



Executive Director's Recommendation

Commission Meeting: February 7, 2013

PROJECT New Commissary Fort Belvoir, North Post Fairfax County, Virginia	NCPC FILE NUMBER 7150
SUBMITTED BY United States Department of Defense Department of the Army	NCPC MAP FILE NUMBER 2204.00(38.00)43722
REVIEW AUTHORITY Advisory per 40 U.S.C. § 8722(b)(1)	APPLICANT'S REQUEST Final approval of site and building development plans
	PROPOSED ACTION Approve final building and site development plans
	ACTION ITEM TYPE Consent Calendar

PROJECT SUMMARY

The Department of the Army proposes to construct a new 138,500 square foot Commissary at Fort Belvoir on the site of the existing Post Exchange, which will be demolished at the completion of the new Post Exchange currently under construction. The Post Exchange and Commissary are part of a planned North Post Town Center development. The new Commissary will be supported by a total of 581 new parking spaces, including 507 for customers and 74 for employees. The project will also include a 3,000 square foot canopy along the front of the new Commissary building to shelter the entrance and exit areas, a loading area in the rear, and extensive landscaping/seating in the front to create an attractive pedestrian area linking the Post Exchange, Commissary and the rest of the Town Center development.

KEY INFORMATION

- The final Commissary design is substantively similar to the Preliminary design.
 - The Commission disapproved preliminary building plans and deferred action on preliminary site development plans due to inadequate information on the Army's reforestation plan, storm water management design, and customer parking.
 - The final submission includes all of the additional information requested by the Commission.
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RECOMMENDATION

The Commission:

Approves the final building and site development plans for a new Commissary on the North Post of Fort Belvoir.

PROJECT REVIEW TIMELINE

Previous actions	October, 2012 - Disapproval of preliminary building plans; deferral of action on preliminary site development plans due to inadequate information on the Army's reforestation plan, storm water management, and proposed customer parking; and recommendation to eliminate a separate proposed employee lot. The Commission requested this additional information prior to final design submission.
Remaining actions (anticipated)	None.

Prepared by Michael Weil
January 31, 2013

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I. PROJECT DESCRIPTION

Site

The project site is located on Fort Belvoir, North Post, approximately 12 miles south of Washington, D.C., in Fairfax County, Virginia. The site is currently developed with a Post Exchange (PX) building (Figure 1), situated within a relatively large land parcel bordered by Kingman Road on the north; Gunston Road on the west;

Gorgas Road on the south; and Woodlawn Road on the east. The new Commissary building will be constructed on the current site of the PX building as shown in Figure 2.

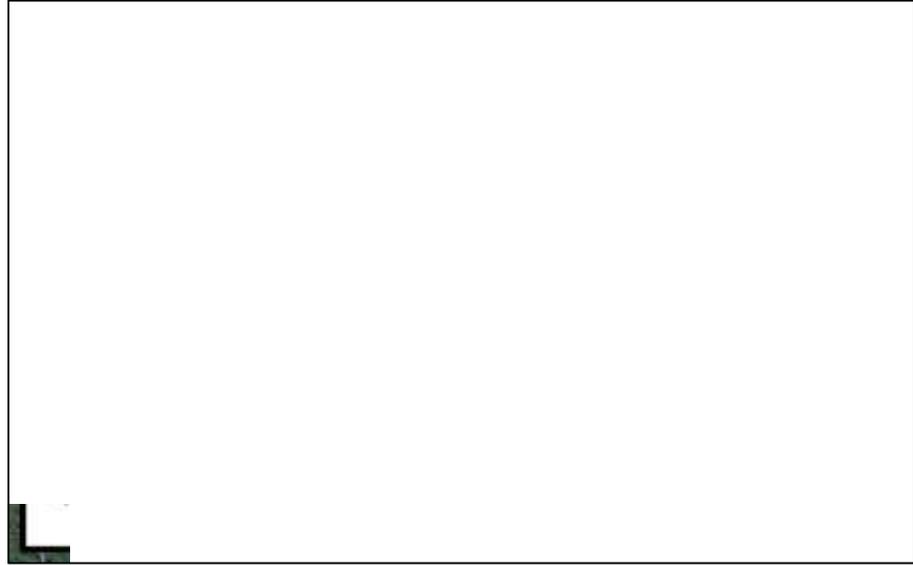


Figure 1: Existing Project Site

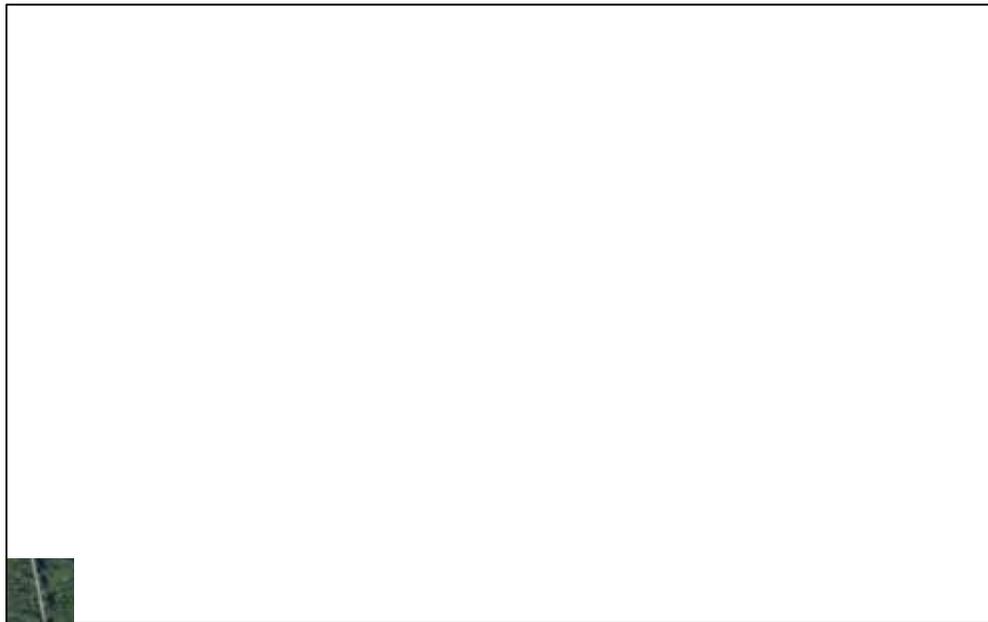


Figure 2: Future Commissary Project Site

Background

The Commissary project was first presented to the Commission as part of an informational presentation in June, 2012. The project was included in an Area Development Plan (ADP) for a future North Post Town Center development, part of the on-going 2013 Fort Belvoir Master Plan Update process. The ADP is consistent with the new *Unified Facilities Criteria (UFC) for Installation Master Planning* (May, 2012), which recommends that “installations be divided into identifiable and connected districts based on geographic features, land use patterns, building types, and/or transportation networks.” The planned North Post Town Center design is influenced by the existing notable Fort Belvoir-South Post Town Center, which has been recognized as the best example of a functional “town center”-style development on a military installation in the country. The town center framework design is shown in Figure 3.

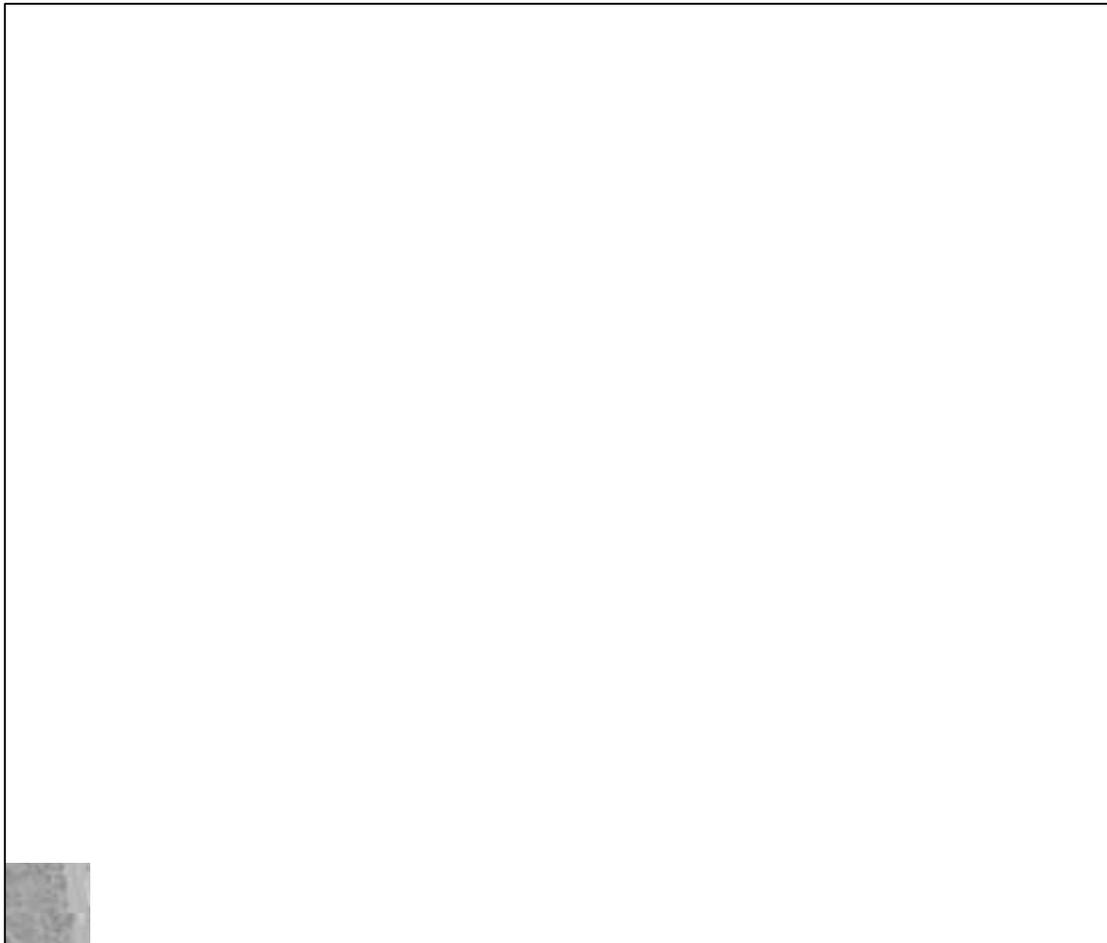


Figure 3: North Post Town Center Area Development Plan

The Commission reviewed the preliminary building and site development plans for the new Commissary in October, 2012 and issued the following action.

Disapproves the preliminary building plans for the new Commissary on the North Post of Fort Belvoir;

Defers action on the preliminary site development plans due to inadequate information on the applicant's reforestation plan, as well as proposed parking and storm water management;

Requests that prior to submitting for preliminary and final approval of site development plans for the Commissary, the applicant include the following:

- Information on the tree reforestation plan being developed for the Master Plan update
- Documentation on the project's compliance with storm water management standards from Fairfax County; Commonwealth of Virginia; EISA, Section 438; and Chesapeake Bay Protection and Restoration Act using quantitative information in the final project submission
- A detailed forecast of projected customer demand for the shared parking lot, including forecast assumptions, parking standards, customer demand overlap, and detailed quantitative demand information

Recommends the elimination of a separate employee parking lot.

Proposal

The final site development plans differ from the preliminary submission in that customer parking has been reduced by 12 spaces (from 519 to 507 spaces); employee parking has been slightly increased by five spaces (from 69 to 74 spaces); and the final design includes a customer drive-through facility on the south-side of the building, with a driveway and canopy. The drive-through window is intended to offer customers a convenient alternative for picking-up prescriptions and other small quantities of items, without parking. The final site design includes the same landscaped forecourt area in the front of the Commissary as seen in the preliminary design, with no changes. The "park-like" area is intended to buffer the Commissary from the customer parking, and will serve as part of a north-south, pedestrian linkage between the PX center (to the north) and the other future North Post Town Center development (to the south). Figure 4 highlights the three site design modifications made since the Commission's preliminary review, and Figure 5 illustrates the forecourt area along the front-side (west-side) of the new Commissary.

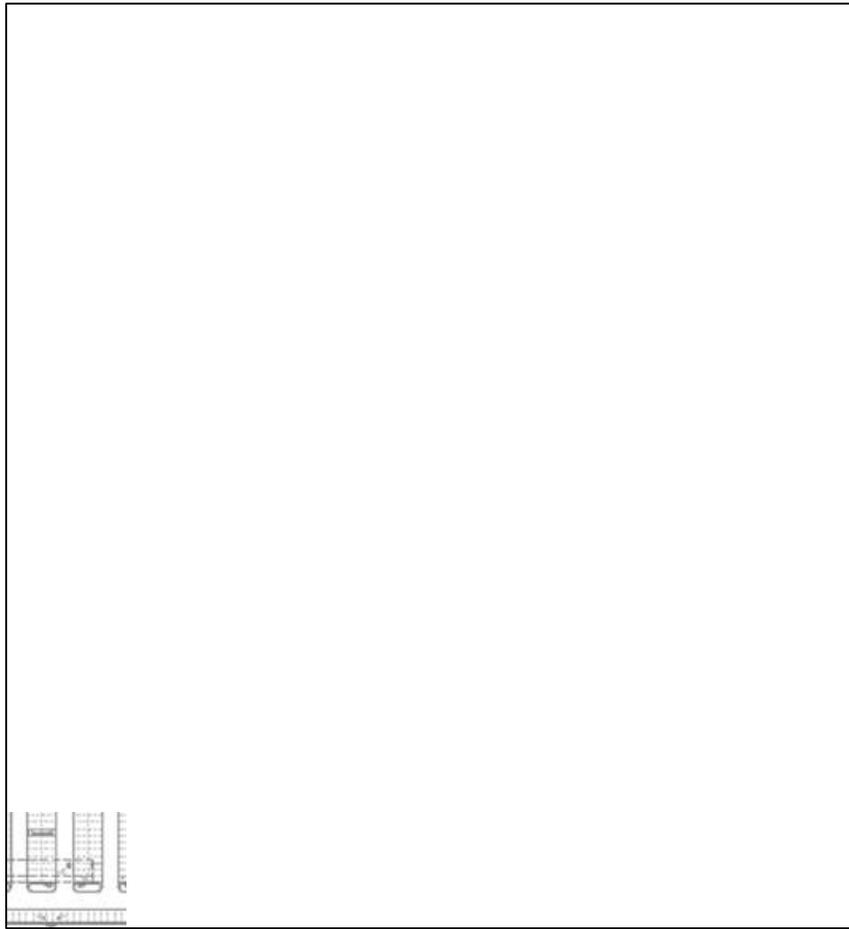


Figure 4: Site Development Plan Modifications



Figure 5: Commissary Forecourt Area Rendering

The current site plan shows 507 spaces (505 regular and 14 handicapped-accessible) in a customer lot (to the west of the building) and 74 employee spaces (71 regular and 3 handicapped-accessible) in a separate lot to the south of the building (Figure 4).¹ The preliminary submission showed 519 customer spaces (505 regular and 14 handicapped-accessible) and 69 employee spaces (66 regular and 3 handicapped-accessible spaces). More specific information related to the customer parking demand is described in the "Project Analysis/Conformance" section in response to the Commission's request.

II. PROJECT ANALYSIS/CONFORMANCE

Analysis

Based on review of the project against the NCPC Comprehensive Plan and existing Fort Belvoir Master Plan, NCPC staff recommends that the Commission **approve the final building and site development plans for a new Commissary on the North Post of Fort Belvoir**. Staff believes that the Army has submitted adequate follow-up information regarding the project's reforestation plan, storm water management design, and customer parking demand in response to the Commission's request during Preliminary review. The information is summarized in the following sections.

Reforestation Plan

The Army plans to mitigate the project's tree removal by replanting trees around Fort Belvoir at a one-to-one ratio, pursuant to a signed Memorandum of Agreement with AAFES (Army and Air Force Exchange Service), which will operate the future Post Exchange (PX) Shopping Center. The MOA (Appendix A) jointly applies to both the PX Shopping Center and Commissary developments, and the Army has submitted detailed plans to NCPC staff to show specific locations for the future planting sites throughout the installation.² A detailed reforestation plan will be incorporated into the draft 2013 Fort Belvoir Master Plan. Staff notes that the one-to-one tree replacement ratio is consistent with the 2004 NCPC Comprehensive Plan, which states that "when tree removal is necessary, trees should be replaced to prevent a net tree loss."

The submission states that replacement trees will consist of a combination (60%) of 2 ½-inch caliper trees and (40%) smaller seedlings, which is specified in the MOA. A two and a half inch caliper replacement size was selected based on Fort Belvoir's experience with tree replacement in that such a tree size affords the best combination of instant positive impact to the landscape and maximized chance of survivability. The submission states that 2.5-inch caliper trees are

¹ The current Commissary has a parking lot with 668 total customer spaces.

² The necessary tree-clear areas for the Commissary (totaling 3.3 acres) were previously reviewed by the Commission on April 7, 2011 and May 5, 2011 as part of the new PX Shopping Center project actions. As such, these areas are not currently under consideration as part of this project.

expected to have a survivability rate of 75-80% after one year, and 50% of the seedlings are expected to survive after one year. The contract specifies a maintenance period of one year and a one year warranty for tree replacement, in-kind.

Based on the additional tree reforestation information provided, staff believes that the Army has successfully fulfilled the Commission's request from its review of the project's Preliminary design.

Storm Water Management Plan

The future project site will consist of three major drainage basins referred to as Drainage Basin A, B, and C. Drainage Basin A is approximately 6.5 acres in size and located in the northern third of the site. Drainage Basin B is approximately 16.8 acres in area and includes a majority of the remaining proposed improvements, including the new Commissary and adjacent parking area. Drainage Basin C is approximately 5.2 acres in size and includes the remaining portion of the proposed site improvements including the remaining parking area from the existing PX site. The following figure shows the proposed three drainage basin system.

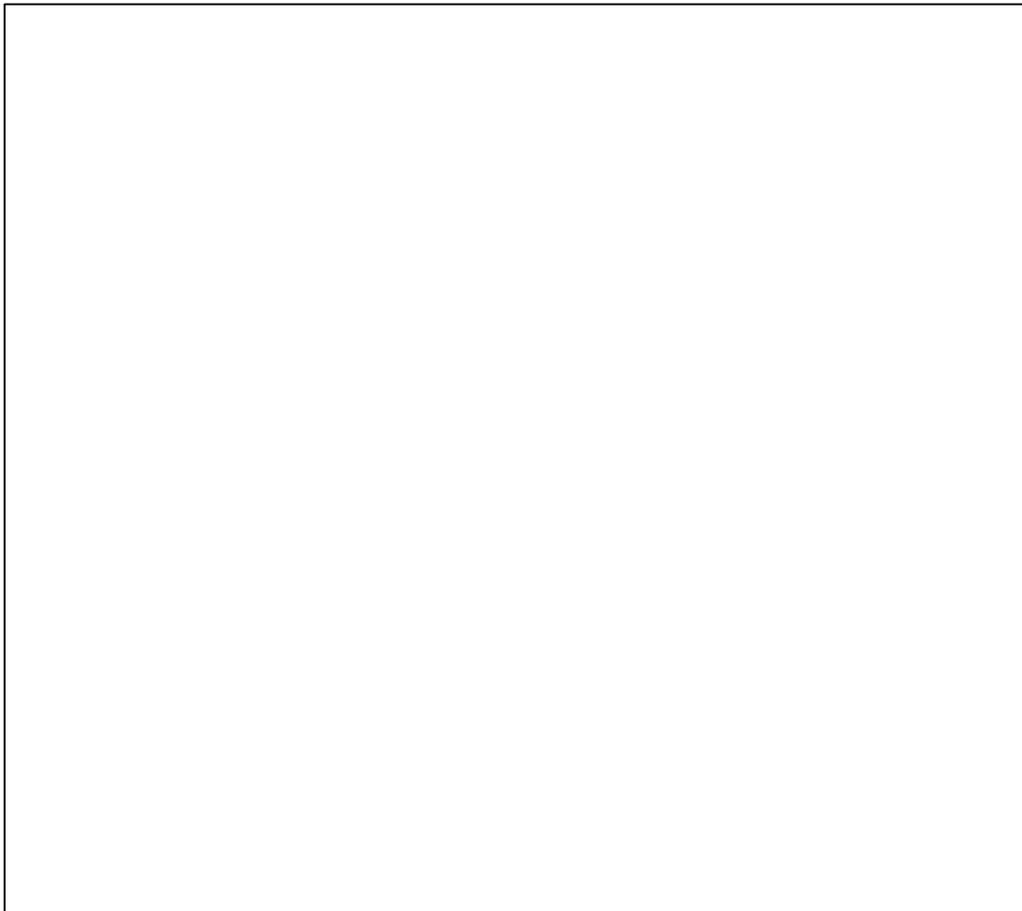


Figure 6: Proposed Future Storm Water Drainage

Two existing dry detention ponds, pervious pavement, underground detention, and bio-retention basins are proposed to be used to control storm water runoff. Two existing dry detention ponds will be removed as part of the proposed improvements, and the detention volume will be increased in the on-site pervious area to compensate for the storage loss of these ponds. All new storm water controls are designed to allow detention and maximize infiltration to the maximum degree possible.

Chapter 6 of the Fairfax County Public Facilities Manual was used for a majority of the drainage design, along with some additional resources for calculating stage-storage relationships, orifice sizing, swale capacity and proposed detention storage requirements. The future site is required to limit runoff peak rate and volume to the existing condition for both the 2-year and 10-year storm events. The following tables (provided by the Army) show a comparison between the existing and proposed future drainage. A more detailed qualitative description of the storm water design is provided in Appendix B from the project submission.

Existing Condition Runoff Rates and Volumes

	A
	E
	C

Future Condition Runoff Rates and Volumes

The proposed storm water management controls will provide additional on-site infiltration and reduce both peak runoff rates and volumes during the 2-year and 10-year storm events. The largest runoff flow and volume reductions will occur during the 10-year event, with only minimal reductions during the 2-year event.

The final plans show that Area A will have a peak runoff rate reduction of 33 percent and 34 percent during the 2-year and 10-year events, and an overall storm water runoff volume reduction of 12 percent and 6 percent in the 2-year and 10-year events, respectively. Area B will have a reduction of 2 percent and 7 percent (peak runoff rate) during the 2-year and 10-year events, and a storm water runoff volume reduction of 44 percent and 41 percent during the 2-year and 10-year events, respectively. The design will not reduce Area C's peak runoff rate since the outflow is controlled by the outlet pipe and additional control measures will not be

implemented in this basin. However, the major basin area will be reduced, resulting in a storm water runoff volume reduction of 37 percent for both the 2-year and 10-year events.

The Applicant analyzed the nutrient loading of the proposed project in accordance with Virginia's Storm Water Management Program Permit Regulations (4 VAC 50-60 et al) based on the "Virginia Runoff Reduction Method". The required reduction in the total phosphorous load for the site is 10.35 pounds per year, and the project will result in a total phosphorous load reduction of 18.41 pounds per year, significantly above the required amount. Additionally, the project will reduce the nitrogen load by 123.25 pounds per year.³ Specific documentation for these calculations was provided in the final design submission package by the Army.

The 95th percentile rainfall event (1.61 inches) was used to determine compliance with the Energy Independence and Security Act (EISA), Section 438, which equates to a minimum runoff site retention volume of 34,468 cubic feet. The final submission shows that the site design will retain 48,817 cubic feet of runoff, thereby satisfying EISA, Section 438's, Option 1 criteria.

The submission certifies that the project is fully compliant with the Chesapeake Bay Protection Act since the new Commissary construction will not locate in a Resource Protection Area and the project will reduce runoff velocities and nutrient load in Virginia State Waters. The Army reviewed the proposed Commissary's compliance with the Chesapeake Bay Act as part of the project's Environmental Assessment process.

Based on the previous storm water management system information, staff believes that the Army has successfully demonstrated the project's compliance with standards from Fairfax County; Commonwealth of Virginia; EISA, Section 438; and Chesapeake Bay Protection and Restoration Act as requested by the Commission during its Preliminary design review.

Customer Parking Demand

The proposed number of customer parking spaces for the Commissary is 161 fewer spaces than currently exists for the Commissary. The total number of spaces (for both the PX center and Commissary) in the shared lot will average out to 3.7 spaces for each 1,000 square feet of gross floor area (GFA), which is lower than other comparable developments in the region that provide between 4.0 and 6.5 spaces per 1,000 GFA. Staff notes that Fairfax County, AAFES, and the Defense Commissary Agency (DeCA) all have a similar minimum standard of four spaces for each 1,000 GFA. As such, under these standards, the PX shopping center would be required to construct a minimum of 1,054 customer spaces and the Commissary would be required to construct a minimum of 554 spaces, resulting in a total of 1,608 spaces. The PX project however, will provide 985 customer spaces (69 fewer spaces) and the Commissary project will provide 507 customer spaces (47 fewer spaces) for a customer parking total of 1,492 spaces (116 spaces lower than the minimum standard). Additional documentation provided by the Army shows that

³ There is no Nitrogen load reduction requirement for this project.

the shared lot will provide a minimal parking supply compared to the forecasted customer demand.

Based on the additional customer parking information provided, staff believes that the Army has successfully fulfilled the Commission's request from its review of the project's Preliminary design.

Comprehensive Plan for the National Capital

The Comprehensive Plan for the National Capital provides goals and policies that guide the Commission in evaluating and acting on plans and projects in the National Capital Region. Staff has determined that the proposed project is consistent with the following policies from the Federal Workplace, Transportation, and Federal Environment Elements of the Comprehensive Plan for the National Capital.

1. Develop sites and buildings consistent with local agencies' zoning and land use policies and development, redevelopment, or conservation objectives, to the maximum extent feasible.
2. Provide employee clothes lockers and showers at federal buildings and on federal campuses to support bicycle commuters. Space should be reserved in new facilities to allow for the provision of showers and lockers to support the bicycle commuting population.
3. Provide parking for disabled persons in accordance with federal law.
4. For suburban federal facilities beyond 2,000 feet of a Metrorail station, the parking ratio (1:1.5-1:2) will reflect a phased approach linked to planned improvements over time.
5. Minimize development of open space by selecting disturbed land or brownfields for new federal workplaces or by reusing existing buildings or sites.
6. Provide secure ... bicycle parking spaces or bicycle lockers in close proximity to building entrances at federal buildings and on federal campuses.
7. Use pervious surfaces and retention ponds to reduce storm water runoff and impacts on off-site water quality.
8. Encourage the use of innovative and environmentally friendly "Best Management Practices" in site and building design and construction practice, such as green roofs, rain gardens, and permeable surface walkways, to reduce erosion and avoid pollution of surface waters.
9. Trees should be replaced to prevent a net tree loss.

The project is not consistent with the Transportation Element policy of placing parking in structures, preferably below ground, in the interest of efficient land use and good urban design.

Fort Belvoir Master Plan

The land use designation for the project site in the 1993 Fort Belvoir Master Plan (the current master plan) is "Community", and the project is consistent with the designation. The Community use is defined as "land use that encourages a mix of uses. Facilities allowed include religious, family support, personnel services, professional services, medical, community, housing, commercial and recreational services. Users live both on- and off-post and may include soldiers, dependents, retirees, and other civilian personnel." Staff has previously reviewed the Long Range Component of the draft 2013 Fort Belvoir Master Plan and provided comments to the Army on the plan as part of the on-going update process. In addition, the proposed Commissary is included in an Area Development Plan for a future North Post Town Center development, which was presented to the Commission in June, 2012 in an information presentation. The draft 2013 Plan shows the Commissary project site remaining as a "Community" use site, and the Army has indicated that the Plan (which includes the Area Development Plan) is scheduled for Commission review at its September, 2013 meeting.

National Environmental Policy Act (NEPA)

The Army studied the Commissary project's impact to the natural environment through an Environmental Assessment (EA) that was completed in 2010. The Army issued a Finding of No Significant Impact (FONSI) on September 28, 2010 to complete their NEPA review responsibility for the project. For federal projects in the environs, NCPC does not have independent NEPA responsibility.

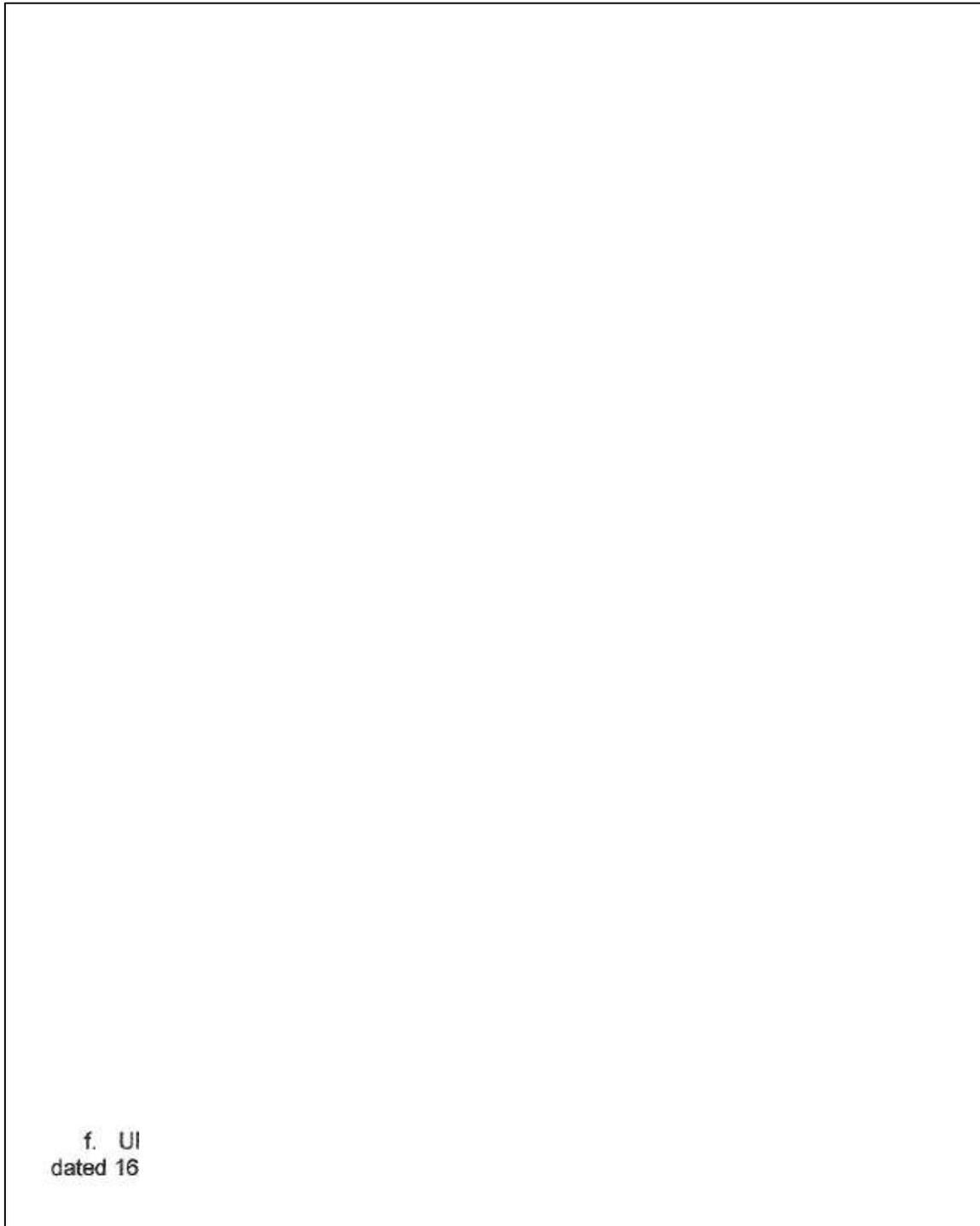
National Historic Preservation Act (NHPA)

Regarding Section 106 of the NHPA, the Army determined, and the VA SHPO concurred, that the project will have "No Adverse Effect" on historic properties. Due to the project's location in the environs, NCPC does not have independent Section 106 responsibility.

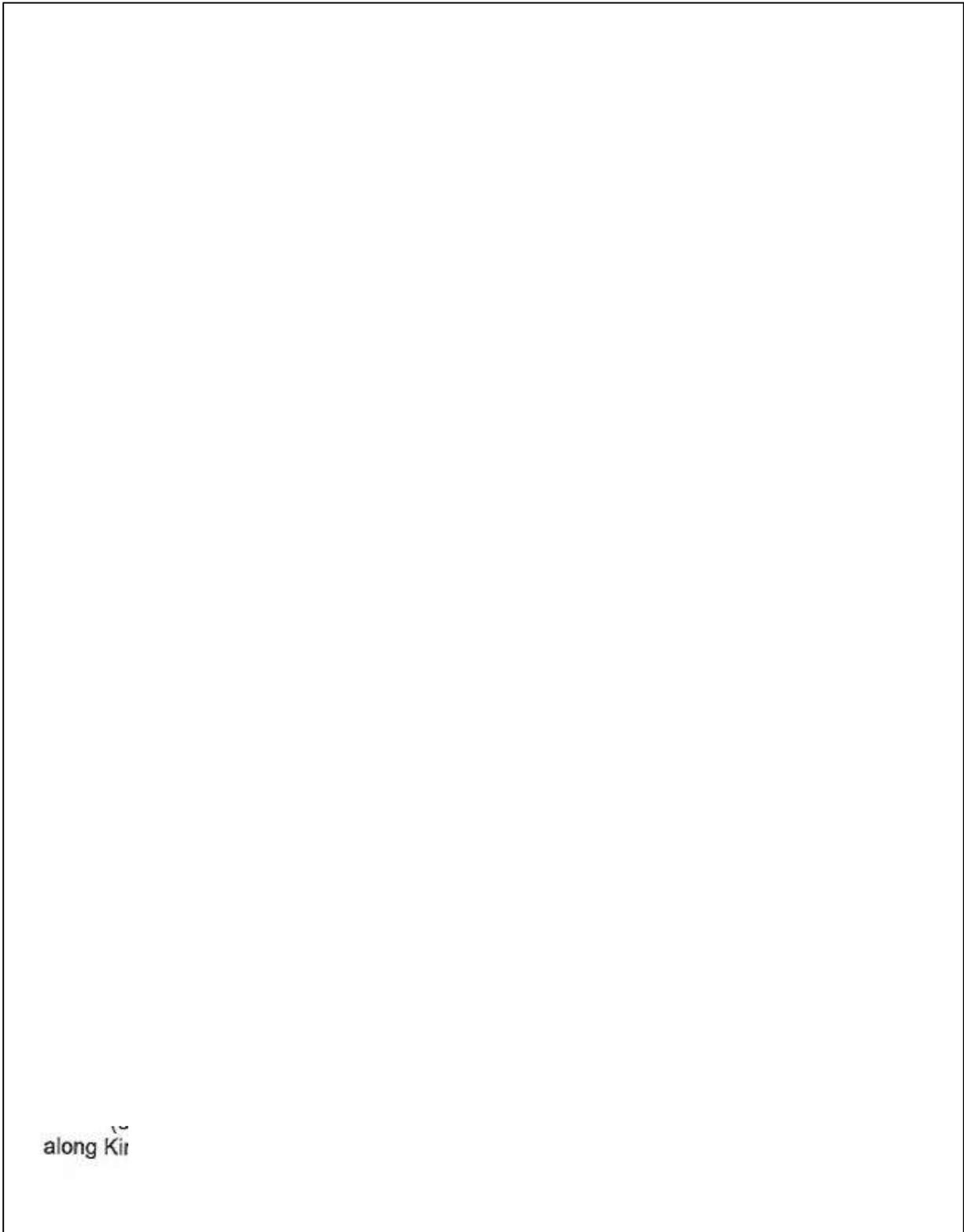
Coordination with local agencies

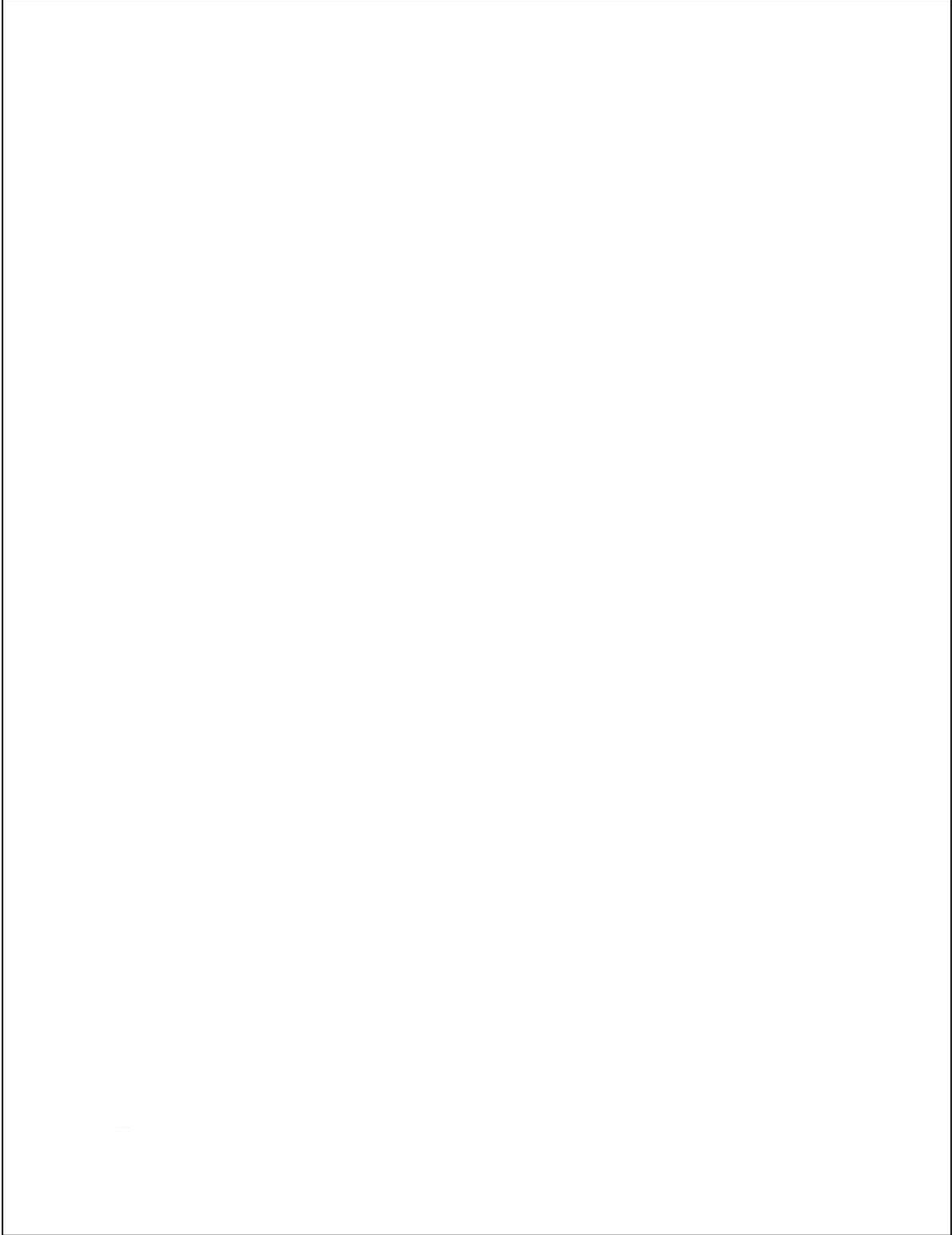
In accordance with the Commission's Procedures for Intergovernmental Cooperation in Federal Planning in the National Capital Region, the preliminary plans for the project were referred by NCPC to the Virginia Department of Transportation (VDOT), the Virginia Department of Environmental Quality (DEQ), the Washington Metropolitan Council of Governments (Wash COG), the Northern Virginia Regional Commission (NVRC), and Fairfax County on July 10, 2012. The comments provided from Fairfax County staff (dated August 29, 2012) and the Northern Virginia Regional Commission (dated August 9, 2012) primarily dealt with the project's potential stormwater management impacts, and ensuring that the final design complies with Fairfax County and new Commonwealth of Virginia (2011) standards. The final design submission includes information that demonstrates the project's compliance with both sets of standards.

III. APPENDIX A – REFORESTATION MEMORANDUM OF AGREEMENT

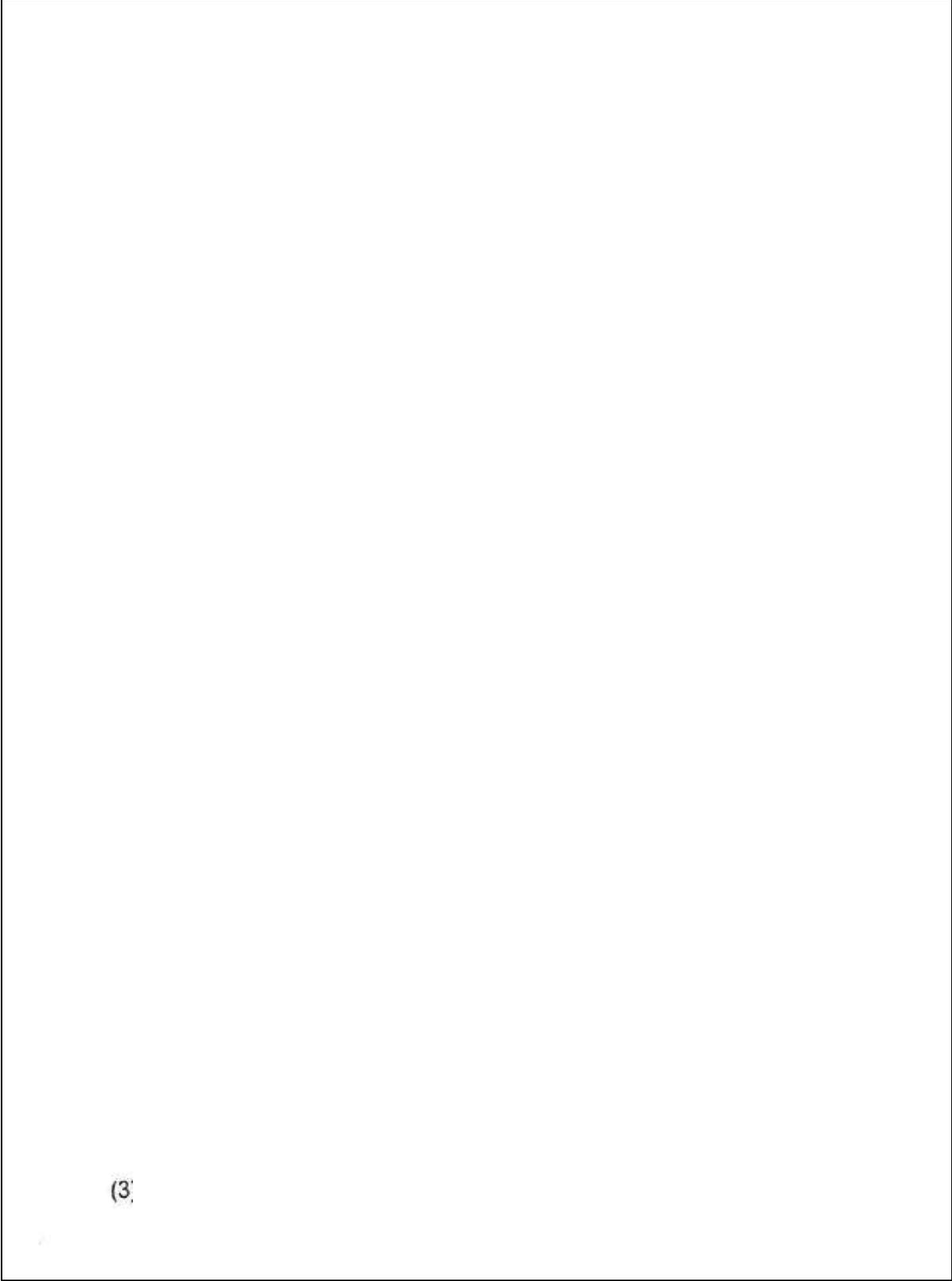


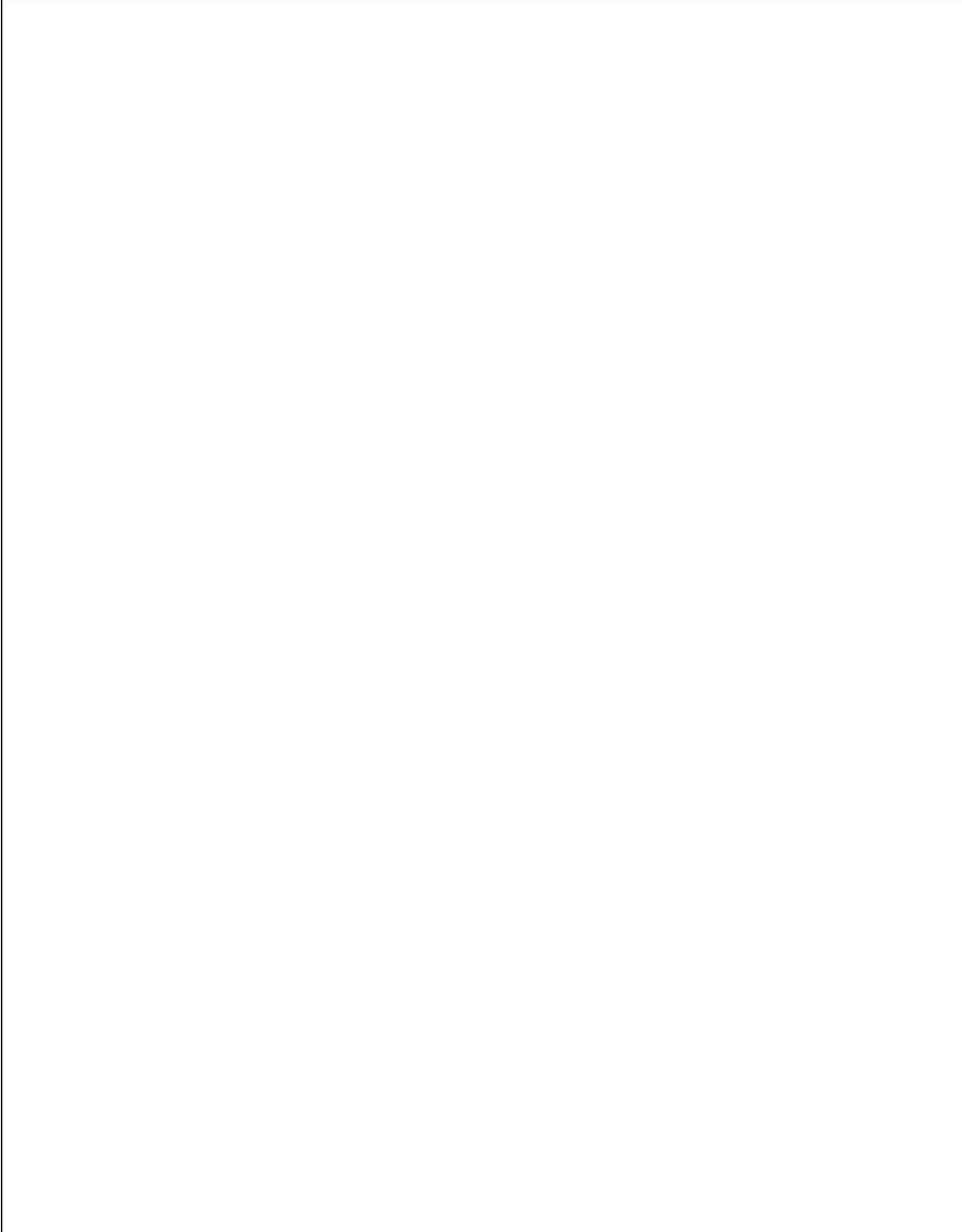
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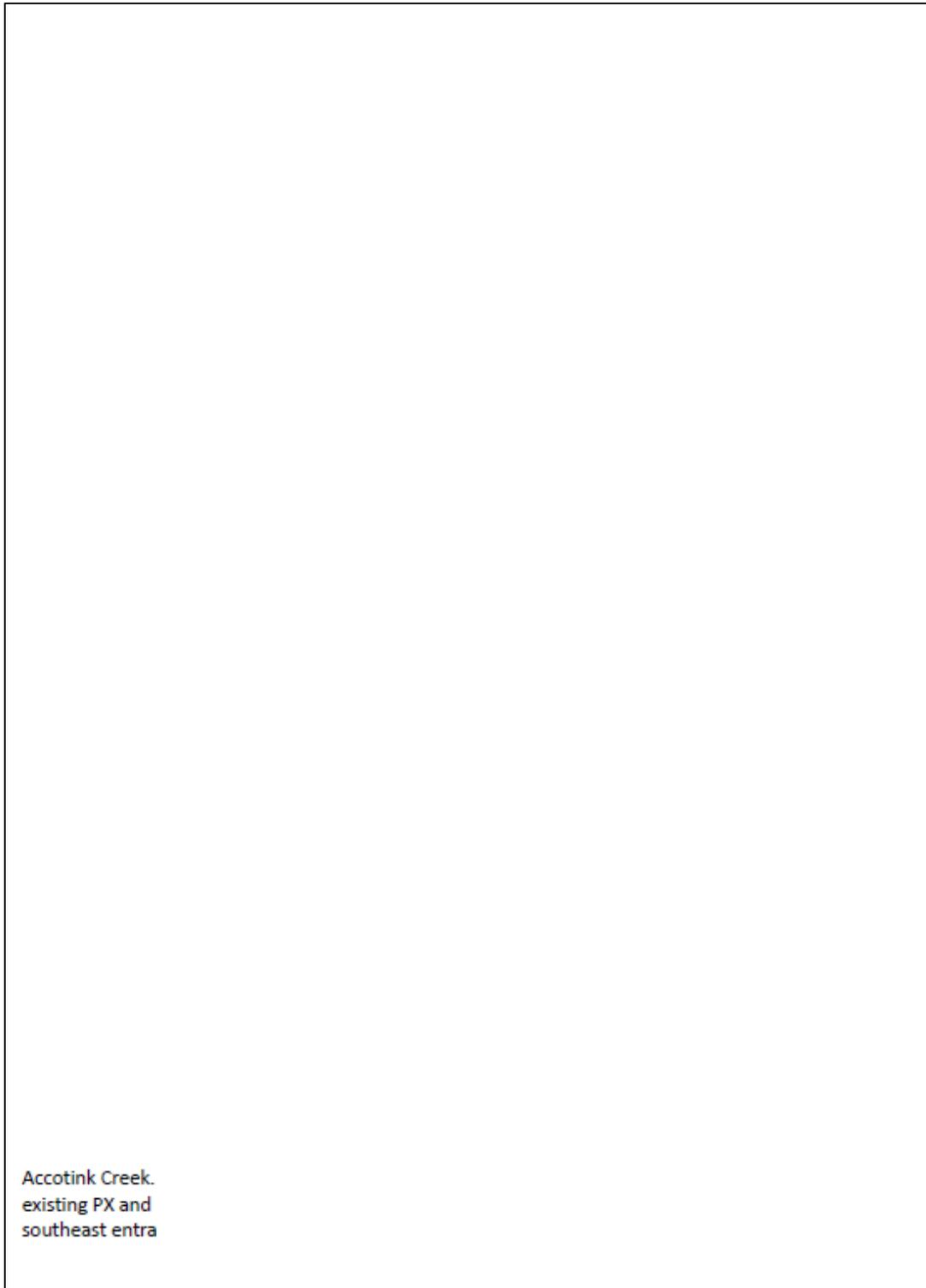








APPENDIX B – STORM WATER MANAGEMENT DESIGN REPORT

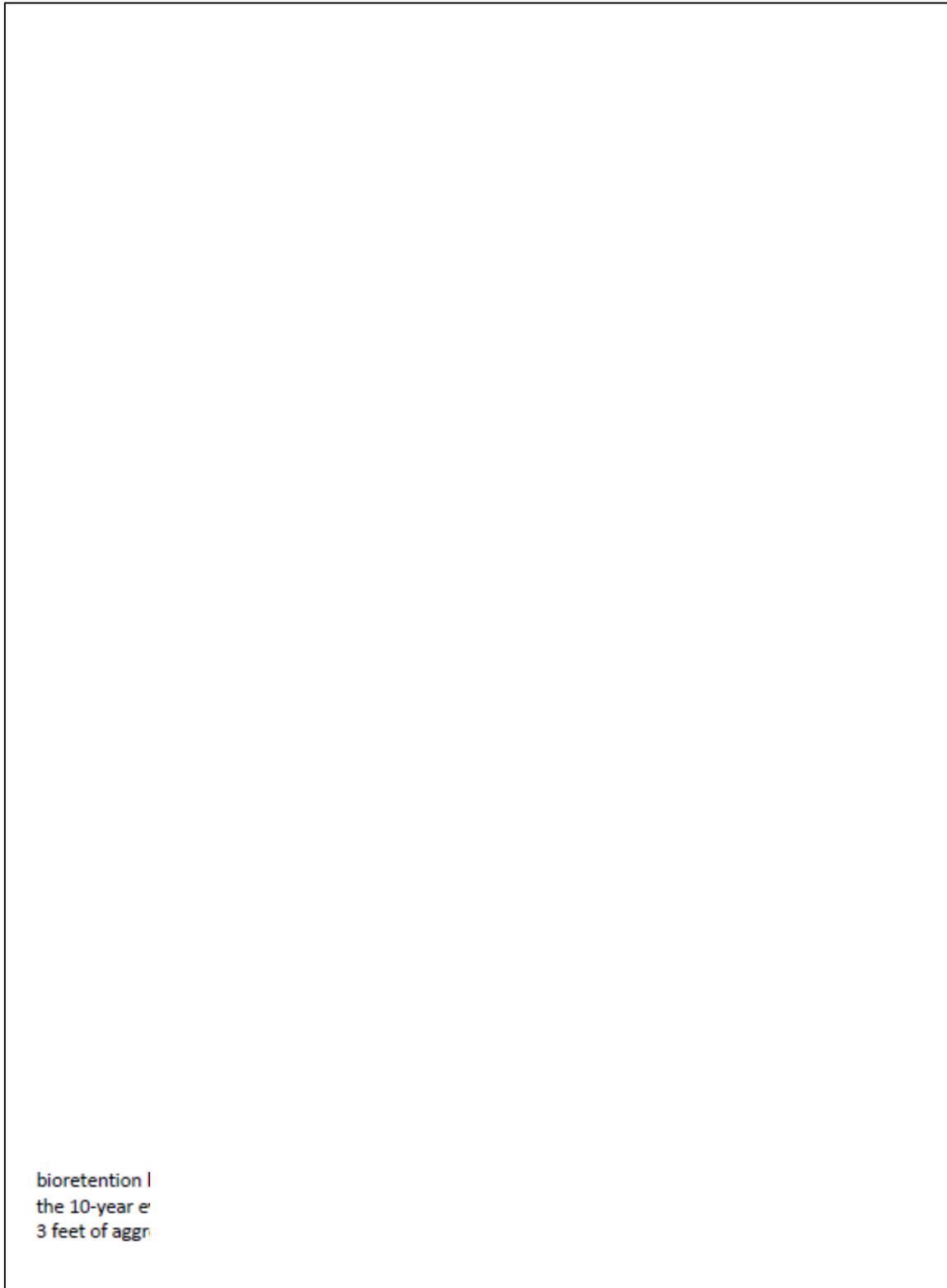


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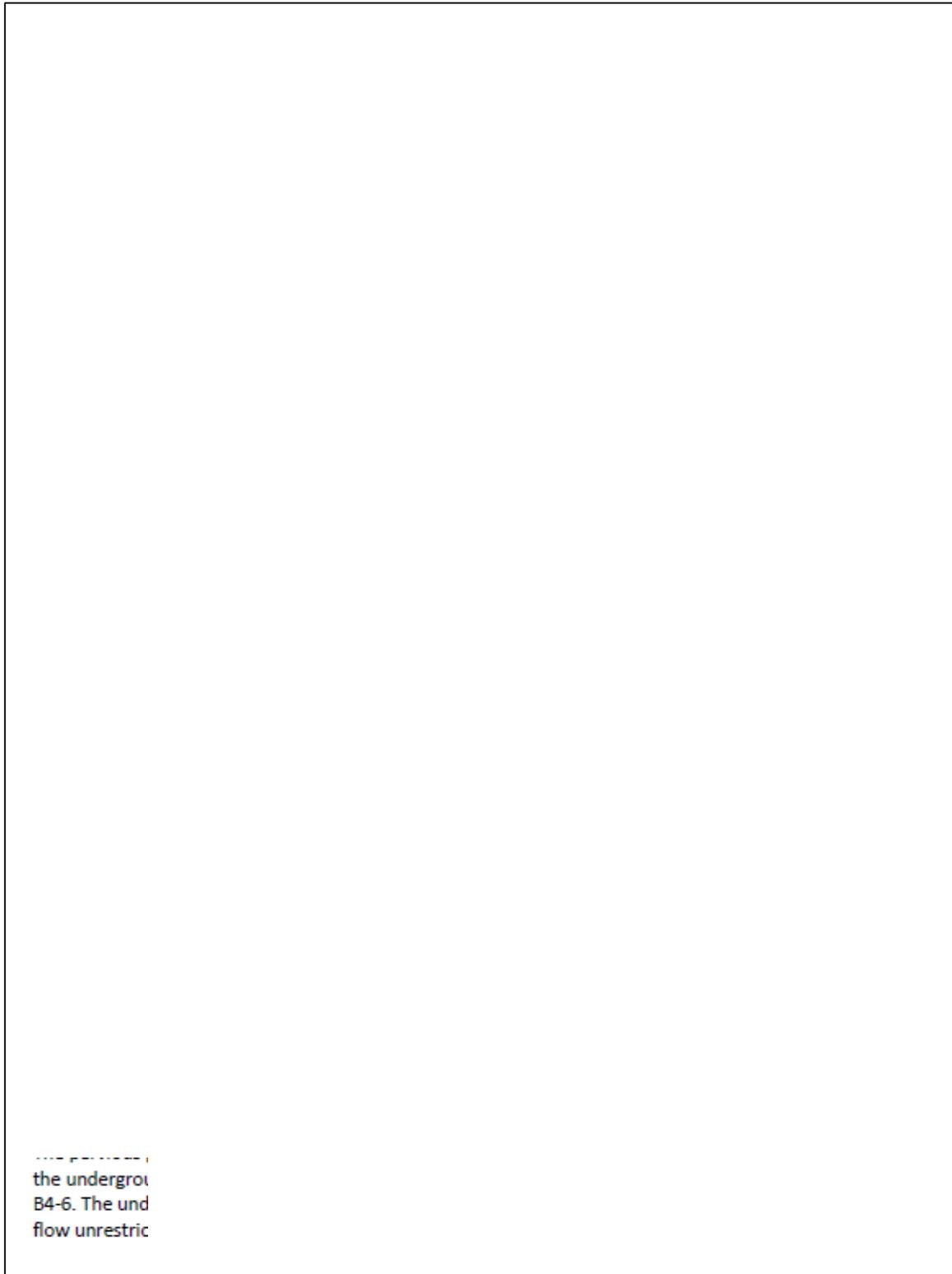


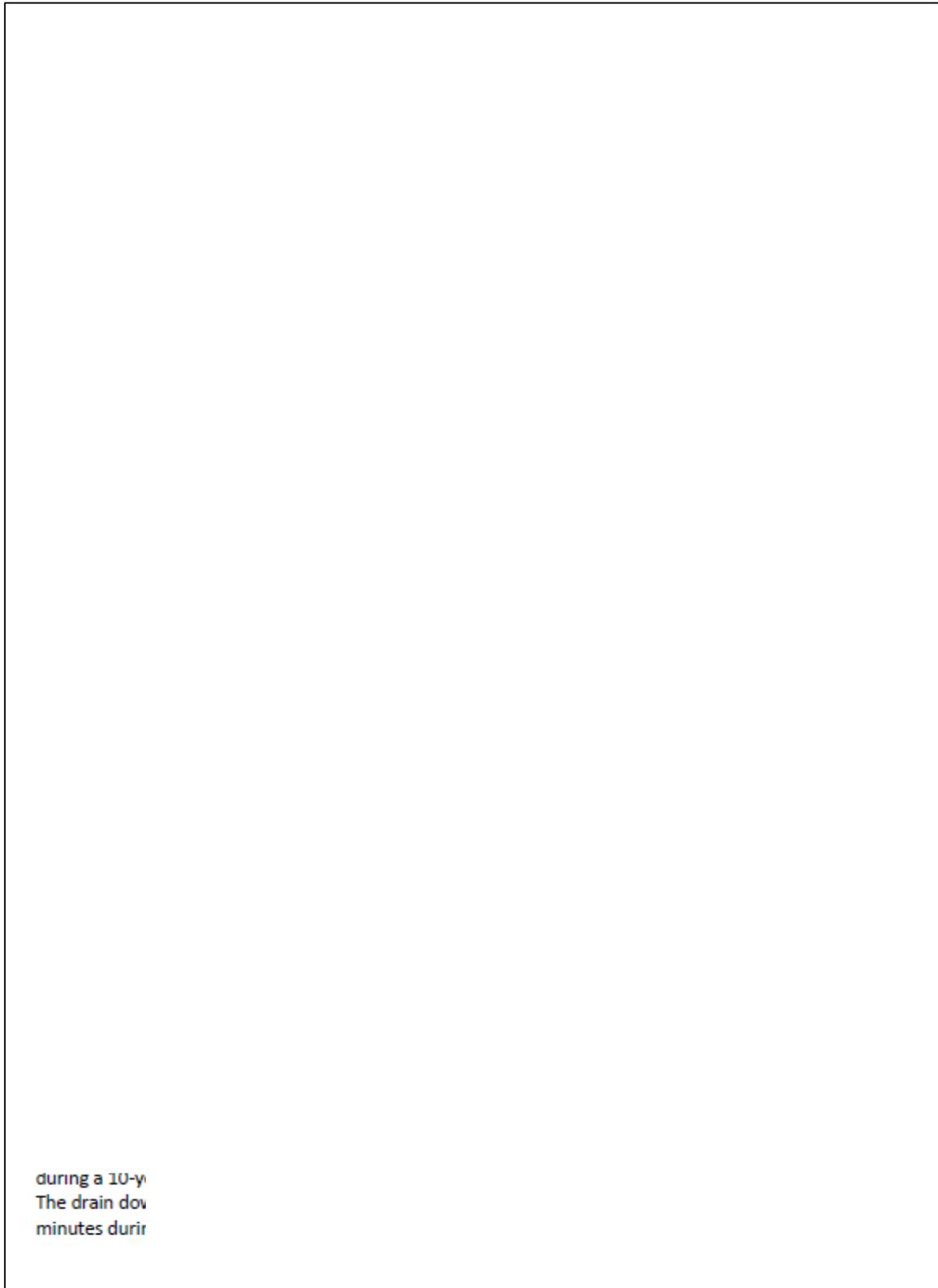
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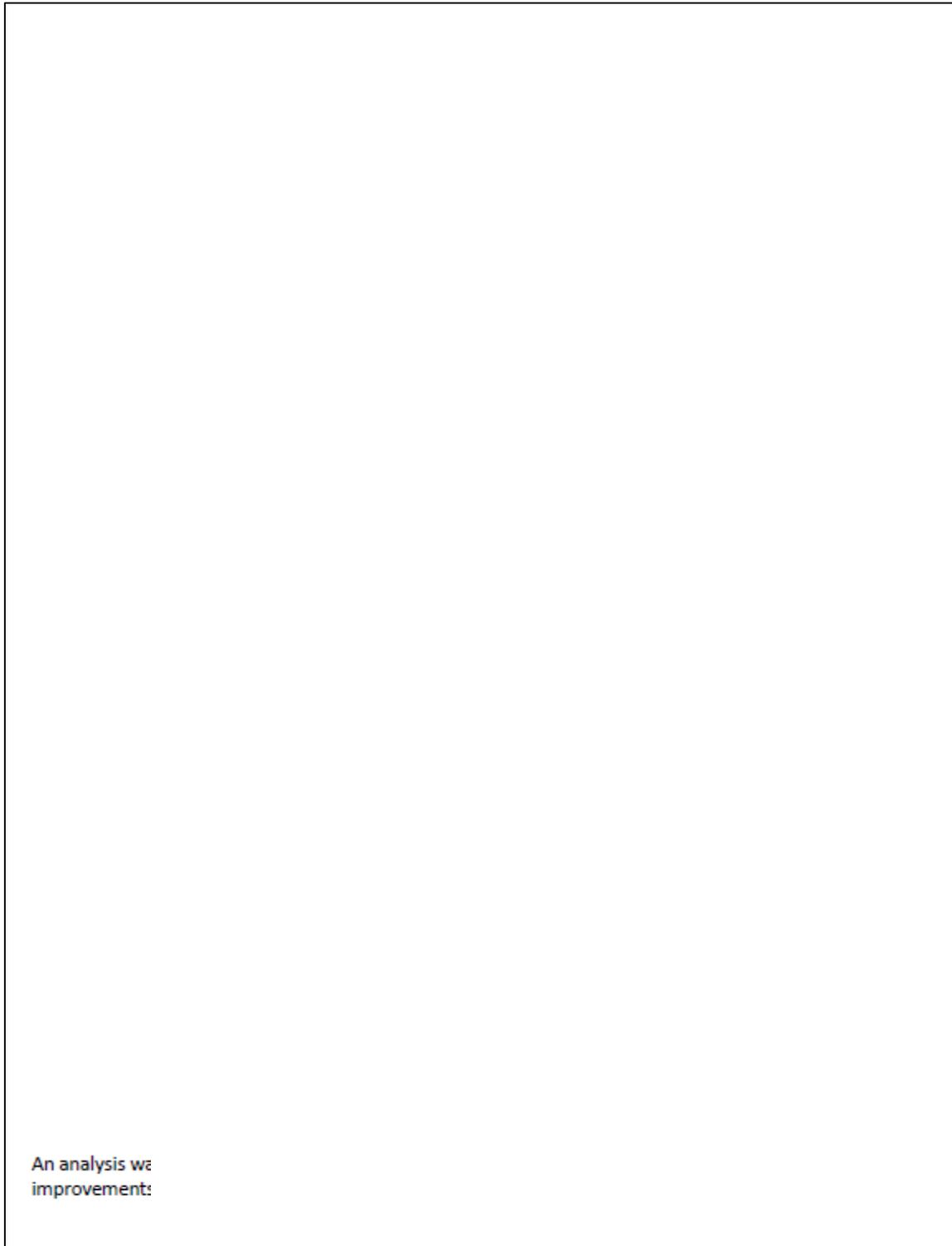


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