KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION
USE ON REVIEW REPORT

FILE #: 7-B-09-UR **AGENDA ITEM #: 42**

POSTPONEMENT(S): 7/9/2009 **AGENDA DATE: 8/13/2009**

APPLICANT: **CEDAR BLUFF LAND PARTNERS, LLC**

OWNER(S): DAVID CAMPBELL

TAX ID NUMBER: 119 H F 014

JURISDICTION: County Commission District 5

LOCATION: **West side of N Cedar Bluff Rd., west end of Fox Lonas Rd.**

APPX. SIZE OF TRACT: **0.821 acres**

SECTOR PLAN: Northwest County

GROWTH POLICY PLAN: Planned Growth Area

ACCESSIBILITY: Access is via N. Cedar Bluff Rd., a major arterial street with 4 lanes and a center turning lane and 60' of pavement width within 80' of right of way. The site's driveway lines up with Fox Lonas Dr., a minor collector street to the east, which has a traffic signal at its intersection with N. Cedar Bluff Rd.

UTILITIES: Water Source: West Knox Utility District

Sewer Source: West Knox Utility District

WATERSHED: Turkey Creek

ZONING: **CN (Neighborhood Commercial)**

EXISTING LAND USE: **Vacant commercial building**

PROPOSED USE: **Restaurant with drive thru window**

HISTORY OF ZONING: Property rezoned to CN (Neighborhood Commercial) on July 24, 2006.

SURROUNDING LAND USE AND ZONING:

North: Vacant land / A (Agricultural) & PC (Planned Commercial)

South: Offices / OA (Office Park) & OB (Office, Medical, and Related Services)

East: School and vacant land / RP-1 (Planned Residential)

West: Recreation facility / A (Agricultural)

NEIGHBORHOOD CONTEXT: This area of N. Cedar Bluff Rd. north of Dutchtown Rd. has been developed with office and residential uses, as well as a large church campus, under A, RA, RAE, RP-1, OA and OB zoning. Most commercial development along N. Cedar Bluff Rd. has occurred to the south, south of Dutchtown Rd. and to the north, near the intersection with Middlebrook Pike, under various commercial zones.

STAFF RECOMMENDATION:

APPROVE the development plan for a proposed Popeye's restaurant with a drive thru window, subject to the following 9 conditions:

1. Meeting all applicable requirements of the Knox County Zoning Ordinance.
2. Meeting all applicable requirements of the Knox County Health Department.

3. Revising the development plan to change the designation of the 931.87' contour from "Maximum Ponding Elevation" to "Closed Contour for Sinkhole"
4. Submitting a geotechnical report prepared by a registered engineer to the Knox County Department of Engineering and Public Works to determine soil stability in the area of the proposed restaurant building. The report is subject to review and approval by the County prior to any building permit being issued. Engineered footings will be required for this area.
5. Obtaining approval of a variance from the Knox County Board of Zoning Appeals for locating the proposed building within the closed contour for the sinkhole.
6. Implementation of Traffic Impact Study recommendations subject to approval of the timing of the improvements by the Knox County Department of Engineering and Public Works.
7. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
8. Installation of landscaping as shown on the development plan within six months of the issuance of occupancy permit for this project, or posting a bond with the Knox County Department of Engineering and Public Works to cover the improvements.
9. Meeting all applicable requirements and obtaining all required permits from the Tennessee Department of Environment and Conservation for development activity within the sinkhole.

With the conditions noted above, this requests meets the requirements for approval of a restaurant with a drive thru window in the CN zone and other criteria for a use on review.

COMMENTS:

The applicant is proposing to develop this 0.821 acre site with a 2200 square foot fast food restaurant with a drive thru window. Restaurants can be permitted in the CN (Neighborhood Commercial) zoning district through the use-on-review process. Access to the site is from the west side of N. Cedar Bluff Rd. at the intersection with Fox Lonas Rd.

A Traffic Impact Study was conducted for the proposed restaurant. The site is located on the west side of the signalized intersection of N Cedar Bluff Rd. and Fox Lonas Rd. The study concluded that the proposed development will not create an unacceptable impact at the signalized intersection. Minor changes are proposed at the intersection that would require new or revised signage and lane striping (see attachment).

To address concerns on flooding in the area, an initial analysis was prepared by a geotechnical engineer and submitted to the Knox County Department of Engineering and Public Works regarding the proposed stormwater management plan for the site (See attached letter from GEOServices). Based on recommendations from the Ogden flood study prepared for Knox County in 1998, the applicant is proposing to install an injection well at the sinkhole throat on the site. It is believed that improving infiltration into the aquifer will help decrease the potential for flooding at the site. Since the County's Stormwater Ordinance does not allow buildings within the closed contour area of the site, the applicant will have to obtain a variance from the Knox County Board of Zoning Appeals to be able to move forward with this proposed development.

EFFECT OF THE PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTIES AND THE COMMUNITY AS A WHOLE

1. As identified in the Traffic Impact Study for the proposed development, installation of the minor improvements at the signalized intersection of N Cedar Bluff Rd. and Fox Lonas Rd. should offset any impacts from the proposed development.
2. Public water and sewer utilities are available to serve the development.
3. It is believed that improving infiltration into the aquifer as proposed in the stormwater management plan will help decrease the potential for flooding at the site.
4. The proposal will have no impact on schools.

CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOXVILLE AND KNOX COUNTY ZONING ORDINANCES

1. With the recommended conditions, the proposed restaurant with a drive thru window meets the requirements of the Knox County Zoning Ordinance.
2. The proposed restaurant with a drive thru window is consistent with the general standards for uses permitted on review: The proposed development is consistent with the adopted plans and policies of the General Plan and Sector Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. The use is compatible with the character of the neighborhood where it is proposed. With the proposed landscaping, the additional parking will not significantly injure the value of adjacent property.

CONFORMITY OF THE PROPOSAL TO ADOPTED MPC PLANS

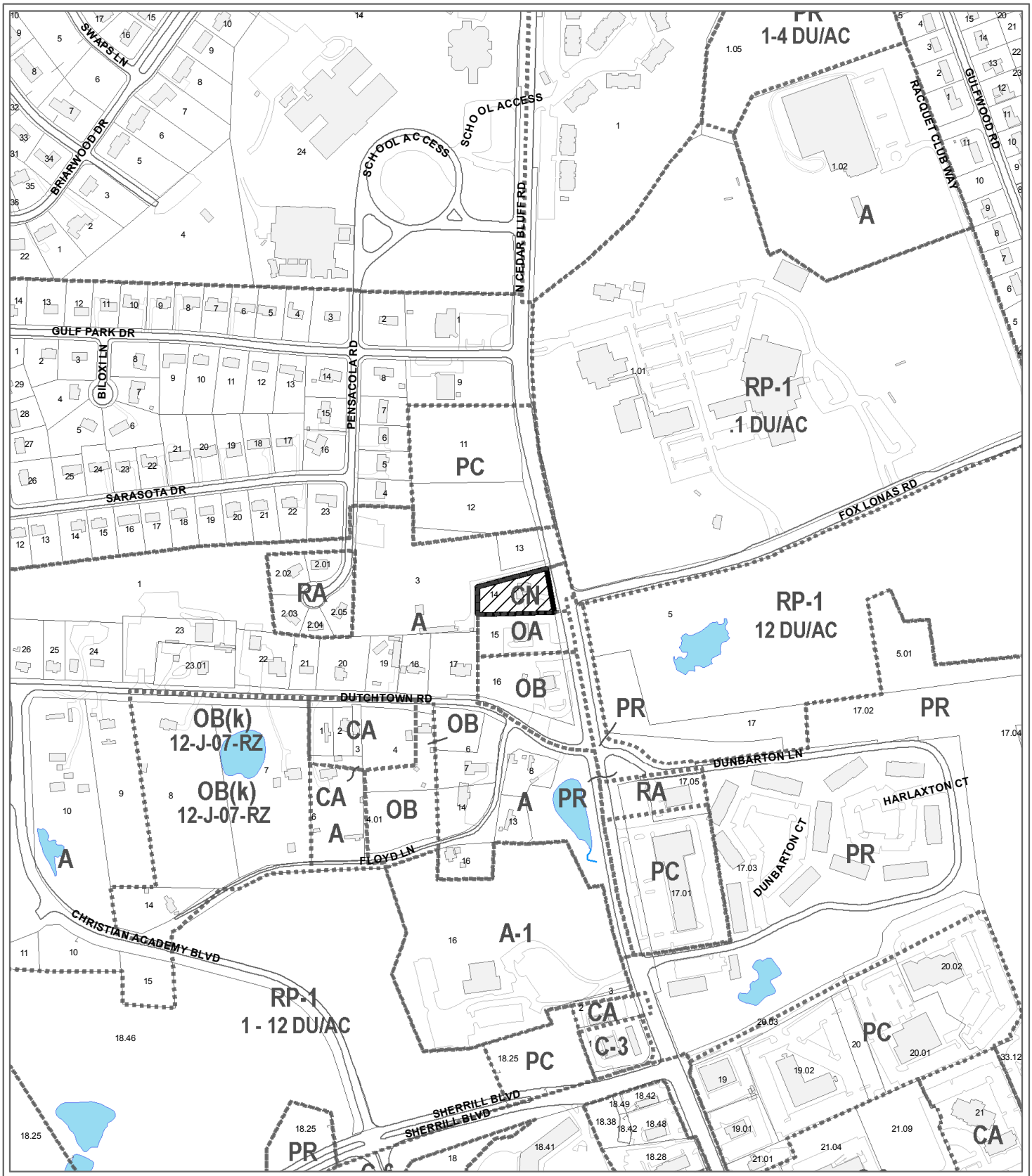
1. The Northwest County Sector Plan proposes neighborhood commercial uses for this site. Under the Zoning Ordinance restaurants can be considered through the use-on-review process.
2. The site is located within the Planned Growth Area of the Knoxville-Knox County-Farragut Growth Policy Plan.

ESTIMATED TRAFFIC IMPACT 1091 (average daily vehicle trips)

Average Daily Vehicle Trips are computed using national average trip rates reported in the latest edition of "Trip Generation," published by the Institute of Transportation Engineers. Average Daily Vehicle Trips represent the total number of trips that a particular land use can be expected to generate during a 24-hour day (Monday through Friday), with a "trip" counted each time a vehicle enters or exits a proposed development.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



7-B-09-UR
USE ON REVIEW

Petitioner: Cedar Bluff Land Partners, LLC

Use on Review for: Restaurant with drive thru in CN zone

Map No: 119
Jurisdiction: County

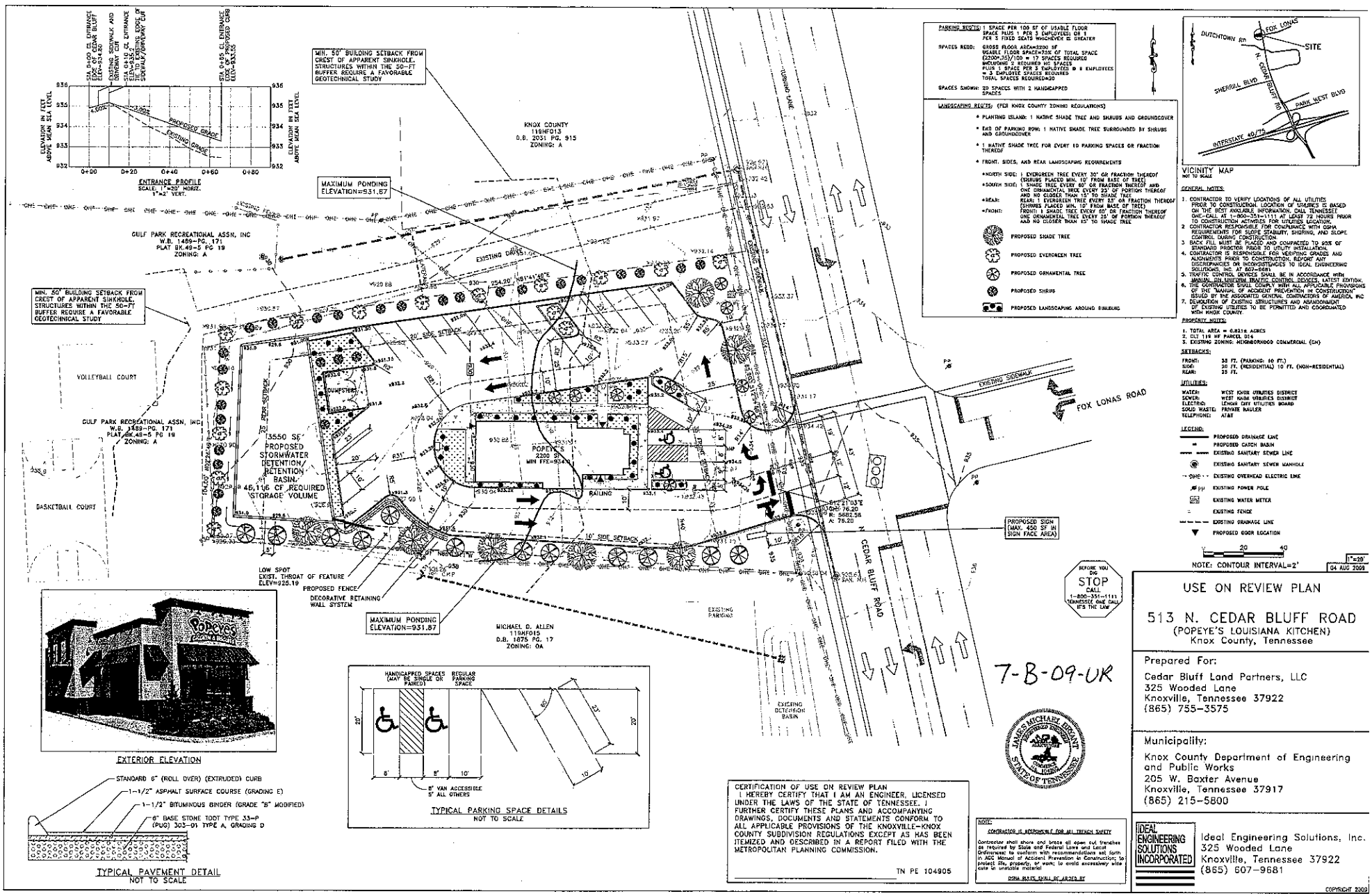
0 500
Feet

N

Original Print Date: 6/23/2009 Revised:

*Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902*

MPC August 13, 2009 **Agenda Item # 42**


ENTRANCE PROFILE
SCALE: 1"=20' HORIZ.
1"=2' VERT.
PROPOSED GRADE
EXISTING GRADE
MIN. 50' BUILDING SETBACK FROM CREST OF APPARENT SINKHOLE. STRUCTURES WITHIN THE 50-FT BUFFER REQUIRE A FAVORABLE GEOTECHNICAL STUDY
MAXIMUM PONDING ELEVATION=931.67
KNOX COUNTY
119NF013
D.B. 2031 PG. 915
ZONING: A
GULF PARK RECREATIONAL ASSN, INC
W.B. 1489-PG. 171
PLAT BK.48-5 PG 19
ZONING: A
VOLLEYBALL COURT
BASKETBALL COURT
3550 SF PROPOSED STORMWATER DETENTION/ RETENTION BASIN. 46,116 CF REQUIRED STORAGE VOLUME
POPEYE'S 2200 SF MIN FFE=934.5
DUMPSTER
RAILING
20' SIDE SETBACK
10' SIDE SETBACK
LOW SPOT EXIST. THROAT OF FEATURE ELEV=925.19
PROPOSED FENCE
DECORATIVE RETAINING WALL SYSTEM
MAXIMUM PONDING ELEVATION=931.87
MICHAEL D. ALLEN
119NF015
D.B. 1875 PG. 17
ZONING: OA
EXISTING PARKING
EXISTING DETENTION BASIN
CEDAR BLUFF ROAD
FOX LONAS ROAD
EXISTING SIDEWALK
PROPOSED SIGN (MAX. 450 SF IN SIGN FACE AREA)
TURNING LANE
PARKING REQ'TS: 1 SPACE PER 100 SF OF USABLE FLOOR SPACE PLUS 1 PER 3 EMPLOYEES OR 1 PER 3 FIXED SEATS WHICHEVER IS GREATER
SPACES REQ'D: GROSS FLOOR AREA=2200 SF
USABLE FLOOR SPACE=70% OF TOTAL SPACE (2200*.35)/100 = 17 SPACES REQUIRED
INCLUDING 2 REQUIRED HC SPACES
PLUS 1 SPACE PER 3 EMPLOYEES @ 8 EMPLOYEES = 3 EMPLOYEE SPACES REQUIRED
TOTAL SPACES REQUIRED=20
SPACES SHOWN: 20 SPACES WITH 2 HANDICAPPED SPACES
LANDSCAPING REQ'TS: (PER KNOX COUNTY ZONING REGULATIONS)
* PLANTING ISLAND: 1 NATIVE SHADE TREE AND SHRUBS AND GROUNDCOVER
* END OF PARKING ROW: 1 NATIVE SHADE TREE SURROUNDED BY SHRUBS AND GROUNDCOVER
* 1 NATIVE SHADE TREE FOR EVERY 10 PARKING SPACES OR FRACTION THEREOF
* FRONT, SIDES, AND REAR LANDSCAPING REQUIREMENTS
*NORTH SIDE: 1 EVERGREEN TREE EVERY 30' OR FRACTION THEREOF (SHRUBS PLACED MIN. 10' FROM BASE OF TREE)
*SOUTH SIDE: 1 SHADE TREE EVERY 60' OR FRACTION THEREOF AND ONE ORNAMENTAL TREE EVERY 25' OF PORTION THEREOF AND NO CLOSER THAN 15' TO SHADE TREE
*REAR: REAR: 1 EVERGREEN TREE EVERY 25' OR FRACTION THEREOF (SHRUBS PLACED MIN. 10' FROM BASE OF TREE)
*FRONT: FRONT: 1 SHADE TREE EVERY 60' OR FRACTION THEREOF ONE ORNAMENTAL TREE EVERY 25' OF PORTION THEREOF AND NO CLOSER THAN 15' TO SHADE TREE
PROPOSED SHADE TREE
PROPOSED EVERGREEN TREE
PROPOSED ORNAMENTAL TREE
PROPOSED SHRUB
PROPOSED LANDSCAPING AROUND BUILDING
VICINITY MAP
NOT TO SCALE
DUTCHTOWN RD
FOX LONAS
SITE
N. CEDAR BLUFF RD
SHERRILL BLVD
PARK WEST BLVD
INTERSTATE 40/75
GENERAL NOTES:
1. CONTRACTOR TO VERIFY LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. LOCATION OF UTILITIES IS BASED ON THE BEST AVAILABLE INFORMATION. CALL TENNESSEE ONE-CALL AT 1-800-351-1111 AT LEAST 72 HOURS PRIOR TO CONSTRUCTION ACTIVITIES FOR UTILITIES LOCATIONS.
2. CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH OSHA REQUIREMENTS FOR SLOPE STABILITY, SHORING, AND SLOPE CONTROL DURING CONSTRUCTION.
3. BACK FILL MUST BE PLACED AND COMPACTED TO 95% OF STANDARD PROCTOR PRIOR TO UTILITY INSTALLATION.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING GRADES AND ALIGNMENTS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES OR INCONSISTENCIES TO IDEAL ENGINEERING SOLUTIONS, INC. AT 607-9681
5. TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
6. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC
7. DEMOLITION OF EXISTING STRUCTURES AND ABANDONMENT OF EXISTING UTILITIES TO BE PERMITTED AND COORDINATED WITH KNOX COUNTY.
PROPERTY NOTES:
1. TOTAL AREA = 0.8216 ACRES
2. OUT 119 NF PARCEL 014
3. EXISTING ZONING: NEIGHBORHOOD COMMERCIAL (CN)
SETBACKS:
FRONT: 35 FT. (PARKING: 10 FT.)
SIDE: 20 FT. (RESIDENTIAL) 10 FT. (NON-RESIDENTIAL)
REAR: 25 FT.
UTILITIES:
WATER: WEST KNOX UTILITIES DISTRICT
SEWER: WEST KNOX UTILITIES DISTRICT
ELECTRIC: LENOIR CITY UTILITIES BOARD
SOLID WASTE: PRIVATE HAULER
TELEPHONE: AT&T
LEGEND:
PROPOSED DRAINAGE LINE
PROPOSED CATCH BASIN
EXISTING SANITARY SEWER LINE
EXISTING SANITARY SEWER MANHOLE
EXISTING OVERHEAD ELECTRIC LINE
EXISTING POWER POLE
EXISTING WATER METER
EXISTING FENCE
EXISTING DRAINAGE LINE
PROPOSED DOOR LOCATION
NOTE: CONTOUR INTERVAL=2'
1"=20'
04 AUG 2009
BEFORE YOU DIG STOP CALL 1-800-351-1111 TENNESSEE ONE CALL IT'S THE LAW
7-B-09-UR
USE ON REVIEW PLAN
513 N. CEDAR BLUFF ROAD
(POPEYE'S LOUISIANA KITCHEN)
Knox County, Tennessee
Prepared For:
Cedar Bluff Land Partners, LLC
325 Wooded Lane
Knoxville, Tennessee 37922
(865) 755-3575
Municipality:
Knox County Department of Engineering and Public Works
205 W. Baxter Avenue
Knoxville, Tennessee 37917
(865) 215-5800
IDEAL ENGINEERING SOLUTIONS INCORPORATED
Ideal Engineering Solutions, Inc.
325 Wooded Lane
Knoxville, Tennessee 37922
(865) 607-9681
COPYRIGHT 2009
EXTERIOR ELEVATION
STANDARD 6" (ROLL OVER) (EXTRUDED) CURB
1-1/2" ASPHALT SURFACE COURSE (GRADING E)
1-1/2" BITUMINOUS BINDER (GRADE "B" MODIFIED)
6" BASE STONE TOOT TYPE 33-P (PUG) 303-01 TYPE A, GRADING D
TYPICAL PAVEMENT DETAIL
NOT TO SCALE
HANDICAPPED SPACES (MAY BE SINGLE OR PAIRED)
REGULAR PARKING SPACE
8' VAN ACCESSIBLE
8' ALL OTHERS
TYPICAL PARKING SPACE DETAILS
NOT TO SCALE
CERTIFICATION OF USE ON REVIEW PLAN
I HEREBY CERTIFY THAT I AM AN ENGINEER, LICENSED UNDER THE LAWS OF THE STATE OF TENNESSEE. I FURTHER CERTIFY THESE PLANS AND ACCOMPANYING DRAWINGS, DOCUMENTS AND STATEMENTS CONFORM TO ALL APPLICABLE PROVISIONS OF THE KNOXVILLE-KNOX COUNTY SUBDIVISION REGULATIONS EXCEPT AS HAS BEEN ITEMIZED AND DESCRIBED IN A REPORT FILED WITH THE METROPOLITAN PLANNING COMMISSION.
TN PE 104905
JAMES MICHAEL BRYANT REGISTERED ENGINEER STATE OF TENNESSEE
NOTE:
CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH SAFETY
Contractor shall shore and brace all open cut trenches as required by State and Federal Laws and Local Ordinances; to conform with recommendations set forth in AGC Manual of Accident Prevention in Construction; to protect life, property, or work; to avoid excessively wide cuts in unstable material.
DONA BUYER SHALL BE ADDED BY

GEOS
GEOServices, LLC-Geotechnical and Materials Engineers

7-B-09-UR

July 30, 2009

David C. Campbell
3225 Wodded Lane
Knoxville, Tennessee 37922

Subject: **Class V Injection Well – Response to Knox County Engineering Concerns**
GEOServices Project Number: 21-09226

Dear Mr. Campbell:

GEOServices has recently completed and obtained approval, by the Tennessee Department of Environment and Conservation, a Class V Injection Well Permit to allow the injection of stormwater into the closed depression located at 513 N. Cedar Bluff Road. We understand that the Knox County Engineering maintains some concern over the development surrounding and the partial filling closed depressions in the Cedar Bluff area due to the potential and past observance of flooding. During our permitting request, GEOServices has become aware of particular items which should be considered by Knox County as part of the approval of the development. A brief summary of these items is listed below:

1. During the flood study (dated September 25, 1998) performed by Ogden for Knox County on the subject area, numerous remedial options were discussed. One options which was limitedly discussed was "Find and improve sinkhole throats" on page 20.

2. Well Log information for the area indicates uppermost aquifer depth in excess of 55 feet with an average depth in excess of 75 feet for wells located within 1 mile of the subject site.

3. The condition of the closed depression as it currently exists is relatively poor for infiltration. Debris and sediment, likely from the adjacent development, was observed and likely impeding the infiltration rate.

4. Rock was encountered at shallow depths in the area where the required detention structure will be located.

GEOServices, LLC
500 Maryville Highway
Building 1, Suite B
Seymour, Tennessee 37865

(865) 573-6130
(865) 573-6132 fax

Opinion

Based on our review and understanding of the Knox County Engineering concerns, it is the opinion of GEOServices that the development of this site and the mitigation of the closed depression at this site will actually decrease the potential for flooding in this area. As stated in the Ogden flood study, locating, improving and maintaining sinkhole throats are a method of improving infiltration rates and subsequently decreasing the potential for flooding. ***The mitigation planned for the sinkhole at the subject property will include excavation and protection of the sinkhole throat as well as permanent sediment controls which will most assuredly improve and protect infiltration rates over the existing poor condition of the sinkhole.*** This will allow more rapid infiltration to the aquifer system, which well data indicates is at least 55 feet below the surface at adjacent sites. Further, the removal of rock in the adjacent detention facility will allow for additional surface area for direct infiltration, further improving the rate of stormwater infiltration. In summary, it is our opinion based on our limited information, that the flooding that periodically occurs in the Cedar Bluff area could be reduced by simply improving the infiltration rates and protection of throats of the numerous sinkholes in the area, and the sinkhole improvements planned for this development should be considered an acceptable way of increasing these infiltration rates.

Sincerely,
GEOServices, LLC

Lloyd R. Monday, P.E
Principal
TN 104964

7-B-09-VR

TRAFFIC IMPACT STUDY
FOR
POPEYE'S LOUISIANA CHICKEN
ON CEDAR BLUFF ROAD

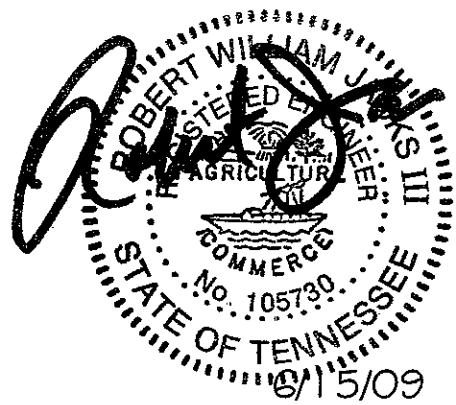
KNOX COUNTY, TENNESSEE

-Prepared For-

Cedar Bluff Land Partners, LLC
325 Wooded Lane
Knoxville, TN 37922

-Prepared By-

Ideal Engineering Solutions, Inc.
325 Wooded Lane
Knoxville, TN 37922



June 15, 2009

RECOMMENDATIONS

The analyses presented in this study of the proposed new Popeye's Chicken indicate that the traffic generated by this proposed development will not create an unacceptable impact on the traffic capacity of the intersection of Cedar Bluff Road and Fox Lonas Road. After all the analyses have been conducted and reviewed, the following recommendations are provided for the proposed new Popeye's Chicken on Cedar Bluff Road:

- Northbound Approach: From the capacity calculations, it has been shown that northbound left turns into the establishment will operate at LOS B. It does not appear that this movement needs a new traffic signal head with a left turn indication that could coincide with the current southbound left turn phase. This is primarily due to the low levels of left turn vehicles into the site and the lowered amounts of southbound traffic in the PM peak. However, if conditions change and warrant a separate left turn phase, this modification could easily be accomplished. The existing left turn storage length for northbound left turns appears to be adequate. It is recommend that a traffic sign "Left Turn Signal – Yield on Green" (R10-21) should be installed adjacent to the traffic signal on the span wire controlling this northbound approach.

- Southbound Approach: From the capacity calculations, it has been shown that southbound thru/right turns will operate at LOS A. No specific changes are recommended for this approach other than that southbound right turns into the site should be accommodated with a maximum amount of driveway entrance radii.

- Westbound Approach: From the capacity calculations, it has been shown that westbound left/thru and right turns will operate at LOS D. These LOS designations did not change in respect to the calculations for the background conditions. However, nonetheless, it is recommended that the striping and signage be changed to accommodate the new development. The westbound left turn lane needs to be re-striped from left turns only to left turn and through striping. Additionally, the signage located on the shoulder should also be changed to reflect the change in lane designations. The existing left turn/thru storage length for the westbound approach appears to be adequate. It is recommend that a traffic sign "Left Turn Signal – Yield on Green" (R10-21) should be installed adjacent to the traffic signal controlling this westbound approach.

- Eastbound Approach: From the capacity calculations, it has been shown that eastbound left/thru/right turns from a single exiting lane will operate at LOS C. The existing lane configurations at this approach (for the abandoned day care center) include an exclusive left turn and thru/right lane. The proposed conceptual plan by Ideal Engineering Solutions, Inc in Figure 2 shows only a single exiting lane for left, thru, and right turns. Both lane configurations (existing two lanes and proposed single lane) were examined and calculated for capacity. Both scenarios resulted in very similar results

  While not necessary for capacity purposes per se, it has been determined that it might be in the best interest of the development to propose the exiting driveway to match the existing lane configurations of a single exclusive left turn and a lane for exiting thru/right lane. This would potentially allow for small amounts of right turns to exit and turn on the red indication when unimpeded by queued thru vehicles. The sight distance at this approach has been examined and determined to be more than adequate for potential right-turn-on-red vehicles. Also, with two exiting lanes, this would allow for the opposing eastbound and westbound approaches to line up opposite each other for safer intersection travel during the green phases Table 6 shows the calculated LOS designations for the exiting lane configuration of an exclusive left lane and thru/right lane. If the existing lane configuration is ultimately constructed with 2 exiting lanes, the left turn lane should be in line with the opposite westbound left. The proposed storage length for exiting traffic appears to be adequate. It is also recommend that a traffic sign "Left Turn Signal – Yield on Green" (R10-21) should be installed adjacent to the traffic signal on the span wire controlling this westbound approach

TABLE 6
2010 PEAK HOUR LEVEL OF SERVICE - PROJECTED
(with exclusive left turn lane and thru/right lane configuration)

INTERSECTION	TRAFFIC CONTROL	TURNING MOVEMENT	LEVEL OF SERVICE PM PEAK
Cedar Bluff Road and Fox Lonas Road	Signalized	Eastbound Left	C
		Eastbound Thru/Right	C
		Westbound Left/Thru	D
		Westbound Right	D
		Northbound Left	B
		Northbound Thru/Right	D
		Southbound Left	D
		Southbound Thru/Right	A
		Intersection LOS	**C**
		Avg. Control Delay (sec)	**31.6**

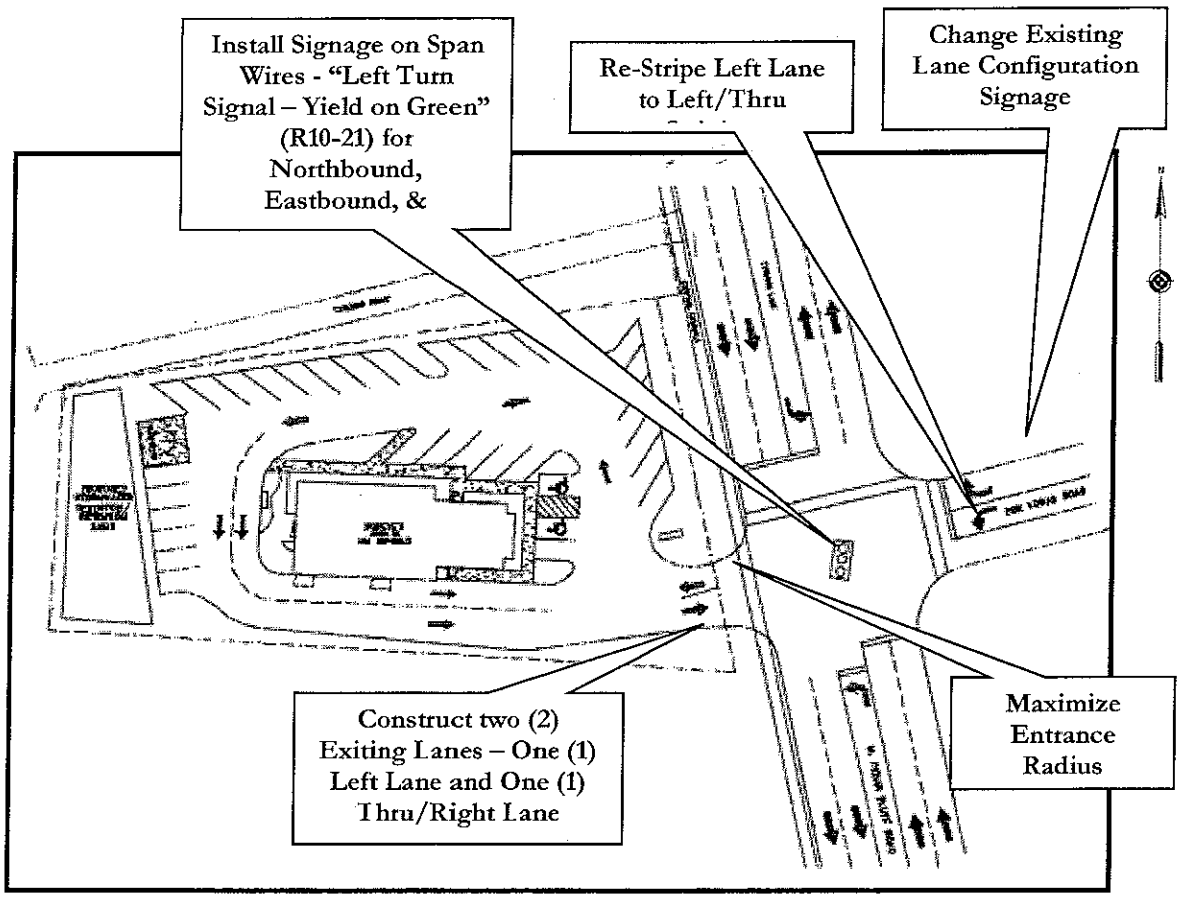


Figure 7
Proposed Site Recommendations

CONCLUSIONS

The analyses presented in this study of the proposed new Popeye's Chicken indicate that the traffic generated by this proposed development will not create an unacceptable impact at the signalized intersection of Cedar Bluff Road and Fox Lonas Road during the PM peak hours at the time of full build-out (2010).

In review, this traffic study used existing traffic counts that were obtained by Cannon & Cannon, Inc in March of 2009. The estimated number of trips generated by this new Popeye's Chicken was calculated using the ITE publication Trip Generation, 7th Edition. At the time of full build-out next year (2010), a growth factor of 2.5% was assumed and used to determine the future traffic of the surrounding roadway. The trips generated by the development were added to these future volumes with a trip distribution assignment according to the surrounding area and based on existing movements at the intersection. In addition, for this development, a pass-by trip rate was assumed to be 20% and was used so that the number of new trips generated would not be overestimated. Ultimately, acceptable levels of service were calculated and determined for the studied intersection.

Overall, even with this proposed development being added to the existing traffic landscape in Knox County, Tennessee, efficient and safe traffic conditions should be maintainable and achievable when coupled with the recommendations of this report.