

**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

	Width		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Asset Hierarchy,	Asset Data	Central System of	Objective is a central								
Registry, and Info		Record	source of information								
			including asset and wor	k							
			activity; acknowledging								
			that specialized systems	;							
			may be used (and								
			possibly linked or								
			integrated) for								
			configuration, status,								
			and notifications								
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic								
Registry, and Info			asset data common to								
			asset management								
			systems including an								
			ARRC unique identifier,								
			year, make, model, seria	al							
			number, color, etc.								
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have							_	
Registry, and Info		Attributes	attributes that allow for								
			direct or easy mapping								
			for NTD reporting								
			without the need to								
			maintain separately in								
			Excel.								
Asset Hierarchy,	Asset Data	Asset Data System	Ability to support								
Registry, and Info		Identifiers	multiple external systen	า							
			identifiers for an asset it	f							
			they differ from internal								
			ARRC identifiers								
Asset Hierarchy,	Asset Data	Asset Data Integration	Ability to synchronize or								
Registry, and Info			integrate basic asset								
			information with								
			external vendors /								
			systems minimize need								
			to manually check and update records for								
			·								
Asset Hierarchy,	Asset Data	Document Managemen	accuracy.  Support a centralized								
Registry, and Info	Asset Data	and Linking	approach to storing and								
negistry, and into		una Emallig	accessing asset-related								
			-								
			documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents								



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Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital								
Registry, and Info		Documents	documents outside of								
			the office; if on mobile								
			possibly allow offline								
			mode by caching								
			documents related to								
			the assets								
Asset Hierarchy,	Asset Data	Link (both ways) to GIS	Support hyperlinking								
Registry, and Info			from asset management								
			system to GIS and from								
			GIS to asset								
Accet Hierarchy	Assat Data	CDC/CIC Desition	management								
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS								
Registry, and Info		Information (Fixed)	locations for GIS at the								
			asset level; either from device or by selecting on								
			map	ı							
Asset Hierarchy,	Asset Data	Location by Mile Post	In addition to a named								
Registry, and Info	7.55Ct Data	Location by Wine 1 ost	location and GPS / GIS								
inegisti y, una imo			coordinates support the								
			location by ARRC Mile								
			Post								
Asset Hierarchy,	Hierarchy	Asset Hierarchy	Model and enforce								
Registry, and Info			hierarchical relationships	s							
			between assets;								
			particulary parent-child								
Asset Hierarchy,	Hierarchy	Classes or Grouping of	Organize and manage								
Registry, and Info		Assets	equipment as a class or								
			group; useful for								
			planned maintenance								
A a a a table a serve made o	I II a u a u a la	Commonto	programs and reporting				_				
Asset Hierarchy,	Hierarchy	Components	Include components and								
Registry, and Info			sub-components,								
			assemblies, systems and								
Asset Availability and	Ownership	Ownership Status	similar entities Ability to indicate owner								
Status	Ownership	Owner strip status	and any interested								
Status			parties in the asset								
			parties in the asset								
Asset Availability and	Ownership	Owner Info	Contact information of								
Status	5		the owner of assets;								
			especially leased or								
			rented equipment								



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Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class		Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Asset Availability and	Status	Condition Assessment -	Support a risk /								
Status		Risk	consequence								
			assessment on assets (or								
			their components);								
			could be used for								
			weighting condition								
			assessment at higher								
			level of hierarchy								
Asset Availability and	Status	Status - Location	Asset location in as near								
Status			real-time as it is possible								
			to have the status								
			changed by a system or								
Assat Availability and	Ctatus	GPS/GIS Position	person								
Asset Availability and	Status		Utilize GPS not only for								
Status		Information (Mobile)	current but also historical data for assets								
			that are mobile								
Asset Availability and	Status	Asset Assignment	Ability to assign assets to								
Status	Status	Asset Assignment	a department with a								
Status			start / end date that will								
			also summarize usage								
			from readings, PMs, and								
			work orders (e.g. costs,								
			fuel, miles, hours)								
Asset Availability and	Status	Asset Rate and Usage	Support mechanism to								
Status		Calculation	calculate costs of asset								
			and which groups used								
			the asset during the								
			period. This calculation								
			may be an initial input to								
			Finance for cost								
			allocation.								
Asset Availability and	Status	Condition Rating System									
Status			rating system for assets								
			(e.g. 1 to 5)								
Asset Availability and	Status	Condition Assessment	Ability to record, store,								
Status			and report periodic								
			condition assessments								
			with criteria guidance as								
			well as previous ratings								
			and work performed								
			since the last								
Asset Availability and	Status	Import External	assessment Ability to import								
·	Status	Import External Transaction Data	Ability to import transaction data from								
Status		Transaction Data	external systems (and								
			when needed ability to								
			enter that transaction								
			manually)								
			manadily								



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Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Asset Availability and	Availability	Out of Service Coding	Capture out of service								
Status		and Duration	codes and time duration								
			(e.g delay impacting								
			operations, or no impact								
			- may include status such								
			as waiting for parts,								
			shop space, labor, etc.);								
			intent is to support								
			reliablity analysis and								
			reporting								
Asset Availability and	Availability	Availability Calculations	Show availablity over								
Status	Availability	Availability Calculations	time at asset and also at								
Status			hierarchy (grouping of								
			assets) levels.								
			Differentiate between								
			types of out of service								
			(e.g. seasonal or								
			intentionally stored)								
Asset Availability and	Availability	Availability - Seasonal	Ability to indicate								
Status		Variations	seasonal status (e.g.								
			open /closed, not being								
			used, etc.)								
Configuration	General	Asset Model	Control over asset								
Management		Configuration	configuration design								
			with ability to define								
			rules for components								
			and parts								
Configuration	General		Ability to have a change								
Management		Process	management process for								
			components of the								
			assets. May include								
			things such as checklists,								
			test procedures, review process, etc.								
			process, etc.								
Configuration	General	Integration with	Ability to integrate or								
Management		Configuration	synchronize data with								
		Management Systems	external configuration								
			management systems to								
			avoid manual								
			duplication or cross-								
			checking of data.								
Fault/Problem Detectio	n General		Ability to capture								
		Failure	reason(s) for failure;								
			preferably through								
			standardized coding								



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Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

	IVIATRIX		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type		General	General	General	General	General	General	General
Fault/Problem Detection		Data from Diagnostic	Ability to hyperlink to o		General	General	General	General	General	General	- Centerul
	. Concra	Systems	record and report on								
		Systems	information from								
			diagnostic systems and								
			testing vendors								
Fault/Problem Detection	General	Data from External Asse	et Ability to hyperlink to o	r							
daily i robiciii Detection	General	Management Systems	complile information	'							
		Wanagement Systems	from external asset								
			management systems								
			including current state,								
			alerts, and errors /								
			issues								
Planned Maintenance	General	Common Inspection	Desire a means of								
and Inspection	General	Record to Satisfy	managing asset and								
and inspection		Multiple Agencies	inspection information								
		Wuitiple Agencies	that can be used to								
			satisfy muliple agency								
			regulatory requirement								
			(e.g. FRA and FTA)	5							
Planned Maintenance	General	Inspection Data	Ability to retain								
and Inspection	General	Retention Periods	electronic copieds of								
and inspection		Retention Ferious	records indefinitely;								
			Federal agencies usuall								
			allow for only a certain								
			period of time								
Planned Maintenance	General	Digital Workflows for	Support digital								_
	General	Review and Approval	workflows for review								
and Inspection		Review and Approval									
			and approval for inspections (and where								
			otherwise required) that is consistent with any								
			regulatory workflow								
			requirements								
Planned Maintenance	General	Pre-Use and Frequent	Ability to record								
	General	Inspection Checklists	I								
and Inspection		inspection checklists	frequent (daily) or pre- use inspections with a								
			checklist; support								
			different checklists								
			based on asset categor	,							
				/							
Planned Maintenance	General	Digital-First Inspections	and characteristics Ability to record								
	General	Digital-First inspections									
and Inspection			inspections digitally in the field (with an offline								
			mode available); subject								
			to any regulatory								
			requirements and								
			workflow requirements								



**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

Buildings General	General General



**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

IVIG	itrix		Assat Catagory	Dalling Stock	Dalling Charle	Fixed Guideway	Fixed Guideway	Fixed Guideway	Comice Vehicles	Facilities	Communications
			Asset Category Asset Class	Rolling Stock Locomotive	Rolling Stock Railcars	Track	Bridge	Signal	Service Vehicles General	Buildings	General
Feature Category Feat	ture Req N	lame	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Work Orders and Work Gen	· · · · · · · · · · · · · · · · · · ·		Ability to code tasks on	General	General	General	General	General	General	General	General
Order Management	Order		work orders that may								
order management	0.46.		include system,								
			subsystem, component,								
			position, and activity								
			(e.g. inspect, install,								
			remove, repair, replace)								
			for accurate information								
			on maintenance activity								
			and costs								
Work Orders and Work Gen	neral Comp	plaint / Cause /	Support the ability to								
Order Management			record complaint, cause,								
			and correction in a								
			standardized way for								
			more efficient failure								
			analysis and								
			identification of								
			common issues, causes,								
			and their resolution								
Work Orders and Work Gen			Record data where and								
Order Management	Order		when the work occurs								
			(create, update, and								
			close) through mobile digital work orders that								
			support an offline mode.								
			Support an online mode.								
Work Orders and Work Gen	neral SLAs f		Support the ability to set								
Order Management			SLAs for response time								
			on asset groups or								
			categories and to record								
			performance against								
Work Orders and Work Gen	oral Chack		Ability to define criteria								
Order Management		r - Create Work	indicating								
Order Wanagement	Order		repair/adjustment or								
	Oraci		replacement is required								
			on checklist items.								
			Automatically create a								
			work order to with the								
			task or add a line item to								
			work order if already								
			created from this								
Manie Ondana s 1114 - 1	and selection		checklist.								
Work Orders and Work Gen	l .		Accommodate multiple								
Order Management	Locati		shops and work locations including ARRC								
			shops and work in the								
			field								
			1								



**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
		Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Work Orders and Work General	Capture Usage Readings	Ability to capture the								
Order Management	on Work Orders	current usage readings								
		(hours, miles, etc.) on								
		work orders and PMs								
		when they are opened								
Work Orders and Work General	Record Checklist and	Ability to capture and								
Order Management	Results	store checklist form and								
		recorded data								
		electronically (rather								
		than paper or scanned								
		paper) for a work order								
Work Orders and Work General	Work Packages	Ability to create pre-								
Order Management		defined work order								
		template with a standard	t l							
		set of tasks for a								
		particular inspection,								
		condition assessement,								
		complaint, etc								
Work Orders and Work General	Assign Work Orders	Ability to assign work								
Order Management		orders to technicians								
		within the appropriate								
		skillset pool and/or								
		geographic location								
Work Orders and Work General	Categorize Costs	Abililty to categorize								
Order Management	(OPEX/CAPEX)	costs by OPEX/CAPEX								
		categories and								
		subcatgory (e.g. OPEX -								
		Preventative (e.g.								
		Inspection), Corrective,								
		or Break-Fix (must fix								
		now) and CAPEX (e.g.								
		ARRC, Agency (if								
		application) or Other (if								
		applicable)								
Work Orders and Work General	Work Order Source	Ability to record the								
Order Management		source of a work order								
		(e.g. result of an								
		inspection, end user								
		request, operations								
		observation,								
		alarm/notification, or								
		internally initiated)								



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Essential (High Priority)

Desired (Medium Priority)

optional (Low Priority) Priority Not Set

IVIALTIX		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
		Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category Feature	Req Name	Req Desc   Asset Type		General	General	General	General	General	General	General
Work Orders and Work General	Checklists (Digital)	Ability to define digital								
Order Management		(not paper) checklists for	or							
		condition assessments,								
		inspections, or regular								
		work activities								
		connected to a work								
		orders. Checklists save								
		the results recorded by								
		the user and are								
		attached to work order								
		and may be available								
		from asset.								
Work Orders and Work General	Cost Reporting	Ability to see aggreggat								
Order Management		costs on assets by basic								
		criteria including Syster	n,							
		"Type", Time Period,								
		PM, Corrective or Break								
		Fix, By OPEX/CAPEX (or								
		funding source), by								
		hierarchy or geography								
Work Orders and Work General	Record GPS Locations to									
Order Management	Work Location	locations (from device								
		itself or selection from	9							
		map) for work order								
Work Orders and Work   General	End-Users and Work	locations Ability for end users (e.			_					
Order Management	Orders	Operations) to initiate	3.							
Order Management	Orders	work requests through								
		complaint process and	u							
		to see status and histor	v							
		of work orders	<b>'</b>							
Work Orders and Work General	Custom Categorize Worl									
Order Management	Orders	work orders in a custon								
		way such as by								
		campaign, program, or								
		season. This may aid in								
		grouping work as part of prioritization and								
		scheduling.								
Work Orders and Work General	Capture All Work on	Ability to easily capture								
Order Management	Work Orders	all work (inspection,								
		condition assessment,								
		work activity) on a worl	(							
		order to ensure that a								
		record is made of the								
		work and costs are								
		captured consistently								



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Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
		Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Work Orders and Work   General	Prioritization of Work	Ability to prioritze or								
Order Management	Orders	rank work orders; a								
		default prioritzation may								
		be based on criticality								
		rating of asset								
Work Orders and Work   General	Reimbursable Work	Ability to indicate that								
Order Management		work is reimbursable by								
		another party and								
		output can be prepared								
		to support Finance								
Work Orders and Work General	Cost Accounting -	Ability to report or pass								
Order Management	Handling Changes	through changes to costs	S .							
		on a work order to the								
		financial system so it is								
		in sync with the work								
		order costs.								
Work Orders and Work   General	Integrate Financial	Work Order system must	t en							
Order Management	System	be integrated or								
		interfaced with the								
		financial system								
		(currently JDE)								
Work Orders and Work   General	Work Orders against	Allow for a work order								
Order Management	Assets in Hierarchy	to be written against								
		assets at various levels								
		of the hierarchy								
Work Orders and Work General	Ease of Use	Focus on ease of use for								
Order Management		recording work yet need								
		the ability to record								
		meaningful information								
		to be useful (e.g. Task								
		Coding)								
Work Orders and Work General	Group Work Orders by	Group work orders by								
Order Management	Geographic Area	geographic area so they								
		do not need to be								
		manually grouped for								
W. J. O. J J. W. J. C J	NATA - ANALA - I	review and assignment		_						
Work Orders and Work Order Management General	Minor Work	Ability to quickly record minor work on a work								
Order Management										
		order against an asset								
		such as inspection and								
		service (i.e. objective is								
		to avoid using a standing								
		or bucket work order								
		that is not asset-specific								
		for non-parts work less								
		than 1 hour)								



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Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category F	- eature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Work Orders and Work	General	Contractor or Vendor	Ability to record work								
Order Management		Work	details (possibly through								
			an import) performed by								
			contractors or vendors								
			on work orders								
Work Orders and Work	General	Mechanic/Technican	Mechanic/Technician								
Order Management		Records Work	records their work on								
			the work order and has								
			access to info they need								
			thrugh the system. Only								
			person with direct								
			knowledge of work is								
			Mechanic/Technician								
			and they should be able								
			to record their work as it								
			is done.								
Work Orders and Work	General	Parts on Work Order	Ability to specify parts								
Order Management			on work order and								
			whether they came from								
			inventory, were ordered,								
			or purchaed with a								
			purchasing card								
Work Orders and Work	General	Failure Analysis	Improved ability to								
Order Management			analyze failures and their								
			causes. Currently can								
			only rely on what has								
			been written on the								
			work orders; and its								
			necessary to look at								
			each individual work								
			order.								
Work Orders and Work	General	Reporting Tools	Base requirement are								
Order Management			tools that are better								
			than an Excel export.								
			There is a need for								
			analytics for trending,								
			analysis, failure, and								
			investment planning.								
			Analytics may be in a								
			separate tool but the								
			information to support it								
			must be reportable.								
			Currently Excel is the								
			reporting tool - either								
			data is manually entered								
			or exported from JDE								



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Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Work Orders and Work	General	Work Order Notification									
Order Management			notifications for new or								
			outstanding work								
			including PM, inspection	1,							
			or work orders to								
			designated users (e.g. or	1							
			being created or								
Work Orders and Work	Gonoral	Usage Readings	assigned) Ability to quickly record								
Order Management	General	Usage Readings	(or import from externa								
Order Management			systems) usage readings								
			(e.g. miles, hours)								
			(e.g. rimes, riours)								
Work Orders and Work	General	End-User Field Service	Ability for end users to								
Order Management			quickly record any field								
			service performed (for								
			efficiency and								
			consistency likely								
			requires a digital mobile								
			offline solution)								
Work Orders and Work	General	Work Order Attachment									
Order Management			link, and/or display (if								
			digital) procedures, checklists, and bills of								
			materials needed for								
			work order								
Work Orders and Work	General	Future and Unscheduled									
Order Management		Work Orders	have unscheduled or								
			future date work orders								
			to record work and have	<u> </u>							
			it available for								
			scheduling								
Work Orders and Work	General	Reassign, Split, or Child	Ability to reassign, split								
Order Management		Work Order	off part of a work order,								
			or create a child work								
			order so that more than								
			one group can record								
			activity against a work								
			order yet still maintain the link to the single								
			event								
Work Orders and Work	General	Scheduling and Planning									
Order Management	Jeneral	Seriessing and Falling	schedule work within th	e							
- I so management			system rather than								
			having to track outside								
			of it (e.g. Excel)								



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Optional (Low Priority)

Priority Not Set

		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
		Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category Feature	Req Name	The state of the s	General	General	General	General	General	General	General	General
Work Orders and Work General	Estimated Effort on	Ability to set an								
Order Management	Work Orders	estimated labor or costs								
		on work orders to aid in								
		planning and scheduling								
		or to provide estimates								
		to end users								
Materials Management General	Equipment Check-Out /	Mechanism to check out								
	Check-In	and check in equipment								
		(particularly portable								
		equipment that may be								
		issued to a user)								
Materials Management General		Ability to easily add and								
	Locations	remove materials in								
		arbitrary field locations								
		identified with GPS								
		(either by device or								
		selection from map).								
		Material locations								
		correlated to asset								
		hierarchy for reporting								
		(e.g. Mile Post)								
Materials Management General	Component Parts -	Ability to identify date								
	Obsolescence	and category of								
		obsolescence by vendor								
		for asset or its								
		component parts (e.g.								
		vendor sends notice with								
		date of end of support)								
Materials Management General	Component Parts -	Ability to designate as								
Waterials Wallagement General	Criticality	critical parts or								
	Criticality	components that have								
		long lead times, are								
		obsolete, or are costly or								
		difficult to ship when								
		needed								
Materials Management General	Min-Max Parts Inventory	Inventory minimum and								
Jane Harris	in in in an area in territory	maximum on-hand								
		requirements that is								
		based on asset and								
		component mix;								
		including when assets								
		are added or surplused;								
		and seasonal changes								
		and scasonal changes								



**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

		Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
		Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General
Materials Management   General	Inventory Purchase Plan	Purchase plan based on								
		forecasted preventative								
		and overhaul work								
		(done manually now but								
		should be able to								
		forecast based on work								
		packages / planned work								
		orders in system)								
Component Tracking and General	Component Serial	Ability to track								
Rebuild	Number Tracking	components by serial								
		number and when they								
		were put on, taken off,								
		moved to another asset								
		or put on shelf (serial								
		number of part not on								
		unit could require								
		component to be an								
		"asset")								
Component Tracking and General	Component	Ability to identify								
Rebuild	Compatibility	compatibility of								
		components with asset								
		configurations								
Component Tracking and General	Component Service Life	1								
Rebuild		expected service life of a								
		component or part								
Component Tracking and General	Component Installation	Track when components								
Rebuild	and Removal	are installed, removed,								
		and their disposition								
		(e.g. transferred,								
		shelved, disposed of,								
		rebuilt) May be								
		differences in handling								
		with components that								
		have serial numbers vs								
		those that do not.								
Component Tracking and Conoral	Part Robuild	Indicator that a nart in								
Component Tracking and General	Part Rebuild	Indicator that a part in								
Rebuild		inventory or being								
Component Tracking and General	Usago for Company	installed is a rebuild								
	Usage for Components	Calculated usage based								
Rebuild		on the usage measures								
		for asset(s) installed in;								
		for reliablity and								
		preventative								
		maintenance								



**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock		Fixed Guideway	Fixed Guideway			Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name		General	General	General	General	General	General	General	General
Warranty Management	General	Warranty	Ability to specify for								
			parts whether a serial								
			number is expected,								
			what warranty terms								
			are, and whether it is								
			from purchaed or								
			installed date. Associate								
			warranty contact info or								
			procedure with record								
			(procedures vary by								
			Vendor/OEM)								
Capital Projects and	General	Total Cost of Ownership	Method for recording								
Campaigns	Gerieran	Reporting	and displaying TCO;								
- Carripaigns			what is spent to								
			maintain assets and the								
			frequency of								
			maintenance versus								
			replacement of the asset								
			or systems within the								
			asset; allow for long								
			term planning of asset or								
			system replacement								
Capital Projects and	General	Capital Projects	Improved reporting on								
Campaigns		Reporting	capital projects including								
			estimates for labor, P-								
			Card purchases, etc.								
			prior to posting in the								
			finance system (perhaps estimated from Work								
			Order entries) in								
			addition to funding by								
			year and by funding								
			source								
Capital Projects and	General	Asset Category / Class	Ability to show the								
Campaigns		Composition over Time	composition of assets in								
1 0 -			an asset category / class								
			over time by asset								
			hierarchy or groupings								
			as well as ownership								
			(e.g. ARRC, leased,								
			rented)								



**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

			Asset Category	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name		General	General	General	General	General	General	General	General
Capital Projects and	General	Replacement Plan (ULB /	For multi-year planning								
Campaigns		Obsolescence)	support replacement								
			planning including age,								
			useful life benchmark,								
			obsolescence, costs,								
			usage, and asset								
			category composition								
			(e.g. owned vs leased /								
			rented)								
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours								
			of Service and availablity								
			for work in a way which								
			adheres and is approved								
			by regulatory agencies								
Timekeeping	General	Hours Worked on Work	Record hours worked								
Ппекееріп	General	Order / Asset	on a work order (both								
			direct and indirect time)								
			and integrate with time								
			keeping.								
Timekeeping	General	Asset Field on Timecards								_	
Timekeeping	General		time cards across ARRC								
			to ensure that asset								
			usage can be captured								
			(usage is a more detailed								
			level than what group								
			the asset is assigned to)								
			line asset is assigned to								
Timekeeping	General	Time Tracking	Avoid duplicate entry								
			or manipulation of time								
			records in more than								
			one system								



Reliability Matters

Scored

#### **Color Coding**

Desired (Medium Prior	i
Optional (Low Priority)	
Priority Not Set	

	Scorea		Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive		Track	Bridge	Signal	General	Buildings	General
	Feature	Req Name		General	General	General	General	General	General	General	General	General
Asset Hierarchy, Registry, and Info	Asset Data	Central System of Record	source of information including asset and work activity; acknowledging that specialized systems	24	3	3	3	3	3	3	3	3
			may be used (and possibly linked or integrated) for configuration, status, and notifications									
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	21	3	3	3	3	3	3	2	1
Asset Hierarchy, Registry, and Info		NTD Reporting Attributes	attributes that allow for direct or easy mapping for NTD reporting without the need to maintain separately in Excel.	17	3	3	3	2	1	2	2	1
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers		3	3	3	1	3	3	2	3
Asset Hierarchy, Registry, and Info		Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	16	3	3	3	1	1	3	1	1
Asset Hierarchy, Registry, and Info		and Linking	approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	23	3	2	3	3	3	3	3	3
Asset Hierarchy, Registry, and Info	Asset Data	Mobile Access to Documents	Ability to access digital documents outside of the office; if on mobile possibly allow offline mode by caching documents related to the assets	20	3	1	2	3	3	3	2	3



Reliability Matters

**Color Coding** 

Essential (High Priority)
Desired (Medium Priority)
Optional (Low Priority)
Priority Not Set

	300100		Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	•	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Asset Hierarchy, Registry and Info	, Asset Data	Link (both ways) to GIS	Support hyperlinking from asset management system to GIS and from GIS to asset management	15	2	1	2	2	2	2	2	2
Asset Hierarchy, Registry and Info	, Asset Data	GPS/GIS Position Information (Fixed)	Ability to record GPS locations for GIS at the asset level; either from device or by selecting on map	16	3	0	2	2	3	1	2	3
Asset Hierarchy, Registry and Info	, Asset Data	Location by Mile Post	In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post	18	3	0	3	3	3	1	2	3
Asset Hierarchy, Registry and Info	, Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	21	3	1	3	3	3	3	2	3
Asset Hierarchy, Registry and Info	, Hierarchy	Classes or Grouping of Assets	Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	d 19	3	3	1	3	2	3	2	2
Asset Hierarchy, Registry and Info	, Hierarchy	Components	Include components and sub-components, assemblies, systems and similar entities	17	3	2	3	2	2	2	2	1
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	15	3	1	1	3	1	3	1	2
Asset Availability and Status	Ownership	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	18	3	1	1	3	3	3	1	3
Asset Availability and Status	Status	Condition Assessment - Risk	Support a risk / consequence assessmen on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	16	3	1	2	3	2	1	2	2
Asset Availability and Status	Status	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	9	3	0	0	1	2	1	1	1
Asset Availability and Status	Status	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historica data for assets that are mobile	al 10	2	0	0	1	1	3	1	2



Color Coding

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Asset Availability and Status	Status		Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs,	15	3	1	0	1	3	3	1	3
Asset Availability and Status	Status	Asset Rate and Usage Calculation	fuel, miles, hours)  Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	11	3	1	0	1	1	3	1	1
Asset Availability and Status	Status	Condition Rating System		21	3	3	2	3	3	3	2	2
Asset Availability and Status	Status	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the last assessment	23	3	3	3	3	3	3	2	3
Asset Availability and Status	Status	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	13	3	1	0	1	1	3	2	2
Asset Availability and Status	Availability	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	18	3	3	1	1	3	3	1	3
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	20	3	3	3	1	3	3	1	3
Asset Availability and Status	Availability		Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	11	2	2	2	1	1	1	1	1



Color Coding

Essential (High Priority)
Desired (Medium Priority)
Optional (Low Priority)
Priority Not Set

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway		Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
<u> </u>	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Configuration Management	General	Asset Model Configuration	Control over asset configuration design wit ability to define rules for components and parts		3	2	2	0	1	2	1	1
Configuration Management	General	Change Management Process	Ability to have a change management process fo components of the assets. May include things such as checklists test procedures, review process, etc.	16	3	2	2	2	3	1	2	1
Configuration Management	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or cross-checking of data.		3	0	1	0	3	3	2	1
Fault/Problem Detection	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	17	3	0	2	1	3	3	2	3
Fault/Problem Detection	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	16	2	3	2	2	1	1	2	3
Fault/Problem Detection	General	Data from External Asset Management Systems	Ability to hyperlink to or complile information from external asset management systems including current state, alerts, and errors / issue	16	3	3	1	0	3	1	2	3
and Inspection	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	19	3	3	3	3	3	1	2	1
Planned Maintenance and Inspection	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	13	2	3	2	2	1	0	2	1



**Color Coding** 

Desired (Medium Priority) Priority Not Set

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements		2	1	3	3	1	1	2	2
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or pre-use inspections with a checklist; support different checklists based on asset category and characteristics	14	3	3	0	0	1	3	2	2
Planned Maintenance and Inspection	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements		3	3	3	3	3	3	2	2
Planned Maintenance and Inspection	General	Inspection Schedules	Support ability to schedule recurring inspections that will automatically create a work order	23	3	2	3	3	3	3	3	3
Planned Maintenance and Inspection	General	PM Service Calculation	Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)		3	3	1	0	1	3	3	1
Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	19	3	3	3	3	1	3	2	1
Planned Maintenance and Inspection	General	PM Job Plan	Ability to setup standard template for labor and parts for preventative maintenance routines to allow for forecasting of parts and labor needed		2	2	2	2	1	2	3	1
Planned Maintenance and Inspection	General	Generate Work Orders from Inspection Results	Ability to generate work orders from inspection results (would typically be categorized as corrective actions)	24	3	3	3	3	3	3	3	3



Reliability Matters

**Color Coding** 

Desired (Medium Priority) Priority Not Set

			Asset Category		Rolling Stock					Service Vehicles	Facilities	Communications
			Asset Class		Locomotive				+	General		General
Feature Category	Feature	Req Name	Req Desc   Asset Type		General	General	General	General	General	General	General	General
Planned Maintenance and Inspection	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or	13	2	2	2	0	1	3	2	1
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	created by the system) Ability to define vendors which are used for PM and inspection activities on assets, systems or components	10	2	2	0	2	1	1	1	1
Planned Maintenance and Inspection	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and		3	1	1	0	1	1	2	1
Work Orders and Work Order Management	General	Task Coding on Work Orders	Ability to code tasks on work orders that may include system, subsystem, component, position, and activity (e.g. inspect, install, remove, repair, replace) for accurate information on maintenance activity and costs	22	2	2	3	3	3	3	3	3
Work Orders and Work Order Management	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution	18	3	1	0	3	3	3	2	3
Work Orders and Work Order Management	General	Mobile Digital Work Orders	Record data where and when the work occurs (create, update, and close) through mobile digital work orders that support an offline mode.	23	3	3	3	3	3	3	2	3
Work Orders and Work Order Management	General		Support the ability to set SLAs for response time on asset groups or categories and to record performance against them	13	2	1	0	1	2	3	2	2



**Requirements Matrix** 

Essential (High Priority) Desired (Medium Priority) Priority Not Set

**Color Coding** 

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class		Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name		General	General	General	General	General	General	General	General	General
Work Orders and Work Order Management	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items.									
			Automatically create a work order to with the task or add a line item to work order if already created from this checklist.	17	2	1	1	3	3	2	2	3
Work Orders and Work	General	Multiple Shop / Work	Accommodate multiple									
Order Management		Locations	shops and work locations including ARRC shops and work in the field	9	1	1	0	0	1	3	2	1
Work Orders and Work	General	Capture Usage Readings	Ability to capture the									
Order Management		on Work Orders	current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	12	3	2	0	0	1	3	2	1
Work Orders and Work Order Management	General	Record Checklist and Results	Ability to capture and store checklist form and recorded data									
			electronically (rather than paper or scanned paper) for a work order	19	3	2	3	3	1	3	2	2
Work Orders and Work Order Management	General	Work Packages	Ability to create pre- defined work order template with a standard set of tasks for a particular inspection, condition assessement, complaint, etc	22	3	3	3	2	3	3	3	2
Work Orders and Work	General	Assign Work Orders	Ability to assign work									
Order Management			orders to technicians within the appropriate skillset pool and/or geographic location	17	3	0	3	0	3	2	3	3
Work Orders and Work Order Management	General	Categorize Costs (OPEX/CAPEX)	Abililty to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX - Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix	19	2	3	2	2	3	3	2	2
			now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)									



Color Coding

Essential (High Priority)
Desired (Medium Priority)
Optional (Low Priority)
Priority Not Set

	Scored		Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Work Orders and Work Order Management	General		Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	21	3	1	3	2	3	3	3	3
Work Orders and Work Order Management	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	23	3	3	3	3	3	3	2	3
Work Orders and Work Order Management	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break-Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography		2	3	2	3	2	2	2	1
Work Orders and Work Order Management	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	15	2	0	3	2	3	1	1	3
Work Orders and Work Order Management	General	End-Users and Work Orders	Ability for end users (e.g. Operations) to initiate work requests through a complaint process and to see status and history of work orders	20	3	3	0	2	3	3	3	3
Work Orders and Work Order Management	General		Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.	10	3	0	2	3	3	3	2	2



Reliability Matters

**Color Coding** 

Desired (Medium Priority) Priority Not Set

			Asset Category		Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class		Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Work Orders and Work Order Management	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	24	3	3	3	3	3	3	3	3
Work Orders and Work Order Management	General	Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	22	3	3	3	3	3	3	1	3
Work Orders and Work Order Management	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance		1	3	2	2	3	1	1	1
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	14	2	0	2	2	1	3	3	1
Order Management	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	18	3	1	1	3	1	3	3	3
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy		3	3	3	3	2	3	1	1
Work Orders and Work Order Management	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	21	3	2	2	3	3	3	2	3
Work Orders and Work Order Management		Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	17	2	1	2	2	3	2	2	3
Work Orders and Work Order Management	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not asset-specific for non-parts work less than 1 hour)	17	3	1	2	2	3	2	2	2



Essential (High Priority)
Desired (Medium Priority)
Optional (Low Priority)

Priority Not Set

**Color Coding** 

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
	Feature	Req Name		General	General	General	General	General	General	General	General	General
	General	Contractor or Vendor	Ability to record work									
Order Management		Work	details (possibly through									
			an import) performed by	14	3	0	1	2	1	3	2	2
			contractors or vendors									
			on work orders									
	General	Mechanic/Technican	Mechanic/Technician									
Order Management		Records Work	records their work on the									
			work order and has									
			access to info they need									
			thrugh the system. Only									
			person with direct	18	3	3	0	1	3	3	2	3
			knowledge of work is									
			Mechanic/Technician									
			and they should be able									
			to record their work as it									
W- 1 0 -1 1 W- 1		De de la Maria Cada	is done.									
	General	Parts on Work Order	Ability to specify parts or									
Order Management			work order and whether they came from									
			inventory, were ordered,	16	3	3	1	1	3	3	1	1
			or purchaed with a									
			purchasing card									
Work Orders and Work	General	Failure Analysis	Improved ability to									
Order Management	General	Tunare Analysis	analyze failures and their									
Order Wandgement			causes. Currently can									
			only rely on what has									
			been written on the worl	k 19	3	3	1	1	3	3	2	3
			orders; and its necessary									
			to look at each individual									
			work order.									
Work Orders and Work	General	Reporting Tools	Base requirement are									
Order Management			tools that are better than	1								
			an Excel export. There is									
			a need for analytics for									
			trending, analysis,									
			failure, and investment									
			planning. Analytics may									
			be in a separate tool but	21	2	2	2	2	2	2	2	2
			the information to	21	2	,	2	2	3	3	J	3
			support it must be									
			reportable. Currently									
			Excel is the reporting too									
			- either data is manually									
			entered or exported									
			from JDE									
Waller III		W-10 1 2 10 1	Abilita a S									
	General	Work Order Notification	s Ability to configure									
Order Management			notifications for new or									
			outstanding work									
			including PM, inspection	19	3	1	2	2	3	2	3	3
			or work orders to									
			designated users (e.g. on									
			being created or									
			assigned)									



## **Requirements Matrix**

**Color Coding** 

Essential (High Priority) Desired (Medium Priority) Priority Not Set

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
<u> </u>	Feature	Req Name		General	General	General	General	General	General	General	General	General
Work Orders and Work Order Management	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)	11	3	0	0	1	1	3	2	1
Work Orders and Work Order Management	General	End-User Field Service	Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	14	3	2	2	0	1	3	2	1
Work Orders and Work Order Management	General	Work Order Attachments	s Automatically output, link, and/or display (if digital) procedures, checklists, and bills of materials needed for work order	20	3	1	2	3	3	3	3	2
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders			3	1	3	3	3	3	2	2
Work Orders and Work Order Management	General	Reassign, Split, or Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event	16	2	0	2	1	3	3	2	3
Work Orders and Work Order Management	General	Scheduling and Planning	<del></del>	23	3	3	3	3	3	2	3	3
Work Orders and Work Order Management	General	Estimated Effort on Worl Orders		13	2	1	1	2	3	2	1	1
Materials Management	General	Equipment Check-Out / Check-In	Mechanism to check out and check in equipment (particularly portable equipment that may be issued to a user)	8	2	0	0	1	1	2	1	1



Reliability Matters

**Color Coding** 

Essential (High Priority)

Desired (Medium Priority)

Optional (Low Priority)

Priority Not Set

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway	Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive		Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name		General	General	General	General	General	General	General	General	General
Materials Management	General		Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting		2	0	3	2	1	2	1	2
Materials Management	General	Component Parts - Obsolescence	(e.g. Mile Post)  Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	12	2	1	0	1	3	3	1	1
Materials Management	General	Component Parts - Criticality	Ability to designate as critical parts or components that have long lead times, are obsolete, or are costly or difficult to ship when needed	15	2	2	1	1	3	3	1	2
Materials Management	General	Min-Max Parts Inventory	Inventory minimum and maximum on-hand requirements that is based on asset and component mix; including when assets are added or surplused; and seasonal changes	15	3	2	1	2	2	3	1	1
Materials Management	General	Inventory Purchase Plan		11	2	1	1	1	1	3	1	1
Component Tracking and Rebuild	General	Component Serial Number Tracking	Ability to track components by serial number and when they were put on, taken off, moved to another asset or put on shelf (serial number of part not on unit could require component to be an "asset")	13	3	0	2	1	2	2	1	2
Component Tracking and Rebuild	General	Component Compatibility	Ability to identify compatibility of components with asset configurations	10	2	0	2	1	1	2	1	1



Reliability Matters

**Color Coding** 

Desired (Medium Priority) Priority Not Set

					Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway	Fixed Guideway		Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Component Tracking and	General	Component Service Life	Ability to specify									
Rebuild			expected service life of a	15	3	2	1	2	3	2	1	1
			component or part									
Component Tracking and	General	Component Installation	Track when components									
Rebuild		and Removal	are installed, removed,									
			and their disposition (e.g.									
			transferred, shelved,									
			disposed of, rebuilt) May									
			be differences in	15	3	2	2	1	3	2	1	1
			handling with									
			components that have									
			serial numbers vs those									
			that do not.									
Component Tracking and	General	Part Rebuild	Indicator that a part in									
Rebuild			inventory or being	9	2	0	1	1	1	2	1	1
			installed is a rebuild									
Component Tracking and	General	Usage for Components	Calculated usage based									
Rebuild			on the usage measures									
			for asset(s) installed in;	13	2	3	1	1	1	3	1	1
			for reliablity and		_							
			preventative									
			maintenance									
Warranty Management	General	Warranty	Ability to specify for									
			parts whether a serial									
			number is expected,									
			what warranty terms are,									
			and whether it is from									
			purchaed or installed	11	3	0	1	1	1	3	1	1
			date. Associate warranty									
			contact info or procedure									
			with record (procedures									
			vary by Vendor/OEM)									
Capital Projects and	General	Total Cost of Ownership	Mathod for recording									
	General		and displaying TCO; what									
Campaigns		Reporting	is spent to maintain									
			assets and the frequency									
			of maintenance versus									
			replacement of the asset	15	3	3	1	2	1	1	3	1
			or systems within the	15	5	3	1	2	1	1	3	1
			asset; allow for long term									
			planning of asset or									
			system replacement									
			system replacement									
	I	<u> </u>	1									



Color Coding
Essential (High

Essential (High Priority)
Desired (Medium Priority)
Optional (Low Priority)
Priority Not Set

			Asset Category	Overall	Rolling Stock	Rolling Stock	Fixed Guideway	Fixed Guideway		Service Vehicles	Facilities	Communications
			Asset Class	General	Locomotive	Railcars	Track	Bridge	Signal	General	Buildings	General
Feature Category	Feature	Req Name	Req Desc   Asset Type	General	General	General	General	General	General	General	General	General
Capital Projects and Campaigns	General	Capital Projects Reporting	Improved reporting on capital projects including estimates for labor, P-Card purchases, etc. prior to posting in the finance system (perhaps estimated from Work Order entries) in additio to funding by year and b funding source	20	3	3	1	3	3	3	3	1
Capital Projects and	General	Asset Category / Class	Ability to show the									
Campaigns		Composition over Time	composition of assets in an asset category / class over time by asset hierarchy or groupings a well as ownership (e.g. ARRC, leased, rented)	12	2	1	2	2	1	3	1	1
Capital Projects and Campaigns	General	Replacement Plan (ULB / Obsolescence)	For multi-year planning support replacement planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)	17	2	3	1	3	3	2	2	1
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours of Service and availablity for work in a way which adheres and is approved by regulatory agencies	0	2	1	1	0	3	0	0	2
Timekeeping	General	Hours Worked on Work Order / Asset	Record hours worked on a work order (both direct and indirect time) and integrate with time keeping.	20	2	2	2	3	3	3	2	3
Timekeeping	General	Asset Field on Timecards	Have an asset field on time cards across ARRC to ensure that asset usage can be captured (usage is a more detailed level than what group the asset is assigned to)	13	3	0	1	3	1	2	2	1
Timekeeping	General	Time Tracking	Avoid duplicate entry or manipulation of time records in more than on system	10	2	2	3	2	3	3	3	1



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Asset Data Integration	Ability to synchronize	Rolling Stock	Locomotive	General	Asset Data Integration	Ability to synchronize	ARRC Prioritize from	Essential (High)
Registry, and Info			or integrate basic asset					or integrate basic	Matrix	
			information with					asset information with		
			external vendors /					external vendors /		
			systems minimize need					systems minimize		
			to manually check and					need to manually		
			update records for					check and update		
			accuracy.					records for accuracy.		
Asset Hierarchy,	Asset Data	Central System of	Objective is a central	Rolling Stock	Locomotive	General	Central System of	Objective is a central	ARRC Prioritize from	Essential (High)
Registry, and Info		Record	source of information				Record	source of information	Matrix	
			including asset and					including asset and		
			work activity;					work activity;		
			acknowledging that					acknowledging that		
			specialized systems					specialized systems		
			may be used (and					may be used (and		
			possibly linked or					possibly linked or		
			integrated) for					integrated) for		
			configuration, status,					configuration, status,		
			and notifications					and notifications		
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Rolling Stock	Locomotive	General	Basic Asset Attributes	Ability to record basic	ARRC Prioritize from	Essential (High)
Registry, and Info			asset data common to					asset data common to	Matrix	
			asset management					asset management		
			systems including an					systems including an		
			ARRC unique identifier,					ARRC unique		
			year, make, model,					identifier, year, make,		
			serial number, color,					model, serial number,		
			etc.					color, etc.		
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have	Rolling Stock	Locomotive	General	NTD Reporting	Assets should have	ARRC Prioritize from	Essential (High)
Registry, and Info		Attributes	attributes that allow for				Attributes	attributes that allow	Matrix	
			direct or easy mapping					for direct or easy		
			for NTD reporting					mapping for NTD		
			without the need to					reporting without the		
			maintain separately in					need to maintain		
			Excel.					separately in Excel.		
	-		-	-	-	-	-	-	-	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Rolling Stock	Locomotive	General		Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Document Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	Rolling Stock	Locomotive	General	Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Mobile Access to Documents	Ability to access digital documents outside of the office; if on mobile possibly allow offline mode by caching documents related to the assets	Rolling Stock	Locomotive	General		Ability to access digital documents outside of the office; if on mobile possibly allow offline mode by caching documents related to the assets	Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Link (both ways) to GIS	Support hyperlinking from asset management system to GIS and from GIS to asset management	Rolling Stock	Locomotive	General	Link (both ways) to GIS	Support hyperlinking from asset management system to GIS and from GIS to asset management	ARRC Prioritize from Matrix	Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	GPS/GIS Position Information (Fixed)	Ability to record GPS locations for GIS at the asset level; either from device or by selecting on map	Rolling Stock	Locomotive	General		Ability to record GPS locations for GIS at the asset level; either from device or by selecting on map	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Location by Mile Post	In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post	Rolling Stock	Locomotive	General		In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post		Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Link (both ways) to GIS	Support hyperlinking	Rolling Stock	Railcars	General	Link (both ways) to GIS	Support hyperlinking	ARRC Prioritize from	Optional (Low)
Registry, and Info			from asset					from asset	Matrix	
			management system to					management system		
			GIS and from GIS to					to GIS and from GIS to		
			asset management					asset management		
Asset Hierarchy,	Asset Data	Location by Mile Post	In addition to a named	Rolling Stock	Railcars	General	Location by Mile Post	In addition to a named	ARRC Prioritize from	Not Set
Registry, and Info			location and GPS / GIS					location and GPS / GIS	Matrix	
			coordinates support the					coordinates support		
			location by ARRC Mile					the location by ARRC		
			Post					Mile Post		
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS	Rolling Stock	Railcars	General	GPS/GIS Position	Ability to record GPS	ARRC Prioritize from	Not Set
Registry, and Info		Information (Fixed)	locations for GIS at the				Information (Fixed)	locations for GIS at the	Matrix	
			asset level; either from					asset level; either		
			device or by selecting					from device or by		
			on map					selecting on map		
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital	Rolling Stock	Railcars	General	Mobile Access to	Ability to access digital	ARRC Prioritize from	Optional (Low)
Registry, and Info		Documents	documents outside of				Documents	documents outside of	Matrix	
			the office; if on mobile					the office; if on mobile		
			possibly allow offline					possibly allow offline		
			mode by caching					mode by caching		
			documents related to					documents related to		
			the assets					the assets		
Asset Hierarchy,	Asset Data	Document	Support a centralized	Rolling Stock	Railcars	General	Document	Support a centralized	ARRC Prioritize from	Desired (Medium)
Registry, and Info		Management and	approach to storing and				Management and	approach to storing	Matrix	
		Linking	accessing asset-related				Linking	and accessing asset-		
			documents including					related documents		
			drawings, schedules,					including drawings,		
			manuals, pictures,					schedules, manuals,		
			etc.for both digital and					pictures, etc.for both		
			paper documents					digital and paper		
								documents		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Central System of Record	Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	Rolling Stock	Railcars	General	Central System of Record	Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	Rolling Stock	Railcars	General	Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Rolling Stock	Railcars	General	Foreign and Customer Owned Cars		ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Rolling Stock	Railcars	General	Incorporate Existing Applications and Integration	Everything the four apps and the integration is a requirement for the future: TMS, JDE, Express Yard, UMLER and then internal billing interface.	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	NTD Reporting Attributes	Assets should have attributes that allow for direct or easy mapping for NTD reporting without the need to maintain separately in	Rolling Stock	Railcars	General	NTD Reporting Attributes	Assets should have attributes that allow for direct or easy mapping for NTD reporting without the need to maintain	ARRC Prioritize from Matrix	Essential (High)
			Excel.					separately in Excel.		
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Rolling Stock	Railcars	General	ARRC Number	Unique number to asset	CTG Consultant	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Rolling Stock	Railcars	General	Non-ARRC Number	E.g. Customer-owned	CTG Consultant	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Rolling Stock	Railcars	General	Interchange Identifier	Unique to asset; includes ARRC or other carrier interchange code	CTG Consultant	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Rolling Stock	Railcars	General	Foreign Keys	Unique identifiers in another system; for data integration and cross-application reporting	CTG Consultant	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Rolling Stock	Railcars	General	_	Capability needed; determine whether historical data is renumbered	CTG Consultant	Desired (Medium)
Asset Hierarchy, Registry, and Info	Hierarchy	Components	Include components and sub-components, assemblies, systems and similar entities	Rolling Stock	Locomotive	General		Include components and sub-components, assemblies, systems and similar entities	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	Rolling Stock	Locomotive	General	,	Model and enforce hierarchical relationships between assets; particulary parent-child	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Hierarchy	Classes or Grouping of Assets	Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	Rolling Stock	Locomotive	General		Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	Rolling Stock	Railcars	General	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	ARRC Prioritize from Matrix	Optional (Low)
Asset Hierarchy, Registry, and Info	Hierarchy	Components	Include components and sub-components, assemblies, systems and similar entities	Rolling Stock	Railcars	General	on Railcars	Components do not have a estimated life but need to know what cars have what components, etc > goes to predictive analysis eventually	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Feature Hierarchy	<u> </u>	Base Req Desc  Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	Rolling Stock	Asset Class Railcars	Asset Type General	Title Asset Series	Description  Groupings of assets (use Series) which have attributes or characteristics that in common. Passenger cars have diffierent characteristics and key more off of car body type or characteristic than make / manufacturer. Freight cars typically handled by Series.	ARRC Group Interview	
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	Rolling Stock	Locomotive	General	Ownership Status	Ability to indicate owner and any interested parties in the asset	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Ownership	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	Rolling Stock	Locomotive	General	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	Rolling Stock	Railcars	General	Ownership Status	Ability to indicate owner and any interested parties in the asset	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Ownership	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	Rolling Stock	Railcars	General	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Condition Assessment Risk	Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	Rolling Stock	Locomotive	General	Condition Assessment Risk	Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Rolling Stock	Locomotive	General	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Matrix	Essential (High)
Asset Availability and Status	Status	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	Rolling Stock	Locomotive	General	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	ARRC Prioritize from Matrix	Desired (Medium)
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Rolling Stock	Locomotive	General	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	Rolling Stock	Locomotive	General	Availability - Status Location	Where assets are and how they are being used including frequency	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	Rolling Stock	Locomotive	General	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	Rolling Stock	Locomotive	General	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	Rolling Stock	Locomotive	General	Availability - Status Location Integration	The location and status of locomotives would be at least partly from TMS	ARRC Group Interview	Essential (High)
Asset Availability and Status	Status	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the last assessment	Rolling Stock	Locomotive	General	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the last assessment	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Rolling Stock	Railcars	General	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Matrix	Optional (Low)
Asset Availability and Status	Status	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	Rolling Stock	Railcars	General	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	ARRC Prioritize from Matrix	Not Set



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the last assessment	Rolling Stock	Railcars	General	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the	ARRC Prioritize from Matrix	Essential (High)
			last assessment					last assessment		
Asset Availability and Status	Status	Condition Assessment Risk	-Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	Rolling Stock	Railcars	General	Condition Assessment Risk	Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Status	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	Rolling Stock	Railcars	General	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Status	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	Rolling Stock	Railcars	General	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	Rolling Stock	Railcars	General	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	ARRC Prioritize from Matrix	Not Set



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Rolling Stock	Railcars	Freight Cars	Non-Revenue Freight Cars	Large non-revenue freight car fleet - used in MOW	ARRC Group Interview	Optional (Low)
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Rolling Stock	Locomotive	General	Availability Calculations	Need availablity information over time; existing methods would be too manual. Differentiate by status (e.g. intentionally stored or planned overhaul in a downtime vs unintentionally unavailable. By reason for failure)		Essential (High)
Asset Availability and Status	Availability	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	Rolling Stock	Locomotive	General	Availability - Seasonal Variations	Take into account summer plan and winter plan	ARRC Group Interview	Desired (Medium)
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Rolling Stock	Locomotive	General	Usage Data for Availability and Reliability	Usage data such as power or standby mode, stored or notstored, whether failure in terminal or out	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Availability	Out of Service Coding	Capture out of service	Rolling Stock	Locomotive	General	Out of Service Coding	Capture out of service	ARRC Group Interview	Essential (High)
and Status		and Duration	codes and time				and Duration	codes and time		
			duration (e.g delay					duration (e.g delay		
			impacting operations,					impacting operations,		
			or no impact - may					or no impact - may		
			include status such as					include status such as		
			waiting for parts, shop					waiting for parts, shop		
			space, labor, etc.);					space, labor, etc.)		
			intent is to support							
			reliablity analysis and							
			reporting							
Asset Availability	Availability	Availability - Seasonal	Ability to indicate	Rolling Stock	Railcars	General	Availability - Seasonal	Ability to indicate	ARRC Prioritize from	Desired (Medium)
and Status		Variations	seasonal status (e.g.				Variations	seasonal status (e.g.	Matrix	
			open /closed, not being					open /closed, not		
			used, etc.)					being used, etc.)		
Asset Availability	Availability	Availability	Show availablity over	Rolling Stock	Railcars	General	Availability	For asset management	ARRC Group Interview	Desired (Medium)
and Status		Calculations	time at asset and also				Calculations	need tracking system		
			at hierarchy (grouping					of availability and		
			of assets) levels.					measures. Have not		
			Differentiate between					gotten figured out for		
			types of out of service					passenger but run		
			(e.g. seasonal or					with little to no		
			intentionally stored)					failures. Key goals for		
								TAM was moving		
								towards availability		
								and reliablity		
								measures.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Availability	Availability	Show availablity over	Rolling Stock	Railcars	General	Customer Needs and	No way to track what	ARRC Group Interview	Essential (High)
and Status		Calculations	time at asset and also				Availability	is needed by the		
			at hierarchy (grouping				Calculations	customer and what we	2	
			of assets) levels.					actually have: are we		
			Differentiate between					fulfilling the need?		
			types of out of service					Unsure that is clear on		
			(e.g. seasonal or					the operations side		
			intentionally stored)					(not even on		
								operations / dispatch)		
								side. E.g .hopper cars		
								not utilized on bad		
								order list but they are		
								not needed so don't		
								have to be repaired.		
								Marketing with		
								transportation is		
								driving what cars are		
								worked; they send		
								direction on what cars		
								/ types need to be		
								worked. TOFC side		
								marketing doesn't		
								necessarily know what		
								the demand has been		
								(e.g. electricified) -		
								don't know how many		
								trailers turned away.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Availability	Availability	Show availablity over	Rolling Stock	Railcars	General	Availability	Manually track	ARRC Group Interview	Desired (Medium)
and Status		Calculations	time at asset and also				Calculations and FRA	availablity for FRA		
			at hierarchy (grouping				Requirements	requirements because		
			of assets) levels.					when JDE was used		
			Differentiate between					they were getting all		
			types of out of service					kinds of ghost work		
			(e.g. seasonal or					orders for things not		
			intentionally stored)					due because it lacks		
								the information or		
								calculations. Have		
								time and usage based		
								cacluations and		
								exceptions (e.g. out of		
								service or stored)		
Asset Availability	Availability	Out of Service Coding	Capture out of service	Rolling Stock	Railcars	General	Delay Reason Codes	Do not have reasons	ARRC Group Interview	Desired (Medium)
and Status	,,	and Duration	codes and time		Trainea. 5	Joseph Market Ma		for delay (e.g. wait for		2 con ca (moanam,
			duration (e.g delay					shop space, wait for		
			impacting operations,					parts, wait for labor)		
			or no impact - may					,		
			include status such as							
			waiting for parts, shop							
			space, labor, etc.);							
			intent is to support							
			reliablity analysis and							
			reporting							
Asset Availability	Availability	Out of Service Coding	Capture out of service	Rolling Stock	Railcars	General	Length Time in Bad	No historical	ARRC Group Interview	Essential (High)
and Status		and Duration	codes and time				Order Status	information on how		
			duration (e.g delay					long a car was in bad		
			impacting operations,					order status or why -		
			or no impact - may					"falls off the list" Note		
			include status such as					that whether a car is		
			waiting for parts, shop					fixed to be taken off		
			space, labor, etc.);					list is often by		
			intent is to support					customer need.		
			reliablity analysis and							
			reporting							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Rolling Stock	Railcars	Passenger Cars	·	Passenger car is demand different than freight and the winter is different because they will open up cars depending on sales, or hold to a set number of cars; or have to turn away business if demand for more than eight cars		Desired (Medium)
Configuration Management	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or cross-checking of data.	Rolling Stock	Locomotive	General	· ·	RailDOCS used for critical PTC component configuration - avoid manual duplication or cross-checking of data. FRA requirement for tracking PTC components.	ARRC Group Interview	Essential (High)
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Rolling Stock	Locomotive	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	ARRC Prioritize from Matrix	Essential (High)
Configuration Management	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Rolling Stock	Locomotive	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists or a testing process to review, etc.	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Configuration Management	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with	Rolling Stock	Railcars	General	Integration with Configuration	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or crosschecking of data.	ARRC Prioritize from	Not Set
Configuration Management	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Rolling Stock	Railcars	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review	ARRC Prioritize from Matrix	Desired (Medium)
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Rolling Stock	Railcars	General	General and Specific Configurations	process, etc.  Freight - the components are all generalized, not much in mismatched or speciality items Passenger - are trying to standardize on components and configurations	ARRC Group Interview	Desired (Medium)
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Rolling Stock	Railcars	Passenger Cars	Specific Configurations for Assets			Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Configuration	General	Asset Model	Control over asset	Rolling Stock	Railcars	Passenger Cars	Detailed Component	For passenger railcars	ARRC Group Interview	Optional (Low)
Management		Configuration	configuration design				Tracking	would like to know		
			with ability to define					"everything" about		
			rules for components					the configuration as		
			and parts					each is fairly unique.		
								May have to be more		
								general but would like		
								capability.		
Fault/Problem	General	Capture Reasons for	Ability to capture	Rolling Stock	Locomotive	General	Capture Reasons for	Capture reasons for	ARRC Group Interview	Essential (High)
Detection		Failure	reason(s) for failure;				Failure	failure; especially		
			preferably through					those that affect		
			standardized coding					service time on		
								locomotives (FRA)		
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Rolling Stock	Locomotive	General	Integrate Lube Oil	Automatically	ARRC Group Interview	Desired (Medium)
Detection		Systems	or record and report on				Analysis Results	generated Work Order		
			information from					for lube oil analysis		
			diagnostic systems and					(currently done by		
			testing vendors					JDE). Ability to record		
								and report on analysis		
								results.		
Fault/Problem	General	Data from External	Ability to hyperlink to	Rolling Stock	Locomotive	General	Problem Detection	Ability to record,	ARRC Group Interview	Essential (High)
Detection		Asset Management	or complile information				from	attach, or relate info		
		Systems	from external asset				Detectors/Operations	from detectors or		
			management systems					operations that is		
			including current state,					relevant to		
			alerts, and errors /					maintenance (when,		
			issues					where,		
								detector/method,		
								measurement value or		
								fault/problem)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Rolling Stock	Locomotive	General	Diagnostic Data	Locomotive	ARRC Group Interview	Desired (Medium)
Detection		Systems	or record and report on				Integration or	diagnostics sent to		
			information from				Feedback	Siemens for EMD, GE		
			diagnostic systems and					for GP for analysis as		
			testing vendors					part of every 92 day		
								inspection or as		
								needed when a		
								problem. Attach		
								vendor analysis to		
								relevant work order		
								and relate to asset.		
								Vendor usually		
								indicates problem		
								info, procedure for		
								diagnosing further or		
								to handle, and		
								parameters for		
								determining if it is a		
								recurring problem		
Fault/Problem	General	Capture Reasons for	Ability to capture	Rolling Stock	Railcars	General	Capture Reasons for	Ability to capture		Not Set
Detection		Failure	reason(s) for failure;				Failure	reason(s) for failure;	Matrix	
			preferably through					preferably through		
			standardized coding					standardized coding		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Fault/Problem	General	Data from External	Ability to hyperlink to	Rolling Stock	Railcars	General	Integrate Operations	Need to be able to	ARRC Group Interview	Essential (High)
Detection		Asset Management	or complile information				Information	make connections that		
		Systems	from external asset					don't exist today to		
			management systems					inform maintenance -		
			including current state,					e.g. number of miles		
			alerts, and errors /					travelled by cars. For		
			issues					freight include servcie		
								types for wheels and		
								bearings for example		
								and for passenger		
								frequency and		
								duration of use.		
								Integrate from TMS		
								rather than capturing		
								manually.		
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Rolling Stock	Railcars	General	Integrate Event	Event tracking -	ARRC Group Interview	Desired (Medium)
Detection		Systems	or record and report on				Tracking Records	where freight car is		
			information from					located - becomes a		
			diagnostic systems and					resource management		
			testing vendors					issue. Geographic		
								location may just be a		
								named location versus		
								a position on GIS.		
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Rolling Stock	Railcars	General	Automated Analysis	Would like analysis	ARRC Group Interview	Essential (High)
Detection		Systems	or record and report on				and Problem	and possible problems	'	
			information from				Notification	to be brought to users		
			diagnostic systems and					attention without		
			testing vendors					having to look for it.		
								Configurable by		
								subject matter expert.		
								, , , , , , ,		
•	•	•	•	•	•	•	•	•	•	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Fault/Problem Detection  Fault/Problem Detection	Feature General	Data from External Asset Management Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors  Ability to hyperlink to or complile information from external asset management systems	Rolling Stock  Rolling Stock	Asset Class Railcars Railcars	Asset Type General General	Integrate Event Records  Automatic Equipment Identification	Use the event records that came from enroute failures (treat in/out same as enroute failures). Wheel impact load detector (WILD)	ARRC Group Interview  ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Generate Work Orders from Inspection Results	including current state, alerts, and errors / issues  Ability to generate work orders from inspection results (would typically be categorized as corrective actions)	Rolling Stock	Locomotive	General	Generate Work Orders from Inspection Results	automatically drop after a period of time	ARRC Prioritize from Matrix	Essential (High)
Planned Maintenance and Inspection	General	PM Service Calculation	Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)	Rolling Stock	Locomotive	General	Service Required Dates by Asset / Component	Have service required by date based on time period or rate of usage (e.g. mileage) on asset and component level	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	PM Service Calculation	Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)	Rolling Stock	Locomotive	General	PM Service Calculation Factors	For assets as well as components - there are differences between passenger and year-round freight. Not the same weight, power, or tractive requirements.	ARRC Group Interview	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements		Locomotive	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements	ARRC Prioritize from Matrix	Essential (High)
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or preuse inspections with a checklist; support different checklists based on asset category and characteristics	Rolling Stock	Locomotive	General	Trip Inspections - Electronic	Ability to record trip inspections digitally without paper - subject to regulatory requirements and agency approval.	ARRC Group Interview	Optional (Low)
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or pre- use inspections with a checklist; support different checklists based on asset category and characteristics	Rolling Stock	Locomotive	General	Trip Inspections	Pre and post trip inspection - who, date, and whether there is a related work order due to it (FRA requires one to be done the day of a trip - retained 90 days)		Essential (High)
Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	Rolling Stock	Locomotive	General	Automated Compliance Tracking and Planning	Automated compliance tracking / planning of the FRA 92 day inspection - quarterly, semiannual, and annual; formula-based with out of service credits (not done well by JDE)		Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	Rolling Stock	Locomotive	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or	ARRC Prioritize from Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Rolling Stock	Locomotive	General	Digital Workflows for Review and Approval	components  Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Prioritize from Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Rolling Stock	Locomotive	General	PM Notification	Notification or recommended plan for assets and components that are getting close to a service threshold	ARRC Group Interview	Desired (Medium)
Planned Maintenance and Inspection	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	Rolling Stock	Locomotive	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	ARRC Prioritize from Matrix	Essential (High)
Planned Maintenance and Inspection	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	Rolling Stock	Locomotive	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	Incorporate Season	Accommodate	Rolling Stock	Locomotive	General	Integrate Season and	For reliablity or	ARRC Group Interview	Essential (High)
Maintenance and		and Weather	recording season and				Weather	predictive		
Inspection			weather into usage					maintenance planning		
			information for					incorporate weather		
			preventative or					and seasonal		
			predictive maintenance					differences		
			planning and							
DI I			6	D III: C: I				C	ADDOD: W. C	
Planned	General	Inspection Schedules	Support ability to	Rolling Stock	Locomotive	General	Inspection Schedules	Support ability to	ARRC Prioritize from	Essential (High)
Maintenance and			schedule recurring					schedule recurring	Matrix	
Inspection			inspections that will					inspections that will		
			automatically create a					automatically create a		
Diamagad	Cananal	DNA Lab Dlava	work order	Dalling Charle	I	Cananal	Lab Dlava	work order	ADDC Correct Laborations	Desired (Medicus)
Planned	General	PM Job Plan	Ability to setup	Rolling Stock	Locomotive	General	Job Plan	· ·	ARRC Group Interview	Desired (Medium)
Maintenance and			standard template for					labor and parts in		
Inspection			labor and parts for					system to allow for		
			preventative					forecasting of parts		
			maintenance routines					and labor needed		
			to allow for forecasting							
			of parts and labor							
Planned	General	Inspection Data	needed Ability to retain	Rolling Stock	Railcars	General	Inspection Data	Ability to retain	ARRC Prioritize from	Essential (High)
Maintenance and	General	Retention Periods	electronic copieds of	Rolling Stock	RailCars	General	Retention Periods	electronic copieds of	Matrix	Essellual (migh)
Inspection		Retention Perious	records indefinitely;				Retention Perious	records indefinitely;	IVIALITX	
Inspection			Federal agencies					Federal agencies		
			usually allow for only a					usually allow for only a		
			1 '					1 '		
			certain period of time					certain period of time		
I	I	I	I	I	I	I	I		I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	Digital-First	Ability to record	Rolling Stock	Railcars	General	Digital Asset	Prefer to go to asset	ARRC Group Interview	Essential (High)
Maintenance and		Inspections	inspections digitally in				Assessment Inspection	assessment program		
Inspection			the field (with an offline					for day to day		
			mode available);					inspections, annual		
			subject to any					assessments, and use		
			regulatory					digital means (prefer		
			requirements and					same app with		
			workflow requirements					different configuration		
								for passenger and		
								freight cars and		
								subsets)		
Planned	General	PM Service Calculation	Ability to calculate PM	Rolling Stock	Railcars	General	Part Replacement	Use cycle on parts to	ARRC Group Interview	Essential (High)
Maintenance and			serivce requirements				Cycles	determine		
Inspection			on more than one					replacement - freight		
			aspect of asset usage					has hardline		
			(e.g. calendar time,					replacement criteria		
			hours, miles, fuel usage,					for parts. Field		
			etc.)					manual provides		
								guidance on		
								everything thats		
								replaced as a		
								component and why;		
								and in some cases also		
								what can be replaced		
								with what		
Planned	General	Pre-Use and Frequent	1	Rolling Stock	Railcars	General	Inspection Pre and	Perform inbound /	ARRC Group Interview	Essential (High)
Maintenance and		Inspection Checklists	frequent (daily) or pre-				Post Trip	outbound air tests -		
Inspection			use inspections with a					when train leaves		
			checklist; support					station and when train		
			different checklists					gets back		
			based on asset category							
			and characteristics							
	1									



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Rolling Stock	Railcars	General	Digital Inspection Workflow - Requirements and Roles	For digital inspections (subject to regulatory requirements and/or approval) should have means to identify that the logged on user is qualified to perform the inspection or to sign off on the inspection. Potential for tie-in to the LMS (Learning Management System)	ARRC Group Interview	Optional (Low)
Planned Maintenance and Inspection	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	Rolling Stock	Railcars	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	Rolling Stock	Railcars	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	ARRC Prioritize from Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Rolling Stock	Railcars	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	PM Job Plan	Ability to setup	Rolling Stock	Railcars	General	PM Job Plan	Ability to setup	ARRC Prioritize from	Desired (Medium)
Maintenance and			standard template for					standard template for	Matrix	
Inspection			labor and parts for					labor and parts for		
			preventative					preventative		
			maintenance routines					maintenance routines		
			to allow for forecasting					to allow for		
			of parts and labor					forecasting of parts		
			needed					and labor needed		
Planned	General	Inspection Schedules	Support ability to	Rolling Stock	Railcars	General	Inspection Schedules	Support ability to	ARRC Prioritize from	Desired (Medium)
Maintenance and			schedule recurring					schedule recurring	Matrix	
Inspection			inspections that will					inspections that will		
			automatically create a					automatically create a		
			work order					work order		
Planned	General	Common Inspection	Desire a means of	Rolling Stock	Railcars	General	Common Inspection	Desire a means of	ARRC Prioritize from	Essential (High)
Maintenance and		Record to Satisfy	managing asset and				Record to Satisfy	managing asset and	Matrix	
Inspection		Multiple Agencies	inspection information				Multiple Agencies	inspection information		
			that can be used to					that can be used to		
			satisfy muliple agency					satisfy muliple agency		
			regulatory					regulatory		
			requirements (e.g. FRA					requirements (e.g.		
			and FTA)					FRA and FTA)		
Planned	General	PM Service Calculation	Ability to calculate PM	Rolling Stock	Railcars	General	Schedule Work and	Ability to schedule	ARRC Group Interview	Essential (High)
Maintenance and			serivce requirements				Open Work Orders	work on a basis (time		
Inspection			on more than one				Automatically	period, usage, etc.)		
			aspect of asset usage					and have a work order		
			(e.g. calendar time,					opened for that PM,		
			hours, miles, fuel usage,	,				inspection, or other		
			etc.)					work (e.g. air tests		
								done yearly).		
								Currently freight cars		
								schedules more with		
								MOW, articulated		
								cars, and air dumps		
								with the remainder		
								largely reactive.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	Rolling Stock	Railcars	General	Asset Management Inspections	Missing is asset mgmt inspections (sheets for tracking the status of each asset) - showing that 10% covered yearly - shows it was done but no condition assessment data for analytics (it's not in a system)	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Generate Work Orders from Inspection Results	Ability to generate work orders from inspection results (would typically be categorized as corrective actions)	Rolling Stock	Railcars	Freight Cars	Express Yard Integration	Freight inspections are regulatory or failture - UMLER / Express Yard does not track that in spreadsheets. Data goes through Express Yard, updates UMLER. Extract data through reports from Express Yard (does little interface capabilitiy - doesn't connect to other things)	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or pre- use inspections with a checklist; support different checklists based on asset category and characteristics	Rolling Stock	Railcars	Passenger Cars	Scanned Daily Inspection	Passenger railcar looking to go digital with handwritten then scanned for daily inspection (other locs already doing)	ARRC Group Interview	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Failure Analysis	Improved ability to	Rolling Stock	Locomotive	General	Failure Analysis	Improved ability to	ARRC Group Interview	Essential (High)
Work Order			analyze failures and					analyze failures and		
Management			their causes. Currently					their causes.		
			can only rely on what					Currently can only rely		
			has been written on the					on what has been		
			work orders; and its					written on the work		
			necessary to look at					orders; and its		
			each individual work					necessary to look at		
			order.					each individual work		
								order.		
Work Orders and	General	Checklists (Digital)	Ability to define digital	Rolling Stock	Locomotive	General	Record Checklist and	Ability to easily	ARRC Group Interview	Essential (High)
Work Order			(not paper) checklists				Readings	capture and store		
Management			for condition					electronically (rather		
			assessments,					than paper or scanned		
			inspections, or regular					paper) checklist data		
			work activities					and any required		
			connected to a work					readings for a work		
			orders. Checklists save					order		
			the results recorded by							
			the user and are							
			attached to work order							
			and may be available							
			from asset.							
Work Orders and	General	Work Order	Ability to configure	Dolling Charle	Locomotive	General	Work Order	Ability to configure	ARRC Prioritize from	Facontial (High)
Work Orders and Work Order	General	Notifications	Ability to configure notifications for new or	Rolling Stock	Locomotive	General	Notifications	Ability to configure notifications for new	Matrix	Essential (High)
		Notifications					Nouncations		IVIALITX	
Management			outstanding work					or outstanding work		
			including PM,					including PM,		
			inspection, or work					inspection, or work		
			orders to designated					orders to designated		
			users (e.g. on being					users (e.g. on being		
			created or assigned)				I	created or assigned)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Order	Automatically output,	Rolling Stock	Locomotive	General	Work Order	Automatically output	ARRC Group Interview	Essential (High)
Work Order		Attachments	link, and/or display (if				Attachments	procedures, checklists	,	
Management			digital) procedures,					and bills of materials		
			checklists, and bills of					need for work order.		
			materials needed for					Supported currenity		
			work order					by JDE.		
Work Orders and	General	Reporting Tools	Base requirement are	Rolling Stock	Locomotive	General	Reporting Tools	Base requirement are	ARRC Group Interview	Desired (Medium)
Work Order			tools that are better					tools that are better		
Management			than an Excel export.					than an Excel export.		
			There is a need for					There is a need for		
			analytics for trending,					analytics for trending,		
			analysis, failure, and					analysis, failure, and		
			investment planning.					investment planning.		
			Analytics may be in a					Analytics may be in a		
			separate tool but the					separate tool but the		
			information to support					information to support	t	
			it must be reportable.					it must be reportable.		
			Currently Excel is the					Currently Excel is the		
			reporting tool - either					reporting tool - either		
			data is manually					data is manually		
			entered or exported					entered or exported		
			from JDE					from JDE		
Work Orders and	General	Usage Readings	Ability to quickly record	Rolling Stock	Locomotive	General	Usage Readings	Ability to quickly	ARRC Prioritize from	Essential (High)
Work Order			(or import from					record (or import from	Matrix	
Management			external systems) usage					external systems)		
			readings (e.g. miles,					usage readings (e.g.		
			hours)					miles, hours)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Cost Accounting -	Ability to report or pass	Rolling Stock	Locomotive	General	Cost Accounting -	Ability to report or	ARRC Group Interview	Desired (Medium)
Work Order		Handling Changes	through changes to				Changes	pass through changes		
Management			costs on a work order					to costs on a work		
			to the financial system					oder to the financial		
			so it is in sync with the					system so it is in sync		
			work order costs.					with the work order		
								costs. This includes		
								funding source (Opex /		
								Capex) as well.		
								Currently this does not		
								work well with JDE		
Work Orders and	General	Capture All Work on	Ability to easily capture	Rolling Stock	Locomotive	General	Capture All Work	Record all work on a	ARRC Group Interview	Essential (High)
Work Order		Work Orders	all work (inspection,					work order to ensure		
Management			condition assessment,					there is a record of		
			work activity) on a work					work performed and		
			order to ensure that a					costs are consistently		
			record is made of the					captured in the same		
			work and costs are					place. Includes		
			captured consistently					Inspections, PMs,		
								condition		
								assessments, as well		
								as maintenance work		
								regardless of location.		
Work Orders and	General	Mechanic/Technican	Mechanic/Technician	Rolling Stock	Locomotive	General	Track Work as Being	Prefer to have ability	ARRC Group Interview	Desired (Medium)
Work Order		Records Work	records their work on				Done	to easily record work	·	i i
Management			the work order and has					as it is done by		
			access to info they need					mechanic to avoid		
			thrugh the system.					after the fact time		
			Only person with direct					assignment		
			knowledge of work is							
			Mechanic/Technician							
			and they should be able							
			to record their work as							
			it is done.							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Packages	Ability to create pre-	Rolling Stock	Locomotive	General	Work Packages	Ability to create pre-	ARRC Group Interview	Essential (High)
Work Order			defined work order					defined work order		
Management			template with a					template (benchmark)		
			standard set of tasks for	r				with a standard set of		
			a particular inspection,					tasks for a particular		
			condition assessement,					inspection, condition		
			complaint, etc					assessement, bad		
								order code,		
								etc.(similar to a PM		
								Job Plan)		
Work Orders and	General	Mobile Digital Work	Record data where and	Rolling Stock	Locomotive	General	Mobile Digital Work	Record data where	ARRC Group Interview	Essential (High)
Work Order		Orders	when the work occurs				Orders	and when the work	·	
Management			(create, update, and					occurs (create,		
			close) through mobile					update, and close		
			digital work orders that					work orders). Mostly		
			support an offline					for gang jobs in the		
			mode.					field in the summer.		
Work Orders and	General	Categorize Costs	Abililty to categorize	Rolling Stock	Locomotive	General	Categorize Costs	Abililty to categorize	ARRC Group Interview	Desired (Medium)
Work Order		(OPEX/CAPEX)	costs by OPEX/CAPEX				(OPEX/CAPEX)	costs by OPEX/CAPEX		
Management			categories and					categories and		
			subcatgory (e.g. OPEX -					subcatgory (e.g. OPEX		
			Preventative (e.g.					Preventative (e.g.		
			Inspection), Corrective,					Inspection),		
			or Break-Fix (must fix					Corrective, or Break-		
			now) and CAPEX (e.g.					Fix (must fix now) and		
			ARRC, Agency (if					CAPX (e.g. ARRC,		
			application) or Other (if					Agency (if application)		
			applicable)					or Other (if applicable)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Checklist Criteria for	Ability to define criteria	Rolling Stock	Locomotive	General	Checklist Criteria for	Ability to define	ARRC Group Interview	Desired (Medium)
Work Order		Repair - Create Work	indicating				Repair - Create Work	criteria for repair or		
Management		Order	repair/adjustment or				Order	replacement on		
			replacement is required					checklist items (e.g.		
			on checklist items.					wheel size is an		
			Automatically create a					example). A work		
			work order to with the					order to address is		
			task or add a line item					automatically created		
			to work order if already					/ or a line item on a		
			created from this					work order if already		
			checklist.					created from this		
								checklist)		
Work Orders and	General	Task Coding on Work	1	Rolling Stock	Locomotive	General	Task Coding on Work	Ability to code tasks	ARRC Group Interview	Desired (Medium)
Work Order		Orders	work orders that may				Orders	on work orders that		
Management			include system,					may include system,		
			subsystem, component,					subsystem,		
			position, and activity					component, position,		
			(e.g. inspect, install,					and activity (e.g.		
			remove, repair, replace)					inspect, install,		
			for accurate					remove, repair,		
			information on					replace) for accurate		
			maintenance activity					information on		
			and costs					maintenance activity		
								and costs		
Work Orders and	General	Mechanic/Technican	Mechanic/Technician	Rolling Stock	Locomotive	General	Who Worked on Work	· · · · · · · · · · · · · · · · · · ·	ARRC Group Interview	Essential (High)
Work Order		Records Work	records their work on				Order	training, and refresher		
Management			the work order and has					purposes would help		
			access to info they need					to have clarity of		
			thrugh the system.					worked on work		
			Only person with direct					orders		
			knowledge of work is							
			Mechanic/Technician							
			and they should be able							
			to record their work as							
			it is done.							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Minor Work	Ability to quickly record	Rolling Stock	Locomotive	General	Minor Work	Ability to quickly	ARRC Group Interview	Essential (High)
Work Order			minor work on a work					record minor work		
Management			order against an asset					against assets or		
			such as inspection and					components such as		
			service (i.e. objective is					inspection and service		
			to avoid using a					(i.e. ability to avoid		
			standing or bucket work					using bucket/generic		
			order that is not asset-					work order for non-		
			specific for non-parts					parts work less than 1		
			work less than 1 hour)					hour)		
Work Orders and	General	Reimbursable Work	Ability to indicate that	Rolling Stock	Locomotive	General	Shop Rates / Work For	Locomotives are not in	ARRC Group Interview	Optional (Low)
Work Order			work is reimbursable by				Others	UMLER / Interchange -	·	
Management			another party and					a few were leased a		
			output can be prepared					long time ago and at		
			to support Finance					some points some		
								work was done on		
								Army locomotives.		
								Ability to record work		
								for others for billing.		
Work Orders and	General	End-User Field Service	Ability for end users to	Rolling Stock	Locomotive	General	End-User Field Service	Ability for end users to	ARRC Prioritize from	Essential (High)
Work Order			quickly record any field	0 3 3 3 3				quickly record any	Matrix	,
Management			service performed (for					field service		
			efficiency and					performed (for		
			consistency likely					efficiency and		
			requires a digital					consistency likely		
			mobile offline solution)					requires a digital		
			,					mobile offline		
								solution)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Custom Categorize	Ability to categorize	Rolling Stock	Locomotive	General	Custom Categorize	Ability to categorize	ARRC Prioritize from	Essential (High)
Work Order		Work Orders	work orders in a custom				Work Orders	work orders in a	Matrix	
Management			way such as by					custom way such as by		
			campaign, program, or					campaign, program, or		
			season. This may aid in					season. This may aid		
			grouping work as part					in grouping work as		
			of prioritization and					part of prioritization		
			scheduling.					and scheduling.		
Work Orders and	General	Multiple Shop / Work	Accommodate multiple	Rolling Stock	Locomotive	General	Multiple Shop / Work	Accommodate	ARRC Group Interview	Ontional (Low)
Work Order	General	Locations	shops and work	Noming Stock	Locomotive	General	Locations	multiple shop or work	Arrice Group interview	Optional (Low)
Management		Locations	locations including				Locations	locations; which all		
ivialiagement			ARRC shops and work in					may offer PM or		
			the field					services but not all		
			the neid					corrective or rebuild /		
								overhaul		
Work Orders and	General	Integrate Financial	Work Order system	Rolling Stock	Locomotive	General	Integration with	Work Order system	ARRC Group Interview	Essential (High)
Work Order		System	must be integrated or				Financial System	must be integrated /	·	
Management		,	interfaced with the				,	interfaced with the		
			financial system					financial system;		
			(currently JDE)					currently JDE.		
Work Orders and	General	Estimated Effort on	Ability to set an	Rolling Stock	Locomotive	General	Estimated Effort on	Ability to set an	ARRC Prioritize from	Desired (Medium)
Work Order		Work Orders	estimated labor or costs				Work Orders	estimated labor or	Matrix	
Management			on work orders to aid in					costs on work orders		
			planning and scheduling					to aid in planning and		
			or to provide estimates					scheduling or to		
			to end users					provide estimates to		
								end users		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Mechanic/Technican Records Work	Mechanic/Technician records their work on the work order and has access to info they need thrugh the system. Only person with direct knowledge of work is Mechanic/Technician and they should be able to record their work as it is done.		Locomotive	General	Record of Work by Mechanic	Only person who knows what is happening on the work order is the mechanic and they should have ability to see the info they need and also record as it is done (as easily as possible)		Essential (High)
Work Orders and Work Order Management	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution		Locomotive	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	SLAs for Response Times	Support the ability to set SLAs for response time on asset groups or categories and to record performance against them	Rolling Stock	Locomotive	General	SLAs for Response Times	Support the ability to set SLAs for response time on asset groups or categories and to record performance against them	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	Rolling Stock	Locomotive	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Assign Work Orders	Ability to assign work	Rolling Stock	Locomotive	General	Assign Work Orders	Ability to assign work	ARRC Prioritize from	Essential (High)
Work Order			orders to technicians					orders to technicians	Matrix	
Management			within the appropriate					within the appropriate		
			skillset pool and/or					skillset pool and/or		
			geographic location					geographic location		
Work Orders and	General	Work Order Source	Ability to record the	Rolling Stock	Locomotive	General	Work Order Source	Ability to record the	ARRC Prioritize from	Essential (High)
Work Order			source of a work order					source of a work order	Matrix	
Management			(e.g. result of an					(e.g. result of an		
			inspection, end user					inspection, end user		
			request, operations					request, operations		
			observation,					observation,		
			alarm/notification, or					alarm/notification, or		
			internally initiated)					internally initiated)		
Work Orders and	General	Cost Reporting	Ability to see	Rolling Stock	Locomotive	General	Cost Reporting	Ability to see	ARRC Prioritize from	Desired (Medium)
Work Order			aggreggate costs on					aggreggate costs on	Matrix	
Management			assets by basic criteria					assets by basic criteria		
			including System,					including System,		
			"Type", Time Period,					"Type", Time Period,		
			PM, Corrective or Break-					PM, Corrective or		
			Fix, By OPEX/CAPEX (or					Break-Fix, By		
			funding source), by					OPEX/CAPEX (or		
			hierarchy or geography					funding source), by		
								hierarchy or		
								geography		
Work Orders and	General	Record GPS Locations	Ability to record GPS	Rolling Stock	Locomotive	General	Record GPS Locations	Ability to record GPS	ARRC Prioritize from	Desired (Medium)
Work Order		to Work Location	locations (from device				to Work Location	locations (from device	Matrix	
Management			itself or selection from					itself or selection from		
			a map) for work order					a map) for work order		
			locations					locations		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Contractor or Vendor	Ability to record work	Rolling Stock	Locomotive	General	Contractor or Vendor	Ability to record work	ARRC Prioritize from	Essential (High)
Work Order		Work	details (possibly				Work	details (possibly	Matrix	
Management			through an import)					through an import)		
			performed by					performed by		
			contractors or vendors					contractors or vendors		
			on work orders					on work orders		
Work Orders and	General	End-Users and Work	Ability for end users	Rolling Stock	Locomotive	General	End-Users and Work	Ability for end users	ARRC Prioritize from	Essential (High)
Work Order		Orders	(e.g. Operations) to				Orders	(e.g. Operations) to	Matrix	
Management			initiate work requests					initiate work requests		
			through a complaint					through a complaint		
			process and to see					process and to see		
			status and history of					status and history of		
			work orders					work orders		
Work Orders and	General	Parts on Work Order	Ability to specify parts	Rolling Stock	Locomotive	General	Parts on Work Order	Ability to specify parts	ARRC Prioritize from	Essential (High)
Work Order			on work order and					on work order and	Matrix	
Management			whether they came					whether they came		
			from inventory, were					from inventory, were		
			ordered, or purchaed					ordered, or purchaed		
			with a purchasing card					with a purchasing card		
Work Orders and	General	Record Checklist and	Ability to capture and	Rolling Stock	Locomotive	General	Record Checklist and	Ability to capture and	ARRC Prioritize from	Essential (High)
Work Order		Results	store checklist form and				Results	store checklist form	Matrix	
Management			recorded data					and recorded data		
			electronically (rather					electronically (rather		
			than paper or scanned					than paper or scanned		
			paper) for a work order					paper) for a work		
								order		
Work Orders and	General	Scheduling and	Ability to plan and	Rolling Stock	Locomotive	General	Scheduling and	Ability to plan and	ARRC Prioritize from	Essential (High)
Work Order		Planning	schedule work within				Planning	schedule work within	Matrix	
Management			the system rather than					the system rather than		
			having to track outside					having to track outside		
			of it (e.g. Excel)					of it (e.g. Excel)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reassign, Split, or Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event	Rolling Stock	Locomotive	General	Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event		Desired (Medium)
Work Orders and Work Order Management	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Rolling Stock	Locomotive	General	Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	Rolling Stock	Locomotive	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	Rolling Stock	Locomotive	General		Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy		Rolling Stock	Locomotive	General	Work Orders against Assets in Hierarchy	Allow for a work order	Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Prioritization of Work	Ability to prioritze or	Rolling Stock	Locomotive	General	Prioritization of Work	Ability to prioritze or	ARRC Prioritize from	Essential (High)
Work Order		Orders	rank work orders; a				Orders	rank work orders; a	Matrix	
Management			default prioritzation					default prioritzation		
			may be based on					may be based on		
			criticality rating of asset					criticality rating of		
								asset		
Work Orders and	General	Reporting Tools	Base requirement are	Rolling Stock	Railcars	General	Reporting Needs	Repair report to yard,	ARRC Group Interview	Essential (High)
Work Order			tools that are better					bad order list,		
Management			than an Excel export.					maintenance		
			There is a need for					summary, billing,		
			analytics for trending,					component usage -		
			analysis, failure, and					high-used components		
			investment planning.					such as air valves and		
			Analytics may be in a					wheels (done		
			separate tool but the					manually), car mileage		
			information to support					(reported every month		
			it must be reportable.					in TMS), fleet		
			Currently Excel is the					utilization		
			reporting tool - either							
			data is manually							
			entered or exported							
			from JDE							
Work Orders and	General	Scheduling and	Ability to plan and	Rolling Stock	Railcars	General	Work Planning	Freight is largely	ARRC Group Interview	Essential (High)
Work Order		Planning	schedule work within					corrective - about 10%		
Management			the system rather than					of it is planned which		
			having to track outside					is off asset inspections		
			of it (e.g. Excel)					and mods for capital		
								management - 90% of		
								work corrective		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Reporting Tools	Base requirement are	Rolling Stock	Railcars	General	Maintenance Analytics	Bad orders on railcars;	ARRC Group Interview	Essential (High)
Work Order			tools that are better				and Trends	how long to repair;		
Management			than an Excel export.					see trends on		
			There is a need for					components; defect		
			analytics for trending,					failures. For example		
			analysis, failure, and					Passenger would like		
			investment planning.					to see they can		
			Analytics may be in a					"toilets" and get the		
			separate tool but the					trend over time - so		
			information to support					they know what have		
			it must be reportable.					to do for parts.		
			Currently Excel is the							
			reporting tool - either							
			data is manually							
			entered or exported							
			from JDE							
Work Orders and	General	Reimbursable Work	Ability to indicate that	Rolling Stock	Railcars	General	Shop Rates	_ ·	ARRC Group Interview	Desired (Medium)
Work Order			work is reimbursable by	<u>'</u>				is flat rate for ARRC		
Management			another party and					even thought may		
			output can be prepared					take longer and the		
			to support Finance					parts cost more than		
								in the Lower 48		
Work Orders and	General	Complaint / Cause /	Support the ability to	Rolling Stock	Railcars	General	Work Order 3C	Complaint / Cause /	ARRC Group Interview	Optional (Low)
Work Order		Correction (3C's)	record complaint,					Correction - is coded	·	
Management		, ,	cause, and correction in					for frieght. Have a bit		
			a standardized way for					more for passenger.		
			more efficient failure					Hard copies of daily		
			analysis and					sheets complaints for		
			identification of					92 days rather than		
			common issues, causes,					indefinitely freight		
			and their resolution					cars are 3 years for		
								back data - but don't		
								have to keep hard		
								copies		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Task Coding on Work Orders	Ability to code tasks on work orders that may include system, subsystem, component, position, and activity (e.g. inspect, install, remove, repair, replace) for accurate information on maintenance activity and costs		Railcars	General	Work Order Level of Detail	Work orders must be able to accommodate multiple lines with coding for system/component (e.g. truck, wheel, decking, electrical) and activity (e.g. diagnose, replace, etc.)	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Categorize Costs (OPEX/CAPEX)	Abililty to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX - Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)	Rolling Stock	Railcars	General	Corrective vs Planned Maintenance	Ability to look at the corrective vs planned mainteance. Trend analysis. There are differences in season and perhaps quarterly e.g. Wheels and Air	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	End-Users and Work Orders	Ability for end users (e.g. Operations) to initiate work requests through a complaint process and to see status and history of work orders	Rolling Stock	Railcars	General	Bad Order Report	Receives list every morning of what is in bad order status and there is a small desc of what it is. What does not know is if there are other defects that have been reported or outstanding. There are basic essential tasks that occur whenever a car comes into the shop.		Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	Rolling Stock	Railcars	General	Maintenance Coding for Consistency and Ease of Use	Inconsistent data due to different people who do not always work on the same asset; need easy to use input. Users past experience everything was coded but at ARRC a lot is manual.	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Reporting Tools	Base requirement are tools that are better than an Excel export. There is a need for analytics for trending, analysis, failure, and investment planning. Analytics may be in a separate tool but the information to support it must be reportable. Currently Excel is the reporting tool - either data is manually entered or exported from JDE	Rolling Stock	Railcars	General	Maintenance Repair History by Asset / Component	Not able to track muliple issues for one car unless you remember and go back and look.	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Reporting Tools	Base requirement are	Rolling Stock	Railcars	General	Reporting - Mock Ups	Recommended they	ARRC Group Interview	Desired (Medium)
Work Order			tools that are better					mock up reports and		
Management			than an Excel export.					dashboard (not just		
			There is a need for					static but also		
			analytics for trending,					dynamic) that would		
			analysis, failure, and					replace what they		
			investment planning.					manually do and		
			Analytics may be in a					remove rote work.		
			separate tool but the					Also a means of		
			information to support					gathering more		
			it must be reportable.					detailed requirements		
			Currently Excel is the					for data or integration		
			reporting tool - either					that may otherwise be		
			data is manually					missed.		
			entered or exported							
			from JDE							
Work Orders and	General	Integrate Financial	Work Order system	Rolling Stock	Railcars	General	Integrate Financial	Work Order system	ARRC Prioritize from	Optional (Low)
Work Order		System	must be integrated or				System	must be integrated or	Matrix	
Management			interfaced with the					interfaced with the		
			financial system					financial system		
			(currently JDE)					(currently JDE)		
Work Orders and	General	SLAs for Response	Support the ability to	Rolling Stock	Railcars	General	SLAs for Response	Support the ability to	ARRC Prioritize from	Optional (Low)
Work Order		Times	set SLAs for response				Times	set SLAs for response	Matrix	
Management			time on asset groups or					time on asset groups		
			categories and to					or categories and to		
			record performance					record performance		
			against them					against them		
Work Orders and	General	Multiple Shop / Work	Accommodate multiple	Rolling Stock	Railcars	General	Multiple Shop / Work	Accommodate	ARRC Prioritize from	Optional (Low)
Work Order		Locations	shops and work				Locations	multiple shops and	Matrix	
Management			locations including					work locations		
			ARRC shops and work in					including ARRC shops		
			the field					and work in the field		
Work Orders and	General	Capture Usage	Ability to capture the	Rolling Stock	Railcars	General	Capture Usage		ARRC Prioritize from	Desired (Medium)
Work Order		Readings on Work	current usage readings				Readings on Work	current usage readings	Matrix	
Management		Orders	(hours, miles, etc.) on				Orders	(hours, miles, etc.) on		
			work orders and PMs					work orders and PMs		
			when they are opened					when they are opened		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	Rolling Stock	Railcars	General	Assign Work Orders	, ,	ARRC Prioritize from Matrix	Not Set
Work Orders and Work Order Management	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	Rolling Stock	Railcars	General	Cost Reporting	· '	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	Rolling Stock	Railcars	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations		Not Set
Work Orders and Work Order Management	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.		Railcars	General	Custom Categorize Work Orders	, ,	ARRC Prioritize from Matrix	Not Set



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	Rolling Stock	Railcars	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to end users		Railcars	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to end users	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	Rolling Stock	Railcars	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	ARRC Prioritize from Matrix	Not Set
Work Orders and Work Order Management	General	Record Checklist and Results	Ability to capture and store checklist form and recorded data electronically (rather than paper or scanned paper) for a work order	Rolling Stock	Railcars	General	Record Checklist and Results	Ability to capture and store checklist form and recorded data electronically (rather than paper or scanned paper) for a work order	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Rolling Stock	Railcars	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	Rolling Stock	Railcars	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	ARRC Prioritize from Matrix	Not Set
Work Orders and Work Order Management	General	Mechanic/Technican Records Work	Mechanic/Technician records their work on the work order and has access to info they need thrugh the system. Only person with direct knowledge of work is Mechanic/Technician and they should be able to record their work as it is done.		Railcars	General	Mechanic/Technican Records Work	· '	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Rolling Stock	Railcars	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Matrix	Essential (High)
Work Orders and Work Order Management	General	Failure Analysis	Improved ability to analyze failures and their causes. Currently can only rely on what has been written on the work orders; and its necessary to look at each individual work order.	Rolling Stock	Railcars	General	Failure Analysis	Improved ability to analyze failures and their causes. Currently can only rely on what has been written on the work orders; and its necessary to look at each individual work order.	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Work Order Notifications	notifications for new or outstanding work including PM, inspection, or work orders to designated users (e.g. on being created or assigned)	Rolling Stock	Railcars	General	Work Order Notifications	Ability to configure notifications for new or outstanding work including PM, inspection, or work orders to designated users (e.g. on being created or assigned)	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)		Railcars	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)	ARRC Prioritize from Matrix	Not Set
Work Orders and Work Order Management	General	End-User Field Service	Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	Rolling Stock	Railcars	General	End-User Field Service	Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	Rolling Stock	Railcars	General	Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Rolling Stock	Railcars	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Order	Automatically output,	Rolling Stock	Railcars	General	Work Order	Automatically output,	ARRC Prioritize from	Optional (Low)
Work Order		Attachments	link, and/or display (if				Attachments	link, and/or display (if	Matrix	
Management			digital) procedures,					digital) procedures,		
			checklists, and bills of					checklists, and bills of		
			materials needed for					materials needed for		
			work order					work order		
Work Orders and	General	Reassign, Split, or	Ability to reassign, split	Rolling Stock	Railcars	General	Reassign, Split, or	Ability to reassign,	ARRC Prioritize from	Not Set
Work Order		Child Work Order	off part of a work order,				Child Work Order	split off part of a work	Matrix	
Management			or create a child work					order, or create a child		
			order so that more than					work order so that		
			one group can record					more than one group		
			activity against a work					can record activity		
			order yet still maintain					against a work order		
			the link to the single					yet still maintain the		
			event					link to the single event		
Work Orders and	General	Checklist Criteria for	Ability to define criteria	Rolling Stock	Railcars	General	Checklist Criteria for	Ability to define	ARRC Group Interview	Optional (Low)
Work Order		Repair - Create Work	indicating				Repair - Create Work	criteria for repair or		
Management		Order	repair/adjustment or				Order	replacement on		
			replacement is required					checklist items (e.g.		
			on checklist items.					wheel size is an		
			Automatically create a					example). A work		
			work order to with the					order to address is		
			task or add a line item					automatically created		
			to work order if already					/ or a line item on a		
			created from this					work order if already		
			checklist.					created from this		
								checklist)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Packages		Rolling Stock	Railcars	General	Work Packages	Ability to create pre-	ARRC Group Interview	Essential (High)
Work Order			defined work order					defined work order		
Management			template with a					template (benchmark)		
			standard set of tasks for					with a standard set of		
			a particular inspection,					tasks for a particular		
			condition assessement,					inspection, condition		
			complaint, etc					assessement, bad		
								order code,		
								etc.(similar to a PM		
								Job Plan)		
				- III I	- "		- 10 1 1			
Work Orders and	General	End-Users and Work	Ability for end users	Rolling Stock	Railcars	General	Bad Order -Work	Initiate a work order	ARRC Group Interview	Essential (High)
Work Order		Orders	(e.g. Operations) to				Order Initiation	from Bad Order report		
Management			initiate work requests					data from TMS -		
			through a complaint					convert Bad Order		
			process and to see					coding to work order		
			status and history of					coding with multiple		
			work orders					lines if needed		
Work Orders and	General	Minor Work	Ability to quickly record	Rolling Stock	Railcars	General	Minor Work	Ability to quickly	ARRC Group Interview	Optional (Low)
Work Order	General	I TOTAL	minor work on a work	Troming Stock	Trailed 5	Certeral	William Work	record minor work	, and Group meer view	optional (2011)
Management			order against an asset					against specific railcars		
			such as inspection and					such as inspection and		
			service (i.e. objective is					service (i.e. ability to		
			to avoid using a					avoid using		
			standing or bucket work					bucket/generic work		
			order that is not asset-					order for non-parts		
			specific for non-parts					work less than 30		
			work less than 1 hour)					minutes)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	Rolling Stock	Railcars	General	Record Checklist and Results	Ability to easily capture and store electronically (rather than paper or scanned paper) checklist data and any required readings for a work order	ARRC Group Interview	
Work Orders and Work Order Management	General	Categorize Costs (OPEX/CAPEX)	Abililty to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX - Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)		Railcars	General	Categorize Costs (OPEX/CAPEX)	Abililty to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPX (e.g. ARRC, Agency (if application) or Other (if applicable)		Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Mobile Digital Work Orders	Record data where and when the work occurs (create, update, and close) through mobile digital work orders that support an offline mode.	Rolling Stock	Railcars	General	Mobile Digital Work Orders	Record data when it occurs in the field by those doing the work two examples (a) work in Whittier and during the passenger season Talkeetna and Seward (b) car men addressing bad orders for release in the yard; create a work order and add parts as needed directly		Essential (High)
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	Rolling Stock	Railcars	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Task Coding on Work Orders	Ability to code tasks on work orders that may include system, subsystem, component, position, and activity (e.g. inspect, install, remove, repair, replace) for accurate information on maintenance activity and costs		Railcars	Freight Cars	Work Order Coding	Express Yard has the detail captured for diagnose, replace, etc standard used for ARRC as well as interchange work	ARRC Group Interview	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance	Rolling Stock	Railcars	Freight Cars	Interchange Work and Billing	<u> </u>	ARRC Group Interview	
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Rolling Stock	Railcars	Freight Cars	Tracking by Asset	JDE for freight is tracking time and parts put on cars - but by series. Use Work Order from JDE for Express Yard and there is an interface program.	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Rolling Stock	Railcars	Passenger Cars	Work Order Entry		ARRC Group Interview	Optional (Low)
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Rolling Stock	Railcars	Passenger Cars	Record Maintenance by Asset	Sometime passenger car is on a consist basis - so costs are not necessarily directly comparable	ARRC Group Interview	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Scheduling and Planning	Ability to plan and schedule work within the system rather than having to track outside of it (e.g. Excel)	Rolling Stock	Railcars	Passenger Cars		Passenger railrcars manages all kinds of committtments and plans (e.g. winterize / non-winterize) through Excel. Work downtime around operations - utilization of passenger cars is about 100% in the summer so small windows for maintenance	ARRC Group Interview	Optional (Low)
Materials Management	General	Material Inventory Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)	Rolling Stock	Locomotive	General	Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)		Desired (Medium)
Materials Management	General	Equipment Check-Out / Check-In	Mechanism to check out and check in equipment (particularly portable equipment that may be issued to a user)	Rolling Stock	Locomotive	General		Mechanism to check out and check in equipment (particularly portable equipment that may be issued to a user)	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Inventory Purchase	Purchase plan based on	Rolling Stock	Locomotive	General	Inventory Purchase	Purchase plan based	ARRC Group Interview	Desired (Medium)
Management		Plan	forecasted preventative				Plan	on forecasted		
			and overhaul work					preventative and		
			(done manually now					overhaul work for		
			but should be able to					season (done		
			forecast based on work					manually but should		
			packages / planned					be able to forecast		
			work orders in system)					based on job plans in		
								system)		
Materials	General	Component Parts -	Ability to designate as	Rolling Stock	Locomotive	General	Component Parts -		ARRC Group Interview	Desired (Medium)
Management		Criticality	critical parts or				Criticality	critical parts or		
			components that have					components that have		
			long lead times, are					long lead times, are		
			obsolete, or are costly					obsolete, or are costly		
			or difficult to ship when					or difficult to ship		
			needed					when needed		
Materials	General	Min-Max Parts	Inventory minimum and	Rolling Stock	Locomotive	General	Min-Max Parts	Inventory on-hand	ARRC Group Interview	Essential (High)
Management		Inventory	maximum on-hand				Inventory	requirements that is		
			requirements that is					based on asset and		
			based on asset and					component mix as		
			component mix;					well as upcoming		
			including when assets					season expectations		
			are added or surplused;							
			and seasonal changes							
Materials	General	Component Parts -	Ability to identify date	Rolling Stock	Locomotive	General	Component Parts -	Ability to identify date		Desired (Medium)
Management		Obsolescence	and category of				Obsolescence	and category of	Matrix	
			obsolescence by vendor					obsolescence by		
			for asset or its					vendor for asset or its		
			component parts (e.g.					component parts (e.g.		
			vendor sends notice					vendor sends notice		
			with date of end of					with date of end of		
			support)					support)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials Management	General	Equipment Check-Out / Check-In	Mechanism to check out and check in equipment (particularly portable equipment that may be issued to a user)	Rolling Stock	Railcars	General	Equipment Check-Out / Check-In	Mechanism to check out and check in equipment (particularly portable equipment that may be issued to a user)	ARRC Prioritize from Matrix	Not Set
Materials Management	General	Material Inventory Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)	Rolling Stock	Railcars	General	Material Inventory Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)		Not Set
Materials Management	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	Rolling Stock	Railcars	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Min-Max Parts Inventory	Inventory minimum and maximum on-hand requirements that is based on asset and component mix; including when assets are added or surplused; and seasonal changes	Rolling Stock	Railcars	General	Min-Max Parts Inventory	Inventory minimum and maximum on-hand requirements that is based on asset and component mix; including when assets are added or surplused; and seasonal changes	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Inventory Purchase	Purchase plan based on	Rolling Stock	Railcars	General	Inventory Purchase	Purchase plan based	ARRC Prioritize from	Optional (Low)
Management		Plan	forecasted preventative				Plan	on forecasted	Matrix	
			and overhaul work					preventative and		
			(done manually now					overhaul work (done		
			but should be able to					manually now but		
			forecast based on work					should be able to		
			packages / planned					forecast based on		
			work orders in system)					work packages /		
								planned work orders		
								in system)		
Materials	General	Component Parts -	Ability to designate as	Rolling Stock	Railcars	General	Component Parts -	Ability to designate as		Desired (Medium)
Management		Criticality	critical parts or				Criticality	critical parts or	Matrix	
			components that have					components that have		
			long lead times, are					long lead times, are		
			obsolete, or are costly					obsolete, or are costly		
			or difficult to ship when needed					or difficult to ship when needed		
Component Tracking	General	Component Service	Ability to specify	Rolling Stock	Locomotive	General	Component Service	Ability to specify	ARRC Group Interview	Essential (High)
and Rebuild	General	Life	expected service life of	Noming Stock	Locomotive	General	Life	expected service life	Anne Group interview	L33CHdal (High)
and Resulta		Line	a component or part				Line	of a component / part.		
								If not serial number		
								tracked then can that		
								part be removed, and		
								rebuilt, or put on		
								another asset?		
Component Tracking	General	Usage for Components	Calculated usage based	Rolling Stock	Locomotive	General	Usage for Components	Based on asset(s)	ARRC Group Interview	Desired (Medium)
and Rebuild			on the usage measures					installed in; usage of		
			for asset(s) installed in;					components for		
			for reliablity and					reliablity and		
			preventative					preventative		
			maintenance					maintenance		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking	General	Component	Track when	Rolling Stock	Locomotive	General	Component	Track when	ARRC Group Interview	Essential (High)
and Rebuild		Installation and	components are				Installation and	components are		
		Removal	installed, removed, and				Removal	installed, removed,		
			their disposition (e.g.					and their disposition		
			transferred, shelved,					(e.g. transferred,		
			disposed of, rebuilt)					shelved, disposed of,		
			May be differences in					rebuilt) May be		
			handling with					differences in handling		
			components that have					with components that		
			serial numbers vs those					have serial numbers vs		
			that do not.					those that do not. For		
								disposition reporting		
								at end of life is		
								assuemd that all		
								locomotive		
								components are		
								present regardless if		
								they have been		
								changed out during		
								the lifetime		
Component Tracking	General	Part Rebuild	Indicator that a part in	Rolling Stock	Locomotive	General	Part Rebuild	Indicator that a part in	ARRC Group Interview	Desired (Medium)
and Rebuild	General	are nebuna	inventory or being	Thomas Stock	Locomotive	General		inventory or being	Time Group interview	Desired (Mediani)
and Nebuliu			installed is a rebuild					installed is a rebuild		
I	I	I	inistanca is a rebuild	I	I		I	instanca is a rebuild	I I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking	General	Component	Ability to identify	Rolling Stock	Locomotive	General	Component	Compatiblity of	ARRC Group Interview	Desired (Medium)
and Rebuild		Compatibility	compatibility of				Compatiblity	components with		
			components with asset					asset configurations		
			configurations					and different		
								procedures for		
								components or		
								versions of them in		
								different asset		
								configurations (e.g.		
								PTC components in		
								different series;		
								locomotive units have		
								different		
								characteristics and		
								OEM requirements		
								between generations		
								of same model)		
Component Tracking	General	Component Serial	Ability to track	Rolling Stock	Locomotive	General	Component Serial	Ability to track	ARRC Group Interview	Essential (High)
and Rebuild		Number Tracking	components by serial				Number Tracking	components by serial		
			number and when they					number and when		
			were put on, taken off,					they were put on,		
			moved to another asset					taken off, moved to		
			or put on shelf (serial					another asset or put		
			number of part not on					on shelf (serial		
			unit could require					number of part not on		
			component to be an					unit could require		
			"asset")					component to be an		
								"asset")		
Component Tracking	General	Component	Ability to identify	Rolling Stock	Railcars	General	Component	Ability to identify	ARRC Prioritize from	Not Set
and Rebuild		Compatibility	compatibility of				Compatibility	compatibility of	Matrix	
			components with asset					components with		
			configurations					asset configurations		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking and Rebuild	General	Usage for Components	Calculated usage based on the usage measures for asset(s) installed in; for reliablity and preventative maintenance	Rolling Stock	Railcars	General	Component Usage (Miles and Time)	Wear and tear comparison over time is manual; no miles to break down; all manually pulled out and crunched	ARRC Group Interview	Essential (High)
Component Tracking and Rebuild	General	Component Service Life	Ability to specify expected service life of a component or part	Rolling Stock	Railcars	General	Component Reliability Tracking	No availablity or realiablity of components in any way today	ARRC Group Interview	Desired (Medium)
Component Tracking and Rebuild	General	Component Serial Number Tracking	Ability to track components by serial number and when they were put on, taken off, moved to another asset or put on shelf (serial number of part not on unit could require component to be an "asset")		Railcars	General	Component Serial Number Tracking	Ability to track	ARRC Prioritize from Matrix	Not Set
Component Tracking and Rebuild	General	Component Service Life	Ability to specify expected service life of a component or part	Rolling Stock	Railcars	General	Mark Parts for Installed Components as Obsolete or Special Order	There are cars that are well built and good	ARRC Group Interview	Desired (Medium)
Component Tracking and Rebuild	General	Part Rebuild	Indicator that a part in inventory or being installed is a rebuild	Rolling Stock	Railcars	General	Part Rebuild	Indicator that a part in inventory or being installed is a rebuild	ARRC Prioritize from Matrix	Not Set



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Trackin	g General	Component	Track when	Rolling Stock	Railcars	Passenger Cars	Track Transfer Parts of	Passenger cars (FTA	ARRC Group Interview	Desired (Medium)
and Rebuild		Installation and	components are				Assets (FTA)	funded) have rules to		
		Removal	installed, removed, and					follow on the transfer		
			their disposition (e.g.					of components or		
			transferred, shelved,					child assets from one		
			disposed of, rebuilt)					car to another as well		
			May be differences in					as ultimate surplus or		
			handling with					disposition		
			components that have							
			serial numbers vs those							
			that do not.							
Warranty	General	Warranty	Ability to specify for	Rolling Stock	Locomotive	General	Warranty	Ability to specify for	ARRC Group Interview	Essential (High)
Management			parts whether a serial					parts whether a serial		
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		
Warranty	General	Warranty	Ability to specify for	Rolling Stock	Railcars	General	Warranty	Ability to specify for	ARRC Prioritize from	Not Set
Management			parts whether a serial					parts whether a serial	Matrix	
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Capital Projects	Improved reporting on	Rolling Stock	Locomotive	General	Capital Projects	Improved reporting on	ARRC Prioritize from	Essential (High)
Campaigns		Reporting	capital projects				Reporting	capital projects	Matrix	
			including estimates for					including estimates for		
			labor, P-Card					labor, P-Card		
			purchases, etc. prior to					purchases, etc. prior		
			posting in the finance					to posting in the		
			system (perhaps					finance system		
			estimated from Work					(perhaps estimated		
			Order entries) in					from Work Order		
			addition to funding by					entries)		
			year and by funding							
			source							
Capital Projects and	General	Replacement Plan	For multi-year planning	Rolling Stock	Locomotive	General	Investment Plan	Need ability to	ARRC Group Interview	Desired (Medium)
Campaigns		(ULB / Obsolescence)	support replacement				Placeholders	designate budget		
			planning including age,					placeholders in the		
			useful life benchmark,					asset plan as an		
			obsolescence, costs,					estimate to be refined		
			usage, and asset					or available if needed.		
			category composition					Locomotive has these		
			(e.g. owned vs leased /					areas: Replacements,		
			rented)					Truck Overhaul,		
								Engine Overhaul, Head		
								End Power (HEP)		
								Updates, Paint and Car		
								Body, Technology		
								Updates		
C :: 1D :		101	Al ili	D. III. C. I			A 1.C.1 / Cl	A1 111 1 1 1	4 D D C D : ''' f	D : 1/04 !: )
Capital Projects and	General	Asset Category / Class	· ·	Rolling Stock	Locomotive	General	Asset Category / Class		ARRC Prioritize from	Desired (Medium)
Campaigns		Composition over	composition of assets in				Composition over		Matrix	
		Time	an asset category / class				Time	in an asset category /		
			over time by asset					class over time by		
			hierarchy or groupings					asset hierarchy or		
			as well as ownership					groupings as well as		
			(e.g. ARRC, leased,					ownership (e.g. ARRC,		
			rented)					leased, rented)		



Capital Projects and Campaigns   Capital Projects and Capital Projects and Campaigns   Capital Projects and Capital Pr	Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
what is spent to minitian assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or system replacement.  Capital Projects and Campaigns  General Replacement Plan (ULB / Obsolescence)  ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Longital Projects ABRIC Group Interview Plan (ULB / ULB /	Capital Projects and	General	Total Cost of	Method for recording	Rolling Stock	Locomotive	General	Total Cost of	Method for recording	ARRC Prioritize from	Essential (High)
maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset, allow for long templanement of the asset or systems within the asset, allow for long templaneming of asset or system replacement (UILS / Obsolescence) supering of asset or system replacement (UILS / Obsolescence) supering for system replacement (UILS / Obsolescence) supering for system replacement (UILS / Obsolescence) supering for system replacement planning including age, useful file benchmark, obsolescence, costs, usage, and asset category composition (e.g., owned vs leased / cented)  Capital Projects and Campaigns  General Total Cost of Ownership Reporting and displaying ICC, what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or system replacement or planning including age. useful file benchmark, obsolescence, costs, usage, and soet category composition (e.g., owned vs leased / cented)  Rolling Stock Railcars General Railcar Committee information and Reporting For maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems distributed to strack the asset data: resulting are tracking  Rolling Stock Railcars General Railcar Committee information and Reporting For maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; al	Campaigns		Ownership Reporting	and displaying TCO;				Ownership Reporting	and displaying TCO;	Matrix	
frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset allow to long term planning of asset or systems within the asset allow to long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long				what is spent to					what is spent to		
maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or system replacement of the asset or system replacement of long term planning of asset or system replacement planning including age, useful life benchmark, obsolescence, costs, usage, and asset caregory composition (e.g. cowned vs leased / rented)  Capital Projects and Campaigns  Capital Projects and Campaigns  General  Total Cast of Ownership Reporting  Ownership Repor				maintain assets and the					maintain assets and		
replacement of the asset or systems within the asset, allow for long term planning of asset or systems within the asset, allow for long term planning of asset or system replacement or system replacement (ULB / Obsolescence)  Capital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  Reporting For multi-year planning asset or system set of the asset or system swithin the asset, allow for long term planning of asset or system replacement of the asset or system replacement of the asset or system swithin the asset, allow for long term planning of asset or system within the asset, allow for long term planning of asset or system within the asset, allow for long term planning of asset or system within the asset or system within the asset of replacement of the asset or system within the asset, allow for long term planning of asset or system within the asset of replacement of the asset or system within the asset allow for long term planning of asset or system replacement of the asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning of asset or system within the asset allow for long term planning including aspect or manufacture and ter				frequency of					the frequency of		
asset or systems within the asset allow for long term planning of asset or system replacement  Capital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)  General  Capital Projects and Campaigns  General  Capital Projects and Campaigns  General  Capital Projects and Campaigns  Total Cost of Cownership Reporting  Anset Master Plan  Description of the saset data; results only that they are tracking  Total Cost of Cownership Reporting  Method for recording, and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset of systems within the asset allow for long term planning of asset or systems within the asset of systems within the asset of systems within the asset allow for long term planning of asset or systems within the asset of systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset or systems within the asset allow for long term planning of asset to systems within the asset allow for long term planning of asset to systems within the asset allow for long term planning of asset to systems within the asset allow for long term planning of asset to systems within the asset allow for lo				maintenance versus					maintenance versus		
the asset; allow for long term planning of asset or system replacement  Capital Projects and Campaigns  Replacement Plan (ULB / Obsolescence) support replacement planning including age, useful life benchmark, obsolescence, costs, useful life penchmark, obsolescence, costs, useful life benchmark, obsolescence, costs, useful life				replacement of the					replacement of the		
term planning of asset or system replacement or system replacement or system replacement or system replacement (ULB / Obsolescence)  Capital Projects and Campaigns  General  Capital Projects and Campaigns  General  Total Cost of Campaigns  Total				asset or systems within							
Capital Projects and Campaigns  Replacement Plan (ULB / Obsolescence)   Replacement   Por multi-year planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)   Capital Projects and Campaigns  Total Cost of Ownership Reporting Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or system replacement or system rep				the asset; allow for long					within the asset; allow		
Capital Projects and Campaigns  General  Total Cost of Ownership Reporting Campaigns  ARRC Group Interview assential (High)  ARRC Group Interview assential (High)  Essential (High)  Essential (High)  Essential (High)  Essential (High)  ARRC Group Interview are tracking  ARRC Group Interview are tracking  Essential (High)  Essential (High)  Essential (High)  Essential (High)  ARRC Group Interview are tracking  ARRC Group Interview are tracking  Essential (High)  Essential (Hig				term planning of asset					for long term planning		
Replacement Plan (ULB / Obsolescence) Campaigns  Replacement Plan (ULB / Obsolescence) Capital Projects and Campaigns  For multi-year planning of Stock susage, and asset category composition (e.g. owned vs leased / rented)  Capital Projects and Campaigns  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset, allow for long term planning of asset or system replacement  Capital Projects and Campaigns  Reporting For Maintenance versus replacement  Reporting For Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset, allow for long term planning of asset or system replacement  Capital Projects and Capital Projects				or system replacement					of asset or system		
Capital Projects and Campaigns  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems replacement  Campaigns  (ULB / Obsolescence)  Support replacement planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)  Railcars  General  Railcar Committee - Information and Reporting For made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks-freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members											
planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)  Capital Projects and General Ownership Reporting Amazone and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement.	1 '	General	'		Rolling Stock	Railcars	General	Asset Master Plan	i i	ARRC Group Interview	Essential (High)
useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)  Capital Projects and Campaigns  General Total Cost of Ownership Reporting Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or systems replacement  Useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)  Reporting For Railcar Committee - Information and Inference of Information and Reporting For meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members	Campaigns		(ULB / Obsolescence)						'		
obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)  Capital Projects and Campaigns  General  Total Cost of Ownership Reporting of Committee samples and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)  Railcar Committee - Information and Reporting For made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members											
usage, and asset category composition (e.g. owned vs leased / rented)  Capital Projects and Campaigns  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or system replacement  Wasset and the frequency of system replacement  Wasset or system replacement  Wasset rep				·					· · · · · · · · · · · · · · · · · · ·		
category composition (e.g. owned vs leased / rented)  Capital Projects and Campaigns  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Capital Projects and General Total Cost of Ownership Reporting and displaying TCO; what is spent to maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Capital Projects and General Total Cost of Ownership Reporting and displaying TCO; what is spent to maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Capital Projects and General Railcar Committee - Information and Reporting For meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees are where life cycle decisions are made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees are where life cycle decisions are made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases as the age of equip increases. Two committees have business and mechanical members									are tracking		
Capital Projects and Campaigns  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or system replacement  (e.g. owned vs leased / rented)  Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or system replacement  (e.g. owned vs leased / rented)  Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or system replacement  (a.g. owned vs leased / rented)  Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement  Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or system replacement  Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or system replacement  Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or system replacement or system repla				_							
Capital Projects and Campaigns    Capital Projects and Campaigns   Total Cost of Ownership Reporting   And displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or system replacement											
Capital Projects and Campaigns  General  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Campaigns  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Total Cost of Ownership Reporting and displaying TCO; what is spent to maintenance reporting For made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees are where and committee - Information and life cycle decisions are made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases as the age of equip increases as the age of equip increases. Two committees are where and committee - Information and life cycle decisions are made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple for the committee - Information				_							
Campaigns  Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or system replacement  Ownership Reporting life cycle decisions are made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members				rented)							
Campaigns  Ownership Reporting and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Ownership Reporting  and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset; allow for long term planning of asset or systems within the asset; allow for long term planning of asset or system replacement  Ownership Reporting  Information and life cycle decisions are made - prep for meetings; pull of excel sheets to pull together  pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members	Capital Projects and	General	Total Cost of	Method for recording	Rolling Stock	Railcars	General	Railcar Committee -	committees are where	ARRC Group Interview	Essential (High)
what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  Wear asset or system replacement  Wear asset or system replacement  Reporting For made - prep for meetings; pull of excel sheets to pull together pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members	· ·			_						The state of the s	( 3 ,
maintain assets and the frequency of sheets to pull together sheets or placement sheets and sheets to pull together sheets of pull together sheets and sheets to pull together sheets of pull together sheets and sheets to pull together sheets of pu									1		
frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  or system replacement  business and mechanical members				· ·					1 ' '		
maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement  or system replacement  maintenance versus  pass every 2 weeks - freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members				frequency of							
replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement freight couple times a year. Would increase as the age of equip increases. Two committees have business and mechanical members				maintenance versus					pass every 2 weeks -		
the asset; allow for long term planning of asset or system replacement or system replacement business and mechanical members				replacement of the					freight couple times a		
term planning of asset or system replacement or system replacement business and mechanical members				asset or systems within					year. Would increase		
or system replacement committees have business and mechanical members				the asset; allow for long					as the age of equip		
business and mechanical members				term planning of asset					increases. Two		
mechanical members				or system replacement					committees have		
									business and		
and finance is there as									mechanical members		
									and finance is there as		
well.									well.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and Campaigns	General	Capital Projects Reporting	Improved reporting on capital projects including estimates for labor, P-Card purchases, etc. prior to posting in the finance system (perhaps estimated from Work Order entries) in addition to funding by year and by funding source	Rolling Stock	Railcars	General	Capital Project Reporting	Capital project reports - need to track data, do extracts from JDE, etc to compile	ARRC Group Interview	Essential (High)
Capital Projects and Campaigns	General	Asset Category / Class Composition over Time		1	Railcars	General	Asset Category / Class Composition over Time	Ability to show the composition of assets in an asset category / class over time by asset hierarchy or groupings as well as ownership (e.g. ARRC, leased, rented)	ARRC Prioritize from Matrix	Optional (Low)
Capital Projects and Campaigns	General	Replacement Plan (ULB / Obsolescence)	For multi-year planning support replacement planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)	Rolling Stock	Railcars	Freight Cars	Railcar Life Cycle	Freight lifecycle is simple 50 years with extension possible (either scrap or repurpose to non-revenue until not safe to run anymore) - pass can run as long as they are kept up to safety standards, continously update and spread the costs over the life		Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Capital Projects	Improved reporting on	Rolling Stock	Railcars	Passenger Cars	Categorize Revenue	For passenger cars	ARRC Group Interview	Desired (Medium)
Campaigns		Reporting	capital projects				Improvement	refurbishment costs		
			including estimates for				Overhaul or	may be driven by		
			labor, P-Card				Refurbishment	higher customer rates;		
			purchases, etc. prior to					rather than a simple		
			posting in the finance					overhaul		
			system (perhaps							
			estimated from Work							
			Order entries) in							
			addition to funding by							
			year and by funding							
			source							
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours	Rolling Stock	Locomotive	General	Hours of Service (HOS)	Ability to record Hours	ARRC Prioritize from	Desired (Medium)
			of Service and					of Service and	Matrix	
			availablity for work in a					availablity for work in		
			way which adheres and					a way which adheres		
			is approved by					and is approved by		
			regulatory agencies					regulatory agencies		
Timekeeping	General	Hours Worked on	Record hours worked	Rolling Stock	Locomotive	General	Hours Worked on	Record time worked	ARRC Group Interview	Desired (Medium)
		Work Order / Asset	on a work order (both				Work Order / Asset	on a work order and		
			direct and indirect					integrate with time		
			time) and integrate					keeping. Currently		
			with time keeping.					enter info in work		
								orders then update		
								time card separately		
								at end of day.		
Timekeeping	General	Asset Field on	Have an asset field on	Rolling Stock	Locomotive	General	Asset Field on	Have an asset field on	ARRC Prioritize from	Essential (High)
		Timecards	time cards across ARRC				Timecards	time cards across	Matrix	
			to ensure that asset					ARRC to ensure that		
			usage can be captured					asset usage can be		
			(usage is a more					captured (usage is a		
			detailed level than					more detailed level		
			what group the asset is					than what group the		
			assigned to)					asset is assigned to)		



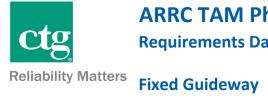
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Time Tracking	Avoid duplicate entry or manipulation of time records in more than one system	Rolling Stock	Locomotive	General	Simplified Time Keeping	Ability to enter time once - probably on the work order for the most detail - and for it to transfer to time card. Do not want to have an additional step to enter or manage time keeping.	ARRC Group Interview	
Timekeeping	General	Asset Field on Timecards	Have an asset field on time cards across ARRC to ensure that asset usage can be captured (usage is a more detailed level than what group the asset is assigned to)	Rolling Stock	Railcars	General	Timecards	Have an asset field on time cards across ARRC to ensure that asset usage can be captured (usage is a more detailed level than what group the asset is assigned to)	ARRC Prioritize from Matrix	Not Set
Timekeeping	General	Hours Worked on Work Order / Asset		Rolling Stock	Railcars	General	Hours Worked on Work Order / Asset	Record time worked on a work order and integrate with time keeping. Preference is hours are recorded on work orders (direct and indirect time) that is carried over to the time card to simplify time entry and management.		Desired (Medium)
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours of Service and availablity for work in a way which adheres and is approved by regulatory agencies	Rolling Stock	Railcars	General	Hours of Service (HOS)		ARRC Prioritize from Matrix	Optional (Low)



# **Requirements Data**

Reliability Matters Rolling Stock

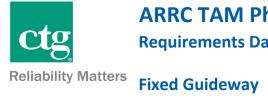
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Time Tracking	Avoid duplicate entry	Rolling Stock	Railcars	General	Time Tracking	A straightforward	ARRC Prioritize from	Desired (Medium)
			or manipulation of time					method of recording	Matrix	
			records in more than					time against work		
			one system					orders that flows to		
								the time card system;		
								avoid duplicate entry		
								or manipulation of		
								time records		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Fixed Guideway	Track	General	Asset Attributes	Support attributes at	ARRC Group Interview	Essential (High)
Registry, and Info			asset data common to					appropriate levels of		
			asset management					hierarchy to include:		
			systems including an					higher level		
			ARRC unique identifier,					organization		
			year, make, model,					(Subdivision, District);		
			serial number, color,					classification		
			etc.					(mainline, branch,		
								yard, siding) [if these		
								are not handled in		
								hierarchy], GIS		
								location (both start		
								and end), length,		
								degree curvature,		
								length of spirals,		
								amount of elevation,		
								grade/elevation at		
								Mile Post, lass of track		
								and design speed, and		
								if it is part of a slide		
								zone		
Asset Hierarchy,	Asset Data	Asset Data System	Ability to support	Fixed Guideway	Track	General	Asset Data System	Ability to support	ARRC Prioritize from	Essential (High)
Registry, and Info		Identifiers	multiple external				Identifiers	multiple external	Matrix	
			system identifiers for					system identifiers for		
			an asset if they differ					an asset if they differ		
			from internal ARRC					from internal ARRC		
			identifiers					identifiers		
Asset Hierarchy,	Asset Data	Asset Data Integration	Ability to synchronize	Fixed Guideway	Track	General	Asset Data Integration	Ability to synchronize	ARRC Prioritize from	Essential (High)
Registry, and Info			or integrate basic asset					or integrate basic	Matrix	
			information with					asset information with		
			external vendors /					external vendors /		
			systems minimize need					systems minimize		
			to manually check and					need to manually		
			update records for					check and update		
			accuracy.					records for accuracy.		
	•	•	•	-	-	-	-	•	•	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital	Fixed Guideway	Track	General	Mobile Access to	Ability to access digital	ARRC Prioritize from	Desired (Medium)
Registry, and Info		Documents	documents outside of				Documents	documents outside of	Matrix	
			the office; if on mobile					the office; if on mobile		
			possibly allow offline					possibly allow offline		
			mode by caching					mode by caching		
			documents related to					documents related to		
			the assets					the assets		
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have	Fixed Guideway	Track	General	NTD Reporting	Assets should have	ARRC Prioritize from	Essential (High)
Registry, and Info		Attributes	attributes that allow for				Attributes	attributes that allow	Matrix	
			direct or easy mapping					for direct or easy		
			for NTD reporting					mapping for NTD		
			without the need to					reporting without the		
			maintain separately in					need to maintain		
			Excel.					separately in Excel.		
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS	Fixed Guideway	Track	General	GPS/GIS Position	Ability to record GPS	ARRC Prioritize from	Desired (Medium)
Registry, and Info		Information (Fixed)	locations for GIS at the				Information (Fixed)	locations for GIS at the	Matrix	
			asset level; either from					asset level; either		
			device or by selecting					from device or by		
			on map					selecting on map		
Asset Hierarchy,	Asset Data	Location by Mile Post	In addition to a named	Fixed Guideway	Track	General	Location by Mile Post	In addition to a named	ARRC Prioritize from	Essential (High)
Registry, and Info			location and GPS / GIS					location and GPS / GIS	Matrix	
			coordinates support the					coordinates support		
			location by ARRC Mile					the location by ARRC		
			Post					Mile Post		
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Fixed Guideway	Track	General	Asset Identifiers	Support a method of	ARRC Group Interview	Essential (High)
Registry, and Info			asset data common to				consistent with Track	coding asset identifers		
			asset management				Charts and Practice	consistent with		
			systems including an					railroad practice and		
			ARRC unique identifier,					track charts; especially	1	
			year, make, model,					for Mainline / Branch /		
			serial number, color,					Yard, Mile Post /		
			etc.					Track, Tangent /		
								Curve, Small Culverts		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Central System of	Objective is a central	Fixed Guideway	Track	General	Single Source for Track	Objective is a single	ARRC Group Interview	Essential (High)
Registry, and Info		Record	source of information				Data	repository / source of		
			including asset and					information for track		
			work activity;					including asset and		
			acknowledging that					work activity		
			specialized systems							
			may be used (and							
			possibly linked or							
			integrated) for							
			configuration, status,							
			and notifications							
Asset Hierarchy,	Asset Data	Link (both ways) to GIS	Support hyperlinking	Fixed Guideway	Track	General	Link (both ways) to GIS	Support hyperlinking	ARRC Group Interview	Desired (Medium)
Registry, and Info			from asset					from asset		
			management system to					management system		
			GIS and from GIS to					to GIS and from GIS to		
			asset management					asset management		
								based on assets based		
								upon the asset itself or	-	
								part of the asset's		
								hierarchy (e.g. mile		
								post)		
Asset Hierarchy,	Asset Data	Document	Support a centralized	Fixed Guideway	Track	General	Linking of Track Charts	Support linking of	ARRC Group Interview	Desired (Medium)
Registry, and Info		Management and	approach to storing and				to Assets	track chart renditions		
		Linking	accessing asset-related					if not native electronic		
			documents including					to the application		
			drawings, schedules,					(CAD, PDF) to assets		
			manuals, pictures,					based upon the asset		
			etc.for both digital and					itself or part of the		
			paper documents					asset's hierarchy (e.g.		
								mile post)		



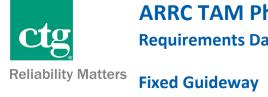
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Document Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	Fixed Guideway	Track	General	Support Electronic Track Charts	Desirable to support the creation and maintenance of electronic track charts (common for track linear asset management)	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Location by Mile Post	In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post	Fixed Guideway	Bridge	General	Location by Mile Post	In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post		Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Link (both ways) to GIS		Fixed Guideway	Bridge	General	Link (both ways) to GIS		ARRC Group Interview	Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	Fixed Guideway	Bridge	General	Asset Data Integration	<u>'</u>	Matrix	Optional (Low)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Fixed Guideway	Bridge	General	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	ARRC Prioritize from Matrix	Optional (Low)



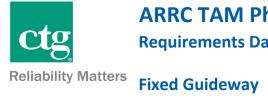
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have	Fixed Guideway	Bridge	General	NTD Reporting	Assets should have	ARRC Prioritize from	Desired (Medium)
Registry, and Info		Attributes	attributes that allow for				Attributes	attributes that allow	Matrix	
			direct or easy mapping					for direct or easy		
			for NTD reporting					mapping for NTD		
			without the need to					reporting without the		
			maintain separately in					need to maintain		
			Excel.					separately in Excel.		
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Fixed Guideway	Bridge	General	Bridges without Track	Support bridges that	ARRC Group Interview	Desired (Medium)
Registry, and Info			asset data common to					do not have track;		
			asset management					would not have the		
			systems including an					same inspection		
			ARRC unique identifier,					program, etc.		
			year, make, model,							
			serial number, color,							
			etc.							
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS	Fixed Guideway	Bridge	General	Extract GPS	To aid in identifying	CTG Consultant	Desired (Medium)
Registry, and Info		Information (Fixed)	locations for GIS at the				Coordinates from	where media (photos,		
			asset level; either from				Media	video) was taken at a		
			device or by selecting					location extract the		
			on map					GPS coordinates from		
								the media (when		
								available) and link to		
								GIS		
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital	Fixed Guideway	Bridge	General	Mobile Access to	Ability to access digital	ARRC Prioritize from	Essential (High)
Registry, and Info	Asset Data	Documents	documents outside of	i ixea Gaiaeway	Бпадс	General	Documents	documents outside of		L33Cittai (iligii)
inegistry, and into		Documents	the office; if on mobile				Documents	the office; if on mobile		
			possibly allow offline					possibly allow offline		
			mode by caching					mode by caching		
			documents related to					documents related to		
			the assets					the assets		
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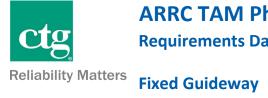
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Fixed Guideway	Bridge	General	Asset Attributes	Build out the master	ARRC Group Interview	Essential (High)
Registry, and Info			asset data common to					data for bridge asset		
			asset management					classes by combining		
			systems including an					asset info, attributes		
			ARRC unique identifier,					from documentation,		
			year, make, model,					and detail on		
			serial number, color,					inspection forms		
			etc.							
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Fixed Guideway	Bridge	General	Built and Installed	Support recording	ARRC Group Interview	Essential (High)
Registry, and Info			asset data common to				Dates	separate original build		
			asset management					date and installed		
			systems including an					date of bridge		
			ARRC unique identifier,					structure assets		
			year, make, model,							
			serial number, color,							
			etc.							
Asset Hierarchy,	Asset Data	Document	Support a centralized	Fixed Guideway	Bridge	General	Document	Support a centralized	ARRC Group Interview	Essential (High)
Registry, and Info		Management and	approach to storing and				Management and	approach to storing		
		Linking	accessing asset-related				Linking	and accessing		
			documents including					documents including		
			drawings, schedules,					drawings, pictures,		
			manuals, pictures,					etc. Support linking to		
			etc.for both digital and					an asset at any part of		
			paper documents					the hierarchy and to		
								work orders (including		
								inspections). For		
								references to paper		
								files or plans allow for		
								a reference (e.g.		
								name, location, file		
								number etc)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Fixed Guideway	Bridge	General	Dimensional and Weight Limits	Support recording the as-designed and the current operating dimensional and weight limits	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Central System of Record	Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	Fixed Guideway	Bridge	General	Single Source for Operations and Regulatory Data	Objective is a single repository / source of information for asset classes managed by Bridge including asset info, inspections, and work activity. Use of this single source should systematically enable consistent processes for managing asset info, documentation, inspections and condition assessment and work	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Fixed Guideway	Bridge	General	Asset Identifiers consistent with Bridge Docs and Practice	management. Support a method of coding asset identifers consistent with railroad practice and track charts (e.g. for Bridge Mile Post, Span, etc.)	ARRC Group Interview	Essential (High)



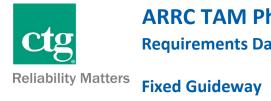
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital	Fixed Guideway	Signal	General	Mobile Access to	Ability to access digital	ARRC Group Interview	Essential (High)
Registry, and Info		Documents	documents outside of				Documents	documents outside of		
			the office; if on mobile					the office; if on mobile		
			possibly allow offline					possibly allow offline		
			mode by caching					mode by caching		
			documents related to					documents related to		
			the assets					the assets		
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have	Fixed Guideway	Signal	General	NTD Reporting	Assets should have	ARRC Prioritize from	Optional (Low)
Registry, and Info		Attributes	attributes that allow for	,			Attributes	attributes that allow	Matrix	
			direct or easy mapping					for direct or easy		
			for NTD reporting					mapping for NTD		
			without the need to					reporting without the		
			maintain separately in					need to maintain		
			Excel.					separately in Excel.		
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Fixed Guideway	Signal	General	Basic Asset Attributes	Ability to record basic	ARRC Prioritize from	Essential (High)
Registry, and Info			asset data common to					asset data common to	Matrix	
			asset management					asset management		
			systems including an					systems including an		
			ARRC unique identifier,					ARRC unique		
			year, make, model,					identifier, year, make,		
			serial number, color,					model, serial number,		
			etc.					color, etc.		
Asset Hierarchy,	Asset Data	Link (both ways) to GIS	Support hyperlinking	Fixed Guideway	Signal	General	Link (both ways) to GIS		ARRC Group Interview	Desired (Medium)
Registry, and Info			from asset					from asset		
			management system to					management system		
			GIS and from GIS to					to GIS and from GIS to		
			asset management					asset management		
								based on assets based		
								upon the asset itself or	.	
								part of the asset's		
								hierarchy		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	Fixed Guideway	Signal	General	Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	Matrix	Optional (Low)
Asset Hierarchy, Registry, and Info	Asset Data	GPS/GIS Position Information (Fixed)	Ability to record GPS locations for GIS at the asset level; either from device or by selecting on map	Fixed Guideway	Signal	General	Extract GPS Coordinates from Media	To aid in identifying where media (photos, video) was taken at a location extract the GPS coordinates from the media (when available) and link to GIS	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Fixed Guideway	Signal	General	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset (e.g. PRTG, RailDocs, etc.) - used for reference, asset data comparison between systems, or actual integration	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Central System of Record	Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	Fixed Guideway	Signal	General	Work	Objective is a central source of information for Signals including asset and work activity; acknowledging that specialized systems may be used for additional configuration, status, and notifications	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Document	Support a centralized	Fixed Guideway	Signal	General	Document	Support a centralized	ARRC Group Interview	Essential (High)
Registry, and Info		Management and	approach to storing and				Management and	approach to storing		
		Linking	accessing asset-related				Linking	and accessing		
			documents including					documents including		
			drawings, schedules,					drawings, manuals,		
			manuals, pictures,					pictures, etc. with		
			etc.for both digital and					them associated /		
			paper documents					indexed to assets		
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS	Fixed Guideway	Signal	General	GPS / GIS Locations	Ability to record GPS	ARRC Group Interview	Essential (High)
Registry, and Info		Information (Fixed)	locations for GIS at the					locations for GIS at the		
			asset level; either from					asset level; either		
			device or by selecting					from device or by		
			on map					selecting on map		
Asset Hierarchy,	Asset Data	Location by Mile Post	In addition to a named	Fixed Guideway	Signal	General	Location by Mile Post	In addition to a named	ARRC Group Interview	Essential (High)
Registry, and Info			location and GPS / GIS					location and GPS / GIS		
			coordinates support the					coordinates support		
			location by ARRC Mile					the location by ARRC		
			Post					Mile Post		
Asset Hierarchy,	Hierarchy	Classes or Grouping of		Fixed Guideway	Track	General	Classes or Grouping of	Organize and manage	ARRC Prioritize from	Optional (Low)
Registry, and Info		Assets	equipment as a class or				Assets	equipment as a class	Matrix	
			group; useful for					or group; useful for		
			planned maintenance					planned maintenance		
			programs and reporting					programs and		
								reporting		
Asset Hierarchy,	Hierarchy	Asset Hierarchy	Model and enforce	Fixed Guideway	Track	General	Child Assets for Work	Support child assets	ARRC Group Interview	Essential (High)
Registry, and Info			hierarchical				Activity at Specific	directly or through		
			relationships between				Locations	hierarchy - it is		
			assets; particulary					necessary to perform		
			parent-child					inspections (including		
								scheduled) and work		
								activity against very		
								specific locations on		
								track such as CWR		
								joints		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Hierarchy	Asset Hierarchy	Model and enforce	Fixed Guideway	Track	General	Track Hierarchy	Support an asset and	ARRC Group Interview	Essential (High)
Registry, and Info			hierarchical					reporting hierarchy		
			relationships between					from the top down:		
			assets; particulary					Railroad, Subdivision,		
			parent-child					District, Sections,		
								Mainline / Branch /		
								Yard, Mile Post /		
								Track, Tangent /		
								Curve, Small Culverts /	<b>′</b>	
								crossings / grade		
								separations. Railroad		
								and Subdivision would		
								likely not be assets		
								that that have work		
								orders written directly	,	
								against them but		
								Division and below		
								may		
Asset Hierarchy,	Hierarchy	Components	Include components	Fixed Guideway	Track	General	Asset Components	Allow for components	ARRC Group Interview	Essential (High)
Registry, and Info			and sub-components,					of assets to be		
			assemblies, systems					identified; primarily		
			and similar entities					these are rail, ties		
								(under Tangent /		
								Curve), sidings, slide		
								zone (under Mile		
								Post), road bed;		
								ballast embankment,		
								ditching (under		
								Tangent / Curve)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Hierarchy	Components	Include components	Fixed Guideway	Bridge	General	Asset Components	Allow for components	ARRC Group Interview	Desired (Medium)
Registry, and Info			and sub-components,					of assets to be		
			assemblies, systems					identified where there		
			and similar entities					are inspection		
								requirements or		
								where work order		
								tasks need to be		
								coded against.		
Asset Hierarchy,	Hierarchy	Classes or Grouping of	Organize and manage	Fixed Guideway	Bridge	General	Classes or Grouping of	Organize and manage	ARRC Prioritize from	Essential (High)
Registry, and Info	, ,	Assets	equipment as a class or	,			Assets	equipment as a class	Matrix	(g,
8,,			group; useful for					or group; useful for		
			planned maintenance					planned maintenance		
			programs and reporting					programs and		
								reporting		
Asset Hierarchy,	Hierarchy	Asset Hierarchy	Model and enforce	Fixed Guideway	Bridge	General	Asset Hierarchy for	<del> </del>	ARRC Group Interview	Essential (High)
Registry, and Info	,	,	hierarchical	,			"Bridge" Classes	asset hierarchy for	·	, , ,
			relationships between					major classes of assets		
			assets; particulary					managed by Bridge:		
			parent-child					Bridges, Tunnels,		
								Large Diameter		
								Culverts (>= 10'),		
								Retaining Walls, and		
								Ports (Slips and		
								Docks). Example is		
								Bridges which are		
								composed of Spans,		
								Piers/Towers, and		
								Deck. An asset is		
								something a work		
								order can be written		
								directly against; a		
								component/system is		
								something that can be		
								coded against on an		
								asset's work order.		



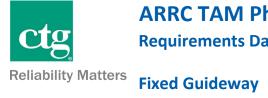
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	Fixed Guideway	Signal	General	Signals Hierarchy	Support an asset and reporting hierarchy from the top down: Railroad, Location, then by asset category and then asset. Must be able to roll up costs and activity by named Location.		Essential (High)
Asset Hierarchy, Registry, and Info	Hierarchy	Classes or Grouping of Assets	Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	Fixed Guideway	Signal	General	Classes or Grouping of Assets	Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	ARRC Prioritize from Matrix	Desired (Medium)
Asset Hierarchy, Registry, and Info	Hierarchy	Components	Include components and sub-components, assemblies, systems and similar entities	Fixed Guideway	Signal	General	Components	Include components and sub-components, assemblies, systems and similar entities	ARRC Prioritize from Matrix	Desired (Medium)
Asset Availability and Status	Ownership	Owner Info		Fixed Guideway	Track	General	Ownership Indicator		ARRC Group Interview	Optional (Low)
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	Fixed Guideway	Track	General	Ownership Status	Ability to indicate owner and any interested parties in the asset	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	Fixed Guideway	Bridge	General	Ownership Status	Ability to indicate owner and any interested parties in the asset	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Ownership	Owner Info	Contact information of	Fixed Guideway	Bridge	General	Ownership Indicator	Support indicating	ARRC Group Interview	Essential (High)
and Status			the owner of assets;					owners or interested		
			especially leased or					parties in the asset (or	r	
			rented equipment					a specific component		
								of an asset) - for asset		
								classes managed by		
								Bridge the focus is on		
								additional things that		
								are on, run across, or		
								are next to the assets		
Asset Availability	Ownership	Owner Info	Contact information of	Fixed Guideway	Cianal	General	Ownership Indicator	Cupport indicating	ADDC Crown Interview	Facontial (High)
and Status	Ownership	Owner into	the owner of assets;	Fixed Guideway	Signal	General	Ownership Indicator	Support indicating owners or interested	ARRC Group Interview	Essential (High)
and Status			especially leased or					parties in the asset (or		
			rented equipment					a specific component		
			rented equipment					of an asset). Also		
								allow for specifying		
								responsiblities under		
								contracts or		
								memorandum of		
								understanding.		
								Businss and Technical		
								contact information		
								for other parties		
								should be avaialble		
								from the record.		
Asset Availability	Ownership	Ownership Status	Ability to indicate	Fixed Guideway	Signal	General	Ownership Status	Ability to indicate	ARRC Prioritize from	Optional (Low)
and Status			owner and any					owner and any	Matrix	
			interested parties in the					interested parties in		
			asset					the asset		



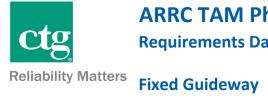
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Status	Asset Rate and Usage	Support mechanism to	Fixed Guideway	Track	General	Asset Rate and Usage	Support mechanism to	ARRC Prioritize from	Not Set
and Status		Calculation	calculate costs of asset				Calculation	calculate costs of asset	Matrix	
			and which groups used					and which groups		
			the asset during the					used the asset during		
			period. This calculation					the period. This		
			may be an initial input					calculation may be an		
			to Finance for cost					initial input to Finance		
			allocation.					for cost allocation.		
Asset Availability	Status	Condition Rating	Support a condition	Fixed Guideway	Track	General	Track Quality Index /		ARRC Group Interview	Desired (Medium)
and Status		System	rating system for assets				Condition Rating	index or condition		
			(e.g. 1 to 5)					rating system		
								mechanism. Tie data		
								has previously been		
								manipulated to get a 1		
								to 5 rating by mile		
								post.		
Asset Availability	Status	Status - Location	Asset location in as	Fixed Guideway	Track	General	Status - Location	Asset location in as	ARRC Prioritize from	Not Set
and Status			near real-time as it is					near real-time as it is	Matrix	
			possible to have the					possible to have the		
			status changed by a					status changed by a		
			system or person					system or person		
Asset Availability	Status	Import External	Ability to import	Fixed Guideway	Track	General	Import External	Ability to import	ARRC Prioritize from	Not Set
and Status		Transaction Data	transaction data from				Transaction Data	transaction data from	Matrix	
			external systems (and					external systems (and		
			when needed ability to					when needed ability		
			enter that transaction					to enter that		
			manually)					transaction manually)		



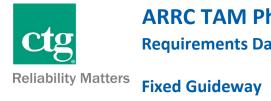
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the last assessment	Fixed Guideway	Track	General	Condition Assessment	Ability to record, store, and report periodic condition assessments with criteria guidance as well as previous ratings and work performed since the last assessment	ARRC Prioritize from Matrix	Essential (High)
Asset Availability and Status	Status	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	Fixed Guideway	Track	General	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	ARRC Prioritize from Matrix	Not Set
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Fixed Guideway	Track	General	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)		Not Set
Asset Availability and Status	Status	Condition Assessment Risk	-Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	Fixed Guideway	Track	General	Condition Assessment Risk	Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy	ARRC Prioritize from Matrix	Desired (Medium)
Asset Availability and Status	Status	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	Fixed Guideway	Bridge	General	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Fixed Guideway	Bridge	General	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.		Optional (Low)
Asset Availability and Status	Status	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	Fixed Guideway	Bridge	General	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Status	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	Fixed Guideway	Bridge	General	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5); this has been done but is not currently used for FTA purposes	ARRC Group Interview	Essential (High)
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Fixed Guideway	Bridge	General	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)		Optional (Low)
Asset Availability and Status	Status	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	Fixed Guideway	Bridge	General	Status - Location	Asset location in as near real-time as it is possible to have the status changed by a system or person	ARRC Prioritize from Matrix	Optional (Low)



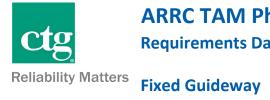
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Status	Condition Assessment	Ability to record, store,	Fixed Guideway	Bridge	General	Known Condition /	Method to record or	ARRC Group Interview	Essential (High)
and Status			and report periodic				Issue Tracking	attach information		
			condition assessments					(e.g. media) from an		
			with criteria guidance					inspection or		
			as well as previous					observation on an		
			ratings and work					asset which will carry		
			performed since the					forward on future		
			last assessment					inspections and work		
								documents to inform		
								users that it was		
								previously known and		
								enable comparison of		
								whether it has		
								worsened. Objective		
								is to reduce reliance		
								on individual or		
								unrecorded		
								institutional		
								knowledge.		
Asset Availability	Status	Condition Assessment		Fixed Guideway	Bridge	General		Support condition	ARRC Group Interview	Essential (High)
and Status			and report periodic				Methodology	assessment at any		
			condition assessments					level of asset		
			with criteria guidance					hierarchy and then		
			as well as previous					one or more methods		
			ratings and work					to assess higher level:		
			performed since the					weakest link - the		
			last assessment					worst rating on child		
								assets is applied to the		
								parent or a weighted		
								condition assessment		
								based on child asset		
								types and their		
								relative risk		
I	I	I	I	I	I	I	I	I		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Condition Assessment Risk	· · · · · · · · · · · · · · · · · · ·	Fixed Guideway	Bridge	General	Condition Assessment Risk	<del> </del>	ARRC Group Interview	
Asset Availability and Status	Status	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Fixed Guideway	Signal	General	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.		Optional (Low)
Asset Availability and Status	Status	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	Fixed Guideway	Signal	General	Import External Transaction Data	Ability to import transaction data from external systems (and when needed ability to enter that transaction manually)	ARRC Prioritize from Matrix	Optional (Low)



and Status    near real-time as it is possible to have the status changed by a system or person   Asset Availability and Status	Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status Asset Availability and Status Condition Assessment System Condition Rating System Condition Rating System Condition Rating Condition Rating System Condition Assessment System Condition Rating Condition Rating Condition Rating Condition Rating System Condition Assessment System Condition Rating Condition Condition Rating	Asset Availability	Status	Condition Assessment	Ability to record, store,	Fixed Guideway	Signal	General	Condition Assessment	Ability to record,	ARRC Group Interview	Essential (High)
Asset Availability and Status  Condition Assessment  System or person  ARRC Prioritize from Matrix  ARRC Prioritize from Matrix  ARRC Prioritize from Watrix  ARRC Prioritize from Watri	and Status			and report periodic					store, and report		
as well as previous ratings and work performed since the last assessment  Asset Availability and Status  Asset Availability Status  Condition Rating System  S				condition assessments					condition assessment		
Asset Availability and Status  Condition Rating Status  Condition Assessment  Asset Move performed since the last assessment  Asset Iocation in as near real-time as it is possible to have the status changed by a system or person  Asset Availability Status  Condition Rating System S				with criteria guidance					and criteria guidance		
Asset Availability and Status  Condition Rating System (asset short have the status changed by a system or assess (e.g. 1 to 5)  Asset Availability and Status  Condition Rating System (asset short have the status changed by a system or person (e.g. 1 to 5)  Asset Availability and Status  Condition Rating System (asset short have the status changed by a system or person (e.g. 1 to 5)  Asset Availability and Status  Condition Rating System (asset short have the status changed by a system or person (e.g. 1 to 5)  Asset Availability and Status  Condition Rating System (assets (e.g. 1 to 5)  Asset Availability and Status  Condition Rating System (assets (e.g. 1 to 5)  Asset Availability and Status  Condition Assessment  Support a condition rating system for assets (e.g. 1 to 5)  Consequence assessment at higher level of hierarchy  assessment at higher level of hierarchy  and Status  Asset Availability Status  GPS/GIS Position Information (Mobile)  Information (Mobile)  Information (Mobile)  Fixed Guideway Signal  General  General  General  GPS/GIS Position  Utilize GPS not only for current but also  Option  Matrix				as well as previous					as well as previous		
Asset Availability and Status   Status - Location   Asset location in as near real-time as it is possible to have the status changed by a system or person   System   Condition Rating System   Condition Rating System   Condition Assessment   System   Condition Assessment   System   Condition Assessment   Condition Assessment   Condition Rating System   Consequence Rating System   Condition Rating System				ratings and work					ratings and work		
Asset Availability and Status  Condition Rating System or person system or person system or parson (e.g. 1 to 5)  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Status  Condition Assessment at higher level of hierarchy  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Condition Assessme				performed since the					performed since the		
Asset Availability and Status  Asset Availability Status  Condition Assessment - System or person System or person system or person and Status  Asset Availability Status  Condition Assessment - System or person				last assessment					last assessment - for		
Asset Availability and Status  Condition Assessment - Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment at higher level of hierarchy  Asset Availability and Status  Condition Assessment and ARRC Prioritize from Assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment and ARRC Prioritize from Assets (or their components); could be used for weighting condition assessment and assets (or their components); could be used for weighting condition assessment and higher level of hierarchy  Asset Availability and Status  Asset Availability and Status  Condition Assessment and ARRC Prioritize from Asset (or their components); could be used for weighting condition assessment and thigher assessmen									assets that have a		
Asset Availability and Status  Asset Availability and Status  Status  Status  Status  Status  Status  Status  Status  Condition Rating system or person  Asset Availability and Status  System  Fixed Guideway  Signal  Status  Support a condition Rating system or person  Asset Availability and Status  Status  Condition Rating System  Fixed Guideway  Signal  Status  Support a condition Rating System  Fixed Guideway  Signal  General  Condition Rating System  System  Fixed Guideway  Signal  General  Condition Assessment  Condition Assessment  System  Fixed Guideway  Signal  General  Condition Assessment  Condition Assessment  Condition Assessment  Condition Assessment  System  Fixed Guideway  Signal  General  Condition Assessment  Condition Assessment  System  Fixed Guideway  Signal  General  Condition Assessment  Condition									physical condition and		
Asset Availability and Status  Status									are not simply working		
and Status    near real-time as it is possible to have the status changed by a system or person   Asset Availability and Status									or not working		
and Status    near real-time as it is possible to have the status changed by a system or person   Asset Availability and Status											
possible to have the status changed by a system or person  Asset Availability and Status  Status  Condition Rating Support a condition rating system for assets (e.g. 1 to 5)  Asset Availability and Status  Status  Condition Assessment - Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability Status  General  Condition Assessment - Support a risk / Risk  Consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability Status  GPS/GIS Position Information (Mobile)  Utilize GPS not only for current but also  Desire ARRC Prioritize from Matrix  Option  Option  Option  Matrix  ARRC Prioritize from Matrix  Option  Option  Option  ARRC Prioritize from Matrix	Asset Availability	Status	Status - Location	Asset location in as	Fixed Guideway	Signal	General	Status - Location	Asset location in as	ARRC Prioritize from	Desired (Medium)
Asset Availability and Status    Status   Condition Rating   System or person	and Status			near real-time as it is					near real-time as it is	Matrix	
Asset Availability and Status  Condition Rating System or person  System System or person  Support a condition rating system for assets (e.g. 1 to 5)  Asset Availability and Status  Condition Assessment - Support a risk / consequence assessment or nassets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  Asset Availability Status  Condition Rating System or person  Fixed Guideway Signal  General  Condition Rating System or acondition rating system for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  ARRC Prioritize from Matrix  ARRC Prioritize from weighting condition assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability Status  GPS/GIS Position Information (Mobile)  Fixed Guideway  Signal  General  Condition Rating  Support a condition ARRC Prioritize from Signal  Condition Assessment - Support a risk / Condition Assessment - Support a risk / Consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  GPS/GIS Position Information (Mobile)  ARRC Prioritize from Option Matrix				possible to have the					possible to have the		
Asset Availability and Status  Condition Rating System  Condition Rating System for assets (e.g. 1 to 5)  Condition Assessment  Condition Assessment  Condition Assessment  Condition Assessment  Support a condition rating system for assets (e.g. 1 to 5)  Condition Assessment  Condition Assessment  Support a condition rating system for assets (e.g. 1 to 5)  Condition Assessment  Condition Rating System  Condition Rating System  Condition Rating System for assets (e.g. 1 to 5)  Condition Assessment  Support a condition rating system for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g. 1 to 5)  ARRC Prioritize from Matrix  Condition Rating System for assets (e.g.				status changed by a					status changed by a		
Asset Availability and Status  System  rating system for assets (e.g. 1 to 5)  Asset Availability and Status  System  Condition Assessment - Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  System  rating system for assets (e.g. 1 to 5)  Fixed Guideway  Signal  General  Condition Assessment - Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  GPS/GIS Position Information (Mobile)  Utilize GPS not only for current but also  ARRC Prioritize from Option (Mobile)  ARRC Prioritize from Option (Mobile)				system or person					system or person		
Asset Availability and Status    Condition Assessment - Support a risk / consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy    Asset Availability and Status   Status   GPS/GIS Position   Information (Mobile)   Infor	Asset Availability	Status	Condition Rating	Support a condition	Fixed Guideway	Signal	General	Condition Rating	Support a condition	ARRC Prioritize from	Essential (High)
Asset Availability and Status  Condition Assessment - Risk  Condition Assessment - Risk  Consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  General  Condition Assessment - Support a risk / Risk  Consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  GPS/GIS Position Information (Mobile)  Utilize GPS not only for current but also  Option  ARRC Prioritize from Matrix  Desired  ARRC Prioritize from Matrix  Desired  General  Condition Assessment - Support a risk / Consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Desired  General  Condition Assessment - Support a risk / Consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Desired  General  GPS/GIS Position Utilize GPS not only for current but also  Matrix	and Status		System	rating system for assets				System	rating system for	Matrix	
and Status  Risk  consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  GPS/GIS Position Information (Mobile)  Risk  consequence assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Signal  General  GPS/GIS Position Information (Mobile)  ARRC Prioritize from Matrix  Option Matrix				(e.g. 1 to 5)							
assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Asset Availability and Status  GPS/GIS Position Information (Mobile)  Assets Available assessment on assets (or their components); could be used for weighting condition assessment at higher level of hierarchy  Fixed Guideway Signal  General  GPS/GIS Position Information (Mobile)  GPS/GIS Position Information (Mobile)  ARRC Prioritize from Matrix  Option Matrix	Asset Availability	Status		-Support a risk /	Fixed Guideway	Signal	General	Condition Assessment	-Support a risk /	ARRC Prioritize from	Desired (Medium)
Asset Availability and Status  GPS/GIS Position Information (Mobile)  (or their components); could be used for weighting condition assessment at higher level of hierarchy  Signal  General  GPS/GIS Position (Mobile)  (or their components); could be used for weighting condition assessment at higher level of hierarchy  Signal  GPS/GIS Position  Utilize GPS not only for current but also  Option  Option  Option  Information (Mobile)	and Status		Risk	consequence				Risk	consequence	Matrix	
Asset Availability and Status  Could be used for weighting condition assessment at higher level of hierarchy  Could be used for weighting condition assessment at higher level of hierarchy  Status  GPS/GIS Position Utilize GPS not only for current but also  Could be used for weighting condition assessment at higher level of hierarchy  GPS/GIS Position Utilize GPS not only for current but also  Option Matrix									assessment on assets		
Asset Availability and Status  GPS/GIS Position Information (Mobile)  Weighting condition assessment at higher level of hierarchy  Signal  General  GPS/GIS Position Utilize GPS not only for current but also  Weighting condition assessment at higher level of hierarchy  Determine The Company of the Compa				(or their components);					(or their components);		
Asset Availability and Status  GPS/GIS Position Information (Mobile)  GPS/GIS Position Current but also  assessment at higher level of hierarchy  Signal General GPS/GIS Position Utilize GPS not only for current but also  GPS/GIS Position Utilize GPS not only for current but also  Option				could be used for					could be used for		
Asset Availability and Status GPS/GIS Position Information (Mobile) Info				weighting condition					weighting condition		
Asset Availability and Status GPS/GIS Position Information (Mobile) Current but also GPS/GIS Position Curren				assessment at higher					assessment at higher		
and Status Information (Mobile) current but also Information (Mobile) for current but also				level of hierarchy					level of hierarchy		
and Status Information (Mobile) current but also Matrix	Asset Availability	Status	GPS/GIS Position	Utilize GPS not only for	Fixed Guideway	Signal	General	GPS/GIS Position	Utilize GPS not only	ARRC Prioritize from	Optional (Low)
historical data for historical data for	and Status		Information (Mobile)	current but also				Information (Mobile)	for current but also	Matrix	
				historical data for					historical data for		
assets that are mobile assets that are mobile				assets that are mobile					assets that are mobile		



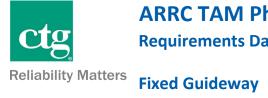
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Fixed Guideway	Signal	General	Asset Assignment	Ability to assign assets to a department or end user (including external ones) with a start / end date	ARRC Group Interview	Essential (High)
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Fixed Guideway	Track	General	Record Availability Changes and Durations	Ability to record track availability changes and durations that correlate to asset hierarchy such as In Service, Restricted (through either condition based - a repair is needed or protective and whether it is temporary or permanent, Out of Service, etc)	ARRC Group Interview	Essential (High)
Asset Availability and Status	Availability	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	Fixed Guideway	Track	General	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	ARRC Prioritize from Matrix	Desired (Medium)
Asset Availability and Status	Availability	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	Fixed Guideway	Track	General	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	Matrix	Optional (Low)



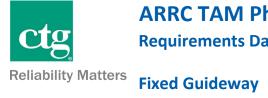
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Availability	Availability - Seasonal	Ability to indicate	Fixed Guideway	Bridge	General	Availability - Seasonal	Ability to indicate	ARRC Prioritize from	Optional (Low)
and Status		Variations	seasonal status (e.g.				Variations	seasonal status (e.g.	Matrix	
			open /closed, not being					open /closed, not		
			used, etc.)					being used, etc.)		
Asset Availability	Availability	Availability	Show availablity over	Fixed Guideway	Bridge	General	Availability	Show availablity over	ARRC Prioritize from	Optional (Low)
and Status		Calculations	time at asset and also				Calculations	time at asset and also	Matrix	
			at hierarchy (grouping					at hierarchy (grouping		
			of assets) levels.					of assets) levels.		
			Differentiate between					Differentiate between		
			types of out of service					types of out of service		
			(e.g. seasonal or					(e.g. seasonal or		
			intentionally stored)					intentionally stored)		
Asset Availability	Availability	Out of Service Coding	Capture out of service	Fixed Guideway	Bridge	General	Out of Service Coding	Capture out of service	ARRC Prioritize from	Optional (Low)
and Status		and Duration	codes and time				and Duration	codes and time	Matrix	
			duration (e.g delay					duration (e.g delay		
			impacting operations,					impacting operations,		
			or no impact - may					or no impact - may		
			include status such as					include status such as		
			waiting for parts, shop					waiting for parts, shop		
			space, labor, etc.);					space, labor, etc.);		
			intent is to support					intent is to support		
			reliablity analysis and					reliablity analysis and		
			reporting					reporting		
Asset Availability	Availability	Availability	Show availablity over	Fixed Guideway	Signal	General	Availability	Show availablity over	ARRC Group Interview	Essential (High)
and Status		Calculations	time at asset and also				Calculations	time at asset and also		
			at hierarchy (grouping					at hierarchy (grouping		
			of assets) levels.					of assets) levels.		
			Differentiate between					Differentiate between		
			types of out of service					types of out of service		
			(e.g. seasonal or					(e.g. service down or		
			intentionally stored)					intentional		
								maintenance)		



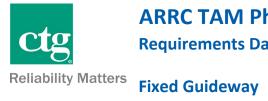
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Availability	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	Fixed Guideway	Signal	General	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, technician, outside service/vendor, etc.)	ARRC Group Interview	Essential (High)
Asset Availability and Status  Configuration Management	Availability General	Availability - Seasonal Variations  Integration with Configuration Management Systems	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.) Ability to integrate or synchronize data with	Fixed Guideway  Fixed Guideway	Signal	General	Availability - Seasonal Variations  Integration with Configuration Management Systems	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.) Ability to integrate or synchronize data with external configuration management systems to avoid manual	ARRC Prioritize from Matrix  ARRC Prioritize from Matrix	Optional (Low) Optional (Low)
Configuration Management	General	Change Management Process	duplication or cross-checking of data.  Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Fixed Guideway	Track	General	Change Management Process	duplication or cross-checking of data.  Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review	ARRC Prioritize from Matrix	Desired (Medium)
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Fixed Guideway	Track	General	Asset Model Configuration	control over asset configuration design with ability to define rules for components and parts	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Configuration Management	General	Integration with Configuration Management Systems	management systems	Fixed Guideway	Bridge	General	Integration with Configuration Management Systems	synchronize data with external configuration management systems	ARRC Prioritize from Matrix	Not Set
			to avoid manual duplication or cross-checking of data.					to avoid manual duplication or cross-checking of data.		
Configuration Management	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Fixed Guideway	Bridge	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	ARRC Prioritize from Matrix	Desired (Medium)
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Fixed Guideway	Bridge	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	ARRC Prioritize from Matrix	Not Set
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Fixed Guideway	Signal	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	ARRC Prioritize from Matrix	Optional (Low)
Configuration Management	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Fixed Guideway	Signal	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Configuration Management	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or crosschecking of data.	Fixed Guideway	Signal	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or crosschecking of data.	ARRC Prioritize from Matrix	Essential (High)
Fault/Problem Detection	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	Fixed Guideway	Track	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	ARRC Prioritize from Matrix	Desired (Medium)
Fault/Problem Detection	General	Data from External Asset Management Systems	Ability to hyperlink to or complile information from external asset management systems including current state, alerts, and errors / issues	Fixed Guideway	Track	General	Data from External Asset Management Systems	Ability to hyperlink to or complile information from external asset management systems including current state, alerts, and errors / issues	ARRC Prioritize from Matrix	Optional (Low)
Fault/Problem Detection	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	Fixed Guideway	Track	General	Correlate Condition Assessment to Assets	Ability to correlate technical condition assessment methods for rail (Holland), ties (Georgetown), and road bed (ground penetrating radar) to assets through ARRC Mile Posts	ARRC Group Interview	Desired (Medium)
Fault/Problem Detection	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	Fixed Guideway	Track	General	Condition Assessment Comparison	_	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Fault/Problem Detection	General	Data from External Asset Management Systems	Ability to hyperlink to or complile information from external asset	Fixed Guideway	Bridge	General	Data from External Asset Management Systems	Ability to hyperlink to or complile information from	ARRC Prioritize from Matrix	Not Set
			management systems including current state, alerts, and errors / issues					external asset management systems including current state, alerts, and errors / issues		
Fault/Problem Detection	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	Fixed Guideway	Bridge	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	ARRC Prioritize from Matrix	Optional (Low)
Fault/Problem Detection	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	Fixed Guideway	Bridge	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	ARRC Prioritize from Matrix	Desired (Medium)
Fault/Problem Detection	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	Fixed Guideway	Signal	General	Capture Reasons for Failure	Ability to capture reason(s) for failure; preferably through standardized coding	ARRC Group Interview	Essential (High)
Fault/Problem Detection	General	Data from External Asset Management Systems	Ability to hyperlink to or complile information from external asset management systems including current state, alerts, and errors / issues	Fixed Guideway	Signal	General	Data from Signal Management Systems	Ability to hyperlink to or complile information from various existing communication management systems which may include configuration, status, and notifications (PRTG, Subversion, etc)	ARRC Group Interview	Essential (High)
Fault/Problem Detection	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	Fixed Guideway	Signal	General	Data from Diagnostic Systems	Ability to hyperlink to or record and report on information from diagnostic systems and testing vendors	ARRC Prioritize from Matrix	Optional (Low)



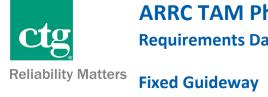
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	PM Job Plan	Ability to setup standard template for labor and parts for preventative maintenance routines to allow for forecasting of parts and labor needed	Fixed Guideway	Track	General	PM Job Plan	Ability to setup standard template for labor and parts for preventative maintenance routines to allow for forecasting of parts and labor needed		Desired (Medium)
Planned Maintenance and Inspection	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements	Fixed Guideway	Track	General	Digital-First Inspections	Subject to regulatory requirements and/or approval provide ability to record inspections digitally in the field (with an offline mode available)	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Generate Work Orders from Inspection Results	Ability to generate work orders from inspection results (would typically be categorized as corrective actions)	Fixed Guideway	Track	General	Generate Work Orders from Inspection Results	Ability to generate or identify work orders created from inspection results (corrective actions)	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Inspection Schedules	Support ability to schedule recurring inspections that will automatically create a work order	Fixed Guideway	Track	General	Inspection Schedules	Support ability to schedule recurring inspections that will create a work order (such as twice weekly FRA)	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	Fixed Guideway	Track	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	Fixed Guideway	Track	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	ARRC Prioritize from Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Fixed Guideway	Track	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Prioritize from Matrix	Essential (High)
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or preuse inspections with a checklist; support different checklists based on asset category and characteristics	Fixed Guideway	Track	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or pre-use inspections with a checklist; support different checklists based on asset category and characteristics	ARRC Prioritize from Matrix	Not Set
Planned Maintenance and Inspection	General	PM Service Calculation	Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)	Fixed Guideway	Track	General	PM Service Calculation	Ability to calculate PM	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	Fixed Guideway	Track	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	ARRC Prioritize from Matrix	Essential (High)



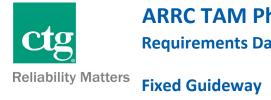
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	Fixed Guideway	Track	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Fixed Guideway	Track	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	Fixed Guideway	Track	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	ARRC Prioritize from Matrix	Not Set
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Fixed Guideway	Bridge	General	Digital Workflows	Support digital workflows for review and approval (e.g. Inspectors, Bridge Engineer) for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Inspection Schedules	Support ability to schedule recurring inspections that will automatically create a work order	Fixed Guideway	Bridge	General	Inspection Schedules	Support ability to schedule recurring inspections on assets that will create a work order	ARRC Group Interview	Essential (High)



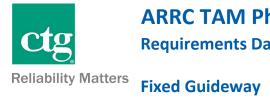
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements	Fixed Guideway	Bridge	General	Digital Inspections	Capture inspections on a digital form (including an offline mode) so the results are stored directly in a database	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Generate Work Orders from Inspection Results	Ability to generate work orders from inspection results (would typically be categorized as corrective actions)	Fixed Guideway	Bridge	General	Generate Work Orders from Inspection Results	Ability to generate or identify work orders created from inspection results (corrective actions)	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	Fixed Guideway	Bridge	General	Support Inspection Contractors	Support inspections that are performed by external contractors; this may impact inspection data format, how it is received from contractor, and any digital workflows. There are a few bridges where external contractors have been used for inspection.	ARRC Group Interview	Desired (Medium)
Planned Maintenance and Inspection	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	Fixed Guideway	Bridge	General	Common Inspection Record to Satisfy FRA /FTA	Desire a means of managing asset and inspection information that can be used to satisfy both FRA and FTA requirements	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	Fixed Guideway	Bridge	General	Inspection Data Retention Periods	Ability to retain electronic copieds of records indefinitely; Federal agencies usually allow for only a certain period of time	ARRC Group Interview	Desired (Medium)
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or pre- use inspections with a checklist; support different checklists based on asset category and characteristics	Fixed Guideway	Bridge	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or pre-use inspections with a checklist; support different checklists based on asset category and characteristics	ARRC Prioritize from Matrix	Not Set
Planned Maintenance and Inspection	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	Fixed Guideway	Bridge	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	ARRC Prioritize from Matrix	Not Set
Planned Maintenance and Inspection	General	PM Service Calculation	Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)	Fixed Guideway	Bridge	General	PM Service Calculation	Ability to calculate PM	ARRC Prioritize from Matrix	Not Set
Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	Fixed Guideway	Bridge	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	PM Job Plan	Ability to setup	Fixed Guideway	Bridge	General	PM Job Plan	Ability to setup	ARRC Prioritize from	Desired (Medium)
Maintenance and			standard template for					standard template for	Matrix	
Inspection			labor and parts for					labor and parts for		
			preventative					preventative		
			maintenance routines					maintenance routines		
			to allow for forecasting					to allow for		
			of parts and labor					forecasting of parts		
			needed					and labor needed		
Planned	General	PM Notification	Ability for notifications	Fixed Guideway	Bridge	General	PM Notification	Ability for notifications	ARRC Prioritize from	Not Set
Maintenance and			to be automatically					to be automatically	Matrix	
Inspection			sent to maintenance					sent to maintenance		
			and assigned user					and assigned user		
			group when a PM is due					group when a PM is		
			(or created by the					due (or created by the		
			system)					system)		
Planned	General	Common Inspection	Desire a means of	Fixed Guideway	Signal	General	Common Inspection	Desire a means of	ARRC Prioritize from	Essential (High)
Maintenance and		Record to Satisfy	managing asset and				Record to Satisfy	managing asset and	Matrix	
Inspection		Multiple Agencies	inspection information				Multiple Agencies	inspection information		
			that can be used to					that can be used to		
			satisfy muliple agency					satisfy muliple agency		
			regulatory					regulatory		
			requirements (e.g. FRA					requirements (e.g.		
			and FTA)					FRA and FTA)		
Dlamad	Computal	Combinations	Abilia and fine	Fined Code	Cianal	Comparel	Combinant area for	Abilia, and define	ADDC Delevities for	Ontinual (Law)
Planned	General	Contractors for	Ability to define	Fixed Guideway	Signal	General	Contractors for	Ability to define	ARRC Prioritize from	Optional (Low)
Maintenance and		Preventative	vendors which are used				Preventative	vendors which are	Matrix	
Inspection		Maintenance	for PM and inspection				Maintenance	used for PM and		
			activities on assets,					inspection activities		
			systems or components					on assets, systems or		
								components		



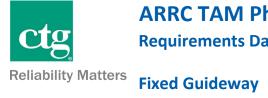
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and	General	Incorporate Season and Weather	Accommodate recording season and	Fixed Guideway	Signal	General	Incorporate Season and Weather		ARRC Prioritize from Matrix	Optional (Low)
Inspection			weather into usage information for					weather into usage		
			preventative or					information for preventative or		
			predictive maintenance					predictive		
			planning and					maintenance planning		
								and		
Planned	General	Inspection Schedules	Support ability to	Fixed Guideway	Signal	General	Inspection Schedules	Support ability to	ARRC Group Interview	Essential (High)
Maintenance and			schedule recurring					schedule recurring		
Inspection			inspections that will					inspections that will		
			automatically create a work order					create a work order for regulatory and non-		
			Work order					regulatory purposes		
								including 30 day, 90		
								day, and annual		
								inspections.		
Planned	General	Generate Work Orders	Ability to generate work	Fixed Guideway	Signal	General	Generate Work Orders		ARRC Group Interview	Essential (High)
Maintenance and		from Inspection	orders from inspection				from Inspection	work orders from		
Inspection		Results	results (would typically				Results	inspection results		
			be categorized as					(these would be		
			corrective actions)					corrective actions)		
Planned	General	Pre-Use and Frequent	Ability to record	Fixed Guideway	Signal	General	Pre-Use and Frequent	Ability to record	ARRC Prioritize from	Optional (Low)
Maintenance and		Inspection Checklists	frequent (daily) or pre-				Inspection Checklists	frequent (daily) or pre-	Matrix	
Inspection			use inspections with a					use inspections with a		
			checklist; support					checklist; support		
			different checklists					different checklists		
			based on asset category					based on asset		
			and characteristics					category and characteristics		
Planned	General	Automated	Automated planning	Fixed Guideway	Signal	General	Automated	Automated planning	ARRC Prioritize from	Optional (Low)
Maintenance and		Compliance Tracking	and compliance		0		Compliance Tracking	and compliance	Matrix	
Inspection		and Planning	tracking of regulatory				and Planning	tracking of regulatory		
			inspection					inspection		
			requirements					requirements		



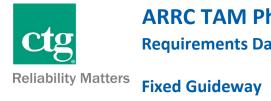
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	PM Job Plan	Ability to setup standard template for labor and parts for preventative maintenance routines to allow for forecasting of parts and labor	Fixed Guideway	Signal	General	PM Job Plan	Ability to setup standard template for labor and parts for preventative maintenance routines to allow for forecasting of parts	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	PM Service Calculation	needed Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)	Fixed Guideway	Signal	General	PM Service Calculation	and labor needed Ability to calculate PM serivce requirements on more than one aspect of asset usage (e.g. calendar time, hours, miles, fuel usage, etc.)	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements	Fixed Guideway	Signal	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements	ARRC Prioritize from Matrix	Essential (High)
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Fixed Guideway	Signal	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	PM Notification	Ability for notifications	Fixed Guideway	Signal	General	PM Notification	Ability for notifications	ARRC Prioritize from	Optional (Low)
Maintenance and			to be automatically					to be automatically	Matrix	
Inspection			sent to maintenance					sent to maintenance		
			and assigned user					and assigned user		
			group when a PM is due					group when a PM is		
			(or created by the					due (or created by the		
			system)					system)		
Planned	General	Inspection Data	Ability to retain	Fixed Guideway	Signal	General	Inspection Data	Ability to retain	ARRC Prioritize from	Optional (Low)
Maintenance and		Retention Periods	electronic copieds of				Retention Periods	electronic copieds of	Matrix	
Inspection			records indefinitely;					records indefinitely;		
			Federal agencies					Federal agencies		
			usually allow for only a					usually allow for only a		
			certain period of time					certain period of time		
Work Orders and	General	Parts on Work Order	Ability to specify parts	Fixed Guideway	Track	General	Parts on Work Order	Ability to specify parts	ARRC Prioritize from	Optional (Low)
Work Order			on work order and					on work order and	Matrix	
Management			whether they came					whether they came		
			from inventory, were					from inventory, were		
			ordered, or purchaed					ordered, or purchaed		
			with a purchasing card					with a purchasing card		
Work Orders and	General	Mechanic/Technican	Mechanic/Technician	Fixed Guideway	Track	General	Mechanic/Technican	Mechanic/Technician	ARRC Prioritize from	Not Set
Work Order		Records Work	records their work on				Records Work	records their work on	Matrix	
Management			the work order and has					the work order and		
			access to info they need					has access to info they		
			thrugh the system.					need thrugh the		
			Only person with direct					system. Only person		
			knowledge of work is					with direct knowledge		
			Mechanic/Technician					of work is		
			and they should be able					Mechanic/Technician		
			to record their work as					and they should be		
			it is done.					able to record their		
								work as it is done.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reassign, Split, or Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event	Fixed Guideway	Track	General	Reassign, Split, or Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event		Desired (Medium)
Work Orders and Work Order Management	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	Fixed Guideway	Track	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Work Packages	Ability to create pre- defined work order template with a standard set of tasks for a particular inspection, condition assessement, complaint, etc	Fixed Guideway	Track	General	Work Packages	Ability to create pre- defined work order template with a standard set of tasks for a particular inspection, condition assessement, complaint, etc	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not asset-specific for non-parts work less than 1 hour)		Track	General	Minor Work	Ability to quickly	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Fixed Guideway	Track	General	Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.		Track	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season		Desired (Medium)
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	Fixed Guideway	Track	General	Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break- Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	Fixed Guideway	Track	General		Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break-Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Scheduling and Planning	Ability to plan and schedule work within the system rather than having to track outside of it (e.g. Excel)	Fixed Guideway	Track	General	Steady-State Planning	Ability to use steady- state level of resourcing to plan and priortize work	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	End-User Field Service	Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	Fixed Guideway	Track	General		Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Failure Analysis	Improved ability to analyze failures and their causes. Currently can only rely on what has been written on the work orders; and its necessary to look at each individual work order.	Fixed Guideway	Track	General	Failure Analysis	Improved ability to analyze failures and their causes. Currently can only rely on what has been written on the work orders; and its necessary to look at each individual work order.	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Scheduling and Planning	Ability to plan and schedule work within the system rather than having to track outside of it (e.g. Excel)	Fixed Guideway	Track	General	Continuous Work Planning (Schedule, Inspect, Work)	Support work planning that includes schedule-driven inspections and work activity (i.e. has to be more actionable and manageable than a list of open work orders)		Essential (High)
Work Orders and Work Order Management	General	Mobile Digital Work Orders	Record data where and when the work occurs (create, update, and close) through mobile digital work orders that support an offline mode.	Fixed Guideway	Track	General	Mobile Work Orders	Ability to view, initiate, update, and close work orders in the field in online or offline mode.	ARRC Group Interview	Essential (High)



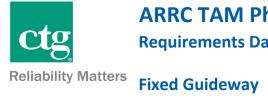
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	Fixed Guideway	Track	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	ARRC Prioritize from	Essential (High)
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Fixed Guideway	Track	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection or an operations observation)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently		Track	General	Capture all Work on Work Order	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	ARRC Group Interview	Essential (High)



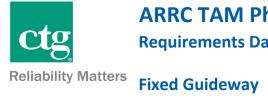
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Order	Automatically output,	Fixed Guideway	Track	General	Work Order	Automatically output,	ARRC Prioritize from	Desired (Medium)
Work Order		Attachments	link, and/or display (if				Attachments	link, and/or display (if	Matrix	
Management			digital) procedures,					digital) procedures,		
			checklists, and bills of					checklists, and bills of		
			materials needed for					materials needed for		
			work order					work order		
Work Orders and	General	Assign Work Orders	Ability to assign work	Fixed Guideway	Track	General	Assign Work Orders	Ability to assign work	ARRC Prioritize from	Essential (High)
Work Order			orders to technicians					orders to technicians	Matrix	
Management			within the appropriate					within the appropriate		
			skillset pool and/or					skillset pool and/or		
			geographic location					geographic location		
Work Orders and	General	Ease of Use	Focus on ease of use for	Fixed Guideway	Track	General	Ease of Use	Focus on ease of use	ARRC Prioritize from	Desired (Medium)
Work Order			recording work yet					for recording work yet		,
Management			need the ability to					need the ability to		
			record meaningful					record meaningful		
			information to be					information to be		
			useful (e.g. Task					useful (e.g. Task		
			Coding)					Coding)		
Work Orders and	General	Work Orders against	Allow for a work order	Fixed Guideway	Track	General	Work Orders against	Allow for a work order	ARRC Group Interview	Essential (High)
Work Order		Assets in Hierarchy	to be written against				Assets in Hierarchy	to be written against		
Management			assets at various levels					assets at various levels		
			of the hierarchy					of the hierarchy		
								including District,		
								Sections, Mainline /		
								Branch / Yard, Mile		
								Post / Track, Tangent /		
								Curve, Small Culverts		
Work Orders and	General	Usage Readings	Ability to quickly record	Fixed Guideway	Track	General	Usage Readings	Ability to quickly	ARRC Prioritize from	Not Set
Work Order			(or import from	,				record (or import from	Matrix	
Management			external systems) usage					external systems)		
			readings (e.g. miles,					usage readings (e.g.		
			hours)					miles, hours)		
			,					,		



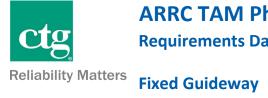
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Order	Ability to configure	Fixed Guideway	Track	General	Work Order	Ability to configure	ARRC Prioritize from	Desired (Medium)
Work Order		Notifications	notifications for new or				Notifications	notifications for new	Matrix	
Management			outstanding work					or outstanding work		
			including PM,					including PM,		
			inspection, or work					inspection, or work		
			orders to designated					orders to designated		
			users (e.g. on being					users (e.g. on being		
			created or assigned)					created or assigned)		
Work Orders and	General	Reporting Tools	Base requirement are	Fixed Guideway	Track	General	Reporting Tools	Base requirement are	ARRC Prioritize from	Desired (Medium)
Work Order			tools that are better					tools that are better	Matrix	
Management			than an Excel export.					than an Excel export.		
			There is a need for					There is a need for		
			analytics for trending,					analytics for trending,		
			analysis, failure, and					analysis, failure, and		
			investment planning.					investment planning.		
			Analytics may be in a					Analytics may be in a		
			separate tool but the					separate tool but the		
			information to support					information to support	t	
			it must be reportable.					it must be reportable.		
			Currently Excel is the					Currently Excel is the		
			reporting tool - either					reporting tool - either		
			data is manually					data is manually		
			entered or exported					entered or exported		
			from JDE					from JDE		
Work Orders and	General	Record GPS Locations	Ability to record GPS	Fixed Guideway	Track	General	Record GPS Locations	Ability to record GPS	ARRC Group Interview	Essential (High)
Work Order		to Work Location	locations (from device				to Work Location	locations (from device		
Management			itself or selection from					itself or selection from		
			a map) for work order					a map) for single		
			locations					locations as well as		
								start and end points		
								for linear (possibly		
								also midpoints)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to end users		Track	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Task Coding on Work Orders	Ability to code tasks on work orders that may include system, subsystem, component, position, and activity (e.g. inspect, install, remove, repair, replace) for accurate information on maintenance activity and costs		Track	General	Task Coding	end users  Support task coding on work orders to identify the work activity (e.g. diagnose, repair, replace, clean, inspect, gauging)		Essential (High)
Work Orders and Work Order Management	General	End-Users and Work Orders	Ability for end users (e.g. Operations) to initiate work requests through a complaint process and to see status and history of work orders	Fixed Guideway	Track	General	End-Users and Work Orders	Ability for end users (e.g. Operations) to initiate work requests through a complaint process and to see status and history of work orders	ARRC Prioritize from Matrix	Not Set
Work Orders and Work Order Management	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	Fixed Guideway	Track	General	Capture Usage Readings on Work Orders			Not Set



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance		Track	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items. Automatically create a work order to with the task or add a line item to work order if already created from this checklist.		Track	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items. Automatically create a work order to with the task or add a line item to work order if already created from this checklist.	Matrix	Optional (Low)
Work Orders and Work Order Management	General	Record Checklist and Results	Ability to capture and store checklist form and recorded data electronically (rather than paper or scanned paper) for a work order	Fixed Guideway	Track	General	Record Checklist and Results		ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	Fixed Guideway	Track	General	Prioritization of Work Orders		ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Cost Accounting -	Ability to report or pass	Fixed Guideway	Track	General	Cost Accounting -	Ability to report or	ARRC Prioritize from	Desired (Medium)
Work Order		Handling Changes	through changes to				Handling Changes	pass through changes	Matrix	
Management			costs on a work order					to costs on a work		
			to the financial system					order to the financial		
			so it is in sync with the					system so it is in sync		
			work order costs.					with the work order		
								costs.		
Work Orders and	General	Complaint / Cause /	Support the ability to	Fixed Guideway	Track	General	Complaint / Cause /	Support the ability to	ARRC Prioritize from	Not Set
Work Order		Correction (3C's)	record complaint,				Correction (3C's)	record complaint,	Matrix	
Management			cause, and correction in					cause, and correction		
			a standardized way for					in a standardized way		
			more efficient failure					for more efficient		
			analysis and					failure analysis and		
			identification of					identification of		
			common issues, causes,					common issues,		
			and their resolution					causes, and their		
								resolution		
Work Orders and	General	Integrate Financial	Work Order system	Fixed Guideway	Track	General	Integrate Financial	Work Order system	ARRC Prioritize from	Optional (Low)
Work Order		System	must be integrated or				System	must be integrated or	Matrix	
Management			interfaced with the					interfaced with the		
			financial system					financial system		
			(currently JDE)					(currently JDE)		
Work Orders and	General	Categorize Costs	Abililty to categorize	Fixed Guideway	Track	General	Categorize Costs	Abililty to categorize	ARRC Group Interview	Desired (Medium)
Work Order		(OPEX/CAPEX)	costs by OPEX/CAPEX				(OPEX/CAPEX)	costs by OPEX/CAPEX		
Management			categories and					categories and		
			subcatgory (e.g. OPEX -					subcatgory (e.g. OPEX	-	
			Preventative (e.g.					Preventative (e.g.		
			Inspection), Corrective,					Inspection),		
			or Break-Fix (must fix					Corrective, or Break-		
			now) and CAPEX (e.g.					Fix (must fix now) and		
			ARRC, Agency (if					CAPEX (e.g. ARRC,		
			application) or Other (if					Agency (if application)		
			applicable)					or Other (if applicable)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	SLAs for Response	Support the ability to	Fixed Guideway	Track	General	SLAs for Response	Support the ability to	ARRC Prioritize from	Not Set
Work Order		Times	set SLAs for response				Times	set SLAs for response	Matrix	
Management			time on asset groups or					time on asset groups		
			categories and to					or categories and to		
			record performance					record performance		
			against them					against them		
Work Orders and	General	Multiple Shop / Work	Accommodate multiple	Fixed Guideway	Track	General	Multiple Shop / Work	Accommodate	ARRC Prioritize from	Not Set
Work Order		Locations	shops and work				Locations	multiple shops and	Matrix	
Management			locations including					work locations		
			ARRC shops and work in					including ARRC shops		
			the field					and work in the field		
Work Orders and	General	Work Packages	Ability to create pre-	Fixed Guideway	Bridge	General	Work Packages	Ability to create pre-	ARRC Prioritize from	Desired (Medium)
Work Order			defined work order					defined work order	Matrix	
Management			template with a					template with a		
			standard set of tasks for					standard set of tasks		
			a particular inspection,					for a particular		
			condition assessement,					inspection, condition		
			complaint, etc					assessement,		
								complaint, etc		
Work Orders and	General	Multiple Shop / Work	Accommodate multiple	Fixed Guideway	Bridge	General	Multiple Shop / Work	Accommodate	ARRC Prioritize from	Not Set
Work Order		Locations	shops and work				Locations	multiple shops and	Matrix	
Management			locations including					work locations		
			ARRC shops and work in					including ARRC shops		
			the field					and work in the field		
Work Orders and	General	Reassign, Split, or	Ability to reassign, split	Fixed Guideway	Bridge	General	Reassign, Split, or	Ability to reassign,	ARRC Prioritize from	Optional (Low)
Work Order		Child Work Order	off part of a work order,				Child Work Order	split off part of a work	Matrix	
Management			or create a child work					order, or create a child	<u> </u>	
			order so that more than					work order so that		
			one group can record					more than one group		
			activity against a work					can record activity		
			order yet still maintain					against a work order		
			the link to the single					yet still maintain the		
			event					link to the single event	t	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Checklist Criteria for	Ability to define criteria	Fixed Guideway	Bridge	General	Checklist Criteria for	Ability to define	ARRC Prioritize from	Essential (High)
Work Order		Repair - Create Work	indicating				Repair - Create Work	criteria indicating	Matrix	
Management		Order	repair/adjustment or				Order	repair/adjustment or		
			replacement is required					replacement is		
			on checklist items.					required on checklist		
			Automatically create a					items. Automatically		
			work order to with the					create a work order to		
			task or add a line item					with the task or add a		
			to work order if already					line item to work		
			created from this					order if already		
			checklist.					created from this		
								checklist.		
Work Orders and	General	Work Order	Automatically output,	Fixed Guideway	Bridge	General	Work Order	Automatically output,	ARRC Prioritize from	Essential (High)
Work Order		Attachments	link, and/or display (if				Attachments	link, and/or display (if	Matrix	
Management			digital) procedures,					digital) procedures,		
			checklists, and bills of					checklists, and bills of		
			materials needed for					materials needed for		
			work order					work order		
Work Orders and	General	Cost Reporting	Ability to see	Fixed Guideway	Bridge	General	Cost Reporting	Ability to see	ARRC Prioritize from	Essential (High)
Work Order			aggreggate costs on					aggreggate costs on	Matrix	
Management			assets by basic criteria					assets by basic criteria		
			including System,					including System,		
			"Type", Time Period,					"Type", Time Period,		
			PM, Corrective or Break	-				PM, Corrective or		
			Fix, By OPEX/CAPEX (or					Break-Fix, By		
			funding source), by					OPEX/CAPEX (or		
			hierarchy or geography					funding source), by		
								hierarchy or		
								geography		
Work Orders and	General	SLAs for Response	Support the ability to	Fixed Guideway	Bridge	General	SLAs for Response	Support the ability to	ARRC Prioritize from	Optional (Low)
Work Order		Times	set SLAs for response				Times	set SLAs for response	Matrix	
Management			time on asset groups or					time on asset groups		
			categories and to					or categories and to		
			record performance					record performance		
			against them					against them		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	End-User Field Service	Ability for end users to	Fixed Guideway	Bridge	General	End-User Field Service	Ability for end users to	ARRC Prioritize from	Not Set
Work Order			quickly record any field					quickly record any	Matrix	
Management			service performed (for					field service		
			efficiency and					performed (for		
			consistency likely					efficiency and		
			requires a digital					consistency likely		
			mobile offline solution)					requires a digital		
								mobile offline		
							\	solution)		
Work Orders and	General	Reporting Tools	Base requirement are	Fixed Guideway	Bridge	General	'	'	ARRC Prioritize from	Desired (Medium)
Work Order			tools that are better					tools that are better	Matrix	
Management			than an Excel export.					than an Excel export.		
			There is a need for					There is a need for		
			analytics for trending,					analytics for trending,		
			analysis, failure, and					analysis, failure, and		
			investment planning.					investment planning.		
			Analytics may be in a					Analytics may be in a		
			separate tool but the					separate tool but the		
			information to support					information to support		
			it must be reportable.					it must be reportable.		
			Currently Excel is the					Currently Excel is the		
			reporting tool - either					reporting tool - either		
			data is manually					data is manually		
			entered or exported					entered or exported		
			from JDE					from JDE		
Work Orders and	General	Work Order	Ability to configure	Fixed Guideway	Bridge	General		Ability to configure	ARRC Prioritize from	Desired (Medium)
Work Order		Notifications	notifications for new or					notifications for new	Matrix	
Management			outstanding work					or outstanding work		
			including PM,					including PM,		
			inspection, or work					inspection, or work		
			orders to designated					orders to designated		
			users (e.g. on being					users (e.g. on being		
			created or assigned)					created or assigned)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	Fixed Guideway	Bridge	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)	·	Bridge	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	Fixed Guideway	Bridge	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	ARRC Prioritize from Matrix	Not Set
Work Orders and Work Order Management	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution	Fixed Guideway	Bridge	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Failure Analysis	Improved ability to	Fixed Guideway	Bridge	General	Failure Analysis	Improved ability to	ARRC Prioritize from	Optional (Low)
Work Order			analyze failures and					analyze failures and	Matrix	
Management			their causes. Currently					their causes.		
			can only rely on what					Currently can only rely		
			has been written on the					on what has been		
			work orders; and its					written on the work		
			necessary to look at					orders; and its		
			each individual work					necessary to look at		
			order.					each individual work		
								order.		
Work Orders and	General	Mechanic/Technican	Mechanic/Technician	Fixed Guideway	Bridge	General	Mechanic/Technican	Mechanic/Technician	ARRC Prioritize from	Optional (Low)
Work Order		Records Work	records their work on				Records Work	records their work on	Matrix	
Management			the work order and has					the work order and		
			access to info they need					has access to info they		
			thrugh the system.					need thrugh the		
			Only person with direct					system. Only person		
			knowledge of work is					with direct knowledge		
			Mechanic/Technician					of work is		
			and they should be able					Mechanic/Technician		
			to record their work as					and they should be		
			it is done.					able to record their		
								work as it is done.		
Work Orders and	General	Integrate Financial	Work Order system	Fixed Guideway	Bridge	General	Integrate Financial	Work Order system	ARRC Prioritize from	Essential (High)
Work Order		System	must be integrated or				System		Matrix	
Management			interfaced with the					interfaced with the		
			financial system					financial system		
			(currently JDE)					(currently JDE)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Categorize Costs (OPEX/CAPEX)	Ability to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX - Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)	Fixed Guideway	Bridge	General	Categorize Costs (OPEX/CAPEX)	•	ARRC Group Interview	<u> </u>
Work Orders and Work Order Management	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	Fixed Guideway	Bridge	General	Contractor Work and Costs	Ability to record contractor work activity (inspection, repair, replacement, etc.) and costs against a work order	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	Fixed Guideway	Bridge	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	Fixed Guideway	Bridge	General	Cost Accounting - Handling Changes	Ability to report or	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Fixed Guideway	Bridge	General	Group Work Orders by Geographic Area	Group work orders by	Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Minor Work	Ability to quickly record	Fixed Guideway	Bridge	General	Minor Work	Ability to quickly	ARRC Prioritize from	Desired (Medium)
Work Order			minor work on a work						Matrix	
Management			order against an asset					a work order against		
			such as inspection and					an asset such as		
			service (i.e. objective is					inspection and service		
			to avoid using a					(i.e. objective is to		
			standing or bucket work					avoid using a standing		
			order that is not asset-					or bucket work order		
			specific for non-parts					that is not asset-		
			work less than 1 hour)					specific for non-parts		
								work less than 1 hour)		
Work Orders and	General	Mobile Digital Work	Record data where and	Fixed Guideway	Bridge	General	Mobile Work Orders	Ability to view,	ARRC Group Interview	Essential (High)
Work Order		Orders	when the work occurs					initiate, update, and		
Management			(create, update, and					close work orders in		
			close) through mobile					the field in online or		
			digital work orders that					offline mode.		
			support an offline					Supports inspections		
			mode.					and bridge gang work		
								activity.		
Work Orders and	General	Capture All Work on	Ability to easily capture	Fixed Guideway	Bridge	General	Capture all Work on	Ability to easily	ARRC Group Interview	Essential (High)
Work Order		Work Orders	all work (inspection,				Work Order	capture all work		
Management			condition assessment,					(inspection, condition		
			work activity) on a work					assessment, work		
			order to ensure that a					activity) on a work		
			record is made of the					order to ensure that a		
			work and costs are					record is made of the		
			captured consistently					work and costs are		
								captured consistently		
Work Orders and	General	End-Users and Work	Ability for end users	Fixed Guideway	Bridge	General	End-Users and Work	Ability for end users	ARRC Prioritize from	Desired (Medium)
Work Order		Orders	(e.g. Operations) to				Orders	(e.g. Operations) to	Matrix	
Management			initiate work requests					initiate work requests		
			through a complaint					through a complaint		
			process and to see					process and to see		
			status and history of					status and history of		
			work orders					work orders		
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Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Fixed Guideway	Bridge	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Matrix	Optional (Low)
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	Fixed Guideway	Bridge	General	Support Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	Fixed Guideway	Bridge	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened		Not Set
Work Orders and Work Order Management	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance		Bridge	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Scheduling and Planning	Ability to plan and schedule work within the system rather than having to track outside of it (e.g. Excel)	Fixed Guideway	Bridge	General	Scheduling and Planning	Ability to plan and schedule work within the system rather than having to track outside of it (e.g. Excel)		Essential (High)



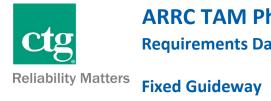
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Fixed Guideway	Bridge	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection or an operations observation)	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Fixed Guideway	Bridge	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy (e.g. the Bridge in general instead of specific Spans)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to end users		Bridge	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling	CTG Consultant	Desired (Medium)
Work Orders and Work Order Management	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.		Bridge	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.		Essential (High)
Work Orders and Work Order Management	General	Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	Fixed Guideway	Bridge	General	Prioritization of Work Orders	Ability to prioritze or rank work orders	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Task Coding on Work	Ability to code tasks on	Fixed Guideway	Bridge	General	Task Coding	Support task coding on	ARRC Group Interview	Essential (High)
Work Order		Orders	work orders that may					work orders to identify	,	
Management			include system,					the work activity (e.g.		
			subsystem, component,					diagnose, repair,		
			position, and activity					replace, install,		
			(e.g. inspect, install,					inspect, etc)		
			remove, repair, replace)							
			for accurate							
			information on							
			maintenance activity							
			and costs							
Work Orders and	General	Record Checklist and	Ability to capture and	Fixed Guideway	Bridge	General	Record Checklist and	Ability to capture and	ARRC Prioritize from	Essential (High)
Work Order		Results	store checklist form and	·			Results	store checklist form	Matrix	
Management			recorded data					and recorded data		
			electronically (rather					electronically (rather		
			than paper or scanned					than paper or scanned		
			paper) for a work order					paper) for a work		
								order		
Work Orders and	General	Record GPS Locations	Ability to record GPS	Fixed Guideway	Bridge	General	Record GPS Locations	Ability to record GPS	ARRC Prioritize from	Desired (Medium)
Work Order		to Work Location	locations (from device				to Work Location	locations (from device	Matrix	
Management			itself or selection from					itself or selection from		
			a map) for work order					a map) for work order		
			locations					locations		
Work Orders and	General	Work Packages	Ability to create pre-	Fixed Guideway	Signal	General	Work Packages	Ability to create pre-	ARRC Group Interview	Essential (High)
Work Order			defined work order					defined work order		
Management			template with a					template with a		
			standard set of tasks for					standard set of tasks		
			a particular inspection,					for a particular		
			condition assessement,					inspection, condition		
			complaint, etc					assessement,		
								complaint, etc		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	·	Signal	General	Capture all Work on Work Order	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Fixed Guideway	Signal	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, alarm/notification, or internally initiated)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Mobile Digital Work Orders	Record data where and when the work occurs (create, update, and close) through mobile digital work orders that support an offline mode.	Fixed Guideway	Signal	General	Mobile Work Orders	Ability to view, initiate, update, and close work orders in the field in online or offline mode.	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	Fixed Guideway	Signal	General	Task Coding Ease of Use	Focus on the ease of use in task coding - as an example filter task codes available on a work order to those that are applicable for the asset	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Task Coding on Work	Ability to code tasks on	Fixed Guideway	Signal	General	Task Coding on Work	Ability to code tasks	ARRC Group Interview	Essential (High)
Work Order		Orders	work orders that may				Orders	on work orders that		
Management			include system,					may include system,		
			subsystem, component,					subsystem,		
			position, and activity					component, position,		
			(e.g. inspect, install,					and activity (e.g.		
			remove, repair, replace)					inspect, install,		
			for accurate					remove, repair,		
			information on					replace) for accurate		
			maintenance activity					information on		
			and costs					maintenance activity		
								and costs		
Work Orders and	General	Prioritization of Work	Ability to prioritze or	Fixed Guideway	Signal	General	Prioritization of Work	Ability to prioritze or	ARRC Group Interview	Essential (High)
Work Order		Orders	rank work orders; a				Orders	rank work orders; a		
Management			default prioritzation					default prioritzation		
			may be based on					may be based on		
			criticality rating of asset					criticality rating of		
								asset		
Work Orders and	General	Group Work Orders by	Group work orders by	Fixed Guideway	Signal	General	Group Work Orders by	Group work orders by	ARRC Group Interview	Essential (High)
Work Order		Geographic Area	geographic area so they				Geographic Area	geographic area so		
Management			do not need to be					they do not need to be		
			manually grouped for					manually grouped for		
			review and assignment					review and		
								assignment		
Work Orders and	General	Cost Reporting	Ability to see	Fixed Guideway	Signal	General	Cost Reporting	Ability to see		Desired (Medium)
Work Order			aggreggate costs on					aggreggate costs on	Matrix	
Management			assets by basic criteria					assets by basic criteria		
			including System,					including System,		
			"Type", Time Period,					"Type", Time Period,		
			PM, Corrective or Break	-				PM, Corrective or		
			Fix, By OPEX/CAPEX (or					Break-Fix, By		
			funding source), by					OPEX/CAPEX (or		
			hierarchy or geography					funding source), by		
								hierarchy or		
								geography		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Estimated Effort on	Ability to set an	Fixed Guideway	Signal	General	Estimated Effort on	Ability to set an	ARRC Group Interview	Essential (High)
Work Order		Work Orders	estimated labor or costs				Work Orders	estimated labor or		
Management			on work orders to aid in					costs on work orders		
			planning and scheduling					to aid in planning and		
			or to provide estimates					scheduling or to		
			to end users					provide estimates to		
								end users		
Work Orders and	General	Assign Work Orders	Ability to assign work	Fixed Guideway	Signal	General	Assign Work Orders	Ability to assign work	ARRC Group Interview	Essential (High)
Work Order			orders to technicians					orders to technicians		
Management			within the appropriate					within the appropriate	غ ا	
			skillset pool and/or					skillset pool and/or		
			geographic location					geographic location		
Work Orders and	General	Work Order	Ability to configure	Fixed Guideway	Signal	General	Work Order	Ability to configure	ARRC Group Interview	Essential (High)
Work Order		Notifications	notifications for new or				Notification	notifications for work		
Management			outstanding work					including inspections		
			including PM,					or work orders to		
			inspection, or work					recipients (end users,		
			orders to designated					technicians,		
			users (e.g. on being					management,		
			created or assigned)					operations) based on		
								criteria and action(e.g.		
								newly created,		
								modified, closed)		
Work Orders and	General	Failure Analysis	Improved ability to	Fixed Guideway	Signal	General	Failure Analysis	Ability to analyze	ARRC Group Interview	Essential (High)
Work Order			analyze failures and					failures and their		
Management			their causes. Currently					causes; particularly		
			can only rely on what					when there are		
			has been written on the					system		
			work orders; and its					interdependencies		
			necessary to look at					(e.g. power, network)		
			each individual work							
			order.							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Multiple Shop / Work	Accommodate multiple		Signal	General	Multiple Shop / Work	Accommodate	ARRC Prioritize from	Optional (Low)
Work Order		Locations	shops and work				Locations	multiple shops and	Matrix	
Management			locations including					work locations		
			ARRC shops and work in					including ARRC shops		
			the field					and work in the field		
Work Orders and	General	Reimbursable Work	Ability to indicate that	Fixed Guideway	Signal	General	Reimbursable Work	Ability to indicate that	ARRC Group Interview	Essential (High)
Work Order			work is reimbursable by					work is reimbursable		
Management			another party and					by another party and		
			output can be prepared					output can be		
			to support Finance					prepared to support		
								Finance		
Work Orders and	General	SLAs for Response	Support the ability to	Fixed Guideway	Signal	General	SLAs for Response	Support the ability to	ARRC Group Interview	Desired (Medium)
Work Order		Times	set SLAs for response				Times	set SLAs for response	·	
Management			time on asset groups or					time on asset groups		
			categories and to					or categories and to		
			record performance					record performance		
			against them					against them		
Work Orders and	General	End-Users and Work	Ability for end users	Fixed Guideway	Signal	General	End-Users and Work	Ability for end users	ARRC Group Interview	Essential (High)
Work Order		Orders	(e.g. Operations) to				Orders	(e.g. Operations) to		
Management			initiate work requests					initiate work requests		
			through a complaint					through a complaint		
			process and to see					process and to see		
			status and history of					status and history of		
			work orders					work orders		
Work Orders and	General	End-User Field Service	Ability for end users to	Fixed Guideway	Signal	General	End-User Field Service	Ability for end users to	ARRC Prioritize from	Optional (Low)
Work Order			quickly record any field					quickly record any	Matrix	
Management			service performed (for					field service		
			efficiency and					performed (for		
			consistency likely					efficiency and		
			requires a digital					consistency likely		
			mobile offline solution)					requires a digital		
								mobile offline		
								solution)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Fixed Guideway	Signal	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	Fixed Guideway	Signal	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	Fixed Guideway	Signal	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Fixed Guideway	Signal	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	Fixed Guideway	Signal	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	Fixed Guideway	Signal	General	Capture Usage Readings on Work Orders	+		Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	Fixed Guideway	Signal	General	Support Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)	·	Signal	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items. Automatically create a work order to with the task or add a line item to work order if already created from this checklist.	Fixed Guideway	Signal	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria for repair or replacement on checklist items. A work order to address is automatically created / or a line item on a work order if already created from this checklist)	ARRC Group Interview	Essential (High)



eature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Checklists (Digital)	Ability to define digital	Fixed Guideway	Signal	General	Digital Checklists	Ability to define digital	ARRC Group Interview	Essential (High)
Work Order			(not paper) checklists					(not paper) checklists		
Management			for condition					for condition		
			assessments,					assessments,		
			inspections, or regular					inspections, or regular		
			work activities					work activities		
			connected to a work					connected to a work		
			orders. Checklists save					orders. Checklists		
			the results recorded by					save the results		
			the user and are					recorded by the user		
			attached to work order					and are attached to		
			and may be available					work order / asset		
			from asset.							
Work Orders and	General	Categorize Costs	Abililty to categorize	Fixed Guideway	Signal	General	Categorize Costs	Abililty to categorize	ARRC Group Interview	Essential (High)
Work Order		(OPEX/CAPEX)	costs by OPEX/CAPEX	,			(OPEX/CAPEX)	costs by OPEX/CAPEX	·	
Management			categories and					categories and		
-			subcatgory (e.g. OPEX -					subcatgory (e.g. OPEX		
			Preventative (e.g.					Preventative (e.g.		
			Inspection), Corrective,					Inspection),		
			or Break-Fix (must fix					Corrective, or Break-		
			now) and CAPEX (e.g.					Fix (must fix now) and		
			ARRC, Agency (if					CAPX (e.g. ARRC,		
			application) or Other (if					Agency (if application)		
			applicable)					or Other (if applicable)		
Work Orders and	General	Record Checklist and	Ability to capture and	Fixed Guideway	Signal	General	Record Checklist and	Ability to capture and	ARRC Prioritize from	Optional (Low)
Work Order		Results	store checklist form and	· ·			Results	store checklist form	Matrix	,
Management			recorded data					and recorded data		
- 0			electronically (rather					electronically (rather		
			than paper or scanned					than paper or scanned		
			paper) for a work order					paper) for a work		
								order		



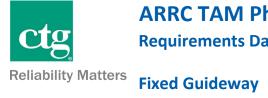
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.	Fixed Guideway	Signal	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.		•
Work Orders and Work Order Management	General	Mechanic/Technican Records Work	Mechanic/Technician records their work on the work order and has access to info they need thrugh the system.  Only person with direct knowledge of work is Mechanic/Technician and they should be able to record their work as it is done.		Signal	General	Record of Work by Technican	Only person who knows what is happening on the work order is the technican and they should have ability to see the info they need and also record as it is done (as easily as possible)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not asset-specific for non-parts work less than 1 hour)		Signal	General	Minor Work	Ability to quickly record minor work such as inspection and service (i.e. ability to avoid using bucket/generic work order for non-parts work less than 15 minutes) - repetitive minor fixes could indicate a recurring problem	ARRC Group Interview	Essential (High)



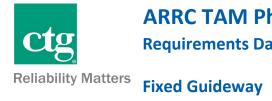
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Order	Automatically output,	Fixed Guideway	Signal	General	Work Order	Automatically output	ARRC Group Interview	Essential (High)
Work Order		Attachments	link, and/or display (if				Attachments	or link / present (if		
Management			digital) procedures,					digital) procedures,		
			checklists, and bills of					checklists, and bills of		
			materials needed for					materials needed for		
			work order					work order		
Work Orders and	General	Scheduling and	Ability to plan and	Fixed Guideway	Signal	General	Scheduling and	Ability to plan and	ARRC Group Interview	Essential (High)
Work Order		Planning	schedule work within				Planning	schedule work within		
Management			the system rather than					the system rather than		
			having to track outside					having to track outside		
			of it (e.g. Excel)					of it (e.g. Excel)		
Work Orders and	General	Reassign, Split, or	Ability to reassign, split	Fixed Guideway	Signal	General	Reassign, Split, or	Ability to reassign,	ARRC Group Interview	Essential (High)
Work Order		Child Work Order	off part of a work order,				Child Work Order	split off part of a work		
Management			or create a child work					order, or create a child		
			order so that more than					work order so that		
			one group can record					more than one group		
			activity against a work					can record activity		
			order yet still maintain					against a work order		
			the link to the single					yet still maintain the		
			event					link to the single event		
Work Orders and	General	Complaint / Cause /	Support the ability to	Fixed Guideway	Signal	General	Work Order 3C	Ability to record	ARRC Group Interview	Essential (High)
Work Order		Correction (3C's)	record complaint,					Complaint / Cause /		
Management			cause, and correction in					Correction with simple		
			a standardized way for					coding to allow for		
			more efficient failure					identifying common		
			analysis and					problems and their		
			identification of					resolution		
			common issues, causes,							
			and their resolution							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reporting Tools	Base requirement are tools that are better than an Excel export. There is a need for analytics for trending, analysis, failure, and investment planning. Analytics may be in a separate tool but the information to support it must be reportable. Currently Excel is the reporting tool - either data is manually entered or exported from JDE	Fixed Guideway	Signal	General	Reporting Tools	<u> </u>	ARRC Group Interview	
Work Orders and Work Order Management	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	Fixed Guideway	Signal	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	ARRC Group Interview	Essential (High)
Materials Management	General	Material Inventory Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)	Fixed Guideway	Track	General	Material Inventory Field Locations	Ability to easily add and remove materials (ties, ballast, etc.) in field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Min-Max Parts	Inventory minimum and	Fixed Guideway	Track	General	Min-Max Parts	Inventory minimum	ARRC Prioritize from	Optional (Low)
Management		Inventory	maximum on-hand				Inventory	and maximum on-	Matrix	
			requirements that is					hand requirements		
			based on asset and					that is based on asset		
			component mix;					and component mix;		
			including when assets					including when assets		
			are added or surplused;					are added or		
			and seasonal changes					surplused; and		
								seasonal changes		
Materials	General	Equipment Check-Out	Mechanism to check	Fixed Guideway	Track	General	Equipment Check-Out	Mechanism to check	ARRC Prioritize from	Not Set
Management		/ Check-In	out and check in				/ Check-In	out and check in	Matrix	
			equipment (particularly					equipment		
			portable equipment					(particularly portable		
			that may be issued to a					equipment that may		
			user)					be issued to a user)		
Materials	General	Component Parts -	Ability to designate as	Fixed Guideway	Track	General	Component Parts -	Ability to designate as	ARRC Prioritize from	Optional (Low)
Management		Criticality	critical parts or				Criticality	critical parts or	Matrix	
			components that have					components that have		
			long lead times, are					long lead times, are		
			obsolete, or are costly					obsolete, or are costly		
			or difficult to ship when					or difficult to ship		
			needed					when needed		
Materials	General	Component Parts -	Ability to identify date	Fixed Guideway	Track	General	Component Parts -	Ability to identify date	ARRC Prioritize from	Not Set
Management		Obsolescence	and category of				Obsolescence	and category of	Matrix	
			obsolescence by vendor					obsolescence by		
			for asset or its					vendor for asset or its		
			component parts (e.g.					component parts (e.g.		
			vendor sends notice					vendor sends notice		
			with date of end of					with date of end of		
			support)					support)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Inventory Purchase	Purchase plan based on	Fixed Guideway	Track	General	Inventory Purchase	Purchase plan based	ARRC Prioritize from	Optional (Low)
Management		Plan	forecasted preventative				Plan	on forecasted	Matrix	
			and overhaul work					preventative and		
			(done manually now					overhaul work (done		
			but should be able to					manually now but		
			forecast based on work					should be able to		
			packages / planned					forecast based on		
			work orders in system)					work packages /		
								planned work orders		
Nataviala	Cananal	Company and Double	A hilitura de de ciencata de	Fived Cuideway	Duides	Canaval	Come in a mant. Do into	in system)	ADDC Deigniting frame	Optional (Law)
Materials	General	Component Parts -	, ,	Fixed Guideway	Bridge	General	Component Parts -	Ability to designate as		Optional (Low)
Management		Criticality	critical parts or				Criticality	critical parts or	Matrix	
			components that have					components that have		
			long lead times, are					long lead times, are		
			obsolete, or are costly					obsolete, or are costly		
			or difficult to ship when					or difficult to ship		
Materials	General	Min-Max Parts	needed Inventory minimum and	Fixed Cuideway	Bridge	General	Min-Max Parts	when needed	ARRC Prioritize from	Desired (Medium)
	General		· ·	rixed Guideway	Bridge	General		Inventory minimum		Desired (Medium)
Management		Inventory	maximum on-hand				Inventory	and maximum on-	Matrix	
			requirements that is based on asset and					hand requirements that is based on asset		
			component mix;					and component mix;		
			including when assets					including when assets		
			"					are added or		
			are added or surplused; and seasonal changes					surplused; and		
			and seasonal changes					surplused, and seasonal changes		
Materials	General	Inventory Purchase	Purchase plan based on	Fixed Guidoway	Bridge	General	Inventory Purchase	Purchase plan based	ARRC Prioritize from	Optional (Low)
Management	General	Plan	forecasted preventative	rixed Guideway	bridge	General	Plan	on forecasted	Matrix	Optional (Low)
ivialiagement		Fidil	and overhaul work				Fidii	preventative and	IVIALITX	
			(done manually now					overhaul work (done		
			but should be able to					manually now but		
			forecast based on work					should be able to		
			packages / planned					forecast based on		
			work orders in system)					work packages /		
			work orders in system)					planned work orders		
								in system)		
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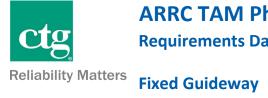
Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Component Parts -	Ability to identify date	Fixed Guideway	Bridge	General	Component Parts -	Ability to identify date	ARRC Prioritize from	Optional (Low)
Management		Obsolescence	and category of				Obsolescence	and category of	Matrix	
			obsolescence by vendor					obsolescence by		
			for asset or its					vendor for asset or its		
			component parts (e.g.					component parts (e.g.		
			vendor sends notice					vendor sends notice		
			with date of end of					with date of end of		
			support)					support)		
Materials	General	Material Inventory	Ability to easily add and	Fixed Guideway	Bridge	General	Material Inventory	Ability to easily add	ARRC Group Interview	Desired (Medium)
Management		Field Locations	remove materials in				Field Locations	and remove materials		
			arbitrary field locations					(ties, pilings, spans,		
			identified with GPS					etc.) in field locations		
			(either by device or					identified with GPS		
			selection from map).					(either by device or		
			Material locations					selection from map).		
			correlated to asset					Material locations		
			hierarchy for reporting					correlated to asset		
			(e.g. Mile Post)					hierarchy for reporting		
								(e.g. Mile Post). Note		
								that structures /		
								components that have		
								been		
								uninstalled/recovered		
								and could be reused		
								should have any asset		
								data follow		
Materials	General	Equipment Check-Out		Fixed Guideway	Bridge	General	Equipment Check-Out		ARRC Prioritize from	Optional (Low)
Management		/ Check-In	out and check in				/ Check-In	out and check in	Matrix	
			equipment (particularly					equipment		
			portable equipment					(particularly portable		
			that may be issued to a					equipment that may		
			user)					be issued to a user)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Min-Max Parts	Inventory minimum and	Fixed Guideway	Signal	General	Min-Max Parts	Inventory minimum	ARRC Prioritize from	Desired (Medium)
Management		Inventory	maximum on-hand				Inventory	and maximum on-	Matrix	
			requirements that is					hand requirements		
			based on asset and					that is based on asset		
			component mix;					and component mix;		
			including when assets					including when assets		
			are added or surplused;					are added or		
			and seasonal changes					surplused; and		
								seasonal changes		
Materials	General	Material Inventory	Ability to easily add and	Fixed Guideway	Signal	General	Material Inventory	Ability to easily add	ARRC Prioritize from	Optional (Low)
Management		Field Locations	remove materials in				Field Locations	and remove materials	Matrix	
			arbitrary field locations					in arbitrary field		
			identified with GPS					locations identified		
			(either by device or					with GPS (either by		
			selection from map).					device or selection		
			Material locations					from map). Material		
			correlated to asset					locations correlated to		
			hierarchy for reporting					asset hierarchy for		
			(e.g. Mile Post)					reporting (e.g. Mile		
								Post)		
Materials	General	Equipment Check-Out	Mechanism to check	Fixed Guideway	Signal	General	Equipment Check-Out	Mechanism to check	ARRC Prioritize from	Optional (Low)
Management		/ Check-In	out and check in	,			/ Check-In	out and check in	Matrix	ориона: (== н,
		,	equipment (particularly				,	equipment		
			portable equipment					(particularly portable		
			that may be issued to a					equipment that may		
			user)					be issued to a user)		
Materials	General	Component Parts -	Ability to identify date	Fixed Guideway	Signal	General	Component Parts -	· · · · · · · · · · · · · · · · · · ·	ARRC Group Interview	Essential (High)
Management		Obsolescence	and category of	,			Obsolescence	and category of		, 3,
			obsolescence by vendor					obsolescence by		
			for asset or its					vendor for asset or its		
			component parts (e.g.					component parts (e.g.		
			vendor sends notice					vendor sends notice		
			with date of end of					with date of end of		
			support)					support)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Inventory Purchase	Purchase plan based on	Fixed Guideway	Signal	General	Inventory Purchase	Purchase plan based	ARRC Prioritize from	Optional (Low)
Management		Plan	forecasted preventative				Plan	on forecasted	Matrix	
			and overhaul work					preventative and		
			(done manually now					overhaul work (done		
			but should be able to					manually now but		
			forecast based on work					should be able to		
			packages / planned					forecast based on		
			work orders in system)					work packages /		
								planned work orders		
								in system)		
Materials	General	Component Parts -	Ability to designate as	Fixed Guideway	Signal	General	Component Parts -	Ability to designate as	ARRC Group Interview	Essential (High)
Management		Criticality	critical parts or				Criticality	critical parts or		
			components that have					components that have		
			long lead times, are					long lead times, are		
			obsolete, or are costly					obsolete, or are costly		
			or difficult to ship when					or difficult to ship		
			needed					when needed		
Component Tracking	General	Component Serial	Ability to track	Fixed Guideway	Track	General	Component Serial	Ability to track	ARRC Prioritize from	Desired (Medium)
and Rebuild		Number Tracking	components by serial				Number Tracking	components by serial	Matrix	
			number and when they					number and when		
			were put on, taken off,					they were put on,		
			moved to another asset					taken off, moved to		
			or put on shelf (serial					another asset or put		
			number of part not on					on shelf (serial		
			unit could require					number of part not on		
			component to be an					unit could require		
			"asset")					component to be an		
								"asset")		
Component Tracking	General	Part Rebuild	Indicator that a part in	Fixed Guideway	Track	General	Part Rebuild	Indicator that a part in	ARRC Prioritize from	Optional (Low)
and Rebuild			inventory or being					inventory or being	Matrix	
			installed is a rebuild					installed is a rebuild		



Feature Category Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Feature Category Feature Component Tracking and Rebuild  General	Base Req Title  Component Installation and Removal	Base Req Desc Track when components are installed, removed, and their disposition (e.g. transferred, shelved, disposed of, rebuilt) May be differences in handling with components that have serial numbers vs those	Fixed Guideway	Asset Class Track	Asset Type General	Component Installation and Removal	Description Track when components are installed, removed, and their disposition (e.g. transferred, shelved, disposed of, rebuilt) May be differences in handling with components that have serial numbers vs	ARRC Prioritize from Matrix	Priority  Desired (Medium)
Component Tracking General and Rebuild	Component Service Life	that do not.  Ability to specify expected service life of a component or part	Fixed Guideway	Track	General	Component Service Life	those that do not.  Ability to specify expected service life of a component or part	ARRC Prioritize from Matrix	Optional (Low)
Component Tracking General and Rebuild	Usage for Components	Calculated usage based on the usage measures for asset(s) installed in; for reliablity and preventative maintenance	Fixed Guideway	Track	General	Usage for Components	•	ARRC Prioritize from Matrix	Optional (Low)
Component Tracking General and Rebuild	Component Compatibility	Ability to identify compatibility of components with asset configurations	Fixed Guideway	Track	General	Compatibility	Ability to identify compatibility of components with asset configurations	ARRC Prioritize from Matrix	Desired (Medium)
Component Tracking General and Rebuild	Component Serial Number Tracking	Ability to track components by serial number and when they were put on, taken off, moved to another asset or put on shelf (serial number of part not on unit could require component to be an "asset")	Fixed Guideway	Bridge	General	Number Tracking	Ability to track components by serial number and when they were put on, taken off, moved to another asset or put on shelf (serial number of part not on unit could require component to be an "asset")	ARRC Prioritize from Matrix	Optional (Low)



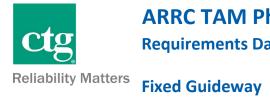
Feature Category Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking General	Part Rebuild	Indicator that a part in	Fixed Guideway	Bridge	General	Part Rebuild	Indicator that a part in		Optional (Low)
and Rebuild		inventory or being					inventory or being	Matrix	
		installed is a rebuild	F: 10 :1	D I	0 1		installed is a rebuild	ADDOD: W	
Component Tracking General	Usage for Components		Fixed Guideway	Bridge	General	Usage for Components		ARRC Prioritize from	Optional (Low)
and Rebuild		on the usage measures					based on the usage	Matrix	
		for asset(s) installed in;					measures for asset(s)		
		for reliablity and					installed in; for		
		preventative					reliablity and		
		maintenance					preventative		
Company and Tracking Company	Common and Compiles	A bilitur to proprie	Five d Codesses	Duidee	Canaval	Campagagh Camilaa	maintenance	ADDC Duianitina fuana	Desired (Medium)
Component Tracking General	Component Service	Ability to specify	Fixed Guideway	Bridge	General	Component Service	Ability to specify	ARRC Prioritize from	Desired (Medium)
and Rebuild	Life	expected service life of				Life	expected service life	Matrix	
		a component or part					of a component or		
Component Tracking Conoral	Component	Track when	Fixed Guideway	Dridge	General	Component	part Track when	ARRC Prioritize from	Optional (Low)
Component Tracking General and Rebuild	Component Installation and		Fixed Guideway	Bridge	General	Component Installation and			Optional (Low)
and Rebuild	Removal	components are installed, removed, and				Removal	components are installed, removed,	Matrix	
	Removal	their disposition (e.g.				Removal	and their disposition		
		transferred, shelved,					(e.g. transferred,		
		disposed of, rebuilt)					shelved, disposed of,		
		May be differences in					rebuilt) May be		
		handling with					differences in handling		
		components that have					with components that		
		serial numbers vs those					have serial numbers vs		
		that do not.					those that do not.		
		that do not.					those that do not.		
Component Tracking General	Component	Ability to identify	Fixed Guideway	Bridge	General	Component	Ability to identify	ARRC Prioritize from	Optional (Low)
and Rebuild	Compatibility	compatibility of				Compatibility	compatibility of	Matrix	
	, , , , , , , , , , , , , , , , , , , ,	components with asset				, ,	components with		
		configurations					asset configurations		
Component Tracking General	Component	Ability to identify	Fixed Guideway	Signal	General	Component	Ability to identify	ARRC Prioritize from	Optional (Low)
and Rebuild	Compatibility	compatibility of	,			Compatibility	compatibility of	Matrix	,
		components with asset					components with		
		configurations					asset configurations		
Component Tracking General	Part Rebuild	Indicator that a part in	Fixed Guideway	Signal	General	Part Rebuild	Indicator that a part in	ARRC Prioritize from	Optional (Low)
and Rebuild		inventory or being	·				inventory or being	Matrix	
		installed is a rebuild					installed is a rebuild		



Feature Category Feat	ature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking Gen	neral	Component	Track when	Fixed Guideway	Signal	General	Component	Track when	ARRC Prioritize from	Essential (High)
and Rebuild		Installation and	components are				Installation and	components are	Matrix	
		Removal	installed, removed, and				Removal	installed, removed,		
			their disposition (e.g.					and their disposition		
			transferred, shelved,					(e.g. transferred,		
			disposed of, rebuilt)					shelved, disposed of,		
			May be differences in					rebuilt) May be		
			handling with					differences in handling		
			components that have					with components that		
			serial numbers vs those					have serial numbers vs		
			that do not.					those that do not.		
Component Tracking Gen	neral	Component Service	Ability to specify	Fixed Guideway	Signal	General	Component Service	Ability to specify	ARRC Prioritize from	Essential (High)
and Rebuild		Life	expected service life of				Life	expected service life	Matrix	
			a component or part					of a component or		
								part		
Component Tracking Gen	neral	Component Serial	Ability to track	Fixed Guideway	Signal	General	Component Serial	Ability to track	ARRC Prioritize from	Desired (Medium)
and Rebuild		Number Tracking	components by serial				Number Tracking	components by serial	Matrix	
			number and when they					number and when		
			were put on, taken off,					they were put on,		
			moved to another asset					taken off, moved to		
			or put on shelf (serial					another asset or put		
			number of part not on					on shelf (serial		
			unit could require					number of part not on		
			component to be an					unit could require		
			"asset")					component to be an		
								"asset")		
Component Tracking Gen	neral	Usage for Components	Calculated usage based	Fixed Guideway	Signal	General	Usage for Components	Calculated usage	ARRC Prioritize from	Optional (Low)
and Rebuild			on the usage measures					based on the usage	Matrix	
			for asset(s) installed in;					measures for asset(s)		
			for reliablity and					installed in; for		
			preventative					reliablity and		
			maintenance					preventative		
								maintenance		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Warranty	General	Warranty	Ability to specify for	Fixed Guideway	Track	General	Warranty	Ability to specify for	ARRC Prioritize from	Optional (Low)
Management			parts whether a serial					parts whether a serial	Matrix	
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		
Warranty	General	Warranty	Ability to specify for	Fixed Guideway	Bridge	General	Warranty	Ability to specify for	ARRC Prioritize from	Optional (Low)
Management			parts whether a serial					parts whether a serial	Matrix	
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		
Warranty	General	Warranty	Ability to specify for	Fixed Guideway	Signal	General	Warranty	Ability to specify for	ARRC Prioritize from	Optional (Low)
Management			parts whether a serial					parts whether a serial	Matrix	
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Capital Projects	Improved reporting on	Fixed Guideway	Track	General	Capital Projects	Improved reporting on	ARRC Prioritize from	Optional (Low)
Campaigns		Reporting	capital projects				Reporting	capital projects	Matrix	
			including estimates for					including estimates for		
			labor, P-Card					labor, P-Card		
			purchases, etc. prior to					purchases, etc. prior		
			posting in the finance					to posting in the		
			system (perhaps					finance system		
			estimated from Work					(perhaps estimated		
			Order entries) in					from Work Order		
			addition to funding by					entries)		
			year and by funding							
			source							
'	General	Asset Category / Class	1	Fixed Guideway	Track	General	Asset Category / Class	1	ARRC Prioritize from	Desired (Medium)
Campaigns		Composition over	composition of assets in				Composition over	'	Matrix	
		Time	an asset category / class				Time	in an asset category /		
			over time by asset					class over time by		
			hierarchy or groupings					asset hierarchy or		
			as well as ownership					groupings as well as		
			(e.g. ARRC, leased,					ownership (e.g. ARRC,		
			rented)					leased, rented)		
Capital Projects and	General	Total Cost of	Method for recording	Fixed Guideway	Track	General	Total Cost of	Method for recording	ARRC Prioritize from	Optional (Low)
Campaigns		Ownership Reporting	and displaying TCO;	,			Ownership Reporting	and displaying TCO;	Matrix	
			what is spent to					what is spent to		
			maintain assets and the					maintain assets and		
			frequency of					the frequency of		
			maintenance versus					maintenance versus		
			replacement of the					replacement of the		
			asset or systems within					asset or systems		
			the asset; allow for long					within the asset; allow		
			term planning of asset					for long term planning		
			or system replacement					of asset or system		
								replacement		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and Campaigns	General	Replacement Plan (ULB / Obsolescence)	For multi-year planning support replacement	Fixed Guideway	Track	General	Replacement Plan (ULB / Obsolescence)	For multi-year planning support	ARRC Prioritize from Matrix	Optional (Low)
Campaigns		(OLD) Obsolescence)	planning including age,				(OLD) Obsolescence)	replacement planning	IVICUIX	
			useful life benchmark,					including age, useful		
			obsolescence, costs,					life benchmark,		
			usage, and asset					obsolescence, costs,		
			category composition					usage, and asset		
			(e.g. owned vs leased /					category composition		
			rented)					(e.g. owned vs leased		
								/ rented)		
Capital Projects and	General	Capital Projects	Improved reporting on	Fixed Guideway	Bridge	General	Planning	Support multi-year	ARRC Group Interview	Essential (High)
Campaigns		Reporting	capital projects					asset planning		
			including estimates for					(currently Bridge has 5		
			labor, P-Card					year plan with other		
			purchases, etc. prior to					list with items in		
			posting in the finance					10/15 year period) -		
			system (perhaps					inputs to planning		
			estimated from Work					include condition		
			Order entries) in					assessment / ranking,		
			addition to funding by					traffic volume, budget,		
			year and by funding					and prioritization		
Conital Ducinate and	Camanal	Davida as we set Diag	source	Fire d Cuideness	Deiden	Cananal	Davida a succest Diam	F	ADDC Dai sutting for an	
' '	General	Replacement Plan	For multi-year planning	Fixed Guideway	Bridge	General	Replacement Plan	For multi-year	ARRC Prioritize from	Essential (High)
Campaigns		(ULB / Obsolescence)	support replacement planning including age,				(ULB / Obsolescence)	planning support replacement planning	Matrix	
			useful life benchmark,					including age, useful		
			obsolescence, costs,					life benchmark,		
			usage, and asset					obsolescence, costs,		
			category composition					usage, and asset		
			(e.g. owned vs leased /					category composition		
			rented)					(e.g. owned vs leased		
								/ rented)		
								,		
•	-	•	•	•	•	•	•	•	•	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Asset Category / Class	Ability to show the	Fixed Guideway	Bridge	General	Asset Category / Class	Ability to show the	ARRC Prioritize from	Desired (Medium)
Campaigns		Composition over	composition of assets in				Composition over	composition of assets	Matrix	
		Time	an asset category / class				Time	in an asset category /		
			over time by asset					class over time by		
			hierarchy or groupings					asset hierarchy or		
			as well as ownership					groupings as well as		
			(e.g. ARRC, leased,					ownership (e.g. ARRC,		
			rented)					leased, rented)		
Capital Projects and	General	Total Cost of	Method for recording	Fixed Guideway	Bridge	General	Total Cost of	Method for recording	ARRC Prioritize from	Desired (Medium)
Campaigns		Ownership Reporting	and displaying TCO;	,				and displaying TCO;	Matrix	, ,
			what is spent to				· · · · · · · · · · · · · · · · · · ·	what is spent to		
			maintain assets and the					maintain assets and		
			frequency of					the frequency of		
			maintenance versus					maintenance versus		
			replacement of the					replacement of the		
			asset or systems within					asset or systems		
			the asset; allow for long					within the asset; allow		
			term planning of asset					for long term planning		
			or system replacement					of asset or system		
								replacement		
Capital Projects and	General	Capital Projects	Improved reporting on	Fixed Guideway	Signal	General	Capital Planning -	Accommodate inputs	ARRC Group Interview	Essential (High)
Campaigns		Reporting	capital projects				Inputs	to capital planning:		
			including estimates for					track and signal issue		
			labor, P-Card					history, extended		
			purchases, etc. prior to					timeframe for external		
			posting in the finance					parties responsible for		
			system (perhaps					maintenance (2-5		
			estimated from Work					years), obsolescence /		
			Order entries) in					loss of support		
			addition to funding by					indications, ability to		
			year and by funding					"level" system		
			source					upgrading and		
								replacement costs		
								over years		
1		I							l	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Replacement Plan	For multi-year planning	Fixed Guideway	Signal	General	Replacement Plan	For multi-year	ARRC Prioritize from	Essential (High)
Campaigns		(ULB / Obsolescence)	support replacement				(ULB / Obsolescence)	planning support	Matrix	
			planning including age,					replacement planning		
			useful life benchmark,					including age, useful		
			obsolescence, costs,					life benchmark,		
			usage, and asset					obsolescence, costs,		
			category composition					usage, and asset		
			(e.g. owned vs leased /					category composition		
			rented)					(e.g. owned vs leased		
								/ rented)		
Capital Projects and	General	Total Cost of	Method for recording	Fixed Guideway	Signal	General	Total Cost of	Method for recording	ARRC Prioritize from	Optional (Low)
Campaigns	General	Ownership Reporting	and displaying TCO;	Fixed Guideway	Signal	General		and displaying TCO;	Matrix	Optional (Low)
Campaigns		Ownership Reporting	what is spent to				Ownership Reporting	what is spent to	IVIALITA	
			maintain assets and the					maintain assets and		
			frequency of					the frequency of		
			maintenance versus					maintenance versus		
			replacement of the					replacement of the		
			asset or systems within					asset or systems		
			the asset; allow for long					within the asset; allow		
			term planning of asset					for long term planning		
			or system replacement					of asset or system		
			or system replacement					replacement		
Capital Projects and	General	Asset Category / Class	Ability to show the	Fixed Guideway	Signal	General	Asset Category / Class	<del>- '</del>	ARRC Prioritize from	Optional (Low)
Campaigns		Composition over	composition of assets in	,			Composition over	1	Matrix	
		Time	an asset category / class				Time	in an asset category /		
			over time by asset					class over time by		
			hierarchy or groupings					asset hierarchy or		
			as well as ownership					groupings as well as		
			(e.g. ARRC, leased,					ownership (e.g. ARRC,		
			rented)					leased, rented)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Hours Worked on	Record hours worked	Fixed Guideway	Track	General	Hours Worked on	Record time worked	ARRC Prioritize from	Desired (Medium)
		Work Order / Asset	on a work order (both				Work Order / Asset	on a work order and	Matrix	
			direct and indirect					integrate with time		
			time) and integrate					keeping. Preference is		
			with time keeping.					hours are recorded on		
								work orders (direct		
								and indirect time) that		
								is carried over to the		
								time card to simplify		
								time entry and		
								management.		
Timekeeping	General	Asset Field on	Have an asset field on	Fixed Guideway	Track	General	Asset Field on		ARRC Prioritize from	Optional (Low)
		Timecards	time cards across ARRC				Timecards	time cards across	Matrix	
			to ensure that asset					ARRC to ensure that		
			usage can be captured					asset usage can be		
			(usage is a more					captured (usage is a		
			detailed level than					more detailed level		
			what group the asset is					than what group the		
			assigned to)				<del></del>	asset is assigned to)		
Timekeeping	General	Time Tracking	Avoid duplicate entry	Fixed Guideway	Track	General	Time Tracking	A straightforward	ARRC Group Interview	Essential (High)
			or manipulation of time					method of recording		
			records in more than					time against work		
			one system					orders that flows to		
								the time card system;		
								avoid duplicate entry		
								or manipulation of		
<del></del>			A1 111	5. 10.1				time records	10000 · · · · · · ·	0 11 11 1
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours	Fixed Guideway	Track	General	Hours of Service (HOS)	'		Optional (Low)
			of Service and					of Service and	Matrix	
			availablity for work in a					availablity for work in		
			way which adheres and					a way which adheres		
			is approved by					and is approved by		
I	I	I	regulatory agencies	I	I		I	regulatory agencies		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Time Tracking	Avoid duplicate entry	Fixed Guideway	Bridge	General	Time Tracking	A straightforward	ARRC Group Interview	Desired (Medium)
			or manipulation of time					method of recording		
			records in more than					time against work		
			one system					orders that flows to		
								the time card system;		
								avoid duplicate entry		
								or manipulation of		
								time records		
Timekeeping	General	Hours Worked on	Record hours worked	Fixed Guideway	Bridge	General		Record time worked	ARRC Prioritize from	Essential (High)
		Work Order / Asset	on a work order (both				· '	on a work order and	Matrix	
			direct and indirect					integrate with time		
			time) and integrate					keeping. Preference is		
			with time keeping.					hours are recorded on		
								work orders (direct		
								and indirect time) that		
								is carried over to the		
								time card to simplify		
								time entry and		
								management.		
Timekeeping	General	Asset Field on	Have an asset field on	Fixed Guideway	Bridge	General		Have an asset field on	ARRC Prioritize from	Essential (High)
		Timecards	time cards across ARRC					time cards across	Matrix	
			to ensure that asset					ARRC to ensure that		
			usage can be captured					asset usage can be		
			(usage is a more					captured (usage is a		
			detailed level than					more detailed level		
			what group the asset is					than what group the		
			assigned to)					asset is assigned to)		
Timekeeping	General	Hours of Service (HOS)		Fixed Guideway	Bridge	General	Hours of Service (HOS)	· ·		Not Set
			of Service and					of Service and	Matrix	
			availablity for work in a					availablity for work in		
			way which adheres and					a way which adheres		
			is approved by					and is approved by		
1	I		regulatory agencies				I	regulatory agencies		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Time Tracking	Avoid duplicate entry	Fixed Guideway	Signal	General	Simplified Time	Ability to enter time	ARRC Group Interview	Essential (High)
			or manipulation of time				Keeping	once - on the work		
			records in more than					order rder for the		
			one system					most detail - and for it		
								to transfer to time		
								card - and for Hours of		
								Service (HOS) to be		
								accomodated. Biggest		
								obstacle to simplified		
								timekeeping for		
								Signals is HOS.		
Timekeeping	General	Hours Worked on	Record hours worked	Fixed Guideway	Signal	General	Hours Worked on	Record time worked	ARRC Group Interview	Essential (High)
		Work Order / Asset	on a work order (both				Work Order / Asset	on a work order and	·	,
			direct and indirect					integrate with time		
			time) and integrate					keeping. Capture		
			with time keeping.					indirect as well as		
			, -					direct time.		
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours	Fixed Guideway	Signal	General	Hours of Service (HOS)	Ability to record Hours	ARRC Group Interview	Essential (High)
			of Service and					of Service and		
			availablity for work in a					availablity for work in		
			way which adheres and					a way which adheres		
			is approved by					and is approved by		
			regulatory agencies					regulatory agencies		
Timekeeping	General	Asset Field on	Have an asset field on	Fixed Guideway	Signal	General	Asset Field on	Have an asset field on	ARRC Prioritize from	Optional (Low)
		Timecards	time cards across ARRC				Timecards	time cards across	Matrix	
			to ensure that asset					ARRC to ensure that		
			usage can be captured					asset usage can be		
			(usage is a more					captured (usage is a		
			detailed level than					more detailed level		
			what group the asset is					than what group the		
			assigned to)					asset is assigned to)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Service Vehicles	General	General	Basic Asset Attributes	Ability to record basic	ARRC Prioritize from	Essential (High)
Registry, and Info			asset data common to					asset data common to	Matrix	
			asset management					asset management		
			systems including an					systems including an		
			ARRC unique identifier,					ARRC unique		
			year, make, model,					identifier, year, make,		
			serial number, color,					model, serial number,		
			etc.					color, etc.		
Asset Hierarchy,	Asset Data	Location by Mile Post		Service Vehicles	General	General	Location by Mile Post	In addition to a named		Optional (Low)
Registry, and Info			location and GPS / GIS					location and GPS / GIS	Matrix	
			coordinates support the					coordinates support		
			location by ARRC Mile					the location by ARRC		
A+ I I'	A	CDC/CIC Daritian	Post CRS	Camilia Makialaa	Cananal	Cananal	CDC/CIC Diti	Mile Post	ADDC Dais wiking for an	Outing 1 (1 )
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS	Service Vehicles	General	General	GPS/GIS Position	· '	ARRC Prioritize from	Optional (Low)
Registry, and Info		Information (Fixed)	locations for GIS at the				Information (Fixed)	locations for GIS at the	IVIALTIX	
			asset level; either from					asset level; either		
			device or by selecting					from device or by selecting on map		
Asset Hierarchy,	Asset Data	Link (both ways) to GIS	on map	Service Vehicles	General	General	Link (both ways) to GIS	<del> </del>	ARRC Prioritize from	Desired (Medium)
Registry, and Info	Asset Data	Link (both ways) to dis	from asset	Service verticles	General	General	Link (both ways) to dis	'' ''	Matrix	Desired (Medium)
inegistry, and inio			management system to					management system	IVICUIX	
			GIS and from GIS to					to GIS and from GIS to		
			asset management					asset management		
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital	Service Vehicles	General	General	Mobile Access to	Ability to access digital	ARRC Prioritize from	Essential (High)
Registry, and Info		Documents	documents outside of				Documents	documents outside of		ν ο ,
			the office; if on mobile					the office; if on mobile		
			possibly allow offline					possibly allow offline		
			mode by caching					mode by caching		
			documents related to					documents related to		
			the assets					the assets		
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have	Service Vehicles	General	General	NTD Reporting			Desired (Medium)
Registry, and Info		Attributes	attributes that allow for				Attributes		Matrix	
			direct or easy mapping					for direct or easy		
			for NTD reporting					mapping for NTD		
			without the need to					reporting without the		
			maintain separately in					need to maintain		
	I	I	Excel.	I	I	I	I	separately in Excel.	I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Central System of	Objective is a central	Service Vehicles	General	General	Central System of	Objective is a central	ARRC Prioritize from	Essential (High)
Registry, and Info		Record	source of information				Record	source of information	Matrix	
			including asset and					including asset and		
			work activity;					work activity;		
			acknowledging that					acknowledging that		
			specialized systems					specialized systems		
			may be used (and					may be used (and		
			possibly linked or					possibly linked or		
			integrated) for					integrated) for		
			configuration, status,					configuration, status,		
			and notifications					and notifications		
Asset Hierarchy,	Asset Data	Asset Data System	Ability to support	Service Vehicles	General	General	Asset Data System	Ability to support	ARRC Group Interview	Essential (High)
Registry, and Info		Identifiers	multiple external				Identifiers	multiple external	·	, 0,
			system identifiers for					system identifiers for		
			an asset if they differ					an asset if they differ		
			from internal ARRC					from internal ARRC		
			identifiers					(e.g. ARI Fleet, Verizon		
								Fleet) - may include		
								things like a SIM/GPS		
								identifier, a fuel card		
								number, an account		
								number, etc.		
Asset Hierarchy,	Asset Data	Asset Data Integration	Ability to synchronize	Service Vehicles	General	General	Asset Data Integration	Ability to synchronize	ARRC Group Interview	Essential (High)
Registry, and Info			or integrate basic asset					or integrate basic		
			information with					asset information with		
			external vendors /					external vendors /		
			systems minimize need					systems (e.g. ARI Fleet		
			to manually check and					and Verizon Fleet) -		
			update records for					minimize need to		
			accuracy.					manually check and		
								update records for		
								accuracy.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data			Service Vehicles	General	General	Asset Attributes and Asset "Type" or "Pools"	Support attributes to identify the make, model, year, VIN/serial, and additional info (engine size, etc.) to enable grouping similar assets into a "type", "family", or "pool" which can help for parts management, setup of PM and maintenance work packages, and reporting		Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Document  Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	Service Vehicles	General	General	Document Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Hierarchy	Components	Include components and sub-components, assemblies, systems and similar entities	Service Vehicles	General	General	Components	Include components and sub-components, assemblies, systems and similar entities	ARRC Prioritize from Matrix	Desired (Medium)
Asset Hierarchy, Registry, and Info	Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	Service Vehicles	General	General	Asset Hierarchy	Allow for categorization of assets at several levels (e.g. Heavy Equipment > Dirt Work > Excavator <125CY); allow for NTD category / description.		Essential (High)



Asset Hierarchy,		Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
assect includency,	Hierarchy	Classes or Grouping of	Organize and manage	Service Vehicles	General	General	Classes or Grouping of	Organize and manage	ARRC Prioritize from	Essential (High)
Registry, and Info		Assets	equipment as a class or				Assets	equipment as a class	Matrix	
			group; useful for					or group; useful for		
			planned maintenance					planned maintenance		
			programs and reporting					programs and		
								reporting		
Asset Availability	Ownership	Ownership Status	Ability to indicate	Service Vehicles	General	General	Ownership Indicator	Support indicating the	ARRC Group Interview	Essential (High)
and Status			owner and any					owners or interested		
			interested parties in the					parties in the asset		
			asset					(e.g. rental or lease)		
Asset Availability	Ownership	Owner Info	Contact information of	Service Vehicles	General	General	Owner Info	Contact information of	ARRC Prioritize from	Essential (High)
and Status			the owner of assets;					the owner of assets;	Matrix	
			especially leased or					especially leased or		
			rented equipment					rented equipment		
Asset Availability	Status	Import External	Ability to import	Service Vehicles	General	General	Fuel Records	Ability to import fuel	ARRC Group Interview	Essential (High)
and Status		Transaction Data	transaction data from					records from an		
			external systems (and					external fuel card		
			when needed ability to					system (or manually if		
			enter that transaction					needed) that includes		
			manually)					equipment number,		
								fuel card, and		
								odometer.		
Asset Availability	Status	Status - Location	Asset location in as	Service Vehicles	General	General	Status - Location	Asset location in as	ARRC Prioritize from	Optional (Low)
and Status			near real-time as it is					near real-time as it is	Matrix	
			possible to have the					possible to have the		
			status changed by a					status changed by a		
			system or person					system or person		
Asset Availability	Status	GPS/GIS Position	Utilize GPS not only for	Service Vehicles	General	General	GPS/GIS Position	Utilize GPS not only	ARRC Prioritize from	Essential (High)
and Status		Information (Mobile)	current but also				Information (Mobile)	for current but also	Matrix	
			historical data for					historical data for		
			assets that are mobile					assets that are mobile		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Status	Condition Assessment	Ability to record, store,	Service Vehicles	General	General	Condition Assessment	Ability to record,	ARRC Prioritize from	Essential (High)
and Status			and report periodic					store, and report	Matrix	
			condition assessments					periodic condition		
			with criteria guidance					assessments with		
			as well as previous					criteria guidance as		
			ratings and work					well as previous		
			performed since the					ratings and work		
			last assessment					performed since the		
								last assessment		
Asset Availability	Status	Condition Rating	Support a condition	Service Vehicles	General	General	Condition Rating	Support a condition	ARRC Group Interview	Essential (High)
and Status		System	rating system for assets				System	rating system for		
			(e.g. 1 to 5)					assets (e.g. 1 to 5)		
Asset Availability	Status	Condition Assessment	-Support a risk /	Service Vehicles	General	General	Condition Assessment	-Support a risk /	ARRC Prioritize from	Optional (Low)
and Status		Risk	consequence				Risk	consequence	Matrix	
			assessment on assets					assessment on assets		
			(or their components);					(or their components);		
			could be used for					could be used for		
			weighting condition					weighting condition		
			assessment at higher					assessment at higher		
			level of hierarchy					level of hierarchy		
Asset Availability	Status	Asset Rate and Usage	Support mechanism to	Service Vehicles	General	General	Equipment Rate and	Support mechanism to	ARRC Group Interview	Essential (High)
and Status		Calculation	calculate costs of asset				Usage Calculation	calculate costs of		
			and which groups used					equipment and which		
			the asset during the					groups used the		
			period. This calculation					equipment during the		
			may be an initial input					period. This		
			to Finance for cost					calculation may be an		
			allocation.					initial input to Finance		
								for cost allocation.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Service Vehicles	General	General	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	ARRC Group Interview	Essential (High)
Asset Availability and Status	Availability	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	Service Vehicles	General	General	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	ARRC Group Interview	Essential (High)
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Service Vehicles	General	General	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	ARRC Group Interview	Essential (High)
Asset Availability and Status	Availability	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	Service Vehicles	General	General	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Configuration	General	Integration with	Ability to integrate or	Service Vehicles	General	General	Integration with	Ability to integrate or	ARRC Prioritize from	Essential (High)
Management		Configuration	synchronize data with				Configuration	synchronize data with	Matrix	
		Management Systems	external configuration				Management Systems	external configuration		
			management systems					management systems		
			to avoid manual					to avoid manual		
			duplication or cross-					duplication or cross-		
			checking of data.					checking of data.		
Configuration	General	Asset Model	Control over asset	Service Vehicles	General	General	Asset Model	Control over asset	ARRC Prioritize from	Desired (Medium)
Management		Configuration	configuration design				Configuration	configuration design	Matrix	
_			with ability to define					with ability to define		
			rules for components					rules for components		
			and parts					and parts		
Configuration	General	Change Management	Ability to have a change	Service Vehicles	General	General	Change Management	Ability to have a	ARRC Prioritize from	Optional (Low)
Management		Process	management process				Process	change management	Matrix	
			for components of the					process for		
			assets. May include					components of the		
			things such as					assets. May include		
			checklists, test					things such as		
			procedures, review					checklists, test		
			process, etc.					procedures, review		
								process, etc.		
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Service Vehicles	General	General	Data from Diagnostic	Ability to hyperlink to	ARRC Prioritize from	Optional (Low)
Detection		Systems	or record and report on				Systems	or record and report	Matrix	
			information from					on information from		
			diagnostic systems and					diagnostic systems		
			testing vendors					and testing vendors		
Fault/Problem	General	Data from External	Ability to hyperlink to	Service Vehicles	General	General	Data from External	Ability to hyperlink to	ARRC Prioritize from	Optional (Low)
Detection		Asset Management	or complile information				Asset Management	or complile	Matrix	
		Systems	from external asset				Systems	information from		
			management systems					external asset		
			including current state,					management systems		
			alerts, and errors /					including current		
			issues					state, alerts, and		
								errors / issues		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Fault/Problem	General	Capture Reasons for	Ability to capture	Service Vehicles	General	General	Capture Reasons for	Ability to capture	ARRC Group Interview	Essential (High)
Detection		Failure	reason(s) for failure;				Failure	reason(s) for failure;		
			preferably through					preferably through		
			standardized coding					standardized coding		
Planned	General	Inspection Data	Ability to retain	Service Vehicles	General	General	Inspection Data	Ability to retain	ARRC Prioritize from	Not Set
Maintenance and		Retention Periods	electronic copieds of				Retention Periods	electronic copieds of	Matrix	
Inspection			records indefinitely;					records indefinitely;		
			Federal agencies					Federal agencies		
			usually allow for only a					usually allow for only a		
			certain period of time					certain period of time		
Planned	General	Common Inspection	Desire a means of	Service Vehicles	General	General	Common Inspection	Desire a means of	ARRC Prioritize from	Optional (Low)
Maintenance and		Record to Satisfy	managing asset and				Record to Satisfy	managing asset and	Matrix	
Inspection		Multiple Agencies	inspection information				Multiple Agencies	inspection information		
			that can be used to					that can be used to		
			satisfy muliple agency					satisfy muliple agency		
			regulatory					regulatory		
			requirements (e.g. FRA					requirements (e.g.		
			and FTA)					FRA and FTA)		
Planned	General	Automated	Automated planning	Service Vehicles	General	General	Automated	Automated planning	ARRC Prioritize from	Essential (High)
Maintenance and		Compliance Tracking	and compliance				Compliance Tracking	and compliance	Matrix	
Inspection		and Planning	tracking of regulatory				and Planning	tracking of regulatory		
			inspection					inspection		
			requirements					requirements		
Planned	General	Generate Work Orders	Ability to generate work	Service Vehicles	General	General	Generate Work Orders	Ability to generate	ARRC Prioritize from	Essential (High)
Maintenance and		from Inspection	orders from inspection				from Inspection	work orders from	Matrix	
Inspection		Results	results (would typically				Results	inspection results		
			be categorized as					(would typically be		
			corrective actions)					categorized as		
								corrective actions)		
Planned	General	Inspection Schedules	Support ability to	Service Vehicles	General	General	Inspection Schedules	Support ability to	ARRC Group Interview	Essential (High)
Maintenance and			schedule recurring					schedule recurring		
Inspection			inspections that will					inspections that will		
			automatically create a					create a work order		
			work order							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Service Vehicles	General	General	PM Notification	Ability to send a notification to maintenance and user group when a PM is close to due	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	PM Service Calculation	•	Service Vehicles	General	General	PM Service Calculation	Ability to calculate PM serivce requirements on one or more aspects of usage including hours and miles	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Pre-Use and Frequent Inspection Checklists	Ability to record frequent (daily) or preuse inspections with a checklist; support different checklists based on asset category and characteristics	Service Vehicles	General	General	Daily or Pre-Use Inspections	Ability to record daily or pre-use inspections with a checklist; support different checklist based on equipment type.	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Service Vehicles	General	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	Service Vehicles	General	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	PM Job Plan	Ability to setup	Service Vehicles	General	General	PM Job Plan	Ability to setup	ARRC Prioritize from	Desired (Medium)
Maintenance and			standard template for					standard template for	Matrix	
Inspection			labor and parts for					labor and parts for		
			preventative					preventative		
			maintenance routines					maintenance routines		
			to allow for forecasting					to allow for		
			of parts and labor					forecasting of parts		
			needed					and labor needed		
Planned	General	Digital-First	Ability to record	Service Vehicles	General	General	Digital-First	Ability to record	ARRC Prioritize from	Essential (High)
Maintenance and		Inspections	inspections digitally in				Inspections	inspections digitally in	Matrix	
Inspection			the field (with an offline					the field (with an		
			mode available);					offline mode		
			subject to any					available); subject to		
			regulatory					any regulatory		
			requirements and					requirements and		
			workflow requirements					workflow		
								requirements		
Planned	General	Incorporate Season	Accommodate	Service Vehicles	General	General	Incorporate Season	Accommodate	ARRC Prioritize from	Optional (Low)
Maintenance and		and Weather	recording season and				and Weather	recording season and	Matrix	
Inspection			weather into usage					weather into usage		
			information for					information for		
			preventative or					preventative or		
			predictive maintenance					predictive		
			planning and					maintenance planning		
								and		
Work Orders and	General	Task Coding on Work	Ability to code tasks on	Service Vehicles	General	General	Task Coding on Work	Ability to code tasks	ARRC Group Interview	Essential (High)
Work Order		Orders	work orders that may				Orders	on work orders that		
Management			include system,					may include system,		
			subsystem, component,					subsystem,		
			position, and activity					component, position,		
			(e.g. inspect, install,					and activity (e.g.		
			remove, repair, replace)					inspect, install,		
			for accurate					remove, repair,		
			information on					replace) for accurate		
			maintenance activity					information on		
			and costs					maintenance activity		
								and costs		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Complaint / Cause /	Support the ability to	Service Vehicles	General	General	Complaint / Cause /	Support the ability to	ARRC Group Interview	Essential (High)
Work Order		Correction (3C's)	record complaint,				Correction	record complaint,		
Management			cause, and correction in					cause, and correction		
			a standardized way for					in a standardized way		
			more efficient failure					for easier failure		
			analysis and					analysis		
			identification of							
			common issues, causes,							
			and their resolution							
Work Orders and	General	Work Packages	Ability to create pre-	Service Vehicles	General	General	Work Packages	Ability to create pre-	ARRC Group Interview	Essential (High)
Work Order			defined work order					defined work order	·	
Management			template with a					template with a		
			standard set of tasks for					standard set of tasks		
			a particular inspection,					for a particular		
			condition assessement,					inspection, condition		
			complaint, etc					assessement,		
								complaint, etc		
Work Orders and	General	Record Checklist and	Ability to capture and	Service Vehicles	General	General	Record Checklist and	Ability to easily	ARRC Group Interview	Essential (High)
Work Order		Results	store checklist form and				Results	capture and store		
Management			recorded data					electronically (rather		
			electronically (rather					than paper or scanned		
			than paper or scanned					paper) checklist data		
			paper) for a work order					and any required		
								readings for a work		
								order		
Work Orders and	General	Contractor or Vendor	Ability to record work	Service Vehicles	General	General	Outside Work	Ability to record work	ARRC Group Interview	Essential (High)
Work Order		Work	details (possibly					details (possibly		
Management			through an import)					through an import)		
			performed by					from outside vendors		
			contractors or vendors					(e.g. ARI Fleet)		
			on work orders							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	End-User Field Service	Ability for end users to	Service Vehicles	General	General	User Field Service	Ability for end users to	ARRC Group Interview	Essential (High)
Work Order			quickly record any field					quickly record any		
Management			service performed (for					field service		
			efficiency and					performed (for		
			consistency likely					efficiency and		
			requires a digital					consistency would		
			mobile offline solution)					probably require a		
								digital mobile offline		
								solution)		
Work Orders and	General	Ease of Use	Focus on ease of use for	Service Vehicles	General	General	Ease of Use	Focus on ease of use	ARRC Group Interview	Essential (High)
Work Order			recording work yet					for recording work yet		
Management			need the ability to					need the ability to		
			record meaningful					record meaningful		
			information to be					information to be		
			useful (e.g. Task					useful (e.g. Task		
			Coding)					Coding)		
Work Orders and	General	Capture Usage	Ability to capture the	Service Vehicles	General	General	Capture Usage on	Ability to capture the	ARRC Group Interview	Essential (High)
Work Order		Readings on Work	current usage readings				Work Orders	current usage		
Management		Orders	(hours, miles, etc.) on					measures (hours,		
			work orders and PMs					miles) on work orders		
			when they are opened					and PMs		
Work Orders and	General	Checklist Criteria for	Ability to define criteria	Service Vehicles	General	General	Checklist Criteria for	Ability to define	ARRC Group Interview	Desired (Medium)
Work Order		Repair - Create Work	indicating				Repair - Create Work	criteria for repair or		
Management		Order	repair/adjustment or				Order	replacement on		
			replacement is required					checklist items (e.g.		
			on checklist items.					wheel size is an		
			Automatically create a					example). A work		
			work order to with the					order to address is		
			task or add a line item					automatically created		
			to work order if already					/ or a line item on a		
			created from this					work order if already		
			checklist.					created from this		
								checklist)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Failure Analysis	Improved ability to	Service Vehicles	General	General	Failure Analysis	Improved ability to	ARRC Group Interview	Essential (High)
Work Order			analyze failures and					analyze failures and		
Management			their causes. Currently					their causes.		
			can only rely on what					Currently can only rely		
			has been written on the					on what has been		
			work orders; and its					written on the work		
			necessary to look at					orders; and its		
			each individual work					necessary to look at		
			order.					each individual work		
								order.		
Work Orders and	General	Work Orders against	Allow for a work order	Service Vehicles	General	General	Work Orders against	Allow for a work order	ARRC Prioritize from	Essential (High)
Work Order		Assets in Hierarchy	to be written against				Assets in Hierarchy	to be written against	Matrix	
Management			assets at various levels					assets at various levels		
			of the hierarchy					of the hierarchy		
Work Orders and	General	Reporting Tools	Base requirement are	Service Vehicles	General	General	Reporting Tools	Base requirement are	ARRC Group Interview	Essential (High)
Work Order	General	Reporting 100is	tools that are better	Service verneres	General	General	Reporting roots	tools that are better	Time Group interview	Losertiai (riigii)
Management			than an Excel export.					than an Excel export.		
i i i i i i i i i i i i i i i i i i i			There is a need for					There is a need for		
			analytics for trending,					analytics for trending,		
			analysis, failure, and					analysis, failure, and		
			investment planning.					investment planning.		
			Analytics may be in a					Analytics may be in a		
			separate tool but the					separate tool but the		
			information to support					information to support	:	
			it must be reportable.					it must be reportable.		
			Currently Excel is the					Currently Excel is the		
			reporting tool - either					reporting tool - either		
			data is manually					data is manually		
			entered or exported					entered or exported		
			from JDE					from JDE		
Work Orders and	General	Usage Readings	Ability to quickly record	Service Vehicles	General	General	Usage Readings	Ability to quickly	ARRC Group Interview	Essential (High)
Work Order			(or import from					record (or import from		
Management			external systems) usage					external systems) hour		
			readings (e.g. miles,					or mile readings for an		
			hours)					asset		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not assetspecific for non-parts work less than 1 hour)	Service Vehicles	General	General	Minor Work	Ability to quickly record minor work such as inspection and service (i.e. ability to avoid using bucket/generic work order for non-parts work less than 1 hour)	ARRC Group Interview	
Work Orders and Work Order Management	General	Categorize Costs (OPEX/CAPEX)	Ability to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX - Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)	Service Vehicles	General	General	Categorize Costs (OPEX/CAPEX)	Abililty to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Work Order Attachments	Automatically output, link, and/or display (if digital) procedures, checklists, and bills of materials needed for work order	Service Vehicles	General	General	Work Order Attachments	Automatically output or link / present (if digital) procedures, checklists, and bills of materials needed for work order	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Mechanic/Technican Records Work	Mechanic/Technician records their work on the work order and has access to info they need thrugh the system. Only person with direct knowledge of work is Mechanic/Technician and they should be able to record their work as it is done.		General	General	Record of Work by Mechanic	Only person who knows what is happening on the work order is the mechanic and they should have ability to see the info they need and also record as it is done (as easily as possible)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Multiple Shop / Work Locations	Accommodate multiple shops and work locations including ARRC shops and work in the field		General	General	Multiple Shop / Work Locations	Accommodate multiple shops or work locations (e.g. Heavy Shop, field service Cantwell and Whittier, Mobile Oiler, mechanics assigned to gangs in summer)		Essential (High)
Work Orders and Work Order Management	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Service Vehicles	General	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or with a purchasing card	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently		General	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	Service Vehicles	General	General	Checklists (Digital)	Ability to define digital		Essential (High)
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Service Vehicles	General	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	Service Vehicles	General	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	Service Vehicles	General	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations		Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	End-Users and Work	Ability for end users	Service Vehicles	General	General	End-Users and Work	Ability for end users	ARRC Prioritize from	Essential (High)
Work Order		Orders	(e.g. Operations) to				Orders	(e.g. Operations) to	Matrix	
Management			initiate work requests					initiate work requests		
			through a complaint					through a complaint		
			process and to see					process and to see		
			status and history of					status and history of		
			work orders					work orders		
Work Orders and	General	Mobile Digital Work	Record data where and	Service Vehicles	General	General	Mobile Digital Work	Record data where	ARRC Group Interview	Essential (High)
Work Order		Orders	when the work occurs				Orders	and when the work		
Management			(create, update, and					occurs (create,		
			close) through mobile					update, and close		
			digital work orders that					work orders)		
			support an offline					supporting offline		
			mode.					mode.		
Work Orders and	General	Custom Categorize	Ability to categorize	Service Vehicles	General	General	Custom Categorize	Ability to categorize	ARRC Prioritize from	Essential (High)
Work Order		Work Orders	work orders in a custom				Work Orders	work orders in a	Matrix	
Management			way such as by					custom way such as by		
			campaign, program, or					campaign, program, or		
			season. This may aid in					season. This may aid		
			grouping work as part					in grouping work as		
			of prioritization and					part of prioritization		
			scheduling.					and scheduling.		
Work Orders and	General	Cost Reporting	Ability to see	Service Vehicles	General	General	Cost Reporting	Ability to see	ARRC Prioritize from	Desired (Medium)
Work Order	General	cost reporting	aggreggate costs on	Service vernicles	General	General	cost reporting	aggreggate costs on	Matrix	Desired (Mediani)
Management			assets by basic criteria					assets by basic criteria		
Ividiagement			including System,					including System,		
			"Type", Time Period,					"Type", Time Period,		
			PM, Corrective or Break	]				PM, Corrective or		
			Fix, By OPEX/CAPEX (or					Break-Fix, By		
			funding source), by					OPEX/CAPEX (or		
			hierarchy or geography					funding source), by		
			linerarchy or geography					hierarchy or		
								geography		
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Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Scheduling and	Ability to plan and	Service Vehicles	General	General	Scheduling and	Ability to plan and	ARRC Prioritize from	Desired (Medium)
Work Order		Planning	schedule work within				Planning	schedule work within	Matrix	
Management			the system rather than					the system rather than		
			having to track outside					having to track outside		
			of it (e.g. Excel)					of it (e.g. Excel)		
Work Orders and	General	SLAs for Response	Support the ability to	Service Vehicles	General	General	SLAs for Response	Support the ability to	ARRC Prioritize from	Essential (High)
Work Order		Times	set SLAs for response				Times	set SLAs for response	Matrix	
Management			time on asset groups or					time on asset groups		
			categories and to					or categories and to		
			record performance					record performance		
			against them					against them		
Work Orders and	General	Prioritization of Work	Ability to prioritze or	Service Vehicles	General	General	Prioritization of Work	Ability to prioritze or	ARRC Prioritize from	Essential (High)
Work Order		Orders	rank work orders; a				Orders	rank work orders; a	Matrix	
Management			default prioritzation					default prioritzation		
			may be based on					may be based on		
			criticality rating of asset					criticality rating of		
								asset		
Work Orders and	General	·	Group work orders by	Service Vehicles	General	General	· '	· · ·	ARRC Prioritize from	Desired (Medium)
Work Order		Geographic Area	geographic area so they				Geographic Area	geographic area so	Matrix	
Management			do not need to be					they do not need to be		
			manually grouped for					manually grouped for		
			review and assignment					review and		
								assignment		
Work Orders and	General	Reimbursable Work	Ability to indicate that	Service Vehicles	General	General	Reimbursable Work	Ability to indicate that		Optional (Low)
Work Order			work is reimbursable by					work is reimbursable	Matrix	
Management			another party and					by another party and		
			output can be prepared					output can be		
			to support Finance					prepared to support		
								Finance		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reassign, Split, or Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event	Service Vehicles	General	General	Reassign, Split, or Child Work Order	Ability to reassign, split off part of a work order, or create a child work order so that more than one group can record activity against a work order yet still maintain the link to the single event		Essential (High)
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	Service Vehicles	General	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	Service Vehicles	General	General	Future and Unscheduled Work Orders	Support the ability to have unscheduled or future date work orders to record work and have it available for scheduling	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	Service Vehicles	General	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Work Order Notifications	Ability to configure notifications for new or outstanding work including PM, inspection, or work orders to designated users (e.g. on being created or assigned)	Service Vehicles	General	General	Work Order Notifications	Ability to configure notifications for new or outstanding work including PM, inspection, or work orders to designated users (e.g. on being created or assigned)	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Estimated Effort on	Ability to set an	Service Vehicles	General	General	Estimated Effort on	Ability to set an	ARRC Prioritize from	Desired (Medium)
Work Order		Work Orders	estimated labor or costs				Work Orders	estimated labor or	Matrix	
Management			on work orders to aid in					costs on work orders		
			planning and scheduling					to aid in planning and		
			or to provide estimates					scheduling or to		
			to end users					provide estimates to		
								end users		
Materials	General	Component Parts -	Ability to designate as	Service Vehicles	General	General	Component Parts -	Ability to designate as	ARRC Group Interview	Essential (High)
Management		Criticality	critical parts or				Criticality	critical parts or		
			components that have					components that have		
			long lead times, are					long lead times, are		
			obsolete, or are costly					obsolete, or are costly		
			or difficult to ship when					or difficult to ship		
			needed					when needed		
Materials	General	Material Inventory	Ability to easily add and	Service Vehicles	General	General	Material Inventory	Ability to easily add	ARRC Prioritize from	Desired (Medium)
Management		Field Locations	remove materials in				Field Locations	and remove materials	Matrix	
			arbitrary field locations					in arbitrary field		
			identified with GPS					locations identified		
			(either by device or					with GPS (either by		
			selection from map).					device or selection		
			Material locations					from map). Material		
			correlated to asset					locations correlated to		
			hierarchy for reporting					asset hierarchy for		
			(e.g. Mile Post)					reporting (e.g. Mile		
								Post)		
Materials	General	Equipment Check-Out	Mechanism to check	Service Vehicles	General	General	Equipment Check-Out	Mechanism to check	ARRC Prioritize from	Desired (Medium)
Management		/ Check-In	out and check in			1	/ Check-In	out and check in	Matrix	
		,	equipment (particularly				,	equipment		
			portable equipment					(particularly portable		
			that may be issued to a					equipment that may		
			user)					be issued to a user)		
I	I	I	user /	I	I	I	I	be issued to a disery	I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials Management	General	Min-Max Parts Inventory	Inventory minimum and maximum on-hand requirements that is based on asset and	Service Vehicles	General	General	Min-Max Parts Inventory	Inventory on-hand requirements that is based on asset and	ARRC Group Interview	
			component mix; including when assets are added or surplused; and seasonal changes					component mix; including when assets are added or surplused		
Materials Management	General	Inventory Purchase Plan	Purchase plan based on forecasted preventative and overhaul work (done manually now but should be able to forecast based on work packages / planned work orders in system)		General	General	Inventory Purchase Plan	Purchase plan based on forecasted preventative and overhaul work (done manually now but should be able to forecast based on work packages / planned work orders in system)	ARRC Group Interview	Essential (High)
Materials Management	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	Service Vehicles	General	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	ARRC Prioritize from Matrix	Essential (High)
Component Tracking and Rebuild	General	Component Serial Number Tracking	Ability to track components by serial number and when they were put on, taken off, moved to another asset or put on shelf (serial number of part not on unit could require component to be an "asset")	Service Vehicles	General	General	Component Serial Number Tracking	Ability to track components by serial number and when they were put on, taken off, moved to another asset or put on shelf (serial number of part not on unit could require component to be an "asset")	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking	General	Part Rebuild	Indicator that a part in	Service Vehicles	General	General	Part Rebuild	Indicator that a part in	ARRC Prioritize from	Desired (Medium)
and Rebuild			inventory or being					inventory or being	Matrix	
			installed is a rebuild					installed is a rebuild		
Component Tracking	General	Component	Track when	Service Vehicles	General	General	Component	Track when	ARRC Prioritize from	Desired (Medium)
and Rebuild		Installation and	components are				Installation and	components are	Matrix	
		Removal	installed, removed, and				Removal	installed, removed,		
			their disposition (e.g.					and their disposition		
			transferred, shelved,					(e.g. transferred,		
			disposed of, rebuilt)					shelved, disposed of,		
			May be differences in					rebuilt) May be		
			handling with					differences in handling		
			components that have					with components that		
			serial numbers vs those					have serial numbers vs		
			that do not.					those that do not.		
Component Tracking	General	Component Service	Ability to specify	Service Vehicles	General	General	Component Service	Ability to specify	ARRC Prioritize from	Desired (Medium)
and Rebuild		Life	expected service life of				Life	expected service life	Matrix	
			a component or part					of a component or		
								part		
Component Tracking	General	Component	Ability to identify	Service Vehicles	General	General	Component	Ability to identify	ARRC Prioritize from	Desired (Medium)
and Rebuild		Compatibility	compatibility of				Compatibility	compatibility of	Matrix	
			components with asset					components with		
			configurations					asset configurations		
Component Tracking	General	Usage for Components	Calculated usage based	Service Vehicles	General	General	Usage for Components		ARRC Prioritize from	Essential (High)
and Rebuild			on the usage measures					based on the usage	Matrix	
			for asset(s) installed in;					measures for asset(s)		
			for reliablity and					installed in; for		
			preventative					reliablity and		
			maintenance					preventative		
								maintenance		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Warranty	General	Warranty	Ability to specify for	Service Vehicles	General	General	Warranty	Ability to specify for	ARRC Prioritize from	Essential (High)
Management			parts whether a serial					parts whether a serial	Matrix	
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		
Capital Projects and	General	Replacement Plan	For multi-year planning	Service Vehicles	General		Replacement Plan	For multi-year	ARRC Group Interview	Desired (Medium)
Campaigns		(ULB / Obsolescence)	support replacement				(ULB / Obsolescence)	planning support		
			planning including age,					replacement planning		
			useful life benchmark,					including age, useful		
			obsolescence, costs,					life benchmark,		
			usage, and asset					obsolescence, costs,		
			category composition					usage, and fleet		
			(e.g. owned vs leased /					composition (owned		
			rented)					vs leased / rented)		
Capital Projects and	Conoral	Asset Category / Class	Ability to show the	Service Vehicles	General	General	Fleet Composition	Ability to show the	ARRC Group Interview	Essential (High)
Campaigns	General	Composition over	composition of assets in		General		over Time	fleet composition over	,	Esselluai (Figil)
Carripaigns		Time	an asset category / class					time by equipment		
		Tille	over time by asset					hierarchy / groupings		
			hierarchy or groupings					as well as ownership		
			as well as ownership					(ARRC, leased, rented)		
			(e.g. ARRC, leased,					(ANNO, leaseu, leilleu)		
			rented)							
	I	I	premieu)	I	I			I	I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Capital Projects	Improved reporting on	Service Vehicles	General	General	Capital Projects	Improved reporting on	ARRC Prioritize from	Essential (High)
Campaigns		Reporting	capital projects				Reporting	capital projects	Matrix	
			including estimates for					including estimates for		
			labor, P-Card					labor, P-Card		
			purchases, etc. prior to					purchases, etc. prior		
			posting in the finance					to posting in the		
			system (perhaps					finance system		
			estimated from Work					(perhaps estimated		
			Order entries) in					from Work Order		
			addition to funding by					entries)		
			year and by funding							
			source							
Capital Projects and	General	Total Cost of	Method for recording	Service Vehicles	General	General	Total Cost of	Method for recording	ARRC Prioritize from	Optional (Low)
Campaigns		Ownership Reporting	and displaying TCO;				Ownership Reporting	and displaying TCO;	Matrix	
			what is spent to					what is spent to		
			maintain assets and the					maintain assets and		
			frequency of					the frequency of		
			maintenance versus					maintenance versus		
			replacement of the					replacement of the		
			asset or systems within					asset or systems		
			the asset; allow for long					within the asset; allow		
			term planning of asset					for long term planning		
			or system replacement					of asset or system		
								replacement		
Timekeeping	General	Hours Worked on	<b>R</b> ecord hours worked	Service Vehicles	General	General	Hours Worked on	Record time worked	ARRC Group Interview	Essential (High)
		Work Order / Asset	on a work order (both				Work Order / Asset	on a work order and		
			direct and indirect					integrate with time		
			time) and integrate					keeping. Currently		
			with time keeping.					enter work order		
								numbers on time card		
								(opposite of many		
								work management		
								systems). Capture		
								indirect as well as		
								direct time.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Asset Field on	Have an asset field on	Service Vehicles	General	General	Equipment Fields on	Have an equipment	ARRC Group Interview	Desired (Medium)
		Timecards	time cards across ARRC				Timecards	field on time cards		
			to ensure that asset					across ARRC groups to		
			usage can be captured					ensure that		
			(usage is a more					equipment usage can		
			detailed level than					be captured		
			what group the asset is							
			assigned to)							
Timekeeping	General	Time Tracking	Avoid duplicate entry	Service Vehicles	General	General	Time Tracking	A straightforward	ARRC Prioritize from	Essential (High)
			or manipulation of time					method of recording	Matrix	
			records in more than					time against work		
			one system					orders that flows to		
								the time card system;		
								avoid duplicate entry		
								or manipulation of		
								time records		
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours	Service Vehicles	General	General	Hours of Service (HOS)	Ability to record Hours	ARRC Prioritize from	Not Set
			of Service and					of Service and	Matrix	
			availablity for work in a					availablity for work in		
			way which adheres and					a way which adheres		
			is approved by					and is approved by		
			regulatory agencies					regulatory agencies		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Central System of Record	Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	Facilities	Buildings	General		Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	ARRC Prioritize from Matrix	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Location by Mile Post	In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post	Facilities	Buildings	General		In addition to a named location and GPS / GIS coordinates support the location by ARRC Mile Post		Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data Integration	Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	Facilities	Buildings	General		Ability to synchronize or integrate basic asset information with external vendors / systems minimize need to manually check and update records for accuracy.	ARRC Prioritize from Matrix	Optional (Low)
Asset Hierarchy, Registry, and Info	Asset Data	Basic Asset Attributes	Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.	Facilities	Buildings	General		Ability to record basic asset data common to asset management systems including an ARRC unique identifier, year, make, model, serial number, color, etc.		Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Link (both ways) to GIS	Support hyperlinking from asset management system to GIS and from GIS to asset management	Facilities	Buildings	General	Link (both ways) to GIS		ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	NTD Reporting Attributes	Assets should have attributes that allow for direct or easy mapping for NTD reporting without the need to maintain separately in Excel.	Facilities	Buildings	General	NTD Reporting Attributes	Facility assets should have attributes that allow for direct or easy mapping for NTD reporting. This includes coding for Maintenance Facility size, Facility Type, and indicators for Passenger Station Accessiblity, Escalators, and Elevators.	ARRC Group Interview	Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Mobile Access to Documents	Ability to access digital documents outside of the office; if on mobile possibly allow offline mode by caching documents related to the assets	Facilities	Buildings	General	Mobile Access to Documents	<del></del>	ARRC Group Interview	Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Facilities	Buildings	General	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	ARRC Prioritize from Matrix	Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Document Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	Facilities	Buildings	General	Document Management and Linking	Support a centralized approach to storing and accessing facility-related documents including drawings, panel schedules, pictures, etc. Currently a mix of paper and digital documents.	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	GPS/GIS Position Information (Fixed)	Ability to record GPS locations for GIS at the asset level; either from device or by selecting on map	Facilities	Buildings	General	GPS / GIS Locations	Ability to record GPS locations for GIS at facilities; for the facility itself as well as points of interest on the property	ARRC Group Interview	Desired (Medium)
Asset Hierarchy, Registry, and Info	Hierarchy	Components	Include components and sub-components, assemblies, systems and similar entities	Facilities	Buildings	General	Facility System Components	Allow for key components of assets to be identified under a system (e.g. elevator, generator) and have their own attributes such as make, model, serial number, vendor	ARRC Group Interview	Desired (Medium)
Asset Hierarchy, Registry, and Info	Hierarchy	Classes or Grouping of Assets	Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	Facilities	Buildings	General	Classes or Grouping of Assets	Organize and manage equipment as a class or group; useful for planned maintenance programs and reporting	ARRC Prioritize from Matrix	Desired (Medium)
Asset Hierarchy, Registry, and Info	Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	Facilities	Buildings	General		Support a simple hierarchy where a facility may belong to a larger facility and facilities have one or more systems such as Substructure, Shell, Roof, Interior, Conveyance, Plumbing, HVAC, Fire Protection, Electrical, Equipment and Site - more detail is unlikely because facilities and systems are not large and not complex	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Ownership	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	Facilities	Buildings	General	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	Facilities	Buildings	General	Ownership Indicator	Support indicating the owners and/or interested parties in the facility asset	ARRC Group Interview	Optional (Low)
Asset Availability and Status	Status	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	Facilities	Buildings	General	Condition Rating System	Support a condition rating system for assets (e.g. 1 to 5)	ARRC Prioritize from Matrix	Desired (Medium)
Asset Availability and Status	Status	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.	Facilities	Buildings	General	Asset Rate and Usage Calculation	Support mechanism to calculate costs of asset and which groups used the asset during the period. This calculation may be an initial input to Finance for cost allocation.		Optional (Low)
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Facilities	Buildings	General	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Status	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	Facilities	Buildings	General	GPS/GIS Position Information (Mobile)	Utilize GPS not only for current but also historical data for assets that are mobile	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Status	Condition Assessment	-Support a risk /	Facilities	Buildings	General	Condition Assessment	Support a risk /	ARRC Prioritize from	Desired (Medium)
and Status		Risk	consequence				Risk	consequence	Matrix	
			assessment on assets					assessment on assets		
			(or their components);					(or their components);		
			could be used for					could be used for		
			weighting condition					weighting condition		
			assessment at higher					assessment at higher		
			level of hierarchy					level of hierarchy		
Asset Availability	Status	Import External	Ability to import	Facilities	Buildings	General	Utilities Tracking	Ability to record	ARRC Group Interview	Desired (Medium)
and Status		Transaction Data	transaction data from					utilities monthly		
			external systems (and					volume and costs over		
			when needed ability to					time to support and		
			enter that transaction					track reduction		
			manually)					efforts. Currently an		
								Excel workbook is		
								used to capture and		
								report energy use.		
Asset Availability	Status	Status - Location	Asset location in as	Facilities	Buildings	General	Status - Location	Asset location in as	ARRC Prioritize from	Optional (Low)
and Status			near real-time as it is					near real-time as it is	Matrix	
			possible to have the					possible to have the		
			status changed by a					status changed by a		
			system or person					system or person		
Asset Availability	Status	Condition Assessment	Ability to record, store,	Facilities	Buildings	General	Condition Assessment	Ability to record,	ARRC Group Interview	Desired (Medium)
and Status			and report periodic					store, and report		
			condition assessments					annual facility		
			with criteria guidance					condition assessment		
			as well as previous					and criteria guidance		
			ratings and work					as well as previous		
			performed since the					ratings and work		
			last assessment					performed since the		
								last assessment		
Asset Availability	Availability	Availability - Seasonal	Ability to indicate	Facilities	Buildings	General	Seasonal Status	Indication of whether	ARRC Group Interview	Optional (Low)
and Status		Variations	seasonal status (e.g.					the facility is open or		
			open /closed, not being					closed for season -		
			used, etc.)					"winterized"		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Facilities	Buildings	General	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. seasonal or intentionally stored)	ARRC Prioritize from Matrix	Optional (Low)
Asset Availability and Status	Availability	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	Facilities	Buildings	General	Out of Service Coding and Duration	Capture out of service codes and time duration (e.g delay impacting operations, or no impact - may include status such as waiting for parts, shop space, labor, etc.); intent is to support reliablity analysis and reporting	Matrix	Optional (Low)
Configuration Management	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Facilities	Buildings	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	ARRC Prioritize from Matrix	Desired (Medium)
Configuration Management	General	Integration with Configuration Management Systems	synchronize data with	Facilities	Buildings	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or crosschecking of data.		Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Configuration	General	Asset Model	Control over asset	Facilities	Buildings	General	Asset Model	Control over asset	ARRC Prioritize from	Optional (Low)
Management		Configuration	configuration design				Configuration	configuration design	Matrix	
			with ability to define					with ability to define		
			rules for components					rules for components		
			and parts					and parts		
Fault/Problem	General	Capture Reasons for	Ability to capture	Facilities	Buildings	General	Capture Reasons for	Ability to capture	ARRC Prioritize from	Desired (Medium)
Detection		Failure	reason(s) for failure;				Failure	reason(s) for failure;	Matrix	
			preferably through					preferably through		
			standardized coding					standardized coding		
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Facilities	Buildings	General	Data from Diagnostic	Ability to hyperlink to	ARRC Prioritize from	Desired (Medium)
Detection		Systems	or record and report on				Systems	or record and report	Matrix	
			information from					on information from		
			diagnostic systems and					diagnostic systems		
			testing vendors					and testing vendors		
Fault/Problem	General	Data from External	Ability to hyperlink to	Facilities	Buildings	General	Data from Building	Ability to hyperlink to	ARRC Group Interview	Desired (Medium)
Detection		Asset Management	or complile information				Management Systems	,		
		Systems	from external asset					information from		
			management systems					various existing		
			including current state,					building management		
			alerts, and errors /					systems (Siemens,		
			issues					Apogee, Tracer, N4		
								etc)		
Planned	General	PM Service Calculation	Ability to calculate PM	Facilities	Buildings	General	PM Service Calculation	Ability to calculate PM		Essential (High)
Maintenance and			serivce requirements					serivce requirements	Matrix	
Inspection			on more than one					on more than one		
			aspect of asset usage					aspect of asset usage		
			(e.g. calendar time,					(e.g. calendar time,		
			hours, miles, fuel usage,					hours, miles, fuel		
			etc.)					usage, etc.)		
Planned	General	Inspection Schedules	Support ability to	Facilities	Buildings	General	Inspection Schedules	Support ability to	ARRC Prioritize from	Essential (High)
Maintenance and			schedule recurring					schedule recurring	Matrix	
Inspection			inspections that will					inspections that will		
			automatically create a					automatically create a		
			work order					work order		



	General	Due I lee and Freezewant								Priority
1		Pre-Use and Frequent	Ability to record	Facilities	Buildings	General	Pre-Use and Frequent	Ability to record	ARRC Prioritize from	Desired (Medium)
Maintenance and		Inspection Checklists	frequent (daily) or pre-				Inspection Checklists	frequent (daily) or pre-	Matrix	
Inspection			use inspections with a					use inspections with a		
			checklist; support					checklist; support		
			different checklists					different checklists		
			based on asset category					based on asset		
			and characteristics					category and		
								characteristics		
Planned Ge	General	PM Job Plan	Ability to setup	Facilities	Buildings	General	PM Job Plan	Ability to setup	ARRC Prioritize from	Essential (High)
Maintenance and			standard template for					standard template for	Matrix	
Inspection			labor and parts for					labor and parts for		
			preventative					preventative		
			maintenance routines					maintenance routines		
			to allow for forecasting					to allow for		
			of parts and labor					forecasting of parts		
			needed					and labor needed		
Planned Ge	General	Inspection Data	Ability to retain	Facilities	Buildings	General	Inspection Data	Ability to retain	ARRC Prioritize from	Desired (Medium)
Maintenance and		Retention Periods	electronic copieds of				Retention Periods	electronic copieds of	Matrix	
Inspection			records indefinitely;					records indefinitely;		
			Federal agencies					Federal agencies		
			usually allow for only a					usually allow for only a		
			certain period of time					certain period of time		
	General	PM Notification	· '	Facilities	Buildings	General	PM Notification	Ability for notifications		Desired (Medium)
Maintenance and			to be automatically					to be automatically	Matrix	
Inspection			sent to maintenance					sent to maintenance		
			and assigned user					and assigned user		
			group when a PM is due					group when a PM is		
			(or created by the					due (or created by the		
			system)					system)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Facilities	Buildings	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Prioritize from Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and		Buildings	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	ARRC Prioritize from Matrix	Desired (Medium)
Planned Maintenance and Inspection	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on assets, systems or components		Buildings	General	Contractors for Preventative Maintenance	Ability to define vendors which are used for PM and inspection activities on systems or components (e.g. fire safety system, elevators)	ARRC Group Interview	Optional (Low)
Planned Maintenance and Inspection	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	Facilities	Buildings	General	Common Inspection Record to Satisfy Multiple Agencies	Desire a means of managing asset and inspection information that can be used to satisfy muliple agency regulatory requirements (e.g. FRA and FTA)	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection  Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning  Generate Work Orders from Inspection Results	Automated planning and compliance tracking of regulatory inspection requirements	Facilities	Buildings  Buildings	General	Automated Compliance Tracking and Planning  Generate Work Orders from Inspection Results	Automated planning and compliance tracking of regulatory inspection requirements  Ability to generate work orders from inspection results (these would be	ARRC Prioritize from Matrix  ARRC Group Interview	Desired (Medium)
Planned Maintenance and Inspection	General	Digital-First Inspections	Ability to record inspections digitally in the field (with an offline mode available); subject to any regulatory requirements and workflow requirements	Facilities	Buildings	General	Digital-First Inspections	Ability to record inspections and condition assessments digitally in the field (with an offline mode available)	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Contractor or Vendor Work	Ability to record work details (possibly through an import) performed by contractors or vendors on work orders	Facilities	Buildings	General	Contractor Work and Costs	Ability to record contractor work activity and costs against a work order	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution	Facilities	Buildings	General	Work Order 3C	Ability to record Complaint / Cause / Correction with simple coding to allow for identifying common problems and their resolution	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Checklists (Digital)	Ability to define digital	Facilities	Buildings	General	Digital Checklists	Ability to define digital	ARRC Group Interview	Desired (Medium)
Work Order			(not paper) checklists					(not paper) checklists		
Management			for condition					for condition		
			assessments,					assessments,		
			inspections, or regular					inspections, or regular		
			work activities					work activities		
			connected to a work					connected to a work		
			orders. Checklists save					orders. Checklists		
			the results recorded by					save the results		
			the user and are					indicated by the user		
			attached to work order					and are attached to		
			and may be available					work order.		
			from asset.							
Work Orders and	General	Work Order	Ability to configure	Facilities	Buildings	General	Work Order	Ability to configure	ARRC Group Interview	Essential (High)
Work Order		Notifications	notifications for new or				Notification	notifications for new		
Management			outstanding work					or outstanding work		
			including PM,					including PM,		
			inspection, or work					inspection, or work		
			orders to designated					orders to designated		
			users (e.g. on being					users (e.g. on being		
			created or assigned)					created or assigned)		
Work Orders and	General	End-Users and Work	Ability for end users	Facilities	Buildings	General	End-Users and Work	Ability for end users to	ARRC Group Interview	Essential (High)
Work Order		Orders	(e.g. Operations) to				Orders	initiate work orders		
Management			initiate work requests					through a complaint		
			through a complaint					process and to see		
			process and to see					status and history of		
			status and history of					work orders		
			work orders							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Capture All Work on	Ability to easily capture	Facilities	Buildings	General	Capture All Work on	Ability to easily	ARRC Group Interview	Essential (High)
Work Order		Work Orders	all work (inspection,				Work Orders	capture all work		
Management			condition assessment,					(inspection, condition		
			work activity) on a work					assessment, work		
			order to ensure that a					activity) on a work		
			record is made of the					order to ensure that a		
			work and costs are					record is made of the		
			captured consistently					work and costs are		
								captured consistently		
Work Orders and	General	Mobile Digital Work	Record data where and	Facilities	Buildings	General	Mobile Work Orders	Ability to view,	ARRC Group Interview	Desired (Medium)
Work Order		Orders	when the work occurs					initiate, update, and		
Management			(create, update, and					close work orders in		
			close) through mobile					the field in online or		
			digital work orders that					offline mode.		
			support an offline							
			mode.							
Work Orders and	General	Categorize Costs	Abililty to categorize	Facilities	Buildings	General	Categorize Costs	Abililty to categorize	ARRC Group Interview	Desired (Medium)
Work Order		(OPEX/CAPEX)	costs by OPEX/CAPEX				(OPEX/CAPEX)	costs by OPEX/CAPEX		
Management			categories and					categories and		
			subcatgory (e.g. OPEX -					subcatgory (e.g. OPEX	-	
			Preventative (e.g.					Preventative (e.g.		
			Inspection), Corrective,					Inspection),		
			or Break-Fix (must fix					Corrective, or Break-		
			now) and CAPEX (e.g.					Fix (must fix now) and		
			ARRC, Agency (if					CAPX (e.g. ARRC,		
			application) or Other (if					Agency (if application)		
			applicable)					or Other (if applicable)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	Facilities -	Buildings	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break-Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	Facilities	Buildings	General	Record GPS Locations to Work Location	Ability to record GPS locations (from device itself or selection from a map) for work order locations	1	Optional (Low)
Work Orders and Work Order Management	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Facilities	Buildings	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Task Coding on Work Orders	Ability to code tasks on work orders that may include system, subsystem, component, position, and activity (e.g. inspect, install, remove, repair, replace) for accurate information on maintenance activity and costs		Buildings	General	Task Coding	Support activity task coding on work orders to identify work activity (e.g. diagnose, repair, replace, install, inspect)	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Facilities	Buildings	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection or an operations observation)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Failure Analysis	Improved ability to analyze failures and their causes. Currently can only rely on what has been written on the work orders; and its necessary to look at each individual work order.	Facilities	Buildings	General	Failure Analysis	Improved ability to analyze failures and their causes. Currently can only rely on what has been written on the work orders; and its necessary to look at each individual work order.	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	Facilities	Buildings	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Work Orders against Assets in Hierarchy	Allow for a work order to be written against assets at various levels of the hierarchy	Facilities	Buildings	General	Work Orders against Assets in Hierarchy	Allow for a work order	Matrix	Optional (Low)
Work Orders and Work Order Management	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	Facilities	Buildings	General	Ease of Use	Focus on ease of use for recording work yet need the ability to record meaningful information to be useful (e.g. Task Coding)	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not assetspecific for non-parts work less than 1 hour)		Buildings	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not assetspecific for non-parts work less than 1 hour)	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to end users		Buildings	General	Estimated Effort on Work Orders	Ability to set an estimated labor or costs on work orders to aid in planning and scheduling or to provide estimates to end users	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	Facilities	Buildings	General	Cost Accounting - Handling Changes	Ability to report or	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Scheduling and Planning	Ability to plan and schedule work within the system rather than having to track outside of it (e.g. Excel)	Facilities	Buildings	General	Scheduling and Planning	Ability to plan and		Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Mechanic/Technican	Mechanic/Technician	Facilities	Buildings	General	Mechanic/Technican	Mechanic/Technician	ARRC Prioritize from	Desired (Medium)
Work Order		Records Work	records their work on				Records Work	records their work on	Matrix	
Management			the work order and has					the work order and		
			access to info they need					has access to info they		
			thrugh the system.					need thrugh the		
			Only person with direct					system. Only person		
			knowledge of work is					with direct knowledge		
			Mechanic/Technician					of work is		
			and they should be able					Mechanic/Technician		
			to record their work as					and they should be		
			it is done.					able to record their		
								work as it is done.		
Work Orders and	General	Reporting Tools	Base requirement are	Facilities	Buildings	General	Reporting Tools	'	ARRC Prioritize from	Essential (High)
Work Order			tools that are better					tools that are better	Matrix	
Management			than an Excel export.					than an Excel export.		
			There is a need for					There is a need for		
			analytics for trending,					analytics for trending,		
			analysis, failure, and					analysis, failure, and		
			investment planning.					investment planning.		
			Analytics may be in a					Analytics may be in a		
			separate tool but the					separate tool but the		
			information to support					information to support		
			it must be reportable.					it must be reportable.		
			Currently Excel is the					Currently Excel is the		
			reporting tool - either					reporting tool - either		
			data is manually					data is manually		
			entered or exported					entered or exported		
			from JDE				"	from JDE		
Work Orders and	General	Usage Readings	Ability to quickly record	Facilities	Buildings	General	Usage Readings	Ability to quickly	ARRC Prioritize from	Desired (Medium)
Work Order			(or import from					record (or import from	Matrix	
Management			external systems) usage					external systems)		
			readings (e.g. miles,					usage readings (e.g.		
			hours)					miles, hours)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	End-User Field Service	Ability for end users to	Facilities	Buildings	General	End-User Field Service	Ability for end users to	ARRC Prioritize from	Desired (Medium)
Work Order			quickly record any field					quickly record any	Matrix	
Management			service performed (for					field service		
			efficiency and					performed (for		
			consistency likely					efficiency and		
			requires a digital					consistency likely		
			mobile offline solution)					requires a digital		
								mobile offline		
								solution)		
Work Orders and	General	Work Order	Automatically output,	Facilities	Buildings	General	Work Order	Automatically output,	ARRC Prioritize from	Essential (High)
Work Order		Attachments	link, and/or display (if				Attachments	link, and/or display (if	Matrix	
Management			digital) procedures,					digital) procedures,		
			checklists, and bills of					checklists, and bills of		
			materials needed for					materials needed for		
			work order					work order		
Work Orders and	General	Future and	Support the ability to	Facilities	Buildings	General	Future and	Support the ability to	ARRC Prioritize from	Desired (Medium)
Work Order		Unscheduled Work	have unscheduled or				Unscheduled Work	have unscheduled or	Matrix	
Management		Orders	future date work orders				Orders	future date work		
			to record work and					orders to record work		
			have it available for					and have it available		
			scheduling					for scheduling		
Work Orders and	General	Reassign, Split, or	Ability to reassign, split	Facilities	Buildings	General	Reassign, Split, or	Ability to reassign,	ARRC Prioritize from	Desired (Medium)
Work Order		Child Work Order	off part of a work order,				Child Work Order	split off part of a work	Matrix	
Management			or create a child work					order, or create a child		
			order so that more than					work order so that		
			one group can record					more than one group		
			activity against a work					can record activity		
			order yet still maintain					against a work order		
			the link to the single					yet still maintain the		
			event					link to the single event		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Facilities	Buildings	General	Parts on Work Order	Ability to specify parts on work order and whether they came from inventory, were ordered, or purchaed with a purchasing card	Matrix	Optional (Low)
Work Orders and Work Order Management	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items. Automatically create a work order to with the task or add a line item to work order if already created from this checklist.		Buildings		Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items. Automatically create a work order to with the task or add a line item to work order if already created from this checklist.	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	Facilities	Buildings		Prioritization of Work Orders	Ability to prioritze or rank work orders; a default prioritzation may be based on criticality rating of asset	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.	Facilities	Buildings		Custom Categorize Work Orders	Ability to categorize work orders in a custom way such as by campaign, program, or season. This may aid in grouping work as part of prioritization and scheduling.		Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	Facilities	Buildings	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Work Packages	Ability to create pre- defined work order template with a standard set of tasks for a particular inspection, condition assessement, complaint, etc	Facilities	Buildings	General	Work Packages	Ability to create predefined work order template with a standard set of tasks for a particular inspection, condition assessement, complaint, etc	ARRC Prioritize from Matrix	Essential (High)
Work Orders and Work Order Management	General	Record Checklist and Results	Ability to capture and store checklist form and recorded data electronically (rather than paper or scanned paper) for a work order	Facilities	Buildings	General	Record Checklist and Results	Ability to capture and store checklist form and recorded data electronically (rather than paper or scanned paper) for a work order	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	Capture Usage Readings on Work Orders	Ability to capture the current usage readings (hours, miles, etc.) on work orders and PMs when they are opened	Facilities	Buildings	General	Capture Usage Readings on Work Orders	+		Desired (Medium)
Work Orders and Work Order Management	General	Multiple Shop / Work Locations	Accommodate multiple shops and work locations including ARRC shops and work in the field		Buildings	General	Multiple Shop / Work Locations	Accommodate multiple shops and work locations including ARRC shops and work in the field	ARRC Prioritize from Matrix	Desired (Medium)
Work Orders and Work Order Management	General	SLAs for Response Times	Support the ability to set SLAs for response time on asset groups or categories and to record performance against them	Facilities	Buildings	General	SLAs for Response Times	Support the ability to set SLAs for response time on asset groups or categories and to record performance against them	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance	Facilities	Buildings	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance	ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Min-Max Parts Inventory	Inventory minimum and maximum on-hand requirements that is based on asset and component mix; including when assets are added or surplused; and seasonal changes	Facilities	Buildings	General	Min-Max Parts Inventory	Inventory minimum and maximum on-hand requirements that is based on asset and component mix; including when assets are added or surplused; and seasonal changes	ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Component Parts - Criticality	Ability to designate as critical parts or components that have long lead times, are obsolete, or are costly or difficult to ship when needed	Facilities	Buildings	General	Component Parts - Criticality		ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Component Parts - Obsolescence		Facilities	Buildings	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Equipment Check-Out / Check-In		Facilities	Buildings	General	Equipment Check-Out / Check-In	Mechanism to check out and check in equipment (particularly portable equipment that may be issued to a user)	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Inventory Purchase	Purchase plan based on	Facilities	Buildings	General	Inventory Purchase	Purchase plan based	ARRC Prioritize from	Optional (Low)
Management		Plan	forecasted preventative				Plan	on forecasted	Matrix	
			and overhaul work					preventative and		
			(done manually now					overhaul work (done		
			but should be able to					manually now but		
			forecast based on work					should be able to		
			packages / planned					forecast based on		
			work orders in system)					work packages /		
								planned work orders		
								in system)		
Materials	General	Material Inventory	Ability to easily add and	Facilities	Buildings	General	Material Inventory	Ability to easily add	ARRC Prioritize from	Optional (Low)
Management		Field Locations	remove materials in				Field Locations	and remove materials	Matrix	
			arbitrary field locations					in arbitrary field		
			identified with GPS					locations identified		
			(either by device or					with GPS (either by		
			selection from map).					device or selection		
			Material locations					from map). Material		
			correlated to asset					locations correlated to		
			hierarchy for reporting					asset hierarchy for		
			(e.g. Mile Post)					reporting (e.g. Mile		
								Post)		
Component Tracking	General	Component Service	Ability to specify	Facilities	Buildings	General	Component Service	Ability to specify	ARRC Prioritize from	Optional (Low)
and Rebuild	General	Life	expected service life of	l acinties	Dullulligs	General	Life	expected service life	Matrix	Optional (Low)
and Rebuild		Life	a component or part				Life	of a component or	IVIGUIX	
			a component or part					part		
Component Tracking	General	Part Rebuild	Indicator that a part in	Facilities	Buildings	General	Part Rebuild	Indicator that a part in	ARRC Prioritize from	Optional (Low)
and Rebuild	General	T are results	inventory or being	i dellities	Danames	General	are resultu	inventory or being	Matrix	Optional (LOW)
and Nebuna			installed is a rebuild					installed is a rebuild	IVIGUIA	
I	I	I	Installed is a rebuild	I	I	I	I	Installed is a rebuild	I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking	General	Component	Track when	Facilities	Buildings	General	Component	Track when	ARRC Prioritize from	Optional (Low)
and Rebuild		Installation and	components are				Installation and	components are	Matrix	
		Removal	installed, removed, and				Removal	installed, removed,		
			their disposition (e.g.					and their disposition		
			transferred, shelved,					(e.g. transferred,		
			disposed of, rebuilt)					shelved, disposed of,		
			May be differences in					rebuilt) May be		
			handling with					differences in handling		
			components that have					with components that		
			serial numbers vs those					have serial numbers vs	;	
			that do not.					those that do not.		
Component Tracking	General	Component Serial	Ability to track	Facilities	Buildings	General	Component Serial	Ability to track	ARRC Prioritize from	Optional (Low)
and Rebuild		Number Tracking	components by serial				Number Tracking	components by serial	Matrix	
			number and when they					number and when		
			were put on, taken off,					they were put on,		
			moved to another asset					taken off, moved to		
			or put on shelf (serial					another asset or put		
			number of part not on					on shelf (serial		
			unit could require					number of part not on		
			component to be an					unit could require		
			"asset")					component to be an		
								"asset")		
Component Tracking	General	Usage for Components	Calculated usage based	Facilities	Buildings	General	Usage for Components		ARRC Prioritize from	Optional (Low)
and Rebuild			on the usage measures					based on the usage	Matrix	
			for asset(s) installed in;					measures for asset(s)		
			for reliablity and					installed in; for		
			preventative					reliablity and		
			maintenance					preventative		
								maintenance		
Component Tracking	General	Component	Ability to identify	Facilities	Buildings	General	Component	Ability to identify	ARRC Prioritize from	Optional (Low)
and Rebuild		Compatibility	compatibility of				Compatibility	compatibility of	Matrix	
			components with asset					components with		
			configurations					asset configurations		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Warranty Management	General	Warranty	Ability to specify for parts whether a serial number is expected, what warranty terms are, and whether it is from purchaed or installed date. Associate warranty contact info or procedure with record (procedures vary by Vendor/OEM)	Facilities	Buildings	General	Warranty	Ability to specify for parts whether a serial number is expected, what warranty terms are, and whether it is from purchaed or installed date. Associate warranty contact info or procedure with record (procedures vary by Vendor/OEM)		Optional (Low)
Capital Projects and Campaigns	General	Total Cost of Ownership Reporting	Method for recording and displaying TCO; what is spent to maintain assets and the frequency of maintenance versus replacement of the asset or systems within the asset; allow for long term planning of asset or system replacement		Buildings	General	Total Cost of Ownership Reporting	· '	ARRC Group Interview	Essential (High)
Capital Projects and Campaigns	General	Capital Projects Reporting	Improved reporting on capital projects including estimates for labor, P-Card purchases, etc. prior to posting in the finance system (perhaps estimated from Work Order entries) in addition to funding by year and by funding source	Facilities	Buildings	General	Capital Projects Reporting	Improved reporting on capital projects including estimates for labor, P-Card purchases, etc. prior to posting in the finance system (perhaps estimated from Work Order entries)	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and Campaigns		Replacement Plan (ULB / Obsolescence)	For multi-year planning support replacement planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)		Buildings	General	Replacement Plan	For multi-year planning support replacement planning including age, useful life benchmark, obsolescence, costs, usage, and asset category composition (e.g. owned vs leased / rented)	ARRC Prioritize from Matrix	Desired (Medium)
Capital Projects and Campaigns	General	Asset Category / Class Composition over Time	Ability to show the composition of assets in an asset category / class over time by asset hierarchy or groupings as well as ownership (e.g. ARRC, leased, rented)		Buildings	General	Asset Category / Class Composition over Time	1	ARRC Prioritize from Matrix	Optional (Low)
Timekeeping	General	Time Tracking	Avoid duplicate entry or manipulation of time records in more than one system	Facilities	Buildings	General	Time Tracking	A straightforward method of recording time against work orders that flows to the time card system; avoid duplicate entry or manipulation of time records	ARRC Group Interview	Essential (High)
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours of Service and availablity for work in a way which adheres and is approved by regulatory agencies	Facilities	Buildings	General	Hours of Service (HOS)	Ability to record Hours of Service and availablity for work in a way which adheres and is approved by regulatory agencies	ARRC Prioritize from Matrix	Not Set



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Asset Field on	Have an asset field on	Facilities	Buildings	General	Asset Field on	Have an asset field on	ARRC Prioritize from	Desired (Medium)
		Timecards	time cards across ARRC				Timecards	time cards across	Matrix	
			to ensure that asset					ARRC to ensure that		
			usage can be captured					asset usage can be		
			(usage is a more					captured (usage is a		
			detailed level than					more detailed level		
			what group the asset is					than what group the		
			assigned to)					asset is assigned to)		
Timekeeping	General	Hours Worked on	<b>R</b> ecord hours worked	Facilities	Buildings	General	Hours Worked on	Record time worked	ARRC Prioritize from	Desired (Medium)
		Work Order / Asset	on a work order (both				Work Order / Asset	on a work order and	Matrix	
			direct and indirect					integrate with time		
			time) and integrate					keeping. Preference is		
			with time keeping.					hours are recorded on		
								work orders (direct		
								and indirect time) that		
								is carried over to the		
								time card to simplify		
								time entry and		
								management.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Asset Data Integration	Ability to synchronize	Communications	General	General	Asset Data Integration	Ability to synchronize	ARRC Prioritize from	Optional (Low)
Registry, and Info			or integrate basic asset					or integrate basic	Matrix	
			information with					asset information with		
			external vendors /					external vendors /		
			systems minimize need					systems minimize		
			to manually check and					need to manually		
			update records for					check and update		
			accuracy.					records for accuracy.		
Asset Hierarchy,	Asset Data	Link (both ways) to GIS	Support hyperlinking	Communications	General	General	Link (both ways) to GIS	Support hyperlinking	ARRC Group Interview	Desired (Medium)
Registry, and Info			from asset					from asset		
			management system to					management system		
			GIS and from GIS to					to GIS and from GIS to		
			asset management					asset management		
								based on assets based		
								upon the asset itself or		
								part of the asset's		
								hierarchy		
Asset Hierarchy,	Asset Data	Mobile Access to	Ability to access digital	Communications	General	General	Mobile Access to	Ability to access digital	ARRC Group Interview	Essential (High)
Registry, and Info		Documents	documents outside of				Documents	documents outside of		
			the office; if on mobile					the office; if on mobile		
			possibly allow offline					possibly allow offline		
			mode by caching					mode by caching		
			documents related to					documents related to		
			the assets					the assets		
Asset Hierarchy,	Asset Data	GPS/GIS Position	Ability to record GPS	Communications	General	General	GPS / GIS Locations	Ability to record GPS	ARRC Group Interview	Essential (High)
Registry, and Info		Information (Fixed)	locations for GIS at the					locations for GIS at the		
			asset level; either from					asset level; either		
			device or by selecting					from device or by		
			on map					selecting on map		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Asset Data	Document Management and Linking	Support a centralized approach to storing and accessing asset-related documents including drawings, schedules, manuals, pictures, etc.for both digital and paper documents	Communications	General	General	Document Management and Linking	Support a centralized approach to storing and accessing documents including drawings, manuals, pictures, etc. with them associated / indexed to assets	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	GPS/GIS Position Information (Fixed)	Ability to record GPS locations for GIS at the asset level; either from device or by selecting on map	Communications	General	General	Extract GPS Coordinates from Media	To aid in identifying where media (photos, video) was taken at a location extract the GPS coordinates from the media (when available) and link to GIS	ARRC Group Interview	Desired (Medium)
Asset Hierarchy, Registry, and Info	Asset Data	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset if they differ from internal ARRC identifiers	Communications	General	General	Asset Data System Identifiers	Ability to support multiple external system identifiers for an asset (e.g. Cisco, PRTG) - used for reference, asset data comparison between systems, or actual integration	ARRC Group Interview	Essential (High)
Asset Hierarchy, Registry, and Info	Asset Data	Central System of Record	Objective is a central source of information including asset and work activity; acknowledging that specialized systems may be used (and possibly linked or integrated) for configuration, status, and notifications	Communications	General	General	Central Source for Communications Assets and Work	Objective is a central source of information for communications including asset and work activity; acknowledging that specialized systems are used for configuration, status, and notifications	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy,	Asset Data	Location by Mile Post	In addition to a named	Communications	General	General	Location by Mile Post	In addition to a named	ARRC Group Interview	Essential (High)
Registry, and Info			location and GPS / GIS					location and GPS / GIS		
			coordinates support the					coordinates support		
			location by ARRC Mile					the location by ARRC		
			Post					Mile Post		
Asset Hierarchy,	Asset Data	NTD Reporting	Assets should have	Communications	General	General	NTD Reporting	Assets should have	ARRC Prioritize from	Optional (Low)
Registry, and Info		Attributes	attributes that allow for				Attributes	attributes that allow	Matrix	
			direct or easy mapping					for direct or easy		
			for NTD reporting					mapping for NTD		
			without the need to					reporting without the		
			maintain separately in					need to maintain		
			Excel.					separately in Excel.		
Asset Hierarchy,	Asset Data	Basic Asset Attributes	Ability to record basic	Communications	General	General	Basic Asset Attributes	Ability to record basic	ARRC Prioritize from	Optional (Low)
Registry, and Info			asset data common to					asset data common to	Matrix	
			asset management					asset management		
			systems including an					systems including an		
			ARRC unique identifier,					ARRC unique		
			year, make, model,					identifier, year, make,		
			serial number, color,					model, serial number,		
			etc.					color, etc.		
Asset Hierarchy,	Hierarchy	Classes or Grouping of	Organize and manage	Communications	General	General	Classes or Grouping of	Organize and manage	ARRC Prioritize from	Desired (Medium)
Registry, and Info		Assets	equipment as a class or				Assets	equipment as a class	Matrix	
			group; useful for					or group; useful for		
			planned maintenance					planned maintenance		
			programs and reporting					programs and		
								reporting		
Asset Hierarchy,	Hierarchy	Components	Include components	Communications	General	General	Components	Include components	ARRC Prioritize from	Optional (Low)
Registry, and Info			and sub-components,					and sub-components,	Matrix	
			assemblies, systems					assemblies, systems		
			and similar entities					and similar entities		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Hierarchy, Registry, and Info	Hierarchy	Asset Hierarchy	Model and enforce hierarchical relationships between assets; particulary parent-child	Communications	General	General	Communications Hierarchy	Support an asset and reporting hierarchy from the top down: Railroad, Location, then by asset category and then asset. Must be able to roll up costs and activity by named Location.		Essential (High)
Asset Availability and Status	Ownership	Owner Info	Contact information of the owner of assets; especially leased or rented equipment	Communications	General	General	Ownership Indicator	Support indicating owners or interested parties in the asset (or a specific component of an asset). Also allow for specifying responsibilities under contracts or memorandum of understanding. Technical contact information for other parties should be avaialble from the record.	ARRC Group Interview	Essential (High)
Asset Availability and Status	Ownership	Ownership Status	Ability to indicate owner and any interested parties in the asset	Communications	General	General	Ownership Status	Ability to indicate owner and any interested parties in the asset	ARRC Prioritize from Matrix	Desired (Medium)
Asset Availability and Status	Status	Asset Assignment	Ability to assign assets to a department with a start / end date that will also summarize usage from readings, PMs, and work orders (e.g. costs, fuel, miles, hours)	Communications	General	General	Asset Assignment	Ability to assign assets to a department or end user with a start / end date. Assets may have more than one department user.	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Status	Condition Assessment	Ability to record, store,	Communications	General	General	Condition Assessment	Ability to record,	ARRC Group Interview	Essential (High)
and Status			and report periodic					store, and report		
			condition assessments					condition assessment		
			with criteria guidance					and criteria guidance		
			as well as previous					as well as previous		
			ratings and work					ratings and work		
			performed since the					performed since the		
			last assessment					last assessment - for		
								assets that have a		
								physical condition and		
								are not simply working		
								or not working		
Asset Availability	Status	Condition Assessment	-Support a risk /	Communications	General	General	Condition Assessment	Support a risk /	ARRC Prioritize from	Desired (Medium)
and Status		Risk	consequence				Risk	consequence	Matrix	
			assessment on assets					assessment on assets		
			(or their components);					(or their components);		
			could be used for					could be used for		
			weighting condition					weighting condition		
			assessment at higher					assessment at higher		
			level of hierarchy					level of hierarchy		
Asset Availability	Status	Status - Location	Asset location in as	Communications	General	General	Status - Location	Asset location in as	ARRC Prioritize from	Optional (Low)
and Status	Status	Status Location	near real-time as it is		General	General	Status Education	near real-time as it is	Matrix	Optional (2011)
and Status			possible to have the					possible to have the	TVIGUIX	
			status changed by a					status changed by a		
			system or person					system or person		
Asset Availability	Status	GPS/GIS Position	<del></del>	Communications	General	General	GPS/GIS Position	Utilize GPS not only	ARRC Prioritize from	Desired (Medium)
and Status		Information (Mobile)	current but also				Information (Mobile)	for current but also	Matrix	(
			historical data for					historical data for		
			assets that are mobile					assets that are mobile		
I	I	I	I	I	I	T.	I	I	I	



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability	Status	Asset Rate and Usage	Support mechanism to	Communications	General	General	Asset Rate and Usage	Support mechanism to	ARRC Prioritize from	Optional (Low)
and Status		Calculation	calculate costs of asset				Calculation	calculate costs of asset	Matrix	
			and which groups used					and which groups		
			the asset during the					used the asset during		
			period. This calculation					the period. This		
			may be an initial input					calculation may be an		
			to Finance for cost					initial input to Finance		
			allocation.					for cost allocation.		
Asset Availability	Status	Condition Rating	Support a condition	Communications	General	General	Condition Rating	Support a condition	ARRC Prioritize from	Desired (Medium)
and Status		System	rating system for assets				System	rating system for	Matrix	
			(e.g. 1 to 5)					assets (e.g. 1 to 5)		
Asset Availability	Status	Import External	Ability to import	Communications	General	General	Import External	Ability to import	ARRC Prioritize from	Desired (Medium)
and Status		Transaction Data	transaction data from				Transaction Data		Matrix	
			external systems (and					external systems (and		
			when needed ability to					when needed ability		
			enter that transaction					to enter that		
			manually)					transaction manually)		
Asset Availability	Availability	Out of Service Coding	Capture out of service	Communications	General	General	Out of Service Coding	Capture out of service	ARRC Group Interview	Essential (High)
and Status	,	and Duration	codes and time				and Duration	codes and time	,	( 0 ,
			duration (e.g delay					duration (e.g delay		
			impacting operations,					impacting operations,		
			or no impact - may					or no impact - may		
			include status such as					include status such as		
			waiting for parts, shop					waiting for parts,		
			space, labor, etc.);					technician, outside		
			intent is to support					service/vendor, etc.)		
			reliablity analysis and							
			reporting							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Asset Availability and Status	Availability	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels.  Differentiate between types of out of service (e.g. seasonal or intentionally stored)	Communications	General	General	Availability Calculations	Show availablity over time at asset and also at hierarchy (grouping of assets) levels. Differentiate between types of out of service (e.g. service down or intentional maintenance)	ARRC Group Interview	Essential (High)
Asset Availability and Status	Availability	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	Communications	General	General	Availability - Seasonal Variations	Ability to indicate seasonal status (e.g. open /closed, not being used, etc.)	ARRC Prioritize from Matrix	Optional (Low)
Configuration Management	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or crosschecking of data.	Communications	General	General	Integration with Configuration Management Systems	Ability to integrate or synchronize data with external configuration management systems to avoid manual duplication or crosschecking of data.	ARRC Prioritize from Matrix	Optional (Low)
Configuration Management	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	Communications	General	General	Change Management Process	Ability to have a change management process for components of the assets. May include things such as checklists, test procedures, review process, etc.	ARRC Prioritize from Matrix	Optional (Low)
Configuration Management	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	Communications	General	General	Asset Model Configuration	Control over asset configuration design with ability to define rules for components and parts	ARRC Prioritize from Matrix	Optional (Low)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Fault/Problem	General	Capture Reasons for	Ability to capture	Communications	General	General	Capture Reasons for	Ability to capture	ARRC Group Interview	Essential (High)
Detection		Failure	reason(s) for failure;				Failure	reason(s) for failure;		
			preferably through					preferably through		
			standardized coding					standardized coding		
Fault/Problem	General	Data from External	Ability to hyperlink to	Communications	General	General	Data from	Ability to hyperlink to	ARRC Group Interview	Essential (High)
Detection		Asset Management	or complile information				Communications	or complile		
		Systems	from external asset				Management Systems	information from		
			management systems					various existing		
			including current state,					communication		
			alerts, and errors /					management systems		
			issues					which may include		
								configuration, status,		
								and notifications		
Fault/Problem	General	Data from Diagnostic	Ability to hyperlink to	Communications	General	General	Data from Diagnostic	, ,	ARRC Prioritize from	Essential (High)
Detection		Systems	or record and report on				Systems	or record and report	Matrix	
			information from					on information from		
			diagnostic systems and					diagnostic systems		
			testing vendors					and testing vendors		
Planned	General	PM Job Plan	Ability to setup	Communications	General	General	PM Job Plan	Ability to setup		Optional (Low)
Maintenance and			standard template for					standard template for	Matrix	
Inspection			labor and parts for					labor and parts for		
			preventative					preventative		
			maintenance routines					maintenance routines		
			to allow for forecasting					to allow for		
			of parts and labor					forecasting of parts		
			needed					and labor needed	_	
Planned	General	PM Service Calculation	· ·	Communications	General	General	PM Service Calculation	Ability to calculate PM		Optional (Low)
Maintenance and			serivce requirements					'	Matrix	
Inspection			on more than one					on more than one		
			aspect of asset usage					aspect of asset usage		
			(e.g. calendar time,					(e.g. calendar time,		
			hours, miles, fuel usage,					hours, miles, fuel		
			etc.)					usage, etc.)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned Maintenance and Inspection	General	Inspection Schedules	Support ability to schedule recurring inspections that will automatically create a work order	Communications	General	General	Inspection Schedules	Support ability to schedule recurring inspections that will create a work order	ARRC Group Interview	Essential (High)
Planned Maintenance and Inspection	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	Communications	General	General	Incorporate Season and Weather	Accommodate recording season and weather into usage information for preventative or predictive maintenance planning and	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	Communications	General	General	PM Notification	Ability for notifications to be automatically sent to maintenance and assigned user group when a PM is due (or created by the system)	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	Communications	General	General	Automated Compliance Tracking and Planning	Automated planning and compliance tracking of regulatory inspection requirements	ARRC Prioritize from Matrix	Optional (Low)
Planned Maintenance and Inspection	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	Communications	General	General	Digital Workflows for Review and Approval	Support digital workflows for review and approval for inspections (and where otherwise required) that is consistent with any regulatory workflow requirements	ARRC Prioritize from Matrix	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	Generate Work Orders	Ability to generate work	Communications	General	General	Generate Work Orders	Ability to generate	ARRC Group Interview	Essential (High)
Maintenance and		from Inspection	orders from inspection				from Inspection	work orders from		
Inspection		Results	results (would typically				Results	inspection results		
			be categorized as					(these would be		
			corrective actions)					corrective actions)		
Planned	General	Digital-First	Ability to record	Communications	General	General	Digital-First	Ability to record	ARRC Prioritize from	Desired (Medium)
Maintenance and		Inspections	inspections digitally in				Inspections	inspections digitally in	Matrix	
Inspection			the field (with an offline					the field (with an		
			mode available);					offline mode		
			subject to any					available); subject to		
			regulatory					any regulatory		
			requirements and					requirements and		
			workflow requirements					workflow		
								requirements		
Planned	General	Common Inspection	Desire a means of	Communications	General	General	Common Inspection	Desire a means of	ARRC Prioritize from	Optional (Low)
Maintenance and		Record to Satisfy	managing asset and				Record to Satisfy	managing asset and	Matrix	
Inspection		Multiple Agencies	inspection information				Multiple Agencies	inspection information		
			that can be used to					that can be used to		
			satisfy muliple agency					satisfy muliple agency		
			regulatory					regulatory		
			requirements (e.g. FRA					requirements (e.g.		
			and FTA)					FRA and FTA)		
Planned	General	Inspection Data	Ability to retain	Communications	General	General	Inspection Data	Ability to retain	ARRC Prioritize from	Optional (Low)
Maintenance and		Retention Periods	electronic copieds of				Retention Periods	electronic copieds of	Matrix	
Inspection			records indefinitely;					records indefinitely;		
			Federal agencies					Federal agencies		
			usually allow for only a					usually allow for only a		
			certain period of time					certain period of time		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Planned	General	Pre-Use and Frequent	Ability to record	Communications	General	General	Pre-Use and Frequent	Ability to record	ARRC Prioritize from	Desired (Medium)
Maintenance and		Inspection Checklists	frequent (daily) or pre-				Inspection Checklists	frequent (daily) or pre-	Matrix	
Inspection			use inspections with a					use inspections with a		
			checklist; support					checklist; support		
			different checklists					different checklists		
			based on asset category					based on asset		
			and characteristics					category and		
								characteristics		
Planned	General	Contractors for	Ability to define	Communications	General	General	Contractors for	Ability to define	ARRC Prioritize from	Optional (Low)
Maintenance and		Preventative	vendors which are used				Preventative	vendors which are	Matrix	
Inspection		Maintenance	for PM and inspection				Maintenance	used for PM and		
			activities on assets,					inspection activities		
			systems or components					on assets, systems or		
								components		
Work Orders and	General	Estimated Effort on	Ability to set an	Communications	General	General	Estimated Effort on	Ability to set an	ARRC Group Interview	Optional (Low)
Work Order		Work Orders	estimated labor or costs				Work Orders	estimated labor or		
Management			on work orders to aid in					costs on work orders		
			planning and scheduling					to aid in planning and		
			or to provide estimates					scheduling or to		
			to end users					provide estimates to		
								end users		
Work Orders and	General	Ease of Use	Focus on ease of use for	Communications	General	General	Task Coding Ease of	Focus on the ease of	ARRC Group Interview	Essential (High)
Work Order			recording work yet				Use	use in task coding - as		
Management			need the ability to					an example filter task		
			record meaningful					codes available on a		
			information to be					work order to those		
			useful (e.g. Task					that are applicable for		
			Coding)					the asset		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Reporting Tools	Base requirement are	Communications	General	General	Reporting Tools	Base requirement are	ARRC Group Interview	Essential (High)
Work Order			tools that are better					tools that are better		
Management			than an Excel export.					than an Excel export.		
			There is a need for					There is a need for		
			analytics for trending,					analytics for trending,		
			analysis, failure, and					analysis, failure, and		
			investment planning.					investment planning.		
			Analytics may be in a					Analytics may be in a		
			separate tool but the					separate tool but the		
			information to support					information to support	:	
			it must be reportable.					it must be reportable.		
			Currently Excel is the							
			reporting tool - either							
			data is manually							
			entered or exported							
			from JDE							
Work Orders and	General	Task Coding on Work	Ability to code tasks on	Communications	General	General	Task Coding on Work	Ability to code tasks	ARRC Group Interview	Essential (High)
Work Order		Orders	work orders that may				Orders	on work orders that		
Management			include system,					may include system,		
			subsystem, component,					subsystem,		
			position, and activity					component, position,		
			(e.g. inspect, install,					and activity (e.g.		
			remove, repair, replace)					inspect, install,		
			for accurate					remove, repair,		
			information on					replace) for accurate		
			maintenance activity					information on		
			and costs					maintenance activity		
								and costs		
Work Orders and	General	Failure Analysis	Improved ability to	Communications	General	General	Failure Analysis	Ability to analyze	ARRC Group Interview	Essential (High)
Work Order			analyze failures and					failures and their		
Management			their causes. Currently					causes; particularly		
			can only rely on what					when there are		
			has been written on the					system		
			work orders; and its					interdependencies		
			necessary to look at					(e.g. power, network)		
			each individual work							
			order.							



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Prioritization of Work	Ability to prioritze or	Communications	General	General	Prioritization of Work	Ability to prioritze or	ARRC Group Interview	Essential (High)
Work Order		Orders	rank work orders; a				Orders	rank work orders; a		
Management			default prioritzation					default prioritzation		
			may be based on					may be based on		
			criticality rating of asset					criticality rating of		
								asset		
Work Orders and	General	Scheduling and	Ability to plan and	Communications	General	General	Scheduling and	Ability to plan and	ARRC Group Interview	Essential (High)
Work Order		Planning	schedule work within				Planning	schedule work within		
Management			the system rather than					the system rather than		
			having to track outside					having to track outside		
			of it (e.g. Excel)					of it (e.g. Excel)		
Work Orders and	General	Record GPS Locations	Ability to record GPS	Communications	General	General	Record GPS Locations	Ability to record GPS	ARRC Group Interview	Essential (High)
Work Order		to Work Location	locations (from device				to Work Location	locations (from device		
Management			itself or selection from					itself or selection from		
			a map) for work order					a map) for work order		
			locations					locations		
Work Orders and	General	Future and	Support the ability to	Communications	General	General	Support Future and	Support the ability to	ARRC Group Interview	Desired (Medium)
Work Order		Unscheduled Work	have unscheduled or				Unscheduled Work	have unscheduled or		
Management		Orders	future date work orders				Orders	future date work		
			to record work and					orders to record work		
			have it available for					and have it available		
			scheduling					for scheduling		
Work Orders and	General	Custom Categorize	Ability to categorize	Communications	General	General	Custom Categorize	Ability to categorize	ARRC Group Interview	Desired (Medium)
Work Order		Work Orders	work orders in a custom				Work Orders	work orders in a		
Management			way such as by					custom way such as by		
			campaign, program, or					campaign, program, or		
			season. This may aid in					season. This may aid		
			grouping work as part					in grouping work as		
			of prioritization and					part of prioritization		
			scheduling.					and scheduling.		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	Communications	General	General	Assign Work Orders	Ability to assign work orders to technicians within the appropriate skillset pool and/or geographic location	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)		General	General	Usage Readings	Ability to quickly record (or import from external systems) usage readings (e.g. miles, hours)		Optional (Low)
Work Orders and Work Order Management	General	End-Users and Work Orders	Ability for end users (e.g. Operations) to initiate work requests through a complaint process and to see status and history of work orders	Communications	General	General	End-Users and Work Orders	Ability for end users to initiate work requests through a complaint process and to see status and history of work orders	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Work Order Notifications	Ability to configure notifications for new or outstanding work including PM, inspection, or work orders to designated users (e.g. on being created or assigned)	Communications	General	General	Work Order Notification	Ability to configure notifications for work including inspections or work orders to recipients (end users, technicians, management, operations) based on criteria and action(e.g. newly created, modified, closed)	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria indicating repair/adjustment or replacement is required on checklist items. Automatically create a work order to with the task or add a line item to work order if already created from this checklist.	Communications	General	General	Checklist Criteria for Repair - Create Work Order	Ability to define criteria for repair or replacement on checklist items. A work order to address is automatically created / or a line item on a work order if already created from this checklist)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Checklists (Digital)	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order and may be available from asset.	Communications	General	General	Digital Checklists	Ability to define digital (not paper) checklists for condition assessments, inspections, or regular work activities connected to a work orders. Checklists save the results recorded by the user and are attached to work order / asset	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Categorize Costs (OPEX/CAPEX)	Ability to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX - Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPEX (e.g. ARRC, Agency (if application) or Other (if applicable)	Communications	General	General	Categorize Costs (OPEX/CAPEX)	Abililty to categorize costs by OPEX/CAPEX categories and subcatgory (e.g. OPEX Preventative (e.g. Inspection), Corrective, or Break-Fix (must fix now) and CAPX (e.g. ARRC, Agency (if application) or Other (if applicable)		Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Mobile Digital Work Orders	•	Communications	General	General	Mobile Work Orders	Ability to view, initiate, update, and close work orders in the field in online or offline mode.	ARRC Group Interview	
Work Orders and Work Order Management	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, operations observation, alarm/notification, or internally initiated)	Communications	General	General	Work Order Source	Ability to record the source of a work order (e.g. result of an inspection, end user request, alarm/notification, or internally)	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Mechanic/Technican Records Work	Mechanic/Technician records their work on the work order and has access to info they need thrugh the system. Only person with direct knowledge of work is Mechanic/Technician and they should be able to record their work as it is done.		General	General	Record of Work by Technican	Only person who knows what is happening on the work order is the technican and they should have ability to see the info they need and also record as it is done (as easily as possible)		Essential (High)
Work Orders and Work Order Management	General	Complaint / Cause / Correction (3C's)	Support the ability to record complaint, cause, and correction in a standardized way for more efficient failure analysis and identification of common issues, causes, and their resolution		General	General	Work Order 3C	Ability to record Complaint / Cause / Correction with simple coding to allow for identifying common problems and their resolution	ARRC Group Interview	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	Communications	General	General	Group Work Orders by Geographic Area	Group work orders by geographic area so they do not need to be manually grouped for review and assignment	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	End-User Field Service	Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	Communications	General	General	End-User Field Service	Ability for end users to quickly record any field service performed (for efficiency and consistency likely requires a digital mobile offline solution)	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Capture All Work on Work Orders	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently		General	General	Capture all Work on Work Order	Ability to easily capture all work (inspection, condition assessment, work activity) on a work order to ensure that a record is made of the work and costs are captured consistently	ARRC Group Interview	Essential (High)
Work Orders and Work Order Management	General	Minor Work	Ability to quickly record minor work on a work order against an asset such as inspection and service (i.e. objective is to avoid using a standing or bucket work order that is not asset-specific for non-parts work less than 1 hour)		General	General	Minor Work	Ability to quickly record minor work such as inspection and service (i.e. ability to avoid using bucket/generic work order for non-parts work less than 15 minutes) - repetitive minor fixes could indicate a recurring problem	ARRC Group Interview	Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Parts on Work Order	Ability to specify parts	Communications	General	General	Parts on Work Order	Ability to specify parts	ARRC Prioritize from	Optional (Low)
Work Order			on work order and					on work order and	Matrix	
Management			whether they came					whether they came		
			from inventory, were					from inventory, were		
			ordered, or purchaed					ordered, or purchaed		
			with a purchasing card					with a purchasing card		
Work Orders and	General	Multiple Shop / Work	Accommodate multiple	Communications	General	General	Multiple Shop / Work	Accommodate	ARRC Prioritize from	Optional (Low)
Work Order		Locations	shops and work				Locations	multiple shops and	Matrix	
Management			locations including					work locations		
			ARRC shops and work in					including ARRC shops		
			the field					and work in the field		
Work Orders and	General	Capture Usage	Ability to capture the	Communications	General	General	Capture Usage	Ability to capture the	ARRC Prioritize from	Optional (Low)
Work Order		Readings on Work	current usage readings				Readings on Work	current usage readings	Matrix	
Management		Orders	(hours, miles, etc.) on				Orders	(hours, miles, etc.) on		
			work orders and PMs					work orders and PMs		
			when they are opened					when they are opened		
Work Orders and	General	Record Checklist and	Ability to capture and	Communications	General	General	Record Checklist and	Ability to capture and	ARRC Prioritize from	Desired (Medium)
Work Order		Results	store checklist form and				Results	store checklist form	Matrix	
Management			recorded data					and recorded data		
			electronically (rather					electronically (rather		
			than paper or scanned					than paper or scanned		
			paper) for a work order					paper) for a work		
								order		
Work Orders and	General	Contractor or Vendor	Ability to record work	Communications	General	General	Contractor or Vendor	Ability to record work	ARRC Prioritize from	Desired (Medium)
Work Order		Work	details (possibly				Work	details (possibly	Matrix	
Management			through an import)					through an import)		
			performed by					performed by		
			contractors or vendors					contractors or vendors	;	
			on work orders					on work orders		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and Work Order Management	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break- Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	Communications	General	General	Cost Reporting	Ability to see aggreggate costs on assets by basic criteria including System, "Type", Time Period, PM, Corrective or Break-Fix, By OPEX/CAPEX (or funding source), by hierarchy or geography	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Reimbursable Work	Ability to indicate that work is reimbursable by another party and output can be prepared to support Finance	Communications	General	General	Reimbursable Work		ARRC Group Interview	Optional (Low)
Work Orders and Work Order Management	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	Communications	General	General	Cost Accounting - Handling Changes	Ability to report or pass through changes to costs on a work order to the financial system so it is in sync with the work order costs.	ARRC Prioritize from Matrix	Optional (Low)
Work Orders and Work Order Management	General	Work Order Attachments	Automatically output, link, and/or display (if digital) procedures, checklists, and bills of materials needed for work order	Communications	General	General	Work Order Attachments	Automatically output or link / present (if digital) procedures, checklists, and bills of materials needed for work order	ARRC Group Interview	Desired (Medium)
Work Orders and Work Order Management	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	Communications	General	General	Integrate Financial System	Work Order system must be integrated or interfaced with the financial system (currently JDE)	ARRC Prioritize from Matrix	Essential (High)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Work Orders and	General	Work Orders against	Allow for a work order	Communications	General	General	Work Orders against	Allow for a work order	ARRC Prioritize from	Optional (Low)
Work Order		Assets in Hierarchy	to be written against				Assets in Hierarchy	to be written against	Matrix	
Management			assets at various levels					assets at various levels		
			of the hierarchy					of the hierarchy		
Work Orders and	General	SLAs for Response	Support the ability to	Communications	General	General	SLAs for Response	Support the ability to	ARRC Group Interview	Desired (Medium)
Work Order		Times	set SLAs for response				Times	set SLAs for response		
Management			time on asset groups or					time on asset groups		
			categories and to					or categories and to		
			record performance					record performance		
			against them					against them		
Work Orders and	General	Reassign, Split, or	Ability to reassign, split	Communications	General	General	Reassign, Split, or	Ability to reassign,	ARRC Group Interview	Essential (High)
Work Order		Child Work Order	off part of a work order,				Child Work Order	split off part of a work		
Management			or create a child work					order, or create a child		
			order so that more than					work order so that		
			one group can record					more than one group		
			activity against a work					can record activity		
			order yet still maintain					against a work order		
			the link to the single					yet still maintain the		
			event					link to the single event		
Work Orders and	General	Work Packages	Ability to create pre-	Communications	General	General	Work Packages	Ability to create pre-	ARRC Group Interview	Desired (Medium)
Work Order			defined work order					defined work order		
Management			template with a					template with a		
			standard set of tasks for					standard set of tasks		
			a particular inspection,					for a particular		
			condition assessement,					inspection, condition		
			complaint, etc					assessement,		
								complaint, etc		
Materials	General	Min-Max Parts	Inventory minimum and	Communications	General	General	Min-Max Parts	Inventory minimum	ARRC Prioritize from	Optional (Low)
Management		Inventory	maximum on-hand				Inventory	and maximum on-	Matrix	
			requirements that is					hand requirements		
			based on asset and					that is based on asset		
			component mix;					and component mix;		
			including when assets					including when assets		
			are added or surplused;					are added or		
			and seasonal changes					surplused; and		
								seasonal changes		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials Management	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	Communications	General	General	Component Parts - Obsolescence	Ability to identify date and category of obsolescence by vendor for asset or its component parts (e.g. vendor sends notice with date of end of support)	ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Inventory Purchase Plan	Purchase plan based on forecasted preventative and overhaul work (done manually now but should be able to forecast based on work packages / planned work orders in system)		General	General	Inventory Purchase Plan	Purchase plan based on forecasted preventative and overhaul work (done manually now but should be able to forecast based on work packages / planned work orders in system)	ARRC Prioritize from Matrix	Optional (Low)
Materials Management	General	Material Inventory Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)	Communications	General	General	Material Inventory Field Locations	Ability to easily add and remove materials in arbitrary field locations identified with GPS (either by device or selection from map). Material locations correlated to asset hierarchy for reporting (e.g. Mile Post)		Desired (Medium)
Materials Management	General	Component Parts - Criticality	Ability to designate as critical parts or components that have long lead times, are obsolete, or are costly or difficult to ship when needed	Communications	General	General	Component Parts - Criticality	Ability to designate as critical parts or components that have long lead times, are obsolete, or are costly or difficult to ship when needed		Desired (Medium)



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Materials	General	Equipment Check-Out	Mechanism to check	Communications	General	General	Equipment Check-Out	Mechanism to check	ARRC Group Interview	Optional (Low)
Management		/ Check-In	out and check in				/ Check-In	out and check in		
			equipment (particularly					equipment		
			portable equipment					(particularly portable		
			that may be issued to a					equipment that may		
			user)					be issued to a user)		
Component Tracking	General	Component Serial	Ability to track	Communications	General	General	Component Serial	Ability to track	ARRC Prioritize from	Desired (Medium)
and Rebuild		Number Tracking	components by serial				Number Tracking	components by serial	Matrix	
			number and when they					number and when		
			were put on, taken off,					they were put on,		
			moved to another asset					taken off, moved to		
			or put on shelf (serial					another asset or put		
			number of part not on					on shelf (serial		
			unit could require					number of part not on		
			component to be an					unit could require		
			"asset")					component to be an		
								"asset")		
Component Tracking	General	Usage for Components	Calculated usage based	Communications	General	General	Usage for Components	Calculated usage	ARRC Prioritize from	Optional (Low)
and Rebuild			on the usage measures					based on the usage	Matrix	
			for asset(s) installed in;					measures for asset(s)		
			for reliablity and					installed in; for		
			preventative					reliablity and		
			maintenance					preventative		
								maintenance		
Component Tracking	General	Part Rebuild	Indicator that a part in	Communications	General	General	Part Rebuild	Indicator that a part in	ARRC Prioritize from	Optional (Low)
and Rebuild			inventory or being					inventory or being	Matrix	
			installed is a rebuild					installed is a rebuild		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Component Tracking	General	Component	Track when	Communications	General	General	Component	Track when	ARRC Prioritize from	Optional (Low)
and Rebuild		Installation and	components are				Installation and	components are	Matrix	
		Removal	installed, removed, and				Removal	installed, removed,		
			their disposition (e.g.					and their disposition		
			transferred, shelved,					(e.g. transferred,		
			disposed of, rebuilt)					shelved, disposed of,		
			May be differences in					rebuilt) May be		
			handling with					differences in handling		
			components that have					with components that		
			serial numbers vs those					have serial numbers vs		
			that do not.					those that do not.		
Component Tracking	General	Component Service	Ability to specify	Communications	General	General	Component Service	Ability to specify	ARRC Prioritize from	Optional (Low)
and Rebuild		Life	expected service life of				Life	expected service life	Matrix	
			a component or part					of a component or		
								part		
Component Tracking	General	Component	Ability to identify	Communications	General	General	Component	Ability to identify	ARRC Prioritize from	Optional (Low)
and Rebuild		Compatibility	compatibility of				Compatibility	compatibility of	Matrix	
			components with asset					components with		
			configurations					asset configurations		
Warranty	General	Warranty	Ability to specify for	Communications	General	General	Warranty	Ability to specify for	ARRC Prioritize from	Optional (Low)
Management			parts whether a serial					l'	Matrix	
			number is expected,					number is expected,		
			what warranty terms					what warranty terms		
			are, and whether it is					are, and whether it is		
			from purchaed or					from purchaed or		
			installed date.					installed date.		
			Associate warranty					Associate warranty		
			contact info or					contact info or		
			procedure with record					procedure with record		
			(procedures vary by					(procedures vary by		
			Vendor/OEM)					Vendor/OEM)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Total Cost of	Method for recording	Communications	General	General	Total Cost of	Method for recording	ARRC Prioritize from	Optional (Low)
Campaigns		Ownership Reporting	and displaying TCO;				Ownership Reporting	and displaying TCO;	Matrix	
			what is spent to					what is spent to		
			maintain assets and the					maintain assets and		
			frequency of					the frequency of		
			maintenance versus					maintenance versus		
			replacement of the					replacement of the		
			asset or systems within					asset or systems		
			the asset; allow for long					within the asset; allow		
			term planning of asset					for long term planning		
			or system replacement					of asset or system		
								replacement		
Capital Projects and	General	Capital Projects	Improved reporting on	Communications	General	General	Capital Projects	Improved reporting on	ARRC Prioritize from	Optional (Low)
Campaigns		Reporting	capital projects				Reporting	capital projects	Matrix	
			including estimates for					including estimates for		
			labor, P-Card					labor, P-Card		
			purchases, etc. prior to					purchases, etc. prior		
			posting in the finance					to posting in the		
			system (perhaps					finance system		
			estimated from Work					(perhaps estimated		
			Order entries) in					from Work Order		
			addition to funding by					entries)		
			year and by funding							
			source							
Capital Projects and	General	Replacement Plan	, ,	Communications	General	General	Replacement Plan	For multi-year	ARRC Prioritize from	Optional (Low)
Campaigns		(ULB / Obsolescence)	support replacement				(ULB / Obsolescence)	planning support	Matrix	
			planning including age,					replacement planning		
			useful life benchmark,					including age, useful		
			obsolescence, costs,					life benchmark,		
			usage, and asset					obsolescence, costs,		
			category composition					usage, and asset		
			(e.g. owned vs leased /					category composition		
			rented)					(e.g. owned vs leased		
								/ rented)		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Capital Projects and	General	Asset Category / Class	Ability to show the	Communications	General	General	Asset Category / Class	Ability to show the	ARRC Prioritize from	Optional (Low)
Campaigns		Composition over	composition of assets in				Composition over	composition of assets	Matrix	
		Time	an asset category / class				Time	in an asset category /		
			over time by asset					class over time by		
			hierarchy or groupings					asset hierarchy or		
			as well as ownership					groupings as well as		
			(e.g. ARRC, leased,					ownership (e.g. ARRC,		
			rented)					leased, rented)		
Timekeeping	General	Hours Worked on	Record hours worked	Communications	General	General	Hours Worked on	Record time worked	ARRC Group Interview	Essential (High)
		Work Order / Asset	on a work order (both				Work Order / Asset	on a work order and	·	
			direct and indirect					integrate with time		
			time) and integrate					keeping. Capture		
			with time keeping.					indirect as well as		
								direct time.		
Timekeeping	General	Time Tracking	Avoid duplicate entry	Communications	General	General	Simplified Time	Ability to enter time	ARRC Group Interview	Optional (Low)
			or manipulation of time				Keeping	once - on the work		
			records in more than					order for the most		
			one system					detail - and for it to		
								transfer to time card.		
								Do not want to have		
								an additional step to		
								enter or manage time		
								keeping. Does require		
								accomodating HOS		
								(Hours of Service)		
Timekeeping	General	Hours of Service (HOS)	Ability to record Hours	Communications	General	General	Hours of Service (HOS)	Ability to record Hours	ARRC Group Interview	Desired (Medium)
			of Service and					of Service and		
			availablity for work in a					availablity for work in		
			way which adheres and					a way which adheres		
			is approved by					and is approved by		
			regulatory agencies					regulatory agencies		



Feature Category	Feature	Base Req Title	Base Req Desc	Asset Category	Asset Class	Asset Type	Title	Description	Initial Source	Priority
Timekeeping	General	Asset Field on	Have an asset field on	Communications	General	General	Asset Field on	Have an asset field on	ARRC Prioritize from	Optional (Low)
		Timecards	time cards across ARRC				Timecards	time cards across	Matrix	
			to ensure that asset					ARRC to ensure that		
			usage can be captured					asset usage can be		
			(usage is a more					captured (usage is a		
			detailed level than					more detailed level		
			what group the asset is					than what group the		
			assigned to)					asset is assigned to)		