



SPECIAL USE PERMIT

File # **SU 2113-09**
Fee
Amt Paid
Check #
Rec'd Date
Rec'd By

APPLICATION

Submit required documentation to:

Wake County Planning Department/Current Planning Section
PO Box 550 Wake County Office Building
Raleigh, NC 27602-0550 336 Fayetteville Street Mall, Downtown Raleigh
Contact Current Planning at (919) 856-6335 for additional information.

Complete with required information (write "n/a" if information is not applicable to proposal).

Type of Special Use (be as specific as possible and cite code section listing use as permitted special use)

Construction and operation of solar arrays & appurtenances on approx. 30 acres located in the southwest quadrant of the intersection of Battle Bridge Road and Brownfield Road.

Modification of previously issued Special Use Permit? (X)Yes ()No

If Yes, provide relevant Special Use Permit Number: BA-512 (1978), BA – SU2092-08 (2008)

Property

Parcel Identification Number: 1751047213

Address: 8500 Battle Bridge Road, Raleigh, NC 27610

Location: South side of Battle Bridge Road, at/between
(north, east, south, west) (street)

Brownfield Road and Griffice Mill Road
(street) (street)

Total site area in square feet and acres: 63,708,678 square feet / 1,462.55 acres

Zoning District(s) and Overlay Districts (if any) and land area within each: R-30

List Conditions of any Conditional Use Zoning Districts: See BA 512, Original Special Use Permit & BA SU2092-08, Special Use Permit Modification (Both Attached)

Present land use(s): Wastewater Treatment Plant, Police Driver Training Facility, Police Training Firing Range, Wake county/Raleigh Joint Law Enforcement Training Center

How is this proposed use a public necessity? The project will demonstrate the City's commitment to and leadership in clean energy and sustainable practices.

What is impact on surrounding neighborhood and adjacent properties? The proposed use is consistent with other governmental uses that surround the site and will have minimal impact on the neighborhood.

Land Owner

Land Owner Name: City of Raleigh

Business Operator Name (if different from Land Owner): Same

Address: P.O. Box 590

City: Raleigh State: NC Zip Code: 27602-590

E-mail Address: gregg.pollard@ci.raleigh.nc.us Fax: (919) 996-7609

Telephone Number: (919) 996-4286

Applicant (person to whom all correspondence will be sent)

Name: Robert L. Massengill

Address: P.O. Box 590

City: Raleigh State: NC Zip Code: 27602

E-mail Address: robert.massengill@ci.raleigh.nc.us Fax: (919) 857-4545

Telephone Number: (919) 857-4543 Relationship to Owner: Employee

Proposal

Max. allowable floor area ratio (see applicable zoning district/use regulation): 0.15

Proposed total floor area: <1000 sf Proposed floor area ratio (floor area/site area): <0.0008

Max. allowable impervious surface coverage (see applicable zoning district/use regulation) : 30%

Proposed impervious surfaces area: <10,000 sf

Proposed impervious surface coverage (impervious surfaces area/site area x 100): <1%

Required transitional bufferyard types and depths (see Article 16):

Front (F) 40 ft Left (F) 40 ft Right (F) 40 ft Rear (F) 40 ft

Proposed transitional bufferyard types and depths (see Article 16): See Narrative

Front () _____ ft Left () _____ ft Right () _____ ft Rear () _____ ft

Min. yard depths (see applicable district/use regulation):

Front 30 ft Corner side 30 ft Side 10 ft Rear 30 ft

Proposed yard depths: Front 50 ft (min) Corner side 50 ft (min) Side 40 ft (min) Rear 40 ft (min)

Max. building height (see applicable district/use regulation): 35 ft

Proposed building height: <15 ft

Min. parking space standard (see Article 15): 2 spaces per site for static transformer station

Min. no. of parking spaces: 2 Proposed no. of parking spaces 4-6

Number of employees: N/A Hours of operation: N/A

Vehicular Access:

Names of access street(s) and number of access points along each: Brownfield Road

Name of access or adjacent street	Right-of-way width (ft)	Pavement width (ft)	No. of lanes	Paved? (Y or N)	Roadway design capacity ¹	Traffic volume (ADT) ²	Est. traffic generated (ADT) ³
Brownfield Road	60	22	2	Y			

¹ See NCDOT Highway Capacity Manual or most recent Wake County Thoroughfare Plan Appendix

² See CAMPO web site (www.raleigh-nc.org/campo) or NCDOT Traffic Survey Unit

³ Base on Institute of Transportation Engineers ratios - ratio used for estimate (e.g., x trips per y sf) _____

Estimated traffic generated by heavy vehicles (vehicles other than automobiles and light trucks):

Type of vehicle: N/A ADT: _____

Type of vehicle: N/A ADT: _____

Utilities and Services:

Water supply provided by: (X) municipal system : City of Raleigh

() community system – specify type: _____ () individual well(s)

Est. total water demand: N/A gpd

Wastewater collection/treatment provided by: (X) municipal system: City of Raleigh

() community system – specify type:

() individual on-site system

Est. total wastewater discharge: N/A gpd

Solid waste collection provided by: N/A

Electrical service provided by: Progress Energy Underground () yes (X) no

Natural gas service provided by: N/A

Telephone service provided by: AT&T Underground () yes () no

Cable television service provided by: N/A _____ Underground () yes () no

Fire protection provided by: City of Raleigh – Station 26 Barwell Road

Miscellaneous:

Generalized slope of site Large site with rolling topography, sloping to adjacent creeks

Valuable natural features (rare plant community, wildlife habitat, lake, stream, geology, etc.) on or adjoining site: N/A – Currently cultivated farm fields

Valuable historic resources (homestead, mill, archeological site) on or adjoining site: N/A

Land Use Plan Classifications

General Classification (note associated municipality and/or watershed):

- () Short-Range Urban Services Area/Water Supply Watershed
- () Short-Range Urban Services Area
- () Long-Range Urban Services Area/Water Supply Watershed
- (X) Long-Range Urban Services Area: City of Raleigh
- () Non-Urban Area/Water Supply Watershed
- () Non-Urban Area

Land Use Classification(s) (Note Area Land Use Plan, if applicable):

East Raleigh – Knightdale Land use Plan – Special Area

Applicant’s statement of compliance with county, municipal and joint Land Use Plans (How is proposal consistent with Land Use Plan objectives for planning area, Land Use classification, activity centers, locational standards and transitional urban development standards?)

See attached Narrative

Other information (additional relevant information about the site or proposal you wish to note or cite)

See attached Narrative

All property owners must sign this application unless one or more individuals are specifically authorized to act as an agent on behalf of the collective interest of some or all of the owners (provide a copy of such authorization).

The undersigned property owner(s) hereby authorize the filing of this application (and any subsequent revisions thereto). The filing of this application authorizes the Wake County staff to enter upon the site to conduct relevant site inspections as deemed necessary to process the application.

Signature: J. Russell Allen Date: 8/5/09

Signature: _____ Date: _____

Signature: _____ Date: _____

The undersigned applicant hereby certifies that, to the best of his or her knowledge and belief, all information supplied with this application is true and accurate.

Signature: J. Russell Allen Date: 8/5/09

Notes: All documents and maps submitted as required become the property of Wake County. The Wake County Unified Development Ordinance is on the web at www.wakegov.com.



Planning Department

ZONING 919 856 6335
SUBDIVISION 919 856 6216

Zoning and Subdivision
P.O. Box 550 • WCOB Suite 101 • Raleigh, NC 27602
www.wakegov.com

Concerning: Additional item for review

Please review the attached information and provide comments no later than Monday, August 24, 2009. Everyone should have access to the Land Use Discussion on Lotus Notes. Please post your comments in Land Use Discussion and save as **Development Review Staff\Reviews\2009-08**. Delete any spaces between words and replace commas with a backslash [\]. Posting your comments on Land Use Discussion is a tremendous time saver. If you are unable to post comments in Land Use Discussion, please send your comments by e-mail. If you mark up plans, please provide the hard copy. Thank You.

Special Use

BA SU 2113-09 (PIN# 1751.01 04 7213) a Special Use Request to modify a previously approved site plan with the addition of solar arrays and appurtenances on approximately 30 acres. The property is zoned Residential-30 (R-30) and is located on the southwest quadrant of the intersection of Battle Bridge Road and Brownfield Road. The property is located within the City of Raleigh's Long Range Urban Services Area.

Please contact Brenda Coats at 856-6215 with any questions.

City of Raleigh

Special Use Permit Modification Request

Statement of Justification

Existing Special Use Permit Number: BA 512 (1978), BA SU2092-08 (2008)

Purpose: This modification to the existing Special Use Permit is being submitted to allow construction and operation of photovoltaic solar power facilities on a tract located in the southwest quadrant of the intersection of Battle Bridge Road and Brownfield Road.

The applicant believes that the following statements are accurate:

- 1) **The proposed development will not materially endanger the public health or safety.** The proposed solar facility will not be staffed daily. Site visits by employees will be weekly or less frequently such that the additional traffic generated will be insignificant. No water, sewer, or garbage collection services will be needed since the site will not be staffed. During construction, any required grading will include erosion control measures in accordance with County regulations. The areas under the solar panels will be planted in grass to stabilize the site. Insignificant additional stormwater runoff will be generated since less than 1% of the site will be impervious.
- 2) **The proposed development will comply with all regulations and standards generally applicable within the zoning district and specifically applicable to the particular type of special use or class of special uses.** The solar array site complies with the conditions of the existing Special Use Permit. Minimum buffer distance required under the zoning regulations for the site will be exceeded. All applicable permits and approvals will be obtained.
- 3) **The proposed development will not substantially injure the value of adjoining property, or is a public necessity.** The solar array site is located within the interior of the much larger parent tract. The solar array generates no noise or odors. The parent tract is adequately buffered from adjoining property. The nearest adjoining property is a landfill.
- 4) **The proposed development will be in harmony with the area in which it is located.** The solar site will be located near other municipal uses such as the Police Training Firing Range, Police Driver Training Facility, The Joint Law Enforcement Training Facility, and the Neuse River Wastewater Treatment Plant. It will demonstrate the City's commitment to sustainable practices, and provide educational opportunities for users of the proposed Mountains to Sea trail.
- 5) **The proposed development will be consistent with Wake County Land Use Plan.** The solar site is consistent with the existing special use plan and other uses in the vicinity.

Background Information: Senate Bill 3, legislation enacted in 2007 requires electric utilities such as Progress Energy to derive a portion of their power from renewable sources such as solar, wind, hydro and biomass. The City of Raleigh is interested in promoting sustainable practices such as solar power generation and is willing to utilize a

portion of its 1,462.55 acre Neuse River Wastewater Treatment Plant (NRWWTP) property for construction of solar arrays.

In order for Progress Energy to receive credit for the renewable energy solar project, the generated power must be supplied to the electrical distribution grid, via a transformer. The proposed solar arrays are proposed to be constructed in increments, with the first increment being a 1.3 Megawatt facility. The size of subsequent increments will be dependent on the Renewable Energy Credit needs of the electric utility, and available funding mechanisms. The funding mechanism for the first increment is proposed through a partnership with a private entity which is eligible for tax credits, accelerated depreciation, and sale of the renewable energy to the electric utility.

Property: The proposed solar array site is located on property owned by the City of Raleigh and is currently utilized as a farm field for growing corn, soy beans, and hay as part of the NRWWTP operation. The property is zoned R-30 and is a portion of a 1,462.55 acre assemblage of properties. The City's Police training firing range, Police Driver Training facility, and Wake County/Raleigh Joint Law Enforcement training Facility are located to the north across Battle Bridge Road. The NRWWTP is located to the northeast. A landfill is located on adjacent property to the south. The nearest residence is located approximately 1,575 feet to the west in the Preserve at Long Branch Farm subdivision.

Solar Facility Information: The solar panels will be oriented in horizontal north to south rows facing in a southerly direction to take the most advantage of the sun throughout the year. The panels will track and stay as close to perpendicular with the sun's rays as possible, therefore glare at ground level will not be a problem. The arrays are attached to a steel structure less than 10 feet above the ground. The ground cover under the arrays will be grass, so the area remains pervious. The electrical equipment required to convert the power from DC to AC is typically housed in a small building or shelter. The shelter height will be less than 15 ft.

Visual Buffering: All of the property adjacent to the proposed solar array site is owned by the City of Raleigh. The nearest neighboring property is the WCA construction and demolition landfill located to the south. There is an existing visual buffer along the north boundary of the landfill property composed of a combination of existing mature woods and a berm (approx. 6-10ft high) with Leyland Cypress and shrubs planted on top. There is a row of closely spaced mature cedar trees along the south side of Battle Bridge Road and a row of widely spaced mature Cedar trees along the west side of Brownfield Road. There are mature woods to the west of the site along the natural drainage way. Fifty (50) foot minimum setbacks are proposed from the road rights-of-way. The site is located within the interior of the much larger parent site, which is adequately buffered from neighboring properties.

Site Information: The site will not be staffed daily. Employees are anticipated to visit the site weekly or less frequently to check and maintain the equipment, maintain a clean site, mow grass when necessary, and make repairs. A gravel driveway is proposed for

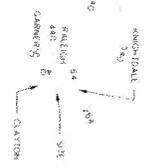
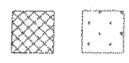
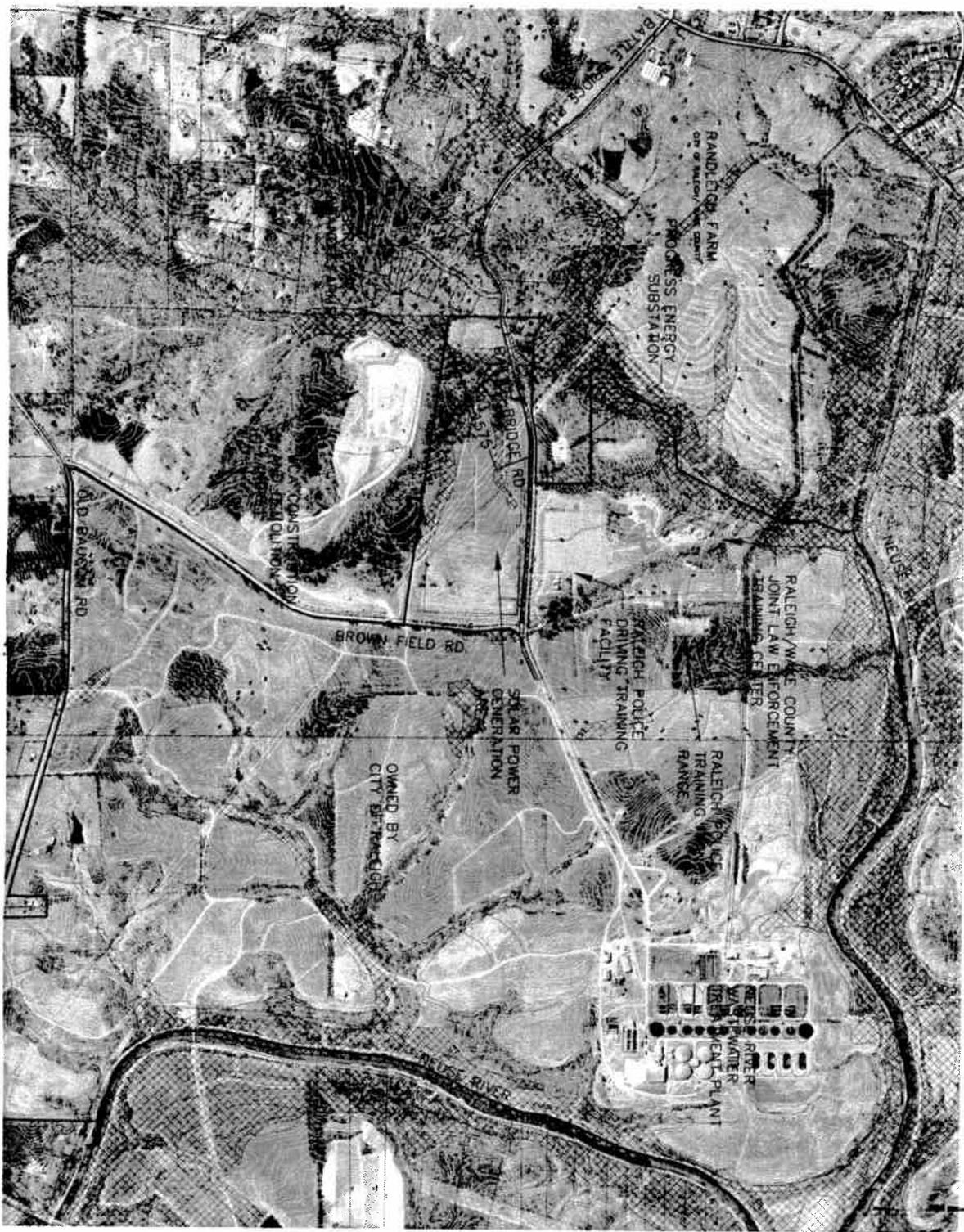
access off Brownfield Road. A gravel parking area will be provided with ample spaces for staff (2-6 spaces are anticipated). Imperious area will be less than 1% of the 30 acre Special Use Area. A chain link fence will be installed around the solar array and equipment shelter to minimize vandalism.

Utilities: No water or sewer services are expected to be needed since the site will not be staffed. The panels are expected to be adequately cleaned by rainfall. Potable and reuse water mains exist along Battle Bridge Road should water be needed in the future. Progress Energy has 3-phase power distribution lines along both Brownfield and Battle Bridge Roads.

Building Standards: A detailed site plan and building construction plans will be prepared and submitted to Wake County for site plan approval and building permit issuance, which is consistent with the existing Special Use Permit. All site grading and construction will be in accordance with Wake County requirements.

Impact on neighboring residences and properties: The impacts to the neighboring properties and residences will be negligible and will not endanger the public health and safety. The additional traffic generated by the site will be negligible since the site will not be staffed. The proposed solar facilities will be in a location that buffered from existing residences by mature woods and should not be visible. There is no noise associated with the daily operation of the solar arrays. The solar arrays are consistent with the surrounding properties which are primarily owned by the City of Raleigh and utilized for municipal purposes. The site should have no negative impact on the adjacent landfill property.

Educational Uses: The statewide Mountains to Sea Trail system is planned to route along the south property line of this site. This will provide an educational opportunity for trail users to see a solar array in use. A viewing area with educational information and a display monitor indicating the power being generated are planned. The City also has long range plans for an environmental education center on the Randleigh tract. Sustainability information such as the amount of power generated form the solar array is envisioned to be an educational tool for the center.



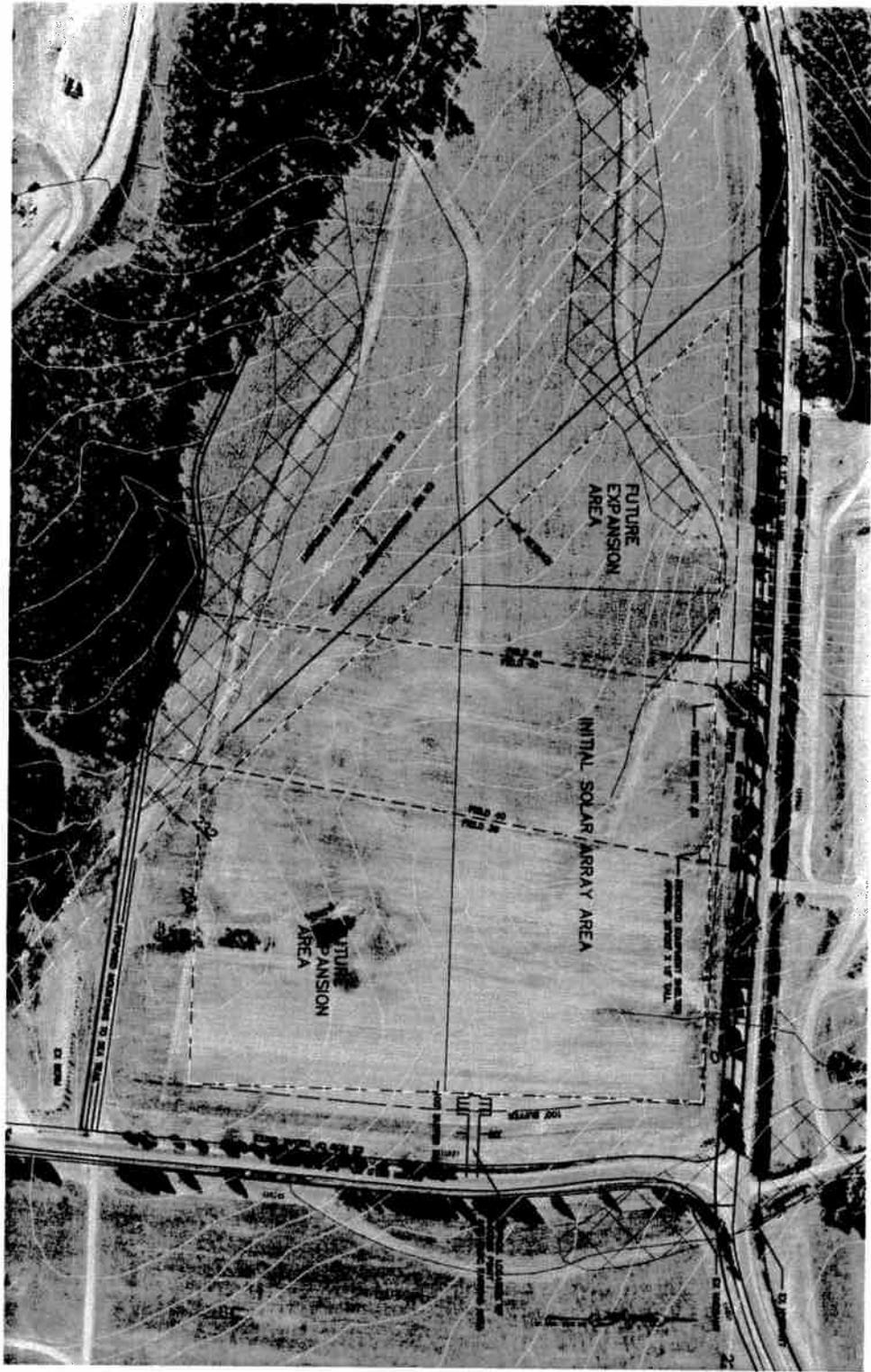
REVISIONS
DATE
BY

EXISTING CONDITIONS
MODIFICATION TO SPECIAL USE PERMIT BA 512
8500 BATTLE BRIDGE ROAD
WAKE COUNTY, NORTH CAROLINA



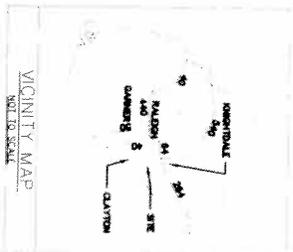
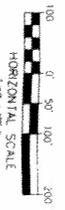
CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT

C-1



100' BUFFER FLOOD PLAIN

FLOOD HAZARD ZONES



SITE DATA

SITE ADDRESS: 8500 BATTLE BRIDGE RD
 Zoning: R-10
 PAV # 1751-04-7213

OWNER: CITY OF RALEIGH
 CONTACT: BRUCE BOWLAND
 ADDRESS: RALEIGH NORTH CAROLINA 27602

TOTAL ACRES: 148.55 ACRES
 ACRES OF SOLAR ARRAY AREA: 30.00 ACRES

EXISTING USES:
 WASTEWATER TREATMENT FACILITY
 POLICE TRAINING RANGE
 PROPOSED ADJUTANT GENERAL'S OFFICE
 PROPOSED POWER SUBSTATION

INTERIUS CALCULATIONS

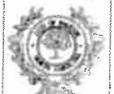
TOTAL SITE AREA: 30.00 ACRES
 WASTEWATER TREATMENT FACILITY: 1.18 ACRES
 POLICE TRAINING RANGE: 1.18 ACRES

NOTES

1. DRAINAGE FEATURES ARE FROM THE 2008
 2. ALL UTILITIES ARE SHOWN AS THEY EXIST.
 3. ALL UTILITIES ARE TO BE DELETED AND RELOCATED TO THE
 4. AS NOTED FOR SECURITY AND/OR SAFETY.
 5. ALL UTILITIES TO BE DELETED AND RELOCATED TO THE
 6. ALL UTILITIES TO BE DELETED AND RELOCATED TO THE
 7. ALL UTILITIES TO BE DELETED AND RELOCATED TO THE
 8. ALL UTILITIES TO BE DELETED AND RELOCATED TO THE
 9. ALL UTILITIES TO BE DELETED AND RELOCATED TO THE
 10. ALL UTILITIES TO BE DELETED AND RELOCATED TO THE

PRELIMINARY SPECIAL USE

PERMIT SITE PLAN
 MODIFICATION TO SPECIAL USE PERMIT BA 512
 8500 BATTLE BRIDGE ROAD
 WAKE COUNTY, NORTH CAROLINA



CITY OF RALEIGH
 PUBLIC UTILITIES DEPARTMENT

REVISIONS	
DATE	DESCRIPTION
11/13/13	PLANS CREATED BY

C-2
 SITE PLAN

