

AGENDA
La Vergne Planning Commission
May 28, 2024 at 6:00 PM

- Call meeting to order.
- Determine quorum.

ORDER OF BUSINESS

1. Approve Minutes: April 30, 2024 Regular Meeting and May 14, 2024 Workshop.
2. Public Comment Period.

OLD BUSINESS

3. Site Plan - Dous Retail Center - Building totaling 4,200 Square Feet on 1.28 Acres. Requested by Chet Rhodes. Property located at 5130 Murfreesboro Road (Tax Map 15M, Group A, Parcel 1). C-2 (Highway Service) Zoning District. Property owned by TN Group Properties, LLC. **(3rd and Final DEFERRAL)**

NEW BUSINESS

4. Site Plan - UHAUL, Phase 2 - Two (2) Buildings Totaling Approximately 43,000 Square Feet on 10 Acres. Requested by SEC, Inc. Property located at 503 New Paul Road (Tax Map 17, Parcel 40.03). I-2 (Heavy Industrial) Zoning District. Property owned by Amerco Real Estate Co.
5. Preliminary Plat - Arbor Ridge, Sections 4, 7 & 8 - 150 Lots on Approximately 39.75 Acres. Requested by SEC, Inc. Property located off Waldron Rd. (Tax Map 32, Parcel 4). PDR (Planned Density Residential) Zoning District. Property owned by Starlight Homes of Tennessee, LLC.
6. Site Plan - New Charter School in Existing 2-Story Building. Requested by SEC, Inc. Property located at 2 Ingram Boulevard (Tax Map 17, Parcel 20.02). I-2 (Heavy Industrial) Zoning District. Property owned by David B. Ingram.
7. Recommendation to the Board of Mayor and Aldermen for Subdivision Acceptance - Finch Branch, Section 2 - Development Totaling 31 Lots. Requested by Finch Branch Building Group, LLC. Property located off Greenwood and Irvin Drives (Tax Map 17L, Group A, Parcel 8.04). R-2 (Medium Density Residential) Zoning District.
8. Bonds / Letters of Credit Update.

ADJOURN

MINUTES OF THE REGULAR MEETING OF THE CITY OF LA VERGNE PLANNING COMMISSION HELD ON APRIL 30, 2024 AT LA VERGNE CITY HALL, LA VERGNE, TENNESSEE.

The City of La Vergne Planning Commission met in a regular meeting on April 30, 2024, in La Vergne City Hall, starting at 6:00 p.m. with Chairman Earl Garvin, Jr., present and presiding.

Members Present

The members present were: Chairman Earl Garvin, Jr., Vice-Chairman / Mayor Jason Cole, Alderman Carol Haas, and Jim Hesemann. Secretary Graeme Coates, Mark Molnar, and Terry Coleman were absent.

ORDER OF BUSINESS

1. Approve Minutes: March 26, 2024 Regular Meeting and April 16, 2024 Workshop.

A motion, made by Mayor Jason Cole, seconded by Alderman Carol Haas, to approve the minutes of the March 26, 2024 Regular Meeting and April 16, 2024 Workshop, was adopted with all voting AYE.

2. Public Comment Period.

No one spoke.

OLD BUSINESS

3. Site Plan - UHAUL, Phase 2 - Two (2) Buildings Totaling Approximately 43,000 Square Feet on 10 Acres. Requested by SEC, Inc. Property located at 503 New Paul Road (Tax Map 17, Parcel 40.03). I-2 (Heavy Industrial) Zoning District. Property owned by Amerco Real Estate Co.

This item was withdrawn. No action was taken.

4. Site Plan - Dous Retail Center - Building totaling 4,200 Square Feet on 1.28 Acres. Requested by Chet Rhodes. Property located at 5130 Murfreesboro Road (Tax Map 15M, Group A, Parcel 1). C-2 (Highway Service) Zoning District. Property owned by TN Group Properties, LLC.

This item was deferred. No action was taken.

NEW BUSINESS

5. **Final Plat – Richland South, LLC Property – Five (5) Lots Totaling Approximately 9.14 Acres. Requested by TTL. Property located at Murfreesboro Road & Veterans Memorial Parkway (Tax Map 14, Parcel 72.04). C-2 (Highway Service) Zoning District. Property owned by Richland South, LLC.**

Mr. Logan gave his report.

A motion, made by Mayor Jason Cole, seconded by Alderman Carol Haas, to approve the final plat as submitted, was adopted with all voting AYE.

6. **Site Plan - Maurice King Subdivision, Lot 13 - New Building Totaling 4,000 Square Feet on 0.44 Acres. Requested by Huddleston Steele, Inc. Property located at 108 Gingham Drive (Tax Map 14I, Group G, Parcel 6). I-1 (Light Industrial) Zoning District. Property owned by D&A Partnership.**

Mr. Logan gave his report.

Mr. Enoch Jarrell, a representative of Huddleston Steele, approached the podium to field questions from the board. Mayor Cole asked City Engineer Gary Lide if all the utility comments had been addressed. Mr. Lide explained.

A motion, made by Mayor Jason Cole, seconded by Alderman Carol Haas, to approve the site plan as submitted, was adopted with all voting AYE.

ADJOURNMENT

There being no further business to come before this meeting, Chairman Garvin declared the meeting adjourned at 6:16 p.m.

Chairman

City Recorder

Approved

MINUTES OF THE WORKSHOP OF THE CITY OF LA VERGNE PLANNING COMMISSION HELD ON MAY 14, 2024 AT LA VERGNE CITY HALL, LA VERGNE, TENNESSEE.

The City of La Vergne Planning Commission met in a regular workshop on May 14, 2024 in La Vergne City Hall, starting at 5:30 p.m. with Chairman Earl Garvin, Jr., present and presiding.

Members Present

The members present were: Chairman Earl Garvin, Jr., Vice-Chairman / Mayor Jason Cole, Alderman Carol Haas, Secretary Graeme Coates, Mark Molnar, Terry Coleman, and Jim Hesemann.

ORDER OF BUSINESS

1. **Approve Minutes: April 30, 2024 Regular Meeting and May 14, 2024 Workshop.**

Minutes will be presented for approval at the Regular Meeting on May 28, 2024.

2. **Public Comment Period.**

No one spoke.

OLD BUSINESS

3. **Site Plan - Dous Retail Center - Building totaling 4,200 Square Feet on 1.28 Acres. Requested by Chet Rhodes. Property located at 5130 Murfreesboro Road (Tax Map 15M, Group A, Parcel 1). C-2 (Highway Service) Zoning District. Property owned by TN Group Properties, LLC.**

Mr. Bo Logan explained that this would be the third and final deferral for this item.

No action was taken.

NEW BUSINESS

4. **Site Plan - UHAUL, Phase 2 - Two (2) Buildings Totaling Approximately 43,000 Square Feet on 10 Acres. Requested by SEC, Inc. Property located at 503 New Paul Road (Tax Map 17, Parcel 40.03). I-2 (Heavy Industrial) Zoning District. Property owned by Amerco Real Estate Co.**

Mr. Logan explained the item to the Planning Commission. Mr. Gary Lide made comments about the utilities.

Mr. Matt Taylor, SEC, 850 Middle Tennessee Blvd., Murfreesboro, approached the podium and stated that they would be ready for the meeting.

No action was taken.

5. Preliminary Plat - Arbor Ridge, Sections 4, 7 & 8 - 150 Lots on Approximately 39.75 Acres. Requested by SEC, Inc. Property located off Waldron Rd. (Tax Map 32, Parcel 4). PDR (Planned Density Residential) Zoning District. Property owned by Starlight Homes of Tennessee, LLC.

Mr. Logan explained the item to the Planning Commission. Mr. Lide made comments regarding the agreement between the city and the developer. He spoke about the topography of Waldron Road and Blair Road and the issues with sight distances.

Mr. Matt Taylor, SEC, 850 Middle Tennessee Blvd., Murfreesboro, approached the podium and fielded questions from the Planning Commission. He stated that they would look into possibly moving the construction entrance on Blair Road closer to the top of the hill and see if they could move the permanent entrance closer to the top of the hill.

No action was taken.

6. Site Plan - New Charter School in Existing 2-Story Building. Requested by SEC, Inc. Property located at 2 Ingram Boulevard (Tax Map 17, Parcel 20.02). I-2 (Heavy Industrial) Zoning District. Property owned by David B. Ingram.

Mr. Logan explained the item to the Planning Commission. Mr. Lide made comments about needing a traffic study. He spoke about stormwater management requirements for the property. He also spoke about the utility needs for the property.

Mr. Matt Taylor, SEC, 850 Middle Tennessee Blvd., Murfreesboro, approached the podium and stated that they will extend utilities to the storm shelter. He stated that they hope to have the traffic study by next week. He spoke about the stormwater items.

Secretary Graeme Coates asked about the school bus traffic pattern. Mr. Lide stated that there would be stacking in the parking lot. Mr. Taylor stated that Amazon is going to terminate their lease on the remaining portion of the parking lot, so that will give the school more parking space.

Mayor Cole asked about the dumpster pad. Mr. Taylor explained.

Mayor Cole asked about signaling and signage for drop off and pickup times. Mr. Taylor explained. He stated that there are no buses for the school. Mayor Cole asked if there would be a 15 mph school zone. Mr. Taylor stated that they would evaluate that to see if school zones are warranted. He stated that it should be part of the traffic study.

Mayor Cole asked about parents jumping down to the other entrance during drop off and pickup times. Mr. Taylor stated that it would probably be controlled by onsite management. He stated that there may be some existing gates on that entrance that could be used.

Chairman Garvin stated that there are gates on the Amazon portion of the parking lot. He asked about the pedestrian crosswalk that was there for Ingram and if it was going to be reworked or removed. Mr. Taylor stated that the crosswalk is already gone.

No action was taken.

7. **Recommendation to the Board of Mayor and Aldermen for Subdivision Acceptance - Finch Branch, Section 2 - Development Totaling 31 Lots. Requested by Finch Branch Building Group, LLC. Property located off Greenwood and Irvin Drives (Tax Map 17L, Group A, Parcel 8.04). R-2 (Medium Density Residential) Zoning District.**

Mr. Logan explained the item to the Planning Commission. Mr. Lide stated that all comments had been addressed.

No action was taken.

ADJOURNMENT

There being no further business to come before this meeting, Chairman Garvin declared the workshop adjourned at 5:55 p.m.

Chairman

City Recorder

Approved



Item #: 3. Item Title: Site Plan - Dous Retail Center - Building totaling 4,200 Square Feet on 1.28 Acres. Requested by Chet Rhodes. Property located at 5130 Murfreesboro Road (Tax Map 15M, Group A, Parcel 1). C-2 (Highway Service) Zoning District. Property owned by TN Group Properties, LLC. (3rd and Final DEFERRAL)

Reviewed By:

Bo Logan, City Planner

Gary Lide, City Engineer

Staff Comments / Technical Items:

Planning (Bo Logan - blogan@lavergneth.gov; and Jake Blair - jblair@lavergneth.gov)

1. Applicant must submit an architectural materials board with actual samples of all exterior materials, including samples of all paint colors;
2. 6' Sidewalks must be shown along all frontages incl. Murfreesboro Road, Old Nashville Hwy., George Chaney and Brewer Street;
3. The address is incorrect and should be 5130 Murf. Road;
4. Landscape Plan is missing;
5. Photometric Plan is missing;
6. Applicant shall show a Site Data Table;
7. Parking requirements must be included in the Site Data Table;
8. A 5' wide Landscaped Buffer Area must be installed around all parking lots with 3' minimum tall screening (shrubs, etc.);
9. Add note on appropriate sheet to indicate van-accessible handicap space with provided van-accessible loading zone;
10. Show all details of ADA signage and ADA pavement markings that will be utilized on the site;
11. Include parking detail for handicap spaces;
12. Show all utilities;
13. Building setback lines must be indicated for all sides of all buildings;

Engineering (Gary Lide - glide@lavergneth.gov)

1. Provide a grading and drainage plan showing how site run-off will be handled for the modified structure. Staff does not concur with engineer's statement on Sheet C-2.1 that no grading plan is required. The architectural plans show doorways exiting from the proposed portion of the building which will require existing and proposed elevations to confirm IBC and ADA access requirements are met.
2. The existing asphalt will have to be removed for the expansion of the building. This will expose and disturb soil which requires an erosion and sediment control plan.
3. Provide stormwater calculations meeting the Stormwater Management Ordinance along with the means for complying with the stormwater quality requirements for the ordinance. These calculations must demonstrate that all existing culverts

leaving the property are able to pass the 25-year storm. Staff does not fully concur with engineer's response as follows:

- a. Staff concurs that stormwater detention calculations are not required for the reasons provided.
- b. The city's stormwater management ordinance, however, does not tie stormwater QUALITY calculations to a pre-versus post-comparison (Section 14-603) and specifically requires that the stormwater quality requirements be met for redevelopment projects. The city is presently interpreting this as requiring that the requirements be met for all disturbed or changed areas of a redevelopment site for plans which disturb less than 50% of the total area of the site and for the entire site for redevelopment sites that disturb 50% or more. Therefore, calculations must be provided and means designed to comply with meeting the requirements of that section for those areas which are being disturbed regardless of whether those areas were previously pervious or impervious.
- c. The city's stormwater management ordinance requires that culverts be able to handle the 25-year storm. The previous ordinance required the 10-year. The engineer must provide calculations demonstrating the capacity of the existing and any proposed stormwater pipes or culverts. In the event that existing pipes are undersized for the new ordinance but meet the requirements of the previous ordinance, the staff will not recommend that the developer replace those culverts but will enter the information into a database for future city use. Any new culverts must pass the 25-year storm and existing culverts must pass the 10-year storm.
4. (Sheet C-2.1) Provide total driveway widths at the northern drive onto Brewer Street and the drive onto George Chaney Road. Correct the driveway width shown at the south entrance to Brewer Street.
5. (Sheet C-2.1)The dumpster screen is proposed to be exposed CMU with a wooden gate. The Planning Commission will review that proposal against requirements of the Murfreesboro Road Overlay District.
6. No landscaping plan has been provided. Engineer's response to this comment was that the landscaping plan is forthcoming. Therefore, the submittal is incomplete.
7. Provide erosion prevention and sediment control (EPSC) plans meeting the requirements of the Stormwater Management Ordinance. See Item 2 above.
8. (C-4.0) Show utilities serving proposed building even if they are existing. Engineer's response is that utilities are shown based on the survey which they were given. Staff considers the submittal incomplete.

Utilities (Scott Tatalovich - statalovich@lavergneth.gov)

1. Show and label existing fire hydrants.
2. Remove fire hydrant shown inside building at 179 Old Nashville Hwy.
3. New fire hydrants shall be labeled and connected to existing waterlines with pipes.
4. Brewer is a private street, please put "(private)" under the street name.
5. 8-inch waterline is not shown in Murfreesboro Rd at northern boundary with property. Show it and the water meters serving this property from this 8-inch waterline.
6. Existing 18" sewer through customer's property has a 15-foot public utility easement, per "DB339, PG214" – please state this reference this on the Site Plan.
7. Show 2-inch public low pressure sewer force main discharging into the existing sewer manhole located in the subject property on the west side of Brewer Street. Contact Jim Owens, GIS Utilities Mapper at Public Works if you have questions.

Codes (Joe White - jwhite@lavergneth.gov)

No comments

Fire (Curtis Brinkley - cbrinkley@lavergneth.gov)

Show all existing hydrants to determine if additional will be needed.

Police (John Eubank - jeubank@lavergneth.gov)

No comments

***Note:** The above technical items may not be the only corrections and/or issues needing to be resolved to get approval from the planning commission. New items can be brought up at the workshop and staff can add items at any time that might have been overlooked. It is the applicant's responsibility to make sure that all technical items are addressed and that no new issues exist before the planning commission meeting. Addressing all technical items does not constitute approval. It is the planning commission's decision whether an item passes or fails. Revised plans are due to staff by the following Monday at close of business unless other arrangements are made and documented.

5130 Murfreesboro Rd



5130 Murfreesboro Rd



5130 Murfreesboro Rd

73rd Ave

Jordan Dr

Sagi Cir

Lori Dr

Private

Goodman Cir

Brewer St

George C. Hays St

Madison Square Blvd

Gibson Ct

Moore Way

Barksdale Cir

Rosecrans Cir

Stones River Rd

Ed Miller Dr

Buchanan St

Old Waldron Rd

Miles St

Fergus Dr

Lytle St

Johnson Pl

Hazelwood Ln

Mason Rd

Stones River Ct

Legend:

- (PDR) Planned Density Residential
- A Agriculture
- C-1 Government Use
- C-2 Highway Service
- C-3 Neighborhood Service
- C-4 Shopping Center
- I-1 Light Industrial
- I-2 Heavy Industrial
- I-3 Industrial (Special Use)
- R-1 Low Density Residential
- R-2 Medium Density Residential
- R-2S MDR Grandfathered
- R-2Z MDR Grandfathered
- R-3 High Density Residential
- R-3Z HDR Zero Lot Line
- R-4 Mobile Home

- | | |
|---|-----------------------------------|
|  | (PDR) Planned Density Residential |
|  | A Agriculture |
|  | C-1 Government Use |
|  | C-2 Highway Service |
|  | C-3 Neighborhood Service |
|  | C-4 Shopping Center |
|  | I-1 Light Industrial |
|  | I-2 Heavy Industrial |
|  | I-3 Industrial (Special Use) |
|  | R-1 Low Density Residential |
|  | R-2 Medium Density Residential |
|  | R-2S MDR Grandfathered |
|  | R-2Z MDR Grandfathered |
|  | R-3 High Density Residential |
|  | R-3Z HDR Zero Lot Line |
|  | R-4 Mobile Home |





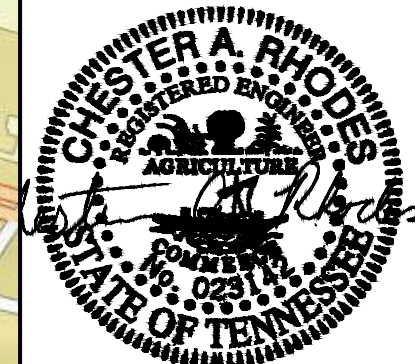


ISTING



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TN GROUP PROPERTIES LLC
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 BRENTWOOD TN 37027



11/17/2023



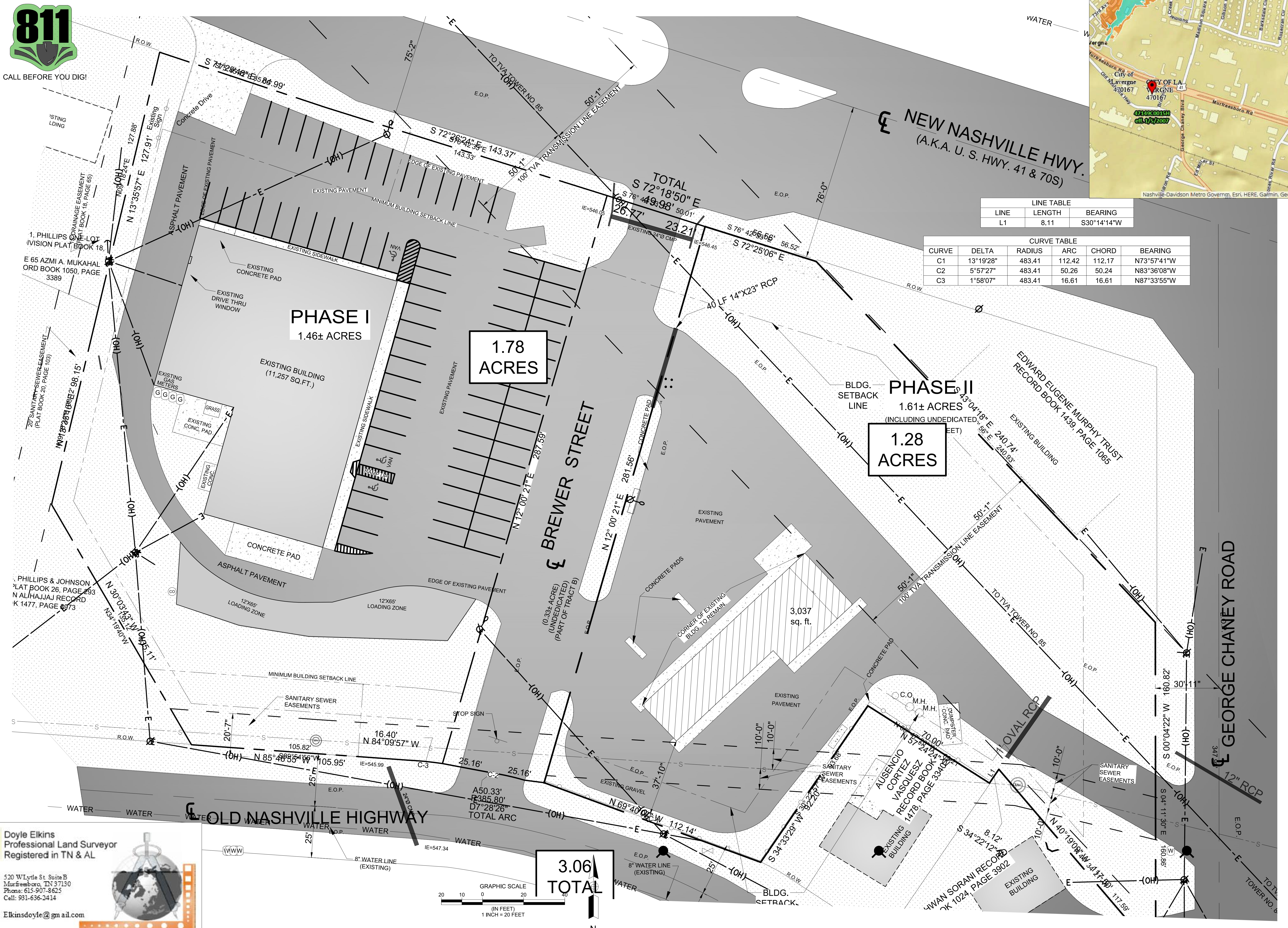
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LINE TABLE		
LINE	LENGTH	BEARING
L1	8.11	S30°14'14"W

CURVE TABLE					
CURVE	DELTA	RADIUS	ARC	CHORD	BEARING
C1	13°19'28"	483.41	112.42	112.17	N73°57'41"W
C2	5°57'27"	483.41	50.26	50.24	N83°36'08"W
C3	1°58'07"	483.41	16.61	16.61	N87°33'55"W



Doyle Elkins
Professional Land Surveyor
Registered in TN & AL

520 W Lytle St Suite B
Murfreesboro, TN 37130
Phone: 615-907-8625
Cell: 931-636-2414

Elkinsdovle@gmail.com



EXISTING CONDITIONS

OSAMA DOUS

RETAIL CENTER

5130 MURFREESBORO ROAD, LA VERGNE, TN 37086

EXISTING CONDITIONS

DING, N.

C-1.0

SCALE: NOTED

JOB No. _____

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REV.



RETAIL GOODS ESTABLISHMENT:

3 SPACES PER 1,000 SQUARE FEET GROSS FLOOR AREA.

4,210 sq. ft. OF RETAIL = 3 x 5,000 sq. ft. = **15 SPACES REQ'D**

THE ADA PARKING SPACE REQUIREMENTS IN TENNESSEE ALSO SPECIFY HOW MANY SPACES ARE NEEDED BASED ON THE SIZE OF THE LOT OR FACILITY. LOTS MUST HAVE AT LEAST ONE ACCESSIBLE SPOT FOR EVERY 25 COMMON SPACES (1:25). FOR ACCOMMODATIONS WITH MORE THAN 25 SPOTS, AN EXTRA ONE ADA PARKING SPACE MUST BE ADDED FOR EVERY 50 REGULAR STALLS OVER 25 (1:50).

IMPERVIOUS AREA	=	35,886.6 sq. ft. = 0.82 acres
PERVIOUS AREA	=	<u>26,847.3 sq. ft. = 0.61 acres</u>
		1.43 acres

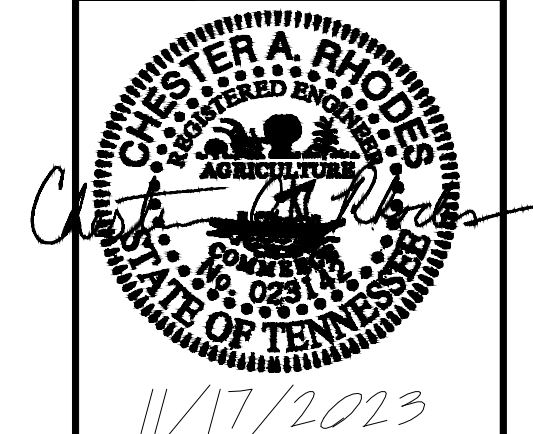
Doyle Elkins
Professional Land Surveyor
Registered in TN & AL

520 W Lytle St Suite B
 Murfreesboro, TN 37130
 Phone: 615-907-8625
 Cell: 931-636-2414

Elkinsdoyle@gmail.com

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APPROVAL		
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SAVED DATE: 2/9/2024 8:32:50 AM Pwh

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SITE PLAN

5130 MURFREESBORO ROAD, LA VERGNE, TN 37086

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C-2.1

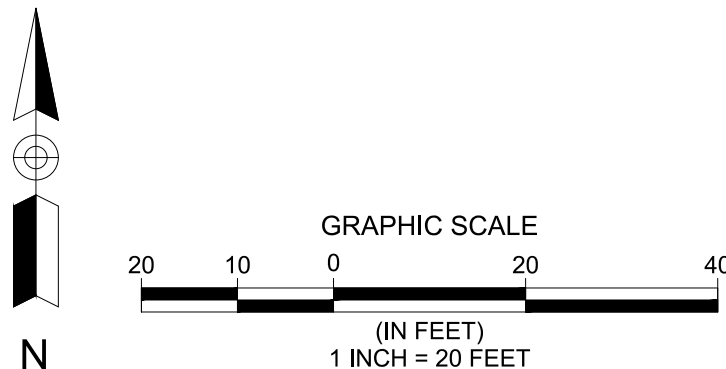
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SITE PLAN

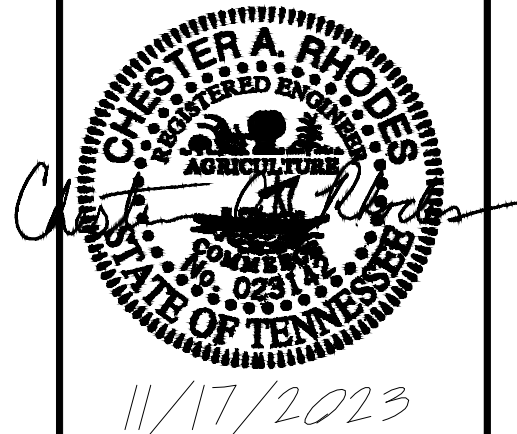


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CURVE	DELTA	RADIUS	ARC	CHORD	BEARING
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C2	5°57'27"	483.41	50.26	50.24	N83°36'08"W
C3	1°58'07"	483.41	16.61	16.61	N87°33'55"W

THERE IS NO GRADING PLAN BECAUSE OF THE FACT THAT THE PERVIOUS AND IMPERVIOUS IS NOT CHANGING. WE ARE ADDING APPROXIMATELY 350sq. ft. OF PERVIOUS AREA. THE BUILDING FOOTPRINT IS IN THE SAME PLACE AS THE EXISTING. WE ARE EXTENDING THE BUILDING TOWARD THE BACK BY SEVERAL FEET BUT THIS AREA IS ALREADY PAVED OVER WITH ASPHALT. THEREFORE THERE IS NO NEED FOR A GRADING & DRAINAGE PLAN OR EPSC SHEET BECAUSE THERE WILL BE ABSOLUTELY NO CHANGE TO THE STORMWATER SITUATION ON THIS SITE.

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CIVIL, ENVIRONMENTAL
SITE DEVELOPMENT, WATER/WASTEWATER

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RETAIL CENTER
SITE PLAN
5130 MURFREESBORO ROAD, LA VERGNE, TN 37086

DWG. No.

C-2.1

SCALE:	NOTED
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NOTED



11/17/2023

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UTILITY PLAN

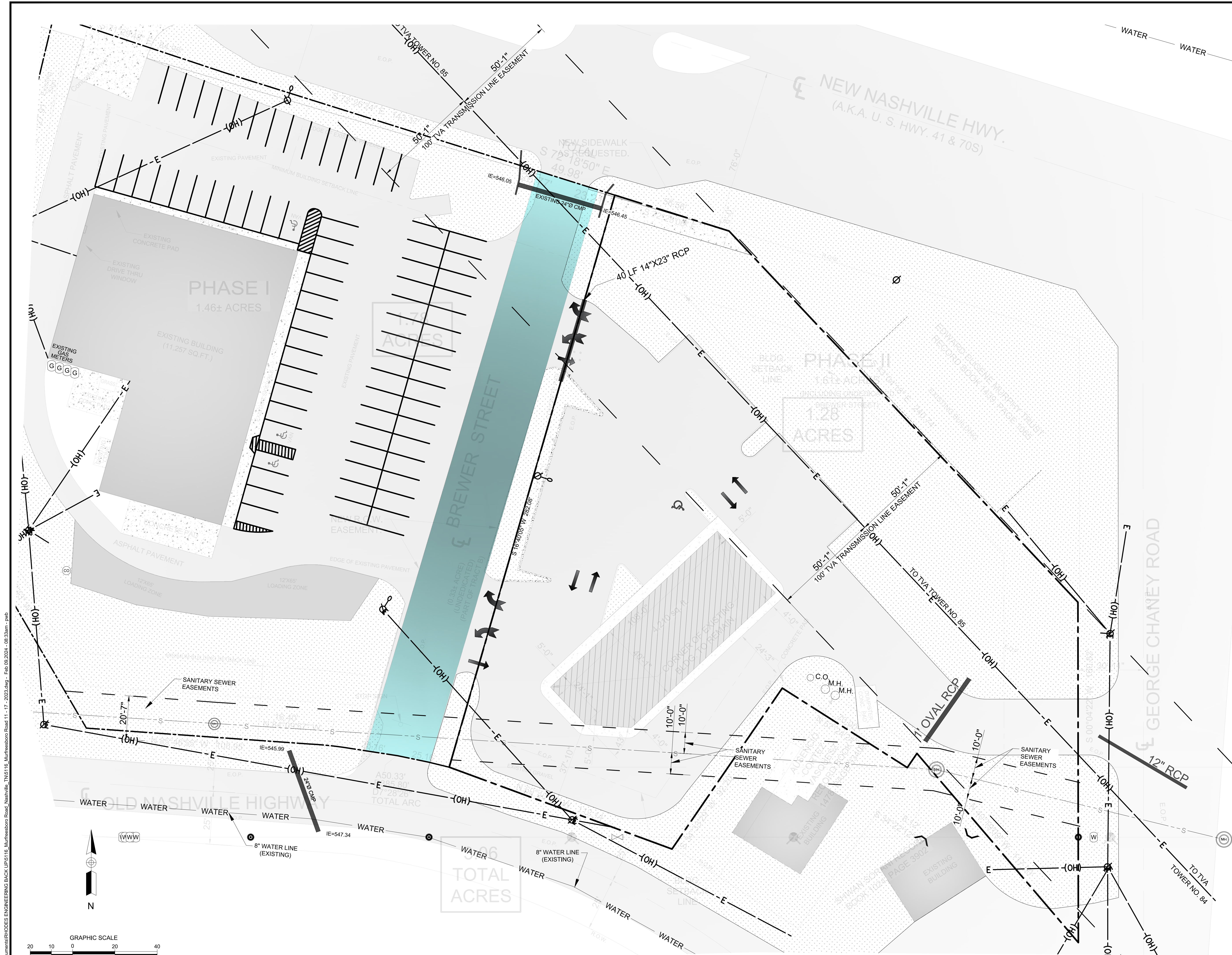
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SCALE: NOTED

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UTILITY PLAN

NOTES



11/17/2023

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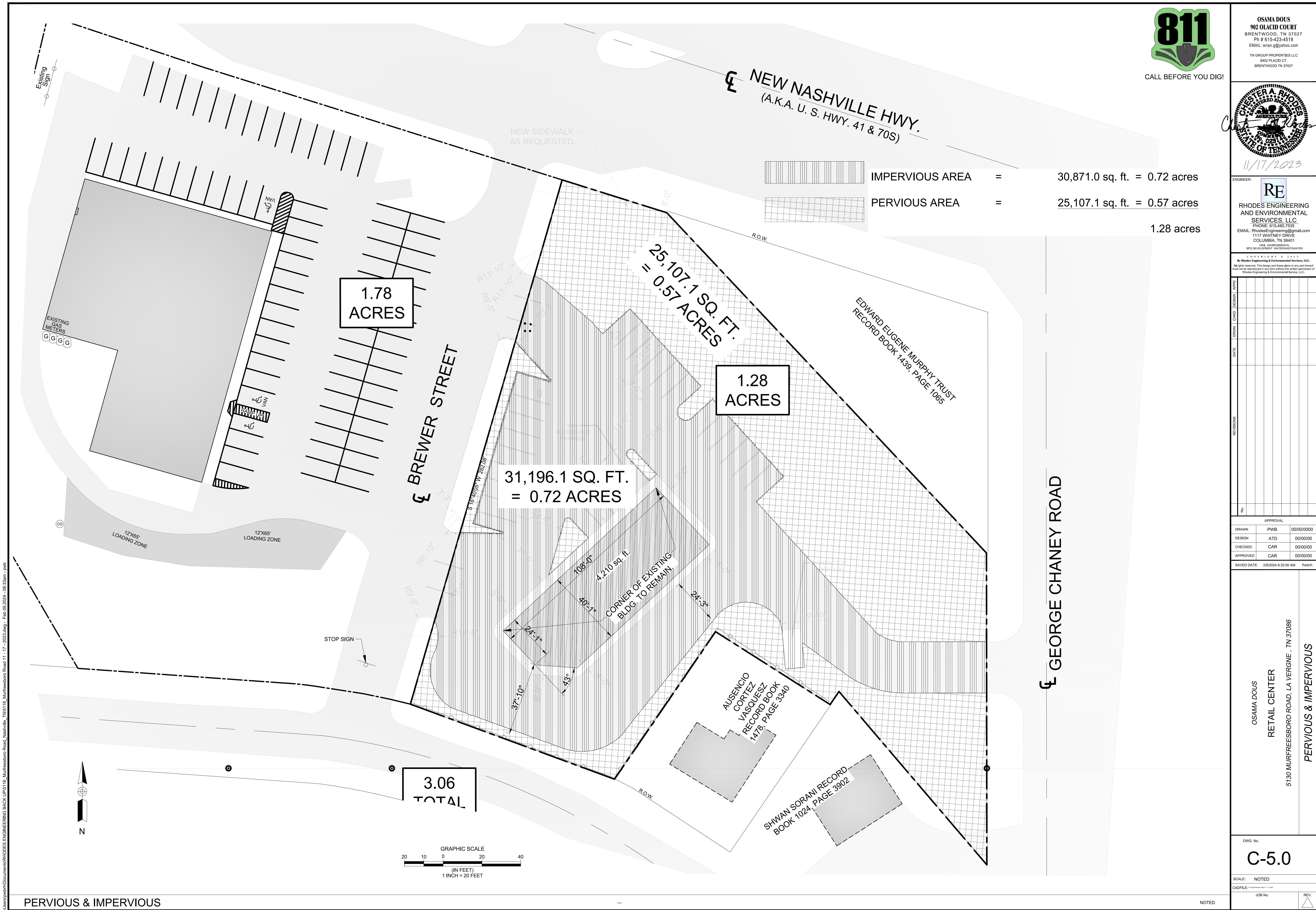
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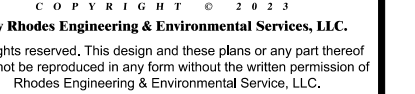
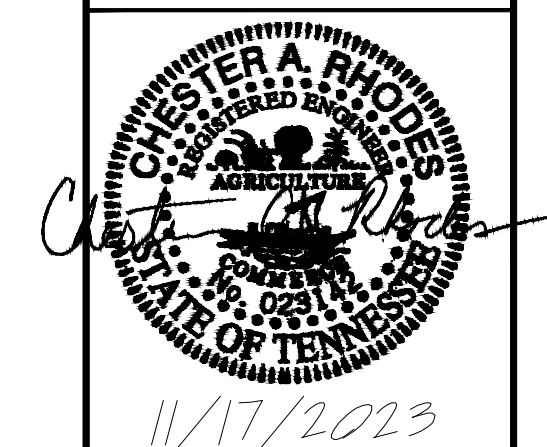
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Notes:

Actual Inside Cramp Angle may be less due to highly specialized options.

Curb to Curb turning radius calculated for a 9.00 inch curb.

1 AUTOTURN DETAIL



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BRENTWOOD TN 37027



11/17/2023

ENGINEER:



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APPROVED	CAR	00/00/00

SAVED DATE: 2/9/2024 8:32:50 AM Pwb

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RETAIL CENTER
51130 MURFREESBORO ROAD, LA VERGNE, TN 37086

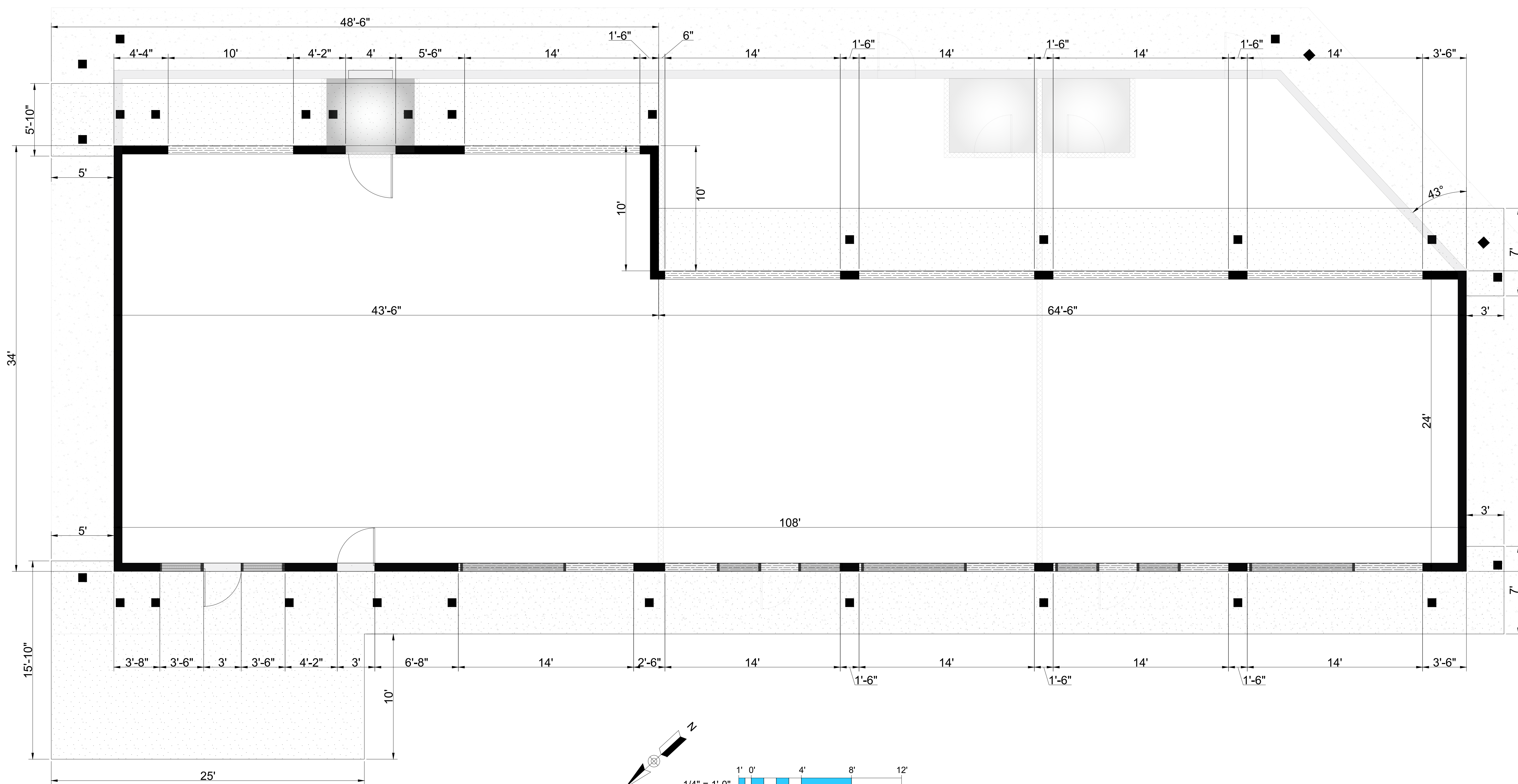
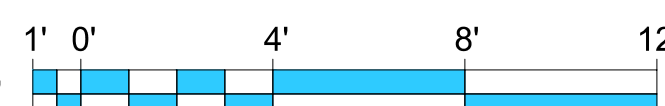
EXISTING FLOOR PLAN

DING, No.

A-1.0

SCALE: NOTED

JOB No. _____


$$1/4" = 1'-0"$$


EXISTING FLOOR PLAN

NOTED



The seal of the State of Tennessee is circular. It features a central emblem with a plow, a sheaf of wheat, and a cotton plant, with the word 'AGRICULTURE' below it. The outer ring of the seal contains the text 'CHESTER A. RHODES' at the top, 'REGISTERED ENGINEER' on the sides, and 'STATE OF TENNESSEE' at the bottom. A handwritten signature 'Chester A. Rhodes' is written across the seal, and the date '11/17/2023' is written below it.

ENGINEER:



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[illegible]

APPROVAL		
DRAWN	PWB	00/00/00
DESIGN	ATD	00/00/00
CHECKED	CAR	00/00/00
APPROVED	CAR	00/00/00
SAVED DATE: 2/9/2024 8:32:50 AM Pwb		

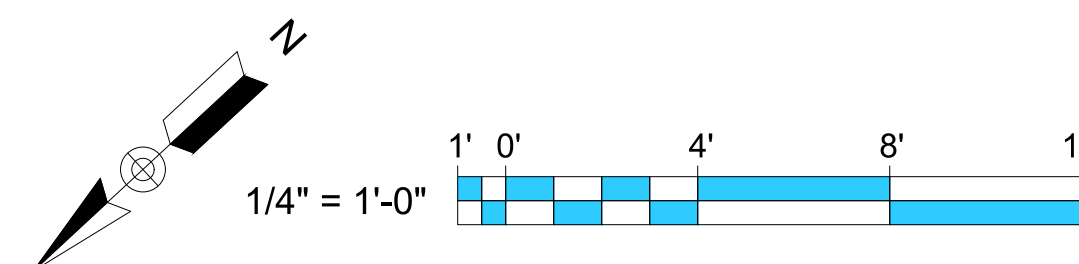
PROPOSED NEW BUILDING LAYOUT

DING, No.

SCALE: NOTED

JOB No. _____

	RE
--	----



PROPOSED NEW BUILDING LAYOUT

NOTED



11/17/2023

ENGINEER:



PHONE: 615.480.7535
EMAIL: RhodesEngineering@gmail.com
1117 WHITNEY DRIVE
COLUMBIA, TN 38401

CIVIL, ENVIRONMENTAL,
SITE DEVELOPMENT, WATER/WASTEWATER

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APPROVAL		
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DESIGN	ATD	00/00/00
CHECKED	CAR	00/00/00
APPROVED	CAR	00/00/00

SAVED DATE: 2/9/2024 8:32:50 AM Pwbrh

OSAMA DOUS

RETAIL CENTER

55130 MURFREESBORO ROAD, LA VERGNE, TN 37086

EXISTING FRONT & REAR ELEVATIONS

D/WG. No.

A-2.0

SCALE: NOTED

JOB No



SCALE: 1/4" = 1'-0"

1' 0" = 1'-0"



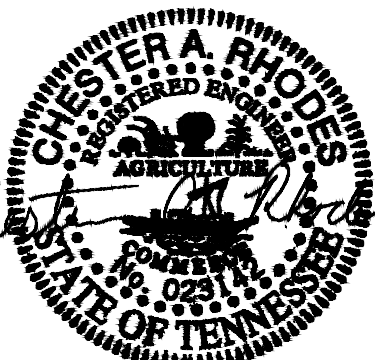
SCALE: 1/4" = 1'-0"

1' 0" = 1'-0"



OSAMA DOUS
902 OLACID COURT
 BRENTWOOD, TN 37027
 Ph # 615-423-4519
 EMAIL: erian.g@yahoo.com

TN GROUP PROPERTIES LLC
 9402 PLACID CT.
 BRENTWOOD TN 37027



11/17/2023

RE

**RHODES ENGINEERING
AND ENVIRONMENTAL
SERVICES, LLC**
PHONE: 615.480.7535
EMAIL: RhodesEngineering@gmail.com
1117 WHITNEY DRIVE
COLUMBIA, TN 38401
CIVIL, ENVIRONMENTAL
SITE DEVELOPMENT, WATER/WASTEWATER

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APPROVAL		
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DESIGN	ATD	00/00/00
CHECKED	CAR	00/00/00
APPROVED	CAR	00/00/00
SAVED DATE: 2/9/2024 8:32:50 AM Pwb		

RETAIL CENTER

5130 MURFREESBORO ROAD, LA VERGNE, TN 37086

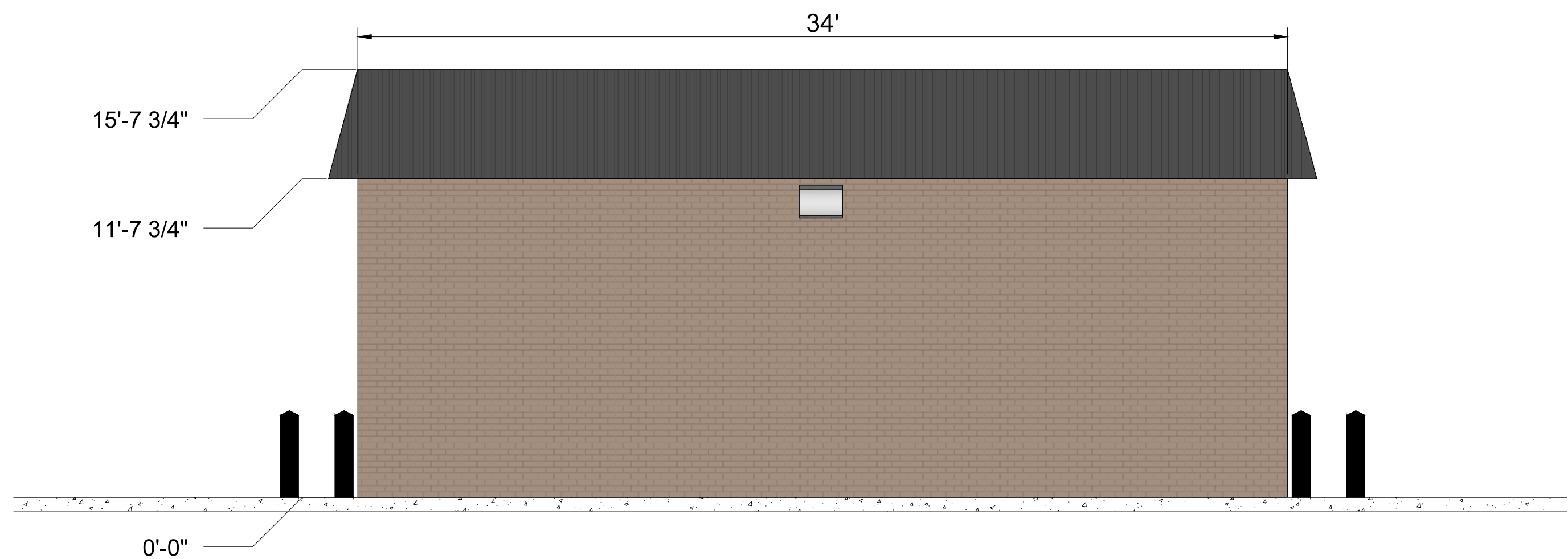
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D'NG, No

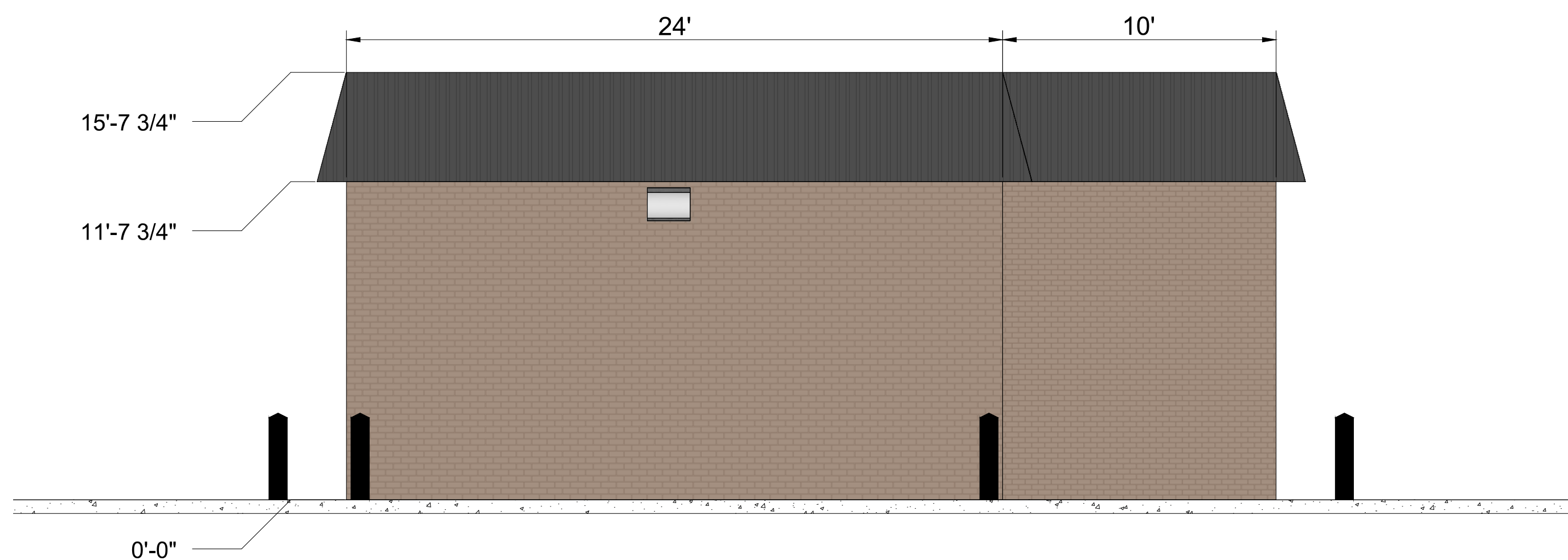
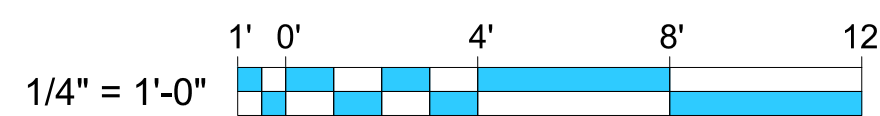
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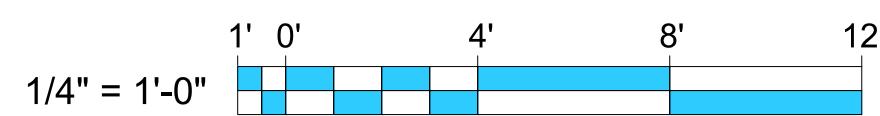
JOB No.



1 LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

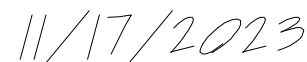


2 RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"





OSAMA DOUS
902 OLACID COURT
 BRENTWOOD, TN 37027
 Ph # 615-423-4519
 EMAIL: erian.g@yahoo.com
 TN GROUP PROPERTIES LLC
 9402 PLACID CT.
 BRENTWOOD TN 37027



RE

**RHODES ENGINEERING
AND ENVIRONMENTAL
SERVICES, LLC**
PHONE: 615.480.7535
EMAIL: RhodesEngineering@gmail.com
1117 WHITNEY DRIVE
COLUMBIA, TN 38401

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APPROVAL		
DRAWN	PWB	00/00/0000
DESIGN	ATD	00/00/00
CHECKED	CAR	00/00/00
APPROVED	CAR	00/00/00
SAVED DATE: 2/9/2024 8:32:50 AM Pwbrh		

RETAIL CENTER

5130 MURFREESBORO ROAD, LA VERGNE, TN 37086

PROPOSED LEFT SIDE & RIGHT SIDE ELEVATIONS

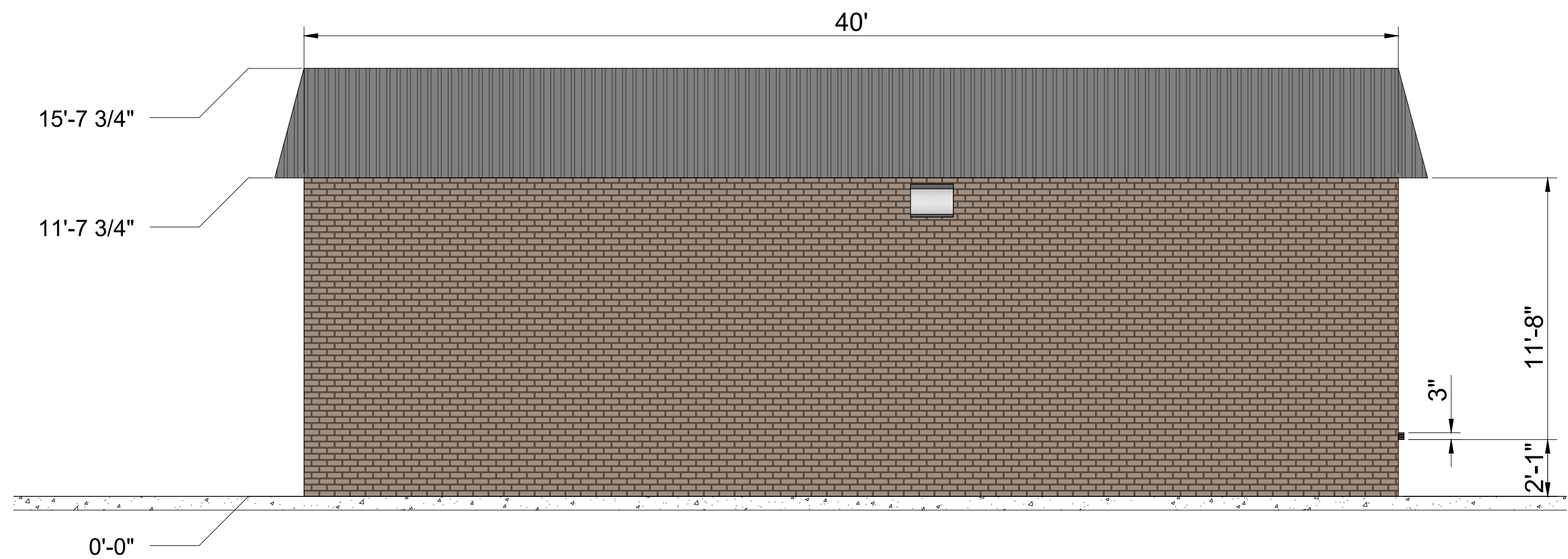
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A-3.1

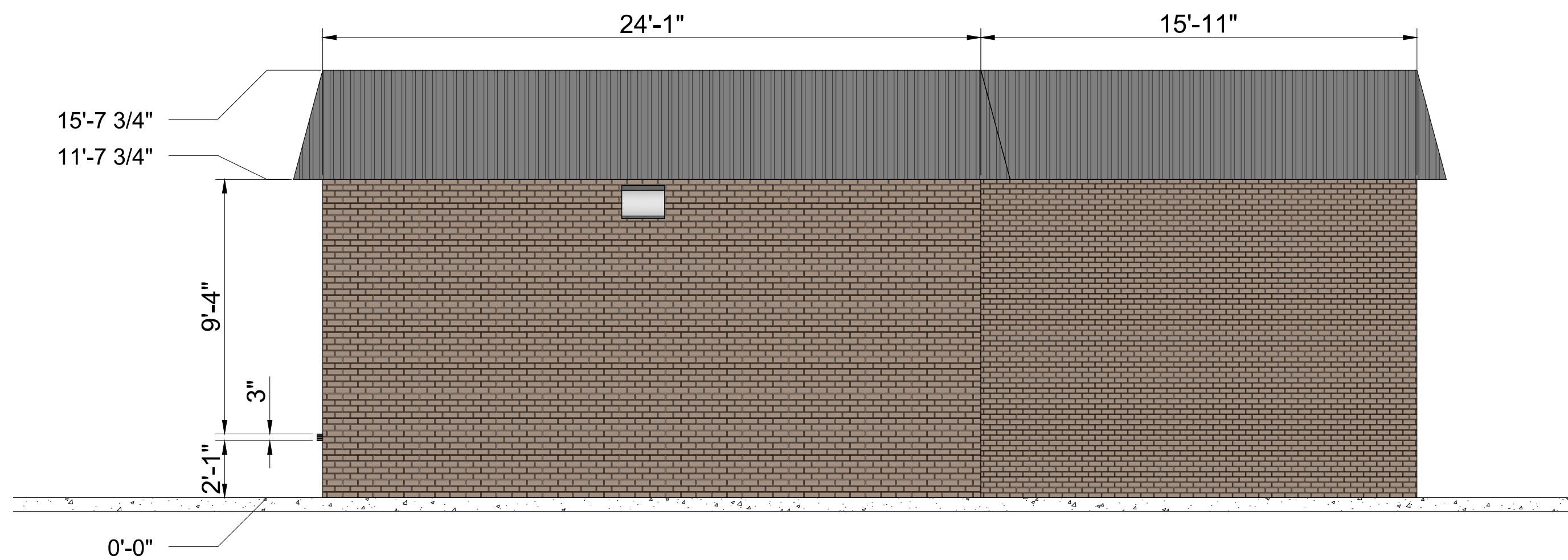
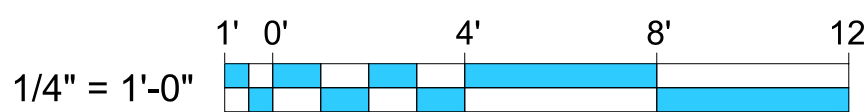
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JOB No. _____

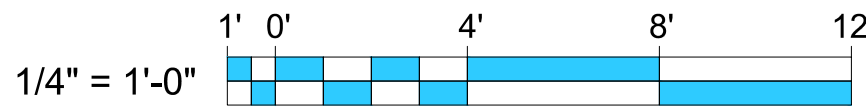
REV.



1 LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



2 RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"





Item #: 4. Item Title: Site Plan - UHAUL, Phase 2 - Two (2) Buildings Totaling Approximately 43,000 Square Feet on 10 Acres. Requested by SEC, Inc. Property located at 503 New Paul Road (Tax Map 17, Parcel 40.03). I-2 (Heavy Industrial) Zoning District. Property owned by Amerco Real Estate Co.

Reviewed By:

Gary Lide, City Engineer

Bo Logan, City Planner

Staff Comments / Technical Items:

Planning

Bo Logan

blogan@lavergn.net

NO COMMENTS

Jake Blair

jblair@lavergn.net

Engineering

Gary Lide

glide@lavergn.net

All Engineering comments addressed.

Utilities

Scott Tatalovich

statalovich@lavergn.net

All Utility comments addressed.

Codes

No comments

Fire

Curtis Brinkley

cbrinkley@lavergn.net

No comments

Police

John Eubank

jeubank@lavergn.net

No comments

***Note:** The above technical items may not be the only corrections and/or issues needing to be resolved to get approval from the planning commission. New items can be brought up at the workshop and staff can add items at any time that might have been overlooked. It is the applicant's responsibility to make sure that all technical items are addressed and that no new issues exist before the planning commission meeting. Addressing all technical items does not constitute approval. It is the planning commission's decision whether an item passes or fails. Revised plans are due to staff by the following Monday at close of business unless other arrangements are made and documented.

503 New Paul Rd



503 New Paul Rd



503 New Paul Rd



- (PDR) Planned Density Residential
- A Agriculture
- C-1 Government Use
- C-2 Highway Service
- C-3 Neighborhood Service
- C-4 Shopping Center
- I-1 Light Industrial
- I-2 Heavy Industrial
- I-3 Industrial (Special Use)
- R-1 Low Density Residential
- R-2 Medium Density Residential
- R-2S MDR Grandfathered
- R-2Z MDR Grandfathered
- R-3 High Density Residential
- R-3Z HDR Zero Lot Line
- R-4 Mobile Home





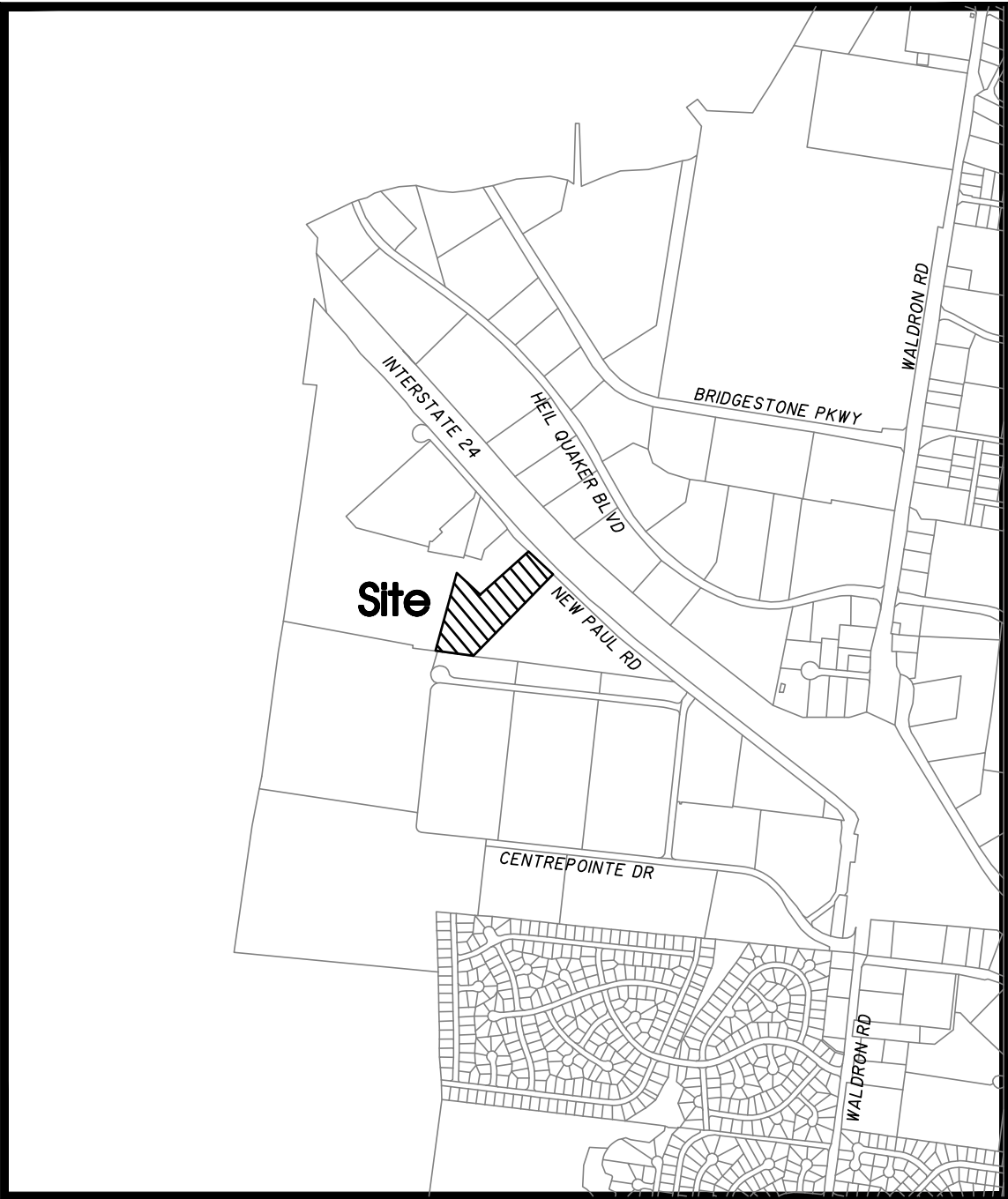
U-Haul Phase 2

503 New Paul Road

LaVergne, Tennessee

Site Plan & Construction Drawings

Drawing Index	
Sheet No.	Title
C0.0	Cover Sheet
C0.1	General Notes
C0.2	Master Plan
C1.0	Existing Conditions/Initial EPSC/Demo Plan
C1.1	Intermediate EPSC Plan
C2.0-2.1	Site Plan
C2.2-2.3	Utility Plan
C3.0	Grading, Drainage & Final EPSC Plan
C4.0-4.1	Details
L1.0-L1.4	Landscape Plans
L 2.0	Landscape Details & Notes



Site Location Map
Not To Scale

Owner/Developer:
Amerco Real Estate Company
2727 N. Central Ave.
Phoenix, AZ 85004-11200

Deed Reference:
Tax Map 17, Parcel 40.03
R.Bk 42, Pg 252
R.Bk 1755 Pg 2801

Yard Requirements:
Front Building Setback: 40'
Side Building Setback: 20'
Rear Building Setback: 15'

Existing Use: Vacant
Intended Use: Retail and Self Storage/ Mini-Warehousing Equipment Rental
& RV Storage. (Special Use Permit Previously Approved)

Land Use Data:
Zoned: I-2
1: 4-Story Building; 2: 1-Story Buildings
Building Ht.: Ex.Bldg. A: 48'-6" ; Bldg. B: 50'-0"; Bldg. C: 23'-2"
Total Floor Area: 172,634 Sq.Ft.
Ex. Building A = 32,421 Sq.Ft. (Footprint) 129,684 Sq.Ft. (Gross)
Prop. Building B = 14,965 Sq.Ft.
Prop. Building C = 27,985 Sq.Ft.
Open Spaces = 2.75 ± Acres
1 Lot on: 10.0 ± Acres

Parking Requirement:
Ex: 2 Spaces/400 Sq.Ft. Office x 200 Sq.Ft. Office + 1 Space/4,000 Sq.Ft. G.F.A. x
136,584 Sq.Ft = 36 Spaces Required
1 Space/4,000 Sq.Ft. G.F.A. x 42,950 Sq.Ft = 11 Additional Spaces Required
Total Spaces Required: 47 Spaces
Provided: 37 Regular + 2 H.C. = 39 Total Spaces Provided (Existing)

Flood Map No.:
This site lies within Zone X, not in the
100 Year Floodplain, per Community Panel
47149C0105J dated May 9, 2023.

SEC, Inc. SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: JMINER@SEC-CIVIL.COM FAX: (615) 895-2567
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By: _____ Date: _____
John F. Miner, P.E. TN. Reg. #122194

Watershed: West Branch Hurricane Creek
Disturbed Area: 2.33± Ac.
Impervious Area: 7.25± Ac. (72.5%)
Δ Impervious Area: 0.0± Ac.

Sheet C0.0
U-Haul Phase 2
S.E.C. Project #19084
Submitted: 12-29-2023
Revised: 5-20-2024

Site Notes:

1. Dimensions shown at curbed areas are to face of curb.

2. See architectural drawings for building dimensions.

3. Contractor shall immediately notify the engineer of any discrepancies found between these plans, the architectural plans, and/or field conditions prior to construction.

4. Apparent errors, discrepancies, or omissions on the drawing shall be brought to the attention of the owner prior to bid submittal. The contractor may not use apparent errors, discrepancies, or omissions present on the drawings presented for bidding for additional charges after bids have been submitted. The architect shall be permitted to make corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the contract documents.

5. The contractor shall stake all improvements using the geometric data provided in the drawings. It is the sole responsibility of the contractor to completely stake and check all improvements to ensure adequate positioning, both horizontal and vertical, prior to the installation of any improvements.

6. The notes and plans shown call attention to certain required features of the construction but do not claim to cover all details of design and construction. The contractor shall furnish and install the work complete and ready for operation.

7. After completion of construction, the contractor shall perform site cleanup to remove all trash, debris, excess materials, equipment, and other deleterious materials associated with construction. The contractor is expressly responsible for ensuring the site is clean and in operable condition at the time of final acceptance.

8. A separate R.O.W. Excavation Permit issued from the LaVergne Street Department shall be required for any excavation or construction in the public R.O.W.

9. The contractor is responsible for the protection and replacement of all property pins on this site.

10. These drawings are intended for use on this site only and as an integrated set for this specific project. These drawings may not be used in whole or in part on any other project under the professional engineer's seal. The owner shall hold harmless and indemnify the architect and engineer from and against any and all claims of any nature whatsoever arising from such use.

11. Existing conditions and topo shown herein are taken from a field-run survey by Dale & Associates.

General Utility Notes:

1. Existing utility lines shown are approximate locations only. The contractor shall field verify all existing utility line locations prior to any construction. Any deviations from the design locations shall be reported to the owner or engineer prior to beginning construction.

2. The contractor will provide all necessary protective measures to safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of protecting utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.

3. The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities, prior to commencing work, the contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility.

4. The contractor shall refer to architect's plans and specifications for actual location of all utility entrances to include sanitary sewer laterals, domestic and fire protection water service, electrical, telephone and gas service. This contractor shall coordinate installation of utilities in such a manner as to avoid conflicts and assure proper depths are achieved as well as coordinating with the regulatory agency as to location and scheduling of tie-ins/connections to their facilities.

5. All underground utilities (water sewer, storm sewer, electrical conduit, irrigation sleeves, and any other miscellaneous), shall be in-place prior to the placement of base course material.

6. Location of site utilities shall be verified with proper utility company providing service.

7. The owner/developer for budget purposes, should check with City of LaVergne Water & Sewer Dept. for connection fees which may be substantial

8. Contractors for sewer work must be approved by the City of LaVergne Sewer Department. Contractor for water work must be approved by City of LaVergne Water Dept..

9. In Tennessee it is a requirement per "the underground utility damage prevention act" that anyone who engages in excavation must notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds those utility owners who participate in the Tennessee one call system can be notified toll free at 1-800-351-1111.

Sanitary Sewer Notes:

1. The contractor must notify the City of LaVergne Sewer Dept. for sewer inspection prior to starting work.

2. Sanitary sewer pick-up points shall terminate five feet outside the face of building unless otherwise noted.

3. Contractor shall comply with all requirements of the latest edition of the City of LaVergne specifications.

Waterline Notes:

1. All water mains shall be hydrostatically tested and disinfected before acceptance.

2. All trenches, pipe laying, and backfilling shall be in accordance with federal O.S.H.A. regulations.

3. Contractor shall comply with all requirements of the latest edition of the City of LaVergne specifications.

4. Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.

Grading And Drainage Notes:

1. The site work contractor shall coordinate the installation of all underground utilities with his work. All underground utilities (water, sanitary sewer, storm sewer, electrical conduit, irrigation sleeves, and any other miscellaneous underground utilities, devices, or structures), shall be in-place prior to the placement of base course material.

2. The contractor shall cut existing pavement as necessary to assure a smooth fit and continuous grade.

3. The contractor shall verify horizontal and vertical location of all existing storm sewer structures, pipes and all utilities prior to construction.

4. Clearing and grubbing limits shall include all areas disturbed by grading operation.

5. Any graded or disturbed areas shall have 4 inches of topsoil, seed, mulch, fertilizer and water applied until a healthy stand of grass is obtained. The restoration shall closely follow construction.

6. The soil materials on lots shown hereon may be disturbed by cutting or filling operations performed during or before development. Therefore, the builder of any proposed structure shall investigate the current conditions and consult with a geotechnical expert or other qualified person as he deems appropriate to assure himself that the design of the proposed foundation is adequate.

7. No portion of this site lies within the 100 year flood plain per F.E.M.A. Community Panel No. 47149C0105J dated May 9, 2023.

8. A separate R.O.W. Permit issued by the City of LaVergne will be required for excavation and construction in the public R.O.W.

9. Handicap parking spaces and accessible routes shall be constructed and sloped in accordance with all applicable provisions of the A.D.A.

10. In Tennessee it is a requirement per "The Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds. Those utility owners who participate in the Tennessee One Call System can be notified toll free at 1-800-351-1111.

Erosion Control Notes:

1. The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent silt from leaving site. Silt will not be allowed beyond construction limits.

2. The contractor is responsible for removing silt from site if not reusable on-site and assuring plan alignment and grade in all ditches at completion of construction.

3. The contractor is responsible for cleaning out all storm drainage structures, including flumes, pipes, etc., prior to completion of this project.

4. Erosion control shall be provided for all cut and fill operations within the limits of the construction site, throughout the construction period to provide the site with maximum protection from erosion at all times.

5. Erosion control measures are to be installed prior to any grading on-site and are to be maintained in place until stabilization of erodable soils has been accomplished.

Purpose Summary:

The proposed buildings and site improvements are proposed to provide an addition of two buildings to the existing Uhaul self-storage facility; including RV storage and equipment rental storage. All the outdoor storage has been placed at the rear of the site behind the proposed building. Employee parking is proposed to be located on the side of the building. The rear of the site is proposed to be secured with a 8-foot tall opaque fence. The gates to the rear area will be open during regular business hours and locked overnight. The site provides for a landscape buffer on the east side where it abuts residential zoning. Stormwater management area is proposed to the east of the main building and to the western rear corner.

U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

SEC, Inc.

SITE ENGINEERING CONSULTANTS

ENGINEERING • SURVEYING • LAND PLANNING

LANDSCAPE ARCHITECTURE

850 MIDDLE TENNESSEE BOULEVARD
MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MINER@SEC-CIVIL.COM FAX: (615) 895-2567

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REVIEW SET
(Not Intended for Construction)

F. MINER
REGISTERED PROFESSIONAL ENGINEER
No. 10000
STATE OF TENNESSEE

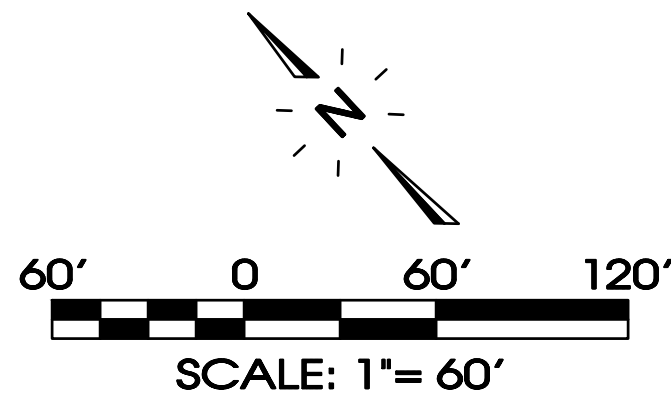
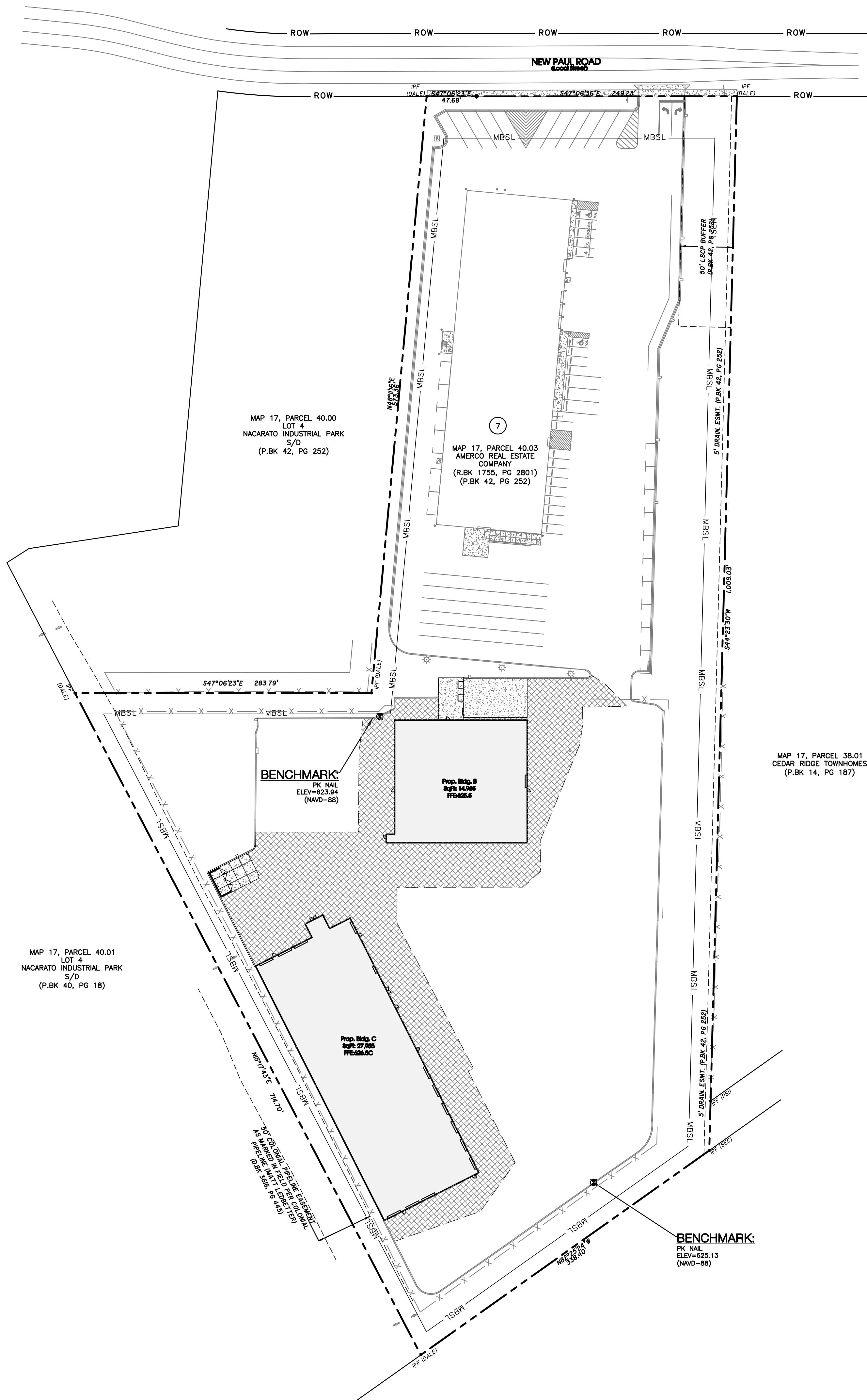
REVISID: 5-20-2024: PC Comments

DRAWN: SJA/CFB3
DATE: 12-29-2023
CHECKED:
MAT, MPL
FILE NAME:
19084uhau12.dwg
SCALE:
None
JOB NO.
19084
SHEET:

General Notes

C0.1

Page 38 of 181



Legend:			
	EXIST. CONCRETE MONUMENT		BENCHMARK
	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL
	IRON PIN FOUND (I.P.F.)		VAN ACCESSIBLE HANDICAP DESIGNATION
	EXIST. SIGN POST		HC SIGN
	EXIST. SEWER CLEANOUT		PROPOSED SIGN POST
	EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD
	EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP
	EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK
	EXIST. TELEPHONE RISER		EXTRUDED CURB
	EXIST. GAS RISER		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. UTILITY POLE		REVISION NUMBER
	EXIST. FIRE HYDRANT		DRAINAGE STRUCTURE DESIGNATION
	POST INDICATOR VALVE		DRAINAGE PIPE DESIGNATION
	BLOW OFF VALVE		RIP RAP
	REDUCER		RUNOFF FLOW ARROW
	REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION
	CONCRETE THRUST BLOCK		PROPOSED SPOT ELEVATION
	DOUBLE DETECTOR CHECK VALVE		EXIST. SPOT ELEVATION
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION
	FIRE HYDRANT		CATCH BASIN
	GATE VALVE & BOX		CURB INLET
	WATER METER		AREA DRAIN
	GAS METER		HEADWALL
	GREASE TRAP		WINGED HEADWALL
	EXTERIOR CLEANOUT ECO		CONCRETE SWALE
	MANHOLE		TYPE- X- HEADWALL
EXISTING PHONE		PH	
EXISTING ELECTRIC		OH	
PROPERTY LINE		---	
EASEMENTS		-----	
RIGHT OF WAY		ROW	
EROSION CONTROL SILT FENCE		SF SF	
EROSION EEL		E E E	
EXISTING TREELINE		~~~~~	
EXISTING FENCELINE		X X X X	
MINIMUM BUILDING SETBACK LINE		---	
PHASE BOUNDARY		-----	
EXISTING GAS LINE		GAS	
PROPOSED GAS LINE		GAS	
EXISTING STORM		STM	
PROPOSED STORM		STM	
EXISTING CONTOUR LINES		-601-	
PROPOSED CONTOUR LINES		-601-	
EXISTING SANITARY SEWER		SS	
PROPOSED SANITARY SEWER		SS	
EXISTING WATER		W W	
PROPOSED WATER		W W	

SEC, Inc.

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LANDSCAPE ARCHITECTURE
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MURFREESBORO, TENNESSEE 37129
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U-Haul Phase 2

503 New Paul Road

LaVergne, Tennessee

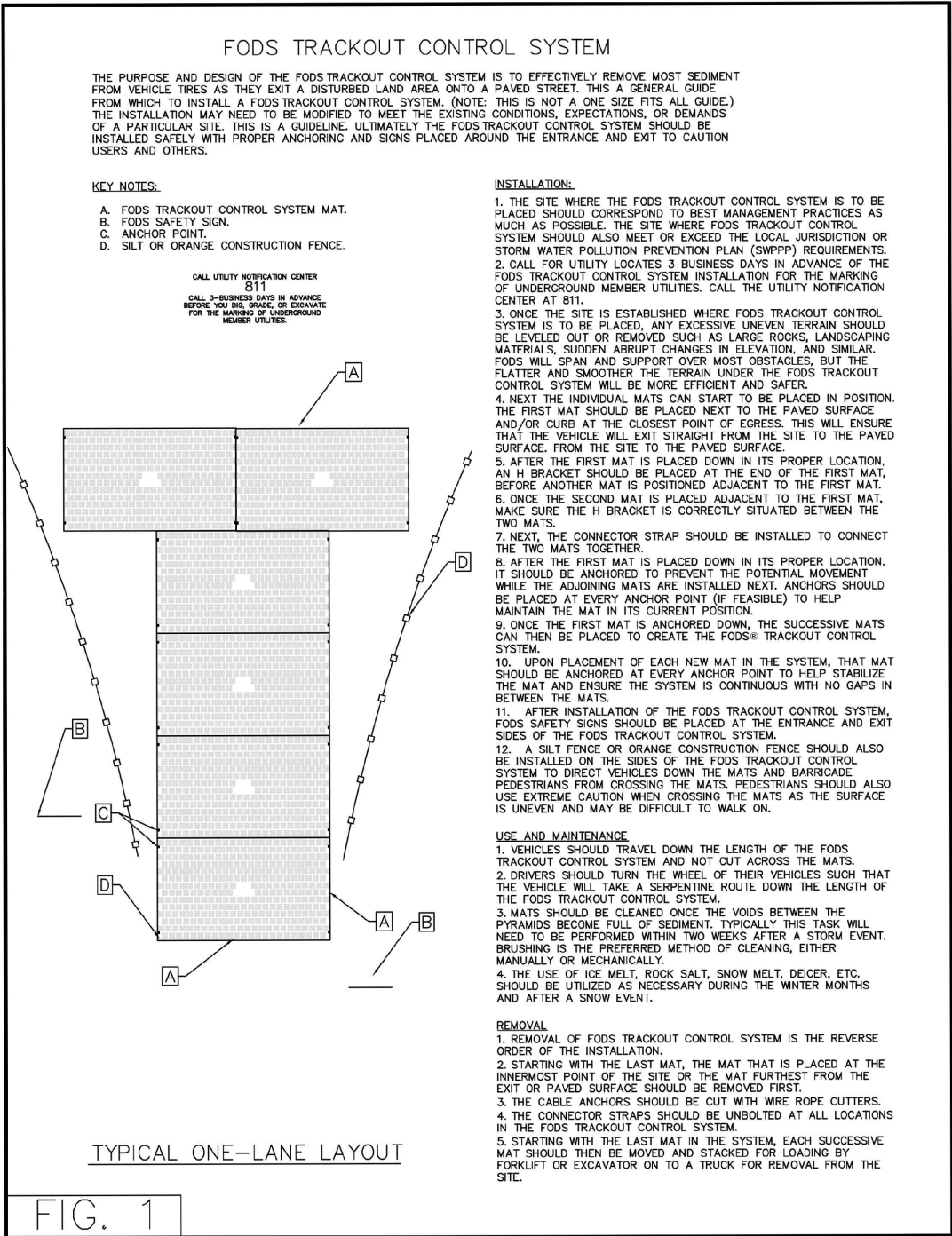
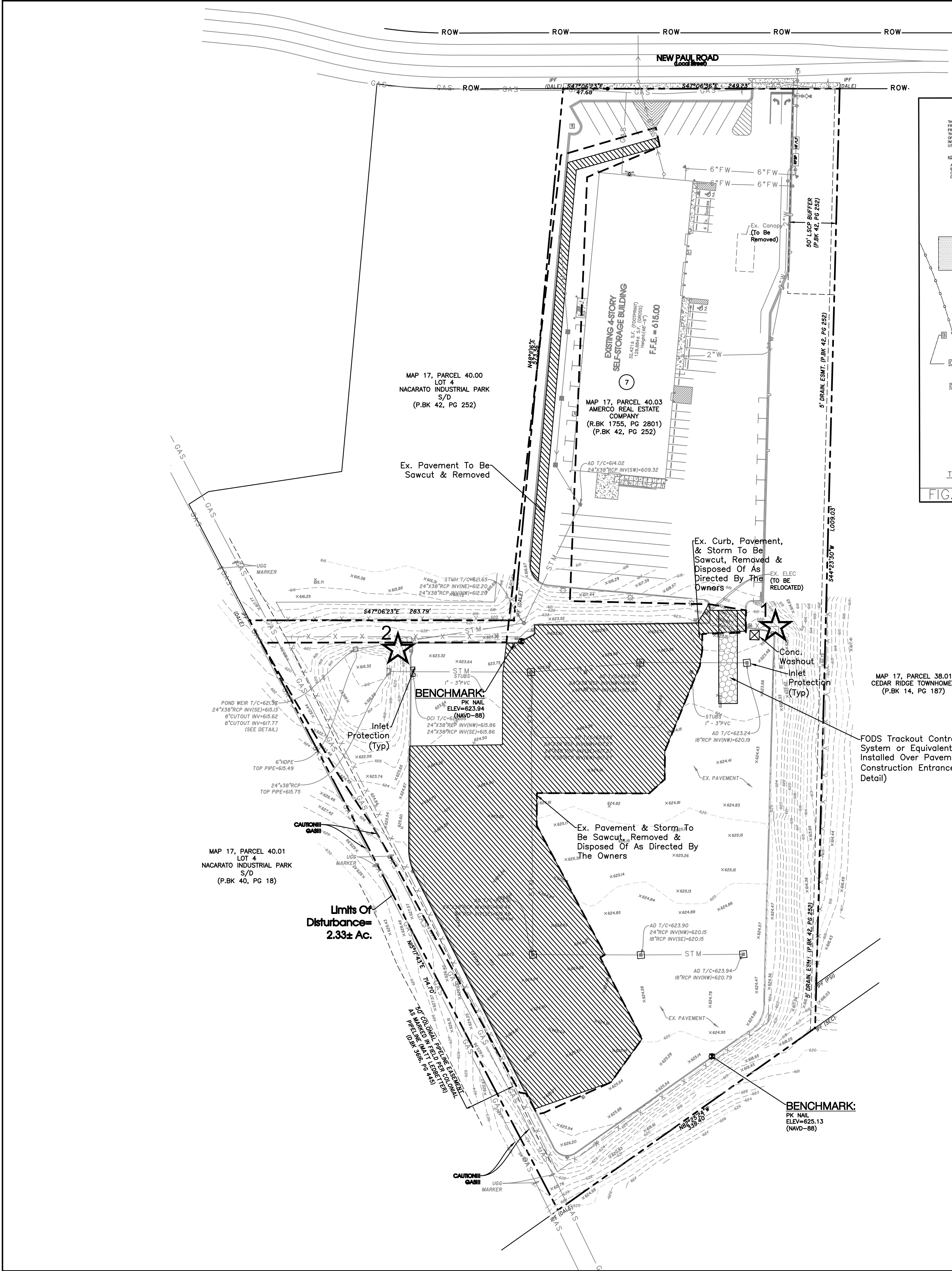
Master Plan

C0.2

REVIEW SET
(Not intended for construction)

REVISED: 5-20-2024: PC Comments

DRAWN: SJA/CFB3
DATE: 12-29-2023
CHECKED: MAT, MPL
FILE NAME: 19084uhoul2.dwg
SCALE: 1"=60'
JOB NO. 19084
SHEET:



SWPPP Narrative:
The existing site is located to the west of northwestern end of New Paul Road within Rutherford County in the City of La Vergne. The project site is a 10.00 Acre project and generally sheet flows from the southwest to the northeast. The site has been designed to discharge to existing downstream conveyance system to the northeast.

The existing soils on site consist of approximately 60.7% Egan Silt Loam and Talbott Silty Clay Loam categorized as type C hydrologic soil group and 39.3% Gladeville-Rock outcrop Complex categorized as type D hydrologic soil group per published information by the National Resources Conservation Service. The pre-developed site has a runoff curve number of 85. The proposed improvements will increase the runoff curve number to 93.

During demolition and mobilization, the sediment and stormwater runoff will be controlled with certain Best Management Practices (BMPs). Silt fence and erosion eel will be installed on the downslope sides of the site. The storm inlets will be protected with silt fence inlet protection until the stone base and pavements can be installed. A stone construction entrance will be installed upon mobilization of site to limit the tracking of mud and sediment onto the adjacent pavements and roadways. Gravel check dams will be provided in the existing swale. Covered dumpsters will be on site for disposal of trash and other debris. Paint and other potentially hazardous chemicals will be stored inside the building or otherwise approved weatherproof container. The contractor purchasing the materials will be responsible for legally disposing of the container. The contractor purchasing the materials will be responsible for legally disposing of the containers and excess materials in accordance with the manufacturers' recommendations. A washout area will be provided for the concrete trucks as required.

It is the contractor's responsibility during construction to install and maintain all sedimentation and storm water pollution prevention BMPs described above and detailed within the plans at all times, which includes regular removal and disposal of accumulated debris. All erosion and sediment controls must be maintained properly until the site is stabilized. Maintenance must include inspection of all erosion and sediment controls after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair replacement, re-grading, re-seeding, re-mulching and re-netting must be performed immediately. The developer will own and maintain the site after construction has been completed.

Construction Sequence:

1. Stake and/or flag limits of clearing.
2. During preconstruction meeting all erosion & sediment control facilities & procedures shall be discussed.
3. Clear & grub, as necessary, for installation of perimeter controls.
4. Install silt fence perimeter controls as shown on plans.
5. Install construction entrance and concrete washout facility, if conditions are such that mud is collected on vehicle tires, the tires must be cleaned before the vehicles enter the public roadway. The site entrance shall be maintained in a condition that will prevent the tracking or flow of mud onto the public right-of-way. All materials spilled, dropped, washed or tracked from vehicles onto the roadway must be removed promptly.
6. Clear & grub the remaining site as necessary.

General Contractor Shall Install All Initial EPSC Measures Prior To Any Earthwork Beginning.

EXISTING ON-SITE CONDITIONS

COVER	SCS CLASSIFICATION	AREA (Ac)
GRASS	MASS GRADED SITE D SOILS, CN=89	2.47
GRAVEL	MASS GRADED SITE D SOILS, CN=91	1.46
GRASS	MASS GRADED SITE C SOILS, CN=86	5.88
GRAVEL	MASS GRADED SITE C SOILS, CN=89	0.19
		COMPOSITE CN=88

PROPOSED ON-SITE CONDITIONS

COVER	SCS CLASSIFICATION	AREA (Ac)
BUILDING, SIDEWALK, PAVEMENT	PAVED PARKING LOTS, ROOFS, ETC. C-SOILS, CN=98	7.25
GRASS / LANDSCAPING	OPEN SPACE: FAIR CONDITION C-SOILS, CN=79	1.34
GRASS / LANDSCAPING	OPEN SPACE: FAIR CONDITION D-SOILS, CN=84	1.41
		COMPOSITE CN=93

INITIAL OUTFALLS

NUMBER	DESCRIPTION	AREA	SLOPE
1	CONSTRUCTION EXIT	4.76	1.92%
2	CULVERT AT N.E. CORNER	2.68	1.10%
3	NORTH PROPERTY LINE	2.56	3.47%

1★ Outfall



Notes:

Staging Area, Worker Parking & Adjoining Drive To Be Constructed Of Stone.

Staging Area is To Be Kept Litter Free With Daily Cleanup. In Addition, All Stored Materials Are To Be Kept In Organized & Stacked Fashion. An unkempt site will not be permitted, and if debris is stored in areas outside of the designated storage area, City Staff will shut down the job site.

All Construction Signage Is To Be Constructed Of 2-4"x4" Painted Posts.

Sign #1 - Display Surface Can Be No More Than 32 S.F. & Must Be Less Than 9 Ft. Tall.

PROPOSED BMP'S

BMP	TYPE
SEDIMENT CONTROL BARRIER	TEMPORARY, SEDIMENT CONTROL
CONSTRUCTION ENTRANCE	TEMPORARY, SEDIMENT CONTROL
VEGETATION	PERMANENT, EROSION PREVENTION
INLET PROTECTION	TEMPORARY, SEDIMENT CONTROL

Legend:			
EXIST. CONCRETE MONUMENT	BENCHMARK	HANDICAP PARKING SYMBOL	
IRON PIN SET (I.P.S.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
EXIST. SIGN POST		HC SIGN	
EXIST. SEWER CLEANOUT		PROPOSED SIGN POST	
EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD	
EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB & GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE		REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION	
CONCRETE THRUST BLOCK	63.25 X	PROPOSED SPOT ELEVATION	
DOUBLE DETECTOR CHECK VALVE	(63.25) X	EXIST. SPOT ELEVATION	
FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION	
FIRE HYDRANT		CATCH BASIN	
GATE VALVE & BOX		CURB INLET	
WATER METER		AREA DRAIN	
GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE- X- HEADWALL	
EXISTING PHONE	PH		
EXISTING ELECTRIC	OH		
PROPERTY LINE			
EASEMENTS			
RIGHT OF WAY	ROW		
EROSION CONTROL SILT FENCE	SF	SF	
EROSION EEL	E	E	
EXISTING TREELINE			
EXISTING FENCELINE	X	X	
MINIMUM BUILDING SETBACK LINE			
PHASE BOUNDARY			
EXISTING GAS LINE	GAS		
PROPOSED GAS LINE	GAS		
EXISTING STORM	STM		
PROPOSED STORM	STM		
EXISTING CONTOUR LINES	-601-		
PROPOSED CONTOUR LINES	-601-		
EXISTING SANITARY SEWER	SS		
PROPOSED SANITARY SEWER	SS		
EXISTING WATER	W	W	
PROPOSED WATER	W	W	

EPSC Phasing

Initial: Silt Fence Along Downgradient Perimeter Construction Entrance Temp. Conc. Washout

Intermediate: Filter Fabric Inlet Protection Silt Fence To Protect Ditches

Final: Landscaping & Grass Sod Of All Pervious Areas (See Landscaping Plan)

Notes:

Soils Survey Information Referenced Here On Is Taken From The National Resources Conservation Service Web Soil Survey.

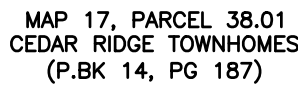
SEC, Inc.
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD
MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MINER@SEC-CIVIL.COM FAX: (615) 895-2567
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U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

REVIEW SET
(Not Intended for Construction)

Existing Conditions/Initial EPSC/Demo Plan

REVISION: 5-20-2024: PC Comments
DRAWN: SJA/CFB3
DATE: 12-29-2023
CHECKED: MAT, MPL
FILE NAME: 19084uhau2.dwg
SCALE: 1"=60'
JOB NO. 19084
SHEET: C1.0



BMP	TYPE
SEDIMENT CONTROL BARRIER	TEMPORARY, SEDIMENT CONTROL
CONSTRUCTION ENTRANCE	TEMPORARY, SEDIMENT CONTROL
VEGETATION	PERMANENT, EROSION PREVENTION
INLET PROTECTION	TEMPORARY, SEDIMENT CONTROL

Know what's **below**.
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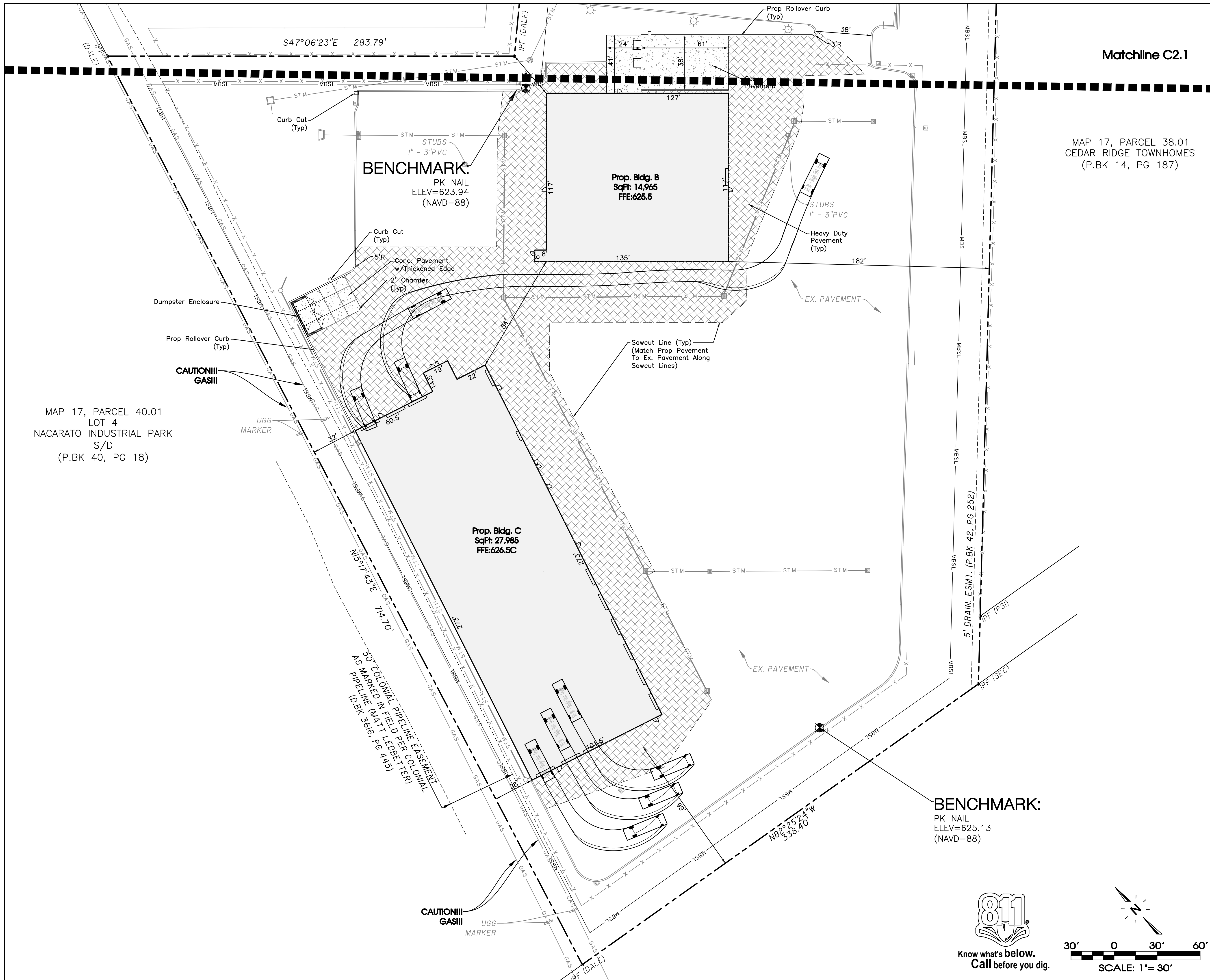
Legend:					
	EXIST. CONCRETE MONUMENT		BENCHMARK		
	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL		
	IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION		
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	EXIST. GAS RISER		CURB & GUTTER		
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW		
	EXIST. WATER METER		TURN LANE ARROWS		
	EXIST. UTILITY POLE		REVISION NUMBER		
	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION		
	POST INDICATOR VALVE		DRAINAGE PIPE DESIGNATION		
	BLOW OFF VALVE		RIP RAP		
	REDUCER		RUNOFF FLOW ARROW		
	REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION		
	CONCRETE THRUST BLOCK	63.25 x	PROPOSED SPOT ELEVATION		
	DOUBLE DETECTOR CHECK VALVE	(63.25) x	EXIST. SPOT ELEVATION		
	FIRE DEPT. CONNECTION	>	SEWER/STORM FLOW DIRECTION		
	FIRE HYDRANT		CATCH BASIN		
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	MANHOLE		TYPE- X- HEADWALL		
EXISTING PHONE		_____ PH _____			
EXISTING ELECTRIC		_____ OH _____			
PROPERTY LINE		-----			
EASEMENTS		-----			
RIGHT OF WAY		_____ ROW _____			
EROSION CONTROL SILT FENCE		_____ SF _____ SF _____			
EROSION EEL		_____ E _____ E _____			
EXISTING TREELINE					
EXISTING FENCELINE		_____ X _____ X _____ X _____ X _____			
MINIMUM BUILDING SETBACK LINE		_____			
PHASE BOUNDARY					
EXISTING GAS LINE		_____ GAS _____			
PROPOSED GAS LINE		_____ GAS _____			
EXISTING STORM		_____ STM _____			
PROPOSED STORM		_____ STM _____			
EXISTING CONTOUR LINES		-----601-----			
PROPOSED CONTOUR LINES		-----601-----			
EXISTING SANITARY SEWER		_____ SS _____			
PROPOSED SANITARY SEWER		-----SS-----			
EXISTING WATER		_____ W _____ W _____			
PROPOSED WATER		_____ W _____ W _____			

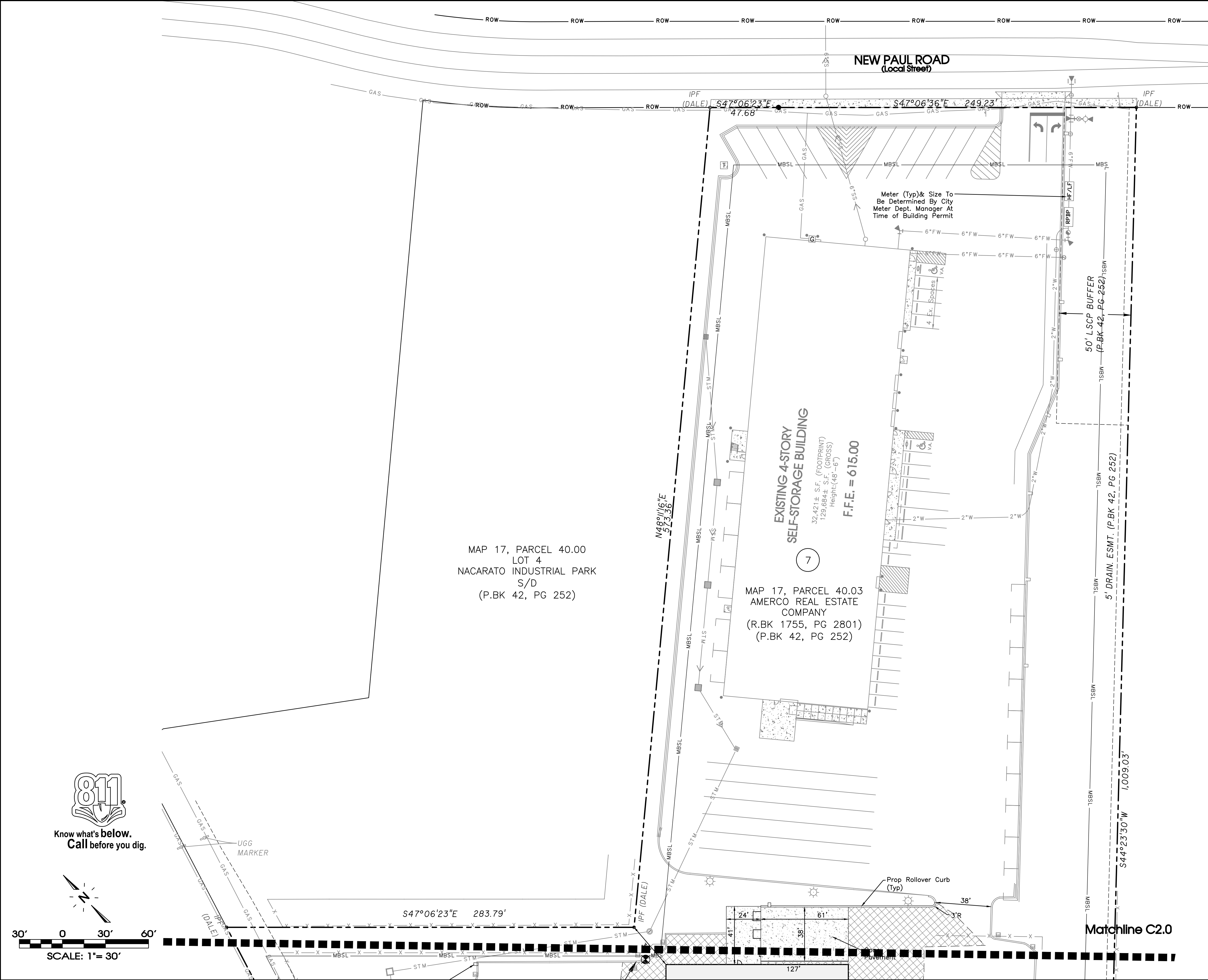
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Initial:	Silt Fence Along Downgradient Perimeter Construction Entrance Temp. Conc. Washout
Intermediate:	Filter Fabric Inlet Protection Silt Fence To Protect Ditches
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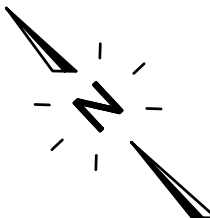
U-Haul Phase 2	
503 New Paul Road	
LaVergne, Tennessee	
Intermediate EPSC Plan	
CL1	
19084	
SHEET:	
JOB NO.	
SCALE:	
1" = 60'	
FILE NAME:	
19084uhaul2.dwg	
CHECKED:	
MAT, MPL	
DRAWN: SJA/CFB3	
DATE: 12-29-2023	
REVISED: 5-20-2024: PG Comments	

[illegible][illegible]





Know what's below.
Call before you dig.



SCALE: 1"= 30'

Legend:

	EXIST. CONCRETE MONUMENT		BENCHMARK
	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL
	IRON PIN FOUND (I.P.F.)		VAN ACCESSIBLE HANDICAP DESIGNATION
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	EXIST. SEWER CLEANOUT		PROPOSED SIGN POST
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	EXIST. GAS RISER		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. UTILITY POLE		REVISION NUMBER
	EXIST. FIRE HYDRANT		DRAINAGE STRUCTURE DESIGNATION
	POST INDICATOR VALVE		DRAINAGE PIPE DESIGNATION
	BLOW OFF VALVE		RIP RAP
	REDUCER		RUNOFF FLOW ARROW
	REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION
	CONCRETE THRUST BLOCK		PROPOSED SPOT ELEVATION
	DOUBLE DETECTOR CHECK VALVE		EXIST. SPOT ELEVATION
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION
	FIRE HYDRANT		CATCH BASIN
	GATE VALVE & BOX		CURB INLET
	WATER METER		AREA DRAIN
	GAS METER		HEADWALL
	GREASE TRAP		WINGED HEADWALL
	EXTERIOR CLEANOUT EOC		CONCRETE SWALE
	MANHOLE		TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E
EXISTING TREE LINE	
EXISTING FENCE LINE	X X X X
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	GAS
PROPOSED GAS LINE	GAS
EXISTING STORM	STM
PROPOSED STORM	STM
EXISTING CONTOUR LINES	-601-
PROPOSED CONTOUR LINES	-601-
EXISTING SANITARY SEWER	SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	W W
PROPOSED WATER	W W

Owner/Developer:
Amerco Real Estate Company
2727 N. Central Ave.
Phoenix, AZ 85004-11200

Deed Reference:
Tax Map 17, Parcel 40.03
R.Bk 42, Pg 252
R.Bk 1755 Pg 2801

Yard Requirements:
Front Building Setback: 40'
Side Building Setback: 20'
Rear Building Setback: 15'

Existing Use: Vacant
Intended Use: Retail and Self Storage/Mini-Warehousing Equipment Rental & RV Storage. (Special Use Permit Previously Approved)

Land Use Data:
Zoned: I-2
1. 4-Story Building: 2 1-Story Buildings
Building H: Ex. Bldg. A 48' 0"; Bldg. B: 50' 0"; Bldg. C: 23' 2"
Total Floor Area: 172,634 Sq. Ft.
Ex. Building A = 32,421 Sq. Ft. (Footprint) 129,684 Sq. Ft. (Gross)
Prop. Building B = 14,985 Sq. Ft.
Prop. Building C = 27,985 Sq. Ft.
Open Spaces = 2.75 ± Acres
1 Lot on: 10.0 ± Acres

Parking Requirement:
2 Spaces/400 Sq. Ft. Office x 200 Sq. Ft. Office + 1 Space/4,000 Sq. Ft. G.F.A. x 136,584 Sq. Ft. = 36 Spaces Required
Provided: 37 Regular + 2 H.C. = 39 Total Spaces Provided (Existing)

Flood Map No.:
This site lies within Zone X, not in the 100 Year Floodplain, per Community Panel 47149C0105J dated May 9, 2023.

SEC, Inc.
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
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Site Plan

U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

Site Plan

REVISIONS

DATE:	12-29-2023
CHECKED:	MAT, MPL
FILE NAME:	19084uhoul2.dwg
SCALE:	1"=30'
JOB NO.	19084
SHEET:	C2.1

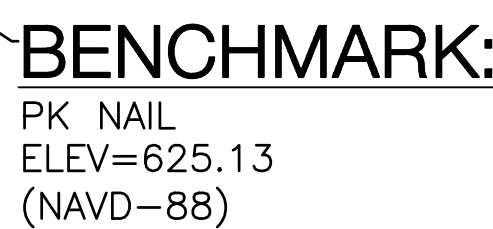


Fire Line Notes:

- 1) Dedicated Fire Water Lines Must Be Inspected And Approved By FMO Prior To Being Covered.
- 2) Upon Completion Of Fire Water Lines, A 2 Hour, 200 PSI And Pressure Test Must Be Witnessed And Approved By FMO.
- 3) FDC To Be 5" Storz Connection.
- 4) An Approved Knox 3200 Series Surface Or Recessed Mounting Lock Box Is Required At Riser Room Access Door.
- 5) An Exterior Electric Horn/Strobe Is Required Above FDC. No Water Gongs.
- 6) All fire line piping from point of service shall be installed by a TN registered sprinkler contractor.
- 7) Waterlines servicing fire hydrant must be in place & operational prior to bringing combustibles onsite.
- 8) Development must be sprinkled per the City of La Vergne's fire sprinkler ordinance

- - Commercial Vault
- - Transformer

NOTE:
No more than 500 feet of open stormwater and/or utility trench will be allowed at one time.



Know what's below.
Call before you dig.

REVISED: 5-20-2024	PC	Comments
DRAWN: SJA/CFB3		
DATE: 12-29-2023		
CHECKED:		
MAT, MPL		
FILE NAME:		
19084unau2.dwg		
SCALE:		
1" = 30'		
JOB NO.		
19084		
SHEET:		

C2.2

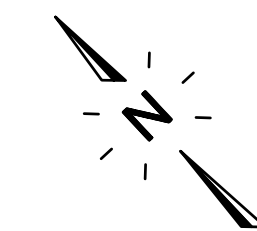


Fire Line Notes:

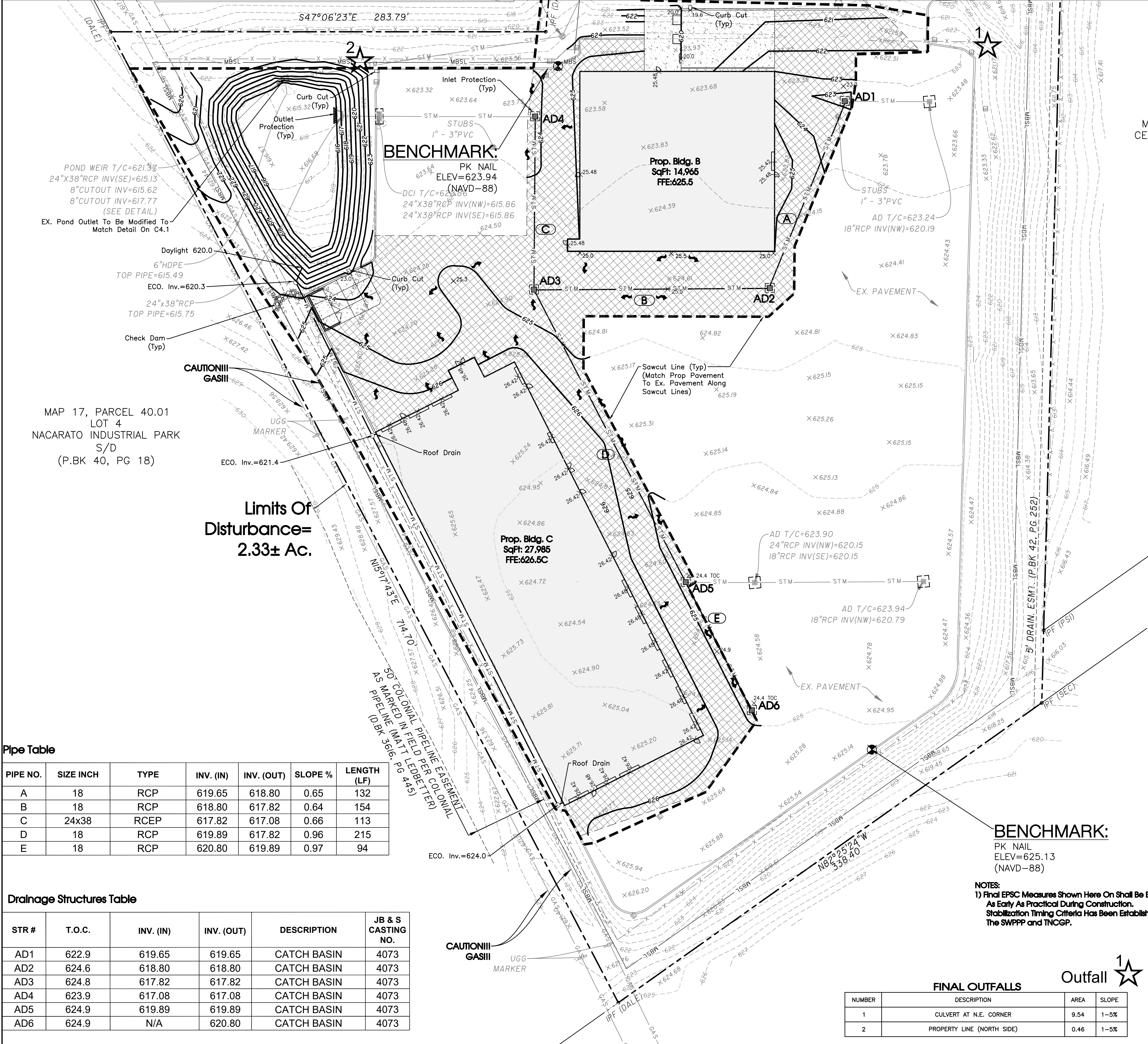
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EXISTING PHONE	_____ PH _____
EXISTING ELECTRIC	_____ OH _____
PROPERTY LINE	=====
EASEMENTS	- - - - -
RIGHT OF WAY	===== ROW =====
EROSION CONTROL SILT FENCE	____ SF _____ SF ____
EROSION EEL	___ E ___ E ___ E ___
EXISTING TREELINE	~~~~~
EXISTING FENCELINE	___ X ___ X ___ X ___ X ___
MINIMUM BUILDING SETBACK LINE	=====
PHASE BOUNDARY	■■■■■■■■■■■■■■■■■■■■■■■■■■■
EXISTING GAS LINE	_____ GAS _____
PROPOSED GAS LINE	===== GAS =====
EXISTING STORM	_____ STM _____
PROPOSED STORM	===== STM =====
EXISTING CONTOUR LINES	- - - - -60'- - - - -
PROPOSED CONTOUR LINES	-----60'-----
EXISTING SANITARY SEWER	_____ SS _____
PROPOSED SANITARY SEWER	===== SS =====
EXISTING WATER	_____ W _____ W _____
PROPOSED WATER	===== W ===== W =====



JOHN F. MINER
REGISTERED ENGINEER
TENN. NO. 12122
STATE OF TENNESSEE



Pipe Table

PIPE NO.	SIZE INCH	TYPE	INV. (IN)	INV. (OUT)	SLOPE %	LENGTH (LF)
A	18	RCP	619.65	618.80	0.65	132
B	18	RCP	618.80	617.82	0.64	154
C	24x38	RCEP	617.82	617.08	0.66	113
D	18	RCP	619.89	617.82	0.96	215
E	18	RCP	620.80	619.89	0.97	94

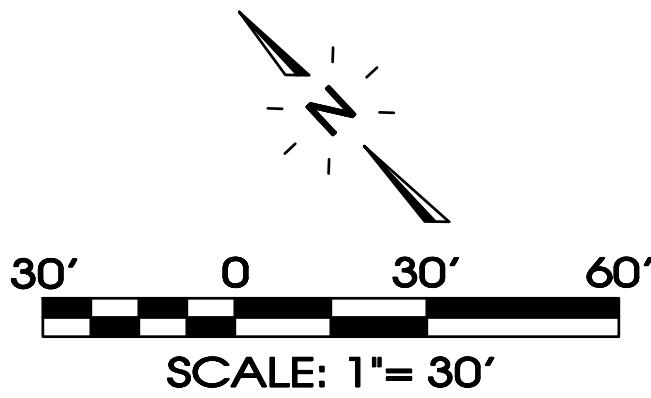
Drainage Structures Table

STR #	T.O.C.	INV. (IN)	INV. (OUT)	DESCRIPTION	JB & S CASTING NO.
AD1	622.9	619.65	619.65	CATCH BASIN	4073
AD2	624.6	618.80	618.80	CATCH BASIN	4073
AD3	624.8	617.82	617.82	CATCH BASIN	4073
AD4	623.9	617.08	617.08	CATCH BASIN	4073
AD5	624.9	619.89	619.89	CATCH BASIN	4073
AD6	624.9	N/A	620.80	CATCH BASIN	4073

Legend:

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PROPOSED SANITARY SEWER	SS
EXISTING WATER	W
PROPOSED WATER	W



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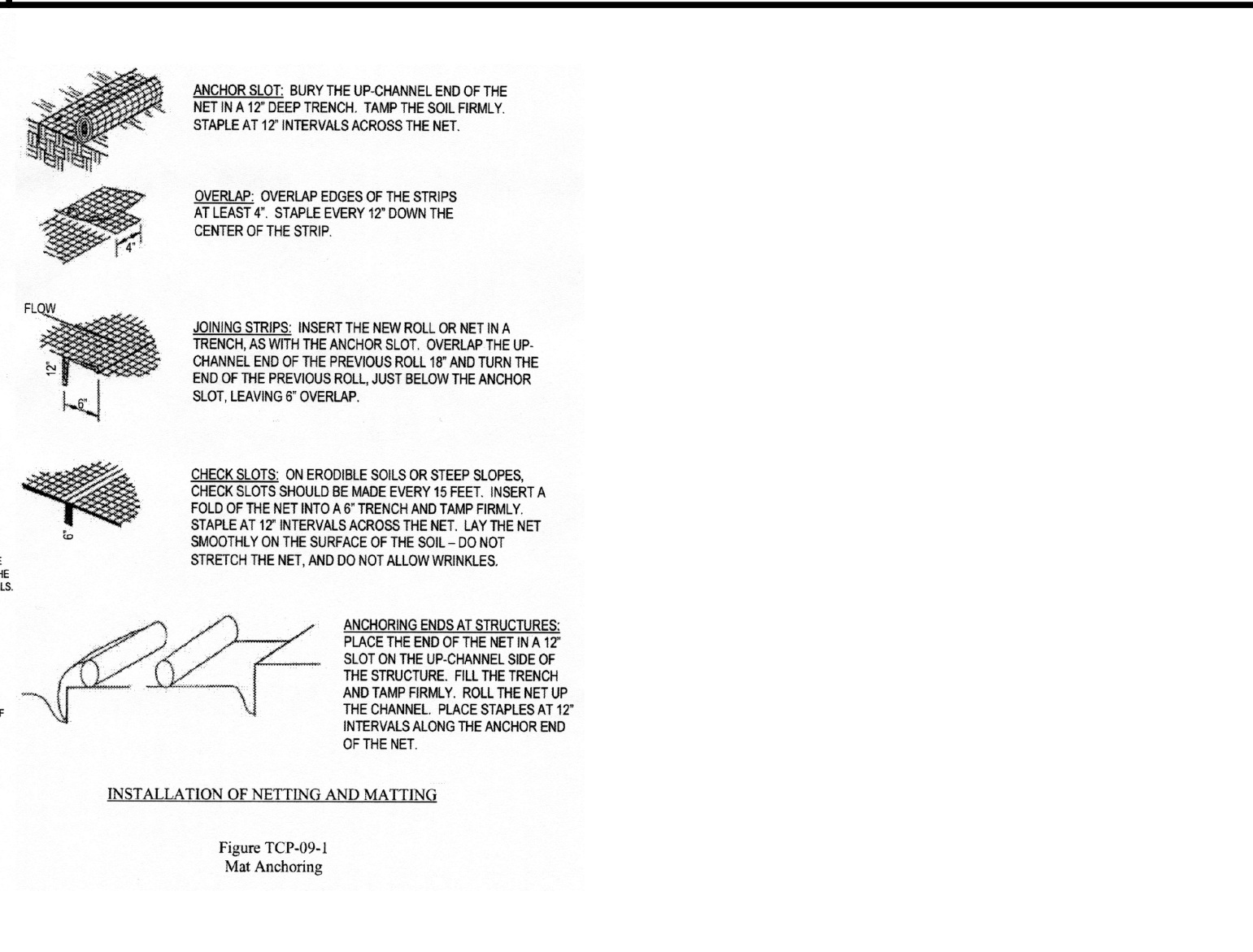
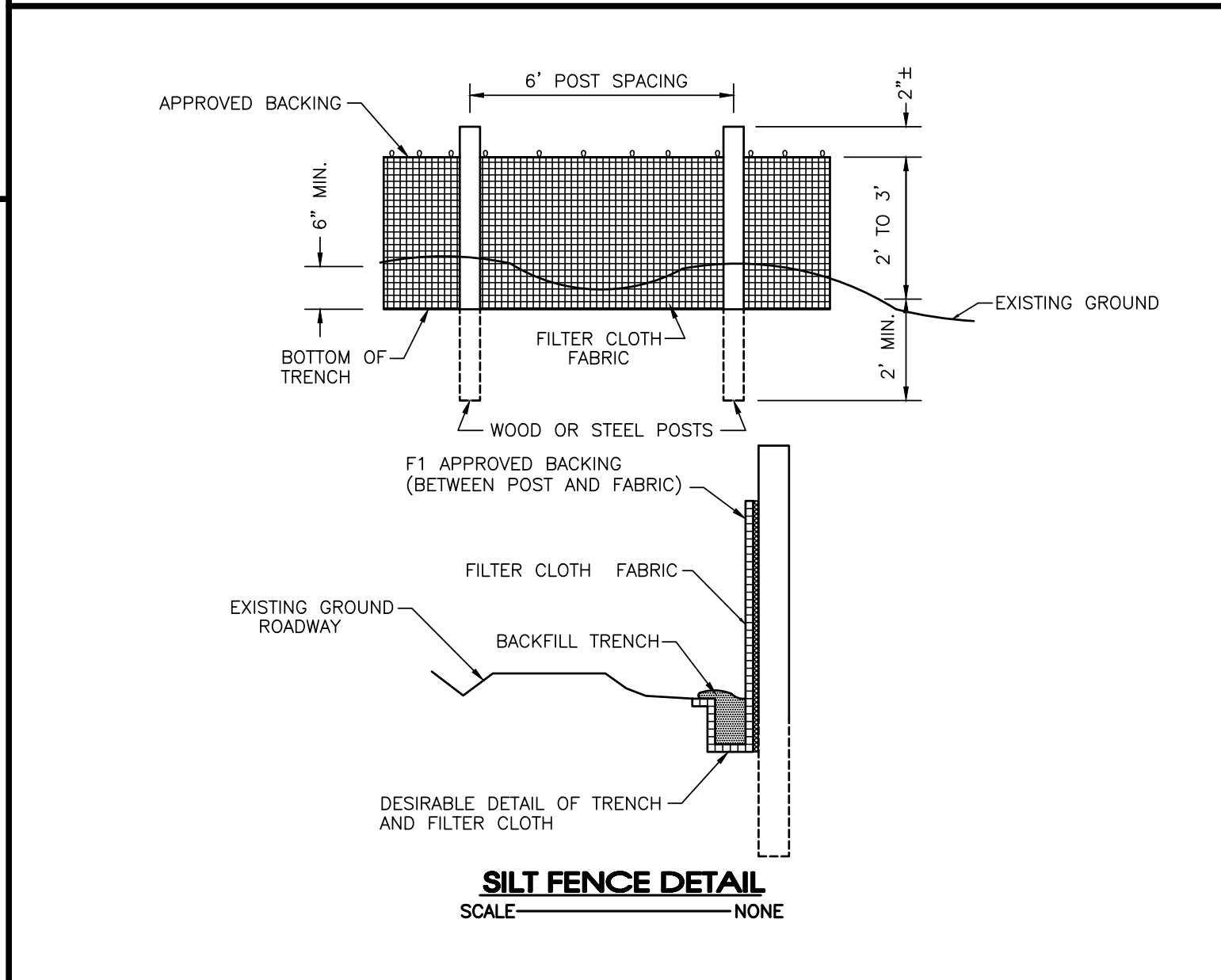
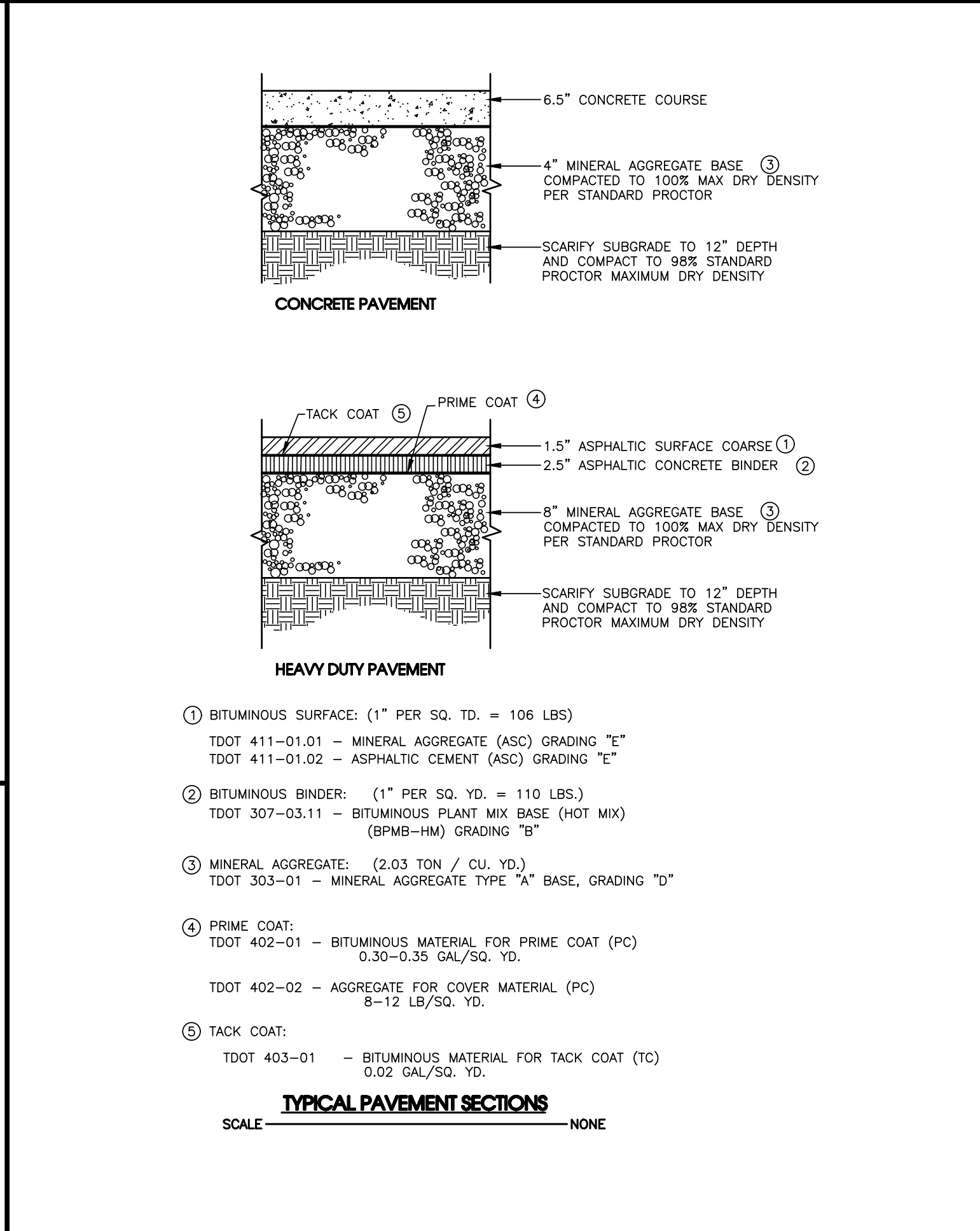
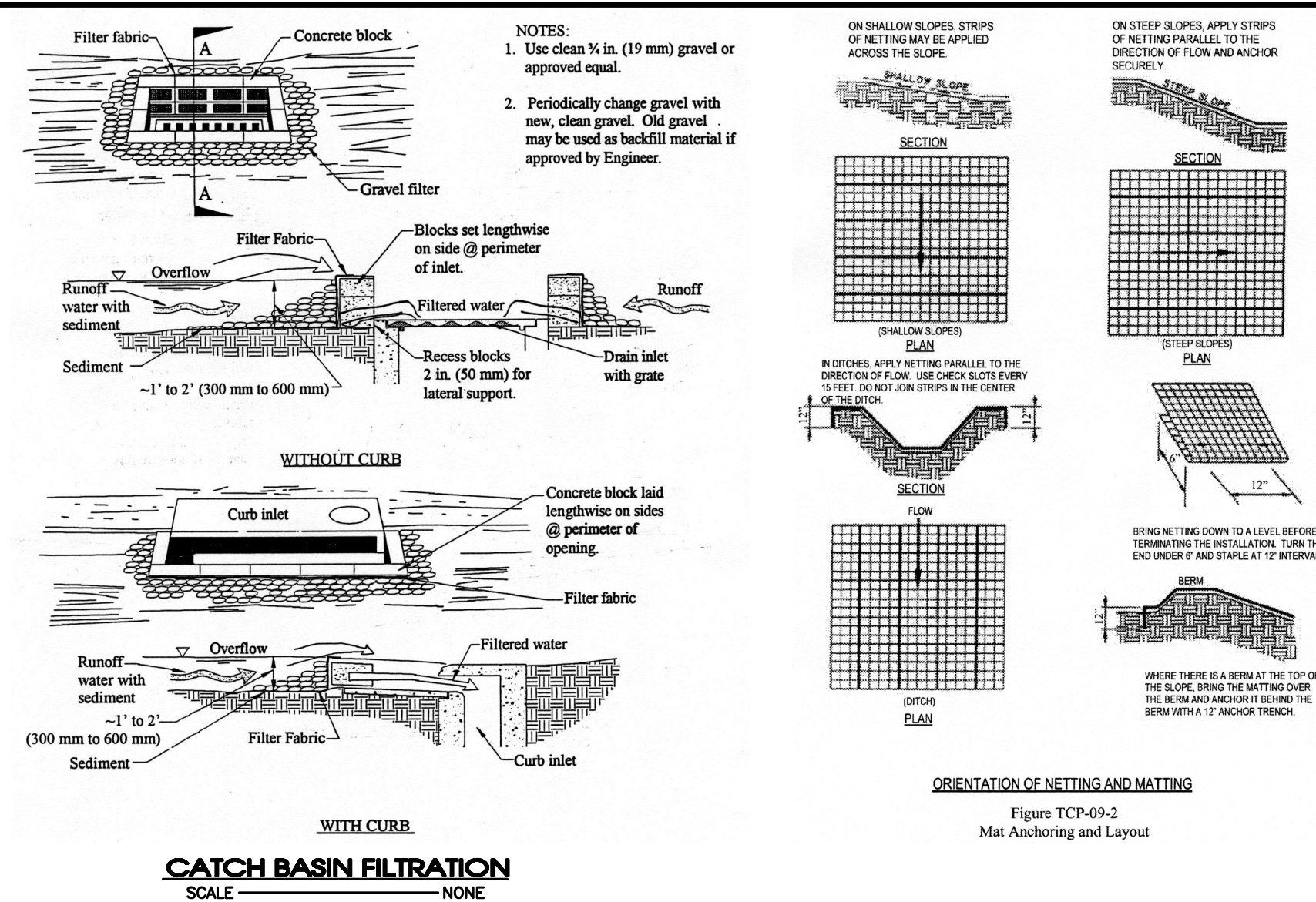
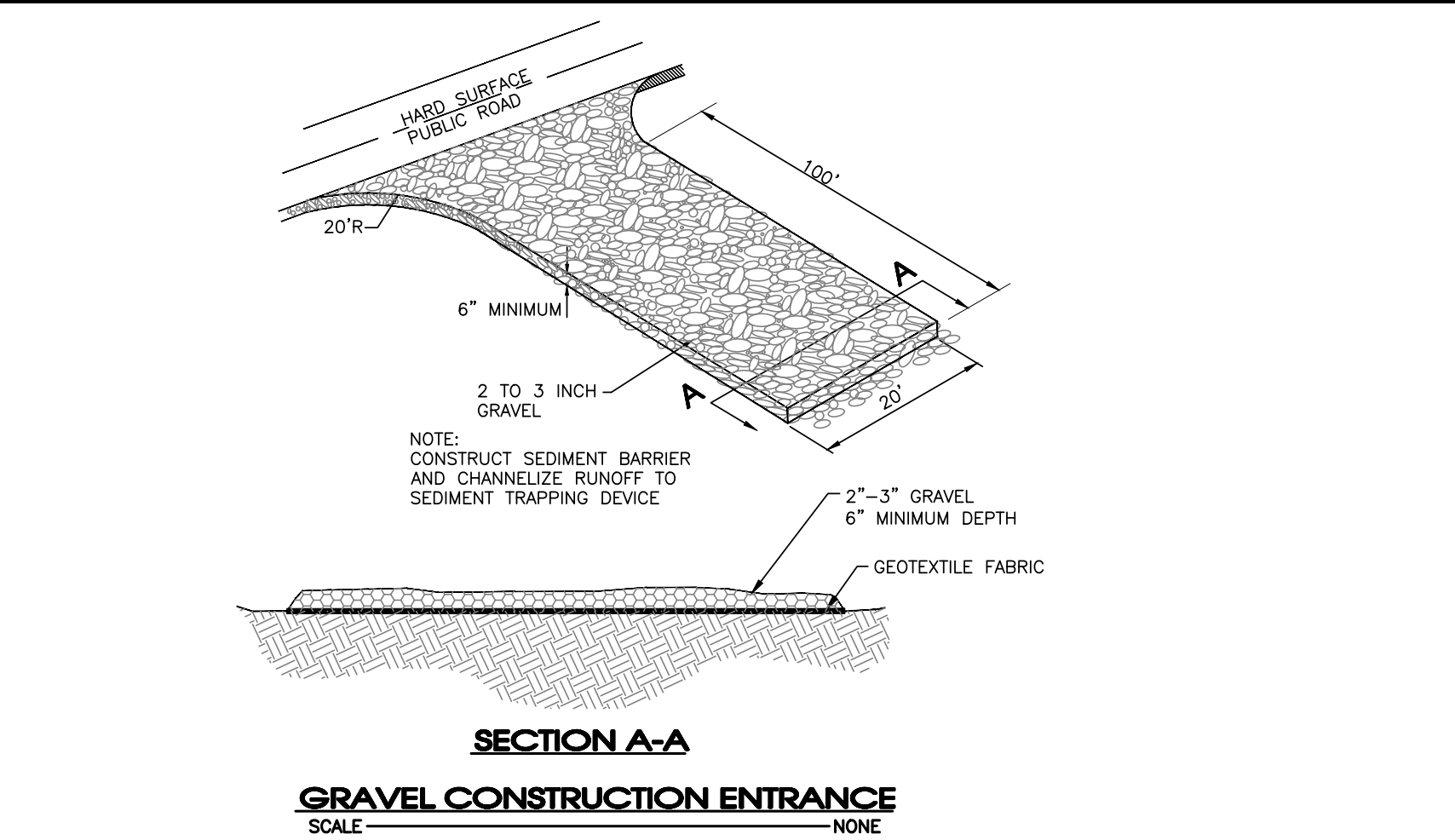
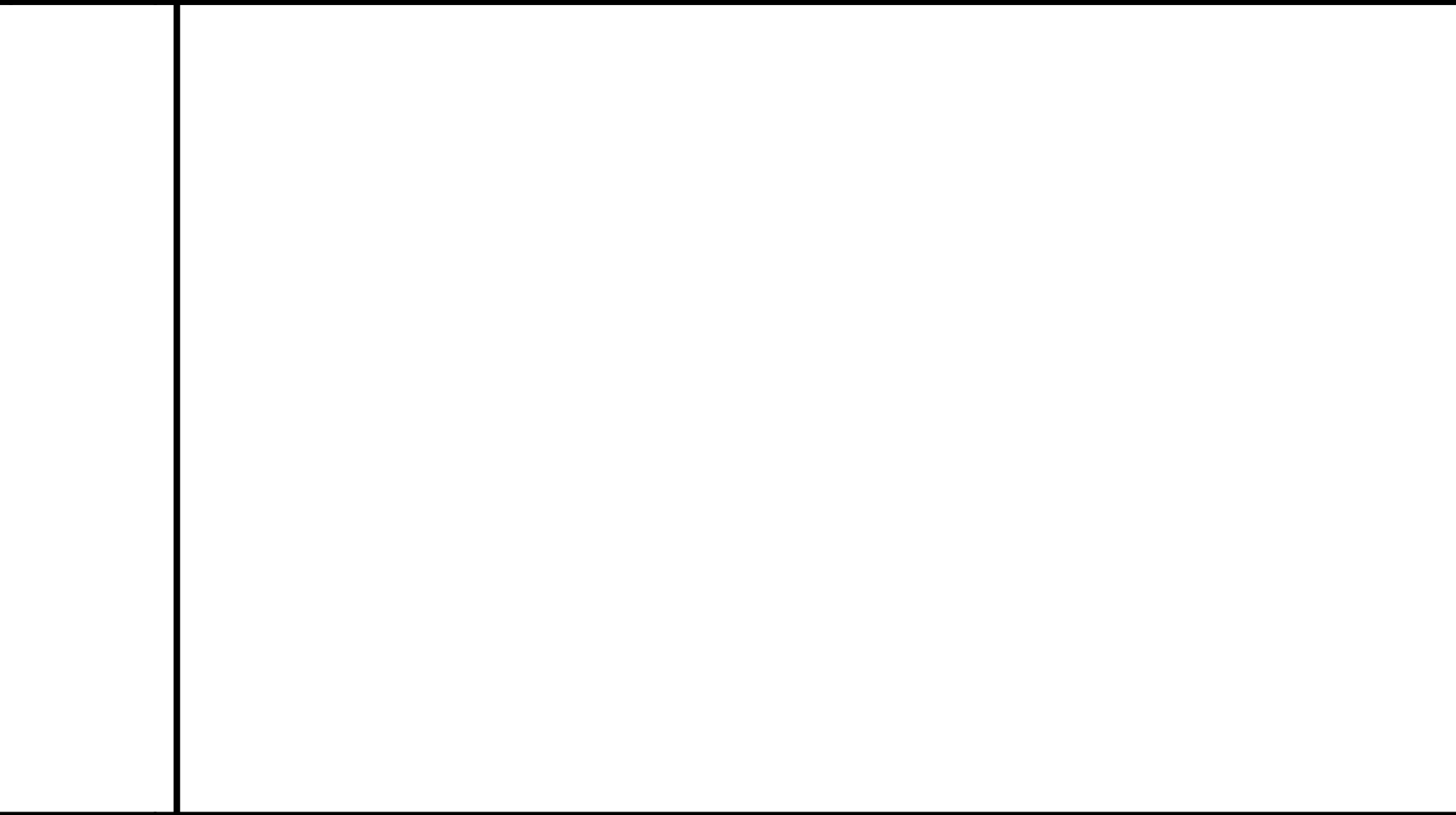
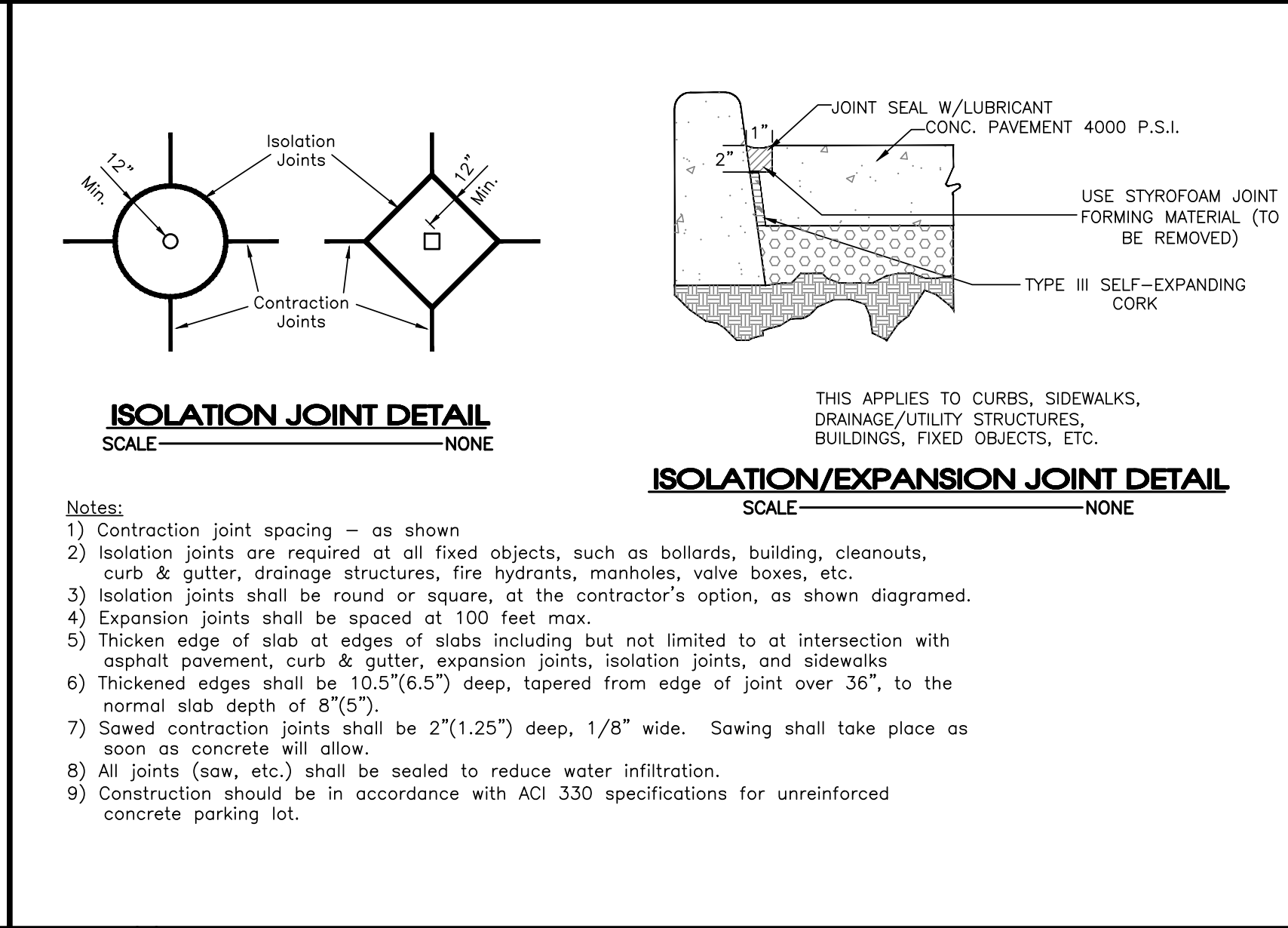
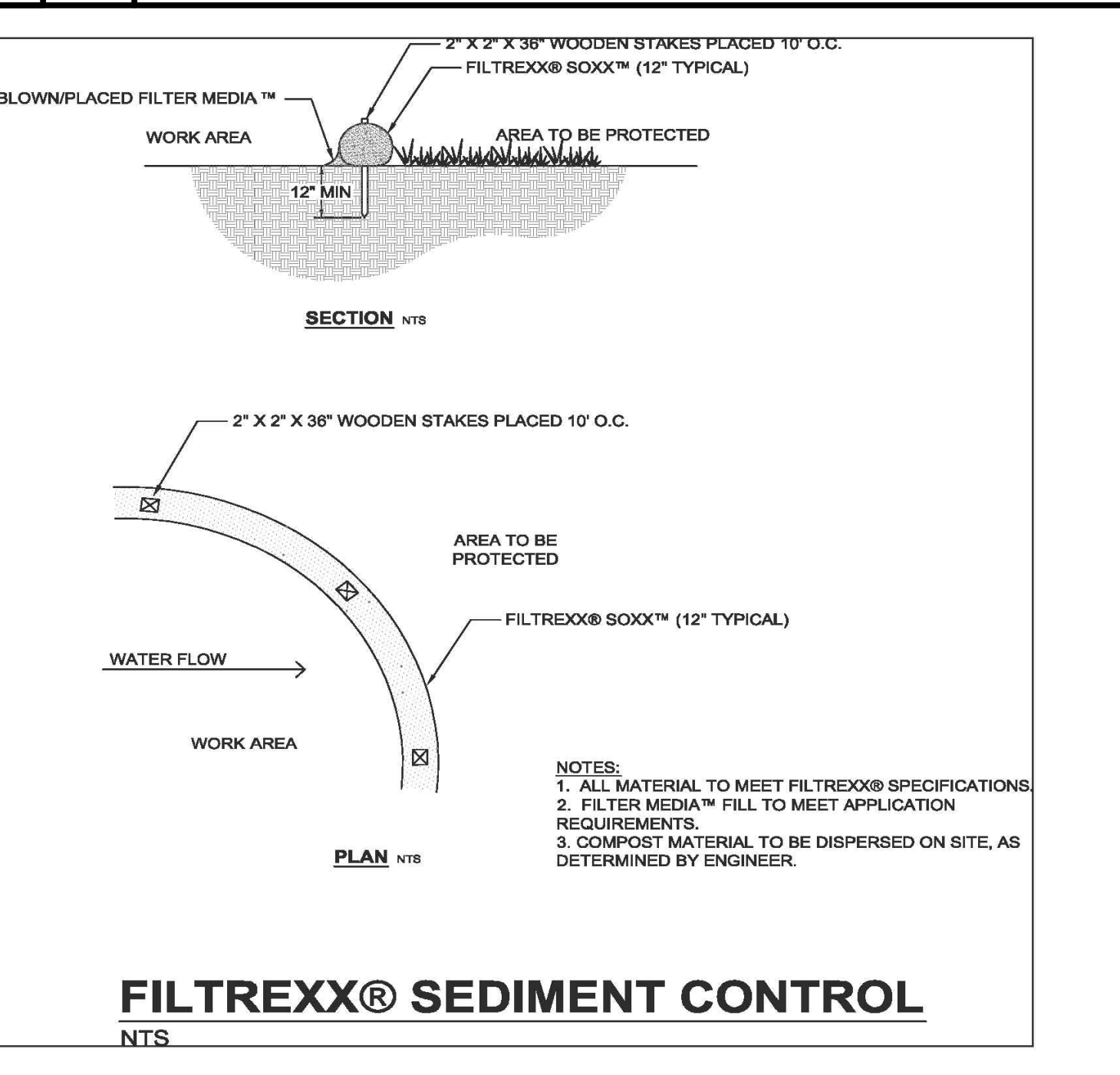
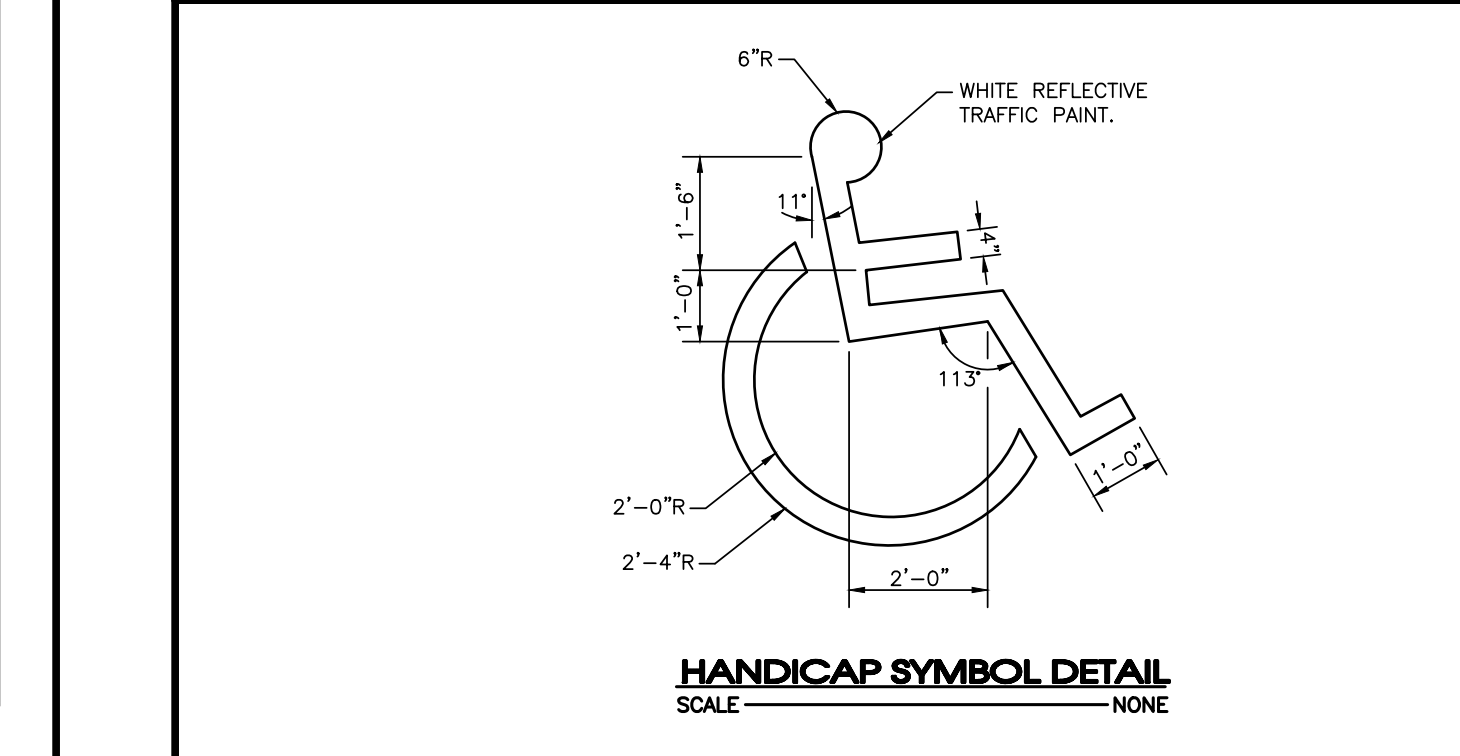
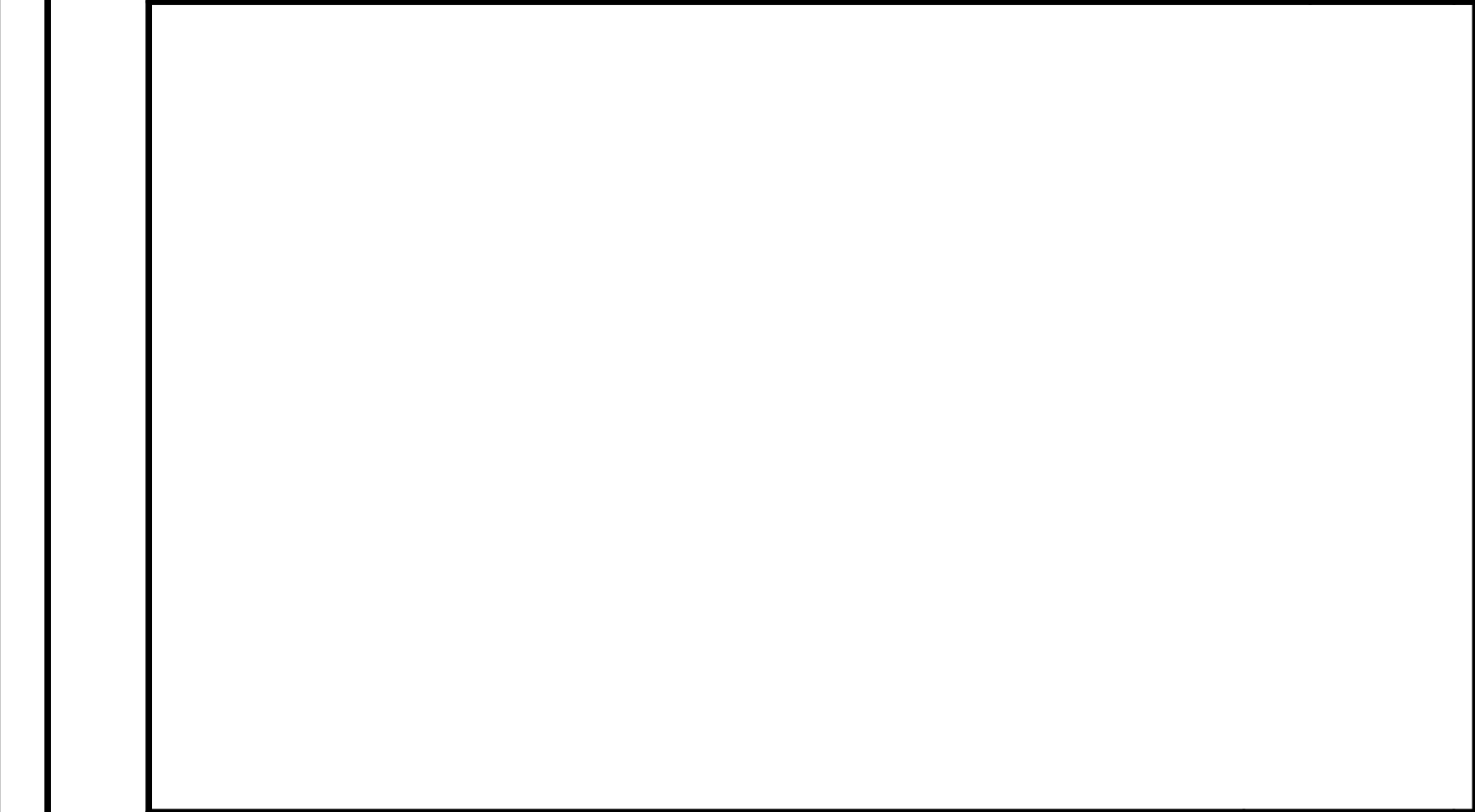
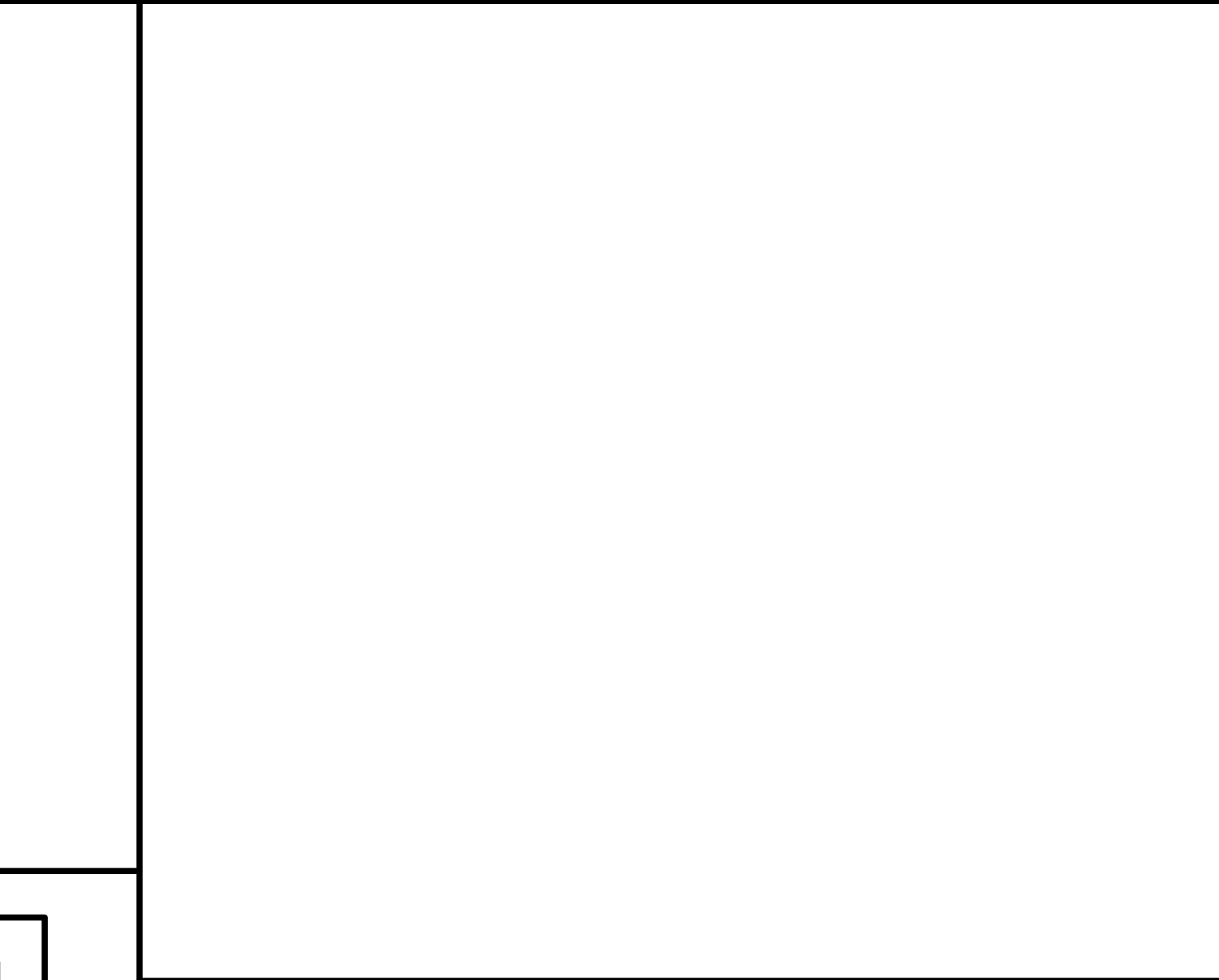
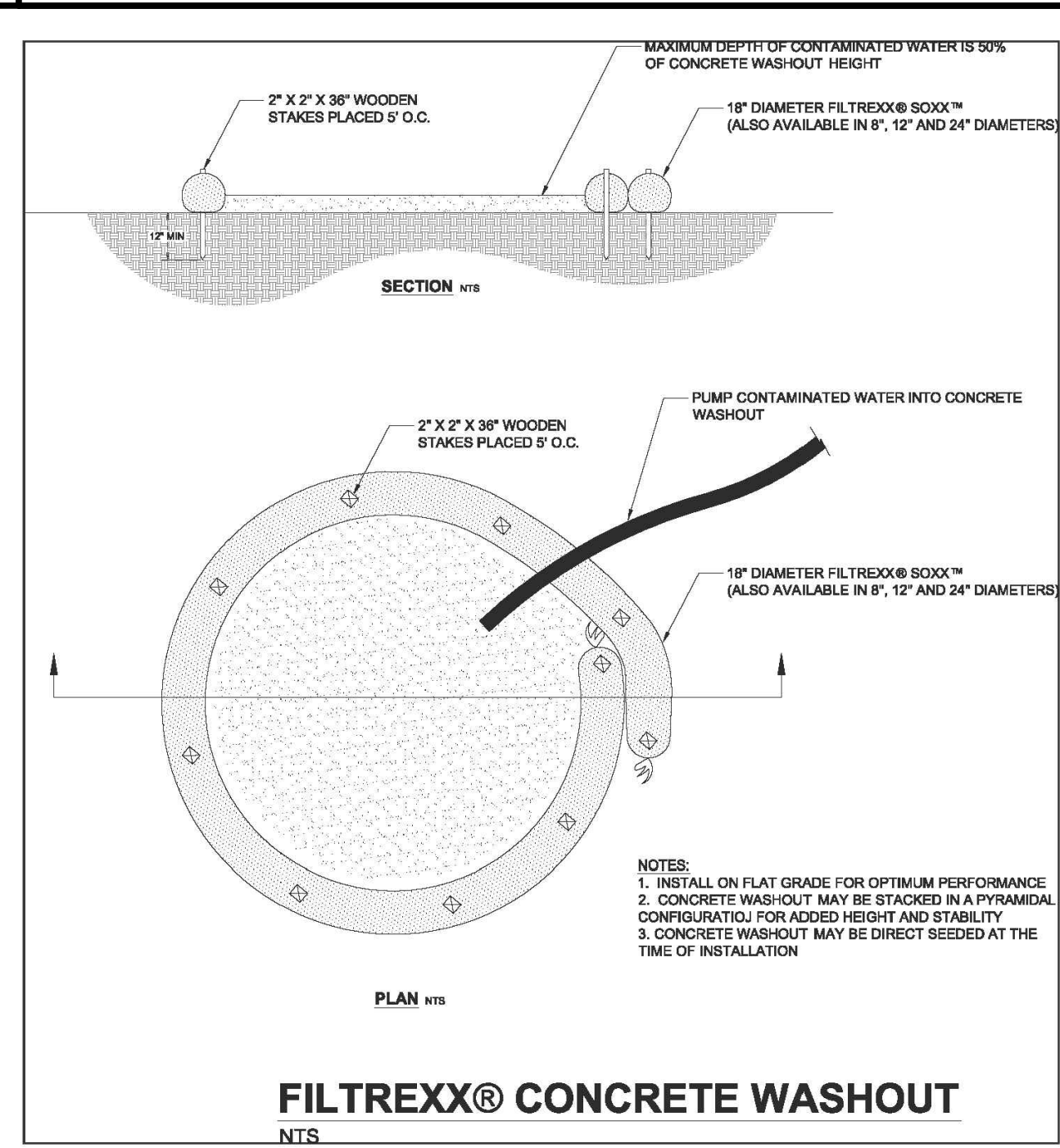
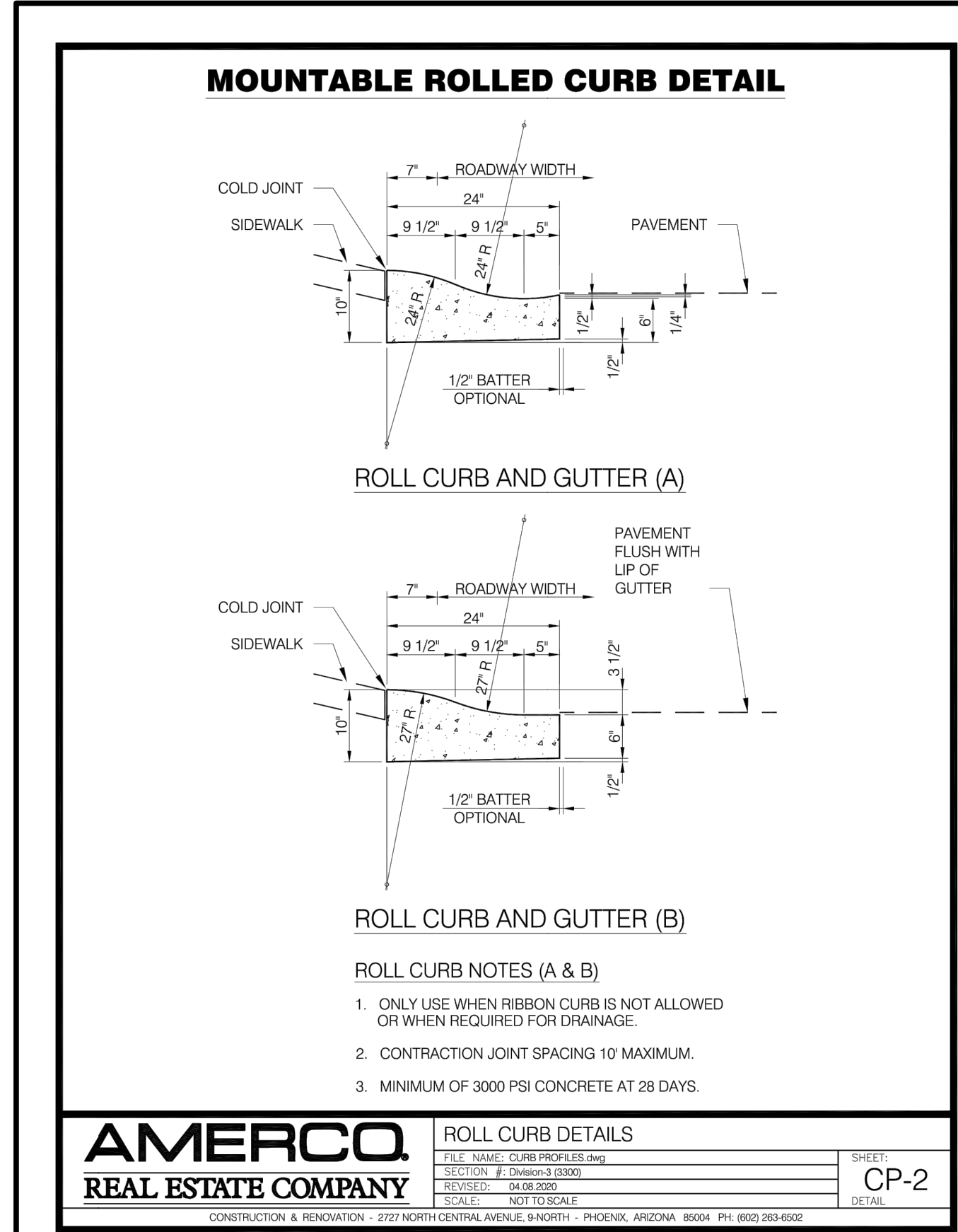
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U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

Grading, Drainage Plan, & Final EPSC

C3.0

REVISION: 5-20-2024: PC Comments
DRAWN: SJA/CFB3
DATE: 12-29-2023
CHECKED: MAT, MPL
FILE NAME: 19084uhau2.dwg
SCALE: 1"=30'
JOB NO. 19084
SHEET:



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F. MINER
REGISTERED PROFESSIONAL ENGINEER
STATE OF TENNESSEE
NO. 0000000000

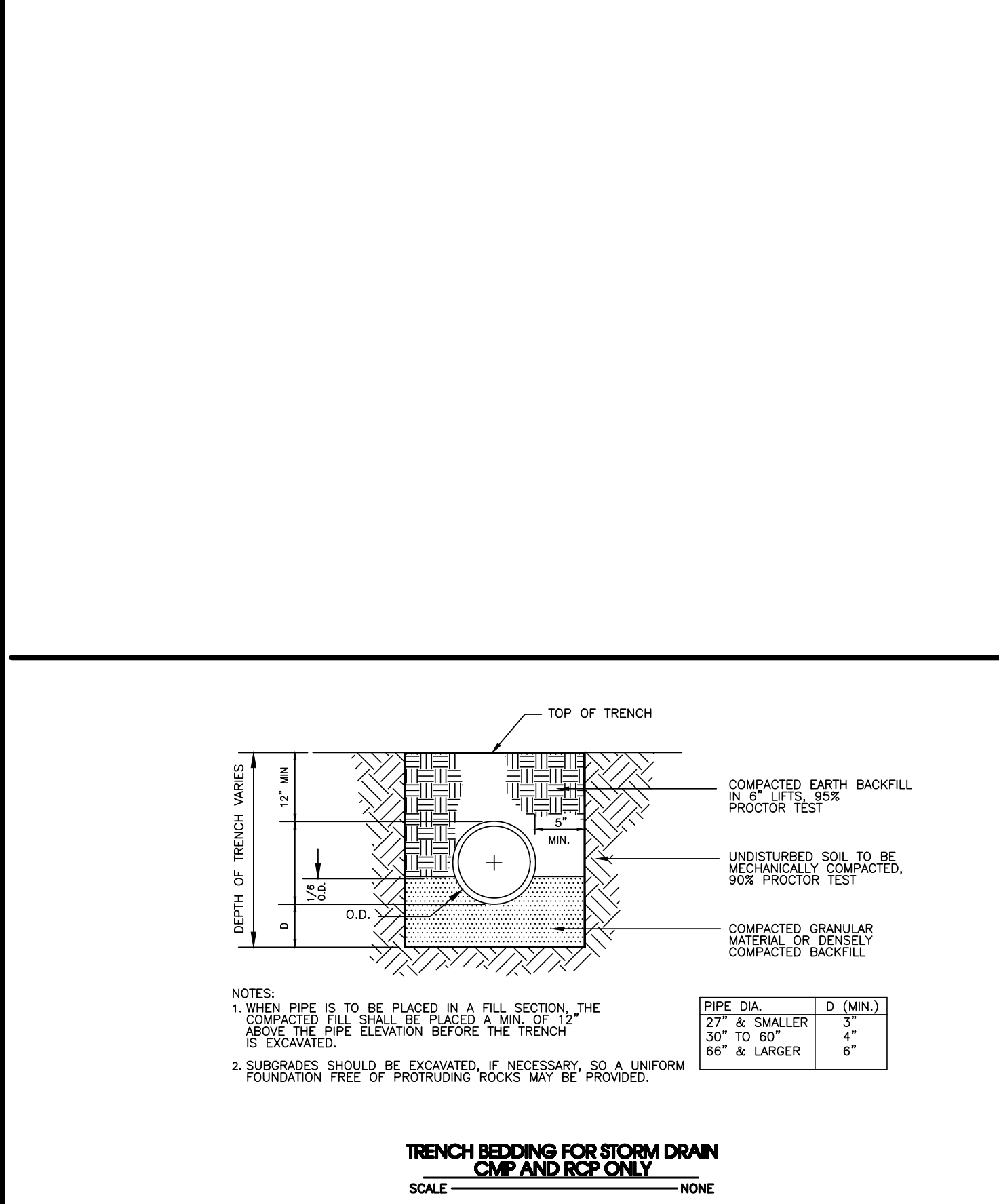
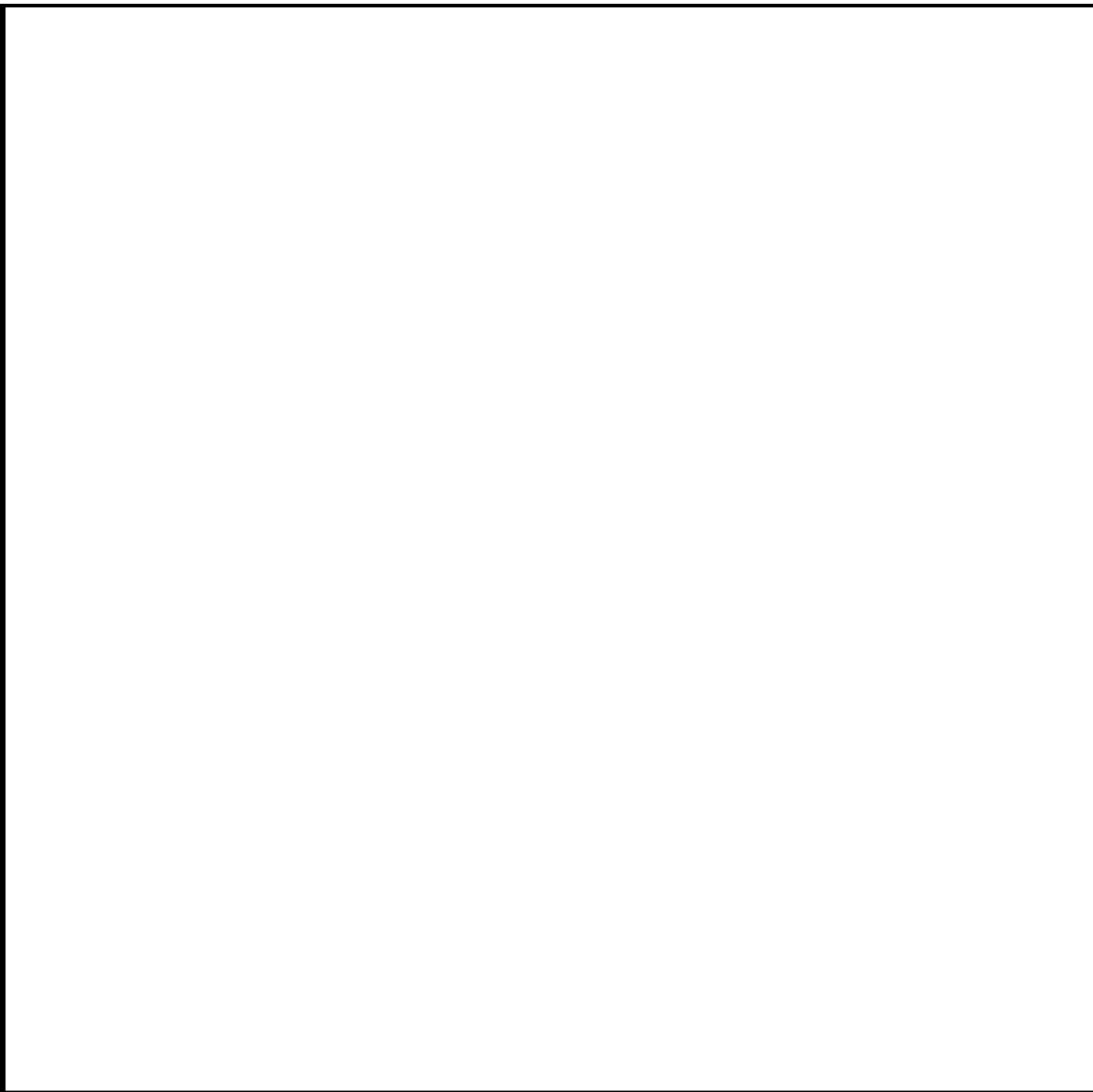
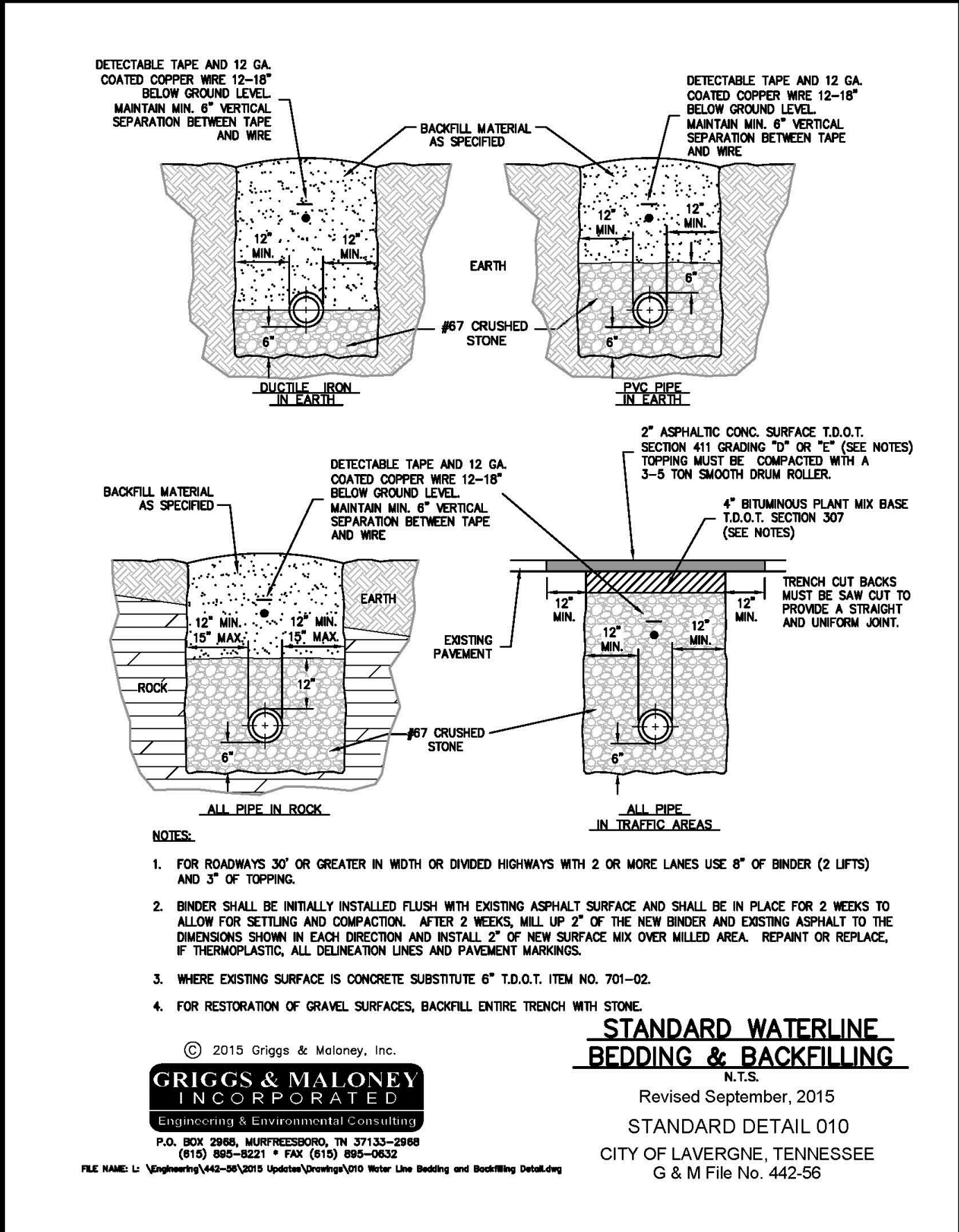
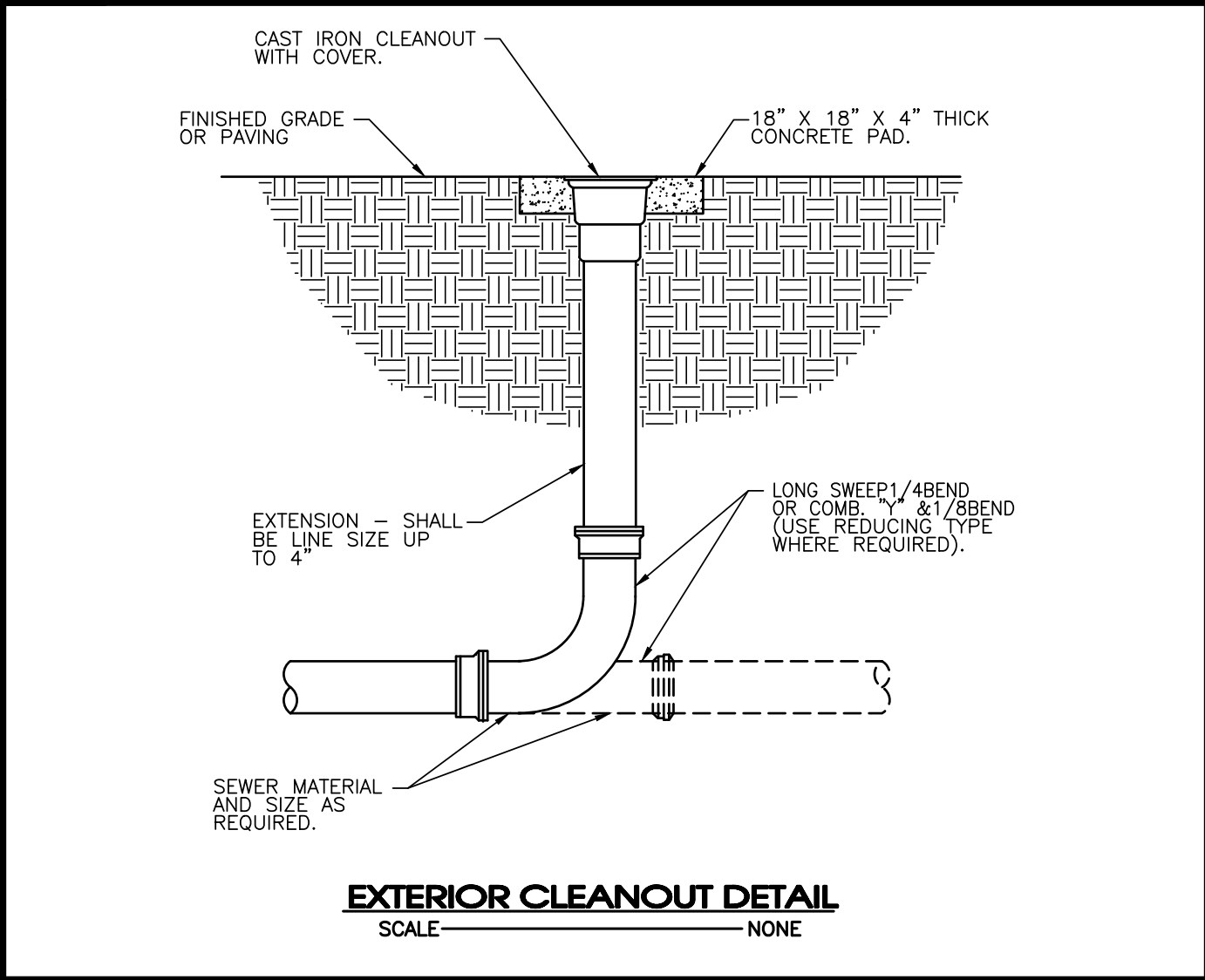
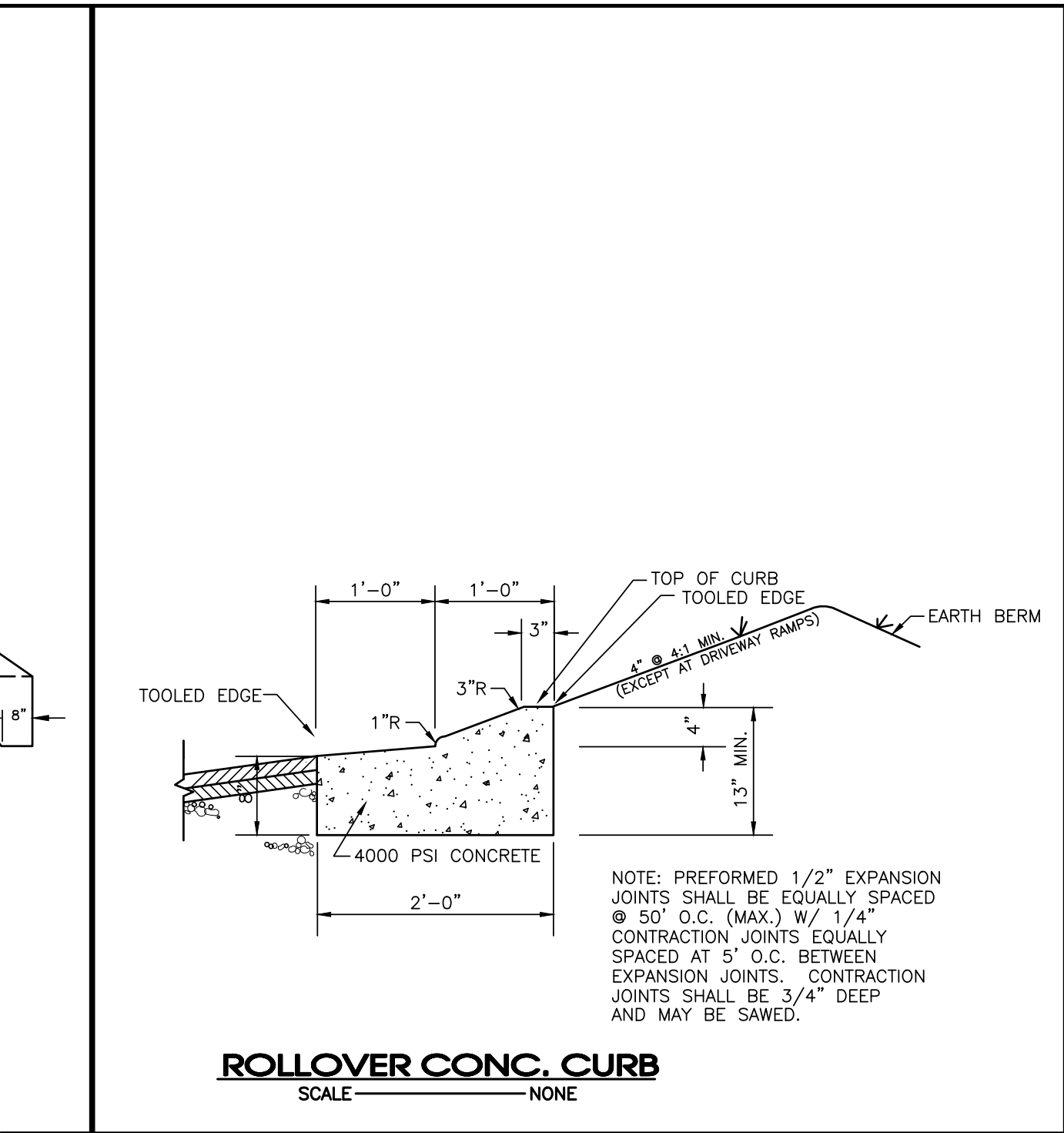
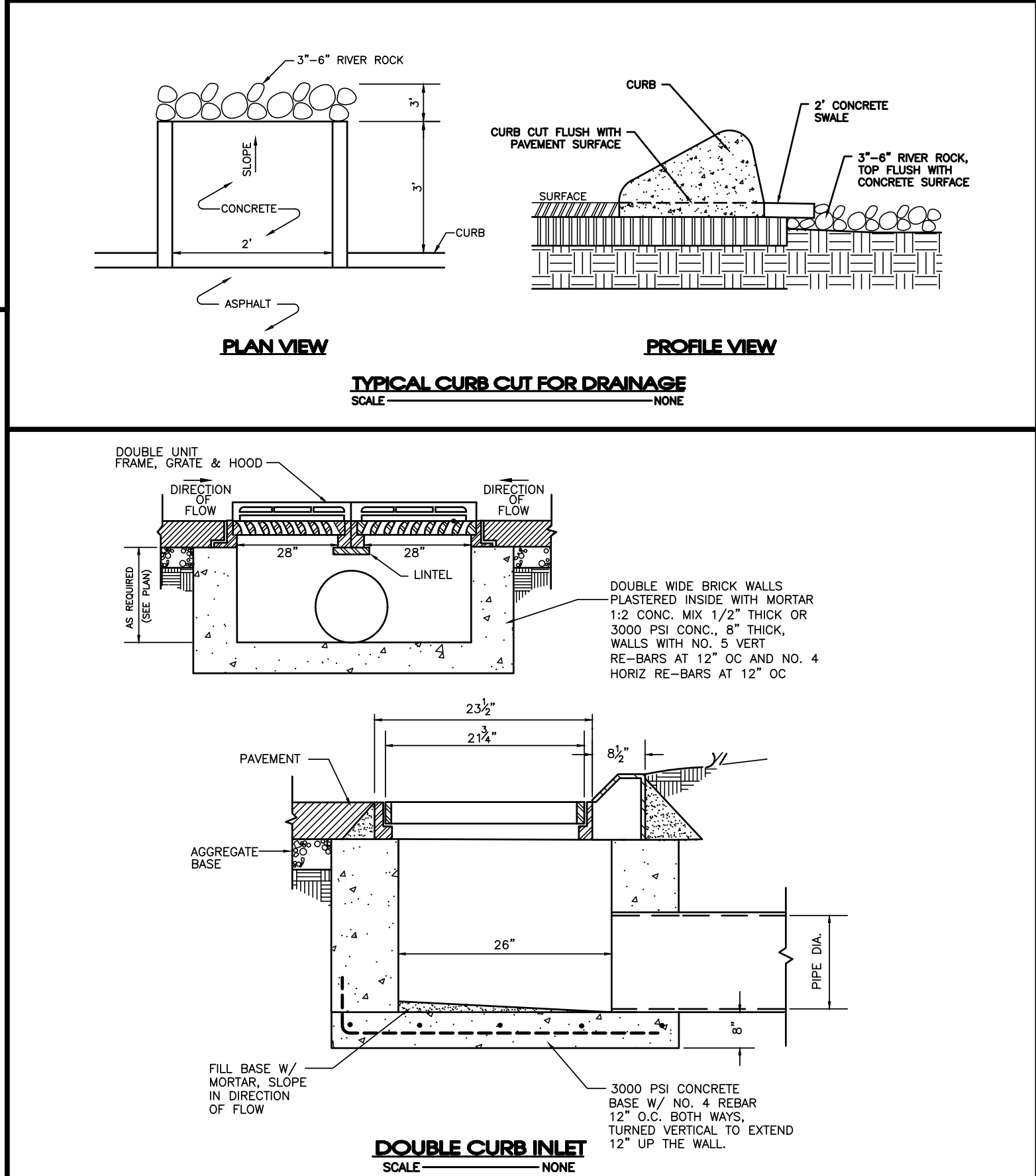
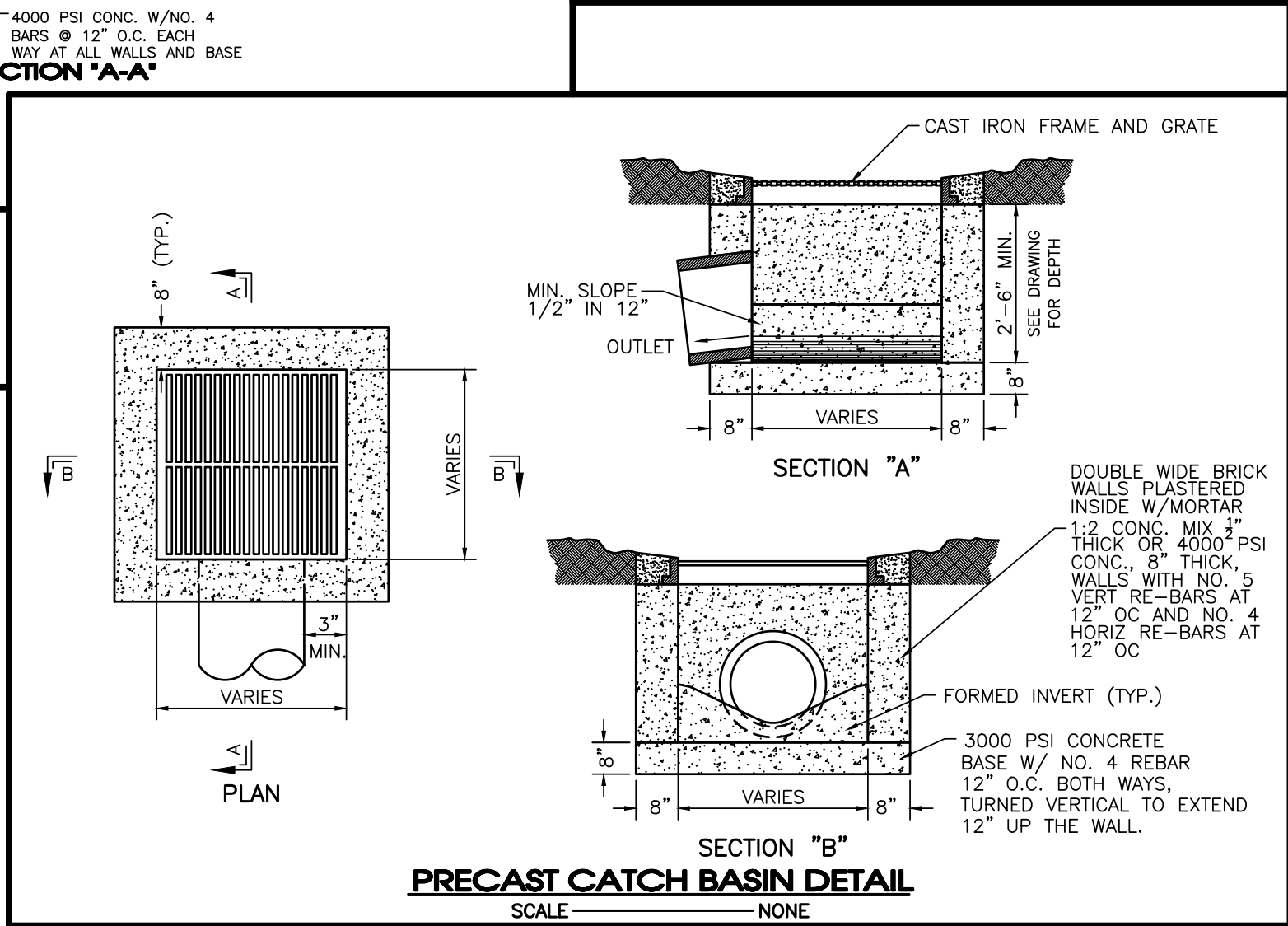
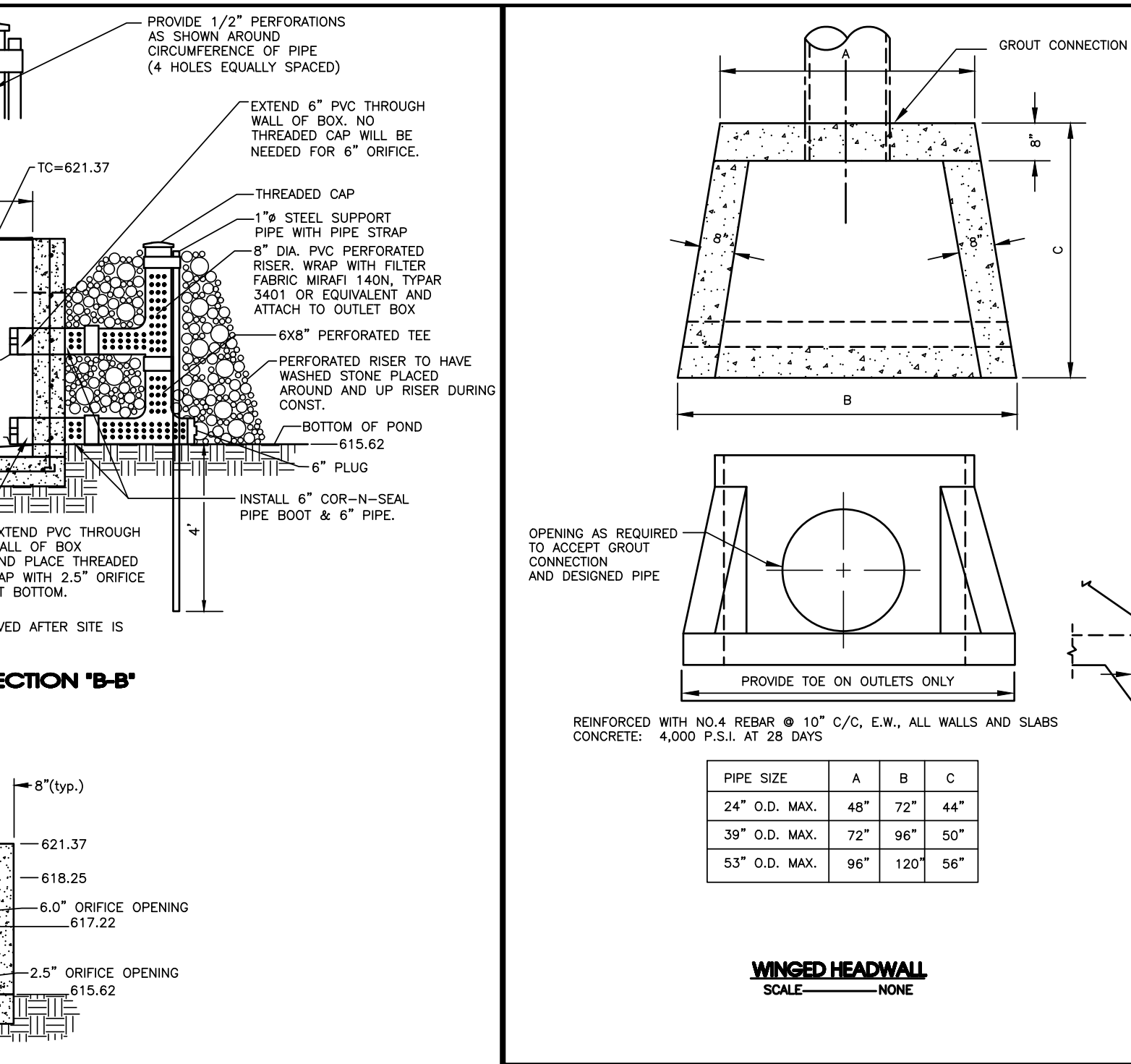
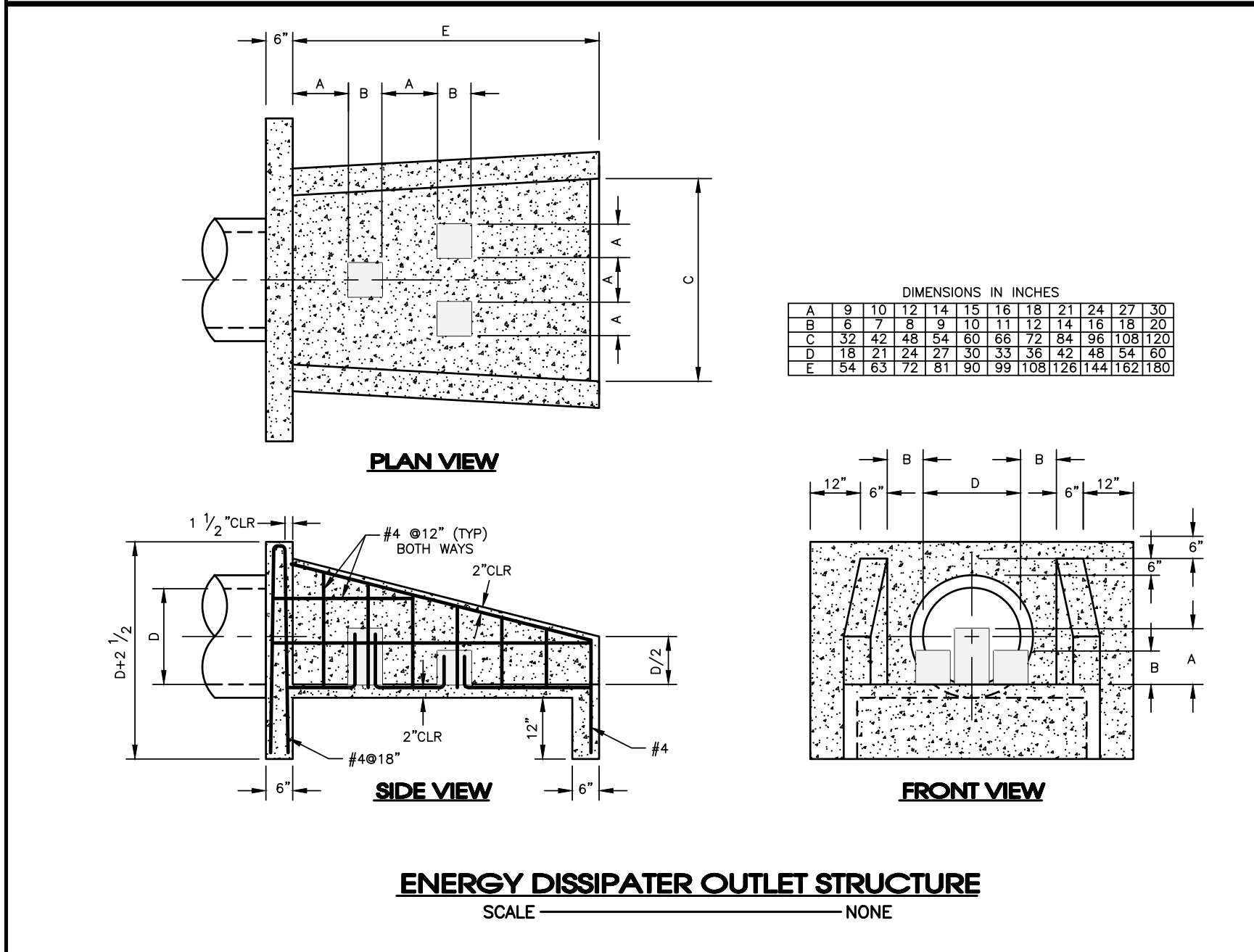
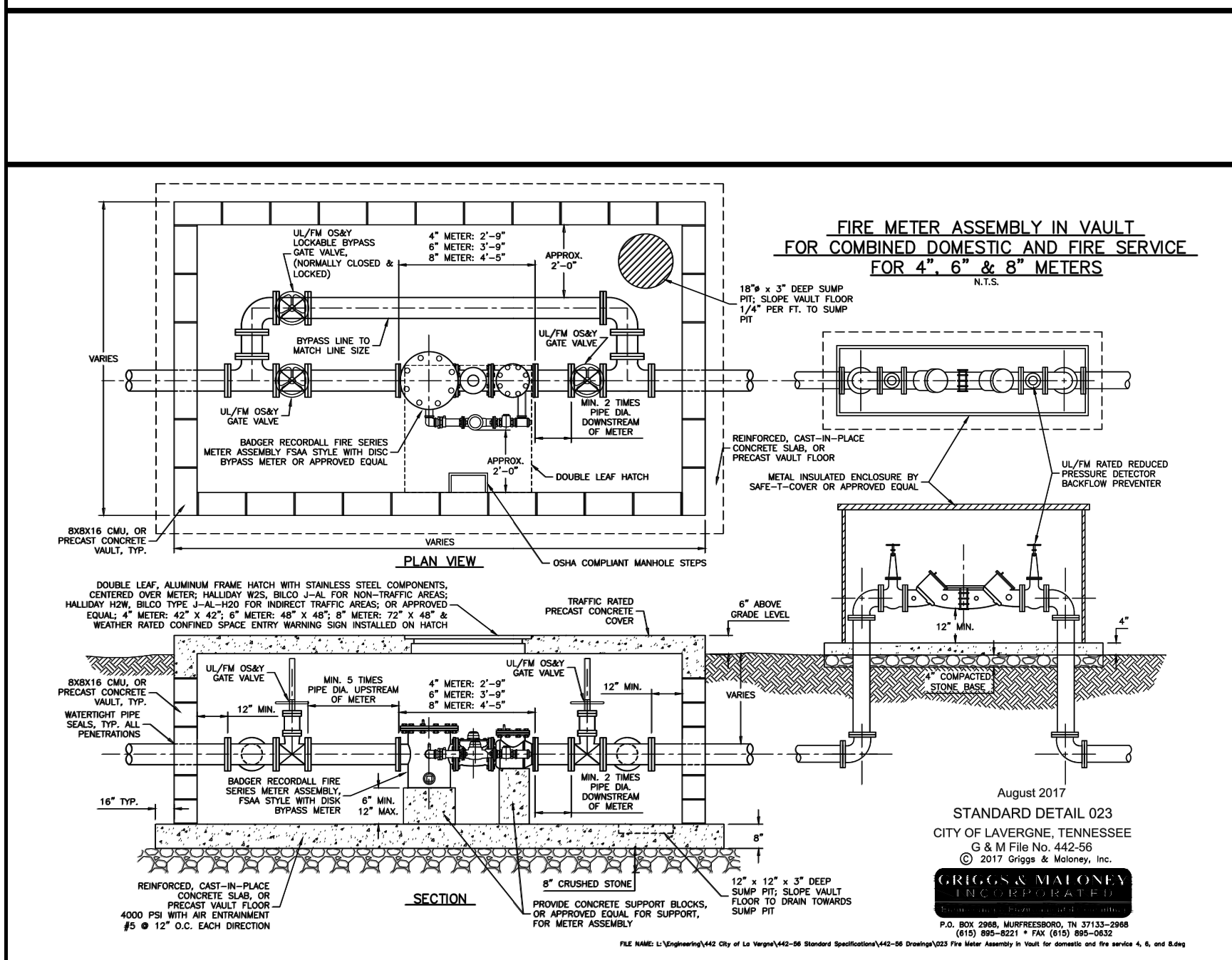
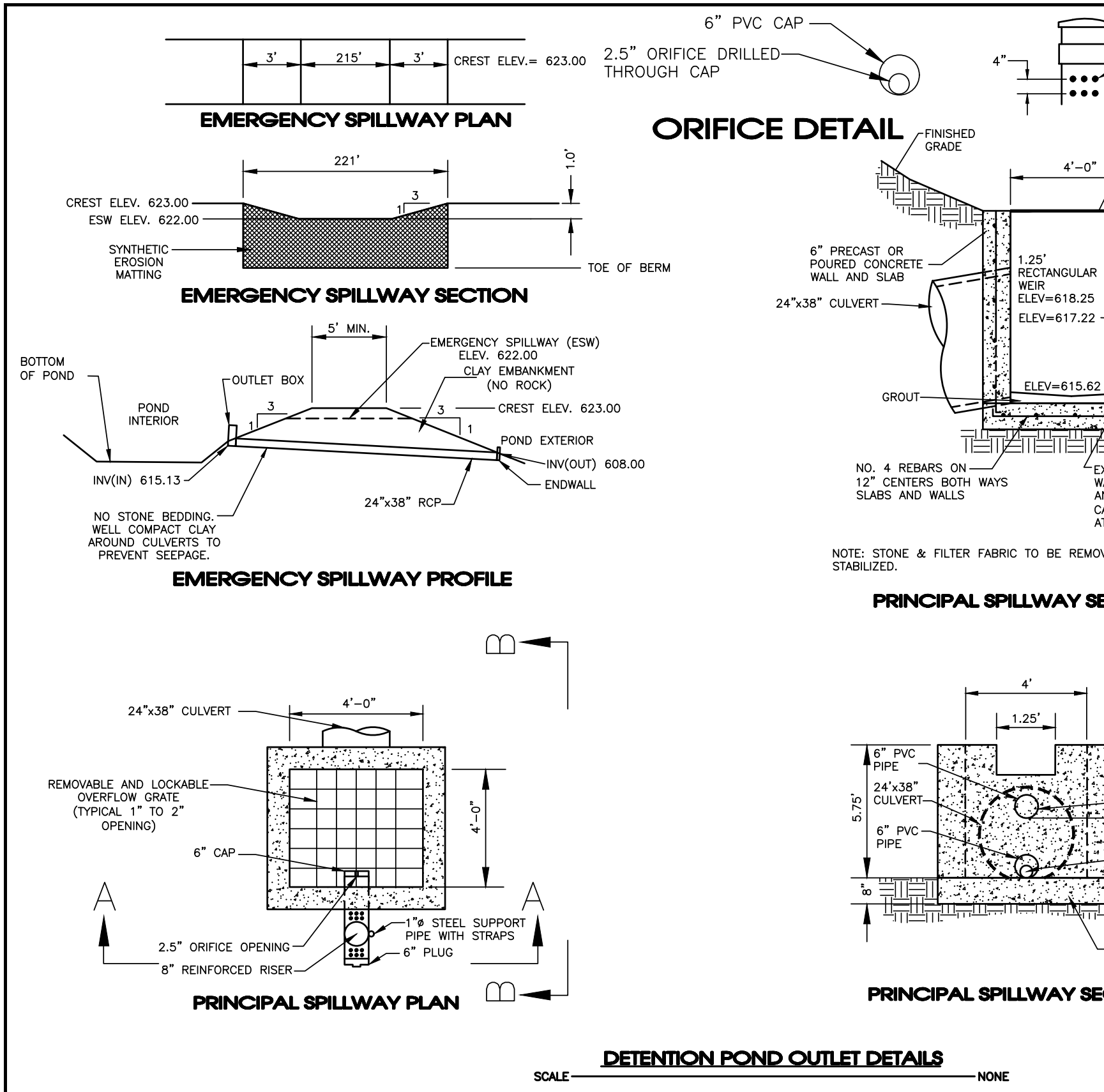
U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

REVIEW SET
(Not intended for construction)

REVISIONS

DRAWN: SJA/CFB3
DATE: 12-29-2023
CHECKED:
MAT, MPL
FILE NAME:
19084uhoul2.dwg
SCALE:
None
JOB NO.
19084
SHEET:
C4.0

Page 47 of 181



SEC, Inc.

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850 MIDDLE TENNESSEE BOULEVARD
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U-Haul Phase 2

503 New Paul Road

LaVergne, Tennessee

REVIEW SET

Not Intended for Construction

Details

REVISIONS: 5-20-2024: PC Comments

DRAWN: SJA/CFB3

DATE: 12-29-2023

CHECKED: MAT, MPL

FILE NAME: 19084uhou2.dwg

SCALE: None

JOB NO. 19084

SHEET: C4.1

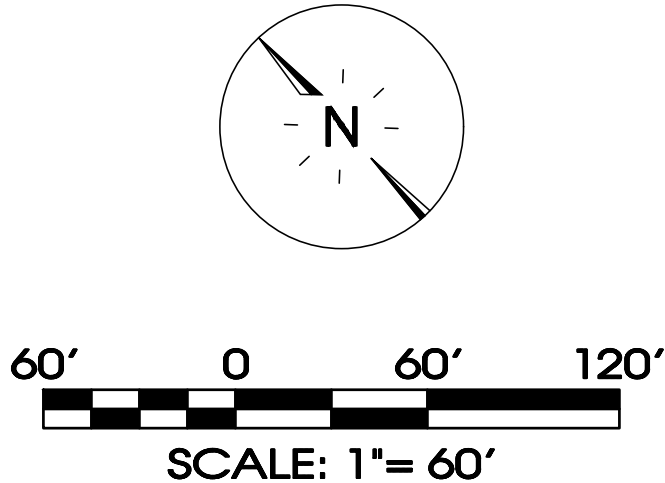
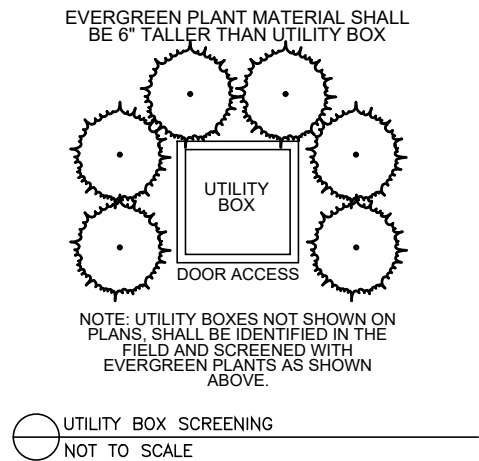


PLAN NOTES:

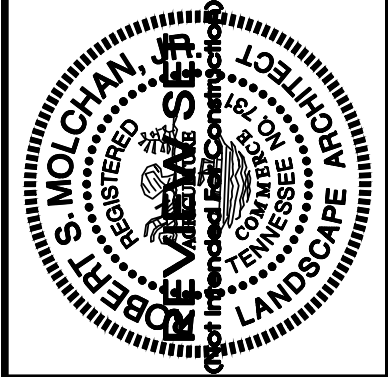
1. ANY TREES OR SHRUBS THAT ARE DEAD, DYING OR MISSING OUTSIDE THE SCOPE OF THE CURRENT WORK WILL NEED TO BE REPLACED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
2. ALL LANDSCAPE BEDS TO HAVE NEATLY TRENCHED BED EDGE AND HAVE 4" MINIMUM DEPTH OF HARDWOOD MULCH.
3. ALL TREES AND SHRUBS SHALL BE COORDINATED WITH LIGHTING PLAN PRIOR TO INSTALLATION.
4. ALL NEW PLANT MATERIAL AND TURF AREAS SHOULD BE IRRIGATED.
5. ALL SHRUBS TO BE 3' BACK OF CURB.
6. ALL AREAS OF DISTURBANCE OUTSIDE OF LANDSCAPE BEDS SHALL BE REPAIRED WITH REBEL III FESCUE SEED OR SOD.
7. ANY UTILITY STRUCTURE, LIGHT POLES, SIGN, OR OTHER FEATURE MAY NOT BE ADDED TO ANY REQUIRED LANDSCAPE ISLAND IN SUCH A MANNER THAT WOULD DISPLACE THE REQUIRED ELEMENT(S) (TREES, SHRUBS, ETC.).
8. PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING MATERIALS, INCLUDING TURF, AND IRRIGATION MATERIALS BOTH ON SITE, AND INSIDE THE ROW.

PLANTING SCHEDULE NOTES

1. SHRUBS AND TREES SHALL BE OF THE HIGHEST QUALITY.
2. NO SUBSTITUTIONS ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND LANDSCAPE ARCHITECT OF RECORD.
3. SUBSTITUTIONS AND DEVIATIONS MAY OR MAY NOT BE APPROVED.
4. REVISED LANDSCAPE PLANS MUST BE SUBMITTED AND APPROVED BY THE CITY OF IAWERNE PLANNING DEPARTMENT 615-213-2624 PRIOR TO INSTALLATION.
5. ALL IRRIGATION, LAWN AND PLANT MATERIALS WITHIN THE ROW MUST BE MAINTAINED BY THE PROPERTY OWNER.

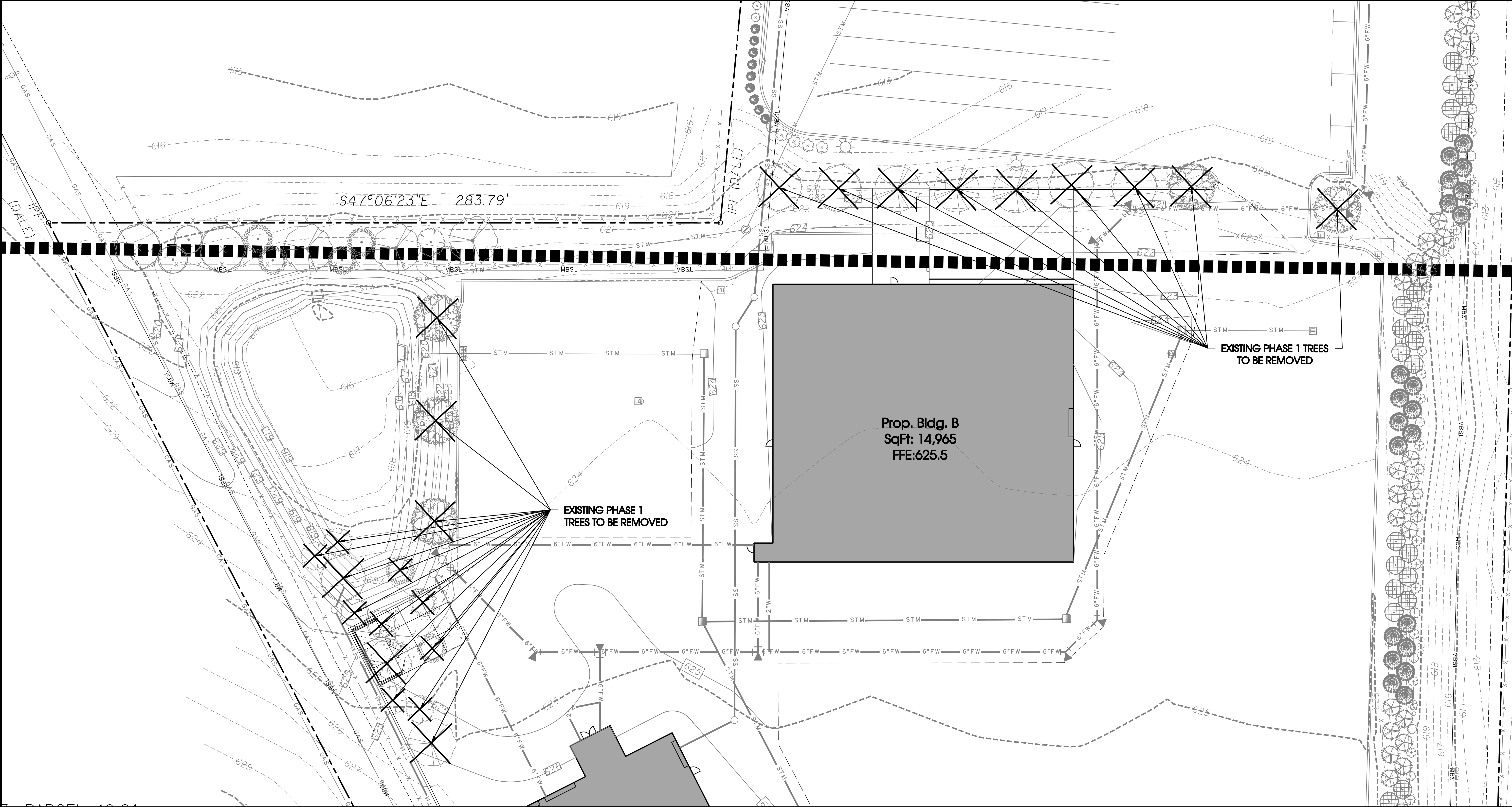


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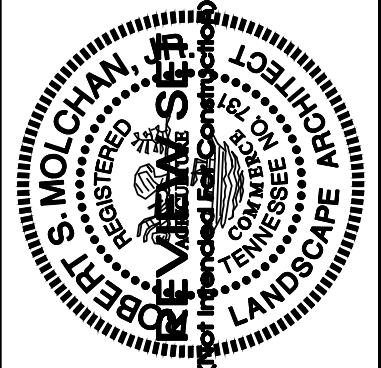


U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

REVISIONS: 					Landscape Plan
DRAWN: SWL					
DATE: 12-29-2023					
CHECKED: RSM					
FILE NAME: 19084\haul2_LA					
SCALE: 1" = 60'					
JOB NO. 19084					
SHEET: L1.0					

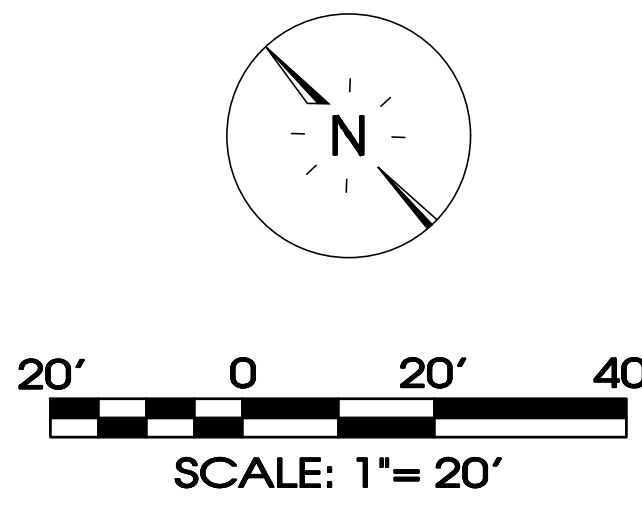
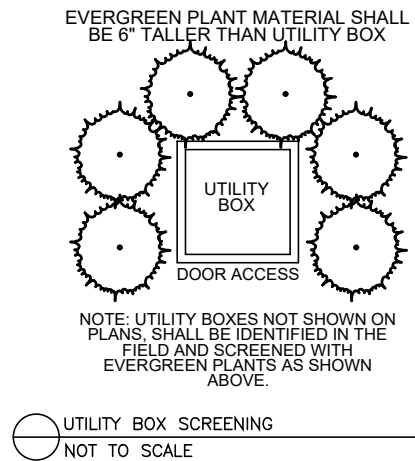


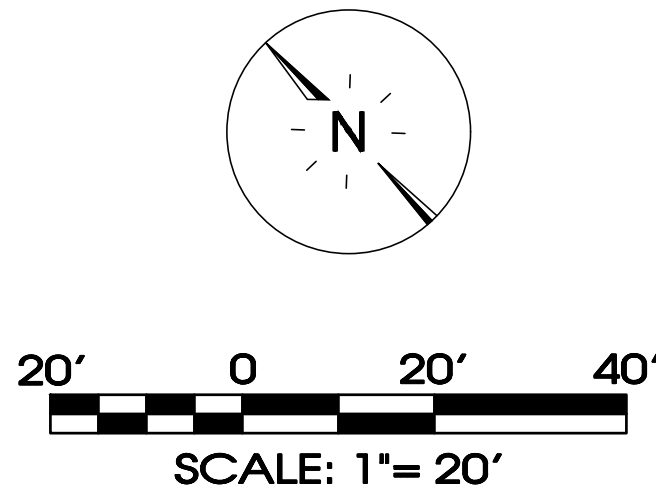
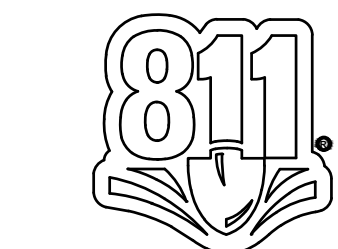
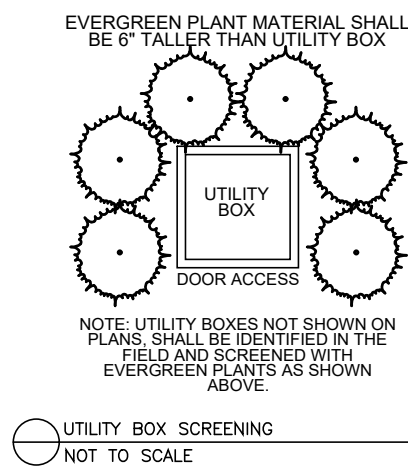
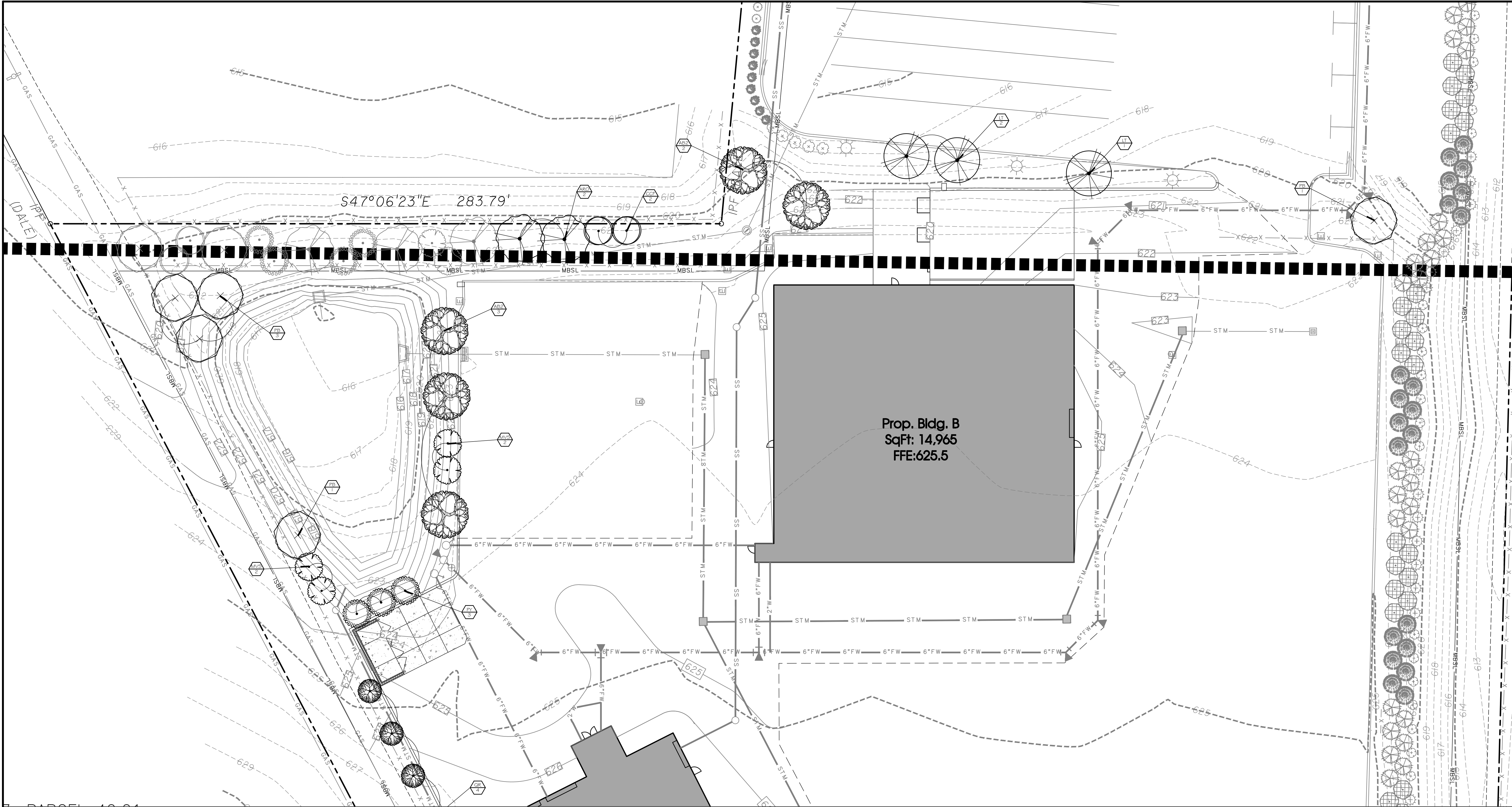
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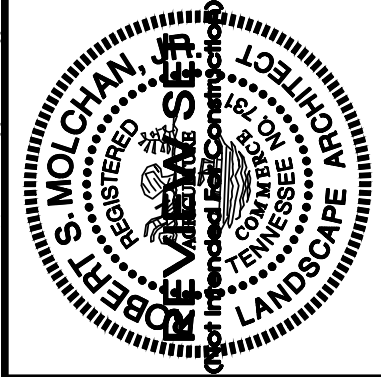
U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

REVISIONS:	
DRAWN: SWL	
DATE: 12-29-2023	
CHECKED: RSM	
FILE NAME: 19084uhaul2_LA	
SCALE: 1" = 20'	
JOB NO. 19084	
SHEET: L1.1	





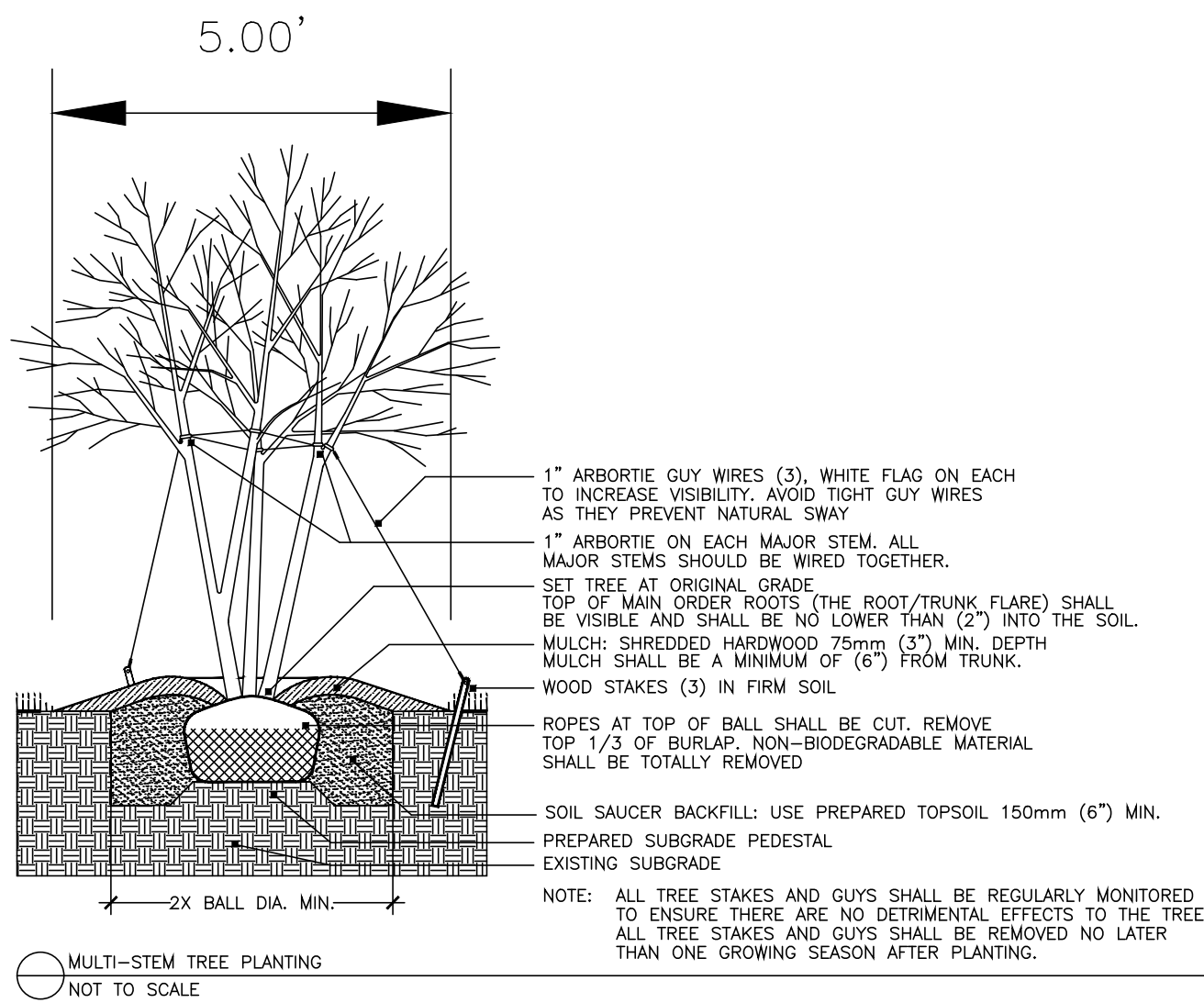
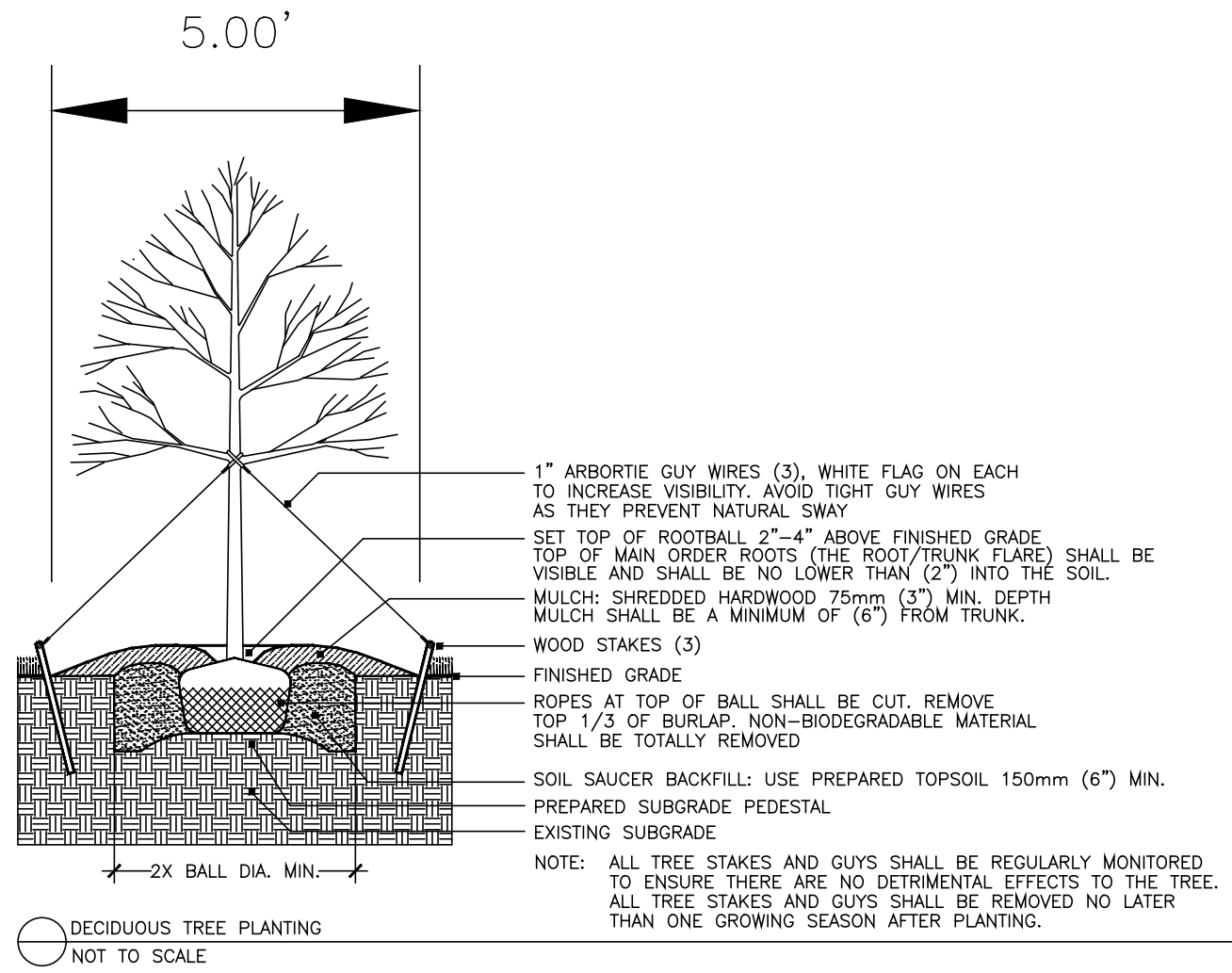
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U-Haul Phase 2
503 New Paul Road
LaVergne, Tennessee

REVISIONS:	
DRAWN: SWL	
DATE: 12-29-2023	
CHECKED: RSM	
FILE NAME: 19084uhul2_LA	
SCALE: 1" = 20'	
JOB NO. 19084	
SHEET: L1.3	

Tree Replacement Plan



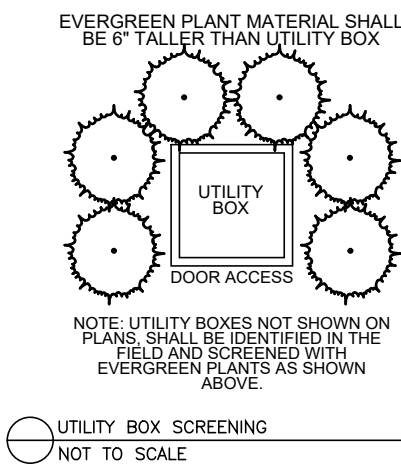
PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPACING	REMARKS
DECIDUOUS TREES								
	AB2	5	ACER BUERGERIANUM / TRIDENT MAPLE	B # B	3" CAL	14' - 16'	AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	ARO	2	ACER RUBRUM `OCTOBER GLORY` TM / OCTOBER GLORY MAPLE	B # B	3" CAL	14' - 16'	AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	LT	3	LIRIODENDRON TULIPIFERA / TULIP TREE	B # B	3" CAL	14' - 16'	AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	PB	5	PLATANUS X ACERIFOLIA `BLOODGOOD` / LONDON PLANE TREE	B # B	3" CAL	14' - 16'	AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	QR	7	QUERCUS ROBUR X ALBA `CRIMSON SPIRE` / CRIMSON SPIRE OAK	B # B	3" CAL	14' - 16'	AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
UNDERSTORY TREES								
	CCF	2	CERCIS CANADENSIS `FOREST PANSY` TM / FOREST PANSY REDBUD	B # B	2" CAL	10' - 12'	AS SHOWN	4' CLEAR TRUNK, FULL CANOPY, MATCHED*
	MVS	4	MAGNOLIA VIRGINIANA / SWEET BAY	B # B	2" CAL	10' - 12'	AS SHOWN	4' CLEAR TRUNK, MULTI-CANE VARIETY, 3-CANE MIN., 3/4 INCH MIN. PER CANE, SYMMETRICAL CANOPY, MATCHED*
	PY	3	PRUNUS X YEDOENSIS / YOSHINO CHERRY	B # B	2" CAL	10' - 12'	AS SHOWN	4' CLEAR TRUNK, FULL CANOPY, MATCHED*

MATCHED* - TREES OF THE SAME SPECIES SHALL HAVE THE FOLLOWING CHARACTERISTICS:
MATCHED BY BRANCH HEIGHT, CALIPER, HEIGHT OF TREE, SPREAD OF BRANCHES AND BRANCHING STRUCTURE, AND OVERALL CANOPY SHAPE

LANDSCAPE NOTES

- THE LANDSCAPE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES AND TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THESE UTILITIES.
- THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY AND SHALL BE RESPONSIBLE FOR AND DAMAGE TO UTILITIES.
- PLANT MATERIALS AND STUMPS INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR. BACKFILL HOLES WITH TOPSOIL FREE OF ROOTS AND ROCKS.
- TREAT ALL LANDSCAPE BEDS WITH PRE-EMERGENT HERBICIDE PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL WEEDING UNTIL FINAL ACCEPTANCE.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY MAINTAINING THE WORK (INCLUDING BUT NOT LIMITED TO: WATERING, MULCHING, SPRAYING, FERTILIZING, ETC.) OF ALL PLANTING AREAS AND LAWNS PER PROJECT SPECIFICATIONS UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
- PROVIDE TREES, SHRUBS, AND PLANTS OF QUALITY, SIZE, GENUS, SPECIES AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". HEIGHT AND WIDTH SHOWN ARE MINIMUM SIZES.
- THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE. THE LANDSCAPE CONTRACTOR SHALL MAKE ALL REPLACEMENTS PROMPTLY (AS PER DIRECTION OF OWNER).
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
- THE QUANTITIES INDICATED ON THE PLANT SCHEDULE AND PLAN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATION AND THE LIABILITY WHICH PERTAINS TO THOSE QUOTATIONS. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE LANDSCAPE ARCHITECT IMMEDIATELY.
- EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE. SELECTIVELY PRUNE DEAD WOOD.
- SEED OR SOD ALL AREAS DISTURBED BY CONSTRUCTION AND NOT DESIGNATED AS PLANTING BEDS.
- SHRUBS AND GROUND COVER BEDS TO BE PLANTED IN A TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR DISTANCES.
- UPON COMPLETION AND FINAL ACCEPTANCE OF THE LANDSCAPE INSTALLATION, A THREE (3) YEAR LANDSCAPE MAINTENANCE BOND WILL BE REQUIRED. THIS BOND SHOULD BE SUBMITTED IN THE NAME OF THE PROPERTY OWNER OF RECORD OR A LEASE HOLDER WHO HAS TEN (10) YEARS OR MORE REMAINING ON A CURRENT LEASE. THE PROPERTY OWNER/LEASE HOLDER SHOULD ALLOW ADEQUATE TIME TO OBTAIN THE BOND AS THIS PROCESS MAY BE LENGTHY AND MAY DELAY THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.



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LANDSCAPE ARCHITECTURE

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MURFREESBORO, TENNESSEE 37129

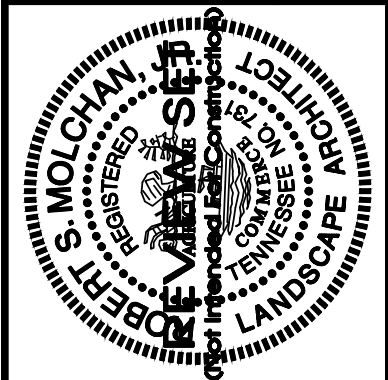
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U-Haul Phase 2

503 New Paul Road

LaVergne, Tennessee

REVISIONS:

DRAWN: SWL

DATE: 12-29-2023

CHECKED: RSM

FILE NAME: 19084uhoul2_LA

SCALE: N/A

JOB NO. 19084

SHEET:

Landscape Details & Notes

L2.0



Item #: 5. **Item Title: Preliminary Plat - Arbor Ridge, Sections 4, 7 & 8 - 150 Lots on Approximately 39.75 Acres. Requested by SEC, Inc. Property located off Waldron Rd. (Tax Map 32, Parcel 4). PDR (Planned Density Residential) Zoning District. Property owned by Starlight Homes of Tennessee, LLC.**

Reviewed By:

Bo Logan, City Planner
Gary Lide, City Engineer
Scott Tatalovich, Utility Engineer

Staff Comments / Technical Items:

Planning

Bo Logan
blogan@lavergneth.gov

No Comments

Jake Blair
jblair@lavergneth.gov

Engineering

Gary Lide
glide@lavergneth.gov

All engineering comments addressed.

Utilities

All Utilities comments addressed.

Codes

Joe White
jwhite@lavergneth.gov

No Comments

Fire

Curtis Brinkley
cbrinkley@lavergneth.gov

No Comments

Police

***Note:** The above technical items may not be the only corrections and/or issues needing to be resolved to get approval from the planning commission. New items can be brought up at the workshop and staff can add items at any time that might have been overlooked. It is the applicant's responsibility to make sure that all technical items are addressed and that no new issues exist before the planning commission meeting. Addressing all technical items does not constitute approval. It is the planning commission's decision whether an item passes or fails. Revised plans are due to staff by the following Monday at close of business unless other arrangements are made and documented.

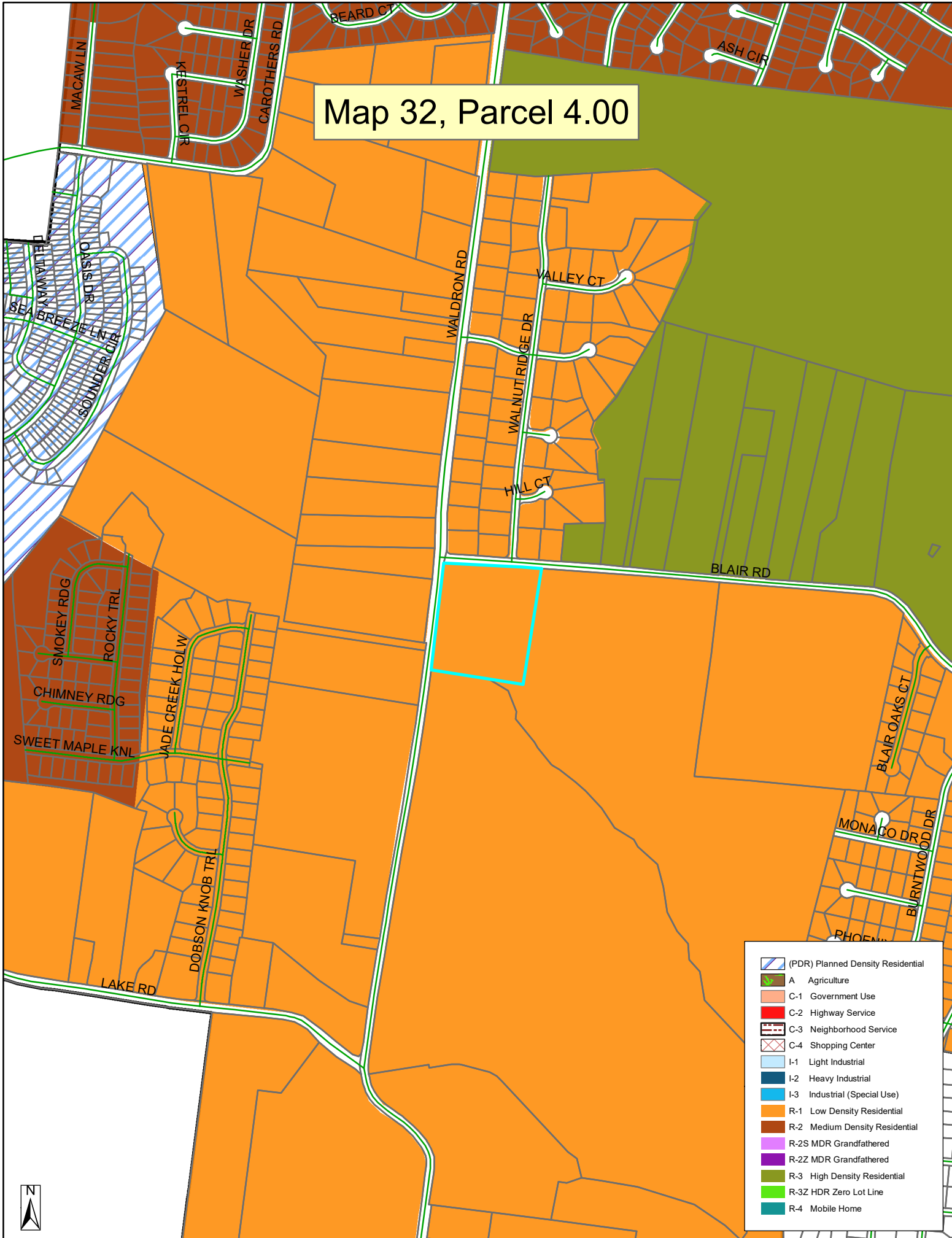
Map 32, Parcel 4.00



Map 32, Parcel 4.00



Map 32, Parcel 4.00



- (PDR) Planned Density Residential
- A Agriculture
- C-1 Government Use
- C-2 Highway Service
- C-3 Neighborhood Service
- C-4 Shopping Center
- I-1 Light Industrial
- I-2 Heavy Industrial
- I-3 Industrial (Special Use)
- R-1 Low Density Residential
- R-2 Medium Density Residential
- R-2S MDR Grandfathered
- R-2Z MDR Grandfathered
- R-3 High Density Residential
- R-3Z HDR Zero Lot Line
- R-4 Mobile Home





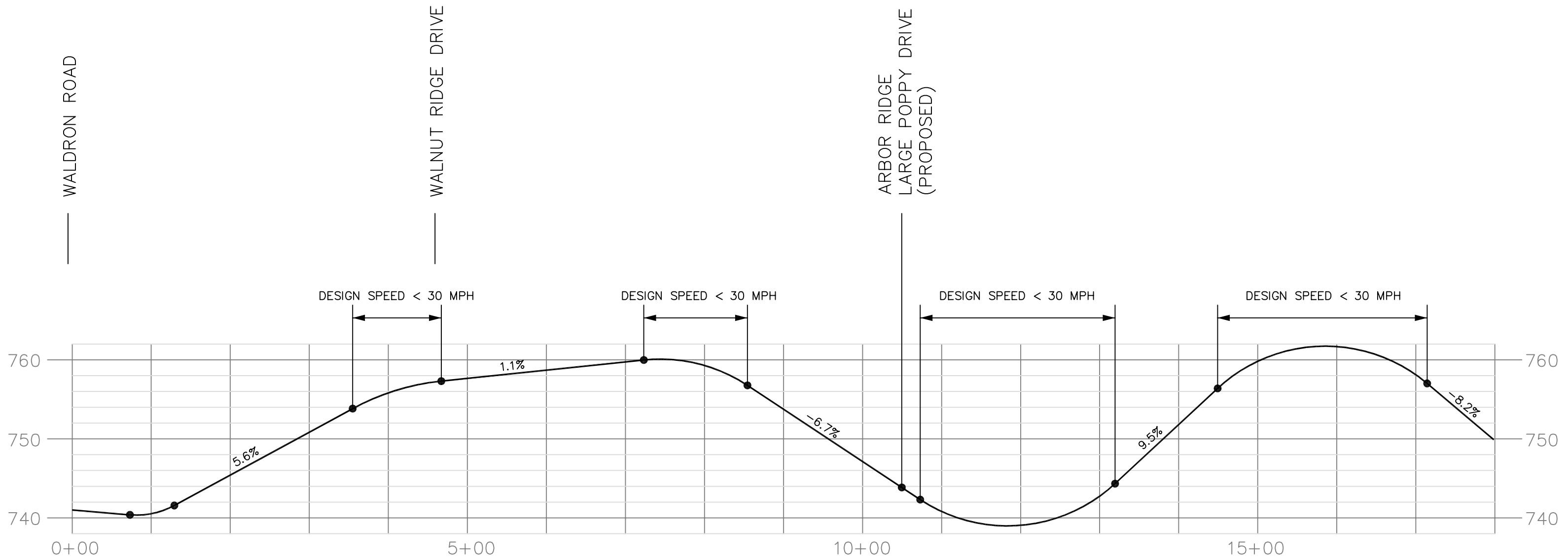


FROM PROPOSED INTERSECTION
OF LARGE POPPY DRIVE WITH
BLAIR ROAD LOOKING EAST



FROM PROPOSED INTERSECTION
OF LARGE POPPY DRIVE WITH
BLAIR ROAD LOOKING WEST



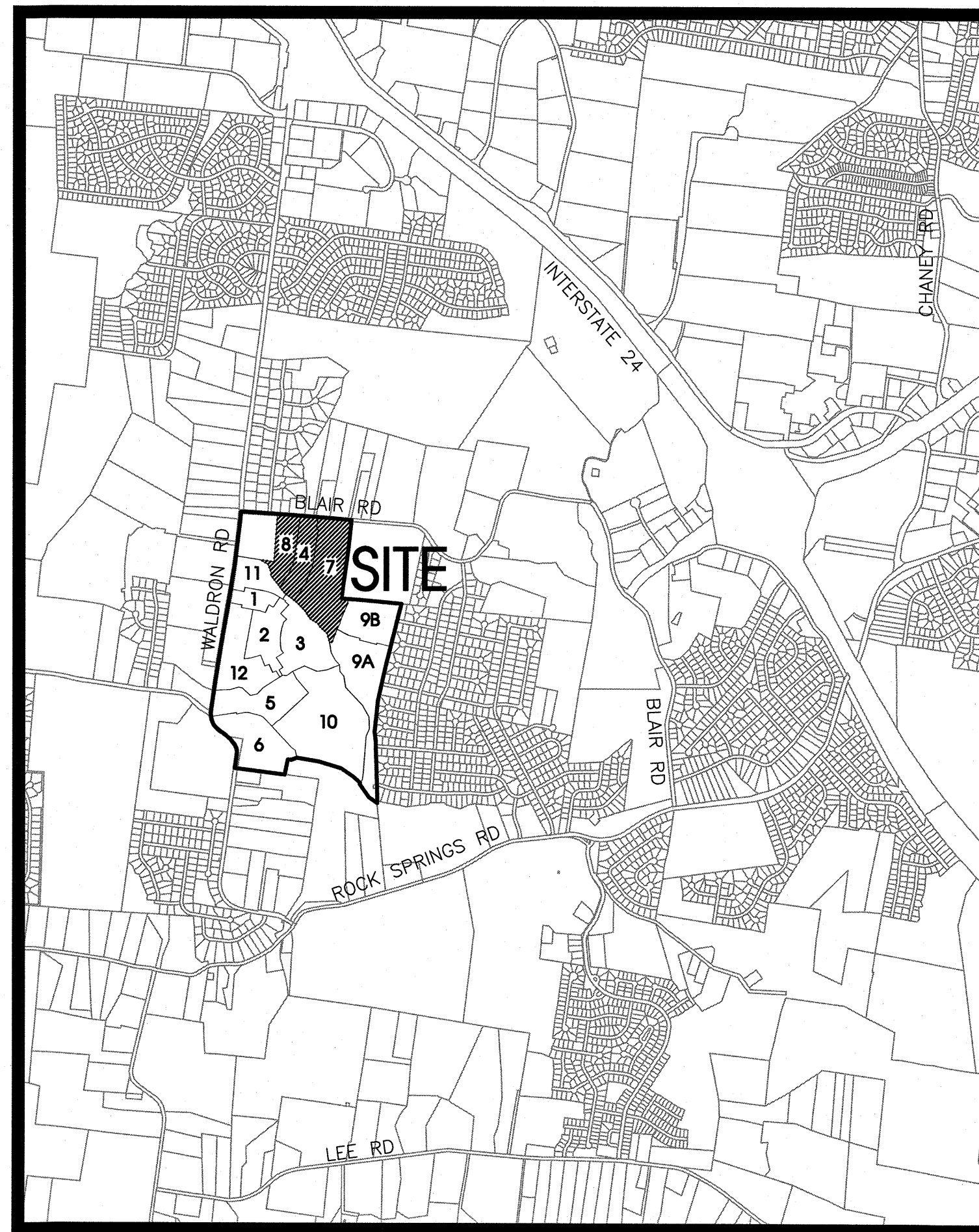


PROPOSED LARGE POPPY DRIVE AT BLAIR ROAD

Arbor Ridge Section 4, 7, & 8 La Vergne, Tennessee Preliminary Plat

Drawing Index

Sheet No.	Title
C0.0	Cover Sheet
C0.1	Master Plan
C1.0-1.2	Preliminary Plat
C2.0	Slope Analysis



Site Location Map
Not To Scale

Owner/Developer:

Starlight Homes Tennessee LLC
99 E. Main St, Suite 200
Franklin, TN 37064
Contact: Christian Macari
Phone: 410-961-9360

Floodplain Note:

This site lies within Zone X, areas determined to be outside the 0.2% annual chance flood plain. FEMA FIRM map #47149C0105J, Dated Jan. 9, 2023.

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SEC, Inc.

SITE ENGINEERING CONSULTANTS

ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE

850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129

PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567

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By: *Matthew A. Taylor*

Matthew A. Taylor, P.E.

Date: *May 20, 2024*

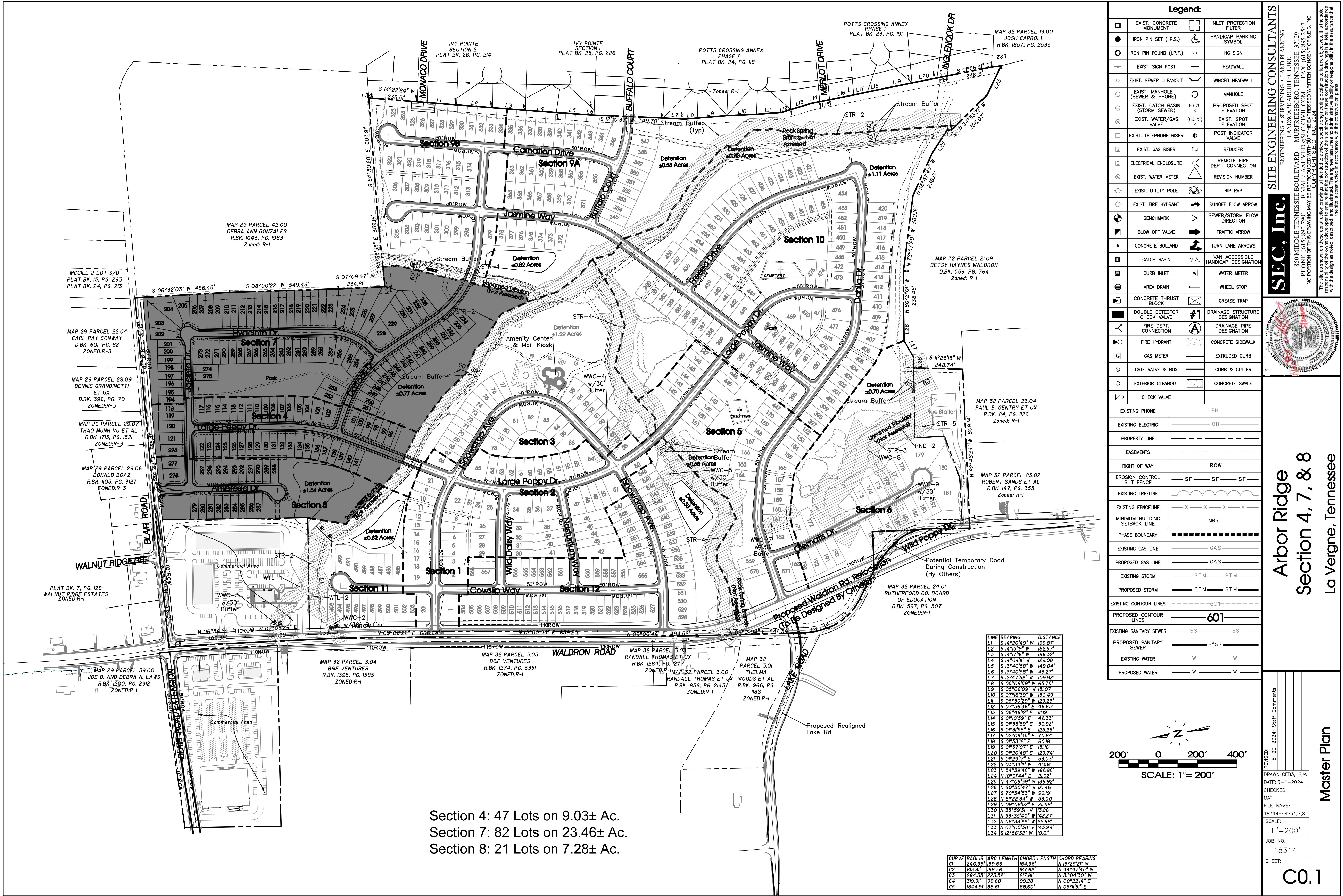
TN. Reg. #112515



Watershed: East Branch Hurricane Creek (Not Supporting)

5-yr, 24-hr EPSC Storm Event

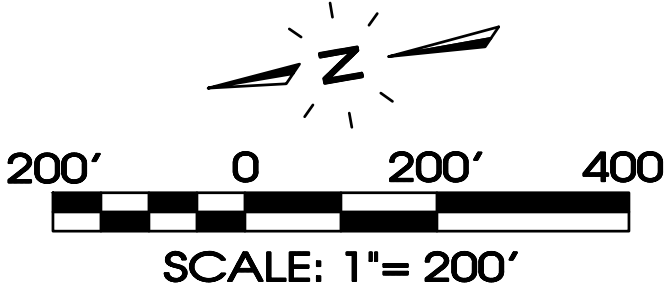
Sheet C0.0
Arbor Ridge
Section 4, 7, & 8
Preliminary Plat
S.E.C. Project #18314
Date: 3-1-2024
Revised: 5-20-2024



Section 4: 47 Lots on 9.03± Ac.
Section 7: 82 Lots on 23.46± Ac.
Section 8: 21 Lots on 7.28± Ac.

Legend:			
	EXIST. CONCRETE MONUMENT		INLET PROTECTION FILTER
	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL
	IRON PIN FOUND (I.P.F.)		HC SIGN
	EXIST. SIGN POST		HEADWALL
	EXIST. SEWER CLEANOUT		WINGED HEADWALL
	EXIST. MANHOLE (SEWER & PHONE)		MANHOLE
	EXIST. CATCH BASIN (STORM SEWER)		PROPOSED SPOT ELEVATION
	EXIST. WATER/GAS VALVE		EXIST. SPOT ELEVATION
	EXIST. TELEPHONE RISER		POST INDICATOR VALVE
	EXIST. GAS RISER		REDUCER
	ELECTRICAL ENCLOSURE		REMOTE FIRE DEPT. CONNECTION
	EXIST. WATER METER		REVISION NUMBER
	EXIST. UTILITY POLE		RIP RAP
	EXIST. FIRE HYDRANT		RUNOFF FLOW ARROW
	BENCHMARK		SEWER/STORM FLOW DIRECTION
	BLOW OFF VALVE		TRAFFIC ARROW
	CONCRETE BOLLARD		TURN LANE ARROWS
	CATCH BASIN		VAN ACCESSIBLE HANDICAP DESIGNATION
	CURB INLET		WATER METER
	AREA DRAIN		WHEEL STOP
	CONCRETE THRUST BLOCK		GREASE TRAP
	DOUBLE DETECTOR CHECK VALVE		DRAINAGE STRUCTURE DESIGNATION
	FIRE DEPT. CONNECTION		DRAINAGE PIPE DESIGNATION
	FIRE HYDRANT		CONCRETE SIDEWALK
	GAS METER		EXTRUDED CURB
	GATE VALVE & BOX		CURB & GUTTER
	EXTERIOR CLEANOUT		CONCRETE SWALE
	CHECK VALVE		

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EXISTING TREELINE	
EXISTING FENCELINE	X X X X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS
PROPOSED GAS LINE	GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS SS
PROPOSED SANITARY SEWER	8"SS
EXISTING WATER	W W
PROPOSED WATER	W W



LINE	BEARING	DISTANCE
L1	S 14°20'49" W	199.87'
L2	S 14°19'19" W	182.67'
L3	S 14°17'16" W	186.38'
L4	S 14°04'11" W	129.08'
L5	S 13°40'58" W	149.04'
L6	S 13°40'58" W	43.27'
L7	S 12°47'52" W	109.92'
L8	S 05°08'59" W	65.75'
L9	S 05°06'09" W	151.07'
L10	S 07°18'39" W	150.49'
L11	S 05°30'29" W	129.23'
L12	S 07°16'56" E	46.63'
L13	S 06°48'12" E	111.19'
L14	S 01°10'59" E	42.33'
L15	S 0°33'39" E	50.92'
L16	S 0°31'59" E	158.92'
L17	S 02°09'35" E	70.84'
L18	S 0°53'12" E	80.18'
L19	S 0°37'07" E	151.16'
L20	S 0°26'48" E	129.74'
L21	S 0°29'17" E	53.03'
L22	S 0°34'11" W	41.86'
L23	N 54°39'42" W	162.92'
L24	N 10°01'44" E	21.92'
L25	N 4°09'39" W	158.92'
L26	N 0°50'47" W	121.46'
L27	S 70°34'53" W	99.19'
L28	N 8°22'34" W	53.00'
L29	N 09°08'52" E	211.58'
L30	N 33°59'51" W	13.26'
L31	N 53°35'40" W	142.27'
L32	N 08°33'22" W	22.98'
L33	N 07°00'30" E	145.99'
L34	S 12°56'32" W	110.01'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	240.95'	189.63'	184.96'	N 13°25'21" W
C2	613.31'	188.36'	187.62'	N 44°47'45" W
C3	284.35'	223.12'	217.81'	N 3°04'30" W
C4	319.91'	99.68'	99.28'	N 00°22'14" E
C5	1844.91'	88.61'	88.60'	N 05°11'51" E

ENGINEERING • SURVEYING • LAND PLANNING

LANDSCAPE ARCHITECTURE

SEC, Inc.

850 MIDDLE TENNESSEE BOULEVARD
MURFREESBORO, TENNESSEE 37129
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Arbor Ridge

Section 4, 7, & 8

La Vergne, Tennessee

Master Plan

C0.1

REVISIONS:

5-20-2024: Staff Comments

DRAWN: CFB3, SJA

DATE: 3-1-2024

CHECKED:

MAT

FILE NAME:

18314prelim4,7,8

SCALE:

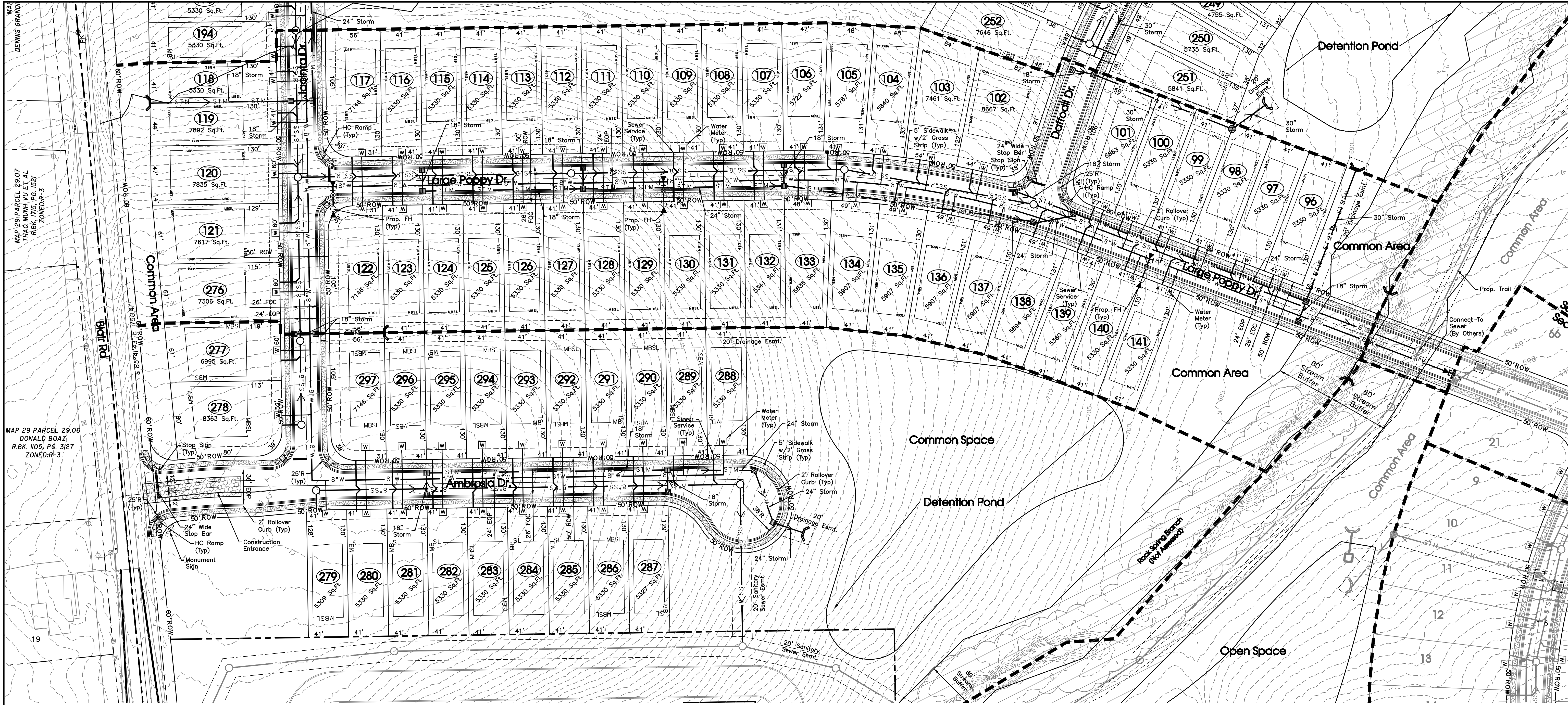
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JOB NO.

18314

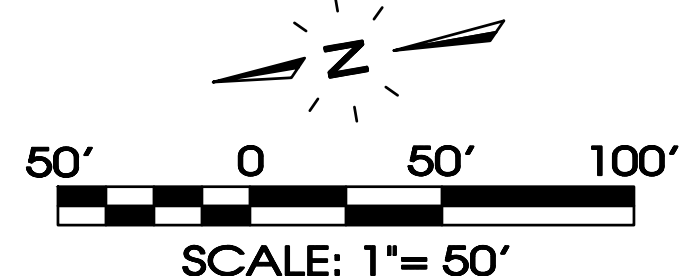
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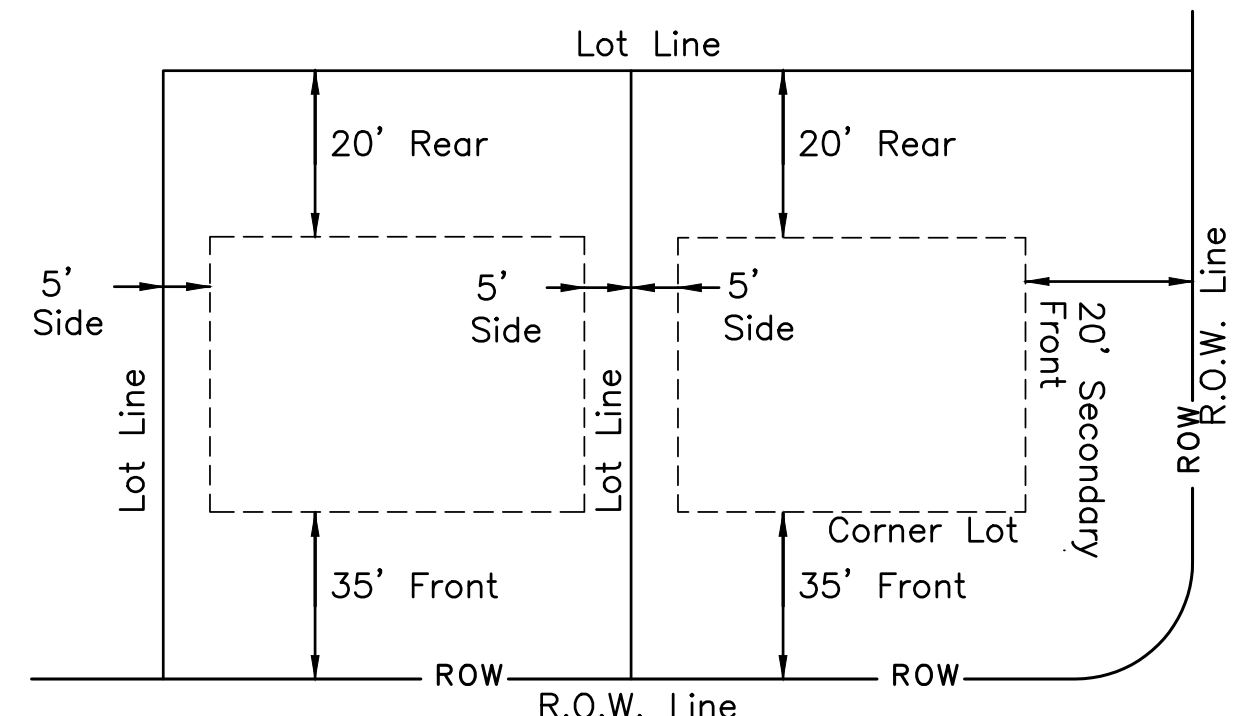
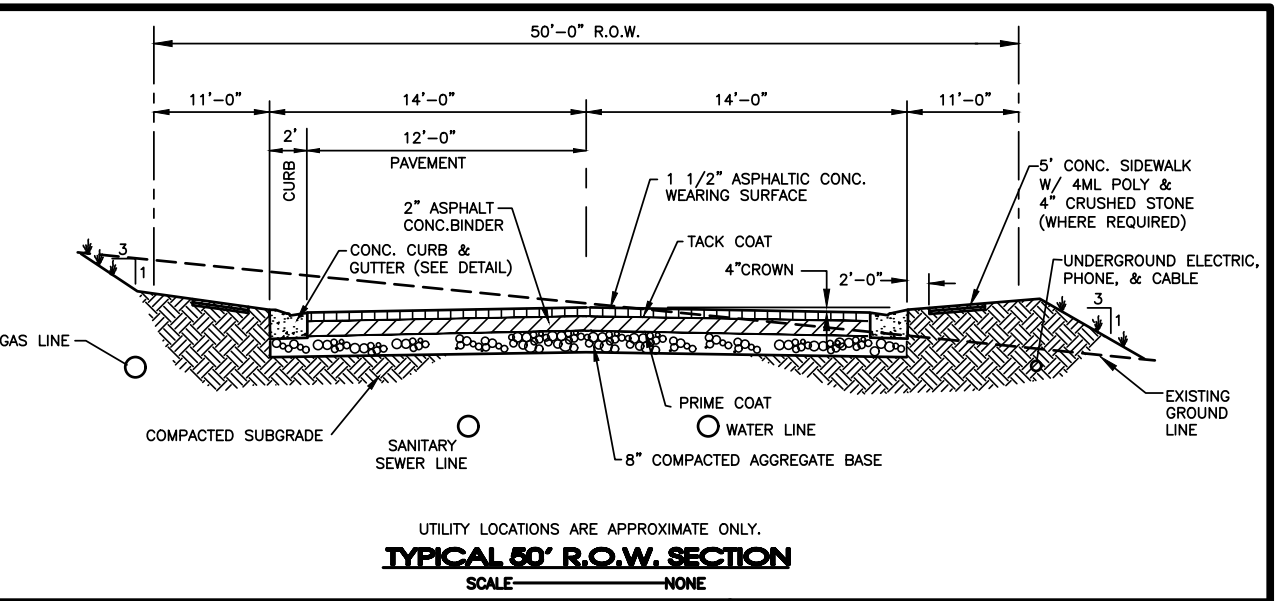
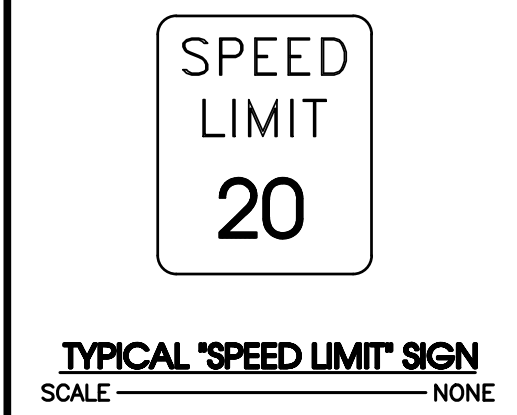
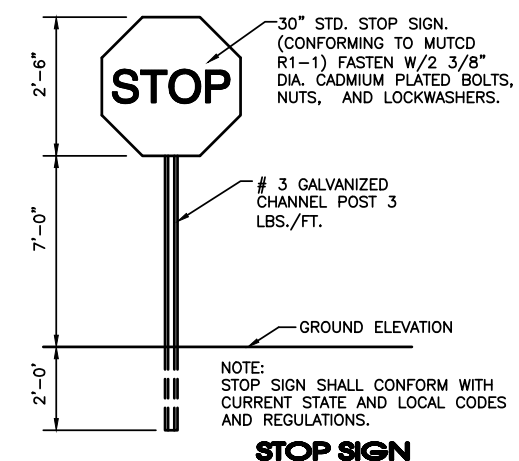


Note: Developer Is Responsible For The Installation Of Street Lights. Street Lights Shall Be Located No More Than 300 Feet Apart.

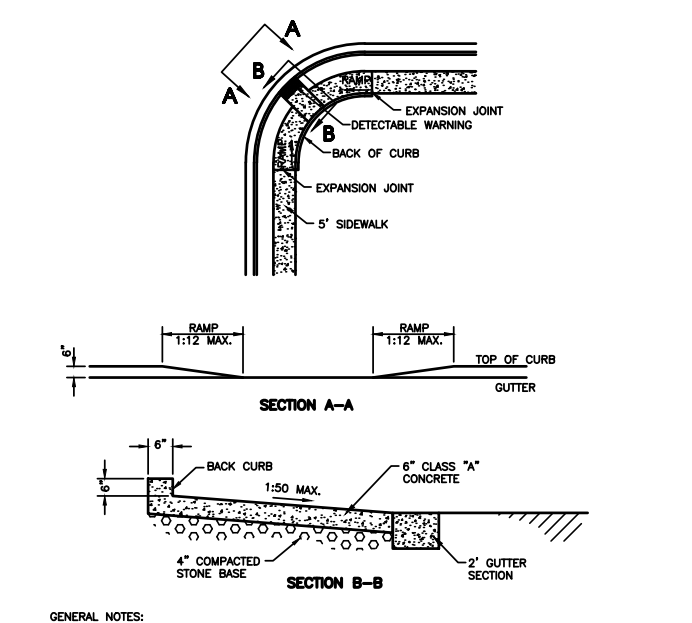
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E MAIN ST
D3-1
STREET SIGN
SCALE: NONE



Legend:									
EXIST. CONCRETE MONUMENT	BENCHMARK	POST INDICATOR VALVE	DRAINAGE PIPE DESIGNATION	EXISTING PHONE	PH	PROPOSED STORM	STM	STM	
IRON PIN SET (I.P.S.)	HANDICAP PARKING SYMBOL	BLOW OFF VALVE	RIP RAP	EXISTING ELECTRIC	OH	EXISTING CONTOUR LINES	-601-		
IRON PIN FOUND (I.P.F.)	V.A. VAN ACCESSIBLE HANDICAP DESIGNATION	REDUCER	RUNOFF FLOW ARROW	PROPERTY LINE	- - - - -	PROPOSED CONTOUR LINES	-601-		
EXIST. SIGN POST	HC SIGN	REMOTE FIRE DEPT. CONNECTION	INLET FILTER PROTECTION	EASEMENTS	- - - - -	EXISTING SANITARY SEWER	-SS-	SS	
EXIST. SEWER CLEANOUT	PROPOSED SIGN POST	CONCRETE THRUST BLOCK	PROPOSED SPOT ELEVATION	RIGHT OF WAY	-50' ROW-	PROPOSED SANITARY SEWER	-8" SS-		
EXIST. MANHOLE (SEWER & PHONE)	CONCRETE BOLLARD	DOUBLE DETECTOR CHECK VALVE	EXIST. SPOT ELEVATION	EROSION CONTROL SILT FENCE	-SF-SF-SF-	EXISTING WATER	-W-W-W-		
EXIST. CATCH BASIN (STORM SEWER)	WHEEL STOP	FIRE DEPT. CONNECTION	SEWER/STORM FLOW DIRECTION	EROSION EEL	-E-E-E-	PROPOSED WATER	-W-W-W-		
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EXIST. TELEPHONE RISER	EXTRUDED CURB	GATE VALVE & BOX	CURB INLET	EXISTING FENCELINE	-X-X-X-X-				
EXIST. GAS RISER	CURB & GUTTER	GAS METER	AREA DRAIN	MINIMUM BUILDING SETBACK LINE	- - - - -				
ELECTRICAL ENCLOSURE	TRAFFIC ARROW	GREASE TRAP	WINGED HEADWALL	EXISTING GAS LINE	-GAS-				
EXIST. WATER METER	TURN LANE ARROWS	EXTERIOR CLEANOUT ECO	CONCRETE SWALE	PROPOSED GAS LINE	-GAS-				
EXIST. UTILITY POLE	REVISION NUMBER	MANHOLE	TYPE- X- HEADWALL	EXISTING STORM	-STM-STM-				
EXIST. FIRE HYDRANT	DRAINAGE STRUCTURE DESIGNATION								



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1. THE PURPOSE OF THIS PRELIMINARY PLAT IS TO CREATE - SINGLE FAMILY LOTS. SECTION 4: 47 LOTS SECTION 7: 82 LOTS SECTION 8: 21 LOTS
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 9. NO MORE THAN 500 LINEAR FEET TOTAL OF TRENCHING WILL BE ALLOWED TO BE OPEN AT ONE TIME. (ALL UTILITIES & STORM DRAINS).

Owner/Developer:
Starlight Homes Tennessee LLC
99 E. Main St, Suite 200
Franklin, TN 37064
Contact: Christian Macari
Phone: 410-961-9360

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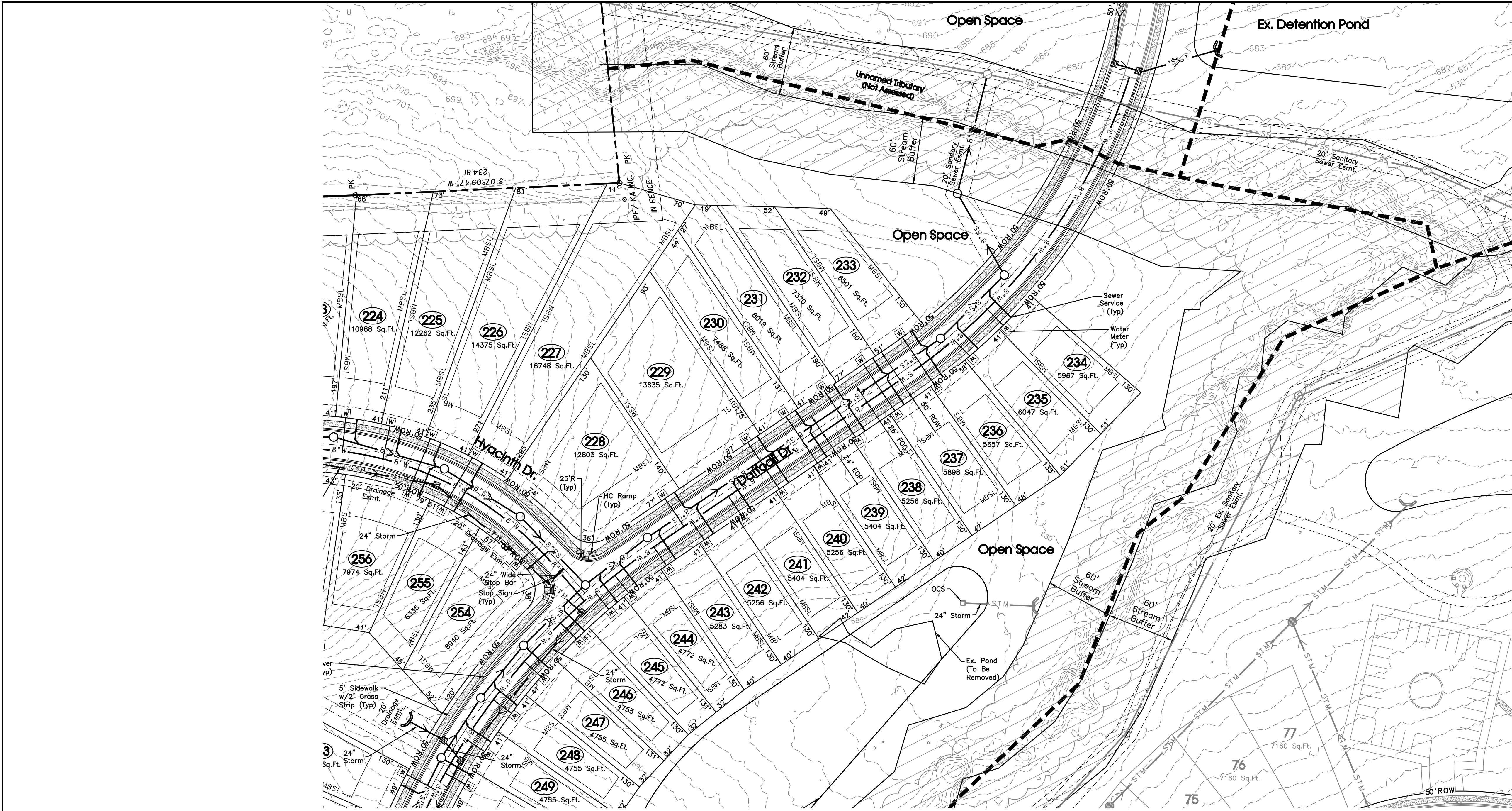
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Arbor Ridge
Section 4, 7, & 8
La Vergne, Tennessee

Preliminary Plat

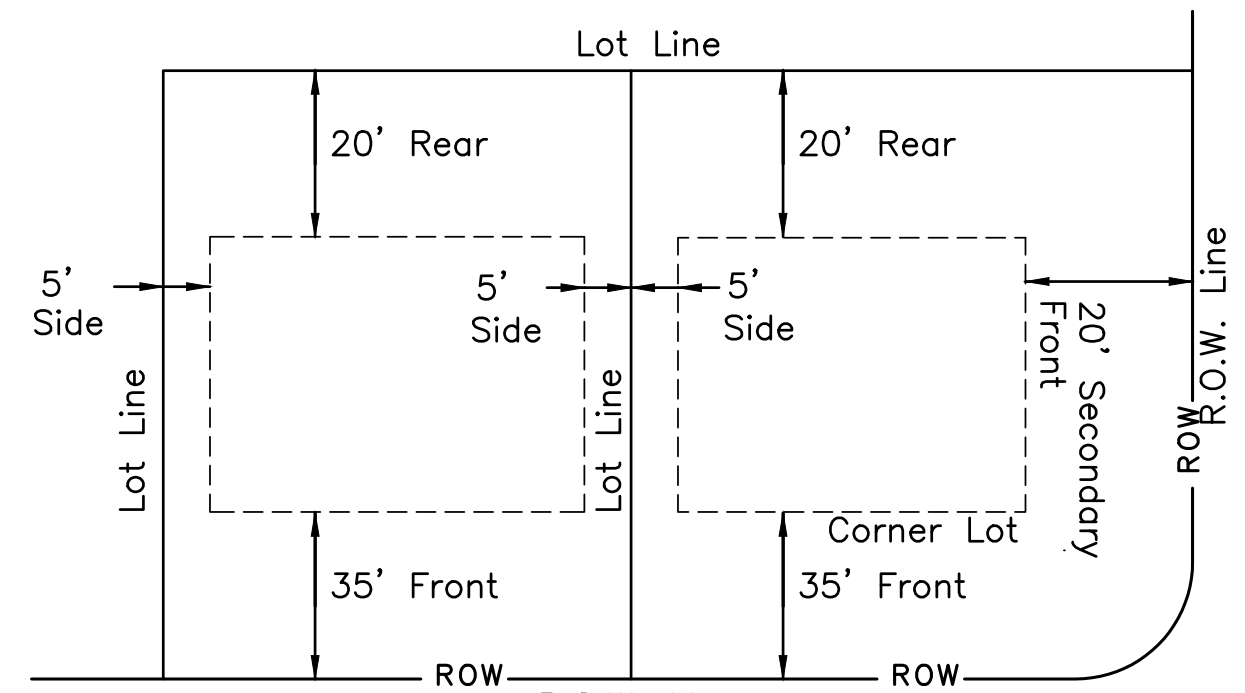
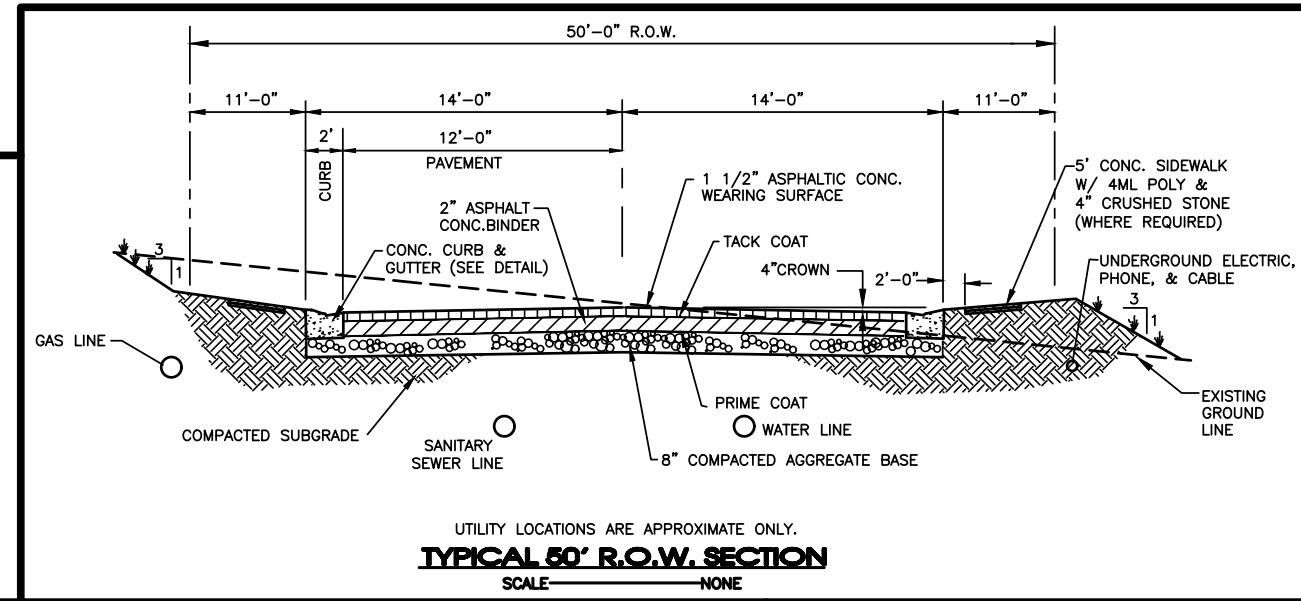
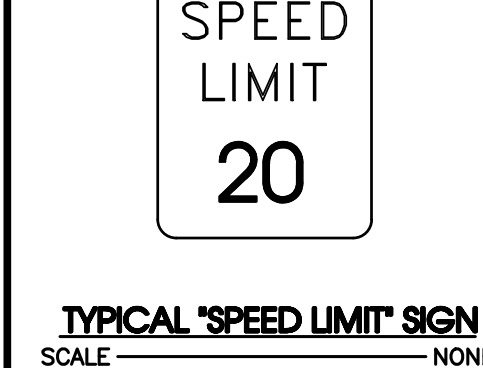
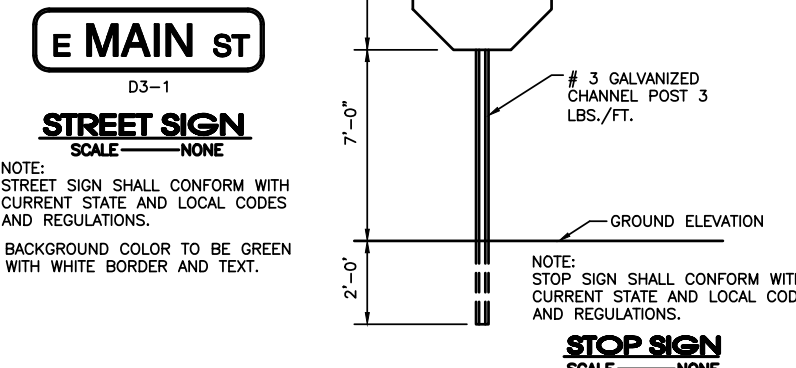
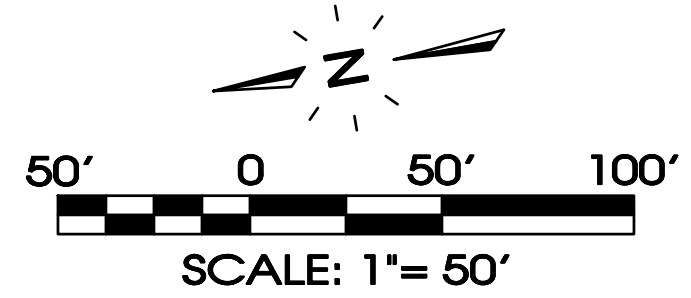
REVISIONS:
5-20-2024: Staff Comments

DRAWN: CFB3, SJA
DATE: 3-1-2024
CHECKED: MAT
FILE NAME: 18314prelim4,7,8
SCALE: 1"=50'
JOB NO: 18314
SHEET: C1.0



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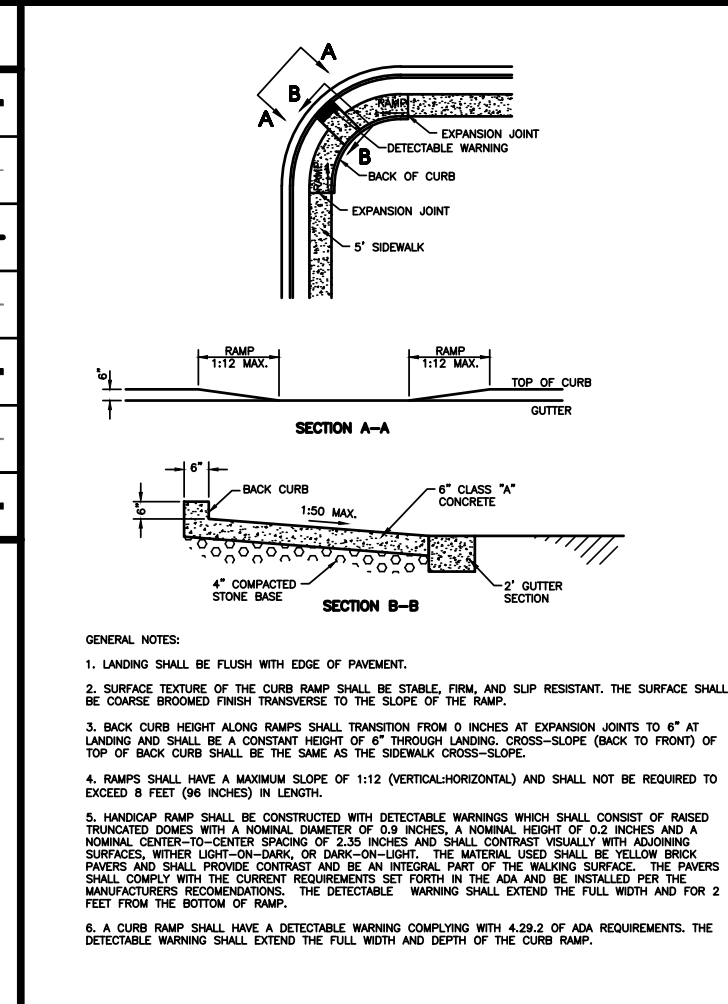
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	EXIST. GAS RISER		CURB & GUTTER		WATER METER		AREA DRAIN	MINIMUM BUILDING SETBACK LINE	
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Electrical Legend

- TRANSFORMER 36"x40"
- MANHOLE
- STREET LIGHT
- SWITCHER
- PRIMARY PULLBOX
- SECONDARY PULLBOX 24" x 36"
- CONDUIT-SEE NOTE
- 3 PH Sector Cabinet



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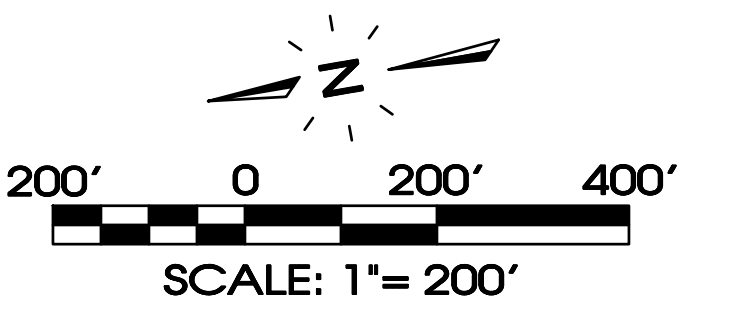
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	BLOW OFF VALVE		TRAFFIC ARROW
	CONCRETE BOLLARD		TURN LANE ARROWS
	CATCH BASIN		VAN ACCESSIBLE HANDICAP DESIGNATION
	CURB INLET		WATER METER
	AREA DRAIN		WHEEL STOP
	CONCRETE THRUST BLOCK		GREASE TRAP
	DOUBLE DETECTOR CHECK VALVE		DRAINAGE STRUCTURE DESIGNATION
	FIRE DEPT. CONNECTION		DRAINAGE PIPE DESIGNATION
	FIRE HYDRANT		CONCRETE SIDEWALK
	GAS METER		EXTRUDED CURB
	GATE VALVE & BOX		CURB & GUTTER
	EXTERIOR CLEANOUT		CONCRETE SWALE
	CHECK VALVE		

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF SF
EXISTING TREELINE	X X X X
EXISTING FENCELINE	
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	GAS
PROPOSED GAS LINE	GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	-601-
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS SS
PROPOSED SANITARY SEWER	8"SS
EXISTING WATER	W W
PROPOSED WATER	W W



LINE	BEARING	DISTANCE
L1	S 14°20'49" W	199.87'
L2	S 14°15'19" W	182.67'
L3	S 14°17'16" W	186.35'
L4	S 14°04'11" W	129.08'
L5	S 13°40'58" W	149.04'
L6	S 13°40'58" W	43.27'
L7	S 12°47'52" W	109.92'
L8	S 05°08'59" W	65.75'
L9	S 05°06'09" W	151.07'
L10	S 07°18'39" W	150.49'
L11	S 05°30'29" W	129.23'
L12	S 07°56'56" E	46.63'
L13	S 06°48'12" E	111.19'
L14	S 01°10'59" E	42.33'
L15	S 0°33'39" E	50.92'
L16	S 0°31'50" E	106.35'
L17	S 02°09'35" E	70.84'
L18	S 01°53'12" E	80.18'
L19	S 01°37'07" E	151.16'
L20	S 01°26'48" E	129.74'
L21	S 01°29'17" E	53.03'
L22	S 03°34'11" W	41.56'
L23	N 54°39'42" W	162.92'
L24	N 10°01'44" E	21.92'
L25	N 4°09'39" W	158.92'
L26	N 02°50'47" W	121.46'
L27	S 70°34'53" W	99.19'
L28	N 81°22'34" W	53.00'
L29	N 09°08'52" E	211.58'
L30	N 33°59'51" W	13.26'
L31	N 53°35'40" W	142.27'
L32	N 08°33'22" W	22.98'
L33	N 07°00'30" E	145.99'
L34	S 12°56'32" W	110.01'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	240.95'	189.63'	184.96'	N 13°25'21" W
C2	613.31'	188.36'	187.62'	N 44°47'45" W
C3	284.35'	233.12'	217.81'	N 3°04'30" W
C4	319.91'	99.68'	99.28'	N 00°22'14" E
C5	1844.91'	88.61'	88.60'	N 05°11'51" E

SEC, Inc.
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD
MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567
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Arbor Ridge
Section 4, 7, & 8
La Vergne, Tennessee

Slopes Analysis

REVISIONS:
5-20-2024: Staff Comments

DRAWN: CFB3, SJA
DATE: 3-1-2024
CHECKED:
MAT
FILE NAME:
18314prelim4,7,8
SCALE:
1"=200'
JOB NO.
18314
SHEET:
C2.0

Page 70 of 181



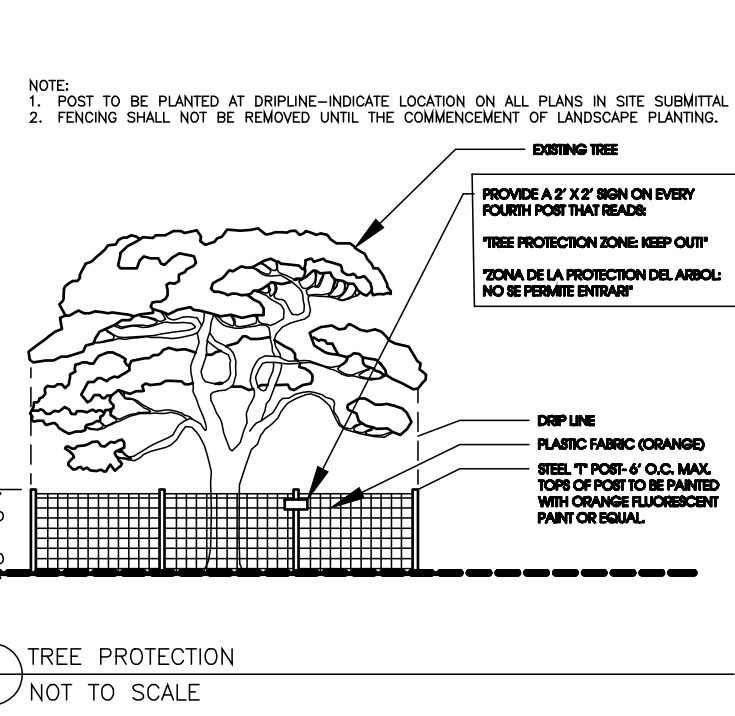
Arbor Ridge Section 4,7,& 8

LANDSCAPE PLAN

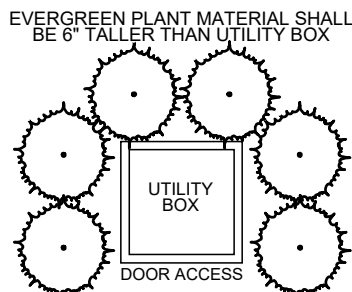
SITE DATA
SECTION 4 AREA: 9.13± ACRES
SECTION 7 AREA: 23.46± ACRES
SECTION 8 AREA: 7.21± ACRES
SITE ZONING: PDR (PLANNED DENSITY RESIDENTIAL)

- PLAN NOTES:
1. ANY TREES OR SHRUBS THAT ARE DEAD, DYING OR MISSING OUTSIDE THE SCOPE OF THE CURRENT WORK WILL NEED TO BE REPLACED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
 2. ALL LANDSCAPE BEDS TO HAVE NEATLY TRENCHED BED EDGE AND HAVE 4" MINIMUM DEPTH OF HARDWOOD MULCH.
 3. ALL TREES AND SHRUBS SHALL BE COORDINATED WITH LIGHTING PLAN PRIOR TO INSTALLATION.
 4. ALL NEW PLANT MATERIAL AND TURF AREAS SHALL BE IRRIGATED.
 5. ALL SHRUBS TO BE 3' BACK OF CURB.
 6. ALL AREAS OF DISTURBANCE OUTSIDE OF LANDSCAPE BEDS SHALL BE REPAIRED WITH REBEL III FESCUE SEED OR SOD.
 7. ANY UTILITY STRUCTURE, LIGHT POLES, SIGN, OR OTHER FEATURE MAY NOT BE ADDED TO ANY REQUIRED LANDSCAPE ISLAND IN SUCH A MANNER THAT WOULD DISPLACE THE REQUIRED ELEMENT(S) (TREES, SHRUBS, ETC.).
 8. PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING MATERIALS, INCLUDING TURF, AND IRRIGATION MATERIALS BOTH ON SITE, AND INSIDE THE ROW.

- PLANTING SCHEDULE NOTES
1. SHRUBS AND TREES SHALL BE OF THE HIGHEST QUALITY.
 2. NO SUBSTITUTIONS ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND LANDSCAPE ARCHITECT OF RECORD.
 3. SUBSTITUTIONS AND DEVIATIONS MAY OR MAY NOT BE APPROVED.
 4. REVISED LANDSCAPE PLANS MUST BE SUBMITTED AND APPROVED BY THE CITY OF LA VERGNE PLANNING DEPARTMENT 615-287-8702 PRIOR TO INSTALLATION.
 5. ALL IRRIGATION, LAWN AND PLANT MATERIALS WITHIN THE ROW MUST BE MAINTAINED BY THE PROPERTY OWNER.



- TREE PRESERVATION NOTES:
- AFTER INSTALLATION OF TREE PROTECTION FENCING, CONTRACTOR SHALL CONTACT THE CITY OF LA VERGNE AT 615-287-8702 FOR A TREE PROTECTION INSPECTION.
 - ANY PRESERVED TREES DAMAGED OR REMOVED DURING CONSTRUCTION MAY HAVE TO BE REPLANTED PRIOR TO CERTIFICATE OF OCCUPANCY TO FULFILL PERIMETER PLANTING OR BUFFER REQUIREMENTS.
 - TREE PROTECTION FENCING THAT DOES NOT GO TO OR EXCEED THE PRESERVED TREE'S DRIPLINE WILL NOT BE ACCEPTED.
 - TREES WITHIN STREAM PROTECTION BUFFERS ARE NOT TO BE DISTURBED.
 - WALKING TRAILS SHALL RESPECT EXISTING TREES WITHIN STREAM PROTECTION BUFFERS. SHOULD A TREE NEED REMOVED FOR THE PLACEMENT OF THE WALKING TRAIL, THE PROJECT LANDSCAPE ARCHITECT AND CITY MUST AGREE UPON THE NECESSITY TO DO SO AND DISCUSS REPLACEMENT VALUE IN CALIPER INCHES OF PROPOSED TREE(S) TO BE REMOVED, PER TENNESSEE'S DEPARTMENT OF ENVIRONMENT AND CONSERVATION'S APPROVAL.

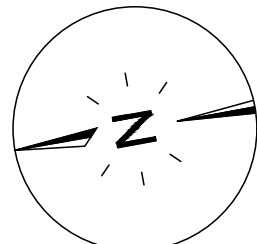


NOTE: UTILITY BOXES NOT SHOWN ON PLANS SHALL BE IDENTIFIED IN THE FIELD AND SCREENED WITH EVERGREEN PLANTS AS SHOWN ABOVE.

UTILITY BOX SCREENING
NOT TO SCALE



Know what's below.
Call before you dig.



200' 0 200' 400'
SCALE: 1" = 200'

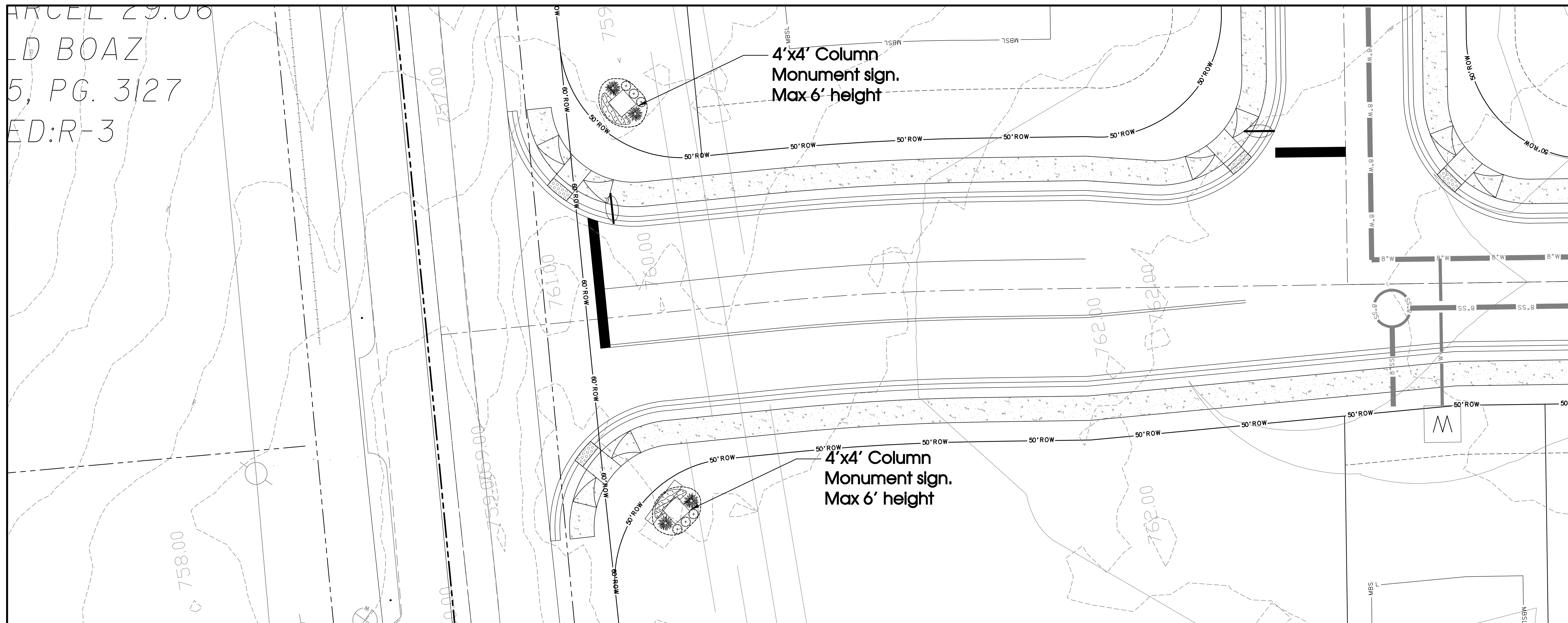
SITE ENGINEERING CONSULTANTS
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LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD
MURFREESBORO, TENNESSEE 37129
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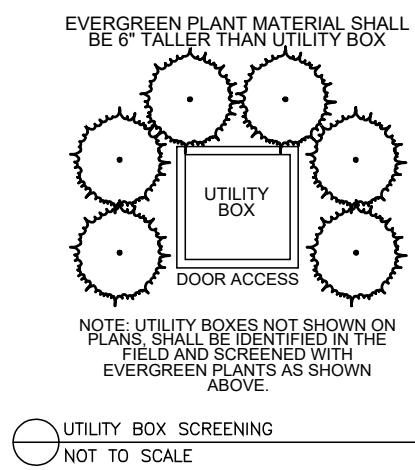
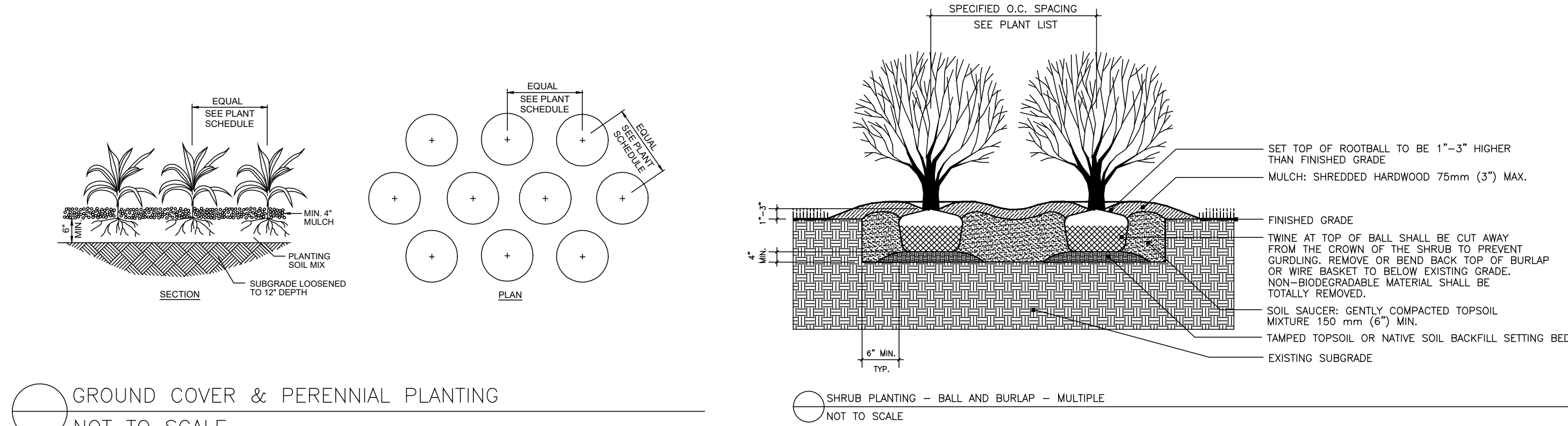
Arbor Ridge
Section 4, 7, & 8
La Vergne, Tennessee

REVISED:	
DRAWN: KMG	
DATE: 04-29-2024	
CHECKED: RSM	
FILE NAME: 18314prelimPROJ&11-12_LA	
SCALE: 1" = 200'	
JOB NO. 18314	
SHEET: L1.0	

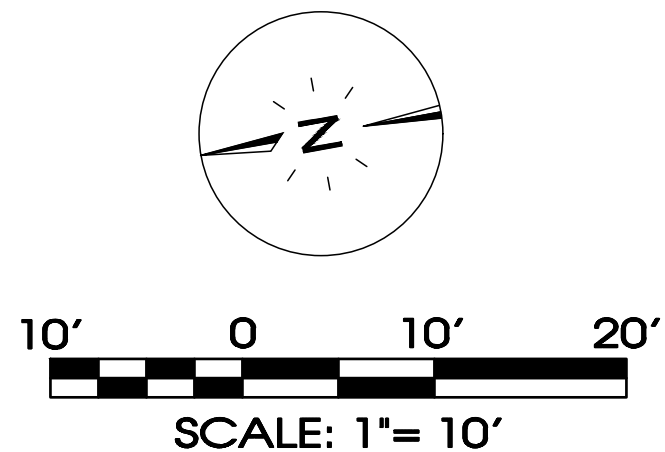
ARCEL 29.06
LD BOAZ
5, PG. 3127
ED:R-3



PLANT SCHEDULE								
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	ICP	6	ILEX CRENATA "SKY PENCIL" / SKY PENCIL JAPANESE HOLLY	CONT.	30"	18"	2' O.C.	DENSE, FULL, MATCHED
GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	PAM	4	PENNISETUM ALOPECUROIDES "MOUDRY" / ORIENTAL FOUNTAIN GRASS	3 GAL	12" - 18"	12"	3' O.C.	WELL ROOTED AND FULL TO EDGES OF CONTAINER
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	HS	16	HEMEROCALLIS X "STELLA DE ORO" / STELLA DE ORO DAYLILY	1 QUART	12"	12"	18" O.C.	WELL ROOTED, MATURE, FULL TO EDGES OF CONTAINER



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850 MIDDLE TENNESSEE BOULEVARD
LANDSCAPE ARCHITECTURE
ENGINEERING • SURVEYING • LAND PLANNING

SITE ENGINEERING CONSULTANTS

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THE SITE AS SHOWN ON THESE CONSTRUCTION DRAWINGS IS INTENDED TO ACHIEVE SPECIFIC DESIGN CRITERIA AND OBJECTIVES. IT IS THE SOLE RESPONSIBILITY OF THE OWNER/DEVELOPER TO ENSURE THAT THE CONSTRUCTION OF THE SITE SHOWN ON THESE CONSTRUCTION DRAWINGS IS IN TOTAL ACCORDANCE WITH THE DESIGN AS NOTED, DESCRIBED, SPECIFIED, OR OTHERWISE INDICATED ON THESE DRAWINGS. NO ASSURANCE THAT THE SITE IS CONFORMING TO ANY REGULATORY REQUIREMENTS OR ORDINANCES IS MADE BY THE ENGINEER OR ARCHITECT. THE ASSURANCE THAT THE SITE IS CONFORMING TO ANY REGULATORY REQUIREMENTS OR ORDINANCES IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER.



Arbor Ridge
Section 4, 7, & 8
La Vergne, Tennessee

Landscape Plan

REVISED:					
DRAWN: KMG					
DATE: 04-29-2024					
CHECKED:					
RSM					
FILE NAME:					
18314prelimPh98a11-12_LA					
SCALE:					
1" = 10'					
JOB NO.					
18314					
SHEET:					

L1.1

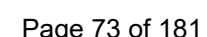


Arbor Ridge
Section 4, 7, & 8
La Vergne, Tennessee

Landscape Plan

DRAWN: KMG
DATE: 04-29-2024
CHECKED:
RSM
FILE NAME:
18314prelimPh9B&11-12_LA
SCALE:
1" = 40'
JOB NO.
18314
SHEET:

L1.2



±0.82 Acres

Detention
±1.29 Acres

Detention
±0.77 Acres

Open Space

Open Space

Detention Pond

Future Walkway Trail

Hyacinth Dr.

20' Sanitary Sewer Esmt.

20' Ex. Sanitary Sewer Esmt.

20' Drainage Esmt.

20' Drainage Esmt.

STM

SS

50' ROW

MOB.OS

W

M

TP

234

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100

EVERGREEN PLANT MATERIAL SHALL BE 6" TALLER THAN UTILITY BOX

UTILITY BOX

DOOR ACCESS

UTILITY BOX SCREENING NOT TO SCALE

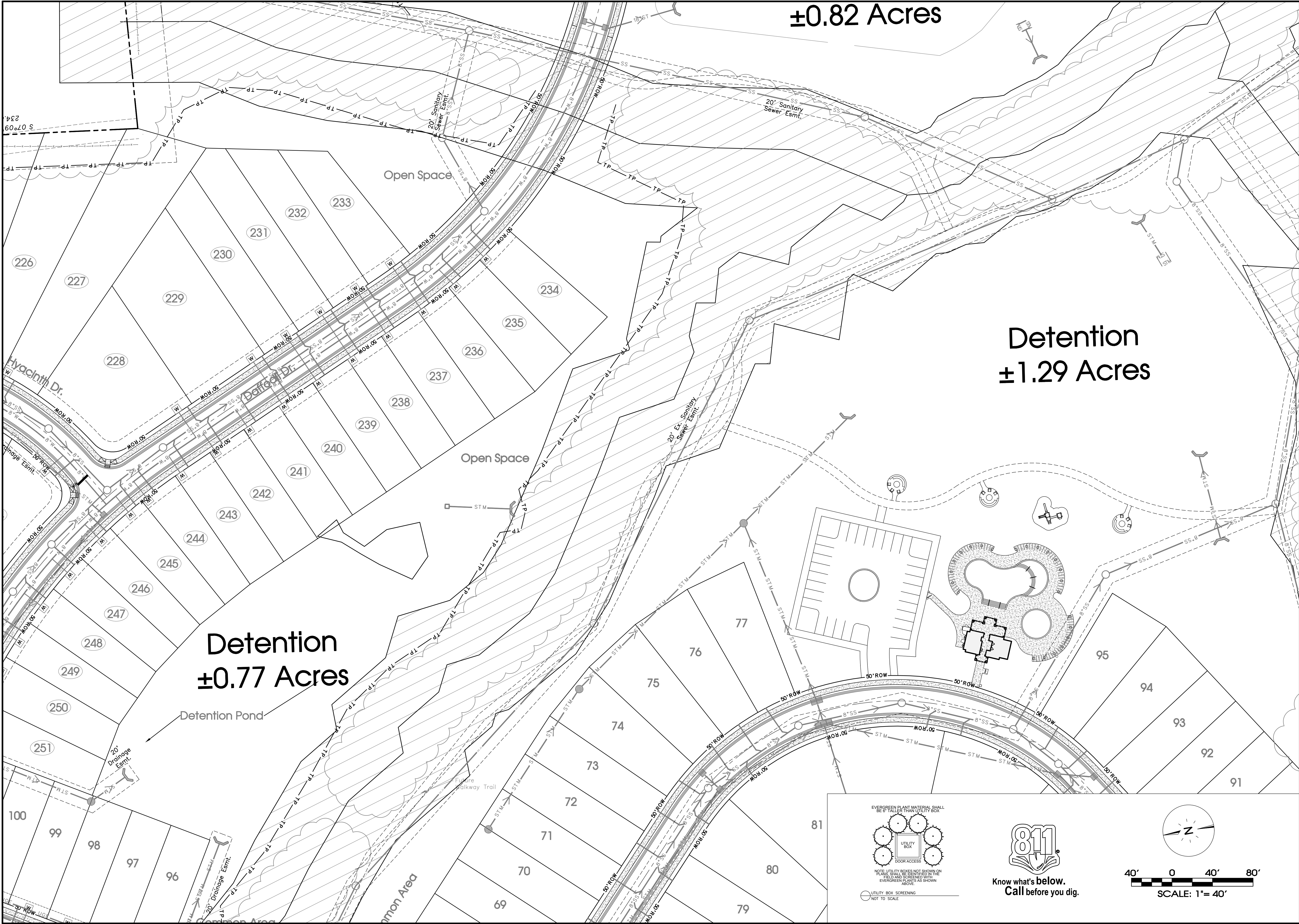
811

Know what's below.
Call before you dig.

40' 0 40' 80'

SCALE: 1" = 40'

Site plan for the 811 project, showing detention areas, open spaces, and various utility lines. The plan includes labels for "Detention ±0.77 Acres", "Detention ±1.29 Acres", and "±0.82 Acres". It also shows "Open Space", "Detention Pond", and "Future Walkway Trail". Utility lines are marked with "STM" and "SS". The plan is numbered with lots 69-100 and 226-251. A legend in the bottom right corner explains symbols for utility boxes, door access, and screening. A north arrow and scale bar (1" = 40') are also present.

[illegible][illegible]

Site plan for the 811 project, showing various areas and utilities. The plan includes labels for "Detention ±0.77 Acres", "Detention ±1.29 Acres", and "±0.82 Acres". It also shows "Open Space", "Detention Pond", and "Future Walkway Trail". Utility lines are marked with "STM" and "SS". The plan is numbered with lots 69-100 and 226-251. A legend in the bottom right corner explains symbols for utility boxes, door access, and screening. A north arrow and scale bar (1" = 40') are also present.

±0.82 Acres

Detention
±1.29 Acres

Detention
±0.77 Acres

Open Space

Open Space

Detention Pond

Hyacinth Dr.

Detention Dr.

20' Sanitary Sewer Esmt.

20' Drainage Esmt.

Future Walkway Trail

50' ROW

811

Know what's below.
Call before you dig.

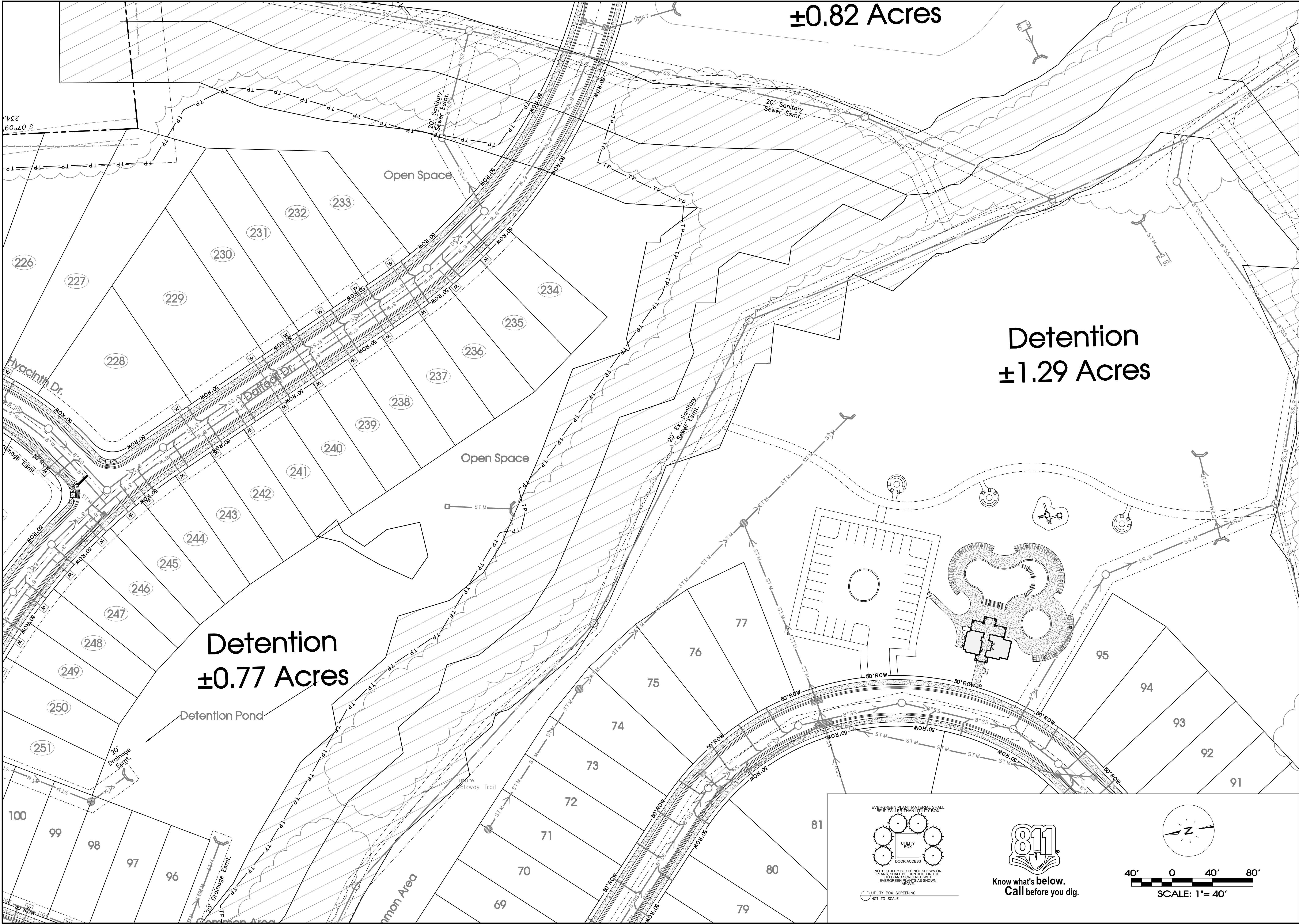
EVERGREEN PLANT MATERIAL SHALL
BE 6" TALLER THAN UTILITY BOX

UTILITY BOX
DOOR ACCESS

UTILITY BOX SCREENING
NOT TO SCALE

40' 0 40' 80'

SCALE: 1" = 40'



±0.82 Acres

Detention
±1.29 Acres

Detention
±0.77 Acres

Open Space

Open Space

Detention Pond

Future Walkway Trail

Hyacinth Dr.

20' Sanitary Sewer Esmt.

20' Ex. Sanitary Sewer Esmt.

20' Drainage Esmt.

20' Drainage Esmt.

STM

SS

50' ROW

MOB.OS

W

M

TP

91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251

70, 71, 72, 73, 74, 75, 76, 77, 79, 80, 81

Evergreen Plant Material Shall Be 6" Taller Than Utility Box

UTILITY BOX

DOOR ACCESS

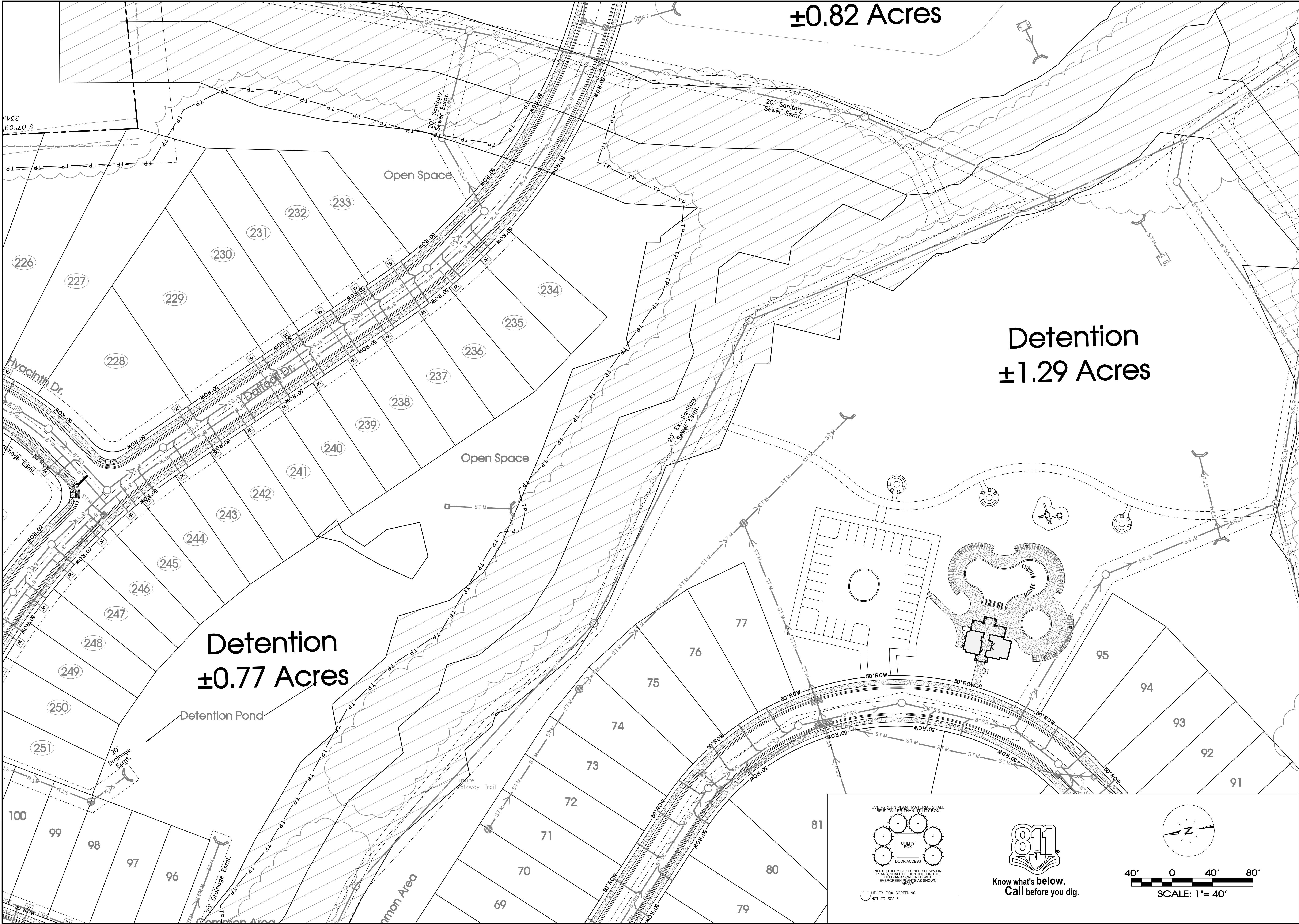
UTILITY BOX SCREENING NOT TO SCALE

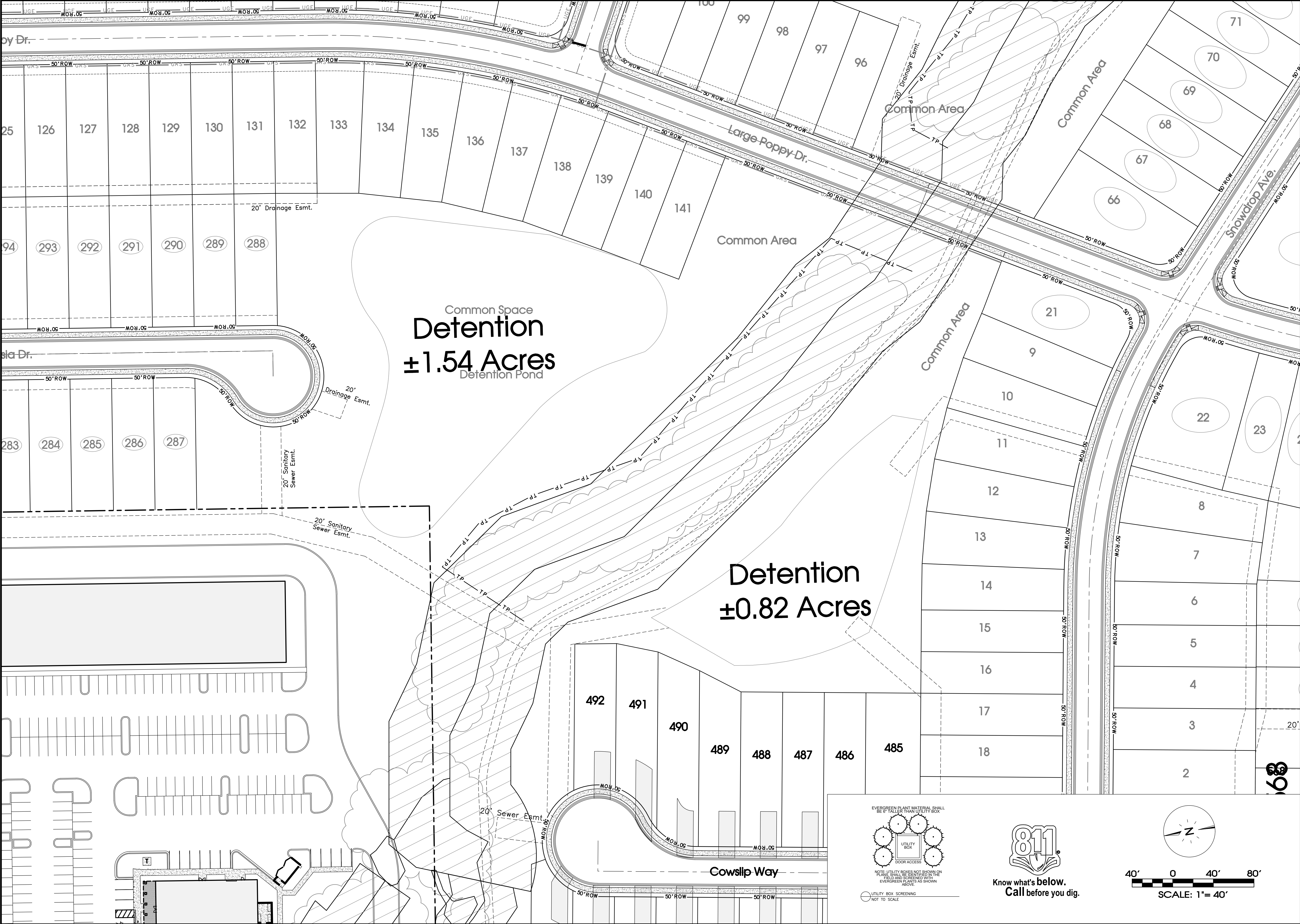
811

Know what's below.
Call before you dig.

40' 0 40' 80'

SCALE: 1" = 40'

[illegible][illegible][illegible][illegible]

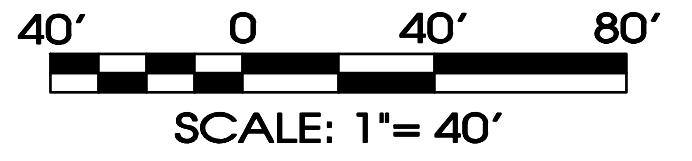
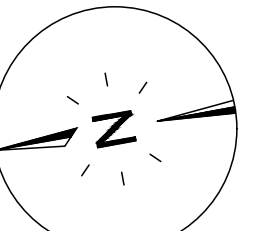
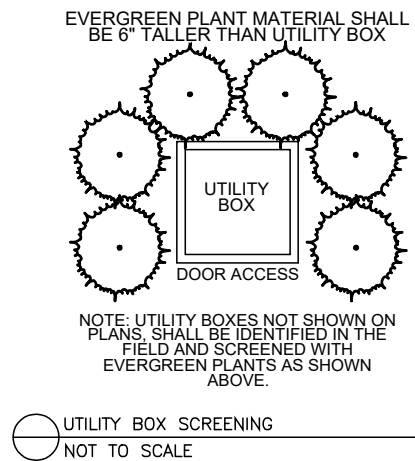


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Arbor Ridge
Section 4, 7, & 8
La Vergne, Tennessee

REVISED:		Landscape Plan
DRAWN: KMG		L1.4
DATE: 04-29-2024		
CHECKED: RSM		
FILE NAME: 18314prelimPROJ&11-12_LA		
SCALE: 1" = 40'		
JOB NO. 18314		SHEET:





Item #: 6. **Item Title: Site Plan - New Charter School in Existing 2-Story Building. Requested by SEC, Inc. Property located at 2 Ingram Boulevard (Tax Map 17, Parcel 20.02). I-2 (Heavy Industrial) Zoning District. Property owned by David B. Ingram.**

Reviewed By:

Bo Logan, City Planner
Gary Lide, City Engineer
Scott Tatalovich, Utility Engineer

Staff Comments / Technical Items:

Planning (Bo Logan - blogan@lavernetn.gov; and Jake Blair - jblair@lavernetn.gov)

All comments have been addressed.

Engineering (Gary Lide - glide@lavernetn.gov)

All Engineering comments addressed.

Utilities (Scott Tatalovich - statalovich@lavernetn.gov)

All Utilities comments addressed.

Codes (Joe White - jwhite@lavernetn.gov)

No Comments

Fire (Curtis Brinkley - cbrinkley@lavernetn.gov)

No Comments

Police (John Eubank - jeubank@lavernetn.gov)

No Comments

***Note:** The above technical items may not be the only corrections and/or issues needing to be resolved to get approval from the planning commission. New items can be brought up at the workshop and staff can add items at any time that might have been overlooked. It is the applicant's responsibility to make sure that all technical

items are addressed and that no new issues exist before the planning commission meeting. Addressing all technical items does not constitute approval. It is the planning commission's decision whether an item passes or fails. Revised plans are due to staff by the following Monday at close of business unless other arrangements are made and documented.

2 Ingram Blvd

MASSON RD

INGRAM BLVD





BAIN DR

2 Ingram Blvd

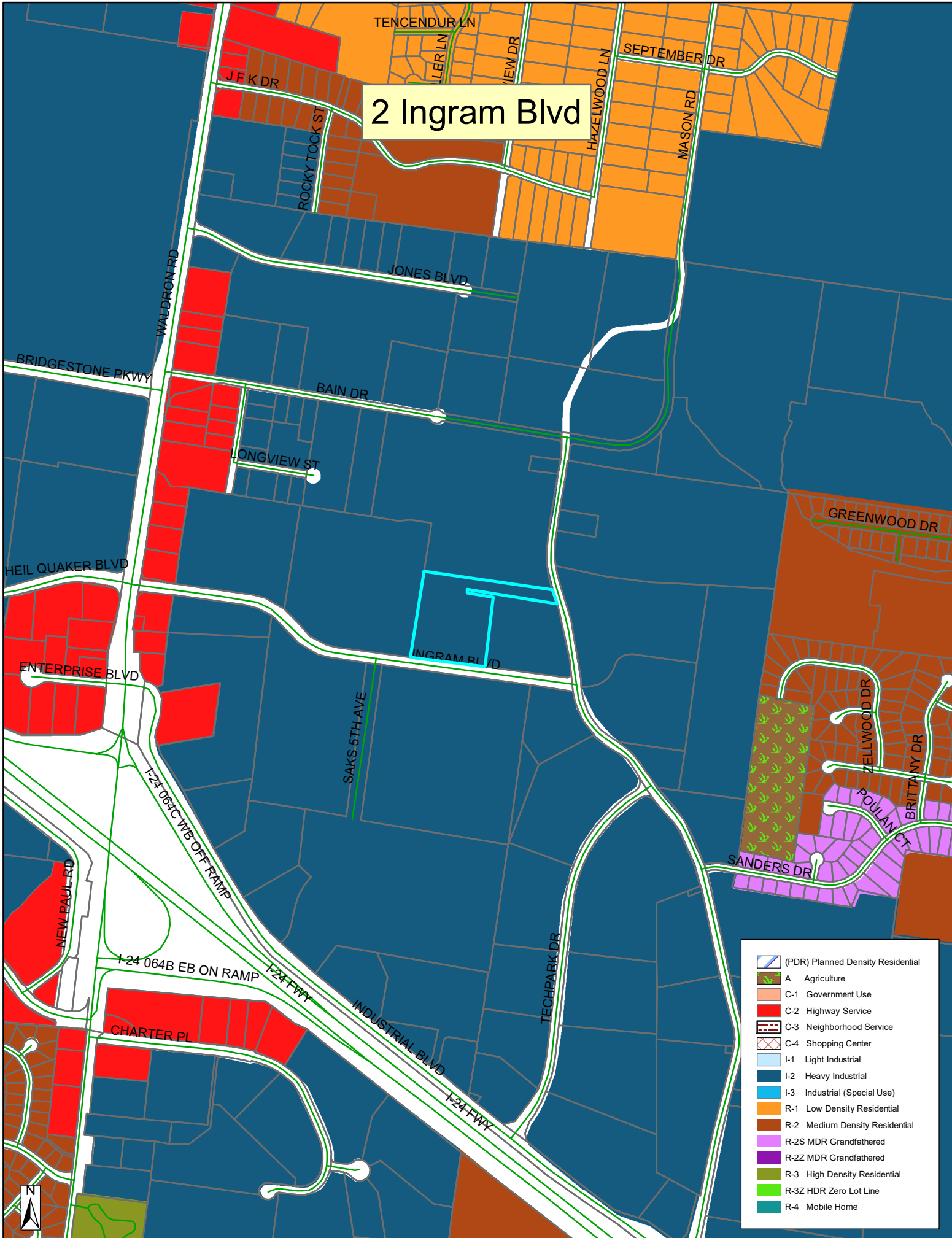
INGRAM BLVD

MASON RD

SAKS 5TH AVE

TECHPARK DR











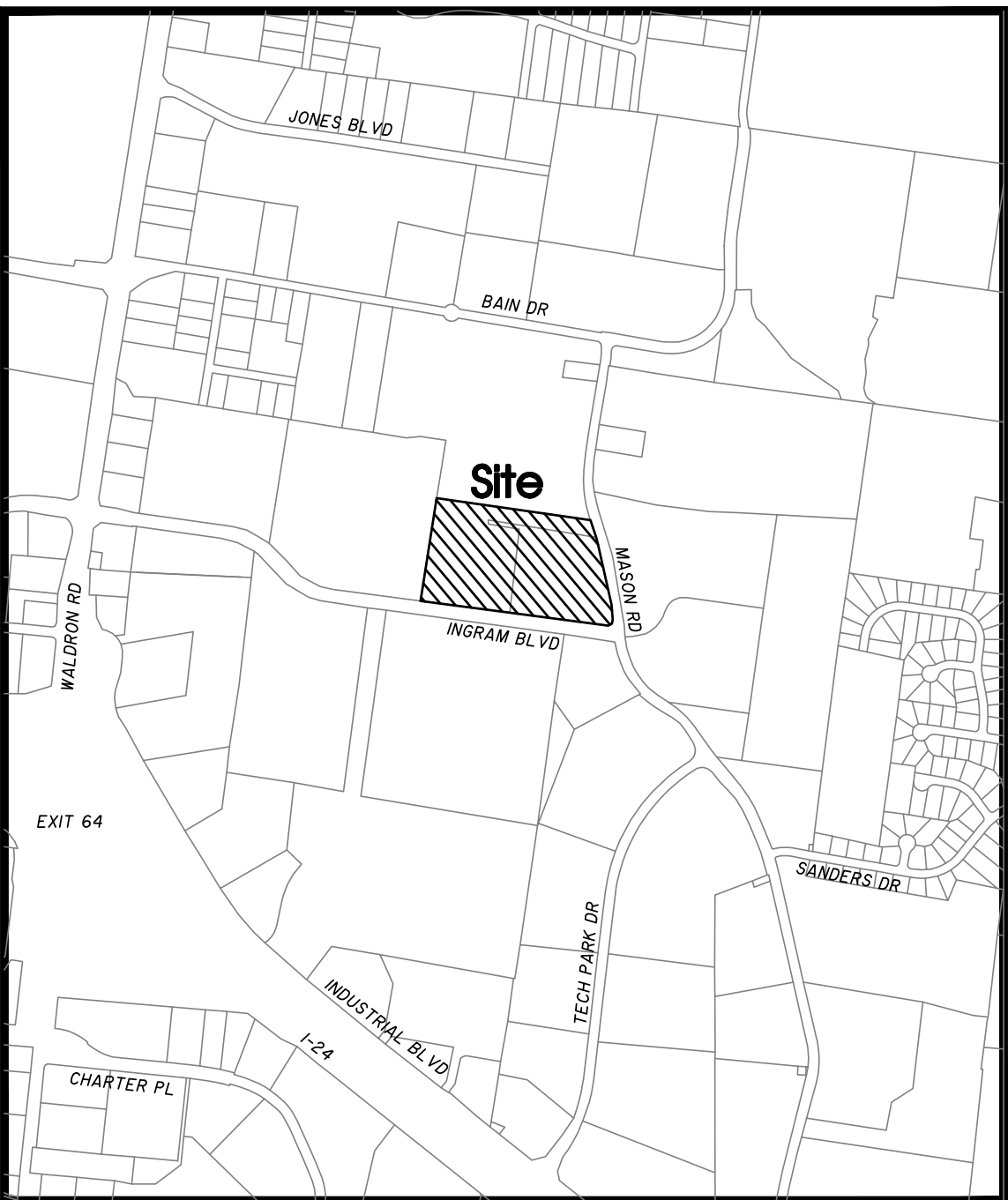
2 Ingram Boulevard

La Vergne, Tennessee

Site Plan & Construction Drawings BZA Special Exception

Drawing Index

Sheet No.	Title
C0.0	Cover Sheet
C0.1	General Notes
C0.2	Master Plan
C1.0	Existing Conditions/Initial EPSC/Demo Plan
C2.0-2.1	Site Plan
C2.2-2.3	Utility Plan
C3.0	Grading, Drainage & Final EPSC Plan
C4.0	Details
L1.0-L1.4	Landscape Plans
L 2.0	Landscape Details & Notes



Site Location Map

Not To Scale

SEC, Inc. SITE ENGINEERING CONSULTANTS
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LANDSCAPE ARCHITECTURE

850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567

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By: _____ Date: _____
Matthew A. Taylor, P.E. TN. Reg. #112515



Watershed: Hurricane Creek

Owner
David Ingram
4417 Tyne Blvd
Nashville, 37215

Deed Reference:
Tax Map 17, Parcels 20.02 & 20.03
Bk. 366, Pg. 296

Yard Requirements:
Front Yard: 10'
Front Building Setback: 40'
Side Building Setback: 20'
Rear Building Setback: 15'

Existing Use: Office Building (Vacant)
Intended Use: Elementary, Junior High, & High School
Density: N/A

Square Footage Of EACH Use:
Floor Area Ratio: 0.16
Height: 2 Stories, 34 Feet Tall
Sign Height = 10' Tall
Sign Area = 100 s.f.

Land Use Data:
Zoned: I-2
1 Lot on: 14.228 ± Acres

Parking Requirement:
Elementary & Junior High: 2 Spaces/Classroom x 15 Classrooms
Or 1 Space/5 Auditorium Seats x 120 Seats = 24 Spaces Required
High Schools: 5 Spaces/Classroom x 0 Classroom
Or 1 Space/4 Auditorium Seats x 120 Seats = 24 Spaces Required
Total Spaces Required: _ Spaces
Provided: 276 Regular + 8 H.C. = 284 Total Spaces Provided (Existing)

Flood Map No.:
This site lies within Zone X, not in the
100 Year Floodplain, per Community Panel
47149C0015J And 47149C0105J dated May 9, 2023.

Interior Landscape Area
Interior Landscaping Atea:
Existing: = 2,818 sq.ft.
Provided: = 5,440 sq.ft.
Imperious Area:
Existing: = 281,841 sq.ft.
Provided: = 281,841 sq.ft.

Sheet C0.0
2 Ingram Boulevard
S.E.C. Project #24136
Submitted: 4-29-2024
Revised:

Site Notes:

1. Dimensions shown at curbed areas are to face of curb.
2. See architectural drawings for building dimensions.
3. Contractor shall immediately notify the engineer of any discrepancies found between these plans, the architectural plans, and/or field conditions prior to construction.
4. Apparent errors, discrepancies, or omissions on the drawing shall be brought to the attention of the owner prior to bid submittal. The contractor may not use apparent errors, discrepancies, or omissions present on the drawings presented for bidding for additional charges after bids have been submitted. The architect shall be permitted to make corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the contract documents.
5. The contractor shall stake all improvements using the geometric data provided in the drawings. It is the sole responsibility of the contractor to completely stake and check all improvements to ensure adequate positioning, both horizontal and vertical, prior to the installation of any improvements.
6. The notes and plans shown call attention to certain required features of the construction but do not claim to cover all details of design and construction. The contractor shall furnish and install the work complete and ready for operation.
7. After completion of construction, the contractor shall perform site cleanup to remove all trash, debris, excess materials, equipment, and other deleterious materials associated with construction. The contractor is expressly responsible for ensuring the site is clean and in operable condition at the time of final acceptance.
8. A separate R.O.W. Excavation Permit issued from the LaVergne Street Department shall be required for any excavation or construction in the public R.O.W.
9. The contractor is responsible for the protection and replacement of all property pins on this site.
10. These drawings are intended for use on this site only and as an integrated set for this specific project. These drawings may not be used in whole or in part on any other project under the professional engineer's seal. The owner shall hold harmless and indemnify the architect and engineer from and against any and all claims of any nature whatsoever arising from such use.
11. Existing conditions and topo shown herein are taken from a field-run survey by Dale & Associates.

General Utility Notes:

1. Existing utility lines shown are approximate locations only. The contractor shall field verify all existing utility line locations prior to any construction. Any deviations from the design locations shall be reported to the owner or engineer prior to beginning construction.
2. The contractor will provide all necessary protective measures to safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of protecting utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.
3. The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities, prior to commencing work, the contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility.
4. The contractor shall refer to architect's plans and specifications for actual location of all utility entrances to include sanitary sewer laterals, domestic and fire protection water service, electrical, telephone and gas service. This contractor shall coordinate installation of utilities in such a manner as to avoid conflicts and assure proper depths are achieved as well as coordinating with the regulatory agency as to location and scheduling of tie-ins/connections to their facilities.
5. All underground utilities (water sewer, storm sewer, electrical conduit, irrigation sleeves, and any other miscellaneous), shall be in-place prior to the placement of base course material.
6. Location of site utilities shall be verified with proper utility company providing service.
7. The owner/developer for budget purposes, should check with City of LaVergne Water & Sewer Dept. for connection fees which may be substantial
8. Contractors for sewer work must be approved by the City of LaVergne Sewer Department. Contractor for water work must be approved by City of LaVergne Water Dept..
9. In Tennessee it is a requirement per "the underground utility damage prevention act" that anyone who engages in excavation must notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds those utility owners who participate in the Tennessee one call system can be notified toll free at 1-800-351-1111.

Sanitary Sewer Notes:

1. The contractor must notify the City of LaVergne Sewer Dept. for sewer inspection prior to starting work.
2. Sanitary sewer pick-up points shall terminate five feet outside the face of building unless otherwise noted.
3. Contractor shall comply with all requirements of the latest edition of the City of LaVergne specifications.

Waterline Notes:

1. All water mains shall be hydrostatically tested and disinfected before acceptance.
2. All trenches, pipe laying, and backfilling shall be in accordance with federal O.S.H.A. regulations.
3. Contractor shall comply with all requirements of the latest edition of the City of LaVergne specifications.
4. Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.

Grading And Drainage Notes:

1. The site work contractor shall coordinate the installation of all underground utilities with his work. All underground utilities (water, sanitary sewer, storm sewer, electrical conduit, irrigation sleeves, and any other miscellaneous underground utilities, devices, or structures), shall be in-place prior to the placement of base course material.
2. The contractor shall cut existing pavement as necessary to assure a smooth fit and continuous grade.
3. The contractor shall verify horizontal and vertical location of all existing storm sewer structures, pipes and all utilities prior to construction.
4. Clearing and grubbing limits shall include all areas disturbed by grading operation.
5. Any graded or disturbed areas shall have 4 inches of topsoil, seed, mulch, fertilizer and water applied until a healthy stand of grass is obtained. The restoration shall closely follow construction.
6. The soil materials on lots shown hereon may be disturbed by cutting or filling operations performed during or before development. Therefore, the builder of any proposed structure shall investigate the current conditions and consult with a geotechnical expert or other qualified person as he deems appropriate to assure himself that the design of the proposed foundation is adequate.
7. No portion of this site lies within the 100 year flood plain per F.E.M.A. Community Panel No. 47149C0105J dated May 9, 2023.
8. A separate R.O.W. Permit issued by the City of LaVergne will be required for excavation and construction in the public R.O.W.
9. Handicap parking spaces and accessible routes shall be constructed and sloped in accordance with all applicable provisions of the A.D.A.
10. In Tennessee it is a requirement per "The Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds. Those utility owners who participate in the Tennessee One Call System can be notified toll free at 1-800-351-1111.

Erosion Control Notes:

1. The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent silt from leaving site. Silt will not be allowed beyond construction limits.
2. The contractor is responsible for removing silt from site if not reusable on-site and assuring plan alignment and grade in all ditches at completion of construction.
3. The contractor is responsible for cleaning out all storm drainage structures, including flumes, pipes, etc., prior to completion of this project.
4. Erosion control shall be provided for all cut and fill operations within the limits of the construction site, throughout the construction period to provide the site with maximum protection from erosion at all times.
5. Erosion control measures are to be installed prior to any grading on-site and are to be maintained in place until stabilization of erodable soils has been accomplished.

Purpose Summary:

To Change Building Use From Office To Elementary,
Junior High, & High School To Allow A Charter School.

Legend:			
	EXIST. CONCRETE MONUMENT		BENCHMARK
	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL
	IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION
	EXIST. SIGN POST		HC SIGN
	EXIST. SEWER CLEANOUT		PROPOSED SIGN POST
	EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD
	EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP
	EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK
	EXIST. TELEPHONE RISER		EXTRUDED CURB
	EXIST. GAS RISER		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. UTILITY POLE		REVISION NUMBER
	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION
	POST INDICATOR VALVE		DRAINAGE PIPE DESIGNATION
	BLOW OFF VALVE		RIP RAP
	REDUCER		RUNOFF FLOW ARROW
	REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION
	CONCRETE THRUST BLOCK	63.25 X	PROPOSED SPOT ELEVATION
	DOUBLE DETECTOR CHECK VALVE	(63.25) X	EXIST. SPOT ELEVATION
	FIRE DEPT. CONNECTION	X	SEWER/STORM FLOW DIRECTION
	FIRE HYDRANT		CATCH BASIN
	GATE VALVE & BOX		CURB INLET
	WATER METER		AREA DRAIN
	GAS METER		HEADWALL
	GREASE TRAP		WINGED HEADWALL
	EXTERIOR CLEANOUT ECD		CONCRETE SWALE
	MANHOLE		TYPE- X- HEADWALL
EXISTING PHONE		PH	
EXISTING ELECTRIC		OH	
PROPERTY LINE		---	
EASEMENTS		-----	
RIGHT OF WAY		ROW	
EROSION CONTROL SILT FENCE		SF SF	
EROSION EEL		EEL EEL	
EXISTING TREELINE			
EXISTING FENCELINE		X X X X	
MINIMUM BUILDING SETBACK LINE		---	
PHASE BOUNDARY		■■■■■■■■■■	
EXISTING GAS LINE		GAS	
PROPOSED GAS LINE		GAS	
EXISTING STORM		-----	
PROPOSED STORM		STM	
EXISTING CONTOUR LINES		-601-	
PROPOSED CONTOUR LINES		601	
EXISTING SANITARY SEWER		SS	
PROPOSED SANITARY SEWER		SS	
EXISTING WATER		W W	
PROPOSED WATER		W W	

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LANDSCAPE ARCHITECTURE

850 MIDDLE TENNESSEE BOULEVARD

MURFREESBORO, TENNESSEE 37129

PHONE: (615) 890-7901

E-MAIL: MTAYLOR@SEC-CIVIL.COM

FAX: (615) 895-2467

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REVISIONS:

DRAWN: SJA/CFB3

DATE: 4-29-2024

CHECKED: MAT, MPL

FILE NAME: 24136project

SCALE: None

JOB NO. 24136

SHEET:

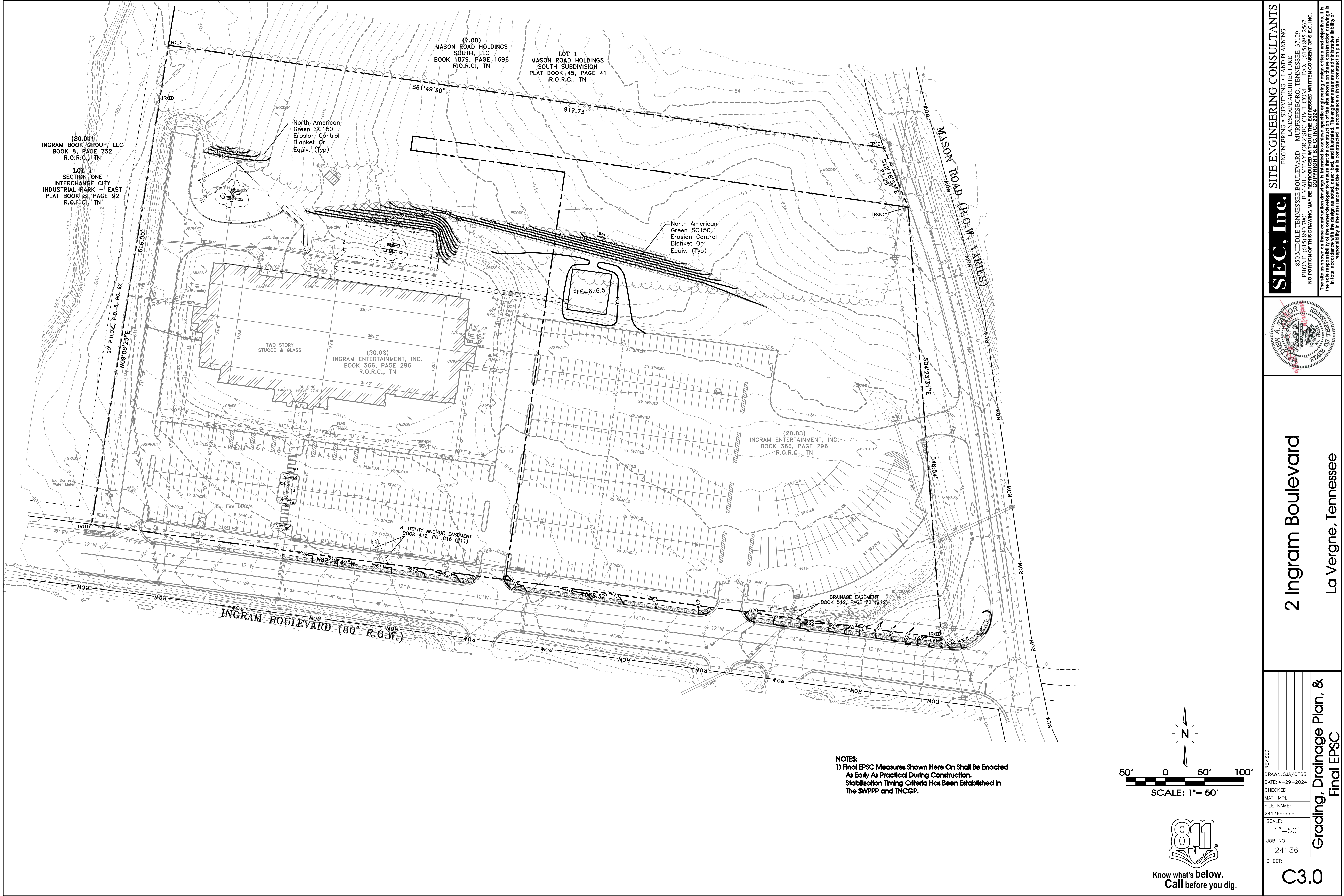
2 Ingram Boulevard

La Vergne, Tennessee

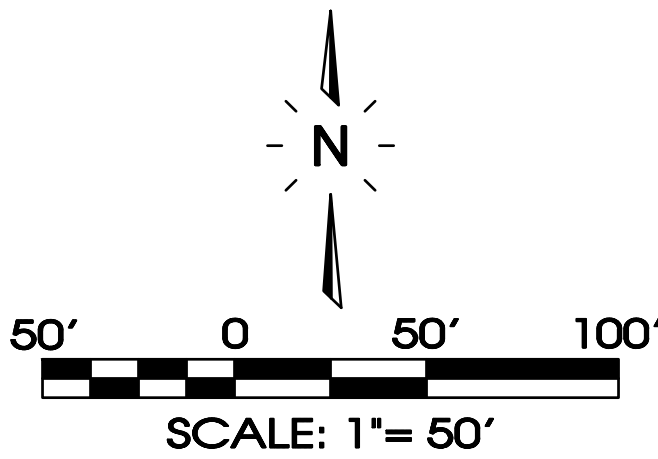
General Notes

C0.1

Page 85 of 181



NOTES:
1) Final EPSC Measures Shown Here On Shall Be Enacted
As Early As Practical During Construction.
Stabilization Timing Criteria Has Been Established In
The SWPPP and TNCGP.



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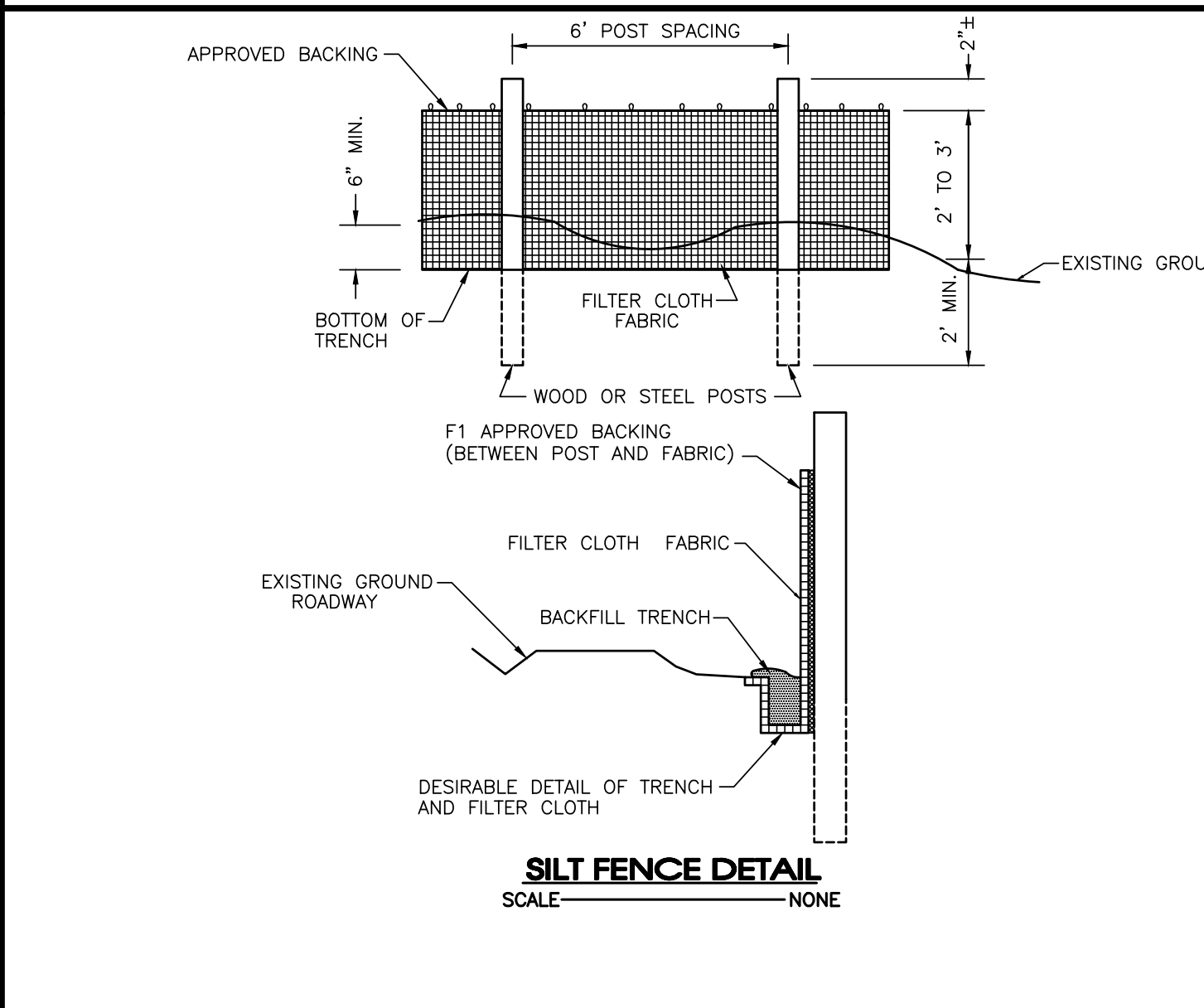
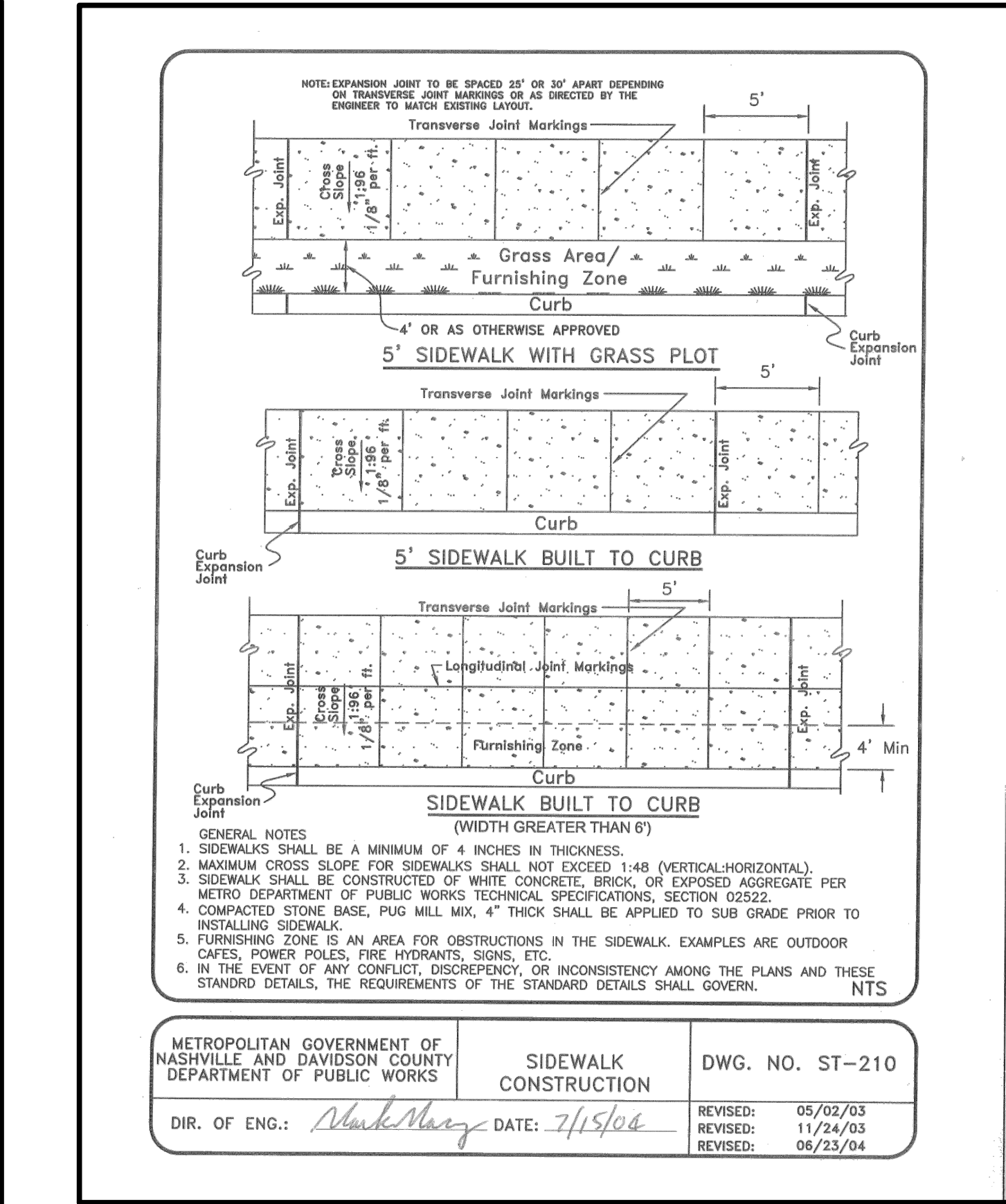
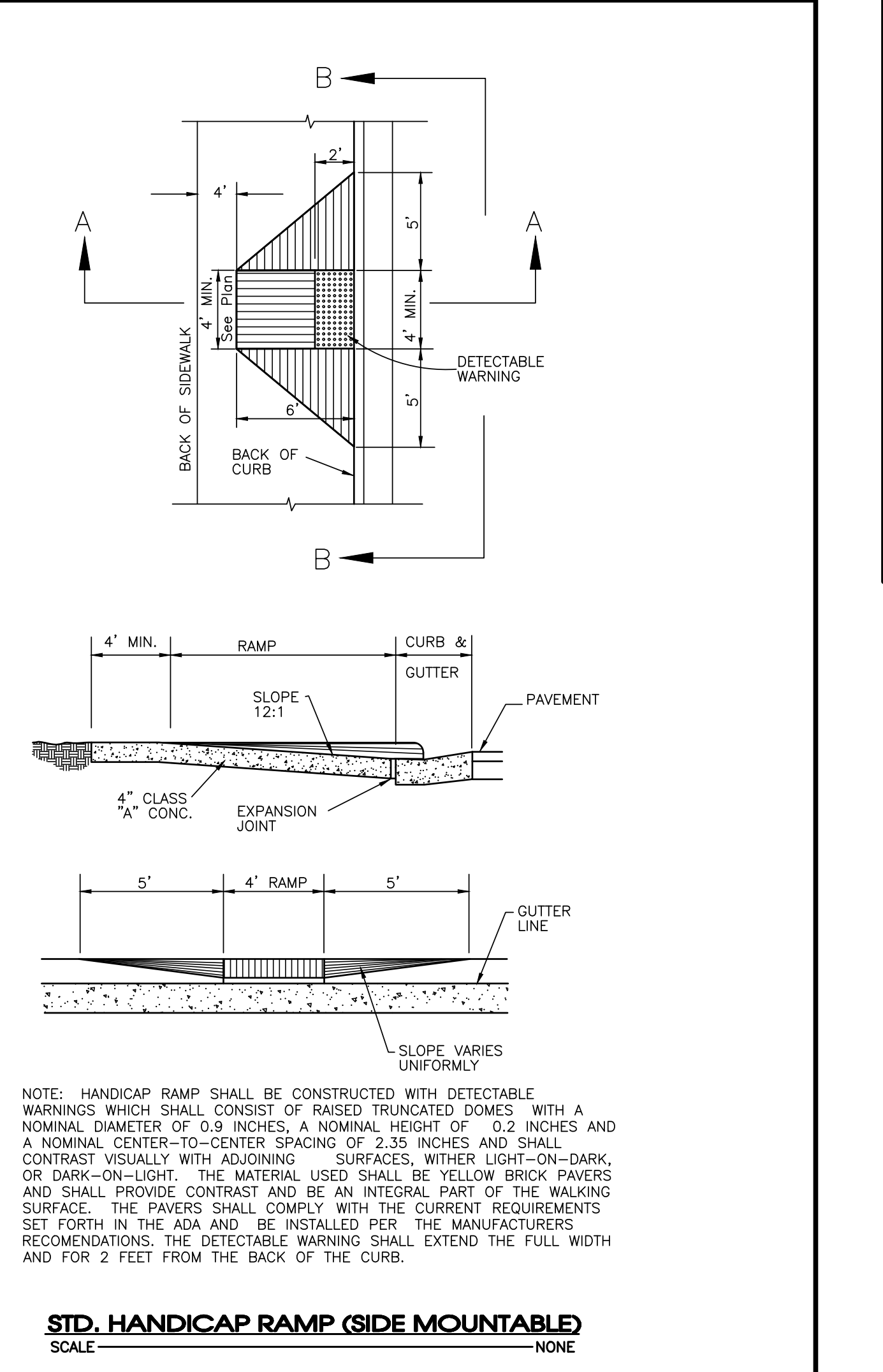
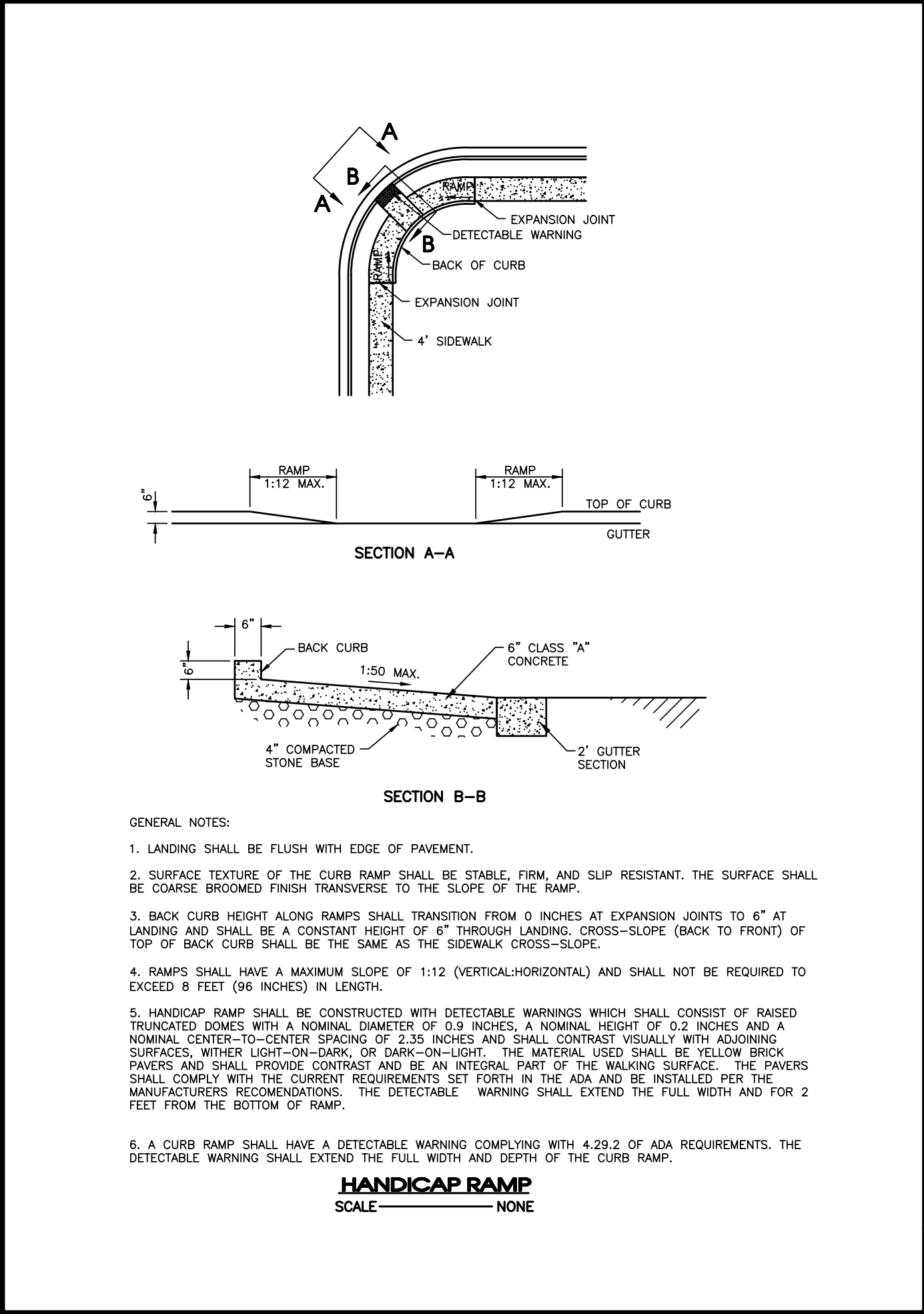
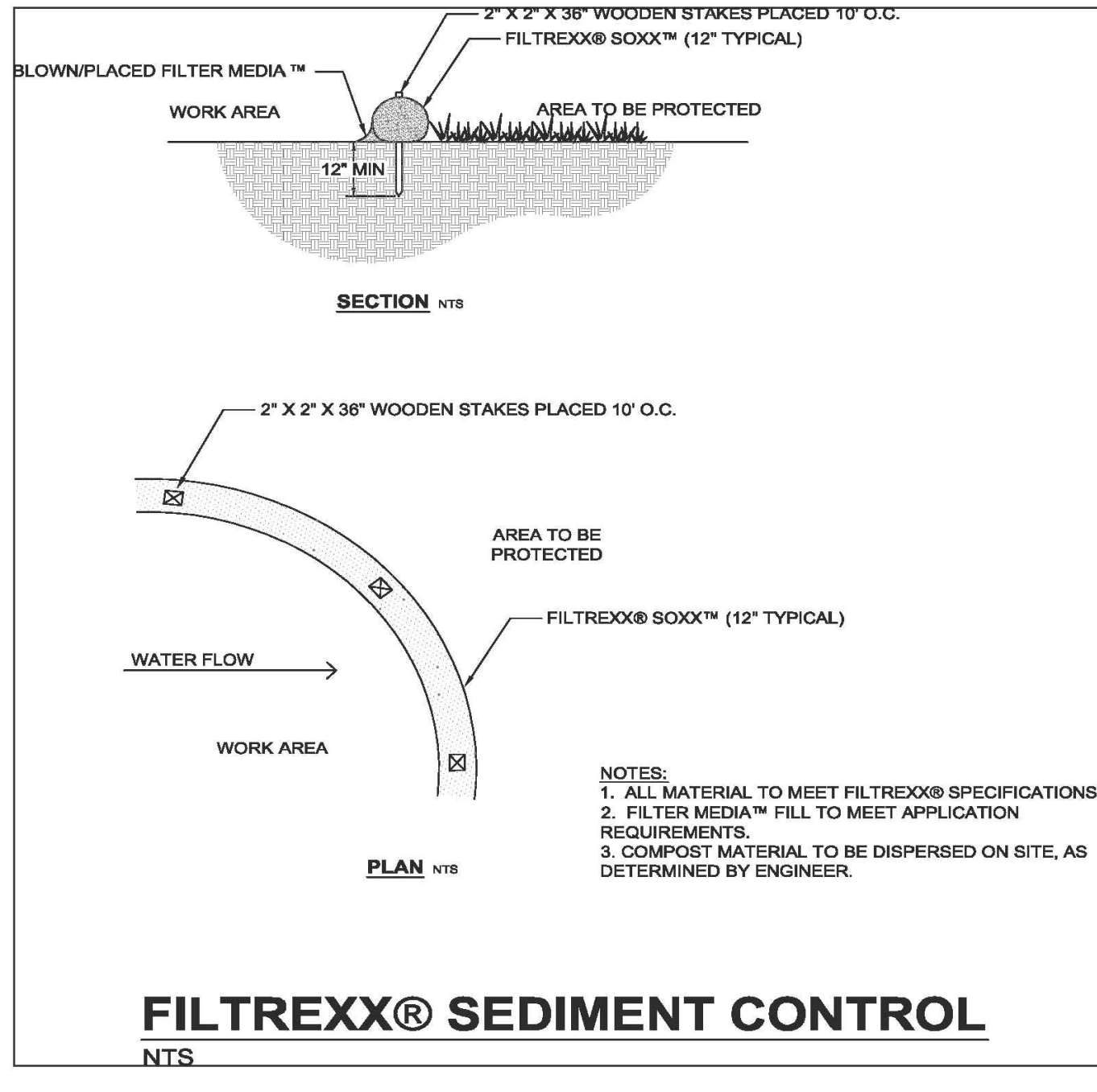
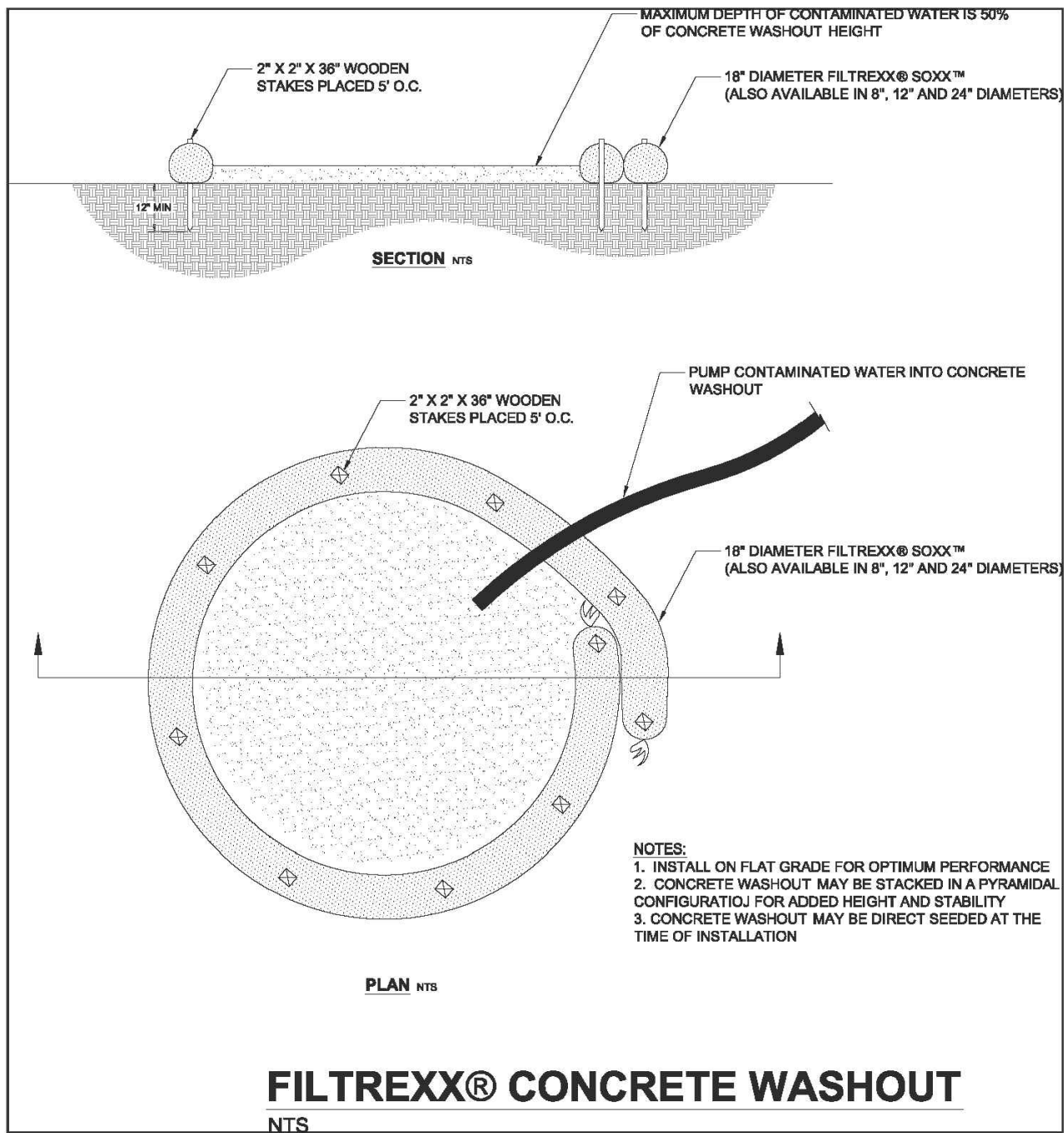
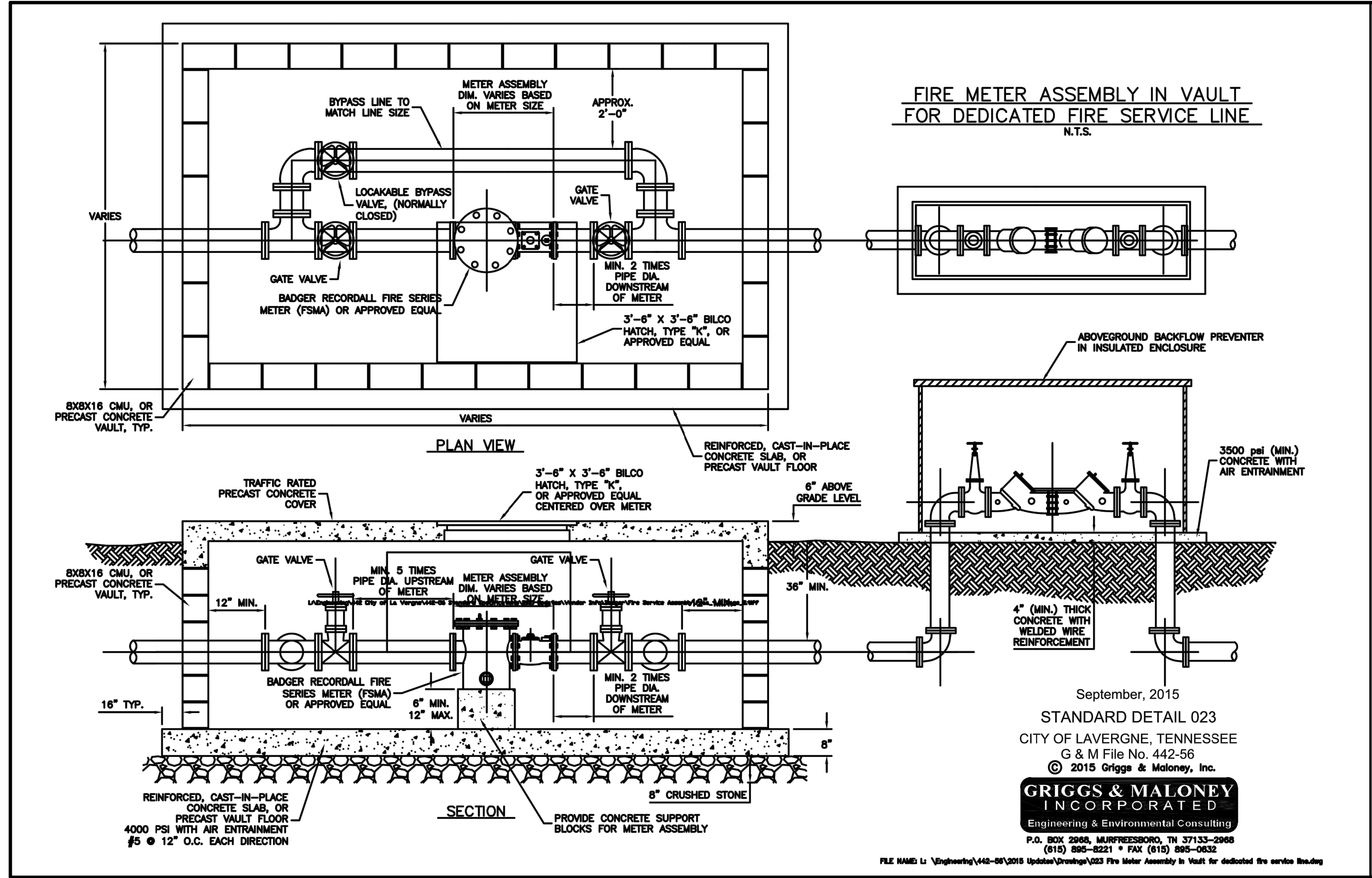
La Vergne, Tennessee

Grading, Drainage Plan, &
Final EPSC

REVISIONS:
DRAWN: SJA/CFB3
DATE: 4-29-2024
CHECKED:
MAT, MPL
FILE NAME:
24136project
SCALE:
1"=50'
JOB NO.
24136
SHEET:

C3.0

Page 88 of 181



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2 Ingram Boulevard
La Vergne, Tennessee

REVISIONS:

NO.	DATE	DESCRIPTION
1	4-29-2024	DATE: 4-29-2024

DRAWN: SJA/CFB3
CHECKED: MAT, MPL
FILE NAME: 24136project
SCALE: None
JOB NO: 24136
SHEET: C4.0

Details

2 Ingram Boulevard
LANDSCAPE PLAN

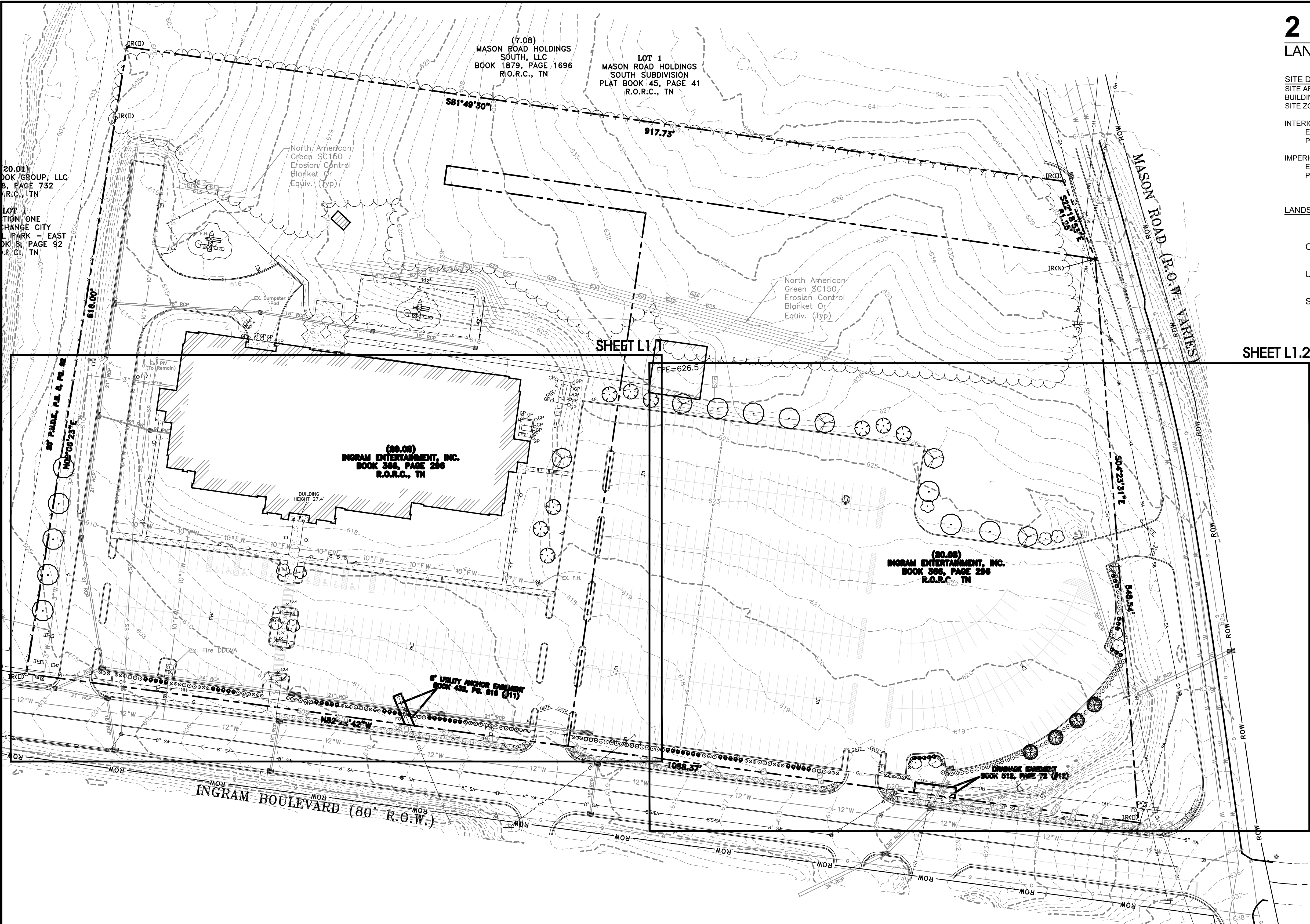
SITE DATA
SITE AREA: 14.23 ACRES
BUILDING & PARKING LOT AREA: 6.59 ACRES
SITE ZONING: I-2

INTERIOR LANDSCAPE AREA:
EXISTING: = 2,818 SQ. FT.
PROVIDED: = 5,440 SQ. FT.

IMPERIOUS AREA:
EXISTING: = 281,841 SQ. FT.
PROVIDED: = 281,841 SQ. FT.

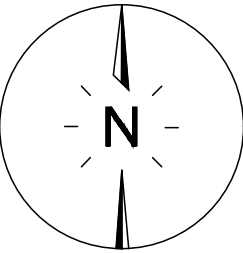
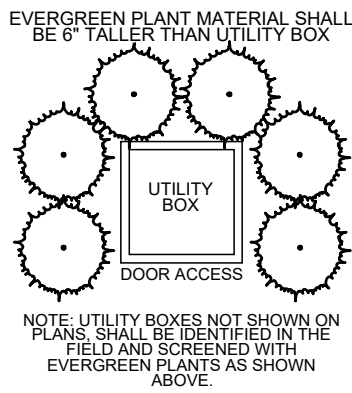
LANDSCAPE REQUIREMENTS (AS PER ARTICLE 3.130 SECTION C)

	REQUIRED	PROVIDED
CANOPY TREES 6.59 ACRES x 3 TREES/ACRE	20 TREES	20 TREES
UNDERSTORY TREES 6.59 ACRES x 3 TREES/ACRE	20 TREES	20 TREES
SHRUBS 6.59 ACRES x 15 SHRUBS/ACRE	99 SHRUBS	99 SHRUBS



- PLAN NOTES:
- ANY TREES OR SHRUBS THAT ARE DEAD, DYING OR MISSING OUTSIDE THE SCOPE OF THE CURRENT WORK WILL NEED TO BE REPLACED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
 - ALL LANDSCAPE BEDS TO HAVE NEATLY TRENCHED BED EDGE AND HAVE 4" MINIMUM DEPTH OF HARDWOOD MULCH.
 - ALL TREES AND SHRUBS SHALL BE COORDINATED WITH LIGHTING PLAN PRIOR TO INSTALLATION.
 - ALL NEW PLANT MATERIAL AND TURF AREAS SHOULD BE IRRIGATED.
 - ALL SHRUBS TO BE 3' BACK OF CURB.
 - ALL AREAS OF DISTURBANCE OUTSIDE OF LANDSCAPE BEDS SHALL BE REPAIRED WITH REBEL III FESCUE SEED OR SOD.
 - ANY UTILITY STRUCTURE, LIGHT POLES, SIGN, OR OTHER FEATURE MAY NOT BE ADDED TO ANY REQUIRED LANDSCAPE ISLAND IN SUCH A MANNER THAT WOULD DISPLACE THE REQUIRED ELEMENT(S) (TREES, SHRUBS, ETC.)
 - PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING MATERIALS, INCLUDING TURF, AND IRRIGATION MATERIALS BOTH ON SITE, AND INSIDE THE ROW.

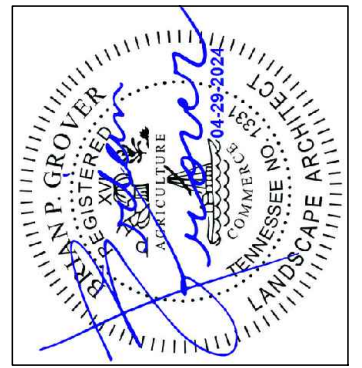
- PLANTING SCHEDULE NOTES
- SHRUBS AND TREES SHALL BE OF THE HIGHEST QUALITY.
 - NO SUBSTITUTIONS ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND LANDSCAPE ARCHITECT OF RECORD.
 - SUBSTITUTIONS AND DEVIATIONS MAY OR MAY NOT BE APPROVED.
 - REVISED LANDSCAPE PLANS MUST BE SUBMITTED AND APPROVED BY THE CITY OF LA VERGNE PLANNING DEPARTMENT 615-213-2624 PRIOR TO INSTALLATION.
 - ALL IRRIGATION, LAWN AND PLANT MATERIALS WITHIN THE ROW MUST BE MAINTAINED BY THE PROPERTY OWNER.



50' 0' 50' 100'
SCALE: 1" = 50'

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The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in total accordance with the design as noted, described, and dimensioned on these drawings. The engineer, architect, or landscape architect is not responsible for the construction of the site as shown on these drawings.

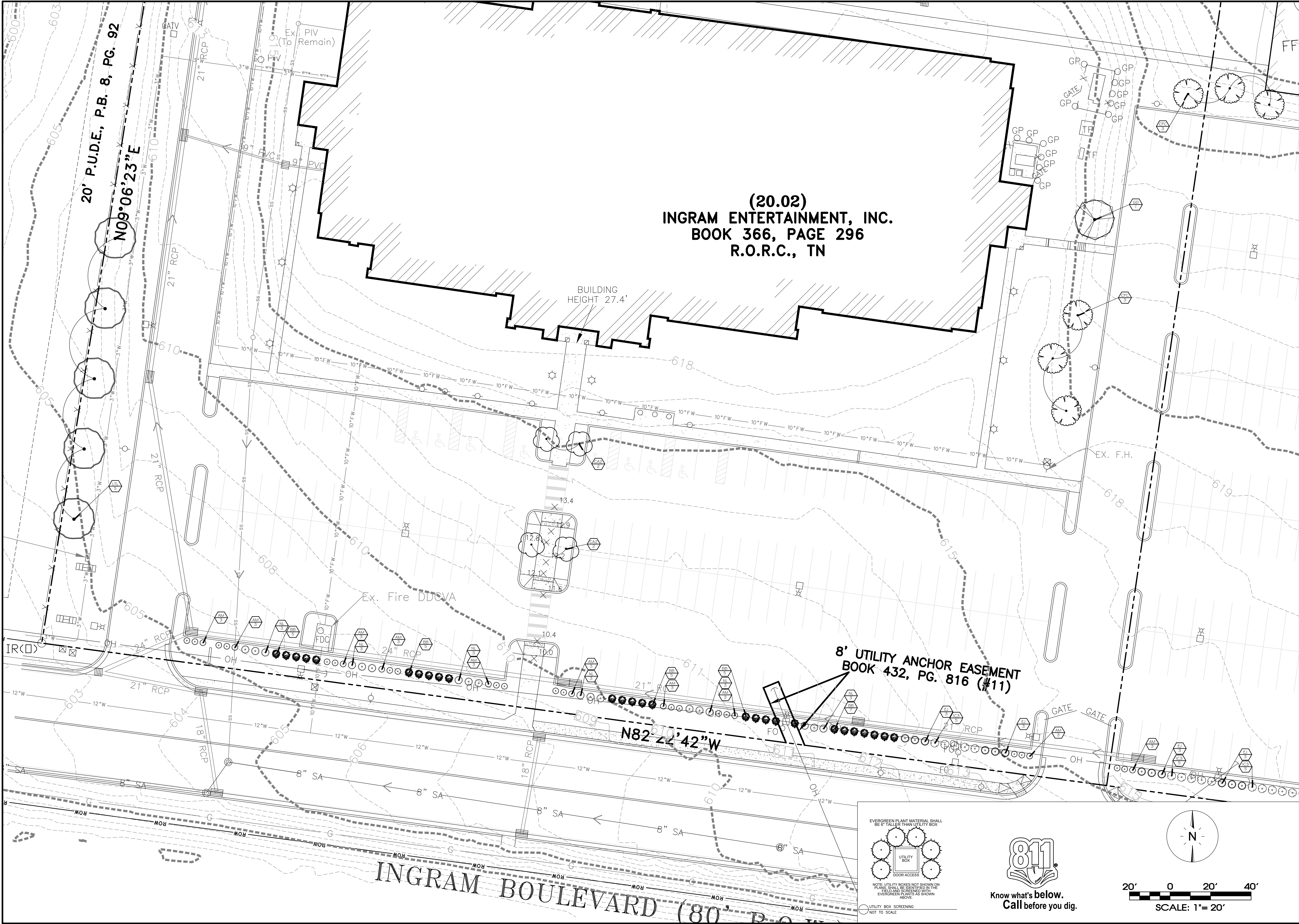


2 Ingram Boulevard
La Vergne, Tennessee

REVISIONS:

DRAWN: KMG
DATE: 04-29-2024
CHECKED: RSM
FILE NAME: 24136bzo_LA
SCALE: 1" = 50'
JOB NO: 24136
SHEET: L1.0

L1.0



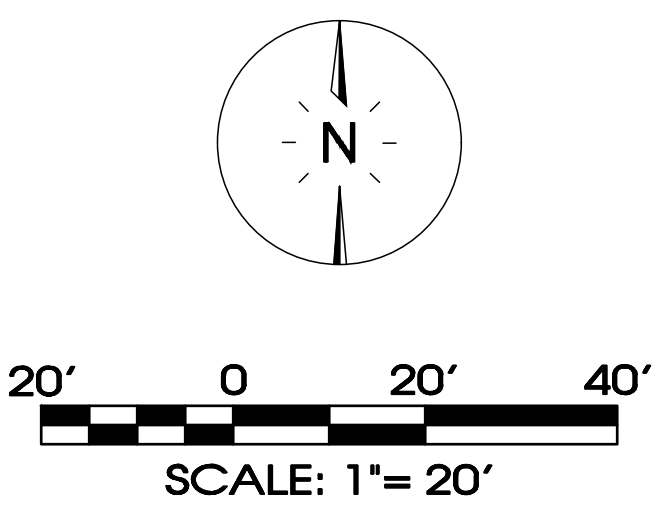
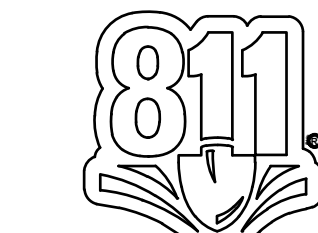
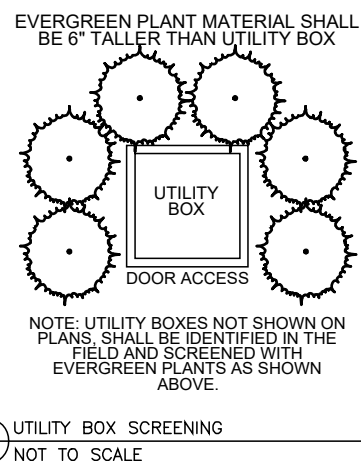
(20.02)
INGRAM ENTERTAINMENT, INC.
BOOK 366, PAGE 296
R.O.R.C., TN

BUILDING
HEIGHT 27.4'

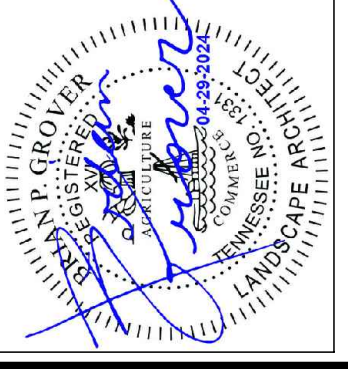
8' UTILITY ANCHOR EASEMENT
BOOK 432, PG. 816 (#11)

N82°22'42"W

INGRAM BOULEVARD (80' R.O.W.)

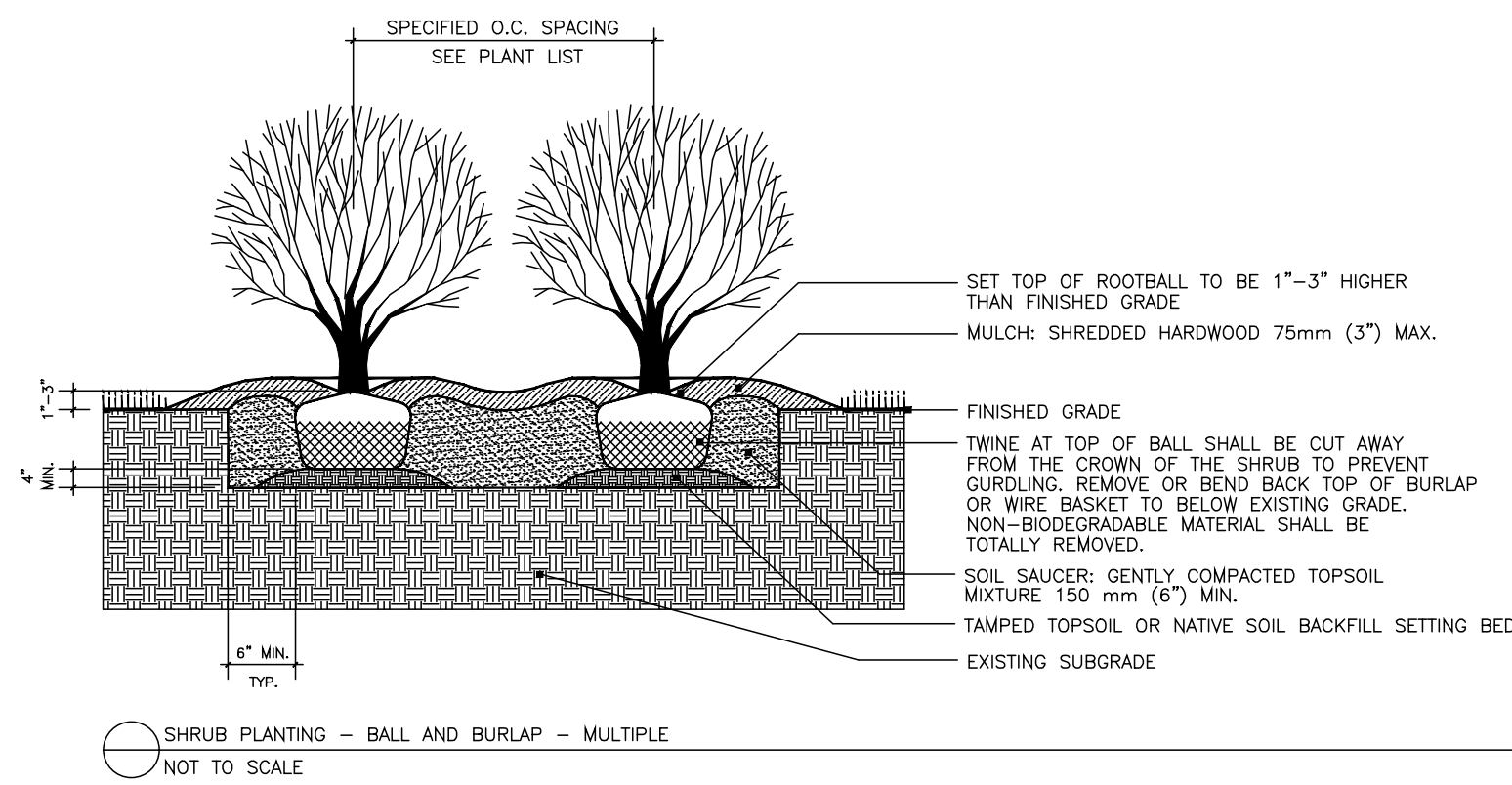
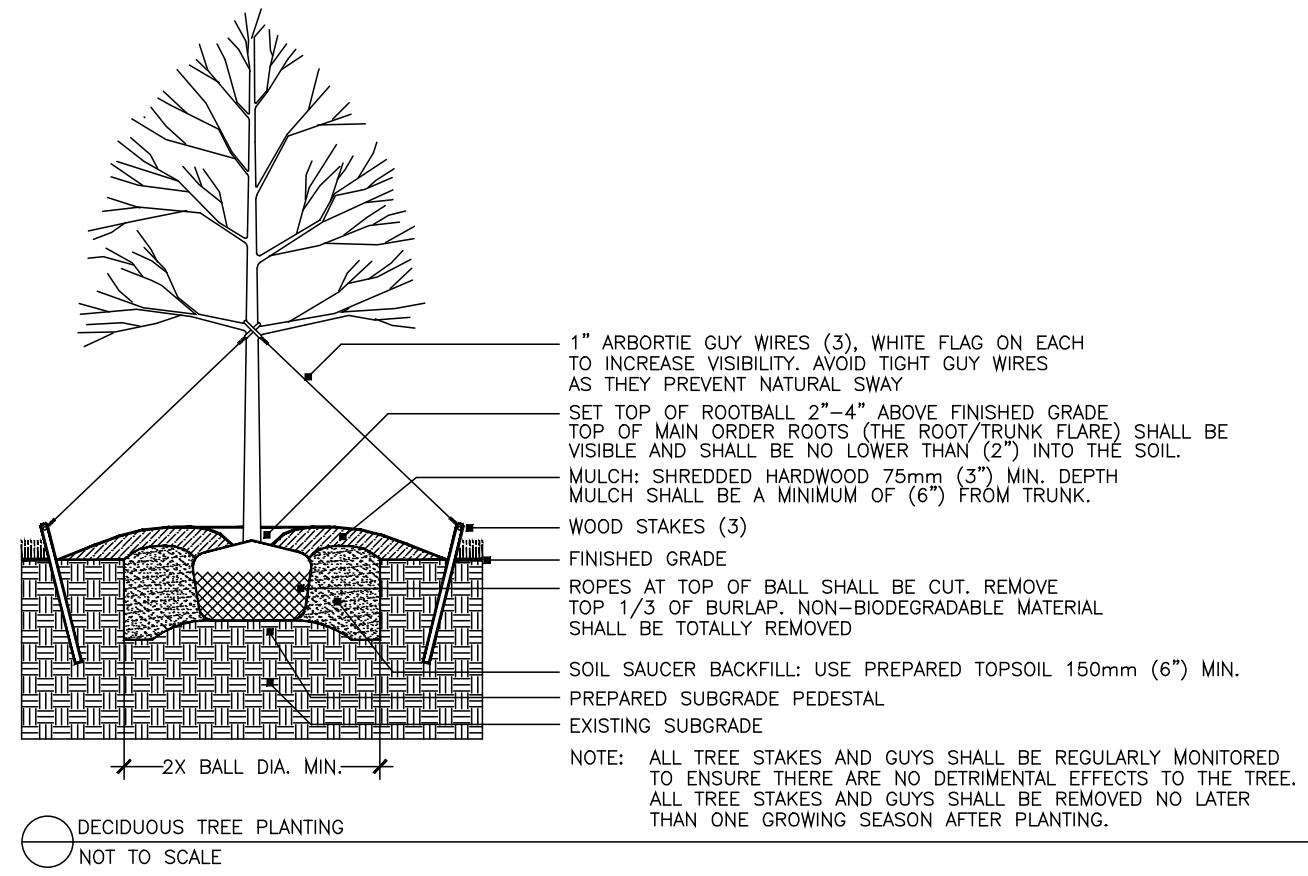


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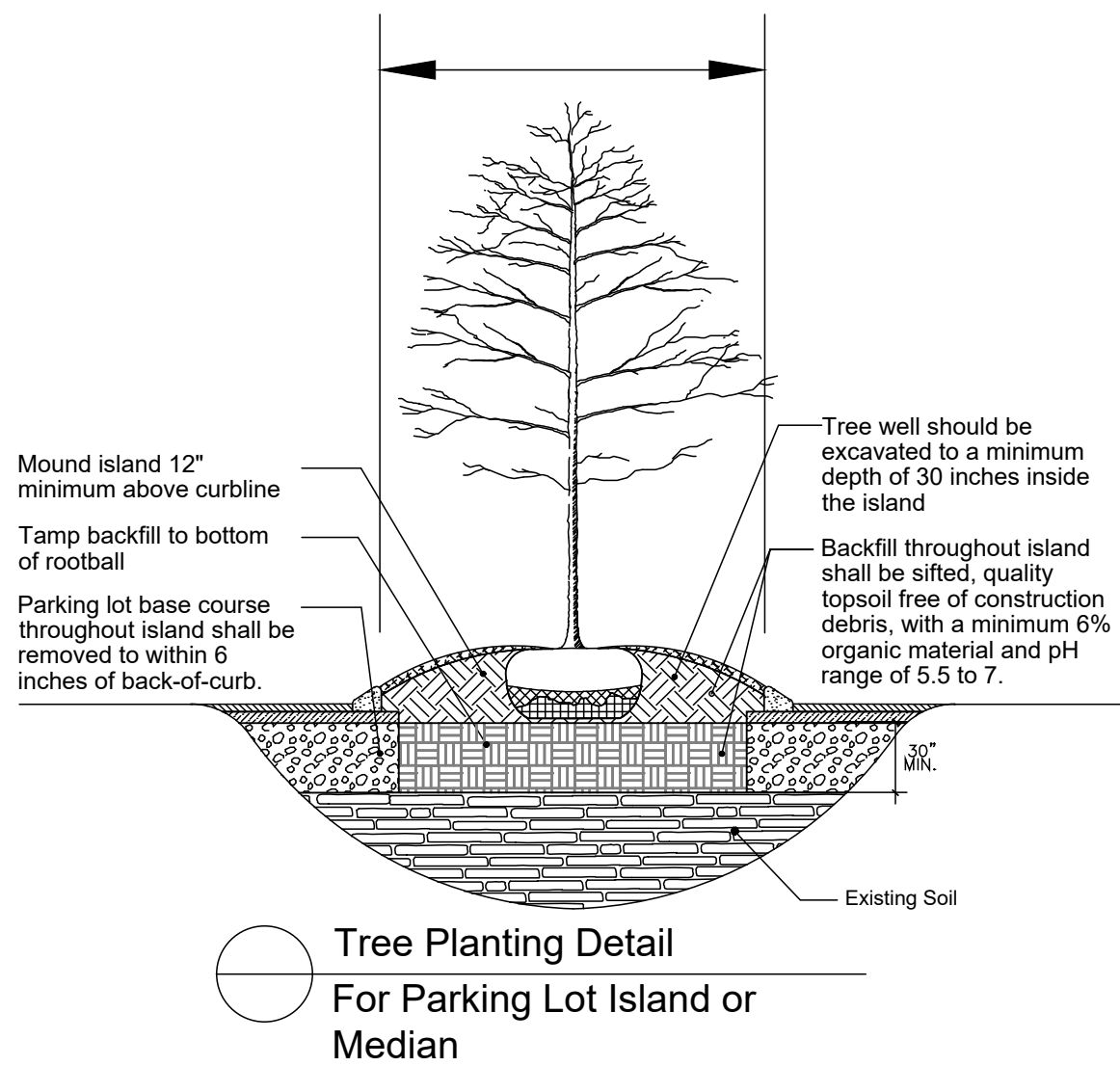


2 Ingram Boulevard
La Vergne, Tennessee

REVISIONS:	
DRAWN: KMG	DATE: 04-29-2024
CHECKED: RSM	
FILE NAME: 24136bzo_LA	
SCALE: 1" = 20'	
JOB NO. 24136	
SHEET: L1.1	



*Varies (See Plans for Width of Tree Island)

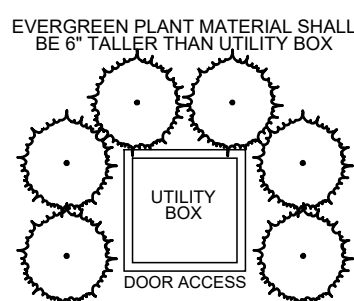


PLANT SCHEDULE									
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
DECIDUOUS TREES									
	CC2	4	CARPINUS BETULUS 'CORNERSTONE' / CORNERSTONE EUROPEAN HORNBEAM	B # B	3" CAL	14' - 16'		AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	GD	5	GLEDITSIA TRIACANTHOS 'DRAVES' / STREET KEEPER HONEY LOCUST	B # B	3" CAL	14' - 16'		AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	LTL	11	LIRIODENDRON TULIPIFERA 'LITTLE VOLUNTEER' / LITTLE VOLUNTEER TULIP TREE	B # B	3" CAL	14' - 16'		AS SHOWN	5' CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
UNDERSTORY TREES									
	CA2	11	CERCIS CANADENSIS 'ACE OF HEARTS' / ACE OF HEARTS REDBUD	B # B	2" CAL	10' - 12'		AS SHOWN	4' CLEAR TRUNK, FULL CANOPY, MATCHED*
	CFC	9	CORNUS FLORIDA 'CHEROKEE CHIEF' / CHEROKEE CHIEF FLOWERING DOGWOOD	B # B	2" CAL	10' - 12'		AS SHOWN	4' CLEAR TRUNK, FULL CANOPY, MATCHED*
EVERGREEN SHRUBS									
	AM	51	ABELIA X 'MARDI GRAS' / MARDI GRAS ABELIA	CONT.		36"	36"	4' O.C.	WELL-BRANCHED, DENSE, MATCHED
	BB	58	BUXUS MICROPHYLLA JAPONICA 'GREEN BEAUTY' / GREEN BEAUTY BOXWOOD	CONT.		36"	36"	5' O.C.	DENSE, FULL, MATCHED
	EJ	12	EUONYMUS JAPONICUS 'AUREO-MARGINATUS' / GOLDEN EUONYMUS	CONT.		36"	36"	5' O.C.	FULL, WELL-BRANCHED, MATCHED
	IC3	33	ILEX CORNUTA 'CARISSA' / CARISSA HOLLY	CONT.		36"	36"	5' O.C.	DENSE, FULL, MATCHED
	NL	33	NANDINA DOMESTICA 'LEMON LIME' / LEMON LIME NANDINA	CONT.		36"	36"	5' O.C.	DENSE, FULL, MATCHED
	PL5	10	PRUNUS LAUROCERASUS 'SCHIPKAENSIS' / SCHIPKA LAUREL	CONT.		36"	18' - 24'	5' O.C.	FULL TO GROUND, DENSE, WELL-BRANCHED
	VD2	18	VIBURNUM DAVIDII X TINUS 'SPG-3-024' / MOONLIT LACE® VIBURNUM	CONT.		36"	36"	5' O.C.	DENSE, FULL, MATCHED

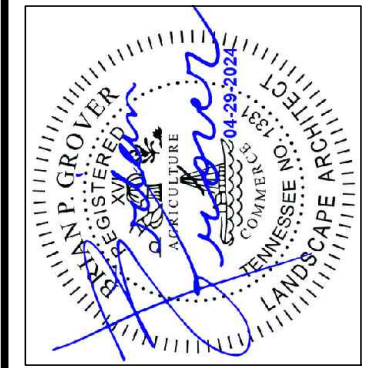
MATCHED* - TREES OF THE SAME SPECIES SHALL HAVE THE FOLLOWING CHARACTERISTICS:
MATCHED BY BRANCH HEIGHT, CALIPER, HEIGHT OF TREE, SPREAD OF BRANCHES AND BRANCHING STRUCTURE, AND OVERALL CANOPY SHAPE

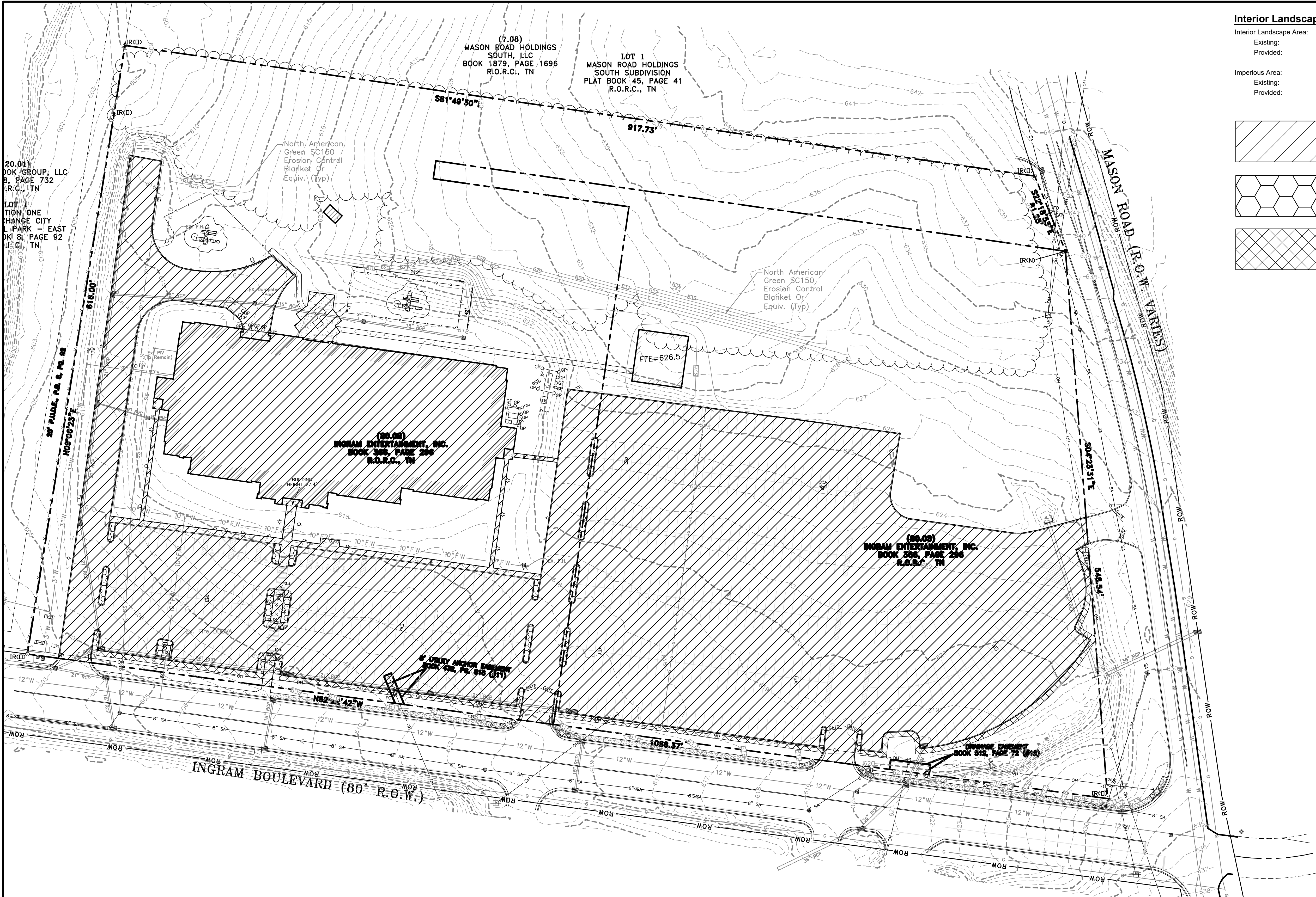
LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES AND TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THESE UTILITIES.
2. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY AND SHALL BE RESPONSIBLE FOR AND DAMAGE TO UTILITIES.
3. PLANT MATERIALS AND STUMPS INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR. BACKFILL HOLES WITH TOPSOIL FREE OF ROOTS AND ROCKS.
4. TREAT ALL LANDSCAPE BEDS WITH PRE-EMERGENT HERBICIDE PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL WEEDING UNTIL FINAL ACCEPTANCE.
5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS.
6. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY MAINTAINING THE WORK (INCLUDING BUT NOT LIMITED TO: WATERING, MULCHING, SPRAYING, FERTILIZING, ETC.) OF ALL PLANTING AREAS AND LAWNS PER PROJECT SPECIFICATIONS UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
7. PROVIDE TREES, SHRUBS, AND PLANTS OF QUALITY, SIZE, GENUS, SPECIES AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". HEIGHT AND WIDTH SHOWN ARE MINIMUM SIZES.
8. THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE. THE LANDSCAPE CONTRACTOR SHALL MAKE ALL REPLACEMENTS PROMPTLY (AS PER DIRECTION OF OWNER).
9. THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
10. THE QUANTITIES INDICATED ON THE PLANT SCHEDULE AND PLAN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATION AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE LANDSCAPE ARCHITECT IMMEDIATELY.
11. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE. SELECTIVELY PRUNE DEAD WOOD.
12. SEED OR SOD ALL AREAS DISTURBED BY CONSTRUCTION AND NOT DESIGNATED AS PLANTING BEDS.
13. SHRUBS AND GROUND COVER BEDS TO BE PLANTED IN A TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR DISTANCES.
14. UPON COMPLETION AND FINAL ACCEPTANCE OF THE LANDSCAPE INSTALLATION, A THREE (3) YEAR LANDSCAPE MAINTENANCE BOND WILL BE REQUIRED. THIS BOND SHOULD BE SUBMITTED IN THE NAME OF THE PROPERTY OWNER OF RECORD OR A LEASE HOLDER WHO HAS TEN (10) YEARS OR MORE REMAINING ON A CURRENT LEASE. THE PROPERTY OWNER/LEASE HOLDER SHOULD ALLOW ADEQUATE TIME TO OBTAIN THE BOND AS THIS PROCESS MAY BE LENGTHY AND MAY DELAY THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.



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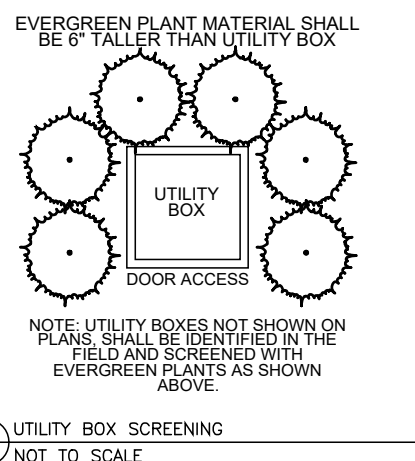
Interior Landscape Area

Interior Landscape Area:	
Existing:	= 2,818 Sq.Ft.
Provided:	= 5,440 Sq.Ft.
Imperious Area:	
Existing:	= 281,841 Sq.Ft.
Provided:	= 281,841 Sq.Ft.

IMPERVIOUS AREA

INTERIOR LANDSCAPE AREA EXISTING

INTERIOR LANDSCAPE AREA PROVIDED



811
Know what's below.
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50' 0' 50' 100'
SCALE: 1" = 50'

N

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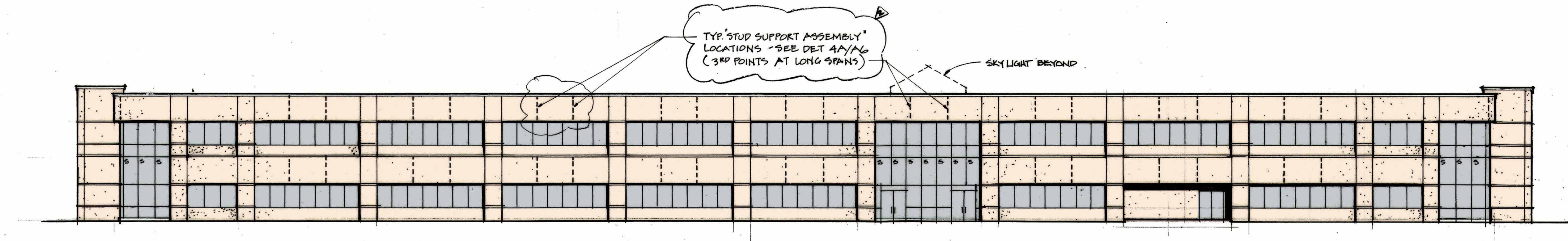
The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in total accordance with the design as noted, described, and dimensioned on these drawings. The site is constructed in accordance with the construction plans.

2 Ingram Boulevard

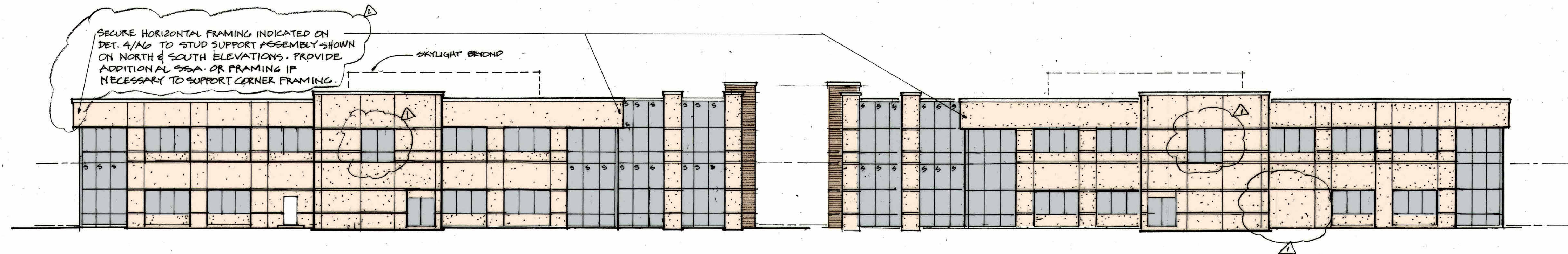
La Vergne, Tennessee

Open Space Plan

L3.0

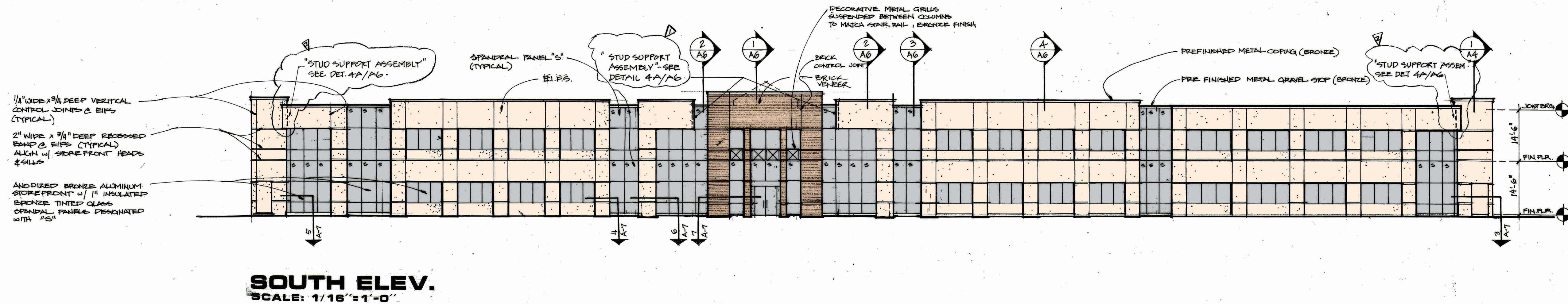


NORTH ELEVATION
SCALE: 1/16"=1'-0"



WEST ELEV.
SCALE: 1/16"=1'-0"

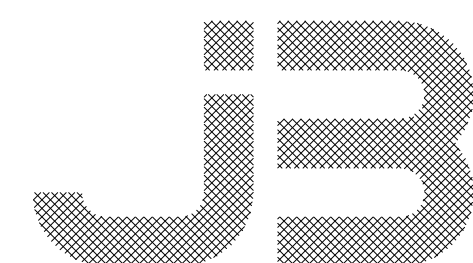
EAST ELEV.
SCALE: 1/16"=1'-0"



SOUTH ELEV.
SCALE: 1/16"=1'-0"

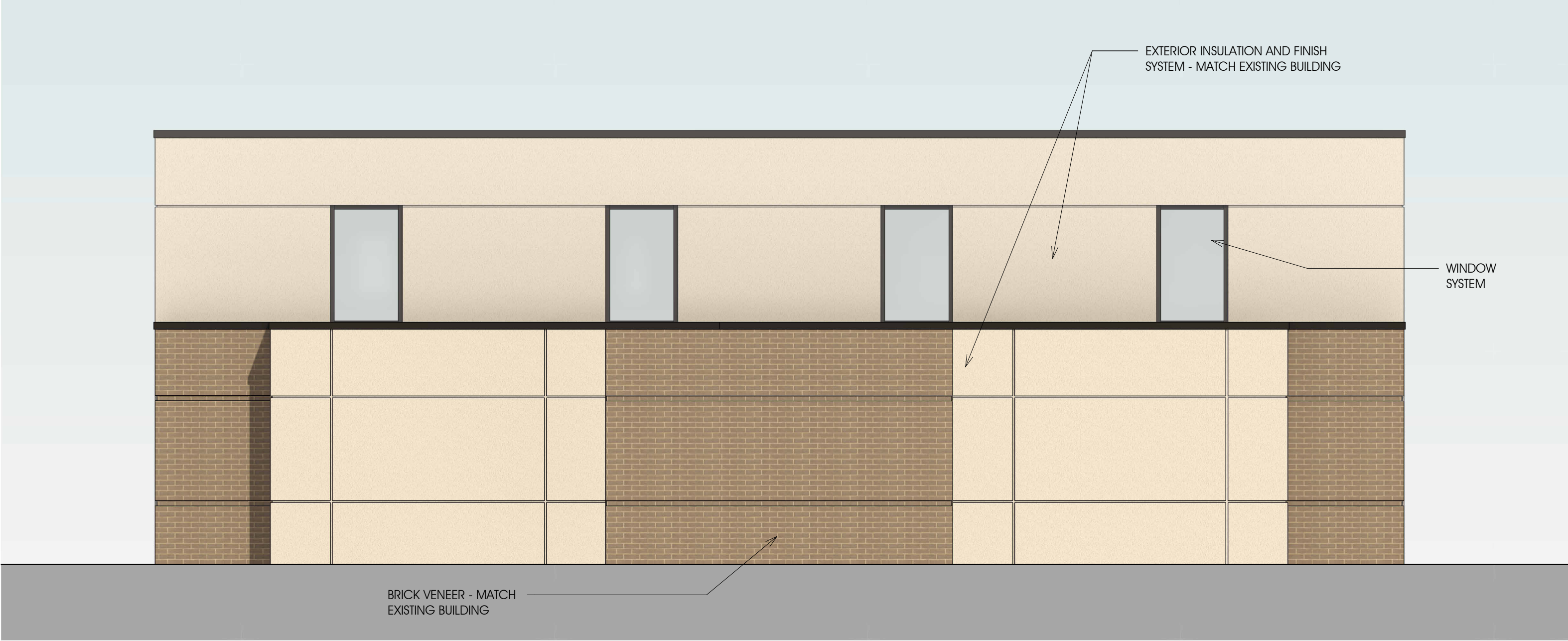
EXISTING BUILDING ELEVATIONS

SCALE 1/16" = 1'-0"



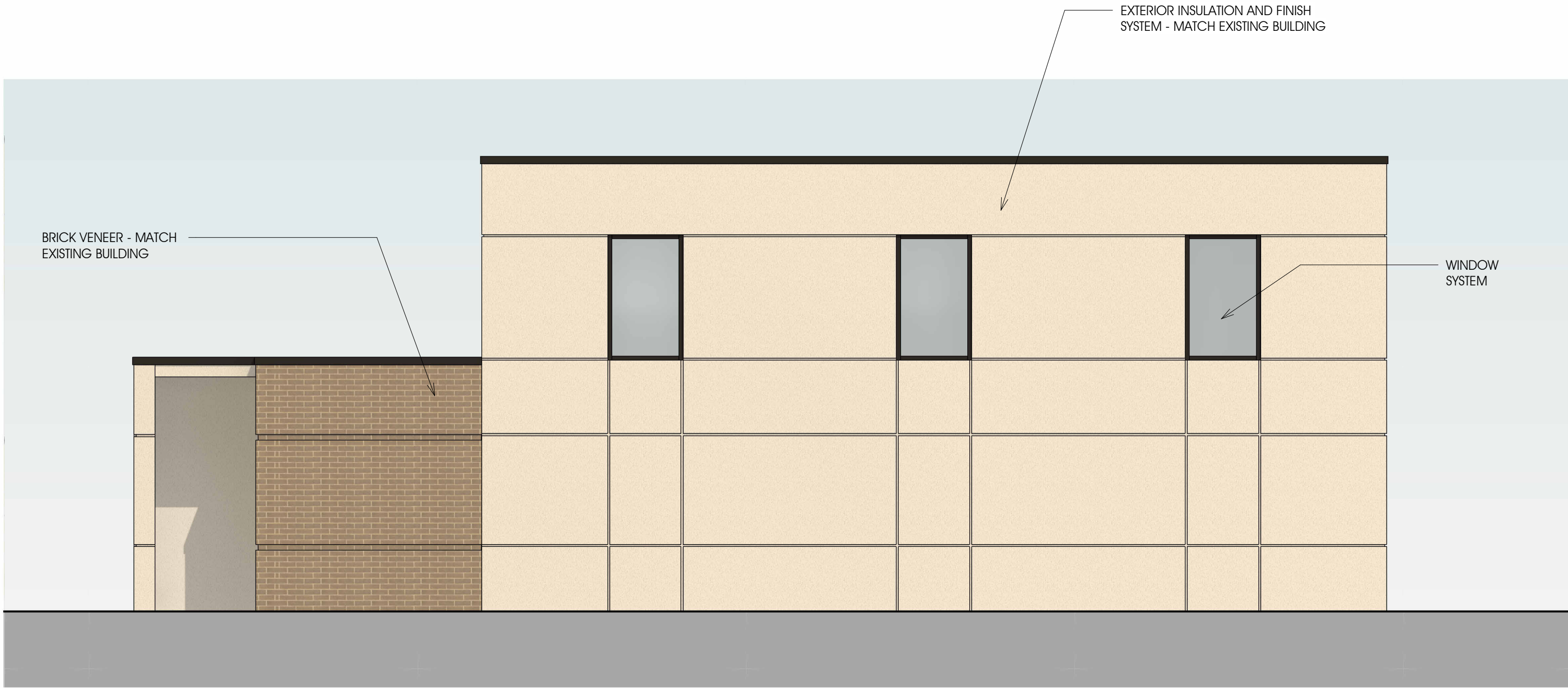
Rutherford Classical Academy - Phase 1 Renovations
JOHNSON + BAILEY ARCHITECTS P.C.

04/26/24



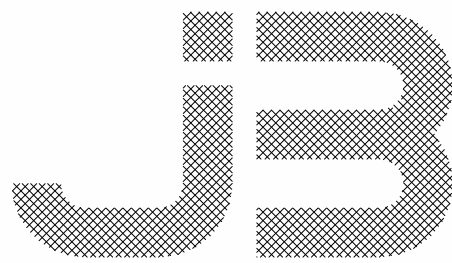
STORM SHELTER - FRONT ELEVATION

SCALE 1/4" = 1'-0"



STORM SHELTER - TYPICAL SIDE ELEVATION

SCALE 1/4" = 1'-0"



Rutherford Classical Academy - Phase 1 Renovations
JOHNSON + BAILEY ARCHITECTS P.C.

04/26/24

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning

Traffic Impact Study

Proposed Charter School
2 Ingram Boulevard
LaVergne, TN

Prepared May 2024
For SEC, Inc.

FTG, LLC
P.O. Box 682736
Franklin, TN 37068
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Traffic Impact Study

Proposed Charter School

2 Ingram Boulevard
LaVergne, Tennessee

Prepared May 2024

PREPARED FOR:

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PREPARED BY:

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FTG Project Number: 11300

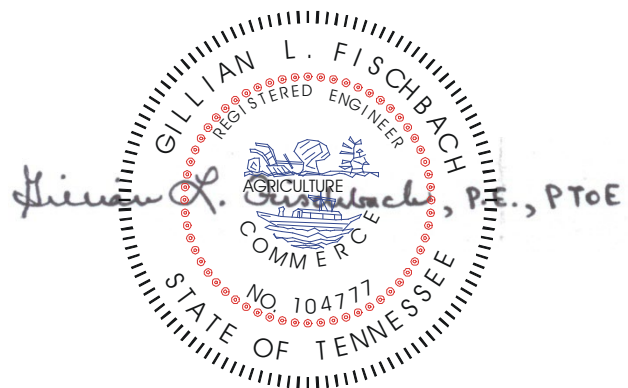


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1. INTRODUCTION

This traffic study has been prepared in order to identify the traffic impacts of a charter school that is proposed to be established within an existing building on the north side of Ingram Boulevard, west of Mason Road, in LaVergne, Tennessee.

For the purposes of this study, existing and background traffic volumes were established, and capacity analyses were conducted for these conditions. Also, trip generation calculations were performed, and the trips which are expected to be generated by the proposed project were distributed to the roadway system and added to the background traffic volumes. The roadways and intersections which provide access to the site were then re-evaluated to determine the traffic impacts of the proposed project. Access needs for the project were evaluated, and the necessary roadway and/or traffic control improvements were identified. This report presents the results of these analyses and the subsequent recommendations.

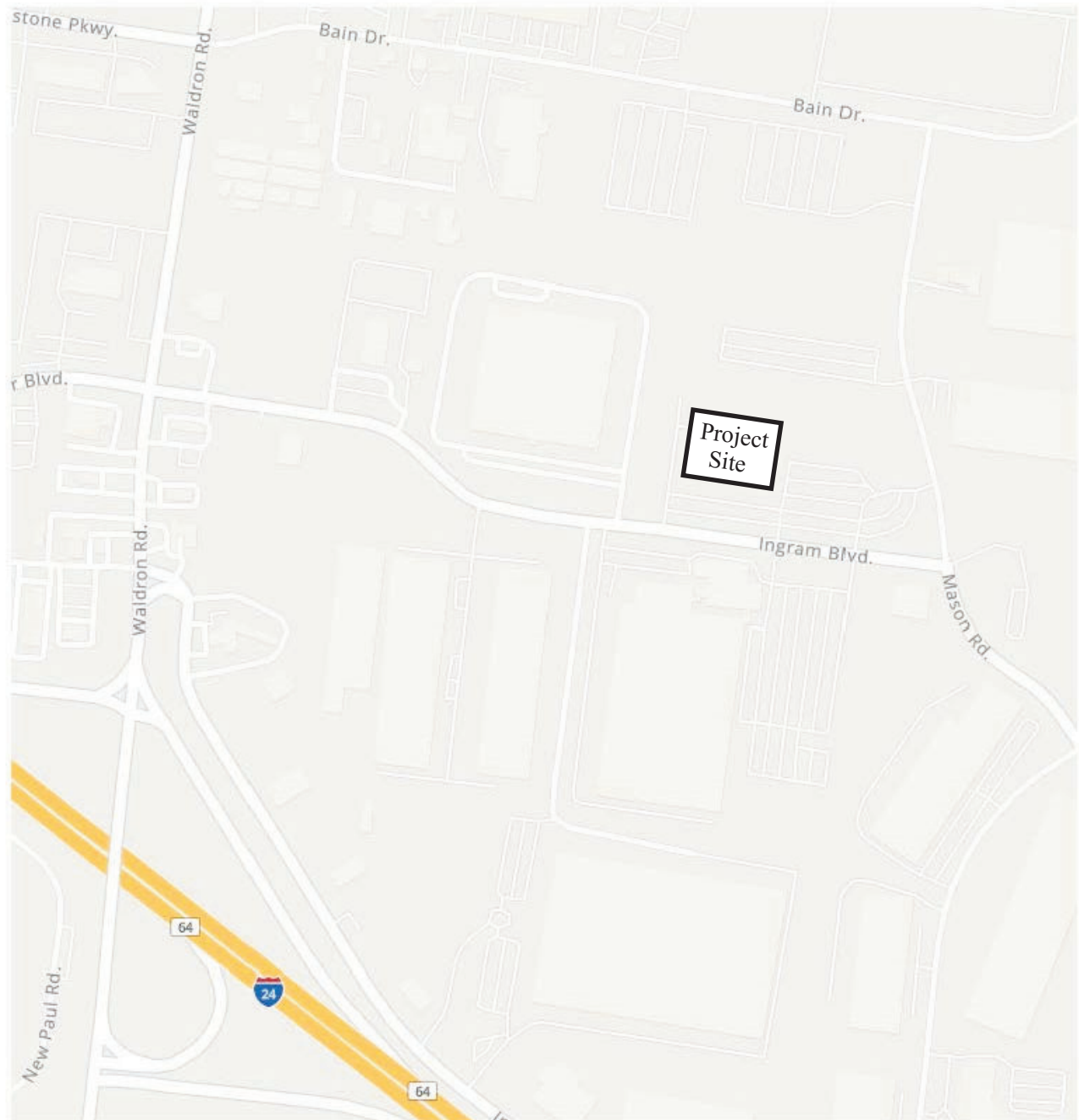
2. PROJECT DESCRIPTION

The location of the proposed project is shown in [Figure 1](#). Currently, an office building and associated parking facilities are constructed on this site, which is on the north side of Ingram Boulevard, west of Mason Road, in LaVergne, Tennessee. The existing office building is currently unoccupied, and the operators of a proposed charter school plan to repurpose the existing building as a school, as shown in [Figure 2](#).

Access to the existing office building is provided by three driveways on Ingram Boulevard and one driveway on Mason Road. Currently, the easternmost portion of the parking facilities are leased by an Amazon distribution facility that is located north of the project site, and so the eastern driveway on Ingram Boulevard and the driveway on Mason Road will not be used by the school. As shown in the site plan, all of the school drop-off and pick-up operations will use the western driveway for entering and exiting vehicles.

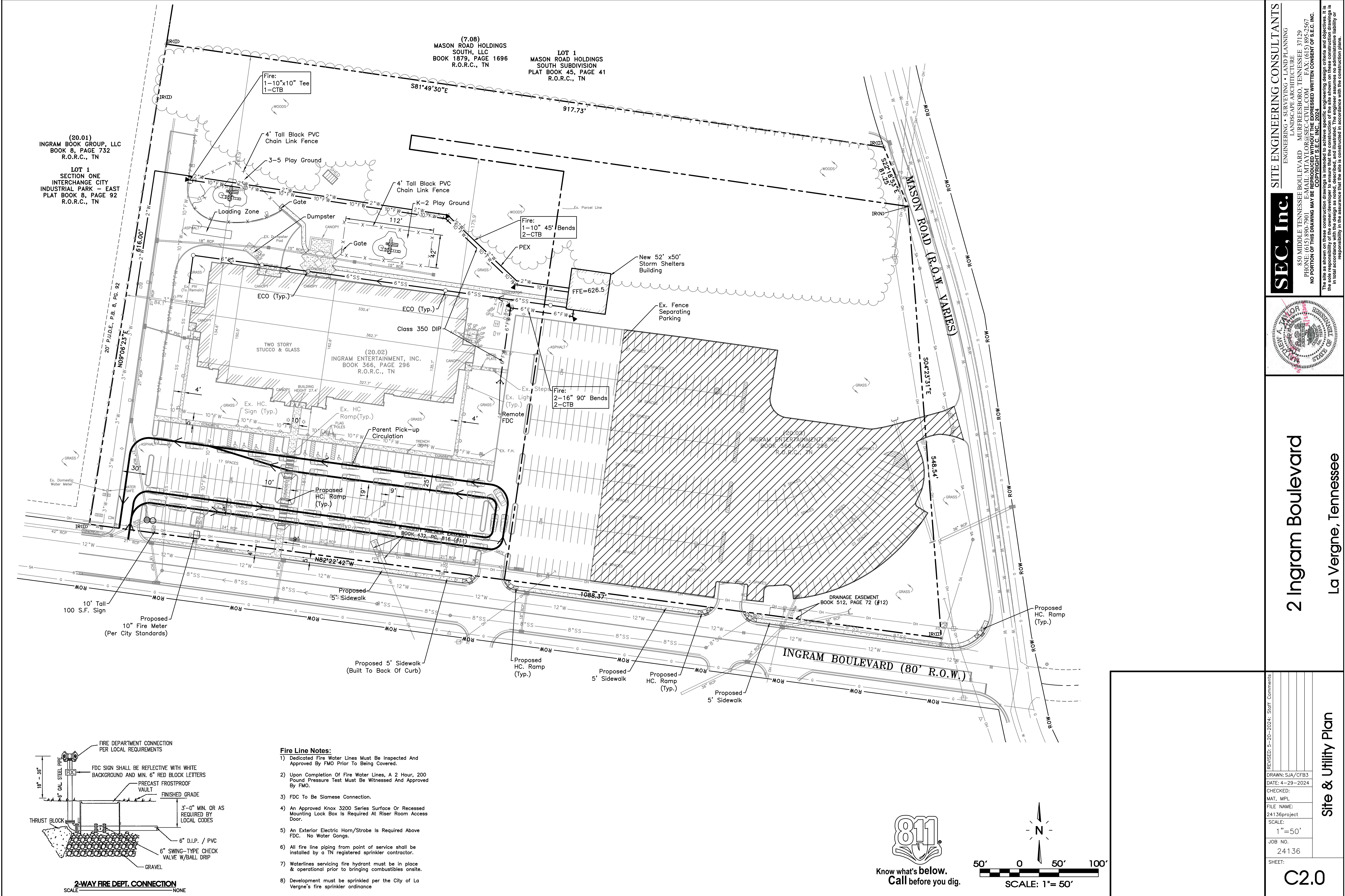
In large part, economic and market considerations will dictate the pace and timing with which the proposed project is actually completed. For the purposes of this study, it was assumed that the entire project will be completed by Year 2026.

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No Scale

Figure 1.
Location of the Proposed Project Site



2 Ingram Boulevard

La Vergne, Tennessee

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The site as shown on these construction drawings is based on information provided by the owner. The engineer assumes no administrative liability or responsibility for the design as noted, described, and illustrated. The engineer assumes no administrative liability or responsibility for the construction of the site as shown on these construction drawings.

24136project

24136

C2.0

Site & Utility Plan

REVISIONS: 5-20-2024: Staff Comments

DRAWN: SJA/CFB3

DATE: 4-29-2024

CHECKED: MAT, MPL

FILE NAME: 24136project

SCALE: 1"=50'

JOB NO. 24136

SHEET: C2.0

Page 104 of 181

3. YEAR 2024 EXISTING CONDITIONS

3.1 REGIONAL AND LOCAL ACCESS

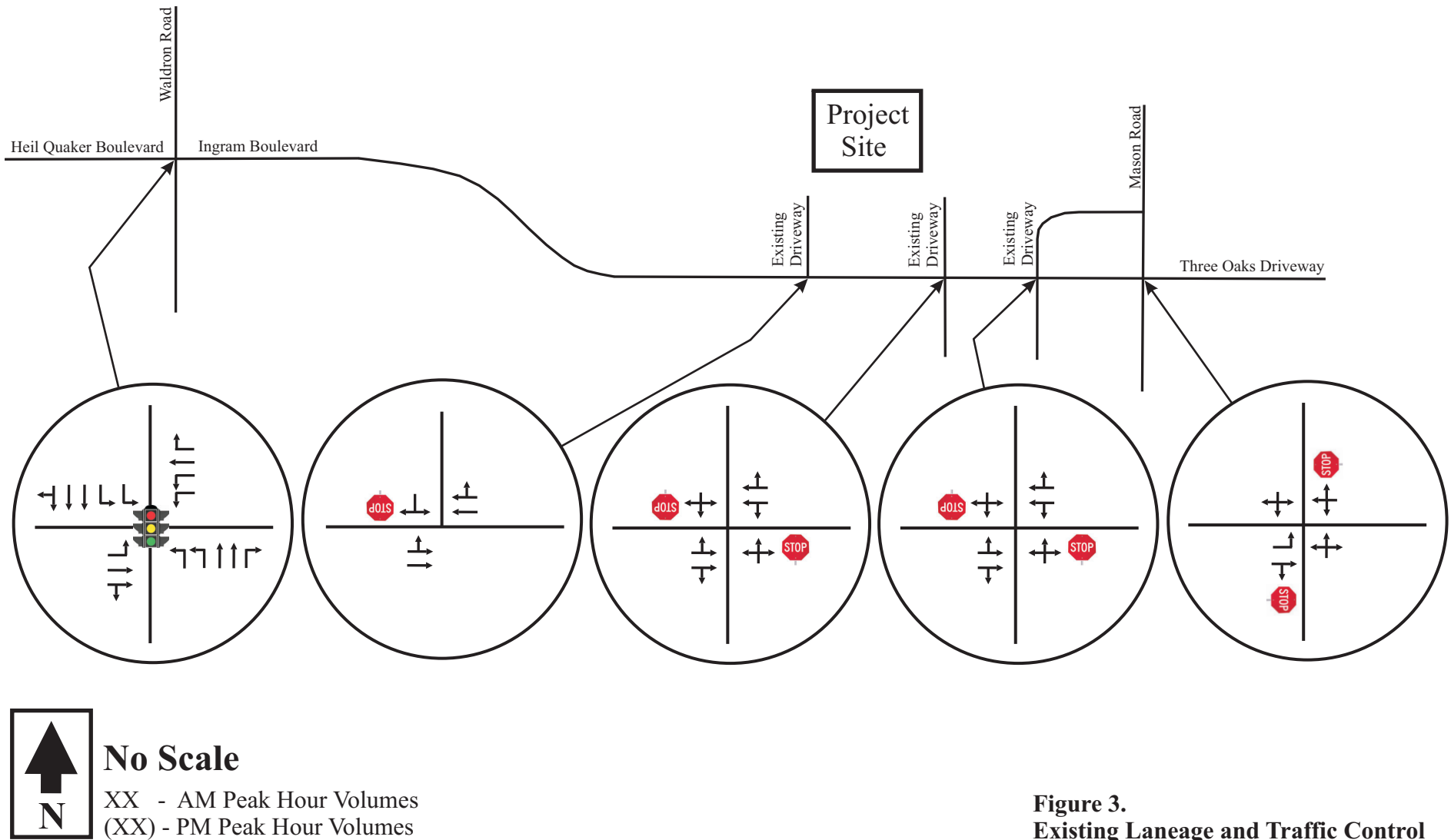
Ingram Boulevard provides access to the project site. This facility is a four-lane collector roadway that includes two 12-foot travel lane in each direction. Curb and gutter drainage and minimum shoulders are provided on both sides of the roadway, and a sidewalk is provided on the north side of Ingram Boulevard along a portion of the project site. A 30 mph speed limit is posted on Ingram Boulevard.

Eastbound Ingram Boulevard at the Project Site



Source: Google Earth (photo taken October 2023)

The existing laneage and traffic control at the intersections within the study area are shown in [Figure 3](#).



3.2 YEAR 2024 EXISTING TRAFFIC VOLUMES

In order to provide data for the traffic impact analysis, peak hour traffic volumes were identified for the following intersections:

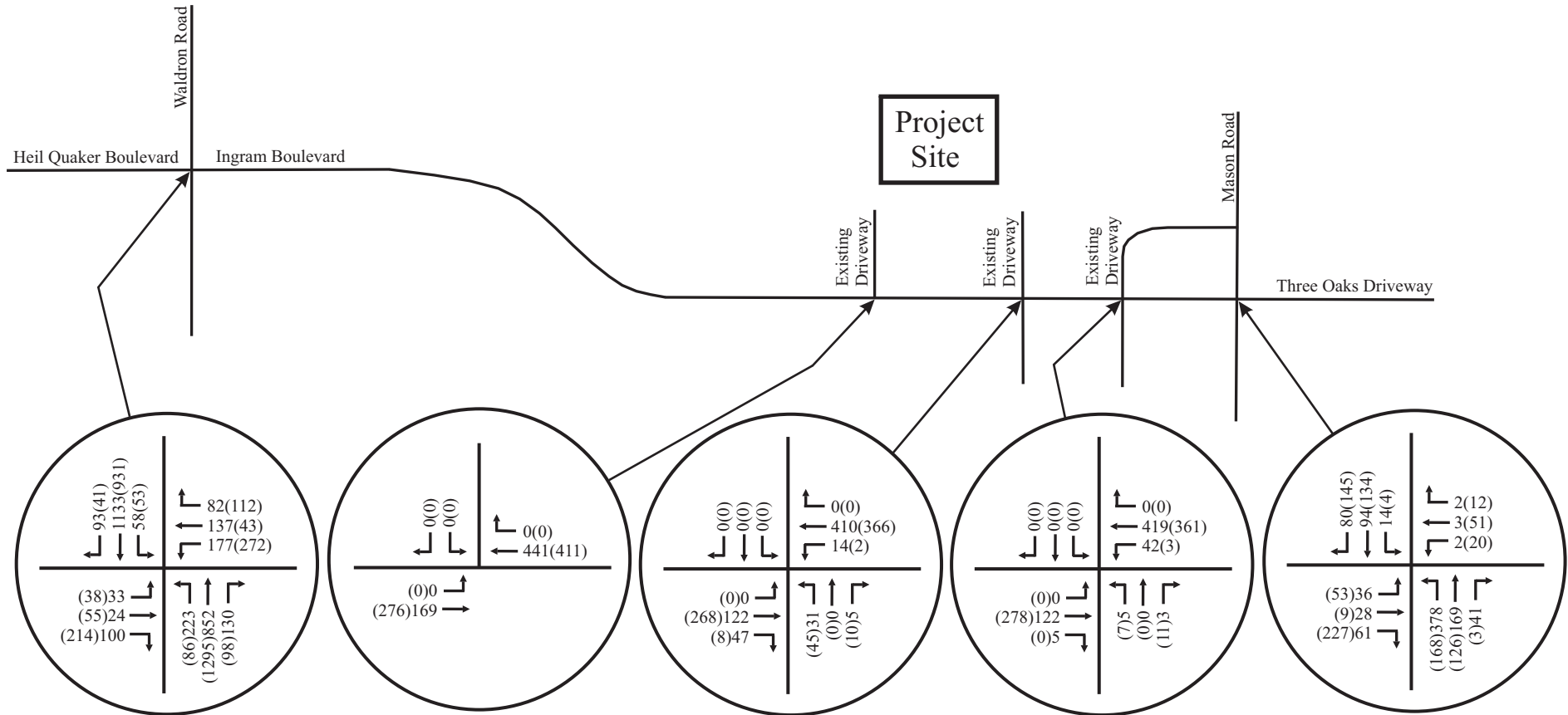
1. Waldron Road and Ingram Boulevard / Heil Quaker Boulevard
2. Ingram Boulevard and Middle Project Driveway / Industrial Driveway
3. Ingram Boulevard and Eastern Project Driveway / Industrial Driveway
4. Mason Road and Ingram Boulevard / Three Oaks Driveway

This data was collected from 6:00 AM – 7:00 PM on typical weekdays in early May 2024, and the traffic count worksheets are included in [Appendix A](#). It is important to note that certain turning movements were increased as needed to show balance traffic flows, and the adjusted peak hour traffic volumes are shown in [Figure 4](#).

Using the existing peak hour traffic volumes shown in [Figure 4](#), capacity analyses were conducted for the intersections studied. Specifically, in order to identify current peak hour levels of operation within the study area, the capacity calculations were performed according to the methods outlined in the [Highway Capacity Manual 7](#) (HCM 7). These analyses result in the determination of a Level of Service (LOS), which is a measure of evaluation is used to describe how well an intersection or roadway operates. LOS A represents free flow traffic operations, and LOS F suggests that the traffic demand exceeds the available capacity. In an urbanized area, LOS D is typically considered to be the minimum acceptable LOS. [Table 1](#) presents the descriptions of LOS for signalized intersections, and [Table 2](#) presents the descriptions of LOS for unsignalized intersections.

The results of the capacity analyses for the existing peak hour traffic volumes are shown in [Table 3](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that:

- The signalized intersection of Waldron Road and Ingram Boulevard / Heil Quaker Boulevard currently operates at LOS C during both peak hours.
- At the unsignalized intersection of Ingram Boulevard and Middle Project Driveway / Industrial Driveway, all of the critical turning movements currently operate at LOS B or better during both peak hours.
- At the unsignalized intersection of Ingram Boulevard and Eastern Project Driveway / Industrial Driveway, all of the critical turning movements currently operate at LOS B or better during both peak hours.
- At the unsignalized intersection of Mason Road and Ingram Boulevard / Three Oaks Driveway, most of the critical turning movements currently operate at LOS D or better during both peak hours. Although the eastbound left turns operate at LOS F and the westbound turning movements operate at LOS E during the AM peak hour, the typical vehicle delays and queues are reasonable.



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 4.
Existing Year 2024 Peak Hour Traffic Volumes

TABLE 1. DESCRIPTIONS OF LOS FOR SIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay per Vehicle (sec)
A	Operations with very low control delay. Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10
B	Operations with stable flows. This generally occurs with good progression, short cycle lengths, or both. More vehicles stop than for LOS A, causing higher levels of average delay.	> 10 and ≤ 20
C	Operations with stable flow. Occurs with fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	> 20 and ≤ 35
D	Approaching unstable flow. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop.	> 35 and ≤ 55
E	Unstable flow. In many cases, this is considered to be the limit for acceptable delay. These high delays generally indicate poor progression, long cycle lengths, and high v/c ratios.	> 55 and ≤ 80
F	Unacceptable delay. This condition often occurs with oversaturation or with high v/c ratios. Poor progression and long cycle lengths may also cause such delay levels.	> 80

Source: Highway Capacity Manual 7 (HCM 7)

TABLE 2. DESCRIPTIONS OF LOS FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay (sec/veh)
A	Minimal delay	≤ 10
B	Brief delay	> 10 and ≤ 15
C	Average delay	> 15 and ≤ 25
D	Significant delay	> 25 and ≤ 35
E	Long delay	> 35 and ≤ 50
F	Extreme delay	> 50

Source: Highway Capacity Manual 7 (HCM 7)

TABLE 3. EXISTING PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95 TH %-ILE QUEUE	LEVEL OF SERVICE	95 TH %-ILE QUEUE
Waldron Road and Ingram Boulevard / Heil Quaker Boulevard	Eastbound Left Turns	LOS D	2 veh (48 sec/veh)	LOS D	2 veh (40 sec/veh)
	Eastbound Thrus	LOS D	1 veh (51 sec/veh)	LOS D	3 veh (44 sec/veh)
	Eastbound Right Turns	LOS E	6 veh (57 sec/veh)	LOS D	11 veh (53 sec/veh)
	Westbound Left Turns	LOS E	5 veh (57 sec/veh)	LOS D	8 veh (55 sec/veh)
	Westbound Thrus	LOS D	8 veh (51 sec/veh)	LOS D	2 veh (37 sec/veh)
	Westbound Right Turns	LOS D	4 veh (44 sec/veh)	LOS D	5 veh (35 sec/veh)
	Northbound Left Turns	LOS E	6 veh (55 sec/veh)	LOS E	2 veh (57 sec/veh)
	Northbound Thrus	LOS B	11 veh (14 sec/veh)	LOS C	22 veh (27 sec/veh)
	Northbound Right Turns	LOS A	2 veh (8 sec/veh)	LOS B	2 veh (11 sec/veh)
	Southbound Left Turns	LOS E	2 veh (57 sec/veh)	LOS E	2 veh (57 sec/veh)
	Southbound Thrus	LOS B	11 veh (16 sec/veh)	LOS B	10 veh (19 sec/veh)
	Southbound Right Turns	LOS B	11 veh (17 sec/veh)	LOS B	10 veh (20 sec/veh)
	OVERALL INTERSECTION	LOS C (26 sec/veh)		LOS C (30 sec/veh)	
Ingram Boulevard and Middle Driveway for Project / Industrial Driveway	Eastbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Westbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Northbound Turning Movements	LOS B	1 veh (12 sec/veh)	LOS B	1 veh (13 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (0 sec/veh)	LOS A	0 veh (0 sec/veh)
Ingram Boulevard and Eastern Driveway for Project / Industrial Driveway	Eastbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Westbound Turning Movements	LOS A	1 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)

	Northbound Turning Movements	LOS B	0 veh (11 sec/veh)	LOS B	1 veh (11 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (0 sec/veh)	LOS A	0 veh (0 sec/veh)
Mason Road and Ingram Boulevard / Three Oaks Driveway	Eastbound Left Turns	LOS F	2 veh (82 sec/veh)	LOS D	1 veh (29 sec/veh)
	Eastbound Thrus / Right Turns	LOS D	2 veh (29 sec/veh)	LOS B	2 veh (12 sec/veh)
	Westbound Turning Movements	LOS E	1 veh (43 sec/veh)	LOS D	2 veh (29 sec/veh)
	Northbound Turning Movements	LOS A	1 veh (9 sec/veh)	LOS A	1 veh (8 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)

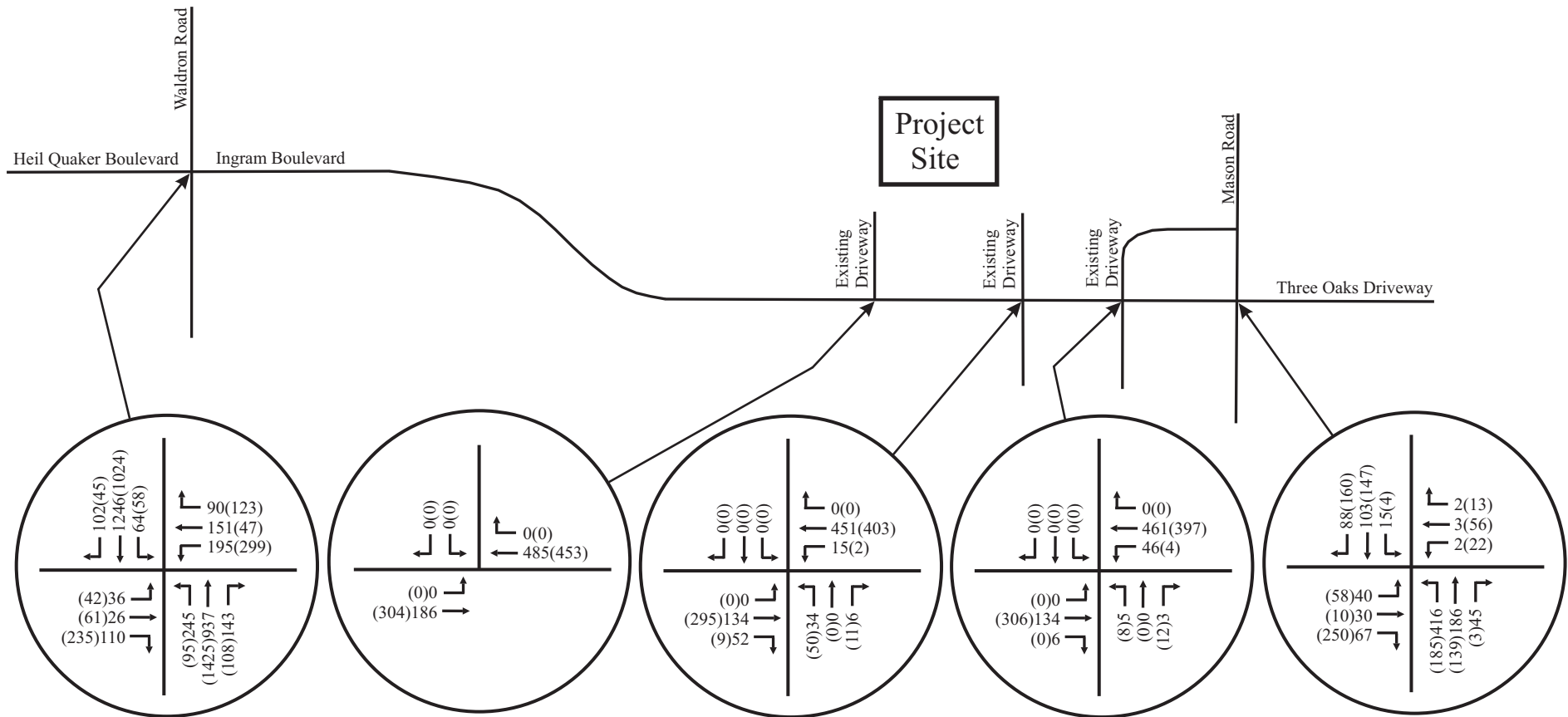
4. YEAR 2026 BACKGROUND TRAFFIC VOLUMES

In order to account for the traffic growth which will occur within the study area because of typical growth, as well as other approved developments, background traffic volumes were established for the intersections within the study area. Specifically, in order to account for growth within the study area, consideration was given to the historical traffic volumes near the project site. The Tennessee Department of Transportation (TDOT) conducts an annual count program throughout the state. This count program includes the annual collection of average daily traffic (ADT) counts at numerous fixed locations.

As shown in [Table 4](#), the daily traffic volumes within the study area have increased marginally since 2014. For the purposes of this study, the existing traffic volumes at the intersections within the study area were increased by 5% per year, for a total of 10%, in order to represent Year 2026 background traffic volumes, as shown in [Figure 5](#).

TABLE 4. HISTORICAL TRAFFIC VOLUMES IN THE STUDY AREA

Year	Station 2 Waldron Road ADT	Annual Growth	Overall Growth
2014	21,815		
2015	21,105	-3.25%	
2016	24,006	13.75%	
2017	24,402	1.65%	
2018	31,197	27.85%	
2019	26,302	-15.69%	
2020	27,954	6.28%	
2021	31,217	11.67%	
2022	30,129	-3.49%	
2023	31,171	3.46%	4.77%



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 5.
Background Year 2026 Peak Hour Traffic Volumes
(Existing Traffic Volumes Increased 10%)

Using the background peak hour traffic volumes shown in [Figure 5](#), capacity analyses were conducted for the intersections within the study area. For these analyses, it was assumed that all existing laneage and traffic control will be maintained and no improvements will be made.

The results of the capacity analyses for the background peak hour traffic volumes are shown in [Table 5](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that:

- The signalized intersection of Waldron Road and Ingram Boulevard / Heil Quaker Boulevard will operate at LOS C during both peak hours.
- At the unsignalized intersection of Ingram Boulevard and Middle Project Driveway / Industrial Driveway, all of the critical turning movements will operate at LOS B or better during both peak hours.
- At the unsignalized intersection of Ingram Boulevard and Eastern Project Driveway / Industrial Driveway, all of the critical turning movements will operate at LOS B or better during both peak hours.
- At the unsignalized intersection of Mason Road and Ingram Boulevard / Three Oaks Driveway, most of the critical turning movements will operate at LOS B or better during both peak hours. Although the eastbound and westbound turning movements are expected to operate poorly during both peak hours, the typical vehicle delays and queues will be moderate.

TABLE 5. YEAR 2026 BACKGROUND PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95 TH %-ILE QUEUE	LEVEL OF SERVICE	95 TH %-ILE QUEUE
Waldron Road and Ingram Boulevard / Heil Quaker Boulevard	Eastbound Left Turns	LOS D	2 veh (47 sec/veh)	LOS D	2 veh (38 sec/veh)
	Eastbound Thrus	LOS D	1 veh (51 sec/veh)	LOS D	3 veh (43 sec/veh)
	Eastbound Right Turns	LOS E	7 veh (57 sec/veh)	LOS D	12 veh (52 sec/veh)
	Westbound Left Turns	LOS E	6 veh (56 sec/veh)	LOS D	8 veh (54 sec/veh)
	Westbound Thrus	LOS D	8 veh (50 sec/veh)	LOS D	2 veh (35 sec/veh)
	Westbound Right Turns	LOS D	5 veh (43 sec/veh)	LOS C	5 veh (33 sec/veh)
	Northbound Left Turns	LOS D	7 veh (55 sec/veh)	LOS E	3 veh (57 sec/veh)
	Northbound Thrus	LOS B	12 veh (15 sec/veh)	LOS C	27 veh (34 sec/veh)
	Northbound Right Turns	LOS A	3 veh (8 sec/veh)	LOS B	3 veh (12 sec/veh)
	Southbound Left Turns	LOS E	2 veh (57 sec/veh)	LOS E	2 veh (57 sec/veh)
	Southbound Thrus	LOS B	13 veh (18 sec/veh)	LOS C	11 veh (22 sec/veh)
	Southbound Right Turns	LOS B	13 veh (19 sec/veh)	LOS C	11 veh (22 sec/veh)
	OVERALL INTERSECTION	LOS C (27 sec/veh)		LOS C (34 sec/veh)	
Ingram Boulevard and Middle Driveway for Project / Industrial Driveway	Eastbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Westbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Northbound Turning Movements	LOS B	1 veh (13 sec/veh)	LOS B	1 veh (14 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (0 sec/veh)	LOS A	0 veh (0 sec/veh)
Ingram Boulevard and Eastern Driveway for Project / Industrial Driveway	Eastbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Westbound Turning Movements	LOS A	1 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)

	Northbound Turning Movements	LOS B	1 veh (12 sec/veh)	LOS B	1 veh (11 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (0 sec/veh)	LOS A	0 veh (0 sec/veh)
Mason Road and Ingram Boulevard / Three Oaks Driveway	Eastbound Left Turns	LOS F	3 veh (149 sec/veh)	LOS E	2 veh (39 sec/veh)
	Eastbound Thrus / Right Turns	LOS E	3 veh (42 sec/veh)	LOS B	2 veh (13 sec/veh)
	Westbound Turning Movements	LOS F	1 veh (61 sec/veh)	LOS E	3 veh (40 sec/veh)
	Northbound Turning Movements	LOS A	2 veh (9 sec/veh)	LOS A	1 veh (9 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)

5. IMPACTS OF PROPOSED DEVELOPMENT

5.1 TRIP GENERATION

Trip generation calculations were conducted in order to identify how much traffic will be generated by the proposed project. Trip generation data for daily and peak hour trips were identified from Trip Generation, 11th Edition, which was published by the Institute of Transportation Engineers (ITE) in 2021. [Table 6](#) presents the daily and peak hour trip generations for proposed project, and these calculations are included in [Appendix C](#).

TABLE 6. TRIP GENERATION

LAND USE	SIZE	DAILY TRAFFIC *	GENERATED TRAFFIC *			
			AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Charter School (LUC 536)	340 students	630	184	170	123	128

5.2 TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

For the purposes of this study, it was estimated that the trips generated by the proposed development will access the project site according to the directional distribution shown in [Figure 6](#). The development of this distribution was based on the following factors:

- existing land use characteristics,
- the directions of approach of the existing traffic,
- the access proposed for the project, and
- the locations of population centers in the area.

The peak hour trip generations and directional distribution were used to add the site-generated trips to the roadway system. [Figure 7](#) includes the peak hour traffic volumes that are expected to be generated by the proposed project.

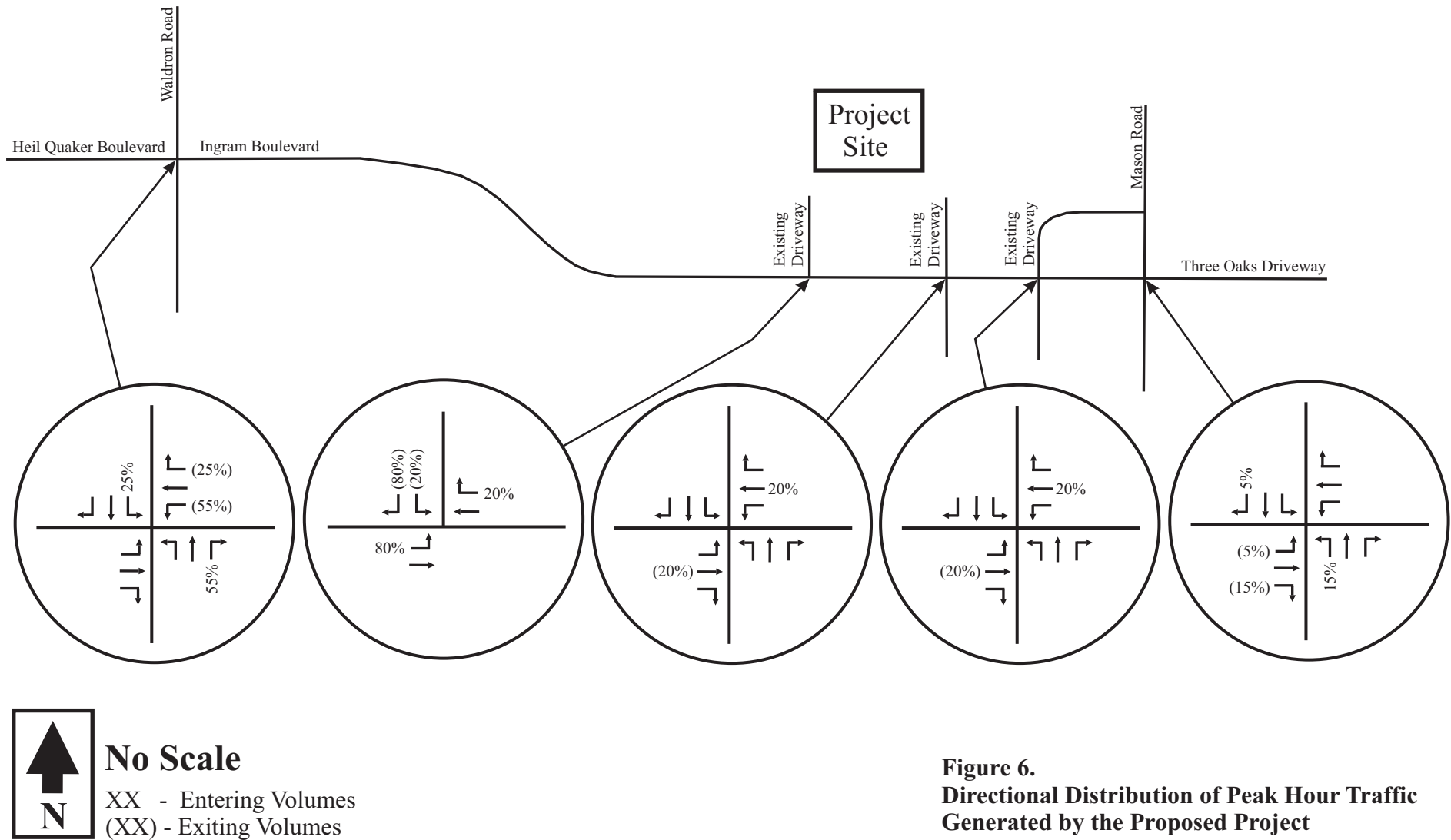
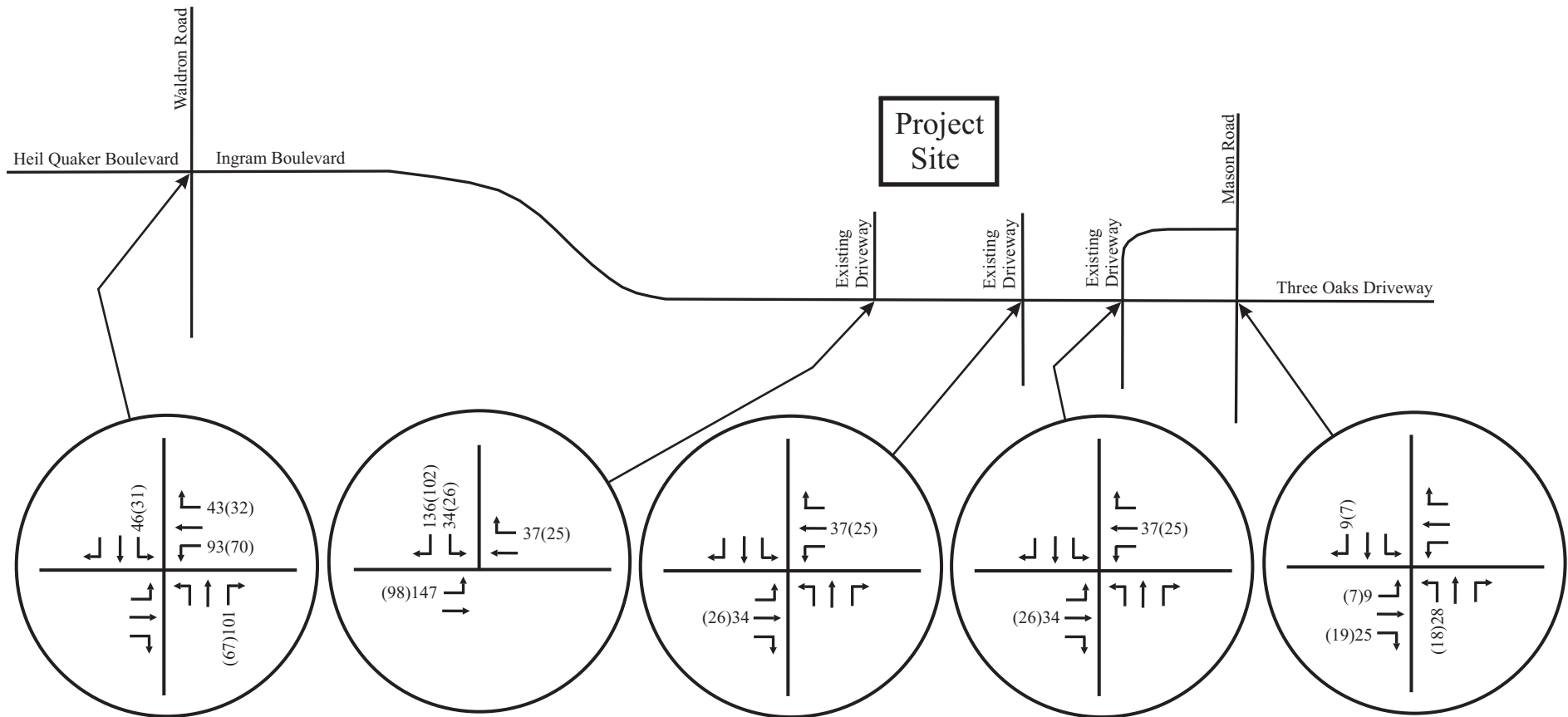


Figure 6.
Directional Distribution of Peak Hour Traffic
Generated by the Proposed Project



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 7.
Peak Hour Traffic Generated by the Proposed Project

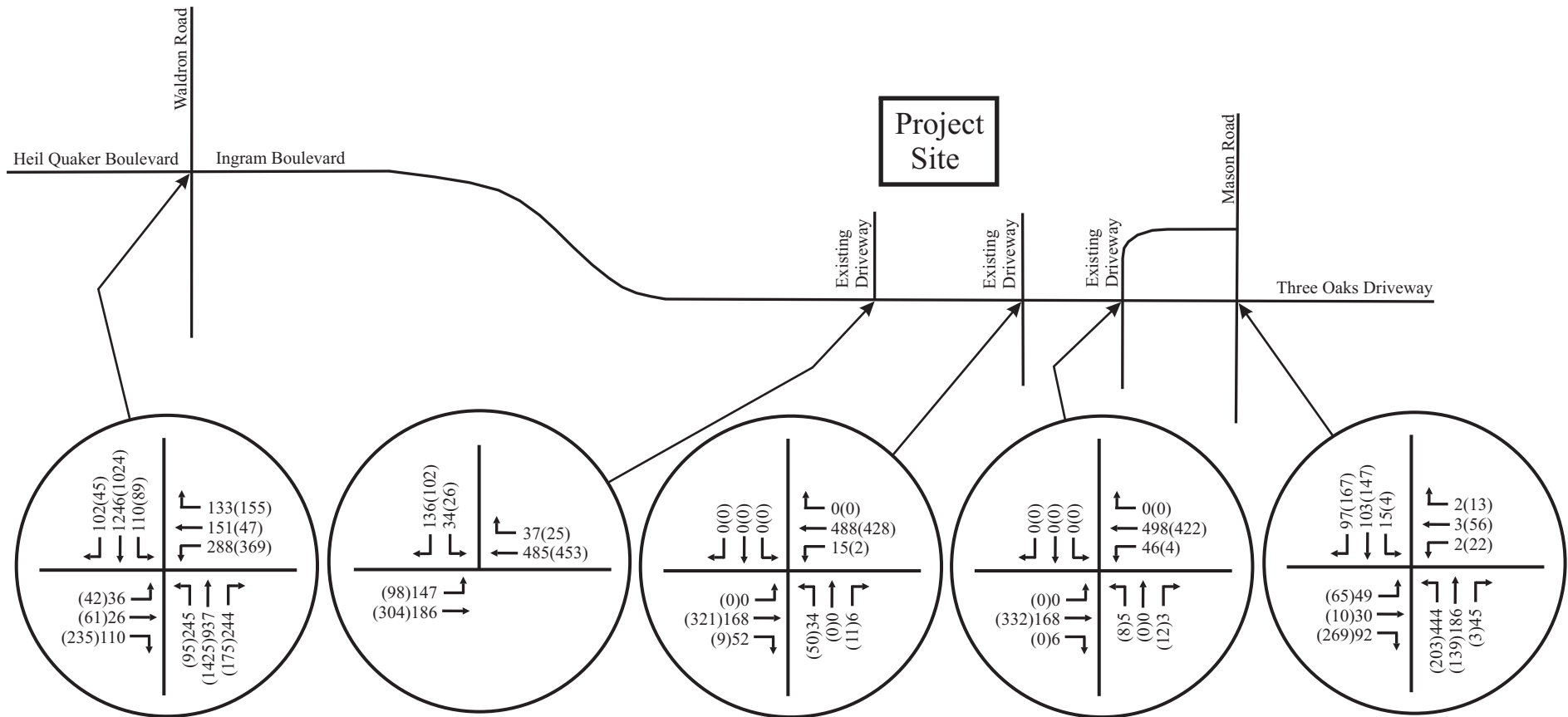
5.3 CAPACITY ANALYSES

In order to identify the projected peak hour traffic volumes at the completion of the proposed project, the trips generated by the proposed development were added to the background peak hour traffic volumes within the study area. The resulting peak hour volumes are shown in [Figure 8](#).

Using the total projected peak hour traffic volumes, capacity analyses were conducted in order to determine the impact of the proposed project on the roadway system. Specifically, these capacity analyses were used to evaluate the need for roadway and traffic control improvements within the study area. For the purposes of these analyses, it was assumed that all existing infrastructure will be maintained and no improvements will be made.

The results of the capacity analyses for the total projected peak hour traffic volumes are shown in [Table 7](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that:

- The signalized intersection of Waldron Road and Ingram Boulevard / Heil Quaker Boulevard will operate at LOS C during the AM peak hour and LOS D during the PM peak hour.
- At the unsignalized intersection of Ingram Boulevard and Middle Project Driveway / Industrial Driveway, all of the critical turning movements will operate at LOS B or better during both peak hours.
- At the unsignalized intersection of Ingram Boulevard and Eastern Project Driveway / Industrial Driveway, all of the critical turning movements will operate at LOS B or better during both peak hours.
- At the unsignalized intersection of Mason Road and Ingram Boulevard / Three Oaks Driveway, most of the critical turning movements will operate at LOS B or better during both peak hours. Although the eastbound and westbound turning movements are expected to operate poorly during both peak hours, the typical vehicle delays will be moderate.
- At the unsignalized intersection of Ingram Boulevard and Western Project Driveway, most of the critical turning movements will operate at LOS C or better during both peak hours.



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 8.
Total Projected Peak Hour Traffic Volumes
at the Completion of the Proposed Project

TABLE 7. TOTAL PROJECTED PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95 TH %-ILE QUEUE	LEVEL OF SERVICE	95 TH %-ILE QUEUE
Waldron Road and Ingram Boulevard / Heil Quaker Boulevard	Eastbound Left Turns	LOS D	2 veh (47 sec/veh)	LOS D	2 veh (38 sec/veh)
	Eastbound Thrus	LOS D	1 veh (50 sec/veh)	LOS D	3 veh (43 sec/veh)
	Eastbound Right Turns	LOS E	7 veh (58 sec/veh)	LOS D	12 veh (52 sec/veh)
	Westbound Left Turns	LOS D	8 veh (54 sec/veh)	LOS D	10 veh (53 sec/veh)
	Westbound Thrus	LOS D	8 veh (46 sec/veh)	LOS C	2 veh (33 sec/veh)
	Westbound Right Turns	LOS D	7 veh (41 sec/veh)	LOS C	6 veh (32 sec/veh)
	Northbound Left Turns	LOS D	7 veh (55 sec/veh)	LOS E	3 veh (57 sec/veh)
	Northbound Thrus	LOS B	13 veh (18 sec/veh)	LOS D	29 veh (41 sec/veh)
	Northbound Right Turns	LOS A	5 veh (9 sec/veh)	LOS B	4 veh (13 sec/veh)
	Southbound Left Turns	LOS E	3 veh (58 sec/veh)	LOS E	3 veh (57 sec/veh)
	Southbound Thrus	LOS C	14 veh (21 sec/veh)	LOS C	12 veh (24 sec/veh)
	Southbound Right Turns	LOS C	14 veh (22 sec/veh)	LOS C	12 veh (25 sec/veh)
	OVERALL INTERSECTION	LOS C (29 sec/veh)		LOS D (37 sec/veh)	
Ingram Boulevard and Middle Driveway for Project / Industrial Driveway	Eastbound Turning Movements	LOS A	0 veh (9 sec/veh)	LOS A	0 veh (8 sec/veh)
	Westbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
	Northbound Turning Movements	LOS B	1 veh (14 sec/veh)	LOS B	1 veh (15 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (0 sec/veh)	LOS A	0 veh (0 sec/veh)
Ingram Boulevard and Eastern Driveway for Project / Industrial Driveway	Eastbound Turning Movements	LOS A	0 veh (9 sec/veh)	LOS A	0 veh (8 sec/veh)
	Westbound Turning Movements	LOS A	1 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)

	Northbound Turning Movements	LOS B	1 veh (12 sec/veh)	LOS B	1 veh (12 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (0 sec/veh)	LOS A	0 veh (0 sec/veh)
Mason Road and Ingram Boulevard / Three Oaks Driveway	Eastbound Left Turns	LOS F	5 veh (265 sec/veh)	LOS E	2 veh (50 sec/veh)
	Eastbound Thrus / Right Turns	LOS E	4 veh (49 sec/veh)	LOS B	2 veh (14 sec/veh)
	Westbound Turning Movements	LOS F	1 veh (80 sec/veh)	LOS E	3 veh (48 sec/veh)
	Northbound Turning Movements	LOS A	2 veh (9 sec/veh)	LOS A	1 veh (9 sec/veh)
	Southbound Turning Movements	LOS A	0 veh (8 sec/veh)	LOS A	0 veh (8 sec/veh)
Ingram Boulevard and Western Project Access	Eastbound Left Turns / Thrus	LOS B	1 veh (10 sec/veh)	LOS A	1 veh (10 sec/veh)
	Southbound Left / Right Turns	LOS E	5 veh (38 sec/veh)	LOS C	2 veh (21 sec/veh)

6. TRAFFIC SIGNAL WARRANT ANALYSES

Based on the results of the capacity analyses, traffic signal warrant analyses were conducted for the intersection of Mason Road and Ingram Boulevard.

The Federal Highway Administration has published the Manual on Uniform Traffic Control Devices (MUTCD 2009), which includes traffic signal warrants that help traffic engineering professionals to identify when a traffic signal installation is justified at a particular location. The warrants include minimum conditions that are compared to existing or projected traffic conditions, and typically, traffic signals should not be installed unless at least one of the MUTCD warrants, as described in [Appendix D](#), is met.

It is important to note that the Manual on Uniform Traffic Control Devices (MUTCD 2009) stipulates that the signal warrant thresholds may be reduced by 30% “...if the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph...” Because the speed limit on Mason Road is 30 mph in the vicinity of Ingram Boulevard, full traffic signal warrant thresholds were considered appropriate for the intersection with Ingram Boulevard.

Based on the daily trip generations for the proposed project, as shown in [Table 6](#), hourly traffic volumes traveling through the intersections within the study area were estimated as shown in [Table 8](#). These hourly volumes were added to the background traffic volumes, which were established by increasing the hourly data collected at the intersections within the study area by 10%.

TABLE 8. HOURLY TRAFFIC VOLUMES (PROPOSED PROJECT)

HOUR	% OF 24-HOUR TRAFFIC		VEHICLES	
	ENTERING	EXITING	ENTERING	EXITING
12:00 - 1:00 AM				
1:00 - 2:00 AM				
2:00 - 3:00 AM				
3:00 - 4:00 AM				
4:00 - 5:00 AM				
5:00 - 6:00 AM				
6:00 - 7:00 AM	5.3%	0.1%	17	0
7:00 - 8:00 AM	41.8%	29.0%	132	91
8:00 - 9:00 AM	9.2%	13.3%	29	42
9:00 - 10:00 AM	1.5%	1.1%	5	3
10:00 - 11:00 AM	1.6%	1.3%	5	4
11:00 - 12:00 N	2.0%	2.3%	6	7
12:00 - 1:00 PM	2.8%	3.2%	9	10
1:00 - 2:00 PM	1.2%	1.3%	4	4
2:00 - 3:00 PM	8.5%	2.8%	27	9
3:00 - 4:00 PM	11.2%	23.9%	35	75
4:00 - 5:00 PM	10.4%	15.9%	33	50
5:00 - 6:00 PM	2.4%	3.2%	8	10
6:00 - 7:00 PM	1.9%	1.7%	6	5
7:00 - 8:00 PM	0.3%	0.4%	1	1
8:00 - 9:00 PM		0.4%		1
9:00 - 10:00 PM				
10:00 - 11:00 PM				
11:00 - 12:00 M				
TOTAL	100.0%	100.0%	315	315

Source: Trip Generation, 11th Edition

The existing, background, and total projected conditions at the intersection of Mason Road and Ingram Boulevard were compared to the full signal warrant thresholds, as shown in [Tables 9A, 9B, and 9C](#). Specifically, these analyses are based on the following parameters:

- a one-lane approach on the main street,
- a two-lane approach on the side street,
- 100% of the eastbound left turns from Mason Road
- 100% of the eastbound thru and right turns from Mason Road

The results of these analyses, which are included in [Tables 9A, 9B, and 9C](#), indicate that the full traffic signal warrants are not satisfied under existing, background, or total projected conditions at the intersection of Mason Road and Ingram Boulevard.

**TABLE 9A. TRAFFIC SIGNAL WARRANT ANALYSIS (EXISTING)
MASON ROAD AND INGRAM BOULEVARD**

EXISTING TRAFFIC VOLUMES

HOUR	TOTAL VEHICLES ON MASON ROAD	EASTBOUND VEHICLES ON INGRAM BOULEVARD	SATISFY FULL WARRANTS?		
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2
6:00-7:00 AM	677	98	--	--	--
7:00 - 8:00 AM	635	128	--	--	--
8:00 - 9:00 AM	363	107	--	--	--
9:00 - 10:00 AM	258	128	--	--	--
10:00 - 11:00 AM	316	133	--	--	--
11:00 - 12:00	435	227	--	--	--
12:00 - 1:00 PM	433	208	--	--	--
1:00 - 2:00 PM	326	174	--	--	--
2:00 - 3:00 PM	390	215	--	--	--
3:00 - 4:00 PM	423	251	--	--	--
4:00 - 5:00 PM	557	289	Yes	--	Yes
5:00 - 6:00 PM	373	204	--	--	--
6:00 - 7:00 PM	202	137	--	--	--

**TABLE 9B. TRAFFIC SIGNAL WARRANT ANALYSIS (BACKGROUND)
MASON ROAD AND INGRAM BOULEVARD**

BACKGROUND TRAFFIC VOLUMES

HOUR	TOTAL VEHICLES ON MASON ROAD	EASTBOUND VEHICLES ON INGRAM BOULEVARD	SATISFY FULL WARRANTS?		
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2
6:00-7:00 AM	745	108	--	--	--
7:00 - 8:00 AM	699	141	--	--	--
8:00 - 9:00 AM	399	118	--	--	--
9:00 - 10:00 AM	284	141	--	--	--
10:00 - 11:00 AM	348	146	--	--	--
11:00 - 12:00	479	250	--	--	--
12:00 - 1:00 PM	476	229	--	--	--
1:00 - 2:00 PM	359	191	--	--	--
2:00 - 3:00 PM	429	237	--	--	--
3:00 - 4:00 PM	465	276	--	--	Yes
4:00 - 5:00 PM	613	318	Yes	--	Yes
5:00 - 6:00 PM	410	224	--	--	--
6:00 - 7:00 PM	222	151	--	--	--

**TABLE 9C. TRAFFIC SIGNAL WARRANT ANALYSIS (TOTAL)
MASON ROAD AND INGRAM BOULEVARD**

TOTAL PROJECTED TRAFFIC VOLUMES

HOUR	TOTAL VEHICLES ON MASON ROAD	EASTBOUND VEHICLES ON INGRAM BOULEVARD	SATISFY FULL WARRANTS?		
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2
6:00-7:00 AM	748	108	--	--	--
7:00 - 8:00 AM	725	159	--	--	--
8:00 - 9:00 AM	405	126	--	--	--
9:00 - 10:00 AM	285	141	--	--	--
10:00 - 11:00 AM	349	147	--	--	--
11:00 - 12:00	480	251	--	--	--
12:00 - 1:00 PM	478	231	--	--	--
1:00 - 2:00 PM	359	192	--	--	--
2:00 - 3:00 PM	434	238	--	--	--
3:00 - 4:00 PM	472	291	--	--	--
4:00 - 5:00 PM	619	328	Yes	--	Yes
5:00 - 6:00 PM	412	226	--	--	Yes
6:00 - 7:00 PM	223	152	--	--	--

7. CONCLUSIONS AND RECOMMENDATIONS

The analyses conducted for the purposes of this study indicate that the proposed project will have the following impacts on the intersections within the study area. Specifically:

Intersection of Waldron Road and Ingram Boulevard / Heil Quaker Boulevard

The analyses conducted for the purposes of this study indicate that this signalized intersection operates at LOS D or better during both peak hours under existing, background, and total projected conditions.

Based on these results, no laneage or traffic control modifications are recommended for this intersection in conjunction with the proposed project.

Intersection of Mason Road and Ingram Boulevard / Three Oaks Driveway

The analyses conducted for the purposes of this study indicate that most of the critical turning movements will operate at LOS B or better during both peak hours. However, the eastbound and westbound turning movements are expected to operate poorly during both peak hours.

Additional analyses indicate that traffic signal warrants are not satisfied by existing, background, or total projected traffic volumes.

Based on these results, no laneage or traffic control modifications are recommended for this intersection in conjunction with the proposed project.

Intersection of Ingram Boulevard and Western Project Access

The analyses conducted for the purposes of this study indicate that the critical turning movements at this intersection will operate with reasonable vehicle queues and delays. However, it is important to note that the inside eastbound lane will likely operate as a default left turn lane, and the outside westbound right turn lane will likely operate as a default right turn lane during the peak 30 minutes at the beginning of the school day and the peak 30 minutes at the end of the school day.

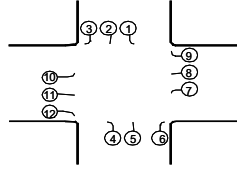
Also, because of the nature of school-related traffic, specifically the intensity of the entering and exiting volumes during the peak 30 minutes at the beginning of the school day and the peak 30 minutes at the end of the school day, consideration should be given to employing a trained traffic control office to facilitate turning movements at the intersection of Ingram Boulevard and the project access during these peak times.

Finally, a school speed zone should be established within the study area. Specifically, on eastbound and westbound Ingram Boulevard, a School Speed Limit Assembly should be

installed approximately 500 feet in advance of the property boundary for the school. This assembly, which should be based on a school zone speed limit of 15 mph, should conform with the signage identified as S4-3P, R2-1, S4-1P and S4-6P within the Manual on Uniform Traffic Control Devices (MUTCD). Also, to mark the end of the school speed zone, a speed limit sign for 45 mph should be installed with an “END SCHOOL ZONE” plaque (S5-2).

**APPENDIX A
EXISTING TRAFFIC COUNTS**

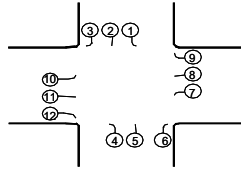
INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Waldron Road and Ingram Blvd / Heil Quaker Blvd
DATE: 7-May-24 Tue
RECORDER: Burns
NOTES: signalized

LOCATION	S/B Waldron Road			N/B Waldron Road			W/B Heil Quaker Blvd			E/B Ingram Blvd				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
6:00-6:15	14	315	14	33	172	17	47	13	18	5	8	19	2,990	675
6:15-6:30	11	350	22	48	187	37	44	25	13	3	4	16	3,042	760
6:30-6:45	13	310	22	78	231	28	44	38	20	3	6	23	2,972	816
6:45-7:00	22	237	33	62	208	34	44	46	18	7	10	18	2,778	739
7:00-7:15	12	236	16	35	226	31	45	28	31	20	4	43	2,758	727
7:15-7:30	19	196	16	57	221	36	51	27	18	16	7	26	2,595	690
7:30-7:45	19	198	14	32	196	31	46	21	20	8	9	28	2,461	622
7:45-8:00	18	223	29	53	257	48	28	19	11	9	4	20	2,388	719
8:00-8:15	17	174	14	40	193	21	27	17	10	14	11	26	2,269	564
8:15-8:30	11	183	17	23	191	36	31	13	15	11	3	22	2,302	556
8:30-8:45	19	185	9	23	189	33	33	14	14	7	9	14	2,340	549
8:45-9:00	12	206	8	26	219	30	43	15	8	9	7	17	2,379	600
9:00-9:15	12	206	10	26	211	28	47	14	9	9	7	18	2,364	597
9:15-9:30	11	207	11	26	204	26	52	12	11	9	6	19	2,349	594
9:30-9:45	11	207	13	25	196	23	56	11	12	8	6	20	2,327	588
9:45-10:00	10	208	14	25	189	21	61	9	14	8	5	21	2,347	585
10:00-10:15	10	208	16	25	181	19	65	8	15	8	5	22	2,355	582
10:15-10:30	10	192	8	20	190	32	42	10	27	13	6	22	2,402	572
10:30-10:45	13	220	14	19	193	23	58	11	9	11	16	21	2,489	608
10:45-11:00	8	249	14	16	183	16	41	10	15	9	13	19	2,563	593
11:00-11:15	17	246	20	14	176	25	39	14	11	16	19	32	2,619	629
11:15-11:30	11	228	13	19	212	24	55	22	13	10	14	38	2,742	659
11:30-11:45	17	251	12	24	202	28	47	23	17	8	19	34	2,747	682
11:45-12:00	14	215	6	33	200	34	57	16	23	7	14	30	2,748	649
12:00-12:15	25	244	11	23	223	19	59	23	27	19	31	48	2,804	752
12:15-12:30	16	208	8	28	210	22	55	19	17	18	30	33	2,778	664
12:30-12:45	15	220	8	28	225	24	52	17	18	16	27	33	2,862	683
12:45-1:00	15	233	7	29	241	26	48	16	19	14	24	33	2,946	705
1:00-1:15	14	245	7	29	256	28	45	14	20	13	22	33	2,921	726
1:15-1:30	14	258	6	30	272	30	41	13	21	11	19	33	2,872	748
1:30-1:45	13	270	6	30	287	32	38	11	22	9	16	33	2,853	767
1:45-2:00	17	187	17	30	285	20	29	21	23	9	5	37	3,044	680
2:00-2:15	14	208	12	25	272	24	41	11	17	16	10	27	3,142	677
2:15-2:30	10	237	13	17	311	25	34	9	21	10	10	32	3,246	729
2:30-2:45	12	267	9	31	287	24	108	17	44	45	33	81	3,291	958
2:45-3:00	21	215	5	16	319	25	49	15	20	22	10	61	3,129	778
3:00-3:15	17	242	10	16	301	28	53	6	21	14	10	63	3,170	781
3:15-3:30	11	210	13	18	319	44	65	7	29	12	15	31	3,230	774
3:30-3:45	14	221	11	21	313	40	66	9	28	10	16	47	3,218	796
3:45-4:00	18	232	10	25	306	36	67	10	27	7	17	64	3,234	819
4:00-4:15	21	243	8	28	300	32	68	12	26	5	18	80	3,238	841
4:15-4:30	9	226	8	20	323	22	50	8	33	12	11	40	3,222	762
4:30-4:45	11	247	15	13	318	18	70	9	22	12	16	61	3,216	812
4:45-5:00	12	215	10	25	354	26	84	14	31	9	10	33	3,106	823
5:00-5:15	6	234	11	21	363	17	47	9	37	16	18	46	2,976	825
5:15-5:30	18	237	1	7	371	21	38	9	24	6	4	20	2,900	756
5:30-5:45	15	167	12	17	353	24	41	9	29	8	6	21	2,829	702
5:45-6:00	9	176	14	15	373	27	19	4	22	4	7	23	2,733	693
6:00-6:15	9	262	4	14	338	21	34	10	14	8	9	26	2,613	749
6:15-6:30	11	232	12	12	288	27	32	8	20	7	8	28	685	
6:30-6:45	11	190	12	15	280	28	30	6	14	1	3	16	606	
6:45-7:00	9	165	9	19	277	16	21	10	12	6	6	23	573	
TOTAL	718	11,741	634	1,384	13,192	1,407	2,487	762	1,030	567	623	1,674		
AM PK HR	58	1,133	93	223	852	130	177	137	82	33	24	100	6:15-7:15	0.93
PM PK HR	53	931	41	86	1,295	98	272	43	112	38	55	214	4:00-5:00	0.96

INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Ingram Blvd and West Driveway
 DATE: 7-May-24 Tue
 RECORDER: Burns
 NOTES: unsignalized

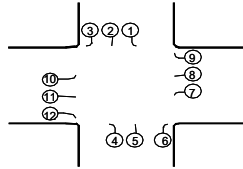
LOCATION	S/B			N/B Driveway (west)			W/B Ingram Boulevard			E/B Ingram Boulevard		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15												
6:15-6:30												
6:30-6:45				3			6	114			33	9
6:45-7:00				9		2	5	118			29	21
7:00-7:15				19		2	3	95			27	8
7:15-7:30						1		92			33	9
7:30-7:45				1		1	1	79			31	6
7:45-8:00				4			3	71			31	5
8:00-8:15				1				64			37	6
8:15-8:30				1				73			34	6
8:30-8:45				1		1		52			21	14
8:45-9:00				1			3	46			44	5
9:00-9:15				1			2	46			40	4
9:15-9:30				1			2	46			36	3
9:30-9:45				1			1	45			33	3
9:45-10:00				1			1	45			29	2
10:00-10:15				1				45			25	1
10:15-10:30								47			41	2
10:30-10:45				1		1		59			33	1
10:45-11:00				2				57			37	2
11:00-11:15				3				82			52	3
11:15-11:30				2				57			66	2
11:30-11:45				6		1		68			63	2
11:45-12:00				9		1	2	75			58	9
12:00-12:15				8		2		70			64	5
12:15-12:30				2		4		61			67	1
12:30-12:45				2		4		59			61	1
12:45-1:00				3		4		57			54	1
1:00-1:15				3		5		56			48	1
1:15-1:30				4		5		54			41	1
1:30-1:45				4		5		52			35	1
1:45-2:00				5				47			41	2
2:00-2:15				3		1	1	43			35	4
2:15-2:30				21		4		35			43	1
2:30-2:45				18		9	4	86			64	4
2:45-3:00				3				74			50	6
3:00-3:15				8		1	4	69			49	16
3:15-3:30				11		8	9	56			62	24
3:30-3:45				13		6	6	65			69	16
3:45-4:00				9		4	4	75			67	9
4:00-4:15				16		2	1	84			84	1
4:15-4:30				8		1	1	82			67	1
4:30-4:45				12		4		108			61	4
4:45-5:00				9		3		87			67	2
5:00-5:15				12		4		67			59	2
5:15-5:30				6		1		41			45	1
5:30-5:45				6		1		32			48	
5:45-6:00				2				37			43	1
6:00-6:15				3				46			37	
6:15-6:30								39			29	
6:30-6:45				4				27			44	1
6:45-7:00				1				28			37	
TOTAL				264		88	59	3,113			2,304	229
AM PK HR				31		5	14	419			122	47
PM PK HR				45		10	2	361			279	8

349
 503
 638 165
 592 184
 522 154
 476 135
 455 119
 425 114
 410 108
 395 114
 369 89
 363 99
 342 93
 321 88
 323 83
 335 78
 355 72
 423 90
 460 95
 505 98
 561 140
 570 127
 578 140
 565 154
 530 149
 494 135
 464 127
 434 119
 410 113
 384 105
 383 97
 471 95
 509 87
 569 104
 635 185
 625 133
 660 147
 701 170
 691 175
 705 168
 705 188
 661 160
 595 189
 493 168
 408 144
 350 94
 324 87
 313 83
 296 86
 68
 76
 66

6:30-7:30 0.87

4:00-5:00 0.93

INTERSECTION TRAFFIC VOLUME COUNTS

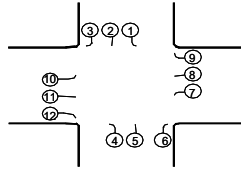


LOCATION: Ingram Blvd and East Driveway
DATE: 7-May-24 Tue
RECORDER: Burns
NOTES: unsignalized

LOCATION	S/B			N/B Driveway (east)			W/B Ingram Boulevard			E/B Ingram Boulevard		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15												
6:15-6:30												
6:30-6:45							13	114			33	1
6:45-7:00				4		3	14	118			29	2
7:00-7:15							12	95			27	2
7:15-7:30				1			3	92			33	
7:30-7:45							5	79			31	2
7:45-8:00							6	71			31	3
8:00-8:15						2	7	64			37	2
8:15-8:30							7	73			34	2
8:30-8:45							3	52			21	2
8:45-9:00							3	46			44	
9:00-9:15							2	46			40	
9:15-9:30							2	46			36	
9:30-9:45							1	45			33	
9:45-10:00							1	45			29	
10:00-10:15								45			25	
10:15-10:30							1	47			41	1
10:30-10:45								59			33	
10:45-11:00							1	57			37	
11:00-11:15				2				82			52	
11:15-11:30				2		2		57			66	
11:30-11:45				4		3		68			63	
11:45-12:00							1	75			58	
12:00-12:15				4		1	3	70			64	
12:15-12:30				4			1	61			67	3
12:30-12:45				4		1	1	59			61	2
12:45-1:00				4		1	1	57			54	2
1:00-1:15				4		2	1	56			48	1
1:15-1:30				4		2	1	54			41	1
1:30-1:45				4		3	1	52			35	
1:45-2:00						1	4	47			41	
2:00-2:15				2				43			35	
2:15-2:30				8		3	1	35			43	
2:30-2:45				8		3	2	86			64	
2:45-3:00						1	2	74			50	
3:00-3:15				4		1	1	69			49	
3:15-3:30				4		3	1	56			62	
3:30-3:45				3		3	1	65			69	
3:45-4:00				3		3		75			72	
4:00-4:15				2		3		84			84	
4:15-4:30						4	2	82			62	
4:30-4:45				3		4		108			61	
4:45-5:00				2			1	87			67	
5:00-5:15				3				67			59	1
5:15-5:30				5		1		41			45	
5:30-5:45						4		32			48	
5:45-6:00				3			1	37			43	
6:00-6:15								46			37	1
6:15-6:30								39			29	
6:30-6:45								27			44	
6:45-7:00								28			37	
TOTAL				91		54	107	3,113			2,304	28
AM PK HR				5		3	42	419			122	5
PM PK HR				7		11	3	361			274	

331
467
596 161
552 170
493 136
469 129
456 117
417 111
399 112
375 116
343 78
344 93
326 88
308 84
314 79
327 75
347 70
413 90
450 92
496 95
535 136
541 127
550 138
540 134
525 142
495 136
462 128
429 119
403 112
371 103
358 95
426 93
460 80
504 90
540 163
518 127
544 124
593 126
617 141
652 153
656 173
613 150
555 176
463 157
390 130
344 92
320 84
307 84
288 84
68
71
65
6:30-7:30 0.88
4:00-5:00 0.93

INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Mason Road and Ingram Blvd / Three Oaks Ind Park
DATE: 14-May-24 Tue
RECORDER: Burns
NOTES: unsignalized

LOCATION	S/B Mason Road			N/B Mason Road			W/B Three Oaks Industrial Park			E/B Ingram Blvd		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15	2	18	14	55	20	8	1	1		10	5	13
6:15-6:30	1	20	23	68	23	10	1	3		7	5	10
6:30-6:45	4	25	30	91	29	14			1	2	8	8
6:45-7:00	3	40	23	108	36	12	1		1	7	9	14
7:00-7:15	5	9	9	83	45	9	1	3		12	4	20
7:15-7:30	2	20	16	85	59	6				10	3	11
7:30-7:45		16	12	63	36	9	1	5	2	6	7	14
7:45-8:00	1	29	9	72	34	6		2		10	10	21
8:00-8:15	1	23	7	51	23	4	1	2		7	4	15
8:15-8:30	1	7	13	53	16	5			1	3	7	13
8:30-8:45		17	7	43	17	4		4	1	6	6	12
8:45-9:00	2	11	17	27	12	2		9		13	5	16
9:00-9:15	2	10	17	26	11	2		8		13	4	16
9:15-9:30	2	9	18	25	11	1		7		13	4	16
9:30-9:45	1	9	18	24	10	1	1	5	1	12	3	16
9:45-10:00	1	8	19	23	10		1	4	1	12	3	16
10:00-10:15	1	7	19	22	9		1	3	1	12	2	16
10:15-10:30		10	42	23	10	1	1	2		6	3	20
10:30-10:45		16	28	16	12	5	2	4	1	14	5	11
10:45-11:00	1	24	33	19	16	2	1	6		26	2	16
11:00-11:15		29	49	21	18	5	5	11	1	8	4	30
11:15-11:30		15	54	27	15	4		1		14	7	37
11:30-11:45	2	27	19	34	17	2	5	10	2	7	2	44
11:45-12:00	2	17	24	28	19	7	5	3	1	18	9	47
12:00-12:15	1	31	32	39	17	1	2	4		13	2	41
12:15-12:30	2	13	14	45	19	3	7	8	1	10	7	41
12:30-12:45		31	11	47	28	2	1	11	1	8	2	40
12:45-1:00		15	14	41	22	5	2	7	2	6	5	33
1:00-1:15		14	13	38	21	4	2	7	2	6	5	33
1:15-1:30		14	12	34	20	3	2	6	1	6	5	33
1:30-1:45	1	13	12	31	20	3	2	6	1	7	4	32
1:45-2:00	1	13	11	27	19	2	2	5		7	4	32
2:00-2:15	1	12	10	24	18	1	2	5		7	4	32
2:15-2:30	1	16	13	33	16	5		7		9	5	39
2:30-2:45	2	25	22	35	30	2	12	30	8	12	9	56
2:45-3:00	2	31	29	34	23	5	6	13		8	5	29
3:00-3:15	2	25	36	28	18	6	4	13		11	4	31
3:15-3:30	9	13	13	38	16	3	3	12	6	10	10	46
3:30-3:45	6	18	18	37	20	2	4	14	6	11	8	50
3:45-4:00	4	24	24	37	24	2	4	15	5	11	6	53
4:00-4:15	1	29	29	36	28	1	5	17	5	12	4	57
4:15-4:30	2	35	27	36	38	1	6	12	5	14	2	57
4:30-4:45		37	37	44	32	1	4	10	2	15	1	74
4:45-5:00	1	33	41	40	28		5	8		12	2	39
5:00-5:15		31	31	45	30		4	3		5		55
5:15-5:30		29	24	22	24			5		5	1	50
5:30-5:45		17	12	29	20		2	1	1	6	2	39
5:45-6:00		11	6	22	20		1	3		7		34
6:00-6:15		11	8	19	18		1			6		32
6:15-6:30		9	8	22	12			1		14		25
6:30-6:45	1	16	12	15	13		1			10		21
6:45-7:00	1	5	5	11	16			1		6		23
TOTAL	72	987	1,044	1,996	1,118	171	112	317	60	502	218	1,579
AM PK HR	14	94	78	367	169	41	2	3	2	31	24	53
PM PK HR	4	134	134	156	126	3	20	47	12	53	9	227

784 147

837 171

878 212

837 254

777 200

715 212

622 171

568 194

488 138

459 119

446 117

430 114

414 109

398 106

410 101

423 98

471 93

559 118

615 114

672 146

706 181

708 174

704 171

715 180

687 183

649 170

615 182

565 152

536 145

507 136

515 132

626 123

688 116

750 144

785 243

736 185

760 178

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905 235

830 257

702 209

597 204

488 160

419 129

379 104

343 95

91

89

68

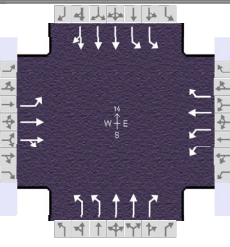
6:30-7:30 0.86

4:00-5:00 0.90

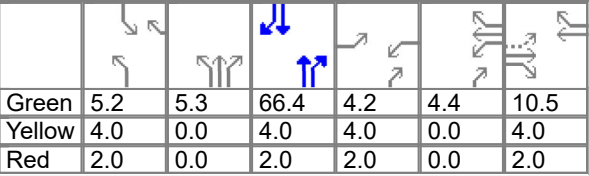
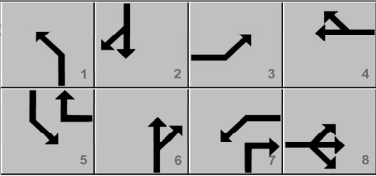
**APPENDIX B
CAPACITY ANALYSES**

EXISTING CONDITIONS

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	FTG			Duration, h	0.250	
Analyst	FTG	Analysis Date	5/21/2024	Area Type	Other	
Jurisdiction	LaVergne, TN	Time Period	AM Peak Hour	PHF	0.93	
Urban Street	Waldron Road	Analysis Year	2024 (Existing)	Analysis Period	1> 7:00	
Intersection	Heil Quaker Blvd/Ingram...	File Name	1_exam.xus			
Project Description	11300					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	33	24	100	177	137	82	223	852	130	58	1133	93

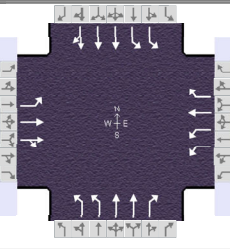
Signal Information											
Cycle, s	120.0	Reference Phase	2		5.2	5.3	66.4	4.2	4.4	10.5	
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								
Green											
Yellow											
Red											

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	10.2	16.5	14.6	20.9	16.5	77.7	11.2	72.4
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.1	3.2	3.1	3.2	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	4.1	9.8	8.4	10.8	10.0		4.1	
Green Extension Time (g_e), s	0.0	0.7	0.2	0.7	0.5	0.0	0.1	0.0
Phase Call Probability	0.69	1.00	1.00	1.00	1.00		0.87	
Max Out Probability	0.00	0.00	0.05	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	35	26	108	190	147	88	240	916	140	62	891	428
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1757	1900	1610	1757	1809	1610	1757	1900	1823
Queue Service Time (g_s), s	2.1	1.5	7.8	6.4	8.8	5.8	8.0	16.4	3.8	2.1	16.4	16.4
Cycle Queue Clearance Time (g_c), s	2.1	1.5	7.8	6.4	8.8	5.8	8.0	16.4	3.8	2.1	16.4	16.4
Green Ratio (g/C)	0.12	0.09	0.09	0.07	0.12	0.17	0.09	0.60	0.67	0.04	0.55	0.55
Capacity (c), veh/h	166	166	141	251	236	271	309	2161	1077	154	2102	1009
Volume-to-Capacity Ratio (X)	0.214	0.155	0.763	0.759	0.624	0.326	0.777	0.424	0.130	0.406	0.424	0.424
Back of Queue (Q), ft/ln (95 th percentile)	43	32.5	147.2	128.9	190	104.1	161.1	267.7	57.9	41.7	285.1	282.1
Back of Queue (Q), veh/ln (95 th percentile)	1.7	1.3	5.9	5.2	7.6	4.2	6.4	10.7	2.3	1.7	11.4	11.3
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	47.3	50.6	53.5	54.7	49.9	43.9	53.6	13.0	7.2	55.9	15.6	15.6
Incremental Delay (d_2), s/veh	0.2	0.2	3.2	1.8	1.0	0.3	1.6	0.6	0.2	0.6	0.6	1.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	47.6	50.8	56.7	56.5	50.9	44.2	55.2	13.6	7.5	56.5	16.3	16.9
Level of Service (LOS)	D	D	E	E	D	D	E	B	A	E	B	B
Approach Delay, s/veh / LOS	53.9	D		52.0	D		20.7	C		18.3	B	
Intersection Delay, s/veh / LOS	25.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.60	C	2.40	B	2.26	B
Bicycle LOS Score / LOS	0.63	A	1.19	A	1.56	B	1.25	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	FTG			Duration, h	0.250	
Analyst	FTG	Analysis Date	5/21/2024	Area Type	Other	
Jurisdiction	LaVergne, TN	Time Period	PM Peak Hour	PHF	0.96	
Urban Street	Waldron Road	Analysis Year	2024 (Existing)	Analysis Period	1> 7:00	
Intersection	Heil Quaker Blvd/Ingram...	File Name	1_expm.xus			
Project Description	11300					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	38	55	214	272	43	112	86	1295	98	53	931	41

Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	5.0	0.6	59.3	4.4	1.5	19.1		
				Yellow	4.0	0.0	4.0	4.0	4.0	4.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	0.0	2.0	2.0	2.0	2.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	10.4	25.1	17.9	32.6	11.7	66.0	11.0	65.3
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.1	3.3	3.1	3.3	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	4.2	18.2	11.5	8.9	5.0		3.8	
Green Extension Time (g_e), s	0.0	0.9	0.4	0.9	0.2	0.0	0.1	0.0
Phase Call Probability	0.73	1.00	1.00	1.00	0.95		0.84	
Max Out Probability	0.00	0.00	0.01	0.00	0.00		0.00	

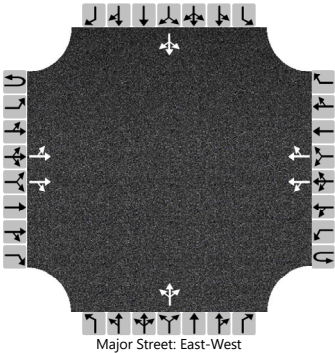
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	40	57	223	283	45	117	90	1349	102	55	680	333
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1757	1900	1610	1757	1809	1610	1757	1900	1857
Queue Service Time (g_s), s	2.2	3.1	16.2	9.5	2.3	6.9	3.0	35.7	3.3	1.8	13.2	13.3
Cycle Queue Clearance Time (g_c), s	2.2	3.1	16.2	9.5	2.3	6.9	3.0	35.7	3.3	1.8	13.2	13.3
Green Ratio (g/C)	0.20	0.16	0.16	0.10	0.22	0.26	0.05	0.50	0.60	0.04	0.49	0.49
Capacity (c), veh/h	346	302	256	349	421	425	167	1808	965	148	1878	918
Volume-to-Capacity Ratio (X)	0.114	0.190	0.871	0.812	0.106	0.275	0.537	0.746	0.106	0.373	0.362	0.363
Back of Queue (Q), ft/ln (95 th percentile)	43.4	66.7	273.9	190	47.4	122	60.3	543.2	52.8	36.9	244.5	245.7
Back of Queue (Q), veh/ln (95 th percentile)	1.7	2.7	11.0	7.6	1.9	4.9	2.4	21.7	2.1	1.5	9.8	9.8
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	39.7	43.8	49.3	52.9	37.2	35.1	55.9	23.9	10.3	55.9	18.7	18.7
Incremental Delay (d_2), s/veh	0.1	0.1	3.6	1.7	0.0	0.1	1.0	2.9	0.2	0.6	0.5	1.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	39.7	43.9	52.9	54.7	37.3	35.2	56.9	26.8	10.5	56.5	19.2	19.8
Level of Service (LOS)	D	D	D	D	D	D	E	C	B	E	B	B
Approach Delay, s/veh / LOS	49.6	D		47.8	D		27.5	C		21.3	C	
Intersection Delay, s/veh / LOS	30.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.73	C	2.60	C	2.42	B	2.27	B
Bicycle LOS Score / LOS	0.75	A	1.22	A	1.76	B	1.07	A

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / Middle Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2024	North/South Street	Middle Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.87
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	122	47		14	410	0		31	0	5		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

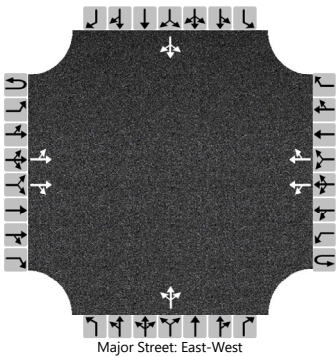
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				16					41				0	
Capacity, c (veh/h)		1101				1391					538				0	
v/c Ratio		0.00				0.01					0.08					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2					
Control Delay (s/veh)		8.3	0.0			7.6	0.1				12.3					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.3				12.3							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / Middle Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2024	North/South Street	Middle Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	268	8		2	366	0		45	0	10		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

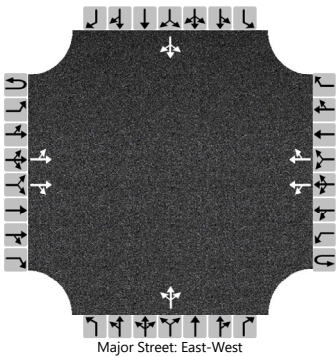
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				2					59				0	
Capacity, c (veh/h)		1176				1276					506				0	
v/c Ratio		0.00				0.00					0.12					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.4					
Control Delay (s/veh)		8.1	0.0			7.8	0.0				13.1					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.1				13.1							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / East Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2024	North/South Street	East Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	122	5		42	419	0		5	0	3		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

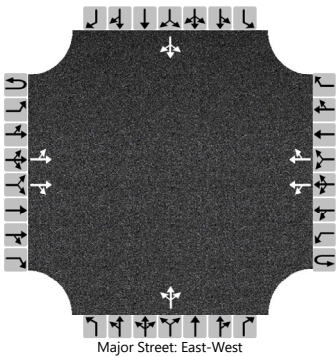
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				48					9				0	
Capacity, c (veh/h)		1097				1450					574				0	
v/c Ratio		0.00				0.03					0.02					
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.0					
Control Delay (s/veh)		8.3	0.0			7.6	0.2				11.4					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.9				11.4							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / East Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2024	North/South Street	East Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	278	0		3	361	0		7	0	11		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

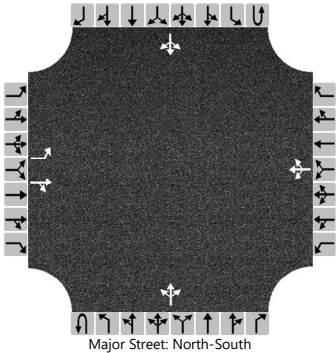
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				3					19				0	
Capacity, c (veh/h)		1181				1274					646				0	
v/c Ratio		0.00				0.00					0.03					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1					
Control Delay (s/veh)		8.0	0.0			7.8	0.0				10.7					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.1				10.7							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Mason Road/Ingram Blvd
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2024	North/South Street	Mason Road
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.86
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	11300 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		36	28	61		2	3	2		378	169	41		14	94	80
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

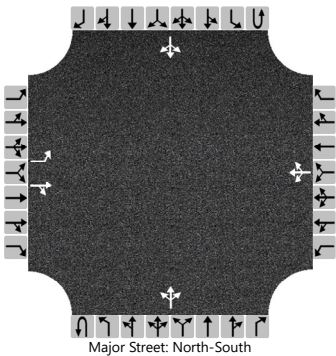
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		42		103			8			440				16		
Capacity, c (veh/h)		86		254			102			1382				1334		
v/c Ratio		0.49		0.41			0.08			0.32				0.01		
95% Queue Length, Q ₉₅ (veh)		2.1		1.9			0.3			1.4				0.0		
Control Delay (s/veh)		81.9		28.5			43.2			8.8	3.3	3.3		7.7	0.1	0.1
Level of Service (LOS)		F		D			E			A	A	A		A	A	A
Approach Delay (s/veh)	43.9				43.2				6.8				0.7			
Approach LOS	E				E				A				A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Mason Road/Ingram Blvd
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2024	North/South Street	Mason Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	11300 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		53	9	227		20	51	12		168	126	3		4	134	145
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

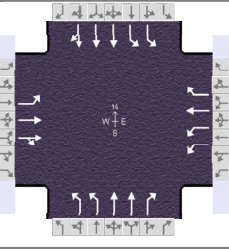
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		59		262			92			187				4		
Capacity, c (veh/h)		207		761			240			1262				1452		
v/c Ratio		0.28		0.34			0.38			0.15				0.00		
95% Queue Length, Q ₉₅ (veh)		1.1		1.5			1.7			0.5				0.0		
Control Delay (s/veh)		29.2		12.2			29.0			8.3	1.3	1.3		7.5	0.0	0.0
Level of Service (LOS)		D		B			D			A	A	A		A	A	A
Approach Delay (s/veh)	15.3				29.0				5.3				0.1			
Approach LOS	C				D				A				A			

BACKGROUND CONDITIONS

HCS Signalized Intersection Results Summary

General Information					Intersection Information		
Agency	FTG				Duration, h	0.250	
Analyst	FTG	Analysis Date	5/21/2024	Area Type	Other		
Jurisdiction	LaVergne, TN	Time Period	AM Peak Hour	PHF	0.93		
Urban Street	Waldron Road	Analysis Year	2026 (Back)	Analysis Period	1> 7:00		
Intersection	Heil Quaker Blvd/Ingram...	File Name	1_bgam.xus				
Project Description	11300						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	36	26	110	195	151	90	245	937	143	64	1246	102

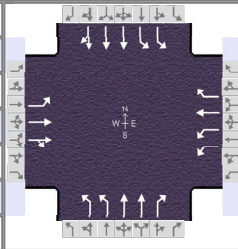
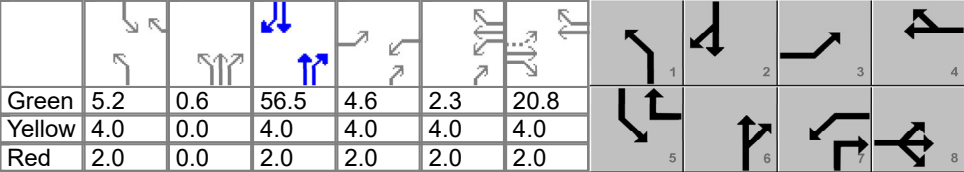
Signal Information											
Cycle, s	120.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On	Green	5.4	5.9	64.2	4.3	4.9	11.2	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
				Red	2.0	0.0	2.0	2.0	0.0	2.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	10.3	17.2	15.3	22.1	17.3	76.1	11.4	70.2
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.1	3.2	3.1	3.2	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	4.3	10.6	9.0	11.7	10.8		4.3	
Green Extension Time (g_e), s	0.0	0.6	0.3	0.7	0.5	0.0	0.1	0.0
Phase Call Probability	0.72	1.00	1.00	1.00	1.00		0.90	
Max Out Probability	0.00	0.04	0.01	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	39	28	118	210	162	97	263	1008	154	69	979	470
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1757	1900	1610	1757	1809	1610	1757	1900	1823
Queue Service Time (g_s), s	2.3	1.6	8.6	7.0	9.7	6.3	8.8	19.2	4.3	2.3	19.4	19.4
Cycle Queue Clearance Time (g_c), s	2.3	1.6	8.6	7.0	9.7	6.3	8.8	19.2	4.3	2.3	19.4	19.4
Green Ratio (g/C)	0.13	0.09	0.09	0.08	0.13	0.18	0.09	0.58	0.66	0.04	0.54	0.54
Capacity (c), veh/h	171	177	150	272	255	289	330	2114	1066	158	2034	976
Volume-to-Capacity Ratio (X)	0.226	0.158	0.788	0.772	0.636	0.335	0.797	0.477	0.144	0.436	0.481	0.481
Back of Queue (Q), ft/ln (95 th percentile)	46.6	35	162.3	141.8	204.3	113	177.2	307.2	66.1	46.1	328.6	325.4
Back of Queue (Q), veh/ln (95 th percentile)	1.9	1.4	6.5	5.7	8.2	4.5	7.1	12.3	2.6	1.8	13.1	13.0
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	46.7	50.1	53.2	54.3	49.2	43.0	53.2	14.4	7.6	55.8	17.4	17.4
Incremental Delay (d_2), s/veh	0.2	0.2	3.4	1.8	1.0	0.3	1.7	0.8	0.3	0.7	0.8	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.9	50.2	56.7	56.1	50.1	43.2	54.9	15.1	7.9	56.5	18.3	19.1
Level of Service (LOS)	D	D	E	E	D	D	D	B	A	E	B	B
Approach Delay, s/veh / LOS	53.7	D		51.4	D		21.7	C		20.3	C	
Intersection Delay, s/veh / LOS	26.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.60	C	2.40	B	2.26	B
Bicycle LOS Score / LOS	0.64	A	1.26	A	1.66	B	1.32	A

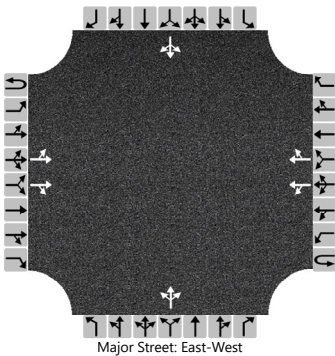
HCS Signalized Intersection Results Summary

General Information						Intersection Information													
Agency	FTG					Duration, h	0.250												
Analyst	FTG		Analysis Date	5/21/2024		Area Type	Other												
Jurisdiction	LaVergne, TN		Time Period	PM Peak Hour		PHF	0.96												
Urban Street	Waldron Road		Analysis Year	2026 (Back)		Analysis Period	1> 7:00												
Intersection	Heil Quaker Blvd/Ingram...		File Name	1_bgpm.xus															
Project Description	11300																		
Demand Information																			
Approach Movement				EB			WB			NB			SB						
				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				42	61	235	299	47	123	95	1425	108	58	1024	45				
Signal Information																			
Cycle, s	120.0	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
				Green	5.2	0.6	56.5	4.6	2.3	20.8									
				Yellow	4.0	0.0	4.0	4.0	4.0	4.0									
				Red	2.0	0.0	2.0	2.0	2.0	2.0									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase				3		8		7		4		1		6		5		2	
Case Number				1.1		4.0		2.0		3.0		2.0		3.0		2.0		4.0	
Phase Duration, s				10.6		26.8		18.9		35.1		11.8		63.1		11.2		62.5	
Change Period, (Y+R c), s				6.0		6.0		6.0		6.0		6.0		6.0		6.0		6.0	
Max Allow Headway (MAH), s				3.1		3.3		3.1		3.3		3.1		0.0		3.1		0.0	
Queue Clearance Time (g s), s				4.3		19.8		12.4		9.4		5.3				4.0			
Green Extension Time (g e), s				0.1		1.0		0.5		1.0		0.2		0.0		0.1		0.0	
Phase Call Probability				0.77		1.00		1.00		1.00		0.96				0.87			
Max Out Probability				0.00		0.00		0.01		0.00		0.00				0.00			
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				3	8	18	7	4	14	1	6	16	5	2	12				
Adjusted Flow Rate (v), veh/h				44	64	245	311	49	128	99	1484	113	60	748	366				
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1900	1610	1757	1900	1610	1757	1809	1610	1757	1900	1857				
Queue Service Time (g s), s				2.3	3.4	17.8	10.4	2.4	7.4	3.3	43.8	3.8	2.0	15.5	15.6				
Cycle Queue Clearance Time (g c), s				2.3	3.4	17.8	10.4	2.4	7.4	3.3	43.8	3.8	2.0	15.5	15.6				
Green Ratio (g/C)				0.21	0.17	0.17	0.11	0.24	0.29	0.05	0.48	0.58	0.04	0.47	0.47				
Capacity (c), veh/h				368	329	279	378	461	460	169	1721	939	152	1790	875				
Volume-to-Capacity Ratio (X)				0.119	0.193	0.878	0.824	0.106	0.278	0.585	0.862	0.120	0.397	0.418	0.418				
Back of Queue (Q), ft/ln (95 th percentile)				46.9	72.8	294.2	204.9	50.3	130.3	66.8	669.4	61.6	40.4	281.5	282.6				
Back of Queue (Q), veh/ln (95 th percentile)				1.9	2.9	11.8	8.2	2.0	5.2	2.7	26.8	2.5	1.6	11.3	11.3				
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Uniform Delay (d 1), s/veh				38.2	42.4	48.4	52.4	35.3	33.2	55.9	28.0	11.2	55.9	20.9	20.9				
Incremental Delay (d 2), s/veh				0.1	0.1	3.5	2.0	0.0	0.1	1.2	6.0	0.3	0.6	0.7	1.5				
Initial Queue Delay (d 3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Control Delay (d), s/veh				38.3	42.5	51.9	54.4	35.4	33.4	57.1	33.9	11.5	56.5	21.6	22.4				
Level of Service (LOS)				D	D	D	D	D	C	E	C	B	E	C	C				
Approach Delay, s/veh / LOS				48.5		D		47.0		D		33.8		C		23.7		C	
Intersection Delay, s/veh / LOS				33.7						C									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				2.73		C		2.59		C		2.42		B		2.27		B	
Bicycle LOS Score / LOS				0.78		A		1.29		A		1.89		B		1.13		A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / Middle Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Middle Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.87
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Back)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	134	52		15	451	0		34	0	6		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

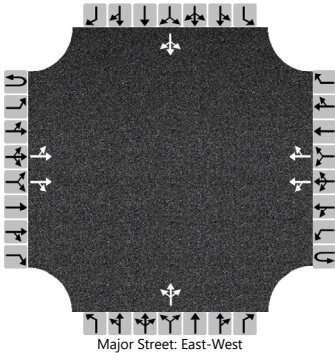
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				17					46				0	
Capacity, c (veh/h)		1058				1368					506				0	
v/c Ratio		0.00				0.01					0.09					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.3					
Control Delay (s/veh)		8.4	0.0			7.7	0.1				12.8					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.3				12.8							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / Middle Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Middle Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Back)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	295	9		2	403	0		50	0	11		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

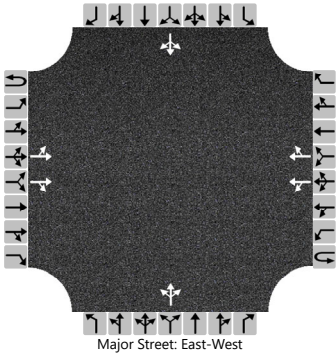
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				2					66				0	
Capacity, c (veh/h)		1137				1244					469				0	
v/c Ratio		0.00				0.00					0.14					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.5					
Control Delay (s/veh)		8.2	0.0			7.9	0.0				13.9					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.1				13.9							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / East Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	East Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Back)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	134	6		46	461	0		5	0	3		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

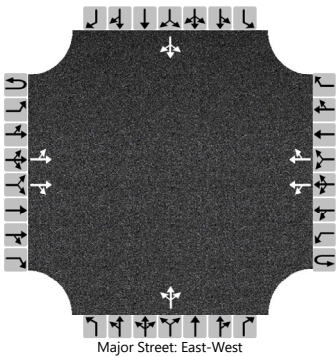
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				52					9				0	
Capacity, c (veh/h)		1053				1433					537				0	
v/c Ratio		0.00				0.04					0.02					
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.1					
Control Delay (s/veh)		8.4	0.0			7.6	0.3				11.8					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.9				11.8							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / East Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	East Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Back)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	306	0		4	397	0		8	0	12		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

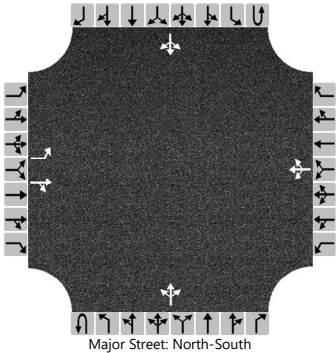
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				4					22				0	
Capacity, c (veh/h)		1143				1242					605				0	
v/c Ratio		0.00				0.00					0.04					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1					
Control Delay (s/veh)		8.1	0.0			7.9	0.0				11.2					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.1				11.2							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Mason Road/Ingram Blvd
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Mason Road
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.86
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	11300 (Back)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		40	30	67		2	3	2		416	186	45		15	103	88
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

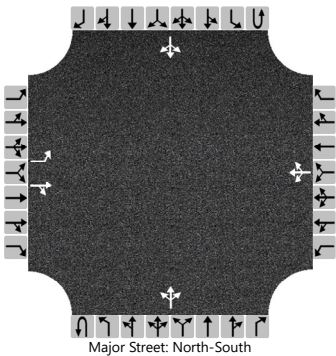
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		47		113			8			484				17		
Capacity, c (veh/h)		64		206			72			1359				1307		
v/c Ratio		0.73		0.55			0.11			0.36				0.01		
95% Queue Length, Q ₉₅ (veh)		3.2		2.9			0.4			1.6				0.0		
Control Delay (s/veh)		149.4		41.7			61.2			9.1	3.8	3.8		7.8	0.1	0.1
Level of Service (LOS)		F		E			F			A	A	A		A	A	A
Approach Delay (s/veh)	73.1				61.2				7.2				0.7			
Approach LOS	F				F				A				A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Mason Road/Ingram Blvd
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Mason Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	11300 (Back)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		58	10	250		22	56	13		185	139	3		4	147	160
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		64		289			101			206				4		
Capacity, c (veh/h)		168		731			202			1229				1434		
v/c Ratio		0.38		0.40			0.50			0.17				0.00		
95% Queue Length, Q ₉₅ (veh)		1.7		1.9			2.5			0.6				0.0		
Control Delay (s/veh)		39.3		13.1			39.5			8.5	1.6	1.6		7.5	0.0	0.0
Level of Service (LOS)		E		B			E			A	A	A		A	A	A
Approach Delay (s/veh)	17.9				39.5				5.5				0.1			
Approach LOS	C				E				A				A			

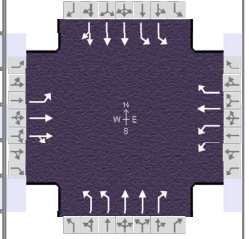
TOTAL PROJECTED CONDITIONS

HCS Signalized Intersection Results Summary

General Information

Agency	FTG		
Analyst	FTG	Analysis Date	5/21/2024
Jurisdiction	LaVergne, TN	Time Period	AM Peak Hour
Urban Street	Waldron Road	Analysis Year	2026 (Total)
Intersection	Heil Quaker Blvd/Ingram...	File Name	1_fuam.xus
Project Description	11300		

Intersection Information



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	36	26	110	288	151	133	245	937	244	110	1246	102

Signal Information

Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	6.0	5.4	60.5	4.3	2.5	11.2		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0		
				Red	2.0	0.0	2.0	2.0	2.0	2.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	10.3	17.2	18.9	25.7	17.4	71.9	12.0	66.5
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.1	3.2	3.1	3.2	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	4.3	10.6	12.4	11.4	10.8		6.0	
Green Extension Time (g_e), s	0.0	0.6	0.5	0.8	0.6	0.0	0.2	0.0
Phase Call Probability	0.72	1.00	1.00	1.00	1.00		0.98	
Max Out Probability	0.00	0.13	0.00	0.00	0.00		0.00	

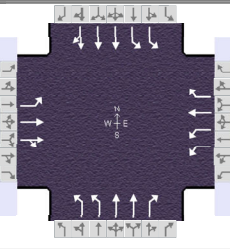
Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	39	28	118	310	162	143	263	1008	262	118	979	470
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1757	1900	1610	1757	1809	1610	1757	1900	1823
Queue Service Time (g_s), s	2.3	1.6	8.6	10.4	9.4	9.2	8.8	20.9	8.0	4.0	20.7	20.7
Cycle Queue Clearance Time (g_c), s	2.3	1.6	8.6	10.4	9.4	9.2	8.8	20.9	8.0	4.0	20.7	20.7
Green Ratio (g/C)	0.13	0.09	0.09	0.11	0.16	0.21	0.10	0.55	0.66	0.05	0.50	0.50
Capacity (c), veh/h	212	177	150	377	312	345	335	1987	1057	176	1916	919
Volume-to-Capacity Ratio (X)	0.182	0.158	0.787	0.821	0.520	0.414	0.787	0.507	0.248	0.672	0.511	0.511
Back of Queue (Q), ft/ln (95 th percentile)	46.4	34.9	164.2	203.4	197.3	164	176.5	334.2	124.9	80.4	352.1	349
Back of Queue (Q), veh/ln (95 th percentile)	1.9	1.4	6.6	8.1	7.9	6.6	7.1	13.4	5.0	3.2	14.1	14.0
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	46.5	50.1	53.2	52.4	45.8	40.6	53.1	16.9	8.5	56.0	19.9	19.9
Incremental Delay (d_2), s/veh	0.2	0.2	4.5	1.7	0.5	0.3	1.6	0.9	0.6	1.7	1.0	2.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	46.6	50.2	57.8	54.1	46.3	40.9	54.7	17.8	9.0	57.7	20.9	21.9
Level of Service (LOS)	D	D	E	D	D	D	D	B	A	E	C	C
Approach Delay, s/veh / LOS	54.3		D	49.0		D	22.7		C	24.0		C
Intersection Delay, s/veh / LOS	28.8						C					

Multimodal Results

	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.60	C	2.41	B	2.27	B
Bicycle LOS Score / LOS	0.64	A	1.50	B	1.75	B	1.35	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	FTG			Duration, h	0.250	
Analyst	FTG	Analysis Date	5/21/2024	Area Type	Other	
Jurisdiction	LaVergne, TN	Time Period	PM Peak Hour	PHF	0.96	
Urban Street	Waldron Road	Analysis Year	2026 (Total)	Analysis Period	1> 7:00	
Intersection	Heil Quaker Blvd/Ingram...	File Name	1_fupm.xus			
Project Description	11300					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	42	61	235	369	47	155	95	1425	175	89	1024	45

Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	5.8	53.6	4.6	5.1	20.9	0.0		
				Yellow	4.0	4.0	4.0	4.0	4.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	10.6	26.9	21.7	38.0	11.8	59.7	11.7	59.6
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.1	3.3	3.1	3.3	3.1	0.0	3.1	0.0
Queue Clearance Time (g_s), s	4.3	19.8	14.8	11.2	5.3		5.1	
Green Extension Time (g_e), s	0.1	1.1	0.9	1.1	0.2	0.0	0.2	0.0
Phase Call Probability	0.77	1.00	1.00	1.00	0.96		0.95	
Max Out Probability	0.00	0.00	0.00	0.00	0.00		0.00	

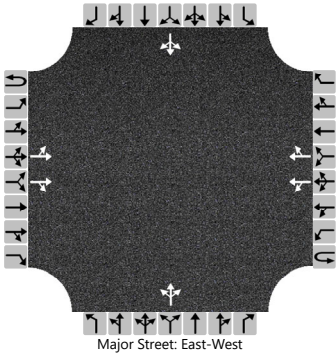
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	44	64	245	384	49	161	99	1484	182	93	748	366
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1757	1900	1610	1757	1809	1610	1757	1900	1857
Queue Service Time (g_s), s	2.3	3.4	17.8	12.8	2.3	9.2	3.3	46.1	6.5	3.1	16.3	16.3
Cycle Queue Clearance Time (g_c), s	2.3	3.4	17.8	12.8	2.3	9.2	3.3	46.1	6.5	3.1	16.3	16.3
Green Ratio (g/C)	0.21	0.17	0.17	0.13	0.27	0.31	0.05	0.45	0.58	0.05	0.45	0.45
Capacity (c), veh/h	369	330	280	460	506	506	169	1619	931	168	1699	830
Volume-to-Capacity Ratio (X)	0.119	0.192	0.874	0.836	0.097	0.319	0.585	0.917	0.196	0.553	0.440	0.441
Back of Queue (Q), ft/ln (95 th percentile)	46.8	72.7	293.7	239.7	48.5	160.3	66.8	727.2	106.4	62.4	294.3	295.7
Back of Queue (Q), veh/ln (95 th percentile)	1.9	2.9	11.7	9.6	1.9	6.4	2.7	29.1	4.3	2.5	11.8	11.8
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	38.2	42.4	48.3	50.9	33.1	31.4	55.9	31.1	12.0	55.9	22.8	22.8
Incremental Delay (d_2), s/veh	0.1	0.1	3.4	1.6	0.0	0.1	1.2	9.7	0.5	1.1	0.8	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	38.2	42.5	51.7	52.5	33.2	31.5	57.1	40.8	12.5	56.9	23.7	24.5
Level of Service (LOS)	D	D	D	D	C	C	E	D	B	E	C	C
Approach Delay, s/veh / LOS	48.3	D		45.2	D		38.8	D		26.5	C	
Intersection Delay, s/veh / LOS	36.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.73	C	2.59	C	2.43	B	2.27	B
Bicycle LOS Score / LOS	0.78	A	1.47	A	1.94	B	1.15	A

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / Middle Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Middle Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.87
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	168	52		15	488	0		34	0	6		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

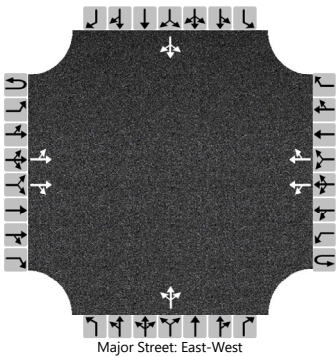
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				17					46				0	
Capacity, c (veh/h)		1020				1324					461				0	
v/c Ratio		0.00				0.01					0.10					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.3					
Control Delay (s/veh)		8.5	0.0			7.8	0.1				13.7					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.3				13.7							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / Middle Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Middle Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	321	9		2	428	0		50	0	11		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

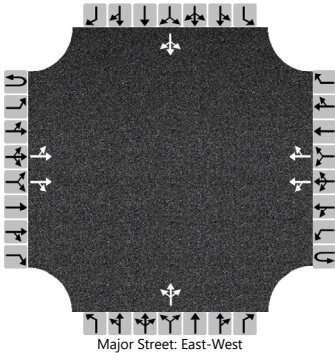
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				2					66				0	
Capacity, c (veh/h)		1111				1215					440				0	
v/c Ratio		0.00				0.00					0.15					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.5					
Control Delay (s/veh)		8.2	0.0			8.0	0.0				14.6					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.1				14.6							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / East Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	East Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	168	6		46	498	0		5	0	3		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

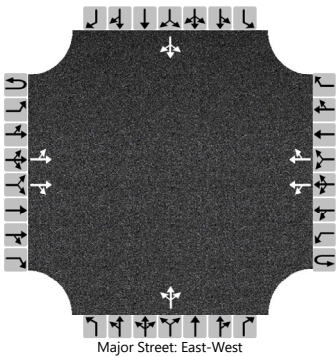
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				52					9				0	
Capacity, c (veh/h)		1016				1387					493				0	
v/c Ratio		0.00				0.04					0.02					
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.1					
Control Delay (s/veh)		8.5	0.0			7.7	0.3				12.4					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.9				12.4							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / East Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	East Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	1	0		0	1	0
Configuration		LT		TR		LT		TR			LTR				LTR	
Volume (veh/h)		0	332	0		4	422	0		8	0	12		0	0	0
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.50	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30

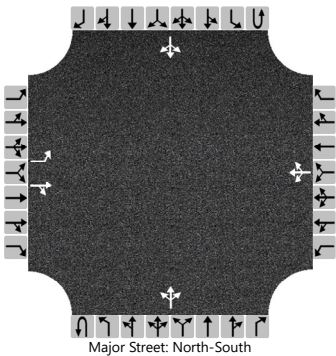
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				4					22				0	
Capacity, c (veh/h)		1118				1213					577				0	
v/c Ratio		0.00				0.00					0.04					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1					
Control Delay (s/veh)		8.2	0.0			8.0	0.0				11.5					
Level of Service (LOS)		A	A			A	A				B					
Approach Delay (s/veh)	0.0				0.1				11.5							
Approach LOS	A				A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Mason Road/Ingram Blvd
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Mason Road
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.86
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		49	30	92		2	3	2		444	186	45		15	103	97
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

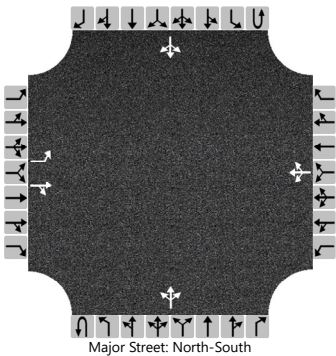
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		57		142			8			516				17		
Capacity, c (veh/h)		54		216			56			1347				1307		
v/c Ratio		1.06		0.66			0.14			0.38				0.01		
95% Queue Length, Q ₉₅ (veh)		4.8		4.0			0.5			1.8				0.0		
Control Delay (s/veh)		265.4		49.0			79.7			9.3	4.2	4.2		7.8	0.1	0.1
Level of Service (LOS)		F		E			F			A	A	A		A	A	A
Approach Delay (s/veh)	111.0				79.7				7.6				0.7			
Approach LOS	F				F				A				A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Mason Road/Ingram Blvd
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	Mason Road
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		65	10	269		22	56	13		203	139	3		4	147	167
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20		

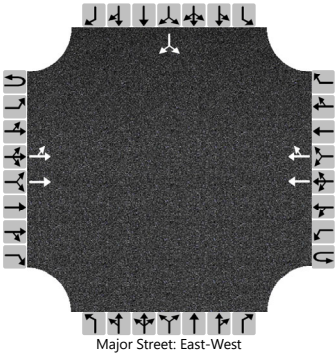
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		72		310			101			226				4		
Capacity, c (veh/h)		149		725			180			1221				1434		
v/c Ratio		0.48		0.43			0.56			0.18				0.00		
95% Queue Length, Q ₉₅ (veh)		2.3		2.2			3.0			0.7				0.0		
Control Delay (s/veh)		49.9		13.6			47.9			8.6	1.7	1.7		7.5	0.0	0.0
Level of Service (LOS)		E		B			E			A	A	A		A	A	A
Approach Delay (s/veh)	20.5				47.9				5.8				0.1			
Approach LOS	C				E				A				A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / West Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	West Ingram Driveway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.70
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		147	186				485	37						34		136
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.80		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

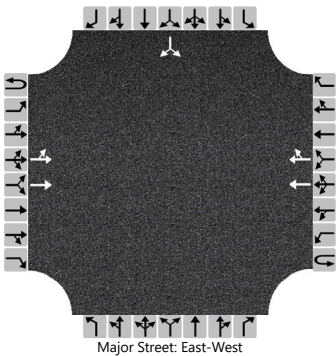
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		210													243	
Capacity, c (veh/h)		871													341	
v/c Ratio		0.24													0.71	
95% Queue Length, Q ₉₅ (veh)		0.9													5.2	
Control Delay (s/veh)		10.4	1.1												38.0	
Level of Service (LOS)		B	A												E	
Approach Delay (s/veh)	5.2												38.0			
Approach LOS	A												E			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	FTG	Intersection	Ingram Blvd / West Driveway
Agency/Co.	FTG	Jurisdiction	LaVergne, TN
Date Performed	May 2024	East/West Street	Ingram Boulevard
Analysis Year	2026	North/South Street	West Ingram Driveway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.70
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	11300 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		LT	T				T	TR							LR	
Volume (veh/h)		98	304				453	25						26		102
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.80		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		140													183	
Capacity, c (veh/h)		920													401	
v/c Ratio		0.15													0.46	
95% Queue Length, Q ₉₅ (veh)		0.5													2.3	
Control Delay (s/veh)		9.6	1.0												21.3	
Level of Service (LOS)		A	A												C	
Approach Delay (s/veh)	3.1												21.3			
Approach LOS	A												C			

**APPENDIX C
TRIP GENERATION**

TRIP GENERATION CALCULATIONS – Charter School

The following calculations are based on the data compiled for ITE Land Use Code 536.

Average Daily Traffic

$$T = 1.85 (X)$$

$$T = 1.85 (340)$$

$$T = 630 \text{ vehicles}$$

$$\text{Enter} = 0.50 (630) = 315 \text{ vehicles}$$

$$\text{Exit} = 0.50 (630) = 315 \text{ vehicles}$$

AM traffic during peak hour of adjacent street

$$T = 1.05 (X) - 2.46$$

$$T = 1.05 (340) - 2.46$$

$$T = 355 \text{ vehicles}$$

$$\text{Enter} = 0.52 (355) = 184 \text{ vehicles}$$

$$\text{Exit} = 0.48 (355) = 170 \text{ vehicles}$$

PM traffic during peak hour of adjacent street

$$\ln(T) = 0.92 \ln(X) + 0.16$$

$$\ln(T) = 0.92 \ln(340) + 0.16$$

$$T = 251 \text{ vehicles}$$

$$\text{Enter} = 0.49 (251) = 123 \text{ vehicles}$$

$$\text{Exit} = 0.51 (251) = 128 \text{ vehicles}$$

**APPENDIX D
TRAFFIC SIGNAL WARRANTS**

The Federal Highway Administration has published the Manual on Uniform Traffic Control Devices 2009 (MUTCD 2009), which includes eight traffic signal warrants that help traffic engineering professionals to identify when a traffic signal installation is justified at a particular location. These eight warrants include minimum conditions that are compared to existing or projected traffic conditions, and typically, traffic signals should not be installed unless at least one of the MUTCD warrants is met. Of the eight total signal warrants, the following are relevant to the intersection considered as part of this study:

Warrant 1, Eight-Hour Vehicular Volume

The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Standard: The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exists for each of any eight hours of an average day:

- A. The vehicles per hour given in both of the 100% columns of Condition A in Table D1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection, or
- B. The vehicles per hour given in both of the 100% columns of Condition B in Table D1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection.

In applying each condition, the major street and minor street volumes shall be for the same eight hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these eight hours.

Option: If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70% columns in Table D1 may be used in place of the 100% columns.

Standard: The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exists for each of any eight hours of an average day:

- A. The vehicles per hour given in both of the 80% columns of Condition A in Table D1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection, and
- B. The vehicles per hour given in both of the 80% columns of Condition B in Table D1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection.

These major street and minor street volumes shall be for the same eight hours for each condition; however, the eight hours satisfied in Condition A shall not be required to be the same eight hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of these eight hours.

TABLE D1. WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

CONDITION A – MINIMUM VEHICULAR VOLUME							
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)			Vehicles per hour on higher-volume minor street approach (one direction only)		
Major Street	Minor Street	100%	80%	70%	100%	80%	70%
1 lane	1 lane	500	400	350	150	120	105
2 or more lanes	1 lane	600	480	420	150	120	105
2 or more lanes	2 or more lanes	600	480	420	200	160	140
1 lane	2 or more lanes	500	400	350	200	160	140

CONDITION B – INTERRUPTION OF CONTINUOUS TRAFFIC							
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)			Vehicles per hour on higher-volume minor street approach (one direction only)		
Major Street	Minor Street	100%	80%	70%	100%	80%	70%
1 lane	1 lane	750	600	525	75	60	53
2 or more lanes	1 lane	900	720	630	75	60	53
2 or more lanes	2 or more lanes	900	720	630	100	80	70
1 lane	2 or more lanes	750	600	525	100	80	70

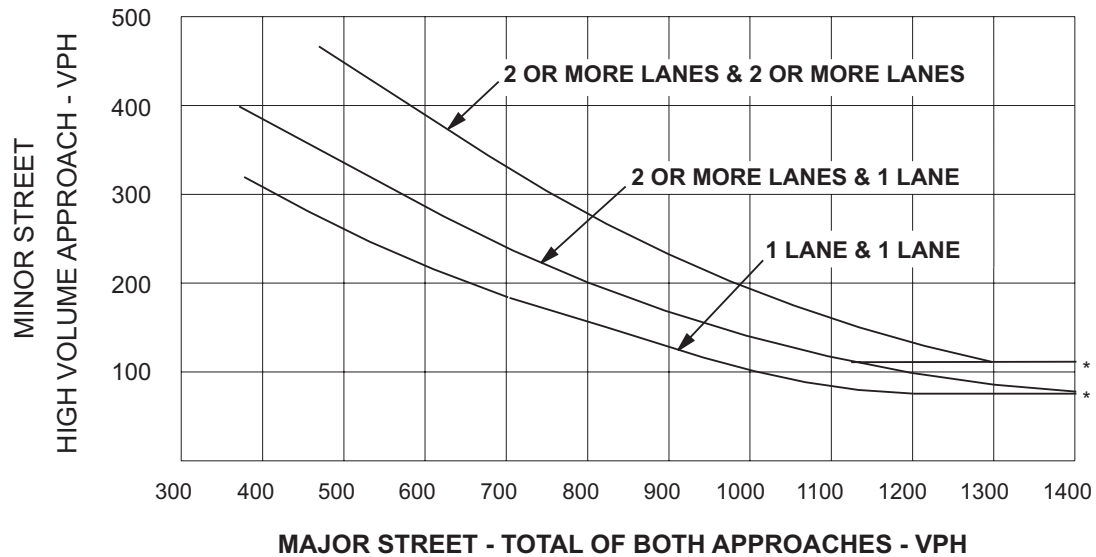
Warrant 2, Four-Hour Vehicular Volume

The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic signal.

Standard: The need for a traffic control signal shall be considered if an engineering study finds that for each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the applicable curve in Figure D1-Graph A for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these four hours.

Option: If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure D1-Graph B may be used in place of Figure D1-Graph A.

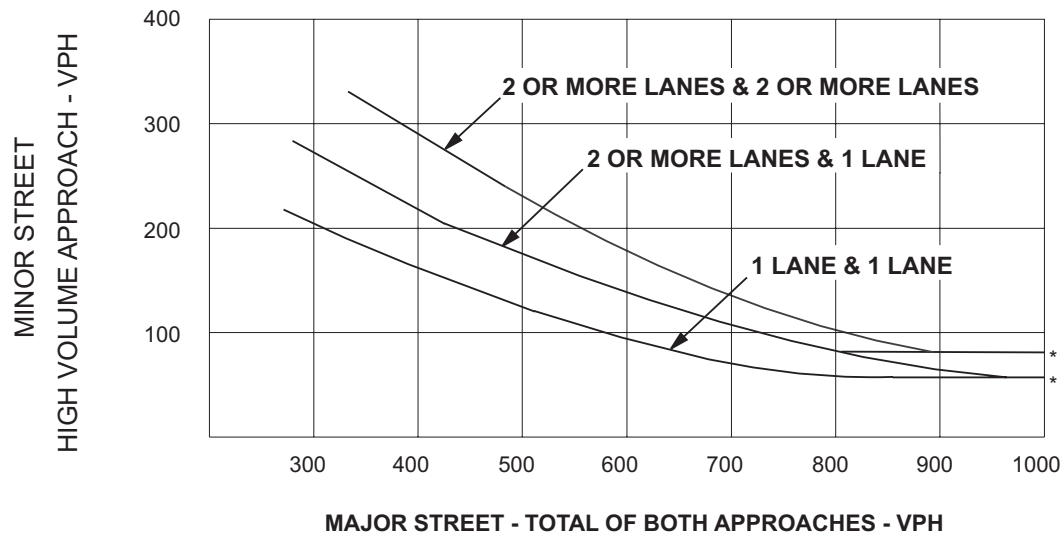
GRAPH A: FOUR HOUR VOLUME WARRANT



*NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

GRAPH B: FOUR HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Warrant 2 - Four Hour Vehicular Volume



Item #: 7. Item Title: Recommendation to the Board of Mayor and Aldermen for Subdivision Acceptance - Finch Branch, Section 2 - Development Totaling 31 Lots. Requested by Finch Branch Building Group, LLC. Property located off Greenwood and Irvin Drives (Tax Map 17L, Group A, Parcel 8.04). R-2 (Medium Density Residential) Zoning District.

Reviewed By:

Bo Logan, City Planner
Gary Lide, City Engineer

Staff Comments / Technical Items:

Planning (Bo Logan - blogan@lavergnethn.gov; and Jake Blair - jblair@lavergnethn.gov)
No Comments

Engineering (Gary Lide - glide@lavergnethn.gov)

Outstanding inspection comments as of 08 May 2024:

Stormwater

- 1 Stabilize where the erosion control was removed.

Water

- 1 FHY #7059 @ 230 Greenwood Dr.- Non-operational (Set too low)
- 2 FHY #7061 @ 242 Greenwood Dr.- Non-operational (Set too low, Not Straight/leaning to one side.)
- 3 FHY #7062 @ 252 Greenwood Dr.- Non operational (Set too low)

Paving and Concrete

All comments addressed

Wastewater

- 1 MH #3655 needs to be cleaned out (debris in trough as well as bench), and removed by hand.
- 2 MH #3654 has been paved over. Uncover MH and ensure that the casting is flush w/ final grade. MH is located in front of 235 Greenwood Drive.

Utilities (Scott Tatalovich - statalovich@lavergnethn.gov)

No Comments

Codes (Joe White - jwhite@lavergnethn.gov)

No Comments

Fire (Curtis Brinkley - cbrinkley@laverghnetn.gov)

No Comments

Police (John Eubank - jeubank@laverghnetn.gov)

No Comments

***Note:** The above technical items may not be the only corrections and/or issues needing to be resolved to get approval from the planning commission. New items can be brought up at the workshop and staff can add items at any time that might have been overlooked. It is the applicant's responsibility to make sure that all technical items are addressed and that no new issues exist before the planning commission meeting. Addressing all technical items does not constitute approval. It is the planning commission's decision whether an item passes or fails. Revised plans are due to staff by the following Monday at close of business unless other arrangements are made and documented.

Finch Branch - Sec 2
Map 17L, Group A, Parcel 8.04

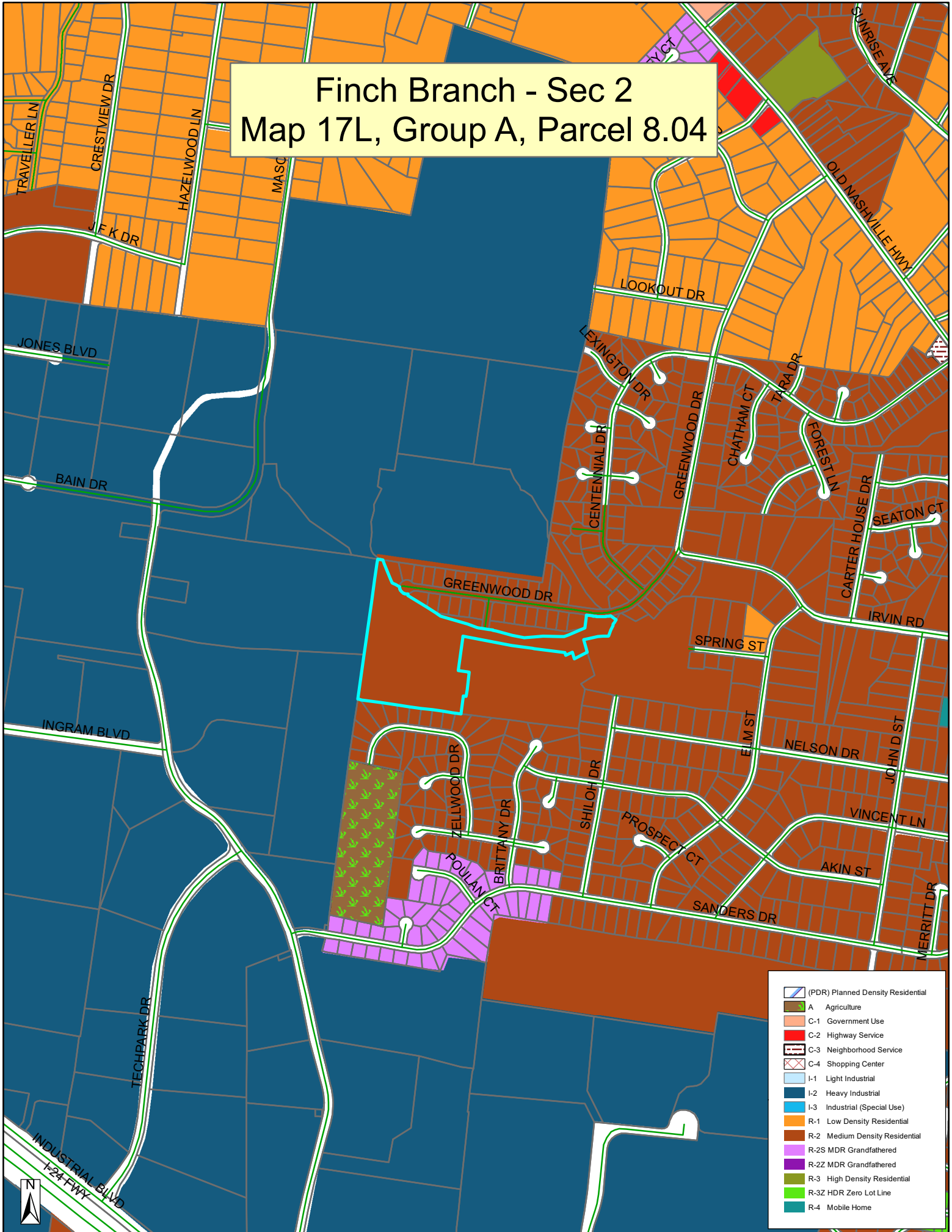


Finch Branch - Sec 2
Map 17L, Group A, Parcel 8.04



Finch Branch - Sec 2

Map 17L, Group A, Parcel 8.04



- (PDR) Planned Density Residential
- A Agriculture
- C-1 Government Use
- C-2 Highway Service
- C-3 Neighborhood Service
- C-4 Shopping Center
- I-1 Light Industrial
- I-2 Heavy Industrial
- I-3 Industrial (Special Use)
- R-1 Low Density Residential
- R-2 Medium Density Residential
- R-2S MDR Grandfathered
- R-2Z MDR Grandfathered
- R-3 High Density Residential
- R-3Z HDR Zero Lot Line
- R-4 Mobile Home

DATE 3/21/23 NAME Hugh Brown
AUTHORIZED APPROVING AGENT

DATE 3/21/23 NAME Kyle Brown
AUTHORIZED APPROVING AGENT

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE LAYOVER SUBDIVISION REGULATIONS, WITH THE EXCEPTION OF JAC VARIANCES, IF ANY, AS ARE NOTED IN THE MINUTES OF THE PLANNING COMMISSION, AND THAT IT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE COUNTY CLERK.

DATE 3/21/23 [Signature]
SECRETARY, PLANNING COMMISSION

DEED REFERENCE:
RECORD BOOK 2278, PAGE 3482
TAX MAP 17L GROUP "A", A PORTION OF PARCEL 8.0-4
ZONING: R-2
SECTION 2, PHASE 2 IN LOTS ON 12.65+ ACRES

SETBACKS:
FRONT = 36'
SIDE = 10'
REAR = 20'
MIN. LOT SIZE = 10,000 S.F.
MINIMUM LOT WIDTH = BUILDING SETBACK LINE = 75'

DATE 03-02-23 David A. Paul
REGISTERED LAND SURVEYOR
TENN. R.L.S. NO. 2381

DATE 3/21/23 NAME Nguyen Nguyen

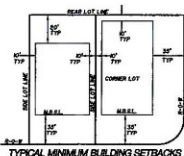
LEGEND

- IRON PIN (FOUND)
- IRON PIN SET (NEW)
- ⊖ CONC. MONUMENT (FOUND)

FN WATER LINE w/ FRICTION HYD. & BLOW OFF VALVE

STG SEWER & MANHOLE

- THE PURPOSE OF THIS FINAL PLAN IS TO CREATE A SINGLE-FAMILY LOT.
- SEALING SYSTEMS ARE BASED ON TENNESSEE STATE PLUMBING CODES THAT REQUIRE A MINIMUM OF TWO INCHES OF COVER OVER THE SEWER MAINS.
- THIS PORTION OF THE PROPERTY LIES WITHIN ZONE A, PER FORM 400 FOR INTERURBAN FOR INTERURBAN COUNTY, MAP NO. 400370340A & EFFECTIVE DATE: APRIL 5, 2007. A MINIMUM OF 30' SHALL BE MAINTAINED FROM THE ADJACENT PROPERTY.
- PARCELS MAY BE SUBJECT TO ADDITIONAL COUNTY ORDINANCES, RESTRICTIONS, BY ORDINANCE NO. 2006-001, AND THE CITY OF CLAYTON MAY REVEAL.
- PROPERTY IS ZONED FOR SLOW DENSITY RESIDENTIAL MINIMUM SETBACK REQUIREMENTS FRONT - 30 FT., SIDE - 30 FT., REAR - 20 FT.
- FOR EACH LOT SHOWN ON THIS PLAN, THERE SHALL BE PLANTED A MINIMUM OF ONE CACTUS OF AT LEAST 12" CALIPER AND ONE UNPLANTED TREE OF 1" CALIPER. THE TYPE, SIZE AND SPECIES SHALL BE DETERMINED BY THE CITY OF CLAYTON WITH THE DEVELOPER.
- ALL CRITICAL LOTTS WITH SLOPES ON OR GREATER, ARE IDENTIFIED WITH AN ASTERISK (*) AND ARE REQUIRED FOR THESE LOTS TO HAVE A STABILIZED BULFING PERMIT.
- ALL COMMON AREAS SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- DEVELOPER IS RESPONSIBLE FOR THE RESTORATION OF STREET LIGHTS. STREET LIGHTS SHALL BE PLACED WITHIN 10 FEET OF THE STREET.



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Smiths Station, Registrar
Perched County Tennessee
Map #: 1009950
Desc'd: 15.00 Estimated #: 248327
Station: 0.00
CLASS: 0.00 Recorded:
Other: 2.00 3/22/2013 at 3:27 AM
Totals: 17.00

```

PLAT BOOK 48, PAGE 277
TIME OF RECORDING: 3:27 P.M.
DATE OF RECORDING: March 22, 2023

[illegible]

OPEN SPACE #1	26,254	0.22
OPEN SPACE #2	8,768	0.73
OPEN SPACE #3	55,254	1.27
TOTAL SP-VAL	90,276	1.24

Page 181 of 181