



Project Management Plan

for Bus Rapid Transit

Prepared by:

The Rapid

In cooperation with the
Federal Transit Administration

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Version 09

Partners

City of Wyoming
 City of Kentwood
 City of Grand Rapids
 Grand Valley Metropolitan Council (GVMC)
 The Federal Transit Administration

REVISIONS

The Project Management Plan for the Project, sponsored by Interurban Transit Partnership (ITP), aka, *The Rapid*, is a dynamic, evolving document. As major revisions occur, the entire manual will be reproduced and distributed. For minor revisions, only the affected pages will be issued. Upon receipt, previous revisions of the document shall be destroyed.

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TABLE OF CONTENTS

CHAPTER 1 – GENERAL.....	10
1.1 Introduction	10
1.2 Purpose of the Project Management Plan	11
1.3 Project Background.....	12
1.4 Project Description	13
1.4.1 Corridor.....	14
1.4.2 Running Way.....	14
1.4.3 Stations	15
1.4.4 Vehicles.....	19
1.4.5 Technology.....	19
1.4.6 Fare Collection/Ticket Vending Machine (TVM).....	20
1.4.7 Limits of Project Scope	20
1.5 Project Schedule	21
1.6 Legal Authority.....	22
1.7 Property Acquisition	22
Chapter 2 – Organization & Staffing.....	26
2.0 Management Approach.....	26
2.1 The Organization.....	30
2.1.1 Departments.....	30
2.1.1.1 Executive Team.....	30
2.1.1.2 Administration Division	30
2.1.1.3 Planning and Program Development Division.....	31
2.1.1.4 Operations Division.....	32
2.2 Interfaces	32
2.2.1 Internal Interfaces	32
2.2.2 External Interfaces.....	33
2.2.2.1 Federal Transit Administration.....	33
2.2.2.2 Michigan Department of Transportation (MDOT)	33
2.2.2.3 Local Municipalities	34
2.3 Project Organizational Structure	34
2.4 Project Team.....	36
2.4.1 The Project Staff/Team Roles and Responsibilities	36
2.4.1.1 Chief Executive Officer.....	37
2.4.1.2 Assistant Executive Director	37
2.4.1.3 Project Manager	37
2.4.1.4 BRT Technical Support Consultant	38
2.4.1.5 Project Controls Consultant.....	38
2.4.1.6 General Engineering Consultant.....	39

2.4.1.7	Design Consultant Project Manager	39
2.4.1.8	Procurement/Purchasing Manager	40
2.4.1.9	CMAR	40
2.4.1.10	Safety and Training Officer	41
2.4.1.11	Finance Manager	41
2.4.1.12	Communications and External Relations Manager	42
2.4.1.13	Grants Officer	42
2.4.1.14	Chief Operating Officer	43
2.4.1.15	Environmental Support Consultant	43
2.4.1.16	Materials Testing Consultant	43
2.4.1.17	On-Site Vehicles Inspectors	44
2.4.1.18	Construction Phase Management Team (CMT)	44
2.4.1.19	BRT Coordinating Committees	44
2.5	Memorandum of Understanding/Inter local Agreement.....	44
2.6	Work Scope by Phase	46
2.6.1	Environmental Assessment Phase.....	46
2.6.1.1	Environmental Effects and Mitigation	46
2.6.1.2	Determinations and Findings.....	49
2.6.1.3	National Ambient Air Quality Standards	50
2.6.2	General Findings	51
2.7	Architectural & Engineering Phase.....	51
2.7.1	Design Review Process/Procedure	52
2.8	Construction Phase.....	53
2.8.1	CMAR	54
2.8.2	Preconstruction Services	54
2.8.3	Construction Services	57
2.8.4	Special Requirements	58
2.9	Decision-Making and Coordination during Design and Construction Activities	60
2.9.1	Decision Authority	60
2.10	Procurement Phase	60
2.11	Testing, Training and Start-Up Phase	60

CHAPTER 3 – Financial Management.....61

3.1	Capital Cost Summary.....	61
3.2	Source of Funds	63
3.2.1	FTA Funds.....	63
3.2.1.1	Very Small Starts (VSS) Funds	63
3.3	Local Financial Commitment	64
3.3.1	Operating Revenues	64
3.3.2	Operating Costs	64
3.4	Grants Management.....	64

CHAPTER 4 – MANAGEMENT CONTROL65

4.0	Design Management.....	65
4.1	Management of As-Built Plans	65
4.2	Document Control Management.....	66
4.3	Document Control Plan	66
4.3.1	Change Control Management	67
4.4	Changes between <i>The Rapid</i> and its CMAR and Consultants.....	67
4.5	Claims Management.....	69
4.6	Disputes Management.....	70
4.7	Suspension of Work.....	70
4.8	Extensions of Time.....	72
4.9	Contract Close-out.....	72
4.10	Quality Assurance Program (QAP).....	73
4.11	Progress Meetings	73
4.12	Affirmative Action and Disadvantaged Business Enterprise	74
4.13	Labor Requirements and Wage Rates	74

CHAPTER 5 – CONSTRUCTION MANAGEMENT75

5.0	Responsibility.....	75
5.1	Construction Safety	75
5.2	Construction/Installation Site Security.....	76
5.3	Materials and Equipment Procurement.....	76
5.3.1	Buy America Requirements	77
5.4	Procurement Specifications.....	78
5.5	Material and Equipment Configuration Control.....	78
5.6	Factory Inspection and Testing.....	78
5.7	Receiving and Storage	78
5.8	Testing During Construction	79
5.9	Labor Relations and Policy.....	79
5.9.1	Responsibility.....	79
5.9.2	Wage Rates and Job Classification.....	79
5.9.3	EEO and Affirmative Action	79
5.9.4	Risk Management and Insurance	79
5.9.5	Contract Completion	80
5.9.5.1	Construction As-Built Drawings and Records.....	80
5.9.5.2	Construction Punch Lists	80
5.10	Utilities.....	80
5.11	Start-Up and Testing.....	83
5.12	Training and Qualifications.....	85
5.13	Permits and Licenses	85
5.14	Safety Certification, System Start-up and Turnover.....	85
5.15	Calibration, Functional Check-out, and Alignment	86

5.16	Acceptance	86
5.17	Maintenance and Protection of Traffic (MOT)	86

CHAPTER 6 – SAFETY AND SECURITY88

6.0	Criteria	89
6.1	Construction Phase Hazard and Vulnerability Analysis	89
6.2	Standards and Codes	90
6.3	System Safety and Emergency Response Plan	90

CHAPTER 7 – CONTRACT ADMINISTRATION91

7.0	General	91
7.1	Responsibility.....	91
7.2	FTA Project Management Meetings.....	91
7.3	Contract Preparation and Award.....	91
7.4	Processing of Invoices.....	92
7.5	Monthly Progress Reports	92
7.5.1	Budget Revisions and Amendments.....	92
7.5.2	Project Closeout.....	92

CHAPTER 8 – PUBLIC INVOLVEMENT93

8.0	Meetings with Community Organizations.....	95
8.1	Interface with State and Local Government Agencies	95
8.2	Public Hearings and Meetings	96
8.3	Media Interface	96
8.4	Informal Public Input	96
8.5	Public Information	96

CHAPTER 9 – PMP CONTROL AND REVISIONS98

9.0	Control of the Project Management Plan.....	98
9.1	Revisions to the Project Management Plan	98

LIST OF TABLES

Table 1: Travel Times Savings (BRT alignment versus existing Route 1-Division alignment).....	13
Table 2: Station Locations	17
Table 3: Scope of Work	21
Table 4: Project Milestone List.....	22
Table 5: Location and Type of Necessary Easements	24
Table 6: Capital Cost Estimate.....	63
Table 7: Sources of Capital Funds (in millions).....	63
Table 8: Progress Meetings	73
Table 9: Utilities within Project Corridor.....	81
Table 10: Third Party and Utility Agreement Summary	84

LIST OF FIGURES

Figure 1: Silver Line BRT Alignment.....	16
Figure 2 Station Concept.....	18
Figure 3 Station Branding.....	19
Figure 4: The Rapid Organizational Chart	28
Figure 5: Silver Line Project Functional Organizational Chart/Reporting Relationships.....	29
Figure 6: Standard Cost Category Worksheet.....	62
Figure 7: Public Involvement Plan Organizational Chart.....	94

LIST OF APPENDICES

APPENDIX A: The Rapid Interlocal Agreement.....	100
APPENDIX B: Findings of No Significant Impact (FONSI)	117
APPENDIX C: Documentation Supporting Original Baseline Project Schedule	123
APPENDIX C-1: CMAR Basis Of Project Schedule	125
APPENDIX D: List Of Key Supporting Project Documents	131
APPENDIX E: <i>The Rapid</i> Silver Line Project Staff Qualifications	132

ACRONYM LIST

A&E	Architectural and Engineering
ADA	Americans with Disabilities Act
AIA	American Institute of Architects
ANSI	American National Standards Institute
APTA	American Public Transportation Association
ASTM	American Society for Testing and Materials
BOCA	Building Officials and Code Administrators
BRT	Bus Rapid Transit
CAAA	Clear Air Act Amendment
CBD	Central Business District
CCTV	Closed Circuit Television
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CM	Construction Management
CMAR	Construction Management At Risk
CMT	Construction Phase Management Team
COO	Chief Operating Officer
COs	Change Orders
CPM	Critical Path Method
CSPP	Construction Safety Program Plan
DBE	Disadvantaged Business Enterprises
DEQ	Department of Environmental Quality
EA	Environmental Assessment
EEO	Equal Employment Opportunity
ERP	Emergency Response Plan
FD	Final Design
FONSI	Findings of No Significant Impact
FTA	Federal Transit Administration
FVM	Fare Vending Machine
FY	Fiscal Year
GEC	General Engineering Consultants
GMP	Guaranteed Maximum Price
GPS	Global Positioning Satellite
GRCC	Grand Rapids Community College
GVMC	Grand Valley Metropolitan Council
HR	Human Resources
IEEE	Institute of Electrical and Electronic Engineers
ITP	Interurban Transit Partnership
ITS	Intelligent Transportation System
LOS	Level of Service
LPA	Locally Preferred Alternative
MISS-DIG	Michigan's One-Call Utility Notification Organization
MIOSHA	Michigan Occupational Safety & Health Admin
MPO	Metropolitan Planning Organization
MSATs	Mobile Source Air Toxics

MDOT	Michigan Department of Transportation
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NTP	Notice To Proceed
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
PCC	Project Controls Consultant
PCGA	Project Construction Grant Agreement
PHA	Preliminary Hazard Analysis
PIP	Public Involvement Plan
PE	Preliminary Engineering
PM	Project Manager
PMO	Project Management Oversight
PMOC	Project Management Oversight Contractor
PMP	Project Management Plan
PM ₁₀	Particulate Matter
PTMS	Public Transit Equipment/Facilities Management System
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAP	Quality Assurance Program
QC	Quality Control
RCS	Rapid Central Station
RFI	Request For Information
ROW	Right of Way
RFP	Request For Proposal
SHPO	State Historical Preservation Officer
SCC	Standard Costs Category
SSMP	Safety and Security Management Plan
TEAM	Transportation Electronic Award & Management
TIP	Technology Integration Plan
TIP	Transportation Improvement Plan
TSC	Technical Support Consultant
TSP	Traffic Signal Priority
UMTA	Urban Mass Transit Administration
UL	Underwriter's Laboratories
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VE	Value Engineering
VSS	Very Small Starts
WSA	Wilbur Smith & Associates
YOE	Year of Expenditure

CHAPTER 1–GENERAL

1.1 Introduction

The Interurban Transit Partnership (ITP), also known as *The Rapid*, is the authority that provides a variety of public transportation services for the Grand Rapids metro area and beyond. It is organized and operates under Michigan Public Act 196 of 1986. *The Rapid* operates 29 fixed routes, demand-response services for people with disabilities and those living outside the fixed-route service area, and car and vanpooling programs among other services.

The activities of *The Rapid* are overseen by a 15-member board of directors that represent the six municipalities in *The Rapid* service area.

The Silver Line Bus Rapid Transit (BRT), hitherto referred to as “Project”, would accommodate transportation needs associated with population and employment growth along the Division Avenue area by increasing transit capacity and providing faster, more convenient access throughout the metropolitan region.

The Project Management Plan (PMP) is intended to be a “living” document which is updated as certain critical milestones are reached throughout project phases. The following events may trigger the revision and re-issuance of the PMP:

- Significant modifications requested by the Federal Transit Administration (FTA).
- Project enters a new phase, i.e. final design, construction or at the start of revenue operations service (as a retrospective or as-built).
- Major change in project approach (fast track vs. traditional approach).
- Significant change in funding scenarios.
- Major changes to the Project budget and Master Project schedule (MPS).

The need for any such revisions is discussed at the regularly scheduled meetings between *The Rapid* and the FTA. After agreement on the intent and scope of the revisions by both parties, *The Rapid’s* Chief Executive Officer (CEO) will direct the Project Manager (PM) and appropriate staff to revise and update the PMP. Revised pages are distributed to all holders of the PMP. Revisions may include additional sections applicable to new phases of the Project, or may update information such as schedule and costs as this information is revised. The PMP is ultimately one tool leading toward successful implementation of a major capital project such as the Project.

This version of the PMP will focus on updates to the Project as it enters the construction phase and as *The Rapid* procures long lead material items such as Ticket Vending Machines and BRT vehicles.

An Environmental Assessment (EA) for this Project was approved by the FTA and a Findings of No Significant Impact (FONSI) was issued in July 2011. Architectural and Engineering (A&E) Design work has already being undertaken up to 100%. A Construction Manager At-Risk (CMAR) project delivery

method was previously determined and a CMAR team already procured to manage the Project construction.

In May 2011, *The Rapid* successfully passed a public referendum to secure operating funds for the Project. On October 18 2012, *The Rapid* signed a Project Construction Agreement (PCGA) with the FTA securing 80% of the project funding. The Michigan Department of Transportation (MDOT) is matching the federal funds with state funds up to 20%.

1.2 Purpose of the Project Management Plan

In 1989, Urban Mass Transit Administration (UMTA), now FTA, issued the Final Rule (49 CFR, Part 633) for Project Management Oversight (PMO), which included a requirement that transit agencies becoming recipients of FTA grants for a major capital project must submit a PMP for FTA review and approval. This PMP has been prepared to assist *The Rapid* in effectively and efficiently managing and controlling this Project. The framework for administration of this project has been established in accordance with the requirements of the FTA. This document specifies the Project's management procedures and organizational structure within *The Rapid*, and provides a guideline for the orderly interaction of the multiple agencies, organizations, and staff involved in the implementation of this project.

The PMP is a management tool. It addresses all elements necessary for the execution of the Project as it progresses through its development and implementation phases: Preliminary Engineering, Final Design, Construction, Testing and Start-up, and, ultimately, Revenue Service. Therefore, it should be recognized that this plan is a living document and subject to change and refinement as the Project evolves. Directly from 49 CFR §633.5: A project management plan means “a written document prepared by a recipient that explicitly defines all tasks necessary to implement a major capital project.” The minimum contents of a PMP are listed in §633.25.

In addition to satisfying the requirements of the FTA, this plan identifies the key activities and the need to assign responsibility for each such activity in an organized manner. The PMP is intended to provide the general framework for management of the Project and not intended to be a detailed procedures manual. Specific and detailed project procedures conforming to the parameters outlined in the PMP are developed and implemented by the various functional managers. These detailed procedures are published in separate procedure manuals and will be referenced when appropriate as companion documents to the PMP.

The purpose of a PMP is to document the procedures and processes that are in effect to provide timely information to the Project decision makers to effectively manage the scope, costs, schedules, quality of, and the Federal requirements applicable to, the Project; and the role of the agency leadership and management team in the delivery of the Project.

1.3 Project Background

The Project is an approximately \$40 million BRT project designed to provide access to centers of employment and extensive educational opportunities in downtown Grand Rapids, improve job access, reduce travel times, and provide the transportation foundation for economic development in the Division Avenue corridor. It will connect Downtown Grand Rapids to the Cities of Kentwood and Wyoming.

Transportation enhancements in the corridor include:

- Efficiently address the need for growing demand on the highest ridership route in *The Rapid's* system (within the urbanized area).
- Provide better connections to key employment and educational centers.
- Support extensive re-development efforts (both under construction and planned).
- Enhance mobility for a large transit-dependent population within the corridor.
- Provide time-saving options to facing growing traffic congestion in the corridor.

Transit service in the Division Avenue corridor is currently provided by Route 1 – Division, with an average of 3,000 daily boarding. Even with 15-minute frequency from downtown Grand Rapids to 36th Street and 30-minute service between 36th Street and 68th Street, significant ridership growth since FY 2001 has resulted in overcrowding and an inability to meet demand. Buses are frequently ‘standing-room only’ and this—along with increased stopping and boarding dwell times—has resulted in increased schedule adherence issues and transferring problems. Because *The Rapid* system is designed as a ‘radial pulse’ the existing service depends on transfers to other routes at *The Rapid* Central Station (RCS) to reach employment and educational locations. Consequently, schedule delays cause missed transfers and late arrival times to the riders’ destinations. Not only are these problems detrimental to existing riders within the corridor, they also discourage new and choice riders from using the system.

The proposed BRT routing and fare payment system address both problems. The BRT route directly serves the three highest employment clusters in downtown Grand Rapids including the St. Mary’s Medical Campus, Medical Mile, and the core of downtown employment. Because the BRT alignment provides direct service to these locations without transfers, travel times are reduced significantly as shown in **Table 1**. The Table shows a comparison between the existing Route 1 transit service time and the estimated BRT service time for select origin-destination pairs. As shown, there is anticipated to be travel time savings (anywhere from 5 to 18.5 minutes) for patrons that take the BRT for a majority of the origin-destination pairs.

With off-board fare collection, level boarding, low floors, and boarding through multiple doors, dwell times (and subsequent schedule impacts) will be reduced. Additionally, with the overlay of the BRT system operating every 10 minutes at peak and the existing local service (Route 1) operating every 30 minutes, transit-dependent riders will benefit from improved access to employment opportunities along the route, as well as improved frequency of service to educational opportunities in downtown

Grand Rapids. Choice riders will benefit from improved travel times connecting directly to key employment destinations, allowing the opportunity to make the mode shift from automobile to public transportation.

The alignment of the BRT project is the same as the existing Route 1 – Division local service from Wealthy Street to 60th Street. Nevertheless, the alignment is different north of Wealthy Street because the BRT directly serves St. Mary's Hospital, Grand Rapids Community College (GRCC), Spectrum Hospital, and DeVos Place, while Route 1-Division directly serves only Van Andel Arena and Rapid Central Station (RCS), resulting in a forced transfer to other routes at RCS in order to access the other locations listed. As a result, the BRT provides significant travel time savings to all of the major employment locations with the exception of Van Andel Arena (see table 1). Furthermore, because Route 1 – Division will remain in service, passengers have the option of using Route 1 – Division as opposed to the BRT line if Van Andel Arena is their destination.

Table 1: Travel Times Savings (BRT alignment versus existing Route 1-Division alignment)

Northbound from 54th Street

<u>Destination</u>	<u>Route 1</u>	<u>BRT</u>	<u>Difference</u>	<u>% Change</u>
St. Mary's	26.8	21.8	-5.0	-18.7%
GRCC	31.0	25.1	-5.9	-19.0%
Spectrum	45.0	26.5	-18.5	-41.1%
DeVos Place	35.5	29.2	-6.3	-17.7%
Van Andel	25.5	34.3	8.8	34.5%
RCS	29.0	34.6	5.6	19.3%

Southbound

<u>Destination</u>	<u>Route 1</u>	<u>BRT</u>	<u>Difference</u>	<u>% Change</u>
St. Mary's - 54th St.	28.3	20.5	-7.8	-27.6%
GRCC - 54th St.	34.7	23.8	-10.9	-31.4%
Spectrum - 54th St.	40.0	24.9	-15.1	-37.8%
DeVos Place - 54th St.	36.5	26.7	-9.8	-26.8%
Van Andel - 54th St.	26.5	32.6	6.1	23.0%
RCS - 54th St.	30.0	33.1	3.1	10.3%

1.4 Project Description

The Project is proposed to provide higher capacity service than the current regular bus services from the south into downtown Grand Rapids. The proposed route is approximately 9.6 miles in length (**Figure 1**). Inputs from potentially affected stakeholders during the EA preparation resulted in the current alignment and a slightly different project length from the originally approved Locally

Preferred Alternative (LPA) of 9.87 miles. South of Wealthy Street, what would be considered the southern boundary of “downtown” Grand Rapids, the route follows Division Avenue due south to the border of *The Rapid*’s service area. In the downtown area, the route directly connects to the three largest employment clusters in the city: St. Mary’s Medical Campus (5,000 jobs), Medical Mile (7,000 jobs, including Michigan State University College of Human Medicine, and Cook-DeVos School of Nursing), and the core of downtown (17,000 jobs). In addition, the route passes through the Grand Rapids Community College campus (13,400 students), and passes within three blocks of four other college or graduate school campuses.

The BRT will operate every 10-minute during weekday peak hours and every 15-30 minutes during weekday off-peak and weekends. Currently, Division Avenue is served by Route 1-Division which is the second-highest capacity route after the Grand Valley State University Campus connector. Currently, Route 1 operates every 15 minutes to 36th Street and every 30 minutes to 68th Street. During weekday peak hours, the 10-minute BRT service will be overlaid onto 30-minute local Route 1 service.

1.4.1 Corridor

The corridor originates from *The Rapid* Central Station (RCS) on the periphery of the Grand Rapids Central Business District (CBD) and extends directly south from downtown Grand Rapids along Division Avenue ending at 60th Street. Division Avenue once was the main roadway from Grand Rapids to Kalamazoo until the U.S. 131 freeway was constructed. The corridor passes through the Cities of Grand Rapids, Kentwood, and Wyoming.

Division Avenue forms the border between Kentwood and Wyoming in the southern part of the corridor. Compared to other radial corridors extending from downtown Grand Rapids, this corridor has the highest total population, the highest population density, and the highest total transit-dependent population. This corridor has several locations which would benefit from economic development. The current zoning is typically commercial for one parcel depth away from Division Avenue, with residential neighborhoods behind the commercial strip. For example, in the City of Grand Rapids (near Crofton), there is an area zoned for industrial usage (many buildings in this industrial area are vacant or underutilized since the departure of the furniture industry more than forty years ago).

1.4.2 Running Way

The proposed running way for the Project vehicles is the curb-most travel lane. In most of the corridor along Division Avenue, the existing roadway has five lanes (two through lanes in each direction plus a center turn lane). Only a few small areas have on-street parking (mainly near Burton and Hall Streets). In the downtown area, the streets are typically two lanes with a turn lane at intersections. Some on-street parking is common along Jefferson, Barclay, Fountain, Lyon, Lafayette, and Grandville.

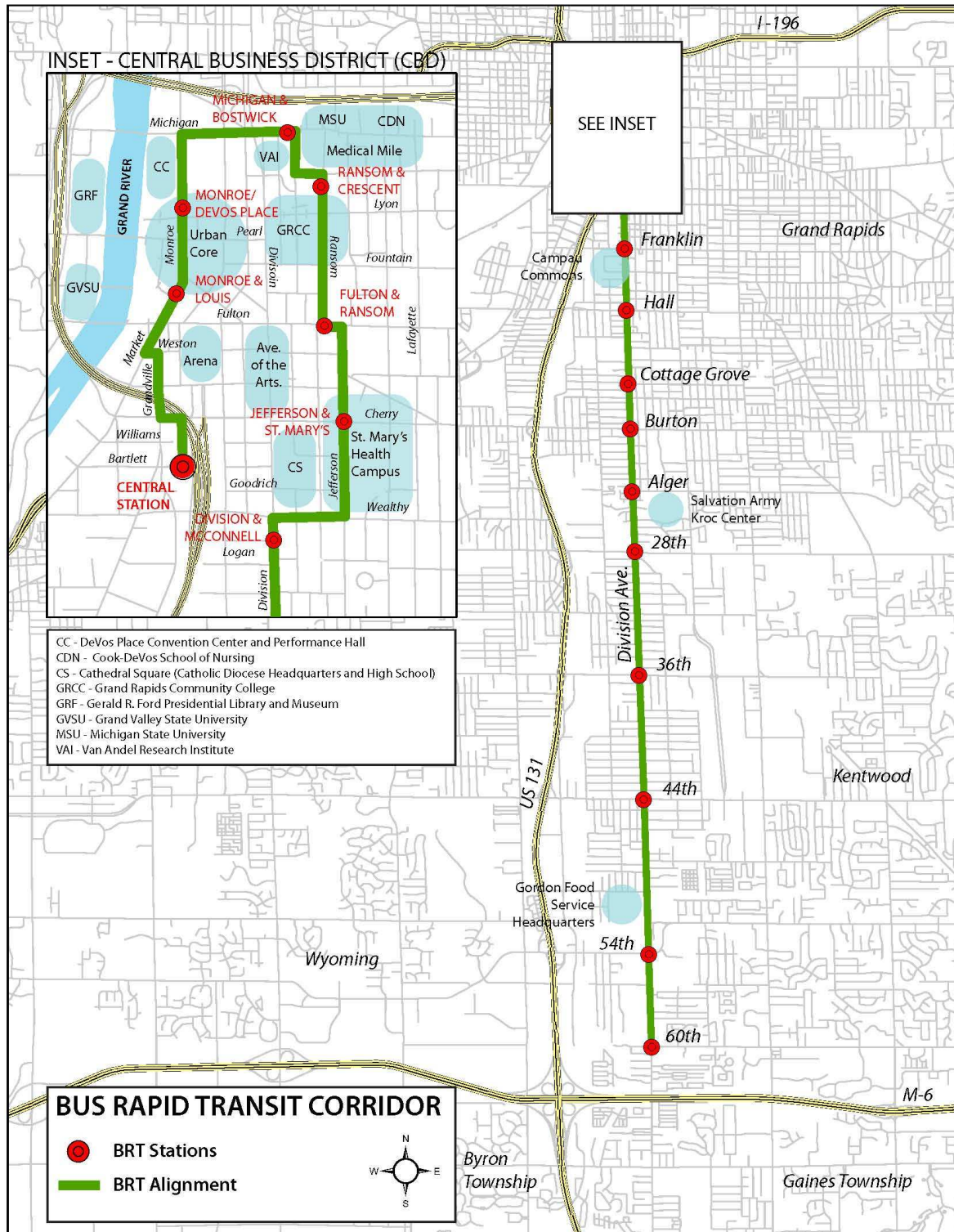
In at least 65% of the corridor, dedicated curb-side lanes have been designed into the Project during peak hours (6-9 AM, 3-6 PM) both directions, shared during off-peak hours. The dedicated lanes will be indicated by signage, pavement markings and other features to distinguish the lanes from a typical vehicular traffic lane. Right-turning vehicles and vehicles accessing business drives and parking may use the dedicated lanes.

For ride quality, some budget has been included for milling and resurfacing around the BRT station areas.

1.4.3 Stations

The Project will be served by 18 stations (including RCS), with 33 platforms (RCS already has a platform and there will be one station platform at the end of the line at 60th Street). These stations are all low-platform at-grade providing level access from the floor of the BRT vehicle.

Figure 1: Silver Line BRT Alignment



The station platforms are generally 60' long and situated in public right-of-way (ROW) on the curb-side of the street. The station shelter will be 48' with the exception where restrictions in the ROW necessitate a 36' shelter. The 48' long shelter is designed to cover both doors of a 40-foot bus and set back 24" from the face of curb to protect boarding passengers from rain. There will be ramps at one or both ends of the platform. If the roof extends over the bus, the clear height of the roof is to be 14'-6" above the pavement. The platforms will be placed 15" above the pavement for Project vehicles and 10" above the pavement where the Project route will share stations with other local route stops. The stations are generally located at signalized intersections facilitating access to the platform.

The stations include lighting, 3-seat benches, signage, real-time bus arrival and status information ("next bus" technology), emergency telephone with closed circuit television (CCTV) passenger information sign, location information, and system information. Landscaping and hardscaping will also be provided in the station area. The location of each station is summarized in **Table 2**.

Table 2: Station Locations

	Location
	Rapid Central Station (RCS)
1	Monroe/Louis
2	Monroe at DeVos Place
3	Michigan/Bostwick
4	Ransom/Crescent
5	Ransom/Fulton(shared station)
6	Jefferson/St Mary's Hospital
7	Division/McConnell*
8	Division/Franklin
9	Division/Hall (Green)
10	Division/Cottage Grove
11	Division/Burton (shared station)
12	Division/ Alger (Southview)*
13	Division/28 th
14	Division/36 th
15	Division/44 th
16	Division/54 th
17	Division/60 th

*These BRT stations are identified by a different name in the EA (Division/Wealthy respectively), however the area of analysis are the same as in the EA.

In order to avoid logistical conflicts at BRT stations resulting in schedule delays, only BRT vehicles will stop at BRT stations. The local bus stops along the alignment will be reconfigured to be as close to the BRT stations as possible (i.e. ~40'-50' away) so that the connections between the local and BRT service can be maintained.

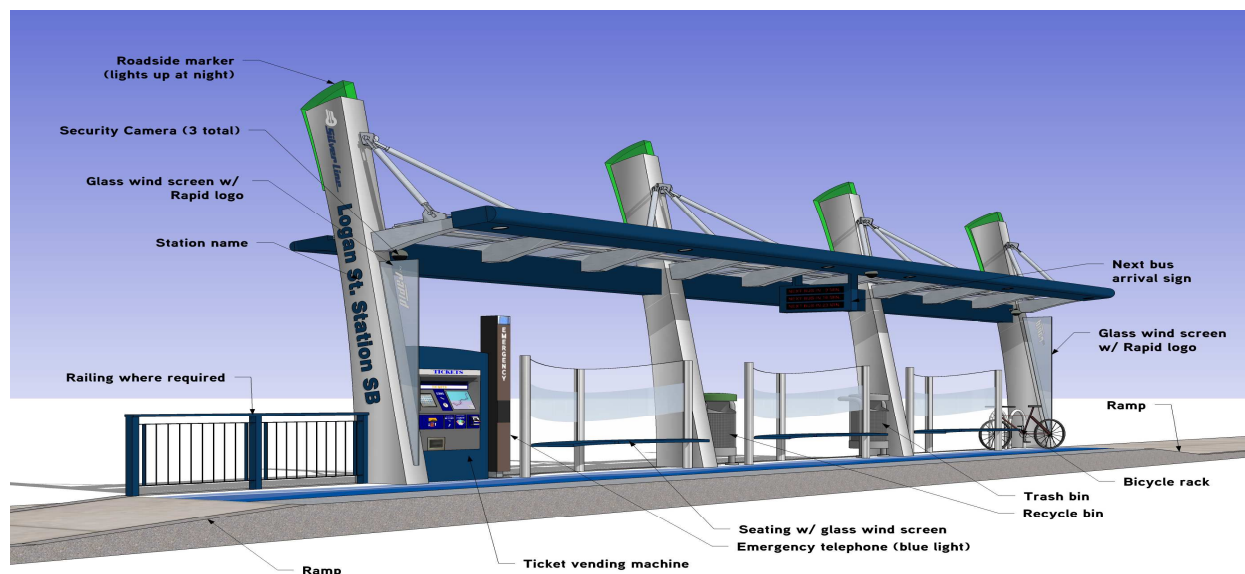
The stations have been designed and branded (**Figure 2 and 3**) to ensure that they are distinctively different than the regular bus stops along the corridor. A branding theme will be continuous through the stations and vehicles.

All the stations are located to either allow direct access to employment or educational centers, or placed to facilitate connections with existing local bus routes including cross-town routes. The terminus of the Project route downtown is RCS, the transfer point for all radial local bus routes.

Figure 2 Station Concept



Figure 3 Station Branding



1.4.4 Vehicles

Ten (10) 40-foot hybrid-electric, low-floor, multiple-door, vehicles will be used to provide service along the corridor. With off-board fare payment (and on-board proof of payment verification), boarding may be through any door. Vehicles will be equipped with Global Positioning Satellite (GPS) to tie into the “next bus” system, as well as visual and audible announcements of next station stops. BRT vehicles are anticipated to be delivered by February 24, 2014.

1.4.5 Technology

The Rapid is currently implementing the use of smart cards for fare payment. The BRT system will allow the use of the same smart cards for fare payment. Fares (including transfers) will be seamless with the rest of the fixed-route transit system. *The Rapid* also has “next bus” GPS technology under development. The BRT system will integrate with this system. Stations will display the arrival times of the next buses. Available display technology is rapidly changing in the industry. Technology is also changing for security cameras. Cameras will be included at stations and on the vehicles. Current technology is moving toward wireless connections to the operations center.

Traffic Signal Priority (TSP) will be equipped on all of the 26 signalized intersections along the Project alignment. The TSP system will grant the BRT buses either an early or extended green of up to 15 seconds that will be borrowed from the cross-traffic. The TSP system—along with dedicated lanes during peak hours—provides the Project with the expected travel time savings identified in the EA and illustrated in Table 1. The TSP system will also be available for emergency vehicles in the form of signal preemption that will change a signal from red to green.

The proposed system is “passive” meaning the driver does not need to take any action. The system detects if a short extension of the signal green time would allow the Project vehicle to pass through the intersection. At potentially two intersections (depending on the precise routing near Wealthy and Division), the left-turn arrow may provide the Project vehicle a priority movement. Most signals in the corridor are already equipped with Opticom TSP transponders but will be upgraded to GPS as part of the Project. The City of Grand Rapids controls the signals and TSP throughout the Project corridor and will provide the CMAR the TSP specifications for procurement. The installation and calibration of the TSP will be done by the City of Grand Rapids.

1.4.6 Fare Collection/Ticket Vending Machine (TVM)

The fare system is specified to coordinated and integrated with *The Rapid*’s current fare structure for its existing bus system. Nevertheless, the specification also allow for flexibility if *The Rapid* desires to change or modify its fare structure in the future to accommodate, for example, smart card or stored value cards and other technologies. The Project is currently planned to be barrier-free and operate on an honor basis that will be verified with a random ‘Proof of Purchase’ policy. Fare vending machines would be placed in all stations and continued use of standard fare boxes is assumed for the bus system. Under the barrier-free concept, no gate or fare inspection points would be installed at the stations. Fare inspectors will ride the system, on a varying schedule, and check that passengers have valid tickets or transfers. There will be fare validation devices installed at each station. Violators would be cited and fined. *The Rapid* is currently analyzing its fare structure along with Title VI compliance to determine if the currently fare structure should be redesigned along with the launch of the BRT.

The following assumptions are made for the Project:

- Fares for the BRT system will be consistent with the fare structure for the regular bus service. Pass products will work interchangeably on both modes and transfers between modes will be seamless and free. The system will accommodate a wide range of fare media including a smart card system.
- It is assumed that future fare increases will keep fare levels consistent with the operating year inflation-adjusted fare level.
- *The Rapid* currently has a contract with a firm to provide security for its transit facilities. However, the contract does not specify responsibility for fare inspection activities. *The Rapid* anticipates utilizing its road supervisors to monitor fare evasion. This will be addressed prior to revenue operations.

1.4.7 Limits of Project Scope

Table 3 below shows the scope of work for the Project and the procurement schedule for the following items (in chronological order):

Table 3: Scope of Work

Items	**Schedule for Completion/Procurement
Minor easements (primarily for placement of pads for utility service)	02/2013
Ten (10) hybrid electric BRT vehicles (and spare parts)	02/2014
Installation of Ticket Vending Equipment and Fare Validation Devices	06/2014
Roadway Construction and Utility Relocation	07/2014
Construction of stations (including platforms, canopies, signage, next-bus technology, security cameras, and lighting)	07/2014

*** These dates will be updated based upon the approved dates in the Master Project Schedule.*

1.5 Project Schedule

Following the issuance of the PCGA and completion of 90% design in January 2013, the project transitioned from the baseline implementation schedule to the Master Project Schedule (MPS) developed by the CMAR. The schedule includes A&E and construction activities. The MPS is currently available on *The Rapid's* website (see Appendix D).

100% of the Project has been designed and engineered. Table 4 is a summary of key project milestones consistent with the MPS. The most current critical path items in the MPS are:

- Construction of the Project corridor elements (BRT systems).
- Procurement of vehicles.
- Procurement of Ticket Vending Machines/Fare Validation devices for the stations
- Testing of systems (such as fare collection at vending machines using smart cards and “next bus” vehicle and signage systems),
- Review times by the FTA (including PMOC’s review times).

The schedule will be updated as needed. Appendix C provides a description of how the baseline implementation schedule was initially developed and assumptions that were built into the original schedule. Appendix C-1 was later developed by CMAR in January 2013 as the basis of MPS.

The following is a list of key milestones, past and present, for the Project:

Table 4: Project Milestone List

*Scheduled Finish Date	Silver Line BRT Milestone Activity
8/31/2012	Shelters Final Design
10/18/2012	Project Construction Grant Agreement
12/12/2012	Stations Final Design
12/12/2012	Roadway Final Design
12/12/2012	BRT Systems Final Design
2/28/2013	Real Estate Activities (access easements)
3/6/2013	Fiber Optic Agreements
3/28/2013	Pre-Construction Activities
5/26/2014	Delivery of BRT Vehicles
5/5/2014	Delivery of Fare Vending Equipment
5/30/2014	Shelter Manufacturing/Delivery
7/4/2014	Station and Roadway Construction
7/4/2014	Utility Relocation
8/25/2014	Revenue Operations

** With the exception of August 25, 2014 project completion date, these dates will be updated based upon the approved dates in the Master Project Schedule.

1.6 Legal Authority

The Rapid is the authority that provides a variety of public transportation services for the Grand Rapids metro area and beyond. It is organized and operates under Michigan Public Act 196 of 1986. The activities of *The Rapid* are overseen by a 15-member board of directors that represent the six municipalities in *The Rapid* service area. Formed in October 2000, *The Rapid* has the authority to provide, develop, and improve public transportation services for the Grand Rapids metro area including the implementation of the Project. *The Rapid* Board of Directors provides policy direction and approval on the Project. This direction is conveyed through *The Rapid's* CEO. *The Rapid's* Board of Directors is responsible for final approval of interagency agreements, approval of *The Rapid* contracts or changes in excess of \$100,000.00. On October 31, 2012, *The Rapid* was given full authorization by the ITP Board to award all necessary contracts/activities to build the Silver Line.

1.7 Property Acquisition

The Rapid—under Michigan Public Act 196 of 1986—has the authority and ability to acquire properties. The following procedures are followed by *The Rapid* when acquiring real property for a proposed project with FTA Grant funds:

1. Alternative available sites for the proposed project are examined and evaluated. The most appropriate site, based on all considerations, is identified (the “Property”).

2. If the potential purchase price of the property is in excess of \$10,000, an appraisal of the Property is conducted by a qualified, licensed appraiser in accordance with the criteria for appraisals set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the “Act”).
3. A second, qualified licensed appraiser conducts a review of the appraisal, and all issues are addressed. The appraisal, review appraisal, and any related documents are sent to the FTA for approval with a request for authorization to proceed with the purchase of the Property in accordance with FTA Circular C-5010.1D.
4. *The Rapid* submits a good faith offer to purchase the Property at its appraised value to the owner of the Property. The offer is made conditioned upon approval by *The Rapid’s* board, approval by the FTA, a satisfactory environmental assessment of the property, and such other conditions, as applicable. A due diligence period is provided to resolve those issues prior to closing.
5. If the Property is occupied, a notice of intent to acquire the Property is provided by *The Rapid* to all persons, businesses, farms and non-profit organizations that occupy the Property. That notice sets forth the occupants’ right to receive relocation assistance from Rapid pursuant to the Act. A relocation consultant is retained by *The Rapid* to provide relocation assistance as well as review and process relocation claims for payment by *The Rapid*.
6. Upon acceptance of the good faith offer, all inspections of the Property are conducted by *The Rapid* during the due diligence period established by the purchase agreement.
7. *The Rapid’s* inspection of the Property includes a full and complete environmental assessment of the Property conducted by a qualified environmental consultant in accordance with “all appropriate inquiry” standards established by the Environmental Protection Agency and applicable state law. If contamination is detected on the Property, steps are taken pursuant to federal and state law to (i) avoid the assumption of liability for the clean-up of the contamination (ii) identify applicable response activities or due care obligations necessary to protect human health and the environment in connection with *The Rapid’s* intended use of the Property. These issues must be resolved to *The Rapid’s* satisfaction as a condition to closing. The results of the environmental assessment of the Property are submitted to the FTA for review.
8. Upon receipt of approvals from *The Rapid* board, and from the FTA, *The Rapid* proceeds with the acquisition of the Property.

Table 5 identifies the easement locations, types and status being pursued for the project. Four (4) of these stations require permanent sidewalk easements and one requires a permanent utility easement for power. To date, 11 have been secured including 10 grading licenses and 1 sidewalk easement. With the exception of station 15 IB (Division and Franklin), all easements are anticipated

to be acquired by the start of construction. The property owner at Station 15 IB requested a new business sign and this is anticipated to be approved by the City of Grand Rapids. Although this may delay the actual station construction by a couple of weeks, the overall project schedule is not affected. Information on the Status/Completion dates of the listed easements will be reflected in the project's monthly report.

Table 5: Location and Type of Necessary Easements

Station	Location / Intersection	Type
09-IB	Fulton Street at Ransom	CG
23-IB	Division Avenue at Alger	CG
21-IB	Division Avenue at Burton	n/a
07-IB	Ransom Avenue at Crescent	CG
08-OB	Ransom Avenue at Crescent	CG
31-IB	Division Avenue at 54th	CG
33-IB	Division Avenue at 60th	CG
19-IB	Division Avenue at Cottage Grove	CG
29-IB	Division Avenue at 44th	CG
12-OB	Jefferson Avenue at St. Mary's	n/a
17-IB	Division Avenue at Hall	CG
02-IB	Monroe Avenue at Louis	n/a
15-IB	Division Avenue at Franklin	CG
27-IB	Division Avenue at 36th	n/a
04-IB	Monroe Avenue at DeVos Place	n/a
25-IB	Division Avenue at 28th	n/a
Station	Location / Intersection	Type
01-OB	Monroe Avenue at Louis	CG
03-OB	Monroe Avenue at DeVos Place	n/a
16-OB	Division Avenue at Franklin	CG, PS, UT
28-OB	Division Avenue at 36th	n/a
18-OB	Division Avenue at Hall	signed
10-OB	Ransom Avenue at Fulton	n/a
20-OB	Division Avenue at Cottage Grove	CG, PS
06-IB	Michigan Street at Bostwick	CG
22-OB	Division Avenue at Burton	n/a
30-OB	Division Avenue at 44th	CG
24-OB	Division Avenue at Alger	n/a
26-OB	Division Avenue at 28th	CG
32-OB	Division Avenue at 54th	CG, PS
13-IB	Division Avenue at McConnell	CG, PS
14-OB	Division Avenue at McConnell	n/a

Station	Location / Intersection	Type
11-IB	Jefferson Avenue at St. Mary's	CG
05-OB	Michigan Street at Bostwick	n/a

Additionally, *The Rapid* is looking at purchasing properties along Division Avenue at the following locations:

- Division Avenue and 36th Street
- Division Avenue and 60th Street

These properties are being acquired primarily to construct a second light maintenance facility at Division Avenue and 36th Street (not part of this project scope) and to serve as a bus terminus and turnaround location for the BRT vehicles at the end of the line (Division and 60th). These properties will be appraised in accordance with *The Rapid's* and FTA property appraisal procedures. A Phase 1 Environmental Site Assessment (ESA) is being conducted for the property at 60th Street.

CHAPTER 2– ORGANIZATION& STAFFING

2.0 Management Approach

This section describes *The Rapid's* organizational structure, key management and staff positions, internal and external interfaces as they relate to capital projects, and personnel policies.

The Rapid has established a management approach to ensure that the Project has the adequate organizational structure including well-defined reporting relationships, functional responsibilities, job qualifications, management skills, and staffing to complete the Project successfully. *The Rapid* has adopted an integrated team approach to the overall management of the Project which blends the strengths of the agency with those of its municipal partners. *The Rapid* seeks to ensure that the Project meets the needs and expectations of the agency, the Cities of Kentwood, Wyoming and Grand Rapids, Michigan Department of Transportation (MDOT), the FTA and the general public that will benefit from this project. The management approach is designed to ensure the Project meets quality standards, is built safely, is constructed on schedule, is cost-effective, meets key Project milestones, and fulfills all necessary planning and environmental requirements.

Figure 4 illustrates the agency's organizational structure, the overall staffing of *The Rapid*, the reporting relationships within the agency, and the position of the Project Manager within the organization. The key relationships and governance of the Project are provided in **Figure 5**. The Project Manager reports to the Planning and Development Director who reports to the CEO. However, in the absence of the Director of Planning and Development, the Project Manager reports directly to the CEO.

Although *The Rapid* has retained consultants and CMAR to oversee the day-to-day management of the Project, there are requirements and responsibilities that cannot be delegated by contract or agreement to entities beyond *The Rapid* itself. The overall responsibility of *The Rapid* is to successfully and safely complete the Project and to institute a planned revenue operation "on schedule within budget and with quality". Among the more significant responsibilities of *The Rapid* are:

- Complete the evaluation of background requirements for the CMAR and develop a plan for the procurement;
- Finalize PCGA with the FTA and secure federal and state funds by other agreements, contracts, resolutions and funding commitments;
- Maintain the staff and assemble the consultant resources for project management, control, design, construction, procurements, quality assurance, safety and environmental compliance, related administration, start-up and testing;
- Reach agreement with each respective municipality where their facilities or operations are impacted temporarily or permanently by the Project, such that means of resolving such conflicts become formally agreed to in all respects;

- Execute the established procurement code and enter into contracts for management, design and construction;
- Oversee the ongoing Project work of the A&E Design Consultants, and CMAR and subcontractors, suppliers and other Project participants;
- Provide the planned levels of public transit service, including the adopted levels of system assurance, safety and security;
- Maintain an effective program of public information pertaining to the Project and establish/maintain liaison with local, state and federal agencies;
- Monitor annual cash flow requirements and manage fund commitments and expenditures on a day-by-day basis; prepare and adopt annual budgets and capital expenditures;
- Protect *The Rapid's* rights and interests and defend same for the public good;
- Review, test, approve and accept work products, equipment and items furnished by all consultants, CMAR and suppliers;
- Adopting a specific Project Financial Plan;
- Submitting the environmental documentation to the FTA;
- Approval and control of consultants' work;
- Preparing various senior staff-level policies and procedures in furtherance of Board policies;
- Establishing and staffing an organizational structure supportive of the design and construction of the Project;
- Ensuring control over the Project;
- Establishing the basis of design and construction including the goals and standards for operations, maintenance, reliability, safety, security, dependability and quality of the finished works;
- Quality Assurance oversight;
- Establishing risk management programs and related insurance coverage;
- Ensuring quality of system development;
- Certifying safety and security of the system;
- Training of employees during start-up and testing; and
- Setting of fares, fees, tariffs, and user rates.
- Prepare and implement the Public Involvement Plan (PIP).

Figure 4: The Rapid Organizational Chart

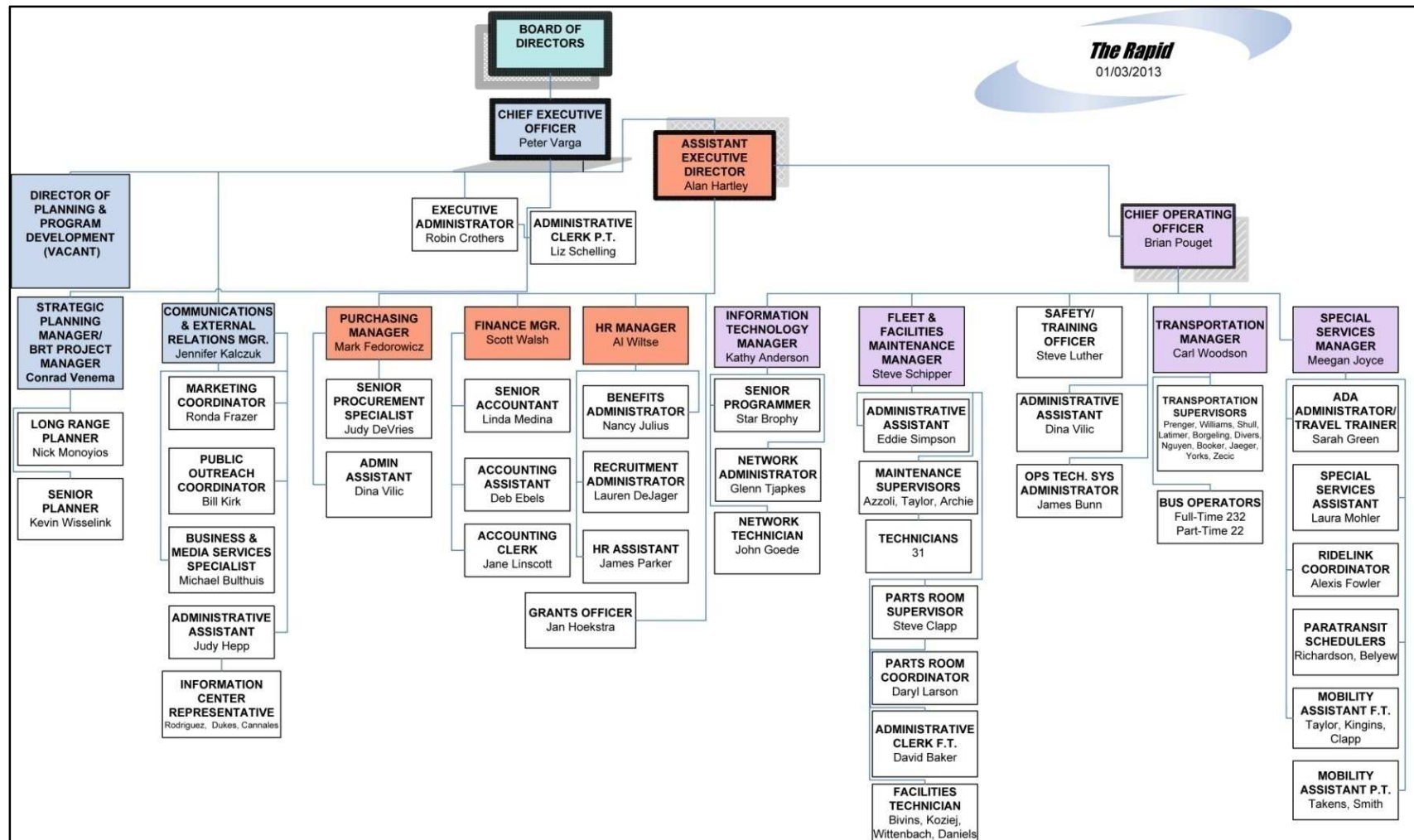
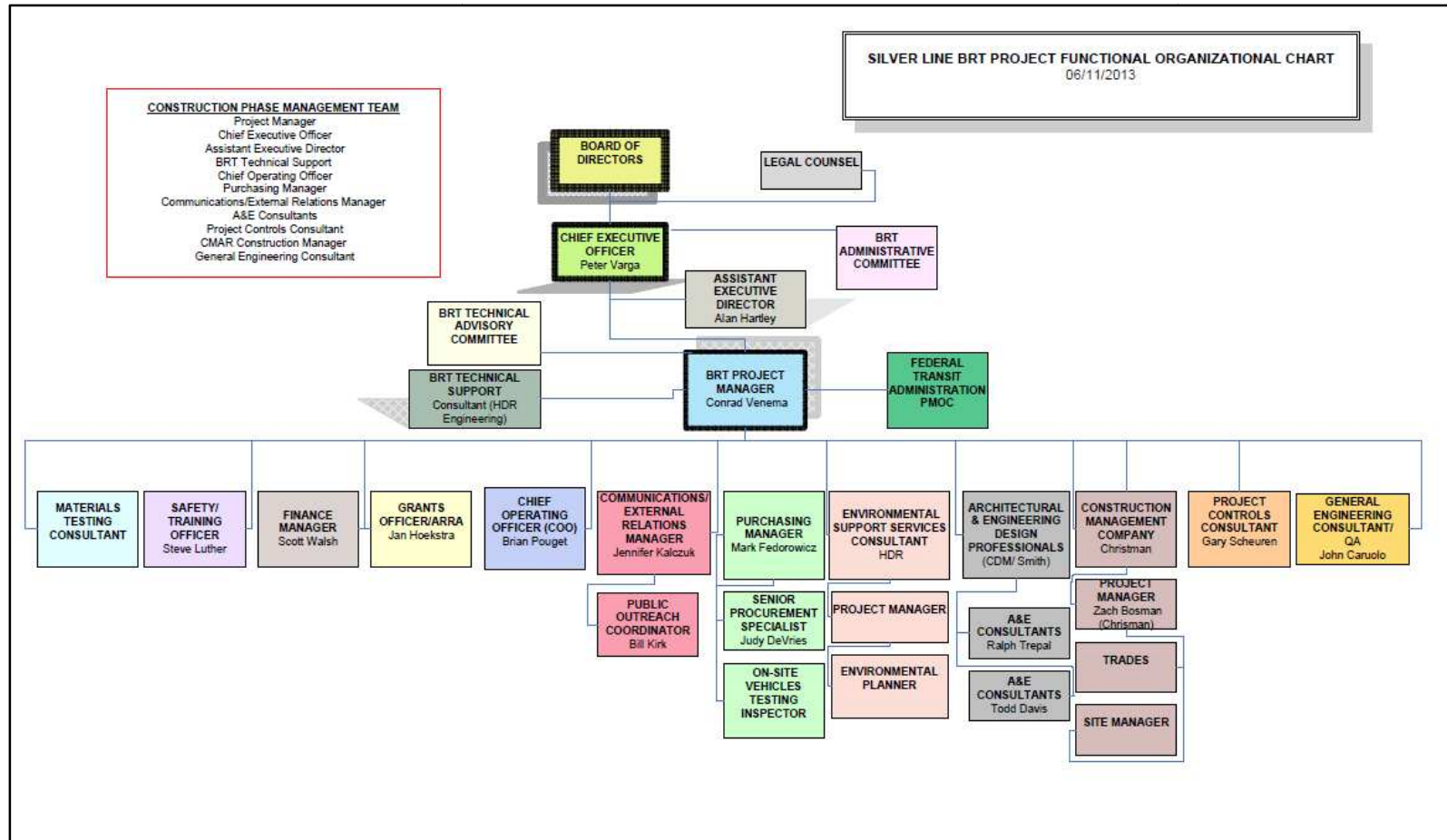


Figure 5: Silver Line Project Functional Organizational Chart/Reporting Relationships



2.1 The Organization

The Rapid organization consists of a Board of Directors, a CEO, Assistant Executive Director, three Divisions (Administration, Operations, and Planning & Program Development) and ten Departments. The Project duties and responsibilities of each Department are clearly established and delineated as described below.

2.1.1 Departments

The Rapid is made up of three Divisions—Operations, Administration, and Planning / Program Development—that cumulatively oversee ten Departments: Finance, Information Technology, Purchasing, Strategic Planning, Communications & External Relations, Special Services, Human Resources, Fleet & Facilities Maintenance, Safety and Training and Transportation (see **Figure 4**). Although the Executive Team is described here, it is not a separate Department. Other services such as Marketing, Legal Counsel and Real Estate activities are provided through existing contracts.

2.1.1.1 Executive Team

The Executive Team is made up of the CEO, the Assistant Executive Director, Chief Operating Officer and the Director of Planning and Program Development supported by the Executive Administrator. The Team has the overall responsibility for providing the oversight and direction of the Agency in accordance with the Board adopted vision and mission. The Team also assures *The Rapid* By-Laws are enforced and efficiently implemented. All Division Heads and the Assistant Executive Director report to the CEO.

The three Divisions are structured as follows:

2.1.1.2 Administration Division

The Administration Division overseen by the Assistant Executive Director is responsible for the following Departments:

a. Finance Department

The Finance Department is responsible for providing administrative support for other departments. Areas of support include accounting, revenue, finance, risk management, business planning, management of budgets and grants accounting.

b. Purchasing Department

The Purchasing Department is responsible for contract administration assistance and procurement of materials, equipment, fabricated products, construction, and services in accordance with approved requisitions, and specifications. Additional responsibilities include:

- Contract reviews and approval of Contractor's Certified Wage Rate Reports;
- Overseeing the preparation of contract documents;
- Management of the formal solicitation and award of contracts;
- Administration and management of the solicitation, procurement and award documents and overseeing compliance with *The Rapid* Procurement Code and Federal procurement requirements, including requirements of the Master Agreement between the FTA and *The Rapid*.

c. Human Resources Department

The Human Resources Department is responsible for recruitment and employment of personnel and the implementation and management of *The Rapid* Employee Benefits Program. The Department is also responsible for the daily administration of personnel policies and procedures, as well as *The Rapid* training and employee development programs. Staffing for the administration, maintenance and operations of the Project will follow normal *The Rapid* hiring and training procedures managed by the HR Department. A Staffing Plan for the agency is already in place and will be utilized in any recruitment and training in advance of the planned revenue service start date.

d. Communication and External Relations Department

The Communication & External Relations Department is responsible for coordinating community/public outreach activities related to the implementation of *The Rapid's* projects. The Department also oversees the Marketing contract with any outside agency that is responsible for the development of media related marketing and customer information, and updating the agency and different project websites.

e. Legal Counsel

The General Counsel, retained by the Board on contract, provides legal representation for *The Rapid*. In any legal action taken by or against *The Rapid*, the General Counsel appears and participates in the case and on behalf of the Board, officer, or employee, to assist with any legal matters that may arise.

2.1.1.3 Planning and Program Development Division

The Planning and Program Development Division is responsible for managing the agency's capital projects as well as its long range and strategic planning activities. It is also responsible for meeting the short and long-range planning goals of *The Rapid*, and for all real estate acquisitions necessary to support *The Rapid* operations. The Division is the agency's liaison with the FTA, MDOT, the Grand Valley Metropolitan Agency (GVMC) and local municipalities on major capital projects planning and funding.

2.1.1.4 Operations Division

The Operations Division is responsible for ensuring the safe, on-time and courteous delivery of *The Rapid's* transit services. The Division oversees the following Departments:

a. Special Services Department

The Special Services Department is responsible for ensuring transit service for seniors and disabled customers within and beyond *The Rapid's* service area.

b. Fleet & Facilities Management Department

The Facilities Department's mission is to maintain safe and clean buildings and grounds in addition to continually improving and developing the facilities to meet the needs of *The Rapid* and its customers.

c. Transportation Department

To provide a sufficient number of well-trained operators to operate fixed route services as determined by the Board of Directors.

d. Safety & Training Officer (within the Transportation Department)

The Mission of the Safety/Training Office is to provide a safe and healthy workplace for all Rapid personnel through employee training, employee development, developing, maintaining and coordinating safety, security and emergency response programs, and increasing awareness of safety issues via initiatives suggested by the Safety Team.

e. Information Technology

The Information Technology Department provides and assists with software, hardware, data and telecommunications solutions to enhance the effectiveness and productivity of all departments of *The Rapid*.

2.2 Interfaces

The successful implementation of *The Rapid* Project requires both internal and external interfacing, between *The Rapid* Executives and Departments, and with Federal, State, and local government agencies.

2.2.1 Internal Interfaces

In the course of the Project, every agency Department will be involved in implementing various *agency* policies and procedures (e.g. Safety, Quality Assurance, EEO, DBE, ADA, PMP, Environmental, etc.).

The Executive Team interfaces directly with *The Rapid* Board of Directors and the Construction Management Team (CMT) on construction issues related to the Project. The Team's responsibility also includes approving Change Orders (COs), participating in the Project's Administrative Coordinating Committee and participation in FTA Monthly and Quarterly Review Meetings.

The Planning and Program Development Division has oversight responsibilities for the management of the Project through its Planning Manager (who is also the Project Manager). The Division has the primary responsibility for the Project in the long-range planning, funding, and budgeting phases.

The Purchasing Department will procure the materials, equipment, construction, and services to support the Project upon receipt of approved purchase requisitions from other departments.

In the absence of an Engineering and Construction Department, *The Rapid* has retained a General Engineering Consultant and Project Controls Consultant, as extension of staff to work closely with the Planning and Program Development Division, particularly in the areas of Project funding, environmental compliance, and permitting and scheduling. During the preliminary engineering phase, the final design and engineering, and construction phases of the Project, these contract staff will work with the agency, consultants and CMAR to assure the successful delivery of the Project.

At Project closeout, after start-up and testing, the CMAR will turn over the completed and certified Project to *The Rapid*, who will assume primary responsibility for operating and maintaining the system and system configuration management.

2.2.2 External Interfaces

The Rapid interacts with the following external agencies throughout the implementation of the project implementation:

2.2.2.1 Federal Transit Administration

The FTA executed a PCGA with *The Rapid* on October 18, 2012 for the implementation of the Project. In September 2011, the FTA assigned a Project Management Oversight Contractor (PMOC), Jacobs Engineering, to *The Rapid*. Therefore, *The Rapid* frequently interfaces with the FTA through the PMOC. The PMOC meets monthly with *The Rapid* to review the status of Project, and reports the results of the review to the FTA. A quarterly meeting is conducted with the FTA, *The Rapid*, Design Consultants, the CMAR and the PMOC to review the Project.

2.2.2.2 Michigan Department of Transportation (MDOT)

MDOT is matching the FTA funds with 20% of the total capital cost of the Project.

2.2.2.3 Local Municipalities

The Project runs through the Cities of Grand Rapids, Kentwood and Wyoming, providing direct benefits to the residents, businesses and visitors in the communities. *The Rapid* has entered into a Memorandum of Understanding (MOU) and Interlocal Agreement with the three cities to build the Project. The cities will not contribute capital costs towards the Project; however, the cities have collectively passed a referendum (together with the other three cities in *The Rapid* service area), to secure local funds to operate and maintain the Project. See Section 2.5 for further discussions on the details of the MOU.

2.3 Project Organizational Structure

Despite the allocation of certain Project tasks to consultants, CMAR, third parties, or other agencies, *The Rapid* remains responsible for the successful implementation of the Project. The Project Functional Organization Chart (**Figure 6**) shows the organizational structure for the Project. *The Rapid* is organized and staffed to maintain control of the Project and to oversee any work formally allocated to others. *The Rapid* has established various policies and procedures to ensure that prudent decisions are made in a timely manner.

The Rapid will establish a Construction Management Team (CMT) consisting of *The Rapid's* Chief Executive Director (CEO), Assistant Executive Director, Project Manager, BRT Technical Support Consultant (HDR Engineering Inc.), Director of Planning and Program Development, Chief Operating Officer (COO), Purchasing Manager, A&E Consultants (CDM/Smith), Project Controls Consultant (Scheuren), On-site Vehicle Inspector, General Engineering Consultant (Caruolo) and CMAR (Christman/Parsons Brinckerhoff). The purpose of the CMT is to maintain good coordination and communications among the team and to ensure that all participants remain informed of the current status of work, the basis of design and construction and to focus attention on evolving issues.

In managing the successful implementation of the Project, *The Rapid*, through its Project Manager, will manage, control and coordinate the activities of various consultants working on the Project. The Project staff consists of:

- Chief Executive Officer
- Assistant Executive Director
- Project Manager
- BRT Technical Support Consultant
- Project Controls Consultant
- General Engineering Consultant
- Design Consultant Project Manager
- Procurement/Purchasing Manager
- CMAR
- Safety and Security Officer
- Finance Manager

- Communications and External Relations Manager
- Grants Officer
- Chief Operating Officer
- Environmental Support Services Consultant
- Materials and Testing Consultant
- BRT Coordinating Committees
- Director of Planning and Program Development
- On-Site Vehicle Inspector

The Rapid's Project staff will directly oversee and/or manage the consultants working on many technical aspects of the Project, including the:

- Preliminary Design,
- Project Management,
- Public Participation,
- Operating Plan,
- Environmental Analysis,
- Architectural and Engineering Design,
- Construction,
- Safety and Security Oversight,
- Procurement Planning,
- Start-up Planning
- Testing and Training

Staff will also be responsible for coordinating any value engineering and constructability efforts.

The Rapid's Project staff will be responsible for ensuring that the consultant's work complies with contract provisions, and federal, state and respective cities' requirements, including those of the FTA and other regulations. The staff will provide timely review and oversight of the consultant's activities, budget and cost submissions, schedule and quality. Staff responsibilities also include:

- Monitoring the financial plans and budgets.
- Monitoring quality of performance in keeping with the QA/QC plan.
- Monitoring coordination and liaison with state, local and federal agencies.
- Review engineering design work and construction and implementing document development.
- Managing schedule and budget, including monitoring DBE participation.
- Coordinating with the FTA and addressing FTA concerns, comments and issues.
- Keeping the public informed of the Project and issues.

Design Consultants will be responsible for keeping *The Rapid* Project team fully informed of the performance of their services, conformance with the Project schedule and budget, and problems, delays or other significant matters arising in connection with the Project. Bi-weekly meetings will be held with consultants and staff during project development. Additionally, each consultant scope of

work will include specific information on the reporting requirements. The CMAR will provide consultation and work with *The Rapid* and its Design and Engineering Team during the planning and design of the Project. Scope of work includes, but is not limited to, constructability reviews, value engineering, scheduling, estimating costs, construction planning, procurement planning, and subcontracting services.

2.4 Project Team

The Project relies on the involvement, cooperation, and participation of a number of entities in order to develop, plan, fund, design, construct, operate, and maintain the Project. The participating entities include the following:

- Federal Transit Administration (FTA)
- FTA's Project Management Oversight Contractor (PMOC)
- *The Rapid*
- City of Grand Rapids
- City of Kentwood
- City of Wyoming
- Michigan Department of Transportation (MDOT)
- Technical Advisory Committee (TAC)
- Construction Management Team (CMT)

The Rapid is the Federal Grantee for this federally funded Project. The ultimate decision-maker for the Project is its CEO. *The Rapid* has hired a number of contract staff to act as an extension of the agency's staff in providing oversight and review of Project work:

- Architectural and Engineering Design Consultant
- CMAR
- A General Engineering Consultant
- A Project Controls and Scheduling Consultant
- BRT Technical Support Consultant
- Environmental Support Services Consultant
- Materials Testing Consultant
- On-site vehicle inspector

The Rapid is responsible for the overall management of the A&E Design Consultant and CMAR to accomplish the design and construction of this Project.

2.4.1 The Project Staff/Team Roles and Responsibilities

The following lists describe the roles and responsibilities of the various members of the Project Team. The BRT Technical Support Consultant (TSC), General Engineering Consultant, Environmental Support

Services Consultant, Project Controls Consultant, Materials Testing Consultant and On Site Vehicles Inspector are contracted with *The Rapid* as an extension of agency staff to assist with management, coordination, oversight, review activities as requested and provide additional technical capacity for the agency.

2.4.1.1 Chief Executive Officer

- Provide oversight of project through Consultant in support of Project Manager;
- Provide overall leadership of the Project at the direction of *The Rapid* Board;
- Approve Change Orders (COs) up to \$100,000;
- Chairs the BRT Administrative Committee;
- Coordinate the development and execution of interlocal agreement with local municipalities.

2.4.1.2 Assistant Executive Director

- Provide support to the Project Manager on the Project Construction activities;
- Responsible for coordinating land acquisitions and Real Estate Activities. Although the Project does not involve any real estate acquisition, the Assistant Executive Director has been primarily responsible for this and will be involved in any negotiations should the need arise;
- Manage the contracted Legal Counsel. The Legal Counsel will review contracts, interagency agreements, right-of-way agreements, real estate acquisition programs if any, and other legal issues as they may arise.

2.4.1.3 Project Manager

- Responsible for day to day activities of the Project and overall Project management;
- Responsible for coordination between Rapid and other partners: FTA, Cities of Grand Rapids, Kentwood and Wyoming, Grand Valley Metro Council (GVMC) – the region’s Metropolitan Planning Organization (MPO), Michigan Department of Transportation (MDOT) and other local private and public partners;
- Establish and maintain communication links between Rapid, Consultants and CMAR;
- Provide direction to other team members on the overall Project;
- Lead or participate in Project meetings;
- Oversees utility agreements and possible relocation;
- Monitor compliance with FTA requirements and others as appropriate;
- Ensure that work on the Project is properly administered, documented and reported by the consultants/CMAR;
- Oversee the CMAR’s mobilization, startup, schedule and progress for the Project duration;
- Assist in CMAR’s CO resolution;

- Approve CMAR's monthly progress payment and assure work is in conformance with the plans and specifications; and
- Be point of contact for all correspondence;
- Overall cost/schedule/quality responsibility for the contract;
- Resolution of technical problems to minimize cost and schedule impacts to Project;
- Ensure that all Project team members are up to date on Project activities;
- Assist in providing direction to other team members;
- Participate in bi-weekly meetings with consultants;
- Provide weekly updates of the Project to *The Rapid's* CEO and Executive Team;
- Coordinate needed agreements, especially Utility Agreements, required permits and Interlocal agreements with respective Cities and agencies;
- Leads the submission of PCGA request to the FTA;
- Participate in negotiations with CMAR.

2.4.1.4 BRT Technical Support Consultant

- Provide technical support to the Project Manager and team;
- Develop, reviews and revises the PMP as necessary;
- Monitor compliance of the PMP requirements and guidelines;
- Support the PM in preparing the request for PCGA;
- Act as Assistant Project Manager in the absence of the Project Manager;
- On behalf of Project Manager and as requested to, will oversee consultants and contractors work through implementation;
- Develop the project's Public Involvement Plan (PIP)

2.4.1.5 Project Controls Consultant

- Manage Project scope, cost and schedule. Updates Project schedules and budget as needed;
- Produce reports, charts, tables, etc., necessary for physical and financial progress reporting;
- Coordinate with Purchasing Manager, Design Consultants and Construction Management managers regarding Project Controls information and issues;
- Responsible for issuing monthly Progress Report; Provides Administrative support for Project;
- Oversee Preparation of Project Progress Reports to FTA;
- Develop and Oversees Project Cash Flow;
- Responsible for review and acceptance of CMAR's schedule;
- Oversee and provide input to Purchasing Department for Cost and Schedule response to CMAR's request for COs and/or Claims;
- Oversee Document Control operations;
- Oversee Configuration Management System operations;

- Oversee tracking of action items, design reviews, permits and other activities or issues related to the Project Schedule;
- Attend Project management meetings to report on Project Budget/Schedule status;
- Track reports on issues with potential Cost/Schedule impact; and
- Responsible for all Project Controls functions.

2.4.1.6 General Engineering Consultant

- Reviews cost estimates provided by consultants and CMAR;
- Review Preliminary Engineering Documents to assure agreement with industry Design Criteria;
- Participate in the CMAR pre-proposal conferences;
- Participate in the Consultant qualifications evaluations;
- Prepare addenda to terms and conditions;
- Evaluate contract proposals/bids;
- Participate in negotiations with CMAR;
- Provide quality assurance and quality control oversight;
- Provide value engineering;
- Provide technical assistance for *The Rapid* to acquire permits;
- Provide on-site review of Project during construction;
- Provide construction administration support during the construction phase of the Project;
- Review COs;
- Responsible for assuring internal compliance with processes and procedures outlined in this PMP and Quality Assurance Program (QAP) using industry standards;
- Responsible for *The Rapid* oversight/auditing of quality assurance of the Project;
- Oversee Davis Bacon and DBE participation compliance.

2.4.1.7 Design Consultant Project Manager

- Responsible for managing the Project design through 100% design level, together with sub-consultants, representing the consultant support responsible for preliminary and final design of the Project;
- Coordinate with the CMAR at various phases of the design work;
- Prepare a unified set of Design Criteria for *The Rapid*;
- Review and finalize the Preliminary Engineering Documents to assure agreement with Design Criteria;
- Prepare Preliminary Engineering, Final Design and Procurement pre-qualifications package;
- Develop scope of work and selection criteria for the contracts;
- Evaluate contract proposals/bids;
- Participate in the CMAR pre-proposal conferences;

- Participate in the Consultant qualifications evaluations
- Provides construction administration support during the construction phase of the Project;
- Coordinate various specialty functions for the Project such as value engineering.

2.4.1.8 Procurement/Purchasing Manager

- Coordinate issuance of solicitation documents, conduct pre-bid or pre-proposal conferences and coordinate every aspect of the consultant/CMAR selection process;
- Responsible for Contract Administration of the Project;
- Acts as a buyer for the Project during planning, design and construction with support from procurement staff from partner agencies;
- Work closely with the Project Manager and Project Controls Staff to lead the invoice review process;
- Responsible for overseeing the contracts from a procurement perspective, processing invoice payments per procedures and reviewing and recommending approval of any procurement actions;
- Monitor costs incurred against anticipated expenditures and budgets, and require consultants to provide information with monthly invoices on actual costs incurred, projected costs, and expected completion to cost;
- Manage the contract administration actions following award;
- Verify that contract administration functions are implemented in the field offices;
- Review and provide official contractual position on all requests for additional time and money disputes and/or claims;
- Coordination with CMAR's personnel to adjust or clarify conflicting contract interpretations;
- Review CMAR's pay applications for compliance with the contract documents.
- Develop specification for rolling stock;
- Monitor Contract closeout requirements, and reviews and approves closeout documentation; and
- Monitor labor compliance, subcontracting and DBE compliance program.

2.4.1.9 CMAR

- Prepare Project Work Plan that adheres to *The Rapid* approved schedule and budget (this Work Plan is inclusive in the overall Master Project Schedule);
- Conduct Partnering workshops;
- Prepare required environmental documentation;
- Establish detailed alignment and station arrangement;
- Prepare working drawings for construction;
- Prepare methods for handling hazardous waste, utilities and environmental impact management plan;

- Provide quality assurance and quality control of its activities;
- In conjunction with Purchasing Manager, prepare “front-end” documents for Project specifications;
- Provide all construction surveys;
- Provide for relocation of all utilities;
- Construct fixed facilities/systems (excluding rolling stock and fare equipment)
- Supervise and inspect construction;
- Review and log shop drawings;
- Maintain record documents;
- Prepare as-built drawings;
- Provide for system safety and integrity;
- Provide integrated functional testing and commissioning; and
- Provide O&M procedures and manuals for all fixed facilities/systems;
- Work with *The Rapid’s* Manager of External Relations and Communications to implement the PIP during Project construction.

2.4.1.10 Safety and Training Officer

- Develop and revise the Project’s Safety and Security Management Plan (SSMP) and ensure that applicable regulatory compliance criteria, job safety requirements, and accident/incident reporting procedures are contained within the plan;
- Review CMAR’s Project Safety Manual to determine consistency with applicable requirements in the Project SSMP.
- Ensures that contractors comply with the safety requirements outlined in the SSMP;
- Audit and observe organizations involved in construction of the system, that their construction safety plan includes hazard analyses, and Fire/Life/Safety procedures. The level of effort proposed for this activity assumes that CMAR delivers a submittal that meets contractual requirements, applicable regulatory requirements and industry standards;
- Perform periodic field safety reviews with the CMAR’s Safety Officer and other Project personnel as necessary;
- Ensure that the design consultants and CMAR make recommendations regarding safety, insurance and risk management for their employees.

2.4.1.11 Finance Manager

- Manage financial accounting and reporting systems related to the Project;
- Analyze Project financial planning including banking and inventory cash flow management;
- Assist with Project-based formulation of balanced budgets ensuring sufficient cash flow and revenue to meet short and long-term requirements;
- Present Project accounting and financial reports to the Board of Directors; and

- Review and consolidate financial reporting and planning procedures.

2.4.1.12 Communications and External Relations Manager

- Coordinate with Project Manager, other agency staff, Consultants and CMAR in the development and implementation of the Project especially with regards to lane closures and traffic disruptions;
- Assist in the coordination of the Community Outreach Team meetings with the CMAR;
- In coordination with the BRT Technical Support Consultant, prepare and revised the PIP as necessary;
- Prepare monthly reports on all community awareness/outreach activity for Consultants and CMAR review and action;
- Attend public and association meetings held in connection with public outreach programs;
- Maintain contact with the public officials and staff in each affected city to insure open lines of communication regarding the Project;
- Assist in the CMAR communications plan for all affected groups (e.g., residents, businesses, riders, elected officials, community/civic organizations, institutions & public agencies, schools, churches, incident response agencies, etc.) and motoring public, and boaters;
- Assist in the development of fact sheets, flyers, posters, brochures, schedules, and newspaper inserts for the riders, community organizations, residents, and businesses to be made available at stations, job sites, stores, businesses, and public places;
- Participate in community projects, events, and activities to distribute information about the Project to keep the community informed;
- Attend homeowner/civic association meetings in the area to inform the residents about the progress of the Project and to address any concerns, monthly in all counties;
- Prepare flyers for distribution to riders to alert them about schedule changes and delays;
- Develop a Press kit and assist the Board and Executive Team in scheduling a Kick-off Press Conference (on April 11, 2013) to inform the press about the Project before construction; and
- Coordinate Project marketing efforts and Project's website development and updates.

2.4.1.13 Grants Officer

- Responsible for the coordination and oversight of Project-based federal, state and local operating, capital and planning grants, in accordance with all requirements;
- Monitor the Project via communication with the Project Manager to ensure consistency with FTA guidelines; while documenting progress and funding expenditures;
- Obtain Project funding requests from the Project Managers for inclusion in the Transportation Improvement Plan (TIP);
- Prepare Project grant amendments and budget adjustments to the FTA/MDOT;
- Approve grant related budget adjustments for the Project;

- Coordinate all public input on Project grant related activities;
- Act as an agency resource and primary liaison for Project federal and state grant requirements and guidelines; and
- Provide support to COO in maintaining the Project Vehicle Accessibility Plan, the Vehicle Inventory and Equipment Inventory specialized services in Public Transit Equipment & Facilities Management System (PTMS)

2.4.1.14 Chief Operating Officer

- Direct and oversee the Operations Division, including provision of fixed-route services, maintenance of facilities and equipment, and supervise the Managers of Transportation and Maintenance related to the Project;
- Serve as a key member of the senior management team, working closely with the Chief Executive Officer, Assistant Executive Director, Director of Planning & Program Development, and Department Managers, to establish goals, objectives, strategies, and priorities, and to see they are effectively carried out as they relate to the Project;
- Assure that Project subordinate staff receives appropriate guidance, support, and training to enable them to effectively carry out their responsibilities and strengthen their skills and capabilities;
- Assist the Chief Executive Officer and the Assistant Executive Director in coordination and communication with community organizations as related to Division functions and responsibilities for the Project;
- Maintain *The Rapid's* Fleet Management Plan;
- Maintain the Project Vehicle Accessibility Plan, the Vehicle Inventory and Equipment Inventory specialized services in PTMS

2.4.1.15 Environmental Support Consultant

- Provide general environmental support to *The Rapid* including environmental issues related to the construction and implementation of the BRT system;
- Provide further analysis related to station locations, potential noise impact and traffic analysis when or where necessary.

2.4.1.16 Materials Testing Consultant

- Coordinates a team of engineers and technicians related to the Project;
- Oversees consulting services related to Project geotechnical engineering, building; materials, and construction materials testing services;
- Performs technical review of Project field reports.

2.4.1.17 On-Site Vehicles Inspectors

- Perform transit vehicle inspections at the manufacturing and assembly location(s)
- Perform factor audits
- Conduct production surveys
- Conduct QA/QC site surveys
- Reports directly to *The Rapid's* Purchasing Manager

2.4.1.18 Construction Phase Management Team (CMT)

The Rapid has put together a team made up of its CEO, Assistant CEO, Chief Operating Office, BRT Project Manager, Purchasing Manager, External Relations Manager and consultants/contractors (A&E, BRT Technical Support, CMAR, Project Controls and General Engineering Consultants) to oversee the transition of the project from design and engineering to construction and to guide the construction of the project through system start-up.

2.4.1.19 BRT Coordinating Committees

The Rapid will coordinate the implementation of the Project with the local municipalities through two coordinating committees. The cities are represented on these committees. These are:

- (a) The Technical Advisory Committee which is responsible for reviewing and approving designs along the corridor made up of planning and engineering staff from *The Rapid* and the cities of Kentwood, Wyoming and Grand Rapids, as well as *The Rapid's* consultants.
- (b) The BRT Administrative Committee which is responsible for approving major policy decisions regarding the operations of the Project along the corridor. The Administrative Committee is made up of *The Rapid's* CEO, Project Manager, City Managers/Administrative heads of the cities of Kentwood, Wyoming and Grand Rapids, and GVMC's Executive Director.

2.5 Memorandum of Understanding/Inter local Agreement

Planning for the Project is being done by *The Rapid* in close coordination with the Cities of Grand Rapids, Kentwood and Wyoming and their various communities. *The Rapid* is responsible for managing design and implementation throughout the phases of the Project from design to construction. Nevertheless, to ensure its success, the Project requires coordination with other significant entities - the administration, public works and planning departments of the three cities.

In order to accomplish this, a two-tiered process was followed. First, a non-binding MOU to guide this process was signed by the Mayors of each respective municipality as well as by *The Rapid* on June 9,

2011. Secondly, *The Rapid* and the three cities executed an Inter local Agreement on June 6, 2012 which is attached herewith as **Appendix A**.

Major elements of the MOU are:

- Zoning for appropriate transit supportive land uses around BRT stations;
- Traffic Signal Priority/System Communication along the corridor;
- Ordinance(s) and enforcement authority associated with off-board fare payment;
- Administration of Project Funding;
- Construction Permits for BRT stations (in Wyoming, Kentwood and Grand Rapids);
- Identification and location of potential Park & Ride Lots;
- Utility Coordination (as appropriate for BRT stations);
- Dedicated Lanes in Peak;
- BRT Coordinating Committees;
 - A Technical Advisory Committee responsible for reviewing and approving designs along the corridor made up of planning and engineering staff;
 - A BRT Administrative Committee responsible for approving major policy decisions regarding the operations of the Project along the corridor;
- Public Outreach Coordination.

As earlier stated, a legally-binding Interlocal Agreement was signed on June 6, 2012 to facilitate coordination, cooperation and communication between *The Rapid* and the Cities of Grand Rapids, Kentwood and Wyoming. Where inconsistencies occur between different project elements (except key changes made to plans and drawings) and process, the elements agreed upon in the Interlocal Agreement will supersede. As part of the Interlocal agreement, two BRT Coordinating Committees have been established with representatives from each of the cities and *The Rapid* as required in the Interlocal Agreement. These committees are the Technical Advisory Committee (TAC) and the BRT Advisory Committee (BAC). The TAC—comprised of 2 city planners and engineers from each city and 2 members from *The Rapid*—has met on a monthly basis with the objective of reviewing, assisting, and approving final design. The TAC has been instrumental in guiding the design process and assisting the project through each city’s permitting process and ensuring that all aspects of final design meet city codes. The BAC committee—comprised of city managers and mayors—has meet on an as-needed basis to resolve BRT policy related issues such as dedicated lanes and fare evasion enforcement.

The signed Interlocal agreement specifically defined the following elements as outlined below:

Elements of Interlocal Agreement:

- Project elements (dedicated lanes, TSP, station elements, etc);
- Construction coordination;
- Relocation of Utilities;

- Coordination of local jurisdiction projects;
- Permitting, Plan review and approval;
- Project maintenance;
- Project costs and responsibilities;
- Project operations;
- Project meetings;
- Traffic maintenance;
- Approval of Final Design (completed January 9, 2013)
- Oversight by the FTA and State of Michigan
- Project Milestones

2.6 Work Scope by Phase

These activities will be directed by *The Rapid* staff through contracts with consultants, CMAR and/or vendors.

2.6.1 Environmental Assessment Phase

In January 2009, the FTA determined that the class of action for this Project would be an EA. *The Rapid* prepared the EA to determine that the Project's potential social, environmental, and economic impacts in accordance with the National Environmental Policy Act (NEPA) of 1969. The FTA independently reviewed and approved the EA before it was issued for public review and comment. On January 25, 2011, FTA issued the EA for public comment subject to 23 CFR §771.119. The EA evaluated a Build-Alternative (the Project) and a No Action Alternative, which serves as a baseline against which to evaluate the effects of the Silver Line Project on transportation, social, economic and environmental factors. The No Action Alternative undertakes no major transit system improvements or investments within the Division Avenue corridor, but rather maintains the existing system with 15-45 minutes headways in off-peak hours and 15-30 minutes headways in peak hour service.

A formal hearing was held on February 23, 2011 by *The Rapid* Board and is fully documented in the EA.

2.6.1.1 Environmental Effects and Mitigation

The Rapid will construct the Project in accordance with the design features and mitigation measures as described in the EA and corresponding FONSI. This FONSI addresses mitigation measures as a result of the EA for the preferred alternative. A list of the mitigation measures are included in the EA and outlined below:

Environmental Justice. The Project is expected to have short term impacts on Environmental Justice populations and minority owned businesses during construction. These impacts could include temporary interruption in access to homes and businesses, as well as possible noise, dust, and fumes

during construction. The proposed mitigation consists of coordination with businesses and residents to minimize construction disruptions, and to maintain access for all properties impacted by construction (as described in Section 3.3.2 of the EA).

The Rapid has prepared and executed an Interlocal Agreement with the three host communities of Grand Rapids, Wyoming and Kentwood (see *Appendix A*). The intent of the Agreement is to generally describe the roles and responsibilities of each entity in implementing the Project. Public outreach coordination is one component of the Agreement. In implementing the project, it is *The Rapid's* intent to periodically coordinate with citizens of the affected jurisdictions, especially environmental justice populations and minority-owned businesses, and provide updates on the Project's progress. In the past few months (especially between April and August 2013) *The Rapid* reached out to the all of the businesses along the corridor. Moreover, following is a list of known minority-owned businesses that have been contacted along the corridor:

- Hong Kong Express – Station 9 IB, April 2013
- Bangkok Taste Cuisine – Station 9 IB, April 2013
- Amy's Fashion/Joe's Western Wear – Station 21/22, April 2013
- Popeye's Louisiana Kitchen – Station 21/22, April 2013
- AirPage Pre Pay & Talk Cellular – Station 21/22, April 2013
- House of Styles – Stations 21/22, April 2013
- El Salvador La Original Restaurant Pupuseria – Station 21/22, April 2013
- Veracruzanos Restaurant/Mariscos – Station 21/22, April 2013
- Rau Food and Beverage – Station 21/22, April 2013
- El Quetzal – Station 21/22, April 2013
- Cutting Edge Barber Shop – Station 27/28, May 2013
- Dong Hung Asian Market/Kiet Bui Jewelry – Station 27/28, May 2013
- A' Dong Market – Station 27/28, May 2013
- Chumino's Tire and Auto Repair – Station 27/28, May 2013
- Super Modeling, Dry Cleaning and Embroidery – Station 21/22, August 2013

The Rapid intends to continue to reach out to all businesses along the corridor during the construction period.

Construction Impacts. The Project is expected to have several short-term construction-related impacts, primarily due to the operation of various construction equipment, lower traffic speeds in the vicinity of construction, and excavation activities. These impacts may include undesirable noise conditions for noise-sensitive land uses adjacent to the Project, vibration damage to adjacent structures from fractured removed pavement, fugitive dust and exhaust emissions, erosion and sedimentation affecting water quality, construction and relocation of utilities within the vicinity of each station area, and traffic and access disruption during the construction period.

Mitigation measures will comply with the ordinances of the cities of Grand Rapids, Wyoming, and Kentwood and include the implementation of control measures during construction. These measures include the use of mufflers, compliance with federal noise level standards, dust suppression measures, construction staging and traffic control plans to minimize traffic and pedestrian movement disruption, and adequate public notice and coordination with area residents of the construction progress and temporary closures.

Traffic and Transportation. The Project is anticipated to impact the future (2035) transportation conditions at six locations including: Franklin Street at Division Avenue, Burton Street at Division Avenue, 28th Street at Division Avenue, 36th Street at Division Avenue, 44th Street at Division Avenue, and 54th Street at Division Avenue. These intersections, as outlined in Section 3.4.3 of the EA are anticipated to exceed Level of Service D, which is considered the threshold for acceptable levels of service for an urban area. Mitigation measures will be intersection-specific and will include updating traffic signal timings, installing pedestrian push-buttons, and implementing shared BRT/general traffic lanes in select locations, as appropriate.

Indirect and Cumulative Effects. The Project will have minor cumulative impacts to existing or isolated natural resources, including the Buck and Plaster Creek waterways. Development is expected to continue in the future and has the potential to impact the perimeter of existing habitat areas or to displace smaller isolated natural resource areas. Mitigation measures include resource protection through local land use and regulatory controls.

Mitigation Monitoring Reporting Process

Environmental impacts of the project during construction are short term and limited to impacts identified above (operation of various construction equipment, lower traffic speeds in the vicinity of construction, and excavation activities, undesirable noise conditions for noise-sensitive land uses adjacent to the project, vibration damage to adjacent structures from fractured removed pavement, fugitive dust and exhaust emissions, erosion and sedimentation affecting water quality, construction and relocation of utilities within the vicinity of each station area, and traffic and access disruption during the construction period). In order to ensure that all mitigation commitments in the environmental record are fulfilled during the final design and construction, *The Rapid* will follow the process below:

- (a) The overall responsibility for ensuring that each mitigation measure is complied with lies with *The Rapid* Project Manager.
- (b) *The Rapid's* Project Manager will receive monthly reports from the CMAR regarding compliance with each mitigation measure as stated in CMAR's contract. CMAR shall be provided a copy of the project's Environmental Assessment and Mitigation Measures so as to be able to effectively monitor their implementation.
- (c) *The Rapid's* environmental support consultant will coordinate the monitoring of implementation of each mitigation measure.

- (d) *The Rapid* will report periodically to FTA during quarterly review meetings the status of implementation of these mitigation commitments.

2.6.1.2 Determinations and Findings

National Environmental Policy Act Finding (NEPA)

The FTA served as the lead agency under NEPA for the Project. *The Rapid* prepared the EA in compliance with NEPA, 42 U.S.C. Section 4321 et seq., and with FTA's regulations, 23 CFR Part 771. The FTA has made an independent evaluation of the EA. The EA discusses the potential impacts of the Project so that The FTA can determine whether significant adverse impacts (DEQ 1508.27) are probable. If such a determination were made, an Environmental Impact Statement would need to be prepared.

After reviewing the EA and supporting documents, including public comments and responses made thereof, the FTA finds, under 23 CFR 7721.121 that the proposed Project, with the mitigation to which *The Rapid* has committed, will have no significant adverse impact on the environment. The record provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

Section 106 Compliance

Section 106 of the National Historic Preservation Act of 1966, as amended, requires the review of federally assisted projects to districts, sites, buildings, structures and objects listed in, or eligible for inclusion in the National Register of Historic Places. Federal agencies must coordinate with the State Historic Preservation Office and potentially effected Tribes to make this determination. The Advisory Council on Historic Preservation has established procedures for the protection of historic and cultural properties, in, or eligible for, the National Register (36 CFR Part 800).

In a letter dated June 1, 2010, the Michigan State Historic Preservation Office affirmed that "Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the effects of the proposed undertaking do not meet the criteria of adverse effect [36 CFR § 800.5(a)(1)]. Therefore, the Project will have **no adverse effect** [36 CFR § 800.5(b)] on historic properties within the area of potential effects..."

Based on the analysis included in the EA by *The Rapid* as well as consultation with the Michigan State Historic Preservation Office, the FTA finds, in accordance with 36 CFR Part 800 Protection of Historic Properties, that the Project will have no effect on any identified or likely cultural or historic resources, and that the Section 106 consultation requirements for this Project have been fulfilled.

Section 4(f) Findings

Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, codified at 49 U.S.C. 303, declares a national policy that a special effort shall be made to preserve the natural beauty of the countryside, public park and recreational lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation may not approve transportation projects requiring the use of publicly owned land of a public park, recreation area, or wildlife or waterfowl refuge of national state or local significance, or land of an historic site of national, state or local significance (as determined by the Federal, State or local officials having jurisdiction over the park, area, refuge or site) unless a determination is made that: (i) there is no feasible and prudent alternative to the use of the land; and (ii) the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 771.135).

The existence of potential Section 4(f) resources was evaluated as part of the EA. It was determined that no impacts would result to public parks, recreation lands, or historic sites; and that no wildlife and waterfowl refuges are located within the proposed Project area.

Based on documentation submitted by *The Rapid*, The FTA has determined, in accordance with 23 CFR 771.135, that the proposed Project will not use or significantly impact any park, recreational, or historic resources protected by Section 4(f) of the USDOT Act of 1966.

2.6.1.3 National Ambient Air Quality Standards

The United State Environmental Protection Agency (USEPA) has developed National Ambient Air Quality Standards (NAAQS) for each of six criteria air pollutants: sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter less than or equal to 10 micrometers (PM₁₀). Current air quality designations for the region, as determined by USEPA, are “attainment” for all listed pollutants. Accordingly, a conformity determination under 40 CFR Part 93 (“Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved under Title 23 USC or the Federal Transit Act”) is not required. It is also noted that the Locally Preferred Alternative was adopted by *The Rapid* Board of Directors on January 24, 2007 and subsequently included in the GVMC’s regional Long Range Transportation Plan on April 9, 2007 by unanimous vote of the Council. Since the Project area is in an attainment area for all NAAQS, a localized or hot spot analysis is not anticipated.

In addition to the criteria for air pollutants for which there are NAAQS, the USEPA also regulates air toxics. The Clean Air Act identified 188 air toxics, also known as hazardous air pollutants. The USEPA has assessed this expansive list of toxics and identified a group of 21 as mobile source air toxics (MSATs), which are set forth in an USEPA final rule, “Control of Emissions of Hazardous Air Pollutants, from Mobile Sources” (Volume 66 Federal Register page 17325). The purpose of this Project is to provide BRT service by constructing stations and purchasing vehicles. This Project has been determined to generate minimal air quality impacts for Clean Air Act Amendments (CAAA) criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this Project will not result in changes in traffic volumes, vehicle mix, basic Project location, or any

other factor that would cause an increase in MSAT impacts of the Project from that of the No Action Alternative.

2.6.2 General Findings

The FTA also finds, in accordance with Federal Transit Law at U.S.C. §5324(b), that an adequate opportunity to present views was given to all parties with significant economic, social, or environmental interests, that the preservation and the enhancement of the environment, and the interest of the community in which the Project is located were considered. The FTA issued a FONSI for the Project on July 11, 2011 – attached as **Appendix B**.

2.7 Architectural & Engineering Phase

For a Very Small Starts project, the preliminary and final engineering phases are combined into a single “project development” phase. An A&E firm was retained to develop designs for the stations and Project corridor. The work was divided into two tasks:

Task 1: Task 1 is the visioning exercise for the entire corridor, creating station conceptual designs and preliminary engineering on such issues as utility relocation, the need for and amount of pavement re-milling and station placement.

Task 2: Task 2 is the complete design and engineering for the entire corridor building on the work from task 1.

The A&E Design Consultants are providing the following phases of services (under two separate tasks):

- Station Conceptual Design / Visioning
- Preliminary Engineering
- Schematic Design
- Design Development
- Construction Documents and Specifications
- Bidding Support
- Construction Administration and Observation

The “visioning” phase (Task 1) of the design process which was concluded in January 2011 included extensive public involvement and feedbacks on the station design. Task 2 of the Project is currently ongoing. The Technical Advisory Committee approved 100% design of the project on January 9, 2013.

Services provided by the A&E team, will include, but are not limited to, the following:

- Final station placement and layout

- Traffic engineering and signaling
- Civil engineering (street and sidewalk)
- Structural engineering
- Geotechnical
- Coordination of utility placement and/or relocation
- BRT station architecture (platform, canopy, landscape, amenities, etc.)
- Signage design
- Permits application preparation
- Coordination with local municipalities
- Design and coordinate technical systems (Next Bus GPS, Smart Card fare system, security system, etc.)
- Coordinate public forums for designs with *The Rapid's* Manager of External Relations.
- Ticket vending machines specifications
- Preliminary cost estimates
- Construction plans and specifications
- Quality control and quality assurance program that meets (FTA) requirements
- Public art coordination
- Design support during construction
- Owner's acceptance

2.7.1 Design Review Process/Procedure

The Project has gone through Design Reviews at various stages of the design. As illustrated in the Project schedule (Figure 3), the Project design (roadway, stations and shelters) was reviewed as follows:

Preliminary Engineering and Schematic Design:	30%
Design:	60%
Advanced Design:	90%
Final Design:	100% Design

The Rapid coordinated the reviews of the design activities at various stages with the BRT Technical Committee which is made up of representatives of the three Cities, *The Rapid* and its consultants.

The A&E Design Review process for each submittal followed these five steps:

1. Originator (Lead Technical Professional person who develops the items to be checked) – The Originator makes sure documents are completed and has done his/her review before outside checking begins.
2. Checker (Person independent of the items designed by the Originator) – The Checker performs a detailed review and check of the design elements. Information that is correct is

highlighted in yellow. Information that is incorrect or inconsistent with the design approach is corrected in red.

3. Concurrence (Agreement between the Originator and the Checker) – The Originator and the Checker discuss the marked red changes to ensure the comments are actually in error or inconsistent with the design approach. This step is performed prior to making any changes.
4. Incorporation – The Originator makes sure all red-marked corrections are added to the documents. Once the comment has been addressed, the red comment is highlighted yellow.
5. Verification – The Checker verifies that all the comments have been addressed by highlighting the yellow highlighted areas with a green highlighter. A green highlight indicates correctness. Incorrect or unincorporated changes are marked in red and the Incorporation and Verification steps detailed in steps 4 and 5 are repeated.

After the 30% submittal was reviewed by the municipalities and utilities we began a log of all comments received and how they were addressed (which was included in the design manual). For the 60% submittal steps 1-5 were followed again on but the “Checker” and “Lead Practitioner” also did a back check of the 30% comment log to ensure everything was addressed. This process was repeated for the 90% and Final submittal.

With regards to reviews by the municipality, each member of the TAC was given a copy of the plans for review. The city of Grand Rapids agreed to upload the plans into their system for distribution to all of the effected utilities. All comments were then forwarded to CDM Smith for download.

2.8 Construction Phase

Various project delivery options were discussed with the FTAL: Design-bid-build method, CMAR method and Design-Build method.

For this Project, the CMAR is the selected delivery method. It provides a single point of responsibility for all construction and technology elements, allows early initiation of procurement necessary to meet the schedule, and allows the CMAR’s input during design in order to contain cost. *The Rapid* has successfully used this delivery method previously for the construction of the RCS and the newly constructed Maintenance Facility (*The Rapid* Operations Center).

Construction related tasks include milling and resurfacing portions of asphalt roadways for ride quality, construction of concrete pads at station locations, installation of signage, construction of stations and appurtenances, providing electric service to stations, and installation of technology items. Currently, oversight of construction activities is performed by the CMAR – Christman.

Certain procurement activities are not included as part of the CMAR delivery. One example is the procurement of new BRT vehicles which is being managed directly by *The Rapid* staff. Other

procurement components of the Project may also be managed directly by *The Rapid*. All aspects will be reviewed as the overall procurement strategy is finalized.

2.8.1 CMAR

The Rapid issued a Request for Proposals (RFP) on September 16, 2011 as the initial step in selection of a firm to provide CMAR services for the Project. The selection process, which included a detailed review of all proposals and interviews with the most qualified firms, was completed in December 2011 with the acceptance by *The Rapid*'s Board of Directors of Rapid staff recommendation of the most qualified firm. CMAR's task will be accomplished in two phases:

Phase 1 Agreement – Pre Construction Services – The contract awarded to the CMAR on March 8, 2012 is for pre-construction services for the Project. Preconstruction services shall be provided under the terms of a Contract executed by *The Rapid* and the selected CMAR firm, which Contract shall include the "Standard Form of Agreement between Owner and CMAR AIA A131 CMC - AGC Document 565", as modified by *The Rapid*.

Phase 2 (April 1, 2013) – Owner-CMAR Agreement Construction Services - At the time that *The Rapid* has substantially finalized the design for the Project, *The Rapid* and the CMAR will enter into negotiations to finalize the contract for Phase 2 Construction Services. Construction phase services will be provided under the terms of the Contract executed by *The Rapid* and the Selected CMAR firm, which Contract shall include Standard Form of Agreement between Owner and CMAR AIA A131 CMC - AGC Document 565, as modified by *The Rapid*, and the General Conditions of the Contract for Construction – AIA Document 201, as modified by *The Rapid*.

The following paragraphs and sub-sections describe the CMAR scope of services and responsibilities for this Project.

2.8.2 Preconstruction Services

The CMAR will provide consultation and work with *The Rapid* and its Design and Engineering Team during the planning and design of the Project. Scope of work includes, but is not limited to, constructability reviews, value engineering, scheduling, estimating costs, construction planning, and procurement planning, and subcontracting services.

Scope of Pre-Construction Services

Task 1 – The CMAR will provide a dedicated Project Manager and associated staff. The Project manager will attend and participate in meetings, as requested by *The Rapid*, to assist in resolution of any Project-related issues.

Task 2 – The CMAR will consult with, advise, assist, and provide recommendations to *The Rapid* and the design team, on all aspects of the planning, design, and proposed construction, as requested by *The Rapid*. This task includes recommendations on design packaging to advance construction.

Task 3 – The CMAR will participate in a partnering process between all parties involved in the Project. The partnering process will take place during the length of the contract. A facilitator will be chosen based upon the mutual agreement of *The Rapid* and the CMAR.

Task 4 – The CMAR will provide bid ability, constructability, and material availability reviews, along with written reports and recommendations, of the pre-final and final design drawings and specifications to *The Rapid*, as applicable.

Task 5 – The CMAR will provide on-going sustainability reviews and Value Engineering (VE) recommendations for the Project, including written reports and recommendations on the pre-final and final design drawings and specifications, as applicable.

Task 6 – The CMAR will submit a written construction plan to *The Rapid*. The plan will address proposed construction phasing, staging and field office needs, parking requirements during construction; construction equipment storage, use of public roadways; protection of properties; dirt/debris mitigation; known hazardous material remediation; storm water drainage management; temporary facilities; traffic management; noise and vibration control; work hours, including, number of shifts and weekends; temporary road closures or detours; emergency vehicle provisions; maintenance of access to all properties; public and worker safety protections; and maintenance of construction work zones.

Task 7 – The CMAR will submit a report identifying materials that may be cost-effectively recycled during construction, including a cost estimate of potential cost increases or decreases from baseline estimate.

Task 8 – The CMAR will identify any long lead items which should be procured prior to completion of design as part of the early work packages so that the schedule is met. These may include traffic signal and street light poles.

Task 9 – The CMAR will prepare, with assistance from *The Rapid*, the necessary documentation to obtain environmental and administrative permits for the construction of the Project.

Task 10 – The CMAR will prepare and submit the plan to manage any subcontract that is not performing in accordance with the Project's requirements for budget control, on-time schedule performance, safety, or QA/QC.

Task 11 – The CMAR will prepare and submit to *The Rapid*, for review and approval, a plan to handle unanticipated hazardous materials that may be encountered during construction.

Task 12 – The CMAR will prepare and submit a tree protection plan, for review and approval, for those trees identified to be protected and maintained.

Task 13 – The CMAR will prepare and submit an erosion control plan to *The Rapid*, for review and approval, to manage storm water runoff and maintain water quality during construction in accordance with the appropriate jurisdictional criteria.

Task 14 – The CMAR will work with *The Rapid* as requested to prepare a safety certification plan for use during and for close out of construction.

Task 15 – The CMAR will prepare a Technology Integration Plan (TIP) to ensure that the installation of the Next Bus Technology, Electronic Ticket Vending Machines, Security Devices and Traffic Signal Priority work seamlessly and reliably as part of the Silver Line system.

Task 16 – Once bid packages for the various trades have been received and evaluated, the CMAR will prepare and submit a construction cost estimate that, when agreed to by *The Rapid*, will become the Guaranteed Maximum Price (GMP). GMP shall include the total sum of the preconstruction fee, the CMAR fee, and the Cost of the Work as more fully described in the contract.

Task 17 – With assistance from *The Rapid* and the design team, the CMAR will prepare and submit construction maintenance traffic control plans for approval. The submittal will include, but not be limited to, staging concepts, lane restrictions, detours, location and identification of traffic control devices, night work requirements, and design of temporary traffic signals.

Task 18 – The CMAR, with assistance from *The Rapid*, will prepare a contracting plan that maximizes DBE opportunities, including outreach programs. Identify a management plan to oversee DBE program implementation

Task 19 – The CMAR will prepare construction-cost estimates when the design documents are 30%, 60% and 90% complete. If a preliminary construction-cost estimate is exceeded, identify feasible cost-reducing options, including projected cost savings offset with any additional design costs, to bring construction costs for the Project within the estimate.

Task 20 - The CMAR will develop and maintain a critical path method schedule (including Preconstruction Phase tasks, and construction activities). The schedule will be updated monthly (including through the Construction phase) to incorporate actual dates and percent complete of ongoing activities.

Task 21 – The CMAR will prepare, for review and approval by *The Rapid*, a Project QA/QC management plan for all activities related to their scope of work. The plan will be in compliance with *The Rapid's* overall Project QA/QC plan and shall include provisions for field quality control inspection requirements and material testing procedures for use during construction.

Task 22 – The CMAR will work with *The Rapid's* Manager of External Relations and Communications in developing a process for public involvement prior to construction. This process will be summarized in a PIP.

2.8.3 Construction Services

The scope of the CMAR construction services will include the following items, many of which will be started in the preconstruction phase and executed in the construction phase:

- (1) Solicit and publicly conduct trade CMAR bidding for all construction work in accordance with all applicable federal and state public bidding requirements.
- (2) Maintain a qualified, full-time Superintendent with needed staff at the job site to coordinate and provide direction of the work. This will also include management of quality control and project scheduling.
- (3) Maintain the critical path schedule that was established in the preconstruction phase, and keep *The Rapid* and the Design Team fully advised of work progress status. Maintain and update construction phasing as the work progresses according to the adopted Project Management Plan.
- (4) Maintain an effective system for project cost control; provide monthly reports of actual costs and work progress as compared to cost estimates and scheduled work progress. Meet with the Project Team bi-weekly to deal with COs, RFI's, etc. Provide supporting information for any variances as requested by *The Rapid* and the Design Team; maintain cost accounting records, provide Owner access to these records, and preserve for at least three years after final payment.
- (5) Assist *The Rapid* in implementing a comprehensive public relations program, which includes specific procedures for minimizing the disruption of the adjoining business operations and inconvenience to the public.
- (6) Implement the Project QA/QC plan, that was established in the preconstruction phase, for all construction, and inspect the work as it is being performed to assure that materials furnished and quality of work performed are in accordance with the plan and construction documents.
 - (a) Project Records- The CMAR shall maintain Project records in accordance with *The Rapids* Document Control Plan. At a minimum these records will include: project reporting, test results, survey records, engineering computations, assumptions, working drawings, meeting minutes, correspondence, memos, transmittals, notes, and other written materials generated in the course of performing the Work identified in the contract documents for the Project. The CMAR's compiling of project records shall be an ongoing task, commencing upon receipt of Notice to Proceed (NTP) for Preconstruction Phase Services from *The Rapid*, incorporating documents as they are generated, and continuing through completion and final acceptance. Project records shall be available for review

by *The Rapid*, at the CMAR's office, at any time. All records should be collected and stored consistent with the Project document control plan.

- (7) Maintain and implement the job-site safety program. This will include an aggressive program for ensuring safety of all persons and property affected by the work, including providing flaggers and escorts.
- (8) Manage programs for maintaining current job-site records, labor relations, and DBE participation, as a minimum.
- (9) Work with *The Rapid*, MDOT, and the Cities of Grand Rapids, Kentwood and Wyoming to obtain necessary permits.
- (10) Review and process all applications for payment by subcontractors and material suppliers in accordance with the terms of their contract. Review and resolve, on behalf of *The Rapid*, all subcontractors' and/or material suppliers' requests for additional costs.
- (11) Schedule and conduct job meetings to ensure orderly progress of the construction work. Prepare and distribute records of the meetings to meeting attendees, *The Rapid*, and the Design Team.
- (12) Resolve, in connection with *The Rapid*, all disputes that may arise between subcontractors and/or suppliers as a result of any aspect of the construction.
- (13) As construction is completed, the CMAR will provide the following close-out services:
 - (a) Perform the necessary work to satisfy *The Rapid* that the Project operates as designed before the facility is deemed substantially complete.
 - (b) Coordinate and expedite the submittal of record documents.
 - (c) Organize and index operations and maintenance manuals.
 - (d) Provide all required training of *The Rapid* personnel in the operation of installed equipment and systems.
 - (e) Assist in securing occupancy permits.
 - (f) Provide continuing CO review and processing services.
 - (g) Prepare final report of all construction costs. Assist in *The Rapid* audit of final cost report and all supporting documentation. Provide lien waivers from all subcontractors and material suppliers.

2.8.4 Special Requirements

Prior to completion of the Construction Documents used for bidding, the CMAR shall contact potential subcontractors and material suppliers to encourage their interest in bidding on the Project. Except as otherwise provided by the Contract Documents, the CMAR shall subcontract the work to

subcontractors other than the CMAR, its subsidiaries, or other affiliates. Further, the CMAR shall comply with all applicable federal and state bidding requirements for the solicitation of bids, including the encouragement of DBE participation in bidding on the Work. It is the objective of *The Rapid* to obtain the best value for the funds expended. Competition is the preferred method of assuring the best value for the least cost. Unless specifically waived in writing by *The Rapid*, the selection of all subcontractors shall be made by competitive bid or quotes in a manner that will not encourage favoritism or substantially diminish competition.

The CMAR will be expected to publicly conduct the sub-bidding of all construction bid-packages including, where applicable, developing a subcontractor's prequalification process for critical items of work. This will include the following:

- (1) All bids for work valued at more than \$5,000 are required to be sealed, written, and submitted to a specific location at a specific time. A representative of *The Rapid* will be present during bid openings. The CMAR shall provide an analysis of bids to *The Rapid*.
- (2) Solicitations for bids shall be advertised at least ten (10) days in advance of the bid opening. Solicitations shall be advertised in the Grand Rapids Press and at least one newspaper specifically targeted to reach DBE audiences.
- (3) The CMAR shall attempt to obtain a minimum three (3) bids for each package of work bid.

The award of subcontracts by the CMAR shall be subject to the following:

- (1) *The Rapid's* concurrence in the award of subcontracts is required, with some specific exemptions as outline in the Contract.
- (2) Advance approval by *The Rapid* is required for any sole-source subcontract awards.
- (3) FTA acknowledgment and approval of sole source bids is acquired prior to award
The CMAR shall pass all flow-through federal and state regulations and grant requirements onto the subcontractors.

On February 28, 2013, *The Rapid* received bids on the following trade contracts which were awarded on low responsive and responsive bidder:

- Earthwork/Site Utilities North, Mid, South
- MDOT/Signage Pavement Markings
- Landscape/Hardscape North, Mid, South
- Concrete North, Mid, South
- Bus Shelters (stations)
- General Trades North, Mid, South

- Electrical Systems
- Consultants

2.9 Decision-Making and Coordination during Design and Construction Activities

The Rapid will provide decision-making and coordination for the Project as follows:

- (1) Retain and reinforce *The Rapid's* role as the agency responsible and accountable for management and implementation of the Project, as it relates to fulfillment of all federal requirements;
- (2) Ensure that *The Rapid's* decision making and coordination go through its Project Manager during all phases of design, construction and startup of the Project; and
- (3) Ensure that there is ongoing coordination with other City, County and State departmental staff on permitting and temporary road closures for the Project.

2.9.1 Decision Authority

The Rapid retains decision authority for all policy and technical matters related to the Project, except for those requiring FTA approval.

2.10 Procurement Phase

Procurement includes the ordering of vehicles and technology devices. This phase includes integration of the technology, including GPS, ITS, TSP, and fare collection in vehicles; ITS, security cameras, and fare collection at stations; TSP for existing signals; and, integration of communications equipment into the existing control center. Further discussions regarding procurement are in Chapter 5 (Sections 5.3 and 5.4).

2.11 Testing, Training and Start-Up Phase

This phase includes testing of all equipment (vehicles, fare vending machines, fare validators, etc.), training of operators and maintainers, and start-up of Project operations. Further information in Chapter 5 (Section 5.11)

CHAPTER 3—FINANCIAL MANAGEMENT

The Rapid developed a Financial Plan for the Project that is included by reference in this PMP (see Appendix D).

3.1 Capital Cost Summary

The FTA capital costing worksheet, the Standard Cost Categories (SCC) was used by *The Rapid* to develop and present the capital costs estimates (see **Figure 6**).

Christman, the CMAR, developed the 90% cost estimate for the Silver Line project. The overall project cost of \$39.857 million which was estimated at 60% has not changed for the 90% design level. The SCC (Figure 7) has been updated to reflect the estimates in the CMAR's 90% cost estimate. The current estimate includes a contingency rate of 18.5%. The CMAR's 90% cost estimate is included as part of Appendix D.

Table 6 identifies the Project Budget broken down by SCC categories. The estimated costs include allowances for Preliminary Engineering (PE) and 100% design, environmental studies, construction and procurement management, and contingencies. The budget assumes that the full Project will be constructed and in operation by August of 2014. This budget will be included in the monthly project report to the FTA which will be used to monitor the project budget. The estimated capital cost in Year of Expenditure (YOE) dollars is estimated at \$39.9 million (rounded Additional items estimated as part of the Project) are detailed in the Project Cost Estimate Report prepared by the A&E Consultant, and subsequently updated by the CMAR (See Appendix D).

SILVER LINE PROJECT MANAGEMENT PLAN FOR BRT

Figure 6: Standard Cost Category Worksheet

MAIN WORKSHEET - BUILD ALTERNATIVE							(Rev.14, August 5, 2011)	
Interurban Transit Partnership - THE RAPID (construction with 33% contingency)						Today's Date		5/22/12
Division Avenue BRT - Cities of Grand Rapids, Kentwood, and Wyoming, Michigan						Yr of Base Year \$		2011
Project Development Phase (Very Small Starts)						Yr of Revenue Ops		2014
	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars TOTAL (X000)	Base Year Dollars Unit Cost (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	9.60	1,384	429	1,730	\$180	8%	5%	1,873
10.01 Guideway: At-grade exclusive right-of-way				0				0
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)	9.60	201,000	66,330	267	\$28			289
10.03 Guideway: At-grade in mixed traffic		1,100,000	363,000	1,463				1,584
10.04 Guideway: Aerial structure				0				0
10.05 Guideway: Built-up fill				0				0
10.06 Guideway: Underground cut & cover				0				0
10.07 Guideway: Underground tunnel				0				0
10.08 Guideway: Retained cut or fill				0				0
10.09 Track: Direct fixation				0				0
10.10 Track: Embedded				0				0
10.11 Track: Ballasted				0				0
10.12 Track: Special (switches, turnouts)				0				0
10.13 Track: Vibration and noise dampening				0				0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	33	8,670	2,861	11,531	\$349	55%	31%	12,272
20.01 At-grade station, stop, shelter, mall, terminal, platform	33	8,670,000	2,861,100	11,531	\$349			12,272
20.02 Aerial station, stop, shelter, mall, terminal, platform				0				0
20.03 Underground station, stop, shelter, mall, terminal, platform				0				0
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.				0				0
20.05 Joint development				0				0
20.06 Automobile parking multi-story structure				0				0
20.07 Elevators, escalators				0				0
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	9.60	226	75	301	\$31	1%	1%	325
30.01 Administration Building: Office, sales, storage, revenue counting				0				0
30.02 Light Maintenance Facility		226,000	74,580	301				325
30.03 Heavy Maintenance Facility				0				0
30.04 Storage or Maintenance of Way Building				0				0
30.05 Yard and Yard Track				0				0
40 SITEWORK & SPECIAL CONDITIONS	9.60	921	304	1,225	\$128	6%	3%	1,326
40.01 Demolition, Clearing, Earthwork				0				0
40.02 Site Utilities, Utility Relocation		403,107	133,025	536				580
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments				0				0
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks				0				0
40.05 Site structures including retaining walls, sound walls				0				0
40.06 Pedestrian / bike access and accommodation, landscaping				0				0
40.07 Automobile, bus, van accessways including roads, parking lots				0				0
40.08 Temporary Facilities and other indirect costs during construction		518,000	170,940	689				746
50 SYSTEMS	9.60	4,616	1,523	6,139	\$640	29%	17%	6,646
50.01 Train control and signals				0				0
50.02 Traffic signals and crossing protection		383,000	126,390	509				551
50.03 Traction power supply: substations				0				0
50.04 Traction power distribution: catenary and third rail				0				0
50.05 Communications		916,000	302,280	1,218				1,319
50.06 Fare collection system and equipment		3,317,000	1,094,610	4,412				4,775
50.07 Central Control				0				0
Construction Subtotal (10 - 50)	9.60	15,734	5,192	20,926	\$2,180	100%	57%	22,442
60 ROW, LAND, EXISTING IMPROVEMENTS	9.60	506	167	673	\$70		2%	728
60.01 Purchase or lease of real estate				673				728
60.02 Relocation of existing households and businesses		506,000	166,980	673				728
70 VEHICLES (number)	10	5,747	1,897	7,644	\$764		21%	8,474
70.01 Light Rail				0				0
70.02 Heavy Rail				0				0
70.03 Commuter Rail				0				0
70.04 Bus	10	5,562,000	1,835,460	7,397	\$740			8,202
70.05 Other		185,000	61,050	246				273
70.06 Non-revenue vehicles				0				0
70.07 Spare parts				0				0
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	9.60	5,220	1,723	6,943	\$723	33%	19%	7,334
80.01 Preliminary Engineering		500,000	165,000	665				702
80.02 Final Design		1,259,000	415,470	1,674				1,769
80.03 Project Management for Design and Construction		315,000	103,950	419				443
80.04 Construction Administration & Management		1,573,000	519,090	2,092				2,210
80.05 Professional Liability and other Non-Construction Insurance				0				0
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.				0				0
80.07 Surveys, Testing, Investigation, Inspection				0				0
80.08 Start up		1,573,000	519,090	2,092				2,210
Subtotal (10 - 80)	9.60	27,207	8,978	36,185	\$3,769		98%	38,978
90 UNALLOCATED CONTINGENCY				754			2%	816
Subtotal (10 - 90)	9.60			36,939	\$3,848		100%	39,794
100 FINANCE CHARGES				61			0%	63
Total Project Cost (10 - 100)	9.60			37,000	\$3,854		100%	39,857
Allocated Contingency as % of Base Yr Dollars w/o Contingency				33.00%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency				2.77%				
Total Contingency as % of Base Yr Dollars w/o Contingency				35.77%				
Unallocated Contingency as % of Subtotal (10 - 80)				2.08%				
YOE Construction Cost per Mile (X000)								\$2,338
YOE Total Project Cost per Mile Not Including Vehicles (X000)								\$3,269
YOE Total Project Cost per Mile (X000)								\$4,152

Table6: Capital Cost Estimate

YEAR OF EXPENDITURE DOLLARS (X\$000)	Quantity	Base Year Dollars w/o Contingency (2013)	Base Year Dollars Allocated Contingency (2013)	YOE Dollars Total (2014)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	9.60	981,066	181,497	1,197,440
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	18	10,622,064	1,965,082	12,964,760
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		0	0	0
40 SITEWORK & SPECIAL CONDITIONS		2,229,157	270,062	2,548,912
50 SYSTEMS		5,704,647	1,055,360	6,842,186
60 ROW, LAND, EXISTING IMPROVEMENTS		554,800	102,638	657,438
70 VEHICLES	10	6,780,000	1,254,300	8,034,300
80 PROFESSIONAL SERVICES		5,696,714	607,879	6,461,381
90 UNALLOCATED CONTINGENCY		0	0	1,086,936
100 FINANCE CHARGES		0	0	63,669
Total Project Cost (10 - 100)		32,568,448	5,436,817	39,857,022

3.2 Source of Funds

Currently, *The Rapid* will utilize two sources of capital funds for the Project (**Table 7**): Very Small Starts funds and funds from Michigan Department of Transportation (MDOT).

Table 7: Sources of Capital Funds (in millions)

SOURCES	YOE Dollars	2012	2013	2014
FTA Very Small Starts	31,886	13,482	13,935	4,469
State of Michigan	7,971	3,370	3,484	1,117
Total Sources		16,852	17,419	5,586
	39,857			

3.2.1 FTA Funds

3.2.1.1 Very Small Starts (VSS) Funds

The Rapid received a total of \$31.9 million in FTA VSS funds in federal fiscal year 2010-2014 towards the implementation of the Project. Further, as noted above, these funds represent 80 percent of the estimated capital funding required.

3.3 Local Financial Commitment

3.3.1 Operating Revenues

The proposed revenue sources for the *Silver Line* Project are farebox revenues, state operating assistance and property taxes. The projected revenue from the farebox for the first year of operations is \$0.61 million and the projected operating expenses are \$2.26 million. The fare revenues were calculated using the fare recovery ratio for Route 1, which also operates in this corridor. The 2009 average fare recovery ratio for Route 1 was 39.2%. State operating assistance is expected to be \$0.49 million and existing property tax revenue will fund the additional \$0.46 million annually. The referendum to raise the millage from its current level of 1.12 to 1.47, or a 31% increase was approved in May 2011. Proceeds of the increased property tax millage will fund the operations of the Project. The increased millage rate was effective in July 2011 and will be levied when required, which is currently expected to be in 2014.

3.3.2 Operating Costs

The projected O&M costs (in YOE dollars) for the opening year are expected to be \$2.26 million. The projected costs for the bus system in FY 2014 (opening year) are also included.

3.4 Grants Management

The Rapid is an existing FTA grantee and familiar with FTA grant requirements. *The Rapid's* Grants Officer will be responsible for submitting FTA grant applications for the Project and making funding requests using the TEAM system. *The Rapid* staff, led by the Grants Officer, will manage the grants and make any necessary budget changes, in keeping with FTA requirements and current *The Rapid* grants processes.

The Rapid Grants Officer develops the grant application, incorporating all FTA required sections. The grant application is approved by *The Rapid* Board. The application is then entered into the FTA's electronic grant tracking system (TEAM) and submitted. Upon approval by the FTA, the funds can be expended on the Project.

All invoices for this Project are approved by the Project Manager, with an indication of the grant number and project being billed against. *The Rapid's* Grant Officer receives the invoice from accounts payable, checks to ensure that the invoice meets all FTA criteria, and then draws down the money from the Treasury Department following appropriate FTA approved process. All documentation for each grant project is included in the Grants Officer's files, from grant application to closeout.

CHAPTER 4—MANAGEMENT CONTROL

4.0 Design Management

The Rapid is responsible for the overall Project development and implementation during the Preliminary Engineering/Final Design (PE/FD) and CMAR phase including:

- Manage the budget and schedule controls of PE/FD and CMAR;
- Insure the development and administration of contractually required PE/FD and CMAR Document Control programs;
- Manage invoice/cost control;
- Insure the development and administration of contractually required PE/FD and CMAR quality assurance/quality control programs;
- Perform value engineering through its consultants and CMAR members;
- Manage the development of Project Contracts;
- Exercise risk management;
- Responsible for obtaining any necessary local permits, entitlements, and licenses;
- Manage the Safety and Security activities for the Project.

As part of Design Management, *The Rapid* will oversee the implementation of:

- Its consultant's contractually required Design Management Program with typical design management and design procedures documents;
- Design Specifications and Codes standardized in accordance with applicable contractual requirements for completion of the design documents;
- Design Review process requirements defined in the design documents with a typical process consisting of: Design reviews for the system 30%, 60%, 90%, fixed facility, and final design;
- Establishing review committees, procedure and protocol, comment and response schedule, addressing comments process, documentation, etc;
- Revision of design submittals and further reviews;
- Revisions to specifications;
- *The Rapid* recommendations based on design reviews;
- Establishing retention of responsibility for conformity of the drawings and data with the Contract Documents;
- Producing final design documents. *The Rapid* CEO or his designee will sign off on a signature block provided on the final design drawings;

4.1 Management of As-Built Plans

This process provides for systematic documentation, resolution, and approval of any design changes to the approved configuration (physical and operational elements) of the Project, as well as

conformance with the Contract Documents. This process is further discussed in the Quality Assurance Plan (QAP).

For this project, the CMAR relies on manual updating our drawings with RFIs and manually redlining the drawings for changes in the as-built location of concealed items. Although there is no formal document that describes this process, the Design consultants (CDM Smith) has been designated by The Rapid to gather all the information and electronically update the final design documents with CMAR information. The Design consultant will collect marked up drawings from CMAR after the work is complete and revise the design drawing CAD files to reflect the changes. CDM Smith will provide The Rapid/Municipalities with three deliverables: stand alone CAD plan sheets, updated electronic pdf plan sheets incorporating field markups, and all unclipped CAD design files. Hardcopies will not be provided. Christman will coordinate the As-Built record submittal among the contractors and turn in the record plan submittals by station to CDM Smith. CDM Smith assumes markups provided by Christman are accurate and will not require any field review or verification.

This is the CMAR's typical process for recording changes to the drawings that have occurred during construction.

4.2 Document Control Management

The Rapid will establish and maintain its own Document Control System under the oversight of the Project Controls Consultant. A detailed Document Control plan has been developed by *The Rapid* and submitted to the FTA. Document control is the process used to ensure that project documents are updated, distributed, filed, and tracked so that the latest approved documents are used on the Project and maintained for future reference. The Project Controls Consultant will ensure that the process provides a mechanism to secure and maintain current and historical project documents, and provide an easily retrievable filing system.

The Rapid has determined that the SharePoint Program Management software will be used for its Document Control system. The document control system will be accessible through a local area network and the internet. The system will be managed by *The Rapid* Project Controls Consultant in coordination with the Project Manager. The document control system will allow team members and outside reviewers, whether in the Project office or at a remote location, to share project information, including drawings and other documentation submitted by the CMAR to *The Rapid* and project partners for review.

During the construction phase of the project the project-specific SharePoint website will be operated by the CMAR under the supervision of the *Rapid* and Project Controls Consultant as described in the Document Control Plan. That project-specific site has already been created and is in operation.

4.3 Document Control Plan

The Rapid's Document Control Plan (See Appendix D) specifically addresses the following items:

- Identification of where and in what format Project files and documents will be stored (e.g. hard-copy versus electronic version);
- System for logging, tracking, filing, and retrieving correspondence and other documents (e.g. manual or electronic system of file codes and document tracking);
- Identification of individuals who are authorized to access various Project files and documents;
- Identification of “controlled documents”, such as the Project Baseline Documents, and system for controlling distribution, revisions, approvals, and tracking;
- Provisions for protection of Project files and documents;
- Method of transfer of Project files and documents to *The Rapid* at appropriate phases of the Project;
- Requirements for document retention;

All documents will be maintained for the duration of the contract and organized, indexed and filed accordingly.

4.3.1 Change Control Management

Change Order (CO) procedures are included in the contract documents between *The Rapid* and their Project consultants as well as the CMAR. These contract documents identify the responsibilities of all affected parties. *The Rapid* Project Manager will be apprised of all potential and completed COs to the Project.

The Rapid CEO is authorized to approve and order additions, deletions or revisions of work elements in any existing or future contract for construction projects.

- a. The Board has approved the total expenditure for the project and all change orders can be made at the staff level as long as the overall project budget is not exceeded. *The Rapid* Quarterly Report to the FTA will document any changes to the Project scope, schedule, or budget, as the result of a Claim/CO.

4.4 Changes between *The Rapid* and its CMAR and Consultants

Each of the contracts entered into by *The Rapid* for this Project will be in accordance with its individual contracts for CO. As part of its CO procedures *The Rapid* will also review each proposed COs, including the justification and cost and schedule impacts.

Any CO issued by *The Rapid* to the Project CMAR and Project consultants, regarding any element of the Work, shall require prior written concurrence of *The Rapid* if:

- The change increases time and/or the Total Project Price;
- The change would result in a material modification in, or is materially inconsistent with, the Final Design Documents, or would result in a material change in the scope of the Project.

Any CO not meeting one of these criteria does not require prior *The Rapid* concurrence.

The Rapid shall not unreasonably withhold or delay its concurrence to a CO to which the preceding paragraph applies if such CO is for:

- Delays directly attributable to a Force Majeure event;
- Delays directly attributable to Differing Site Conditions.

The Rapid will provide FTA with notice of:

- Any COs in excess of \$100,000 (in the monthly progress report); and
- Any CO that may affect the Project Completion Date.

The Rapid will not:

- Issue a CO changing the Project Scope or Project Description as set forth in the Final Design documents;
- Issue a CO eliminating or materially reducing any other portion or element of the Work, unless there is a reduction in the Total Project Price in an amount equal to the estimated cost (including labor, materials, overhead, and profit) of the portion or element of Work being eliminated or reduced.

The FTA requires that Grantees secure FTA review and concurrence in a proposed claim settlement before using Federal Funds. Specifically, Title 49 of the United States Code Chapter 53, Section 5010 Chapter 1, entitled Project Administration and Management. Paragraph 7 of the document is titled Procurement. Part 4 is titled FTA Review and Concurrence and states; “grantees must secure FTA review and concurrence in a proposed claim settlement before using federal funds in the following instances”:

- a. When negotiated settlements exceeds \$100,000,
- b. When insufficient funds remain in the approved grant to cover the settlement; or
- c. Where a special Federal interest is declared because of program management concerns, possible mismanagement, impropriety, waste or fraud.

All COs are subject to applicable FTA requirements relating to notice, budget and grant amendment approvals, cost justification, and review and concurrence by FTA/and or Congress, as applicable.

The Rapid initiated changes in the Scope of Work provided by Project consultants and CMAR may only be made pursuant to the change process described in the contract documents in *The Rapid* General Conditions which states, “The successful Bidder shall comply with all provisions, requirements and rates required by this document for COs, which increase the contract amount. CMAR represents that

COs will include all related costs prior to presentation to *The Rapid* for consideration, retroactive COs will be rejected. Work which is specifically required by *The Rapid* or their representative, and that is in addition to Work required by the Contract Documents, will be charged against a formal CO executed by both parties. Then the work defined shall commence as directed by *The Rapid* or their representative. All COs require prior approval by the CEO or *The Rapid* Board."

4.5 Claims Management

The Rapid will manage the Claims Management process in compliance with the individual design and construction contracts. For CMAR the following General Conditions apply:

A. Contract Interpretation by the Project Manager

Questions regarding the meaning and intent of the Contract Documents shall be referred in writing, by the CMAR to the Project Manager. Where practical, the Project Manager shall respond to the CMAR in writing with a decision within seven (7) working days of receipt of the request.

B. Claims

If the CMAR disagrees with the Project Manager's decision, or in any case where the CMAR deems additional compensation or a time extension to the Contract period is due the CMAR for work or materials not covered in the Contract or which the Project Manager has not recognized as extra work, the CMAR shall notify the Project Manager, in writing, of its intention to make claim. Claims pertaining to decisions based on Contract interpretation, or such other determinations by the Project Manager, shall be filed in writing to the Project Manager within five (15) Business Days of receipt of such decision. Failure to file a claim, in writing, within 15 Business Days from the date of Occurrence, or from the receipt of the Project Manager's decision will waive the CMAR's right to Claim. All other claims notices for extra work shall be filed in writing to the Project Manager prior to the commencement of such work. Written notice shall use the words "Notice of Potential Claim". Such Notice of Potential Claim shall state the circumstances and all reasons for the claim, but need not state the amount.

It is agreed that unless notice is properly given, the CMAR shall not recover costs incurred by it as a result of the alleged extra work, changed work, or other situation which, had proper notice been given, would have given rise to a right for additional compensation. The CMAR should understand that timely Notice of Potential Claim is of great importance to the Project Manager and *The Rapid*, and is not merely a formality. Such notice allows *The Rapid* to consider preventative action, to monitor the CMAR's increased costs resulting from the situation, to marshal facts, and to plan its affairs. Such notice by the CMAR and the fact that the Project Manager has kept account of the cost as aforesaid shall not in any way be construed as proving the validity of the claim.

C. Records of Disputed Work

In proceeding with a disputed portion of the Work, the CMAR shall keep accurate and complete records of its costs and shall make available to the Project Manager a daily summary of the hours and classifications of equipment and labor utilized on the disputed work, as well as a summary of any materials or any specialized services which are used which shall be signed by the Project Manager and CMAR daily. Such information shall be submitted to the Project Manager on a weekly or daily basis as determined by the Project Manager, receipt of which shall not be construed as an authorization for or acceptance of the disputed work.

D. Submission of Claim Costs

Within 30 days after the last cost of work for which the CMAR contends it is due additional compensation is incurred, but if costs are incurred over a span of more than 30 days, then within 15 days after the thirtieth day and every month thereafter, the CMAR shall submit to the Project Manager, as best the CMAR is able, its costs incurred for the claimed matter. Claims shall be made in itemized detail. Should the Project Manager be dissatisfied with format or detail of presentation, and upon request for more or different information, the CMAR will promptly comply to the satisfaction of the Project Manager. If the additional costs are in any respect not knowable with certainty, they shall be estimated as best can be done. In case the claim is found to be just, it shall be allowed and paid for as provided in Paragraph GC 6.4, Modification Procedures.

E. Claim Meetings

The Project Manager may call special meetings to discuss outstanding claims. The CMAR shall cooperate and attend prepared to discuss its claims, making available the personnel necessary for resolution, and all documents which may reasonably be requested by the Project Manager.

4.6 Disputes Management

The Rapid will manage the Disputes Management process in compliance with their individual design and construction contracts. Any dispute relating to this Contract after award shall be resolved through good faith efforts upon the part of CMAR and Owner. At all times, CMAR shall carry on the work and maintain their progress schedule, in accordance with the requirements of the Contract and the determination of *The Rapid*, pending resolution of any dispute. If the dispute is not resolved in ninety (90) days, either party may request arbitration in accordance with the General Condition entitled, "ARBITRATION."

4.7 Suspension of Work

The Rapid will manage consultants and CMAR to comply with the Suspension of Work requirements identified in their individual design and construction contracts. For the CMAR the following General Conditions apply:

A. Termination by *The Rapid* for Cause

1) *The Rapid* may terminate the Contract for Construction if the CMAR:

- a) Fails to maintain bonding, Michigan State CMAR's Board License, Employer's Insurance Company of Michigan, insurance policy for limits as defined in the contract documents.
- b) Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- c) Fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the CMAR and the Subcontractors;
- d) Persistently disregards laws, ordinances, or rules, regulations or order of a public authority having jurisdiction; or
- e) Otherwise is guilty of material breach of a provision of the Contract Documents.

2) When any of the above reasons exist, *The Rapid* may without prejudice to any other rights or remedies of *The Rapid* and after giving the CMAR and the CMAR's Surety, if any, seven (7) consecutive calendar days written notice, terminate employment of the CMAR and may, subject to any prior rights of the Surety:

- a) Take possession of the Site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the CMAR;
- b) Accept assignment of subcontractors pursuant to this Contract for Construction (Contingent Assignment of Subcontracts to Owner if Contract is terminated); and,
- c) Finish the Work by whatever reasonable method *The Rapid* may deem expedient.

3) When *The Rapid* terminates the Contract for Construction for one of the reasons stated in Termination by *The Rapid* for Cause (Section 3 of the Contract for Construction) the CMAR shall not be entitled to receive further payment until the Work is finished.

4) If the unpaid balance of the Contract Amount exceeds costs of finishing the Work, including expenses made necessary thereby, such excess shall be paid to the CMAR. If such costs exceed the unpaid balance, the CMAR shall pay the difference to *The Rapid*. The amount to be paid to the CMAR or Owner, as the case may be, shall survive termination of the Contract for Construction.

B. Suspension by *The Rapid* for Convenience

- 1) *The Rapid* may, without cause, order the CMAR in writing to suspend, delay or interrupt the Work, in whole or in part, for such period of time as *The Rapid* may determine.
- 2) An adjustment shall be made for increase in the cost of performance of the requirements of the Contract Documents, including profit on the increased cost of performance caused by suspension, delay, or interruption. No adjustment shall be made to the extent:

- a) That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the CMAR is responsible; or
 - b) That an equitable adjustment is made or denied under another provision of the Contract Documents.
- 3) Adjustments made in the cost of performance may have a mutually agreed fixed price.

4.8 Extensions of Time

The Rapid will manage consultants and CMAR to comply with the Extension of Time requirements identified in their individual design and construction contracts. The CMAR will be granted an extension of time for any delay on the critical path to completion of any Critical Milestone, based on the latest approved Construction Schedule, arising from acts of God, acts of the public enemy, acts of the government in either its sovereign or contractual capacity, fires, floods, earthquake, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or wrongful acts of owners occupants of property adjoining the Work Site, provided that the aforesaid causes were not foreseeable and did not result from the fault or negligence of the CMAR, and provided further that the CMAR has taken reasonable precautions to prevent further delays owing to such causes, and has notified the CMAR in writing of the cause or causes of delay within twenty four (24) hours from the beginning of such delay. Time extensions will be considered on a case by case basis and submission of such request shall not be construed as agreement or concurrence to this noted extension of time. Such delay shall not be the basis for a claim for additional compensation.

4.9 Contract Close-out

The Rapid will manage the contract closeout in accordance with the construction contract documents and as follows:

- A) When the CMAR considers that all work under the Contract is complete, the CMAR shall so inform Owner in writing. When the results of inspection and testing satisfy Owner that all work under the Contract is completed and in accordance with the requirements of this contract, Owner shall initiate the Notice of Completion process.
- B) The date of final acceptance of the Project by *The Rapid* shall be the date upon which the Governing Body accepts and approves the Notice of Completion.
- C) All warranties, guarantees and other applicable requirements designated in the Contract documents, shall commence on the date of final acceptance of the Project by *The Rapid* as defined herein, except that Owner, upon written request, may approve earlier commencement dates for system, equipment, or other specific items of work.

4.10 Quality Assurance Program (QAP)

The objective of *The Rapid's* Quality Assurance Program (QAP) Manual, See Appendix D, for the Project is to assure that all designs, components, systems, equipment and facilities meet or exceed standards of excellence established by *The Rapid*. The agency has retained a GEC with responsibility for administering the QA Program. The Manual includes procedures that the GEC will utilize in implementing the QA Program. The Project Manager will ensure that each consultant will develop a formal QC Program as part of their proposals and designate QA/QC staff on their team. For any City work, the appropriate City will rely on their existing QA/QC procedures to maintain quality and control. *The Rapid* will utilize industry standards of QA/QC to maintain quality and control all aspects of the project.

Philosophy and Approach – QA/QC Program will ensure that all Project requirements are met through ongoing and systematic attention to quality and quality-related activities, from design through installation/construction, and into revenue service. The following terms help define the program:

Quality Assurance – Those planned and systematic actions using established standards to provide confidence to management that a service, material, component, system, equipment and facility will perform satisfactorily. Quality Assurance is a management tool.

Quality Control – Those actions that control and measure the characteristics of a material, component, system, process, or facility to meet or exceed pre-established requirements. For example, procedures are followed and critical characteristics are achieved and verified by measurements or observations. Quality Control is a production tool.

4.11 Progress Meetings

Communication is the key to the success of the Project. It is expected that frequent meetings will be held with the Project's CMT and consultants initially on a bi-weekly basis. The results of the meetings will be documented and actionable items included on the Project Action Item Log. **Table 8** identifies the types, frequency and purpose of meetings that will be held to track the progress of the Project.

Table 8: Progress Meetings

Participants *	Purpose	Potential Frequency *	Time & Location
Project Staff & FTA	Brief FTA on project status	Monthly and Quarterly or as Requested	FTA Region V Office, <i>The Rapid</i> Offices of via Conference Calls
Project Staff and consultants	Review Issues, solutions, etc.	As often as needed (Bi-weekly)	<i>The Rapid</i> Offices
Interurban Transit Partnership Board of Directors Meetings	Policy direction and approvals	Monthly	<i>The Rapid</i> Offices

- * *Meeting frequency is an estimate. Meetings will be held when needed, and as often as needed. Meetings may not be held if there are no issues. Additional meetings with other participants will be scheduled as needed.*

Formats for meetings will be developed to suit the needs of the meetings and participants. To the extent appropriate, meetings will be documented by consultants or Project staff and action items will be assigned by the Project Manager.

4.12 Affirmative Action and Disadvantaged Business Enterprise

The Rapid is committed to participation on the Project by DBEs and will conform to the requirements in 49 CFR Part 26. Appropriate DBE goals and affirmative action requirements will be developed for each third-party contract, in keeping with current federal requirements; the DBE goal for this project is 1.7%. DBE participation will be evaluated prior to contract award and DBE attainment will be monitored as part of *The Rapid's* project management process by Project staff, in consultation and coordination with *The Rapid's* Purchasing Manager. The GEC will be monitoring compliance with DBE on a monthly basis during construction.

4.13 Labor Requirements and Wage Rates

During construction, work will be undertaken by competitively bid third party contracts. Third party contracting requirements will comply with all federal and state requirements, including the Davis - Bacon Act and Contract Work Hours. The GEC will be monitoring compliance with Davis - Bacon Act on a monthly basis during construction.

CHAPTER 5 – CONSTRUCTION MANAGEMENT

The Rapid construction management involves those actions and plans necessary to ensure the successful completion of the Project and the delivery of fully functional facilities safely, on time and budget, and with quality.

5.0 Responsibility

The Rapid has overall responsibility for the construction of the Project. The Project Manager or his designee(s) will plan, manage, and control the Project. The GEC will provide QA oversight of the A&E Consultants and the CMAR. *The Rapid* has retained a professional engineer under a GEC contract to enable this during design and construction phases of the Project.

Construction will be performed in accordance with the CMAR's Work Plan and Construction Procedures, Construction Safety Plan, and Project QA/QC Plan approved by *The Rapid*. *The Rapid* will be responsible for the oversight of all work performed by the CMAR, the Design Consultants and any other work associated with the Project.

The CMAR will be responsible for the construction management, administration, and safety oversight of the Project during construction. The CMAR will perform their duties in accordance with the contract requirements issued for the Project and *The Rapid* approved QA Plan and this PMP.

5.1 Construction Safety

Safety is *The Rapid's* number one priority. The CMAR is responsible for safety during construction along the corridor. *The Rapid's* Safety Officer will monitor the CMAR's compliance with their approved Construction Safety Program Plan (CSPP) along with *The Rapid's* Operations Plan. Also, there is a Maintenance of Traffic (MOT) plan for construction safety at each station in the final plan set. During construction, general precautions will be taken by the CMAR including single lane closures for 5-6 weeks at each station, as appropriate.

The CMAR's CSPP shall designate a Safety Officer, who will hold job briefings weekly or before each new task, hold regular "tool-box" safety meetings, submit an Accident Prevention Program for approval, and conform to the requirements of Occupational Safety & Health Administration (OSHA) Construction Industry Standards 29CFR1926\1910 and MIOSHA Construction Safety Standards.

Under the direction of *The Rapid's* Chief Operating Officer or Safety Officer, the CMAR will be responsible for assuring that all subcontractors adhere to all safety requirements. *The Rapid* Safety Officer shall promptly notify the CMAR of any apparent safety violations. Violations may result in suspension of work until the violations are corrected. Repeated violations by an individual may result

in *The Rapid* ordering of the CMAR or subcontractors to remove the individual (temporarily or permanently) from the construction site.

5.2 Construction/Installation Site Security

To ensure there is a safe and secure method of coordinating construction and testing activities, the CSPP will be presented to all new employees of the CMAR. This program will provide the processes and procedures governing the activities of the CMAR and *The Rapid* staff working on or about the right-of-way. It will identify the individual responsible for managing the Project right-of-way and it will include the procedure, Project warrant provisions, and specific reporting and scheduling requirements on or along the alignment. It will also address accident prevention, employee protective devices, medical treatment, as well as OSHA and other regulatory requirements.

5.3 Materials and Equipment Procurement

Under the guidance of the Purchasing Manager, the CMAR will prepare the necessary bid specifications and documents, including all required State and Federal certifications and contract clauses, including flow-down requirements. The CMAR shall stipulate that all State sales and excise taxes be included in the bid price. The CMAR retains the full responsibility for the procurement, including scheduling, delivery, quality assurance, verification, storage, installation, warranties, etc. All delivery tickets are required to be verified by The Rapid PM and/or designated representative for compliance with Buy America requirements (see 5.3.1).

The CMAR is responsible for reviewing all invoices from subcontractors for accuracy and compliance with Davis-Bacon wage rules. The GEC will oversee the Davis-Bacon wage rules to ensure compliance. The GEC will provide a final review and send the invoice to the Accounts Payable staff to authorize payment to the CMAR. Upon receipt of payment from the owner, The CMAR is responsible for the prompt payment of the supplier invoice, within 30 days from receipt of said payment. The payment will be given to the CMAR, who will then issue a check to the supplier in return for lien releases. 10% of each invoice will be retained by the CMAR to ensure project completion. After the work is 50% complete, the supplier may request in writing to the CMAR that the retainage amount be reduced to 5%. This reduction will be granted based on the concurrence of the CMAR, the A&E firm and The Rapid. Near the Project's conclusion, the retainage amount may be reduced further at the discretion of The Rapid and the CMAR.

The CMAR's procurements must meet all applicable regulatory requirements specified in The Rapid's Procurement Standards Manual and meet all contract requirements. Suppliers will produce materials and equipment in accordance with the CMAR's Project QA/QC Plan approved to The Rapid.

Procurement of equipment (e.g. Ticket Vending Machines, Next Bus technology, etc.) and rolling stock is the sole responsibility of The Rapid's Purchasing Department in coordination with the Operations Division. Procurement will be based upon specifications prepared by The Rapid's Purchasing Department. The Project Manager, Purchasing Manager and GEC (QA Administrator) will

provide design review of the specifications. On-site inspection of the vehicles being manufactured will be conducted by the Maintenance Manager as well as a professional vehicle inspection firm that is specifically trained to conduct FTA Buy America compliance. The professional inspection firm will be hired by The Rapid on a competitive basis.

5.3.1 Buy America Requirements

The CMAR is responsible for providing manufactured products, and associated equipment that satisfies the Buy America requirements set forth in 49 CFR Part 661, other than those products or materials which may be eligible for a waiver under such regulations. Additionally, the CMAR is responsible for promptly providing to *The Rapid* all information and documentation needed to document compliance with Buy America requirements relating to the Project.

Utility companies will also comply with Buy America requirements.

The following procedure is used to ensure that steel and other manufactured goods meet the Buy America requirements of the FTA. GEC will audit the process on a monthly basis via spot checks and field visits.

1. The subs will notify by the CMAR of daily shipments to the Project site. The CMAR will inspect manufactured goods delivered to the Project work site to ensure compliance with Buy America rules. CMAR will then put together a log with dates of shipments. All Project logs inventorying deliveries to the site will be sent to the GEC who will do a monthly check and will report to the Project Manager.
2. The CMAR will be on site weekly to complete the following: check materials and shipments, review testing reports and results, review change order requests from the CMAR and contractors, check percent complete of the work on a monthly basis, and meet with GEC and *Rapid* staff to convey results and progress to ensure that the item(s) were manufactured in the United States for Build America compliance.
3. Items that are not readily identified as meeting Buy America will be further investigated using the Buy America Inspection Form. CMAR will submit the Buy America Inspection Form to *The Rapid's* Purchasing Manager or his designee and the Project Manager. The form will indicate two levels of compliance, "in compliance" or "not in compliance".
4. Items not in compliance will be shipped back to the manufacturer. Unless an item can be provided in a timely fashion that meets Buy America, payments will be withheld from the manufacturer in violation.

To ensure compliance by 3rd parties conducting private utility and TSP work, the GEC will verify BA compliance by field checking the country of origin of materials delivered to the job site. A monthly

list of such materials will be provided by the CMAR for monthly field checks. The process will require the GEC to conduct monthly reviews of materials, invoices and submittals.

5.4 Procurement Specifications

Procurement specifications for materials, components, systems, equipment, and revisions to these specifications are prepared by the CMAR and will be reviewed by the PM and Purchasing Manager to ensure that all design criteria and requirements are met. Appropriate requirements include:

- *The Rapid* Design and Quality Criteria;
- Applicable codes and standards;
- Process and inspection procedures to be submitted for review;
- Inspection and test reports to be furnished;
- Owner access to vendor, CMAR and subcontractors facilities for performance or witnessing of inspections or test; and
- Compatibility with existing materials, components, systems, or equipment.

5.5 Material and Equipment Configuration Control

As required by applicable procurement specifications, material and equipment vendors will submit information to the Project Manager, and obtain approval of changes in material and equipment configuration.

As required by applicable procurement specifications, material and equipment vendors the CMAR will provide drawings, reports and manuals, showing the *as-built* configuration of materials and equipment, results of factory tests and alignments, and O&M manuals.

5.6 Factory Inspection and Testing

Material and equipment vendors will submit the procedures for and reports of factory tests to the CMAR for approval. Should in-plant inspections be required or are appropriate, the CMAR will plan and complete factory inspections for designated equipment and components, using qualified inspection personnel. These inspections will be reported to and reviewed by *The Rapid*. In addition, the CMT will designate an appropriate individual(s) to witness or conduct factory inspection and testing on selected long lead-time items as required.

5.7 Receiving and Storage

The CMAR is responsible for receiving and storing procured materials and equipment in accordance with the contract provisions and Project QA/QC Plan. These will provide for the inspection, identification, protection, and storage, both before and after installation. These provisions will also

provide for identification, segregation, reporting, and disposition of equipment that does not meet Project requirements. The CMAR is responsible for all materials management and Control.

5.8 Testing During Construction

The Rapid will procure the services of an independent Materials Testing Firm on an as-needed basis throughout the Project. The testing laboratories will submit all test results to the PM and the CMAR for review and records; the testing results will also be provided to the Design Consultants (A&E). Therefore, all such testing will be paid by *The Rapid*. The Subcontractor must pay for re-testing if needed. The CMAR will be required to give ample notice to *The Rapid* and the Testing and Materials consultant of upcoming events requiring testing, such as concrete pours, soil compaction tests, etc. The testing requirements, batch sizes, and other criteria are specified in the technical specifications. *The Rapid* will not pay for multiple testing due to the CMAR's non-conformance of the work to the contract documents.

5.9 Labor Relations and Policy

5.9.1 Responsibility

The CMAR is responsible for compliance, verification, and record keeping, as required by all Federal, state, and local labor regulations. The Purchasing Department is responsible for ensuring that the CMAR provides all required documentation to *The Rapid*.

5.9.2 Wage Rates and Job Classification

The CMAR and all subcontractors must comply with all applicable Federal regulations pertaining to wage and hour requirements. Wage rates, job classifications and payroll record keeping as defined in the Davis-Bacon Act, as amended, apply to the Project and will be reported to the Project Manager. *The Rapid* standard construction agreement details the regulations with which the CMAR is required to comply. Furthermore, the GEC will review all certified payrolls to determine Davis Bacon compliance.

5.9.3 EEO and Affirmative Action

The CMAR and subcontractors shall file Monthly Employee Utilization Reports with each application for payment. The GEC will monitor these activities in coordination with the Project Manager.

5.9.4 Risk Management and Insurance

Risk management in design, engineering, and construction of the Project is accomplished through indemnification, insurance, and performance bond requirements, which are part of *The Rapid's* standard contract agreement. The Purchasing Department is responsible for ensuring that

documentation is received from the Design Consultant, and/or CMAR, which verifies compliance with these requirements.

The level of indemnification and insurance to be required is determined by a multi-disciplinary review, including Legal, Procurement, and *The Rapid's* insurance provider. This review includes the identification of potential risk and a determination of the sufficiency of the insurance and indemnification provisions in the proposed agreement.

Risk is also mitigated through a reference check of the Design Consultant, and/or CMAR's background and qualifications to effectively perform the Project requirements. The Purchasing Department performs the reference check before award of contract.

Before the start of construction and any intrusive work, a survey of the site shall be performed, including photographic recording of the existing conditions of the site. The limits of the site survey will be expanded to include adjacent property to ensure optimum preparedness in the event of a damage claim. The CMAR will perform photographic recordings involved in the site survey. In addition, the CMAR may also perform site surveys prior to construction.

5.9.5 Contract Completion

5.9.5.1 Construction As-Built Drawings and Records

The CMAR will prepare and provide construction as-built drawings, test results, safety certificates, CMAR-procured equipment manuals, CMAR-prepared operating and maintenance manuals, and construction records for *The Rapid* review, as required in the contract documents. This shall include all documents in electronic format.

All Project Quality Assurance Record Documents are prepared and submitted in accordance with applicable sections of the CMAR's approved Project QA/QC Plan.

5.9.5.2 Construction Punch Lists

The CMT will review and maintain closeout construction punch lists to expedite and resolve contract completion.

5.10 Utilities

The Design Consultant has sent out utility requests to all known utility owners in the Project area, as well as contacted MISS DIG so that existing utilities could be marked in the field and incorporated into the utility survey. Known utility conflicts are being logged in a matrix which shows where the conflict is, who owns the utility in question, what action is decided upon, and who is responsible to mitigate

the conflict. The result of this effort is a detailed utility matrix that details the scope of work and known conflicts at each station (see Appendix D)

Utilities potentially affected by the Project, as identified during preliminary engineering and survey are shown in **Table 9**, as well as the contact agencies *The Rapid* will negotiate with regarding potential relocations. Utility relocation plans were developed by the TAC and folded into the final design. Utility relocations are limited to City water mains at stations 33, 32, 31, 30, 29 at the request of Wyoming and Kentwood and a handful of street lighting movements. Although there are more utilities along the corridor, the lack of platform depth avoided most conflicts.

Table 9: Utilities within Project Corridor

Utility	Responsible Party	Contact Information
Water, Sanitation, Storm	City of Grand Rapids	Vaughn Umphrey 300 Monroe Avenue NW Grand Rapids, MI 49503 Vaughn.umphrey@grcity.us Ph. 616-456-3092
Water, Sanitation, Storm	City of Kentwood	Tim Bradshaw, P.E. 4900 Breton Ave., S.E.; P.O. Box 8848 Kentwood, MI 49518-8848 bradshawt@ci.kentwood.mi.us Ph. 616-554-0739
Water, Sanitation, Storm	City of Wyoming	Carlos Caceres, P.E. 2660 Burlingame Ave., S.W. Wyoming, MI 49509 caceresc@wyomingmi.gov Ph. 616-530-7388
Gas	DTE Energy – MichCon	Andre Diaz 444 Wealthy St S.W. Grand Rapids, MI 49503 diaza@dteenergy.com Ph. 616-632-2631
Steam Lines	Veolia Energy	Jim Monterusso 50 Monroe N.W., Suite 430 Grand Rapids, MI 49503 jmonterusso@veoliaEnergyna.com Ph. 616-356-2535
Power	Consumers Energy	Ken Shelton 4000 Clay Ave., S.W.; P.O. Box 201 Grand Rapids, MI 49501-0201 krshelton@cmsenergy.com Ph. 616-530-4252
Fiber Optic	Level3 Communications	1025 Eldorado Blvd. Broomfield, CO 80021 (877)366-8344

Utility	Responsible Party	Contact Information
Telephone	AT&T	Level3.networkrelocations@level3.com Bernie McKenzie 54 N. Mill St, Pontiac, MI 48342 bm1519@att.com Ph. 248-972-0102
Cable	Comcast	Jim Zawacki 3500 Patterson Ave., SE Grand Rapids, MI 49512 jim_zawacki@cable.comcast.com Ph. 616-575-0501

The CMAR is responsible for verifying the existing field conditions and the exact location and size of all utility facilities affected by the Project. Should unanticipated utility conflicts be discovered in the course of the work, the CMAR is responsible for;

- Identifying all utilities affected by the Project (including their specific location); and
- Submitting a proposed relocation plan to *The Rapid* Project Manager, which the General Engineering Consultant will review and either approve or issue guidance to proceed.

All utility relocation activities shall be consistent with the Federal requirements set forth in 40 CFR 24.307 and 23 CFR Part 645, Subpart A. The CMAR is responsible for coordinating the work of its subcontractors and the various utilities and resolving any conflicts. *The Rapid* will authorize, as appropriate and allowable, utility relocation or conflict mitigation costs. The Interlocal Agreement (Appendix A) discusses the responsibility for these costs and conduct. The roles, responsibilities, and costs associated with utility relocation are identified in the Third Party Agreement (see Table 10). The Cities have provided all necessary permits and easements for station construction. The Rapid will be coordinating directly with two private companies – Consumers for power and AT&T for phone. Water main relocation will be completed by Christman.

This Project will require one Interlocal agreement signed by *The Rapid*, the City of Grand Rapids, the City of Kentwood, and the City of Wyoming. This Interlocal agreement specifies the roles, responsibilities, costs, and scope of work for each party. The interlocal agreement identifies the following:

- Utility Coordination
- Installation of BRT Systems
- Construction Permits
- Coordination of Municipal Construction Projects with the BRT Project
- Contacts

In addition, *The Rapid* will also enter into a maintenance agreement with the City of Grand Rapids for its share of the long-term maintenance costs of the TSP system.

5.11 Start-Up and Testing

The Rapid's COO will prepare the Startup Plan prior to Revenue Operations Start date of August 25, 2014. Testing and training is expected to begin three months prior to the Operations Start date. The Startup Plan is anticipated to be in place by March 2014 and will be utilized during the testing and training of BRT operators, which is scheduled to begin in June 2014 (see Master Project Schedule). The plan will optimize the use of *The Rapid* personnel and will develop all of the program requirements for system revenue service. It will provide a scheduling framework within which testing must be accomplished and will include general policy guidelines on the use of personnel. The Integrated Test Program must comply with the Startup Plan.

The purpose of the startup program is to ensure that *The Rapid* will have the vital support needed to efficiently and effectively operate this major expansion of its total system that includes integration of the existing bus service with the new BRT operation. System expansion may entail incidental easement acquisitions, signals, passenger stations, and utilities. Ten new BRT vehicles will be operating as part of an expanded bus network. Additional maintenance requirements for vehicles will require increased staffing, training, tool and equipment procurements, additional parts for re-supply prior to system start-up. More vehicle operators, supervisory staff, and maintenance personnel will be recruited and trained.

Administratively, operational aspects of an expanded system need to be reviewed. The Project Manager's role is to ensure a smooth transition from the construction phase into the operation of the system. The COO with the primary support of the Project Manager and respective CMAR, will lead the Start-up effort as a team.

The Start-up team will meet monthly and transition to a weekly meeting as the scheduled Revenue Operations Date (ROD) nears. Items typically discussed at these meetings include (but not limited to):

Table 10: Third Party and Utility Agreement Summary

TRIX						
Bus Rapid Transit (BRT) - The Rapid						
pm / Intersection	QDT	Jurisdiction	Address	Utility Relocation*	Utility Addition**	Total Cost
1st Avenue at Louis	SE	Grand Rapids	58 Monroe Ave NW	MH, LP	Power, Phone	\$ 16,958
1st Avenue at DeVos Place	NW	Grand Rapids	111 Monroe Ave NW	LP	Power, Phone	\$ 22,793
1st Avenue at DeVos Place	E	Grand Rapids	310 Monroe Ave NW	LP	Power, Phone	\$ 11,632
1st Avenue at DeVos Place	W	Grand Rapids	295 Monroe Ave NW	MH, LP	Power, Phone	\$ 10,343
1st Avenue at Bostwick	SW	Grand Rapids	14 Michigan St NE	water main, MH	Power, Phone	\$ 88,939
1st Avenue at Bostwick	NW	Grand Rapids	29 Michigan St NE	STORM	Power, Phone	\$ 26,751
1st Avenue at Crescent	E	Grand Rapids	240 Ransom Ave NE	MH	Power, Phone	\$ 23,630
1st Avenue at Crescent	W	Grand Rapids	239 Ransom Ave NE	MH	Power, Phone	\$ 7,168
1st Avenue at Ransom	NE	Grand Rapids	151 Fulton St E	MH, LP	Power, Phone	\$ 17,825
1st Avenue at Fulton	NW	Grand Rapids	1 Ransom Ave NE	MH	Power, Phone	\$ 15,235
1st Avenue at St. Mary's	E	Grand Rapids	248 Jefferson Ave SE	MH	Power, Phone	\$ 23,224
1st Avenue at St. Mary's	W	Grand Rapids	237 Jefferson Ave SE	MH	Power, Phone	\$ 20,503
1st Avenue at McConnell	E	Grand Rapids	422 Division Ave S	n/a	Power, Phone	\$ 12,838
1st Avenue at McConnell	NW	Grand Rapids	425 Division Ave S	STORM, LP	Power, Phone	\$ 22,196
1st Avenue at Franklin	NE	Grand Rapids	760 Division Ave S	MH	Power, Phone	\$ 13,566
1st Avenue at Franklin	SW	Grand Rapids	803 Division Ave S	MH	Power, Phone	\$ 10,011
1st Avenue at Hall (Green)	NE	Grand Rapids	1109 Division Ave S	MH	Power, Phone	\$ 15,990
1st Avenue at Hall (Green)	SW	Grand Rapids	1119 Division Ave S	n/a	Power, Phone	\$ 11,236
1st Avenue at Cottage Grove	NE	Grand Rapids	1528 Division Ave S	n/a	Power, Phone	\$ 6,583
1st Avenue at Cottage Grove	SW	Grand Rapids	1575 Division Ave S	n/a	Power, Phone	\$ 18,462
1st Avenue at Burton	NE	Grand Rapids	1980 Division Ave S	MH, LP	Power, Phone	\$ 21,467
1st Avenue at Burton	SW	Grand Rapids	2015 Division Ave S	STORM, MH	Power, Phone	\$ 18,632
1st Avenue at Alger (Southview)	SE	Grand Rapids	2450 Division Ave S	FH	Power, Phone	\$ 15,032
1st Avenue at Alger (Southview)	NW	Wyoming	2451 Division Ave S	water main, MH	Power, Phone	\$ 32,615
1st Avenue at 28th	SE	Grand Rapids	2806 Division Ave S	FH, MH	Power, Phone	\$ 18,878
1st Avenue at 28th	SW	Wyoming	2833 Division Ave S	STORM, water main	Power, Phone	\$ 86,424
1st Avenue at 36th	NE	Wyoming	3558 Division Ave S	water main	Power, Phone	\$ 25,394
1st Avenue at 36th	SW	Wyoming	3615 Division Ave S	water main	Power, Phone	\$ 78,179
1st Avenue at 44th	SE	Kentwood	4416 Division Ave S	water main	Power, Phone	\$ 32,607
1st Avenue at 44th	SW	Wyoming	4455 Division Ave S	STORM, water main	Power, Phone	\$ 20,429
1st Avenue at 54th	SE	Kentwood	5408 Division Ave S	water main	Power, Phone	\$ 39,739
1st Avenue at 54th	SW	Wyoming	5423 Division Ave S	water main	Power, Phone	\$ 43,268
1st Avenue at 60th	NE	Kentwood	5978 Division Ave S	water main	Power, Phone	\$ 25,516
Total						\$ 854,063

adjustment, LP= street light pole relocation, water main=water main relocation, STORM= storm sewer inlet adjustment, FH=fire hydrant relocation
 1st Avenue at 60th (emergency)

- Schedule of construction activities,
- Operations test plan,
- Support activities requiring Operations staff,
- Safety certification status,
- Coordination of testing activities with the CMAR,
- Possible support activities to be performed by Facilities staff,

- Marketing and outreach activities to make the public aware of new operations, and
- Grand opening celebration activities.

Many items may need revision, including service timetables, operator run assignments, staffing plans, job descriptions, the operating rulebook, emergency plans, operating and maintenance costs, and *The Rapid's* operating philosophy.

A master startup schedule with detailed tasks will be developed and periodically updated and coordinated by the Start-up team.

Most of the tasks will end with the inauguration of the revenue service. Tasks that continue, such as marketing, operations control, and customer service will become the responsibility of the appropriate *The Rapid* Division Directors and/or Manager(s).

The Operations Division is responsible for the transition from the construction phase into operation. Before system operation, plans for personnel staffing and training will be implemented, and maintenance tooling and spares will be procured to support safe and reliable system operation.

5.12 Training and Qualifications

When new equipment is installed, personnel responsible for operating this new equipment must complete an orientation to familiarize themselves with the new installations. This orientation, conducted by the CMAR includes instruction, on-the-job training, and testing. The respective Safety Department and Human Resources Department shall maintain records of personnel training, certification, and re-certification.

5.13 Permits and Licenses

Permits needed for construction and operation of the system will be identified and the process for obtaining permits will be outlined in the final design. Tests, inspections, certifications and all required permits and licenses issued by local, State, and Federal agencies, must be included in the closeout documentation provided by the CMAR. Generally, environmental permits are obtained by *The Rapid* with the assistance of the Environmental Support Consultants. Construction permits and code inspections, including Certificate of Occupancy, are obtained by the CMAR. The final permit resides with *The Rapid*. The CMAR as well as the respective Departments in the Cities of Grand Rapids, Kentwood and Wyoming also have copies of the final permit. The information is included as part of Appendix D.

5.14 Safety Certification, System Start-up and Turnover

The CMAR shall apply controls to assure the safety, completeness, and operability of equipment and systems transferred from construction to operations, including provisions for turnover of portions of

systems, equipment check-out, start-up, testing, warranties, and personnel training. Safety and Security Certification of Certifiable Elements in the System shall be performed in accordance with the latest revision of *The Rapid* Safety and Security Plan.

5.15 Calibration, Functional Check-out, and Alignment

The Operations Division must conduct a complete review of calibration, functional checks, and alignment of operating systems, such as signal prioritization, Next Bus signage and fare vending machines before formal acceptance.

5.16 Acceptance

Acceptance tests of operating systems and facilities are performed and documented by the CMAR to verify operational readiness, and witnessed by *The Rapid* Executive and Board, and other municipalities/agencies representatives as applicable. Test results are reviewed by *The Rapid* personnel responsible for design, construction, and operations. Appropriate equipment shakedown, including actual operating procedures and personnel, must be included in acceptance testing plans. All safety related elements are strictly verified under the Safety and Security Management Plan administered by *The Rapid* Safety and Training Officer.

5.17 Maintenance and Protection of Traffic (MOT)

As appropriate, the CMAR will develop a plan for the maintenance of traffic in accordance with the Cities of Grand Rapids, Kentwood and Wyoming, MDOT and the Manual of Uniform Traffic Control Devices over the duration of construction. These plans are included in the final set of plans for the project and are part of the documents listed in Appendix D. The CMAR has the primary responsibility for maintaining safe conditions for motorists, pedestrians, and workers in the vicinity of construction and maintenance areas, including the following specific requirements:

- Traffic safety in construction zones will be an integral and high-priority element of the project through design and construction.
- Inhibited traffic movement will be minimized.
- Construction time will be minimized to reduce exposure to potential hazards.
- Motorists will be guided in a clear and positive manner while approaching and traversing construction areas.
- The CMAR will provide individuals trained in the principles of safe traffic control at work sites to ensure that all traffic control elements of the project are in conformity with the traffic control plan and are effective in providing safe conditions for motorists, pedestrians, and workers.
- Traffic control devices will be installed only when needed and removed immediately when no longer required.



Control of Traffic through Work Areas: The material and construction requirements in the Cities of Grand Rapids, Kentwood and Wyoming and MDOT Standard Construction Specifications will apply.

CHAPTER 6 – SAFETY AND SECURITY

The Rapid has developed a system Safety and Security Management Plan (SSMP) that provides an overall management and direction of all safety activities undertaken by *The Rapid* (See Appendix D). In addition to this Plan, CMAR has also developed a Project Safety Manual (See Appendix D) to guide contractors during construction of the project. The SSMP and the Safety Manual provides guidelines for response to various types of emergencies that may occur and provide guidelines for restoration of service after an emergency has occurred.

The purpose of the SSMP is to:

- Document the management philosophy to be used by *The Rapid* and the Silver Line BRT project team to developing management structures that will support the implementation of an effective safety and security program;
- Ensure that management strategies are in place to identify threats to safety and security, their risks assessed and mitigating actions are developed, tracked and resolved prior to revenue service;
- Define the specific safety responsibilities, activities and capabilities identified by *The Rapid* to promote and improve system safety and security;
- Identify the management structure and activities to be performed for integrating safety and security into all phases of project development.

The SSMP applies to all project development phases, including: preliminary and final design, construction phase, testing, demonstration, and initiation of operations. The plan applies to all work *The Rapid* or its contractors perform during the project development process. The SSMP will also apply to the resolution of any restrictions to full safety and security certification, even after the Silver Line BRT project has commenced revenue service.

The SSMP applies to any part of the Silver Line BRT project that affects safety and security, including the following areas:

1. System-wide Elements – includes the bus fleet, control system, voice & data communication, closed-circuit television (CCTV), traffic control systems, fare collection, supervisory control, auxiliary vehicles and equipment;
2. Fixed Facilities – includes stations, shelters, and equipment installed in stations or shelter stops such as benches, and fare vending machines;
3. Safety, Security, System Assurance, Operations and Maintenance Plans – includes items such as emergency preparedness plans, training programs, accident/incident investigation and reporting procedures, and standard operating procedures;
4. Personnel Qualifications and Training – aligning the appropriate individuals with the required skills and experience for each role, and preparing them to properly address safety and security issues is an essential part of the program;

5. Requirements of the Department of Homeland Security (DHS) – includes activities to ensure compliance with requirements specified by the State of Michigan.

The Safety and Security requirements of the Project will be planned and built-in, starting with the development of the basis of design standards and systems performance requirements. System safety and security must be concerned with patrons, the operating and maintenance staff, and the safety of the public and the protection of facilities and equipment.

The Rapid buses in revenue service must offer everything which interfaces with the system a degree of safety and security that meets the U.S. Public Transit Industry Standards, while striving to provide Policies and Procedures that offer a higher degree of safety. The SSMP will be implemented through the phases of design, specification, equipment selection, construction, installation and testing and operation.

These safety and security requirements intend to provide acceptable standards to ensure safety and security are incorporated into *The Rapid* transit System throughout the design, construction, and activation of the new construction. These principles follow acceptable safety practices and guidelines used by other transit systems that have recently been designed, constructed and are currently operating throughout North America.

The Safety and Security Management Plan will be verified and monitored by The Rapid's Safety Training Officer and an established Safety Committee.

6.0 Criteria

The A&E Design Consultants will consolidate the existing design criteria into a single set of criteria to be used during design of the Project. These criteria will include all of the safety and security requirements for each facility and system design. *The Rapid* staff and the Design Consultants will review the criteria and will revise them as applicable and include them as a part of the contract documents. The safety and security elements of the criteria, will become part of requirements that must be addressed by the CMAR, through the development of specifications, drawings, design reviews, and final acceptance.

6.1 Construction Phase Hazard and Vulnerability Analysis

Per the SSMP, all mitigations of hazards and vulnerabilities identified during any risk assessment that specifically affect the construction phase will be incorporated into contract documents. The SSC will determine if additional analyses to identify and mitigate hazard and vulnerabilities unique to the construction phase will be required.

6.2 Standards and Codes

Design, construction, and testing standards and codes will be identified and incorporated into all facility and system designs. These standards and codes are designed to incorporate safety as well as sound construction and manufacturing techniques. The CMAR will be responsible for compliance with:

- All Standards;
- Testing Procedures;
- Building Codes;
- Ordinances;
- ADA Regulations;
- Other Applicable Safety Regulations; and
- Industry Practices, if appropriate.

Examples of the codes and regulations include the following:

- American National Standards Institute (ANSI);
- American Society for Testing and Materials (ASTM);
- Occupational Safety and Health Administration (OSHA);
- National Fire Protection Association (NFPA);
- Underwriters Laboratories (UL);
- Building Officials and Code Administrators (BOCA);
- Institute of Electrical and Electronic Engineers (IEEE);
- Applicable Military Standards, Specifications, and Handbooks; and
- Local Codes and Ordinances.

6.3 System Safety and Emergency Response Plan

The Rapid has developed a SSMP in accordance with FTA requirements and with APTA guidelines. The update of this plan will continue to address the safety and security issues of operating a BRT system.

The SSMP includes operating procedures to deal with incidents such as the following:

- Injuries, Accidents or Collisions;
- Hazardous Material;
- Adverse environmental and weather conditions;
- System Failure; and
- Security Situations.

CHAPTER 7 – CONTRACT ADMINISTRATION

7.0 General

Contract administration is the day-to-day management of contracts and includes contract preparation and award, processing invoices and contract changes, grants administration, and contract compliance.

7.1 Responsibility

The contract administration duties are the responsibility of the Purchasing Department. To resolve the overlap between contract administration functions of the Purchasing Department and the responsibility of the Project Manager, who is ultimately responsible for the administration of the design and construction contracts, the Purchasing Department will operate in a support role. All staff, consultants and CMAR, are responsible for the proper and complete documentation of all contract activities.

7.2 FTA Project Management Meetings

FTA Region V in Chicago, Illinois is the FTA lead for the Project. All formal correspondence to FTA will be addressed to the Regional Administrator, unless directed otherwise.

The Rapid's philosophy is to include FTA in planning, development, and implementation of the Project. Accordingly, FTA through its Project Management Oversight Contractor (PMOC) will be kept informed of Project status and issues through quarterly reviews, regular briefings, status reports, and telephone conferences, as needed. Currently, *The Rapid* holds monthly conference calls and quarterly meetings with the FTA and PMOC.

7.3 Contract Preparation and Award

Procurement procedures in the advertising and award of consultant and CMAR contracts are detailed in *The Rapid* Procurement Standards Manual and in the Procurement Control section of this PMP (See Section 5.4 on *Procurement Specifications*).

The preparation of the technical portions of the contract documents is the responsibility of the BRT Technical Support Consultant, the GEC and PCC in coordination with the Project Manager. The final packaging and preparation of the non-technical bid documents is the responsibility of the Purchasing Department.

Pre-award contract administration procedures include review of the proposed agreement to ensure that:

- All provisions required by Federal and State regulations are included;

- Responses to requests for information are included; and
- That bid protests have been handled in accordance with *The Rapid* Procurement Standards Manual and FTA requirements.

The Purchasing Department performs these functions.

Once the proposal is determined to be within the budget, exceptions to the contract provisions are resolved, and the CMAR's qualifications are verified, a recommendation to award is made to the Board. The Purchasing Manager, in coordination with the Project Manager, prepares the agenda item for Board action. After approval by the Board, a Notice to Proceed is issued to the CMAR.

7.4 Processing of Invoices

Invoices are submitted directly to the Purchasing Manager by the consultants, suppliers, and CMAR. The invoices then are regenerated and routed to the Grants Officer and Project Manager for approval and processing for payment.

7.5 Monthly Progress Reports

The Project Manager is responsible for coordinating with the CMT members in all phases of the Project to obtain accurate and timely information for the FTA.

The official means of communicating program forecasting, management and reporting during construction to *The Rapid* Executive Team, is through the monthly narrative progress reports. These include significant events, relevant grant activities, and any changes in the grant schedule or budget. These monthly reports will be used to provide regular updates to the FTA.

7.5.1 Budget Revisions and Amendments

The Project Manager prepares budget revisions that may be required. Other budget revisions and amendments due to reallocation of funds are also submitted by the Project Manager on an as-needed basis. The Grant's Officer would be responsible for any required grant amendments.

7.5.2 Project Closeout

When the Project is completed, the Purchasing Department, the Project Manager, the Grants Officer and Assistant Executive Director assist in the Project "close-out" by preparing a narrative summary of the Project. That summary is included with the required financial status report and final Project budget prepared by the Project Manager. During the "close-out" process, the Project Manager also reviews, with the CEO, the Purchasing Department, and the Operations Division, any outstanding line items with remaining funding and adjusts the final budget accordingly. In compliance with Federal and State requirements, all grant-related files for Projects are retained for a three-year period after submission of the expenditure report at Project completion.

CHAPTER 8 – PUBLIC INVOLVEMENT

Keeping the community informed of the status of the Project will be a critical task. The Project Manager, with the support of the Communications and External Relations Department, is responsible for ensuring that the public is informed of the Project's status on a regular basis and the resulting impacts on the community. Communication efforts will be coordinated by the Project Manager and *The Rapid's* Communications and External Relations Department Manager. This task will also be coordinated with the Project team and the appropriate city (Grand Rapids, Kentwood and/or Wyoming) staff.

The External Relations Department Manager or designee has the overall responsibility for communicating internal and external comments and information regarding the project.

Figure 7 shows the flow of communication between *The Rapid*, the project team and the community prior to, and during construction activities.

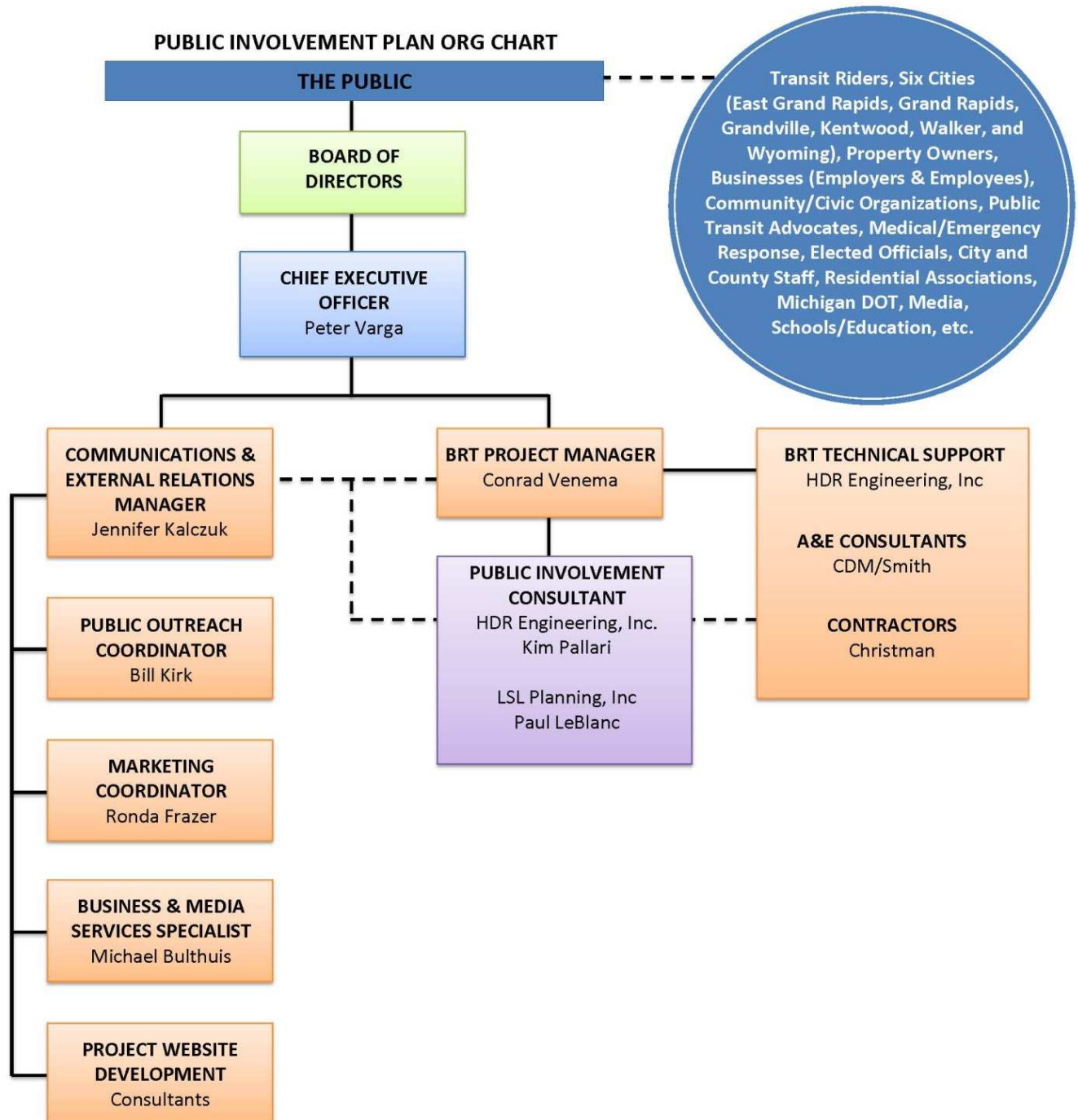
It is our goal to proactively communicate project-related information to the community. Project updates and other general information will be widely available via a variety of information channels. Specific information related to Grand Rapids, Wyoming, and or Kentwood residents, businesses, and other entities will be developed and distributed on an as-needed basis.

A proactive public involvement strategy and tactical plan, referred to as the Public Involvement Plan (PIP), has been prepared by *The Rapid* and will:

- Inform the public about the work in progress and planned service improvements;
- Monitor community and rider feedback about the Project; and
- Promote the services in advance of the opening, highlighting the benefits of the new line;
- It will guide the interface between the agency and the public pre, during and post construction.

The PIP has been reviewed and approved by the local jurisdictions and is currently being finalized by *The Rapid*. The PIP is included on the list of documents in Appendix D.

Figure 7: Public Involvement Plan Organizational Chart



8.0 Meetings with Community Organizations

In an effort to obtain community input regarding the Project and to solicit community support, the Communications and External Relations Department will coordinate meetings with various community organizations during the planning and implementation of the Project. These meetings will give an overview of the Project, an explanation of the Project in relation to the overall Rapid system and provide for questions from the group. The Project Manager with the assistance of the Communications and External Relations Department and the Executive Team has prepared a Public Involvement Plan (PIP) to be used before, during and after the construction of the Project.

While these meetings are not formal public hearings, this process allows *The Rapid* to gain insights from the community. Input obtained from these meetings will be summarized and provided to the Operations Division for consideration in implementation.

The External Relations Department continues to work with the local chambers of commerce, businesses, community, civic and homeowners associations, condominiums, and other groups to obtain a cross section of comments related to the planned Project. These meetings have been initiated early in the process and are reflected in the PIP.

One of the critical aspects of the program will be an information outreach to employers and employees in major activity centers along the corridor. As the construction of the roadway and BRT stations progresses, they will need to be informed so they can continue to utilize existing transit services and avoid interruptions to the operations of traffic on the roadway.

8.1 Interface with State and Local Government Agencies

Federal, State, and local governmental entities within the Project area will be informed about the Project early in the development of the Project plans. The Executive Team and the Project Manager will make formal submittals to the Metropolitan Planning Organizations (MPO) and the respective cities. Each entity will be provided with a presentation regarding the Project and comments will be solicited. Comments obtained from these presentations and meetings will be summarized and documented by the Communications and External Relations Department Manager. The Manager will communicate this information to Project Manager and CMAR through regular updates.

Station plans and joint development efforts will be coordinated with the appropriate public agencies through the BRT Administrative Committee to gain their early input and to facilitate obtaining the required permits.

8.2 Public Hearings and Meetings

Public hearings are held as part of all regular Board meetings; however, special public hearings will be held at locations and/or times more convenient to affected communities. Comments obtained from public hearings will be summarized and presented to the Board for consideration.

8.3 Media Interface

The Communications and External Relations Department will be responsible for communications with the trade, local, and national media in relation to the Project. The Communications and External Relations Department Manager shall be the first point of contact for all media reporters. Board Members, the CEO, Project Manager, COO, CMAR, or others associated with the Project may be called upon to provide background information or to be interviewed by the media. In no case is the consultant or CMAR to solicit media involvement in the Project without *The Rapid's* prior consent. *The Rapid* standard agreements also prohibit the use of the Project in any advertising by the consultant or CMAR without prior written consent.

8.4 Informal Public Input

The Rapid performs a ridership survey every two years to determine customer satisfaction levels, identify trends in ridership, and collect demographic information. The survey identifies trends in ridership; this information is then used by the Planning Department to develop strategies to better meet public needs.

There are a number of ways the public communicates with *The Rapid* on a day-to-day basis. The Communications and External Relations Department coordinates distribution of public feedback to the appropriate staff and tracks responses from the staff to the public.

8.5 Public Information

During the construction of the Project, *The Rapid* will develop and distribute project bulletins. The bulletins will focus on notifying the community of the following:

- Status of the Project and long-range plans;
- Up-coming construction work;
- Pending service modifications;
- Planned feeder bus improvements;
- Station modifications; and
- Joint venture proposals.

These bulletins will be distributed via a number of channels which may include any or all of the following: direct mail, email, web and social media sites, in Rapid facilities and vehicles; third-party



sources (e.g. providing content to cities to run in their respective newsletters), and through various news media.

CHAPTER 9 – PMP CONTROL AND REVISIONS

9.0 Control of the Project Management Plan

The Project Manager is responsible for the maintenance and distribution of the PMP, as well as coordination of review, approval, and distribution of revised and new PMP documents. The Project Manager is responsible for retaining all master file copies, both hard copy and electronically stored versions of the document, namely the PMP, referenced procedures, manuals, and plans including all figures, tables, and forms. The maintenance and distribution of the PMP and revisions thereto, shall be in accordance with the Document Control Procedure.

9.1 Revisions to the Project Management Plan

The requestor of any revision to this PMP shall provide a brief description of the change, reason for the change, urgency, and identify other documents affected by the change to the Project Manager.

The Project Manager shall determine whether the change is valid and will distribute the proposed change to the appropriate Departments for review and comment. The Project Manager shall incorporate the approved revisions into this PMP and will distribute the revised document to the PMP holders.

APPENDICES

Appendix A	<i>The Rapid/Cities</i> Interlocal Agreement
Appendix B	Findings of No Significant Impact (FONSI)
Appendix C	Backup Documentation for Project Schedule
Appendix C-1	CMAR Basis of Project Schedule
Appendix D	List of Key Supporting Project Documents
Appendix E	Project Team Qualifications

APPENDIX A: The Rapid Interlocal Agreement

INTERLOCAL AGREEMENT

(SILVER LINE BUS RAPID TRANSIT PROJECT)

This INTERLOCAL AGREEMENT (“**Agreement**”) is made and entered into as of the 6th day of June, 2012 by and between the INTERURBAN TRANSIT PARTNERSHIP, a Public Authority incorporated under the Public Transportation Authority Act, P.A., 196 of 1986, (“**The Rapid**”), the CITY OF GRAND RAPIDS, a Michigan municipal corporation (“**Grand Rapids**”), the CITY OF KENTWOOD, a Michigan municipal corporation (“**Kentwood**”), and the CITY OF WYOMING, a Michigan municipal corporation (“**Wyoming**” and together with Grand Rapids and Kentwood, collectively, the “**Cities**” and individually “**City**”).

WHEREAS, The Rapid and the Cities have entered into a Memorandum of Understanding dated as of June 9, 2011 (“**MOU**”) which describes the intention of the parties to cooperate in the development of the Silver Line Bus Rapid Transit (“**BRT**”) project, a 9.6 mile, approximately \$40 million rapid transit bus service that will follow a route through the Cities as more particularly described in the attached Exhibit A (“**Silver Line**” or “**Project**”);

WHEREAS, the Project budget includes federal funding through the Federal New Starts/Small Starts project grant program from the Federal Transit Administration (“**FTA**”) to assist in financing the costs of the Silver Line (“**FTA Grant**”);

WHEREAS, the Project budget includes state funding from the State of Michigan (the “**State**”) to assist in financing the costs of the Silver Line (“**State Grant**”);

WHEREAS, it is the intent of the parties to establish duties, responsibilities and rights of each party during the design, construction and operational phases of the Silver Line;

WHEREAS, the Project is being done in the interest of public convenience and safety and will benefit the citizens and the economy of the Cities and the surrounding region;

WHEREAS, the Cities and The Rapid, as public agencies, are empowered by the Urban Cooperation Act of 1967, MCLA § 124.501 *et seq.* to exercise jointly any power, privilege, or authority that they share in common and that each might exercise separately;

NOW, THEREFORE, The Rapid and the Cities agree as follows:

ARTICLE I

DEFINITIONS

1.1 In addition to terms defined elsewhere in this Agreement, the following terms shall have the following meanings:

“*BAC*” shall mean the BRT administrative committee established in Section 2.5 of this Agreement.

“*Base Plans*” means the Station 30% Base Plans and associated Design Manual dated March, 2012 prepared by The Rapid.

“*BRT*” means bus rapid transit.

“*Facilities*” means all buildings, streets, utilities, parcels, rights of way, medians, easements and premises, permitted areas and leased parcels or buildings owned and operated by one or more of the Cities.

“*Final Project Design*” means the final plans and specifications for the Project as developed and approved by the TAC.

“*Force Majeure*” shall have the meaning set forth in Section 3.19.

“*Maintenance*” means all reasonable costs associated with the day to day and seasonal upkeep of long term retention, preservation and restoration.

“*Priority*” means the advantage given to The Rapid’s BRT vehicles operating within the Project limits to control traffic signals, intersection by intersection, and advance through intersections before cross traffic (with the exception of emergency vehicles properly equipped with communication equipment) for the purpose of achieving travel time savings and more frequent service.

“*Project*” means the design, construction and implementation of the Silver Line BRT project, a 9.6 mile, approximately \$40 million rapid transit bus service that will follow a route through the Cities as more particularly described in the attached Exhibit A.

“*Project Budget*” means the total estimated costs of the Project, which shall not exceed the amount of funding available for the Project, including the FTA Grant and any additional funding sources that are committed to the Project after the date of this Agreement. The initial itemized Project Budget is attached to this Agreement as Exhibit B. The Project Budget is subject to change based upon the Final Project Design, and any change in the funding sources for the Project.

“*Project Corridor*” means the route of the Silver Line as depicted on attached Exhibit A-1.

“*Project Cost*” means the total cost of designing and constructing the Project not to exceed \$39.874 Million Dollars, unless additional funding sources are committed to the Project after the date of this Agreement.

“*Project Schedule*” means the schedule for construction of the Project.

“*Third Party Utility Relocation Contracts*” shall be defined as provided in Section 2.2.2(b) of this Agreement.

“*TAC*” shall have the meaning described in Section 2.1 of this Agreement.

“*Traffic Signal Priority*” or “*TSP*” means a comprehensive traffic control system consisting of signal heads, pedestrian signals, and traffic control signs, all interconnected to interact in a coordinated fashion. Said system must be of a type that is compatible with the Cities’ integrated corridor and downtown signal system.

“*Utility Relocation Plan*” shall have the meaning described in Section 2.2.2(a) of this Agreement.

ARTICLE II

DESIGN AND IMPLEMENTATION OF THE PROJECT

2.1 TAC. All elements of the Project’s design and construction shall be developed, prepared and overseen by The Rapid, subject to the review and approval of a technical advisory committee composed of planning and engineering staff of the Cities and the planning staff of The Rapid (“TAC”). Each of the Cities and The Rapid shall designate two (2) persons to serve as members of the TAC within thirty (30) days after the date of this Agreement.

2.1.1 Meetings. The TAC shall meet as necessary to review and approve the Final Project Design, and any changes to the Final Project Design that arise after the construction of the Project begins. The members of the TAC shall elect a chairperson to preside over the meetings and a secretary to record the minutes of the meetings, from among its members at its initial meeting. After the initial meeting, the Chairperson shall schedule meetings by advance notice to all of the members. If a member is unable to attend a scheduled meeting, that member may, by advance notice to the other members, appoint a designee having equal authority to attend the meeting in his or her place. A meeting may not be convened unless a quorum consisting of not less than one representative of each of the Cities and The

Rapid, or their respective designees, are present. The Base Plans shall be the accepted starting point for the TAC's work in developing the Final Project Design. It is the intent of the parties that development of the Final Project Design shall entail resolving design issues arising in connection with the implementation of the Base Plans, including, without limitation, the precise beginning and ending points of dedicated lanes within each City, but shall not involve fundamental changes to the Base Plans. The Final Project Design (including, without limitation, final BRT Station design, final TSP system design, and final roadway design) shall be approved by the TAC no later than November 30, 2012. The TAC shall approve each element of the Final Project Design by general consent of all members of the TAC or their respective designees in attendance at a meeting scheduled and convened in accordance with this section. The Rapid shall appoint a project engineer who shall be responsible for consulting with the TAC, and implementing all aspects of the Final Project Design.

2.1.2 Authority. The TAC shall have full power and authority to approve the Final Project Design for submission to the Cities for any required final planning or other approvals and permits. Subsequent to receipt of all TAC, local and other required approvals, the TAC shall resolve all technical issues arising with the construction of the Project; provided, however, that the TAC is not authorized to modify the Final Project Design without following the same process used in adopting the Final Project Design. Notwithstanding the foregoing, the TAC shall not approve a Final Project Design which:

- (a) has an aggregate estimated cost in excess of the Project Budget, or
- (b) violates or is inconsistent with any requirement of the FTA Grant or the State Grant, or
- (c) violates any applicable laws or local ordinances.

2.1.3 Duration. Upon completion of construction of the Project and formation of the BAC, the TAC shall be disbanded.

2.2. Construction of the Project. Except as otherwise provided below, the Rapid shall consult with the TAC and seek the approval of the TAC and the Cities as required, purchase all materials, perform all site work, hire all contractors and consultants, administer all construction contracts, administer the FTA Grant and the State Grant, and take all other actions necessary to complete the construction of the Silver Line in accordance with the Final Project Design approved by the TAC.

2.2.1 Project Milestones. The TAC shall approve the Project Schedule after approving the Final Project Design. Modifications to deadlines set forth in the Project Schedule shall be permitted only for events of Force Majeure. The TAC shall use its reasonable best efforts to incorporate the following Project milestones into the Project Schedule:

(a) The Rapid shall acquire all required permits and approvals, including without limitation encroachment permits where applicable, required based upon the Final Project Design no later than December 15, 2012;

(b) To the extent required by the Final Project Design, utilities currently located within the Project Corridor shall be relocated in accordance with subsection 2.2.2 below as each BRT Station is constructed between January 1, 2013 and May 30, 2014;

(c) Construction of the Project shall be substantially completed no later than August 25, 2014;

(d) The TSP System shall be installed and operational no later than June 3, 2014;

(e) All testing of the Project Components and training of The Rapid personnel shall occur between June 3, 2014 and August 25, 2014.

(f) The Silver Line shall begin operations no later than September 1, 2014.

2.2.2 Relocation of Utilities. The Rapid shall work in collaboration with each of the Cities to relocate all utilities currently located beneath the proposed locations for BRT Stations to the extent required by the Final Project Design as provided in this Section, at The Rapid's sole cost and expense.

(a) The Rapid shall develop a plan and schedule for relocation work to be performed in any City ("**Utility Relocation Plan**") for review and approval by such City prior to commencing such work. Any changes to the Utility Relocation Plan that are inconsistent with the Final Project Design shall not be implemented unless reviewed and approved by the TAC and The Rapid.

(b) The Rapid shall be solely responsible to manage and cause the performance of each Utility Relocation Plan. The Cities shall use their best reasonable efforts to assist The Rapid in relocating utilities within their

jurisdictional boundaries. Each City shall be responsible for plan reviews associated with the relocation of utilities within that City's boundaries and the Cities shall assist The Rapid's project manager in facilitating the relocation of utilities within the public rights of way.

(c) The Rapid shall reimburse each City for all costs and expenses incurred by that City in providing its assistance with the relocation of utilities (whether public or private), including without limitation, charges for equipment, materials and labor at the City's standard rates for such work, all overhead charges, and all "out-of-pocket" expenses paid to third parties who are not employees of the City.

(d) The Rapid and the Cities shall use their reasonable best efforts to cause all Utility Relocation Plans concerning private utilities owned by third parties, to be implemented and paid for by those third parties. In this regard, the Cities will use their reasonable best efforts to exercise any rights they may have, by contract or otherwise, to prevent third party utility owner from rejecting, terminating or enjoining the work to be performed by The Rapid under the Utility Relocation Plans.

(e) The Rapid will use its reasonable best efforts to impose a daily penalty upon its contractors for failure to complete the utility relocation work in accordance with the Project Schedule, subject only to permitted delays based upon events of Force Majeure.

(f) The Rapid's Project engineer shall conduct the final inspection of all completed utility relocation work to ensure consistency with the Final Project Design.

2.2.3 TSP. The specifications for the TSP shall be determined by Grand Rapids in cooperation with the Cities of Kentwood and Wyoming. A TSP meeting Grand Rapids' specifications shall be procured by The Rapid, and installed and calibrated by Grand Rapids in accordance with the Project Schedule. After installation and calibration of the TSP, the TSP shall be tested jointly by Grand Rapids and The Rapid. All costs incurred by Grand Rapids in specifying, installing, calibrating and testing the TSP shall be reimbursed by The Rapid.

2.2.4 Coordination With Other Projects. The Cities of Kentwood and Wyoming are scheduling a road improvement project within the Project Corridor on Division Avenue between 54th Street and 60th Street for construction in 2014. Beyond this project, the Cities are not presently aware of any other municipal construction or repair projects scheduled or anticipated that may interfere with the

construction of the Project. The TAC shall be responsible for resolving scheduling conflicts and other issues presented by the above-referenced project and any other municipal construction or repair projects that arise during the construction of the Project. The parties' representatives on the TAC shall be their primary contacts for communications required to coordinate and prevent delays caused by such other municipal construction or repair projects.

2.2.5 Permitting. Without limiting the foregoing, the Project construction manager will be responsible to make application and submit drawings for building, electrical, or any other required permits in any City where a structure is to be constructed consistent with the Final Project Design.

2.3. Project Costs. The Rapid shall pay and be solely responsible for the Project Cost, along with all fees and expenses associated with the Final Project Design consistent with the Project Budget. Each City shall pay and be solely responsible for the cost and expense of all additional work it requests in writing which is not part of the Final Project Design. To the extent that The Rapid incurs costs or expenses for such additional work at the request of a City, that City shall reimburse The Rapid for such costs and expenses within thirty (30) days after the City's receipt of The Rapid's invoice and supporting documents.

2.4. Ownership of the Project. The Rapid shall hold title to all real property interests, if any, acquired as part of the Project or otherwise transferred by the Cities in connection with the Project, and shall hold title to all improvements, including the BRT Stations (but excluding improvements to public utilities and public rights of way required to support the Project), constructed in connection with the Project. Each City shall continue to own all public rights of way, utilities and public properties owned by that City as of the date of this Agreement.

2.5 Operation of the Project. The Rapid shall be solely responsible for the day to day operation of the Silver Line at its sole cost and expense. If issues regarding the operation of the Silver Line arise after construction of the Project is completed that require coordination between the Rapid and the Cities, a BRT administrative committee comprised of the chief executive officer of each of the Cities (Mayor or City Manager), the Chief Executive Officer of The Rapid, or their respective designees (the "BAC") shall render advice and assistance to The Rapid in resolving those issues. The manner in which those issues are resolved, however, shall be determined solely by the board of The Rapid.

2.5.1 Meetings. The BAC shall meet as often as necessary after construction of the Project is completed, to assure the efficient and effective operation of the Silver Line. The members of the BAC shall elect a chairperson to preside over the meetings, and a secretary to record the minutes of the meetings,

from among its members at its initial meeting. After the initial meeting, the Chairperson shall schedule meetings by advance notice to all of the members. If a member is unable to attend a scheduled meeting, that member may, by advance notice to the other members, appoint a designee having equal authority to attend the meeting in his or her place. A meeting may not be convened unless all the members of the BAC or their designees are present. The BAC shall make decisions by general consent of all members of the BAC or their respective designees in attendance at a meeting scheduled and convened in accordance with this section.

2.5.2 Authority. The BAC may render advice and assistance to The Rapid. The Rapid shall use its reasonable best efforts to implement the recommendations of the BAC, but The Rapid shall not be obligated to comply with the recommendations of the BAC. Notwithstanding the foregoing, The Rapid shall have no obligation to consider or implement any recommendation of the BAC that would materially impair the operation of the Silver Line, or impose or result in an increase in The Rapid's cost or expense of operating the Silver Line.

2.5.3 Duration. The BAC shall continue in existence so long as this Agreement remains in effect.

2.5.4 Contacts. After construction of the Project is completed and operation of the Silver Line begins, the points of contact for each of the parties shall be their representative members on the BAC.

2.6 Maintenance of the Project. The parties' obligations to maintain the Silver Line are as follows:

2.6.1 Maintenance Obligations of The Rapid. The Rapid shall be responsible, at its sole cost and expense, for (a) operating the Silver Line, (b) operating and maintaining its vehicles, equipment and other properties used in connection with the Silver Line, (c) maintaining the BRT Stations and appurtenances thereto, including, without limitation, snow removal, graffiti abatement, painting, trash removal, sidewalk and curb replacement or repair, as necessary, and (d) maintaining any improvement to the public rights of way made by The Rapid consistent with this Agreement.

2.6.2 Maintenance Obligations of the Cities. Each City, at its sole cost and expense, shall meet all legal obligations relative to the maintenance of all public rights of way, Facilities, and other public places under its jurisdiction.

2.6.3 Maintenance of the TSP. Grand Rapids shall maintain the TSP in good repair and operating condition. All costs incurred by Grand Rapids in

maintaining the TSP in proper working order shall be approved in advance by The Rapid, and reimbursed by The Rapid upon receipt of Grand Rapids' invoice for such costs and all supporting documents.

2.7 Cooperation by the Cities. The Cities shall use their reasonable best efforts to cooperate with The Rapids' efforts and activities in constructing the Project. The points of contact for the parties with respect to all matters concerning the design and construction of the Project shall be the parties' representatives on the TAC. The points of contact for all matters concerning the operation and maintenance of the Project shall be the parties' representatives on the BAC. If, and to the extent, that other construction projects within a City arise that may conflict with or otherwise impede the progress of the Project, that City shall notify the other parties to this Agreement of the points of contact for the contractors and other parties involved in such conflicting construction projects, and otherwise coordinate communications between the parties.

2.8 FTA and State Oversight. The parties acknowledge and agree that the FTA and the State will monitor all aspects of the Project. The FTA and the State shall have the authority to access applicable Project files of The Rapid and the Cities to the extent permitted by law, copies of all completed work products, invitations to all progress review and public involvement meetings, and copies of minutes generated as a result of all such meetings and such other documentation as required. As the recipient of the FTA Grant and the State Grant, The Rapid shall be solely responsible for administration of the FTA Grant, the State Grant, and all required reporting to the FTA and the State of Michigan. All matters pertaining to grant funds expenditures, allocations and disbursement of funds will be solely the responsibility of The Rapid.

2.9 Insurance. The Rapid shall obtain, and continuously maintain for the duration of this Agreement, and provide to the Cities prior to the execution of this Agreement and annually thereafter upon the request of the Cities, proof of commercial liability insurance coverage naming each of the Cities and their officers and employees as additional insured parties. Such insurance shall have an initial limit of \$1,000,000 per occurrence and \$2,000,000 general aggregate. Said insurance must contain comprehensive coverage to insure against any and all claims arising out of or attributable to the construction and operation of the Silver Line, regardless of whether The Rapid or any of its officers, employees, or agents are negligent in any manner, and also must contain contractual liability coverage to insure that the obligations of The Rapid to the Cities pursuant to this Agreement are met. All certificates of insurance evidencing the insurance coverage required by this section shall contain an unqualified guarantee that the Cities will be provided with thirty (30) days' prior written notice of cancellation, termination, non-renewal, or material change in coverage of the insurance policy provided. If The Rapid fails to maintain the required insurance in force during the term of this Agreement, each City may, at its option, obtain such insurance at its own expense and bill the costs of the same to The Rapid,

which costs The Rapid agrees to promptly pay or the Cities may revoke any encroachment permits granted in connection with the construction of the Project.

ARTICLE III

GENERAL PROVISIONS

3.1 Term. The term of this Agreement shall be from the date first written above through and including December 31, 2025. Thereafter, this Agreement shall automatically renew from year to year unless terminated by written notice delivered by any party to the other parties not later than September 30. Notwithstanding the foregoing, this Agreement may be terminated by The Rapid at any time if the FTA Grant or the State Grant is withdrawn, or if funding under the FTA Grant or the State Grant is reduced or impaired after the date of this Agreement.

3.2 Effective Date. This Agreement shall not become effective and binding on the parties unless and until it is approved by official action of the governing bodies of The Rapid and each of the Cities.

3.3 Indemnification. To the maximum extent permitted by law, each party will defend, indemnify and hold harmless the other party and all of its officials, employees, principals and agents from and against all claims, demands, suits, actions, liability of any kind (including, without limitation, injuries to persons or property), costs and expenses (including, without limitation, reasonable attorneys' fees) arising out of the errors, omissions or negligent acts of the indemnifying party, its contractors and/or employees, agents, and representatives in performing such indemnifying party's obligations under this Agreement. No party shall be required to indemnify, defend, or save harmless the other party if the claim, suit or action is caused by the sole negligence of the other party. Where such claims, suits or actions result from concurrent negligence of one or more parties, this indemnification shall be valid and enforceable only to the extent of the indemnifying party's own negligence as determined by a court of competent jurisdiction. Each party to this Agreement will provide reasonable notice to the other parties of any and all claims, actions, losses or damages that arise or are brought against that party relating to or pertaining to this Agreement.

3.4 Entire Agreement. This Agreement constitutes the entire agreement of the parties with respect to the Project. This Agreement may not be amended or modified orally. All understandings and agreements heretofore between the parties with respect to the Silver Line are merged in this Agreement which alone fully and completely expresses their understanding. This Agreement may not be amended, modified, altered or changed in any respect whatsoever except in writing duly executed by the parties hereto.

3.5 Waiver. The exercise (or failure to exercise) of any one of the parties' rights or remedies under this Agreement shall not be deemed to be in lieu of, or a waiver of, any other right or remedy contained herein or provided by law, except to the extent inconsistent herewith. No waiver of any provision of this Agreement shall be effective unless it is in writing and signed by the party against whom it is asserted and any such written waiver shall only be applicable to the specific instance to which it relates and shall not be deemed to be a continuing or future waiver.

3.6 Partial Invalidity. In the event any term or provision of this Agreement is determined by appropriate judicial authority to be illegal or otherwise invalid, such provision shall be given its nearest legal meaning or be construed or deleted as such authority determines, and the remainder of this Agreement shall remain in full force and effect.

3.7 Construction. The rule of strict construction shall not apply to this Agreement. This Agreement has been prepared by The Rapid and its professional advisors and reviewed and modified by the Cities and their professional advisors. The Rapid, the Cities, and their separate advisors intend this Agreement to be the product of all of their efforts, that it expresses their agreement, and that it should not be interpreted in favor of or against either The Rapid or any of the Cities merely because of their efforts in preparing it.

3.8 Applicable Law. This Agreement shall be governed by the laws of the State of Michigan.

3.9 Captions. The captions of this Agreement are for convenience and reference only and in no way define, describe, extend or limit the scope or intent of this Agreement or the intent of any provision hereof.

3.10 Time. Whenever any time period is to be computed hereunder, the day from which the period shall run is not to be included, and any period ending on a Saturday, Sunday or legal holiday shall be extended to the next business day.

3.11 Counterparts. This Agreement may be executed in counterparts by the parties hereto and each shall be considered an original, but all such counterparts shall be construed together as representing one agreement between the parties.

3.12 Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns. Whenever used, the singular number shall include the plural; the plural number shall include the singular; and the use of any gender shall include all genders.

3.13. Third Party Beneficiaries. This Agreement is not intended to create or confer third party beneficiary status on the public or any member of the public, or to

authorize anyone not a party to this Agreement to maintain a suit for personal injuries or property damage pursuant to any of the terms or provisions of this Agreement.

3.14 Notices. All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile or electronic mail with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other party at the address set forth below, or such other address of which such party provides notice to the other parties in accordance with paragraph:

THE RAPID: INTERURBAN TRANSIT PARTNERSHIP
300 Ellsworth S.W.
Grand Rapids, Michigan 49503
Attn: Peter Varga, CEO
Telephone: (616) 456-7514
E-mail: PVarga@ridetherapid.org

GRAND RAPIDS: CITY OF GRAND RAPIDS
300 Monroe – Room 660
Grand Rapids, Michigan 49503
Attn: Eric R. DeLong, Deputy City Manager
Telephone: (616) 456-3119
E-mail: edelong@grcity.us

KENTWOOD: CITY OF KENTWOOD
4900 Breton Ave., S.E.
Kentwood, Michigan 49508
Attn: Richard L. Root, Mayor
Telephone: (616) 456-0771
E-mail: mayor@ci.kentwood.mi.us

WYOMING: CITY OF WYOMING
1155 28th Street, S.W.
Wyoming, Michigan 49509
Attn: Curtis L. Holt, City Manager
Telephone: (616) 530-7226
E-mail: holtc@wyomingmi.gov

3.15 No Joint Venture. Nothing in this Agreement shall be deemed or construed to create a partnership or joint venture, or employer-employee or principal-agent relationship, or to otherwise create any liability for one party whatsoever with respect to the indebtedness, liabilities, and obligations of another party. Each party is and shall be a public entity, separate and distinct from the other parties and shall have the right to supervise, manage, operate, control and direct performance of its obligations under this Agreement.

3.16 Assignment. No party to this Agreement shall assign, transfer or delegate any of its rights, obligations or duties under this Agreement without the prior written consent of the other parties to this Agreement.

3.17 Public Disclosure. This Agreement shall be subject to public disclosure in accordance with the Freedom of Information Act, MCLA § 15.231 *et seq.*

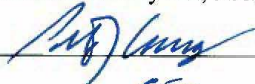

3.18 Authority. Each party to this Agreement represents and warrants that the person executing this Agreement on its behalf has full power and authority to enter into this Agreement on behalf of such party, and that such party is authorized by law to enter into and perform its obligations under this Agreement.

3.19 Force Majeure. No party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, actions or orders of a civil or military authority, acts of a public enemy, accidents, fires, explosions, or acts of God including, without limitation, earthquakes, floods, winds or storms. In any such event, the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of this Agreement after the intervening cause ceases.

WHEREFORE, The Rapid and the Cities have executed this Agreement as of the date first written above.

(Signature Page to Interlocal Agreement for the Silver Line Bus Rapid Transit Project)

INTERURBAN TRANSIT PARTNERSHIP, a
Public Authority incorporated under the Public
Transportation Authority Act, P.A., 196 of 1986

By: _____
Its:  CEO _____

ATTEST:

_____

(Signature Page to Interlocal Agreement for the Silver Line Bus Rapid Transit Project)

CITY OF GRAND RAPIDS, a Michigan municipal
corporation

By: 

Its: Mayor

ATTEST:


Deputy City Clerk

**AFFIX
Mayor's Signature**

Catherine M. Miska
Dept. of Law

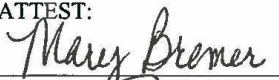
(Signature Page to Interlocal Agreement for the Silver Line Bus Rapid Transit Project)

CITY OF KENTWOOD, a Michigan municipal corporation

By: 

Its: Mayor

ATTEST:


MARY BREMER

(Signature Page to Interlocal Agreement for the Silver Line Bus Rapid Transit Project)

CITY OF WYOMING, a Michigan municipal
corporation

By: 

Jack A. Poll

Its: Mayor

ATTEST:


Heidi A. Isakson, City Clerk

APPENDIX B: Findings of No Significant Impact(FONSI)



U.S. Department
Of Transportation
**Federal Transit
Administration**

Note: See attached signed FONSI

Region V

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-1646
312-886-0351 (fax)

July 11, 2011

Peter Varga
Chief Executive Officer
The Rapid
300 Ellsworth Avenue SW
Grand Rapids, MI 49503-4005

Re: Finding of No Significant Impact for the Silver Line Bus Rapid Transit Project

Dear Mr. Varga:

Based upon the Federal Transit Administration's (FTA) review of the Environmental Assessment dated January, 2011, we have issued a Finding of No Significant Impact (FONSI) for the Silver Line Bus Rapid Transit Project that connects Downtown Grand Rapids with the cities of Wyoming and Kentwood. A copy of the FONSI is enclosed.

Please be advised that in accordance with 23 C.F.R. § 771.121, the Interurban Transit Partnership (also known as the "The Rapid") is required to transmit a copy of this FONSI to the affected units of Federal, State, and local government. The Rapid is also required to ensure that the document shall be made available upon request by the public, in accordance with 23 C.F.R. § 771.121(b). The FONSI and its Exhibits and Appendix also must be accessible via the project's website, www.ridetherapid.org. The Rapid may also want to send copies to all the consulting parties.

If you have any questions regarding this determination, please contact Renee Kuruc at (312) 353-1646.

Sincerely,

for Rhonda Reed
Marisol R. Simon
Regional Administrator

cc: Cecelia M. Comito, FTA
Stewart McKenzie, FTA
Taiwo Jaiyeoba, The Rapid

**FEDERAL TRANSIT ADMINISTRATION
REGION V**

FINDING OF NO SIGNIFICANT IMPACT

Project: Silver Line Bus Rapid Transit Project

Applicant: Interurban Transit Partnership, also known as *The Rapid*

Location: Cities of Grand Rapids, Wyoming, and Kentwood, Kent County, Michigan

Dated: July 11, 2011

Introduction

The Interurban Transit Partnership (also known as "*The Rapid*") seeks to construct a bus rapid transit system located in Kent County, Michigan. The Silver Line Bus Rapid Transit project ("Silver Line BRT") is a proposed north-south bus rapid transit system that connects Downtown Grand Rapids with the cities of Wyoming and Kentwood. The proposed alignment for the Silver Line BRT extends 9.6 miles from the Rapid Central Station on the periphery of the Grand Rapids Central Business District south to 60th Street within the cities of Wyoming and Kentwood.

The Interurban Transit Partnership prepared an Environmental Assessment to determine the Silver Line BRT's potential social, environmental, and economic impacts in accordance with the National Environmental Policy Act of 1969 (NEPA). The Federal Transit Administration (FTA) independently reviewed and approved the Environmental Assessment before it was issued for public review and comment. On January 25, 2011, FTA issued the Environmental Assessment for public comment pursuant to 23 C.F.R. § 771.119. The Environmental Assessment evaluated a Build Alternative (the Silver Line BRT) and a No Action Alternative, which serves as a baseline against which to evaluate the effects of the Silver Line BRT on transportation, social, economic, and environmental factors. The No Action Alternative undertakes no major transit system improvements or investments within the Division Avenue corridor, but rather maintains the existing transit system with 15-45 minute headways in off-peak hours and 15-30 minute headways in peak-hour service.

Proposed Project

The proposed Silver Line BRT consists of a bus rapid transit route that is 9.6 miles in length, starting at the Rapid Central Station in Downtown Grand Rapids, traveling north to Michigan Street via Grandville Avenue, Market Avenue, and Monroe Avenue. The alignment then circulates through downtown and follows Division Avenue southbound, travelling through the cities of Wyoming and Kentwood to 60th Street. The Silver Line BRT was initially routed along Lafayette Avenue for approximately three blocks. Following an evaluation of transportation, socio-economic, historic and environmental factors, as well as neighborhood meeting input, *The Rapid* decided to reroute the line to

Ransom Avenue to avoid residential areas within the Heritage Hill Historic District, increase proximity to major activity centers along Ransom Avenue, and produce a minimal impact on traffic flow. The proposed Silver Line BRT system includes 18 stations consisting of two platforms at each station location, with the exception of the station at Central Station, consisting of a single platform. No property acquisition is proposed as part of the project, since each of the stations will be located in existing road rights-of-way.

The purpose of the Silver Line BRT project is to improve travel times in the corridor, provide an alternative mode of travel to the automobile, and improve reliability for existing and new transit riders in the corridor, particularly improving connectivity between residents along the corridor to major employment and education centers in the Grand Rapids central business district.

Agency Coordination and Public Opportunity to Comment

The Silver Line BRT Environmental Assessment was made available for public review and comment from January 25, 2011 through February 23, 2011. A public hearing on the Environmental Assessment was held on February 23, 2011. Notifications of the availability of the Environmental Assessment and the public hearing appeared in area newspapers, including the local Spanish language newspaper, on January 21, 2011, and were sent to stakeholders in the project corridor including local, regional, and state agencies. The Environmental Assessment was made available for viewing online at *The Rapid's* website and print copies were available to the public at the Planning Departments of the cities of Grand Rapids, Wyoming and Kentwood, and at the office of the Grand Valley Metropolitan Council (GVMC). The hearing was attended by 11 individuals. During the public comment period, comments were submitted by 5 individuals or organizations via stenographer record and letters. All comments have been addressed and the comments and associated responses are included in *Appendix A*. A copy of the complete transcript of the public hearing is included in *Appendix B*.

Environmental Effects and Mitigation

The Rapid will construct the project in accordance with the design features and mitigation measures as described in the Environmental Assessment. This Finding of No Significant Impact addresses mitigation measures as a result of the Environmental Assessment for the preferred alternative. A list of the mitigation measures are included in the Environmental Assessment and outlined below.

Determinations and Findings

National Environmental Policy Act (NEPA) Finding

FTA served as the lead agency under NEPA for the project. *The Rapid* prepared the Environmental Assessment in compliance with NEPA, 42 U.S.C. Section 4321 et seq., and with FTA's regulations, 23 CFR Part 771. FTA has made an independent evaluation of the Environmental Assessment.

After reviewing the Environmental Assessment and supporting documents, including public comments and responses made thereof, the FTA finds under 23 C.F.R. § 7721.121 that the proposed project, with the mitigation to which *The Rapid* has committed, will have no significant adverse impact on the environment. The record provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

The Silver Line BRT will have short-term impacts during construction on residents and businesses along the alignment that may cause temporary interruption in access to homes and businesses, as well as possible noise, dust, and fumes during construction. The populations along the alignment include low income or minority populations and *The Rapid* has committed to providing public outreach to coordination with businesses and residents to minimize construction disruptions, and to maintain access for all properties impacted by construction (as described in Section 3.3.2 of the Environmental Assessment). As a part of this commitment, *The Rapid* has prepared and executed a Memorandum of Understanding (MOU) with the three host communities of Grand Rapids, Wyoming and Kentwood (see *Appendix C*). A plan for public outreach, including strategies and responsibilities during construction, will be developed by *The Rapid* before construction begins. Additionally, *The Rapid* will comply with all federal, state and local requirements for construction projects and will implement control measures during construction. These measures include the use of mufflers, compliance with federal noise level standards, dust suppression measures, construction staging and traffic control plans to minimize traffic and pedestrian movement disruption, and adequate public notice and coordination with area residents of the construction progress and temporary closures.

The FTA also finds, in accordance with Federal Transit Law at 49 U.S.C. § 5324(b), that an adequate opportunity to present views was given to all parties with significant economic, social, cultural, or environmental interest, that the preservation and enhancement of the environment and the interest of the community in which the Project is located were considered.

Environmental Justice Finding

Executive Order 12898 provides that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.” A disproportionately high and adverse effect on human health or environment is defined as an effect predominantly borne by, or would be suffered by, low-income populations or minority populations (collectively “environmental justice populations”) and that is appreciably more severe and greater in magnitude than adverse effects suffered by a non-environmental justice population. While environmental justice populations are present in the study area, the effects associated with the Silver Line BRT Project are similar throughout the area. No environmental justice population will experience appreciably more severe or greater in magnitude impacts than those experienced by

non-environmental justice communities. FTA finds that the Project will not have disproportionately high and adverse effects on low-income or minority populations.

National Ambient Air Quality Standards

The United State Environmental Protection Agency (USEPA) has developed National Ambient Air Quality Standards (NAAQS) for each of six criteria air pollutants: sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter less than or equal to 10 micrometers (PM₁₀). Current air quality designations for the region, as determined by USEPA, are "attainment" for all listed pollutants. Accordingly, a conformity determination under 40 C.F.R. Part 93 ("Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved under Title 23 USC or the Federal Transit Act") is not required. Because the project area is in an attainment area for all NAAQS, a localized or hot spot analysis is not anticipated.

In addition to the criteria air pollutants for which there are NAAQS, the USEPA also regulates air toxics. The Clean Air Act identified 188 air toxics, also known as hazardous air pollutants. The USEPA has assessed this expansive list of toxics and identified a group of 21 as mobile source air toxics (MSATs), which are set forth in an USEPA final rule, "Control of Emissions of Hazardous Air Pollutants, from Mobile Sources." The purpose of this project is to provide bus rapid transit service by constructing stations and purchasing vehicles. This project has been determined to generate minimal air quality impacts for Clean Air Act Amendments (CAAA) criteria pollutants and has not been linked with any special mobile source air toxic (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the No Action Alternative.

Section 106 Compliance

In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, FTA has determined, with the concurrence of the Michigan Historic Preservation Office, that the Silver Line BRT will not have any adverse effects on historic properties within the area of potential effects, and that the Section 106 consultation requirements for this project have been fulfilled.

Section 4(f) Findings

Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, codified at 49 U.S.C. 303, declares a national policy that a special effort shall be made to preserve the natural beauty of the countryside, public park and recreational lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation may not approve transportation projects requiring the use of publicly owned land of a public park, recreation area, or wildlife or waterfowl refuge of national state or local significance, or land of an historic site of national, state or local significance (as determined by the Federal, State or local officials having jurisdiction over the park, area, refuge or site) unless a determination is made that: (i) there is no feasible and prudent

alternative to the use of the land; and (ii) the action includes all possible planning to minimize harm to the property resulting from such use.


The existence of potential Section 4(f) resources was evaluated as part of the Environmental Assessment. The Silver Line BRT will travel on existing streets and all station elements will be located on public right of way. Based on the documentation provided by *The Rapid*, FTA has determined, in accordance with 23 C.F.R. part 774, that the proposed project will not use or significantly impact any public park, recreational lands, wildlife and waterfowl refuges or historic resources protected by Section 4(f).


General Findings

The FTA also finds, in accordance with Federal Transit Law at U.S.C. §5324(b), that an adequate opportunity to present views was given to all parties with significant economic, social, or environmental interests, that the preservation and the enhancement of the environment, and the interest of the community in which the project is located were considered.

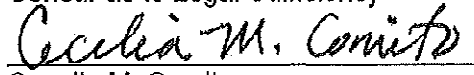
Incorporation by Reference

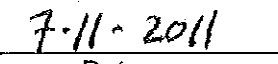
The full text of the Environmental Assessment and the Supplemental Environmental Assessment, prepared by the Interurban Transit Partnership and approved and issued by FTA, are hereby incorporated by reference in this Finding of No Significant Impact.

for 
 Marisol Simon
 Regional Administrator
 Federal Transit Administration, Region V


 Date

Concur as to Legal Sufficiency


 Cecelia M. Comito
 Regional Counsel


 Date

APPENDIX C: Documentation Supporting Original Baseline Project Schedule

Gary Scheuren

830 N. Harrison Road
East Lansing, MI 48823
517-582-5192
Fax: 517-332-3388

MEMO

To:	Mr. Taiwo Jaiyeoba	Date:	12/1/11
Company:	<i>The Rapid</i>		
Address:	300 Ellsworth Ave., SW Grand Rapids, MI 49503	From:	Gary Scheuren
Re:	Silver Line Project – Basis for schedule development		
CC:	Conrad Venema, <i>The Rapid</i>		

Message:

Taiwo, per your request the following describes the elements used to construct the most recent project schedule for the overall Silver Line BRT Project.

The development of the schedule has been a collaborative process and, like all schedules, continues to evolve since the commencement of this project endeavor. The schedule document we have created uses Microsoft Project as the scheduling software. It is created using a critical path method and shown in a Gantt format. When viewed, in either in a pdf format or in Microsoft Project, the activities colored in red are on the critical path to completion. All activities tied together are shown with thin logic lines. For clarification, the durations shown for each activity represent work days, not calendar days.

Most of the dates, durations and sequencing logic related to the EA process, the issuance of the FONSI, development of the PCGA, and other FTA approvals are based on the experiences you and Rapid staff have had on other FTA funded projects. Additionally, these items were further informed through feedback from FTA officials and staff. For example, the timing shown for the issuance of the PCGA was based heavily on feedback provided by the FTA that PCGA would not occur until late in the first quarter of 2012.

The schedule elements related to the Preliminary Engineering and Design were developed collaboratively with the Project's Architect/Engineering consultant, Wilbur Smith Associates (WSA). Their Task 1 services and duration were based primarily on *The Rapid's* available funds prior to the issuance of the FONSI. Upon issuance of the FONSI, WSA was given authorization to proceed with the Task 2 services, which incorporates the full remaining services for design and engineering. That milestone provided Pre-Award Authority to *The Rapid* and the confidence that these services would be reimbursed with the FTA grant proceeds. The schedule of the Task 2 design was developed with an understanding that the engineering/design work needs to be paced such that the cost of the services would not exceed the funds currently in hand at *The Rapid*. Upon

issuance of the PCGA in the first quarter of next year, the pace and of the Task 2 design services increases substantially, as cash flow from the grant can begin. On the schedule you will see that the many elements of the design are tied to the issuance of the PCGA. Delays in issuance of the PCGA will delay the continuation of the design and ultimately delays in the Project completion.

The division of work for the design is shown based on the expected breakdown in scope of the construction work for the issuance of separate bid packages. The durations are based on the commitments provided by WSA. You will see that we have included time for review and comment for each deliverable milestone (30%, 60%, 90%, etc.) for each set of design activities.

The duration shown for the procurement of the new vehicles is based on *The Rapid's* previous experience with bus procurement as provided to me by *The Rapid's* Procurement Manager. You'll see that the procurement will commence only after the issuance of the PCGA. At this time, bus procurement is not expected to be driving element on the critical path for the overall project completion.

The schedule also shows the procurement and delivery of the Fare Vending equipment. This is an item that is expected to be procured directly by *The Rapid*. Receipt and installation will be coordinated by the CMAR.

At this time, the construction activities are show as single lines in the schedule tied logically to the bid and award of the associated trades. The overall duration of approximately 18 months is based on preliminary discussions with Rapid staff and other construction professionals. As you know, we are in the process of completing the selection for the CMAR that will be joining the Project team (this too, is shown on the schedule). Upon their selection and authorization to proceed, I expect to begin detailed discussions with that firm regarding the sequencing of the construction work and durations of the individual elements.

The activities associated with service planning/scheduling and staff training is tied to the delivery of the new vehicles as well as the completion of the construction project. We expect that this effort will begin in advance of the completion of construction, but cannot finish until construction is completed. We are showing a duration of approximately 3 months for these efforts.

The Revenue Operations date occurs at the completion of all testing, training, and service planning. As shown on the schedule we are currently expecting that date to be in mid-August in 2014. This date is on the critical path of completion.

If you have any questions regarding the preparation of the overall BRT Project schedule, please feel free to let me know.

APPENDIX C-1: CMAR Basis Of Project Schedule



Silver Line BRT Project ITP – The Rapid

Basis of Schedule

Project Description

The Silver Line Bus Rapid Transit (BRT), hitherto referred to as “Project”, would accommodate transportation needs associated with population and employment growth along the Division Avenue area by increasing transit capacity and providing faster, more convenient access throughout the metropolitan region.

The Project is an approximately \$40 million BRT project designed to provide access to centers of employment and extensive educational opportunities in downtown Grand Rapids, improve job access, reduce travel times, and provide the transportation foundation for economic development in the Division Avenue corridor. It will connect Downtown Grand Rapids to the Cities of Kentwood and Wyoming.

The Project is proposed to provide higher capacity service than the current regular bus services from the south into downtown Grand Rapids. The proposed route is approximately 9.6 miles in length. The corridor originates from The Rapid Central Station (RCS) on the periphery of the Grand Rapids Central Business District (CBD) and extends directly south from downtown Grand Rapids along Division Avenue ending at 60th Street.

The proposed running way for the Project vehicles is the curb-most travel lane. In most of the corridor along Division Avenue, the existing roadway has five lanes (two through lanes in each direction plus a center turn lane). Only a few small areas have on-street parking (mainly near Burton and Hall Streets). In the downtown area, the streets are typically two lanes with a turn lane at intersections.

In at least 50% of the corridor, dedicated curb-side lanes have been designed into the Project during peak hours. The dedicated lanes would be indicated by signage, pavement markings and other features to distinguish the lanes from a typical vehicular traffic lane. Right-turning vehicles and vehicles accessing business drives and parking may use the dedicated lanes.

The Project will be served by 18 stations (including RCS), with 33 platforms (RCS already has a platform and there will be one station platform at the end of the line at 60th Street). These stations are all low-platform at-grade providing level access from the floor of the BRT vehicle. The existing platform at RCS will be raised to 15” in order to accommodate low-level boarding. The station platforms are generally 60’ long and situated in public right-of-way (ROW) on the curb-side of the street. The location and configuration are being finalized in the Design and Engineering phase. The station shelter will be 48’ with the exception where restrictions in the ROW necessitate a 36’ shelter. The 48’ long shelter is designed to cover both doors of a 40-foot bus and set back 24” from the face of curb to protect boarding passengers from rain. There will be ramps at one or both ends of the platform. If the roof extends over the bus, the clear height of the roof is to be 14’-6” above the pavement. The platforms will be placed 15” above the pavement for Project vehicles and 10” above the pavement where the Project route will share stations with other local route stops. The stations are generally

located at signalized intersections facilitating access to the platform.

The stations include lighting, 3-seat benches, signage, real-time bus arrival and status information ("next bus" technology), emergency telephone with closed circuit television (CCTV) passenger information sign, location information, and system information. Landscaping and hardscaping will also be provided in the station area. The Project vehicles will stop only at the BRT stations. However, at Division and Burton, the BRT service and local bus service will share station platform. The stations have been branded to ensure that they are distinctively different than the regular bus stops along the corridor. A branding theme will be continuous through the stations and vehicles.

Definition of Service

Schedule development is a critical element of the Pre-Construction Phase of the project. It identifies the essential elements of the project and sets the path for the project team. It establishes the pace for the project both in the pre-construction phase and construction phase and identifies the need for early bid packages or long lead material and equipment purchases. It also provides essential information to develop a cash flow projection for the client to use in planning the investment of capital for the project.

The Christman Company project planning team prepared a series of progressively complex project schedules during the pre-construction phase:

- **Schematic Schedule** – this was the first effort to define, at a broad level, the pre-construction and construction overall durations. This schedule was developed in early April 2013 and included some of the pre-bid, bid and post bid activities. At this time the design schedule was being tracked by the owner
- **Preliminary Project Schedule** – this effort began to add detail to construction phase activities, establishing milestones, phasing, and critical path for site work, foundations, structure, , and Owner move-in. This schedule was submitted in June 2013 and included some of the detail for the reaming design activities and bidding activities
- **Baseline Construction Schedule** – the current schedule is a detailed, fully analyzed master schedule developed before construction has started for the use of the construction team. It contains full detail for the owner, bidding and construction activities. This schedule will be updated regularly by the construction team.

At all stages of scheduling, the schedule is a leadership tool to guide and monitor the progress of the team. Scheduling efforts are an iterative effort based on release of design documents and details. The Schematic Schedule was prepared based on analysis of SD documents, and the Preliminary Project Schedule is prepared based on 60% DD documents. The Baseline Construction Schedule is prepared after 90% CD design, when the development of most key details not previously developed and reviewed was accomplished, but before bid documents were ready for distribution.

- **Scope of Work**

1. This project will construct 33 new platforms and shelters that will create the new station. Each station will necessitate the demolition of existing elements in the street right of way including asphalt, concrete curbs, sidewalks, and landscaping elements.
2. The work will be overseen by the Christman Company operating as the Construction Manager at Risk (CMAR). The CMAR will solicit bids from the project during the bid phase and assign the schedule tasks to the successful bidders. The bidders will submit lump sum proposals based on the various work scopes developed by the CMAR.
3. Each of the 33 station locations can be thought of as a standalone project that has been linked together by the critical path to create the full project schedule.

- **Execution Strategy**

1. To meet the construction schedule the Christman Company expects to implement an aggressive execution approach which will require some shift work and/or overtime work to meet the schedule.
2. The schedule has been broken down into four main areas for clarity:
 - Design
 - Planning
 - Procurement
 - Construction
3. The first three areas are also sub categorized by grouping tasks of similar nature into sections for a logical presentation of activities.
4. Due to the large number of individual project sites the Christman Company has broken down the Construction section of the schedule into 3 geographic regions as follows:
 - BRT South Corridor – Contains Stations 25-33 and BRT Systems.
 - BRT Mid Corridor – Contains Stations 15-24 and BRT Systems.
 - BRT North Corridor – Contains Stations 1-14, BRT Systems and Owner Provided items.
5. Each geographic region will be bid out as a group of projects within each work scope. This means that three different contractors could be contracted to perform the work in each of the three regions.
6. The BRT North Corridor contains the most stations and will be further divided into yearly sections with 10 stations being constructed in 2013 and the remaining 4 stations in 2014.
7. A strategy of constructing stations on the same side of the road or grouping construction activities by inbound or outbound stations was also developed in a linear fashion. While this strategy was widely implemented in the early project schedules the final construction schedule jumps around to accommodate the key dates mentioned below.

- **Key Project Dates**

1. As part of the Project Construction Grant Agreement with the FTA, The Rapid is committed to a Revenue Operations date of 8/25/14 and the Christman Company is contractually obligated to meet this date.
2. Final Design documents will be submitted to the owner no later than 12/12/12.
3. Construction is scheduled to start as the weather permits in the spring of 2013. The tentative start date is 4/1/2013. Any earlier start may be possible.
4. Completion of the first set of inbound stations will be completed by 9/9/13 while the outbound stations scheduled for completion in 2013 will be completed by 12/17/13 in time for the winter shutdown
5. The Construction Schedule will be dormant during the winter months and will resume on 4/1/14.
6. The remaining stations schedule for delivery in 2014 will be completed by 7/4/14.
7. There are several events throughout the city that the Christman Company was asked to schedule around. The current schedule is the best effort to work around the following dates:
 - River Bank Run 2nd Saturday in May 2013 – No lane closures will occur at Stations 1-4 at this time.
 - 28th Street Metro Cruise on August 23 and 24, 2013 – No Constriction work will occur at stations 25 and 26.
 - Art Prize during the last week of September 2013 – No lane closures will occur at Stations 1-4.
 - GRCC school activities first week of August 2013 – No street closures at Stations 13 and 14.

- **Planning Basis**

1. Critical Path – The Critical path has been established as running through the demolition, utility relocation and utility installation activities at each station. Once these work items are complete the site work crews can move to the next station and the new conduits, sleeves and concrete crews can mobilize to each station location. The remaining tasks for each location are independent of the tasks at other station locations.

The only limiting factor is crew number. The strategy for acquiring the appropriate number of crews to support the schedule necessitated bidding the project in three regions. This allows the engagement of three different subcontractors for each region that will; have the appropriate number of crews to support the scheduled activities per grouping of stations.

2. Crew Sizes – This schedule makes no attempt to dictate crew sizes to the bidders. Rather, an important step in the post bid process will be to confirm each bidders understanding of the schedule and confirm that the number of crews available will satisfy this schedule. A bid may be found to be non-responsive if the schedule requirements of this project cannot be met. Each bidder will be responsible to complete the scheduled task in the time frame provided or risk having their crews supplemented by the CMAR at no cost to the owner.

Furthermore, the bidding documents include this statement to all prospective bidders:

00205 - CONSTRUCTION SCHEDULE NARRATIVE

1. A Construction Schedule is included at the end of this section.
2. The Project sequencing will be scheduled by the Construction Manager and must be adhered to by all Trade Contractors. Time, labor, material, equipment and possible cost implication of this sequencing and others not fully conceived or described prior to the time of bidding, shall be included in base bid.

A preliminary schedule is included for reference only. It is emphasized that start dates for work may shift. The bidder shall familiarize himself with expected maximum durations and shall include in his proposal sufficient manpower to meet these requirements. All milestone dates are approximate and are to be used as guidelines for the Trade Contractor's basis for bid.

3. It is the Trade Contractor's responsibility to establish which items of work within the scope of his work category will be affected by the Owner's or other Trade Contractors operations and coordinate and schedule completion of his work accordingly at no cost to the Owner.
3. Deliveries of off-site manufactured shelters – the project schedule shows the procurement, design and manufacturing activities for the off-site constructed bus shelters for tracking purposes. The schedule assumes that the shelter will be delivered by the required dates. A separate schedule of actual activities involved in manufacturing the shelter may be submitted at a later time.
4. Punch out Demob – The schedule assumes that each station location will be substantially complete, punched out, and accepted by the owner as they are completed.

Issues and Risks

1. Weather – The weather represents a risk only to the start date of construction each Spring. The municipalities have instructed us to not begin until snow removal activities are complete for each season. We will rely on a long range forecast and input from the cities to determine the start date.
2. If the actual start date of 4/1/13 is delayed, the additional duration can be absorbed at the end of each seasons work. Several of the ending activities at each station are not weather dependent and could be completed later than indicated in the schedule. For this reason no weather dates have been included in the schedule. It is assumed that project float can be utilized for these occurrences.

3. Available contractors – The schedule assumes that the availability of crews is unlimited. Due to the current state of the marketplace and the number of contractors available in the greater Grand Rapids metropolitan area, Christman is confident that the risk of limited crew numbers is very small. This will need to be confirmed in the bidding phase with each proposer. After the post bid and contract award phase is completed, any adjustments to the schedule could be made if a limited crew size is encountered.
4. Unknown sub surface items – The schedule assumes that any subsurface items not shown on the design documents will not impact the critical path of the schedule. Because unknown sub surface items represent the most risk to delay in the schedule, the project team engaged a third party testing agency to investigate two station pairs for unknown sub –surface items utilizing vacuum excavation. This investigation resulted in no major findings. However, this item is of the largest concern to the project team and project contingency will be apportioned appropriately to accelerate the schedule should sub-surface items be encountered.

- **Other Assumptions**

1. No storage – the schedule assumes limited storage capacity at each station location. Therefore trade contractors will need to deliver materials in an as needed basis to the project site.
2. Calendar – The project calendar is a standard yearly calendar with a 5 day work week from Monday-Friday 8 hours per shift with no work on the weekends. Should the schedule need to be accelerated an off hours shift or weekend work will be implemented. The calendar also assumes no Holidays or other down time.
3. Weather Dates – There are no weather days included in the project schedule. Weekend work or float may be used to make up for this time.
4. Critical activities – An activity is shown as critical in the project schedule if its total float is less than 10 days.

- **Exclusions**

1. Owner Equipment – While the procurement of owner supplied items is shown for tracking purposes in the project schedule, the CMAR is not responsible for these procured items and the project schedule assumes these items will be delivered to the site at the required dates.
2. The schedule excludes any major additions or changes in the work scope shown on the 90% CD documents.

APPENDIX D: List Of Key Supporting Project Documents

Item	Document	Reference
1.	Master Project Schedule	Chapter 1
2.	Locally Preferred Alternative (LPA)	Section 1.4
3.	BRT Vision Report	Section 1.5
4.	Environmental Assessment (EA)	Section 1.5
5.	Bus Fleet Management Plan	Section 2.4.1.14
6.	Project Finance Plan	Chapter 3
7.	CMAR 90% Cost Estimate Report	Section 3.1
8.	Document Controls Plan	Section 4.3
9.	Quality Assurance Procedures (QAP) Manual	Section 4.10
10.	Project Final Plans	Chapter 5
11.	Detailed Utility Matrix	Section 5.10
12.	Permitting Information	Section 5.13
13.	Maintenance of Traffic (MOT) Plans	Section 5.17
14.	Safety and Security Management Plan (SSMP)	Chapter 6
15.	CMAR Project Safety Manual	Chapter 6
16.	Public Involvement Plan (PIP)	Chapter 8

NOTE: All these documents are available on The Rapid's website (www.ridetherapid.org) as well as at The Rapid in the Project Manager's Office.



APPENDIX E: *The Rapid* Silver Line Project Staff Qualifications

Position & Responsibilities	Name & Qualifications
Chief Executive Officer <ul style="list-style-type: none">• The CEO is the chief executive and operating officer of the Interurban Transit Partnership (ITP), responsible for all aspects of planning, financing, administration and operation of ITP's public transit services.• The CEO shall serve as ITP's representative with governmental units, agencies and transit organizations at the local, state and federal levels.• Duties of the CEO are to be performed within broad, general policies and plans established by the ITP Board.• The CEO has overall responsibility for the organization of subordinate staff, including the recruitment, hiring, promotion, development, discipline, evaluation and delegation of responsibility.	Peter Varga <ul style="list-style-type: none">• Masters of Arts in Political Science, New York University 1972.• Post Graduate work in Public Administration, UCLA 1973-75.• Over 31 years of experience in operations and management of transit service in the United States. Worked at Santa Cruz Metro, Muskegon Area Transit System and in Grand Rapids, Michigan. CEO of <i>The Rapid</i> in Grand Rapids since 1997. Managed and directed various transportation projects over the last 20 years.• Generally responsible for numerous transportation projects, including the Union Depot Renovation in Muskegon Michigan, Rapid Central Station in Grand Rapids, and The Wealthy Operations Center also in Grand Rapids.• Director of an executive and management staff of thirteen and a work force of (308) Three Hundred and eight. ITP's representative on the Board of Directors of the American Public Transit Association (APTA). Directly responsible under the policy direction of a fifteen member board consisting of the six cities in the Grand Rapids metro region, for all the activities of the transit authority; these include strategic development, long and short range planning, marketing, administrative and financial oversight, as well as the management of safe, reliable and efficient transportation services provided to the community.• Director of ITP's mobility management system and its family of services which include fixed route and paratransit services, vanpooling, rideshare, mobility training, travel assessments, City of Grand Rapids DASH services, business transportation consulting and the transportation brokerage of several urban programs for the cities and Kent County such as welfare to work transportation, supportive housing, rural dial-a-ride, and other special services.
Project Manager <ul style="list-style-type: none">• Responsible for day to day activities of the project and overall Silver Line project management• Responsible for coordination between <i>The Rapid</i> and other partners and stakeholders related to the Project• Provides direction to other team members on the overall project• Point of contacts with the Federal Transit Administration (FTA) and local municipalities in all matters relating to the Silver Line Project.• Coordination of any agreements necessary for Project development and construction	Conrad Venema <ul style="list-style-type: none">• 11 years of transit planning and project management experience• <i>The Rapid</i> Planning Manager 2005-present• Masters of Public Administration, GVSU 2009• Experience with development and implementation of long term and short-range transit plans• Successfully implemented multiple service expansions and modifications• Project Manager of <i>The Rapid's</i> bench infrastructure project• Project Manager of Comprehensive Operational Analysis completed in 2005• Experience with the development and implementation of system performance standards and monitoring



Assistant Executive Director <ul style="list-style-type: none">• Provides support to the Project Manager on the Project Construction activities• Responsible for coordinating land acquisitions and Real Estate Activities if needed.• Manages the contracted Legal Counsel	Alan Hartley <ul style="list-style-type: none">• 15 years of transit management experience• Masters of Public Administration, WMU 1993• Project Manager of the construction of the Wealthy Operations and Maintenance Facility, 2011-2012• Project Manager of the construction of <i>The Rapid</i> Central Station, 2003-2004
Chief Operating Officer <ul style="list-style-type: none">• Provides direction and oversight to Transportation, Maintenance, IT, Safety, and Special Services Departments• Provide support to the Project Team in all matters related to the operation of the BRT service.• Reports to <i>The Rapid</i> Assistant Executive Director• Responsible for BRT operator training, testing, start-up and revenue service.	Brian Pouget <ul style="list-style-type: none">• 28 years senior management experience, 12 years managing a small transit property and 13 years directing operations for a medium size transit property• Successfully managed implementation of substantial service expansion projects multiple times over the last decade• Planned and implemented multiple transit facility projects, including passenger transfer locations and operations center
BRT Technical Support Consultant <ul style="list-style-type: none">• Provide technical support to the Project Manager and team;• Develop, reviews and revises the PMP as necessary;• Monitor compliance of the PMP requirements and guidelines;• Support the PM in preparing the request for PCGA;• Act as Assistant Project Manager in the absence of the Project Manager.	Taiwo Jaiyeoba <ul style="list-style-type: none">• 20 years of transit planning and project management experience• Masters of Urban and Regional Planning• Managed <i>The Rapid</i> TMP• Project manager for the Silver Line BRT Project• Prior experience with Sacramento and Atlanta transit projects



External Relations Manager <ul style="list-style-type: none">• Manage legislative and government communications and assist the Chief Executive Officer (CEO) in external relations activities at federal, state, and local levels to include transit funding, legislation, and other applicable government programs. Coordinate interaction with government and legislative entities and represent the interests of the authority.• Manage the authority's overall public relations strategy, including day-to-day media interaction, writing and distributing press releases, and developing and maintaining the authority's crisis communications plan. Act as the authority's spokesperson and/or coordinate responses to the media for other employees, as the situation requires.• Design the authority's marketing plans. Oversee implementation of marketing programs and activities personally, through other employees, or through the authority's designated marketing firm. Areas include advertising, promotions, special events, and communications with passengers and the public at large.• Manage market research activities to maintain current demographic and community attitude measures.• Act as liaison to the ITP cities and other local entities for activities such as participation in special events, speaking engagements, and other means of involvement to demonstrate ITP's commitment to the community it serves.	Jennifer Kalczuk <ul style="list-style-type: none">• 20 years of experience in marketing communications in public, private, and non-profit organizations. 13 years of direct experience in the transit industry.• Oversees government relations, public relations, marketing, and customer service for the agency.• Directed agency educational outreach on 3 successful property tax initiatives.• Manage agency communication through various channels including advertising, print-based publications, website and social media tools, presentations, and video production.• Oversee outreach to various stakeholders, including area businesses, educational and healthcare organizations, neighborhood groups, and non-profit entities.• Serve as the agency's FOIA officer.
Purchasing Manager <ul style="list-style-type: none">• The authority and responsibility for the procurement and disposal of all material, equipment, vehicles, property and services for ITP rests with the Purchasing Manager.• The Purchasing Manager or his designee is the only ITP employees that may commit funds to potential or existing suppliers or suppliers on ITP's behalf.• As designated by the DBELO, the Purchasing Manager administers the DBE program for the agency.• Reports to <i>The Rapid</i> Assistant General Manager	Mark Fedorowicz <ul style="list-style-type: none">• Over 33 years of experience in procurement, planning, grants management and project management for capital projects. .• Deputy project manager for Rapid Central Station and Ellsworth Administration Building Projects. Co-chair of Sustainability efforts.• Currently Project manager for the Replacement AMTRAK Station Project.
Information Technology Manager <ul style="list-style-type: none">• Provides and assists with software, hardware, data and telecommunications solutions to enhance the effectiveness and productivity of all departments of <i>The Rapid</i>.• Is responsible for assisting in tasks as assigned and implementation of the Project.• Reports to <i>The Rapid</i> Chief Operations Officer	Kathleen Anderson <ul style="list-style-type: none">• Over 30 years of experience in Information Technology. Project Leader and/or Team Member of various hardware and software transportation projects over the last sixteen years.• Responsible for Information Technology Department staff and budget.• Responsible for network and phone system over a multiple location campus.



Finance Manager <ul style="list-style-type: none">• Oversees all accounting functions.• Is responsible for all cash management, preparation of monthly financial statements, annual audited statements and a variety of quarterly/annual reports to the federal and state governments.• Reports to <i>The Rapid</i> Assistant General Manager	Scott Walsh <ul style="list-style-type: none">• B.S. in Business Administration with majors in accounting and finance• Three years of public accounting including auditing of county, city and township governments as well as school districts and not-for-profits.• Over 13 years of experience as the manager of finance in public transportation.• Responsible for design and implementation of financial cycle controls.• Designed and Managed Construction on major transportation projects
General Engineering Consultant <ul style="list-style-type: none">• Reviews cost estimates provided by consultants and contractors• Review Preliminary Engineering Documents to assure agreement with industry Design Criteria• Participate in the Contractor pre-proposal conferences;• Participate in the Consultant qualifications evaluations;• Prepare special terms and conditions of Consultant, Contractor, Vendor contracts;• Prepare addenda to terms and conditions;• Evaluate contract proposals/bids;• Participate in negotiations with Contractor;• Provide quality assurance and quality control oversight;• Provide construction management and oversight;• Provide value engineering;• Provide technical assistance for <i>The Rapid</i> to acquire permits;• Develop specification for rolling stock;• Provide on-site review of Project during construction;• Provide construction administration support during the construction phase of the project;• Review and change orders;• Responsible for assuring internal compliance with processes and procedures outlined in this PMP and Quality Assurance Plan (QAP) using industry standards• Responsible for <i>The Rapid</i> oversight/auditing of quality assurance of the Silver Line BRT Project.	John Caruolo, P.E. <ul style="list-style-type: none">• Registered engineer in Pennsylvania, New Jersey, and Delaware• Over 30 years of experience in planning, engineering and design of various highway and transit capital projects.• Oversee the engineering and construction of various bus and rail transportation projects for the Federal Transit Administration.• Project Management Oversight Consultant responsible for Federal Compliance for the Wealthy Street Operations Center



Project Controls Consultant

- Manages Project scope, cost and schedule. Updates Project schedules and budget as needed;
- Produces reports, charts, tables, etc., necessary for physical and financial progress reporting;
- Coordinates with Purchasing Manager, Design Consultants and Construction Management managers regarding Project Controls information and issues;
- Responsible for issuing monthly Progress Report; Provides Administrative support for Project
- Oversees Preparation of Project Progress Reports to FTA;
- Develops and Oversees Project Cash Flow;
- Responsible for review and acceptance of CMAR's schedule;
- Oversee and provide input to Purchasing Department for Cost and Schedule response to CMAR's request for COs and/or Claims.
- Oversees Document Control operations;
- Oversees Configuration Management System operations;
- Oversees tracking of action items, design reviews, permits and other activities or issues related to the Project Schedule;
- Attend Project management meetings to report on Project Budget/Schedule status;
- Track reports on issues with potential Cost/Schedule impact; and
- Responsible for all Project Controls functions.

Gary Scheuren

- 16 years of program management and construction management.
- Experience with managing federally funded projects, including those funded by the FTA.
- Extensive work in schedule management and cost control management.
- Project manager in charge of the construction of *The Rapid's* Central station.
- Experience managing the selection and award of contractors and consultants.
- Bachelor of Science in Civil Engineering



Architectural & Engineering Consultant (CDM/Smith)

- Design Consultant is responsible for managing the project design through 100% design level, together with sub-consultants, represent the consultants, represent the consultant support for the Project and be responsible for preliminary and final design of the project.
- Coordinate with the Construction Manager at various phases of the design work and,
- Prepare a unified set of Design Criteria for *The Rapid*;
- Review and finalize the Preliminary Engineering Documents to assure agreement with Design Criteria;
- Participate in the Contractor pre-proposal conferences;
- Provides Construction administration support during the construction phase of the project

Deputy Project Manager/Public Involvement

- Responsible for running the project day-to-day activities, managing teammates, and coordinating and attending project meetings.
- Is responsible for performance, administration and coordination of Project team including project budget, scope, and schedule.
- Reports to *The Rapid* Project Manager and consultant Project Manager.

Ralph Trepal, PE

- 45 years of engineering experience; 40 years experience as a Professional Engineer involved in design and planning projects. 27 years of experience in design engineering and planning on transportation projects.
- Director of Busway Expansion for the Final Design and Construction of the East and West Busways; Port Authority of Allegheny County (Pittsburgh, PA); 1997 to 2000.
- Project Manager for the Final Design of the Euclid Corridor Transportation Project; Greater Cleveland Regional Transit Authority (Cleveland, OH); 2001 to 2008.
- Project Manager for the New Haven-Hartford-Springfield Line High Speed Intercity Passenger Rail Project Environmental Assessment; Connecticut Department of Transportation (Newington, CT); 2008 to present.
- Project Manager for the Silver Line BRT; Interurban Transit Partnership (Grand Rapids, MI); 2010 to present.

Todd Davis, AICP

CDM Smith Certified Project Manager

- Over 20 years of experience in managing, planning and engineering of various transportation projects.
- Project Manager for Blue Water Bridge Plaza Study, Port Huron, Michigan. Estimated project construction cost of \$450 million and included numerous agency meetings and public engagement activities.
- Has led public involvement activities for a variety of transportation projects of various sizes and types.

<p>CMAR (Christman)</p> <ul style="list-style-type: none"> • Prepare Project Work Plan that adheres to <i>The Rapid</i> approved schedule and budget; • Conduct Partnering workshops; • Prepare required environmental documentation; • Establish detailed alignment and station arrangement; • Prepare working drawings for construction; • Prepare methods for handling hazardous waste, utilities and environmental impact management plan; • Provide quality assurance and quality control of its activities; • In conjunction with Purchasing Manager, prepare “front-end” documents for Project specifications; • Provide all construction surveys; • Provide for relocation of all utilities; • Construct fixed facilities/systems (excluding rolling stock and fare equipment) • Supervise and inspect construction; • Review and log shop drawings • Maintain record documents; • Prepare as-built drawings; • Provide for system safety and integrity; • Provide integrated functional testing and commissioning; and • Provide O&M procedures and manuals for all fixed facilities/systems; • Work with <i>The Rapid’s</i> Manager of External Relations and Communications to develop the PIP prior to Project construction. 	<p>Daniel C. LaMore, P.E. – Project Director</p> <ul style="list-style-type: none"> • 31 Years of Construction Experience • 10 Years with The Christman Company • superintendent and project manager for challenging projects • current overall responsibilities include managing the operations of the Christman West Michigan office, as well as pre-construction planning and project management for various projects <p>Edwin E. Tatum – Project Planning Director</p> <ul style="list-style-type: none"> • 26 Years of experience • Project manager and principal-in charge for a number of large transportation projects • Masters of Civil Engineering, Wayne State University <p>Zachary J. Bosma, LEED AP – Project Manager</p> <ul style="list-style-type: none"> • Nearly 20 years of experience in construction experience • Extensive experience in estimating and scheduling, as well as budgeting, contracting and overall management of multi-million dollar projects • Bachelor of Science in Construction Science and Management, Western Michigan University <p>Brian Baar, LEED AP – Site Manager</p> <ul style="list-style-type: none"> • 15 years of construction experience • Project engineer and project manager on a number of projects • Bachelor of science, Civil Engineering, Michigan Technical U. <p>Jeffrey J. Lechak, P.E. – Project Technical Lead</p> <ul style="list-style-type: none"> • 19 years of transit project management experience • Resident engineer for the Euclid Avenue BRT project in Cleveland • M.B.A, Cleveland State U., B.S. Civil Engineering, Cleveland State <p>Michael F. Arnold, JR., LEED AP – Conceptual Estimator</p> <ul style="list-style-type: none"> • Bachelor of Science in Heating, Ventilation, Air Conditioning, Refrigeration, Engineering Technology, Ferris State University • 14 years of construction experience • Experience with cost estimation, vendor bids, purchase and change orders, awarding contracts, tracking schedules. • Excellent attention to detail
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Construction Materials Testing Manager <ul style="list-style-type: none">• Coordinates a team of engineers and technicians, overseeing consulting services related to geotechnical engineering, building materials, and construction materials testing services.• Performs technical review of field reports.• Performs administrative and budgetary management for projects.• Services scheduled by owner or owner's designated representative.	Louis J. Northouse, PE <ul style="list-style-type: none">• Over 14 years of experience in providing geotechnical recommendations addressing earthwork, shallow foundations, building materials, and construction considerations.• Project Manager for over 1,300 construction materials testing projects in West Michigan including the ITP Rapid Central Station, Ellsworth Administration Building, and the Wealthy Central Station projects.• Member of American Society of Civil Engineers, and Structural Engineers Association of Michigan.• B.S., Civil Engineering, Michigan Technological University
Legal Counsel <ul style="list-style-type: none">• Provides day-to-day assistance to the Assistant General Manager as required to perform Rapid's role and responsibilities in the Project• Is responsible for advising <i>The Rapid</i> with respect to legal compliance matters, including compliance with FTA regulations, and preparation and negotiation of contracts and agreements.• Reports to <i>The Rapid</i> Assistant General Manager	Alan C. Schwartz <ul style="list-style-type: none">• Attorney with the firm of Miller Johnson, Snell & Commiskey, PLC, licensed to practice law in the State of Michigan• Over 28 years of experience in real estate transactions with specialties in environmental law, financing, and compliance with FTA property acquisition regulations.• Has represented <i>The Rapid</i> in various property acquisitions and development projects.• Responsible for negotiations and preparation of interlocal agreement, and general compliance matters.
Grants Officer <ul style="list-style-type: none">• Responsible for the coordination and oversight of Project-based federal, state and local operating, capital and planning grants, in accordance with all requirements;• Monitor the Project via communication with the Project Manager to ensure consistency with FTA guidelines; while documenting progress and funding expenditures;• Obtain Project funding requests from the Project Managers for inclusion in the Transportation Improvement Plan (TIP);• Prepare Project grant amendments and budget adjustments to the FTA/MDOT;• Approve grant related budget adjustments for the Project;• Coordinate all public input on Project grant related activities;• Act as an agency resource and primary liaison for Project federal and state grant requirements and guidelines; and• Provide support to COO in maintaining the Project Vehicle Accessibility Plan, the Vehicle Inventory and Equipment Inventory specialized services in PTMS	Jan Hoekstra <ul style="list-style-type: none">• Over 10 years of grants management experience• Proficient with FTA, MDOT, and local grants policies and procedures• Experience with coordination of TIP and STIP activities• Responsible for annual UPWP and related activities