

To: Government Operations Committee
From: Bob Farrar, Assistant City Manager, Laurie Linscott, Bus Superintendent
Subject: Bus Hub Study
Date: August 29, 2014

Next Wednesday at the Government Operations Committee meeting, there will be an agenda item to review / revisit the results of the Transit Hub Alternatives Analysis. I believe that the intent of the discussion will be on the Consultant's Recommendations regarding options for the downtown hub location. Council may recall that essentially three options, with a couple of variations, were presented for consideration: (1) Create a "bump -in" on the Water Street side of Pickering Square, (2) continue to use the existing location in front of the Parking Garage, or (3) possibly consider the current Bank property between the parking garage and Washington Street on the south side of the Parking Garage. At the last Government Operations Committee meeting where the study was discussed with the Consultant, there were the concerns raised with options #1 and #3, and no consensus developed in terms of moving forward with either option. Concerns discussed included the estimated cost, the impact on Pickering Square, the impact on neighboring businesses, and the delay and waiting times that would be created with buses not all arriving and departing at the same times. As a side note, it would now seem that with the moving of a couple of downtown businesses that had been in the area, and with the added police presence in the downtown and Pickering Square, much of the concern previously voiced regarding questionable / objectionable behavior in and around the Bus Hub area and Pickering Square has been significantly reduced or eliminated. Chapter 9 contains the Consultant's Recommendations. Section 9.3 on pages 9-5 and 9-6 provide further detail on the three downtown hub options.

Staff will be present to answer questions the Committee may have at the meeting.

Chapter 9: Recommendations

This chapter presents the consulting team’s recommendations for the future of Pickering Square and the Community Connector transit system. It summarizes the strengths and weaknesses of six transit hub alternatives, and it compares the anticipated construction costs associated with each strategy. It presents a conceptual landscape plan for Pickering Square, along with a draft Community Connector route map that takes advantage of a proposed transfer hub at the Airport Mall.

The chapter includes five sections.

- Section 9.1 Summary of Strengths and Weaknesses for Six Alternatives
- Section 9.2 Comparison of Anticipated Construction Costs
- Section 9.3 Consulting Team’s Recommendations
- Section 9.4 Pickering Square Conceptual Landscape Design
- Section 9.5 Proposed Community Connector Route Map

9.1 Summary of Strengths and Weaknesses for Six Alternatives

Figure 9.1 presents a summary of strengths and weaknesses for six transit hub alternatives. For Pickering Square, this summary addresses just the Turn-out / Passenger Island alternative, because the other two Water Street options require transferring bus riders to cross Water Street.

Each of the five alternatives analyzed in Chapter 8 involves negative impacts for some groups in the community. For this reason, continued use of the two existing Pickering Square bus lanes has been added as a sixth alternative.

Three of the six alternatives involve continued use of Pickering Square as a transit hub. The community could enhance these Pickering Square alternatives by taking two steps: (1) acquiring quieter, alternative fuel transit buses, and (2) obtaining a federal grant to renovate and upgrade the existing parking garage restrooms and waiting area.

Figure 9.1 Transit Hub Alternatives: Summary of Strengths and Weaknesses

Alternative	Strengths	Weaknesses
<p>1. Limit buses at Pickering Square to no more than four at a time, and use just one of the existing bus stop lanes</p>	<ol style="list-style-type: none"> 1. Removes buses from the lane in front of the parking garage. 2. Reduces the impact on Pickering Square by reducing the number of buses. 3. Removes conflicts with cars entering the parking garage. 4. Little or no impact on operating costs. 	<ol style="list-style-type: none"> 1. Introduces transfer delays for Hampden, Brewer, and Old Town bus riders. 2. Leaves pavement in front of the parking garage and leaves roadways encircling Pickering Square, limiting redesign options. 3. Pedestrian pathways continue to cross the bus stop site and multiple travel lanes.
<p>2. Use the Water Street side of Pickering Square, with a turnout parallel to Water Street</p>	<ol style="list-style-type: none"> 1. Removes buses and roadways from the front of the parking garage, creating opportunities for commercial use of the ground level. 2. Places buses on the side of Pickering Square, in a location where they will not block existing crosswalks and pedestrian pathways. 3. Allows for a Village Green-style redesign of Pickering Square. 4. Retains easy transit access for downtown residents. 5. Removes conflicts between pedestrians, buses, and cars. 6. Avoids a need for Main Street bus stops near West Market Square. 7. Less expensive than the Summer Street alternative. 8. Money invested in the transit hub will contribute to downtown improvements. 	<ol style="list-style-type: none"> 1. Introduces transfer delays for Brewer and Hampden bus riders. 2. Restrooms and the heated waiting area will no longer be immediately adjacent to the bus stop. 3. Eliminates parking spaces along the Pickering Square side of Water Street. 4. Places buses between Key Bank Plaza and Pickering Square, which may be perceived as a visual and psychological barrier by Key Bank Plaza tenants.
<p>3. Option 2 plus an Airport Mall transit hub</p>	<ol style="list-style-type: none"> 1. A better transfer site is needed now. 2. An improved Airport Mall transfer hub will accommodate a new Hammond Street / Husson / Center Street route that will provide improved access to many Bangor destinations, while limiting the number of downtown transfers. 	<ol style="list-style-type: none"> 1. Access along the side of the Hannaford store may be constrained at times by truck traffic. 2. A transit stop on the Griffin Road side of the Airport Mall will require passengers to walk through the mall building to reach Hannaford.
<p>4. Intercity bus terminal on airport property at Maine Avenue and Godfrey Boulevard</p>	<ol style="list-style-type: none"> 1. New improved intercity bus terminal for Concord Coach and Greyhound. 2. Overflow parking for Bangor International Airport. 3. Improved intermodal transportation links for the region. 	<ol style="list-style-type: none"> 1. Three buses will be needed to maintain 30-minute headways on the Capehart route, resulting in higher operating costs. 2. This alternative will have a relatively high price tag. It is unknown whether federal funding will be available to help pay for this type of facility. 3. Improved bus stops at the Airport Mall will still be needed, even if most transfers take place at a new Maine Avenue terminal.

<p>5. Summer Street</p>	<ol style="list-style-type: none"> 1. Removes buses from Pickering Square. 2. Accommodates seven buses at the same time, avoiding transfer delays. 	<ol style="list-style-type: none"> 1. High price tag for design and construction, plus the unknown cost of acquiring the property. 2. Requires some bus riders to transfer to reach downtown. 3. Requires the addition of downtown bus stops on Water Street. Bus stops on Main Street may also be needed. 4. Service to the Bangor malls will need to be streamlined, eliminating some stops, to provide extra time for Stillwater Avenue and Mount Hope buses to reach Summer Street. 5. If a combined Hammond Street / Husson / Center Street route is not added, service on Center Street will need to be reduced to hourly to allow time to reach Summer Street.
<p>6. Continue to use the existing Pickering Square bus lanes, with renovated restroom facilities and redesigned pathways</p>	<ol style="list-style-type: none"> 1. Preserves all existing transfers. 2. No impact on operating costs. 3. Preserves existing on-street parking. 4. Avoids placing buses between Key Bank Plaza and Pickering Square 	<ol style="list-style-type: none"> 1. Leaves pavement in front of the parking garage and leaves roadways encircling Pickering Square, limiting redesign options. 2. Pedestrian pathways continue to cross the bus stop site and multiple travel lanes. 3. Buses continue to present an obstacle for cars entering the parking garage at fifteen minutes past the hour.

9.2 Comparison of Anticipated Construction Costs

Estimates of probable site improvement costs are provided in Figure 9.2.

Fay, Spoffard and Thorndike estimated \$240,000 as the probable construction cost for adding a bus turnout in Pickering Square parallel to Water Street. Coplon Associates added \$455,000 to this amount for associated pathway and landscape improvements, resulting in a combined cost for this option of \$695,000.

The estimated construction costs for the Airport Mall were \$20,000 for one space adjacent to Hannaford, and \$22,000 for three spaces parallel to Union Street. Construction of a transfer island on the Griffin Road side of the mall complex is projected to cost \$124,000. The combined cost for four bus spaces on the Hannaford side of the Airport Mall is estimated to be \$42,000.

The engineers provided order of magnitude estimates for the Airport site of \$2 - \$2.5 million for site work and parking, plus \$900,000 for buildings and structures. Costs for site improvements will vary depending on soil conditions and the number of parking spaces included.

Figure 9.2 Engineers' Opinion of Probable Site Construction Costs

Site	Cost	Comments
Pickering Square – Construction of parallel Water Street turnout	\$240,000	Walkway and landscape improvements are addressed separately.
Pickering Square – Landscape improvements, including pavers, loam, seed, plantings, and furnishings	\$455,000	
Combined cost for Pickering Square	\$695,000	
Airport Mall – Bus island on the Griffin Road side of the mall	\$124,000	
Airport Mall – One space adjacent to Hannaford	\$20,000	The single space next to Hannaford could be combined with three spaces along Union Street, or the single space next to Hannaford could be combined with the bus island on the Griffin Road side of the mall complex.
Airport Mall – Three spaces adjacent to Union Street	\$22,000	
Bangor International Airport – Intercity bus terminal and overflow airport parking	\$2 - 2.5 million plus \$900,000 for a terminal building	This is an order of magnitude estimate. Costs will depend on the number of parking spaces and on existing soil conditions.
Summer Street	\$1 million plus \$195,000 for a building with restrooms and a passenger waiting room	This is an order of magnitude estimate. It does not include the unknown cost of acquiring the privately owned site.

Assumptions and Exclusions

1. Estimates are based on conceptual plans dated December 2013. These estimates do not benefit from survey or design of grading and drainage. Estimates are for the approximate construction cost and exclude costs for design, permitting, construction management, and inspection.
2. All estimates, with the exclusion of Pickering Square landscaping, were provided by Fay, Spoffard and Thorndike, Inc. The Pickering Square landscaping estimate was provided by Coplon Associates.
3. The consultants have provided these estimates with the understanding that neither FST, Inc. nor Coplon Associates has control over the cost or availability of labor, equipment and materials, or over market conditions or contractors' methods of pricing, and that the Engineer's Opinion of Probable Construction Cost is based on the professional judgment and experience of FST and Coplon Associates. FST Inc. and Coplon Associates make no warranty, expressed or implied, that future bids or negotiated costs will not vary from the Engineer's Opinion of Probable Construction Costs.

The engineers provided order of magnitude estimates for Summer Street of \$1 million for site improvements plus \$195,000 for a building that would house a passenger waiting area and restrooms.

These are rough estimates that do not benefit from detailed site surveys or detailed design of required grading and drainage. These construction cost estimates that do not include costs for design, permitting, and construction management.

9.3 Consulting Team's Recommendations

The consultants developed three sets of recommendations for Bangor and its Community Connector partners. Part one addresses Pickering Square and bus stops in downtown Bangor. Part two recommends creation of a new outlying hub at the Airport Mall. Part three suggests changes to six Community Connector bus routes.

Downtown Bangor and Pickering Square

The consultants were unable to locate an available, affordable, and viable alternative to continued use of Pickering Square as a downtown Community Connector transit hub. They recommend that the city choose between two Pickering Square alternatives: (1) design and construct a new turnout and passenger waiting island parallel to Water Street, or (2) continue to use both of the existing bus lanes in front of the parking garage for Community Connector buses.

The consultants consider the Water Street option to be preferable, because it removes bus stop activity from important pedestrian pathways and because it allows for a village green-style redesign of the public square. But they also recognize that the Water Street option will result in transfer delays for Hampden and Brewer bus riders, and that buses on Water Street may be perceived by some Key Bank Plaza tenants as an obstacle between their building and Pickering Square.

With either approach, the city should continue its efforts to obtain federal funding to purchase quieter, alternative-fuel buses. Also, if buses remain where they are, the city should hire a landscape architect to design improved pathways through Pickering Square.

The city may want to pursue a third Pickering Square alternative that came to light at the end of the planning process. At the December 16 meeting of the Government Operations Committee, a City Councilor asked if a transit hub could fit on the site next to the parking garage that is currently occupied by a Key Bank drive through facility. The consultants did not consider this location earlier because it is occupied by a private business, and because there has been no indication that it might be made available for use by the city.

The consultants did not contact Key Bank to inquire about this property. They did, however, prepare a preliminary sketch showing that the site could be reconfigured to accommodate up to five transit buses. This would require eliminating some of the parking spaces in the city-owned lot adjacent to Kenduskeag Stream. Two buses would enter the

site from Washington Street and exit onto Broad Street. Three buses would enter from Broad Street and exit onto Washington Street. Route and schedule adjustments for this location would be the same as the adjustments required for the Water Street alternative.

The city may be able to help Key Bank find a better downtown site for a drive through facility. Moving the transit hub to Broad Street would preserve transit access in the downtown center, while moving buses away from views and pathways associated with Pickering Square.

The main drawbacks to Broad Street are (1) transfer delays for Hampden and Brewer bus riders, (2) a longer walk between the bus stop and restroom and waiting room facilities, and (3) an exit onto Broad Street that is relatively close to the nearby signaled intersection. Left-hand turns onto Washington Street could be avoided by having Old Town, Stillwater Avenue, and Mount Hope buses exit the site by turning right on Washington Street, followed by a right on Broad Street, before continuing via Water Street, Main Street, and State Street.

The consultants recommend that the City of Bangor apply for Federal Transit Administration funding to cover 80% of the cost of transit-related improvements in or near Pickering Square.

Airport Mall

The consultants considered alternative locations for an outlying transfer hub near the Airport Mall and Bangor International Airport. They recommend that new bus stops be constructed at the Airport Mall on the access drive next to Hannaford. A stop for one bus would be added on the Hannaford side of the access drive, and space for three buses would be added next to Union Street. This approach assumes that delivery trucks will not block vehicular access around the rear of the Hannaford store. If access around the store cannot be assured, the consultants recommend construction of a transfer island on the Griffin Road side of the Airport Mall property.

The consultants recommend that the City of Bangor apply for Federal Transit Administration funding to cover 80% of the cost of these Airport Mall bus stops. If federal funding is available, the city and the mall owners could be each asked to contribute 10% of the project cost.

Changes to Community Connector Bus Routes

The consultants recommend that the transit system introduce the following changes to the Community Connector route structure:

- Introduce 30-minute service in both directions on a combined Center Street / Husson University / Hammond Street bus route. This new route would provide improved access and more frequent service to Husson University. It would provide improved access to Community College and Bangor International Airport, while reducing the number of people who transfer between buses at Pickering Square. This new combined route would replace the existing Mall Hopper service, which means that the transit system would no longer offer a direct link between the Broadway Shopping Center and the Bangor Mall.
- Streamline the Capehart route by eliminating diversions to the airport and the Department of Human Services building. This will allow midday Capehart service to operate with two buses instead of three. The airport and DHS would instead be added to the route of Center Street / Husson University / Center Street buses.
- Revise Odlin Road service by beginning the route at the Airport Mall, and by operating it hourly throughout the day. This will provide faster and more convenient access to Odlin Road destinations, while reducing downtown transfer activity at Pickering Square.
- Add a third bus to the Old Town route during peak commuting times to provide 30-minute headways between downtown Bangor and the University of Maine. Old Town partners should also consider extending the hours for the extra afternoon bus to provide evening service between the University and downtown.

9.4 Pickering Square Conceptual Landscape Design

Figure 9.3 presents a conceptual sketch of possible improvements to the Pickering Square landscape design. Roadways in front of the parking garage would be eliminated. Grass, trees, and Village Green-style pathways would replace the pavers that currently dominate the center of the square.

Figure 9.4 presents an additional sketch that shows how the proposed site design accommodates important pedestrian movements through the public square. This includes pedestrian movements to and from the parking garage, pedestrian movements to and from the Community Connector bus stop, and a pedestrian link between Bangor's downtown center and the Penobscot River waterfront.

9.5 Proposed Community Connector Route Map

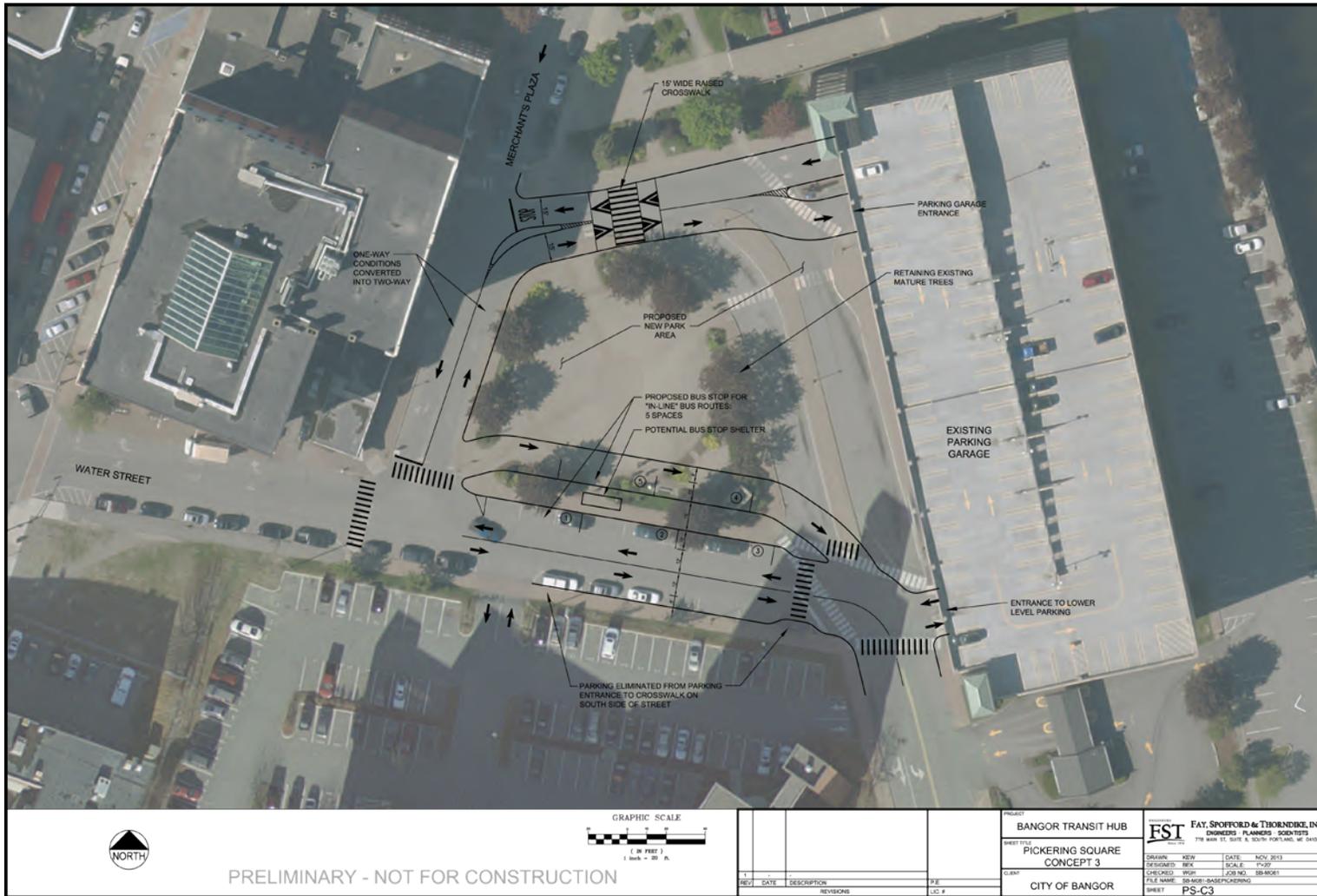
Figure 9.5 presents a proposed Community Connector route map. It envisions a new circular bus route that would serve downtown Bangor, Center Street, Husson University, and Hammond Street. Two buses would provide clockwise service every thirty minutes, and two buses would provide counterclockwise service every thirty minutes. This combined route would replace the current Mall Hopper route. The map also shows proposed improvements to the Capehart route and to the Odlin Road route.

Figure 9.5 Revised Community Connector Route Map



These changes take advantage of a proposed new transfer hub at the Airport Mall. They will result in faster travel times and fewer transfers for many bus riders, along with improved access to Husson University, University College, Bangor International Airport, and destinations on the Odlin Road and outer Hammond Street.

Figure 8.3 Water Street with Passenger Island



PRELIMINARY - NOT FOR CONSTRUCTION



REV	DATE	DESCRIPTION	FILE	USER

PROJECT	BANGOR TRANSIT HUB		
SHEET TITLE	PICKERING SQUARE CONCEPT 3		
CITY	CITY OF BANGOR		
DESIGNED BY	DATE	SCALE	NOV 2013
CHECKED BY	NOV 11 2013	1/8" = 1'-0"	
FILE NAME	30-0001-0405-PICKERING		
SHEET	PS-C3		

FST FAT, SPOFFORD & THORNDIKE, INC.
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Figure 8.4 Airport Mall: Rear Transfer Hub

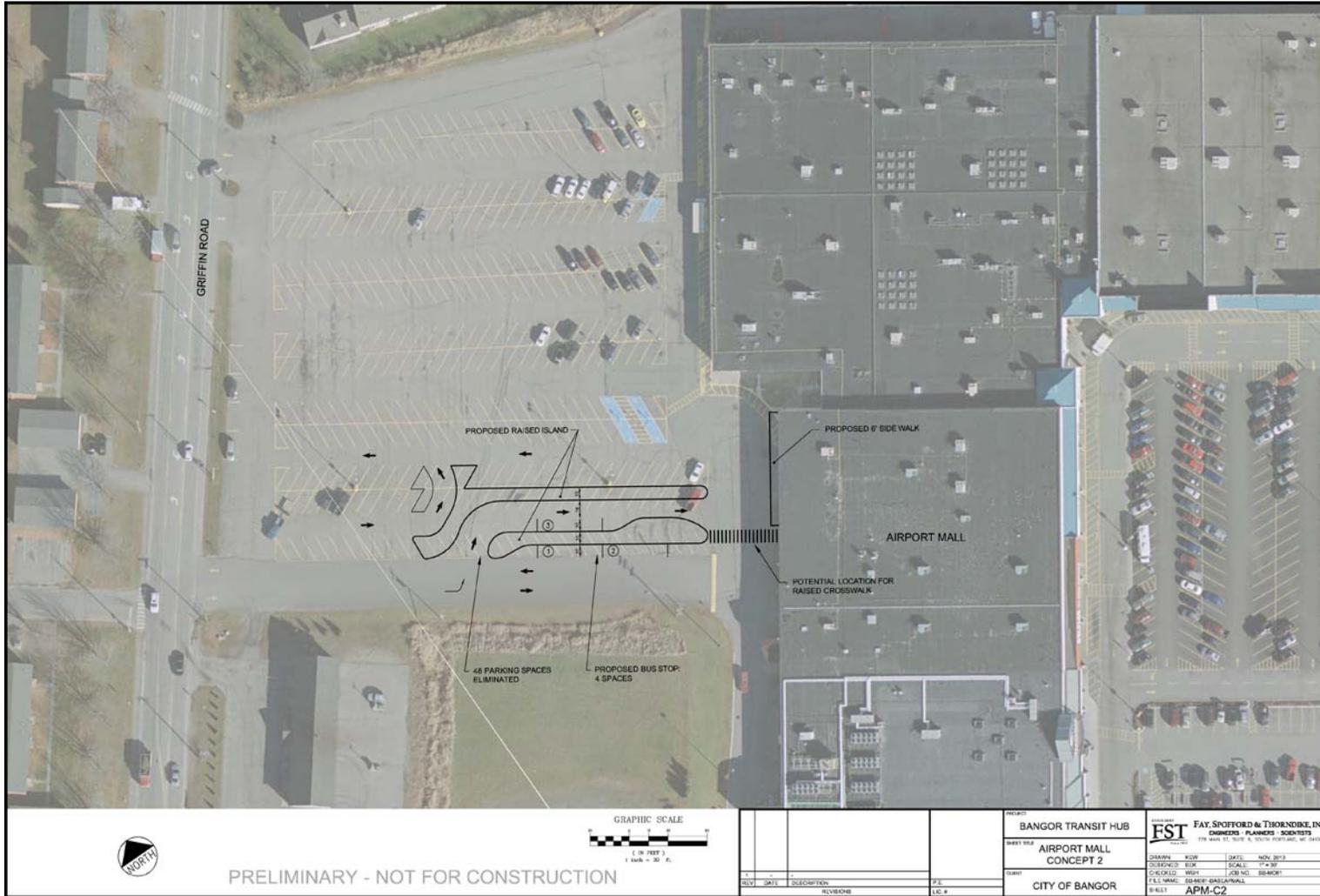


Figure 8.9 Broad Street Conceptual Sketch

