SPECIAL CALLED MEETING OF THE MAYOR AND BOARD OF ALDERMEN OF THE CITY OF GLUCKSTADT, MISSISSIPPI

Tuesday, October 03, 2023 at 5:00 PM

Agenda

This notice and agenda of the Special Called Meeting of the Mayor and Board of Aldermen is hereby given by the undersigned. Said meeting shall be held on Tuesday, October 03, 2023, at 5:00 PM in the Board Room at City Hall, located at 343 Distribution Drive, Gluckstadt, MS 39110.

The business to be brought before the meeting shall be limited to the following:

1. **Call Meeting to Order and Roll Call**

2. **Opening Prayer and Pledge of Allegiance**

3. **Old Business**

   A) Request to Approve Quote and Purchase Public Works Director Vehicle

   B) Request to Approve Change Order #1: Gluckstadt Police Department and Municipal Court Project (Benchmark Construction)

4. **Old Business**

   A) Discussion of Gluckstadt Police Station Redesign & Explanation of Cost, Dean and Dean Architecture (Alan Grant) (Requested by: Alderman Jayce Powell)

   B) Request for Board Reconsideration, AutoZone Site Plan (Requested by: Alderman Jayce Powell)

5. **Public Comment**

6. **Closed Session to Determine Need for Executive Session**

7. **Adjourn**

WALTER C. MORRISON, IV
MAYOR

We the undersigned Aldermen acknowledge that we were given notice of said meeting at least three (3) hours in advance thereof by a copy of this notice.

Alderwoman Bates_____

Alderman Powell_____

Alderman Slay_____

Alderman Taylor_____

Alderwoman Williams_____

ATTEST: DATE:

_____ _____

LINDSAY D. KELLUM
CITY CLERK

[Seal]

CITY OF GLUCKSTADT

MISSISSIPPI

PUBLIC WORKS DEPARTMENT

MEMORANDUM

TO: Mayor & Board of Alderman

FROM: Buckner, Chris, Public Works Director

DATE: 10/2/2023

SUBJECT: Purchase of Vehicle for Public Works Director

We are asking for your approval to buy a Dodge Ram for the Public Works Director. The amount for the truck was taken into consideration and approved in the FY24 budget, but there was no line item created for it.

We have 2 quotes with the lowest and best bid being a Dodge Ram from Mac Haik Canton. This truck is currently available on the lot. Due to the current UAW strike, and subsequent truck shortages, we are wanting to purchase this truck as soon as possible.

If you have any questions, please feel free to contact me.

Mac Haik CHEVY MADISON CHEVROLET

CUSTOMER INFORMATION

Customer City of Blue Ridge
Address
Email

Home Phone
Work
Cell Phone

VEHICLE INFORMATION

Stock # PG662432
VIN
Stock Type

Vehicle
Color
Mileage

Market Value/MSRP	47,455
Mac Haik Price	
Rebate	4,745.50
Your Price Today	42,709.50
Trade Allowance	
Trade Difference	
Fees	10
Tax	
Added Equipment	
Net Price	
Trade Payoff	
Balance	42,719.50

*Dealer Added Equipment is Optional

Customer Signature

Date

Manager Signature

9/28/23
Date

RAM

2023 MODEL YEAR

RAM 1500 CLASSIC TRADESMAN CREW CAB 4X4

For more information visit: www.ramtrucks.com
or call 1–866–RAMINFO

FCA US LLC

THIS VEHICLE IS MANUFACTURED TO MEET SPECIFIC UNITED STATES REQUIREMENTS. THIS VEHICLE IS NOT MANUFACTURED FOR SALE OR REGISTRATION OUTSIDE OF THE UNITED STATES.

MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION

Base Price: $44,130

RAM 1500 TRADESMAN CREW CAB 4X4
Exterior Color: Diamond Black Crystal Pearl–Coat Exterior Paint
Interior Color: Black / Diesel Gray Interior Colors
Interior: Heavy–Duty Vinyl 40/20/40 Split Bench Seat
Engine: 3.6L V6 24V VVT Engine
Transmission: 8–Speed Automatic 850RE Transmission

STANDARD EQUIPMENT (UNLESS REPLACED BY OPTIONAL EQUIPMENT)

FUNCTIONAL/SAFETY FEATURES
- Advanced Multistage Front Air Bags
- Supplemental Front Seat–Mounted Side Air Bags
- Supplemental Side–Curtain Front and Rear Air Bags
- Supplemental Side Air Bags
- Parkview® Rear Back–Up Camera
- 3.21 Rear Axle Ratio
- Class III Bumper Hitch
- Trailer–Tow with 4–Pin Connector Wiring
- 7–Pin Wiring Harness
- Locking Tailgate
- Anti–Lock 4–Wheel Disc Brakes
- Electronic Stability Control
- Speed Control
- Sentry Key® Theft Deterrent System
- Tire Pressure Monitoring Display

INTERIOR FEATURES
- Ram Clean Air System
- Uconnect® 3 with 5–Inch Touch Screen Display
- 6 Speakers
- Integrated Voice Command
- Media Hub with USB and Auxiliary Port
- Power Front Windows with 1–Touch Up / Down
- Tilt Steering Column
- Black Rotary Shifter
- Vehicle Information Center
- Front Armrest with Three Cupholders
- 40/20/40 Split Bench Seat
- Rear Folding Seat
- Rear Under–Seat Storage Compartment
- Black Vinyl Floor Covering

EXTERIOR FEATURES
- 17–Inch x 7.0–Inch Steel Wheels
- P265/70R17 BSW All–Season Tires
- Halogen Quad Headlamps
- Automatic Headlamps
- Black Front Bumper
- Black Rear Bumper
- Black Grille

OPTIONAL EQUIPMENT (May Replace Standard Equipment)

Diamond Black Crystal Pearl–Coat Exterior Paint	$200
Customer Preferred Package 29B	
Anti–Spin Differential Rear Axle	$495
Remote Keyless–Entry with AllSecure®	$190
Class IV Receiver–Hitch	$445
Destination Charge	$1,995

TOTAL PRICE: * $47,455

WARRANTY COVERAGE
5–year or 60,000–mile Powertrain Limited Warranty.
3–year or 36,000–mile Basic Limited Warranty.
Ask Dealer for a copy of the limited warranties or see your owner's manual for details.

5 YEAR / 60,000 MILE POWERTRAIN WARRANTY

Assembly Point/Port of Entry: SALTILLO, MEXICO S.L. SHIP TO: SOLDTO:

VIN: 3C6–RR7KG9PG–662432 L4–VON: 0114 0808–0

THIS LABEL IS ADDED TO THIS VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REMOVED OR ALTERED PRIOR TO DELIVERY TO THE ULTIMATE PURCHASER.

* STATE AND/OR LOCAL TAXES IF ANY, LICENSE AND TITLE FEES AND DEALER SUPPLIED AND INSTALLED OPTIONS AND ACCESSORIES ARE NOT INCLUDED IN THIS PRICE. DISCOUNT, IF ANY, IS BASED ON PRICE OF OPTIONS IF PURCHASED SEPARATELY.

EPA DOT Fuel Economy and Environment

Gasoline Vehicle

Fuel Economy These estimates reflect new EPA methods beginning with 2017 models.

19 MPG combined city/hwy — 16 city, 23 highway

5.3 gallons per 100 miles

Standard pickups range from 12 to 70 MPGe.
The best vehicle rates 132 MPGe.

You spend $3,750 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost $2,350

Fuel Economy & Greenhouse Gas Rating (tailpipe only): 4 (1 – 10, Best)

Smog Rating (tailpipe only): 7 (1 – 10, Best)

This vehicle emits 474 grams CO2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also creates emissions; learn more at fueleconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 28 MPG and cost $8,000 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at $2.95 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fueleconomy.gov
Calculate personalized estimates and compare vehicles

Smartphone QR Code™

GOVERNMENT 5–STAR SAFETY RATINGS

Overall Vehicle Score ★★★★
Based on the combined ratings of frontal, side and rollover.
Should ONLY be compared to other vehicles of similar size and weight.

Frontal Crash — Driver ★★★★; Passenger ★★★★
Based on the risk of injury in a frontal impact.
Should ONLY be compared to other vehicles of similar size and weight.

Side Crash — Front seat ★★★★★; Rear seat ★★★★★
Based on the risk of injury in a side impact.

Rollover ★★★
Based on the risk of rollover in a single–vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★) with 5 being the highest.
Source: National Highway Traffic Safety Administration (NHTSA)
www.safercar.gov or 1–888–327–4236

The safety ratings above are based on Federal Government tests of particular vehicles equipped with certain features and options. The performance of this vehicle may differ.

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE:
U.S./CANADIAN PARTS CONTENT: 45%
MAJOR SOURCES OF FOREIGN PARTS CONTENT:
MEXICO : 44%
NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON–PARTS COSTS.
FOR THIS VEHICLE:
FINAL ASSEMBLY POINT:
SALTILLO, MEXICO
COUNTRY OF ORIGIN:
ENGINE: UNITED STATES
TRANSMISSION: UNITED STATES

Snow Plow Prep Disclaimer
This vehicle not factory equipped for Snow Plow installation – See dealer for details.

MOPAR® VEHICLE PROTECTION
A PRODUCT OF FCA US LLC
Ask for Mopar Vehicle Protection for your vehicle. We Built It. We Back It.

5728 I-55 North
Jackson, Mississippi 39211
Phone 601-956-0150
1-800-448-7519 • Fax: 601-956-8221

Phil Moore BUICK GMC

Section 3, IA)

Email chris.buckner@gluckstadt.net

Salesman Amos Shearry Slsmn # 225 Customer No. 110501 Date 10/2/2023

Purchaser: City of Gluckstadt DOB SS #

Co-Purchaser: DOB SS #

Address 343 Distribution Drive City Madison State MS Zip 39110

County Madison Res. Phone: (769) 567-2309 Bus. Phone:

Please Enter My Order For The Following: New ☑ Used ☐ Demo ☐

Vehicle: GMC Model: Sierra 1500 Series 2WD Double Body Type: Pro Year: 2024 Stock #: 19341

Color: Summit White ID # 1GTRHAED7RZ127631 Mileage: 5 Cylinders 8

USED CAR TRADE-IN AND/OR OTHER CREDITS

MAKE MODEL TYPE

DECAL NO MILEAGE

YEAR LICENSE NO.

Color: Cylinders:

VIN #

PAYOFF INFORMATION

PAYOFF TO

ADDRESS

CITY STATE ZIP

AMOUNT ACCT.#

Good Til: Quoted by:

VERIFIED BY:

TITLE BUREAU 923-7818

NAME CAR TITLED IN

TITLE #

LIENHOLDER

LIEN INFORMATION ON PURCHASE PH. #

INSTITUTION

ADDRESS

CITY STATE ZIP

LIEN HOLDER #

SUGGESTED PRICE	$ 45,930.00
ACCESSORIES	
CERAMIC VEHICLE PROTECTION	
5 YEAR COVERAGE	**895.00**
PRICE OF VEHICLE & ACCESSORIES	$ 43,964.00
TRADE IN ALLOWANCE	
NET DIFFERENCE	
DOCUMENTARY/SERVICE FEE	**339.50**
SUB-TOTAL	$ 44,303.50
SALES TAX	
TITLE AND INSPECTION	**10.00**
TOTAL PRICE OF VEHICLE	$ 44,313.50
PAY-OFF BALANCE	
TOTAL	
PERSONALIZATION ALLOWANCE ➡	
CASH ON DELIVERY ➡	
UNPAID BALANCE ➡	

"A DOCUMENT/SERVICE FEE IS NOT AN OFFICIAL FEE AND IS NOT REQUIRED BY LAW, HOWEVER, IT MAY BE CHARGED TO A BUYER/LESSEE FOR THE PREPARATION, HANDLING AND PROCESSING OF DOCUMENTS AND THE PERFORMANCE OF SERVICES RELATED TO THE SALE OF A MOTOR VEHICLE AND MAY INCLUDE DEALER PROFIT. THIS NOTICE IS REQUIRED BY REGULATION OF THE MISSISSIPPI MOTOR VEHICLE COMMISSION."

Service examples may include but are not limited to checking vehicle safety, history, and titles; providing full condition information on the window label; discovering and a disclosing accurate vehicle mileage; checking for recalls on used vehicles where required; completing required forms and contracts that protect buyers; and lessees; interests; processing titles and plates; clearing liens; keeping buyers' and lessees' information private and secure, fulfilling vehicle emission laws; passing along manufacturer information, including lemon law notices; processing taxes on buyer's and lessees purchases and rebates; keeping buyer's and lessees informed of their rights and obligations; keeping important records of buyer's and lessees paperwork; training staff to carry out laws that protect buyers and lessees; and maintaining professional licenses that ensure quality service. Not all services will be performed on every sale or by every dealer.

"ALL EXPRESSED WARRANTIES, IF ANY, BY A MANUFACTURER OR SUPPLIER ARE THEIRS, NOT THE DEALERS, UNLESS OTHERWISE PROVIDED IN WRITING AND FURNISHED TO THE BUYER BY THE DEALER. MISSISSIPPI'S IMPLIED WARRANTY LAW MAY GIVE THE BUYER ADDITIONAL RIGHTS." THIS IS A SALESMAN/CUSTOMER RETAIL WORK SHEET - NOT A CONTRACT.

In the event of increase in price by manufacturer before delivery, I agree to pay the difference in price.

BUYER HEREBY EXPRESSLY AND SPECIFICALLY WAIVES HIS RIGHT TO NOTICE AND TO HEARING THEREON, OF ANY ACTION TAKEN BY PHIL MOORE BUICK GMC WHICH SHALL TAKE THE FORM OF REPLEVIN, ATTACHMENT, GARNISHMENT, OR INVOLVE OTHER SIMILAR WRITS. BUYER STATES THAT THE FOREGOING WAIVER IS FREELY, VOLUNTARILY AND KNOWINGLY GIVEN.

USED CARS ONLY. The information you see on the window form for this vehicle is part of the contract. Information on the window form overrides any contrary provisions in the contract sales.

The above proposal constitutes the entire agreement pertaining to this agreement and no other agreement of any kind, including but not limited to verbal understandings have been made by either the buyer or Phil Moore Buick GMC.

Buyer's Approval

Accepted By Customer Date 10/2/202

The Reynolds and Reynolds Company EF7200 Q (04/23)

From: Kathy Dier
To: Alan Grant; Lindsay Kellum
Cc: John Dant; Chris Deupree; Walter Morrison; Scott Maugh
Subject: RE: GPS&MC Change Order No. 1 for signature
Date: Monday, October 2, 2023 11:44:45 AM
Attachments: image001.png
CO No. 1.pdf

Lindsay,

Per Alan Grant, please find attached Change Order No. 1 adding 33 days to the contract time (as previously discussed).

Please process for signature and return at your earliest convenience.

Thank you,
Kathy

Kathy Dier, CSI, CCCA | Construction Contract Administrator

DEAN ARCHITECTURE
GEDDIE | GRANT | OUBRE

661 Sunnybrook Rd, Ste 140
Ridgeland, MS 39157 | 601.939.7717 Ext. 123

kdier@deandean.com
deandean.com

AIA® Document G701® – 2017

Change Order

PROJECT: *(Name and address)*
City of Gluckstadt Police Station
and Municipal Court
Gluckstadt, MS

CONTRACT INFORMATION:
Contract For: General Construction
Date: July 5, 2023

CHANGE ORDER INFORMATION:
Change Order Number: 001
Date: September 25, 2023

OWNER: *(Name and address)*
City of Gluckstadt
343 Distribution Drive
Madison, MS 39110

ARCHITECT: *(Name and address)*
Dean Architecture, P.A.
661 Sunnybrook Road, Ste 140
Ridgland, MS 39157

CONTRACTOR: *(Name and address)*
Benchmark Construction Corporation
1867 Crane Ridge Dr., Ste 200-A
Jackson, MS 39216

THE CONTRACT IS CHANGED AS FOLLOWS:
(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

Add thirty-three (33) days to the contract time due to exterior re-design. Re-design was not accepted, therefore no additional cost is added to the contract sum.

TOTAL ADD C.O. #1: 33 DAY(S) TIME EXPENSION

The original Contract Sum was	$	6,955,000.00
The net change by previously authorized Change Orders	$	0.00
The Contract Sum prior to this Change Order was	$	6,955,000.00
The Contract Sum will be unchanged by this Change Order in the amount of	$	0.00
The new Contract Sum including this Change Order will be	$	6,955,000.00

The Contract Time will be increased by Thirty-Three (33) days.
The new date of Substantial Completion will be August 21, 2024

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

ARCHITECT *(Firm name)*	CONTRACTOR *(Firm name)*	OWNER *(Firm name)*
Dean Architecture, P.A.	Benchmark Construction Corporation	City of Gluckstadt
SIGNATURE	SIGNATURE	SIGNATURE
J. Alan Grant, AIA, NCARB,	David Marsh,	Walter C. Morrison, IV,
Principal	President	Mayor
PRINTED NAME AND TITLE	PRINTED NAME AND TITLE	PRINTED NAME AND TITLE
10/2/23	10-2-23	
DATE	DATE	DATE

From: Alan Grant
To: Walter Morrison; Lindsay Kellum
Cc: Chris Deupree; David Marsh; John Dant
Subject: RE: Gluckstadt Police Re-Design
Date: Tuesday, September 19, 2023 12:56:17 PM
Attachments: image004.png
image005.png
image001.png

Thanks for letting us know.

We will proceed that way.

Thanks
Alan.

J. Alan Grant, AIA, NCARB | Principal

DEAN ARCHITECTURE
GEDDIE | GRANT | OUBRE

661 Sunnybrook Rd, Ste 140
Ridgeland, MS 39157 | 601.939.7717 Ext. 120

agrant@deandean.com
deandean.com

From: Walter Morrison <walter.morrison@gluckstadt.net>
Sent: Tuesday, September 19, 2023 12:50 PM
To: Alan Grant <agrant@deandean.com>; Lindsay Kellum <lindsay.kellum@gluckstadt.net>
Cc: Chris Deupree <cdeupree@benchmarkms.com>; David Marsh <dmarsh@benchmarkms.com>; John Dant <jdant@deandean.com>
Subject: RE: Gluckstadt Police Re-Design

Alan:

This is to confirm that the board voted to revert back to the original design and forgo any changes.

Walter C. Morrison IV
Mayor, City of Gluckstadt
P.O. Box 2210
Gluckstadt, MS 39130
Office: (769) 567-2306
Fax: (769) 567-2305
Walter.morrison@gluckstadt.net

From: Alan Grant <agrant@deandean.com>
Sent: Tuesday, September 19, 2023 8:53 AM
To: Walter Morrison <walter.morrison@gluckstadt.net>; Lindsay Kellum <lindsay.kellum@gluckstadt.net>
Cc: Chris Deupree <cdeupree@benchmarkms.com>; David Marsh <dmarsh@benchmarkms.com>; John Dant <jdant@deandean.com>
Subject: RE: Gluckstadt Police Re-Design

Thanks. Let us know if you need anything further from us for the meeting.

Thanks
Alan.

J. Alan Grant, AIA, NCARB | Principal

DEAN ARCHITECTURE
GEDDIE | GRANT | OUBRE

661 Sunnybrook Rd, Ste 140
Ridgeland, MS 39157 | 601.939.7717 Ext. 120

agrant@deandean.com
deandean.com

From: Walter Morrison <walter.morrison@gluckstadt.net>
Sent: Tuesday, September 19, 2023 8:32 AM
To: Alan Grant <agrant@deandean.com>; Lindsay Kellum <lindsay.kellum@gluckstadt.net>
Cc: Chris Deupree <cdeupree@benchmarkms.com>; David Marsh <dmarsh@benchmarkms.com>; John Dant <jdant@deandean.com>
Subject: RE: Gluckstadt Police Re-Design

We are meeting at noon.

Walter C. Morrison IV
Mayor, City of Gluckstadt
P.O. Box 2210
Gluckstadt, MS 39130
Office: (769) 567-2306
Fax: (769) 567-2305
Walter.morrison@gluckstadt.net

From: Alan Grant <agrant@deandean.com>
Sent: Tuesday, September 19, 2023 8:31 AM
To: Walter Morrison <walter.morrison@gluckstadt.net>; Lindsay Kellum

<lindsay.kellum@gluckstadt.net>
Cc: Chris Deupree <cdeupree@benchmarkms.com>; David Marsh <dmarsh@benchmarkms.com>; John Dant <jdant@deandean.com>
Subject: RE: Gluckstadt Police Re-Design

Mayor and Lindsay,

Following up. Any word from Wesley or if there will be a special called meeting?

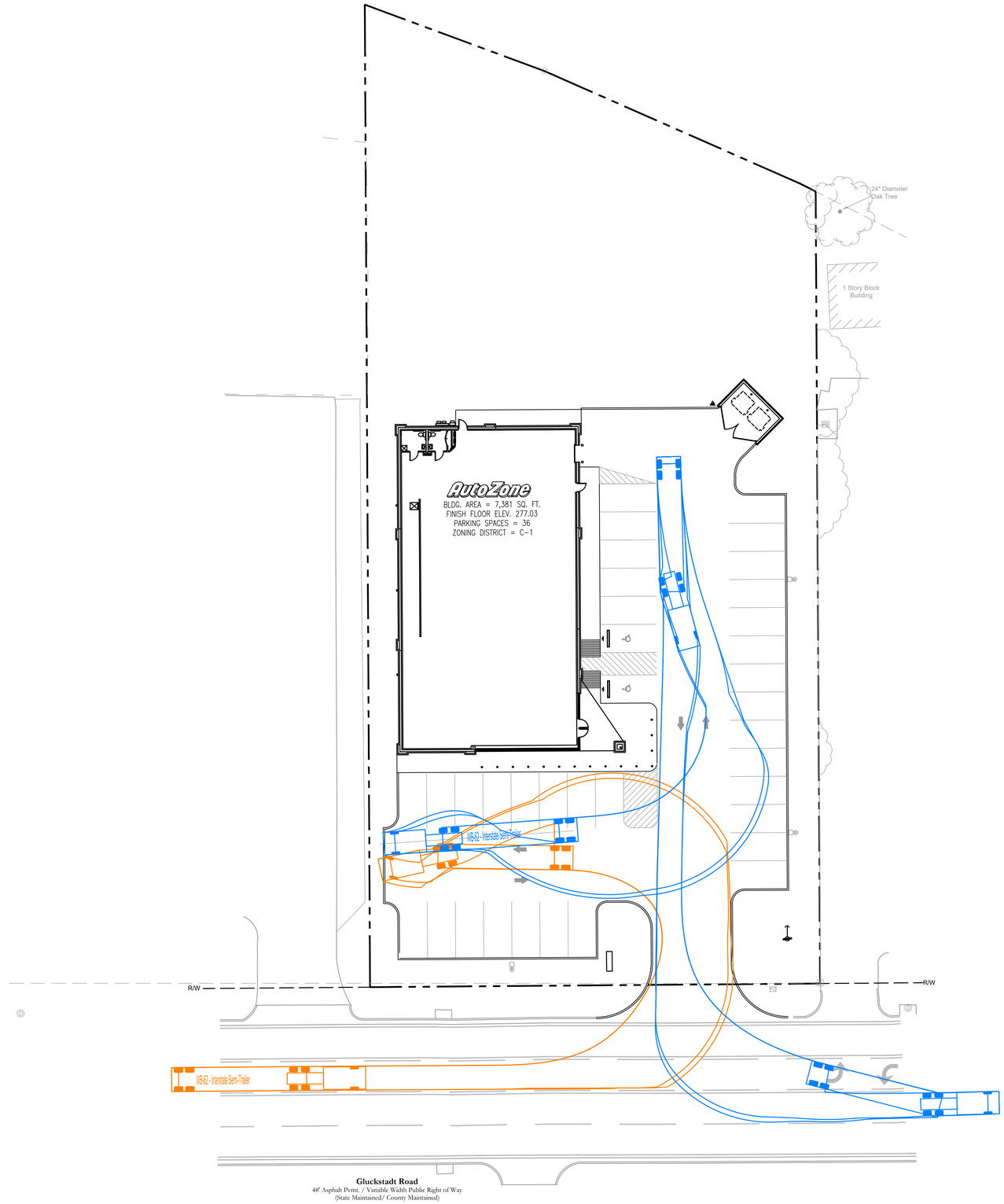
Thanks
Alan.

J. Alan Grant, AIA, NCARB | Principal

DEAN ARCHITECTURE
GEDDIE | GRANT | OUBRE

661 Sunnybrook Rd, Ste 140
Ridgeland, MS 39157 | 601.939.7717 Ext. 120

agrant@deandean.com
deandean.com



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

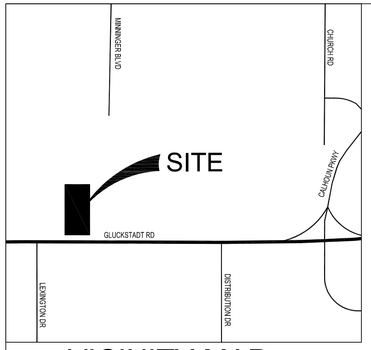
AutoZone Store No. 0152
1076 GLUCKSTADT RD
MS 39110
GLUCKSTADT
TRUCK ROUTE

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

7N2

EX 1.0



VICINITY MAP
(NOT TO SCALE)

AutoZone

AutoZone Store Development
Preliminary/Final Site Plan Submission

for:

AutoZone Store No. O152
1076 GLUCKSTADT RD
MADISON, MS 39110

PARCEL: 002 / 01.00

SURVEYOR:
BLEW & ASSOCIATES, PA
3825 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703
(479) 443-4506

OWNER:
AUTOZONE, INC.
c/o: WADE DAVIS
123 S. FRONT STREET, 3RD FLOOR
MEMPHIS, TENNESSEE 38103
(901) 495-8701

CIVIL ENGINEERING:
Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Land Planning, and Environmental

PLAN SUBMITTAL DATE:
APRIL, 2023

INDEX OF DRAWINGS

NORTH
NAD83 MS STATE PLANE

REVISIONS
1 | 2 | 3 | 4 | 5 | 6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
COVER SHEET

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.:(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

RAYMOND G. CLARK LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI 03/10/2022

4/25/2023

7N2

C0.0

ALTA/NSPS Land Title Survey

□□tle □n□or□ at□on

First American □itle □nsurance Company National Commerical Services
File No.□NCS□□□8□□□M□C□
Commitment Date□uly □□□□□□ at 8□□ AM

Sc□edule □ □ escr□□t□on

□he Land referred to herein belo□ is situated in the County of Madison□State of Mississippi□and is described as follo□s□

A parcel of land containing □.□□ acres□more or less□situated in the Southeast □/4 of Section □□□□o□nship 8 North□Range □ East□Madison County□ Mississippi and more particularly described as follo□s□

□egin at a found iron pin in the ne□ Northern Right of Way line of □ luc□stadt Road □hich is □□□□.□□ feet South of and □4□□.□□ feet East of the North□est corner of the Southeast □/4 of said Section □□□as sho□n on attached survey and run □hence South 8□ Degrees □□ Minutes □8 Seconds West along said Northern Right of Way line for a distance of □□□.□□ feet to a found iron pin□Leaving said ne□ Right of Way line□Run thence North □□ Degrees □□ Minutes 4□ Seconds West for a distance of □4□.□8 feet to a found iron pin□□hence South □□ Degrees 4□ Minutes 4□ Seconds East for a distance of □8.□4 feet□□hence South □□ Degrees □□ Minutes □8 Seconds East for a distance of □□.48 feet□□hence South □□ Degrees □8 Minutes □□ Seconds East for a distance of □.8□ feet□□hence South □□ Degrees □□ Minutes 4□ Seconds East along the edge of concrete par□ing and a pro□ection thereof for a distance of □8□.□□ feet to the Point of □eginning.

Sc□edule B □Sect□on □□

□□ – Right of Way Easement granted to □ear Cree□ Water Association□□nc. recorded in □oo□ □□□□Page □□□.Mec□lenburg County Registry.
(Does not affect)

□□ – Right of Way and easement granted to Mississippi Po□er □ Light Company recorded in □oo□ □□4□Page □□4.
(Does not affect)

□□ – Right of Way and Easement Deed for Distribution System granted to Centerpoint Energy Resources Corp.□d/b/a Centerpoint Energy Mississippi □ as recorded in □oo□ □□□8□Page □□.
(Does not affect)

□□ – Right of Way and easement granted to Mississippi Po□er □ Light Company recorded in □oo□ □□□□Page □□4.
(Affects□appro□imate location sho□n hereon)

□4 – □erms and conditions of that certain □ uitclaim and □oundary Line Agreement by and bet□een Cliff Smith and Charlotte □. Smith□□he □ iles □ roup□LLC□and Sturdivant Empire□LLC recorded in □oo□ □4□□□Page □□□.
(□□ects, □urrent Boundar□ as s□o□n)

□on□n□ □n□or□ at□on

PROPER□Y □S C□RREN□LY ZONED□
Zone □(C□) □ eneral/□ndoor Commercial

□□EM	RE□ □□RED	O□SERVED
PERM□□□ED □SE	□ eneral Commercial	O□SERVED
M□N. LO□ AREA	□□□8□ S□ FEE□	O□SERVED
M□N. LO□ W□D□□	REFER □O NO□ES	O□SERVED
MAX. □LD□ COVERA□ E	NONE	O□SERVED
M□N. SE□□AC□ S FRON□	□□ FEE□	O□SERVED
M□N. SE□□AC□ S S□DE	REFER □O NO□ES	O□SERVED
M□N. SE□□AC□ S REAR	REFER □O NO□ES	O□SERVED
MAX □□□LD□N□ □ E□□ □	4□ FEE□	O□SERVED
PAR□ □N□ RE□ □LAR	REFER □O NO□ES	O□SERVED
PAR□ □N□ □ AND□CAP	REFER □O NO□ES	O□SERVED
PAR□ □N□ □O□AL	REFER □O NO□ES	O□SERVED

□le□ □ Associates ma□es no □arranty to the e□act regulations or ordinances represented on the dra□ing hereon. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as □ell as the applicable restrictions and re□uirements associated □ith such □oning classification.

Specific □oning information as sho□n hereon is as interpreted by the surveyor per Madison County □oning □□□□ PDF□and should be confirmed by a licensed Mississippi attorney or □oning professional in the controlling □urisdiction.

Notes□

□ecause there may be a need for interpretation of the applicable □oning codes□□e refer you to Madison County for □oning la□s and applicable codes.

Lot W□dt□ Notes□

Shopping centers□
□□□ feet.

□ndependent commercial uses□
□□□ feet. For any lot having a □idth of less than □□□ feet□there shall be no more than one access drive□ay per lot. For lots having a □idth of □□□ feet or more□t□o access drive□ays may be provided for every □□□ feet of street/ road frontage. □nterior circulation streets shall be provided for all commercial subdivisions approved after the effective date of this Ordinance.

Setback Notes□

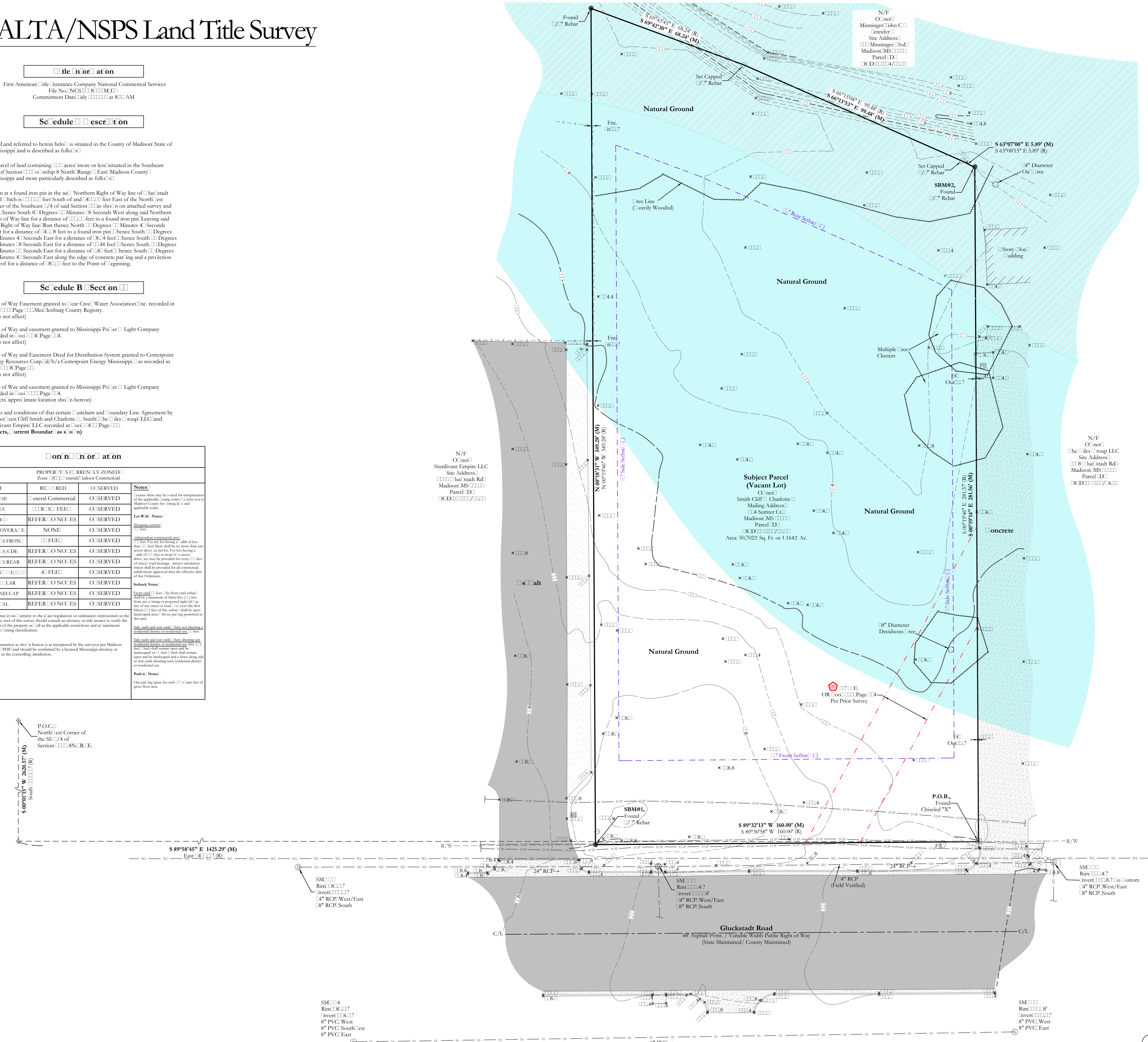
Front yard□□□ feet. □he front yard setbac□ shall be a minimum of thirty□five (□□) feet from any e□isting or proposed right□of□□ay line of any street or road. □ o□ ever□the first fifteen (□□) feet of this setbac□ shall be open landscaped area□□ith no par□ing permitted in this area.

Side yards and rear yards □here not abutting a residential district or residential use□□□ feet.

Side yards and rear yards □here abutting any residential district or residential use□fifty (□□) feet□□hich shall remain open and be landscaped□or □□ feet□□hich shall remain open and be landscaped and a fence along side or rear yards abutting such residential district or residential use.

Park□n□ Notes□

One par□ing space for each □□□ s□uare feet of gross floor area.



M□scellaneous Notes

□. Completed field □or□ □as August □□□□□□.
□. □he □asis of □earing for this survey is □ rid North per □ PS coordinate observations Mississippi State Plane□West Zone NAD8□.
Latitude □ 32°31'01.52438"
Longitude □ -90°06'38.10102"
Convergence Angle □ -00°07'11.06336"
□. Distances sho□n on plat are ground.
Combined scale factor (ground to grid) □ □.□□□□□□□8□□□□
4. Some features on this plat may be sho□n out of scale for clarity.
□. Dimensions on this plat are e□pressed in feet and decimal parts thereof unless other□ise noted. Monuments □ere found at points □here indicated.
□. Any servitudes and restrictions sho□n on this survey are limited to those set forth in the description furnished to surveyor□and there is no representation that all applicable servitudes and restrictions are sho□n hereon.
□. Names and addresses of ad□oining property o□ners □ere ta□en from Madison County ta□ cards and deeds.
8. □he nearest fire hydrant is located in the South Right of Way of Cluc□stadt Road approximately 200'± West of the Southwest corner of subject property .
□. No surveyor or any other person other than a licensed Mississippi attorney may provide legal advice concerning the status of □itle to the property described in this survey ("the sub□ect property"). □he purpose of this survey□and the comments related to the Schedule □□□e□ceptions□is only to sho□ the location of boundaries and physical ob□ections in relation thereto. □o the e□tent that the survey indicates that the legal instrument "affects" the sub□ect property□such statement is only intended to indicate that property boundaries included in such instrument include some or all of the sub□ect property. □he surveyor does not purport to describe ho□ such instrument affects the sub□ect property or the enforceability or legal conse□uences of such instrument.
□□. All bearings and distances sho□n hereon are measured dimensions unless other□ise noted hereon. Record dimensions□if differing from measured dimensions□□ill be follo□ed by "(R□)" □here the □ indicates from □hich reference document the dimension originated.
□□. Contour □nterval □ □ foot
□□. No par□ing spaces observed.
□□. Surveyor notes that the property abuts the right□of□□ay of Cluc□stadt Road. Access to the right□of□□ay may be sub□ect to other agreements or proper governmental approvals.
□4. □here □as no evidence of monitor □ells□or any test borings on the sub□ect property at the time of the survey.
□□. At the time of the survey□there □as no observable evidence of site use as a cemetery□ isolated grave site or burial grounds.
□□. At the time of the survey□there □as no observable evidence of site use as a solid □aste dump□sump□or sanitary landfill.
□□. Elevations established □ith □ PS static observations utili□ing online positioning user service (OP□S) for post processing. (NAVD □□88 datum)
□8. At the time of the survey□there □ere no changes in street right□of□□ay lines either completed or proposed□and available from controlling □urisdiction or observable evidence of recent street or side□al□ construction repairs.
□□. □here □as no observable evidence of Earth moving □ or□□building construction or building additions □ithin recent months.
□□. □he nearest intersecting street is the intersection of Cluc□stadt Road and Le□ington Drive□□hich is appro□imately □□□' from the South□est corner of the sub□ect property.
□□. Surveyor did not receive current deeds for ad□oining properties from the title insurer. Surveyor obtained the deed information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the current deed descriptions for ad□oining properties.
□□. Reference documents noted hereon □ere obtained by the surveyor and any and all representations based thereon should be revie□ed by a licensed attorney or title insurer for verification.
□□. Surveyor did not receive any information from the title insurer regarding the current □oning classification of the property or any re□uirements related to the applicable □oning classification. Surveyor obtained the □oning information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as □ell as the applicable restrictions and re□uirements associated □ith such □oning classification.
□4. No □uildings observed at the time of the Survey
□□. Sanitary Se□er□□ as□and Water lines sho□n per map provided by the □ear Cree□ Water Association. No mar□ings or other evidence for such utilities □as observed in the field.
□□. Due to silting□standing □ater or other environmental considerations□invert elevations depicted herein are measured do□n to the bottom center of the storm structure.

□lood Note

□y graphic plotting only□this property is in Zone AE of the Flood □nsurance Rate Map□Community Panel No. □8□8□C□4□□F□□hich bears an effective date of □□/□□/□□□□ and is in a Special Flood □ a□ard Area

Zone Definitions According to the FEMA □ebsite.

Zone "AE" □□he base floodplain □here base flood elevations are provided. AE Zones are no□ used on ne□ format F□RMs instead of A□□A□□ Zones.

Zone "X □ nshaded" □Area of minimal flood ha□ard□usually depicted on F□RMs as above the □□□□year flood level. Zone X is the area determined to be outside the □□□□year flood and protected by levee from □□□□year flood.

Zone "Shaded X" □Area of moderate flood ha□ard□usually the area bet□een the limits of the □□□□year and □□□□year floods.

□ t□l□t□ Notes

□he utilities sho□n on this dra□ing hereon have been located by field measurements□utility map dra□ings□and one□call utility locate re□uest. □le□ □ Associates ma□es no □arranty to the e□act location of any underground utilities sho□n or not sho□n on this dra□ing. □t is the responsibility of the contractor to verify any and all utilities prior to construction. Call Mississippi one□call at □ (8□□) □□□□4□□ for field locations (re□uest for ground mar□ings) of underground utility lines before digging.

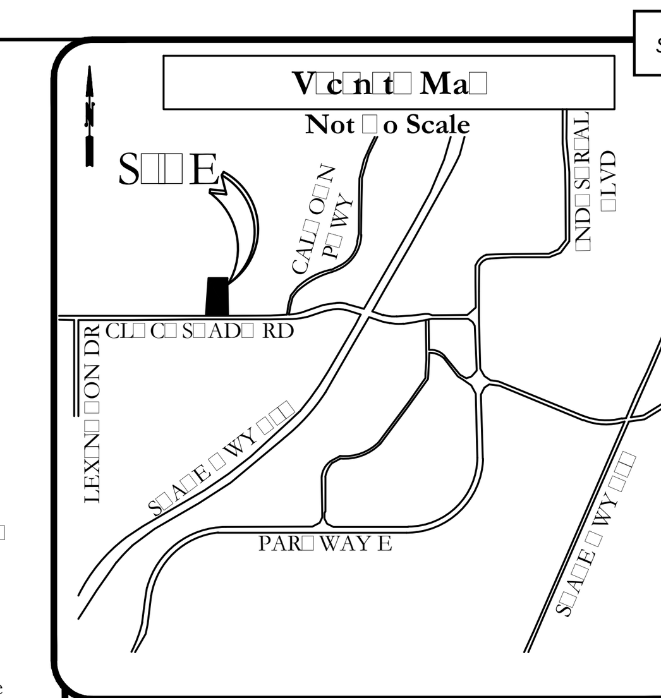
□no□ □hat's belo□. Call before you dig.

Ele□at□on Benc□□ arks

Site □enchmar□□□		Site □enchmar□□□	
□ype	Found □/□" Rebar	□ype	Found □/□" Rebar
Northing	□□□□4□8.□□	Northing	□□□□4□□.□□
Easting	□□□□□□□.□□	Easting	□□□□□□□.□8
Elevation	□□□.□□'	Elevation	□□□.84'

□enchmar□s Northing □ Eastings are applied □ith scale factor

DA□E	REV□S□ON	□Y



Le□end o□ S□□bols □ □bbre□□at□ons

- ×XXX.X Spot Elevation
- Found Rebar (As Noted)
- Set Rebar (As Noted)
- Computed Point
- Found Chiseled "X"
- Fiber Optic □o□
- □elephone Pedestal
- Fiber Optic Vault
- Mail□o□
- Po□er □o□
- □ree
- (M) Measured Dimension
- (R) Recorded Dimension
- (□) Zoning Re□uirements
- N/F No□ or Formerly
- S□M Site □enchmar□
- M□ Manhole
- □□ Curb □nlet □asin
- □nv □nvert of Pipe
- P.O.C. Point of Commencement
- P.O.□. Point of □eginning
- Ad□oiner Property Line
- Sub□ect Property Line
- Easement line
- □tility Easement
- □uilding Setbac□
- Right of Way
- Fiber Optic Line
- Storm Se□er Line
- □uried Water Line
- Sanitary Se□er Line
- □nderground □as
- Chainlin□ Fence
- Contour Ma□or
- Contour Minor
- Asphalt
- Concrete
- □ravel
- Flood Zone □AE / AO / A□
- Flood Zone□Flood□ay (Zones AE□AO□A□□VE□AR)

Scale□□" □ □□'
□ □□' 4□'

Sur□e□or's □ert□□cat□on

□o□ AutoZone Parts□nc□Cliff Smith and Charlotte □. Smith□ Civil Engineering Services□PC□First American □itle □nsurance Company National Commerical Services□

□his is to certify that this map or plat and the survey on □hich it is based □ere made in accordance □ith the □□□□ Minimum Standard Detail Re□uirements for AL□A/NSPS Land □itle Surveys□ointly established and adopted by AL□A and NSPS□ and includes items □□□□4□□□□(a)□□(b□)□8□□□□□□□□□□□□□□□8□ □□□□□ □ □□ of □able A thereof. □he field □or□ □as completed on □8/□□/□□□□.

Date of Plat or Map□□□/□4/□□□□

Preliminary

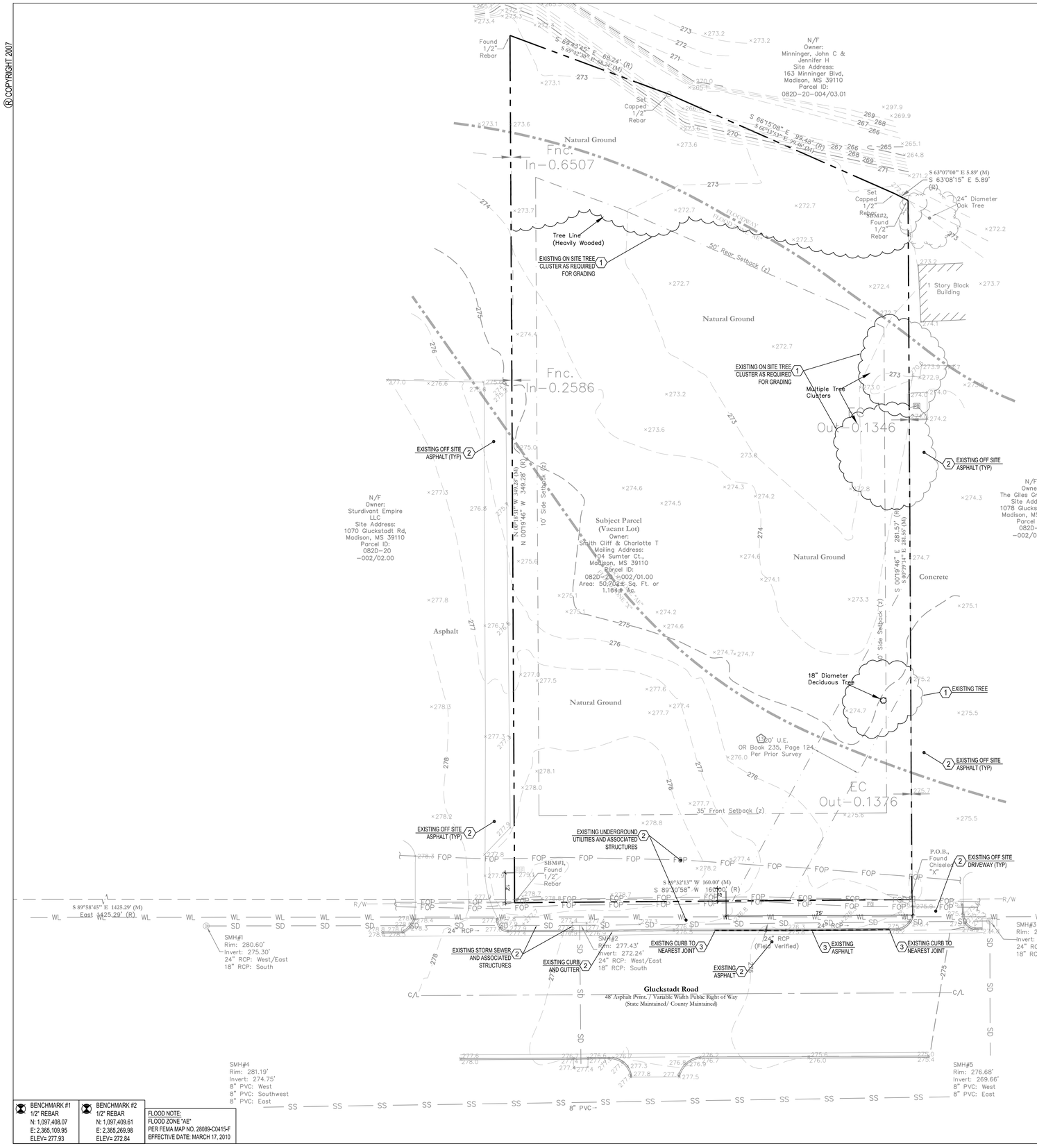
□uc□ley □le□
Professional Surveyor □□□8□□
State of Mississippi

F□RM□
BLEW & ASSOCIATES, PA
CIVIL ENGINEERS & LAND SURVEYORS
□8□□N. S□□LO□ DR□VE
FAYE□□EV□LLE□AR□ANSAS □□□□□
OFF□CE□4□□.44□.4□□□
FAX□4□□.□8□.□88□
□□□.□LEW□NC.com

DRAWN □Y □ DA□E□	REV□EWED □Y□	S□RVEYED □Y□
DLD/M□ □□/□4/□□□□	□ C/PRS	□□
CO□N□Y □ S□A□E□ Madison□Mississippi	□O□ N□M□ER□ □□□□□□□	

LOCA□□ON□
Property □est of □□□8 □ luc□stadt Rd□□ luc□stadt□MS

FOR □□ E □SE AND □ENEF□□ OF□
CES (AutoZone) □ (MS□□□□) □ luc□stadt□MS



DEMOLITION LEGEND

- APPROXIMATE LIMITS OF ASPHALT/CONCRETE SAWCUT
- APPROXIMATE LIMITS OF ASPHALT/CONCRETE REMOVAL

KEYNOTES

1. REMOVE EXISTING STRUCTURE
2. PROTECT EXISTING STRUCTURE
3. SAWCUT ASPHALT / CONCRETE
4. RELOCATE EXISTING SITE STRUCTURE OR UTILITY

DEMOLITION NOTES

1. ALL WORK TO BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL LOCAL ORDINANCES, CITY OR STATE.
2. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
3. ALL ITEMS NOTED TO BE REMOVED BY THE SELLER SHALL BE ACCOMPLISHED PRIOR TO THE CLOSING OF THE REAL ESTATE TRANSACTION. ALL OTHER ITEMS NOTED TO BE REMOVED SHALL BE DONE SO AS PART OF THE CONTRACT FOR GENERAL CONSTRUCTION.
4. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL.
5. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF BUILDING DEMOLITION DEBRIS.
6. THE DETAILED PLANS MAY NOT REFLECT ALL UTILITIES ON THE SITE OR SURROUNDING STREETS AND PROPERTIES. THE CONTRACTOR SHALL VERIFY LOCATIONS AND EXISTENCE OF UTILITY SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-800-344-7233, 72 HOURS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR TO REMOVE ALL UTILITIES TO EXISTING STRUCTURES WHETHER SHOWN OR NOT OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND CAP SERVICE PIPING AT THE PROPERTY LINE OR MAIN (AS REQUIRED). ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN.
9. FOR ALL ITEMS NOTED TO BE REMOVED - REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALL UNDERGROUND ELEMENTS AS WELL INCLUDING BUT NOT NECESSARILY LIMITED TO: FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, OLD PIPES, ETC.
10. BACK FILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK TO MEET THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL REPORT.
11. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPES, PAVEMENT, CURBS, SIDEWALKS OR LANDSCAPED AREAS DISTURBED DURING DEMOLITION TO THEIR ORIGINAL CONDITION TO THE SATISFACTION.
13. ALL BUILDINGS, FOUNDATION WALLS AND FOOTINGS INDICATED ON THIS PLAN TO BE REMOVED FROM SITE. CONTRACTOR SHALL SECURE ANY PERMITS AND PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
14. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE REMOVED BY THE CONTRACTOR USING A LICENSED HAZARDOUS MATERIAL CONTRACTOR PER ASBESTOS REPORT PREPARED BY XXXXXXXXXX. PRIOR TO THE START OF DEMOLITION, FEDERAL LAW REQUIRES THAT THE LOCAL EPA OFFICE TO BE NOTIFIED IN WRITING @ LEAST 10 WORKING DAYS.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
DEMOLITION PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

REGISTERED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
03/10/2022

4/25/2023

7N2

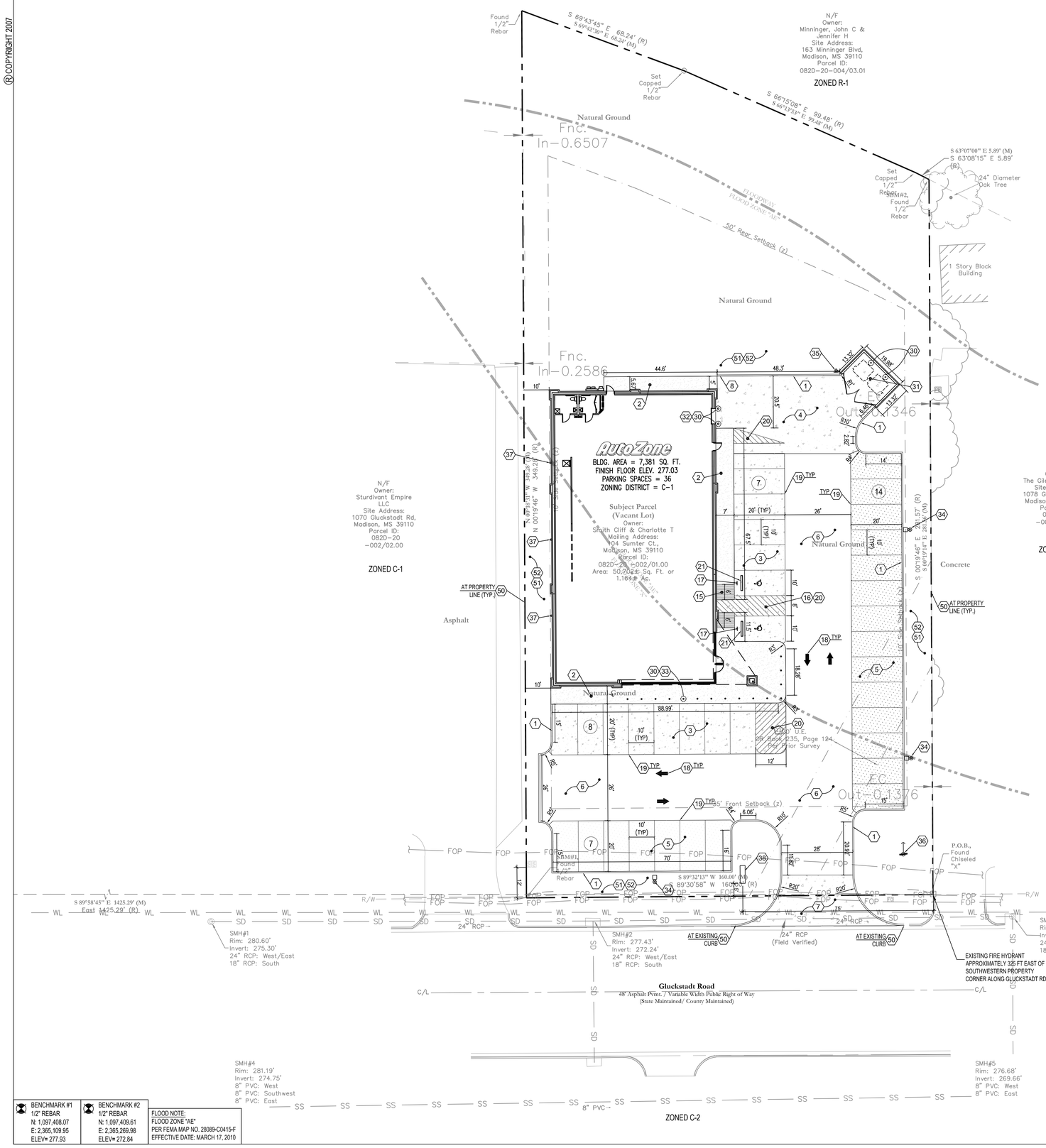
D1.0

BENCHMARK #1
1/2" REBAR
N: 1,097,408.07
E: 2,365,109.95
ELEV= 277.93

BENCHMARK #2
1/2" REBAR
N: 1,097,409.61
E: 2,365,269.98
ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning



BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

SITE LEGEND

(10)	PARKING STALL COUNT - SEE PLANS
	REGULAR ASPHALT PAVING (SEE DETAIL SHEET)
	HEAVY DUTY ASPHALT PAVING (SEE DETAIL SHEET)
	CONCRETE SIDEWALK (SEE DETAIL SHEET)
	HEAVY DUTY CONCRETE PAVING (SEE DETAIL SHEET)
	REGULAR DUTY CONCRETE PAVEMENT AT PARKING STALLS AROUND BUILDING (SEE DETAIL SHEET)

KEYNOTES

PAVEMENT AND CURBING

1. CONCRETE CURB @ CONCRETE/ASPHALT PAVING - SEE DETAIL 1 & 2 / C4.0
2. CONCRETE SIDEWALK - SEE DETAIL 27/C4.0 - SEE DETAIL 22/C4.0 FOR SIDEWALKS AROUND BUILDING
3. REGULAR DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
4. HEAVY DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
5. REGULAR DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
6. HEAVY DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
7. PROVIDE NEW CURB CUT & APPROACH PER LOCAL CODES & SPECS. - ENTRANCE TO BE HEAVY DUTY CONCRETE - SEE DTL. 3/ C4.0
8. TAPER CURB HEIGHT FROM 6" TO 0" OVER TWO FEET

PAVEMENT STRIPING / ADA FEATURES / TRAFFIC SIGNAGE

15. ACCESSIBLE RAMP - SEE DETAIL 19/C4.0 - MAX. SLOPE 1:12 (8.33%) , MAX. CROSS SLOPE 1:50 (2.00%) TRUNCATED DOME TO BE A CONTRASTING COLOR.
16. HANDICAP PARKING AREA - SEE THIS PLAN FOR DIMENSIONS - SEE DETAILS 6,7, AND 12/C4.0
17. HANDICAP PARKING SIGN - SEE DETAIL 12/C4.0 G.C. TO PROVIDE ONE VAN ACCESSIBLE SIGN.
18. ONSITE PAVEMENT MARKINGS - SEE DETAIL 25 & 26/C4.0
19. 4" WIDE PARKING STRIPE PAINTED YELLOW (TYP.)
20. 4" WIDE DIAGONAL STRIPES PAINTED YELLOW AT 2 FT. O.C.
21. 6'-0" LONG CONCRETE WHEEL STOP PINNED TO PAVEMENT (TYPICAL). LOCATE 3'-6" FROM FACE OF CURB OR SIDEWALK SEE DETAIL 17 / C4.0

AUTOZONE SITE FEATURES

30. PIPE GUARD - SEE DETAIL 16 / C4.0
31. DUMPSTER LAYOUT - SEE DETAILS 8,9,10, & 11/ C4.0
32. SERVICE DOOR PLAN - SEE DETAIL 15/ C4.0
33. BOLLARD PLAN - SEE DETAIL 14/ C4.0
34. CONCRETE LIGHT POLE BASE - SEE DETAIL 13/ C4.0 AIM LIGHT FIXTURE IN DIRECTION AS INDICATED. SEE ELECTRICAL PLANS FOR ROUTING
35. FREEZELESS YARD HYDRANT AT BUILDING - SEE DETAIL 6 ON SHEET M2
36. APPROXIMATE LOCATION FOR POLE MOUNTED TRANSFORMER PER SERVICE PROVIDER SPECIFICATIONS - COORDINATE WITH SERVICE PROVIDER PRIOR TO CONSTRUCTION
37. PROVIDE DOWNSPOUT CONNECTOR AT BUILDING DOWN SPOUT - SEE ARCHITECTURAL PLANS - SEE DETAIL 21/ C4.0 - SEE GRADING PLAN FOR INVERTS
38. 4'-2"X7'-0"X2'-0" MONUMENT SIGN 12'-0" OVERALL HEIGHT - SEE SIGNAGE SHEETS FOR DETAILS - FINAL LOCATION AND DESIGN TO BE DETERMINED DURING SIGN PERMIT REVIEW

ADDITIONAL SITE FEATURES

50. TIE TO EXISTING - MATCH GRADE
51. GRASS AREA - PROVIDE 6" TOPSOIL & SOD COMMON TO REGION ON ALL DISTURBED AREAS NOT TO BE PAVED
52. SLOPE GRADE FROM BACK OF CURB DOWN TO MATCH THE EXISTING/PROPOSED GRADE - SEE GRADING PLAN

GENERAL AZ NOTES

1. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY THE ARCHITECT OF ANY UNACCEPTABLE AREAS.
2. EDGE OF NEW PAVEMENT TO BE FLUSH WITH EXISTING PAVEMENT.
3. ALL SIDEWALK CURB AND GUTTER STREET PAVING, CURB CUTS, DRIVEWAY APPROACHES, HANDICAP RAMP, ETC. CONSTRUCTED OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY SHALL CONFORM TO ALL MUNICIPAL AND/OR STATE SPECIFICATIONS AND REQUIREMENTS.
4. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC.) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
5. FOR PROPOSED UTILITY LOCATIONS, SEE THE UTILITY PLAN.

SITE DATA INFORMATION

PARKING REQUIRED (1225 SF) = 33
EXISTING PARKING = 0
PROPOSED PARKING = 34
HC SPACES REQUIRED = 2
HC SPACES PROVIDED = 2
TOTAL PARKING = 36
PARKING STALL SIZE = 10'X20'
ADA PARKING STALL SIZE = 8'X20'
LOT AREA = 50,702 SF / 1.164 AC
NUMBER OF BUILDINGS = 1
BUILDING AREA = 7,381 SF
FLOOR AREA RATIO = 14.56%

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - CONTRACTOR TO GUARANTEE AND MAINTAIN ALL NEW SODDED AREAS FOR 60 DAYS MINIMUM, AND ALL SODDED AREAS ARE STABILIZED.

PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL NEW GRASS SODDED AREAS TO BE IRRIGATED - IRRIGATION PLAN TO BE DESIGN BUILD BY G.C. - COORDINATE WITH A SOUTH CAROLINA CERTIFIED IRRIGATION CONTRACTOR

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS					
1	2	3	4	5	6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
SITE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

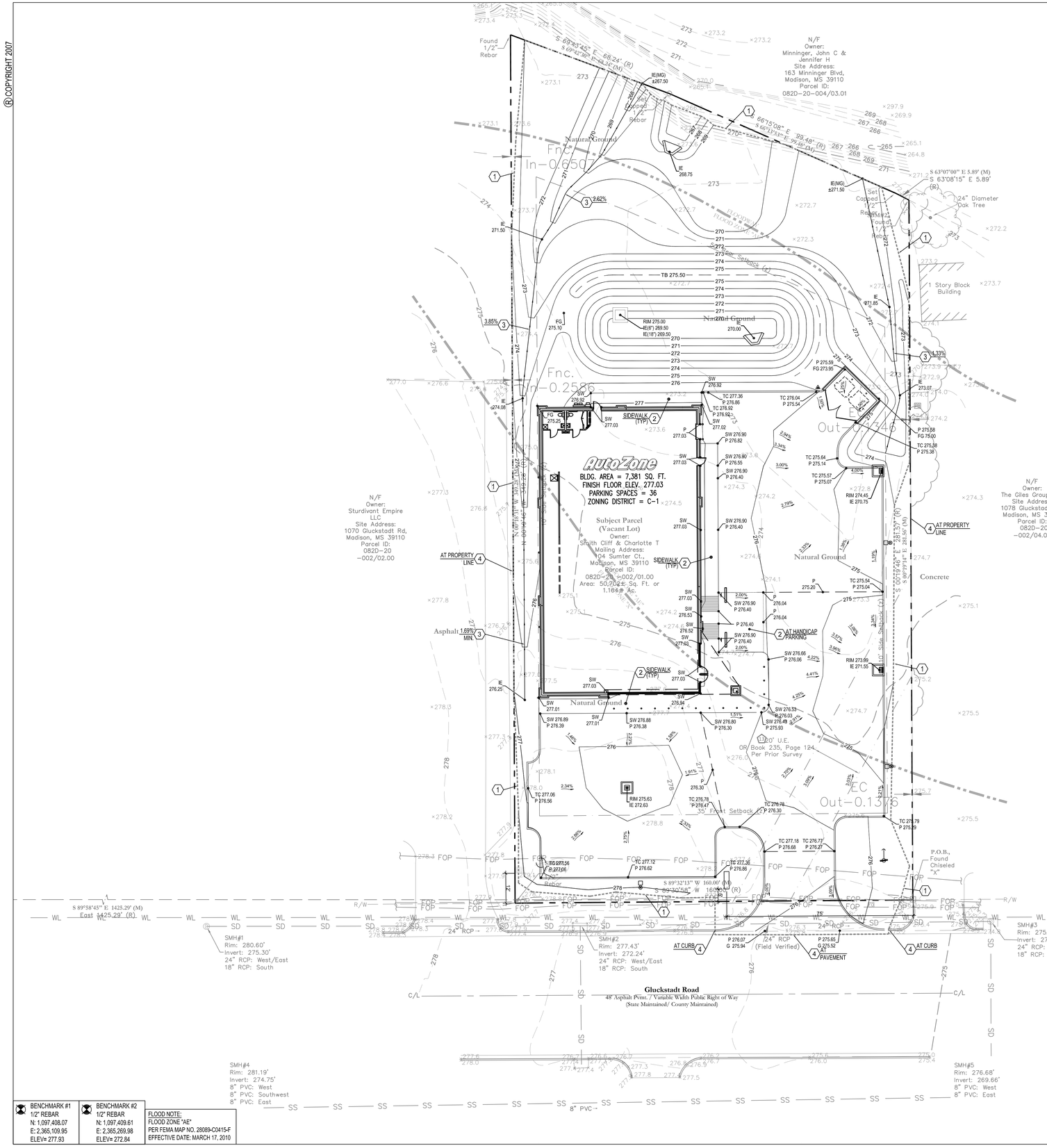
LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
05/10/2022

4/25/2023

7N2

C1.0

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning



GENERAL GRADING LEGEND

TC	TOP OF CURB ELEVATION
P	BOTTOM OF CURB ELEVATION
FG	FINISHED GRADE ELEVATION
SW	SIDEWALK ELEVATION
MG	MATCH EXISTING GRADE ELEVATION
TB	TOP OF BANK GRADE ELEVATION
RIM	TOP OF RIM ELEVATION AT STRUCTURE
HP	HIGH POINT GRADE ELEVATION
1.09%	PROPOSED GRADE SLOPE
----------	LIMIT OF DISTURBANCE
————	PROPOSED SWALE

GRADING KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. PROVIDE 2.00% MAXIMUM CROSS SLOPE
3. PROVIDE SWALE - SEE SLOPE AND ELEVATIONS THIS SHEET
4. MATCH EXISTING GRADES

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

GENERAL GRADING NOTES

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN THE CLOSE PROXIMITY OF THE ABOVE-NOTED WIRES, THE ELECTRIC COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD AND UNDERGROUND WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
2. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT, DURING CONSTRUCTION, UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATIONS OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS NECESSARY TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITY LINES.
3. AT LOCATIONS WHERE UTILITY LINES OR SERVICES ARE UNDERNEATH PROPOSED PAVEMENT, THE TRENCH SHALL BE BACKFILLED TO SUBGRADE WITH CRUSHED STONE.
4. DEVELOPER IS TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, THE DEVELOPER'S ENGINEER, THE COUNTIES REPRESENTATIVE AND THE COUNTIES ENGINEER.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. REMOVE ALL FOUNDATIONS, UNDERGROUND TANKS, PAVING, BASE ETC. IF REMAINING, BEFORE BEGINNING CONSTRUCTION.
7. FILL ALL PLANTERS/ISLANDS TO TOP OF CONCRETE CURB WITH TOPSOIL. TOPSOIL TO BE CLEAN AND FREE OF DEBRIS, ETC.
8. THESE PLANS, PREPARED BY CIVIL ENGINEERING SERVICES, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF CIVIL ENGINEERING SERVICES REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
9. IN THE CASE OF CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR THE SPECIFICATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2
1/2" REBAR	1/2" REBAR
N: 1,097,408.07	N: 1,097,409.61
E: 2,365,109.95	E: 2,365,269.98
ELEV= 277.93	ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

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37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS					
1		2		3	
4		5		6	

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
GRADING PLAN

Owner / Developer: AUTOZONE STORES LLC
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Cindy.searcy@construction.com

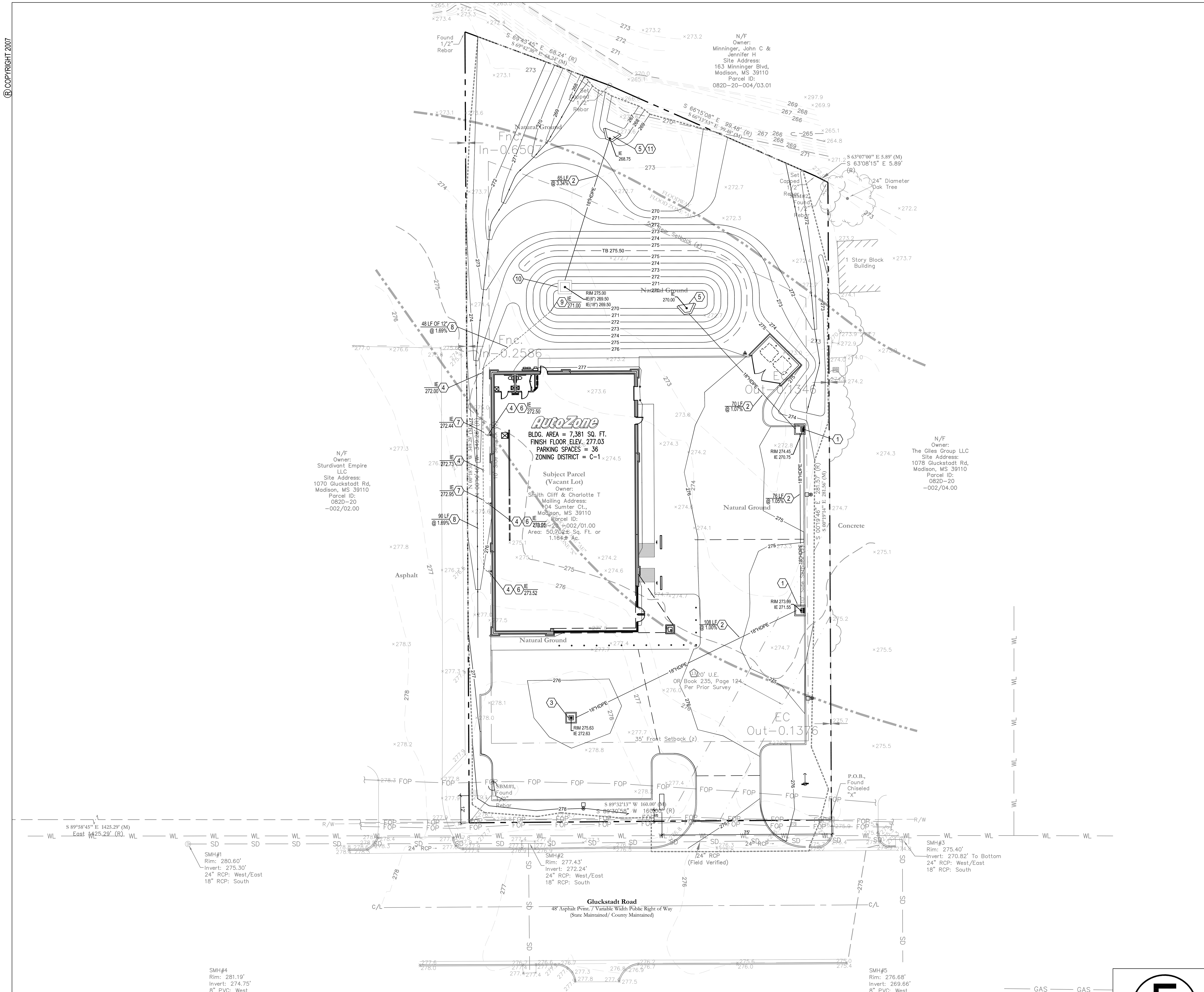
RAY G. FLOWERS LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
05/10/2022

4/25/2023

7N2

C2.0

Section 4, IB)



GENERAL GRADING LEGEND

IE	TOP OF BANK GRADE ELEVATION
RIM	INVERT ELEVATION AT STRUCTURE
	CURB INLET
	HEADWALL
	AREA INLET

GRADING KEYNOTES

1. PROVIDE CURB INLET - SEE THIS SHEET FOR ELEVATIONS - SEE DETAIL SHEET (C4.1)
2. PROVIDE STORM SEWER PIPE - SEE THIS SHEET FOR ELEVATIONS - SEE DETAIL SHEET (C4.1)
3. PROVIDE AREA INLET - SEE THIS SHEET FOR ELEVATIONS - SEE DETAIL SHEET (C4.1)
4. PROVIDE STORM SEWER CLEANOUT - SEE INVERT ELEVATION THIS SHEET - SEE DETAIL SHEET (C4.1)
5. PROVIDE PRECAST CONCRETE HEADWALL - SEE ELEVATIONS THIS SHEET - - SEE DETAIL SHEET (C4.1)
6. PROVIDE DOWNSPOUT COLLECTOR AT ROOF DRAIN - SEE ELEVATIONS THIS SHEET - SEE DETAIL SHEET (C4.0)
7. PROVIDE 8"X8"WATER TIGHT HDPE WYE PER MANUFACTURER SPECS. - SEE INVERT ELEVATION THIS SHEET
8. PROVIDE WATER TIGHT POLYETHYLENE PIPE FOR ROOF DRAINS - SEE THIS SHEET FOR SIZE, TYPE AND ELEVATIONS
9. DAYLIGHTPIPE FROM ROOF DRAIN - SEE THIS SHEET FOR ELEVATION
10. PROVIDE DETENTION OUTLET STRUCTURE - SEE DETAIL SHEET (C4.1)
11. PROVIDE RED VALVE TIDEFLEX TF-1 CHECK VALVE, OR APPROVED EQUAL

GENERAL GRADING NOTES

SEE SHEET C2.0

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
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E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
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NAD83 MS STATE PLANE

REVISIONS

1	4
2	5
3	6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
DRAINAGE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL:(901) 495-8994 FAX: (901) 495-8969
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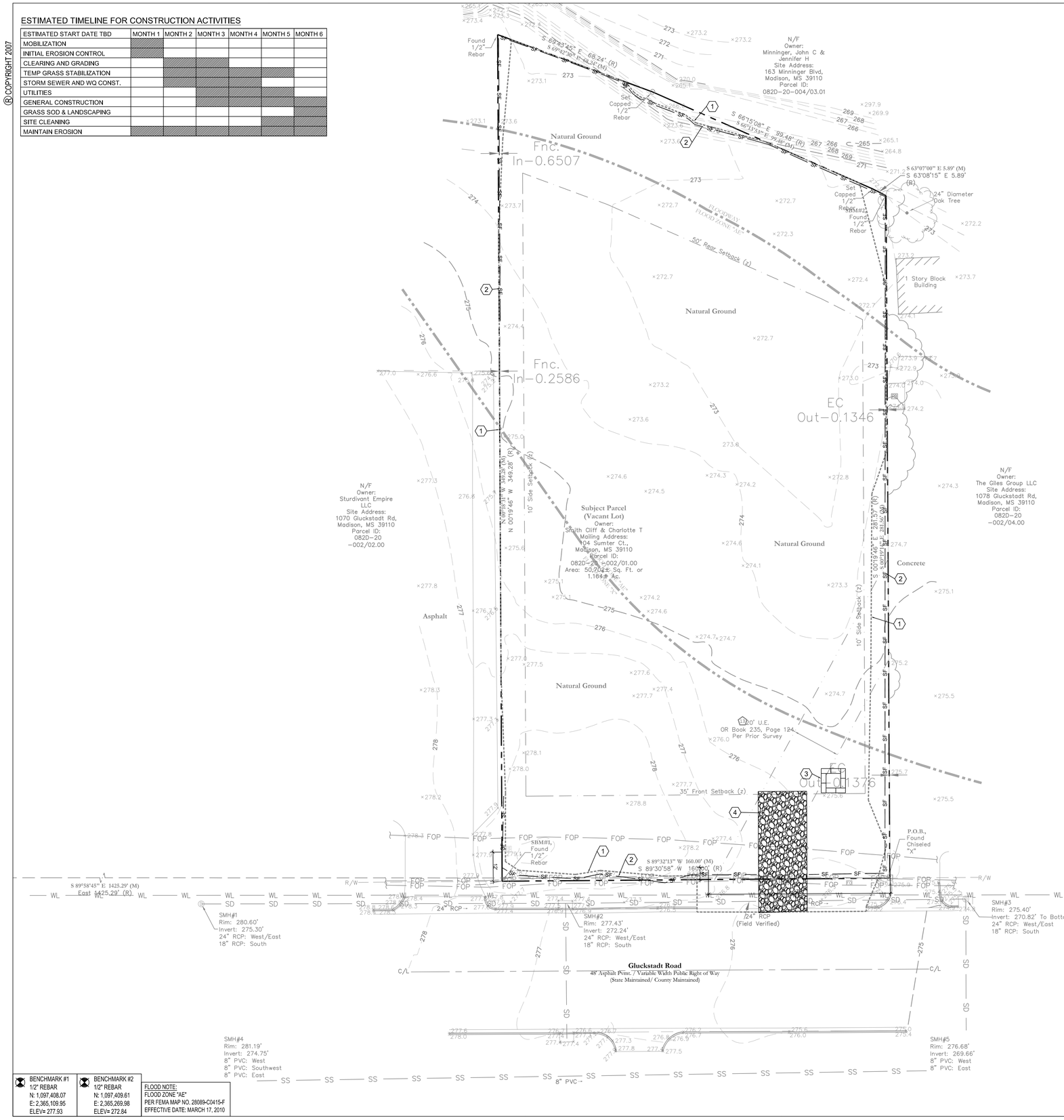
Engineering, Environmental, Land Planning

ESTIMATED TIMELINE FOR CONSTRUCTION ACTIVITIES

ESTIMATED START DATE TBD	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
MOBILIZATION						
INITIAL EROSION CONTROL						
CLEARING AND GRADING						
TEMP GRASS STABILIZATION						
STORM SEWER AND WQ CONST.						
UTILITIES						
GENERAL CONSTRUCTION						
GRASS SOD & LANDSCAPING						
SITE CLEANING						
MAINTAIN EROSION						



PROPOSED LEGEND

- INSTALL INLET PROTECTION (SEE DETAIL SHEET)
- SF — INSTALL SILT FENCE (SEE DETAIL SHEET)
- TEMPORARY CONSTRUCTION EXIT
- CONCRETE WASHOUT AREA
- LIMITS OF DISTURBANCE

KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. INSTALL SILT FENCE AT LIMITS OF DISTURBANCE - MAINTAIN THROUGHOUT CONSTRUCTION - FIELD ADJUST AS REQUIRED - (SEE DETAIL SHEET)
3. CONCRETE WASHOUT PER EPA STANDARDS - CONTRACTOR TO FIELD ADJUST LOCATION ON SITE AS NEEDED
4. TEMPORARY CONSTRUCTION ENTRANCE

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE GRADING WORK. PLAN PRIOR TO ANY SITE CONSTRUCTION

2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR OTHER ACCEPTABLE METHODS.

3. MAXIMUM SLOPE CUTS SHALL NOT EXCEED 3:1 UNLESS APPROVED BY THE OWNERS REPRESENTATIVE. CUT AND FILL SLOPES 3:1 AND GREATER, SHALL BE STABILIZED BY EROSION CONTROL BLANKETS (ECB) AND SOD COMMON TO THE REGION.

4. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

5. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

6. ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

7. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED PERIODS OF CONTINUOUS RAINFALL.

8. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

9. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE OF THE SITE IS NOT IMPEDED.

10. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD OF 14 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

11. CLEAN SILT BARRIERS WHEN THEY ARE APPROXIMATELY 33% OBSTRUCTED BY SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED.

12. TOPSOIL SHALL BE RE-SPREAD A MINIMUM DEPTH OF 6" OVER ALL DISTURBED AREAS, DISTURBED AREAS SHALL HAVE PERMANENT STABILIZATION APPLIED (SOD COMMON TO THE LOCAL AREA) PERMANENT.

13. AREAS THAT HAVE BEEN STRIPPED, CUT SLOPES, FILL SLOPES OR AREAS OTHER WISE DISTURBED SHALL HAVE PERMANENT STABILIZATION APPLIED WITH SOD COMMON TO THE LOCAL AREA. PERMANENT STABILIZATION SHALL BE IN PLACE PRIOR TO ACCEPTANCE OF FINAL GRADING.

14. REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER. STABILIZATION SHALL BE PLACED PRIOR TO ACCEPTANCE OF FINAL GRADING.

15. STOCK PILING OF SOILS ON SITE IF REQUIRED, SHALL BE LOCATED BY CONTRACTOR AND BE PROTECTED BY PERIMETER SILT FENCE. IF LEFT EXPOSED FOR A PERIOD OF 13 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - SEE LANDSCAPE PLAN

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
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BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
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NORTH
NAD83 MS STATE PLANE

REVISIONS
1 2 3
4 5 6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
INITIAL EROSION PLAN

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RAY G. CLEARY LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
03/10/2022

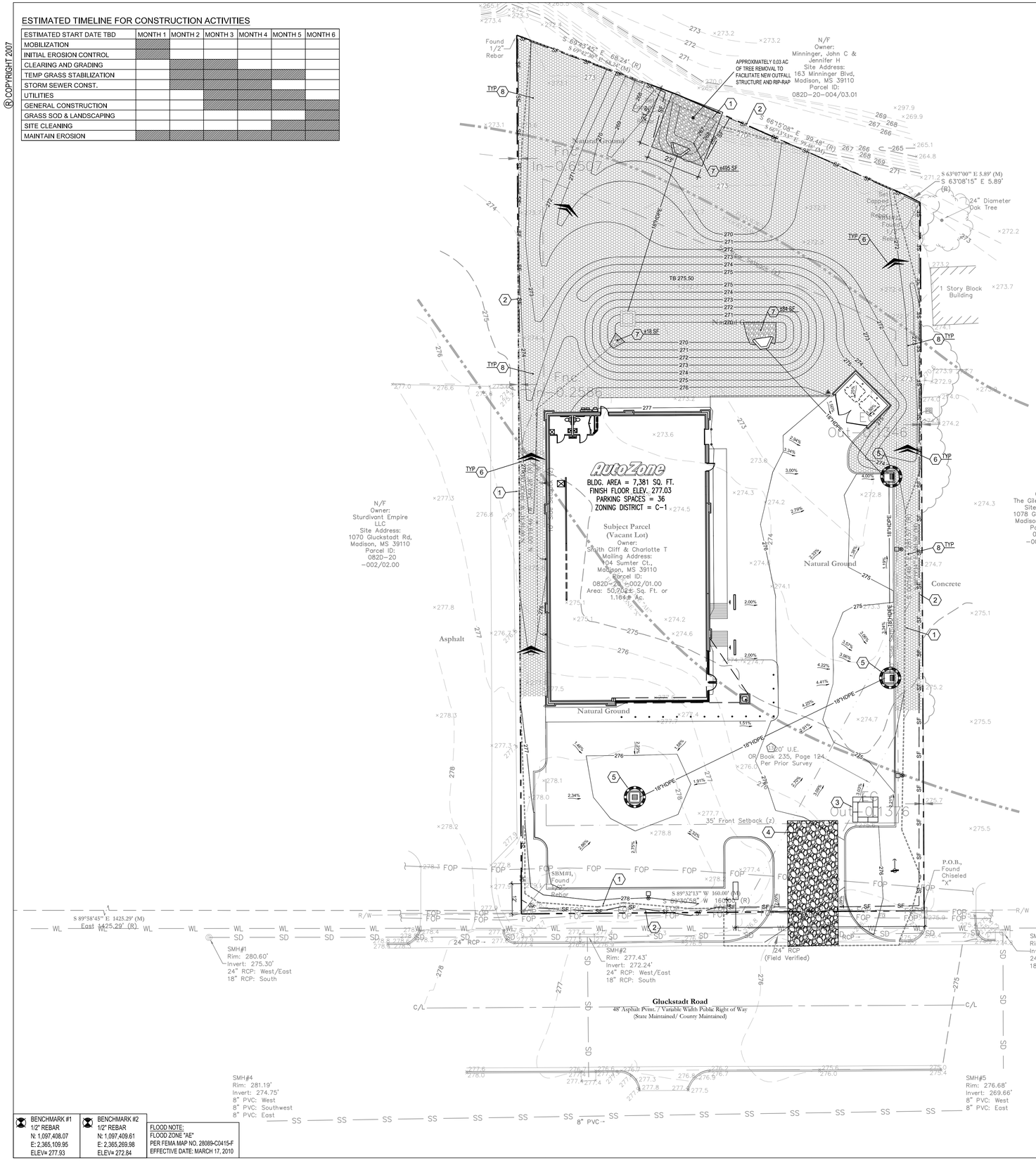
4/25/2023

7N2

C2.2

ESTIMATED TIMELINE FOR CONSTRUCTION ACTIVITIES

ESTIMATED START DATE TBD	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
MOBILIZATION						
INITIAL EROSION CONTROL						
CLEARING AND GRADING						
TEMP GRASS STABILIZATION						
STORM SEWER CONST.						
UTILITIES						
GENERAL CONSTRUCTION						
GRASS SOD & LANDSCAPING						
SITE CLEANING						
MAINTAIN EROSION						



PROPOSED LEGEND

- INSTALL INLET PROTECTION (SEE DETAIL SHEET)
- INSTALL SILT FENCE (SEE DETAIL SHEET)
- TEMPORARY CONSTRUCTION EXIT
- CONCRETE WASHOUT AREA
- LIMITS OF DISTURBANCE
- RIP-RAP
- INSTALL CHECK DAM
- EROSION CONTROL BLANKET

KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. INSTALL SILT FENCE AT LIMITS OF DISTURBANCE - MAINTAIN THROUGHOUT CONSTRUCTION - FIELD ADJUST AS REQUIRED - (SEE DETAIL SHEET)
3. CONCRETE WASHOUT PER EPA STANDARDS - CONTRACTOR TO FIELD ADJUST LOCATION ON SITE AS NEEDED
4. TEMPORARY CONSTRUCTION ENTRANCE
5. INSTALL INLET PROTECTION OR APPROVED EQUAL - (SEE DETAIL SHEET)
6. INSTALL CHECK DAM OR APPROVED EQUAL (SEE DETAIL SHEET)
7. RIP-RAP PROTECTION OR APPROVED EQUAL (SEE DETAIL SHEET)
8. INSTALL TEMPORARY / PERMANENT SOD STABLIZATION (SEE DETAIL SHEET)

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE GRADING WORK, PLAN PRIOR TO ANY SITE CONSTRUCTION

2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR OTHER ACCEPTABLE METHODS.

3. MAXIMUM SLOPE CUTS SHALL NOT EXCEED 3:1 UNLESS APPROVED BY THE OWNERS REPRESENTATIVE. CUT AND FILL SLOPES 3:1 AND GREATER, SHALL BE STABILIZED BY EROSION CONTROL BLANKETS (ECB) AND SOD COMMON TO THE REGION.

4. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

5. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

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12. TOPSOIL SHALL BE RE-SPREAD A MINIMUM DEPTH OF 6" OVER ALL DISTURBED AREAS. DISTURBED AREAS SHALL HAVE PERMANENT STABILIZATION APPLIED (SOD COMMON TO THE LOCAL AREA) PERMANENT.

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14. REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER. STABILIZATION SHALL BE PLACED PRIOR TO ACCEPTANCE OF FINAL GRADING.

15. STOCK PILING OF SOILS ON SITE IF REQUIRED, SHALL BE LOCATED BY CONTRACTOR AND BE PROTECTED BY PERIMETER SILT FENCE. IF LEFT EXPOSED FOR A PERIOD OF 13 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - SEE LANDSCAPE PLAN

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2
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FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
1076 GLUCKSTADT RD

MADISON MS 39110

FINAL EROSION PLAN

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LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
05/10/2022

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7N2

C2.3

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phone: (615) 533-0401
fax: (615) 523-8865
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Engineering, Environmental, Land Planning

GENERAL UTILITY NOTES

1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. GENERAL CONTRACTOR TO COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR ALL LOCATIONS AND CONNECTIONS. A PRECONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES, IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT AUTOZONE IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
4. THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND CITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION. (AUTOZONE TO REIMBURSE GENERAL CONTRACTOR FOR ALL SANITARY SEWER AND WATER TAP FEES).
5. ALL VALVE BOXES AND CURB BOXES SHALL BE ADJUSTED TO THE FINAL GRADES. ALL CURB BOXES SHALL BE LOCATED IN GRASSED AREAS UNLESS INDICATED OTHERWISE ON THE PLANS.
6. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES UNLESS OTHERWISE SHOWN, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED. WHERE WATER LINE CROSSES ABOVE SANITARY LATERAL BY LESS THAN 2' VERTICAL, A CONCRETE ENCASEMENT SHALL BE INSTALLED, CONTRACTOR SHALL CENTER ONE JOINT OF PIPE AT CROSSING.
7. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS. SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE GOVERNING AUTHORITY.
9. WATER PIPE SHALL BE PEX (HDPE) TUBING.
10. ALL SANITARY SEWER MAIN LINES SHALL BE SCHEDULE 40 PVC PIPE (EXCEPT AS NOTED ON PLANS). ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURE.

AUTOZONE WATER NOTES:

ALL WATER INFRASTRUCTURE CONSTRUCTION TO BE COORDINATED WITH THE LOCAL UTILITY SERVICE DEPARTMENT.

AUTOZONE TO REIMBURSE GENERAL CONTRACTOR FOR ALL SANITARY SEWER, GAS, AND WATER TAP FEES.

UTILITY CONTACTS

WATER / SEWER DEPARTMENT
BEAR CREEK WATER ASSOCIATION
301 DISTRIBUTION DR.
GLUCKSTADT, MS 39110
NOLAN WILLIAMSON - MANAGER / ENGINEER
(601) 594-9457
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ELECTRIC DEPARTMENT
ENTERGY
GREG GINNS - ENGINEER ASSOCIATE
(601) 668-0404
gbinns@entergy.com

GAS DEPARTMENT
CENTER POINT ENERGY
ERIC FERREN
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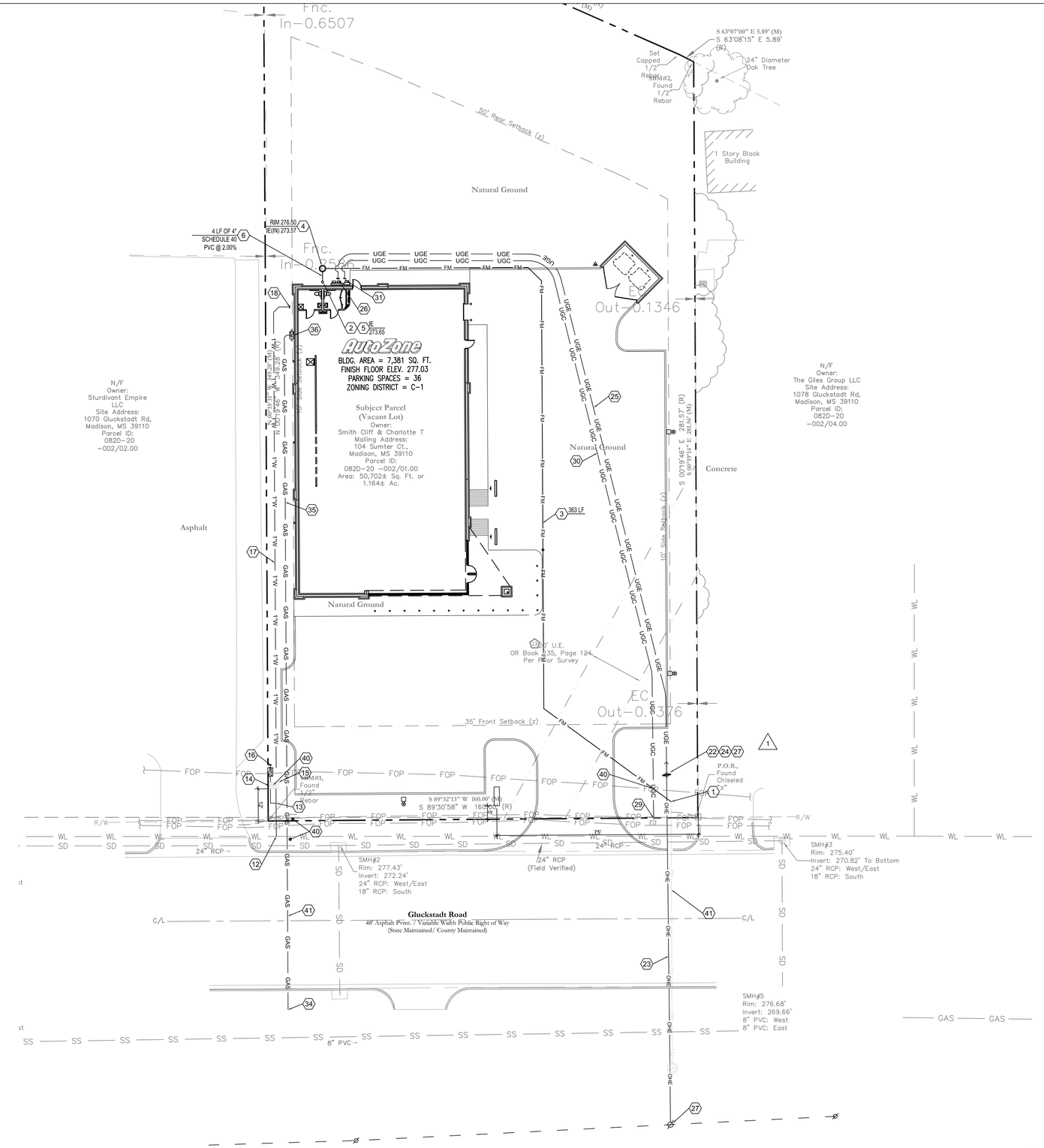
eric.ferren@centerpointenergy.com

COMMUNICATIONS DEPARTMENT
AT&T
DAVID MIZELL - ENGINEER
(601) 591-3434
david.mizell@att.com



PROPOSED UTILITY LEGEND

FM	LOW PRESSURE FORCE MAIN FOR SANITARY SEWER SERVICE PER LOCAL SERVICE PROVIDER SPECS.
W	WATER LINE PER LOCAL UTILITY CO SPECS.
GAS	GAS LINE PER LOCAL UTILITY CO SPECS.
UGE	UNDERGROUND ELECTRIC SERVICE PER LOCAL UTILITY CO SPECS.
UGC	UNDERGROUND TELEPHONE AND COMMUNICATIONS SERVICE PER LOCAL UTILITY CO SPECS.
RPBP	BACK FLOW PREVENTER PER LOCAL UTILITY CO SPECS.
WM	WATER METER PER LOCAL UTILITY CO SPECS.

PROPOSED UTILITY BLOCK NOTES

SANITARY SEWER SERVICE:

1. TIE TO EXISTING FORCE MAIN STUB PER SERVICE PROVIDER SPECS - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
2. SANITARY SEWER SERVICE ENTRY TO BUILDING - SEE ELEVATION THIS SHEET - SEE PLUMBING PLANS FOR CONTINUATION AND POINT OF ENTRY
3. INSTALL SCHEDULE 40 PVC LOW PRESSURE FORCE MAIN FOR SANITARY SEWER SERVICE PER LOCAL SERVICE PROVIDER SPECS.
4. INSTALL 1HP EONE SIMPLEX GRINDER PUMP STATION WITH 24"X72" TANK WITH FIBERGLASS LID OR APPROVED EQUAL - SEE DETAIL SHEET
5. INSTALL SANITARY SEWER CLEANOUT PER LOCAL SERVICE PROVIDER SPECS. - SEE SIZE, TYPE AND SLOPE THIS SHEET - SEE DETAIL SHEET
6. INSTALL SCHEDULE 40 PVC SANITARY SEWER LINE, PER LOCAL SERVICE PROVIDER SPECS. - SEE SIZE AND SLOPE THIS SHEET

WATER SERVICE:

12. TIE TO EXISTING WATER METERS PER SERVICE PROVIDER SPECS - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
13. EXISTING 1.5" WATERLINE AND 1.5" TEE WITH 3/4" REDUCER FOR DOMESTIC SERVICE AND 1" REDUCER FOR IRRIGATION SERVICE
14. EXISTING 1" METER AND VALVE PROVIDE ABOVE GROUND RPBP AND ENCLOSURE FOR IRRIGATION SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE - FIELD VERIFY LOCATION AND SIZES
15. EXISTING 3/4" METER AND VALVE FOR DOMESTIC WATER SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE - FIELD VERIFY LOCATION AND SIZES
16. STUB OUT 1" SCH 40 PVC LINE FOR IRRIGATION
17. PROVIDE DOMESTIC WATER SERVICE LINE - INSTALL 1" CLASS 200, DR9 HDPE PIPE (POLYPIPE PW-PE3408/PE3608 OR APPROVED EQUAL) - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
18. DOMESTIC WATER SERVICE ENTRY WITH INTERNAL 1" RPBP PER CITY SPECS. - SEE PLUMBING PLANS

ELECTRIC SERVICE:

22. CONNECTION TO EXISTING ELECTRICAL SERVICE PER LOCAL SERVICE PROVIDER SPECS. - G.C. TO COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
23. PROVIDE PRIMARY OVERHEAD ELECTRICAL PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
24. PROVIDE POLE MOUNTED TRANSFORMER - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
25. PROVIDE SECONDARY UNDERGROUND ELECTRIC PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE ELECTRICAL PLANS FOR CONDUIT SIZE AND CONNECTION POINT INTO THE BUILDING.
26. ELECTRIC SERVICE POINT OF ENTRY INTO BUILDING - SEE ELECTRICAL PLANS FOR CONDUIT SIZE AND CONNECTION POINT INTO THE BUILDING.
27. PROVIDE SERVICE POLE WITH GUY WIRE(S) PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE

COMMUNICATIONS SERVICE:

29. POINT OF CONNECTION FOR TELEPHONE / COMMUNICATIONS SERVICE PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
30. PROVIDE UNDERGROUND TELEPHONE / COMMUNICATIONS PER LOCAL SERVICE PROVIDER REQUIREMENTS COORDINATE WITH LOCAL SERVICE PROVIDERS PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING.
31. UNDERGROUND TELEPHONE / COMMUNICATIONS POINT INTO THE BUILDING - COORDINATE WITH ELECTRIC SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING - PROVIDE BOLLARD SEE PLAN - SEE DETAIL

GAS SERVICE:

34. SERVICE PROVIDER TO TIE TO EXISTING GAS LINE PER LOCAL SERVICE PROVIDER REQUIREMENTS - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
35. GAS SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
36. GAS METER AND SERVICE POINT INTO THE BUILDING - COORDINATE WITH ELECTRIC SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING

ADDITIONAL KEY NOTES:

40. UTILITY CROSSING PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDERS PRIOR TO ANY WORK DONE
41. EXISTING SANITARY SEWER FORCEMAIN STUB - FIELD VERIFY EXACT LOCATION PRIOR TO ANY WORK DONE - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE

NOTE:
PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL LANDSCAPED AREAS TO BE IRRIGATED (IRRIGATION PLAN TO BE SUBBED OUT THRU G.C.) - SEE LANDSCAPE DRAWINGS FOR PLANTINGS AND DETAILS

SEE M.E.P. PLANS FOR ALL UTILITY SERVICE ENTRIES.
LOCATIONS SHOW ARE APPROXIMATE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
		5	6
		4	

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110

UTILITY PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
05/10/2022

4/25/2023

7N2

C3.0

BENCHMARK #1	BENCHMARK #2
1/2" REBAR	1/2" REBAR
N: 1,097,408.07	N: 1,097,409.61
E: 2,365,109.95	E: 2,365,269.98
ELEV= 277.93	ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

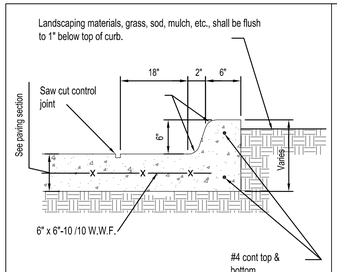
Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS

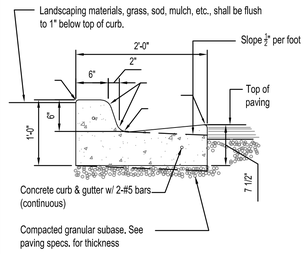
1	2	3
4	5	6

1 CONCRETE MONOLITHIC CURB



N.T.S.

2 CONC. CURB & GUTTER (at Asphalt paving only)



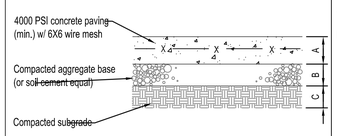
1" = 1'-0" SEC-C01

3 CONCRETE PAVING SECTION

DIMENSION & TYPE

Concrete Section	A	B	C
Parking Areas	5"	--	see note
Loading/Dumpster	8"	--	see note
Approaches	7"	--	see note

NOTE: Compacted subgrade should be as specified in soils report.



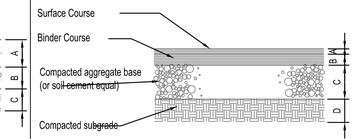
NO SCALE SEC-C04

4 ASPHALT PAVING SECTION

DIMENSION & TYPE

Asphalt Section	A	B	C	D
Parking Areas	2"	4"	--	see note
Drive Aisle	2"	6"	--	see note

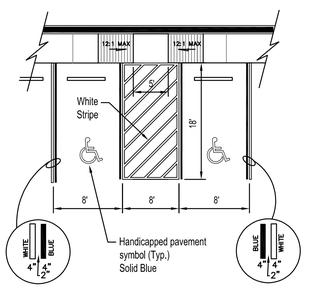
NOTE: Compacted subgrade should be as specified in soils report.



NO SCALE

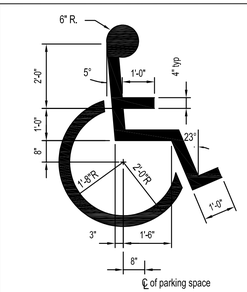
5 NOT USED

6 HANDICAP PARKING DETAIL



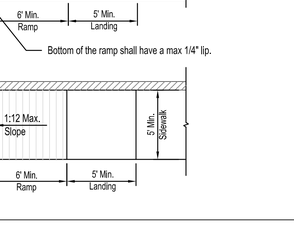
NO SCALE

7 INT'L BARRIER FREE SYMBOL



NO SCALE

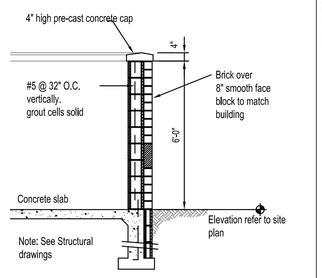
8 BRICK DUMPSTER LAYOUT



NOTE: Bollards behind the dumpsters shall be 6'-0" tall above the pavement surface and extend 3'-0" into the ground. Paint inside CMU same color as brick

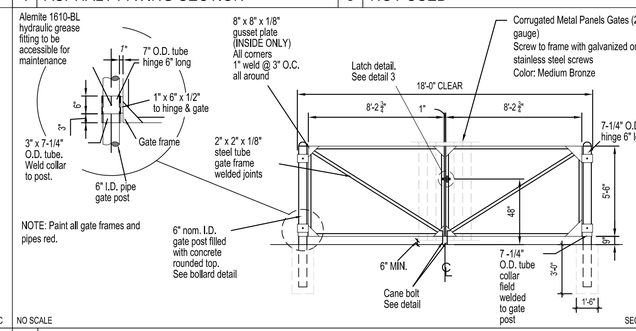
NO SCALE SEC-C17M

9 BRICK DUMPSTER SECTION



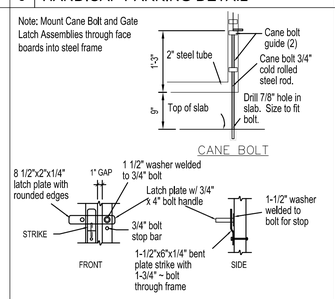
NO SCALE MDUMPSEC

10 GATE DETAIL FOR MASONRY WALL DUMPSTER ENCLOSURE



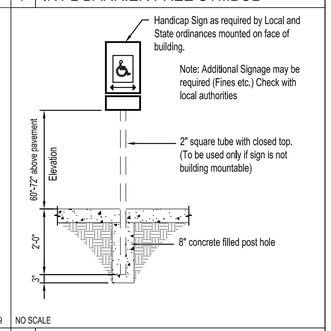
NO SCALE SEC-C18

11 GATE LATCH / BOLT DETAILS



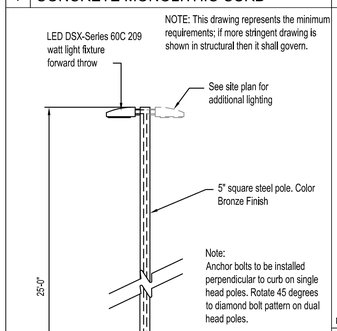
NO SCALE SEC-C19

12 TYPICAL HANDICAP SIGN



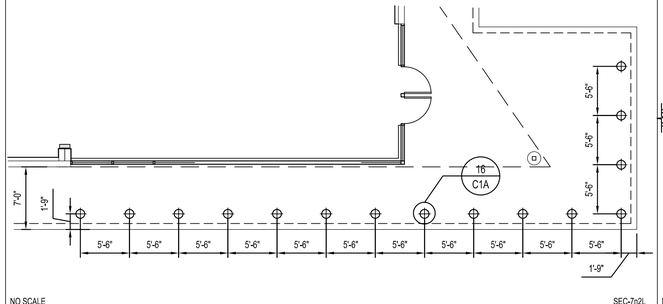
NO SCALE

13 TYPICAL LIGHT POLE



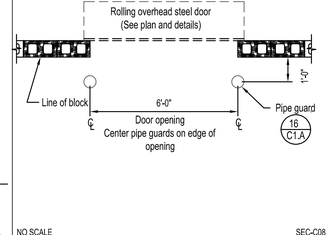
NO SCALE SEC-C13

14 BOLLARD LAYOUT PLAN - 7n2



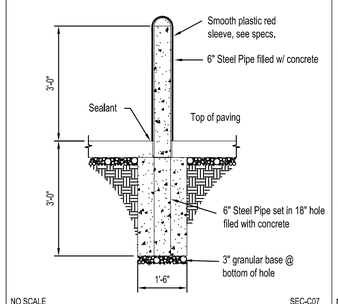
NO SCALE SEC-7n2L

15 PIPE GUARD @ ROLL-UP DOOR



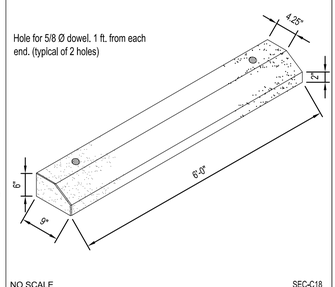
NO SCALE SEC-C08

16 TYPICAL PIPE GUARD SECTION



NO SCALE SEC-C07

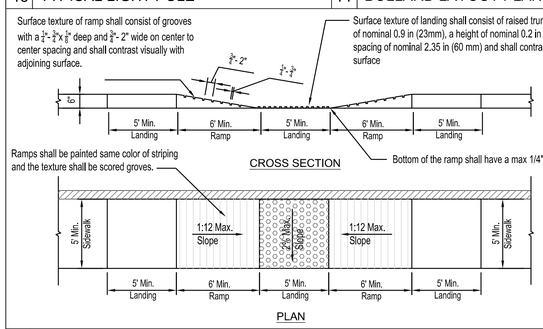
17 WHEEL STOP DETAIL



NO SCALE SEC-C18

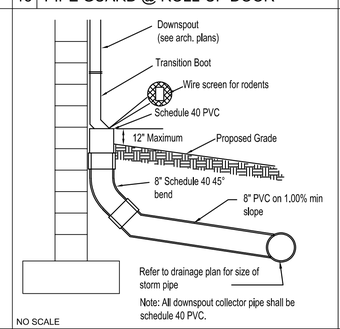
18 NOT USED

19 HANDICAP PARKING RAMP



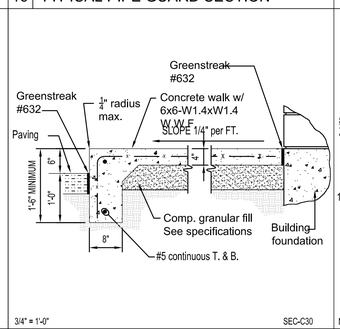
20 NOT USED

21 DOWNSPOUT DETAIL



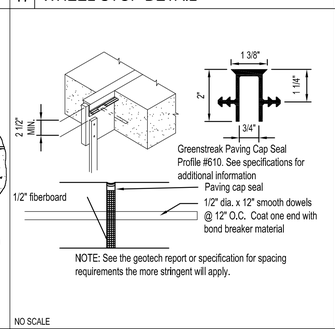
NO SCALE

22 TYPICAL WALK SECTION



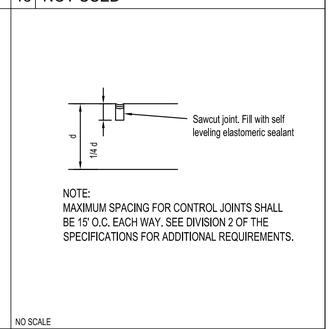
3/4" = 1'-0" SEC-C30

23 TYPICAL EXPANSION JOINT



NO SCALE

24 TYPICAL CONTROL JOINT

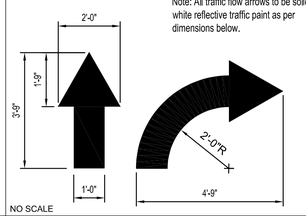


NO SCALE

For all details on this sheet which call for a minimum depth of concrete, that depth shall be adjusted to the deeper of that called for in the detail or the frost depth shown in the Geotechnical Report.

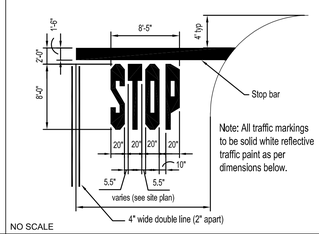
FROST DEPTH NOTES

25 TYPICAL PAVEMENT MARKINGS



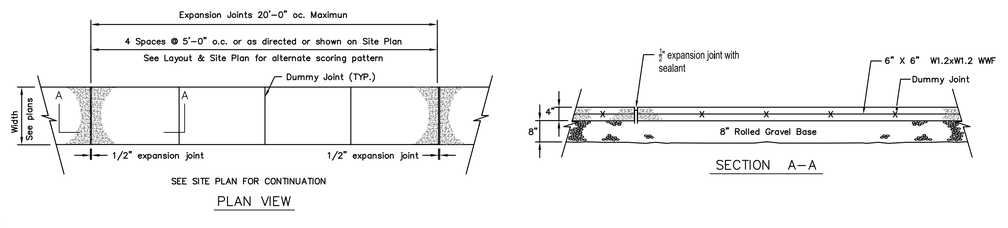
NO SCALE

26 TYPICAL PAVEMENT MARKINGS



NO SCALE

27 CONCRETE SIDEWALK



NO SCALE

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
DETAIL SHEET 1

RAYG. FLAKE LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
03/10/2022

4/25/2023

7N2

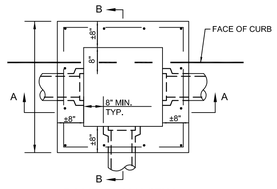
C4.0

NOTE:

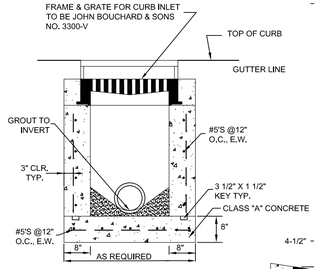
1. STORM WATER CURB INLET/AREA INLET TO HAVE ENVIRONMENTAL MESSAGE STAMPED INTO THE METAL"DUMP NO WASTE","DRAINS TO STREAM".

2. THE CONTRACTOR SHALL POUR THE INVERTS IN ALL STORM WATER STRUCTURES.

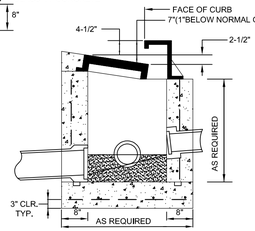
3. OPTIONAL CONSTRUCTION PRE-FAB, CONCRETE EQUIVALENT.



RAMP PLAN VIEW



SECTION A-A



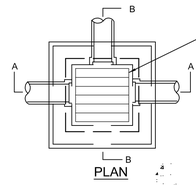
SECTION B-B

SINGLE CURB INLET

N.T.S.

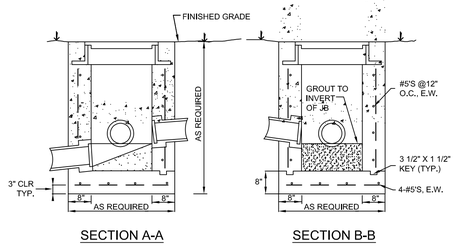
NOTE

OPTIONAL CONSTRUCTION MATERIALS INCLUDE PRE-FAB. CONCRETE.



PLAN

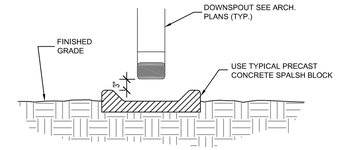
FRAME & GRATE FOR AREA INLET TO BE JOHN BOUCHARD & SONS NO. 4310 ADJUST HORIZONTAL DIMENSIONS ACCORDINGLY. MANHOLE FRAME AND LID TO BE JOHN BOUCHARD & SONS NO. 1131 OR APPROVED EQUAL



SECTION A-A SECTION B-B

AREA INLET/JUNCTION BOX

N.T.S.



NOTE:

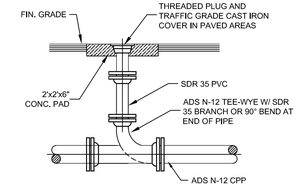
FRONT EDGE OF FLUME TO BE FLUSH W/ FINISHED GRADE.

CONCRETE SPLASH BLOCK

N.T.S.

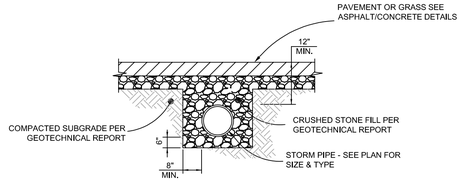
NOTE:

IN GRASS AREAS WHERE NO PAVEMENT IS PROPOSED, CONCRETE BLOCK SHALL NOT BE CONSTRUCTED.



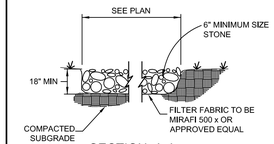
PRIVATE STORM SEWER CLEANOUT

N.T.S.

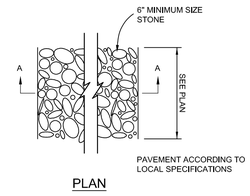


STORM SEWER PIPE TRENCH DETAIL

N.T.S.



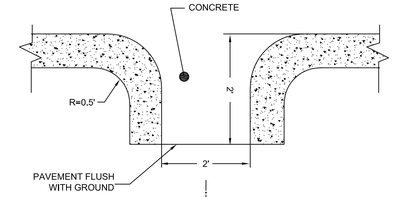
SECTION A-A



PLAN

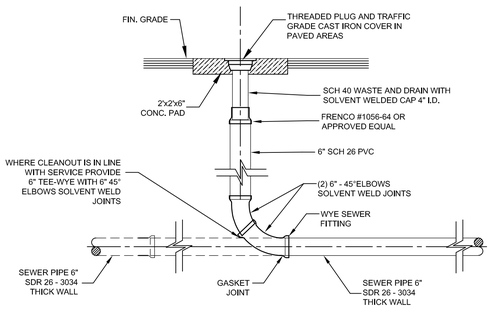
RIPRAP DETAIL

N.T.S.



CURB CUT DETAIL

N.T.S.

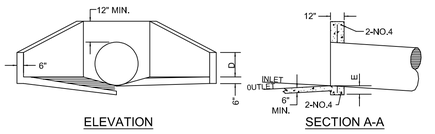


NOTE:

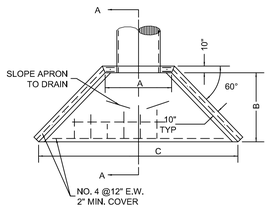
IN GRASS AREAS WHERE NO PAVEMENT IS PROPOSED, CONCRETE PAD SHALL NOT BE CONSTRUCTED.

PRIVATE SANITARY SEWER CLEANOUT

N.T.S.



ELEVATION SECTION A-A



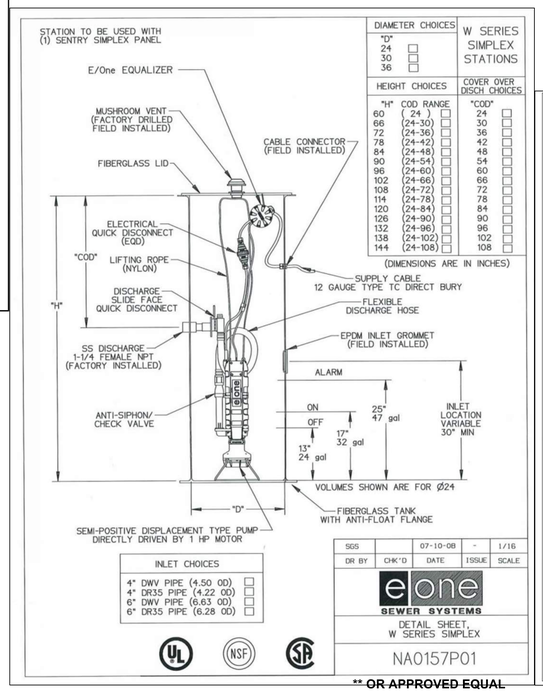
PLAN VIEW

TABLE OF DIMENSIONS					
DIA	A	B	C	D	E
12"	20"	30"	60"	6"	8"
15"	23"	36"	72"	6"	8"
18"	28"	42"	84"	9"	8"
24"	34"	48"	96"	9"	8"
30"	40"	54"	108"	12"	10"
36"	48"	60"	120"	15"	10"
42"	54"	66"	132"	18"	10"
48"	60"	72"	144"	21"	12"
54"	54"	78"	156"	24"	12"
60"	66"	84"	168"	24"	12"

NOTE:
ALL EDGES OF EXPOSED CONCRETE TO BE CHAMFERED TO ONE CONCRETE TO BE

WINGED HEADWALL/ENDWALL

N.T.S.



DIAMETER CHOICES "D"	W SERIES SIMPLEX STATIONS
24 ☐	
30 ☐	
36 ☐	

HEIGHT CHOICES "H"	COD RANGE (24)	COVER OVER DISCH. CHOICES "COD"
60	(24-30) ☐	24 ☐
66	(24-36) ☐	30 ☐
72	(24-42) ☐	36 ☐
78	(24-48) ☐	42 ☐
84	(24-54) ☐	48 ☐
90	(24-60) ☐	54 ☐
96	(24-66) ☐	60 ☐
102	(24-72) ☐	66 ☐
108	(24-78) ☐	72 ☐
114	(24-84) ☐	78 ☐
120	(24-90) ☐	84 ☐
126	(24-96) ☐	90 ☐
132	(24-102) ☐	96 ☐
138	(24-108) ☐	102 ☐
144		108 ☐

(DIMENSIONS ARE IN INCHES)

INLET CHOICES
4" DWV PIPE (4.50 OD) ☐
4" DR35 PIPE (4.22 OD) ☐
6" DWV PIPE (6.63 OD) ☐
6" DR35 PIPE (6.28 OD) ☐

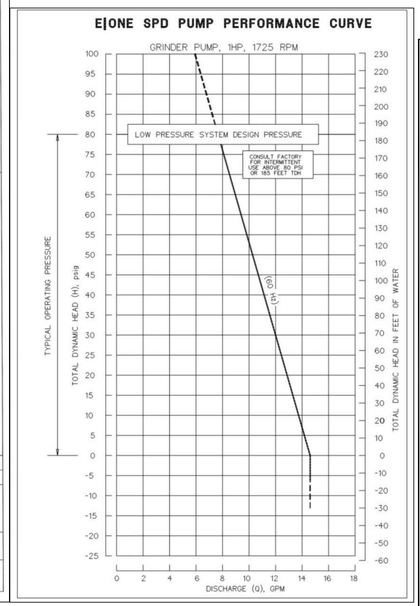
SGS		07-10-08	-	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

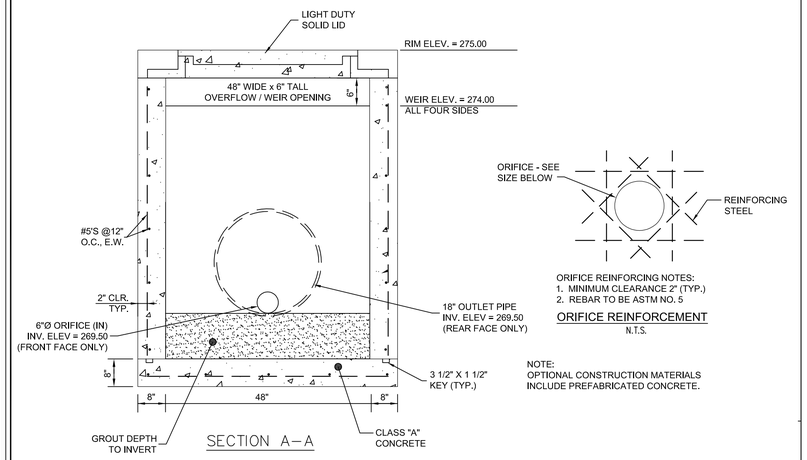
e/one SEWER SYSTEMS

DETAIL SHEET, W SERIES SIMPLEX

NA0157P01

** OR APPROVED EQUAL





SECTION A-A

ORIFICE REINFORCING NOTES:
1. MINIMUM CLEARANCE 2" (TYP.)
2. REBAR TO BE ASTM NO. 5

ORIFICE REINFORCEMENT
N.T.S.

NOTE:
OPTIONAL CONSTRUCTION MATERIALS INCLUDE PREFABRICATED CONCRETE.

DETENTION OUTLET STRUCTURE

N.T.S.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
4	5	6	

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110

DETAIL SHEET 2

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.:(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
05/10/2022

4/25/2023

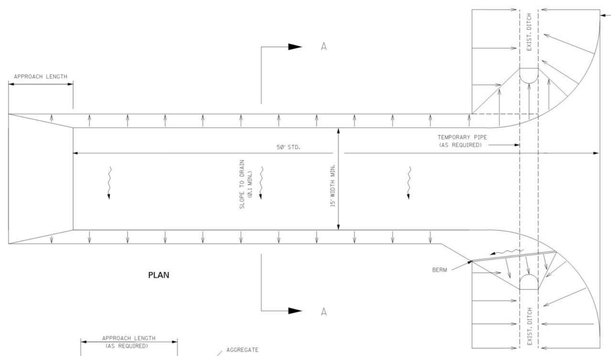
7N2

C4.1

NAD83 MS STATE PLANE

REVISIONS					
1		2		3	
4		5		6	

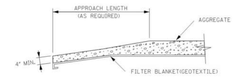
STATE	PROJECT NO.
MISS.	



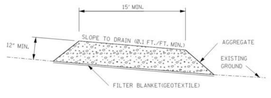
PLAN

GENERAL NOTES:

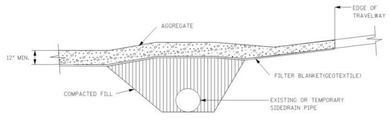
1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT POINTS OF EGRESS FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS WHERE OFFSITE TRACKING OF MUD COULD OCCUR. TRAFFIC FROM UNSTABILIZED AREAS OF THE PROJECT SHALL BE DIRECTED THRU THE STABILIZED ENTRANCE. BARRIERS, FLAGGING, OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICULAR EGRESS ACROSS THE STABILIZED ENTRANCE.
2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE TECHNIQUE TO MINIMIZE OFFSITE TRACKING OF SEDIMENT. THE ALTERNATIVE MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS USE.
3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING THE STABILIZED CONSTUCTION ENTRANCE AGGREGATE AND CONSTRUCTION MUD) SHOULD BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED BY THE ENGINEER.
4. SIZE III STABILIZER AGGREGATE OR LARGER SHALL BE USED.
5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS FUNCTION TO PREVENT OFFSITE TRACKING. THE STABILIZED CONSTRUCTION ENTRANCE SHOULD BE RINSED WHEN NECESSARY TO MOVE ACCUMULATED MUD DOWNWARD THRU THE STONE. ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STABILIZED ENTRANCE MAY BE REQUIRED TO LIMIT THE MUD TRACKED.
6. THE NOMINAL SIZE OF A STANDARD STABILIZED CONSTRUCTION ENTRANCE IS 15' X 50' UNLESS OTHERWISE SHOWN IN THE EROSION CONTROL PLAN.
7. COSTS OF ALL ITEMS ON THIS SHEET SHALL BE INCLUDED IN OTHER ITEMS BID.



TRANSITION DETAIL



SECTION A–A



RURAL CONNECTION DETAIL

NO.	DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

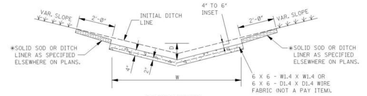
STABILIZED CONSTRUCTION ENTRANCE

MDOT

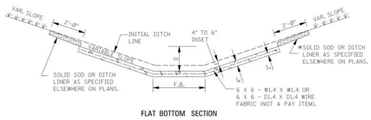
WORKING NUMBER ECD-16

ISSUE DATE: AUGUST 01, 2017

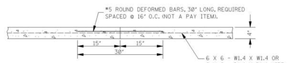
SHEET NUMBER 6116



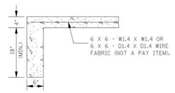
"V" TYPE SECTION



FLAT BOTTOM SECTION



DETAIL OF CONSTRUCTION JOINT

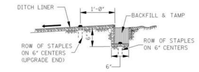


DETAIL OF TOE WALL

NOTE: TOE WALL REQUIRED UPSTREAM AND DOWNSTREAM.

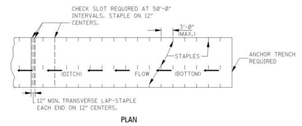
CONCRETE PAVED DITCH

NOTES:
1. CONCRETE PAVED DITCHES SHALL BE GROOVED AT 20'-0" INTERVALS. THE GROOVES SHALL BE CUT TO A DEPTH OF NOT LESS THAN 1".
2. DIMENSIONS D & W ARE AS FOLLOWS:
   D(MINIMUM) = 6"
   D(NOMINAL) = 9"
   W(MINIMUM) = 24"
3. CHAIR SUPPORTS FOR THE WIRE MESH WILL NOT BE REQUIRED. HOWEVER, THE CONTRACTOR SHALL PLACE THE WIRE MESH IN A SATISFACTORY AND WORKMANLIKE MANNER TO ENSURE THAT THE FINAL POSITION IS REASONABLY NEAR THE POSITION INDICATED.
*4. CENTER ROW OF STAPLES MAY BE OMITTED ON DITCH LINER.

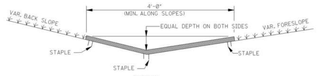


ANCHOR TRENCH DETAIL

NOTE: ANCHOR TRENCH REQUIRED AT THE BEGINNING AND ENDING OF EACH AREA TO BE COVERED, EXCEPT DOWNSTREAM END ADJOINING A STRUCTURE.



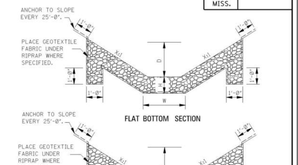
PLAN



SECTION

DITCH LINER TREATMENT
(EXCELSIOR BLANKET, JUTE MESH OR EROSION CONTROL FABRIC)

NOTE: DITCHES TREATED WITH DITCH LINER WILL BE VEGETATED PRIOR TO TREATMENT, UNLESS OTHERWISE INDICATED.



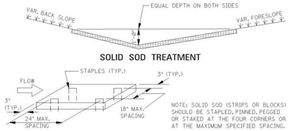
FLAT BOTTOM SECTION

"V" TYPE SECTION

RIPRAP TREATMENT

NOTES:
1. DIMENSIONS D, W AND X ARE VARIABLE AND ARE SHOWN ELSEWHERE ON THE PLANS.
2. THE RIPRAP SIZE AND MINIMUM DEPTH "H" FOR RIPRAP TREATMENT ARE AS FOLLOWS:

RIPRAP SIZE & MINIMUM DEPTH "H"	
H	RIPRAP SIZE (Dso)
(in)	
12"	180
18"	360



NOTE: SOLID SOD (STRIPS OR BLOCKS) SHOULD BE STAPLED, PINNED, PEGGED OR STAKED AT THE FOUR CORNERS OR AT THE MAXIMUM SPECIFIED SPACING.

SOLID SOD TREATMENT

GENERAL NOTE:
1. FOR LOCATION OF APPROPRIATE DITCH TREATMENTS, SEE PLAN SHEETS AS DENOTED BY THE FOLLOWING LEGEND OR AS DIRECTED BY THE ENGINEER:
   DITCH LINER
   SOLID SOD
   CONCRETE PAVED DITCH
   RIPRAP

NO.	DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DETAILS OF TYPICAL DITCH TREATMENTS

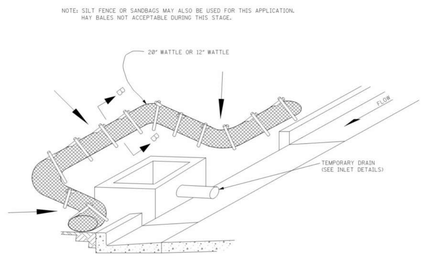
MDOT

WORKING NUMBER DT-1

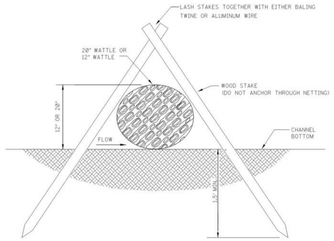
ISSUE DATE: AUGUST 01, 2017

SHEET NUMBER 6123

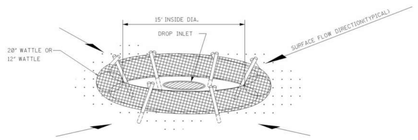
STATE	PROJECT NO.
MISS.	



CURB INLET PROTECTION (STAGE 2)
SINGLE OR DOUBLE WING INLET



SECTION B–B



DROP INLET PROTECTION

NOTES:
1. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE WATTLE. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
2. OVERLAP ENDS OF WATTLES PER MANUFACTURER'S RECOMMENDATIONS (2' MIN., 3' MAX.)
3. TRENCHING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
4. IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SANDBAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE WATTLES IN PLACE. COST OF SANDBAGS USED IN THIS APPLICATION SHALL BE INCLUDED IN OTHER ITEMS BID.

NO.	DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

INLET PROTECTION DETAILS OF WATTLES

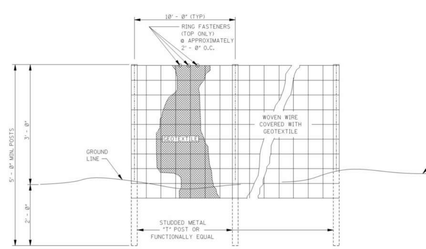
MDOT

WORKING NUMBER ECD-15

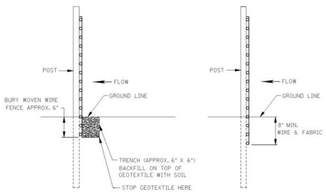
ISSUE DATE: AUGUST 01, 2017

SHEET NUMBER 6113

STATE	PROJECT NO.
MISS.	



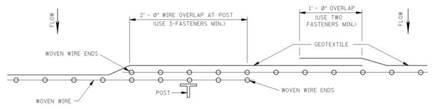
ELEVATION VIEW



METHOD I

METHOD II
MECHANICAL INSTALLATION

SIDE VIEW



PLAN VIEW
REQUIRED LAPPING

GENERAL NOTES:

1. SILT FENCES SHOULD BE USED IN AREAS WHERE FLOW IS NOT SEVERE.
2. SILT FENCES ARE TEMPORARY SEDIMENT CONTROL ITEMS THAT SHOULD BE ERECTED OPPOSITE ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STEAMS AND CHANNELS.
3. SILT FENCE SHOULD BE PLACED WELL INSIDE RIGHT-OF-WAY AND ALONG EDGE OF CLEARING LIMITS. THIS WILL ALLOW ROOM FOR BACK-UP FENCE IF FIRST FENCE BECOMES FULL.
4. WHENEVER POSSIBLE SILT FENCE SHOULD BE CONSTRUCTED ACROSS A LEVEL AREA IN THE SHAPE OF A SMILE. THIS AIDS IN PONDING OF RUNOFF AN FACILITATES SEDIMENTATION.
5. THE CONTRACTOR MAY ELECT TO USE EITHER METHOD I OR METHOD II. COST TO BE LINEAR FEET OF SILT FENCE.
6. METHOD II INSTALLATION SHALL BE ACCOMPLISHED USING AN IMPLEMENT THAT IS MANUFACTURED FOR THE APPLICATION AND PROVIDES A CONFIGURATION MEETING THE REQUIREMENTS OF DETAIL.
7. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
8. GEOTEXTILE FABRIC MEETING THE TYPE II MATERIAL REQUIREMENTS AND INSTALLED ACCORDING TO SPECIFICATION MAY BE USED WITHOUT WIRE FENCE.

NO.	DATE	REVISION	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DETAILS OF SILT FENCE INSTALLATION

MDOT

WORKING NUMBER ECD-3

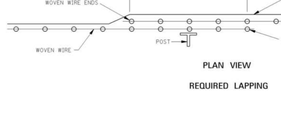
ISSUE DATE: AUGUST 01, 2017

SHEET NUMBER 6103

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
DETAIL SHEET 3

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com



4/25/2023

7N2

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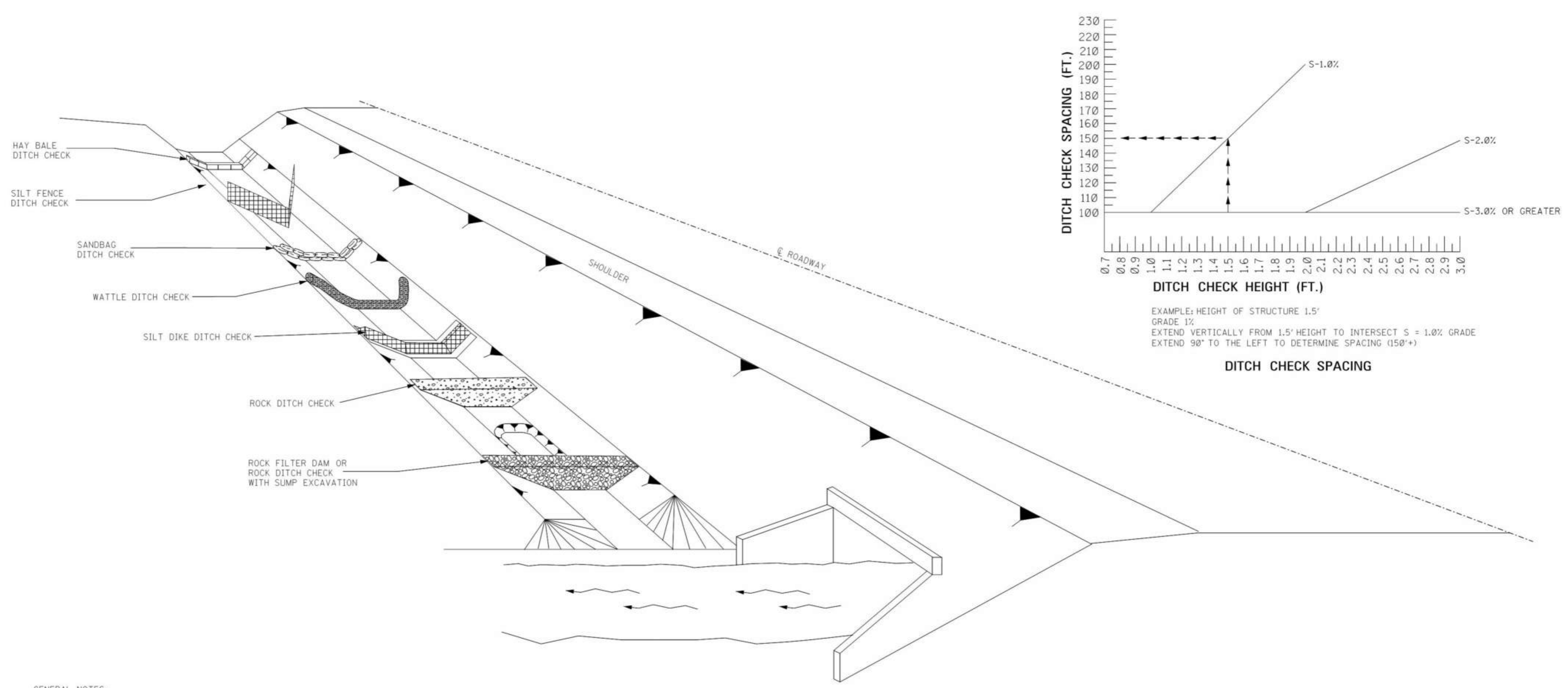
NORTH

NAD83 MS STATE PLANE

STATE	PROJECT NO.
MISS.	



GENERAL NOTES:

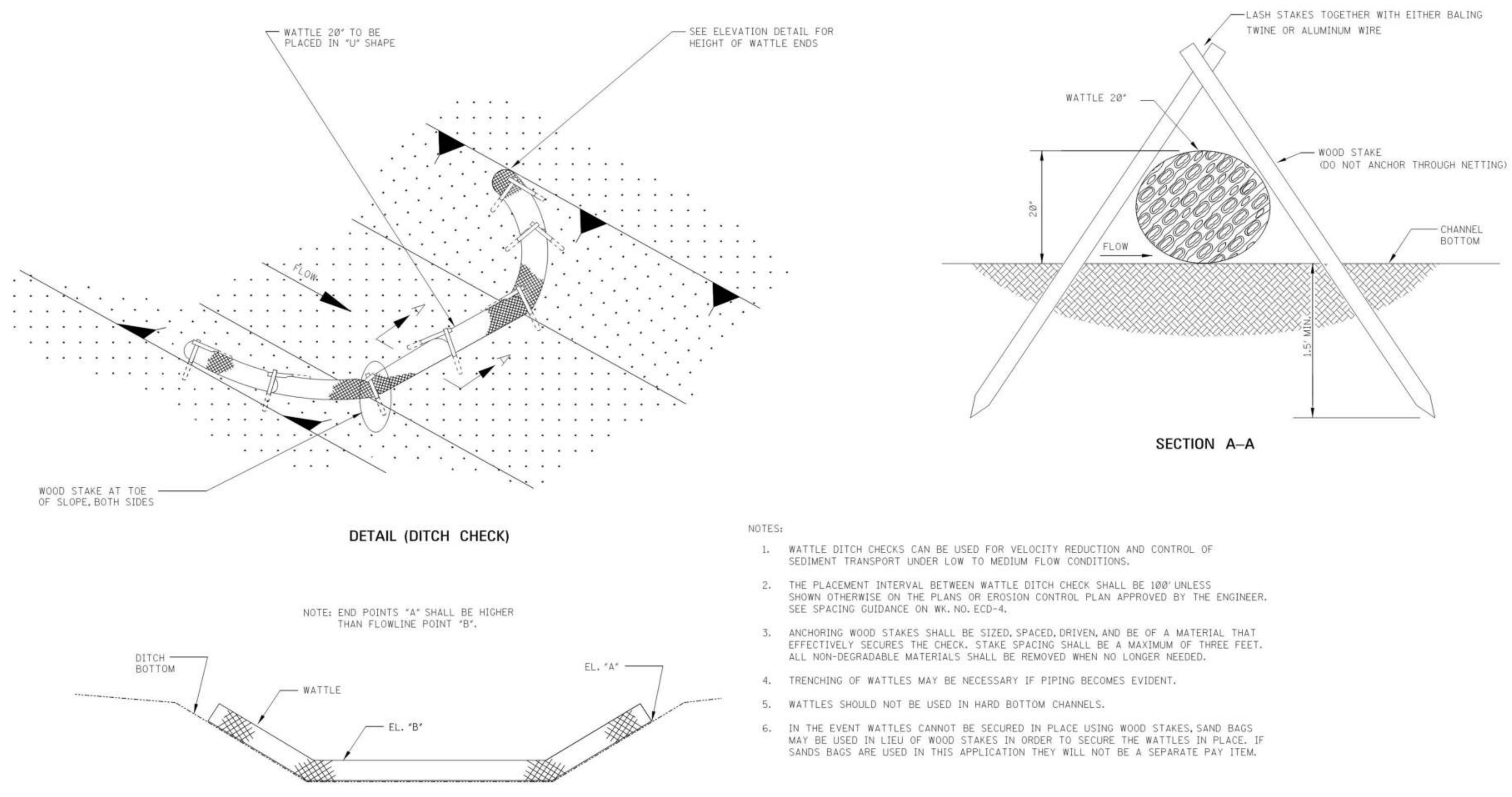
1. THE DITCH CHECK PERSPECTIVE ILLUSTRATES A TOOL BOX OF TEMPORARY PRACTICES THAT MAY BE USED. DITCH CHECKS ARE INSTALLED TO CONTROL RUNOFF VELOCITY AND THUS REDUCE EROSION AND PROVIDE FOR TRAPPING OF SEDIMENTS.
2. SELECTION OF THE APPROPRIATE DITCH CHECK SHOULD BE A FUNCTION OF CONSTRUCTION PHASE, DRAINAGE AREA, DITCH GRADIENT, SOIL TYPE, ECONOMY AND SAFETY.
3. DITCH CHECKS CAN BE REMOVED FOR MAINTENANCE AND/OR REPLACEMENT BUT MUST REMAIN IN PLACE UNTIL UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED. MAINTENANCE INCLUDES REMOVAL OF SEDIMENT BEGINNING WHEN SEDIMENT ACCUMULATION REACHES ⅓ THE CAPACITY OR HEIGHT OF THE STRUCTURE AND NEVER ALLOWING FOR SEDIMENT TO ACCUMULATE MORE THAN ½ THE VOLUME OR HEIGHT OF THE DITCH CHECK STRUCTURE.
4. HAY BALES SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
5. SILT FENCE DITCH CHECKS SHOULD BE USED WHERE IT HAS BEEN DETERMINED THAT HAY BALE CHECKS ARE INADEQUATE. SILT FENCE DITCH CHECKS SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
6. SANDBAG DITCH CHECKS SHOULD BE USED FOR VELOCITY REDUCTION AND MINIMAL SEDIMENT TRAPPING IN CONCRETE PAVED DITCHES OR IN DITCHES THAT HAVE ROCK BOTTOMS.
7. WATTLE DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS.
8. SILT DIKES CAN BE USED IN DITCHES WITH CONCENTRATED FLOWS WITHIN THE CLEAR ZONE WHERE RIPRAP CAN NOT BE USED. AS CONSTRUCTION PROGRESSES.
9. ROCK DITCH CHECKS WITH SUMP EXCAVATION CAN BE PLACED IN DITCHES TO ASSURE ON-SITE SEDIMENT TRAPPING REQUIREMENTS ARE MET. DITCH CHECK WITH SUMP EXCAVATION IS USED WHEN DITCHES RECEIVE DRAINAGE FROM CUT OR FILL SLOPES OR OTHER CRITICAL AREAS WHERE SOIL EROSION IS EXPECTED. DRAINAGE AREA FOR A TEMPORARY SEDIMENT TRAP SHOULD BE LIMITED TO 3 ACRES. THEY CAN BE USED IN SERIES TO INCREASE ON-SITE SEDIMENT TRAPPING EFFICIENCY.
10. DITCH CHECKS, IN NO CASE, SHALL BE PLACED IN LIVE STREAMS.
11. CONFIGURATION AND SPACING MAY BE ADJUSTED IF APPROVED BY THE ENGINEER TO ACCOMMODATE TRAVELWAY SAFETY, WATER FLOW, OR SOIL AND INSTALLATION CHALLENGES.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DITCH CHECK STRUCTURES, TYPICAL APPLICATIONS AND DETAILS

MDOT
WORKING NUMBER ECD-4
SHEET NUMBER 6104
ISSUE DATE: AUGUST 01, 2017

STATE	PROJECT NO.
MISS.	



NOTES:

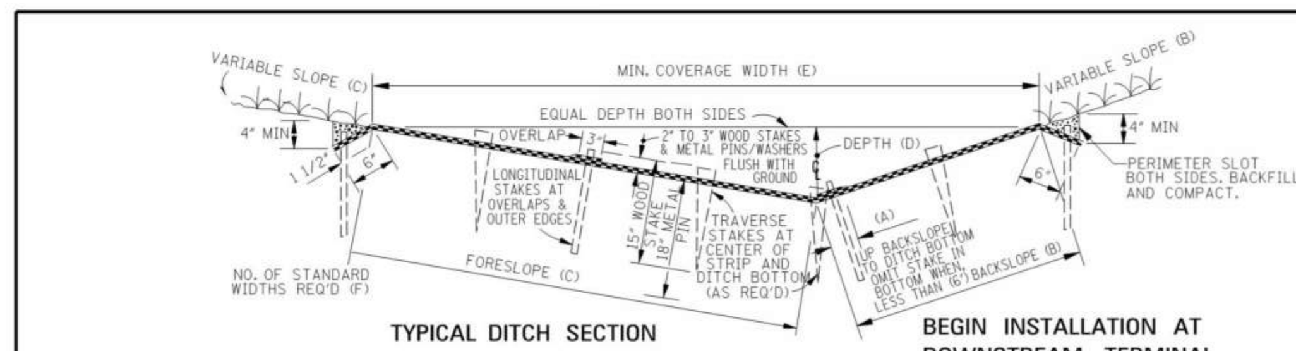
1. WATTLE DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS.
2. THE PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECK SHALL BE 100' UNLESS SHOWN OTHERWISE ON THE PLANS OR EROSION CONTROL PLAN APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON WK. NO. ECD-4.
3. ANCHORING WOOD STAKES SHALL BE SIZED, SPACED, DRIVEN, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET. ALL NON-DEGRADABLE MATERIALS SHALL BE REMOVED WHEN NO LONGER NEEDED.
4. TRENCHING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
5. WATTLES SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
6. IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SAND BAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE THE WATTLES IN PLACE. IF SANDS BAGS ARE USED IN THIS APPLICATION THEY WILL NOT BE A SEPARATE PAY ITEM.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DETAILS OF EROSION CONTROL WATTLE DITCH CHECK

MDOT
WORKING NUMBER ECD-6
SHEET NUMBER 6106
ISSUE DATE: AUGUST 01, 2017

STATE	PROJECT NO.
MISS.	

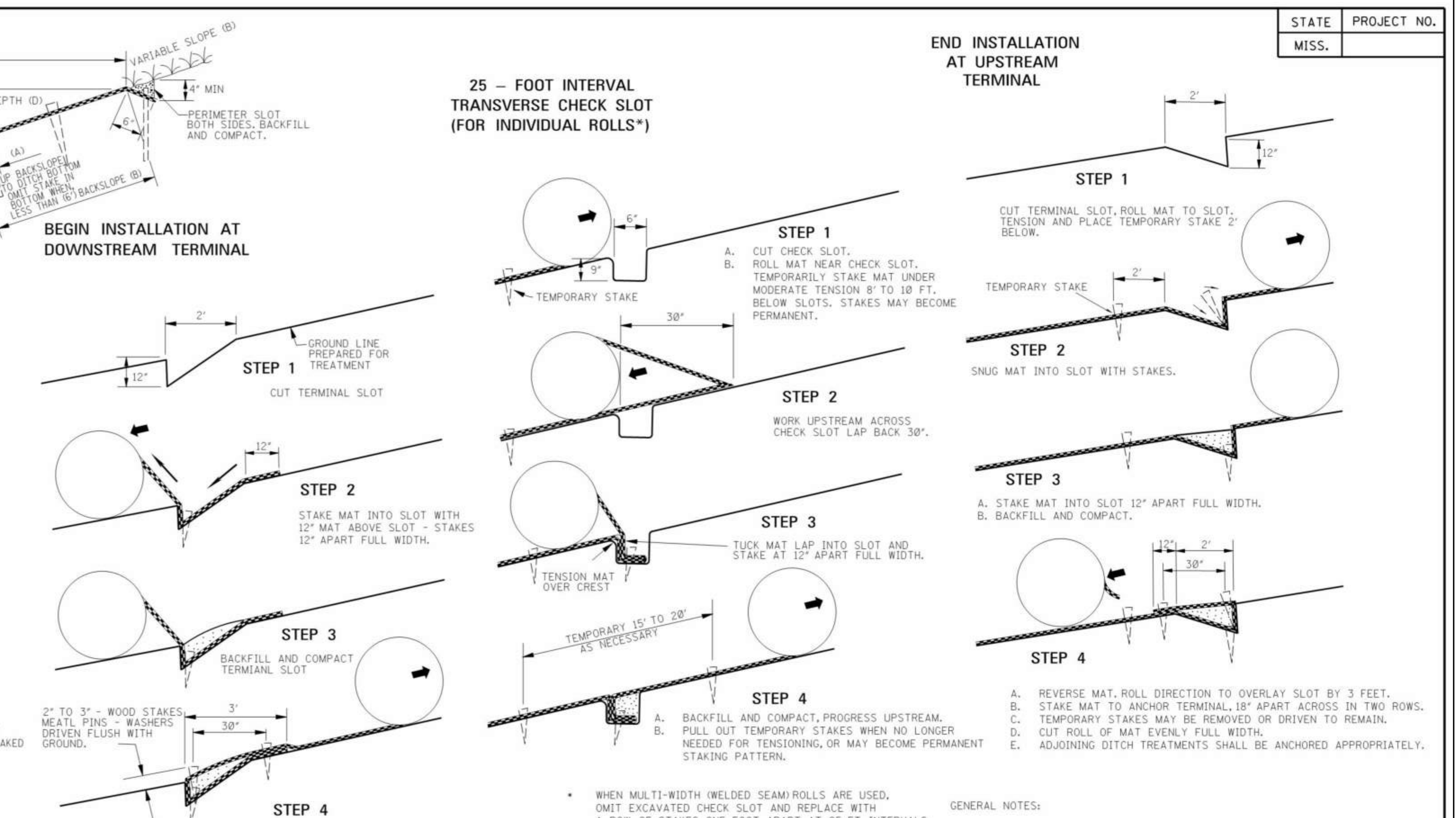


MAT PLACEMENT TABLE

DIMENSIONS OF MAT PLACEMENT IN DITCH (INDIVIDUAL 38" WIDTH ROLLS)					
ELEMENTS OF MAT PLACEMENT	SIDE SLOPE COMBINATIONS FORESLOPE – BACKSLOPE				
	3:1 & 3:1	4:1 & 3:1	6:1 & 3:1	6:1 & 4:1	6:1 & 6:1
(A) UP BACKSLOPE TO DITCH BOTTOM	1' - 7"	1' - 1"	0' - 4"	0' - 10"	0' - 1 1/2"
(B) BACKSLOPE	4' - 0"	3' - 6"	2' - 9"	3' - 3"	3' - 5 1/2"
(C) FORESLOPE	4' - 0"	4' - 6"	5' - 3"	4' - 9"	5' - 5 1/2"
(D) DEPTH OF COVERAGE	1' - 3"	1' - 1"	0' - 10"	0' - 9"	0' - 11"
(E) WIDTH OF COVERAGE	7' - 7"	7' - 8"	7' - 9"	7' - 10"	10' - 9"
(F) MINIMUM NUMBER OF STAND, WIDTH STRIPES	3	3	3	3	4
(B) + (C) TOTAL COVERAGE ON SLOPES	8' - 0"	8' - 0"	8' - 0"	8' - 0"	10' - 11"
SQ. YDS./LIN. FT.	0.89	0.89	0.89	0.89	1.22
MULTI– WIDTH WELDED SEAM MAT (WELDED 38" WIDTH STRIPS)					
(B) + (C) TOTAL COVERAGE MULTI-WIDTH ROLLS	8' - 3"	8' - 3"	8' - 3"	8' - 3"	11' - 3 1/2"
SQ. YDS./LIN. FT.	0.92	0.92	0.92	0.92	1.25

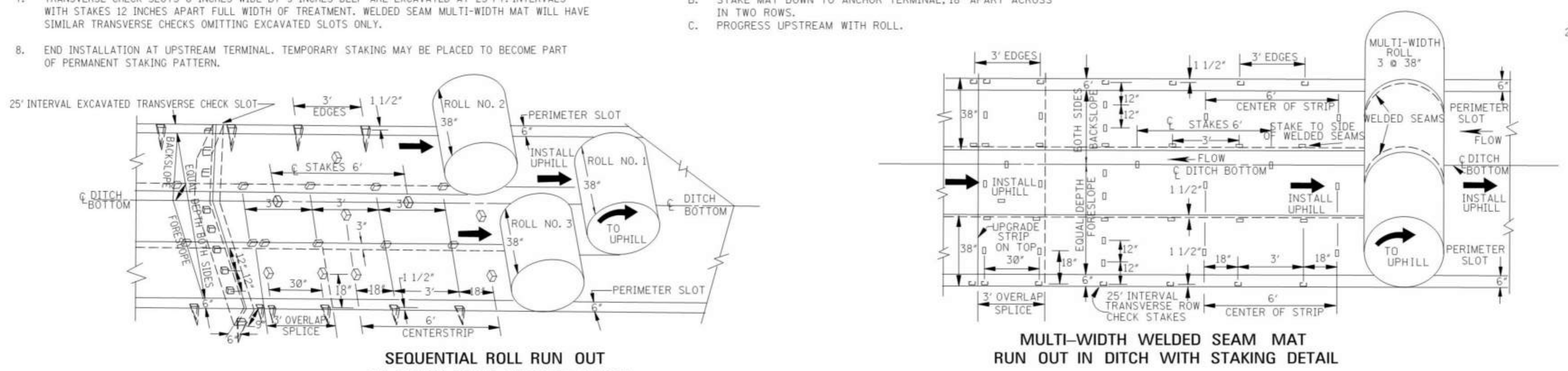
GENERAL INSTRUCTIONS:

1. BEGIN INSTALLATION AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS ALIGNED FROM DITCH BOTTOM UP BACKSLOPE (SEE MAT PLACEMENT TABLE) AND UNDER MODERATE TENSION TEMPORARILY STAKED TO MAINTAIN PROPER DESIGN COVERAGE ALIGHMENT.
3. WORKING OUTWARD FROM DITCH BOTTOM TO EDGES, SUBSEQUENT ADJACENT ROLLS FOLLOW IN STAGGERED SEQUENCE UNDER MODERATE TENSION.
4. OVERLAP MAT SEAMS 3 INCHES AND STAKE AT 3-FT. INTERVALS WITH STAKES ALIGNED LONGITUDINALLY TO DITCH AND DIAGONAL EDGE OF STAKE TO THE UPSTREAM. OUTER EDGES (PERIMETER) OF MAT ARE STAKED SIMILARLY.
5. STAKE THE CENTER OF EACH MAT STRIP AND WHEN REQUIRED ALONG THE DITCH BOTTOM AT 6-FT. INTERVALS STAGGERED BETWEEN THE 3-FT. SPACING OF OVERLAP AND OUTER EDGE STAKES WITH THE BROADSIDE TO THE FLOW DIRECTION AND DIAGONAL EDGE TOWARD THE SLOPE.
6. USE 3-FT. OVERLAP AT END OF MAT ROLL SPLICES WITH UPGRADE STRIP ON TOP, STAKED IN TWO ROWS 30 INCHES APART, AND STAKES 18 INCHES APART ACROSS FULL WIDTH.
7. TRANSVERSE CHECK SLOTS 6 INCHES WIDE BY 9 INCHES DEEP ARE EXCAVATED AT 25-FT. INTERVALS WITH STAKES 12 INCHES APART FULL WIDTH OF TREATMENT. WELDED SEAM MULTI-WIDTH MAT WILL HAVE SIMILAR TRANSVERSE CHECKS OMITTING EXCAVATED SLOTS ONLY.
8. END INSTALLATION AT UPSTREAM TERMINAL. TEMPORARY STAKING MAY BE PLACED TO BECOME PART OF PERMANENT STAKING PATTERN.



GENERAL NOTES:

1. WHEN METAL PINS WITH WASHERS ARE PERMITTED IN PLACE OF WOOD STAKES, THE METAL PINS ARE DRIVEN TO ASSURE THAT THE WASHERS WITH MAT UNDERNEATH ARE FLUSH WITH THE GROUND LEAVING NO PROJECTION OF THE PINS ABOVE THE GROUND LINE.
2. SOIL REINFORCING MAT SHALL BE USED WHERE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

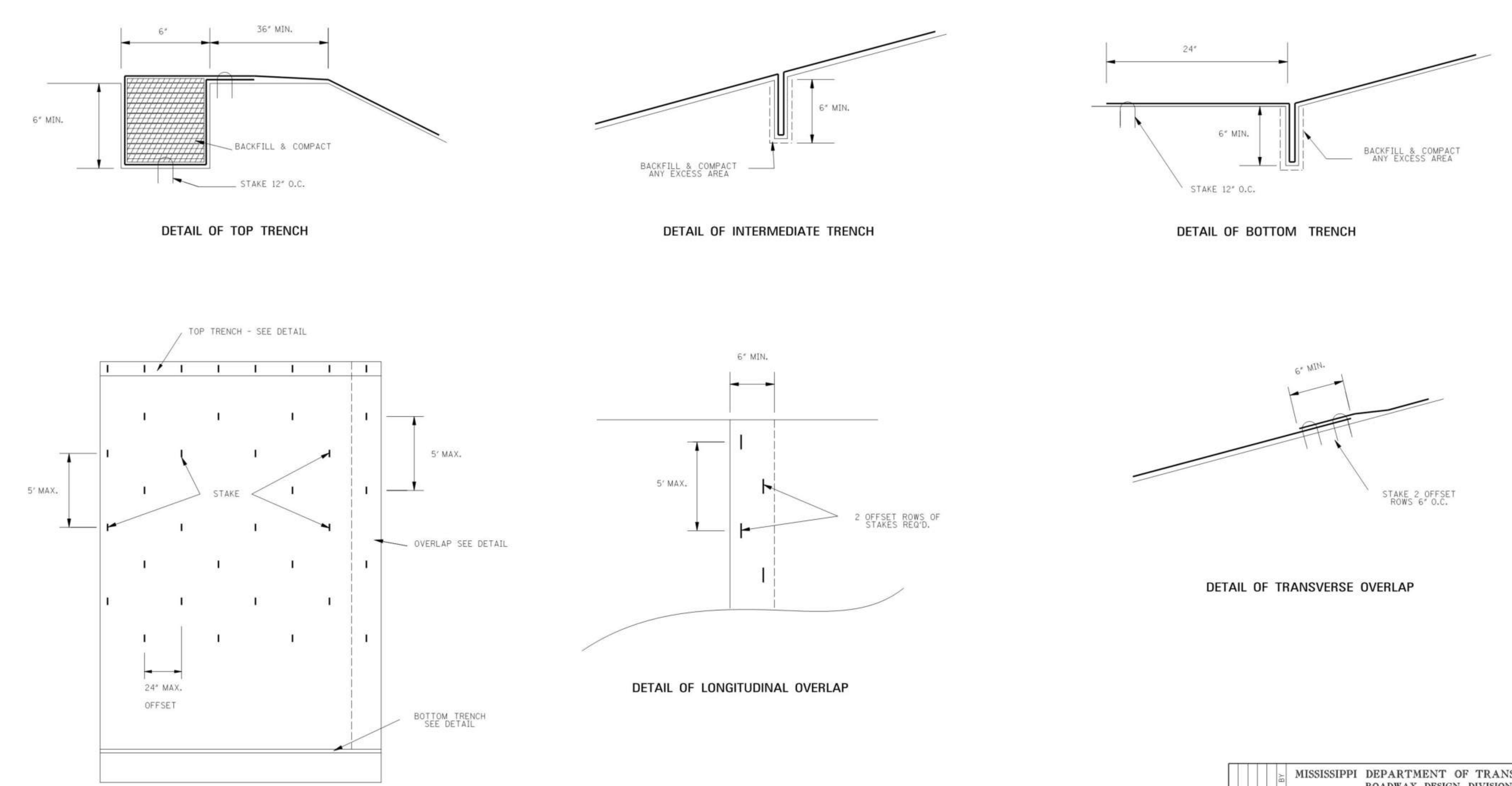


MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DITCH TREATMENT INSTALLATION DETAIL FOR SOIL REINFORCING MAT

MDOT
WORKING NUMBER DT-1A
SHEET NUMBER 6124
ISSUE DATE: AUGUST 01, 2017

STATE	PROJECT NO.
MISS.	



MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

EROSION CONTROL BLANKET

MDOT
WORKING NUMBER ECB-1
SHEET NUMBER 6131
ISSUE DATE: AUGUST 01, 2017

REVISIONS

1	4
2	5
3	6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
DETAIL SHEET 4

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
03/10/2022

4/25/2023

7N2

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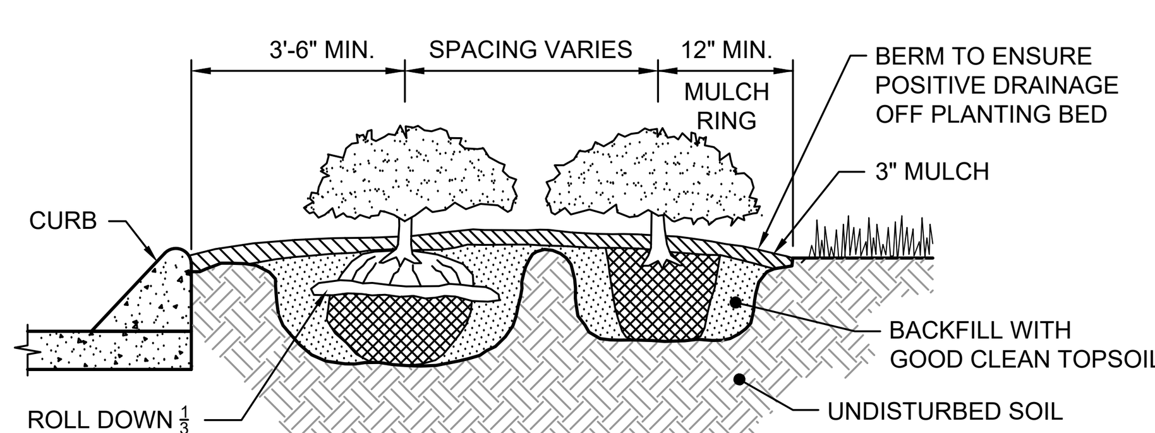
Section 4, IB)

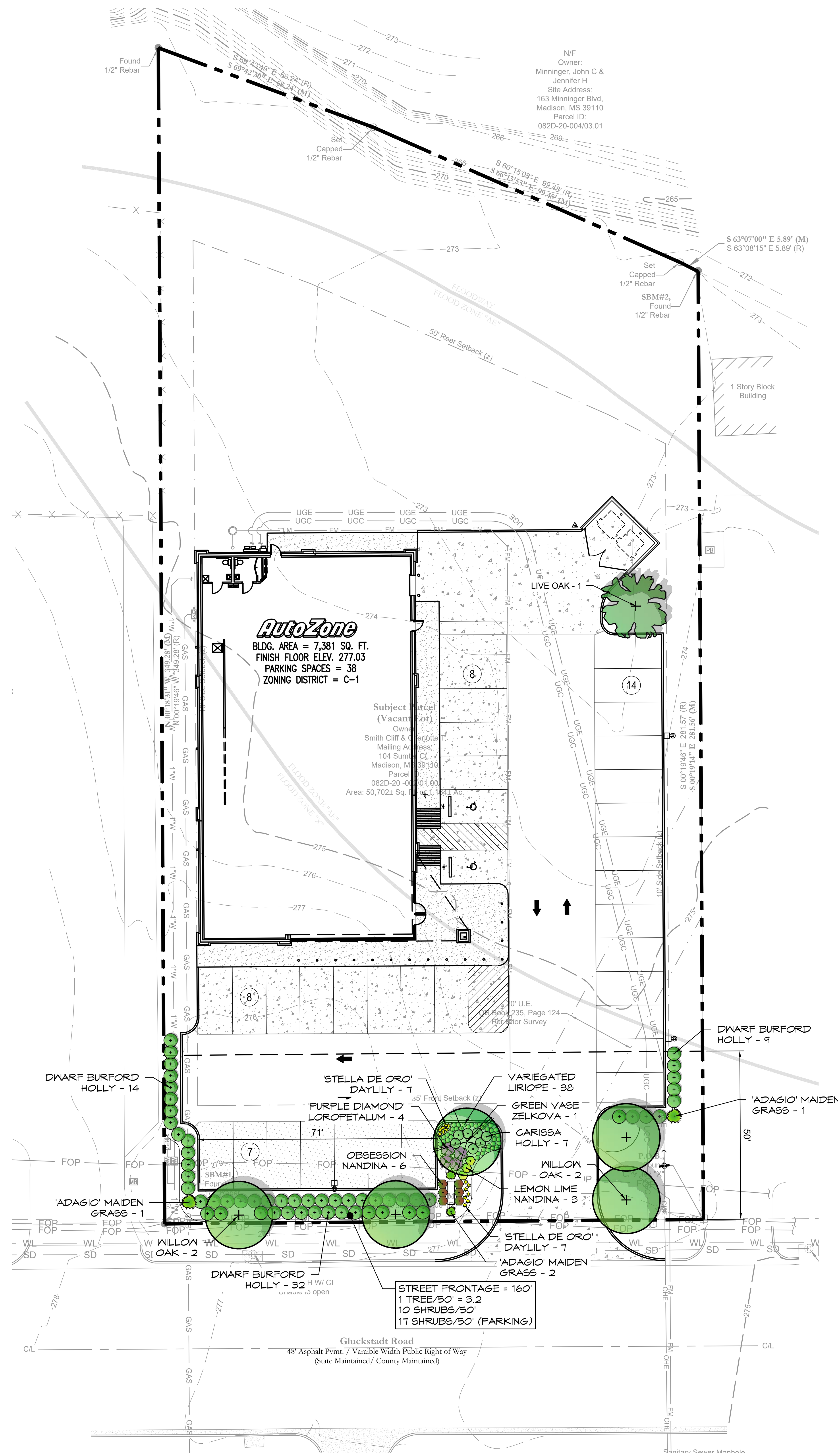
LANDSCAPE NOTES:

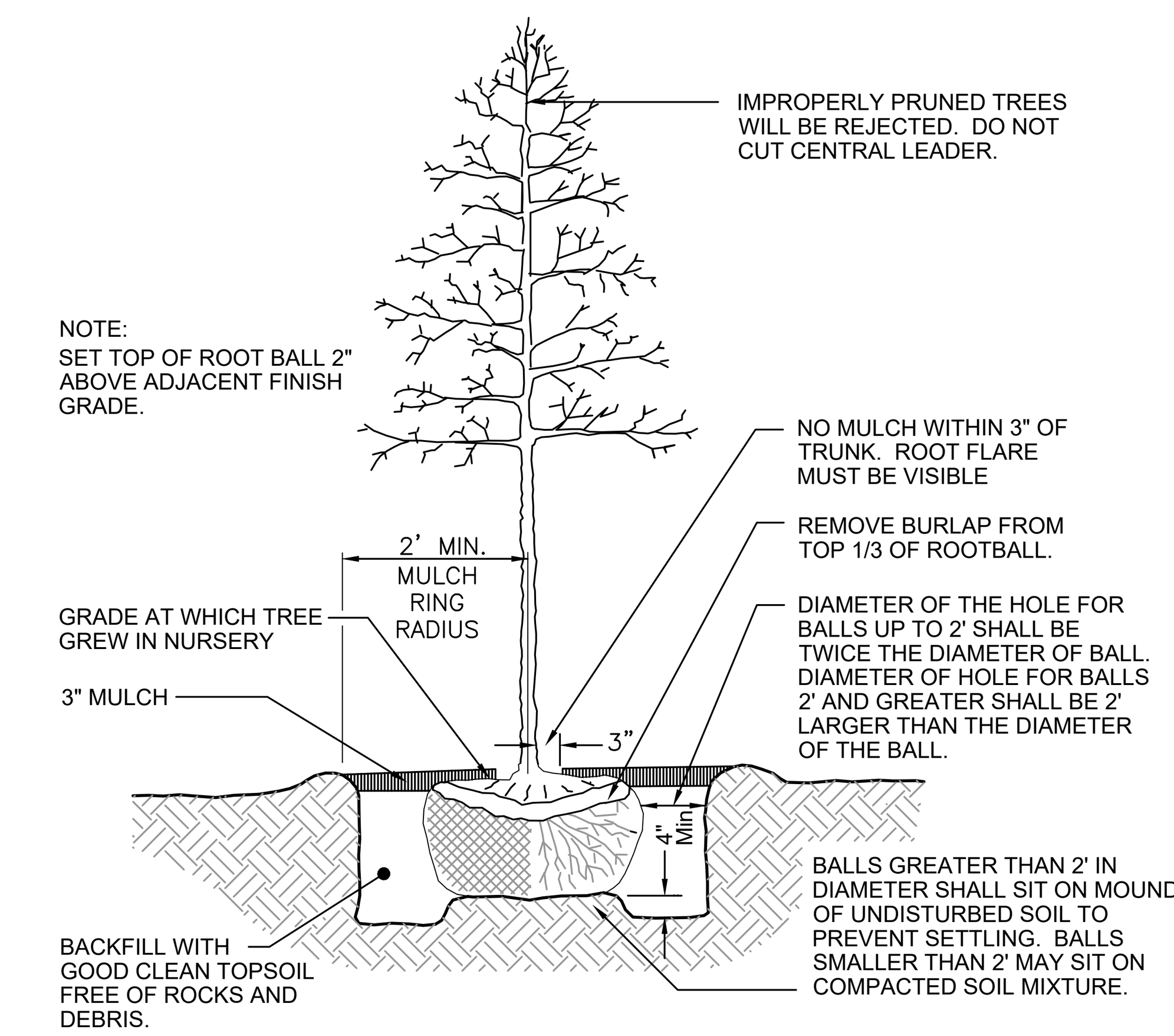
1. WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIALS SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
4. NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. KITA LANDSCAPE DESIGN (615) 469-1222.
5. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. SOD ALL DISTURBED AREAS.
7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD.
   A. SAND SHALL BE CLEAN MASONRY SAND.
   B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
   C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
22. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.
    PLANTING DATES
    SPRING: MARCH 15 - APRIL 15
    FALL: OCTOBER 1 - NOVEMBER 30
24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
25. CONTRACTOR TO IRRIGATE ALL NEW LANDSCAPE PLANTINGS AND LAWN AREAS WITH AN AUTOMATED UNDERGROUND IRRIGATION SYSTEM.
26. IRRIGATION TO HAVE A SEPARATE METER.
27. GENERAL CONTRACTOR TO COORDINATE AND BE RESPONSIBLE FOR WATERING ALL PLANTS AND SEEDED AREAS AFTER PLANTING UNTIL IRRIGATION SYSTEM IS OPERABLE.



SHRUB / GROUND COVER PLANTING

NOT TO SCALE





DECIDUOUS TREE PLANTING

NOT TO SCALE

LANDSCAPE CALCULATIONS		
SITE AREA:	50,702 SF	(1.16 AC)
	REQUIRED	PROVIDED
STREET YARD: 160'		
1 TREE/50'	3.2	3
10 SHRUBS/50'	32.0	
PARKING SPACES:	-	37
200 SF AREA PER SPACE	7,400 SF	
1 TREE / 10 SPACES:	4	
INTERIOR PARKING AREA:	-	16,093
PLANTING AREA: (MIN.)	8%	9.3%
PLANTING AREA: (SQ. FT.)	1287 SF	1490 SF

QTY.	COMMON NAME	BOTANICAL NAME	HEIGHT	TRUNK	COMMENTS
PLANT SCHEDULE					
CANOPY TREES					
1	'Green Vase' Japanese Zelkova	Zelkova serrata 'Green Vase'	10' - 12'	2" Cal.	B&B
1	Live Oak	Quercus virginiana	10' - 12'	2" Cal.	B&B
4	Willow Oak	Quercus phellos	10' - 12'	2" Cal.	B&B
6	TOTAL - CANOPY TREES				
UNDERSTORY/COLUMNAR TREES					
0	'Arnold' Tulip Poplar	Liriodendron tulipifera 'Arnold'	10' - 12'	2" Cal.	B&B
0	TOTAL - UNDERSTORY TREES				
6	TOTAL - ALL TREES				
SHRUBS					
7	Carissa Holly	Ilex cornuta 'Carissa'	18" Min.		Container
55	Dwarf Burford Holly	Ilex cornuta 'Burfordii nana'	24" Min.		Container
3	'Lemon Lime' Nandina	Nandina domestica 'Lemon-Lime'	12" Min.		Container
6	'Obsession' Nandina	Nandina domestica 'Seika'	18" Min.		Container
4	Purple Diamond Loropetalum	Loropetalum chinense 'Shang-hi'	24" Min.		Container
75	TOTAL - SHRUBS				
GRASSES, PERENNIALS AND GROUND COVER					
4	'Adagio' Maiden Grass	Miscanthus sinensis 'Adagio'	24"	3 Gal.	
14	Stella De Oro Daylily	Hemerocallis x 'Stella de Oro'		1 Gal.	
38	Variegated Liriope	Liriope muscari 'Variegata'		1 Gal.	
TURF					
-	Hybrid Fescue Seed/Sod	Drought tolerant fescue blend			

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

KITA designs
Beauty | Economy | Sustainability

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e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
LANDSCAPE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
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TEL:(901) 495-8994 FAX: (901) 495-8969

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10/08/2021

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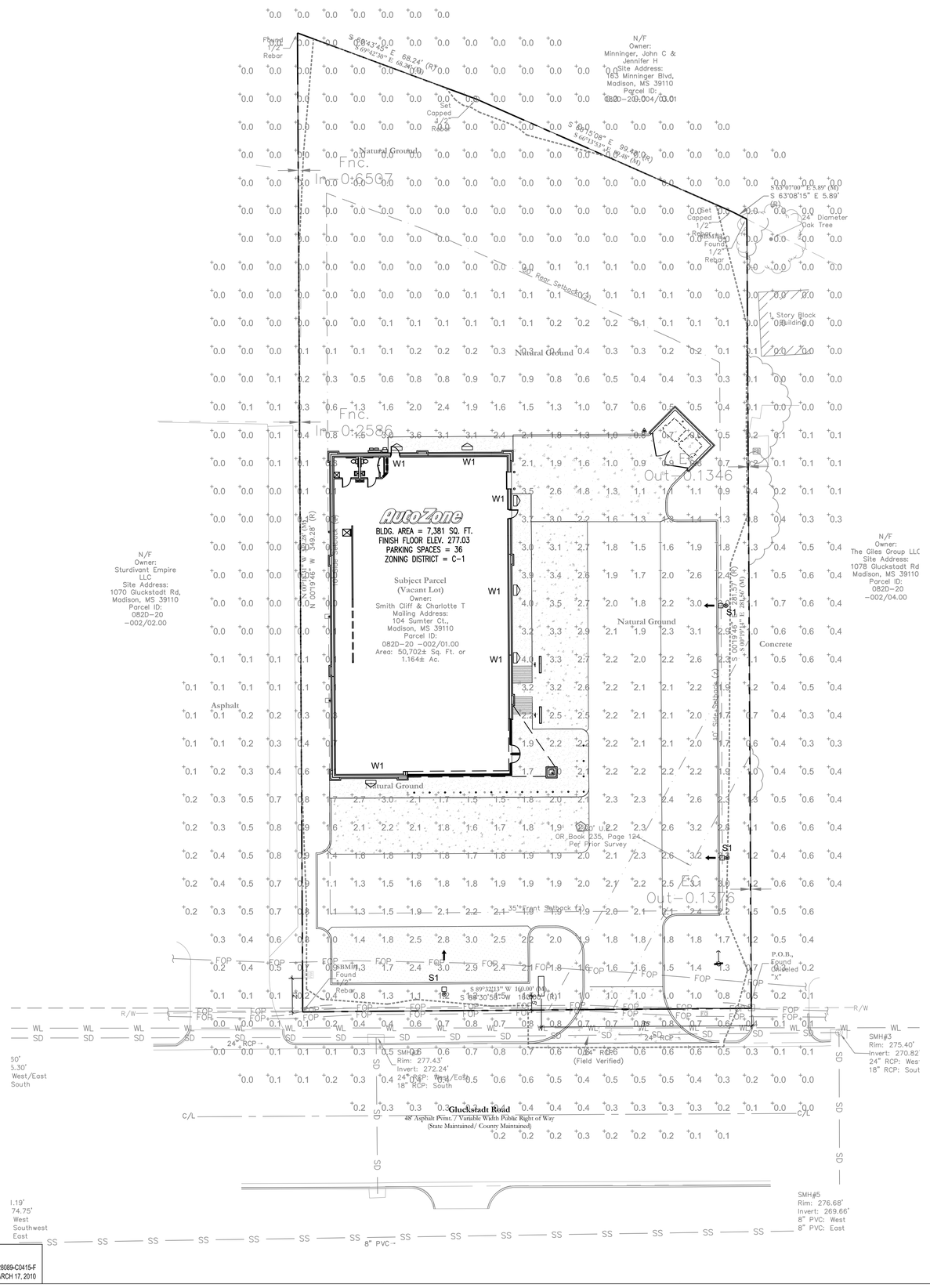

LUMINAIRE SCHEDULE						
TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF	QTY
S1		LITHONIA - DSX1 LED 60C IES FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 28'-0"	LED - 209 WATTS	ABSOLUTE	0.95	3
W1		LITHONIA - DSW1 LED 10C IESNA FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 12'-0"	LED - 40 WATTS	ABSOLUTE	0.95	6

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone	+	1.0 fc	4.0 fc	0.0 fc	N/A	N/A

LIGHTING NOTES:

1. TIME CONTROLS: ALL SITE LIGHTING IS CONTROLLED AND MONITORED BY AN ENERGY MANAGEMENT SYSTEM CALLED VENSTAR WHICH IS CONTROLLED AT AUTOZONE CORPORATE OFFICES. ALL SITE LIGHTING IS PROGRAMMED TO AUTOMATICALLY TURN ON AT DUSK AND TURN OFF 30 MINUTES AFTER THE CLOSE OF BUSINESS.

2. ALL FIXTURES ARE FULL CUTOFF DISTRIBUTION AND MOUNTED @ 0° DOWN POSITION.

3. NO FLOODLIGHTS ARE PROPOSED.

4. THE LIGHTING PLAN COMPLIES WITH THE PROVISIONS OF SECTION 1907 - LANDSCAPING AND LIGHTING FOR COMMERCIAL DEVELOPMENT IN MLHP OVERLAY DISTRICT LIGHTING STANDARDS AND GUIDELINES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

Civil Engineering Services
7705 Spicer Farm Lane
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phone: (615) 533-0401
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Engineering, Environmental, Land Planning

NORTH

NAD83 MS STATE PLANE

REVISIONS
1 2 3 4 5 6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
PHOTOMETRIC PLAN

Owner / Developer: AUTOZONE STORES LLC
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For Bidding & Contractor Information Contact:
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Cindy.searcy@construction.com

RAY G. TEAGUE LICENSED PROFESSIONAL ENGINEER 21060 PROFESSIONAL
03/10/2022

4/25/2023

7N2

PH 5.0

D-Series Size 1
LED Area Luminaire

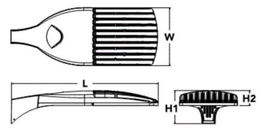
d-series

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 [1] P7 [1] P2 P5 [1] P8 P3 P6 [1] P9 [1] **Rotated optics** P10 [2] P12 [2] P11 [2] P13 [1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short [3] T5S Type V short [3] T5M Type V medium [3] T5W Type V wide [3] BLC Backlight control [4] LCCO Left corner cutoff [4] RCCO Right corner cutoff [4]	MVOLT [5] 120 [6] 208 [6] 240 [6] 277 [6] 347 [6] 480 [6]	**Shipped included** SPA Square pole mounting RPA Round pole mounting [7] WBA Wall bracket [7] SPUMBA Square pole universal mounting adaptor [8] RPUMBA Round pole universal mounting adaptor [8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) [9]

Control options		Other options		Finish (required)	
Shipped installed NLTAIR2 nLight AIR generation 2 enabled [10] PIRHN Network, high/low motion/ambient sensor [11] PER NEMA twist-lock receptacle only (controls ordered separately) [12] PER5 Five-pin receptacle only (controls ordered separately) [12,13] PER7 Seven-pin receptacle only (controls ordered separately) [12,13] DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) [14] DS Dual switching [15,16,17]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc [17,18] PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc [17,18] PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [17,18] PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [17,18] FAO Field adjustable output [12,19]	**Shipped installed** HS House-side shield [20] SF Single fuse (120, 277, 347V) [6] DF Double fuse (208, 240, 480V) [6] L90 Left rotated optics [2] R90 Right rotated optics [2] HA 50°C ambient operations [1] **Shipped separately** BS Bird spikes [21] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white		

D-Series Size 1
LED Wall Luminaire

d-series

Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements

Specifications

Luminaire

Width:	13-3/4" (34.9 cm)	**Weight:**	12 lbs (5.4 kg)
Depth:	10" (25.4 cm)		
Height:	6-3/8" (16.2 cm)		

Back Box (BBW, ELCW)

Width:	13-3/4" (34.9 cm)	**BBW Weight:**	5 lbs (2.3 kg)
Depth:	4" (10.2 cm)	**ELCW Weight:**	10 lbs (4.5 kg)
Height:	6-3/8" (16.2 cm)		

Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

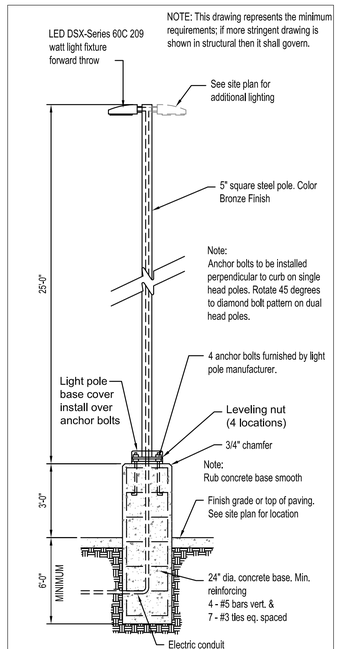
Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines) [1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A) [1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT [2] 120 [3] 208 [3] 240 [3] 277 [3] 347 [3,4] 480 [3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry) [5]	**Shipped installed** PE Photoelectric cell, button type [6] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht [7,8] PIRH 180° motion/ambient light sensor, 15-30' mtg ht [7,8] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [7,8] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [7,8] ELCW Emergency battery backup (includes external component enclosure), CA Title 20 Noncompliant [9,10]

Other Options		Finish (required)			
Shipped installed SF Single fuse (120, 277 or 347V) [3,10] DF Double fuse (208, 240 or 480V) [3,10] HS House-side shield [11] SPD Separate surge protection [12]	**Shipped separately** [11] BSW Bird-deterrent spikes VG Vandal guard DDL Diffused drop lens	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White	DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum	DSSXD Sandstone DWHGXD Textured white DSSTXD Textured sandstone	

Accessories
Ordered and shipped separately.

DSXWHS U House-side shield (one per light engine)
DSXWBSW U Bird-deterrent spikes
DSXWVG U Vandal guard accessory

NOTES
1. 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5. Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6. Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7. Reference Motion Sensor table on page 3.
8. Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
9. Not available with SPD.
10. Not available with ELCW.
11. Also available as a separate accessory; see Accessories information.
12. Not available with ELCW.



13 TYPICAL LIGHT POLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
4	5	6	

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110

PHOTOMETRIC DETAILS

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

4/25/2023

7N2

PH 5.1

BENCHMARK #1
1/2" REBAR
N: 1,097,408.07
E: 2,365,109.95
ELEV= 277.93

BENCHMARK #2
1/2" REBAR
N: 1,097,409.61
E: 2,365,269.98
ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

ALTA/NSPS Land Title Survey

□tle □n□or□at□on

First American □itle□Insurance Company National Commercial Services
File No□ NCS□0 □8 76 M□□
Commitment Date□ July 26, 202□ at 8□□ AM

Sc□edule □ □escr□t□on

□he Land referred to herein belo□ is situated in the County of Madison, State of Mississippi, and is described as follo□s:

A parcel of land containing 1 □□ acres□more or less, situated in the Southeast 1/4 of Section □0, □o□nship 8 North, Range 2 East, Madison County, Mississippi and more particularly described as follo□s:

□egin at a found iron pin in the ne□ Northern Right of Way line of □luc□stadt Road □hich is □62.2□□ feet South of and 1 4□5□9 feet East of the North□est corner of the Southeast 1/4 of said Section □0 as sho□n on attached survey and run □hence South 09 Degrees □□ Minutes 5 4 Seconds West along said Northern Right of Way line for a distance of □6 □□□ feet to a found iron pin, Leaving said ne□ Right of Way line, Run thence North □0 Degrees □9 Minutes 46 Seconds West for a distance of 3 9□38 feet to a found iron pin□ □hence South 6□ Degrees 4□ Minutes 45 Seconds East for a distance of 6 5□4 feet□ □hence South □6 Degrees 1 □ Minutes 0 4 Seconds East for a distance of 9□48 feet□ □hence South □3 Degrees 0 4 Minutes 1 □ Seconds East for a distance of 5 49 feet□ □hence South □0 Degrees 1 □ Minutes 46 Seconds East along the edge of concrete par□ing and a pro□ection thereof for a distance of 2 4□5 □ feet to the Point of □eginning.

Sc□edule B - Sect□on □□

- Right of Way Easement granted to □ear Cree□ Water Association□Inc. recorded in □oo□161 Page □32 Mec□lenburg County Registry. (Does not affect)
- Right of Way and easement granted to Mississippi Po□er & Light Company recorded in □oo□□4, Page 7□4. (Does not affect)
- Right of Way and Easement Deed for Distribution System granted to Centerpoint Energy Resources Corp□d/b/a Centerpoint Energy Mississippi □as recorded in □oo□20□8, Page □3 (Does not affect)
- Right of Way and easement granted to Mississippi Po□er & Light Company recorded in □oo□□35 Page 7□4, (Affects□approx□imate location sho□n hereon)
- □erms and conditions of that certain □uitclaim and □oundary Line Agreement by and bet□een Cliff Smith and Charlotte T. Smith□□he□ des□roup LLC□and Sturdivant Empire LLC recorded in □oo□□655 Page 91□. **(□□ects, □urrent Boundar□as s□o□n)**

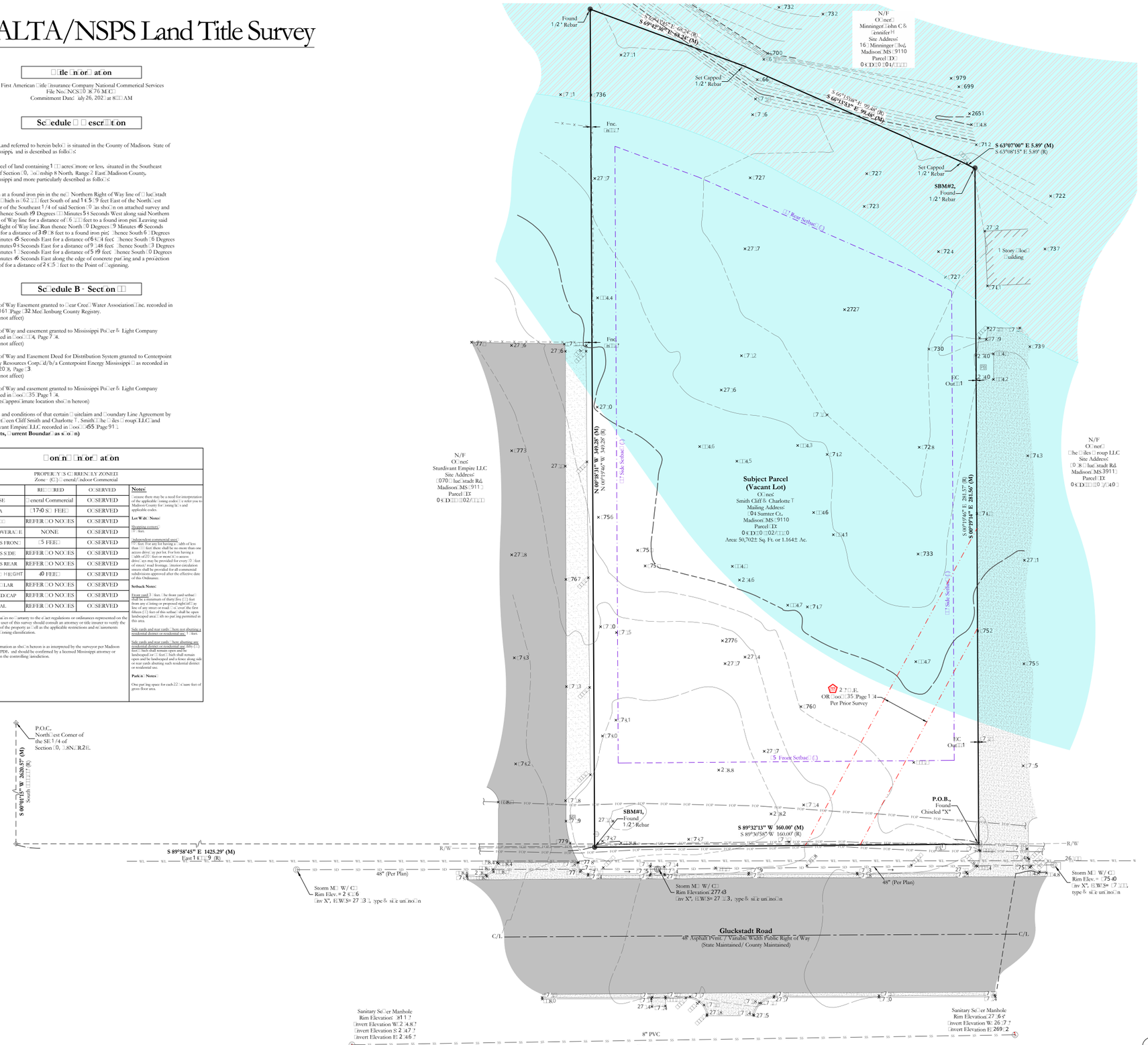
□on□□□n□or□at□on

PROPER□Y □S C□RREN□LY ZONED: Zone- (C-2)□ eneral/□ndoor Commercial

□□EM	RE□□RED	O□SERVED	Notes:
PERMI□□ED □SE	□eneral Commercial	O□SERVED	□nsure there may be a need for interpretation of the applicable □oning code□□e refer you to Madison County for□zoning □s and applicable codes.
M□N. LO□ AREA	□17,0 S□ FEE□	O□SERVED	**Lot Wid□ Notes:**
M□N. LO□ WID□□	REFER□□O NO□ES	O□SERVED	Shopping centers: 50□ feet.
MAX. □LD□ COVERA□E	NONE	O□SERVED	
M□N. SE□□AC□S FRON□	□5 FEE□	O□SERVED	Independent commercial uses: 200 feet. For any lot having a□width of less than □□□ feet□there shall be no more than one access drive□on por□on, For lots having a □width of 20□ feet or more□□o access drive□ays may be provided for every □0□feet of street□ road frontage. □motor circulation streets shall be provided for all commercial subdivisions approved after the effective date of this Ordinance.
M□N. SE□□AC□S SIDE□	REFER□□O NO□ES	O□SERVED	
M□N. SE□□AC□S REAR	REFER□□O NO□ES	O□SERVED	
MAX□□□LD NU□ HE□GHT	40 FEE□	O□SERVED	**Setback Notes:**
PAR□□NG□ RE□□LAR	REFER□□O NO□ES	O□SERVED	Front yard: 3□ feet. □he front yard setback shall be a minimum of thirty five □5□ feet from any e□sting or proposed right□of□way line of any street or road□□□cept the first fifteen □5□ feet of this setback shall be open landscaped area□□ith no par□ing permitted in this area.
PAR□□NG□ □ AND□CAP	REFER□□O NO□ES	O□SERVED	Side yards and rear yards□□here not abutting a residential district or residential use, □ 5 feet.
PAR□□NG□ □O□AL	REFER□□O NO□ES	O□SERVED	Side yards and rear yards□□here abutting any residential district or residential use, 15□ feet□ Such shall remain open and be landscaped or□□ feet□Such shall remain open and be landscaped and a fence along side or rear yards abutting such residential district or residential use.
			Park□ng Notes□
			One par□ing space for each 22□□ square feet of gross floor area.

□he□ & Associates ma□es no□warranty to the e□act regulations or ordinances represented on the dra□ing hereon,□he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as□well as the applicable restrictions and re□uirements associated□□ith such□oning classification.

Specific□oning information as sho□n hereon is as interpreted by the surveyor per Madison County□zoning□2021□PDF, and should be confirmed by a licensed Mississippi attorney or □oning professional in the controlling jurisdiction.



Ele□at□on Benc□□arks

Site □enchmar□□□□		Site □enchmar□□□□	
□ype	Found 1/2" Rebar	□ype	Found 1/2" Rebar
Northing	□□□□40 8.□□	Northing	□□□4□□□
Easting	□□□□□□□□.□□	Easting	□□□□□□□.8
Elevation	□□□.□'	Elevation	□□□.84'

□enchmar□s Northing & □astings are applied □ith scale factor

DA□E	REVIS□ON	□Y

M□scellaneous Notes

1. Completed field □ork□as August 19, 202□.
2. □he□lass of□earing for this survey is □rid North per□PS coordinate observations Mississippi State Plane□West Zone NAD83 Latitude = 32°31'01.52438" Longitude = -90°00'38.10102" Convergence Angle = -00°07'11.06336" □ Distances sho□n on plat are ground. Combined scale factor (ground to grid) = 0 □9995539□3531
4. Some features on this plat may be sho□n out of scale for clarity.
5. Dimensions on this plat are e□pressed in feet and decimal parts thereof unless other□ise noted, Monuments□ere found at points□here indicated.
6. Any servitudes and restrictions sho□n on this survey are limited to those set forth in the description furnished to surveyo□ and there is no representation that all applicable servitudes and restrictions are sho□n hereon.
7. Names and addresses of ad□oining property o□ners□ere ta□en from Madison County ta□ cards and deeds.
8. □he nearest fire hydrant is located in the South Right of Way of Cluc□stadt Road approximately 200□ West of the Southwest corner of subject property.
9. No surveyor or any other person other than a licensed Mississippi attorney may provide legal advice concerning the status of□itle to the property described in this survey ("the subject property"). □he purpose of this survey□and the comments related to the Schedule □□□e□ceptions□is only to sho□ the location of boundaries and physical ob□ections in relation thereto. □o the e□tent that the survey indicates that the legal instrument "affects" the subject property, such statement is only intended to indicate that property boundaries included in such instrument include some or all of the subject property. □he surveyor does not purport to describe ho□ such instrument affects the subject property or the enforceability or legal conse□uences of such instrument.
10. All bearings and distances sho□n hereon are measured dimensions unless other□ise noted hereon, Record dimensions□if differing from measured dimensions□□ill be follo□ed by "(R)"□□here the # indicates from □hich reference document the dimension originated.
11. Contour□nterval = 1 foot
12. No par□ing spaces observed.
13. Surveyor notes that the property abuts the right□of□ay of Cluc□stadt Road. Access to the right□of□ay may be subject to other agreements or proper governmental approvals.
14. □here□as no evidence of monitor□ells, or any test borings on the subject property at the time of the survey.
15. At the time of the survey, □here□as no observable evidence of site use as a cemetery, isolated grave site or burial grounds.
16. At the time of the survey, □here□as no observable evidence of site use as a solid □aste dump, sump, or sanitary landfill.
17. Elevations established □ith □PS static observations utili□ing online positioning user service (OPU□S) for post processing, (NAVD□88 datum)
18. At the time of the survey, □here□are no changes in street right□of□ay lines either completed or proposed□and available from controlling jurisdiction or observable evidence of recent street or side□alk construction repairs.
19. □here□as no observable evidence of Earth moving □ork□building construction or building additions □ithin recent months.
20. □he nearest intersecting street is the intersection of Cluc□stadt Road and Le□ington Drive□ which is approximately 0.7 from the South□est corner of the subject property.
21. Surveyor did not receive current deeds for ad□oining properties from the title insurer. Surveyor obtained the deed information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the current deed descriptions for ad□oining properties.
22. Reference documents noted hereon□are obtained by the surveyor and any and all representations based thereon should be revie□ed by a licensed attorney or title insurer for verification.
23. Surveyor did not receive any information from the title insurer regarding the current □oning classification of the property or any re□uirements related to the applicable □oning classification. Surveyor obtained the □oning information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as□ell as the applicable restrictions and re□uirements associated□□ith such □oning classification.
24. No □uildings observed at the time of the Survey
25. Sanitary Se□er□ines and Water lines sho□n per map provided by the □ear Cree□ Water Association. No mar□ings or other evidence for such utilities□as observed in the field.

□lood Note

□y graphic plotting only, this property is in Zone AE of the Flood□nsurance Rate Map□Community Panel No.2 0 4□□C 4□5 □, □hich bears an effective date of 03/□7/□01□and is in a Special Flood□a□ard Area

Zone Definitions According to the FEMA □ebsite.

Zone "AE" - □he base floodplain□here base flood elevations are provided. AE Zones are no□ used on ne□ format FIRMs instead of A□A□□ Zones.

Zone "X □□nshaded" - Area of minimal flood ha□ard, usually depicted on FIRMs as above the□00 year flood level. Zone X is the area determined to be outside the □00 year flood and protected by levee from□00 year flood.

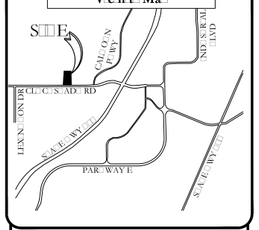
Zone "Shaded X" - Area of moderate flood ha□ard, usually the area bet□een the limits of the□00 year and□00 year floods.

□ □□□ Notes

□he utilities sho□n on this dra□ing hereon have been located by field measurements, utility map dra□ings and one□call utility locate re□uest. □he□ & Associates ma□es no□warranty to the e□act location of any underground utilities sho□n or not sho□n on this dra□ing. It is the responsibility of the contractor to verify any and all utilities prior to construction. Call Mississippi one□call at 1 (811) 227.4□□ for field locations (re□uest for ground mar□ings) of underground utility lines before digging.

811 □uc□□hat's Belo□ Call before you dig.

V□c□n□t□ Ma□



Le□end o□S□ bols & □bbre□at□ons

×xxxx.x Spot Elevation	(M) Measured Dimension
Found Rebar (As Noted)	(R) Recorded Dimension
Set Rebar (As Noted)	(□) Zoning Re□uirements
Computed Point	N/F No□ or Formerly
Found Chiseled "X"	S□M Site □enchmar□
Fiber Optic P□□	M□ Manhole
□elephone Pedestal	C□ Curb □nlet□Basin
Fiber Optic Vault	□nv □nvert of Pipe
Mail B□□	P.O.C. Point of Commencement
Po□er B□□	P.O.□. Point of □eginning

- Ad□oiner Property Line
- Subject Property Line
- Easement line
- □tility Easement
- □uilding Setback
- Right□of□Way
- FOP — Fiber Optic Line
- SD — Storm Se□er Line
- W — Buried Water Line
- SS — Sanitary Se□er Line
- □G — Underground □as
- □ □ □ Chainlin□ Fence
- Contour Ma□or
- Contour Minor

Asphalt · Concrete · □ravel

Flood Zone - AE / AO / A□

Flood Zone- Flood□ay (Zones AE, AO, A, V, X)

Scale□1" = □□'

□ □□' 40'

Sur□e□or's □ert□□cat□on

□□ AutoZone Parts, Inc□Cliff Smith and Charlotte T. Smith□ Civil Engineering Services, PC□First American□itle□Insurance Company National Commercial Services:

□his is to certify that this map or plat and the survey on□hich it is based□□ere made in accordance□□ith the□2□Minimum Standard Detail Re□uirements for AL□A/NSPS Land□itle Surveys□jointly established and adopted by AL□A and NSPS, and includes items□1, 3, 4□5, 6(a),7(b□), 8, 9, 11, 13, 16, 17, 18, □9, 2□& 2 2 of□able A thereof. □he field □or□□as completed on 03/□9/□02□.

Date of Plat or Map□1 /□4/2021

Preliminary

□uc□ley□le□
Professional Surveyor #□□86□
State of Mississippi

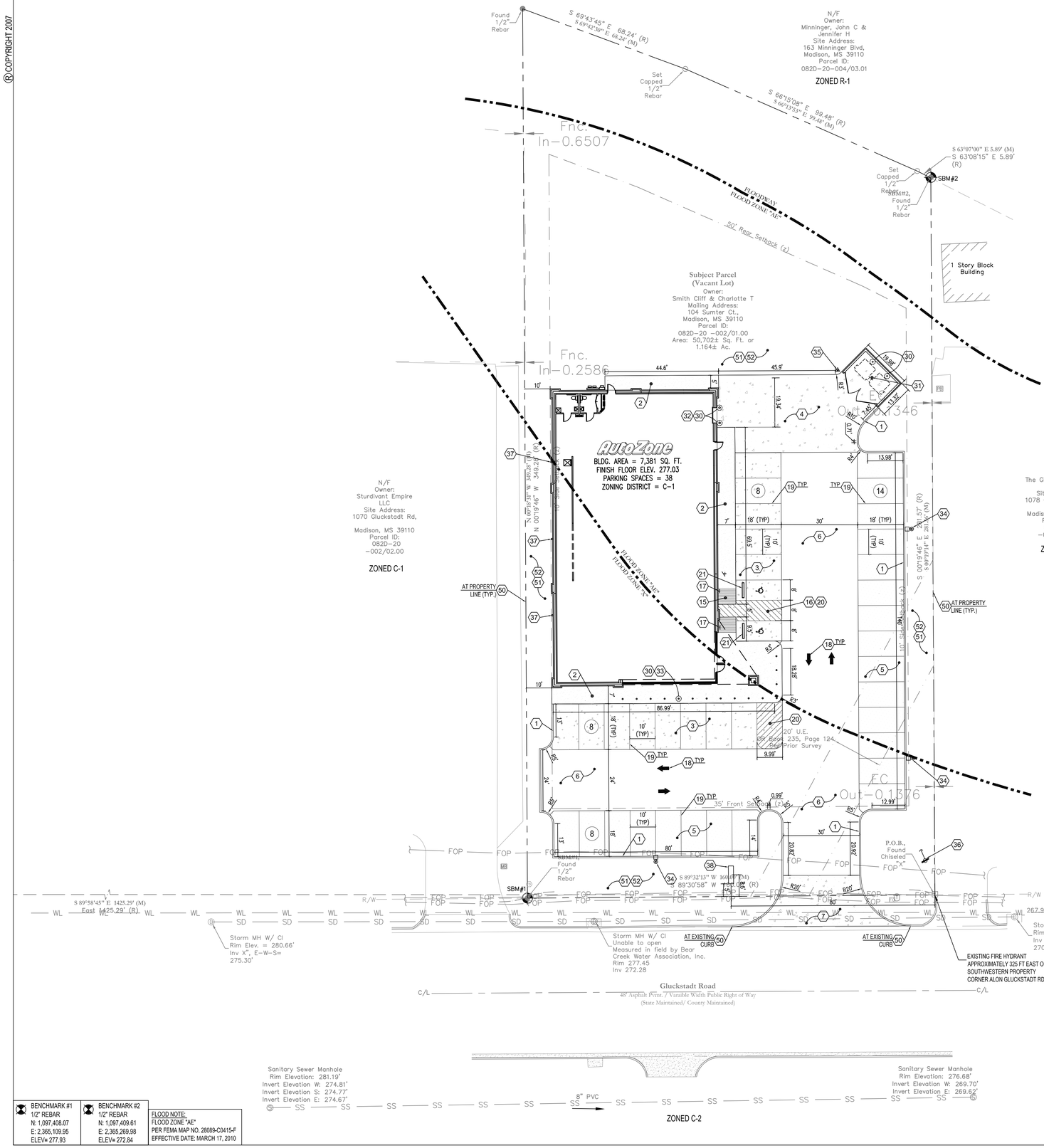
BLEW & ASSOCIATES, PA
CIVIL ENGINEERS & LAND SURVEYORS
3□5 N. S□□LO□ DRIVE
FAYE□□EVILLE, AR□ANSAS 72703
OFF□CE 4□□.44□.4506
FAX: 47□.8□.1883
□□□□LEW□NC.com

DRAWN□Y: DA□E	REVIEWED□Y:	S□RVEYED□Y:
DLD/M□ □□/□4/2□□□	□ C/PRS	□□
CO□NCY□ SCA□E:	CF□ N□MBER:	
Madison□Mississippi		□□□□□□

LOCA□ION:
Property □est of □□8 □luc□stadt Rd□□luc□stadt□MS

FOR□□S□ AND□ENS□E OF:
CES (AutoZone) - (MS5607) □luc□stadt, MS

Sheet 1 of 1



SITE LEGEND

(10)	PARKING STALL COUNT - SEE PLANS
	REGULAR ASPHALT PAVING (SEE DETAIL SHEET)
	HEAVY DUTY ASPHALT PAVING (SEE DETAIL SHEET)
	CONCRETE SIDEWALK (SEE DETAIL SHEET)
	HEAVY DUTY CONCRETE PAVING (SEE DETAIL SHEET)
	REGULAR DUTY CONCRETE PAVEMENT AT PARKING STALLS AROUND BUILDING (SEE DETAIL SHEET)

KEYNOTES

PAVEMENT AND CURBING

1. CONCRETE CURB @ CONCRETE/ASPHALT PAVING - SEE DETAIL 1 & 2 / C4.0
2. CONCRETE SIDEWALK - SEE DETAIL 27/C4.0 - SEE DETAIL 22/C4.0 FOR SIDEWALKS AROUND BUILDING
3. REGULAR DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
4. HEAVY DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
5. REGULAR DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
6. HEAVY DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
7. PROVIDE NEW CURB CUT & APPROACH PER LOCAL CODES & SPECS. - ENTRANCE TO BE HEAVY DUTY CONCRETE - SEE DTL. 3/ C4.0

PAVEMENT STRIPING / ADA FEATURES / TRAFFIC SIGNAGE

15. ACCESSIBLE RAMP - SEE DETAIL 19/C4.0 - MAX. SLOPE 1:12 (8.33%) , MAX. CROSS SLOPE 1:50 (2.00%) TRUNCATED DOME TO BE A CONTRASTING COLOR
16. HANDICAP PARKING AREA - SEE THIS PLAN FOR DIMENSIONS - SEE DETAILS 6,7, AND 12/C4.0
17. HANDICAP PARKING SIGN - SEE DETAIL 12/C4.0 G.C. TO PROVIDE ONE VAN ACCESSIBLE SIGN.
18. ONSITE PAVEMENT MARKINGS - SEE DETAIL 25 & 26/C4.0
19. 4" WIDE PARKING STRIPE PAINTED YELLOW (TYP.)
20. 4" WIDE DIAGONAL STRIPES PAINTED YELLOW AT 2 FT. O.C.
21. 6'-0" LONG CONCRETE WHEEL STOP PINNED TO PAVEMENT (TYPICAL). LOCATE 3'-6" FROM FACE OF CURB OR SIDEWALK SEE DETAIL 17 / C4.0

AUTOZONE SITE FEATURES

30. PIPE GUARD - SEE DETAIL 16 / C4.0
31. DUMPSTER LAYOUT - SEE DETAILS 8,9,10, & 11/ C4.0
32. SERVICE DOOR PLAN - SEE DETAIL 15/ C4.0
33. BOLLARD PLAN - SEE DETAIL 14/ C4.0
34. CONCRETE LIGHT POLE BASE - SEE DETAIL 13/ C4.0 AIM LIGHT FIXTURE IN DIRECTION AS INDICATED. SEE ELECTRICAL PLANS FOR ROUTING
35. FREEZELESS YARD HYDRANT AT BUILDING - SEE DETAIL 6 ON SHEET M2
36. APPROXIMATE LOCATION FOR POLE MOUNTED TRANSFORMER PER SERVICE PROVIDER SPECIFICATIONS - COORDINATE WITH SERVICE PROVIDER PRIOR TO CONSTRUCTION
37. PROVIDE DOWNSPOUT CONNECTOR AT BUILDING DOWN SPOUT - SEE ARCHITECTURAL PLANS - SEE DETAIL 21/ C4.0 - SEE GRADING PLAN FOR INVERTS
38. 4'-2"X7'-0"X2'-0" MONUMENT SIGN 12'-0" OVERALL HEIGHT - SEE SIGNAGE SHEETS FOR DETAILS - FINAL LOCATION AND DESIGN TO BE DETERMINED DURING SIGN PERMIT REVIEW

ADDITIONAL SITE FEATURES

50. TIE TO EXISTING - MATCH GRADE
51. GRASS AREA - PROVIDE 6" TOPSOIL & SOD COMMON TO REGION ON ALL DISTURBED AREAS NOT TO BE PAVED
52. SLOPE GRADE FROM BACK OF CURB DOWN TO MATCH THE EXISTING/PROPOSED GRADE - SEE GRADING PLAN

GENERAL AZ NOTES

1. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY THE ARCHITECT OF ANY UNACCEPTABLE AREAS.
2. EDGE OF NEW PAVEMENT TO BE FLUSH WITH EXISTING PAVEMENT.
3. ALL SIDEWALK CURB AND GUTTER STREET PAVING, CURB CUTS, DRIVEWAY APPROACHES, HANDICAP RAMP, ETC, CONSTRUCTED OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY SHALL CONFORM TO ALL MUNICIPAL AND/OR STATE SPECIFICATIONS AND REQUIREMENTS.
4. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC.) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
5. FOR PROPOSED UTILITY LOCATIONS, SEE THE UTILITY PLAN.

SITE DATA INFORMATION

PARKING REQUIRED (1/225 SF) = 33
EXISTING PARKING = 0
PROPOSED PARKING = 36
HC SPACES REQUIRED = 2
HC SPACES PROVIDED = 2
TOTAL PARKING = 38
PARKING STALL SIZE = 10'X18'
ADA PARKING STALL SIZE = 8'X18'
LOT AREA = 50,702 SF / 1.164 AC
NUMBER OF BUILDINGS = 1
BUILDING AREA = 7,381 SF
FLOOR AREA RATIO = 14.56%

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - CONTRACTOR TO GUARANTEE AND MAINTAIN ALL NEW SODDED AREAS FOR 60 DAYS MINIMUM, AND ALL SODDED AREAS ARE STABILIZED.

PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL NEW GRASS SODDED AREAS TO BE IRRIGATED - IRRIGATION PLAN TO BE DESIGN BUILD BY G.C. - COORDINATE WITH A SOUTH CAROLINA CERTIFIED IRRIGATION CONTRACTOR

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
4	5	6	

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
MS 39110

GLUCKSTADT
SITE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

10/08/2021

7N2

C1.0

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

GENERAL UTILITY NOTES

1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. GENERAL CONTRACTOR TO COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR ALL LOCATIONS AND CONNECTIONS. A PRECONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES, IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT AUTOZONE IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
4. THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND CITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATION'S, INSPECTIONS, AND DEMOLITION. (AUTOZONE TO REIMBURSE GENERAL CONTRACTOR FOR ALL SANITARY SEWER AND WATER TAP FEES).
5. ALL VALVE BOXES AND CURB BOXES SHALL BE ADJUSTED TO THE FINAL GRADES. ALL CURB BOXES SHALL BE LOCATED IN GRASSED AREAS UNLESS INDICATED OTHERWISE ON THE PLANS.
6. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES UNLESS OTHERWISE SHOWN, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED. WHERE WATER LINE CROSSES ABOVE SANITARY LATERAL BY LESS THAN 2' VERTICAL, A CONCRETE ENCASEMENT SHALL BE INSTALLED, CONTRACTOR SHALL CENTER ONE JOINT OF PIPE AT CROSSING.
7. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS. SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE GOVERNING AUTHORITY.
9. WATER PIPE SHALL BE PEX (HDPE) TUBING.
10. ALL SANITARY SEWER MAIN LINES SHALL BE SCHEDULE 40 PVC PIPE (EXCEPT AS NOTED ON PLANS). ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURE.

AUTOZONE WATER NOTES:

ALL WATER INFRASTRUCTURE CONSTRUCTION TO BE COORDINATED WITH THE LOCAL UTILITY SERVICE DEPARTMENT.

AUTOZONE TO REIMBURSE GENERAL CONTRACTOR FOR ALL SANITARY SEWER, GAS, AND WATER TAP FEES.

UTILITY CONTACTS

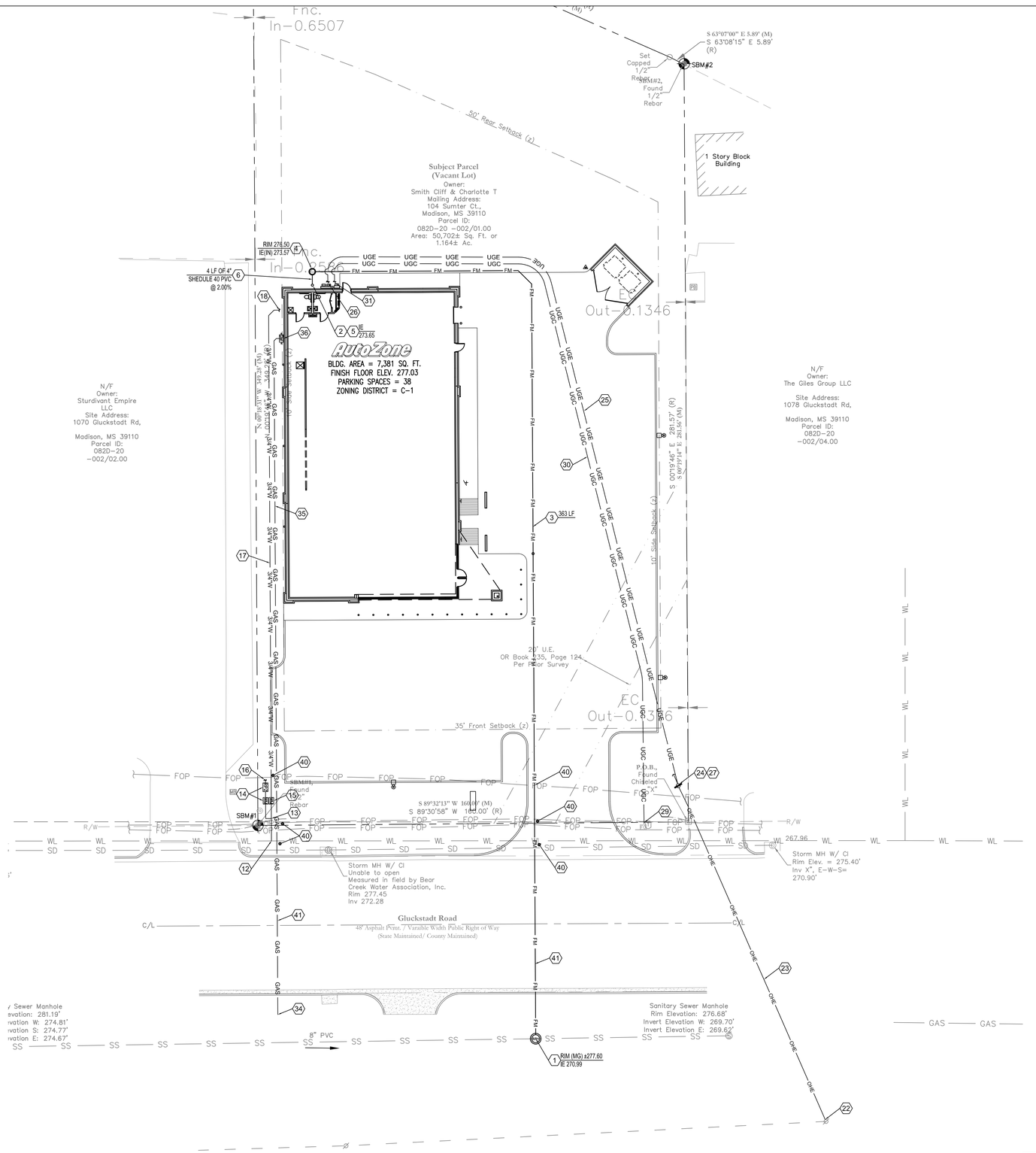
WATER DEPARTMENT
MADISONVILLE WATER
400 COLLEGE STREET N
MADISONVILLE, TN 37354
FRED CAGLE - COMMISSIONER
(423)572-0554

SANITARY SEWER DEPARTMENT
MADISONVILLE SANITATION
400 COLLEGE STREET N
MADISONVILLE, TN 37354
CHARLIE MCDONALD - COMMISSIONER
(423)572-0554

ELECTRIC DEPARTMENT
FORT LOUDOUN ELECTRIC COOPERATIVE
116 TELLICO PORT RD
VONORE, TN 37885
(877)353-2674

GAS DEPARTMENT
MADISONVILLE WATER
400 COLLEGE STREET N
MADISONVILLE, TN 37354
FRED CAGLE - COMMISSIONER
(423)572-0554

COMMUNICATIONS



PROPOSED UTILITY LEGEND

FM	LOW PRESSURE FORCE MAIN FOR SANITARY SEWER SERVICE PER LOCAL SERVICE PROVIDER SPECS.
W	WATER LINE PER LOCAL UTILITY CO SPECS.
GAS	GAS LINE PER LOCAL UTILITY CO SPECS.
UGE	UNDERGROUND ELECTRIC SERVICE PER LOCAL UTILITY CO SPECS.
UGC	UNDERGROUND TELEPHONE AND COMMUNICATIONS SERVICE PER LOCAL UTILITY CO SPECS.
RPBP	BACK FLOW PREVENTER PER LOCAL UTILITY CO SPECS.
WM	WATER METER PER LOCAL UTILITY CO SPECS.

PROPOSED UTILITY BLOCK NOTES

SANITARY SEWER SERVICE:

1. TIE TO EXISTING MAIN WITH PRECAST CONCRETE MANHOLE PER SERVICE PROVIDER SPECS - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
2. SANITARY SEWER SERVICE ENTRY TO BUILDING - SEE ELEVATION THIS SHEET - SEE PLUMBING PLANS FOR CONTINUATION AND POINT OF ENTRY
3. INSTALL SCHEDULE 40 PVC LOW PRESSURE FORCE MAIN FOR SANITARY SEWER SERVICE PER LOCAL SERVICE PROVIDER SPECS.
4. INSTALL 2HP SIMPLEX GRINDER PUMP STATION WITH 24"X72" TANK WITH HEAVY DUTY TRAFFIC RATED LID - RINGS AND LIDS MUST BE VULCAN 1384
5. INSTALL SANITARY SEWER CLEANOUT PER LOCAL SERVICE PROVIDER SPECS. - SEE SIZE, TYPE AND SLOPE THIS SHEET - SEE DETAIL SHEET
6. INSTALL SCHEDULE 40 PVC SANITARY SEWER LINE, PER LOCAL SERVICE PROVIDER SPECS. - SEE SIZE AND SLOPE THIS SHEET

WATER SERVICE:

12. CONNECT TO EXISTING WATER MAIN WITH 1.5" TAPPING SLEEVE AND VALVE PER LOCAL SERVICE PROVIDER SPECS - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
13. PROVIDE 1.5" WATERLINE AND 1.5" TEE WITH 3/4" REDUCER FOR DOMESTIC SERVICE AND 1" REDUCER FOR IRRIGATION SERVICE - PER SERVICE PROVIDER SPECS.
14. PROVIDE 1" METER AND VALVE WITH ABOVE GROUND RPBP AND ENCLOSURE FOR IRRIGATION SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
15. PROVIDE 3/4" METER AND VALVE FOR DOMESTIC WATER SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
16. STUB OUT 1" SCH 40 PVC LINE FOR IRRIGATION
17. PROVIDE DOMESTIC WATER SERVICE LINE - INSTALL 1" CLASS 200, DR9 HDPE PIPE (POLYPIPE PA-PE3408/PE3608 OR APPROVED EQUAL) - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
18. DOMESTIC WATER SERVICE ENTRY WITH INTERNAL 1" RPBP PER CITY SPECS. - SEE PLUMBING PLANS

ELECTRIC SERVICE:

22. CONNECTION TO EXISTING ELECTRICAL SERVICE PER LOCAL SERVICE PROVIDER SPECS. - G.C. TO COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
23. PROVIDE PRIMARY OVERHEAD ELECTRICAL PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
24. PROVIDE POLE MOUNTED TRANSFORMER - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
25. PROVIDE SECONDARY UNDERGROUND ELECTRIC PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDE PRIOR TO ANY WORK DONE - SEE ELECTRICAL PLANS FOR CONDUIT SIZE AND CONNECTION POINT INTO THE BUILDING.
26. ELECTRIC SERVICE POINT OF ENTRY INTO BUILDING - SEE ELECTRICAL PLANS FOR CONDUIT SIZE AND CONNECTION POINT INTO THE BUILDING.
27. PROVIDE SERVICE POLE WITH GUY WIRE(S) PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE

COMMUNICATIONS SERVICE:

29. POINT OF CONNECTION FOR TELEPHONE / COMMUNICATIONS SERVICE PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
30. PROVIDE UNDERGROUND TELEPHONE / COMMUNICATIONS PER LOCAL SERVICE PROVIDER REQUIREMENTS COORDINATE WITH LOCAL SERVICE PROVIDERS PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING.
31. UNDERGROUND TELEPHONE / COMMUNICATIONS POINT INTO THE BUILDING - COORDINATE WITH ELECTRIC SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING - PROVIDE BOLLARD SEE PLAN - SEE DETAIL

GAS SERVICE:

34. SERVICE PROVIDER TO TIE TO EXISTING GAS LINE PER LOCAL SERVICE PROVIDER REQUIREMENTS - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
35. GAS SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
36. GAS METER AND SERVICE POINT INTO THE BUILDING - COORDINATE WITH ELECTRIC SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING

ADDITIONAL KEY NOTES:

40. UTILITY CROSSING PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDERS PRIOR TO ANY WORK DONE
41. SERVICE LINE TO BE BROUGHT TO PROPERTY UNDER EXISTING ROAD BY DIRECTIONAL DRILLING - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE - FIELD VERIFY FOR EXISTING UTILITIES PRIOR TO ANY WORK DONE

NOTE:
PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL LANDSCAPED AREAS TO BE IRRIGATED (IRRIGATION PLAN TO BE SUBBED OUT THRU G.C.) - SEE LANDSCAPE DRAWINGS FOR PLANTINGS AND DETAILS

SEE M.E.P. PLANS FOR ALL UTILITY SERVICE ENTRIES.
LOCATIONS SHOW ARE APPROXIMATE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
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Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS
1 2 3 4 5 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD MS 39110
GLUCKSTADT
UTILITY PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
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10/08/2021
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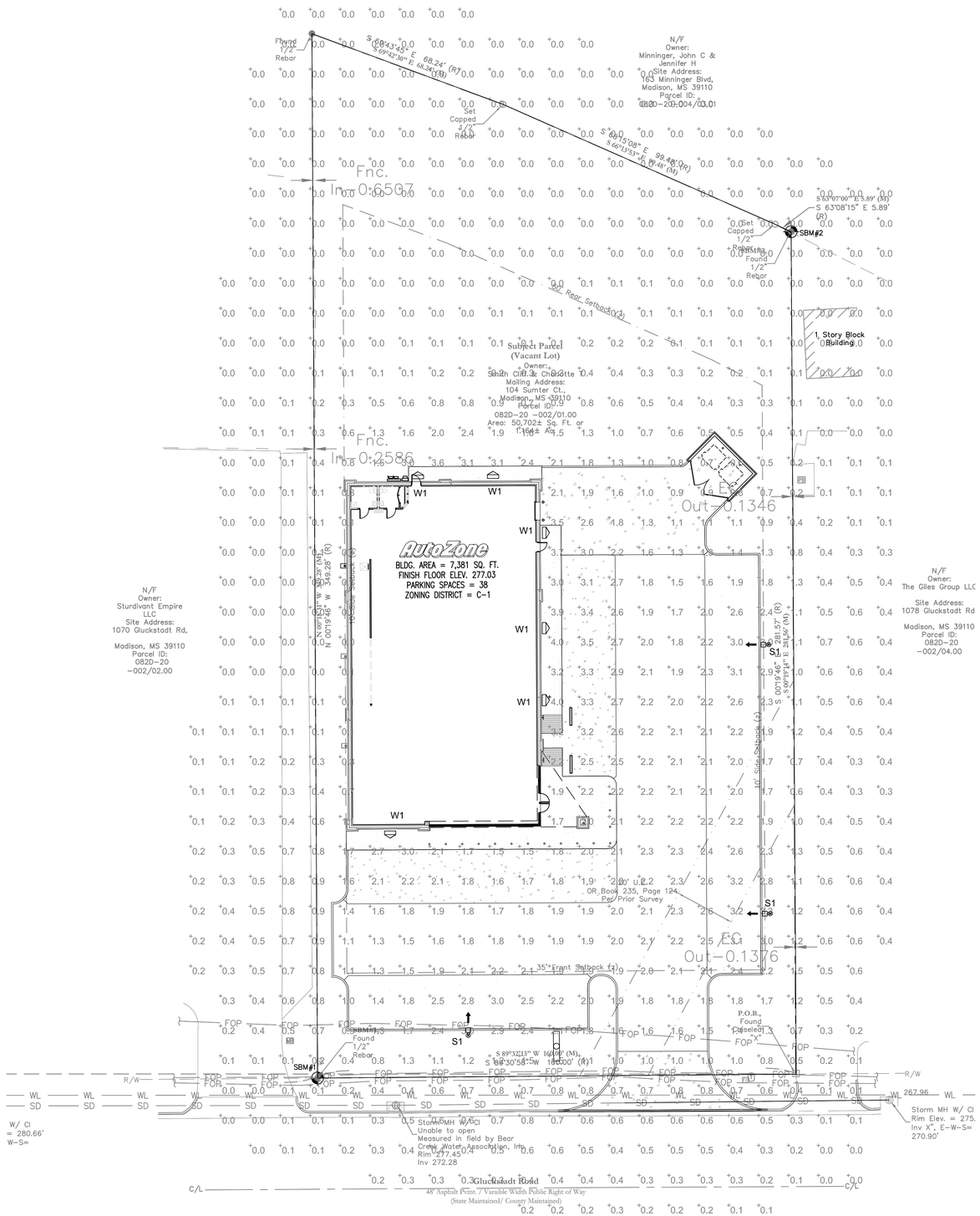
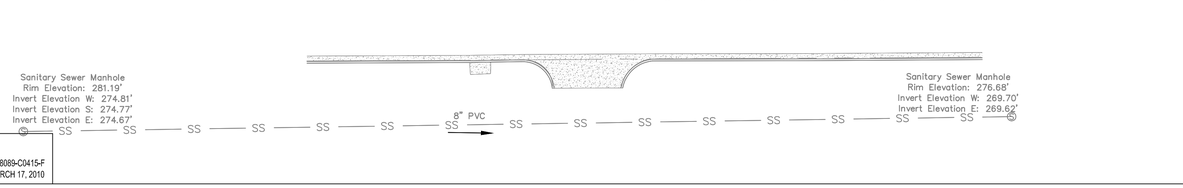
C3.0





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LUMINAIRE SCHEDULE

TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF	QTY
S1		LITHONIA - DSX1 LED 60C IES FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 28'-0"	LED - 209 WATTS	ABSOLUTE	0.95	3
W1		LITHONIA - DSW1 LED 10C IESNA FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 12'-0"	LED - 40 WATTS	ABSOLUTE	0.95	6

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone	+	1.0 fc	4.0 fc	0.0 fc	N/A	N/A

LIGHTING NOTES:

1. TIME CONTROLS: ALL SITE LIGHTING IS CONTROLLED AND MONITORED BY AN ENERGY MANAGEMENT SYSTEM CALLED VENSTAR WHICH IS CONTROLLED AT AUTOZONE CORPORATE OFFICES. ALL SITE LIGHTING IS PROGRAMMED TO AUTOMATICALLY TURN ON AT DUSK AND TURN OFF 30 MINUTES AFTER THE CLOSE OF BUSINESS.

2. ALL FIXTURES ARE FULL CUTOFF DISTRIBUTION AND MOUNTED @ 0° DOWN POSITION.

3. NO FLOODLIGHTS ARE PROPOSED.

4. THE LIGHTING PLAN COMPLIES WITH THE PROVISIONS OF SECTION 1907 - LANDSCAPING AND LIGHTING FOR COMMERCIAL DEVELOPMENT IN MLHP OVERLAY DISTRICT LIGHTING STANDARDS AND GUIDELINES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Civil Engineering Services
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NAD83 MS STATE PLANE

REVISIONS
1 2 3
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AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
PHOTOMETRIC PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
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TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
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10/08/2021

7N2

PH 5.0

D-Series Size 1
LED Area Luminaire

Catalog Number

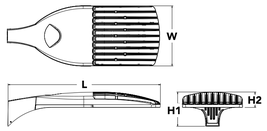
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33″ (83.8 cm)
Width:	13″ (33.0 cm)
Height H1:	7-1/2″ (19.0 cm)
Height H2:	3-1/2″
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 [1] P7 [1] P2 P5 [1] P8 P3 P6 [1] P9 [1] **Rotated optics** P10 [2] P12 [2] P11 [2] P13 [1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short [3] T5S Type V short [3] T5M Type V medium [3] T5W Type V wide [3] BLC Backlight control [4] LCCO Left corner cutoff [4] RCCO Right corner cutoff [4]	MVOLT [5] 120 [6] 208 [6] 240 [6] 277 [6] 347 [6] 480 [6]	**Shipped included** SPA Square pole mounting RPA Round pole mounting [7] WBA Wall bracket [7] SPUMBA Square pole universal mounting adaptor [8] RPUMBA Round pole universal mounting adaptor [8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) [9]

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark bronze
NLTAIR2	nLight AIR generation 2 enabled [10]	HS	House-side shield [20]	DBLXD	Black
PIRHN	Network, high/low motion/ambient sensor [11]	SF	Single fuse (120, 277 or 347V)	DNAXD	Natural aluminum
PER	NEMA twist-lock receptacle only (controls ordered separate) [12]	DF	Double fuse (208, 240 or 480V)	DWHXD	White
PER5	Five-pin receptacle only (controls ordered separate) [12,13]	L90	Left rotated optics [2]	DDBTXD	Textured dark bronze
PER7	Seven-pin receptacle only (controls ordered separate) [12,13]	R90	Right rotated optics [2]	DBLBXD	Textured black
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) [14]	HA	50°C ambient operations [1]	DNATXD	Textured natural aluminum
DS	Dual switching [15,16,17]	**Shipped separately**		DWHGXD	Textured white
PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc [17,18]	BS	Bird spikes [21]		
PIRH	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc [17,18]	EGS	External glare shield		
PIR1FC3V	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [17,18]				
PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [17,18]				
FAO	Field adjustable output [17,19]				

d#series

D-Series Size 1
LED Wall Luminaire

Catalog Number

Notes

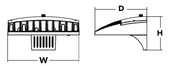
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

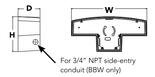
Luminaire

Width:	13-3/4″ (34.9 cm)	**Weight:**	12 lbs (5.4 kg)
Depth:	10″ (25.4 cm)		
Height:	6-3/8″ (16.2 cm)		



Back Box (BBW, ELCW)

Width:	13-3/4″ (34.9 cm)	**BBW Weight:**	5 lbs (2.3 kg)
Depth:	4″ (10.2 cm)	**ELCW Weight:**	10 lbs (4.5 kg)
Height:	6-3/8″ (16.2 cm)		



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines) [1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A) [1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT [2] 120 [3] 208 [3] 240 [3] 277 [3] 347 [3,4] 480 [3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry) [5]	**Shipped installed** PE Photoelectric cell, button type [6] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht [6,7] PIRH 180° motion/ambient light sensor, 15-30' mtg ht [6,7] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [6,7] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [6,7] ELCW Emergency battery backup (includes external component enclosure), CA Title 20 Noncompliant [8,9]

Other Options		Finish (required)					
Shipped installed		**Shipped separately** [11]		DDBXD	Dark bronze	DSSXD	Sandstone	DWHGXD	Textured white
SF	Single fuse (120, 277 or 347V) [3,10]	BSW	Bird-deterrent spikes	DBLXD	Black	DDBTXD	Textured dark bronze	DSSTXD	Textured sandstone
DF	Double fuse (208, 240 or 480V) [3,10]	VG	Vandal guard	DNAXD	Natural aluminum	DBLBXD	Textured black		
HS	House-side shield [5]	DDL	Diffused drop lens	DWHXD	White	DNATXD	Textured natural aluminum		
SPD	Separate surge protection [12]								

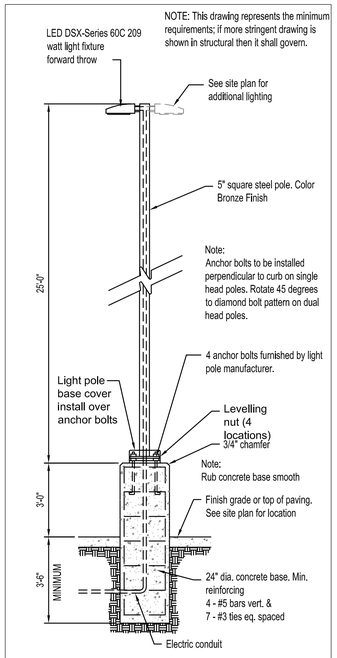
Accessories

Ordered and shipped separately.

DSXWHS U House-side shield (one per light engine)
DSXWBSW U Bird-deterrent spikes
DSXW1VG U Vandal guard accessory

NOTES

1. 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5. Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6. Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7. Reference Motion Sensor table on page 3.
8. Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
9. Not available with SPD.
10. Not available with ELCW.
11. Also available as a separate accessory; see Accessories information.
12. Not available with ELCW.



NO SCALE SEC-C13

13 TYPICAL LIGHT POLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1
1/2" REBAR
N: 1,097,408.07
E: 2,365,109.95
ELEV= 277.93

BENCHMARK #2
1/2" REBAR
N: 1,097,409.61
E: 2,365,269.98
ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110

PHOTOMETRIC DETAILS

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

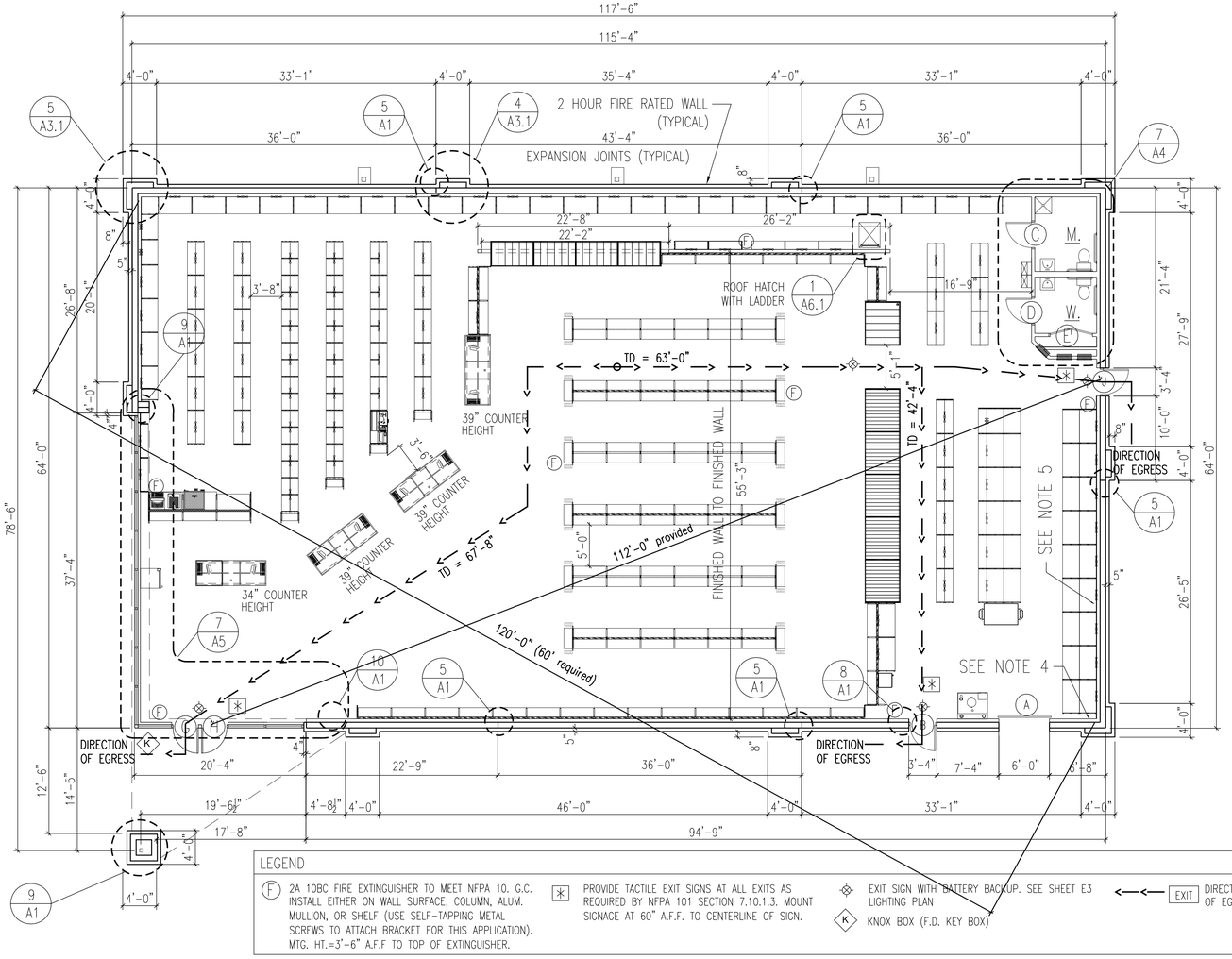
For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

10/08/2021

7N2

PH 5.1



LEGEND

(F) 2A 10BC FIRE EXTINGUISHER TO MEET NFPA 10. G.C. INSTALL EITHER ON WALL SURFACE, COLUMN, ALUM. MULLION, OR SHELF (USE SELF-TAPPING METAL SCREWS TO ATTACH BRACKET FOR THIS APPLICATION). MTG. HT.=3'-6" A.F.F TO TOP OF EXTINGUISHER.

(*) PROVIDE TACTILE EXIT SIGNS AT ALL EXITS AS REQUIRED BY NFPA 101 SECTION 7.10.1.3. MOUNT SIGNAGE AT 60" A.F.F. TO CENTERLINE OF SIGN.

EXIT SIGN WITH BATTERY BACKUP. SEE SHEET E3 LIGHTING PLAN

(K) KNOX BOX (F.D. KEY BOX)

EXIT DIRECTION OF EGRESS

1/8" = 1'-0"

1 | FLOOR PLAN

1. REFER TO STRUCTURAL DRAWINGS FOR ALL DETAILS AND REQUIREMENTS REGARDING FOUNDATIONS, WALL REINFORCING, BOND BEAMS, LINTELS, AND ROOF FRAMING.
2. REFER TO CIVIL DRAWINGS FOR LOCATIONS AND DETAILS OF SIDEWALKS, PIPE GUARDS, ETC., AS WELL AS FINISH FLOOR ELEVATION AND EXTERIOR FINISHED GRADES AROUND THE BUILDING.
3. INSTALL 6" WIDE, 20 GAUGE GALVANIZED SHEET METAL STRIP BETWEEN THE BACK OF THE GYPSUM BOARD AND THE FACE OF THE METAL STUD AROUND THE ENTIRE PERIMETER OF THE BUILDING, AS WELL AS BOTH SIDES OF THE CURTAIN WALL. TOP OF STRIP TO BE 93" ABOVE FINISHED FLOOR. REFER TO SHEET A-4 FOR DETAILS OF CURTAIN WALL.
4. SEE SHEET M-2 FOR LOCATION OF NON FREEZE YARD HYDRANT AND INSTALLATION REQUIREMENTS.
5. INSTALL 1/2" X 4'-0" X 8'-0" AC PLYWOOD HORIZONTALLY WITH THE LONG EDGE ON THE FLOOR AND THE END JOINT CENTERING ON A STUD. APPLY PLYWOOD TO THE FACE OF GYPSUM BOARD WITH SCREWS TO FACILITATE FUTURE REPLACEMENT. SEE INTERIOR ELEVATIONS SEE 3/A4 DETAIL.

1/8" = 1'-0" AFN01

2 | FLOOR PLAN NOTES

LOCATION	FLOOR		BASE		WALLS		CLG.		REM.
	SEALED CONCRETE	VINYL TILE	VINYL	QUARRY TILE	GYPSUM BOARD	FIBER REINFORCED PANELS	METAL DECK	GYPSUM BOARD	
SALES AREA		●	●		●		●		
REST ROOMS	●		●			●		●	

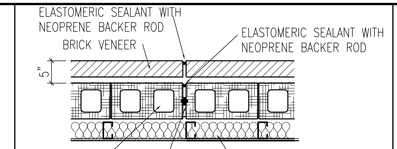
3/16" = 1'-0" AFC01

3 | ROOM FINISH SCHEDULE

MK	SIZE	TYPE	FRAME	JAMB DETAIL	HEAD DETAIL	ADA / EXIT HARDWARE (SEE SECTION 08700 OF THE SPECIFICATIONS)
A	6'-0" x 8'-0"	STEEL OVERHEAD ROLL-UP	STEEL ANGLE	6;7&8/A1	6&7/A1	
B	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	8/A1	8/A1	PUSH BAR EXIT DEVICE WILL HAVE AN INTEGRAL SOUNDER
C	3'-0" x 6'-8" x 1-3/4"	SOLID CORE WOOD UNDERCUT DOOR 1"	HOLLOW METAL	8/A1	8/A1	LEVER HANDLE PRIVACY SETS, CLOSER: LCN #P4041, PLATED FINISH US 26D, CLOSER IS PARALLEL ARM AND MOUNTS ON PUSH SIDE OF DOOR
D	3'-0" x 6'-8" x 1-3/4"	SOLID CORE WOOD UNDERCUT DOOR 1"	HOLLOW METAL	8/A1	8/A1	LEVER HANDLE PRIVACY SETS, CLOSER: LCN #P4041, PLATED FINISH US 26D, CLOSER IS PARALLEL ARM AND MOUNTS ON PUSH SIDE OF DOOR
E	2'-6" x 6'-8" x 1-3/4"	SOLID CORE WOOD PAIR REQUIRED	HOLLOW METAL	8/A1	8/A1	UNDERCUT DOOR 1" (PAIR REQUIRED)
G	3'-0" x 7'-0" x 1-3/4"	GLASS & ALUMINUM SEE SHEET A-5	ALUMINUM	SEE MANUFACTURER'S SHOP DRAWINGS		SELF CLOSERS MOUNTED ON THE INSIDE OF BUILDING, CYLINDER LOCKS (KEY OPERATION EXTERIOR AND THUMB TURN INTERIOR), PUSH BARS AND PULLS, SIGN OVER EACH EXIT DOOR TO READ AS FOLLOWS "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" 1" HIGH WHITE LETTERS.
H	3'-0" x 7'-0" x 1-3/4"	GLASS & ALUMINUM SEE SHEET A-5	ALUMINUM	SEE MANUFACTURER'S SHOP DRAWINGS		
J	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	8/A1	8/A1	PUSH BAR EXIT DEVICE

3/32" = 1'-0" ADC01

4 | DOOR SCHEDULE – HOLLOW METAL DOORS & FRAMES

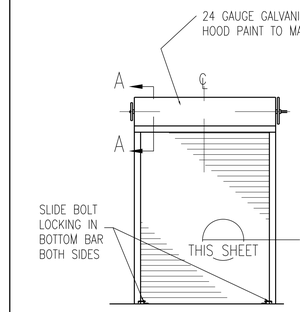


NOTE: SEE STRUCTURAL DRAWINGS FOR REINFORCING REQUIREMENTS

3/4" = 1'-0" AFS01

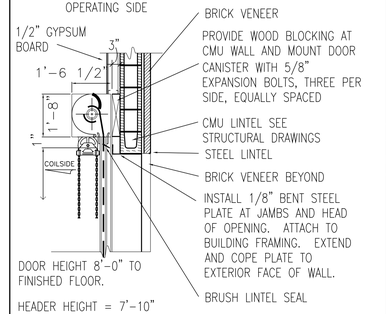
5 | EXPANSION JOINT DETAIL

CHAIN OPERATED INSULATED DOOR SURFACE MOUNTED



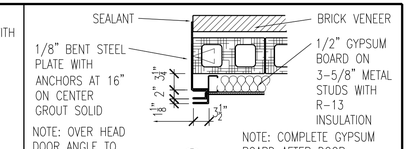
6 | OVERHEAD DOOR ELEVATION

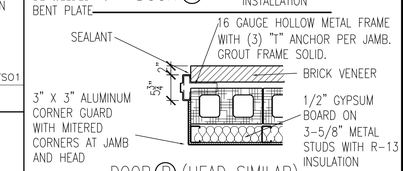
NOTE: GENERAL CONTRACTOR TO INSTALL 6" X 8'-0" ALUMINUM CHAIN GUARD ON WALL AT OPERATING SIDE

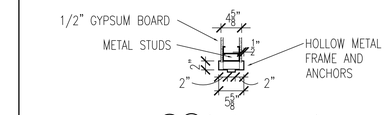


5/16" = 1'-0" ADS01

7 | OVERHEAD DELIVERY DOOR (A)

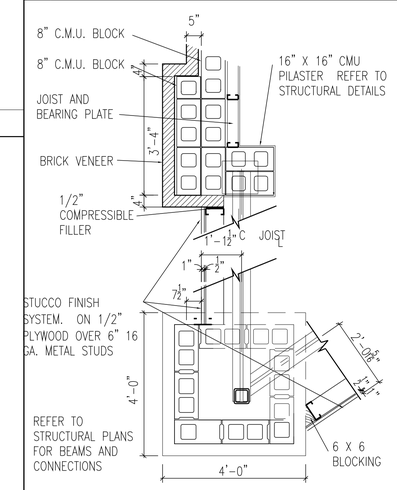






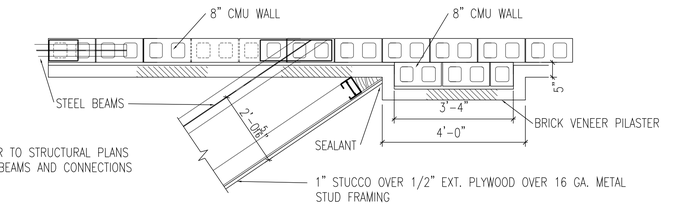
3/4" = 1'-0" ADS02

8 | JAMB DETAILS



1/2" = 1'-0" ACS01NL

9 | SECTION AT CANOPY



1/2" = 1'-0" ACS02NL

10 | SECTION AT CANOPY

Section 4, IB)

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 5607
GLUCKSTADT ROAD

GLUCKSTADT, MS 39110

FLOOR PLAN / DOOR SCHEDULE / WALL DETAILS

Architect: George Callow
123 South Front Street
Memphis, Tennessee 38103
TEL: 901-495-8701 FAX: (901) 495-8969

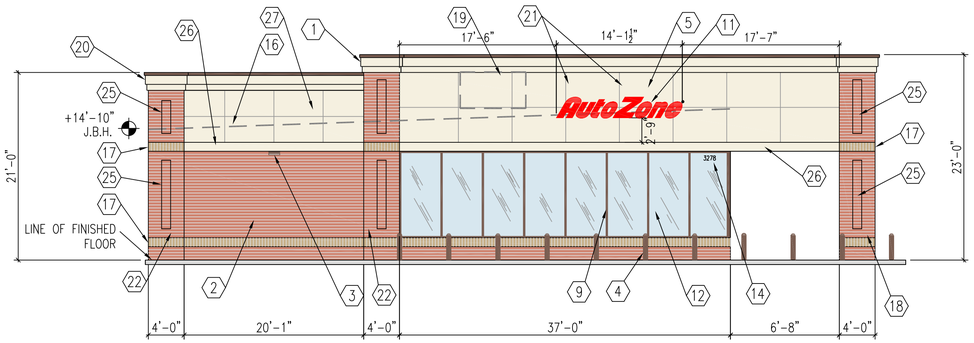
For Bidding & Contractor Information Contact:
McGraw - Hill Construction Tel. 615-884-1017
www.construction.com

REGISTERED ARCHITECT George W. Callow 2079 Memphis, TN STATE OF MISSISSIPPI

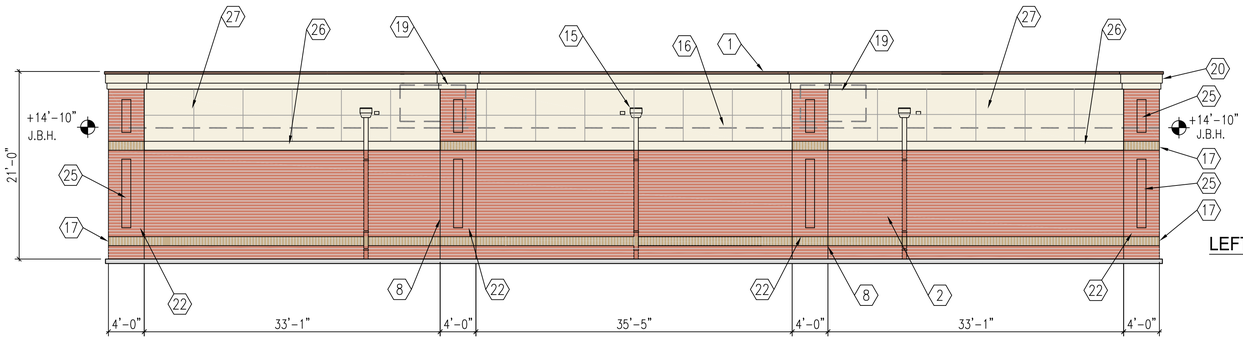
10/12/21

7N2-L

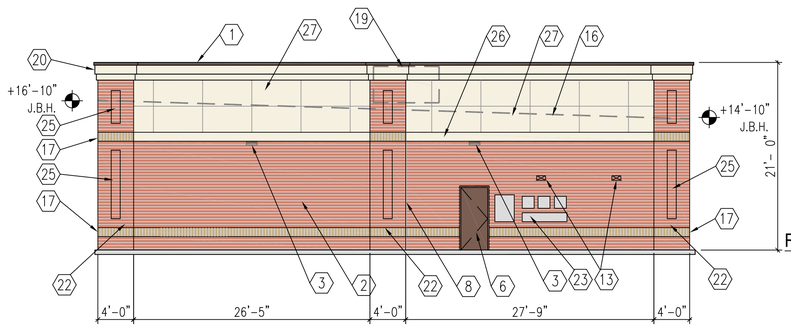
A-1



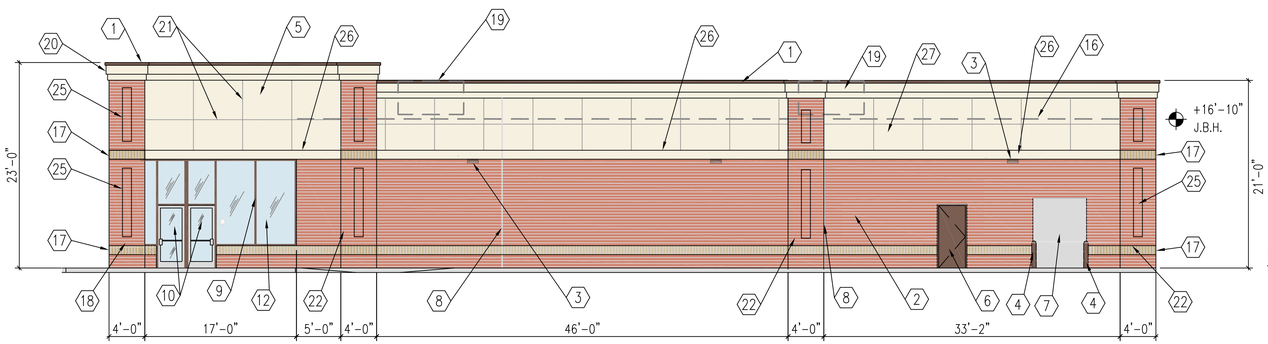
FRONT WALL (South View)
Gluckstadt Road



LEFT SIDE WALL (West View)



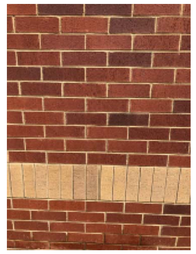
REAR WALL (North View)



LEFT SIDE WALL (South View)

J.B.H. = JOIST BEARING HEIGHT

1 BUILDING ELEVATIONS



BRICK COLORS:

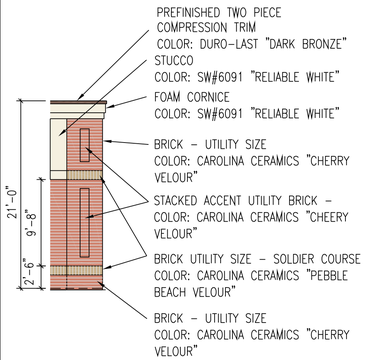
FIELD BRICK RUNNING BOND – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

STACKED BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

SOLDIER COURSE BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

1. PREFINISHED TWO PIECE COMPRESSION TRIM
COLOR: DURO-LAST "DARK BRONZE"
2. BRICK UTILITY SIZE – RUNNING BOND
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"
3. WALL MOUNTED LIGHT FIXTURE – DARK BRONZE FINISH
4. PIPE GUARD WITH ARCHITECTURAL BROWN SLEEVE
5. STUCCO FINISH
COLOR: SW#6091 RELIABLE WHITE
6. PAINT MAN DOOR & METAL FRAMES DARK BRONZE
7. PAINT OVERHEAD DOOR & ANGLES DARK BRONZE
8. EXPANSION JOINT
9. ALUMINUM STOREFRONT – DARK BRONZE FINISH
10. GLASS AND ALUMINUM DOORS – CLEAR ANODIZED FINISH
11. FRONT WALL SIGN – 28" RED CHANNEL LETTERS
12. ALUMINUM STOREFRONT – DARK BRONZE FACTORY FINISH WITH TINTED GRAY GLASS
13. TOILET WALL VENTS PAINT TO MATCH WALL
14. STORE ADDRESS – 6" WHITE REFLECTIVE NUMBERS
15. SCUPPERS AND DOWNSPOUTS. PAINTED TO MATCH BACKGROUND WALL COLOR. ADJACENT 4" H. X 6" W. OVERFLOW SCUPPER. FLOWLINE 2" ABOVE ROOF.
16. BOND BEAM AT ROOF LINE
17. BRICK UTILITY SIZE – SOLDIER COURSE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"
18. 4'-0" SQUARE BRICK COLUMN
19. HVAC UNITS SCREENED BEHIND PARAPET WALL
20. FOAM CORNICE
COLOR: SW#6091 "RELIABLE WHITE"
21. 1" VERTICAL AND HORIZONTAL V-GROVE SCORED JOINTS (TYP.)
22. 4'-0" WIDE BRICK PILASTER (8" PROJECTION)
23. ELECTRICAL EQUIPMENT
24. NOT USED
25. STACKED ACCENT UTILITY BRICK – (½" RECESSED)
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"
26. 12" HIGH X 1" DEPTH FOAM BOARD TRIM W/ E.F.S.
COLOR: SW #6091 "RELIABLE WHITE"
27. STUCCO FINISH
COLOR: SW #6091 "RELIABLE WHITE"

2 ELEVATION KEYNOTES



FIELD BRICK RUNNING BOND – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

STACKED BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

SOLDIER COURSE BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

BRICK MORTAR COLOR: BEIGE

CONTACT: JEAN BREKLICH 803-788-1917

SCALE: ⅛" = 1'-0"

3 EXTERIOR WALL COLOR SCHEME

AUTOZONE INC.
Architect: Lew Ellis
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8707 FAX: (901) 495-8969
Email Address: george.callow@autozone.com

Prepared For: **AutoZone** STORE DEVELOPMENT
Store No. 5607
GLUCKSTADT ROAD
GLUCKSTADT, MS 39110

COLOR ELEVATIONS

REVISIONS
1.
2.
3.
4.

SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
George W. Callow
2079
Memphis TN
STATE OF MISSISSIPPI

DATE
10/12/21

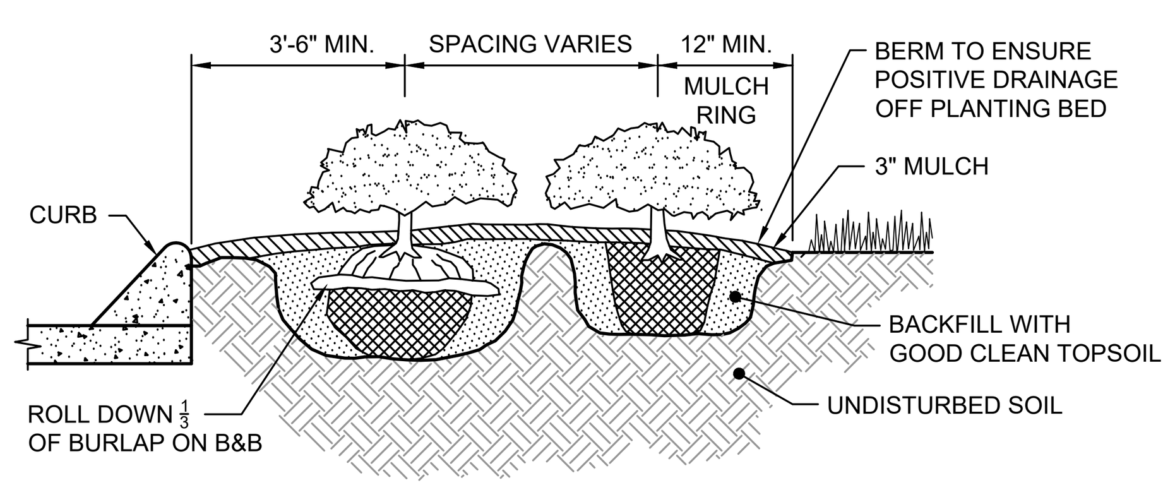
PROTOTYPE SIZE
7N2L

CE

Section 4, IB)

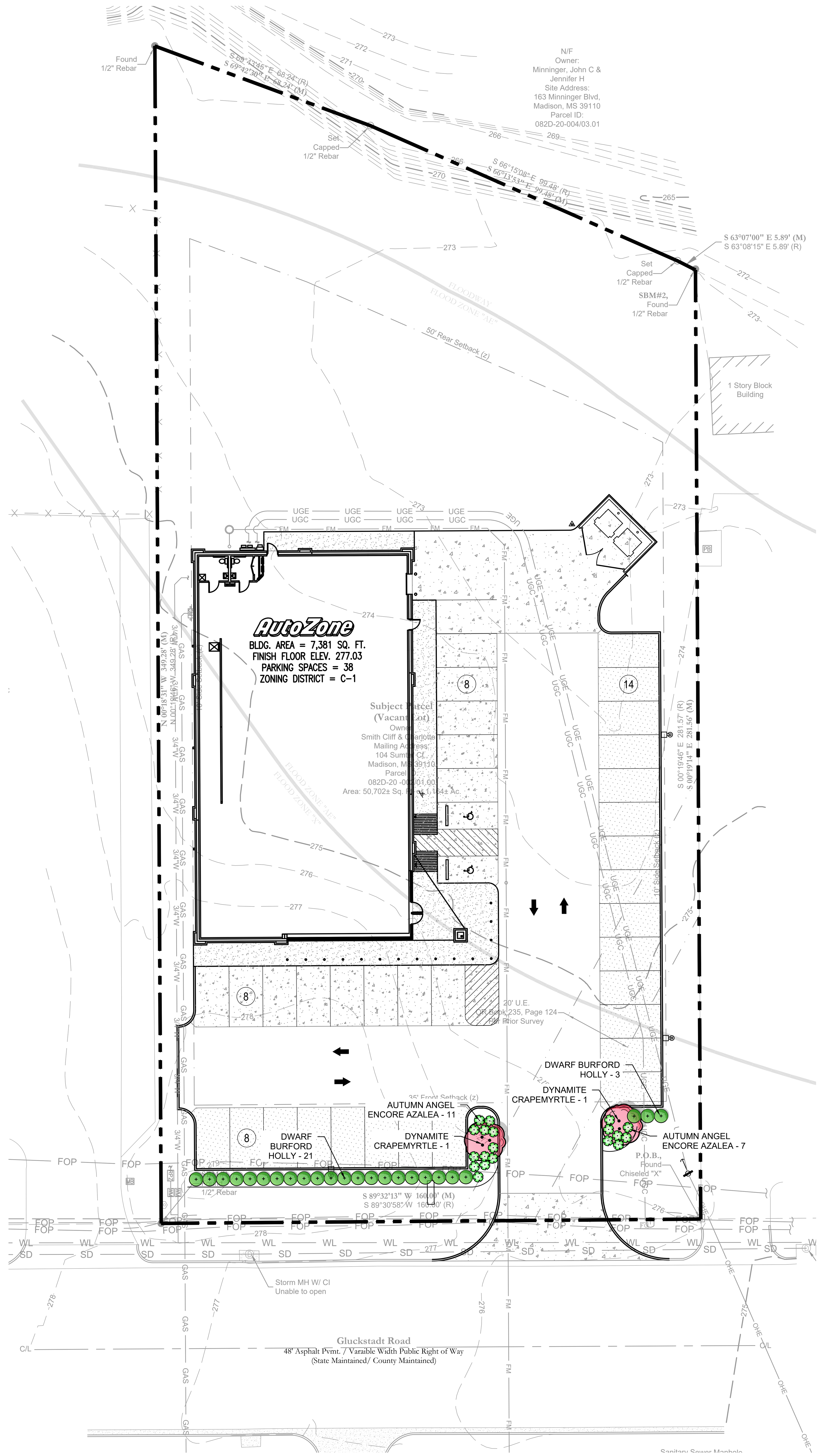
LANDSCAPE NOTES:

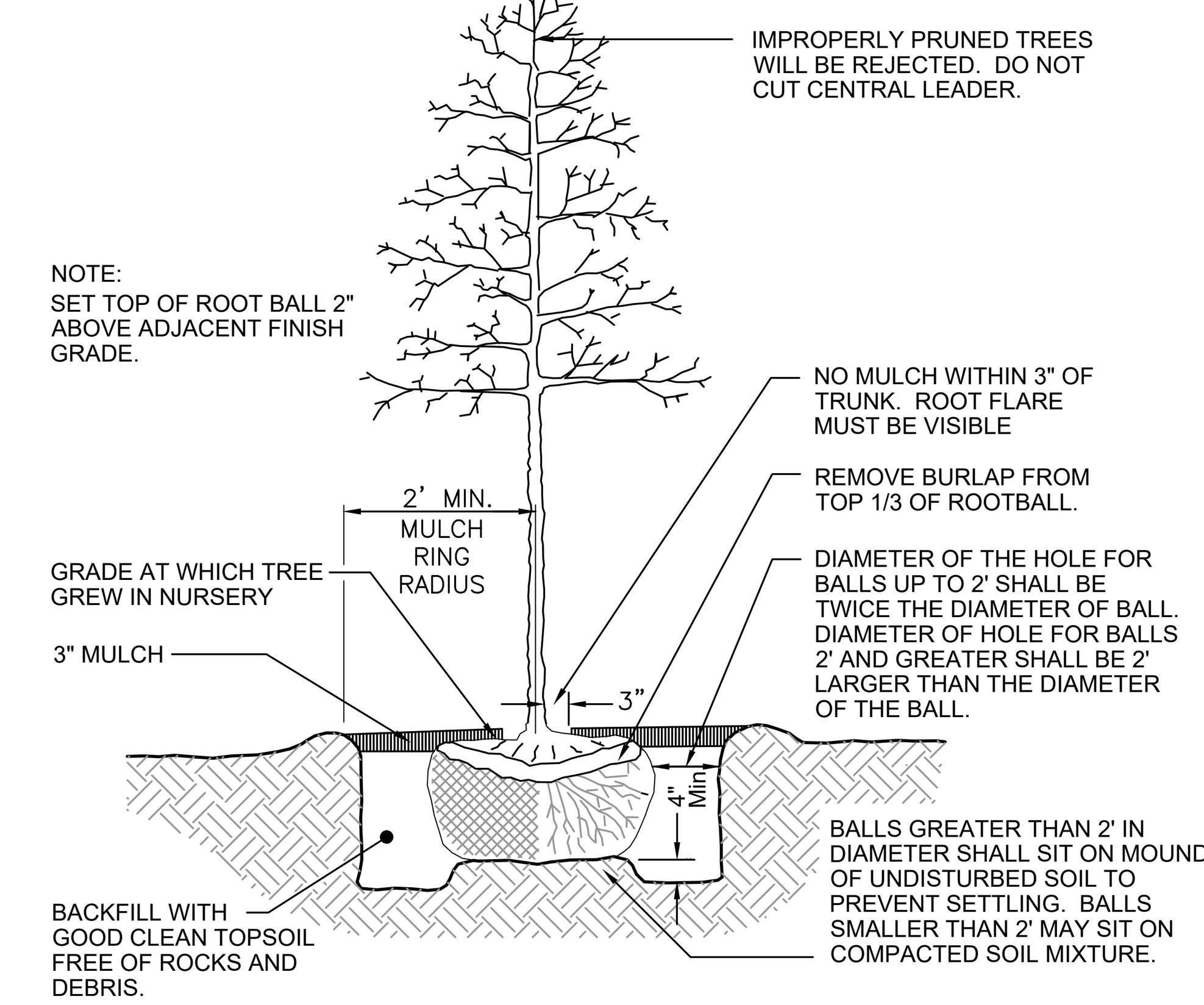
1. WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIALS SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
4. NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. KITA LANDSCAPE DESIGN (615) 469-1222.
5. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. SOD ALL DISTURBED AREAS.
7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD.
   A. SAND SHALL BE CLEAN MASONRY SAND.
   B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
   C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
22. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.
    PLANTING DATES
    SPRING: MARCH 15 - APRIL 15
    FALL: OCTOBER 1 - NOVEMBER 30
24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
25. CONTRACTOR TO IRRIGATE ALL NEW LANDSCAPE PLANTINGS AND LAWN AREAS WITH AN AUTOMATED UNDERGROUND IRRIGATION SYSTEM.
26. IRRIGATION TO HAVE A SEPARATE METER.
27. GENERAL CONTRACTOR TO COORDINATE AND BE RESPONSIBLE FOR WATERING ALL PLANTS AND SEEDED AREAS AFTER PLANTING UNTIL IRRIGATION SYSTEM IS OPERABLE.



SHRUB / GROUND COVER PLANTING

NOT TO SCALE





DECIDUOUS TREE PLANTING

NOT TO SCALE

PLANT SCHEDULE					
QTY.	COMMON NAME	BOTANICAL NAME	HEIGHT	TRUNK	COMMENTS
UNDERSTORY/COLUMNAR TREES					
2	'Dynamite' Crapemyrtle	Lagerstroemia indica 'Whit II'	6' - 7'	2" Cal.	Multi-Trunk, Min. (3) ¾" canes
2	TOTAL - UNDERSTORY TREES				
SHRUBS					
19	'Autumn Angel' Encore Azalea	Rhododendron 'Robleg'	18" Min.	3 Gal.	Container (White)
24	Dwarf Burford Holly	Ilex cornuta 'Burfordii nana'	24" Min.	5 Gal.	Container
43	TOTAL - SHRUBS				
TURF					
	Common Bermuda	Cynodon dactylon			

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS

1	4
2	5
3	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
LANDSCAPE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL:(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

KITA designs
Beauty | Economy | Sustainability
Kevin Reff, RLA
KITA Sustainable Designs, LLC
2101 Masters Drive
Springfield, TN 37172
(615) 469 - 1222 Ofc.
(615) 594 - 7333 Cell.
kreff@kitadesign.biz

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee 37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

10/08/2021

7N2

L-1.1

CIVIL ENGINEERING SERVICES, PC

P.O. Box 1302, Fairview, TN 37062 Office (615) 533-0401

October 15, 2021

Madison County Planning and Zoning
125 West north street
Canton, MS 39046

Re: Transportation Impact Statement
AutoZone Store Number 5607
Gluckstadt, MS
Parcel ID: 082D-20 -002/01.00

Dear Staff:

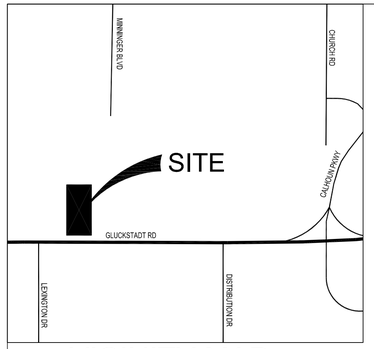
On behalf of AutoZone, we respectfully submit this Transportation Impact Statement in support of the Site Development Plans submittal.

The existing site is a vacant lot, located east of the Animal hospital at 1070 Gluckstadt Rd, Madison, MS 39110. The site is presently a grass, with some wooded area tot the north side of the property. There are no existing trips generated in relation to the existing condition. We propose to construct a new 7,381 sf AutoZone (Automotive Parts Retail). The proposed use will be retail only and will not include service of vehicles. Based on ITE 10th Edition, Code 843, the PM Peak Hour Total Trips is 36 vph, the AM Peak Hour Total Trips is 19 vph.

Thank you in advance for your time and review of the above impact statement. If you have any questions, please do not hesitate to contact me at (615) 533-0401.

Respectfully,
Ray Flake

Cc: Yuri Hawley



VICINITY MAP
(NOT TO SCALE)

AutoZone

AutoZone Store Development
Preliminary/Final Site Plan Submission

for:

AutoZone Store No. O152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT, MS

PARCEL: 002 / 01.00

SURVEYOR:
BLEW & ASSOCIATES, PA
3825 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703
(479) 443-4506

OWNER:
AUTOZONE, INC.
c/o: WADE DAVIS
123 S. FRONT STREET, 3RD FLOOR
MEMPHIS, TENNESSEE 38103
(901) 495-8701

CIVIL ENGINEERING:
Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Land Planning, and Environmental

PLAN SUBMITTAL DATE:
NOVEMBER, 2021

INDEX OF DRAWINGS

NORTH
NAD83 MS STATE PLANE

REVISIONS
1 | 2 | 3
4 | 5 | 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
COVER SHEET

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

RAYMOND L. FLAKE LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
11/24/2021

11/22/2021

7N2

C0.0

ALTA/NSPS Land Title Survey

□□tle □n□or□ at□on

First American □itle □nsurance Company National Commerical Services
File No.□NCS□□□8□□□M□C□
Commitment Date□uly □□□□□□ at 8□□ AM

Sc□edule □ □ escr□□t□on

□he Land referred to herein belo□ is situated in the County of Madison□State of Mississippi□and is described as follo□s□

A parcel of land containing □.□□ acres□more or less□situated in the Southeast □/4 of Section □□□□o□nship 8 North□Range □ East□Madison County□ Mississippi and more particularly described as follo□s□

□egin at a found iron pin in the ne□ Northern Right of Way line of □luc□stadt Road □hich is □□□□.□□ feet South of and □4□□.□□ feet East of the North□est corner of the Southeast □/4 of said Section □□□as sho□n on attached survey and run □hence South 8□ Degrees □□ Minutes □8 Seconds West along said Northern Right of Way line for a distance of □□□.□□ feet to a found iron pin□Leaving said ne□ Right of Way line□Run thence North □□ Degrees □□ Minutes 4□ Seconds West for a distance of □4□.□8 feet to a found iron pin□□hence South □□ Degrees 4□ Minutes 4□ Seconds East for a distance of □8.□4 feet□□hence South □□ Degrees □□ Minutes □8 Seconds East for a distance of □□.48 feet□□hence South □□ Degrees □8 Minutes □□ Seconds East for a distance of □.8□ feet□□hence South □□ Degrees □□ Minutes 4□ Seconds East along the edge of concrete par□ing and a pro□ection thereof for a distance of □8□.□□ feet to the Point of □eginning.

Sc□edule B □Sect□on □□

(□□) – Right of Way Easement granted to □ear Cree□ Water Association□□nc. recorded in □oo□ □□□□Page □□□.Mec□lenburg County Registry.
(Does not affect)

(□□) – Right of Way and easement granted to Mississippi Po□er □ Light Company recorded in □oo□ □□4□Page □□4.
(Does not affect)

(□□) – Right of Way and Easement Deed for Distribution System granted to Centerpoint Energy Resources Corp.□d/b/a Centerpoint Energy Mississippi □ as recorded in □oo□ □□□8□Page □□.
(Does not affect)

(□□) – Right of Way and easement granted to Mississippi Po□er □ Light Company recorded in □oo□ □□□□Page □□4.
(Affects□appro□imate location sho□n hereon)

(□4) – □erms and conditions of that certain □uitclaim and □oundary Line Agreement by and bet□een Cliff Smith and Charlotte □. Smith□□he □iles □roup□LLC□and Sturdivant Empire□LLC recorded in □oo□ □4□□□Page □□□.
(□□ects, □urrent Boundar□ as s□o□n)

□on□n□ □n□or□ at□on

PROPER□Y □S C□RREN□LY ZONED□
Zone □(C□) □eneral/□ndoor Commercial

□□EM	RE□□□RED	O□SERVED
PERM□□□ED □SE	□eneral Commercial	O□SERVED
M□N. LO□ AREA	□□□8□ S□ FEE□	O□SERVED
M□N. LO□ W□D□□	REFER □O NO□ES	O□SERVED
MAX. □LD□ COVERA□E	NONE	O□SERVED
M□N. SE□□AC□S FRON□	□□ FEE□	O□SERVED
M□N. SE□□AC□S S□DE	REFER □O NO□ES	O□SERVED
M□N. SE□□AC□S REAR	REFER □O NO□ES	O□SERVED
MAX □□□LD□N□ □E□□□□	4□ FEE□	O□SERVED
PAR□□N□ RE□□LAR	REFER □O NO□ES	O□SERVED
PAR□□N□ □AND□CAP	REFER □O NO□ES	O□SERVED
PAR□□N□ □O□AL	REFER □O NO□ES	O□SERVED

□le□ □ Associates ma□es no □arranty to the e□act regulations or ordinances represented on the dra□ing hereon. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as □ell as the applicable restrictions and re□uirements associated □ith such □oning classification.

Specific □oning information as sho□n hereon is as interpreted by the surveyor per Madison County □oning □□□□ PDF□and should be confirmed by a licensed Mississippi attorney or □oning professional in the controlling □urisdiction.

Notes□

□ecause there may be a need for interpretation of the applicable □oning codes□□e refer you to Madison County for □oning la□s and applicable codes.

Lot W□dt□ Notes□

Shopping centers□ □□□ feet.

□ndependent commercial uses□ □□□ feet. For any lot having a □idth of less than □□□ feet□there shall be no more than one access drive□ay per lot. For lots having a □idth of □□□ feet or more□t□o access drive□ays may be provided for every □□□ feet of street/ road frontage. □nterior circulation streets shall be provided for all commercial subdivisions approved after the effective date of this Ordinance.

Setback Notes□

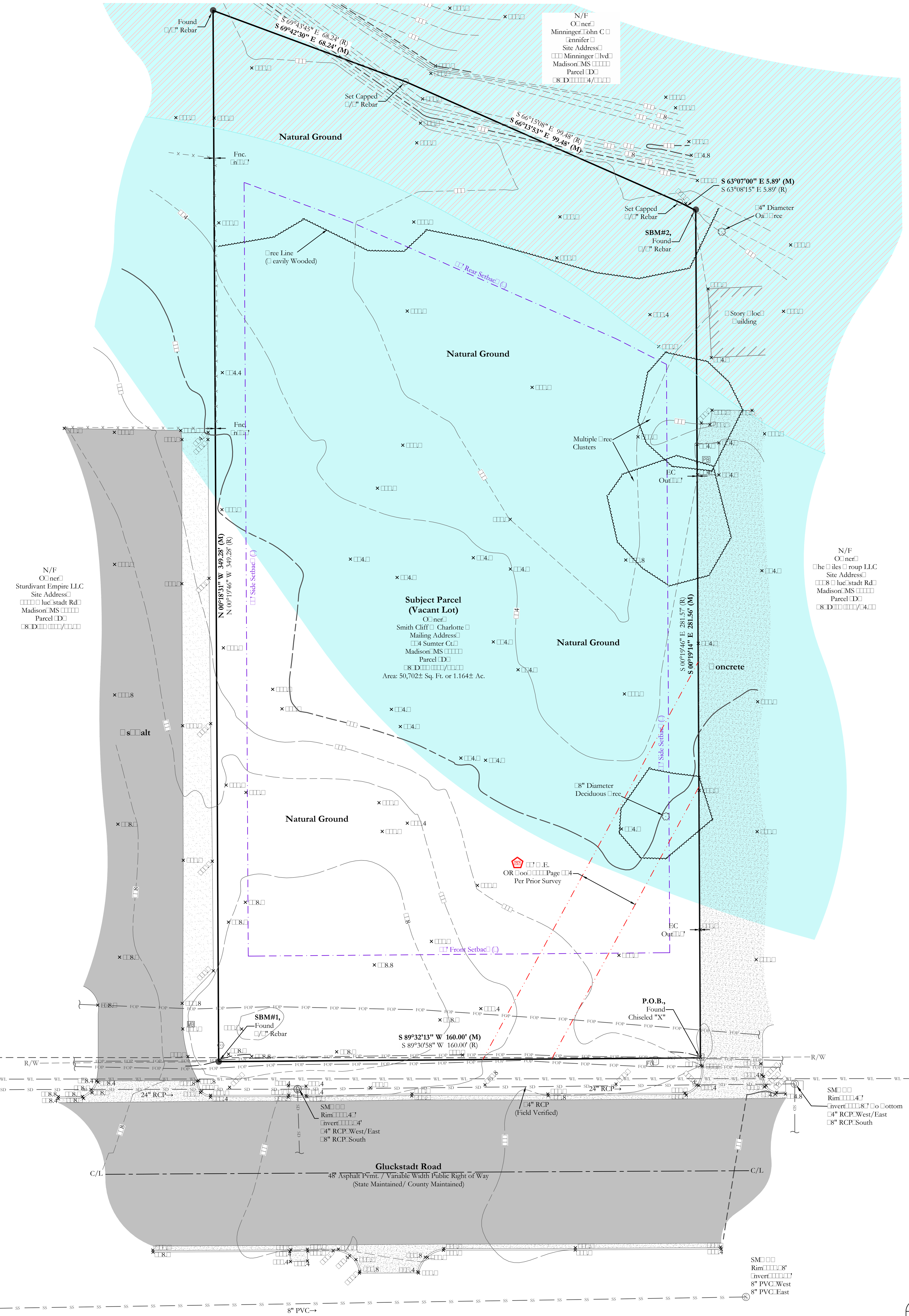
Front yard□□□ feet. □he front yard setbac□ shall be a minimum of thirty□five (□□) feet from any e□isting or proposed right□of□□ay line of any street or road. □o□ever□the first fifteen (□□) feet of this setbac□ shall be open landscaped area□□ith no par□ing permitted in this area.

Side yards and rear yards □here not abutting a residential district or residential use□□ feet.

Side yards and rear yards □here abutting any residential district or residential use□fifty (□□) feet□□hich shall remain open and be landscaped□or □□ feet□□hich shall remain open and be landscaped and a fence along side or rear yards abutting such residential district or residential use.

Park□n□ Notes□

One par□ing space for each □□□ s□uare feet of gross floor area.



M□scellaneous Notes

□. Completed field □or□ □as August □□□□□□.
□. □he □asis of □earing for this survey is □rid North per □PS coordinate observations Mississippi State Plane□West Zone NAD8□.
Latitude □ 32°31'01.52438"
Longitude □ -90°06'38.10102"
Convergence Angle □ -00°07'11.06336"
□. Distances sho□n on plat are ground.
Combined scale factor (ground to grid) □ □.□□□□□□□8□□□□
4. Some features on this plat may be sho□n out of scale for clarity.
□. Dimensions on this plat are e□pressed in feet and decimal parts thereof unless other□ise noted. Monuments □ere found at points □here indicated.
□. Any servitudes and restrictions sho□n on this survey are limited to those set forth in the description furnished to surveyor□and there is no representation that all applicable servitudes and restrictions are sho□n hereon.
□. Names and addresses of ad□oining property o□ners □ere ta□en from Madison County ta□ cards and deeds.
8. □he nearest fire hydrant is located in the South Right of Way of Cluc□stadt Road approximately 200'± West of the Southwest corner of subject property .
□. No surveyor or any other person other than a licensed Mississippi attorney may provide legal advice concerning the status of □itle to the property described in this survey ("the sub□ect property"). □he purpose of this survey□and the comments related to the Schedule □□□e□ceptions□is only to sho□ the location of boundaries and physical ob□ections in relation thereto. □o the e□tent that the survey indicates that the legal instrument "affects" the sub□ect property□such statement is only intended to indicate that property boundaries included in such instrument include some or all of the sub□ect property. □he surveyor does not purport to describe ho□ such instrument affects the sub□ect property or the enforceability or legal conse□uences of such instrument.
□□. All bearings and distances sho□n hereon are measured dimensions unless other□ise noted hereon. Record dimensions□if differing from measured dimensions□□ill be follo□ed by "(R□)" □here the □ indicates from □hich reference document the dimension originated.
□□. Contour □nterval □ □ foot
□□. No par□ing spaces observed.
□□. Surveyor notes that the property abuts the right□of□□ay of Cluc□stadt Road. Access to the right□of□□ay may be sub□ect to other agreements or proper governmental approvals.
□4. □here □as no evidence of monitor □ells□or any test borings on the sub□ect property at the time of the survey.
□□. At the time of the survey□there □as no observable evidence of site use as a cemetery□ isolated grave site or burial grounds.
□□. At the time of the survey□there □as no observable evidence of site use as a solid □aste dump□sump□or sanitary landfill.
□□. Elevations established □ith □PS static observations utili□ing online positioning user service (OP□S) for post processing. (NAVD □□88 datum)
□8. At the time of the survey□there □ere no changes in street right□of□□ay lines either completed or proposed□and available from controlling □urisdiction or observable evidence of recent street or side□al□ construction repairs.
□□. □here □as no observable evidence of Earth moving □or□□building construction or building additions □ithin recent months.
□□. □he nearest intersecting street is the intersection of Cluc□stadt Road and Le□ington Drive□□hich is appro□imately □□□' from the South□est corner of the sub□ect property.
□□. Surveyor did not receive current deeds for ad□oining properties from the title insurer. Surveyor obtained the deed information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the current deed descriptions for ad□oining properties.
□□. Reference documents noted hereon □ere obtained by the surveyor and any and all representations based thereon should be revie□ed by a licensed attorney or title insurer for verification.
□□. Surveyor did not receive any information from the title insurer regarding the current □oning classification of the property or any re□uirements related to the applicable □oning classification. Surveyor obtained the □oning information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as □ell as the applicable restrictions and re□uirements associated □ith such □oning classification.
□4. No □uildings observed at the time of the Survey
□□. Sanitary Se□er□□ as□and Water lines sho□n per map provided by the □ear Cree□ Water Association. No mar□ings or other evidence for such utilities □as observed in the field.
□□. Due to silting□standing □ater or other environmental considerations□invert elevations depicted herein are measured do□n to the bottom center of the storm structure.

□lood Note

□y graphic plotting only□this property is in Zone AE of the Flood □nsurance Rate Map□Community Panel No. □8□8□□C□4□□□F□□hich bears an effective date of □□/□□/□□□□ and is in a Special Flood □a□ard Area

Zone Definitions According to the FEMA □ebsite.

Zone "AE" □□he base floodplain □here base flood elevations are provided. AE Zones are no□ used on ne□ format F□RMs instead of A□□A□□ Zones.

Zone "X □nshaded" □Area of minimal flood ha□ard□usually depicted on F□RMs as above the □□□year flood level. Zone X is the area determined to be outside the □□□year flood and protected by levee from □□□year flood.

Zone "Shaded X" □Area of moderate flood ha□ard□usually the area bet□een the limits of the □□□year and □□□year floods.

□t□l□t□ Notes

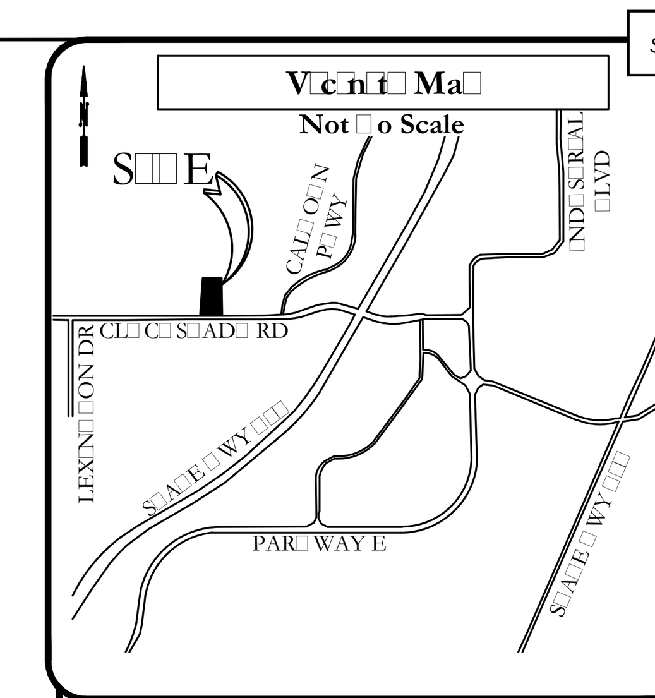
□he utilities sho□n on this dra□ing hereon have been located by field measurements□utility map dra□ings□and one□call utility locate re□uest. □le□ □ Associates ma□es no □arranty to the e□act location of any underground utilities sho□n or not sho□n on this dra□ing. □t is the responsibility of the contractor to verify any and all utilities prior to construction. Call Mississippi one□call at □ (8□□) □□□□□4□□ for field locations (re□uest for ground mar□ings) of underground utility lines before digging.

811
□no□ □hat's belo□.
Call before you dig.

Ele□at□on Benc□□ arks			
Site □enchmar□□□		Site □enchmar□□□	
□ype	Found □/□" Rebar	□ype	Found □/□" Rebar
Northing	□□□□4□8.□□	Northing	□□□□4□□.□□
Easting	□□□□□□□.□□	Easting	□□□□□□□.□8
Elevation	□□□.□□'	Elevation	□□□.84'
□enchmar□s Northing □ Eastings are applied □ith scale factor			

DA□E	REV□S□ON	□Y

V□c□n□t□ Ma□



Le□end o□S□□ bols □ □bbre□□at□ons

×XXX.X	Spot Elevation	(M)	Measured Dimension
●	Found Rebar (As Noted)	(R)	Recorded Dimension
○	Set Rebar (As Noted)	(□)	Zoning Re□uirements
	Computed Point	N/F	No□ or Formerly
X	Found Chiseled "X"	S□M	Site □enchmar□
FO	Fiber Optic □o□	M□	Manhole
	□elephone Pedestal	C□	Curb □nlet □asin
FO	Fiber Optic Vault	□nv	□nvert of Pipe
MB	Mail □o□	P.O.C.	Point of Commencement
PB	Po□er □o□	P.O.□.	Point of □eginning
	□ree		

Ad□oiner Property Line
Sub□ect Property Line
Easement line
□tility Easement
□uilding Setbac□
Right□of□Way
FOP Fiber Optic Line
SD Storm Se□er Line
WL □uried Water Line
SS Sanitary Se□er Line
□AS □nderground □as
Chainlin□ Fence
Contour Ma□or
Contour Minor

Asphalt | Concrete | □ravel
Flood Zone □AE / AO / A□
Flood Zone□Flood□ay

NORTH

Scale□□" □ □□'
□ □□' 4□'

Sur□e□or's □ert□□cat□on

□o□ AutoZone Parts□□nc□Cliff Smith and Charlotte □. Smith□ Civil Engineering Services□PC□First American □itle □nsurance Company National Commerical Services□

□his is to certify that this map or plat and the survey on □hich it is based □ere made in accordance □ith the □□□□ Minimum Standard Detail Re□uirements for AL□A/NSPS Land □itle Surveys□□ointly established and adopted by AL□A and NSPS□ and includes items □□□□4□□□□(a)□□(b□)□8□□□□□□□□□□□□□□□8□ □□□□□ □□ of □able A thereof. □he field □or□□as completed on □8/□□/□□□□.

Date of Plat or Map□□□/□4/□□□□

Preliminary

□uc□ley □le□
Professional Surveyor □□□8□□
State of Mississippi

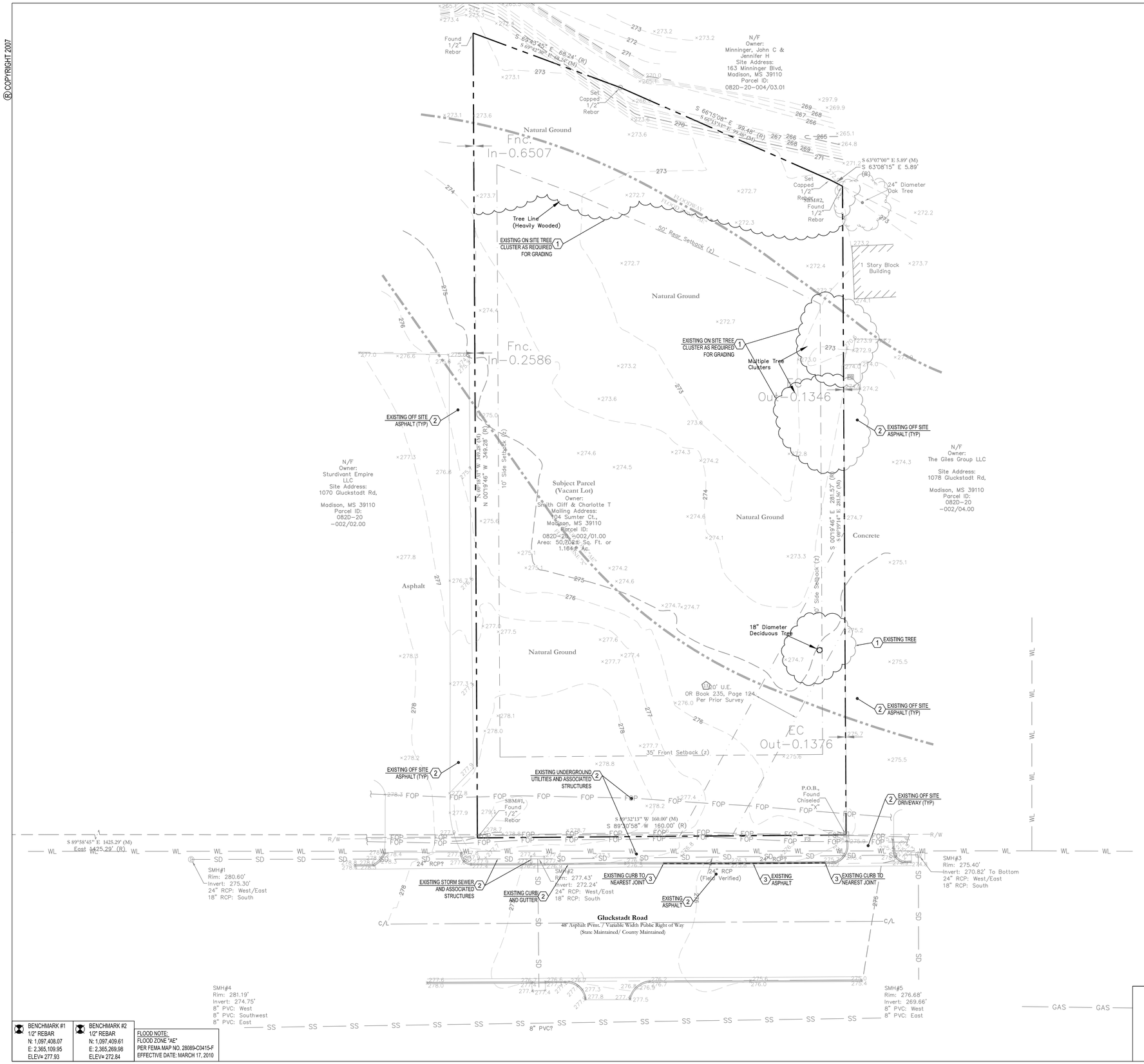
F□RM□
BLEW & ASSOCIATES, PA
CIVIL ENGINEERS & LAND SURVEYORS
□8□□ N. S□□LO□ DR□VE
FAYE□□EV□LLE□AR□ANSAS □□□□□
OFF□CE□4□□.44□.4□□□
FAX□4□□.□8□.□88□
□□□.□LEW□NC.com

DRAWN □Y□ DA□E□	REV□EWED □Y□	S□RVEYED □Y□
DLD/M□ □□/□4/□□□□	□C/PRS	□□

CO□N□Y□ S□A□E□	□O□ N□M□ER□
Madison□Mississippi	□□□□□□□

LOCA□□ON□
Property □est of □□□8 □luc□stadt Rd□□luc□stadt□MS

FOR □□E □SE AND □ENEF□□ OF□
CES (AutoZone) □ (MS□□□□) □ luc□stadt□MS



DEMOLITION LEGEND

- - - - APPROXIMATE LIMITS OF ASPHALT/CONCRETE SAWCUT

APPROXIMATE LIMITS OF ASPHALT/CONCRETE REMOVAL

KEYNOTES

1. REMOVE EXISTING STRUCTURE
2. PROTECT EXISTING STRUCTURE
3. SAWCUT ASPHALT / CONCRETE
4. RELOCATE EXISTING SITE STRUCTURE OR UTILITY

DEMOLITION NOTES

1. ALL WORK TO BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL LOCAL ORDINANCES, CITY OR STATE.
2. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
3. ALL ITEMS NOTED TO BE REMOVED BY THE SELLER SHALL BE ACCOMPLISHED PRIOR TO THE CLOSING OF THE REAL ESTATE TRANSACTION. ALL OTHER ITEMS NOTED TO BE REMOVED SHALL BE DONE SO AS PART OF THE CONTRACT FOR GENERAL CONSTRUCTION.
4. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL.
5. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF BUILDING DEMOLITION DEBRIS.
6. THE DETAILED PLANS MAY NOT REFLECT ALL UTILITIES ON THE SITE OR SURROUNDING STREETS AND PROPERTIES. THE CONTRACTOR SHALL VERIFY LOCATIONS AND EXISTENCE OF UTILITY SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-800-344-7233, 72 HOURS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR TO REMOVE ALL UTILITIES TO EXISTING STRUCTURES WHETHER SHOWN OR NOT OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND CAP SERVICE PIPING AT THE PROPERTY LINE OR MAIN (AS REQUIRED). ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN.
9. FOR ALL ITEMS NOTED TO BE REMOVED - REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALL UNDERGROUND ELEMENTS AS WELL INCLUDING BUT NOT NECESSARILY LIMITED TO: FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, OLD PIPES, ETC.
10. BACK FILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK TO MEET THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL REPORT.
11. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPES, PAVEMENT, CURBS, SIDEWALKS OR LANDSCAPED AREAS DISTURBED DURING DEMOLITION TO THEIR ORIGINAL CONDITION TO THE SATISFACTION.
13. ALL BUILDINGS, FOUNDATION WALLS AND FOOTINGS INDICATED ON THIS PLAN TO BE REMOVED FROM SITE. CONTRACTOR SHALL SECURE ANY PERMITS AND PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
14. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE REMOVED BY THE CONTRACTOR USING A LICENSED HAZARDOUS MATERIAL CONTRACTOR PER ASBESTOS REPORT PREPARED BY XXXXXXXXXX. PRIOR TO THE START OF DEMOLITION, FEDERAL LAW REQUIRES THAT THE LOCAL EPA OFFICE TO BE NOTIFIED IN WRITING @ LEAST 10 WORKING DAYS.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DEMOLITION PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.scarcy@construction.com

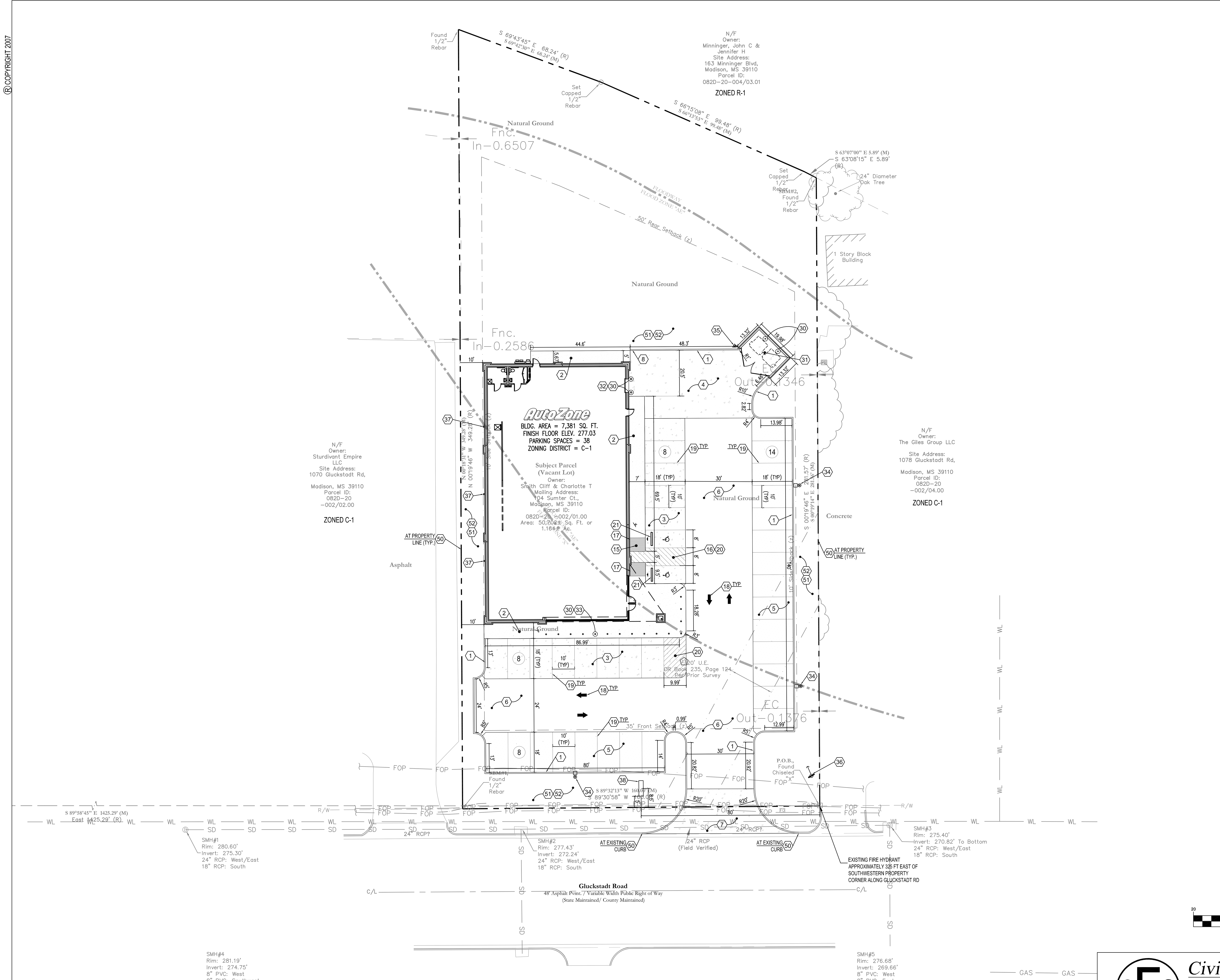
STATE OF MISSISSIPPI LICENSED PROFESSIONAL ENGINEER 21060 11/24/2021

11/22/2021

7N2

D1.0

Section 4, IB)



BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

SITE LEGEND

- (10) PARKING STALL COUNT - SEE PLANS
- REGULAR ASPHALT PAVING (SEE DETAIL SHEET)
- HEAVY DUTY ASPHALT PAVING (SEE DETAIL SHEET)
- CONCRETE SIDEWALK (SEE DETAIL SHEET)
- HEAVY DUTY CONCRETE PAVING (SEE DETAIL SHEET)
- REGULAR DUTY CONCRETE PAVEMENT AT PARKING STALLS AROUND BUILDING (SEE DETAIL SHEET)

KEYNOTES

PAVEMENT AND CURBING

1. CONCRETE CURB @ CONCRETE/ASPHALT PAVING - SEE DETAIL 1 & 2 / C4.0
2. CONCRETE SIDEWALK - SEE DETAIL 27/C4.0 - SEE DETAIL 22/C4.0 FOR SIDEWALKS AROUND BUILDING
3. REGULAR DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
4. HEAVY DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
5. REGULAR DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
6. HEAVY DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
7. PROVIDE NEW CURB CUT & APPROACH PER LOCAL CODES & SPECS. - ENTRANCE TO BE HEAVY DUTY CONCRETE - SEE DTL. 3/ C4.0
8. TAPER CURB HEIGHT FROM 6" TO 0" OVER TWO FEET

PAVEMENT STRIPING / ADA FEATURES / TRAFFIC SIGNAGE

15. ACCESSIBLE RAMP - SEE DETAIL 19/C4.0 - MAX. SLOPE 1:12 (8.33%) , MAX. CROSS SLOPE 1:50 (2.00%) TRUNCATED DOME TO BE A CONTRASTING COLOR.
16. HANDICAP PARKING AREA - SEE THIS PLAN FOR DIMENSIONS - SEE DETAILS 6,7, AND 12/C4.0
17. HANDICAP PARKING SIGN - SEE DETAIL 12/C4.0 G.C. TO PROVIDE ONE VAN ACCESSIBLE SIGN.
18. ONSITE PAVEMENT MARKINGS - SEE DETAIL 25 & 26/C4.0
19. 4" WIDE PARKING STRIPE PAINTED YELLOW (TYP.)
20. 4" WIDE DIAGONAL STRIPES PAINTED YELLOW AT 2 FT. O.C.
21. 6'-0" LONG CONCRETE WHEEL STOP PINNED TO PAVEMENT (TYPICAL). LOCATE 3'-6" FROM FACE OF CURB OR SIDEWALK SEE DETAIL 17 / C4.0

AUTOZONE SITE FEATURES

30. PIPE GUARD - SEE DETAIL 16 / C4.0
31. DUMPSTER LAYOUT - SEE DETAILS 8,9,10, & 11/ C4.0
32. SERVICE DOOR PLAN - SEE DETAIL 15/ C4.0
33. BOLLARD PLAN - SEE DETAIL 14/ C4.0
34. CONCRETE LIGHT POLE BASE - SEE DETAIL 13/ C4.0 AIM LIGHT FIXTURE IN DIRECTION AS INDICATED. SEE ELECTRICAL PLANS FOR ROUTING
35. FREEZELESS YARD HYDRANT AT BUILDING - SEE DETAIL 6 ON SHEET M2
36. APPROXIMATE LOCATION FOR POLE MOUNTED TRANSFORMER PER SERVICE PROVIDER SPECIFICATIONS - COORDINATE WITH SERVICE PROVIDER PRIOR TO CONSTRUCTION
37. PROVIDE DOWNSPOUT CONNECTOR AT BUILDING DOWN SPOUT - SEE ARCHITECTURAL PLANS - SEE DETAIL 21/ C4.0 - SEE GRADING PLAN FOR INVERTS
38. 4'-2"X7'-0"X2'-0" MONUMENT SIGN 12'-0" OVERALL HEIGHT - SEE SIGNAGE SHEETS FOR DETAILS - FINAL LOCATION AND DESIGN TO BE DETERMINED DURING SIGN PERMIT REVIEW

ADDITIONAL SITE FEATURES

50. TIE TO EXISTING - MATCH GRADE
51. GRASS AREA - PROVIDE 6" TOPSOIL & SOD COMMON TO REGION ON ALL DISTURBED AREAS NOT TO BE PAVED
52. SLOPE GRADE FROM BACK OF CURB DOWN TO MATCH THE EXISTING/PROPOSED GRADE - SEE GRADING PLAN

GENERAL AZ NOTES

1. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY THE ARCHITECT OF ANY UNACCEPTABLE AREAS.
2. EDGE OF NEW PAVEMENT TO BE FLUSH WITH EXISTING PAVEMENT.
3. ALL SIDEWALK CURB AND GUTTER STREET PAVING, CURB CUTS, DRIVEWAY APPROACHES, HANDICAP RAMP, ETC. CONSTRUCTED OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY SHALL CONFORM TO ALL MUNICIPAL AND/OR STATE SPECIFICATIONS AND REQUIREMENTS.
4. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC.) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
5. FOR PROPOSED UTILITY LOCATIONS, SEE THE UTILITY PLAN.

SITE DATA INFORMATION

PARKING REQUIRED (1/225 SF) = 33
EXISTING PARKING = 0
PROPOSED PARKING = 36
HC SPACES REQUIRED = 2
HC SPACES PROVIDED = 2
TOTAL PARKING = 38
PARKING STALL SIZE = 10'X18'
ADA PARKING STALL SIZE = 8'X18'
LOT AREA = 50,702 SF / 1.164 AC
NUMBER OF BUILDINGS = 1
BUILDING AREA = 7,381 SF
FLOOR AREA RATIO = 14.56%

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - CONTRACTOR TO GUARANTEE AND MAINTAIN ALL NEW SODDED AREAS FOR 60 DAYS MINIMUM, AND ALL SODDED AREAS ARE STABILIZED.

PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL NEW GRASS SODDED AREAS TO BE IRRIGATED - IRRIGATION PLAN TO BE DESIGN BUILD BY G.C. - COORDINATE WITH A SOUTH CAROLINA CERTIFIED IRRIGATION CONTRACTOR

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

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7705 Spicer Farm Lane
Fairview, Tennessee
37062
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fax: (615) 523-8865
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Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS 1 2 3 4 5 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
SITE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

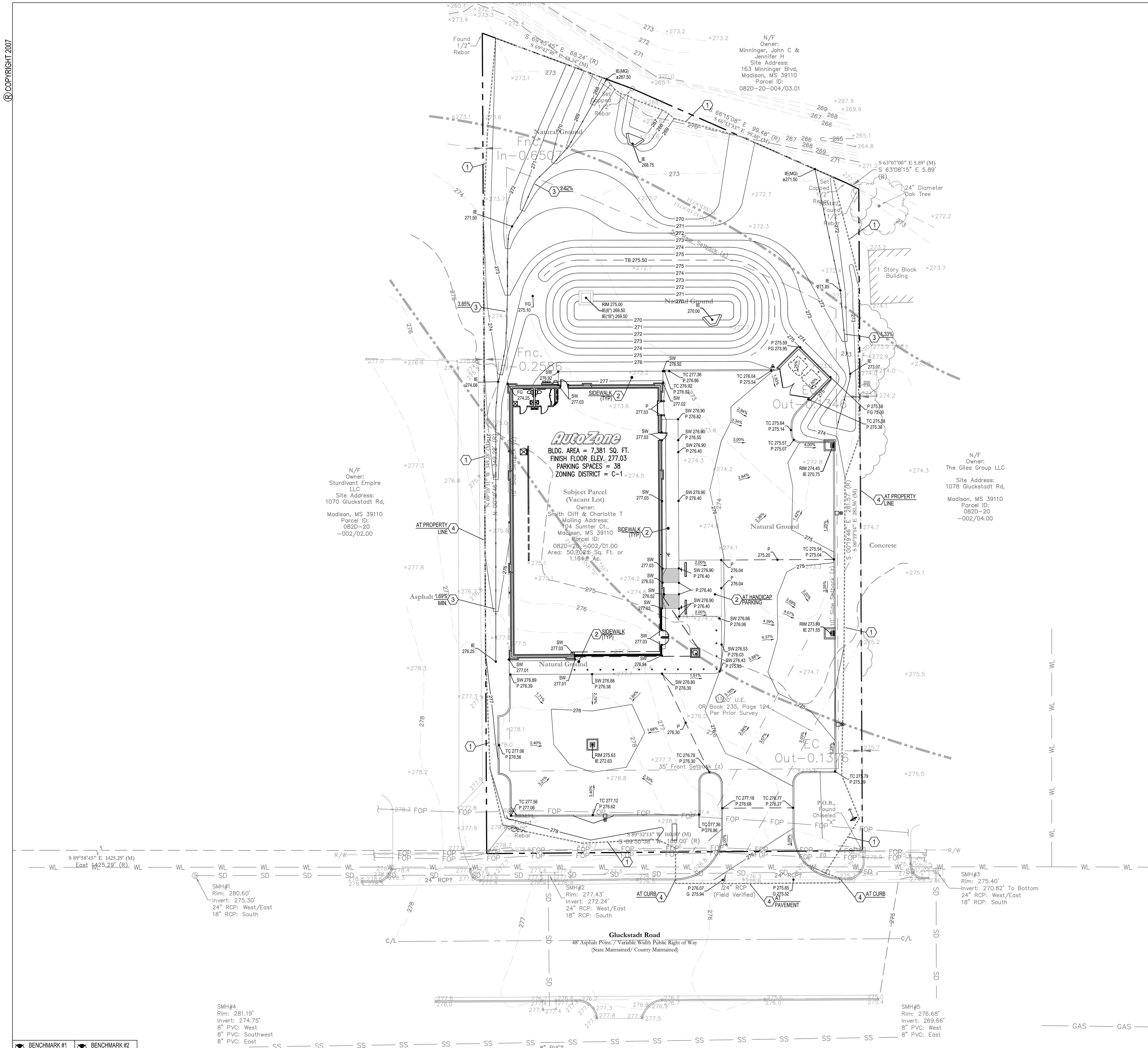
For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

11/24/2021

11/22/2021

7N2

C1.0



BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
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GENERAL GRADING LEGEND

TC	TOP OF CURB ELEVATION
P	BOTTOM OF CURB ELEVATION
FG	FINISHED GRADE ELEVATION
SW	SIDEWALK ELEVATION
MG	MATCH EXISTING GRADE ELEVATION
TB	TOP OF BANK GRADE ELEVATION
RIM	TOP OF RIM ELEVATION AT STRUCTURE
HP	HIGH POINT GRADE ELEVATION
1.09%	PROPOSED GRADE SLOPE
- - - -	LIMIT OF DISTURBANCE
———	PROPOSED SWALE

GRADING KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. PROVIDE 2.00% MAXIMUM CROSS SLOPE
3. PROVIDE SWALE - SEE SLOPE AND ELEVATIONS THIS SHEET
4. MATCH EXISTING GRADES

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

GENERAL GRADING NOTES

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN THE CLOSE PROXIMITY OF THE ABOVE-NOTED WIRES, THE ELECTRIC COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD AND UNDERGROUND WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
2. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT, DURING CONSTRUCTION, UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATIONS OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS NECESSARY TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITY LINES.
3. AT LOCATIONS WHERE UTILITY LINES OR SERVICES ARE UNDERNEATH PROPOSED PAVEMENT, THE TRENCH SHALL BE BACKFILLED TO SUBGRADE WITH CRUSHED STONE.
4. DEVELOPER IS TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, THE DEVELOPER'S ENGINEER, THE COUNTIES REPRESENTATIVE AND THE COUNTIES ENGINEER.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. REMOVE ALL FOUNDATIONS, UNDERGROUND TANKS, PAVING, BASE ETC. IF REMAINING, BEFORE BEGINNING CONSTRUCTION.
7. FILL ALL PLANTERS/ISLANDS TO TOP OF CONCRETE CURB WITH TOPSOIL. TOPSOIL TO BE CLEAN AND FREE OF DEBRIS, ETC.
8. THESE PLANS, PREPARED BY CIVIL ENGINEERING SERVICES, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF CIVIL ENGINEERING SERVICES REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
9. IN THE CASE OF CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR THE SPECIFICATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS

1	4
2	5
3	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
GRADING PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

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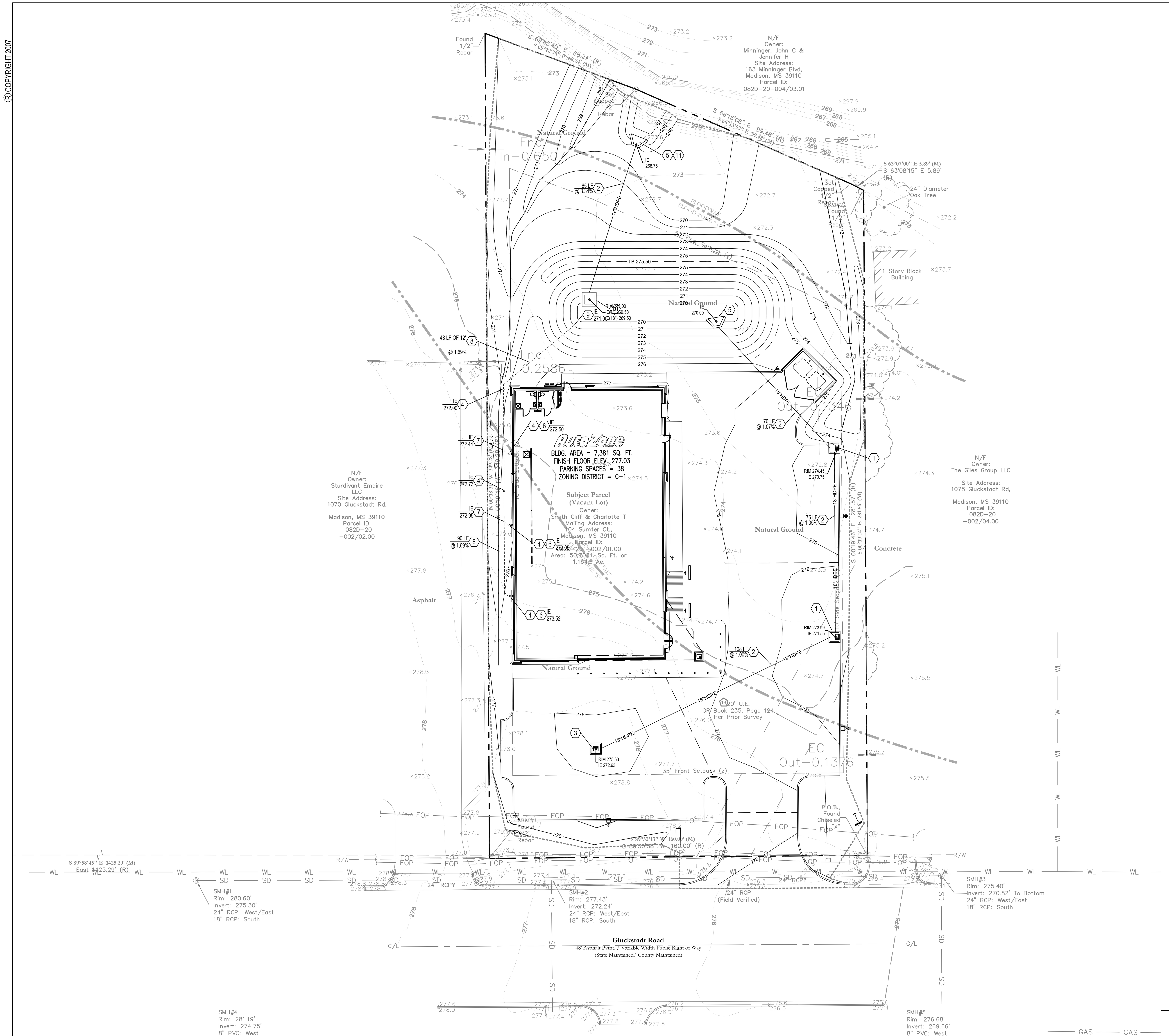
Engineering, Environmental, Land Planning

11/22/2021

7N2

C2.0



GENERAL GRADING LEGEND

IE	TOP OF BANK GRADE ELEVATION
RIM	INVERT ELEVATION AT STRUCTURE
(symbol)	CURB INLET
(symbol)	HEADWALL
(symbol)	AREA INLET

GRADING KEYNOTES

1. PROVIDE CURB INLET - SEE THIS SHEET FOR ELEVATIONS - SEE DETAIL SHEET (C4.1)
2. PROVIDE STORM SEWER PIPE - SEE THIS SHEET FOR ELEVATIONS - SEE DETAIL SHEET (C4.1)
3. PROVIDE AREA INLET - SEE THIS SHEET FOR ELEVATIONS - SEE DETAIL SHEET (C4.1)
4. PROVIDE STORM SEWER CLEANOUT - SEE INVERT ELEVATION THIS SHEET - SEE DETAIL SHEET (C4.1)
5. PROVIDE PRECAST CONCRETE HEADWALL - SEE ELEVATIONS THIS SHEET - - SEE DETAIL SHEET (C4.1)
6. PROVIDE DOWNSPOUT COLLECTOR AT ROOF DRAIN - SEE ELEVATIONS THIS SHEET - SEE DETAIL SHEET (C4.0)
7. PROVIDE 8"X8"WATER TIGHT HDPE WYE PER MANUFACTURER SPECS. - SEE INVERT ELEVATION THIS SHEET
8. PROVIDE WATER TIGHT POLYETHYLENE PIPE FOR ROOF DRAINS - SEE THIS SHEET FOR SIZE, TYPE AND ELEVATIONS
9. DAYLIGHTPIPE FROM ROOF DRAIN - SEE THIS SHEET FOR ELEVATION
10. PROVIDE DETENTION OUTLET STRUCTURE - SEE DETAIL SHEET (C4.1)
11. PROVIDE RED VALVE TIDEFLEX TF-1 CHECK VALVE, OR APPROVED EQUAL

GENERAL GRADING NOTES

SEE SHEET C2.0

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GRAPHIC SCALE
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(IN FEET)
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NAD83 MS STATE PLANE

REVISIONS
1 2 3 4 5 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DRAINAGE PLAN

Owner / Developer: AUTOZONE STORES LLC
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Memphis, Tennessee 38103
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RAY G. FLAKE LICENSED PROFESSIONAL ENGINEER 21060
11/24/2021

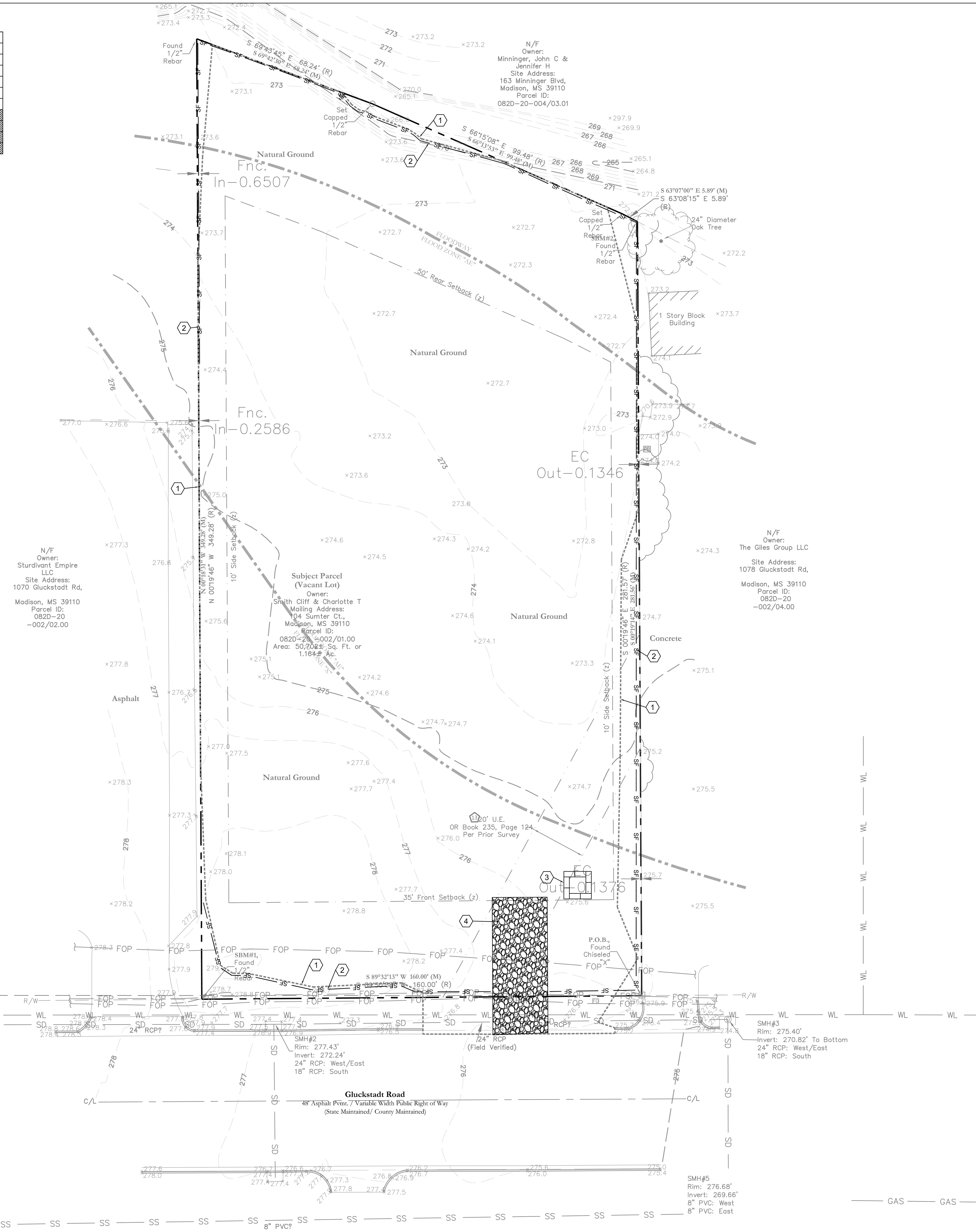
11/22/2021

7N2

C2.1

ESTIMATED TIMELINE FOR CONSTRUCTION ACTIVITIES

ESTIMATED START DATE TBD	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
MOBILIZATION	X					
INITIAL EROSION CONTROL	X					
CLEARING AND GRADING		X	X			
TEMP GRASS STABILIZATION		X	X	X	X	
STORM SEWER AND WQ CONST.		X	X	X		
UTILITIES			X	X	X	
GENERAL CONSTRUCTION			X	X	X	X
GRASS SOD & LANDSCAPING						X
SITE CLEANING					X	X
MAINTAIN EROSION	X	X	X	X	X	X



PROPOSED LEGEND

- INSTALL INLET PROTECTION (SEE DETAIL SHEET)
- INSTALL SILT FENCE (SEE DETAIL SHEET)
- TEMPORARY CONSTRUCTION EXIT
- CONCRETE WASHOUT AREA
- LIMITS OF DISTURBANCE

KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. INSTALL SILT FENCE AT LIMITS OF DISTURBANCE - MAINTAIN THROUGHOUT CONSTRUCTION - FIELD ADJUST AS REQUIRED - (SEE DETAIL SHEET)
3. CONCRETE WASHOUT PER EPA STANDARDS - CONTRACTOR TO FIELD ADJUST LOCATION AS NEEDED
4. TEMPORARY CONSTRUCTION ENTRANCE

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE GRADING WORK. PLAN PRIOR TO ANY SITE CONSTRUCTION

2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR OTHER ACCEPTABLE METHODS.

3. MAXIMUM SLOPE CUTS SHALL NOT EXCEED 3:1 UNLESS APPROVED BY THE OWNERS REPRESENTATIVE. CUT AND FILL SLOPES 3:1 AND GREATER, SHALL BE STABILIZED BY EROSION CONTROL BLANKETS (ECB) AND SOD COMMON TO THE REGION.

4. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

5. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

6. ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

7. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED PERIODS OF CONTINUOUS RAINFALL.

8. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

9. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE OF THE SITE IS NOT IMPEDED.

10. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD OF 14 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

11. CLEAN SILT BARRIERS WHEN THEY ARE APPROXIMATELY 33% OBSTRUCTED BY SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED.

12. TOPSOIL SHALL BE RE-SPREAD A MINIMUM DEPTH OF 6" OVER ALL DISTURBED AREAS. DISTURBED AREAS SHALL HAVE PERMANENT STABILIZATION APPLIED (SOD COMMON TO THE LOCAL AREA) PERMANENT.

13. AREAS THAT HAVE BEEN STRIPPED, CUT SLOPES, FILL SLOPES OR AREAS OTHER WISE DISTURBED SHALL HAVE PERMANENT STABILIZATION APPLIED WITH SOD COMMON TO THE LOCAL AREA. PERMANENT STABILIZATION SHALL BE IN PLACE PRIOR TO ACCEPTANCE OF FINAL GRADING.

14. REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER. STABILIZATION SHALL BE PLACED PRIOR TO ACCEPTANCE OF FINAL GRADING.

15. STOCK PILING OF SOILS ON SITE IF REQUIRED, SHALL BE LOCATED BY CONTRACTOR AND BE PROTECTED BY PERIMETER SILT FENCE, IF LEFT EXPOSED FOR A PERIOD OF 13 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - SEE LANDSCAPE PLAN

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS: 1, 2, 3, 4, 5, 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
INITIAL EROSION PLAN

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11/24/2021

11/22/2021

7N2

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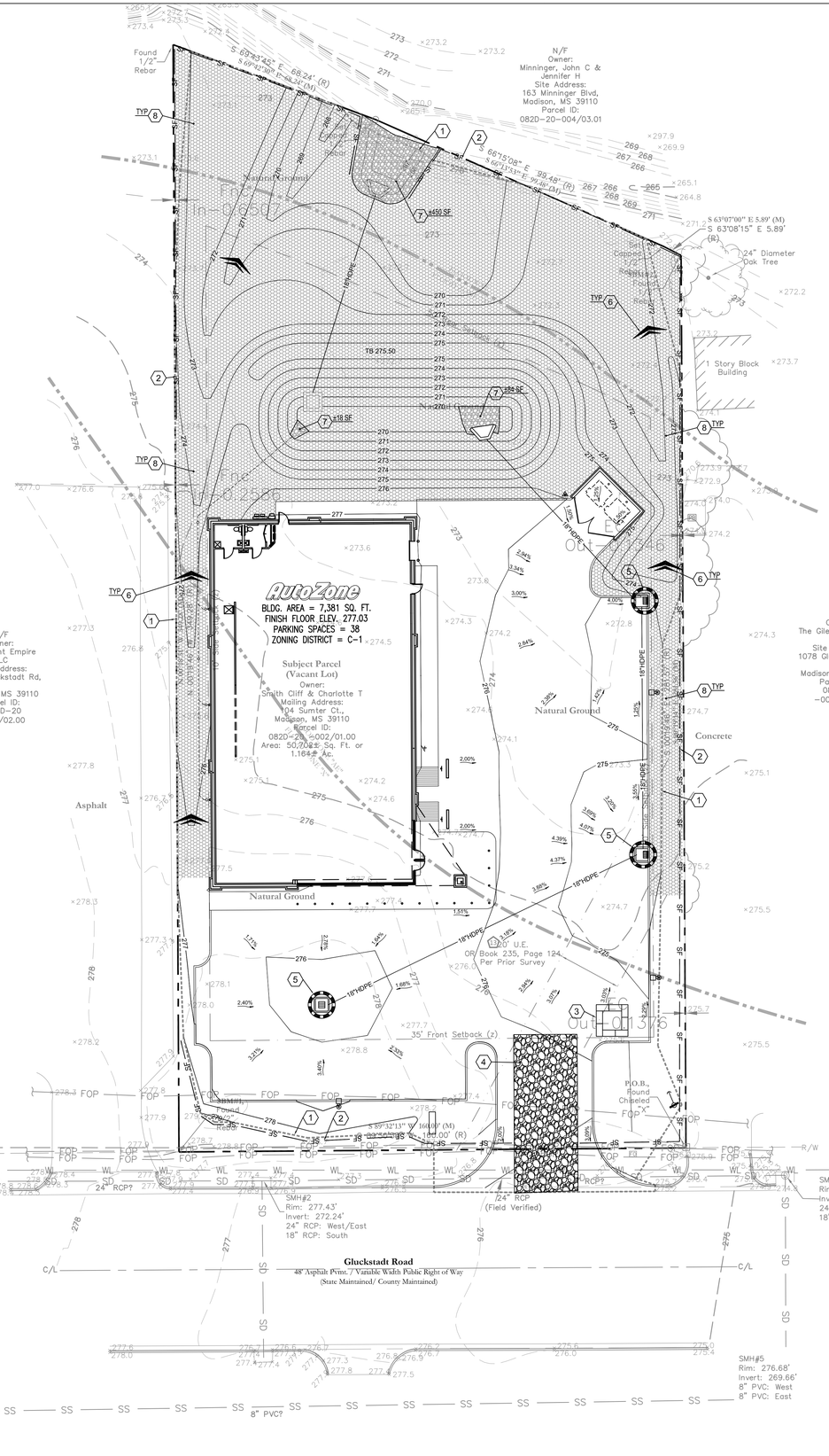
Engineering, Environmental, Land Planning

C2.2

ESTIMATED TIMELINE FOR CONSTRUCTION ACTIVITIES

ESTIMATED START DATE TBD	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
MOBILIZATION						
INITIAL EROSION CONTROL						
CLEARING AND GRADING						
TEMP GRASS STABILIZATION						
STORM SEWER CONST.						
UTILITIES						
GENERAL CONSTRUCTION						
GRASS SOD & LANDSCAPING						
SITE CLEANING						
MAINTAIN EROSION						



PROPOSED LEGEND

- INSTALL INLET PROTECTION (SEE DETAIL SHEET)
- SF — INSTALL SILT FENCE (SEE DETAIL SHEET)
- TEMPORARY CONSTRUCTION EXIT
- CONCRETE WASHOUT AREA
- LIMITS OF DISTURBANCE
- RIP-RAP
- INSTALL CHECK DAM
- EROSION CONTROL BLANKET

KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. INSTALL SILT FENCE AT LIMITS OF DISTURBANCE - MAINTAIN THROUGHOUT CONSTRUCTION - FIELD ADJUST AS REQUIRED - (SEE DETAIL SHEET)
3. CONCRETE WASHOUT PER EPA STANDARDS - CONTRACTOR TO FIELD ADJUST LOCATION ON SITE AS NEEDED
4. TEMPORARY CONSTRUCTION ENTRANCE
5. INSTALL INLET PROTECTION OR APPROVED EQUAL - (SEE DETAIL SHEET)
6. INSTALL CHECK DAM OR APPROVED EQUAL (SEE DETAIL SHEET)
7. RIP-RAP PROTECTION OR APPROVED EQUAL (SEE DETAIL SHEET)
8. INSTALL TEMPORARY / PERMANENT SOD STABLIZATION (SEE DETAIL SHEET)

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE GRADING WORK. PLAN PRIOR TO ANY SITE CONSTRUCTION

2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR OTHER ACCEPTABLE METHODS.

3. MAXIMUM SLOPE CUTS SHALL NOT EXCEED 3:1 UNLESS APPROVED BY THE OWNERS REPRESENTATIVE. CUT AND FILL SLOPES 3:1 AND GREATER, SHALL BE STABILIZED BY EROSION CONTROL BLANKETS (ECB) AND SOD COMMON TO THE REGION.

4. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

5. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

6. ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

7. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED PERIODS OF CONTINUOUS RAINFALL.

8. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

9. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE OF THE SITE IS NOT IMPEDED.

10. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD OF 14 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

11. CLEAN SILT BARRIERS WHEN THEY ARE APPROXIMATELY 33% OBSTRUCTED BY SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED.

12. TOPSOIL SHALL BE RE-SPREAD A MINIMUM DEPTH OF 6" OVER ALL DISTURBED AREAS. DISTURBED AREAS SHALL HAVE PERMANENT STABILIZATION APPLIED (SOD COMMON TO THE LOCAL AREA) PERMANENT.

13. AREAS THAT HAVE BEEN STRIPPED, CUT SLOPES, FILL SLOPES OR AREAS OTHER WISE DISTURBED SHALL HAVE PERMANENT STABILIZATION APPLIED WITH SOD COMMON TO THE LOCAL AREA. PERMANENT STABILIZATION SHALL BE IN PLACE PRIOR TO ACCEPTANCE OF FINAL GRADING.

14. REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER. STABILIZATION SHALL BE PLACED PRIOR TO ACCEPTANCE OF FINAL GRADING.

15. STOCK PILING OF SOILS ON SITE IF REQUIRED, SHALL BE LOCATED BY CONTRACTOR AND BE PROTECTED BY PERIMETER SILT FENCE. IF LEFT EXPOSED FOR A PERIOD OF 13 DAYS OR MORE SHALL BE STABILIZED WITH TEMPORARY SEEDING.

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - SEE LANDSCAPE PLAN

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS
1 2 3
4 5 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
FINAL EROSION CONTROL PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

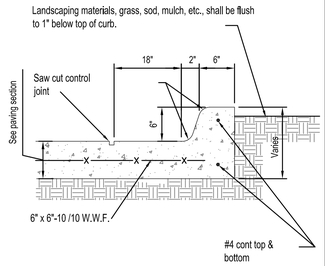
For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

RAY C. FLAKE
LICENSED PROFESSIONAL ENGINEER
21060
STATE OF MISSISSIPPI
11/24/2021

11/22/2021

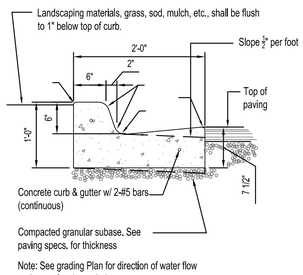
7N2

C2.3



N.T.S.

1 CONCRETE MONOLITHIC CURB



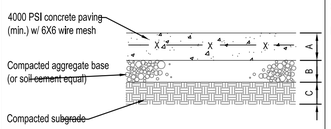
1" = 1'-0" SEC-C01

2 CONC. CURB & GUTTER (at Asphalt paving only)

DIMENSION & TYPE

Concrete Section	A	B	C
Parking Areas	5"	--	see note
Loading/Dumpster	8"	--	see note
Approaches	7"	--	see note

NOTE: Compacted subgrade should be as specified in soils report.



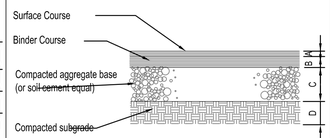
NO SCALE SEC-C04

3 CONCRETE PAVING SECTION

DIMENSION & TYPE

Asphalt Section	A	B	C	D
Parking Areas	2"	4"	--	see note
Drive Aisle	2"	6"	--	see note

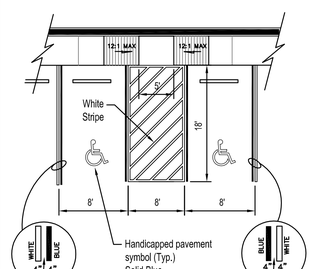
NOTE: Compacted subgrade should be as specified in soils report.



NO SCALE

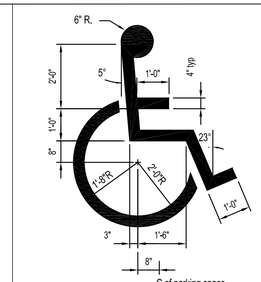
4 ASPHALT PAVING SECTION

5 NOT USED



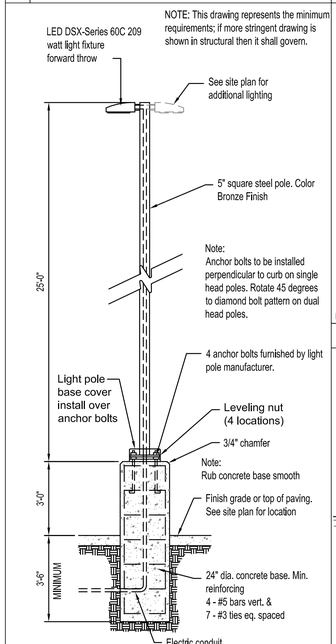
NO SCALE

6 HANDICAP PARKING DETAIL



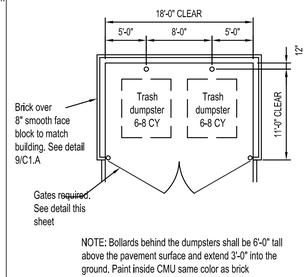
NO SCALE

7 INT'L BARRIER FREE SYMBOL



NO SCALE SEC-C13

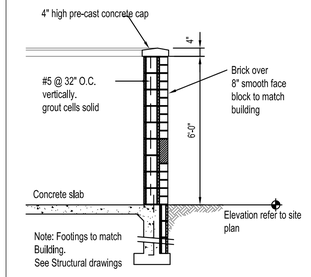
13 TYPICAL LIGHT POLE



NOTE: Bollards behind the dumpsters shall be 6'-0" tall above the pavement surface and extend 3'-0" into the ground. Paint inside CMU same color as brick

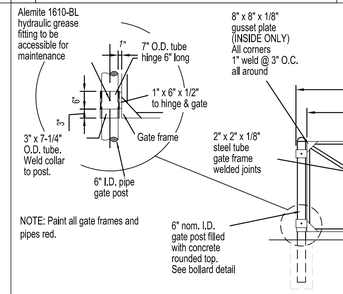
NO SCALE SEC-C17M

8 BRICK DUMPSTER LAYOUT



NO SCALE MDUMPSEC

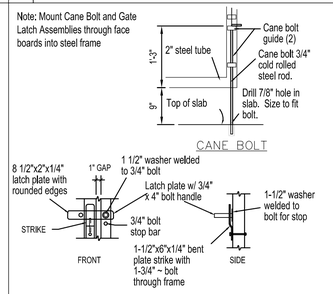
9 BRICK DUMPSTER SECTION



NO SCALE SEC-C18

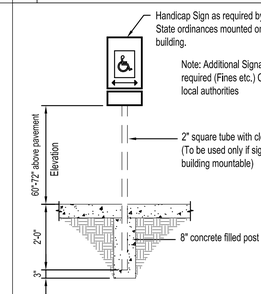
10 GATE DETAIL FOR MASONRY WALL DUMPSTER ENCLOSURE

Note: Mount Cane Bolt and Gate Latch Assemblies through face boards into steel frame



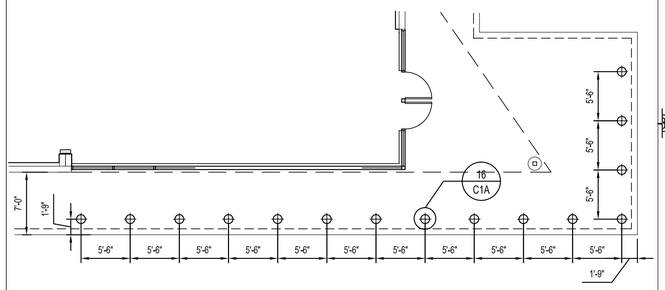
NO SCALE SEC-C19

11 GATE LATCH / BOLT DETAILS



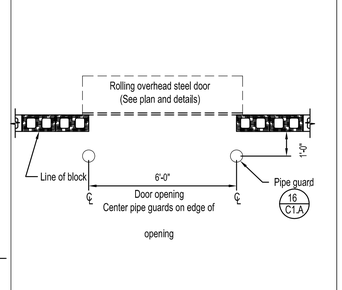
NO SCALE

12 TYPICAL HANDICAP SIGN



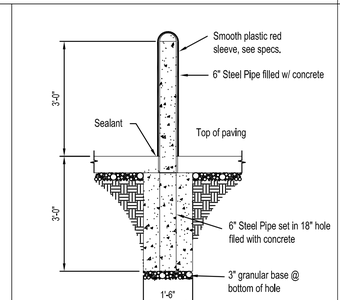
NO SCALE SEC-7n2L

14 BOLLARD LAYOUT PLAN - 7n2



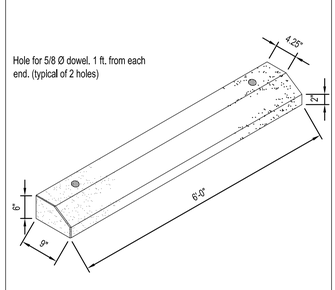
NO SCALE SEC-C08

15 PIPE GUARD @ ROLL-UP DOOR



NO SCALE SEC-C07

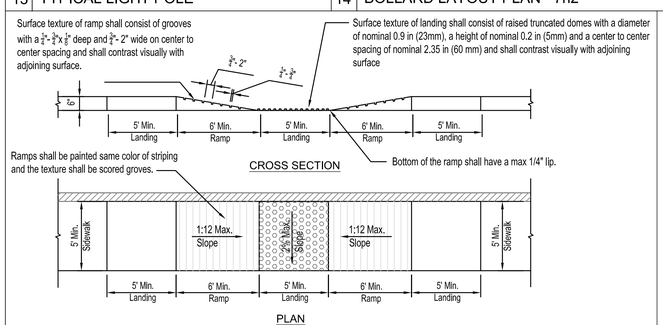
16 TYPICAL PIPE GUARD SECTION



NO SCALE SEC-C18

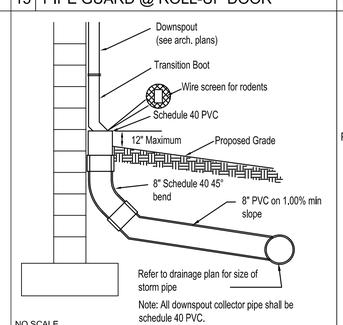
17 WHEEL STOP DETAIL

18 NOT USED



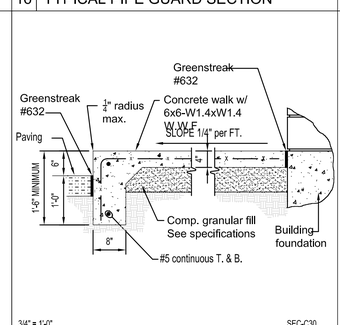
19 HANDICAP PARKING RAMP

20 NOT USED



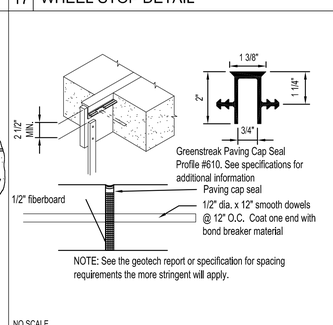
NO SCALE

21 DOWNSPOUT DETAIL



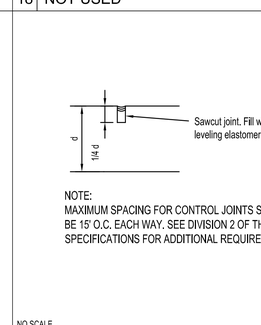
3/4" = 1'-0" SEC-C30

22 TYPICAL WALK SECTION



NO SCALE

23 TYPICAL EXPANSION JOINT

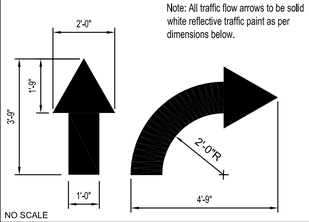


NO SCALE

24 TYPICAL CONTROL JOINT

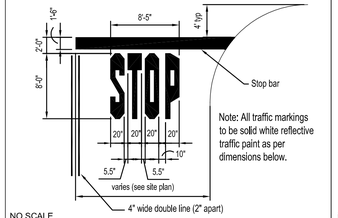
For all details on this sheet which call for a minimum depth of concrete, that depth shall be adjusted to the deeper of that called for in the detail or the frost depth shown in the Geotechnical Report.

FROST DEPTH NOTES



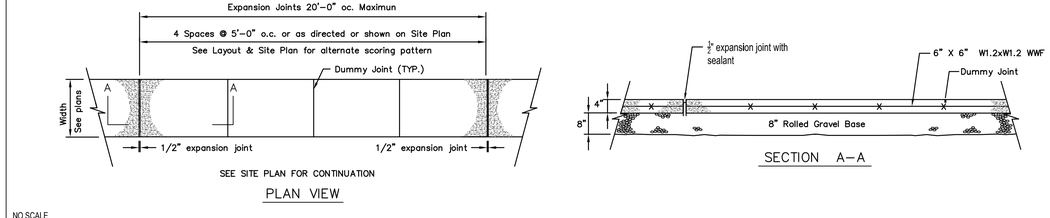
NO SCALE

25 TYPICAL PAVEMENT MARKINGS



NO SCALE

26 TYPICAL PAVEMENT MARKINGS



NO SCALE

27 CONCRETE SIDEWALK

NORTH
NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD

GLUCKSTADT
DETAIL SHEET 1

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

REGISTERED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
11/24/2021

11/22/2021

7N2

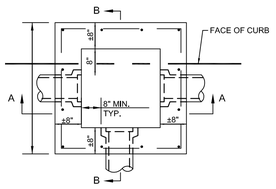
C4.0

NOTE:

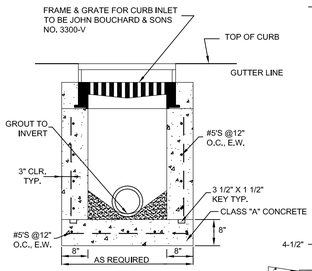
1. STORM WATER CURB INLET/AREA INLET TO HAVE ENVIRONMENTAL MESSAGE STAMPED INTO THE METAL"DUMP NO WASTE","DRAINS TO STREAM",

2. THE CONTRACTOR SHALL POUR THE INVERTS IN ALL STORM WATER STRUCTURES.

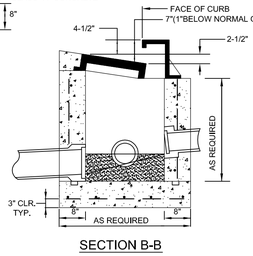
3. OPTIONAL CONSTRUCTION PRE-FAB. CONCRETE EQUIVALENT.



RAMP PLAN VIEW



SECTION A-A



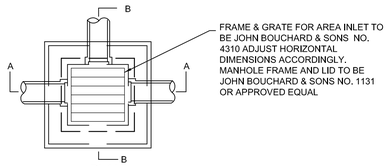
SECTION B-B

SINGLE CURB INLET

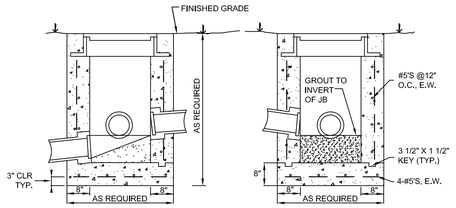
N.T.S.

NOTE

OPTIONAL CONSTRUCTION MATERIALS INCLUDE PRE-FAB. CONCRETE.



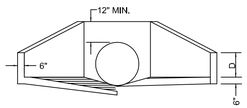
PLAN



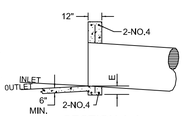
SECTION A-A SECTION B-B

AREA INLET/JUNCTION BOX

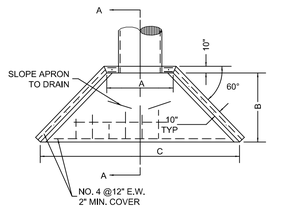
N.T.S.



ELEVATION



SECTION A-A



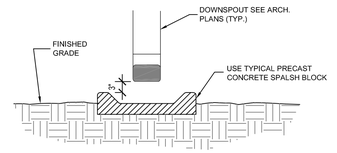
PLAN VIEW

TABLE OF DIMENSIONS					
DIA	A	B	C	D	E
12"	20"	30"	60"	6"	8"
15"	23"	36"	72"	6"	8"
18"	28"	42"	84"	9"	8"
24"	34"	48"	96"	9"	8"
30"	40"	54"	108"	12"	10"
36"	48"	60"	120"	15"	10"
42"	54"	66"	132"	18"	10"
48"	60"	72"	144"	21"	12"
54"	54"	78"	156"	24"	12"
60"	60"	84"	168"	24"	12"

NOTE:
ALL EDGES OF EXPOSED CONCRETE TO BE CHAMFERED TO ONE CONCRETE TO BE

WINGED HEADWALL/ENDWALL

N.T.S.



NOTE:

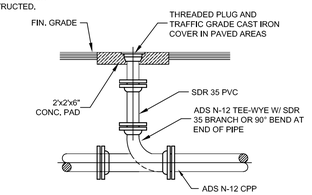
FRONT EDGE OF FLUME TO BE FLUSH W/ FINISHED GRADE.

CONCRETE SPLASH BLOCK

N.T.S.

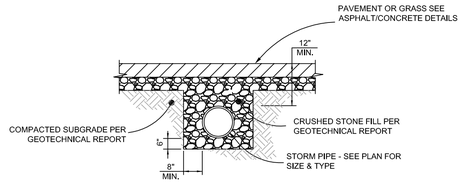
NOTE:

IN GRASS AREAS WHERE NO PAVEMENT IS PROPOSED, CONCRETE BLOCK SHALL NOT BE CONSTRUCTED.



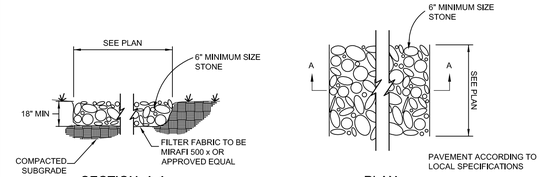
PRIVATE STORM SEWER CLEANOUT

N.T.S.



STORM SEWER PIPE TRENCH DETAIL

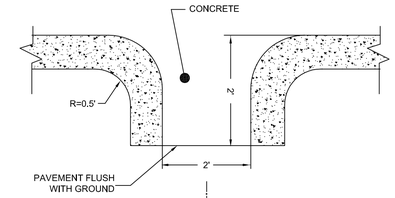
N.T.S.



SECTION A-A PLAN

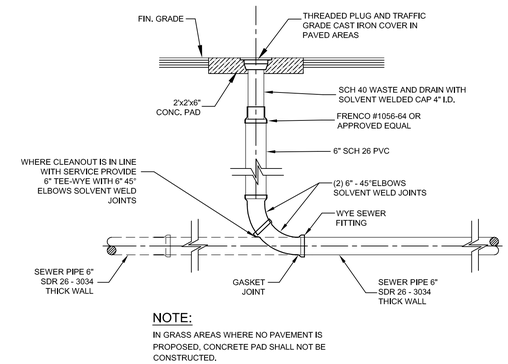
RIPRAP DETAIL

N.T.S.



CURB CUT DETAIL

N.T.S.

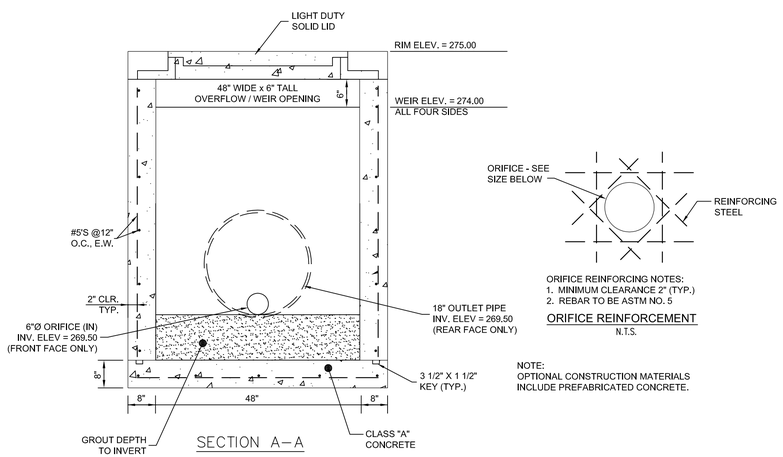


NOTE:

IN GRASS AREAS WHERE NO PAVEMENT IS PROPOSED, CONCRETE PAD SHALL NOT BE CONSTRUCTED.

PRIVATE SANITARY SEWER CLEANOUT

N.T.S.



ORIFICE REINFORCING NOTES:
1. MINIMUM CLEARANCE 2" (TYP.)
2. REBAR TO BE ASTM NO. 5

ORIFICE REINFORCEMENT
N.T.S.

NOTE:
OPTIONAL CONSTRUCTION MATERIALS INCLUDE PREFABRICATED CONCRETE.

DETENTION OUTLET STRUCTURE

N.T.S.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
4	5	6	

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DETAIL SHEET 2

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL:(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

REGISTERED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI 11/24/2021

11/22/2021

7N2

C4.1

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
		4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DETAIL SHEET 3

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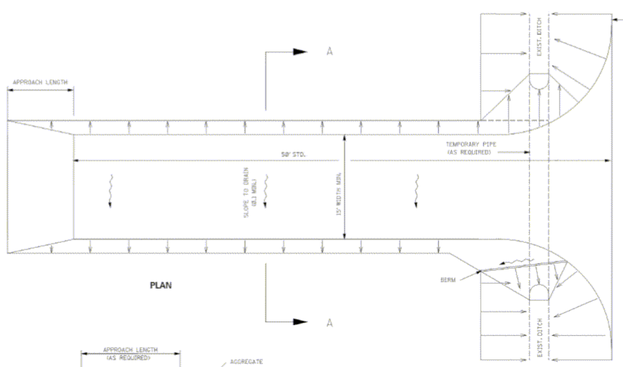
Cindy.searcy@construction.com

11/22/2021

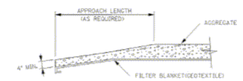
7N2

C4.2

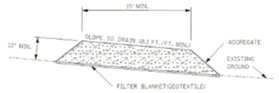
STATE	PROJECT NO.
MISS.	



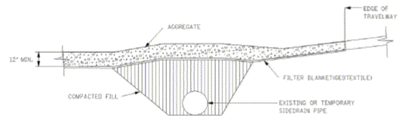
PLAN



TRANSITION DETAIL



SECTION A-A



RURAL CONNECTION DETAIL

GENERAL NOTES:

1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT POINTS OF EGRESS FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS WHERE OFFSITE TRACKING OF MUD COULD OCCUR. TRAFFIC FROM UNSTABILIZED AREAS OF THE PROJECT SHALL BE DIRECTED THRU THE STABILIZED ENTRANCE. BARRIERS, FLAGGING, OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICULAR EGRESS ACROSS THE STABILIZED ENTRANCE.
2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE TECHNIQUE TO MINIMIZE OFFSITE TRACKING OF SEDIMENT. THE ALTERNATIVE MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS USE.
3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING THE STABILIZED CONSTUCTION ENTRANCE AGGREGATE AND CONSTRUCTION MUD) SHOULD BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED BY THE ENGINEER.
4. SIZE III STABILIZER AGGREGATE OR LARGER SHALL BE USED.
5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS FUNCTION TO PREVENT OFFSITE TRACKING. THE STABILIZED CONSTRUCTION ENTRANCE SHOULD BE RINSED WHEN NECESSARY TO MOVE ACCUMULATED MUD DOWNWARD THRU THE STONE. ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STABILIZED ENTRANCE MAY BE REQUIRED TO LIMIT THE MUD TRACKED.
6. THE NOMINAL SIZE OF A STANDARD STABILIZED CONSTRUCTION ENTRANCE IS 15' X 50' UNLESS OTHERWISE SHOWN IN THE EROSION CONTROL PLAN.
7. COSTS OF ALL ITEMS ON THIS SHEET SHALL BE INCLUDED IN OTHER ITEMS BID.

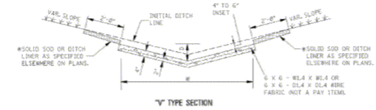
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

STABILIZED CONSTRUCTION ENTRANCE

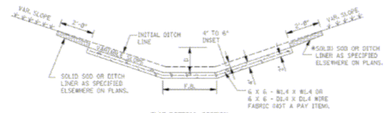
MDOT

WORKING NUMBER ECD-16
SHEET NUMBER 6116

ISSUE DATE: AUGUST 01, 2017

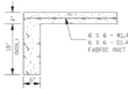


"V" TYPE SECTION



FLAT BOTTOM SECTION

DETAIL OF CONSTRUCTION JOINT



DETAIL OF TOE WALL

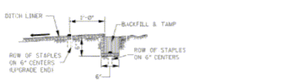
NOTES: TOE WALL REQUIRED UPSTREAM AND DOWNSTREAM.

CONCRETE PAVED DITCH

NOTES:

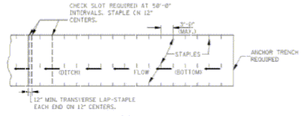
1. CONCRETE PAVED DITCHES SHALL BE GROOVED AT 20'-0" INTERVALS. THE GROOVES SHALL BE CUT TO A DEPTH OF NOT LESS THAN 1".
2. DIMENSIONS D & W ARE AS FOLLOWS:
   D(MINIMUM) = 6"
   D(HORIZONTAL)= 9"
   W(MINIMUM) = 24"
3. CHAIR SUPPORTS FOR THE WIRE MESH WILL NOT BE REQUIRED, HOWEVER, THE CONTRACTOR SHALL PLACE THE WIRE MESH IN A SATISFACTORY AND WORKMANLIKE MANNER TO ENSURE THAT THE FINAL POSITION IS REASONABLY NEAR THE POSITION INDICATED.

*6. CENTER ROW OF STAPLES MAY BE OMITTED ON DITCH LINER.

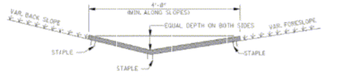


ANCHOR TRENCH DETAIL

NOTE: ANCHOR TRENCH REQUIRED AT THE BEGINNING AND ENDING OF EACH AREA TO BE COVERED, EXCEPT DOWNSTREAM END ADJOINING A STRUCTURE.



PLAN



SECTION

DITCH LINER TREATMENT
(EXCELSIOR BLANKET, JUTE MESH OR EROSION CONTROL FABRIC)

NOTE: DITCHES TREATED WITH DITCH LINER WILL BE VEGETATED PRIOR TO TREATMENT, UNLESS OTHERWISE INDICATED.

STATE	PROJECT NO.
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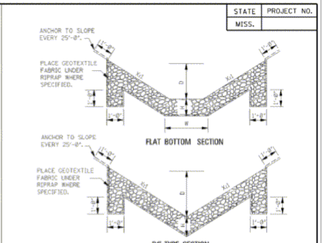
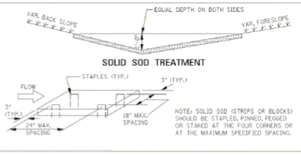


NOTES:

1. DIMENSIONS D, W AND X ARE VARIABLE AND ARE SHOWN ELSEWHERE ON THE PLANS.
2. THE RIPRAP SIZE AND MINIMUM DEPTH "H" FOR RIPRAP TREATMENT ARE AS FOLLOWS:

RIPRAP SIZE & MINIMUM DEPTH "H"	
W	RIPRAP SIZE (Dso)
12"	150
18"	200



SOLID SOD TREATMENT

NOTE: SOLID SOD (STRIPS OR BLOCKS) SHOULD BE STAPLED, PINNED, PEGGED OR STAKED AT THE FOUR CORNERS OR AT THE MAXIMUM SPECIFIED SPACING.

GENERAL NOTES:

1. FOR LOCATION OF APPROPRIATE DITCH TREATMENTS, SEE PLAN SHEETS AS DENOTED BY THE FOLLOWING LEGEND OR AS DIRECTED BY THE ENGINEER:
   DITCH LINER
   SOLID SOD
   CONCRETE PAVED DITCH
   RIPRAP

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

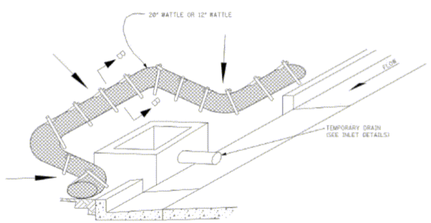
DETAILS OF TYPICAL DITCH TREATMENTS

MDOT

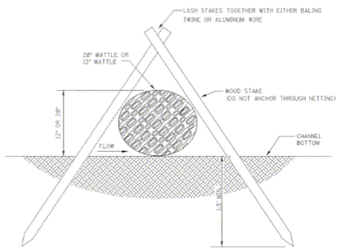
WORKING NUMBER DT-1
SHEET NUMBER 6123

ISSUE DATE: AUGUST 01, 2017

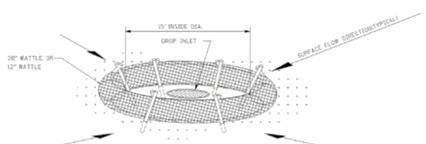
NOTE: SILT FENCE OR SANDBAGS MAY ALSO BE USED FOR THIS APPLICATION. HAY BALES NOT ACCEPTABLE DURING THIS STAGE.



CURB INLET PROTECTION (STAGE 2)
SINGLE OR DOUBLE WING INLET



SECTION B-B



DROP INLET PROTECTION

NOTES:

1. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE WATTLE. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
2. OVERLAP ENDS OF WATTLES PER MANUFACTURER'S RECOMMENDATIONS (1' MIN., 3' MAX.)
3. TRENCHING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
4. IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SANDBAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE WATTLES IN PLACE. COST OF SANDBAGS USED IN THIS APPLICATION SHALL BE INCLUDED IN OTHER ITEMS BID.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

INLET PROTECTION DETAILS OF WATTLES

MDOT

WORKING NUMBER ECD-13
SHEET NUMBER 6113

ISSUE DATE: AUGUST 01, 2017

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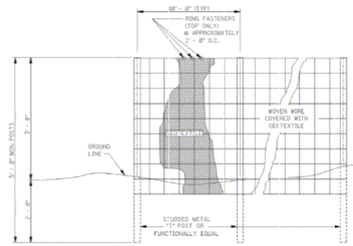
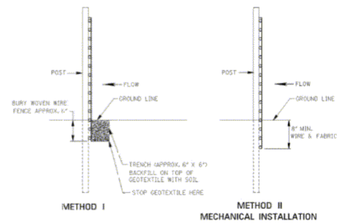
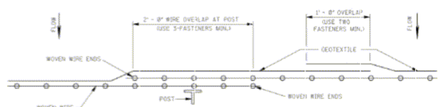
MISS.	



ELEVATION VIEW



SIDE VIEW



PLAN VIEW
REQUIRED LAPPING

GENERAL NOTES:

1. SILT FENCES SHOULD BE USED IN AREAS WHERE FLOW IS NOT SEVERE.
2. SILT FENCES ARE TEMPORARY SEDIMENT CONTROL ITEMS THAT SHOULD BE ERECTED OPPOSITE ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS AND CHANNELS.
3. SILT FENCE SHOULD BE PLACED WELL INSIDE RIGHT-OF-WAY AND ALONG EDGE OF CLEARING LIMITS. THIS WILL ALLOW ROOM FOR BACK-UP FENCE IF FIRST FENCE BECOMES FULL.
4. WHENEVER POSSIBLE, SILT FENCE SHOULD BE CONSTRUCTED ACROSS A LEVEL AREA IN THE SHAPE OF A SWALE. THIS AIDS IN PONDING OF RUNOFF AND FACILITATES SEDIMENTATION.
5. THE CONTRACTOR MAY ELECT TO USE EITHER METHOD I OR METHOD II. COST TO BE LINEAR FEET OF SILT FENCE.
6. METHOD II INSTALLATION SHALL BE ACCOMPLISHED USING AN IMPLEMENT THAT IS MANUFACTURED FOR THE APPLICATION AND PROVIDES A CONFIGURATION MEETING THE REQUIREMENTS OF DETAIL.
7. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
8. GEOTEXTILE FABRIC MEETING THE TYPE II MATERIAL REQUIREMENTS AND INSTALLED ACCORDING TO SPECIFICATION MAY BE USED WITHOUT WOVEN FENCE.

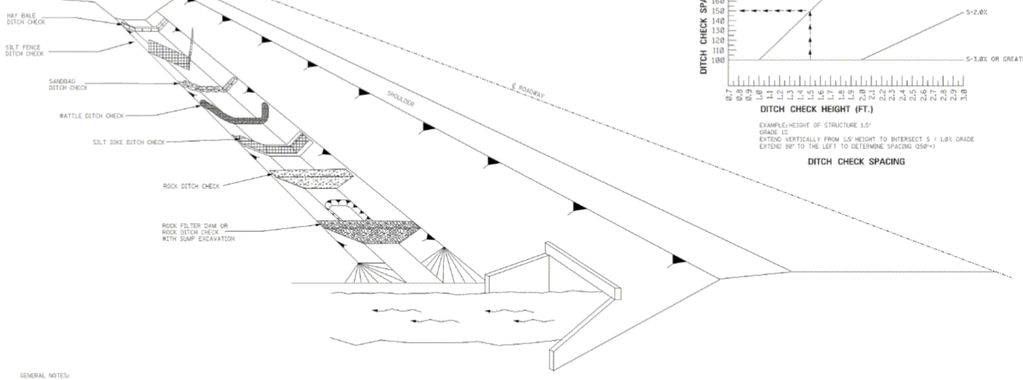
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

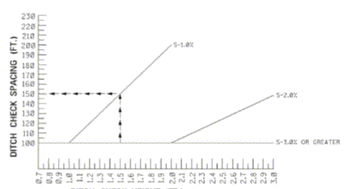
DETAILS OF SILT FENCE INSTALLATION

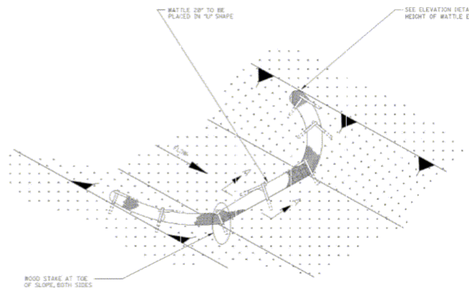
MDOT

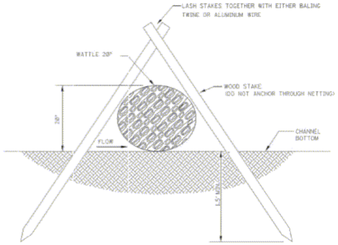
WORKING NUMBER ECD-1
SHEET NUMBER 6103

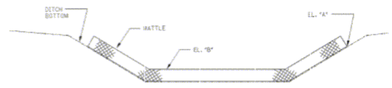
ISSUE DATE: AUGUST 01, 2017











STATE	PROJECT NO.
MISS.	

EXAMPLE: HEIGHT OF STRUCTURE 1.5'
GRADE 1%
EXTEND VERTICALLY FROM 1.5' HEIGHT TO INTERSECT S = 1.0% GRADE
EXTEND 90° TO THE LEFT TO DETERMINE SPACING (150'+)

DITCH CHECK SPACING

GENERAL NOTES:

1. THE DITCH CHECK PERSPECTIVE ILLUSTRATES A TOOL BOX OF TEMPORARY PRACTICES THAT MAY BE USED. DITCH CHECKS ARE INSTALLED TO CONTROL RUNOFF VELOCITY AND THUS REDUCE EROSION AND PROVIDE FOR TRAPPING OF SEDIMENTS.
2. SELECTION OF THE APPROPRIATE DITCH CHECK SHOULD BE A FUNCTION OF CONSTRUCTION PHASE, DRAINAGE AREA, DITCH GRADIENT, SOIL TYPE, ECONOMY AND SAFETY.
3. DITCH CHECKS CAN BE REMOVED FOR MAINTENANCE AND/OR REPLACEMENT BUT MUST REMAIN IN PLACE UNTIL UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED. MAINTENANCE INCLUDES REMOVAL OF SEDIMENT BEGINNING WHEN SEDIMENT ACCUMULATION REACHES ⅓ THE CAPACITY OR HEIGHT OF THE STRUCTURE AND NEVER ALLOWING FOR SEDIMENT TO ACCUMULATE MORE THAN ½ THE VOLUME OR HEIGHT OF THE DITCH CHECK STRUCTURE.
4. HAY BALES SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
5. SILT FENCE DITCH CHECKS SHOULD BE USED WHERE IT HAS BEEN DETERMINED THAT HAY BALE CHECKS ARE INADEQUATE. SILT FENCE DITCH CHECKS SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
6. SANDBAG DITCH CHECKS SHOULD BE USED FOR VELOCITY REDUCTION AND MINIMAL SEDIMENT TRAPPING IN CONCRETE PAVED DITCHES OR IN DITCHES THAT HAVE ROCK BOTTOMS.
7. WATTLE DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS.
8. SILT DIKES CAN BE USED IN DITCHES WITH CONCENTRATED FLOWS WITHIN THE CLEAR ZONE WHERE RIPRAP CAN NOT BE USED, AS CONSTRUCTION PROGRESSES.
9. ROCK DITCH CHECKS WITH SUMP EXCAVATION CAN BE PLACED IN DITCHES TO ASSURE ON-SITE SEDIMENT TRAPPING REQUIREMENTS ARE MET. DITCH CHECK WITH SUMP EXCAVATION IS USED WHEN DITCHES RECEIVE DRAINAGE FROM CUT OR FILL SLOPES OR OTHER CRITICAL AREAS WHERE SOIL EROSION IS EXPECTED. DRAINAGE AREA FOR A TEMPORARY SEDIMENT TRAP SHOULD BE LIMITED TO 3 ACRES. THEY CAN BE USED IN SERIES TO INCREASE ON-SITE SEDIMENT TRAPPING EFFICIENCY.
10. DITCH CHECKS, IN NO CASE, SHALL BE PLACED IN LIVE STREAMS.
11. CONFIGURATION AND SPACING MAY BE ADJUSTED IF APPROVED BY THE ENGINEER TO ACCOMMODATE TRAVELWAY SAFETY, WATER FLOW, OR SOIL AND INSTALLATION CHALLENGES.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DITCH CHECK STRUCTURES, TYPICAL APPLICATIONS AND DETAILS

MDOT
WORKING NUMBER ECD-4
SHEET NUMBER 6104
ISSUE DATE: AUGUST 01, 2017

STATE	PROJECT NO.
MISS.	

DETAIL (DITCH CHECK)

SECTION A–A

NOTE: END POINTS "A" SHALL BE HIGHER THAN FLOWLINE POINT "B".

ELEVATION DETAIL

NOTES:

1. WATTLE DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS.
2. THE PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECK SHALL BE 100' UNLESS SHOWN OTHERWISE ON THE PLANS OR EROSION CONTROL PLAN APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON WK. NO. ECD-4.
3. ANCHORING WOOD STAKES SHALL BE SIZED, SPACED, DRIVEN, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET. ALL NON-DEGRADABLE MATERIALS SHALL BE REMOVED WHEN NO LONGER NEEDED.
4. TRENCHING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
5. WATTLES SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
6. IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SAND BAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE THE WATTLES IN PLACE. IF SANDS BAGS ARE USED IN THIS APPLICATION THEY WILL NOT BE A SEPARATE PAY ITEM.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DETAILS OF EROSION CONTROL WATTLE DITCH CHECK

MDOT
WORKING NUMBER ECD-6
SHEET NUMBER 6106
ISSUE DATE: AUGUST 01, 2017

STATE	PROJECT NO.
MISS.	

TYPICAL DITCH SECTION

BEGIN INSTALLATION AT DOWNSTREAM TERMINAL

MAT PLACEMENT TABLE

DIMENSIONS OF MAT PLACEMENT IN DITCH (INDIVIDUAL 38" WIDTH ROLLS)					
ELEMENTS OF MAT PLACEMENT	SIDE SLOPE COMBINATIONS FORESLOPE – BACKSLOPE				
	3:1 & 3:1	4:1 & 3:1	6:1 & 3:1	6:1 & 4:1	6:1 & 6:1
(A) UP BACKSLOPE TO DITCH BOTTOM	1' - 7"	1' - 1"	0' - 4"	0' - 10"	0' - 1 1/2"
(B) BACKSLOPE	4' - 0"	3' - 6"	2' - 9"	3' - 3"	3' - 5 1/2"
(C) FORESLOPE	4' - 0"	4' - 6"	5' - 3"	4' - 9"	5' - 5 1/2"
(D) DEPTH OF COVERAGE	1' - 3"	1' - 1"	0' - 10"	0' - 9"	0' - 11"
(E) WIDTH OF COVERAGE	7' - 7"	7' - 8"	7' - 9"	7' - 10"	10' - 9"
(F) MINIMUM NUMBER OF STAND. WIDTH STRIPES	3	3	3	3	4
(B)+(C) TOTAL COVERAGE ON SLOPES	8' - 0"	8' - 0"	8' - 0"	8' - 0"	10' - 11"
SQ. YDS./LIN. FT.	0.89	0.89	0.89	0.89	1.22
MULTI – WIDTH WELDED SEAM MAT (WELDED 38" WIDTH STRIPS)					
(B)+(C) TOTAL COVERAGE MULTI-WIDTH ROLLS	8' - 3"	8' - 3"	8' - 3"	8' - 3"	11' - 3 1/2"
SQ. YDS./LIN. FT.	0.92	0.92	0.92	0.92	1.25

GENERAL INSTRUCTIONS:

1. BEGIN INSTALLATION AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS ALIGNED FROM DITCH BOTTOM UP BACKSLOPE (SEE MAT PLACEMENT TABLE) AND UNDER MODERATE TENSION TEMPORARILY STAKED TO MAINTAIN PROPER DESIGN COVERAGE ALIGNMENT.
3. WORKING OUTWARD FROM DITCH BOTTOM TO EDGES, SUBSEQUENT ADJACENT ROLLS FOLLOW IN STAGGERED SEQUENCE UNDER MODERATE TENSION.
4. OVERLAP MAT SEAMS 3 INCHES AND STAKE AT 3-FT. INTERVALS WITH STAKES ALIGNED LONGITUDINALLY TO DITCH AND DIAGONAL EDGE OF STAKE TO THE UPSTREAM. OUTER EDGES (PERIMETER) OF MAT ARE STAKED SIMILARLY.
5. STAKE THE CENTER OF EACH MAT STRIP AND WHEN REQUIRED ALONG THE DITCH BOTTOM AT 6-FT. INTERVALS STAGGERED BETWEEN THE 3-FT. SPACING OF OVERLAP AND OUTER EDGE STAKES WITH THE BROADSIDE TO THE FLOW DIRECTION AND DIAGONAL EDGE TOWARD THE SLOPE.
6. USE 3-FT. OVERLAP AT END OF MAT ROLL SPLICES WITH UPGRADE STRIP ON TOP, STAKED IN TWO ROWS 30 INCHES APART, AND STAKES 18 INCHES APART ACROSS FULL WIDTH.
7. TRANSVERSE CHECK SLOTS 6 INCHES WIDE BY 9 INCHES DEEP ARE EXCAVATED AT 25-FT. INTERVALS WITH STAKES 12 INCHES APART FULL WIDTH OF TREATMENT. WELDED SEAM MULTI-WIDTH MAT WILL HAVE SIMILAR TRANSVERSE CHECKS OMITTING EXCAVATED SLOTS ONLY.
8. END INSTALLATION AT UPSTREAM TERMINAL. TEMPORARY STAKING MAY BE PLACED TO BECOME PART OF PERMANENT STAKING PATTERN.

STEP 1
CUT TERMINAL SLOT

STEP 2
STAKE MAT INTO SLOT WITH 12" MAT ABOVE SLOT - STAKES 12" APART FULL WIDTH.

STEP 3
BACKFILL AND COMPACT TERMIANL SLOT

STEP 4

A. ROLL MAT UPSTREAM OVER BACKFILLED TERMINAL.
B. STAKE MAT DOWN TO ANCHOR TERMINAL, 18" APART ACROSS IN TWO ROWS.
C. PROGRESS UPSTREAM WITH ROLL.

25 – FOOT INTERVAL TRANSVERSE CHECK SLOT (FOR INDIVIDUAL ROLLS*)

STEP 1
A. CUT CHECK SLOT.
B. ROLL MAT NEAR CHECK SLOT. TEMPORARILY STAKE MAT UNDER MODERATE TENSION 8' TO 10 FT. BELOW SLOTS. STAKES MAY BECOME PERMANENT.

STEP 2
WORK UPSTREAM ACROSS CHECK SLOT LAP BACK 30".

STEP 3
TUCK MAT LAP INTO SLOT AND STAKE AT 12" APART FULL WIDTH.

STEP 4
A. BACKFILL AND COMPACT, PROGRESS UPSTREAM.
B. PULL OUT TEMPORARY STAKES WHEN NO LONGER NEEDED FOR TENSIONING, OR MAY BECOME PERMANENT STAKING PATTERN.

* WHEN MULTI-WIDTH (WELDED SEAM) ROLLS ARE USED, OMIT EXCAVATED CHECK SLOT AND REPLACE WITH A ROW OF STAKES ONE FOOT APART AT 25-FT. INTERVALS (SEE DETAILS). TEMPORARY STAKES NOT REQUIRED.

END INSTALLATION AT UPSTREAM TERMINAL

STEP 1
CUT TERMINAL SLOT, ROLL MAT TO SLOT, TENSION AND PLACE TEMPORARY STAKE 2' BELOW.

STEP 2
SNUG MAT INTO SLOT WITH STAKES.

STEP 3
A. STAKE MAT INTO SLOT 12" APART FULL WIDTH.
B. BACKFILL AND COMPACT.

STEP 4
A. REVERSE MAT. ROLL DIRECTION TO OVERLAY SLOT BY 3 FEET.
B. STAKE MAT TO ANCHOR TERMINAL, 18" APART ACROSS IN TWO ROWS.
C. TEMPORARY STAKES MAY BE REMOVED OR DRIVEN TO REMAIN.
D. CUT ROLL OF MAT EVENLY FULL WIDTH.
E. ADJOINING DITCH TREATMENTS SHALL BE ANCHORED APPROPRIATELY.

GENERAL NOTES:

1. WHEN METAL PINS WITH WASHERS ARE PERMITTED IN PLACE OF WOOD STAKES, THE METAL PINS ARE DRIVEN TO ASSURE THAT THE WASHERS WITH MAT UNDERNEATH ARE FLUSH WITH THE GROUND LEAVING NO PROJECTION OF THE PINS ABOVE THE GROUND LINE.
2. SOIL REINFORCING MAT SHALL BE USED WHERE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

SEQUENTIAL ROLL RUN OUT IN DITCH WITH STAKING DETAIL

MULTI-WIDTH WELDED SEAM MAT RUN OUT IN DITCH WITH STAKING DETAIL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

DITCH TREATMENT INSTALLATION DETAIL FOR SOIL REINFORCING MAT

MDOT
WORKING NUMBER DT-1A
SHEET NUMBER 6124
ISSUE DATE: AUGUST 01, 2017

STATE	PROJECT NO.
MISS.	

DETAIL OF TOP TRENCH

DETAIL OF INTERMEDIATE TRENCH

DETAIL OF BOTTOM TRENCH

DETAIL OF EROSION CONTROL BLANKET

DETAIL OF LONGITUDINAL OVERLAP

DETAIL OF TRANSVERSE OVERLAP

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

EROSION CONTROL BLANKET

MDOT
WORKING NUMBER ECB-1
SHEET NUMBER 6131
ISSUE DATE: AUGUST 01, 2017

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NAD83 MS STATE PLANE

REVISIONS

1	4
2	5
3	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DETAIL SHEET 4

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

RAY G. FLAKE
21060
11/24/2021

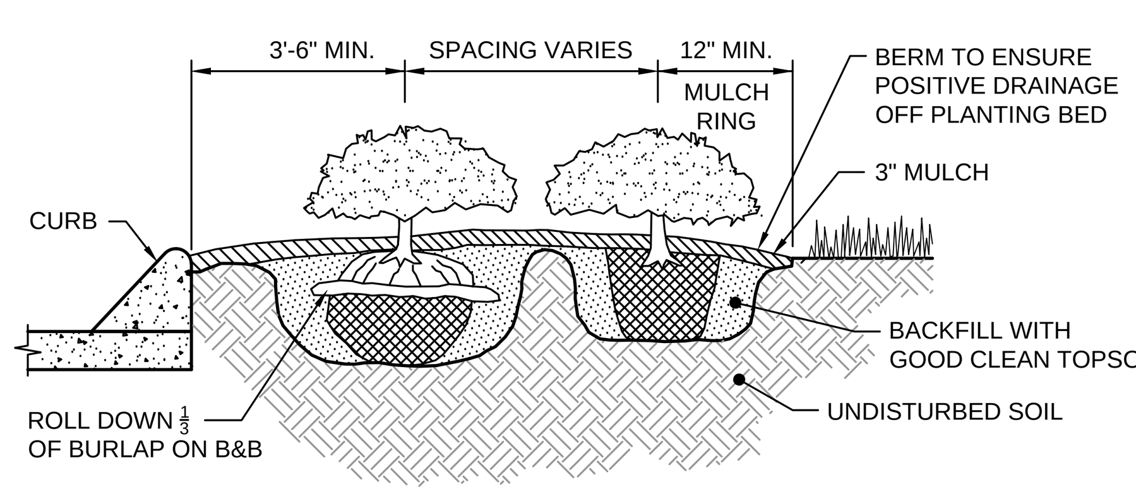
11/22/2021

7N2

C4.3

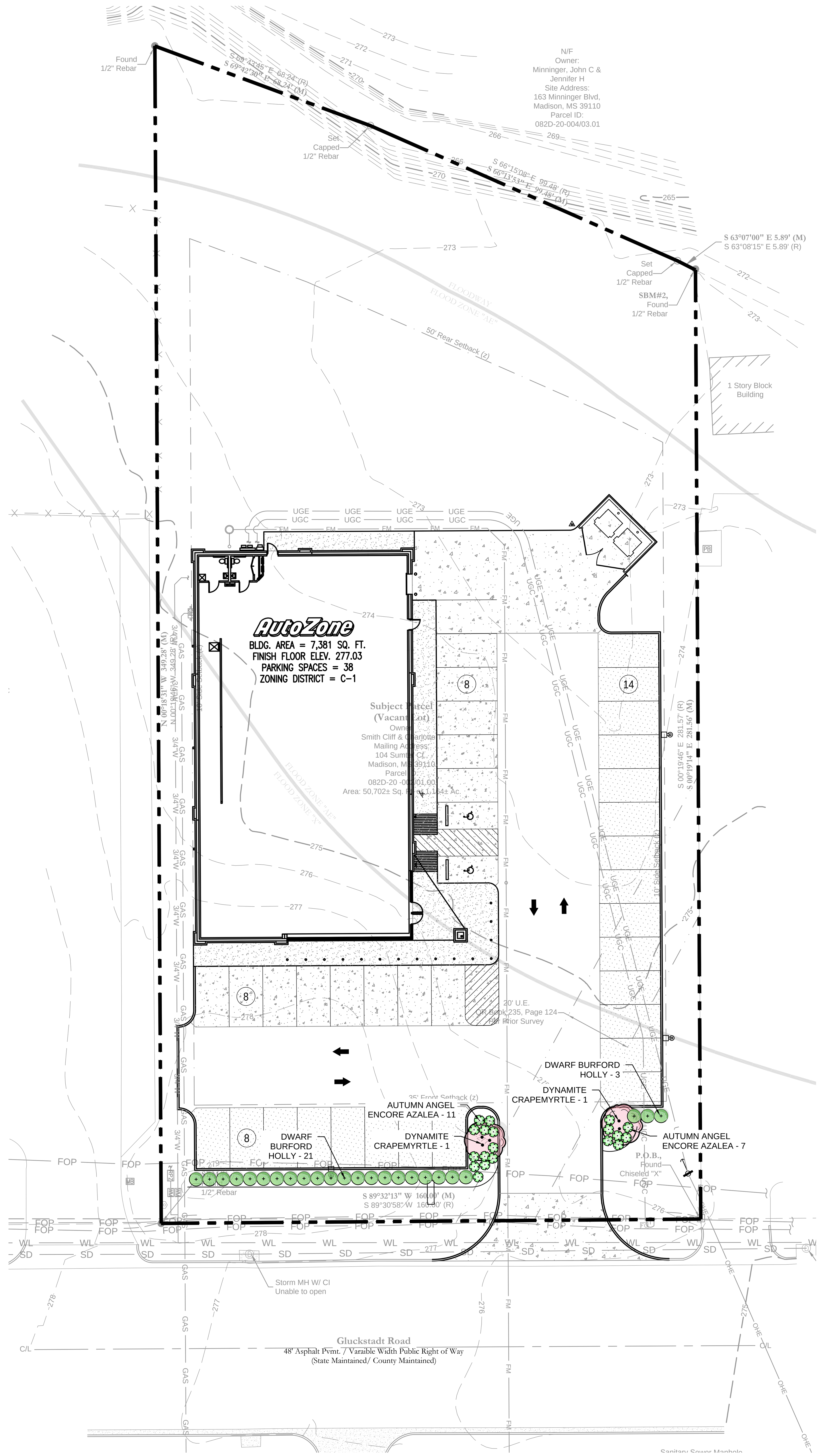
LANDSCAPE NOTES:

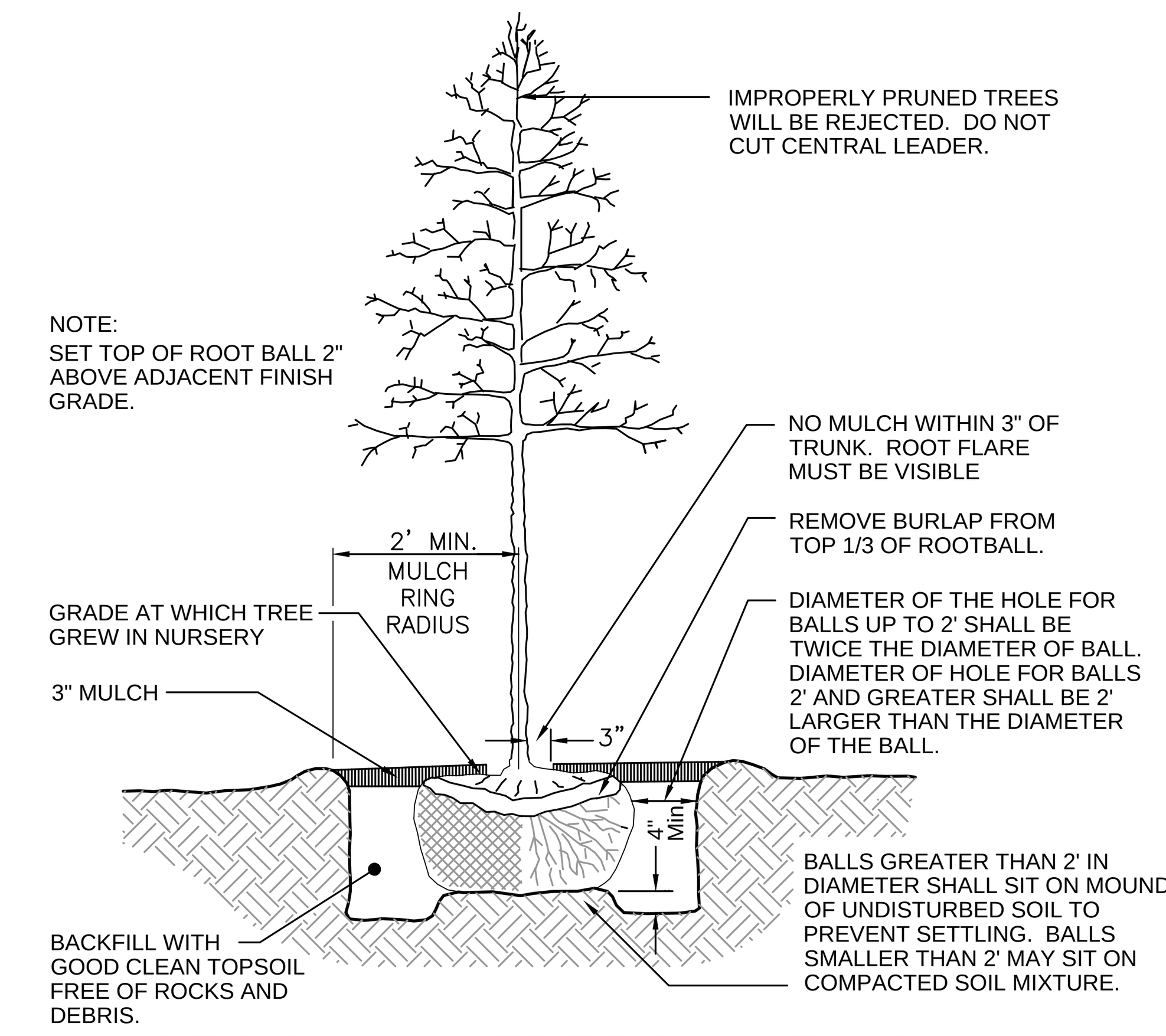
1. WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIALS SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
4. NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. KITA LANDSCAPE DESIGN (615) 469-1222.
5. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. SOD ALL DISTURBED AREAS.
7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD.
   A. SAND SHALL BE CLEAN MASONRY SAND.
   B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
   C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
22. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.
    PLANTING DATES
    SPRING: MARCH 15 - APRIL 15
    FALL: OCTOBER 1 - NOVEMBER 30
24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
25. CONTRACTOR TO IRRIGATE ALL NEW LANDSCAPE PLANTINGS AND LAWN AREAS WITH AN AUTOMATED UNDERGROUND IRRIGATION SYSTEM.
26. IRRIGATION TO HAVE A SEPARATE METER.
27. GENERAL CONTRACTOR TO COORDINATE AND BE RESPONSIBLE FOR WATERING ALL PLANTS AND SEEDED AREAS AFTER PLANTING UNTIL IRRIGATION SYSTEM IS OPERABLE.



SHRUB / GROUND COVER PLANTING

NOT TO SCALE





DECIDUOUS TREE PLANTING

NOT TO SCALE

PLANT SCHEDULE

QTY.	COMMON NAME	BOTANICAL NAME	HEIGHT	TRUNK	COMMENTS
UNDERSTORY/COLUMNAR TREES					
2	'Dynamite' Crapemyrtle	Lagerstroemia indica 'Whit II'	6' - 7'	2" Cal.	Multi-Trunk, Min. (3) 3/4" canes
2	TOTAL - UNDERSTORY TREES				
SHRUBS					
19	'Autumn Angel' Encore Azalea	Rhododendron 'Robleg'	18" Min.	3 Gal.	Container (White)
24	Dwarf Burford Holly	Ilex cornuta 'Burfordii nana'	24" Min.	5 Gal.	Container
43	TOTAL - SHRUBS				
TURF					
	Common Bermuda	Cynodon dactylon			

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

KITA designs
Beauty | Economy | Sustainability

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e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

Section 4, IB)

NAD83 MS STATE PLANE

REVISIONS

1	4
2	5
3	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
LANDSCAPE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

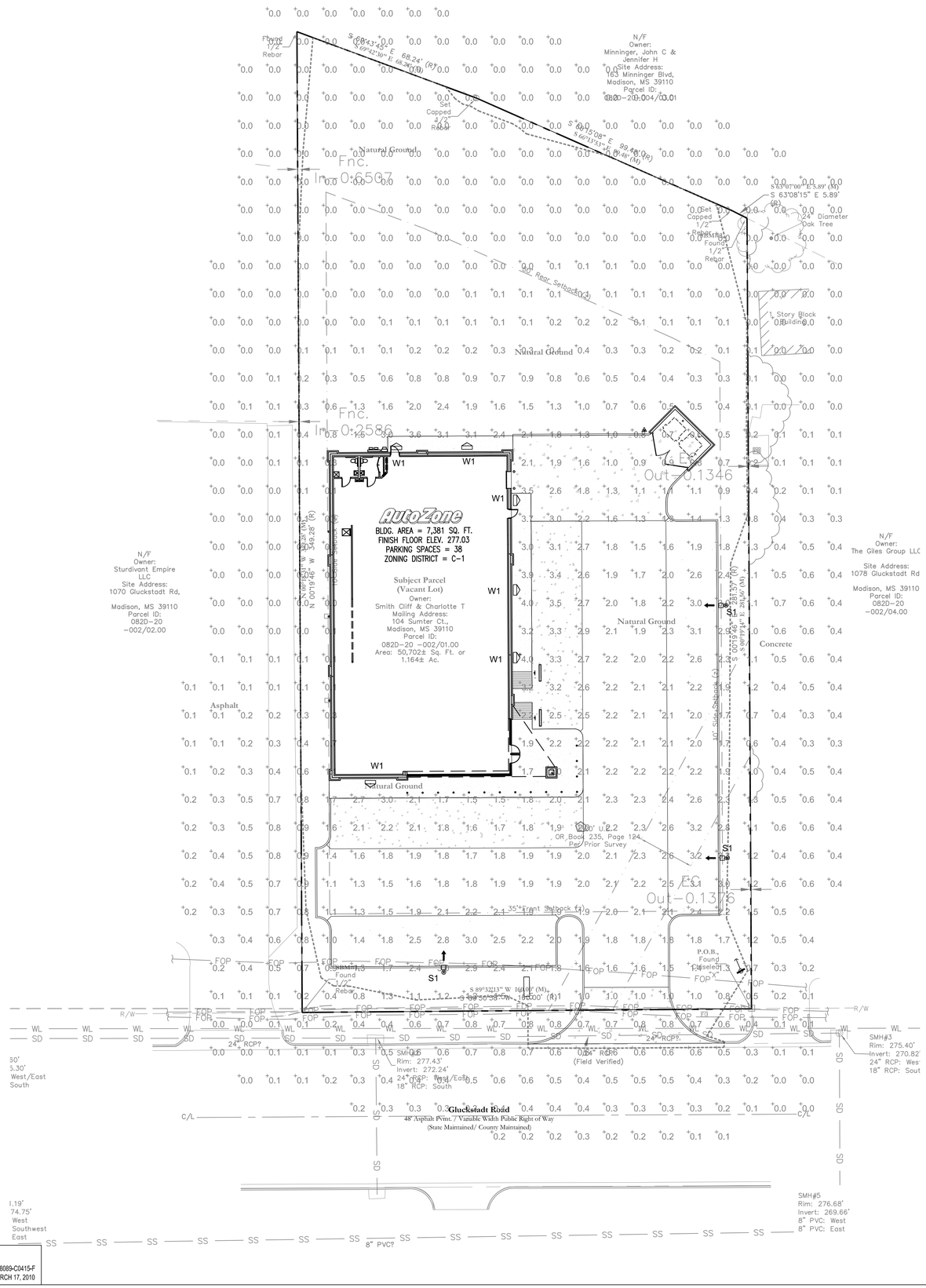
For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

REGISTERED LANDSCAPE ARCHITECT KEVIN JOHN REFF

10/08/2021

7N2

L-1.1



LUMINAIRE SCHEDULE						
TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF	QTY
S1	⊕□	LITHONIA - DSX1 LED 60C IES FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 28'-0"	LED - 209 WATTS	ABSOLUTE	0.95	3
W1	▽	LITHONIA - DSW1 LED 10C IESNA FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 12'-0"	LED - 40 WATTS	ABSOLUTE	0.95	6

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone	+	1.0 fc	4.0 fc	0.0 fc	N/A	N/A

LIGHTING NOTES:

1. TIME CONTROLS: ALL SITE LIGHTING IS CONTROLLED AND MONITORED BY AN ENERGY MANAGEMENT SYSTEM CALLED VENSTAR WHICH IS CONTROLLED AT AUTOZONE CORPORATE OFFICES.
ALL SITE LIGHTING IS PROGRAMMED TO AUTOMATICALLY TURN ON AT DUSK AND TURN OFF 30 MINUTES AFTER THE CLOSE OF BUSINESS.

2. ALL FIXTURES ARE FULL CUTOFF DISTRIBUTION AND MOUNTED @ O° DOWN POSITION.

3. NO FLOODLIGHTS ARE PROPOSED.

4. THE LIGHTING PLAN COMPLIES WITH THE PROVISIONS OF SECTION 1907 - LANDSCAPING AND LIGHTING FOR COMMERCIAL DEVELOPMENT IN MLHP OVERLAY DISTRICT LIGHTING STANDARDS AND GUIDELINES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2
1/2" REBAR	1/2" REBAR
N: 1,097,408.07	N: 1,097,409.61
E: 2,365,109.95	E: 2,365,269.98
ELEV= 277.93	ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

NAD83 MS STATE PLANE

REVISIONS
1
2
3
4
5
6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
PHOTOMETRIC PLAN

Owner / Developer: AUTOZONE STORES LLC
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Engineering, Environmental, Land Planning

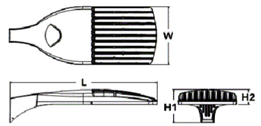
D-Series Size 1
LED Area Luminaire

Catalog Numbers	
Notes	
Type	

Hit the Tab key or mouse over this page to see all interactive elements

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED					
Series	**LEDs**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**
DSX1 LED	**Forward optics** P1 P4[1] P7[1] P2 P5[1] P8 P3 P6[1] P9[1] **Rotated optics** P10[2] P12[2] P11[2] P13[2,3]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium TSVS Type V very short[3] TSS Type V short[3] TSM Type V medium[3] TSW Type V wide[3] BLC Backlight control[4] LCCO Left corner cutoff[4] RCCO Right corner cutoff[4]	MVOLT[5] 120[6] 208[6] 240[6] 277[6] 347[6] 480[6]	**Shipped included** SPA Square pole mounting RPA Round pole mounting[7] WBA Wall bracket[7] SPUMBA Square pole universal mounting adaptor[8] RPUMBA Round pole universal mounting adaptor[8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

Control options		Other options		Finish (required)	
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[10] PIRHN Network, high/low motion/ambient sensor[11] PER NEMA twist-lock receptacle only (controls ordered separate)[12] PER5 Five-pin receptacle only (controls ordered separate)[12,13] PER7 Seven-pin receptacle only (controls ordered separate)[12,13] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[14] DS Dual switching[15,16,17]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[15,16] PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[15,16] PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[15,16] PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[15,16] FAO Field adjustable output[17,18]	**Shipped installed** HS House-side shield[19] SF Single fuse (120, 277 or 347V)[3] DF Double fuse (208, 240 or 480V)[3] L90 Left rotated optics[2] R90 Right rotated optics[2] HA 50°C ambient operations[3] **Shipped separately** BS Bird spikes[11] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white	

D-Series Size 1
LED Wall Luminaire

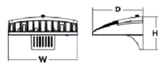
Catalog Number	
Notes	
Type	

Hit the Tab key or mouse over the page to see all interactive elements

Specifications

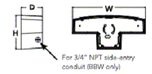
Luminaire

Width:	13-3/4" (34.9 cm)	**Weight:**	12 lbs (5.4 kg)
Depth:	10" (25.4 cm)		
Height:	6-3/8" (16.2 cm)		



Back Box (BBW, ELCW)

Width:	13-3/4" (34.9 cm)	**BBW Weight:**	5 lbs (2.3 kg)
Depth:	4" (10.2 cm)	**ELCW Weight:**	10 lbs (4.5 kg)
Height:	6-3/8" (16.2 cm)		



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

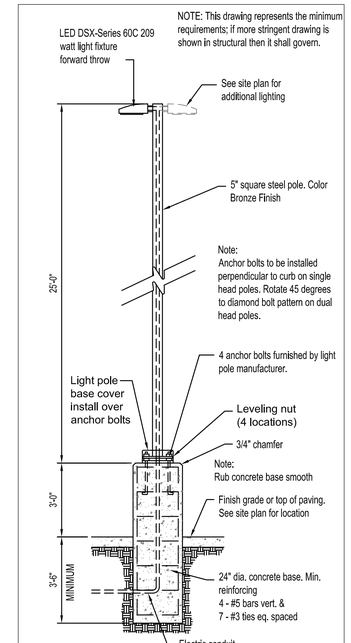
DSXW1 LED							
Series	**LEDs**	**Drive Current**	**Color temperature**	**Distribution**	**Voltage**	**Mounting**	**Control Options**
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines)[1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)[2]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT[2] 120[3] 208[3] 240[3] 277[3] 347[3,4] 480[3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry)[5]	**Shipped installed** PE Photoelectric cell, button type[6] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[7] PIR 180° motion/ambient light sensor, <15' mtg ht[8,9] PIRH 180° motion/ambient light sensor, 15-30' mtg ht[8,9] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[8,9] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[8,9] ELCW Emergency battery backup (includes external component enclosure), CA Title 20 Noncompliant[9,10]

Other Options		Finish (required)			
Shipped installed SF Single fuse (120, 277 or 347V)[3,11] DF Double fuse (208, 240 or 480V)[3,11] HS House-side shield[12] SPD Separate surge protection[12]	**Shipped separately**[12] BSW Bird-deterrent spikes VG Vandal guard DDL Diffused drop lens	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White	DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum	DWHGXD Textured white DSSTXD Textured sandstone	

Accessories
Ordered and shipped separately

DSXW1 U House-side shield (one per light engine)
DSXW1BSW U Bird-deterrent spikes
DSXW1VG U Vandal-guard accessory

NOTES
1. 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5. Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6. Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7. Reference Motion Sensor table on page 3.
8. Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com.
9. Not available with SPD.
10. Not available with ELCW.
11. Also available as a separate accessory; see Accessories information.
12. Not available with ELCW.



NO SCALE SEC-C13

13 TYPICAL LIGHT POLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1
1/2" REBAR
N: 1,097,408.07
E: 2,365,109.95
ELEV= 277.93

BENCHMARK #2
1/2" REBAR
N: 1,097,409.61
E: 2,365,269.98
ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

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PHOTOMETRIC DETAILS

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Cindy.searcy@construction.com

STATE OF MISSISSIPPI LICENSED PROFESSIONAL ENGINEER 21060
11/24/2021

11/22/2021

7N2

PH 5.1

ALTA/NSPS Land Title Survey

□□tle □n□or□ at□on

First American □itle □nsurance Company National Commerical Services
File No.□NCS□□□8□□□M□C□
Commitment Date□uly □□□□□□ at 8□□ AM

Sc□edule □ □ escr□□t□on

□he Land referred to herein belo□ is situated in the County of Madison□State of Mississippi□and is described as follo□s□

A parcel of land containing □.□□ acres□more or less□situated in the Southeast □/4 of Section □□□□o□nship 8 North□Range □ East□Madison County□ Mississippi and more particularly described as follo□s□

□egin at a found iron pin in the ne□ Northern Right of Way line of □ luc□stadt Road □hich is □□□□.□□ feet South of and □4□□.□□ feet East of the North□est corner of the Southeast □/4 of said Section □□□as sho□n on attached survey and run □hence South 8□ Degrees □□ Minutes □8 Seconds West along said Northern Right of Way line for a distance of □□□.□□ feet to a found iron pin□Leaving said ne□ Right of Way line□Run thence North □□ Degrees □□ Minutes 4□ Seconds West for a distance of □4□.□8 feet to a found iron pin□□hence South □□ Degrees 4□ Minutes 4□ Seconds East for a distance of □8.□4 feet□□hence South □□ Degrees □□ Minutes □8 Seconds East for a distance of □□.48 feet□□hence South □□ Degrees □8 Minutes □□ Seconds East for a distance of □.8□ feet□□hence South □□ Degrees □□ Minutes 4□ Seconds East along the edge of concrete par□ing and a pro□ection thereof for a distance of □8□.□□ feet to the Point of □eginning.

Sc□edule B □Sect□on □□

□□ – Right of Way Easement granted to □ear Cree□ Water Association□□nc. recorded in □oo□ □□□□Page □□□.Mec□lenburg County Registry.
(Does not affect)

□□ – Right of Way and easement granted to Mississippi Po□er □ Light Company recorded in □oo□ □□4□Page □□4.
(Does not affect)

□□ – Right of Way and Easement Deed for Distribution System granted to Centerpoint Energy Resources Corp.□d/b/a Centerpoint Energy Mississippi □ as recorded in □oo□ □□□8□Page □□.
(Does not affect)

□□ – Right of Way and easement granted to Mississippi Po□er □ Light Company recorded in □oo□ □□□□Page □□4.
(Affects□appro□imate location sho□n hereon)

□4 – □erms and conditions of that certain □ uitclaim and □oundary Line Agreement by and bet□een Cliff Smith and Charlotte □. Smith□□he □ iles □ roup□LLC□and Sturdivant Empire□LLC recorded in □oo□ □4□□□Page □□□.
(□□ects, □urrent Boundar□ as s□o□n)

□on□n□ □n□or□ at□on

PROPER□Y □S C□RREN□LY ZONED□
Zone □(C□) □ eneral/□ndoor Commercial

□□EM	RE□ □□RED	O□SERVED
PERM□□□ED □SE	□ eneral Commercial	O□SERVED
M□N. LO□ AREA	□□□8□ S□ FEE□	O□SERVED
M□N. LO□ W□D□□	REFER □O NO□ES	O□SERVED
MAX. □LD□ COVERA□ E	NONE	O□SERVED
M□N. SE□□AC□ S FRON□	□□ FEE□	O□SERVED
M□N. SE□□AC□ S S□DE	REFER □O NO□ES	O□SERVED
M□N. SE□□AC□ S REAR	REFER □O NO□ES	O□SERVED
MAX □□□LD□N□ □ E□□□□	4□ FEE□	O□SERVED
PAR□□N□ RE□ □LAR	REFER □O NO□ES	O□SERVED
PAR□□N□ □ AND□CAP	REFER □O NO□ES	O□SERVED
PAR□□N□ □O□AL	REFER □O NO□ES	O□SERVED

□le□ □ Associates ma□es no □arranty to the e□act regulations or ordinances represented on the dra□ing hereon. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as □ell as the applicable restrictions and re□uirements associated □ith such □oning classification.

Specific □oning information as sho□n hereon is as interpreted by the surveyor per Madison County □oning □□□□ PDF□and should be confirmed by a licensed Mississippi attorney or □oning professional in the controlling □urisdiction.

Notes□

□ecause there may be a need for interpretation of the applicable □oning codes□□e refer you to Madison County for □oning la□s and applicable codes.

Lot W□dt□ Notes□

Shopping centers□ □□□ feet.

□ndependent commercial uses□ □□□ feet. For any lot having a □idth of less than □□□ feet□there shall be no more than one access drive□ay per lot. For lots having a □idth of □□□ feet or more□t□o access drive□ays may be provided for every □□□ feet of street/ road frontage. □nterior circulation streets shall be provided for all commercial subdivisions approved after the effective date of this Ordinance.

Setback Notes□

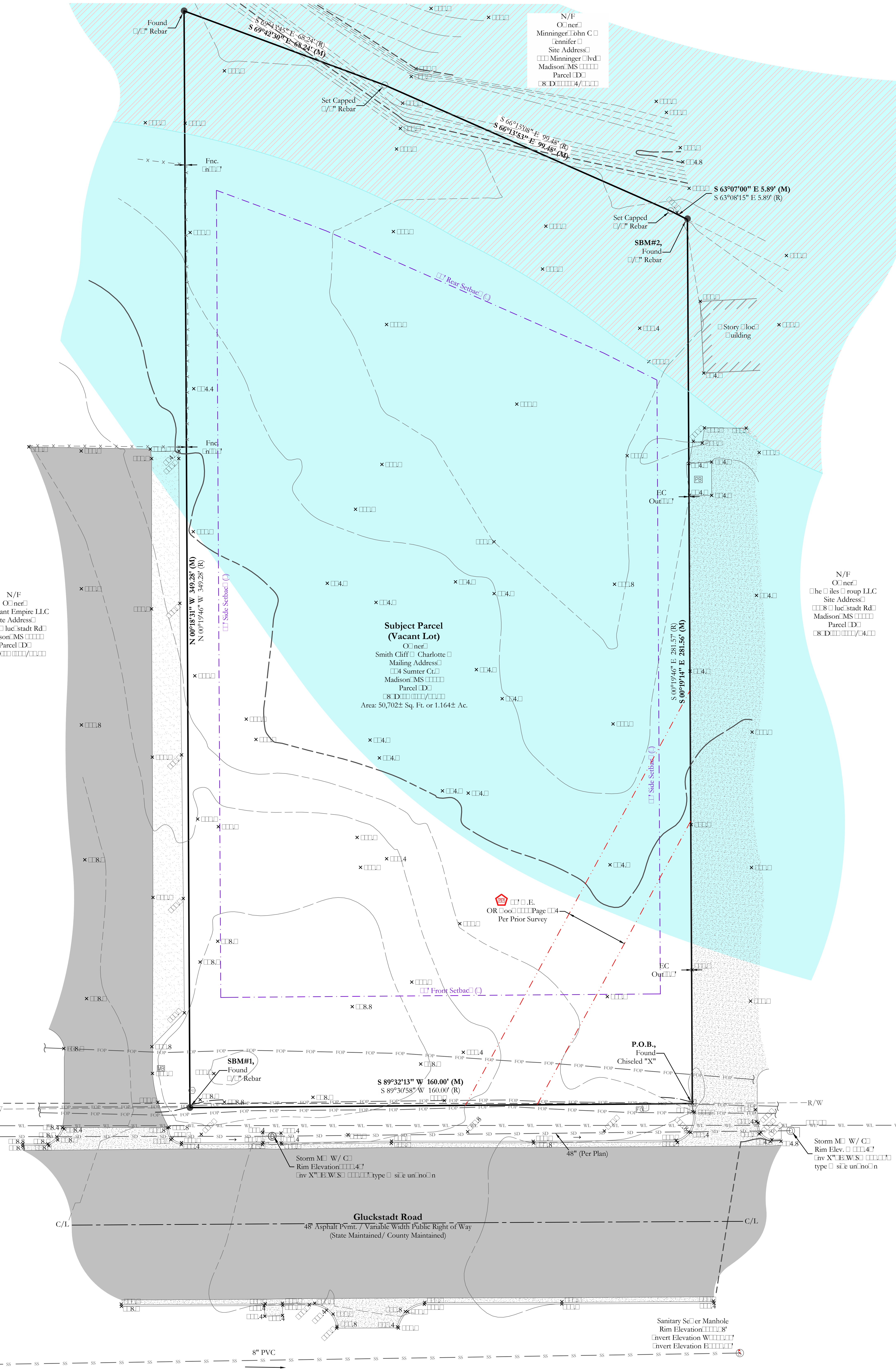
Front yard□□□ feet. □he front yard setbac□ shall be a minimum of thirty□five (□□) feet from any e□isting or proposed right□of□□ay line of any street or road. □ o□ever□the first fifteen (□□) feet of this setbac□ shall be open landscaped area□□ith no par□ing permitted in this area.

Side yards and rear yards □here not abutting a residential district or residential use□□□ feet.

Side yards and rear yards □here abutting any residential district or residential use□fifty (□□) feet□□hich shall remain open and be landscaped□or □□ feet□□hich shall remain open and be landscaped and a fence along side or rear yards abutting such residential district or residential use.

Park□n□ Notes□

One par□ing space for each □□□ s□uare feet of gross floor area.



M□scellaneous Notes

□. Completed field □or□ □as August □□□□□□.
□. □he □asis of □earing for this survey is □ rid North per □ PS coordinate observations Mississippi State Plane□West Zone NAD8□.
Latitude □ 32°31'01.52438"
Longitude □ -90°06'38.10102"
Convergence Angle □ -00°07'11.06336"
□. Distances sho□n on plat are ground.
Combined scale factor (ground to grid) □ □.□□□□□□□8□□□□
4. Some features on this plat may be sho□n out of scale for clarity.
□. Dimensions on this plat are e□pressed in feet and decimal parts thereof unless other□ise noted. Monuments □ere found at points □here indicated.
□. Any servitudes and restrictions sho□n on this survey are limited to those set forth in the description furnished to surveyor□and there is no representation that all applicable servitudes and restrictions are sho□n hereon.
□. Names and addresses of ad□oining property o□ners □ere ta□en from Madison County ta□ cards and deeds.
8. □he nearest fire hydrant is located in the South Right of Way of Cluc□stadt Road approximately 200'± West of the Southwest corner of subject property .
□. No surveyor or any other person other than a licensed Mississippi attorney may provide legal advice concerning the status of □itle to the property described in this survey ("the sub□ect property"). □he purpose of this survey□and the comments related to the Schedule □□□e□ceptions□is only to sho□ the location of boundaries and physical ob□ections in relation thereto. □o the e□tent that the survey indicates that the legal instrument "affects" the sub□ect property□such statement is only intended to indicate that property boundaries included in such instrument include some or all of the sub□ect property. □he surveyor does not purport to describe ho□ such instrument affects the sub□ect property or the enforceability or legal conse□uences of such instrument.
□□. All bearings and distances sho□n hereon are measured dimensions unless other□ise noted hereon. Record dimensions□if differing from measured dimensions□□ill be follo□ed by "(R□)" □here the □ indicates from □hich reference document the dimension originated.
□□. Contour □nterval □ □ foot
□□. No par□ing spaces observed.
□□. Surveyor notes that the property abuts the right□of□□ay of Cluc□stadt Road. Access to the right□of□□ay may be sub□ect to other agreements or proper governmental approvals.
□4. □here □as no evidence of monitor □ells□or any test borings on the sub□ect property at the time of the survey.
□□. At the time of the survey□there □as no observable evidence of site use as a cemetery□ isolated grave site or burial grounds.
□□. At the time of the survey□there □as no observable evidence of site use as a solid □aste dump□sump□or sanitary landfill.
□□. Elevations established □ith □ PS static observations utili□ing online positioning user service (OP□S) for post processing. (NAVD □□88 datum)
□8. At the time of the survey□there □ere no changes in street right□of□□ay lines either completed or proposed□and available from controlling □urisdiction or observable evidence of recent street or side□al□ construction repairs.
□□. □here □as no observable evidence of Earth moving □or□□building construction or building additions □ithin recent months.
□□. □he nearest intersecting street is the intersection of Cluc□stadt Road and Le□ington Drive□□hich is appro□imately □□□' from the South□est corner of the sub□ect property.
□□. Surveyor did not receive current deeds for ad□oining properties from the title insurer. Surveyor obtained the deed information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the current deed descriptions for ad□oining properties.
□□. Reference documents noted hereon □ere obtained by the surveyor and any and all representations based thereon should be revie□ed by a licensed attorney or title insurer for verification.
□□. Surveyor did not receive any information from the title insurer regarding the current □oning classification of the property or any re□uirements related to the applicable □oning classification. Surveyor obtained the □oning information reflected on this survey on their o□n. □he user of this survey should consult an attorney or title insurer to verify the □oning classification of the property as □ell as the applicable restrictions and re□uirements associated □ith such □oning classification.
□4. No □uildings observed at the time of the Survey
□□. Sanitary Se□er□□ as□and Water lines sho□n per map provided by the □ear Cree□ Water Association. No mar□ings or other evidence for such utilities □as observed in the field.

□lood Note

□y graphic plotting only□this property is in Zone AE of the Flood □nsurance Rate Map□Community Panel No. □8□8□□C□4□□F□□hich bears an effective date of □□/□□/□□□□ and is in a Special Flood □ a□ard Area

Zone Definitions According to the FEMA □ebsite.

Zone "AE" □□he base floodplain □here base flood elevations are provided. AE Zones are no□ used on ne□ format F□RMs instead of A□□A□□ Zones.

Zone "X □nshaded" □Area of minimal flood ha□ard□usually depicted on F□RMs as above the □□□year flood level. Zone X is the area determined to be outside the □□□year flood and protected by levee from □□□year flood.

Zone "Shaded X" □Area of moderate flood ha□ard□usually the area bet□een the limits of the □□□year and □□□year floods.

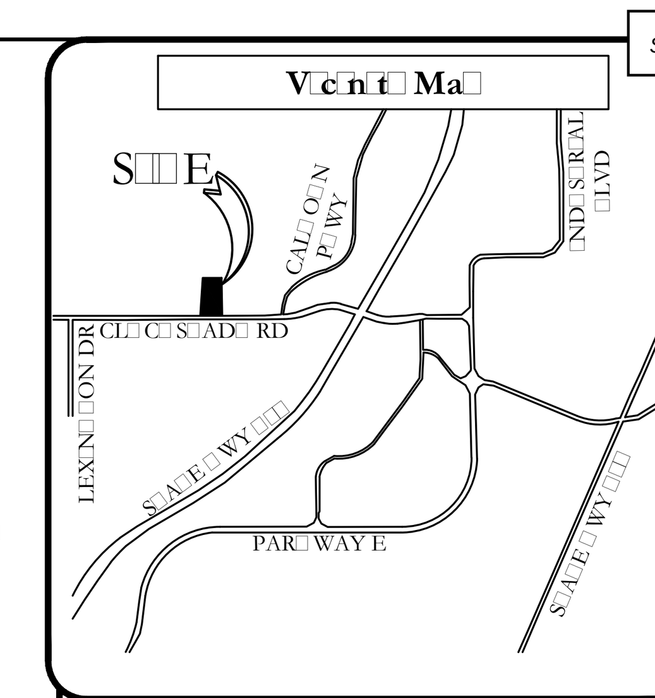
□ t□l□t□ Notes

□he utilities sho□n on this dra□ing hereon have been located by field measurements□utility map dra□ings□and one□call utility locate re□uest. □le□ □ Associates ma□es no □arranty to the e□act location of any underground utilities sho□n or not sho□n on this dra□ing. □t is the responsibility of the contractor to verify any and all utilities prior to construction. Call Mississippi one□call at □ (8□□) □□□□4□□ for field locations (re□uest for ground mar□ings) of underground utility lines before digging.

□ no□ □hat's belo□.
Call before you dig.

Ele□at□on Benc□□ arks			
Site □enchmar□ □□		Site □enchmar□ □□	
□ype	Found □/□" Rebar	□ype	Found □/□" Rebar
Northing	□□□□4□8.□□	Northing	□□□□4□□.□□
Easting	□□□□□□□.□□	Easting	□□□□□□□.□8
Elevation	□□□.□□'	Elevation	□□□.84'
□enchmar□s Northing □ Eastings are applied □ith scale factor			

DA□E	REV□S□ON	□Y



Le□end o□S□□ bols □ □bbre□□at□ons

- ×XXX.X Spot Elevation
- Found Rebar (As Noted)
- Set Rebar (As Noted)
- Computed Point
- Found Chiseled "X"
- Fiber Optic □o□
- □elephone Pedestal
- Fiber Optic Vault
- Mail □o□
- Po□er □o□
- (M) Measured Dimension
- (R) Recorded Dimension
- (□) Zoning Re□uirements
- N/F No□ or Formerly
- S□M Site □enchmar□
- M□ Manhole
- C□ Curb □nlet □asin
- □nv □nvert of Pipe
- P.O.C. Point of Commencement
- P.O.□. Point of □eginning
- Ad□oiner Property Line
- Sub□ect Property Line
- Easement line
- □tility Easement
- □uilding Setbac□
- Right□of□Way
- FOP Fiber Optic Line
- SD Storm Se□er Line
- WL □uried Water Line
- SS Sanitary Se□er Line
- □AS □nderground □ as
- Chainlin□ Fence
- Contour Ma□or
- Contour Minor
- Asphalt
- Concrete
- □ ravel
- Flood Zone □AE / AO / A□
- Flood Zone□Flood□ay (Zones AE□AO□A□ □VE□AR)

Scale□□" □ □□'
□ □□' 4□'

Sur□e□or's □ert□□cat□on

□o□ AutoZone Parts□□nc□Cliff Smith and Charlotte □. Smith□ Civil Engineering Services□PC□First American □itle □nsurance Company National Commerical Services□

□his is to certify that this map or plat and the survey on □hich it is based □ere made in accordance □ith the □□□□ Minimum Standard Detail Re□uirements for AL□A/NSPS Land □itle Surveys□□ointly established and adopted by AL□A and NSPS□ and includes items □□□□4□□□□(a)□□(b□)□8□□□□□□□□□□□□□□□8□ □□□□□ □□ of □able A thereof. □he field □or□ □as completed on □8/□□/□□□□.

Date of Plat or Map□□□/□4/□□□□

Preliminary

□uc□ley □le□
Professional Surveyor □□□8□□
State of Mississippi

F□RM□
BLEW & ASSOCIATES, PA
CIVIL ENGINEERS & LAND SURVEYORS
□8□□ N. S□ □LO□ DR□VE
FAYE□□EV□LLE□AR□ ANSAS □□□□□
OFF□CE□4□□.44□.4□□□
FAX□4□□.□8□.□88□
□□□.□LEW□NC.com

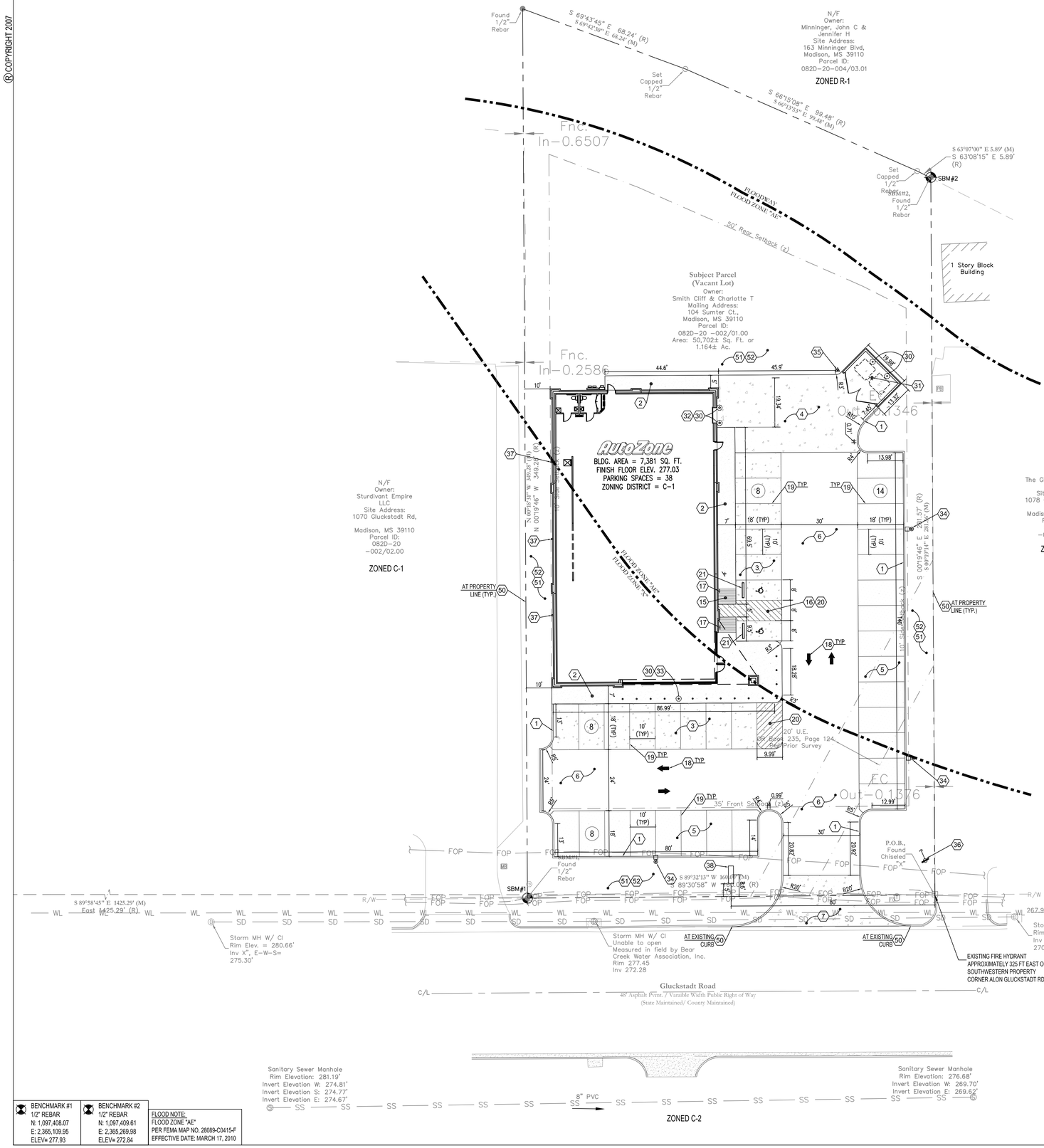
DRAWN □Y □ DA□E□	REV□EWED □Y□	S□RVEYED □Y□
DLD/M□ □□/□4/□□□□	□ C/PRS	□□

CO□N□Y □ S□A□E□	□O□ N□M□ER□
Madison□Mississippi	□□□□□□□

LOCA□□ON□ Property □est of □□□8 □ luc□stadt Rd□□ luc□stadt□MS

FOR □□ E □SE AND □ENEF□□ OF□
CES (AutoZone) □ (MS□□□□) □ luc□stadt□MS

Sheet □ of □



BENCHMARK #1
1/2" REBAR
N: 1,097,408.07
E: 2,365,109.95
ELEV= 277.93

BENCHMARK #2
1/2" REBAR
N: 1,097,409.61
E: 2,365,269.98
ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

SITE LEGEND

- (10) PARKING STALL COUNT - SEE PLANS
- REGULAR ASPHALT PAVING (SEE DETAIL SHEET)
- HEAVY DUTY ASPHALT PAVING (SEE DETAIL SHEET)
- CONCRETE SIDEWALK (SEE DETAIL SHEET)
- HEAVY DUTY CONCRETE PAVING (SEE DETAIL SHEET)
- REGULAR DUTY CONCRETE PAVEMENT AT PARKING STALLS AROUND BUILDING (SEE DETAIL SHEET)

KEYNOTES

PAVEMENT AND CURBING

1. CONCRETE CURB @ CONCRETE/ASPHALT PAVING - SEE DETAIL 1 & 2 / C4.0
2. CONCRETE SIDEWALK - SEE DETAIL 27/C4.0 - SEE DETAIL 22/C4.0 FOR SIDEWALKS AROUND BUILDING
3. REGULAR DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
4. HEAVY DUTY CONCRETE PAVING - SEE DTL. 4/ C4.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C4.0. MAXIMUM SPACING FOR CONTROL JOINTS PER SOILS REPORT.
5. REGULAR DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
6. HEAVY DUTY ASPHALT PAVING - SEE DTL. 3/ C4.0. PROVIDE ALTERNATE CONCRETE BID - SEE DTL. 4/ C4.0
7. PROVIDE NEW CURB CUT & APPROACH PER LOCAL CODES & SPECS. - ENTRANCE TO BE HEAVY DUTY CONCRETE - SEE DTL. 3/ C4.0

PAVEMENT STRIPING / ADA FEATURES / TRAFFIC SIGNAGE

15. ACCESSIBLE RAMP - SEE DETAIL 19/C4.0 - MAX. SLOPE 1:12 (8.33%) , MAX. CROSS SLOPE 1:50 (2.00%) TRUNCATED DOME TO BE A CONTRASTING COLOR
16. HANDICAP PARKING AREA - SEE THIS PLAN FOR DIMENSIONS - SEE DETAILS 6,7, AND 12/C4.0
17. HANDICAP PARKING SIGN - SEE DETAIL 12/C4.0 G.C. TO PROVIDE ONE VAN ACCESSIBLE SIGN.
18. ONSITE PAVEMENT MARKINGS - SEE DETAIL 25 & 26/C4.0
19. 4" WIDE PARKING STRIPE PAINTED YELLOW (TYP.)
20. 4" WIDE DIAGONAL STRIPES PAINTED YELLOW AT 2 FT. O.C.
21. 6'-0" LONG CONCRETE WHEEL STOP PINNED TO PAVEMENT (TYPICAL). LOCATE 3'-6" FROM FACE OF CURB OR SIDEWALK SEE DETAIL 17 / C4.0

AUTOZONE SITE FEATURES

30. PIPE GUARD - SEE DETAIL 16 / C4.0
31. DUMPSTER LAYOUT - SEE DETAILS 8,9,10, & 11/ C4.0
32. SERVICE DOOR PLAN - SEE DETAIL 15/ C4.0
33. BOLLARD PLAN - SEE DETAIL 14/ C4.0
34. CONCRETE LIGHT POLE BASE - SEE DETAIL 13/ C4.0 AIM LIGHT FIXTURE IN DIRECTION AS INDICATED. SEE ELECTRICAL PLANS FOR ROUTING
35. FREEZELESS YARD HYDRANT AT BUILDING - SEE DETAIL 6 ON SHEET M2
36. APPROXIMATE LOCATION FOR POLE MOUNTED TRANSFORMER PER SERVICE PROVIDER SPECIFICATIONS - COORDINATE WITH SERVICE PROVIDER PRIOR TO CONSTRUCTION
37. PROVIDE DOWNSPOUT CONNECTOR AT BUILDING DOWN SPOUT - SEE ARCHITECTURAL PLANS - SEE DETAIL 21/ C4.0 - SEE GRADING PLAN FOR INVERTS
38. 4'-2"X7'-0"X2'-0" MONUMENT SIGN 12'-0" OVERALL HEIGHT - SEE SIGNAGE SHEETS FOR DETAILS - FINAL LOCATION AND DESIGN TO BE DETERMINED DURING SIGN PERMIT REVIEW

ADDITIONAL SITE FEATURES

50. TIE TO EXISTING - MATCH GRADE
51. GRASS AREA - PROVIDE 6" TOPSOIL & SOD COMMON TO REGION ON ALL DISTURBED AREAS NOT TO BE PAVED
52. SLOPE GRADE FROM BACK OF CURB DOWN TO MATCH THE EXISTING/PROPOSED GRADE - SEE GRADING PLAN

GENERAL AZ NOTES

1. PROOF ROLL BUILDING AND ALL PARKING AREAS. NOTIFY THE ARCHITECT OF ANY UNACCEPTABLE AREAS.
2. EDGE OF NEW PAVEMENT TO BE FLUSH WITH EXISTING PAVEMENT.
3. ALL SIDEWALK CURB AND GUTTER STREET PAVING, CURB CUTS, DRIVEWAY APPROACHES, HANDICAP RAMP, ETC, CONSTRUCTED OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY SHALL CONFORM TO ALL MUNICIPAL AND/OR STATE SPECIFICATIONS AND REQUIREMENTS.
4. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC.) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
5. FOR PROPOSED UTILITY LOCATIONS, SEE THE UTILITY PLAN.

SITE DATA INFORMATION

PARKING REQUIRED (1/225 SF) = 33
EXISTING PARKING = 0
PROPOSED PARKING = 36
HC SPACES REQUIRED = 2
HC SPACES PROVIDED = 2
TOTAL PARKING = 38
PARKING STALL SIZE = 10'X18'
ADA PARKING STALL SIZE = 8'X18'
LOT AREA = 50,702 SF / 1.164 AC
NUMBER OF BUILDINGS = 1
BUILDING AREA = 7,381 SF
FLOOR AREA RATIO = 14.56%

ALL DISTURBED AREA SHALL BE STABILIZED WITH SOD, COMMON TO THE REGION - CONTRACTOR TO GUARANTEE AND MAINTAIN ALL NEW SODDED AREAS FOR 60 DAYS MINIMUM, AND ALL SODDED AREAS ARE STABILIZED.

PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL NEW GRASS SODDED AREAS TO BE IRRIGATED - IRRIGATION PLAN TO BE DESIGN BUILD BY G.C. - COORDINATE WITH A SOUTH CAROLINA CERTIFIED IRRIGATION CONTRACTOR

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
4	5	6	

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
MS 39110

GLUCKSTADT
SITE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

10/08/2021

7N2

C1.0

GENERAL UTILITY NOTES

1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. GENERAL CONTRACTOR TO COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR ALL LOCATIONS AND CONNECTIONS. A PRECONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES, IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT AUTOZONE IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
4. THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND CITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATION'S, INSPECTIONS, AND DEMOLITION. (AUTOZONE TO REIMBURSE GENERAL CONTRACTOR FOR ALL SANITARY SEWER AND WATER TAP FEES).
5. ALL VALVE BOXES AND CURB BOXES SHALL BE ADJUSTED TO THE FINAL GRADES. ALL CURB BOXES SHALL BE LOCATED IN GRASSED AREAS UNLESS INDICATED OTHERWISE ON THE PLANS.
6. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES UNLESS OTHERWISE SHOWN, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED. WHERE WATER LINE CROSSES ABOVE SANITARY LATERAL BY LESS THAN 2' VERTICAL, A CONCRETE ENCASEMENT SHALL BE INSTALLED, CONTRACTOR SHALL CENTER ONE JOINT OF PIPE AT CROSSING.
7. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS. SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE GOVERNING AUTHORITY.
9. WATER PIPE SHALL BE PEX (HDPE) TUBING.
10. ALL SANITARY SEWER MAIN LINES SHALL BE SCHEDULE 40 PVC PIPE (EXCEPT AS NOTED ON PLANS). ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURE.

AUTOZONE WATER NOTES:

ALL WATER INFRASTRUCTURE CONSTRUCTION TO BE COORDINATED WITH THE LOCAL UTILITY SERVICE DEPARTMENT.

AUTOZONE TO REIMBURSE GENERAL CONTRACTOR FOR ALL SANITARY SEWER, GAS, AND WATER TAP FEES.

UTILITY CONTACTS

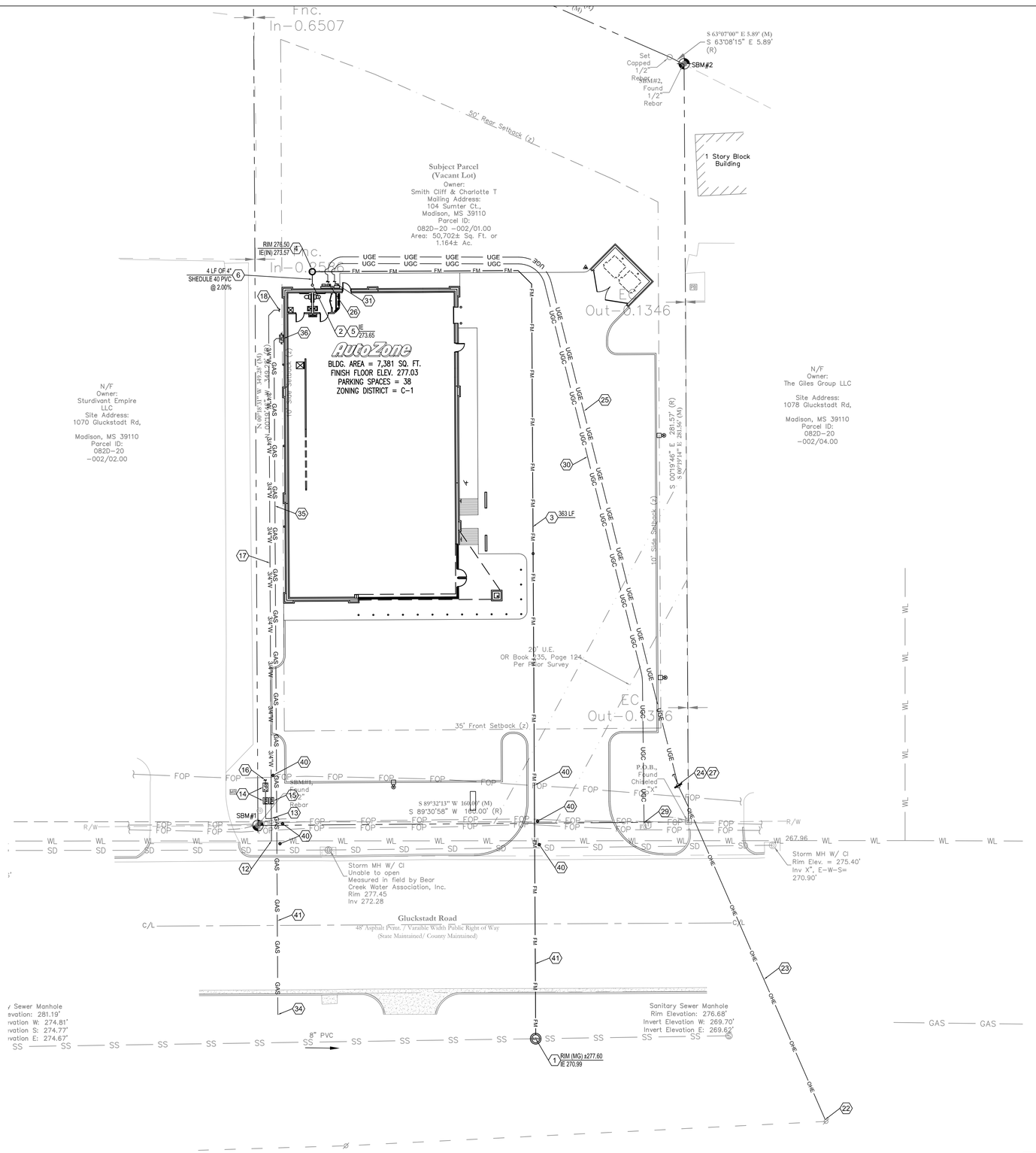
WATER DEPARTMENT
MADISONVILLE WATER
400 COLLEGE STREET N
MADISONVILLE, TN 37354
FRED CAGLE - COMMISSIONER
(423)572-0554

SANITARY SEWER DEPARTMENT
MADISONVILLE SANITATION
400 COLLEGE STREET N
MADISONVILLE, TN 37354
CHARLIE MCDONALD - COMMISSIONER
(423)572-0554

ELECTRIC DEPARTMENT
FORT LOUDOUN ELECTRIC COOPERATIVE
116 TELLICO PORT RD
VONORE, TN 37885
(877)353-2674

GAS DEPARTMENT
MADISONVILLE WATER
400 COLLEGE STREET N
MADISONVILLE, TN 37354
FRED CAGLE - COMMISSIONER
(423)572-0554

COMMUNICATIONS



PROPOSED UTILITY LEGEND

FM	LOW PRESSURE FORCE MAIN FOR SANITARY SEWER SERVICE PER LOCAL SERVICE PROVIDER SPECS.
W	WATER LINE PER LOCAL UTILITY CO SPECS.
GAS	GAS LINE PER LOCAL UTILITY CO SPECS.
UGE	UNDERGROUND ELECTRIC SERVICE PER LOCAL UTILITY CO SPECS.
UGC	UNDERGROUND TELEPHONE AND COMMUNICATIONS SERVICE PER LOCAL UTILITY CO SPECS.
RPBP	BACK FLOW PREVENTER PER LOCAL UTILITY CO SPECS.
WM	WATER METER PER LOCAL UTILITY CO SPECS.

PROPOSED UTILITY BLOCK NOTES

SANITARY SEWER SERVICE:

1. TIE TO EXISTING MAIN WITH PRECAST CONCRETE MANHOLE PER SERVICE PROVIDER SPECS - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
2. SANITARY SEWER SERVICE ENTRY TO BUILDING - SEE ELEVATION THIS SHEET - SEE PLUMBING PLANS FOR CONTINUATION AND POINT OF ENTRY
3. INSTALL SCHEDULE 40 PVC LOW PRESSURE FORCE MAIN FOR SANITARY SEWER SERVICE PER LOCAL SERVICE PROVIDER SPECS.
4. INSTALL 2HP SIMPLEX GRINDER PUMP STATION WITH 24"X72" TANK WITH HEAVY DUTY TRAFFIC RATED LID - RINGS AND LIDS MUST BE VULCAN 1384
5. INSTALL SANITARY SEWER CLEANOUT PER LOCAL SERVICE PROVIDER SPECS. - SEE SIZE, TYPE AND SLOPE THIS SHEET - SEE DETAIL SHEET
6. INSTALL SCHEDULE 40 PVC SANITARY SEWER LINE, PER LOCAL SERVICE PROVIDER SPECS. - SEE SIZE AND SLOPE THIS SHEET

WATER SERVICE:

12. CONNECT TO EXISTING WATER MAIN WITH 1.5" TAPPING SLEEVE AND VALVE PER LOCAL SERVICE PROVIDER SPECS - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
13. PROVIDE 1.5" WATERLINE AND 1.5" TEE WITH 3/4" REDUCER FOR DOMESTIC SERVICE AND 1" REDUCER FOR IRRIGATION SERVICE - PER SERVICE PROVIDER SPECS.
14. PROVIDE 1" METER AND VALVE WITH ABOVE GROUND RPBP AND ENCLOSURE FOR IRRIGATION SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
15. PROVIDE 3/4" METER AND VALVE FOR DOMESTIC WATER SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
16. STUB OUT 1" SCH 40 PVC LINE FOR IRRIGATION
17. PROVIDE DOMESTIC WATER SERVICE LINE - INSTALL 1" CLASS 200, DR9 HDPE PIPE (POLYPIPE PW-PE3408/PE3608 OR APPROVED EQUAL) - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
18. DOMESTIC WATER SERVICE ENTRY WITH INTERNAL 1" RPBP PER CITY SPECS. - SEE PLUMBING PLANS

ELECTRIC SERVICE:

22. CONNECTION TO EXISTING ELECTRICAL SERVICE PER LOCAL SERVICE PROVIDER SPECS. - G.C. TO COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
23. PROVIDE PRIMARY OVERHEAD ELECTRICAL PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
24. PROVIDE POLE MOUNTED TRANSFORMER - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
25. PROVIDE SECONDARY UNDERGROUND ELECTRIC PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDE PRIOR TO ANY WORK DONE - SEE ELECTRICAL PLANS FOR CONDUIT SIZE AND CONNECTION POINT INTO THE BUILDING.
26. ELECTRIC SERVICE POINT OF ENTRY INTO BUILDING - SEE ELECTRICAL PLANS FOR CONDUIT SIZE AND CONNECTION POINT INTO THE BUILDING.
27. PROVIDE SERVICE POLE WITH GUY WIRE(S) PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE

COMMUNICATIONS SERVICE:

29. POINT OF CONNECTION FOR TELEPHONE / COMMUNICATIONS SERVICE PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
30. PROVIDE UNDERGROUND TELEPHONE / COMMUNICATIONS PER LOCAL SERVICE PROVIDER REQUIREMENTS COORDINATE WITH LOCAL SERVICE PROVIDERS PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING.
31. UNDERGROUND TELEPHONE / COMMUNICATIONS POINT INTO THE BUILDING - COORDINATE WITH ELECTRIC SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING - PROVIDE BOLLARD SEE PLAN - SEE DETAIL

GAS SERVICE:

34. SERVICE PROVIDER TO TIE TO EXISTING GAS LINE PER LOCAL SERVICE PROVIDER REQUIREMENTS - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE
35. GAS SERVICE PER LOCAL SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO ANY WORK DONE
36. GAS METER AND SERVICE POINT INTO THE BUILDING - COORDINATE WITH ELECTRIC SERVICE PROVIDER PRIOR TO ANY WORK DONE - SEE M.E.P. PLANS FOR DEMANDS, SIZE, AND CONNECTION POINT INTO THE BUILDING

ADDITIONAL KEY NOTES:

40. UTILITY CROSSING PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDERS PRIOR TO ANY WORK DONE
41. SERVICE LINE TO BE BROUGHT TO PROPERTY UNDER EXISTING ROAD BY DIRECTIONAL DRILLING - COORDINATE WITH LOCAL SERVICE PROVIDER PRIOR TO ANY WORK DONE - FIELD VERIFY FOR EXISTING UTILITIES PRIOR TO ANY WORK DONE

NOTE:
PROVIDE (2) 4" PVC CONDUITS UNDER DRIVES TO ALL LANDSCAPED AREAS. PROVIDE 2' COVER AND CAP OFF. MARK STUB OUT WITH FLAG/MARKER.

ALL LANDSCAPED AREAS TO BE IRRIGATED (IRRIGATION PLAN TO BE SUBBED OUT THRU G.C.) - SEE LANDSCAPE DRAWINGS FOR PLANTINGS AND DETAILS

SEE M.E.P. PLANS FOR ALL UTILITY SERVICE ENTRIES.
LOCATIONS SHOW ARE APPROXIMATE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

Civil Engineering Services
7705 Spicer Farm Lane
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Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS
1 2 3 4 5 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD MS 39110
GLUCKSTADT
UTILITY PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969
For Bidding & Contractor Information Contact:
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Cindy.searcy@construction.com

10/08/2021
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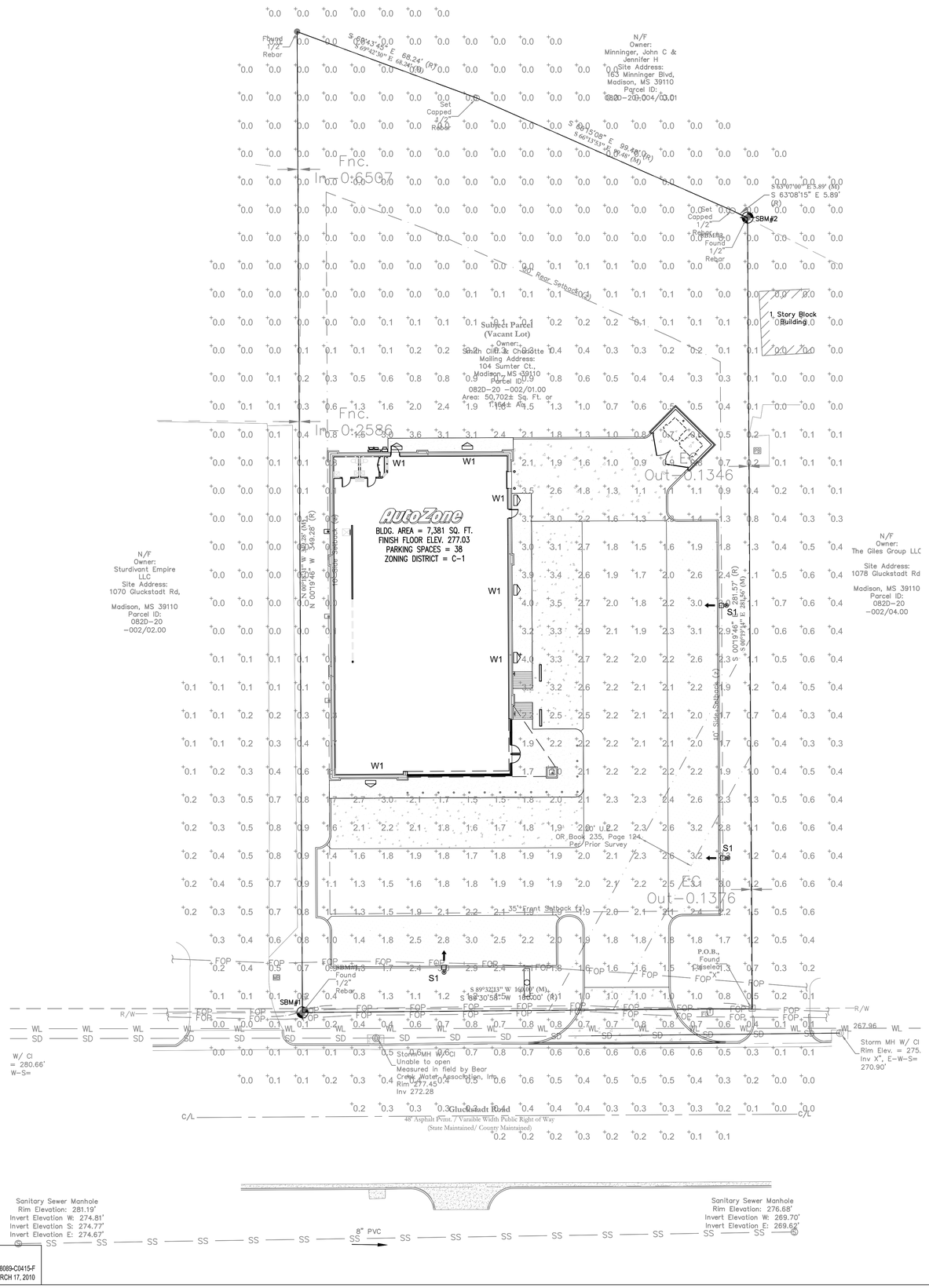

LUMINAIRE SCHEDULE						
TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF	QTY
S1		LITHONIA - DSX1 LED 60C IES FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 28'-0"	LED - 209 WATTS	ABSOLUTE	0.95	3
W1		LITHONIA - DSW1 LED 10C IESNA FULL CUTOFF DISTRIBUTION MOUNTED 0° DOWN POSITION MOUNTED HEIGHT = 12'-0"	LED - 40 WATTS	ABSOLUTE	0.95	6

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone	+	1.0 fc	4.0 fc	0.0 fc	N/A	N/A

LIGHTING NOTES:

1. TIME CONTROLS: ALL SITE LIGHTING IS CONTROLLED AND MONITORED BY AN ENERGY MANAGEMENT SYSTEM CALLED VENSTAR WHICH IS CONTROLLED AT AUTOZONE CORPORATE OFFICES. ALL SITE LIGHTING IS PROGRAMMED TO AUTOMATICALLY TURN ON AT DUSK AND TURN OFF 30 MINUTES AFTER THE CLOSE OF BUSINESS.

2. ALL FIXTURES ARE FULL CUTOFF DISTRIBUTION AND MOUNTED @ 0° DOWN POSITION.

3. NO FLOODLIGHTS ARE PROPOSED.

4. THE LIGHTING PLAN COMPLIES WITH THE PROVISIONS OF SECTION 1907 - LANDSCAPING AND LIGHTING FOR COMMERCIAL DEVELOPMENT IN MLHP OVERLAY DISTRICT LIGHTING STANDARDS AND GUIDELINES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Sanitary Sewer Manhole
Rim Elevation: 281.19'
Invert Elevation W: 274.81'
Invert Elevation S: 274.77'
Invert Elevation E: 274.67'

8" PVC

Sanitary Sewer Manhole
Rim Elevation: 276.68'
Invert Elevation W: 269.70'
Invert Elevation E: 269.62'

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
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NAD83 MS STATE PLANE

REVISIONS
1 2 3
4 5 6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
PHOTOMETRIC PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

10/08/2021

7N2

PH 5.0

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA: 1.01 ft² (0.09 m²)

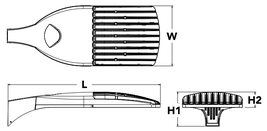
Length: 33″ (83.8 cm)

Width: 13″ (33.0 cm)

Height H1: 7-1/2″ (19.0 cm)

Height H2: 3-1/2″

Weight (max): 27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4[1] P7[1] P2 P5[1] P8 P3 P6[1] P9[1] **Rotated optics** P10[2] P12[2] P11[2] P13[1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short[3] T5S Type V short[3] T5M Type V medium[3] T5W Type V wide[3] BLC Backlight control[4] LCCO Left corner cutoff[4] RCCO Right corner cutoff[4]	MVOLT[5] 120[6] 208[6] 240[6] 277[6] 347[6] 480[6]	**Shipped included** SPA Square pole mounting RPA Round pole mounting[7] WBA Wall bracket[7] SPUMBA Square pole universal mounting adaptor[8] RPUMBA Round pole universal mounting adaptor[8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark bronze
NLTAIR2	nLight AIR generation 2 enabled[10]	HS	House-side shield[20]	DBLXD	Black
PIRHN	Network, high/low motion/ambient sensor[11]	SF	Single fuse (120, 277 or 347V)[6]	DNAXD	Natural aluminum
PER	NEMA twist-lock receptacle only (controls ordered separate)[12]	DF	Double fuse (208, 240, 480V)[6]	DWHXD	White
PER5	Five-pin receptacle only (controls ordered separate)[12,13]	L90	Left rotated optics[2]	DDBTXD	Textured dark bronze
PER7	Seven-pin receptacle only (controls ordered separate)[12,13]	R90	Right rotated optics[2]	DBLBXD	Textured black
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[14]	HA	50°C ambient operations[1]	DNATXD	Textured natural aluminum
DS	Dual switching[15,16,17]	**Shipped separately**		DWHGXD	Textured white
PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[17,18]	BS	Bird spikes[21]		
PIRH	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[17,18]	EGS	External glare shield		
PIR1FC3V	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[17,18]				
PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[17,18]				
FAO	Field adjustable output[17,19]				

D-Series Size 1
LED Wall Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Luminaire

Width: 13-3/4″ (34.9 cm)
Weight: 12 lbs (5.4 kg)

Depth: 10″ (25.4 cm)

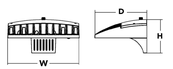
Height: 6-3/8″ (16.2 cm)

Back Box (BBW, ELCW)

Width: 13-3/4″ (34.9 cm)
BBW Weight: 5 lbs (2.3 kg)

Depth: 4″ (10.2 cm)
ELCW Weight: 10 lbs (4.5 kg)

Height: 6-3/8″ (16.2 cm)



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines)[1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)[1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT[2] 120[3] 208[3] 240[3] 277[3] 347[3,4] 480[3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry)[5]	**Shipped installed** PE Photoelectric cell, button type[6] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht[7,7] PIRH 180° motion/ambient light sensor, 15-30' mtg ht[7,7] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[7,7] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[7,7] ELCW Emergency battery backup (includes external component enclosure), CA Title 20 Noncompliant[8,9]

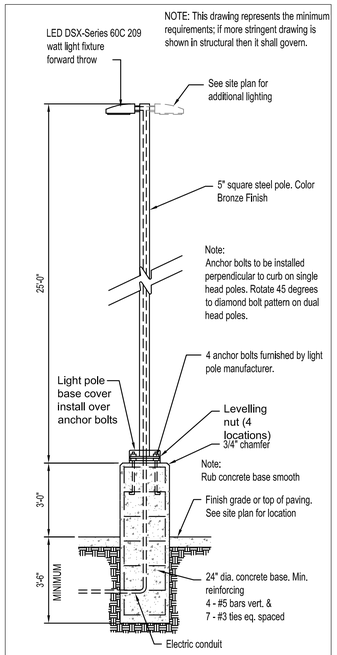
Other Options		Finish (required)			
Shipped installed		DDBXD	Dark bronze	DSSXD	Sandstone
SF	Single fuse (120, 277 or 347V)[3,10]	DBLXD	Black	DDBTXD	Textured dark bronze
DF	Double fuse (208, 240 or 480V)[3,10]	DNAXD	Natural aluminum	DBLBXD	Textured black
HS	House-side shield[11]	DWHXD	White	DNATXD	Textured natural aluminum
SPD	Separate surge protection[12]			DWHGXD	Textured white
Shipped separately[13]				DSSTXD	Textured sandstone
BSW	Bird-deterrent spikes				
VG	Vandal guard				
DDL	Diffused drop lens				

Accessories

Ordered and shipped separately.

DSXWHS U House-side shield (one per light engine)
DSXWBSW U Bird-deterrent spikes
DSXW1VG U Vandal guard accessory

NOTES
1. 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5. Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6. Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7. Reference Motion Sensor table on page 3.
8. Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
9. Not available with SPD.
10. Not available with ELCW.
11. Also available as a separate accessory; see Accessories information.
12. Not available with ELCW.



NO SCALE SEC-C13

13 TYPICAL LIGHT POLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

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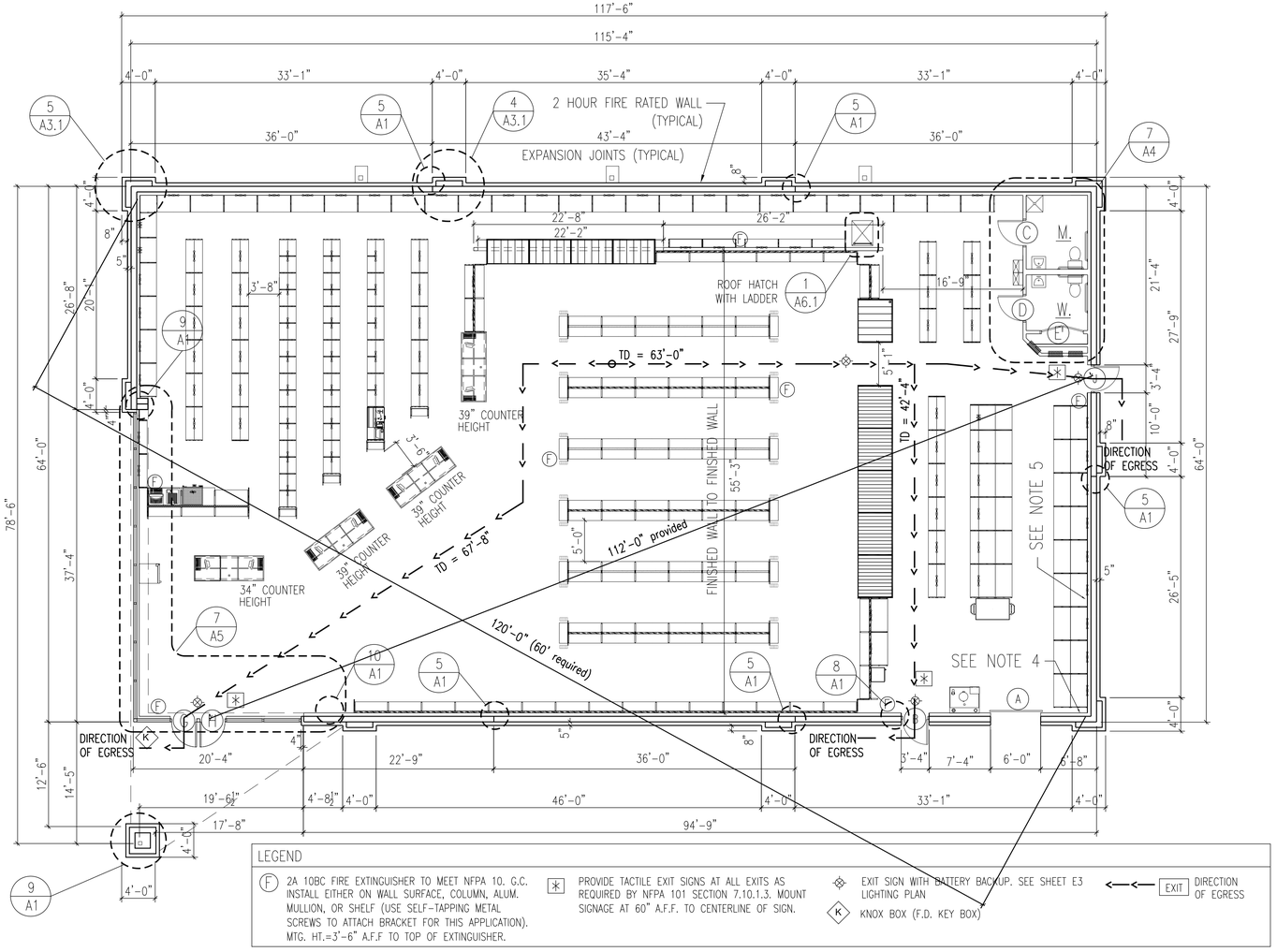
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010



1/8" = 1'-0"

1 | FLOOR PLAN

1. REFER TO STRUCTURAL DRAWINGS FOR ALL DETAILS AND REQUIREMENTS REGARDING FOUNDATIONS, WALL REINFORCING, BOND BEAMS, LINTELS, AND ROOF FRAMING.
2. REFER TO CIVIL DRAWINGS FOR LOCATIONS AND DETAILS OF SIDEWALKS, PIPE GUARDS, ETC., AS WELL AS FINISH FLOOR ELEVATION AND EXTERIOR FINISHED GRADES AROUND THE BUILDING.
3. INSTALL 6" WIDE, 20 GAUGE GALVANIZED SHEET METAL STRIP BETWEEN THE BACK OF THE GYPSUM BOARD AND THE FACE OF THE METAL STUD AROUND THE ENTIRE PERIMETER OF THE BUILDING, AS WELL AS BOTH SIDES OF THE CURTAIN WALL. TOP OF STRIP TO BE 93" ABOVE FINISHED FLOOR. REFER TO SHEET A-4 FOR DETAILS OF CURTAIN WALL.
4. SEE SHEET M-2 FOR LOCATION OF NON FREEZE YARD HYDRANT AND INSTALLATION REQUIREMENTS.
5. INSTALL 1/2" X 4'-0" X 8'-0" AC PLYWOOD HORIZONTALLY WITH THE LONG EDGE ON THE FLOOR AND THE END JOINT CENTERING ON A STUD. APPLY PLYWOOD TO THE FACE OF GYPSUM BOARD WITH SCREWS TO FACILITATE FUTURE REPLACEMENT. SEE INTERIOR ELEVATIONS SEE 3/A4 DETAIL.

1/8" = 1'-0" AFN01

2 | FLOOR PLAN NOTES

LOCATION	FLOOR		BASE		WALLS		CLG.		REM.
	SEALED CONCRETE	VINYL TILE	VINYL	QUARRY TILE	GYPSUM BOARD	FIBER REINFORCED PANELS	METAL DECK	GYPSUM BOARD	
SALES AREA		●	●		●		●		
REST ROOMS	●		●			●		●	

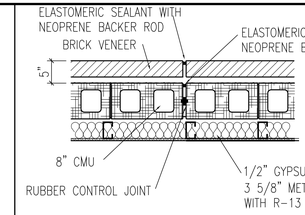
3/16" = 1'-0" AFC01

3 | ROOM FINISH SCHEDULE

MK	SIZE	TYPE	FRAME	JAMB DETAIL	HEAD DETAIL	ADA / EXIT HARDWARE (SEE SECTION 08700 OF THE SPECIFICATIONS)
A	6'-0" x 8'-0"	STEEL OVERHEAD ROLL-UP	STEEL ANGLE	6;7&8/A1	6&7/A1	
B	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	8/A1	8/A1	PUSH BAR EXIT DEVICE WILL HAVE AN INTEGRAL SOUNDER
C	3'-0" x 6'-8" x 1-3/4"	SOLID CORE WOOD UNDERCUT DOOR 1"	HOLLOW METAL	8/A1	8/A1	LEVER HANDLE PRIVACY SETS, CLOSER: LCN #P4041, PLATED FINISH US 26D, CLOSER IS PARALLEL ARM AND MOUNTS ON PUSH SIDE OF DOOR
D	3'-0" x 6'-8" x 1-3/4"	SOLID CORE WOOD UNDERCUT DOOR 1"	HOLLOW METAL	8/A1	8/A1	LEVER HANDLE PRIVACY SETS, CLOSER: LCN #P4041, PLATED FINISH US 26D, CLOSER IS PARALLEL ARM AND MOUNTS ON PUSH SIDE OF DOOR
E	2'-6" x 6'-8" x 1-3/4"	SOLID CORE WOOD PAIR REQUIRED	HOLLOW METAL	8/A1	8/A1	UNDERCUT DOOR 1" (PAIR REQUIRED)
G	3'-0" x 7'-0" x 1-3/4"	GLASS & ALUMINUM SEE SHEET A-5	ALUMINUM	SEE MANUFACTURER'S SHOP DRAWINGS		SELF CLOSERS MOUNTED ON THE INSIDE OF BUILDING, CYLINDER LOCKS (KEY OPERATION EXTERIOR AND THUMB TURN INTERIOR), PUSH BARS AND PULLS, SIGN OVER EACH EXIT DOOR TO READ AS FOLLOWS "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" 1" HIGH WHITE LETTERS.
H	3'-0" x 7'-0" x 1-3/4"	GLASS & ALUMINUM SEE SHEET A-5	ALUMINUM	SEE MANUFACTURER'S SHOP DRAWINGS		
J	3'-0" x 7'-0" x 1-3/4"	HOLLOW METAL	HOLLOW METAL	8/A1	8/A1	PUSH BAR EXIT DEVICE

3/32" = 1'-0" ADC01

4 | DOOR SCHEDULE – HOLLOW METAL DOORS & FRAMES

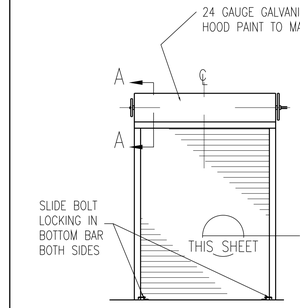


NOTE: SEE STRUCTURAL DRAWINGS FOR REINFORCING REQUIREMENTS

3/4" = 1'-0" AFS01

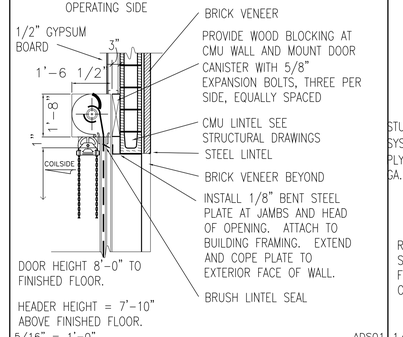
5 | EXPANSION JOINT DETAIL

CHAIN OPERATED INSULATED DOOR SURFACE MOUNTED



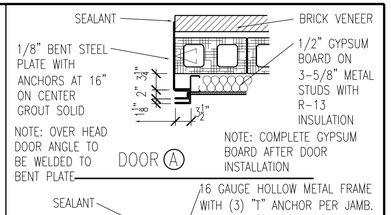
6 | OVERHEAD DOOR ELEVATION

NOTE: GENERAL CONTRACTOR TO INSTALL 6" X 8'-0" ALUMINUM CHAIN GUARD ON WALL AT OPERATING SIDE



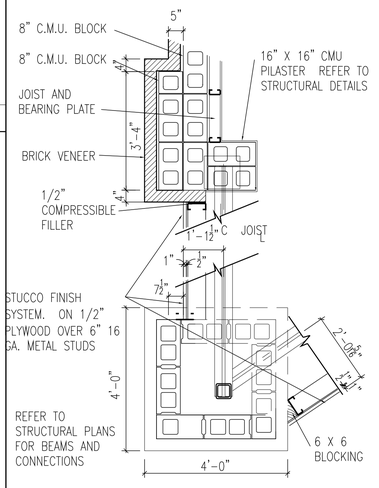
5/16" = 1'-0" ADS01

7 | OVERHEAD DELIVERY DOOR (A)



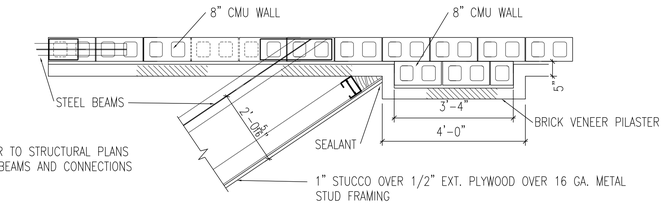
3/4" = 1'-0" ADS02

8 | JAMB DETAILS



1/2" = 1'-0" ACS01NL

9 | SECTION AT CANOPY



1/2" = 1'-0" ACS02NL

10 | SECTION AT CANOPY

REVISIONS		
1	2	3
4	5	6

Section 4, IB)

AutoZone Store No. 5607
GLUCKSTADT ROAD

GLUCKSTADT

MS 39110

FLOOR PLAN / DOOR SCHEDULE / WALL DETAILS

Architect: George Callow
123 South Front Street
Memphis, Tennessee 38103
TEL: 901-495-8701 FAX: (901) 495-8969

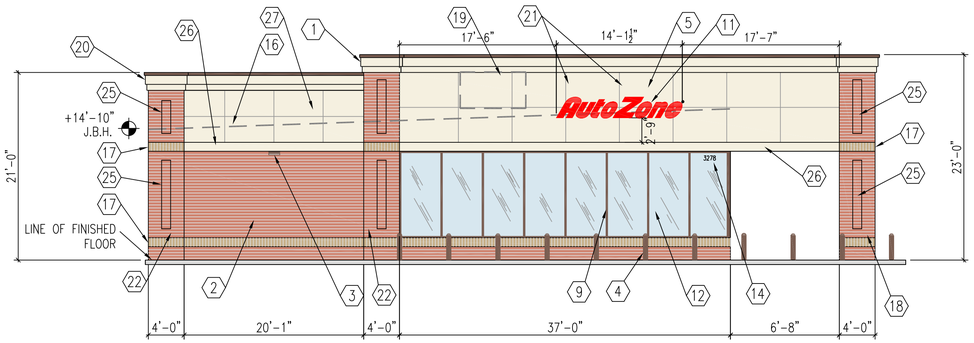
For Bidding & Contractor Information Contact:
McGraw - Hill Construction Tel. 615-884-1017
www.construction.com

REGISTERED ARCHITECT George W. Callow 2079 Memphis, TN STATE OF MISSISSIPPI

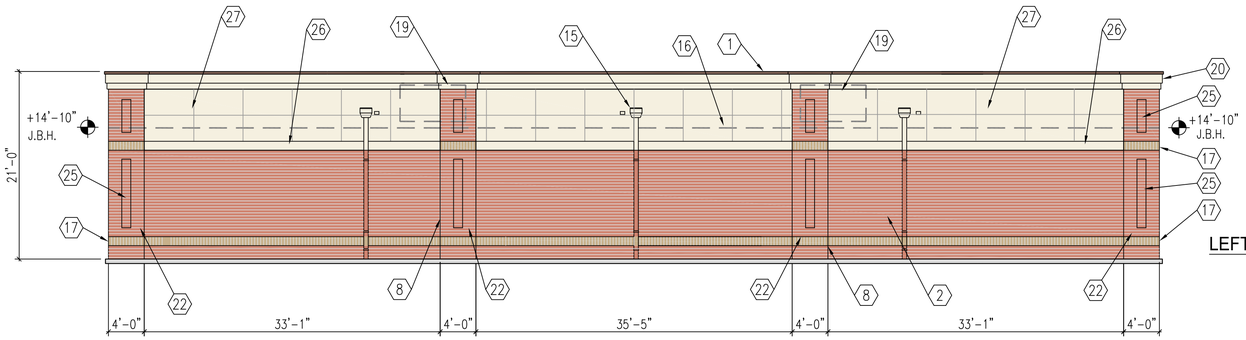
10/12/21

7N2-L

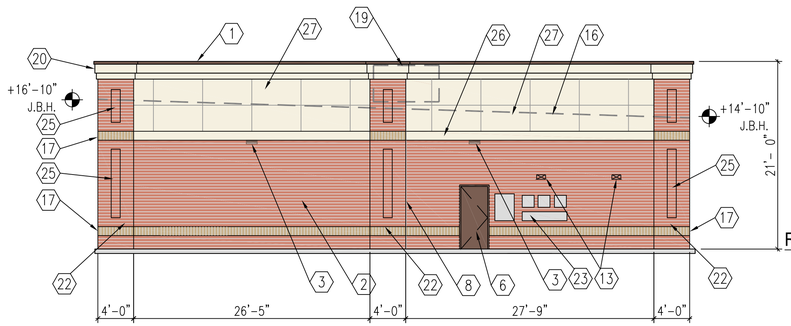
A-1



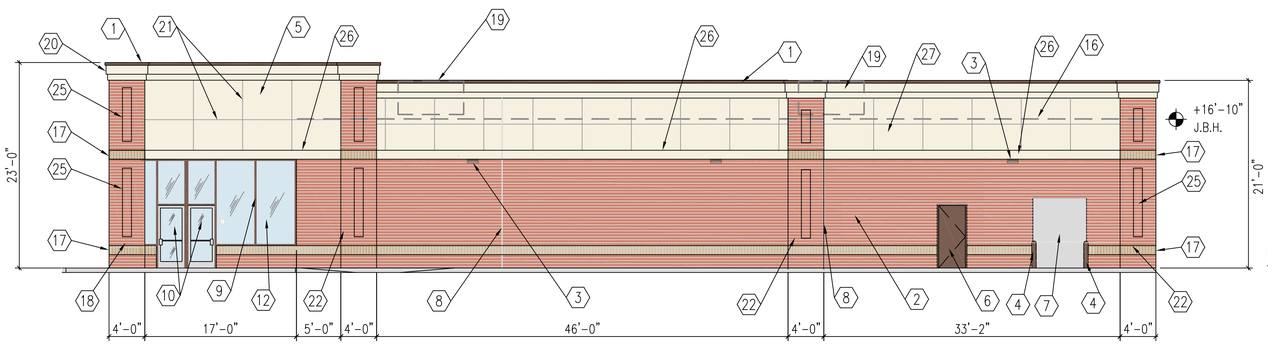
FRONT WALL (South View)
Gluckstadt Road



LEFT SIDE WALL (West View)



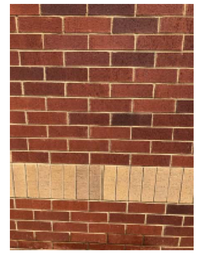
REAR WALL (North View)



LEFT SIDE WALL (South View)

J.B.H. = JOIST BEARING HEIGHT

1 BUILDING ELEVATIONS



BRICK COLORS:

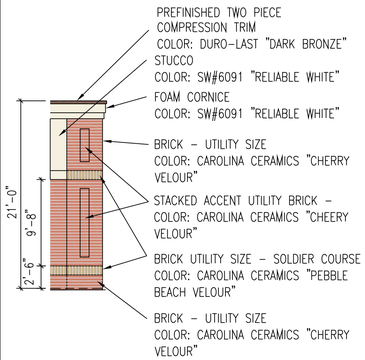
FIELD BRICK RUNNING BOND – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

STACKED BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

SOLDIER COURSE BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

1. PREFINISHED TWO PIECE COMPRESSION TRIM
COLOR: DURO-LAST "DARK BRONZE"
2. BRICK UTILITY SIZE – RUNNING BOND
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"
3. WALL MOUNTED LIGHT FIXTURE – DARK BRONZE FINISH
4. PIPE GUARD WITH ARCHITECTURAL BROWN SLEEVE
5. STUCCO FINISH
COLOR: SW#6091 RELIABLE WHITE
6. PAINT MAN DOOR & METAL FRAMES DARK BRONZE
7. PAINT OVERHEAD DOOR & ANGLES DARK BRONZE
8. EXPANSION JOINT
9. ALUMINUM STOREFRONT – DARK BRONZE FINISH
10. GLASS AND ALUMINUM DOORS – CLEAR ANODIZED FINISH
11. FRONT WALL SIGN – 28" RED CHANNEL LETTERS
12. ALUMINUM STOREFRONT – DARK BRONZE FACTORY FINISH WITH TINTED GRAY GLASS
13. TOILET WALL VENTS PAINT TO MATCH WALL
14. STORE ADDRESS – 6" WHITE REFLECTIVE NUMBERS
15. SCUPPERS AND DOWNSPOUTS. PAINTED TO MATCH BACKGROUND WALL COLOR. ADJACENT 4" H. X 6" W. OVERFLOW SCUPPER. FLOWLINE 2" ABOVE ROOF.
16. BOND BEAM AT ROOF LINE
17. BRICK UTILITY SIZE – SOLDIER COURSE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"
18. 4'-0" SQUARE BRICK COLUMN
19. HVAC UNITS SCREENED BEHIND PARAPET WALL
20. FOAM CORNICE
COLOR: SW#6091 "RELIABLE WHITE"
21. 1" VERTICAL AND HORIZONTAL V-GROVE SCORED JOINTS (TYP.)
22. 4'-0" WIDE BRICK PILASTER (8" PROJECTION)
23. ELECTRICAL EQUIPMENT
24. NOT USED
25. STACKED ACCENT UTILITY BRICK – (½" RECESSED)
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"
26. 12" HIGH X 1" DEPTH FOAM BOARD TRIM W/ E.F.S.
COLOR: SW #6091 "RELIABLE WHITE"
27. STUCCO FINISH
COLOR: SW #6091 "RELIABLE WHITE"

2 ELEVATION KEYNOTES



FIELD BRICK RUNNING BOND – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

STACKED BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

SOLDIER COURSE BRICK – UTILITY SIZE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

BRICK MORTAR COLOR: BEIGE

CONTACT: JEAN BREKLICH 803-788-1917

SCALE: ⅛" = 1'-0"

3 EXTERIOR WALL COLOR SCHEME

AUTOZONE INC.
Architect: Lew Ellis
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8707 FAX: (901) 495-8969
Email Address: george.callow@autozone.com

Prepared For: **AutoZone** STORE DEVELOPMENT
Store No. 5607
GLUCKSTADT ROAD
GLUCKSTADT, MS 39110

COLOR ELEVATIONS

REVISIONS
1.
2.
3.
4.

SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
George W. Callow
2079
Memphis TN
STATE OF MISSISSIPPI

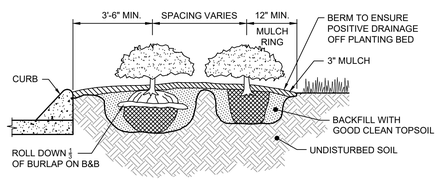
DATE
10/12/21

PROTOTYPE SIZE
7N2L

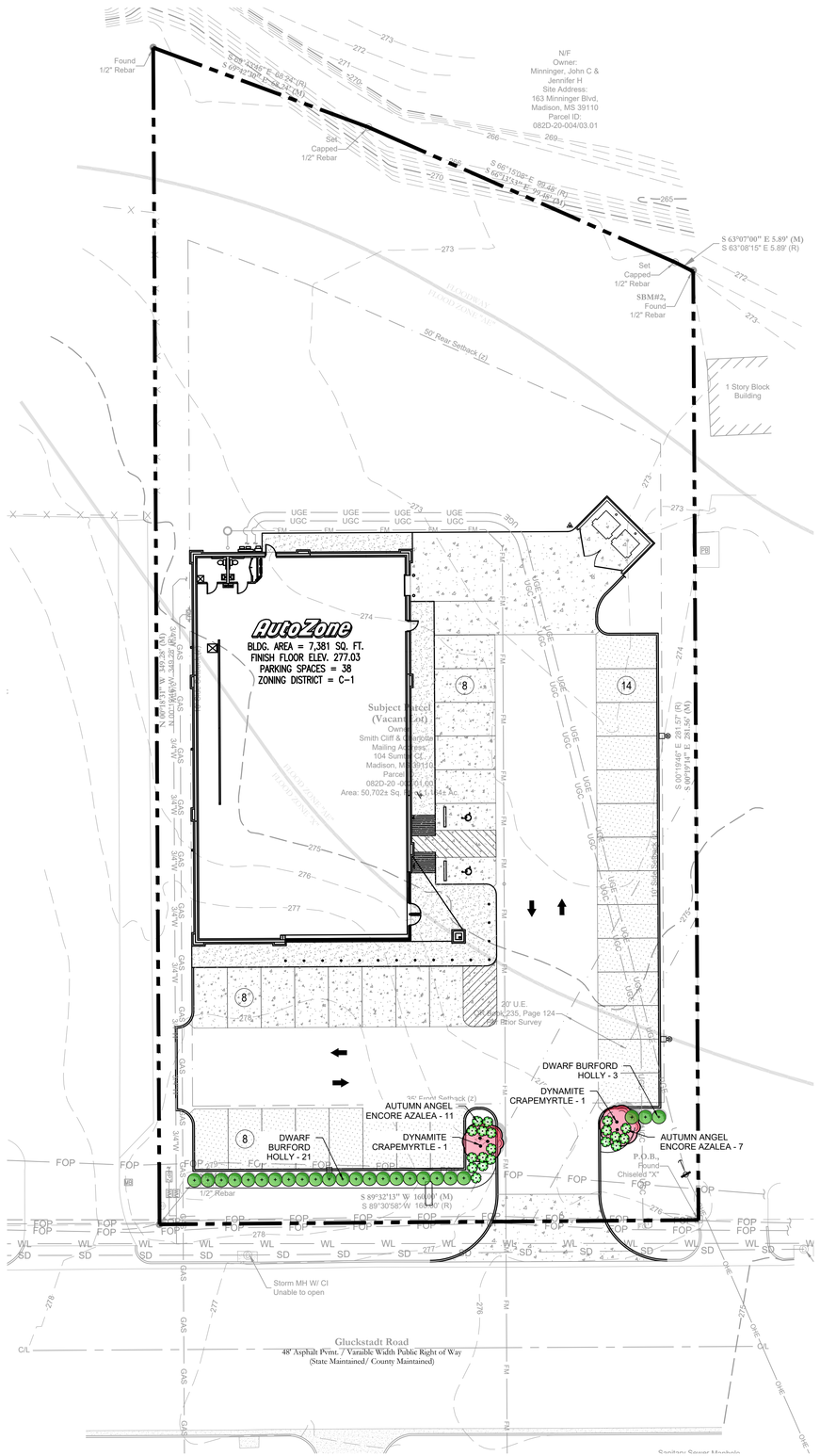
CE

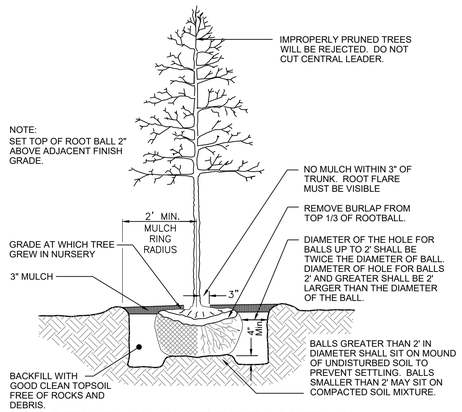
LANDSCAPE NOTES:

1. WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIALS SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
4. NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. KITA LANDSCAPE DESIGN (615) 469-1222.
5. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. SOD ALL DISTURBED AREAS.
7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD.
   A. SAND SHALL BE CLEAN MASONRY SAND.
   B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
   C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
22. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.
    PLANTING DATES
    SPRING: MARCH 15 - APRIL 15
    FALL: OCTOBER 1 - NOVEMBER 30
24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
25. CONTRACTOR TO IRRIGATE ALL NEW LANDSCAPE PLANTINGS AND LAWN AREAS WITH AN AUTOMATED UNDERGROUND IRRIGATION SYSTEM.
26. IRRIGATION TO HAVE A SEPARATE METER.
27. GENERAL CONTRACTOR TO COORDINATE AND BE RESPONSIBLE FOR WATERING ALL PLANTS AND SEEDED AREAS AFTER PLANTING UNTIL IRRIGATION SYSTEM IS OPERABLE.



SHRUB / GROUND COVER PLANTING
NOT TO SCALE





DECIDUOUS TREE PLANTING
NOT TO SCALE

PLANT SCHEDULE					
QTY.	COMMON NAME	BOTANICAL NAME	HEIGHT	TRUNK	COMMENTS
UNDERSTORY/COLUMNAR TREES					
2	'Dynamite' Crapemyrtle	Lagerstroemia indica 'Whit II'	6' - 7'	2" Cal.	Multi-Trunk, Min. (3) 2" canes
2	TOTAL - UNDERSTORY TREES				
SHRUBS					
19	'Autumn Angel' Encore Azalea	Rhododendron 'Robleg'	18" Min.	3 Gal.	Container (White)
24	Dwarf Burford Holly	Ilex cornuta 'Burfordii nana'	24" Min.	5 Gal.	Container
43	TOTAL - SHRUBS				
TURF					
	Common Bermuda	Cynodon dactylon			

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

KITA designs
Beauty | Economy | Sustainability

Kevin Reff, RLA
KITA Sustainable Designs, LLC
2101 Masters Drive
Springfield, TN 37172
(615) 469 - 1222 Ofc.
(615) 594 - 7333 Cell.
kreff@kitadesign.biz

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS			
1	4		
2	5		
3	6		

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT
LANDSCAPE PLAN
MS 39110

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969
For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@construction.com

RECISTERED LANDSCAPE ARCHITECT
KEVIN M. REFF
806
STATE OF MISSOURI

10/08/2021

7N2

L-1.1

Civil Engineering Services

P.O. Box 1302, Fairview, TN 37062 Office: (615) 533-0401

November 18, 2021

Attn: Tim Bryan
Madison County Road Department
3137 South Liberty Street
P.O. Box 608
Canton, MS 39046
(601) 855-5670

RE: Drainage / Stormwater Design Report
AutoZone retail store (Store #0152)
West of 1078 Gluckstadt Road
Gluckstadt, Madison County, Mississippi 39110

Mr. Bryan:

Below and enclosed is our submittal of the stormwater design letter report for the site of the proposed AutoZone retail store located at the address referenced above (see Enclosure 1 for site location map). Please include this report in your review of the proposed site development plans.

Existing Site Conditions:

The subject property is currently undeveloped and is situated between 1070 and 1078 Gluckstadt Road. The site is bordered to the east by an office building, now or formerly The Giles Group, LLC. To the west, the site is bordered by the Gluckstadt Animal Hospital. The site is bordered to the north by a heavily wooded drainage channel (referred to as Stream O in the FEMA FIS), and to the south by Gluckstadt Road.

The existing project site generally drains southwest to northeast. There is an existing storm sewer, along with two storm sewer inlets, on Gluckstadt Road. The size and depth of this storm sewer is unknown, as the inlets were not accessible at the time of the survey. There are two outfall points for the existing site. Outfall #1 is the existing storm sewer inlet, located just east of this site. Only a small portion of the site and adjacent right-of-way drain to Gluckstadt Road, and to this existing inlet. Outfall #2 is at the northern property line where runoff from this site drains into Stream O.

Proposed Site Conditions:

The proposed project is to construct an AutoZone retail store with a detention pond, drainage system, drive aisle, and parking spaces, and to bring all utilities to the building envelopes. Proposed site drainage

patterns have been designed to limit the amount of sheet flow to Outfall #1 and to drain the majority of the proposed site to the proposed detention pond and ultimately to Outfall #2 (at Stream O).

The onsite drainage system, which includes an above ground detention pond, was designed to meet Madison County stormwater regulations. More specifically, it is required that the proposed site and stormwater system limit site runoff to pre-development levels. Also, the proposed detention pond has been designed to safely pass the 100-year, 24-hour design storm.

Flood Plain Information:

This site lies in Special Flood Hazard Areas Zone AE with Base Flood Elevation (BFE) determined, according to FEMA FIRM Map Number 28089C0415F with an effective date of March 17, 2010. The base flood elevation of Stream O at this site is approximately 275.00 for the 100-year storm event, and approximately 274.50 for the 10-year storm event. These elevations have been interpolated from the Flood Insurance Study (FIS) flood profiles, for the approximate site location. The FEMA Firmette and FIS are included with this report in Enclosure 2.

To raise the proposed building above the 100-year flood elevation, fill will be placed on the site within the flood plain. The finish floor elevation of the proposed building has been set at 277.03, and a minimum elevation of 275.50 has been established for the top of berm around the detention pond. Approximately 600 cubic yards (net) of fill material (including pavement) will be required to achieve proposed finish grades, within the flood plain. However, only 2 cubic yards of fill material will be placed within the floodway, at the northeast corner of the detention pond. The remainder of the proposed grading within the floodway will be approximately 405 cubic yards of excavation.

Methods:

Since this is a small site and the storm water runoff is directed to the proposed storm drainage system, only one drainage area encompassing the entire site was used for the pre-development and post-development conditions (see Enclosure 3). The time of concentration and the SCS Curve number (CN) for each sub-drainage area were estimated based on the soil type and development conditions, and then the Rational Method was utilized to calculate runoff peak flows. Rainfall intensity data obtained from the NOAA Atlas 14, Volume 2, Version 3 (see Enclosure 5) were used along with a SCS Type III 24-hr storm to generate runoff hydrographs.

The NRCS's Soil Survey was reviewed for Hydrologic Soil type. The soils report, included as Enclosure 4, shows the entire site to be in a B soil classification. Due to small size of the site, the time of concentration was assumed to be 10 minutes for both pre-developed and post-developed conditions.

To perform the calculations described above, Autodesk Storm & Sanitary Analysis modeling software was used. The Rational Method runoff calculations for the existing and proposed conditions are included as Enclosure 7, as well as the detention calculations. Enclosure 8 includes the pipe capacity calculations.

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Results:

The proposed site decreases peak discharges resulting from the 2, 10, 25, 50 and 100-yr design storms. The results, including peak pond elevations, are included in the table below:

Storm Event	Existing Conditions Q (cfs)	Proposed Conditions			
		Q_{inflow} (cfs)	Peak Storage Volume (cu.ft.)	Peak Storage Elevation (ft.)	$Q_{outfall}$ (cfs)
2-yr	0.95	3.45	1,393	271.43	0.88
10-yr	1.29	4.69	2,033	271.90	0.99
25-yr	1.50	5.48	2,454	272.17	1.05
50-yr	1.67	6.11	2,787	272.36	1.09
100-yr	1.84	6.73	3,124	272.55	1.13

If you have any questions or need further information during your review of this site, please do not hesitate to call me at (615) 533-0401 to discuss.

Respectfully,

Ray G. Flake, $PE_{(MS)}$

Enc. Enclosure 1 – Site Location Map
Enclosure 2 – FEMA Flood Map
Enclosure 3 – Drainage Area Maps
Enclosure 4 – NRCS Soils Report
Enclosure 5 – Rainfall and Curve Number Reference Information
Enclosure 6 – Curve Number Calculations
Enclosure 7 – Rational Method Runoff & Detention Calculations
Enclosure 8 – Pipe Capacity Calculations

Enclosure 1

Site Location Map

Gluckstadt, MS

AutoZone, store #0152

Section 4, IB)

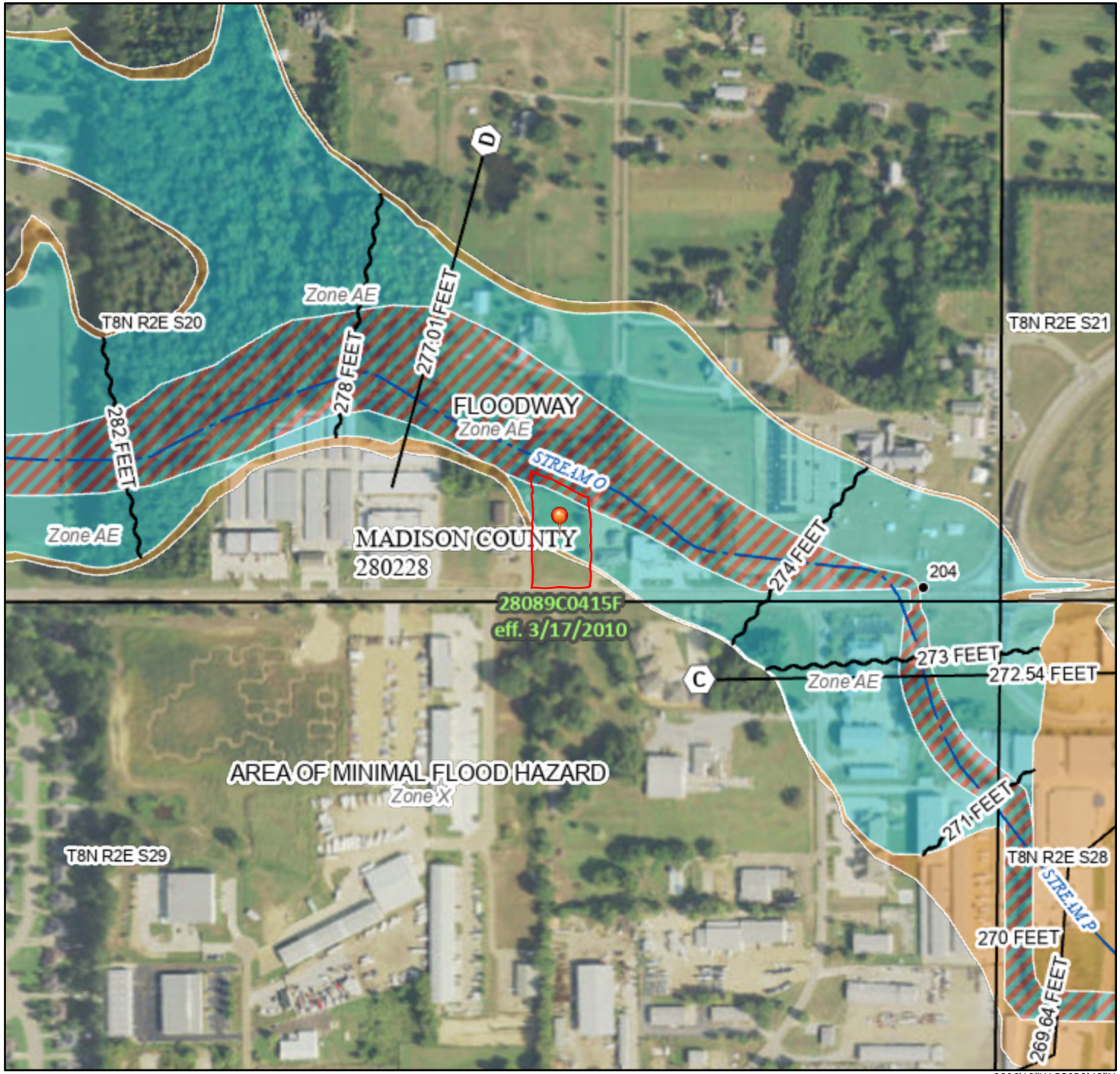
Enclosure 2

FEMA Flood Map

National Flood Hazard Layer FIRMette

FEMA

90°6'56"W 32°31'18"N



90°6'19"W 32°30'48"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

Section 4, IB)

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX M UT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

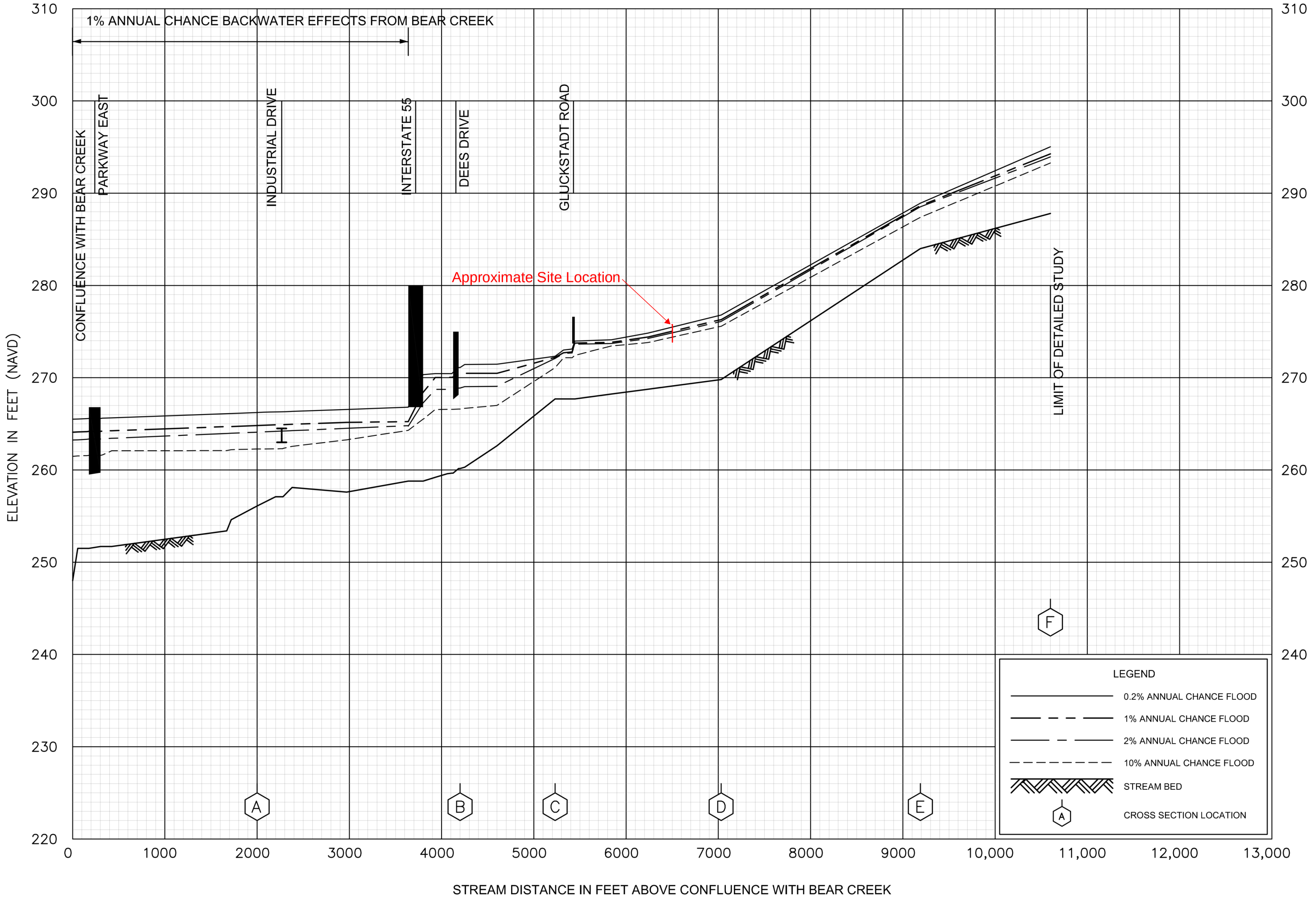
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/8/2021 at 9:42 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community ide FIRM panel number, and FIRM effective date. Map im unmapped and unmodernized areas cannot be used regulatory purposes.



FLOOD PROFILES

STREAM O

FEDERAL EMERGENCY MANAGEMENT AGENCY

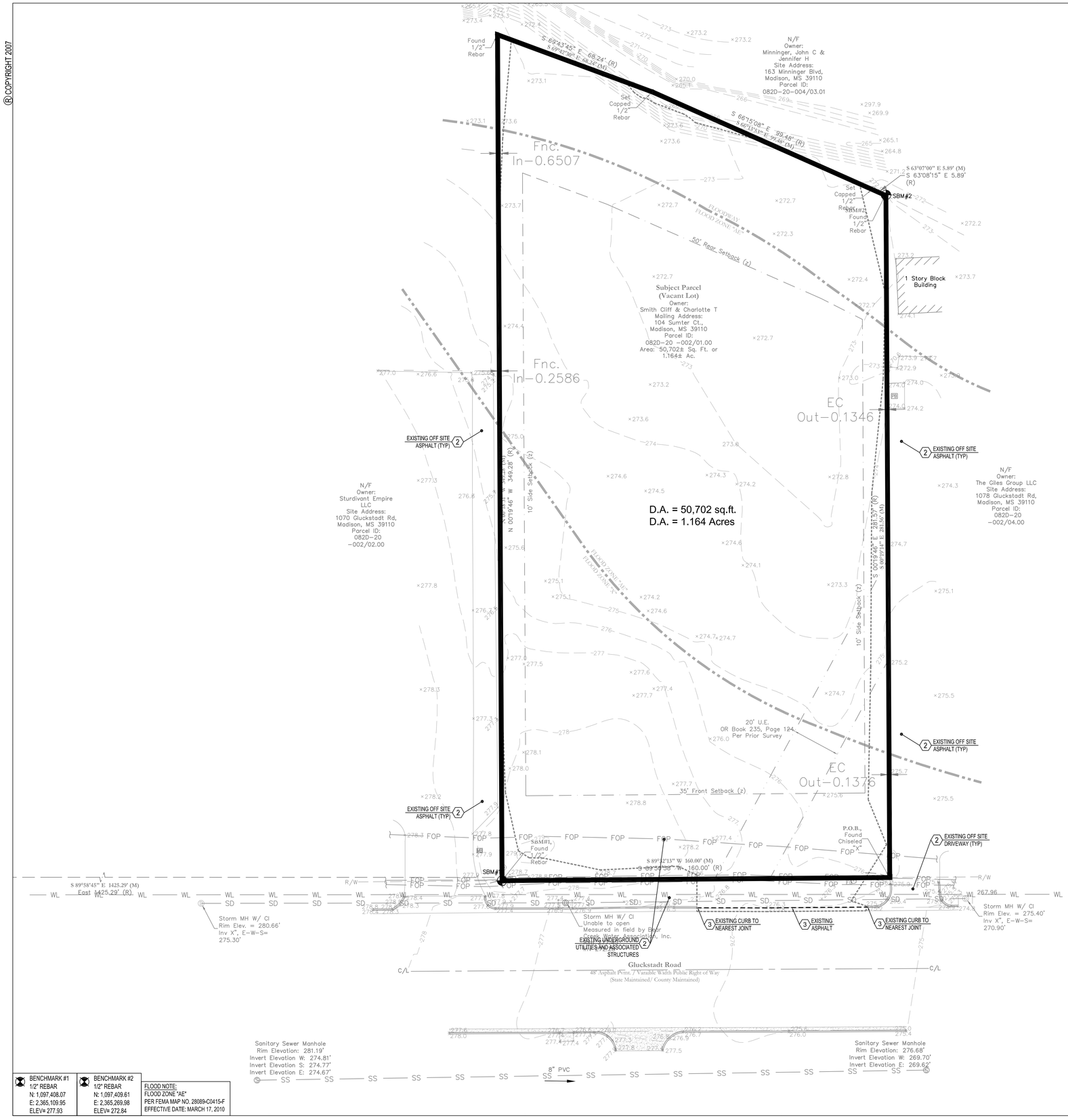
MADISON COUNTY, MS

AND INCORPORATED AREAS

68P

Enclosure 3

Drainage Area Maps



DEMOLITION LEGEND

- APPROXIMATE LIMITS OF ASPHALT/CONCRETE SAWCUT
- APPROXIMATE LIMITS OF ASPHALT/CONCRETE REMOVAL

KEYNOTES

1. REMOVE EXISTING STRUCTURE
2. PROTECT EXISTING STRUCTURE
3. SAWCUT ASPHALT / CONCRETE
4. RELOCATE EXISTING SITE STRUCTURE OR UTILITY

DEMOLITION NOTES

1. ALL WORK TO BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL LOCAL ORDINANCES, CITY OR STATE.
2. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
3. ALL ITEMS NOTED TO BE REMOVED BY THE SELLER SHALL BE ACCOMPLISHED PRIOR TO THE CLOSING OF THE REAL ESTATE TRANSACTION. ALL OTHER ITEMS NOTED TO BE REMOVED SHALL BE DONE SO AS PART OF THE CONTRACT FOR GENERAL CONSTRUCTION.
4. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL.
5. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF BUILDING DEMOLITION DEBRIS.
6. THE DETAILED PLANS MAY NOT REFLECT ALL UTILITIES ON THE SITE OR SURROUNDING STREETS AND PROPERTIES. THE CONTRACTOR SHALL VERIFY LOCATIONS AND EXISTENCE OF UTILITY SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-800-344-7233, 72 HOURS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR TO REMOVE ALL UTILITIES TO EXISTING STRUCTURES WHETHER SHOWN OR NOT OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND CAP SERVICE PIPING AT THE PROPERTY LINE OR MAIN (AS REQUIRED). ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN.
9. FOR ALL ITEMS NOTED TO BE REMOVED - REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALL UNDERGROUND ELEMENTS AS WELL INCLUDING BUT NOT NECESSARILY LIMITED TO: FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, OLD PIPES, ETC.
10. BACK FILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK TO MEET THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL REPORT.
11. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPES, PAVEMENT, CURBS, SIDEWALKS OR LANDSCAPED AREAS DISTURBED DURING DEMOLITION TO THEIR ORIGINAL CONDITION TO THE SATISFACTION.
13. ALL BUILDINGS, FOUNDATION WALLS AND FOOTINGS INDICATED ON THIS PLAN TO BE REMOVED FROM SITE. CONTRACTOR SHALL SECURE ANY PERMITS AND PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
14. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE REMOVED BY THE CONTRACTOR USING A LICENSED HAZARDOUS MATERIAL CONTRACTOR PER ASBESTOS REPORT PREPARED BY XXXXXXXXXX. PRIOR TO THE START OF DEMOLITION, FEDERAL LAW REQUIRES THAT THE LOCAL EPA OFFICE TO BE NOTIFIED IN WRITING @ LEAST 10 WORKING DAYS.

EXISTING CONDITIONS DRAINAGE AREA MAP

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2
1/2" REBAR	1/2" REBAR
N: 1,097,408.07	N: 1,097,409.61
E: 2,365,109.95	E: 2,365,269.98
ELEV= 277.93	ELEV= 272.64

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

NAD83 MS STATE PLANE

REVISIONS					
1	2	3	4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DEMOLITION PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

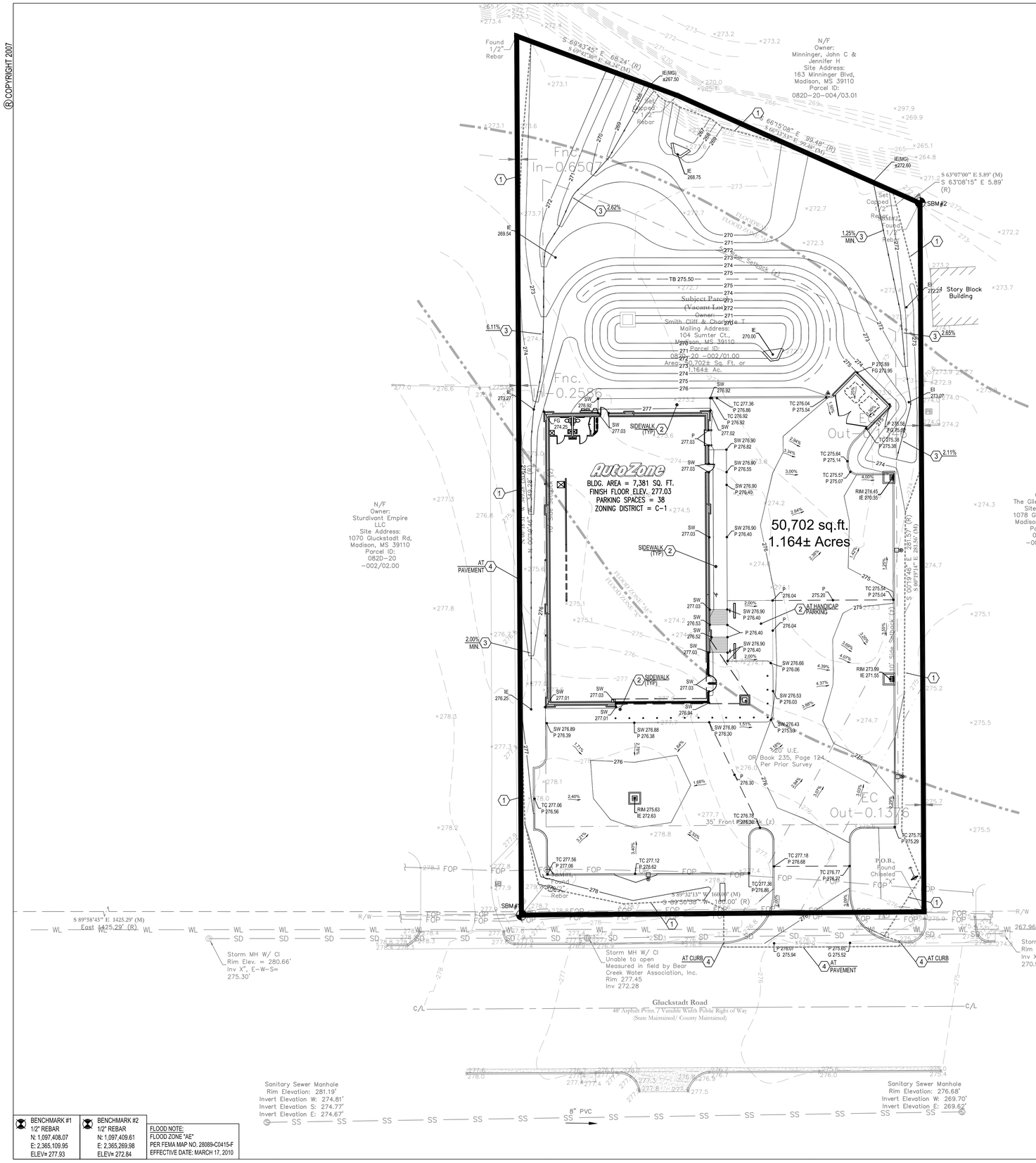
For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

10/08/2021

7N2

D1.0

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning



BENCHMARK #1
1/2" REBAR
N: 1,097,408.07
E: 2,365,109.95
ELEV= 277.93

BENCHMARK #2
1/2" REBAR
N: 1,097,409.61
E: 2,365,269.98
ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

GENERAL GRADING LEGEND

TC	TOP OF CURB ELEVATION
P	BOTTOM OF CURB ELEVATION
FG	FINISHED GRADE ELEVATION
SW	SIDEWALK ELEVATION
MG	MATCH EXISTING GRADE ELEVATION
TB	TOP OF BANK GRADE ELEVATION
RIM	TOP OF RIM ELEVATION AT STRUCTURE
HP	HIGH POINT GRADE ELEVATION
1.09%	PROPOSED GRADE SLOPE
- - - - - -	LIMIT OF DISTURBANCE
———	PROPOSED SWALE

GRADING KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. PROVIDE 2.00% MAXIMUM CROSS SLOPE
3. PROVIDE SWALE - SEE SLOPE AND ELEVATIONS THIS SHEET
4. MATCH EXISTING GRADES

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,010 SF / 1.13 AC

GENERAL GRADING NOTES

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN THE CLOSE PROXIMITY OF THE ABOVE-NOTED WIRES, THE ELECTRIC COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD AND UNDERGROUND WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
2. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT, DURING CONSTRUCTION, UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATIONS OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS NECESSARY TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITY LINES.
3. AT LOCATIONS WHERE UTILITY LINES OR SERVICES ARE UNDERNEATH PROPOSED PAVEMENT, THE TRENCH SHALL BE BACKFILLED TO SUBGRADE WITH CRUSHED STONE.
4. DEVELOPER IS TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, THE DEVELOPER'S ENGINEER, THE COUNTIES REPRESENTATIVE AND THE COUNTIES ENGINEER.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. REMOVE ALL FOUNDATIONS, UNDERGROUND TANKS, PAVING, BASE ETC. IF REMAINING, BEFORE BEGINNING CONSTRUCTION.
7. FILL ALL PLANTERS/ISLANDS TO TOP OF CONCRETE CURB WITH TOPSOIL. TOPSOIL TO BE CLEAN AND FREE OF DEBRIS, ETC.
8. THESE PLANS, PREPARED BY CIVIL ENGINEERING SERVICES, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF CIVIL ENGINEERING SERVICES REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
9. IN THE CASE OF CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR THE SPECIFICATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.

PROPOSED CONDITIONS DRAINAGE AREA MAP

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
			4
			5
			6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD MS 39110

GLUCKSTADT
GRADING PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL:(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

10/08/2021

7N2

C2.0

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

Enclosure 4

NRCS Soils Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Madison County, Mississippi

Gluckstadt, MS

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:678 if printed on A portrait (8.5" x 11") sheet.

N

0 10 20 40 60 Meters

0 30 60 120 180 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Madison County, Mississippi
Survey Area Data: Version 16, Sep 8, 2021

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LoB2	Loring silt loam, 2 to 5 percent slopes, moderately eroded, central	0.1	7.9%
Oa	Oaklimeter silt loam, 0 to 2 percent slopes, occasionally flooded, north	1.1	92.1%
Totals for Area of Interest		**1.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Madison County, Mississippi

LoB2—Loring silt loam, 2 to 5 percent slopes, moderately eroded, central

Map Unit Setting

National map unit symbol: 2x0tr
Elevation: 170 to 660 feet
Mean annual precipitation: 52 to 58 inches
Mean annual air temperature: 60 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Loring and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Noncalcareous loess

Typical profile

Ap - 0 to 5 inches: silt loam
Bt - 5 to 27 inches: silty clay loam
Btx - 27 to 56 inches: silt loam
C - 56 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 27 to 33 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 24 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Providence

Percent of map unit: 5 percent

Landform: Loess hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Memphis

Percent of map unit: 3 percent
Landform: Terraces, interfluves
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope, riser
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Grenada

Percent of map unit: 1 percent
Landform: Stream terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Byram

Percent of map unit: 1 percent
Landform: Loess hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Oa—Oaklimeter silt loam, 0 to 2 percent slopes, occasionally flooded, north

Map Unit Setting

National map unit symbol: 2x0th
Elevation: 110 to 390 feet
Mean annual precipitation: 54 to 59 inches
Mean annual air temperature: 59 to 65 degrees F
Frost-free period: 165 to 290 days
Farmland classification: Prime farmland if protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Oaklimeter and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oaklimeter

Setting

Landform: Alluvial flats, flood plains
Landform position (three-dimensional): Talf, rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap - 0 to 6 inches: silt loam
Bw - 6 to 27 inches: silt loam
EBb - 27 to 52 inches: silt loam
Btgb - 52 to 70 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.6 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Gillsburg

Percent of map unit: 4 percent
Landform: Flood plains, alluvial flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ariel

Percent of map unit: 4 percent
Landform: Flood plains, alluvial flats
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rosebloom

Percent of map unit: 2 percent
Landform: Flood plains, alluvial flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Enclosure 5

Curve Number and Rainfall Reference Information

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NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: MS

Data description

Data type: Precipitation intensity **Units:** English **Time series type:** Partial duration

Select location

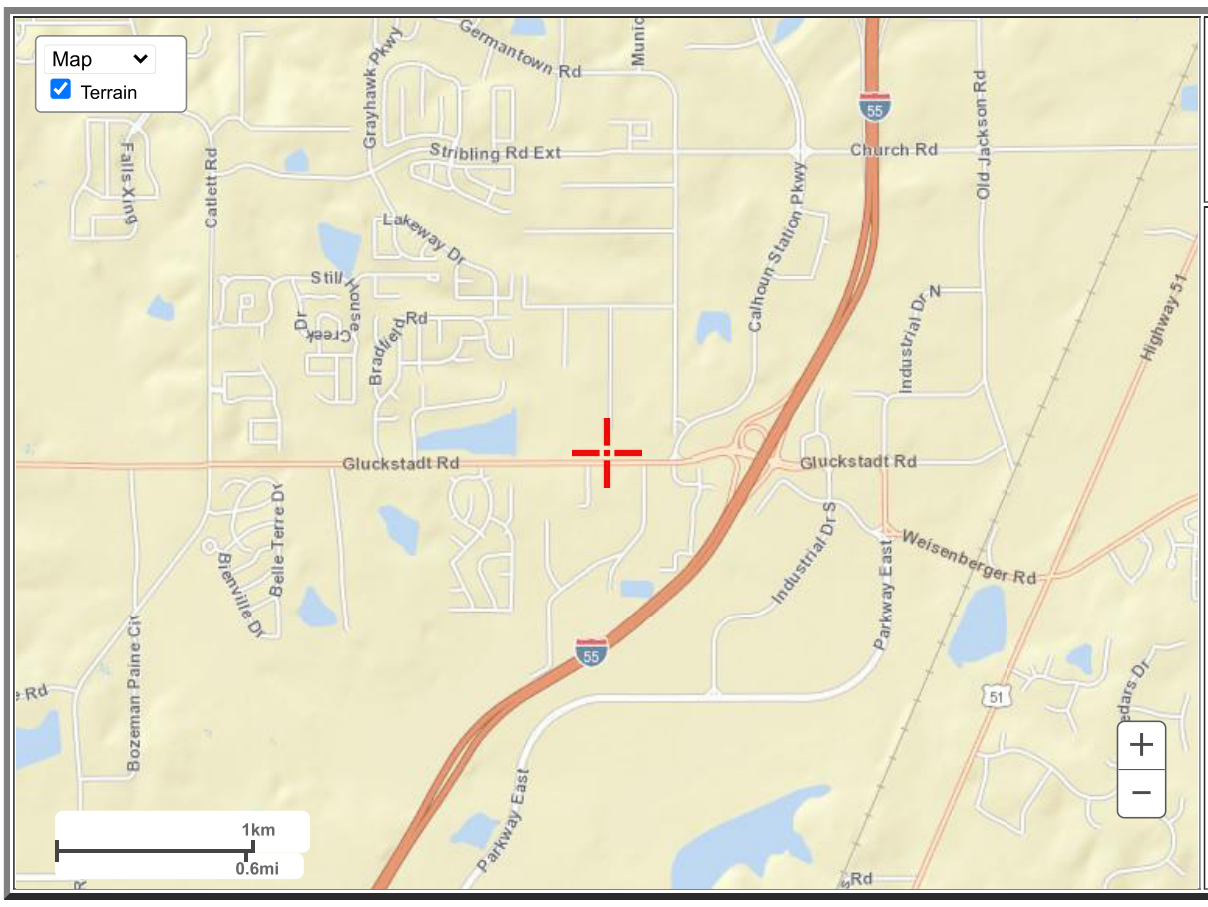
1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude: Longitude: Submit

b) By station (list of MS stations): Select station

c) By address 1078 Gluckstadt Rd, Madison, MS, 39

2) Use map (if ESRI interactive map is not loading, try adding the host: **https://js.arcgis.com/** to the firewall, or contact us at hdsc.questions@noaa.gov):



a) Select location
Move crosshair or double click

b) Click on station icon
Show stations on map

Location information:
Name: Madison, Mississippi, USA*
Latitude: 32.5174°
Longitude: -90.1100°
Elevation: 275.8 ft **

* Source: ESRI Maps
** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 9, Version 2

PF tabular PF graphical Supplementary information Print page

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**5.74** (4.93-6.72)	**6.52** (5.59-7.63)	**7.80** (6.67-9.17)	**8.88** (7.55-10.5)	**10.4** (8.53-12.6)	**11.6** (9.26-14.3)	**12.7** (9.86-16.2)	**13.9** (10.3-18.2)	**15.6** (11.1-20.9)	**16.8** (11.7-22.9)
10-min	**4.20** (3.61-4.92)	**4.78** (4.10-5.59)	**5.71** (4.89-6.71)	**6.50** (5.53-7.67)	**7.60** (6.25-9.26)	**8.46** (6.79-10.5)	**9.32** (7.22-11.8)	**10.2** (7.58-13.3)	**11.4** (8.12-15.3)	**12.3** (8.54-16.8)
15-min	**3.42** (2.94-4.00)	**3.88** (3.33-4.54)	**4.65** (3.97-5.46)	**5.29** (4.50-6.24)	**6.18** (5.08-7.52)	**6.88** (5.52-8.50)	**7.58** (5.87-9.61)	**8.30** (6.16-10.8)	**9.26** (6.60-12.4)	**9.99** (6.94-13.7)
30-min	**2.49** (2.14-2.92)	**2.84** (2.44-3.33)	**3.41** (2.91-4.00)	**3.88** (3.30-4.58)	**4.54** (3.73-5.52)	**5.05** (4.05-6.24)	**5.56** (4.30-7.05)	**6.08** (4.51-7.93)	**6.77** (4.83-9.09)	**7.30** (5.07-9.98)
60-min	**1.66** (1.42-1.94)	**1.89** (1.62-2.21)	**2.28** (1.95-2.68)	**2.61** (2.22-3.08)	**3.07** (2.52-3.75)	**3.43** (2.76-4.25)	**3.81** (2.95-4.83)	**4.19** (3.11-5.48)	**4.71** (3.36-6.33)	**5.11** (3.55-6.98)
2-hr	**1.03** (0.893-1.20)	**1.18** (1.02-1.37)	**1.43** (1.23-1.66)	**1.64** (1.40-1.92)	**1.93** (1.60-2.35)	**2.17** (1.76-2.67)	**2.42** (1.89-3.05)	**2.67** (2.00-3.47)	**3.02** (2.17-4.03)	**3.29** (2.30-4.46)
3-hr	**0.774** (0.671-0.896)	**0.884** (0.766-1.02)	**1.07** (0.925-1.25)	**1.23** (1.06-1.44)	**1.47** (1.22-1.78)	**1.66** (1.34-2.03)	**1.85** (1.45-2.33)	**2.05** (1.54-2.66)	**2.34** (1.69-3.11)	**2.56** (1.79-3.46)
6-hr	**0.463** (0.404-0.532)	**0.530** (0.462-0.610)	**0.645** (0.560-0.744)	**0.746** (0.644-0.864)	**0.892** (0.747-1.08)	**1.01** (0.826-1.23)	**1.13** (0.895-1.42)	**1.26** (0.957-1.63)	**1.45** (1.05-1.92)	**1.59** (1.12-2.13)
12-hr	**0.268** (0.235-0.306)	**0.308** (0.270-0.352)	**0.376** (0.328-0.431)	**0.435** (0.378-0.501)	**0.521** (0.439-0.623)	**0.590** (0.485-0.715)	**0.662** (0.526-0.823)	**0.738** (0.562-0.944)	**0.842** (0.616-1.11)	**0.925** (0.658-1.23)
24-hr	**0.155** (0.137-0.176)	**0.179** (0.158-0.203)	**0.219** (0.193-0.249)	**0.253** (0.221-0.290)	**0.302** (0.256-0.358)	**0.341** (0.281-0.409)	**0.380** (0.304-0.469)	**0.422** (0.323-0.535)	**0.478** (0.352-0.624)	**0.522** (0.374-0.692)
2-day	**0.090** (0.080-0.101)	**0.104** (0.092-0.117)	**0.126** (0.111-0.142)	**0.145** (0.127-0.164)	**0.171** (0.146-0.201)	**0.192** (0.159-0.228)	**0.213** (0.171-0.260)	**0.234** (0.180-0.294)	**0.262** (0.194-0.340)	**0.284** (0.205-0.375)
3-day	**0.066** (0.059-0.074)	**0.075** (0.067-0.085)	**0.090** (0.080-0.102)	**0.103** (0.091-0.117)	**0.121** (0.103-0.141)	**0.135** (0.112-0.160)	**0.149** (0.120-0.181)	**0.163** (0.126-0.204)	**0.182** (0.136-0.235)	**0.197** (0.143-0.259)
4-day	**0.054** (0.048-0.060)	**0.061** (0.054-0.068)	**0.072** (0.064-0.081)	**0.081** (0.072-0.092)	**0.095** (0.081-0.110)	**0.105** (0.088-0.124)	**0.115** (0.093-0.140)	**0.126** (0.098-0.158)	**0.141** (0.105-0.181)	**0.152** (0.110-0.199)
7-day	**0.036** (0.033-0.041)	**0.041** (0.036-0.045)	**0.047** (0.042-0.053)	**0.053** (0.047-0.059)	**0.061** (0.052-0.070)	**0.067** (0.056-0.078)	**0.073** (0.059-0.088)	**0.079** (0.062-0.098)	**0.087** (0.065-0.112)	**0.094** (0.068-0.122)
10-day	**0.029** (0.026-0.032)	**0.032** (0.029-0.035)	**0.037** (0.033-0.041)	**0.041** (0.037-0.046)	**0.047** (0.040-0.054)	**0.051** (0.043-0.060)	**0.056** (0.045-0.067)	**0.060** (0.047-0.074)	**0.066** (0.050-0.084)	**0.071** (0.052-0.091)
20-day	**0.019** (0.017-0.021)	**0.021** (0.019-0.023)	**0.024** (0.022-0.026)	**0.026** (0.024-0.029)	**0.030** (0.026-0.034)	**0.033** (0.028-0.038)	**0.035** (0.029-0.042)	**0.038** (0.030-0.046)	**0.041** (0.031-0.052)	**0.044** (0.032-0.057)
30-day	**0.015** (0.014-0.017)	**0.017** (0.015-0.018)	**0.019** (0.017-0.021)	**0.021** (0.019-0.023)	**0.024** (0.021-0.027)	**0.026** (0.022-0.030)	**0.028** (0.023-0.033)	**0.030** (0.024-0.037)	**0.033** (0.025-0.041)	**0.035** (0.026-0.044)
45-day	**0.013** (0.012-0.014)	**0.014** (0.013-0.015)	**0.016** (0.014-0.017)	**0.017** (0.016-0.019)	**0.020** (0.017-0.022)	**0.021** (0.018-0.024)	**0.023** (0.019-0.027)	**0.024** (0.019-0.029)	**0.026** (0.020-0.033)	**0.028** (0.021-0.035)
60-day	**0.011** (0.010-0.012)	**0.012** (0.011-0.013)	**0.014** (0.013-0.015)	**0.015** (0.014-0.017)	**0.017** (0.015-0.019)	**0.019** (0.016-0.021)	**0.020** (0.016-0.023)	**0.021** (0.017-0.025)	**0.023** (0.017-0.028)	**0.024** (0.018-0.030)

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

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

Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format: Precipitation frequency estimates Submit

Rational Method
c values
from Autodesk Storm and Sanitary Sewer Analysis

Land Use	Return Period	A(0-2%)	A(2-6%)	A(6%+)	B(0-2%)	B(2-6%)	B(6%+)	C(0-2%)	C(2-6%)	C(6%+)	D(0-2%)	D(2-6%)	D(6%+)
Cultivated Land	less than 25 years	0.08	0.13	0.16	0.11	0.15	0.21	0.14	0.19	0.26	0.18	0.23	0.31
Cultivated Land	25 years or greater	0.14	0.18	0.22	0.16	0.21	0.28	0.20	0.25	0.34	0.24	0.29	0.41
Pasture	less than 25 years	0.12	0.20	0.30	0.18	0.28	0.37	0.24	0.34	0.44	0.30	0.40	0.50
Pasture	25 years or greater	0.15	0.25	0.37	0.23	0.34	0.45	0.30	0.42	0.52	0.37	0.50	0.62
Meadow	less than 25 years	0.10	0.16	0.25	0.14	0.22	0.30	0.20	0.28	0.36	0.24	0.30	0.40
Meadow	25 years or greater	0.14	0.22	0.30	0.20	0.28	0.37	0.26	0.35	0.44	0.30	0.40	0.50
Forest	less than 25 years	0.05	0.08	0.11	0.08	0.11	0.14	0.10	0.13	0.16	0.12	0.16	0.20
Forest	25 years or greater	0.08	0.11	0.14	0.10	0.14	0.18	0.12	0.16	0.20	0.15	0.20	0.25
Residential Lot Size 1/8 Acre	less than 25 years	0.25	0.28	0.31	0.27	0.30	0.35	0.30	0.33	0.38	0.33	0.36	0.42
Residential Lot Size 1/8 Acre	25 years or greater	0.33	0.37	0.40	0.35	0.39	0.44	0.38	0.42	0.49	0.41	0.45	0.54
Residential Lot Size 1/4 Acre	less than 25 years	0.22	0.26	0.29	0.24	0.29	0.33	0.27	0.31	0.36	0.30	0.34	0.40
Residential Lot Size 1/4 Acre	25 years or greater	0.30	0.34	0.37	0.33	0.37	0.42	0.36	0.40	0.47	0.38	0.42	0.52
Residential Lot Size 1/3 Acre	less than 25 years	0.19	0.23	0.26	0.22	0.26	0.30	0.25	0.29	0.34	0.28	0.32	0.39
Residential Lot Size 1/3 Acre	25 years or greater	0.28	0.32	0.35	0.30	0.35	0.39	0.33	0.38	0.45	0.36	0.40	0.50
Residential Lot Size 1/2 Acre	less than 25 years	0.16	0.20	0.24	0.19	0.23	0.28	0.22	0.27	0.32	0.26	0.30	0.37
Residential Lot Size 1/2 Acre	25 years or greater	0.25	0.29	0.32	0.28	0.32	0.36	0.31	0.35	0.42	0.34	0.38	0.48
Residential Lot Size 1 Acre	less than 25 years	0.14	0.19	0.22	0.17	0.21	0.26	0.20	0.25	0.31	0.24	0.29	0.35
Residential Lot Size 1 Acre	25 years or greater	0.22	0.26	0.29	0.24	0.28	0.34	0.28	0.32	0.40	0.31	0.35	0.46
Industrial	less than 25 years	0.67	0.68	0.68	0.68	0.68	0.69	0.68	0.69	0.69	0.69	0.69	0.70
Industrial	25 years or greater	0.85	0.85	0.86	0.85	0.86	0.86	0.86	0.86	0.87	0.86	0.86	0.88
Commercial	less than 25 years	0.71	0.71	0.72	0.71	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Commercial	25 years or greater	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.89	0.89	0.90
Streets	less than 25 years	0.70	0.71	0.72	0.71	0.72	0.74	0.72	0.73	0.76	0.73	0.75	0.78
Streets	25 years or greater	0.76	0.77	0.79	0.80	0.82	0.84	0.84	0.85	0.89	0.89	0.91	0.95
Open Space	less than 25 years	0.05	0.10	0.14	0.08	0.13	0.19	0.12	0.17	0.24	0.16	0.21	0.28
Open Space	25 years or greater	0.11	0.16	0.20	0.14	0.19	0.26	0.18	0.23	0.32	0.22	0.27	0.39
Parking	less than 25 years	0.85	0.86	0.87	0.85	0.86	0.87	0.85	0.86	0.87	0.85	0.86	0.87
Parking	25 years or greater	0.95	0.96	0.97	0.95	0.96	0.97	0.95	0.96	0.97	0.95	0.96	0.97

Enclosure 6

Curve Number Calculations

Gluckstadt, MS **AutoZone** **11/16/2021**

Existing Conditions

	Area (sq.ft.)	Area (acres)	Rational c
-	0	0.000	0.00
-	0	0.000	0.00
lawn	43,390	0.996	0.18
woods	7,312	0.168	0.12
paved	0	0.000	0.95
total	50,702	1.164	0.17

Proposed Conditions

	Area (sq.ft.)	Area (acres)	Rational c
pond area	4,986	0.114	0.80
bypass area	11,410	0.262	0.20
lawn	1,886	0.043	0.18
woods	6,969	0.160	0.12
paved	25,451	0.584	0.95
total	50,702	1.164	0.62

Enclosure 7

Rational Method Runoff & Detention Calculations

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 2 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.155	0.797
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.061	0.020
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

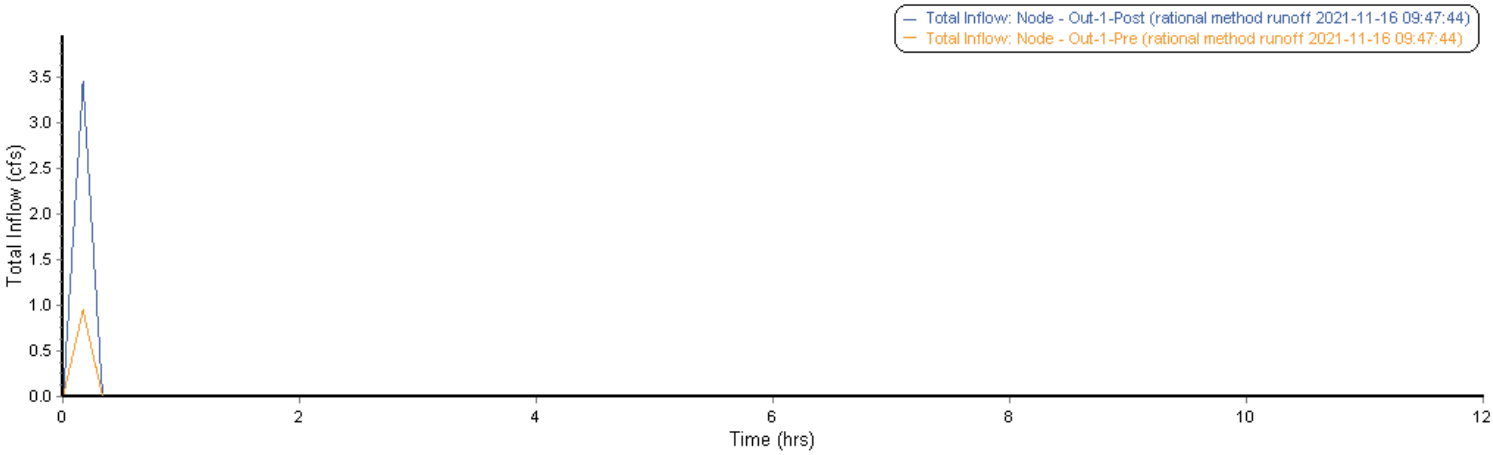
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	0.80	4.78	0.49	3.45	0.620	0	00:10:00
DA#1-Pre	0.80	4.78	0.14	0.95	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:47:42 2021
Analysis ended on: Tue Nov 16 09:47:43 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:47:44)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:47:44)
Total Inflow (cfs)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 10 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.210	1.083
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.082	0.027
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

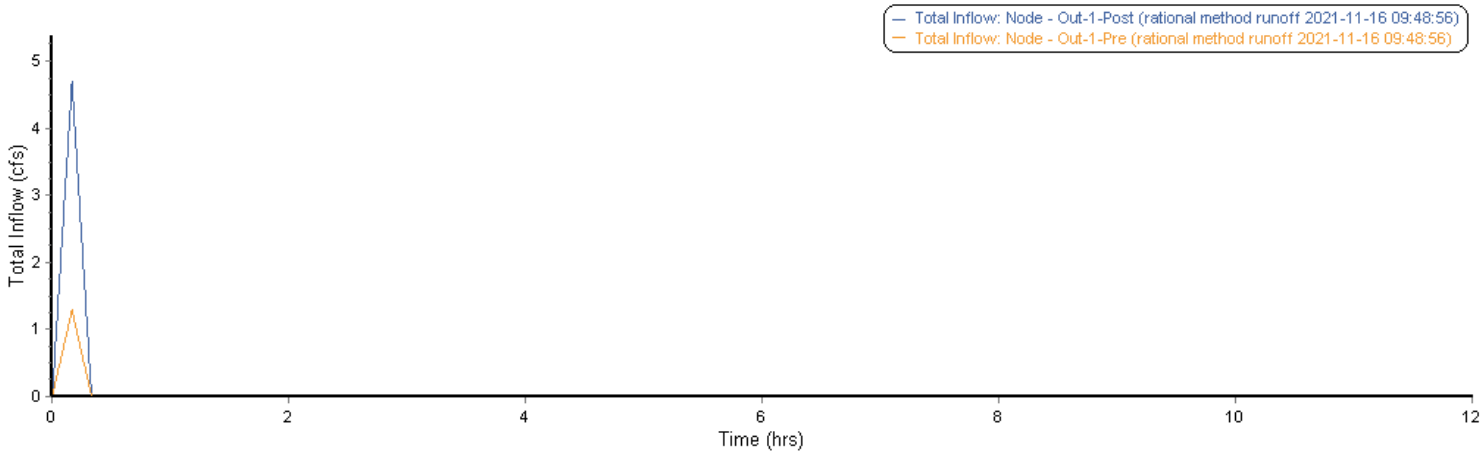
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.08	6.50	0.67	4.69	0.620	0	00:10:00
DA#1-Pre	1.08	6.50	0.18	1.29	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:48:53 2021
Analysis ended on: Tue Nov 16 09:48:54 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:48:56)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:48:56)
Total Inflow (cfs)
0
1
2
3
4
5
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 25 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.246	1.267
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.096	0.031
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

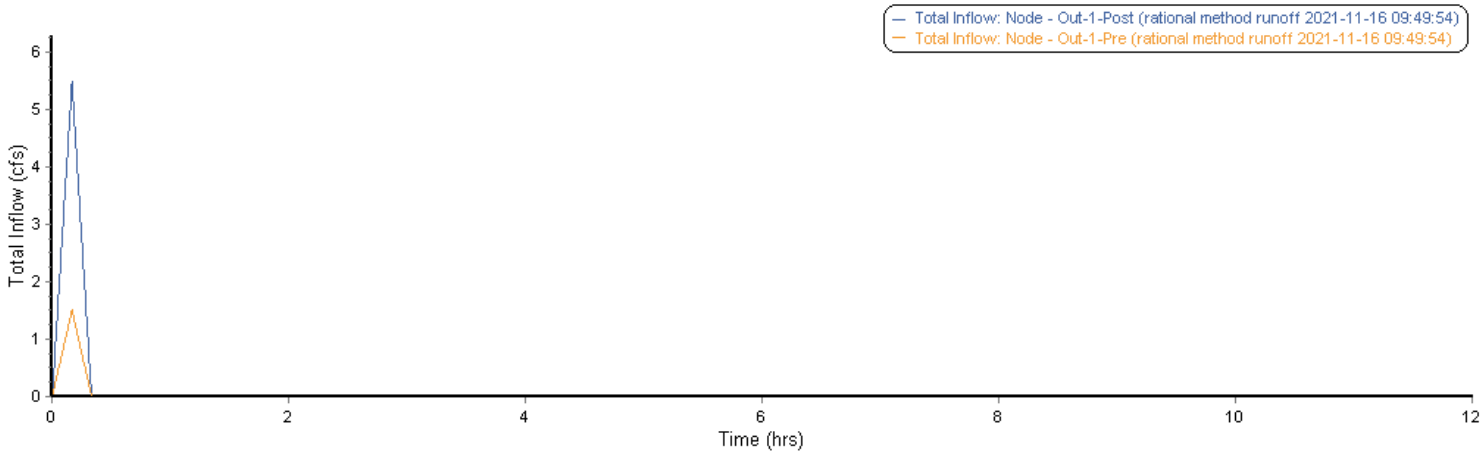
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.27	7.60	0.79	5.48	0.620	0	00:10:00
DA#1-Pre	1.27	7.60	0.22	1.50	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:49:52 2021
Analysis ended on: Tue Nov 16 09:49:53 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:49:54)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:49:54)
Total Inflow (cfs)
0
1
2
3
4
5
6
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 50 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.274	1.410
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.107	0.035
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

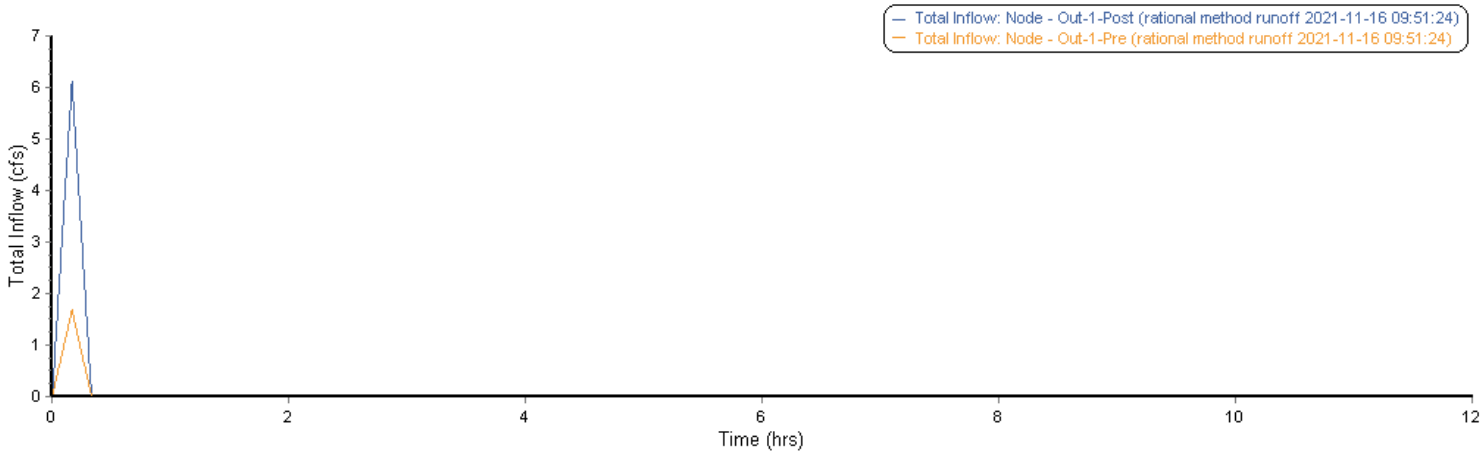
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.41	8.46	0.87	6.11	0.620	0	00:10:00
DA#1-Pre	1.41	8.46	0.24	1.67	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:51:21 2021
Analysis ended on: Tue Nov 16 09:51:23 2021
Total elapsed time: 00:00:02


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:51:24)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:51:24)
Total Inflow (cfs)
0
1
2
3
4
5
6
7
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 100 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.301	1.553
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.118	0.038
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

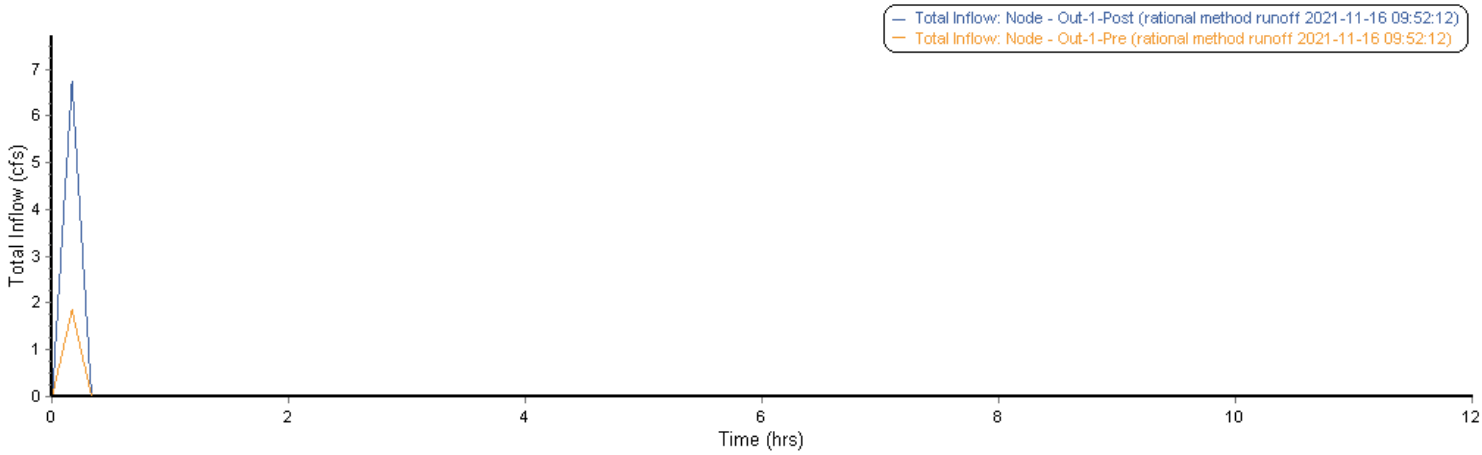
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.55	9.32	0.96	6.73	0.620	0	00:10:00
DA#1-Pre	1.55	9.32	0.26	1.84	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:52:10 2021
Analysis ended on: Tue Nov 16 09:52:11 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:52:12)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:52:12)
Total Inflow (cfs)
0
1
2
3
4
5
6
7
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 2 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.077	0.797
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.048	0.015
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	0.80	4.78	0.49	3.45	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.52	0.76	269.76	0	00:17	0	0	0:00:00
Out-1-Post	0.02	0.26	269.01	0	00:17	0	0	0:00:00
Stor-01	0.09	1.93	271.43	0	00:17	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	0.88	0	00:17	0.00		
Out-1-Post	OUTFALL	0.00	0.88	0	00:17	0.00		
Stor-01	STORAGE	3.45	3.45	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	1.393	12	0	00:17	0.050	0	0.88	0.00	0:00:00	0.000

```
  ***********************
  Outfall Loading Summary
  ***********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post              9.80      0.49      0.88
  ------------------------------------------------
  System                  9.80      0.49      0.88


  *****************
  Link Flow Summary
  *****************

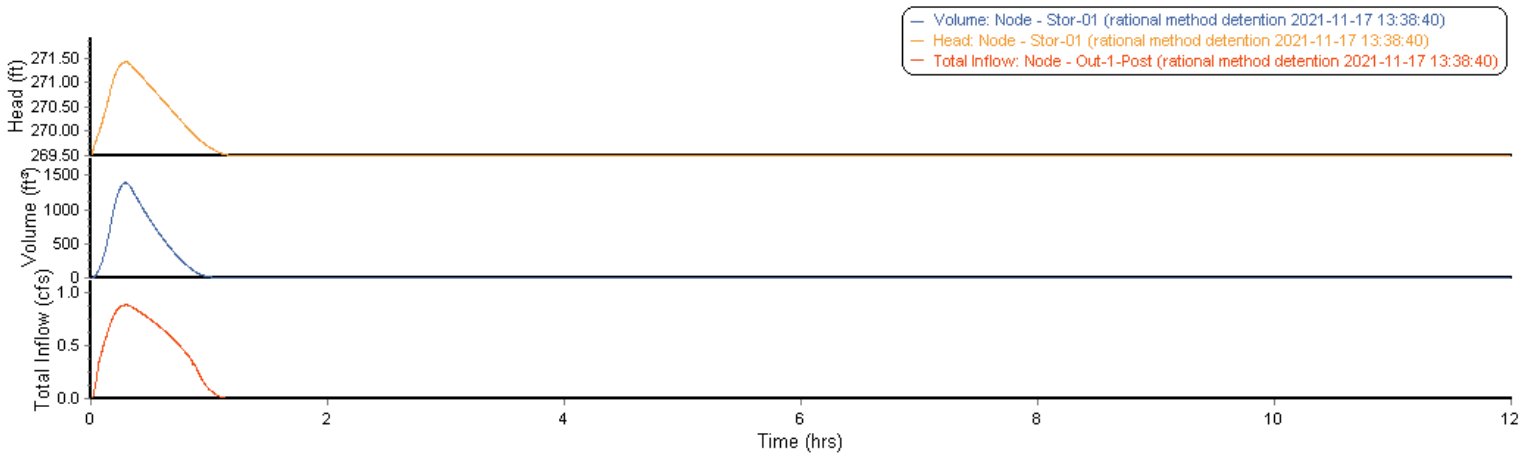
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:17      4.24    1.00        0.88       13.29      0.07
0.17           0  Calculated
  Orifice-01           ORIFICE      0  00:17                          0.88
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:38:38 2021
  Analysis ended on:  Wed Nov 17 13:38:39 2021
  Total elapsed time: 00:00:01
```


Volume: Node - Stor-01 (rational method detention 2021-11-17 13:38:40)
Head: Node - Stor-01 (rational method detention 2021-11-17 13:38:40)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:38:40)
Head (ft)
271.50
271.00
270.50
270.00
269.50
Volume (ft³)
1500
1000
500
0
Total Inflow (cfs)
1.0
0.5
0.0
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 10 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.105	1.083
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.065	0.021
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.08	6.50	0.67	4.69	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.52	0.78	269.78	0	00:18	0	0	0:00:00
Out-1-Post	0.02	0.28	269.03	0	00:18	0	0	0:00:00
Stor-01	0.13	2.40	271.90	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	0.99	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	0.99	0	00:18	0.00		
Stor-01	STORAGE	4.69	4.69	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	2.033	18	0	00:18	0.085	1	0.99	0.00	0:00:00	0.000

```
  ***********************
  Outfall Loading Summary
  ***********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post            11.41      0.57      0.99
  ------------------------------------------------
  System                11.41      0.57      0.99


  *****************
  Link Flow Summary
  *****************

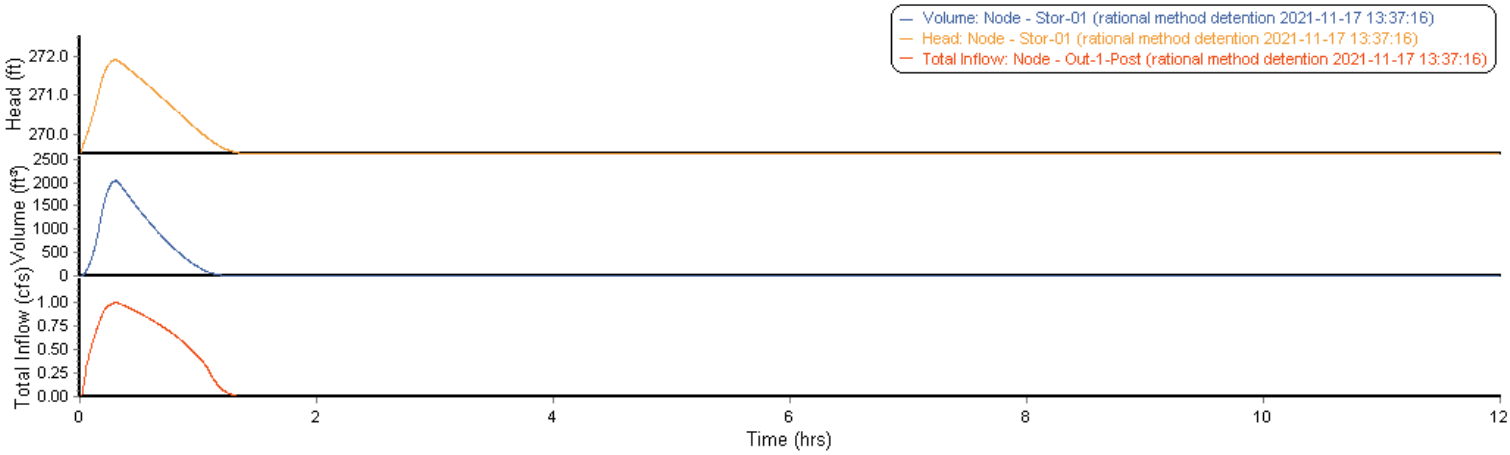

------------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                     Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                      days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

------------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.42    1.00        0.99       13.29      0.07
0.18           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          0.99
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:37:13 2021
  Analysis ended on:  Wed Nov 17 13:37:14 2021
  Total elapsed time: 00:00:01
```


Volume: Node - Stor-01 (rational method detention 2021-11-17 13:37:16)
Head: Node - Stor-01 (rational method detention 2021-11-17 13:37:16)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:37:16)
Head (ft)
272.0
271.0
270.0
Volume (ft³)
2500
2000
1500
1000
500
0
Total Inflow (cfs)
1.00
0.75
0.50
0.25
0.00
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 25 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter (ft)	Width (ft)	No. of Barrels	Cross Sectional Area (ft²)	Full Flow Hydraulic Radius (ft)	Design Flow Capacity (cfs)
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.123	1.267
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.076	0.025
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.27	7.60	0.79	5.48	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.53	0.79	269.79	0	00:18	0	0	0:00:00
Out-1-Post	0.03	0.29	269.04	0	00:18	0	0	0:00:00
Stor-01	0.16	2.67	272.17	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	1.05	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	1.05	0	00:18	0.00		
Stor-01	STORAGE	5.48	5.48	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	2.454	21	0	00:18	0.112	1	1.05	0.00	0:00:00	0.000

```
  **********************
  Outfall Loading Summary
  **********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post            12.38      0.62      1.05
  ------------------------------------------------
  System                12.38      0.62      1.05


  *****************
  Link Flow Summary
  *****************

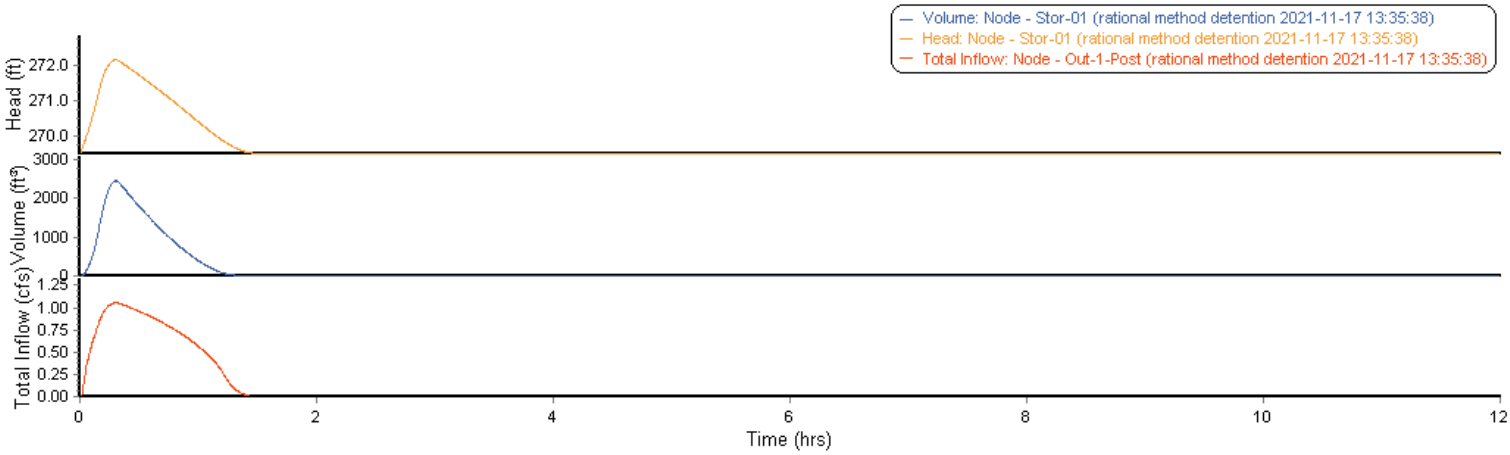
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.50    1.00        1.05       13.29      0.08
0.19           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          1.05
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:35:36 2021
  Analysis ended on:  Wed Nov 17 13:35:37 2021
  Total elapsed time: 00:00:01
```


Volume: Node - Stor-01 (rational method detention 2021-11-17 13:35:38)
Head: Node - Stor-01 (rational method detention 2021-11-17 13:35:38)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:35:38)
Head (ft)
272.0
271.0
270.0
Volume (ft³)
3000
2000
1000
0
Total Inflow (cfs)
1.25
1.00
0.75
0.50
0.25
0.00
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 50 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.137	1.410
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.084	0.027
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.41	8.46	0.87	6.11	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.53	0.79	269.79	0	00:18	0	0	0:00:00
Out-1-Post	0.03	0.29	269.04	0	00:18	0	0	0:00:00
Stor-01	0.18	2.86	272.36	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	1.09	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	1.09	0	00:18	0.00		
Stor-01	STORAGE	6.11	6.11	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	2.787	24	0	00:18	0.136	1	1.09	0.00	0:00:00	0.000

```
  ***********************
  Outfall Loading Summary
  ***********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post            13.11      0.65      1.09
  ------------------------------------------------
  System                13.11      0.65      1.09


  *****************
  Link Flow Summary
  *****************

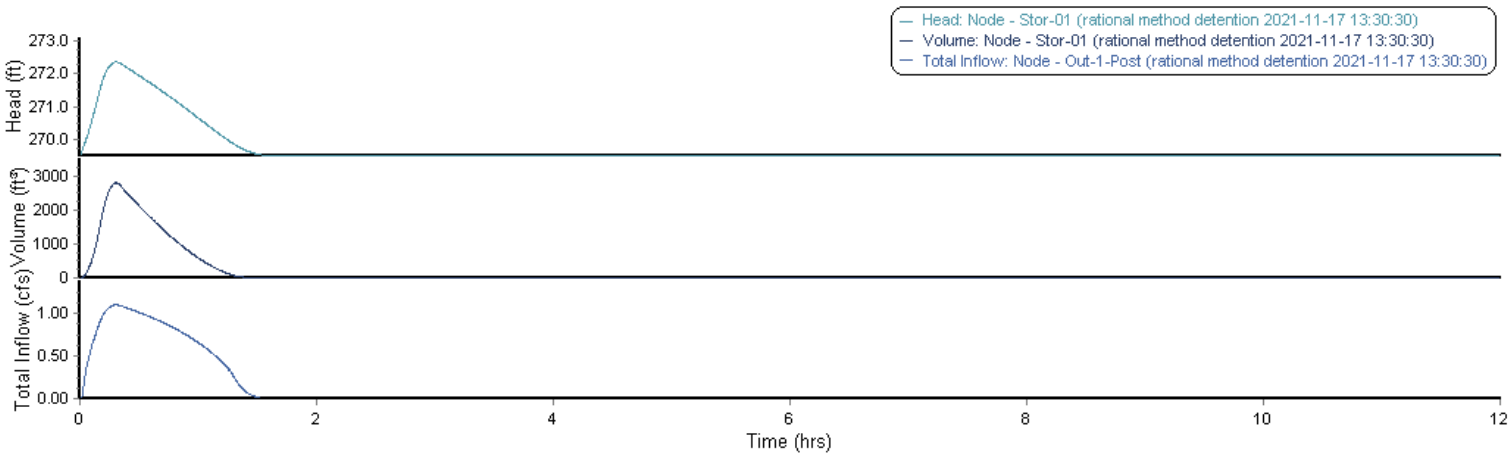
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.55    1.00        1.09       13.29      0.08
0.19           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          1.09
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:30:28 2021
  Analysis ended on:  Wed Nov 17 13:30:29 2021
  Total elapsed time: 00:00:01
```


Head: Node - Stor-01 (rational method detention 2021-11-17 13:30:30)
Volume: Node - Stor-01 (rational method detention 2021-11-17 13:30:30)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:30:30)
Head (ft)
273.0
272.0
271.0
270.0
Volume (ft³)
3000
2000
1000
0
Total Inflow (cfs)
1.00
0.50
0.00
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 100 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary
****

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.151	1.553
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.093	0.030
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.55	9.32	0.96	6.73	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.53	0.80	269.80	0	00:18	0	0	0:00:00
Out-1-Post	0.03	0.30	269.05	0	00:18	0	0	0:00:00
Stor-01	0.21	3.05	272.55	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	1.13	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	1.13	0	00:18	0.00		
Stor-01	STORAGE	6.73	6.73	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	3.124	27	0	00:18	0.161	1	1.13	0.00	0:00:00	0.000

```
  **********************
  Outfall Loading Summary
  **********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post            13.81      0.68      1.13
  ------------------------------------------------
  System                13.81      0.68      1.13


  *****************
  Link Flow Summary
  *****************

-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.59    1.00        1.13       13.29      0.09
0.20           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          1.13
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:28:15 2021
  Analysis ended on:  Wed Nov 17 13:28:16 2021
  Total elapsed time: 00:00:01
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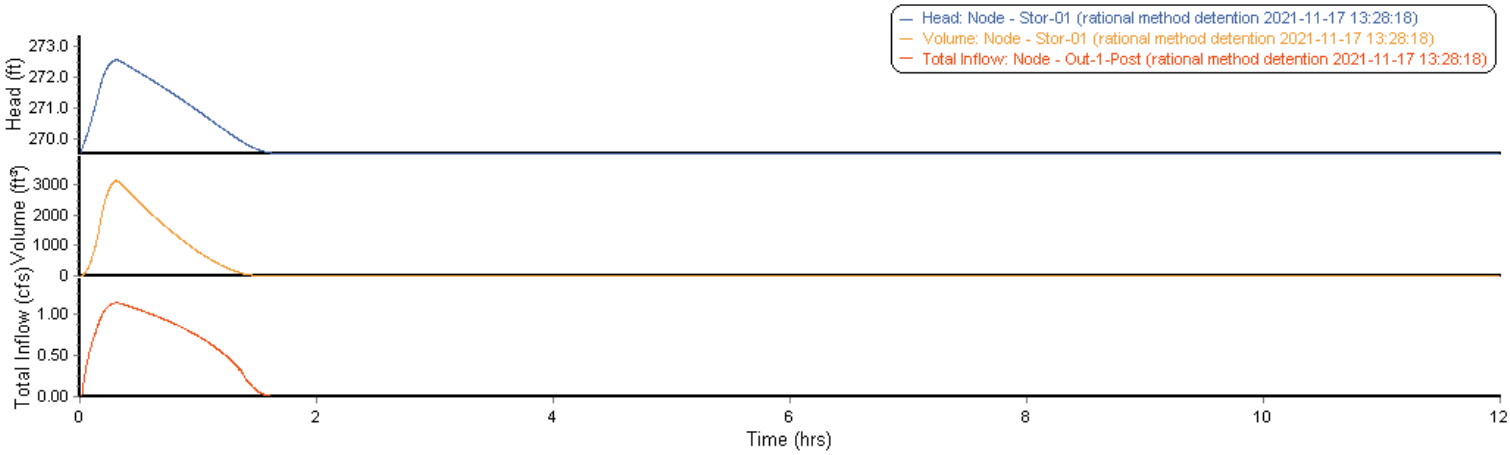

Head: Node - Stor-01 (rational method detention 2021-11-17 13:28:18)
Volume: Node - Stor-01 (rational method detention 2021-11-17 13:28:18)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:28:18)
Head (ft)
273.0
272.0
271.0
270.0
Volume (ft³)
3000
2000
1000
0
Total Inflow (cfs)
1.00
0.50
0.00
0
2
4
6
8
10
12
Time (hrs)

Enclosure 8

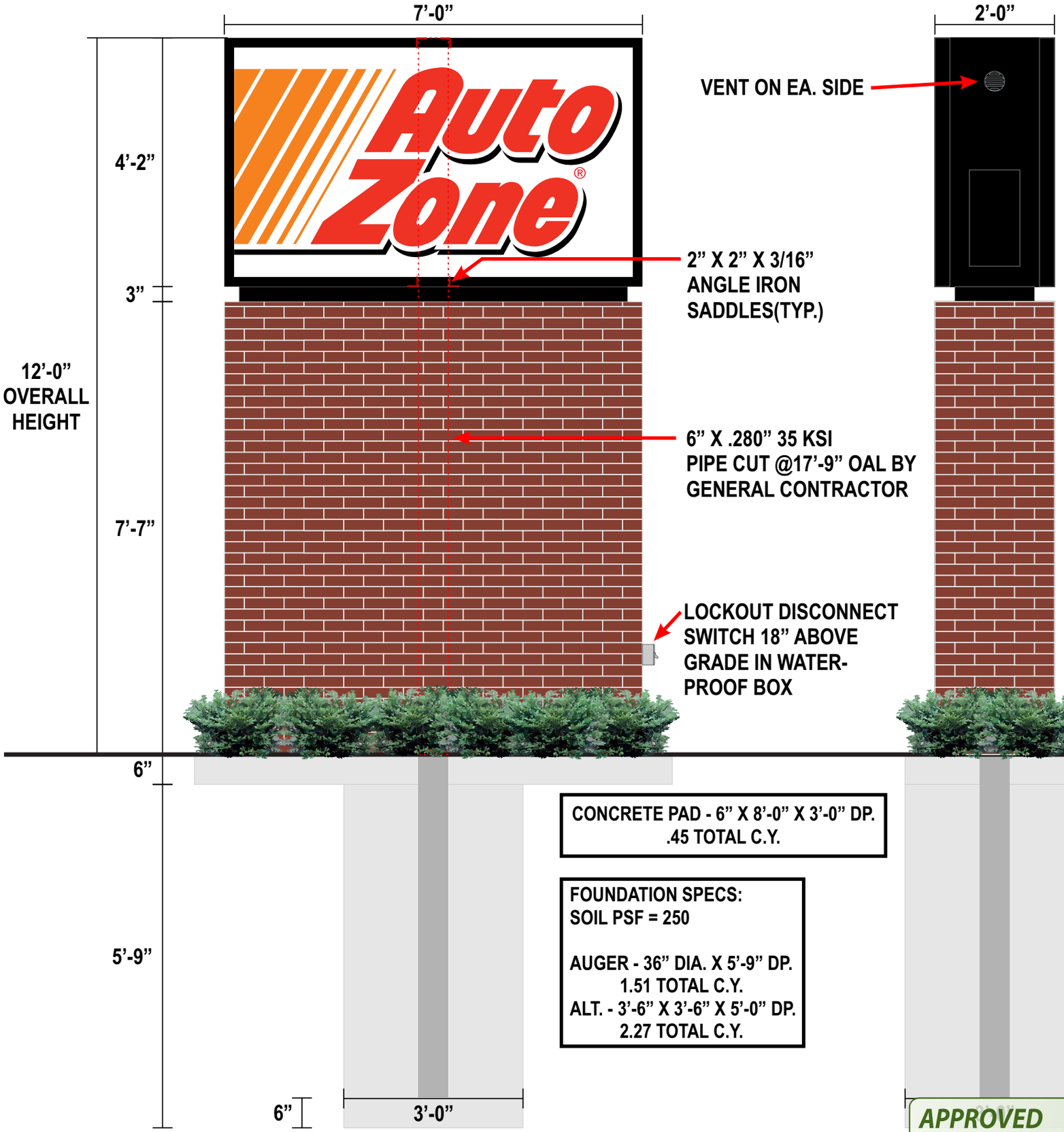
Pipe Capacity Calculations

Gluckstadt, MS **AutoZone** **11/16/2021**

24-hour storm event precipitation

Catchment	Drain Area 1 (sf)	runoff C Area 1	Drain Area 2 (sf)	runoff C Area 2	Total Area (acres)	weighted C	actual Tc (min)	chosen Tc (min)	rainfall I (10) (in/hr)	rainfall I (25) (in/hr)	rainfall I (50) (in/hr)	rainfall I (100) (in/hr)	runoff Q (10) (cfs)	runoff Q (25) (cfs)	runoff Q (50) (cfs)	runoff Q (100) (cfs)
SW Area Inlet	1,115	0.18	5280	0.95	**0.15**	**0.82**	10.0	**10.0**	**6.50**	**7.60**	**8.46**	**9.32**	**0.78**	**0.91**	**1.01**	**1.12**
SE Curb Inlet	1,052	0.18	6750	0.95	**0.18**	**0.85**	10.0	**10.0**	**6.50**	**7.60**	**8.46**	**9.32**	**0.99**	**1.15**	**1.28**	**1.41**
NE Curb Inlet	0	0.18	5740	0.95	**0.13**	**0.95**	10.0	**10.0**	**6.50**	**7.60**	**8.46**	**9.32**	**0.81**	**0.95**	**1.06**	**1.17**

Catchment	runoff Q (25) (cfs)	Catch Basin efficiency	captured flow (cfs)	cumulat. Q (25) (cfs)	Pipe Out Desig.	U.S. Invert Elev.	D.S. Invert Elev.	Pipe Length (ft)	Pipe slope %	Pipe Size (inches)	U.S. Grade at CB	Cover over pipe (ft)	D.S. Grade at CB	Cover over pipe (ft)	Full Flow (cfs)	Q / Qfull	velocity (fps)	bypass flow (cfs)
SW Area Inlet	**0.91**	100.0%	**0.91**	**0.91**		272.63	271.55	108.0	1.00%	18	275.63	1.3	273.99	0.7	11.8	0.1	2.6	0.00
SE Curb Inlet	**1.15**	100.0%	**1.15**	**2.06**		271.55	270.75	76.0	1.05%	18	273.99	0.7	274.45	1.9	12.0	0.2	4.0	0.00
NE Curb Inlet	**0.95**	100.0%	**0.95**	**3.01**	to pond	270.75	270.00	70.0	1.07%	18	274.45	1.9	272.00	0.3	12.0	0.3	5.2	0.00



NOTES:
4’-2” X 7’-0” X 2’-0” @ 12’-0” OAH INTERNALLY LED ILLUMINATED MONUMENT
FLEX FACES W/ FIRST SURFACE VINYL GRAPHICS
3” ALUMINUM REVEAL
2” RETAINERS

COLORS:
CABINET, RETAINERS, & REVEAL - MATTHEWS 42-204 GLOSS BLACK
AUTOZONE FACE - 3M PANAGRAPHICS III FLEXIBLE FACES W/ 3M 3630-44 ORANGE, 3630-143 RED, & 3630-22 BLACK VINYL W/ 3660 MATTE LAMINATE

**BRICK BASE TO MATCH BUILDING
CAROLINA CERAMICS - CHERRY VELOUR

LANDSCAPING REQUIREMENTS:
THE BASE OF ALL GROUND-MOUNTED SIGNS IN RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DISTRICTS SHALL BE FULLY LANDSCAPED WITH PLANTERS AND/OR SHRUBS IN ALL DIRECTIONS, NOT LESS THAN THE DIMENSIONAL WIDTH OF THE SIGN.

CONCRETE PAD - 6” X 8’-0” X 3’-0” DP.
.45 TOTAL C.Y.

FOUNDATION SPECS:
SOIL PSF = 250

AUGER - 36” DIA. X 5’-9” DP.
1.51 TOTAL C.Y.
ALT. - 3’-6” X 3’-6” X 5’-0” DP.
2.27 TOTAL C.Y.

GENERAL CONTRACTOR TO PROVIDE STEEL POLE, DIG FOOTER, POUR CONCRETE TO INCLUDE PAD, SET POLE, PROVIDE AND INSTALL BASE. SIGN VENDOR TO PROVIDE DOUBLE-FACE CABINET AND INSTALL ON POLE.

APPROVED
By Laura Beth Myers at 2:48 pm, Oct 13, 2021

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. DUE TO CONSTRUCTION CONSTRAINT

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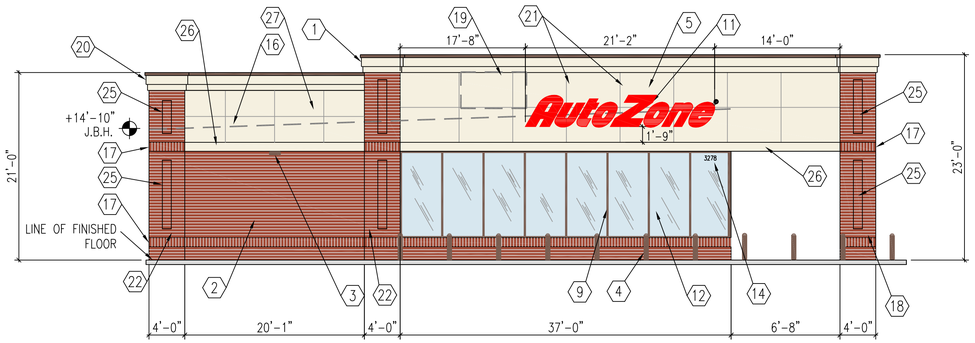
www.idassociatesinc.com

CLIENT:	AUTOZONE	STORE NO:	#5607	REV:		REV:		REV:		REV:	
LOCATION:	GLUCKSTADT, MISSISSIPPI	DATE:	10/13/21	REV:		REV:		REV:		REV:	
ACCOUNT REP.:	CYNDI CRAWFORD	DRAWN BY:	JAS	REV:		REV:		REV:		EXHIBIT APPROVED BY:	
DRAWING NO:	AZ#5607-GLUCKSTADT, MS-FREESTANDING EXHIBIT					REV:		REV:			

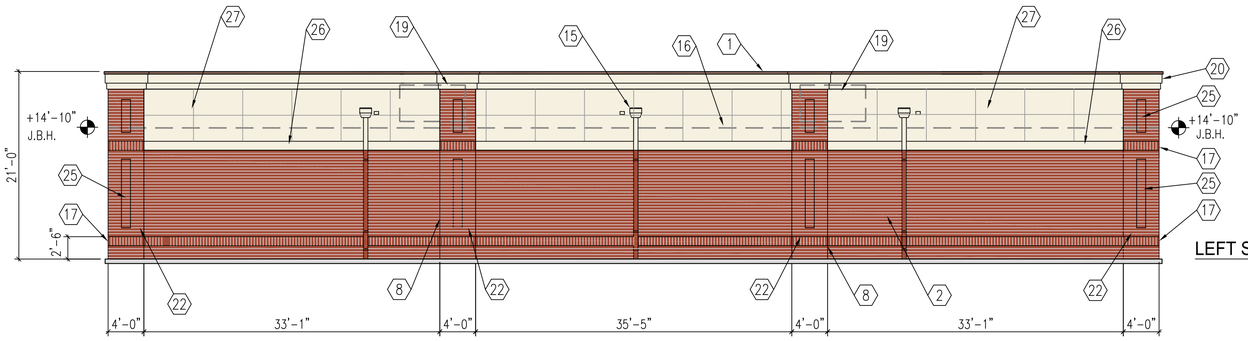
Underwriters Laboratories Inc.® LISTED

Color / Material Samples For: AutoZone #5607 1076 Gluckstadt Road, Gluckstadt, MS 39110

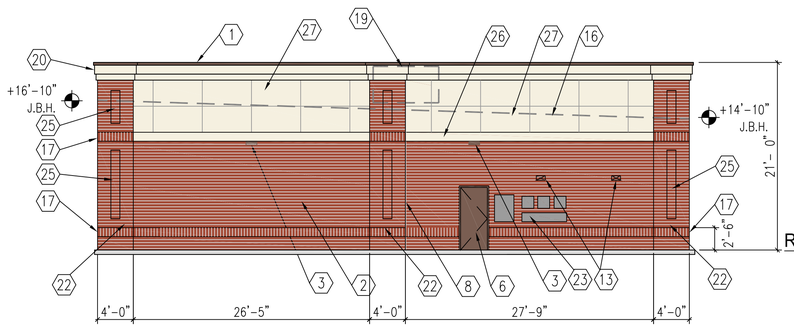
Brick (Utility Size)
Color: Palmeto Bucksport
(Blackson Brick)



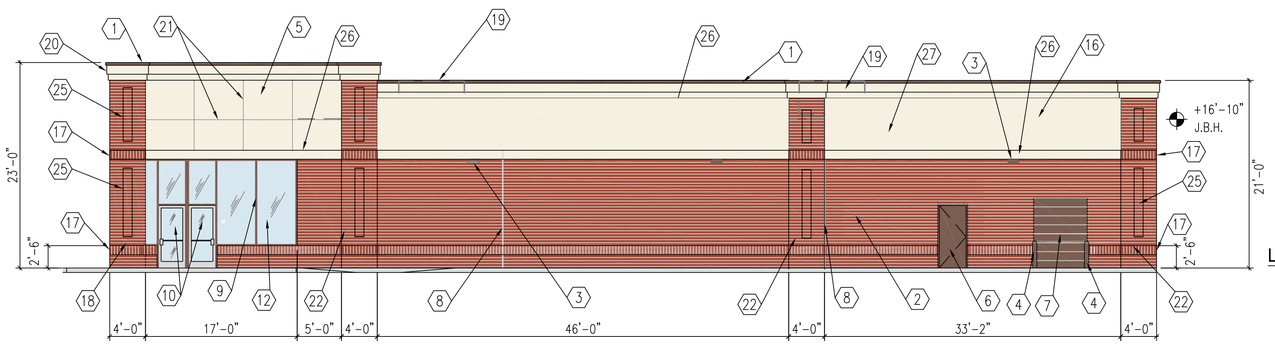
FRONT WALL (South View)
Gluckstadt Road



LEFT SIDE WALL (West View)

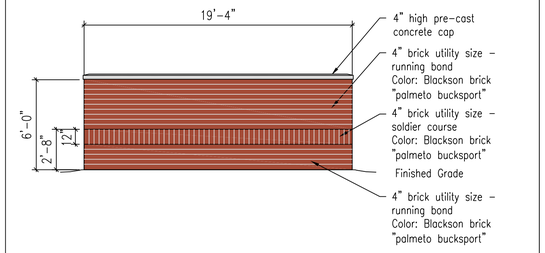


REAR WALL (North View)

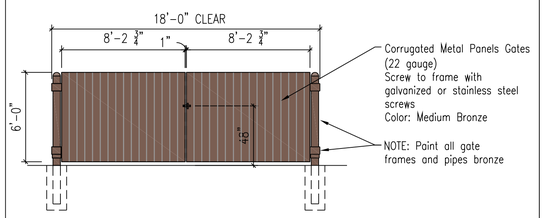


LEFT SIDE WALL (South View)

1 | BUILDING ELEVATIONS



3 | DUMPSTER WALL ELEVATIONS



3 | GATE DETAIL DUMPSTER ENCLOSURE

BRICK COLORS:

FIELD BRICK RUNNING BOND – UTILITY SIZE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"

STACKED BRICK – UTILITY SIZE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"

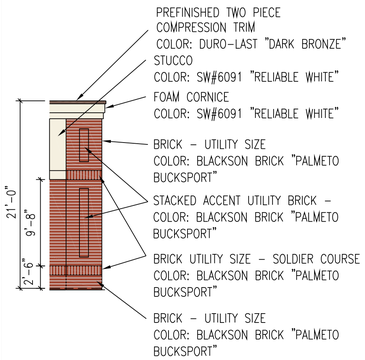
SOLDIER COURSE BRICK – UTILITY SIZE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"

BRICK MORTAR COLOR: WHITE MORTAR

J.B.H. = JOIST BEARING HEIGHT

1. PREFINISHED TWO PIECE COMPRESSION TRIM
COLOR: DURO-LAST "DARK BRONZE"
2. BRICK UTILITY SIZE – RUNNING BOND
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"
3. WALL MOUNTED LIGHT FIXTURE – DARK BRONZE FINISH
4. PIPE GUARD WITH ARCHITECTURAL BROWN SLEEVE
5. STUCCO FINISH
COLOR: SW#6091 RELIABLE WHITE
6. PAINT MAN DOOR & METAL FRAMES DARK BRONZE
7. PAINT OVERHEAD DOOR & ANGLES DARK BRONZE
8. EXPANSION JOINT
9. ALUMINUM STOREFRONT – DARK BRONZE FINISH
10. GLASS AND ALUMINUM DOORS – CLEAR ANODIZED FINISH
11. FRONT WALL SIGN – 42" RED CHANNEL LETTERS
12. ALUMINUM STOREFRONT – DARK BRONZE FACTORY FINISH WITH TINTED GRAY GLASS
13. TOILET WALL VENTS PAINT TO MATCH WALL
14. STORE ADDRESS – 6" WHITE REFLECTIVE NUMBERS
15. SCUPPERS AND DOWNSPOUTS. PAINTED TO MATCH BACKGROUND WALL COLOR. ADJACENT 4" H. X 6" W. OVERFLOW SCUPPER. FLOWLINE 2" ABOVE ROOF.
16. BOND BEAM AT ROOF LINE
17. BRICK UTILITY SIZE – SOLDIER COURSE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"
18. 4'-0" SQUARE BRICK COLUMN
19. HVAC UNITS SCREENED BEHIND PARAPET WALL
20. FOAM CORNICE
COLOR: SW#6091 "RELIABLE WHITE"
21. 1" VERTICAL AND HORIZONTAL V-GROVE SCORED JOINTS (TYP.)
22. 4'-0" WIDE BRICK PILASTER (8" PROJECTION)
23. ELECTRICAL EQUIPMENT
24. NOT USED
25. STACKED ACCENT UTILITY BRICK – (⅜" RECESSED)
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"
26. 12" HIGH X 1" DEPTH FOAM BOARD TRIM W/ E.F.S.
COLOR: SW #6091 "RELIABLE WHITE"
27. STUCCO FINISH
COLOR: SW #6091 "RELIABLE WHITE"

2 | ELEVATION KEYNOTES



FIELD BRICK RUNNING BOND – UTILITY SIZE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"

STACKED BRICK – UTILITY SIZE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"

SOLDIER COURSE BRICK – UTILITY SIZE
COLOR: BLACKSON BRICK "PALMETO BUCKSPORT"

BRICK MORTAR COLOR: WHITE MORTAR

CONTACT: info@blacksonbrick.com (214)855-5051

SCALE: ⅛" = 1'-0"

3 | EXTERIOR WALL COLOR SCHEME

AUTOZONE INC.
Architect: Lew Ellis
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8707 FAX: (901) 495-8969
Email Address: george.callow@autozone.com

Prepared For: **AutoZone** STORE DEVELOPMENT
Store No. 5607
1076 GLUCKSTADT ROAD
GLUCKSTADT, MS 39110

COLOR ELEVATIONS

REVISIONS
1.
2.
3.
4.

SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
George W. Callow
2079
Memphis TN
STATE OF MISSISSIPPI

DATE
10/12/21

PROTOTYPE SIZE
7N2L

CE

City of Gluckstadt

Application for Site Plan Review

Subject Property Address: 1076 Gluckstadt Rd, Madison, MS 39110

Parcel #: 082D-20 -002/01.00

Owner: AutoZone, Attn: Wade Davis

Address: 1076 Gluckstadt Rd

Gluckstadt, MS 39110

Phone #: (901) 495-8701

E-Mail: wade.davis@autozone.com

Applicant: Yuri Hawley

Address: P.O. Box 1302

Fairview, TN 37062

Phone #: 615-495-0132

E-Mail: yuri@civilengineeringservices.net

Current Zoning District: General Commercial C-1

Acreage of Property (If applicable): 50,702± Sq. Ft. or 1.164± Ac

Use sought of Property: AutoZone Store

Requirements of Applicant:

1. Copy of written legal description.
2. Site Plan as required in Sections 807-810 of City of Gluckstadt Zoning Ordinance
3. Color Rendering & Elevations at time of submittal

Requirements for Site Plan Submittal (Refer to Section 807, Gluckstadt Zoning Ordinance)

Nine (9) copies of the site plan shall be prepared and submitted to the Zoning Administrator. Digital copies are acceptable. Three (3) hard copies are required.

Site Plan Specifications (Section 809, Zoning Ordinance)

A. Lot Lines (property lines)
B. Zoning of the adjacent lots
C. The names of owners of adjacent lots
D. Rights of way existing and proposed streets, including streets shown on the adopted Throughfares plan
E. Access ways, curb cuts, driveways, and parking, including number of parking spaces to be provided
F. All existing and proposed easements
G. All existing and proposed water and sewer lines. Also, the location of all existing and proposed fire hydrants.
H. Drainage plan showing existing and proposed storm drainage facilities. The drainage plan shall indicate adjacent off site drainage courses and projected storm water flow rates from off-site and on-site sources.

I. Contours at vertical intervals of five (5) feet or less.
J. Floodplain designation, according to FEMA Maps.
K. Landscaped areas and planting screens.
L. Building lines and the locations of all structures, existing and proposed
M. Proposed uses of the land and buildings, if known
N. Open space and recreation areas, where required.
O. Area in square feet, and/or square acres of parcel
P. Proposed gross lot coverage in square feet
Q. Number and type of dwelling units where proposed
R. Location of sign structures and drawings. (Section 701)
S. Location of garbage dumpster and enclosure. (Section 406.06)
T. Any other data necessary to allow for a through evaluation of the proposed use, including a traffic study.

Applicant shall be present at the monthly meeting of the Planning and Zoning Commission when site plan is on the agenda for consideration; additionally, applicant shall be present at the Mayor and Board of Alderman meeting when the site plan is on the agenda for final approval.

Applicant is responsible for complying with all applicable requirements of the Gluckstadt Zoning Ordinance.

Site Plans shall be submitted by the 5:00 pm on the 5th day of the month, immediately preceding the next regular meeting of the Planning and Zoning Commission. No Exceptions.

Once submitted to the Planning & Zoning Administrator for approval to add to the Planning and Zoning Commission's agenda, no amendments or changes shall be made to the site plan. If you wish to submit changes, you will be required to resubmit by the 5th of the following month for the next monthly meeting of the Planning and Zoning Commission.

Attestation: ***By signing this application, the applicant agrees to all the terms and conditions laid out in this document. Approval of site plan is subject to Board approval.***

Verified by pdfFiller 04/25/2023

Yuri Hawley
Applicant Signature

04/25/2023
Date

CITY OF GLUCKSTADT BUILDING DEPARTMENT

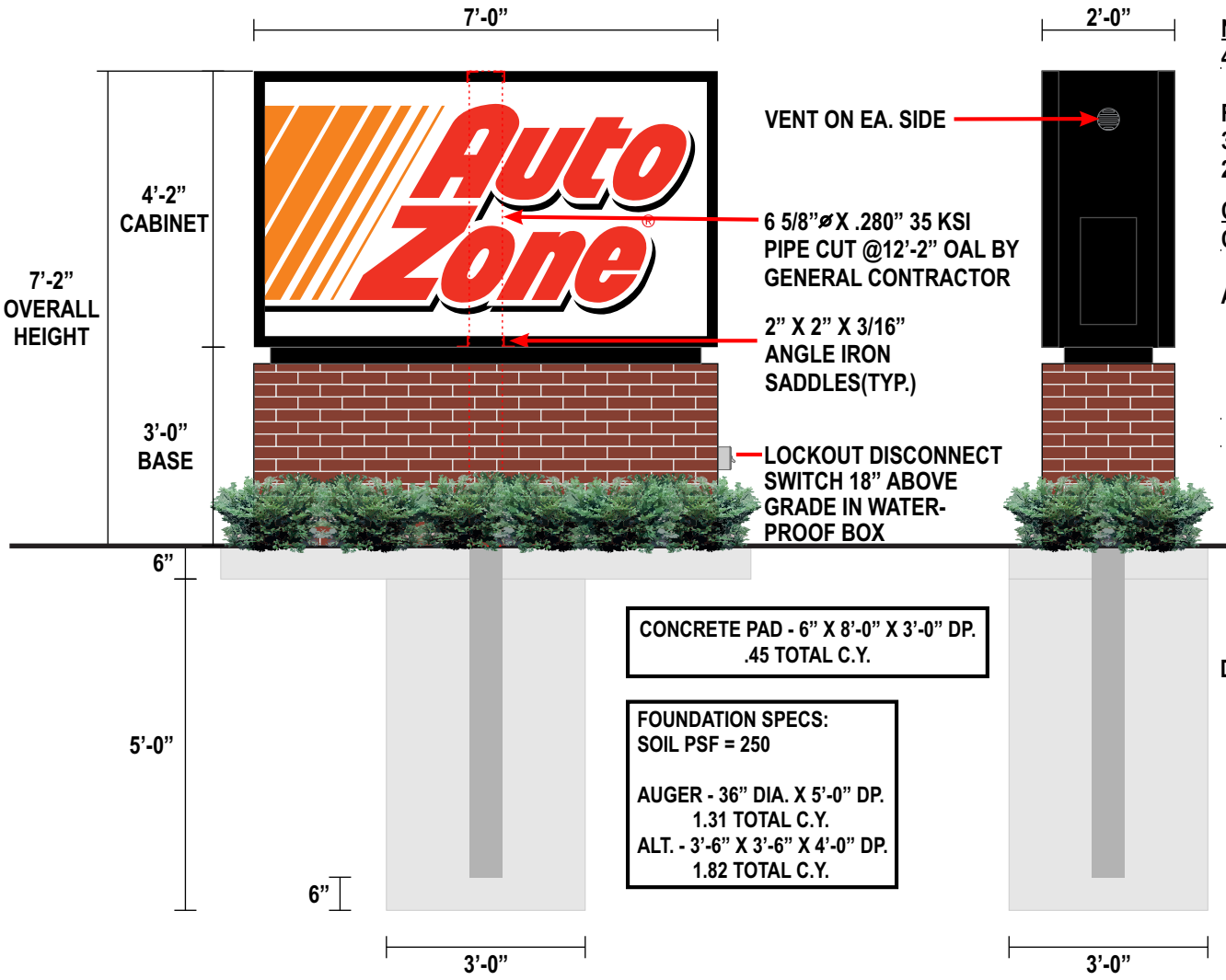
OFFICE USE ONLY

Date Received: 5-1-2023

Application Complete & Approved to Submit to P&Z Board (please check):

Yes_____ **No**_____

Signature: _____
Planning & Zoning Administrator (or Authorized Representative)



NOTES:

4'-2" X 7'-0" X 2'-0" @ 7'-2" OAH INTERNALLY LED ILLUMINATED MONUMENT
FLEX FACES W/ FIRST SURFACE VINYL GRAPHICS
3" ALUMINUM REVEAL
2" RETAINERS

COLORS:

CABINET, RETAINERS, & REVEAL - MATTHEWS 42-204 GLOSS BLACK
AUTOZONE FACE - 3M PANAGRAPHICS III FLEXIBLE FACES W/ 3M 3630-44 ORANGE, 3630-143 RED, & 3630-22 BLACK VINYL W/ 3660 MATTE LAMINATE

**BRICK BASE TO MATCH BUILDING
CAROLINA CERAMICS - CHERRY VELOUR

CONCRETE PAD - 6" X 8'-0" X 3'-0" DP.
.45 TOTAL C.Y.

FOUNDATION SPECS:
SOIL PSF = 250

AUGER - 36" DIA. X 5'-0" DP.
1.31 TOTAL C.Y.
ALT. - 3'-6" X 3'-6" X 4'-0" DP.
1.82 TOTAL C.Y.

LANDSCAPING REQUIREMENTS:
THE BASE OF ALL GROUND-MOUNTED SIGNS IN RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DISTRICTS SHALL BE FULLY LANDSCAPED WITH PLANTERS AND/OR SHRUBS IN ALL DIRECTIONS, NOT LESS THAN THE DIMENSIONAL WIDTH OF THE SIGN.

GENERAL CONTRACTOR TO PROVIDE STEEL POLE, DIG FOOTER, POUR CONCRETE TO INCLUDE PAD, SET POLE, PROVIDE AND INSTALL BASE. SIGN VENDOR TO PROVIDE DOUBLE-FACE CABINET AND INSTALL ON POLE.

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. DUE TO CONSTRUCTION CONSTRAINTS, SIZES AND OR LAYOUTS MAY CHANGE SLIGHTLY.

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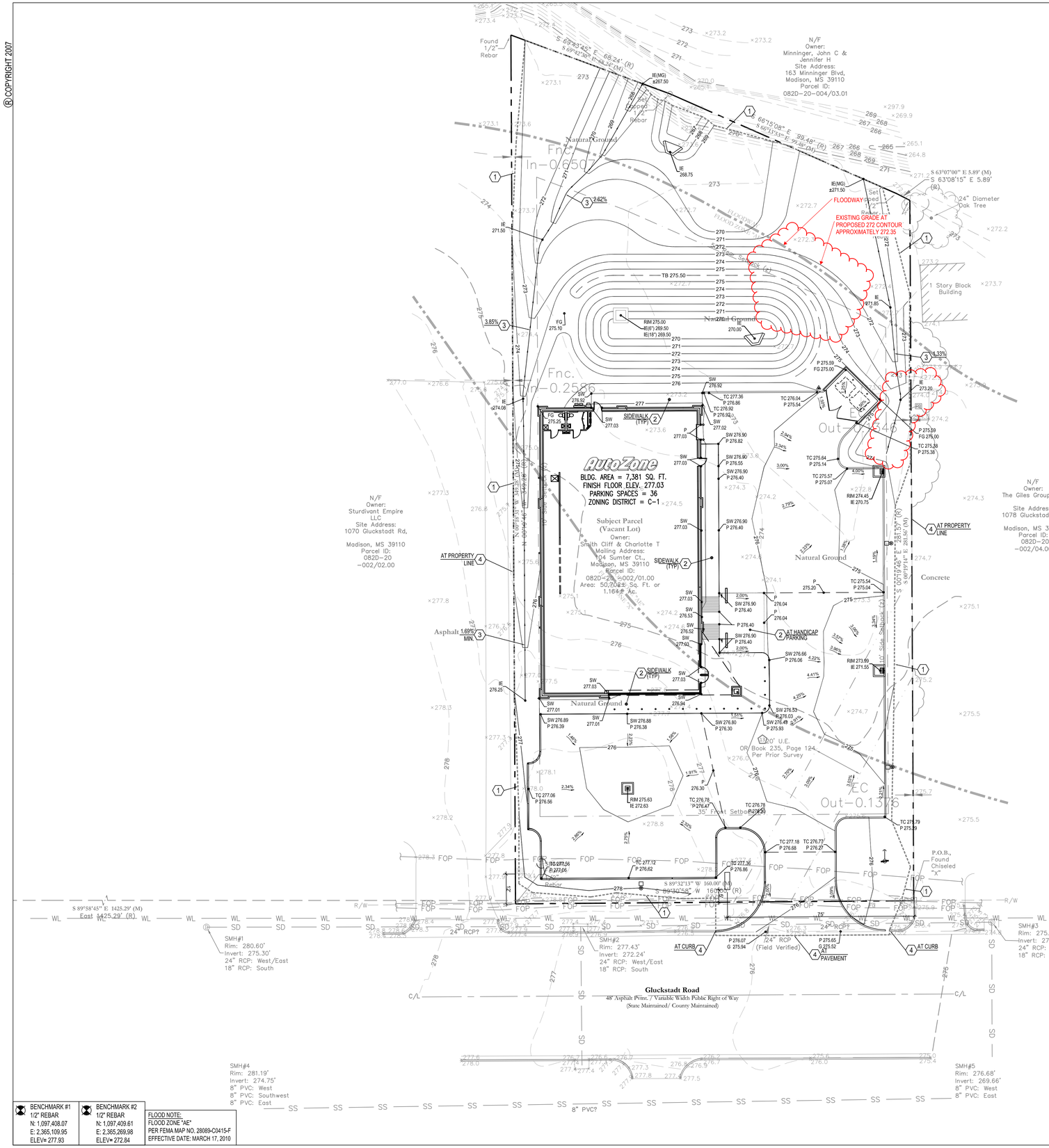
www.idassociatesinc.com

CLIENT: AUTOZONE	STORE NO.: #5607	REV.: R1 04/26/23 JAS	REV.:	REV.:	REV.:	Underwriters Laboratories Inc. LISTED
LOCATION: GLUCKSTADT, MISSISSIPPI	DATE: 10/13/21	REV.: R2 05/02/23 JAS	REV.:	REV.:	REV.:	
ACCOUNT REP.: CYNDI CRAWFORD	DRAWN BY: JAS	REV.:	REV.:	REV.:	EXHIBIT APPROVED BY:	
DRAWING NO.: AZ#5607-GLUCKSTADT, MS-FREESTANDING EXHIBIT			REV.:	REV.:		



GENERAL GRADING LEGEND

TC	TOP OF CURB ELEVATION
P	BOTTOM OF CURB ELEVATION
FG	FINISHED GRADE ELEVATION
SW	SIDEWALK ELEVATION
MG	MATCH EXISTING GRADE ELEVATION
TB	TOP OF BANK GRADE ELEVATION
RIM	TOP OF RIM ELEVATION AT STRUCTURE
HP	HIGH POINT GRADE ELEVATION
1.09%	PROPOSED GRADE SLOPE
- - - -	LIMIT OF DISTURBANCE
————	PROPOSED SWALE

GRADING KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. PROVIDE 2.00% MAXIMUM CROSS SLOPE
3. PROVIDE SWALE - SEE SLOPE AND ELEVATIONS THIS SHEET
4. MATCH EXISTING GRADES

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,166 SF / 1.13 AC

GENERAL GRADING NOTES

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN THE CLOSE PROXIMITY OF THE ABOVE-NOTED WIRES, THE ELECTRIC COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD AND UNDERGROUND WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
2. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT, DURING CONSTRUCTION, UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATIONS OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS NECESSARY TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITY LINES.
3. AT LOCATIONS WHERE UTILITY LINES OR SERVICES ARE UNDERNEATH PROPOSED PAVEMENT, THE TRENCH SHALL BE BACKFILLED TO SUBGRADE WITH CRUSHED STONE.
4. DEVELOPER IS TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, THE DEVELOPER'S ENGINEER, THE COUNTIES REPRESENTATIVE AND THE COUNTIES ENGINEER.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. REMOVE ALL FOUNDATIONS, UNDERGROUND TANKS, PAVING, BASE ETC. IF REMAINING, BEFORE BEGINNING CONSTRUCTION.
7. FILL ALL PLANTERS/ISLANDS TO TOP OF CONCRETE CURB WITH TOPSOIL. TOPSOIL TO BE CLEAN AND FREE OF DEBRIS, ETC.
8. THESE PLANS, PREPARED BY CIVIL ENGINEERING SERVICES, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF CIVIL ENGINEERING SERVICES REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
9. IN THE CASE OF CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR THE SPECIFICATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2
1/2" REBAR	1/2" REBAR
N: 1,097,408.07	N: 1,097,409.61
E: 2,365,109.95	E: 2,365,269.98
ELEV= 277.93	ELEV= 272.84

FLOOD NOTE:
FLOOD ZONE "AE"
PER FEMA MAP NO. 28089-C0415-F
EFFECTIVE DATE: MARCH 17, 2010

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Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
1076 GLUCKSTADT RD
MADISON MS 39110
GRADING PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Sreet, 3rd Floor
Memphis, Tennessee 38103
TEL.: (901) 495-8994 FAX: (901) 495-8969
For Bidding & Contractor Information Contact:
Dodge Data & Analytics, Tel. 413-930-4215
Cindy.searcy@consruction.com

RAYMOND G. FINCHER LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
10/16/2023

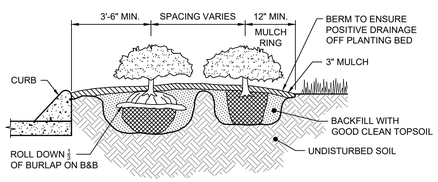
4/25/2023

7N2

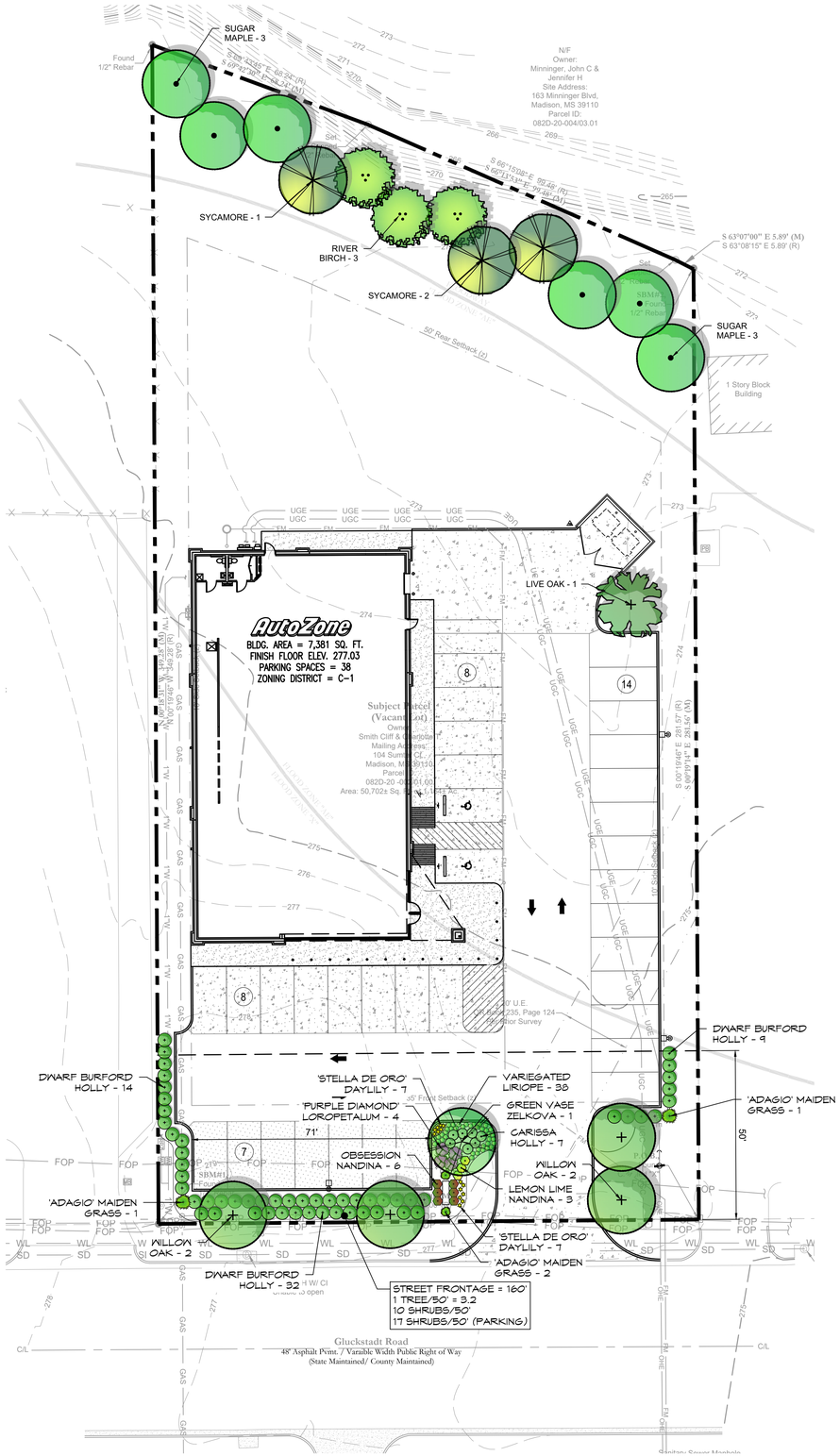
C2.0

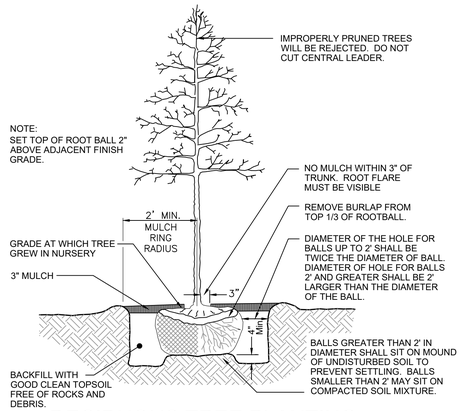
LANDSCAPE NOTES:

1. WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIALS SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
4. NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. KITA LANDSCAPE DESIGN (615) 469-1222.
5. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. SOD ALL DISTURBED AREAS.
7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD.
   A. SAND SHALL BE CLEAN MASONRY SAND.
   B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
   C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
22. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.
    PLANTING DATES
    SPRING: MARCH 15 - APRIL 15
    FALL: OCTOBER 1 - NOVEMBER 30
24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
25. CONTRACTOR TO IRRIGATE ALL NEW LANDSCAPE PLANTINGS AND LAWN AREAS WITH AN AUTOMATED UNDERGROUND IRRIGATION SYSTEM.
26. IRRIGATION TO HAVE A SEPARATE METER.
27. GENERAL CONTRACTOR TO COORDINATE AND BE RESPONSIBLE FOR WATERING ALL PLANTS AND SEEDED AREAS AFTER PLANTING UNTIL IRRIGATION SYSTEM IS OPERABLE.



SHRUB / GROUND COVER PLANTING
NOT TO SCALE





DECIDUOUS TREE PLANTING
NOT TO SCALE

LANDSCAPE CALCULATIONS

SITE AREA:	50,702 SF	(1.16 AC)
	REQUIRED	PROVIDED
STREET YARD: 160'		
1 TREE/50'	3.2	3
10 SHRUBS/50'	32.0	
PARKING SPACES:	-	37
200 SF AREA PER SPACE	7,400 SF	
1 TREE / 10 SPACES:	4	
INTERIOR PARKING AREA:	-	16,093
PLANTING AREA: (MIN.)	8%	9.3%
PLANTING AREA: (SQ. FT.)	1287 SF	1490 SF

PLANT SCHEDULE

QTY.	COMMON NAME	BOTANICAL NAME	HEIGHT	TRUNK	COMMENTS
CANOPY TREES					
1	'Green Vase' Japanese Zelkova	Zelkova serrata 'Green Vase'	10' - 12'	2" Cal.	B&B
1	Live Oak	Quercus virginiana	10' - 12'	2" Cal.	B&B
3	River Birch	Betula nigra	10' - 12'	2" Cal.	B&B
6	Sugar Maple	Acer saccharum	10' - 12'	2" Cal.	B&B
3	Sycamore	Platanus occidentalis	10' - 12'	2" Cal.	B&B
4	Willow Oak	Quercus phellos	10' - 12'	2" Cal.	B&B
18	TOTAL - CANOPY TREES				
UNDERSTORY/COLUMNAR TREES					
0					
0	TOTAL - UNDERSTORY TREES				
18	TOTAL - ALL TREES				
SHRUBS					
7	Carissa Holly	Ilex cornuta 'Carissa'	18" Min.		Container
55	Dwarf Burford Holly	Ilex cornuta 'Burfordii nana'	24" Min.		Container
3	'Lemon Lime' Nandina	Nandina domestica 'Lemon-Lime'	12" Min.		Container
6	'Obsession' Nandina	Nandina domestica 'Seika'	18" Min.		Container
4	Purple Diamond Loropetalum	Loropetalum chinense 'Shang-hi'	24" Min.		Container
75	TOTAL - SHRUBS				
GRASSES, PERENNIALS AND GROUND COVER					
4	'Adagio' Maiden Grass	Miscanthus sinensis 'Adagio'	24"	3 Gal.	
14	Stella De Oro Daylily	Hemerocallis x 'Stella de Oro'		1 Gal.	
38	Variegated Liriope	Liriope muscari 'Variegata'		1 Gal.	
TURF					
-	Hybrid Fescue Seed/Sod	Drought tolerant fescue blend			

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

KITA designs
Beauty | Economy | Sustainability
Kevin Reff, RLA
KITA Sustainable Designs, LLC
3369 Reids Chapel Rd.
Campbellsville, KY 42718
(615) 469 - 1222 Ofc.
(615) 594 - 7333 Cell.
kreff@kitadesign.biz

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
	4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
MS 39110

GLUCKSTADT
LANDSCAPE PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

10/08/2021

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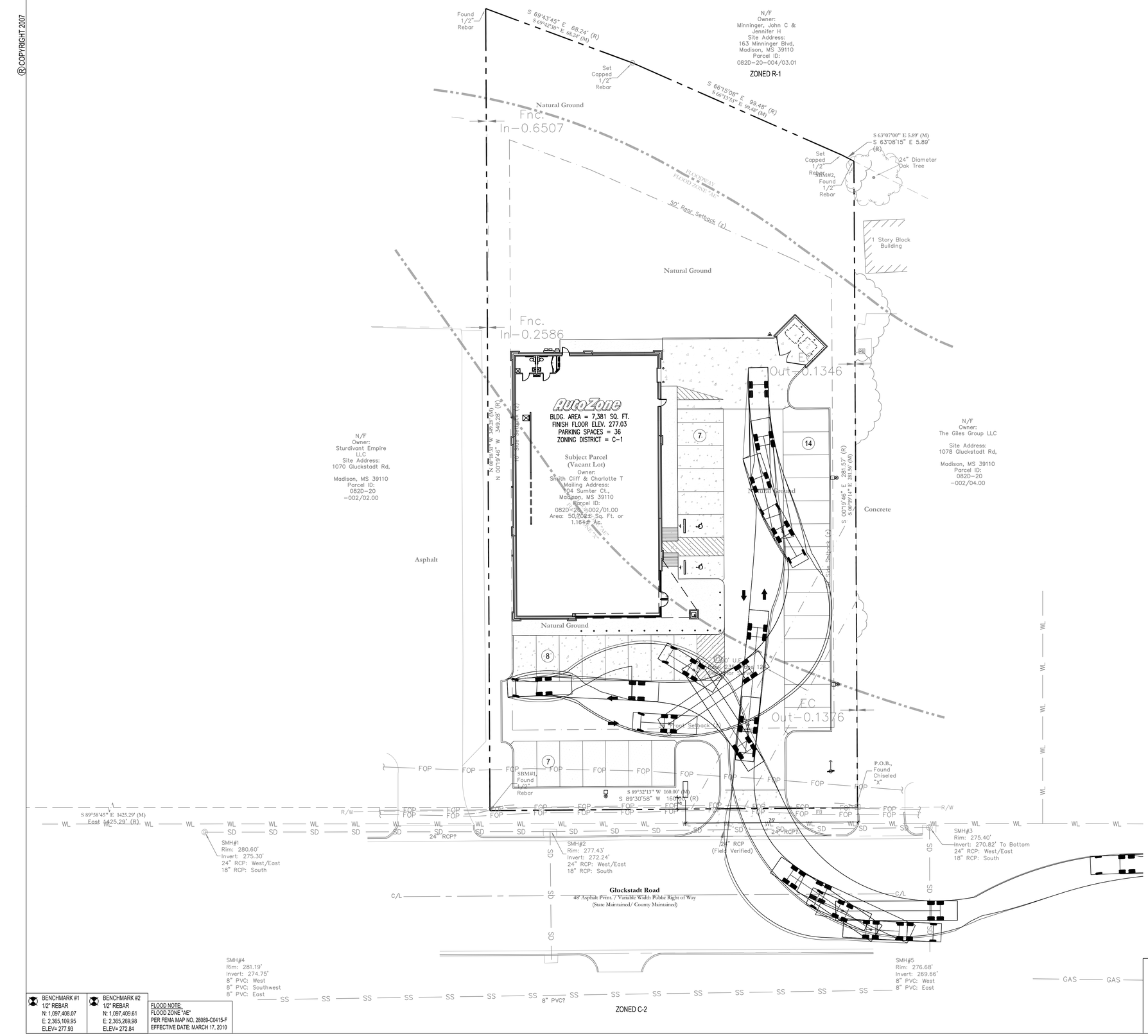

GRAPHIC SCALE

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BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

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NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
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MADISON MS 39110
TRUCK ROUTE

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RAYMOND G. FLAKE LICENSED PROFESSIONAL ENGINEER 21060 STATE OF MISSISSIPPI
05/16/2023

4/25/2023

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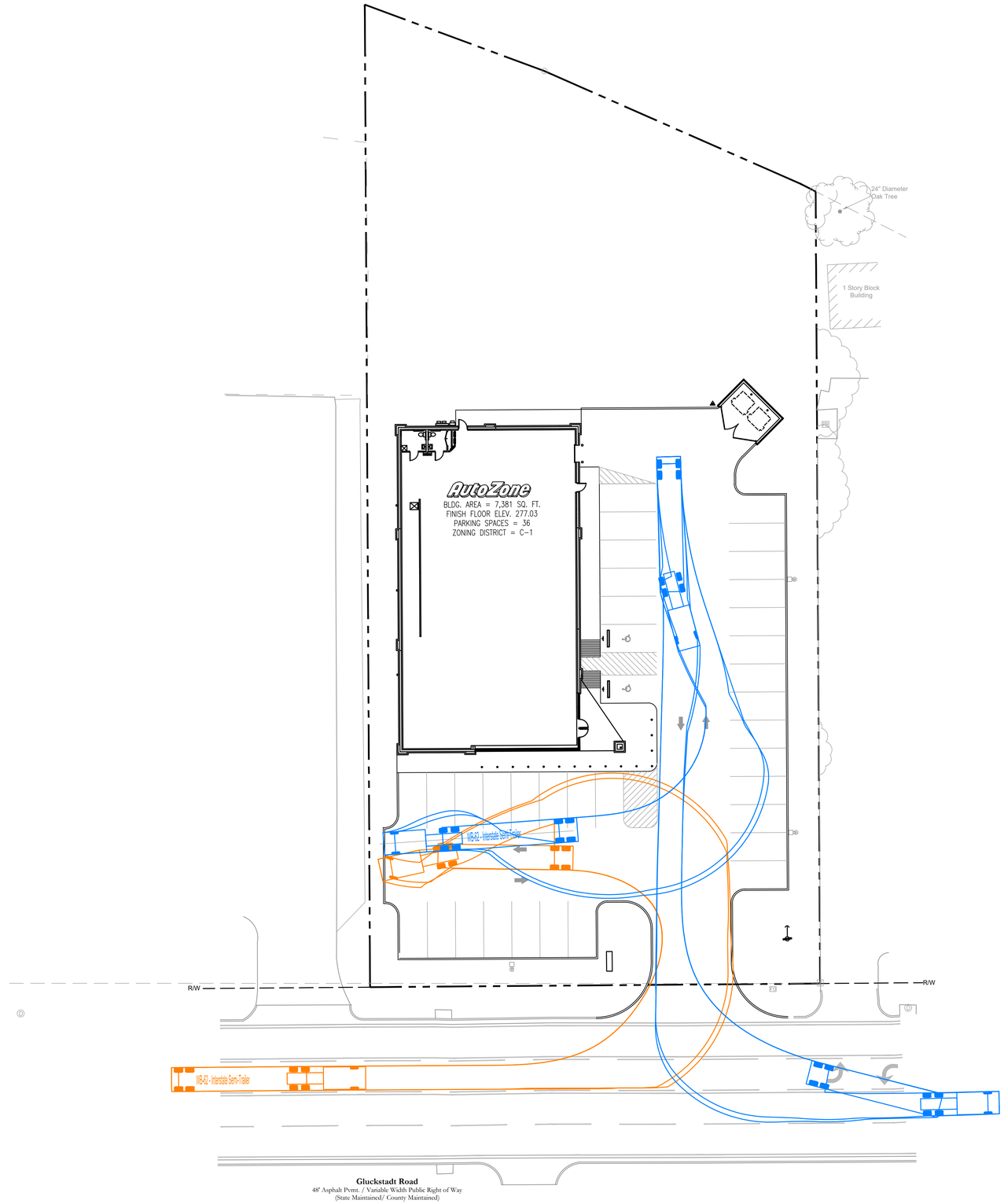
EX 1.0



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7N2

EX 1.0

Civil Engineering Services

P.O. Box 1302, Fairview, TN 37062 Office: (615) 533-0401

November 18, 2021

Attn: Tim Bryan
Madison County Road Department
3137 South Liberty Street
P.O. Box 608
Canton, MS 39046
(601) 855-5670

RE: Drainage / Stormwater Design Report
AutoZone retail store (Store #0152)
West of 1078 Gluckstadt Road
Gluckstadt, Madison County, Mississippi 39110

Mr. Bryan:

Below and enclosed is our submittal of the stormwater design letter report for the site of the proposed AutoZone retail store located at the address referenced above (see Enclosure 1 for site location map). Please include this report in your review of the proposed site development plans.

Existing Site Conditions:

The subject property is currently undeveloped and is situated between 1070 and 1078 Gluckstadt Road. The site is bordered to the east by an office building, now or formerly The Giles Group, LLC. To the west, the site is bordered by the Gluckstadt Animal Hospital. The site is bordered to the north by a heavily wooded drainage channel (referred to as Stream O in the FEMA FIS), and to the south by Gluckstadt Road.

The existing project site generally drains southwest to northeast. There is an existing storm sewer, along with two storm sewer inlets, on Gluckstadt Road. The size and depth of this storm sewer is unknown, as the inlets were not accessible at the time of the survey. There are two outfall points for the existing site. Outfall #1 is the existing storm sewer inlet, located just east of this site. Only a small portion of the site and adjacent right-of-way drain to Gluckstadt Road, and to this existing inlet. Outfall #2 is at the northern property line where runoff from this site drains into Stream O.

Proposed Site Conditions:

The proposed project is to construct an AutoZone retail store with a detention pond, drainage system, drive aisle, and parking spaces, and to bring all utilities to the building envelopes. Proposed site drainage

patterns have been designed to limit the amount of sheet flow to Outfall #1 and to drain the majority of the proposed site to the proposed detention pond and ultimately to Outfall #2 (at Stream O).

The onsite drainage system, which includes an above ground detention pond, was designed to meet Madison County stormwater regulations. More specifically, it is required that the proposed site and stormwater system limit site runoff to pre-development levels. Also, the proposed detention pond has been designed to safely pass the 100-year, 24-hour design storm.

Flood Plain Information:

This site lies in Special Flood Hazard Areas Zone AE with Base Flood Elevation (BFE) determined, according to FEMA FIRM Map Number 28089C0415F with an effective date of March 17, 2010. The base flood elevation of Stream O at this site is approximately 275.00 for the 100-year storm event, and approximately 274.50 for the 10-year storm event. These elevations have been interpolated from the Flood Insurance Study (FIS) flood profiles, for the approximate site location. The FEMA Firmette and FIS are included with this report in Enclosure 2.

To raise the proposed building above the 100-year flood elevation, fill will be placed on the site within the flood plain. The finish floor elevation of the proposed building has been set at 277.03, and a minimum elevation of 275.50 has been established for the top of berm around the detention pond. Approximately 600 cubic yards (net) of fill material (including pavement) will be required to achieve proposed finish grades, within the flood plain. However, only 2 cubic yards of fill material will be placed within the floodway, at the northeast corner of the detention pond. The remainder of the proposed grading within the floodway will be approximately 405 cubic yards of excavation.

Methods:

Since this is a small site and the storm water runoff is directed to the proposed storm drainage system, only one drainage area encompassing the entire site was used for the pre-development and post-development conditions (see Enclosure 3). The time of concentration and the SCS Curve number (CN) for each sub-drainage area were estimated based on the soil type and development conditions, and then the Rational Method was utilized to calculate runoff peak flows. Rainfall intensity data obtained from the NOAA Atlas 14, Volume 2, Version 3 (see Enclosure 5) were used along with a SCS Type III 24-hr storm to generate runoff hydrographs.

The NRCS's Soil Survey was reviewed for Hydrologic Soil type. The soils report, included as Enclosure 4, shows the entire site to be in a B soil classification. Due to small size of the site, the time of concentration was assumed to be 10 minutes for both pre-developed and post-developed conditions.

To perform the calculations described above, Autodesk Storm & Sanitary Analysis modeling software was used. The Rational Method runoff calculations for the existing and proposed conditions are included as Enclosure 7, as well as the detention calculations. Enclosure 8 includes the pipe capacity calculations.

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Results:

The proposed site decreases peak discharges resulting from the 2, 10, 25, 50 and 100-yr design storms. The results, including peak pond elevations, are included in the table below:

Storm Event	Existing Conditions Q (cfs)	Proposed Conditions			
		Q_{inflow} (cfs)	Peak Storage Volume (cu.ft.)	Peak Storage Elevation (ft.)	$Q_{outfall}$ (cfs)
2-yr	0.95	3.45	1,393	271.43	0.88
10-yr	1.29	4.69	2,033	271.90	0.99
25-yr	1.50	5.48	2,454	272.17	1.05
50-yr	1.67	6.11	2,787	272.36	1.09
100-yr	1.84	6.73	3,124	272.55	1.13

If you have any questions or need further information during your review of this site, please do not hesitate to call me at (615) 533-0401 to discuss.

Respectfully,

Ray G. Flake, $PE_{(MS)}$

Enc. Enclosure 1 – Site Location Map
Enclosure 2 – FEMA Flood Map
Enclosure 3 – Drainage Area Maps
Enclosure 4 – NRCS Soils Report
Enclosure 5 – Rainfall and Curve Number Reference Information
Enclosure 6 – Curve Number Calculations
Enclosure 7 – Rational Method Runoff & Detention Calculations
Enclosure 8 – Pipe Capacity Calculations

Enclosure 1

Site Location Map

Gluckstadt, MS

AutoZone, store #0152

Section 4, IB)

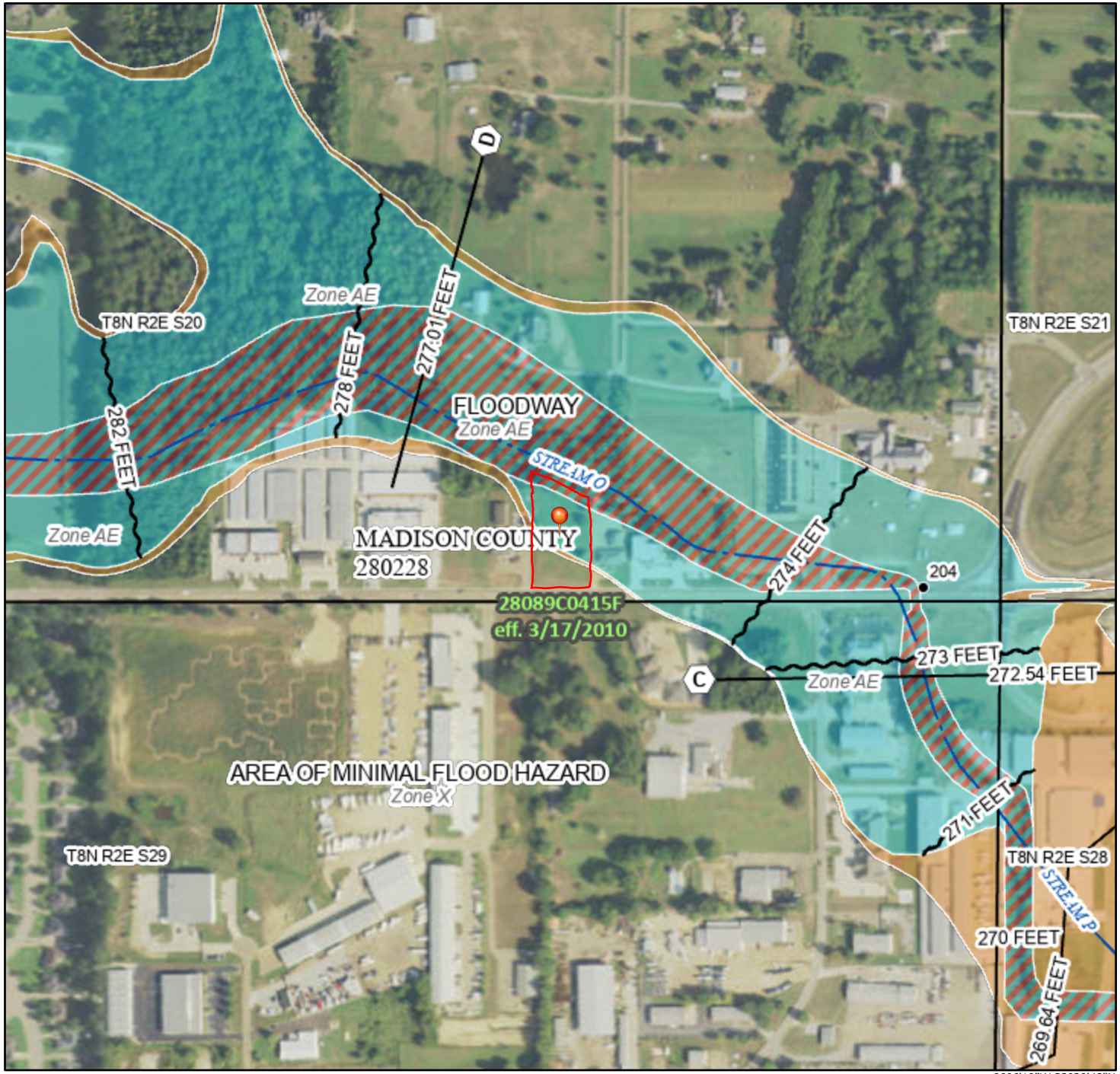
Enclosure 2

FEMA Flood Map

National Flood Hazard Layer FIRMette

FEMA

90°6'56"W 32°31'18"N



90°6'19"W 32°30'48"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

Section 4, IB)

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX M UT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

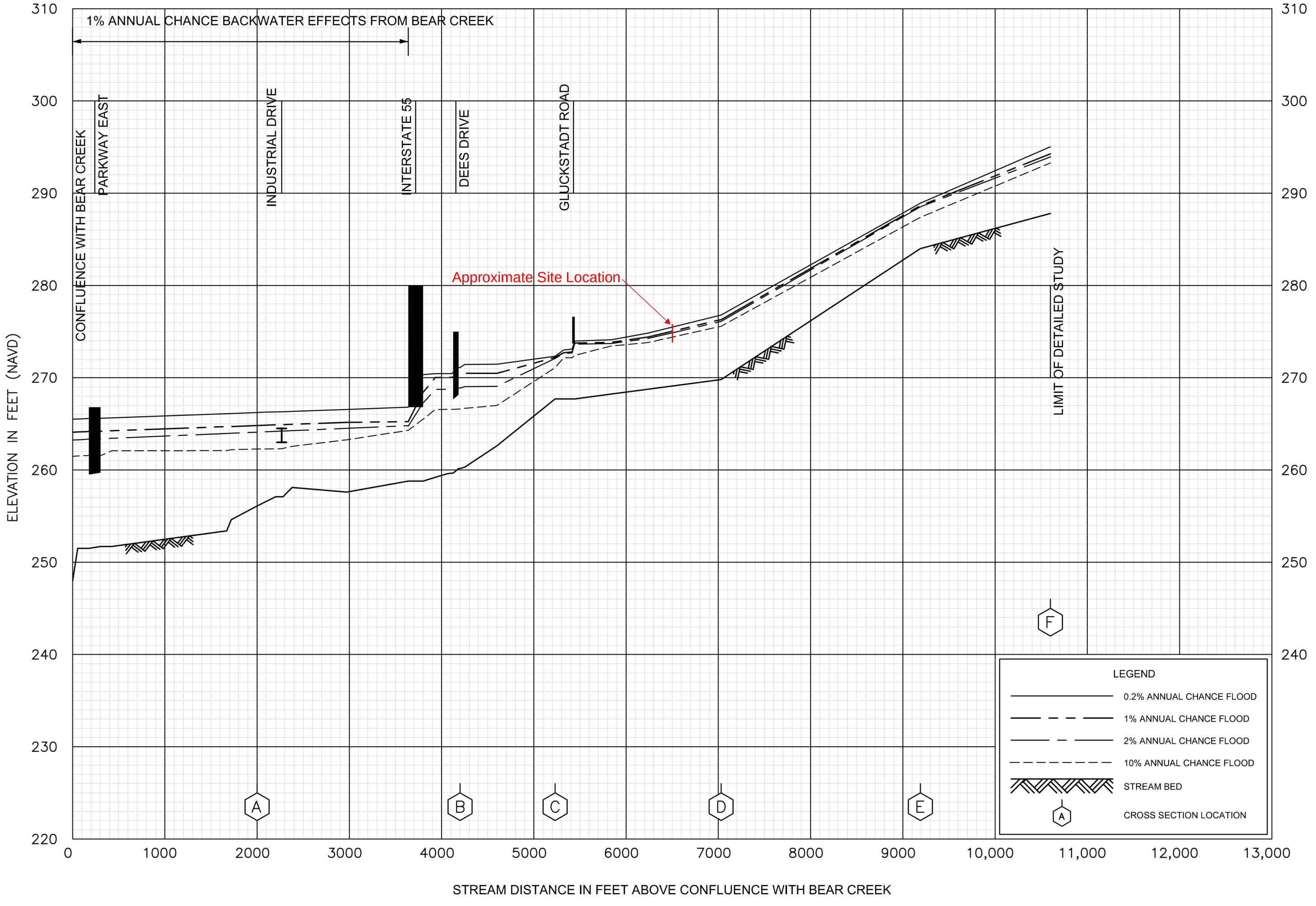
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/8/2021 at 9:42 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community id FIRM panel number, and FIRM effective date. Map i unmapped and unmodernized areas cannot be use regulatory purposes.



FLOOD PROFILES

STREAM O

FEDERAL EMERGENCY MANAGEMENT AGENCY

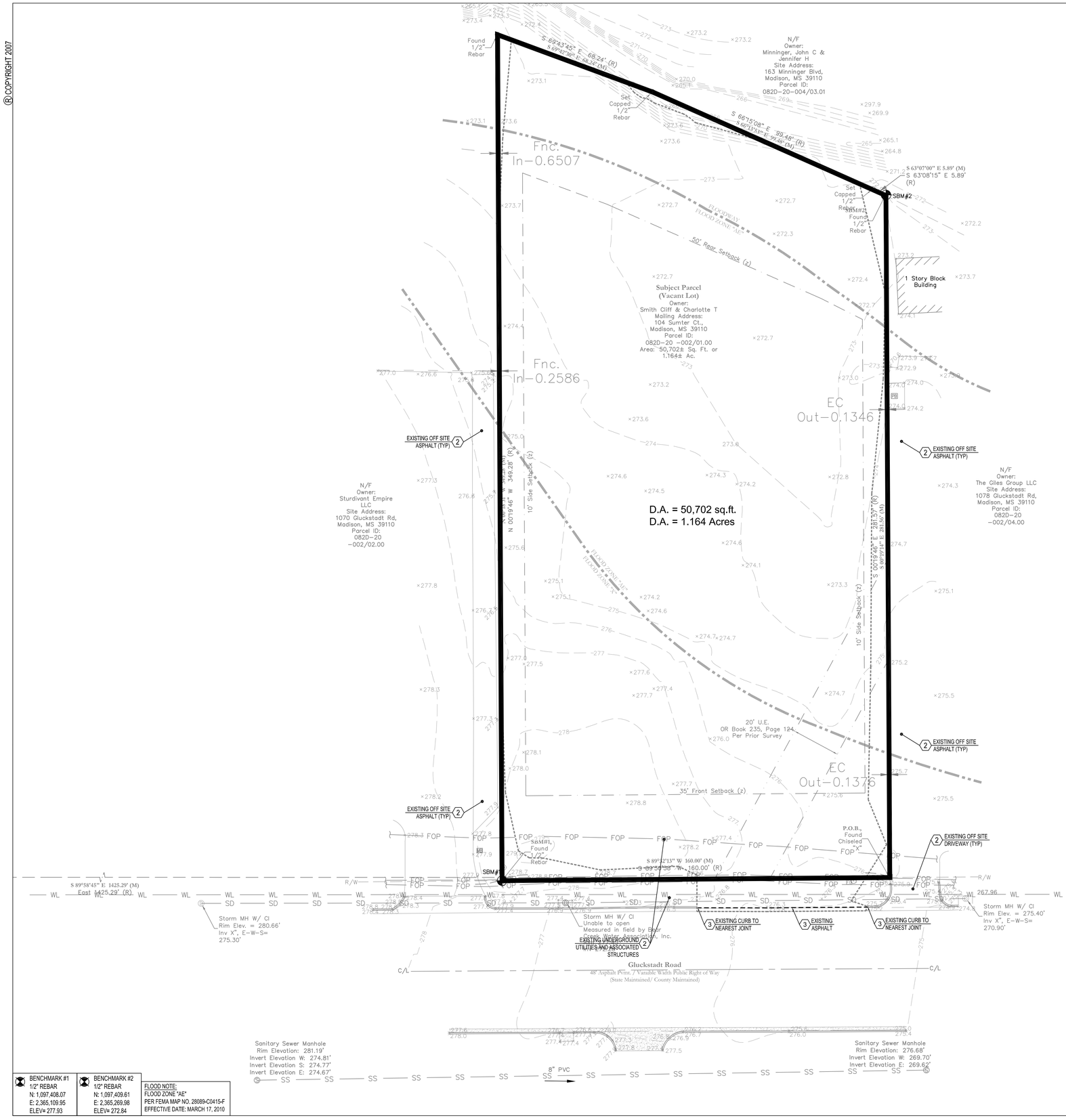
MADISON COUNTY, MS

AND INCORPORATED AREAS

68P

Enclosure 3

Drainage Area Maps



DEMOLITION LEGEND

- APPROXIMATE LIMITS OF ASPHALT/CONCRETE SAWCUT
- APPROXIMATE LIMITS OF ASPHALT/CONCRETE REMOVAL

KEYNOTES

1. REMOVE EXISTING STRUCTURE
2. PROTECT EXISTING STRUCTURE
3. SAWCUT ASPHALT / CONCRETE
4. RELOCATE EXISTING SITE STRUCTURE OR UTILITY

DEMOLITION NOTES

1. ALL WORK TO BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL LOCAL ORDINANCES, CITY OR STATE.
2. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
3. ALL ITEMS NOTED TO BE REMOVED BY THE SELLER SHALL BE ACCOMPLISHED PRIOR TO THE CLOSING OF THE REAL ESTATE TRANSACTION. ALL OTHER ITEMS NOTED TO BE REMOVED SHALL BE DONE SO AS PART OF THE CONTRACT FOR GENERAL CONSTRUCTION.
4. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED OFF SITE LANDFILL.
5. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF BUILDING DEMOLITION DEBRIS.
6. THE DETAILED PLANS MAY NOT REFLECT ALL UTILITIES ON THE SITE OR SURROUNDING STREETS AND PROPERTIES. THE CONTRACTOR SHALL VERIFY LOCATIONS AND EXISTENCE OF UTILITY SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-800-344-7233, 72 HOURS PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR TO REMOVE ALL UTILITIES TO EXISTING STRUCTURES WHETHER SHOWN OR NOT OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND CAP SERVICE PIPING AT THE PROPERTY LINE OR MAIN (AS REQUIRED). ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN.
9. FOR ALL ITEMS NOTED TO BE REMOVED - REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALL UNDERGROUND ELEMENTS AS WELL INCLUDING BUT NOT NECESSARILY LIMITED TO: FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, OLD PIPES, ETC.
10. BACK FILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK TO MEET THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL REPORT.
11. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING CONSTRUCTION. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPES, PAVEMENT, CURBS, SIDEWALKS OR LANDSCAPED AREAS DISTURBED DURING DEMOLITION TO THEIR ORIGINAL CONDITION TO THE SATISFACTION.
13. ALL BUILDINGS, FOUNDATION WALLS AND FOOTINGS INDICATED ON THIS PLAN TO BE REMOVED FROM SITE. CONTRACTOR SHALL SECURE ANY PERMITS AND PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
14. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE REMOVED BY THE CONTRACTOR USING A LICENSED HAZARDOUS MATERIAL CONTRACTOR PER ASBESTOS REPORT PREPARED BY XXXXXXXXXX. PRIOR TO THE START OF DEMOLITION, FEDERAL LAW REQUIRES THAT THE LOCAL EPA OFFICE TO BE NOTIFIED IN WRITING @ LEAST 10 WORKING DAYS.

EXISTING CONDITIONS DRAINAGE AREA MAP

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.64	

NAD83 MS STATE PLANE

REVISIONS

1	2	3
4	5	6

AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD
GLUCKSTADT MS 39110
DEMOLITION PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8994 FAX: (901) 495-8969

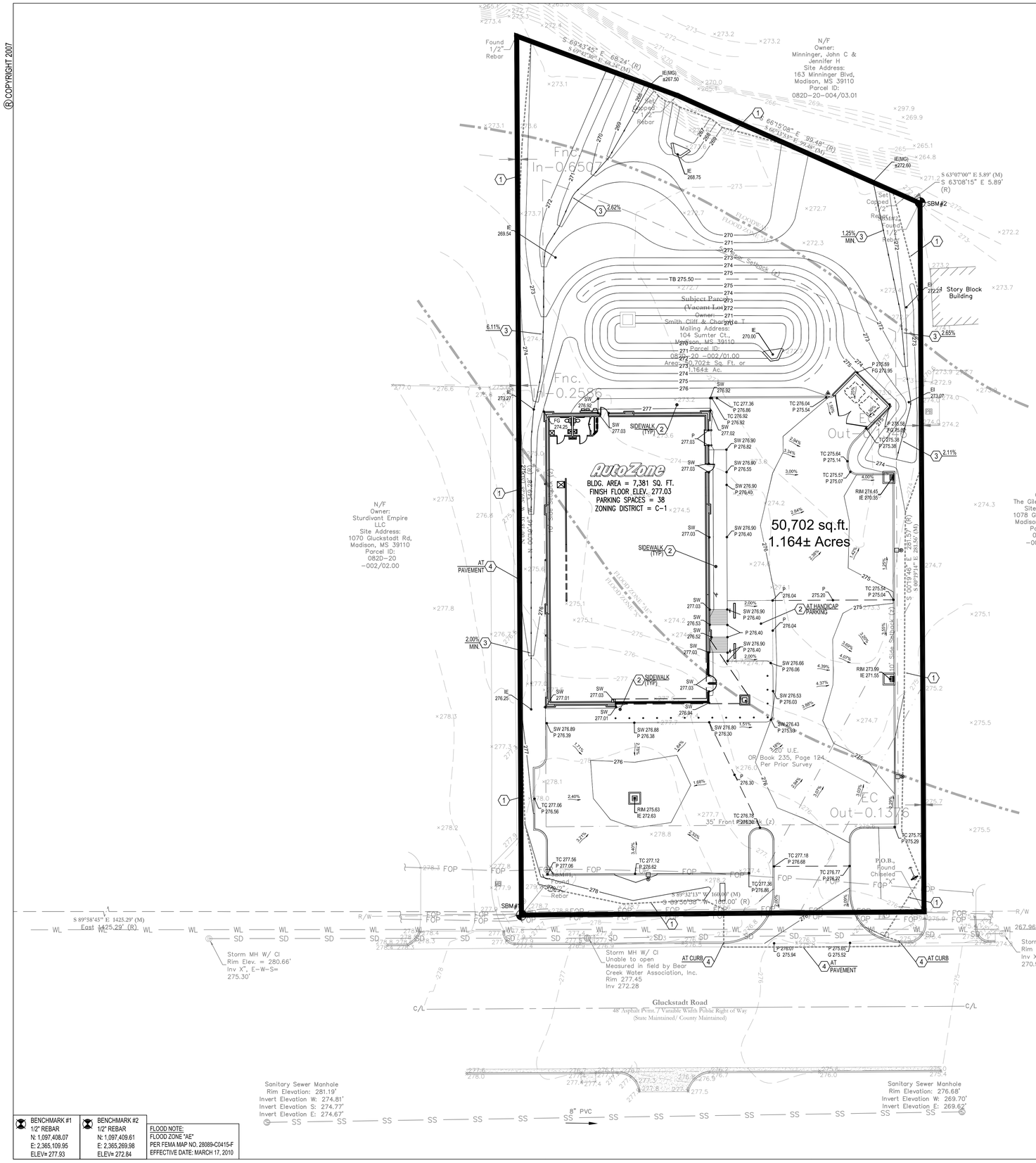
For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

10/08/2021

7N2

D1.0

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning



GENERAL GRADING LEGEND

TC	TOP OF CURB ELEVATION
P	BOTTOM OF CURB ELEVATION
FG	FINISHED GRADE ELEVATION
SW	SIDEWALK ELEVATION
MG	MATCH EXISTING GRADE ELEVATION
TB	TOP OF BANK GRADE ELEVATION
RIM	TOP OF RIM ELEVATION AT STRUCTURE
HP	HIGH POINT GRADE ELEVATION
1.09%	PROPOSED GRADE SLOPE
- - - - - -	LIMIT OF DISTURBANCE
———	PROPOSED SWALE

GRADING KEYNOTES

1. LIMITS OF LAND DISTURBANCE
2. PROVIDE 2.00% MAXIMUM CROSS SLOPE
3. PROVIDE SWALE - SEE SLOPE AND ELEVATIONS THIS SHEET
4. MATCH EXISTING GRADES

GRADING INFORMATION

LIMITS OF DISTURBANCE = 49,010 SF / 1.13 AC

GENERAL GRADING NOTES

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN THE CLOSE PROXIMITY OF THE ABOVE-NOTED WIRES, THE ELECTRIC COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD AND UNDERGROUND WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
2. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT, DURING CONSTRUCTION, UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATIONS OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS NECESSARY TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITY LINES.
3. AT LOCATIONS WHERE UTILITY LINES OR SERVICES ARE UNDERNEATH PROPOSED PAVEMENT, THE TRENCH SHALL BE BACKFILLED TO SUBGRADE WITH CRUSHED STONE.
4. DEVELOPER IS TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, THE DEVELOPER'S ENGINEER, THE COUNTIES REPRESENTATIVE AND THE COUNTIES ENGINEER.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. REMOVE ALL FOUNDATIONS, UNDERGROUND TANKS, PAVING, BASE ETC. IF REMAINING, BEFORE BEGINNING CONSTRUCTION.
7. FILL ALL PLANTERS/ISLANDS TO TOP OF CONCRETE CURB WITH TOPSOIL. TOPSOIL TO BE CLEAN AND FREE OF DEBRIS, ETC.
8. THESE PLANS, PREPARED BY CIVIL ENGINEERING SERVICES, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF CIVIL ENGINEERING SERVICES REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
9. IN THE CASE OF CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR THE SPECIFICATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR CLARIFICATION.

PROPOSED CONDITIONS DRAINAGE AREA MAP

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK #1	BENCHMARK #2	FLOOD NOTE:
1/2" REBAR	1/2" REBAR	FLOOD ZONE "AE"
N: 1,097,408.07	N: 1,097,409.61	PER FEMA MAP NO. 28089-C0415-F
E: 2,365,109.95	E: 2,365,269.98	EFFECTIVE DATE: MARCH 17, 2010
ELEV= 277.93	ELEV= 272.84	

NAD83 MS STATE PLANE

REVISIONS			
1	2	3	
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AutoZone Store No. 0152
WEST OF 1078 GLUCKSTADT RD MS 39110

GLUCKSTADT

GRADING PLAN

Owner / Developer: AUTOZONE STORES LLC
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL:(901) 495-8994 FAX: (901) 495-8969

For Bidding & Contractor Information Contact:
Dodge Data & Analytics. Tel. 413-930-4215
Cindy.searcy@construction.com

Civil Engineering Services
7705 Spicer Farm Lane
Fairview, Tennessee
37062
phone: (615) 533-0401
fax: (615) 523-8865
e-mail: ray@civilengineeringservices.net
Engineering, Environmental, Land Planning

10/08/2021

7N2

C2.0

Enclosure 4

NRCS Soils Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Madison County, Mississippi

Gluckstadt, MS

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:678 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Madison County, Mississippi
Survey Area Data: Version 16, Sep 8, 2021

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

Date(s) aerial images were photographed: Data not available.

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LoB2	Loring silt loam, 2 to 5 percent slopes, moderately eroded, central	0.1	7.9%
Oa	Oaklimeter silt loam, 0 to 2 percent slopes, occasionally flooded, north	1.1	92.1%
Totals for Area of Interest		**1.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Madison County, Mississippi

LoB2—Loring silt loam, 2 to 5 percent slopes, moderately eroded, central

Map Unit Setting

National map unit symbol: 2x0tr
Elevation: 170 to 660 feet
Mean annual precipitation: 52 to 58 inches
Mean annual air temperature: 60 to 66 degrees F
Frost-free period: 180 to 290 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Loring and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loring

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Noncalcareous loess

Typical profile

Ap - 0 to 5 inches: silt loam
Bt - 5 to 27 inches: silty clay loam
Btx - 27 to 56 inches: silt loam
C - 56 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 27 to 33 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 24 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Providence

Percent of map unit: 5 percent

Landform: Loess hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Memphis

Percent of map unit: 3 percent
Landform: Terraces, interfluves
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope, riser
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Grenada

Percent of map unit: 1 percent
Landform: Stream terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Byram

Percent of map unit: 1 percent
Landform: Loess hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Oa—Oaklimeter silt loam, 0 to 2 percent slopes, occasionally flooded, north

Map Unit Setting

National map unit symbol: 2x0th
Elevation: 110 to 390 feet
Mean annual precipitation: 54 to 59 inches
Mean annual air temperature: 59 to 65 degrees F
Frost-free period: 165 to 290 days
Farmland classification: Prime farmland if protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Oaklimeter and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Oaklimeter

Setting

Landform: Alluvial flats, flood plains
Landform position (three-dimensional): Talf, rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap - 0 to 6 inches: silt loam
Bw - 6 to 27 inches: silt loam
EBb - 27 to 52 inches: silt loam
Btgb - 52 to 70 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 13.6 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Gillsburg

Percent of map unit: 4 percent
Landform: Flood plains, alluvial flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ariel

Percent of map unit: 4 percent
Landform: Flood plains, alluvial flats
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rosebloom

Percent of map unit: 2 percent
Landform: Flood plains, alluvial flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Enclosure 5

Curve Number and Rainfall Reference Information

General Information
Homepage
Progress Reports
FAQ
Glossary

Precipitation Frequency
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Probable Maximum Precipitation
Documents

Miscellaneous
Publications
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Record Precipitation

Contact Us
Inquiries

NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: MS

Data description

Data type: Precipitation intensity **Units:** English **Time series type:** Partial duration

Select location

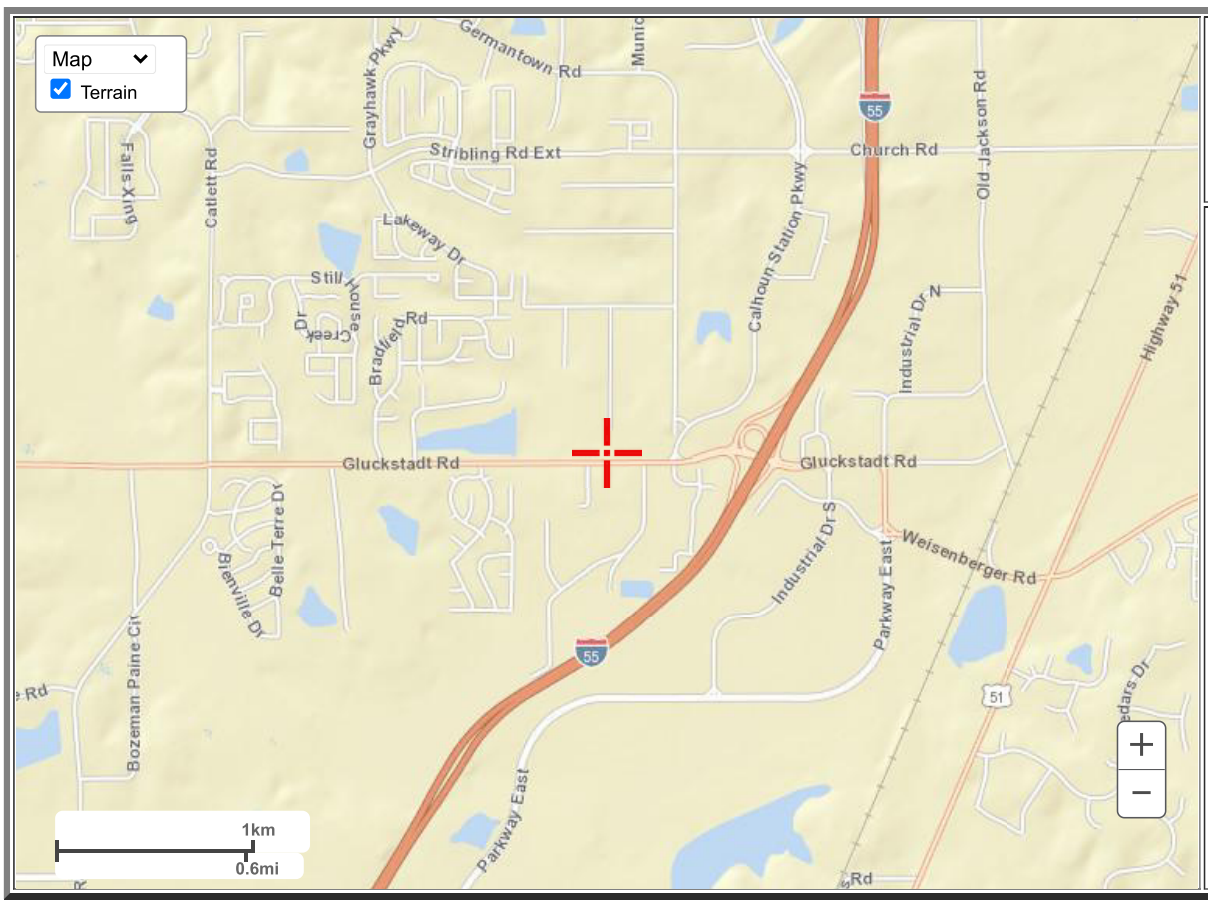
1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude: Longitude: Submit

b) By station (list of MS stations): Select station

c) By address 1078 Gluckstadt Rd, Madison, MS, 39

2) Use map (if ESRI interactive map is not loading, try adding the host: **https://js.arcgis.com/** to the firewall, or contact us at hdsc.questions@noaa.gov):



a) Select location
Move crosshair or double click

b) Click on station icon
Show stations on map

Location information:
Name: Madison, Mississippi, USA*
Latitude: 32.5174°
Longitude: -90.1100°
Elevation: 275.8 ft **

* Source: ESRI Maps
** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 9, Version 2

PF tabular PF graphical Supplementary information Print page

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**5.74** (4.93-6.72)	**6.52** (5.59-7.63)	**7.80** (6.67-9.17)	**8.88** (7.55-10.5)	**10.4** (8.53-12.6)	**11.6** (9.26-14.3)	**12.7** (9.86-16.2)	**13.9** (10.3-18.2)	**15.6** (11.1-20.9)	**16.8** (11.7-22.9)
10-min	**4.20** (3.61-4.92)	**4.78** (4.10-5.59)	**5.71** (4.89-6.71)	**6.50** (5.53-7.67)	**7.60** (6.25-9.26)	**8.46** (6.79-10.5)	**9.32** (7.22-11.8)	**10.2** (7.58-13.3)	**11.4** (8.12-15.3)	**12.3** (8.54-16.8)
15-min	**3.42** (2.94-4.00)	**3.88** (3.33-4.54)	**4.65** (3.97-5.46)	**5.29** (4.50-6.24)	**6.18** (5.08-7.52)	**6.88** (5.52-8.50)	**7.58** (5.87-9.61)	**8.30** (6.16-10.8)	**9.26** (6.60-12.4)	**9.99** (6.94-13.7)
30-min	**2.49** (2.14-2.92)	**2.84** (2.44-3.33)	**3.41** (2.91-4.00)	**3.88** (3.30-4.58)	**4.54** (3.73-5.52)	**5.05** (4.05-6.24)	**5.56** (4.30-7.05)	**6.08** (4.51-7.93)	**6.77** (4.83-9.09)	**7.30** (5.07-9.98)
60-min	**1.66** (1.42-1.94)	**1.89** (1.62-2.21)	**2.28** (1.95-2.68)	**2.61** (2.22-3.08)	**3.07** (2.52-3.75)	**3.43** (2.76-4.25)	**3.81** (2.95-4.83)	**4.19** (3.11-5.48)	**4.71** (3.36-6.33)	**5.11** (3.55-6.98)
2-hr	**1.03** (0.893-1.20)	**1.18** (1.02-1.37)	**1.43** (1.23-1.66)	**1.64** (1.40-1.92)	**1.93** (1.60-2.35)	**2.17** (1.76-2.67)	**2.42** (1.89-3.05)	**2.67** (2.00-3.47)	**3.02** (2.17-4.03)	**3.29** (2.30-4.46)
3-hr	**0.774** (0.671-0.896)	**0.884** (0.766-1.02)	**1.07** (0.925-1.25)	**1.23** (1.06-1.44)	**1.47** (1.22-1.78)	**1.66** (1.34-2.03)	**1.85** (1.45-2.33)	**2.05** (1.54-2.66)	**2.34** (1.69-3.11)	**2.56** (1.79-3.46)
6-hr	**0.463** (0.404-0.532)	**0.530** (0.462-0.610)	**0.645** (0.560-0.744)	**0.746** (0.644-0.864)	**0.892** (0.747-1.08)	**1.01** (0.826-1.23)	**1.13** (0.895-1.42)	**1.26** (0.957-1.63)	**1.45** (1.05-1.92)	**1.59** (1.12-2.13)
12-hr	**0.268** (0.235-0.306)	**0.308** (0.270-0.352)	**0.376** (0.328-0.431)	**0.435** (0.378-0.501)	**0.521** (0.439-0.623)	**0.590** (0.485-0.715)	**0.662** (0.526-0.823)	**0.738** (0.562-0.944)	**0.842** (0.616-1.11)	**0.925** (0.658-1.23)
24-hr	**0.155** (0.137-0.176)	**0.179** (0.158-0.203)	**0.219** (0.193-0.249)	**0.253** (0.221-0.290)	**0.302** (0.256-0.358)	**0.341** (0.281-0.409)	**0.380** (0.304-0.469)	**0.422** (0.323-0.535)	**0.478** (0.352-0.624)	**0.522** (0.374-0.692)
2-day	**0.090** (0.080-0.101)	**0.104** (0.092-0.117)	**0.126** (0.111-0.142)	**0.145** (0.127-0.164)	**0.171** (0.146-0.201)	**0.192** (0.159-0.228)	**0.213** (0.171-0.260)	**0.234** (0.180-0.294)	**0.262** (0.194-0.340)	**0.284** (0.205-0.375)
3-day	**0.066** (0.059-0.074)	**0.075** (0.067-0.085)	**0.090** (0.080-0.102)	**0.103** (0.091-0.117)	**0.121** (0.103-0.141)	**0.135** (0.112-0.160)	**0.149** (0.120-0.181)	**0.163** (0.126-0.204)	**0.182** (0.136-0.235)	**0.197** (0.143-0.259)
4-day	**0.054** (0.048-0.060)	**0.061** (0.054-0.068)	**0.072** (0.064-0.081)	**0.081** (0.072-0.092)	**0.095** (0.081-0.110)	**0.105** (0.088-0.124)	**0.115** (0.093-0.140)	**0.126** (0.098-0.158)	**0.141** (0.105-0.181)	**0.152** (0.110-0.199)
7-day	**0.036** (0.033-0.041)	**0.041** (0.036-0.045)	**0.047** (0.042-0.053)	**0.053** (0.047-0.059)	**0.061** (0.052-0.070)	**0.067** (0.056-0.078)	**0.073** (0.059-0.088)	**0.079** (0.062-0.098)	**0.087** (0.065-0.112)	**0.094** (0.068-0.122)
10-day	**0.029** (0.026-0.032)	**0.032** (0.029-0.035)	**0.037** (0.033-0.041)	**0.041** (0.037-0.046)	**0.047** (0.040-0.054)	**0.051** (0.043-0.060)	**0.056** (0.045-0.067)	**0.060** (0.047-0.074)	**0.066** (0.050-0.084)	**0.071** (0.052-0.091)
20-day	**0.019** (0.017-0.021)	**0.021** (0.019-0.023)	**0.024** (0.022-0.026)	**0.026** (0.024-0.029)	**0.030** (0.026-0.034)	**0.033** (0.028-0.038)	**0.035** (0.029-0.042)	**0.038** (0.030-0.046)	**0.041** (0.031-0.052)	**0.044** (0.032-0.057)
30-day	**0.015** (0.014-0.017)	**0.017** (0.015-0.018)	**0.019** (0.017-0.021)	**0.021** (0.019-0.023)	**0.024** (0.021-0.027)	**0.026** (0.022-0.030)	**0.028** (0.023-0.033)	**0.030** (0.024-0.037)	**0.033** (0.025-0.041)	**0.035** (0.026-0.044)
45-day	**0.013** (0.012-0.014)	**0.014** (0.013-0.015)	**0.016** (0.014-0.017)	**0.017** (0.016-0.019)	**0.020** (0.017-0.022)	**0.021** (0.018-0.024)	**0.023** (0.019-0.027)	**0.024** (0.019-0.029)	**0.026** (0.020-0.033)	**0.028** (0.021-0.035)
60-day	**0.011** (0.010-0.012)	**0.012** (0.011-0.013)	**0.014** (0.013-0.015)	**0.015** (0.014-0.017)	**0.017** (0.015-0.019)	**0.019** (0.016-0.021)	**0.020** (0.016-0.023)	**0.021** (0.017-0.025)	**0.023** (0.017-0.028)	**0.024** (0.018-0.030)

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

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

Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format: Precipitation frequency estimates Submit

Rational Method
c values
from Autodesk Storm and Sanitary Sewer Analysis

Land Use	Return Period	A(0-2%)	A(2-6%)	A(6%+)	B(0-2%)	B(2-6%)	B(6%+)	C(0-2%)	C(2-6%)	C(6%+)	D(0-2%)	D(2-6%)	D(6%+)
Cultivated Land	less than 25 years	0.08	0.13	0.16	0.11	0.15	0.21	0.14	0.19	0.26	0.18	0.23	0.31
Cultivated Land	25 years or greater	0.14	0.18	0.22	0.16	0.21	0.28	0.20	0.25	0.34	0.24	0.29	0.41
Pasture	less than 25 years	0.12	0.20	0.30	0.18	0.28	0.37	0.24	0.34	0.44	0.30	0.40	0.50
Pasture	25 years or greater	0.15	0.25	0.37	0.23	0.34	0.45	0.30	0.42	0.52	0.37	0.50	0.62
Meadow	less than 25 years	0.10	0.16	0.25	0.14	0.22	0.30	0.20	0.28	0.36	0.24	0.30	0.40
Meadow	25 years or greater	0.14	0.22	0.30	0.20	0.28	0.37	0.26	0.35	0.44	0.30	0.40	0.50
Forest	less than 25 years	0.05	0.08	0.11	0.08	0.11	0.14	0.10	0.13	0.16	0.12	0.16	0.20
Forest	25 years or greater	0.08	0.11	0.14	0.10	0.14	0.18	0.12	0.16	0.20	0.15	0.20	0.25
Residential Lot Size 1/8 Acre	less than 25 years	0.25	0.28	0.31	0.27	0.30	0.35	0.30	0.33	0.38	0.33	0.36	0.42
Residential Lot Size 1/8 Acre	25 years or greater	0.33	0.37	0.40	0.35	0.39	0.44	0.38	0.42	0.49	0.41	0.45	0.54
Residential Lot Size 1/4 Acre	less than 25 years	0.22	0.26	0.29	0.24	0.29	0.33	0.27	0.31	0.36	0.30	0.34	0.40
Residential Lot Size 1/4 Acre	25 years or greater	0.30	0.34	0.37	0.33	0.37	0.42	0.36	0.40	0.47	0.38	0.42	0.52
Residential Lot Size 1/3 Acre	less than 25 years	0.19	0.23	0.26	0.22	0.26	0.30	0.25	0.29	0.34	0.28	0.32	0.39
Residential Lot Size 1/3 Acre	25 years or greater	0.28	0.32	0.35	0.30	0.35	0.39	0.33	0.38	0.45	0.36	0.40	0.50
Residential Lot Size 1/2 Acre	less than 25 years	0.16	0.20	0.24	0.19	0.23	0.28	0.22	0.27	0.32	0.26	0.30	0.37
Residential Lot Size 1/2 Acre	25 years or greater	0.25	0.29	0.32	0.28	0.32	0.36	0.31	0.35	0.42	0.34	0.38	0.48
Residential Lot Size 1 Acre	less than 25 years	0.14	0.19	0.22	0.17	0.21	0.26	0.20	0.25	0.31	0.24	0.29	0.35
Residential Lot Size 1 Acre	25 years or greater	0.22	0.26	0.29	0.24	0.28	0.34	0.28	0.32	0.40	0.31	0.35	0.46
Industrial	less than 25 years	0.67	0.68	0.68	0.68	0.68	0.69	0.68	0.69	0.69	0.69	0.69	0.70
Industrial	25 years or greater	0.85	0.85	0.86	0.85	0.86	0.86	0.86	0.86	0.87	0.86	0.86	0.88
Commercial	less than 25 years	0.71	0.71	0.72	0.71	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Commercial	25 years or greater	0.88	0.88	0.89	0.89	0.89	0.89	0.89	0.89	0.90	0.89	0.89	0.90
Streets	less than 25 years	0.70	0.71	0.72	0.71	0.72	0.74	0.72	0.73	0.76	0.73	0.75	0.78
Streets	25 years or greater	0.76	0.77	0.79	0.80	0.82	0.84	0.84	0.85	0.89	0.89	0.91	0.95
Open Space	less than 25 years	0.05	0.10	0.14	0.08	0.13	0.19	0.12	0.17	0.24	0.16	0.21	0.28
Open Space	25 years or greater	0.11	0.16	0.20	0.14	0.19	0.26	0.18	0.23	0.32	0.22	0.27	0.39
Parking	less than 25 years	0.85	0.86	0.87	0.85	0.86	0.87	0.85	0.86	0.87	0.85	0.86	0.87
Parking	25 years or greater	0.95	0.96	0.97	0.95	0.96	0.97	0.95	0.96	0.97	0.95	0.96	0.97

Enclosure 6

Curve Number Calculations

Gluckstadt, MS **AutoZone** **11/16/2021**

Existing Conditions

	Area (sq.ft.)	Area (acres)	Rational c
-	0	0.000	0.00
-	0	0.000	0.00
lawn	43,390	0.996	0.18
woods	7,312	0.168	0.12
paved	0	0.000	0.95
total	50,702	1.164	0.17

Proposed Conditions

	Area (sq.ft.)	Area (acres)	Rational c
pond area	4,986	0.114	0.80
bypass area	11,410	0.262	0.20
lawn	1,886	0.043	0.18
woods	6,969	0.160	0.12
paved	25,451	0.584	0.95
total	50,702	1.164	0.62

Enclosure 7

Rational Method Runoff & Detention Calculations

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 2 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.155	0.797
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.061	0.020
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

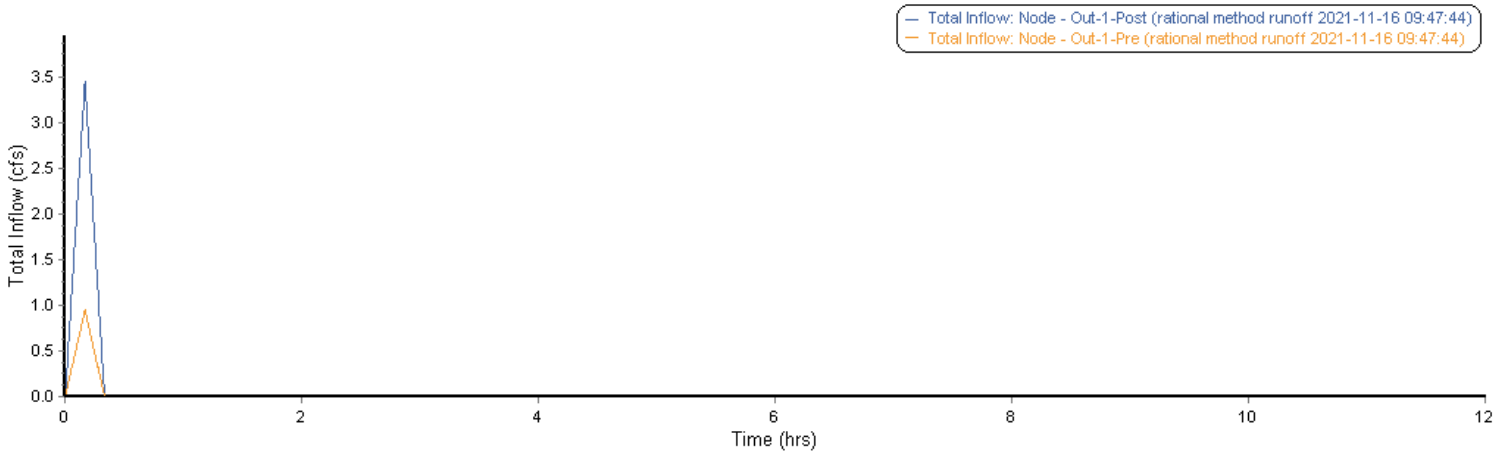
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	0.80	4.78	0.49	3.45	0.620	0	00:10:00
DA#1-Pre	0.80	4.78	0.14	0.95	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:47:42 2021
Analysis ended on: Tue Nov 16 09:47:43 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:47:44)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:47:44)
Total Inflow (cfs)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 10 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.210	1.083
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.082	0.027
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

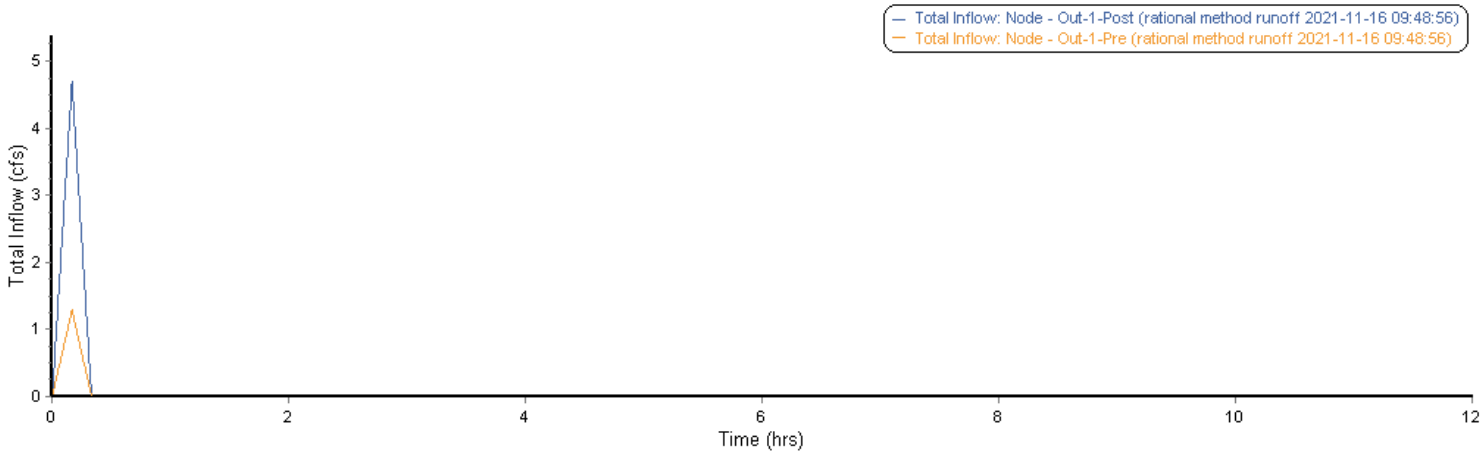
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.08	6.50	0.67	4.69	0.620	0	00:10:00
DA#1-Pre	1.08	6.50	0.18	1.29	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:48:53 2021
Analysis ended on: Tue Nov 16 09:48:54 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:48:56)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:48:56)
Total Inflow (cfs)
0
1
2
3
4
5
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 25 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.246	1.267
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.096	0.031
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

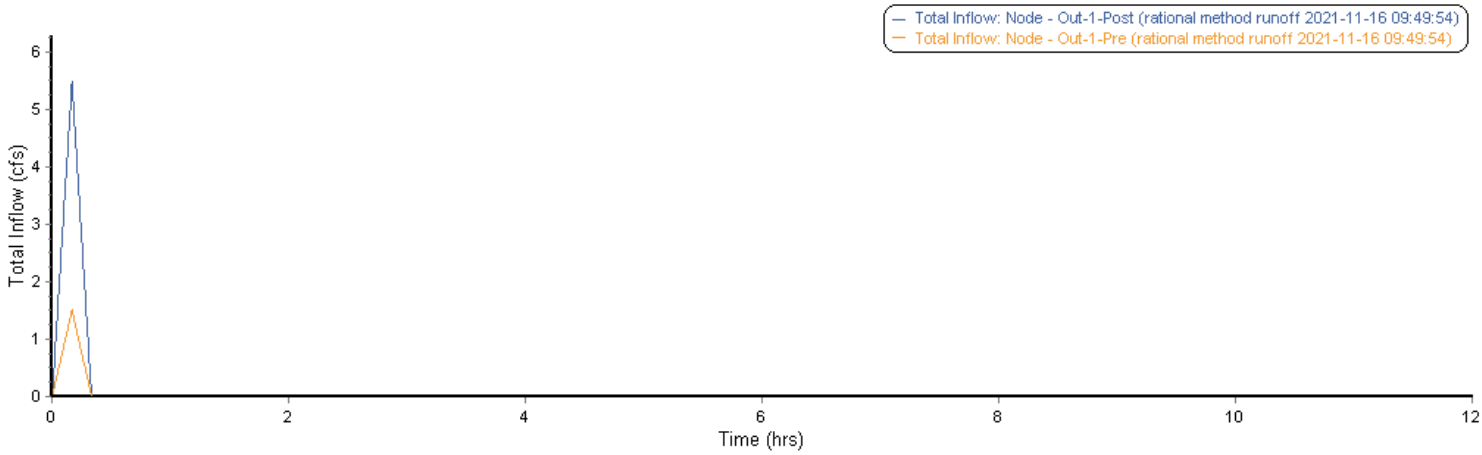
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.27	7.60	0.79	5.48	0.620	0	00:10:00
DA#1-Pre	1.27	7.60	0.22	1.50	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:49:52 2021
Analysis ended on: Tue Nov 16 09:49:53 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:49:54)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:49:54)
Total Inflow (cfs)
0
1
2
3
4
5
6
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 50 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.274	1.410
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.107	0.035
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

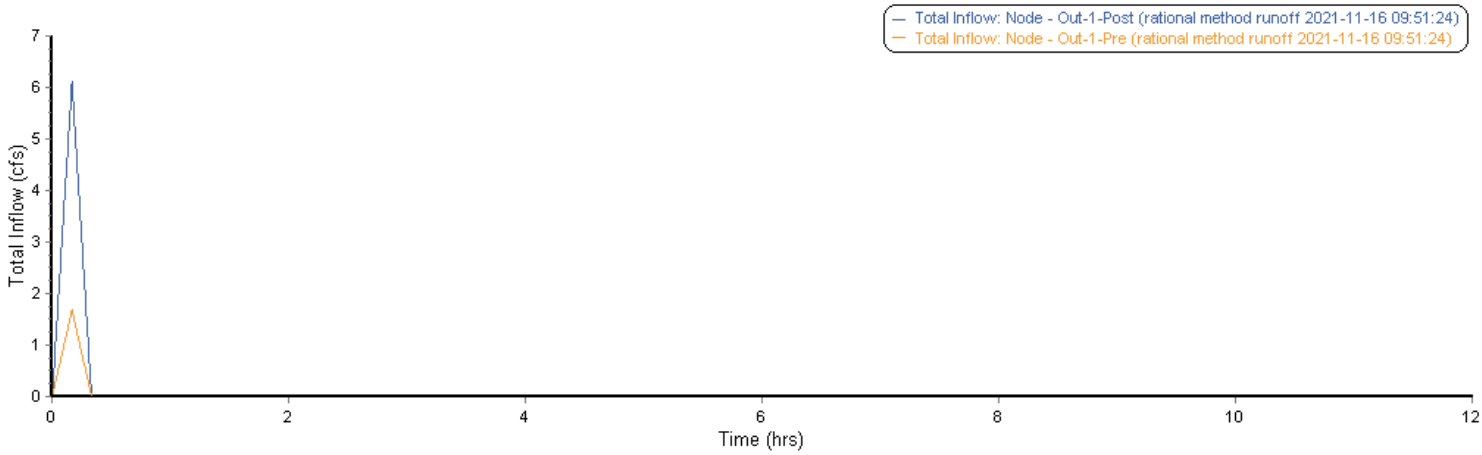
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.41	8.46	0.87	6.11	0.620	0	00:10:00
DA#1-Pre	1.41	8.46	0.24	1.67	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:51:21 2021
Analysis ended on: Tue Nov 16 09:51:23 2021
Total elapsed time: 00:00:02


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:51:24)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:51:24)
Total Inflow (cfs)
0
1
2
3
4
5
6
7
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method runoff.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 100 years
Storm Duration..... 5 min
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 2
Number of nodes 2
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000
DA#1-Pre	50701.81	100.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Out-1-Post	OUTFALL	268.75	268.75	0.00	
Out-1-Pre	OUTFALL	268.75	268.75	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.301	1.553
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.118	0.038
Initial Stored Volume	0.000	0.000

Final Stored Volume 0.000 0.000
Continuity Error (%) 0.000

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Subbasin DA#1-Pre

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	43389.81	C (0-2%)	0.18
Forest, 25 years or greater	7311.95	C (0-2%)	0.12
Composite Area & Weighted Runoff Coeff.	50701.76		0.17

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

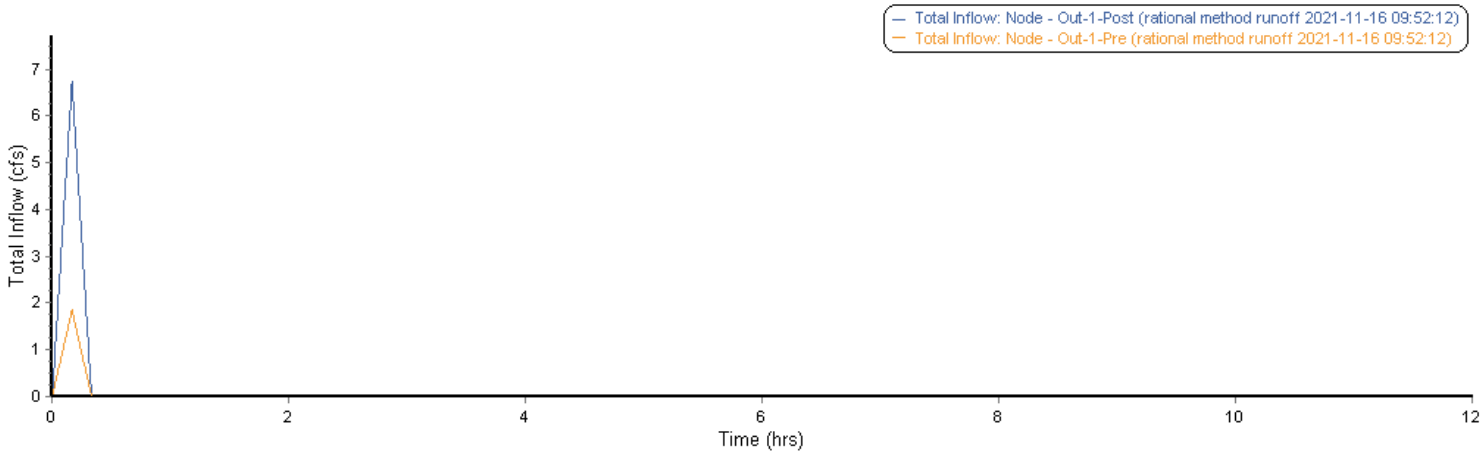
Subbasin DA#1-Pre

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.55	9.32	0.96	6.73	0.620	0	00:10:00
DA#1-Pre	1.55	9.32	0.26	1.84	0.170	0	00:10:00

Analysis began on: Tue Nov 16 09:52:10 2021
Analysis ended on: Tue Nov 16 09:52:11 2021
Total elapsed time: 00:00:01


Total Inflow: Node - Out-1-Post (rational method runoff 2021-11-16 09:52:12)
Total Inflow: Node - Out-1-Pre (rational method runoff 2021-11-16 09:52:12)
Total Inflow (cfs)
0
1
2
3
4
5
6
7
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 2 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.077	0.797
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.048	0.015
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	0.80	4.78	0.49	3.45	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.52	0.76	269.76	0	00:17	0	0	0:00:00
Out-1-Post	0.02	0.26	269.01	0	00:17	0	0	0:00:00
Stor-01	0.09	1.93	271.43	0	00:17	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	0.88	0	00:17	0.00		
Out-1-Post	OUTFALL	0.00	0.88	0	00:17	0.00		
Stor-01	STORAGE	3.45	3.45	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	1.393	12	0	00:17	0.050	0	0.88	0.00	0:00:00	0.000

```
  **********************
  Outfall Loading Summary
  **********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post              9.80      0.49      0.88
  ------------------------------------------------
  System                  9.80      0.49      0.88


  *****************
  Link Flow Summary
  *****************

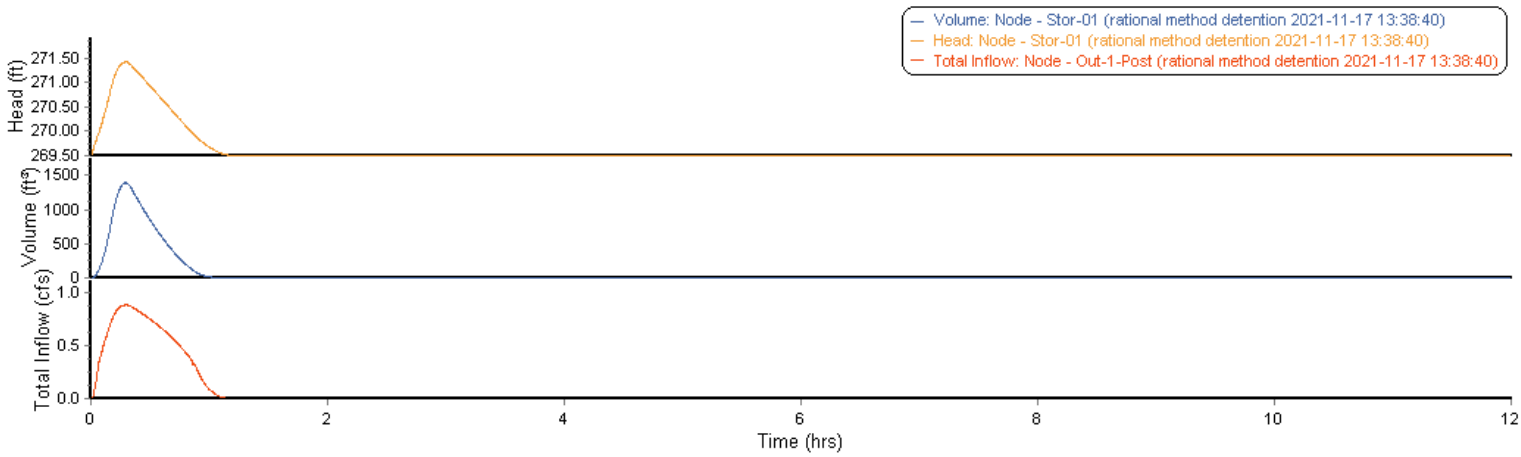
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:17      4.24    1.00        0.88       13.29      0.07
0.17           0  Calculated
  Orifice-01           ORIFICE      0  00:17                          0.88
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:38:38 2021
  Analysis ended on:  Wed Nov 17 13:38:39 2021
  Total elapsed time: 00:00:01
```


Volume: Node - Stor-01 (rational method detention 2021-11-17 13:38:40)
Head: Node - Stor-01 (rational method detention 2021-11-17 13:38:40)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:38:40)
Head (ft)
271.50
271.00
270.50
270.00
269.50
Volume (ft³)
1500
1000
500
0
Total Inflow (cfs)
1.0
0.5
0.0
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 10 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.105	1.083
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.065	0.021
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.08	6.50	0.67	4.69	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.52	0.78	269.78	0	00:18	0	0	0:00:00
Out-1-Post	0.02	0.28	269.03	0	00:18	0	0	0:00:00
Stor-01	0.13	2.40	271.90	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	0.99	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	0.99	0	00:18	0.00		
Stor-01	STORAGE	4.69	4.69	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	2.033	18	0	00:18	0.085	1	0.99	0.00	0:00:00	0.000

```
  ***********************
  Outfall Loading Summary
  ***********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post            11.41      0.57      0.99
  ------------------------------------------------
  System                11.41      0.57      0.99


  *****************
  Link Flow Summary
  *****************

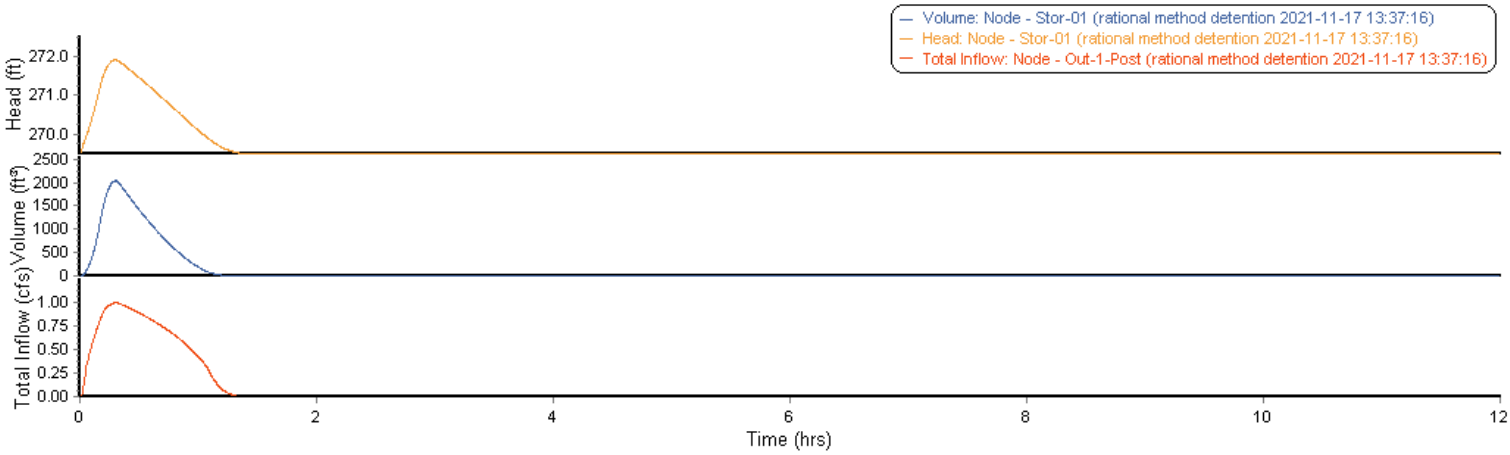

------------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

------------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.42    1.00        0.99       13.29      0.07
0.18           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          0.99
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:37:13 2021
  Analysis ended on:  Wed Nov 17 13:37:14 2021
  Total elapsed time: 00:00:01
```


Volume: Node - Stor-01 (rational method detention 2021-11-17 13:37:16)
Head: Node - Stor-01 (rational method detention 2021-11-17 13:37:16)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:37:16)
Head (ft)
272.0
271.0
270.0
Volume (ft³)
2500
2000
1500
1000
500
0
Total Inflow (cfs)
1.00
0.75
0.50
0.25
0.00
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 25 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary
****

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.123	1.267
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.076	0.025
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Runoff Coefficient Computations Report
****

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

****
Kirpich Time of Concentration Computations Report
****

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.27	7.60	0.79	5.48	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.53	0.79	269.79	0	00:18	0	0	0:00:00
Out-1-Post	0.03	0.29	269.04	0	00:18	0	0	0:00:00
Stor-01	0.16	2.67	272.17	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	1.05	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	1.05	0	00:18	0.00		
Stor-01	STORAGE	5.48	5.48	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	2.454	21	0	00:18	0.112	1	1.05	0.00	0:00:00	0.000

```
  ***********************
  Outfall Loading Summary
  ***********************

  -----------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  -----------------------------------------------
  Out-1-Post            12.38      0.62      1.05
  -----------------------------------------------
  System                12.38      0.62      1.05


  *****************
  Link Flow Summary
  *****************

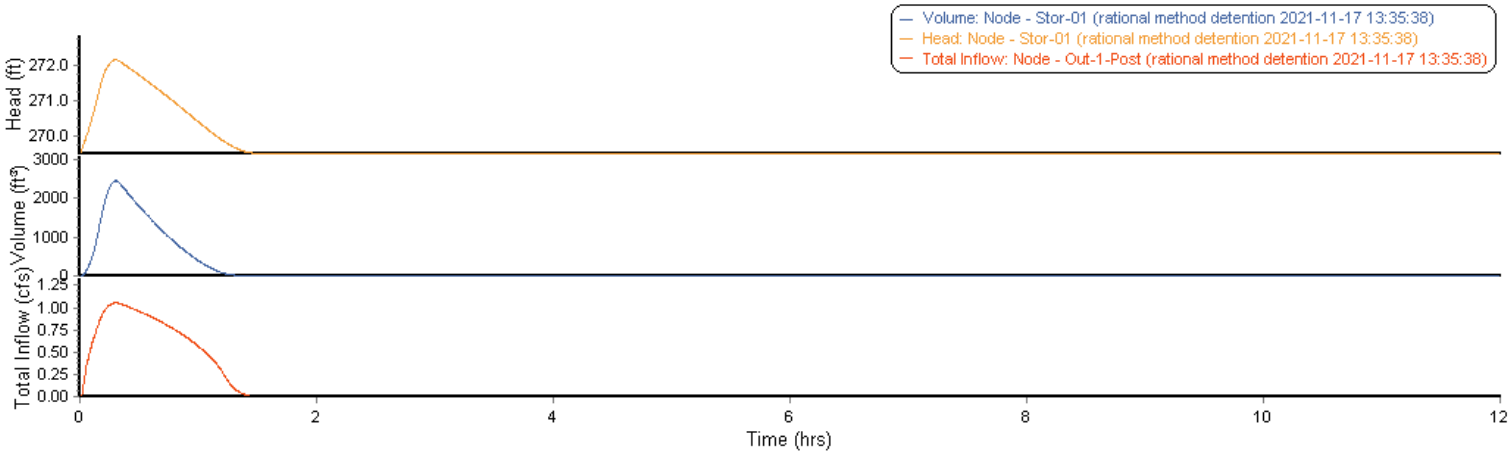
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.50    1.00        1.05       13.29      0.08
0.19           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          1.05
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:35:36 2021
  Analysis ended on:  Wed Nov 17 13:35:37 2021
  Total elapsed time: 00:00:01
```


Volume: Node - Stor-01 (rational method detention 2021-11-17 13:35:38)
Head: Node - Stor-01 (rational method detention 2021-11-17 13:35:38)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:35:38)
Head (ft)
272.0
271.0
270.0
Volume (ft³)
3000
2000
1000
0
Total Inflow (cfs)
1.25
1.00
0.75
0.50
0.25
0.00
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 50 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.137	1.410
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.084	0.027
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.41	8.46	0.87	6.11	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.53	0.79	269.79	0	00:18	0	0	0:00:00
Out-1-Post	0.03	0.29	269.04	0	00:18	0	0	0:00:00
Stor-01	0.18	2.86	272.36	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	1.09	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	1.09	0	00:18	0.00		
Stor-01	STORAGE	6.11	6.11	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	2.787	24	0	00:18	0.136	1	1.09	0.00	0:00:00	0.000

```
  ***********************
  Outfall Loading Summary
  ***********************

  -----------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  -----------------------------------------------
  Out-1-Post            13.11      0.65      1.09
  -----------------------------------------------
  System                13.11      0.65      1.09


  *****************
  Link Flow Summary
  *****************

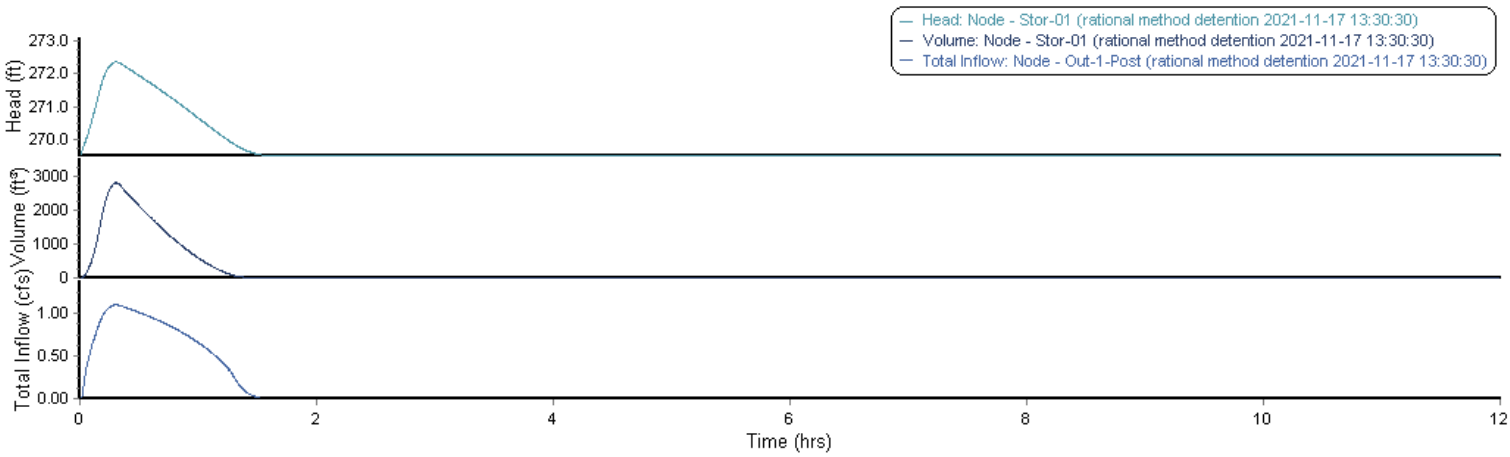
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.55    1.00        1.09       13.29      0.08
0.19           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          1.09
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:30:28 2021
  Analysis ended on:  Wed Nov 17 13:30:29 2021
  Total elapsed time: 00:00:01
```


Head: Node - Stor-01 (rational method detention 2021-11-17 13:30:30)
Volume: Node - Stor-01 (rational method detention 2021-11-17 13:30:30)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:30:30)
Head (ft)
273.0
272.0
271.0
270.0
Volume (ft³)
3000
2000
1000
0
Total Inflow (cfs)
1.00
0.50
0.00
0
2
4
6
8
10
12
Time (hrs)

Autodesk® Storm and Sanitary Analysis 2016 - Version 12.0.42 (Build 0)

****
Project Description
****
File Name ..... rational method detention.SPF

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Modified Rational
Time of Concentration..... Kirpich
Return Period..... 100 years
Storm Duration..... 5 min
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. None
Starting Date MAR-15-2021 00:00:00
Ending Date MAR-15-2021 12:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 1
Number of nodes 3
Number of links 3

****
Subbasin Summary
****

Subbasin ID	Total Area ft²	Flow Length ft	Average Slope %
DA#1-Post	50701.81	200.00	2.0000

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-01	JUNCTION	269.00	274.90	0.00	
Out-1-Post	OUTFALL	268.75	270.25	0.00	
Stor-01	STORAGE	269.50	275.50	0.00	

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
Culvert-01	Jun-01	Out-1-Post	CONDUIT	55.0	1.3636	0.0120
Orifice-01	Stor-01	Jun-01	ORIFICE			
Weir-01	Stor-01	Jun-01	WEIR			

****

Cross Section Summary

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
Culvert-01	CIRCULAR	1.50	1.50	1	1.77	0.38	13.29

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	0.151	1.553
Continuity Error (%)	1.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	0.093	0.030
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

Runoff Coefficient Computations Report

Subbasin DA#1-Post

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Open Space, 25 years or greater	1886.01	C (0-2%)	0.18
Forest, 25 years or greater	6968.96	C (0-2%)	0.12
Parking, 25 years or greater	25450.92	C (0-2%)	0.95
Pond-Area	4985.99	C (0-2%)	0.80
Bypass-Area	11409.97	C (0-2%)	0.18
Composite Area & Weighted Runoff Coeff.	50701.85		0.62

Kirpich Time of Concentration Computations Report

Tc = (0.0078 * (L^0.77) * (S^-0.385))

Where:

Tc = Time of Concentration (min)
L = Flow length (ft)
S = Slope (ft/ft)

Subbasin DA#1-Post

User-Defined TOC override (minutes): 10.00

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DA#1-Post	1.55	9.32	0.96	6.73	0.620	0	00:10:00

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-01	0.53	0.80	269.80	0	00:18	0	0	0:00:00
Out-1-Post	0.03	0.30	269.05	0	00:18	0	0	0:00:00
Stor-01	0.21	3.05	272.55	0	00:18	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-01	JUNCTION	0.00	1.13	0	00:18	0.00		
Out-1-Post	OUTFALL	0.00	1.13	0	00:18	0.00		
Stor-01	STORAGE	6.73	6.73	0	00:10	0.00		

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days	Time of Max Ponded Volume hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Stor-01	3.124	27	0	00:18	0.161	1	1.13	0.00	0:00:00	0.000

```
  **********************
  Outfall Loading Summary
  **********************

  ------------------------------------------------
  Outfall Node ID        Flow   Average      Peak
                    Frequency      Flow    Inflow
                          (%)       cfs       cfs
  ------------------------------------------------
  Out-1-Post            13.81      0.68      1.13
  ------------------------------------------------
  System                13.81      0.68      1.13


  *****************
  Link Flow Summary
  *****************

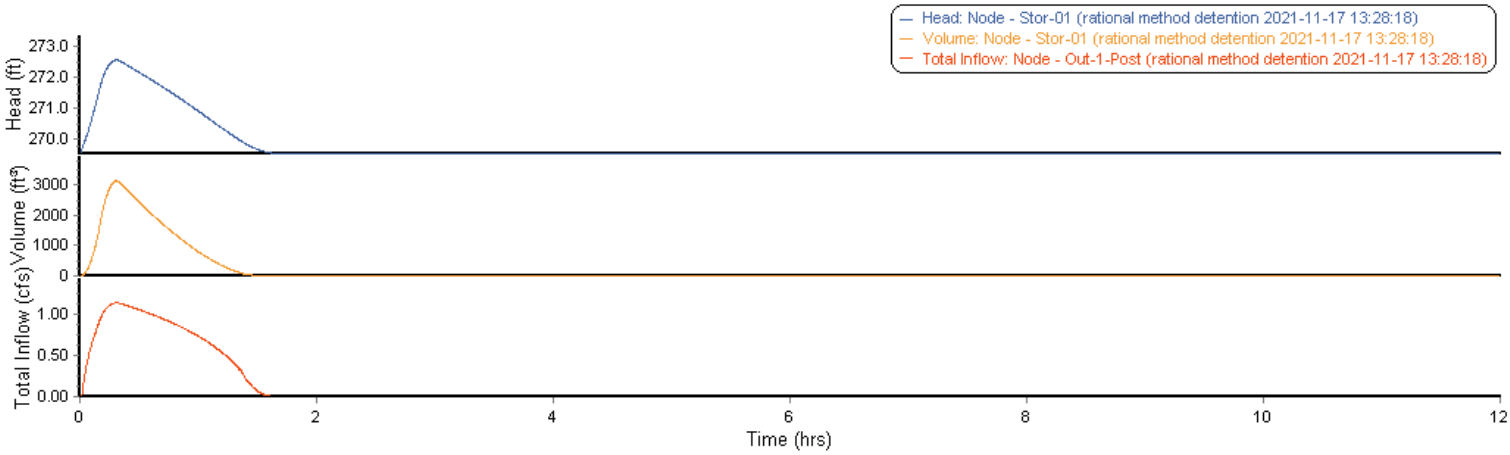
-------------------------------------------------------------------------------------------------------
--------------------------------
  Link ID              Element       Time of   Maximum  Length   Peak Flow      Design  Ratio of
Ratio of       Total  Reported
                       Type        Peak Flow  Velocity  Factor      during        Flow   Maximum
Maximum        Time  Condition
                                  Occurrence  Attained            Analysis    Capacity   /Design
Flow  Surcharged
                                  days hh:mm    ft/sec                 cfs         cfs      Flow
Depth     minutes

-------------------------------------------------------------------------------------------------------
--------------------------------
  Culvert-01           CONDUIT      0  00:18      4.59    1.00        1.13       13.29      0.09
0.20           0  Calculated
  Orifice-01           ORIFICE      0  00:18                          1.13
0.00
  Weir-01              WEIR         0  00:00                          0.00
0.00


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  WARNING 107 : Initial water surface elevation defined for Junction Jun-01 is below junction
invert elevation.
                Assumed initial water surface elevation equal to invert elevation.
  WARNING 108 : Surcharge elevation defined for Junction Jun-01 is below junction maximum
elevation. Assumed surcharge elevation equal to maximum elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height
dimensions for Node Jun-01.

  Analysis began on:  Wed Nov 17 13:28:15 2021
  Analysis ended on:  Wed Nov 17 13:28:16 2021
  Total elapsed time: 00:00:01
```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Volume: Node - Stor-01 (rational method detention 2021-11-17 13:28:18)
Total Inflow: Node - Out-1-Post (rational method detention 2021-11-17 13:28:18)
Head (ft)
273.0
272.0
271.0
270.0
Volume (ft³)
3000
2000
1000
0
Total Inflow (cfs)
1.00
0.50
0.00
0
2
4
6
8
10
12
Time (hrs)

Enclosure 8

Pipe Capacity Calculations

Gluckstadt, MS **AutoZone** **11/16/2021**

24-hour storm event precipitation

Catchment	Drain Area 1 (sf)	runoff C Area 1	Drain Area 2 (sf)	runoff C Area 2	Total Area (acres)	weighted C	actual Tc (min)	chosen Tc (min)	rainfall I (10) (in/hr)	rainfall I (25) (in/hr)	rainfall I (50) (in/hr)	rainfall I (100) (in/hr)	runoff Q (10) (cfs)	runoff Q (25) (cfs)	runoff Q (50) (cfs)	runoff Q (100) (cfs)
SW Area Inlet	1,115	0.18	5280	0.95	**0.15**	**0.82**	10.0	**10.0**	**6.50**	**7.60**	**8.46**	**9.32**	**0.78**	**0.91**	**1.01**	**1.12**
SE Curb Inlet	1,052	0.18	6750	0.95	**0.18**	**0.85**	10.0	**10.0**	**6.50**	**7.60**	**8.46**	**9.32**	**0.99**	**1.15**	**1.28**	**1.41**
NE Curb Inlet	0	0.18	5740	0.95	**0.13**	**0.95**	10.0	**10.0**	**6.50**	**7.60**	**8.46**	**9.32**	**0.81**	**0.95**	**1.06**	**1.17**

Catchment	runoff Q (25) (cfs)	Catch Basin efficiency	captured flow (cfs)	cumulat. Q (25) (cfs)	Pipe Out Desig.	U.S. Invert Elev.	D.S. Invert Elev.	Pipe Length (ft)	Pipe slope %	Pipe Size (inches)	U.S. Grade at CB	Cover over pipe (ft)	D.S. Grade at CB	Cover over pipe (ft)	Full Flow (cfs)	Q / Qfull	velocity (fps)	bypass flow (cfs)
SW Area Inlet	**0.91**	100.0%	**0.91**	**0.91**		272.63	271.55	108.0	1.00%	18	275.63	1.3	273.99	0.7	11.8	0.1	2.6	0.00
SE Curb Inlet	**1.15**	100.0%	**1.15**	**2.06**		271.55	270.75	76.0	1.05%	18	273.99	0.7	274.45	1.9	12.0	0.2	4.0	0.00
NE Curb Inlet	**0.95**	100.0%	**0.95**	**3.01**	to pond	270.75	270.00	70.0	1.07%	18	274.45	1.9	272.00	0.3	12.0	0.3	5.2	0.00

Madison County, MS
I CERTIFY THIS INSTRUMENT FILED/RECORDED
8/17/2022 11:03:55 AM
INST. 963795 PAGE 1 OF 3
BOOK W - 4248/296
WITNESS MY HAND AND SEAL
Ronny Lott, C.C. BY: DA D.C.

PREPARED BY AND RETURN TO:

Gardner Richey (MS Bar #: 105292)
Maples & Richey, PLLC
801 Baptist Drive, Suite 203
Madison, Mississippi 39110
Phone: (601) 707-4114

INDEXING INSTRUCTIONS:

SE 1/4 of Section 20, T8N, R2E
Madison County, Mississippi

Parcel #: 082D-20-002/01.00

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of Ten Dollars and No/100 ($10.00), cash in hand paid, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

Cliff Smith and Charlotte T. Smith ("Grantor")
104 Sumter Court, Madison, MS 39110
Phone: 601-940-6520

does hereby GRANT, BARGAIN, SELL, CONVEY AND WARRANT to

AutoZone Mississippi Properties, LLC, a Nevada limited liability company ("Grantee")
123 S. Front Street, 3rd Floor, Memphis, TN 38103
Phone: 901-495-6500

the following described land (the "Property"), situated, lying and being in **Madison County**, Mississippi, to-wit:

See Exhibit A attached hereto and made a part hereof.

TOGETHER WITH all improvements and appurtenances, with every privilege, right, title, interest and estate, reversion, remainder, and easement thereto belonging or in anyway appertaining, to have and to hold the same in fee simple forever.

This conveyance and the warranty hereof are SUBJECT TO (a) ad valorem real property taxes and assessments for the current and subsequent years; (b) all zoning, environmental and other building and other regulations, laws, ordinances, orders, rules, permits, restrictions, codes and requirements of any governmental authorities, federal, state, county, local or otherwise; and (c) all covenants, conditions, restrictions, reservations (including prior oil, gas, mineral and royalty reservations), severances, easements, rights of way, leases or any other encumbrance or limitation of record, if any.

Current ad valorem taxes on the Property having been prorated, Grantee hereby assumes payment of all ad valorem real property taxes and assessments on the Property for the current year and subsequent years.

The terms "Grantor" and "Grantee" are used for singular or plural, as context requires, and include the respective heirs, personal representatives, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, Grantor has signed this Warranty Deed on the date acknowledged below.

GRANTOR:

Cliff Smith

Charlotte T. Smith

STATE OF MS
COUNTY OF Madison

Personally appeared before me, the undersigned authority in and for the said county and state, on this 16th day of August, 2022, within my jurisdiction, the within named Cliff Smith and Charlotte T. Smith, who acknowledged that they executed the above and foregoing instrument.

Notary Public

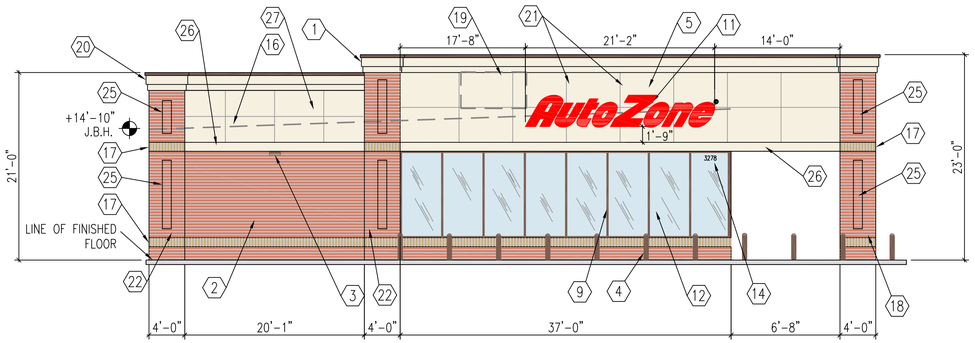
STATE OF MISSISSIPPI
John David Harrison
NOTARY PUBLIC
ID No. 168764
My Comm. Expires
Dec. 26, 2023
HINDS COUNTY

Section 4, IB)

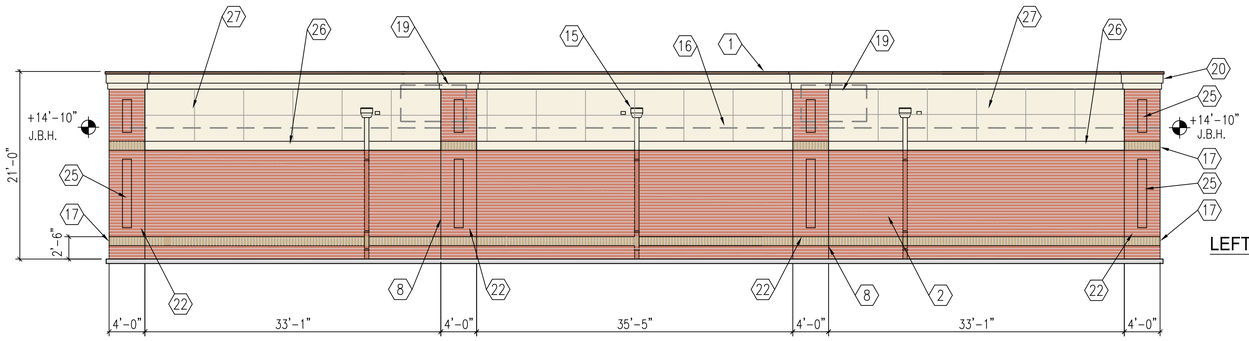
EXHIBIT A
LEGAL DESCRIPTION

A PARCEL OF LAND CONTAINING 1.16 ACRES, MORE OR LESS, SITUATED IN THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 8 NORTH, RANGE 2 EAST, MADISON COUNTY, MISSISSIPPI AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

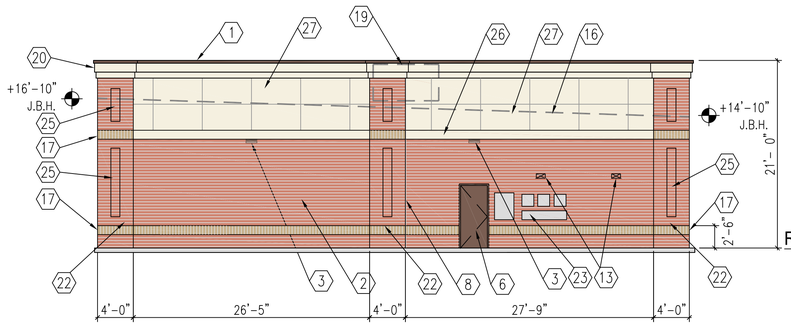
BEGIN AT A FOUND IRON PIN IN THE NEW NORTHERN RIGHT OF WAY LINE OF GLUCKSTADT ROAD WHICH IS 2620.57 FEET SOUTH OF AND 1425.29 FEET EAST OF THE NORTHWEST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION 20, AS SHOWN ON ATTACHED SURVEY AND RUN THENCE SOUTH 89 DEGREES 30 MINUTES 58 SECONDS WEST ALONG SAID NORTHERN RIGHT OF WAY LINE FOR A DISTANCE OF 160.00 FEET TO A FOUND IRON PIN; LEAVING SAID NEW RIGHT OF WAY LINE, RUN THENCE NORTH 00 DEGREES 19 MINUTES 46 SECONDS WEST FOR A DISTANCE OF 349.28 FEET TO A FOUND IRON PIN; THENCE SOUTH 69 DEGREES 43 MINUTES 45 SECONDS EAST FOR A DISTANCE OF 68.24 FEET; THENCE SOUTH 66 DEGREES 15 MINUTES 08 SECONDS EAST FOR A DISTANCE OF 99.48 FEET; THENCE SOUTH 63 DEGREES 08 MINUTES 15 SECONDS EAST FOR A DISTANCE OF 5.89 FEET; THENCE SOUTH 00 DEGREES 19 MINUTES 46 SECONDS EAST ALONG THE EDGE OF CONCRETE PARKING AND A PROJECTION THEREOF FOR A DISTANCE OF 281.57 FEET TO THE POINT OF BEGINNING.



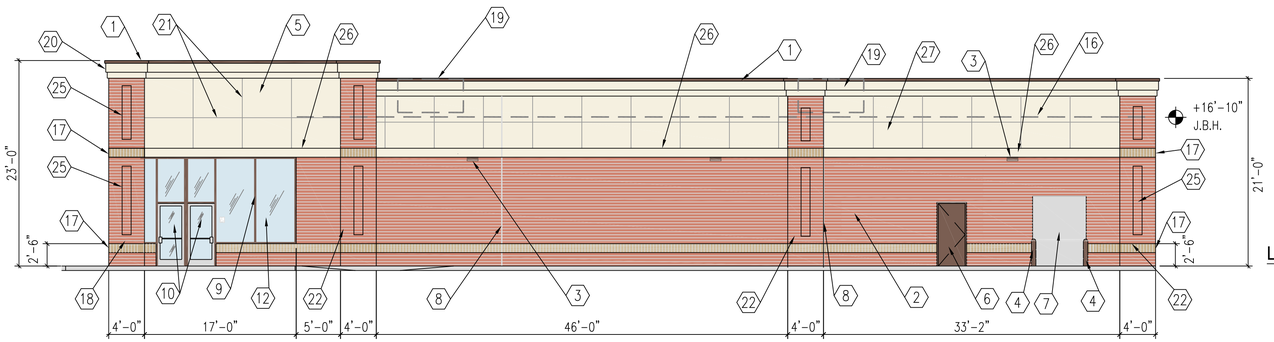
FRONT WALL (South View)
Gluckstadt Road



LEFT SIDE WALL (West View)

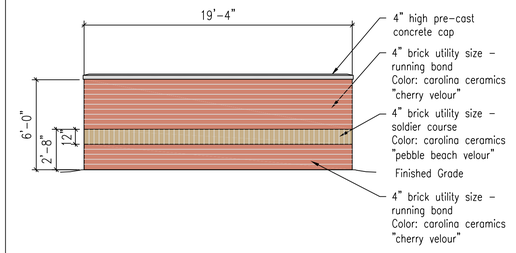


REAR WALL (North View)

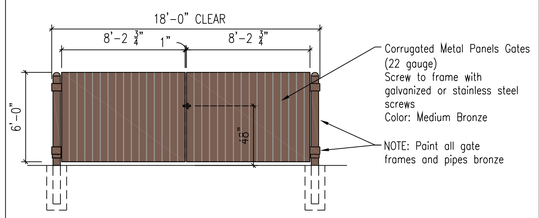


LEFT SIDE WALL (South View)

1 | BUILDING ELEVATIONS



3 | DUMPSTER WALL ELEVATIONS



3 | GATE DETAIL DUMPSTER ENCLOSURE

BRICK COLORS:

FIELD BRICK RUNNING BOND - UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

STACKED BRICK - UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

SOLDIER COURSE BRICK - UTILITY SIZE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

J.B.H. = JOIST BEARING HEIGHT

1 PREFINISHED TWO PIECE COMPRESSION TRIM
COLOR: DURO-LAST "DARK BRONZE"

2 BRICK UTILITY SIZE - RUNNING BOND
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

3 WALL MOUNTED LIGHT FIXTURE - DARK BRONZE FINISH

4 PIPE GUARD WITH ARCHITECTURAL BROWN SLEEVE

5 STUCCO FINISH
COLOR: SW#6091 RELIABLE WHITE

6 PAINT MAN DOOR & METAL FRAMES DARK BRONZE

7 PAINT OVERHEAD DOOR & ANGLES DARK BRONZE

8 EXPANSION JOINT

9 ALUMINUM STOREFRONT - DARK BRONZE FINISH

10 GLASS AND ALUMINUM DOORS - CLEAR ANODIZED FINISH

11 FRONT WALL SIGN - 42" RED CHANNEL LETTERS

12 ALUMINUM STOREFRONT - DARK BRONZE FACTORY FINISH WITH TINTED GRAY GLASS

13 TOILET WALL VENTS PAINT TO MATCH WALL

14 STORE ADDRESS - 6" WHITE REFLECTIVE NUMBERS

15 SCUPPERS AND DOWNSPOUTS. PAINTED TO MATCH BACKGROUND WALL COLOR. ADJACENT 4" H. X 6" W. OVERFLOW SCUPPER. FLOWLINE 2" ABOVE ROOF.

16 BOND BEAM AT ROOF LINE

17 BRICK UTILITY SIZE - SOLDIER COURSE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

18 4'-0" SQUARE BRICK COLUMN

19 HVAC UNITS SCREENED BEHIND PARAPET WALL

20 FOAM CORNICE
COLOR: SW#6091 "RELIABLE WHITE"

21 1" VERTICAL AND HORIZONTAL V-GROVE SCORED JOINTS (TYP.)

22 4'-0" WIDE BRICK PILASTER (8" PROJECTION)

23 ELECTRICAL EQUIPMENT

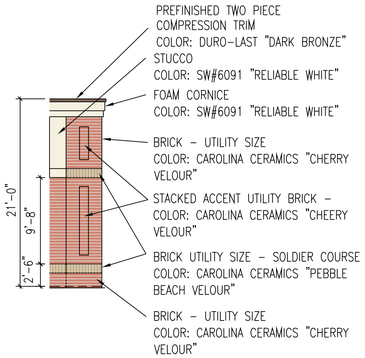
24 NOT USED

25 STACKED ACCENT UTILITY BRICK - (⅛" RECESSED)
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

26 12" HIGH X 1" DEPTH FOAM BOARD TRIM W/ E.F.S.
COLOR: SW #6091 "RELIABLE WHITE"

27 STUCCO FINISH
COLOR: SW #6091 "RELIABLE WHITE"

2 | ELEVATION KEYNOTES



FIELD BRICK RUNNING BOND - UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

STACKED BRICK - UTILITY SIZE
COLOR: CAROLINA CERAMICS "CHERRY VELOUR"

SOLDIER COURSE BRICK - UTILITY SIZE
COLOR: CAROLINA CERAMICS "PEBBLE BEACH VELOUR"

BRICK MORTAR COLOR: BEIGE

CONTACT: JEAN BREKLICH 803-788-1917

SCALE: ⅛" = 1'-0"

3 | EXTERIOR WALL COLOR SCHEME

AUTOZONE INC.
Architect: Lew Ellis
123 South Front Street, 3rd Floor
Memphis, Tennessee 38103
TEL: (901) 495-8707 FAX: (901) 495-8969
Email Address: george.callow@autozone.com

Prepared For: **AutoZone** STORE DEVELOPMENT
Store No. 5607
1076 GLUCKSTADT ROAD
GLUCKSTADT, MS 39110

COLOR ELEVATIONS

REVISIONS
1.
2.
3.
4.

SCALE: 1/8" = 1'-0"

REGISTERED ARCHITECT
George W. Callow
2079
Memphis TN
STATE OF MISSISSIPPI

DATE
10/12/21

PROTOTYPE SIZE
7N2L

CE