Draft Environmental Assessment
for the

Walter E. Hoffman
United States Courthouse
Proposed Courthouse Annex
Norfolk, Virginia

Responsible Agency:

General Services Administration
Region 3

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4 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

This chapter contains a discussion of the environmental consequences, or impacts, associated with the No-Action Alternative and with site selection and construction of the proposed Courthouse Annex to the Walter E. Hoffman United States Courthouse.

Where applicable, NEPA regulations direct Federal agencies to discuss any direct or indirect adverse environmental effects that cannot be avoided should the proposal be implemented and the means to mitigate such adverse impacts if they occur. NEPA regulations also instruct Federal agencies to consider both beneficial and adverse impacts of the proposed action in terms of public health, unique features of the geographic area, the effect of the action, whether the action is highly controversial, and the degree to which the impacts are uncertain.

Potential impacts associated with the proposed action and related mitigation actions are discussed under the same headings and in the same order as the preceding description of the potentially affected environment in terms of site characteristics and community and regional characteristics.

4.1 NATURAL AND PHYSICAL ENVIRONMENT

4.1.1 TOPOGRAPHY

4.1.1.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the sites. Consequently, there would be no direct, indirect or cumulative impacts with regard to topography.

4.1.1.2 Build Alternatives

Construction activities at each site would involve varying degrees of clearing and excavation that would reconfigure the present topography to accommodate the building footprint. Because of the site's minimal vertical relief, only insignificant topographical changes are anticipated. The extent of site excavation generally depends on site conditions, the specific footprint of the building, and the location of vehicle and pedestrian entrances and utility connections. No significant adverse impacts due to topographic changes are anticipated during the construction or operating phase of the proposed project. Negligible direct impacts are anticipated and no indirect or cumulative impacts are anticipated.

4.1.1.3 Mitigation Measures

All areas to be excavated, re-graded, or otherwise subject to topographic changes would be either built upon or landscaped. Soil disturbances would be minimized and appropriate soil erosion and sediment control measures would be implemented to minimize the loss of soil during excavation. No other measures to mitigate potential topographic changes appear warranted.

4.1.2 GEOLOGY AND SEISMICITY

4.1.2.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the sites. Consequently, there would be no direct, indirect, or cumulative impacts to geology or seismicity.

4.1.2.2 Build Alternatives

Construction activity would require excavation, but it is not expected to have an adverse effect on area geological features. There are no known voids, fissures, mineral resources, or unusual geological conditions beneath the areas of the sites that would be affected by or impede construction of the proposed project. Norfolk is also considered to be an area of low seismic risk. Subsequent detailed development plans would definitively determine the need for special footings and/or other foundation requirements. Geotechnical testing would be undertaken as necessary during the initial stages of the planning and design process to establish subsurface conditions and foundation requirements. No direct, indirect, or cumulative impacts are anticipated.

4.1.2.3 Mitigation Measures

No adverse geological or seismic impacts are anticipated at the site. Additional geological investigations would be undertaken to specify engineering design and construction requirements. No other mitigation measures appear warranted.

4.1.3 SOILS

4.1.3.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the sites. Consequently, there would be no direct, indirect, or cumulative impacts to soil conditions.

4.1.3.2 Build Alternatives

Impacts to existing soil conditions would occur during the construction phase due to clearing, excavation, and other site preparation activities. However, soils beneath the sites have been substantially altered by previous development activity. Given the nature and degree of the soil materials existing on-site, and the fact that the sites have been altered by previous development, no significant adverse impacts upon soil conditions are expected as a result of the proposed action. In addition, no cumulative impacts are anticipated.

The proposed action has been considered pursuant to the Federal Farmland Protection Policy Act (FPPA) and it has been determined that the FPPA does not apply.

4.1.3.3 Mitigation Measures

During construction, attention would be given to erosion potential and engineering characteristics of soils in and around the site. Appropriate soil erosion and sedimentation control measures would be employed to mitigate potential erosion. No other mitigation measures appear warranted.

4.1.4 WATER RESOURCES

4.1.4.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the sites. Consequently, there would be no changes to the area's stormwater runoff volume, water quality, or off-site surface water bodies. No direct, indirect, or cumulative impacts would occur.

4.1.4.2 Build Alternatives

All sites are almost entirely paved and/or built upon or unimproved and under construction. Therefore, the proposed action would result in a continuation of present conditions with respect to stormwater management. The proposed action would not result in a significant change (increase or decrease) in stormwater runoff volume, water quality, or impacts to off-site surface water bodies. The existing system of catch basins, collection pipes and drainageways would continue to collect and discharge stormwater runoff away from developed areas. No direct, indirect or cumulative impacts to the system of stormwater collection in Norfolk are anticipated as a result of the proposed action.

The proposed action would not entail the use of groundwater wells and, therefore, subsurface hydrology would not be impacted. No direct, indirect, cumulative impacts to groundwater are anticipated. In addition, no wetlands are present on the site; no direct, indirect, or cumulative impacts are anticipated either on- or off-site as a result of the proposed action.

4.1.4.3 Mitigation Measures

There are no areas to be modified from a water resources standpoint as a result of the proposed action. Other than ensuring proper maintenance of the existing stormwater management system, mitigative measures for the proposed action are not necessary.

4.1.5 FLOODPLAINS

4.1.5.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the sites. In the event of a 100-year or 500-year flood, access from major and secondary arterials to all of the sites would be disrupted. Flash flooding may also temporarily impede access via commuter routes to all sites and the City in general. Therefore, although no construction by GSA will occur on the sites, there may be a minor, indirect, adverse impact to the City from floods. No cumulative impacts to flood levels or flood-related damage are anticipated.

4.1.5.2 The Southern, Western, Eastern, and Tower Annex Alternatives

Flooding conditions would not be affected by the proposed action. The Southern, Western, Eastern, and Tower Annex sites are located outside the limits of both the 500- and 100-year flood hazard areas. No direct impacts are anticipated. In the event of a 100-year or 500-year flood, access to all of the sites would be disrupted. Flash flooding may also temporarily impede access via commuter routes to all sites and the City in general. Therefore, there may be a minor, indirect, adverse impact on court operations from floods. No cumulative impacts to flood levels or flood-related damage are anticipated.

4.1.5.3 The Northern Annex Alternative

Under the Northern Annex Alternative, the proposed Courthouse Annex would be developed to meet the U.S. Court's infrastructure requirements. As mentioned in **Section 3.1.5, Floodplains**, approximately 75 percent of the Northern Annex Alternative is located within Flood Zone B (an area within the 500- year floodplain or an area subject to a 0.2 percent chance of flooding in a given year). A small portion of the site is within Flood Zone A4, or the 100- year floodplain. Zone A is a Special Flood Hazard Area inundated by the 100-year flood, determined by detailed methods, with base flood elevations shown. According to GSA's Floodplain Management Desk Guide, critical actions (such as the proposed Courthouse Annex) cannot be located in either the 100- or 500-year floodplain unless there is no practicable alternative. The Southern, Western, Eastern, and Tower Annex Sites are practicable alternatives. Construction on the Northern Annex Alternative would have a minor, adverse, long-term, direct impact on the floodplain.

Construction on the Northern Annex site could indirectly impact floodplains by increasing impervious surface, which may increase stormwater runoff volume to the area's system of catch basins, collection pipes, and drainageways. The increase in stormwater runoff could raise a stream's water level, which in-turn can result in an increase in the area of the stream's floodplain. The Northern Annex Alternative could have a minor, adverse, long-term, indirect impact on floodplains. In addition, in the event of a 100-year or 500-year flood, access to the Northern Annex Site from the South and West would be disrupted. Flash flooding may also temporarily impede access via commuter routes to all sites and the City in general. A minor, indirect, adverse impact on court operations from floods may occur.

Past development in the area has increased impervious surfaces. Future development planned in the area could also result in increases in impervious surfaces. Such increases in impervious surfaces could result in a negative cumulative effect on stormwater runoff volumes and thus on floodplains. The proposed Courthouse Annex could add to these cumulative impacts. Therefore, minor, adverse, long-term, cumulative impacts to floodplains could occur.

4.1.5.4 Mitigation Measures

According to GSA's Floodplain Management Desk Guide, critical actions (such as the proposed Courthouse Annex) cannot be located in either the 100- or 500-year floodplain unless there is no practicable alternative. Several practicable alternatives exist for this action.

If the Northern Annex Alternative is selected, the following mitigation measures could be implemented to reduce impacts to the floodplain:

- Sediment and erosion control plans would be required as part of the permit process.
- Stormwater quantity control may be required in compliance with state and county requirements.
- Best management practices (BMPs) during construction, including the use of silt fences, and other soil retention measures, would minimize the erosion of soils by precipitation and wind, and transport of sediments to surface waters.
- Bioretention facilities in parking lots and landscaped areas could be utilized to provide sustainable alternatives to traditional stormwater management techniques.
- If constructed on the Northern Annex Site, the building could be elevated above the base flood elevation.

No mitigation measures are recommended for the Southern, Western, Eastern, and Tower Annex sites.

4.1.6 VEGETATION AND WILDLIFE

4.1.6.1 No-Action Alternative

Under the No-Build Alternative, there would be no construction activity at any of the sites. Consequently, there would be no impact to biological resources.

4.1.6.2 Build Alternatives

Implementation of the proposed action would not involve alteration to biological resources. No forests, wetlands, or other important biological resources would be directly affected. As a result, impacts to wildlife which may inhabit or utilize areas within or around the City of Norfolk are not expected to occur. No direct, indirect, or cumulative impacts are anticipated.

4.1.6.3 Mitigation Measures

Because no adverse impacts to vegetation and wildlife are expected to occur, no mitigation measures are warranted.

4.1.7 HAZARDOUS MATERIALS

The existing condition of the proposed site is discussed with respect to potential environmental contamination outlined in **Section 3.1.7** of this document. The expected impacts of the No-Action Alternative and the Build Alternatives for the proposed courthouse are discussed in this section.

4.1.7.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the five sites. As a result, there would be no impact resulting from any hazardous materials that could potentially be on any site.

4.1.7.2 Southern Annex Alternative

The Phase I Environmental Site Assessment database research identified the Southern Annex Alternative as a leaking underground storage tank (LUST) site. The tank was closed in 2001 by removing its contents (1,000 gallons of heating oil and water) and filling it with a mix of sand and cement. The case has since been closed with no requirement for further action; however, soil and groundwater contamination remain at the site. Removal of contaminated soil would result in the reduction of on-site groundwater contamination. Because the site is served by the municipal water supply, there would no impact to human health through the water supply.

The Southern Annex Alternative was home to a printing facility and a peanut roasting facility. These manufacturing activities, along with the historical presence of an automotive repair shop, should be considered when addressing possible soil and groundwater contamination at the site. Historically, USTs existed just south of the Southern Annex Alternative on Charlotte Street. Due to the age of the tanks, it is unlikely they would be registered with the state. Therefore, the possibility exists that petroleum-contaminated soils and/or groundwater are located in this area.

Direct impacts to hazardous materials could occur if, during construction, contaminated soils are disturbed. If the mitigation measures listed below are not implemented, there is the potential for a minor, adverse, long-term, impact to occur to the environment and human health if hazardous materials/hazardous waste are not properly disposed.

Current and future development of the area surrounding the construction of the courthouse could create additional impacts to this area. This development could have a negligible, adverse, long-term, cumulative impact on hazardous materials.

4.1.7.3 Western Annex Alternative

The Phase I Environmental Site Assessment identified several manufacturing activities historically operating onsite. These businesses include: auto repair facilities, a vulcanizing facility, a printing shop, a leather company, an oil burner facility, a beverage bottling company, and an electroplating facility. The potential exists for soil and/or groundwater contamination at the Western Annex Alternative. Additionally, due to the age of on-site structures, it is possible PCB-, asbestos, and LBP materials are present.

Direct impacts to hazardous materials could occur if on-site buildings are demolished or if, during construction, contaminated soils are disturbed. If the mitigation measures listed below are not implemented, there is the potential for a minor, adverse, long-term, impact to occur to the environment and human health if hazardous materials/hazardous waste are not properly disposed.

Current and future development of the area surrounding the construction of the courthouse could create additional impacts to this area. This development could have a negligible, adverse, long-term, cumulative impact on hazardous materials.

4.1.7.4 Northern Annex Alternative

The Phase I Environmental Site Assessment identified a coal yard, at least two filling stations, a motorcycle repair facility, a tin shop, two battery stations, and a tar and pitch storage yard. The potential exists for soil and/or groundwater contamination resulting from these activities at the Northern Annex Alternative. Additionally, due to the age of on-site structures, it is possible PCB-, asbestos, and LBP materials are present.

Direct impacts to hazardous materials could occur if on-site buildings are demolished or if, during construction, contaminated soils are disturbed. If the mitigation measures listed below are not implemented, there is the potential for a minor, adverse, long-term, impact to occur to the environment and human health if hazardous materials/hazardous waste are not properly disposed.

Current and future development of the area surrounding the construction of the courthouse could create additional impacts to this area. This development could have a negligible, adverse, long-term, cumulative impact on hazardous materials.

4.1.7.5 Eastern Annex Alternative

Sanborn Maps utilized during the Phase I Environmental Site Assessments for the Northern. Western, and Southern Annex Sites identified two filling stations (historical) abutting the Eastern Annex Alternative to the east. The filling stations had several USTs that could have impacted the site.

Direct impacts to hazardous materials could occur if, during construction, contaminated soils are disturbed. If the mitigation measures listed below are not implemented, there is the potential for a minor, adverse, long-term, impact to occur to the environment and human health if hazardous materials/hazardous waste are not properly disposed.

Current and future development of the area surrounding the construction of the courthouse could create additional impacts to this area. This development could have a neglible, adverse, long-term, cumulative impact on hazardous materials.

4.1.7.6 Tower Annex Alternative

A Phase I Environmental Site Assessment was not completed for the Tower Annex Site. Therefore, the potential for direct, indirect, and cumulative impacts on the site due to hazardous materials is unknown. A Phase I Environmental Site Assessment is recommended as described in Section 4.1.7.7.

4.1.7.7 Mitigation Measures

If the proposed courthouse is constructed on the Northern or Western Annex sites, mitigation measures should be followed in order to prevent a possible release of contaminants, which could

impact human health and the natural environment off-site. Based on the limited Phase I Environmental Site Assessment performed for the Northern and Western Annex Sites, it is recommended that GSA:

- Perform a geophysical survey to determine the presence of USTs;
- Sample groundwater and soil in areas of previously identified USTs to determine the extent, if any, of contamination at the site; if USTs are located, they should be properly abandoned/removed in accordance with State and Federal regulations
- Contaminated soil should also be removed and disposed of by a licensed facility; if it is determined contaminated soils do not require removal, a health and safety plan should be developed to protect site workers from contaminated soils;
- Depending on groundwater and soil sampling findings, the results may need to be sent to Virginia DEQ for review and further instruction.

If the proposed courthouse is constructed on the Southern Annex Site, mitigation measures should be followed in order to prevent a possible release of contaminants, which could impact human health and the natural environment off-site. Based on the limited Phase I ESA performed for the Southern Annex Alternative, it is recommended that GSA:

- Perform a geophysical survey to locate the existing UST that was abandoned in place; the UST should be properly removed in accordance with State and Federal regulations.
- It may be necessary to perform a geophysical survey to determine if any other USTs are present at the site; if USTs are located, they should be properly abandoned/removed in accordance with State and Federal regulations.
- Contaminated soils should be removed and properly disposed of at an authorized facility.

If the proposed courthouse is constructed on the Eastern Annex Site, mitigation measures should be followed in order to prevent a possible release of contaminants, which could impact human health and the natural environment off-site. Based on State and Federal Regulatory database information, it is recommended that GSA:

- City officials should be contacted to obtain UST closure and removal information regarding two tanks located in the northeast corner of the site and three tanks on the southeast corner of the site.
- If no information is available from the city, a geophysical survey would be required to locate the existing UST that was abandoned in place; the UST should be properly abandoned/removed in accordance with State and Federal regulations
- it may be necessary to perform a geophysical survey to determine if any other USTs are present at the site; if USTs are located, they should be properly abandoned/removed in accordance with State and Federal regulations

A Phase I ESA or limited Phase I ESA was not performed for the Tower Annex Alternative. In order to determine if any recognized environmental conditions exist a visual inspection or formal Phase I Environmental Site Assessment should be conducted.

4.1.8 METEOROLOGICAL CONDITIONS

4.1.8.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no impact to the area's climatic characteristics.

4.1.8.2 Build Alternatives

Draft guidelines provided by the Council on Environmental Quality (CEQ) suggest that the following two aspects of global climate change should be considered in the preparation of environmental documents:

- The potential for the federal actions to influence actions to influence global climatic change, e.g., increased emissions of chlorofluorocarbons (CFCs), halons, or greenhouse gases; and

- The potential for global climatic change to affect federal actions, e.g., feasibility of coastal projects in light of projected sea level changes.

Based upon the design and utilization of the proposed project as addressed by this environmental document, the proposed action is not expected to result in the significant emission of CFCs, halons, or greenhouse gases. The National Academy of Sciences estimates that a doubling of carbon dioxide concentration which could occur by the middle of this century, would lead to global warming of 1.5 to 4.5 degrees Celsius (3 to 8 degrees Fahrenheit). The proposed action is expected to be unaffected by a potential climatic change in this range. No direct impacts are anticipated.

Studies by the U.S. Environmental Protection Agency and others have estimated that along the Gulf and Atlantic coasts, a one foot rise in sea level is likely by 2050 and could occur as soon as 2025. Within the next century, a two foot rise is most likely, but a four foot rise is possible. The proposed action would occur on land situated approximately 10 feet above msl and would likely be unaffected by sea level rise in this range.

The proposed action has the potential to alter the wind and temperature components of the microclimatology at any of the sites. The impacts, however, would be local and insignificant. The proposed action would not change the larger-scale climatology of the area or have any significant impact on neighboring properties. No indirect or cumulative impacts are anticipated.

4.1.8.3 Mitigation Measures

Measures to mitigate local weather modification are not warranted. Any meteorological impacts resulting from the proposed action would be of a microclimatic nature. The meteorological circumstances of the sites are such that no extraordinary design features are necessary.

4.1.9 AIR QUALITY

4.1.9.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no new impact to the region's air quality.

4.1.9.2 Build Alternatives

At present, the area in which the proposed action is located has been designated in compliance with the National Ambient Air Quality Standards for all pollutants, except the newly designated 8-hour standard for ozone. Currently, the newly created 8-hour average standard for ozone puts the City of Norfolk in a marginal non-attainment status for ozone, with a requirement to obtain attainment by 2007.

Air quality in the region would potentially be affected as a result of the proposed action due to the construction activities, boiler and backup generator operations, and traffic generated by the proposed facility. Federal actions, for construction of new office facilities such as the Proposed Courthouse Annex, must be in conformity with the provisions of the Clean Air Act.

In the case of ozone, the precursor emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) are considered. Once these emissions have been evaluated, a determination can be made with respect to the applicability of the rules. If the total emissions are below de minimis levels, the rules are not applicable.

The following are potential emission sources from the proposed Courthouse Annex:

- construction activities;
- Boiler System;
- mobile sources, including employee commuting.

Construction Activities

Construction impacts are generally related to fugitive dust emissions in and around the project site due to site preparation and construction operations. The potential for impacts would be temporary, occurring only while construction is in progress and certain meteorological conditions occur. Fugitive dust emissions typically occur during ground clearing and preparation, grading, and stockpiling of materials, on-site movement of equipment, and transportation of construction materials. Fugitive dust emissions can occur during dry weather periods, periods of maximum construction activity, and high wind conditions. These impacts would be short-term and would be minimized if construction equipment is well-maintained, and good engineering practices are followed. Construction related activities are not expected to violate NAAQS or standards as established by the Commonwealth of Virginia.

Boiler System

A boiler system for hot water would be installed at the proposed facility and would be the primary stationary source of potential air quality impact. The final choice of fuel would be determined by fuel availability and other considerations. It is anticipated that the amount of combustion byproducts from the fuel selected would have a slight impact on air quality. The emissions are expected to be well below New Source Review significant impact levels for CO and NOx.

Mobile Sources

Motor vehicle operations represent the greatest potential for project-related impacts on air quality. Because the proposed action would relocate existing employees from nearby existing facilities, no significant adverse impacts relative to traffic related air quality are expected to occur.

Conclusions of General Conformity Review Applicability Analysis

This review has considered the precursors of ozone, VOCs, and oxides of nitrogen (NOx). The largest stationary source, the boiler system, would be subject to permit review requirements; consequently, systems would be re-examined comprehensively during the permitting stage of the project, when more precise design information is available. However, based on the size of the proposed facility, it is estimated that emissions would fall below the *de minimis* levels established under General Conformity. Consequently, the General Conformity procedures are not applicable to the proposed action.

Federal Operating Permit (Title V)

All new and existing facilities must determine if they are potential "major sources" of emissions as defined by the Federal Operating Permit Program, also known as Title V. The Title V permit program is for facilities whose potential and/or actual emissions of air contaminants exceed set annual thresholds. For Virginia, the limits are set at 100 tons per year (tpy) for all criteria pollutants and 25 tpy for all hazardous air pollutants (HAPs) or 10 tpy for each individual HAP. If the facility's potential and actual emissions were to exceed the Title V thresholds then it would be required to file a Title V application with the state. Based on a review of emissions from similar facilities it is determined that the emissions from the proposed project would fall significantly below these limits. As such the facility is not a major Title V source and is not required to file a Title V permit. The facility is, however, required to file applications of construction and operation for all individual sources (e.g., boilers) as required by state and local regulations.

4.1.9.3 Mitigation Measures

Techniques to limit emissions include using properly maintained construction equipment, using tarp covers on trucks transporting materials to and from the construction site, wetting upaved surfaces, and prohibiting any open burning of construction waste products on site. In addition, all construction equipment would be calibrated to the manufacturer's specifications to further minimize air emissions.

Stationary sources of emissions would require permits. This would be considered early in the design stage of the project and would be coordinated with the VDEQ.

4.1.10 NOISE

4.1.10.1 No-Action Alternative

Under the No-Action Alternative, the proposed action alternative would not be undertaken. Consequently, there would be no added noise to the area. No direct, indirect, or cumulative noise impacts would occur at the existing courthouse.

4.1.10.2 Build Alternatives

Construction

Temporary increases in noise levels within the immediate vicinity of the sites would occur during construction. The magnitude of the impact depends on the specific types of equipment used, the construction methods employed, and the scheduling of work. Construction noise lasts only for the duration of the construction contract and is usually limited to daylight hours. Noise resulting from construction is not anticipated to have an adverse effect on surrounding land use at the sites. It is generally intermittent and depends on the type of operation, location, and function of the equipment and the equipment usage cycle, and attenuates quickly with distance.

The proposed action, in combination with other past, present, and reasonably foreseeable future actions, will not have a significant cumulative impact on noise levels.

Facility Operation

During operation of the facility, on-site noise, from facility equipment is expected to be minimal. Negligible impacts are anticipated.

Traffic increases associated with the construction of the Courthouse Annex are expected to be minimal and would only increase noise levels slightly. Therefore, negligible, adverse, long-term, indirect impacts would occur under this alternative.

The proposed action, in combination with other past, present, and reasonably foreseeable future actions, will not have a significant cumulative impact on noise levels.

4.1.10.3 Mitigation Measures

Noise impacts during the construction phase would be mitigated by confining construction activities to normal working hours and employing noise-controlled construction equipment to the extent possible. Measures to mitigate these impacts would be incorporated into contract documents and may include the following provisions:

Source Control

- All construction equipment would be equipped with appropriate noise attenuation devices, such as mufflers and engine housings.
- All exhaust systems would be maintained in good working order. Properly designed engine enclosures and intake silencers would be employed.
- Regular equipment maintenance would be undertaken.

Site Control

- Stationary equipment would be placed as far away from sensitive receptors as possible (e.g. aggregate crushers, operators).
- Disposal sites and haul routes would be selected to minimize objectionable noise impacts
- Shielding mechanisms would be employed where possible.

Time and Activity Constraints

- Operations would be scheduled to coincide with periods when people would least likely be affected.

Community Awareness

- Public notification of construction operations would incorporate noise considerations.
- Methods to handle complaints would be specified.

4.2 SOCIAL ENVIRONMENT

4.2.1 DEMOGRAPHICS

4.2.1.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no impact to the city's demographic characteristics.

4.2.1.2 Build Alternatives

The proposed action would result in the expansion of the existing Walter E. Hoffman U.S. Courthouse and an increase in employees at that location. As a result of the proposed action an additional 75 employees are expected to be transferred to the courthouse or annex. Because the additional employees of the expanded courthouse are to be transferred from facilities less than 0.5 miles from the proposed action, no impact on local demographics is anticipated.

4.2.1.3 Mitigation Measures

No mitigation measures are necessary.

4.2.2 HOUSING

4.2.2.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no changes in land use patterns or zoning.

4.2.2.2 Build Alternatives

The proposed action is not expected to impact the Norfolk housing market, based on the assumption that the facility would be staffed primarily by individuals presently working at the Walter E. Hoffman U.S. Courthouse and those transferred from two facilities located less than 0.5 miles from the courthouse. Any change in demand for housing in the region as a result of the proposed action is expected to be negligible and, when distributed over both the purchase and rental markets throughout the metropolitan area, is not viewed as a significant adverse impact.

4.2.2.3 Mitigation Measures

No mitigation measures are recommended for housing.

4.2.3 RELOCATION CONSIDERATIONS

4.2.3.1 No-Action Alternative

Under the No-Action Alternative, there would be no construction activity at any of the sites and no displacements. Consequently, there would be no relocation issues.

4.2.3.2 Southern Annex Alternative

The Southern Annex Alternative is currently occupied by a historic, five story, condominium building containing 24 units and the sports bar, Baxter's. All occupied units would be relocated as a result of the proposed action and Baxter's would be displaced.

4.2.3.3 Western Annex Alternative

The Western Annex Alternative is currently a vacant lot. Ground was recently broken on-site for a proposed 31-story Condo Tower. Approximately 302 units are planned for this building. If condominium's were occupied prior to site acquisition for the proposed Courthouse Annex, all occupants would be required to relocate as a result of the proposed action. According to 2000 Census Data, approximately 8,206 housing units in the City of Norfolk were vacant, which would be sufficient to accommodate any necessary relocations.

4.2.3.4 Northern Annex Alternative

The property proposed for the Northern Annex Alternative is currently occupied by a Greyhound Bus terminal (southern portion of the site), Sheriff's satellite office (northeast corner of site), a vacant diner (central-eastern portion of the site), and a former Western Union building (northwest corner of site), all of which would need to be displaced as a result of the proposed action.

4.2.3.5 Eastern and Tower Annex Sites

No businesses or residents occupy the Eastern and Tower Annex Sites. Therefore, no relocation is required.

4.2.3.6 Mitigation Measures

Any displacement would be mitigated through actions pursuant to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC section 4601, et seq.) and the Uniform Relocation Act Amendments of 1987 (hereinafter jointly referred to as URA). Information regarding the URA is provided to assist those individuals, families, farmers and/or business owners who may be displaced as a result of the proposed development by providing an overview regarding relocation assistance advisory services and relocation payments. Appendix C provides a more detailed description of relocation policies and provisions. However, such policies and provisions are subject to change; the overview provided here is illustrative only and is neither intended, nor to be relied upon, as an exhaustive summary of rights or benefits that may apply under the URA in specific circumstances.

In the case of the proposed project, owners and tenants of displaced businesses may be eligible for a payment for the actual direct loss tangible personal property resulting from the move or cessation of operations. Any such payment will be based on the value of the item for continued use at the displacement site less the proceeds from its sale or the estimated cost of moving the item, whichever is less. Owners and tenants of businesses that are displaced may be entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property. Expenses may include transportation, meals, and lodging when away from home; the reasonable value of the time spent during the search; fees paid to real estate agents, brokers or consultants; and other similar expenses.

A small business may be eligible for a payment for expenses actually incurred in relocating and re-establishing the business at a replacement site. To qualify, the business must have at least one but not more than 500 employees working at the selected site who will be affected by the proposed project. Reestablishment expenses may include the following:

- Repairs or improvements to the replacement property required by various laws, codes, or ordinances;

- Modifications to the replacement property to make the structures(s) suitable for the business operation;

- Advertising the new business location, including the installation of exterior advertising signs;
- The cost of installing utilities or improvements on the replacement site;
- Redecoration when required by the condition of the replacement site;
- The cost of license fees and permits when not covered as a moving expense;
- Marketing studies, feasibility surveys, and soil testing;
- Professional real estate services needed for the purchase or lease of a replacement site;
- Increased costs of operation at the replacement site during the first two years for items such as lease or rental charges, personal or real property taxes, insurance premiums, and utility charges; and/or
- Other items that are deemed essential for the re-establishment of the business or farm.

Additional re-establishment costs may be considered eligible if excessive costs are encountered at the replacement site subject to certain limitations.

4.2.4 COMMUNITY SERVICES AND FACILITIES

4.2.4.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no changes in land use patterns or zoning.

4.2.4.2 Build Alternatives

The proposed facility is not expected to pose a substantial impact upon public service agencies in Norfolk. Site security during the construction phase would be the responsibility of the construction contractor, and federal personnel once the facility becomes operational. With respect to fire protection, the building will be equipped with a fully automatic fire detection, alarm and suppression system, including combined standpipe/sprinkler risers and a fire pump with associated automatic controllers. The design of the system will meet the applicable standards of the National Fire Protection Association's (NFPA) *Life Safety Code Handbook*, the Building Officials and Code Administrators (BOCA) *National Codes* and GSA's *Safety and Environmental Management Program Handbook.*

No adverse impacts are expected to occur with respect to area medical facilities, educational facilities, and emergency medical services. As noted earlier, the personnel associated with the proposed facility are primarily those currently employed at the courthouse and those transferred from two nearby existing locations. Only 75 additional employees are expected to be relocated to the courthouse and annex as a direct result of the proposed action; therefore, no adverse impacts are expected. No direct, indirect, or cumulative impacts are anticipated.

4.2.4.3 Mitigation Measures

Since no substantial adverse impacts to community services and facilities are anticipated as a result of the proposed action, no mitigating measures, outside of the need to coordinate and communicate project construction activities with the appropriate city agencies, would be warranted.

4.2.5 LAND USE

4.2.5.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no changes in land use patterns. No direct, indirect, or cumulative impacts are anticipated.

4.2.5.2 Build Alternatives

Development of the Southern Annex Site would replace an early twentieth-century/historic residential building as well as a small public plaza. Development of the Western Annex Site would replace an unimproved lot currently under construction. Development of the Northern Annex Site would replace a Greyhound Bus terminal, Sheriff's satellite office, a vacant diner, and a former Western Union building. The development of the Eastern Annex Site would involve closing Monticello Avenue between Bute Street and Brambleton Avenue. Implementation of the Tower Annex Alternative would involve building the annex in the courtyard portion of the existing courthouse. The tower would extend seven floors above the existing courthouse. Under each alternative, the proposed Courthouse Annex's design would be sensitive to the existing courthouse and its surrounding environs.

Impacts to on-site land use at the Southern, Western, and Northern Annex sites would occur by virtue of the fact that existing occupants of the selected site would be displaced by the proposed action and the current land use would change to that of a courthouse. Relocation actions for site occupants are discussed in Section 4.2.3. Off-site impacts to surrounding land uses also warrant attention.

Any direct impact to neighboring land use as a result of the proposed action would be minimal at any of the sites. All sites are relatively self contained. Indirect impact by virtue of construction activity, increased traffic noise, etc., or other ancillary aspects of site development are temporary and are not expected to induce land use changes or conflicts. No adverse impact due to security or similar operating considerations is anticipated, based on GSA experience at similar facilities. Empirical evidence indicates that the absence of adverse impacts is not dependent on the specific nature of the neighboring land uses. Land uses neighboring U.S. Courthouses in other metropolitan locations include high-density office, commercial, educational, and institutional uses located in close proximity. U.S. Courthouses have been excellent neighbors to private commercial and other public land uses. There is no evidence of adverse land use impacts (i.e. changes either induced or inhibited) due to U.S. Courthouse construction.

The possibility of land use changes area generally postulated on the basis of security considerations. Therefore, potential security-related impacts have been evaluated according to

three primary factors: potential increase in crime, the potential visual impact of security precautions, and the perception of risks or breaches of security.

No adverse impact due to a perceived or actual security risk is anticipated. Avoidance of security violations is a primary concern of GSA. Facilities are designed and operated to ensure that, to the extent possible, risks to security do not occur. An unrealized theoretical potential for a security concern does not, in and of itself, constitute a significant adverse impact.

The Southern, Western, Tower, and Eastern Annex sites are depicted in the Downtown Plan as mixed-use development, with a very small portion of the Eastern Annex site depicted as Educational, Recreational, Cultural, Open Space, and Environmentally Sensitive. The Northern Annex Alternative is depicted as Commercial/Office Use. A negligible adverse impact to land use would occur under the Eastern Annex Alternative in that the small portion of the site would be changed from a cultural use to an institutional use. Otherwise, no direct, indirect, or cumulative impacts to land use are anticipated.

4.2.5.3 Mitigation Measures

Although the proposed action is not anticipated to present adverse impacts on existing land use or plans for any of the sites, to mitigate the perception of potential land use impacts and to maximize the benefits afforded to the surrounding land uses, GSA typically undertakes actions that include the following:

- Provision of all necessary security measures within the interior of the structure, with little or no exterior visibility and intrusiveness;
- Continuous coordination with city agencies and officials to address any design and development issues and concerns; and
- Thoughtful site design and landscape planning to provide the maximum feasible harmony between the facility and its surroundings.

No substantial adverse impact to surrounding land use or zoning is anticipated as a result of the proposed action at any of the sites. No additional mitigation measures related to surrounding land use are warranted.

4.2.6 ZONING

4.2.6.1 No-Action Alternative

Under the No-Build Alternative, the proposed action would not be undertaken. Consequently, there would be no changes in zoning.

4.2.6.2 Build Alternatives

Federal actions such as construction of the proposed U.S. Courthouse are not subject to local land use and zoning regulations. However, in accordance with the Public Buildings Administrative Act (40 USC 3312), GSA will consider the requirements of local laws. In

addition, GSA will provide the local authorities the opportunity to review the project for zoning compliance, building design code compliance, and construction inspection for code compliance (GSA, 1994).

The Southern Annex, Western Annex, and Tower Annex Sites are located in Norfolk's Freemason/Granby Conservation and Mixed Use District (D-3 zone). Government buildings such as the proposed annex are permitted in this district as of right.

The Northern Annex Site is located in Norfolk's Downtown Cultural and Convention Center District (D-4 zone). Government buildings such as the proposed annex are permitted in this district as of right.

Eastern Annex Site is located in Norfolk's Freemason/Granby Conservation and Mixed Use District (D-3 zone) and the Downtown Cultural and Convention Center District (D-4 zone). Government buildings such as the proposed annex are permitted in this district as of right.

No changes in zoning would occur under any of the build alternatives. Consequently, no direct, indirect, or cumulative impacts are anticipated.

4.2.6.3 Mitigation Measures

No substantial adverse impact to zoning is anticipated as a result of the proposed action at any of the site. No additional mitigation measures related to zoning are warranted.

4.2.7 ECONOMY AND EMPLOYMENT

4.2.7.1 No-Action Alternative

Under the No-Build Alternative, the proposed action would not be undertaken. Consequently, there would be no impact to the city or regional economy.

4.2.7.2 Build Alternatives

Economic impacts associated with the proposed action include the following:

- Beneficial impacts to the national economy and Federal expenditures resulting from more effective and efficient Federal court operations.

- Benefits to the economy of Norfolk during both the construction and operation of the proposed facility. Economic benefits would result from job creation, increased sales revenue and the generation of tax revenue to Federal, State and City governments. Both direct and indirect economic benefits would be realized. The proposed action has an estimated construction budget of over $140 million. Direct economic benefits would result from material purchases in the Norfolk metropolitan area and through construction and operational payrolls. Indirect economic benefits would be realized through the subsequent respending of this initial revenue. Successive respending or "rounds" of economic activity would be stimulated by the initial expenditure of funds commonly referred to as the "multiplier effect".

Direct and indirect economic benefits associated with the construction phase would occur for a limited time, lasting during the actual construction period (approximately 36 months), ending shortly after the project's construction is completed and the multiplier effect is exhausted. Economic activity generated during the operational phase of the U.S. Courthouse and Proposed Annex, on the other hand, would continue throughout the life of the facility.

Past, present, and future development in the vicinity of the site would result in a moderate, beneficial, long-term cumulative impact on the economy, employment, and revenues of the region.

4.2.7.3 Mitigation Measures

No mitigation measures are recommended for economy and employment.

4.2.8 FISCAL CONSIDERATIONS

Fiscal considerations are those having to do with the public treasury or revenues. Potential fiscal impacts could, but do not always, include the following:

- Removal of the property (i.e. site) from the public tax rolls;
- Acquisition of the property through use of public funds; and
- Other public expenditures related to the proposed public action (e.g. utility connections).

4.2.8.1 No-Action Alternative

Under the No-Action Alternative, GSA would not acquire any of the sites. There would be no changes to state and local taxes and revenues. Therefore, there would be no direct, indirect, or cumulative impacts to Fiscal Considerations.

4.2.8.2 Southern Annex Alternative

Because Federal agencies does not pay local property tax, the use of the Southern Annex Site for the proposed Courthouse Annex would result in the removal of the property from the Norfolk property tax base. However, this impact is expected to be minor. This minor impact is offset by virtue of the beneficial impacts the proposed action would bring to the economy of Norfolk in terms of construction employment and materials purchases.

Secondary jobs related to the increased economic activity stimulated by the proposed action may be created. Additional retail services and business employment may result from the proposed action through a multiplier effect, yielding additional sales and income tax revenues for local and state governments, thus having a beneficial indirect impact.

Past, present, and future development in the vicinity of the Southern Annex Alternative has and will continue to create revenue for the city.

4.2.8.3 Western Annex Alternative

The use of the Western Annex Site for the proposed Courthouse Annex would result in the loss of tax revenue to the city. This impact is expected to be negligible as the property is currently unimproved. However, the site is currently undergoing development and is the location of the future Granby Tower Condominiums. Granby Tower will contain approximately 302 units. This development will raise the property tax revenue collected by the city substantially and loss of this revenue would have a moderate impact on the city's revenue.

Secondary jobs related to the increased economic activity stimulated by the proposed action may be created. Additional retail services and business employment may result from the proposed action through a multiplier effect, yielding additional sales and income tax revenues for local and state governments, thus having a positive indirect impact.

Past, present, and future development in the vicinity of the Western Annex Alternative has and will continue to create revenue for the city.

4.2.8.4 Northern Annex Alternative

The use of the Northern Annex Site for the proposed Courthouse Annex would result in the loss of tax revenue to the city. This impact is expected to be negligible as the property does not currently generate a significant tax revenue for the city.

Secondary jobs related to the increased economic activity stimulated by the proposed action may be created. Additional retail services and business employment may result from the proposed action through a multiplier effect, yielding additional sales and income tax revenues for local and state governments, thus having a positive indirect impact.

Past, present, and future development in the vicinity of the Northern Annex Alternative has and will continue to create revenue for the state, county, and local governments.

4.2.8.5 Eastern Annex Alternative

Currently, real estate tax is not collected for the Eastern Annex Alternative. Consequently, no adverse direct impacts are anticipated.

Secondary jobs related to the increased economic activity stimulated by the proposed action may be created. Additional retail services and business employment may result from the proposed action through a multiplier effect, yielding additional sales and income tax revenues for local and state governments, thus having a positive indirect impact.

Past, present, and future development in the vicinity of the Eastern Annex Alternative has and will continue to create revenue for the state, county, and local governments.

4.2.8.6 Tower Annex Alternative

Currently, real estate tax is not collected for the Tower Annex Alternative. Consequently, no adverse direct impacts are anticipated.

Secondary jobs related to the increased economic activity stimulated by the proposed action may be created. Additional retail services and business employment may result from the proposed action through a multiplier effect, yielding additional sales and income tax revenues for local and state governments, thus having a positive indirect impact.

Past, present, and future development in the vicinity of the Tower Annex Alternative has and will continue to create revenue for the state, county, and local governments.

4.2.8.7 Mitigation Measures

No mitigation measures are recommended for Fiscal Considerations.

4.2.9 AESTHETICS AND VISUAL RESOURCES

4.2.9.1 No-Action Alternative

Under the No-Action Alternative, there would be no building demolition or construction activity at either site. Consequently, there would be no direct, indirect, or cumulative impacts to aesthetics or visual resources.

4.2.9.2 Build Alternatives

The sites would be disrupted during the construction period by virtue of site preparation, building construction, landscaping, and other related activities. The construction period is temporary and, once concluded, the aesthetic characteristics of the general area beyond the bounds of the sites would not be significantly altered.

No adverse impact has been found to result from the visual aspects of security precautions in the vicinity of courthouse facilities. Security measures are unobtrusive and are generally internal rather than external. In most instances, persons passing by U.S. Courthouses are generally unconcerned with the nature of such facilities.

The proposed Courthouse Annex would be developed as part of an overall architectural composition to present a visually simplified and unified image that is aesthetically pleasing and compatible with the surrounding area in terms of site arrangement, building materials and landscape treatments. Views of the Courthouse Annex from the adjoining roadways and properties would reveal a structure compatible with its surroundings. No adverse direct, indirect, or cumulative impacts are expected.

4.2.9.3 Mitigation Measures

No mitigation measures beyond the maintenance of sensitive site planning and architectural and landscape design treatments are necessary.

4.3 CULTURAL ENVIRONMENT

4.3.1 ARCHAEOLOGICAL RESOURCES

4.3.1.1 No-Action Alternative

Under the No-Action Alternative, the proposed annex would not be constructed and no impacts to archaeological resources would take place.

Under this alternative, there would be no direct, indirect, or cumulative impacts to archaeological resources at the existing facility.

4.3.1.2 Southern Annex Alternative

Construction of the courthouse annex at this site would entail ground disturbing activities. A review of a series of historic maps indicates that there remains a potential for archaeological deposits dating to the nineteenth and twentieth centuries, and perhaps as early as the eighteenth century, within the Southern Annex Alternative. Therefore, ground disturbance may result in a moderate, adverse, long-term, direct impact to archaeological resources.

No indirect impacts would result from construction at the Southern Annex Alternative. It is not likely that the use of the Southern Annex Alternative would be a catalyst for future development. Therefore, negligible, adverse, indirect impacts would occur under this alternative.

4.3.1.3 Western Annex Alternative

Construction of the courthouse annex at this site would entail ground disturbing activities. A review of a series of historic maps indicates that there remains a potential for archaeological deposits dating to the nineteenth and twentieth centuries, and perhaps as early as the eighteenth century, within the Western Annex Alternative. Such ground disturbance may result in a moderate, adverse, long-term, direct impact to archaeological resources.

No indirect impacts would result from construction at the Western Annex Alternative. It is not likely that the use of Western Annex Site would be a catalyst for future development. Therefore, negligible, adverse, indirect impacts would occur under this alternative.

4.3.1.4 Northern Annex Alternative

Construction of the courthouse annex at this site would entail ground disturbing activities. A review of a series of historic maps indicates that there remains a potential for archaeological deposits dating to the nineteenth and twentieth centuries, and perhaps as early as the eighteenth century, within the Northern Annex Alternative. Such ground disturbance may result in a moderate, adverse, long-term, direct impact to archaeological resources.

No indirect impacts would result from construction at the Northern Annex Alternative. It is not likely that the use of the Northern Annex Alternative would be a catalyst for future development. Therefore, negligible, adverse, indirect impacts would occur under this alternative.

4.3.1.5 Eastern Annex Alternative

Construction of the courthouse annex at this site would entail ground disturbing activities. A review of a series of historic maps indicates that there remains a potential for archaeological deposits dating to the nineteenth and twentieth centuries, and perhaps as early as the eighteenth century, within the Eastern Annex Alternative. Therefore, ground disturbance may result in moderate, adverse, long-term, direct impact to archaeological resources.

No indirect impacts would result from construction at the Eastern Annex Alternative. It is not likely that the use of the Eastern Annex Alternative would be a catalyst for future development. Therefore, negligible, adverse, indirect impacts would occur under this alternative.

4.3.1.6 The Tower Annex Alternative

Construction of the courthouse annex at this site would entail ground-disturbing activities. A review of a series of historic maps indicates that there remains a low potential for archaeological deposits dating to the nineteenth and twentieth centuries, and perhaps as early as the eighteenth century, within portions of the Tower Annex Alternative. Therefore, only minor, direct, long-term, adverse impacts to archaeological resources are anticipated.

No indirect impacts would result from construction at the Tower Site alternative. It is not likely that the use of the Tower Site alternative would be a catalyst for future development. Therefore, a negligible, adverse, indirect impact would occur under this alternative.

4.3.1.7 Mitigation Measures

The following mitigation measures could be implemented for archaeological resources:

- Conduct a Phase IA survey of the proposed annex sites that would include a detailed examination of historic maps to identify specific areas where intact archaeological resources may be present.

- Conduct a Phase IB/II identification survey and NRHP evaluation of areas identified during the Phase IA study as likely having intact archaeological deposits. This study would be used to identify any archaeological deposits present and to collect data to be used to determine whether the deposits are eligible for listing in the NRHP.

- If any archaeological resources are determined to be eligible for listing in the NRHP, an MOA would be developed to identify appropriate measures to mitigate adverse effects associated with the construction of the courthouse annex.

4.3.2 ARCHITECTURAL RESOURCES

4.3.2.1 No-Action Alternative

Under the No-Action Alternative, the proposed annex would not be constructed and no impacts to historic structures would take place. Under this alternative, there would be no direct, indirect, or cumulative impacts to historic structures at the existing facility.

4.3.2.2 Southern Annex Alternative

Under the Southern Annex Alternative, the construction of the proposed Courthouse Annex would occur within the Downtown Norfolk Historic District and would necessitate demolition of a contributing resource to the district: the former Showcase Furniture building, currently the Lofts at 500 Granby. Construction on the Southern Annex Site would alter the current historic viewshed by eliminating a contributing resource to Downtown Norfolk Historic District as well as introducing a new and contrasting visual element to that district and the adjacent National Register listed Walter E. Hoffman U.S. Courthouse.

Building the Courthouse Annex on the Southern Annex Site would also introduce modern elements to the area. These elements may be different in design and massing from the remaining contributing resources to the historic district, creating a visual intrusion that may also be incompatible with the existing architecture. Under Section 106 of the National Historic Preservation Act, the proposed construction would constitute an Adverse Effect on the Downtown Norfolk Historic District and the Walter E. Hoffman U.S. Courthouse. Consequently, construction on this site would create a moderate, adverse, long-term, direct impact to historic architectural resources.

The area is currently experiencing wide scale growth and renewal. It is not likely that the use of the Southern Annex Alternative would be a catalyst for substantial future re-development within the historic district; therefore, negligible, adverse, indirect impacts to historic resources are anticipated under this alternative.

The construction of Granby Tower, as well as the effects of other smaller developmental changes in the area, has contributed to the changes in the historic character of the District. The demolition and re-development of the Southern Annex Alternative would also contribute to the cumulative impacts to the District by demolishing a contributing resource to that district. A moderate, adverse cumulative impact would occur under this alternative.

4.3.2.3 Western Annex Alternative

Under the Western Annex Alternative, the construction of the proposed Courthouse Annex would involve construction within the Downtown Norfolk Historic District. The Courthouse Annex on the Western Annex Site would be immediately adjacent to National Register listed resources, introducing modern elements into the historic setting. The new construction may be different in materials, size, and massing to adjacent historic resources and thus may be visually and architecturally incompatible with historic structures. In terms of Section 106 of the National Historic Preservation Act, this would constitute an Adverse Effect on the Downtown Norfolk Historic District and the Walter E. Hoffman U.S. Courthouse. Consequently, construction on this site would create a moderate, adverse, long-term, direct impact to historic architectural resources.

Indirect and cumulative impacts under the Western Annex Alternative would be the same as those described for the Southern Annex Alternative.

4.3.2.4 Northern Annex Alternative

Under the Northern Annex Alternative, the present Greyhound Bus Terminal and parking lot would be demolished and a new annex constructed on the site. Construction at the Northern Annex Site would introduce modern elements to the viewshed of the Walter E. Hoffman U.S. Courthouse. Although there would be some impact, given the present nature of the site, with open parking spaces and modern buildings, the construction of the annex on this site would not substantially impact the overall visual continuity of the historic district and would not substantially alter the current viewshed surrounding the Courthouse and the Downtown Norfolk Historic District. In terms of Section 106 of the National Historic Preservation Act, this would constitute No Adverse Effect on the Downtown Norfolk Historic District and the Walter E. Hoffman U.S. Courthouse. Construction on this site would create a minor, adverse, long-term, direct impact to historic structures.

The area is currently experiencing wide scale growth and renewal. The construction on the Northern Annex Alternative Site would not have a substantial effect on architectural resources when compared to the effect of the widespread development already under way in the vicinity. Therefore, a negligible, adverse, indirect impact would occur under this alternative.

Although the demolition and re-development of the Northern Annex Alternative would contribute somewhat to the cumulative changes already taking place in the vicinity of the courthouse, the Northern Annex Alternative is not located within the historic district and is not of sufficient size and massing to have an impact on contributing resources due to its distance from the majority of the structures. The closest contributing resource is the Walter E. Hoffman U.S. Courthouse, which is the largest building in the vicinity and provides a visual screen to the remainder of the District. Therefore, a negligible, adverse cumulative indirect impact would occur under this alternative.

4.3.2.5 Eastern Annex Alternative

Under the Eastern Annex Alternative, an addition would be constructed on the east façade of the present Walter E. Hoffman U.S. Courthouse. The addition would be similar in design and scale to the existing courthouse. However, the addition would conceal a major part of the eastern façade of this National Register listed building, thus altering its physical and visual character. Construction on the Eastern Annex Site would introduce modern intrusive elements to this National Register resource, and constitute an Adverse Effect in terms of Section 106. As the courthouse is also a contributing resource to the Downtown Norfolk Historic District, this would also adversely affect that District. Construction on this site would create a moderate, adverse, long-term, direct impact to historic structures.

Indirect and cumulative impacts under the Eastern Annex Alternative would be the same as those described for the Southern Annex Alternative.

4.3.2.6 Tower Annex Alternative

The Tower Annex Alternative would consist of constructing a seven-story tower above the current Walter E. Hoffman U.S. Courthouse building, which is a National Register, listed historic property and is also a contributing resource to the Downtown Norfolk Historic District.

Construction of the Tower Annex Alternative would alter the current historic viewshed by altering the massing and scale of the present building as well as introducing a new visual element to the Downtown Norfolk Historic District. In terms of Section 106 of the National Historic Preservation Act, the addition of new elements would constitute an Adverse Effect on the Downtown Norfolk Historic District and the Walter E. Hoffman U.S. Courthouse. Consequently, construction on this site would create a moderate, adverse, long-term, direct impact to architectural and visual resources.

Indirect and cumulative impacts under the Tower Annex Alternative would be the same as those described for the Southern Annex Alternative.

4.3.2.7 Mitigation Measures

Mitigation measures would be different, depending upon the alternative selected. Any mitigation would be a result of meetings between GSA, the Virginia SHPO, and any consulting parties and would be established in a Memorandum of Agreement (MOA). Design for any of the four alternatives would meet the Secretary of Interior's guidelines for new additions to historic buildings and construction within historic districts.

The following mitigation measures are examples of those that could be implemented for historic structures:

- Landscaping around the perimeter of the site could be implemented to help screen the view of the building from neighboring buildings.
- Low-intensity lighting could be used where feasible.
- Design should be careful to complement the scale, massing, and design of the surrounding visual resources, especially those features of the existing courthouse.
- Photographic and further historical documentation of affected historic resources in consultation with the Department of Historic Resources of Virginia prior to commencement of demolition or construction.

Prior to construction within this Downtown Norfolk Historic District, applicants must obtain a certificate of appropriateness from the design review committee within the planning commission. However, GSA, as a federal agency, is not required to do so (City of Norfolk, 2006).

4.4 INFRASTRUCTURE

The following section describes impacts to infrastructure, including utilities, transportation, and waste management, for the No-Action Alternative and for the Build Alternatives.

4.4.1 UTILITIES

4.4.1.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no impact to area utilities

4.4.1.2 Build Alternatives

Regardless of which alternative is selected for development of the proposed annex, underground utilities (water, sewer, electricity, gas, and telephone) would need to be relocated. Utility company representatives have indicated that these utilities could all be relocated with little or no interruptions to service.

Water Supply and Distribution

The proposed project would require a potable water supply for domestic consumption as well as for heating and cooling systems and fire protection purposes. The anticipated average water demand for the buildings domestic consumption is approximately 15,300 gallons per day (gpd) based on 115 percent of the structure's wastewater load (assuming 75 gpd per 1,000 square feet of building space).

The city's water system is currently permitted for a maximum flow of 107 million gallons per day (mgd) and current usage averages approximately 60 mgd. The increase in demand resulting from the proposed project is not expected to present a substantial adverse impact on the city's raw water sources, treatment capability, or distribution system. Representatives of the City of Norfolk, Department of Utilities have indicated that they anticipate no unusual difficulties provided water service to the sites.

Past, present, and future development would increase the usage of the area's water supply and its capacity for distribution. This development would have a minor, adverse, cumulative impact on the water supply. The proposed Courthouse Annex would contribute negligibly to these cumulative impacts.

Wastewater Treatment

The proposed facility would require wastewater collection, which would be provided by the City of Norfolk, Department of Utilities. The Hampton Roads Sanitation District would provide treatment of wastewater. Sewage generation was estimated using a standard multiplier (75 gpd per 1,000 square feet of building floor space), and is projected to total approximately 13,300 gpd. An existing eight-inch sewer main is located within the Brambleton Avenue right-of-way adjacent to the existing courthouse. This sewage main has sufficient capacity to accommodate the increased load generated by the proposed action. Representatives of both Hampton Roads Sanitation District and the Department of Utilities anticipate no unusual difficulties providing collection and treatment service to the sites.

The treatment plant that services the portion of Norfolk in which the courthouse is located has a permitted capacity of 40 mgd and currently accepts between 28 and 32 mgd. The potential

wastewater generation resulting from the operation of the proposed facility is well within the system's existing capacity and is not expected to pose an adverse impact.

Past, present, and future development would increase the demand for wastewater treatment services in the area. This development would have a minor, adverse, cumulative impact on wastewater treatment. The proposed Courthouse Annex would contribute negligibly to these cumulative impacts.

Electricity

Three distribution systems would be provided within the structure: 1) "normal" to serve general lighting and power loads; 2) "emergency" to serve life safety and critical loads; and 3) "uninterruptible" to serve critical loads which cannot be interrupted. All distribution equipment would be sized to include spare capacity in accordance with GSA guidelines. Dominion Virginia Power representatives have indicated that adequate electric service can be provided to any of the sites without adverse impacts to existing service capabilities. Representatives also indicate that they would be able to supply the necessary level of electrical service to the proposed facility in terms of voltage, capacity and reliability.

Past, present, and future development would increase the demand for electricity in the area. This development would have a minor, adverse, cumulative impact on electricity supplies. The proposed Courthouse Annex would contribute negligibly to these cumulative impacts.

Natural Gas

Virginia Natural Gas, Inc. would provide natural gas to the annex via transmission lines which exist along the south side of Brambleton Avenue. Additional lines exist within the rights-of-way of Monticello Avenue and Charlotte Street. According to company officials, the proposed project would have no adverse impact on gas supplies to other customers. Upon presentation of specific service and usage requirements and BTU ratings, it is anticipated that the company would conduct a detailed analysis to determine the most feasible arrangement for providing gas to the proposed facility. Conversations with company representatives indicate that the necessary level of service can be provided without adverse impact to their existing service capabilities.

Past, present, and future development would increase the demand for natural gas in the area. This development would have a minor, adverse, cumulative impact on Natural Gas supplies. The proposed Courthouse Annex would contribute negligibly to these cumulative impacts.

4.4.1.3 Mitigation Measures

The following mitigation measures may need to be conducted the site:

Water Supply and Distribution

Coordination between GSA, the construction contractor and city officials would ensure that there are no disruptions to the city's water supply and distribution service. No other mitigation measures are warranted.

Wastewater Treatment

Coordination between GSA, the construction contractor, and city officials would ensure that there are no disruptions to the city's water supply and distribution service. No other mitigation measures are warranted.

Electricity

All service requirements, service alternatives, optimum service locations and arrangements would be coordinated with Dominion Virginia Power representatives. Other than temporary impacts such as noise and dust associated with the construction of electric utility connections, there are no adverse impacts associated with providing electricity to any of the sites.

Natural Gas

Upon presentation of specific service and usage requirements and BTU ratings, it is anticipated that the company would conduct a detailed analysis to determine the most feasible arrangement for providing gas to the proposed facility. Conversations with company representatives indicate that the necessary level of service can be provided without adverse impact to their existing service capabilities.

4.4.2 TRANSPORTATION

The proposed expansion to the Norfolk Federal Courthouse is expected to be completed by 2012. There are five sites being considered for this expansion. They are all located within one block of the existing Courthouse.

4.4.2.1 No-Action Alternative

Under the No-Action Alternative, the Norfolk Federal Courthouse expansion would not occur and the existing number of people who regularly use this facility would continue to do so with no projected increase.

The No-Action Alternative includes future anticipated peak hour traffic volumes for roadways near the site. These volumes are the sum of the existing traffic volumes, plus the background growth in the area and any approved un-built developments in the study area.

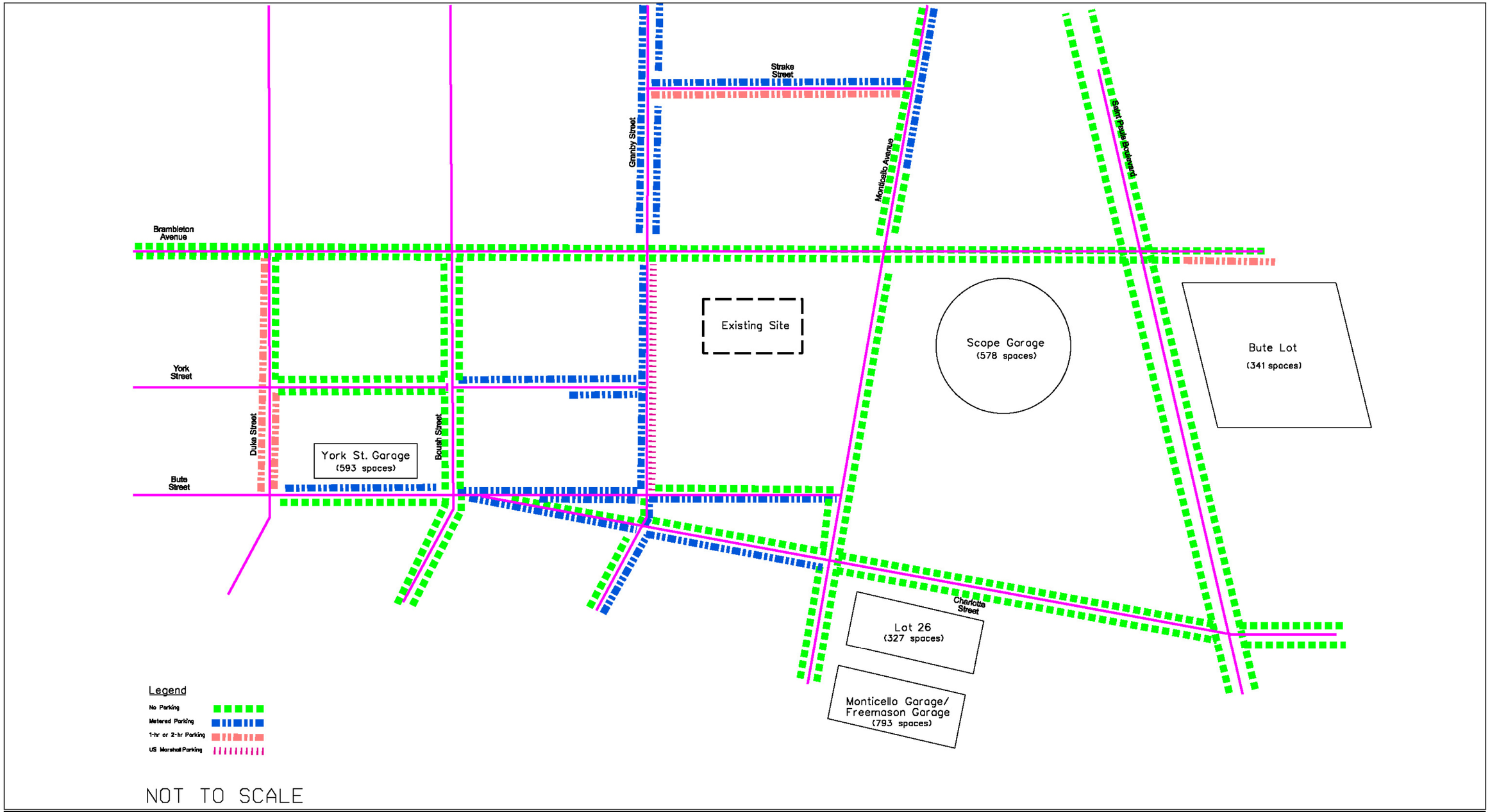

Figure 4-1: Parking

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Background Growth

Developments, which are approved, but are not yet built or occupied, are included in the background traffic. The city of Norfolk has a Synchro Model for the downtown area for the year 2026. This model includes background historic growth and approved yet un-built developments. Using the projected traffic in this model, the following growth rates were developed along the study roadways:

- 2% annual growth along Brambleton Avenue
- 3.5% annual growth along Granby Street
- 3% annual growth along Bute Street, Charlotte Street, and Monticello Street.
- 1% annual growth along all other study area roadways.

It should be noted that these rates include the background developments. Thus, the No-Action traffic volumes were derived, using the existing traffic volumes, the growth rates presented above and a methodology presented in the National Cooperative Highway Research Program Report 255 (NCHRP 255). These volumes are presented in Figure 4-1.

Traffic Operations Analysis

Conditions in 2012, under the No-Action Alternative, were evaluated using the methodology mentioned previously. The No-Action traffic and existing roadway geometry were included in the analysis. The LOS results are graphically depicted in Figure 4-2 and presented in Table 4-1.

Table 4-1. No Action Alternative LOS Results (2012)

Intersection	AM LOS (Delay)	PM LOS (Delay)
Brambleton Ave. and Monticello Ave.	A (9.7)	B (15.5)
Brambleton Ave. and Granby St.	A (7.9)	B (15.4)
Brambleton Ave. and Duke St.	C (26.7)	D (35.5)
Brambleton Ave. and St. Paul's Blvd.	E (56.7)	D (50.0)
Brambleton Ave. and Boush St.	B (14.2)	B (14.5)
Charlotte St. and Monticello Ave.	B (16.7)	B (13.3)
Charlotte St. and St. Paul's Blvd.	A (8.4)	B (11.6)
E. Bute St. and St. Paul's Blvd.	A (5.4)	A (2.9)
Boush St. and Bute St.	B (18.2)	B (10.8)
Charlotte St. and Granby St.	b (12.4)	c (20.4)

Bute St. and Granby St.	b (13.9)	b (15.5)
York St. and Granby St.	a (10.7)	a (9.9)
Bute St. and Monticello Ave.	b (11.6)	b (13.2)
Granby St. and Strake St.	b (12.1)	b (10.7)
Monticello Ave. and Strake St.	a (10.0)	b (10.9)

X – signalized intersection LOS; x – unsignalized movement LOS

Results of the analysis indicate that with the projected background growth (under the No-Action Alternative) all the intersections with the exception of the Brambleton Avenue/St. Paul's Boulevard intersection are expected to operate at LOS D or better during the AM and PM peak hours. The intersection at Brambleton Avenue/St. Paul's Boulevard is expected to operate at LOS D during the PM peak hour and at capacity conditions (LOS E) during the AM peak hour. All movements at the unsignalized intersections are expected to continue operating at LOS C or better during both the AM and PM peak hours.

4.4.2.2 Build Alternatives

The new expansion is expected to result in 75 new employees and some additional jurors at the Norfolk Federal Courthouse. There are five sites for the proposed Norfolk Courthouse Expansion. They are as follows:

- South Option
  - This option involves expansion to the south of Bute Street. This would involve the closure of Bute Street between Monticello Avenue and Granby Street. Monticello Avenue would also become a two lane roadway.

- West Option
  - This option involves expansion to the west of the existing courthouse across Granby Street. This proposed facility would be bounded by Brambleton Avenue to the north, Granby Street to the east, and Bute Street to the south. York Road, west of Granby Street would be closed.

- North Option
  - This option involves construction to the north of Brambleton Avenue. The new site would be bounded on the north by Strake Street, on the east by Monticello Avenue, and on the west by Granby Street. The existing and the new proposed building would be connected via a walkway.

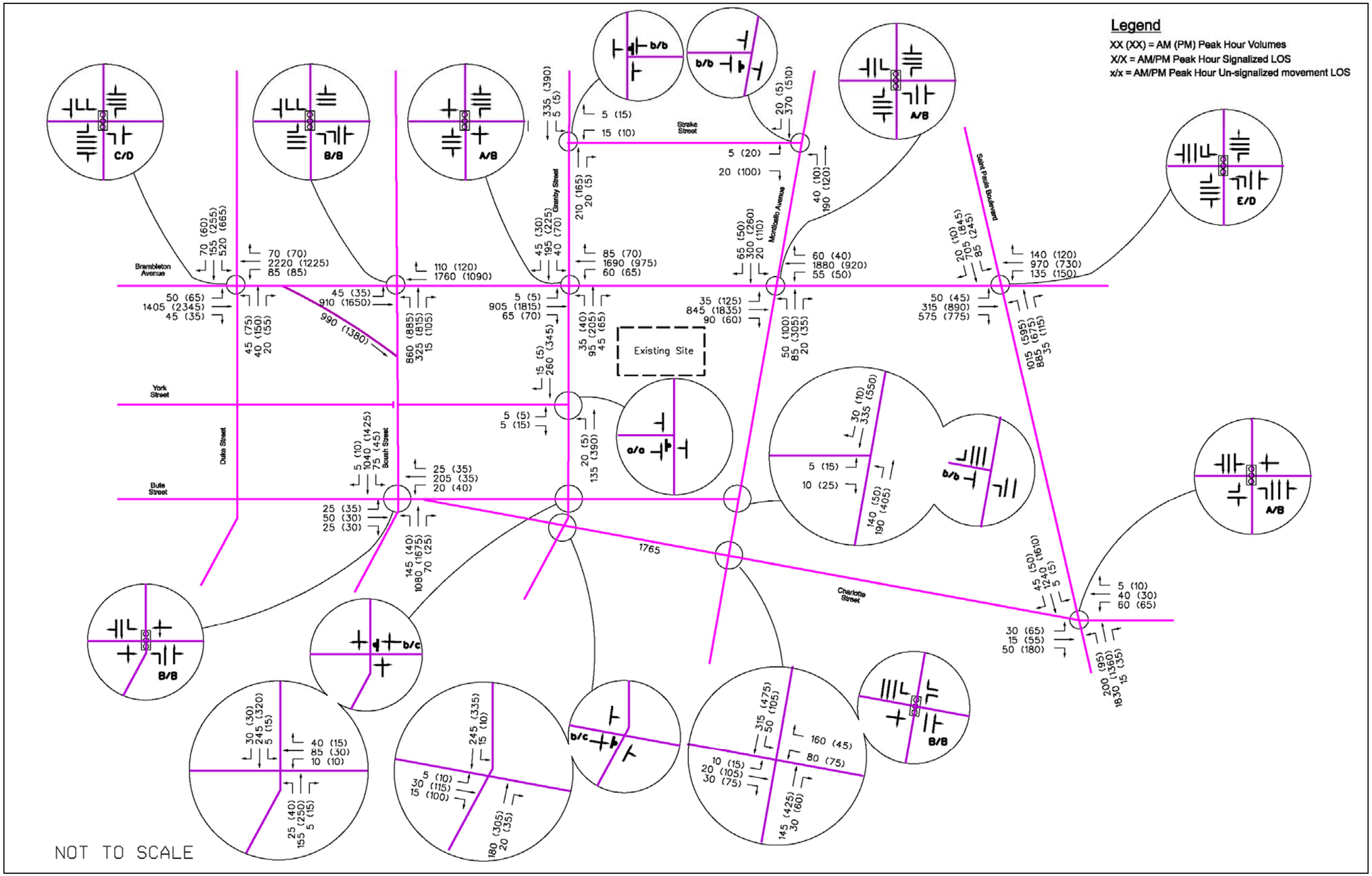

Figure 4-2: No-Action Traffic Volumes, Lane Geometry, and LOS Analysis

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- East Option
  - This option involves expansion to the east of the existing courthouse. It would involve the closure of Monticello Avenue between Bute Street and Brambleton Avenue.

- Tower Option
  - This alternative involves building a tower on top of the exiting courthouse. This option would involve the closure of Bute Street between Monticello Avenue and Boush Street. Monticello Avenue would become a two lane roadway.

Site Trip Generation

The number of vehicle-trips generated by these additional employees/jurors was estimated using the Institute of Transportation Engineers (ITE) Trip Generation manual and GSA's prior experience with similar facilities. The Single Tenant Office land use was used to develop the trips for the new employees and discussions with GSA and their prior experience with these types of facilities were used to determine the trip making patterns of jurors.

Thus, this proposed expansion is expected to generate approximately 140 trips during the AM peak hour and 145 trips during the PM peak hour. The trip generation analysis is presented in Table 4-2 below.

Table 4-2: Trip Generation

Land Use	ITE Land Use Code	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Federal Employees	Single Tenant Office Building (715)	75	51	6	57	10	59	69
Jurors	GSA*		85	-	85	-	77	77
Total			136	6	142	10	136	146

* This information is based on the GSA's prior experience with other courthouses in the country

Site Trip Distribution

The trip distribution of the additional employees and the jurors were estimated based on the existing traffic patterns, roadway systems, and the parking locations. The site trip distribution percentages are presented in Figure 4-3 and they are as follows:

- 10 percent to/from the east along Brambleton Avenue
- 30 percent to/from the south along St. Paul's Boulevard
- 10 percent to/from the south along Boush Street
- 20 percent to/from the west along Brambleton Avenue
- 10 percent to/from the north along St. Paul's Boulevard
- 10 percent to/from the north along Duke Street
- 5 percent to/from the north along Monticello Street
- 5 percent to/from the north along Granby Street

The Federal Courthouse does not provide onsite parking for anyone apart from judges, and thus employees and jurors would have to park at surrounding parking garages or at the spaces provided on the streets. The on-street parking along a majority of the streets, however, is restricted to 1 to 2 hour metered parking. Thus, we do not expect employees or jurors to make use of the on-street parking on a regular basis.

The Scope Coliseum parking garage is open to the public when events are not being held at it. The Scope's location makes it the most likely garage that the new employees/jurors would use as it is across street from the Federal Courthouse. Furthermore, it is our understanding that this garage is most frequently used by the current employees and jurors of the courthouse. In fact the U.S. Marshals website mentions this garage as the location for parking. Thus, we believe that most of the additional employees and jurors would be using this garage. Access to this garage is provided via St. Paul's Boulevard.

Site Trip Assignment

The trip generation estimate for the Norfolk Federal Courthouse sites were distributed along the study area roadways/intersections based on the trip distribution estimates presented above. The site trip assignments are presented in Figure 4-4.

Traffic Operations Analysis

Total traffic volumes were determined by adding the site traffic volumes to the No-Action volumes. It should be noted that because the South and East Options involve the closure of Bute Street and Monticello Avenue, the volumes projected for these roadway had to be redistributed. Thus, Figures 4-5, 4-6, 4-7, and 4-8 present the Action Alternatives Volumes Lane Geometries and LOS results. Figures 4-5 and 4-6 present the volumes for the North and West Alternatives, respectively. Figure 4-7 presents the volumes for the East Alternative and Figure 4-8 presents the volumes for South and the Tower Alternatives.

Intersection capacity analyses were performed at the study intersections and the results are presented in Figures 4-5, 4-6, 4-7, and 4-8. The LOS results for the North and West Alternatives are presented in Table 4-3.

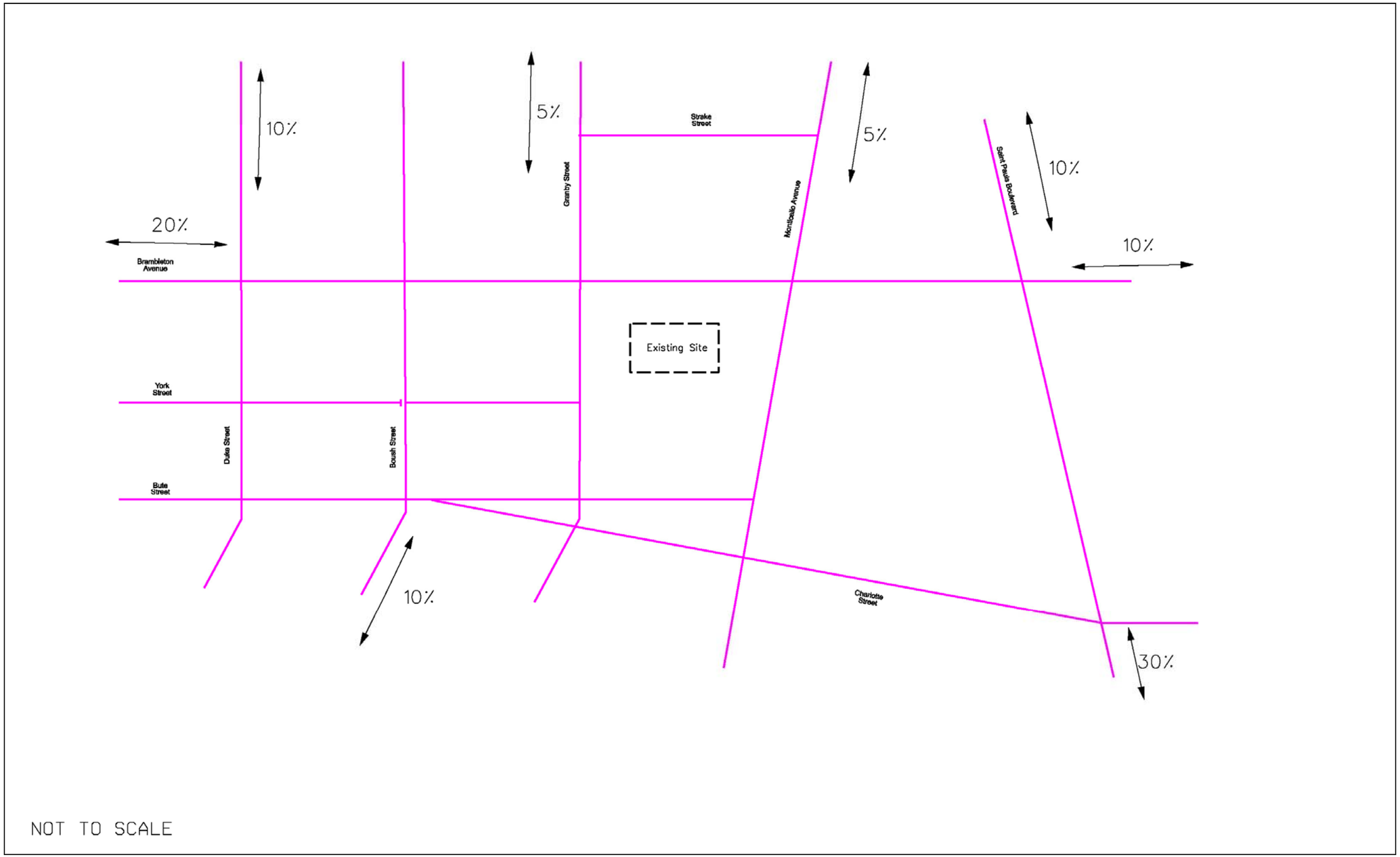

Figure 4-3: Site Trip Distribution

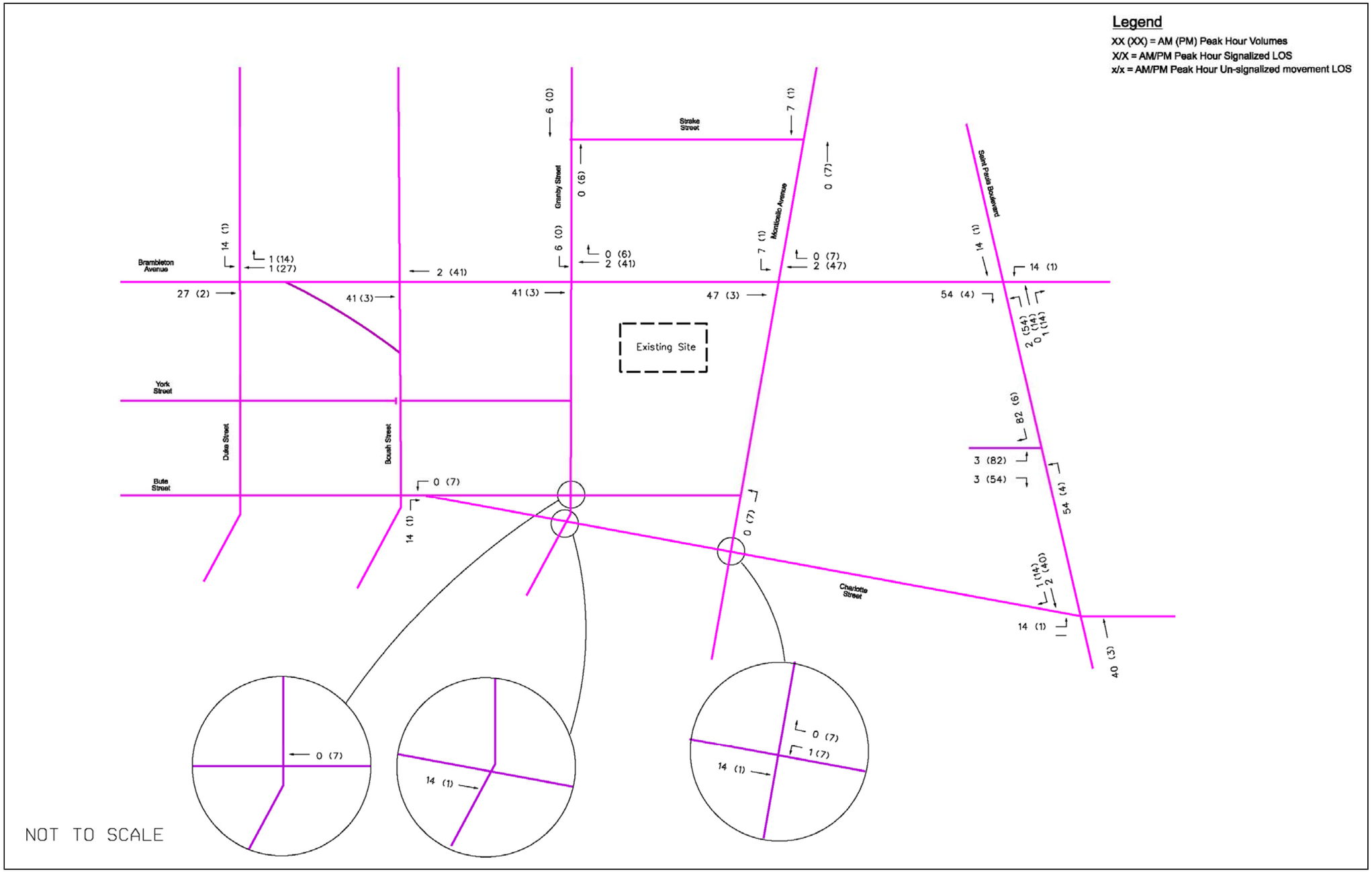

Figure 4-4: Site Trip Assignment

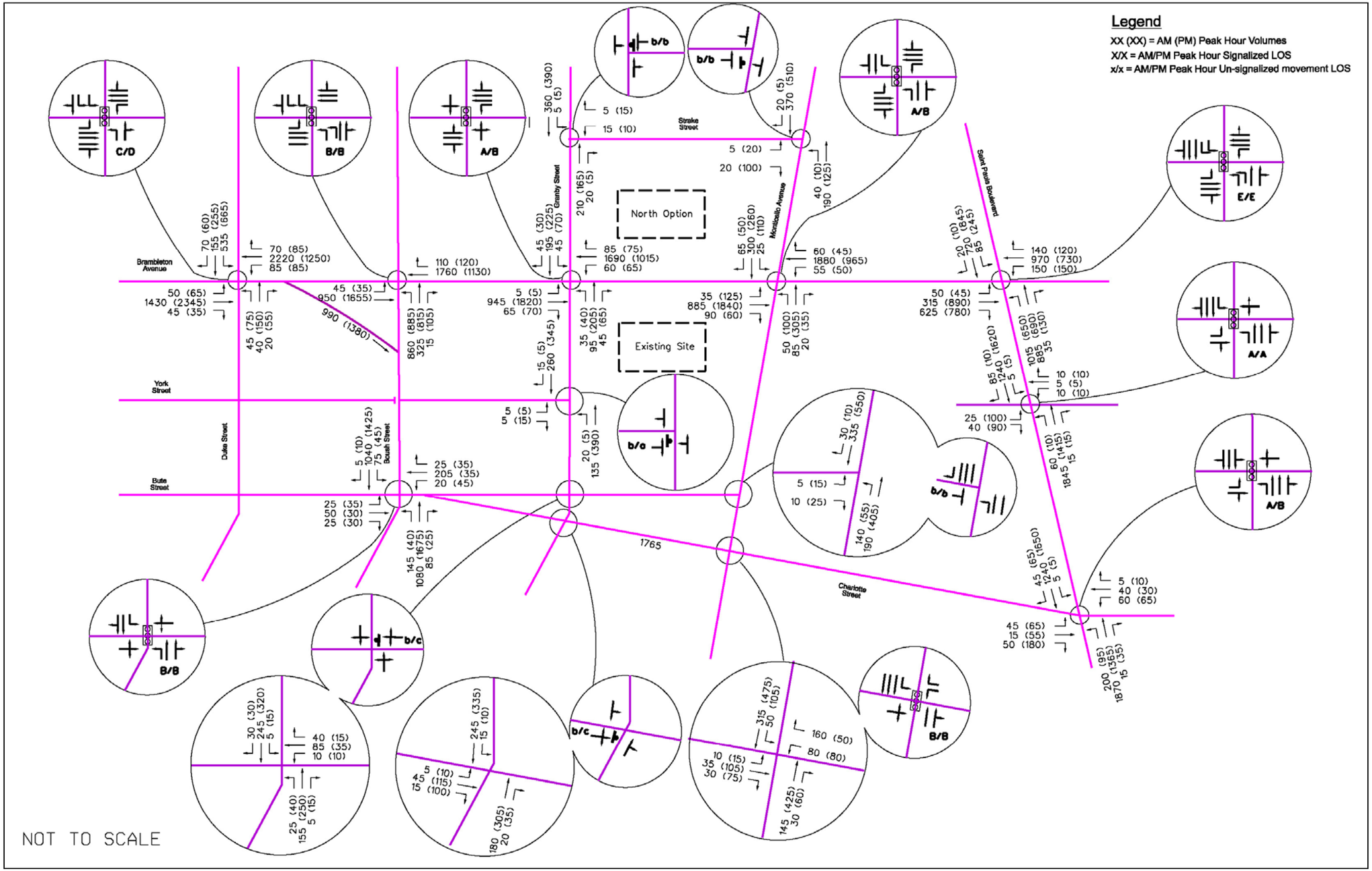

Figure 4-5: North Option Build Traffic Volumes, Lane Geometries, and LOS Results

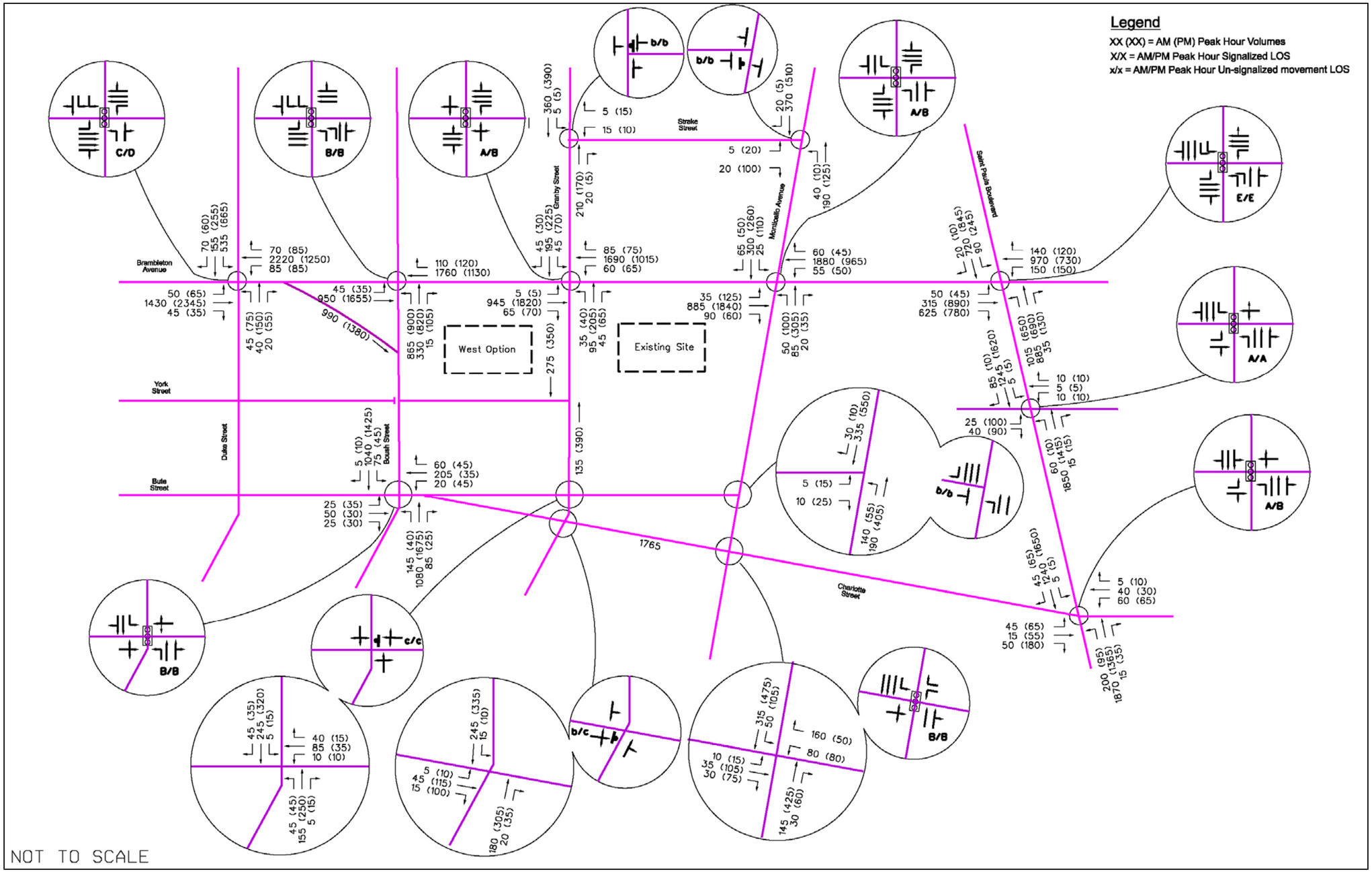

Figure 4-6: West Option Build Traffic Volumes, Lane Geometries, and LOS Results

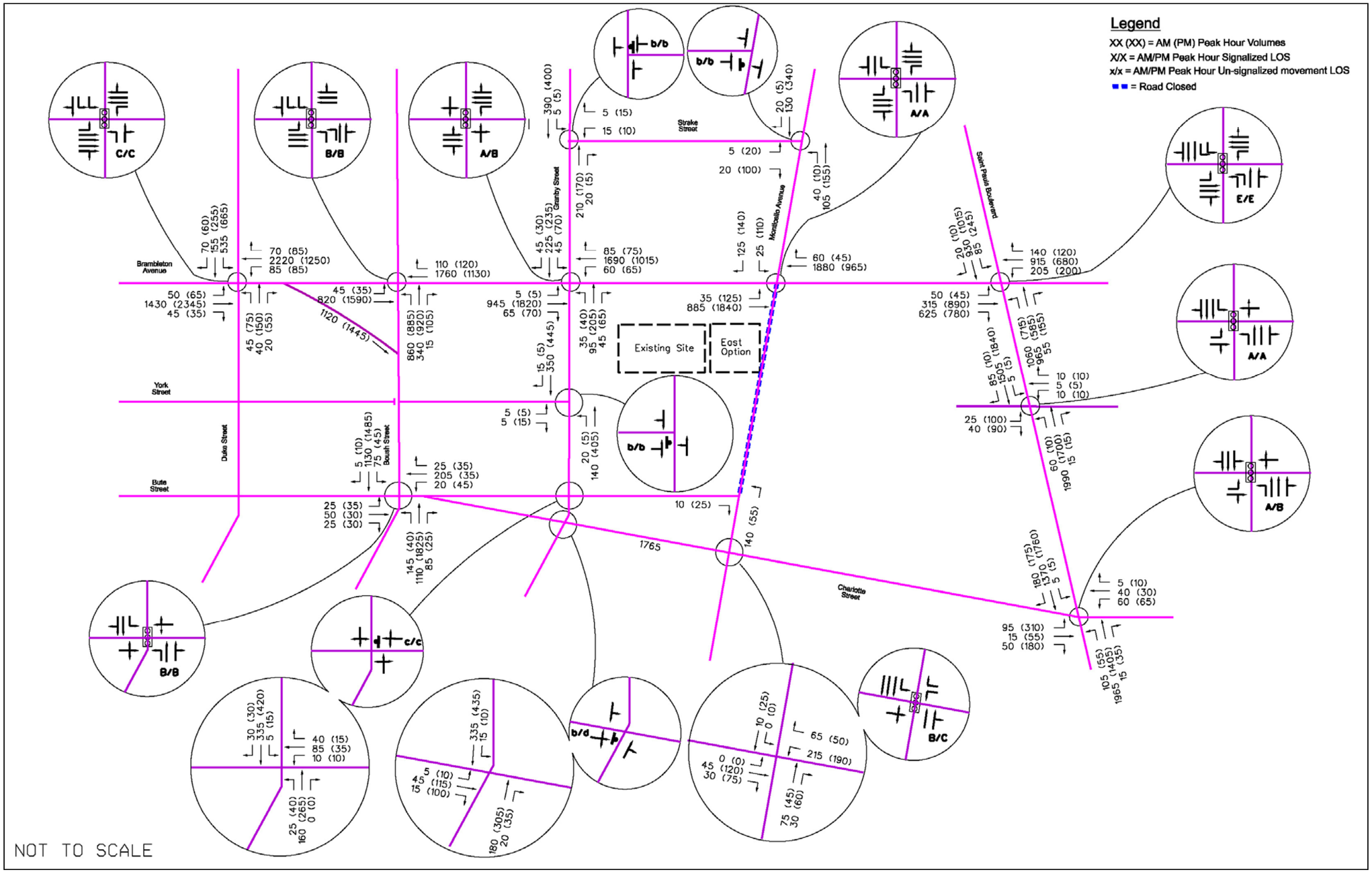

Figure 4-7: East Option Build Traffic Volumes, Lane Geometries, and LOS Results

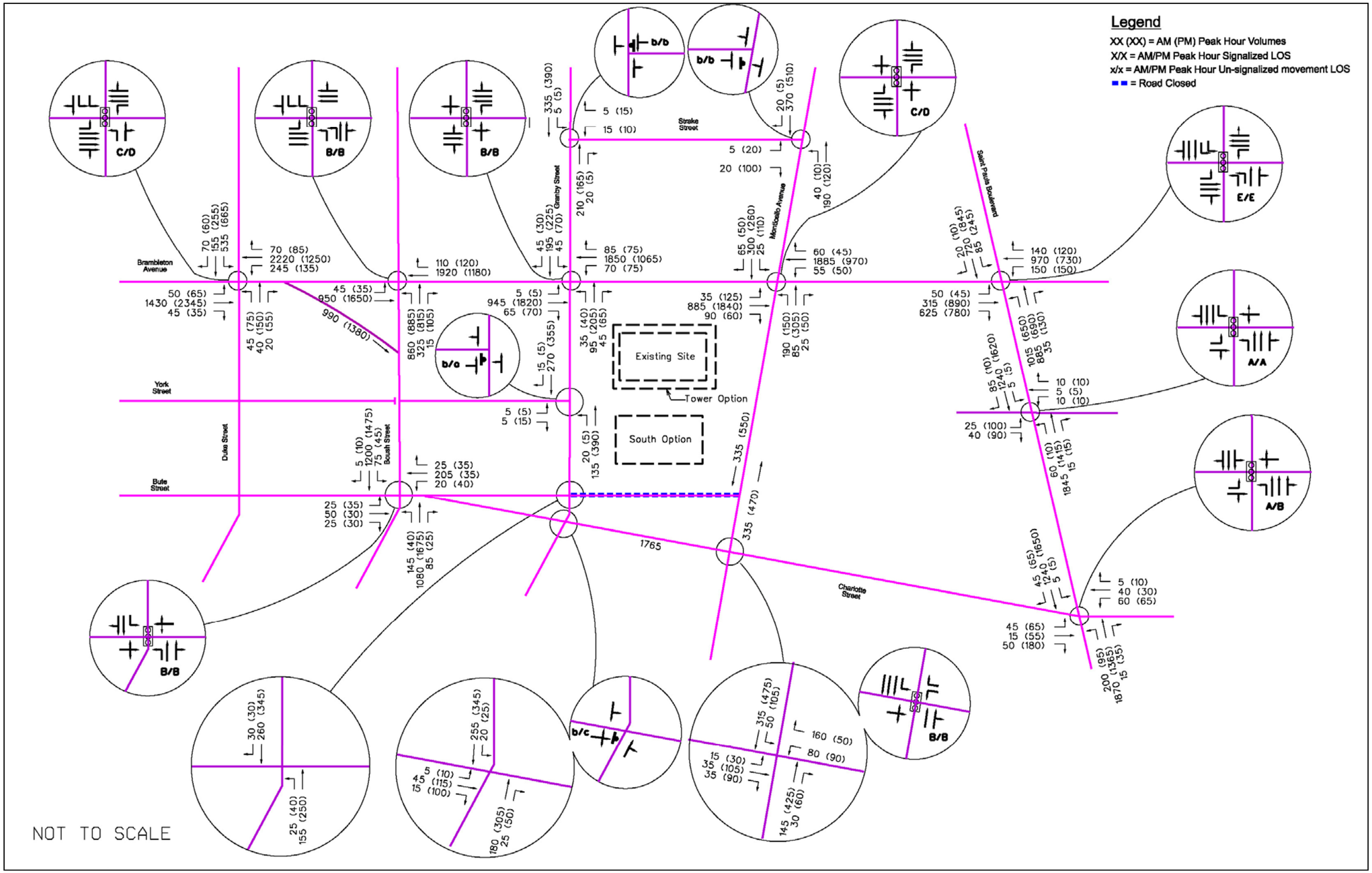

Figure 4-8: South and Tower Option Build Traffic Volumes, Lane Geometries, and LOS Results

Table 4-3. Action Alternative LOS Results – North Option (2012)

Intersection	No-Action		Action (North Option)	
	AM LOS (Delay)	PM LOS (Delay)	AM LOS (Delay)	PM LOS (Delay)
Brambleton Ave. and Monticello Ave.	A (9.7)	B (15.5)	A (9.7)	B (15.5)
Brambleton Ave. and Granby St.	A (7.9)	B (15.4)	A (8.4)	B (15.5)
Brambleton Ave. and Duke St.	C (26.7)	D (35.5)	C (27.3)	D (35.7)
Brambleton Ave. and St. Paul's Blvd.	E (56.7)	D (50.0)	E (58.8)	E (56.1)
Brambleton Ave. and Boush St.	B (14.2)	B (14.5)	B (14.3)	B (14.7)
Charlotte St. and Monticello Ave.	B (16.7)	B (13.3)	B (16.9)	B (13.8)
Charlotte St. and St. Paul's Blvd.	A (8.4)	B (11.6)	A (8.4)	B (12.5)
E. Bute St. and St. Paul's Blvd.	A (5.4)	A (2.9)	A (5.4)	A (5.2)
Boush St. and Bute St.	B (18.2)	B (10.8)	B (18.3)	B (13.7)
Charlotte St. and Granby St.	b (12.4)	c (20.4)	b (12.9)	c (20.4)
Bute St. and Granby St.	b (13.9)	b (15.5)	c (16.5)	c (15.8)
York St. and Granby St.	a (10.7)	a (9.9)	a (10.7)	a (9.9)
Bute St. and Monticello Ave.	b (11.6)	b (13.2)	b (11.6)	b (13.3)
Granby St. and Strake St.	b (12.1)	b (10.7)	b (12.1)	b (10.7)
Monticello Ave. and Strake St.	a (10.0)	b (10.9)	a (10.0)	b (10.9)

X – signalized intersection LOS; x – unsignalized movement LOS

As can be seen in Table 4-3, with the North Option, the study intersections are expected to operate at the same LOS as under the No-Build conditions. Thus, all the intersections are expected to operate at LOS D or better during the peak hours, with the exception of the Brambleton Avenue/St. Paul's Boulevard Intersection which is expected to operate at LOS E during the AM and PM peak hours.

Table 4-4 presents the LOS results for the West Option.

Table 4-4: Action Alternative LOS Results – West Option (2012)

Intersection	No-Action		Action (West Options)	
	AM LOS (Delay)	PM LOS (Delay)	AM LOS (Delay)	PM LOS (Delay)
Brambleton Ave. and Monticello Ave.	A (9.7)	B (15.5)	A (9.7)	B (15.5)
Brambleton Ave. and Granby St.	A (7.9)	B (15.4)	A (8.4)	B (15.5)
Brambleton Ave. and Duke St.	C (26.7)	D (35.5)	C (27.3)	D (35.7)
Brambleton Ave. and St. Paul's Blvd.	E (56.7)	D (50.0)	E (58.8)	E (56.1)
Brambleton Ave. and Boush St.	B (14.2)	B (14.5)	B (14.4)	B (14.7)
Charlotte St. and Monticello Ave.	B (16.7)	B (13.3)	B (16.9)	B (13.8)
Charlotte St. and St. Paul's Blvd.	A (8.4)	B (11.6)	A (8.4)	B (12.5)
E. Bute St. and St. Paul's Blvd.	A (5.4)	A (2.9)	A (5.4)	A (5.2)
Boush St. and Bute St.	B (18.2)	B (10.8)	B (19.8)	B (13.6)
Charlotte St. and Granby St.	b (12.4)	c (20.4)	b (12.9)	c (20.4)
Bute St. and Granby St.	b (13.9)	b (15.5)	c (18.3)	c (16.6)
York St. and Granby St.	a (10.7)	a (9.9)	N/A	N/A
Bute St. and Monticello Ave.	b (11.6)	b (13.2)	b (11.6)	b (13.3)
Granby St. and Strake St.	b (12.1)	b (10.7)	b (12.1)	b (10.7)
Monticello Ave. and Strake St.	a (10.0)	b (10.9)	a (10.0)	b (10.9)

X – signalized intersection LOS; x – unsignalized movement LOS

As shown in Table 4-4, with the West Alternative and the closure of York Street west of Granby Street, the study intersections are expected to operate at the same LOS as under the No-Action conditions. Thus, all the intersections are expected to operate at LOS D or better during the peak hours, with the exception of the Brambleton Avenue/St. Paul's Boulevard intersection, which is expected to operate at LOS E during the AM and PM peak hours.

Table 4-5 presents the LOS results for the East Alternative, followed by Table 4-6, which presents the LOS results for the South and Tower Alternative.

Table 4-5. Action Alternative LOS Results - East Option (2012)

Intersection	No-Action		Action (East Option)	
	AM LOS (Delay)	PM LOS (Delay)	AM LOS (Delay)	PM LOS (Delay)
Brambleton Ave. and Monticello Ave.	A (9.7)	B (15.5)	A (5.2)	A (9.3)
Brambleton Ave. and Granby St.	A (7.9)	B (15.4)	A (9.6)	B (17.1)
Brambleton Ave. and Duke St.	C (26.7)	D (35.5)	C (27.3)	D (35.7)
Brambleton Ave. and St. Paul's Blvd.	E (56.7)	D (50.0)	E (63.0)	E (74.7)
Brambleton Ave. and Boush St.	B (14.2)	B (14.5)	B (13.8)	B (14.8)
Charlotte St. and Monticello Ave.	B (16.7)	B (13.3)	B (18.5)	B (20.9)
Charlotte St. and St. Paul's Blvd.	A (8.4)	B (11.6)	A (7.6)	B (18.8)
E. Bute St. and St. Paul's Blvd.	A (5.4)	A (2.9)	A (5.2)	A (6.8)
Boush St. and Bute St.	B (18.2)	B (10.8)	B (18.8)	B (13.8)
Charlotte St. and Granby St.	b (12.4)	c (20.4)	b (14.0)	c (25.2)
Bute St. and Granby St.	b (13.9)	b (15.5)	b (15.2)	b (18.6)
York St. and Granby St.	a (10.7)	a (9.9)	a (11.6)	a (13.2)
Bute St. and Monticello Ave.	b (11.6)	b (13.2)	N/A	N/A
Granby St. and Strake St.	b (12.1)	b (10.7)	b (12.4)	b (10.8)
Monticello Ave. and Strake St.	a (10.0)	b (10.9)	a (9.5)	b (9.7)

X – signalized intersection LOS; x – unsignalized movement LOS

As shown in Table 4-5, with the East Alternative, which involves closing Monticello Avenue, the study intersections are expected to operate at the same LOS as under the No-Action conditions. Thus, all the intersections are expected to operate at LOS D or better during the peak hours, with the exception of the Brambleton Avenue/St. Paul's Boulevard intersection, which is expected to operate at LOS E during the AM and PM peak hours. However, it should be noted that under the East Alternative, the delays at the Brambleton Avenue/St. Paul's Boulevard intersection, during the PM peak, are expected to be significantly higher than under any other scenario.

Table 4-6. Action Alternative LOS Results - South and Tower Option (2012)

Intersection	No-Action		Action (South and Tower Options)	
	AM LOS (Delay)	PM LOS (Delay)	AM LOS (Delay)	PM LOS (Delay)
Brambleton Ave. and Monticello Ave.	A (9.7)	B (15.5)	C (21.2)	D (38.4)
Brambleton Ave. and Granby St.	A (7.9)	B (15.4)	B (10.4)	B (16.1)
Brambleton Ave. and Duke St.	C (26.7)	D (35.5)	C (29.9)	D (36.2)
Brambleton Ave. and St. Paul's Blvd.	E (56.7)	D (50.0)	E (58.5)	E (58.6)
Brambleton Ave. and Boush St.	B (14.2)	B (14.5)	B (14.6)	B (15.1)
Charlotte St. and Monticello Ave.	B (16.7)	B (13.3)	B (16.8)	B (17.5)
Charlotte St. and St. Paul's Blvd.	A (8.4)	B (11.6)	A (7.6)	B (11.3)
E. Bute St. and St. Paul's Blvd.	A (5.4)	A (2.9)	A (5.1)	A (7.5)
Boush St. and Bute St.	B (18.2)	B (10.8)	B (18.7)	B (12.0)
Charlotte St. and Granby St.	b (12.4)	c (20.4)	b (13.2)	c (21.3)
Bute St. and Granby St.	b (13.9)	b (15.5)	N/A	N/A
York St. and Granby St.	a (10.7)	a (9.9)	a (10.8)	a (9.9)
Bute St. and Monticello Ave.	b (11.6)	b (13.2)	N/A	N/A
Granby St. and Strake St.	b (12.1)	b (10.7)	b (12.1)	b (10.7)
Monticello Ave. and Strake St.	a (10.0)	b (10.9)	a (10.0)	b (10.9)

X – signalized intersection LOS; x – unsignalized movement LOS

With the South and Tower Alternatives, as shown in Table 4-6, all the intersections are expected to operate at LOS D or better with the exception of the Brambleton Avenue/St. Paul's Boulevard intersection, which is expected to operate at LOS E during both the AM and PM Peak.

Transit Facilities Analysis

A significant portion of the bus routes in Norfolk stop at the Monticello Avenue/Charlotte Street intersection. In fact, all the routes described with the exception of the NET bus route, have a stop at near this intersection, which is one block from the Norfolk Federal Courthouse and will be at most two blocks away from the any of the five options discussed. The free NET route also

runs along Granby Street, which borders the existing courthouse. The NET has a stop at the Granby Street/Monticello Road intersection. Thus, public transit to the Norfolk Courthouse is and will be easily available to those who would like to use it.

Parking Facilities Analysis

There is adequate capacity in the surrounding parking supply to absorb the parking demand increase by the Federal Courthouse expansion. There are 5 parking garages within a 2 block radius of the courthouse providing approximately 2,630 parking spaces. In these garages, the average occupancy rate for any 1-hour period between 7 AM to 11 AM is 78% or less. During the hours of 2 PM and 5 PM, the average occupancy for any 1-hour period is 64% or less.

The parking garage most likely to be impacted by the courthouse expansion is the Scope garage as it is closest to the courthouse. This garage has 578 parking spaces. During the AM Peak Period, the Scope garage has an occupancy rate of 25% or less and during the PM peak period it has an occupancy rate of 18% or less. Thus, overall, the additional demand placed by the courthouse expansion should be easily accommodated by the existing parking supply.

4.4.2.3 Mitigation Measures for Traffic

Mitigation Strategies to Improve Operational Conditions at Intersections:

As discussed above under the Build Alternatives analysis, all of the study area intersections are expected to operate at LOS D or better during both the AM and PM peak hours, with the exception of the Brambleton Avenue/St. Paul's Boulevard intersection. Under the No-Action conditions, this intersection is expected to operate at LOS E during the AM peak hour and D during the PM peak hour. However, under all the action alternatives, this intersection would operate at LOS E during both peak hours.

The Brambleton Avenue/St. Paul's Boulevard intersection would operate with the highest delays under the East option, which would close Monticello Avenue between Bute and Brambleton Streets. Not only would this option be disruptive to the traffic flow in this area and increase congestion at several intersections, it would also significantly increase delays at the Brambleton Avenue/St. Paul's Boulevard intersection.

In order to improve the operational conditions at the Brambleton Avenue/St. Paul's Boulevard, it is recommended that an exclusive eastbound right turn lane be added. Thus, the eastbound approach of Brambleton Avenue would have an exclusive left turn lane, three through lanes, and an exclusive eastbound to southbound right turn lane. Due to the Scope Center abutting eastbound Brambleton Avenue, the expansion would have to occur along the north side of Brambleton Avenue. With this improvement, the Brambleton Avenue/St. Paul's Boulevard intersection is expected to operate at LOS D during both peak hours under all the action alternatives.

4.4.3 WASTE MANAGEMENT

4.4.3.1 No-Action Alternative

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no impact to waste management.

4.4.3.2 Build Alternatives

Construction and operation of the facility would generate solid waste requiring collection and disposal. Solid wastes would be generated during the construction phase, although no precise estimate of the quantity of such wastes can be made at this time. During this phase, the disposal of these materials would be the responsibility of the construction contractor. Wastes generated during this phase would be disposed of only at sites designed for this purpose and would have little or no adverse effect on other waste collection and disposal services.

Past, present, and future development, along with the proposed Courthouse Annex, would generate general waste. This development would have a moderate, adverse, cumulative impact on waste management. However, the proposed Courthouse Annex would contribute negligibly to these cumulative impacts.

4.4.3.3 Mitigation Measures

Mitigative measures to ensure compliance with all applicable pollution prevention and recycling programs include such strategies as waste separation and recycling of glass, paper products, aluminum, and various packaging materials to reduce the amount of solid waste generated. Other possible mitigative measures include reusing office supplies, more precise inventorying and ordering of office supplies, electronic mail, and negotiating with suppliers to utilize more economical packaging. The use of on-site compactors would result in less frequent collection services and would minimize service vehicle traffic.

4.5 SUMMARY OF ANY SIGNIFICANT IMPACTS AND REQUIRED MITIGATION

The proposed action would result in less than significant adverse impacts to the selected site and surrounding areas. These include less than significant adverse impacts on: topographic, geologic and soil conditions, hydrological and biological resources, demographic characteristics, community services and facilities, land use, traffic and transportation movements to and from the any of the sites, utility services, meteorological conditions, air quality and noise. Beneficial impacts would include providing the Courts with a secure facility and much needed space. Beneficial impacts to the area's economy would also be realized by virtue of the proposed action's construction budget. Cumulative, secondary, and construction-related impacts and any other potentially adverse impacts would be controlled, mitigated or avoided to the maximum extent possible.

4.6 RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Regulations for the preparation of environmental impact studies require that the relationship between short-term use of the environment and the maintenance of long-term productivity be addressed. In this instance, it should be noted that following initiation of the construction process, the selected site would be used as a construction site. Construction-related activities would include construction of a new structure, improvements to utility services and parking areas, etc.

The construction phase would generate economic productivity in terms of the construction jobs created, new payrolls, induced personal income, and the purchasing of materials, supplies, and services during the construction phase of the project.

Cumulative effects of construction and operation of the proposed facility would include stimulation of the local and regional economy. Cumulative impacts of the proposed action would also include its contribution to the overall efficiency of the operations of the courts within Virginia in general and the Eastern District of Virginia in particular.

4.7 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES

Regulations for the preparation of environmental studies also require that they address irreversible and irretrievable commitments of resources associated with the proposed action. In this instance construction and operation of the proposed facility would result in both direct and indirect commitments of resources. In some cases, the resources committed would be recovered in a relatively short time. In other cases, resources would be irreversibly or irretrievably committed by virtue of being consumed or by the apparent limitlessness of their commitment to a specific use. Irreversible and irretrievable commitments of resources can sometimes be compensated for by the creation of similar resources with substantially the same use or value, as in the case of wildlife or plant habitats, for example.

In this instance, much or all of the selected site would be required for the actual construction and operation of the facility. Resources consumed during the construction phase would be offset by the addition of badly needed courthouse space and the resulting societal benefits. Use of the developed portion of the land could be considered irretrievably committed. The proposed action would also require use of various construction materials, including cement, aggregate, steel, lumber, asphalt, and other building materials. Much of the material used during the construction phase may, however, be recycled at some future date. The proposed action would require the use of an amount of fossil fuel, electrical energy and other energy resources during the construction and operation of the proposed facility. These should also be considered irretrievably committed to the project.

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