BOARD OF ALDERMEN TENTATIVE REGULAR MEETING AGENDA
CITY HALL COUNCIL CHAMBERS, 205 N. 1ST STREET, OZARK, MO
MONDAY, DECEMBER 16, 2024, 7:00 PM

Posted: 12/13/2024 Next Ordinance #24-092

The City encourages the public to view the live stream of this meeting at:
https://myozark.info/ozarkyoutube

1. **CALL TO ORDER**
2. **PLEDGE OF ALLEGIANCE**
3. **VIDEO ON RULES OF DECORUM**
4. **CALL OF THE ROLL OF ALDERMEN**
5. **APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING(S):**
   a. December 2, 2024 - Special Meeting
   b. December 2, 2024 – Regular Meeting
6. **CEREMONIAL MATTERS:**
7. **SCHEDULED VISITORS & GUESTS:**
   a. Ozark Chamber of Commerce – Monthly Update
   b. Historic River District - Updates
8. **FIRST READING BILL AND RESOLUTIONS:**
   (Open for Public Discussion)

a. NEW BILLS:

1. Bill #3619 An Ordinance Of The City Of Ozark, Missouri, Approving the Preliminary Plat For The Ozark Marketplace Subdivision And Authorizing The Director Of Planning And Development To Accept The Dedication Of The Public Streets And Easements To The City As Shown On The Preliminary Plat, Upon The Applicant Filing And Recording A Final Plat That Substantially Conforms To The Preliminary Plat; And Authorizing The City Clerk To Sign The Final Plat Upon Compliance With The Terms Of This Ordinance
Staff: Asst. City Administrator Cameron Smith
Alderman Jim Metcalf

i. Staff Comments
ii. In Person Comments
iii. Board Comments

2. **Bill #3620** An Ordinance Of The City Of Ozark, Missouri, Amending The Zoning Code And Official Map By Changing The Zoning Classification Of Certain Real Property Located At 1767 South 15th Avenue, C-2 to OW
Staff: Asst City Administrator Cameron Smith
Alderman Jim Metcalf

i. Staff Comments
ii. In Person Comments
iii. Board Comments

3. **Bill #3621** An Ordinance Of The City Of Ozark, Missouri, Adopting One New Chapter, Chapter 660, Residential Rental Dwelling Unit Inspections And Certificates
Staff: Asst. City Administrator Cameron Smith
Alderman Jim Metcalf

i. Staff Comments
ii. In Person Comments
iii. Board Comments

4. **Bill #3622** An Ordinance Of The City Of Ozark, Missouri, Adopting One New Chapter, Chapter 670, Regarding Contractor's Licenses
Staff: Asst. City Administrator Cameron Smith
Alderman Jim Metcalf

i. Staff Comments
ii. In Person Comments
iii. Board Comments

5. **Bill #3623** An Ordinance Of The City Of Ozark, Missouri, Amending The 2025 Fee Study To Add Five New Fees
Staff: Asst. City Administrator Cameron Smith
Alderman Bruce Galloway

i. Staff Comments
ii. In Person Comments
iii. Board Comments

6. **Bill #3624** An Ordinance Of The City Of Ozark, Missouri, Authorizing The City To Enter Into A Contract With Radmacher Brothers Excavating Company, Inc., For Phase 4, Phase 5, And Spur Improvements To The Chadwick Flyer Trail
Staff: Public Works Director Jeremy Parsons
Alderman Chris Aiken

i. Staff Comments

ii. In Person Comments
iii. Board Comments

7. **Bill #3625** An Ordinance Of The City Of Ozark, Missouri, Granting White River Valley Electric Cooperative, Inc. A Franchise For Electric Distribution
Staff: City Attorney Amanda Callaway
Alderman Bruce Galloway

i. Staff Comments
ii. In Person Comments
iii. Board Comments

8. **Bill #3626** An Ordinance Approving A Funding Agreement Between The City Of Ozark, Missouri And Missouri Commercial Development LLC, Relating To The Development Of The Ozark Marketplace Project.
Staff: City Attorney Amanda Callaway
Alderman Eddie Campbell

i. Staff Comments
ii. In Person Comments
iii. Board Comments

9. **Bill #3627** An Amended Ordinance Of The City Of Ozark, Missouri, Amending The Budget For Fiscal Year 2024
Staff: Finance Director Mary Edna Wilson
City Administrator Eric Johnson
Alderman Bruce Galloway

i. Staff Comments
ii. In Person Comments
iii. Board Comments

10. **Bill #3628** An Amended Ordinance Of The City Of Ozark, Missouri, Adopting A Budget For The 2025 Fiscal Year
Staff: City Administrator Eric Johnson
Alderman Bruce Galloway

i. Staff Comments
ii. In Person Comments
iii. Board Comments

b. **RESOLUTIONS**:

1. **Resolution #2013** A Resolution By The Board Of Aldermen Of The City Of Ozark, Missouri, Approving One Reappointment To The Planning And Zoning Commission, Caleb Berger
Staff: Asst City Administrator Cameron Smith
Alderman Jim Metcalf

9. SECOND READING AND FINAL PASSAGE OF BILLS:

(Board discussion only)

1. **Bill #3613** - An Ordinance Of The City Of Ozark, Missouri, Amending the Budget For Fiscal Year 2024
   Staff: Finance Director Mary Edna Wilson
   City Administrator Eric Johnson
   Alderman Bruce Galloway

2. **Bill #3614** - An Ordinance Of The City Of Ozark, Missouri, Adopting A Budget For The 2025 Fiscal Year
   Staff: City Administrator Eric Johnson
   Alderman Bruce Galloway

3. **Bill #3615 -** An Ordinance Of The City Of Ozark, Missouri, Authorizing The City To Enter Into And Execute A Contract With The Ozark Chamber Of Commerce For Professional Services
   Staff: City Administrator Eric Johnson
   Alderman Bruce Galloway

4. **Bill #3616** - An Ordinance Of The City Of Ozark, Missouri, Authorizing The City To Enter Into An Intergovernmental Agreement with Christian County Regarding The County Government Plaza Development
   Staff: City Attorney Amanda Callaway
   Alderman Eddie Campbell

5. **Bill #3617** - An Ordinance Of The City Of Ozark, Missouri, Establishing Sewer Connection Fees
   Staff: Public Works Director Jeremy Parsons
   Alderman Chris Aiken

6. **Bill #3618** - An Amended Ordinance Of The City Of Ozark, Missouri, Approving The 2025 Fee Study Establishing Certain City Fees
   Staff: City Attorney Amanda Callaway
   Alderman Bruce Galloway

10. REPORT OF OFFICERS, BOARDS AND COMMITTEES:

a. City Administrator Eric Johnson

b. Planning and Development Department – Monthly Report

c. OC/Parks and Recreation Department – Monthly Report

11. MAYOR AND BOARD OF ALDERMEN COMMENTS AND ANNOUNCEMENTS

12. CLOSED SESSION:

a. Litigation

b. Personnel

13. ADJOURNMENT

Representatives of the News Media may obtain copies of this notice by contacting: The City Clerk's Office at (417) 581-2407 or by E-Mail: chodges@ozarkmissouri.org. The Board of Aldermen Agenda Documents may be obtained from the City's Website: www.ozarkmissouri.com

In accordance with ADA Guidelines, if you need special accommodations when attending City Meetings, please notify the City Clerk's Office at least 3 days prior to the scheduled meeting.

The Tentative Agenda includes any matters that may properly come before the Board. (Ord. No. 16-015)

The Tentative Agenda of this Meeting Includes a Vote to Close the Meeting to Discuss Litigation Pursuant to RSMo: 610.021 (1) & (3).

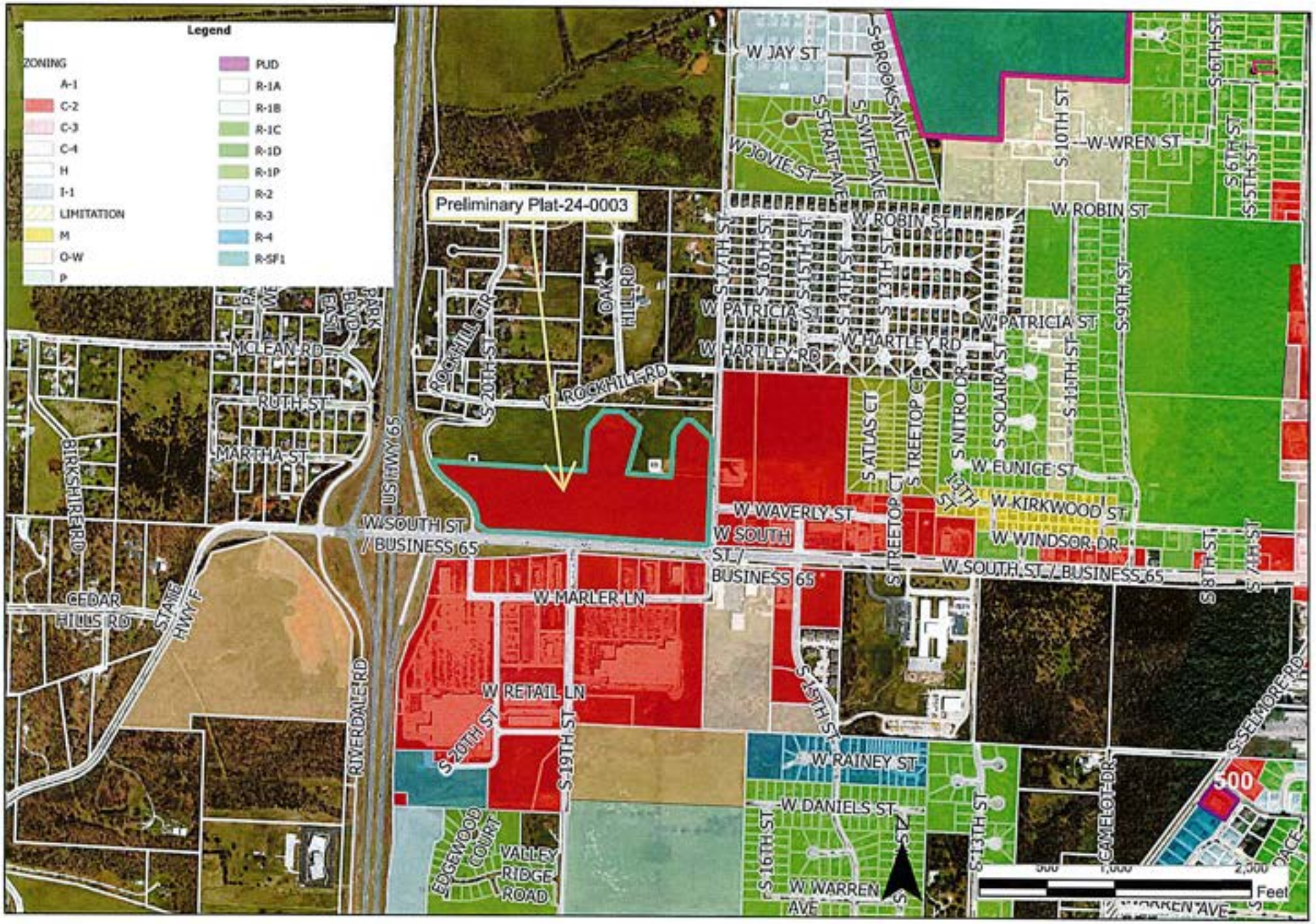
PLANNING AND DEVELOPMENT DEPARTMENT
CITY OF OZARK, MO
205 N. 1ST STREET
OZARK, MISSOURI 65721

Application:	Preliminary Plat-24-0003
Property Owner(s):	Elk Valley LLC
Representative:	OWN Engineering, Applicant Representative
Lot Sizes:	Approximately 26.01 acres
Location:	1505 S. 17th Street - the southern approximately 26-acre parcel bordered by S. 20th Street on the west, W. South Street on the south, and South 17th Street on the east.
Existing Use:	Vacant/Agricultural
Existing Zoning:	A-1 (Agriculture), outside city limits
Requested Zoning:	C-2 (General Commercial), working through annexation process.
Meeting Dates:	P&Z Commission: November 25, 2024 City Council 1st Reading: December 16, 2024 City Council 2nd Reading: January 6, 2025

Surrounding Land Use and Zoning:

North: Agricultural/Vacant; A-1 (Agriculture); Outside City Limits
East: Commercial: C-2 (General Commercial), in City
South: Commercial; C-2 (General Commercial), in City
West: Residential; R-1 (Suburban Residence) and RR-1 (Rural Residence); Outside City Limits

Preliminary Plat-24-0003



Preliminary Plat-24-0003

Planning and Zoning Commission Options:
In reviewing a request for preliminary plat and code Section 410.170, the Planning and Zoning Commission shall approve, approve with modifications or disapprove the preliminary plat. Below are highlights of the City Code Section 410.170 refer to the entire section for additional information when considering a preliminary plat application. The Commission's motion should include a reasoning for their recommendation.

City Code Section 410.170(C)(1):
Any conditions to the preliminary plat required as prerequisites for approval shall be noted in the minutes of the Planning and Zoning Commission's public hearing. A list of required conditions will be sent to the applicant or his/her engineer within ten (10) business days so the preliminary plat can be revised and resubmitted to the Planning and Development Department prior to the Board of Aldermen hearing for approval.

City Code Section 410.170(D):
If the Planning and Zoning Commission do not recommend approval or approval with conditions of the preliminary plat, the Commission shall provide a statement of the reasons for such action and return it to the applicant within ten (10) business days of the action. The grounds for denial of any preliminary plat submitted or regulations violated by the plat shall be set forth in the minutes of the Planning and Zoning Commission meeting.

**See the City Code Sections 410.170 and 410.190 in the packet for additional Preliminary Plat information.

Ozark Comprehensive Plan:
The Ozark Comprehensive Plan ("The Plan") recommends a future land use of Commercial for this parcel. The zoning of C-2 (General Commercial) is appropriate for this recommended future land. The requested preliminary plat conforms to the zoning. The parcel is located within Tier 1 of the Urban Service Area. The existing public water and sewer services run within the property boundaries.

Conforming/Nonconforming:
The proposed plat and the use are in conformance to the code and the requested zoning.

Overlay Districts	**Does it apply to the property in question?**
Core Overlay District (Section 405.452)	No
Transportation Overlay District (Section 405.453)	Yes
Neighborhood Overlay District (Section 405.454)	No
Highway 65 corridor Overlay District (Section 405.455)	Yes
Historic Property	No

Impact of Overlay:
The proposed lots that fall within the Transportation Overlay District and the Highway 65 Corridor Overlay District shall comply with the requirements of those districts.

Emergency Services:
The parcel serviced by the Ozark Police Department, Christian County Ambulance District, and Ozark Fire District. The parcel is going through the annexation process, and once the parcel is annexed, it will be served by the Ozark Police Department.

Environmental Features:
This parcel does not contain a floodplain or any sinkholes that Staff are aware of at the time of this report. There are freshwater pond wetlands identified in the northern portion of the property. During the construction plan review, a consultant will need to evaluate the wetland and go through the proper permitting processes. *See Environmental Features Map.*

Trail Connections
No trail connections are identified on this property in the Pedestrian Master Plan. Sidewalks will be required along all street frontages.

Water:
Currently, there is a 12-inch water main that is located on the southeast corner of the subject property. Typically, developments are required to have a looped connection. A traditional looped connection may be cost prohibitive due to the MODOT right-of-way to the south. In lieu of a connection to the south, a second connection should be made to the water main located to the east across 17th Street. All future development and water main extensions will require approval from the Public Works Department. All construction plans will be reviewed to ensure compliance with the City of Ozark's design standards. During the construction plan review process, staff will evaluate the engineered drawings to ensure that the property has adequate water service and fire flows. *See Public Works Map*

Sewer:
An 8-inch gravity sewer main is located on the southeast corner of the subject property. Any offsite sewer connections and easements will be the developer's responsibility. All future development and any sewer main extensions will require approval of Public Works Department and their 3rd Party review consultant. All construction plans will be reviewed to ensure compliance with the City of Ozark's design standards. *See Public Works Map*

Stormwater:
Stormwater management and stormwater quality measures will be addressed during the development process based on the scope of the improvements to the property. These improvements will be reviewed to conform with the City's design standards and stormwater regulations. Construction documents will be reviewed to ensure that the proposed stormwater design complies with the calculations and management methods outlined within the previously submitted stormwater report. All construction plans will be reviewed to ensure compliance with the City of Ozark's design standards. *See Public Works Map*

Streets:
The property can be accessed from West South Street, South 20th Street, and South 17th Street. West South Street is classified as a primary arterial and is under the jurisdiction of the Missouri Department of Transportation (MoDOT). South 20th Street is classified as a commercial street and is also under the jurisdiction of MoDOT. The East side of the subject property is bordered by South 17th Street. This street is classified as a secondary arterial and is under the jurisdiction of the Ozark Special Road District (OSRD). A traffic impact study has been completed and was reviewed during the preliminary plat process. The development construction documents will be reviewed to ensure that the roadway improvement plans comply with the City of Ozark Design Standards. A preliminary traffic impact study has been submitted and was reviewed during the preliminary plat process. As the construction documents and final transportation impact study are

reviewed, the proposed connection to S. 17th Street will be further evaluated as to whether access restrictions are warranted.

Additional Utilities (Electric, Gas, Fiber, etc.):
Any other utilities should go through the appropriate entity to ensure service is available to this site or to determine if there are any requirements to adequately service their site.

Buffer Yard
The property line abutting agricultural property will require a Buffer Yard B, however City Code Section 405.780 notes the buffer yard requirement for property lines abutting agriculturally zoned land may be waived or reduced at the discretion of the Community Development Director. The Director waived the buffer yard requirement based on the existing use: agricultural/vacant, the property ownership: the same owner as that of the property being platted, and the possible uses that could develop on the property in the future: the future land use map identifies commercial as the future use of the property.

Code Compliance for Preliminary Plats:
By the City Code, a preliminary plat shall go before the Planning and Zoning Commission and then two hearings at the Board of Aldermen. There are no publication requirements. The meetings are posted on the website and outside City Hall.

Staff Recommendations:
Based on the above report and staff's finding, all requirements have been met for the approval of the preliminary plat application as presented.

Staff: Megan Bischof, City Planner

SITE PHOTOS

Figure 1- View from the eastern lot line of the property looking south. S. 17th Street is on the lefthand side of the photo.

Figure 2- View from the eastern lot line of the property looking west.

Figure 3- View from the southeastern corner of the property looking west. W. South Street is on the lefthand side of the photo.

Figure 4- View from the southeastern corner of the property looking north. S. 17th Street is on the righthand side of the photo.

Figure 5- View from the southwestern corner of the property looking north. S. 20th Street is on the lefthand side of the photo.

Figure 6- View from the southwestern corner of the property looking east. W. South Street is on the righthand side of the photo.

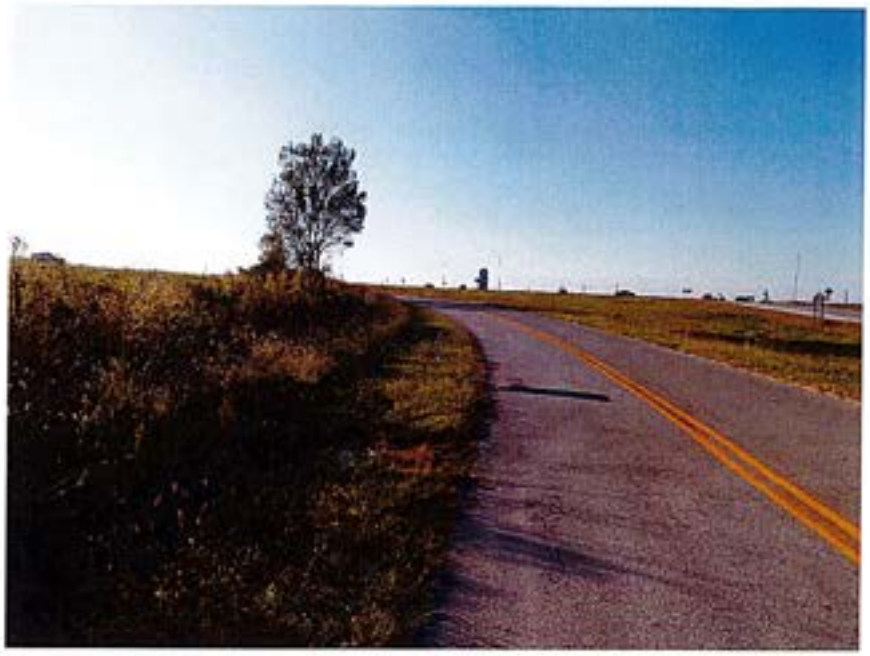


Figure 7- View from the northwestern corner of the property looking south. S. 20th Street is on the righthand side of the photo.

Figure 8- View from the northwestern corner of the property looking east.

Preliminary Plat-24-0003
Environmental Features Map

Preliminary Plat-24-0003
Public Works Infrastructure Map

City of Ozark, MO
Planning and Development

205 N 1st Street
Ozark, MO 65721
417-581-2407
https://ozarkmissouri.com/

PERMIT

PPLAT-24-0003 — **PRELIMINARY PLAT**

SITE ADDRESS: 1505 S 17TH ST OZARK
PRIMARY PARCEL: 110726004011014001
PROJECT NAME: THE OZARK COMMERCIAL SUBDIVISION

ISSUED:
EXPIRES:

APPLICANT: Davis, Jared
3213 S West Bypass
Springfield, MO 65807
4178662741

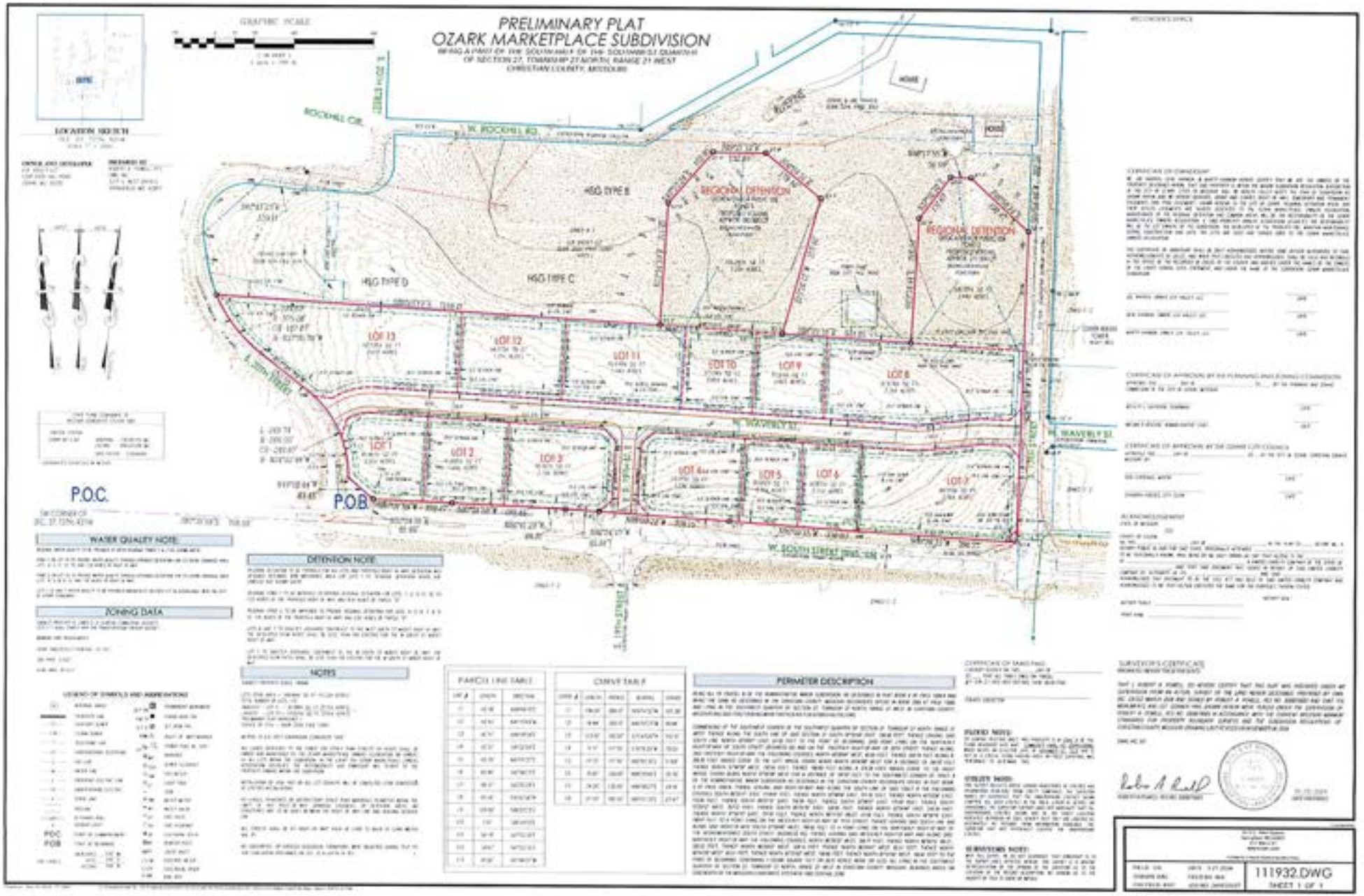
OWNER:

Detail Name	Detail Value
Owner's Name	Elk Valley LLC
Owner's Email Address	pc@weareown.com
Owner's Phone #	4178662741
Development's proposed name	Ozark Commercial Subdivision
Size of Property Square Ft	1132560
Size of Property Acreage	26
Number of Lots	13
Existing Use	Vacant
Proposed Use	Commercial
Existing Zoning	C-2 General Commercial District
Is the property located within a Historic District?	No
I hereby certify the proposed work is authorized by the owner of record and I have been authorized by the owner to make this application as his authorized agent and agree to conform to all applicable laws and understand that this permit may be revoked if I fail to do so. The Applicant is responsible for all third party fees. The City of Ozark will issue and track invoices for these cost. By typing your name you agree to the above items.	Amber Broyles

Issued By: _____

City of Ozark, MO
Planning and Development
205 N 1st Street
Ozark, MO 65721
417-581-2407
https://ozarkmissouri.com/

FEES:	Paid	Due		
3rd Party Civil Review Fee		$563.75		
Preliminary Plat	$1,147.50	$0.00		
		Totals :	**$1,147.50**	**$563.75**


PRELIMINARY PLAT
OZARK MARKETPLACE SUBDIVISION
BEING A PART OF THE SOUTHHALF OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 27 NORTH, RANGE 21 WEST
CHRISTIAN COUNTY, MISSOURI
GRAPHIC SCALE
LOCATION SKETCH
W. ROCKHILL RD.
ROCKHILL CIR.
HSG TYPE B
HSG TYPE C
HSG TYPE D
REGIONAL DETENTION
REGIONAL DETENTION
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
W. WAVERLY ST.
W. SOUTH STREET
P.O.C.
P.O.B.
WATER QUALITY NOTE
DETENTION NOTE
ZONING DATA
NOTES
PERIMETER DESCRIPTION
PARCEL LINE TABLE
CURVE TABLE
LEGEND OF SYMBOLS AND ABBREVIATIONS
SURVEYOR'S CERTIFICATE
111932.DWG
SHEET 1 OF 1

OWN

Engineering beyond.™

September 17, 2024
Revised: October 14, 2024

Stormwater Management & Drainage Report

Client

Missouri Commercial Development LLC
Kevin Guffey
709 Hwy 28 West
Belle, MO 65013

Project

Ozark Commercial Subdivision
Business 65 between 20th & 17th St
Ozark, MO

P.N. 24SP10152

Report Prepared By:
OWN, Inc.
3213 S. West Bypass
Springfield, MO 65807
417.866.2741

WeAreOwn.com
866.866.2741
info@weareown.com

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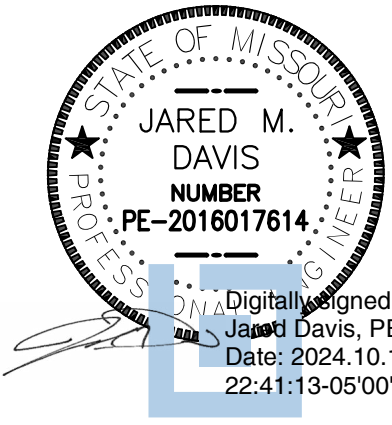
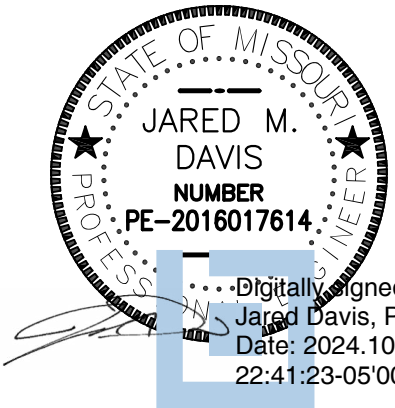


Appendix



Digitally signed by Jared Davis, PE
Date: 2024.10.14 22:41:23-05'00'

Project Description and General Information

This report summarizes the stormwater improvements associated with the Ozark Commercial Subdivision off of Business 65 between 17th and 20th St in Ozark, MO, see Figure 1. The project includes 13 commercial lots and 2 regional detention basins.

All sketches and exhibits are oriented north unless indicated otherwise.

Figure 1: Site Location

The subject property has five outfalls and no offsite drainage areas (DA). Discharge will be less than or equal to existing flow rates at each outfall during the 2-, 10-, 25-, and 100-year storm events. Stormwater detention modeling was done using Hydraflow Hydrographs extension for AutoCAD Civil 3D 2023.

Note, the proposed wet detention basins were sized assuming 10.77 acres of parcel A, the parcel north of the subdivision, will be developed and drain to the basins, see the developed DA map for details. 80% impervious area was assumed.

In addition to restricting each developed outfall to existing flowrates, new culverts are proposed in the Rockhill Rd right-of-way (ROW) north of the development to prevent water overtopping the road during the 25-year storm event, alleviating existing flooding.

Existing Onsite Drainage Areas

Refer to Table 1 for a summary of all DA's size and properties. DA and soil maps are included in the Appendix.

Existing Southeast DA

This DA is entirely meadow and outfalls to the southeast corner of the property, MoDOT ROW, and is collected in the storm sewer along Business 65.

Existing Southwest DA

This DA is entirely meadow and outfalls to the southwest corner of the property, MoDOT ROW, to a culvert flowing west under 20th St.

Existing Northwest DA

This DA is entirely meadow and outfalls to northwest corner of the property, MoDOT ROW, the water continues to flow northwest along the 20th St ROW.

Existing Pond 1 DA

This DA is entirely meadow and includes the tributary area of the existing west pond and the area of Parcel A which will be routed to Pond 1 as part of future development. The entire area drains to the north neighbor's property and Rockhill Rd ROW.

Existing Pond 2 DA

This DA is entirely meadow and includes the tributary area of the existing east pond and the area of Parcel A which will be routed to Pond 2 as part of future development. The entire area drains to the north neighbor's property which drains to Rockhill Rd ROW.

Developed Onsite Drainage Areas

Refer to Table 1 for a summary of all DA's size and properties. DA and soil maps are included in the Appendix.

Developed Southeast DA

Lots 6 & 7 are assumed to be developed at 90% impervious and will discharge directly to the MoDOT Business 65 ROW. Calculations are provided showing the developed flow rates are less than existing. Lots 6 & 7 will provide onsite water quality using alternative methods such as a vegetative filter strip at the time of development. No extended detention will be required.

Developed Southwest DA

Lots 1 is assumed to be developed at 90% impervious and will discharge directly to the culvert under 20th St in MoDOT's ROW along with 0.41 acres of of Waverly St ROW. Calculations are provided showing the developed flow rates are less than existing. Lots 1 will provide onsite water

quality using alternative methods such as a vegetative filter strip at the time of development. No extended detention will be required.

Developed Northwest DA

All of Lot 13 is designed to go to Pond 1. However, if at the time of Lot 13 buildout it is unfeasible to convey all runoff to the basin 0.8 acres can discharge to the existing northwest outfall without exceeding existing flowrates. Water quality would need to be provided for this area.

Developed Pond 1 DA

Pond 1 will be an extended wet detention basin and expands on the existing west pond. It is designed to provide detention for 0.81 acres of new ROW, Lots 1-3, Lots 11-13, and future buildout of 8.16 acres of Parcel "A" west of Pond 1, see developed DA map.

Developed Pond 2 DA

Pond 2 will be an extended wet detention basin and expands on the existing east pond. It is designed to provide detention for 1.81 acres of new ROW, Lots 4-7, Lots 8-10, and future buildout of 2.61 acres of Parcel "A" east of Pond 1, see developed DA map.

Table 1: Hydrograph Method Watershed Summary

	Drainage Area (Acres)	Cover Type	Hydrologic Soil Group	Curve Number	Time of Concentration (min)
Existing Southeast DA	8.04	Meadow	C, D	78	20.9
Existing Southwest DA	3.45	Meadow	D	80	16.5
Existing Northwest DA	2.34	Meadow	D	80	18.2
Existing Pond 1 DA	6.27	Meadow	B, C, D	73	18.3
Existing Pond 2 DA	5.57	Meadow & Impervious Area	B, C, D	72	16.2
Developed Southeast DA	2.69	Impervious & Lawn Area	C, D	96	5.0
Developed Southwest DA	1.36	Impervious, Lawn Area, & Right-of-Way	D	96	5.0
Developed Northwest DA	(0.8 max allowed)	Impervious & Lawn Area	D	98	5.0
Developed Pond 1 DA	19.02	Impervious Area, Lawn Area, & Right-of-Way	B, C, D	92	5.0
Developed Pond 2 DA	13.46	Impervious Area, Lawn Area, & Right-of-Way	B, C, D	91	5.0

Table 2: Wet Pond 1: Stage-Storage-Discharge

Stage (ft)	Elevation (ft)	Storage (ft^3)	Discharge (cfs)
0	1245	0	0.0
1	1246	24,933	0.0
2	1247	52,621	0.0
3	1248	83,007	0.5
4	1249	116,243	3.4
5	1250	152,429	9.4
6	1251	191,615	14.9
7	1252	233,950	20.6
8	1253	279,586	22.3
9	1254	328,522	23.8
10	1255	380,906	50.9

Table 3: Wet Pond 2: Stage-Storage-Discharge

Stage (ft)	Elevation (ft)	Storage (ft^3)	Discharge (cfs)
0	1237	0	0.0
1	1238	20,988	0.2
2	1239	44,226	0.3
3	1240	69,765	1.5
4	1241	97,703	5.9
5	1242	128,191	16.7
6	1243	161,279	19.0
7	1244	197,066	20.7
8	1245	235,654	74.2
9	1246	277,141	170.7

Table 4: Pond 1 DA Peak Flow Rate Summary

Storm Event	Existing Pond 1 DA (cfs) (Hydrograph 7)	Developd Pond 1 DA (cfs) (Hydrograph 9)	Basin WSE	Pond 1 Outflow (cfs) (Hydrograph 11)
2-year	9.2	90.4	1249.2	4.2
10-year	17.1	130.9	1250.5	13.0
25-year	22.9	158.4	1251.4	18.6
100-year	33.0	203.7	1252.8	22.0

Table 5: Pond 2 DA Peak Flow Rate Summary

Storm Event	Existing Pond 2 DA (cfs) (Hydrograph 8)	Developd Pond 2 DA (cfs) (Hydrograph 10)	Basin WSE	Pond 2 Outflow (cfs) (Hydrograph 12)
2-year	8.2	62.3	1240.4	3.4
10-year	15.5	91.1	1241.6	9.7
25-year	20.9	110.7	1242.2	17.4
100-year	30.4	142.9	1243.5	19.8

Table 6: Southeast DA Peak Flow Rate Summary

Storm Event	Existing Southeast DA (cfs) (Hydrograph 1)	Developed Southeast DA (cfs) (Hydrograph 2)
2-year	13.9	13.9
10-year	24.1	19.5
25-year	31.4	23.3
100-year	43.7	29.6

Table 7: Southwest DA Peak Flow Rate Summary

Storm Event	Existing Southwest DA (cfs) (Hydrograph 3)	Developed Southwest DA (cfs) (Hydrograph 4)
2-year	7.2	7.0
10-year	12.0	9.8
25-year	15.4	11.8
100-year	21.1	15.0

Table 8: Northwest DA Peak Flow Rate Summary

Storm Event	Existing Northwest DA (cfs) (Hydrograph 5)	Developed Northwest DA (cfs) (Hydrograph 6)
2-year	4.9	4.2
10-year	8.1	5.9
25-year	10.4	7.0
100-year	14.3	8.9

Water Quality

Pond 1

Pond 1 provides water quality (WQ) for Lots 2-3, Lots 11-13, 1.22 acres of ROW, and 8.16 acres of Parcel A. Pond 1 does not provide WQ for Lot 1. The water quality volume (WQV) for Pond 1 was calculated using the City of Ozark design standards and found to be 69,448 cubic feet with the design WQV water surface elevation (WSE) at 1248.14'. The outlet structure was designed to drain this volume over 41.7 hours. Refer to the Appendix for calculations.

Pond 2

Pond 2 provides water quality (WQ) for Lots 4-5, Lots 8-10, 1.81 acres of ROW, and 2.61 acres of Parcel A. Pond 1 does not provide WQ for Lot 6 & 7. The WQV for Pond 2 was calculated using the City of Ozark design standards and found to be 45,931 cubic feet with the design WQV WSE at 1239.44'. The outlet structure was designed to drain this volume over 42.8 hours. Refer to the Appendix for calculations.

Huff Critical Duration Analysis

In addition to the SCS 24-hour analysis a Huff critical storm analysis was performed of the Pond 1 & 2 DAs per comments from Ozark Special Road District.

Table 9: Pond 1 DA Critical Duration Analysis

Pond 1				
Storm Duration	Year	Existing Pond 1 DA (cfs) (Hydrograph 7)	Developed Peak Flow (cfs) (Hydrograph 9)	Routed Pond 1 DA (cfs) (Hydrograph 11)
0.5 hr	2	0.6	34.9	0.0
	10	2.2	62.8	0.0
	25	3.7	82.1	0.1
	100	6.5	113.0	2.6
1 hr	2	1.0	31.4	0.0
	10	3.2	55.4	1.2
	25	5.1	73.1	3.2
	100	8.9	103.0	7.7
2 hr	2	1.2	24.1	0.0
	10	2.2	35.4	1.9
	25	5.1	60.8	5.9
	100	8.6	87.2	11.6
3 hr	2	1.2	21.9	0.8
	10	3.1	39.7	3.9
	25	4.7	52.9	6.9
	100	7.7	75.2	12.4

Table 10: Pond 2 DA Critical Duration Analysis

Pond 2				
Storm Duration	Year	Existing Pond 1 DA (cfs) (Hydrograph 8)	Developed Peak Flow (cfs) (Hydrograph 10)	Routed Pond 1 DA (cfs) (Hydrograph 12)
0.5 hr	2	0.5	22.0	0.2
	10	1.8	40.4	0.3
	25	3.1	53.7	0.3
	100	5.6	75.0	1.4
1 hr	2	0.8	20.2	0.2
	10	2.7	36.1	0.4
	25	4.4	48.0	2.3
	100	7.7	68.5	5.7
2 hr	2	1.0	14.9	0.3
	10	1.9	22.6	0.8
	25	4.4	39.8	4.8
	100	7.4	58.0	7.7
3 hr	2	1.0	13.4	0.3
	10	2.6	25.9	3.3
	25	4.0	35.0	5.2
	100	6.7	50.6	9.0

Storm Sewers

Storm sewer design to be in accordance with the City of Ozark's design standards and shall convey runoff from the new subdivision to the proposed ponds per the developed DA map. Calculations to be provided with future submittal.

Offsite Rockhill Road Improvements

As part of our analysis, the drainage downstream of both detention basins in the Rockhill Rd right-of-way was studied. There are two locations water currently crosses Rockhill Rd, a 15" culvert and a low spot in the road. Our calculations found the existing 15" culvert to be undersized with water overtopping the road during the design storm, 25-year event. (2) 18" culverts are proposed to prevent stormwater from overtopping the road. Additionally, (2) 18" culverts are proposed at the existing low spot in the road to convey the design storm. Refer to the Appendix for culvert drainage area maps and sizing calculations.

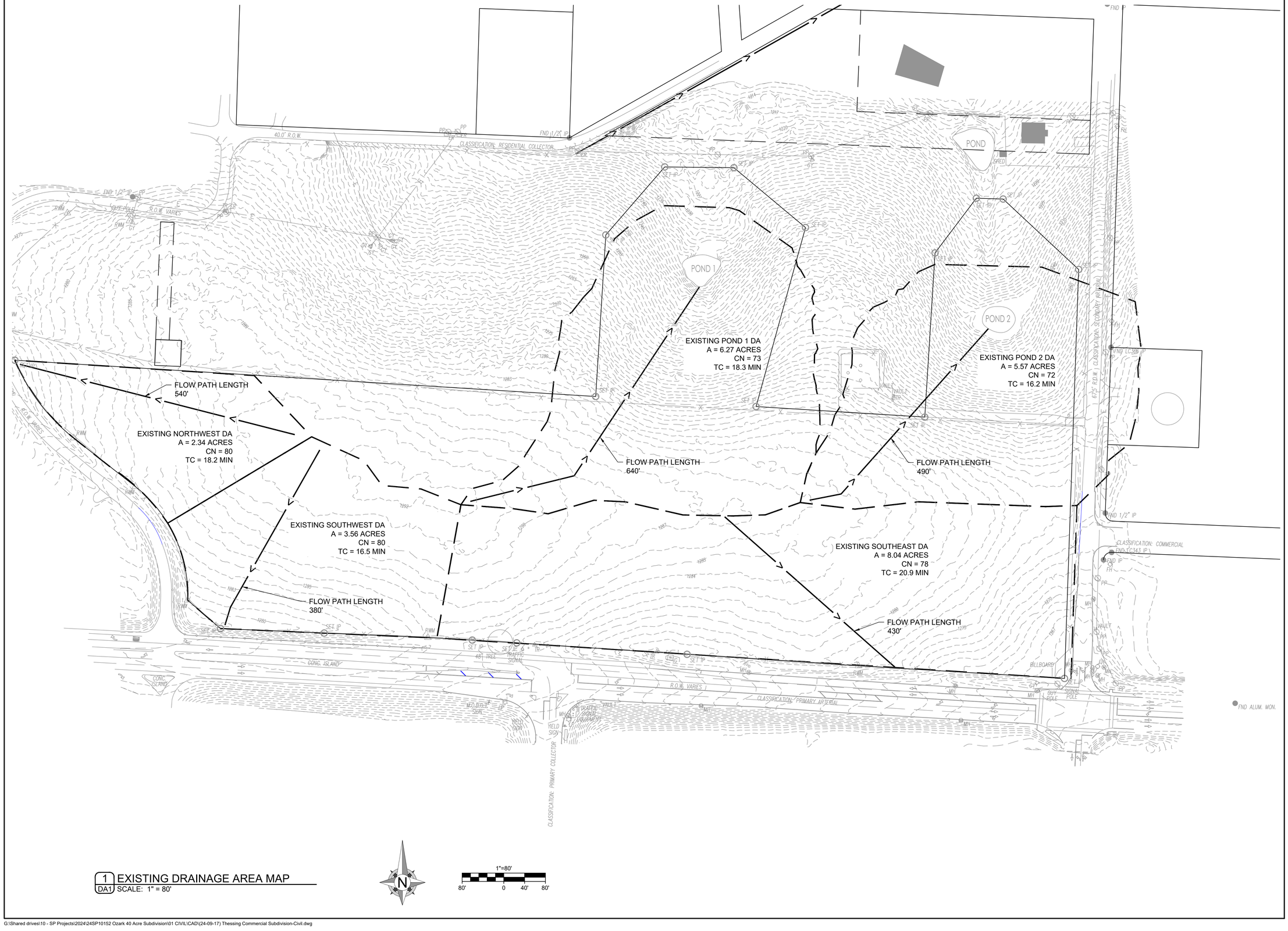
Conclusion

The proposed commercial subdivision will include the construction of two extended wet detention basin and storm sewers to minimize the impact of increased stormwater runoff. All 5 of the site's outfall were analyzed to ensure peak flow rates did not exceed the existing conditions. The proposed wet detention basins have 1' of freeboard during the 100-year storm event and satisfy the City of Ozark's detention and water quality requirements. Calculations are included in the Appendix.

Storm sewer pipe and inlet calculations to be included with future submittal.

Appendix

1 - Existing Drainage Area Map



1 DA1 EXISTING DRAINAGE AREA MAP
SCALE: 1" = 80'

1"=80'
80' 0 40' 80'

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LICENSE NO: PE No. 2016017614

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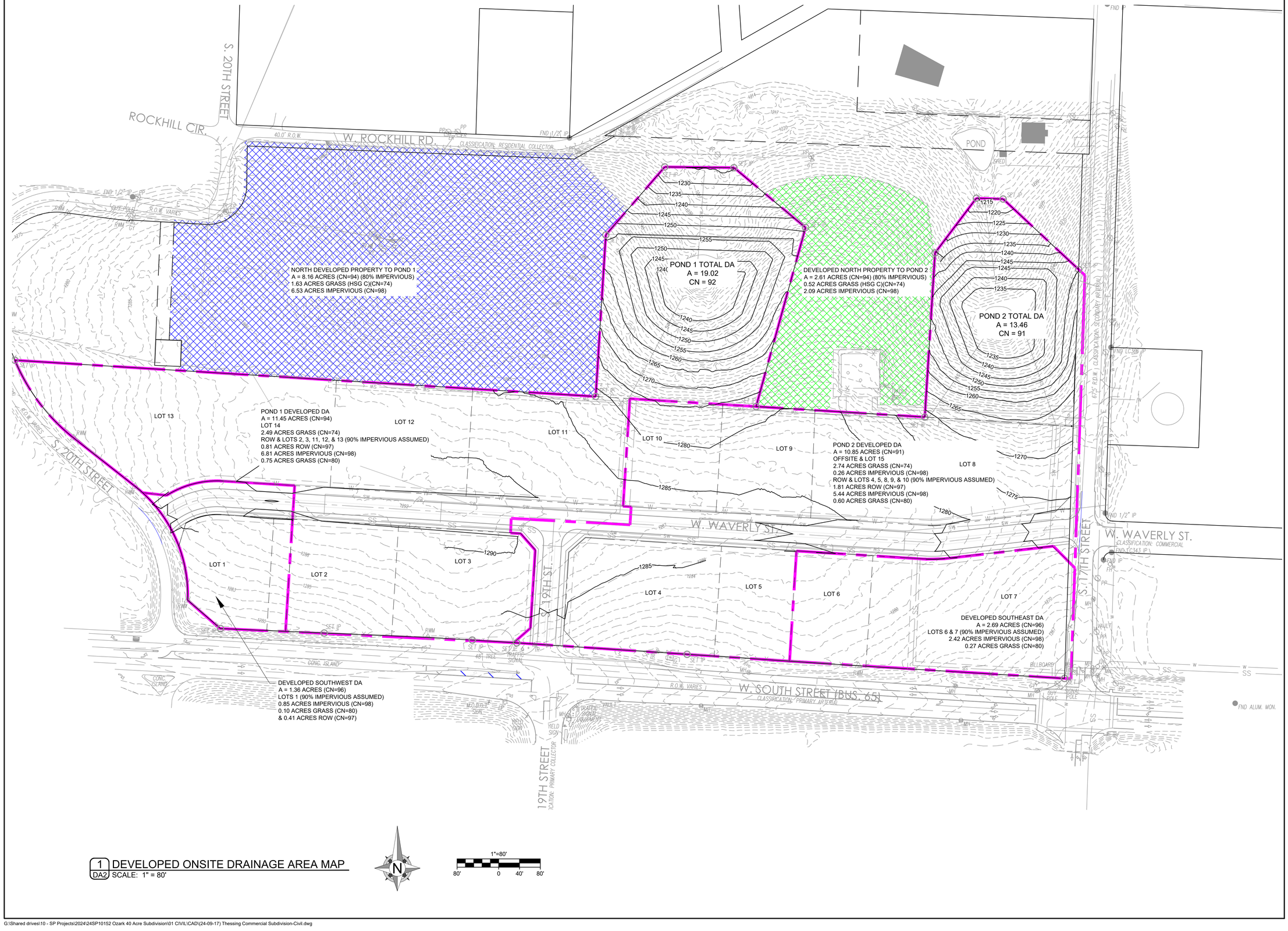
SHEET TITLE

EXISTING ONSITE DA MAP

SHEET NUMBER

DA1

2 - Proposed Drainage Area Maps



1 DA2 DEVELOPED ONSITE DRAINAGE AREA MAP
SCALE: 1" = 80'

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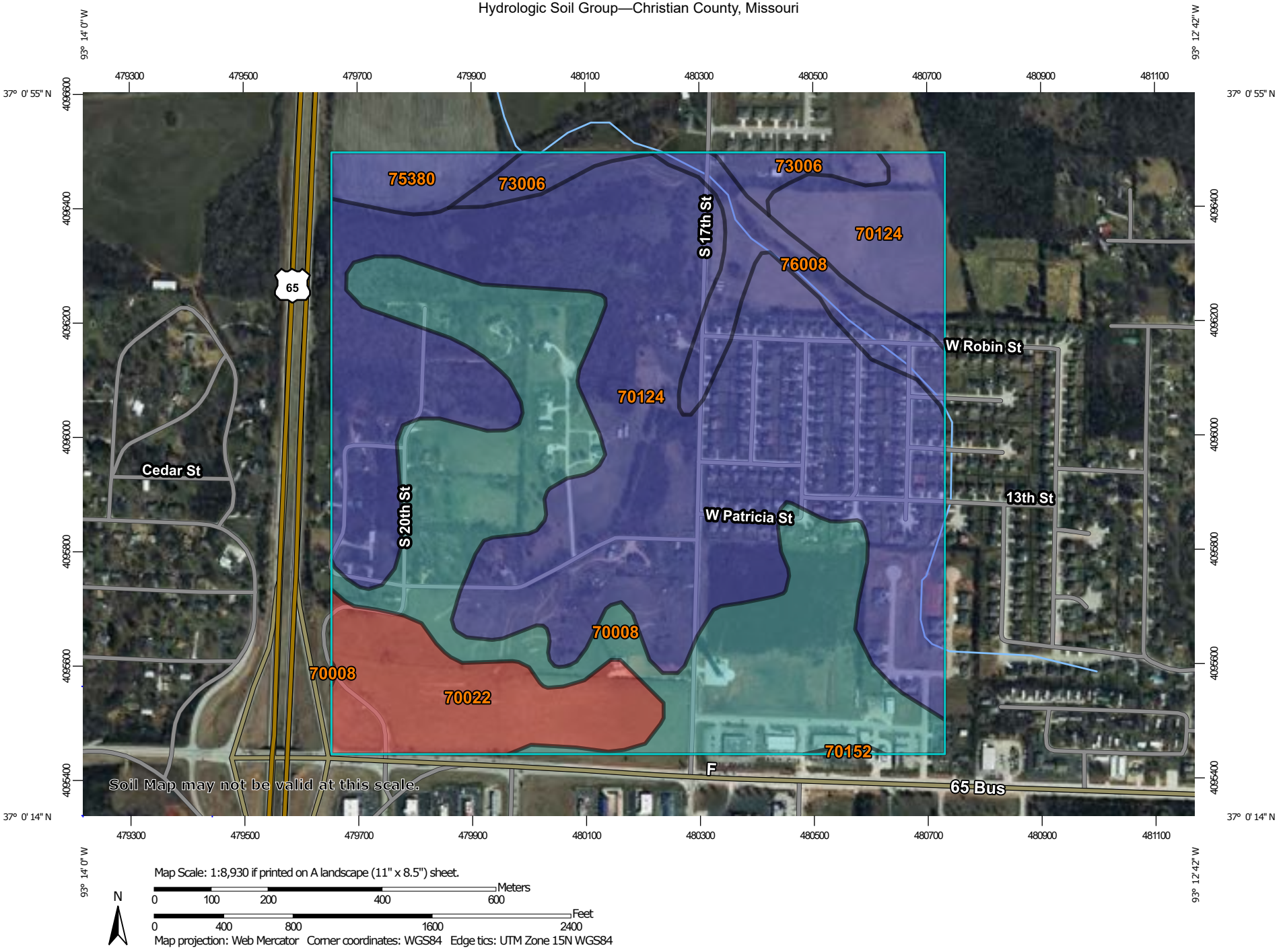
SHEET TITLE

DEVELOPED ONSITE DA MAP

SHEET NUMBER

DA2

3 - Hydrologic Soil Groups Map


93° 14' 0" W
93° 12' 42" W
37° 0' 55" N
37° 0' 14" N
479300
479500
479700
479900
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480300
480500
480700
480900
481100
4096600
4096400
4096200
4096000
4095800
4095600
4095400
75380
73006
73006
70124
76008
70124
70008
70008
70022
70152
S 17th St
S 20th St
W Robin St
W Patricia St
13th St
Cedar St
65
F
65 Bus
Soil Map may not be valid at this scale.
Map Scale: 1:8,930 if printed on A landscape (11" x 8.5") sheet.
N
0 100 200 400 600 Meters
0 400 800 1600 2400 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Christian County, Missouri
Survey Area Data: Version 31, Aug 22, 2023

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

Date(s) aerial images were photographed: Mar 5, 2020—Mar 6, 2020

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
70008	Goss gravelly silt loam, 3 to 8 percent slopes	C	73.5	26.1%
70022	Tonti silt loam, 3 to 8 percent slopes	D	24.7	8.8%
70124	Goss-Gasconade complex, 3 to 50 percent slopes	B	154.8	55.0%
70152	Goss gravelly silt loam, karst, 3 to 8 percent slopes	C	0.3	0.1%
73006	Peridge silt loam, 2 to 5 percent slopes	B	7.4	2.6%
75380	Dapue silt loam, 0 to 2 percent slopes, occasionally flooded	B	6.6	2.4%
76008	Cedargap gravelly silt loam, 1 to 3 percent slopes, frequently flooded	B	14.0	5.0%
Totals for Area of Interest			**281.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

4 - TR55 Time of Concentration Calculations

5 - Hydraflow Routing Output: SCS-24 Hour

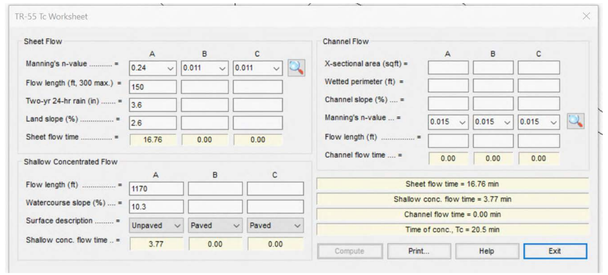
6 - Water Quality Computations

7 – Rockhill Rd Culvert Calculations

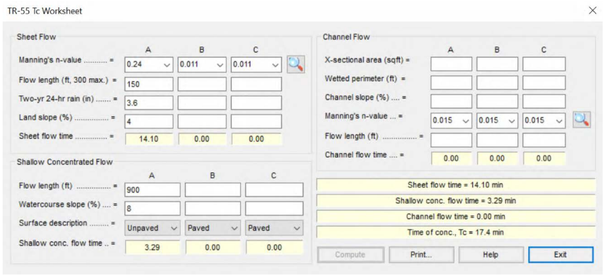
1 EXISTING ROCKHILL RD CULVERT MAP
DA3 SCALE: 1" = 100'

N

1"=100'
100' 0 50' 100'



ROCKHILL RD WEST TIME OF CONCENTRATION



ROCKHILL RD EAST TIME OF CONCENTRATION

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SHEET TITLE

EXISTING ROCKHILL RD CULVERT

SHEET NUMBER

DA3

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Culvert Report

Existing Rockhill Rd Culvert 25 Year

Invert Elev Dn (ft)	=	1194.00
Pipe Length (ft)	=	65.00
Slope (%)	=	4.62
Invert Elev Up (ft)	=	1197.00
Rise (in)	=	15.0
Shape	=	Circular
Span (in)	=	15.0
No. Barrels	=	1
n-Value	=	0.013
Culvert Type	=	Circular Corrugate Metal Pipe
Culvert Entrance	=	Headwall
Coeff. K,M,c,Y,k	=	0.0078, 2, 0.0379, 0.69, 0.5

Embankment

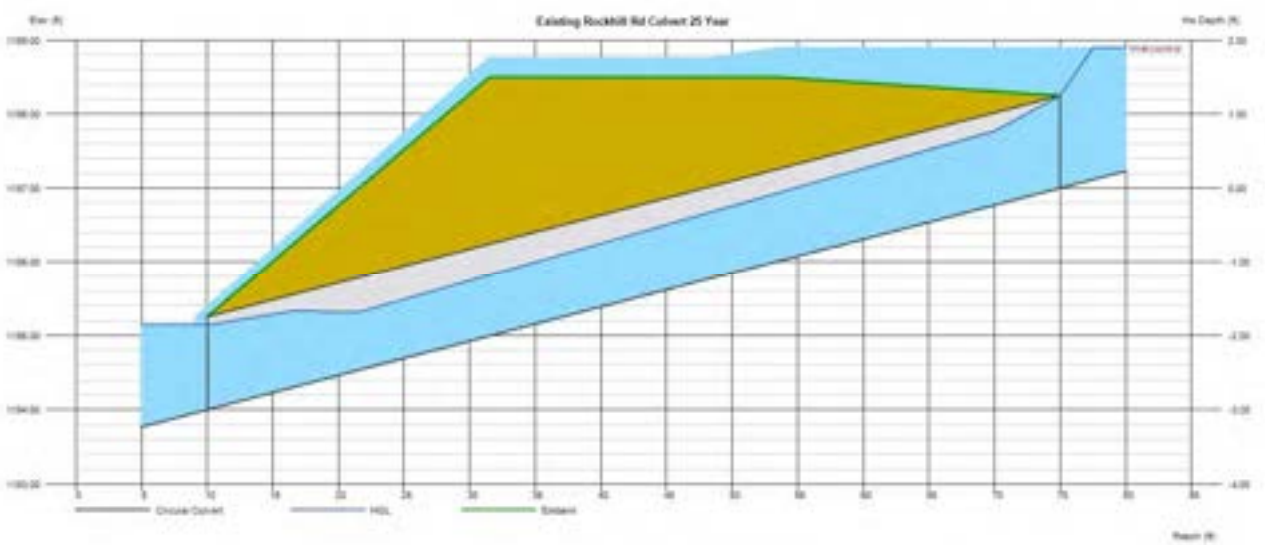
Top Elevation (ft)	=	1198.50
Top Width (ft)	=	22.00
Crest Width (ft)	=	10.00

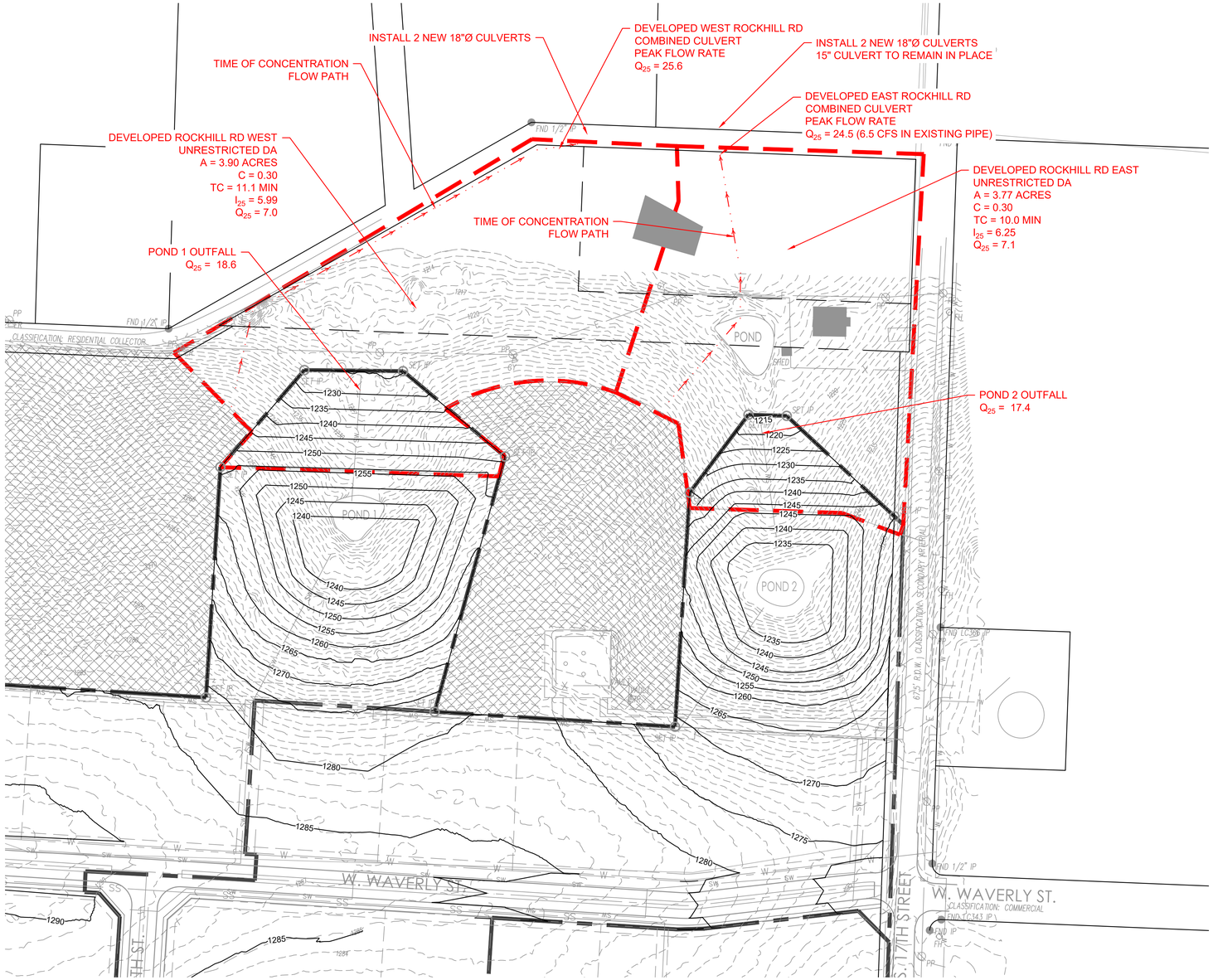
Calculations

Qmin (cfs)	=	14.00
Qmax (cfs)	=	14.00
Tailwater Elev (ft)	=	(dc+D)/2

Highlighted

Qtotal (cfs)	=	14.00
Qpipe (cfs)	=	6.50
Qovertop (cfs)	=	7.50
Veloc Dn (ft/s)	=	5.54
Veloc Up (ft/s)	=	6.03
HGL Dn (ft)	=	1195.14
HGL Up (ft)	=	1198.03
Hw Elev (ft)	=	1198.90
Hw/D (ft)	=	1.52
Flow Regime	=	Inlet Control





1 DA4 DEVELOPED ROCKHILL RD CULVERT MAP
SCALE: 1" = 80'

CULVERT INSTALLATION NOTE:

PRIOR TO INSTALLATION OF NEW CULVERTS ACROSS ROCKHILL RD, TOPOGRAPHIC SURVEY WILL BE NEEDED OF THE ROCKHILL RD RIGHT-OF-WAY TO CONFIRM THE GRADES SHOWN ON LIDAR. CULVERT LOCATIONS WILL BE REVISED AS NEEDED, CULVERT SIZE AND SLOPE WILL TO REMAIN UNCHANGED.

TR-55 Tc Worksheet

Sheet Flow

	A	B	C
Manning's n-value =	0.24	0.011	0.011
Flow length (ft, 300 max.) =	140		
Two-yr 24-hr rain (in) =	3.60		
Land slope (%) =	10		
Sheet flow time =	9.25	0.00	0.00

Shallow Concentrated Flow

	A	B	C
Flow length (ft) =	480		
Watercourse slope (%) =	7		
Surface description =	Unpaved	Paved	Paved
Shallow conc. flow time =	1.87	0.00	0.00

Channel Flow

	A	B	C
X-sectional area (sqft) =			
Wetted perimeter (ft) =			
Channel slope (%) =			
Manning's n-value =	0.015	0.015	0.015
Flow length (ft) =			
Channel flow time =	0.00	0.00	0.00

Sheet flow time = 9.25 min
Shallow conc. flow time = 1.87 min
Channel flow time = 0.00 min
Time of conc., Tc = 11.1 min

Compute | Print... | Help | Exit

DEVELOPED ROCKHILL RD CULVERT TIME OF CONCENTRATION

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SHEET TITLE

DEVELOPED ROCKHILL RD CULVERT MAP

SHEET NUMBER

DA4

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Culvert Report

Existing Rockhill Rd East Proposed Culverts 25 Year

Invert Elev Dn (ft)	=	1186.00
Pipe Length (ft)	=	65.00
Slope (%)	=	2.31
Invert Elev Up (ft)	=	1187.50
Rise (in)	=	18.0
Shape	=	Circular
Span (in)	=	18.0
No. Barrels	=	2
n-Value	=	0.011
Culvert Type	=	Circular Concrete
Culvert Entrance	=	Square edge w/headwall (C)
Coeff. K,M,c,Y,k	=	0.0098, 2, 0.0398, 0.67, 0.5

Embankment

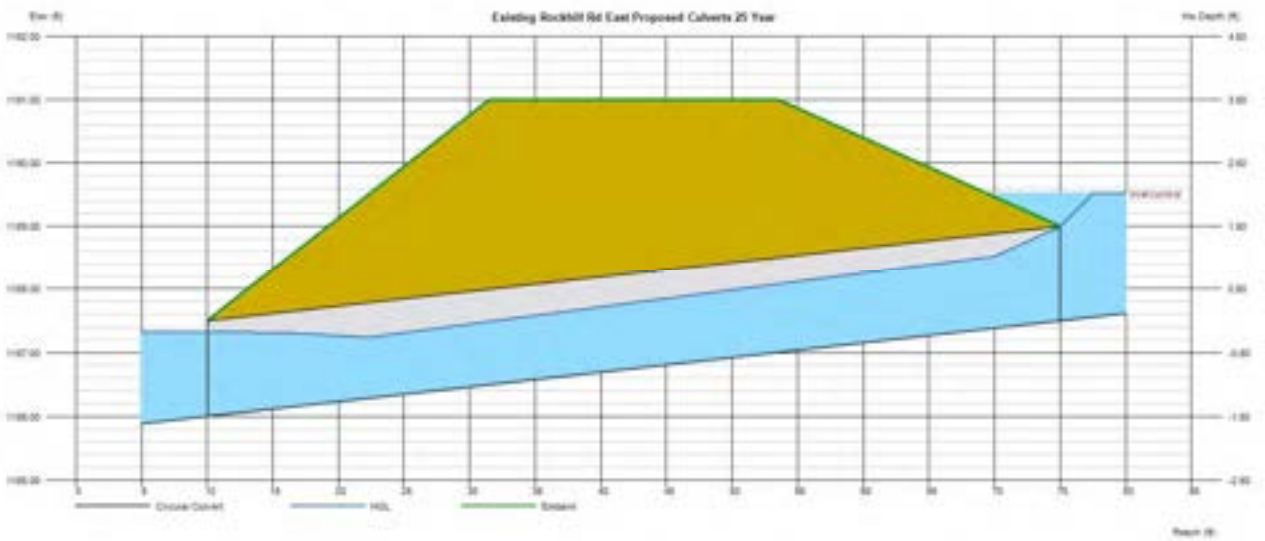
Top Elevation (ft)	=	1191.00
Top Width (ft)	=	22.00
Crest Width (ft)	=	10.00

Calculations

Qmin (cfs)	=	18.00
Qmax (cfs)	=	18.00
Tailwater Elev (ft)	=	(dc+D)/2

Highlighted

Qtotal (cfs)	=	18.00
Qpipe (cfs)	=	18.00
Qovertop (cfs)	=	0.00
Veloc Dn (ft/s)	=	5.43
Veloc Up (ft/s)	=	6.14
HGL Dn (ft)	=	1187.33
HGL Up (ft)	=	1188.66
Hw Elev (ft)	=	1189.52
Hw/D (ft)	=	1.35
Flow Regime	=	Inlet Control



Culvert Report

Rockhill Rd Culvert West Proposed Culverts 25 Year

Invert Elev Dn (ft)	=	1192.80
Pipe Length (ft)	=	75.00
Slope (%)	=	1.60
Invert Elev Up (ft)	=	1194.00
Rise (in)	=	18.0
Shape	=	Circular
Span (in)	=	18.0
No. Barrels	=	2
n-Value	=	0.011
Culvert Type	=	Circular Concrete
Culvert Entrance	=	Square edge w/headwall (C)
Coeff. K,M,c,Y,k	=	0.0098, 2, 0.0398, 0.67, 0.5

Embankment

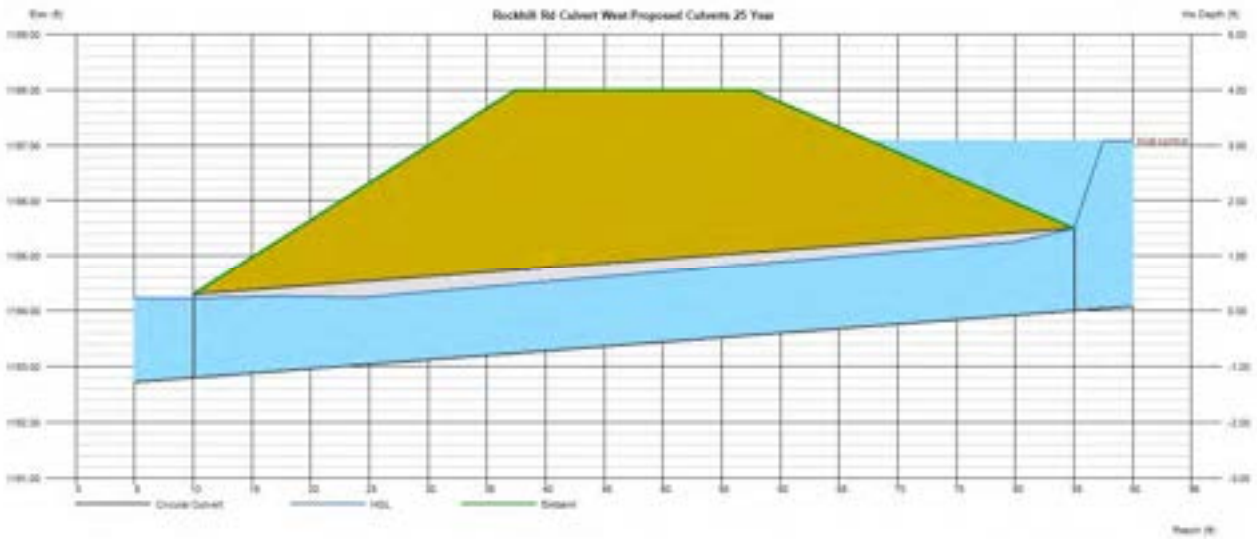
Top Elevation (ft)	=	1198.00
Top Width (ft)	=	20.00
Crest Width (ft)	=	10.00

Calculations

Qmin (cfs)	=	25.60
Qmax (cfs)	=	25.60
Tailwater Elev (ft)	=	(dc+D)/2

Highlighted

Qtotal (cfs)	=	25.60
Qpipe (cfs)	=	25.60
Qovertop (cfs)	=	0.00
Veloc Dn (ft/s)	=	7.39
Veloc Up (ft/s)	=	7.67
HGL Dn (ft)	=	1194.22
HGL Up (ft)	=	1195.34
Hw Elev (ft)	=	1197.08
Hw/D (ft)	=	2.05
Flow Regime	=	Inlet Control



8 – FEMA Map

drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

Special Flood Hazard Areas were determined by **approximate study methods**. Therefore, no Flood Insurance Study report was developed.

The **coordinate system** used in the preparation of this map was State Plane Missouri Central Zone (FIPS 2402) US feet, Transverse Mercator. The **Horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid or projection used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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

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

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

Base map information shown on this map was provided in digital format by the U.S. Farm Service Agency, National Agricultural Imagery Program (NAIP), dated 2006, and by the U.S. Geological Survey Digital Orthophoto Quadrangles, dated 1993 and later, produced at a scale of 1:24000.

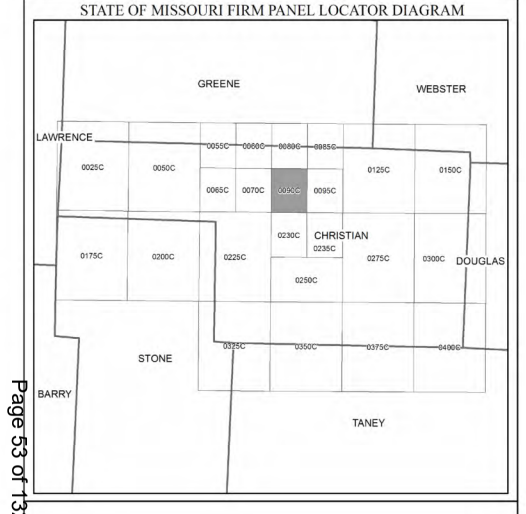
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

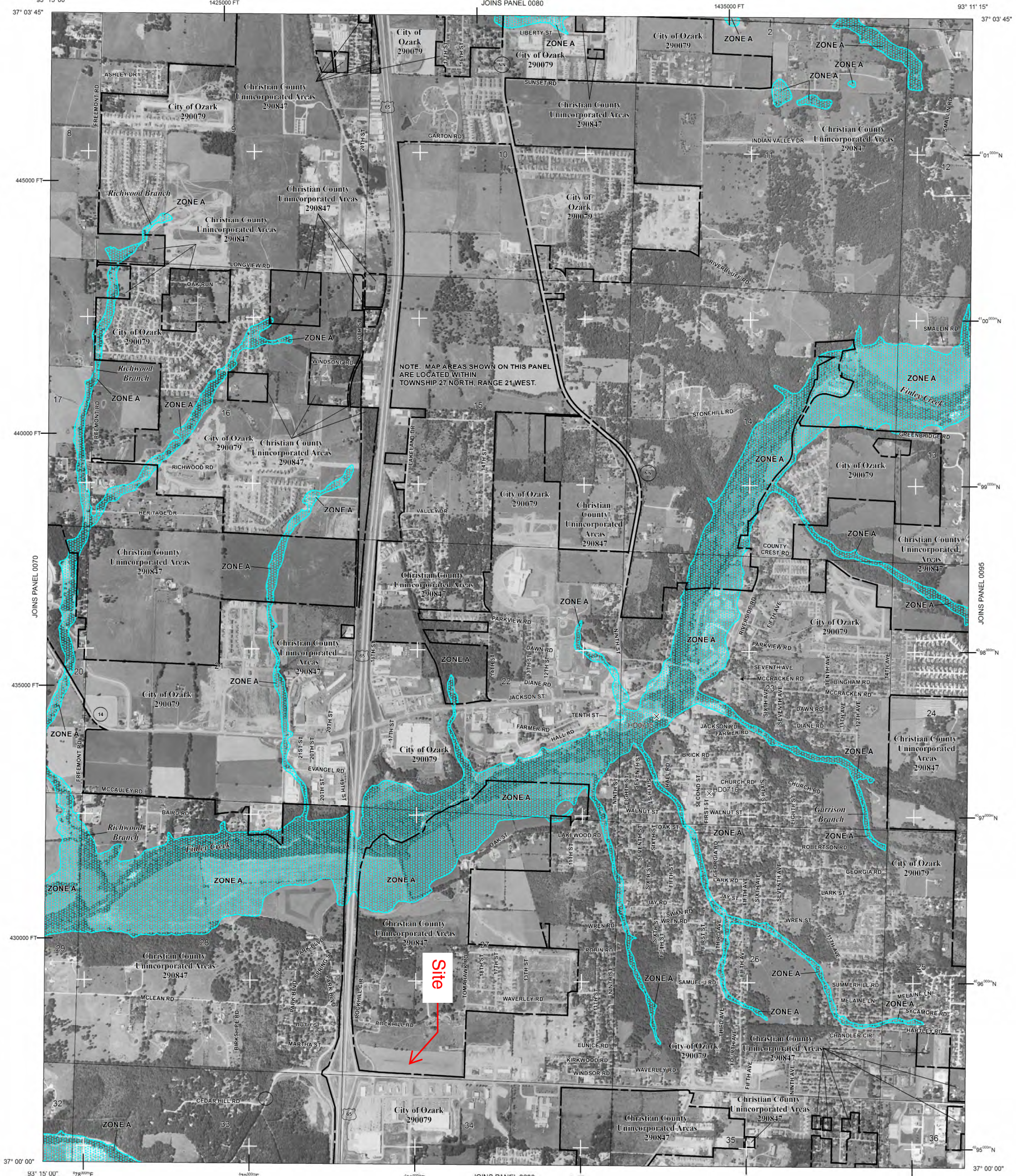
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

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

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

STATE OF MISSOURI FIRM PANEL LOCATOR DIAGRAM





PANEL 0090C

FIRM
FLOOD INSURANCE RATE MAP

CHRISTIAN COUNTY, MISSOURI
AND INCORPORATED AREAS

PANEL 90 OF 400
(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHRISTIAN COUNTY	290847	0090	C
OZARK, CITY OF	290079	0090	C

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

MAP NUMBER
29043C0090C

EFFECTIVE DATE
DECEMBER 17, 2010

NATIONAL FLOOD INSURANCE PROGRAM

The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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

OTHER FLOOD AREAS

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

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAS)

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

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- CBRS and OPA boundary
- International, State, or County boundary
- Corporate, Extraterritorial Jurisdiction, or Urban Growth boundary
- Area Not Included boundary
- Military Reservation, Native American Lands boundary
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988
- A — A — Cross section line
- 23 — 23 — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4276000mE — 1000-meter Universal Transverse Mercator grid values, zone 15
- 600000 FT — 5000-foot grid ticks: Missouri State Plane coordinate system (FIPS 2402), Transverse Mercator projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- ● M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
DECEMBER 17, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

9 – Rainfall Data

NOAA Atlas 14, Volume 8, Version 2
Location name: Ozark, Missouri, USA*
Latitude: 37.0074°, Longitude: -93.2216°
Elevation: 1230 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.379** (0.301-0.470)	**0.434** (0.344-0.539)	**0.526** (0.416-0.654)	**0.603** (0.476-0.752)	**0.711** (0.550-0.906)	**0.795** (0.605-1.02)	**0.881** (0.656-1.15)	**0.968** (0.702-1.29)	**1.09** (0.767-1.47)	**1.18** (0.816-1.61)
10-min	**0.554** (0.440-0.688)	**0.636** (0.504-0.789)	**0.770** (0.610-0.958)	**0.883** (0.697-1.10)	**1.04** (0.805-1.33)	**1.16** (0.886-1.50)	**1.29** (0.960-1.68)	**1.42** (1.03-1.89)	**1.59** (1.12-2.15)	**1.72** (1.20-2.36)
15-min	**0.676** (0.537-0.839)	**0.775** (0.615-0.962)	**0.939** (0.744-1.17)	**1.08** (0.850-1.34)	**1.27** (0.981-1.62)	**1.42** (1.08-1.83)	**1.57** (1.17-2.05)	**1.73** (1.25-2.30)	**1.94** (1.37-2.63)	**2.10** (1.46-2.88)
30-min	**0.974** (0.773-1.21)	**1.12** (0.888-1.39)	**1.36** (1.08-1.69)	**1.56** (1.23-1.94)	**1.84** (1.42-2.34)	**2.05** (1.56-2.64)	**2.27** (1.69-2.96)	**2.49** (1.80-3.31)	**2.78** (1.97-3.77)	**3.01** (2.09-4.12)
60-min	**1.26** (1.00-1.57)	**1.46** (1.16-1.81)	**1.78** (1.41-2.21)	**2.05** (1.62-2.56)	**2.44** (1.89-3.12)	**2.75** (2.10-3.54)	**3.07** (2.29-4.02)	**3.40** (2.46-4.52)	**3.84** (2.72-5.21)	**4.19** (2.91-5.73)
2-hr	**1.55** (1.25-1.91)	**1.79** (1.44-2.20)	**2.20** (1.76-2.71)	**2.55** (2.03-3.15)	**3.05** (2.39-3.87)	**3.45** (2.66-4.41)	**3.87** (2.91-5.03)	**4.30** (3.15-5.70)	**4.90** (3.49-6.61)	**5.37** (3.75-7.30)
3-hr	**1.74** (1.41-2.12)	**2.01** (1.62-2.45)	**2.46** (1.98-3.01)	**2.86** (2.30-3.51)	**3.45** (2.72-4.36)	**3.92** (3.04-5.00)	**4.42** (3.35-5.73)	**4.95** (3.64-6.54)	**5.68** (4.07-7.65)	**6.27** (4.40-8.49)
6-hr	**2.14** (1.75-2.58)	**2.44** (1.99-2.94)	**2.96** (2.41-3.59)	**3.44** (2.79-4.17)	**4.15** (3.32-5.21)	**4.74** (3.71-5.99)	**5.36** (4.10-6.90)	**6.03** (4.48-7.92)	**6.98** (5.04-9.34)	**7.74** (5.47-10.4)
12-hr	**2.65** (2.19-3.16)	**2.98** (2.46-3.56)	**3.57** (2.94-4.27)	**4.10** (3.36-4.92)	**4.90** (3.96-6.10)	**5.57** (4.42-6.99)	**6.29** (4.86-8.03)	**7.06** (5.30-9.20)	**8.16** (5.94-10.9)	**9.05** (6.43-12.1)
24-hr	**3.18** (2.65-3.75)	**3.60** (3.01-4.25)	**4.33** (3.61-5.13)	**4.97** (4.12-5.91)	**5.91** (4.80-7.24)	**6.67** (5.32-8.25)	**7.47** (5.81-9.42)	**8.31** (6.27-10.7)	**9.49** (6.94-12.5)	**10.4** (7.45-13.8)
2-day	**3.68** (3.11-4.30)	**4.26** (3.60-4.98)	**5.23** (4.40-6.12)	**6.04** (5.06-7.09)	**7.16** (5.85-8.63)	**8.04** (6.45-9.80)	**8.92** (6.98-11.1)	**9.83** (7.45-12.5)	**11.0** (8.12-14.4)	**12.0** (8.62-15.8)
3-day	**4.04** (3.44-4.68)	**4.66** (3.96-5.41)	**5.68** (4.81-6.60)	**6.54** (5.51-7.62)	**7.72** (6.35-9.25)	**8.65** (6.98-10.5)	**9.58** (7.53-11.9)	**10.5** (8.02-13.3)	**11.8** (8.71-15.3)	**12.8** (9.24-16.8)
4-day	**4.34** (3.71-5.01)	**4.97** (4.24-5.74)	**6.01** (5.12-6.95)	**6.88** (5.84-8.00)	**8.11** (6.70-9.68)	**9.06** (7.35-10.9)	**10.0** (7.92-12.4)	**11.0** (8.43-13.9)	**12.4** (9.16-16.0)	**13.4** (9.71-17.6)
7-day	**5.10** (4.40-5.83)	**5.76** (4.97-6.59)	**6.87** (5.90-7.88)	**7.81** (6.68-8.99)	**9.14** (7.62-10.8)	**10.2** (8.33-12.2)	**11.2** (8.96-13.8)	**12.4** (9.51-15.5)	**13.8** (10.3-17.8)	**15.0** (10.9-19.6)
10-day	**5.77** (5.01-6.56)	**6.49** (5.62-7.38)	**7.68** (6.64-8.76)	**8.70** (7.48-9.95)	**10.1** (8.49-11.9)	**11.2** (9.25-13.4)	**12.4** (9.91-15.1)	**13.6** (10.5-16.9)	**15.2** (11.3-19.4)	**16.4** (12.0-21.3)
20-day	**7.73** (6.79-8.68)	**8.65** (7.58-9.72)	**10.1** (8.87-11.4)	**11.4** (9.90-12.9)	**13.1** (11.1-15.2)	**14.4** (11.9-16.9)	**15.7** (12.6-18.9)	**17.0** (13.2-21.0)	**18.8** (14.1-23.8)	**20.1** (14.8-25.9)
30-day	**9.37** (8.29-10.5)	**10.5** (9.25-11.7)	**12.2** (10.8-13.7)	**13.6** (12.0-15.3)	**15.6** (13.2-17.9)	**17.0** (14.2-19.8)	**18.4** (14.9-22.0)	**19.8** (15.5-24.3)	**21.6** (16.3-27.2)	**22.9** (16.9-29.4)
45-day	**11.4** (10.2-12.7)	**12.8** (11.4-14.2)	**14.9** (13.2-16.5)	**16.5** (14.6-18.4)	**18.7** (15.9-21.3)	**20.2** (17.0-23.4)	**21.7** (17.7-25.8)	**23.2** (18.2-28.2)	**25.0** (18.9-31.3)	**26.2** (19.5-33.6)
60-day	**13.2** (11.8-14.6)	**14.7** (13.2-16.2)	**17.1** (15.2-18.9)	**18.9** (16.8-21.0)	**21.3** (18.2-24.1)	**23.0** (19.3-26.4)	**24.5** (20.0-28.9)	**26.0** (20.4-31.5)	**27.7** (21.1-34.6)	**28.9** (21.5-36.9)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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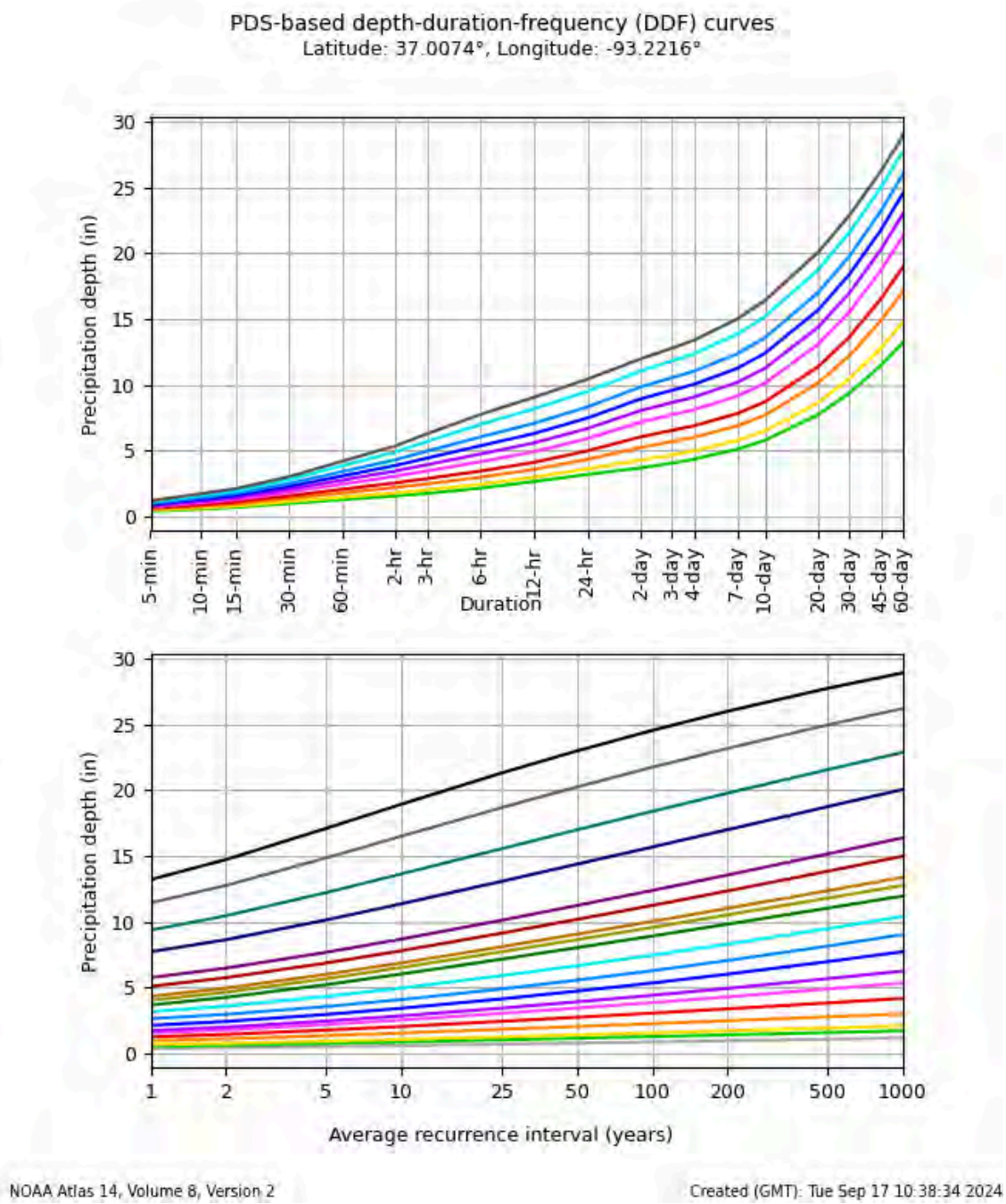
PF graphical



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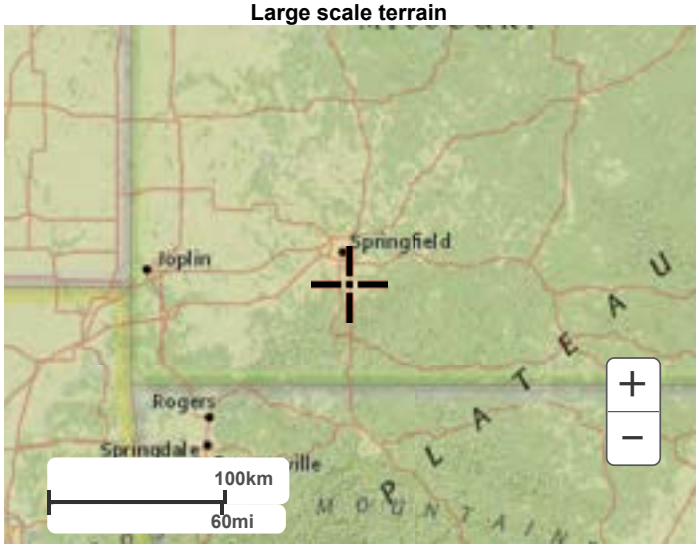
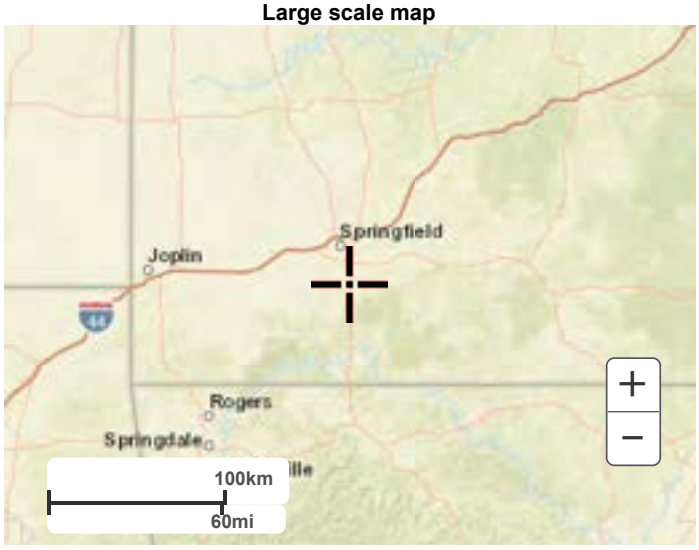
Maps & aerials

Small scale terrain

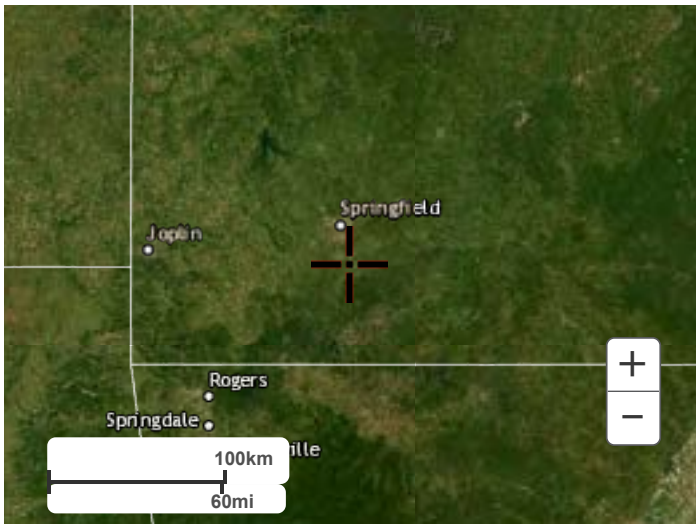
Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

10 – Huff Critical Duration Analysis

Hydraflow Table of Contents

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.694	1	33	2,693	------	------	------	Existing Southeast DA
2	SCS Runoff	7.989	1	10	7,446	------	------	------	Developed Southeast DA
3	SCS Runoff	0.999	1	29	1,524	------	------	------	Existing Southwest DA
4	SCS Runoff	4.039	1	10	3,765	------	------	------	Developed Southwest DA
5	SCS Runoff	0.678	1	29	1,034	------	------	------	Existing Northwest DA
6	SCS Runoff	3.068	1	9	2,718	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	0.612	1	33	798	------	------	------	Existing Pond 1 DA
8	SCS Runoff	0.467	1	33	567	------	------	------	Existing Pond 2 DA
9	SCS Runoff	34.94	1	11	34,941	------	------	------	Developed Pond 1 DA
10	SCS Runoff	21.99	1	11	22,323	------	------	------	Developed Pond 2 DA
11	Reservoir	0.000	1	n/a	0	9	1246.36	34,941	Pond 1 Outfall
12	Reservoir	0.194	1	39	19,711	10	1238.05	22,025	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.552	1	30	7,632	------	------	------	Existing Southeast DA
2	SCS Runoff	12.79	1	9	11,597	------	------	------	Developed Southeast DA
3	SCS Runoff	2.512	1	25	3,907	------	------	------	Existing Southwest DA
4	SCS Runoff	6.468	1	9	5,863	------	------	------	Developed Southwest DA
5	SCS Runoff	1.704	1	25	2,650	------	------	------	Existing Northwest DA
6	SCS Runoff	4.579	1	9	4,011	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	2.231	1	30	3,347	------	------	------	Existing Pond 1 DA
8	SCS Runoff	1.843	1	30	2,676	------	------	------	Existing Pond 2 DA
9	SCS Runoff	62.76	1	10	60,644	------	------	------	Developed Pond 1 DA
10	SCS Runoff	40.41	1	10	39,765	------	------	------	Developed Pond 2 DA
11	Reservoir	0.000	1	n/a	0	9	1247.26	60,644	Pond 1 Outfall
12	Reservoir	0.263	1	39	31,818	10	1238.79	39,337	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.901	1	27	11,691	------	------	------	Existing Southeast DA
2	SCS Runoff	15.96	1	9	14,298	------	------	------	Developed Southeast DA
3	SCS Runoff	3.709	1	24	5,736	------	------	------	Existing Southwest DA
4	SCS Runoff	8.067	1	9	7,229	------	------	------	Developed Southwest DA
5	SCS Runoff	2.515	1	24	3,891	------	------	------	Existing Northwest DA
6	SCS Runoff	5.567	1	8	4,839	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	3.670	1	27	5,676	------	------	------	Existing Pond 1 DA
8	SCS Runoff	3.093	1	27	4,653	------	------	------	Existing Pond 2 DA
9	SCS Runoff	82.13	1	10	77,945	------	------	------	Developed Pond 1 DA
10	SCS Runoff	53.68	1	10	51,643	------	------	------	Developed Pond 2 DA
11	Reservoir	0.138	1	40	4,514	9	1247.83	77,894	Pond 1 Outfall
12	Reservoir	0.300	1	39	38,539	10	1239.27	51,144	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	11.16	1	26	18,888	------	------	------	Existing Southeast DA
2	SCS Runoff	20.87	1	9	18,495	------	------	------	Developed Southeast DA
3	SCS Runoff	5.901	1	22	9,084	------	------	------	Existing Southwest DA
4	SCS Runoff	10.55	1	9	9,351	------	------	------	Developed Southwest DA
5	SCS Runoff	4.002	1	22	6,161	------	------	------	Existing Northwest DA
6	SCS Runoff	7.098	1	8	6,116	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	6.480	1	25	10,077	------	------	------	Existing Pond 1 DA
8	SCS Runoff	5.584	1	24	8,467	------	------	------	Existing Pond 2 DA
9	SCS Runoff	112.97	1	10	105,482	------	------	------	Developed Pond 1 DA
10	SCS Runoff	75.00	1	10	70,678	------	------	------	Developed Pond 2 DA
11	Reservoir	2.574	1	38	31,810	9	1248.62	103,522	Pond 1 Outfall
12	Reservoir	1.420	1	38	50,910	10	1239.99	69,528	Pond 2 Outflow

Hydraflow Table of Contents

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.469	1	38	6,361	------	------	------	Existing Southeast DA
2	SCS Runoff	6.905	1	11	10,642	------	------	------	Developed Southeast DA
3	SCS Runoff	1.389	1	33	3,296	------	------	------	Existing Southwest DA
4	SCS Runoff	3.491	1	11	5,380	------	------	------	Developed Southwest DA
5	SCS Runoff	0.942	1	33	2,236	------	------	------	Existing Northwest DA
6	SCS Runoff	2.665	1	10	3,716	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	1.041	1	38	2,639	------	------	------	Existing Pond 1 DA
8	SCS Runoff	0.825	1	37	2,083	------	------	------	Existing Pond 2 DA
9	SCS Runoff	31.38	1	14	54,604	------	------	------	Developed Pond 1 DA
10	SCS Runoff	20.19	1	15	35,595	------	------	------	Developed Pond 2 DA
11	Reservoir	0.000	1	n/a	0	9	1247.06	54,604	Pond 1 Outfall
12	Reservoir	0.247	1	69	29,160	10	1238.60	34,884	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.087	1	34	15,107	------	------	------	Existing Southeast DA
2	SCS Runoff	11.15	1	10	16,342	------	------	------	Developed Southeast DA
3	SCS Runoff	3.210	1	30	7,329	------	------	------	Existing Southwest DA
4	SCS Runoff	5.639	1	10	8,262	------	------	------	Developed Southwest DA
5	SCS Runoff	2.177	1	30	4,971	------	------	------	Existing Northwest DA
6	SCS Runoff	4.073	1	9	5,462	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	3.229	1	33	7,712	------	------	------	Existing Pond 1 DA
8	SCS Runoff	2.725	1	33	6,414	------	------	------	Existing Pond 2 DA
9	SCS Runoff	55.43	1	12	91,117	------	------	------	Developed Pond 1 DA
10	SCS Runoff	36.13	1	13	60,818	------	------	------	Developed Pond 2 DA
11	Reservoir	1.150	1	68	17,484	9	1248.21	90,107	Pond 1 Outfall
12	Reservoir	0.388	1	69	43,164	10	1239.61	59,819	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	9.043	1	33	22,065	------	------	------	Existing Southeast DA
2	SCS Runoff	14.13	1	10	20,166	------	------	------	Developed Southeast DA
3	SCS Runoff	4.666	1	28	10,491	------	------	------	Existing Southwest DA
4	SCS Runoff	7.142	1	10	10,195	------	------	------	Developed Southwest DA
5	SCS Runoff	3.165	1	28	7,116	------	------	------	Existing Northwest DA
6	SCS Runoff	5.014	1	9	6,622	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	5.149	1	31	12,023	------	------	------	Existing Pond 1 DA
8	SCS Runoff	4.421	1	31	10,186	------	------	------	Existing Pond 2 DA
9	SCS Runoff	73.07	1	12	116,602	------	------	------	Developed Pond 1 DA
10	SCS Runoff	48.04	1	12	78,210	------	------	------	Developed Pond 2 DA
11	Reservoir	3.165	1	67	42,898	9	1248.86	111,649	Pond 1 Outfall
12	Reservoir	2.311	1	67	57,554	10	1240.19	75,074	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.52	1	31	34,681	------	------	------	Existing Southeast DA
2	SCS Runoff	18.98	1	10	26,393	------	------	------	Developed Southeast DA
3	SCS Runoff	7.334	1	27	16,129	------	------	------	Existing Southwest DA
4	SCS Runoff	9.598	1	10	13,344	------	------	------	Developed Southwest DA
5	SCS Runoff	4.974	1	27	10,940	------	------	------	Existing Northwest DA
6	SCS Runoff	6.538	1	9	8,499	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	8.869	1	30	20,232	------	------	------	Existing Pond 1 DA
8	SCS Runoff	7.733	1	29	17,383	------	------	------	Existing Pond 2 DA
9	SCS Runoff	103.03	1	11	158,586	------	------	------	Developed Pond 1 DA
10	SCS Runoff	68.45	1	12	107,652	------	------	------	Developed Pond 2 DA
11	Reservoir	7.732	1	65	84,831	9	1249.79	144,880	Pond 1 Outfall
12	Reservoir	5.746	1	65	85,964	10	1240.96	96,598	Pond 2 Outflow

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Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.588	1	48	10,937	------	------	------	Existing Southeast DA
2	SCS Runoff	5.613	1	14	13,810	------	------	------	Developed Southeast DA
3	SCS Runoff	1.355	1	42	5,436	------	------	------	Existing Southwest DA
4	SCS Runoff	2.838	1	14	6,982	------	------	------	Developed Southwest DA
5	SCS Runoff	0.919	1	42	3,687	------	------	------	Existing Northwest DA
6	SCS Runoff	2.107	1	13	4,691	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	1.192	1	51	5,227	------	------	------	Existing Pond 1 DA
8	SCS Runoff	0.968	1	55	4,279	------	------	------	Existing Pond 2 DA
9	SCS Runoff	24.14	1	15	74,789	------	------	------	Developed Pond 1 DA
10	SCS Runoff	14.93	1	16	49,484	------	------	------	Developed Pond 2 DA
11	Reservoir	0.030	1	130	1,621	9	1247.73	74,775	Pond 1 Outfall
12	Reservoir	0.290	1	128	37,192	10	1239.14	47,859	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.340	1	45	17,688	------	------	------	Existing Southeast DA
2	SCS Runoff	7.514	1	14	17,803	------	------	------	Developed Southeast DA
3	SCS Runoff	2.201	1	39	8,517	------	------	------	Existing Southwest DA
4	SCS Runoff	3.799	1	14	9,001	------	------	------	Developed Southwest DA
5	SCS Runoff	1.493	1	39	5,777	------	------	------	Existing Northwest DA
6	SCS Runoff	2.698	1	13	5,908	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	2.232	1	45	9,300	------	------	------	Existing Pond 1 DA
8	SCS Runoff	1.863	1	45	7,795	------	------	------	Existing Pond 2 DA
9	SCS Runoff	35.44	1	15	100,937	------	------	------	Developed Pond 1 DA
10	SCS Runoff	22.56	1	15	67,503	------	------	------	Developed Pond 2 DA
11	Reservoir	1.908	1	126	27,247	9	1248.42	97,015	Pond 1 Outfall
12	Reservoir	0.813	1	127	47,516	10	1239.82	65,076	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	8.874	1	41	34,314	------	------	------	Existing Southeast DA
2	SCS Runoff	11.53	1	13	26,195	------	------	------	Developed Southeast DA
3	SCS Runoff	4.318	1	36	15,942	------	------	------	Existing Southwest DA
4	SCS Runoff	5.830	1	13	13,243	------	------	------	Developed Southwest DA
5	SCS Runoff	2.929	1	36	10,813	------	------	------	Existing Northwest DA
6	SCS Runoff	3.914	1	13	8,439	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	5.109	1	40	19,986	------	------	------	Existing Pond 1 DA
8	SCS Runoff	4.390	1	39	17,150	------	------	------	Existing Pond 2 DA
9	SCS Runoff	60.82	1	14	157,228	------	------	------	Developed Pond 1 DA
10	SCS Runoff	39.81	1	15	106,645	------	------	------	Developed Pond 2 DA
11	Reservoir	5.853	1	124	83,457	9	1249.53	135,471	Pond 1 Outfall
12	Reservoir	4.752	1	124	84,565	10	1240.68	88,631	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.03	1	39	52,540	------	------	------	Existing Southeast DA
2	SCS Runoff	15.51	1	13	34,351	------	------	------	Developed Southeast DA
3	SCS Runoff	6.701	1	34	23,953	------	------	------	Existing Southwest DA
4	SCS Runoff	7.842	1	13	17,367	------	------	------	Developed Southwest DA
5	SCS Runoff	4.545	1	34	16,246	------	------	------	Existing Northwest DA
6	SCS Runoff	5.078	1	13	10,887	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	8.558	1	37	32,286	------	------	------	Existing Pond 1 DA
8	SCS Runoff	7.444	1	37	28,027	------	------	------	Existing Pond 2 DA
9	SCS Runoff	87.20	1	14	212,958	------	------	------	Developed Pond 1 DA
10	SCS Runoff	58.00	1	14	145,767	------	------	------	Developed Pond 2 DA
11	Reservoir	11.60	1	106	139,165	9	1250.27	162,909	Pond 1 Outfall
12	Reservoir	7.727	1	106	122,966	10	1241.45	111,305	Pond 2 Outflow

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Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.462	1	57	14,437	------	------	------	Existing Southeast DA
2	SCS Runoff	4.742	1	19	15,948	------	------	------	Developed Southeast DA
3	SCS Runoff	1.254	1	53	7,039	------	------	------	Existing Southwest DA
4	SCS Runoff	2.398	1	19	8,063	------	------	------	Developed Southwest DA
5	SCS Runoff	0.850	1	53	4,775	------	------	------	Existing Northwest DA
6	SCS Runoff	1.699	1	18	5,343	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	1.180	1	62	7,307	------	------	------	Existing Pond 1 DA
8	SCS Runoff	0.968	1	63	6,070	------	------	------	Existing Pond 2 DA
9	SCS Runoff	21.86	1	20	88,713	------	------	------	Developed Pond 1 DA
10	SCS Runoff	13.79	1	20	59,058	------	------	------	Developed Pond 2 DA
11	Reservoir	0.840	1	187	15,052	9	1248.12	87,086	Pond 1 Outfall
12	Reservoir	0.314	1	188	41,881	10	1239.48	56,423	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	5.470	1	54	30,357	------	------	------	Existing Southeast DA
2	SCS Runoff	7.529	1	19	24,305	------	------	------	Developed Southeast DA
3	SCS Runoff	2.631	1	49	14,188	------	------	------	Existing Southwest DA
4	SCS Runoff	3.807	1	19	12,288	------	------	------	Developed Southwest DA
5	SCS Runoff	1.784	1	49	9,623	------	------	------	Existing Northwest DA
6	SCS Runoff	2.532	1	18	7,873	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	3.075	1	54	17,383	------	------	------	Existing Pond 1 DA
8	SCS Runoff	2.621	1	53	14,865	------	------	------	Existing Pond 2 DA
9	SCS Runoff	39.67	1	19	144,440	------	------	------	Developed Pond 1 DA
10	SCS Runoff	25.93	1	20	97,803	------	------	------	Developed Pond 2 DA
11	Reservoir	3.894	1	184	70,665	9	1249.15	121,620	Pond 1 Outfall
12	Reservoir	3.260	1	183	75,435	10	1240.37	80,218	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.904	1	49	43,003	------	------	------	Existing Southeast DA
2	SCS Runoff	9.486	1	18	30,168	------	------	------	Developed Southeast DA
3	SCS Runoff	3.717	1	47	19,770	------	------	------	Existing Southwest DA
4	SCS Runoff	4.796	1	18	15,252	------	------	------	Developed Southwest DA
5	SCS Runoff	2.521	1	47	13,409	------	------	------	Existing Northwest DA
6	SCS Runoff	3.105	1	18	9,633	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	4.685	1	51	25,790	------	------	------	Existing Pond 1 DA
8	SCS Runoff	4.047	1	51	22,276	------	------	------	Existing Pond 2 DA
9	SCS Runoff	52.91	1	19	184,323	------	------	------	Developed Pond 1 DA
10	SCS Runoff	35.03	1	19	125,645	------	------	------	Developed Pond 2 DA
11	Reservoir	6.942	1	157	110,523	9	1249.69	141,228	Pond 1 Outfall
12	Reservoir	5.174	1	156	102,801	10	1240.79	91,931	Pond 2 Outflow

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	12.46	1	46	65,616	------	------	------	Existing Southeast DA
2	SCS Runoff	12.71	1	18	39,842	------	------	------	Developed Southeast DA
3	SCS Runoff	5.735	1	38	29,631	------	------	------	Existing Southwest DA
4	SCS Runoff	6.425	1	18	20,143	------	------	------	Developed Southwest DA
5	SCS Runoff	3.889	1	38	20,097	------	------	------	Existing Northwest DA
6	SCS Runoff	4.041	1	18	12,531	------	------	------	Developed Northwest DA (max allowe
7	SCS Runoff	7.684	1	49	41,296	------	------	------	Existing Pond 1 DA
8	SCS Runoff	6.718	1	48	36,060	------	------	------	Existing Pond 2 DA
9	SCS Runoff	75.18	1	19	250,910	------	------	------	Developed Pond 1 DA
10	SCS Runoff	50.61	1	19	172,297	------	------	------	Developed Pond 2 DA
11	Reservoir	12.42	1	96	177,093	9	1250.38	167,254	Pond 1 Outfall
12	Reservoir	8.980	1	96	148,836	10	1241.52	113,486	Pond 2 Outflow

SOUTH STREET OZARK TIA

COMMERCIAL DEVELOPMENT

TRAFFIC IMPACT ASSESSMENT

PREPARED FOR

Brad Thessing
Thessing Commercial Reality
8410 Interlochen Drive
Nixa, MO 65714

November 8, 2024

PREPARED BY:

CJW

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Appendices

Executive Summary

1.1 Project

A commercial development is proposed for a 40.18 acre existing parcel north of South Street, south of Rockhill Road, east of 20th Street, and west of 17th Street in Ozark, MO. The proposed commercial development would include a 9,300 SQFT Walk-in Bank, a Coffee/Donut Shop with Drive-Through with 2 Drive-Through Lanes, a Gasoline/Service Station with 12 Vehicle Fueling Positions, a 15,400 SQFT Fast-Food Restaurant with Drive-Through, a 7,000 SQFT Quick Lubrication Vehicle Shop, a 15,000 SQFT Fast-Food Restaurant with Drive-Through, a 13,600 SQFT Fast-Food Restaurant without Drive-Through, a Hotel with approximately 150 Rooms, a 9,400 SQFT Fast-Food Restaurant with Drive-Through, a 9,300 SQFT Fast-Food Restaurant with Drive-Through, a 15,700 SQFT Fast-Food Restaurant without Drive-Through, a 14,600 SQFT Automobile Parts and Service Center, and a 34,300 SQFT Supermarket. It is anticipated that the property will include three access points.

1.2 Findings

The results of the study showed that in the existing condition, the intersection of South St & US 65 SB Ramp operates at a level of service B in the AM, and a F in the PM. The intersection of South St & US 65 NB Ramp operates at a level of service F in the AM, and a A in the PM. The intersection of South St & 20th St operates at a level of service A overall. The intersection of South St & 19th St operates at a level of service A in the AM, and a C in the PM. The intersection of South St & 17th St operates at a level of service C in the AM, and a E in the PM.

A review of the 2026 peak hour intersection analysis revealed that the intersection of **South St & US 65 SB Ramp** would operate at a **level of service C in the AM, and F in the PM**. The intersection of **South St & US 65 NB Ramp** would operate at a **level of service A in the AM, and B in the PM.**The intersection of **South St & 20th St** would operate at a **level of service A overall**. The intersection of **Access P1 & 20th St** would operate at a **level of service A overall**. The intersection of **South St & Access P2** would operate at a **level of service F in the AM, and F in the PM**. The intersection of **South St & 17th St** would operate at a **level of service F in the AM, and F in the PM.**The intersection of **Access P3 & 17th St** would operate at a **level of service A overall.**

1.3 Recommendations

Roadway Improvements 2026 – At **South St & 20th St** it is recommended that the Southbound Left movement be restricted. The intersection of **South St & Access P2** will require an **Eastbound Left turn lane, Westbound Right turn lane,** and a **Northbound Through lane**. The intersection of **South St & 17th St** will require a **Southbound Right turn lane**. The intersection of **Access P3 & 17th St** will require a **Northbound Left turn lane.**

2 Introduction

2.1 Purpose

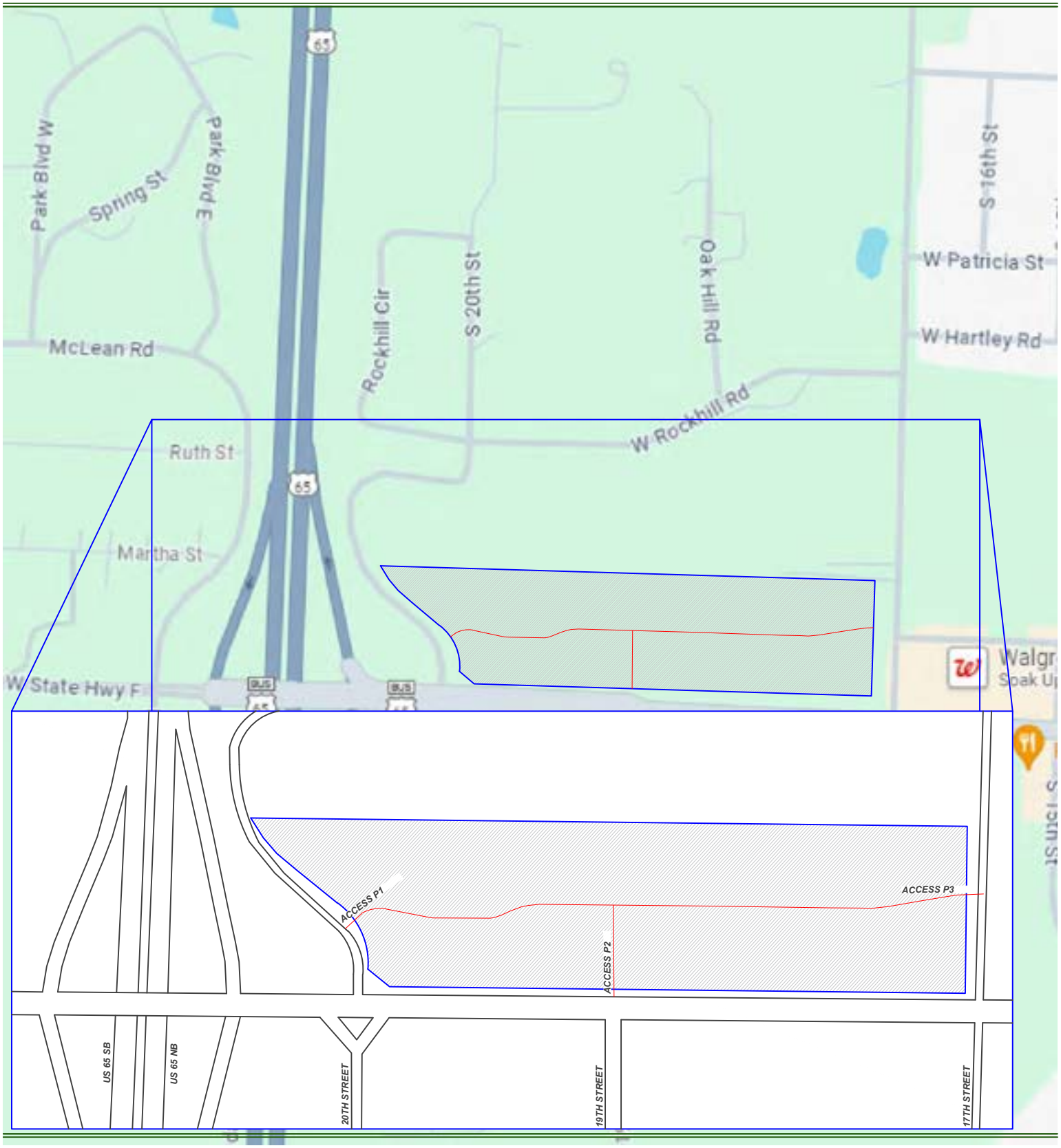
A commercial development is proposed for a 40.18 acre existing parcel north of South Street, south of Rockhill Road, east of 20th Street, and west of 17th Street in Ozark, MO. The proposed commercial development would include a 9,300 SQFT Walk-in Bank, a Coffee/Donut Shop with Drive-Through with 2 Drive-Through Lanes, a Gasoline/Service Station with 12 Vehicle Fueling Positions, a 15,400 SQFT Fast-Food Restaurant with Drive-Through, a 7,000 SQFT Quick Lubrication Vehicle Shop, a 15,000 SQFT Fast-Food Restaurant with Drive-Through, a 13,600 SQFT Fast-Food Restaurant without Drive-Through, a Hotel with approximately 150 Rooms, a 9,400 SQFT Fast-Food Restaurant with Drive-Through, a 9,300 SQFT Fast-Food Restaurant with Drive-Through, a 15,700 SQFT Fast-Food Restaurant without Drive-Through, a 14,600 SQFT Automobile Parts and Service Center, and a 34,300 SQFT Supermarket. It is anticipated that the property will include three access points.

The purpose of this study is to determine the potential impact to the transportation network due to potential development and identify any necessary improvements (lane additions and/or traffic control modifications) to the adjacent and nearby road system to mitigate the impact and maintain a satisfactory level of service, adequate safety, and access for the proposed development.

2.2 Objective

The objective of this study is to evaluate development access points and traffic impacts on the public roadway network adjacent to the site of the proposed development. This report will identify possible traffic related concerns that could arise due to the proposed development and recommend any needed improvements based on comprehensive data attained in the field and traffic projections.

EXHIBIT 1
STUDY AREA



NORTH

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CJW PROJECT No. 24082

3 Proposed Development

3.1 Study Area

A commercial development is proposed for a 40.18 acre existing parcel north of South Street, south of Rockhill Road, east of 20th Street, and west of 17th Street in Ozark, MO. The proposed commercial development would include a 9,300 SQFT Walk-in Bank, a Coffee/Donut Shop with Drive-Through with 2 Drive-Through Lanes, a Gasoline/Service Station with 12 Vehicle Fueling Positions, a 15,400 SQFT Fast-Food Restaurant with Drive-Through, a 7,000 SQFT Quick Lubrication Vehicle Shop, a 15,000 SQFT Fast-Food Restaurant with Drive-Through, a 13,600 SQFT Fast-Food Restaurant without Drive-Through, a Hotel with approximately 150 Rooms, a 9,400 SQFT Fast-Food Restaurant with Drive-Through, a 9,300 SQFT Fast-Food Restaurant with Drive-Through, a 15,700 SQFT Fast-Food Restaurant without Drive-Through, a 14,600 SQFT Automobile Parts and Service Center, and a 34,300 SQFT Supermarket. It is anticipated that the property will include three access points.

Exhibit 1 illustrates the location of the proposed development. US 65 Ramps, South St, 20th St, 19th St, and 17th St would be affected by the proposed development. **Table 1** shows the study corridor characteristics of the roadway network that would be affected.

Table 1: Study Corridor Characteristics

Name	Classification	Speed Limit (MPH)	Daily Traffic Volume	Lanes	Fixed Route Transit	Ped/Bicycle Facilities
US 65 SB Ramp	Other Freeway & Expressway	40	14,610	1 lane	No	No
US 65 NB Ramp	Other Freeway & Expressway	40	10,230	1 lane	No	No
South St	Minor Arterial	45	27,100	4 lanes undivided	No	No
20th St	Local	20	60	2 lanes undivided	No	No
19th St	Local	30	9,720	2 lanes undivided	No	No
17th St	Major Collector	35	3,990	2 lanes undivided	No	Yes

3.2 On-Site Development

The proposed commercial development would include a 9,300 SQFT Walk-in Bank, a Coffee/Donut Shop with Drive-Through with 2 Drive-Through Lanes, a Gasoline/Service Station with 12 Vehicle Fueling Positions, a 15,400 SQFT Fast-Food Restaurant with Drive-Through, a 7,000 SQFT Quick Lubrication Vehicle Shop, a 15,000 SQFT Fast-Food Restaurant with Drive-Through, a 13,600 SQFT Fast-Food Restaurant without Drive-Through, a Hotel with approximately 150 Rooms, a 9,400 SQFT Fast-Food Restaurant with Drive-Through, a 9,300 SQFT Fast-Food Restaurant with Drive-Through, a 15,700 SQFT Fast-Food Restaurant without Drive-Through, a 14,600 SQFT Automobile Parts and Service Center, and a 34,300 SQFT Supermarket. It is anticipated

that the property will include three access points. A site plan can be found in **Appendix I**.

3.3 Site Accessibility

3.3.1 Future

Access P1 – Access P1 will provide full access onto 20th Street to the subject property and will provide full ingress/egress to all development traffic.

Access P2 – Access P2 will provide full access onto South St to the subject property and will provide ingress/egress to development traffic.

Access P3 – Access P3 will provide full access onto 17th Street to the subject property and will provide full ingress/egress to all development traffic.

4 Existing Conditions

4.1 Physical Characteristics

4.1.1 Existing

South St – (South of the development) South St is an east/west roadway. The roadway provides full access to commercial properties in Ozark, Missouri. South St is classified as a Minor Arterial by the Missouri Department of Transportation Functional Classification Maps. The roadway is under the jurisdiction of the Missouri Department of Transportation (MoDOT) and is currently posted with a 45 mph speed limit near the development. It is a four-lane roadway with typical lane widths of 12 feet. There are no Pedestrian/Bicycle facilities near the development. There is not a fixed transit route near the development.

20th St – (West of the development) 20th St is a north/south roadway. The roadway provides full access to residential properties in Ozark, Missouri. 20th St is classified as a Local by the Missouri Department of Transportation Functional Classification Maps. The roadway is under the jurisdiction of the City of Ozark and is currently posted with a 20 mph speed limit near the development. It is a two-lane roadway with typical lane widths of 11 feet. There are no Pedestrian/Bicycle facilities near the development. There is not a fixed transit route near the development.

19h St – (South of the development) 19th St is a north/south roadway. The roadway provides full access to commercial properties in Ozark, Missouri. 19th St is classified as a Local by the Missouri Department of Transportation Functional Classification Maps. The roadway is under the jurisdiction of the City of Ozark and is assumed to have a 30 mph speed limit near the development. It is a two-lane roadway with typical lane widths of 12 feet. There are no

Pedestrian/Bicycle facilities near the development. There is not a fixed transit route near the development.

17th St – (East of the development) 17th St is a north/south roadway. The roadway provides full access to residential and commercial properties in Ozark, Missouri. 17th St is classified as a Major Collector by the Missouri Department of Transportation Functional Classification Maps. The roadway is under the jurisdiction of the City of Ozark and is currently posted with a 35 mph speed limit near the development. It is a two-lane roadway with typical lane widths of 12 feet. There are Pedestrian/Bicycle facilities near the development. There is not a fixed transit route near the development.

4.2 Data Sources

Data used in this report includes turning movement counts, average daily traffic, roadway network characteristics, level of service, trip generation, traffic forecast, and turn lane warrants. Turning movement counts that are found throughout this report were conducted by CJW. Average Daily Traffic volumes were obtained using peak hour values that represent 9% of the daily traffic volumes. The Missouri Department of Transportation Functional Classification Maps and the Ozarks Transportation Organization Major Thoroughfare Plan Map were used to determine roadway characteristics such as classification and jurisdiction. Level of Service for each intersection was obtained using Synchro 10 that follows the Highway Capacity Manual. Traffic generated to and from the development was estimated based upon data provided in “Trip Generation, 11th Edition,” an informative report published by the Institute of Transportation Engineers. The ITE Trip Generation Report is recognized by land use and traffic planners as the most authoritative text available for estimating the trip generation of various types of land development. Traffic volumes for future development are estimated in terms of “Trip Ends” for each land use. A Trip End is defined as a one-way trip to or from the subject property that has the property as either its origin or destination. The number of trips was subsequently used to determine the impact on adjacent roadways. The traffic forecast was calculated using the assumption of an annual growth of 2%.

4.3 Traffic Volumes

Exhibit 2 illustrates the existing roadway system and the existing AM & PM peak hour traffic volumes for the adjacent roadways. Specific turning movements are denoted in **Exhibit 2**.

Traffic is typically analyzed in the peak hour condition, which allows an analysis of the “worst-case scenario.”

South St – (South of the development) Traffic volumes at South St recorded 27,100 vehicles per day, 1,933 vehicles in the AM peak hour, and 2,439 vehicles in the PM peak hour.

20th St – (West of the development) Traffic volumes at 20th St recorded 60 vehicles per day, 8 vehicles in the AM peak hour, and 5 vehicles in the PM peak hour.

19th St – (South of the development) Traffic volumes at 19th St recorded 9,720 vehicles per day, 375 vehicles in the AM peak hour, and 875 vehicles in the PM peak hour.

17th St – (East of the development) Traffic volumes at 17th St recorded 3,990 vehicles per day, 220 vehicles in the AM peak hour, and 359 vehicles in the PM peak hour.

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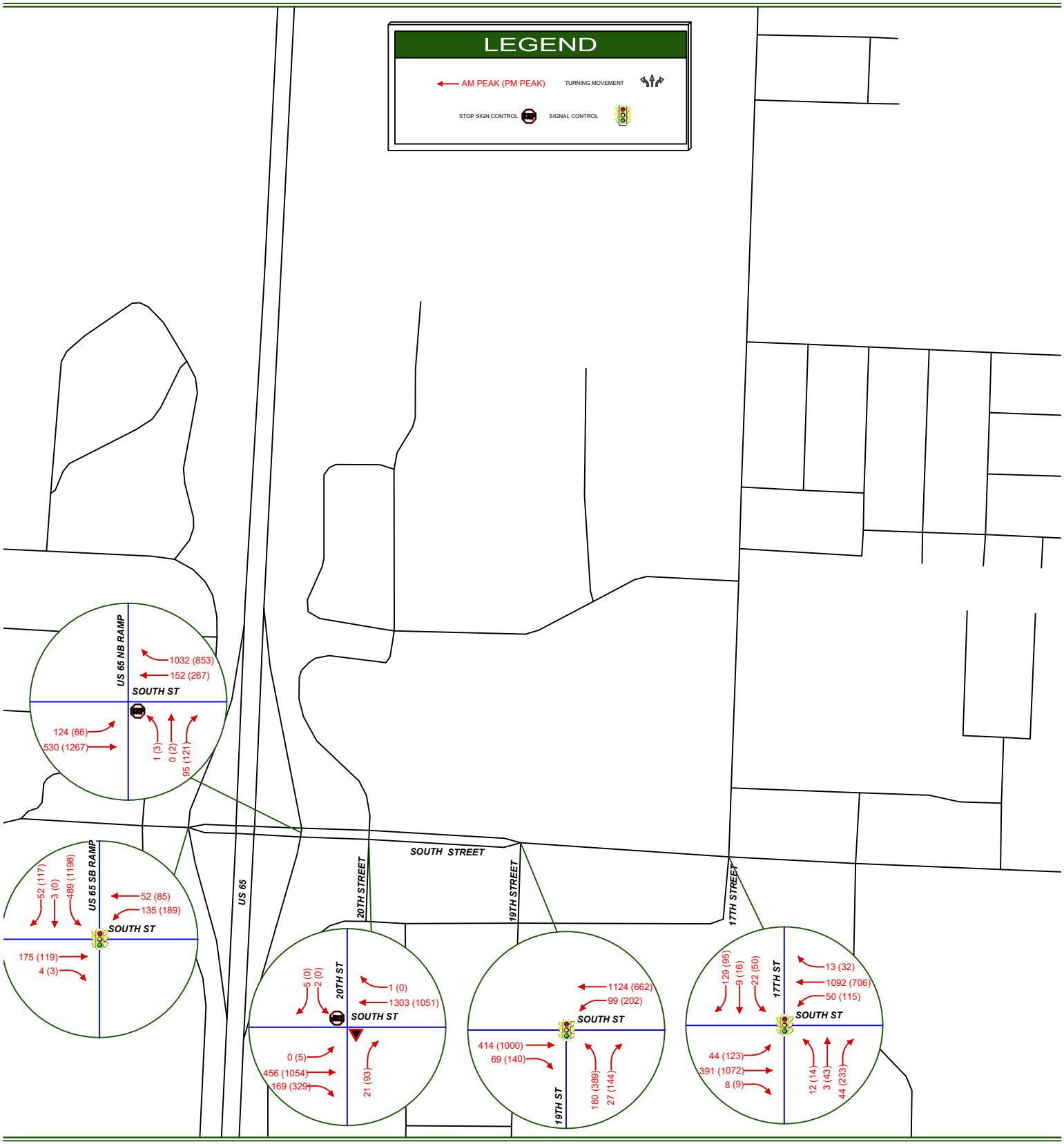
EXHIBIT 2
EXISTING TRAFFIC VOLUME
AM & PM PEAK HOUR



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4.4 Level of Service

Due to the expansion proposed at this property, a capacity analysis of the existing road system was conducted to analyze intersection operations during the AM & PM peak hour.

The capacity was analyzed using Synchro Traffic modeling software, which is based on procedures and techniques outlined in the HIGHWAY CAPACITY MANUAL, 2010 Edition which is published by the Transportation Research Board to determine the operational level of service (LOS) and lane requirements. The quality of traffic flow is estimated based on calculations of delay to vehicles on each approach at an intersection. A grading system has been developed in the Highway Capacity Manual related to delay per vehicle which defines the quality of flow from Level A for free-flowing conditions through Level F representing extreme congestion with excessive delays. Levels of traffic service are quantifiable measures of traffic flow that are represented by such factors as speed and delay time, traffic interruptions, safety, driving comfort, and convenience. Level of service (LOS), vehicular delay, and volume-to-capacity are key “measures of effectiveness” (MOEs) in the analysis of intersections.

The thresholds that define LOS are based on the type of traffic control used at an intersection; i.e., whether it is signalized or unsignalized. For signalized intersections, the average control delay per vehicle is estimated for each movement and aggregated for each approach and the intersection as a whole. At intersections with partial (side-street) stop control, the delay for each minor movement and approach is determined with no report for the intersection as a whole (since motorists on the main road are not required to stop and are assumed to operate under free-flow conditions). LOS is directly related to control delay. Highway designers strive for a minimum LOS of “C” as design criteria for operations during peak hour conditions, but a LOS E is acceptable during the peak hour.

Table 2 shows the LOS for the existing traffic volumes and lane geometrics for the AM & PM peak hour.

Table 2: Existing Peak Hour Measure of Effectiveness

INTERSECTION N/S E/W	# of Lanes	Traffic Control	AM Delay	AM LOS	PM Delay	PM LOS
US 65 SB Ramp & South St		**SIG**	**16.9**	**B**	**86.2**	**F**
Eastbound Through / Right	2		23.5	C	23.9	C
Westbound Left	1		11.9	B	15.8	B
Westbound Through	1		9.7	A	11.2	B
Southbound Left	1		19.3	B	121.9	F
Southbound Right	1		1.6	A	4.5	A
US 65 NB Ramp & South St		**OWSC**	**ERR**	**F**	**2.9**	**A**
Eastbound Left	1	Free	173.9	F	8.4	A
Eastbound Through	2	Free	0.0	A	0.0	A
Westbound Through	1	Free	0.0	A	0.0	A
Westbound Right	1	Free	0.0	A	0.0	A
Northbound Left	1	Stop	ERR	F	247.3	F
Northbound Through		Stop	0.0	0.0	138.8	F
Northbound Right	1	Yeild	12.1	B	30.3	D
20th St & South St		**OWSC**	**0.2**	**A**	**0.8**	**A**
Eastbound Left	1	Free	0.0	A	11.3	B
Eastbound Through	2	Free	0.0	A	0.0	A
Eastbound Right	1	Free	0.0	A	0.0	A
Westbound Through	1	Free	0.0	A	0.0	A
Westbound Right	1	Free	0.0	A	0.0	A
Northbound Right	1	Yield	11.0	B	20.8	C
Southbound Left / Right	1	Stop	24.7	C	0.0	A
19th St & South St		**SIG**	**9.0**	**A**	**24.8**	**C**
Eastbound Through / Right	2		10.7	B	24.0	C
Westbound Left	1		0.9	A	36.3	D
Westbound Through	2		1.8	A	1.2	A
Northbound Left	2		47.2	D	63.0	E
Northbound Right	1		12.7	B	15.2	B
17th St & South St		**SIG**	**24.2**	**C**	**70.4**	**E**
Eastbound Left	1		16.5	B	16.4	B
Eastbound Through / Right	2		11.7	B	69.4	E
Westbound Left	1		11.5	B	57.3	E
Westbound Through / Right	2		32.8	C	27.5	C
Northbound Left	1		26.2	C	25.9	C
Northbound Through / Right	1		12.7	B	184.1	F
Southbound Left	1		26.0	C	35.2	D
Southbound Through / Right	1		12.2	B	13.5	B

5 Projected Traffic

5.1 Existing Traffic Build Forecasting

5.1.1 Trip Generation

Traffic generated to and from the development is estimated based upon data provided in "Trip Generation, 11th Edition,(Online)". The ITE Trip Generation Report is recognized by land use and traffic planners as the most authoritative text available for estimating the trip generation of various types of land development. Traffic volumes for future development are estimated in terms of "Trip Ends" for each land use. A Trip End is defined as a one-way trip to or from the subject property that has the property as either its origin or destination. The trip generation can be seen in **Table 3.**

Table 3: Average Daily, AM & PM Peak Hour Trip Generation

	ITE			24-HOUR	AM PEAK		PM PEAK	
LAND USE	CODE	Size	Variable	WEEKDAY	IN	OUT	IN	OUT
Walk-in Bank	911	9.3	1000 SQFT	1,244	-	-	49	63
Coffee/Donut Shop with Drive-Through	938	2.0	Drive-Through Lanes	358	40	40	15	15
Gasoline/Service Station	944	12.0	Vehicle Fueling Positions	2,064	62	62	83	83
Fast-Food with Drive-Through	934	15.4	1000 SQFT	7,176	349	336	264	243
Quick Lubrication Shop	941	7.0	1000 SQFT	487	30	10	26	35
Fast-Food with Drive-Through	934	15.0	1000 SQFT	7,022	342	328	258	238
Fast-Food without Drive-Through	933	13.6	1000 SQFT	6,127	341	247	226	226
Hotel	310	150.0	Rooms	1,199	39	30	45	43
Fast-Food with Drive-Through	934	9.4	1000 SQFT	4,376	213	205	161	148
Fast-Food with Drive-Through	934	9.3	1000 SQFT	4,324	210	202	159	147
Fast-Food without Drive-Through	933	15.7	1000 SQFT	7,064	393	284	260	260
Automobile Parts and Service Center	943	14.6	1000 SQFT	242	20	8	12	18
Supermarket	850	34.3	1000 SQFT	3,219	58	40	153	153
				Total Trips:	**2,097**	**1,792**	**1,711**	**1,672**

5.1.2 Adjustments to Trip Generation Rates

The trip generation projections were adjusted to account for trips that would already be utilizing the roadway network. Studies conducted by ITE professionals

have shown that a portion of the traffic generated by commercial developments such as this one would already be present on the roadway network and would be attracted to the development on their way to or from their destination. These trips are referred to as pass-by trips/diverted link. The pass-by rates utilized in this study were taken from the ITE Trip Generation Handbook, 2nd Edition, Chapter 5. Based on this reference, pass-by/diverted link rates were assigned as follows: 47% in the PM for Walk-in Bank, 49% in the AM and 50% in the PM for Coffee/Donut Shop with Drive-Through with 2 Drive-Through Lanes, 58% in the AM and 42% in the PM for Gasoline/Service Station with 12 Vehicle Fueling Positions, 49% in the AM and 50% in the PM for Fast-Food Restaurant with Drive-Through, 43% in the PM for Fast-Food Restaurant without Drive-Through, 43% in the PM for Automobile Parts and Service Center, and 36% in the PM for Supermarket. These rates can be viewed in **Appendix III**.

5.1.3 Trip Distribution

For the purpose of this study a directional distribution of traffic was compiled in order to accurately describe the traffic patterns the development is projected to generate. The directional distribution is used to distribute the traffic generated by the proposed development onto the roadway network. Origin-destination was used to determine future trip generation. Trip distribution can be viewed in **Exhibit III.**

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EXHIBIT 3
2026 PROJECTED LAND USE DIRECTIONAL DISTRIBUTION

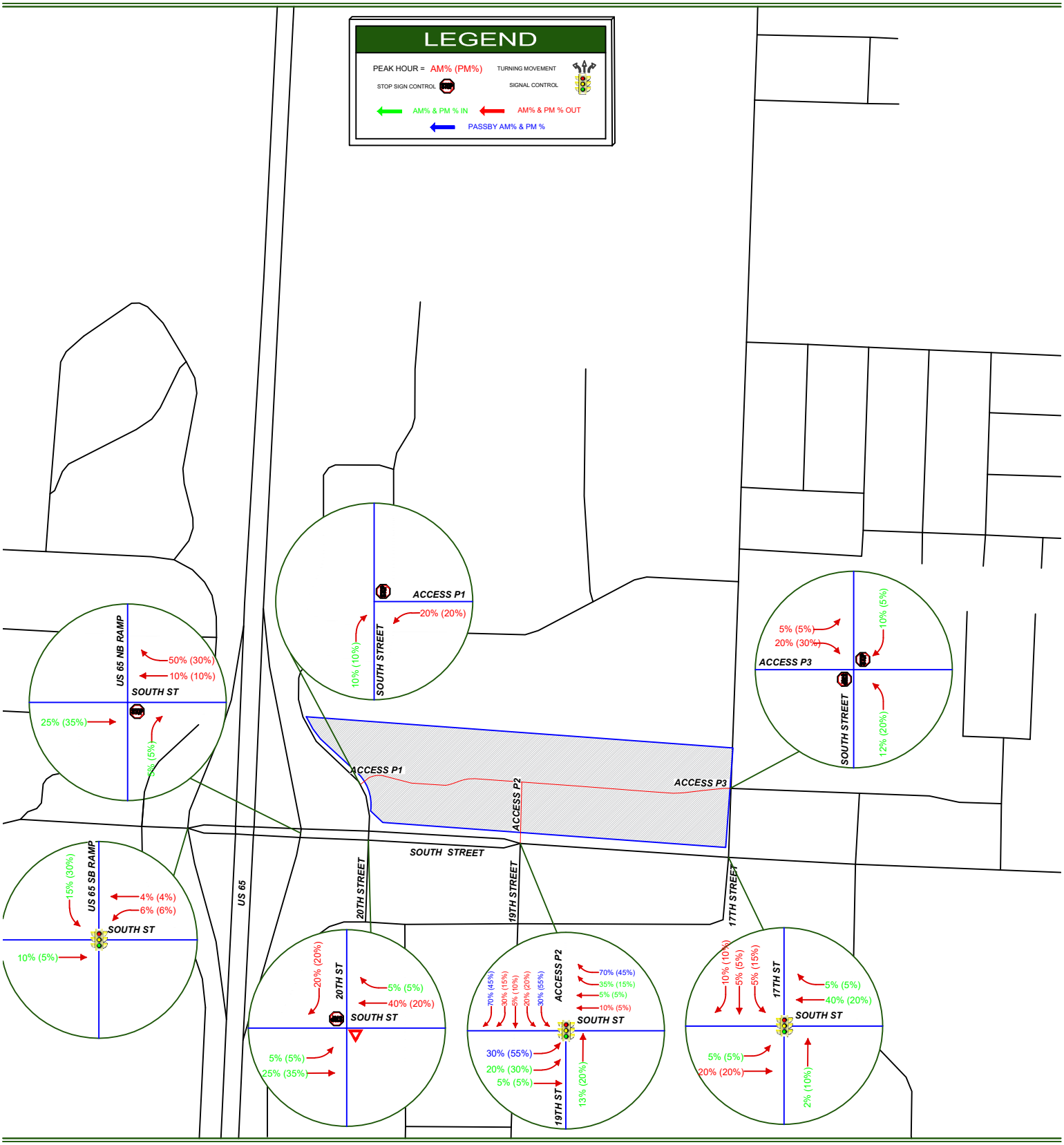

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EXHIBIT 4
2026 PROJECTED TRAFFIC ASSIGNMENT
AM & PM PEAK

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5.2 Future Build Forecasting

5.2.1 2026

The traffic volumes that will be on the transportation network for the year 2026 with construction of the proposed development was calculated from the existing traffic grown annually at 2% for 2 years, the estimated generated trip ends from Table 3, and the assumed directional distribution of traffic from Exhibit III. Tables 4, 5, & 6, represent the two-way traffic anticipated for the future build condition during the daily, AM, & PM Peak Hour respectively onto each roadway segment.

Table 4: 2026 Daily Projected Traffic Volumes (Future Build)

Roadway	From	To	Daily Traffic 2026 Projections with the Existing	Proposed
South St	West of	US 65 SB Ramp	3,600	4,720
South St	US 65 SB Ramp	US 65 NB Ramp	17,810	23,400
South St	US 65 NB Ramp	20th St	27,100	36,760
South St	20th St	19th St/Access P2	24,340	31,960
South St	19th St/Access P2	17th St	22,430	29,220
South St	East of	17th St	24,530	31,930
US 65 SB Ramp	North of	South St	14,610	18,480
US 65 SB Ramp	South of	South St	2,140	2,850
US 65 NB Ramp	North of	South St	10,230	13,790
US 65 NB Ramp	South of	South St	1,400	2,000
20th St	South St	Access P1	60	3,250
20th St	North of	Access P1	60	60
20th St	South of	South St	4,690	4,880
19th St/Access P2	North of	South St	-	27,960
19th St/Access P2	South of	South St	9,720	13,350
17th St	South St	Access P3	3,990	9,470
17th St	North of	Access P3	3,990	5,220
17th St	South of	South St	4,780	6,580
Access P1			-	3,190
Access P3			-	6,390

Table 5: 2026 AM Peak Projected Traffic Volumes (Future Build)

Roadway	From	To	AM Peak Existing	AM Peak 2026 Projections with the Proposed
South St	West of	US 65 SB Ramp	282	494
South St	US 65 SB Ramp	US 65 NB Ramp	807	1,338
South St	US 65 NB Ramp	20th St	1,933	3,192
South St	20th St	19th St/Access P2	1,787	2,796
South St	19th St/Access P2	17th St	1,676	2,726
South St	East of	17th St	1,612	2,721
US 65 SB Ramp	North of	South St	543	792
US 65 SB Ramp	South of	South St	142	219
US 65 NB Ramp	North of	South St	1,156	1,807
US 65 NB Ramp	South of	South St	96	176
20th St	South St	Access P1	8	401
20th St	North of	Access P1	8	8
20th St	South of	South St	184	197
19th St/Access P2	North of	South St	-	2,851
19th St/Access P2	South of	South St	375	647
17th St	South St	Access P3	220	651
17th St	North of	Access P3	220	439
17th St	South of	South St	126	220
Access P1			-	393
Access P3			-	634

Table 6: 2026 PM Peak Traffic Volumes (Future Build)

Roadway	From	To	PM Peak 2026 Projections with the Existing	Proposed
South St	West of	US 65 SB Ramp	327	425
South St	US 65 SB Ramp	US 65 NB Ramp	1,603	2,106
South St	US 65 NB Ramp	20th St	2,439	3,308
South St	20th St	19th St/Access P2	2,191	2,877
South St	19th St/Access P2	17th St	2,019	2,630
South St	East of	17th St	2,208	2,874
US 65 SB Ramp	North of	South St	1,315	1,664
US 65 SB Ramp	South of	South St	192	257
US 65 NB Ramp	North of	South St	921	1,241
US 65 NB Ramp	South of	South St	126	180
20th St	South St	Access P1	5	292
20th St	North of	Access P1	5	5
20th St	South of	South St	422	439
19th St/Access P2	North of	South St	-	2,516
19th St/Access P2	South of	South St	875	1202
17th St	South St	Access P1	359	853
17th St	North of	Access P1	359	470
17th St	South of	South St	430	593
Access P1			-	287
Access P3			-	575

6 Analysis of Traffic and Improvements

6.1 Site Access Performance

Access P1 – Access P1 will provide full access onto 20th Street to the subject property and will provide full ingress/egress to all development traffic.

Access P2 – Access P2 will provide full access onto South St to the subject property and will provide ingress/egress to development traffic.

Access P3 – Access P3 will provide full access onto 17th Street to the subject property and will provide full ingress/egress to all development traffic.

6.2 Capacity and Level of Service Analysis

6.2.1 Background (2026)

Due to the expansion proposed at this property, a capacity analysis of the road system in future without improvements condition was conducted to analyze intersection operations during the AM & PM peak hour.

Table 7 shows the LOS for the future without improvements condition traffic volumes and lane geometrics for the AM & PM peak hour.

Table 7: 2026 Peak Hour Measure of Effectiveness

INTERSECTION N/S E/W	# of Lanes	Traffic Control	AM Delay	AM LOS	PM Delay	PM LOS
US 65 SB Ramp & South St		**SIG**	**25.7**	**C**	**238.4**	**F**
Eastbound Through / Right	2		27.9	C	24.5	C
Westbound Left	1		16.1	B	17.7	B
Westbound Through	1		10.6	B	11.2	B
Southbound Left	1		32.8	C	350.0	F
Southbound Through	1		0.0	A	0.0	A
Southbound Right	1		1.8	A	6.9	A
US 65 NB Ramp & South St		**OWSC**	**2.0**	**A**	**13.3**	**B**
Eastbound Left	1	Free	8.9	A	8.9	A
Eastbound Through	2	Free	0.0	A	0.0	A
Westbound Through	1	Free	0.0	A	0.0	A
Westbound Right	1	Free	0.0	A	0.0	A
Northbound Left	1	Stop	129.1	F	1171.3	F
Northbound Through	1	Stop	0.0	A	668.4	F
Northbound Right	1	Yield	22.8	C	165.5	F
20th St & Access P1		**OWSC**	**6.5**	**A**	**6.4**	**A**
Westbound Left / Right	1	Stop	10.8	B	10.1	B
Northbound Through / Right	1	Free	0.0	A	0.0	A
Southbound Left / Through	1	Free	0.0	A	0.0	A
20th St & South St		**OWSC**	**2.3**	**A**	**2.3**	**A**
Eastbound Left	1	Free	29.8	D	14.9	B
Eastbound Through	2	Free	0.0	A	0.0	A
Eastbound Right	1	Free	0.0	A	0.0	A
Westbound Through	1	Free	0.0	A	0.0	A
Westbound Right	1	Free	0.0	A	0.0	A
Northbound Right	1	Yield	13.6	B	32.5	D
Southbound Left / Right	1	Stop	20.4	C	22.0	C
19th St/Access P2 & South St		**SIG**	**315.7**	**F**	**365.1**	**F**
Eastbound Left	1		ERR	F	ERR	F

Eastbound Through	2		21.5	C	167.1	F
Eastbound Right	1		0.0	A	0.0	A
Westbound Left	1		14.2	B	42.7	D
Westbound Right	2		22.3	C	13.5	B
Westbound Right	1		4.4	A	4.4	A
Northbound Left	2		41.0	D	282.6	F
Northbound Through	1		13.5	B	13.5	B
Northbound Right	1		1.0	A	24.5	C
Southbound Left	1		409.1	F	736.5	F
Southbound Through	1		20.0	C	21.3	C
Southbound Right	1		370.7	F	91.3	F
17th St & South St		**SIG**	**196.6**	**F**	**263.2**	**F**
Eastbound Left	1		78.1	E	209.2	F
Eastbound Through / Right	2		25.3	C	180.4	F
Westbound Left	1		13.2	B	64.3	E
Westbound Through / Right	2		334.9	F	44.7	D
Northbound Left	1		27.2	C	27.7	C
Northbound Through / Right	1		38.5	D	839.5	F
Southbound Left	1		61.7	E	412.9	F
Southbound Through / Right	1		65.3	E	58.0	E
17th St & Access P3		**TWSC**	**8.7**	**A**	**8.8**	**A**
Eastbound Left / Through / Right	1	Stop	19.1	C	19.1	C
Westbound Left / Through / Right	1	Stop	0.0	A	0.0	A
Northbound Through / Right	1	Free	7.0	A	5.0	A
Southbound Left / Through / Right	1	Free	0.0	A	0.0	A

6.3 Proposed Improvements

6.3.1 2026

It is anticipated that the property will include 3 access points.
Roadway access point capacity must be analyzed thoroughly in order to ensure that the roadway network adequately handles future traffic demands based on the additional development trip generation.

Table 8: Intersection Improvements 2026: Turn Lane Warrants

Intersection	Direction	Turn Lane	Warranted?	Storage Length (ft)	Taper Length (ft)
South St & US 65 SB Ramp[2]	Eastbound	Right	No	-	-
Access P1 & 20th St	Northbound	Right	No	-	-
South St & Access P2	Eastbound	Left	Yes	170	100
South St & Access P2	Westbound	Right	Yes	120	100
South St & 17th St	Southbound	Right	Yes	120	100
Access P3 & 17th St	Northbound	Left	Yes	120	100

[1] Left turn lane is not needed for left turn volume less than 10 vph.
[2] Right turn lane is not needed for right turn volume less than 10 vph.

6.3.2 Future Build with Improvements

Due to the expansion proposed at this property, a capacity analysis of the road system in future with improvements condition was conducted to analyze intersection operations during the AM & PM peak hour.

Table 9 shows the LOS for the future with improvements condition traffic volumes and lane geometrics for the AM & PM peak hour.

Table 9: 2026 Peak Hour Measure of Effectiveness (with improvements)

INTERSECTION N/S E/W	# of Lanes	Traffic Control	AM Delay	AM LOS	PM Delay	PM LOS
US 65 SB Ramp & South St		**SIG**	**25.7**	**C**	**238.4**	**F**
Eastbound Through / Right	2		27.9	C	24.5	C
Westbound Left	1		16.1	B	17.7	B
Westbound Through	1		10.6	B	11.2	B
Southbound Left	1		32.8	C	350.0	F
Southbound Through	1		0.0	A	0.0	A
Southbound Right	1		1.8	A	6.9	A
US 65 NB Ramp & South St		**OWSC**	**2.0**	**A**	**13.3**	**B**
Eastbound Left	1	Free	8.9	A	8.9	A
Eastbound Through	2	Free	0.0	A	0.0	A
Westbound Through	1	Free	0.0	A	0.0	A
Westbound Right	1	Free	0.0	A	0.0	A
Northbound Left	1	Stop	129.1	F	1171.3	F
Northbound Through	1	Stop	0.0	A	668.4	F
Northbound Right	1	Yield	22.8	C	165.5	F
20th St & Access P1		**OWSC**	**6.5**	**A**	**6.4**	**A**
Westbound Left / Right	1	Stop	10.8	B	10.1	B
Northbound Through / Right	1	Free	0.0	A	0.0	A

Southbound Left / Through	1	Free	0.0	A	0.0	A
20th St & South St		**OWSC**	**2.3**	**A**	**2.3**	**A**
Eastbound Left	1	Free	29.8	D	14.9	B
Eastbound Through	2	Free	0.0	A	0.0	A
Eastbound Right	1	Free	0.0	A	0.0	A
Westbound Through	1	Free	0.0	A	0.0	A
Westbound Right	1	Free	0.0	A	0.0	A
Northbound Right	1	Yield	13.6	B	32.5	D
Southbound Left / Right	1	Stop	20.4	C	22.0	C
19th St/Access P2 & South St		**SIG**	**315.7**	**F**	**365.1**	**F**
Eastbound Left	1		ERR	F	ERR	F
Eastbound Through	2		21.5	C	167.1	F
Eastbound Right	1		0.0	A	0.0	A
Westbound Left	1		14.2	B	42.7	D
Westbound Right	2		22.3	C	13.5	B
Westbound Right	1		4.4	A	4.4	A
Northbound Left	2		41.0	D	282.6	F
Northbound Through	1		13.5	B	13.5	B
Northbound Right	1		1.0	A	24.5	C
Southbound Left	1		409.1	F	736.5	F
Southbound Through	1		20.0	C	21.3	C
Southbound Right	1		370.7	F	91.3	F
17th St & South St		**SIG**	**192.1**	**F**	**260.0**	**F**
Eastbound Left	1		78.1	E	209.2	F
Eastbound Through / Right	2		25.3	C	180.4	F
Westbound Left	1		13.2	B	64.3	E
Westbound Through / Right	2		334.9	F	44.7	D
Northbound Left	1		25.6	C	25.9	C
Northbound Through / Right	1		38.5	D	839.5	F
Southbound Left	1		61.7	E	412.9	F
Southbound Through	1		38.4	D	38.1	D
Southbound Right	1		6.1	A	5.9	A
17th St & Access P3		**TWSC**	**8.6**	**A**	**8.4**	**A**
Eastbound Left / Through / Right	1	Stop	19.1	C	19.0	C
Westbound Left / Through / Right	1	Stop	0.0	A	0.0	A
Northbound Left	1	Free	8.8	A	8.4	A
Northbound Through / Right	1	Free	0.0	A	0.0	A
Southbound Left / Through / Right	1	Free	0.0	A	0.0	A

6.4 Improvements

Roadway Improvements 2026 – At **South St & 20th St** it is recommended that the Southbound Left movement be restricted. The intersection of **South St & Access P2** will require an **Eastbound Left turn lane, Westbound Right turn lane,** and a **Northbound**

Through lane. The intersection of **South St & 17th St** will require a **Southbound Right turn lane**. The intersection of **Access P3 & 17th St** will require a Northbound Right.

7 Recommendations and Conclusion

7.1 Sight Distance at Proposed Entrances

Careful consideration should be given to sight distance obstructions when planning any future development or aesthetic enhancements, such as berms, fencing, or landscaping, to ensure that these improvements do not obstruct the view of entering and exiting traffic at the development entrance with public roads. It is generally recommended that all improvements higher than 3.5 feet above the elevation of the nearest pavement edge be held back at least 20 feet from the traveled roadway.

7.2 Access Points

Access P1 – Access P1 will provide full access onto 20th Street to the subject property and will provide full ingress/egress to all development traffic.

Access P2 – Access P2 will provide full access onto South St to the subject property and will provide ingress/egress to development traffic.

Access P3 – Access P3 will provide full access onto 17th Street to the subject property and will provide full ingress/egress to all development traffic.

7.3 Summary of Needed Improvement

Roadway Improvements 2026 – At **South St & 20th St** it is recommended that the Southbound Left movement be restricted. The intersection of **South St & Access P2** will require an **Eastbound Left turn lane, Westbound Right turn lane,** and a **Northbound Through lane**. The intersection of **South St & 17th St** will require a **Southbound Right turn lane**. The intersection of **Access P3 & 17th St** will require a **Northbound Left turn lane.**

7.4 Summary of Intersection Analysis

A review of the 2026 peak hour intersection analysis revealed that the intersection of **South St & US 65 SB Ramp** would operate at a **level of service C in the AM, and F in the PM**. The intersection of **South St & US 65 NB Ramp** would operate at a **level of service A in the AM, and B in the PM.**The intersection of **South St & 20th St** would operate at a **level of service A overall**. The intersection of **Access P1 & 20th St** would operate at a **level of service A overall**. The intersection of **South St & Access P2** would operate at a **level of service F in the AM, and F in the PM**. The intersection of **South St & 17th St** would operate at a **level of service F in the AM, and F in the PM.**The intersection of **Access P3 & 17th St** would operate at a **level of service A overall.**

We trust this traffic study satisfactorily answers questions concerning the traffic impact on the proposed development. If you need additional information, please contact me.
Respectfully submitted,

CJW TRANSPORTATION CONSULTANTS, LLC

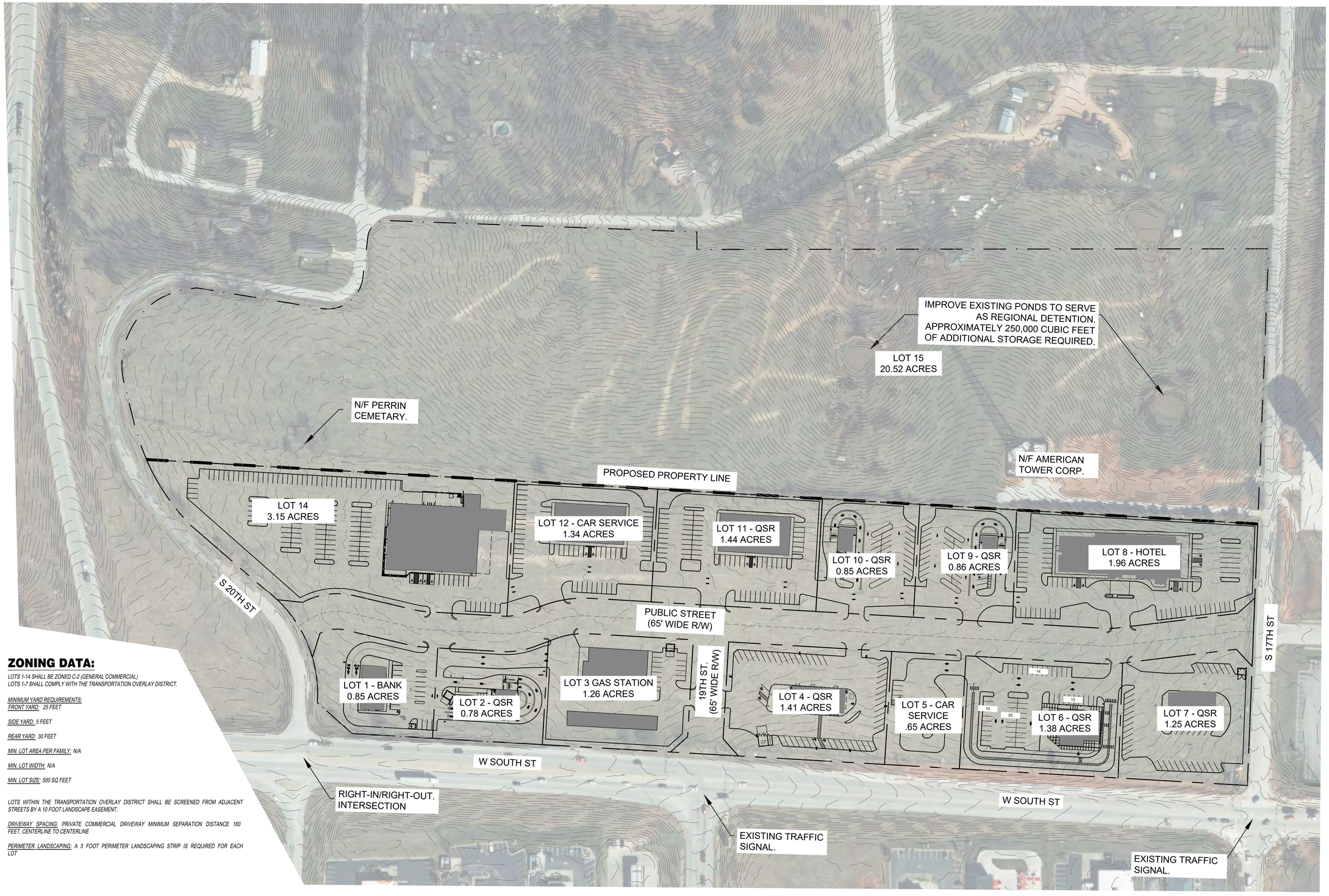
C. Jay Wynn, PE, PTOE, LSI
CJW Transportation Consultants, LLC.

Tawny Denzer
CJW Transportation Consultants, LLC.

APPENDIX I – PROPOSED DEVELOPMENT

PREPARED BY:

CJW



ZONING DATA:

LOTS 1-14 SHALL BE ZONED C-2 (GENERAL COMMERCIAL)
LOTS 1-7 SHALL COMPLY WITH THE TRANSPORTATION OVERLAY DISTRICT.

MINIMUM YARD REQUIREMENTS:
FRONT YARD: 25 FEET

SIDE YARD: 5 FEET

REAR YARD: 30 FEET

MIN. LOT AREA PER FAMILY: N/A

MIN. LOT WIDTH: N/A

MIN. LOT SIZE: 500 SQ FEET

LOTS WITHIN THE TRANSPORTATION OVERLAY DISTRICT SHALL BE SCREENED FROM ADJACENT STREETS BY A 10 FOOT LANDSCAPE EASEMENT.

DRIVEWAY SPACING: PRIVATE COMMERCIAL DRIVEWAY MINIMUM SEPARATION DISTANCE 160 FEET, CENTERLINE TO CENTERLINE

PERIMETER LANDSCAPING: A 5 FOOT PERIMETER LANDSCAPING STRIP IS REQUIRED FOR EACH LOT

EASEMENT NOTES:

DRAINAGE EASEMENTS TO BE PROVIDED TO REGIONAL DETENTION. LOCATIONS TO BE DETERMINED.

ACCESS EASEMENTS TO BE PROVIDED BETWEEN ADJACENT LOT DRIVEWAY CONNECTIONS. LOCATIONS TO BE DETERMINED.

1 C1.0 CONCEPTUAL SITE LAYOUT
SCALE: 1" = 80'

80 0 80 160 240
GRAPHIC SCALE - FEET

N

OWN
Engineering beyond.™
3213 S. West Bypass
Springfield, MO 65807
417.866.2741
weareown.com
FORMERLY ANDERSON ENGINEERING

OZARK 40 ACRES THESSING

1505 S 17TH ST
OZARK, MO

REVISIONS		
NO.	DESCRIPTION	DATE

DRAWING INFORMATION

PROJECT NO: PSP1-2329
DRAWN BY: CMF
CHECK BY: JMD
ISSUED FOR: CONCEPT
ISSUED DATE: 10/11/2023

PRELIMINARY
NOT FOR CONSTRUCTION OR PERMIT

ISSUED BY: JARED M DAVIS
LICENSE NO: PE No. 2016017614

A licensed Missouri Engineering Corporation
COA 00062

SHEET TITLE

CONCEPTUAL SITE LAYOUT

SHEET NUMBER

C1.0

Plotted on: Oct 11, 2023 - 2:51pm G:\Shared drives_01_Land Development Eng Proposals\SP1_2023\PSP1-2329 Ozark Commercial Subdivision\01 CIVIL\CAD\Base Files\Thessing-Ozark40 (CMF concept 23-10-10).dwg Layout: C1.1

APPENDIX II – EXISTING CONDITIONS

PREPARED BY:

CJW

APPENDIX III – PROJECTED TRAFFIC

PREPARED BY:

CJW

APPENDIX IV – ANALYSIS OF TRAFFIC & IMPROVEMENTS

PREPARED BY:

CJW

Section 410.170 **Approval, Disapproval or Modification of Preliminary Plat by Planning and Zoning Commission and Board of Aldermen.**

A. Planning And Zoning Commission Review. The Planning and Zoning Commission will review the preliminary plat and supplemental materials to determine if the plat meets the standards set forth in this Title.

B. Planning And Zoning Commission's Recommendation. The Planning and Zoning Commission shall recommend approval, approval with modifications, or disapproval to the Board of Aldermen the preliminary plat within one hundred twenty (120) days from and after the meeting at which the preliminary plat was submitted. The Planning and Zoning Commission will clarify to the applicant or his/her representative attending the meeting what action, if any, was taken by the Planning and Zoning Commission, specifying what changes or additions, if any, will be required prior to final review and approval of the preliminary plat. If the Planning and Zoning Commission within the one hundred twenty (120) day time period takes no action, the preliminary plat shall be deemed to be disapproved by the Planning and Zoning Commission. The one hundred twenty (120) day period for Planning and Zoning Commission action may be extended upon written request of the applicant.

C. Planning And Zoning Commission's Recommendation of Approval With Conditions.

1. Any conditions to the preliminary plat required as prerequisites for approval shall be noted in the minutes of the Planning and Zoning Commission's public hearing. A list of required conditions will be sent to the applicant or his/her engineer within ten (10) business days so the preliminary plat can be revised and resubmitted to the Planning and Development Department prior to the Board of Aldermen hearing for approval.

2. The revised preliminary plat must be received by the Planning and Development Department prior to being placed on the Board of Aldermen's agenda.

D. Planning and Zoning Commission's Recommendation of Denial Of A Preliminary Plat. If the Planning and Zoning Commission do not recommend approval or approval with conditions of the preliminary plat, the Commission shall provide a statement of the reasons for such action and return it to the applicant within ten (10) business days of the action. The grounds for denial of any preliminary plat submitted or regulations violated by the plat shall be set forth in the minutes of the Planning and Zoning Commission meeting.

E. Resubmission Of A Denied Preliminary Plat. If, after denial, the applicant elects to resubmit a revised preliminary plat for further consideration, the applicant must do so within ninety (90) days from the date of the Planning and Zoning Commission's denial.

1. In the event that the Planning and Zoning Commission does not recommend approval or approval with conditions of the preliminary plat, the applicant may proceed through the process and submit a revised preliminary plat to the Board of Aldermen within ninety (90) days from the date of the denial. In such event the Planning and Zoning Commission shall forward their recommendation to the Board of Aldermen along with their reasoning and supporting information.

F. Board Of Aldermen Approval Of Preliminary Plat. The preliminary plat shall be forwarded to the Board of Aldermen with the Planning and Zoning Commission's recommendation and the Board of Aldermen may approve said plat. The Board of Aldermen shall determine if the land or easement proposed to be dedicated by the applicant for public use or if the public improvements shall be accepted by the City. If the Board of Aldermen determines that the location of the land to be dedicated for public use or the location of public improvements is appropriate and complies with applicable ordinances then the Board of Aldermen shall authorize the acceptance of the dedication of the land or easements upon the applicant filing and recording a final plat which substantially conforms to the preliminary plat and shall authorize the acceptance of the public improvements upon the Director of Public Works certifying to the Community Development Director and the City Clerk that the public improvements have been made in accordance with City standards and specifications.

1. No person shall present testimony to council which is substantially and materially different from that presented to the commission at its hearing on the matter, and no exhibit will be accepted by council that has not been presented to the commission at its hearing on the matter. However, this Subsection is not intended to prevent the introduction of new testimony, new exhibits, or other new evidence when there is a clear showing, as determined by a majority of Aldermen, that the introduction of such evidence before the commission was not in good faith reasonably possible.

2. Should a person present testimony that is substantially or materially different from that presented to the commission at its hearing on the matter or should an exhibit be offered that has not been presented to the commission at its hearing on the matter, subject to the exception contained in Subsection 410.170(F)(1), any person on the opposing side of the matter before council may claim prejudice from such presentation or offering, and council shall upon such a claim have sole discretion to determine whether the person claiming prejudice has in fact been prejudiced from such presentation or offering. Upon a determination that prejudice exists, council shall refer the matter back to the commission for a new notice and hearing.

G. Effect Of Preliminary Plat Approval. Approval of a preliminary plat by the Planning and Zoning Commission and Board of Aldermen constitutes approval of the subdivision as to the character and density of development, the arrangement, location and approximate dimension of streets, lots, utility easements, detention basins and other planned features and authorizes the applicant to proceed to prepare sedimentation and erosion control plans; submit an application for a land development/land disturbance permit; and proceed with the preparation of construction drawings for Public Improvement Plans including, but not limited to, streets, potable water, sanitary sewer and stormwater infrastructure specifications.

1. Approval of the preliminary plat shall not authorize the sale of lots or the construction of buildings or public improvements, nor shall it constitute acceptance by the City of Ozark of any dedicated improvements anticipated in the preliminary plat.

Section 410.180 **Effective Period of Preliminary Plat Approval.**

The approval of a preliminary plat shall remain effective for a period of twelve (12) consecutive months from the date of approval or the last inspection of the public improvements. If the applicant fails to submit a final plat within the said twelve (12) month period and the applicant is not actively in the process of completing the public improvements, the authority granted by the approval of the preliminary plat shall automatically expire. The Community Development Director, or his/her designee, has the discretion to extend the effective period of the Preliminary Plat approval. In the event that the applicant desires to continue development, a new application for preliminary plat shall be required.

Section 410.190 **Preliminary Plat Requirements.**

A. The preliminary plat shall include, but not be limited to, the following features and information:

1. *Name and code.* The proposed name of the subdivision which shall not duplicate or closely approximate the name of any other subdivision in the City of Ozark or of any subdivision filed in Christian County.

2. *Designation.* The tract designation according to real estate records of the Recorder of the County where located.

3. *Owners of record.* The names and addresses of the owner or owners of record, the developer, and the engineer or surveyor.

4. *Abutting owners.* The name of adjacent subdivisions and the names of record owners of adjacent parcels of unplatted land.

5. *Boundary lines.* The boundary lines, accurate in scale, of the tract to be subdivided. To reduce clutter during review, the above items may be lighter in color than the prominent items required on this plan.

6. *Lot information*. The plat shall indicate the area, lot size, proposed setbacks and exact location and distance of all structures and other physical improvements in relation to proposed lot lines. Each lot should bear sequential numbering.

7. *Proposed layout and legal description.* The legal description of the entire site to be subdivided, including acreage in tract, boundary and easement lines, locations and dimensions and bearings of newly created tracts, parcels or lots that are part of the subdivision shall be shown on the Preliminary Plat. The dimensions and location of all arcs-radii, points of curvature, tangent boundaries, and other pertinent survey information necessary to an accurate description and location. Survey data shall meet all applicable portions of the current Missouri Standards for Property Boundary Surveys as promulgated by the Department of Agriculture, Division of weights Measures, and Consumer Protection. All survey datum shall be vertically tied to the NAVD 88 datum and shall graphically show a horizontal tie to two subdivision corners bearing and distance from the nearest published GRS monument which name and/or designation number, date of adjustment and coordinates shall be noted

8. *Curve data.* When a boundary, easement, lot or street is on a circular curve, data shall be shown in place or on an included Curve Table. Curve data shown shall consist of at least the following: Curve number/name if table is used; Delta or central angle; Radius; Arc length; Chord length and bearing.

    a. When curved lot lines are concentric to the centerline of street it shall be noted as such on the Preliminary Plat.

    b. Non-tangent curves shall be noted in place or in Curve Table and shall show Central Angle rather than Delta; Bearing from radius point to point of curvature and all other curve components mentioned above.

9. *Streets — other features.* The location, widths, right-of-way, centerline, and names of all existing or platted streets or other public ways within or adjacent to the tract and other important features such as existing permanent buildings; large trees and watercourses; railroad lines; corporation and township lines; utility lines, etc.

a. If private streets are proposed, then they shall be constructed to the City of Ozark public Street requirements, following the Public Works Design Standards.

10. *Existing utilities.* Existing sewers, water mains, culverts and other underground structures within the tract and immediately adjacent thereto with the easement details, pipe sizes, and grades indicated.

11. *Physical characteristics.* Topography; contours, normally with intervals of five (5) feet or as may be otherwise required by the Planning and Zoning Commission.

12. *Soils.* Type and extent of soil groups with main soil horizon description.

13. *Geology.* Location, type and extent of subsurface and exposed geological formations.

14. *Subdivision Sign and Sign Easement*. A sign shall be required for all major subdivisions of land. Indicate the location for the proposed subdivision sign easement at the main entrance of the subdivision. The sign easement shall be located outside of public right of way, site triangle and other easements, following the Public Works Design Standards

15. *Proposed design — street, drainage, etc.*

    a. The layout, names, cul-de-sacs, and, widths of proposed streets, alleys, sidewalks and easements.

    b. Two public road connections to public right of way for proposed subdivisions that will have more than thirty (30) lots.

        i. If there exists a hardship which prevents two connections from the property to be subdivided to existing public right of way, then a subdivision plat with one connection from the applicant’s property to existing public right-of-way may be

considered for approval by the Planning and Development Department. In addition, the approved access shall meet the requirements of the adopted International Fire Code.

ii. The hardship shall only be considered due to unobtainable access through neighboring properties based on existing adjoining development, or the shape, topographical conditions, and environmental features that would prevent the access.

c. The location of any trail and easement identified in the Ozark Trails Master Plan, see Section 410.510.

d. The location of sight triangle at street intersections, per the Public Works Design Standards.

e. The location and approximate sizes of catch basins, retention basins, culverts and other drainage structures.

f. The layout, numbers and approximate dimensions (including approximate square footage) of proposed lots.

g. Proposed street names shall be established to the satisfaction of the Planning and Zoning staff representative and the approval obtained from the Christian County Emergency Services representative and shall not duplicate or closely approximate any existing or platted street names in the City, except extensions of existing streets.

h. Proposed subdivisions shall show right-of-way for future connections to undeveloped property, to ensure connectivity of roadways.

16. *Proposed Elements*. All proposed right-of-way for streets and all easements for drainage, sewer, water and other utilities planned to be within the tract. and immediately adjacent thereto.

17. *Zoning.* Zoning boundary lines if any; proposed uses of property and setback lines.

18. *Corner lots.* Corner lots shall comply with front yard setback requirements for the applicable zoning regulations as set out in Chapter **405**.

19. *Adjacent Property Zoning*. Identify the existing zoning district of the adjacent property.

20. *North point, etc.* North point, scale, date, title. Both magnetic north and true north shall be indicated with the declination also shown.

21. *Scale*. The preliminary plat shall be drawn at a scale no greater than one hundred (100) feet to the inch and which is in increments of ten (10) feet

22. *Vicinity Sketch*. A vicinity sketch at a scale of four hundred (400) feet or more to the

inch shall be drawn on or shall accompany the preliminary plat. The sketch shall show the nearest existing highways or thoroughfares, streets and alleys in neighboring subdivisions or unplatted property involved in producing the most advantageous development of the entire neighborhood and the section, range and township.

23. Environmental Features:

    a. *Floodplains, etc*. The extent and location of floodplains, floodways or other waterways of record; elevations of which, shall be based on applicable Flood Insurance Studies, Flood Insurance Rate Maps, Flood Boundary and Floodway Maps.

    b. *Wetlands*. The extent and location of wetlands must be shown, the location of which shall be based on the latest data from the National Wetland Inventory.

    c. *Sinkholes*. The extent and location of sinkholes must be shown, the location of which shall be based on the latest data from the Christian County Assessor's Department, a report conducted by a Geotechnical Engineer, or a source approved by the Public Works Department Administrator, or their designee. Any sinkhole and its associated "No Build" buffer zone shall follow the Public Works Design Standards.

24. *Dedicated Property.* An accurate outline of all property which is offered for dedication for public use and of all property that may be reserved by covenant in the deeds for the common use of the property owners in the subdivisions, with the purpose indicated thereon. All lands dedicated to the public use other than streets or roads shall be marked on the plat and within the plat notes: "Dedicated for Public Use" and "owned and maintained by the Homeowners' Association or owners of all lots within the subdivision. In the event the Homeowners' Association dissolves, the responsibility and ownership will revert to the property owners within the subdivision."

25. *Survey acknowledgement*. The name and license number of the Professional Land Surveyor or holder of a Corporate Survey License who provided the boundary information for the Preliminary Plat, and the date of usage conformation shall be noted on Plan.

26. *Notes and related information*. Notes pertaining to particular items such as:
    a. Total area;
    b. Total number of lots;
    c. Smallest/largest lot;
    d. Setback minimums;
    e. Class of Property;
    f. Current zoning;
    g. Source of title;
    h. Floodplain details;

i. Buffer Yard Details, if applicable;
j. Standard Right-of-Way details;
k. Horizontal and Vertical Datum basis;
l. Access limitations;

27. All preliminary plats shall be provided as an AutoCAD dwg file and shall be on U.S. State Plane 1983, Missouri Central 2402 Zone [NAD 1983, CONUS] coordinates.

B. The following list of supporting documents are required with preliminary plat applications shall include, but not be limited to, the following.

1. A Professional Engineered Stormwater Analysis that follow the Public Works Design Standards.

2. A Professional Engineered Traffic Impact Study (TIS) that follow the Public Works Design Standards.

EXPLANATION TO COUNCIL BILL NO: 3619

FILED DATE: 12-2-2024

ORIGINATING DEPARTMENT: Planning and Development

PURPOSE: AN ORDINANCE APPROVING THE PRELIMINARY PLAT FOR THE OZARK MARKETPLACE SUBDIVISION AND AUTHORIZING THE DIRECTOR OF PLANNING AND DEVELOPMENT TO ACCEPT THE DEDICATION OF THE PUBLIC STREETS AND EASEMENTS TO THE CITY AS SHOWN ON THE PRELIMINARY PLAT, UPON THE APPLICANT FILING AND RECORDING A FINAL PLAT THAT SUBSTANTIALLY CONFORMS TO THE PRELIMINARY PLAT; AND AUTHORIZING THE CITY CLERK TO SIGN THE FINAL PLAT UPON COMPLIANCE WITH THE TERMS OF THIS ORDINANCE

BACKGROUND INFORMATION: The request is for the Preliminary Plat of the Ozark Marketplace Subdivision. The parcel is located at 1505 S. 17th Street - the southern approximately 26-acre parcel bordered by S. 20th Street on the west, W. South Street on the south, and South 17th Street on the east. The parcel is zoned C-2 (General Commercial District). Staff reviewed the Preliminary Plat and all comments have been satisfied. The City of Ozark, Ozark Special Road District, and the Missouri Department of Transportation (MoDOT) reviewed the preliminary traffic study and will review the final traffic impact study for required road improvements during the Public Improvements phase. The proposed subdivision is composed of thirteen (13) lots and two detention areas. Constriction documents will be reviewed to ensure that the proposed stormwater design complies with the calculations and management methods outlined within the preliminary stormwater report.

REMARKS: On November 25, 2024, the Planning and Zoning Commission recommended approving the Preliminary Plat of the Ozark Marketplace Subdivision. The recommendation passed, 9-0. Staff recommended the approval of the Preliminary Plat.

SUBMITTED BY:

Cameron R. Smith, PLA
Assistant City Administrator

APPROVED BY:

Eric Johnson
City Administrator

BILL NO. 3625 ORDINANCE NO. 24 - ____

AN ORDINANCE, OF THE CITY OF OZARK, MISSOURI, GRANTING WHITE RIVER VALLEY ELECTRIC COOPERATIVE, INC. A FRANCHISE FOR ELECTRIC DISTRIBUTION

WHEREAS, the City of Ozark, Missouri, (City) and White River Valley Electric Cooperative, Inc. (Cooperative) desire to enter into a Franchise Agreement; and

WHEREAS, the Cooperative is a rural electric cooperative corporation organized and existing under the laws of the State of Missouri; and

WHEREAS, Recent changes in the law have provided for rural electric cooperatives of this State to provide electric service within the corporate limits of certain cities, including the City of Ozark, Missouri, under the provisions of Sections 386.800, and 394.315, RSMo., and other applicable sections of Chapters 394 and 386, RSMo., if certain requirements are met; and

WHEREAS, the Franchise Agreement grants the Cooperative, its successors and assigns, the right to use the streets, alleys and public grounds for the purpose of erecting and maintaining an electric distribution system, with the necessary poles, wires and other apparatus, equipment and appliances therefor, and to string wires above ground or carry same thereunder; and the right to do all things necessary and proper for the purpose of generating or otherwise procuring electric energy, or any part thereof, and distributing same throughout the City and of supplying and selling electric energy for light, power, heat and any other purposes to the City and the inhabitants thereof, and fixing the terms and conditions upon which such rights may be granted and exercised.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF OZARK, MISSOURI, as follows, that:

SECTION 1 – That White River Valley Electric Cooperative, Inc. (hereinafter called the "Cooperative"), its successors and assigns, are hereby authorized and empowered to use the streets, avenues, lanes, alleys and other public grounds and ways in the City of Ozark, Missouri, (hereinafter called the "City"), as its limits now exist or may be altered, for the purpose of erecting and maintaining an electric distribution system, with the poles, wires (above ground or thereunder) and other apparatus, equipment and appliances necessary therefor, subject to reasonable supervision of the Board of Aldermen as to the place and manner of erecting the poles for said purposes; and for the purpose of conducting, supplying, distributing, and selling electric energy to the City and/or the inhabitants thereof for light, power, heat, and any other purposes; and for the purpose of erecting and maintaining a plant or plants in said City for the generating of electric energy, with the right in said Cooperative also to generate or procure said electric energy, or any part thereof, at other points and to carry same into said City and there make distribution and sale thereof, and the further right in said Cooperative to transmit any of said electric

energy from or through said City for sale outside the limits thereof.

SECTION 2 – Said Cooperative shall use every reasonable precaution to avoid damage or injury to person or property and agrees to indemnify and save harmless the said City from damage, injury, suits, actions, loss or expense arising from any negligent construction, reconstruction, repair, maintenance or operation of its said electrical system.

SECTION 3 – The Cooperative agrees that it will furnish continuous and uninterrupted electric service from the beginning of such service to the end of the franchise period, except for interruptions caused by strikes, riots, governmental interference or regulation, acts of Providence, accidents beyond the control of the Cooperative, or necessary maintenance or replacements.

SECTION 4 – The distribution and sale of electric energy to consumers shall be governed by such operating rules, regulations and practices of the Cooperative as may now or hereafter be prescribed or approved by competent authority.

SECTION 5 – The Cooperative shall abide by all applicable provisions of the Municipal Code of the City of Ozark, Missouri, including but not limited to the Dark Skies ordinance for all street lighting. The Cooperative shall use fixtures in the right-of-way that are Dark Skies compliant.

SECTION 6 – The Cooperative shall utilize energy efficient fixtures in the right-of-way.

SECTION 7 – The Cooperative agrees to pay to the City during the term of this Franchise and at such times as may be mutually agreed upon an amount equal to two (2) percent of the charges for services to customers under rate schedules for Residential and Commercial Service.

SECTION 8 – All terms and provisions of this Ordinance shall be binding upon the parties hereto, and upon their respective successors and assigns.

SECTION 9 – This Ordinance establishes a non-exclusive franchise granted by the City to the Cooperative.

SECTION 10 – This Ordinance shall be in full force and effect from and after passage and approval; and all the rights hereby granted shall continue and remain in full force and effect for a period of twenty (20) years from and after the date of passage of this Ordinance, provided that written acceptance by the Cooperative shall be filed with the Clerk within ten (10) days after such passage and approval.

PASSED AT MEETING_____.

AYE **NAY** **ABSENT/ABSTAIN**

APPROVED ON_____.

DON CURRENCE, MAYOR

ATTEST:

CHANDRA HODGES, CITY CLERK

CERTIFICATION

I, _____, Clerk of the City of Ozark, Missouri do hereby certify that the above and foregoing is a full, true and correct copy of Ordinance No._____, duly passed by the Governing Body of said City and the execution of the contract therein provided, as the same appears on the records of said City.

Witness my hand and the seal of said City, this _____ day of _____, 2024.

_____
CITY CLERK

(CITY SEAL)

EXPLANATION TO BOARD OF ALDERMAN BILL NO: 3625

FILED DATE: 12-2-2024

ORIGINATING DEPARTMENT: Law Department

PURPOSE: AN ORDINANCE, OF THE CITY OF OZARK, MISSOURI, GRANTING WHITE RIVER VALLEY ELECTRIC COOPERATIVE, INC. A FRANCHISE FOR ELECTRIC DISTRIBUTION

BACKGROUND INFORMATION: The City of Ozark, Missouri, ("City") and White River Valley Electric Cooperative, Inc. ("White River"), wish to enter into a Franchise Agreement establishing the rights and responsibilities of each party for the distribution of electric power within the City limits. Recent changes in Missouri law allow for rural electric cooperatives of this state to provide electric service within the corporate boundaries of certain cities, including the City. Property owners are utilizing this change in state law to select electric cooperative service providers prior to annexation. Therefore, the City and White River now wish to enter into a non-exclusive Franchise Agreement.

The proposed Franchise Agreement grants White River the right to use the streets, alleys, and public grounds for the purpose of erecting and maintaining an electric distribution system, with the necessary poles, wires, and other apparatus, equipment and appliances. Pursuant to the terms of this Franchise Agreement, White River will pay to the City an amount equal to two percent of the charges for service to customers under the rate schedules for Residential and Commercial Services. This is the same franchise fee for other electric franchises currently operating within the City limits. Additionally, White River has agreed to comply with the City's Dark Skies law and to utilize energy efficient fixtures in the right-of-way.

SUBMITTED BY:

/s/ Amanda Callaway
Amanda Callaway
City Attorney

APPROVED BY:

Eric Johnson
City Administrator

BILL NO. 3626 **ORDINANCE NO. _____**

AN ORDINANCE APPROVING A FUNDING AGREEMENT BETWEEN THE CITY OF OZARK, MISSOURI AND MISSOURI COMMERCIAL DEVELOPMENT LLC, RELATING TO THE DEVELOPMENT OF THE OZARK MARKETPLACE PROJECT.

WHEREAS, the City of Ozark, Missouri (the "City") is a fourth-class city and political subdivision of the State of Missouri, incorporated and exercising governmental functions and powers pursuant to the Constitution and the Revised Statutes of the State of Missouri, with its legislative power residing in the Board of Aldermen; and

WHEREAS, Missouri Commercial Development, LLC (the "Developer") has proposed to develop approximately 26 acres located generally in the northeast corner of U.S. Highway 65 and South Street in the City (the "Property") with commercial development (the "Project"); and

WHEREAS, Developer has requested that the City consider the use of economic development incentives for the project (the "Application"); and

WHEREAS, in order for the City to fully consider and evaluate the Application, the City will need to engage consultants to review, evaluate, process and consider the sources of public and private funding for the proposed Project and the experience of the Developer to complete the project contemplated; and

WHEREAS, the City does not have a source of funds to pay for costs incurred for additional legal, financial and other consultants or for expenses and other costs resulting from services to review, evaluate, process and consider the Application, including but not limited to the engagement of the legal services of Gilmore & Bell, P.C. ("Special Legal Counsel") to provide legal services for the City; and

WHEREAS, it is the policy of the City that developers who request assistance from the City in a public-private partnership or through the use of economic incentive tools to demonstrate the financial ability to allow for the full and fair evaluation by the City of all development proposals and requests for economic incentives from the City; and

WHEREAS, in order for the City to fully consider and evaluate the Application, the Developer seeks to deposit funds with the City to be used by the City to pay for the City's expenses necessary to perform a full evaluation of the Application; and

WHEREAS, the City and the Developer desire to enter into a Funding Agreement (the "Funding Agreement") to provide for the payment and funding of the expenses.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF CITY OF OZARK, MISSOURI, as follows, that:

SECTION 1. Approval of Agreement. The Funding Agreement by and between the City and the Developer, in substantially the form attached hereto as "Exhibit A" incorporated herein by reference, are hereby approved and the Mayor is hereby authorized to execute the agreement on behalf of the City.

SECTION 2. Further Authority. The Mayor, the City Administrator, and other officials, agents and employees of the City as required are hereby authorized and directed to take such further action and execute such other documents, certificates and instruments as may be necessary or desirable to carry out and comply with the intent of this Ordinance.

SECTION 3. Effective Date. This Ordinance shall take effect and be in full, force from and after its passage and approval.

PASSED AT MEETING _____.

AYE	**NAY**	**ABSENT/ABSTAIN**

APPROVED ON _____.

_____
Don Currence, Mayor

ATTEST:

_____
Chandra Hodges, City Clerk

EXHIBIT A
TO ORDINANCE NO. _____

FUNDING AGREEMENT

Exhibit A to Ordinance

CITY OF OZARK, MISSOURI
FUNDING AGREEMENT FOR
OZARK MARKETPLACE REDEVELOPMENT

This **FUNDING AGREEMENT** for the **OZARK MARKETPLACE PROJECT** (the **"Funding Agreement"**) is entered into this ____ day of January, 2025, between the **CITY OF OZARK, MISSOURI** (the **"City"**), and **MISSOURI COMMERCIAL DEVELOPMENT LLC,** a Missouri limited liability company (the **"Developer"**).

RECITALS

WHEREAS, cities, counties, towns and villages in Missouri are authorized, pursuant to the Missouri Constitution and Missouri Revised Statutes (the "Authority") to provide various tools and incentives to promote economic development; and

WHEREAS, the City is a fourth class city incorporated and exercising governmental functions and powers pursuant to the Missouri Constitution and the Revised Statutes of the State of Missouri, with its legislative power residing in the Board of Aldermen; and

WHEREAS, the Developer is authorized to conduct business in the State of Missouri; and

WHEREAS, the City does not have a source of funds to finance costs incurred for additional legal, financial and other consultants or for direct out-of-pocket expenses and other costs resulting from services rendered to review, evaluate, consider and process the application to construct a commercial project (the "Project") in the City (the "Application"); and

WHEREAS, it is the City's policy that a Developer who desires assistance from the City in a public-private partnership or through the use of economic incentive tools shall demonstrate the financial ability to allow for the full and fair evaluation by the City of all development proposals and requests for economic incentives from the City; and

WHEREAS, the City will need to prepare or consult on the preparation of documents necessary to provide economic development incentives (the "Incentive") for a project within the City, and to consider the project in accordance with the Authority and, if such Incentive is approved by the City, to provide such other services and assistance as may be required to implement and administer the Incentive through its completion. Such incentive may result in significant financial benefit to the Developer; and

WHEREAS, the City does not have a source of funds to pay costs incurred by them, in the form of additional City staff time; legal fees (Bond Counsel, Special Counsel and City Attorney), fiscal and planningconsultants; direct out-of-pocket expenses and other costs resulting from, services rendered to review, evaluate, process and consider a request for the Incentive pursuant to the Authority.

AGREEMENT

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. **Services to be Performed by the City.** The City shall:

A. Prepare or consult with the Developer on the review and analysis of the Incentive for the Project;

B. Give all notices, make all publications and hold hearings as may be required by applicable laws in order to consider an Incentive for the Project;

C. If the Board of Aldermen of the City approves the Project and, if applicable, the issuance of bonds, the City will provide necessary staff, legal, financial, and planning assistance to prepare, evaluate, negotiate and present the requested actions to the City and to prepare and present required ordinances and other documents to the Board of Aldermen for the Project; and

D. If the Developer's requested actions are approved, provide the necessary staff and legal, financial and planning assistance to prepare and negotiate a definitive agreement between the Developer and the City for implementation of the Project, which may also include related contracts for the other approved public funding sources.

2. **Application Fee & Initial Deposit.** The City acknowledges receipt of fifteen thousand dollars ($15,000) (the "Deposit") from the Developer in connection with this Funding Agreement as the Application Fee. The Deposit shall be treated as a deposit with the City pursuant to the terms and conditions of this Funding Agreement. The City shall disburse the Deposit as set forth in **Section 4** and shall bill the Developer pursuant to **Section 5** to re-establish the Deposit so that there is always a minimum cash balance of fifteen thousand dollars ($15,000) available, from which additional disbursements may be made as required.

3. **Additional Funding.**

A. The City shall submit an itemized statement for actual and reasonable out-of-pocket third-party expenses necessary to perform its obligations hereunder or for any additional reasonable obligations or expenditures incurred by the City, including copies of paid invoices for such obligations and expenditures. Such statements shall be submitted on a regular periodic basis, but no more often than monthly. The Developer shall pay the City the amounts set forth on such statements (the "Additional Funds") within thirty (30) days of receipt thereof. If such funds are not so received, the unpaid balance shall accrue interest at the rate of two percent (2%) per month until paid, but in no event shall such interest exceed twenty-four percent (24%) per annum, and City shall be relieved of any and all obligations hereunder until paid or may terminate this Funding Agreement pursuant to **Section 6**. Developer shall supply the Additional Funds in a timely manner so that City activities may continue without interruption.

B. The City and the Developer agree that the Developer shall reimburse the City for its reasonable expenses necessary to perform the City's obligations hereunder, including additional consultants as approved according to **Section 3(C)**.

C. The City shall advise the Developer in writing if it intends to utilize the services of any other consultant to perform its obligations under the terms of this Funding Agreement. Such written notice shall include the name of the consultant, the service to be performed and an estimate of the cost expected. If the Developer, in writing, within five (5) business days from receipt of the City's notice, objects to either the consultant named or the service to be performed, the City and Developer shall negotiate in good faith to resolve the Developer's objections. If the City and Developer cannot agree on the consultant to be used or the service to be performed, the City shall have no obligation to perform that service or any other service under the terms of this Funding

Agreement and the Developer shall have no obligation to pay for such service under the terms of this Funding Agreement and this Funding Agreement shall terminate and the City will have no further obligation to consider the Incentive.

D. Before a vote by the Board of Aldermen for approval or disapproval of the Incentives, approval of this Funding Agreement with the Developer, or approval of any other measure associated with the Application or the Project, the Developer shall deposit with the City, upon notice from the City, sufficient Additional Funds to pay all outstanding expenses incurred hereunder and replenish the amount on deposit with the City as provided in **Section 2**.

4. **Disbursement of Funds.** The City shall disburse the Deposit and Additional Funds for reimbursement of reasonable costs to the City on or before the thirtieth (30th) day of each month,and for reasonable consulting fees and the payment of all actual and reasonable expenses incurred by the City or any of its consultants in connection with the performance of its obligations under this Funding Agreement as payment for such expenses become due. The City shall send to the Developer a copy of the record for each disbursement made to the Developer pursuant to this Funding Agreement withinfive (5) business days of such disbursement along with documents evidencing such expenses.

5. **Project Administration**. In addition to the services set forth in **Section 1**, the City may be required to provide services from time to time for the continuing administration of the Incentive and any contracts entered into in furtherance of the Application and the Project. Upon appropriate itemization, the City shall be reimbursed by the Developer for meeting expenses and other expenses that are reasonable or incidental to the general operations of the City and its consultants with respect to administration of the Incentive, and any contracts entered into in furtherance of the Application or the Project. The provisions of this section shall apply until such time as the City and the Developer execute anagreement which provides for the termination of this Funding Agreement and the terms and conditions under which the City's ongoing services shall be funded. It is anticipated that, if approved, any such agreement will include provisions necessary for reimbursement of such funds to the Developer.

6. **Termination of this Funding Agreement.**

A. Termination by the City. In the event the Developer fails to perform any of its obligations herein, the City may terminate this Funding Agreement, and any other agreement between the parties, at its sole discretion if the Developer fails to cure the default within ten (10) days after written notice to the Developer of the default. Termination by the City for any reason provided in this Funding Agreement shall also terminate any duties and obligations of the City with respect to this Funding Agreement, including, but not limited to, the City's processing of Developer's Application. Upon such termination, the Deposit and any Additional Funds shall be disbursed as set forth in paragraph C of this Section.

B. Termination by the Developer. The parties hereto acknowledge that the Developer may determine to abandon the Application. Upon written notice of abandonment by the Developer, this Funding Agreement shall terminate, and the City may terminate any other agreement between the parties. Upon such termination, the Deposit and any Additional Funds shall be disbursed as set forth in paragraph C of this Section.

C. Wrap-Up After Early Termination. Upon termination pursuant to paragraphs A or B of this Section, the City shall retain the Deposit and Additional Funds, if any, necessary to reimburse the City for all reasonable expenses incurred under this Funding Agreement to the date of termination and any monies due and owing to the City pursuant to any other agreementwith the Developer. Upon such termination, in the event the Deposit and Additional Funds are insufficient to reimburse the City for the outstanding expenses of the City payable hereunder, the Developer shall reimburse the City as set forth in **Section 3**. After termination of this Funding

Agreement pursuant to paragraphs A or B of this Section, any amounts remaining from the Deposit and the Additional Funds after all amounts have either been paid as directed by the City, or reimbursed to the City, shall be returned to the Developer.

D. Termination by Consolidation into Incentive Agreement. Unless otherwise terminated as provided in paragraphs A or B of this **Section 6**, this Funding Agreement shall stay in full force and effect until it is specifically terminated as set forth in an agreement between the City and the Developer, and thereafter the terms and conditions of the agreement shall provide for the continued funding arrangements by Developer with respect to the Application and the Project.

7. **Notice.** Any notice, approval, request or consent required by or asked to be given under this Funding Agreement shall be deemed to be given if in writing and mailed by United States mail, postage prepaid, or delivered by hand, and addressed as follows:

To the City:	To the Developer:
City of Ozark	_____
205 N. 1st Street	_____
Ozark, Missouri 65721	_____
Attn: City Attorney	Attn: _____
With a copy to:	With a copy to:
Sarah Granath	_____
Gilmore & Bell, P.C., Suite 1100	_____
2405 Grand Blvd.	_____
Kansas City, Missouri 64108	_____

Each party may specify that notice be addressed to any other person or address by giving to the other party ten (10) days prior written notice thereof.

8. **City Requirements and Prior Approval.** The Developer agrees to comply with all applicable laws and City ordinances, including, but not limited to, the City's zoning ordinances, subdivision regulations and all planning or infrastructure requirements related to the development of Developer's property. The parties agree that execution of this Funding Agreement in no way constitutes a waiver of any requirements of applicable City ordinances or policies with which the Developer must comply and does not in any way constitute prior approval of any future proposal for Project. The parties understand that the City may not lawfully contract away its police powers and that approval of the Application and any zoning, subdivision and similar development projects cannot be contractually guaranteed. This Funding Agreement does not alter or diminish the City's ability to exercise its legislative discretion to consider the Application and the Project and approvals for the Application in accordance with all applicable laws any other projects with respect to development of the redevelopment area and Developer's property.

9. **Legal Representation.** The Developer understands and acknowledges that this arrangement is an accommodation to the Developer in which the City's special legal counsel is not providing legal representation to the Developer and that no attorney-client relationship between the Developer and the City's special legal counsel shall exist by any reason including, but not limited to, the Developer's payment of the City's expenses under this Funding Agreement. Developer further understands that legal counsel paid pursuant to this Funding Agreement is legal counsel for the City and acknowledges the duties of confidentiality and loyalty to the City.

10. **Assignment.** This Funding Agreement may not be assigned by any party without the prior written consent of the other party. No assignment, unless specifically provided for in such consent, shall relieve the assigning party of any liability pursuant to this Funding Agreement. This Funding Agreement shall be binding upon the parties and their successors and permitted assigns.

11. **Federal Work Authorization.** Simultaneously with the execution of this Agreement, the Developer shall, pursuant to the provisions of Sections 285.525 through 285.555 of the Revised Statutes of Missouri, as amended, by sworn affidavit in substantially the form attached hereto as Exhibit A and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to its employees and state that it does not knowingly employ any person who is an unauthorized alien.

[Remainder of this Page Intentionally Left Blank]

The parties hereto have caused this Funding Agreement to be executed by their duly authorized representatives the day and year first above written.

CITY OF OZARK, MISSOURI

By: _____
Don Currence
Mayor

ATTEST:

_____
Chandra Hodges
City Clerk

MISSOURI COMMERCIAL DEVELOPMENT LLC

By: _____

Name: _____

Title: _____