AGENDA ITEM:

XI-H

Ordinance item H

Jasper County
Planning and Building Services

358 Third Avenue - Post Office Box 1659
Ridgeland, South Carolina 29936
Phone (843) 717-3650 Fax (843) 726-7707

Lisa Wagner, CFM
Director of Planning and Building Services
lwagner@jaspercountysc.gov

Jasper County Council

Staff Report

Meeting Date:	August 15, 2022
Project:	Conceptual Review of a Planned Development District – Bailey Park
Applicant:	K & R Development, LLC
Tax Map Number:	081-00-04-007 and 081-00-04-080
Submitted For:	1st Reading

Description: The Applicant has submitted a request for a Planned Development District (PDD) zoning designation for a mixed-use development, which will be known as Bailey Park PDD. Included with the Zoning Map Amendment application is a PDD document and Concept Plan. The project site consists of two parcels, which are identified by tax map numbers 081-00-04-007 and 081-00-04-080, and total 26.63 acres. The properties are located along Highway 170, approximately 2 miles east of the intersection of Highway 462 and also has frontage along Old Bailey Road. The properties are currently zoned Community Commercial and Residential and are both undeveloped.

Analysis: The PDD regulations are intended to accomplish the purpose of zoning and other applicable regulations to an equivalent or higher degree and are designed to control unscheduled development on individual lots or tracts, promote economical and efficient land use, provide an improved level of amenities, foster a harmonious variety of uses, encourage creative design, and produce a better environment. In view of the substantial public advantage of "planned development," it is the intent of the PDD regulations to promote and encourage or require development in this form where appropriate in character, timing, and location, particularly in large undeveloped tracts. All PDD's shall conform to the Jasper County Comprehensive Land Use Plan and Land Use Map (latest edition).

- ***Comprehensive Plan***: According to the 2018 Jasper County Comprehensive Plan, the Future Land Use Map identifies this area as "Rural Conservation," which seeks to protect and promote the character of Jasper County that largely exists today outside of the municipalities. In these areas, new development should be thoughtfully placed within the existing landscape.

  The Land Use Chapter of the Comprehensive Plan recommends guiding growth and new development in or around the municipalities where infrastructure and services are available to

serve new growth. While this project site is not near a municipality, it is located in an area where infrastructure and services are available to serve the site.

- ***Adjacent Zoning and Land Uses***: Figure 1 below shows the project location and Table 1 shows the adjacent land uses and zoning designation:

Table 1. Adjacent Land Uses and Zoning Designations

Adjacent Property	Existing Uses	Zoning	City or County
North	Center Point PDD	PDD	Jasper County
South	Old Bailey Road and S/F Residential	SCDOT Residential	Jasper County and Beaufort County
West	Primarily Vacant, Beaufort Jasper Comprehensive Health, and S/F Residential	Community Commercial and Residential	Jasper County
East	Vacant and 1 single family residence	Community Commercial and Residential	Jasper County

Figure 1.

- ***Traffic and Access***: One of the properties is accessed by North Okatie Highway (Highway 170), which is a four-lane state maintained highway, classified as an arterial road. The other property has direct access to Old Bailey Road, which is a two-lane state maintained road classified as a local road.

The Bailey Park PDD Concept Plan illustrates the proposed uses, the general layout, and access points. A Master Plan will be submitted separately and will provide additional information regarding the layout of the development.

The proposed PDD will establish the following:

- **Access Points** – One full access point is proposed along Highway 170 and a second full access point is proposed along Old Bailey Road.

- **Allowed Land Uses** – Tract A, which is 6.63 acres, is proposed as Mixed Use Commercial and Community Commercial, while Tract B, which is 20 acres, is proposed as Multi-Family Residential, Single-Family Residential Attached, and Single-Family Residential Detached.
- **Density** – The overall commercial use density within Tract A shall not exceed 12,000 square feet of upland acre or a total of 65,820 square feet. The maximum residential use density within Tract B is 233 residential units, which is based on a unit density of 12 units of upland acres.
- **Open Space** – 10% open space for residential land uses. While there is no open space requirement for the Commercial Tract, 10% of the commercial uplands will remain pervious.
- **Setbacks and Buffers** – Tract A will require a 50' buffer along Highway 170 and 15' from any adjacent residential use not separated by a road. Incompatible land uses shall comply with the buffer requirements as outlined in Article 12 of the Jasper County Zoning Ordinance. In regard to setbacks and buffers, the International Fire Code will be met.
  Tract B – For detached single-family residential and duplexes, the side setbacks are 6', rear yard setbacks are 15', and front yard setbacks are 25' for lots with front loaded garages, and 15' setbacks for lots with side loaded garages. For attached single-family residential, townhomes, or condominiums there will be 6' side setbacks from non-common property lines. Perimeter buffer for single-family and townhomes will be a minimum of 10' and all other uses will be a minimum of 20'.
- **Landscaping Standards** – will meet or exceed the County's requirements.
- **Utilities** – Water and Sewer will be provided by BJWSA; Electric will be provided by Dominion Energy; Telephone Service will be provided by Hargray.

A full environmental assessment of the site has been conducted as well as a full Traffic Impact Analysis, both are included with this staff report. The Bailey Park PDD meets all of the requirements for a PDD *Application and Concept Plan* as outlined in Article 8:1.7 of the Jasper County Zoning Ordinance.

Public Notice: Notices were sent to all adjacent property owners, notifying them of the Applicant's request to have the property designated as PDD and notifying them of the Planning Commissions review. In addition, a Zoning Application sign was placed along Highway 170 and another sign was placed along Bailey Road. The public comments that were received for the May 10, 2022 Planning Commission Meeting are included with this staff report. A public hearing will be scheduled for a future County Council Meeting,

Planning Commission Recommendation: A zoning designation of PDD does not entitle an applicant or owner of the affected property a right to develop or engage in any land use or land disturbing activity, other than the rights in existence at the time of the Concept Plan approval. To engage in development or any land use or land disturbing activity, a Master Plan and subsequent Development Plan(s) must be approved for the areas to be developed. While the Concept Plan is very generalized, a Master Plan is a more refined document which will be reassessed by the Planning Commission at a future date. The PDD application is supported by the Comprehensive Plan; as such, staff recommends approval of the PDD designation, the PDD document, and the Concept Plan.

Attachments:

1. Application
2. Plat of Property
3. PDD Document and Concept Plan
4. Traffic Report
5. Phase I Environmental Assessment Report
6. Aerial Map
7. Aerial Map with Zoning Layer

Jasper County
Planning and Building Services

358 Third Avenue - Post Office Box 1659
Ridgeland, South Carolina 29936
Phone (843) 717-3650 Fax (843) 726-7707

Zoning Map Amendment Application

Owner or Owner-Authorized Applicant:	K & R Development, LLC c/o Jennifer Tosky
Address:	PO Box 1590, Bluffton, SC 29910
Telephone/Fax:	843-368-1782
Email:	jen@kennethscottbuilders.com
Property Address or Physical Location:	Hwy 170 & Bailey's Road (18)
Tax Map Number(s):	081-00-04-007, 081-00-04-008, 081-00-04-009
Gross Acreage:	26.63
Current Zoning:	Community Commercial & Residential
Proposed Zoning:	PDD
Administrative Fee: ($250 per lot)	$500
Date Mailed or Hand Delivered:	March 16, 2022
Reason for Request: (attach narrative if necessary)	To allow for a mixed used development in keeping with Jasper County PDD guidelines to promote and and encourage responsibel development beneficial to the long-term growth of Jasper County. Please see attached narrative.

Signature of Owner or Owner-Authorized Applicant (Proof of owner-authorization required) Date

Internal Use Only

Date Received:	
Amount Received:	
Staff Member:	

STATE OF SOUTH CAROLINA
JASPER COUNTY

ORDINANCE #2022 -_____

AN ORDINANCE OF
JASPER COUNTY COUNCIL

To adopt Planned Development District Zoning for two tracts of land consisting of approximately 26.63 acres, bearing Jasper County Tax Map Numbers 081-00-04-007 and 081-00-04-080, located along N. Okatie Highway (Highway 170), approximately 2 miles east of the intersection of Highway 462, and known as Bailey Park PDD.

WHEREAS, The Planned Development District Zoning was adopted by Jasper County to permit and encourage flexibility in the development of land in order to promote its most appropriate use; and to do so in a manner that will enhance public health, safety, morals, and general welfare; and

WHEREAS, Jasper County has received a request from the owner of two tracts of land consisting of a total of approximately 26.63 acres, bearing Jasper County Tax Map Number 081-00-04-007 and 081-00-04-080, located along North Okatie Highway (Highway 170) approximately 2 miles east of the intersection of Highway 462, known as Bailey Park, to zone such in accordance with submitted Planned Development District Standards prepared for Bailey Park, LLC and accompanying Planned Development District Concept Map (Appendix H); and

WHEREAS, the above mentioned property was duly posed, with public hearings properly noticed and held by the Jasper County Planning Commission on May 10, 2022, which recommended approval and adoption, and by the Jasper County Council on September 6, 2022; and

WHEREAS, Jasper County Council finds the Planned Development District Standards and the Concept Map (Appendix H) to be in accordance with the statutory requirements of the state, and consistent with the Jasper County Comprehensive Plan, *Jasper's Journey*, as well as the Jasper County Zoning and Land Development Ordinances; and

NOW THEREFORE, BE IT RESOLVED by Jasper County Council, in council duly assembled and by the authority of the same:

1. Jasper County Council finds in accordance with the staff report, and the recommendation of Jasper County Planning Commission, the proposed zoning is consistent with the continued pattern of growth in the vicinity and is in harmony with the Jasper County Comprehensive Plan. Good cause having been shown to approve the applicant's request for Planned Development District Zoning for the Property, and of the Planned Development District Standards and Conceptual Master Plan (Appendix H), and to amend the Jasper County Official Zoning Map to reflect Planned Development District zoning for two tracts of land consisting of approximately 26.63 acres, bearing Jasper County Tax Map Numbers 081-00-04-007 and 081-00-04-080 and known as Bailey Park PDD.

2. This ordinance shall take effect upon approval by Council.

Ms. Barbara B. Clark
Chairwoman

ATTEST:

Wanda Simmons
Clerk to Council

ORDINANCE: # 2022-___

First Reading: August 15, 2022
Second Reading: _____
Public Hearing: _____
Adopted: _____

Considered by the Jasper County Planning Commission at it's meeting on

May 10, 2022 and recommended for approval.

Reviewed for form and draftsmanship by the Jasper County Attorney.

_____ _____
David Tedder **Date**

K & R DEVELOPMENT, LLC
PO BOX 1590 · BLUFFTON, SC · 29910
jen@kennethscottbuilders.com · (843) 368-1782

March 16, 2022

Ms. Lisa Wagner, Director
Jasper County Planning & Building
358 Third Avenue, Room 202
PO Box 1659
Ridgeland, SC 29936

Re: Tax Map # 081-00-04-007 (parcels 2A & 2B) - see attached plat

Dear Ms. Wagner:

I hope this letter finds you well. Recently, K & R Development, LLC acquired approximately 27 acres situated between Hwy 170 and Bailey's Road. At present, the property is subdivided into 2 parcels that are zoned CC & R. To allow for growth and development, favorable to the needs of Jasper County and the surrounding properties, K & R seeks a zoning map amendment to rezone the existing parcels from their current zoning to a PDD designation.

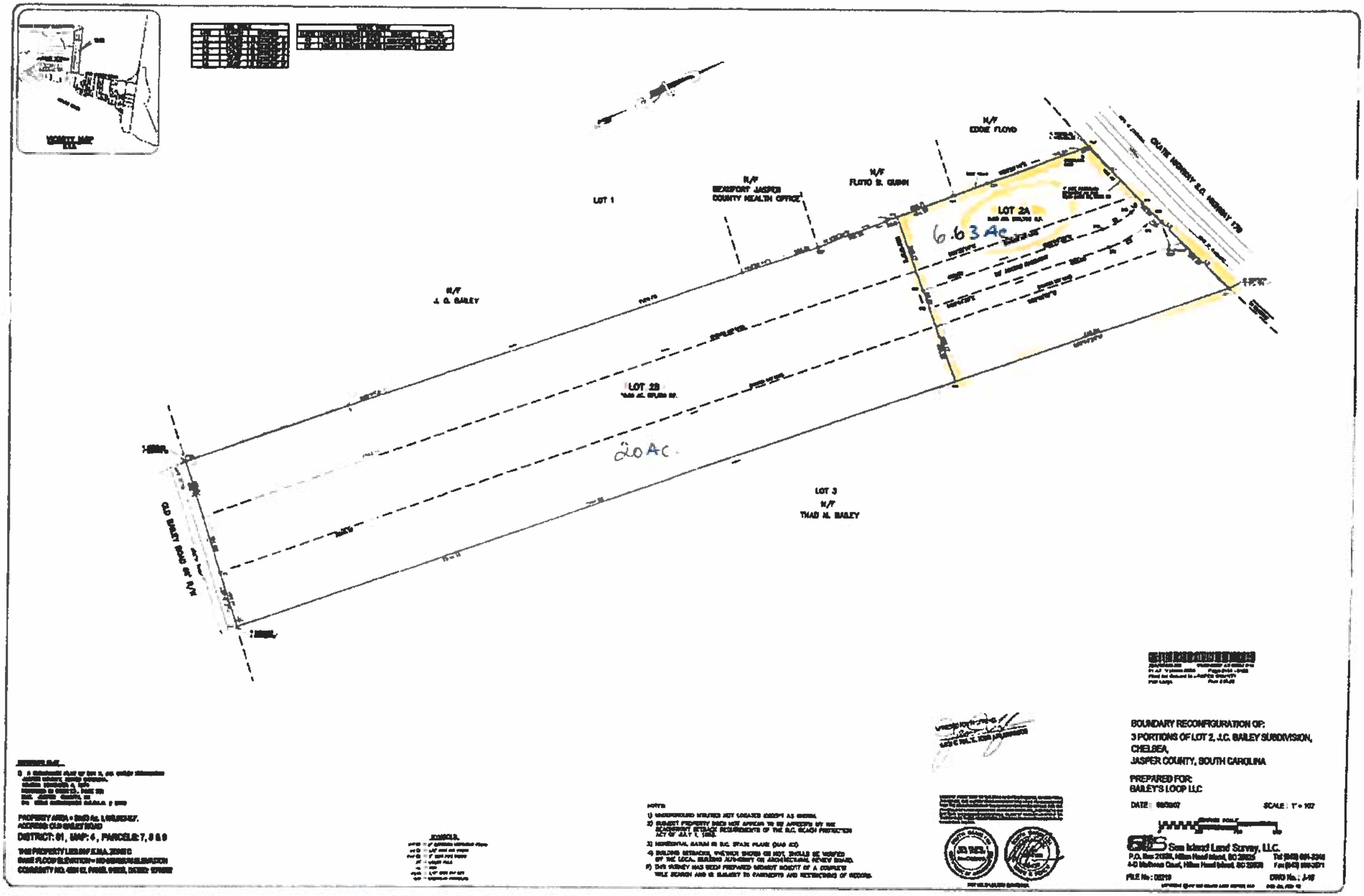
Enclosed please find a completed Zoning Map Amendment Application with fee, current Plat, Conceptual Bubble Plan and a "Draft" PDD document for the referenced property.

With your approval, K & R respectfully requests our application be presented to the Jasper County Planning Commission for their consideration and approval at the April 12th, 2022 meeting. Please let me know what else may be needed prior to the meeting.

I look forward to hearing from you and thank you greatly for your help and guidance over the last few months.

Warm regards,

Jennifer R. Tosky, Manager
K & R Development, LLC


N/F
EDDIE FLOYD
N/F
FLOYD S. QUINN
N/F
BEAUFORT JASPER
COUNTY HEALTH OFFICE
LOT 1
N/F
J. D. BAILEY
LOT 2A
6.63 Ac
LOT 2B
20 Ac.
LOT 3
N/F
THAD M. BAILEY
OLD BAILEY ROAD 60' R/W
OKATIE HIGHWAY S.C. HIGHWAY 170
BOUNDARY RECONFIGURATION OF:
3 PORTIONS OF LOT 2, J.C. BAILEY SUBDIVISION,
CHELSEA,
JASPER COUNTY, SOUTH CAROLINA
PREPARED FOR:
BAILEY'S LOOP LLC
SCALE : 1" = 100'
Sea Island Land Survey, LLC.

PLANNED DEVELOPMENT DISTRICT
AND
CONCEPT PLAN

FOR

BAILEY PARK

Jasper County, South Carolina

FOR

BAILEY PARK, LLC

BY

WITMER - JONES – KEEFER, LTD.
23 PROMENADE STREET, SUITE 201

MARCH 28, 2022

PLANNED DEVELOPMENT DISTRICT
AND
CONCEPT PLAN

BAILEY PARK

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LIST OF APPENDICES

BAILEY PARK

PLANNED DEVELOPMENT DISTRICT

CONCEPT PLAN

SECTION I – SITE DEVELOPMENT

A. THE PROPERTY

The Bailey Park Planned Development District (PDD) is located in Jasper County, South Carolina with frontage on Highway 170. The tract is located approximately 2 miles east of the Hwy 462 intersection and is approximately 26.63 acres. A site location map is provided in Appendix A.

The Bailey Park Tract is currently owned by K&R Development ("Owner"), its successors or assigns. The Owner proposes that this property be zoned and developed as a PDD in accordance with the Jasper County Zoning Ordinance (ZO) and Land Development Regulations (LDR) in effect at the time of submittal to Jasper County. The PDD designation will be utilized to encourage unified planning and development, promote economical and efficient land use, foster a harmonious variety of uses, encourage creative design, and produce a better environment.

The Bailey Park Tract (TM# 081-00 -04-007) is located in Jasper County, South Carolina and is adjacent to Center Point PDD to the North; undeveloped property to the east and west and residential property to the south. The property is currently vacant undeveloped land. The property has approximately 514 linear feet frontage on Highway 170 to the north and approximately 450 linear feet of frontage on Old Bailey's road to the south. A site survey is included as Appendix B. See section I.C. and Appendix H for detail related to the Conceptual Master Plan.

The property encompasses approximately 26.63 acres which consist of 1.7 acres non-jurisdictional freshwater wetlands, and 24.93 acres of upland. The property does not contain any saltwater marsh critical areas and has no frontage on critical areas. The U.S. Army Corps of Engineers (USACE) wetland verification are pending. Appendix C. Preliminary soil data has been evaluated using available on site soil data and USDA soils information. On site soils are Coosaw loamy fine sand (Cs) and Wahee fine sandy loam (Wa). The soils are expected to be acceptable and suitable for the proposed site development. USDA soils data is included as Appendix D.

The 6.63 acres of Bailey Park fronting Highway 170 is currently zoned Community Commercial and the remaining 20 acres to the south is currently zoned Residential. The adjacent land uses to the north is undeveloped Center Point PDD; to the east and west are undeveloped properties and residential property to the south. Bailey Park will be

developed in 2-3 phases over an approximately 5 year period. An aerial overlay map of the PDD and surrounding area is included as Appendix E.

Based on a review of the USGS Jasper quadrangle map and preliminary site surveys, site elevations range from approximately 17-20 feet above mean sea level. A portion of the USGS map is included as Appendix F. The site is currently forested and drainage flows towards the existing wetland along highway 170; towards a drainage ditch at the center of the property and along Old Baileys road.

Based on a review of FEMA Maps, all of the PDD property occurs outside of a designated flood zone areas A portion of FEMA Map Panel Number 410, dated October 18, 2019, is included as Appendix G.

B. PLANNED DEVELOPMENT DISTRICT (PDD) AND DEVELOPMENT AGREEMENT (DA) PROCESS

The PDD overlay zone was adopted by the Jasper County Council to permit and encourage the effective, efficient, and economical development of large tracts of land in Jasper County. The PDD application will be accompanied by a Development Agreement, the intent of which is to protect the rights and entitlements specified in the PDD for the property from the effect of subsequently enacted local legislation or from the effects of changing policies and procedures of local government agencies which may conflict with any term or provision of the PDD or in any way hinder, restrict, or prevent the development of the project. The Development Agreement will provide a reasonable certainty as to the lawful requirements that must be met in protecting vested property rights, while maintaining the authority and duty of government to enforce laws and regulations which promote the public safety, health, and general welfare of the citizens of our State. The Development Agreement is being made and entered between Owner and The Jasper County Council, under the terms of the Act, for the purpose of providing assurances to Owner that it may proceed without encountering future changes in law which would materially affect the ability to develop under the plan, and for the purpose of providing important protection to the natural environment and long term financial stability and a viable tax base to Jasper County. The Owner as well as its successors, assigns, and future owners will adhere to the provisions of the PDD and Development Agreement for the duration that each remains in effect, unless one or both is modified or extended through mutual agreement with the Jasper County Council.

C. CONCEPTUAL MASTER PLAN

Bailey Park is an approximately 26.63 acre tract of land located adjacent to the Center Point PDD in Jasper County, South Carolina. It is anticipated that the property will be developed over a period of 5 years, in accordance with the Concept Planas set forth in this document or amended in the future. The Concepual Master Plan sets forth the general scope of the development including number of units, phasing, development

standards, open space and other issues. In addition to the Conceptual Master Plan, development of the property is controlled by other provisions of the PDD and further guaranteed by the Development Agreement (DA) between the applicant and the Jasper County Council. The Concept Planis included in Appendix H.

The goal of the development is to produce a high quality, mixed use development. The tract of land provides an opportunity for a mix of land uses that will be developed over a period of time. The PDD designation is necessary to accommodate the mix of land uses and provide for the responsible planning and development of the property over time.

The Bailey Park Conceptual Master Plan, prepared by Witmer-Jones-Keefer, shows a general access layout and a mixed use community showing areas designated for commercial and residential development. Proposed land uses in the residential and commercial development areas are detailed under Section 2 - Land Use Designation and Definitions.

The Bailey Park PDD property is a 26.3 acre property with 6.63 acres community commercial Tract 'A' and a 20 acre Residential Tract 'B'. 1.7 acres of non-jurisdictional wetlands are located within the tracts. Appropriate buffers shall be provided between incompatible land uses. Buffer widths are described in Section II.D.11 of the PDD.

Development is planned to occur in accordance with the Development Schedule presented in Appendix I which is preliminary and subject to change based on market conditions.
The proposed Concept Plan will maintain open space requirements as per Section II, D.10 of this document. The open space and amenities will be owned and maintained in the manner approved with appropriate covenants and restrictions by the developer, homeowner's association, or other legally designated entity. Property deeded to a governmental entity becomes the maintenance responsibility of that entity.

Activities along any external property lines of the PDD shall conform to the setback, buffer, screening as described in Section II.D.11(b) of the PDD. Height requirements shall conform to the latest adopted version of the Jasper County Zoning Ordinance (ZO) and Land Development Regulations (LDR).

The Concept Plan and Development Agreement constitute a request for a waiver from the current Jasper County ZO and LDR where differences occur. However, activities in the PDD shall conform to all other Jasper County Ordinances and Regulations where differences do not occur. The Concept Plan may introduce land uses that do not exist in the current Zoning Ordinance. Based on the PDD, Bailey Park requests deviations from the following ZO/LDR provisions:

General Requirement	Description of Proposal
No exceptions	

The provisions of the Development Agreement and the Concept Plan shall apply to development in the Bailey Park PDD. In the event of a conflict, the hierarchy of documents is the following: 1) Development Agreement; 2) PDD and Concept Plan; 3) Jasper County ZO and LDR in effect at the time of Final Adoption of the Bailey Park PDD.

D. ENVIRONMENTAL PROTECTION

Environmental protection is a priority for the Applicant. As part of the development process, Bailey Park developers will meet or exceed the stormwater management requirements of the Jasper County LDR/Stormwater Regulations and the South Carolina Department of Health's Office of Ocean and Coastal Resource Management (OCRM).

Bailey Park developers will prepare stormwater management plans for the tracts of land as they are developed. The plan will address the hydrological characteristics of the site as well as predevelopment conditions and post-development stormwater management facilities for flood control and sediment reduction.

Freshwater wetlands on the property are typical of the South Carolina Lowcountry. Approximately 15.6 percent of the site is non-jurisdictional freshwater wetlands. A plat indicating the freshwater wetlands on the property is included in Appendix C.

On-site wetland impacts resulting from the development of the Bailey Park PDD will be permitted jointly through the USACE and OCRM. All impact mitigation will be accomplished through a combination of buffers and preservation of jurisdictional wetlands located on the property and will meet or exceed state and/or federal standards.

E. CULTURAL AND HISTORICAL RESOURCES

As part of the comprehensive study of the property, a preliminary assessment of the cultural and historical resources on the site will be prepared prior to submittal of a development plan for each of the tracts. As part of Master Plan Approval and prior to final design, the South Carolina Department of Archives and History will be contacted by the Owner to request a review of the Department's cultural resource inventory database. The Owner will follow the direction and procedures of the Department of Archives and History as appropriate and if necessary, will address all cultural resource issues with the State Historic Preservation Office. A final determination will be provided as part of Master Plan Approval.

F. WATER AND SEWER SERVICE

Water and sewer service will be provided to Bailey Park by Beaufort Jasper Water & Sewer Authority (BJWSA). Currently, BJWSA has water 8" water main located within the Old Baileys road and 30" water main located within the North Okatie Highway (170) right of way and 8" force main sewer lines located within the North Okatie Highway (170) right of way, and gravity sewer within the Okatie Park Circle West right of way. Detailed planning for the water and sewer systems will commence at the time of Development Agreement and PDD approval by Jasper County. Preliminary discussions with BJWSA indicate a willingness to serve the property and to increase their capacity to serve developments in the vicinity. BJWSA has agreed to operate and maintain the water and sewer systems within their service area upon completion by the developer and acceptance by the Authority.

G. UTILITY SERVICE

Bailey Park is within the service territory of Dominion Energy for electrical power. The Owner will coordinate with Dominion Energy regarding planning for the PDD.

Hargray is able to provide telephone service to Bailey Park. The Owner will coordinate with Hargray regarding planning for the PDD.

Other utility services may be provided by legally established entities at the discretion of the Owner, provided such are in accordance with applicable franchising ordinances and licensing requirements of Jasper County.

H. ROADWAYS AND TRAFFIC

Bailey Park has frontage on SC Highway 170 to the north and Old Baileys road to the south. Establishing safe and reasonable ingress and egress for the property is a priority for the Owner, South Carolina Department of Transportation (SCDOT), and Jasper County. Full access shall be defined as access which allows any and all possible vehicular traffic movements into and out of the development. Limited access shall be defined as access which limits the movement of traffic into and out of a development (i.e., right-in, right-out). Any proposed roadway improvements shall be subject to approval by Jasper County and, where appropriate, the SCDOT.

The Concept Planprovides locations for potential internal access points for future interconnectivity.

As part of the access management plan for the project, the Owner will work with SCDOT and Jasper County to obtain one access point from Highway 170 and one access off Old Bailey Road. All proposed access points shall be accompanied by a traffic analysis that demonstrates consistency with the Jasper County and SCDOT Highway Management

Access Plans and design criteria. These accesses may be relocated to accommodate traffic modeling information, site specific characteristics and adjacent land uses as part of the access management plan.

Primary access to the interior of the development will be via the access point off Highway 170 and access off Old Baileys road as shown on the Conceptual Master Plan. Connectivity between the various development parcels and these access locations will be planned and incorporated into the site plans for the individual developments as they are submitted to Jasper County for review. Traffic circulation and access systems will be developed to maximize the public utility of full access points to Highway 170 from Bailey Park and also from adjacent and opposite parcels, to the extent practical. Interconnectivity between different proposed uses within the PDD will be promoted in order to encourage efficient traffic flow within the PDD.

The Bailey Park PDD may have roads designed with funding as outlined in the Development Agreement. Roads indicated on the Concept Planare subject to modification at the time of Development Plan approval based upon specific soil conditions, environmental concerns, physical constraints and design parameters.

The access point locations described above and shown on the Concept Planare preliminary and may be relocated during Master Plan approval and final development plans. Planning, design and construction of these accesses as well as all roadways and transportation elements shall be in accordance with SCDOT standards, Jasper County Ordinances, traffic impact assessment, PDD standards, or other engineering standards reasonably acceptable to the County engineer. Typical roadway sections will be submitted for review at the Master Plan approval stage.

Potential access across the jurisdictional wetlands surrounding adjacent tracts may be allowed if approved by OCRM and the USACE. Road linkages to adjacent properties may include impacts to jurisdictional wetlands.

Notwithstanding other provisions of this document and subject to approval by Jasper County, roadway design standards may be modified to reduce environmental impacts and increase tree preservation provided safety concerns are not compromised. Protection and preservation of significant trees will be encouraged. Reductions of roadway and right-of-way widths may not occur unless specifically authorized by the County.

I. PARKING

The total number of required parking spaces for all land uses allowed herein shall conform to the Jasper County ZO and LDR in effect at the time of Final Adoption of the Bailey Park PDD. Modulation of those standards may be allowed provided the applicant furnishes actual documentation that the new proposed standard meets the parking needs of the proposed land use and the County agrees at Master Plan approval.

J. STORMWATER MANAGEMENT

Bailey Park PDD shall conform to the Jasper County ZO, LDR and Stormwater Management Ordinance in effect at the time of Master Plan approval for the Bailey Park PDD as well as all other applicable state and federal requirements. Sufficient stormwater best management practices will be employed in the development of the PDD to ensure runoff leaving the site does not degrade water quality within surrounding wetlands and the receiving waterways.

SECTION II – LAND USE

A. INTRODUCTION AND NARRATIVE

The Bailey Park PDD has a total area of 26.63 acres, including 1.7 acres of non-jurisdictional freshwater wetlands, as indicated on the Conceptual Master Plan.

The Concept Planconsists of the following land use areas:

List types of proposed uses:

Of the approximately 24.93 upland acres, approximately 6 upland acres are intended for Commercial/ mixed use, approximately 19.445 upland acres are intended for residential uses and 10% (2.5%) upland acres are intended for community space use and stormwater management.

The majority of the commercial mixed use acres are intended for retail and office use. Of the residential units, initial plans call for multi-family, townhouse and single family homes.

The land use areas indicated on the Concept Plan are not intended to be rigid exact boundary lines for future land use and improvements. The Concept Plan for the Bailey Park PDD shall maintain flexibility to accommodate specific soil conditions, environmental concerns, pedestrian friendly requirements, physical constraints, market conditions and design parameters and as such, the exact location of boundary lines between land uses and their subsequent location and size indicated within the planning area shall be subject to change at the time Development Permit Plan(s) are submitted for development; provided, however, that maximum densities and other conditions of this PDD and the Development agreement between the Owner and Jasper County, South Carolina, will be strictly adhered to, unless adjustment is requested by the Owner and approved by the County. The boundaries of the PDD may be modified to include adjacent acreage subject to the approval of Jasper County by appropriate petition/application to the County to amend the PDD and the Development Agreement.

B. ALLOWED LAND USES

The following land uses shall be permitted in the Bailey Park PDD. The purpose of this portion of the PDD document is to state which land uses shall be allowed within the Bailey Park PDD; however, by allowing these uses this does not obligate the developer to provide the uses or facilities stated herein.

The following land uses and definitions shall be permitted in the Bailey Park PDD:

List types of proposed uses:

Tract A : Mixed Use Commercial and Community Commercial

Tract B: Multi Family Residential; Single Family attached and Single Family Detached Residential

Any easement that occurs within the property shall have the same land uses as any of the adjacent land uses. Any restrictions shall be based on the legal definition of the easement.

Design Regulations and Performance Standards will be established for each area at the time of the Master Plan approval. Unless otherwise agreed at Master Plan approval or in this PDD, the standard for uses and design criteria from the Jasper County ZO and LDR will apply.

C. ALLOWED DENSITY

Of the approximately 24.93 upland acres, the Concept Planfor the Bailey Park PDD consists of approximately 6.63 acres of Mixed Use Commercial/Community Commercial, approximately 20 acres of Residential uses. The Concept Plan may be modified at Master Plan approval, taking into consideration the potential need to change the exact locations of the proposed use(s) in order to address traffic considerations and in response to market conditions.

The overall Commercial use density within Tract A for the PDD shall not exceed 12,000 square feet/upland acre or a total build-out cap of 65,820 square feet for the entire PDD.

The Bailey Park PDD is planned to include a maximum of 233 residential units, which is based on a unit density of 12 units/upland acre for Tract B. Overall residential density shall include both Attached and Detached Single-Family Residential and Multi-Family Residential. Bed and Breakfast and Guesthouses shall not count against residential density. Detached guesthouses, "Mother-in-Law" Apartments, and Garage Apartments (for rent or not) on the same lot with a single family unit will be allowed as one structure per lot up to a maximum of 20% of the total residential units, with the exception of TND land use areas which shall not be subject to this 20% restriction; the second structure will

not be counted against the density cap but shall be counted as 0.5 units for the purposed of Development Fees. Fractional Ownership/Time Shares and Condo/Hotels count as 0.5 residential units for purposes of density, but count as commercial for Developer Fees under the Development Agreement. Condo/Hotels are defined as primarily transient, short term lodging facilities which have units owned by individuals/entities and may be under some type of common management/leasing program.

Commercial to Residential Conversion Rate: Commercial land uses in Tract A may be converted to multi-family or assisted living residential units. The allowable conversion rate shall be 1 DU per 625 SF of allowable Commercial SF or 19.2 DU per Acre. Both Short and Long term multi-family rentals and units for sale are allowed.

Commercial acreage shall include the commercial uses of Institutional/Civic as well as other uses and shall have no cap placed on unit density (building square footage/acre), provided compliance with stormwater, parking, buffering, landscaping and other site design requirements of the PDD and the Jasper County ZO and LDR are met. Hotel/Inn/Bed and Breakfast Properties, and assisted living, congregate care, and nursing home facilities shall not have a specified dwelling unit per acre maximum, provided compliance with stormwater, parking, buffering, landscaping and other site design requirements of the PDD and the Jasper County Ordinances and Regulations are met. All commercial development shall be subject to the provisions of the Jasper County ZO and LDR unless specifically exempted by this document. In addition to the Prohibited Uses specified in Section II(D)(5), trucking terminals will not be a permitted use in the commercial use areas.

D. DEFINITIONS OF LAND USE TERMS AND DENSITY TERMS

In the absence of a term definition in this Concept Plan or in the Bailey Park Development Agreement with Jasper County, the definitions of the Jasper County Zoning Ordinance shall apply in the interpretation of this Concept Plan. The definitions below shall generally describe the allowed uses within the PDD.

1. Tract A - General Commercial

   The general commercial designation allows for the development of concentrated commercial and office nodes located on primary vehicular routes to serve the Bailey Park PDD and surrounding area.

   a. Permitted Uses:

      (1) Establishments engaged in selling goods or merchandise to the general public for personal or household consumption (e.g., regional malls, outlet

centers, shopping centers, supermarkets, department stores, convenience stores, gas stations, automobile and boat dealerships, etc.) and rendering services incidental to the sale of such goods; establishments providing services or entertainment to the general public including but not limited to eating and drinking establishments, personal service and repair business and entertainment establishments (e.g. movie theatres, bowling alleys, etc.); medical and health facilities/office buildings and/or office for government, business professional or general purposes, unless specifically prohibited under Prohibited Uses below.

(2) Assembly and Worship
(3) Colleges and Professional Schools, Neighborhood (elementary , middle and high school)
(4) Storage facility
(5) Assisted living and continuing care facility
(6) Daycare, commercial
(7) Utilities including Cell Towers
(8) Public Services
(9) Government Office
(10) Commercial lodging (hotel and motel)
(11) Commercial Retail
(12) Office
(13) Medical and Health Facilities
(14) Restaurant (including outdoor seating)
(15) Service Businesses
(16) Dry-cleaning and Laundry Services
(17) Parking Garages
(18) Gas-convenient stores
(19) Commercial Amusement (indoor)
(20) Christmas Tree Sales
(21) Roadside Stands (on designated areas only)
(22) Commercial Outdoor Sales (related to existing retail)
(23) Public Interest and Special Events (permitted, located, and scheduled ahead of time)
(24) Nightclub and entertainment
(25) Movie Theaters and Bowling alleys
(26) Grocery
(27) Mini-warehouse facilities
(28) Outdoor go-cart racing facilities subject to the Jasper County Ordinances
(29) Single family attached, detached residential and Multi-family residential

b. Sidewalk displays are permitted directly in front of an establishment, if at least five (5) feet of sidewalk is maintained for adequate and uncluttered pedestrian access.

c. Commercial uses shall provide a minimum buffer of Fifteen (15) feet from any adjacent residential use not separated by a road right of way, excluding TND uses.

d. Prohibited Uses:

The following commercial uses are specifically prohibited:

(1) Junkyards or auto salvage yards
(2) Gambling facilities not authorized by law
(3) Sexually-oriented businesses

6. Hotel, Inn, Resort and Condo/hotel

This designation is for hotels, inns, timeshare projects, resorts and spas that consist of building or buildings with guest rooms for sleeping, kitchens and or a dining room(s) to provide meals for guests, including public restaurants, bars, and entertainment areas. Hotels, inns, and spas shall be considered a commercial land use. Conference facilities may or may not accompany the hotel/inn and may be integral to the hotel/inn or detached. Resorts under this land use may include fractional ownership. Hotels, inns, and spas shall be considered a commercial land use and will not count against the residential unit cap except for Fractional Ownership/Time Shares and Condo/Hotels, which count as 0.5 residential units for purposes of density, but count as a commercial unit (Hotel/Motel) for Developer Fees under the Development Agreement.

Maximum building height shall meet the requirements of the Jasper County Ordinances and Regulations for group dwellings and multiple family dwellings.

2. Tract B - Residential (Multi-family and Single family)

a. The maximum number of residential dwelling units on the property will be 233 units, as determined by specific soil conditions, environmental concerns, pedestrian friendly requirements, physical constraints, market conditions and design parameters.

b. For detached single family residential and duplexes, (i) the average lot size may vary as to specific, individual master plans, but the overall average lot size on the Property shall not be less than 4,500 square feet and (ii) the minimum side setbacks shall be 6 feet on each side. Side setbacks can be reduced at the discretion of the County's Planning staff. The primary standard, to be utilized in allowing the variance shall be the maintenance of the County's Insurance Services Organization fire safety rating. As for dwelling units, a minimum front-yard setback of 25 feet shall be imposed on lots with front-loaded garages; a minimum setback of 15 feet for lots with side-loaded garages; a minimum setback of 15 feet from the back lot line; and a minimum setback of 5 feet from a pool or deck. For corner lots, the second street setback shall be 15 feet.

c. For attached single family residential, townhomes, or condominiums (i) there shall be no minimum lot size or setbacks, and (ii) 6 foot side setbacks shall be required for all non-common lot line sides.

d. Multi-family residential units (which are not separated by a ground-to-roof wall) are allowable up to a maximum of 12 units per acre. Multifamily residential consists of attached or detached residential including both short term and long term rentals, but excludes Hotel/Inn/Bed and Breakfast and Guesthouse. Multi-family units do not have a lot size designation. Multi-family units do not have a lot size designation. Multi-family units shall be limited to a maximum of four (4) stories and 55 feet in height above finished grade, as applicable, not including minor uninhabitable architectural elements above basic roof lines, subject to provisions of the Jasper County Ordinances.

e. The allocation of density as specified allows for the clustering of development to optimize the protection of natural features and maximize open space. This does not guarantee that the Property can be developed at the identified maximum. Lot sizes range from the square footage of the foundation of cottage-type product to larger single family lots.

f. Single-family residential consists of attached (2 or more units separated by a ground-to-roof wall) and detached residential, including both short and long term rentals. Product mix may include full size lots, attached zero lot line product subject to Master Plan Review, townhouses, patio home sites and cottages. Residential improvements shall be limited to a maximum of three (3) stories in height above parking or base flood elevation, as applicable, not including minor uninhabitable architecture elements above basic roof lines, subject to provisions of the Jasper County Ordinances. Single family managed rental communities shall not be an allowable use in the development.

g. Additional lot size designations and bulk requirements shall be provided for each type of proposed residential use at the Master Plan phase.

3. Community Recreation, Amenities and Parks:

This designation allows for the recreational complexes and amenities to serve the Bailey Park PDD. Land uses may consist of private and semi-private recreation, indoor and outdoor lighted and unlighted recreation facilities, establishments and services that include active and passive sports and entertainment, ancillary facilities such as restaurants serving such public recreational facilities. Community Recreation enhances the quality of life and provides recreational needs for the Bailey Park community and shall not be counted against the overall allowed acreage for commercial uses within the Bailey Park PDD. Permitted uses include:

a. Outdoor Recreational Facilities including but not limited to:

1. Public or Private Clubhouse and pavilions (maximum 3 stories and 45' height above finished grade, subject to provisions of the Jasper County Ordinances)
2. Swimming pool and support facilities
3. Event space and green for outdoor recreation and restrooms
4. Recreation fields, sports courts and other recreation related amenities.
5. Sidewalks and pedestrian trails
6. Recreational Building including but not limited to uses such as indoor recreation, meetings, assembly, banquet, fitness, and hobby space.
7. Accessory Buildings
8. Community Offices/Administration Buildings shall not be counted against commercial acreage.
9. Maintenance and Storage Facilities
10. Pro shops, snack bars, grills, restaurants and lounges associated with clubhouses
11. Ancillary uses associated with community recreation facilities such as craft centers, fitness centers, etc.

4. Institutional/Civic

This designation allows for institutional and civic land uses, which shall be allowed to occur as a mixed use throughout the Bailey Park PDD. Institutional and civic land uses shall be reviewed at the Master Plan phase with total square footages counting at a rate of 50% towards the commercial cap.

a. Civic, cultural, municipal, governmental, educational (public or private), conference centers, research or other similar facilities which may include dormitories or other similar living quarters for students, staff, faculty and professionals.
b. Churches, synagogues, temple and other places of worship provided that such uses are housed in a permanent structure.
c. Cemeteries provided that such use does not include a funeral home or crematorium.
d. Medical and health facilities, assisted living facility, nursing home and congregate care facility.
e. Public emergency service facilities, library, museum, day care facilities, social/community centers, etc.

5. Maintenance Areas

The maintenance areas will contain the facilities, tools and equipment necessary to maintain the common properties within the Bailey Park PDD. These facilities may be congregated on a central site or located in separate convenient sites for

different services such as general community maintenance, golf course maintenance, recreation area maintenance or individual property regime maintenance. Permitted uses include:

a. Vehicle maintenance
b. Storage of vehicles and parts, boats, recreational vehicles and resident storage
c. Fuel storage
d. Shops for woodwork, metalwork and painting.
e. Greenhouses, plant propagation areas and holding yards
f. Mulching facility and mulch storage.
g. Storage of chemicals and bulk materials as permitted by law.
h. Offices associated with community and maintenance.

6. Model Home/Sales Center

This designation allows for the model homes and office/administrative facilities associated with the primary sale of residential lots and homes. The facility(s) may be permanent or temporary in nature with the model homes being sold as single-family residences in the future or the facility(s) may relocate from time to time during the period of development to meet the needs of development phasing. From time to time model homes may be constructed and later sold as permanent residences when no longer needed as models. Permanent model homes will count towards the total residential density cap and towards associated residential development fees. Temporary sales centers will not count against commercial square footage density or development fees.

7. Open Space

Bailey Park PDD shall provide at least ten (10) percent open space for all residential land uses. There shall be no requirement for additional open space for the Commercial portions of the development; however 10% of the overall Commercial uplands will remain pervious. No wetlands, rights of way, easements or other lands already subject to use restrictions shall be used to generate the ten percent (10%) open space reservation for residential land uses. Open space may be located in restricted access, gated communities and shall consist of the following:

(1) Landscaped areas including manicured village greens
(2) Forest, wildlife preserves/corridors, wetland conservation areas, stormwater management areas and greenbelts
(3) Community garden plots
(4) Recreation areas including swimming pools, tennis courts, playgrounds, ball fields, lawn game fields, gardens, public or private regulation or par three golf courses, etc.
(5) Pedestrian/bicycle trail, sidewalk easements and right-of-ways
(6) Buffer and setback areas

8. Setbacks and Buffers

Setbacks and buffers required by the HCOD shall apply according to the LDR if and when necessary. All other buffers and setbacks shall be maintained as described below:

a. Setbacks and buffer standards within the Bailey Park PDD shall include:

(1) There shall be no minimum setbacks applied to the Concept Plan other than those described in the HCOD where necessary, those required by Fire Code, and those described elsewhere in this document. Residential setbacks are described in Section II.D.4 of this document.

(2) Buffers between non-compatible land uses shall comply with Section 2B4 of the LDR. The required buffers shall be a total width and can be met by sharing a buffer across a property line.

(3) At jurisdictional wetlands or recorded conservation easements the setbacks and buffers shall be as determined by the state and federal agencies having jurisdiction over the wetlands. The project shall also comply with Section 7.4 of the LDR with regards to riparian buffering. The project shall have the right to buffer average in accordance with USACE and OCRM standards.

(4) A 10-foot setback shall be required for all drainage systems and retention ponds within the development.

b. Perimeter buffer for single family and townhomes shall be a minimum of 10', all other uses shall be required a minimum 20' Buffer. Stormwater features related to the outfall from a detention, retention or filtration system shall be allowed within the perimeter setbacks and buffers. Only temporary flood control and soil erosion control devices shall be permitted in the perimeter setback and buffer areas during construction. These devices shall be immediately removed upon stabilization of these areas.

9. Signage Control

Signage for the Bailey Park PDD shall be governed by the Jasper County ZO and LDR in effect at the time of the submission of final development plans or as herein contained.

10. Wetlands

This designation allows the following uses within wetlands. Freshwater wetlands on the property shall be those areas over which the applicable governmental agencies claim jurisdiction for freshwater wetlands. Unless restricted via a future Memorandum of Agreement (MOA) to the contrary, the following are permitted uses:

a. Buffers
b. Conservation areas
c. Activities in all wetland areas as permitted by the USACE and OCRM
d. Disposal of reclaimed water as permitted by SCDHEC
e. Stormwater management and recreational lakes
f. Boardwalks, trails, bridges and other permitted structures
g. Game Management

11. Utilities

This designation allows for utility service to serve the planned tracts of the Bailey Park PDD. Utility types and facilities not germane to the development will be subject to review by the Planning Commission as part of the Master Plan review process. The following land uses shall be allowed:

a. Potable water supply and distribution
b. Wastewater collection, treatment and disposal
c. Stormwater collection, treatment and detention
d. Irrigation
e. Communication towers (except in residential land use areas)
f. Satellite antennas
g. Cable television facilities
h. Telephone facilities
i. Power transmission and distribution
j. Fiber optic lines
k. Other utility services (i.e., Internet access and other telecommunication uses)

Certain community-wide infrastructure is required for the development of any large, master-planned community. This infrastructure may include, but is not limited to the following:

a. Arterial streets and primary access roads
b. Water supply
c. Wastewater treatment and effluent disposal
d. Power substations
e. Central telephone facilities
f. Stormwater management lagoons
g. Natural gas supply

In the case of this Concept Plan, the community-wide infrastructure may serve more than one planning tract. Infrastructure serving the community (on-site and off-site) will be approved as part of the Master Plan approval process. Infrastructure projects must receive a Jasper County Development Permit prior to construction.

12. Traditional Neighborhood Development (TND)

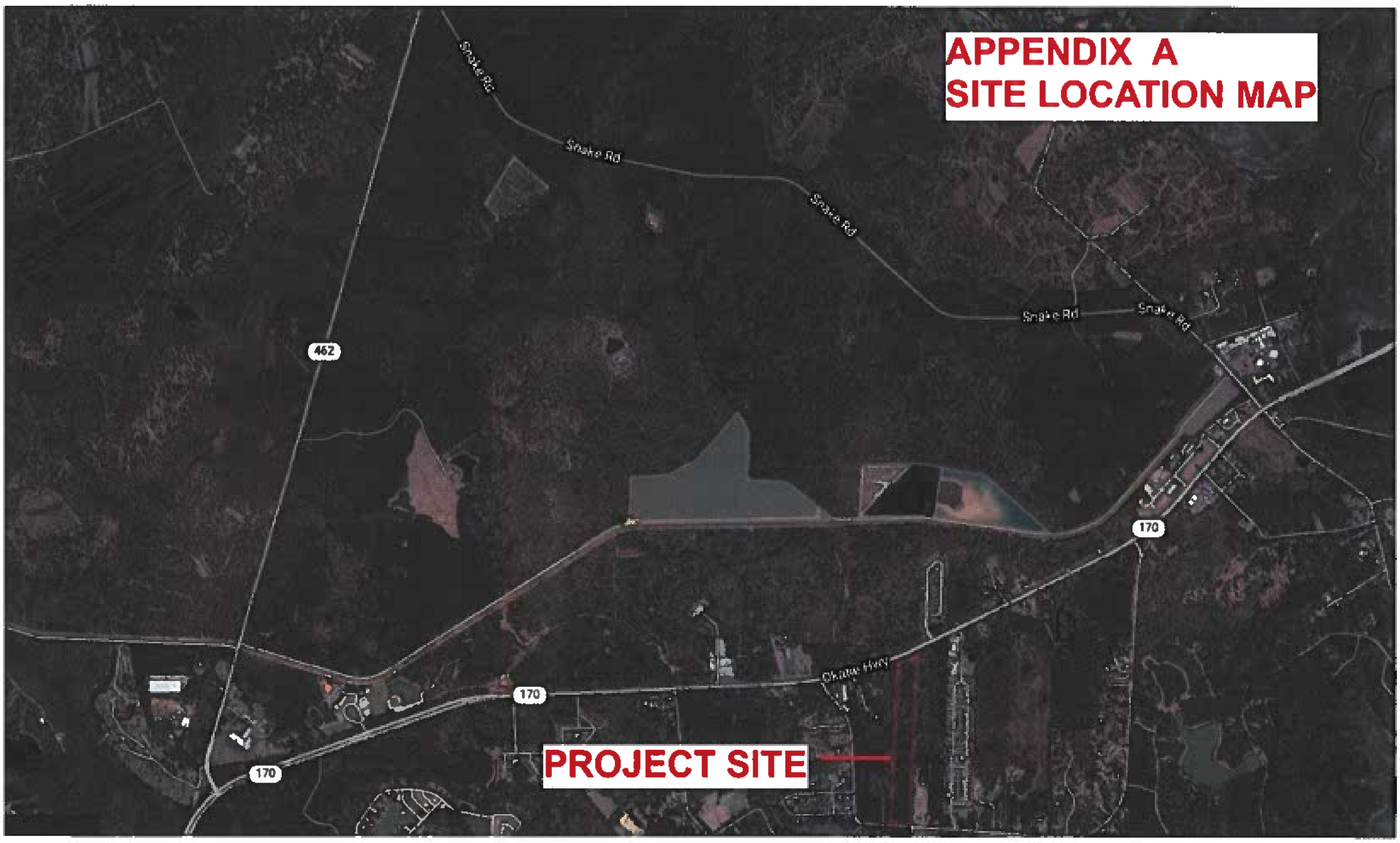
This Land Use Category allows for the development of a Traditional Neighborhood Development within the Bailey Park PDD typified by the culture, value and traditions exemplified in the Historic Districts of Savannah, GA, Charleston, SC and Seaside, FL. This development is to be a traditional neighborhood, which is characterized by a pedestrian-friendly environment of grid streets, neighborhood parks, sidewalks, front porches, alleys, on-street parking, mixed uses and a tight scale to unify the district. Homes within the neighborhood are planned to be within a five minute walk of the community hall, civic buildings and other mixed use areas.

The traditional neighborhood will be a mixed-use development consisting of neighborhood-commercial, single-family residential, multi-family residential, recreational, civic uses and open space. There shall be allowance for mixed-use capabilities (live/work units) as well as an allowance for accessory buildings to have residential capacity (such as garage apartments). Other distinctive features of this traditional neighborhood that will be allowed within this district are outlined in this land use category.

Design Standards shall be submitted at Master Plan stage, and may have standards deviating from the Jasper County Ordinances or this PDD, provided that health, safety, ingress/egress, and fire protection concerns are addressed to the satisfaction of the County.

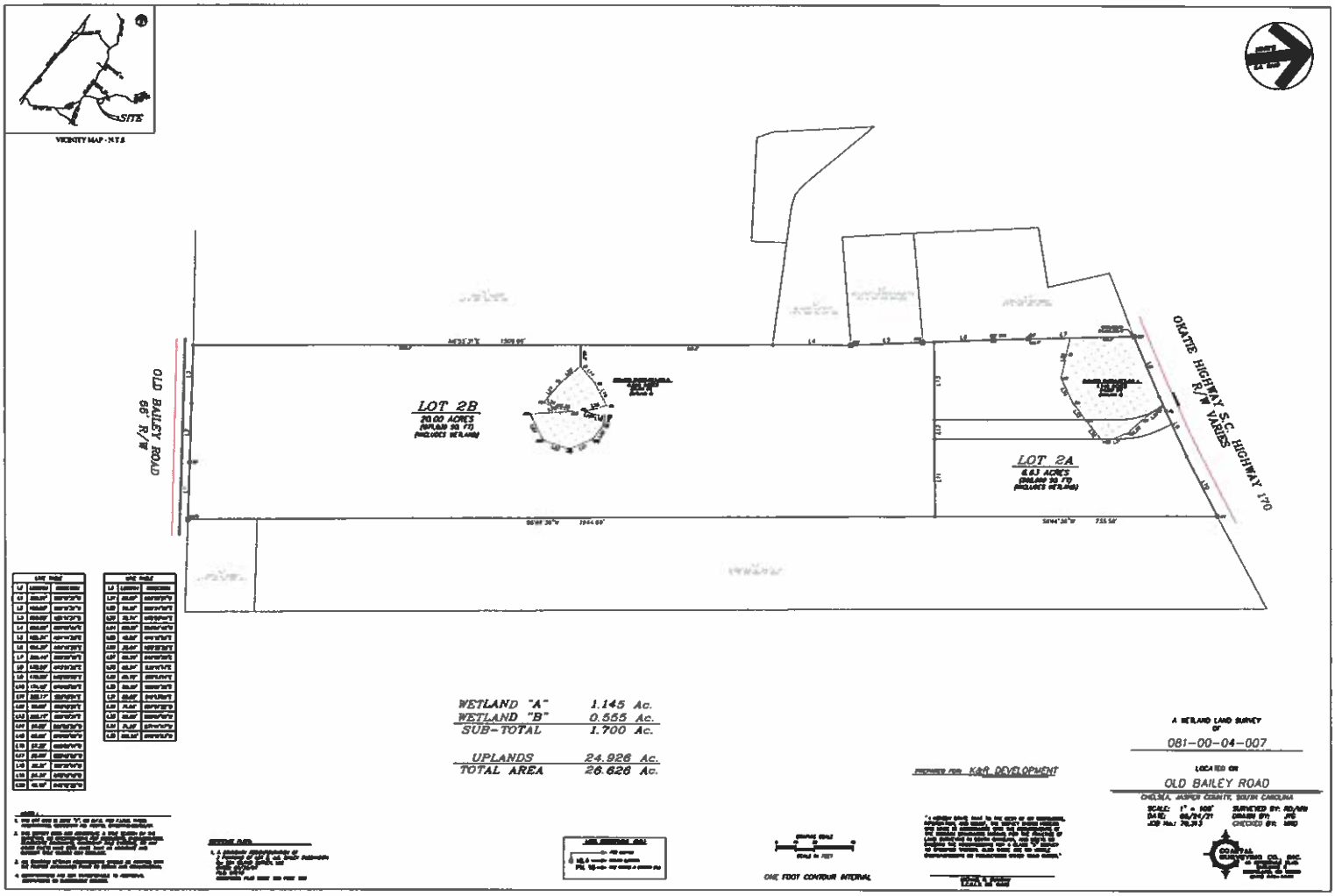
APPENDIX A

SITE LOCATION MAP


APPENDIX A
SITE LOCATION MAP
Snake Rd
Snake Rd
Snake Rd
Snake Rd
Snake Rd
462
170
170
170
170
PROJECT SITE

APPENDIX B

SITE SURVEY



WETLAND "A"	1.145 Ac.
WETLAND "B"	0.555 Ac.
SUB-TOTAL	1.700 Ac.
UPLANDS	24.926 Ac.
TOTAL AREA	26.626 Ac.

A WETLAND LAND SURVEY
OF
081-00-04-007

LOCATED ON
OLD BAILEY ROAD
CHELSEA, JASPER COUNTY, SOUTH CAROLINA

PREPARED FOR: K&R DEVELOPMENT

ONE FOOT CONTOUR INTERVAL

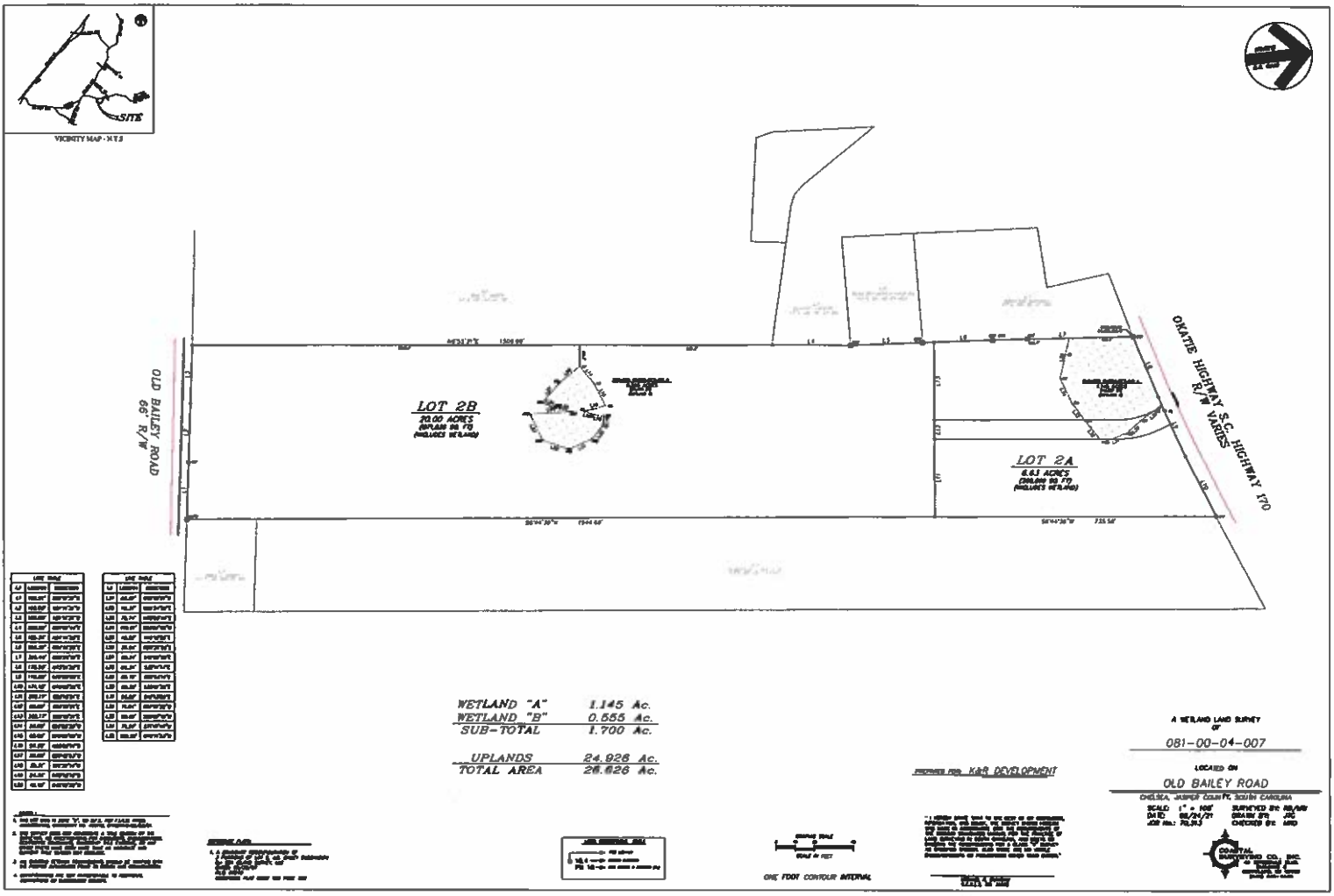
SCALE: 1" = 100'
DATE: 06/21/21
JOB No.: 76.23

SURVEYED BY: BD/MW
DRAWN BY: JG
CHECKED BY: MW

COASTAL SURVEYING CO., INC.

APPENDIX C

FRESHWATER WETLANDS DELINEATION



WETLAND "A"	1.145 Ac.
WETLAND "B"	0.555 Ac.
SUB-TOTAL	1.700 Ac.
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TOTAL AREA	26.628 Ac.

A WETLAND LAND SURVEY
OF
081-00-04-007
LOCATED ON
OLD BAILEY ROAD
CHELSEA, JASPER COUNTY, SOUTH CAROLINA

PREPARED FOR: K&R DEVELOPMENT

ONE FOOT CONTOUR INTERVAL

APPENDIX D

USDA SOILS DATA

Soil Map—Beaufort County, South Carolina, and Jasper County, South Carolina
(Bailey Park)

Map Scale: 1:2,770 if printed on B portrait (11" x 17") sheet.

Meters
0 40 80 160 240

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Beaufort County, South Carolina
Survey Area Data: Version 17, Aug 27, 2021

Soil Survey Area: Jasper County, South Carolina
Survey Area Data: Version 16, Aug 30, 2021

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 21, 2021—Feb 23, 2021

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

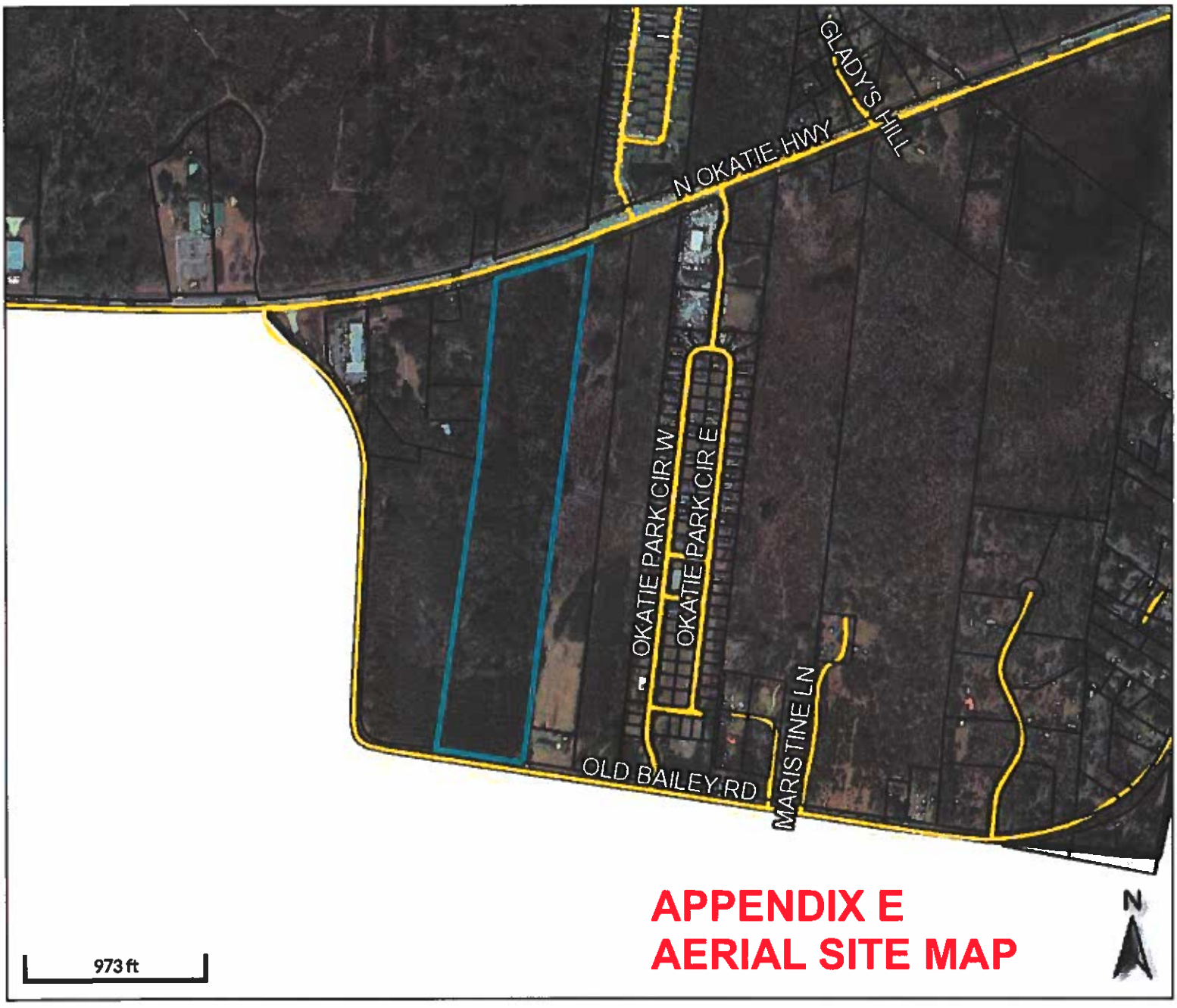
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cs	Coosaw loamy fine sand	0.1	0.5%
Subtotals for Soil Survey Area		**0.1**	**0.5%**
Totals for Area of Interest		**29.1**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cs	Coosaw loamy fine sand	8.6	29.5%
Wa	Wahee fine sandy loam	20.4	70.1%
Subtotals for Soil Survey Area		**28.9**	**99.5%**
Totals for Area of Interest		**29.1**	**100.0%**

APPENDIX E

AERIAL SITE MAP



APPENDIX E
AERIAL SITE MAP

APPENDIX F

USGS QUADRANGLE MAP

The National Map Advanced Viewer

3/12/2022, 12:57:55 PM

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

- Override 1
- 3.75 Minute Index
- 7.5 Minute (1:24K) Index
- 15 Minute (1:63K) Index
- 30x60 Minute (1:100K) Index
- 1x1 Degree Index

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

APPENDIX G

FEMA MAP

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the Floodways were computed at cross-sections and interpolated between cross-sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was State Plane South Carolina FIPS 3900. The horizontal datum was NAD 83 GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Jasper County, South Carolina.

This map may reflect more detailed or up-to-date stream channel configurations than those shown on the previous FIRM. The floodways were developed using the most hydrologically appropriate data available, which may include updated topographic data, post-flood channel configurations, and/or more detailed hydraulic models. Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; communities that have revised or updated floodways since the previous FIRM was printed; the Community Map History table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

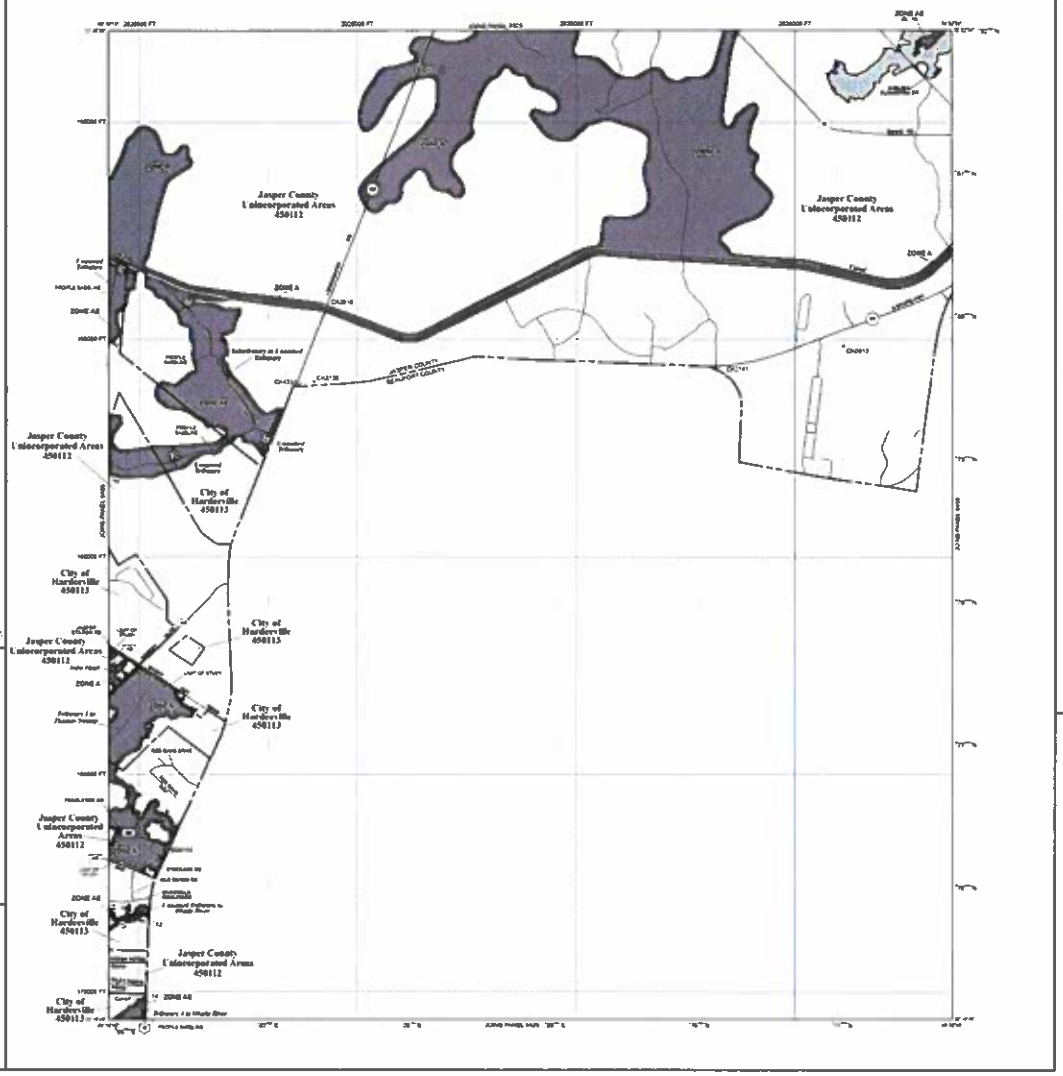
Contact the FEMA Map Information eXchange (FMIX) at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FMIX may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip/index.shtm.

DNR

This digital Flood Insurance Rate Map (FIRM) was produced through a cooperative partnership between the State of South Carolina and the Federal Emergency Management Agency (FEMA). The State of South Carolina has implemented a long term vision of floodplain management by joining the National Flood Insurance Program, participating in the Community Rating System (CRS), supporting local floodplain management ordinances, and assisting communities in the mitigation of flood damages. As a part of this effort, the State of South Carolina has joined FEMA in a Cooperating Technical State agreement with the goal of maintaining and updating selected FIRMs.

http://www.dnr.state.sc.us/



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.

ZONE AE — Base Flood Elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary — Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*
- *Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western hemisphere
- 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 5000-foot grid ticks: South Carolina State Plane coordinate system, FIPSZONE 3900, Lambert Projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River mile

MAP SCALE 1" = 1000'

For information and services (how to purchase maps, how to find out current flood hazard information for a property, how to request a Letter of Map Change, etc.), call the Emergency Management Assistance Center toll free number, 1-877-FEMA-MAP (1-877-336-2627).

If you have Internet access, visit the Federal Emergency Management Agency's Map Service Center website at http://msc.fema.gov. From this site, you can order Flood Insurance Rate Maps, search publication databases, and access publications and publication ordering information.

NFIP

PANEL 0410D

FLOOD INSURANCE RATE MAP

JASPER COUNTY, SOUTH CAROLINA AND INCORPORATED AREAS

PANEL 410 OF 575

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JASPER COUNTY, UNINCORPORATED AREAS	450112	0410	D
HARDEEVILLE, CITY OF	450113	0410	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

NATIONAL FLOOD INSURANCE PROGRAM

MAP NUMBER
45053C0410D

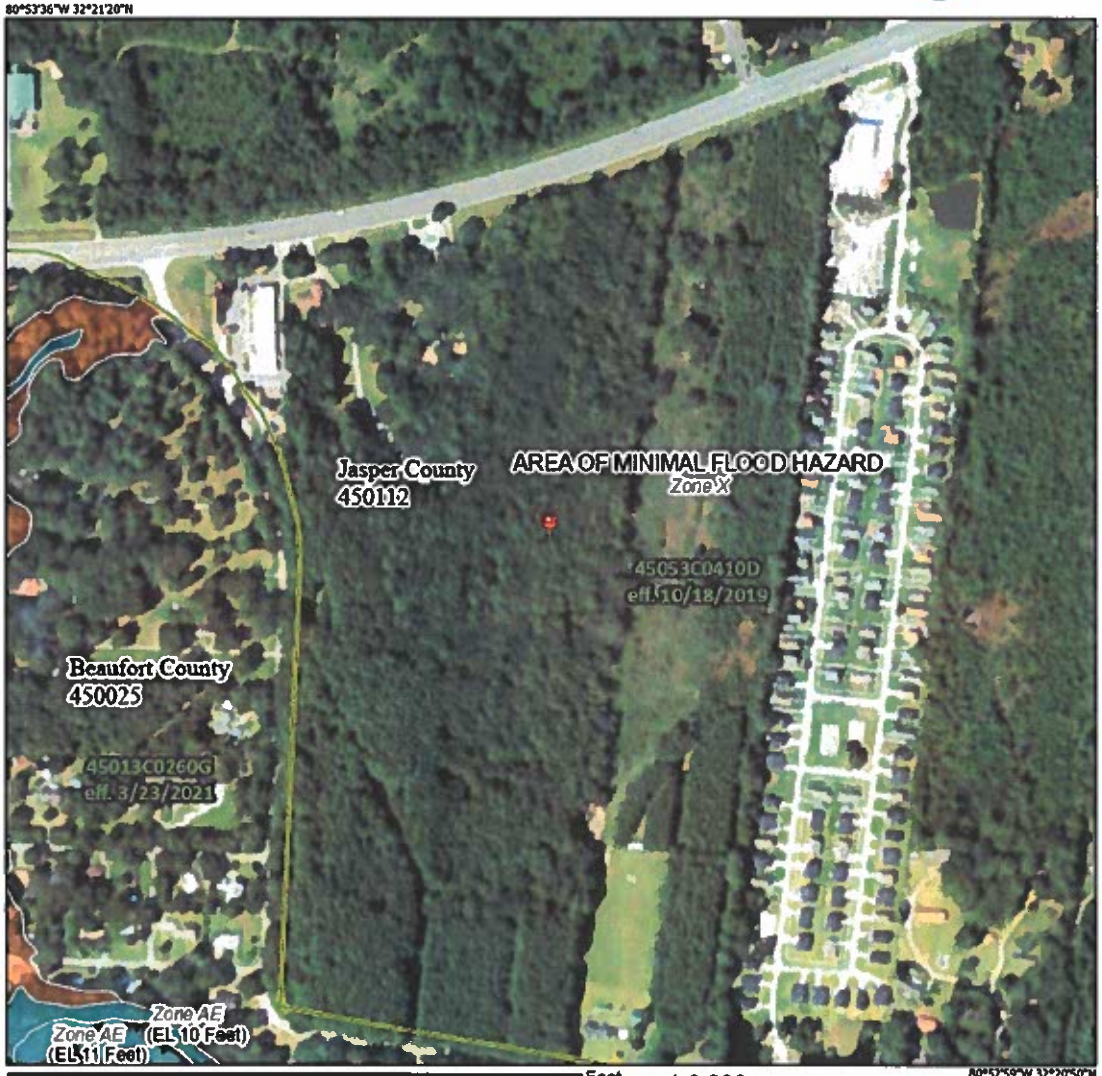
EFFECTIVE DATE
OCTOBER 16, 2013

Federal Emergency Management Agency

National Flood Hazard Layer FIRMette

FEMA

80°53'36"W 32°21'20"N



80°52'59"W 32°20'50"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

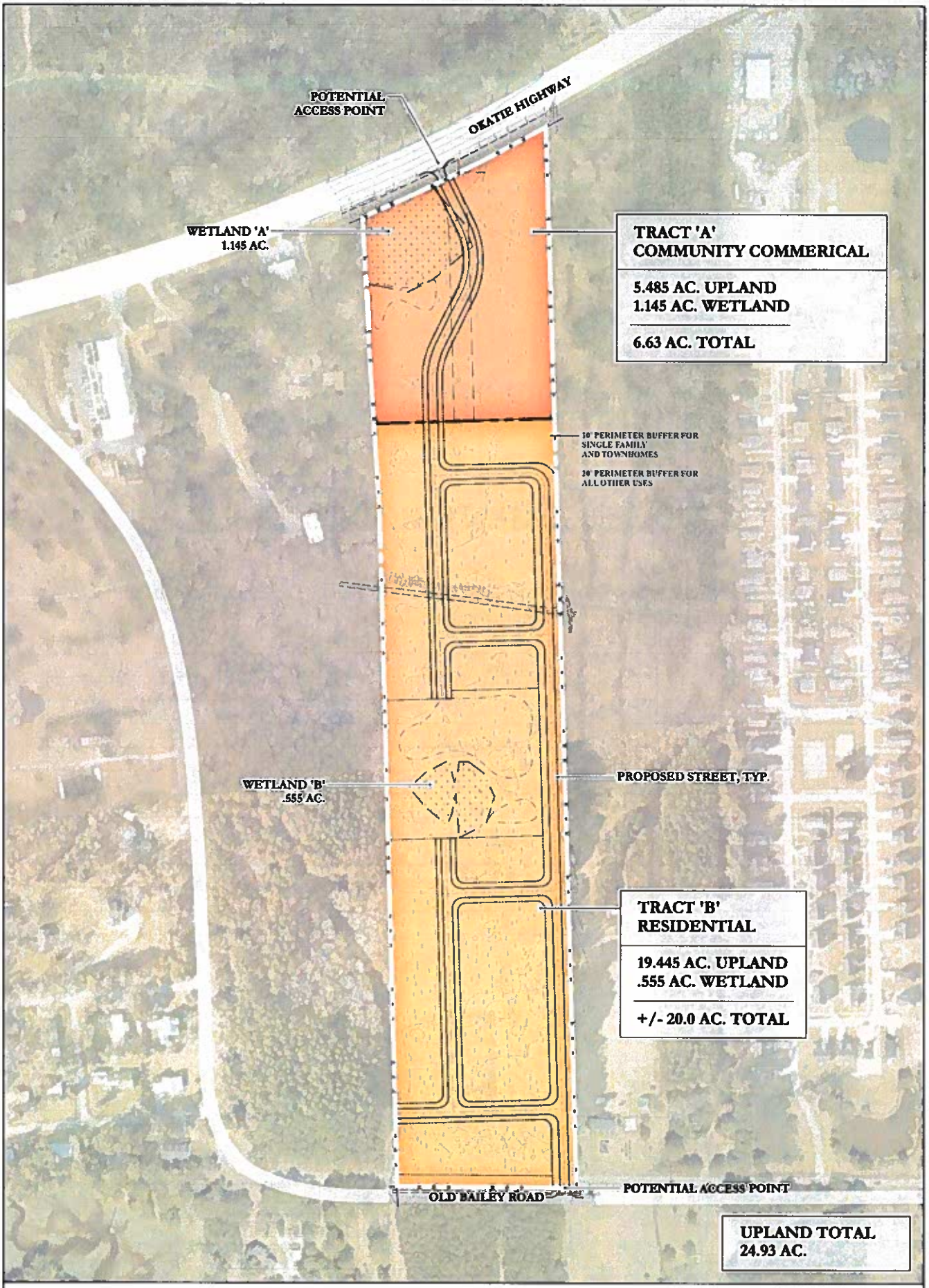
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/12/2022 at 1:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX H

CONCEPT PLAN



Wilmer-Jones-Keefer Ltd.

MARCH 15, 2022

BAILEY PARK

PLANNED DEVELOPMENT DISTICT

CONCEPT PLAN

JASPER COUNTY, SOUTH CAROLINA

DRAFT

0 50 100 150 200 250 300 350 400

Scale 1" = 100'

Note: Plan is conceptual in nature and subject to change

APPENDIX I

DEVELOPMENT SCHEDULE

The following is a Preliminary Development Schedule for Bailey Park PDD that is subject to change based on market conditions and other factors:

Year	Commercial (sq ft)	Residential (dwelling units)
Phase 1 – 2022-2024	35,820	180 DU's
Phase 2 -2025-2027	30,000	53 DU's

AECOM

Bailey Park

Traffic Impact Study

April 2022

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
Jacob Nelson, PE	Ryan Eckenrode, P.E. PTOE, RSP2I		

Revision History

Revision	Revision date	Details	Authorized	Name	Position

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Table of Contents

Figures

Tables

Appendix

1. Executive Summary

The planned Bailey Park mixed-use development is to be located south of SC 170 (Okatie Highway) between Old Bailey Road West and Okatie Park Drive in Jasper County, South Carolina. The development is expected to be fully built out by 2027 and is planned to consist of 233 single family homes and 65,280 square feet of commercial development.

AECOM studied the traffic impacts of the Bailey Park development at full build-out and due to the heavy traffic volumes on SC 170, the minor street approaches at Bailey Road West and Site Driveway #1 are likely to experience moderate to significant delay for all left-turn vehicles in the year 2027. Please note AECOM used a conservative 4% annual growth rate to obtain 2027 traffic volumes.

In the Build 2027 scenario, the minor approach at Site Driveway #1 intersecting with SC 170 is expected to operate with a poor level of service and experience significant queuing. The following items were recommended for this scenario:

SC 170 at Site Driveway #1

- Construct a 150-foot eastbound right turn lane on SC 170 at Site Driveway #1.
- Construct a northbound left-turn lane along with 200-foot right-turn lane on Site Driveway #1 at SC 170.

While these recommendations may not fully mitigate congestion during peak hours, the following additional improvement should be considered:

- Install a sign at Site Driveway #1 that prohibits vehicle from turning left out of driveway during 7-9 AM and 4-6 PM. As a result of vehicles being restricted from turning left out of Site Driveway #1, the intersection of SC 170 at Bailey Road West should be monitored as future signalization may be warranted at a later time.

Old Bailey Road at Site Driveway #2

- Construct a single lane southbound approach on Site Driveway #2 at Old Bailey Road under stop control. No significant delay is expected at this driveway.

2. Introduction

The planned Bailey Park mixed-use development is to be located on SC 170 (Okatie Highway) between Old Bailey Road West and Okatie Park Drive in Jasper County, South Carolina as seen in **Figure 1**. The development is expected to be fully built out by 2027 and is planned to consist of 233 single family homes and 65,280 square feet of commercial development. The proposed site plan is shown in **Figure 2**. The intersections studied in this report are listed below:

1. SC 170 at Old Bailey Road West (S-18)
2. SC 170 at Old Bailey Road East (S-18)

This traffic study focuses on trip generation, distribution, traffic analyses, and provides recommendations for mitigating Level of Service (LOS) and queuing incurred by the proposed Bailey Park mixed-use development.

AECOM was tasked with studying traffic conditions near the proposed project during the weekday AM and PM peak hours for three (3) scenarios:

- 2022 Existing: An analysis of the existing conditions
- 2027 Background: An analysis of conditions in the year 2027 if the development is not constructed.
- 2027 Build: An analysis of conditions in the year 2027 if the development is constructed.

Based on these scenarios, the study is structured to focus on whether the proposed development will have a negative impact on traffic regarding LOS, delay, and queuing.

AECOM

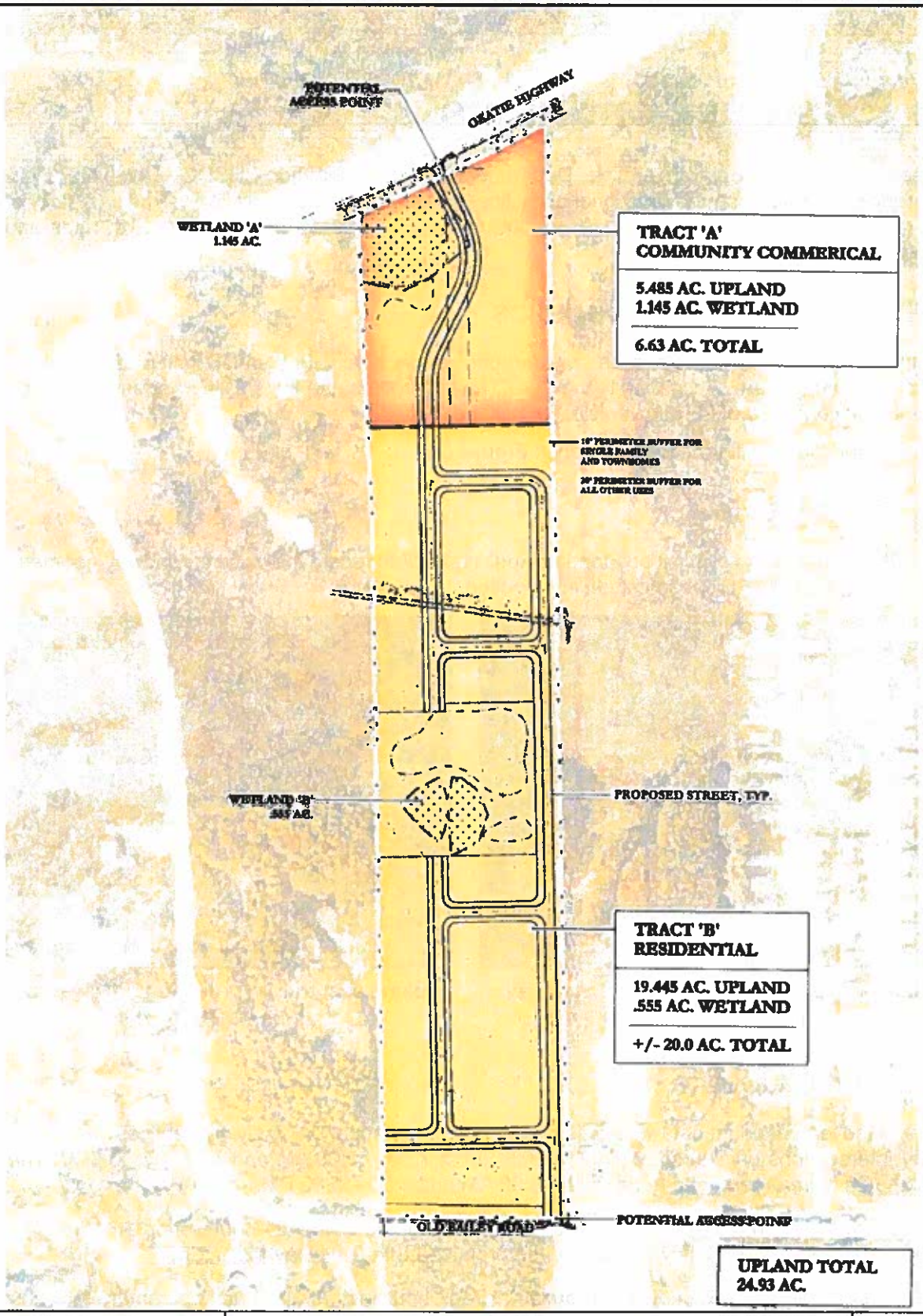
FIGURE 1

VICINITY MAP

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale



AECOM

FIGURE 2

PROPOSED SITE PLAN

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

3. Existing Conditions

Resources on the South Carolina Department of Transportation (SCDOT) website were referenced to determine the functional classification and Annual Average Daily Traffic (AADT) of the roadways studied in this report. This data assisted with determination of growth rates and other analysis factors.

3.1 Roadway Characteristics

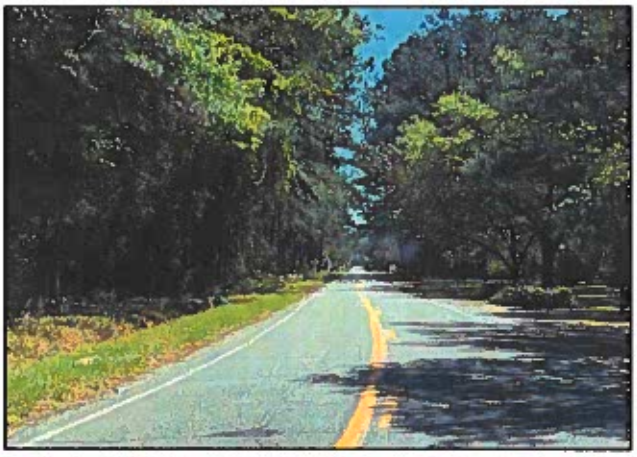
Okatie Highway (SC 170) is a 5-lane divided principal arterial with a speed limit of 55 miles per hour in the study area. According to the SCDOT traffic counts, the 2019 (Pre-Pandemic) average daily traffic consisted of 28,300 vehicles just east of the study area.

The existing lane configuration is shown in **Figure 3**.

3.2 Field Review

AECOM conducted a field visit on Monday, April 11, 2022 to record the existing roadway geometry and operations at the proposed study intersection.

Looking east towards proposed driveway location along SC 170



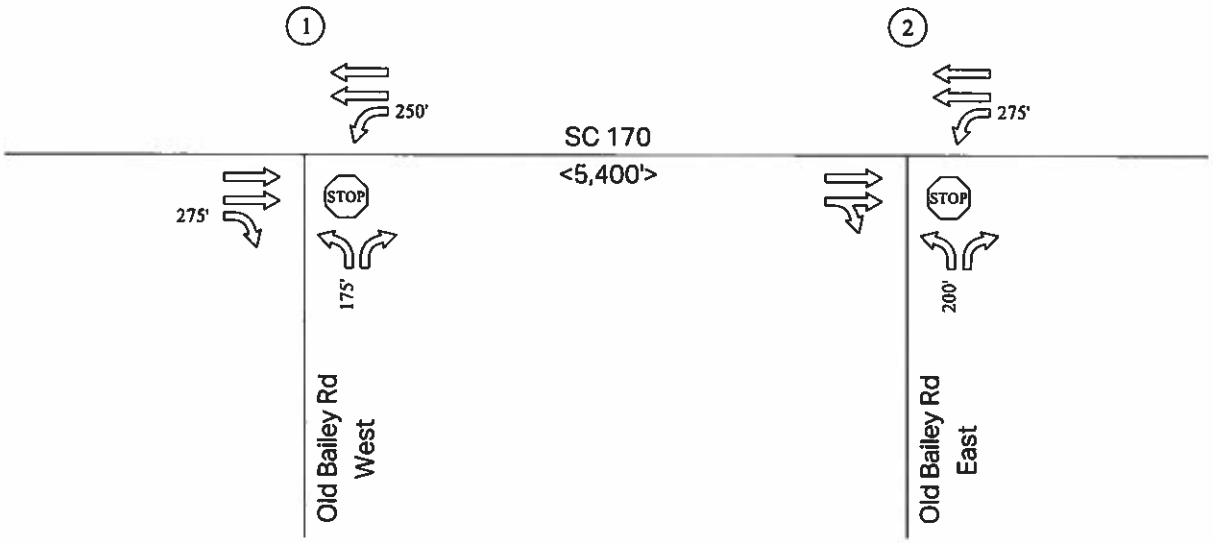
Looking east toward proposed driveway location along Old Bailey Road

3.3 Traffic Counts

Turning movement count data was collected by National Data and Surveying Services, Inc. at the study intersections on Thursday, April 7, 2022, from 7:00 – 9:00 AM and 4:00 – 6:00 PM. The peak hours were determined to be 7:00 – 8:00 AM and 4:00 – 5:00 PM.

An Average Daily Traffic (ADT) volume of 467 was collected over a 24-hour period on Thursday, April 7, 2022 along Old Bailey Road near the proposed Site Driveway #2.

The existing volumes are shown in **Figure 4.** Peak hour factors and truck percentages for the roadway are also reflected in the analysis. Traffic count data can be found in **Appendix A**.



LEGEND

- Existing Laneage
- (##) Intersection Number
- <##'> Distance Between Intersections

AECOM

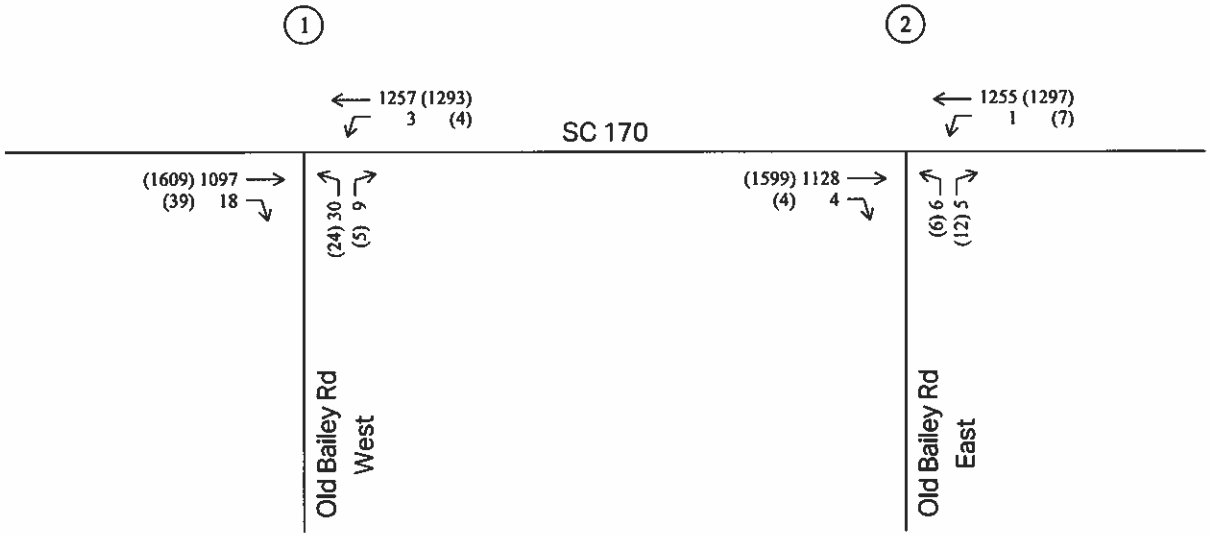
FIGURE 3

Existing 2022 Lane Configuration

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale



LEGEND

- ← Volume Movement
- (##) Intersection Number
- ## AM Peak Hour Traffic Volume
- (##) PM Peak Hour Traffic Volume

AECOM

FIGURE 4

Existing 2022
AM / PM Peak Hour Volumes

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

4. Background Growth

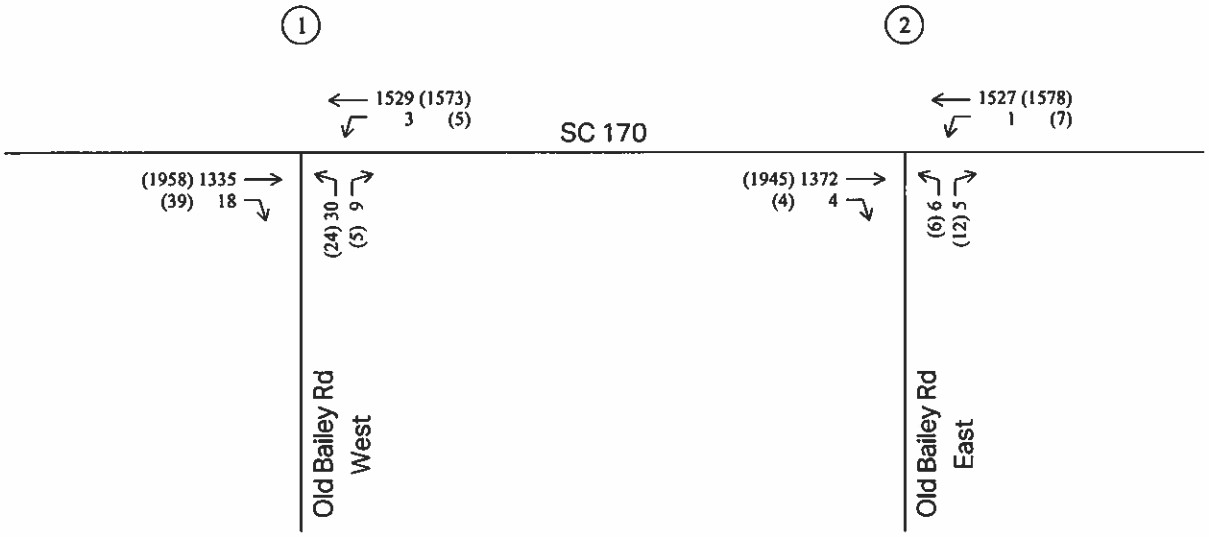
4.1 AADT Trends

Historic trend analysis of the data referenced from the SCDOT website shows growth rates in the study area at approximately 4 percent (4%) growth per year from 2014-2019. **Table 1** shows Annual Average Daily Traffic (AADT) Trends from 2014 to 2019.

Table 1 – AADT Trends

Road Name	Station	2014	2015	2016	2017	2018	2019	% Growth Rate
SC 170 from Jasper County Line to Beaufort County Line	184	23,100	22,200	22,900	23,600	25,500	28,300	**4.14%**

Background 2027 volumes are shown in **Figure 5**.



LEGEND

- ← Volume Movement
- (##) Intersection Number
- ## AM Peak Hour Traffic Volume
- (##) PM Peak Hour Traffic Volume

AECOM

FIGURE 5

Background 2027
AM / PM Peak Hour Volumes

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

5. Trip Generation and Distribution

5.1 Trip Generation

AECOM used the Trip Generation Manual (Institute of Transportation Engineers, 10th Edition, 2017) to generate the site trips for the Bailey Park mixed-use development as shown in **Table 2.** The Trip Generation Handbook (Institute of Transportation Engineers, 3rd Edition, 2017) was referenced for determining whether to use the average rate or equation to generate projected traffic.

The development is planned to consist of 233 single family homes and 65,280 square feet of commercial development and is expected to be fully built out by 2027.

The Bailey Park mixed-use development is projected to generate 4,186 new daily trips (2,093 entering, 2,093 exiting) for a normal weekday. During the peak hours the proposed development is expected to generate 168 new trips (63 entering, 105 exiting) in the AM peak, and 374 new trips (199 entering, 175 exiting) during the PM peak.

Internal capture includes trips that start and end within the project site; therefore, trips do not affect external study intersections since they do not exit the development. According to the Trip Generation Handbook (Institute of Transportation Engineers, 2017) internal capture worksheets, approximately 2% of the AM and 25% of the PM peak hour site trips will be internally captured trips between the residential and retail land uses.

Pass-by includes trips already on the roadway network that are attracted by the retail development, enter and exit the development within the same peak hour. Based on proposed land uses, AECOM used 0% (AM peak) and 34% (PM peak) for the commercial development.

After internal capture and pass-by calculations, the proposed Bailey Park development is projected to generate 2,576 net new daily trips (1,288 entering, 1,288 exiting) for a normal weekday. During the peak hours the proposed development is expected to generate 164 net new trips (61 entering, 103 exiting) in the AM peak, and 213 net new trips (116 entering, 97 exiting) during the PM peak when constructed.

Detailed trip generation calculations are provided in **Appendix B**.

Table 2 – Trip Generation

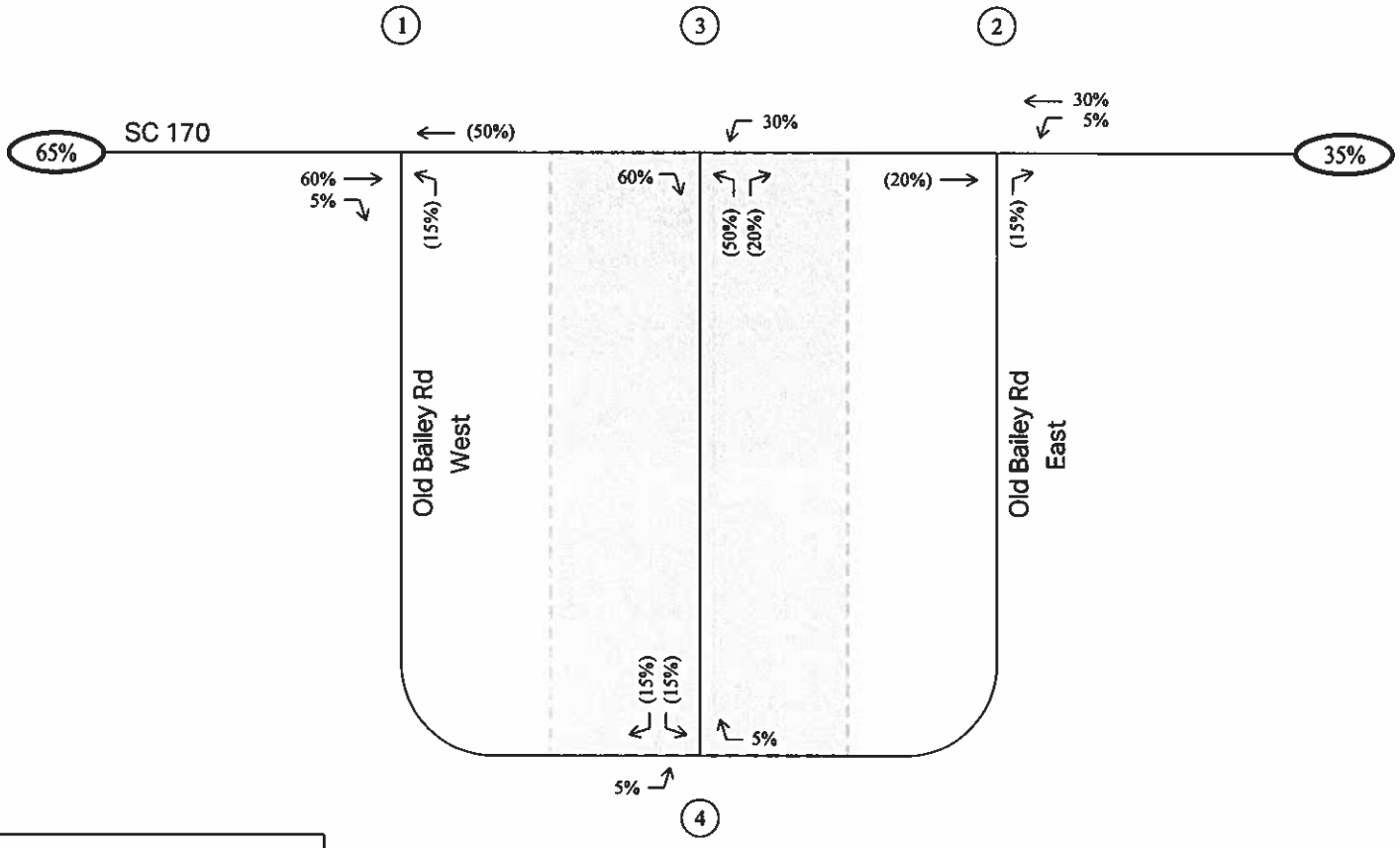
Land Use Type	ITE Code	Daily			AM Peak Hour			PM Peak Hour		
		Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
65,280 SF Commercial	820	2,464	1,232	1,232	61	38	23	249	120	129
233 Townhomes	220	1,722	861	861	107	25	82	125	79	46
New Vehicle Trips	-	**4,186**	**2,093**	**2,093**	**168**	**63**	**105**	**374**	**199**	**175**
Internal Capture	-	**3,266**	**1.633**	**1,633**	**164**	**61**	**103**	**282**	**153**	**129**
Pass-By	-	**690**	**345**	**345**	**0**	**0**	**0**	**69**	**37**	**32**
Total External Site Trips	-	**2,576**	**1,288**	**1,288**	**164**	**61**	**103**	**213**	**116**	**97**

5.2 Trip Distribution

The planned development is to be accessed by a full access driveway along SC 170. Trip distributions for the Bailey Park mixed-use development were developed by analyzing existing traffic patterns at the study intersections. The distribution is described below:

- 65% to and from the west on SC 170
- 35% to and from the east on SC 170

Site trip distribution and assignment are presented in **Figure 6**. The AM site trips using this distribution are shown in **Figure 7**. The PM site trips using this distribution are shown in **Figure 8.**



LEGEND

- ← Turning Movement
- (##) Intersection Number
- (XX%) Origin / Destination
- ##% Entering
- (##%) Exiting
- Site

AECOM

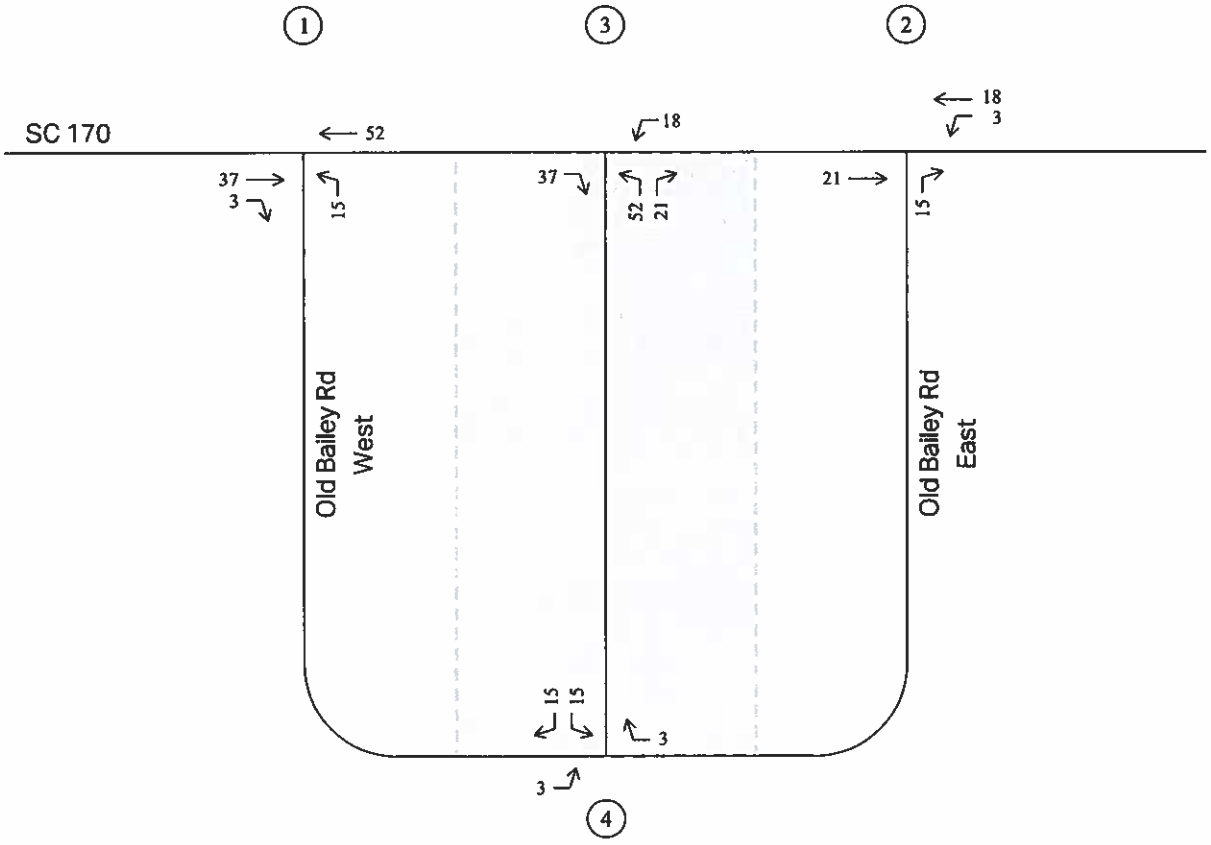
FIGURE 6

Site Traffic Distribution

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale



LEGEND

- ← Turning Movement
- (##) Intersection Number
- ## AM Peak Hour Site Traffic Volume
- Site

AECOM

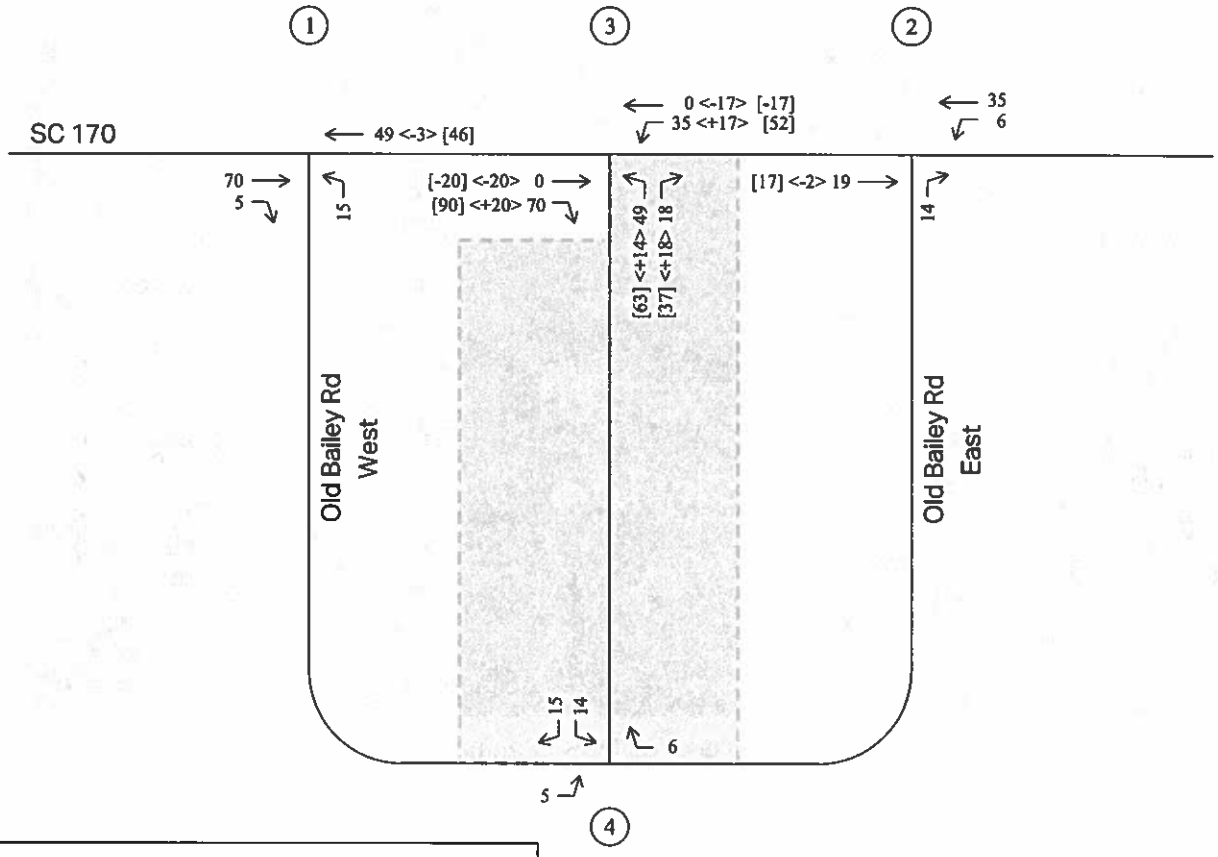
FIGURE 7

Site Traffic Volume AM

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale



LEGEND

←	Turning Movement
(##)	Intersection Number
##	PM Peak Hour Site Traffic Volume
<##>	PM Pass-By Peak Hour Traffic Volume
[##]	PM Peak Hour Total External Site Traffic Volume
	Site

AECOM

FIGURE 8

Site Traffic Volume PM

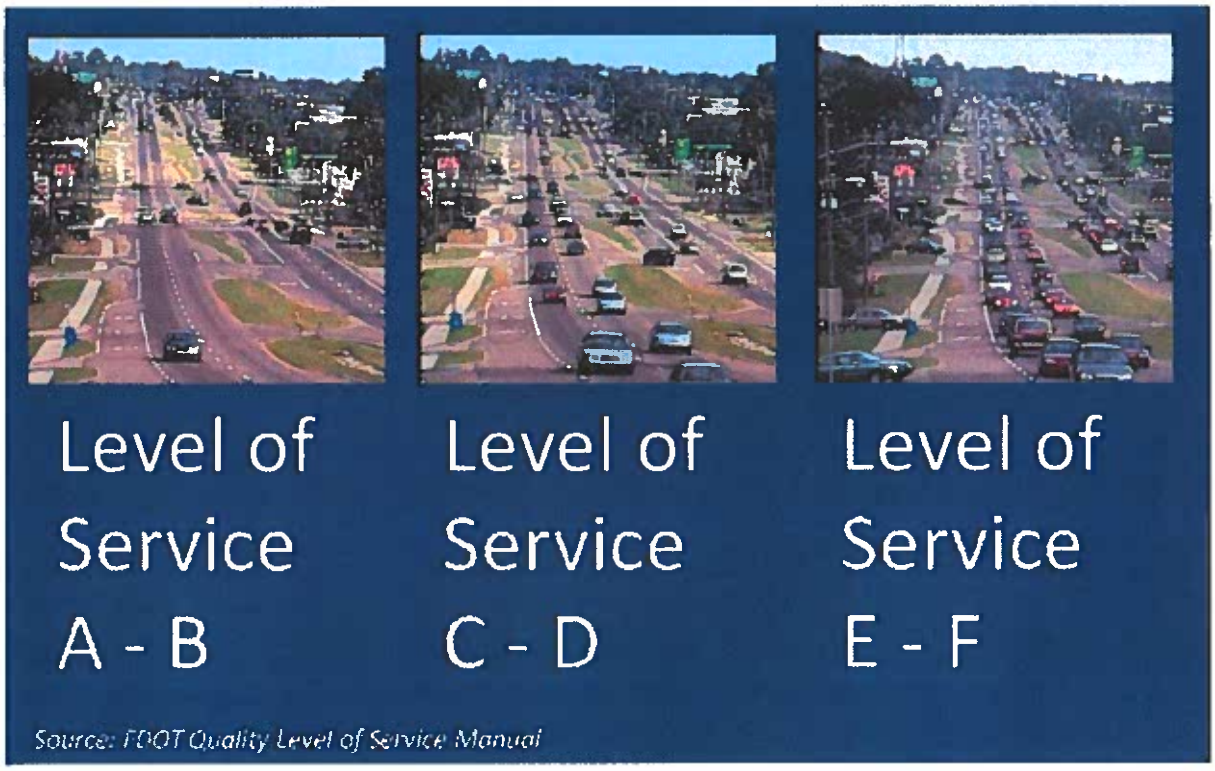
Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

6. Capacity Analysis

The traffic carrying ability of a roadway is described by levels of service (LOS) that range from LOS A to LOS F. LOS A represents unrestricted maneuverability and operating speeds. LOS B represents reduced maneuverability and operating speeds. LOS C represents restricted maneuverability and operating speeds closer to the speed limit. LOS D represents severely restricted maneuverability and unstable, low operating speeds. LOS E represents operating conditions at or near the capacity level. LOS F represents breakdown conditions characterized by stop and go travel. A visual representation of each LOS is shown below.



The Highway Capacity Manual (HCM) 6 defines LOS at an unsignalized intersection by average control delay per vehicle, which includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue. The Highway Capacity Manual explains that drivers perceive that a signalized intersection is designed to carry higher traffic volumes and therefore expect to experience greater delays at signalized intersections. Unsignalized intersections are assigned a LOS for each minor movement. Typically, LOS D is considered the minimum acceptable level of service at an urban intersection. **Table 3** presents LOS thresholds for unsignalized intersections.

Table 3 – LOS Thresholds for Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)
A	< 10.0
B	> 10.0 and < 15.0
C	> 15.0 and < 25.0
D	> 25.0 and < 35.0
E	> 35.0 and < 50.0
F	> 50.0

AECOM performed an analysis using Synchro 11 (Build 0, Rev 8) for the study intersections. AECOM analyzed each scenario for the AM and PM peak hours.

AECOM determined the required laneage to satisfy the LOS requirement as well as the appropriate storage lengths to accommodate 95th percentile queuing. According to Highway Capacity Manual (HCM) 6, an acceptable Level-of-Service (LOS) is "D" or better with "A" having the shortest delays and "F" having the longest delays. Sim Traffic was used to report 95th percentile queuing.

Appendix C provides the volume calculation spreadsheets used to develop all capacity analysis scenarios.

6.1 Existing 2022

AECOM analyzed the Existing 2022 traffic conditions during the AM and PM peak hours at the study intersections. **Figure 9** shows the Existing 2022 AM and PM peak hour volumes and LOS.

Table 4 presents a summary of the LOS, delay, and volume to capacity ratios for the Existing 2022 conditions.

Table 4 – Existing 2022 Summary of LOS and Delay

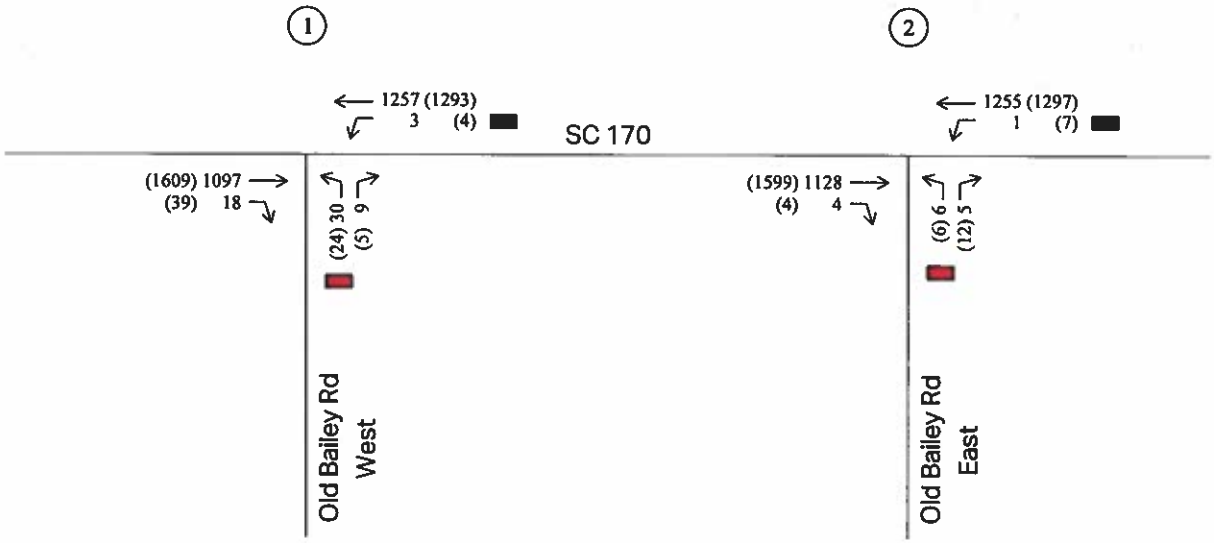
ID#	Intersection	Approach	HCM 6 Level of Service (LOS)		Control Delay (sec/veh)		Volume to Capacity Ratio (V/C)	
			AM	PM	AM	PM	AM	PM
1	SC 170 at Old Bailey Road West *(Unsignalized)*	EBR	A	A	0.0	0.0	-	-
		WBL	C	B	16.3	14.9	0.010	0.012
		NBL	D	E	26.5	48.0	0.228	0.306
		NBR	B	C	13.6	16.9	0.034	0.025
2	SC 170 at Old Bailey Road East *(Unsignalized)*	EB	A	A	0.0	0.0	-	-
		WBL	B	C	12.6	16.8	0.002	0.025
		NBL	D	E	25.0	37.5	0.068	0.078
		NBR	B	C	13.1	18.4	0.024	0.065

The 95th percentile queues for the Existing 2022 scenario are shown in **Table 5**.

Table 5 – Existing 2022 Summary of 95th Percentile Queues

ID#	Intersection	Approach	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	SC 170 at Old Bailey Road West *(Unsignalized)*	EBR	275	0	0
		WBL	250	21	22
		NBL	175	72	93
		NBR	-	42	24
2	SC 170 at Old Bailey Road East *(Unsignalized)*	WBL	275	8	19
		NBL	200	32	22
		NBR	-	26	41

Synchro 11 and Sim Traffic outputs from the Existing 2022 analysis are provided in **Appendix D.**



LEGEND

- ← Volume Movement
- (##) Intersection Number
- ## AM Peak Hour Traffic Volume
- (##) PM Peak Hour Traffic Volume
- Site

Unsignalized LOS (Critical Peak Hour)

- LOS E/F
- LOS D
- LOS A/B/C

AECOM

FIGURE 9

Existing 2022 AM / PM
Peak Hour Volumes & LOS

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

6.2 Background 2027

AECOM analyzed the Background 2027 traffic conditions during the AM and PM peak hours at each study intersection. As previously mentioned, this is an analysis of conditions in the year 2027 if the project is not constructed.

Table 6 presents a summary of the LOS, delay, and volume to capacity ratios for the Background 2027 conditions. As indicated in the table below, the northbound left turns experience a high level of delay due to the high east-west traffic volume on SC 170 and the 4% annual growth.

Table 6 – Background 2027 Summary of LOS and Delay

ID#	Intersection	Approach	HCM 6 Level of Service (LOS)		Control Delay (sec/veh)		Volume to Capacity Ratio (V/C)	
			AM	PM	AM	PM	AM	PM
1	SC 170 at Old Bailey Road West *(Unsignalized)*	EBR	A	A	0.0	0.0	-	-
		WBL	C	C	20.2	18.9	0.014	0.021
		NBL	D	F	33.5	77.4	0.210	0.356
		NBR	C	C	15.4	20.8	0.028	0.024
2	SC 170 at Old Bailey Road East *(Unsignalized)*	EB	A	A	0.0	0.0	-	-
		WBL	B	C	14.8	22.0	0.003	0.035
		NBL	D	F	32.0	56.9	0.048	0.088
		NBR	B	C	14.7	22.9	0.015	0.062

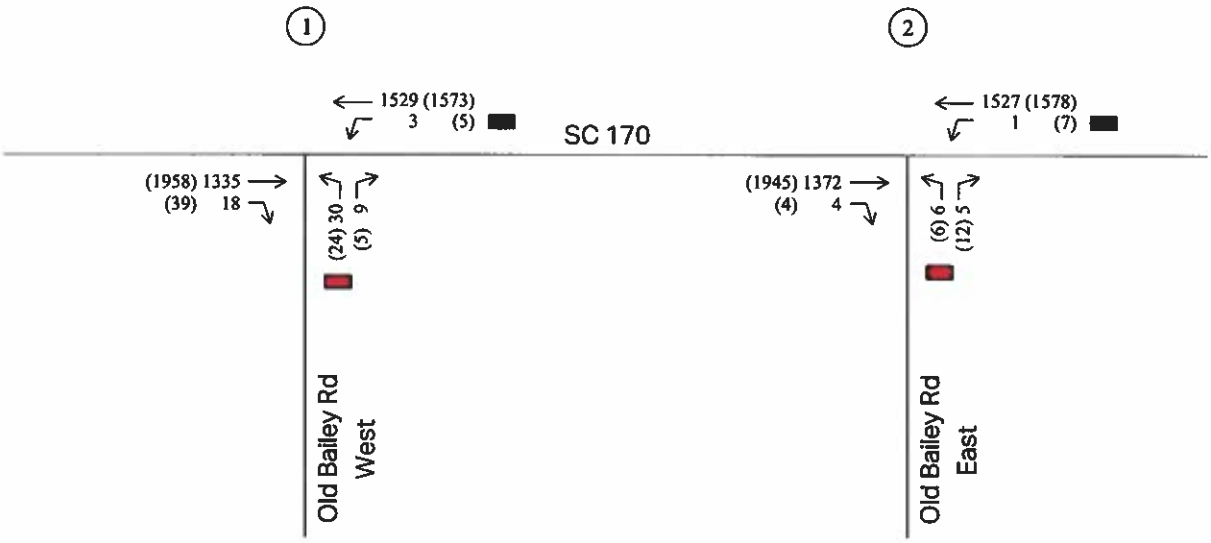
Figure 10 shows the Background 2027 AM and PM peak hour volumes and LOS.

The 95th percentile queues for the Build 2027 scenario are shown in **Table 7**.

Table 7 – Background 2027 Summary of 95th Percentile Queues

ID#	Intersection	Approach	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	SC 170 at Old Bailey Road West *(Unsignalized)*	EBR	275	0	0
		WBL	250	16	12
		NBL	175	75	314
		NBR	-	36	373
2	SC 170 at Old Bailey Road East *(Unsignalized)*	WBL	275	0	17
		NBL	200	29	17
		NBR	-	25	40

Synchro 11 and Sim Traffic outputs from the Background 2027 analysis are provided in **Appendix E.**



LEGEND

- Volume Movement
- (##) Intersection Number
- ## AM Peak Hour Traffic Volume
- (##) PM Peak Hour Traffic Volume
- Site

Unsignalized LOS (Critical Peak Hour)

- LOS E/F
- LOS D
- LOS A/B/C

AECOM

FIGURE 10

Background 2027 AM / PM Peak Hour Volumes & LOS

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

6.3 Build 2027

AECOM analyzed the Build 2027 traffic conditions during the AM and PM peak hours at the study intersection. This is an analysis of conditions in the year 2027 if the development is constructed.

Based on SCDOT turn lane warrants, a westbound left and eastbound right turn lane are both warranted at Site Driveway #1. The right turn lane warrant for the eastbound approach can be found in **Appendix F**. A left turn lane is recommended on all divided highways able to accommodate them according to the SCDOT ARMS Manual.

In the Build 2027 scenario, the minor approach at Site Driveway #1 intersecting with SC 170 is expected to operate with a poor level of service and experience significant queuing. The following items were recommended for this scenario:

SC 170 at Site Driveway #1

- Construct a 150-foot eastbound right turn lane on SC 170 at Site Driveway #1.
- Construct a northbound left-turn lane along with 200-foot right-turn lane on Site Driveway #1 at SC 170

While these recommendations may not fully mitigate congestion during peak hours, the following additional improvement should be considered:

- Install a sign at Site Driveway #1 that prohibits vehicle from turning left out of driveway during 7-9 AM and 4-6 PM. As a result of vehicles being restricted from turning left out of Site Driveway #1, the intersection of SC 170 at Bailey Road West should be monitored as future signalization may be warranted at a later time.

Old Bailey Road at Site Driveway #2

- Construct a single lane southbound approach on Site Driveway #2 at Old Bailey Road under stop control. No significant delay is expected at this driveway.

Table 8 presents a summary of the LOS, delay, and volume to capacity ratios for the Build 2027 conditions.

Table 8 – Build 2027 Summary of LOS and Delay

ID#	Intersection	Approach	HCM 6 Level of Service (LOS)		Control Delay (sec/veh)		Volume to Capacity Ratio (V/C)	
			AM	PM	AM	PM	AM	PM
1	SC 170 at Old Bailey Road West *(Unsignalized)*	EBR	A	A	0.0	0.0	-	-
		WBL	C	C	22.3	21.6	0.016	0.025
		NBL	E	F	43.9	160.3	0.355	0.734
		NBR	C	C	16.3	23.3	0.030	0.028
2	SC 170 at Old Bailey Road East *(Unsignalized)*	EB	A	A	0.0	0.0	-	-
		WBL	C	C	16.1	24.2	0.014	0.072
		NBL	E	F	36.2	63.6	0.055	0.098
		NBR	C	D	16.2	26.0	0.064	0.144
3	SC 170 at Site Driveway #1 *(Unsignalized)*	WBL	B	D	13.8	26.7	0.047	0.259
		NBL	E	F	44.9	235.1	0.396	1.061
		NBR	C	D	15.9	25.8	0.066	0.192
4	Old Bailey Road at Site Driveway #2 *(Unsignalized)*	EB	A	A	7.2	7.3	0.002	0.003
		SB Approach	A	A	8.7	8.7	0.033	0.032

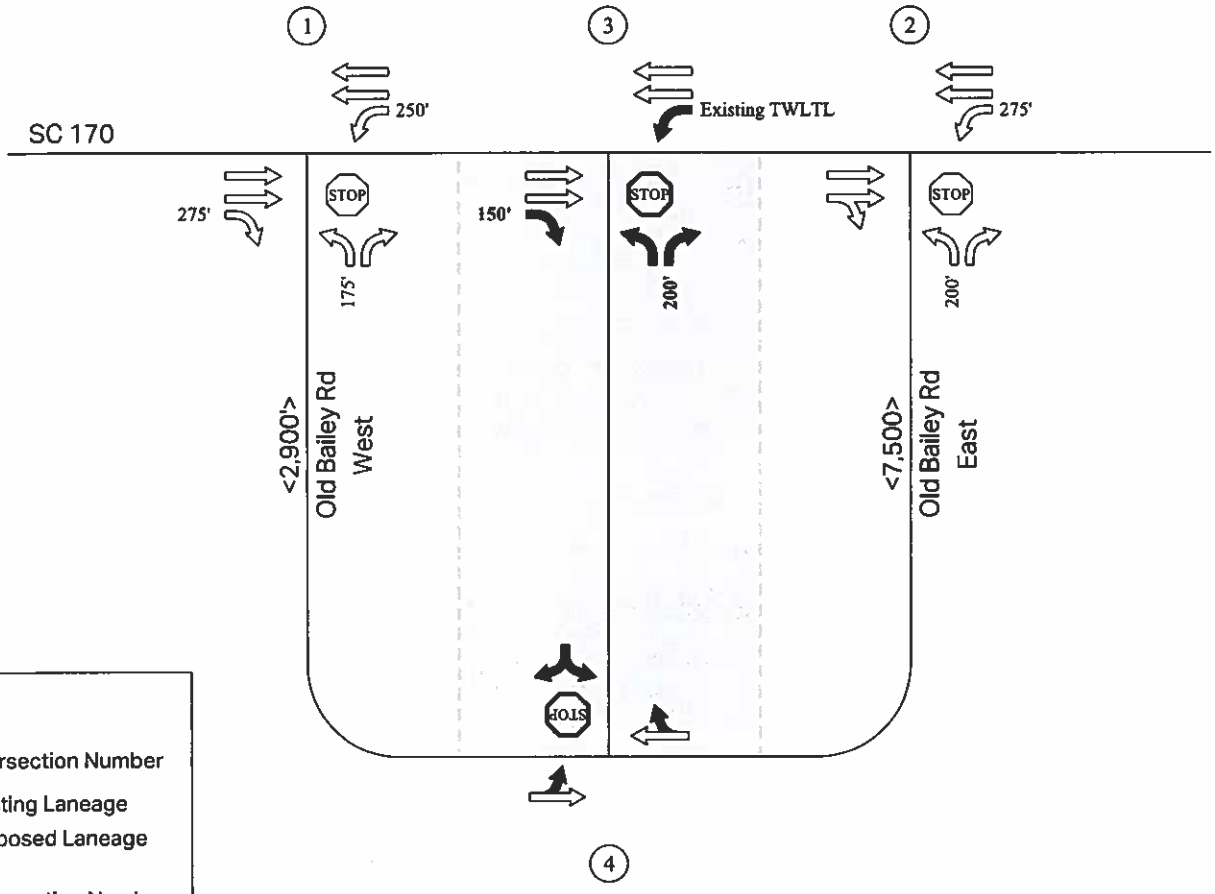
Figure 11 shows the proposed Build 2027 proposed laneage and **Figure 12** shows the Build 2027 AM and PM peak hour volumes and LOS. As indicated in the tables, the northbound approaches at intersections #1 (Old Bailey Road West) and #3 (Site Driveway #1) with SC 170 are expected experience significant delay and queuing. It should be noted that the volume to capacity ratio is less than 1.0 at the Old Bailey Road West intersection and not likely to warrant a traffic signal.

The 95th percentile queues for the Build 2027 scenario are shown in **Table 9**.

Table 9 – Build 2027 Summary of 95th Percentile Queues

ID#	Intersection	Approach	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	SC 170 at Old Bailey Road West *(Unsignalized)*	EBR	275	0	0
		WBL	250	22	18
		NBL	175	96	324
		NBR	-	30	611
2	SC 170 at Old Bailey Road West *(Unsignalized)*	WBL	275	17	32
		NBL	200	32	40
		NBR	-	41	66
3	SC 170 at Site Driveway #1 *(Unsignalized)*	WBL	150	29	67
		NBL	-	104	757
		NBR	-	33	45
4	Old Bailey Road at Site Driveway #2 *(Unsignalized)*	EBL	-	0	0
		SB Approach	-	43	42

Synchro 11 and Sim Traffic outputs from the Build 2027 analysis are provided in **Appendix G**



LEGEND

- (##) Intersection Number
- Existing Laneage
- Proposed Laneage
- (##) Intersection Number
- STOP Proposed Stop Sign
- ##' Storage Length
- <##'> Distance Between Intersections
- Site

AECOM

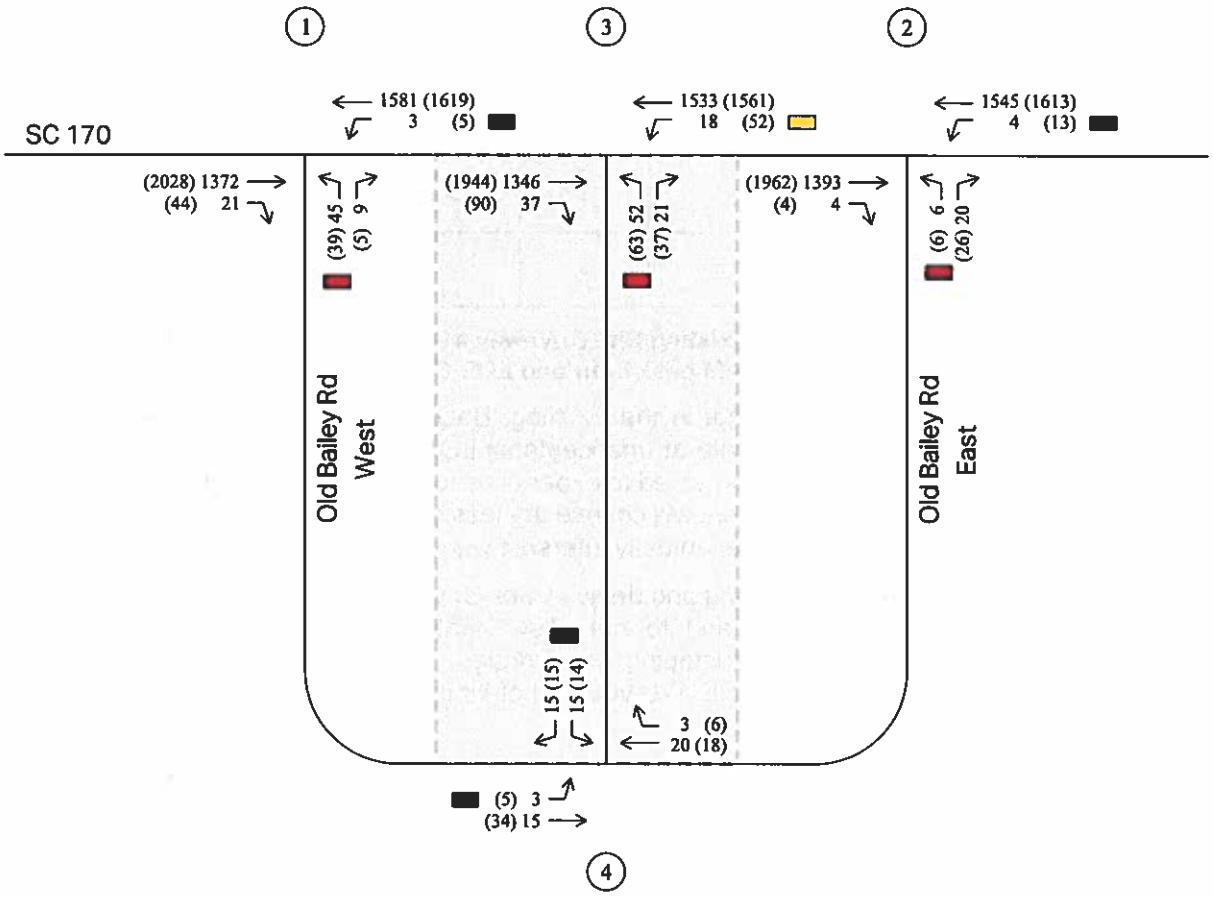
FIGURE 11

Build 2027
Lane Configuration

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale



LEGEND

- Volume Movement
- (##) Intersection Number
- ## AM Peak Hour Traffic Volume
- (##) PM Peak Hour Traffic Volume
- Site

Unsignalized LOS (Critical Peak Hour)

- LOS E/F
- LOS D
- LOS A/B/C

AECOM

FIGURE 12

Build 2027 AM / PM
Peak Hour Volumes & LOS

Bailey Park
Traffic Impact Analysis - Jasper County, SC

N

Drawing Not to Scale

7. Conclusions and Recommendations

AECOM analyzed multiple scenarios for the Bailey Park development. A summary of the LOS and delay for each scenario is summarized in **Table 10**.

Table 10 – Scenario Summary of LOS and Delay

ID#	Intersection	Approach	Level of Service and Delay (sec)					
			2022 Existing		2027 Background		2027 Build	
			AM	PM	AM	PM	AM	PM
1	SC 170 at Old Bailey Road West	NB Left	D (26.5)	E (48.0)	D (33.5)	F (77.4)	E (43.9)	F (160.3)
2	SC 170 at Old Bailey Road East	NB Left	D (25.0)	E (37.5)	D (32.0)	F (56.9)	E (36.2)	F (63.6)
3	SC 170 at Site Driveway #1	NB Left	-	-	-	-	E* (44.9)	F* (235.1)
4	Old Bailey Road at Site Driveway #2	SB Approach	-	-	-	-	A (8.8)	A (8.9)

***Installing sign prohibiting no left-turn existing Site Driveway #1 during the AM and PM peak hours is expected to improve LOS to D in the AM peak hour and LOS C during the PM peak hour.**

The summary table above indicates that in the Existing, Background, and Build scenarios the study intersections along SC 170 operate at unacceptable LOS on the minor approaches. The Site Driveway #1 approach should be expected to experience long queues during the peak hours. It is likely that traffic from the development will choose the less congested route such as using the Old Bailey Road back driveway which eventually intersect with SC 170.

A future consideration to improve queuing and delay at Site Driveway #1 would be to allow exiting vehicles to a northbound right only and to not allow northbound left turns. This access configuration could be achieved with restriping and signage. Northbound left turning vehicles would then have the option to access SC 170 via both of its intersections with Old Bailey Road through the back access Site Driveway #2.

As access is restricted along all northbound site driveways along SC 170 in general study area, warrants are likely to be met for a traffic signal at Old Bailey Road West. Traffic from the Bailey Park development and other sites along Old Bailey Road would likely opt to use the signal to turn left onto SC 170 to avoid long queues and delay at unsignalized intersections.

The growth rate used in this study was 4%. This is a conservative growth rate and does result in significant growth in background traffic. This is not an unreasonable growth rate to use based on historic traffic counts but if growth does not continue at this rate, traffic congestion may not be to the level indicated in this report.

As development increases along SC 170, a corridor study may be necessary to determine a long-term solution to alleviate congestion and safety. These solutions may include raised median barriers along SC 170 combined with dedicated U-turn sites which would help encourage the right-out only movement from Site Driveway #1.

Appendix A – Traffic Count Data

Project ID: 22-150013-001
Location: SR S-7-18/Old Bailey Rd W & SR 170/Okatie Hwy
City: Ridgeland

Day: Thursday
Date: 4/7/2022

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR S-7-18/Old Bailey Rd W Northbound						SR S-7-18/Old Bailey Rd W Southbound						SR 170/Okatie Hwy Eastbound						SR 170/Okatie Hwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App Total	Left	Thru	Rgt	Uturn	Peds	App Total	Left	Thru	Rgt	Uturn	Peds	App Total	Left	Thru	Rgt	Uturn	Peds	App Total	Int Total
7:00 AM	7	0	1	0	0	8	0	0	0	0	0	0	0	258	7	0	0	265	1	349	0	0	0	350	623
7:15 AM	10	0	6	0	0	16	0	0	0	0	0	0	0	287	6	0	0	293	0	332	0	0	0	332	641
7:30 AM	7	0	2	0	0	9	0	0	0	0	0	0	0	294	3	0	0	297	1	321	0	0	0	322	628
7:45 AM	6	0	0	0	0	6	0	0	0	0	0	0	0	258	2	0	0	260	1	255	0	0	0	256	522
Total	30	0	9	0	0	39	0	0	0	0	0	0	0	1097	18	0	0	1115	3	1257	0	0	0	1260	2414
8:00 AM	4	0	0	0	0	4	0	0	0	0	0	0	0	256	3	0	0	259	1	241	0	0	0	242	505
8:15 AM	8	0	0	0	0	8	0	0	0	0	0	0	0	219	1	0	0	220	1	269	0	0	0	270	498
8:30 AM	3	0	0	0	0	3	0	0	0	0	0	0	0	218	4	0	0	222	0	281	0	0	0	281	508
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	225	5	0	0	230	3	249	0	0	0	252	482
Total	15	0	0	0	0	15	0	0	0	0	0	0	0	918	13	0	0	931	5	1040	0	0	0	1045	1991
BREAK																									
4:00 PM	8	0	3	0	0	11	0	0	0	0	0	0	0	409	11	0	0	420	1	369	0	0	0	370	801
4:15 PM	2	0	1	0	0	3	0	0	0	0	0	0	0	422	11	0	0	433	3	326	0	0	0	329	765
4:30 PM	8	0	1	0	0	9	0	0	0	0	0	0	0	391	9	0	0	400	0	321	0	0	0	321	730
4:45 PM	6	0	0	0	0	6	0	0	0	0	0	0	0	387	8	0	0	395	0	277	0	0	0	277	678
Total	24	0	5	0	0	29	0	0	0	0	0	0	0	1609	39	0	0	1648	4	1293	0	0	0	1297	2974
5:00 PM	3	0	1	0	0	4	0	0	0	0	0	0	0	327	8	0	0	335	1	251	0	0	0	252	591
5:15 PM	5	0	1	0	0	6	0	0	0	0	0	0	0	298	11	0	0	309	0	216	0	0	0	216	531
5:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	247	6	0	0	253	1	200	0	0	0	201	455
5:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	185	6	0	0	191	1	155	0	0	0	156	349
Total	9	0	4	0	0	13	0	0	0	0	0	0	0	1057	31	0	0	1088	3	822	0	0	0	825	1926
Grand Total	78	0	18	0	0	96	0	0	0	0	0	0	0	4681	101	0	0	4782	15	4412	0	0	0	4427	9305
Apprch %	81.3	0.0	18.8	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	97.9	2.1	0.0	0.0		0.3	99.7	0.0	0.0	0.0		
Total %	0.8	0.0	0.2	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.3	1.1	0.0	0.0	51.4	0.2	47.4	0.0	0.0	0.0	47.6	
Cars, PU, Vans	75	0	17	0		92	0	0	0	0		0	0	4460	97	0		4557	12	4239	0	0		4251	8900
% Cars, PU, Vans	96.2	0.0	94.4	0.0		95.8	0.0	0.0	0.0	0.0		0.0	0.0	95.3	96.0	0.0		95.3	80.0	96.1	0.0	0.0		96.0	95.6
Heavy trucks	3	0	1	0		4	0	0	0	0		0	0	221	4	0		225	3	173	0	0		176	405
%Heavy trucks	3.8	0.0	5.6	0.0		4.2	0.0	0.0	0.0	0.0		0.0	0.0	4.7	4.0	0.0		4.7	20.0	3.9	0.0	0.0		4.0	4.4

Project ID: 22-150013-001
Location: SR S-7-18/Old Bailey Rd W & SR 170/Okatie Hwy
City: Ridgeland

PEAK HOURS

Day: Thursday
Date: 4/7/2022

AM

	SR S-7-18/Old Bailey Rd W Northbound					SR S-7-18/Old Bailey Rd W Southbound					SR 170/Okatie Hwy Eastbound					SR 170/Okatie Hwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Int Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	7	0	1	0	8	0	0	0	0	0	0	258	7	0	265	1	349	0	0	350	623
7:15 AM	10	0	6	0	16	0	0	0	0	0	0	287	6	0	293	0	332	0	0	332	641
7:30 AM	7	0	2	0	9	0	0	0	0	0	0	294	3	0	297	1	321	0	0	322	628
7:45 AM	6	0	0	0	6	0	0	0	0	0	0	258	2	0	260	1	255	0	0	256	522
Total Volume	30	0	9	0	39	0	0	0	0	0	0	1097	18	0	1115	3	1257	0	0	1260	2414
% App Total	76.9	0.0	23.1	0.0	100	0.0	0.0	0.0	0.0	0	0.0	98.4	1.6	0.0	100	0.2	99.8	0.0	0.0	100	
PHF					0.609										0.939					0.900	0.941
Cars, PU, Vans	29	0	8	0	37	0	0	0	0	0	0	1021	17	0	1038	1	1201	0	0	1202	2277
% Cars, PU, Vans	96.7	0.0	88.9	0.0	94.9	0.0	0.0	0.0	0.0	0.0	0.0	93.1	94.4	0.0	93.1	33.3	95.5	0.0	0.0	95.4	94.3
Heavy trucks	1	0	1	0	2	0	0	0	0	0	0	76	1	0	77	2	56	0	0	58	137
%Heavy trucks	3.3	0.0	11.1	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	6.9	5.6	0.0	6.9	66.7	4.5	0.0	0.0	4.6	5.7

PM

	SR S-7-18/Old Bailey Rd W Northbound					SR S-7-18/Old Bailey Rd W Southbound					SR 170/Okatie Hwy Eastbound					SR 170/Okatie Hwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Int Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	8	0	3	0	11	0	0	0	0	0	0	409	11	0	420	1	369	0	0	370	801
4:15 PM	2	0	1	0	3	0	0	0	0	0	0	422	11	0	433	3	326	0	0	329	765
4:30 PM	8	0	1	0	9	0	0	0	0	0	0	391	9	0	400	0	321	0	0	321	730
4:45 PM	6	0	0	0	6	0	0	0	0	0	0	387	8	0	395	0	277	0	0	277	678
Total Volume	24	0	5	0	29	0	0	0	0	0	0	1609	39	0	1648	4	1293	0	0	1297	2974
% App Total	82.8	0.0	17.2	0.0	100	0.0	0.0	0.0	0.0	0	0.0	97.6	2.4	0.0	100	0.3	99.7	0.0	0.0	100	
PHF					0.659										0.952					0.876	0.928
Cars, PU, Vans	23	0	5	0	28	0	0	0	0	0	0	1570	37	0	1607	4	1269	0	0	1273	2908
% Cars, PU, Vans	95.8	0.0	100.0	0.0	96.6	0.0	0.0	0.0	0.0	0.0	0.0	97.6	94.9	0.0	97.5	100.0	98.1	0.0	0.0	98.1	97.8
Heavy trucks	1	0	0	0	1	0	0	0	0	0	0	39	2	0	41	0	24	0	0	24	66
%Heavy trucks	4.2	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	5.1	0.0	2.5	0.0	1.9	0.0	0.0	1.9	2.2

Project ID: 22-150013-002
Location: SR S-7-18 & SR 170/Okatie Hwy
City: Ridgeland

Day: Thursday
Date: 4/7/2022

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR S-7-18 Northbound					SR S-7-18 Southbound						SR 170/Okatie Hwy Eastbound					SR 170/Okatie Hwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	Peds	App Total	Left	Thru	Rgt	Uturn	Peds	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	Peds	App Total	Int Total
7:00 AM	4	0	2	0	0	6	0	0	0	0	0	0	0	267	1	0	268	1	345	0	0	0	346	620
7:15 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	295	1	0	296	0	336	0	0	0	336	634
7:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	295	0	1	296	0	310	0	0	0	310	607
7:45 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	271	2	0	273	0	264	0	0	0	264	539
Total	6	0	5	0	0	11	0	0	0	0	0	0	0	1128	4	1	1133	1	1255	0	0	0	1256	2400
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	266	1	0	267	2	246	0	0	0	248	516
8:15 AM	1	0	2	0	0	3	0	0	0	0	0	0	0	233	0	0	233	1	263	0	0	0	264	500
8:30 AM	2	0	1	0	0	3	0	0	0	0	0	0	0	205	0	0	205	1	273	0	0	0	274	482
8:45 AM	1	0	3	0	0	4	0	0	0	0	0	0	0	237	1	0	238	0	262	0	0	0	262	504
Total	4	0	7	0	0	11	0	0	0	0	0	0	0	941	2	0	943	4	1044	0	0	0	1048	2002
BREAK																								
4:00 PM	1	0	3	0	0	4	0	0	0	0	0	0	0	402	2	0	404	0	361	0	0	0	361	769
4:15 PM	2	0	5	0	0	7	0	0	0	0	0	0	0	429	0	0	429	1	332	0	0	0	333	769
4:30 PM	3	0	2	0	0	5	0	0	0	0	0	0	0	391	1	0	392	4	316	0	0	0	320	717
4:45 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	377	1	0	378	2	288	0	0	0	290	670
Total	6	0	12	0	0	18	0	0	0	0	0	0	0	1599	4	0	1603	7	1297	0	0	0	1304	2925
5:00 PM	1	0	2	0	0	3	0	0	0	0	0	0	0	336	2	0	338	1	261	0	0	0	262	603
5:15 PM	1	0	5	0	0	6	0	0	0	0	0	0	0	311	1	0	312	5	205	0	0	0	210	528
5:30 PM	2	0	1	0	0	3	0	0	0	0	0	0	0	254	0	0	254	3	211	0	0	0	214	471
5:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	186	0	0	186	3	162	0	0	0	165	355
Total	4	0	12	0	0	16	0	0	0	0	0	0	0	1087	3	0	1090	12	839	0	0	0	851	1957
Grand Total	20	0	36	0	0	56	0	0	0	0	0	0	0	4755	13	1	4769	24	4435	0	0	0	4459	9284
Apprch %	35.7	0.0	64.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	99.7	0.3	0.0	0.0	0.5	99.5	0.0	0.0	0.0		
Total %	0.2	0.0	0.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.2	0.1	0.0	0.0	51.4	0.3	47.8	0.0	0.0	0.0	48.0	
Cars, PU, Vans	18	0	35	0		53	0	0	0	0		0	0	4533	13	1		4547	21	4261	0	0		4282	8882
% Cars, PU, Vans	90.0	0.0	97.2	0.0		94.6	0.0	0.0	0.0	0.0		0.0	0.0	95.3	100.0	100.0		95.3	87.5	96.1	0.0	0.0		96.0	95.7
Heavy trucks	2	0	1	0		3	0	0	0	0		0	0	222	0	0		222	3	174	0	0		177	402
%Heavy trucks	10.0	0.0	2.8	0.0		5.4	0.0	0.0	0.0	0.0		0.0	0.0	4.7	0.0	0.0		4.7	12.5	3.9	0.0	0.0		4.0	4.3

Project ID: 22-150013-002
Location: SR S-7-18 & SR 170/Okatie Hwy
City: Ridgeland

PEAK HOURS

Day: Thursday
Date: 4/7/2022

AM

	SR S-7-18 Northbound					SR S-7-18 Southbound					SR 170/Okatie Hwy Eastbound					SR 170/Okatie Hwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Int Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	4	0	2	0	6	0	0	0	0	0	0	267	1	0	268	1	345	0	0	346	620
7:15 AM	1	0	1	0	2	0	0	0	0	0	0	295	1	0	296	0	336	0	0	336	634
7:30 AM	0	0	1	0	1	0	0	0	0	0	0	295	0	1	296	0	310	0	0	310	607
7:45 AM	1	0	1	0	2	0	0	0	0	0	0	271	2	0	273	0	264	0	0	264	539
Total Volume	6	0	5	0	11	0	0	0	0	0	0	1128	4	1	1133	1	1255	0	0	1256	2400
% App Total	54.5	0.0	45.5	0.0	100	0.0	0.0	0.0	0.0	0	0.0	99.6	0.4	0.1	100	0.1	99.9	0.0	0.0	100	
PHF					0.458										0.957					0.908	0.946
Cars, PU, Vans	5	0	5	0	10	0	0	0	0	0	0	1056	4	1	1061	0	1199	0	0	1199	2270
% Cars, PU, Vans	83.3	0.0	100.0	0.0	90.9	0.0	0.0	0.0	0.0	0.0	0.0	93.6	100.0	100.0	93.6	0.0	95.5	0.0	0.0	95.5	94.6
Heavy trucks	1	0	0	0	1	0	0	0	0	0	0	72	0	0	72	1	56	0	0	57	130
%Heavy trucks	16.7	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0	6.4	100.0	4.5	0.0	0.0	4.5	5.4

PM

	SR S-7-18 Northbound					SR S-7-18 Southbound					SR 170/Okatie Hwy Eastbound					SR 170/Okatie Hwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Left	Thru	Rgt	Uturn	App Total	Int Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	1	0	3	0	4	0	0	0	0	0	0	402	2	0	404	0	361	0	0	361	769
4:15 PM	2	0	5	0	7	0	0	0	0	0	0	429	0	0	429	1	332	0	0	333	769
4:30 PM	3	0	2	0	5	0	0	0	0	0	0	391	1	0	392	4	316	0	0	320	717
4:45 PM	0	0	2	0	2	0	0	0	0	0	0	377	1	0	378	2	288	0	0	290	670
Total Volume	6	0	12	0	18	0	0	0	0	0	0	1599	4	0	1603	7	1297	0	0	1304	2925
% App Total	33.3	0.0	66.7	0.0	100	0.0	0.0	0.0	0.0	0	0.0	99.8	0.2	0.0	100	0.5	99.5	0.0	0.0	100	
PHF					0.643										0.934					0.903	0.951
Cars, PU, Vans	6	0	11	0	17	0	0	0	0	0	0	1560	4	0	1564	6	1273	0	0	1279	2860
% Cars, PU, Vans	100.0	0.0	91.7	0.0	94.4	0.0	0.0	0.0	0.0	0.0	0.0	97.6	100.0	0.0	97.6	85.7	98.1	0.0	0.0	98.1	97.8
Heavy trucks	0	0	1	0	1	0	0	0	0	0	0	39	0	0	39	1	24	0	0	25	65
%Heavy trucks	0.0	0.0	8.3	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.4	14.3	1.9	0.0	0.0	1.9	2.2

Prepared by NDS/ATD

VOLUME

SR S-7-18 W/O Old Baileys Cir

Day: Thursday
Date: 4/7/2022

City: Ridgeland
Project #: SC22_150014_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	252	215	467

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			7		5		12	
00:15			0		0		0		12:15			8		2		10	
00:30			0		0		0		12:30			5		4		9	
00:45			0	1	0		0	1	12:45			4	24	4	15	8	39
01:00			0		0		0		13:00			5		5		10	
01:15			1		0		1		13:15			4		6		10	
01:30			0		0		0		13:30			5		4		9	
01:45			0	1	0		0	1	13:45			2	16	4	19	6	35
02:00			1		1		2		14:00			1		7		8	
02:15			0		1		1		14:15			1		4		5	
02:30			0		0		0		14:30			2		4		6	
02:45			0	1	0	2	0	3	14:45			3	7	1	16	4	23
03:00			0		0		0		15:00			4		4		8	
03:15			0		0		0		15:15			4		0		4	
03:30			0		0		0		15:30			8		2		10	
03:45			0		0		0		15:45			4	20	5	11	9	31
04:00			0		0		0		16:00			10		6		16	
04:15			0		1		1		16:15			5		3		8	
04:30			0		0		0		16:30			6		4		10	
04:45			0		0	1	0	1	16:45			13	34	5	18	18	52
05:00			0		3		3		17:00			5		3		8	
05:15			0		0		0		17:15			8		6		14	
05:30			1		1		2		17:30			6		2		8	
05:45			2	3	3	7	5	10	17:45			4	23	5	16	9	39
06:00			0		3		3		18:00			5		3		8	
06:15			1		7		8		18:15			7		2		9	
06:30			3		5		8		18:30			6		1		7	
06:45			2	6	4	19	6	25	18:45			6	24	5	11	11	35
07:00			2		7		9		19:00			4		2		6	
07:15			3		4		7		19:15			6		2		8	
07:30			6		4		10		19:30			6		2		8	
07:45			4	15	5	20	9	35	19:45			1	17	2	8	3	25
08:00			1		6		7		20:00			7		0		7	
08:15			0		5		5		20:15			3		0		3	
08:30			2		3		5		20:30			2		0		2	
08:45			0	3	2	16	2	19	20:45			3	15	0		3	15
09:00			0		4		4		21:00			0		2		2	
09:15			2		0		2		21:15			2		0		2	
09:30			2		2		4		21:30			4		1		5	
09:45			2	6	3	9	5	15	21:45			0	6	3	6	3	12
10:00			4		0		4		22:00			4		2		6	
10:15			2		2		4		22:15			1		2		3	
10:30			1		4		5		22:30			0		0		0	
10:45			6	13	1	7	7	20	22:45			1	6	0	4	1	10
11:00			1		3		4		23:00			2		1		3	
11:15			1		2		3		23:15			0		1		1	
11:30			4		3		7		23:30			0		0		0	
11:45			2	8	0	8	2	16	23:45			1	3	0	2	1	5
TOTALS				57		89		146	TOTALS				195		126		321
SPLIT %				39.0%		61.0%		31.3%	SPLIT %				60.7%		39.3%		68.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	252	215	467

AM Peak Hour				11:45	06:15	07:00	PM Peak Hour				16:00	13:15	16:00
AM Pk Volume				22	23	35	PM Pk Volume				34	21	52
Pk Hr Factor				0.688	0.821	0.875	Pk Hr Factor				0.654	0.750	0.722
7 - 9 Volume	0	0		18	36	54	4 - 6 Volume	0	0		57	34	91
7 - 9 Peak Hour				07:00	07:00	07:00	4 - 6 Peak Hour				16:00	16:00	16:00
7 - 9 Pk Volume	0	0		15	20	35	4 - 6 Pk	0	0		34	18	52
Pk Hr Factor	0.000	0.000		0.625	0.714	0.875	Pk Hr Factor	0.000	0.000		0.654	0.750	0.722

Appendix B – Trip Generation

Bailey Park Trip Generation

Table 2 - Trip Generation

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
820 Shopping Center	65.28	1000 SF GLA	2,464	1,232	1,232	61	38	23	249	120	129
220 Townhomes	233	Dwelling Units	1,722	861	861	107	25	82	125	79	46
Subtotal			**4,186**	**2,093**	**2,093**	**168**	**63**	**105**	**374**	**199**	**175**
Internal Capture											
820 Shopping Center			460	120	340	2	1	1	46	12	34
220 Townhomes			460	340	120	2	1	1	46	34	12
	AM	PM									
Internal Capture Total	**2.38%**	**24.60%**	920	460	460	4	2	2	92	46	46
Total External Trips			3,266	1,633	1,633	164	61	103	282	153	129
Pass-By Traffic (ITE)	AM	PM									
820 Shopping Center	0%	34%	690	345	345	0	0	0	69	37	32
Pass-By Total.	**18.45%**		**690**	**345**	**345**	**0**	**0**	**0**	**69**	**37**	**32**
Total Net New External Trips			2,576	1,288	1,288	164	61	103	213	116	97

Project Name:	Bailey Park TIA
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	38	38	1.00	23	23
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	25	25	1.00	82	82
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	7		3	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	16	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		12	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	3		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	6	0	0		0
Hotel	0	2	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	1	37	38	37	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	24	25	24	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	1	22	23	22	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	81	82	81	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Bailey Park TIA
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	120	120	1.00	129	129
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	79	79	1.00	46	46
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	3		37	5	34	6
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	19	10	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	0	0	3	0
Retail	0		0	0	36	0
Restaurant	0	60		0	13	0
Cinema/Entertainment	0	5	0		3	0
Residential	0	12	0	0		0
Hotel	0	2	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	12	108	120	108	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	34	45	79	45	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	34	95	129	95	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	34	46	34	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix C – Intersection Calculation Spreadsheets

INTERSECTION VOLUME WORKSHEET

Intersection #1
SC 170 at Old Bailey Rd West

AM Peak Hour

Description		SC 170 Eastbound			SC 170 Westbound			Old Bailey Rd West Northbound			- Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022	Raw Traffic Count	0	1,097	18	3	1,257	0	30	0	9			
	Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022	Peak Hour Volume	0	1,097	18	3	1,257	0	30	0	9	0	0	0
	Annual Growth Rate	4.0%	4.0%	0.0%	0.0%	4.0%	4.0%	0.0%	0.0%	0.0%	4.0%	4.0%	4.0%
	Background Growth	0	238	0	0	272	0	0	0	0	0	0	0
2027	No-Build Peak Hour Volume	0	1,335	18	3	1,529	0	30	0	9	0	0	0
	% Entering	0%	60%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Entering Site Traffic	0	37	3	0	0	0	0	0	0	0	0	0
	% Exiting	0%	0%	0%	0%	50%	0%	15%	0%	0%	0%	0%	0%
	Exiting Site Traffic	0	0	0	0	52	0	15	0	0	0	0	0
	Total Site Trips	0	37	3	0	52	0	15	0	0	0	0	0
	Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0
	Total External Site Traffic	0	37	3	0	52	0	15	0	0	0	0	0
2027	Build Peak Hour Volume	0	1,372	21	3	1,581	0	45	0	9	0	0	0

PM Peak Hour

Description		SC 170 Eastbound			SC 170 Westbound			Old Bailey Rd West Northbound			- Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022	Raw Traffic Count	0	1,609	39	4	1,293	0	24	0	5			
	Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022	Peak Hour Volume	0	1,609	39	4	1,293	0	24	0	5	0	0	0
	Annual Growth Rate	4.0%	4.0%	0.0%	4.0%	4.0%	4.0%	0.0%	0.0%	0.0%	4.0%	4.0%	4.0%
	Background Growth	0	349	0	1	280	0	0	0	0	0	0	0
2027	No-Build Peak Hour Volume	0	1,958	39	5	1,573	0	24	0	5	0	0	0
	% Entering	0%	60%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Entering Site Traffic	0	70	5	0	0	0	0	0	0	0	0	0
	% Exiting	0%	0%	0%	0%	50%	0%	15%	0%	0%	0%	0%	0%
	Exiting Site Traffic	0	0	0	0	49	0	15	0	0	0	0	0
	Total Site Trips	0	70	5	0	49	0	15	0	0	0	0	0
	Pass-by Trips	0	0	0	0	-3	0	0	0	0	0	0	0
	Total External Site Traffic	0	70	5	0	46	0	15	0	0	0	0	0
2027	Build Peak Hour Volume	0	2,028	44	5	1,619	0	39	0	5	0	0	0

INTERSECTION VOLUME WORKSHEET

Intersection #2
SC 170 at Old Bailey Rd East

AM Peak Hour

Description		SC 170 Eastbound			SC 170 Westbound			Old Bailey Rd East Northbound			- Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022	Raw Traffic Count	0	1,128	4	1	1,255	0	6	0	5	0	0	0
	Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022	Peak Hour Volume	0	1,128	4	1	1,255	0	6	0	5	0	0	0
	Annual Growth Rate	4.0%	4.0%	0.0%	0.0%	4.0%	4.0%	0.0%	0.0%	0.0%	4.0%	4.0%	4.0%
	Background Growth	0	244	0	0	272	0	0	0	0	0	0	0
2027	No-Build Peak Hour Volume	0	1,372	4	1	1,527	0	6	0	5	0	0	0
	% Entering	*0%*	*0%*	*0%*	*5%*	*30%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	3	18	0	0	0	0	0	0	0
	% Exiting	*0%*	*20%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*15%*	*0%*	*0%*	*0%*
	Exiting Site Traffic	0	21	0	0	0	0	0	0	15	0	0	0
	Total Site Trips	0	21	0	3	18	0	0	0	15	0	0	0
	Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0
	Total External Site Traffic	0	21	0	3	18	0	0	0	15	0	0	0
2027	Build Peak Hour Volume	0	1,393	4	4	1,545	0	6	0	20	0	0	0

PM Peak Hour

Description		SC 170 Eastbound			SC 170 Westbound			Old Bailey Rd East Northbound			- Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022	Raw Traffic Count	0	1,599	4	7	1,297	0	6	0	12	0	0	0
	Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022	Peak Hour Volume	0	1,599	4	7	1,297	0	6	0	12	0	0	0
	Annual Growth Rate	4.0%	4.0%	0.0%	0.0%	4.0%	4.0%	0.0%	0.0%	0.0%	4.0%	4.0%	4.0%
	Background Growth	0	346	0	0	281	0	0	0	0	0	0	0
2027	No-Build Peak Hour Volume	0	1,945	4	7	1,578	0	6	0	12	0	0	0
	% Entering	*0%*	*0%*	*0%*	*5%*	*30%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	6	35	0	0	0	0	0	0	0
	% Exiting	*0%*	*20%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*15%*	*0%*	*0%*	*0%*
	Exiting Site Traffic	0	19	0	0	0	0	0	0	14	0	0	0
	Total Site Trips	0	19	0	6	35	0	0	0	14	0	0	0
	Pass-by Trips	0	-2	0	0	0	0	0	0	0	0	0	0
	Total External Site Traffic	0	17	0	6	35	0	0	0	14	0	0	0
2027	Build Peak Hour Volume	0	1,962	4	13	1,613	0	6	0	26	0	0	0

INTERSECTION VOLUME WORKSHEET

Intersection #3
SC 170 at Site Driveway #1

AM Peak Hour

Description	SC 170 Eastbound			SC 170 Westbound			Site Driveway #1 Northbound			- Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022 Raw Traffic Count		1,106			1,260							
Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022 Peak Hour Volume	**0**	**1,106**	**0**	**0**	**1,260**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Annual Growth Rate	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Background Growth	0	240	0	0	273	0	0	0	0	0	0	0
Existing Phase Remaining Traffic												
2027 No-Build Peak Hour Volume	**0**	**1,346**	**0**	**0**	**1,533**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Entering	*0%*	*0%*	*60%*	*30%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	37	18	0	0	0	0	0	0	0	0
% Exiting	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*20%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	52	0	21	0	0	0
Total Site Trips	0	0	37	18	0	0	52	0	21	0	0	0
Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	0	37	18	0	0	52	0	21	0	0	0
2027 Build Peak Hour Volume	**0**	**1,346**	**37**	**18**	**1,533**	**0**	**52**	**0**	**21**	**0**	**0**	**0**

PM Peak Hour

Description	SC 170 Eastbound			SC 170 Westbound			Site Driveway #1 Northbound			- Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022 Raw Traffic Count		1,614			1,297							
Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022 Peak Hour Volume	**0**	**1,614**	**0**	**0**	**1,297**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Annual Growth Rate	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Background Growth	0	350	0	0	281	0	0	0	0	0	0	0
Existing Phase Remaining Traffic												
2027 No-Build Peak Hour Volume	**0**	**1,964**	**0**	**0**	**1,578**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Entering	*0%*	*0%*	*60%*	*30%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	70	35	0	0	0	0	0	0	0	0
% Exiting	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*20%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	49	0	19	0	0	0
Total Site Trips	0	0	70	35	0	0	49	0	19	0	0	0
Pass-by Trips	0	-20	20	17	-17	0	14	0	18	0	0	0
Total External Site Traffic	0	-20	90	52	-17	0	63	0	37	0	0	0
2027 Build Peak Hour Volume	**0**	**1,944**	**90**	**52**	**1,561**	**0**	**63**	**0**	**37**	**0**	**0**	**0**

INTERSECTION VOLUME WORKSHEET

Intersection #4
Old Bailey Rd at Site Driveway #2

AM Peak Hour

Description		Old Bailey Rd Eastbound			Old Bailey Rd Westbound			- Northbound			Site Driveway #2 Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022	Raw Traffic Count		18			36							
	Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022	**Peak Hour Volume**	**0**	**18**	**0**	**0**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Annual Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
	Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
2027	**No-Build Peak Hour Volume**	**0**	**18**	**0**	**0**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	% Entering	*5%*	*0%*	*0%*	*0%*	*0%*	*5%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	3	0	0	0	0	3	0	0	0	0	0	0
	% Exiting	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*15%*	*0%*	*15%*
	Exiting Site Traffic	0	0	0	0	0	0	0	0	0	15	0	15
	Total Site Trips	3	0	0	0	0	3	0	0	0	15	0	15
	Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0
	Total External Site Traffic	3	0	0	0	0	3	0	0	0	15	0	15
2027	**Build Peak Hour Volume**	**3**	**18**	**0**	**0**	**36**	**3**	**0**	**0**	**0**	**15**	**0**	**15**

PM Peak Hour

Description		Old Bailey Rd Eastbound			Old Bailey Rd Westbound			- Northbound			Site Driveway #2 Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2022	Raw Traffic Count		57			34							
	Growth Adjustment Factor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Adjustment Amount	0	0	0	0	0	0	0	0	0	0	0	0
2022	**Peak Hour Volume**	**0**	**57**	**0**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Annual Growth Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
	Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
2027	**No-Build Peak Hour Volume**	**0**	**57**	**0**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	% Entering	*5%*	*0%*	*0%*	*0%*	*0%*	*5%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	5	0	0	0	0	6	0	0	0	0	0	0
	% Exiting	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*15%*	*0%*	*15%*
	Exiting Site Traffic	0	0	0	0	0	0	0	0	0	14	0	15
	Total Site Trips	5	0	0	0	0	6	0	0	0	14	0	15
	Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0
	Total External Site Traffic	5	0	0	0	0	6	0	0	0	14	0	15
2027	**Build Peak Hour Volume**	**5**	**57**	**0**	**0**	**34**	**6**	**0**	**0**	**0**	**14**	**0**	**15**

Appendix D – Existing Synchro and SimTraffic Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1097	18	3	1257	30	9
Future Volume (vph)	1097	18	3	1257	30	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	250		175	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3374	1524	1081	3438	1752	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3374	1524	1081	3438	1752	1455
Link Speed (mph)	55			55	30	
Link Distance (ft)	1485			2650	1171	
Travel Time (s)	18.4			32.9	26.6	
Peak Hour Factor	0.94	0.94	0.90	0.90	0.61	0.61
Heavy Vehicles (%)	7%	6%	67%	5%	3%	11%
Adj. Flow (vph)	1167	19	3	1397	49	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1167	19	3	1397	49	15
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1097	18	3	1257	30	9
Future Vol, veh/h	1097	18	3	1257	30	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	250	-	175	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	90	90	61	61
Heavy Vehicles, %	7	6	67	5	3	11
Mvmt Flow	1167	19	3	1397	49	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1186	0	1872	584
Stage 1	-	-	-	-	1167	-
Stage 2	-	-	-	-	705	-
Critical Hdwy	-	-	5.44	-	6.86	7.12
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.87	-	3.53	3.41
Pot Cap-1 Maneuver	-	-	323	-	63	433
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	448	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	323	-	62	433
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	444	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	216	433	-	-	323	-
HCM Lane V/C Ratio	0.228	0.034	-	-	0.01	-
HCM Control Delay (s)	26.5	13.6	-	-	16.3	-
HCM Lane LOS	D	B	-	-	C	-
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1128	4	1	1255	6	5
Future Volume (vph)	1128	4	1	1255	6	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	275		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3403	0	1444	3438	1543	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3403	0	1444	3438	1543	1615
Link Speed (mph)	55			55	30	
Link Distance (ft)	2727			1381	1408	
Travel Time (s)	33.8			17.1	32.0	
Peak Hour Factor	0.96	0.96	0.91	0.91	0.46	0.46
Heavy Vehicles (%)	6%	0%	25%	5%	17%	0%
Adj. Flow (vph)	1175	4	1	1379	13	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1179	0	1	1379	13	11
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↰	↑↑	↰	↱
Traffic Vol, veh/h	1128	4	1	1255	6	5
Future Vol, veh/h	1128	4	1	1255	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	275	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	91	91	46	46
Heavy Vehicles, %	6	0	25	5	17	0
Mvmt Flow	1175	4	1	1379	13	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1179	0	1869	590
Stage 1	-	-	-	-	1177	-
Stage 2	-	-	-	-	692	-
Critical Hdwy	-	-	4.6	-	7.14	6.9
Critical Hdwy Stg 1	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	6.14	-
Follow-up Hdwy	-	-	2.45	-	3.67	3.3
Pot Cap-1 Maneuver	-	-	474	-	54	456
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	420	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	474	-	54	456
Mov Cap-2 Maneuver	-	-	-	-	193	-
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	419	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	193	456	-	-	474	-
HCM Lane V/C Ratio	0.068	0.024	-	-	0.002	-
HCM Control Delay (s)	25	13.1	-	-	12.6	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1609	39	4	1293	24	5
Future Volume (vph)	1609	39	4	1293	24	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	250		175	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1538	1805	3539	1736	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1538	1805	3539	1736	1615
Link Speed (mph)	55			55	30	
Link Distance (ft)	1485			2650	1171	
Travel Time (s)	18.4			32.9	26.6	
Peak Hour Factor	0.95	0.95	0.88	0.88	0.66	0.66
Heavy Vehicles (%)	2%	5%	0%	2%	4%	0%
Adj. Flow (vph)	1694	41	5	1469	36	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1694	41	5	1469	36	8
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1609	39	4	1293	24	5
Future Vol, veh/h	1609	39	4	1293	24	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	250	-	175	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	88	88	66	66
Heavy Vehicles, %	2	5	0	2	4	0
Mvmt Flow	1694	41	5	1469	36	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1735	0	2439	847
Stage 1	-	-	-	-	1694	-
Stage 2	-	-	-	-	745	-
Critical Hdwy	-	-	4.1	-	6.88	6.9
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	-	-	2.2	-	3.54	3.3
Pot Cap-1 Maneuver	-	-	368	-	~ 25	309
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	425	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	368	-	~ 25	309
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	419	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	42.6
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	119	309	-	-	368	-
HCM Lane V/C Ratio	0.306	0.025	-	-	0.012	-
HCM Control Delay (s)	48	16.9	-	-	14.9	-
HCM Lane LOS	E	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1599	4	7	1297	6	12
Future Volume (vph)	1599	4	7	1297	6	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	275		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt						0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	0	1583	3539	1805	1495
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	0	1583	3539	1805	1495
Link Speed (mph)	55			55	30	
Link Distance (ft)	2727			1381	1408	
Travel Time (s)	33.8			17.1	32.0	
Peak Hour Factor	0.93	0.93	0.90	0.90	0.64	0.64
Heavy Vehicles (%)	2%	0%	14%	2%	0%	8%
Adj. Flow (vph)	1719	4	8	1441	9	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1723	0	8	1441	9	19
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection						
Int Delay, s/veh	0.3					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1599	4	7	1297	6	12
Future Vol, veh/h	1599	4	7	1297	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	275	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	90	90	64	64
Heavy Vehicles, %	2	0	14	2	0	8
Mvmt Flow	1719	4	8	1441	9	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1723	0	2458	862
Stage 1	-	-	-	-	1721	-
Stage 2	-	-	-	-	737	-
Critical Hdwy	-	-	4.38	-	6.8	7.06
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.34	-	3.5	3.38
Pot Cap-1 Maneuver	-	-	314	-	26	287
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	314	-	25	287
Mov Cap-2 Maneuver	-	-	-	-	120	-
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	428	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	24.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	120	287	-	-	314	-
HCM Lane V/C Ratio	0.078	0.065	-	-	0.025	-
HCM Control Delay (s)	37.5	18.4	-	-	16.8	-
HCM Lane LOS	E	C	-	-	C	-
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0.1	-

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	2424
Vehs Exited	2419
Starting Vehs	78
Ending Vehs	83
Travel Distance (mi)	3679
Travel Time (hr)	73.2
Total Delay (hr)	5.0
Total Stops	57
Fuel Used (gal)	108.0

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	2424
Vehs Exited	2419
Starting Vehs	78
Ending Vehs	83
Travel Distance (mi)	3679
Travel Time (hr)	73.2
Total Delay (hr)	5.0
Total Stops	57
Fuel Used (gal)	108.0

Intersection: 1: Old Bailey Rd West & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	44	108	73
Average Queue (ft)	3	27	13
95th Queue (ft)	21	72	42
Link Distance (ft)			1116
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250	175	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Bailey Rd East & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	25	50	31
Average Queue (ft)	1	8	6
95th Queue (ft)	8	32	26
Link Distance (ft)		1363	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	275		200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Start Time	3:50
End Time	5:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	2908
Vehs Exited	2932
Starting Vehs	102
Ending Vehs	78
Travel Distance (mi)	4450
Travel Time (hr)	89.8
Total Delay (hr)	7.5
Total Stops	69
Fuel Used (gal)	130.1

Interval #0 Information Seeding

Start Time	3:50
End Time	4:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	2908
Vehs Exited	2932
Starting Vehs	102
Ending Vehs	78
Travel Distance (mi)	4450
Travel Time (hr)	89.8
Total Delay (hr)	7.5
Total Stops	69
Fuel Used (gal)	130.1

Intersection: 1: Old Bailey Rd West & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	26	113	27
Average Queue (ft)	5	37	7
95th Queue (ft)	22	93	24
Link Distance (ft)			1116
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250	175	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Bailey Rd East & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	26	31	54
Average Queue (ft)	4	5	14
95th Queue (ft)	19	22	41
Link Distance (ft)		1363	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	275		200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Appendix E – Background 2027 Synchro and SimTraffic Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1335	18	3	1529	30	9
Future Volume (vph)	1335	18	3	1529	30	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	250		175	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3374	1524	1081	3438	1752	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3374	1524	1081	3438	1752	1455
Link Speed (mph)	55			55	30	
Link Distance (ft)	1485			2650	1171	
Travel Time (s)	18.4			32.9	26.6	
Peak Hour Factor	0.94	0.94	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	6%	67%	5%	3%	11%
Adj. Flow (vph)	1420	19	3	1699	33	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1420	19	3	1699	33	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1335	18	3	1529	30	9
Future Vol, veh/h	1335	18	3	1529	30	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	250	-	175	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	90	90	90	90
Heavy Vehicles, %	7	6	67	5	3	11
Mvmt Flow	1420	19	3	1699	33	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1439	0	2276	710
Stage 1	-	-	-	-	1420	-
Stage 2	-	-	-	-	856	-
Critical Hdwy	-	-	5.44	-	6.86	7.12
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.87	-	3.53	3.41
Pot Cap-1 Maneuver	-	-	240	-	~ 33	356
Stage 1	-	-	-	-	187	-
Stage 2	-	-	-	-	374	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	240	-	~ 33	356
Mov Cap-2 Maneuver	-	-	-	-	159	-
Stage 1	-	-	-	-	187	-
Stage 2	-	-	-	-	370	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	29.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	159	356	-	-	240	-
HCM Lane V/C Ratio	0.21	0.028	-	-	0.014	-
HCM Control Delay (s)	33.5	15.4	-	-	20.2	-
HCM Lane LOS	D	C	-	-	C	-
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1372	4	1	1527	6	5
Future Volume (vph)	1372	4	1	1527	6	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	275		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt						0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3406	0	1444	3438	1543	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3406	0	1444	3438	1543	1615
Link Speed (mph)	55			55	30	
Link Distance (ft)	2727			1381	1408	
Travel Time (s)	33.8			17.1	32.0	
Peak Hour Factor	0.96	0.96	0.91	0.91	0.90	0.90
Heavy Vehicles (%)	6%	0%	25%	5%	17%	0%
Adj. Flow (vph)	1429	4	1	1678	7	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1433	0	1	1678	7	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1372	4	1	1527	6	5
Future Vol, veh/h	1372	4	1	1527	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	275	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	91	91	90	90
Heavy Vehicles, %	6	0	25	5	17	0
Mvmt Flow	1429	4	1	1678	7	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1433	0	2272	717
Stage 1	-	-	-	-	1431	-
Stage 2	-	-	-	-	841	-
Critical Hdwy	-	-	4.6	-	7.14	6.9
Critical Hdwy Stg 1	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	6.14	-
Follow-up Hdwy	-	-	2.45	-	3.67	3.3
Pot Cap-1 Maneuver	-	-	369	-	28	377
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	348	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	369	-	28	377
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	347	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	140	377	-	-	369	-
HCM Lane V/C Ratio	0.048	0.015	-	-	0.003	-
HCM Control Delay (s)	32	14.7	-	-	14.8	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1958	39	5	1573	24	5
Future Volume (vph)	1958	39	5	1573	24	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	250		175	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1538	1805	3539	1736	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1538	1805	3539	1736	1615
Link Speed (mph)	55			55	30	
Link Distance (ft)	1485			2650	1171	
Travel Time (s)	18.4			32.9	26.6	
Peak Hour Factor	0.95	0.95	0.88	0.88	0.90	0.90
Heavy Vehicles (%)	2%	5%	0%	2%	4%	0%
Adj. Flow (vph)	2061	41	6	1788	27	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2061	41	6	1788	27	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1958	39	5	1573	24	5
Future Vol, veh/h	1958	39	5	1573	24	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	250	-	175	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	88	88	90	90
Heavy Vehicles, %	2	5	0	2	4	0
Mvmt Flow	2061	41	6	1788	27	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2102	0	2967	1031
Stage 1	-	-	-	-	2061	-
Stage 2	-	-	-	-	906	-
Critical Hdwy	-	-	4.1	-	6.88	6.9
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	-	-	2.2	-	3.54	3.3
Pot Cap-1 Maneuver	-	-	265	-	~ 11	234
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	350	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	265	-	~ 11	234
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	342	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	67.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	75	234	-	-	265	-
HCM Lane V/C Ratio	0.356	0.024	-	-	0.021	-
HCM Control Delay (s)	77.4	20.8	-	-	18.9	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1945	4	7	1578	6	12
Future Volume (vph)	1945	4	7	1578	6	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	275		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt						0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	0	1583	3539	1805	1495
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	0	1583	3539	1805	1495
Link Speed (mph)	55			55	30	
Link Distance (ft)	2727			1381	1408	
Travel Time (s)	33.8			17.1	32.0	
Peak Hour Factor	0.93	0.93	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	0%	14%	2%	0%	8%
Adj. Flow (vph)	2091	4	8	1753	7	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2095	0	8	1753	7	13
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1945	4	7	1578	6	12
Future Vol, veh/h	1945	4	7	1578	6	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	275	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	90	90	90	90
Heavy Vehicles, %	2	0	14	2	0	8
Mvmt Flow	2091	4	8	1753	7	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2095	0	2986	1048
Stage 1	-	-	-	-	2093	-
Stage 2	-	-	-	-	893	-
Critical Hdwy	-	-	4.38	-	6.8	7.06
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.34	-	3.5	3.38
Pot Cap-1 Maneuver	-	-	220	-	11	214
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	365	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	220	-	11	214
Mov Cap-2 Maneuver	-	-	-	-	76	-
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	352	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	34.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	76	214	-	-	220	-
HCM Lane V/C Ratio	0.088	0.062	-	-	0.035	-
HCM Control Delay (s)	56.9	22.9	-	-	22	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.1	-

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	2959
Vehs Exited	2936
Starting Vehs	76
Ending Vehs	99
Travel Distance (mi)	4492
Travel Time (hr)	89.9
Total Delay (hr)	7.1
Total Stops	53
Fuel Used (gal)	131.7

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	2959
Vehs Exited	2936
Starting Vehs	76
Ending Vehs	99
Travel Distance (mi)	4492
Travel Time (hr)	89.9
Total Delay (hr)	7.1
Total Stops	53
Fuel Used (gal)	131.7

Intersection: 1: Old Bailey Rd West & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	49	90	51
Average Queue (ft)	2	30	10
95th Queue (ft)	16	75	36
Link Distance (ft)			1116
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250	175	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Bailey Rd East & SC 170

Movement	NB	NB
Directions Served	L	R
Maximum Queue (ft)	54	30
Average Queue (ft)	6	6
95th Queue (ft)	29	25
Link Distance (ft)	1363	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Start Time	3:50
End Time	5:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3673
Vehs Exited	3628
Starting Vehs	92
Ending Vehs	137
Travel Distance (mi)	5605
Travel Time (hr)	121.1
Total Delay (hr)	17.3
Total Stops	61
Fuel Used (gal)	165.4

Interval #0 Information Seeding

Start Time	3:50
End Time	4:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3673
Vehs Exited	3628
Starting Vehs	92
Ending Vehs	137
Travel Distance (mi)	5605
Travel Time (hr)	121.1
Total Delay (hr)	17.3
Total Stops	61
Fuel Used (gal)	165.4

Intersection: 1: Old Bailey Rd West & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	25	275	381
Average Queue (ft)	2	159	113
95th Queue (ft)	12	314	373
Link Distance (ft)			1116
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250	175	
Storage Blk Time (%)		48	
Queuing Penalty (veh)		2	

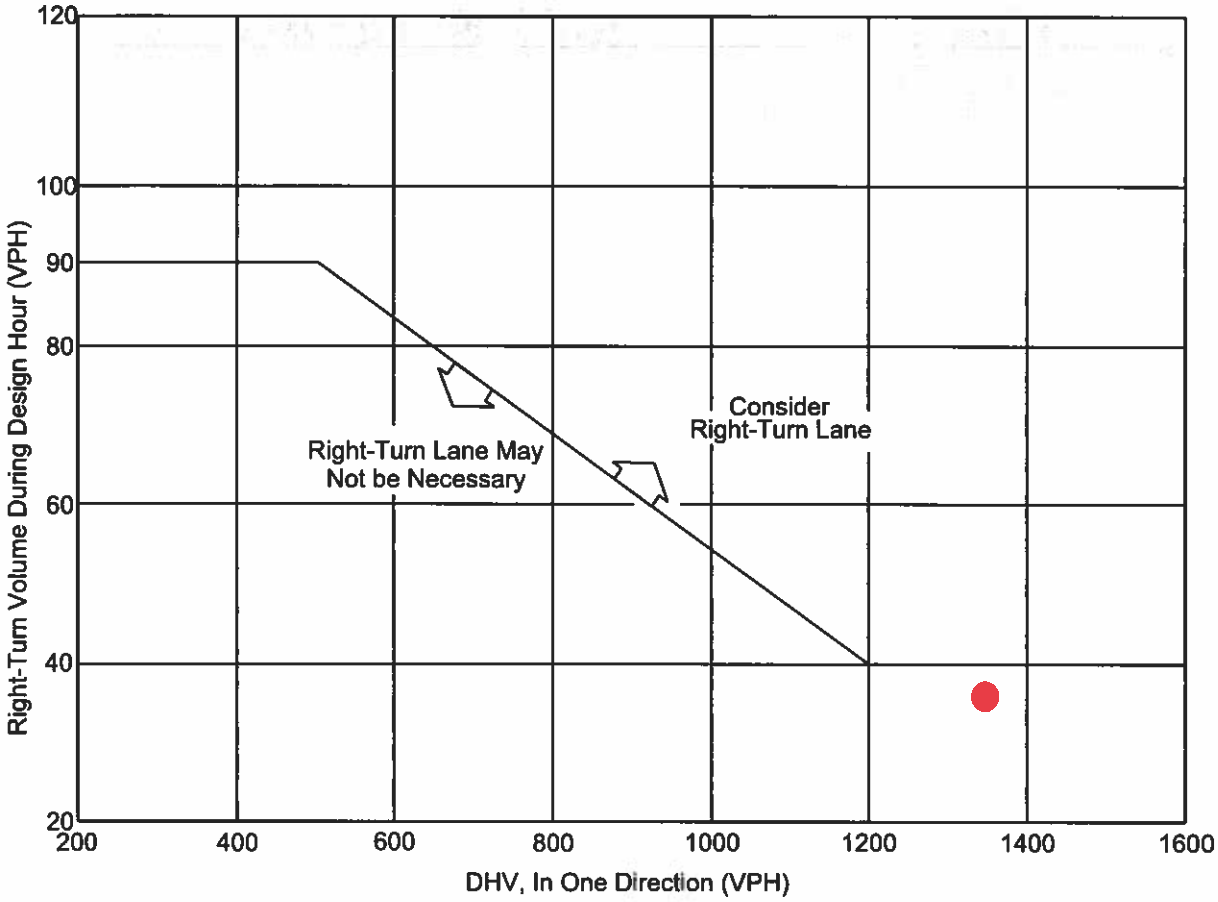
Intersection: 2: Old Bailey Rd East & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	25	31	87
Average Queue (ft)	3	3	9
95th Queue (ft)	17	17	40
Link Distance (ft)		1363	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	275		200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 2

Appendix F – SCDOT Right Turn Lane Warrant Worksheet



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

AM = 1383, 37
PM = 2034, 90

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON FOUR-LANE HIGHWAYS
Figure 9.5-B

Appendix G – Build 2027 Synchro and SimTraffic Reports

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1372	21	3	1581	45	9
Future Volume (vph)	1372	21	3	1581	45	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	250		175	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3374	1524	1081	3438	1752	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3374	1524	1081	3438	1752	1455
Link Speed (mph)	55			55	30	
Link Distance (ft)	1485			1016	1171	
Travel Time (s)	18.4			12.6	26.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	6%	67%	5%	3%	11%
Adj. Flow (vph)	1524	23	3	1757	50	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1524	23	3	1757	50	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1372	21	3	1581	45	9
Future Vol, veh/h	1372	21	3	1581	45	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	250	-	175	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	7	6	67	5	3	11
Mvmt Flow	1524	23	3	1757	50	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1547	0	2409	762
Stage 1	-	-	-	-	1524	-
Stage 2	-	-	-	-	885	-
Critical Hdwy	-	-	5.44	-	6.86	7.12
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.87	-	3.53	3.41
Pot Cap-1 Maneuver	-	-	211	-	~ 27	328
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	361	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	211	-	~ 27	328
Mov Cap-2 Maneuver	-	-	-	-	141	-
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	356	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	39.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	141	328	-	-	211	-
HCM Lane V/C Ratio	0.355	0.03	-	-	0.016	-
HCM Control Delay (s)	43.9	16.3	-	-	22.3	-
HCM Lane LOS	E	C	-	-	C	-
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1393	4	4	1545	6	20
Future Volume (vph)	1393	4	4	1545	6	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	275		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt						0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3406	0	1444	3438	1543	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3406	0	1444	3438	1543	1615
Link Speed (mph)	55			55	30	
Link Distance (ft)	2727			1381	1408	
Travel Time (s)	33.8			17.1	32.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	0%	25%	5%	17%	0%
Adj. Flow (vph)	1548	4	4	1717	7	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1552	0	4	1717	7	22
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1393	4	4	1545	6	20
Future Vol, veh/h	1393	4	4	1545	6	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	275	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	0	25	5	17	0
Mvmt Flow	1548	4	4	1717	7	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1552	0	2417	776
Stage 1	-	-	-	-	1550	-
Stage 2	-	-	-	-	867	-
Critical Hdwy	-	-	4.6	-	7.14	6.9
Critical Hdwy Stg 1	-	-	-	-	6.14	-
Critical Hdwy Stg 2	-	-	-	-	6.14	-
Follow-up Hdwy	-	-	2.45	-	3.67	3.3
Pot Cap-1 Maneuver	-	-	328	-	22	345
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	337	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	328	-	22	345
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	122	345	-	-	328	-
HCM Lane V/C Ratio	0.055	0.064	-	-	0.014	-
HCM Control Delay (s)	36.2	16.2	-	-	16.1	-
HCM Lane LOS	E	C	-	-	C	-
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1346	37	18	1533	52	21
Future Volume (vph)	1346	37	18	1533	52	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Link Speed (mph)	55			55	30	
Link Distance (ft)	1016			1628	1563	
Travel Time (s)	12.6			20.2	35.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1496	41	20	1703	58	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1496	41	20	1703	58	23
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		60	60		60	60
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1346	37	18	1533	52	21
Future Vol, veh/h	1346	37	18	1533	52	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	150	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1496	41	20	1703	58	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1537	0	2388	748
Stage 1	-	-	-	-	1496	-
Stage 2	-	-	-	-	892	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	429	-	~ 28	355
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	361	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	429	-	~ 27	355
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	36.6
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	146	355	-	-	429	-
HCM Lane V/C Ratio	0.396	0.066	-	-	0.047	-
HCM Control Delay (s)	44.9	15.9	-	-	13.8	-
HCM Lane LOS	E	C	-	-	B	-
HCM 95th %tile Q(veh)	1.7	0.2	-	-	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	15	20	3	15	15
Future Volume (vph)	3	15	20	3	15	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984		0.932	
Flt Protected		0.993			0.976	
Satd. Flow (prot)	0	1887	1870	0	1728	0
Flt Permitted		0.993			0.976	
Satd. Flow (perm)	0	1887	1870	0	1728	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		559	769		549	
Travel Time (s)		12.7	17.5		12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	3	17	22	3	17	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	20	25	0	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	15	20	3	15	15
Future Vol, veh/h	3	15	20	3	15	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	17	22	3	17	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	25	0	-	0	47	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1603	-	-	-	968	1058
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1603	-	-	-	966	1058
Mov Cap-2 Maneuver	-	-	-	-	966	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1603	-	-	-	1010
HCM Lane V/C Ratio	0.002	-	-	-	0.033
HCM Control Delay (s)	7.2	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2028	44	5	1619	39	5
Future Volume (vph)	2028	44	5	1619	39	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	250		175	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1538	1805	3539	1736	1615
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1538	1805	3539	1736	1615
Link Speed (mph)	55			55	30	
Link Distance (ft)	1485			1016	1171	
Travel Time (s)	18.4			12.6	26.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	0%	2%	4%	0%
Adj. Flow (vph)	2253	49	6	1799	43	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2253	49	6	1799	43	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	2028	44	5	1619	39	5
Future Vol, veh/h	2028	44	5	1619	39	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	275	250	-	175	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	5	0	2	4	0
Mvmt Flow	2253	49	6	1799	43	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2302	0	3165	1127
Stage 1	-	-	-	-	2253	-
Stage 2	-	-	-	-	912	-
Critical Hdwy	-	-	4.1	-	6.88	6.9
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	-	-	2.2	-	3.54	3.3
Pot Cap-1 Maneuver	-	-	222	-	~ 8	202
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	222	-	~ 8	202
Mov Cap-2 Maneuver	-	-	-	-	59	-
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	338	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	144.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	59	202	-	-	222	-
HCM Lane V/C Ratio	0.734	0.028	-	-	0.025	-
HCM Control Delay (s)	160.3	23.3	-	-	21.6	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	3.2	0.1	-	-	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1962	4	13	1613	6	26
Future Volume (vph)	1962	4	13	1613	6	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	275		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt						0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	0	1583	3539	1805	1495
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	0	1583	3539	1805	1495
Link Speed (mph)	55			55	30	
Link Distance (ft)	2727			1381	1408	
Travel Time (s)	33.8			17.1	32.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	0%	14%	2%	0%	8%
Adj. Flow (vph)	2180	4	14	1792	7	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2184	0	14	1792	7	29
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1962	4	13	1613	6	26
Future Vol, veh/h	1962	4	13	1613	6	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	275	-	0	200
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	0	14	2	0	8
Mvmt Flow	2180	4	14	1792	7	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2184	0	3106	1092
Stage 1	-	-	-	-	2182	-
Stage 2	-	-	-	-	924	-
Critical Hdwy	-	-	4.38	-	6.8	7.06
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.34	-	3.5	3.38
Pot Cap-1 Maneuver	-	-	202	-	9	200
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	352	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	202	-	8	200
Mov Cap-2 Maneuver	-	-	-	-	68	-
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	328	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	33.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	68	200	-	-	202	-
HCM Lane V/C Ratio	0.098	0.144	-	-	0.072	-
HCM Control Delay (s)	63.6	26	-	-	24.2	-
HCM Lane LOS	F	D	-	-	C	-
HCM 95th %tile Q(veh)	0.3	0.5	-	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1944	90	52	1561	63	37
Future Volume (vph)	1944	90	52	1561	63	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		150	150		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			100		100	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Link Speed (mph)	55			55	30	
Link Distance (ft)	1016			1628	1563	
Travel Time (s)	12.6			20.2	35.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2160	100	58	1734	70	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2160	100	58	1734	70	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Traffic Vol, veh/h	1944	90	52	1561	63	37
Future Vol, veh/h	1944	90	52	1561	63	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	150	-	0	0
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2160	100	58	1734	70	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2260	0	3143	1080
Stage 1	-	-	-	-	2160	-
Stage 2	-	-	-	-	983	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	223	-	~ 8	214
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	323	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	223	-	~ 6	214
Mov Cap-2 Maneuver	-	-	-	-	~ 66	-
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	239	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	157.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	66	214	-	-	223	-
HCM Lane V/C Ratio	1.061	0.192	-	-	0.259	-
HCM Control Delay (s)	235.1	25.8	-	-	26.7	-
HCM Lane LOS	F	D	-	-	D	-
HCM 95th %tile Q(veh)	5.4	0.7	-	-	1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	34	18	6	14	15
Future Volume (vph)	5	34	18	6	14	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.965		0.930	
Flt Protected		0.993			0.976	
Satd. Flow (prot)	0	1887	1834	0	1725	0
Flt Permitted		0.993			0.976	
Satd. Flow (perm)	0	1887	1834	0	1725	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		559	769		549	
Travel Time (s)		12.7	17.5		12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	6	38	20	7	16	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	44	27	0	33	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection						
Int Delay, s/veh	3.1					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	34	18	6	14	15
Future Vol, veh/h	5	34	18	6	14	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	6	38	20	7	16	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	74	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1600	-	-	-	935	1058
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1600	-	-	-	931	1058
Mov Cap-2 Maneuver	-	-	-	-	931	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1600	-	-	-	993
HCM Lane V/C Ratio	0.003	-	-	-	0.032
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3320
Vehs Exited	3328
Starting Vehs	100
Ending Vehs	92
Travel Distance (mi)	4579
Travel Time (hr)	94.6
Total Delay (hr)	9.2
Total Stops	201
Fuel Used (gal)	139.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3320
Vehs Exited	3328
Starting Vehs	100
Ending Vehs	92
Travel Distance (mi)	4579
Travel Time (hr)	94.6
Total Delay (hr)	9.2
Total Stops	201
Fuel Used (gal)	139.3

Intersection: 1: Old Bailey Rd West & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	47	115	51
Average Queue (ft)	3	43	7
95th Queue (ft)	22	96	30
Link Distance (ft)			1116
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250	175	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Bailey Rd East & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	44	50	31
Average Queue (ft)	2	10	17
95th Queue (ft)	17	32	41
Link Distance (ft)		1363	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	275		200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Bailey Park #1 & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	32	182	44
Average Queue (ft)	8	43	12
95th Queue (ft)	29	104	33
Link Distance (ft)		1506	1506
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Old Bailey Rd & Bailey Park #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	18
95th Queue (ft)	43
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Start Time	3:50
End Time	5:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3833
Vehs Exited	3804
Starting Vehs	139
Ending Vehs	168
Travel Distance (mi)	5588
Travel Time (hr)	147.5
Total Delay (hr)	42.6
Total Stops	255
Fuel Used (gal)	176.1

Interval #0 Information Seeding

Start Time	3:50
End Time	4:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3833
Vehs Exited	3804
Starting Vehs	139
Ending Vehs	168
Travel Distance (mi)	5588
Travel Time (hr)	147.5
Total Delay (hr)	42.6
Total Stops	255
Fuel Used (gal)	176.1

Intersection: 1: Old Bailey Rd West & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	29	274	586
Average Queue (ft)	3	243	264
95th Queue (ft)	18	324	611
Link Distance (ft)			1116
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250	175	
Storage Blk Time (%)		87	
Queuing Penalty (veh)		4	

Intersection: 2: Old Bailey Rd East & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	48	52	94
Average Queue (ft)	9	13	24
95th Queue (ft)	32	40	66
Link Distance (ft)		1363	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	275		200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Bailey Park #1 & SC 170

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	95	828	63
Average Queue (ft)	31	417	19
95th Queue (ft)	67	757	45
Link Distance (ft)		1506	1506
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Old Bailey Rd & Bailey Park #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	19
95th Queue (ft)	42
Link Distance (ft)	520
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 4

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