Department of Public Works and Parks
6801 Delmar Boulevard, University City, Missouri 63130, Phone: (314) 505-8560, Fax: (314) 862-0694

AGENDA
COMMISSION ON STORM WATER ISSUES
HEMAN PARK COMMUNITY CENTER
975 PENNSYLVANIA
Tuesday, August 5, 2025
3:30 PM

1. **MEETING CALLED TO ORDER**

2. **ATTENDANCE-ROLL CALL**

3. **APPROVAL OF AGENDA**

4. **APPROVAL OF MINUTES**

   - July 1, 2025

5. **CITIZEN COMMENTS**

6. **ANNOUNCEMENTS BY COMMISSIONERS**

7. **SUBCOMMITTEE REPORTS**

   - Monitoring Subcommittee Report
   - AdHoc Subcommittee Report

8. **NEW BUSINESS**

   - Residential Development – Enclaves at Canton

9. **OLD BUSINESS**

   - Draft Stormwater Master Plan

10. **COUNCIL LIAISON COMMENTS**

11. **ADJOURNMENT**

Storm Water Task Force
6801 Delmar Boulevard, University City, Missouri 63130,
Phone: (314) 505-8560, Fax: (314) 862-0694

Draft MINUTES OF THE STORMWATER COMMISSION
July 1, 2025

1. **Call to Order.** The fifty-third meeting of the Stormwater Commission (Commission) was called to order at 3:31 PM by Chair Todd Thompson.

2. **Attendance-Roll Call.** The following Commission members were present at the Community Center: Susan Armstrong, Garry Aronberg, Bob Criss, Phil Eastin, Mark Holly, Eric Karch, Todd Thompson. Also in attendance were John Tieman (Councilperson), and Darin Girdler (Director of Parks and Recreation)

   Mirela Celaj (Director of Public Works), John Mulligan (City Attorney).

   Visitors**:** HR Green representatives for the Stormwater Master Plan: Josiah Holst and Samantha Keeven .

3. **Agenda.** The following agenda was accepted without objection: *Roll Call; Approval of Agenda; Approval of Minutes; Citizen Participation; New Business; Old Business (Planning and Zoning matrix discussion); Subcommittee Reports; Miscellaneous Business; Council Liaison Comments; Adjournment.*

4. **Minutes.** June 3, 2025, minutes were approved with the following correction. Approval as amended (Eastin, Armstrong).
   - The spelling of P&Z chairman's last name is Gascon.

5. **Citizen Comments.**
   - None

6. **Announcements by Commissioners and Staff.**
   - None

7. **Committee Reports**
   - River Des Peres (RDP) Monitoring Subcommittee (Eastin, Criss):
     - Three stage meters and three web cameras are installed and working.
     - A visual stage gage has been installed at the entrance of the MSD RdP tubes and a visual gage will be installed at the Hanley Road bridge.
     - Commissioner Criss suggested that we meet with Fire Chief Hinson to inform him of the flood monitoring tools installed and capability of the tools that can aid his efforts to monitor and warn floodplain residents of dangerous conditions.
       - Possibly a zoom meeting. Mr. Girdler is available all-day. Commissioner Criss will email to Mr. Girdler to setup a meeting time.
       - Possibly an annual check-in meeting.
       - City has an emergency management protocol.
       - Mr. Mulligan will discuss with the Fire Department the need for a meeting.
     - Commissioner Criss has a web site if predictive River des Peres stage data need to add 3.3 to get same stage as USGS gage. When it hits 11 feet (scroll all the way down on the site) water is about to jump the banks or is already jumping the banks. Once it jumps the banks (spreads onto the floodplain) the system will give wild info (e.g. 20 feet deep) since the system is designed

based on being confined inside the river banks. Eventually, there will be enhancements to address that.

- Ad Hoc Committee (Armstrong):
  - Planning and Zoning Commission is still reviewing the impervious area ordinance and plans to consider it as P&Z current effort to update of all the City Code

8. New Business

- Consulting engineers and scientists from HR Green and Reitz & Jens made a presentation on the Draft Stormwater Management Plan to begin discussions of the plan and City desired additions to the plan.
  - The representatives were Josiah Holst, Sam Keeven, Garry Aronberg, and Eric Karch.
  - Key points of the plan are shown in the attached PowerPoint slides and identified below:
  - Data gathered from hundreds of questionnaire responses, visits to problem sites, discussions with residents, Commissioners, citizen groups.
  - Stormwater problem data evaluated and fall into five categories:
    - Flooding in River des Peres (RdP) floodplain,
    - Street flooding,
    - Flooding in yards outside of the RdP floodplain,
    - Basement flooding,
    - Erosion of the banks of the RdP.
  - Mitigation methods are listed below:
    - Reduce stormwater runoff by decreasing impervious area and detention or storage,
    - Improve conveyance of stormwater away from problem areas,
    - Move people and structures away from flooding prone areas,
    - Make structures that are in flood prone areas resilient to flooding.
    - Please see Slide 6 of the attached PowerPoint slides
  - Eight typical project examples were discussed – at least one example for each or the mitigation and problem area. Cost of mitigation ranged from a few thousand dollars to tens of million dollars. Please see slides 6 through 15 of the attached PowerPoint slides. Consultants identified that four additional "projects" could be examined n detail and urged the City officials and the Commission to identify four projects for examinatioin.
  - A priority ranking system based on benefit points and mitigation dollars was discussed. The benefit points system is the same as used by MSD for ranking projects – please see Slide 16 attached. Please see slide 16 of the attached PowerPoint slides.
  - Tentative definitions of public and private stormwater projects was discussed – and shown on slide 17 in the attached PowerPoint slides.
  - Code should be used to reduce stormwater problems such as limits on impervious surfaces.
  - Questions and Comments:
    - Commissioner Criss had prepared written comments and those comments are attached.
      - Value of prevention of damage is not well considered in the current plan's priority system.
      - Cost of <u>losses</u> for various storm should be evaluated with mitigation costs. In the context of buyouts, observed water levels and flood extents could be used to determine flood

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frequency. Evaluation needs recognize the difference between basement flooding costs and first floor flooding costs. Cars are also often totaled when first floors are flooded.

- Can the master plan include as a project an evaluation of the costs to administer the recently proposed impervious area ordinance? The response was yes, if requested. (Commissioner Armstrong feels there should be no additional staff. Mr. Mulligan said that PW Director Celaj has completed an analysis of the potential additional staff tiime.
- Can the RdP channel be reconfigured as a natural river. Response was that this would require buyouts to allow the space to configure stable (wider and less steep) channel banks.
- Much more discussion defining public and private projetcs

9. Old Business.

- Councilperson Tieman discussed the upcoming Cool Cities presentation that U City is presenting – by the Commission. The meeting is August 28 at 10:30 in the Council Chambers. Commissioners Holly and Armstrong agreed to identify speakers and topics.

10. Council Liaison. Councilperson Tieman, Council Liaison, reported the following:

- Councilperson Tieman has sponsored a City ordinance to limit idling motor vehicles – to reduce exhaust and harmful gas in the atmosphere.
- We should watch for reintroduction of bills in the General Assembly that would restrict cities from enacting and enforcing City ordinances related to environmental improvement. Such a bill was submitted in the last session but did not reach the floor but the bill is likely to be proposed in the next session.
- The City budget is balanced and adequate but there are no extra funds for special projects.
- Suggested that we make better use of Robert's Rule of Order to streamline our meetings.

11. Adjournment: 5:58 (Aronberg, Armstrong).

Minutes Preparation. Minutes were prepared by Garry Aronberg.

https://d.docs.live.net/43035933147e87df/GarrysFiles2018/UCity Stormwater Taskforce/CommissionMinutesDrafts/20250701_StrmWtrCommMin.docx

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Storm Water Task Force
6801 Delmar Boulevard, University City, Missouri 63130,
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6/30/2025

Comments on the June 25, 2025 draft of the Stormwater Master Plan, HR Green Project No. 19180

Robert E. Criss, Member, U City SWC

Summary. The Draft Stormwater Master Plan (DSMP) 1) lists and prioritizes useful, small-scale projects that will alleviate some localized problems. The DSMP fails to 2) rank the relative, annual economic losses associated with the 5 identified categories of stormwater problems; 3) does not identify the most cost-effective efforts made to date; 4) fails to highlight the many unique attributes of University City that amplify several categories of stormwater problems; 5) provides incomplete lists of available data and their sources; 6) provides an incomplete list of the many recommendations made by the Stormwater Commission, several of which have low or negligible cost; 7) lacks a future vision that would provide an effective compliment to the UCity's Comprehensive Plan. These items are discussed in order below, followed by an incomplete list of suggested edits.

1) **Priority Recommendations (p. 44-45)** The list of recommendations is useful but incomplete. Item 1a is well underway (e.g., St. Louis Post Dispatch; 6/30/25); items 1b-1g are all small scale. Recommended item 2 may greatly underestimate the damages associated with overland flooding, as does the template provided in Appendix E, which suggests that losses associated with basement flooding are 70% those of first floor flooding. Among other things, unlike typical basement flooding, main floor flooding endangers lives and has high health risks, causes loss of most possessions, and typically results in home condemnation. Finally, item 5 (first floor elevation survey) should become Item 1, as this basic information is needed to prioritize properties subject to overland flooding; moreover, the cost of acquiring this essential data is less than 10% that needed to buy out a single home, and much less than the estimated costs of items 1b, 1c or 1d.
2) **Lack of Ranked, Annual Economic Losses.** More than 5 years ago, Commissioner Criss claimed that average economic losses associated with River des Peres flooding in University City exceeded $1M/y. This estimate caused considerable surprise, yet subsequent events prove that that it is much too low. Besides this high annual cost, which surely exceeds those of the other 4 categories listed on p. 6 (street flooding, erosion…), overbank flooding of the upper River des Peres is the only category that has 1) caused loss of life; 2) endangered first responders; 3) destroyed fire trucks, police cars, firehouses, and public infrastructure; 4) severely damaged the Heman Park pool and associated facilities, resulting in the protracted loss of major recreational opportunities of our citizens; 5) caused widespread condemnation of hundreds of homes, and long-term displacement of their inhabitants.
3) **No Recognition of Prior, Cost Effective Efforts.** The DSMP does not discuss what prior efforts worked best. The homes along Wilson Avenue that were bought out by FEMA in 2012 would have experienced severe flood damage between 3 and 5 times since 2012. The remarkable cost effectiveness of this buyout effort is not some hypothetical B/C ratio, but is provable and calculable.
4) **Does not highlight the many unique attributes of University City**. University City has many unique attributes that amplify several categories of flooding. First, its high population density of 5968 people/square mile exceeds that of all significant municipalities in St. Louis County, the only exceptions being 11 small communities whose *combined* population and *combined* area are each less than half that of UCity (e.g., US Census Bureau). Second, this high population density is associated with its impervious character of 43%, one of the very highest in Missouri; note that high impervious character is strongly correlated with the magnitude and frequency of flash flooding (e.g., Southard, 2010). Third, the in-stream sensor network established by the SWC proves that

most flood peaks propagate down the upper River des Peres channel very rapidly, requiring only an hour to travel between its upper reaches in Olivette (Dielman Rd) to the Pennsylvania Ave bridge. Fourth, this network of sensors, together with extensive data collected by the USGS gauge 07010022 at the Purdue Ave. bridge, shows that the upper River des Peres can rise more than 11 ft/hr, sufficient to overflow its banks, which is one of the very highest observed rates of rise of any midwestern stream. Together, these remarkable attributes make the upper River des Peres in University City the flashiest stream in Missouri (Criss, 2018), which combined with the high population density of our city makes this stream arguably the most dangerous.

5) **Provides incomplete lists of available data and relevant sources.** Page 7 (top) claims that the DSMP effort "included review of historical data". Yet, the list provided by DSMP immediately below that claim does not include the most important and comprehensive sources of relevant historical data that exist. Omissions include the following:
   a) 28 years of stage measurements acquired every five minutes at USGS gauge 07010022.
   b) 3 years of water level data every 5 min collected by the SWC network of 9 in-stream sensors.
   c) NWS hourly data and many event summaries, including a detailed description of the July 2022 event.
   d) Several decades of 5-min archived for 5 MSD rain gauges in UCity, and 3 years of 5 minute data collected by our network of 3 UCFWS rain gauges.
   e) Significant collections of historical photos showing flood events, including photos taken by Chief Olshwanger (curated by UCity Public Library) and Commissioner Karch. Numerous news reports, photos and videos made by StLPD, local television, YouTube, etc.
   f) Detailed, 1-m digital elevation maps of the entire St. Louis area, available at MSDIS.
   g) Historical maps that document historical changes, including USGS topographic maps of many vintages (e.g. Clayton 1933).
   h) Measured profiles of the peak water levels along the upper River des Peres, published for the major floods of 1957 and 1970 (Hauth and Spencer, 1971), 2008 (Criss and Nelson, 2022), and 2022 (Criss et al., 2022).
   i) Published inundation maps of the 2008 and 2022 floods (above refs).

6) **Incomplete list of the prior SWC recommendations.** Over the years the Stormwater Commission has made numerous recommendations to the city, which were compiled and presented to the City Council in the work session of Sept. 9, 2024. Many of those suggestions could have been implemented with low or negligible cost, including some that would have improved the current DSMP.

7) **Lacks a future vision.** The draft DSMP provides a list of useful projects that would alleviate some local problems. It does not provide an effective compliment to the U City Comprehensive Plan, that bears on key issues such as open spaces, livability, vacant properties, climate resiliency, record keeping, etc. It does not address the many unique attributes of UCity that provide opportunities and challenges.

Typos and Suggested Edits

p. 6 Add new category: Overland flooding or erosion caused by new development.

p. 7 Add footnote to the NWS 2022 event summary and the Criss et al (2022) report

p. 7 Expand discussion of the significance of 43 % impervious cover, including a footnote to Southard (2010)

p. 13 Cost of Overland Detention Basin: $10M or $23M?

p. 14 Stormwater Task Force Data: Mention Flood Marks, Photographs, Bridge Measurements

p. 23 Add footnote mention of Hauth and Spencer (1971), Criss & Nelson (2022); Criss et al. (2022) re the high water marks.

p. 30 ditto footnote re high water marks

p. 37 Item 3: The list of development size thresholds is useful only if viewed along with average lot sizes. For example, the 2500 sq ft threshold in Town and Country must be considered alongside the Minimum lot size of 4 acres (>174,000 sq ft) in this municipality, as compared to the typical lot in UCity of perhaps 6000 sq ft. Note that all 4 municipalities mentioned here have population densities that are 2 to 5x lower than UCity.

p. 37 Item 4: Suggest that a specific suggestion is included, such as "No gutter of pipe should discharge within a foot (?) of a property line".

p. 41 top: 7487 Amherst should read 7581.

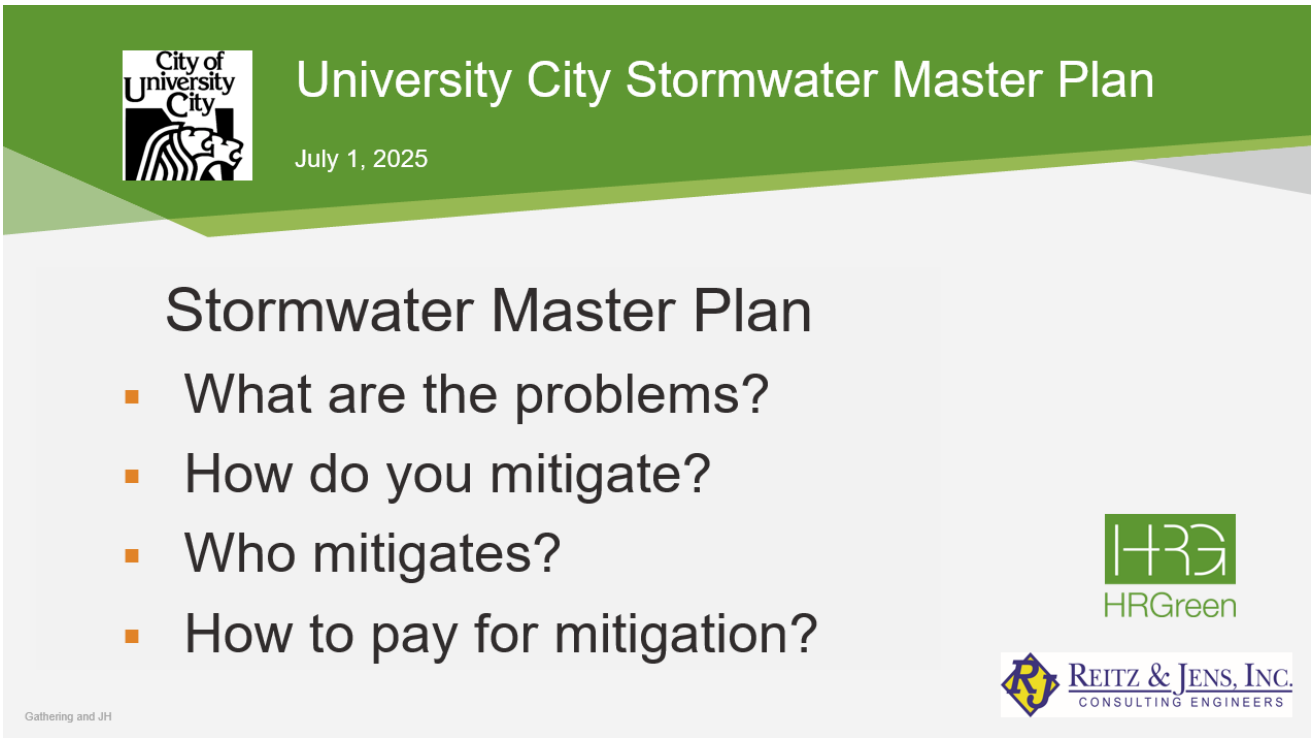
p. 44. Item 1b should read 7581

RECOMMENDATIONS:

Item 5 should become Item #1

Add: Implement standing SWC Recommendations

Add: Have inspectors collect flood level data during damage/condemnation inspections. Better record keeping is needed.


University City Stormwater Master Plan
July 1, 2025
Stormwater Master Plan
What are the problems?
How do you mitigate?
Who mitigates?
How to pay for mitigation?
HRGreen
REITZ & JENS, INC.
CONSULTING ENGINEERS
Gathering and JH

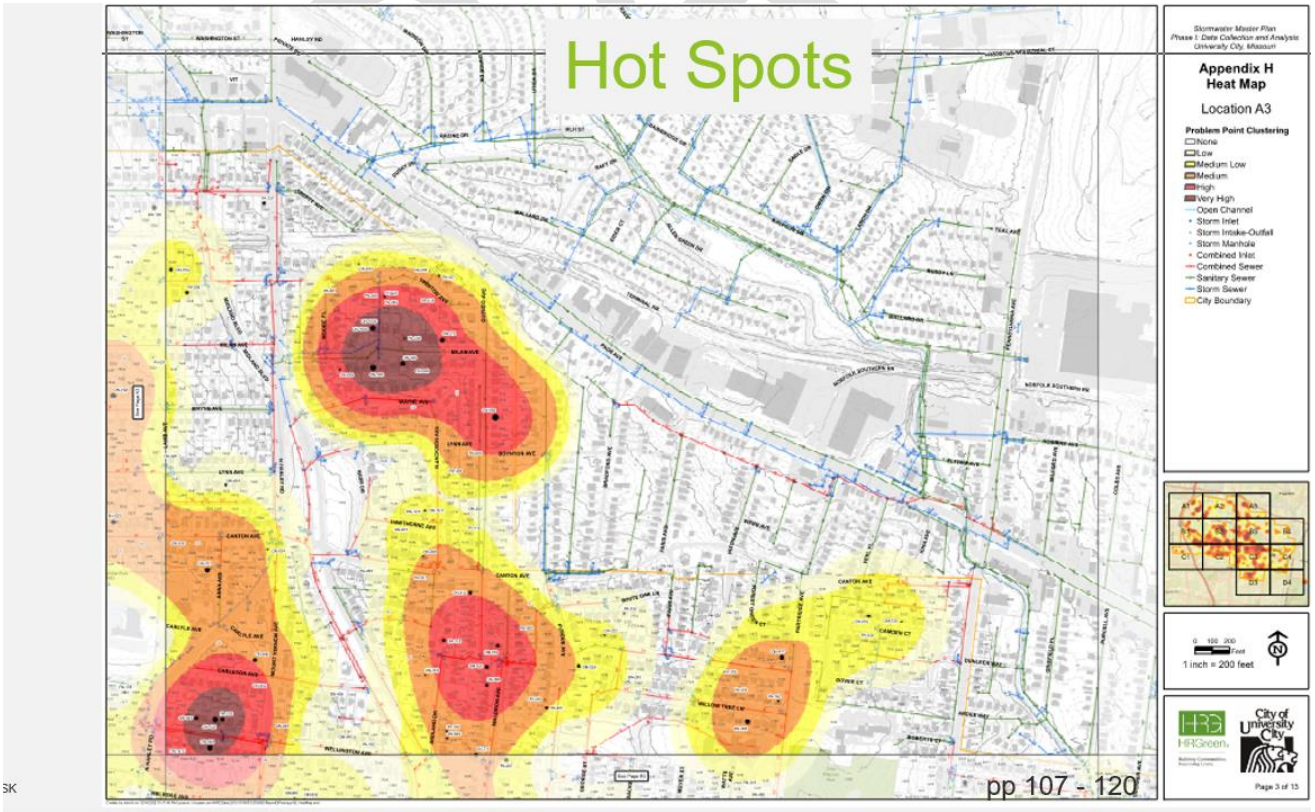
University City Stormwater Master Plan
July 1, 2025
HRGreen
REITZ & JENS, INC.
CONSULTING ENGINEERS
Garry Aronberg
PE, CFM
Eric Karch,
PE, CFM
Josiah Holst,
PE, CFM
Samantha Keeven
PE, CFM
JH

Data Gathering

- Historical Data
- Questionnaires
- Visits and conversations with residents
- Commission
- Citizen groups

Pp 7 - 22

Stormwater Master Plan
City of University City, MO



Problems

- Overland flooding from River des Peres onto the floodplain
- Overland flooding from streets
- Overland flooding from adjacent yards
- Basement flooding
- Erosion of the Banks of River des Peres and its tributaries

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Stormwater Master Plan
City of University City, MO

Mitigation

- Reduce stormwater runoff:
  - decrease impervious area,
  - add detention basins, rain gardens, rain barrels, dry wells, amended soils.
  - add pervious area
- Convey stormwater away from problem areas:
  - divert overland flow to storm sewers,
  - discharge storm sewers into appropriate channels;
- Moving people and structures away from stormwater.
- Make structures resilient to flooding.

pp 22-43

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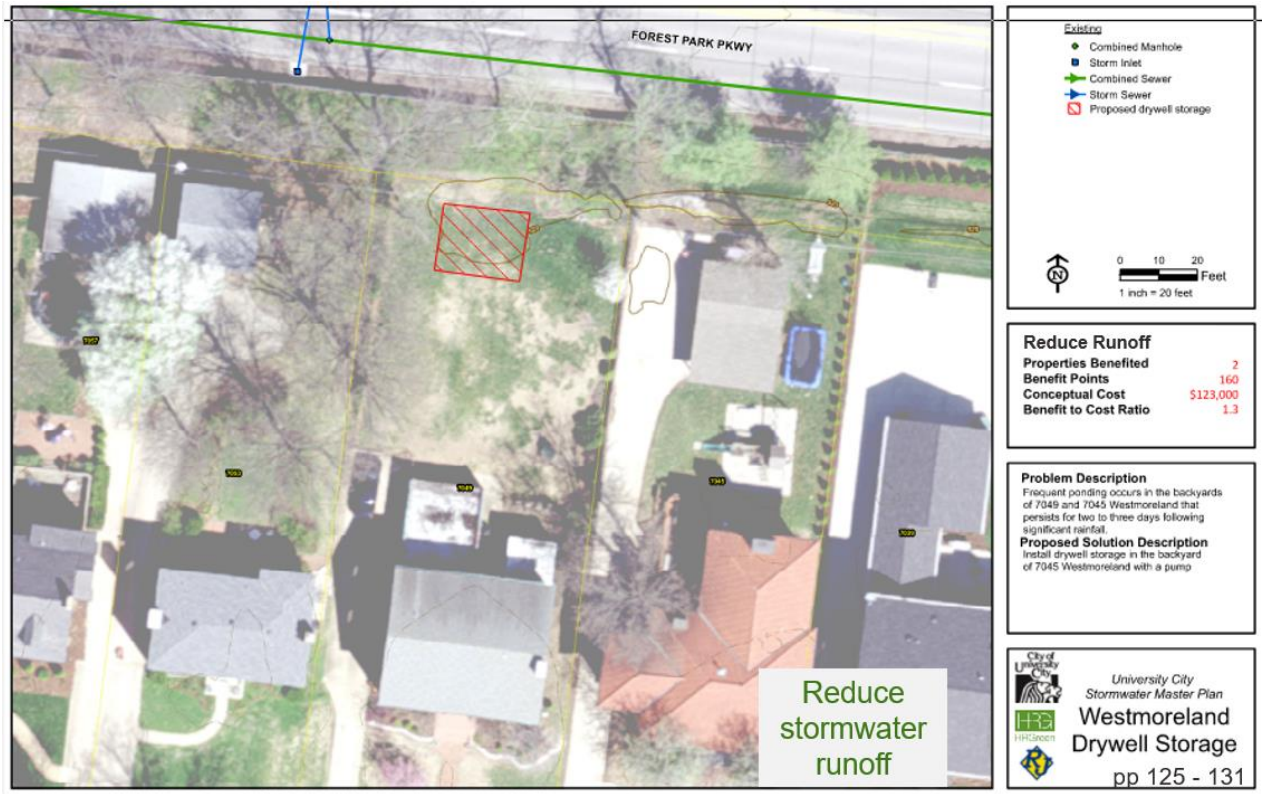

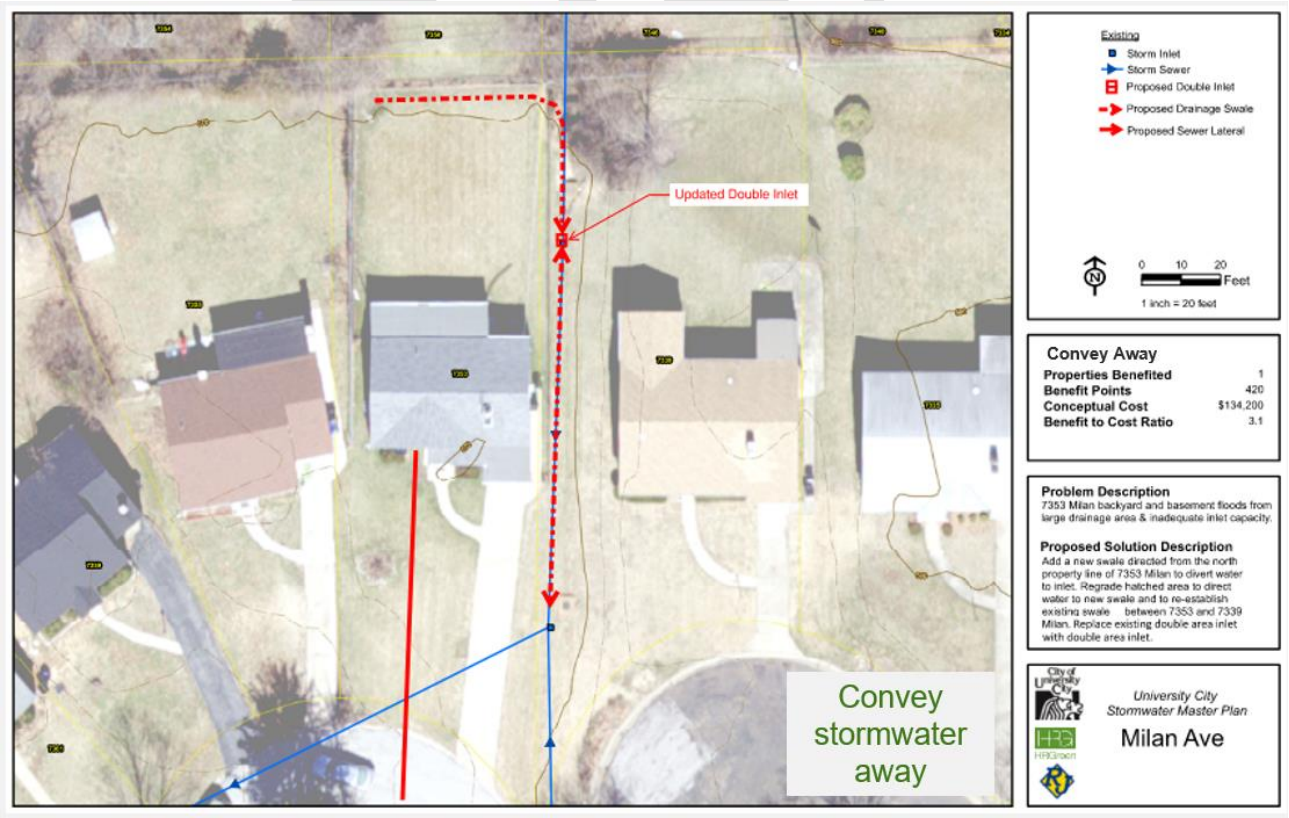

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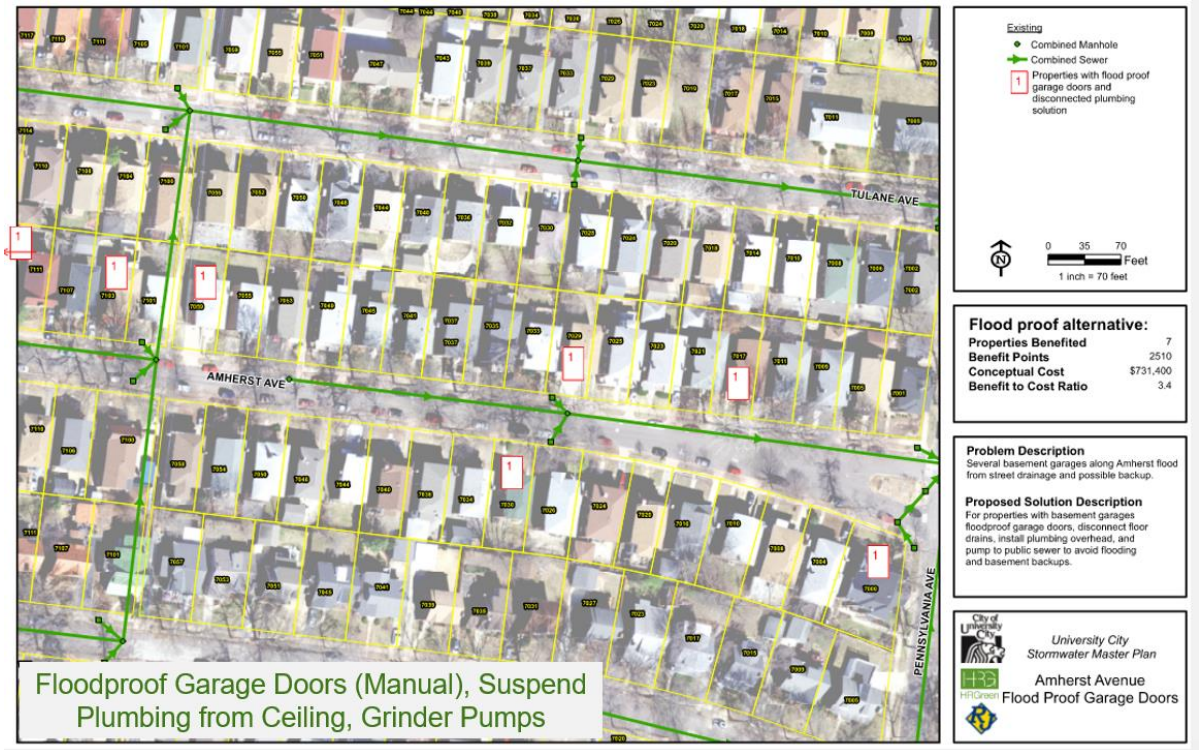

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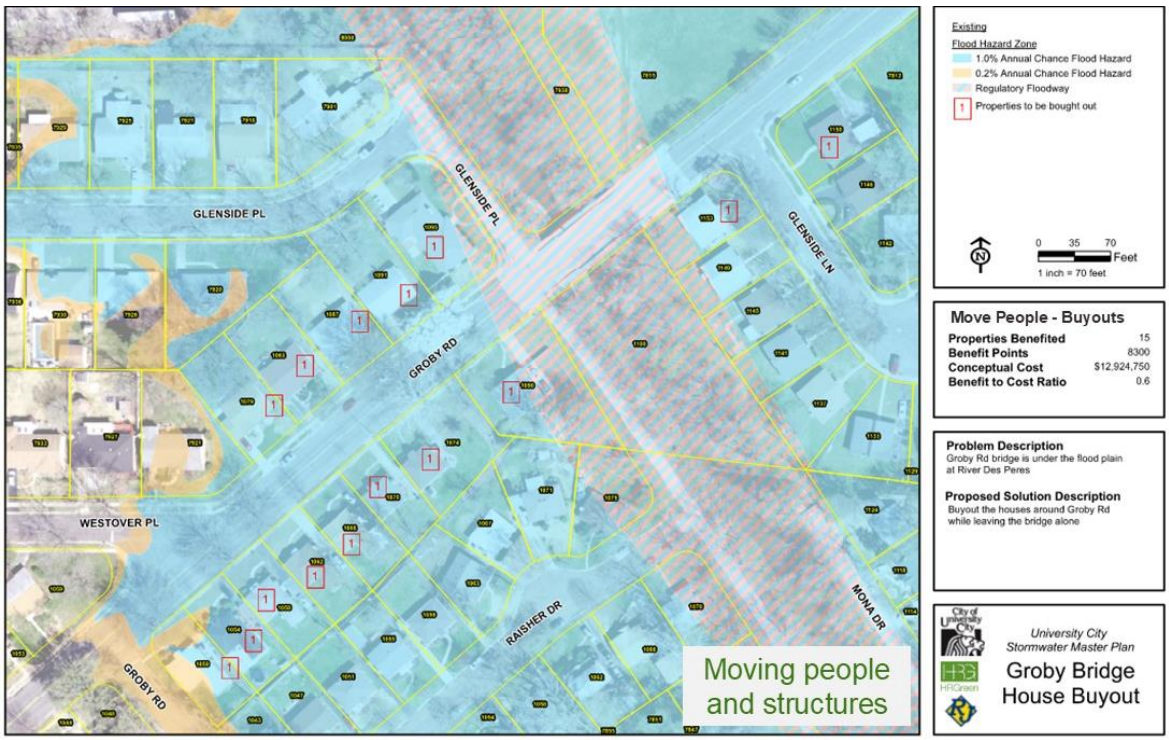

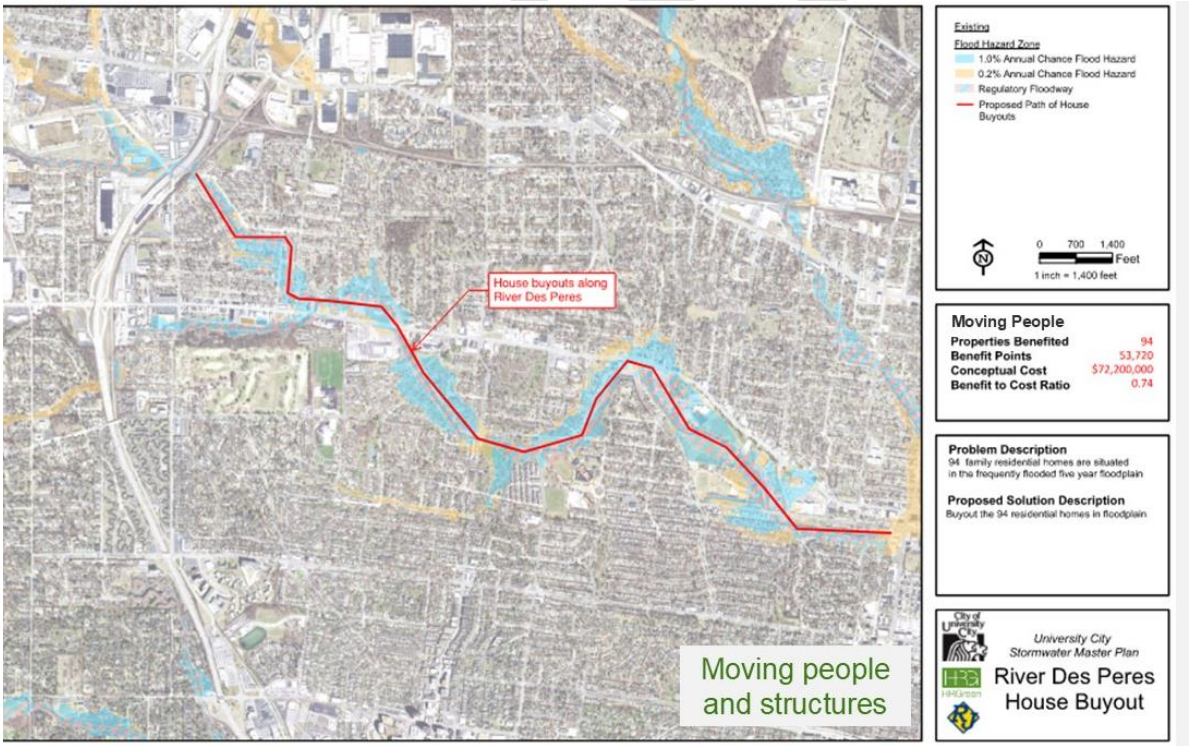

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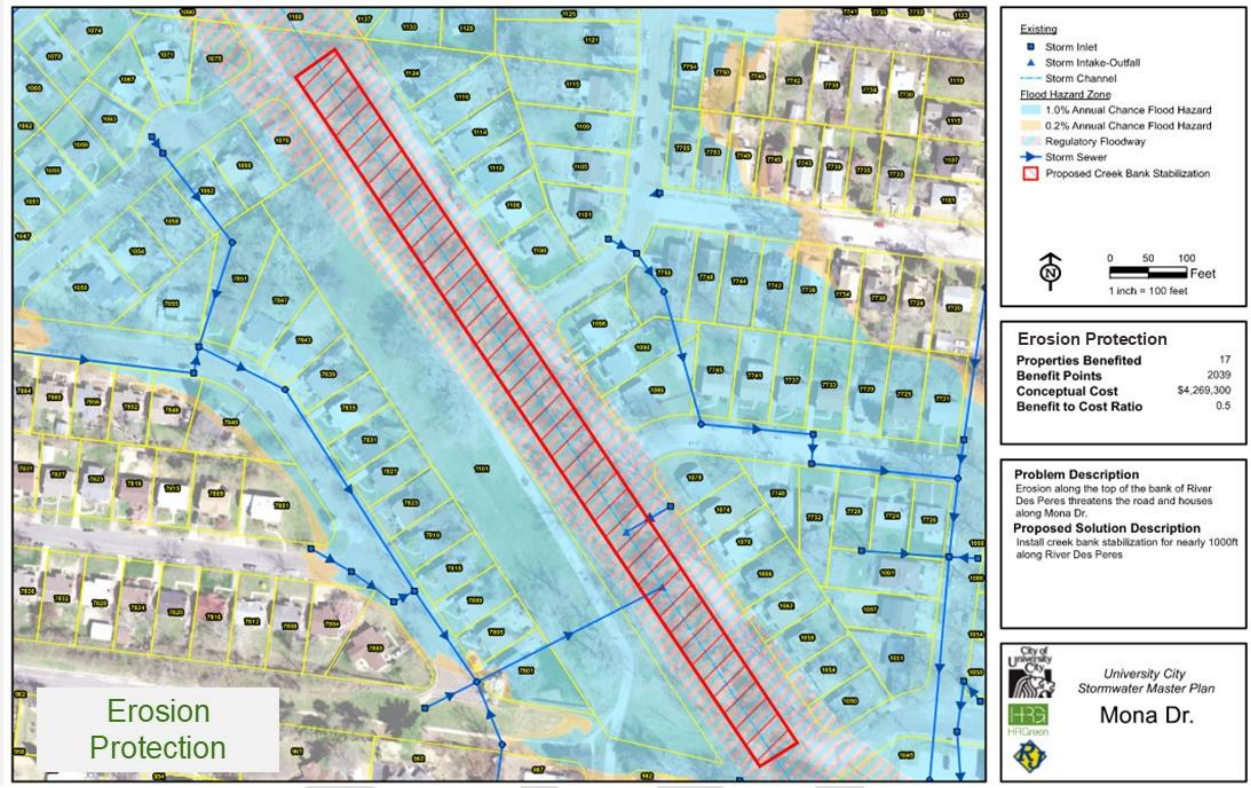

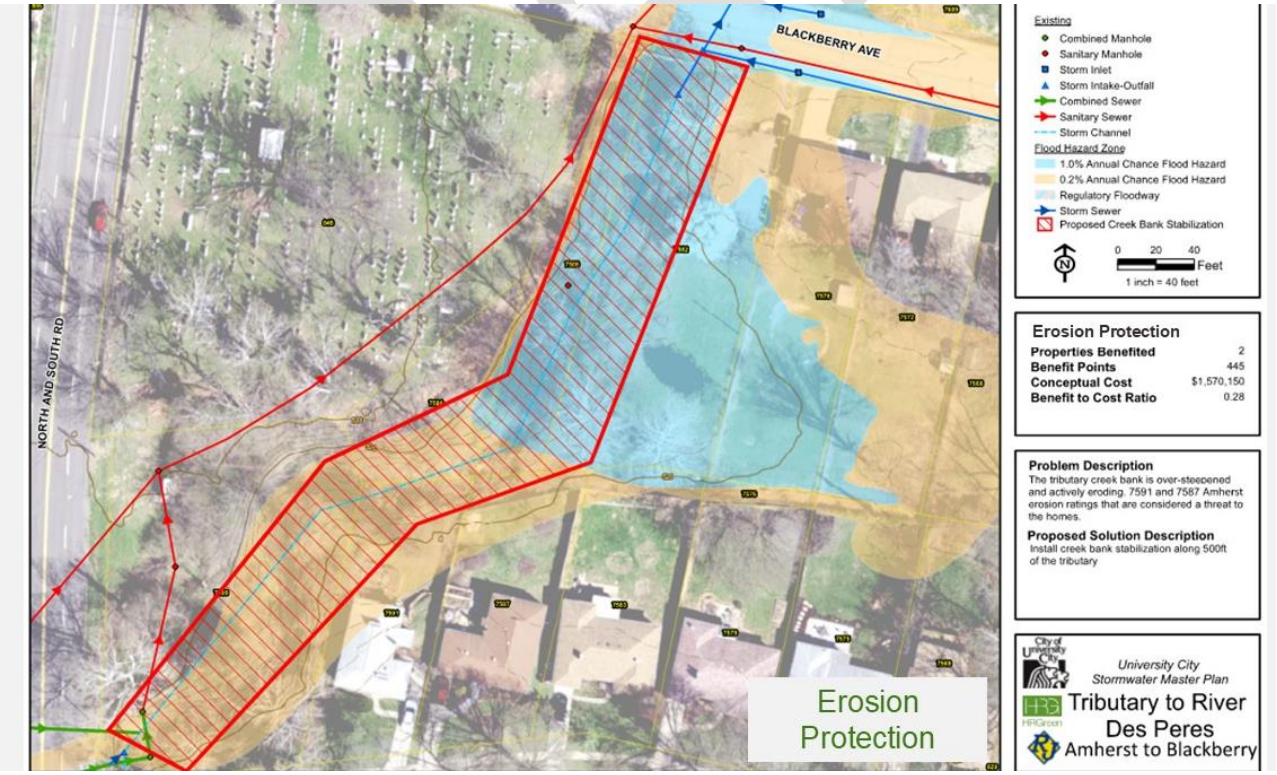

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Problems ….$

	$ Millions
Overland flooding from RdP	$13 to $72
Overland flooding from streets	$3 to $4
Overland flooding from adjacent yards	$1 to $2
Basement flooding	private
Erosion of the Banks of RdP & tributaries	$4 to $5

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City of University City, MO

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GA

BENEFIT POINT CALCULATION

STORMWATER MANAGEMENT PROGRAM

Project Name: _____ **Project Number:** _____

PROBLEM SOLVED CATEGORY Note: Problem points are awarded only for those problems solved by the proposed			Chronic (<=2-Yr) Flooding		Frequent (>2<=15-Yr) Flooding		Infrequent (>15-Yr) Flooding		Total Points
			Points per Category	No. Lots Affected	Points per Category	No. Lots Affected	Points per Category	No. Lots Affected	
1.1. FLOODING	1.1.1. Structure Flooding								
		Habitable 1st floor, residential; includes spaces with mechanical equipment (1 lot per structure) *Address:*	300		150		25		
		Basement (1 lot per structure) *Address:*	200		100		15		
		Attached Garage (1 lot per structure) *Address:*	100		50		8		
		Address:							
		Industrial, office, commercial and warehouse (1 lot per 2,500 sf of floor space flooded) *Address:*	300		150		25		
		Yard Flooding (1 per lot) *Address:*	10		5		0		
	1.1.2.	Roadway Flooding (allocate 1 lot per 250' of roadway impacted & 2 lots per intersection impacted)							
		Emergency Access restricted (>12" water over only access route to habitable structure), pts per structure *Address:*	200		100		15		

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Stormwater Master Plan
City of University City, MO

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GA

Who Mitigates?

Public vs Private

Two or more private properties would benefit.
Required improvements extend to at least two private properties.
The drainage area is greater than or equal to 1 acre.
Public infrastructure has been impacted by flooding or erosion.
Repair or upgrade to existing publicly owned stormwater system is needed.
Repair of a publicly-owned infrastructure is needed.

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Stormwater Master Plan
City of University City, MO

Who Mitigates?

Code

Limit Runoff from some
or all improvements

Pp 36, 37

Stormwater Master Plan
City of University City, MO

How to Pay for Mitigation?

- Federal Grants and Earmarks
- State Regional Grants
- MSD
- City Loans Bonds Taxes

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Stormwater Master Plan
City of University City, MO

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EK

Questions
Discussion

Stormwater Master Plan
City of University City, MO

HRGreen.

JH

Department of Planning and Zoning
6801 Delmar Boulevard, University City, Missouri 63130, Phone: (314) 862-6767, Fax: (314) 862-3168

M E M O R A N D U M

TO: Storm Water Commission

FROM: John Wagner, Ph.D., Director of Planning and Zoning

DATE: August 5, 2025

SUBJECT: Residential Development – Enclaves at Canton

The Plan Commission approved the rezoning and Conditional Use Permit (C.U.P.) on July 23, 2025 for a townhome development at 7701 Canton Avenue – The Enclaves at Canton. The proposed development consists of 106 townhome units.

One of the conditions in the C.U.P. was to receive a favorable recommendation from the Stormwater Commission for the stormwater plan proposed by the Applicant. There are already issues with stormwater management in the area, so it is important to have a stormwater management plan that improves the existing situation.

I will be at the meeting on August 5th should you have any questions.

Attachments:

Preliminary Site Plan
Color Coded Site Plan
Pre-Development Drainage Area
Post-Development Drainage Area

The Enclaves at Canton Avenue

A TRACT OF LAND LOCATED IN SECTION 3, TOWNSHIP 45 NORTH, RANGE 6 EAST
CITY OF UNIVERSITY CITY, ST. LOUIS COUNTY, MISSOURI

PRELIMINARY PLAN

GENERAL NOTES:

1. THIS SITE IS WITHIN THE FOLLOWING DISTRICTS AND UTILITY SERVICE AREAS:
   METROPOLITAN ST. LOUIS SEWER DISTRICT
   UNIVERSITY CITY FIRE PROTECTION DISTRICT
   UNIVERSITY CITY SCHOOL DISTRICT
   MISSOURI AMERICAN WATER COMPANY
   AMEREN UE
   SBC COMPANY
   SPIRE
   CHARTER COMMUNICATIONS
2. SANITARY SEWER CONSTRUCTION AND CONNECTIONS SHALL BE AS APPROVED BY THE METROPOLITAN ST. LOUIS SEWER DISTRICT AND IN ACCORDANCE WITH THE STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES.
3. STORM WATER SYSTEM SHALL BE DESIGNED PURSUANT TO THE CITY OF UNIVERSITY CITY AND METROPOLITAN ST. LOUIS SEWER DISTRICT REQUIREMENTS AND DISCHARGE AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE DISCHARGE POINTS.
4. NO SLOPES SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL), UNLESS JUSTIFIED BY GEOTECHNICAL REPORT WHICH HAS BEEN ACCEPTED/APPROVED BY THE CITY OF UNIVERSITY CITY.
5. THE LOCATION OF STORM AND SANITARY SEWER IMPROVEMENTS ARE APPROXIMATE ONLY. ACTUAL LOCATION SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE INDICATED ON THE IMPROVEMENT PLANS.
6. GRADING SHALL BE PER CITY OF UNIVERSITY CITY STANDARDS. SOURCE OF TOPOGRAPHY– LIDAR.
7. NEAREST MAJOR INTERSECTION IS OLIVE BLVD. AND I–170.
8. ALL SIDEWALKS SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY ADA AND THE CITY OF UNIVERSITY CITY STANDARDS.
9. ALL PROPOSED IMPROVEMENTS WITHIN ST. LOUIS COUNTY RIGHT–OF–WAY SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY STANDARDS.
10. ALL GRADING AND DRAINAGE WITHIN ST. LOUIS COUNTY RIGHT–OF–WAY TO BE IN CONFORMANCE WITH ST. LOUIS COUNTY AND MSD STANDARDS.
11. NO SLOPE(S) WITHIN ST. LOUIS COUNTY RIGHT–OF–WAY SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL).
12. PRIOR TO SPECIAL USE PERMIT ISSUANCE BY THE ST. LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC, A SPECIAL CASH ESCROW OR A SPECIAL ESCROW SUPPORTED BY AND IRREVOCABLE LETTER OF CREDIT, MUST BE ESTABLISHED WITH THE ST. LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC TO GUARANTEE COMPLETION OF THE REQUIRED ROADWAY IMPROVEMENTS.
13. MAIL BOXES WILL BE PROVIDED WITHIN CLUB HOUSE BUILDING.

SITE INFORMATION

LOCATOR NUMBER:	16K310885
EXISTING ZONING:	PA (PUBLIC ACTIVITY)
PROPOSED ZONING	LR (10.80 AC.) LC (0.26 AC.) PA (15.07 AC.)
PROPOSED USE:	SINGLE–FAMILY ATTACHED RESIDENTIAL, COFFEE SHOP
GROSS AREA OF SITE:	26.14 ACRES
AREA OF DEVELOPMENT:	11.08 ACRES
RESIDENTIAL AREA:	10.80 AC.
COMMERCIAL AREA:	0.26 AC.

NUMBER OF UNITS PROPOSED: 106

LOT DEVELOPMENT REQUIREMENTS: FRONT YARD SETBACK=20',
REAR YARD SETBACK=20'

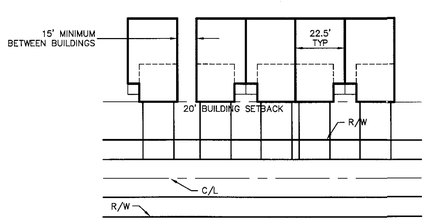
FLOOD MAP: NO FLOODPLAIN IS PRESENT ON THIS PARCEL PER FEMA PANEL 29189C0212K DATED: FEB. 4, 2015

PARKING SPACES REQUIRED: 222 SPACES TOTAL

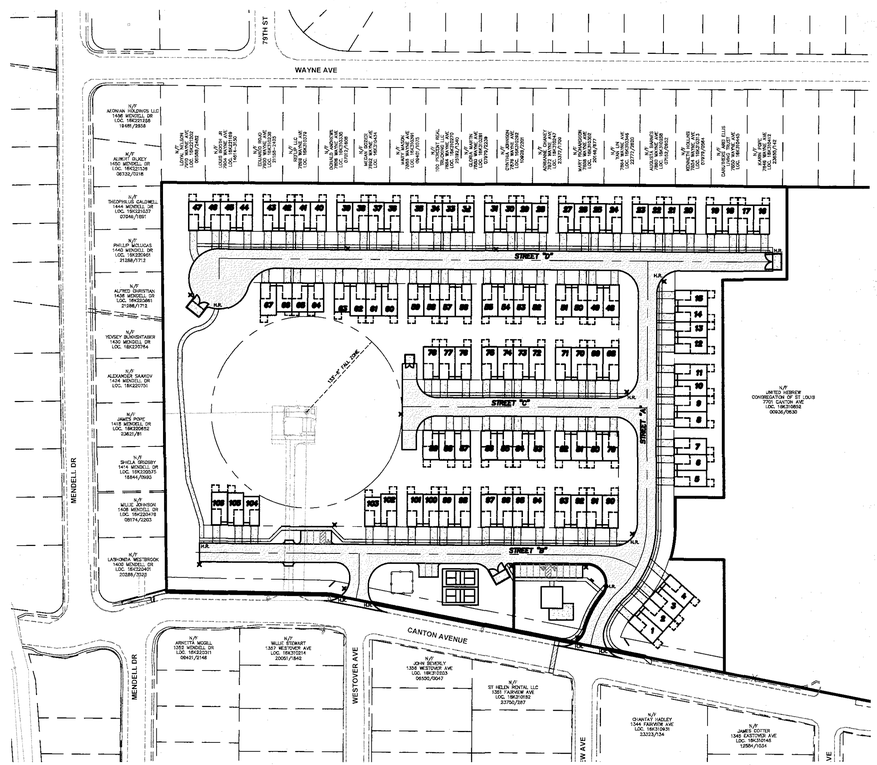
SINGLE FAMILY (106 UNITS):	212 SPACES
COFFEE SHOP/CLUB HOUSE:	10 SPACES
TOTAL PARKING PROVIDED:	229 SPACES

LC PARCEL SITE COVERAGE:

GROSS SITE AREA:	11,681 SQ.FT.
BUILDING:	900 SQ.FT.
PARKING/SIDEWALK:	3,121 SQ.FT.
PATIO:	635 SQ.FT.
TOTAL SITE COVERAGE:	4,656 SQ.FT. (39%)



TYPICAL SINGLE FAMILY ATTACHED UNIT
NOT TO SCALE



SHEET INDEX

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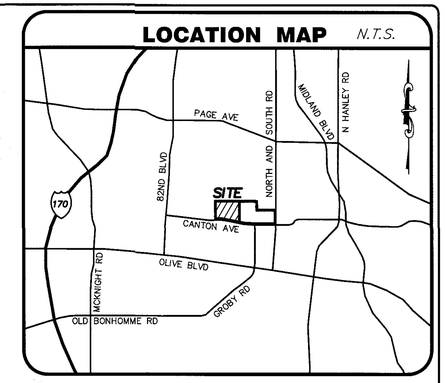
2.1	PROPERTY DESCRIPTIONS
3.1	EXISTING CONDITIONS
4.1	GRADING PLAN
5.1	SITE PLAN
6.1	UTILITY PLAN
7.1	DETAILS
8.1	LIGHTING PLAN
L-1	LANDSCAPE PLAN



PROJECT ZIP CODE 63130

LEGEND

EXISTING		PROPOSED
542	CONTOURS	(542)
X536	SPOT ELEVATIONS	X536
	CENTER LINE	
	BUILDINGS, ETC.	
	TREE LINE	
x	FENCE	
	STORM SEWERS	
	SANITARY SEWERS	
EX CI	CATCH BASIN	CI NO.
EX AI	AREA INLET	AI NO.
EX GI	GRATED INLET	GI NO.
EX MH	STORM MANHOLE	MH NO.
EX SA	SANITARY MANHOLE	SA NO.
EX FE	FLARED END SECTION	FE NO.
CO	CLEANOUT	CO
T	LATERAL CONNECTION	T
	UTILITY OR POWER POLE	
	FIRE HYDRANT	
TH	TEST HOLE	
	PAVEMENT	
2"G	GAS MAIN & SIZE	(2"G)
6"W	WATER MAIN & SIZE	(6"W)
T	TELEPHONE	(T)
E	ELECTRIC (U) UNDERGROUND	(E)
OHW	ELECTRIC (O) OVERHEAD	(OHW)
℄	FLOW LINE	℄
	TO BE REMOVED	TBR
TC	TOP OF CURB	(TC)
	SWALE	
	LIGHT STANDARD	

CALL BEFORE YOU DIG!
1–800–DIG–RITE

SURVEYOR CERTIFICATION:

THIS IS TO CERTIFY THAT WE HAVE, DURING THE MONTH OF NOVEMBER 2024, AT THE REQUEST OF WILLIAM JAMES CAPITAL, LLC, PREPARED A PRELIMINARY DEVELOPMENT PLAN OF "THE ENCLAVES AT CANTON AVENUE" A TRACT OF LAND LOCATED IN SECTION 3, TOWNSHIP 45 NORTH, RANGE 6 EAST, CITY OF UNIVERSITY CITY, ST. LOUIS COUNTY, MISSOURI. THIS PLAN IS NOT A SURVEY AND DOES NOT MEET THE "MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS"(10 CSR 30–2 AND 4 CSR 30–16 EFFECTIVE DATE DECEMBER 30, 1994).

THE STERLING COMPANY

3-21-2025

JAMEY A. HENSON, P.L.S
MO. REG. L.S. #2007017963

DATE

STATE OF MISSOURI
JAMEY A. HENSON
NUMBER
PLS-2007017963
PROFESSIONAL LAND SURVEYOR

MSD Base Map 16K
MSD P #
Highway & Traffic #

ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE STERLING CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-8944
www.sterlingco.net
Corporate Certificate of Authority #001348

The Enclaves at Canton Avenue
UNIVERSITY CITY, MISSOURI
PRELIMINARY PLAN
COVER SHEET

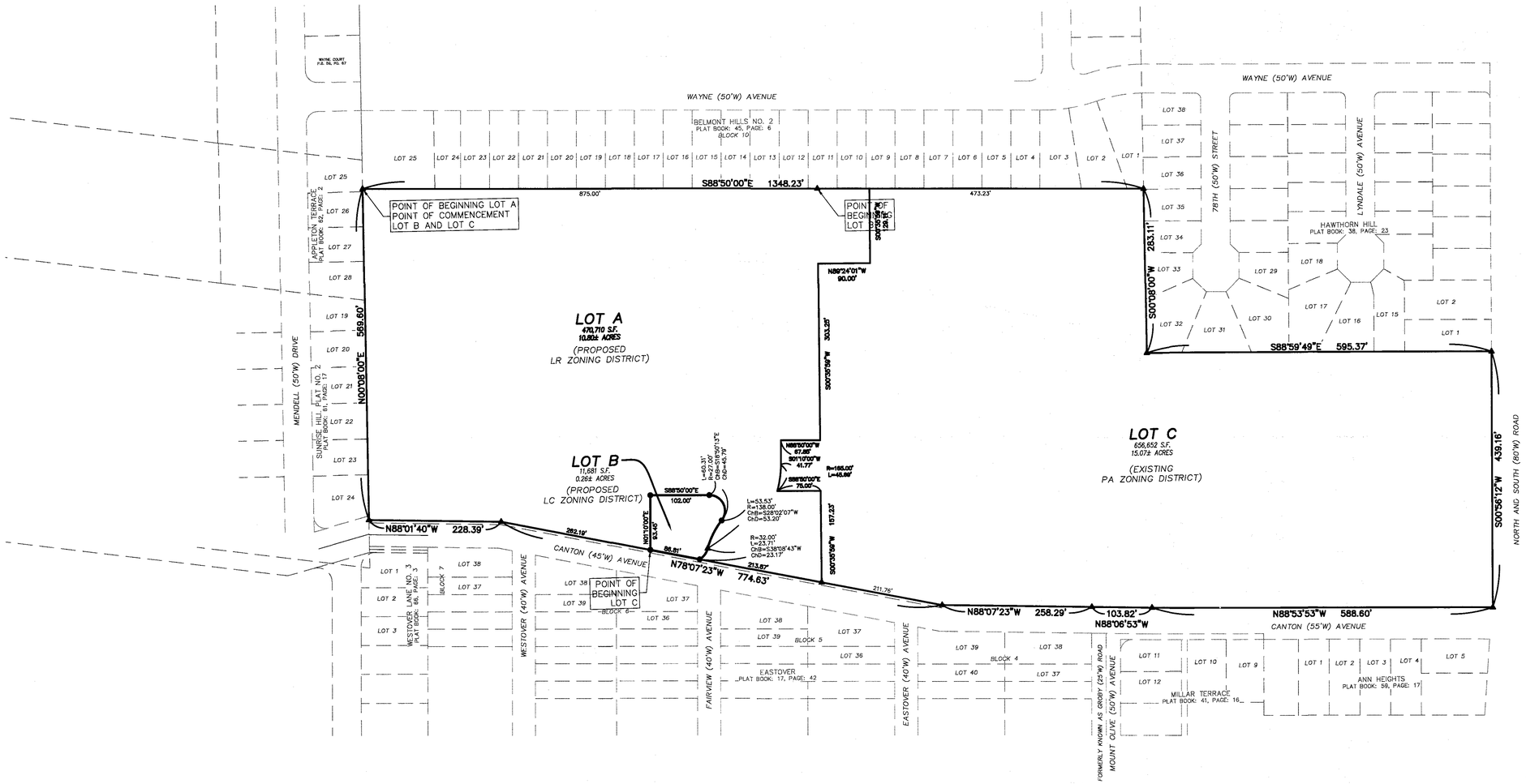
The Professional Engineer's seal and signature affixed to this sheet applies only to the material and items shown on this sheet. All drawing, instruments or other documents not exhibiting this seal and signature shall not be considered part of the work of the Professional Engineer and he disclaims any and all responsibility for such plans, drawings or documents not exhibiting this seal and signature.

STATE OF MISSOURI
MICHAEL G. BOERDING
NUMBER
E-28643
PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	23-09-234
Date	Mar. 21, 2025
Designed: MF	Sheet 1.1
Drawn:	
Checked:	PRE

Drawing name: V:\23\09234 7701 Canton Ave\Drawings\Preliminary\Preliminary\09234pre.dwg Plotted on: Mar 21, 2025 - 2:26pm Plotted by: stevellers



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

PROPERTY DESCRIPTION (PARCEL A):

PROPOSED LR ZONING DISTRICT (10.80 AC.)

A TRACT OF LAND BEING PART OF LOT 21 OF 'BELLEMONT -PLACE', A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 3 PAGE 99 OF THE ST. LOUIS COUNTY, MISSOURI RECORDS, LOCATED IN THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 46 NORTH, RANGE 6 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF UNIVERSITY CITY, ST. LOUIS COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF LOT 25 IN BLOCK 10 OF 'BELLEMONT HILLS PLAT NO. 2', A SUBDIVISION RECORDED IN PLAT BOOK 45 PAGE 6 OF THE ABOVEMENTIONED RECORDS; THENCE ALONG THE SOUTH LINE OF BLOCK 10 OF SAID 'BELLEMONT HILLS PLAT NO 2' SUBDIVISION, SOUTH 88°50'00"EAST, 875.00 FEET TO A POINT; THENCE LEAVING THE SOUTH LINE OF SAID BLOCK 10 THE FOLLOWING COURSES, DISTANCES, AND CURVE, SOUTH 00°35'59"WEST, 129.11 FEET; THENCE NORTH 89°24'01" WEST, 90.00 FEET TO A POINT; THENCE SOUTH 0'35'59" WEST, 303.25 FEET TO A POINT; THENCE NORTH 88°50'00" WEST, 67.85 FEET TO A POINT;
THENCE SOUTH 01°10'00" WEST, 41.77 FEET TO THE BEGINNING OF A CURVE CONCAVE WESTERLY, SAID CURVE HAS A RADIUS OF 165.00 FEET; THENCE SOUTHERLY ALONG SAID CURVE, A CHORD WHICH BEARS SOUTH 09°05'58" WEST, 45.54 FEET AND AN ARC DISTANCE OF 45.69 FEET TO A POINT; THENCE SOUTH 88°50'00" EAST, 75.00 FEET TO A POINT; THENCE SOUTH 0'35'59" WEST, 157.23 FEET TO A POINT LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF CANTON AVENUE (VARIABLE WIDTH); THENCE ALONG SAID NORTH RIGHT-OF-WAY LINE, NORTH 78°07'23"WEST, 213.87 FEET TO A POINT OF CUSP; THENCE LEAVING SAID NORTH RIGHT-OF-WAY LINE AND PROCEEDING THE FOLLOWING COURSES, DISTANCES, AND CURVES: ALONG AN ARC CONCAVE TO THE NORTHWEST, AN ARC LENGTH OF 23.71 FEET, A RADIUS OF 32.00 FEET, THE CHORD OF WHICH BEARS NORTH 38°08'43"EAST, 23.17 FEET TO A POINT OF REVERSE CURVATURE; ALONG AN ARC CONCAVE TO THE EAST, AN ARC LENGTH OF 53.53 FEET, A RADIUS OF 138.00 FEET, THE CHORD OF WHICH BEARS NORTH 28°02'07"EAST, 53.20 FEET TO A POINT OF REVERSE CURVATURE; ALONG AN ARC CONCAVE TO THE SOUTHWEST, AN ARC LENGTH OF 60.31 FEET, A RADIUS OF 27.00 FEET, THE CHORD OF WHICH BEARS NORTH 18°50'13"WEST, 45.79 FEET TO A POINT OF TANGENCY; NORTH 88°50'00"WEST, 102.00 FEET TO A POINT; AND SOUTH 01°10'00"WEST, 93.45 FEET TO A POINT LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF THE ABOVEMENTIONED CANTON AVENUE (VARIABLE WIDTH); THENCE ALONG SAID NORTH RIGHT-OF-WAY LINE, NORTH 78°07'23"WEST, 262.19 FEET TO A POINT; THENCE CONTINUING ALONG SAID NORTH RIGHT-OF-WAY LINE, NORTH 88°01'40"WEST, 228.39 FEET TO A POINT LOCATED ON THE SOUTHERN PROLONGATION OF THE EAST LINE OF 'SUNRISE HILL PLAT NO. 2', A SUBDIVISION RECORDED IN PLAT BOOK 61 PAGE 17 OF THE ABOVEMENTIONED RECORDS; THENCE ALONG THE EAST LINE OF SAID 'SUNRISE HILL PLAT NO. 2', AND ITS SOUTHERN PROLONGATION, AND THE EAST LINE OF 'APPLETON TERRACE', A SUBDIVISION RECORDED IN PLAT BOOK 62 PAGE 2 OF THE ABOVEMENTIONED RECORD, NORTH 00°08'00"EAST, 569.60 FEET TO THE POINT OF BEGINNING AND CONTAINING 474,347 SQUARE FEET (10.80 ACRES) MORE OR LESS, ACCORDING TO CALCULATIONS PERFORMED BY THE STERLING COMPANY DURING THE MONTH OF MARCH, 2025 UNDER PROJECT NO. 23-09-234. THIS DESCRIPTION IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A FUTURE BOUNDARY SURVEY.

PROPERTY DESCRIPTION (PARCEL B):

PROPOSED LC ZONING DISTRICT (0.26 AC.)

A TRACT OF LAND BEING PART OF LOT 21 OF 'BELLEMONT -PLACE', A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 3 PAGE 99 OF THE ST. LOUIS COUNTY, MISSOURI RECORDS, LOCATED IN THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 46 NORTH, RANGE 6 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF UNIVERSITY CITY, ST. LOUIS COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF LOT 25 IN BLOCK 10 OF 'BELLEMONT HILLS PLAT NO. 2', A SUBDIVISION RECORDED IN PLAT BOOK 45 PAGE 6 OF THE ABOVEMENTIONED RECORDS, SAID CORNER BEING LOCATED ON THE EAST LINE OF 'APPLETON TERRACE', A SUBDIVISION RECORDED IN PLAT BOOK 62 PAGE 2 OF THE ABOVEMENTIONED RECORDS; THENCE ALONG THE EAST LINE OF SAID 'APPLETON TERRACE' SUBDIVISION, THE EAST LINE OF 'SUNRISE HILL PLAT NO. 2', A SUBDIVISION RECORDED IN PLAT BOOK 61 PAGE 17 OF THE ABOVEMENTIONED RECORDS AND ITS SOUTHERLY PROLONGATION, SOUTH 00°08'00"WEST, 569.60 FEET TO A POINT LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF CANTON AVENUE (VARIABLE WIDTH); THENCE ALONG SAID NORTH RIGHT-OF-WAY LINE, SOUTH 88°01'40"EAST, 228.39 FEET TO A POINT; THENCE CONTINUING ALONG SAID NORTH RIGHT-OF-WAY LINE, SOUTH 78°07'23"EAST, 262.19 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT OF LAND; THENCE LEAVING SAID NORTH RIGHT-OF-WAY LINE AND PROCEEDING THE FOLLOWING COURSES, DISTANCES, AND CURVES: NORTH 01°10'00"EAST, 93.45 FEET TO A POINT; SOUTH 88°50'00"EAST, 102.00 FEET TO A POINT OF CURVATURE; ALONG AN ARC CONCAVE TO THE SOUTHWEST, AN ARC LENGTH OF 60.31 FEET, A RADIUS OF 24.00 FEET, THE CHORD OF WHICH BEARS SOUTH 18°50'13"EAST, 45.79 FEET TO A POINT OF REVERSE CURVATURE; ALONG AN ARC CONCAVE TO THE EAST, AN ARC LENGTH OF 53.53 FEET, A RADIUS OF 138.00 FEET, THE CHORD OF WHICH BEARS SOUTH 28°02'07"WEST, 53.20 FEET TO A POINT OF REVERSE CURVATURE; ALONG AN ARC CONCAVE TO THE NORTHWEST, AN ARC LENGTH OF 23.71 FEET, A RADIUS OF 32.00 FEET, THE CHORD OF WHICH BEARS SOUTH 38°08'43"WEST, 23.17 FEET TO A POINT OF TANGENCY LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF THE ABOVEMENTIONED CANTON AVENUE (VARIABLE WIDTH); THENCE ALONG SAID NORTH RIGHT-OF-WAY LINE, NORTH 78°07'23"WEST, 86.81 FEET TO THE POINT OF BEGINNING AND CONTAINING 11,681 SQUARE FEET (0.26 ACRES) MORE OR LESS, ACCORDING TO CALCULATIONS PERFORMED BY THE STERLING COMPANY DURING THE MONTH OF NOVEMBER, 2024 UNDER PROJECT NO. 23-09-234. THIS DESCRIPTION IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A FUTURE BOUNDARY SURVEY.

PROPERTY DESCRIPTION (PARCEL C):

EXISTING PU ZONING DISTRICT (15.07 AC.)

A TRACT OF LAND BEING PART OF LOT 21 OF 'BELLEMONT -PLACE', A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 3 PAGE 99 OF THE ST. LOUIS COUNTY, MISSOURI RECORDS, LOCATED IN THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 46 NORTH, RANGE 6 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF UNIVERSITY CITY, ST. LOUIS COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF LOT 25 IN BLOCK 10 OF 'BELLEMONT HILLS PLAT NO. 2', A SUBDIVISION RECORDED IN PLAT BOOK 45 PAGE 6 OF THE ABOVEMENTIONED RECORDS; THENCE ALONG THE SOUTH LINE OF BLOCK 10 OF SAID 'BELLEMONT HILLS PLAT NO 2' SUBDIVISION, SOUTH 88°50'00"EAST, 875.00 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT OF LAND; THENCE CONTINUING ALONG THE SOUTH LINE OF SAID BLOCK 10, SOUTH 88°50'00"EAST, 473.23 FEET TO THE SOUTHEAST CORNER OF SAID BLOCK 10, SAID CORNER BEING LOCATED ON THE WEST LINE OF 'HAWTHORN HILL', A SUBDIVISION RECORDED IN PLAT BOOK 38 PAGE 23 OF THE ABOVEMENTIONED RECORDS; THENCE ALONG THE WEST LINE OF SAID 'HAWTHORN HILL' SUBDIVISION, SOUTH 00°08'00"WEST, 283.11 FEET TO THE SOUTHWEST CORNER OF SAID 'HAWTHORN HILL' SUBDIVISION; THENCE ALONG THE SOUTH LINE OF SAID 'HAWTHORN HILL' SUBDIVISION, SOUTH 88°59'49"EAST, 595.37 FEET TO THE SOUTHEAST CORNER OF SAID 'HAWTHORN HILL' SUBDIVISION, SAID CORNER BEING LOCATED ON THE WEST RIGHT-OF-WAY LINE OF NORTH AND SOUTH ROAD (80 FEET WIDE); THENCE ALONG SAID WEST RIGHT-OF-WAY, SOUTH 00°56'12"WEST, 439.16 FEET TO THE POINT OF INTERSECTION OF SAID WEST RIGHT-OF-WAY AND THE NORTH RIGHT-OF-WAY LINE OF CANTON AVENUE (VARIABLE WIDTH); THENCE ALONG SAID NORTH RIGHT-OF-WAY LINE, THE FOLLOWING COURSES AND DISTANCES: NORTH 88°53'53"WEST, 588.60 FEET TO A POINT; NORTH 88°06'53"WEST, 103.83 FEET TO A POINT; NORTH 88°07'23"WEST, 258.30 FEET TO A POINT; AND NORTH 78°07'23"WEST, 211.76 FEET TO A POINT; THENCE LEAVING SAID NORTH RIGHT-OF-WAY LINE THE FOLLOWING COURSES, DISTANCES, AND CURVE, NORTH 00°35'59" EAST, 157.23 FEET; THENCE NORTH 88°50'00" WEST, 75.00 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE WESTERLY, SAID CURVE HAS A RADIUS OF 165.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 72°58'03" EAST; THENCE NORTHERLY ALONG SAID CURVE THE CHORD WHICH BEARS, NORTH 09°05'58" EAST, 45.54 FEET AND AN ARC DISTANCE OF 45.69 FEET TO A POINT; THENCE NORTH 01°10'00" EAST, 41.77 FEET TO A POINT; THENCE SOUTH 88°50'00" EAST, 67.85 FEET TO A POINT; THENCE NORTH 00°35'59" EAST, 303.25 FEET TO A POINT; THENCE SOUTH 89°24'01" EAST, 90.00 FEET TO A POINT; THENCE NORTH 00°35'59" EAST, 129.11 FEET TO THE POINT OF BEGINNING AND CONTAINING 656,652 SQUARE FEET (15.0746 ACRES) MORE OR LESS, ACCORDING TO CALCULATIONS PERFORMED BY THE STERLING COMPANY DURING THE MONTH OF MARCH, 2025 UNDER PROJECT NO. 23-09-234. THIS DESCRIPTION IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A FUTURE BOUNDARY SURVEY.

MSD Base Map 16K
MSD P #
Highway & Traffic #

ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE STERLING CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-8944
www.sterling-eng-sur.com
Corporate Certificate of Authority #001348

The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
PROPERTY DESCRIPTIONS

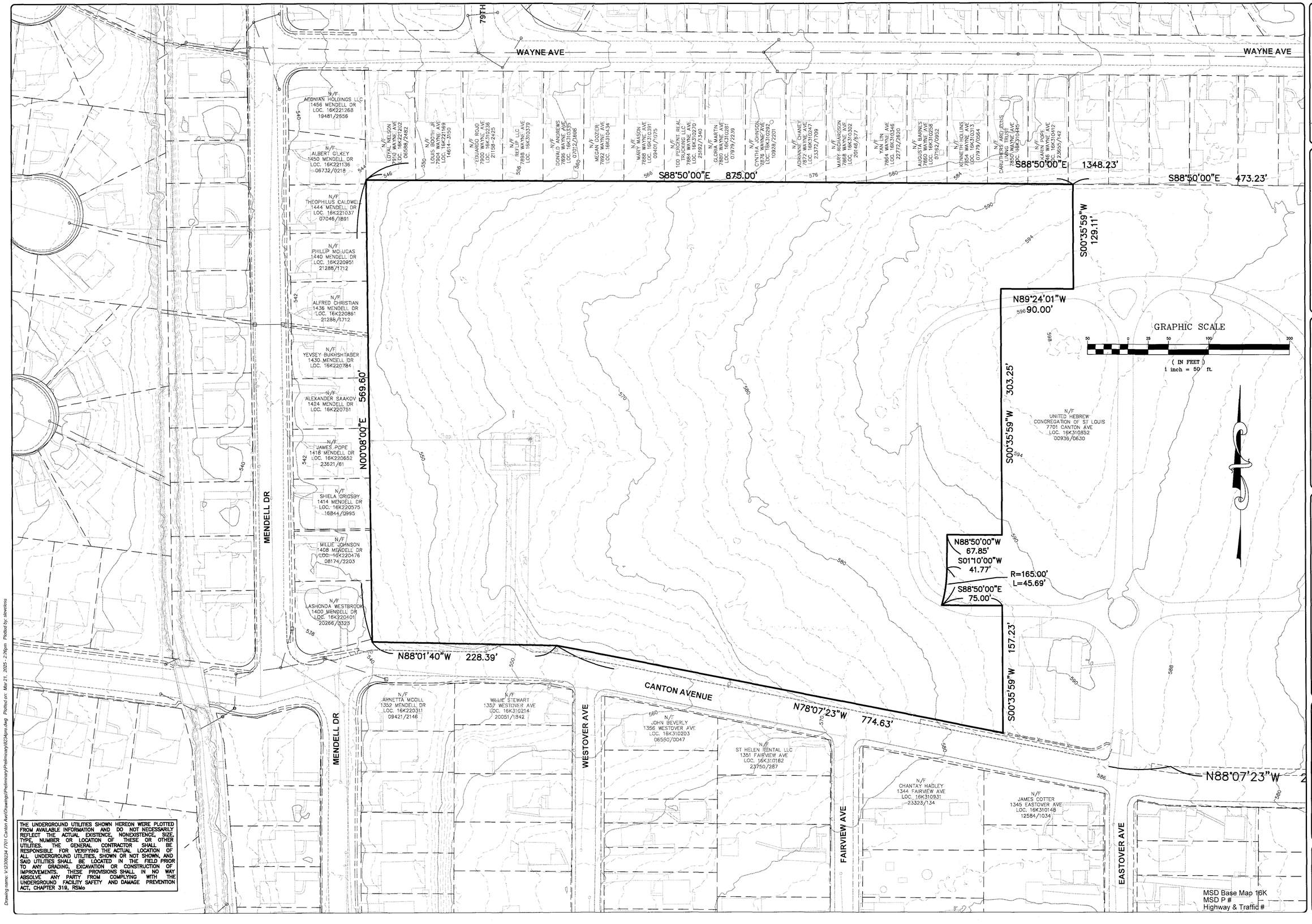
The Professional Engineer's seal and signature affixed to this sheet applies only to the material and items shown on this sheet. All drawing, instruments or other documents not exhibiting this seal and signature shall not be considered the work product of the undersigned professional and disclaims any and all responsibility for such plans, drawings or documents not exhibiting this seal and signature.

STATE OF MISSOURI
MICHAEL G. BOERDING
NUMBER
28643
PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	
23-09-234	
Date	
Mar. 21, 2025	
Designed: MF	Sheet
Drawn:	2.1
Checked:	PRE

Drawing name: V:\23092234 7701 Canton Ave\Drawings\Preliminary\Preliminary\92234pre.dwg Plotted on: Mar 21, 2025 - 2:26pm Plotted by: stevelass



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BALLWIN, MISSOURI 63011

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The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
EXISTING CONDITIONS

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MISSOURI E-28643 PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	23-09-234
Date	Mar. 21, 2025
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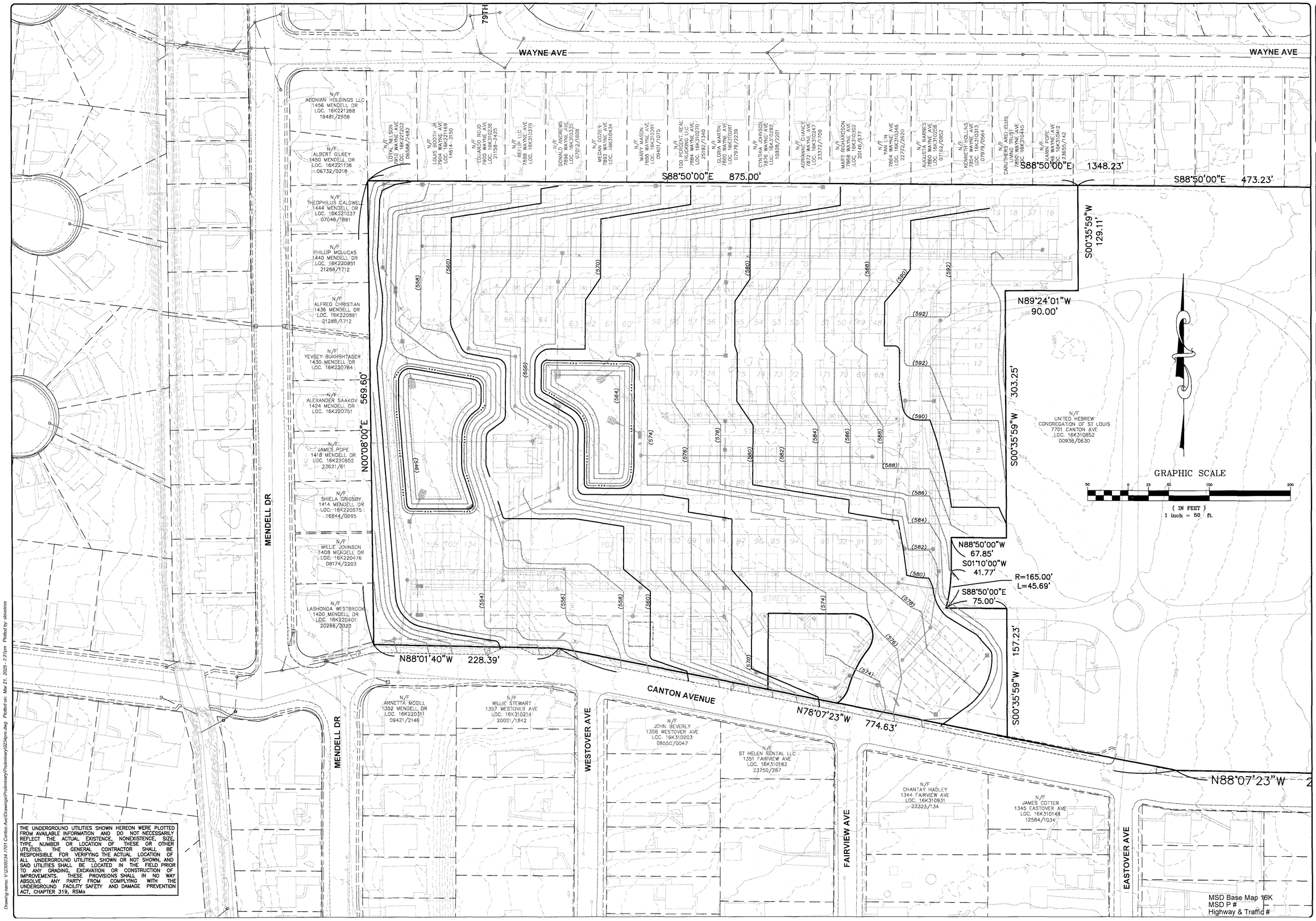

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ISSUE	REMARKS/DATE

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The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
GRADING PLAN

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STATE OF MISSOURI
MICHAEL G. BOERDING
E-28643
PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
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Job Number	
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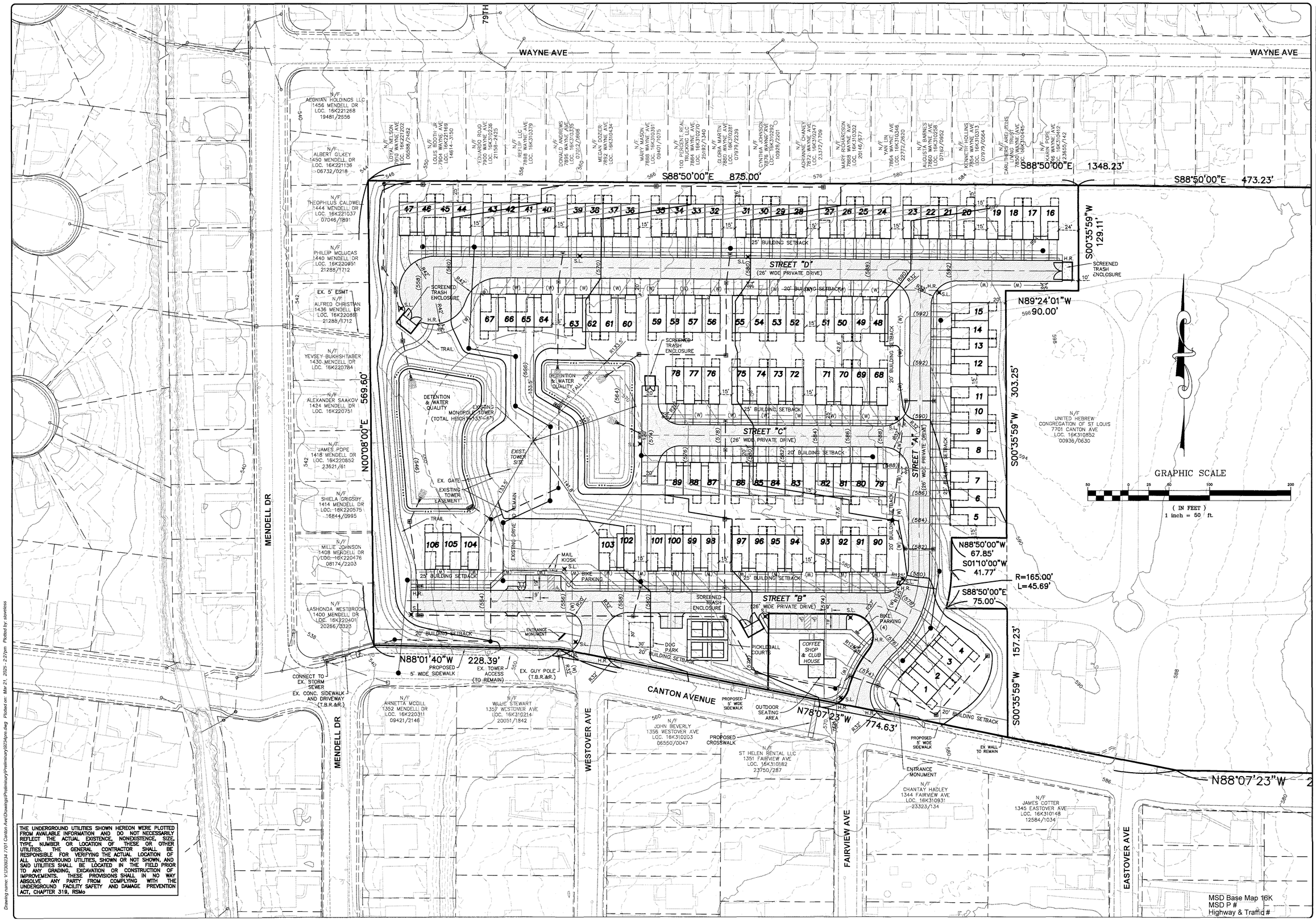

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ISSUE	REMARKS/DATE

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830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

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The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
GRADING PLAN

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STATE OF MISSOURI
MICHAEL G. BOERDING
E-28643
PROFESSIONAL ENGINEER

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Date: 3-21-2025
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License No. MO E-28643
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Job Number	
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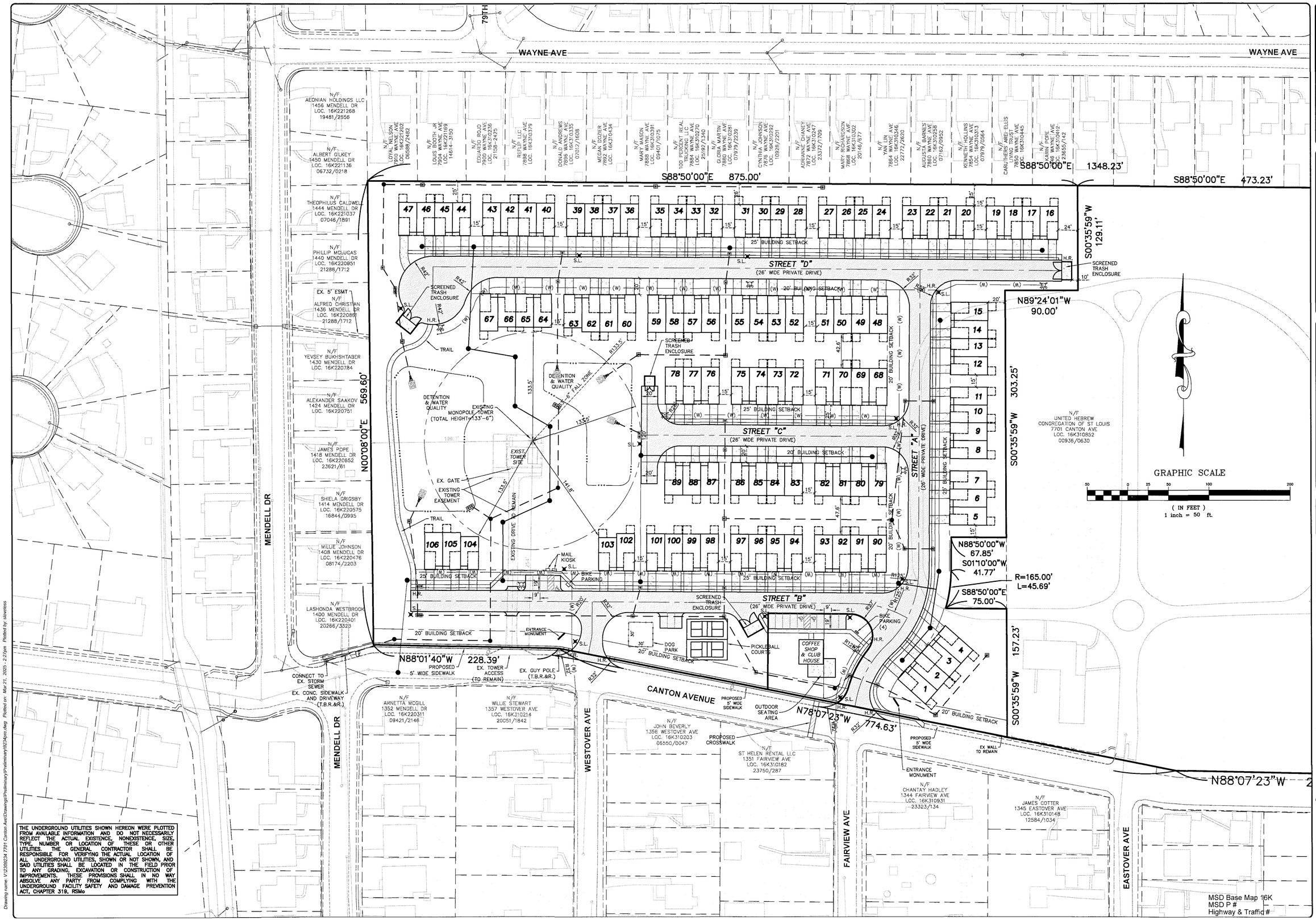
Drawing name: V:\23\09234 7701 Canton Ave\Drawings\Preliminary\09234pre.dwg Plotted on: Mar 21, 2025 - 2:27pm Plotted by: slovelless



THE UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMo

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ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE STERLING CO
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63128
Ph 314-487-0440 Fax 314-487-8944
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Corporate Certificate of Authority #001348

The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

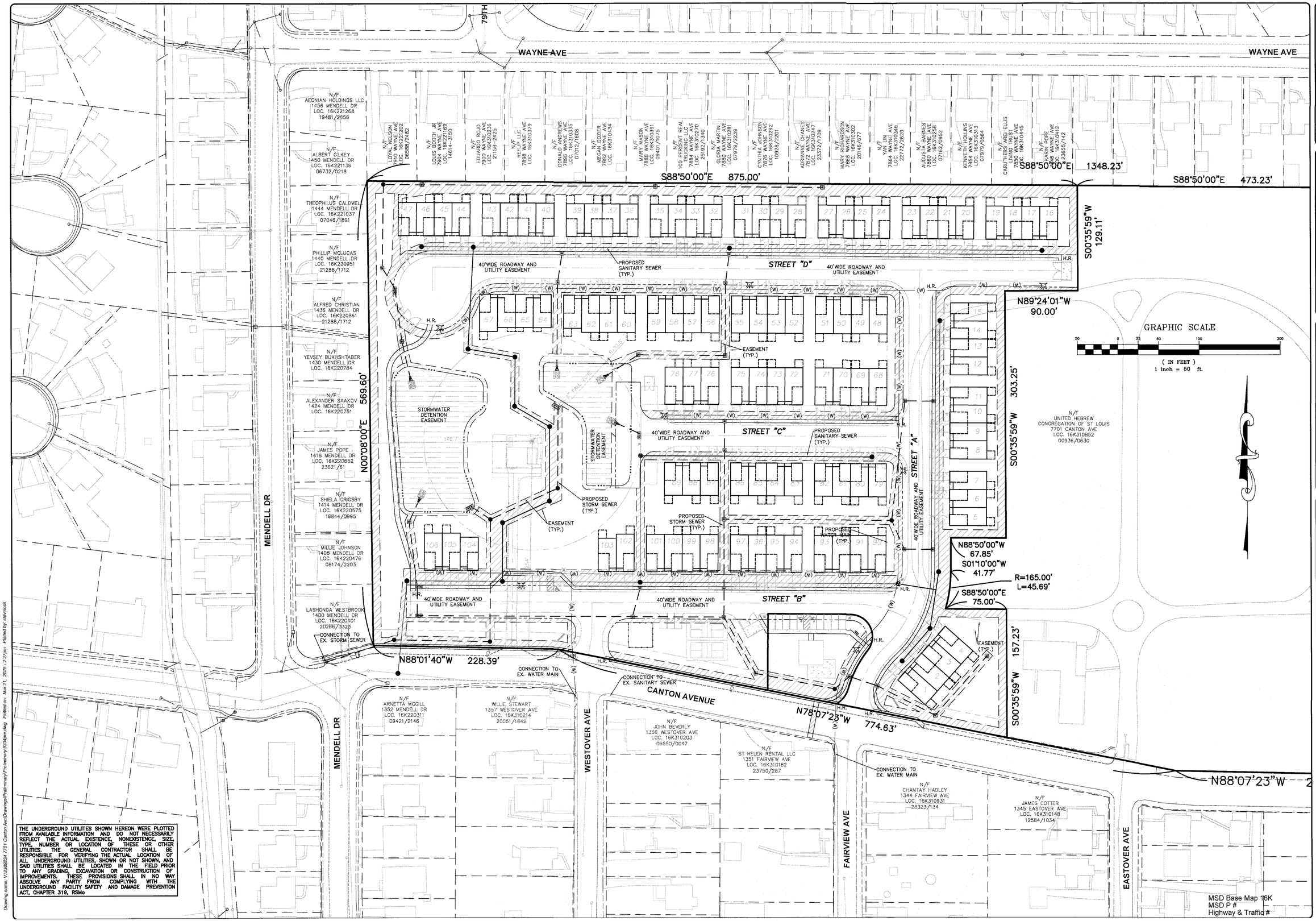
PRELIMINARY PLAN
SITE PLAN

The Professional Engineer's seal and signature affixed to this sheet applies only to the material and items shown on this sheet. All drawing, instruments or other documents not exhibiting this seal and signature shall not be considered prepared by this engineer, and the engineer expressly disclaims any and all responsibility for such plans, drawings or documents not exhibiting this seal and signature.

MICHAEL G. BOERDING
E-28643
MISSOURI
PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	
23-09-234	
Date	
Mar. 21, 2025	
Designed: MF	Sheet
Drawn:	5.1
Checked:	PRE



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The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
UTILITY PLAN

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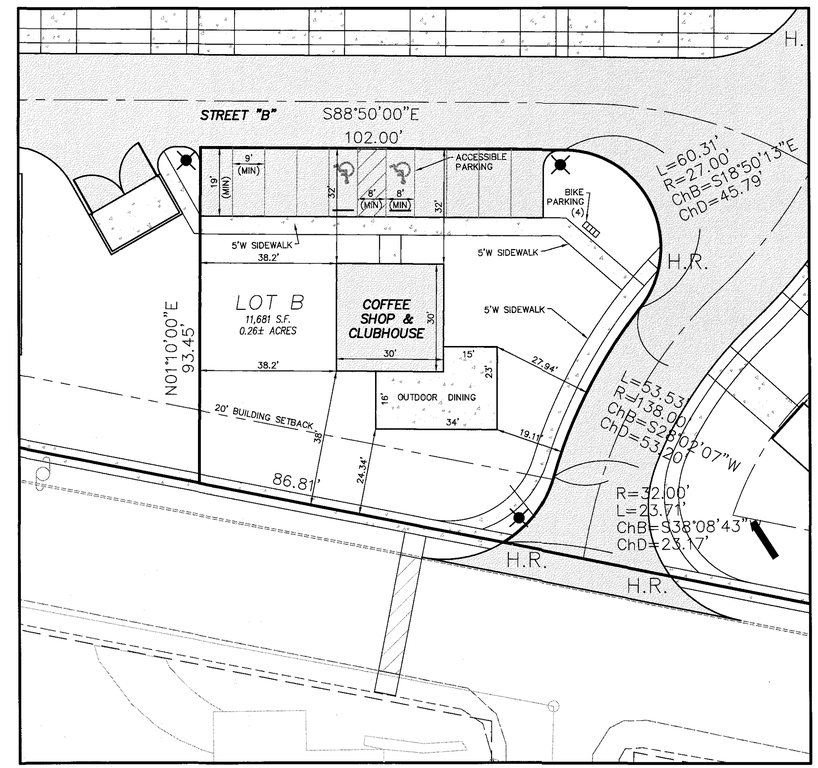
MICHAEL G. BOERDING
NO. E-28643
STATE OF MISSOURI
PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	23-09-234
Date	Mar. 21, 2025
Designed: MF	Sheet 6.1
Drawn:	
Checked:	PRE

SIDEWALK PLAN
1" = 50'



CLUBHOUSE/COFFEE SHOP PLAN
1" = 20'

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MSD Base Map 16K
MSD P #
Highway & Traffic #

ISSUE	REMARKS	DATE

William James Capital, LLC
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BALLWIN, MISSOURI 63011

THE STERLING CO.
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The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
SIDEWALK PLAN

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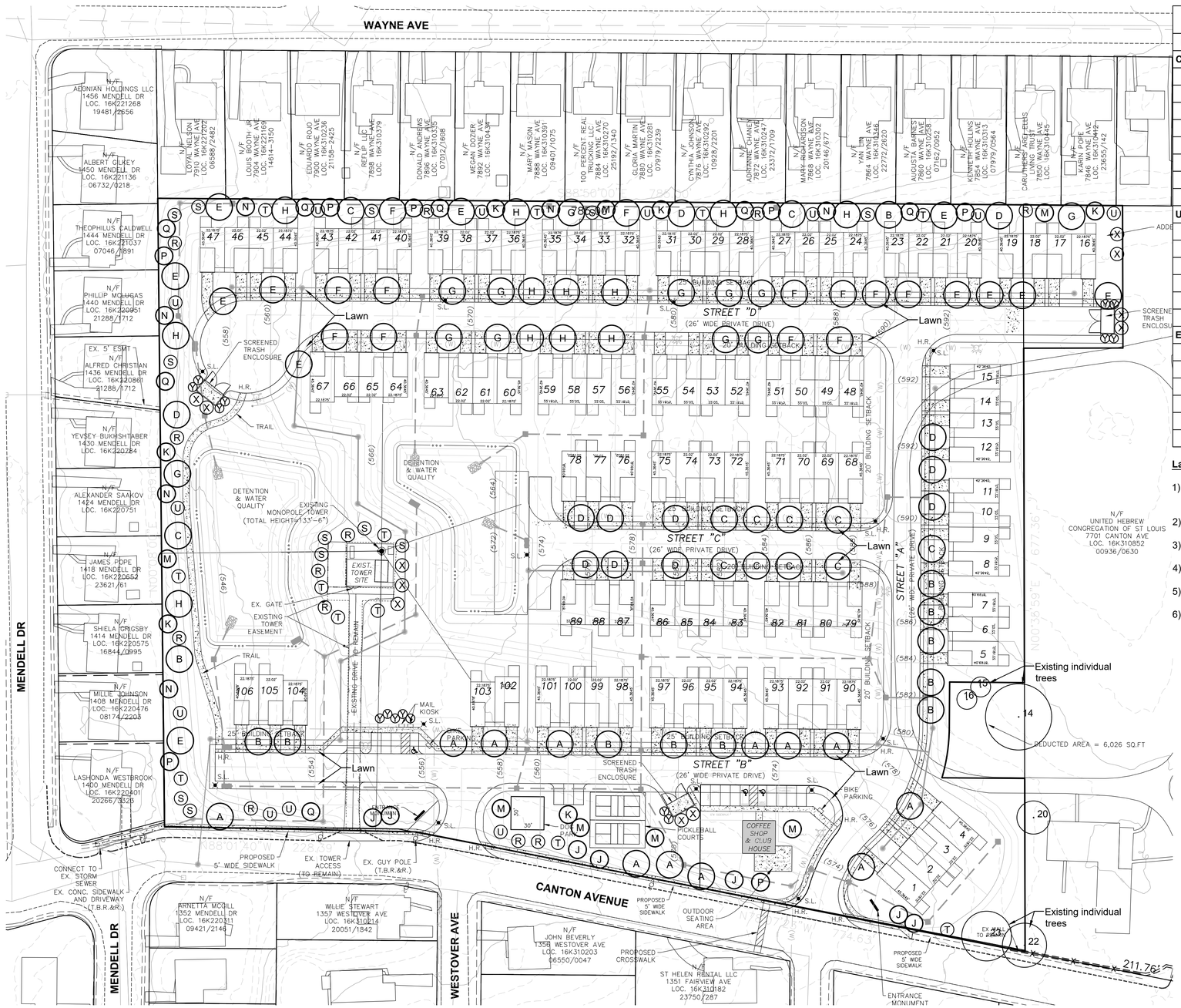
STATE OF MISSOURI
MICHAEL G. BOERDING
E-28643
PROFESSIONAL ENGINEER

PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	23-09-234
Date	Mar. 21, 2025
Designed: MF	Sheet
Drawn:	7.1
Checked:	PRE

Drawing name: V:\23\09234 7701 Canton Ave\Drawings\Preliminary\9234ave.dwg Plotted on: Mar 21, 2025 - 2:27pm Plotted by: steveless



Landscape Plan
SCALE 1"=50'
0 50 100 200

PLANTING SCHEDULE

ID	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
CANOPY-SHADE TREE					
A	12	Acer saccharum	Sugar Maple	3" caliper	B & B
B	12	Acer rubrum	Red Maple	3" caliper	B & B
C	12	Ulmus americana 'Princeton'	Princeton American Elm	3" caliper	B & B
D	12	Tilia americana 'Redmond'	Redmond American Linden	3" caliper	B & B
E	12	Quercus macrocarpa	Bur Oak	3" caliper	B & B
F	12	Quercus bicolor	Swamp White Oak	3" caliper	B & B
G	12	Quercus imbricaria	Shingle Oak	3" caliper	B & B
H	12	Gleditsia triacanthos 'Shademaster'	Shademaster Honeylocust	3" caliper	B & B
UNDERSTORY-ORNAMENTAL TREE					
J	7	Prunus x yedoensis	Yoshino Cherry	2" caliper	B & B
K	6	Malus 'Sutyzam'	Sugar Tyme Crabapple	2" caliper	B & B
M	7	Prunus virginiana	Chokecherry	2" caliper	B & B
N	6	Cornus florida	Flowering Dogwood	2" caliper	B & B
P	7	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2" caliper	B & B
Q	7	Cercis canadensis	Eastern Redbud	2" caliper	B & B
EVERGREEN TREE					
R	12	Picea abies	Norway Spruce	8' tall	B & B
S	12	Picea glauca	White Spruce	8' tall	B & B
T	12	Picea pungens	Colorado Blue Spruce	8' tall	B & B
U	12	Pinus strobus	White Pine	8' tall	B & B
X	11	Juniperus virginiana	Juniper	8' tall	B & B
Y	15	Juniperus scopulorum 'Moonglow'	Moonglow Juniper	8' tall	B & B

Landscape Notes:

1) Lawn areas shall be turf-type Tall Fescue Grass or approved equivalent.
All 3:1 or steeper slopes shall be lawn seed and have erosion control blanket.

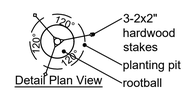
2) Topsoil in all disturbed lawn areas at 6" depth.

3) Soil mix in all planting beds at 8" depth.

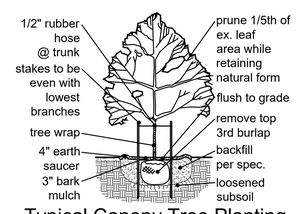
4) All mulch to be double ground bark mulch.

5) Bed edges to be spade cut.

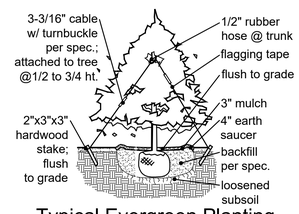
6) Refer to Tree Survey sheets TS 1.01 and TS 1.02 for existing conditions.



Detail Plan View



Typical Canopy Tree Planting



Typical Evergreen Planting

STATE OF MISSOURI JERALD SAUNDERS NUMBER LA-7 LANDSCAPE ARCHITECT
3/24/25

Jerald Saunders - Landscape Architect
MO License # LA-007

Consultants:

The Enclaves at Canton Avenue

University City, Missouri

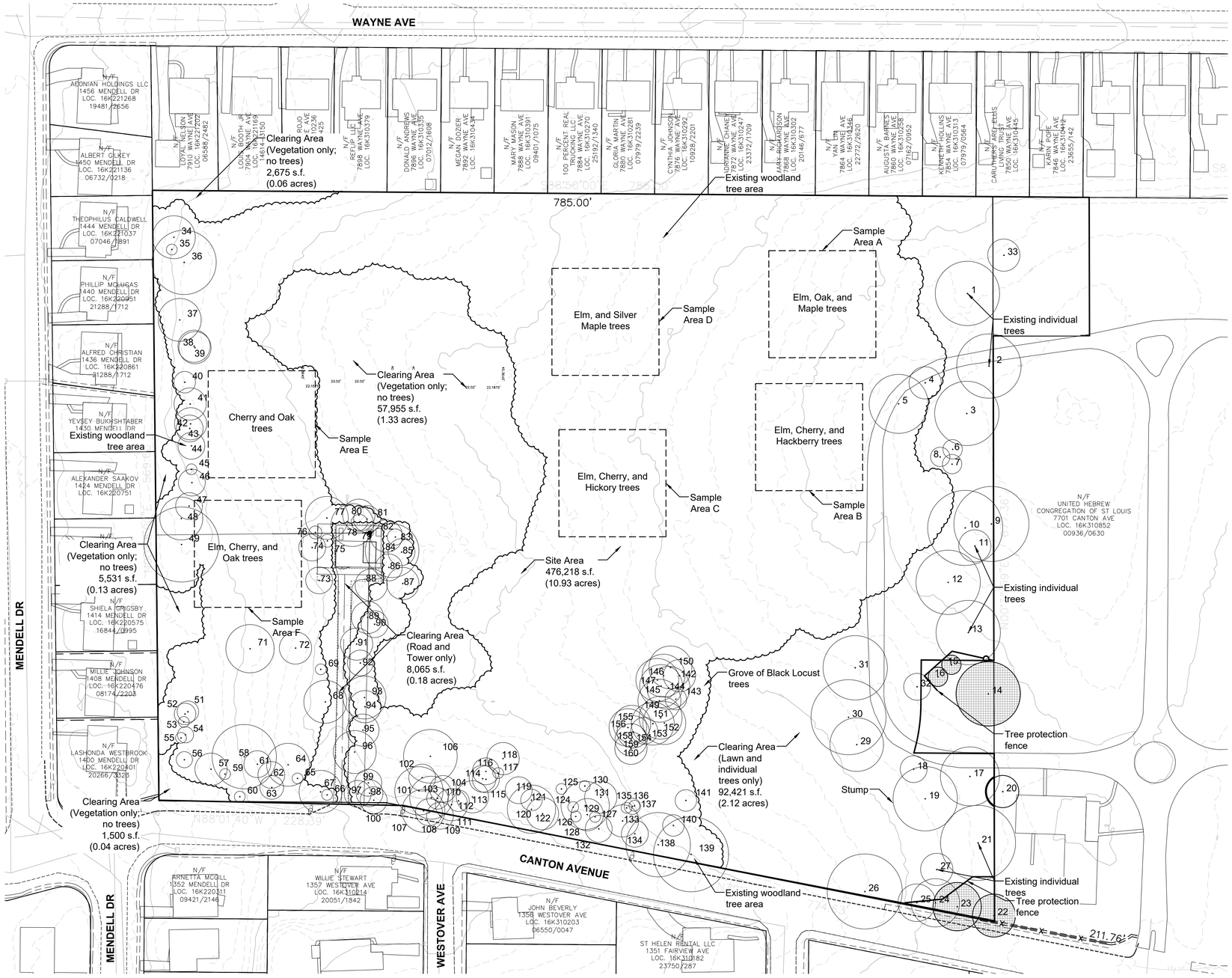
Revisions:

Date	Description	No.
12/11/24	Plan Revisions	1
3/24/25	Plan Revisions	2

Drawn: KP
Checked: RS

LOOMIS ASSOCIATES
landscape architects + planners
750 spirit 40 park drive, chesterfield, missouri 63005
t. 636-519-8668
www.loomis-associates.com
Loomis Associates Inc.
Missouri State Certificate of Authority #: LAC #000019

Sheet Title: Landscape Plan
Sheet No: L1.01
Date: 9/12/24
Job #: 1085.001



Tree Survey

SCALE 1"=50'

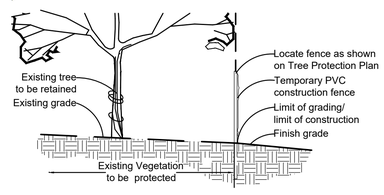
0 50 100 200

Tree Protection Notes:

1) Pre-construction meeting to be held on-site to include a presentation of tree protection measures to operators, construction supervisors, developer's representative, and city zoning inspector.
2) Clearing Limits to be rough staked in order to facilitate location for installation of protection fencing. No early maintenance schedule is required.
3) No clearing or grading shall begin in areas where the treatment and preservation measures have not been completed, including the installation of tree protection fencing as shown on the plan. Where necessary, Contractor may perform minor tree clearing prior to installing silt fencing and tree protection fencing provided they maintain tree protection area.
4) Tree Protection Fencing shall be 4-foot high temporary plastic construction fence. No equipment traffic/parking, concrete washout, material storage or other such construction activity shall be permitted to penetrate the protection fencing or disrupt the Protected Woodland Area except for the removal of dead or invasive plant material. All ground plane in planting areas shall be mulched with hardwood bark mulch. Tree Protection Signage will be placed along the Protection Fencing as shown as the dashed line on the plan.
5) Tree protection measures to be maintained throughout construction sequence.

Tree Survey Prepared by:
Kristin Provinse
Certified Arborist MW-6075A

Kristin Provinse



Tree Protection Detail

Note: Refer to TS1.02 for Tree Inventory charts and sample areas.

STATE OF MISSOURI JERALD SAUNDERS NUMBER LA-7 LANDSCAPE ARCHITECT
3/24/25

Jerald Saunders - Landscape Architect
MO License # LA-007

Consultants:

The Enclaves at Canton Avenue

University City, Missouri

Revisions:

Date	Description	No.
12/11/24	Plan Revisions	1
3/24/25	Plan Revisions	2

Drawn: KP
Checked: RS

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landscape architects + planners
750 spirit 40 park drive, chesterfield, missouri 63005
t. 636-519-8668
www.loomis-associates.com
Loomis Associates Inc.
Missouri State Certificate of Authority #: LAC #000019

Sheet Title: Tree Survey

Sheet No: TS 1.01

Date: 9/12/24
Job #: 1085.001

Tree Sample Area	Tree ID	Tree Name	DBH	Condition Rating	Comment
A	A1	White Oak	30	Fair	Tree sample area A
A	A2	Elm	7	Fair	Tree sample area A
A	A3	Pin Oak	11	Fair	Tree sample area A
A	A4	Maple	14	Fair	Tree sample area A
A	A5	White Oak	6	Fair	Tree sample area A
A	A6	White Oak	6	Fair	Tree sample area A
A	A7	Elm	14	Poor	Tree sample area A
A	A8	Elm	10	Fair	Tree sample area A
A	A9	Maple	12	Fair	Tree sample area A
A	A10	Tree of Heaven	14	Poor	Tree sample area A
A	A11	Boxelder	7	Poor	Tree sample area A
A	A12	Silver Maple	18	Fair	Tree sample area A
A	A13	Silver Maple	12	Fair	Tree sample area A
A	A14	Boxelder	10	Fair	Tree sample area A
A	A15	Tree of Heaven	0	Dead	Tree sample area A
A	A16	Silver Maple	19	Fair	Tree sample area A
A	A17	Silver Maple	14	Fair	Tree sample area A
A	A18	Silver Maple	18	Fair	Tree sample area A
A	A19	Silver Maple	8	Fair	Tree sample area A
A	A20	Silver Maple	14	Fair	Tree sample area A
A	A21	Silver Maple	10	Fair	Tree sample area A
A	A22	Black Walnut	15	Fair	Tree sample area A
A	A23	Elm	8	Fair	Tree sample area A
A	A24	Elm	18	Poor	Tree sample area A
A	A25	White Oak	7	Fair	Tree sample area A
A	A26	White Oak	8	Fair	Tree sample area A
A	A27	Pin Oak	8	Fair	Tree sample area A
A	A28	Black Cherry	14	Fair	Tree sample area A
A	A29	Black Cherry	14	Fair	Tree sample area A
A	A30	Elm	12	Fair	Tree sample area A

Tree Sample Area	Tree ID	Tree Name	DBH	Condition Rating	Comment
B	B1	Silver Maple	32	Good	Tree sample area B
B	B2	Elm	11	Fair	Tree sample area B
B	B3	Black Cherry	32	Fair	Tree sample area B
B	B4	Black Cherry	8	Fair	Tree sample area B
B	B5	Elm	18	Fair	Tree sample area B
B	B6	Black Walnut	17	Fair	Tree sample area B
B	B7	Elm	10	Fair	Tree sample area B
B	B8	Hackberry	13	Fair	Tree sample area B
B	B9	Elm	13	Poor	Tree sample area B
B	B10	Hackberry	8	Fair	Tree sample area B
B	B11	Hackberry	21	Fair	Tree sample area B

Tree Sample Area	Tree ID	Tree Name	DBH	Condition Rating	Comment
C	C1	Black Cherry	16	Fair	Tree sample area C
C	C2	Persimmon	13	Fair	Tree sample area C
C	C3	Black Cherry	16	Fair	Tree sample area C
C	C4	Hickory	8	Fair	Tree sample area C
C	C5	Sassafras	13	Fair	Tree sample area C
C	C6	Hickory	9	Fair	Tree sample area C
C	C7	Hickory	15	Fair	Tree sample area C
C	C8	Hickory	12	Fair	Tree sample area C
C	C9	Hickory	12	Fair	Tree sample area C
C	C10	Hickory	12	Fair	Tree sample area C
C	C11	Elm	12	Fair	Tree sample area C
C	C12	Silver Maple	20	Fair	Tree sample area C
C	C13	Hickory	10	Poor	Tree sample area C
C	C14	Silver Maple	16	Fair	Tree sample area C
C	C15	Elm	9	Fair	Tree sample area C
C	C16	Elm	8	Fair	Tree sample area C
C	C17	Persimmon	12	Fair	Tree sample area C
C	C18	Black Cherry	23	Fair	Tree sample area C
C	C19	Shingle Oak	8	Fair	Tree sample area C
C	C20	Elm	12	Fair	Tree sample area C
C	C21	Elm	16	Fair	Tree sample area C
C	C22	Elm	10	Fair	Tree sample area C
C	C23	Black Cherry	10	Fair	Tree sample area C
C	C24	Black Cherry	13	Fair	Tree sample area C

Tree Sample Area	Tree ID	Tree Name	DBH	Condition Rating	Comment
D	D1a	Silver Maple	25	Fair	Tree sample area D, Twin
D	D1b	Silver Maple	30	Fair	Tree sample area D, Twin
D	D2	Elm	10	Fair	Tree sample area D
D	D3	Elm	20	Fair	Tree sample area D
D	D4	Black Walnut	14	Fair	Tree sample area D
D	D5a	Silver Maple	27	Fair	Tree sample area D, Twin
D	D5b	Silver Maple	27	Fair	Tree sample area D, Twin
D	D6	Silver Maple	16	Poor	Tree sample area D, in decline

Tree Sample Area	Tree ID	Tree Name	DBH	Condition Rating	Comment
E	E1	Black Cherry	12	Poor	Tree sample area E
E	E2	Black Cherry	12	Poor	Tree sample area E
E	E3	Cottonwood	7	Fair	Tree sample area E
E	E4	Black Cherry	28	Fair	Tree sample area E
E	E5	Black Cherry	17	Poor	Tree sample area E
E	E6	Shingle Oak	28	Poor	Tree sample area E, in decline
E	E7	Shingle Oak	28	Fair	Tree sample area E
E	E8	Hackberry	7	Fair	Tree sample area E
E	E9	Shingle Oak	22	Fair	Tree sample area E
E	E10	Red Mulberry	8	Fair	Tree sample area E
E	E11	Black Cherry	22	Fair	Tree sample area E
E	E12	Black Cherry	20	Fair	Tree sample area E
E	E13	Black Cherry	14	Poor	Tree sample area E
E	E14	Black Cherry	9	Fair	Tree sample area E
E	E15	Shingle Oak	6	Fair	Tree sample area E
E	E16	Black Cherry	17	Fair	Tree sample area E
E	E17	Elm	7	Poor	Tree sample area E
E	E18	Black Cherry	21	Fair	Tree sample area E
E	E19	Shingle Oak	15	Fair	Tree sample area E

Tree Sample Area	Tree ID	Tree Name	DBH	Condition Rating	Comment
F	F1	Black Cherry	14	Fair	Tree sample area F
F	F2	Elm	13	Fair	Tree sample area F
F	F3	Elm	15	Fair	Tree sample area F
F	F4	Black Cherry	20	Fair	Tree sample area F
F	F5	Black Cherry	12	Fair	Tree sample area F
F	F6	Black Cherry	10	Poor	Tree sample area F
F	F7	Black Cherry	13	Fair	Tree sample area F
F	F8	Black Locust	8	Poor	Tree sample area F
F	F9a	Black Cherry	16	Fair	Tree sample area F, Twin
F	F9b	Black Cherry	16	Fair	Tree sample area F, Twin
F	F10	Black Cherry	15	Fair	Tree sample area F
F	F11	Elm	8	Fair	Tree sample area F
F	F12	Shingle Oak	13	Fair	Tree sample area F
F	F13	Elm	7	Fair	Tree sample area F
F	F14a	Black Cherry	17	Fair	Tree sample area F, Twin
F	F14b	Black Cherry	17	Fair	Tree sample area F, Twin
F	F15	Elm	6	Fair	Tree sample area F
F	F16	Black Cherry	22	Poor	Tree sample area F
F	F17	Boxelder	9	Fair	Tree sample area F
F	F18	Oak	8	Fair	Tree sample area F

Tree Condition Rating:

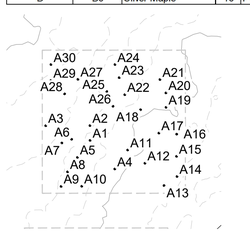
Dead	(0%)
Critical	(1%-25%)
Poor	(25%-50%)
Fair	(50%-75%)
Good	(75%-100%)

Tree Inventory

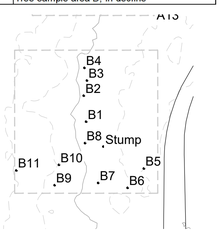
ID	Tree Name	DBH	Canopy Diam.	Condition Rating	Condition Rating %	Comment	Individual Tree	To Be Removed	Preserved
1	Red Oak	46	60	Poor	10	In decline	X	X	
2	Bur Oak	34	60	Poor	5	Dead branches, conks, at property line	X	X	
3	Red Oak	36	60	Good	75	Broken branches	X	X	
4	Hackberry	18	30	Poor	10	In decline, debris		X	
5	White Oak	28	55	Fair	50	Broken branches		X	
6	Juniper	12	18	Fair	30	Bush honeysuckle at base	X	X	
7	Juniper	18	18	Fair	30	Bush honeysuckle at base	X	X	
8	Juniper	14	18	Fair	30	Bush honeysuckle at base	X	X	
9	Shingle Oak	46	70	Good	75	Vines, near property line	X	X	
10	Shingle Oak	42	70	Fair	30	Broken branches, bush honeysuckle at base	X	X	
11	Shingle Oak	34	30	Poor	5	In decline, 1/2 dead, near property line	X	X	
12	Bur Oak	34	60	Fair	40	Patchy bark	X	X	
13	White Oak	36	60	Fair	50	Vines, dead branches	X	X	
14	White Oak	30	60	Fair	50	Dead branches, offsite	X		X
15	Juniper	22	18	Fair	30	Bush honeysuckle at base, offsite	X		X
16	Juniper	18	18	Fair	30	Bush honeysuckle at base, offsite	X		X
17	White Oak	20	55	Good	75		X	X	
18	White Oak	25	25	Fair	25	Vines, dead branches, 1/2 canopy	X	X	
19	Red Oak	40	60	Fair	50	Dead branches	X	X	
20	Bur Oak	23	30	Poor	10	In decline, sprouts, offsite	X		X
21	Red Oak	37	70	Good	60	Vines, broken branches	X	X	
22	Ginkgo	24	40	Good	75	Broken branches, near property line, offsite	X		X
23	Ginkgo	23	45	Fair	40	Poor structure	X		X
24	Ginkgo	24	45	Good	75		X	X	
25	Ginkgo	14	35	Good	75		X	X	
26	Shingle Oak	42	70	Poor	5	In decline, vines, conks, lean	X	X	
27	Silver Maple	25	30	Poor	10	In decline, 1/2 dead	X	X	
28	Silver Maple	30	55	Fair	25	Broken branches, lean	X	X	
29	Silver Maple	23	50	Poor	10	In decline, vines, dead branches	X	X	
30	Bur Oak	54	70	Good	75	Vines, dead branches	X	X	
31	Bur Oak	34	60	Fair	40	Vines, dead branches	X	X	
32	Silver Maple	22	25	Poor	10	In decline, vines	X	X	
33	Red Oak	36	30	Poor	5	In decline, vines, at property line	X	X	

Tree Inventory

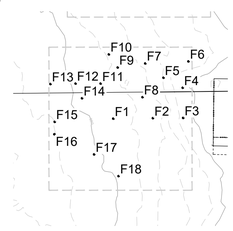
ID	Tree Name	DBH	Canopy Diam.	Condition Rating	Condition Rating %	Comment	Individual Tree	To Be Removed	Preserved
34	Shingle Oak	24	40	Fair				X	
35	White Oak	15		Fair				X	
36	Shingle Oak	32	60	Fair				X	
37	Shingle Oak	18	40	Fair				X	
38	Black Cherry	16	30	Fair				X	
39	Black Cherry	18	30	Fair				X	
40	Black Cherry	9	20	Fair				X	
41	Black walnut	13	45	Fair				X	
42	Black Cherry	20	30	Fair				X	
43	Black Cherry	16	25	Fair				X	
44	Black Cherry	18	25	Fair				X	
45	Black Cherry	12	10	Poor				X	
46	Black Cherry	12	25	Fair				X	
47	Shingle Oak	13	25	Fair				X	
48	Black Cherry	23	40	Fair				X	
49	Shingle Oak	60	70	Fair				X	
51	Hackberry	8	20	Fair				X	
52	Hackberry	8	20	Fair				X	
53	Elm	15		Poor				X	
54	Black Cherry	16	15	Poor				X	
55	Elm			Poor				X	
56	Boxelder	7	15	Fair				X	
57	Shingle Oak	18	30	Fair				X	
58	Shingle Oak	30	60	Fair				X	
59	Black Cherry	10		Poor		Crown dieback		X	
60	Elm	8		Fair				X	
61	Linden	11	25	Fair				X	
62	Linden	18	25	Fair				X	
63	Linden	22	22	Fair				X	
64	Linden	15	40	Fair				X	
65	Elm	9		Poor				X	
66	Black Locust	11		Poor				X	
67	Black Locust	12	40	Fair				X	
68	Linden	13	40	Poor				X	
69	Cottonwood	36		Dead				X	
71	Black Cherry	26	45	Fair				X	
72	Elm	14	30	Poor				X	
73	Silver Maple	11	25	Fair				X	
74	Silver Maple	14	25	Fair				X	
75	Black Locust	9	12	Poor				X	
76	Silver Maple	9	12	Fair				X	
77	Cottonwood	16	40	Fair				X	
78	Black Locust	7	10	Poor				X	
79	Boxelder	8	15	Poor				X	
80	Cottonwood	11	30	Fair				X	
81	Elm	12	25	Fair				X	
82	Silver Maple	11	30	Fair				X	
83	Silver Maple	7	15	Fair				X	
84	Hackberry	22	50	Fair				X	
85	Hackberry	15	25	Fair				X	
86	Elm	10	25	Fair				X	
87	Shingle Oak	36	30	Poor		In decline		X	
88	Elm	10	30	Fair				X	
89	Elm	8	30	Fair				X	
90	Black Cherry	11	25	Poor				X	
91	Black Cherry	17	30	Fair				X	
92	Elm	10	24	Poor				X	
93	Black Cherry	20	40	Fair				X	
94	Elm	20	30	Poor				X	
95	Elm	9	30	Poor				X	
96	Black Locust	12	40	Fair				X	
97	Black Locust	9	25	Poor				X	
98	Black Locust	9	25	Poor				X	
99	Black Locust	9	25	Poor				X	
100	Black Locust	9	25	Poor				X	
101	Hackberry	25	45	Fair				X	
102	Hackberry	10	25	Fair				X	
103	Elm	14	40	Poor				X	
104	Hackberry	7	25	Poor				X	
106	Black Cherry	20	50	Fair				X	
107	Hackberry	18	40	Fair				X	
108	Elm	12	25	Fair				X	
109	Elm	15	25	Fair				X	
110	Elm	8	20	Fair				X	
111	Elm	9	30	Poor				X	
112	Elm		20	Poor				X	
113	Hackberry	20	30	Fair				X	
114	Elm	8	25	Fair				X	
115	Linden	12	25	Poor				X	
116	Linden	12	25	Poor				X	
117	Black Cherry	20	0	Dead				X	
118	Elm	24	30	Poor				X	
119	Elm	12	25	Poor				X	
120	Elm	16	45	Poor				X	
121	Elm	10	20	Poor				X	
122	Elm	16	30	Fair				X	
123		10		Dead				X	
124	Black Locust	25		Dead				X	
125	Black Locust	25		Dead				X	
126	Black Locust	20		Dead				X	
127	Black Locust	20		Dead				X	
128	Hackberry	15	30	Poor				X	
129	Elm	14	45	Poor		Triple		X	
130	Black Cherry	14		Poor		In decline		X	
131	Black Locust	14	30	Poor		Twin		X	
132	Black Locust	12	25	Poor		Offsite		X	
133	Ash	18	30	Poor				X	
134	Black Locust	16	25	Poor				X	
135	Black Locust	10	10	Dead				X	
136	Boxelder	9	15	Poor				X	
137	Black Locust	8		Dead		Twin		X	
138	Elm	12	60	Poor				X	
139	Hackberry	17	70	Fair		Multi-stem		X	
140	Black Locust	8	20	Poor				X	
141	Black Locust	8	20	Fair				X	
142	Black Locust	14	30	Fair				X	
143	European Alder	8	20	Poor				X	
144	Black Locust	10	40	Poor				X	
145	Black Locust	8	40	Poor				X	
146	Black Locust	10	40	Poor				X	
147	Black Locust	12	40	Poor				X	
149	Black Locust	10	40	Poor				X	
150	Black Locust	14	40	Poor				X	
151	Black Locust	12	40	Poor				X	
152	Black Locust	8	40	Poor				X	
153	Black Locust	8	40	Poor				X	
154	Elm	7	25	Poor				X	
155	Black Locust	22	35	Poor				X	
156	Black Locust	22	35	Poor				X	
158	Black Locust	10	30	Poor				X	
159	Black Locust	10	30	Poor		In decline		X	
160	Black Locust	10	30	Poor				X	



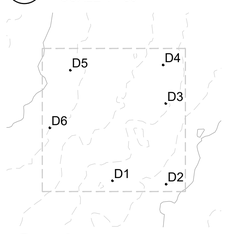
Sample Area A
SCALE 1"=50'



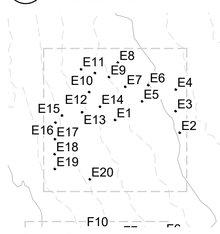
Sample Area B
SCALE 1"=50'



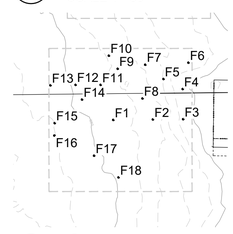
Sample Area C
SCALE 1"=50'



Sample Area D
SCALE 1"=50'



Sample Area E
SCALE 1"=50'



Sample Area F
SCALE 1"=50'

0 50 100 200

Note: Refer to TS1.01 for overall Tree Survey.

STATE OF MISSOURI
JERALD E. SAUNDERS
NUMBER LA-7
LANDSCAPE ARCHITECT
3/24/25

Jerald Saunders - Landscape Architect
MO License # LA-007

Consultants:

The Enclaves at Canton Avenue

University City, Missouri

Revisions:

Date	Description	No.
12/11/24	Plan Revisions	1
3/24/25	Plan Revisions	2

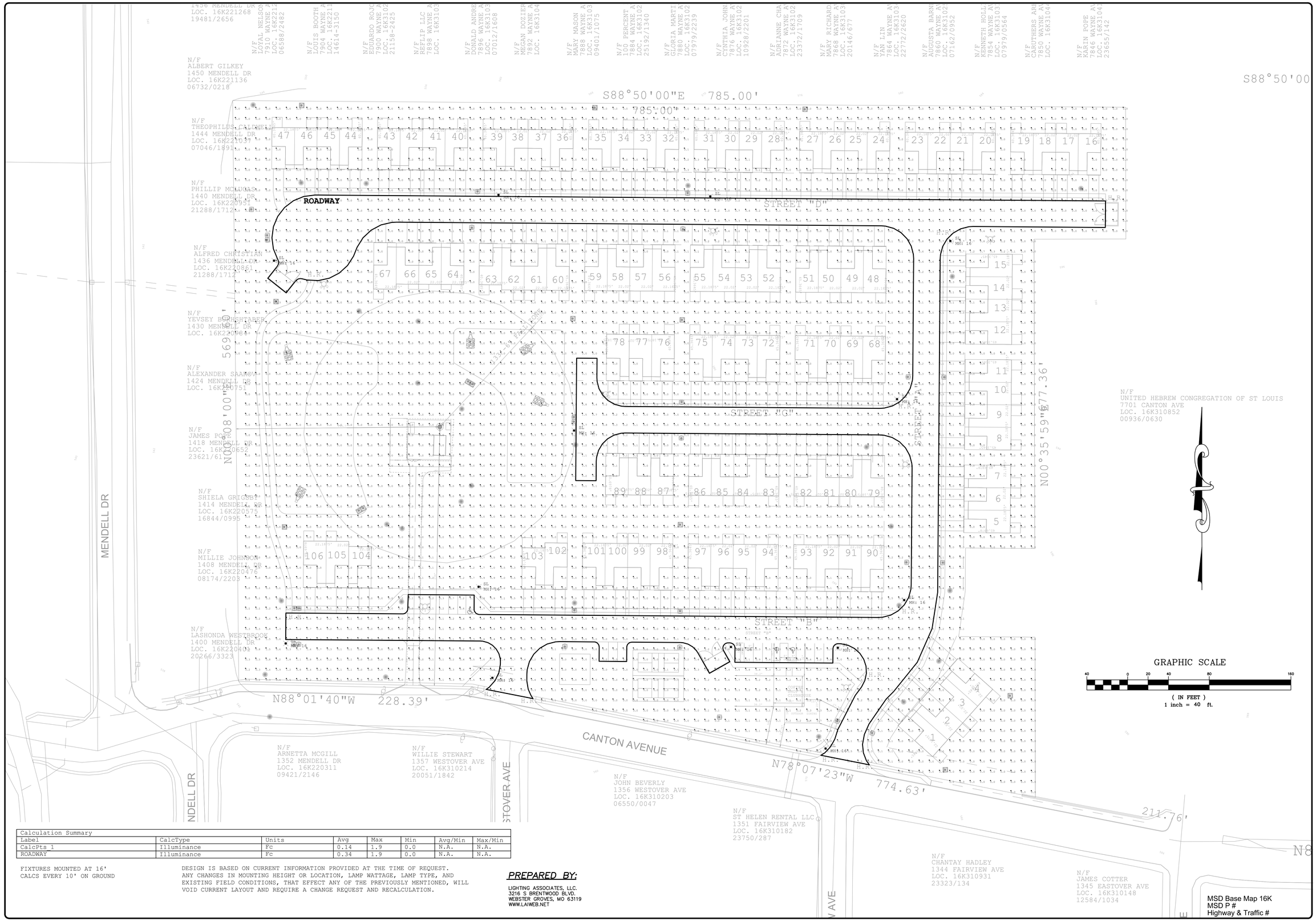
Drawn: KP
Checked: RS

LOOMIS ASSOCIATES
landscape architects + planners
750 spirit 40 park drive, chesterfield, missouri 63005
t. 636-519-8668
www.loomis-associates.com
Loomis Associates Inc.
Missouri State Certificate of Authority #: LAC #000019

Sheet Title: Tree Survey

Sheet No: TS 1.02

Date: 9/12/24
Job #: 1085.001



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts 1	Illuminance	Fc	0.14	1.9	0.0	N.A.	N.A.
ROADWAY	Illuminance	Fc	0.34	1.9	0.0	N.A.	N.A.

FIXTURES MOUNTED AT 16'
CALCS EVERY 10' ON GROUND

DESIGN IS BASED ON CURRENT INFORMATION PROVIDED AT THE TIME OF REQUEST. ANY CHANGES IN MOUNTING HEIGHT OR LOCATION, LAMP WATTAGE, LAMP TYPE, AND EXISTING FIELD CONDITIONS, THAT EFFECT ANY OF THE PREVIOUSLY MENTIONED, WILL VOID CURRENT LAYOUT AND REQUIRE A CHANGE REQUEST AND RECALCULATION.

PREPARED BY:

LIGHTING ASSOCIATES, LLC.
3216 S BRENTWOOD BLVD.
WEBSTER GROVES, MO 63119
WWW.LAIWEB.NET

MSD Base Map 16K
MSD P #
Highway & Traffic #

ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE **STERLING** CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-0944
www.sterling-survey.com
Corporate Certificate of Authority #001348

The Enclaves at Canton Avenue
UNIVERSITY CITY, MISSOURI
PRELIMINARY PLAN
LIGHTING PLAN

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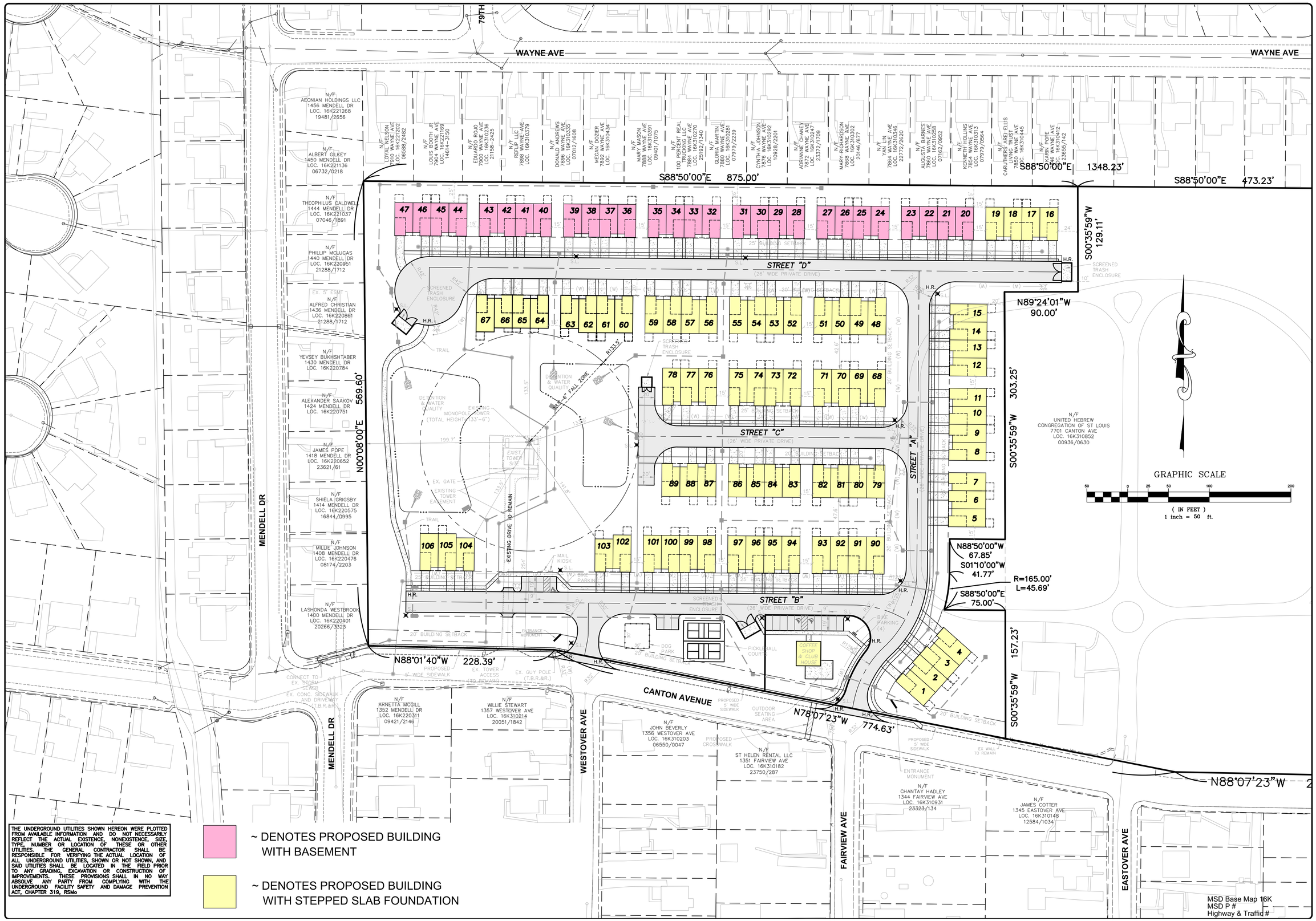
PRELIMINARY PLAN
Date:-_____

Job Number	
23-09-234	
Date	
Mar. 24, 2025	
Designed: MF	Sheet
Drawn:	8.1
Checked:	PRE

Drawing name: V:\23\9234 7701 Canton Ave\Drawings\Preliminary\Preliminary\LVI Plan 2025-03-24.dwg Plotted on: Mar 24, 2025 - 1:34pm Plotted by: sloveless



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ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE STERLING CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-8944
www.sterling-engineers.com
Corporate Certificate of Authority #001348

The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
SITE PLAN

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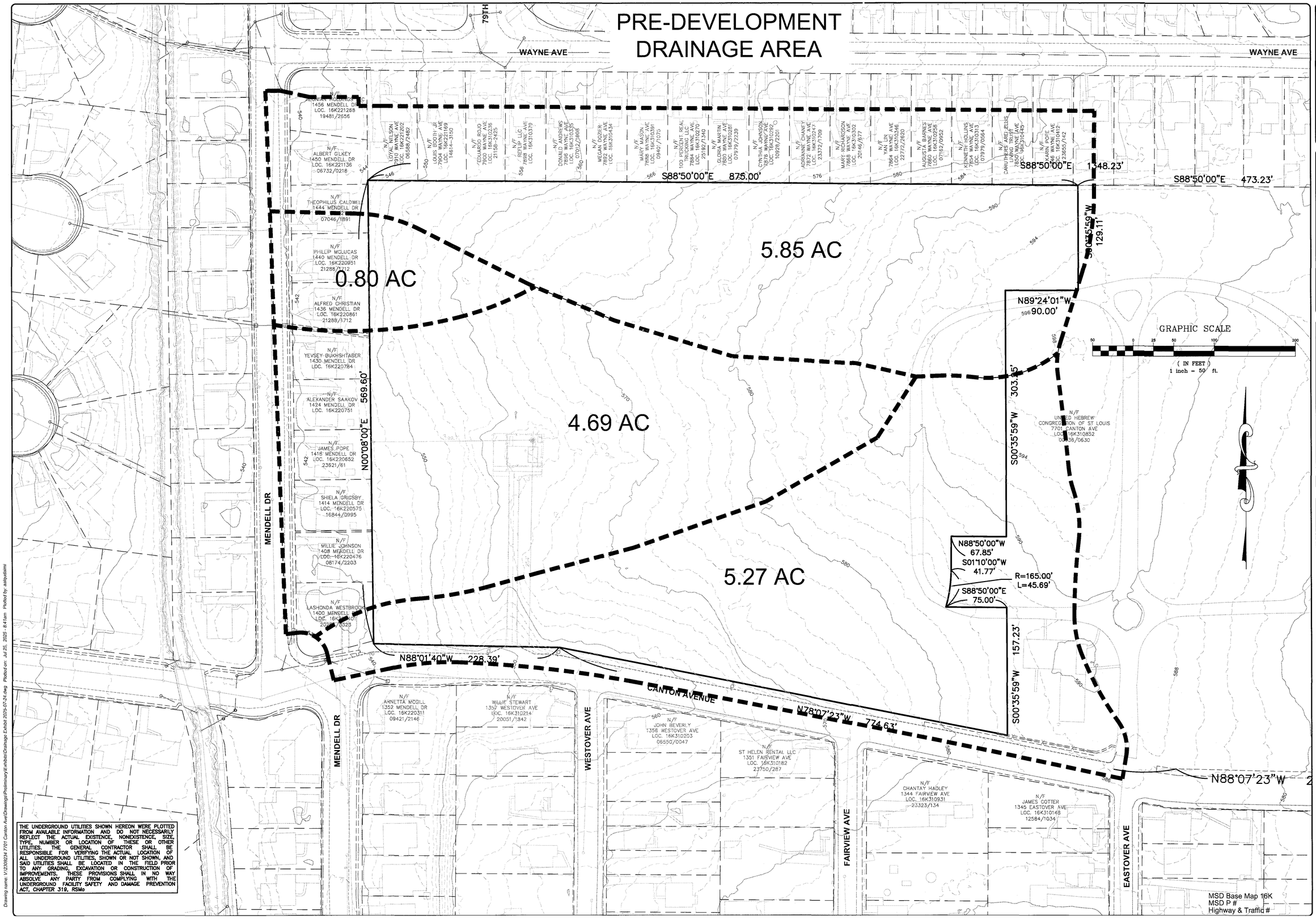
PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	23-09-234
Date	Mar. 21, 2025
Designed: MF	Sheet 5.1
Drawn:	
Checked:	PRE

MSD Base Map 16K
MSD P #
Highway & Traffic #

Drawing name: V:\23\09234 7701 Canton Ave\Drawings\Preliminary\Preliminary\Exhibit 2025-07-10.dwg Plotted on Jul 10, 2025 - 12:15pm Plotted by: sloveless

PRE-DEVELOPMENT DRAINAGE AREA



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ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE STERLING CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-8944
www.sterling-eng-sur.com
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The Enclaves at Canton Avenue
UNIVERSITY CITY, MISSOURI
PRELIMINARY PLAN
EXISTING DRAINAGE

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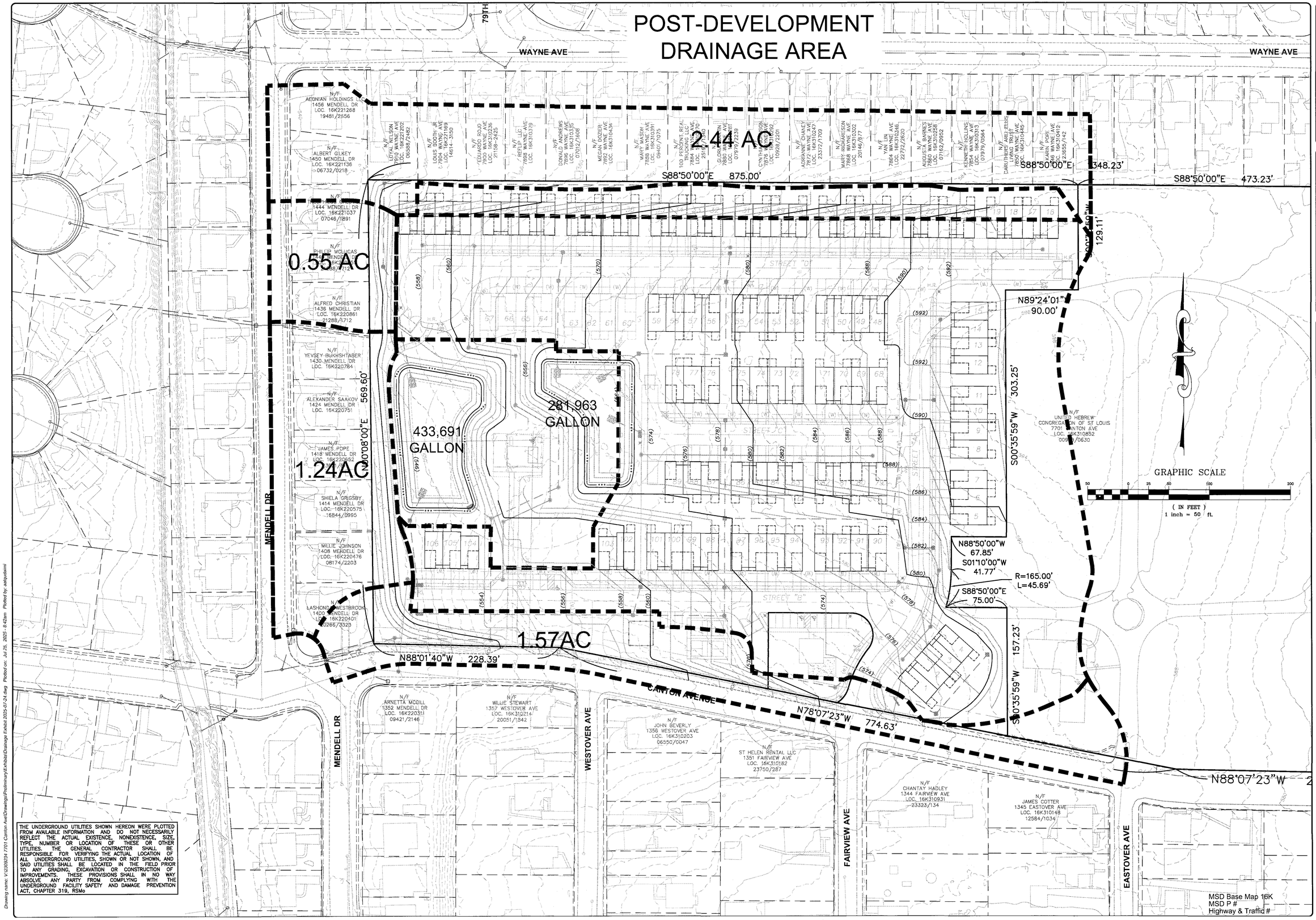
PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	23-09-234
Date	Mar. 21, 2025
Designed: MF	Sheet 3.1
Drawn:	
Checked:	PRE

Drawing name: V:\23\09234 7701 Canton Ave\Drawings\Preliminary\Exhibits\Drainage Exhibit 2025-07-24.dwg Plotted on: Jul 25, 2025 - 8:41am Plotted by: aalquddami

POST-DEVELOPMENT DRAINAGE AREA



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MSD Base Map 16K
MSD P #
Highway & Traffic #

ISSUE	REMARKS/DATE

William James Capital, LLC
830 WESTWOOD DRIVE
BALLWIN, MISSOURI 63011

THE STERLING CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63123
Ph 314-544-0453 Fax 314-638-8944
www.sterling-eng-sur.com
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The Enclaves at Canton Avenue

UNIVERSITY CITY, MISSOURI

PRELIMINARY PLAN
PROPOSED DRAINAGE PLAN

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PRELIMINARY PLAN
Date: 3-21-2025
MICHAEL G. BOERDING
License No. MO E-28643
Professional Engineer

Job Number	
23-09-234	
Date: Mar. 21, 2025	
Designed: MF	Sheet 4.1
Drawn:	
Checked: PRE	

Drawing name: V:\2309234 1701 Canton Ave\Drawings\Preliminary\Exhibits\Drainage Exhibit 2023-07-24.dwg Plotted on: Jul 28, 2025 - 8:42am Plotted by: saiquddusi

From:	Mark Holly
To:	criss@wustl.edu
Cc:	Mirela Celaj; Aronberg, Garry; susan@susansnaturalspringwaters.com; susansnaturalspringwaters@gmail.com; ucity7024@gmail.com; garonberg@sbcglobal.net; Robert E. Criss; ekarch@reitzjens.com; phileastin@gmail.com; Darin Girdler; tiemanucity@gmail.com; John F Mulligan; LaRette Reese; Charles Gascon
Subject:	Re: 7701 Development Plan
Date:	Monday, July 28, 2025 11:39:27 AM
Attachments:	Elevation Contours Canton Property.pptx

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

All,
I too, took a look at this and put together a couple of charts that are more qualitative than quantitative. One of the charts has a depiction of the isocontours of the topography superposed with the July 2022 inundation boundary (similar to 2008 at this end of town) and highlighting some of flooding "greatest hits": Hafner, Glenside Place (former councilperson Cusack's area) and Groby. All areas that have had chronic issues. After the 2022 event, I drove down all these streets and witnessed the scores of households with submerged furniture, bedding and appliances that had been affected by the flooding.

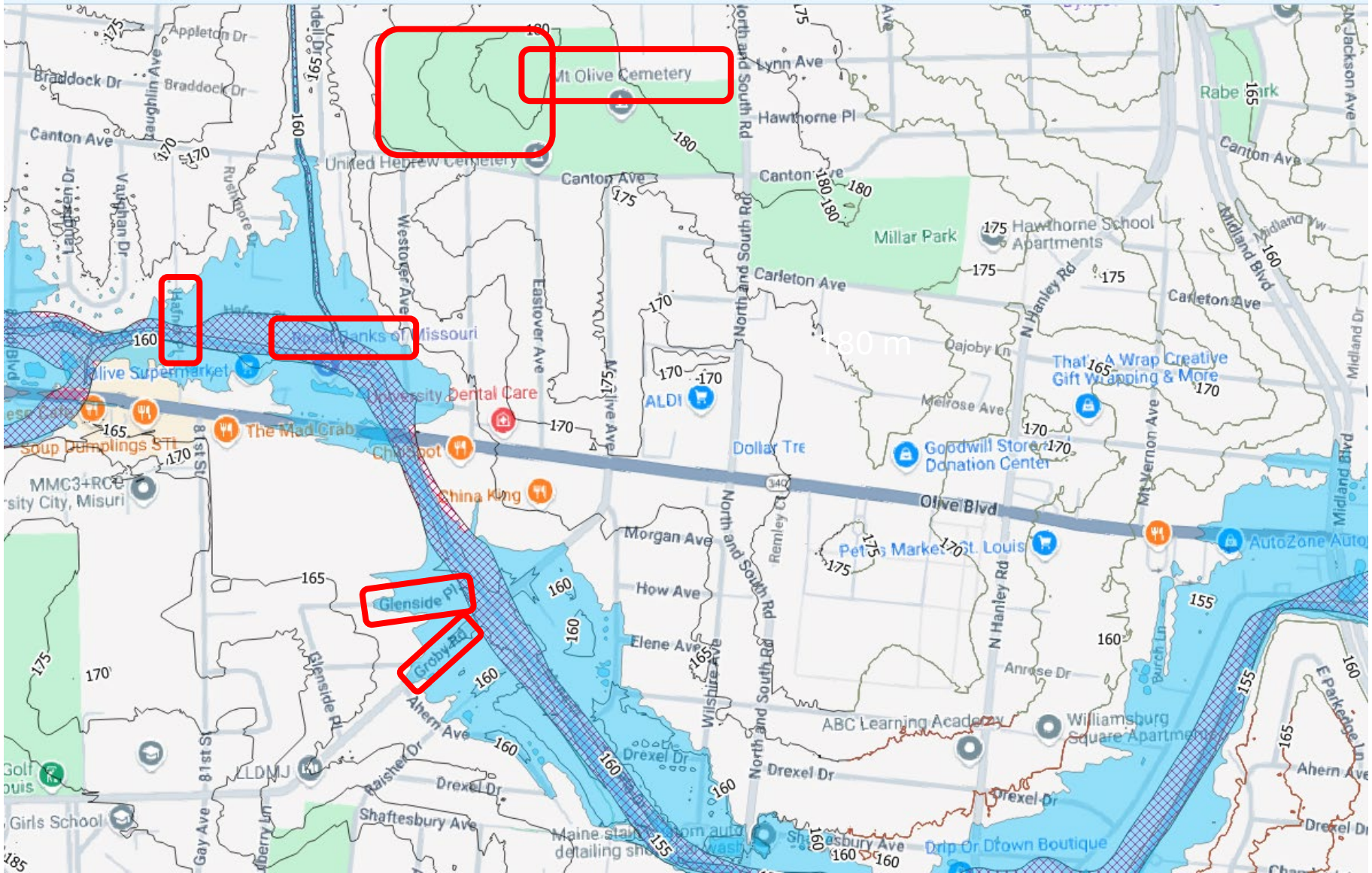
I also snapped a picture of the relief map which sits in council chambers. Its casting of shadows offers a more intuitive sense of the topology of the area in question. I note that another place in UCity that has a similar elevation is Ruth Park Golf Course with similar runoff problems along Old Bonhomme. To me, the city should purchase this parcel and turn it into hiking trails with ground cover plantings to further mitigate runoff on the existing streets.

On Mon, Jul 28, 2025 at 10:32 AM Robert E. Criss <criss@wustl.edu> wrote:

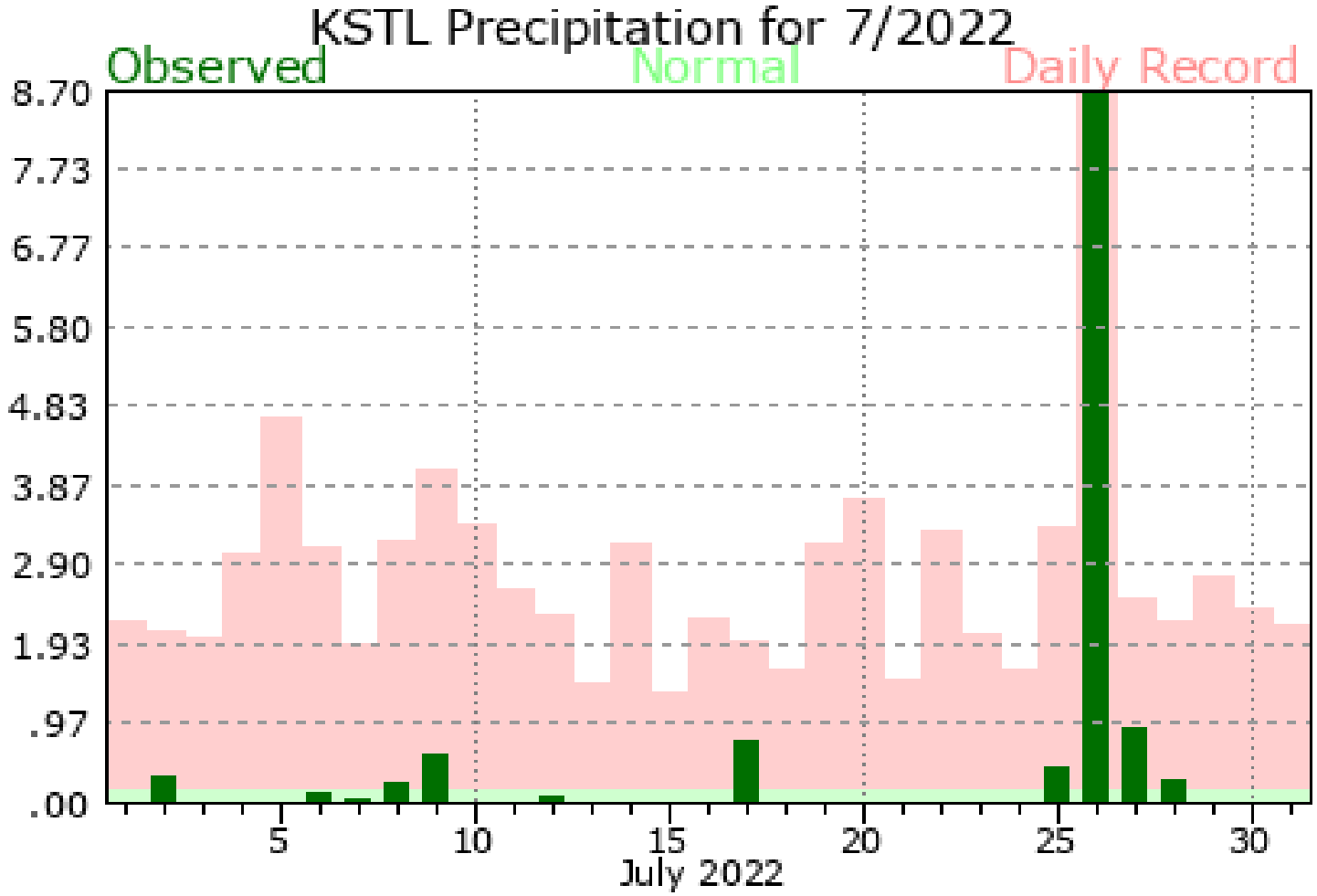
> Dear All, I will be out of state until Aug 11, and so must miss the August SWC meeting. Nevertheless, I considered the proposed development plan for 7701 Canton, that was provided by Charles Gascon last Thursday.
> Please review the attached powerpoint that I took considerable time and pains to generate. Kind regards, Bob

--
Regards,
Mark Holly

Elevation Contours (m) & Inundation July 2022

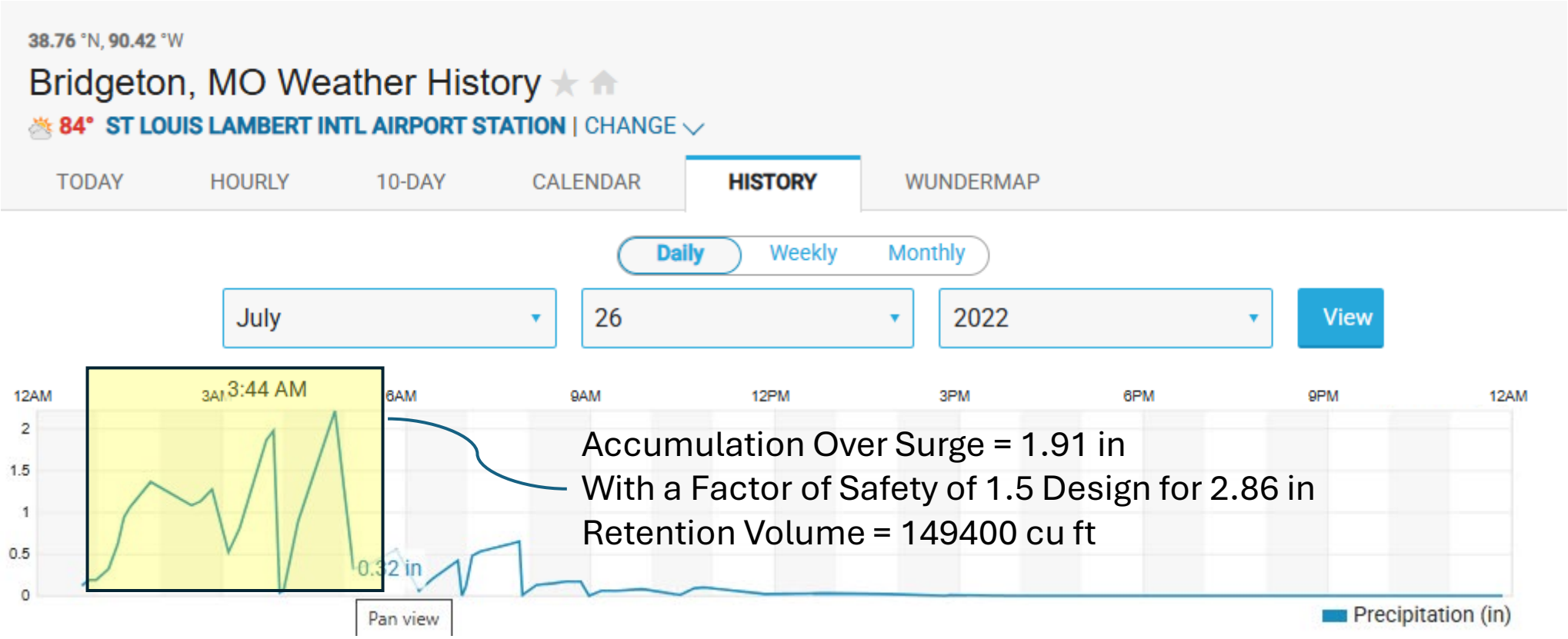


Rainfall July 26, 2022



Rainfall Over July 26, 2022

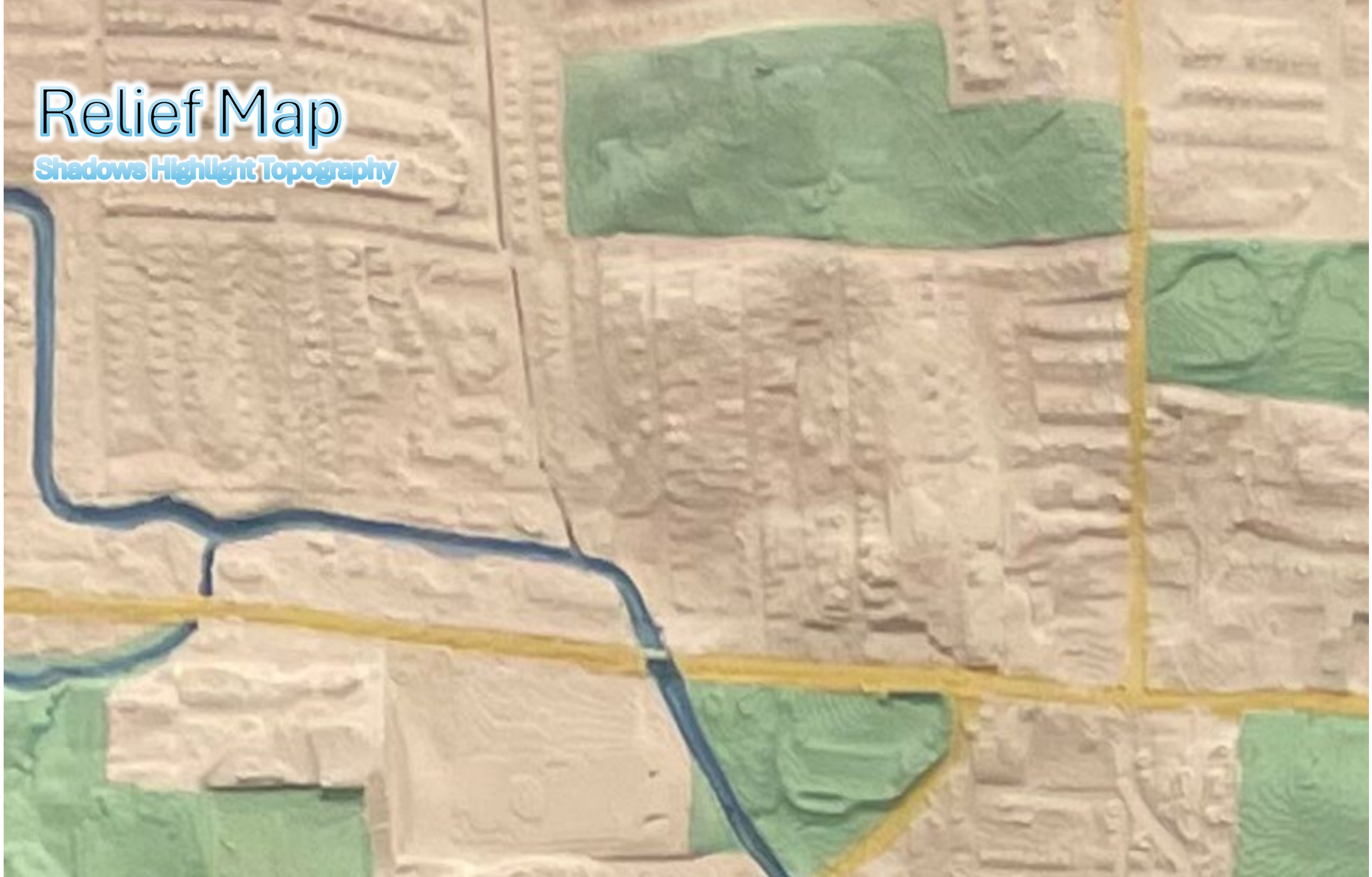
From Weather Underground – Need to revisit with our local warning system gages.



Accumulation Over Surge = 1.91 in
With a Factor of Safety of 1.5 Design for 2.86 in
Retention Volume = 149400 cu ft

Relief Map

Shadows Highlight Topography



7/26/22
Hafner Court Apartments
Water elevation rose to doorknob level.

7/26/22
Glenside Place
Water elevation to 2 ½ ft above the surface of the ground..

From:	Robert E. Criss
To:	Mirela Celaj
Cc:	Aronberg, Garry; susan@susansnaturalspringwaters.com; susansnaturalspringwaters@gmail.com; ucity7024@gmail.com; garonberg@sbcglobal.net; Robert E. Criss; mkholly.mh@gmail.com; ekarch@reitzjens.com; phileastin@gmail.com; Darin Girdler; tiemanucity@gmail.com; John F Mulligan; LaRette Reese; Charles Gascon
Subject:	Re: 7701 Development Plan
Date:	Monday, July 28, 2025 10:32:54 AM
Attachments:	7701PlanGeoRef.pptx

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear All, I will be out of state until Aug 11, and so must miss the August SWC meeting. Nevertheless, I considered the proposed development plan for 7701 Canton, that was provided by Charles Gascon last Thursday. Please review the attached powerpoint that I took considerable time and pains to generate. Kind regards, Bob

7701 Canton Ave: Rezoning and Development Plan for 11 ac parcel

The following slides are georeferenced and all are indexed to show the same area, facilitating direct comparison:

Slide 2. Plan as Submitted, with a North Arrow and 30m (98.4 ft) Scale Bar added
Slide 3. Ditto, with 2 ft present-day contours showing steep westward slope, calculated from the available DEM.
Slide 4. Google Earth Satellite Image, showing a mature forest with a >70 ft hi canopy
Slide 5. DEM of Current Topography, with 2 ft. contours added.
Slide 6. Flow Accumulation calculated from DEM, also with 2 ft contours
Slide 7. Submitted Plan, with additional details

Criss Comments:

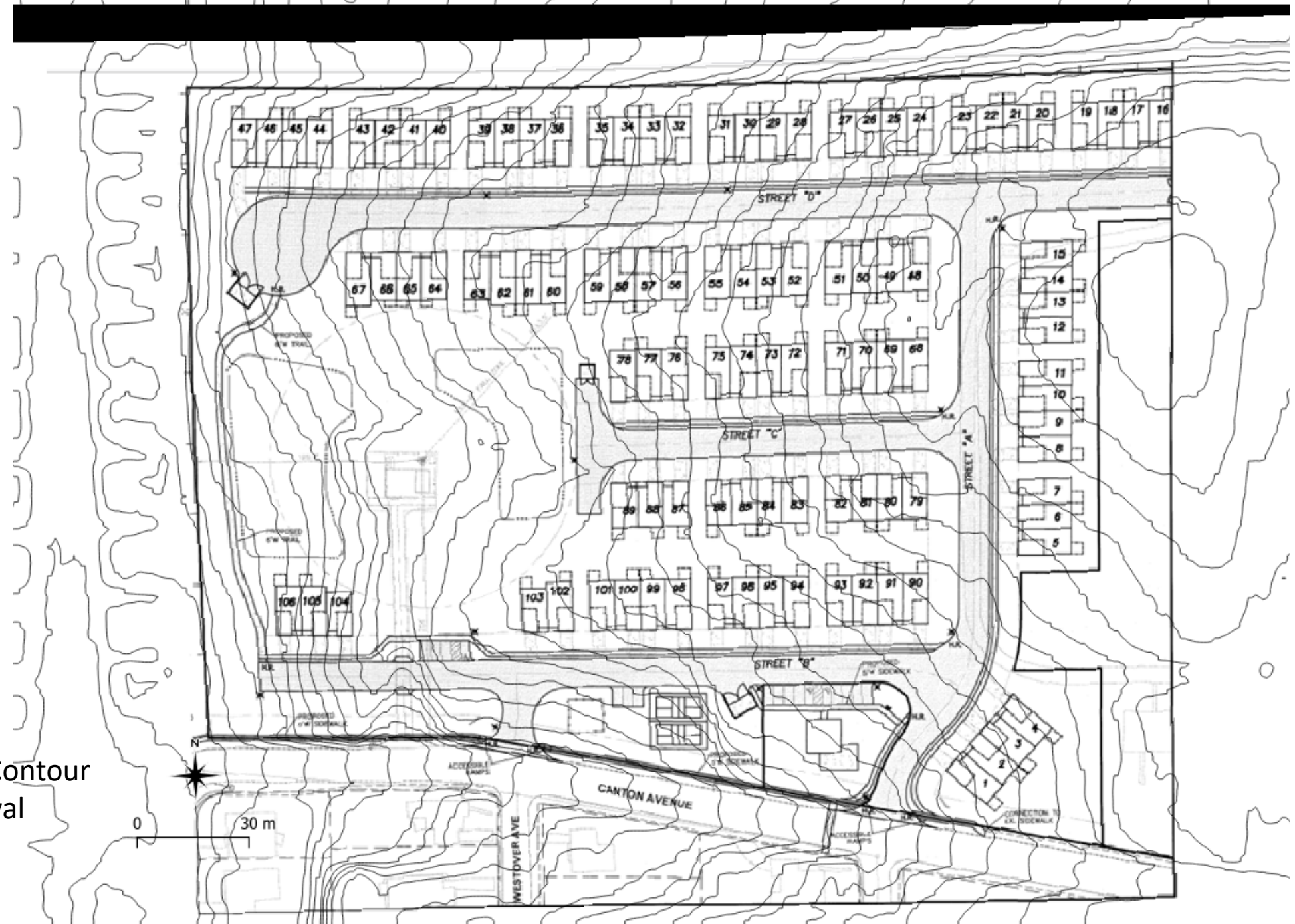
This is a thoughtful plan with some clever elements. Rezoning will convert tax exempt property to taxable property, generating significant revenue for StLCo and UCity.

The apparent sizes of the planned detention basins are 0.34 acres and 0.25 acres. This total is typical for a ~10 ac development in our area. Given UCity's growing problems, this is insufficient. Given the steep topography, tree removal will increase runoff on the homes along Mendel Ave. Do problems already exist? Developer needs to provide current vs planned impervious cover, the number and sizes of trees to be removed, and a revegetation plan.

According to USGS regressions (Southard, 2010), peak flows for forested areas are about 2.5x greater than for developed areas. The impervious cover for the uRdP basin is already in the top 1% of Missouri watersheds.

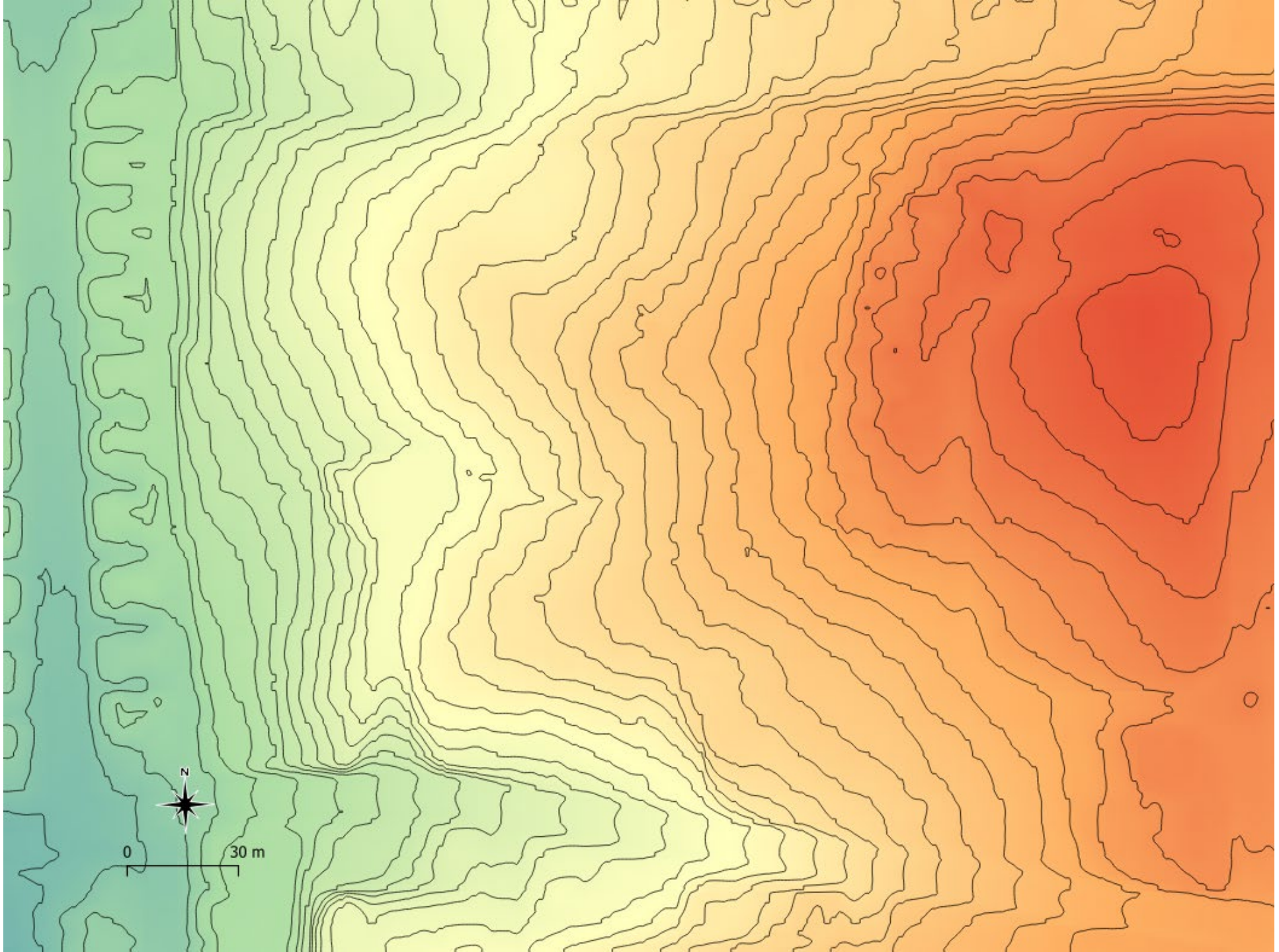
Removing mature trees is going backwards for UCity, especially when thousands of large trees in St Louis were just destroyed by the May 16 tornado. Runoff to the RdP will be increased, while heat island effects alone will magnify storm intensity. This increased runoff will enter the N tributary immediately west of Mendel Ave, then will flow only 0.25 mile due south to its confluence with the main uRdP thalweg between the Hafner and Westover Apts., further impacting one of UCity's most flood-prone neighborhoods (see MSD facilities map 16K). A remnant refugia will be destroyed. Why rezone to allow this? Public comments are essential.

STREET "D"
STREET "C"
STREET "B"
STREET "A"
CANTON AVENUE
WESTOVER AVE
PROPOSED 6'W TRAIL
PROPOSED 6'W TRAIL
PROPOSED 5'W SIDEWALK
PROPOSED 5'W SIDEWALK
PROPOSED 5'W SIDEWALK
ACCESSIBLE RAMPS
ACCESSIBLE RAMPS
CONNECTION TO EXI. SIDEWALK
H.R.
N
0
30 m



2 ft. Contour Interval

N
0
30 m



2 ft. Contour Interval

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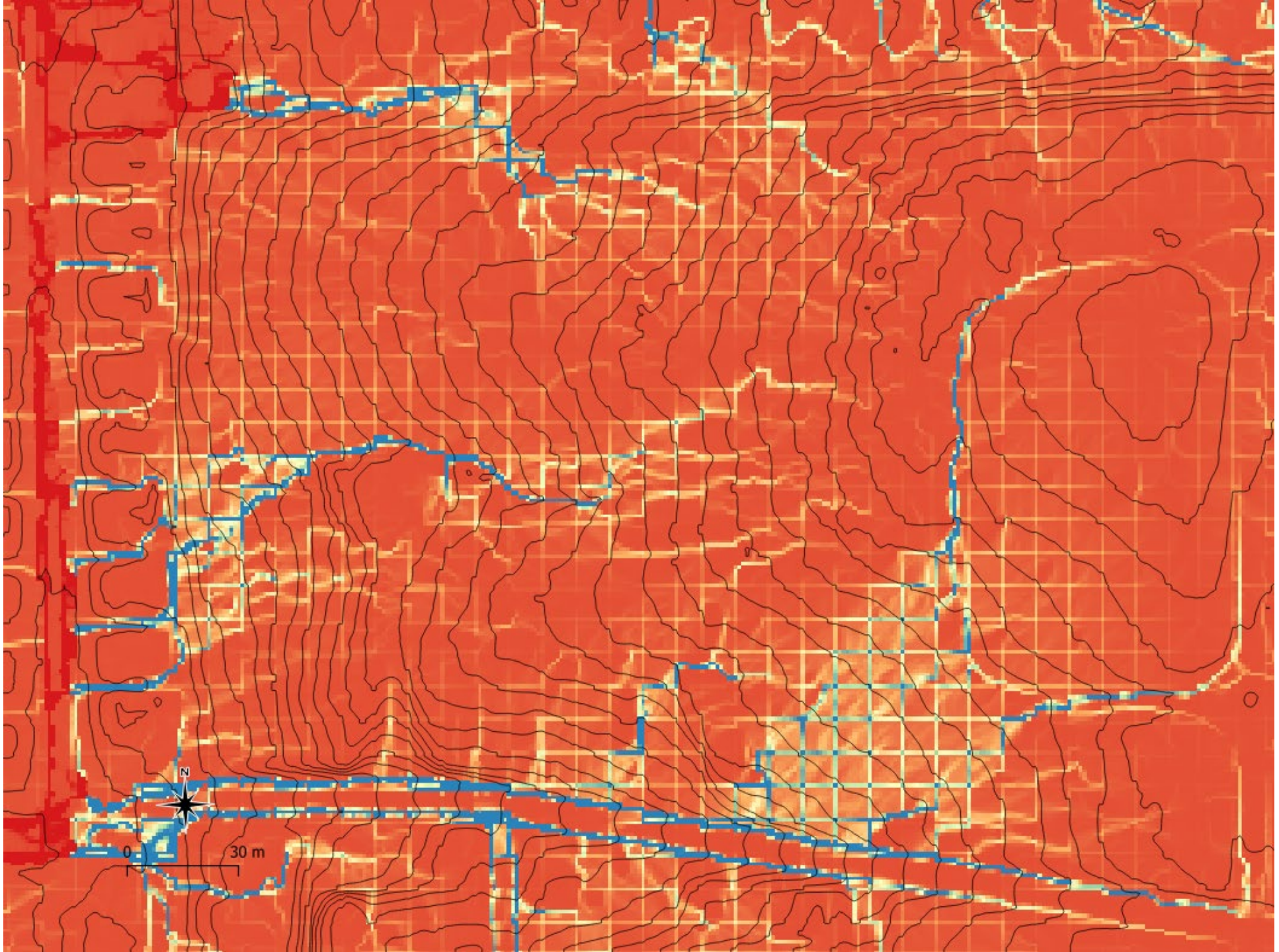

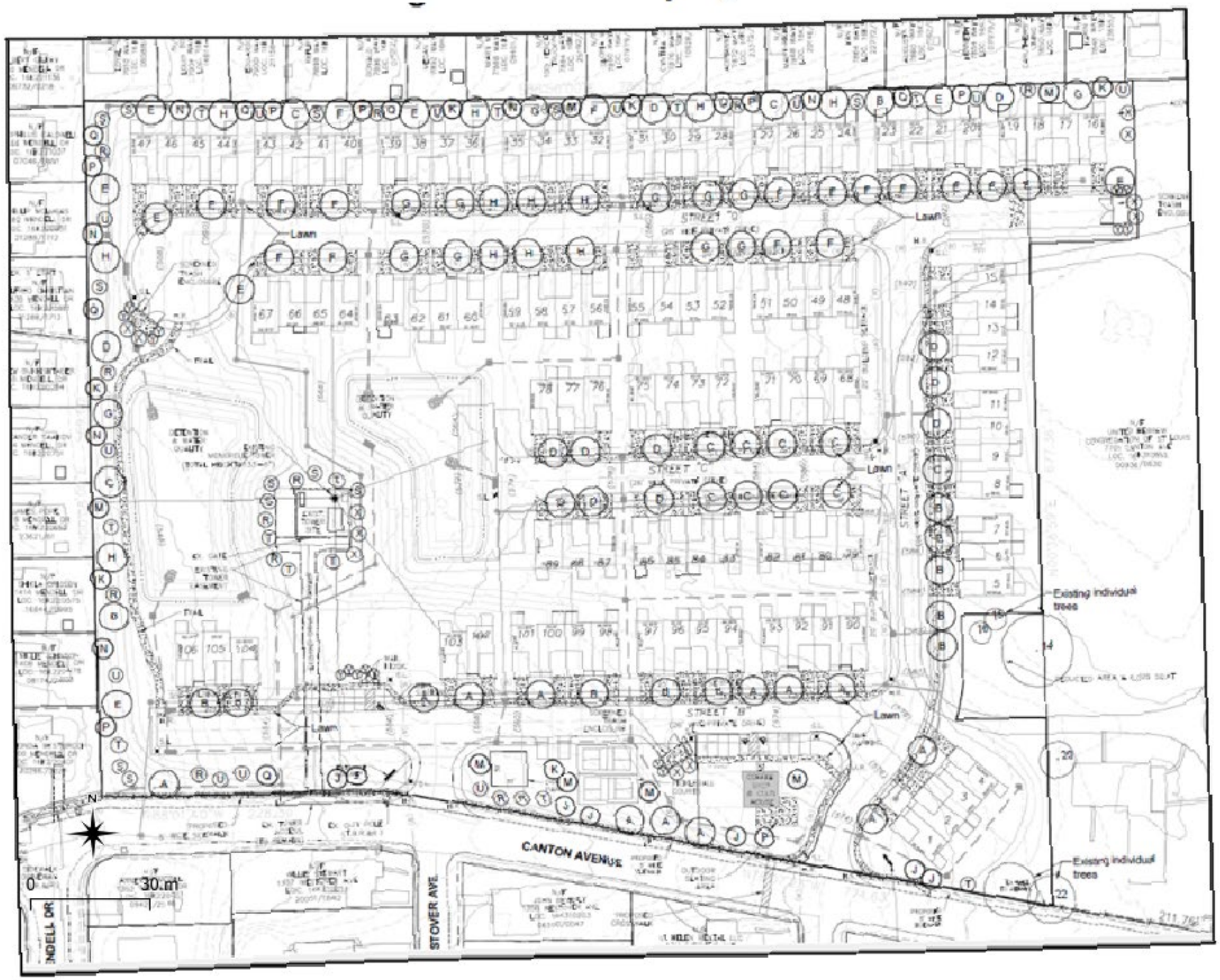
STREET D
STREET C
STREET B
STREET A
Lawn
Existing individual trees
CANTON AVENUE
STOVER AVE.
INDELL DR.
0
30 m