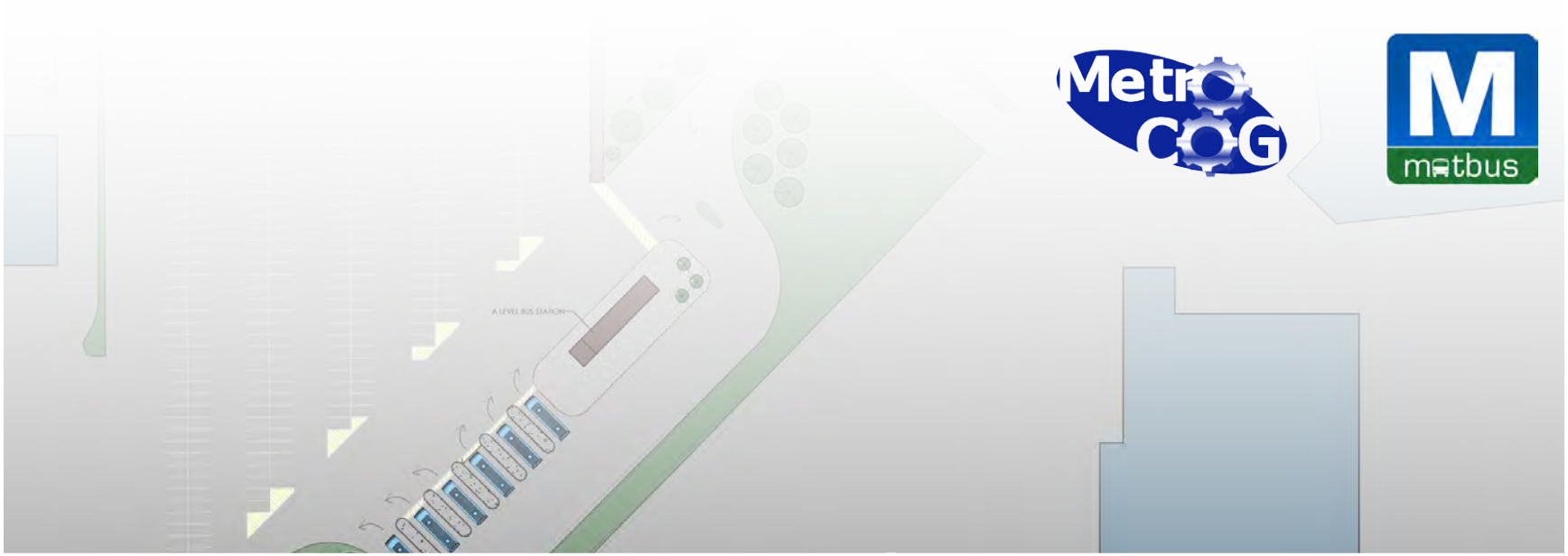

MATBUS TRANSIT FACILITY STUDY

December 17, 2018

MATBUS TRANSIT FACILITY STUDY

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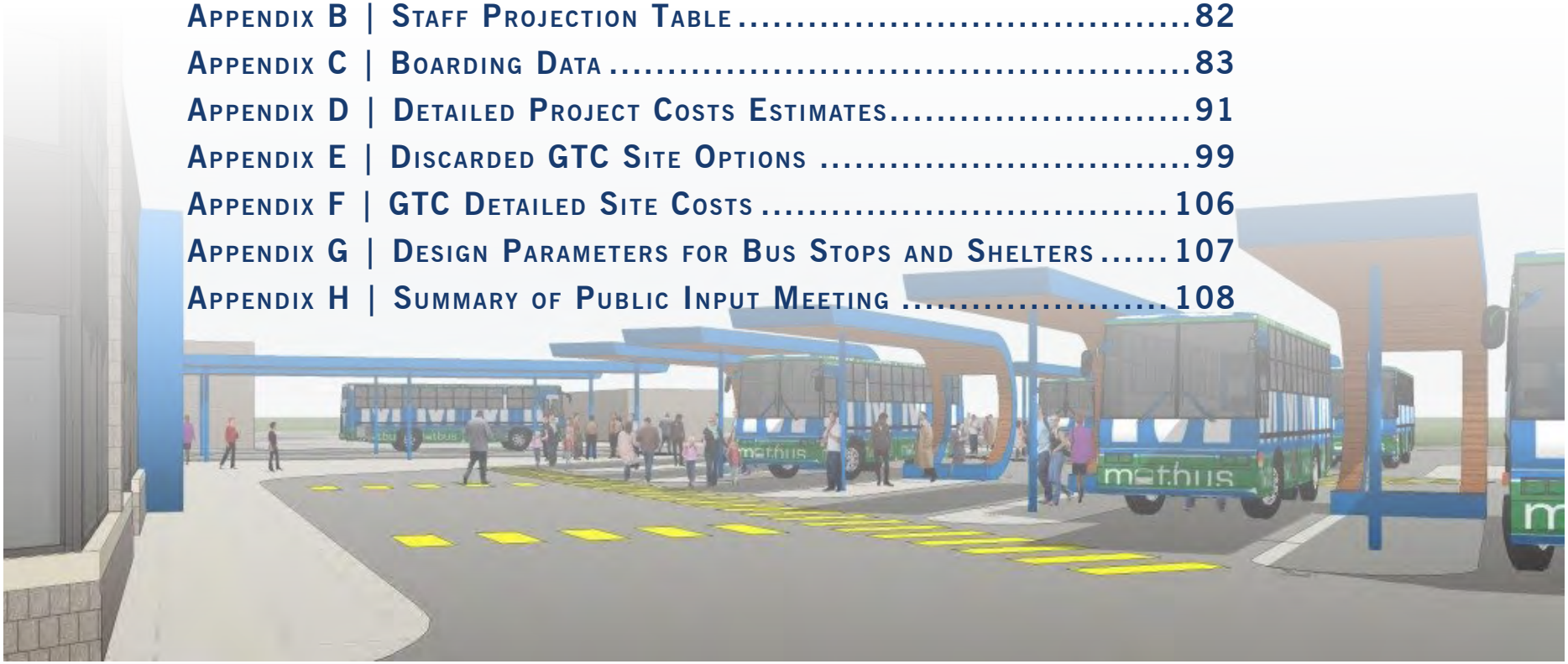


Introduction

The MATBUS Transit Facility Study was developed to address several short, medium, and long-range facility-related issues facing MATBUS. The study evaluated four primary points of need related to MATBUS facilities.

1. **Metro Transit Garage** – Based on projected overcrowding at the Metro Transit Garage (MTG), a 20-year investment plan was developed to provide expansion options to meet existing storage and maintenance needs for the MATBUS fleet. Analysis also identified options to accommodate space for existing and projected administrative staffing needs. Changes at the MTG were coordinated closely with administrative changes at the Ground Transportation Center (GTC) to maximize existing space and potentially forestall costly expansion or renovations to administrative offices at the MTG. A final strategy for the MTG includes both a short to medium-term implementation strategy to address immediate storage and maintenance needs, and a longer-range program to meet needs through a 20-year planning horizon.

2. **West Acres Transit Hub** – Based in close consultation with West Acres management and in review of existing and projected conditions, a series of options were evaluated to accommodate an expanded facility for the West Acres Transit hub. A series of on-site and off-site options were developed. Three primary options were refined and finalized for a future West Acres Transit hub. All options remain on West Acres property, but are dislocated from direct attachment to the mall itself. Significant consideration was developed to assure seamless mobility between a new future hub and a public entrance to the mall.

3. **Ground Transportation Center** – As a nearly 40-year old facility, an evaluation of both short and long-term needs and options at the GTC were developed to meet a series of needs identified by MATBUS to improve operations of the GTC. In coordination with analysis developed at the MTG, a renovation strategy was employed at the GTC to accommodate various transit functions currently housed at the MTG. This coordination provides for better utilization of the GTC, improved operations, and maximizes existing spaces and facilities at the MTG.

4. **Stop Level & Minor Hub Needs** – Based on an evaluation of existing boarding and ridership patterns, a series of infrastructure investment priorities were developed for existing stops on the MATBUS system. Stop levels were developed based on four tiers of utility, expense, and size. Stop levels are designated as level A, B, C, and D. Both general and context-specific improvements were identified for series of existing and future Level B and C system hubs.

Each area of the facility analysis was developed through an evaluation of both existing and projected needs. Consultation also occurred with the public, ridership, other key municipal departments (e.g., public works), and key system stakeholders. Chapter 2 of this report summarizes key background data and analysis to support development of the study.

Each subsequent chapter of this report outlines the analysis and recommendations

Metro Transit Garage

Background

The Metro Transit Garage (MTG) was built in 2006 and provides storage and maintenance functions for MATBUS. Currently the MTG provides for nearly 37,000 square feet of bus storage and nearly 12,000 square feet of fleet services (maintenance-related) space. The MTG is also the central administrative hub for MATBUS, providing for nearly 5,500 square feet of space for MATBUS staff including related space for MATBUS contractor operations.

While only slightly more than 10 years old, the MTG is projected to run out of space in almost all functional areas by the year 2022. As shown in Table 16, by 2022, fleet services are projected to be nearly 50% over capacity. Other elements are projected to be 13 to 15% over capacity.

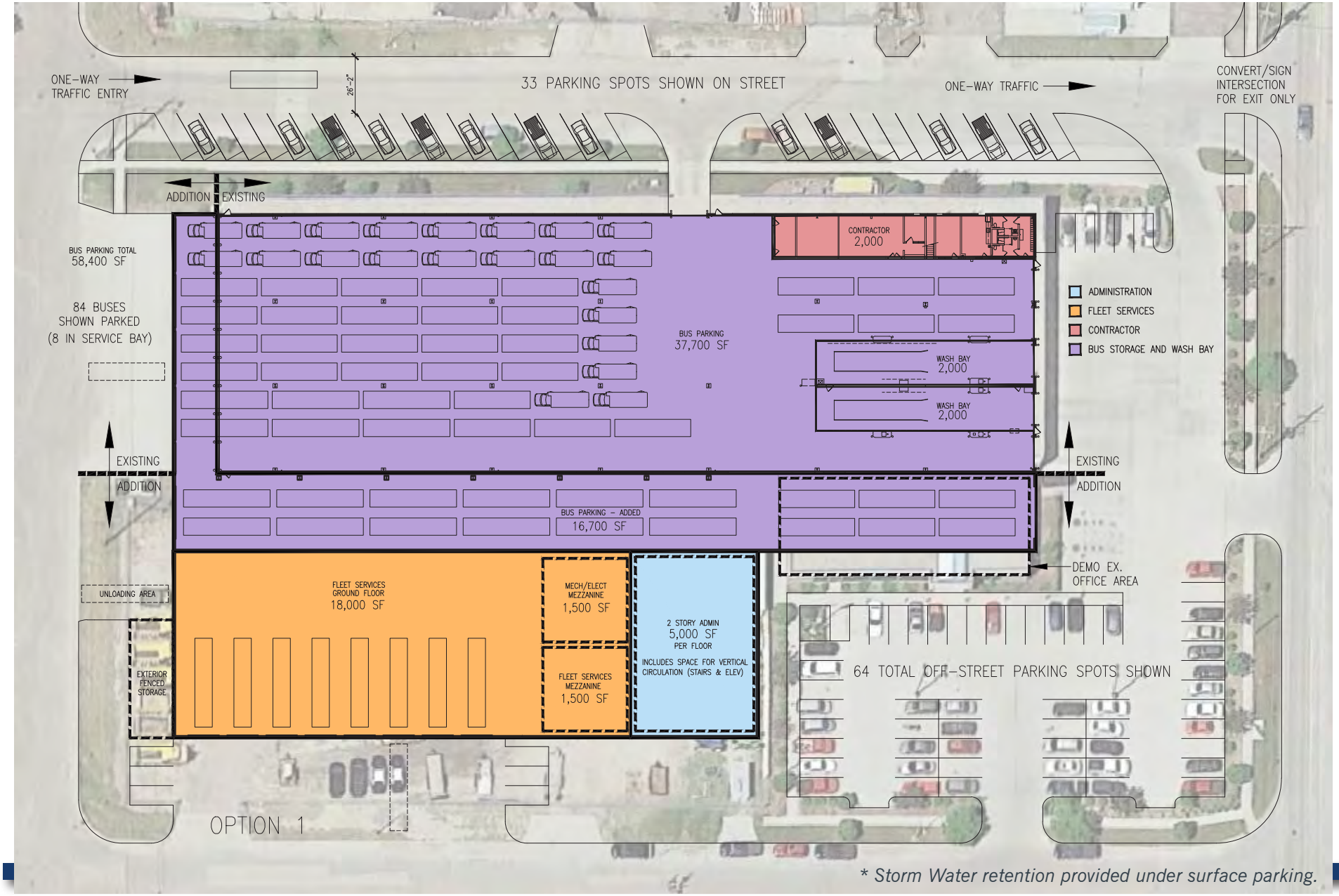
With these projections in mind, a series of options were developed to assist with giving MATBUS an understanding of generalized options to address projected space needs at the MTG. The development of options was based on a series of detailed working meetings with MATBUS staff, which provided the planning team insight into details of space planning and programming needs. Considerations for staffing needs and space availability across facilities and functional areas was considered.

MTG – Proposed Aerial Looking NE

MTG – Proposed NW Corridor

MTG – Existing Aerial Looking SW

MTG Option 1 – Full Build



** Storm Water retention provided under surface parking.*

Option 1

This option focuses on maximizing capacity in all five program areas while keeping as much of the existing operations on-site. This is accomplished by demolishing the existing office area to allow for additional drive-thru vehicle storage and a second wash bay. The existing maintenance area would be converted into additional vehicle storage and contractor space. The southeast corner of the lot would be fully developed and would include fleet services and a two-story administrative area. This option also provides an addition to the south end of the building to accommodate larger exit doors.

To alleviate issues with parking, the new fleet services and administrative addition are moved to the south of the lot to allow the existing lot to be reconfigured. Additional parking spaces are also acquired adjacent to fleet services and when 24th Street is converted to diagonal, on-street parking. Summary of Option 1 is as follows:

Table i: Refined Option 1

Option	Description	Cost	Percentage of Projected Program Needs Met			
			Admin.	Fleet Services	Fleet Storage + Wash	Off-Street Parking
1	**Expand MTG (Admin Demo)**	**$11,500,000**	100%	100%	112%	88%

MTG Implementation Strategy

Since fleet services is the most pressing need for expansion at the MTG, two phasing plans were explored for expansion of the MTG. This first option looked to add fleet services in 2022 and then do a full building expansion in 2037. The second option adds fleet services in 2027 and then completes the full MTG expansion in 2037. Table ii shows the utilization factor by functional area for each of those two-phasing plans. The option of building the fleet services component of Option 1 in 2022 and renovating current fleet service to bus storage appears to most adequately meet mid to long range needs of MATBUS at the MTG.

Table ii: Space Utilization by Functional Area at the MTG (Two-Phasing Plans)

Metro Transit Garage – Phased Implementation: Add Fleet Services 2022 and Full Expansion 2037

	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	84%	8,755	159%	8,755	88%
Contractor	1,400	100%	1,610	81%	1,820	91%	2,242	112%
Fleet Services	11,860	100%	17,000	89%	17,740	93%	19,220	100%
Storage + Wash	36,843	100%	41,963	101%	45,323	109%	52,163	101%
Parking	59	100%	97	82%	97	93%	97	113%

Metro Transit Garage – Phased Implementation: Add Fleet Services 2027 and Full Expansion 2037

	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	113%	8,755	159%	8,755	88%
Contractor	1,400	100%	1,610	115%	1,820	91%	2,242	112%
Fleet Services	11,860	100%	17,000	143%	17,740	93%	19,220	100%
Storage + Wash	36,843	100%	41,963	101%	45,323	109%	52,163	101%
Parking	59	100%	59	136%	97	93%	97	113%

West Acres Transit Hub

Background

The current West Acres Transit hub was built in November 2003 at a total cost of approximately $144,521. The current location replaced the original transfer location that was located on the north front entrance to the mall. Prior to renovations to the north main entrance to the mall, West Acres management had requested MATBUS relocate its transfer area to the south end of the mall.

Given changes to the mall currently in process or planned for the near future, West Acres management has again requested MATBUS consider a relocation of its current transit hub. Additionally, MATBUS itself has continued to struggle with various operational issues related to the current location of the West Acres Transit hub.

No timetable was given by West Acres as to when it wishes for MATBUS to relocate its current transit hub. However, MATBUS started to prepare a financial strategy for programming federal funds to assist with cost of developing a preplacement for the current West Acres Transit hub.

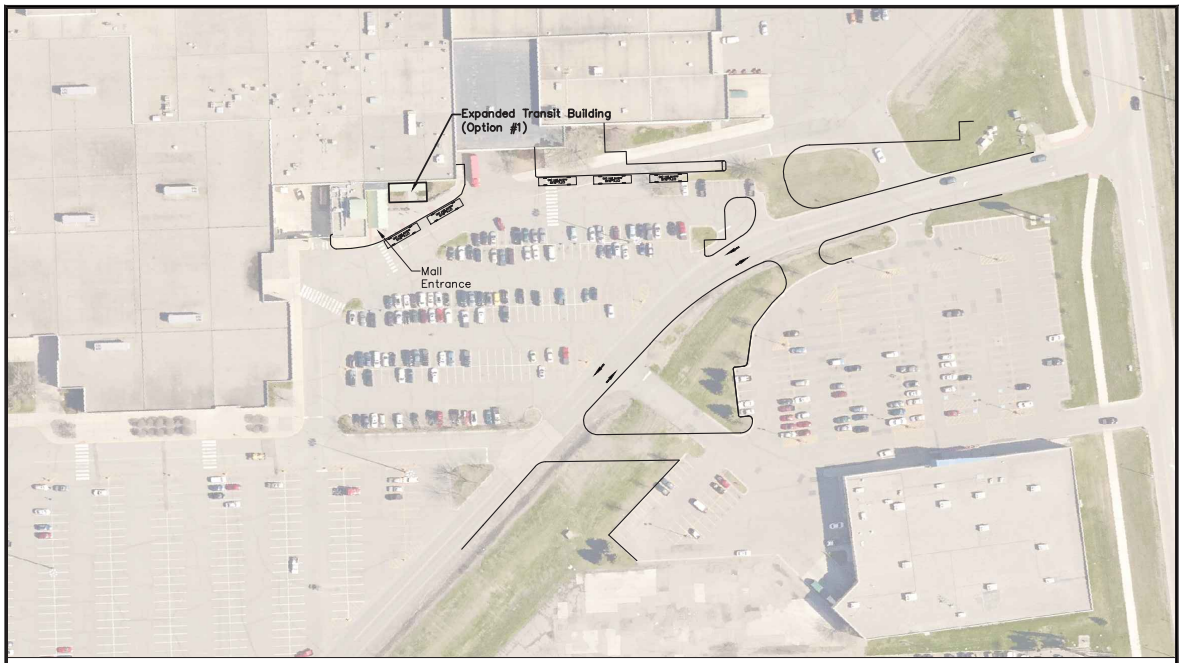
West Acres is currently served by Route 14, 15, 16, 20, and 24, which represented 5 of 11 existing non-NDSU based fixed routes. It is estimated that around 140,000 passengers pass through the West Acres transit hub annually. Of that total, between 68,000 and 73,000 MATBUS passengers access West Acres itself. In total, the West Acres Transit hub accounts for nearly 7% of all Fargo based MATBUS boardings.

On-Site Locations

Based on three meetings with the West Acres management and a series of internal working meetings with MATBUS and Metro COG, a set of options were developed and evaluated for the West Acres Transit Hub. The following options were initially developed for consideration:

» **Do Nothing –** Would essentially maintain the existing transfer at the West Acres southeast entrance. Beyond the immediate short-term, this is not considered a viable option for either West Acres management or MATBUS.

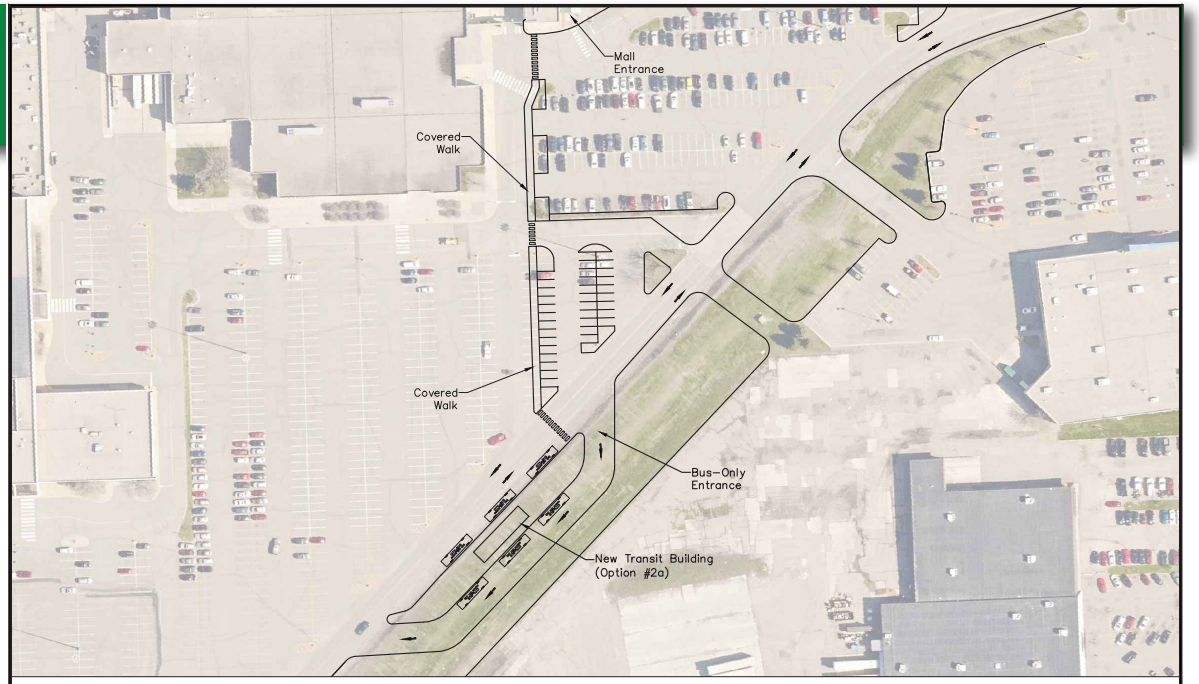
» **Option 1 –** Option 1 is really an enhanced/expanded existing condition. Option 1 would add additional on-street bus capacity along the island just south of the new Best Buy location. Option 1 would provide additional passenger waiting area to the existing transit hub. Based on concerns expressed both by West Acres management and MATBUS, this option does not address concerns raised regarding the current location.



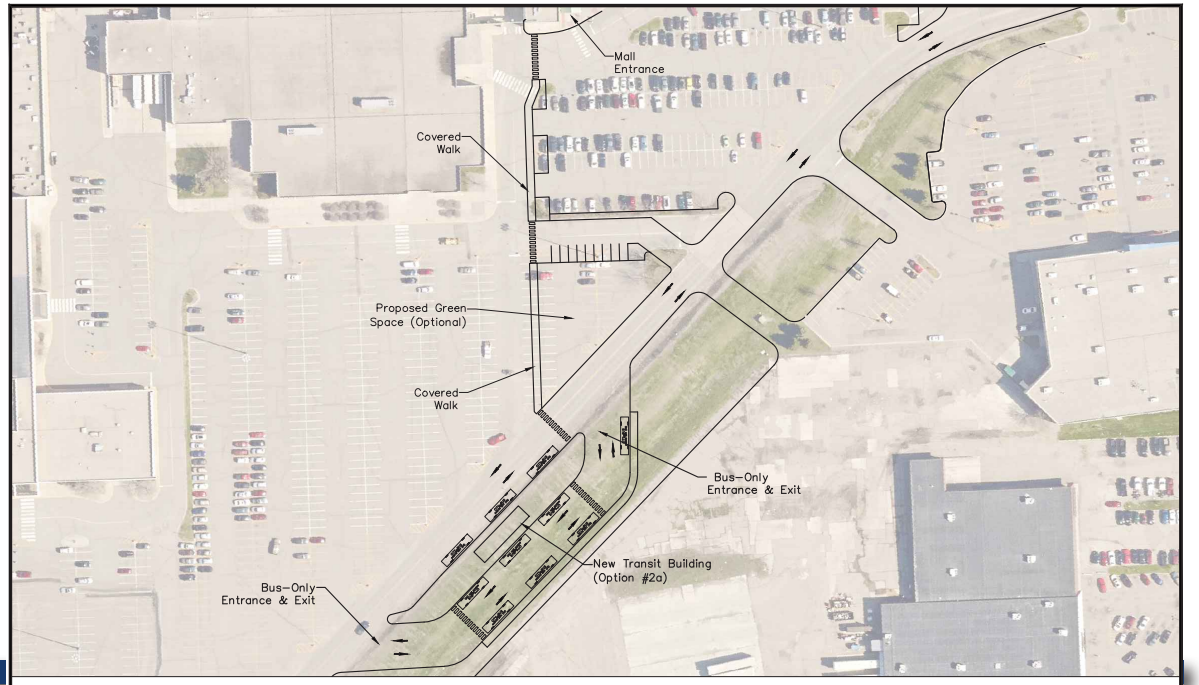
MATBUS – West Acres Mall Transit Hub
Option #1 (5 Buses)

» **Option 2a/2c –** Option 2a/2c develops a new transit hub within the green space on the southeast side of the West Acres property. This green space is former rail right-of-way now owned by West Acres. This property also abuts property currently owned by West Acres. This general location includes consideration of Option 2a/2c, which are generally variations of another. Accommodations for both options account for both a 6-bus and 10-bus option.

» **Option 2b –** Option 2b developed a new transit hub within the parking areas south of the southeast mall entrance, straight south of the current transit hub at West Acres. ***Based on significant impacts to property owner-tenant agreements, this option was dismissed prior to developing detailed analysis.***



MATBUS – West Acres Mall Transit Hub
Option #2a (6 Buses)

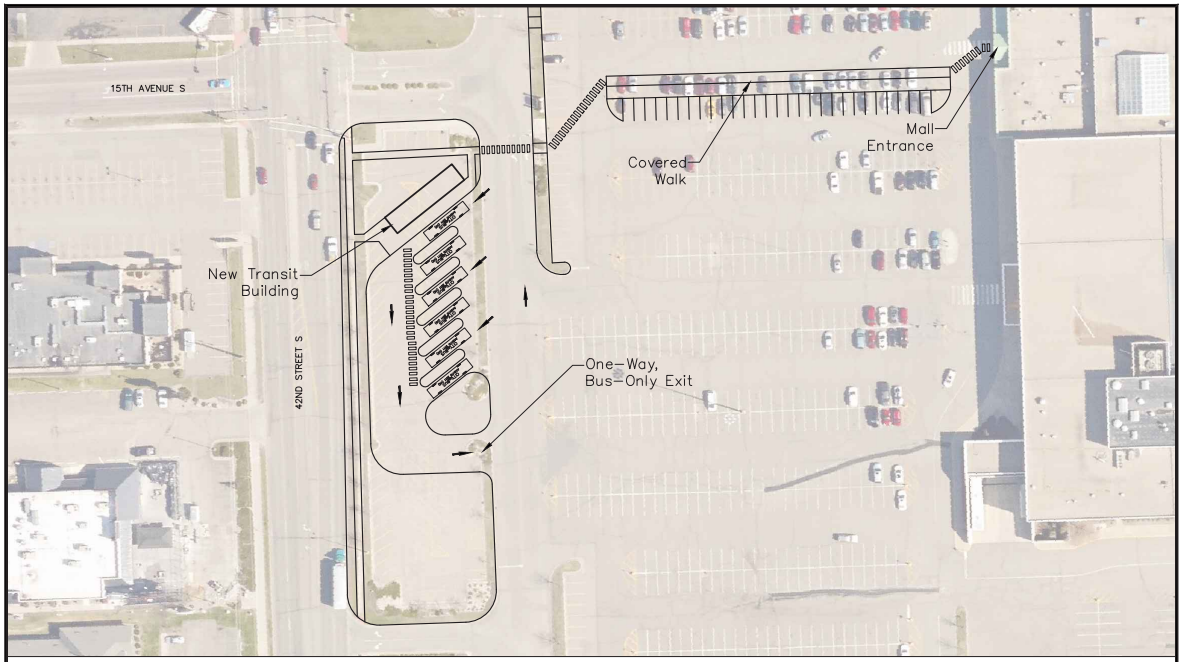


MATBUS – West Acres Mall Transit Hub
Option #2a – Future Expansion (10 Buses)

» **Option 3** – Option 3 develops a new transit hub south of 15th Avenue on the east side of 42nd Street. Option 3 would convert a remote parking lot on the southwest edge of the West Acres Mall to a transit hub. Accommodations in Option 3 account for both a 6-bus and 10-bus options.

» **Option 4** – Option 4 looked at a new transit hub north of 15th Avenue on the east side of 42nd Street, using a remote parking lot on the west edge of the West Acres mall. ***This option was dismissed based on operational concerns by MATBUS and uncertainty of West Acres Management regarding the future of the former Herberger's site.***

» **Option 5** – Develop a new transit hub on the north end of the West Acres property, south of 13th Avenue, but north of the current mall access road. This option would modify and use the existing overflow parking areas north of the mall. Accommodations in Option 5 account for an 8-bus layout. This option was considered the least favorable of those remaining options by both West Acres management and MATBUS. This site was not considered feasible based on projected traffic congestion issues on the north end of the mall and 13th Avenue.

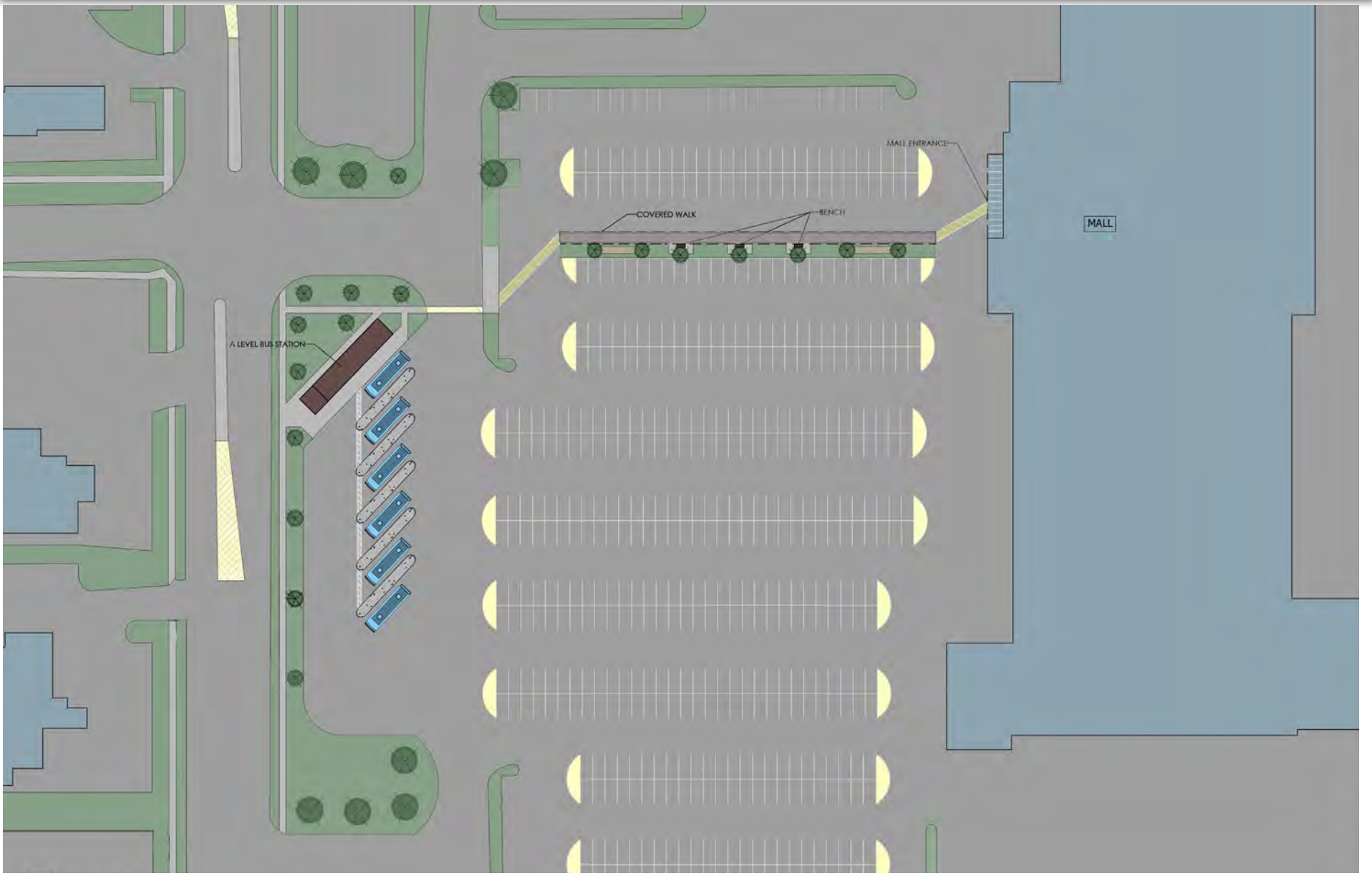


MATBUS – West Acres Mall Transit Hub
Option #3 (6 Buses)

Concept sketches of on-site West Acres Hub options are shown in the following graphics.

Option 2a Concept Sketch

Option 2c Concept Sketch



Option 3 Concept Sketch

Cost Estimates

Detailed project cost estimates were developed for each of the three sites determined to be most feasible by the SRC and West Acres Management. There were three inputs into the development of cost estimate for the West Acres Transit Hub: 1) Building costs; 2) Site design costs; and 3) Road Improvement costs. Each are summarized below.

Building Costs

Site development costs assumed the generalized programming cost developed for the A Level Stop design discussed in Chapter 4. The A Level Stop design and layout was scaled to meet planning level needs identified by MATBUS for a future expanded West Acres Transit Hub. The planning level cost estimate was assumed to be $500,000 for the building itself.

Site Design Costs

Site designs costs included the site development costs to redevelop each proposed site to accommodate a future West Acres Transit Hub. The detailed line item site costs for each site are shown in Appendix D.

Road Improvements

At the request of West Acres Management, the cost to improve sections of mall roadways from a six inch over six inch aggregate section to a nine inch eight section were developed. This was assumed to be adequate to account for existing and projected levels of transit traffic through the mall roadways. Cost assumptions were developed for site 2a/2c and 3. Detailed cost specifics and related assumptions for these improvements are shown in Appendix D.

Table iii: West Acres Hub – Cost Estimates

	Option 2A	Option 2C	Option 3
Building	$500,000	$500,000	$500,000
Site	$594,077	$873,895	$470,835
Road Improvements	$909,085	$909,085	$593,653
Total	**$2,003,162**	**$2,282,980**	**$1,564,488**

Notes:

1. *Includes contingency on all elements.*
2. *All option costs based on 6-bus layout.*
3. *Includes pedestrian/parking-related improvements between hub and mall.*
4. *Assumes asphalt road improvements for roads carrying bus traffic.*
5. *Assumes base layout for West Acres hub that was developed as part of this plan.*

Ground Transportation Center

Background

The Ground Transportation Center (GTC) is nearly 40 years old. Based on the development of the Transit Facility Development Study it was determined the GTC was underutilized relative to overcrowding in other areas such as the MTG. Several components of the GTC were determined to need significant remodeling and upgrades to respond current and projected demands. The project team developed an evaluation of both short- and long-term needs and options at the GTC aimed at addressing these issues.

The overall goal was to improve operations of and interrelationship of spaces for internal passenger waiting areas, operational functions, and administrative office space. A major analysis point in the evaluation of the GTC explored options to improve the safety and vehicle capacity of bus transfer areas. Concerns identified by MATBUS for existing conditions at the GTC include:

- Loitering is a concern inside and outside of the building.
- Concerns involving site security and surveillance of the overall property, which need improvement.
- The buses are required to back up when exiting the GTC, which is a safety concern.
- The current dispatch location does not allow for full view of the bus deck or waiting area; dispatchers have a difficult time seeing the deck due to window glare.
- Limited sight lines of the dispatch center create many “dead” spots where people can hide.

In coordination with the analysis developed at the Metro Transit Garage (MTG), various transit functions currently housed at the MTG were assumed to transition to the GTC. Most notably, MAT Paratransit dispatch and various contractor staff were relocated at the GTC from the MTG. This coordination provides better

MATBUS Ground Transportation Center
Concept 4c
(16 Buses)

MATBUS Ground Transportation Center
Concept 4d
(16 Buses + 2 Bus Parking)

MATBUS Ground Transportation Center
Concept 4e
(20 Buses)

utilization of existing and projected spaces at the GTC. This shift in operational locations of certain MATBUS functions also improves mid- to long-term space and facility needs at the MTG.

On-Site Options

The SRC developed a total of eight basic site concepts to address projected system needs for the GTC. Most of the technically feasible options to improve the function and operation of the GTC required acquisition of land either to the south or east of the current site. In all cases, expansion options requiring additional land only utilized property currently owned by the City of Fargo. Expansion options requiring new space used the current Municipal Court and the 4th Street surface lot.

The SRC considered Option 4d and 4e to represent the most technically feasible options for meeting both mid- to long-term needs at the GTC.

GTC Canopy Option A Aerial

GTC Canopy Option A Looking NW

GTC Canopy Option A Looking SE

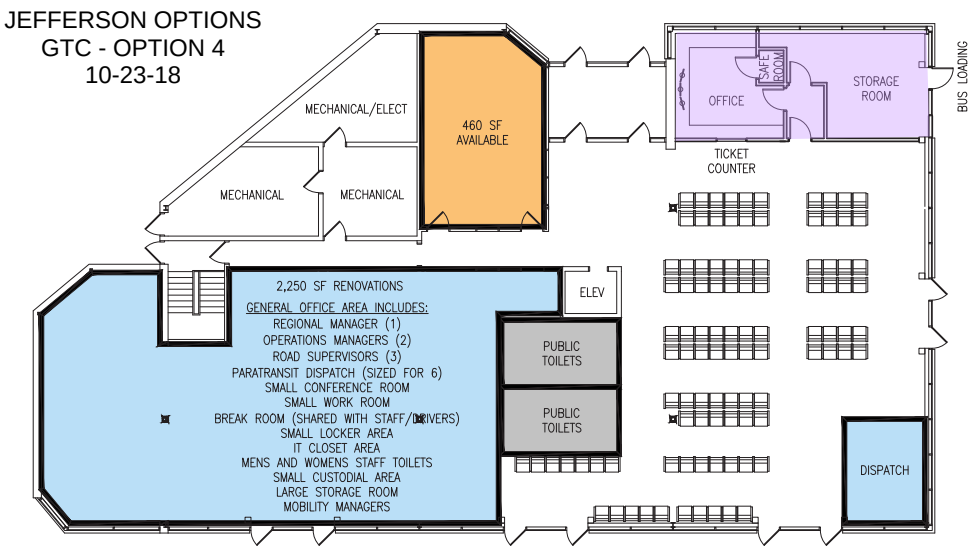
Internal Programming Options and Needs

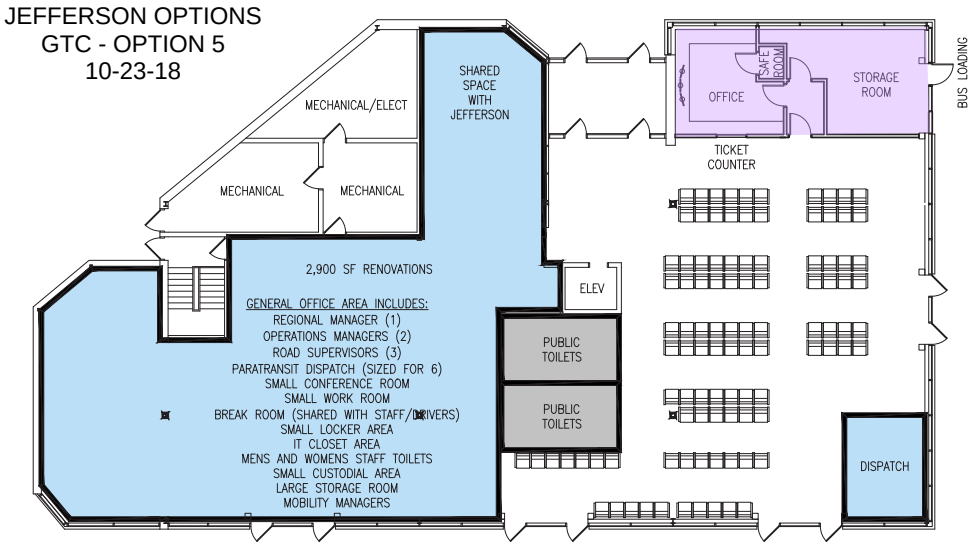
The SRC worked through a series of generalized space programming evaluations. The evaluations were used to determine projected future space needs for MATBUS. As noted earlier, those evaluations looked at options to relocate staff between the GTC and MTG based on a 20-year growth projection for MATBUS operations. This effort allowed the allocation of administrative and contractor office space to be more equally distributed between the MTG and GTC. This resulted in two key outcomes:

1. Maximizing space between the two locations.
2. Better alignment of staff locations with the operational needs of MATBUS.

The SRC worked through a series of space programming options and evaluations to develop a more efficient utilization of existing spaces within the current building footprint of the GTC. At this point in the analysis, the SRC was confident in the development of a site concept that would retain the general building footprint at the GTC (i.e., Option 4c/4d/4e). Therefore, a series of programming options for the current building footprint at the GTC were developed. Each of these options were developed to account for the potential integration of Jefferson Lines into the internal spaces of the GTC. Eight total options were developed for internal modifications to the GTC. The SRC recommended proceeding further into design with Options 4 and 5, which are shown to the right. The balance of options evaluated internally at the GTC are included in Appendix F.

The recommended internal program developed for the GTC, coupled with the revisions to the deck, address all the significant operational issues identified at the onset of the planning study. Implementation of the proposed improvements at the GTC serve to address mid- to long-range needs of MATBUS for successful operation of the GTC.





Cost Estimates

The SRC proceeded with developing an implementation program to support the development of Site Concept 4d/4e, and internal site plan support by Option 4 or Option 5. Cost estimates were developed to support implementation of both of those programs. Detailed estimate required for deck modifications to support Option 4d/4e are included in Appendix F. Generalized estimates to support the renovation of the internal and external components of the GTC are as follows.

Table iv: GTC Cost Estimates

Area of Work	Cost
Reroof	$154,090.00
Fascia Rebuild	$48,125.00
Notes: Includes top 5 feet of building around the facility	
Toilet Area	$120,000.00
Admin Area	$337,500.00
Dispatch	$42,500.00
Mobility Center or Jefferson	$82,500.00
Common Space	$166,000.00
Demo of Roof Overhang	$48,000.00
New Canopies Over Deck Area	$600,000.00
Costs for Deck Revisions	$551,000.00
Subtotal	**$2,149,715.00**
Contingency (15%)	$322,457.25
Total Construction Cost	**$2,472,172.25**

Notes:

1. *Does not include any bump out additions for entries, etc.*
2. *No renovations at the small office area and conference room.*
3. *Reroof costs include sub costs and contractor general conditions and OH/ Profit.*

Stop Level & Minor Hub Analysis

Ridership Data

Ridership was evaluated based on a sample size provided from September 25 to 30, 2017. Average daily boarding was calculated for each boarding point. In the case of Route 18, 20 (old 21 and 22), and 23, new ridership was pulled for a two-week period in late September 2018. A new ridership batch was pulled for these routes to account for potential maturity in ridership patterns based on the newness of the routes at the time of the original sample.

Environmental Justice

Environmental Justice (EJ) and Title VI considerations were integrated as part of the ridership evaluation. The Stop Level evaluation used existing low income and minority datasets used by Metro COG for its ongoing EJ evaluations. EJ should be a consideration in future weighting and consideration of stop level improvements. EJ data can suggest potential need for more neighborhood level improvements that may not be as evident in looking at individual stop level boarding patterns (e.g. Madison, Jefferson, and Romkey Park). EJ data is shown on the Stop Level Analysis Map on page 36.

Transit Intensive Corridors

Transit intensive corridors were identified to show areas with higher levels of transit use or the potential for significant redevelopment or increased transit usage in the future. These transit intensive corridors are those that likely warrant consideration for more significant investment in stop level transit infrastructure. Transit Intensive corridors are shown on the Stop Level Analysis Map on page 36.

Stop Level Analysis

Stop levels were developed based on four tiers of utility, expense, and size. These four stop levels are designated as level A, B, C, and D. It is anticipated these stops will be integrated into the neighborhoods they are embedded within to provide some context specific considerations such as history of neighborhood, point of interest, public art, and native landscapes/plantings.

Stop Level A – The largest facility with the most amenities; for the purposes of this analysis it is assumed these assumptions relate most specifically to West Acres, which is a primary hub for the MATBUS. An Level A Stop is the highest level and has a shelter with largest footprint and greatest number of amenities. These amenities can include restrooms, arrival/departure boards, waiting areas, vending machines, and office/administrative area.

The potential costs associated with construction of a facility such as this would be $375,000 to $500,000 for the shelter with the site improvement costs varying depending on existing conditions.

Stop Level B – Level B stops are smaller system hubs where there is currently transfer between routes, or higher frequency of service with a significant level of boarding relative to the rest of the system. The unique distinction between a Level A and Level B stop is the need for administrative space and the supportive functions associated with having the stop staffed with employees.

Potential costs associated with a Level B stop are anticipated to be $125,000 to $150,000 for the shelter with the site improvement costs varying depending on existing conditions.

Four (4) potential B-level stops were identified based on existing and projected transit boarding:

1. **Marriott –** The current Marriott transfer location would be a candidate for a B-level stop to better accommodate that hub's location and the routes that serve it. Although the daily boarding numbers do not currently meet the minimum average daily parameters defined herein, it is the main transfer point for bus service in Moorhead.
2. **NDSU Barry Hall –** There currently isn't a shelter at this location, but the average daily boardings is well over 450. Nearby routes include 13, 13U, 17, and 33 with up to 10 potential transfers per hour. In addition, there is already a bus pull-off located along 2nd Avenue North.
3. **Walmart-Dilworth –** The Walmart-Dilworth operates as a minor hub on the east end of the MATBUS system. Future system growth will serve to increase traffic through that site. As such, the site currently meets warrants for B Level Stop investments. Potential layouts and 3D renderings of the site are shown on the following pages.

4. **M|State** – It is possible that this location could potentially replace the Marriott as the main transfer hub in south Moorhead. If so, additional investments would be needed nearly matching that of B Level Stop. The potential layout and 3D visualization of the M|State site on the following pages.

Total cost for the M|State and Walmart sites are as follows:

Table v: Walmart and M|State Transit Hub Development – Cost Estimates

	Walmart	M-State
Building	$150,000	$150,000
Site	$91,792	$258,475
Road Improvements	$0	$0
Total	**$241,792**	**$408,475**

Notes:

1. Includes contingency on all elements.

2. All Option costs are based on the proposed site layout

3. Assumes B Level building costs.

Stop Level C – This is the smallest shelter on the system and would relate to higher boarding locations or along identified transit intensive corridors. These shelters are primarily designed to service one or two routes. These shelters have a small indoor waiting area for up to 10 passengers with benches and outdoor canopy. The total footprint is approximately 100 square feet with an adjacent ADA accessible landing pad.

Potential costs associated with a Level C stop are anticipated to be $15,000 to $20,000 for the shelter with the site improvement costs varying depending on existing conditions.

Stop Level D – This is a designated bus stop without a shelter. It includes a bus stop sign, no parking sign, and ADA accessible landing pad. It may also include an exterior bench. It is anticipated these stops would be integrated into routes at regular intervals of approximately every two to three blocks. In areas of lower boarding, specifically along routes within lower density and newly developed areas, consideration should be given to placing a sheltered C Level Stop at least every 12 blocks, or 1 mile.

Future Hub Investments

Based on existing conditions and future route growth, a series of existing stop locations were determined to have the potential for future investment. These are in addition to those listed earlier under Stop Level B needs. These investments would serve to upgrade these current stops to more of a significant level of stop or hub.

These locations are noted for future potential investment due to the current level of ridership. Also, of note is the general location of these facilities in relation to existing and future system growth which may occur within the MATBUS service area. Future stop level or hub investment areas are shown on the map on page 37. Future growth in these areas will make these a logical point for increased bus traffic at both the passenger and transfer level. These locations are noted as follows:

- **Downtown Moorhead –** Significant investments are happening in Downtown Moorhead. As changes to existing private developments and public roads unfold, additional consideration is needed to enhance and improve stop level amenities in Downtown Moorhead.
- **Walmart/13th Avenue –** Currently is served by two routes with more than 100 boardings per day. Future investment in the current condition would warrant a C Level Stop. Significant additional growth at this location could warrant a B Level Stop.
- **Sanford Hospital –** Currently served by one route, with boarding projected to increase as service on this route matures. Will likely be in close relation to new future service in the southwest service area of MATBUS. A C Level Stop is currently warranted at this location.
- **Walmart/52nd Avenue –** This location is in close relation to new future service. This Walmart, like others in the MATBUS service area (Dilworth, Fargo, etc.), will attract future potential transit demand. As warrants are met per this report, an upgrade to a C Level Stop should be considered.

» **NDSU/North University –** Significant boarding patterns and continued redevelopment in areas along North University Drive/17th Avenue provide support for an evaluation of future hub investment in those areas. Several C Level stops are closely aligned adjacent to Niskanen Hall, University Village, and the Sandford Health Athletic Complex (SHAC). Future study could look at coordinating and maximizing stop level investments in this area.

» **South University/25th Avenue –** This area is considered a future transfer point between existing and future MATBUS routes. Current infrastructure is substandard. There are existing conflicts between buses, parked cars and pedestrians, and very little delineation of the transit areas from adjacent uses.

» **Midtown Crossing –** The current stop at 1st Avenue and 12th Street North warrants consideration for additional investment. Based on boarding patterns, it meets criteria for a C Level Stop and is the fifth largest stop outside of the GTC, West Acres, and NDSU. The general location of Midtown crossing is ideal to support the potential of a future bus transfers between north-south/ cross town routes without the need to stop at the GTC.

Table vi: Stop Infrastructure

Stop Levels	Minimum Passenger Boardings/ Hour	Shelter *	Stop Infrastructure											
			ADA Landing Pad	Bus Pull-Off	MATBUS Stop Sign/No Parking Sign	Exterior Bench	Interior Bench	Trash Receptacle	Sun Shading	Shelter Doors	Restroom	Dispatch/ Offices	Storage/ Mechanical	Bike Rack
A Level	350	X	X	X	X	X	X	X	X	X	X	X	X	X
B Level	350	X	X	O	X	O	X	X	X	O	-	-	-	O
C Level	25	X	X	-	X	O	O	O	O	-	-	-	-	O
D Level	-	-	O	-	O	O	-	-	-	-	-	-	-	-

X Base Requirement O Warranted Option - Not Applicable

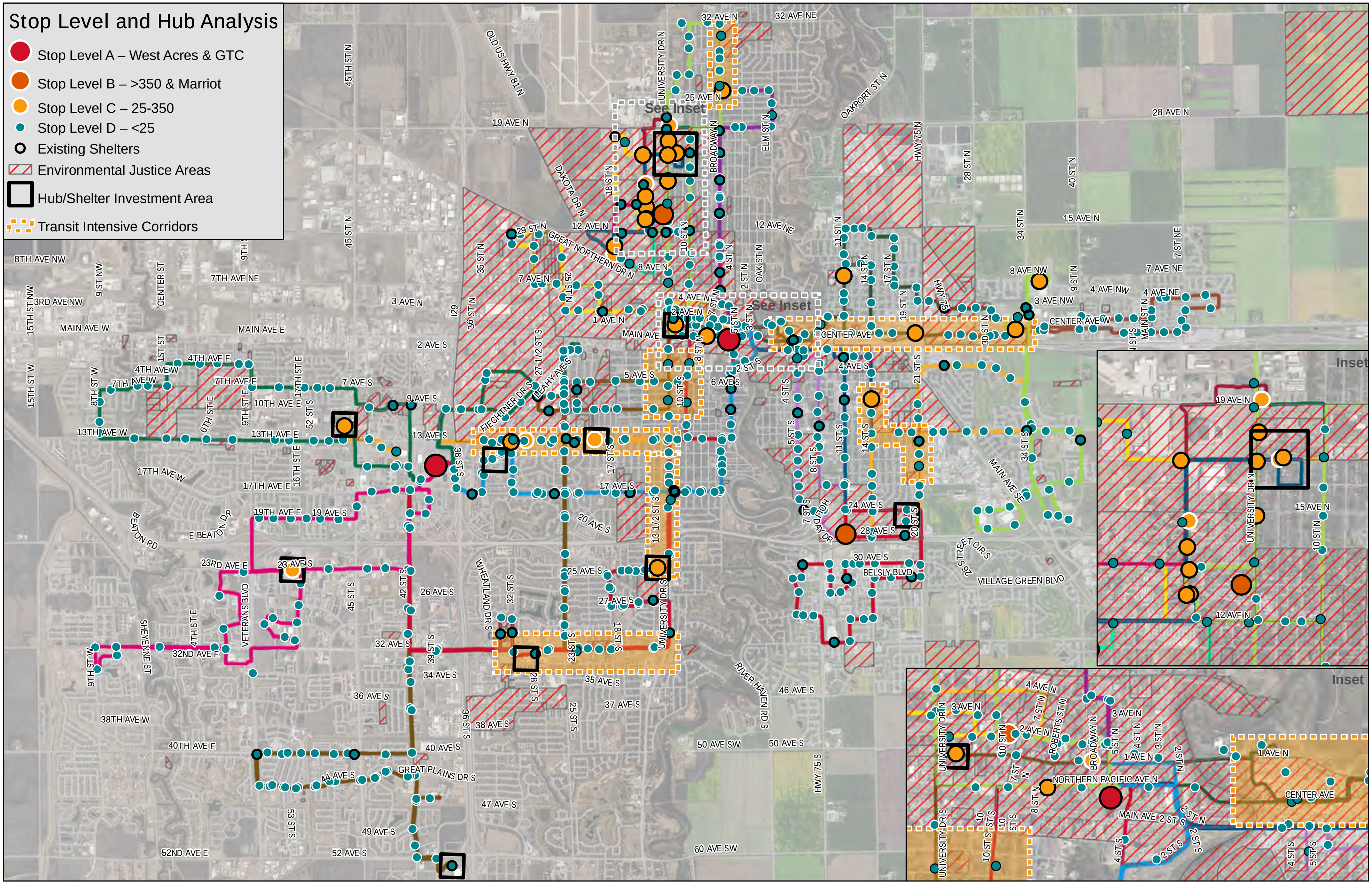
** Shelter may be a stand alone shelter or integrated within existing building infrastructure.*

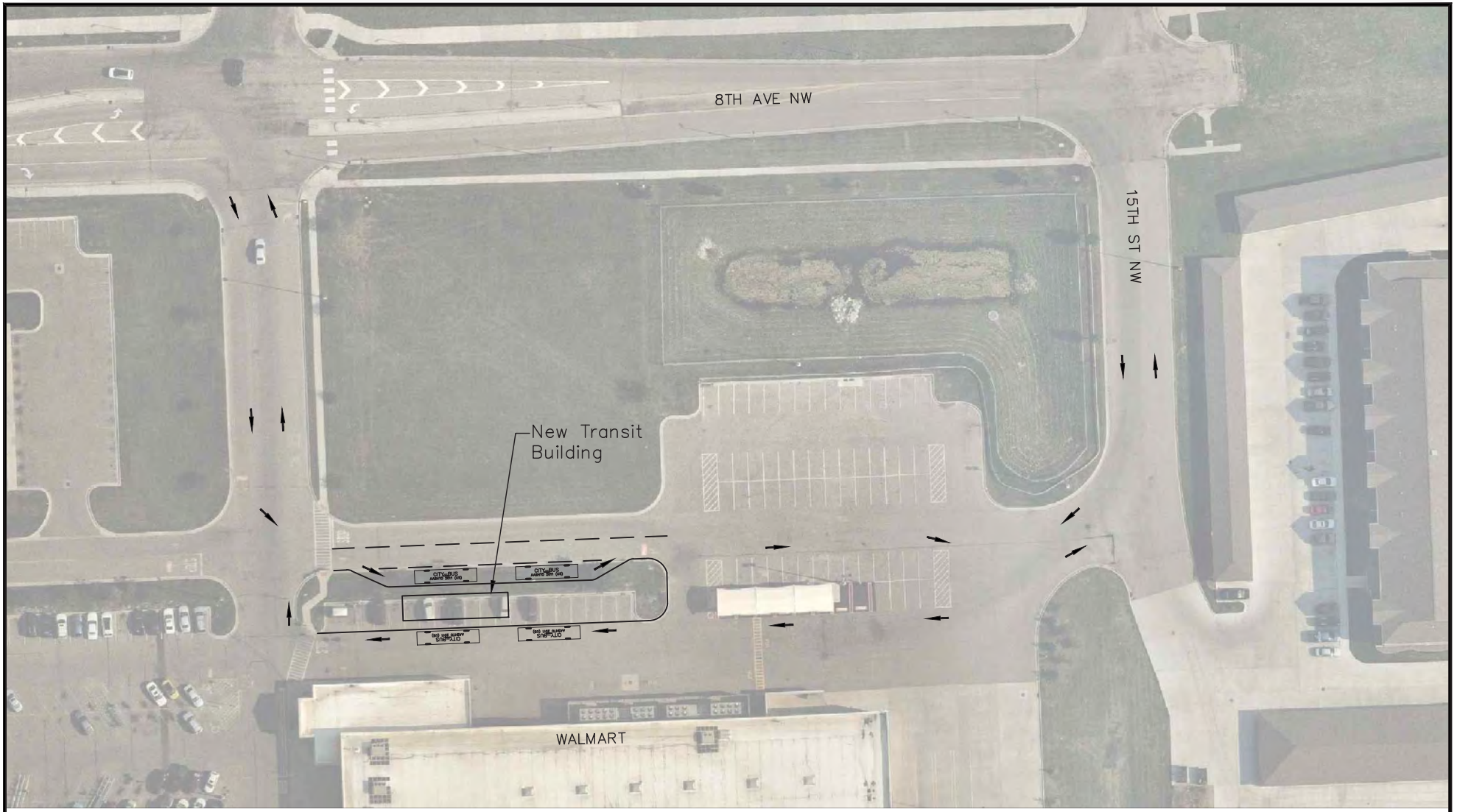
Table vii: Stop Amenities

Stop Levels	Minimum Passenger Boardings/ Hour	Shelter *	Stop Infrastructure										
			Exterior Lighting	Interior Lighting	Docking Station/ Outlets/USB Ports	Standing Height Counter	Vending Kiosk	Exterior Advertising	Heated	Cooled	Shade Trees	Solar Power	Green Roof
A Level	350	X	X	X	X	X	X	X	X	X	X	X	X
B Level	350	X	X	X	-	-	X	O	X	-	X	O	-
C Level	25	X	X	-	-	-	-	O	-	-	O	O	-
D Level	-	-	O	-	-	-	-	-	-	-	-	-	-

X Base Requirement O Warranted Option - Not Applicable

** Shelter may be a stand alone shelter or integrated within existing building infrastructure.*


Stop Level and Hub Analysis
Stop Level A – West Acres & GTC
Stop Level B – >350 & Marriot
Stop Level C – 25-350
Stop Level D – <25
Existing Shelters
Environmental Justice Areas
Hub/Shelter Investment Area
Transit Intensive Corridors
See Inset
See Inset
Inset
Inset
32 AVE N
32 AVE NE
25 AVE N
28 AVE N
19 AVE N
15 AVE N
12 AVE N
12 AVE NE
8 AVE N
8 AVE NW
7 AVE N
7 AVE NE
4 AVE NW
4 AVE NE
3 AVE N
3 AVE NW
1 AVE N
MAIN AVE
CENTER AVE
CENTER AVE W
8TH AVE NW
7TH AVE NE
3RD AVE NW
MAIN AVE W
MAIN AVE E
4TH AVE E
4TH AVE W
7TH AVE E
10TH AVE E
13TH AVE W
13TH AVE E
17TH AVE W
17TH AVE E
19TH AVE E
E BEATON DR
BEATON RD
23RD AVE E
32ND AVE E
38TH AVE W
40TH AVE E
52ND AVE E
2 AVE S
5 AVE S
6 AVE S
7 AVE S
9 AVE S
13 AVE S
17 AVE S
19 AVE S
20 AVE S
23 AVE S
24 AVE S
25 AVE S
26 AVE S
27 AVE S
28 AVE S
30 AVE S
32 AVE S
34 AVE S
35 AVE S
36 AVE S
37 AVE S
38 AVE S
40 AVE S
44 AVE S
46 AVE S
47 AVE S
49 AVE S
50 AVE S
50 AVE SW
52 AVE S
60 AVE SW
GREAT NORTHERN DR N
GREAT PLAINS DR S
BELSLY BLVD
VILLAGE GREEN BLVD
VETERANS BLVD
WHEATLAND DR S
RIVER HAVEN RD S
OLD US HWY 81 N
OAKPORT ST N
DAKOTA DR N
UNIVERSITY DR N
UNIVERSITY DR S
BROADWAY N
ELM ST N
OAK ST N
HWY 75 N
HWY 75 S
MAIN AVE SE
FIECHTNER DR S
LEAHY AVE S
STREET CIR S
45TH ST N
45 ST N
36 ST N
35 ST N
29 ST N
28 ST N
40 ST N
34 ST N
30 ST N
21 ST N
19 ST N
18 ST N
17 ST N
14 ST N
11 ST N
10 ST N
9 ST N
7 ST N
4 ST N
2 ST N
8TH ST W
9 ST NW
15TH ST NW
15TH ST W
CENTER ST
1ST ST
6TH ST E
9TH ST E
16TH ST E
17TH ST E
52 ST S
45 ST S
42 ST S
39 ST S
38 ST S
36 ST S
32 ST S
28 ST S
25 ST S
23 ST S
21 ST S
18 ST S
17 ST S
14 ST S
13 1/2 ST S
11 ST S
10 ST S
8 ST S
7 ST S
5 ST S
4 ST S
2 ST S
53 ST S
SHEYENNE ST
4TH ST E
9TH ST W
NORTHERN PACIFIC AVE N
MAIN AVE
ROBERTS ST N
2 AVE N
4 AVE N
15 AVE N
19 AVE N



Dilworth Walmart
Proposed Stop Level B

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

Dilworth Walmart 3D Renderings

Chapter 1 | Background and Summary

The MATBUS Transit Facility Study was developed to address several short, medium, and long-range facility-related issues facing MATBUS. The study evaluated four primary points of need related to MATBUS facilities.

1. **Metro Transit Garage** – Based on projected overcrowding at the Metro Transit Garage (MTG), a 20-year investment plan was developed to provide expansion options to meet existing storage and maintenance needs for the MATBUS fleet. Analysis also identified options to accommodate space for existing and projected administrative staffing needs. Changes at the MTG were coordinated closely with administrative changes at the Ground Transportation Center (GTC) to maximize existing space and potentially forestall costly expansion or renovations to administrative offices at the MTG. A final strategy for the MTG includes both a short to medium-term implementation strategy to address immediate storage and maintenance needs, and a longer-range program to meet needs through a 20-year planning horizon.

2. **West Acres Transit Hub** – Based in close consultation with West Acres management and in review of existing and projected conditions, a series of options were evaluated to accommodate an expanded facility for the West Acres Transit hub. A series of on-site and off-site options were developed. Three primary options were refined and finalized for a future West Acres Transit hub. All options remain on West Acres property, but are dislocated from direct attachment to the mall itself. Significant consideration was developed to assure seamless mobility between a new future hub and a public entrance to the mall.

3. **Ground Transportation Center** – As a nearly 40-year old facility, an evaluation of both short and long-term needs and options at the GTC were developed to meet a series of needs identified by MATBUS to improve operations of the GTC. In coordination with analysis developed at the MTG, a renovation strategy was employed at the GTC to accommodate various transit functions currently housed at the MTG. This coordination provides for better utilization of the GTC, improved operations, and maximizes existing spaces and facilities at the MTG.

4. **Stop Level & Minor Hub Needs** – Based on an evaluation of existing boarding and ridership patterns, a series of infrastructure investment priorities were developed for existing stops on the MATBUS system. Stop levels were developed based on four tiers of utility, expense, and size. Stop levels are designated as level A, B, C, and D. Both general and context-specific improvements were identified for series of existing and future Level B and C system hubs.

Each area of the facility analysis was developed through an evaluation of both existing and projected needs. Consultation also occurred with the public, ridership, other key municipal departments (e.g., public works), and key system stakeholders. Chapter 2 of this report summarizes key background data and analysis to support development of the study.

Each subsequent chapter of this report outlines the analysis and recommendations developed for each element of the MATBUS Transit Facility Study.

Chapter 2 | Projected Conditions

Introduction

This element of the MATBUS Facility Study establishes a set of baseline and projected data sets used to develop the MATBUS Facility Study. Existing and projected conditions are evaluated to cover three primary areas:

1. Vehicle Projections
2. Operational Concept and Hub Projections
3. Staffing Projections

Development of either existing or projected conditions for each of these areas assists in later planning and facility space programming to support the overall MATBUS Facility Study. Projections were performed on the MATBUS fleet, staff, and hubs. The following sections explain projections methods and approach used for each.

Vehicles

The existing base year (2017) MATBUS fleet was extrapolated to a 20-year planning horizon using four methods. Each method was developed and presented to the Study Review Committee (SRC) for review and comment. A summary of each method follows:

Method A: Revenue Miles per Vehicle

Using National Transit Database (NTD) data and data from MATBUS where available, growth in revenue miles per year was calculated back to the year 2007 for 10 years of data. This growth rate was extrapolated across the planning 20-year horizon. Also using NTD data and MATBUS data, the number of vehicles in the MATBUS fleet per vehicle revenue mile was calculated. This ratio was used to determine future fleet size based on the previously extrapolated revenue mile figure. This was also done to the 20-year planning horizon to determine short, medium, and long-range fleet needs.

Method B: Passengers per Vehicle

Like Method A, Method B used MATBUS data where available but used passengers per vehicle instead of vehicle revenue miles.

Method C: Urban-Area Population per Vehicle (Demand Response Only)

Method C used urban area population to determine a ratio of population to demand response vehicle. The urban area population was chosen initially for this metric as it was thought to better encapsulate the relatively unlimited service area (compared to fixed route) that demand response provides. Using recently updated demographic forecasts, a population to vehicle ratio was established and projected across the 20-year planning window.

Method D: Passenger Miles per Vehicle (Demand Response Only)

Method D used passenger miles per vehicle from NTD and vehicle numbers from MATBUS to develop a passenger mile to vehicle ratio for the demand response fleet. The previous 10 years of passenger miles were used to calculate a growth rate of passenger miles per year and this number was extrapolated to the 20-year planning window. The ratio of passenger miles per vehicle was used to determine the demand response fleet need throughout the planning horizon.

Summary

Based on guidance from the SRC, Methods B and C were dropped in favor of method A for use on the fixed route fleet and method D for use on the demand response/paratransit fleet. For both fixed route and demand response fleets, methods A and D were initially developed using high, medium, and low growth scenarios. Due to SRC feedback, a medium-high scenario was added.

High growth is 100% of the expected value of the fleet given ratio used by each method and extrapolated out across the planning window. Medium-high growth is 75% of this number, medium growth is 50%, and low growth is 25%.

These different growth rates were presented to provide options for MATBUS staff to plan for what was deemed to be most appropriate for the development of future planning and programming needs at existing and projected facilities.

The SRC decided to use the medium growth scenario for fixed route and the high growth for paratransit fleet projections. The medium growth scenario projects a need of 63 fixed route vehicles and 18 demand response vehicles by 2037.

Table 1: Fixed Route Revenue Miles and Vehicles by Year

Fixed Route Revenue Miles and Vehicles by Year					
Revenue Miles by Year	**2017 (Base)**	**2022**	**2027**	**2032**	**2037**
High Growth	1,468,699	1,781,224	2,093,749	2,406,274	2,718,799
Medium-High Growth		1,703,092	1,937,486	2,171,879	2,406,273
Medium Growth		1,624,961	1,781,224	1,937,486	2,093,749
Low Growth		1,546,830	1,624,961	1,703,092	1,781,223
Vehicles by Year	**2017 (Base)**	**2022**	**2027**	**2032**	**2037**
High Growth	42	53	63	74	85
Medium-High Growth		50	58	66	74
Medium Growth		47	53	58	63
Low Growth		45	47	50	53

Figure 1: Projected Fixed Route Vehicles by Year

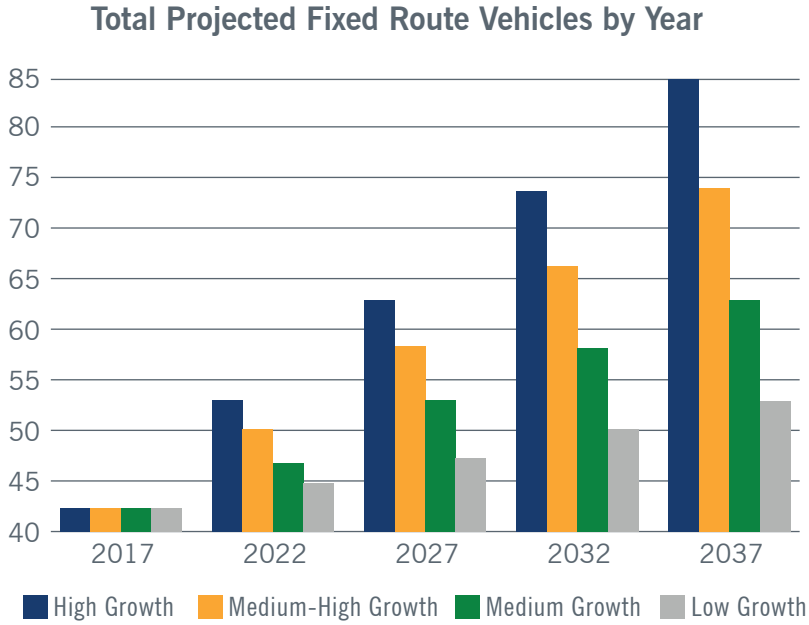
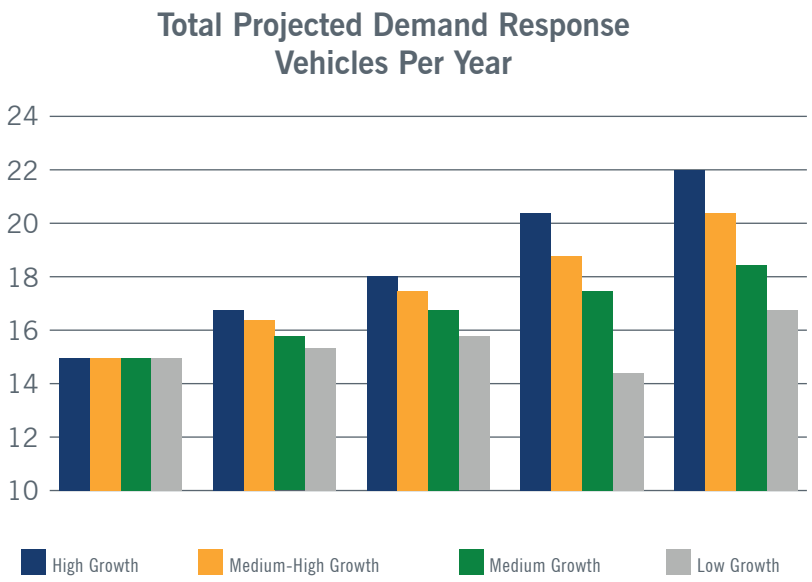


Table 2: Demand Response Passenger Miles and Vehicles by Year

Demand Response Passenger Miles and Vehicles by Year					
Passenger Miles Per Year					
	2017 (Base)	**2022**	**2027**	**2032**	**2037**
High Growth	1,468,699	395,166	441,672	488,178	534,684
Medium-High Growth		383,540	418,419	453,299	488,178
Medium Growth		371,913	395,166	418,419	441,672
Low Growth		360,287	371,913	383,540	395,166
Vehicles by Year					
	2017 (Base)	**2022**	**2027**	**2032**	**2037**
High Growth	42	17	18	20	22
Medium-High Growth		16	18	19	20
Medium Growth		16	17	18	18
Low Growth		15	16	16	17

Figure 2: Projected Demand Response Vehicles by Year



Peer City Population Size and Active Fleet Size

For purposes of validating the methods and projections for fixed route vehicles, Metro COG's current 2015-2045 Demographic projections were used to triangulate future population figures for peer cities and projected MATBUS vehicle needs. The "best case" population projections for the FM Metropolitan area (shown in Table 3) were used to identify and compare with projected peer's systems for MATBUS. (Note: A similar comparison for Paratransit/Demand Response was not developed given the wide range of service delivery methods and localized policies which can radically affect service levels and fleet sizes.)

Table 3: FM Demographics Forecasts

FM Demographics Forecast		
Population Forecasts (UZA)	**Medium-Term (2025)**	**Long-Term (2035)**
Best Case	243,860	277,540
Most Likely	239,170	269,100

Peers systems were identified for both existing and projected conditions. Three levels of peer systems were evaluated based on the existing and projected population of the FM Metropolitan area.

1. **Current Peers** – Used the same peers identified in the 2016 Transit Development Plan (TDP), with population, fleet size, and revenue miles shown in Table 4. On average, MATBUS showed a lower fleet size, but equivalent revenue miles when compared to fixed route peer's systems in the existing condition.
2. **Future Peer Cities (years 2025)** – Year 2025 peers were evaluated to compare year 2027 MATBUS projections to communities with similar population sizes to that projected for MATBUS in year 2025. On average, MATBUS sized closely with year 2025 peer systems for fleet size, but shows nearly 400,000 more revenue miles than the system average of those peers.
3. **Future Peer Cities (Year 2035)** – Table 5 peers were used to compare year 2037 MATBUS projects to communities who currently have a similar size to that projected for MATBUS in year 2035. When compared to Year 2035 peer systems, MATBUS was very closely matched in both fixed route fleet size and revenue for those identified system peers.

Table 4: Current Peer Cities

Peer Cities Identified in 2016 TDP			
Current Peers	**2016 Population Estimate**	**Active Fleet (2016 NTD)**	**Fixed Route Revenue Miles (2016 NTD)**
St. Cloud, MN	114,574	39	1,234,866
Duluth, MN-WI	115,390	68	1,815,453
Racine, WI	133,138	35	957,132
Champaign, IL	150,682	102	3,117,545
Topeka, KS	148,718	30	854,933
Medford, OR	164,157	26	592,205
Sioux Falls, SD	171,906	28	763,809
Binghamton, NY-PA	157,909	44	1,168,425
Santa Cruz, CA	170,825	88	2,650,889
College Station-Bryan, TX	195,896	27	794,107
Waco, TX	183,087	37	853,815
Cedar Rapids, IA	186,623	30	978,000
Waterbury, CT	192,420	42	1,105,711
Erie, PA	190,927	81	1,991,405
Lafayette, LA	262,653	25	707,634
Grand Rapids, MI	611,815	148	5,091,378
Average	**188,515**	**53**	**1,446,356**
Fargo, ND-MN	**199,778**	**42***	**1,468,699**

**FM vehicle data from MATBUS*

Table 5: Future Peer Cities (2025 and 2035)

Fixed Route Fleet Sizes Among Future Peer Cities			
Medium-Term Peers	**Year 2025 Peer System Population**	**Active Fleet (2016 NTD)**	**Fixed Route Revenue Miles (2016 NTD)**
Kennewick-Pasco, WA	232,954	63	2,161,030
Killeen, TX	233,580	40	708,855
Barnstable Town, MA	244,138	64	1,412,448
Wilmington, NC	244,561	39	1,223,022
York, PA	245,052	44	1,238,076
Atlantic City, NJ	249,860	30	590,636
Salem, OR	252,890	64	2,173,882
Tallahassee, FL	253,709	80	2,169,975
Laredo, TX	254,988	49	1,705,954
Lubbock, TX	256,813	74	1,784,801
Average	**246,855**	**55**	**1,378,971**
Fargo-Moorhead	**243,860**	**53**	**1,781,224**
Long-Term Peers	**Year 2035 Peer System Population**	**Active Fleet (2016 NTD)**	**Fixed Route Revenue Miles (2016 NTD)**
Eugene, OR	262,036	88	3,003,566
Columbus, GA-AL	262,516	31	897,975
Lafayette, LA	262,653	25	707,634
Santa Clarita, CA	266,721	53	1,986,803
Peoria, IL	266,814	59	2,030,607
Reading, PA	273,538	53	1,521,108
Canton, OH	277,134	108	2,249,630
Lincoln, NE	278,085	67	1,602,090
Springfield, MO	284,181	28	1,073,726
Davenport, IA-IL	284,781	108	3,434,792
Average	**271,846**	**62**	**1,850,793**
Fargo-Moorhead	**277,540**	**63**	**2,093,749**

Operational Concept

An Operational Concept was developed to triangulate fleet projections to a conceptual growth concept on a route-by-route basis. The Operational Concept is useful to determine where new route growth would occur, which transit hubs would be most affected, and when and where new hubs would be needed. Additionally, the Operational Concept draws a comparison between projected fleet size in relation to fleet needs to meet future peak demand and anticipated spare ratio requirements for MATBUS.

The Operational Concept was developed based upon the existing route structure and built based on consultation with MATBUS, Metro COG and the 2016-2020 TDP.

The Operational Concept is realistic in that it develops improved services based on projected desire lines. However, it has no basis in fiscal constraint. Rather, it is used to attempt to develop a longer-range estimate of operational needs of MATBUS from a rolling stock and transfer hub perspective. In summary, the following principles were applied to develop the Operational Concept:

By 2027

- Four (4) new fixed routes added to the MATBUS System, plus one additional downtown shuttle.
- Five (5) existing Fargo routes would see headway increases.

By 2037

- Three (3) Moorhead routes would see headway increases.
- Three (3) Fargo routes would see headway increases.

Table 6 shows a comparison of the Operational Concept on existing and projected fleet size as previously discussed in this report. A more detailed summary of the Operational Concept is shown in Appendix A.

Hubs

Projected future conditions were developed for each existing MATBUS system hub.

Projected future hub operations were based on inputs from the Operational Concept in terms of new routes, increases in frequency of existing, and projected future routes. Projections were developed for the GTC, West Acres, Marriott, and Dilworth Walmart. These projections were broken into appropriate time bands to work with current pulse patterns at each hub.

These growth projections were combined to provide an approximation of needed vehicle capacity at each hub for each phase of the 20-year planning window that covers the base year (2017), Medium Term (2027), and Long Range (2037).

Table 6: Spare Ratio Analysis Comparison of Operational Concept to Fleet Projection Scenarios

		Base	2027	2037
Total Peak Need	NDSU (15% Growth)	7	9	11
	All Other Fixed Route	25	39	52
	Total Fixed Route Peak	32	48	63
Medium Growth Spare Ratio	Fleet (Medium Growth-50%)	42	53	63
	Spare	10	9	14
	% Spare Ratio	31%	17.8%	21.8%

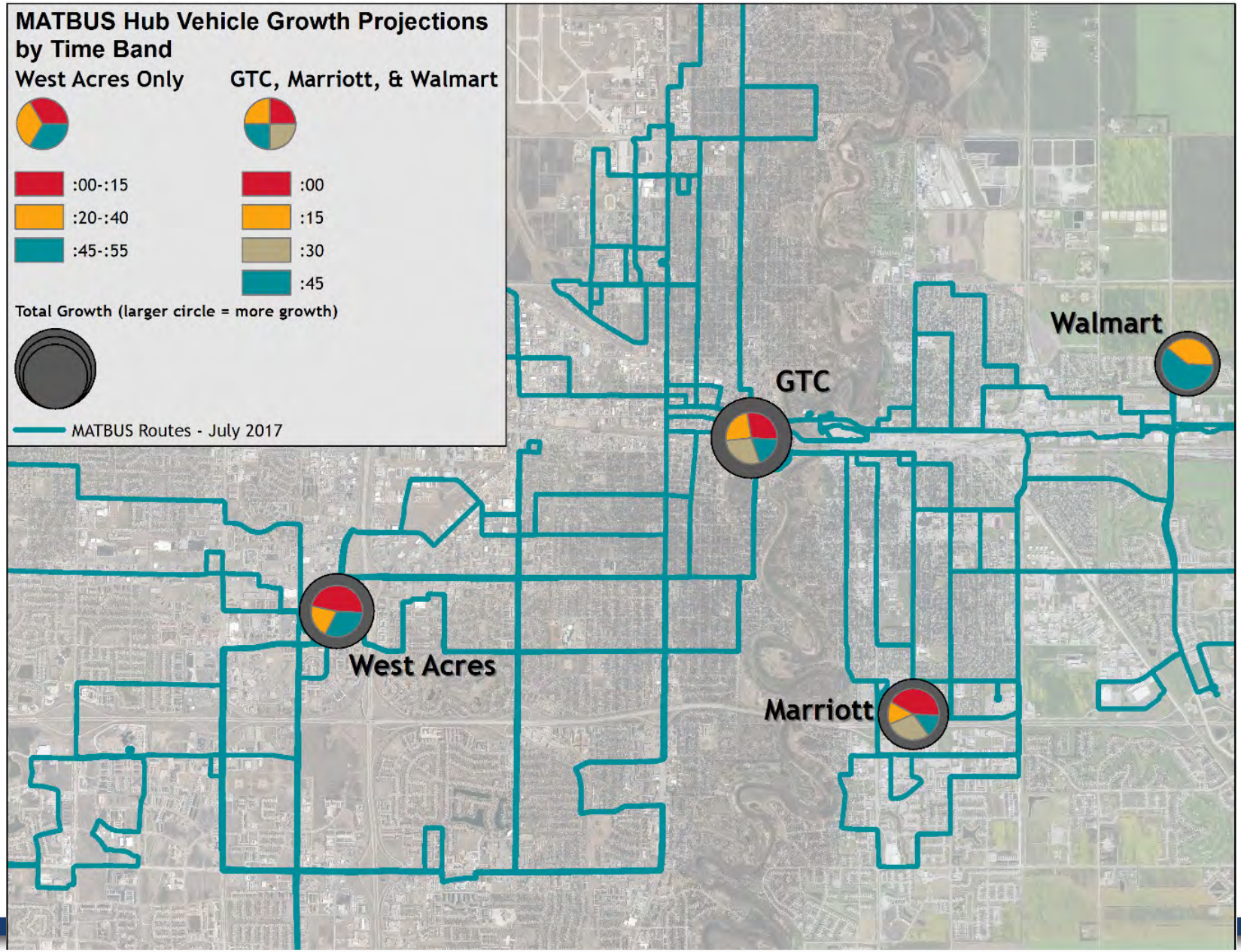
The Operational Concept was integrated with existing scheduling patterns to develop anticipated arrival patterns for each for the four hubs. For hubs where all buses typically pulse at the same time, growth was added to those periods where pulsing currently occurs. In the case of West Acres, where not all pulsing occurs at the same time, assumptions were made regarding the "banding" of bus traffic throughout a typical hour.

The GTC is projected to see the greatest overall vehicle growth with West Acres shortly behind and Marriott having more modest growth. This summary can be seen in Table 7 and in the map in Figure 3.

Table 7: Total Projected Vehicles at Each Hub by Time Band

Base					Medium-Term (2027)					Long-Range (2037)				
GTC														
	:00	:15	:30	:45		:00	:15	:30	:45		:00	:15	:30	:45
Total	**4**	**9**	**4**	**10**	**Total**	**7**	**12**	**7**	**12**	**Total**	**10**	**14**	**10**	**14**
Link is :12, :27, :43 and :57 (approx.)					*Link is :12, :27, :43 and :57 (approx.)*					*Link is :12, :27, :43 and :57 (approx.)*				
West Acres														
	:00-:15	:20-:40	:45-:55			:00-:15	:20-:40	:45-:55			:00-:15	:20-:40	:45-:55	
Total	**5**	**6**	**3**		**Total**	**9**	**6**	**6**		**Total**	**14**	**10**	**9**	
Marriott														
	:00	:15	:30	:45		:00	:15	:30	:45		:00	:15	:30	:45
Total	**4**	**1**	**4**	**1**	**Total**	**6**	**2**	**6**	**2**	**Total**	**7**	**2**	**6**	**2**
Walmart-Dilworth														
Total	**0**	**3**	**0**	**2**	**Total**	**0**	**4**	**0**	**5**	**Total**	**0**	**5**	**0**	**5**

Figure 3: Hub Vehicle Growth by Time Band



Staff

To assist with planning for facility needs, staffing projections were developed for each functional area of MATBUS. This covered the following areas:

- **Administration –** Covering all administrative, planning, dispatching, and other staffing needs provided by either the City of Moorhead or City of Fargo.
- **Fleet Services –** Transit fleet maintenance provided by the City of Fargo.
- **Contracted Operations –** Covers management and supervisory staff of the contracted operator, including fixed route and paratransit drivers.

Staffing levels as expressed by full time equivalents (FTE) were projected using current and past staffing levels provided by MATBUS and First Transit. Future staffing levels were evaluated based off a series of variables unique to each functional area. The following key assumptions were vetted and approved by the SRC for use in developing the staff projections:

- Account for new staff needs as part of the transition to a Transit Authority, specifically:
  - > Accounting, Legal, IT, Human Resources, etc.
  - > Transition from 2 Directors to 1 Director + 2 Asst. Director
- Use Growth Assumptions related to Fixed Route (Revenue Miles) and Paratransit (Passenger Miles) to account for growth in dispatch and contracted operations (i.e., drivers, supervisors, etc.);
- Fleet maintenance growth based on base year (2017) ratio of fleet/staff of 3.22 for future staffing levels.

This summary can be seen in Table 8. A more detailed summary of staffing projections is included in Appendix B.

Table 8: MATBUS Staffing Summary

MATBUS Staffing Levels Summary				
	2017	2022	2027	2037
Administrative Staff	11.5	14	20	25
Maintenance Staff	18	20	22	26
Contracted (less drivers)	11	12	12	16
Drivers	86	94	102	118
Total MATBUS + Contracted	127	139	160	185

Background

The current West Acres Transit hub was built in November 2003 at a total cost of approximately $144,521. The current location replaced the original transfer location that was located on the north front entrance to the mall. Prior to renovations to the north main entrance to the mall, West Acres management had requested MATBUS relocate its transfer area to the south end of the mall.

Given changes to the mall currently in process or planned for the near future, West Acres management has again requested MATBUS consider a relocation of its current transit hub. Additionally, MATBUS itself has continued to struggle with various operational issues related to the current location of the West Acres Transit hub.

No timetable was given by West Acres as to when it wishes for MATBUS to relocate its current transit hub. However, MATBUS started to prepare a financial strategy for programming federal funds to assist with cost of developing a preplacement for the current West Acres Transit hub.

West Acres is currently served by Route 14, 15, 16, 20, and 24, which represented 5 of 11 existing non-NDSU based fixed routes. It is estimated that around 140,000 passengers pass through the West Acres transit hub annually. Of that total, between 68,000 and 73,000 MATBUS passengers access West Acres itself. In total, the West Acres Transit hub accounts for nearly 7% of all Fargo based MATBUS boardings.

Field Survey

To study impacts to passengers boarding or departing busses at West Acres, a field survey was conducted at the current facility between 8:00 am and 4:30 pm on December 12 and 14, 2017. A summary of this survey is presented in Table 9.

Based on field work conducted on December 12 and 14 of 2017, an average of 239 passengers entered the West Acres mall after disembarking from MATBUS. Of this total, 3% of total passengers using the West Acres Transit hub appeared to have some form of a mobility limitation. A ridership sample from October 2018, indicated that 24.1% and 10.7% of passengers on routes passing through West Acres were eligible for a disabled or elderly fare, respectively.

Table 9: West Acres Passenger Survey

West Acres Passenger Survey Summary			
Date	Passengers entering the mall	Passengers Departing	Limited Mobility Passengers
12/12/2017	239	213	5
12/14/2017	237	170	10

Options Development

Off-Site Locations

From the start of the negotiations with West Acres management, they were amenable to finding an option that maintained the current transit hub on the West Acres property. Additionally, MATBUS considered a location on the current West Acres site to be a high priority. Two significant issues emerged regarding the potential to remove the current West Acres Transit hub from the Mall property altogether:

- Given the high volume of boarding/deboarding at West Acres, an off-site replacement location for the West Acres Transit hub would have the potential to induce additional transfers for some passengers to access the mall.
- Replacing the current West Acres Transit hub off-site may still require the same volume of bus traffic in near proximity to an existing West Acres entrance, thus continuing many of the existing concerns present for both West Acres Management and MATBUS.

Regardless of these two major concerns, potential off-site locations were identified in the event an on-site location was not determined suitable or technically feasible. Six total locations were identified as part of the hub analysis for ease of routing and facility building potential.

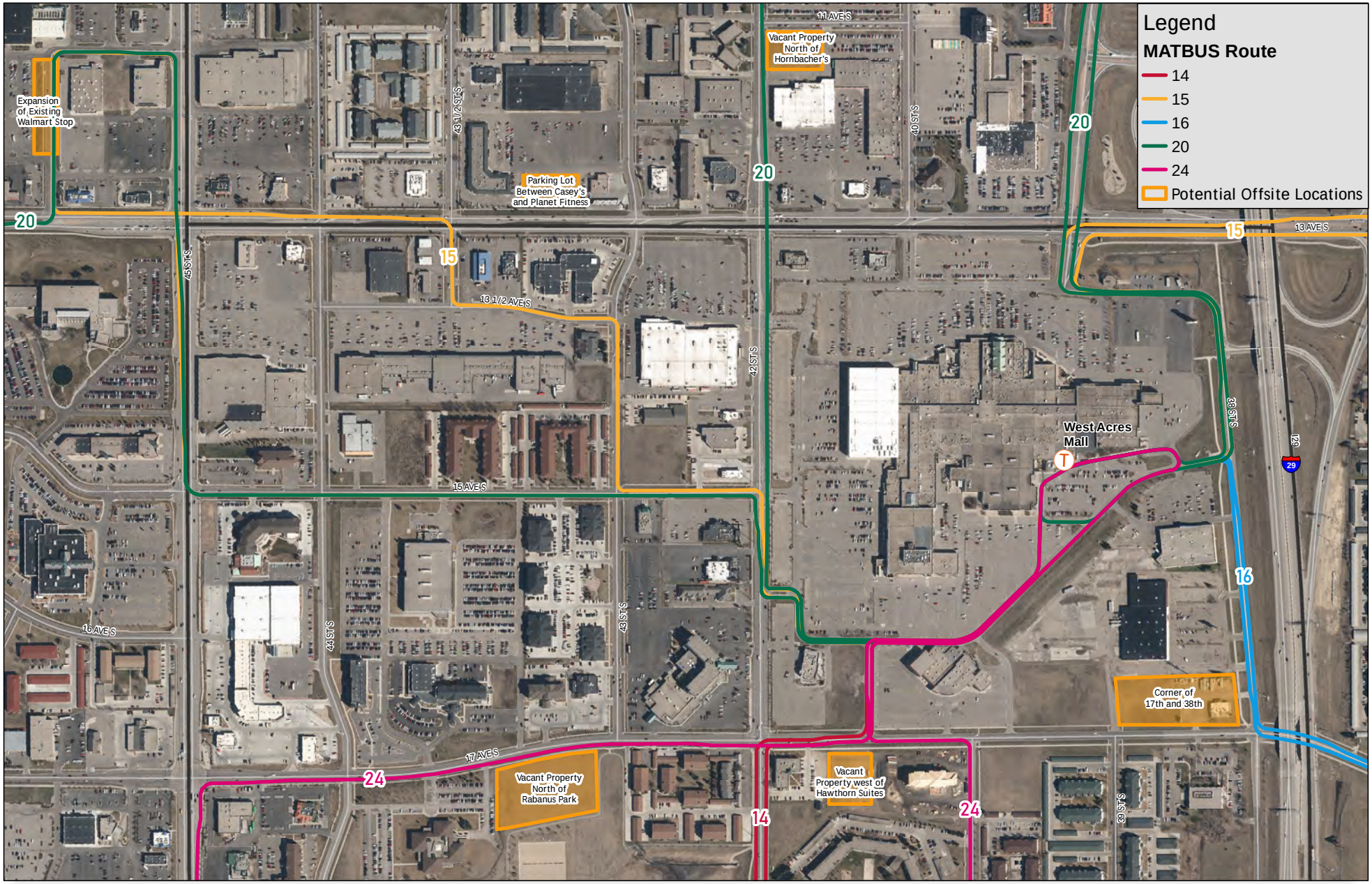
Off-site options were considered at the following locations:

1. **Corner of 17th and 38th** – This corner set of properties are anticipated to redevelop in the very near future. A potential for a cross access easement would be needed on this property to avoid conflict with intersection traffic at 17th Avenue and 38th Street. There is no easy connection between this site and the existing West Acres mall as currently configured.

2. **Vacant Property west of Hawthorn Suites** – Deliberations with property owner as part of 17th Avenue Study indicates desire for commercial development (restaurant), with little interest in selling for development of transit facility. Proximity of the location to the 17th Avenue/42nd Street intersection presents issues with traffic access. Difficult for direct convenient access to the mall.
3. **Vacant Property North of Hornbacher's** – This property is located at the corner of 42nd Street and 11th Avenue. Given the distance from the current West Acres Transit hub, this location is considered detrimental to operations of Route 14, 16, and 23.
4. **Vacant Property North of Rabanus Park** – Traffic access along 17th Avenue may be difficult, but location is considered feasible. Relatively easy access for route currently accessing the West Acres Transit hub. Location is nearly 1/3 of mile from existing West Acres transfer location. This location may also present potential adverse 4(f) impacts to the adjacent publicly-owned space at Rabanus Park.
5. **Parking Lot Between Casey's and Planet Fitness** – A transfer hub along 13th Avenue was preliminarily developed along 13th Avenue between 42nd Street and 38th Street (on-site at West Acres). Similar concerns regarding access to/from 13th Avenue would be present at this location. Restricted intersection access at 43rd Street and congested signalized intersection at 43 ½ Street make access difficult. The location is challenging for Route 14 and 16.
6. **Expansion of Existing Walmart Stop** – Accommodation of long-term operations may be limited given the site constraints of the location. Restricted access at 47th Street further complicate the ability to access the site. The location would be difficult for Route 14 and 16.

Several technically viable options were developed that keep the West Acres Transit hub on West Acres property. Therefore, no further analysis was developed on these off-site options. If the refined options are not able to be developed on-site at West Acres, it would be suggested an off-site location is most desirable south of 15th Avenue, west of I-29 and between 38th Street and 43rd Street.

Figure 4: Offsite Locations

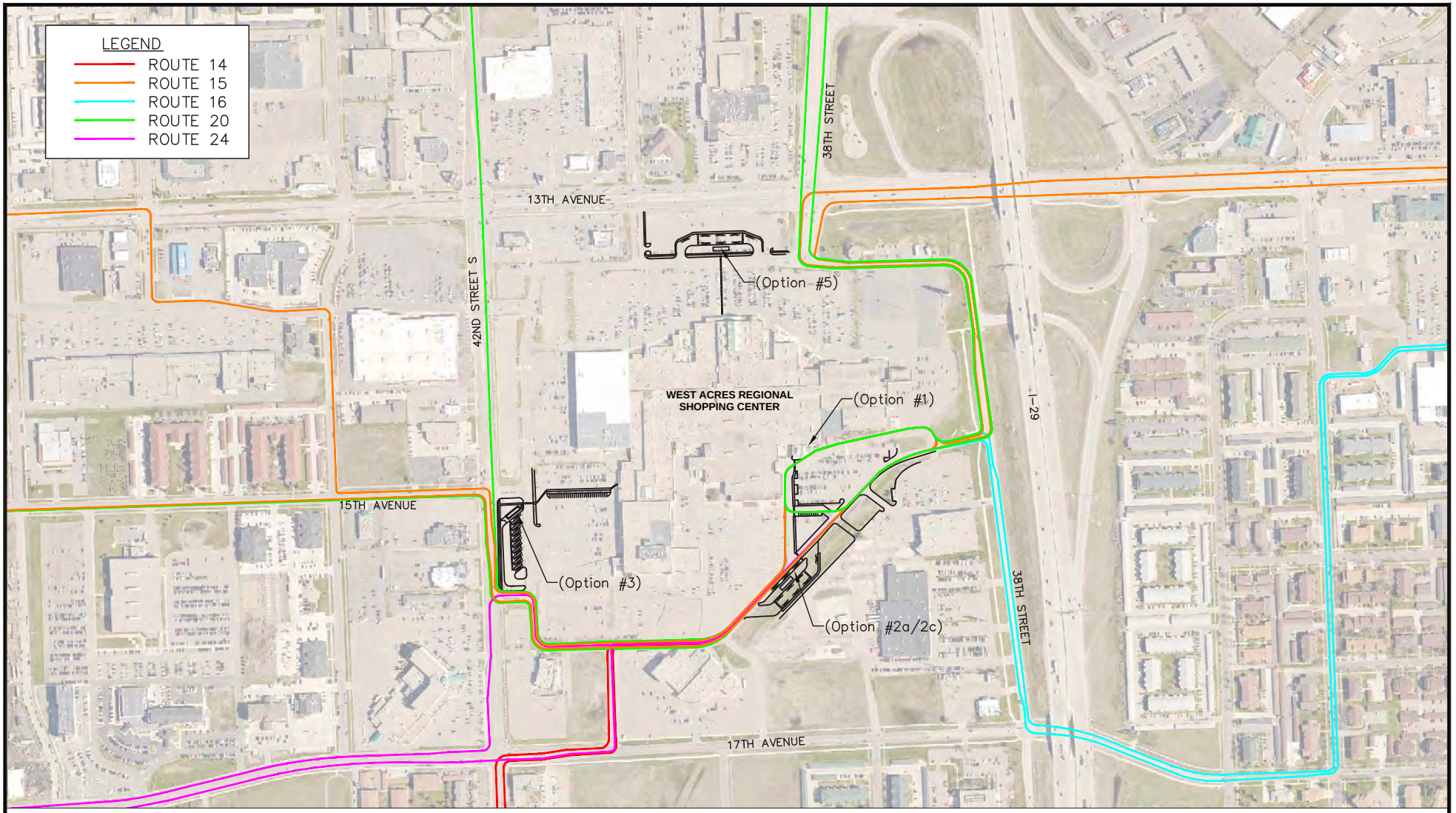


On-Site Locations

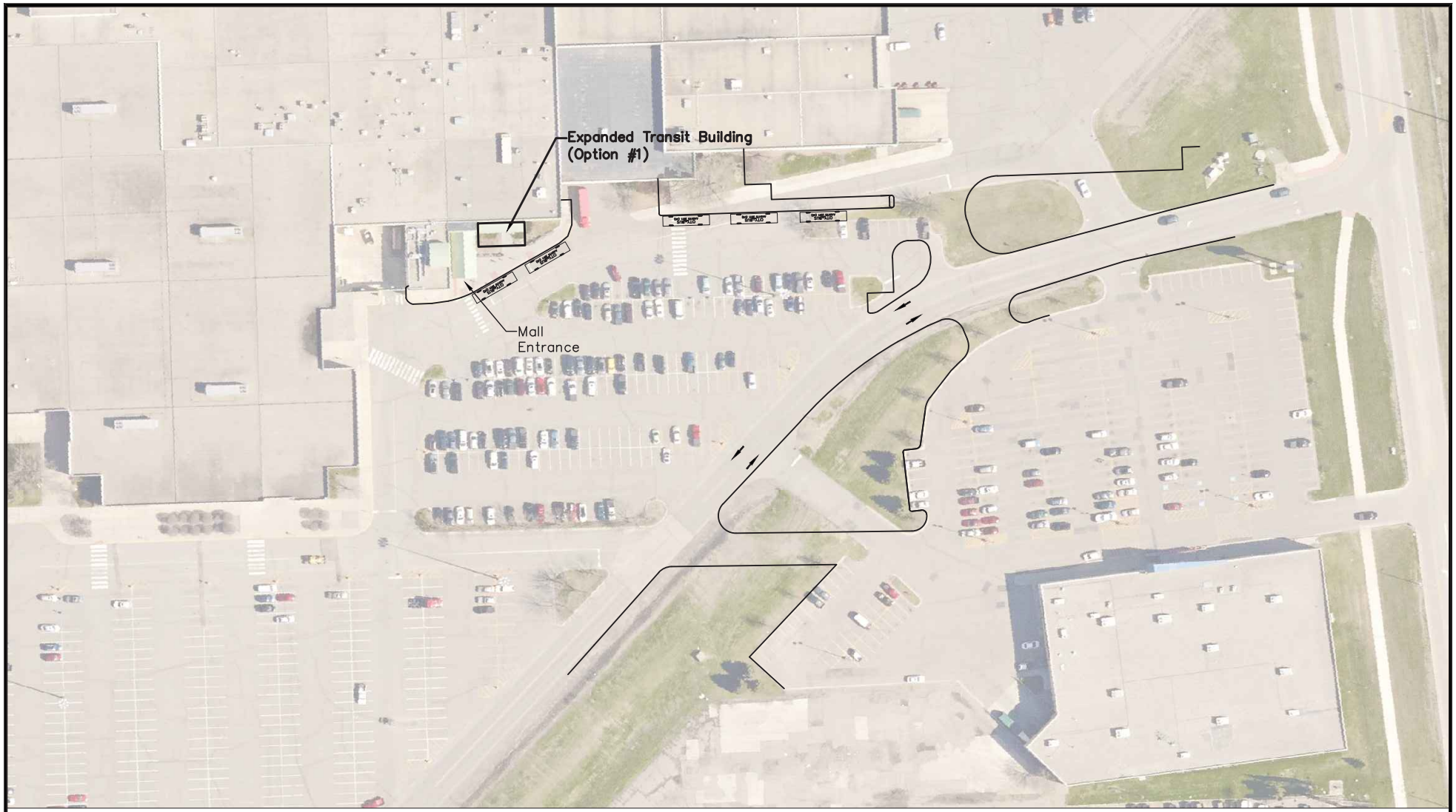
Based on three meetings with the West Acres management and a series of internal working meetings with MATBUS and Metro COG, a set of options were developed and evaluated for the West Acres Transit Hub. The following options were initially developed for consideration:

- **Do Nothing –** Would essentially maintain the existing transfer at the West Acres southeast entrance. Beyond the immediate short-term, this is not considered a viable option for either West Acres management or MATBUS.
- **Option 1 –** Option 1 is really an enhanced/expanded existing condition. Option 1 would add additional on-street bus capacity along the island just south of the new Best Buy location. Option 1 would provide additional passenger waiting area to the existing transit hub. Based on concerns expressed both by West Acres management and MATBUS, this option does not address concerns raised regarding the current location.
- **Option 2a/2c –** Option 2a/2c develops a new transit hub within the green space on the southeast side of the West Acres property. This green space is former rail right-of-way now owned by West Acres. This property also abuts property currently owned by West Acres. This general location includes consideration of Option 2a/2c, which are generally variations of another. Accommodations for both options account for both a 6-bus and 10-bus option.
- **Option 2b –** Option 2b developed a new transit hub within the parking areas south of the southeast mall entrance, straight south of the current transit hub at West Acres. ***Based on significant impacts to property owner-tenant agreements, this option was dismissed prior to developing detailed analysis.***
- **Option 3 –** Option 3 develops a new transit hub south of 15th Avenue on the east side of 42nd Street. Option 3 would convert a remote parking lot on the southwest edge of the West Acres Mall to a transit hub. Accommodations in Option 3 account for both a 6-bus and 10-bus options.
- **Option 4 –** Option 4 looked at a new transit hub north of 15th Avenue on the east side of 42nd Street, using a remote parking lot on the west edge of the West Acres mall. ***This option was dismissed based on operational concerns by MATBUS and uncertainty of West Acres Management regarding the future of the former Herberger's site.***
- **Option 5 –** Develop a new transit hub on the north end of the West Acres property, south of 13th Avenue, but north of the current mall access road. This option would modify and use the existing overflow parking areas north of the mall. Accommodations in Option 5 account for an 8-bus layout. This option was considered the least favorable of those remaining options by both West Acres management and MATBUS. This site was not considered feasible based on projected traffic congestion issues on the north end of the mall and 13th Avenue.

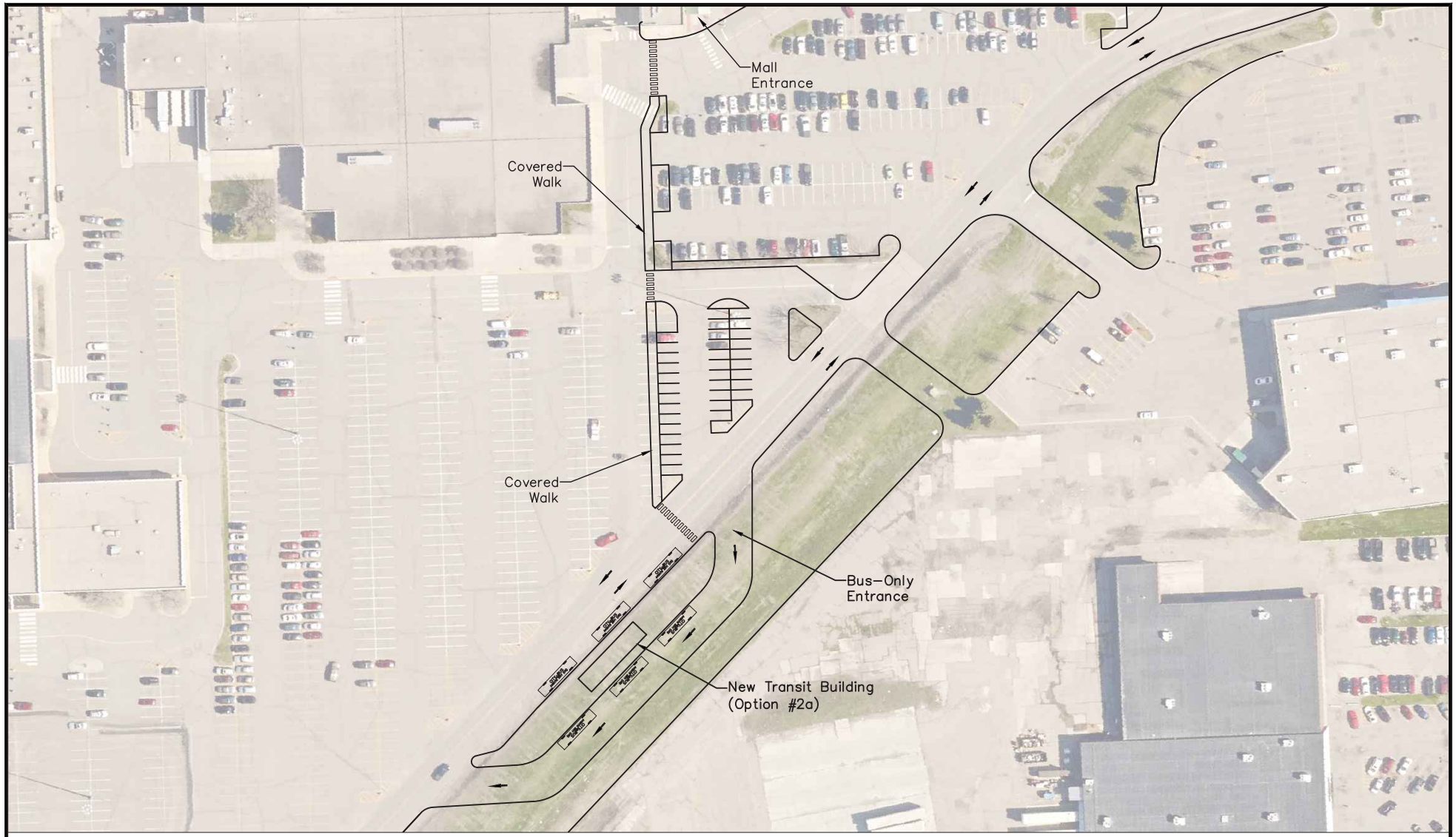
Each of the remaining on-site West Acres Hub options are shown on the following pages.



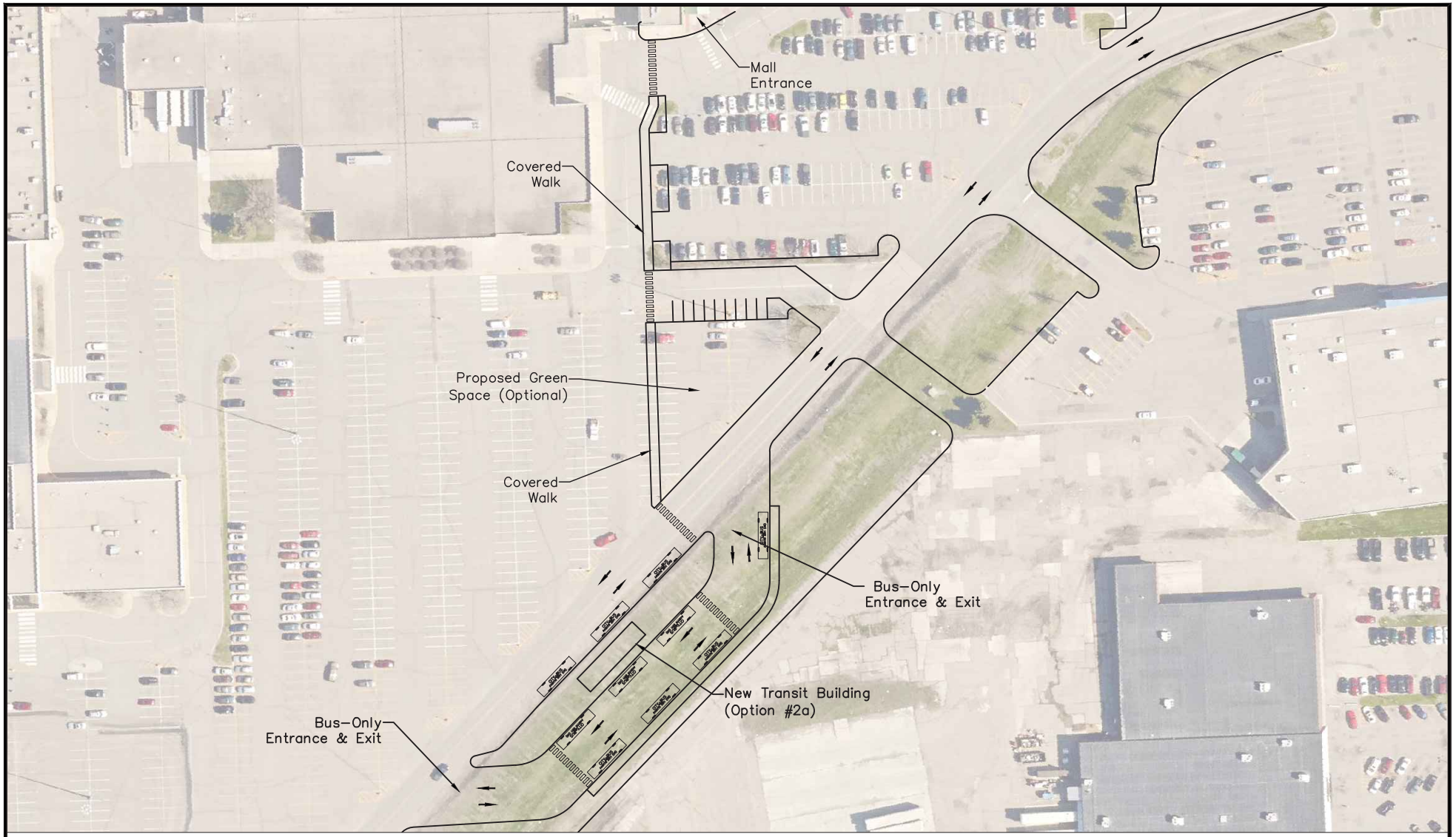
MATBUS – West Acres Mall Transit Hub
Route Access Map



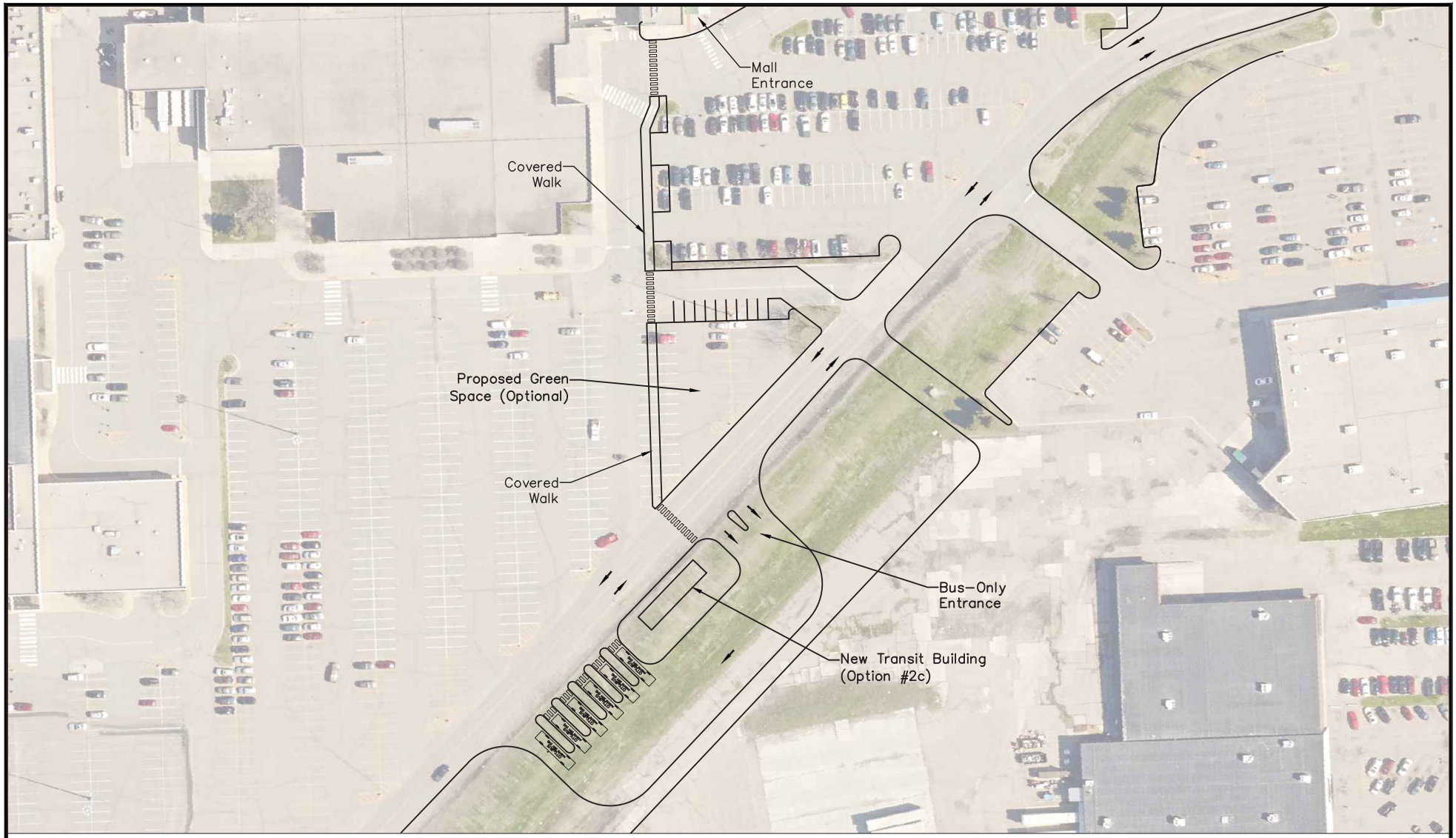
MATBUS – West Acres Mall Transit Hub
Option #1 (5 Buses)



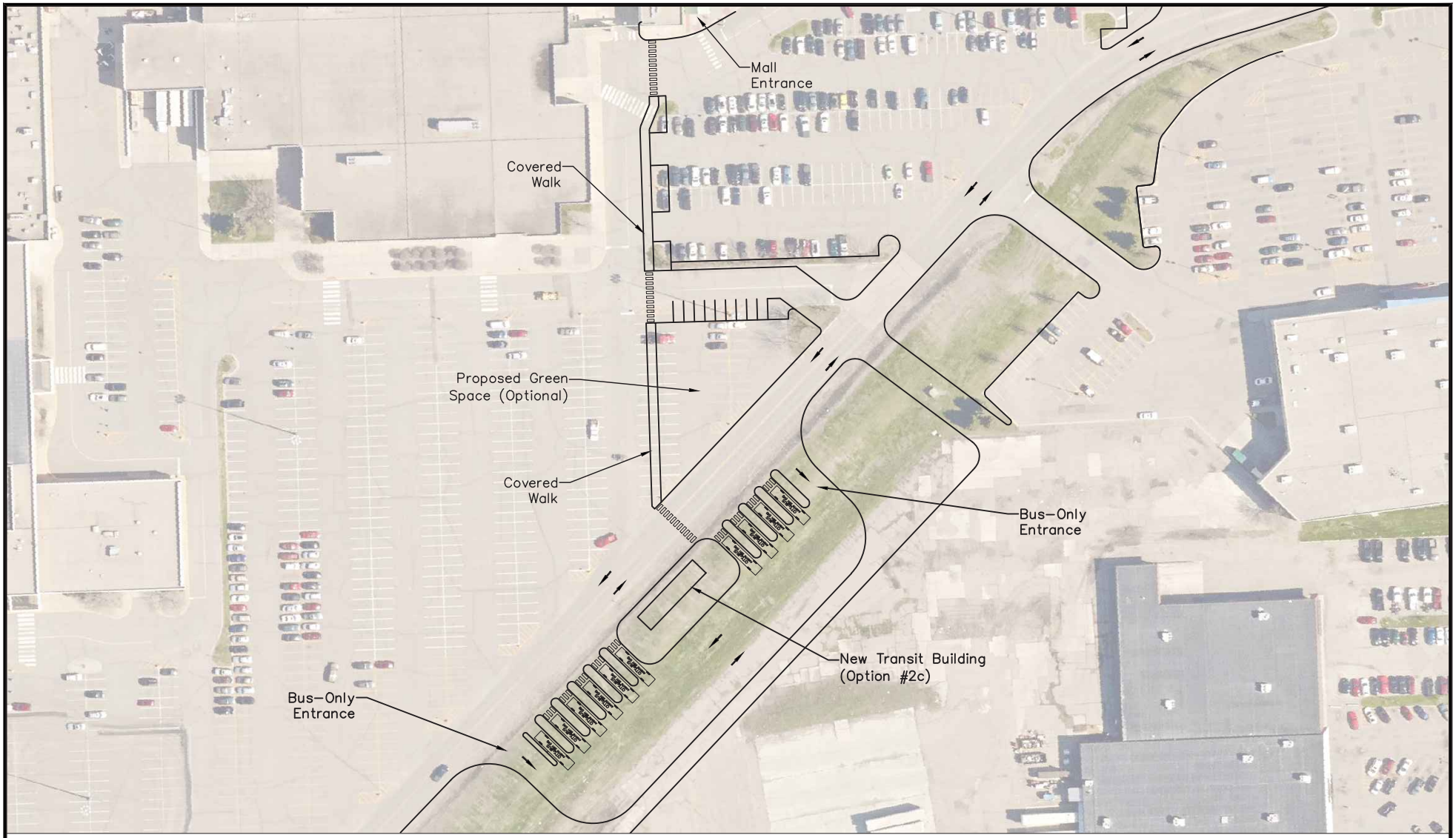
MATBUS – West Acres Mall Transit Hub
Option #2a (6 Buses)



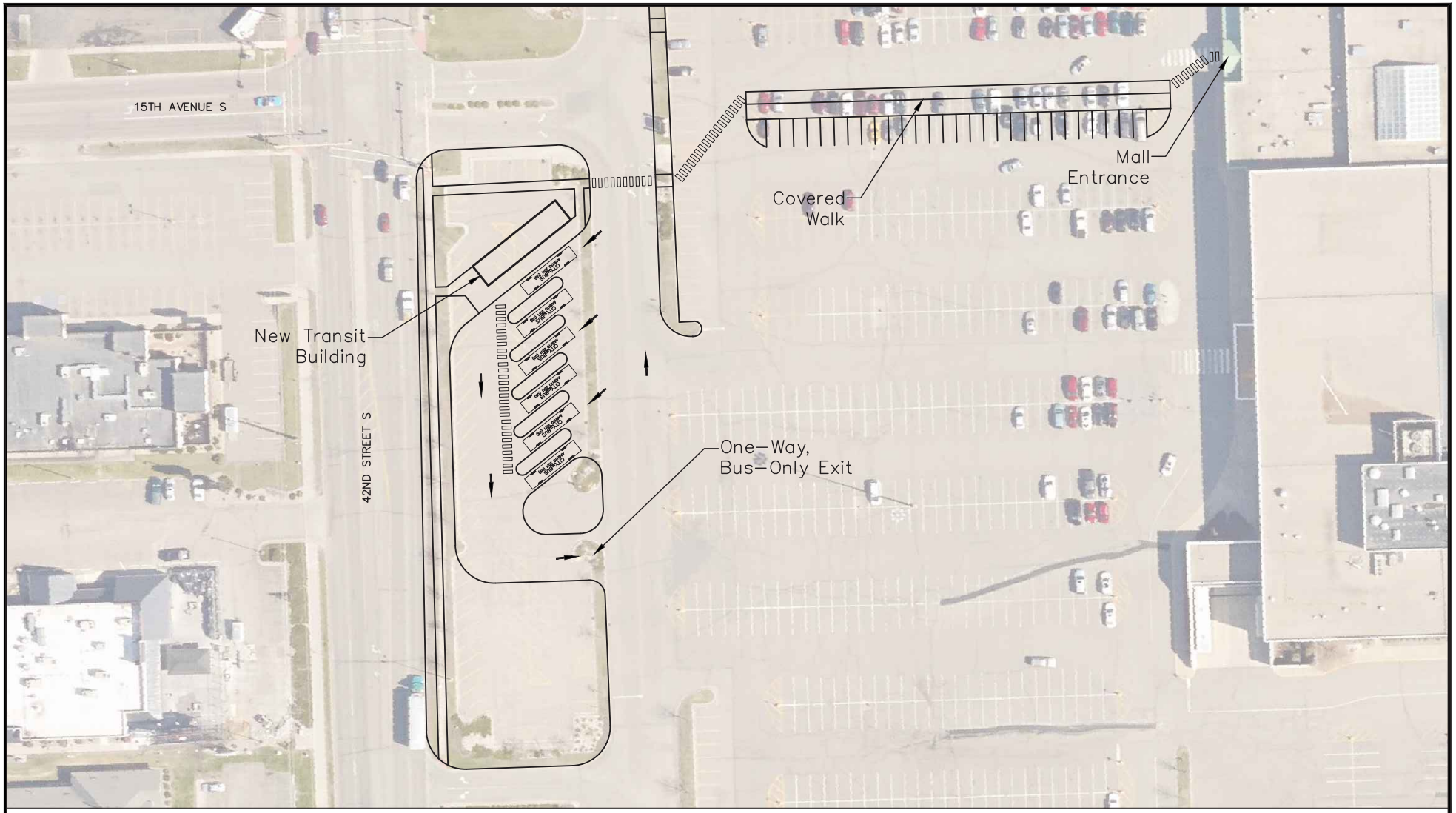
MATBUS – West Acres Mall Transit Hub
Option #2a – Future Expansion (10 Buses)



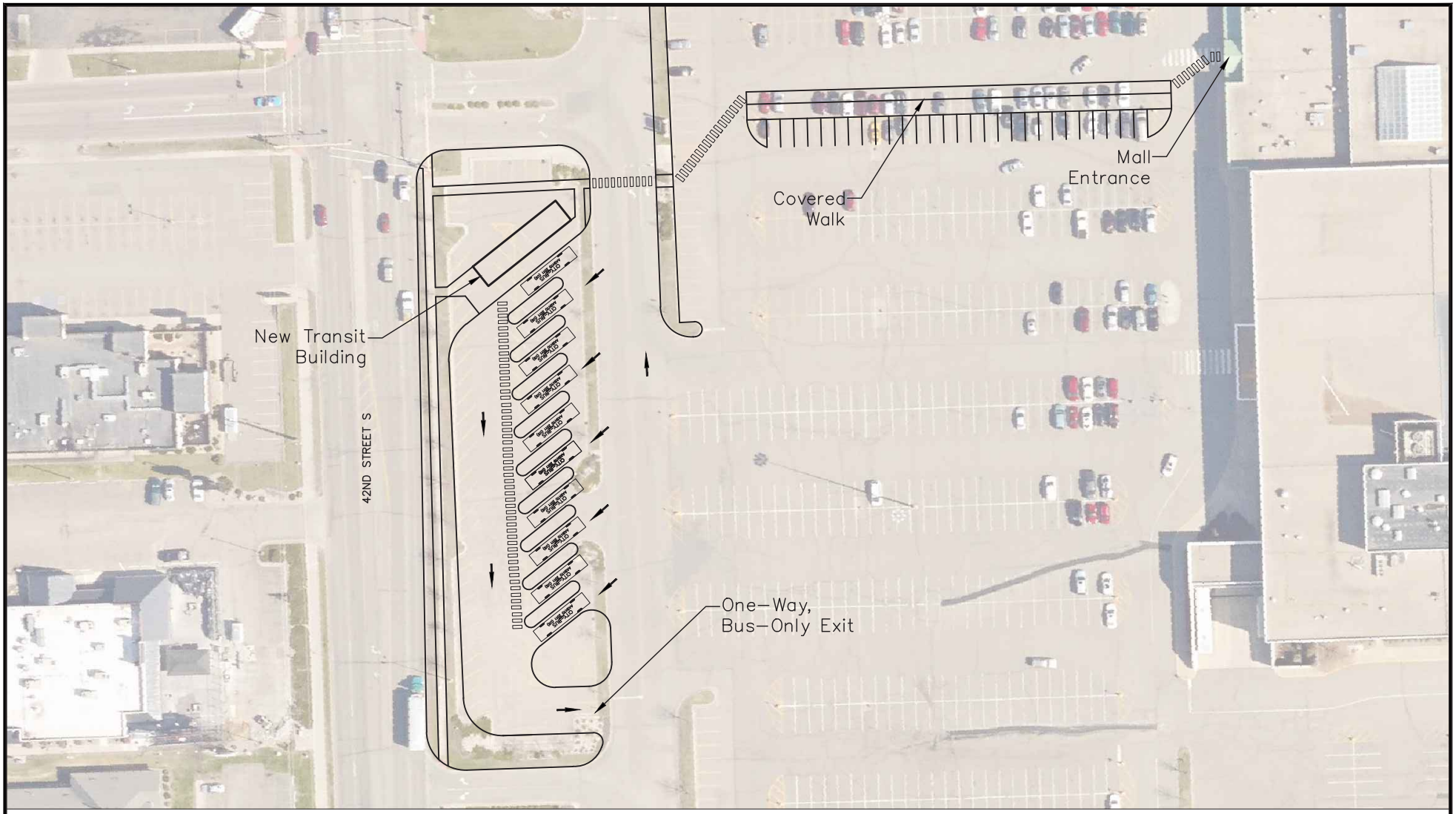
MATBUS – West Acres Mall Transit Hub
Option #2c (6 Buses)



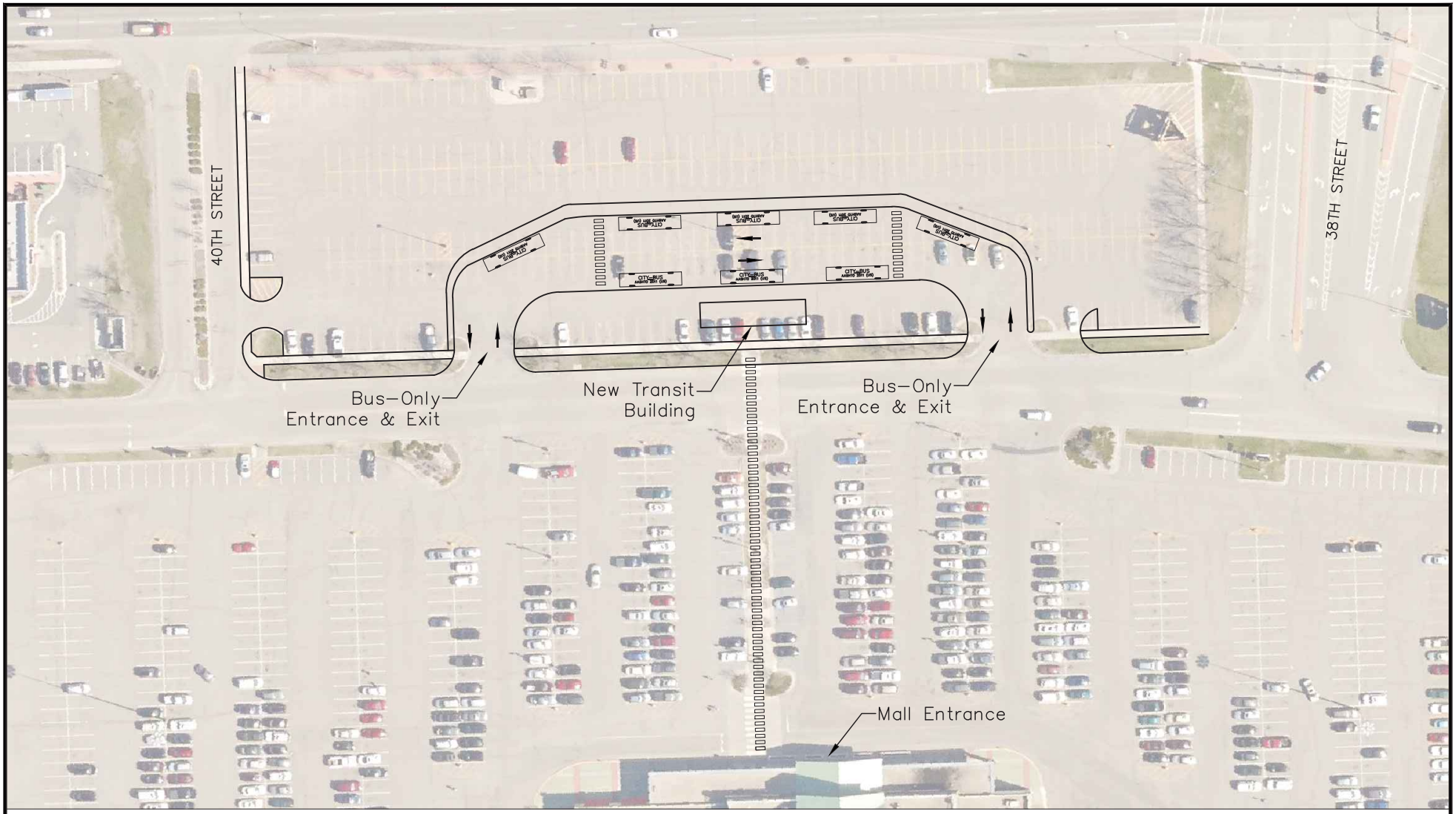
MATBUS – West Acres Mall Transit Hub
Option #2c – Future Expansion (10 Buses)



MATBUS – West Acres Mall Transit Hub
Option #3 (6 Buses)



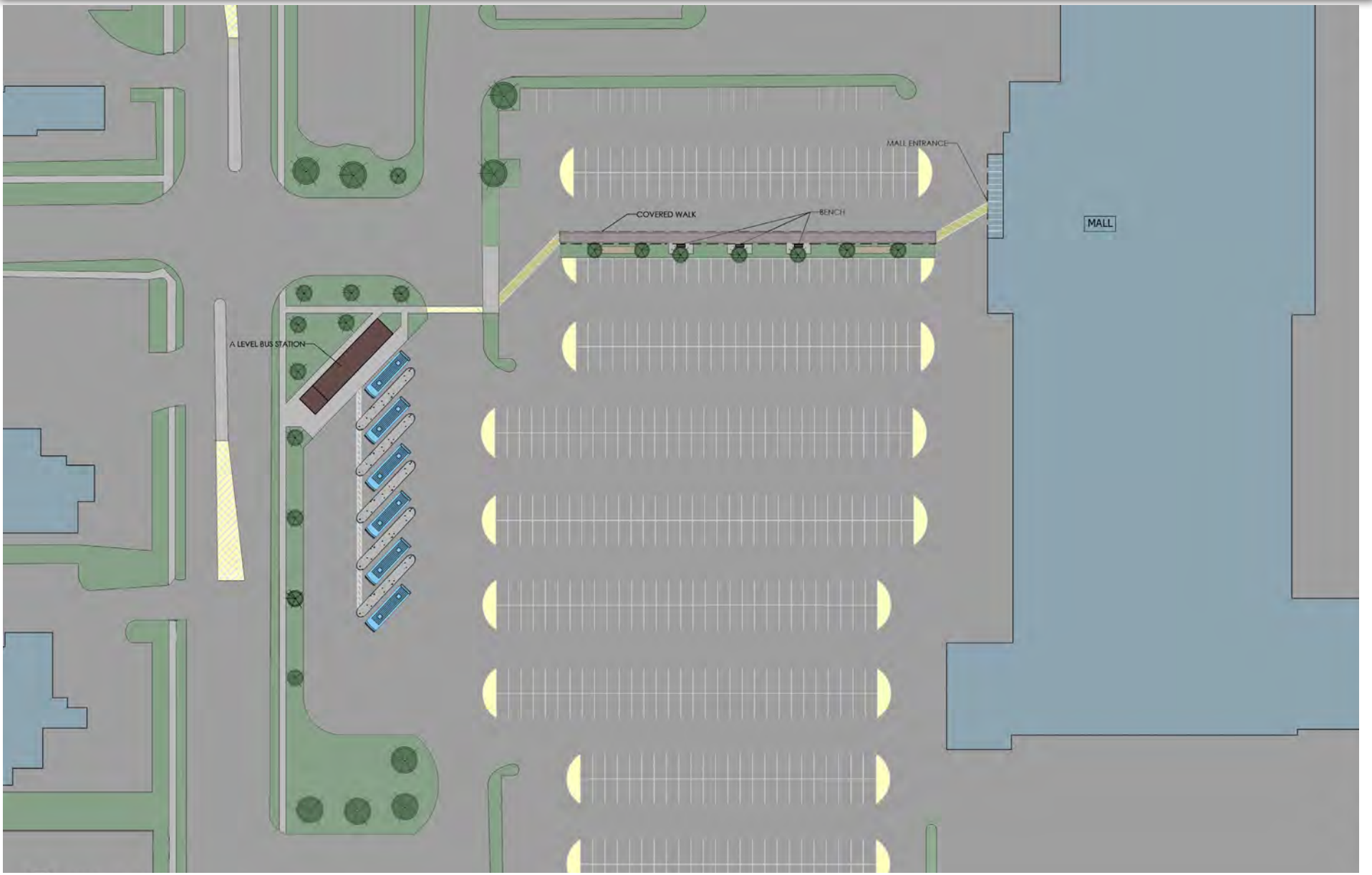
MATBUS – West Acres Mall Transit Hub
Option #3 – Future Expansion (10 Buses)



MATBUS – West Acres Mall Transit Hub
Option #5 (8 Buses)

Option 2a Concept Sketch

Option 2c Concept Sketch



Option 3 Concept Sketch

Option 2a Concept Sketches

Option 3 Concept Sketches

West Acres Hub Layout Options Analysis

Each of the remaining five (5) on-site options developed for the West Acres Transit hub were evaluated based on a battery of metrics agreed to by the SRC. Evaluation of these options decreases the likelihood there will be fatal flaws in development of the remaining options following the planning study. Additionally, the evaluation also provides some comparative valuation between each of the remaining options. The West Acres Transit hub options were compared based on various criteria discussed below, and shown in Table 10.

Americans with Disabilities Act (ADA) Passengers

Any impact to passengers at the West Acres facility will be most greatly felt by those with disability or other difficulties boarding/departing a vehicle. There was an average of 7.5 ADA passengers arriving/departing each day during the survey KLJ completed in December 2017.

Distance from Mall Entrance/Direct Access to Mall Entrance

The current layout presents virtually no barrier to mall entry since the current West Acres Transit Hub is part of the mall. The distance from a current public entrance and accommodations to that entrance will need to be considered for future options.

Parking Impacts

Parking impacts require serious consideration for West Acres management. Each option is evaluated in terms of relative impact to existing parking capacity.

Impact to Schedules

Using Remix software, the location of each potential on site hub location is evaluated based on impacts to schedules.

Total Impact of all Routes by Miles per Run

All routes were analyzed using Remix software to realign the current routes to approximate locations of potential new facilities. These impacts were combined to determine the total impact a new facility would have on lengthening (or shortening) any existing routes.

Meets 20-Year Need

Each option is evaluated in terms of its ability to be expandable to meet future needs based on 20-year projections developed for this study. One of the shortcomings of the current West Acres Transit hub is it failed to account for increased demand and growth of the system.

Utility Impacts

Impacts to existing utility infrastructure are evaluated for each option based on available data provided by West Acres and through a general desk top review of the site locations.

Table 10: West Acres Hub Layout Options

	Do Nothing	Option 1	Option 2a	Option 2c	Option 3
		Enhanced Existing Condition	South Access Road		42nd Street
Distance from Mall Entrance (feet)	0	0	520	520	495
Direct Access to Mall Entrance (yes or no)	Yes	Yes	Yes	Yes	Yes
Transit Riders Accessing Mall (avg./day)	239				
Average Est. Elderly/Disabled Passengers Accessing Mall	83				
Total Daily Walk Distance Added for all Customers (feet)	0	0	124,280	124,280	118,305
Parking Impacts (Estimate)	0	0	21	47	139
Impact to Routes (mile/run)					
Route 14	No Change		2.6		1.3
Route 15			-0.42		0.58
Route 16			0		0.1
Route 20			0.48		-0.22
Route 24			-0.99		-1.49
Total Impact (all routes)(mile/run)	**0**	**0**	**1.67**		**0.27**
Opportunity for Expansion	No	No	Designed for 6 bus bays, can expand to 10 bus bays		
Utility Impacts	None	None	Underground Power	Underground Power	Gas Line; Underground Power

Cost Estimates

Detailed project cost estimates were developed for each of the three sites determined to be most feasible by the SRC and West Acres Management. There were three inputs into the development of cost estimate for the West Acres Transit Hub: 1) Building costs; 2) Site design costs; and 3) Road Improvement costs. Each are summarized below.

Building Costs

Site development costs assumed the generalized programming cost developed for the A Level Stop design discussed in Chapter 4. The A Level Stop design and layout was scaled to meet planning level needs identified by MATBUS for a future expanded West Acres Transit Hub. The planning level cost estimate was assumed to be $500,000 for the building itself.

Site Design Costs

Site designs costs included the site development costs to redevelop each proposed site to accommodate a future West Acres Transit Hub. The detailed line item site costs for each site are shown in Appendix D.

Road Improvements

At the request of West Acres Management, the cost to improve sections of mall roadways from a six inch over six inch aggregate section to a nine inch eight section were developed. This was assumed to be adequate to account for existing and projected levels of transit traffic through the mall roadways. Cost assumptions were developed for site 2a/2c and 3. Detailed cost specifics and related assumptions for these improvements are shown in Appendix D.

Table 11: West Acres Hub – Cost Estimates

	Option 2A	Option 2C	Option 3
Building	$500,000	$500,000	$500,000
Site	$594,077	$873,895	$470,835
Road Improvements	$909,085	$909,085	$593,653
Total	**$2,003,162**	**$2,282,980**	**$1,564,488**

Notes:

1. *Includes contingency on all elements.*
2. *All option costs based on 6-bus layout.*
3. *Includes pedestrian/parking-related improvements between hub and mall.*
4. *Assumes asphalt road improvements for roads carrying bus traffic.*
5. *Assumes base layout for West Acres hub that was developed as part of this plan.*

Stop Level and Minor Hub Analysis

Ridership Data

Ridership was evaluated based on a sample size provided from September 25 to 30, 2017. Average daily boarding was calculated for each boarding point. In the case of Route 18, 20 (old 21 and 22), and 23, new ridership was pulled for a two-week period in late September 2018. A new ridership batch was pulled for these routes to account for potential maturity in ridership patterns based on the newness of the routes at the time of the original sample.

Environmental Justice

Environmental Justice (EJ) and Title VI considerations were integrated as part of the ridership evaluation. The Stop Level evaluation used existing low income and minority datasets used by Metro COG for its ongoing EJ evaluations. EJ should be a consideration in future weighting and consideration of stop level improvements. EJ data can suggest potential need for more neighborhood level improvements that may not be as evident in looking at individual stop level boarding patterns (e.g. Madison, Jefferson, and Romkey Park). EJ data is shown on the Stop Level Analysis Map on page 36.

Transit Intensive Corridors

Transit intensive corridors were identified to show areas with higher levels of transit use or the potential for significant redevelopment or increased transit usage in the future. These transit intensive corridors are those that likely warrant consideration for more significant investment in stop level transit infrastructure. Transit Intensive corridors are shown on the Stop Level Analysis Map on page 36.

Stop Level Analysis

Stop levels were developed based on four tiers of utility, expense, and size. These four stop levels are designated as level A, B, C, and D. It is anticipated these stops will be integrated into the neighborhoods they are embedded within to provide some context specific considerations such as history of neighborhood, point of interest, public art, and native landscapes/plantings. Suggested layouts for each of the stop levels is shown at the end of the chapter. Definitions for each level are as follows:

Stop Level A – The largest facility with the most amenities; for the purposes of this analysis it is assumed these assumptions relate most specifically to West Acres, which is a primary hub for the MATBUS. An Level A Stop is the highest level and has a shelter with largest footprint and greatest number of amenities. These amenities can include restrooms, arrival/departure boards, waiting areas, vending machines, and office/administrative area. The footprint of an Level A stop also includes bus travel lanes and sidewalk aprons.

These shelters are anticipated to accommodate up to 50 passengers at one time and are designed with a minimum of 6 routes utilizing the stop, a minimum of 14 buses per hour, and an average minimum of 350 passengers boarding per day. The shelters are heated and air conditioned for passenger and staff comfort.

The GTC and West Acres are currently the only Level A stops on the system. West Acres warrants an Level A stop based on traffic levels, number of routes served, amount of transfers, and administrative needs. No other future Level A stops are anticipated to be needed based on current operational projections. The potential costs associated with construction of a facility such as this would be $375,000 to $500,000 for the shelter with the site improvement costs varying depending on existing conditions. A detailed site-specific cost estimate for the implementation of Level A layout at West Acres is included separately outside of this element of the report.

STOP LEVEL A SERVICE PARAMETERS	
MINIMUM ROUTES	6
MINIMUM BUSES/HOUR	12
MINIMUM BOARDINGS/DAY	350
PASSENGER WAITING AREA CAPACITY	50

Stop Level B – Level B stops are smaller system hubs where there is currently transfer between routes, or higher frequency of service with a significant level of boarding relative to the rest of the system. The unique distinction between a Level A and Level B stop is the need for administrative space and the supportive functions associated with having the stop staffed with employees. B-level stops include an outdoor bench and bike rack, garbage, and an indoor waiting area with benches (approximately 160 square feet).

These stops are designed to accommodate a minimum of four (4) routes, eight (8) route transfers per hour, up to 25 passengers at one time, and an average 300 passengers or more per day. The stop at the NDSU STEM Center is a great example of a well-operating Level B stop and is the basis of design for future Level B stops. This hub serves four (4) routes, twelve (12) transfers per hour, and more than 700 boardings per day.

Potential costs associated with a Level B stop are anticipated to be $125,000 to $150,000 for the shelter with the site improvement costs varying depending on existing conditions.

Four (4) potential B-level stops were identified based on existing and projected transit boarding:

1. **Marriott –** The current Marriott transfer location would be a candidate for a B-level stop to better accommodate that hub's location and the routes that serve it. Although the daily boarding numbers do not currently meet the minimum average daily parameters defined herein, it is the main transfer point for bus service in Moorhead.
2. **NDSU Barry Hall –** There currently isn't a shelter at this location, but the average daily boardings is well over 450. Nearby routes include 13, 13U, 17, and 33 with up to 10 potential transfers per hour. In addition, there is already a bus pull-off located along 2nd Avenue North.
3. **Walmart-Dilworth –** The Walmart-Dilworth operates as a minor hub on the east end of the MATBUS system. Future system growth will serve to increase traffic through that site. As such, the site currently meets warrants for B Level Stop investments. Potential layouts and 3D renderings of the site are shown on the following pages.
4. **M|State –** It is possible that this location could potentially replace the Marriott as the main transfer hub in south Moorhead. If so, additional investments would be needed nearly matching that of B Level Stop. The potential layout and 3D visualization of the M|State site on the following pages.

Total cost for the M|State and Walmart sites are as follows:

Table 12: Walmart and M|State Transit Hub Development – Cost Estimates

	Walmart	M-State
Building	$150,000	$150,000
Site	$91,792	$258,475
Road Improvements	$0	$0
Total	**$241,792**	**$408,475**

Notes:

1. Includes contingency on all elements.

2. All Option costs are based on the proposed site layout

3. Assumes B Level building costs.

Detailed cost estimates for both sites are included in Appendix D.

STOP LEVEL B SERVICE PARAMETERS	
MINIMUM ROUTES	4
MINIMUM BUSES/HOUR	8
MINIMUM BOARDINGS/DAY	300
PASSENGER WAITING AREA CAPACITY	25

Stop Level C – This is the smallest shelter on the system and would relate to higher boarding locations or along identified transit intensive corridors. These shelters are primarily designed to service one or two routes. These shelters have a small indoor waiting area for up to 10 passengers with benches and outdoor canopy. The total footprint is approximately 100 square feet with an adjacent ADA accessible landing pad.

Level C stops should be considered at locations and along corridors of more intensive transit use and should consider the following conditions when considering a C Level Stop even if boarding warrants are not met:

- Open space where elements are extremely adverse, which affect the use of system (e.g., the area would generate riders, except for poor bus stop conditions).
- Commercial areas such as shopping malls or business districts where frequent stops are not desired due to high vehicle traffic. The shelter "steers" passengers to designated stop location. Also where parking space is limited and there is a need to reduce automobile traffic.
- Elderly and disabled housing facilities where direct service is not warranted or location is not conducive for direct service. This clientele is more adversely affected by weather conditions. Providing a shelter can make the fixed route usable for some who would normally require door-to-door paratransit service.
- Educational institutions where parking is limited and high transit usage is desired.
- High density areas such as apartment complexes and dormitories.
- Government or public buildings.
- Medical facilities.
- Low income/minority residential areas.

The higher the number of criteria we meet, the higher priority the location receives.

Potential costs associated with a Level C stop are anticipated to be $15,000 to $20,000 for the shelter with the site improvement costs varying depending on existing conditions.

STOP LEVEL C SERVICE PARAMETERS	
MINIMUM ROUTES	1
MINIMUM BUSES/HOUR	N/A
MINIMUM BOARDINGS/DAY	25
PASSENGER WAITING AREA CAPACITY	10

Stop Level D – This is a designated bus stop without a shelter. It includes a bus stop sign, no parking sign, and ADA accessible landing pad. It may also include an exterior bench. It is anticipated these stops would be integrated into routes at regular intervals of approximately every two to three blocks. In areas of lower boarding, specifically along routes within lower density and newly developed areas, consideration should be given to placing a sheltered C Level Stop at least every 12 blocks, or 1 mile. This would be particularly necessary along routes with little or no stop level infrastructure:

- Route 6 – Dilworth
- Route 18 – South 25th Street
- Route 20 – West Fargo/Jefferson Neighborhood
- Route 23 – West Fargo/Sanford

Future Hub Investments

Based on existing conditions and future route growth, a series of existing stop locations were determined to have the potential for future investment. These are in addition to those listed earlier under Stop Level B needs. These investments would serve to upgrade these current stops to more of a significant level of stop or hub.

These locations are noted for future potential investment due to the current level of ridership. Also, of note is the general location of these facilities in relation to existing and future system growth which may occur within the MATBUS service area. Future stop level or hub investment areas are shown on the map on page 37. Future growth in these areas will make these a logical point for increased bus traffic at both the passenger and transfer level. These locations are noted as follows:

- **Downtown Moorhead –** Significant investments are happening in Downtown Moorhead. As changes to existing private developments and public roads unfold, additional consideration is needed to enhance and improve stop level amenities in Downtown Moorhead.
- **Walmart/13th Avenue –** Currently is served by two routes with more than 100 boardings per day. Future investment in the current condition would warrant a C Level Stop. Significant additional growth at this location could warrant a B Level Stop.
- **Sanford Hospital –** Currently served by one route, with boarding projected to increase as service on this route matures. Will likely be in close relation to new future service in the southwest service area of MATBUS. A C Level Stop is currently warranted at this location.
- **Walmart/52nd Avenue –** This location is in close relation to new future service. This Walmart, like others in the MATBUS service area (Dilworth, Fargo, etc.), will attract future potential transit demand. As warrants are met per this report, an upgrade to a C Level Stop should be considered.
- **NDSU/North University –** Significant boarding patterns and continued redevelopment in areas along North University Drive/17th Avenue provide support for an evaluation of future hub investment in those areas. Several C Level stops are closely aligned adjacent to Niskanen Hall, University Village, and the Sandford Health Athletic Complex (SHAC). Future study could look at coordinating and maximizing stop level investments in this area.
- **South University/25th Avenue –** This area is considered a future transfer point between existing and future MATBUS routes. Current infrastructure is substandard. There are existing conflicts between buses, parked cars and pedestrians, and very little delineation of the transit areas from adjacent uses.
- **Midtown Crossing –** The current stop at 1st Avenue and 12th Street North warrants consideration for additional investment. Based on boarding patterns, it meets criteria for a C Level Stop and is the fifth largest stop outside of the GTC, West Acres, and NDSU. The general location of Midtown crossing is ideal to support the potential of a future bus transfers between north-south/cross town routes without the need to stop at the GTC.

The Marriott Transfer Hub is a well designed B Level Stop.

The South K-Mart location requires investment to match demand.

Table 13: Stop Infrastructure

Stop Levels	Minimum Passenger Boardings/ Hour	Shelter *	Stop Infrastructure											
			ADA Landing Pad	Bus Pull-Off	MATBUS Stop Sign/No Parking Sign	Exterior Bench	Interior Bench	Trash Receptacle	Sun Shading	Shelter Doors	Restroom	Dispatch/ Offices	Storage/ Mechanical	Bike Rack
A Level	350	X	X	X	X	X	X	X	X	X	X	X	X	X
B Level	350	X	X	O	X	O	X	X	X	O	-	-	-	O
C Level	25	X	X	-	X	O	O	O	O	-	-	-	-	O
D Level	-	-	O	-	O	O	-	-	-	-	-	-	-	-

X Base Requirement O Warranted Option - Not Applicable

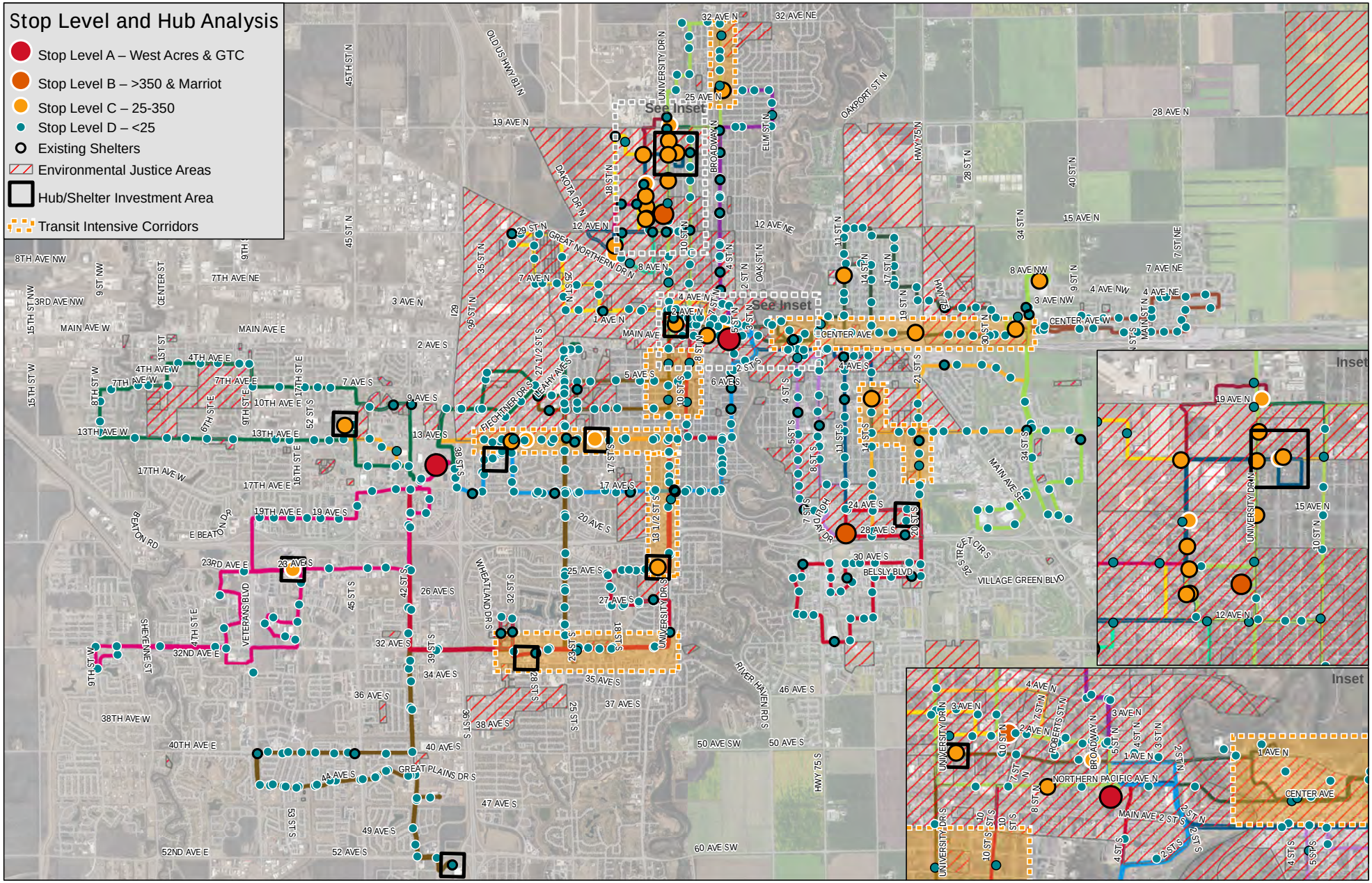
** Shelter may be a stand alone shelter or integrated within existing building infrastructure.*

Table 14: Stop Amenities

Stop Levels	Minimum Passenger Boardings/ Hour	Shelter *	Stop Infrastructure										
			Exterior Lighting	Interior Lighting	Docking Station/ Outlets/USB Ports	Standing Height Counter	Vending Kiosk	Exterior Advertising	Heated	Cooled	Shade Trees	Solar Power	Green Roof
A Level	350	X	X	X	X	X	X	X	X	X	X	X	X
B Level	350	X	X	X	-	-	X	O	X	-	X	O	-
C Level	25	X	X	-	-	-	-	O	-	-	O	O	-
D Level	-	-	O	-	-	-	-	-	-	-	-	-	-

X Base Requirement O Warranted Option - Not Applicable

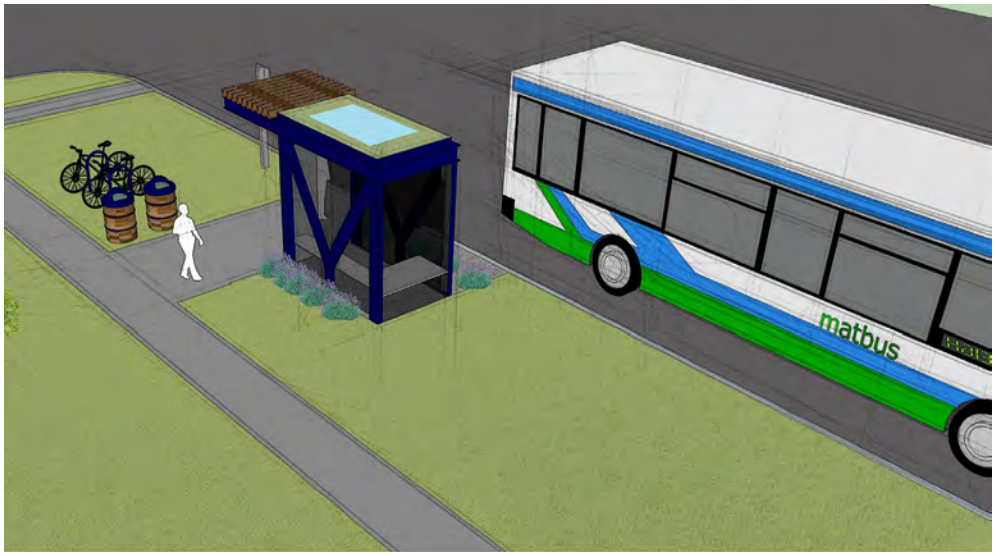
** Shelter may be a stand alone shelter or integrated within existing building infrastructure.*

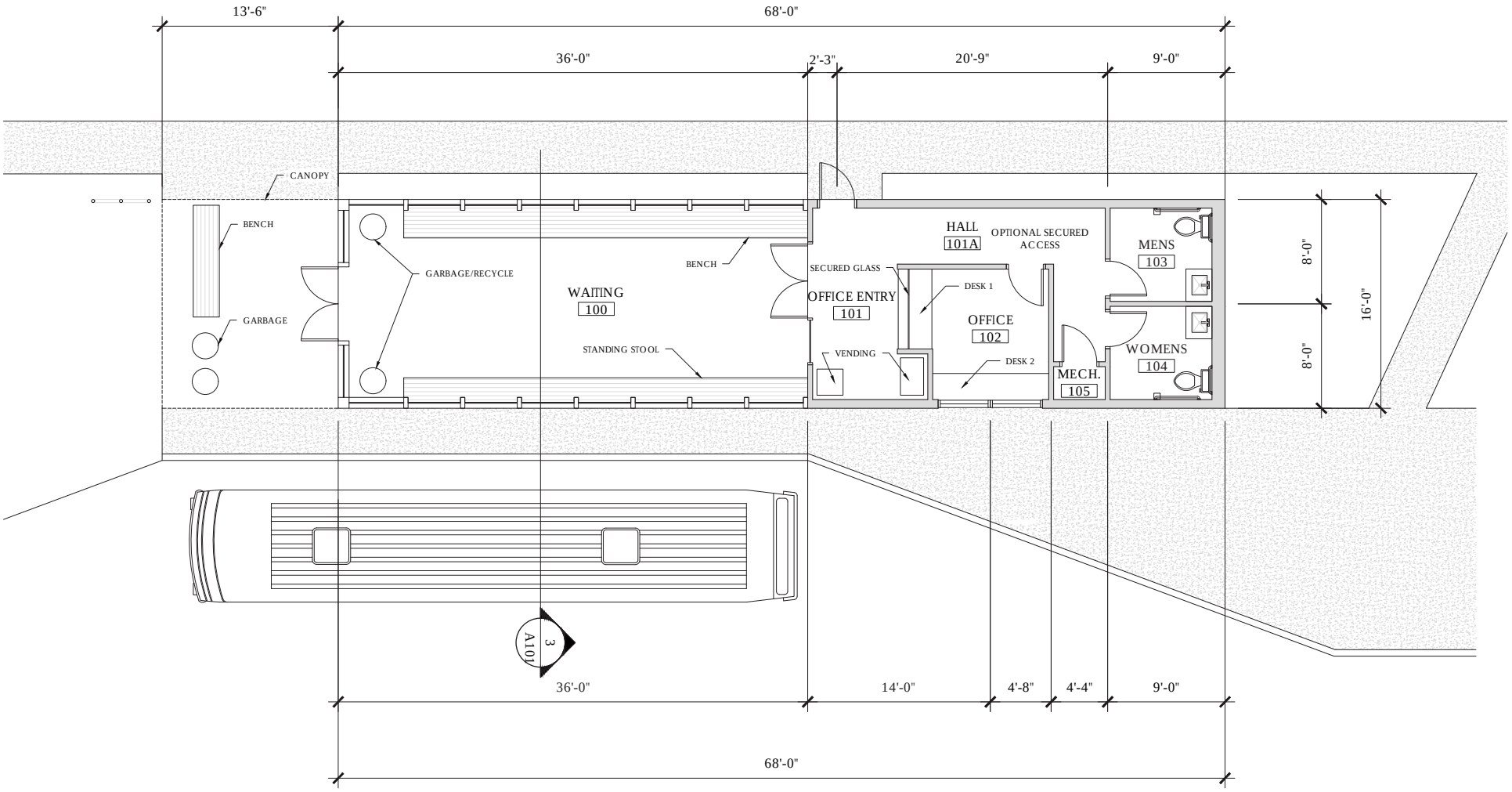

Stop Level and Hub Analysis
Stop Level A – West Acres & GTC
Stop Level B – >350 & Marriot
Stop Level C – 25-350
Stop Level D – <25
Existing Shelters
Environmental Justice Areas
Hub/Shelter Investment Area
Transit Intensive Corridors
See Inset
See Inset
Inset
Inset
32 AVE N
32 AVE NE
25 AVE N
19 AVE N
28 AVE N
12 AVE N
12 AVE NE
8 AVE N
7 AVE N
1 AVE N
4 AVE N
2 AVE N
MAIN AVE
CENTER AVE
8 AVE NW
4 AVE NW
4 AVE NE
7 AVE NE
3 AVE NW
15 AVE N
2 AVE S
3 AVE N
4TH AVE E
4TH AVE W
7TH AVE E
7TH AVE W
7 AVE S
9 AVE S
10TH AVE E
13TH AVE W
13TH AVE E
13 AVE S
17TH AVE W
17TH AVE E
17 AVE S
19TH AVE E
19 AVE S
20 AVE S
23RD AVE E
28 AVE S
25 AVE S
26 AVE S
27 AVE S
30 AVE S
32 AVE S
32ND AVE E
34 AVE S
35 AVE S
36 AVE S
37 AVE S
38 AVE S
40 AVE S
38TH AVE W
40TH AVE E
44 AVE S
46 AVE S
47 AVE S
49 AVE S
50 AVE S
50 AVE SW
52 AVE S
52ND AVE E
60 AVE SW
24 AVE S
28 AVE S
MAIN AVE E
MAIN AVE W
MAIN AVE SE
CENTER AVE W
BELSLY BLVD
VILLAGE GREEN BLVD
E BEATON DR
BEATON RD
GREAT PLAINS DR S
NORTHERN PACIFIC AVE N
OLD US HWY 81 N
UNIVERSITY DR N
UNIVERSITY DR S
BROADWAY N
OAKPORT ST N
ELM ST N
HWY 75 N
HWY 75 S
DAKOTA DR N
GREAT NORTHERN DR N
FIECHTNER DR S
LEAHY AVE S
WHEATLAND DR S
RIVER HAVEN RD S
ROBERTS ST N
45TH ST N
35 ST N
29 ST N
25 ST N
18 ST N
10 ST N
4 ST N
2 ST N
OAK ST N
11 ST N
14 ST N
17 ST N
19 ST N
28 ST N
34 ST N
40 ST N
9 ST NW
15TH ST NW
CENTER ST
1ST ST
8TH ST W
9TH ST E
6TH ST E
10TH ST E
16TH ST E
17TH ST E
52 ST S
42 ST S
45 ST S
39 ST S
38 1/2 ST S
32 ST S
27 1/2 ST S
25 ST S
18 1/2 ST S
17 ST S
10 ST S
6 AVE S
5 AVE S
4 ST S
5 ST S
8 ST S
11 ST S
14 ST S
21 ST S
34 ST S
7 ST S
20 ST S
92 ST S
VETERANS BLVD
SHEYENNE ST
9TH ST W
4TH ST E
53 ST S
36 ST S
28 ST S
25 ST S
23 ST S
18 ST S
HOLIDAY DR S
TROT CIR S
7 ST N
10 ST N
2 AVE N
3 AVE N
4 AVE N
1 AVE N
2 ST N
3 ST N
4 ST N
5 ST N
7 ST N
8 ST N
10 ST S
2 ST S
4 ST S
5 ST S
MAIN AVE 2 ST S
CENTER AVE

MATBUS Stop Level A Shelter

MATBUS Stop Level B Shelter

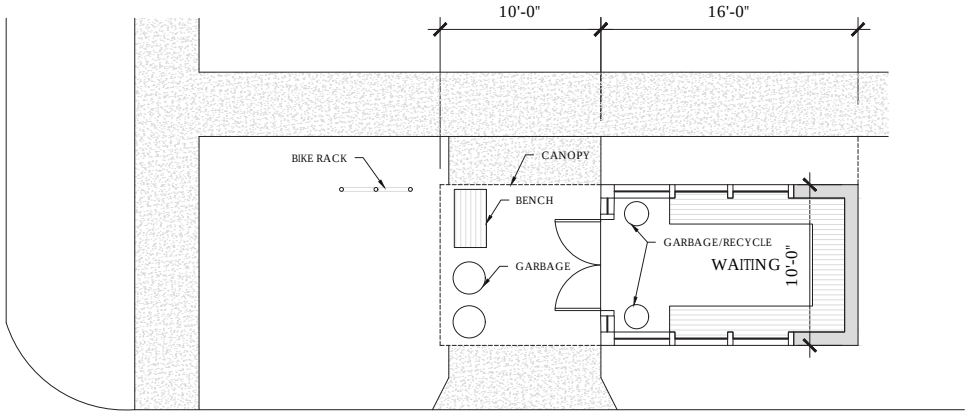
MATBUS Stop Level C Shelter





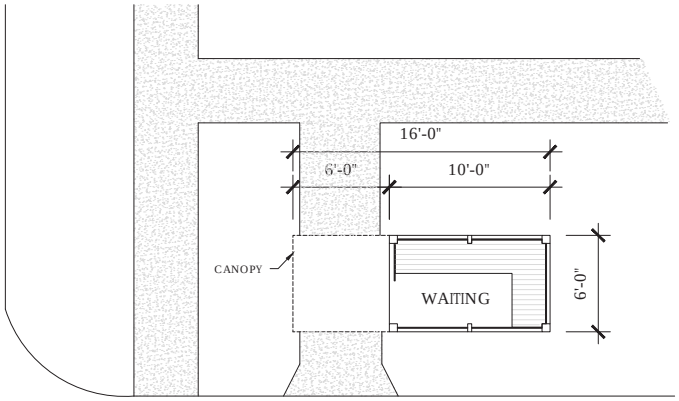
Stop Level A Shelter

1 / A100 SCALE: 1/8" = 1'-0"



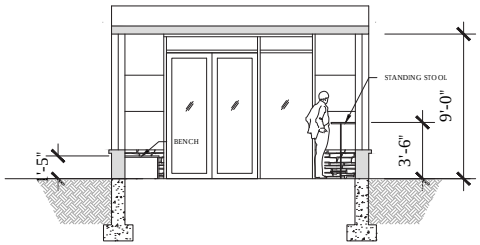
1 / A101 Stop Level B Shelter

SCALE: 1/8" = 1'-0"



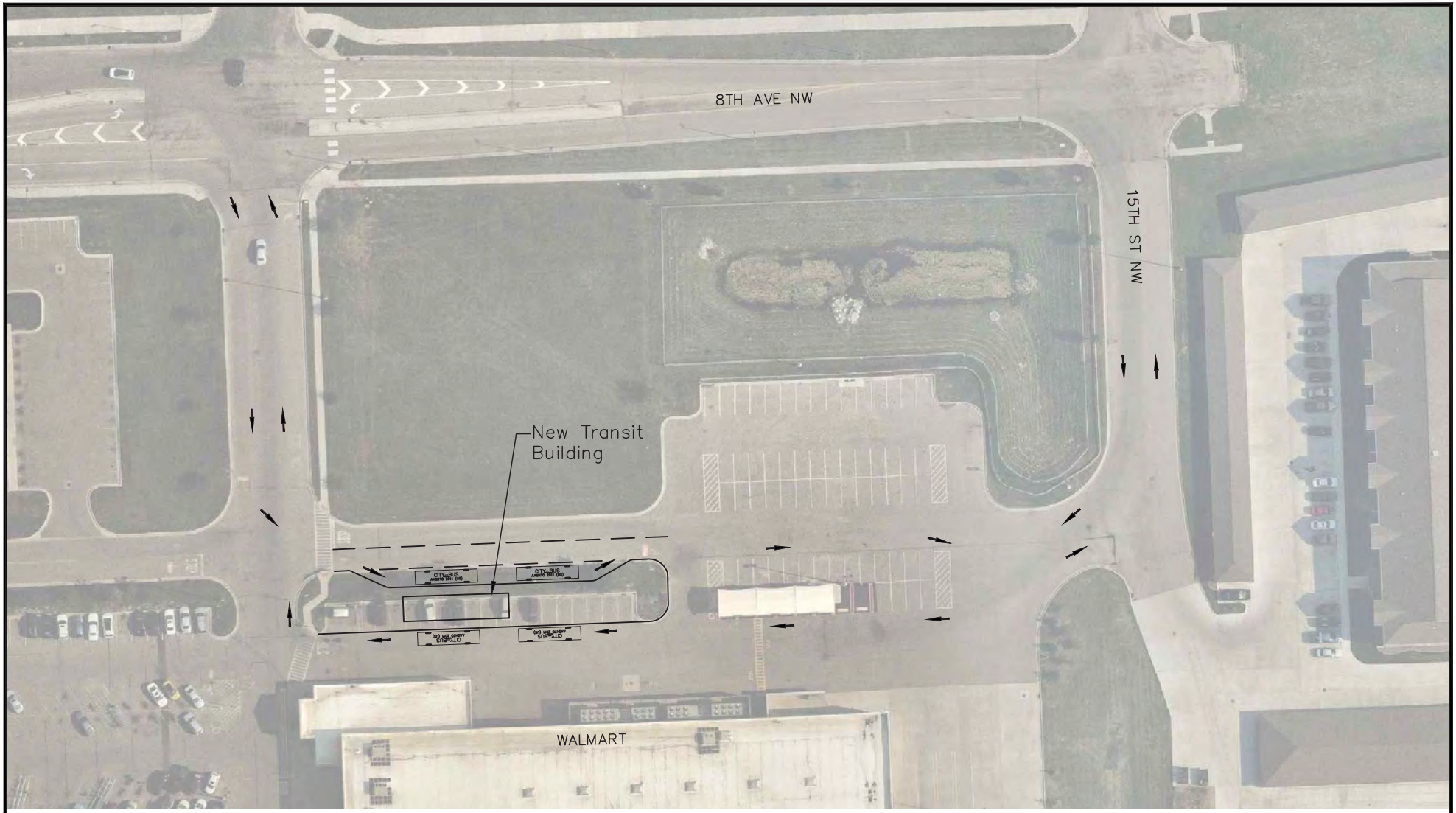
2 / A101 Stop Level C Shelter

SCALE: 1/8" = 1'-0"



3 / A101 Stop Level A Section

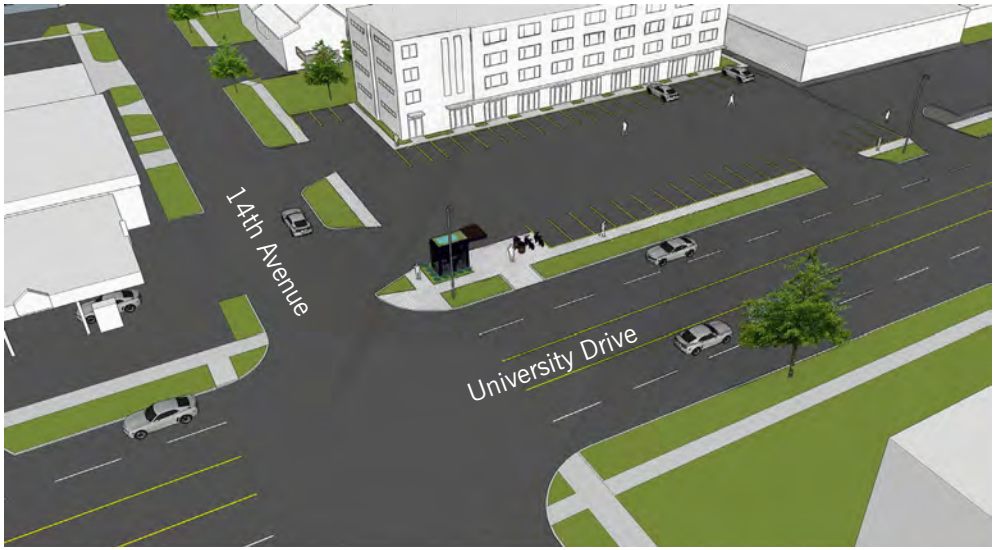
SCALE: 1/8" = 1'-0"

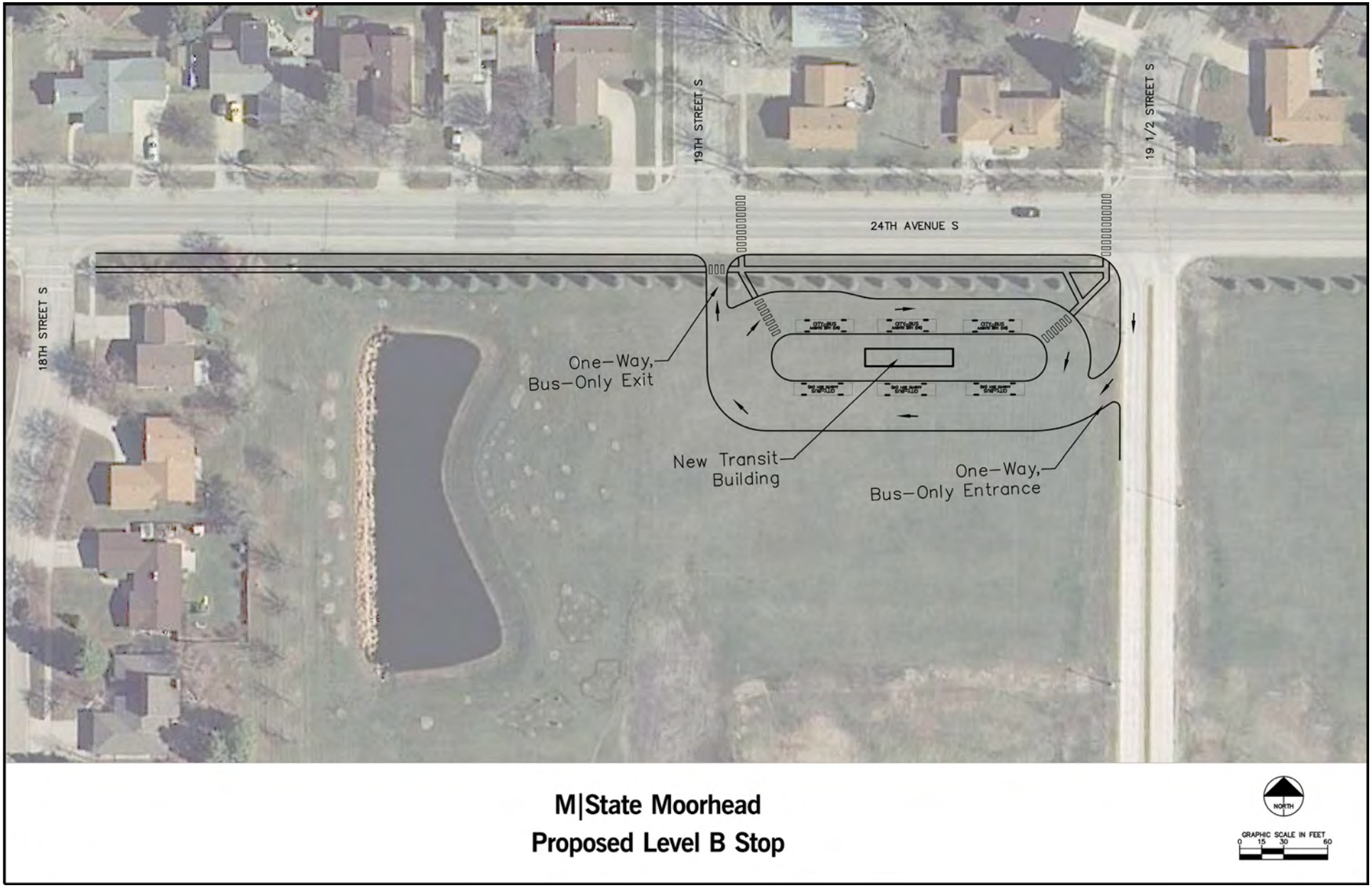


Dilworth Walmart
Proposed Stop Level B

Dilworth Walmart 3D Renderings

C Level Stop University Drive South





M|State Moorhead
Proposed Level B Stop

M|State Moorhead
Proposed Level B Stop

M|State Moorhead 3D Renderings

B Level Stop MSUM

Background

The Ground Transportation Center (GTC) is nearly 40 years old. Based on the development of the Transit Facility Development Study it was determined the GTC was underutilized relative to overcrowding in other areas such as the MTG. Several components of the GTC were determined to need significant remodeling and upgrades to respond current and projected demands. The project team developed an evaluation of both short- and long-term needs and options at the GTC aimed at addressing these issues.

The overall goal was to improve operations of and interrelationship of spaces for internal passenger waiting areas, operational functions, and administrative office space. A major analysis point in the evaluation of the GTC explored options to improve the safety and vehicle capacity of bus transfer areas. Concerns identified by MATBUS for existing conditions at the GTC include:

- Loitering is a concern inside and outside of the building.
- Concerns involving site security and surveillance of the overall property, which need improvement.
- The buses are required to back up when exiting the GTC, which is a safety concern.
- The current dispatch location does not allow for full view of the bus deck or waiting area; dispatchers have a difficult time seeing the deck due to window glare.
- Limited sight lines of the dispatch center create many "dead" spots where people can hide.

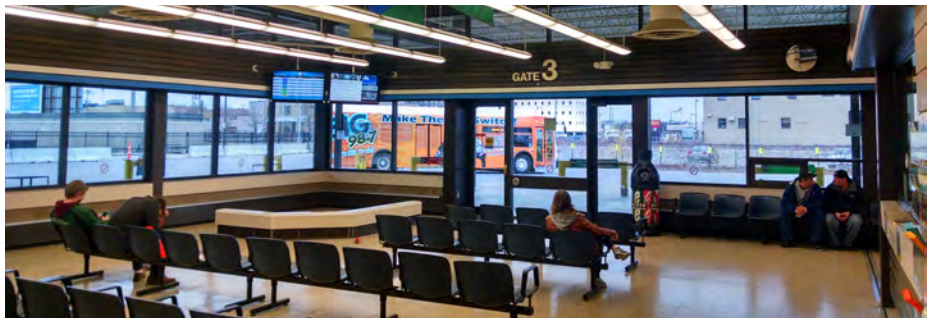
In coordination with the analysis developed at the Metro Transit Garage (MTG), various transit functions currently housed at the MTG were assumed to transition to the GTC. Most notably, MAT Paratransit dispatch and various contractor staff were relocated at the GTC from the MTG. This coordination provides better utilization of existing and projected spaces at the GTC. This shift in operational locations of certain MATBUS functions also improves mid- to long-term space and facility needs at the MTG.

Off-Site Options

Potential alternative sites in downtown Fargo for a GTC replacement were considered (illustrated in the following GTC Relocation Possibilities map). This was done prior to identifying the current location of the GTC for refinement of potential site expansion and modification concepts to meet existing and projected needs. Several key factors limited identification of a new site to meet long-term needs of the GTC:

- The 2016–2020 Transit Development Plan (TDP) continues to support operation of a hub and spoke system for the foreseeable future, requiring a centralized hub.
- As a central point in the hub and spoke system, the location of the GTC was determined to be needed in reasonable proximity to the city of Moorhead, which limited the ability of potential new GTC sites to be more than ¼ mile from the current location.
- It was not deemed feasible to move the GTC to Moorhead given the majority of MATBUS' routes utilizing the GTC operate in Fargo.

Space requirements for a new GTC site in downtown Fargo were difficult to find, and potentially costly both from a financial and environmental permitting perspective. After consultation with the SRC, City of Fargo City Center Master Plan, and City of Fargo Planning Department, the current site in tandem with adjacent properties owned by the City of Fargo, was considered flexible enough to meet long-term expansion and modification needs projected for future operational needs.



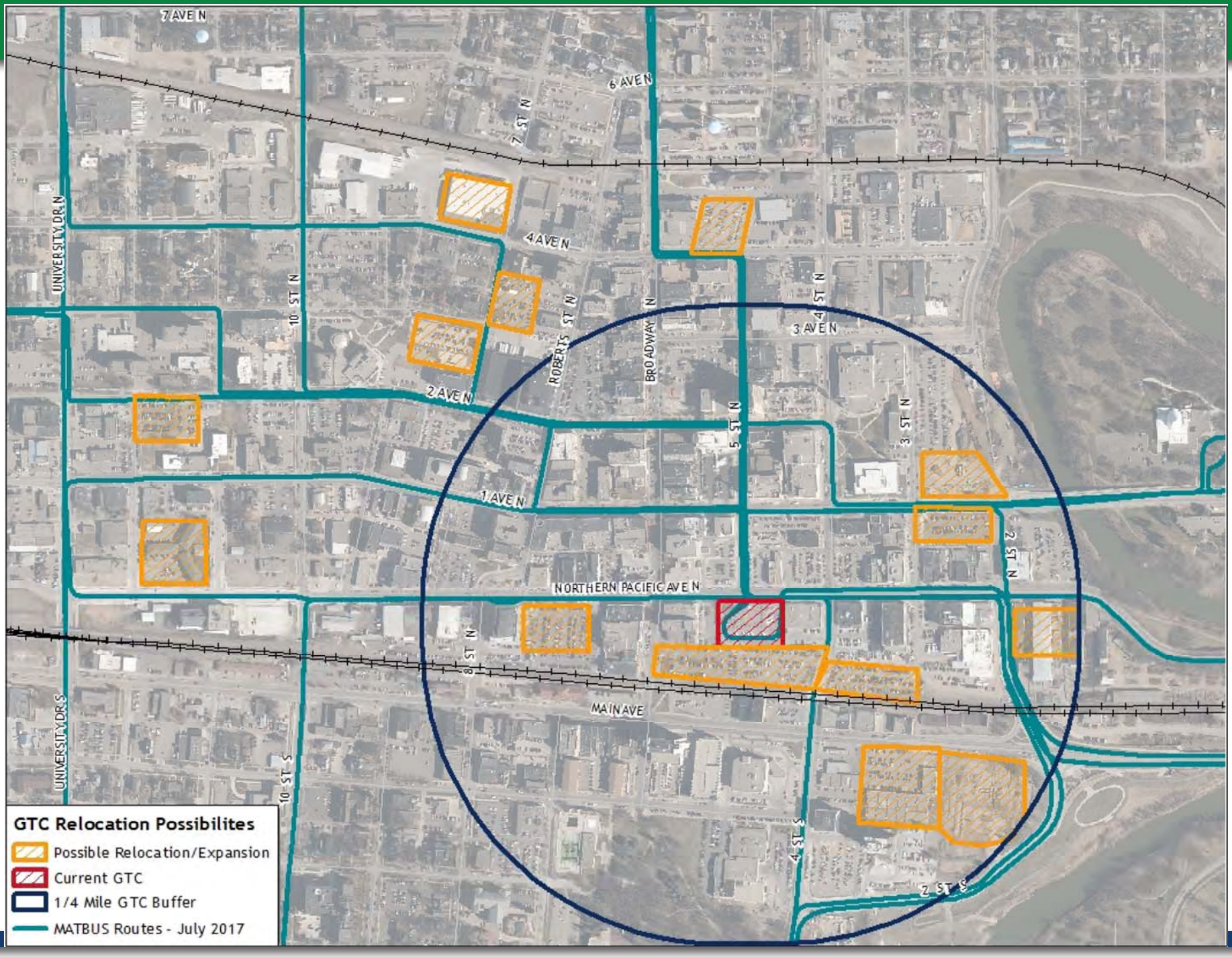
On-Site Options

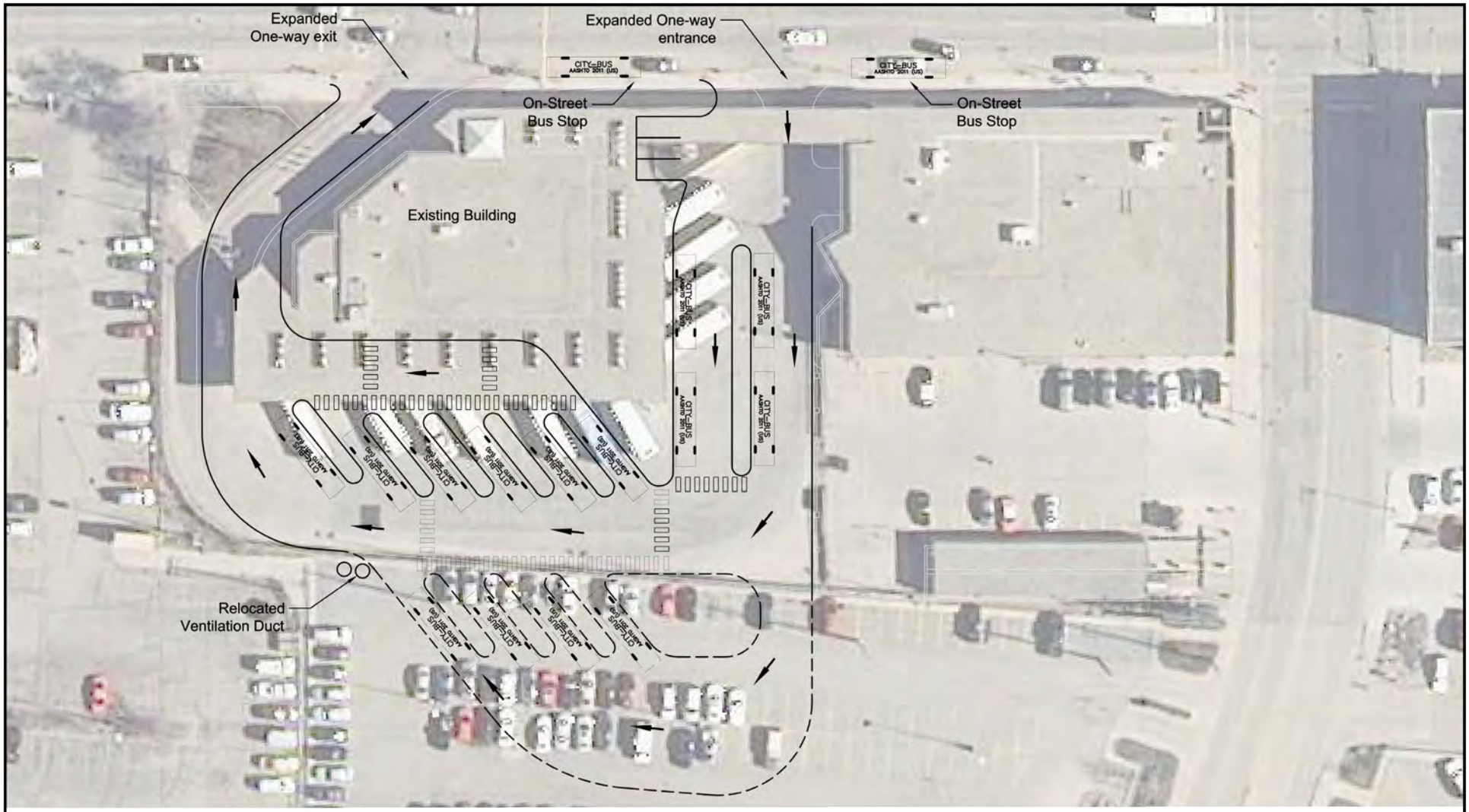
The SRC developed a total of eight basic site concepts to address projected system needs for the GTC. Most of the technically feasible options to improve the function and operation of the GTC required acquisition of land either to the south or east of the current site. In all cases, expansion options requiring additional land only utilized property currently owned by the City of Fargo. Expansion options requiring new space used the current Municipal Court and the 4th Street surface lot.

Following consideration of the SRC, four of the eight options were dismissed based on the ability of the concept to meet projected needs. Options eliminated from further refinement and analysis are included in Appendix E. The retained options underwent additional evaluation and consideration. The remaining options are shown on the following pages. Options 5, 6, and 8, while technically feasible, would require redevelopment through a public-private partnership. While similar investments are occurring in downtown Fargo, there are no opportunities being explored near the GTC location. These options will be carried forward in the event opportunities for public-private partnerships do emerge for a more comprehensive redevelopment of the GTC site.

The SRC considered Option 4d and 4e to represent the most technically feasible options for meeting both mid- to long-term needs at the GTC. Some of the key items addressed with the new GTC deck layout include:

- Canopies are a necessary component of any future deck layout to provide passenger comfort.
- The deck should be well marked and signed for pedestrian safety and flow.
- All bus parking should be designed to be drive-through, so buses are not required to back up.
- The dispatch center should be situated to allow as much of the deck as feasibly possible to be visible.
- The deck must accommodate a minimum of 12–14 buses in the short-term and 16–18 in the long-term.

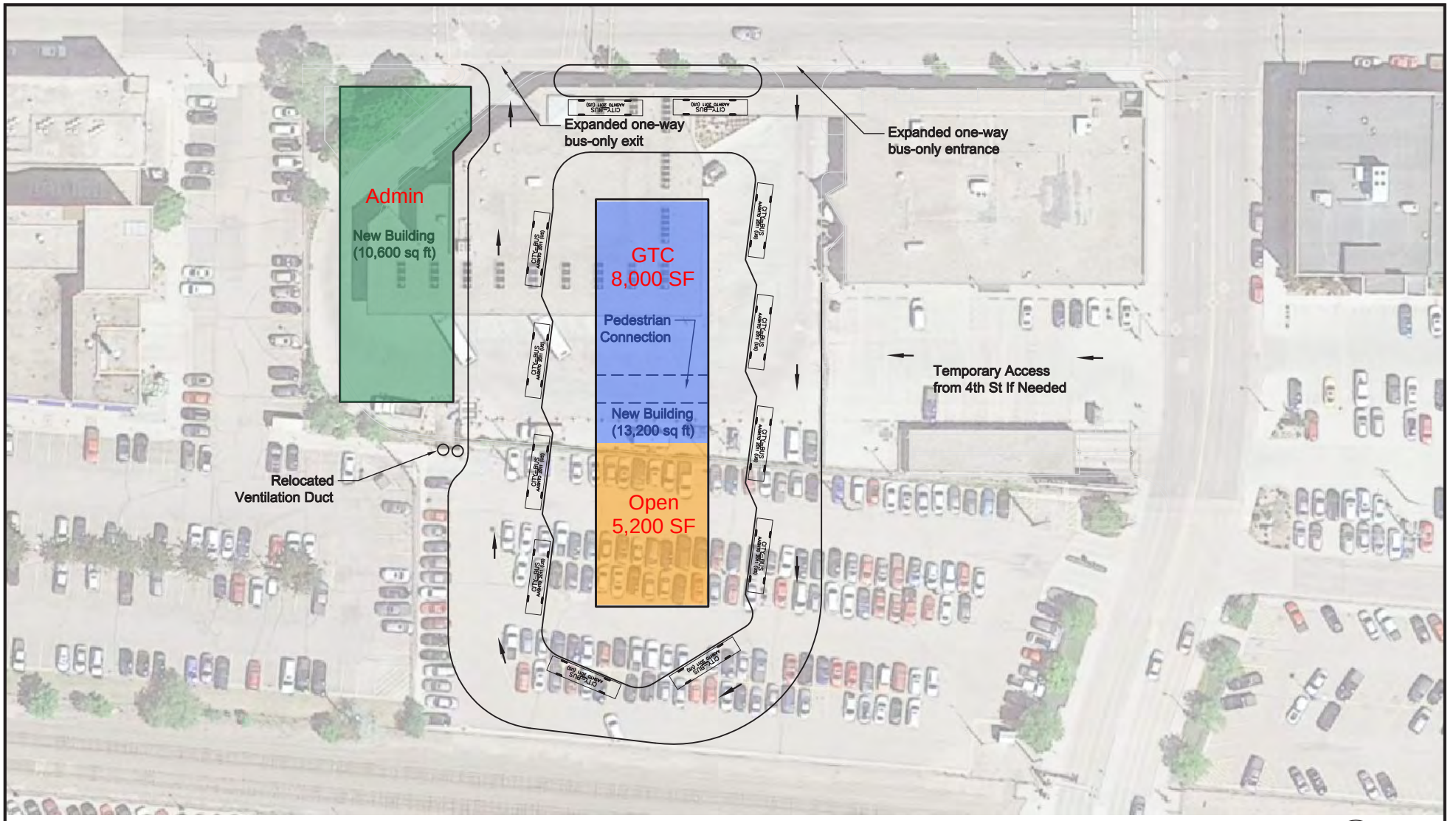

7 AVE N
6 AVE N
7 ST N
4 AVE N
UNIVERSITY DR N
10 ST N
ROBERTS ST N
BROADWAY N
4 ST N
3 AVE N
2 AVE N
5 ST N
3 ST N
1 AVE N
2 ST N
NORTHERN PACIFIC AVE N
8 ST N
MAIN AVE
UNIVERSITY DR S
10 ST S
4 ST S
2 ST S
GTC Relocation Possibilites
Possible Relocation/Expansion
Current GTC
1/4 Mile GTC Buffer
MATBUS Routes - July 2017



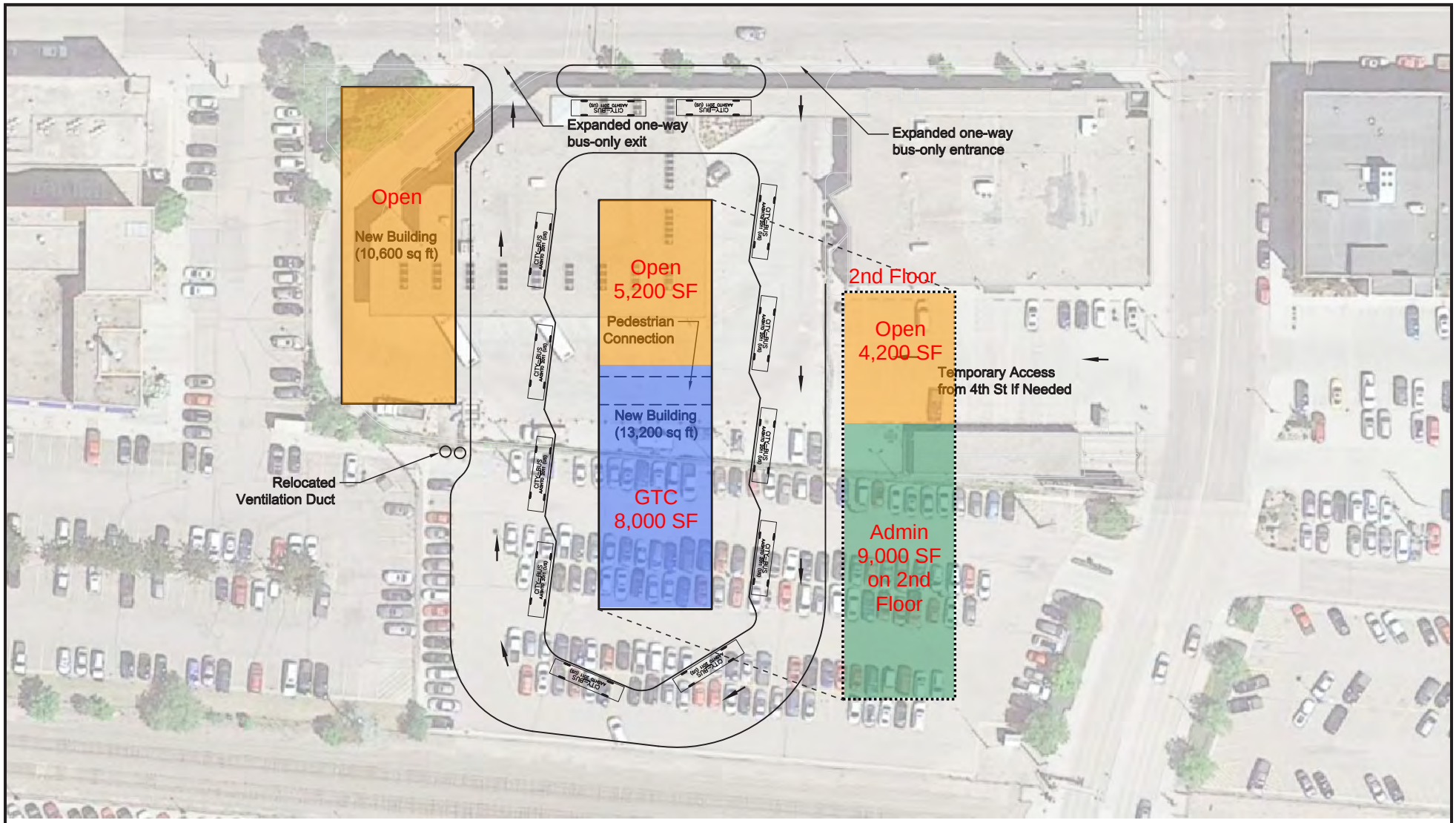
MATBUS Ground Transportation Center
Concept 4c
(16 Buses)

MATBUS Ground Transportation Center
Concept 4d
(16 Buses + 2 Bus Parking)

MATBUS Ground Transportation Center
Concept 4e
(20 Buses)



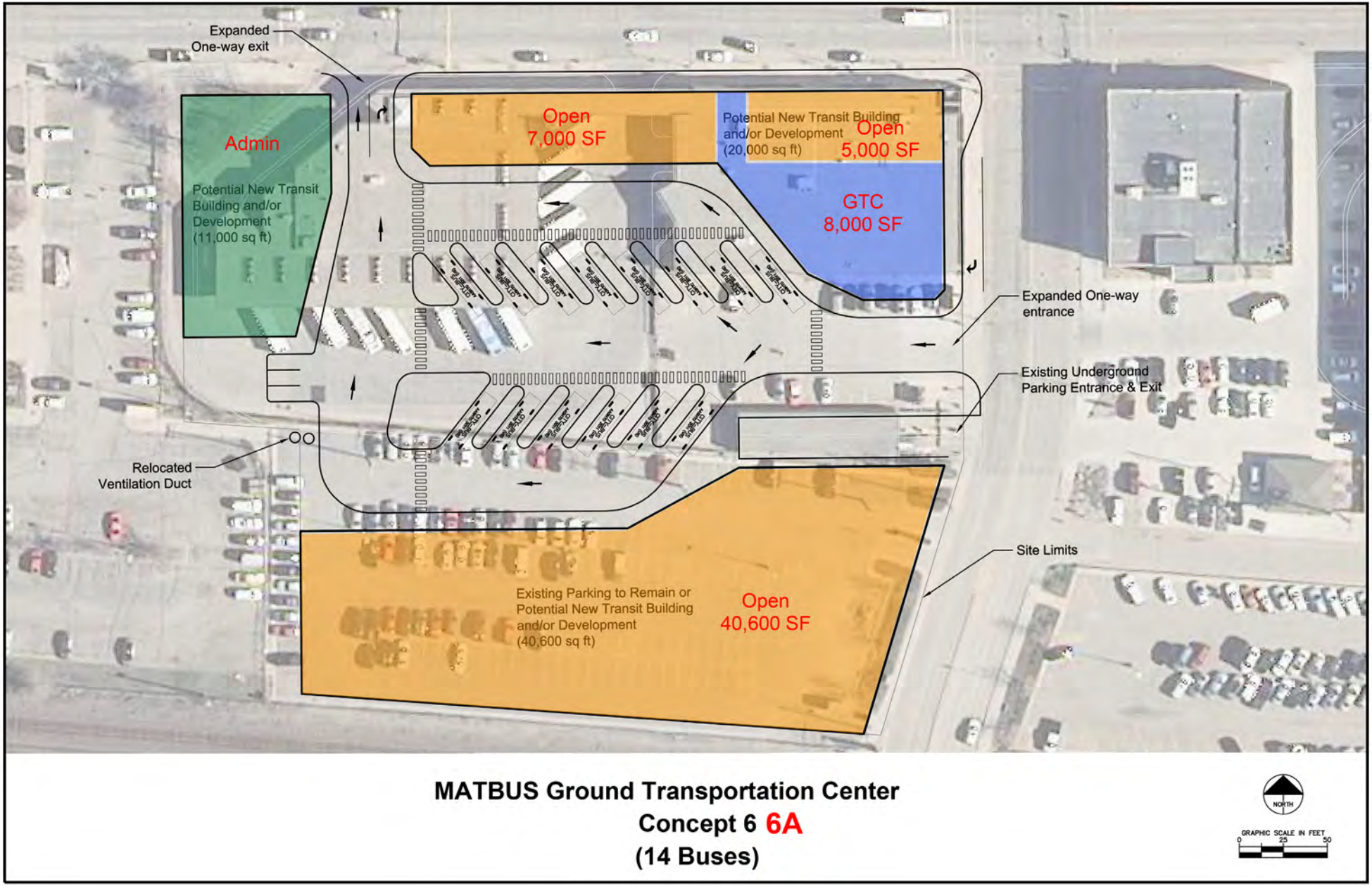
Fargo MATBUS - Ground Transportation Center
Concept 5 5A
(12 Buses)



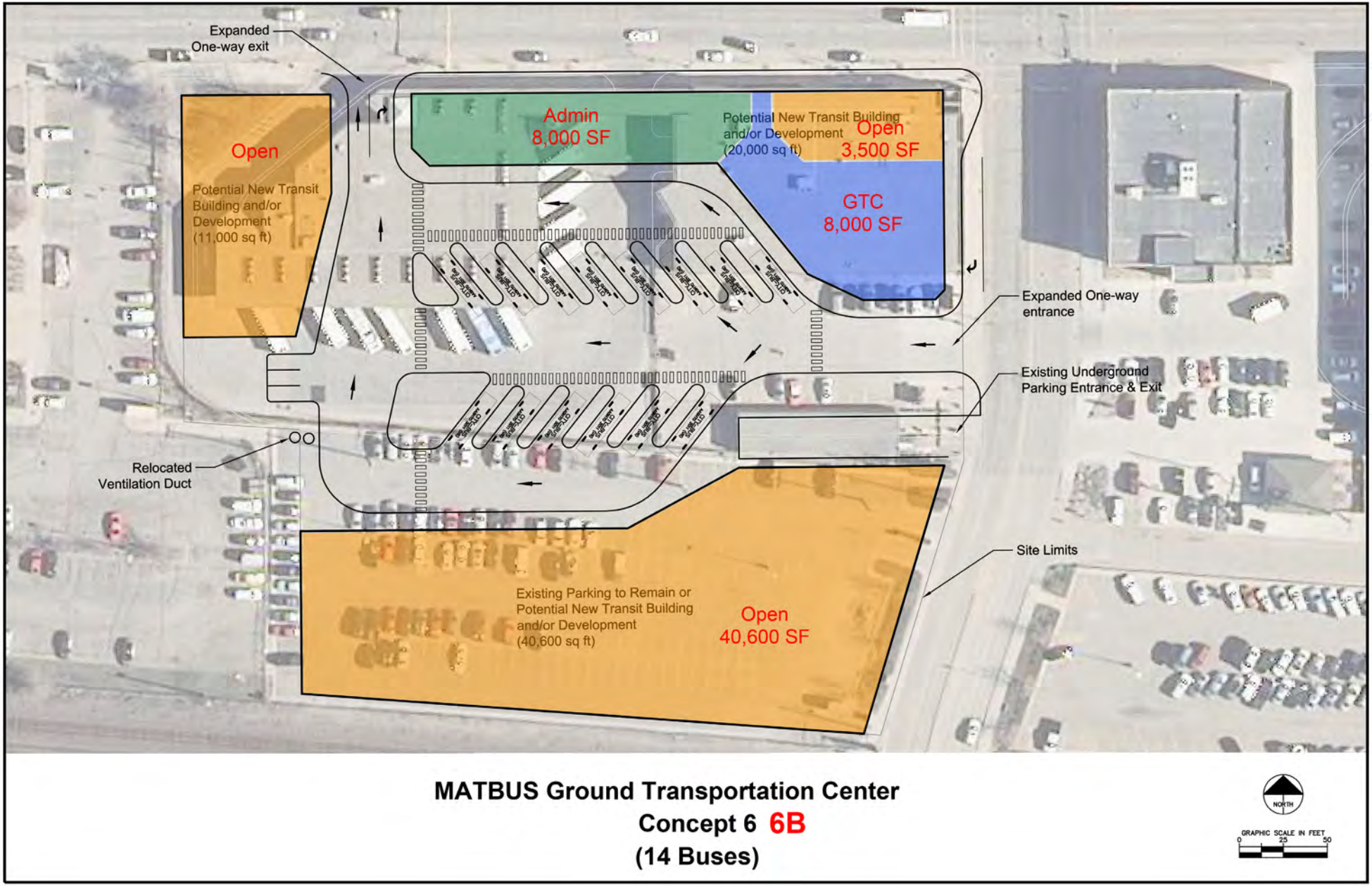
MATBUS - Ground Transportation Center

Concept 5 5B

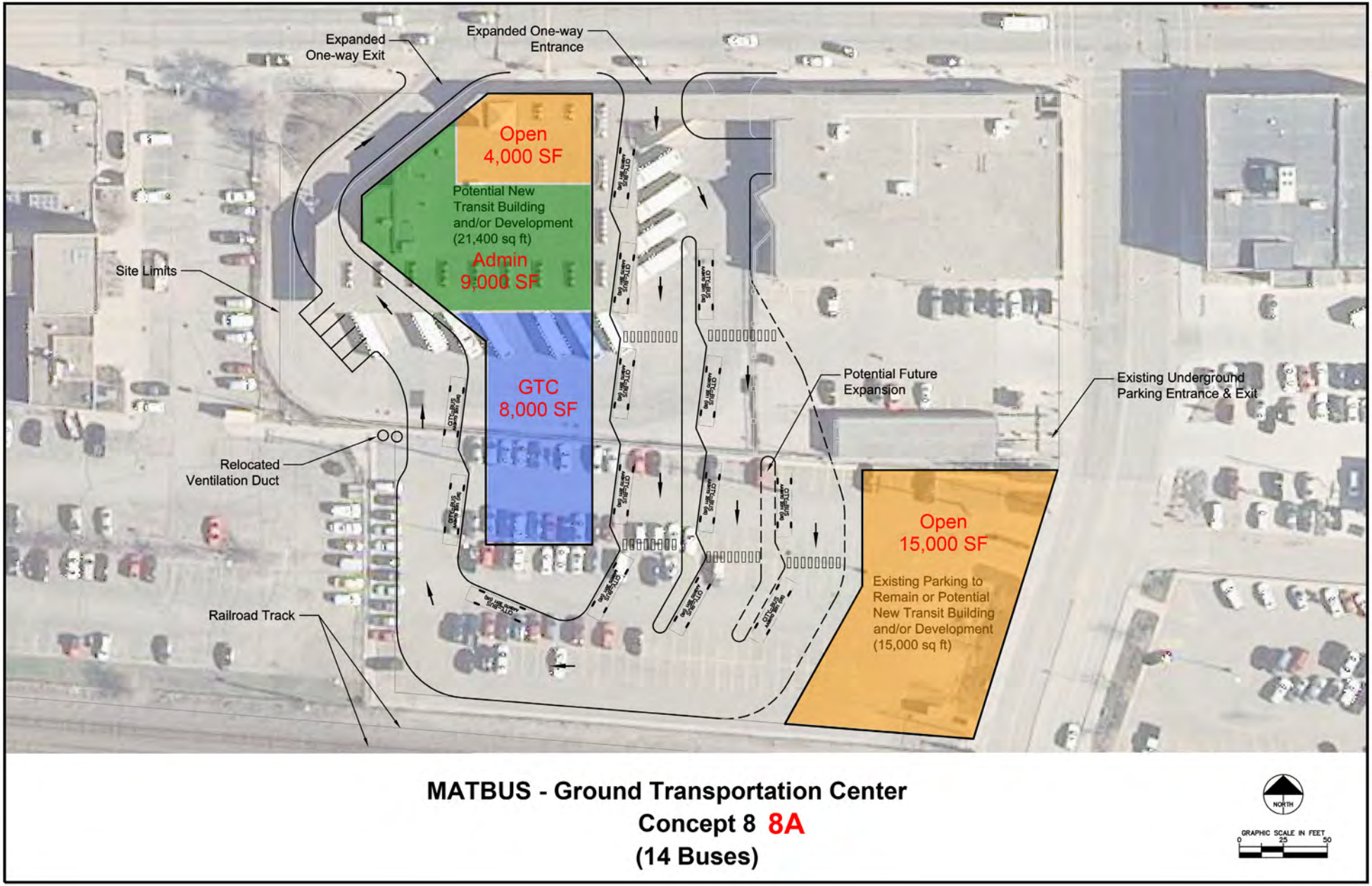
(12 Buses)



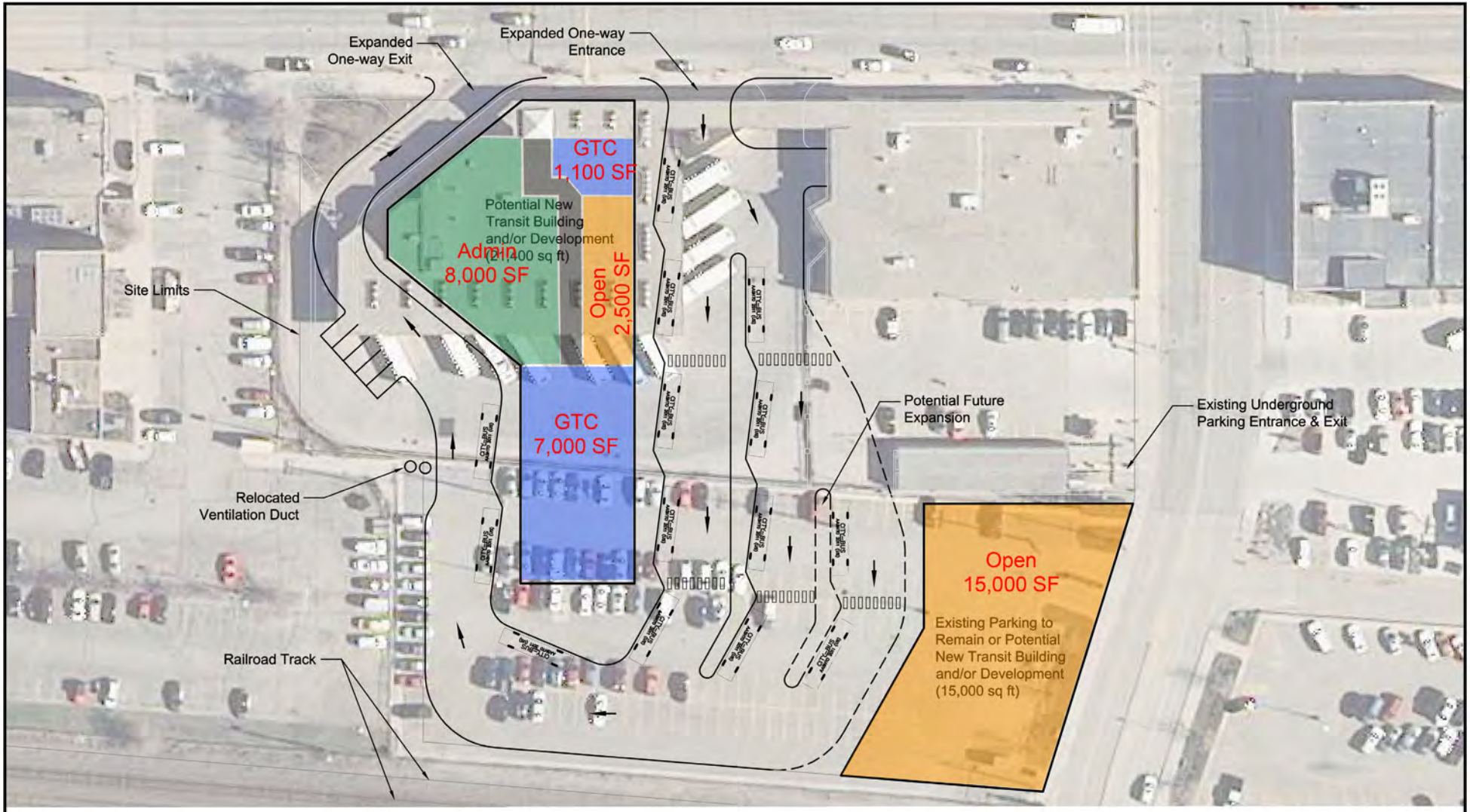
MATBUS Ground Transportation Center
Concept 6 6A
(14 Buses)



MATBUS Ground Transportation Center
Concept 6 6B
(14 Buses)



MATBUS - Ground Transportation Center
Concept 8 8A
(14 Buses)



MATBUS - Ground Transportation Center
Concept 8 8B
(14 Buses)

GTC Canopy Option A Aerial

GTC Canopy Option A Looking NW

GTC Canopy Option A Looking SE

GTC Canopy Option B Aerial

GTC Canopy Option B Looking NW

GTC Canopy Option B Looking SE

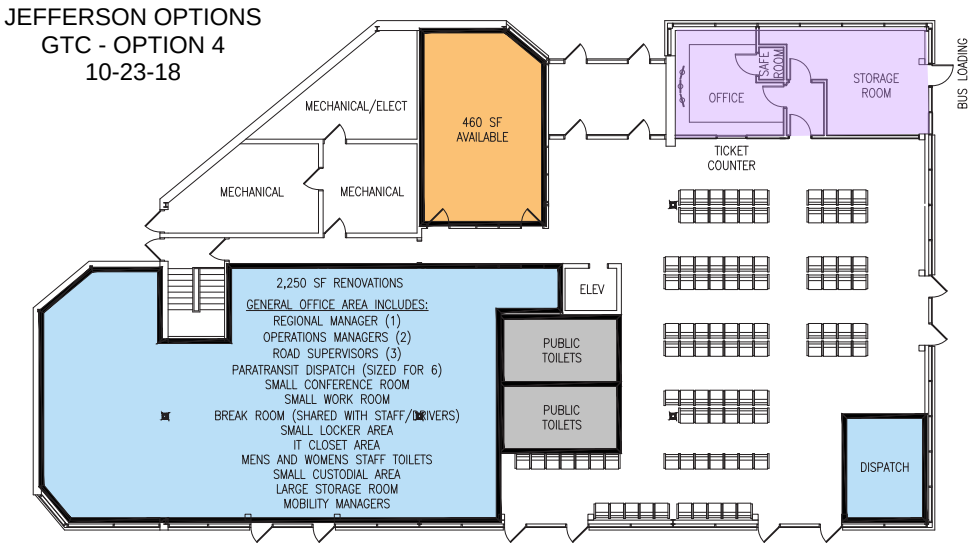
Internal Programming Options and Needs

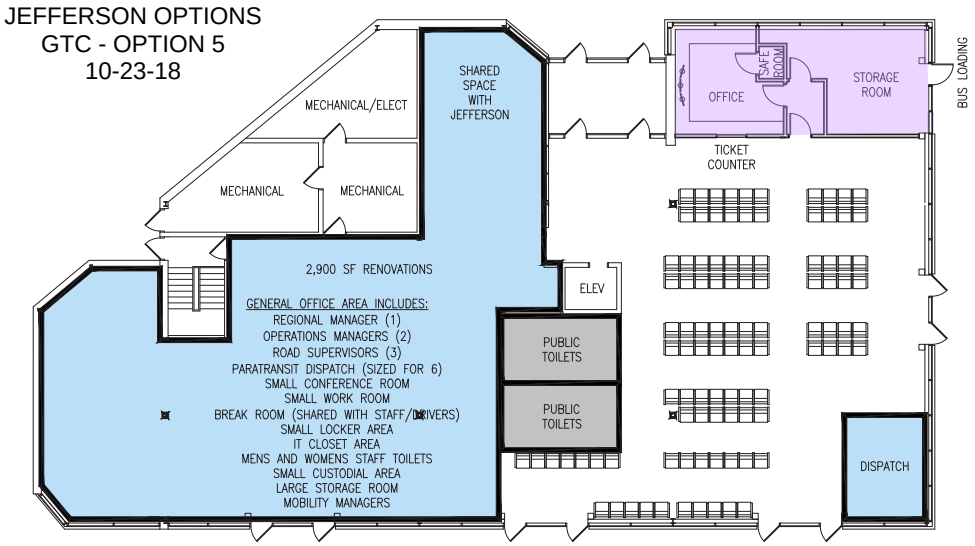
The SRC worked through a series of generalized space programming evaluations. The evaluations were used to determine projected future space needs for MATBUS. As noted earlier, those evaluations looked at options to relocate staff between the GTC and MTG based on a 20-year growth projection for MATBUS operations. This effort allowed the allocation of administrative and contractor office space to be more equally distributed between the MTG and GTC. This resulted in two key outcomes:

1. Maximizing space between the two locations.
2. Better alignment of staff locations with the operational needs of MATBUS.

The SRC worked through a series of space programming options and evaluations to develop a more efficient utilization of existing spaces within the current building footprint of the GTC. At this point in the analysis, the SRC was confident in the development of a site concept that would retain the general building footprint at the GTC (i.e., Option 4c/4d/4e). Therefore, a series of programming options for the current building footprint at the GTC were developed. Each of these options were developed to account for the potential integration of Jefferson Lines into the internal spaces of the GTC. Eight total options were developed for internal modifications to the GTC. The SRC recommended proceeding further into design with Options 4 and 5, which are shown to the right. The balance of options evaluated internally at the GTC are included in Appendix F.

The recommended internal program developed for the GTC, coupled with the revisions to the deck, address all the significant operational issues identified at the onset of the planning study. Implementation of the proposed improvements at the GTC serve to address mid- to long-range needs of MATBUS for successful operation of the GTC.





Cost Estimates

The SRC proceeded with developing an implementation program to support the development of Site Concept 4d/4e, and internal site plan support by Option 4 or Option 5. Cost estimates were developed to support implementation of both of those programs. Detailed estimate required for deck modifications to support Option 4d/4e are included in Appendix F. Generalized estimates to support the renovation of the internal and external components of the GTC are as follows.

Table 15: GTC Cost Estimates

Area of Work	Cost
Reroof	$154,090.00
Fascia Rebuild	$48,125.00
Notes: Includes top 5 feet of building around the facility	
Toilet Area	$120,000.00
Admin Area	$337,500.00
Dispatch	$42,500.00
Mobility Center or Jefferson	$82,500.00
Common Space	$166,000.00
Demo of Roof Overhang	$48,000.00
New Canopies Over Deck Area	$600,000.00
Costs for Deck Revisions	$551,000.00
Subtotal	**$2,149,715.00**
Contingency (15%)	$322,457.25
Total Construction Cost	**$2,472,172.25**

Notes:

1. *Does not include any bump out additions for entries, etc.*
2. *No renovations at the small office area and conference room.*
3. *Reroof costs include sub costs and contractor general conditions and OH/ Profit.*

Background

The Metro Transit Garage (MTG) was built in 2006 and provides storage and maintenance functions for MATBUS. Currently the MTG provides for nearly 37,000 square feet of bus storage and nearly 12,000 square feet of fleet services (maintenance-related) space. The MTG is also the central administrative hub for MATBUS, providing for nearly 5,500 square feet of space for MATBUS staff including related space for MATBUS contractor operations.

While only slightly more than 10 years old, the MTG is projected to run out of space in almost all functional areas by the year 2022. As shown in Table 16, by 2022, fleet services are projected to be nearly 50% over capacity. Other elements are projected to be 13 to 15% over capacity.

With these projections in mind, a series of options were developed to assist with giving MATBUS an understanding of generalized options to address projected space needs at the MTG. The development of options was based on a series of detailed working meetings with MATBUS staff, which provided the planning team insight into details of space planning and programming needs. Considerations for staffing needs and space availability across facilities and functional areas was considered.

Preliminary Options Development

After working with the SRC and a smaller Working Group, four (4) preliminary base options, including two sub options were developed to address projected programming needs for the MTG. These preliminary options were developed to assist with understanding future potential options for meeting programming demands of MATBUS in the areas of maintenance, storage, parking, and administration. Upon review and evaluation of these preliminary options, a narrower set of options were refined to undergo a more refined development and analysis.

One limiting factor in expansion of the existing facility is the location of the storm water retention for the site. It is currently located below the existing parking lot located on the northeast corner of the property. Unless the storm water retention system is relocated off site, which isn't feasible, expansion options are limited to the exterior vehicle storage area on the southeast corner of the lot. The preliminary set of options were as follows:

- **Option 1:** Under this option, the goal was to maximize capacity in all five program areas. This is accomplished by demolishing the existing office area to allow for additional drive-thru vehicle storage. The existing maintenance area would be converted into additional vehicle storage and contractor space. The southeast corner of the lot would be fully developed and would include underground parking, fleet services, and a multi-story administrative area. The primary negative of this option was inclusion of an underground parking facility that would severely limit development of the fleet services.

- **Option 1a:** This is a slight variation of Option 1 in that the underground parking is removed. This option would accommodate all 20-year growth projections, excluding the off-street parking requirements.

Table 16: No Build Space Utilization Analysis

	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	113%	8,755	214%	8,755	214%
Contractor	1,400	100%	1,610	115%	1,820	130%	2,242	160%
Fleet Services	11,860	100%	17,000	143%	17,740	150%	19,220	162%
Storage + Wash	36,843	100%	41,963	114%	45,323	123%	52,163	142%
Parking	59	100%	59	136%	59	153%	59	186%

- **Option 2:** The entire administration area would be moved to a new site to alleviate congestion from off-street parking requirements and free up space for expansion of the vehicle storage and fleet services on-site. Our projections estimate the stand-alone administration building to be approximately 11,000 square feet to accommodate 2037 staffing projections. At the MTG, the existing administration building would be demolished to accommodate a new addition to the east for fleet services and additional bus parking. The existing fleet services area would be converted to bus storage/parking and contractor offices. This option would still be short about 20 off-street parking spots, so additional parking elsewhere would need to be considered. It also creates a disconnect between the operations of MATBUS having contractor, maintenance, and administrative staff housed separately. However, this option does provide the most potential for future expansion.

- **Option 3a:** Upon much deliberation, the SRC concluded there may be potential in separating paratransit operations from the fixed route operations. Under this option, it is also assumed the existing administrative space is left as is and provides opportunity for growth into the space vacated by the paratransit staff, which would meet the 2037 needs. The existing fleet services area would be renovated as in the previous options to accommodate additional vehicle storage and contractor offices. A new addition would be placed in the southeast corner of the existing lot for fleet services. The biggest downfall of this option is the inefficiency it creates within the fleet services operations. The paratransit vehicles are no longer stored on-site creating additional resources and time to maintain these vehicles. In addition, off-street parking remains a concern at the MTG.

- **Option 3b:** This option stemmed from inefficiencies created under Option 3a related to servicing paratransit vehicles storage off-site from the MTG. The only difference between this option and Option 3a is an independent fleet services addition is placed at the new location of the paratransit facility. This would result in duplication of existing staffing resources. These additional operational costs are not accounted for in the preliminary construction costs provided.

- **Option 4:** Option 4 assumes development of a nearly identical facility to the current MTG that houses vehicle storage, maintenance, and administrative offices in a second location within the MATBUS system. Potential sites for a facility such as this weren't evaluated in detail, but discussions with the SRC included Moorhead, South Fargo, and an a nearby City-owned property. The drawback to this option is the need for duplication within the administrative functions and operations. Financial effects of this option makes it less desirable than the other options considered.

Summary of Preliminary Options

Table 17 (next page) provides a summary of each of the Preliminary Options for the MTG. Each option was evaluated in relation to the Percentage of Project Program Needs Met in the functional following areas:

- Administration
- Fleet Services
- Fleet Storage + Bus Wash
- Off Street parking

Additionally, the cost of each of the respective options was factored in as a consideration in the preliminary vetting of options.

Table 17: Summary of MTG Preliminary Options

Option	Description	Cost	Percentage of Projected Program Needs Met			
			Admin.	Fleet Services	Fleet Storage + Wash	Off-Street Parking
1	**Expand on current block**	**$17,300,000**	100%	79%	87%	100%
Option	**Description**	**Cost**	**Admin.**	**Fleet Services**	**Fleet Storage + Wash**	**Off-Street Parking**
1a	**Expand on current block** *(no underground parking)*	**$12,988,000**	100%	94%	87%	50%
Option	**Description**	**Cost**	**Admin.**	**Fleet Services**	**Fleet Storage + Wash**	**Off-Street Parking**
2	**Separate Administrative Building**		108%	96%	87%	83%
	New Administrative Building	$2,512,000				
	MTG Expansion	$9,635,000				
	subtotal	**$12,147,000**				
Option	**Description**	**Cost**	**Admin.**	**Fleet Services**	**Fleet Storage + Wash**	**Off-Street Parking**
3a	**New Paratransit Storage & Operations Building**		154%	96%	104%	58%
	New Paratransit Building	$3,830,500	Option to add administrative offices as a second story would add $2.8 million in cost.			
	MTG Expansion	$9,182,500				
	subtotal	**$13,013,000**				
Option	**Description**	**Cost**	**Admin.**	**Fleet Services**	**Fleet Storage + Wash**	**Off-Street Parking**
3b	**New Paratransit Storage, Maintenance, & Operations Building**		151%	102%	104%	67%
	New Paratransit Building	$5,323,000	Option to add administrative offices as a second story would add $2.8 million in cost.			
	MTG Expansion	$9,182,500				
	subtotal	**$14,505,500**				
Option	**Description**	**Cost**	**Admin.**	**Fleet Services**	**Fleet Storage + Wash**	**Off-Street Parking**
4	**Build 2nd Storage & Maintenance Facility**	**$13,365,000**	Replicates current MTG, assumed to meet 100% of functional programming needs.			

Refined Options

Following a review of the preliminary evaluation of options, MATBUS reduced the options to previously developed vehicle growth projections. The study team was directed to work within Options 1a, 2, and 3 related to expansion options at the MTG; however, the team also had to factor in a lower future growth rate in vehicles to the year 2037.

Three (3) refined options for the MTG were developed with the following assumptions. These assumptions were developed in cooperation with MATBUS and Metro COG:

- Limit impact to current surface parking to avoid major changes to underground storm water system.
- Revise Growth Projections for Fixed Route Vehicles from a high growth (77) to a medium growth (63); retaining the high growth projection for Paratransit vehicle growth (22).
- Implement an Operational Concept that relocates various MATBUS functions between the MTG to GTC, as follows:
  - Paratransit Dispatch + Mobility Management
  - Safety & Training
- Coordinate short to mid-range renovation projects at the GTC.
- Develop longer range site concepts at the GTC that allow for the potential development of centralized administrative office.

Each of the refined options modifies preliminary Options 1a, 2, and 3 as related to expansion of the MTG footprint. The primary variance of each of the refined options relates most specifically to how the administrative office space within the MTG is handled to meet overall MTG programming needs.

Option 1

This option focuses on maximizing capacity in all five program areas while keeping as much of the existing operations on-site. This is accomplished by demolishing the existing office area to allow for additional drive-thru vehicle storage and a second wash bay. The existing maintenance area would be converted into additional vehicle storage and contractor space. The southeast corner of the lot would be fully developed and would include fleet services and a two-story administrative area. This option also provides an addition to the south end of the building to accommodate larger exit doors.

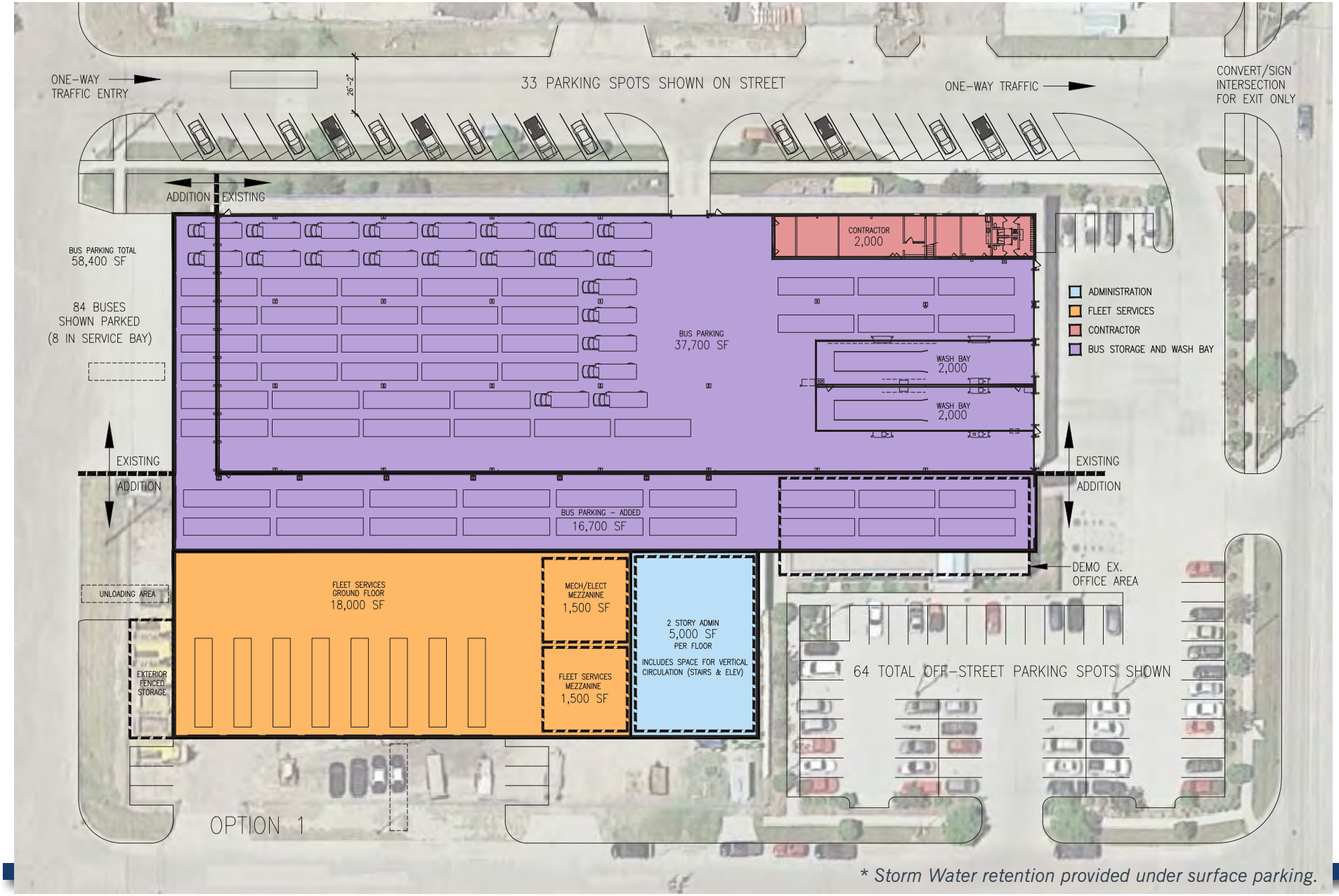
To alleviate issues with parking, the new fleet services and administrative addition are moved to the south of the lot to allow the existing lot to be reconfigured. Additional parking spaces are also acquired adjacent to fleet services and when 24th Street is converted to diagonal, on-street parking.

Summary of Option 1 is as follows:

Table 18: Refined Option 1

Option	Description	Cost	Percentage of Projected Program Needs Met			
			Admin.	Fleet Services	Fleet Storage + Wash	Off-Street Parking
1	**Expand MTG (Admin Demo)**	**$11,500,000**	100%	100%	112%	88%

MTG Option 1 – Full Build



** Storm Water retention provided under surface parking.*

MTG – Proposed NW Corridor

MTG – Proposed Aerial Looking NE

MTG – Existing Aerial Looking SW

MTG – Proposed Aerial Looking SW

MTG – Proposed Aerial Looking NW

MTG – Existing Aerial Looking NW

Option 2

As concepts for the GTC progressed, it became evident there was potential to relocate all of the administrative functions to the GTC under concepts 5, 6, and 8 found in the previous chapter. With the administrative functions having been relocated downtown, the existing administrative space can be demolished to make room for expansion of the fleet services and vehicle storage facility at the MTG. The expansion would include two additional drive-thru lanes for vehicle storage and a new fleet services building. The existing fleet services building would be converted to vehicle storage and contractor office space. A second wash bay would be integrated into the existing space. A 20-foot addition would be placed on the south end of the existing building to accommodate larger, 24-foot overhead doors for the drive-thru bays.

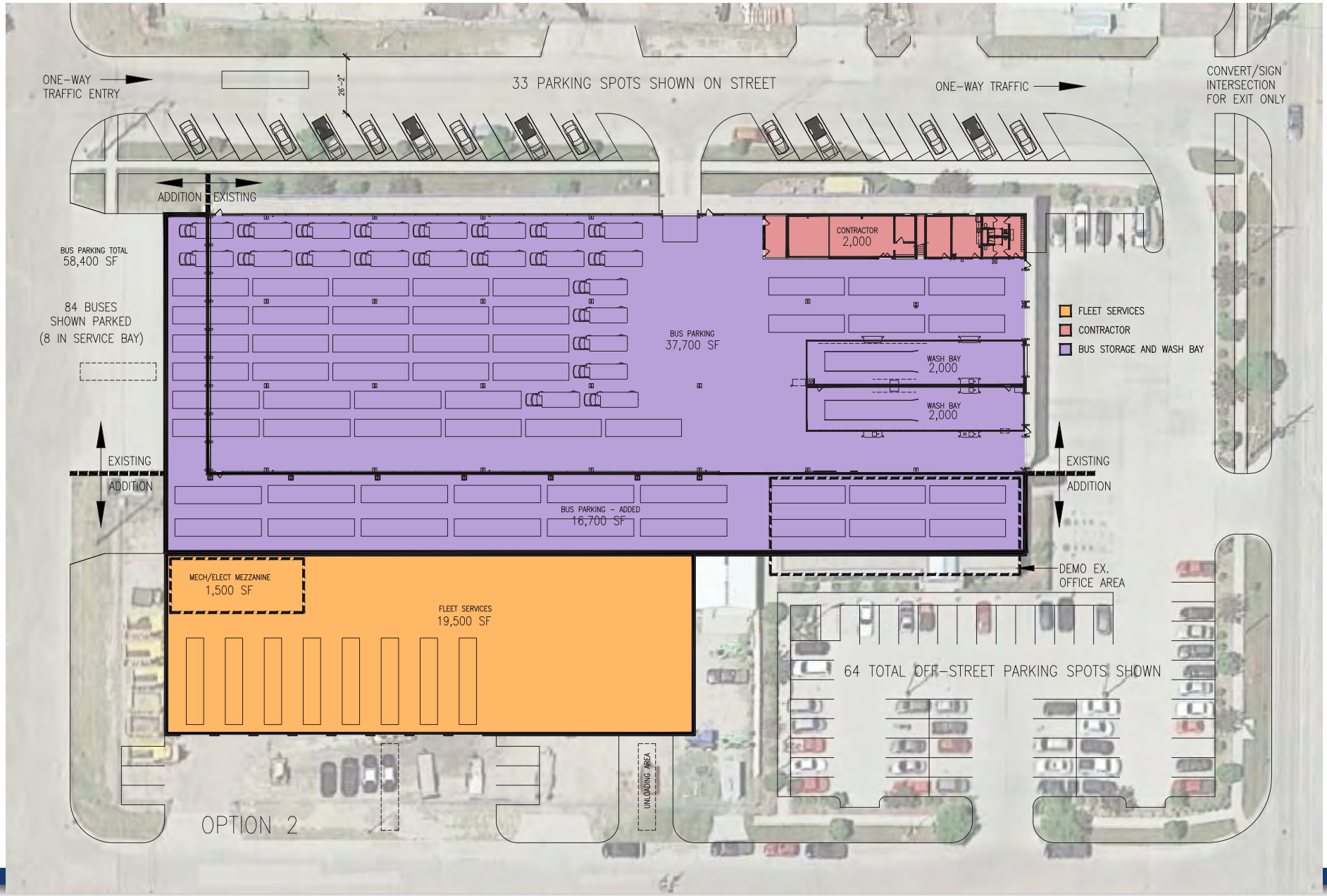
This option would meet or exceed the 2037 projections for fleet services, vehicle storage, and off-street parking at the MTG. However, it would separate the administrative functions from the MTG, which may have some negative impacts on the day-to-day operations of MATBUS.

Summary of Option 2 is as follows:

Table 19: Refined Option 2

Option	Description	Cost	Admin.	Fleet Services	Fleet Storage + Wash	Off-Street Parking
2	**Expand MTG (Admin off site)**		Off -Site	100%	112%	129%
	New Administrative Building	*$2,430,000*	*Costs assumed to be related to changes at GTC Site Concepts. Costs based on sq. foot assumptions and not specific to GTC site.*			
	MTG Expansion	$8,970,000				
	subtotal	**$11,400,000**				

MTG Option 2


ONE-WAY TRAFFIC ENTRY
26'-2"
33 PARKING SPOTS SHOWN ON STREET
ONE-WAY TRAFFIC
CONVERT/SIGN INTERSECTION FOR EXIT ONLY
ADDITION
EXISTING
BUS PARKING TOTAL 58,400 SF
84 BUSES SHOWN PARKED (8 IN SERVICE BAY)
CONTRACTOR 2,000
BUS PARKING 37,700 SF
WASH BAY 2,000
WASH BAY 2,000
FLEET SERVICES
CONTRACTOR
BUS STORAGE AND WASH BAY
EXISTING ADDITION
EXISTING ADDITION
BUS PARKING - ADDED 16,700 SF
DEMO EX. OFFICE AREA
MECH/ELECT MEZZANINE 1,500 SF
FLEET SERVICES 19,500 SF
64 TOTAL OFF-STREET PARKING SPOTS SHOWN
UNLOADING AREA
OPTION 2

Option 3

Under Option 3, all administrative staff remains at the MTG. The existing administration building would be demolished. The entire administration operation would be accounted for as part of MTG expansion and moved to the 2nd floor adjacent to the fleet services expansion. Other than reception space on the ground floor to direct visitors up to administration, all administrative functions are on the 2nd floor of the expansion. Further consideration should be taken regarding how to address secured access for the second floor.

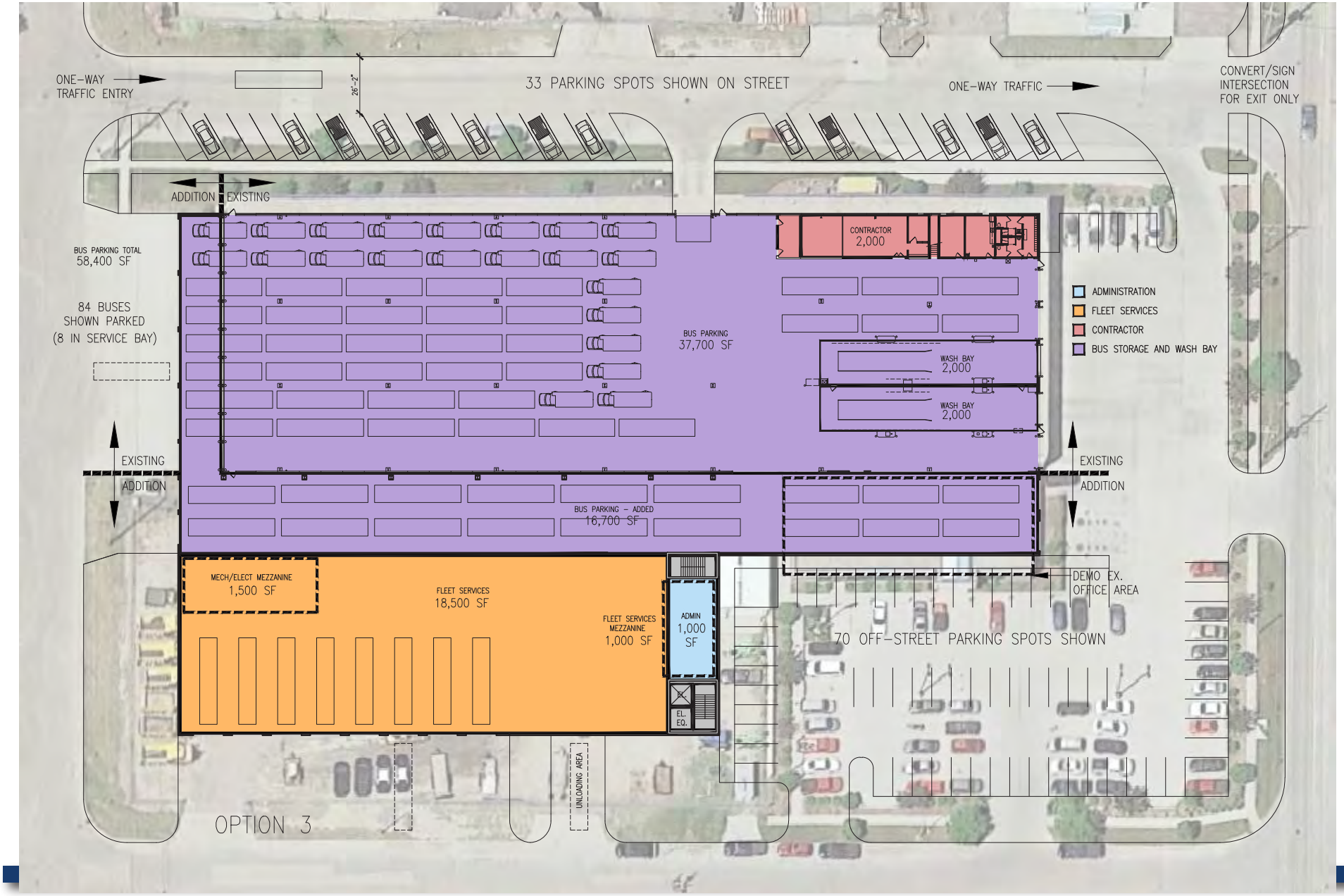
A new addition to the east would contain fleet services and additional bus parking. The existing fleet services area would be demolished and converted to bus storage/parking. The contractor area would be moved to current location of fleet services office/break room area.

An extension/addition would be added to the south end of the existing building, extending the building 20 feet and allowing for larger overhead doors to be installed (24-foot wide overhead doors would replace two 12-foot openings). Bus storage is increased by adding two parking lanes to the east of the building. An additional wash bay is also added. The additions allow the buses to be parked off-street, outside of the building on the south side, and in front of fleet services. One hundred percent of fleet services requirements are met on the ground floor such that mezzanine storage space is not required.

Summary of Option 3 is as follows:

Table 20: Refined Option 3

Option	Description	Cost	Percentage of Projected Program Needs Met			
			Admin.	Fleet Services	Fleet Storage + Wash	Off-Street Parking
3	**Expand MTG (Admin Addition)**	**$11,850,000**	100%	100%	112%	94%


ONE–WAY TRAFFIC ENTRY
26'–2"
33 PARKING SPOTS SHOWN ON STREET
ONE–WAY TRAFFIC
CONVERT/SIGN INTERSECTION FOR EXIT ONLY
ADDITION
EXISTING
BUS PARKING TOTAL 58,400 SF
84 BUSES SHOWN PARKED (8 IN SERVICE BAY)
CONTRACTOR 2,000
BUS PARKING 37,700 SF
WASH BAY 2,000
WASH BAY 2,000
ADMINISTRATION
FLEET SERVICES
CONTRACTOR
BUS STORAGE AND WASH BAY
EXISTING ADDITION
BUS PARKING – ADDED 16,700 SF
EXISTING ADDITION
MECH/ELECT MEZZANINE 1,500 SF
FLEET SERVICES 18,500 SF
FLEET SERVICES MEZZANINE 1,000 SF
ADMIN 1,000 SF
EL. EQ.
DEMO EX. OFFICE AREA
70 OFF–STREET PARKING SPOTS SHOWN
UNLOADING AREA
OPTION 3

MTG Implementation Strategy

Based on projected growth trends for MATBUS, an implementation strategy was developed to incrementally expand the MTG to meet the pressing needs facing MATBUS.

Table 21 below shows the utilization of space by functional area at the MTG if Option 1 were to be built in 2022 and 2027 respectively. A full expansion to the MTG in either 2022 or 2027 solves Fleet Services needs; however, it adds unneeded capacity in several other areas sooner than needed.

Table 21: Space Utilization by Functional Area at the MTG (Option 1)

Metro Transit Garage – Full Build 2022

	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	46%	8,755	88%	8,755	88%
Contractor	1,400	100%	1,610	81%	1,820	91%	2,242	112%
Fleet Services	11,860	100%	17,000	89%	17,740	93%	19,220	100%
Storage + Wash	36,843	100%	41,963	81%	45,323	88%	52,163	101%
Parking	59	100%	97	82%	97	93%	97	113%

Metro Transit Garage – Full Build 2027

	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	113%	8,755	88%	8,755	88%
Contractor	1,400	100%	1,610	115%	1,820	91%	2,242	112%
Fleet Services	11,860	100%	17,000	143%	17,740	93%	19,220	100%
Storage + Wash	36,843	100%	41,963	114%	45,323	88%	52,163	101%
Parking	59	100%	59	136%	97	93%	97	113%

Since fleet services is the most pressing need for expansion at the MTG, two phasing plans were explored for expansion of the MTG. This first option looked to add fleet services in 2022 and then do a full building expansion in 2037. The second option adds fleet services in 2027 and then completes the full MTG expansion in 2037. Table 22 shows the utilization factor by functional area for each of those two-phasing plans. The option of building the fleet services component of Option 1 in 2022 and renovating current fleet service to bus storage appears to most adequately meet mid to long range needs of MATBUS at the MTG.

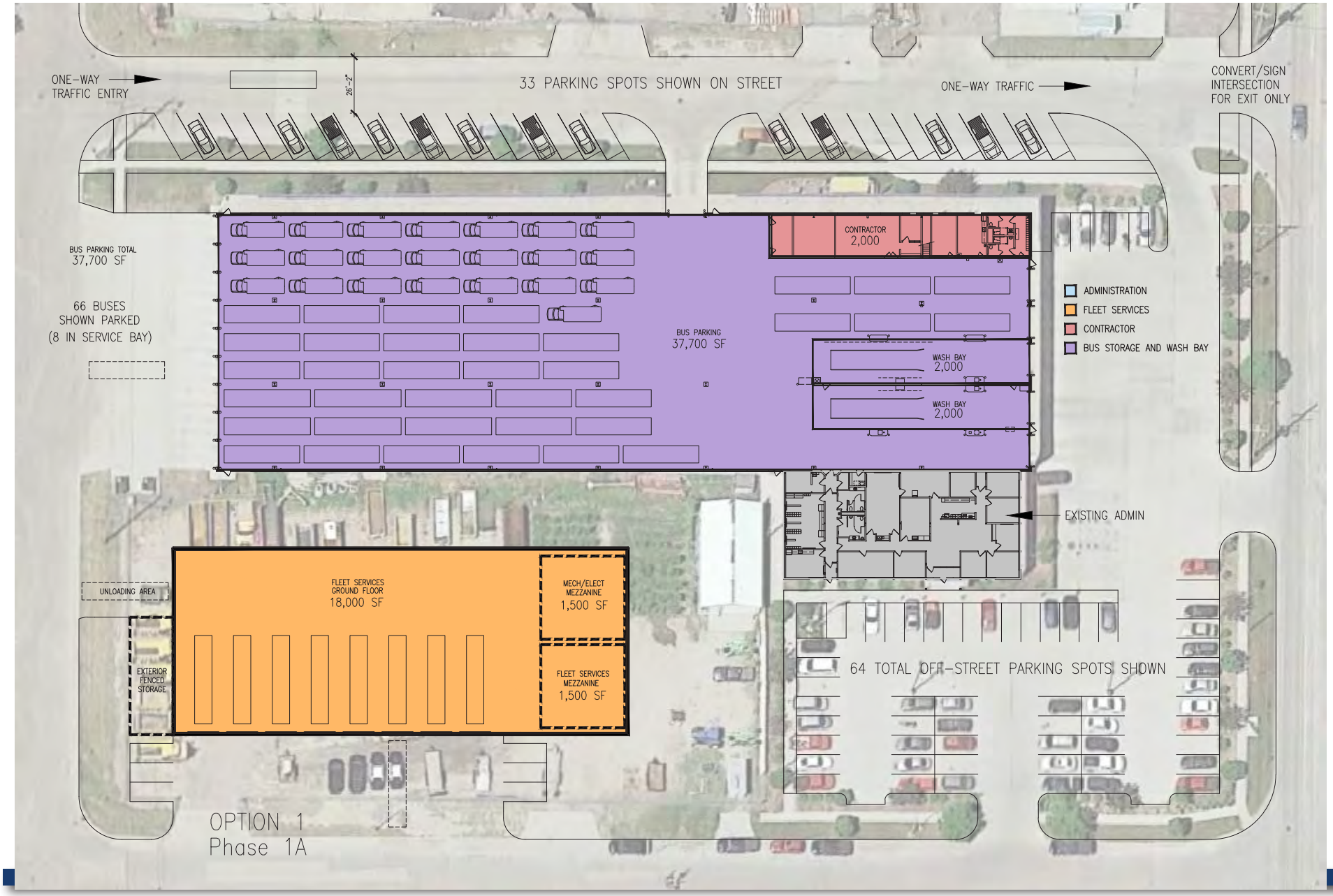
Table 22: Space Utilization by Functional Area at the MTG (Two-Phasing Plans)

Metro Transit Garage – Phased Implementation: Add Fleet Services 2022 and Full Expansion 2037

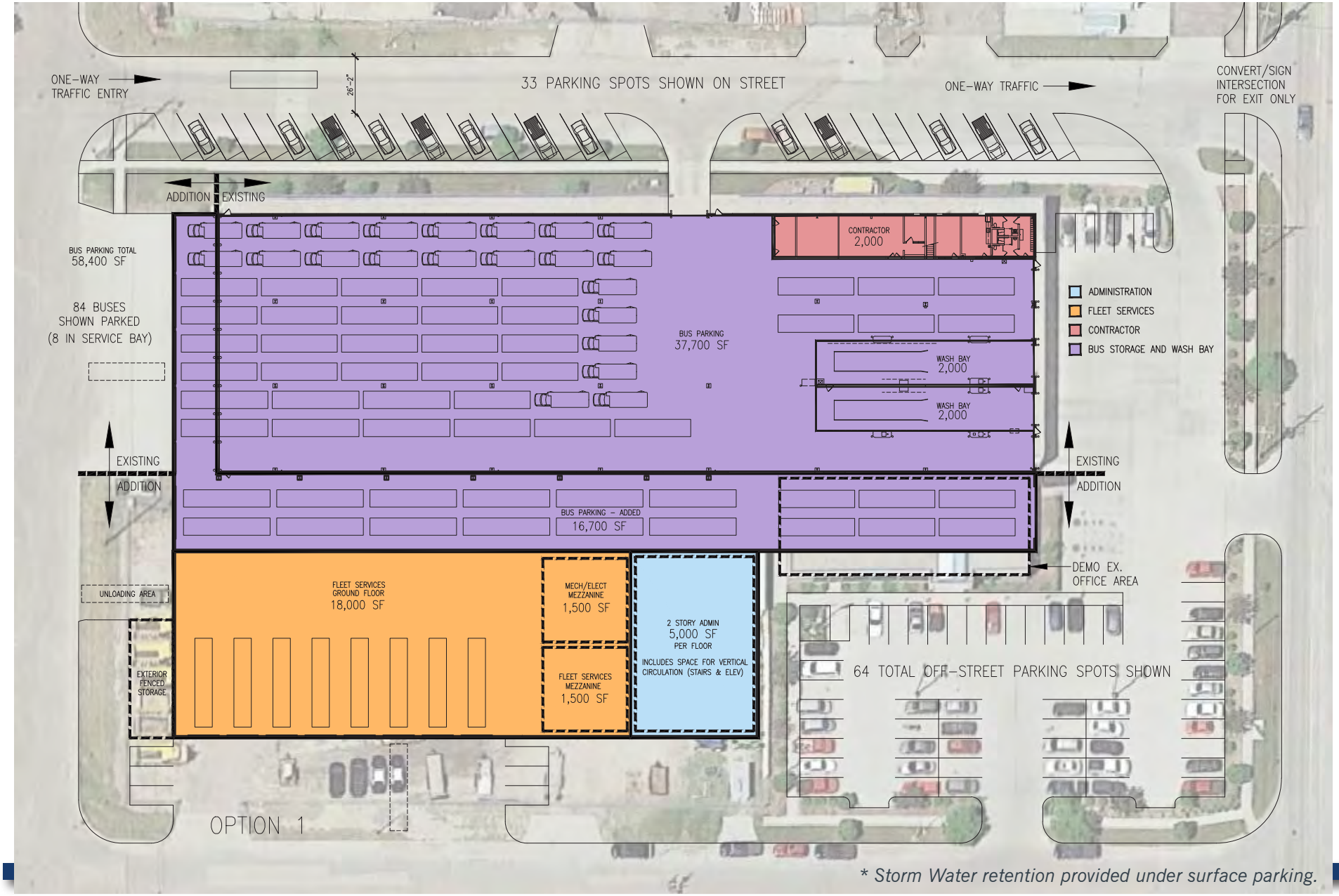
	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	84%	8,755	159%	8,755	88%
Contractor	1,400	100%	1,610	81%	1,820	91%	2,242	112%
Fleet Services	11,860	100%	17,000	89%	17,740	93%	19,220	100%
Storage + Wash	36,843	100%	41,963	101%	45,323	109%	52,163	101%
Parking	59	100%	97	82%	97	93%	97	113%

Metro Transit Garage – Phased Implementation: Add Fleet Services 2027 and Full Expansion 2037

	Base	%Utilized	2022	%Utilized	2027	%Utilized	2037	%Utilized
Administration	4,100	100%	4,635	113%	8,755	159%	8,755	88%
Contractor	1,400	100%	1,610	115%	1,820	91%	2,242	112%
Fleet Services	11,860	100%	17,000	143%	17,740	93%	19,220	100%
Storage + Wash	36,843	100%	41,963	101%	45,323	109%	52,163	101%
Parking	59	100%	59	136%	97	93%	97	113%


ONE–WAY
TRAFFIC ENTRY
26'-2"
33 PARKING SPOTS SHOWN ON STREET
ONE–WAY TRAFFIC
CONVERT/SIGN
INTERSECTION
FOR EXIT ONLY
BUS PARKING TOTAL
37,700 SF
66 BUSES
SHOWN PARKED
(8 IN SERVICE BAY)
BUS PARKING
37,700 SF
CONTRACTOR
2,000
WASH BAY
2,000
WASH BAY
2,000
ADMINISTRATION
FLEET SERVICES
CONTRACTOR
BUS STORAGE AND WASH BAY
EXISTING ADMIN
UNLOADING AREA
FLEET SERVICES
GROUND FLOOR
18,000 SF
MECH/ELECT
MEZZANINE
1,500 SF
FLEET SERVICES
MEZZANINE
1,500 SF
EXTERIOR
FENCED
STORAGE
64 TOTAL OFF–STREET PARKING SPOTS SHOWN
OPTION 1
Phase 1A

MTG Option 1 – Phase 2



** Storm Water retention provided under surface parking.*

Appendix A | 20-Year Operational Projections

Route	Medium (2022- 2027)	Long Range (2027+)	Hub Locations	Notes:	2017 Base	2026 Medium	2036 Long Range
1	NC	DH	GTC, M		1	1	2
2	NC	NC	GTC, M		2	2	2
3	NC	NC	M		1	1	1
4	NC	NC	GTC, W		2	2	2
5	NC	NC	M		1	1	1
6	NC	DH	W		0.5	0.5	1
9	NC	DH	W, M		0.5	0.5	1
Dilworth to Moorhead (Center Avenue Route) - ***New Route***	60 Min HW	NC	GTC, W		0	1	1
South of I-94 - ***New Route***	30 Min HW	NC	M		0	1	1
11	NC	DH	GTC		1	1	2
13	NC	NC	GTC		2	2	2
13U	NC	NC	GTC		2	2	2
14 (GTC to South Kmart)	DH	NC	GTC, WA		1	2	2
14 (Skmart to West Acres	DH	NC	GTC, WA		1	2	2
15	NC	NC	GTC, WA		4	4	4
16	DH	NC	GTC, WA		1	2	2
17	DH	NC	GTC		0.5	1	1
18	NC	DH	GTC		1.5	1.5	3
Link	Assume 2nd Route	NC	GTC		1	2	2
20	NC	DH	WA		1	2	2
24	DH	NC	WA		1	2	2
25 Southwest Metro - ***New Route***	60 Min HW	NC	WA		0	1	1
26 - Southwest Metro - ***New Route***	60 Min HW	NC	WA		0	1	1
				NDSU (15% Growth)	7	8	9
				All Other Fixed Route	25	36	40
				Total (Fixed Route) Peak	**32**	**44**	**49**
				Fleet (High Growth-100%)	42	60	77
				Spare	10	16	28
				% Spare Ratio	31.3%	37.8%	56.3%
				Fleet (Med.-High Growth-75%)	42	55	68
				Spare	10	11	19
				% Spare Ratio	31.3%	20.8%	27.6%
				Fleet (Medium Growth-50%)	42	53	63
				Spare	10	9	14
				% Spare Ratio	31.3%	17.8%	21.8%

HW = Headway

DH= Double Headway

NC = No Change (over previous service level)

Hubs

GTC - Ground Transportation Center

W - Moorhead Walmart

WA - West Acres

M - Marriott

Appendix B | Staff Projection Table

MATBUS Staffing Levels							
	2007	2012	2017	2022	2027	2037	Assumptions
Fargo & Moorhead Staff							
Director/Manager	2	2	2	2	1	1	Staffing level stays same through 2022, two directors + 1 asst. director. After 2022 merge to one director and two asst. directors (each with operational focus).
Asst. Director	0	0	1	1	2	2	
Fixed Route Planner	1	1	1	1	2	2	
Asst. Planner/Marketing (position added in 2014)	0	0	1	1	2	2	
Mobility Management	1	1	1	1	2	2	
Public Information	0	0	0	1	1	1	
Paratransit Dispatch	2	2	3	4	5	6	Grow by Demand Repsonse Revenue Miles Assumption
Office Associates	2	2	2	2	2	2	
Accountant	0	0	0.5	1	2	2	Estimate based on existing conditions per each city; revise once transit authority study is completed. Assume support staffing growth peaks between 2002 and 2027 to account organization transition; then roughly stabilizes.
Human Resources	x	x	x		2	2	
Legal Counsel	x	x	x		1	1	
Information Systems/Technology	x	x	x		2	2	
Subtotal Administrative Staff	**8**	**8**	**11.5**	**14**	**24**	**25**	
Fleet Services	**10**	**11**	**18**	**20**	**22**	**26**	
Fleet Manager	x	x	1				Ratio of Fleet/Staff (Base = 3.22 : 1) assume for growth projection. Specific number of staff by type not assumed.
Maintenance Attendant II	x	x	1				
Inventory Specialist	x	x	1				
Equipment Tech III	x	x	2				
Equipment Tech II	x	x	4				
Maintenance Attendant II	x	x	4				
Equipment Tech I	x	x	2				
Maintenance Attendant I (both .5 FTE)	x	x	2				
Technician Intern (.5 FTE)	x	x	1				
Total (MATBUS)	**18**	**19**	**29.5**	**34**	**46**	**51**	
Contractor							
General Manager	x	x	1	1	1	1	
Operations Manager	x	x	1	1	1	2	Ratio of Rev Miles/Staff (Base) used for future year projections.
Safety Supervisor	x	x	1	1	1	2	
Road Supervisor	x	x	2.5	3	3	3	
Accounting Clerk	x	x	1	1	1	1	
Fixed Route Dispatch	x	x	4.5	5	5	6	
Subtotal Contracted (less drivers)	**x**	**x**	**11**	**12**	**12**	**16**	
Drivers	x	x	86	94	102	118	Ratio of Rev Miles/Drivers
Total Contracted	x	x	97	106	114	134	
Total MATBUS + Contracted	**x**	**x**	**127**	**139**	**160**	**185**	

Appendix C | Boarding Data

Boarding Data

Boarding Data was gathered from September 25 through 30, 2017. All boardings were entered using the normal Farebox software. This data was passed on to KLJ already combined at the stop level. Additionally, codes for wheelchair and bike boardings were called out so these numbers could also be combined at the stop level. A limitation of the data is that farebox data could not necessarily be easily joined and compared with spatial General Transit Feed Specification (GTFS) data. Because of this limitation, in some instances data had to be manually entered for each stop. In these instances, stops with higher boardings were prioritized over low-boarding stops.

Shelter Boarding Data

Including GTC and the other hubs, there are 100 stops with shelters in the MATBUS system. However, of the top 100 stops for boardings during the given week, only 44 had a shelter of some kind. Some major stops with no shelter include NDSU's Barry Hall, 17th Avenue North and 12th Street North (across the street from University Village), the new Sanford Hospital, and one of two major stops at the Walmart in Dilworth. As is shown, some low-boarding stops currently have shelters in place. Table 1C shows all stops that averaged more than 20 boards per day during the study period. Figure 1C shows all stops' ridership. Table 2C shows additional boarding data for stops with 10 to 20 average daily boardings.

Table 1C: Stops with More Than 20 Average Boardings per Day

Stop Code	Stop Name	Average Boardings per Day	Existence of Shelter
4000	GTC#*	1263.8	Hub or Building
4500	Shelter 220 (NDSU Transit Hub) #*	702.7	Shelter
4038	2nd Ave N - NDSU R H Barry Hall (Main Entrance) *	468.2	No Shelter
4134	Shelter 240 (West Acres) #*	363.8	Hub or Building
4438	Shelter 252 (17th Ave N University Village)	329.0	Shelter
4046	Shelter 247 (Centennial & Albrecht Blvd) *	196.7	Shelter
4091	Shelter 256 (N University Dr. - Niskanen)	180.2	Shelter
4431	Albrecht Blvd & NDSU Minard Hall (Pullout East)	170.7	Shelter
4197	Shelter 270 (13th Ave Walmart) #*	169.7	Shelter
1014	28th Ave S & Marriott (Shelter 118) #*	152.7	Shelter
4436	17th Ave N & 12th St N (Corner SW)	105.7	No Shelter
4175	1st Ave N & 12th St N (Shelter 214 Corner NE) #*	97.5	Shelter
4414	Albrecht Blvd & NDSU Minard Hall (Pullout West)	86.3	Shelter
4597	Sanford Medical Center (23rd Ave S)*	85.0	No Shelter
4432	Albrecht Blvd & 14th Ave N (Shelter 251 Corner SE)	63.0	Shelter
4088	NP Ave N & NDSU Renaissance Hall (Pullout) *	58.5	Hub or Building
1108	Dilworth Walmart	55.2	No Shelter
4074	Shelter 217 (Sanford Health Athletic Complex)	53.2	Shelter
4426	Shelter 230 (17th Ave N & Albrecht Blvd - Fargodome Transit Hub)	47.8	Shelter
4449	Dakota Dr & 18th St N (Corner NE)	47.3	No Shelter
4204	Shelter 202 (13th Ave Bell State Bank) #	42.3	Shelter
4105	Shelter 210 (University Dr. K-Mart)	40.0	Shelter
4433	Albrecht Blvd & 14th/15th Ave N (Midblock East)	37.8	No Shelter
4021	Shelter 271 (N. Broadway Gate City Bank)	37.3	Shelter
1046	14th St S & 9th/6th Ave S (Shelter 128 MSUM) *	36.3	Shelter

**=Top 20 Wheelchair Stop*
#=Top 10 Bike Stop
1000 Stop Codes are Moorhead/Dilworth
4000 Stop Codes are Fargo/West Fargo

Table 1C: Stops with More Than 20 Average Boardings per Day (continued)

Stop Code	Stop Name	Average Boardings per Day	Existence of Shelter
4188	13th Ave S & Page Dr (Corner NE) #	35.7	No Shelter
4184	13th Ave S & 21st St S (Corner NE)	31.2	No Shelter
4075	Shelter 225 (University Dr. & 15th Ave N - Bison Court)	29.2	Shelter
4450	Shelter 269 (18th St N 11th Ave N)	26.2	Shelter
4457	University Dr N & Stop and Go Center (Main Entrance)	26.0	No Shelter
1092	11th St N & 8th Ave N (Clay County Courthouse)	25.7	Shelter
4172	1st Ave N & Broadway N (Corner NE)	25.7	No Shelter
1098	1st Ave N & 18/20th St N (Churches United for the Homeless) #	25.5	Shelter
1064	Hwy 10 Frontage Rd & Midblock by Moorhead Target (Shelter 109 SE) *	25.3	Shelter
4591	32nd Ave N & 10th St N (U32 Apartment Complex)	24.7	No Shelter
4171	Shelter 241 (Cass County Courthouse)	24.5	Shelter
4076	Shelter 205 (Centennial Blvd)	24.0	Shelter
4122	32nd St S & 32nd Ave S (Corner SE)	23.3	No Shelter
1109	8th Ave N & near 34th St - Dilworth (Shelter 108 - Walmart Parking Lot Stop Sign) #*	22.7	Shelter
4179	University Dr S & 8th Ave S (Shelter 211 Corner NW)	21.5	Shelter
1063	Parking Lot Moorhead Cash Wise (Stop Sign)	20.8	Shelter
4169	Shelter 263 (St. Anthony of Padua)	20.8	Shelter

**=Top 20 Wheelchair Stop*
#=Top 10 Bike Stop
1000 Stop Codes are Moorhead/Dilworth
4000 Stop Codes are Fargo/West Fargo

Figure 1C – Boarding Locations with Top Bike and Wheelchair Stops

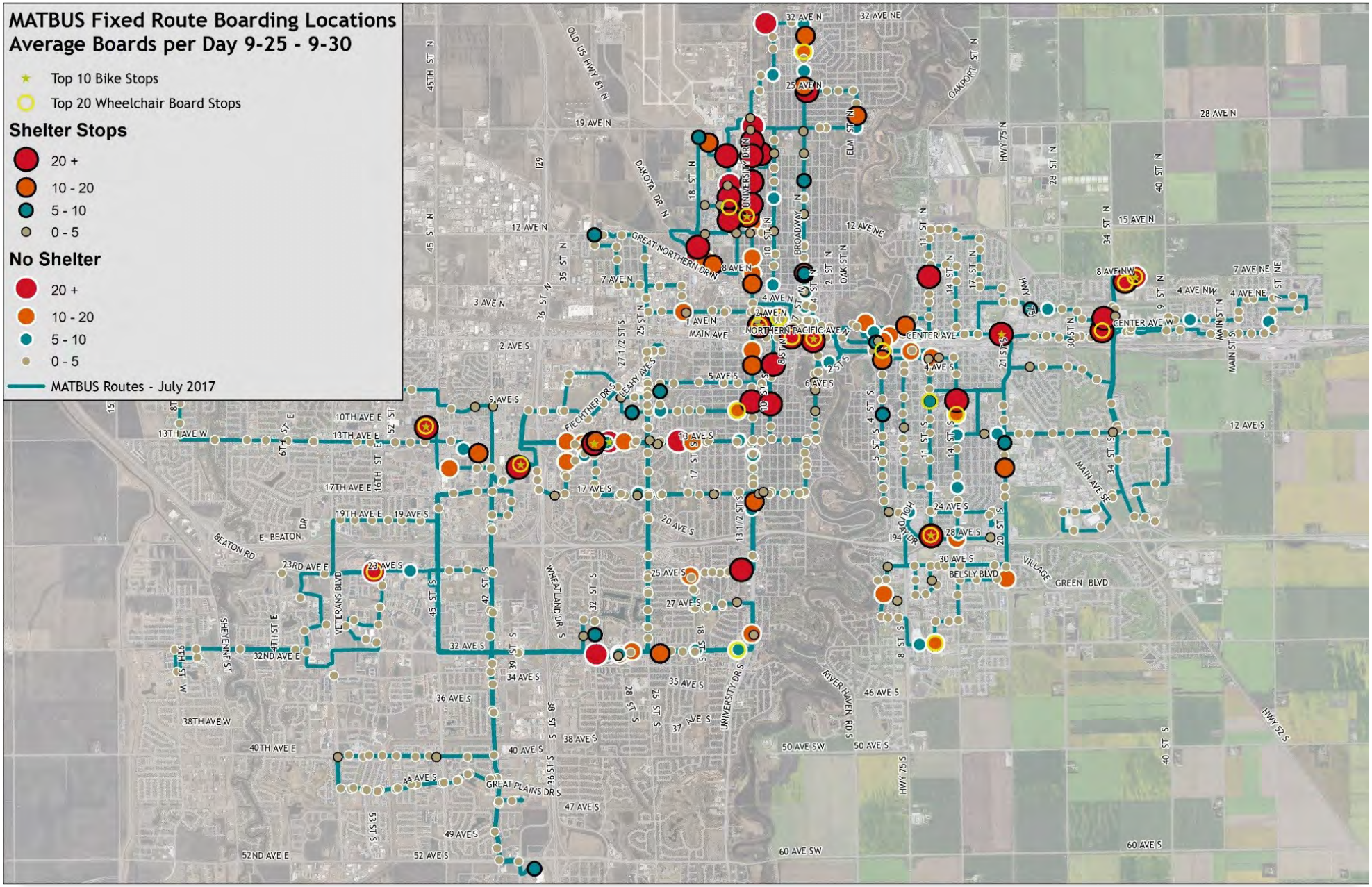


Table 2C: Stops with 10 to 20 Average Daily Boardings

Stop Code	Stop Name	Average Boardings per Day	Existence of Shelter
4191	13th Ave S & Fiechtner Dr (Corner NE)	19.5	No Shelter
1052	Main Ave & 5th St S (Corner NE) *	18.8	No Shelter
4199	15th Ave S & 44th St S (Corner SW)	18.7	No Shelter
4312	3rd Ave N & 20th St N (Corner NE)	18.3	No Shelter
4148	Shelter 236 (32nd Ave & 25th St - Southpointe)	18.0	Shelter
1135	28th Ave S & 14th St S (T inters. SW - Route 5 Only) *	17.8	No Shelter
4448	Dakota Dr & 17th St N (Corner NE)	17.3	No Shelter
4048	University Dr N & Administration Ave (Corner NW)	17.3	No Shelter
4440	Albrecht Blvd & 17th Ave N (Corner SW)	16.7	No Shelter
4063	Broadway N & 30th Ave N (Corner SE) *	16.7	No Shelter
4083	Shelter 226 (N. University Family Fare)	16.7	Shelter
4016	Shelter 209 (VA Hospital)	15.8	Shelter
4203	13th Ave S & 33rd St S (Corner SW)	15.7	No Shelter
4146	28th St S & 32nd Ave S (Corner SE)	15.7	No Shelter
1163	Rivershore Dr & 34th Ave S (Corner SE)	15.7	No Shelter
4283	34th St S & Cash Wise Driveway (13th Ave CashWise Corner SE)	15.3	No Shelter
1150	11th St S & 40th Ave S (Corner NW) *	15.0	No Shelter
4447	Shelter 258 (Dakota Dr & 16th St)	15.0	Shelter
4082	University Dr N & 8th Ave N (Corner NW)	15.0	No Shelter
4456	Skills and Tech Rd & Skills and Technology (NDSCS Main Entrance)	14.7	No Shelter
4490	Link FM #01 & Moorhead Center Mall (East Side)	14.3	No Shelter
4176	University Dr S & 1st Ave S (Corner NW)	13.3	No Shelter
1050	2nd Ave S & 11th St S (Corner NE)	13.2	No Shelter
4424	Shelter 276 (NDSU Research Park)	13.0	Shelter
4193	Shelter 259 (13th Ave Target)	12.7	Shelter
4208	13th Ave S & 18th St S (Corner SW)	12.5	No Shelter

**=Top 20 Wheelchair Stop*

1000 Stop Codes are Moorhead/Dilworth 4000 Stop Codes are Fargo/West Fargo

Table 2C: Stops with 10 to 20 Average Daily Boardings (Continued)

Stop Code	Stop Name	Average Boardings per Day	Existence of Shelter
1027	5th St S & 2nd Ave S (Shelter 122 Corner SE)	12.5	Shelter
4115	University Dr S & 30th Ave S (Corner NW)	12.5	No Shelter
4151	32nd Ave S & Hornbacher's Driveway (32nd Ave & University Dr Corner SW)	12.3	No Shelter
4439	17th Ave N & University Dr N (Corner NE)	11.8	No Shelter
1145	20th St S & Belsly Blvd (Corner NW)	11.8	No Shelter
4491	Link FM #02 & Moorhead Center Mall (South Side)	11.8	No Shelter
1130	2nd Ave N & 8th St N (Shelter 103 Corner NE)	11.8	Shelter
4435	Albrecht Blvd & 17th Ave N (Corner SE)	11.7	No Shelter
4429	Albrecht Blvd & 14th Ave N (T Intersection West)	11.3	No Shelter
4446	Dakota Dr & 15th St N (Corner NE)	11.3	No Shelter
4120	32nd Ave S & 27th St S (Corner NE)	11.2	No Shelter
1045	14th St S & 9th Ave S (Corner SE) *	11.0	No Shelter
1029	Main Ave & 9th St S (Corner SW)	11.0	No Shelter
4189	Shelter 201 (13th Ave Wendy's)	10.8	Shelter
4177	Shelter 237 (University Dr. Bethany Homes)	10.8	Shelter
4163	Shelter 238 (S. University Dr. Sanford Hospital)	10.8	Shelter
4081	University Dr N & 10th Ave N (Corner NW)	10.8	No Shelter
1133	100 3rd St N (Park View Entrance Moorhead)	10.7	No Shelter
4109	25th Ave S & 18th St S (Corner NE)	10.7	No Shelter
4005	Shelter 223 (N. Broadway Sanford Health)	10.7	Shelter
4060	Shelter 229 (Northport Hornbacher's)	10.7	Shelter
4064	Shelter 218 (N. Broadway First International Bank)	10.7	Shelter
1075	20th St S & 16th/18th Ave S (Shelter 110 Midblock West)	10.5	Shelter
4464	Dakota Creek Lofts & Dakota Dr (Midblock South)	10.5	No Shelter
4427	Albrecht Blvd & 15th Ave N (Corner NW)	10.2	No Shelter
1081	Center Ave & 4th & 5th St (Shelter 102 Midblock)	10.0	Shelter

**=Top 20 Wheelchair Stop*

1000 Stop Codes are Moorhead/Dilworth 4000 Stop Codes are Fargo/West Fargo

Top Bike Board Stops

Locations of the top 10 stops for bike boardings were extracted from the earlier referenced boarding sample provided by MATBUS. There was a sharp drop-off in bike boardings with the GTC having a high of 34.3 per day down to 1.3 for the week at 1st Avenue North and 18th/20th Street North (Shelter 105). Bike Boardings can be seen in Table 3C. For this study, Fargo's Great Rides bike share system was not analyzed as a part of bike ridership to/from transit facilities. Bike share users were not counted as bike boardings. Locations of the top 10 bike stops can be seen in Figure 1C.

Table 3C: Top Bike Boardings Stops

Stop Code	Stop Name	Bike Daily Average	Existence of Shelter
4000	GTC	34.3	Shelter
4134	Shelter 240 (West Acres)	10.5	No Shelter
4197	Shelter 270 (13th Ave Walmart)	4.2	No Shelter
1014	28th Ave S & Marriott (Shelter 118)	3.2	No Shelter
4175	1st Ave N & 12th St N (Shelter 214 Corner NE)	2.7	Shelter
4204	Shelter 202 (13th Ave Bell State Bank)	2.5	Shelter
4500	Shelter 220 (NDSU Transit Hub)	1.8	Shelter
1109	8th Ave N & near 34th St - Dilworth (Shelter 108 - Walmart Parking Lot Stop Sign)	1.5	Shelter
4188	13th Ave S & Page Dr (Corner NE)	1.5	No Shelter
1098	1st Ave N & 18/20th St N (Shelter 105 Midblock)	1.3	No Shelter

1000 Stop Codes are Moorhead/Dilworth
4000 Stop Codes are Fargo/West Fargo

Top Wheelchair Stops

Locations of the top 20 stops for wheelchair boardings were extracted from the earlier referenced boarding sample provided by MATBUS. Wheelchair boardings are more spread throughout the system compared to bike boardings with many stops having at least one daily average wheelchair boardings. Table 4C shows stops with more than five average wheelchair boardings per day. Many, though not all, top wheelchair stops have a shelter. One notable exception is NDSU's Barry Hall. Top Wheelchair stops can be seen in Figure 1C.

Table 4C: Top Wheelchair Boardings Stops

Stop Code	Stop Name	Wheelchair Daily Average
4000	GTC	378.3
4134	Shelter 240 (West Acres)	70.3
1014	28th Ave S & Marriott (Shelter 118)	31.7
1046	14th St S & 9th/6th Ave S (Shelter 128 Midblock East)	25.0
4175	1st Ave N & 12th St N (Shelter 214 Corner NE)	22.7
4500	Shelter 220 (NDSU Transit Hub)	22.5
4197	Shelter 270 (13th Ave Walmart)	18.7
4597	Sanford Medical Center (23rd Ave S)	16.7
1108	8th Ave N & near 36th St - Dilworth (Corner SW)	10.7
1135	28th Ave S & 14th St S (T inters. SW - Route 5 Only)	10.5
4063	Broadway N & 30th Ave N (Corner SE)	8.7
4046	Shelter 247 (Centennial & Albrecht Blvd)	8.5
1033	11th St S & 7th/9th Ave S (Shelter 127 Midblock West)	7.5
1150	11th St S & 40th Ave S (Corner NW)	7.2
1064	Hwy 10 Frontage Rd & Midblock by Moorhead Target (Shelter 109 SE)	7.0
1052	Main Ave & 5th St S (Corner NE)	7.0
4038	2nd Ave N - NDSU R H Barry Hall (Main Entrance)	6.7
1109	8th Ave N & near 34th St - Dilworth (Shelter 108 - Walmart Parking Lot Stop Sign)	6.7
1045	14th St S & 9th Ave S (Corner SE)	5.5
4088	NP Ave N & NDSU Renaissance Hall (Pullout)	5.2

1000 Stop Codes are Moorhead/Dilworth
4000 Stop Codes are Fargo/West Fargo

11/2/2018

West Acres MATBUS Station
Site 2A - 10 Bus
Preliminary Cost Estimate

Estimated Quantities					
No	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 40,000.00	$ 40,000.00
2	Erosion Control	LS	1	$ 2,500.00	$ 2,500.00
3	Remove Asphalt Pavement	SY	2,974	$ 10.00	$ 29,740.00
4	Remove Curb & Gutter	LF	160	$ 15.00	$ 2,400.00
5	Remove Pavement Markings	LS	1	$ 1,000.00	$ 1,000.00
6	Connect to Existing Watermain	EA	1	$ 1,000.00	$ 1,000.00
7	4" PVC C900	LF	22	$ 30.00	$ 660.00
8	4" Gate Valve	EA	1	$ 1,200.00	$ 1,200.00
9	6" PVC C900	LF	357	$ 32.00	$ 11,424.00
10	6" Gate Valve	EA	2	$ 1,500.00	$ 3,000.00
11	Hydrant	EA	1	$ 4,000.00	$ 4,000.00
12	Connect to Existing Sanitary Sewer	EA	1	$ 1,000.00	$ 1,000.00
13	4" PVC SDR35	LF	158	$ 35.00	$ 5,530.00
14	4" Cleanout	EA	1	$ 1,000.00	$ 1,000.00
15	48" Sanitary Sewer Manhole	EA	1	$ 4,000.00	$ 4,000.00
16	Connect to Existing Storm Sewer	EA	1	$ 1,000.00	$ 1,000.00
17	12" Storm Sewer	LF	223	$ 40.00	$ 8,920.00
18	36" Storm Sewer	LF	500	$ 95.00	$ 47,500.00
19	48" Storm Sewer Manhole	EA	1	$ 3,000.00	$ 3,000.00
20	Hydrodynamic Separator	EA	1	$ 15,000.00	$ 15,000.00
21	Subgrade Prep	SY	4,078	$ 4.00	$ 16,312.00
22	Geofabric	SY	4,078	$ 3.00	$ 12,234.00
23	Class 5 Aggregate Subbase	CY	779	$ 40.00	$ 31,153.33
24	Asphalt Pavement	TON	1,359	$ 75.00	$ 101,950.00
25	Curb & Gutter	LF	1,131	$ 22.00	$ 24,882.00
26	Thickened Edge Sidewalk	SY	388	$ 60.00	$ 23,280.00
27	Pavement Marking	LS	1	$ 2,000.00	$ 2,000.00
28	Seeding	SY	3,972	$ 1.00	$ 3,972.00
29	Mulch	SY	3,972	$ 0.50	$ 1,986.00
30	Landscape Plantings	LS	1	$ 7,800.00	$ 7,800.00
31	Covered Walkway	LF	320	$ 380.00	$ 121,600.00
			Estimated Construction Total		$ 531,043.33
			Contingency	20%	$ 106,208.67
			Estimated Total		**$ 637,252.00**

Comments:

1. 10 bus option encroaches on property lines
2. Assumes underground detention for stormwater
3. If a 6 bus layout is selected, reduce total by $43,175.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost. The Client assumes all liability if using this Probable Construction Cost for determining project feasibility or securing project funding/financing.

11/2/2018

West Acres MATBUS Station
Site 2C - 10 Bus
Preliminary Cost Estimate

Estimated Quantities					
No	**Description**	**Unit**	**Quantity**	**Unit Price**	**Total**
1	Mobilization	LS	1	$ 65,000.00	$ 65,000.00
2	Erosion Control	LS	1	$ 2,500.00	$ 2,500.00
3	Remove Asphalt Pavement	SY	2,974	$ 10.00	$ 29,740.00
4	Remove Curb & Gutter	LF	160	$ 15.00	$ 2,400.00
5	Remove Pavement Markings	LS	1	$ 1,000.00	$ 1,000.00
6	Connect to Existing Watermain	EA	1	$ 1,000.00	$ 1,000.00
7	4" PVC C900	LF	48	$ 30.00	$ 1,440.00
8	4" Gate Valve	EA	1	$ 1,200.00	$ 1,200.00
9	6" PVC C900	LF	364	$ 32.00	$ 11,648.00
10	6" Gate Valve	EA	2	$ 1,500.00	$ 3,000.00
11	Hydrant	EA	1	$ 4,000.00	$ 4,000.00
12	Connect to Existing Sanitary Sewer	EA	1	$ 1,000.00	$ 1,000.00
13	4" PVC SDR35	LF	113	$ 35.00	$ 3,955.00
14	4" Cleanout	EA	1	$ 1,000.00	$ 1,000.00
15	Connect to Existing Storm Sewer	EA	1	$ 1,000.00	$ 1,000.00
16	12" Storm Sewer	LF	222	$ 40.00	$ 8,880.00
17	48" Storm Sewer	LF	750	$ 95.00	$ 71,250.00
18	Hydrodynamic Separator	EA	1	$ 15,000.00	$ 15,000.00
19	Subgrade Prep	SY	8,170	$ 4.00	$ 32,680.00
20	Geofabric	SY	8,170	$ 3.00	$ 24,510.00
21	Class 5 Aggregate Subbase	CY	1,595	$ 40.00	$ 63,806.67
22	Asphalt Pavement	TON	2,723	$ 75.00	$ 204,250.00
23	Curb & Gutter	LF	1,626	$ 22.00	$ 35,772.00
24	Thickened Edge Sidewalk	SY	1,194	$ 60.00	$ 71,640.00
25	Pavement Marking	LS	1	$ 2,700.00	$ 2,700.00
26	Seeding	SY	5,678	$ 1.00	$ 5,678.00
27	Mulch	SY	5,678	$ 0.50	$ 2,839.00
28	Landscape Plantings	LS	1	$ 6,500.00	$ 6,500.00
29	Covered Walkway	LF	320	$ 380.00	$ 121,600.00
			Estimated Construction Total		$ 796,988.67
			Contingency	20%	$ 159,397.73
			Estimated Total		**$ 956,386.40**

Comments:

1. 10 bus option encroaches on property lines
2. Assumes underground detention for stormwater
3. If a 6 bus layout is selected, reduce total by $82,491.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost. The Client assumes all liability if using this Probable Construction Cost for determining project feasibility or securing project funding/financing.

11/2/2018

West Acres MATBUS Station
Site 3 - 9 Bus
Preliminary Cost Estimate

Estimated Quantities					
No	**Description**	**Unit**	**Quantity**	**Unit Price**	**Total**
1	Mobilization	LS	1	$ 45,000.00	$ 45,000.00
2	Erosion Control	LS	1	$ 1,000.00	$ 1,000.00
3	Remove Asphalt Pavement	SY	2,480	$ 10.00	$ 24,800.00
4	Remove Curb & Gutter	LF	1,457	$ 15.00	$ 21,855.00
5	Remove Concrete Sidewalk	SY	80	$ 15.00	$ 1,200.00
6	Remove Pavement Markings	LS	1	$ 1,500.00	$ 1,500.00
7	Connect to Existing Watermain	EA	1	$ 1,000.00	$ 1,000.00
8	4" PVC C900	LF	68	$ 30.00	$ 2,040.00
9	4" Gate Valve	EA	1	$ 1,200.00	$ 1,200.00
10	Connect to Existing Sanitary Sewer	EA	1	$ 1,000.00	$ 1,000.00
11	4" PVC SDR35	LF	77	$ 35.00	$ 2,695.00
12	4" Cleanout	EA	1	$ 1,000.00	$ 1,000.00
13	48" Manhole	EA	1	$ 4,000.00	$ 4,000.00
14	Connect to Existing Storm Sewer	EA	1	$ 1,000.00	$ 1,000.00
15	12" Storm Sewer	LF	10	$ 40.00	$ 400.00
16	36" Storm Sewer	LF	500	$ 95.00	$ 47,500.00
17	Hydrodynamic Separator	EA	1	$ 15,000.00	$ 15,000.00
18	Subgrade Prep	SY	1,480	$ 4.00	$ 5,920.00
19	Geofabric	SY	1,480	$ 3.00	$ 4,440.00
20	Class 5 Aggregate Subbase	SY	405	$ 7.00	$ 2,835.00
21	Asphalt Pavement	TON	493	$ 75.00	$ 37,000.00
22	Curb & Gutter	LF	799	$ 22.00	$ 17,578.00
23	Thickened Edge Sidewalk	SY	770	$ 60.00	$ 46,200.00
24	Reinforced Concrete Sidewalk	SY	180	$ 60.00	$ 10,800.00
25	Pavement Marking	LS	1	$ 1,500.00	$ 1,500.00
26	Seeding	SY	1,547	$ 1.00	$ 1,547.00
27	Mulch	SY	1,547	$ 0.50	$ 773.50
28	Landscape Plantings	LS	1	$ 10,500.00	$ 10,500.00
29	Covered Walkway	LF	280	$ 380.00	$ 106,400.00
30	Import Topsoil (6" Assumed)	CY	70	$ 15.00	$ 1,050.00
			Estimated Construction Total		$ 418,733.50
			Contingency	20%	$ 83,746.70
			Estimated Total		**$ 502,480.20**

Comments:

1. Assumes no impacts to existing driveways
2. Assumes underground detention for stormwater
3. If a 6 bus layout is selected, reduce total by $31,645.

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10/8/2018

West Acres MATBUS Station
Bus Route Improvements- Option 2
Preliminary Cost Estimate

Estimated Quantities					
No	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 65,000.00	$ 65,000.00
2	Remove Concrete Pavement	SY	258	$ 10.00	$ 2,580.00
3	Remove Asphalt Pavement	SY	11,432	$ 10.00	$ 114,320.00
4	Salvage & Replace Ex. Cl5 Aggregate (4" Assumed)	CY	1,299	$ 5.00	$ 6,494.44
5	Export Soils (7" Assumed)	CY	2,223	$ 15.00	$ 33,346.25
6	Class 5 Aggregate (4")	TON	2,435	$ 25.00	$ 60,885.42
7	Separation Fabric	SY	11,690	$ 3.00	$ 35,070.00
8	Asphalt Pavement (9")	TON	5,845	$ 75.00	$ 438,375.00
9	Pavement Marking	LS	1	$ 1,500.00	$ 1,500.00
			Estimated Construction Total		$ 757,571.11
			Contingency	20%	$ 151,514.22
			Estimated Total		**$ 909,085.33**

Comments:

1. Assumed existing pavement section is 6" asphalt over 6" class 5 aggregate. Final pavement section 9" asphalt over 8" class 5 (per Fargo details)

If Concrete pavement (8" concrete over 8" class 5 aggregate) add - $495,000

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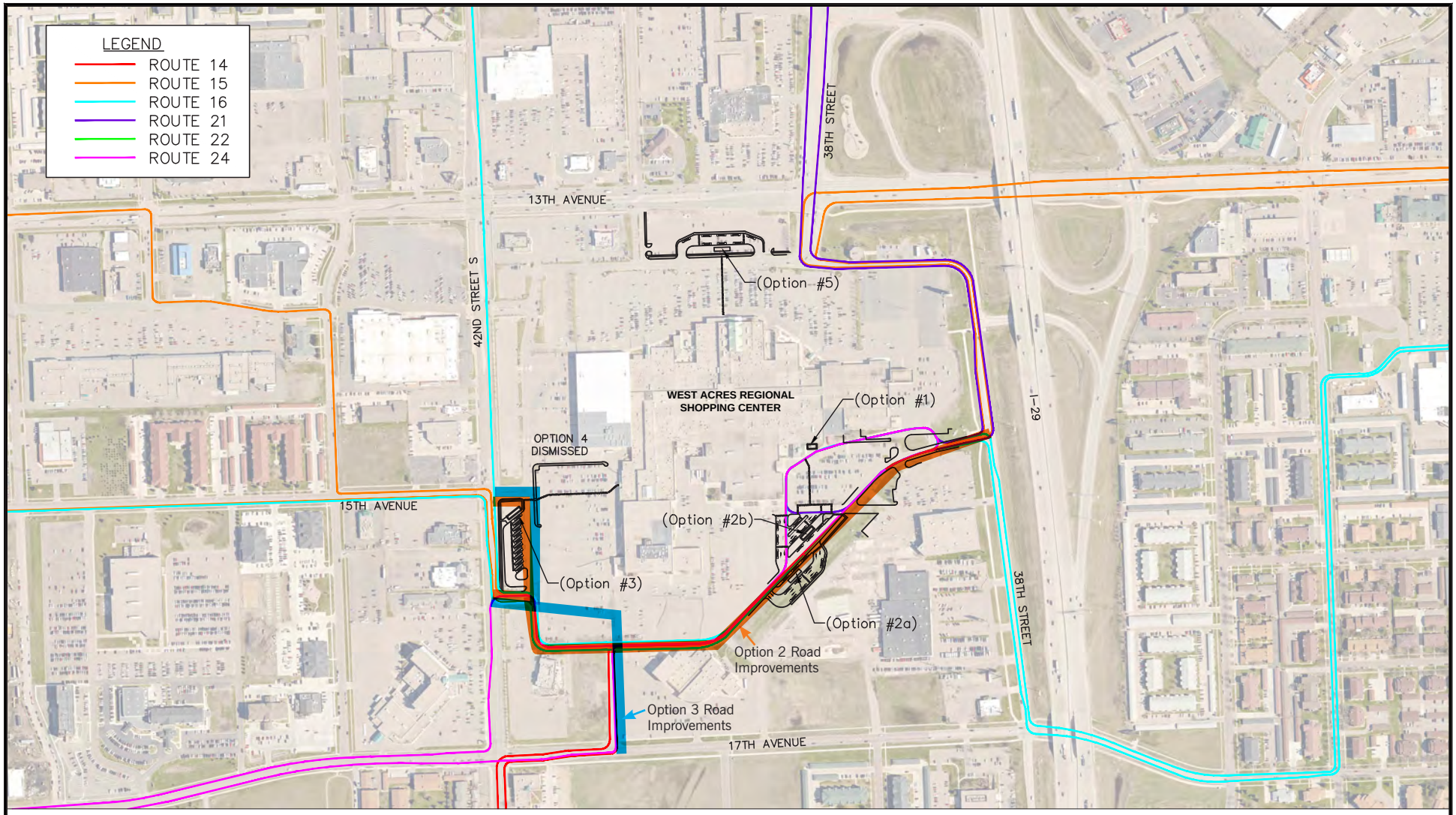

Fargo MATBUS – West Acres Mall Station
Access Road Improvement Assumptions

10/8/2018

West Acres MATBUS Station
Bus Route Improvements- Option 3
Preliminary Cost Estimate

Estimated Quantities					
No	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 45,000.00	$ 45,000.00
2	Remove Asphalt Pavement	SY	7,577	$ 10.00	$ 75,770.00
3	Salvage & Replace Ex. Cl5 Aggregate (4" Assumed)	CY	842	$ 5.00	$ 4,209.44
4	Export Soils (7" Assumed)	CY	1,473	$ 15.00	$ 22,099.58
5	Class 5 Aggregate (4")	TON	1,579	$ 25.00	$ 39,463.54
6	Separation Fabric	SY	7,577	$ 3.00	$ 22,731.00
7	Asphalt Pavement (9")	TON	3,789	$ 75.00	$ 284,137.50
8	Pavement Marking	LS	1	$ 1,300.00	$ 1,300.00
				Estimated Construction Total	$ 494,711.07
				Contingency 20%	$ 98,942.21
				Estimated Total	**$ 593,653.28**

Comments:
1. Assumed existing pavement section is 6" asphalt over 6" class 5 aggregate. Final pavement section 9" asphalt over 8" class 5 (per Fargo details)

If Concrete pavement (8" concrete over 8" class 5 aggregate) add - $320,000

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost. The Client assumes all liability if using this Probable Construction Cost for determining project feasibility or securing project funding/financing.

11/6/2018

MSUM MATBUS Station
Concept 1
Preliminary Cost Estimate

Estimated Quantities					
No	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 25,000.00	$ 25,000.00
2	Erosion Control	LS	1	$ 2,500.00	$ 2,500.00
3	Remove Curb & Gutter	LF	85	$ 15.00	$ 1,275.00
4	Salvage Field Goal Post	EA	1	$ 1,500.00	$ 1,500.00
5	Remove Trees	EA	3	$ 500.00	$ 1,500.00
6	Subgrade Prep	SY	1,998	$ 4.00	$ 7,992.00
7	Geofabric	SY	1,998	$ 3.00	$ 5,994.00
8	Class 5 Aggregate Subbase	CY	444	$ 40.00	$ 17,760.00
9	Asphalt Pavement	TON	999	$ 75.00	$ 74,925.00
10	Curb & Gutter	LF	1,170	$ 22.00	$ 25,740.00
11	Sidewalk	SY	817	$ 60.00	$ 49,020.00
12	Seeding	SY	1,460	$ 1.00	$ 1,459.89
13	Mulch	SY	1,460	$ 0.50	$ 729.94
14	Stormwater Pond Expansion, Piping & Restoration	LS	1	$ 20,000.00	$ 20,000.00
15	Pavement Markings	LS	1	$ 5,000.00	$ 5,000.00
			Estimated Construction Total		$ 215,395.83
			Contingency	20%	$ 43,079.17
			Estimated Total		**$ 258,475.00**

Comments:

1. Assumes existing lighting is to remain in place.
2. Assumes adjacent stormwater pond can be expanded to account for the project.
1. Final pavement section 9" asphalt over 8" class 5

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11/6/2018

Dilworth Walmart MATBUS Station
Concept 1
Preliminary Cost Estimate

Estimated Quantities					
No	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 15,000.00	$ 15,000.00
2	Erosion Control	LS	1	$ 2,500.00	$ 2,500.00
3	Remove Bus Shelter	EA	1	$ 1,500.00	$ 1,500.00
4	Remove Asphalt Pavement	SY	444	$ 10.00	$ 4,440.00
5	Remove Curb & Gutter	LF	450	$ 15.00	$ 6,750.00
6	Relocate Trees	EA	5	$ 500.00	$ 2,500.00
7	Relocate Inlet	EA	1	$ 4,000.00	$ 4,000.00
8	Relocate Light Pole	EA	1	$ 2,500.00	$ 2,500.00
9	Subgrade Prep	SY	335	$ 4.00	$ 1,340.00
10	Geofabric	SY	335	$ 3.00	$ 1,005.00
11	Class 5 Aggregate Subbase	CY	74	$ 40.00	$ 2,960.00
12	Asphalt Pavement	TON	168	$ 75.00	$ 12,600.00
13	Curb & Gutter	LF	415	$ 22.00	$ 9,130.00
14	Sidewalk	SY	160	$ 60.00	$ 9,600.00
15	Seeding	SY	446	$ 1.00	$ 446.00
16	Mulch	SY	446	$ 0.50	$ 223.00
				Estimated Construction Total	$ 76,494.00
				Contingency 20%	$ 15,298.80
				Estimated Total	**$ 91,792.80**

Comments:

1. Assumes stormwater detention is already accounted for.
2. Final pavement section 9" asphalt over 8" class 5

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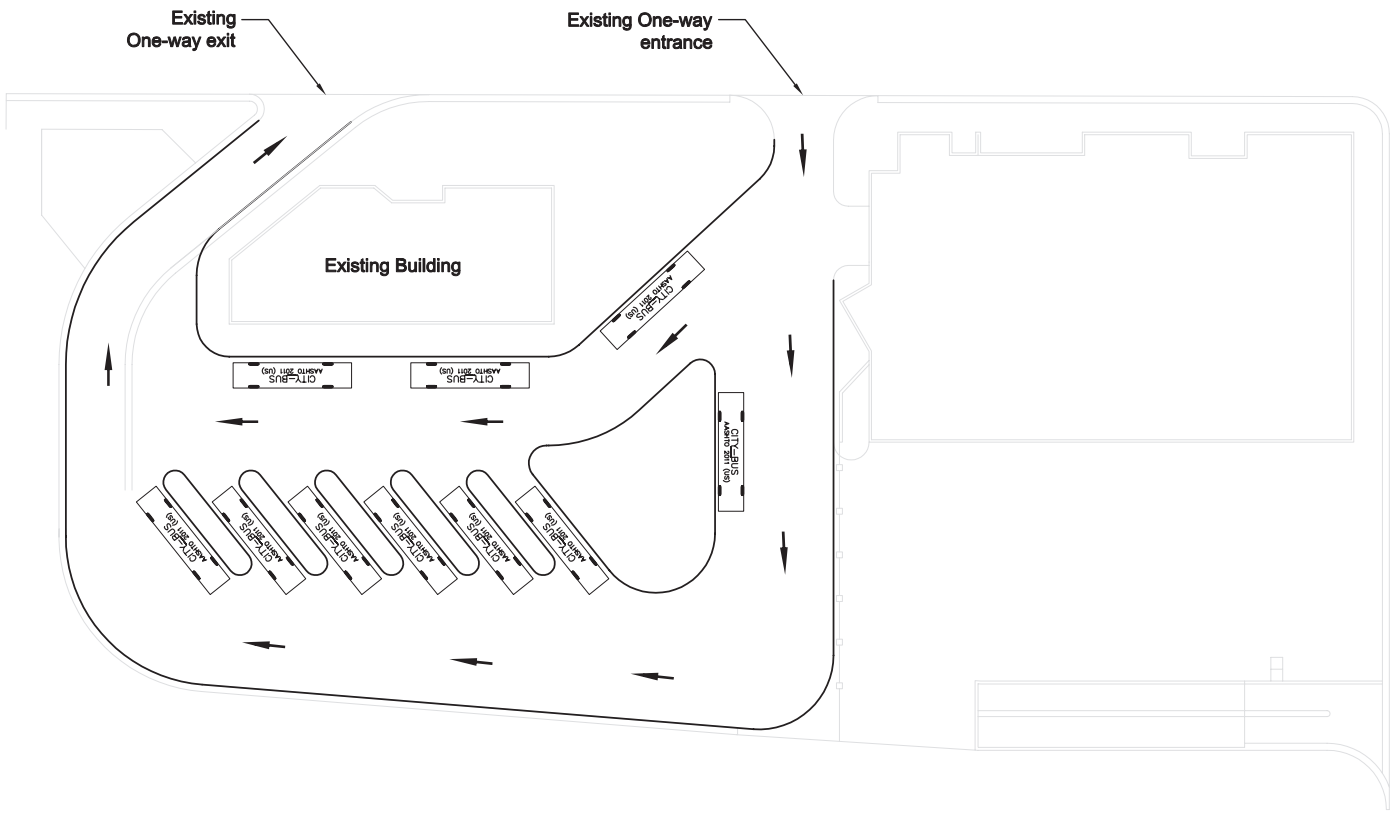
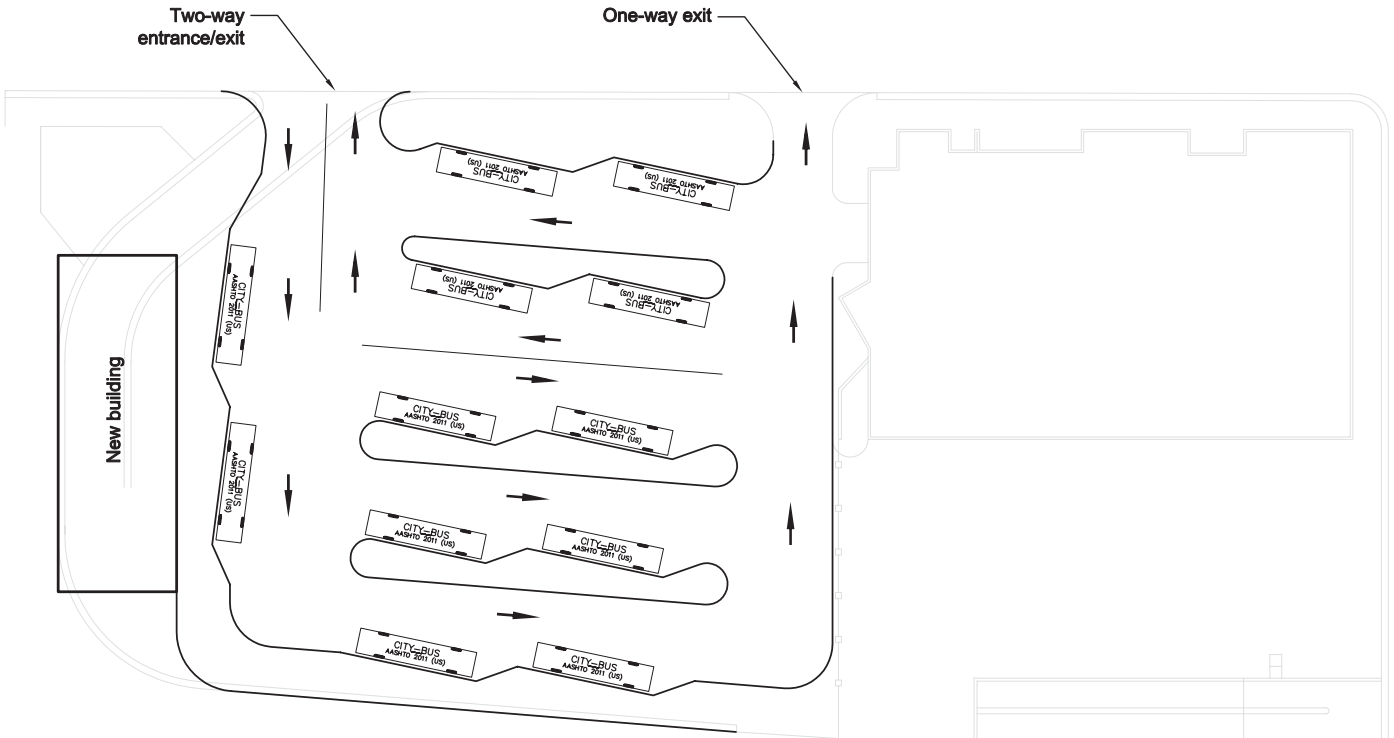


Fargo MATBUS Ground Transportation Center
Concept 1
(10 Buses)

NORTH

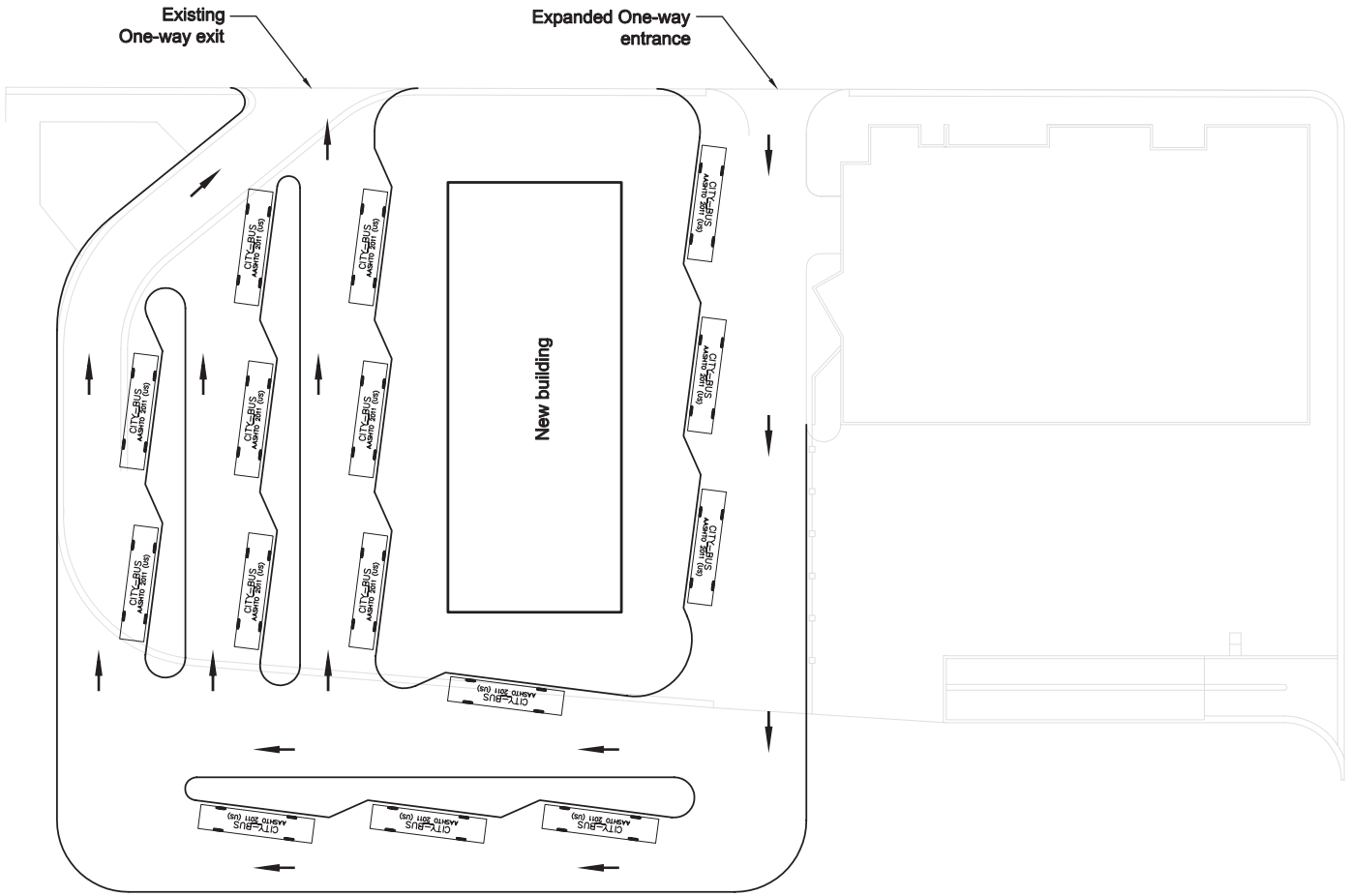
GRAPHIC SCALE IN FEET
0 10 20 40



Fargo MATBUS Ground Transportation Center
Concept 2
(12 Buses)

NORTH

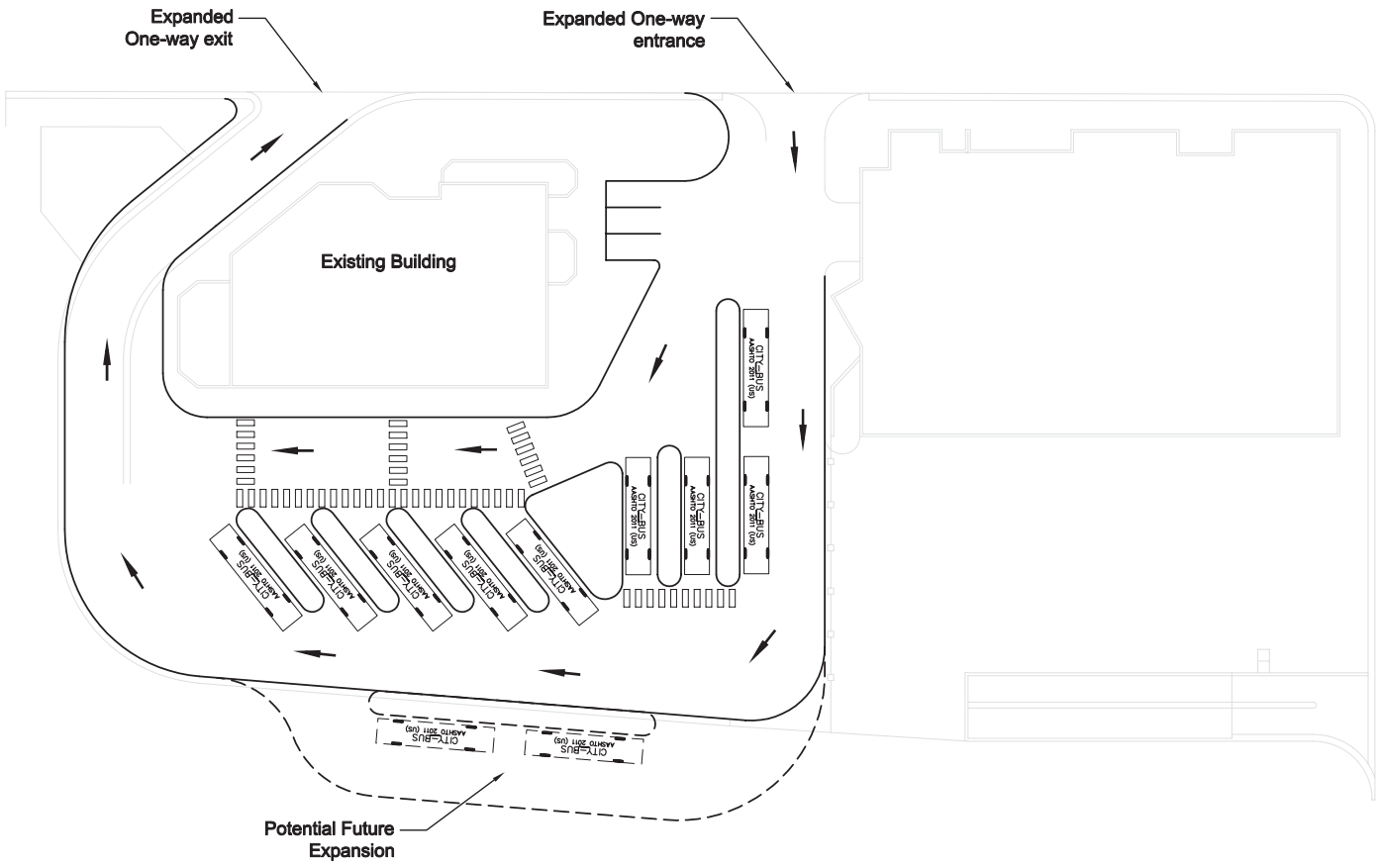
GRAPHIC SCALE IN FEET
0 10 20 40



Fargo MATBUS Ground Transportation Center
Concept 3
(15 Buses)

NORTH

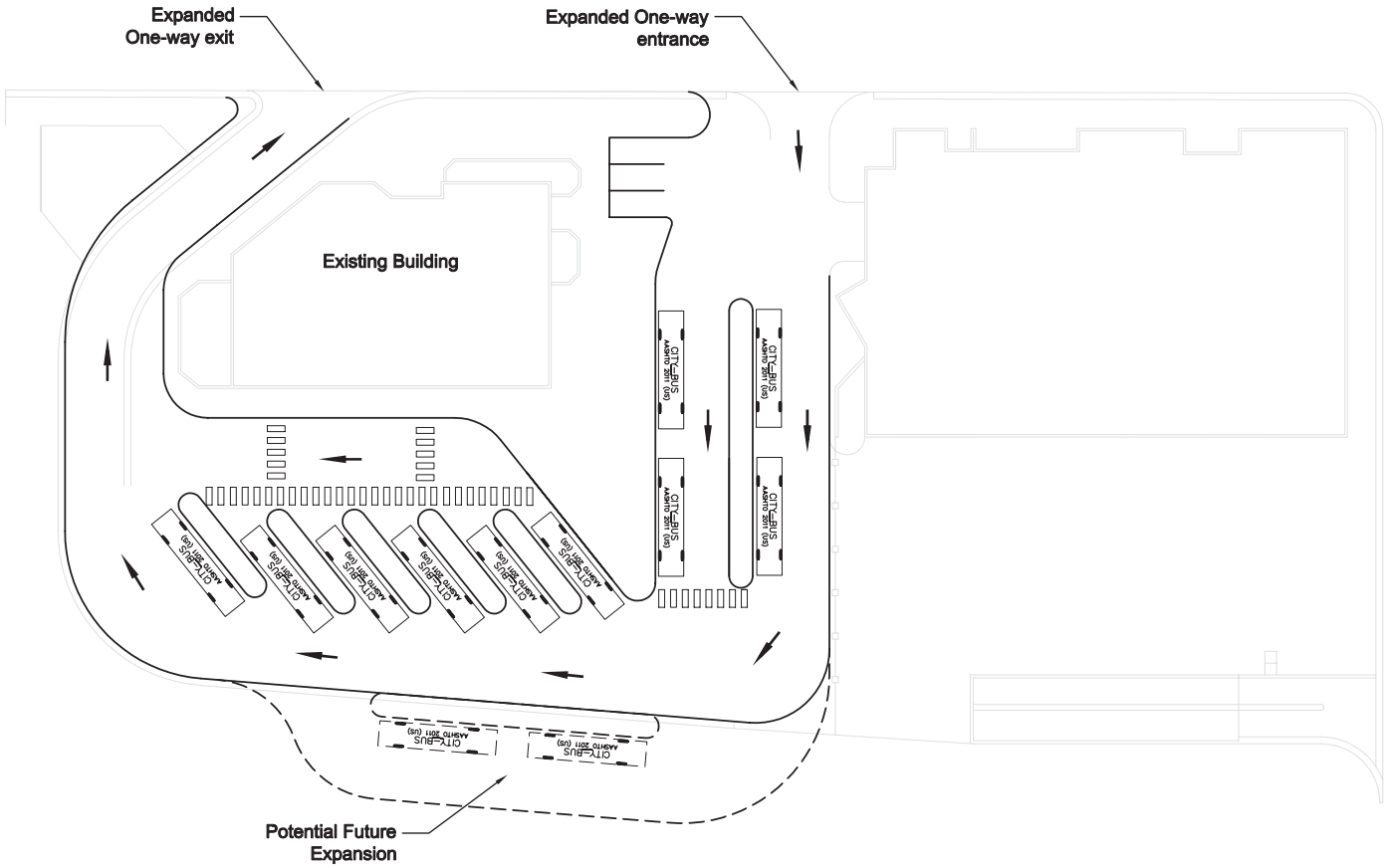
GRAPHIC SCALE IN FEET
0 10 20 40



Fargo MATBUS - Ground Transportation Center
Concept 4a
(9 Buses)

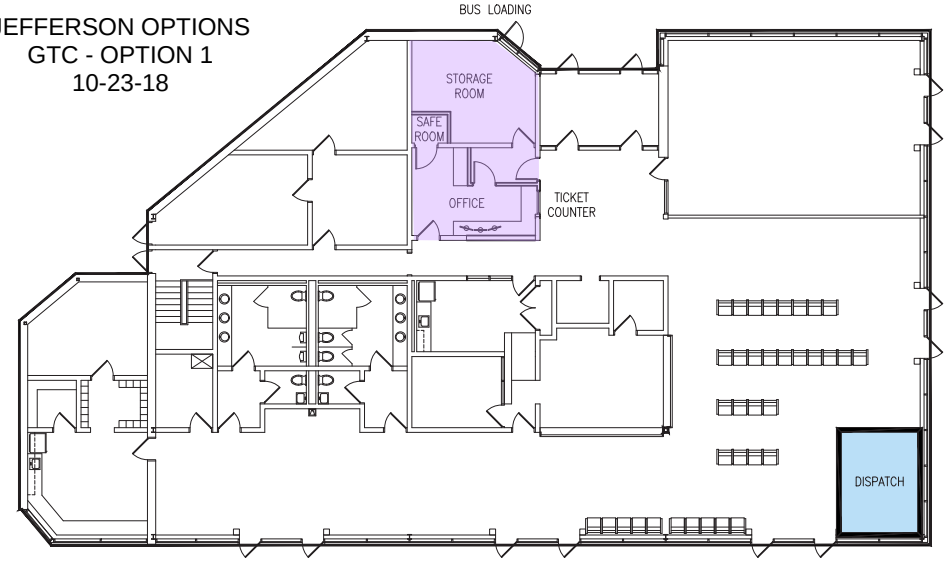
NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

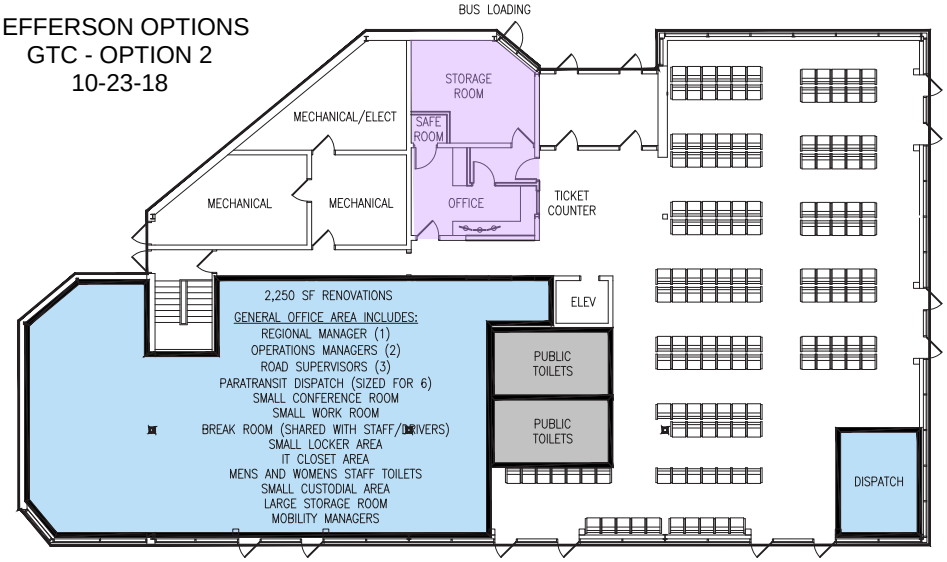


Fargo MATBUS - Ground Transportation Center
Concept 4b
(10 Buses)

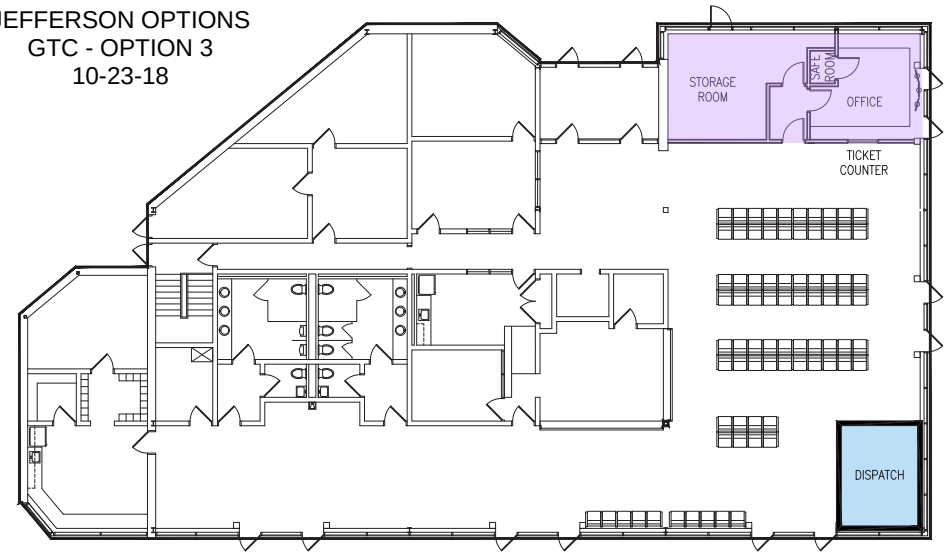
JEFFERSON OPTIONS
GTC - OPTION 1
10-23-18



JEFFERSON OPTIONS
GTC - OPTION 2
10-23-18



JEFFERSON OPTIONS
GTC - OPTION 3
10-23-18



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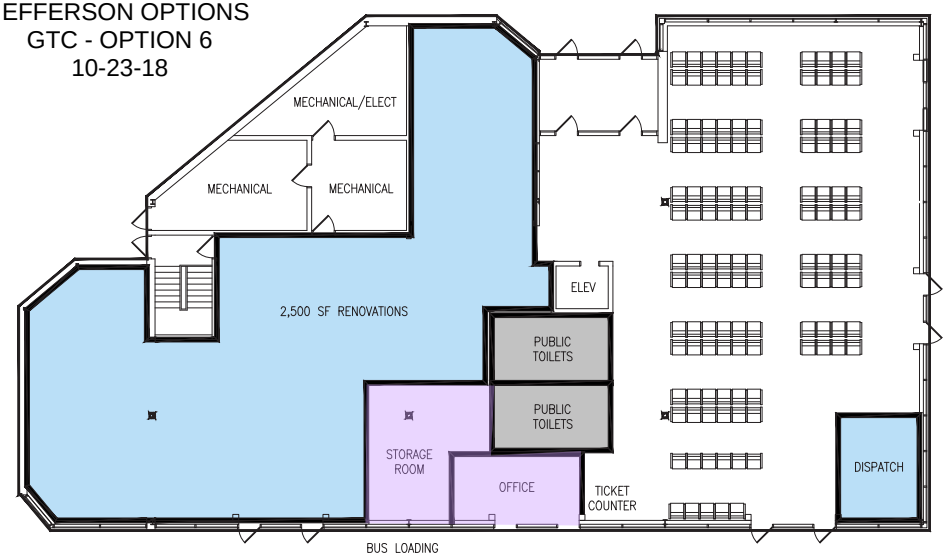
GTC - OPTION 6
10-23-18



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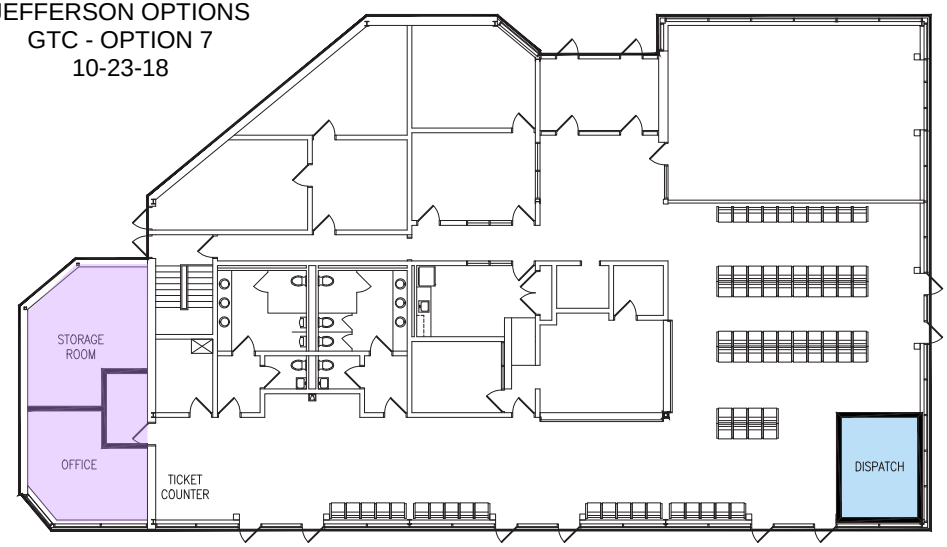
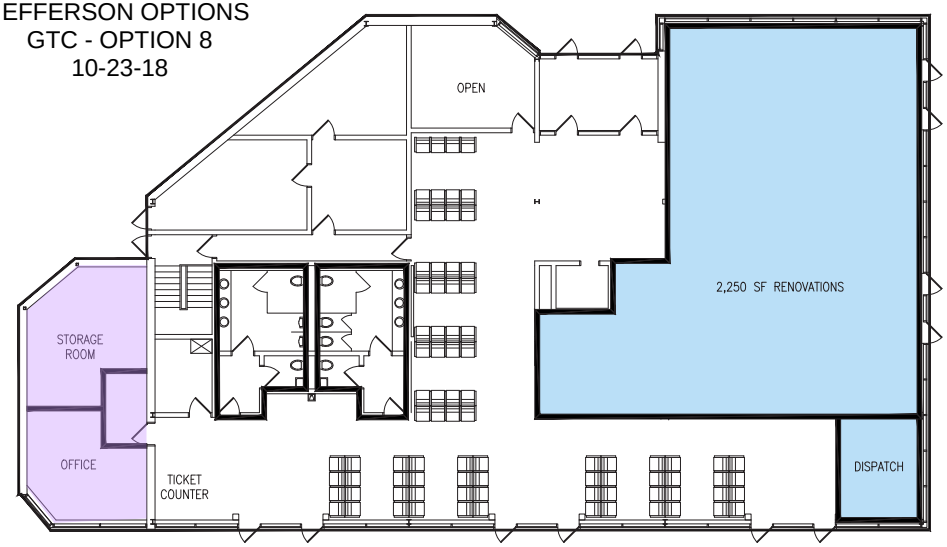
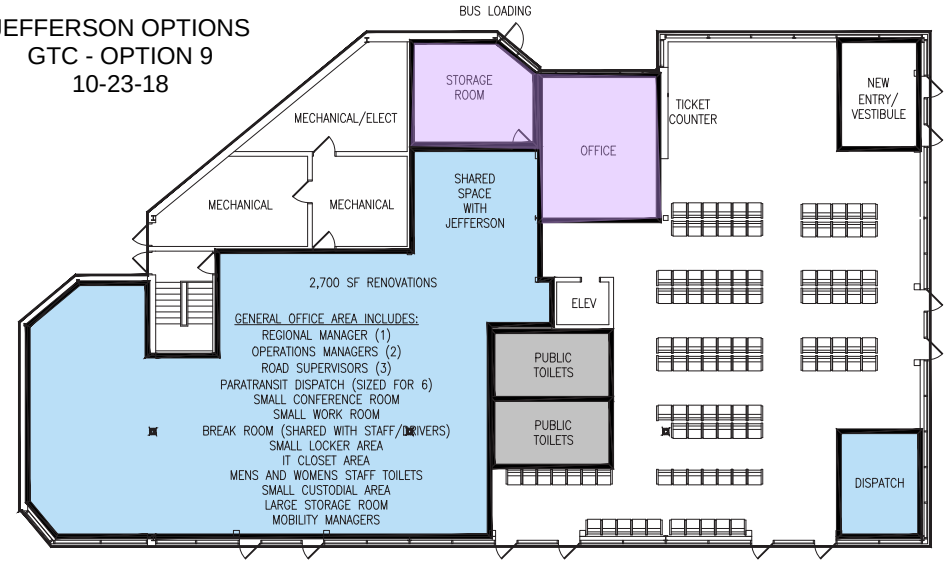
GTC - OPTION 7
10-23-18



JEFFERSON OPTIONS
GTC - OPTION 8
10-23-18



JEFFERSON OPTIONS
GTC - OPTION 9
10-23-18



10/19/2018

MATBUS Ground Tranportation Center
Concept 4e (Sept 27, 2018)
Preliminary Cost Estimate

Estimated Quantities					
No	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	$ 45,000.00	$ 50,000.00
2	Remove Curb & Gutter	LF	430	$ 10.00	$ 4,300.00
3	Remove Asphalt Pavement (4" Assumed)	SY	3,018	$ 10.00	$ 30,180.00
4	Remove Ex. Chainlink fence	LF	220	$ 15.00	$ 3,300.00
5	Export Ex. Cl5 Aggregate (4" Assumed)	CY	335	$ 15.00	$ 5,025.00
6	Export Soils (8" Assumed)	CY	671	$ 15.00	$ 10,065.00
7	Subgrade Preparation	SY	3,018	$ 3.00	$ 9,054.00
8	Class 5 Aggregate (8")	TON	1,258	$ 25.00	$ 31,450.00
9	Separation Fabric	SY	3,018	$ 3.00	$ 9,054.00
10	Concrete Pavement (8")	SY	3,018	$ 90.00	$ 271,620.00
11	Curb & Gutter	LF	200	$ 35.00	$ 7,000.00
12	Concrete Sidewalk	SY	40	$ 50.00	$ 2,000.00
13	8' Chainlink Fence	LF	450	$ 35.00	$ 15,750.00
14	Painted Pavement Markings	LS	1	$ 10,000.00	$ 10,000.00
			Estimated Construction Total		$ 458,798.00
			Contingency	20%	$ 91,759.60
			Estimated Total		**$ 550,557.60**

Assumptions:

1. Existing pavement section is assumed as 4" asphalt over 4" class 5 aggregate. Final pavement section 8" concrete pavement over 8" class 5 aggregate (per Fargo details).
2. Existing ventilation ducts can remain in place.
3. On site stormwater detention is not required.
4. Existing Concrete pavement & structural decking to remain at MATBUS Station

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost. The Client assumes all liability if using this Probable Construction Cost for determining project feasibility or securing project funding/financing.

Appendix G | Design Parameters for Bus Stops and Shelters

Design Parameters for Bus Stops and Shelters:

The following is a guideline to be utilized when considering the placement of a new bus shelter or stop or evaluation of an existing location. This list shall be utilized in conjunction with the stop level analysis provided in Chapter 4 of the 2018 MATBUS Transit Facility Study.

A. Design Codes for Shelters

1. 2012/2015/2018 International Building Code with local amendments
2. Current North Dakota and Minnesota State Building Codes
3. American Society of Civil Engineers Design Standard 7-10 and 7-16
4. Manual on Pedestrian and Bicycle Connections to Transit, FTA Report No. 0111—August 2017.
5. American with Disabilities Act—2010 ADA Standards for Accessible Design

B. Structural Design Considerations for Shelters

1. Risk Category = II
2. Exposure Category = B
3. Wind Loads
   a) *Ultimate Wind Speed = 115 mph*
   b) *Topography = Flat*
4. Snow Loads
   a) *Ground Snow Load = 50psf*
5. Seismic Loads
   a) *Site Class = D*
   b) *Ss = 0.053g*
   c) *S1 = 0.020g*
   d) *SDC = A*
   e) *Analysis Procedure = Index Force Analysis*
6. Foundation
   a) *Soil Type = CL*

C. Best Practice Layouts for Stops and Shelters:

1. Placement:
   a) *Place shelters and stops a minimum of 20'-0" back from intersection.*
   b) *Consider adding "No parking here to corner" sign or paint curb yellow.*
   c) *Place shelters at least 5'-0" from tree to avoid roots.*
   d) *Set stops and shelters 2'-0" back from curb to prevent damage from street snow removal.*
   e) *The bus, when stopped, shall not block an intersection, maintain 65'-0" from intersection.*
2. ADA Accessibility:
   a) *Provide sufficient room for wheelchair to travel from shelter to curb.*
   b) *Consider adding an ADA landing pad when feasible.*
   c) *Adjacent curbs and driveways shall meet ADA access requirements.*
3. Orientation:
   a) *Shelter openings shall face south or west when feasible.*
4. Site Selection:
   a) *Site has at least eight-foot berm, two foot from curb to shelter and 6 feet by 11'-0" for the shelter pad.*
   b) *Site has insufficient public berm but has potential for private easement (usually commercial or high density residential).*
   c) *Ideally, there is no parking that side of street. However, if parking is allowed on that side of street, the site has potential to be signed no parking.*
   d) *There are no problem easements under the site.*
   e) *For placement in high vehicle traffic areas, ensure 11 second bus stop would not result in traffic backed up so as to block a major intersection.*
   f) *Accessible curb cuts lead to the shelter or can be accommodated.*
   g) *Site shall be well lit or have the potential to be lit at night for passenger safety and driver visibility.*

Public Input Survey Summary

Introduction

As part of the MATBUS Transit Facility Study, public input was sought through two online surveys and one online interactive map survey. These surveys were open to MATBUS and the public from November 5th until December 6th, 2018. These surveys overlapped with the public comment period on the overall study which ran from November 5th through November 30th. Surveys were advertised through a public notice which was run in the Forum Legal Ads on November 5th, 2018. MATBUS also used social media and rider alerts to notify passengers about the surveys.

Surveys

West Acres Survey

Using the website surveymonkey.com, a survey was developed for MATBUS ridership to seek input on potential changes to the West Acres Transit Hub. A total of 15 questions were asked, and the survey generated 29 responses.

Key findings included:

- Approximately half of passengers surveyed indicated using the West Acres hub to access the mall; whereas the other half only use the West Acres hub to transfer between routes. This generally conforms to general trends for the West Acres Transit Hub noted through onsite field evaluation and ridership analysis.
- For those respondents who indicated they accessed mall while passing through the West Acres Transit Hub, a majority indicated they spend more than 30 minutes at the mall.
- Among those responding to the survey, Routes 14 & 15 are the most commonly used routes, with 16, 20, and 24 being less utilized.

Table 1: Reported Route Usage at West Acres

Route	Number of Responses	Percent
14	19	25%
15	27	36%
16	13	17%
20	10	13%
24	6	8%
Total	**75**	**100%**

- Nearly all respondents indicated they typically make at least one transfer, 9 made 2 or more;
- Of those surveyed, 14% reported a mobility limitation of some form, only three (10%) of those individuals surveyed indicated being conditionally eligible for Paratransit. However, a separate sample field analysis of ridership on routes passing through West Acres found that nearly 35% of passengers were either senior or disabled. The field study was much larger and included tallies of all users of the facility for two 8-hour periods. Determinations of mobility need were made by the surveyor and not reported by the users themselves. It is likely that these discrepancies in mobility need can be explained by the relatively small sample size (29 responses) of the West Acres survey when compared to the field survey (an average of 239 passengers over the two periods).
- Respondents were asked to select a preference between Option 2 and Option 3. Preferences between options 2 and 3 were split evenly between both options, with a few more selecting Option 2, which was the location to the south of the current West Acres Transit Hub.

Table 2: Reported Preference for a New West Acres Hub

Option	Number of Responses	Percent
2	15	60%
3	10	40%
Total	**25**	**100%**

» The survey asked respondents to rate a series of existing features of the current West Acres Transit Hub on a scale of 1 (being the lowest) and 5 (being the highest), Table 3 shows the complete list of rated responses.

» Respondents were then asked to rate a series of potential future amenities for the West Acres Transit Hub in terms of importance on a scale of 1 (least important) to 5 (most important). The most important amenities ranked by users were indoor climate-controlled areas with an average score of 4.4. The next highest score was a three-way tie between display boards/route information, WiFi, and an outdoor seating area all at a score of 3.8.

» The survey provided an opportunity for respondents to provide open ended responses. Comments made included concerns about current security, complaints about the current indoor waiting area being cramped and dirty, and concerns that options detached from the mall would result in exposure to cold weather. Individual responses are attached.

Table 3: West Acres Scale Question Responses

Question	Item	Average Score
Rate the Following:	Safety and Security	3.8
	Route Information	3.5
	Outdoors Space	3.1
	Inside Space	2.8
Which is most important?	Indoor Climate Controlled Waiting Areas (heat in winter, A/C in summer)	4.4
	Outdoor Seating Area	3.8
	Display Boards/Route Information	3.8
	WiFi	3.8
	Restrooms	3.7
	Bus Pass Vending/Sales	3.5
	Bike Rack	3.5
	On-Site Dispatch/Staff	3.3
	Coffee/Snacks	2.7

Ground Transportation Center (GTC) Survey

Using the website surveymonkey.com, a survey was made available and targeted at MATBUS ridership. The intent of the survey was to collect input on existing features and potential future changes to the Ground Transportation Center (GTC). A total of 10 questions were asked, and the survey generated 35 responses.

Key findings included:

- Several users noted issues with insufficient security/safety at the current GTC. It was noted that security and safety concerns are exacerbated by the frequent presence of intoxicated and aggressive passengers in the waiting area.
- Based on a series of scaled questions (1 being the worst and 5 being the best), users gave low scores to the existing restrooms and vending machines. Many respondents used the open-ended comment form to raise concerns with existing restroom facilities. Table 4 summarizes results of the survey regarding the evaluation of existing facilities and amenities at the GTC.
- Respondents noted that future GTC expansion should avoid outdoor waiting areas that lack heating elements or significant shelter from the elements. Much like the West Acres survey, respondents responded positively to indoor waiting areas.
- Several open-ended responses expressed frustration with the time required to obtain fare/pass sales at the dispatch window; suggesting the need for automated pass sales or additional staff available during peak times.

Table 4: GTC Rider Satisfaction Responses

Item	Average Score
Dispatch/Transit Staff	3.7
Indoor Passenger Waiting Areas	3.6
Outdoor passenger Waiting Areas	3.3
Safety and Security	3.3
Pass Vending/Sales	3.2
Bathrooms	2.5
Vending Machines	2.5

ArcGIS Online Comments

In tandem with the online surveys regarding potential changes to the West Acres Transit Hub and Ground Transportation Center, an interactive map was hosted on ArcGIS Online to garner user comments about stop level transit needs. Users were provided an interactive map showing existing routes and stop locations, with the ability to provide specific comments and notes on issues and needs along the MATBUS system.

The interactive route map generated a total of nine valid comments. Comments were limited to the following "issue types": Pedestrian Need; Shelter Need; Amenities Need; and Safety/Security Need. The responses can be seen in Table 5.

Table 5: ArcGIS Online Comments

AMENITIES NEED	Family Wellness (2960 Seter Pkwy, Fargo)
AMENITIES NEED	Moorhead Cashwise (3300 US-10, Moorhead)
AMENITIES NEED	University Village (17th Ave N, Fargo)
AMENITIES NEED	Near CJ's Kitchen (University Dr & 16th Ave S, Fargo)
PEDESTRIAN NEED	6th Ave N & 14th St N, Moorhead
SAFETY/SECURITY NEED	North Edge of Rabanus Park across from Crystal Ballroom (43rd St S and 17th Ave S, Fargo)
SHELTER NEED	Concordia (12th Ave S & 5th St, Moorhead)
SHELTER NEED	Concordia (10th Ave S & 5th St, Moorhead)
SHELTER NEED	Fargo Industrial Park

MATBUS Ridership Survey—West Acres

Respondent ID	Do you use the West Acres transit hub facility?	If you answered yes on #1, do you typically...	If you access the mall from the West Acres Transit Hub, approximately how much time do you spend in the mall?	Which routes do you typically use when passing through the West Acres transit hub?						How many transfers do you usually make on a one-way trip when you ride MATBUS?
	Response	Response	Response	14	15	16	20	24	Other (please specify)	Response
10348671382	Yes	use it to just transfer between routes.		14	15	16	20		Would like to see more option	2 or more
10372894246	Yes	use it to access the mall.	More than 1 hour	14	15					1
10370489921	Yes	use it to just transfer between routes.	5 minutes or less	14	15	16	20	24		2 or more
10348817058	Yes	use it to just transfer between routes.	15 - 30 minutes	14	15		20			2 or more
10339443892	Yes	use it to access the mall.	15 - 30 minutes	14	15			24		2 or more
10372748293	Yes	use it to just transfer between routes.	30 minutes to an hour	14	15	16				1
10339367689	Yes	use it to access the mall.	More than 1 hour	14	15	16				0
10339285515	No	use it to access the mall.	15 - 30 minutes	14	15					2 or more
10339430525	No	use it to access the mall.	30 minutes to an hour	14	15	16				1
10339157800	Yes	use it to just transfer between routes.	Between 5 and 15 minutes		15		20			1
10340968415	Yes	use it to just transfer between routes.	5 minutes or less		15					1
10372882796	Yes	use it to access the mall.	More than 1 hour	14	15	16				1
10353791713	Yes	use it to access the mall.	More than 1 hour						All of the above	2 or more
10387426651	No									
10339893391	Yes	use it to access the mall.	15 - 30 minutes		15					1
10371077737	Yes	use it to just transfer between routes.	15 - 30 minutes	14	15	16				1
10339167365	Yes	use it to access the mall.	More than 1 hour	14	15		20	24		1
10349800082	Yes	use it to access the mall.	More than 1 hour		15	16	20			1
10350548214	Yes	use it to access the mall.	More than 1 hour	14	15	16		24		1
10345800199	Yes	use it to just transfer between routes.	More than 1 hour		15		20	24		1
10372761044	Yes	use it to access the mall.	15 - 30 minutes	14	15	16				2 or more
10339991559	Yes	use it to access the mall.	More than 1 hour	14	15	16				1
10340326041	Yes	use it to access the mall.	30 minutes to an hour	14	15	16	20			0
10356509473	Yes	use it to just transfer between routes.	Between 5 and 15 minutes		15		20			1
10372839723	Yes	use it to just transfer between routes.	30 minutes to an hour		15		20			1
10353942296	Yes	use it to access the mall.	30 minutes to an hour		15	16				2 or more
10340142312	Yes	use it to just transfer between routes.	5 minutes or less	14	15			24		1
10340535468	Yes	use it to just transfer between routes.		14	15					2 or more
10340051210	Yes	use it to just transfer between routes.	30 minutes to an hour	14	15					1

How do you typically pay for your MATBUS fare?	Do you have any kind of mobility limitation? (wheelchair, walker, etc.)?	Are you conditionally eligible for MAT Paratransit?	Two options are being studied for a potential new site for the West Acres Hub, which one below would you find most convenient?	On a scale of 1-5, how would you rate safety and security at the current West Acres Transit Hub, with 1 being the least safe/secure and 5 being the most safe/secure?	On a scale of 1-5, how would you rate the inside waiting areas at the current West Acres Transit Hub, with 1 being not enough space and 5 being more than enough space?
Response	Response	Response	Response	Open-Ended Response	Open-Ended Response
Senior/Disabled/Youth	Yes	No	Option 2	1	1
College ID (U Pass)	No	No	Option 2	2	2
30-Day Pass	Yes	No	Option 2	2	1
30-Day Pass	Yes	No	Option 2	2	2
30-Day Pass	No	No	Option 2	3	3
Senior/Disabled/Youth	No	No	Option 2	3	1
Cash Fare	No	No	Option 3	3	1
College ID (U Pass)	No	No	Option 3	3	4
30-Day Pass	No	Yes	Option 3	3	1
Senior/Disabled/Youth	No	No		3	1
10-Ride Card	No	No	Option 2	4	4
30-Day Pass	No	No	Option 2	4	4
Senior/Disabled/Youth	No	No	Option 2	4	3
			Option 2	4	5
10-Ride Card	No	No	Option 3	4	2
30-Day Pass	No	No	Option 3	4	4
30-Day Pass	No	No	Option 3	4	3
Cash Fare	No	No	Option 3	4	2
Senior/Disabled/Youth	No	No	Option 3	4	3
30-Day Pass	No	No		4	5
Senior/Disabled/Youth	No	No		4	3
10-Ride Card	No	No	Option 2	5	4
30-Day Pass	No	No	Option 2	5	4
30-Day Pass	No	No	Option 2	5	3
Cash Fare	No	No	Option 2	5	5
30-Day Pass	No	Yes	Option 2	5	1
College ID (U Pass)	No	No	Option 3	5	5
Cash Fare	Yes	Yes	Option 3	5	2
30-Day Pass	No	No		5	2

On a scale of 1-5, how would you rate the outside waiting areas at the current West Acres Transit Hub, with 1 being not enough space and 5 being more than enough?	On a scale of 1-5, how would you rate the route/traveler information at the current West Acres Transit Hub, with 1 being the least helpful and 5 being the most helpful?	Of the following list of amenities, rank them from least to most important to you, with 1 being the least important and 5 being the most.						
Open-Ended Response	Open-Ended Response	Bus Pass Vending/Sales	On-Site Dispatch/Staff	Display Boards/Route Information	Restrooms	Coffee/Snacks	WiFi	Indoor Climate Controlled Waiting Areas (heat in winter, A/C in summer)
1	1	4	3	5	4	2	2	5
4	5	4	4	5	5	3	5	5
1	1	1	2	3	5	1	1	5
2	3	2		3		1		4
5	5	3	3	4	4	2	5	4
2	2	5	3	2	2	4	3	5
3	4	4		3	2			1
4	4	2	5	1	5	5	5	5
5	1	5	5	5	1	1	3	5
2	3	4	4	5	5	3	4	5
3	5	3			2			4
2	4	5	4	1	5	5	2	2
2	3	5	4	3	5	3	5	5
1	3	5	4	5	4	4	5	5
3	4	5		1		4		2
4	4	4	4	4	4	3	4	4
4	3	3	3	5	1	1	2	5
2	4	5	5	5	5	5	5	5
4	5	3	3	5	5	3	5	5
5	5	4	1	5	5	5	4	5
3	4	1	2	5	3	1	5	3
5	4			1	3	2		5
4	3	4	1	5	3	1	3	5
4	5	5	5	5	5	1	1	5
5	5	5	5	5	3	5	5	5
3	3	3	1	5	1	3	5	5
2		1	3	4	5	1	5	4
3	4	2	2	5	5	2	4	5
1	2	2	2	1	3	1	2	4

		Are there any other amenities you would like to see or any other comments or concerns regarding the existing or a future West Acres transit hub?
Outdoor Seating Area	Bike Rack	Open-Ended Response
3	3	There is currently NO security at the West Acres transit hub. I have been propositioned, have witnessed individuals being assaulted, and have tried to access help - not easy to do at that site. The current setup does NOT provide information on arriving / departing buses for individuals with sight issues or hearing issues. The current location does NOT meet ADA requirements. I do NOT use the bus to go to the mall, I use the bus to get to and from work, to and from appointments, and generally everywhere else in town EXCEPT the mall. West Acres is NOT a destination in and of itself. More access to the growing West Fargo and South Fargo areas is needed. More access to employers in the FM Metro is needed. My employment is tied directly to what employers are accessible from bus routes, and I am loosing income due to the MATBus refusal to have routes that access the industrial parks.
3	5	I like option 2 because it's close to Essentia Health, which is very ideal when you're unwell. With that said, the only thing I'd really like to see is that the covered walkways are enclosed and heated/AC. We wait so long outside sometimes for buses. It Would be nice to have full rain and winter protection. Dressing warm isn't always an option for everyone. Having a heated walkway is just a bit of an extra way to be mindeful and help take care of those of us who ride the bus. Plus it will help those in wheelchairs and walkers. I see so many around town who struggle through the snow, ice and slush on some sidewalks. A patch of ice is all it takes. Reducing the change I'm sure would be appreciated. (Of course an anti slip floor or rugs would also help). it would also reduce the amount of shoveling and salt that would be needed to keep it free of snow and ice. Onsite staff could be helpful in answering questions. Some still get confused with bus 15, but also if it is able to give another location to refil bus passes it might reduce the lines that sometimes form at GTC. But if there's an alternative way to get passes or to refil the pass card through technology, that might be helpful too. From a safety standpoint, I'd rather have security there over a Matbus employee. Especially with it being a busy hub with lots of people. One last security concern that I forgot on the other survey. I'm not sure why you guys trust your buses to be left running when the driver steps away from the bus to go to the bathroom etc. To me it just seems like a bad situation waiting to happen. I'm not sure what a solution is because you can't prevent your drivers from basic human needs. But you guys put a lot of trust in passengers, which is great but I'm sure you've seen your share of those with bad intentions. As a passenger, it's a scary thought, especially given the world we live in today.
4	1	inside waiting area is dirty and always smell like old farts and turds. No air circulation. Need more seating, automatic door is slow and doesn't always work; no security checking on what is going on inside
4	1	waiting area smells awful; crowded; dirty
4	5	
5	4	
5		I would much rather see a station in the north side of the mall.
3	3	On site dispatch and options to renew your bus pass at the West Acres transfer hub.
1	1	
5	4	
1	5	Walkway or sidewalk connecting the mall so we don't have to walk on an icy parking lot
3	5	
4	5	Nope not at this current time
5	5	The biggest positive that the existing facility has over the others is that it is connected to the mall. If it is detached, then pedestrians have to walk a distance in the blistering cold to get into the mall. It would be nice to see the existing facility improved and expanded upon to make it a more attractive experience for riders.
3		
4	1	
3	3	No.
5	5	Enforced speed limits, and checks for pedestrian safety is needed at the moment. I've almost been plowed over by a pickups when I was on the marked crosswalk. Also, with the winter months coming quickly, I think a heated sidewalk, or some method of de-icing the sidewalks on, and around the hub, to prevent injury to those who are frail.
4	3	
4	4	Neither of the options presented on this survey look appealing at all because they are not attached to the mall. It says there are covered walkways but are they like a tunnel/hallway? If they are then that's ok. If they just have a roof but are exposed to the elements I won't use the bus to go shopping at West Acres anymore. Also, if I'm there to change between routes and it's so far from the mall it makes it harder to run into the mall to use the restroom and grab food/coffee. Will mall security be frequenting these outskirt areas more and will there be security cameras?
5	5	A different television....or a different place...in there. The one that is there we cannot read at all, if the sun is out.
4		I don't like the idea of having to walk so far across the parking lot to get to the busses. especially if there isn't an indoor walkway.
5	4	
5	4	Thank you for your work!
5	5	
4	1	1. I like the idea of having buses on either side of the transfer station. It's so much better then having to walk a ways to find your bus. 2. Snacks would be great at the station, while you're waiting for the bus you just missed. 3. It would also be good to have Newspapers, Magazines at the station to, to read 4. It would also be a good idea to have TV's in the main, and West Acres stations, to watch 5. A third sub station(apart from the main, GTC station) should be the Dilworth Walmart, since four routes show up there daily
5	5	Neither of the proposed locations make sense to me. If you want to relocate, you should consider moving closer to 13th Ave. Walmart would be a perfect location, you could simplify route 15 (remove those complicated turns between 42nd and 45th St) and divert other routes (16, 20, 24) over there.
4	2	current stop doesn't have enough seating or general room. there's been many times it's standing room only, esp in the winter and it''s difficult to move around in there, it's so crowded
1	2	I wish the outside waiting area was covered during inclinate weather such as rain and snow.

MATBUS Ridership Survey—GTC

Respondent ID	On a scale of 1-5, how would you rate safety and security at the current GTC, with 1 being the least safe/secure and 5 being the most safe/secure?	Do you have any specific safety/security concerns at the GTC? What could be done better?	On a scale of 1-5, how would you rate pass vending/sales at the current GTC, with 1 being the worst and 5 being the best?	On a scale of 1-5, how would you rate dispatch/transit staff at the current GTC, with 1 being the least helpful/friendly and 5 being the most?	On a scale of 1-5, how would you rate outdoor passenger waiting areas at the current GTC, with 1 having not enough space and 5 having more than enough space?	On a scale of 1-5, how would you rate indoor passenger waiting areas at the current GTC, with 1 having not enough space and accommodations and 5 having more than enough?	On a scale of 1-5, how would you rate the vending machines at the current GTC, with 1 being the worst and 5 being the best?	On a scale of 1-5, how would you rate the bathrooms at the current GTC, with 1 being the worst and 5 being the best?
	Open-Ended Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Open-Ended Response
10372734914	1	Security there all the time. There is drug deals being done there. Unruly people causing trouble.	5	5	5	4	3	2
10353213513	1	Sketchy activity, out of control drunk people. Need Staff that focuses on safety and security.	1	5	5	5	1	1
10339426777	1		2	1	3	2	1	1
10386291216	2	Better lighting, more inviting entry	5	4	3	4	3	2
10365660831	2	I know people that use the GTC for parking and words like "creepy" and "unsafe" are used frequently and it's not their ideal choice for paid parking.	4	4	4	4	3	3
10348623348	2	what safety / security? Staff is secure behind the walls / barriers, with no visual security for the riders	2	2	4	2	1	2
10339380874	2	Homeless and drunks hanging around	1	2	5	5	1	1
10339376472	2	The terminal should be part of an active commercial area.	4	5	3	4	2	4
10372880704	3	Women get harassed. More security	4	5	3	4	3	2
10372808142	3	There's a lot of drunk people who come to GTC and I sometimes feel there's no security around other than the cameras or if security is scheduled to be there or is called. I'm not sure what can be done to help this. But my biggest fear is it would be easy for someone to bring a knife or a gun to GTC or any stop and use it.	4	4	5	5	4	2
10370479991	3	too many weirdos hanging around inside and outside. dangerous with bicycles and skateboards careening around the area where buses load. Almost got his several times	1	3	1	2	1	1
10353718680	3	Nope. Keep it the way it is.	3	3	2	3	2	2
10350492108	3			4	4	4	2	2
10349866560	3	On-Duty guards/security. Better, newer cameras, and cameras/ mirrors to cover the blind spots. Blue lights in the bathrooms as well to prevent someone trying to shoot a hit of heroin into their arm.	3	4	2	2	1	1
10348802846	3	too many weirdos hanging around. Bikes should not be allowed to be ridden around GTC--have almost gotten hit several times	4	2	1	2	1	1
10339896772	3		4	3	2	4	2	2
10339322448	3	NO	2	3	2	3	2	2
10339281316	3		4	3	4	2	2	2
10339163988	3	People just hanging around	4	3	2	2	3	3
10339159991	3	On any day there are a fair number of intoxicated or high patrons waiting for buses. Fights are more frequent than they should be.	4	4	4	5	2	2
10373640556	4	There are drunk people hanging around making me Feel uncomfortable at times by how they are acting	4	5	4	4	4	5
10372742652	4	The security of the bike rack is horrible and should be improved.	2	5	3	4	2	3
10372737111	4		2	3	1	3	1	3
10353896994	4	The safety concerns would be hostile, rude people	5	4	1	3	5	4
10348653542	4	None that I have experienced.	3	2	3	2	3	1
10340527881	4		5	4	3	4	5	3
10340441525	4	Some of the people waiting are sometimes rowdy, loud, use profane language. Just things that would make me be careful about being followed or showing valuables while there.	3	4	5	5		
10340047573	4	At times there seem to be a lot of transient people. There have been multiple times where people have been allowed on buses despite not having any money to pay. While I get that there is a schedule to keep and it may be easier to just let these people on, it's not fair to others who pay fairs responsibly. Plus, the people who do this, in my opinion, seem to be belligerent and sometimes intoxicated which could possibly lead to safety concerns.	2	3	1	2	3	3
10339555293	4		2	3	3	3	2	1
10339276132	4	They need to be watching the bathrooms more careful. Also, be outside during loading and unloading.	4	5	5	5	3	2
10372534180	5	No	5	4	5	5	5	5
10356167271	5	More guards	5	5	5	5	5	5
10350840386	5	bus shelters need to be upgrade they need to have doors on them to keep the wind and snow out. i was at the ac for play practice. i walked to the shelter with a friend it was very cold that night i could not sit on the bench it was full of snow and the wind was so cold i was about to cry it was bad	5	5	5	5	4	5
10345774992	5	I don't like that if the handicap door open button is used on the door to the ladies bathroom that it stays open so long. While it's making the door sit open anyone can walk by and stare into the bathroom and watch you if you're standing in the sink area. I wish the bathroom had been set up differently.	1	4	5	5	1	4
10339975107	5		1	5	4	4	1	4

The following images show a potential option for external changes to the GTC. Please offer an comments or concerns you see with this layout.	Are there any other amenities that you would like to see added at the GTC or any other comments/concerns you have?
Open-Ended Response	Open-Ended Response
The second one leaves too much walking from building to the buses.	Get rid of the homeless and druggies.
	Automatic ticket sales. A better vending contractor
We live in Fargo, ND - it gets VERY cold here. Your passengers now have to walk from one bus to another even further in inclement weather? What about those in wheelchairs? Walkers? The elderly? Those with children? The times you give us to board buses between them leaving isn't adequate and spacing out the buses like this will only create headache!	An ATM machine!!!
Please include heaters under the canopies. The bus exiting back onto NP is really wide, and an uncomfortable distance for pedestrians to walk past. Is there any way to funnel the busses to just one driveway width? The remaining space can be plantings, art, and benches for a more pleasing streets cape.	
The images look fine. I have to ask why money isn't being spent to study alternative locations for the GTC? This site and adjacent parking lot are over 3 acres of underutilized land. Consider a smaller hub like West Acres in this area, or elsewhere.	Again, consider moving the GTC altogether and allow this downtown area to be redeveloped.
Accessing the facility remains a challenge for those with mobility issues - and it is NOT up to ADA requirements	MATBus tracker that is more reliable. The current app has significant lags / gaps in the information it provides
I'd rather see the GTC moved to a commercial area such as the Moorhead Center Mall to make it also be a destination.	Moving to a new commercial area would open up a great range of possibilities.
Na	
This looks amazing! My only concern is transferring to the buses that are furthest from the building. During winter, people will want to wait inside. For someone who's handicapped and slow, it might be difficult for them to walk that far quickly, especially if there's ice or slush in the cross walk section. It might require them to take extra time and by that point, could miss the bus. It's also not fair to expect people to wait outside for extended periods either because we know how cold ND winters can get. Elderly and children especially. So there has to be enough time for these individuals to get to those far buses.	Updated bathrooms! Maybe add a 2nd person who can refill cards so hopefully it will go faster. A big issue I have had in the past with refills is there can be a very short window of time to refil your card and so you miss the bus. Or even if there's other technology that will make it easier and quicker for people to do so, like a refil hub. WiFi would be nice. There's times when I can't afford to add minutes to my phone but need to get in contact with a person I'm meeting through social media. It's just nice to have a backup way to communicate.
More outdoor benches. automatic doors.	inside gets dirty and slippery during winter; bathrooms are too small, not enough stalls, and smell bad; vending machines don' have enough variety and are expensive
Looks like a great idea.	Not that I can think of at this time.
This design looks confusing. I dislike there being a second row of buses.	
Needs more room for green space, and a place for the Great Northern Bike Sharing machine. Also, I believe a ticket fare machine would help keep the flow running smoothly when rush hour hits. Outdoor displays, and interactive route maps, similar to the one on the app would also provide a great deal of convenience to the staff and riders.	Phone Charging stations, ATMs, and a change machine. Please bring back the change machine.
n/a	bathrooms are too small and smell horrible
lack of nature/plant space, safe bicycle parking with weather protection	
Looks nice and futuristic	
There are problems with patrons walking in the lot now. I think this would increase with the proposed design.	Friendlier staff.
Will those changes allow for future expansion of the GTC?	1) Free plastic monthly pass cards instead of the paper ones. 2) Drivers that understand and speak fluent English. 3) A MATBUS Live Tracker that works consistently on a daily basis.
I'm wondering what the rounded ends are? It will make it harder for people to find the right bus they are suppose to get on. Maybe have overhead signs, signaling people where to go. With an expansion, should come a bigger building.	Put doors on all the shelters, so in the winter time, people aren't freezing, in the cold temperatures.
The cost to refit the GTC to mimic these images would not receive the justification for the expense. Less than 1% of the population uses the bus system. This funding should be spent on improving the basic function of a bus transportation system- then when you get more than 1% of population using the bus, refit the larger hubs to accommodate these new users. Kinda silly.	Connections to Jefferson Lines and the airport.
	not a building issue but when busses pick up passengers i wish they'd let people board before the drivers go inside. i've been standing in line outside and the driver arrives then shuts the door and goes inside right away, leaving us standing outside in the cold and or rain until they come back so we can board the bus. they should let people board first then go inside to do what they need
What is the point of the curved ends outside. They don't seem to serve any practical use.	I would like to see something to hold bikes while waiting for the bus.
The first one looks modern. The second one looks like it may be hard to make transfers in winter because it has open areas that could get icy. Right now people are protected by weather while getting on and off busses.	I wish there was a way to load more money or pay for the monthly card without having to go to the window. Perhaps an addition of bus card vending machines or a way to add more months and pay online if you have a reusable card.
You need to have two lanes to renew bus passes or a machine that would renew your bus passes online with an account with a bus ID number on your bus pass that way you can just renew it online and know how many rides you have left. That would maybe cut down on lines.	Those are good options. These are good ideas. Maybe you can have more routes at on time and also have them run without delays
Good idea	No
It looks fine. I'm not as concerned with the main GTC station because there is already indoor heated seating. I wish they'd focus on heating bus shelters during the winter. Many of us have to make sure we get to a shelter/stop on time and because of this end up standing out in the cold. 10-15 minutes can feel like 30 when it's below 0 degrees	I would say a place to buy warm drinks with a cover or a food stand but I know in this area buses are still considered the dominion of the "poor" or students quickly moving through from point A to point B. I'm used to living in cities where people from all incomes and walks of life use public transportation. I doubt they would ever get a coffee stand etc. at the GTC.
It looks like the folks in the booth could miss someone walking out where they may be struck by a bus because of all the new structures. perhaps this has been addressed.	It would be great to have a hot dog stand or a high quality coffee stand.

Legal Ad

ND Affidavit No. **2696596**

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA
ss.
COUNTY OF CASS

Bill Morehouse, *The Forum,* being duly sworn, states as follows:

1. I am the designated agent of The Forum, under the provisions and for the purposes of, Section 31-04-06, NDCC, for the newspapers listed on the attached exhibits.

2. The newspapers listed on the exhibits published the advertisement of: **LEGAL NOTICE;** *(1) time: **November 5, 2018,*** as required by law or ordinance.

3. All of the listed newspapers are legal newspapers in the State of North Dakota and, under the provisions of Section 46-05-01, NDCC, are qualified to publish any public notice or any matter required by law or ordinance to be printed or published in a newspaper in North Dakota.

Dated this 5th day of November, 2018.

Legals Clerk

Notary Public

KRIS ADAMSON
Notary Public
State of North Dakota
My Commission Expires Jan. 6, 2021

MATBUS Transit Facility Study
Public Open House

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) in cooperation with Metropolitan Area Transit of Fargo-Moorhead (MATBUS) is holding open houses on the MATBUS Transit Facility Study. The MATBUS Transit Facility Study has evaluated potential changes and modifications in the following areas.

Ground Transportation Center (GTC) – Options have been developed to address long-range facility needs at the GTC. A series of changes both to internal and external areas of the GTC have been evaluated. More information on GTC analysis and a GTC systems needs survey is available at www.fmmetrocog.org.

West Acres Transit Hub – Based on projected growth for transit operations options have been developed which look at changes to the current West Acres Transit Hub. Options developed propose to relocate the Transit Hub away from the West Acres Mall. All options maintain reasonable accessibility to an existing mall entrance. More information on the West Acres Transit Hub and a West Acres Transit Hub needs survey is available at www.fmmetrocog.org.

Stop Level – Analysis has been developed regarding a range of stop level passenger amenities along existing MATBUS routes. Based on existing ridership patterns a series of recommendations have been developed to support development of new or expanded stop level amenities. An interactive Stop Level Issues map is available for review and comment at www.fmmetrocog.org.

Open house meetings will be held at the following times and locations:

Tuesday November 13th
9:00 to 11:00 & 4:00 to 6:00 pm
Ground Transportation Center- 502 NP Avenue, Fargo

Wednesday November 14
2:00 to 6:00 pm
West Acres Transit Center- West Acres Shopping Center

Staff from Metro COG, MATBUS and its consultant will be present to review and discuss the the MATBUS Transit Facility Study. Project information is available for review at www.fmmetrocog.org. For more information you can contact KLJ Project Manager Wade Kline at 701.271.5009 or by email at wade.kline@kljeng.com. All comments on the MATBUS Transit Facility Study should be received by November 30th, 2018.

Metro COG is committed to ensuring all individuals, regardless of race, color, sex, age, national origin, disability/handicap, sexual orientation, and/or income status have access to Metro COG's programs and services. Meeting facilities will be accessible to mobility impaired individuals. Metro COG will make a good faith effort to accommodate requests for translation services for meeting proceedings and related materials. Please contact Savanna Leach, Metro COG Executive Secretary, at 701-532-5100 at least five days in advance of the meeting if any special accommodations are required for any member of the public to be able to participate in the meeting.

(November 5, 2018) 2696596

Project Meeting Flyer

MATBUS Transit Facility Study

PUBLIC OPEN HOUSE

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West Acres Transit Hub – Based on projected growth, options have been developed which look at changes to the current West Acres Transit Hub. Options developed propose to relocate the Transit Hub away from the West Acres Mall. All options maintain reasonable accessibility to an existing mall entrance. More information on the West Acres Transit Hub and a West Acres Transit Hub needs survey is available at www.matbus.com.

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TUESDAY, NOVEMBER 13TH
9:00 to 11:00 & 4:00 to 6:00 pm
Ground Transportation Center
502 NP Avenue, Fargo

WEDNESDAY NOVEMBER 14
2:00 to 6:00 pm
West Acres Transit Center
West Acres Shopping Center

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KLJ
ENGINEERING, REIMAGINED

Transit Facility West Acres Flyer

MATBUS Transit Facility Study

WEST ACRES TRANSIT CENTER ANALYSIS

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) in cooperation with Metropolitan Area Transit of Fargo-Moorhead (MATBUS) is holding open houses on the MATBUS Transit Facility Study. The MATBUS Transit Facility Study has evaluated potential changes and modifications for the existing West Acres Transit Hub.

Based on projected growth, options have been developed which look at changes to the current West Acres Transit Hub. Options developed propose to relocate the Transit Hub away from the West Acres Mall. All options maintain reasonable accessibility to an existing mall entrance. More information on the West Acres Transit Hub and a West Acres Transit Hub needs survey is available at www.matbus.com.

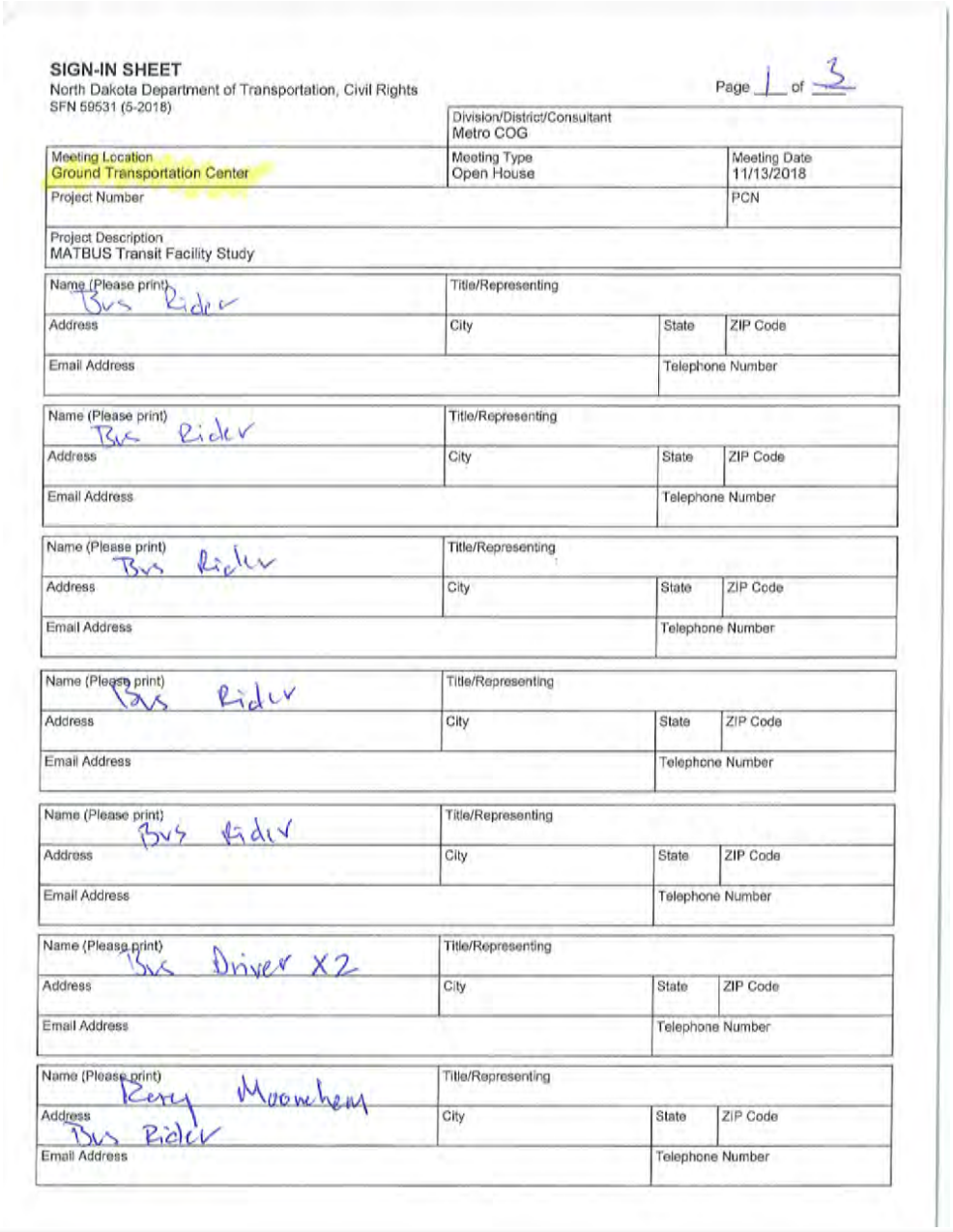
OPEN HOUSE MEETINGS WILL BE HELD AT THE FOLLOWING TIME AND LOCATION:

WEDNESDAY, NOVEMBER 14
2:00 to 6:00 pm
West Acres Transit Center
West Acres Shopping Center

Staff from Metro COG, MATBUS and its consultant will be present to review and discuss the the MATBUS Transit Facility Study. Project information is available for review at www.matbus.com. For more information you can contact KLJ Project Manager Wade Kline at 701.271.5009 or by email at wade.kline@kljeng.com. All comments on the MATBUS Transit Facility Study should be received by November 30th, 2018.

KLJ
ENGINEERING, REIMAGINED

Sign-In Sheets



SIGN-IN SHEET
North Dakota Department of Transportation, Civil Rights
SFN 59531 (5-2018)

Page 1 of 3

	Division/District/Consultant Metro COG	
Meeting Location Ground Transportation Center	Meeting Type Open House	Meeting Date 11/13/2018
Project Number		PCN
Project Description MATBUS Transit Facility Study		

Name (Please print) Bus Rider	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print) Bus Rider	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print) Bus Rider	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print) Bus Rider	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print) Bus Rider	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print) Bus Driver X2	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print) Rory Moonhem	Title/Representing		
Address Bus Rider	City	State	ZIP Code
Email Address		Telephone Number	

SIGN-IN SHEET
North Dakota Department of Transportation, Civil Rights
SFN 59531 (5-2018)

Page 2 of 3

Division/District/Consultant		
Metro COG		
Meeting Location: Ground Transportation Center	Meeting Type: Open House	Meeting Date: 11/13/2018
Project Number		PCN
Project Description: MATBUS Transit Facility Study		

Name (Please print)	Title/Representing		
Bus Rider			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Beeky (Bus Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Bruce Corum (Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Paul Mott (Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Tim (Bus Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Acron (Bus Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
George D. Smith	S.E.H.S.		
Address: 313 14th St. South #103	City: Fargo, ND.	State: ND.	ZIP Code:
Email Address: N.A.		Telephone Number: 701-280-4118	

SIGN-IN SHEET
North Dakota Department of Transportation, Civil Rights
SFN 59531 (5-2018)

Page 3 of 3

Division/District/Consultant			
Metro COG			
Meeting Location: Ground Transportation Center	Meeting Type: Open House		Meeting Date: 11/13/2018
Project Number			PCN
Project Description: MATBUS Transit Facility Study			

Name (Please print)	Title/Representing		
Michael (Bus rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Keven (Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Tyler (Rider)			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Bus Rider			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Address: Bus Rider	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Bus Rider			
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

SIGN-IN SHEET
North Dakota Department of Transportation, Civil Rights
SFN 59531 (5-2018)

Page 4 of 4

Division/District/Consultant		
Metro COG		
Meeting Location: Ground Transportation Center	Meeting Type: Open House	Meeting Date: 11/13/2018
Project Number		PCN
Project Description: MATBUS Transit Facility Study		

Name (Please print)	Title/Representing		
Wade Klze	KLJ		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Dave Wiesna	KLJ		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Michael Melbye	Metrocog		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Lori VanBeek	MATBUS		
Address	City	State	ZIP Code
Email Address		Telephone Number	

Name (Please print)	Title/Representing		
Julie Bommelmen	MATBUS		
Address	City	State	ZIP Code
Email Address		Telephone Number	

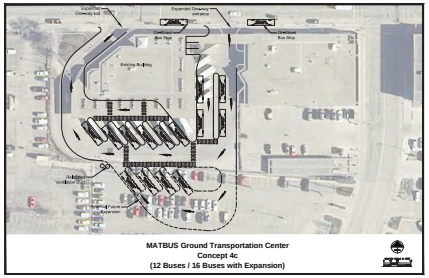
Name (Please print)	Title/Representing		
Jordan Smith	MATBUS		
Address	City	State	ZIP Code
Email Address		Telephone Number	

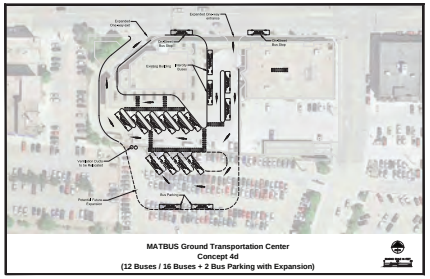
Name (Please print)	Title/Representing		
Address	City	State	ZIP Code
Email Address		Telephone Number	

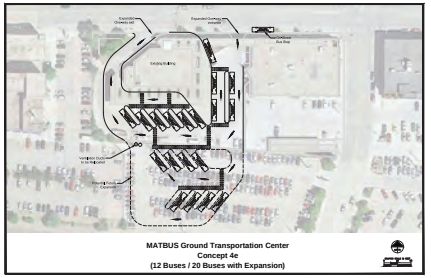
MATBUS Transit Facility Study

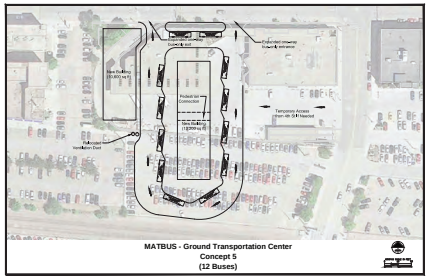
GROUND TRANSPORTATION CENTER

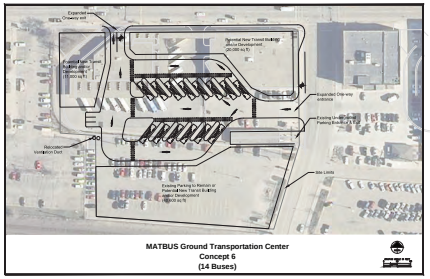
ENGINEERING, REIMAGINED

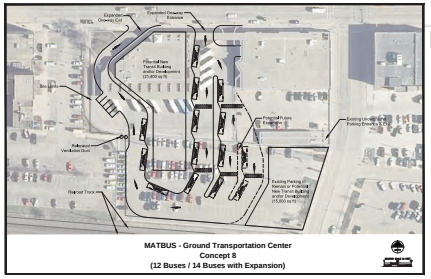












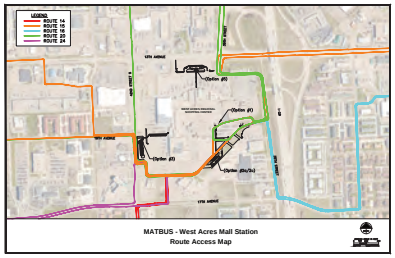
Concept 4c
Canopy Option A

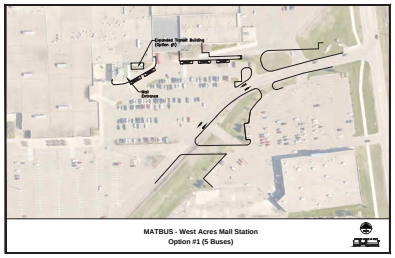
Concept 4c
Canopy Option B

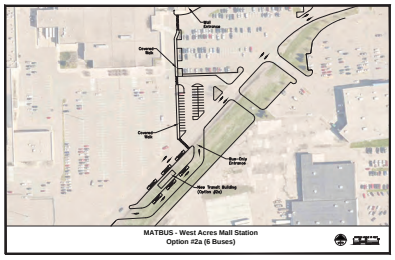
West Acres Meeting Exhibit

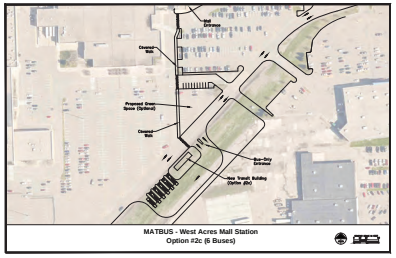
MATBUS Transit Facility Study

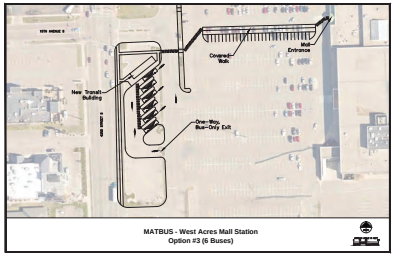
WEST ACRES

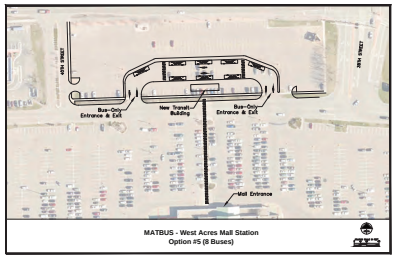






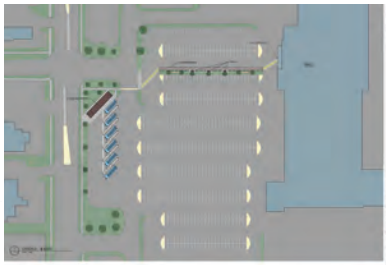






OPTION 2C

OPTION 2C



OPTION 3

OPTION 2A

OPTION 2A

OPTION 3

OPTION 3

OPTION 3 *(approaching mall)*

ENGINEERING, REIMAGINED