



**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION
SUBDIVISION REPORT - CONCEPT/USE ON REVIEW**

▶ **FILE #:** 9-SB-16-C **AGENDA ITEM #:** 13
9-E-16-UR **AGENDA DATE:** 9/8/2016

▶ **SUBDIVISION:** MIDWAY BUSINESS PARK
▶ **APPLICANT/DEVELOPER:** THE DEVELOPMENT CORPORATION OF KNOX COUNTY
OWNER(S): Development Corporation of Knox County

TAX IDENTIFICATION: 74 039, 040, 041, 092, 093, 094, 09501, 09502, [View map on KGIS](#)
096, 09601, 09602, 09603, 09604, 09605, 09606,
09607 & 097

JURISDICTION: County Commission District 8

STREET ADDRESS: 8918 Thorn Grove Pike

▶ **LOCATION:** Northwest and southeast side of Thorn Grove Pike, north side of Worthington Ln. at the northwest quadrant of the I-40 and Midway Rd. Interchange.

SECTOR PLAN: East County

GROWTH POLICY PLAN: Planned Growth Area

WATERSHED: Holston and French Broad and Tuckahoe Creek

▶ **APPROXIMATE ACREAGE:** 327.94 acres

▶ **ZONING:** EC (Employment Center) & A (Agricultural)

▶ **EXISTING LAND USE:** Farm, residences and vacant land

▶ **PROPOSED USE:** Business Park

SURROUNDING LAND USE AND ZONING: This site is located in the northwest quadrant of the I-40/Midway Rd. interchange in an agricultural and rural residential portion of East Knox County zoned A (Agricultural).

North: Agricultural and rural residential / A (Agricultural)

South: I-40, agricultural and rural residential / OS-1 (Open Space Preservation) and A (Agricultural)

East: Agricultural and rural residential / A (Agricultural) & C-4 (Highway and Arterial Commercial)

West: Agricultural and rural residential / A (Agricultural) & A-1 (General Agricultural)

▶ **NUMBER OF LOTS:** 40

SURVEYOR/ENGINEER: Vaughn and Melton

ACCESSIBILITY: Access is via Thorn Grove Pike, a minor arterial street with 20' of pavement width within 50' of right-of-way, or Midway Rd., a minor arterial street with 21' of pavement width within 50' of right-of-way.

▶ **SUBDIVISION VARIANCES REQUIRED:** None

STAFF RECOMMENDATION:

► APPROVE the Concept Plan subject to 12 conditions.

1. Obtaining approval from the Knox County Commission of the requested rezoning of Tax Parcels 074 -09601 and 074-09603, from A (Agricultural) to EC (Employment Center). (10-H-16-RZ/10-D-16-SP)
2. Connection to sanitary sewer and meeting any other relevant requirements of the Knox County Health Department.
3. Provision of street names which are consistent with the Uniform Street Naming and Addressing System within Knox County (Ord 91-1-102).
4. Implementation of all intersection and road improvements and recommendations outlined in the Traffic Impact Study (TIS) prepared by Cannon & Cannon, Inc. as revised on July 19, 2016 (Recommendations are attached). The design details and timing of the installation of the improvements (including traffic signals) shall be worked out with the Knox County Department of Engineering and Public Works and Tennessee Department of Transportation (TDOT) during the design plan stage for the subdivision.
5. An updated Traffic Impact Study (TIS) will be required prior to final plat approval for Phases II and III of the subdivision to determine if any changes are necessary for the recommended improvements.
6. Development within the limits of any closed topographic depression, outside of identified preservation areas, will be contingent on obtaining required permits from the Tennessee Department of Environment and Conservation, a subsurface investigation and design recommendation by a geotechnical engineer, and approval by the Knox County Department of Engineering and Public Works
7. Sidewalks shall be installed as identified on the concept plan. Sidewalks shall meet all applicable requirements of the Americans with Disabilities Act (ADA) and the Knox County Department of Engineering and Public Works. A bond shall be provided to the Knox County Department of Engineering and Public Works by the developer in an amount sufficient to guarantee the installation of the sidewalks.
8. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
9. Placing a note on the final plat that all lots will have access only to the internal street system except for proposed Lots 24-27, 30-32 and 38-40.
10. A final plat application based on this concept plan will not be accepted for review by the MPC until certification of design plan approval has been submitted to the MPC staff.
11. Prior to certification of a final plat for the subdivision, establishing the Midway Business Park Property Owners Association that will be responsible for maintaining the storm water system, common area and any other commonly held assets.
12. Prior to certification of a final plat for the subdivision, recording the protective covenants for the Preserved Natural Areas.

► APPROVE the Midway Business Park Development Plan and Design Guidelines subject to 4 conditions.

1. Lot 40 is designated as a mixed use development that would allow retail commercial uses as designated in Section 5.51.02.O. of the Knox County Zoning Ordinance.
2. Any request to deviate from the approved Design Guidelines would require either a use on review approval from the Planning Commission or a variance approval from the Knox County Board of Zoning Appeals.
3. Providing certification during development plan review process that the proposed development site has adequate sight distance at the proposed access driveway onto the public street.
4. Meeting all applicable requirements of the Knox County Zoning Ordinance.

With the conditions noted, the concept plan and development plan meet the requirements for approval in the EC (Employment Center) zoning district.

COMMENTS:

The applicant is requesting approval of the concept plan and development plan for the Midway Business Park development which is located at the northwest quadrant of the I-40/Midway Rd interchange. The proposed development will have access to Thorn Grove Pike and Midway Rd. This site was rezoned to EC (Employment Center) by the Knox County Commission on December 21, 2015.

The proposed concept plan includes 40 lots on approximately 330.5 acres for development under the EC zoning district. This includes two lots (Tax Parcels 074-09601 and 074-09603) along Thorn Grove Pike that have been recently purchased or are under contract. The applicant has submitted an application (10-H-16-RZ/10-D-16-SP) for the rezoning of that property from A (Agricultural) to EC (Employment Center). The majority of the lots will have access to a proposed public street system that will be implemented in phases.

To address the traffic impact of the proposed development, a traffic impact study was prepared by Cannon & Cannon Inc. with a revised date of July 19, 2016. A copy of the conclusions and recommendations from the

study is attached. Traffic improvements include: a) creating a four way intersection at the north end of Midway Rd. at proposed Road A; b) the realignment of Thorne Grove Pike in the area of the second entrance into the business park (west of Midway Rd.) at proposed Road B; c) providing a traffic signal at the intersection of Midway Rd. and Thorn Grove Pike; and d) turn lane and signal improvements at the I-40 / Midway Rd. interchange.

Approximately 54 acres will be kept in Preserved Natural Areas throughout the business park that will also serve as wildlife corridors through the property. A 100 foot buffer/setback adjoining the majority of the A (Agricultural) zoned property to the north and west is proposed. Proposed amenities include a community park, and 2.6 miles of paved and natural trail.

The EC zone allows the Planning Commission to approve an overall development plan and design guidelines for the district. Once approved, administrative review and approval can be granted for development of individual sites by the Planning Commission Staff instead of each development site having to go before the Planning Commission for a use on review approval. A copy of the Midway Business Park Design Guidelines is included in the packet. The Guidelines comply with the requirements of the EC zoning district.

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

1. With the plans to extend public sewer and gas, all major utilities will be available to serve the site.
2. While the traffic generated from the proposed business park will have significant traffic volume related impacts in the immediate area, through the implementation of the recommended roadway and intersection improvements these impacts can be successfully mitigated. The business parks location has excellent access to I-40 which will help reduce impact to the local road network.
3. The proposed 100 foot buffer/setback adjoining the majority of the A (Agricultural) zoned property to the north and west will help to mitigate the impact of the proposed development (only 50 feet is required). The natural buffer will remain in those areas and additional landscape buffer will be established.
4. Approximately 54 acres will be kept in Preserved Natural Areas throughout the business park that will also serve as wildlife corridors through the property. These areas are to remain undisturbed except for minor alteration for the establishment of a trail system and a possible sewer pump station.
5. Proposed amenities that will benefit the community include a community park, a sidewalk and trail system and an area for expansion of Thorn Grove Cemetery.

CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOX COUNTY ZONING ORDINANCE

1. With the recommended conditions and approval of the design guidelines, the proposed development meets the requirements of the EC zoning as well as the general criteria for approval of a use on review.
2. The proposed development plan is consistent with the following general standards for uses permitted on review: The proposal 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. While the proposed use will change the rural character of the immediate area, the Preserved Natural Areas, maintained buffers and design guidelines will help to make the business park more compatible with the character of the neighborhood where it is proposed. The use will not significantly injure the value of adjacent property. The use will not draw substantial additional traffic through residential areas since the development is located along two minor arterial streets near an interstate interchange. No surrounding land uses will pose a hazard or create and unsuitable environment for the proposed use.

CONFORMITY OF THE PROPOSAL TO ADOPTED MPC PLANS

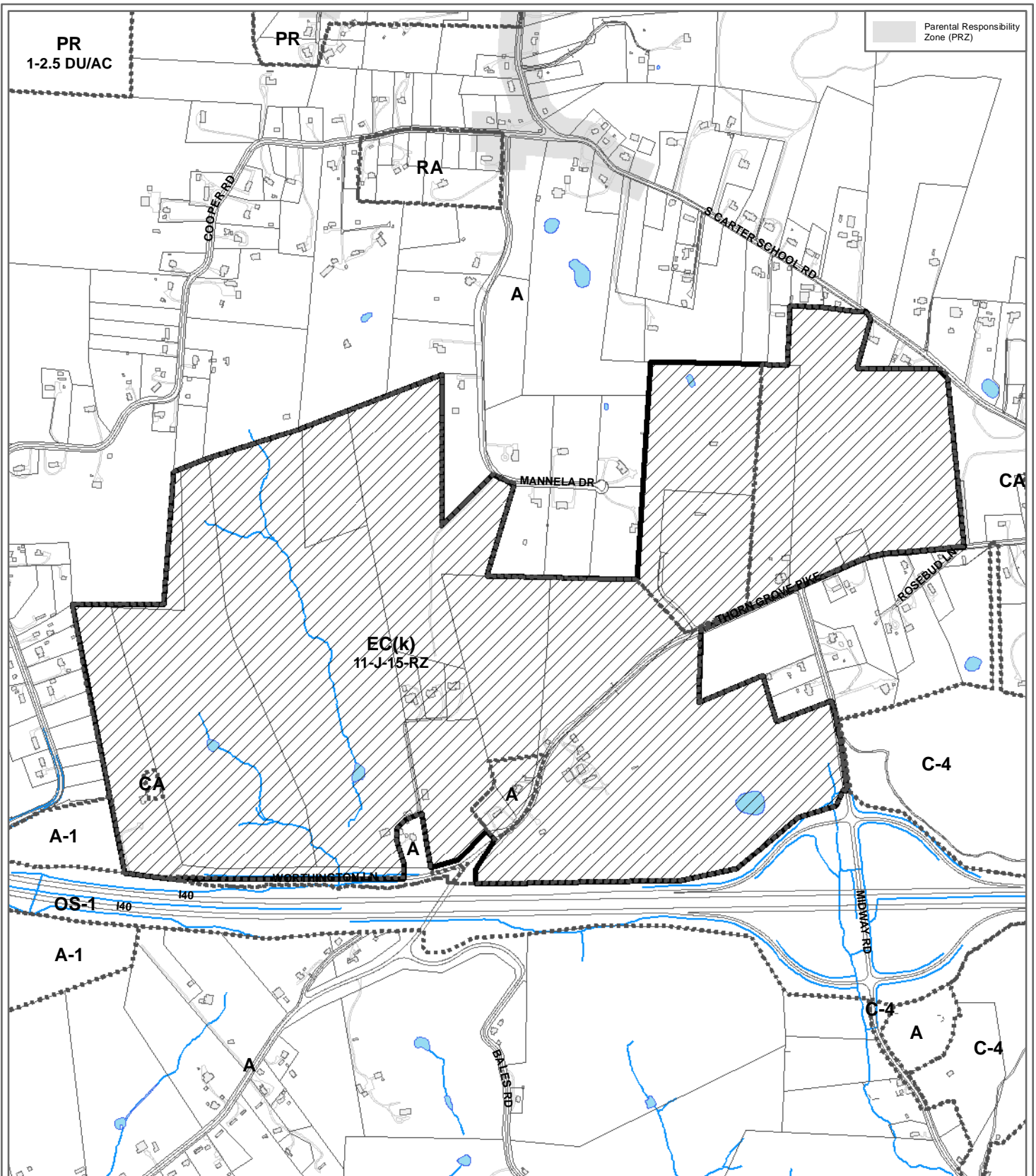
1. The East County Sector Plan proposes business park uses for the site.
2. The site is located within the Planned Growth Area on the Knoxville-Knox County-Farragut Growth Policy Plan map.

ESTIMATED TRAFFIC IMPACT: A traffic impact study was prepared by the applicant. The findings of that study were used in formulating the recommendations of this staff report.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this concept plan request is final, unless the action is appealed to Knox County Chancery Court. The date of the Knox County Chancery Court hearing will depend on when the appeal application is filed.

MPC's approval or denial of this use on review 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.



Parental Responsibility Zone (PRZ)

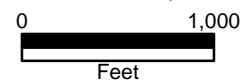
**9-SB-16-C / 9-E-16-UR
CONCEPT PLAN/USE ON REVIEW**

Petitioner: The Development Corporation of
Knox County
Midway Business Park



Business Park in EC (Employment Center) & A (Agricultural)

Map No: 74
Jurisdiction: County



Original Print Date: 8/12/2016 Revised: 8/26/2016
Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902

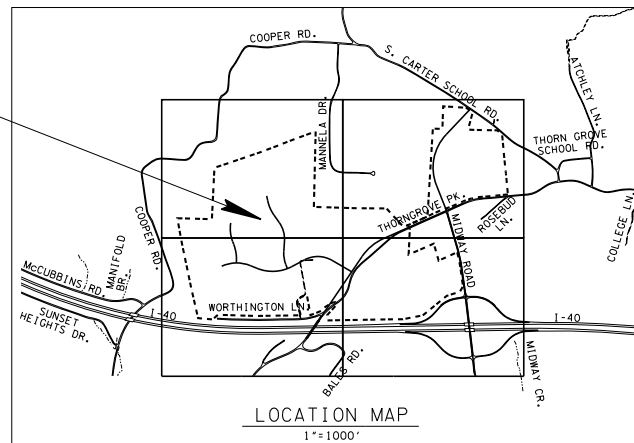
THE DEVELOPMENT CORPORATION OF KNOX COUNTY MIDWAY BUSINESS PARK

CONCEPT PLAN

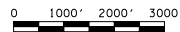
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
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2	MASTER CONCEPT PLAN LAYOUT
3	MASTER CONCEPT PHASING LAYOUT
4-7	EXISTING CONDITIONS PLAN
8-11	CONCEPT PLAN LAYOUT
12-15	STORM DRAIN PLAN LAYOUT
16-19	DEPRESSIONS & REQUIRED BUFFERS LAYOUT
20-26	ROADWAY PROFILES
27-27N	THORNGROVE PIKE CROSS SECTIONS
28-28C	MIDWAY ROAD CROSS SECTIONS

PROJECT LOCATION



AUGUST 24, 2016



9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

THE DEVELOPMENT CORPORATION
OF KNOX COUNTY
17 MARKET SQUARE, #201
KNOXVILLE, TENNESSEE 37902

CURRENT PARCEL OWNERSHIP

Development Corporation of Knox County
CLT Map: 74
Parcel: 97
Recorded Deed: 20060922-0026292

United States of America
CLT Map: 74
Parcel: 95.01
Recorded Deed: None

Development Corporation of Knox County
CLT Map: 74
Parcel: 92
Recorded Deed: 20060922-0026293

Development Corporation of Knox County
CLT Map: 74
Parcel: 93
Recorded Deed: 20060922-0026293

Development Corporation
CLT Map: 74
Parcel: 96.07
Recorded Deed: 20061012-0032300

Development Corporation
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Parcel: 96
Recorded Deed: 20061005-0030301

Development Corporation of Knox County
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Parcel: 96.02
Recorded Deed: 20061026-0036229

Development Corporation of Knox County
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Parcel: 35
Recorded Deed: 20061026-0036229

Development Corporation of Knox County
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Parcel: 96.04
Recorded Deed: 20061026-0036227

Development Corporation of Knox County
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Parcel: 96.05
Recorded Deed: 20061026-0036231

Development Corporation of Knox County
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Parcel: 96.06
Recorded Deed: 20061026-0036229

Development Corporation of Knox County
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Parcel: 40
Recorded Deed: 20061027-0036583

The Development Corporation of Knox County
CLT Map: 74
Parcel: 41
Recorded Deed: 20061027-0036582

The Development Corporation of Knox County (LOT A)
CLT Map: 74
Parcel: 96.03
Recorded Deed: 20151013-0023312

The Development Corporation of Knox County (LOT B)
CLT Map: 74
Parcel: 96.01
Recorded Deed: None

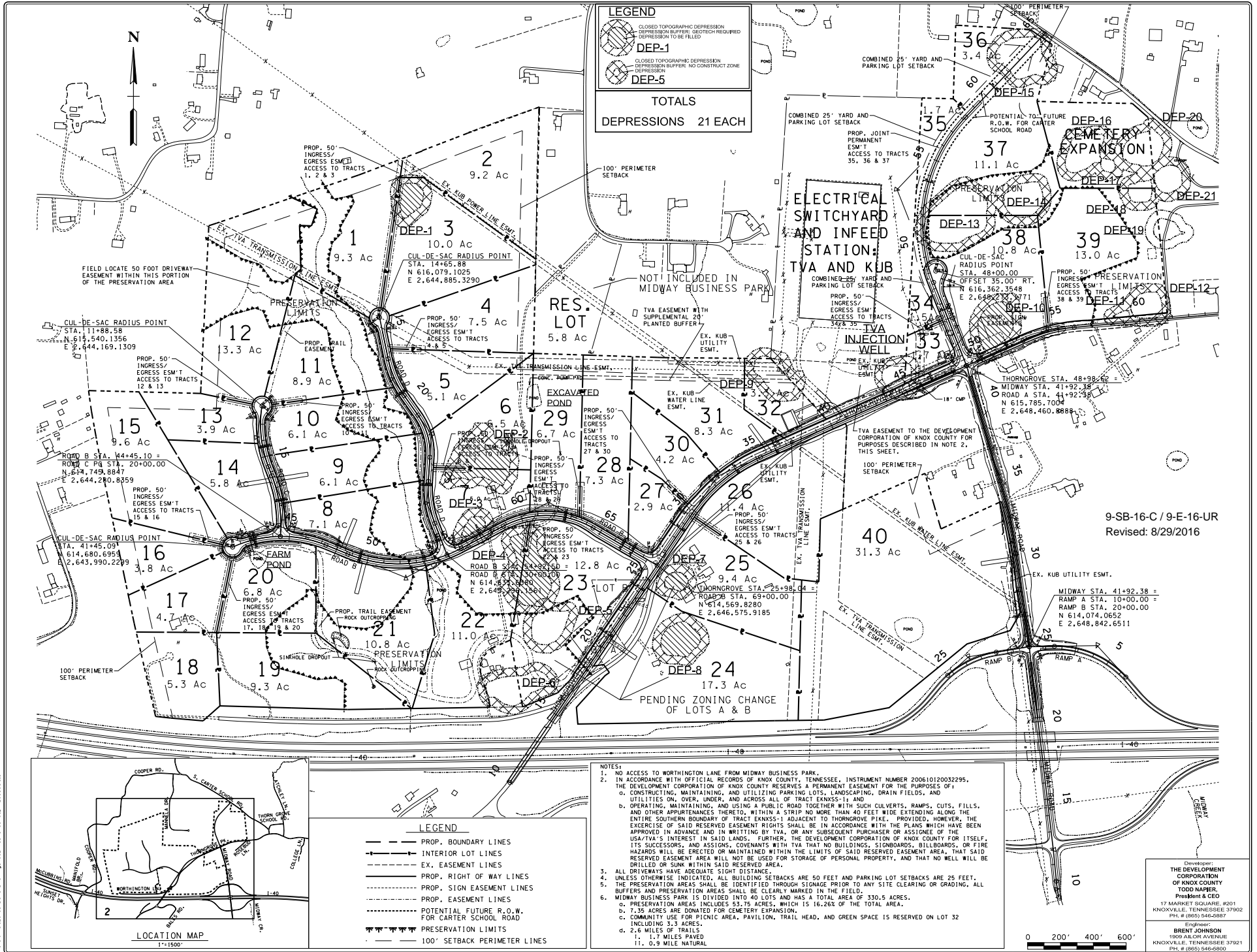


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DRAWN: J.E.W.
CHECKED: B.J.J.
JOHN#: 51620-05
SCALE: 1"=1000'
DATE: 8-24-2016
FILE NAME:
DRAWING TITLE:
CONCEPT PLAN TITLE SHEET
SHEET: DRAWING NO:
CP 1

Developer:
THE DEVELOPMENT CORPORATION
OF KNOX COUNTY
TODD NAPIER,
President & CEO
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KNOXVILLE, TENNESSEE 37902
PH. # (865) 548-5807

Engineer:
BRENT JOHNSON
1509 ALDER AVENUE
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PH. # (865) 546-8800



REVISIONS	
NO.	DATE
1	11/16/16
2	11/16/16
3	11/16/16

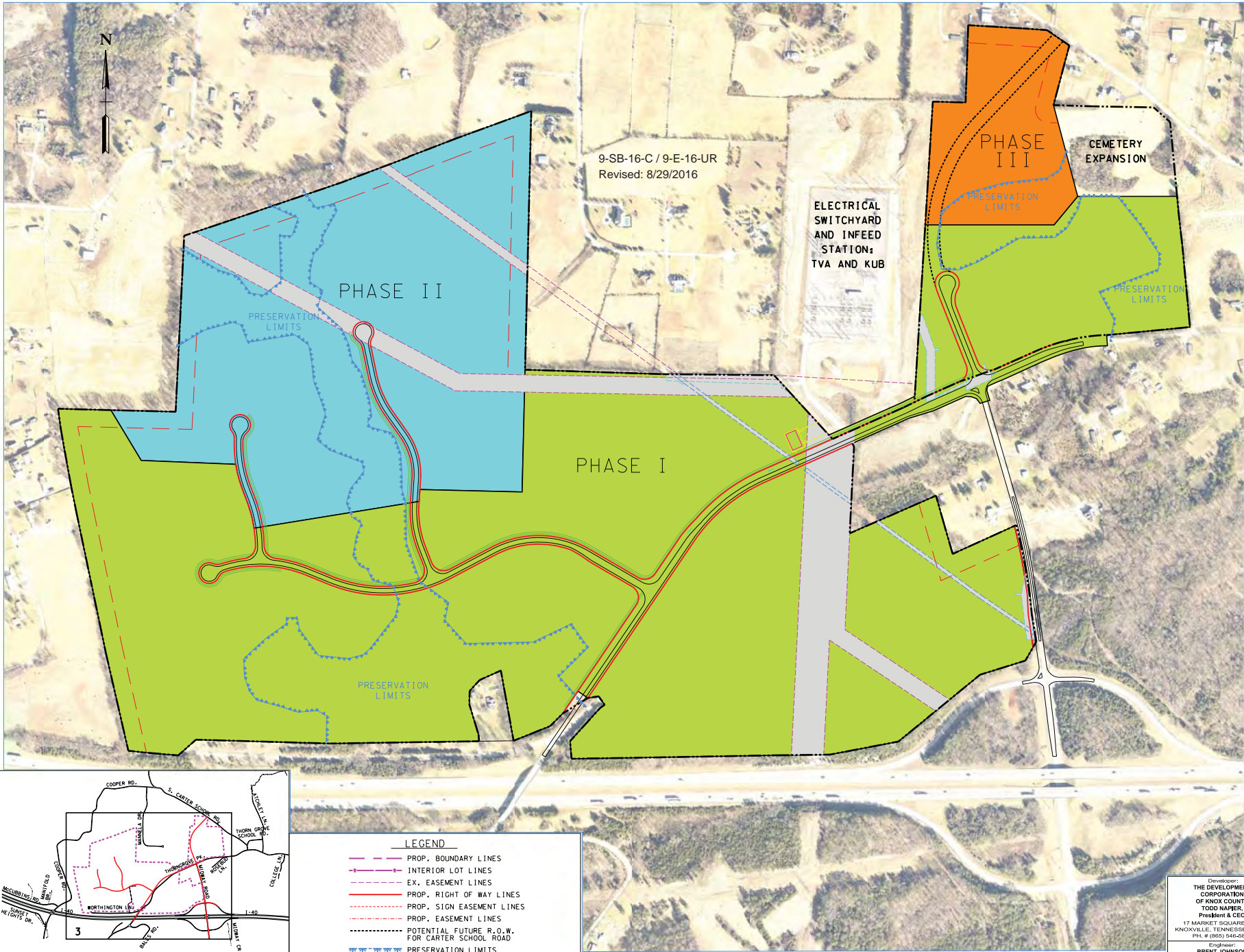
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Drawn by: J.E.W.	Checked: B.J.L.
Job No: 51620-05	Scale: 1"=200'
Date: 8-24-2016	Project: MASTER CONCEPT PLAN LAYOUT
Sheet: 2	Draining No: 2



9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

ELECTRICAL SWITCHYARD AND INFEED STATION: TVA AND KUB

PHASE III

CEMETERY EXPANSION

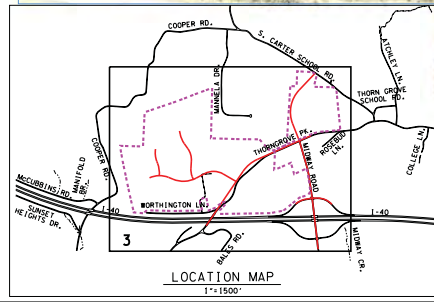
PHASE II

PHASE I

PRESERVATION LIMITS

PRESERVATION LIMITS

PRESERVATION LIMITS

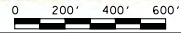


LEGEND

- PROP. BOUNDARY LINES
- INTERIOR LOT LINES
- EX. EASEMENT LINES
- PROP. RIGHT OF WAY LINES
- PROP. SIGN EASEMENT LINES
- PROP. EASEMENT LINES
- POTENTIAL FUTURE R.O.W. FOR CARTER SCHOOL ROAD
- PRESERVATION LIMITS
- 100' SETBACK PERIMETER LINES

Developer:
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REVISIONS	
NO.	DESCRIPTION
1	ISSUE FOR CONSTRUCTION

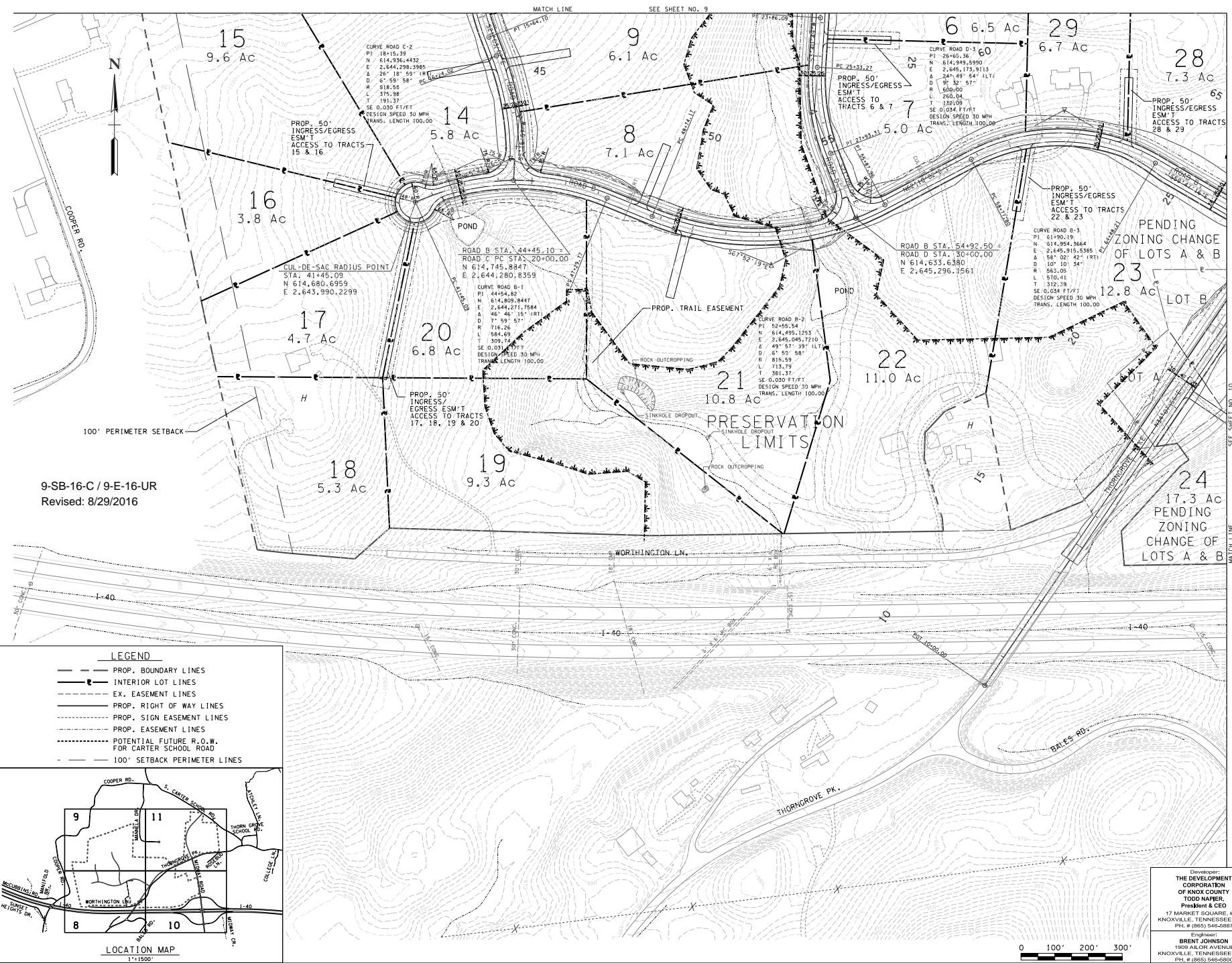
MIDWAY BUSINESS PARK
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DRAWING NO.	3
SHEET	OF 3
DATE	8-24-2016
SCALE	1"=200'
CHECKED BY	J.E.W.
DESIGNED BY	T.N.
DRAWING TITLE	MASTER CONCEPT PHASING LAYOUT

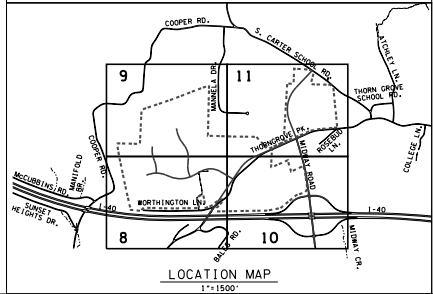
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9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

LEGEND

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NO.	DATE	DESCRIPTION

MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

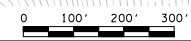
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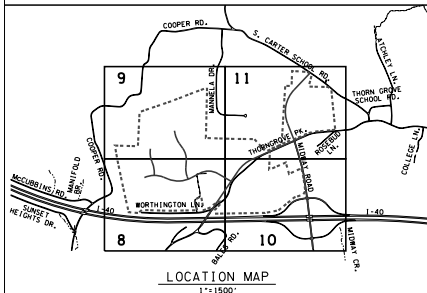
Engineer:
BRENT JOHNSON
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Drawn: J.E.W.	Sheet: 8
Checked: B.J.J.	Drawing No: 51620-05
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File Name: 9-SB-16-C	Project Title: CONCEPT PLAN LAYOUT

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- LEGEND**
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Revised: 8/29/2016

FIELD LOCATE 50 FOOT DRIVEWAY EASEMENT WITHIN THIS PORTION OF THE PRESERVATION AREA

PRESERVATION LIMITS

NOT INCLUDED IN MIDWAY BUSINESS PARK

RES. LOT

100' PERIMETER SETBACK

CURVE ROAD D-1
PI 13+80.76
N 615,350,3169
E 2,644,139,1683
Δ 30° 02' 18" (LTI)
D 77.59' 57"
R 716.26
L 379.51
T 199.18
SE 0.031 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100.00

PROP. 50' INGRESS/EGRESS ESM'T ACCESS TO TRACTS 12 & 13

PROP. 50' INGRESS/EGRESS ESM'T ACCESS TO TRACTS 10 & 11

CUL-DE-SAC RADIUS POINT
STA. 11+88.58
N 615,540,1356
E 2,644,169,1309

CUL-DE-SAC RADIUS POINT
N 616,079,1025
E 2,644,885,3290

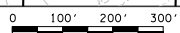
CURVE ROAD D-1
PI 18+46.86
N 615,936,3247
E 2,644,962,9941
Δ 23° 28' 51" (LTI)
D 91' 02" 57"
R 600.00
L 245.83
T 124.66
SE 0.030 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100.00

PROP. 50' INGRESS/EGRESS ESM'T ACCESS TO TRACTS 4 & 5

CURVE ROAD D-2
PI 22+55.72
N 615,365,3293
E 2,645,200,3097
Δ 38° 59' 05" (RTI)
D 144' 19" 26"
R 400.00
L 277.10
T 141.33
SE 0.034 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100.00

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NO.	DATE	DESCRIPTION



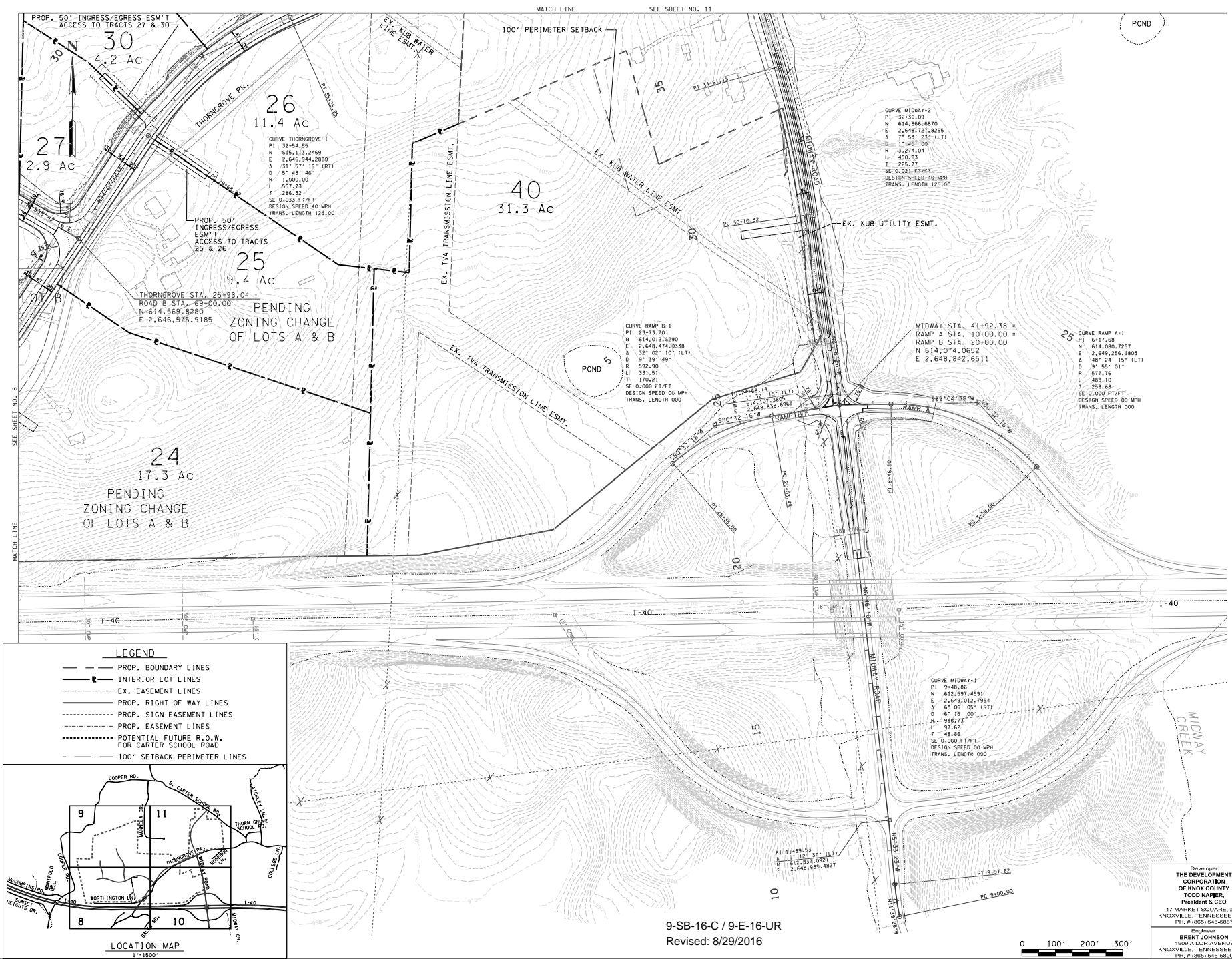
MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

THE DEVELOPMENT CORPORATION OF KNOX COUNTY
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Drawn: J.E.W.	Sheet: 9
Checked: B.J.J.	Draining No:
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Scale: 1"=100'	
Date: 8-24-2016	
File Name:	
Drawing Title:	CONCEPT PLAN LAYOUT

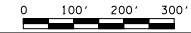


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- 100' SETBACK PERIMETER LINES

LOCATION MAP
1"=1500'

9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016



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President & CEO
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Engineer:
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KNOXVILLE, TENNESSEE 37921
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REVISIONS	
NO.	DESCRIPTION

MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

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17 MARKET SQUARE, #201
KNOXVILLE, TENNESSEE 37902

V&M
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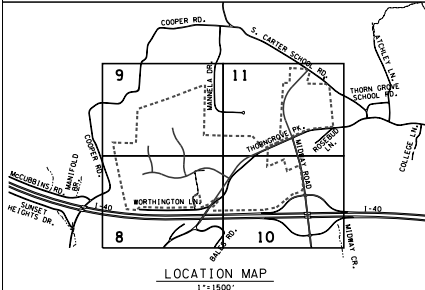
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Drawn: J.E.W.
Checked: B.J.J.
JOB NO: 51620-05
SCALE: 1"=100'
DATE: 8-24-2016
FILE NAME:
DRAWING TITLE:
CONCEPT PLAN LAYOUT

SHEET	DRAWING NO.
	10

- LEGEND**
- PROP. BOUNDARY LINES
 - INTERIOR LOT LINES
 - EX. EASEMENT LINES
 - PROP. RIGHT OF WAY LINES
 - PROP. SIGN EASEMENT LINES
 - PROP. EASEMENT LINES
 - POTENTIAL FUTURE R.O.W. FOR CARTER SCHOOL ROAD
 - 100' SETBACK PERIMETER LINES



TVA EASEMENT TO THE DEVELOPMENT CORPORATION OF KNOX COUNTY IN ACCORDANCE WITH OFFICIAL RECORDS OF KNOX COUNTY, TENNESSEE, INSTRUMENT NUMBER 20061012003295, THE DEVELOPMENT CORPORATION OF KNOX COUNTY RESERVES A PERMANENT EASEMENT FOR THE PURPOSES OF:

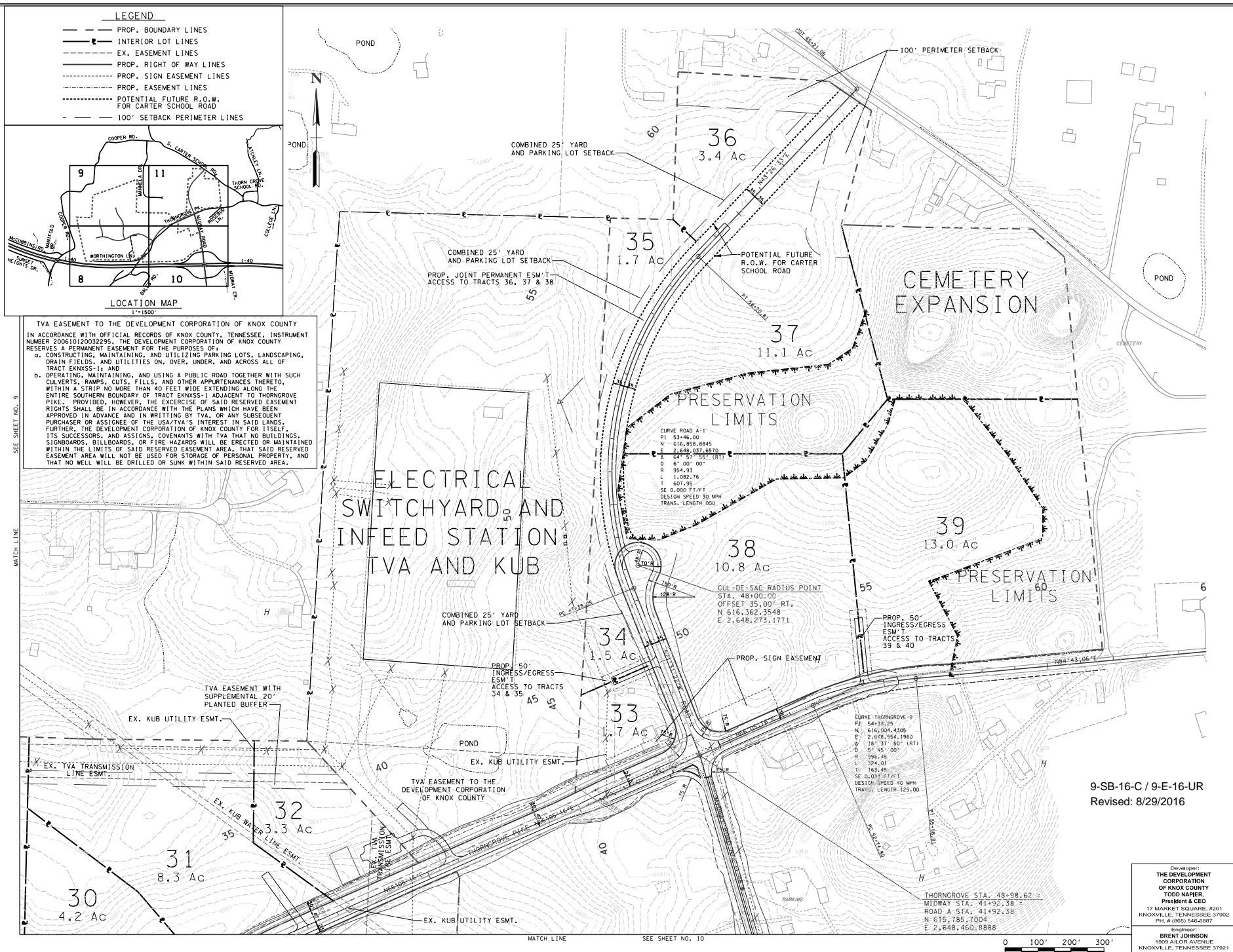
- CONSTRUCTING, MAINTAINING, AND UTILIZING PARKING LOTS, LANDSCAPING, DRAIN FIELDS, AND UTILITIES ON, OVER, UNDER, AND ACROSS ALL OF TRACT EXNXXS-1; AND
- OPERATING, MAINTAINING, AND USING A PUBLIC ROAD TOGETHER WITH SUCH CULVERTS, RAMPS, CUTS, FILLS, AND OTHER APPURTENANCES THERETO, WITHIN A STRIP NO MORE THAN 40 FEET WIDE EXTENDING ALONG THE ENTIRE SOUTHERN BOUNDARY OF TRACT EXNXXS-1 ADJACENT TO THORNGROVE PIKE. PROVIDED, HOWEVER, THE EXERCISE OF SAID RESERVED EASEMENT RIGHTS SHALL BE IN ACCORDANCE WITH THE PLANS WHICH HAVE BEEN APPROVED IN ADVANCE AND IN WRITING BY TVA, OR ANY SUBSEQUENT PURCHASER OR ASSIGNEE OF THE USA/TVA'S INTEREST IN SAID LANDS. FURTHER, THE DEVELOPMENT CORPORATION OF KNOX COUNTY FOR ITSELF, ITS SUCCESSORS, AND ASSIGNS, COVENANTS WITH TVA THAT NO BUILDINGS, SIGNBOARDS, BILLBOARDS, OR FIRE HAZARDS WILL BE ERCTED OR MAINTAINED WITHIN THE LIMITS OF SAID RESERVED EASEMENT AREA, THAT SAID RESERVED EASEMENT AREA WILL NOT BE USED FOR STORAGE OF PERSONAL PROPERTY, AND THAT NO WELL WILL BE DRILLED OR SUNK WITHIN SAID RESERVED AREA.

ELECTRICAL SWITCHYARD AND INFEED STATION TVA AND KUB

CEMETERY EXPANSION

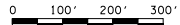
PRESERVATION LIMITS

PRESERVATION LIMITS



9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

THORNGROVE STA. 48+98.62
MIDWAY STA. 41+92.38
ROAD A STA. 41+92.38
N: 615,785,7004
E: 2,648,450,8888



Developer:
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REVISIONS	
NO.	DESCRIPTION
1	FINAL SETBACKS, LOT 33 & PORTION OF 31

MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

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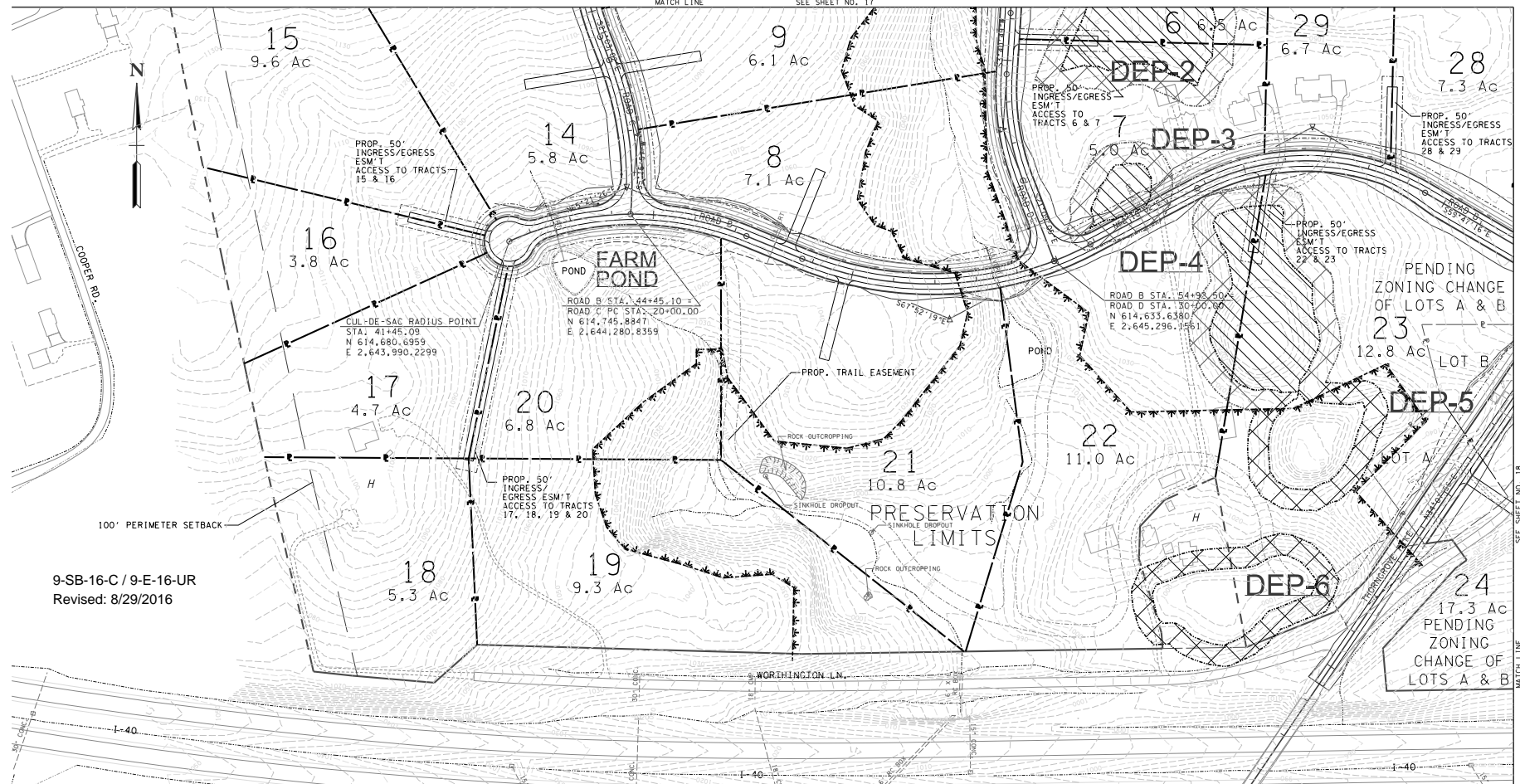
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Drawing: J.E.W.	Sheet: 11
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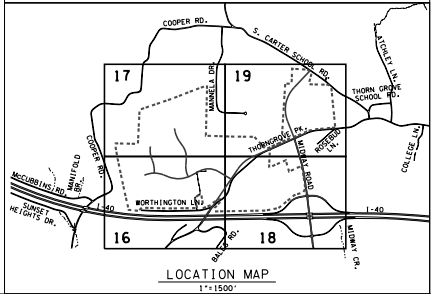
MATCH LINE SEE SHEET NO. 17



9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

LEGEND

- PROP. BOUNDARY LINES
- INTERIOR LOT LINES
- EX. EASEMENT LINES
- PROP. RIGHT OF WAY LINES
- PROP. SIGN EASEMENT LINES
- PROP. EASEMENT LINES
- POTENTIAL FUTURE R.O.W. FOR CARTER SCHOOL ROAD
- 100' SETBACK PERIMETER LINES



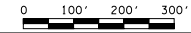
LEGEND

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- DEP-1
- CLOSED TOPOGRAPHIC DEPRESSION DEPRESSION BUFFER: NO CONSTRUCT ZONE DEPRESSION
- DEP-5

TOTALS
DEPRESSIONS 21 EACH

Developer:
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REVISIONS

NO.	DATE	DESCRIPTION

--

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KNOX COUNTY, TENNESSEE

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Checked by: B.J.J.
JOB NO: 51620-05
SCALE: 1"=100'
DATE: 8-24-2016
FILE NAME:
DRAWING TITLE:
DEPRESSIONS & REQUIRED BUFFERS LAYOUT

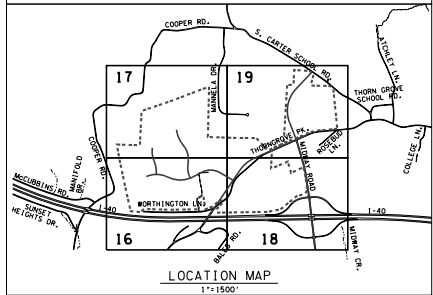
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OF	16

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- LEGEND**
- PROP. BOUNDARY LINES
 - INTERIOR LOT LINES
 - EX. EASEMENT LINES
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- LEGEND**
- DEP-1 CLOSED TOPOGRAPHIC DEPRESSION DEPRESSION BUFFERS: GEOTECH REQUIRED DEPRESSION TO BE FILLED
 - DEP-5 CLOSED TOPOGRAPHIC DEPRESSION DEPRESSION BUFFERS: NO CONSTRUCT ZONE DEPRESSION

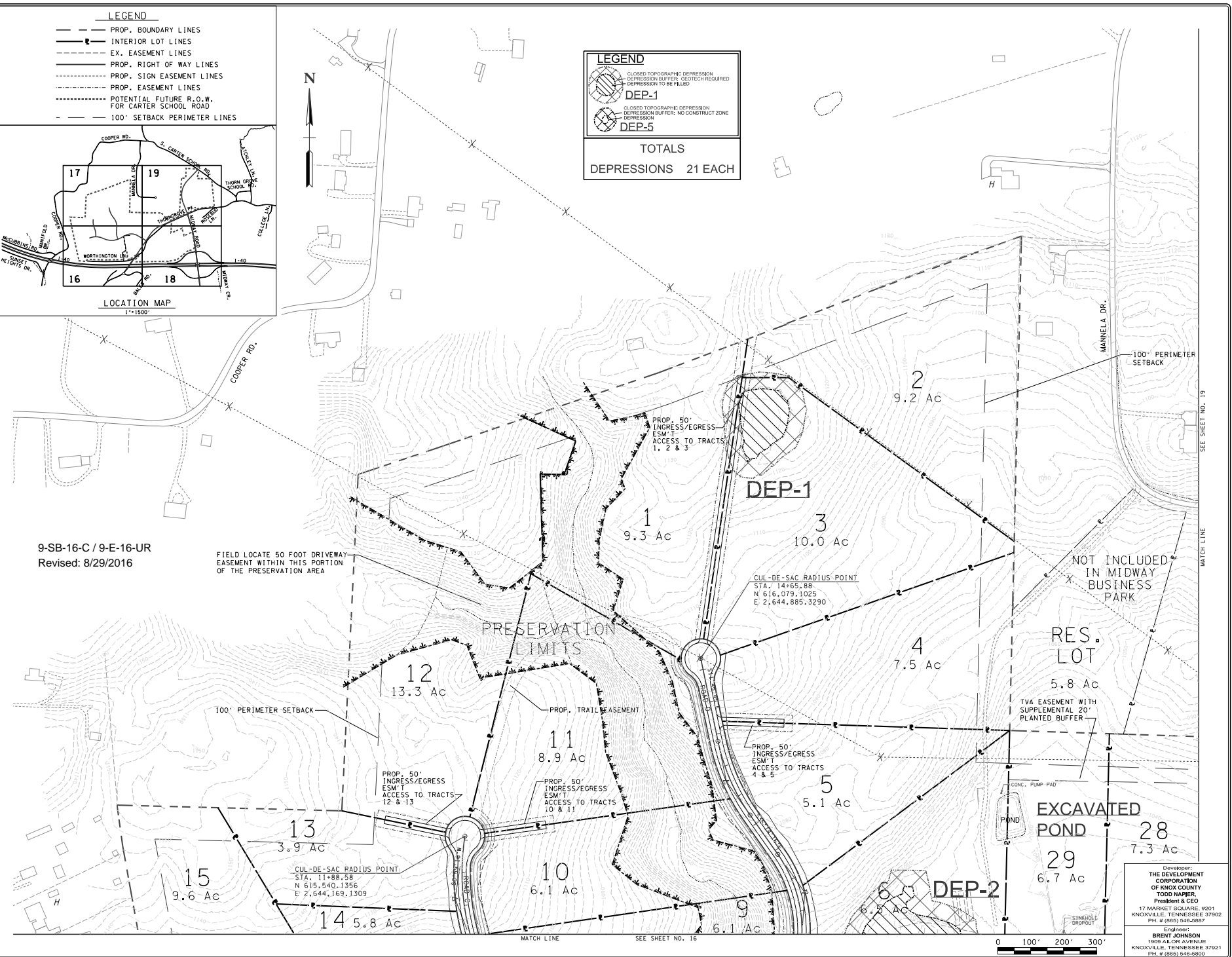
TOTALS
DEPRESSIONS 21 EACH



9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

FIELD LOCATE 50 FOOT DRIVEWAY EASEMENT WITHIN THIS PORTION OF THE PRESERVATION AREA

PRESERVATION LIMITS



Developer:
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NO.	DATE	REVISIONS DESCRIPTION



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JOB NO: 51620-05
SCALE: 1"=100'
DATE: 8-24-2016
FILE NAME:
DRAWING TITLE:
DEPRESSIONS & REQUIRED BUFFERS LAYOUT

SHEET	DRAWING NO.
OF 17	

MATCH LINE SEE SHEET NO. 19

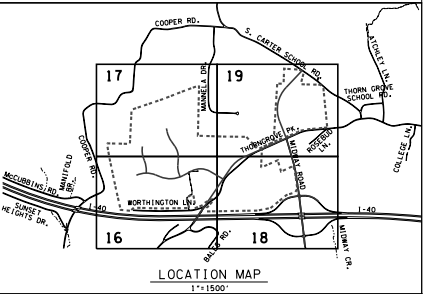


DEP-5
 PROP. 50' INGRESS/EGRESS ESM 'T ACCESS TO TRACTS 25 & 26

DEP-6
 PENDING ZONING CHANGE OF LOTS A & B

MIDWAY STA. 41+92.38 =
 RAMP A STA. 10+00.00 =
 RAMP B STA. 20+00.00 =
 N 614,074.0652
 E 2,648,842.6511

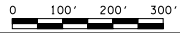
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- LEGEND**
- DEP-1**
 - DEP-5**

TOTALS
 DEPRESSIONS 21 EACH

9-SB-16-C / 9-E-16-UR
 Revised: 8/29/2016



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NO.	DATE	DESCRIPTION



MIDWAY BUSINESS PARK
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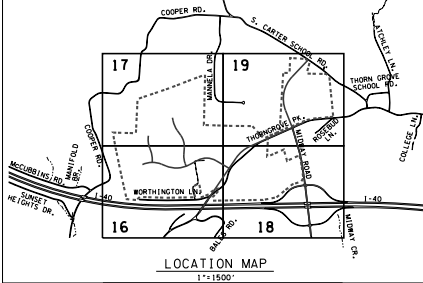
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DRAWING NO.	51620-05
OWNER	B.J.J.
JOB NO.	51620-05
SCALE	1"=100'
DATE	8-24-2016
FILE NAME	
DRAWING TITLE	DEPRESSIONS & REQUIRED BUFFERS LAYOUT
SHEET	18

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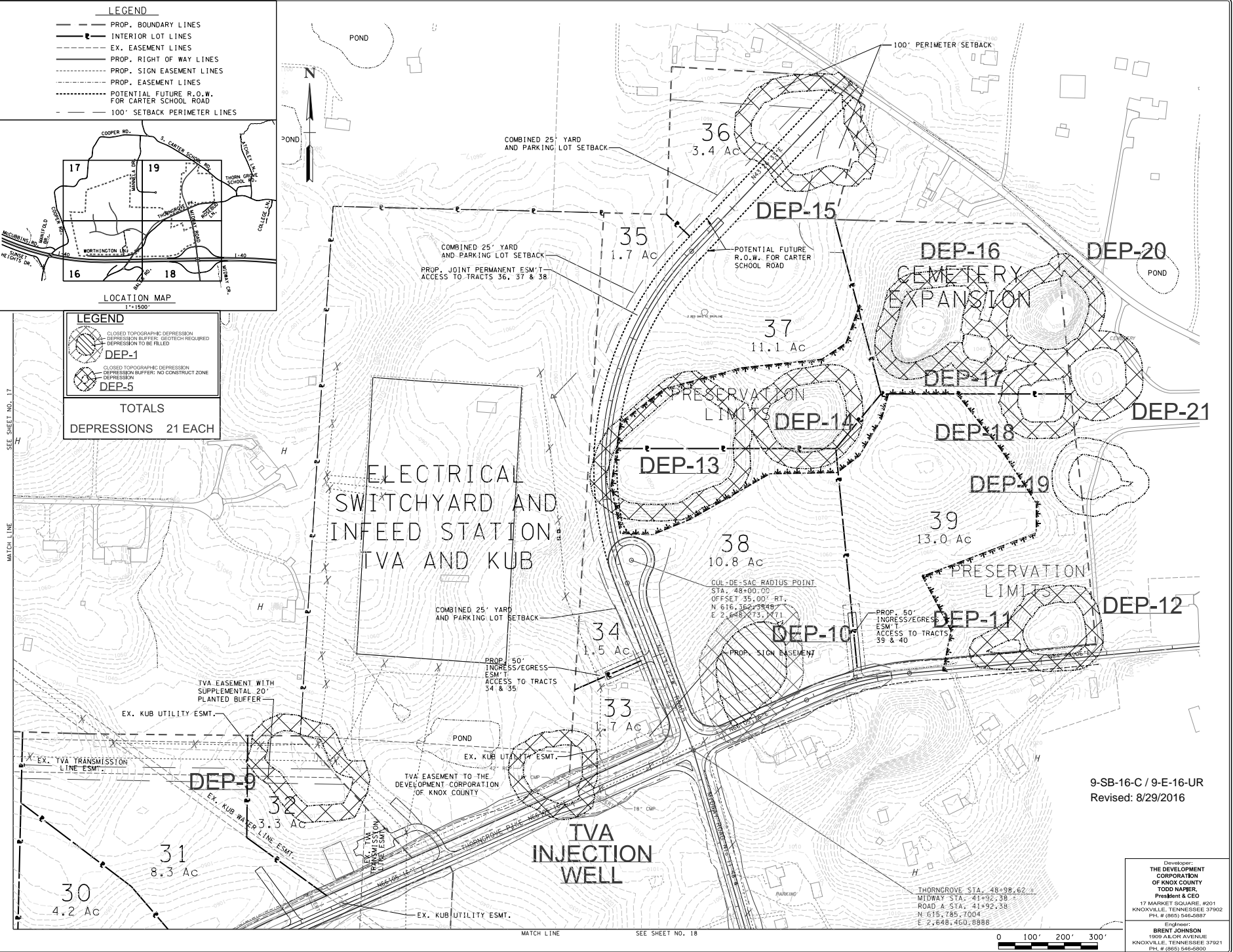
- LEGEND**
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 - EX. EASEMENT LINES
 - PROP. RIGHT OF WAY LINES
 - PROP. SIGN EASEMENT LINES
 - PROP. EASEMENT LINES
 - POTENTIAL FUTURE R.O.W. FOR CARTER SCHOOL ROAD
 - 100' SETBACK PERIMETER LINES



LEGEND

- DEP-1 CLOSED TOPOGRAPHIC DEPRESSION DEPRESSION BUFFER; GEOTECH REQUIRED DEPRESSION TO BE FILLED
- DEP-5 CLOSED TOPOGRAPHIC DEPRESSION DEPRESSION BUFFER; NO CONSTRUCT ZONE DEPRESSION

TOTALS
DEPRESSIONS 21 EACH



REVISIONS

NO.	DATE	DESCRIPTION
1	8/24/2016	FINAL SETBACKS, LOT 20.6 LOCATION OF #2

MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

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KNOXVILLE, TENNESSEE 37902

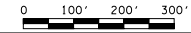
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Revised: 8/29/2016

Developer:
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President & CEO
TODD NAPER

Engineer:
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PH. # (865) 548-8800



Drawn: J.E.W.
Checked: B.J.J.
JOB NO: 51620-05
SCALE: 1"=100'
DATE: 8-24-2016

FILE NAME:
DRAWING TITLE:
DEPRESSIONS & REQUIRED BUFFERS LAYOUT

SHEET 19
DRAWING NO.

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MIDWAY BUSINESS PARK DEVELOPMENT PLAN SUBMITTAL

KNOXVILLE, TENNESSEE

PROJECT No. 51620-05

AUGUST 24, 2016

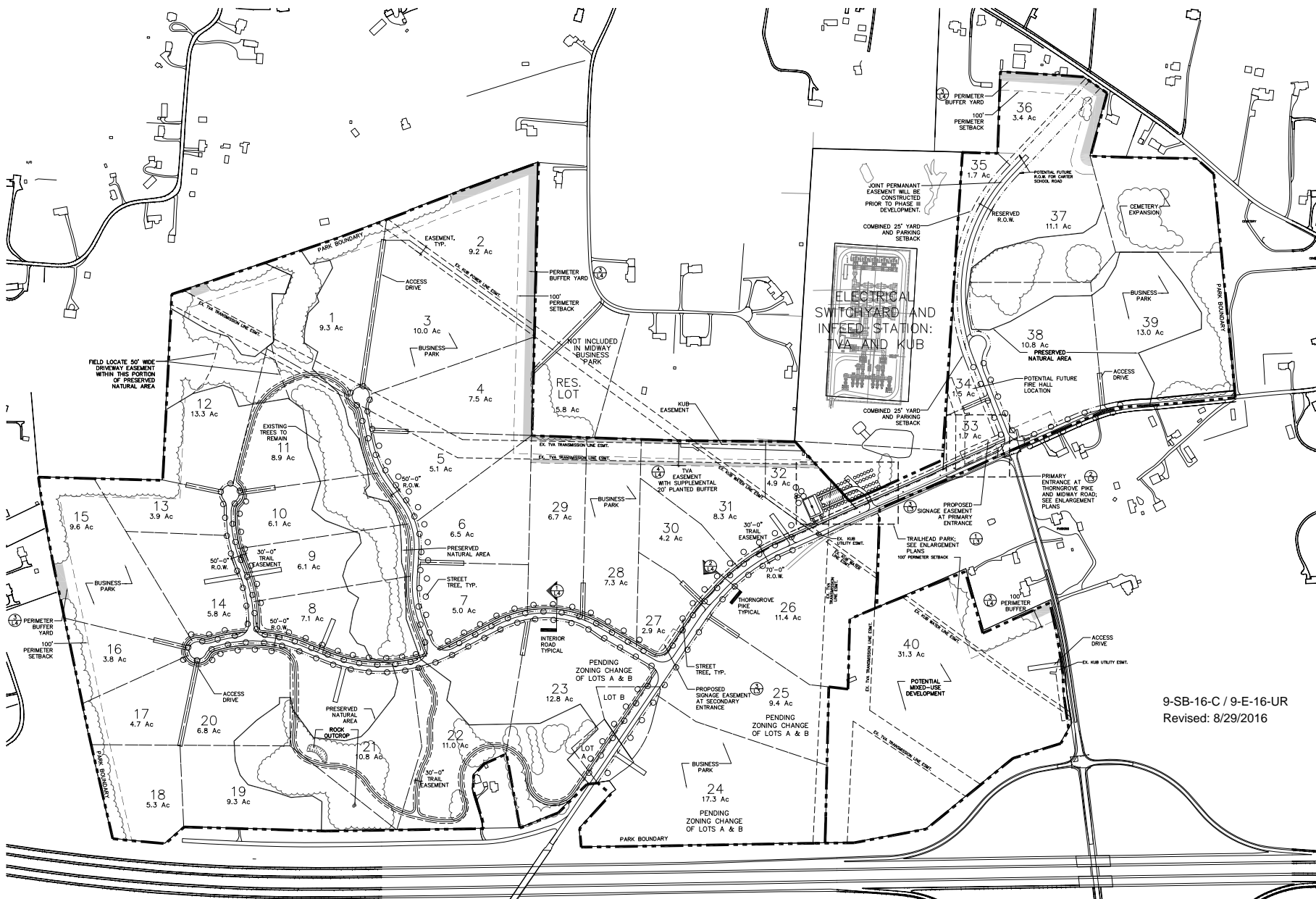
INDEX OF SHEETS:

<u>SHEET No.</u>	<u>SHEET NAME</u>
L1	EXISTING CONDITIONS PLAN
L2	CONCEPTUAL DEVELOPMENT PLAN
L3	TRAILHEAD PARK AND ENTRANCE FEATURE
L4	ROADWAY TYPICALS, BUFFER AND EASEMENTS

9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016

REVISIONS

NO.	DATE	DESCRIPTION



9-SB-16-C / 9-E-16-UR
 Revised: 8/29/2016

LEGEND			
	PARK BOUNDARY		INTERIOR LOT LINE LINES, INCLUDE A 50' BUILDING SETBACK AND 25' PARKING SETBACK FOR EACH INTERIOR LOT PER CITY ORDINANCE.
	RIGHT OF WAY		TREES TO REMAIN
	100' PERMETER SETBACK		PROPOSED STREET TREE
	PERMETER BUFFER YARD		TRAIL (13,600 LINEAR FEET)
	TRAIL EASEMENT		TVA/KUB EASEMENT
	PRESERVED NATURAL AREA, DESIGNATED ON SITE WITH SIGNAGE		

REVISIONS	
NO.	DATE
1	8/29/16

MIDWAY BUSINESS PARK
 KNOX COUNTY, TENNESSEE

THE DEVELOPMENT CORPORATION OF KNOX COUNTY
 17 MARKET SQUARE, #201
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DRAWING NO.	51820-05
DATE	8-24-2016
SCALE	
PROJECT TITLE	CONCEPTUAL DEVELOPMENT PLAN
SHEET NO.	2 OF 4
DRAWING NO.	L2



1 TRAILHEAD PARK
NOT TO SCALE



3 MONUMENT SIGNAGE AT PRIMARY AND SECONDARY ENTRANCE EASEMENTS
NOT TO SCALE



2 PRIMARY ENTRANCE AT THORNGROVE PIKE AND MIDWAY ROAD
NOT TO SCALE

REVISIONS	
NO.	DATE

MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

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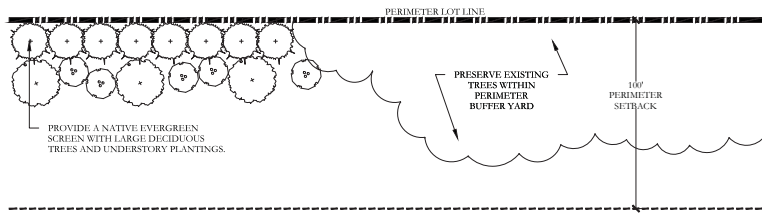
Developer:
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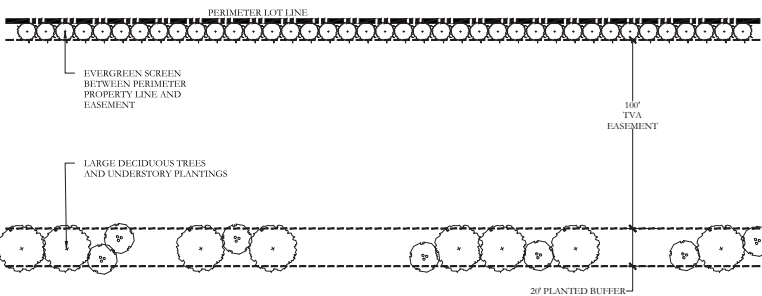
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CHECKED: G.L.S.	SCALE: AS SHOWN
JOB NO: 51820-05	FILE NAME: TRAILHEAD PARK AND ENTRANCE FEATURE
SHEET 3 OF 3	DRAWING NO: L3

PLANT SCHEDULE- OVERALL SITE					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE MIN.	NOTES
STREET TREES					
	OS	Quercus lyrata 'Highbeam'	Highbeam Overcup Oak	3" Cal. Min.	B & B
	QP	Quercus phellos 'High Tower'	Hightower Willow Oak	3" Cal. Min.	B & B
	TC	Tilia cordata	Little Leaf Linden	3" Cal. Min.	B & B
	UA	Ulmus americana	Valley Forge American Elm	3" Cal. Min.	B & B
DECIDUOUS TREES- BUFFER PLANTING					
	AR	Acer rubrum 'Armstrong'	Armstrong Red Maple	3" Cal. Min.	B & B
	LS	Liquidambar styraciflua 'Rotundiloba'	Rotundiloba Sweetgum	3" Cal. Min.	B & B
	LT	Liriodendron tulipifera	Tulip Poplar	3" Cal. Min.	B & B
	NS	Nyssa sylvatica	Black Gum	3" Cal. Min.	B & B
	PL	Platanus occidentalis	American Sycamore	3" Cal. Min.	B & B
UNDERSTORY TREES- BUFFER PLANTING					
	AL	Amelanchier laevis	Allegheny Serviceberry	8' HT.	B&B; Full Crown; Multi-Stemmed
	CC	Cercis canadensis 'Forest Pansy'	Forest Pansy Redbud	8' HT.	B&B; Full Crown
	CCN	Cercis canadensis 'Hearts of Gold'	Hearts of Gold Redbud	8' HT.	B&B; Full Crown
	CV	Crataegus viridis	Green Hawthorn	8' HT.	B&B; Full Crown
EVERGREEN TREES- BUFFER PLANTING					
	JV	Juniperus virginiana	Eastern Red Cedar	8' HT.	B&B; Full to Ground
	PS	Pinus strobus	White Pine	8' HT.	B&B; Full to Ground
MEADOW SEED MIX					
	AG	Andropogon gerardii	Big Bluestem		
	CL	Chasmanthium latifolium	River Oats		
	PV	Panicum virgatum	Switchgrass		
	BH	Rudbeckia hirta	Black Eyed Susan		
	SN	Sorghastrum nutans	Indiangrass		

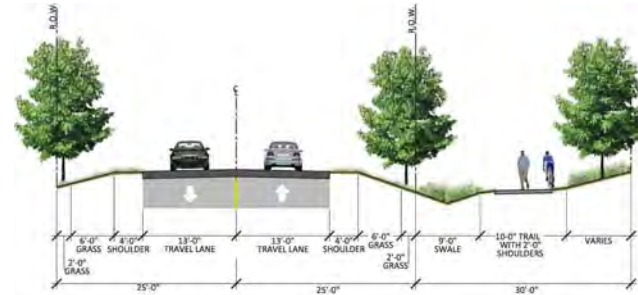
9-SB-16-C / 9-E-16-UR
Revised: 8/29/2016



3 PERIMETER BUFFER YARD
NOT TO SCALE



4 TVA EASEMENT WITH SUPPLEMENTAL 20' PLANTED BUFFER
NOT TO SCALE



1 SECTION TYPICAL- INTERIOR ROAD
NOT TO SCALE



2 SECTION TYPICAL- THORNGROVE PIKE
NOT TO SCALE

NO.	DATE	DESCRIPTION



MIDWAY BUSINESS PARK
KNOX COUNTY, TENNESSEE

THE DEVELOPMENT CORPORATION OF KNOX COUNTY
17 MARKET SQUARE, #201
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DRAWN	P.N.G.
CHECKED	G.L.S.
JOB NO.	51820-05
SCALE	
DATE	8-24-2016
FILE NAME	
DRAWING TITLE	ROADWAY TYPICALS BUFFER AND EASEMENTS
SHEET	4
OF	4
DRAWING NO.	L4

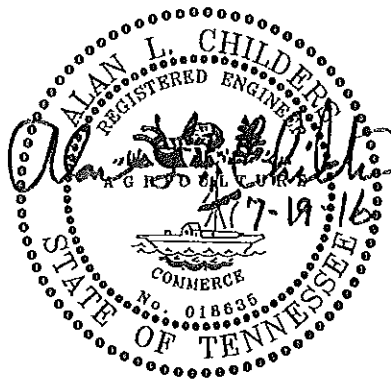
Developed by:
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PH. # (606) 546-6887
Engineer:
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PH. # (606) 546-6800

TRAFFIC IMPACT STUDY

MIDWAY BUSINESS PARK

KNOX COUNTY, TN

CCI PROJECT NO 00723-0009



9-SB-16-C
9-E-16-UR

REVISION I (7/19/16)

This report replaces the original traffic impact study report dated 11/11/15 prepared for this project in its entirety. The associated changes are associated with redistribution of trips from Phase IA and IB at the Thorngrove Pike / Midway Road intersection.



PREPARED FOR

Vaughn & Melton
1909 Ailor Drive
Knoxville, TN 37921

SUBMITTED BY



JULY 19

2016

I.0 EXECUTIVE SUMMARY

This report provides a summary of the traffic impact study that was performed for the proposed Midway Business Park in Knoxville / Knox County, Tennessee. This development is to be located on an approximate 340 acre site in extreme eastern Knox County, immediately north of the interchange of Interstate 40 and Midway Road. The proposed project site entails one of the larger undeveloped parcels of land remaining in Knox County that is available and possesses topography conducive to the development of a large business park. In addition, the site's proximity to Interstate 40 makes it attractive from an access and transportation perspective. The surrounding land uses in the project vicinity are predominantly undeveloped property and large lot single family residential. The concept plan for this project proposes primarily business park type development, as applicable within the Employment Center zoning (EC).

The purpose of this study was the evaluation of the traffic operational and safety impact of the proposed Midway Business Park upon roadways in the vicinity of the project site. Of particular interest were the intersections of Midway Road with both I-40 Eastbound and Westbound ramps, Thorngrove Pike and Midway Road, Thorngrove Pike and Carter School Road, and Thorngrove Pike at the proposed Park Road "B".

The primary conclusion of this study is that the traffic generated from the proposed Midway Business Park will have significant traffic volume related impacts at four of the five study intersections. These impacts, however, can be successfully mitigated through the implementation of a series of roadway geometric and signalization improvements. These signalization improvements include new traffic signals at the intersections of Midway Road and I-40 Eastbound Ramps and Midway Road and Thorngrove Pike. Various turn lanes will be required at the intersections of Midway Road and I-40 Eastbound, Midway Road and I-40 Westbound, Midway Road and Thorngrove Pike, and Thorngrove Pike and proposed Business Park Road "B".

With the exception of Midway Road in the vicinity of Interstate 40, the existing roadways within the area of the proposed business park possess narrow lanes and minimal shoulder. Therefore, in addition to required intersection improvements, widening to appropriate lane and shoulder standards is recommended for Midway Road, from I-40 to Thorngrove Pike, and for Thorngrove Pike, from Midway Road to at least just beyond the business park intersections. Also, as mentioned in the previous section, intersection corner sight distances are recommended to be provided at all study intersections for approach speeds of at least the posted speed limit plus ten miles per hour.

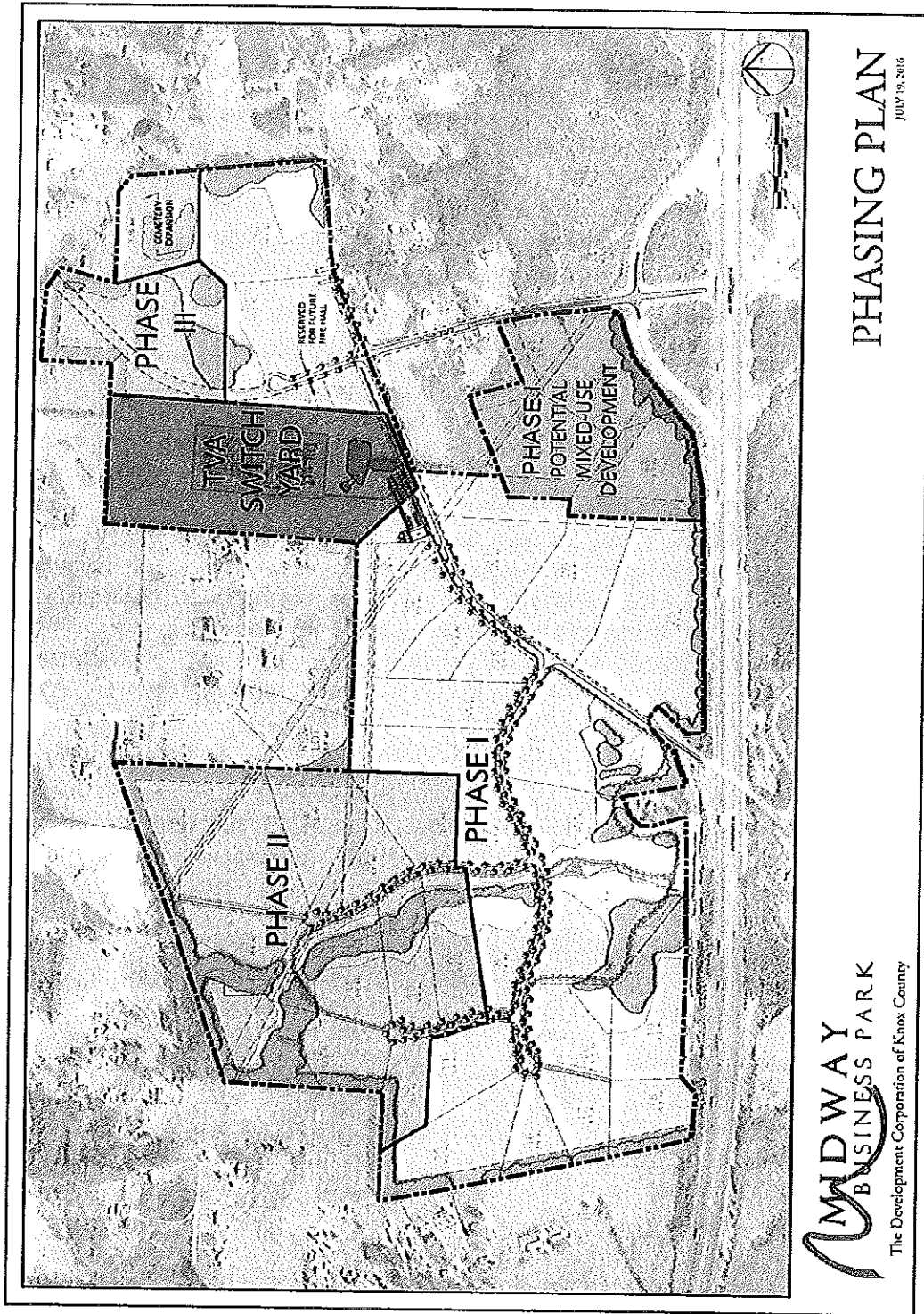


FIGURE 2
CONCEPTUAL SITE PLAN

7.0 CONCLUSIONS & RECOMMENDATIONS

The primary conclusion of this study is that the traffic generated from the proposed Midway Business Park will have significant traffic volume related impacts at four of the five study intersections. These impacts, however, can be successfully mitigated through the implementation of a series of roadway geometric and signalization improvements, which are discussed below.

FIGURE 8A shows the existing traffic lanes at each of the intersections included in this study. As the proposed business park develops over time, more and more of the improvements identified in the preceding section will become justified. A park build-out plan has been developed which involves three distinct phases that will lead to full build-out. Phase I is anticipated to take ten years to fully develop, beginning in 2018 and ending in 2028. Phases II and III are anticipated to take five years each, ending in 2033 and 2038 respectively. FIGURE 8B displays the traffic lane and traffic control changes anticipated to be required after build-out of the first half of Phase I (2023), FIGURE 8C for the second half of Phase I (2028), FIGURE 8D for Phase II (2033), and FIGURE 8E for Phase III (2038). The actual sequence and schedule for the required improvements will likely vary somewhat depending on a number of factors, but the above phase sequence and schedule provides a logical framework that can be adjusted as needed. TABLE 4 provides a summary of all recommended intersection improvements, with associated information on turn lane storage length, bay taper length, and anticipated time frame based on the current planned development phase sequence.

With the exception of Midway Road in the vicinity of Interstate 40, the existing roadways within the area of the proposed business park possess narrow lanes and minimal shoulder. Therefore, in addition to required intersection improvements, widening to appropriate lane and shoulder standards is recommended for Midway Road, from I-40 to Thorngrove Pike, and for Thorngrove Pike, from Midway Road to at least just beyond the business park intersections. Also, as mentioned in the previous section, intersection corner sight distances are recommended to be provided at all study intersections for approach speeds of at least the posted speed limit plus ten miles per hour.

CONCLUSIONS & RECOMMENDATIONS | SECTION 7

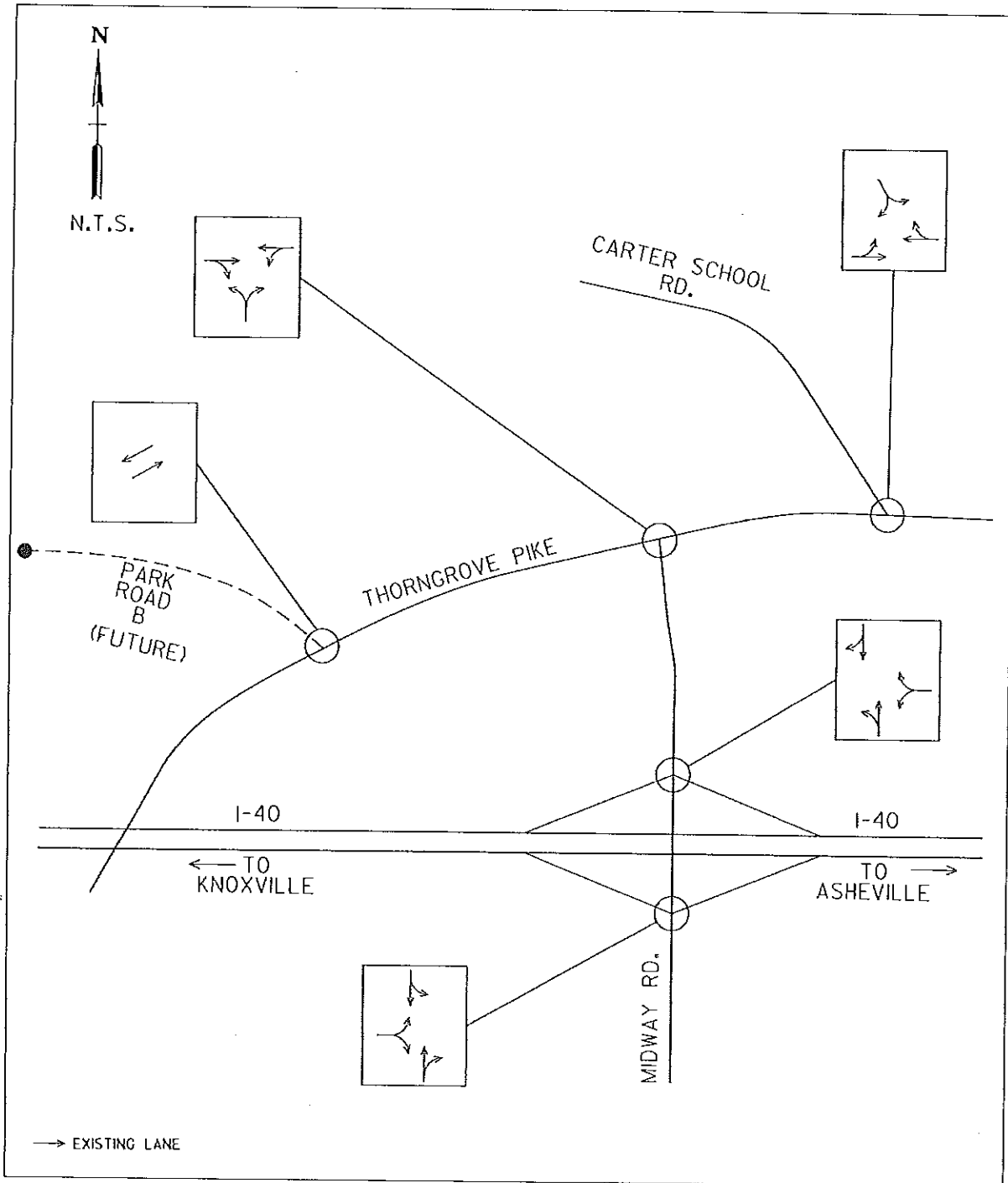


FIGURE 8A
EXISTING TRAFFIC LANES AT STUDY INTERSECTIONS

CONCLUSIONS & RECOMMENDATIONS | SECTION 7

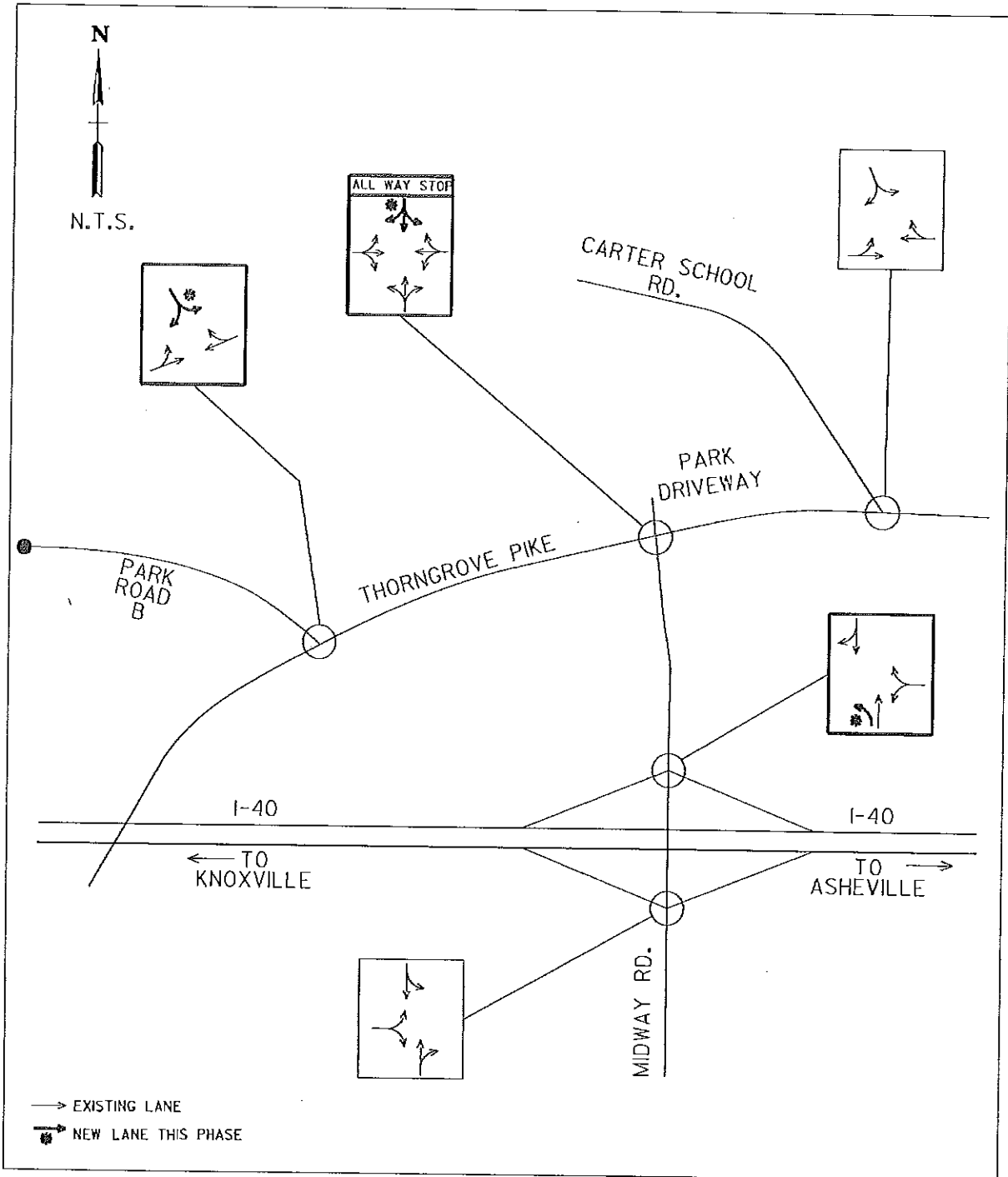


FIGURE 8B
RECOMMENDED PHASE IA INTERSECTION LANES AND TRAFFIC CONTROL

CONCLUSIONS & RECOMMENDATIONS | SECTION 7

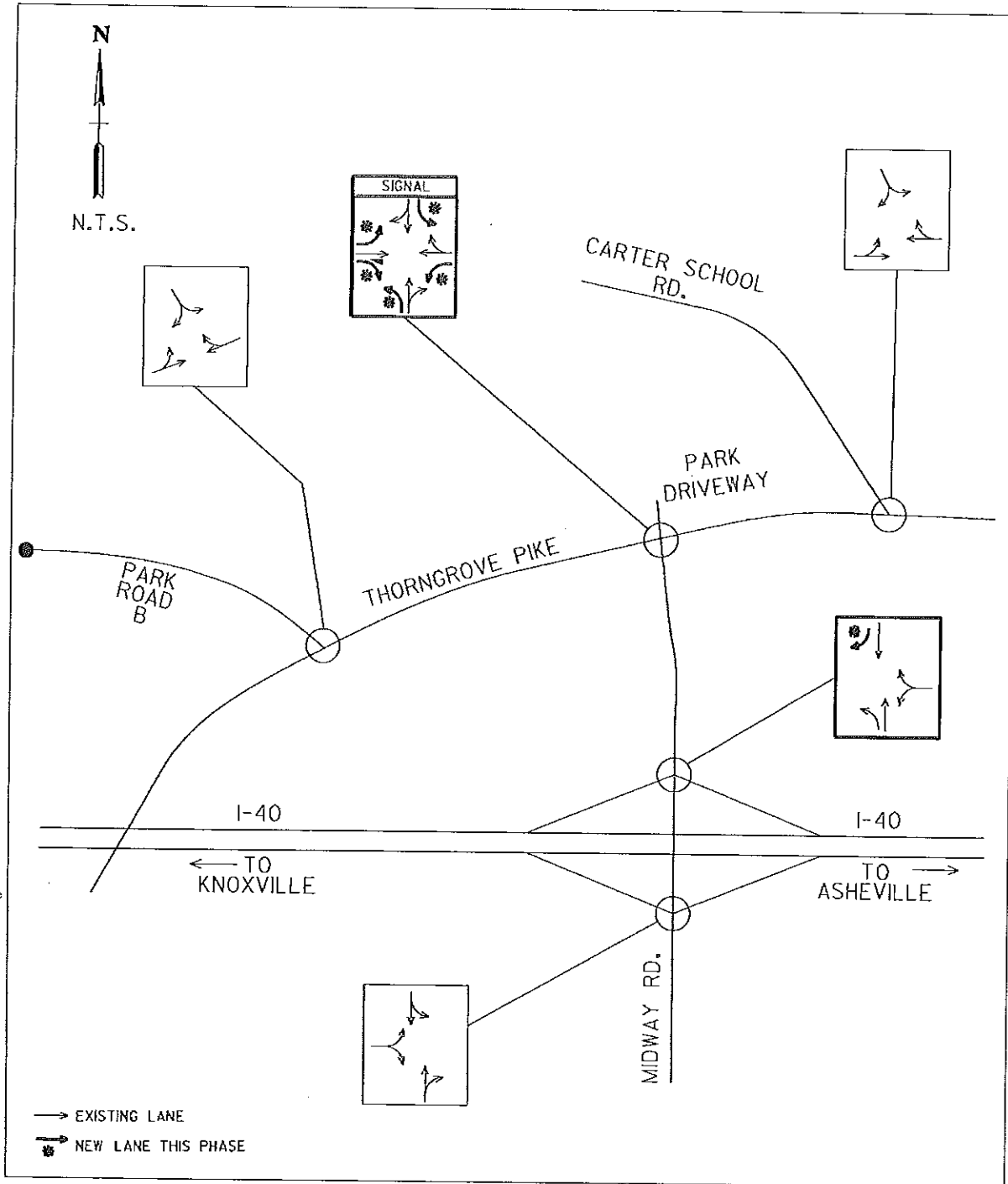


FIGURE 8C
RECOMMENDED PHASE IB INTERSECTION LANES AND TRAFFIC CONTROL

CONCLUSIONS & RECOMMENDATIONS | SECTION 7

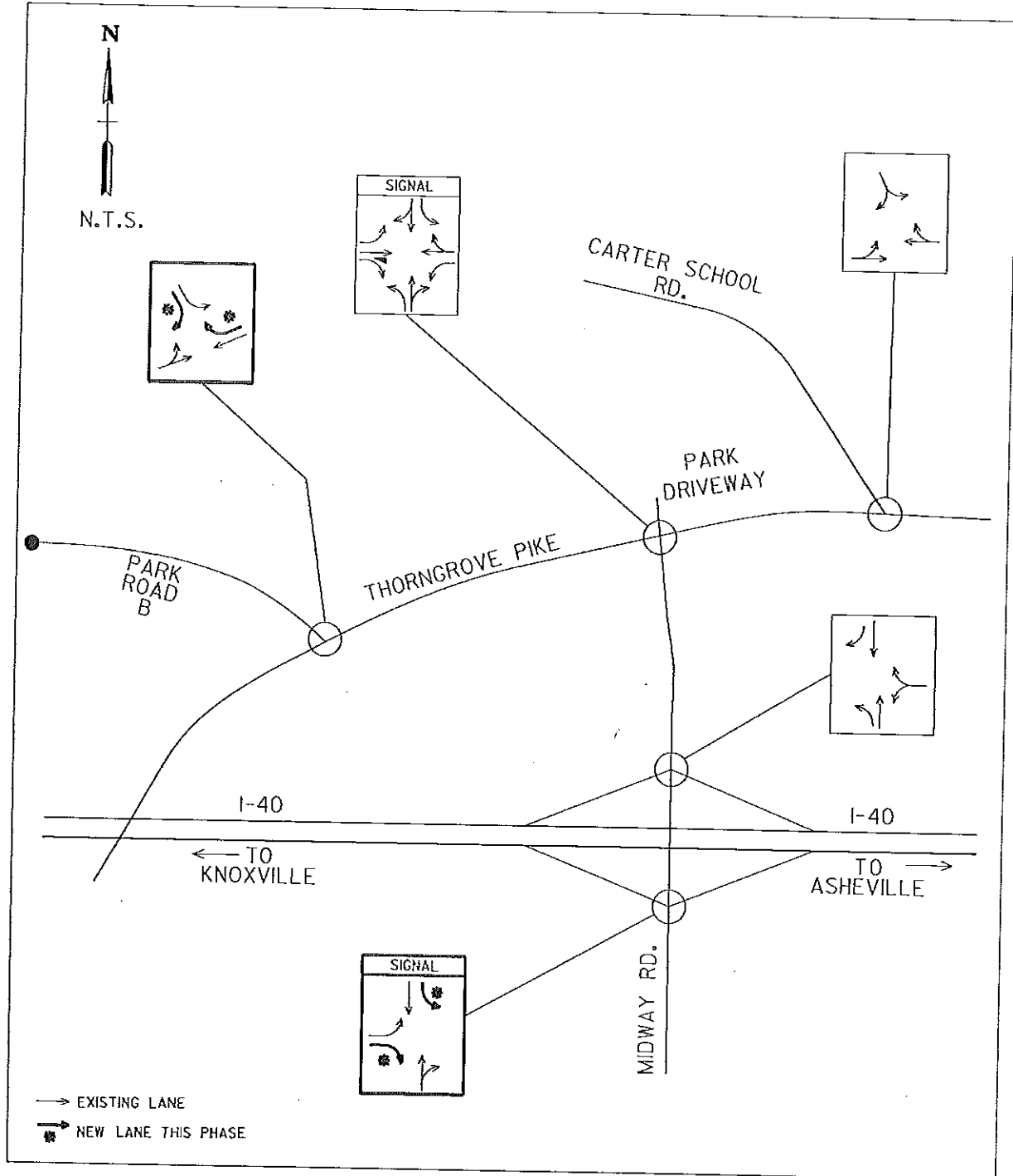


FIGURE 8D
RECOMMENDED PHASE II INTERSECTION LANES AND TRAFFIC CONTROL

CONCLUSIONS & RECOMMENDATIONS | SECTION 7

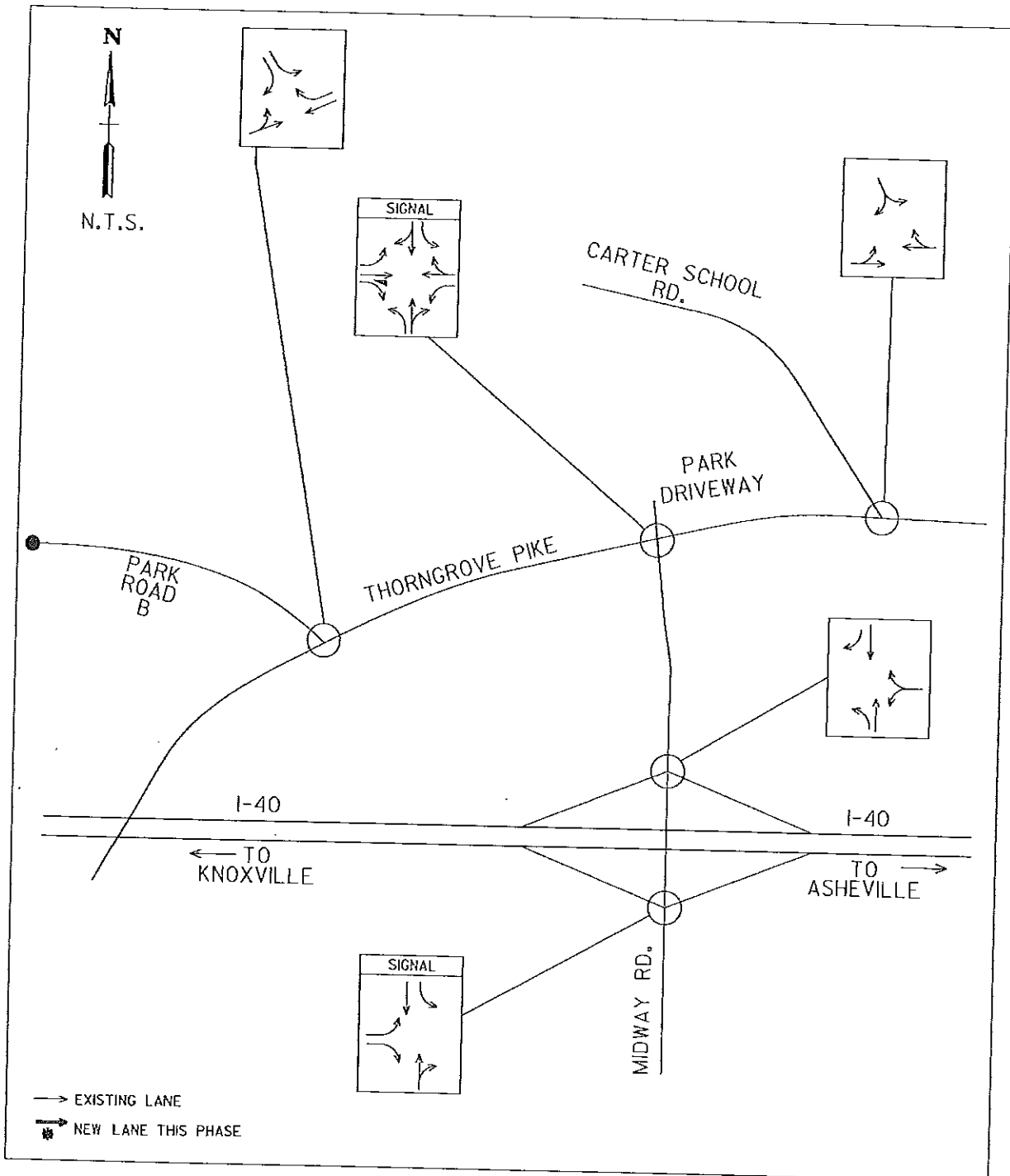


FIGURE 8E
RECOMMENDED PHASE III INTERSECTION LANES AND TRAFFIC CONTROL

CONCLUSIONS & RECOMMENDATIONS | SECTION 7

**TABLE 4
SUMMARY OF RECOMMENDED INTERSECTION IMPROVEMENTS**

INTERSECTION	RECOMMENDED IMPROVEMENT	MINIMUM LENGTH OF STORAGE LANE*	IMPROVEMENT** THRESHOLD
Midway/I-40 Eastbound	Traffic Signal Southbound left-turn lane Eastbound right-turn lane	-- 75 feet 450 feet	1,800 employees 1,800 employees 1,800 employees
Midway/I-40 Westbound	Northbound left-turn lane Southbound right-turn lane***	75 feet 300 feet	500 employees 1,100 employees
Midway/Thomgrove	All-Way Stop Traffic Signal Eastbound left-turn lane Eastbound right-turn lane Westbound left-turn lane Northbound left-turn lane Southbound left-turn lane	-- -- 75 feet 200 feet 225 feet 500 feet 125 feet	500 employees 1,100 employees 1,100 employees 1,100 employees 1,100 employees 1,100 employees 1,100 employees
Thomgrove/Carter School	None		
Thomgrove/Park Road "B"	Westbound right-turn lane Southbound right-turn lane	300 feet 350 feet	1,800 employees 1,800 employees
<p>* Bay tapers for turn lanes shall be minimum length of 120 feet, and shall be in addition to the "Minimum Length of Storage Lane."</p> <p>** Implement associated improvement by the time the threshold number of employees are working at the Midway Business Park.</p> <p>*** Proposed lane design to include right-turn channelization lane with triangular island and yield control.</p>			

Midway Business Park Development Plan

Design Guidelines

JULY 25, 2016

REVISION 02



9-SB-16-C / 9-E-16-UR

Revised: 8/31/2016

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Section One: Introduction

A. OVERVIEW

Midway Business Park (MBP) has been developed to provide Knox County with an inventory of business property which is vital to attracting new companies to the area and aiding in the growth of existing companies. This Business Park will serve as an economic driver for the entire Knoxville region for many years to come, and will result in the creation of new jobs and capital investment within Knox County.

In addition to MBP's locational advantages, such as direct access to the interstate and being adjacent to a Tennessee Valley Authority electrical switching station and a Knoxville Utilities Board electrical in-feed and substation, MBP has been developed to be an exceptionally attractive and employee focused business park that will aid in the recruitment of both employers and employees to Knox County. MBP includes amenities such as paved and natural surface walking trails for recreation and exercise, as well as a covered

shelter and lawn areas for use by Business Park employees and nearby residents. Business Park development standards and guidelines will ensure superb quality in building and site design with plentiful amounts of landscaping throughout.

B. PURPOSE AND INTENT

These design guidelines have been created to foster a quality built environment as well as to maintain performance standards for all development within the Business Park. Maintaining such standards will protect the investment of existing and future property owners.

Additionally, these design guidelines are intended to direct project design and to provide clear communication of what is expected and required. Property owners within MBP should inform their design team of these requirements early on in the design process. All development plans will be reviewed by The Development Corporation

of Knox County (TDC) staff, TDC's Design Review Board (DRB), and the Knoxville-Knox County Metropolitan Planning Commission (MPC) staff. Refer to Section 2.C for additional information on the DRB.

These design guidelines establish the minimum standards which shall be conformed to, as required by TDC and MPC. They do not replace the need for conformance to any applicable federal, state, county, or local obligations or approval procedures. All structures must conform to applicable state or local building codes, zoning ordinances, or other governmental regulations to ensure the health and safety of users. If any provisions of these design guidelines are more restrictive than the applicable codes, the provisions of the design guidelines shall apply.

Development plans for MBP are also subject to permitting through Knox County.

TDC will work with each property owner to facilitate development of their site. If stumbling blocks are encountered due to specifics in the design guidelines or other County regulations, these should be brought to the attention of TDC staff to help work through them.

In all instances, do not hesitate to contact TDC's staff for answers to questions or concerns. TDC encourages a preliminary meeting with staff to review these guidelines.

C. PROPERTY OWNERS ASSOCIATION

All property within MBP shall be subject to the Midway Business Park Property Owner's Association Covenants which shall be recorded with the Knox County Register of Deeds.

D. GLOSSARY OF TERMS

The following definitions are applicable to the terms as they are used in the design guidelines for MBP.

- **Design Review** is a process which has been adopted by TDC whereby development plans/proposals are evaluated by the DRB for their compliance with these design guidelines.
- **Design Guidelines** are statements and graphics intended to direct the planning and development of the built environment in a particular manner or style so that the end result contributes positively to the Business Park.
- **A unified design** is where each of the individual elements, such as building orientations, building forms, materials, colors, landscaping, pavement, lighting, signs, etc., when joined together, appear as a logical and aesthetically integrated whole. The elements (of each parcel and the park) should be conceived as part of a "family," not identical in appearance but designed with similar or complementary characteristics. Some repetition of elements

also contributes to a unified design, but care should be taken not to repeat entire building or landscape designs.

- **Streetscape** refers to all the elements within and adjacent to the right-of-way that contribute to the street's appearance and functionality.
- **Articulate** means to give emphasis to or distinctly mark off a particular building element. An articulated facade would be the emphasis of elements on the face of a wall—could be a change in step back, a change in material, color, etc.; anything which emphasizes that particular building face.
- **Building mass** means the building's expanse or bulk and is typically used in reference to structures of considerable size.
- **Public building face** refers to any building side which is visible from public road right-of-ways.
- **Front building face** refers to any building face which can be touched by a line drawn perpendicular to the street and/or the face(s) which contains the public entry.
- **Swales** are low lying or depressed stretches of land which carry storm water runoff. Swales are typically wide, gently sloping, and covered by grass.
- The term **setback** has been used as a prescribed distance or an area between

one element and another. Within these guidelines, the term describes:

- A **yard setback** is the minimum distance and the area measured from the property line to the interior of a parcel where buildings may be constructed.
- A **parking setback** is the required distance and the area between the edge of parking lot pavement and the property line. Refer to Article II of the Zoning Ordinance for Knox County, Tennessee.
- A **screen** or **buffer** is intended to block undesired views and is consisting of materials effective in blocking unwanted views.
- **Caliper**, in landscape and nursery usage, is the diameter of a tree measured six inches above the ground line for up to a four inch caliper tree. The diameter is measured twelve inches above the ground line for plants which have a caliper greater than four inches.
- **Footcandle** refers to the amount of illumination on a surface at a single point. One footcandle is equal to one lumen (measurement of the amount of light energy emitted by a light source) uniformly distributed over an area of one square foot. The amount of illumination incident on a surface varies with the intensity of the source in the direction of the surface,

the distance between the source and the surface, and the angle of incidence.

- The **buffer yard** is established along the property line abutting residential or agricultural property. No parking lots or structure shall be allowed within the buffer yard setback.
- **Preserved natural areas** are recorded limits within MBP which include areas deemed to be appropriate or worthy of preservation. Development is not allowed within these areas.

Section Two: Design Submission and Review

A. PERMITTING AND ZONING REQUIREMENTS

General Description

The Midway Business Park is zoned EC Employment Center. EC Employment Center zoning is intended to encourage development of business parks and other employment centers that will contribute to the future economic well-being of Knox County; to provide standards and procedures that will minimize any conflicts or adverse impacts of these developments with other properties, public roads or facilities; to provide a zoning district for use in areas meeting the locational standards for industrial parks and technology based development contained in the Knoxville-Knox County General Plan; and to provide a zoning district for business and technology park development that requires site plan review and complies with the requirements of the Farragut-Knoxville-Knox County Growth Policy Plan.

Permitted Uses

Only the following of the permitted uses listed in the EC Employment Center Zoning ordinance may be permitted in the Midway Business Park development. Where North American Industry Classification System (NAICS) codes are indicated after permitted uses, the businesses listed under that classification in the United States Office of Management and Budget North American Industry Classification System Manual, 1997 edition, and any subsequent edition, may be permitted providing all other requirements of this ordinance are fulfilled.

Construction and contracting, including:

- Building, developing and general contracting (NAICS 233).
- Heavy construction (NAICS 234).
- Special trades contractors (NAICS 235).

Manufacturing, including:

- Food manufacturing (NAICS 311), excluding: slaughter of animals and fat rendering; rice, malt and wet corn milling; soybean and other oilseed processing; fats and oil refining and blending; meat processed from carcasses; rendering and meat and poultry processing; seafood product preparation and packaging.
- Beverage and tobacco product manufacturing (NAICS 312).
- Textile mills (NAICS 313).
- Textile product mills (NAICS 314).
- Apparel manufacturing (NAICS 315).
- Leather and allied product manufacturing (NAICS 316), excluding: leather and hide tanning and finishing.
- Wood product manufacturing (NAICS 321).
- Printing and related support activities (NAICS 323).
- Pharmaceutical and medicine manufacturing (NAICS 3254), excluding: manufacturing of petrochemicals, industrial gases and ethyl alcohol; cyclic crude, intermediate, and gum and wood chemical manufacturing; synthetic rubber manufacturing; all fertilizer manufacturing and mixing; pesticide and other agricultural chemical manufacturing; explosives manufacturing; and, photographic film, paper, plate and chemical manufacturing.
- Plastics and rubber products manufacturing (NAICS 326) excluding: tire manufacturing and retreading; electroplating, plating, polishing; anodizing, and coloring; and, ammunition (except small arms) manufacturing.
- Fabricated metal product manufacturing (NAICS 332).
- Machinery manufacturing (NAICS 333).
- Computer and electronic product manufacturing (NAICS 334).
- Electrical equipment, appliance and component manufacturing (NAICS 335).
- Transportation equipment manufacturing (NAICS 336).
- Furniture and related product manufacturing (NAICS 337).
- Miscellaneous manufacturing (NAICS 339).

Wholesale trade, including:

- Wholesale trade, durable goods (NAICS 421) excluding: storage of wholesale products outside of enclosed buildings.
- Wholesale trade, non-durable goods (NAICS 422): excluding any live poultry or livestock; and the storage of wholesale products outside of enclosed buildings.

Transportation and warehousing, including:

- Truck transportation (NAICS 484).
- Transit and ground passenger transportation (NAICS 485), excluding: school and employee bus transport.
- Pipeline transportation (NAICS 486).
- Scenic and sightseeing transportation (NAICS 487), limited only to land-based modes of transportation.
- Support activities for transportation (NAICS 488), excluding: air traffic control; other airport operations; port or harbor operations; marine cargo handling; navigational services to shipping; other support activities for water transportation; and, motor vehicle towing.
- Postal service (NAICS 491).
- Couriers and messengers (NAICS 492).
- Warehousing and storage (NAICS 493) limited to within enclosed buildings.

Information, including:

- Publishing industries (NAICS 511).
- Motion picture and sound recording industries (NAICS 512) excluding: drive-in motion picture theaters.

- Broadcasting and telecommunications (NAICS 513).
- Information services and data processing services (NAICS 514).

Finance and insurance, including:

- Monetary authorities and banks (NAICS 521).
- Credit intermediation and related activities (NAICS 522).
- Securities, commodity contracts and other financial investments (NAICS 523).
- Insurance carriers and related activities (NAICS 524).
- Funds, trusts and other financial vehicles (NAICS 525).

Real estate and rental and leasing, including:

- Real estate (NAICS 531) excluding: lessors of mini-warehouses and self-storage units.
- Rental and leasing services (NAICS 532) excluding: general rental centers; commercial air, rail, and water transportation equipment rental and leasing; construction, mining, and forestry machinery and equipment rental and leasing.

- Lessors of other nonfinancial intangible assets, except copyrighted works (NAICS 533).

Professional, scientific and technical services (NAICS 541).

Management of companies and enterprises, including:

- Management of companies and enterprises (NAICS 551).
- Administrative and support services (NAICS 561).

Educational services (NAICS 611), excluding: elementary and secondary schools.

Health care and social assistance, including Hospitals (NAICS 622).

Other services, except public administration, including:

- Support activities for agriculture and forestry (NAICS 115).
- Support activities for mining (NAICS 213).
- Repair and maintenance (NAICS 811) excluding: general automotive repair;

automotive exhaust system repair; automotive transmission repair; other automotive mechanical and electrical repair and maintenance; automotive glass replacement shops; automotive oil change and lubrication shops; car washes; and all other automotive repair and maintenance.

Public administration, including:

- Local, state and federal government offices and programs.
- Space research and technology (NAICS 927).
- National security and international affairs (NAICS 928).

Commercial telecommunications towers, consistent with the requirements of the Wireless Communications Facilities Plan (11/18/02), with any subsequent amendments, and Article 4, "Supplementary Regulations," Section 4.92, "Standards for Commercial Telecommunications Facilities," of these regulations.

As permitted in an EC Employment Center Zone development, twenty percent (20%) of the land area within the Midway Business Park development

may be set aside for retail commercial development, subject to the following conditions and requirements:

- The overall EC Employment Center Zone development must include a minimum of twenty (20) acres.
- Only the following retail commercial uses shall be permitted, provided that there shall be no sales, display or storage of merchandise outside of a fully enclosed building.
 - a. Drug stores.
 - b. Convenience stores, without gasoline pumps.
 - c. Restaurants, without drive-through facilities.
 - d. Sales of office supplies, office equipment and computers.
 - e. Employment services.
 - f. Hotels and motels.
 - g. Accessory uses customarily incidental to any of the commercial uses listed in this section.
- The locations of commercial uses shall be integrated by means of access within the EC Employment Center Zone development.

Other uses of the same general character as those listed in this section as permitted uses and deemed appropriate by the Planning Commission.

Child day care centers, consistent with the requirements of Section 4.91, “Requirements for Child Day Care Centers and Group Day Care Homes, When Considered as Uses Permitted on Review,” of these regulations.

Adult day care centers, consistent with the requirements of Section 4.98, “Requirements for Adult Day Care Centers, When Considered as Uses Permitted on Review”, of these regulations.

Outdoor storage, subject to the following requirements:

- Outdoor storage shall be fully screened on all sides by an opaque, ornamental or vegetative screen.
- Outdoor storage must be an accessory use to a principal use on the same site.

Landfills are prohibited.

B. DEVELOPMENT AND REVIEW PROCESS

Site Selection Process

Step One - Choosing Midway Business Park

Review the Design Guidelines in its entirety to get a complete picture of the requirements. Will the proposed facility fit the plan and the proposed site for Midway Business Park? If so, then go to Step Two.

Step Two - Site Selection and Design

Once a site is chosen, the project's architects or engineers will review this section which outlines information the Design Review Board (DRB) and Metropolitan Planning Commission (MPC) staff requires for review. TDC staff will recommend a preliminary meeting with the design team to review the standards and make sure they completely understand what is expected. The project's architect or engineer should review Section 3 and make sure that the plans are in compliance with the standards.

Approval Process

Step One - DRB Review

TDC will require the following process for preliminary review and approval prior to submitting the project's documents to (MPC) staff for approval.

TDC Preliminary Review

The applicant should schedule a kickoff meeting with TDC staff to review the site, uses, and design intent. The applicant should be prepared to discuss preliminary development plans which should include one (1) set of the information recommended for preliminary review under the Submittals section of these requirements.

TDC staff will make comments and recommendations and assist with scheduling a DRB meeting to review the proposed project.

Recommended Submittals

(for TDC Preliminary Review)

It is recommended the applicant provide one (1) full set of the following plans and submittal information for preliminary TDC staff review. Submittal should include:

- Site plan showing the location of buildings, sidewalks, driveways, intersections with streets, parking areas, screen walls and fences, yard setback requirements, buffer yards, and preserved natural areas
- Architectural plans showing general floor plans, elevations, building materials and listing floor area square footages
- Landscape plans showing proposed planting locations and any existing vegetation to be preserved if required or planned.
- Signage plans on all exterior, façade and

free standing signs including information on locations, design, dimensions, colors, and lighting.

- Exterior lighting plans
- Narrative including: 1) a description of the proposed operation in enough detail to judge whether or not it is permitted under the approved Development Plan uses for MBP. This should include the extent of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics.

Formal DRB Review

The applicant will deliver six (6) sets of required submittals to TDC staff. A DRB meeting will be planned within ten (10) working days after receipt of these submittal plans. A meeting will not be scheduled until all appropriate information is available to the DRB. At the meeting, the applicant will present their plans to the Board. The DRB will discuss the plans and the applicant will receive, via written correspondence, notification of the Board's decision and recommendations on changes the Board may require. Following this presentation, TDC will issue an approval, conditional approval, or instructions regarding resubmittal. TDC's approval or conditional approval letter shall be submitted as part of the MPC review.

Required Submittals

(for formal DRB and MPC reviews)

DRB requires size (6) full sets and MPC requires five (5) full sets of the following submittal information. The applicant is required to provide the following information on drawing submittals:

- Plot plan which shows the relationship of the proposed improvements to the improvements on adjacent parcels, utilities and streets.
- Survey of property clearly showing property boundaries in relation to other features
- Site plan at a scale of one inch equals forty (40) feet or less. This should show the location of buildings, sidewalks, driveways, intersections with streets, parking areas (including stall sizes and quantities), screen walls and fences, site grading and erosion control measures and utilities, yard setback requirements, buffer yards, preserved natural areas, calculated building coverage ratio, and calculated impervious surface coverage ratio.
- Architectural plans at a scale no less than one inch equals sixteen (16) feet showing elevations, all building materials, and floor plans including floor area square footages
- Landscape plans at a scale of one inch equals forty (40) feet or less that show proposed planting locations and any existing vegetation to be preserved if

required or planned. Landscape plans should also include a detailed plant schedule with the plant's common and botanical name, general type of plant (i.e. evergreen, deciduous tree, flowering tree, annual flower, perennial flower, grass, etc.), minimum specified size at installation and expected size at maturity, total quantity, and symbol (if used).

- Signage plans on all exterior, façade and free standing signs including information on locations, design, dimensions, colors, and lighting.
- Exterior lighting plans including site photometrics, fixture locations and types, pole heights and colors, and descriptive data for all fixtures.
- Samples of all materials and/or paint colors used on all improvements (required by DRB, but not MPC). In lieu of submitting material and/or paint color samples, the DRB may, at its discretion, accept an accurately colored rendering of the proposed building(s) with specific descriptions of all materials to be used.
- Narrative including: 1) a description of the proposed operation in enough detail to judge whether or not it is permitted under the approved Development Plan uses for MBP. This should include the extend of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual

performance characteristics; and 2) an estimate of the maximum number of employees and visitors contemplated for the business and the timing of shifts during which the employees will work.

- Information that is to be provided on the Survey, Site plan, and/or Architectural plans should include: parcel ID, address, owner, location map, zoning, north arrow and total site acreage.

Step Two - MPC Submission and Approval for Administrative Site Plans

The purpose of the administrative site plan review is to ensure that the requirements and intent of the EC Zoning Ordinance and other applicable county ordinances are met prior to the issuance of building permits. At this point in the process, the Knox County Engineering and Public Works Department and the Knox County Fire Prevention Department will conduct their initial reviews.

Administrative Review

- In administratively reviewing plans for specific sites or parcels, the staff shall approve any site plan that complies with the MBP design guidelines document, the overall MBP development plan approved by the Planning Commission, and the requirements of the Zoning Ordinance for Knox County, Tennessee and the Knoxville - Knox County Minimum Subdivision Regulations. MPC staff

decisions may be appealed to the Planning Commission. Anyone aggrieved by a decision of the Planning Commission may appeal such decision to the Board of Zoning Appeals, pursuant to Article 6, "Administration, Enforcement and Interpretation", Section 6.60, "Board of Zoning Appeals", of these regulations.

- The Metropolitan Planning Commission shall approve, approve with conditions, or deny applications for uses on review, as described in this section and in compliance with relevant Knox County zoning and subdivision regulations.

Plans Review and Approval Process Checklist		
TO BE COMPLETED BY THE APPLICANT	YES	N/A
Preliminary TDC Review		
Provide one (1) set of drawings and project narrative		
Site plan including:		
Plan scale shall be no less than 1:40		
Setbacks, yards, and preserved areas		
All easements		
Building locations		
Driveways, sidewalks, and parking areas		
Screening elements (walls, fences, berms)		
Signage plan including:		
Locations of all signs		
Signs on buildings		
Freestanding signs		
Sign Exhibit including design, dimensions, color and lighting		
Lighting plan including:		
Locations of all exterior lights		
Fixture cut sheets		
Project narrative including:		
Proposed use		
Description of proposed operational detail including extent of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics		
An estimate of the maximum number of employees and visitors contemplated for the business and the timing of shifts during which the employees will work.		

Formal DRB Review		
Provide six (6) set of drawings and project narrative		
Existing conditions plan including:		
Plan scale shall be no less than 1:40		
Topography at maximum 2' contour intervals		
Vegetation including trees and shrubs		
Property boundary		
All easements		
Preserved Natural Areas		
Site plan including:		
Plan scale shall be no less than 1:40		
Setbacks, yards, and preserved areas		
All easements		
Building locations		
Driveways, sidewalks, and parking areas		
Screening elements (walls, fences, berms)		
Maximum lot coverage		
Impervious area ratio		
Architectural plan including:		
Plan scale shall be no less than 1:16		
Floor plate with rooms and uses		
Doors and windows		
Loading docks and service areas		
Architectural elevations including:		
Elevation scale shall be no less than 1:16		
Doors and windows		
Façade materials		
Loading docks and service areas		
Landscape plan including:		
Plan scale shall match site plan		
Existing trees to be preserved		
All easements		

Preserved Natural Areas		
Proposed trees, shrubs, groundcover, and lawn areas		
Plant schedule including botanical names, common names, type of plant, installed sizes, and mature sizes		
Signage plan including:		
Locations of all signs		
Signs on buildings		
Freestanding signs		
Sign Exhibit including design, dimensions, color and lighting		
Lighting plan including:		
Locations of all exterior lights		
Fixture cut sheets		
Sign Exhibit including design, dimensions, color and lighting		
Material samples including:		
Façade materials		
Exterior walls, fences, and railings		
Specialty pavement such as unit pavers or colored concrete		
Accurate renderings may be provided in lieu of samples		
Project narrative including:		
Proposed use		
Description of proposed operational detail including extent of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics		
An estimate of the maximum number of employees and visitors contemplated for the business and the timing of shifts during which the employees will work.		

MPC Submittal		
Submit completed MPC application form		
Provide required MPC submittal fee		
Provide DRB's formal response letter		
Provide five (5) sets drawings, narrative, and DRB letter		
Plot plan including:		
Plan scale shall be no less than 1:40		
Illustration of proposed improvements to the adjacent parcels, utilities, and streets.		
Existing conditions survey plan including:		
Plan scale shall be no less than 1:40		
Topography at maximum 2' contour intervals		
Vegetation including trees and shrubs		
Property boundary		
All easements		
Preserved Natural Areas		
Site plan including:		
Plan scale shall be no less than 1:40		
Setbacks, yards, and preserved areas		
All easements		
Building locations		
Driveways, sidewalks, and parking areas		
Screening elements (walls, fences, berms)		
Maximum lot coverage		
Impervious area ratio		
Architectural plan including:		
Plan scale shall be no less than 1:16		
Floor plate with rooms and uses		
Doors and windows		
Loading docks and service areas		
Landscape plan including:		
Plan scale shall match site plan		

Existing trees to be preserved		
All easements		
Preserved Natural Areas		
Proposed trees, shrubs, groundcover, and lawn areas		
Plant schedule including botanical names, common names, type of		
Signage plan including:		
Locations of all signs		
Signs on buildings		
Freestanding signs		
Sign Exhibit including design, dimensions, color and lighting		
Lighting plan including:		
Locations of all exterior lights		
Fixture cut sheets		
Sign Exhibit including design, dimensions, color and lighting		

DRAFT

C. DESIGN REVIEW BOARD

TDC's DRB shall consist of no fewer than four (4) and no more than six (6) members. The members will include the president of TDC or a designee, a licensed Architect, a registered Landscape Architect, and a licensed professional Engineer, all of whom live within Knox County. TDC may also designate a professional in the construction business or a real estate developer. Once the Park is 50% occupied, an additional board member may be chosen from an operating business in the Business Park.

Each member of the Board shall serve at the pleasure of the Board of Directors of TDC, and each such member can be removed at any time, with or without cause, by the TDC Board of Directors. Once 100% of the Business Park's total acreage is sold by TDC or its successor in interest and has been developed by a third party, then the Design Review Board may be elected by the property owners within the Business Park.

The vote of a majority of the members of the Board at a meeting shall constitute the action of the Board on any matter before it; provided, however, in no event shall a vote of less than three (3) members (either affirmative or negative and not both) constitute the act of the Board. Each Design Review Board member has the responsibility, upon recognizing the potential for the appearance of a conflict or the existence of a real conflict

of interest between the member's position and the issue being decided, to declare that he has a conflict of interest on the matter of question. Any member who declares a conflict of interest may continue his involvement in the discussion of the issue but shall excuse himself from voting on the matter.

Approval of plans and improvements shall be at the sole discretion of the Design Review Board. By purchasing property in the Business Park, each Owner accepts the authority of these standards and agrees to the Design Review Board's authority.

The rationale for Board approval, conditions or denial shall be included in the minutes of the Board meeting at which decisions are made. Correspondence regarding denials to applicants shall cite the specific section of the Design Standards and Restrictive Covenants for the Business Park or other basis for denial.

Section Three: Design Guidelines

Applicants should refer to the Zoning Ordinance for Knox County, Tennessee and to the Midway Business Park (MBP) Design Guidelines, as amended from time-to-time, for specific requirements. Where there are differences in requirements, applicant should use the most stringent requirement.

A. OBJECTIVES

These design objectives guide the Park's overall plan and should be used to guide the development of individual parcels.

- Foster a unified design which supports the Midway Business Park concept and serves as a planning and design example for future business parks.
- Locate buildings and parking so that any appropriate existing vegetation is maintained and utilized as screening and buffering.
- Minimize the operational and visual intrusion of loading and storage areas by screening them and by locating them where they will be least visible and least disruptive to private properties surrounding the Business Park boundary.
- Create an internal vehicular and pedestrian circulation system which facilitates separation of commercial and employee traffic.
- Foster superior quality in architecture and landscape design throughout the Park while emphasizing low maintenance requirements.
- Incorporate design solutions which will serve to minimize and/or mitigate the potential impact of on-site uses.

B. SITE ENVELOPE

Development shall be sited with minimal negative impact on the land and surroundings and to highlight areas of architectural or natural interest.

- Site buildings and parking areas to preserve as much of the existing vegetation as possible, utilizing it as a natural buffer or screen.
- Site development where the topography is least restrictive—requiring the least amount of site excavation.
- Orient buildings, parking, storage, and loading areas to reduce poor views, noise, and glare off-site. When this is not feasible because of the operational needs of the individual users, the operational needs shall be met and additional steps to mitigate the potential negative effects shall be required—screening, buffering, etc.

Building Setbacks

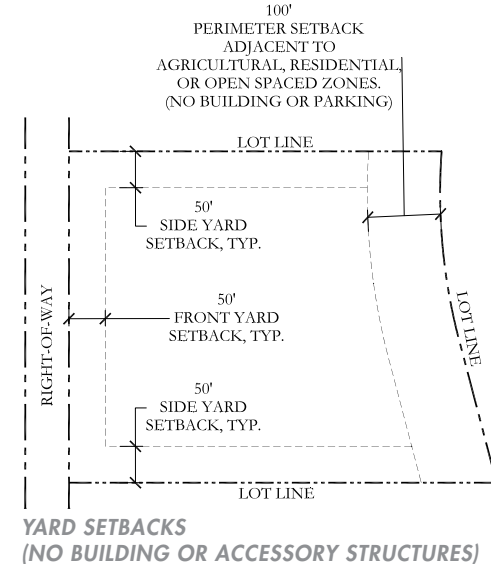
INTENT:

The setbacks required shall provide sufficient space around development to contribute to the appearance of open space and provide some separation between uses.

GUIDELINES:

REQUIRED MINIMUM SETBACKS		
Yard Location	Minimum Setback	Document References
Front	50 Feet *	3.F
Side	50 Feet *	3.F
Rear	50 Feet *	3.F
Buffer Yard Abutting Agricultural or Residential Zone	100 Feet *	3.G

* EXCEPT AS OTHERWISE INDICATED ON THE DEVELOPMENT SITE PLAN



YARD SETBACKS
(NO BUILDING OR ACCESSORY STRUCTURES)

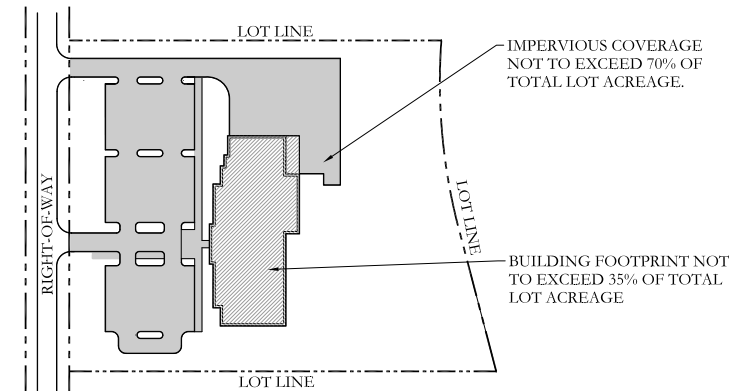
Development Density / Building Height

INTENT:

Density of development on the site shall ensure sufficient open green areas.

GUIDELINES:

DEVELOPMENT DENSITY	
Maximum Lot Coverage (divide area of a lot covered by a building by the gross area of the lot)	$\leq 35\%$
Impervious Area Ratio (divide gross area of all impervious surfaces—buildings, roads, parking lots, sidewalks, and other pavement—by the gross area of the lot)	$\leq 70\%$
Maximum Building Height (measured from finished grade on front side of building)	45 Feet



MAXIMUM LOT COVERAGE AND IMPERVIOUS AREA

C. PRESERVED NATURAL AREAS

INTENT:

The Preserved Natural Areas (PNA) are areas of significant ecological value and/or desirability which will remain preserved and protected. This includes approximately 55 acres of land with riparian corridors, rock outcrops, steep slopes, depressions, and/or other desirable characteristics. Field markers will denote the boundary of the PNA. In some locations walking trails are provided within preserved areas for recreational purposes. Refer to the development plan for the recorded limits of all PNA.

GUIDELINES:

- Grading is not permitted within the Preserved Natural Area.
- There shall be no development within the Preserved Natural Area
- Preserved Natural Areas may be included when calculating maximum lot coverage and impervious area ratios of a parcel.

D. GRADING, DRAINAGE, AND STORM WATER MANAGEMENT

INTENT:

Grading, drainage, and storm water management techniques shall be used which limit erosion, establish proper drainage, and accommodate development with limited impacts on the site or adjacent sites. The results of any grading, drainage, and/or storm water management shall be visually pleasing.

GUIDELINES:

- All construction shall comply with Knox County, State, and Federal requirements.
- Cut or fill slopes greater than 3:1 are discouraged. Slopes shall not exceed 2:1. Where slopes exceed 3:1, they shall be planted with ground cover, meadow seed, or other acceptable plant material as approved by the DRB and MPC staff.
- Ensure adequate drainage by maintaining to the greatest extent practical a minimum 2% slope across lawn areas and a minimum 1% slope on paved areas. In locations where driveways, walks, and parking areas cross drainage ways, culverts shall be provided to allow for natural drainage.

- Integrate grading and drainage features for each parcel with the Business Park's overall storm water management system. Storm water systems shall meet all the Knox County requirements and all the state and federal requirements. Combined storm water and sanitary sewers shall not be permitted.
- Minimize the amount of cut and fill and tree loss with site sensitive development and grading practices. Provide a gentle grade change at site boundaries between excavation on site and existing grades off site.
- Swales should be designed with a rounded bottom and with a gentle transition to existing grade. Grade all dry storm water management areas to follow natural forms and with gradual side slopes so they appear as naturally occurring land forms. Water tolerant vegetation is the encouraged ground cover for swales except in locations runoff velocities do not allow. Stone may be used to line swales as needed. Waivers to this requirement will be considered by the DRB when sustainable design methods (such as low impact design) are used. Refuse and broken concrete shall not be permitted in swales.
- No grading shall occur within designated Preserved Natural Areas.

E. UTILITIES

INTENT:

Utilities shall be located to reduce the visual intrusion of equipment and where they are least susceptible to damage from weather and/or moving vehicles.

GUIDELINES:

- All new utility lines and service connections shall be located underground. When it is not feasible to do so, dark, neutral colors shall be used on poles and fixtures and they shall be located a safe distance from traffic areas.
- All above-ground utility structures, including those attached to poles or buildings (meters, transformers, etc.), shall be approved by the DRB.
- Screen above ground utilities and/or wall-mounted utilities with architectural elements (building setbacks, walls, fences, architectural building attachments) and/or landscaping.
- Both Tennessee Valley Authority (TVA) and Knoxville Utilities Board (KUB) own utility easements throughout the Business Park. Refer to each of their own guidelines and restrictions regarding all construction and development within TVA and KUB easements.

- Septic tanks and drain fields shall not be allowed.

Questions about TVA's power line easement in the Park should be directed to the TVA's Electrical Systems Engineering Department.

F. ARCHITECTURE

Building Entry Areas

INTENT:

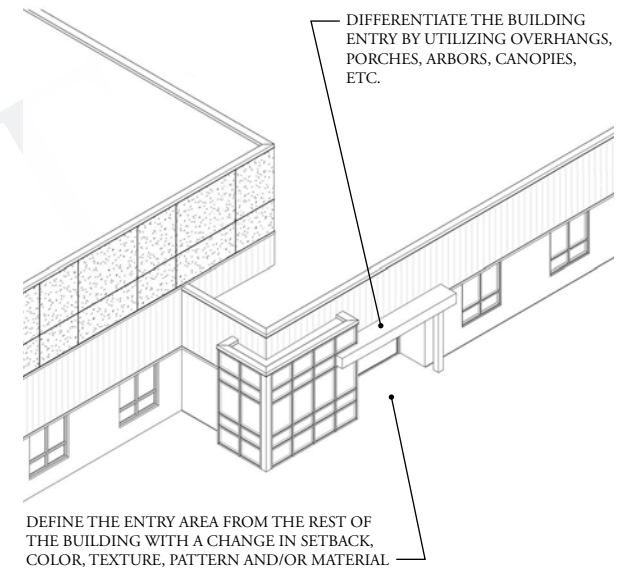
The building entry shall be clearly defined and shall provide space for safe and easy movement between the indoors and the outdoors

GUIDELINES:

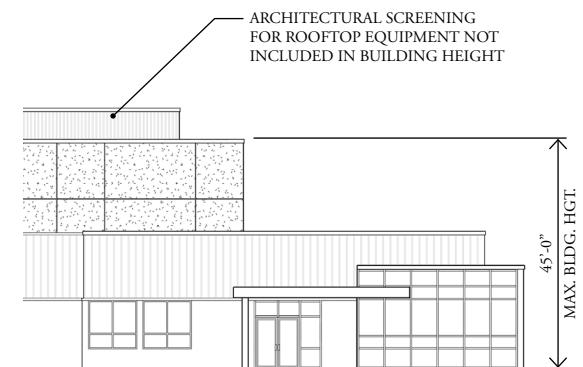
- Differentiate the entry area from the rest of the building face with a change in step back, color, texture, pattern, and/or material.
- Delineate a space outside the entry with plant materials, mounding, walls, paving, or overhead features to create a transition space between the entry and the outdoors.
- Differentiate the paving at the entry from the sidewalks or parking areas by changing the width, the color, the material, the scoring pattern, or the finish.
- Use overhead features such as building overhangs, porches, arbors, canopies, etc. to define the entry and to provide overhead protection in the transition space. Tree canopies can also provide the overhead feature in the transition area.

Building Height

Building heights shall not exceed 45' to be measured from the ground level front finished floor elevation to the top edge of parapet wall or ridge of the roof. Building heights shall be subject to approval by the DRB, and shall conform to any other height requirements as may be mandated within the requirements and restrictions of the Zoning Ordinance for Knox County, Tennessee.

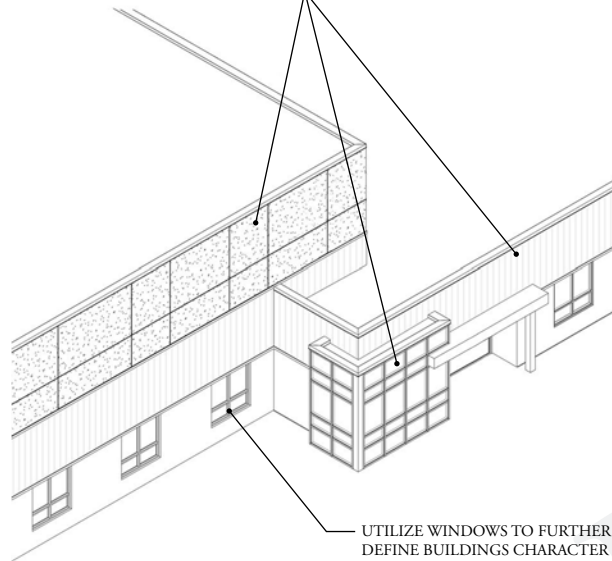


BUILDING ENTRY



BUILDING HEIGHT

ARTICULATE BUILDING FORM WITH CHANGES
IN SETBACKS AND/OR MATERIALS



BUILDING FORM

UTILIZE WINDOWS TO FURTHER
DEFINE BUILDINGS CHARACTER

Building Form

INTENT:

The building form shall reduce the apparent mass of large buildings, give buildings visual interest, and relate buildings to the site and to other buildings within the business park.

GUIDELINES:

- When the building use allows, reflect the character of the physical setting through building forms by using low, horizontal forms when buildings are in open areas and more vertical, compact forms in wooded area.
- Articulate the building base through a change in setbacks and/or materials. Walls which extend out from buildings and into the site help unify buildings with the site.
- Utilize windows to establish a relationship between indoors and outdoors and to further define the building's character. Where windows pose security issues, secure locations and/or special glass (glass block, tinted, etc.) should be used, rather than completely removing windows from the building face.
- Provide a distinctly different architectural treatment at the ground or lower levels of buildings to reduce the building mass. Examples of ways to differentiate the base include: articulating the building base, changing materials, colors, or textures, using overhangs, and window detailing.
- Emphasize architectural elements such as roof lines, windows, and entries to help break up large building faces and blank walls into smaller identifiable parts.
- Utilize plant materials, of an effective size and scale, to visually break up large building faces and blank walls into smaller identifiable parts. Plant materials shall be used when architectural elements are not emphasized.
- Any building face which is visible from a public right-of-way shall not be blank. Architectural elements and/or landscaping of a scale which will be effective in breaking up the blank wall shall be used.
- Use some uniformity (not repetition) of building details, scale, proportions, textures, materials, colors and overall building forms throughout the corporate center.

Building Materials

INTENT:

Materials shall be used to establish a look of quality and permanence and to create some visual interest in buildings, walls, and fences. Materials shall also be used to contribute to a unified park design.

GUIDELINES:

- Use materials which will age without deteriorating given a minimum level of maintenance.
- Use materials consistently throughout the park to further unify the overall park design.
- Building materials which are encouraged include: brick, stone, stone veneers, and stucco type materials. Metal is acceptable in limited amounts, however all metal buildings are unacceptable.
- Repeat the building face materials and patterns on architectural or screening walls, retaining walls, and other hardscape features.
- Use primary and secondary materials of different colors and textures to add architectural interest

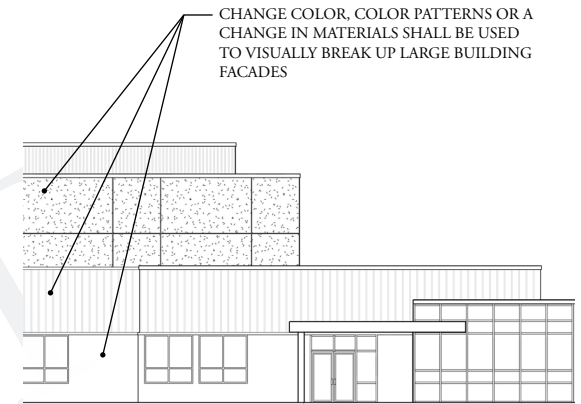
Colors

INTENT:

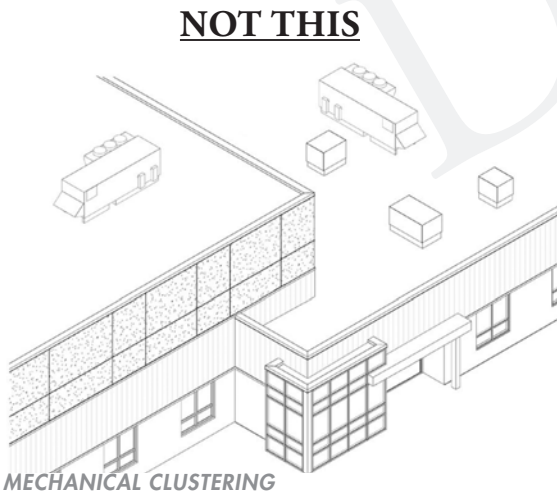
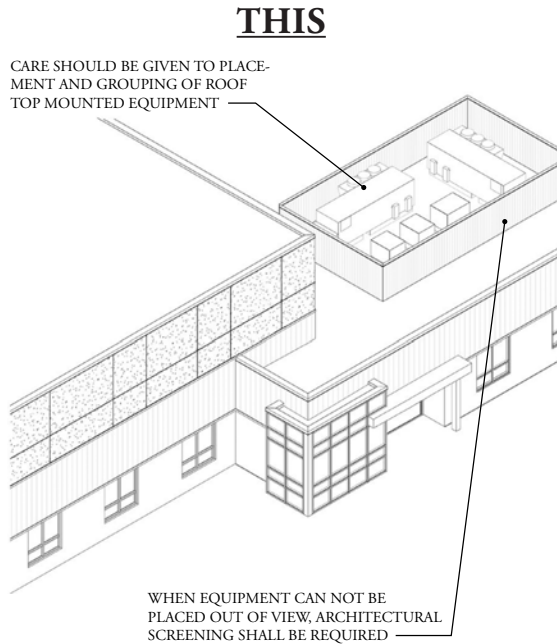
Colors shall be used to establish an appearance of quality, to provide visual interest to buildings, walls, and fences, and to contribute to a unified park design. Building colors shall blend with the natural landscape and shall not be in sharp contrast with other buildings in the business park.

GUIDELINES:

- Colors recommended for primary building coverage include neutral earth tones which have subdued color intensity.
- Accent colors (colors other than the primary building color) shall be used in limited amounts relative to the primary building color. Accents are encouraged, and should be used to emphasize architectural elements such as windows and doors, and/or in patterns on the building face. Buildings which are all one color are undesirable.
- A change in color, color patterns, or a change in materials shall be used to visually break up large building facades.



BUILDING MATERIALS



- Repeat the primary building color on walls which extend into the site or are used for screening. If accent colors are used on the wall they should be the same accent colors which are on the building.
- Radical use of intense or bright colors and/or color patterns is unacceptable.
- All color schemes are subject to review and approval by the DRB.

Roof

INTENT:

The visibility of rooftop mechanical equipment shall be decreased so the overall appearance of the building is improved.

GUIDELINES:

- Utilize low profile rooftop equipment and locate it to the center and rear of buildings, out of view from public roads. When equipment cannot be placed out of view, architectural screening shall be required that is equal to or between one (1) and two (2) feet greater in height than the equipment to be screened.
- Rooftop equipment shall be screened with sloped roof lines, parapet walls and/or other architectural features when such equipment cannot be physically placed out of view from public roads, building entry areas, and neighborhood properties. These architectural features shall be designed to appear as part of the overall building design—repeating building forms, materials, and colors. Special consideration shall be given to appropriate and effective screening features when rooftops can be viewed from above by neighboring properties.
- Although architectural screening is required for all rooftop mounted equipment, care should be given to the placement and grouping of such equipment so as to minimize the amount of screen required.
- The DRB shall require all rooftop equipment be painted the same color when it can be proven to the DRB that the requirements for location and/or screening are physically impossible or will result in unnecessary hardship. The color shall be approved by the DRB.
- Roofs may be sloped or flat. Acceptable materials include membrane ballast, EPDM, metal (non-reflective only), TPO, green/planted and others. Roofscapes shall be organized and clean.

Accessory Structures (Service/Storage)

INTENT:

Service/storage areas (service storage areas, loading areas, refuse containers, and all ground-mounted service equipment, chillers, condensing units, transformers, trash collection equipment, etc.) shall be located and/or screened so they are safe and not visible from building entry areas, roadways, and neighboring properties. Service/storage accessory structures shall be integrated with the overall building and parcel design.

GUIDELINES:

- Locate service/storage areas, loading, and refuse containers within the buildings. When such functions cannot be housed within the building, they shall be located where they are least visible from adjacent properties, building entry areas (both on-site and from neighboring buildings), or from roadways.
- All accessory structures shall be screened. Materials typically used for screening include earth mounding, plantings, walls, and fences—used individually or in some combination. To be effective, the height shall be sized to screen the accessory structure or items being stored, but at a minimum, plantings, walls, and fences shall be at least six (6) feet high. Proposed earth mounding shall be evaluated for effective screen height and natural appearance.
- Walls and or fences shall be used to screen service/storage areas when the service/storage area is visible from non-service areas of adjacent properties, building entrances (both on and off site) and/or from public right-of-ways.
- Service/storage and loading areas (including the pavement) shall not encroach within the required front, side, or rear yards.
- Loading areas shall be located and designed so that no part of the vehicle extends outside the property line while loading or unloading.
- Use a canopy over loading areas which extends a minimum of ten (10) feet away from the building wall, for the length of the loading bays. Heights will vary, but shall be the minimum height above the loading doors which will allow any security lighting to be located below the canopy and which allows safe use by all loading and unloading vehicles.
- Replicate the forms, colors, and materials of the primary buildings in the design of all accessory structures and screening walls.

- Locate antennas, satellite dishes, and other transmission equipment where they are least visible from all rights-of-way and building entrance areas (on and off site). Mounting the equipment to non-public building faces or to roof areas which are screened from public view is encouraged.
- Any transmission equipment which must be visible, for functional reasons, shall be painted to blend into its surroundings and shall be screened with architectural or landscape materials consistent with the building and landscape design. When safety/security is an issue, ground mounted equipment shall be secured with walls and/or fences.

Energy Conscious Design

- Where possible, energy conscious design strategies shall be employed. Energy conscious design may include, but should not be limited to, solar energy, green roofs, geothermal hvac systems, low flow plumbing fixtures, etc.

G. CIRCULATION

Pedestrian Circulation

Sidewalks and Trails

INTENT:

Pedestrian circulation shall be accommodated by a clearly identifiable path which shall be separated from vehicular circulation to the greatest extent feasible. The Midway Business Park includes a trail system and associated easements within the Business Park boundary. The trails include paved and unpaved trails. Paved trails are located along roadways in the Business Park.

GUIDELINES:

- Walkways for pedestrian circulation shall be 6' wide minimum. Concrete sidewalks are recommended.
- Provide changes of materials and striping as necessary to delineate pedestrian circulation when it does not occur on sidewalks. Unit pavers, stamped concrete, colored thermoplastic overlays are recommended.

- In parking areas provide clear paths of travel from the parking stalls to the front door. Provides sidewalks within medians and provide thermoplastic overlays when pedestrian paths intersect vehicular paths such as asphalt drive aisles.
- Additionally, in locations where the MBP paved trail easement crosses an individual lot a pedestrian connection shall be provided to connect to the MBP trail.

Vehicular Circulation

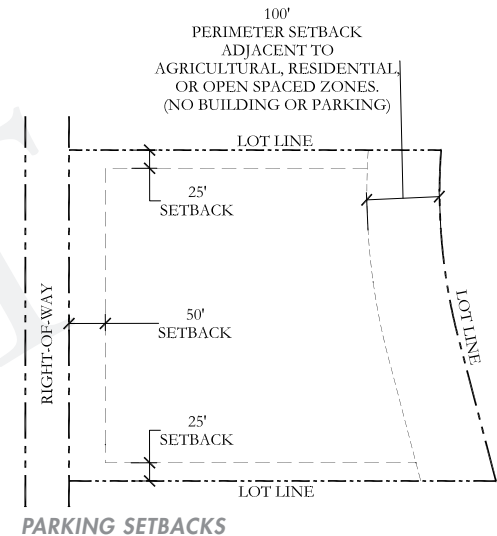
Entrance Areas

INTENT:

Entrances to both the park and the parcels shall be clearly defined, attractive, and safe. Refer to Knox County Access Control and Driveway Design Policy, 1996 or latest edition.

GUIDELINES:

- Driveway pavement materials shall not include gravel or loose aggregate.
- Highlight entrances (at the curb cut) with special landscaping, lighting, and identification signs. The use of special paving to further delineate the entry is encouraged. All paving should be able to support anticipated loads.
- Adequate sight distances shall be maintained at all entrances.
- Turning radii, into and within, each parcel shall be designed to accommodate the largest vehicles anticipated on each site and is subject to Knox County Engineering review and regulations.
- At entrances where the pavement width exceeds thirty-six (36) feet, landscaped medians, a minimum width of ten (10) feet, shall be provided. Total width of entrance may increase by median width.
- Provide a visitor drop-off area near visitor entrances. Special landscaping and/or a change in pavement material are encouraged in and around the drop-off zone.
- Parking along entry drives shall not be permitted.



Parking Areas

INTENT:

Parking areas shall be safe, convenient, and efficient and shall have reduced negative physical and visual impacts on the site and the surroundings.

GUIDELINES:

REQUIRED MINIMUM SETBACKS		
Yard Location	Minimum Setback	Document References
Front	50 Feet *	3.G
Side	25 Feet *	3.G
Rear	25 Feet *	3.G
Buffer Yard Abutting Agricultural or Residential Zone	100 Feet *	3.H

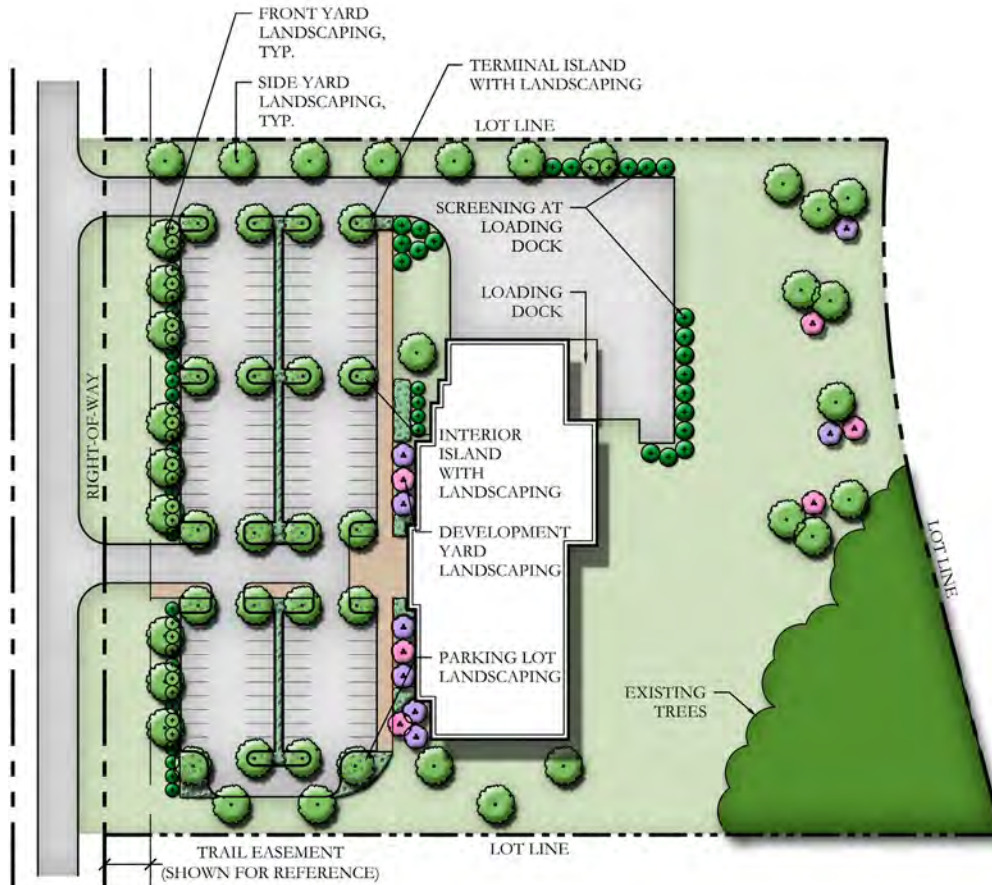
** EXCEPT AS OTHERWISE INDICATED ON THE DEVELOPMENT SITE PLAN*

- Parking areas shall be set back a minimum of twelve (12) feet from all building edges. This setback shall be landscaped with trees, shrubs, and ground cover, as well as pedestrian walkways.
- Locate parking where it is convenient to building entrances and, as much as possible, where it has little negative impact on natural amenities and the overall appearance of the development. Innovative design concepts to improve parking area appearance and environmental friendliness are encouraged.
- Utilize berms, landscaped medians, and islands to break large parking areas into smaller lots and to shade and screen vehicles. Where medians or islands utilize existing vegetation, they are exempt from the following requirements, but shall be reviewed for effectiveness in screening, shading, and breaking up parking areas.
- Medians shall be used between every two (2) double aisles of parking. Minimum median width is eight (8) feet and the length shall be, at a minimum, equal to the length of the parking aisles it divides. Medians shall be planted and shall include plantings of a type and number which are effective in shading and breaking up the parking areas.

- Landscaped islands shall be provided at the ends of parking bays and throughout the parking area. A minimum of one island per twelve (12) continuous parking stalls is required. Islands shall contain at least one (1) shade tree. Large islands that can accommodate several trees are preferable to multiple smaller islands. The minimum width for islands is eight (8) feet, minimum length eighteen (18) feet.
- All parking areas shall be paved and curbed. No parking is allowed on streets or drives, or any place other than paved parking spaces. Alternate designs shall be approved by the Knox County Engineering and Public Works Department.
- The number of required parking spaces shall be determined by referring to the Zoning Ordinance for Knox County, Tennessee.
- The minimum size of a parking space and other parking lot dimensions shall be as specified in the Zoning Ordinance for Knox County, Tennessee.

Loading Docks and Service Areas:

- It is preferred that all loading docks are located at the rear of the building; however they may be located at the side of the building as noted herein. For those sites that adjoin property within the Shackelford Estates development, loading docks may be located on the side of the building when appropriately screened from public roads, and approved by the DRB and MPC staff. Where the size and/or shape of the building and property, or some physical characteristic of the property (i.e., topography, wetlands, sinkholes, etc.), make it infeasible to locate a loading dock at the rear of a building, the loading dock may be located at the side of a building providing that landscaping is used to screen the loading dock from neighboring properties and public rights-of-way.
- All loading docks shall be set back and permanently screened, either by landscaping, berming or architectural screens, from neighboring properties and public view to minimize the effect of their appearance from neighboring building sites.
- Vehicle maneuvering for loading and unloading shall not be permitted on abutting rights-of-way.



TYPICAL LANDSCAPE PLAN

H. PLANTING

A landscaping plan shall be submitted as a part of any application for plan approval. The species lists for plant material is located in the Plant Schedule (pg. 38-40). The following minimum standards shall apply:

* For planting within TVA and KUB easements the applicant shall contact the appropriate entity for regulations and requirements.

Parking Areas

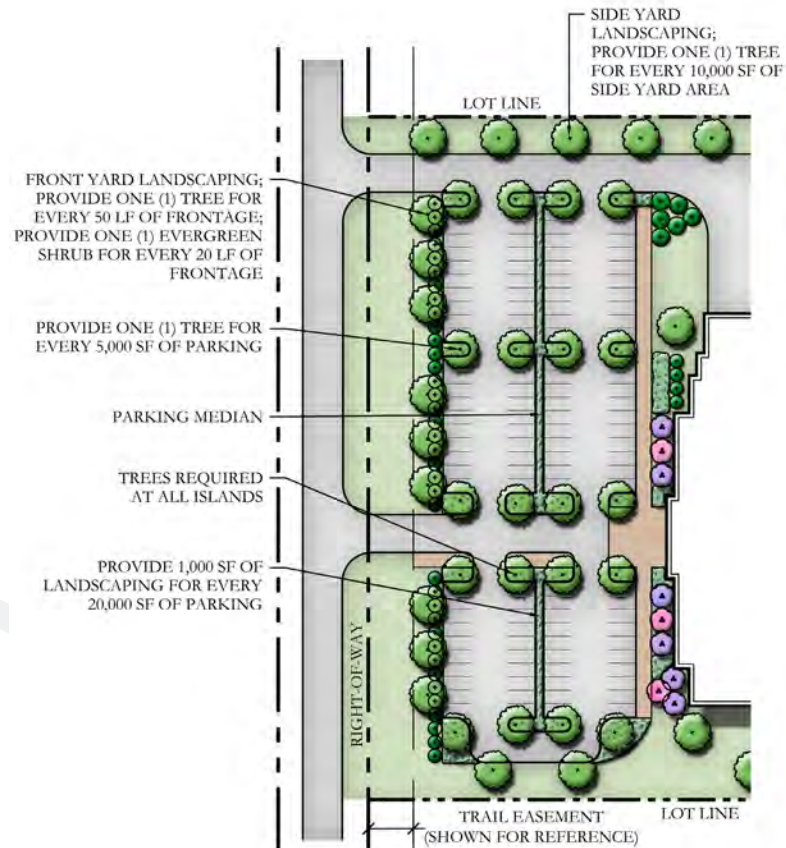
- Parking areas shall contain one thousand (1,000) square feet of landscaping for every twenty thousand (20,000) square feet, or fraction thereof, of paved parking area.
- For each five thousand (5,000) square feet of parking area, or fraction thereof, a tree shall be provided that will obtain a minimum height of forty (40) feet at maturity. Trees planted in islands may count toward this requirement.
- One (1) tree reaching a minimum 40' height at maturity shall be planted in all interior and terminal islands.
- Parking areas fronting public streets shall contain one (1) tree maturing at a minimum height of forty (40) feet per every 50 linear feet of frontage and at a minimum one (1) evergreen shrub maturing at 3' height minimum for every 20 linear feet of frontage.

Loading and Service Areas

- Loading and Service areas shall be screened with evergreen plantings at minimum eight (8) feet in height.

Refuse Collection and Outdoor Storage Areas

- Refuse collection: Screen shall be one (1) foot height higher the refuse container enclosure.
- Outdoor storage (where permitted): Screen shall be minimum six (6) feet in height.
- For these operations, adequate screening can be either natural or architectural material which obscures the line of sight from vehicles, pedestrians, and first story windows. Storage, loading and refuse container screening shall be of a material and design compatible with the overall architecture of the associated structure. The trees and shrubs shall cover a minimum of fifty (50) percent of the fence or architectural material in order to soften the screen.
- Berms, which have a minimum height of three (3) feet at any point, are strongly encouraged as a technique to screen on-site activities and to provide a buffer between those activities and adjacent properties.



PARKING LOT LANDSCAPING

Berms should vary in height to provide interest. The plan materials previously identified should be used in landscaping berms.

- Existing trees to be preserved to provide buffer and other screening shall be identified on the landscaping plan.

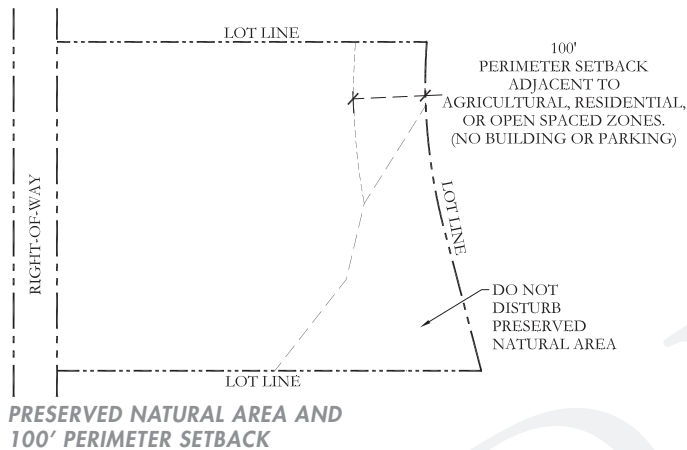
Buffer Yards

The **buffer yard** is established along the property line abutting residential or agricultural property.

- The following standards shall apply in buffer yards unless otherwise denoted on the Development Site Plan:
 - Minimum width: One hundred (100) feet adjacent to residential zones and agricultural and open space zones.
 - Within buffer yards, individual property owners shall be required to maintain the following minimum landscaping and screening requirements. A combination of medium and large evergreen trees and evergreen shrubs, which will provide an eighty (80) percent screen at maturity from adjoining properties to a height of forty-five (45) feet, shall be planted in the buffer yard. Existing trees and planting that act as a natural buffer shall be supplemented as needed.

Setback Yards

- Any required setback yard shall be landscaped with various sizes of native trees. Four (4) large maturing trees and four (4) medium or small maturing trees shall be provided per acre of required yard setback areas.
- Grass or other natural ground cover shall be used in the required setback yard. The majority of the area around buildings shall be landscaped with shrubs, and yards shall be maintained in such a manner as to provide a park-like setting for the Business Park.



Plant Materials

INTENT:

Existing and new plant materials shall be effective in relating development to the site, defining space, screening undesirable views, breaking up large building faces, and providing adequate shade in parking and pedestrian areas. Plant materials and landscape design shall contribute to a unified park appearance and shall be consistent with the Business Park common area landscaping.

GUIDELINES:

- Use planting designs which reinforce the overall planting scheme of the Business Park and which are well integrated with planting plans on adjoining sites.
- Use plantings which have a quality, year-round appearance around entrance areas and entry signs. Plantings should include a mix of evergreen and deciduous materials.
- Use landscaping in the foreground and background of entry signs to highlight the signs and to visually anchor them to the site.
- Maintain as many of the existing trees as possible with sensitive site lay out and building design.
- Continue the lines, forms, masses, and spaces of buildings with plant materials and planting configurations.
- Repeat planting forms, and/or materials to create a unified planting appearance.
- Mass plants, as opposed to using individual plantings, to provide visual continuity among planting areas - unless the individual is a specimen plant, intended to attract attention. Also, keep the number of different materials used in mass plantings low (but not one type only) to unify the design. A random mix of plants scattered about the site is undesirable.
- Use plantings around the base of buildings to reduce the building mass and to break up large blank walls—choose plant materials with heights, forms, and foliage which will effectively accomplish this.
- Mix shade trees and lower growing trees and shrubs on berms, medians, and islands to effectively shade and screen parking areas.
- The use of approved native plant material is strongly encouraged.

- Choose plant materials with high resistance to disease, insects, and storm damage in addition to qualities such as seasonal color, overall form, and/or ornamental qualities. A fast growth rate is also desirable in new plant material.

Obtain plant materials from businesses which are primarily a plant nursery, and use the largest caliper, height, or spread available for each plant. Minimum acceptable sizes at the time of installation are shown in the following table.

PLANT MATERIAL MINIMUM SPECIFICATIONS	
Shade Tree	3 inch caliper
Evergreen Tree	6 feet height
Ornamental Tree	8 feet height
Large Deciduous Shrubs	3 foot height, 2 foot spread
Evergreen Shrubs	18-24 inch height and spread
Low Spreading Shrubs	18 inch spread

- All planting stock and planting methods shall conform to the standards of the American Association of Nurserymen, latest edition.

All landscaping shall be properly maintained. Any tree, shrub or ground cover which does not survive shall be replaced with the same or similar planting material. The owner of the parcel, where the failing plant exists, is responsible for replacement and shall do so in a timely manner (60 days maximum). TDC (or subsequent owners' association) will maintain and replace failed landscape material in public areas of the Business Park including the Park entry and within rights-of-way.

Plant Schedules

PLANT SCHEDULE- OVERALL SITE					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE MIN.	NOTES
STREET TREES					
	QL	<i>Quercus Lyrata 'Highbeam'</i>	Highbeam Overcup Oak	3" Cal. Min.	B & B
	QP	<i>Quercus phellos 'High Tower'</i>	Hightower Willow Oak	3" Cal. Min.	B & B
	TC	<i>Tilia cordata</i>	Little Leaf Linden	3" Cal. Min.	B & B
	UA	<i>Ulmus americana</i>	Valley Forge American Elm	3" Cal. Min.	B & B
DECIDUOUS TREES- BUFFER PLANTING					
	AR	<i>Acer rubrum 'Armstrong'</i>	Armstrong Red Maple	3" Cal. Min.	B & B
	LS	<i>Liquidambar styraciflua 'Rotundiloba'</i>	Rotundiloba Sweetgum	3" Cal. Min.	B & B
	LT	<i>Liriodendron tulipifera</i>	Tulip Poplar	3" Cal. Min.	B & B
	NS	<i>Nyssa sylvatica</i>	Black Gum	3" Cal. Min.	B & B
	PL	<i>Platanus occidentalis</i>	American Sycamore	3" Cal. Min.	B & B
UNDERSTORY TREES- BUFFER PLANTING					
	AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry	8' HT.	B&B; Full Crown; Multi-Stemmed
	CC	<i>Cercis canadensis 'Forest Pansy'</i>	Forest Pansy' Redbud	8' HT.	B&B; Full Crown
	CCH	<i>Cercis canadensis 'Hearts of Gold'</i>	Hearts of Gold' Redbud	8' HT.	B&B; Full Crown
	CV	<i>Crataegus viridis</i>	Green Hawthorn	8' HT.	B&B; Full Crown
EVERGREEN TREES- BUFFER PLANTING					
	JV	<i>Juniperus virginiana</i>	Eastern Red Cedar	8' HT.	B&B; Full to Ground
	PS	<i>Pinus strobus</i>	White Pine	8' HT.	B&B; Full to Ground
MEADOW SEED MIX					
	AG	<i>Andropogon gerardii</i>	Big Bluestem		
	CL	<i>Chasmanthium latifolium</i>	River Oats		
	PV	<i>Panicum virgatum</i>	Switchgrass		
	RH	<i>Rudbeckia hirta</i>	Black Eyed Susan		
	SN	<i>Sorghastrum nutans</i>	Indangrass		

PLANT SCHEDULE- INDIVIDUAL SITE					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
DECIDUOUS TREES					
	AR	<i>Acer rubrum</i> 'Armstrong'	Armstrong Red Maple	3" Cal. Min.	B & B
	LS	<i>Liquidambar styraciflua</i> 'Rotundiloba'	Rotundiloba Sweetgum	3" Cal. Min.	B & B
	LT	<i>Liriodendron tulipifera</i>	Tulip Poplar	3" Cal. Min.	B & B
	NS	<i>Nyssa sylvatica</i>	Black Gum	3" Cal. Min.	B & B
	PL	<i>Platanus occidentalis</i>	American Sycamore	3" Cal. Min.	B & B
	QL	<i>Quercus Lyrata</i> 'Highbeam'	Highbeam Overcup Oak	3" Cal. Min.	B & B
	QP	<i>Quercus phellos</i> 'High Tower'	Hightower Willow Oak	3" Cal. Min.	B & B
	TC	<i>Tilia cordata</i>	Little Leaf Linden	3" Cal. Min.	B & B
	UA	<i>Ulmus americana</i>	Valley Forge American Elm	3" Cal. Min.	B & B
UNDERSTORY TREES					
	AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry	8' HT.	B&B; Full Crown; Multi-Stemmed
	CC	<i>Cercis canadensis</i> 'Forest Pansy'	Forest Pansy' Redbud	8' HT.	B&B; Full Crown
	CCH	<i>Cercis canadensis</i> 'Hearts of Gold'	Hearts of Gold' Redbud	8' HT.	B&B; Full Crown
	CV	<i>Crataegus viridis</i>	Green Hawthorn	8' HT.	B&B; Full Crown
EVERGREEN TREES					
	IE	<i>Ilex x</i> 'Emily Bruner'	Emily Bruner Holly	8' HT.	B&B; Full to Ground
	JV	<i>Juniperus virginiana</i>	Eastern Red Cedar	8' HT.	B&B; Full to Ground
	MG	<i>Magnolia grandiflora</i>	Bracken's Brown Beauty	8' HT.	B&B; Full to Ground
	PS	<i>Pinus strobus</i>	White Pine	8' HT.	B&B; Full to Ground
DECIDUOUS SHRUBS					
	CO	<i>Cephalanthus occidentalis</i>	Common Buttonbush	3 Gal	
	CA	<i>Clethra alnifolia</i>	Hummingbird Summersweet	3 Gal	
	FG	<i>Fothergilli gardenii</i> 'Mt. Airy'	Mt Airy Fothergilla	3 Gal.	
	HQ	<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea	3 Gal.	
	IV	<i>Ilex verticillata</i> Nana 'Red Sprite'	Red Sprite Winterberry	3 Gal	
	IV	<i>Itea virginica</i> 'Little Henry'	Little Henry Virginia Sweetspire	3 Gal	
	RA	<i>Rhus aromatica</i> 'Gro Low'	Dwarf Fragrant Sumac	3 Gal.	

EVERGREEN SHRUBS					
	BS	<i>Buxus sempervirens</i>	Common Boxwood	5 Gal.	
	CH	<i>Cephalotaxus harringtonia</i> 'Dukes	Duke Gardens Yew	5 Gal.	
	IG	<i>Ilex glabra</i>	Compacts Inkberry	5 Gal.	
	PL	<i>Prunus laurocerasus</i> 'Otto Luyken'	Otto Luyken Laurel	3 Gal.	
PERENNIALS AND GRASSES					
	AH	<i>Amsonia hubrechtii</i>	Willowleaf bluestar	1 Gal.	
	EP	<i>Echinacea purpurea</i> 'Kim's Knee High'	Kim's Knee High Coneflower	1 Gal.	
	HC	<i>Hypericum calcycinum</i>	St. Johns Wort	3 Gal.	
	MC	<i>Muhlenbergia capillaris</i>	Muhly Grass	1 Gal.	
	RH	<i>Rudbeckia hirta</i>	Black-eyed Susan	1 Gal.	
	SS	<i>Schyzachyrium scoparium</i>	The Blues Little Bluestem	1 Gal.	
	HV	<i>Heuchera villosa</i>	Autumn Bride Heuchera	1 Gal.	

DRAFT

I. LANDSCAPE ELEMENTS

INTENT:

Landscape elements shall relate to and complement the architecture and landscape design of each parcel and shall be integrated with the park's overall landscape design.

GUIDELINES:

- Design walls and fences to be compatible with the architecture of the buildings they serve by repeating forms, materials, colors, textures, and/or patterns complementary to and consistent with the primary building. Use a consistent design in walls and fences which are within a given parcel or grouping of buildings.
- Use earth berms to provide screening (alone or in combination with plant material) and to provide visual interest in the landscape. Berm use and placement should enhance the overall Business Park design. Design and shape built landforms (berms, medians) to be gently rolling—appearing as an extension of the natural landform. Built landforms with hard edges or an erratic series of small undulations are undesirable.
- Integrate planting designs with the design of walls and fences so that each complements the other.
- Locate fenced areas to the side and/or rear of parcels. Fencing shall not be permitted between a front building face and the road rights-of-way.
- All fencing materials are subject to review for appropriateness. Chain link fence should be used for security reasons only, and should be vinyl coated in a dark color to minimize its visual impact. No barbed wire or razor wire permitted.

J. SIGNAGE

INTENT:

Signs used in the Business Park shall provide clear, logical, and consistent directional information; reinforce an orderly traffic pattern and flow; be legible from moving automobiles; and be located where time is allowed for decisions to be made for appropriate maneuvers.

- The design guidelines used in the Business Park shall be used consistently throughout the Park to provide a unified appearance. The guidelines specify standards for size, color, form, type style and type size, logo placement, type locations, message content, materials, and general sign locations for each type of sign. Business signs shall be consistent with the sign design guidelines for the Business Park.

GUIDELINES:

- All sign types shall conform in size and dimension to the Zoning Ordinance for Knox County, Tennessee and the MBP Design Guidelines, unless otherwise noted.
- Each development shall be limited to one free-standing sign of not more than one hundred (100) square feet of sign area and not exceeding six (6) feet in height. For doubled-faced signs, a maximum of fifty (50) square feet will be permitted per side. Each sign must be ground mounted with a fully enclosed base.
- Free-standing signs shall be located no closer than ten (10) feet from the street right-of-way line, or fifteen (15) feet from the edge of pavement, whichever is greater so long as the sign is not located in the street right-of-way.
- One (1) face sign will be permitted at one (1) square foot of sign area for each foot of building frontage, up to maximum of one hundred (100) square feet per building. The sign shall not extend above the parapet wall. Multi-tenant buildings may be approved for more than one (1) sign, provided that all other requirements of this section are met.
- Additional signs may be permitted if approved by both the DRB and the Planning Commission through the Use-on-Review procedure, provided that scaled drawings of the signs indicate they will not detract from the Midway Business Park development. The development plan must clearly show that because of unusual topography, building locations and relationships of development with multiple structures, additional signs are essential to inform and direct the public.
- No sign may have flashing, intermittent or animated illumination.
- Billboards and other advertising signs are prohibited.
- Finishes should be matte or flat as opposed to glossy or reflective finishes,
- The number of colors on each sign shall be limited to three,
- The message on the sign shall be limited to a maximum of corporate name, logo, street address, and parent company, except where otherwise allowed.
- Signs may be internally illuminated or not illuminated.

- Signs shall be internally illuminated through the use of Light Emitting Diode (LED) technology. Internally illuminated signs shall not be mounted on a building wall that faces a property line that abutting privately owned property beyond the boundary of the Business Park. The signs shall be designed so that when illuminated at night, only the letters and or logos of the sign are visible. This shall be accomplished by one of the following methods:
 - Channel letters where the raceways, conduits, and other electrical components are concealed from public view, or
 - Cabinet design with an opaque and non-reflective background with translucent letters and logos.
- No light shall emanate through the background, the borders, sides, or any other surface of the sign or its supporting structure.

Temporary Signs

- One construction sign and one “for sale” / “for lease” sign is permitted per parcel. Signs shall not exceed thirty-two (32) square feet.

K. LIGHTING

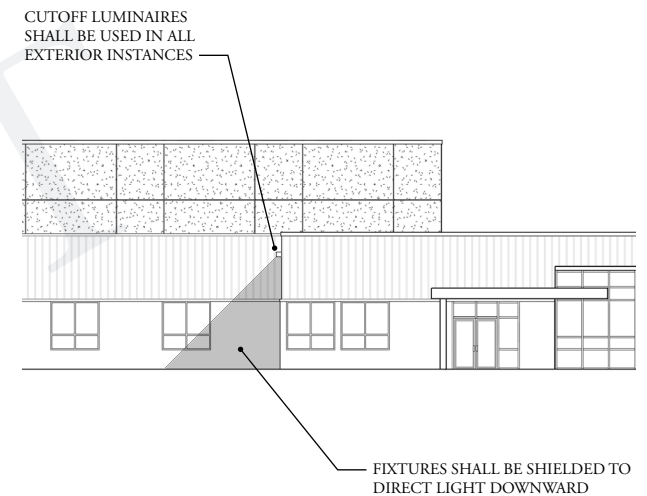
INTENT:

Light shall be provided for the safe and efficient movement of people and vehicles with minimal light/glare off site. Lighting features shall contribute to a unified Center appearance while also distinguishing individual businesses.

GUIDELINES:

- Provide lighting, as needed for safe movement, along roadways and entry drives; throughout parking areas; at site, parcel, and building entrance areas; and along pedestrian walkways.
- Lighting intensity shall not exceed the following:
 - Parking lots – 2.5 foot candles
 - Use areas and entrances - 5 footcandles

- Sidewalks, paths, and steps - average of 1 footcandle
- At perimeter lot lines adjacent to privately owned agricultural or residential zoning 0.0 footcandles. Property owned by public utilities is not included in the 0.0 footcandle requirement.
- Changes in illumination requirements will be considered when they are consistent with recommendations by the current Institute of Electrical Standards for office and industrial uses.
- Light sources shall be LED with core temperatures between 3,200 and 3,800 kelvin. Neutral colored poles of a dark color are desired. All hardware should be vandal proof and colored to match the pole and fixture color.
- Use special fixtures at building entrance areas to help establish identity for each business. All light fixtures should be chosen to be compatible with the overall Business Park lighting design. Full cut-off fixtures are required.
- Locate lights to avoid glare or excessive light spillage on adjacent sites and direct exterior lighting away from adjoining properties. Glare, whether direct or reflected, shall not be visible at any property line.
- Cut-off luminaires shall be used for all parking, road, and security lights to reduce the amount of glare and light spillage. The bulb shall be concave or flat and shall not be visible from the side.
 - Shield light sources from view of adjacent privately owned agricultural and residential properties where feasible.
- No pole light shall exceed 30 feet in height. Recommended range for the height of lights are:
 - Roadways and parking areas—25-30 feet
 - Intermediate landscape lights and Pedestrian lights—8-16 feet
 - Pathway lights—less than 4 feet
- Use building illumination and architectural lighting to articulate and highlight particular building features. Indirect lighting (no light source visible), overhead down lighting, and/or interior illumination which does not spill outside are encouraged.
- Wall-pack units shall be permitted in service areas only and the units shall be shielded to direct light downwards. Full cut-off fixtures required.+



LIGHTING CUTOFF

DRAFT

PREPARED BY:

CRJA-IBI Group
Draft
July 29, 2016

SUBDIVISION - CONCEPT

Name of Applicant: THE DEVELOPMENT CORPORATION OF KNOX COUNTY
 Date Filed: 7/25/16 Meeting Date: 9/8/16
 Application Accepted by: Thomas Breckle
 Fee Amount: \$1820.00 File Number: Subdivision - Concept 9-SB-16-C
 Fee Amount: -0- Related File Number: Development Plan 9-E-16-UR

PROPERTY INFORMATION

Subdivision Name: THE MIDWAY BUSINESS
 Unit/Phase Number: N/A
 General Location: AT INTERSECTION OF MIDWAY ROAD & THORN GROVE PK.
 Tract Size: 327.94 AC. No. of Lots: 44
 Zoning District: (EC) EMPLOYMENT CENTER
 Existing Land Use: RESIDENTIAL & LIGHT FARM
 Planning Sector: EAST KNOX COUNTY
 Growth Policy Plan Designation: PLANNED GROWTH
 Census Tract: 53.02
 Traffic Zone: 132
 Parcel ID Number(s): SEE ATTACHED

Jurisdiction: City Council _____ District
 County Commission 8 District

PROPERTY OWNER/OPTION HOLDER

PLEASE PRINT
 Name: TODD NAPIER, PRESIDENT & CEO
 Company: THE DEVELOPMENT CORP. OF KNOX CO.
 Address: 17 MARKET SQUARE, SUITE 201
 City: KNOXVILLE State: TN Zip: 37902
 Telephone: 865-546-5887
 Fax: 865-546-6170
 E-mail: tnapiert@knoxdevelopment.org

PROJECT SURVEYOR/ENGINEER

PLEASE PRINT
 Name: BRENT JOHNSON
 Company: VAUGHN & MELTON
 Address: 1909 AILOR AVE
 City: KNOXVILLE State: TN Zip: 37921
 Telephone: (865) 546-5800
 Fax: (865) 546-4714
 E-mail: bjohnson@vaughn-melton.com

AVAILABILITY OF UTILITIES

List utility districts proposed to serve this subdivision:

Sewer PLANNED KUB
 Water ON-SITE KUB
 Electricity ON-SITE KUB
 Gas PLANNED KUB
 Telephone 865-524-2911

APPLICATION CORRESPONDENCE

All correspondence relating to this application (including plat corrections) should be directed to:

PLEASE PRINT
 Name: BRENT JOHNSON
 Company: VAUGHN AND MELTON
 Address: 1909 AILOR AVE
 City: KNOXVILLE State: TN Zip: 37921
 Telephone: 865-546-5800
 Fax: 865-546-4714
 E-mail: bjohnson@vaughn-melton.com

TRAFFIC IMPACT STUDY REQUIRED

No Yes

USE ON REVIEW No Yes

Approval Requested:
 Development Plans in Planned District or Zone
 Other (be specific): _____

VARIANCE(S) REQUESTED

No Yes (If Yes, see reverse side of this form)

VARIANCES REQUESTED

1. SETBACK REDUCTION FROM 50 FT TO 25 FT ON ROADWAY "A"

Justify variance by indicating hardship: THE EXISTING ALIGNMENT OF MIDWAY RD COMBINED WITH THE EXISTING KUB EASEMENT CREATES A SITUATION NOT CONDUSIVE TO PLACING A FIRE HALL, FURTHERMORE,

2. THIS LOT IS ADJACENT ONLY TO THE TVA ELECTRICAL SUBSTATION

Justify variance by indicating hardship: AND OTHER LOTS WITHIN THE BUSINESS PARK. THERE IS NO ADJACENCY TO NON-BUSINESS PARK NEIGHBORS.

FURTHERMORE,

NEIGHBORS.

3. VARIANCE FOR LOADING DOCKS IF THE LOADING DOCK BY

Justify variance by indicating hardship: EC ZONING IS IN BACK OR SIDE YARD AND THAT REAR OR SIDEYARD IS FACING A RESIDENT

4.

Justify variance by indicating hardship: RESIDENTIAL PROPERTY WILL BE IMPACTED MORE UNLESS DOCK OPEN TO FRONT AND ADJACENT RESIDENTIAL PROPERTY

5.

Justify variance by indicating hardship: _____

6.

Justify variance by indicating hardship: _____

7.

Justify variance by indicating hardship: _____

APPLICATION AUTHORIZATION

I hereby certify that I am the authorized applicant, representing ALL property owners involved in this request or holders of option on same, as listed on this form. I further certify that any and all variances needed to meet regulations are requested above, or are attached. I understand and agree that no additional variances can be acted upon by the legislative body upon appeal and none will be requested. I hereby waive the requirement for approval or disapproval of the plat within sixty (60) days after its submission, in accordance with the provisions of Tennessee Code Annotated 13-3-404.

PLEASE PRINT

Name: Ray Christian

Address: 17 Market Square # 201

City: Knoxville State: TN Zip: 37902

Telephone: 865-246-2642

Signature: Ray Christian

Fax: 865-546-6170

Date: 7/25/2016

E-mail: rchristian@Knoxdevelopment.org

Development Corporation of Knox County
CLT Map: 74
Parcel: 97
Parcel ID: 074 097
Recorded Deed: 20060922-0026292

United States of America
CLT Map: 74
Parcel: 95.01
Parcel ID: 074 09501
Recorded Deed: None

Development Corporation of Knox County
CLT Map: 74
Parcel: 92
Parcel ID: 074 092
Recorded Deed: 20060922-0026293

Development Corporation of Knox County
CLT Map: 74
Parcel: 93
Parcel ID: 074 093
Recorded Deed: 20060922-0026293

Development Corporation
CLT Map 74
Parcel: 96.07
Parcel ID: 074 09607
Recorded Deed: 20061012-0032300

Development Corporation
CLT Map: 74
Parcel: 96
Parcel ID: 074 096
Recorded Deed: 20061005-0030301

Development Corporation of Knox County
CLT Map: 74
Parcel: 96.02
Parcel ID: 074 09602
Recorded Deed: 20061026-0036229

Development Corporation of Knox County
CLT Map: 74
Parcel: 39
Parcel ID: 074 039
Recorded Deed: 20061026-0036229

Development Corporation of Knox Co
CLT Map: 74
Parcel: 96.04
Parcel ID: 074 09604
Recorded Deed: 20061026-0036227

Development Corporation of Knox County
CLT: 74
Parcel: 96.05
Parcel ID: 074 09605
Recorded Deed: 20061026-0036231

Development Corporation of Knox County
CLT Map: 74
Parcel: 96.06
Parcel ID: 074 09606
Recorded Deed: 20061026-0036229

Development Corporation of Knox Co
CLT Map: 74
Parcel: 40
Parcel ID: 074 040
Recorded Deed: 20061027-0036583

The Development Corporation of Knox Co
CLT Map: 74
Parcel: 41
Parcel ID: 074 041
Recorded Deed: 20061027-0036582



Vaughn & Melton

Consulting Engineers

July 25, 2016

The Metropolitan Planning Commission
City-County Building
400 Main St.
Knoxville, Tennessee 37901

Ladies and Gentlemen,

Vaughn & Melton Consulting Engineers (V&M) is excited about the opportunity to submit the Concept Plan of the Midway Business Park (MBP) to you at the request of the Development Corporation of Knox County (TDC). Having gone through the checklist, below is a narrative explanation of information requested.

First, we believe that the existing conditions map is best represented by the aerial photo provided by KGIS from 2016 pictometry. This map is included with the existing TVA and KUB easements along with the proposed boundary of the site to represent existing conditions.

In addition to the above, the proposed roadway is overlain on the two foot contour topography acquired by V&M using a low altitude flight. This four page atlas contains a 1 inch equals 100 feet of the proposed roadway, ROW, slope limits and trail. As you will note, we plan to improve Midway Road as well as improve and relocate Thorn Grove Pike. Therefore, as we have staked Thorn Grove Pike with its intersection with Roadway "B", it is not located within the existing Thorn Grove Pike due to the aforementioned realignment. The intersection of Roadway "A" is directly across from Midway Road and therefore, it is my belief that staking would not be needed to locate it in the field.

Furthermore, included in this package is the roadway profiles and cross-sections every 50 feet along the profile. I hope that this provides you with the information needed to understand the relationship of the roadway, trail, ROW and easements to the existing topography.

Likewise, each sinkhole is represented with the required buffer shown as a cross-hatched area around the hole. Other depressions are represented by the contours but we have met with Scotty Sorrells, of the TDEC Underground Injection Control Permit group, and plan to grade over a few of those (each of which have been bored by S&ME and do not have rock or any indication of sinkhole activity near the surface). However, please note that all sinkholes that we believe to have an opening at the bottom, are included in the approximately 63 acres of preservation areas wherein we made a monumental effort to work with the land and preserve steep slopes, sinkholes and provide a wildlife corridor. We also plan to use a bottomless structure where Roadway "B" crosses the preservation area that will suffice for wildlife passage; therefore, creating a large corridor of connectivity for wildlife to roam in an area that exceeds 3400 feet in length and 2000 feet in width at the widest point. Yet, another large preservation area is located in the north eastern most corner of the proposed development.

As required by the concept plan checklist, the utilities provider will be KUB. Water and electric power is currently available on site and KUB is in the process of extending the sanitary sewer and gas trunk lines to the site. Forty-four lots are proposed on this almost 328 acre site and the roadways are proposed to be accepted by Knox County for the public's use.

As required, the schematic drainage plan is included. This plan shows the direction of flow from each lot to the primary roadway drainage system of vegetative swale sections which empty into five proposed detention ponds to facilitate peak flow reduction.

The aforementioned reduction is only for the master planned impervious area and any run-on that



Vaughn & Melton

Consulting Engineers

1909 AILOR AVENUE
KNOXVILLE, TN 37921
P. 865.546.5800
F. 865.546.4714

occurs. Upon development, each lot must also comply with the requirements of the Knox County Stormwater Regulations for both quantity and quality. Due to concerns about the purity of aquifers serving wells in the general area, about which we have heard repeatedly at the public meetings, and although we believe that a much greater threat exists from each neighbor's septic system drain fields and the farms in the area, we are proposing to use methods other than infiltration for water quality and quantity control. We do not plan to amend or enhance any infiltration properties of the development; however, we will rely upon features such as vegetated swales, depressed medians and islands where appropriate to allow for evapotranspiration.

The list of improvements at this point, remain as shown on the Development Plan. Improvements include existing roadway improvements on Midway Road and Thorn Grove Pike realignment and cross-section improvements. A trail along the roadway in a 30 feet easement adjacent to the ROW as well as a natural trail through the preservation areas which sums to 2.5 miles of trails in the MBP is proposed. Additional community and MBP amenities include a trailhead parking area, a sheltered picnic area and an adjacent green for passive recreation.

Besides the roadway information provided above, Cannon and Cannon Inc. was retained to study the traffic impacts and transportation needs of this project. Their Traffic Impact Study (TIS) is included as a part of this submittal package.

Finally, we are asking for a variance on the Roadway "A" setback. Due to the preferred location of Roadway "A" aligning with Midway Road for better traffic flow, the KUB easement and the TVA substation property which currently exist, we see no easy way in which to work around these obstacles that predate our proposal. These lots are important to utilize because we are currently in discussions with Rural Metro in order to donate lot 44 for a Fire Hall to better serve the MBP and the Thorn Grove and Midway communities. Moreover, each lot is important because we have attempted to build a quality development using best practices to work with the land such that only around 168 acres of the approximately 328 acres will be available for building sites.

We appreciate your consideration to approve the Concept Plan of the Midway Business Park.

Sincerely,

Brently J. Johnson, P.E., RLS

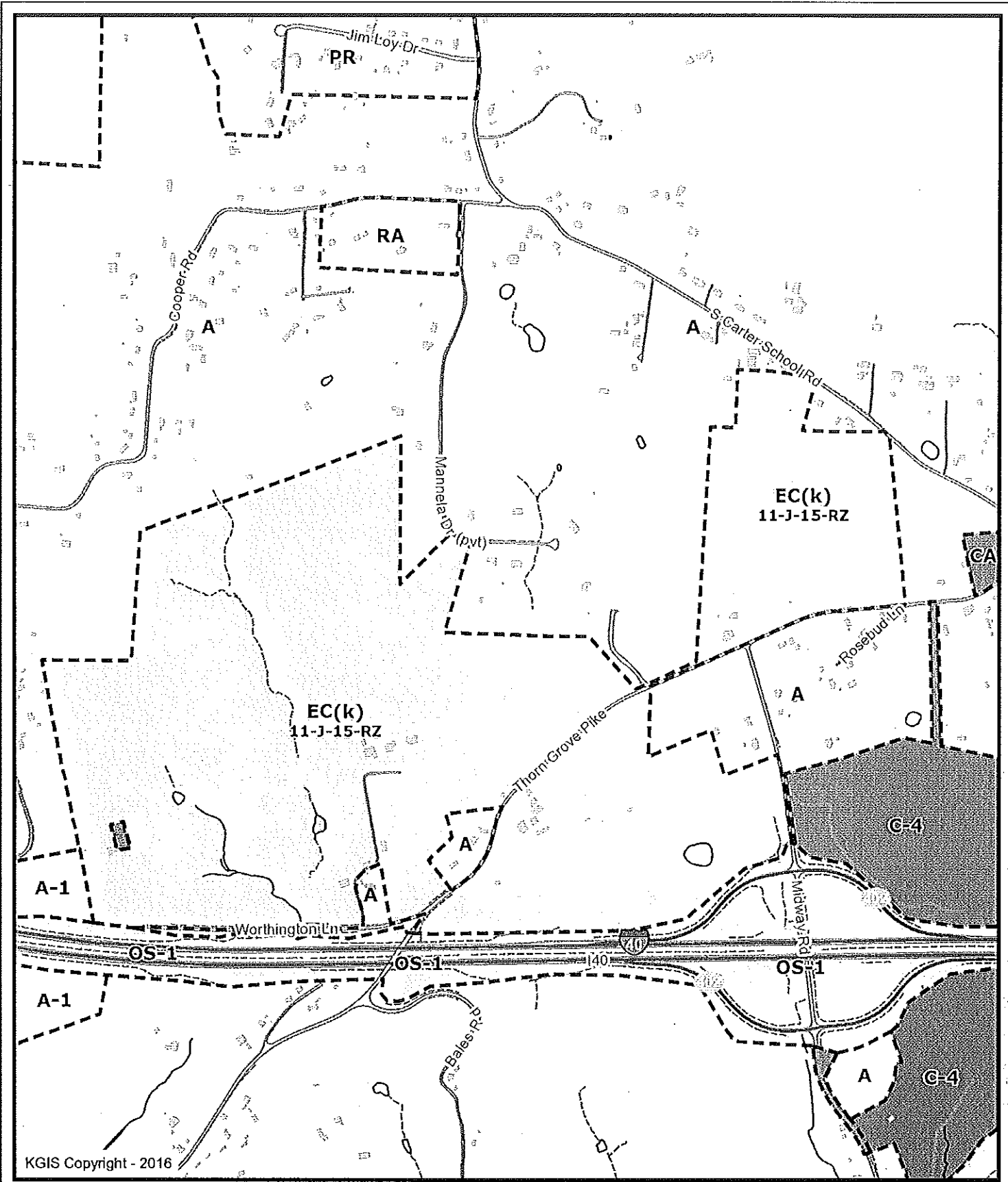
44-112.2 Certification of Concept Plan.

I hereby certify that I am a registered engineer, licensed to practice engineering under the laws of the State of Tennessee. I further certify that the plan 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.

Registered Engineer Brently Johnson

Tennessee Certificate No. 20410

GEORGIA
KENTUCKY
NORTH CAROLINA
SOUTH CAROLINA
TENNESSEE

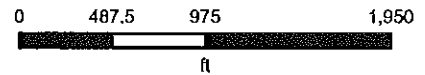


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