



October 7, 2024 Planning Commission City Hall - Massie Chambers
5:00 PM

Agenda:

Call to Order

Approval of Agenda

1. Approval of October 7, 2024 *Revised* Agenda

Approval of Meeting Minutes

2. Approval of September 9, 2024 Meeting Minutes

Individual Review of Regular Agenda Items

3. Public Forum on Planned Related Topics
4. Michael Hite, Property Owner Representative: Requests recommendation to the Goodlettsville City Commission to rezone the 1.08-acre property at 608 Alta Loma Road from R25, Low Density Residential to R15, Medium Density Residential. The property is referenced as Davidson County Tax Map/Parcel# 03401000800. Property Owner: Robert Hite
5. Goodlettsville 56/FCG Civil: Requests final master approval for 103 residential lots on 58.66 acres on Moncrief Avenue, McCoin Drive, and Barber Drive (non-improved road right of way). The properties are referenced as Davidson County Tax Map/Parcels#025013500, 02505500, and 025005600 and are zoned MDRPUD, Medium Density Residential Planned Unit Development. Property Owner: Dania McVicker (8-24)

DISCUSSION ITEMS:

6. 798 Rivergate Parkway Commercial Property Zoning Proposed Auto Repair Tenant
7. Subdivision Bond Regulations Amendment
8. Solar Panel Regulations
9. 1049 Madison Creek Road Agricultural Sales

10. *Springfield Highway Interchange Overlay*

For more information regarding this agenda, please contact the city recorder by email at:

amccormick@goodlettsville.gov

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CITY OF GOODLETTSVILLE PLANNING COMMISSION

REVISED MEETING AGENDA

Monday October 7, 2024 5:00 PM

Call Meeting to Order and Member Roll Call

ITEM#1 Approval of October 7, 2024 Agenda

ITEM#2 Approval of September 9, 2024 Meeting Minutes

ITEM#3 Public Forum on Planned Related Topics

ITEM#4 Michael Hite, Property Owner Representative: Requests recommendation to the Goodlettsville City Commission to rezone the 1.08-acre property at 608 Alta Loma Road from R25, Low Density Residential to R15, Medium Density Residential. The property is referenced as Davidson County Tax Map/Parcel# 03401000800. Property Owner: Robert Hite

ITEM#5 Goodlettsville 56/FCG Civil: Requests final master approval for **103** residential lots on 58.66 acres on Moncrief Avenue, McCain Drive, and Barber Drive (non-improved road right of way). The properties are referenced as Davidson County Tax Map/Parcels#025013500, 02505500, and 025005600 and are zoned MDRPUD, Medium Density Residential Planned Unit Development. Property Owner: Dania McVicker (8-24)

DISCUSSION ITEMS:

- 798 Rivergate Parkway Commercial Property Zoning Proposed Auto Repair Tenant
- Subdivision Bond Regulations Amendment
- Solar Panel Regulations
- 1049 Madison Creek Road Agricultural Sales
- Springfield Highway Interchange Overlay*

GOODLETTSVILLE CITY HALL MASSIE CHAMBERS

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CITY OF GOODLETTSVILLE PLANNING COMMISSION

STAFF REPORT

Monday October 7, 2024 5:00 PM

ITEM#1 Approval of October 7, 2024 Agenda

STAFF NOTES:

The Rosehill Park project item was removed from the agenda. The intention is for the request to be on the November 4th agenda.

MOTION OPTIONS:

1. Approve the *revised* agenda as listed
2. Approve with agenda amendments as determined by the Planning Commission

ITEM#2 Approval of September 9, 2024 Meeting Minutes

MOTION OPTIONS:

1. Approve as listed
2. Approve with minute amendments as determined by the Planning Commission

ITEM#3 Public Forum on Planned Related Topics

STAFF NOTES: N/A

MOTION OPTIONS: N/A

ITEM#4 Michael Hite, Property Owner Representative: Requests recommendation to the Goodlettsville City Commission to rezone the 1.08-acre property at 608 Alta Loma Road from R25, Low Density Residential to R15, Medium Density Residential. The property is referenced as Davidson County Tax Map/Parcel# 03401000800. Property Owner: Robert Hite

STAFF NOTES:

The request is to rezone the property to R15, Medium Density Residential. The purpose of the rezoning request per the owner is to subdivide the property to build another detached one family dwelling unit on a separate lot. The R15 zoning would also permit the existing home to be demolished and rebuilt as two (2) family dwelling unit (duplex) or alter the exiting house to be used as a duplex. The adjacent property at 606 Alta Loma Road was rezoned to R15 in 2016.



Goodlettsville Zoning Map

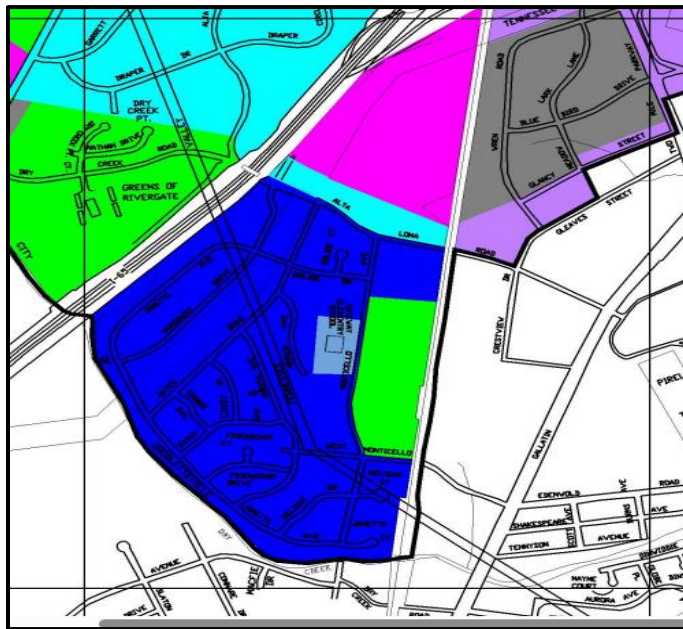


Red- R25 Low Density Residential

Purple- R15 Medium Density Residential

Light Green -HDRPUD High Density Residential Planned Unit Development

Goodlettsville Comprehensive Land Use Plan



Light Blue-Residential Conservation Low Density

Dark Blue- Residential Conservation Medium Density

Pink- Residential Conservation High Density

MOTION OPTIONS:

1. Recommend approval to the City Commission to rezone the property from R-25, Low Density Residential to R-15, Medium Density Residential based on the property location adjacent to R15, Medium Density and HRDPUD, High Density Residential Planned Unit Development zoning districts
2. Recommend denial of the rezoning request to maintain the property as R-25, Low Density Residential as determined by the Planning Commission during the meeting discussion
3. Defer the request to include additional information as determined by the Planning Commission during the meeting discussion

Staff recommendation to be provided at meeting

ITEM#5 Goodlettsville 56/FCG Civil: Requests final master approval for **103** residential lots on 58.66 acres on Moncrief Avenue, McCain Drive, and Barber Drive (non-improved road right

of way). The properties are referenced as Davidson County Tax Map/Parcels#025013500, 02505500, and 025005600 and are zoned MDRPUD, Medium Density Residential Planned Unit Development. Property Owner: Dania McVicker (8-24)

STAFF NOTES:

The MDRPUD, Medium Density Residential property zoning was approved in May 2019. The project preliminary master plan was approved at the June 2024 Planning Commission meeting. The preliminary master plan for the project included 101 subdivision lots and a three (3) acre lot to remain for the property owner. The final master plan includes 103 subdivision lots and the three (3) acre lot to remain for the property owner. The project density per the preliminary master plan was 1.74 units per acre and per the requested final master plan is 1.77 units per acre. The MDRPUD zoning permits three (3) units per acre. The two (2) additional lots does not impact the property zoning. The final master plan design includes 28.7 acres of open space or forty-eight (48%) percent of the total project area. The City's Planned Unit Development Ordinance requires a minimum fifteen (15%) of open space.

The project landscape plans including buffers, street plantings, and areas for tree preservation. The plan includes 650 understory tree plantings. The plan includes two (2) tree varieties for the understory plantings.

The project street design includes Subdivision Regulations variances requests. The variances are requested due to property grades. The Subdivision Regulations requires the cross section of an intersections not to exceed three (3%) percent. The proposed intersection of the Barber Street and future street connection intersection includes a five (5%) percent intersection cross section design. The Subdivision Regulations defines the maximum grade of two (2%) percent for the first sixty (60') feet of a street connection at an intersection. The project design includes two (2) sections with requested three (3%) percent slopes. The requested variances are limited and are due to the property slopes and the intention to not exceed the maximum street design grades of ten (10%) percent.

The project traffic study does not include any recommended off-site improvements. Page twenty-eight (28) of the traffic study attachment summary includes the recommend project access improvements. The applicant has discussed providing funds for the City to coordinate with the TDOT, Tennessee Department of Transportation for a S. Main Street south bound lane striping alteration to incorporate dual left turn lanes onto Long Hollow Pike/SR 174. The proposal includes the south bound-left side lane being changed to a dual purpose thru traffic and left turn lane. The additional left turn striping could improve the current intersection delay as referenced in the traffic study. The lane striping improvement would require coordination and approval from TDOT. The turn lane striping improvements would include pavement overlay, lane re-striping, and traffic signal upgrades and timing redesign. An engineering estimate of the cost improvements would be required to define the needed funding level. Staff discussed another design option would be redesigning the intersection to include dedicated dual left turn lanes onto Long Hollow Pike and the construction of an additional south bound lane along the City's

property frontage. The alternative improvement would require revising the City's current Main Street roadway improvement project that could possibly delay the project years in order to go back through TDOT's design review, utility, and right of way phase requirements. The Planning Commission discussed possible Moncrief Avenue improvements at the June Planning Commission meeting. The traffic study does not include any recommended roadway improvement to Moncrief Avenue. Page twenty-four (24) of the traffic summary attachment includes the Moncrief Avenue existing condition analysis. Moncrief Avenue includes street widths ranging from twenty (20') to twenty-one (21') feet with different levels and widths of shoulders. The City's minimum street width requirement for a new minor roadway is twenty-two (22') feet.

A building design plan example is included with the meeting packet. The plan example includes a front recessed garage and the City's Planned Unit Development requirement to incorporate a minimum fifty (50%) brick and/or stone on the building elevations. Per the applicant, the final home designs are not available yet since the project home builder has not yet been selected. The City's Planned Unit Development Ordinance requires on new homes a minimum fifty (50%) brick and or stone, with additional materials permitted to be cement fiber board or wood siding, EIFS, split face block, glass. The City's Planned Unit Development ordinance includes options for garage design and orientation including a front recessed garage. The front recessed garage design includes a twenty (20') x forty (40') off street parking area to meet the City's requirement for four (4) off street parking spaces outside of the interior garage spaces.

STAFF STIPULATIONS:

1. Applicant to provide an engineer estimate of the proposed Main Street turn lane striping improvement to determine the needed project funding.
2. Provide a notation with the traffic study that the two (2) additional lots would not impact the defined traffic improvements.
3. Provide additional types of understory plantings per landscape plan to provide a variety of understory tree plantings
4. The street lighting plan to be submitted to City staff for review and approval prior to issuance of the land disturbance permit. The project design include underground utility service. The applicant will need to coordinate the type of lighting with NES, Nashville Electrical Service. The public street light locations are to be per the City's Street Design Specifications for future City maintenance funding. Any additional street lighting and also the lighting for the open space parking areas to have the maintenance funded by the homeowner's association.
5. The homeowner's association guidelines and private common open space covenants to be provided with the first phase project subdivision final subdivision plat review.
6. The street signage and pavement markings plan to be submitted to City staff for review and approval prior to issuance of the land disturbance permit.
7. Review and approval of exterior building plan design options to be reviewed and approved by the Planning Commission prior to building permit issuance.

8. Any outstanding engineering plan review comments to be discussed at meeting and will be required to be completed prior to land disturbance permit issuance.

MOTION OPTIONS:

1. Approve the final master plan with the defined staff stipulations. The final master plan includes the referenced Subdivision Regulations street intersection design slope variances
2. Deny the final master plan and define the needed plan amendments based on the Planning Commission's determination during the meeting that the final master plan does not meet the City's Subdivision Regulations and Zoning Ordinance.
3. Defer the request for the applicant to provide additional requested information as determined by the Planning Commission during the meeting discussion.

Staff recommendation to be provided at meeting

Referenced Zoning Ordinance Section

14-208 (1) (c)

In all residential districts, except for residential planned unit development districts, no lots shall have erected thereon more than one principal building. Principal buildings and additions as well as additions in residential districts consisting of wall, roof, floor, and foundation connections shall meet the requirements of the applicable zoning district. Permitted limited connection additions in residential districts and accessory buildings in all districts shall meet the following requirements in items (d) and (e) and the requirements of the applicable zoning district.

To ensure order in site developments including building and lot bulk standards and the compatibility of buildings constructed on-site, all buildings and structures, additions and accessory buildings or structures in residential districts which exceed 504 square footage shall be constructed of roof and exterior wall materials consistent with the primary roof and exterior wall materials of the principal building or structure.

One accessory building or structure is permitted less than the 504 square footage requirements not meeting the primary building material consistency requirements of this section. Accessory buildings or structures permitted or installed per city requirements prior to the adoption of the material consistency requirement per Ordinance 15-844 (September 10, 2015) would not be used in calculating the square footage permitted less than the 504 square footage permitted per property. On primary roof and exterior wall materials of the principal large acreage agricultural and R-40 zoned properties consisting of five or more acres, accessory building(s) or structure are not required to be constructed of consistent materials of the primary building if the accessory building(s) or structure is constructed entirely behind and separate from the primary building and is constructed per the building setbacks of the zoning district. The primary exterior wall and roof materials of the principal building shall be extended on all sides of the exterior walls and roof of additions or accessory buildings or structures. In the case of principal buildings or structures with multiple exterior wall materials, the addition and accessory building or structure may be

constructed of materials at the same ratio of the principal building or structure. Alternative designs for large acreage properties as referenced above and alternative designs that exceed the purpose and intention of the items referenced above with single family and duplex residential building and structures may be approved by planning and development services staff. **Staff's decision on alternative designs may be appealed to the planning commission for review. All** other building and structures shall meet site and architectural design standards and the Goodlettsville Design Guidelines.

Referenced Subdivision Regulations Section:

4.103.203 (5) and (6)

(5) Intersections shall be designed with a flat grade wherever practicable. In hilly or rolling areas, at the approach to an intersection, a leveling area shall be provided having not greater than a two percent (2) grade for a distance of sixty (60) feet, measured from the nearest right-of-way line of the intersecting street.

(6) The cross-slope on all streets, including intersections, shall be three percent (3%) or less.

Referenced Street Specifications Section:

6.3 - Street Lights

6.3.1 General: Street lights shall be designed and constructed in accordance with the applicable sections of the Nashville Electric Service (NES) Street Lighting Guidelines. The developer or property owner(s) is responsible for complying with the requirement to install street lighting and shall make all necessary arrangements with NES and/or Cumberland Electric Membership Corporation (CEMC) for the installation of streetlights and bear all costs relating to the purchase and placement of streetlights. Installation of street lighting materials shall be performed by a Tennessee licensed contractor also having any locally required business licenses prior to commencing any work.

6.3.2 Location: Locations of lighting fixtures in residential subdivisions to include:

1) Locate a fixture at each intersection

2) Locate a fixture in cul-de-sacs which are 200 ft. in length or greater.

3) Upon Approval from the City of Goodlettsville, locate a fixture at hazardous curves or those locations with a high accident rate.

Note: Light locations in Goodlettsville are approved during the permitting process. Developer is required to submit plans approved by the City to CEMC or NES Street Lighting Department, based on jurisdiction.

DISCUSSION ITEMS:

-798 Rivergate Parkway Commercial Property Zoning Proposed Auto Repair Tenant

The Planning Commission previously denied a requested Zoning Ordinance amendment to include auto repair uses in the CSL, Commercial Services Limited zoning district. The Planning Commission also discussed with the property representative that the request amendment was denied based on the tenant's request including the possibility of larger commercial type vehicles and outside vehicle parking and storage. The proposed discussion item is based on a different proposed auto repair type business.

-Subdivision Bond Regulations Amendment

The City currently permits options for development and storm water improvements bonds including either a bank issued letter of credit, insurance agency issued performance bond, or cash deposit into city account with a refund. The purpose of the development bonds is for completing public improvements in the case of bonded public right of way improvements (roadway paving, sidewalks, drainage) that are not completed by the developer due to project abandonment. The storm water bonds are to ensure the safety and function of storm water improvements not fully completed also in the case of project abandonment. A letter of credit and cash deposit and refund process are the simplest and best method for the City to collect the funds if necessary. The City can take a valid letter of credit at the end of the bonded period to a bank and request payment. The City has to provide some type of proof of project violation or abandonment and prior notices to the property owner/developer in order to obtain payment of a letter of credit. Letter of credit and the cash deposit and refund process are typically seen with smaller bond amounts less than \$ 250,000 since both require the owner/developer to have the funds fully available. Performance bonds are typically seen with larger project developments and bonded improvements. The performance bonds process would require notification to the bonding agency of a project violation or abandonment and would also require following the bond agency's defined process for obtaining payment. Staff would prefer only permitting letter of credits or the cash deposit refund process but not permitting performance bonds especially on larger projects could create possible project funding issues depending on the project scale and project developer. A Subdivision Regulation amendment with a public hearing would be required prior to amending the bond requirements. The City currently has letter of credits, performance bonds, and a cash deposit ranging from \$ 15,000 to \$ 2,500,000.

-Solar Panel Regulations

Staff received a request for the City to develop and adopt solar panel regulations in residential zoning districts. The City's Zoning Ordinance does not have any specific regulations for solar panels. The Zoning Ordinance contains provision for on-site structures under the accessory building section regarding the maximum size of structures at seventy (70%) percent of the principal structure (house) and the location of the structure behind the house. The City does permit solar roof panels under the City's adopted building and residential codes regarding structural roof support and electrical connections. Based on the discussion during the meeting, staff will research and prepare defined solar panel regulations to present for the Planning Commission's review.

-1049 Madison Creek Road Agricultural Sales

Staff received a request to permit a farmers market type produce and seasonal market on Madison Creek Road. The 0.78-acre property is zoned R-40, Low Density Residential and is across from the Madison Creek Elementary school. The property previously contained a mobile home. The property contains a flood plain and floodway. The City's Zoning Ordinance has a provision for temporary sales up to sixty (60) days a year associated with on-site agricultural materials production and provisions for agricultural uses including possible retail sales of agricultural products by conditional use review by the Board of Zoning and Sign Appeals. The agricultural conditional use process is only for properties with five (5) or more acres in the R40, Low Density Residential zoning district.



-Springfield Highway Interchange Overlay

The 0.45-acre property at 850 Louisville Hwy/31W is zoned CS, Commercial Services/ INT Interchange Overlay. The property contains a designated floodplain. Staff received a request for the property to be used for a retail sales/office building for a portable type shed building display and sales use. The proposal is to build a small commercial center building with a building space including a drive thru window for a possible restaurant use. The property is within the INT Overlay. The Overlay only permits restaurant, convenience market/fuel center, and hotel uses. Due to the limited property dimensions and acreage, the property would be limited to a restaurant use.



OFFICIAL MINUTES OF THE MEETING
GOODLETTSVILLE PLANNING COMMISSION

September 9, 2024

Goodlettsville City Hall

5:00 p.m.

Massie Chambers-Auditorium

Present: Chairman Scott Trew, Jeff Duncan, Cisco Gilmore, Grady McNeal, Jeff Parnell, Mayor Rusty Tinnin and Judy Wheeler.

Absent: N/A

Also Present: Addam McCormick (Staff), Tim Ellis-City Manager, Russell Freeman-City Attorney, Sharon Reed (Staff), and Alex West (Staff).

Scott Trew called the meeting to order, and Duncan offered prayer.

Item #1 Approval of Agenda: Duncan made a motion to approve the agenda, Tinnin seconded the motion. The motion passed unanimously.

Item #2 Approval of August 5, 2024 Meeting Minutes: McNeal made a motion to approve the minutes of the August 5, 2024 meeting, Wheeler seconded the motion. The motion passed.

Item #3 Trew opened the Public Forum on Planning Related Topics.

Jane Birdwell – 505 Debra Drive

Birdwell states the committee has made some very good decisions in the past years. Although they are not elected, they still represent the citizens of Goodlettsville. Lately the citizens feel you are not representing them and making decisions they are not happy with. They have asked you for businesses, restaurants, shops and you have given them a coffee shop you clearly knew the citizens did not want. Birdwell states they are wanting to add more houses in addition to all the apartments they have allowed to be built in the area increasing the traffic flow. Birdwell discussed the traffic issues and thinks there needs to be a moratorium on the building of residential until the City addresses the issues not only with traffic. Birdwell states they are against more building at this time.

Jafar Ware – 200 Cobblestone

Ware is the HOA president and is speaking against the Alta Loma exterior vehicle parking lot project. The HOA board and neighbors have spoken and have concerns for the commercial type use next to the residents in the subdivision. They have concerns with the traffic around the area and property value of their homes. They also have concerns for the wildlife in the area so they ask that you vote no for the project.

Connie Childress – 127 N Maple Ridge

Childress lives in Wynridge and lives at the end of the cul-de-sac. They will be impacted behind and side of their house with the Long Hollow Pike proposal. Childress states they have been citizens of Goodlettsville for thirty-one (31) years. The heart of the matter ask the question what kind of community do we want to be in Goodlettsville? Childress discussed what kind of community they want

and the quality of life they have in Goodlettsville. Childress stated the heart of the matter is do we choose to live in a community that cares just for ourselves or for all living creatures in our custody. Childress stated her family has been making a species list of what they have seen in their yard and neighborhood for the twenty (20) years they have lived in Wynridge. Childress stated this proposed development would be detrimental to the wildlife in the area.

Wallace Ralph Jr. – 4403 Long Hollow Pike

Wallace is the property owner of approximately 7 acres at 4403 Long Hollow Pike. He is speaking for his family that lives on property that is contiguous and they are in opposition to the 4408 Keel Development project. Wallace read the City of Goodlettsville vision statement. Wallace stated he supports Ralph's right to sell his property, and he does not oppose growth. Wallace stated this project threatens the essential character of the land. Wallace discussed the density of the project and how it will negatively affect his property value. Wallace discussed the negatives this project will bring to the branch along Madison Creek, Madison Creek elementary school and the traffic on Long Hollow Pike. Wallace encouraged the members to honor their heritage and protect their quality of life by rejecting this proposed development.

Sarah Childress – 127 N Maple Ridge

Childress as a zoologist is concerned with the loss of the fields and woodland habitats. Childress discussed the many species that are pushed out from reckless urban developments. Childress discussed with the clearing of existing woodlands the loss of many benefits' nature has on human health. Childress described the intangible and irreplaceable things that would be lost with this proposed development. Childress asked that they build in moderation with wisdom and forethought and that they consider what they have to lose.

Brett Mansfeld – 4463 Long Hollow Pike

Mansfeld is a state certified appraiser in Tennessee. Mansfeld discussed conformity of this project in value to surrounding property owners. Mansfeld discussed the density of this project is not in line with the current use of surrounding area. Mansfeld stated the area along Long Hollow Pike is primarily agriculture and low density, and the medium density proposed project is not consistent with that. Mansfeld discussed how developments work and the impact these non-conforming uses will have on surrounding property owners.

Mike Fentress – 115 N Wynridge Way

Fentress is opposed to the 4408 Long Hollow Pike project. Fentress discussed the traffic in and out of the neighborhood and the many near accidents at the intersection of Long Hollow and Allen Road and more traffic will only compound that problem. Fentress discussed the impact of an additional 112 homes and the migration of those additional families to the area. Fentress asked that they vote no for this project.

Missi Rowe – 4330 Long Hollow Pike

Rowe stated they love living in Goodlettsville, but they do not want another housing development. Rowe discussed traffic issues and overcrowding in the schools if this development is approved. Rowe is opposed to this project.

Markus Rowe – 4330 Long Hollow Pike

Rowe would like to ask them what is best for the citizens of Goodlettsville? Rowe read a Facebook post from Jeremy Mansfield regarding the fiscal imbalance created by this type of development. Rowe commented what would improve their lives are better restaurant choices and better shopping choices. Rowe is opposed to this development and say no to annexation.

Mike – Cobblestone Townhomes

Mike is opposed to the parking lot storage project. Mike is concerned with how this will affect property value, potential parking issues, safety concerns, and traffic concerns. Mike strongly opposes it.

Dallas Reddy – 3723 Long Hollow Pike

Reddy discussed safety issues with the amount of traffic on Long Hollow Pike. Reddy discussed agriculture, the agriculture land and farmers in Tennessee.

Ms. Padgett – Alta Loma

Ms. Padgett is opposed to any building or a car lot due to traffic on Alta Loma.

Mike McGinnis – 144 N Wynridge Way

McGinnis discussed density being the issue for the 4408 Long Hollow Pike development. McGinnis discussed traffic concerns and drainage problems with adjacent properties in Wynridge. McGinnis stated he talked with many of his neighbors and there is strong opposition to this project.

Tom Patterson – 103 Forrest Oak Drive

Patterson stated the high-density development is not the right approach for this area. Patterson discussed infrastructure and how it needs to be transformed. Patterson discussed higher value communities staying in Goodlettsville.

Trew asked for any additional comments and no additional comments were received.

Tinnin made a motion to close the public forum, seconded by Parnell. The motion passed unanimously.

The Public Forum was closed.

AGENDA

Item #4 Community Development Services Staff: Requests Dry Creek Commons Phase Two (2) Performance Bond Extension. Property Owner: Vastland, Eatherley, McClung, Development, LLC.

Item Representative: Addam McCormick

Staff Discussion:

- The developer requests to maintain the current bond \$170,500 amount for the 2024-2025 time period due to the remaining cost improvements estimate of \$123,200.
- Project Status: Townhouse construction twelve (12) of thirty-nine (39) units completed - thirty-one (31%) percent project construction and nine (9) units under construction.
- Current Project Bond: \$170,500 - performance bond - October 11, 2024 expiration.
- Remaining Project Improvements: Final asphalt paving, Landscaping, Sidewalk sections with unit construction, and playground/dog park improvements.

- Improvement Cost Estimate: \$112,000 estimate provided by developer for 2023 review. Revised estimate \$123,200.
- Motion Option-Approval for one-year bond extension at current amount \$170,500. (Staff Recommendation)
- Motion Option-Approval for one-year bond extension at amount determined by Planning Commission based on information provided during the meeting.

Planning Commission Discussion: No Discussion

Motion: Motion by Duncan to approve the request, seconded by Gilmore. The motion passed unanimously.

Item #5 (PUBLIC HEARING) Alex Pulliam: Requests Comprehensive Plan amendment for the 3.85-acre property referenced as 0 Hardaway Drive- Davidson County Tax Map/Parcel# 03401000400 to change the plan designation from Residential Conservation High Density to Commercial Development.

Public Hearing Opened:

Jesse Walker – 105 Dorr Drive

Walker states he shares the concerns about this project that will be adjacent to the Cobblestone neighborhood. Walker states there are concerns about light pollution, and sound pollution that they cannot control. Walker states putting a parking lot in the secluded area welcomes potential crime, so he is very concerned about that. Walker asked that they deny the project.

Amanda Howa – 280 Cobblestone

Howa stated that she agrees with everything the neighbors have said about the parking lot in the neighborhood. Howa stated currently the neighborhood is surrounded by trees and woods and acting as a noise barrier between them and I-65. Howa stated she has concerns for privacy if the proposed road is built. She worries about privacy and safety of the community, so she strongly opposes this parking lot being built.

Melissa Proctor – 170 Cobblestone

Proctor stated this breathes crime because car break in and car theft is basically the only crime they have in the area. Proctor stated a vehicle storage lot would be an eye sore and would bring the value of the homes down. She has concerns about privacy and safety because there are a lot of women and children that live in the neighborhood, and they do not want criminals breaking into cars. She opposes this project.

Amanda Evans – 169 Cobblestone

Evans stated she has concerns about privacy and losing the noise buffer between the homes and interstate. Evans stated the parking lot would be an eye sore, devalue their property and affect the quality of life for all of those that live in Cobblestone and other neighborhoods. She opposes the project.

Dallas Reddy – 3723 Long Hollow Pike

Reddy stated he is not opposed to the idea of developments in areas that have been developed. Reddy stated he did not see light pollution or noise pollution being an issue in this area. Reddy stated he is a farmer and has lived in Goodlettsville all his life and if development is to be in Goodlettsville it should be in the areas that are committed to development. Reddy stated he is not opposed to development in

Goodlettsville but is opposed to development of agriculture lands and maintaining the balance of wildlife and community.

Trew asked for any additional comments and no additional comments were received.

Gilmore made a motion to close the public hearing, seconded by Parnell. The motion passed unanimously.

Public Hearing Closed.

Item #6 Alex Pulliam: Requests recommendation to the Goodlettsville City Commission to rezone the 3.85-acre property referenced as O Hardaway Drive from R-25, Low Density Residential to CPUD, Commercial Planned Unit Development and preliminary master plan for an exterior vehicle storage use. The property is referenced as Davidson County Tax Map/Parcel# 03401000400. Property Owner: Greater Faith Missionary Baptist Church (14-24).

Item Representative: Edward Pulliam

Staff Discussion:

- Staff explained Item #5 and Item #6 are connected requests.
- Item#5 contains an advertised public hearing that the Planning Commission can receive comments with the agenda item.
- Any motion on either item will need to be consistent or the request amended.
- Staff received a request to develop the property for an exterior vehicle parking area.
- The property is currently zoned R-25, Low Density Residential.
- The exterior vehicle parking area is not proposed to be an accessory use of a residential use on the property therefore the request would require Land Use Plan amendment and rezoning to commercial. -
- The City's Board of Zoning and Sign Appeals in February 2021 approved a conditional use for a small-scale religious facility, but the facility was never constructed.
- The property is limited by a TVA, Tennessee Valley Authority easement and access easement for the billboards and cell tower along I-65.
- The property has limited residential development potential due to the easements on the property and location.
- The property is accessed by a non improved section of Hardaway Drive right of way.
- Staff has discussed numerous proposals on the property and the key for the property development is a use with limited traffic due to the property access and location that would not create any issues with the adjacent Cobblestone townhouse community.
- The request is for a CPUD, Commercial Planned Unit Development preliminary master plan to define the commercial use on the property limited to an exterior outdoor vehicle parking area on the property.
- If the rezoning and preliminary master plan is approved, a paved or concrete drive would be required from Alta Loma Road to the property.
- The proposal would include storm water facilities, fencing, and screening.
- Motion Option-Approve the Comprehensive Land Use Plan amendment based on Planning Commission discussion during the meeting.
- Motion Option-Deny the Comprehensive Land Use Plan amendment based on Planning Commission discussion during the meeting.
- Motion Option-Defer the Comprehensive Land Use Plan amendment request to include any additional information as determined by the Planning Commission.
- Motion Option-Recommend to the Goodlettsville City Commission approval of the CPUD, Commercial

Planned Unit Development rezoning and preliminary master plan for exterior vehicle parking area.
(Staff Recommendation)

- Motion Option-Recommend to the Goodlettsville City Commission denial of the CPUD, Commercial Planned Unit Development rezoning and preliminary master plan for exterior vehicle parking area and maintain the R-25, Low Density Residential zoning.
- Motion Option-Defer the rezoning and preliminary master plan request to include any additional information as determined by Planning Commission

Planning Commission Discussion:

- Pulliam stated the proposal is to develop the land as an exterior vehicle storage use property.
- Pulliam stated will not be storage units but a gravel lot.
- Pulliam stated they agree to access Alta Loma Road front entrance will be paved.
- Pulliam stated the plan is to fence the area with a nine (9') foot fence but it will be twenty (20') feet away from the TVA powerline easement.
- Pulliam stated they want to maintain the border of trees and shrubs around the property.
- Pulliam stated there are no plans for entrance or exit access to Cobblestone Place Drive.
- Gilmore discussed the property going before the BZA Board in 2021 and issues with easements.
- Gilmore asked Pulliam how long vehicles will be parked on the property.
- Pulliam responded it will be for long term storage one (1) month to a year.
- Duncan discussed concerns with changing the comprehensive plan in a residential area with multiple zoning and putting commercial in the middle of residential.
- Parnell asked what type of vehicles will be stored?
- Pulliam responded small RV's, boats on trailers, trailers and a place for people to park vehicles that cannot be parked in neighborhoods. It will be an outdoor storage facility.
- Parnell discussed the limited visibility of the area around the driveway right-of-way.
- Parnell stated he is not opposed to this use but has concerns about exiting the property safely with the limited visibility in the area.

Motion: Motion by Wheeler to deny Item #5 and Item #6 to change the Comprehensive Land Use Plan and the rezone from R-25, Low Density Residential to CPUD, Commercial Planned Unit Development, seconded by Duncan. The motion passed with six (6) yes votes and one (1) Parnell no vote.

Item #7 Keel Development, Property Owner Representative: Request recommendation to the Goodlettsville City Commission to approve the Plan of Services for the proposed annexation of 45.02 acres at 4408 Long Hollow Pike. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee.

Item #8 Keel Development, Property Owner Representative: Requests recommendation to the Goodlettsville City Commission to rezone the 45.02-acre properties at 4408 Long Hollow Pike from Sumner County RR, Rural Residential to MDPUD, Medium Density Residential Planned Unit and preliminary master plan approval for 112 - one family detached dwelling unit lots. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee (15-24).

Item Representative: David Abbey, Development Management Group, LLC

Staff Discussion:

- Staff explained Item #7 and Item #8 are connected requests.
- The City cannot annex property without also designating a city zoning district on the requested annexed property.

- The applicant has requested to defer the request to provide a more detailed preliminary master plan for review.
- The proposal is a requested annexation.
- The properties are located within the City of Goodlettsville Sumner County Urban Growth Boundary and is contiguous to the City limits.
- The City will also be reviewing an extension of the City limits 1,770 feet along the Long Hollow Pike right of way to include the property frontage.
- The plan of service process is required by State law to define the extension of City services to the property and the proposed timing.
- If the annexation request is approved, City services for the existing residence on the property including police and fire, trash, planning and code services, park and recreation resident services and rates would be effective at the approval date of annexation.
- Since the proposed annexation is for a proposed development, the developer with an approved project is required to extend utility services (water, sewer, electric) and complete required Long Hollow Pike improvements required per project traffic study and Goodlettsville Planning Commission and TDOT requirements.
- Staff presented the General Goals and Policies for Residential Development from the Comprehensive Land Use Plan.
- The annexation process also requires a property rezoning to designate the property a Goodlettsville zoning district.
- The City's Comprehensive Land Use Plan designates the area as Residential Development Low Density.
- The proposal is for 2.50 units per acre which would fall under the Low-Density designation of the Comprehensive Land Use Plan.
- The plan defines low medium density at three (3) to four (4) units per acre.
- The Comprehensive Plan also defines reviewing project design including lot sizes based on adjacent lot areas.
- The area along Long Hollow Pike includes larger lots and typical development lots as seen with the Initial phase of Copper Creek and Wyndridge Subdivisions ranging from 75 to 90 feet in width and 15,000 to 18,500 sq. ft in lot area.
- The developer has requested to defer the request to provide a more detailed preliminary master plan for review.
- Staff comments remaining include water and sewer commitment letters, general area of storm water quality and quantity detention facilities, lot parking and house design proposals.
- Staff requests the Planning Commission to review the connection to the Maple Ridge Lane North public right of way in the Wyndridge Subdivision.
- Staff has requested an emergency gated connection in case of accidents or emergency on Long Hollow Pike in the area.
- The emergency connection would permit traffic through both subdivisions in case of an accident or an emergency at an intersection.
- Staff and the project engineer reviewed the proposal with TDOT, Tennessee Department of Transportation representatives regarding anticipated Long Hollow Pike turn lane improvements with the development entrance.
- Item # 7 Motion Options:**
- Motion Option-Defer the annexation and plan of services recommendation request per the applicant's request to defer the rezoning and preliminary master plan to provide a more detailed preliminary master plan. (Staff Recommendation)
- Motion Option-Recommend to the Goodlettsville City Commission denial of the annexation and plan of services request based on the Planning Commission's determination during the meeting discussion that the proposed density will not be recommended regardless of the revisions to the preliminary master plan.

-Item #8 Motion Options:

- Motion Option-Per applicant's request, defer the rezoning and preliminary master plan request to provide a more detailed preliminary master plan and include any additional information as determined by the Planning Commission. (Staff Recommendation)
- Motion Option-Recommend to the Goodlettsville City Commission denial of the Medium Density Residential Planned Unit Development rezoning and preliminary master plan for 112-one family detached dwelling unit lots due to the Planning Commission's determination that the proposed density would not be permitted regardless of the revisions to the preliminary master plan.

Planning Commission Discussion:

- Abbey stated they requested to defer at this time.
- Abbey stated the original submittal was to be a concept plan and they were not ready for all the comments so they need more time.
- Abbey stated they request to defer so they can address issues and listen to the community.
- Trew asked Abbey if he understood the citizens' comments regarding this project.
- Abbey responded yes, they understand a lot of it is density and traffic.
- Duncan commented on the many good citizen comments they received and how good it was to see everybody come out and exercise their right to speak.
- Duncan discussed the comments and the project not being the quality development the board strives for.
- Duncan discussed people having rights to their property to do what they want.
- Duncan stated he echoes some of the comments because he lives in the neighboring subdivision Wynridge and discussed a possible longer deferral period so that he will not be on the board since his term expires in December and impact the vote on the request.
- Duncan discussed a motion to defer until January 2025.

Motion: Motion by Duncan to defer the project until January 2025, seconded by McNeal.

- Tinnin commented that he and the City Manager get lots of calls on why they cannot get more restaurants. Tinnin discussed population, roof tops, and head count all are part of how we can get restaurants in the City.
 - Trew discussed Duncan's motion to defer until January 2025.
 - Freeman commented if the developer is okay with the deferral they can defer until January 2025.
- The motion passed unanimously.

Item #9 Duncan Rowe, 214 Hasty Drive: Requests a Subdivision Regulation Variance from section 406.2 Fire Hydrants regarding requirement for the installation or timing of the installation of the required fire hydrant per the Rowe- Mabee Minor Subdivision plat recorded December 16, 2021. ***(Deferred at August 5, 2024 Meeting)***

Item Representative: Duncan Rowe, 214 Hasty Drive

Staff Discussion:

- The Planning Commission deferred the request at the August meeting since the applicant was not in attendance.
- The Planning Commission discussed a defined timeline for the fire hydrant installation and a possible bond for the fire hydrant installation.
- The Rowe-Mabee Minor subdivision plat separated the 4.02-acre property (Tract #2) at 214 Hasty Drive off of a 24.28-acre property.
- The subdivision plat included a notation that required a fire hydrant to be installed per the applicable

Water Department specifications at the end of Hasty Drive.

- The fire hydrant requirement was based on the Subdivision Regulations section 406.2 since the new platted lot/property was over 500 feet (680' measured per aerial tax assessor parcel data) from the existing fire hydrant near the intersection of Hasty Drive and Tabor Drive.
- The fire hydrant requirement was also due to the property owner's proposal on the adjacent Tract#1 to construct a home near the northeast corner of Tract#1.
- Staff has recently talked to the property owner about the plan and permit process for the home construction on Tract#1.
- The property owner of Tract#2 has requested a Subdivision Regulation variance to not require the fire hydrant due to their house spacing to the existing hydrant.
- The owner has discussed if the hydrant is required then to permit additional time to install the hydrant or connect the fire hydrant requirement with the construction of the home on Tract#1 due to the spacing the proposed house on Tract#1 would be from the existing hydrant at Hasty Drive and Tabor Drive intersection.
- Staff presented Subdivision Regulation Sections: 4-106.2 Fire Hydrants and 1-111 Variances.
- Motion Option-Approve the Subdivision Regulations variance per the Subdivision Regulations variance review criteria as defined by the Planning Commission during the meeting.
- Motion Option-Deny the Subdivision Regulations variance request per the Subdivision Regulations variance review criteria as defined by the Planning Commission during the meeting and for city staff to proceed with the enforcement process for the fire hydrant installation.
- Motion Option-Deny the Subdivision Regulations variance request per the Subdivision Regulations variance review criteria as defined by the Planning Commission during the meeting but define an alternative timeline for the fire hydrant installation. (Staff Recommendation)
- Motion Option-Defer the request to include any additional information as determined by Planning Commission.

Planning Commission Discussion:

- Rowe stated that the cost of the fire hydrant was going to be between \$4,000 and \$6,000 thousand dollars and installation with taping into the City could run up to \$14,000 to \$15,000 thousand dollar expense.
- Rowe stated the build for his house went over budget by \$100,000 thousand dollars and he has no more money for any more expenses.
- Rowe discussed his neighbor's property location to the closest hydrant and the Davidson County ISO Fire Department Mapping.
- Trew asked Rowe if he was going to build another house on the property?
- Rowe responded his daughter and son-in-law are going to build on the adjacent property
- Trew asked how they will have access to their house?
- Rowe responded they will have access through the same drive.
- Trew asked if there was an emergency would the bridge hold a fire truck?
- Rowe responded absolutely and the bridge has been approved by the City.
- Tinnin asked McCormick for his suggestion/recommendation.
- McCormick responded his recommendation is about the subdivision regulations and in his opinion there is not a basis for a variance.
- McCormick stated he would recommend denying the variance request but give them additional time to have the hydrant installed.
- Parnell commented there is no reason to grant a variance because of no money.
- Parnell discussed the requirement of the fire hydrant at the time the building permit was issued.
- Duncan discussed the need for the fire hydrant was for their safety.

- Gilmore commented on the location of Rowe's house and when his son-in-law builds behind him a fire truck will not be able to reach the house behind before it burns down.
- Gilmore commented it is a safety issue and there is a need for the hydrant.
- Rowe asked if they could delay the requirement for the hydrant until his son-in-law builds and can share in the cost of the hydrant?
- Parnell asked Freeman if the City will have a liability if they give additional time for this fire hydrant to be installed?
- Freeman responded they can defer the request and give additional time to get it installed.
- Freeman discussed criteria for granting a variance and a personal hardship is not part of the criteria.
- Freeman discussed a deferral with a bond or a letter of credit for installation.
- McCormick discussed the recommendation of additional time and a bond and the enforcement process if the fire hydrant is not installed.
- Ellis asked Rowe if he was aware he had to install a fire hydrant when he built his house?
- Rowe responded yes at some point.
- Ellis asked Rowe how much time he needed before he had enough money to install the hydrant?
- Rowe responded as much time as they are willing to give him.
- Ellis asked Rowe if he talked with the bank about getting a line of credit or a bond for the City.
- Rowe responded he did not know he needed a line of credit of credit or a bond.

Motion: Motion by Parnell to approve the request for an alternative timeline of six (6) months to install the fire hydrant, seconded by Duncan. The motion passed unanimously.

Item #10 Rose Hill Park/ Nashville Civil LLC: Requests preliminary plat and construction plan approval for three (3) residential lots and roadway cul-de-sac construction on 2.87 acres at the end of Rosehill Drive. Property referenced as Davidson County Tax Map/Parcel# 02508004600 and is zoned R-10, Medium Density Residential. Property Owners: Marvin Hitt, Linda Cutrell, and Patricia Campbell. (6-24)

Item Representative: No Representative

Staff Discussion:

- Defer the request for the applicant to provide revised plans that meet the plan review comments and the City's Subdivision Regulation and Zoning Ordinance requirements.

Planning Commission Discussion: No Discussion

Motion: Motion by Duncan to defer the request for one (1) month, seconded by Wheeler. The motion passed unanimously.

With no further business, the meeting was adjourned at 7:11 pm.

Scott Trew, Chairman

Sharon Reed, Planning Assistant

FINAL MASTER DEVELOPMENT PLAN

FOR

GOODLETTSVILLE 56 SUBDIVISION

PARCEL IDS 02500005500, 02500005600, 025000013500

GOODLETTSVILLE, TN

PROPERTY INFORMATION:

DANIA MCVICKERS & LAST OF
THE LOGGERS, LLC
446 MONCRIEF AVE
GOODLETTSVILLE, TN
MEDIUM DENSITY RESIDENTIAL PUD
PARCEL IDS 02500005500, 02500005600,
025000013500

PROJECT CONTACT LIST:

DEVELOPER: CLQ LAND
4652 MAJESTIC MEADOWS DRIVE
ARRINGTON, TN 37014
(615) 663-7345
mark@clqland.com

CIVIL ENGINEER: FCG | CIVIL
1877 ERLINGER DRIVE
NOLENSVILLE, TN 37135
(408) 690-1467
cole@fcgcivil.com

SURVEYOR: TTL
330 NORTH 2ND STREET
CLARKSVILLE, TN 37040
(931) 245-4613
grayson@ttlusa.com

PLANNING DEPARTMENT: CITY OF GOODLETTSVILLE
318 NORTH MAIN STREET
GOODLETTSVILLE, TN 37072
(615) 851-2202
amccormick@goodlettsville.gov

WATER: MADISON SUBURBAN UTILITY DISTRICT
108 WEST WEBSTER STREET
MADISON, TN 37115
(615) 868-3201
info@msud.net

WASTEWATER: CITY OF GOODLETTSVILLE
PUBLIC WORKS
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
(615) 851-3470
sdiviney@goodlettsville.gov

POWER: NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
(615) 736-6900

NATURAL GAS: PIEDMONT NATURAL GAS
83 CENTURY BOULEVARD
NASHVILLE, TN 37214
(615) 872-2310
bill.jontz@duke-energy.com



LOCATION MAP

NOT TO SCALE

Sheet List	
1	C-0.0 TITLE SHEET
2	C-0.1 NOTES
3	C-1.0 EXISTING CONDITIONS PLAN
4	C-2.0 FINAL MASTER PLAN
5	C-2.1 PRELIMINARY PLAT
6	C-2.2 LOT TABLES
7	C-3.0 INITIAL EROSION CONTROL PLAN
8	C-3.1 TEMPORARY EROSION CONTROL PLAN
9	C-3.2 FINAL EROSION CONTROL PLAN
10	C-3.3 EROSION CONTROL DETAILS
11	C-3.4 EROSION CONTROL DETAILS
12	C-3.5 EROSION CONTROL DETAILS
13	C-4.0 PRE CONSTRUCTION STORMWATER CONTROL PLAN
14	C-4.1 POST CONSTRUCTION STORMWATER CONTROL PLAN
15	C-5.0 OVERALL GRADING PLAN
16	C-5.1 GRADING AND DRAINAGE PLAN WEST
17	C-5.2 GRADING AND DRAINAGE PLAN NORTH
18	C-5.3 GRADING AND DRAINAGE PLAN SOUTH
19	C-5.4 STORM STRUCTURE AND PIPE TABLES
20	C-5.5 INLET AREA PLAN
21	C-6.0 ROAD ALIGNMENT PLAN
22	C-6.1 ROAD 1 PLAN AND PROFILE
23	C-6.2 ROAD 1 PLAN AND PROFILE
24	C-6.3 MCCOIN DRIVE PLAN AND PROFILE
25	C-6.4 BARBER DRIVE PLAN AND PROFILE
26	C-6.5 BARBER DRIVE AND ROAD 4 PLAN AND PROFILE
27	C-6.6 SIGHT DISTANCE EXHIBIT
28	C-7.0 OVERALL UTILITY PLAN
29	C-7.1 ROAD 1 UTILITY PLAN AND PROFILE
30	C-7.2 ROAD 1 PLAN AND PROFILE
31	C-7.3 ROAD 1 UTILITY PLAN AND PROFILE
32	C-7.4 MCCOIN DRIVE UTILITY PLAN AND PROFILE
33	C-7.5 BARBER DRIVE UTILITY PLAN AND PROFILE
34	C-7.6 BARBER DRIVE AND ROAD 4 PLAN AND PROFILE
35	C-7.7 SANITARY SEWER STRUCTURE AND PIPE TABLES
36	C-8.0 DETAILS
37	C-8.1 DETAILS
38	C-8.2 DETAILS
39	C-8.3 DETAILS
40	C-8.4 DETAILS
41	C-8.5 DETAILS
42	C-8.6 DETAILS
43	C-8.7 DETAILS
44	C-8.8 DETAILS
45	C-8.9 DETAILS
46	C-8.10 DETAILS
47	C-8.11 DETAILS
48	C-8.12 DETAILS



REVISION DESCRIPTION:	
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CLQ LAND		ISSUE DATE:		DATE:	
PARCEL IDS 02500005500, 02500005600,		DESIGNED BY:		REV:	
025000013500		FCG		1	
4652 MAJESTIC MEADOWS DRIVE,		DRAWN BY:		2	
ARRINGTON, TN 37014		FCG		3	
(615) 663-7345 mark@clqland.com		PROJECT NUMBER:		4	
FC GAUMMIZ CIVIL ENGINEER, LLC		224-0203		5	
1877 ERLINGER DRIVE		CHECKED BY:		6	
NOLENSVILLE, TN 37135		FCG		7	
(408) 690-1467				8	
cole@fcgcivil.com					

FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN



SHEET TITLE:
TITLE SHEET

SHEET:
C-0.0

GENERAL NOTES

1. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CALL NATIONAL ONE CALL (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
3. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.
4. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED IN ACCORDANCE WITH LOCAL AGENCY STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT. COORDINATE PAVEMENT TRENCHING LOCATIONS WITH SITE CIVIL, PLUMBING AND ELECTRICAL PLANS.
5. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY.
6. DIMENSIONS ARE TO FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
7. CONCRETE FOR CURBS SHALL BE 4,000 PSI AND CONCRETE FOR SIDEWALKS SHALL BE 3,500 PSI.
8. ANY WORK UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE OR TO THE LOCAL GOVERNING AUTHORITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.
10. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
11. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.
12. THE CONTRACTOR SHALL COLD PLANE IN THE DIRECTION OF TRAFFIC.
13. THE CONTRACTOR WILL BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
14. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF GOODLETTSVILLE AND TDOT.
15. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE CITY OF GOODLETTSVILLE AND TDOT REGULATIONS AND SPECIFICATIONS.
16. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING MANHOLE CASTINGS/LIDS TO PROPOSED FINISHED GRADE AS NECESSARY.
18. ROADWAYS AND STORM INFRASTRUCTURE IN THE PROPOSED CITY OF GOODLETTSVILLE RIGHT OF WAYS WILL REQUIRE INSPECTIONS FROM THE PUBLIC WORKS DEPARTMENT. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSPECTIONS THROUGH THE PUBLIC WORKS DEPARTMENT FOR THE SUBGRADE PROOF ROLL (CONTRACTOR TO PROVIDE TRI-AXLE FULLY LOADED DUMP TRUCK FOR ROLL), STORM SEWER INSTALLATION INSPECTIONS (INCLUDING BACKFILL), BASE STONE INSPECTION, AND ASPHALT COURSE INSPECTIONS.

SITE GRADING & EROSION CONTROL NOTES

1. THIS PROJECT WILL DISTURB GREATER THAN 1 ACRE OF LAND THEREFORE AN NOI AND NOC FROM TDEC WILL BE REQUIRED PRIOR TO THE ISSUANCE OF A GRADING PERMIT. THE SELECTED CONTRACTOR MUST SUBMIT A SUPPLEMENTAL NOI TO TDEC TO BE ADDED AS AN OPERATOR PRIOR TO THE PERMIT BEING ISSUED.
2. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.
3. MULCH AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETED, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
4. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
5. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
6. THE CONTRACTOR SHALL ADJUST THE CASTINGS OF ALL NEW AND EXISTING STRUCTURES TO MATCH PROPOSED FINISH GRADES.
7. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
8. ALL CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL TO 1 VERTICAL OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.
9. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.
10. MINIMUM GRADE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0%.
11. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.
12. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL, SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR THEIR REPRESENTATIVE.
13. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE EXPOSED DURING CONSTRUCTION PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE

ENCOUNTERED, AND SHALL BE APPROVED BY THE ENGINEER.

14. THE GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL SOILS REPORT HAS BEEN PREPARED AND IS AVAILABLE FROM THE OWNER. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
15. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
16. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.
17. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
18. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL SUPPLY ADDITIONAL TOP SOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE.
19. TOP OF GRATE ELEVATIONS AND LOCATION OF COORDINATES FOR DRAINAGE STRUCTURES SHALL BE AS SHOWN ON THE DETAIL, UNLESS NOTED OTHERWISE. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADES.
20. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION.
21. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. GROUNDWATER INFILTRATION INTO EXCAVATIONS SHOULD BE EXPECTED, AND THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.
22. REINFORCED CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III, WALL "B".
23. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.
24. THE CONTRACTOR SHALL PROVIDE AN ASBUILT SURVEY STAMPED BY A LICENSED SURVEYOR IN THE STATE OF TENNESSEE FOR ALL PUBLIC STORM SYSTEMS, ONSITE DETENTION PONDS, AND WATER QUALITY MEASURES VERIFYING COMPLIANCE WITH DESIGN DOCUMENTS.
25. THE LOCATION OF ALL DIVERSION SWALES AND DITCHES SHALL BE FIELD ADJUSTED TO AVOID TREES AS POSSIBLE. THE CONTRACTOR SHALL WALK THE ALIGNMENT OF THESE SWALES AND DITCHES IN THE FIELD TO VERIFY AVOIDANCE OF TREES.
26. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN THE RUN-OFF. COST FOR THEIR TREATMENT IS TO BE INCLUDED IN BID PRICE FOR EARTHWORK. THE CONTRACTOR SHALL OBTAIN THE DISPOSAL SITE AS PART OF THEIR WORK.
27. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.
28. ANY SITE USED FOR DISPOSAL AND/OR STOCKPILE OF ANY MATERIAL SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT ALL REQUIRED PERMITS ARE SECURED FOR EACH PROPERTY UTILIZED. A COPY OF THE APPROVED PERMIT MUST BE PROVIDED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK ON ANY PROPERTY. FAILURE TO DO SO MAY RESULT IN THE CONTRACTOR REMOVING ANY ILLEGALLY PLACED MATERIAL AT THEIR OWN EXPENSE.
29. SEGMENTABLE AND/OR POURED IN PLACE RETAINING WALLS SHALL BE PROVIDED BY THE CONTRACTOR AS A DESIGN BUILD. WALL DESIGN PLANS STAMPED BY A STRUCTURAL REGISTERED ENGINEER IN THE STATE OF TENNESSEE THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER AS A SHOP DRAWING. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY GEOTECHNICAL INFORMATION NECESSARY TO PROPERLY DESIGN THE WALL.
30. IF ANY SINKHOLES OR VOID AREAS ARE DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH WORK. A PHASE V INJECTION WELL PERMIT WILL NEED TO BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.

SITE UTILITY NOTES

1. THE SANITARY SEWER SHALL BE OF THE MATERIAL INDICATED ON THE PLAN. POLYVINYLCHLORIDE (PVC) SHALL BE (SDR26). DUCTILE IRON PIPE (D.I.P.) SHALL BE CLASS 250.
2. ALL WATER LINES, SEWER LINES, AND APPURTENANCES SHALL BE OF MATERIALS AND CONSTRUCTION THAT CONFORM TO THE CITY OF GOODLETTSVILLE STANDARDS AND SPECIFICATIONS.
4. PROVIDE A MINIMUM 36" OF COVER OVER ALL WATER MAINS.
5. THE CONTRACTOR SHALL MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THESE CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.
6. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING MANHOLES OR SANITARY SEWER LINES AT THE POINT OF CONNECTION PRIOR TO THE COMMENCEMENT OF ORDERING OF MATERIALS, CONSTRUCTION OR REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE, EXISTING OR PROPOSED.
8. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
9. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE LOCAL WATER AND SEWER DEPARTMENT SPECIFICATIONS.

10. ALL TRENCHES CUT IN EXISTING ROADS OR DRIVES SHALL UTILIZE A CLEAN SAW CUT AND SHALL BE BACKFILLED (100%) TO FINAL SUBGRADE WITH #57 STONE. REPAIR ROADS PER LOCAL AGENCY REQUIREMENTS.
11. REPAIR ALL DAMAGE TO EXISTING FEATURES (i.e. DRIVES, ROADS, YARDS, LANDSCAPING, ETC...) TO PRE-CONSTRUCTION CONDITION.
12. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASS UNDER OR OVER OTHER UTILITY LINES. (ALL BENDS AND BRACES NEEDED MAY NOT BE ACTUALLY SHOWN). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED BY WATER DEPARTMENT.
13. WATER METERS SHALL BE AT LEAST 22" BUT NO MORE THAN 26" FROM TOP OF METER TO PROPOSED FINISHED GRADE.
14. THE CONTRACTOR SHALL VERIFY REQUIRED PIPE LENGTHS. EXISTING PIPE MATERIAL AND SIZES AS SHOWN ON PLANS.
15. REPAIR EXISTING PAVEMENT, CURBS, WALKS, LANDSCAPING, ETC. THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES TO A LIKE NEW CONDITION AT NO ADDITIONAL COST TO THE OWNER.
16. THE PROPOSED GAS LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL GAS COMPANY BY THE CONTRACTOR.
17. THE PROPOSED ELECTRIC LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL ELECTRIC COMPANY BY THE CONTRACTOR.
18. THE PROPOSED TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL TELEPHONE COMPANY BY THE CONTRACTOR.
19. WHERE DRAINAGE OR UTILITY LINES OCCUR IN PROPOSED FILL AREAS, THE FILL MATERIAL IS TO BE PLACED AND COMPACTED PER GEOTECHNICAL RECOMMENDATIONS PRIOR TO INSTALLATION OF DRAINAGE OR UTILITY LINES. FILL IS TO BE INSPECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE. OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.
20. THE CONTRACTOR SHALL ADJUST THE ALIGNMENT OF THE WATER LINES (HORIZONTALLY AND/OR VERTICALLY) TO ALLOW THE REQUIRED BRACING AT BENDS AND TEES.
21. EXISTING CASTINGS LOCATED IN FILL/CUT AREAS SHALL BE ADJUSTED TO ENSURE THAT THE TOP OF CASTING IS FLUSH WITH THE FINISHED GRADE.
22. THE OUTSIDE OF ALL MANHOLES SHALL BE COATED WITH BITUMINOUS PAINT.

23. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.
24. PRIOR TO SUBMITTING THEIR BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.
25. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE BY THE CORING AND RESILIENT SEAL METHOD.
26. FIRE HYDRANT ASSEMBLIES INCLUDE THE APPROPRIATE SIZED TEE (WITH KICKER), 6" LINE TO HYDRANT, 6" GATE VALVE (WITH VALVE BOX), AND FIRE HYDRANT (WITH KICKER). HYDRANTS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS.
27. THE CONCRETE CAPS AND ENCASEMENTS ON WATER AND SEWER LINES SHALL BE A MINIMUM OF 6" THICK. USE 3,000 PSI CONCRETE.
28. ALL SANITARY SEWER SERVICES SHALL BE 6" DIAMETER AND EXTEND 10 FEET BEYOND THE PROPERTY LINE.
29. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE.

30. ALL PROPOSED LOT CORNERS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION OF SANITARY SEWERS. CONTROL POINTS ARE AS SHOWN ON THE SITE LAYOUT PLAN.
31. THE BUILDER SHALL VERIFY THE SANITARY SEWER SERVICE ELEVATION PRIOR TO SETTING THE FINISHED FLOOR ELEVATIONS FOR ALL STRUCTURES. THE SANITARY SEWER MAIN AND SERVICES WERE DESIGNED BASED ON SETTING MINIMUM FINISHED FLOOR ELEVATIONS ON A NUMBER OF CRITICAL LOTS. THE BUILDER SHALL ADHERE TO THE MINIMUM FINISHED FLOOR ELEVATIONS LISTED ON THE SANITARY SEWER SHEETS.

32. PROVIDE A MINIMUM 36" OF COVER OVER ALL SEWER LINES IN GRASS AREAS AND 48" OF COVER IN PAVED AREAS.

GEOTECHNICAL NOTE

1. ALL SITE WORK SHALL BE IN ACCORDANCE WITH THE REPORT OF GEOTECHNICAL SERVICES BY GEO SERVICES, LLC PROJECT NUMBER 31-222001, DATED DECEMBER 28, 2022.
- IF, IN THE PURSUIT OF THIS WORK BY THE CONTRACTOR, CONDITIONS OR CIRCUMSTANCES ARE ENCOUNTERED THAT ARE DIFFERENT THAN REFLECTED IN THESE PLANS OR THAT APPEAR TO IMPACT THE SCOPE OF THE WORK, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE CIVIL ENGINEER, AND THE OWNER/DEVELOPER BEFORE ANY REMEDIAL COURSE OF ACTION OR DESIGN CHANGE IS INITIATED. ALL PARTIES (OWNER, CIVIL ENGINEER, PROPER GOVERNMENTAL AGENCIES, AND CONTRACTOR) MUST BE IN AGREEMENT AND THE MAGNITUDE OF THE COST/TIME REQUIRED FOR THE MEASURES ESTABLISHED.

AS-BUILT SURVEY

1. THE CITY OF GOODLETTSVILLE WILL REQUIRE AN AS-BUILT SURVEY AND STORMWATER ANALYSIS DEMONSTRATING THE SITE MEETS THE SUBMITTED DESIGN INTENTIONS FOR STORMWATER DETENTION, WATER QUALITY, AND STORMWATER INFRASTRUCTURE SUCH AS STORM SEWER AND CONVEYANCE CHANNELS. CALCULATIONS MUST REFLECT THE DESIGNED POND ROUTINGS, WATER SURFACE ELEVATIONS, ETC. PROVIDED DURING THE CONSTRUCTION DOCUMENTS REVIEW. NO BUILDING CERTIFICATE OF OCCUPANCY WILL BE PROVIDED UNTIL THE SITE IS COMPLETED / STABILIZED, AND AS-BUILTS HAVE BEEN SUBMITTED FOR THE PROJECT.



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ISSUE DATE:		PROJECT NUMBER:	
09/28/2024		224-0203	
DESIGNED BY:		DRAWN BY:	
FCG		FCG	
CHECKED BY:			
FCG			

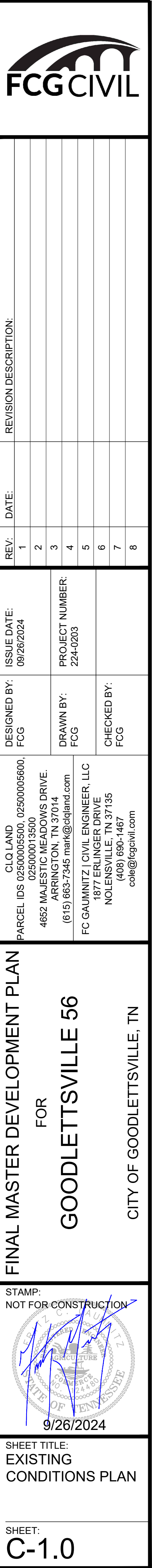
CLQ LAND PARCEL IDS 02500005500, 02500005600, 025000019500 4652 MAJESTIC MEADOWS DRIVE, NOLANSVILLE, TN 37135 (615) 663-7345 mark@cdigital.com	FC GAUMMITZ CIVIL ENGINEER, LLC 1877 ERLINGER DRIVE NOLANSVILLE, TN 37135 (404) 686-1467 cde@fcgenllc.com
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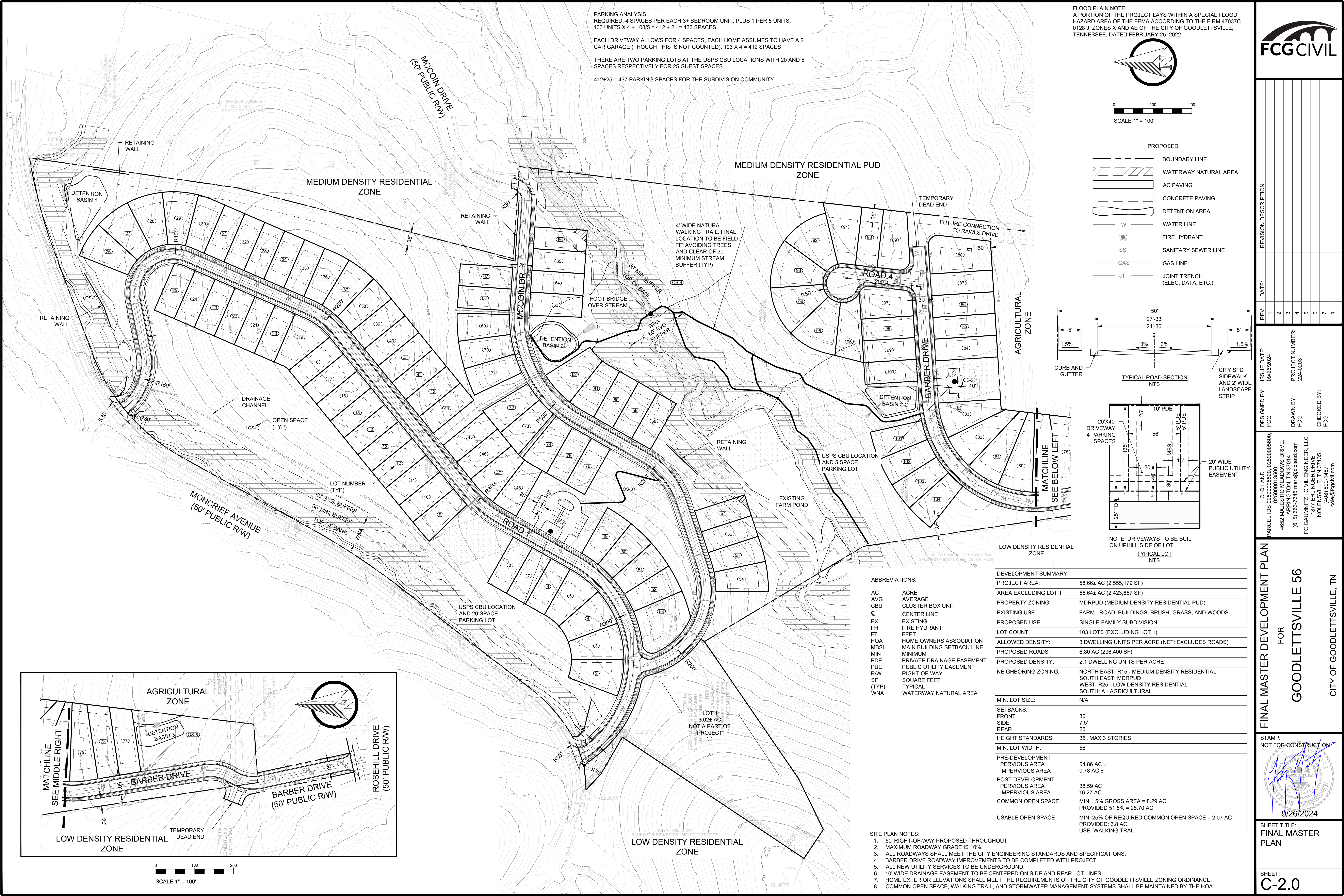
FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN



SHEET TITLE:
NOTES

SHEET:
C-0.1





REVISION DESCRIPTION:

DATE:

REV: 1 2 3 4 5 6 7 8

ISSUE DATE: 09/26/2024

DESIGNED BY: FCG

DRAWN BY: FCG

CHECKED BY: FCG

CLQ LAND 02500005500, 02500005600, 025000013500, 025000013500, 4652 MARIETTA MEADOWS DRIVE, NOLANSVILLE, TN 37135, (615) 663-7345 mark@fcgcivil.com

PARCEL IDS 02500005500, 02500005600, 025000013500, 025000013500, 4652 MARIETTA MEADOWS DRIVE, NOLANSVILLE, TN 37135, (615) 663-7345 mark@fcgcivil.com

FC GAUMMIZI, CIVIL ENGINEER, LLC, 1877 ERLINGER DRIVE, NOLANSVILLE, TN 37135, (408) 686-1467, cga@fcgcivil.com

FINAL MASTER DEVELOPMENT PLAN FOR GOODLETTSVILLE 56

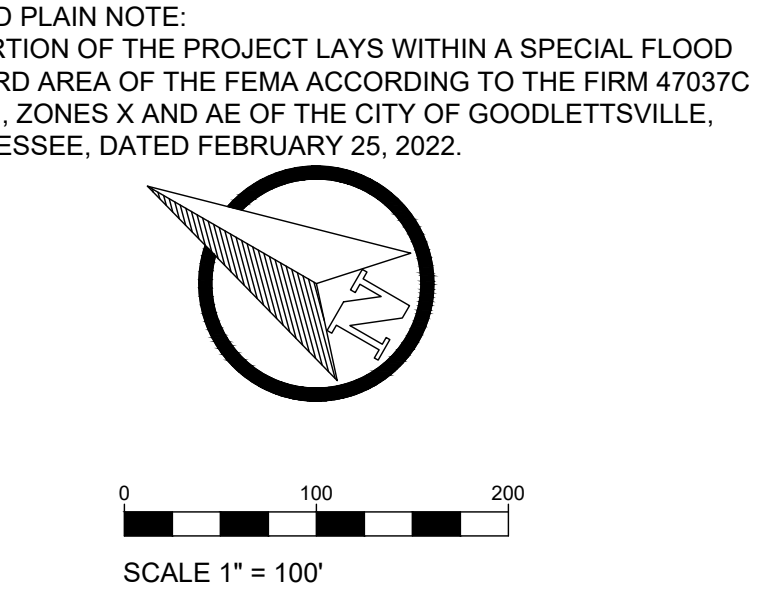
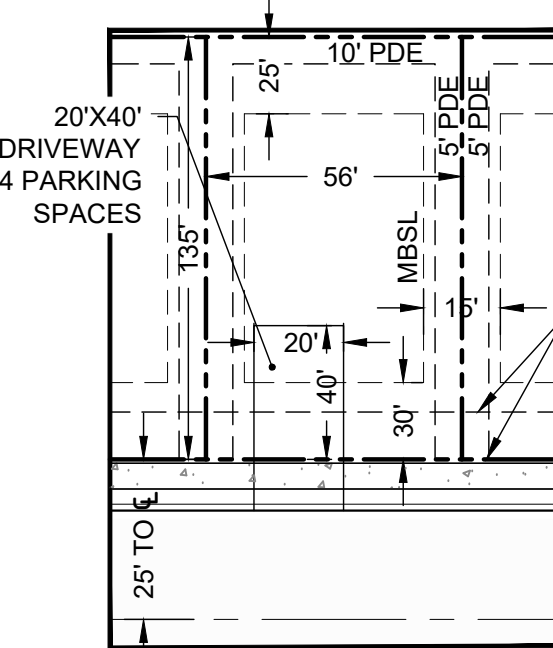
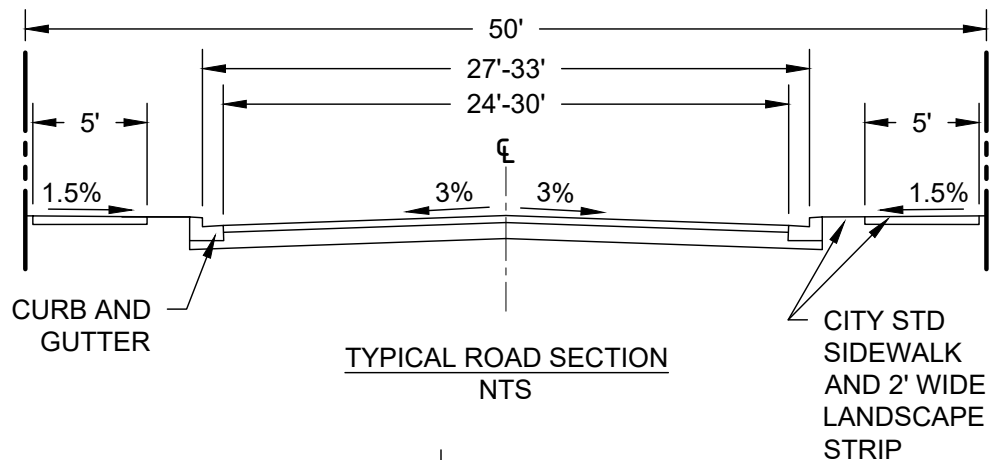
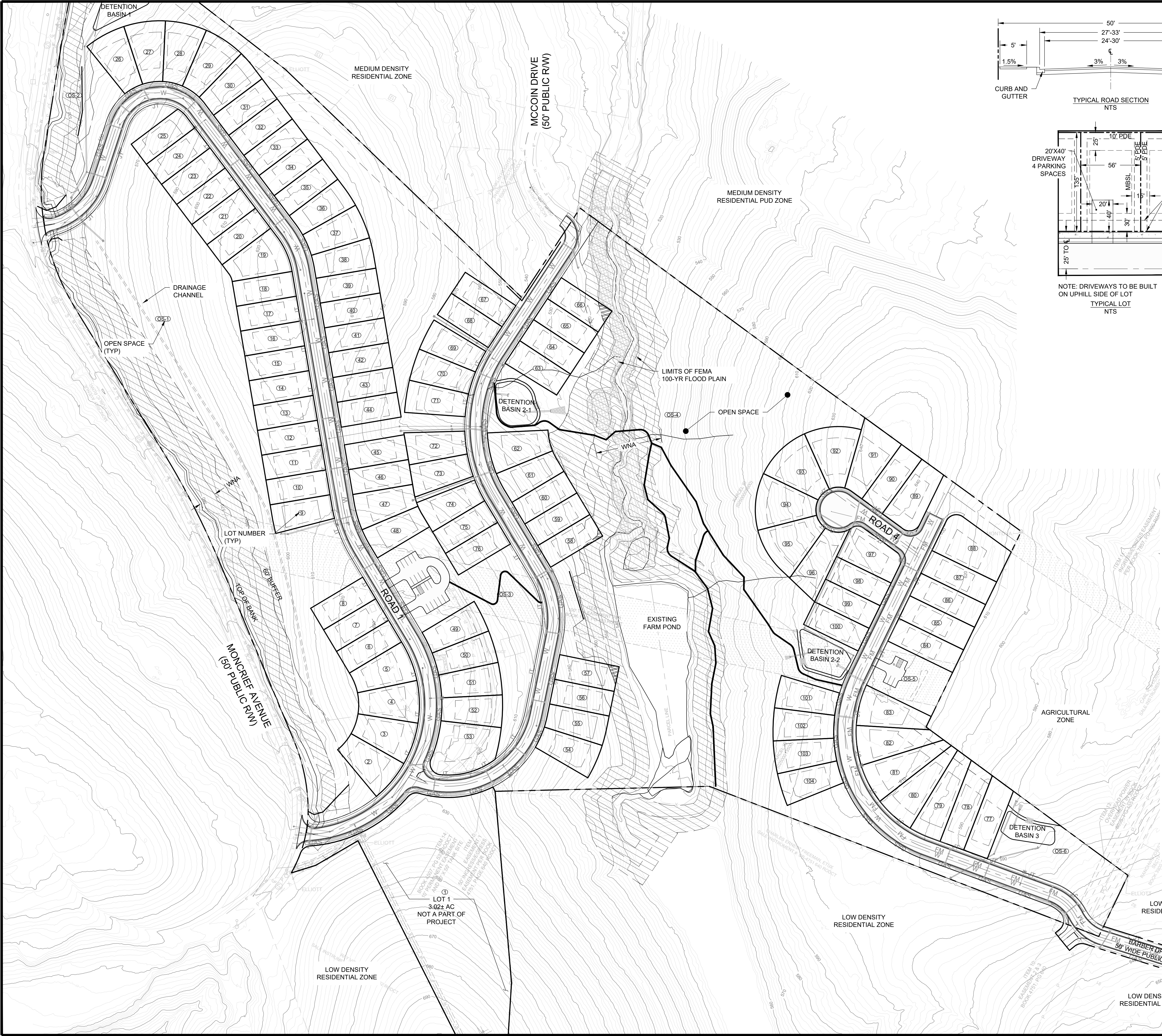
CITY OF GOODLETTSVILLE, TN

STAMP: NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE: FINAL MASTER PLAN

SHEET: C-2.0



- PROPOSED
- BOUNDARY LINE
 - WATERWAY NATURAL AREA
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - WATER LINE
 - FIRE HYDRANT
 - SANITARY SEWER LINE
 - GAS LINE
 - JOINT TRENCH (ELEC, DATA, ETC.)

DEVELOPMENT SUMMARY:	
PROJECT AREA:	58.66± AC (2,555,179 SF)
AREA EXCLUDING LOT 1	55.64± AC (2,423,657 SF)
PROPERTY ZONING:	MDRPUD (MEDIUM DENSITY RESIDENTIAL PUD)
EXISTING USE:	FARM - ROAD, BUILDINGS, BRUSH, GRASS, AND WOODS
PROPOSED USE:	SINGLE-FAMILY SUBDIVISION
LOT COUNT:	103 LOTS (EXCLUDING LOT 1)
ALLOWED DENSITY:	3 DWELLING UNITS PER ACRE (NET: EXCLUDES ROADS)
PROPOSED ROADS:	6.80 AC (296,400 SF)
PROPOSED DENSITY:	2.1 DWELLING UNITS PER ACRE
NEIGHBORING ZONING:	NORTH EAST: R15 - MEDIUM DENSITY RESIDENTIAL SOUTH EAST: MDRPUD WEST: R25 - LOW DENSITY RESIDENTIAL SOUTH: A - AGRICULTURAL
MIN. LOT SIZE:	N/A
SETBACKS:	
FRONT	30'
SIDE	7.5'
REAR	25'
HEIGHT STANDARDS:	35', MAX 3 STORIES
MIN. LOT WIDTH:	56'
PRE-DEVELOPMENT	
PERVIOUS AREA	54.86 AC ±
IMPERVIOUS AREA	0.78 AC ±
POST-DEVELOPMENT	
PERVIOUS AREA	38.59 AC
IMPERVIOUS AREA	16.27 AC
COMMON OPEN SPACE	MIN. 15% GROSS AREA = 8.29 AC PROVIDED 51.5% = 28.70 AC
USABLE OPEN SPACE	MIN. 25% OF REQUIRED COMMON OPEN SPACE = 2.07 AC PROVIDED: 3.8 AC USE: WALKING TRAIL

- SITE PLAN NOTES:
- 50' RIGHT-OF-WAY PROPOSED THROUGHOUT
 - MAXIMUM ROADWAY GRADE IS 10%.
 - ALL ROADWAYS SHALL MEET THE CITY ENGINEERING STANDARDS AND SPECIFICATIONS.
 - BARBER DRIVE ROADWAY IMPROVEMENTS TO BE COMPLETED WITH PROJECT.
 - ALL NEW UTILITY SERVICES TO BE UNDERGROUND.
 - 10' WIDE DRAINAGE EASEMENT TO BE CENTERED ON SIDE AND REAR LOT LINES
 - HOME EXTERIOR ELEVATIONS SHALL MEET THE REQUIREMENTS OF THE CITY OF GOODLETTSVILLE ZONING ORDINANCE
 - COMMON OPEN SPACE, WALKING TRAIL, AND STORMWATER MANAGEMENT SYSTEMS SHALL BE MAINTAINED BY THE HOA.

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ISSUE DATE:	09/26/2024
PROJECT NUMBER:	224-0203
DESIGNED BY:	FCG
DRAWN BY:	FCG
CHECKED BY:	FCG

CLQ LAND	02500005500, 02500005600
PARCEL IDS	025000019500
4652 MAJESTIC MEADOWS DRIVE	
6151 665-7345 mark@fcgcivil.com	
FC GAUMMIZ CIVIL ENGINEER, LLC	
1877 ERLINGER DRIVE	
NOLANSVILLE, TN 37135	
(405) 686-1467	
code@fcgcivil.com	

FINAL MASTER DEVELOPMENT PLAN

FOR

GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE:

PRELIMINARY PLAT

SHEET:

C-2.1



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ISSUE DATE: 09/26/2024	PROJECT NUMBER: 224-0203
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DESIGNED BY: FCG	DRAWN BY: FCG	CHECKED BY: FCG
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CLQ LAND PARCEL IDS 02500005500, 02500005600, 025000015500 4652 MAJESTIC MEADOWS DRIVE, NOLANVILLE, TN 37135 (615) 663-7345 mark@cdland.com	FC GAUMMITZ CIVIL ENGINEER, LLC 1877 ERLINGER DRIVE NOLANVILLE, TN 37135 (408) 686-1467 cdl@fcga.com
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FINAL MASTER DEVELOPMENT PLAN

FOR

GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE:
LOT TABLES

SHEET:
C-2.2

Parcel Area Table		
PARCEL	SQ. FT.	ACRES
1	131,521.61	3.02
2	9,632.81	0.22
3	9,632.80	0.22
4	9,632.79	0.22
5	9,467.55	0.22
6	7,560.19	0.17
7	7,560.72	0.17
8	7,561.25	0.17
9	7,966.28	0.18
10	7,560.00	0.17
11	7,560.00	0.17
12	7,560.00	0.17
13	7,560.00	0.17
14	7,560.00	0.17
15	7,560.00	0.17
16	7,560.00	0.17
17	7,560.00	0.17
18	7,560.00	0.17
19	10,300.52	0.24
20	7,560.00	0.17

Parcel Area Table		
PARCEL	SQ. FT.	ACRES
21	7,560.00	0.17
22	7,560.00	0.17
23	7,560.00	0.17
24	7,560.00	0.17
25	7,514.86	0.17
26	9,389.03	0.22
27	9,389.03	0.22
28	9,389.03	0.22
29	9,389.03	0.22
30	8,352.08	0.19
31	7,560.00	0.17
32	7,560.00	0.17
33	7,560.00	0.17
34	7,560.00	0.17
35	7,560.00	0.17
36	8,234.40	0.19
37	8,671.76	0.20
38	8,191.93	0.19
39	7,560.00	0.17
40	7,560.00	0.17

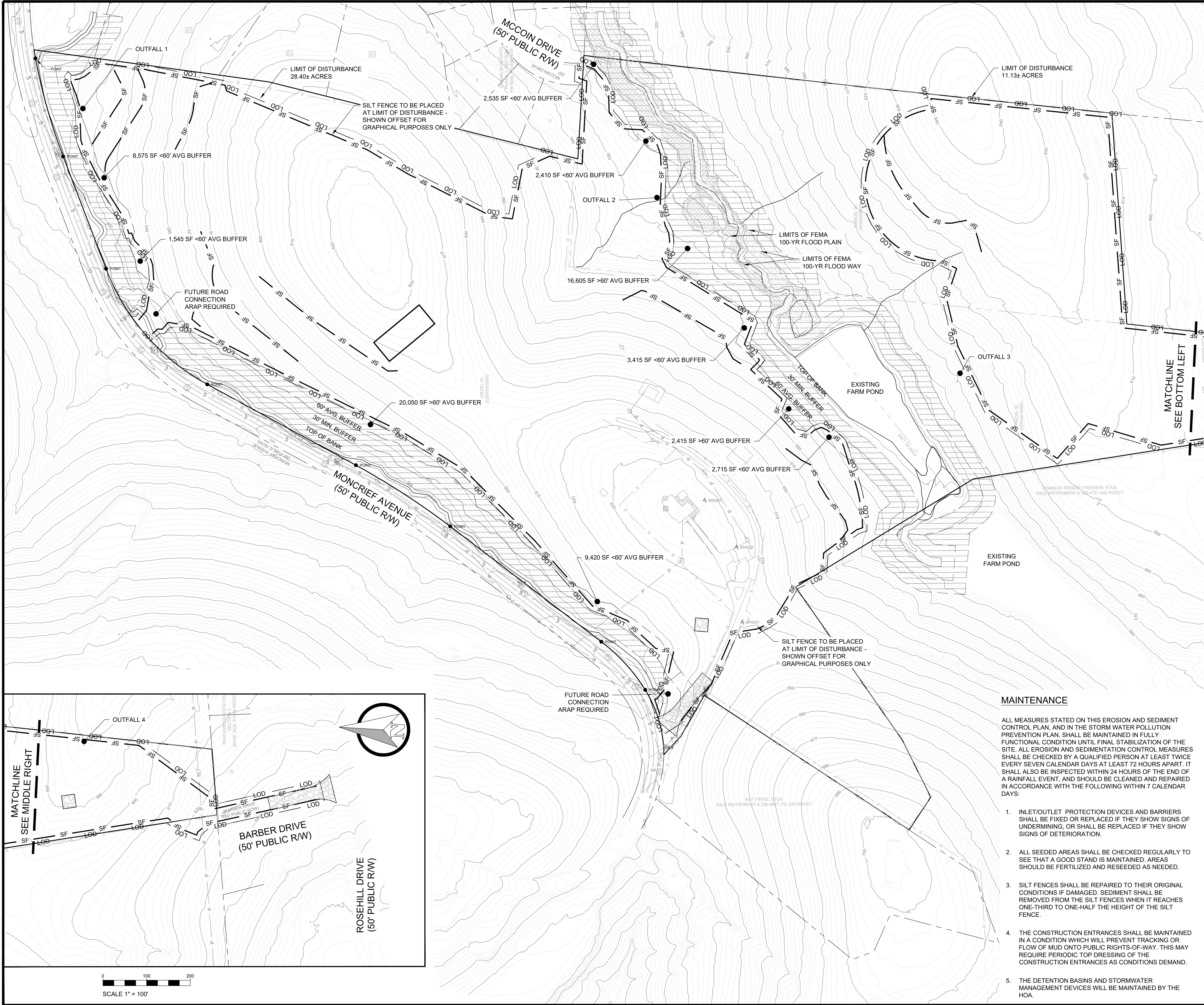
Parcel Area Table		
PARCEL	SQ. FT.	ACRES
41	7,560.00	0.17
42	7,560.00	0.17
43	7,560.00	0.17
44	7,560.00	0.17
45	7,560.00	0.17
46	7,560.00	0.17
47	8,880.93	0.20
48	8,364.43	0.19
49	8,395.15	0.19
50	8,381.74	0.19
51	8,381.74	0.19
52	8,381.74	0.19
53	14,565.84	0.33
54	8,677.81	0.20
55	8,099.60	0.19
56	7,560.00	0.17
57	7,560.00	0.17
58	7,560.00	0.17
59	7,560.00	0.17
60	7,560.00	0.17

Parcel Area Table		
PARCEL	SQ. FT.	ACRES
61	8,432.30	0.19
62	9,507.27	0.22
63	7,839.49	0.18
64	7,560.00	0.17
65	7,560.00	0.17
66	7,560.00	0.17
67	7,560.00	0.17
68	7,595.59	0.17
69	8,358.59	0.19
70	8,358.59	0.19
71	8,358.59	0.19
72	8,182.17	0.19
73	8,270.84	0.19
74	8,549.47	0.20
75	7,561.33	0.17
76	7,560.79	0.17
77	9,470.53	0.22
78	10,376.07	0.24
79	10,964.62	0.25
80	10,886.06	0.25

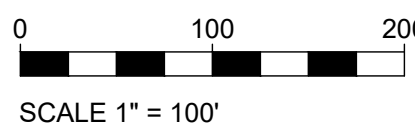
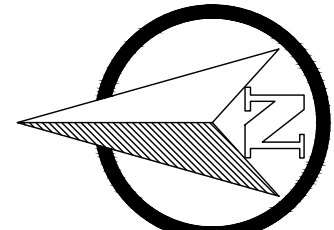
Parcel Area Table		
PARCEL	SQ. FT.	ACRES
81	10,789.62	0.25
82	10,401.92	0.24
83	9,808.83	0.23
84	8,960.00	0.21
85	8,960.00	0.21
86	8,960.00	0.21
87	8,960.00	0.21
88	13,970.02	0.32
89	10,790.42	0.25
90	8,400.00	0.19
91	11,063.03	0.25
92	11,103.77	0.25
93	11,103.79	0.25
94	11,103.79	0.25
95	11,120.00	0.26
96	9,388.75	0.22
97	10,019.48	0.23
98	7,560.00	0.17
99	7,560.00	0.17
100	7,560.00	0.17

Parcel Area Table		
PARCEL	SQ. FT.	ACRES
101	8,419.09	0.19
102	8,419.09	0.19
103	8,419.09	0.19
104	8,419.09	0.19

Open Space Areas		
PARCEL	SQ. FT.	ACRES
OS-1	336,292.92	7.72
OS-2	199,450.06	4.58
OS-3	66,824.82	1.53
OS-4	588,321.77	13.51
OS-5	17,402.57	0.40
OS-6	38,735.64	0.89



FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD
HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



- LEGEND
- LOD — LIMIT OF DISTURBANCE
 - SF — SILT FENCE
 - PROPOSED CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
 - PROPOSED INLET PROTECTION

GENERAL EROSION NOTES:

- THIS SITE DISTURBANCE IS 39.53 ACRES AND DOES REQUIRE A SWPPP. THE STORMWATER CONTROLS SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.
- THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICAL.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
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- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.
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- SILT FENCING SHOWN ALONG THE LIMIT OF DISTURBANCE LINE IS GRAPHICALLY OFFSET FOR PLAN CLARITY. SILT FENCE DURING CONSTRUCTION SHALL BE PLACE ALONG THE LIMIT OF DISTURBANCE.

MAINTENANCE

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- INLET/OUTLET PROTECTION DEVICES AND BARRIERS SHALL BE FIXED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETERIORATION.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
 - SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE SILT FENCE.
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 - THE DETENTION BASINS AND STORMWATER MANAGEMENT DEVICES WILL BE MAINTAINED BY THE HOA.



REVISION DESCRIPTION:

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ISSUE DATE: 09/26/2024	PROJECT NUMBER: 224-0203
DESIGNED BY: FCG	DRAWN BY: FCG
CHECKED BY: FCG	

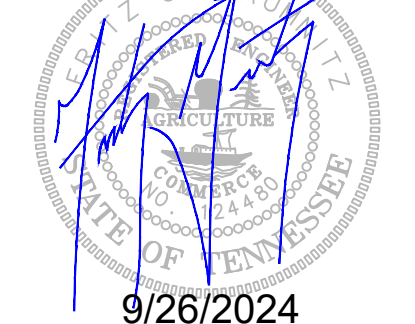
CLQ LAND 02500005500, 02500005600, 025000013500 4652 MAJESTIC MEADOWS DRIVE, NOLANSVILLE, TN 37135 (615) 663-7345 mark@cdigital.com	FC GAUMMUTZ CIVIL ENGINEER, LLC 1877 ERLINGER DRIVE NOLANSVILLE, TN 37135 (404) 686-1467 cde@fcgenl.com
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FINAL MASTER DEVELOPMENT PLAN

FOR
GOODLETTSVILLE 56

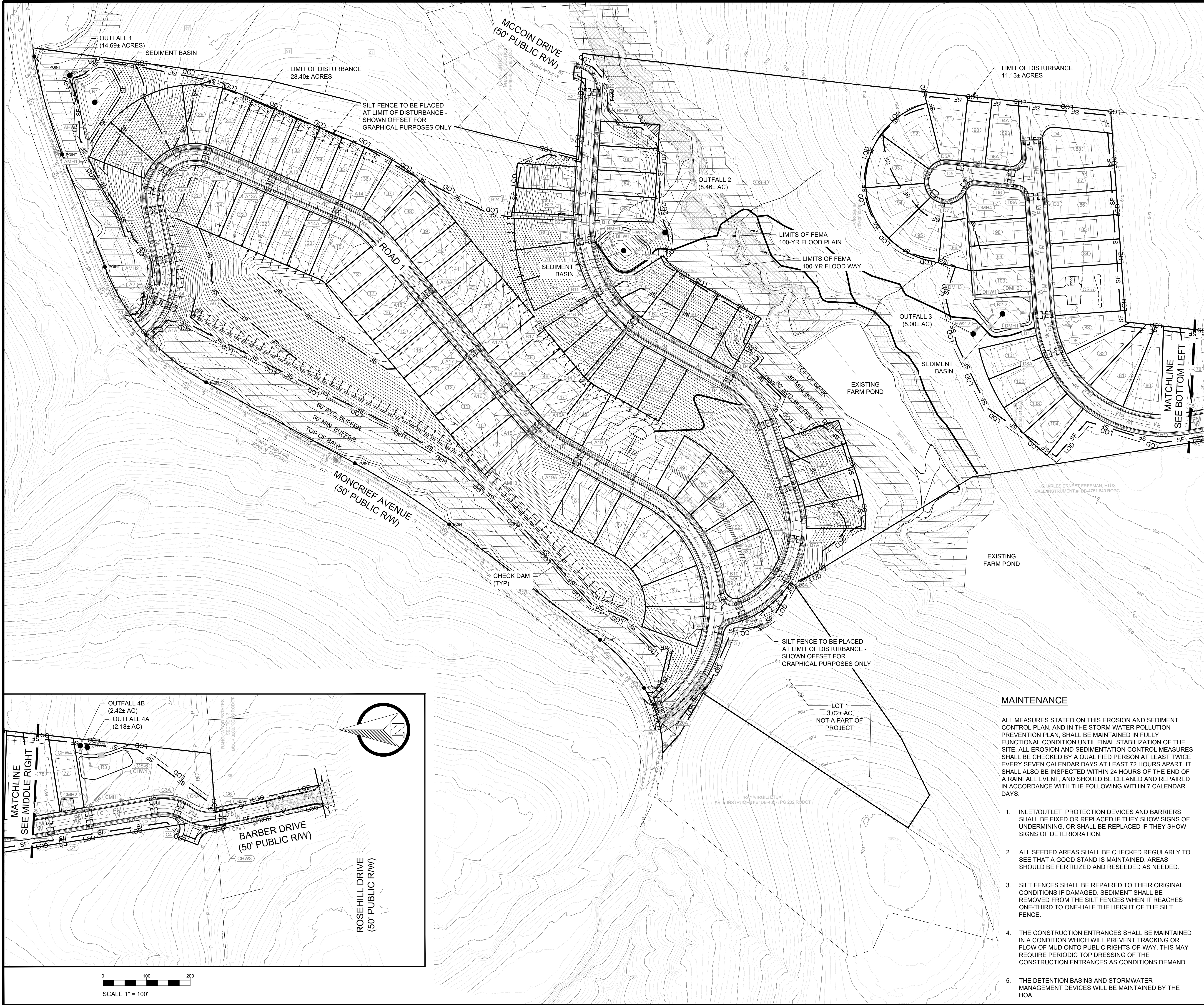
CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION

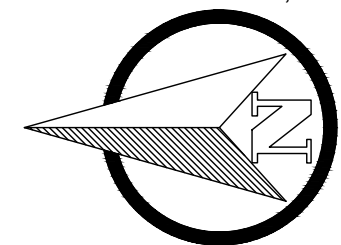


9/26/2024
SHEET TITLE:
INITIAL EROSION
CONTROL PLAN

SHEET:
C-3.0



FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C 0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE, TENNESSEE, DATED FEBRUARY 25, 2022.



0 100 200
SCALE 1" = 100'

- LEGEND
- LOD — LIMIT OF DISTURBANCE
 - SF — SILT FENCE
 - PROPOSED CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
 - PROPOSED INLET PROTECTION
 - SEDIMENT BASIN

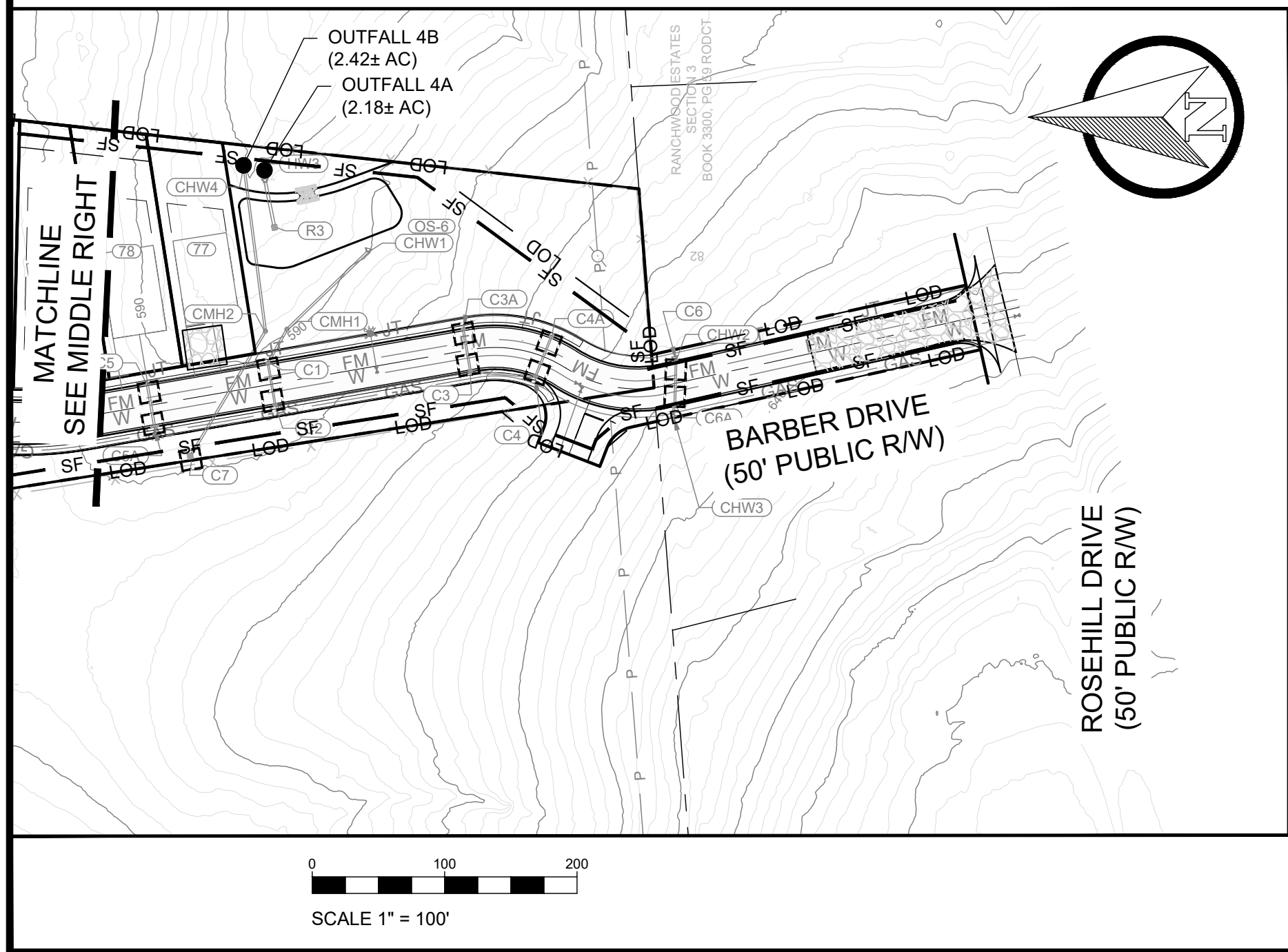
GENERAL EROSION NOTES:

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- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.
- THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
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MAINTENANCE

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09/26/2024

PROJECT NUMBER:
224-0203

DESIGNED BY:
FCG

DRAWN BY:
FCG

CHECKED BY:
FCG

CLQ LAND
02500005500, 02500005600
025000013500
4652 MAESTIC MEADOWS DRIVE,
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(404) 686-1467
cfe@fcgcivil.com

FINAL MASTER DEVELOPMENT PLAN

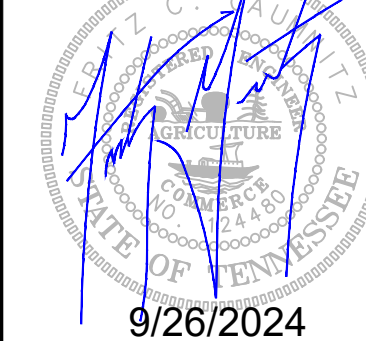
FOR

GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

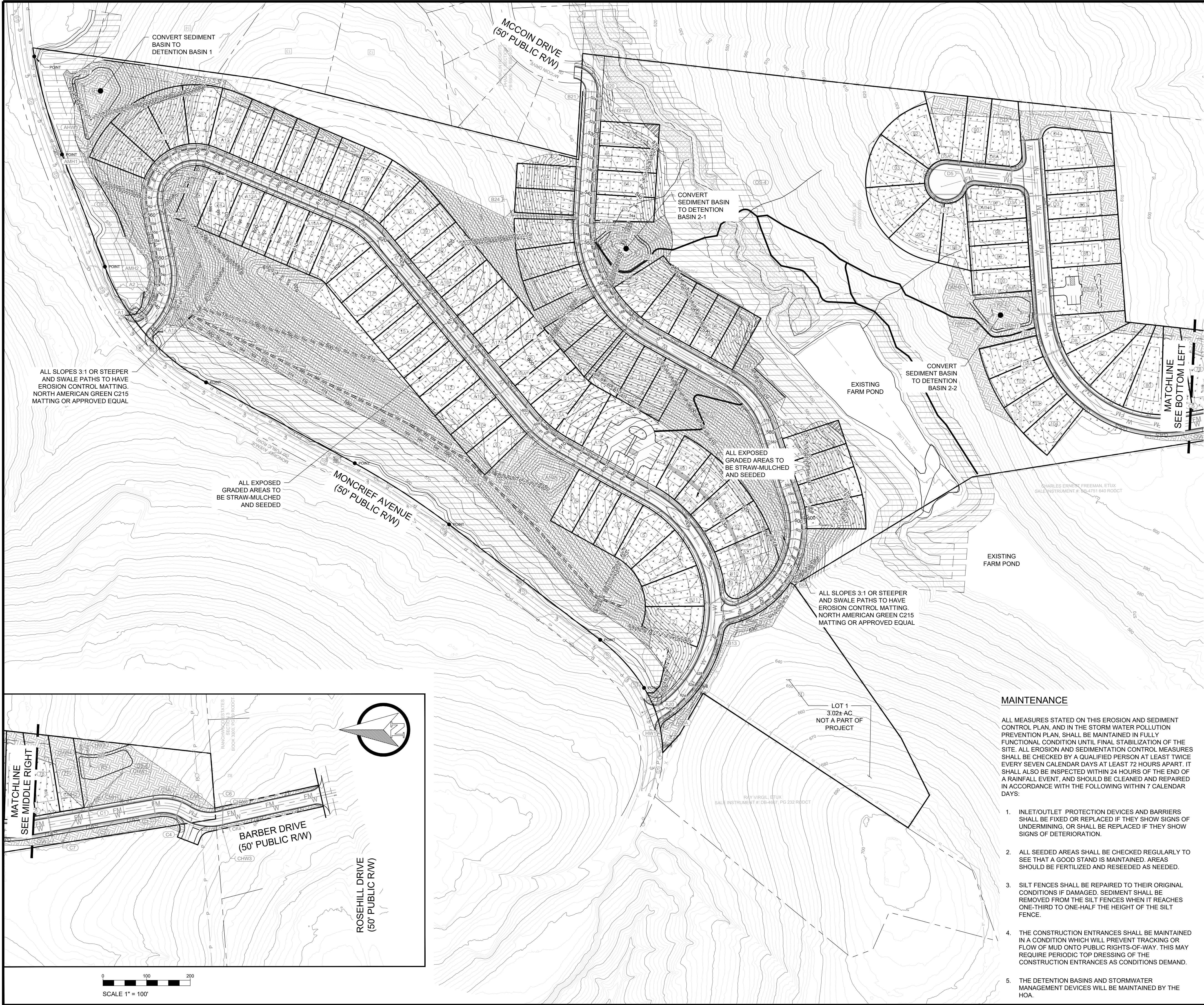
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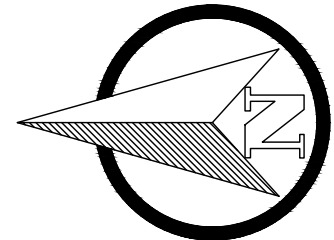


SHEET TITLE:
TEMPORARY
EROSION
CONTROL PLAN

SHEET:
C-3.1



FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD
HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



0 100 200
SCALE 1" = 100'

- LEGEND
- PROPOSED PERMANENT SEEDING
 - PERMANENT EROSION CONTROL MATTING WITH SEEDING

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ISSUE DATE:
09/26/2024

PROJECT NUMBER:
224-0203

DESIGNED BY:
FCG

DRAWN BY:
FCG

CHECKED BY:
FCG

CLQ LAND
02500005500, 02500005600
025000013500
4652 MAJESTIC MEADOWS DRIVE,
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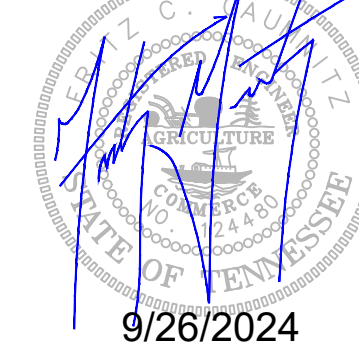
FINAL MASTER DEVELOPMENT PLAN

FOR
GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

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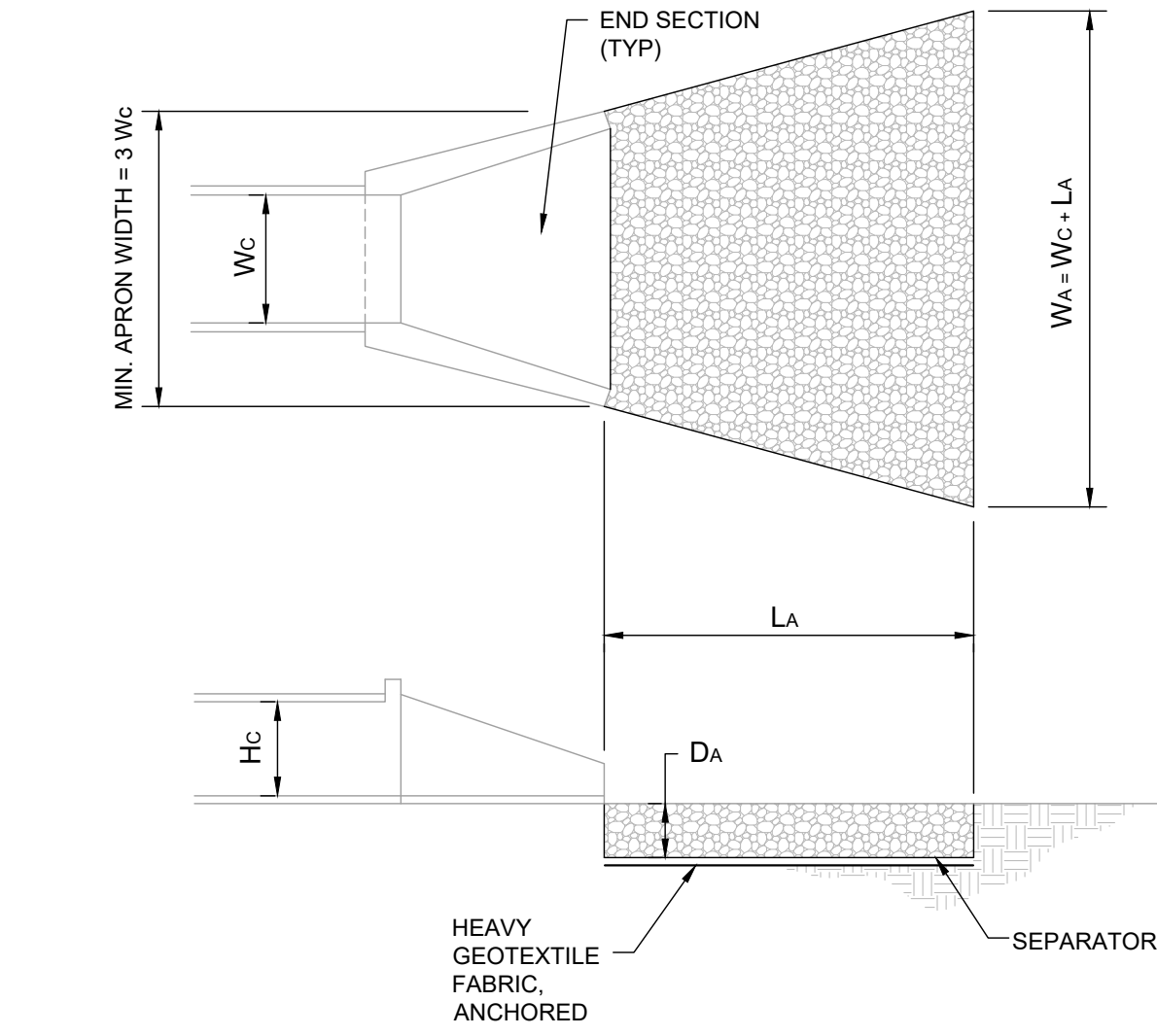


9/26/2024

SHEET TITLE:
FINAL EROSION
CONTROL PLAN

SHEET:

C-3.2



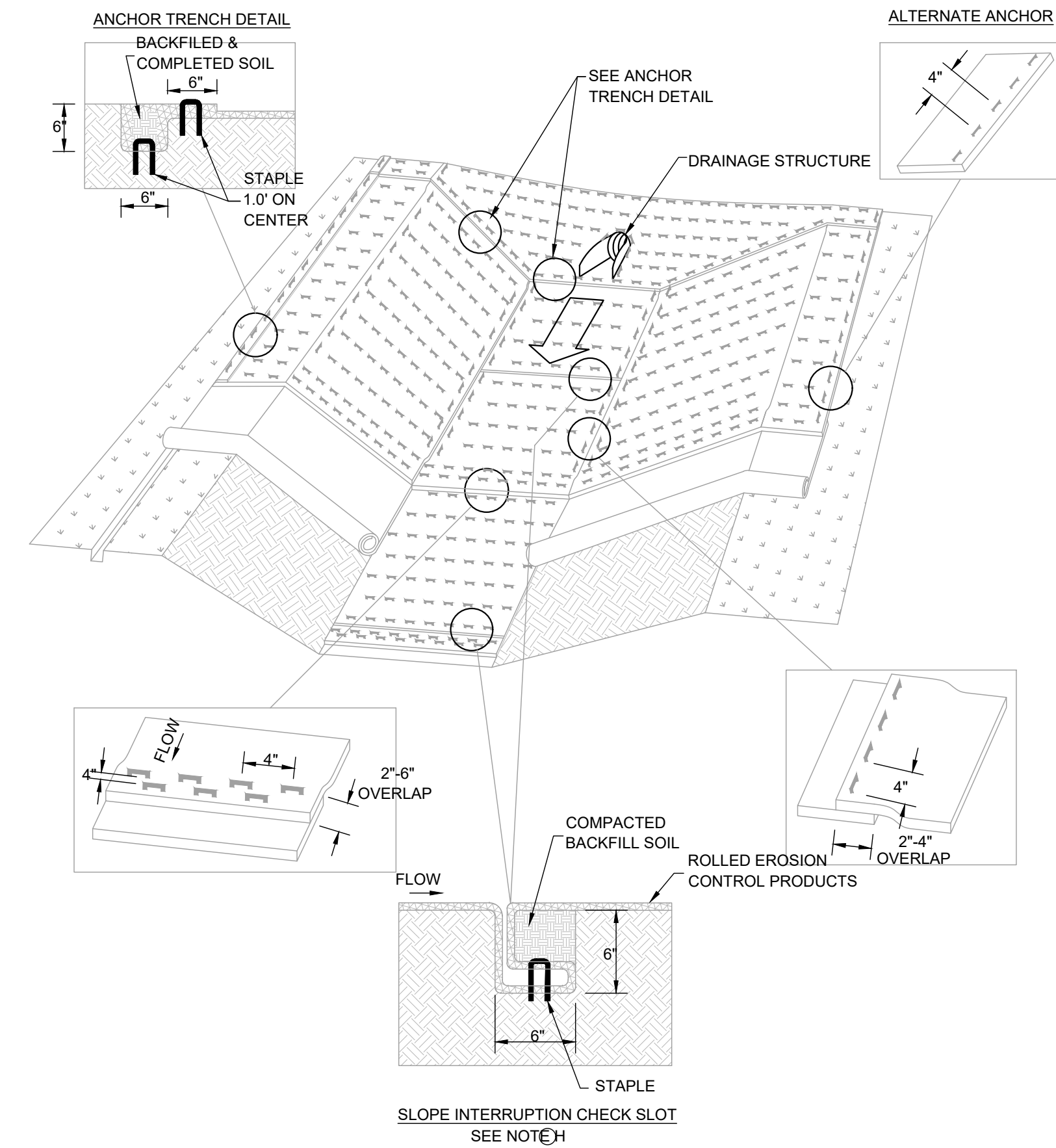
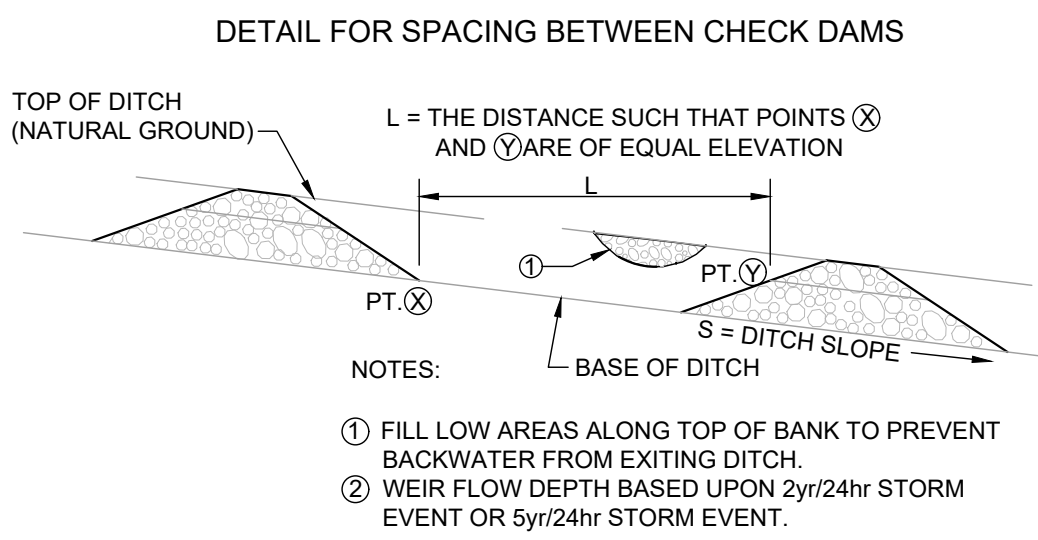
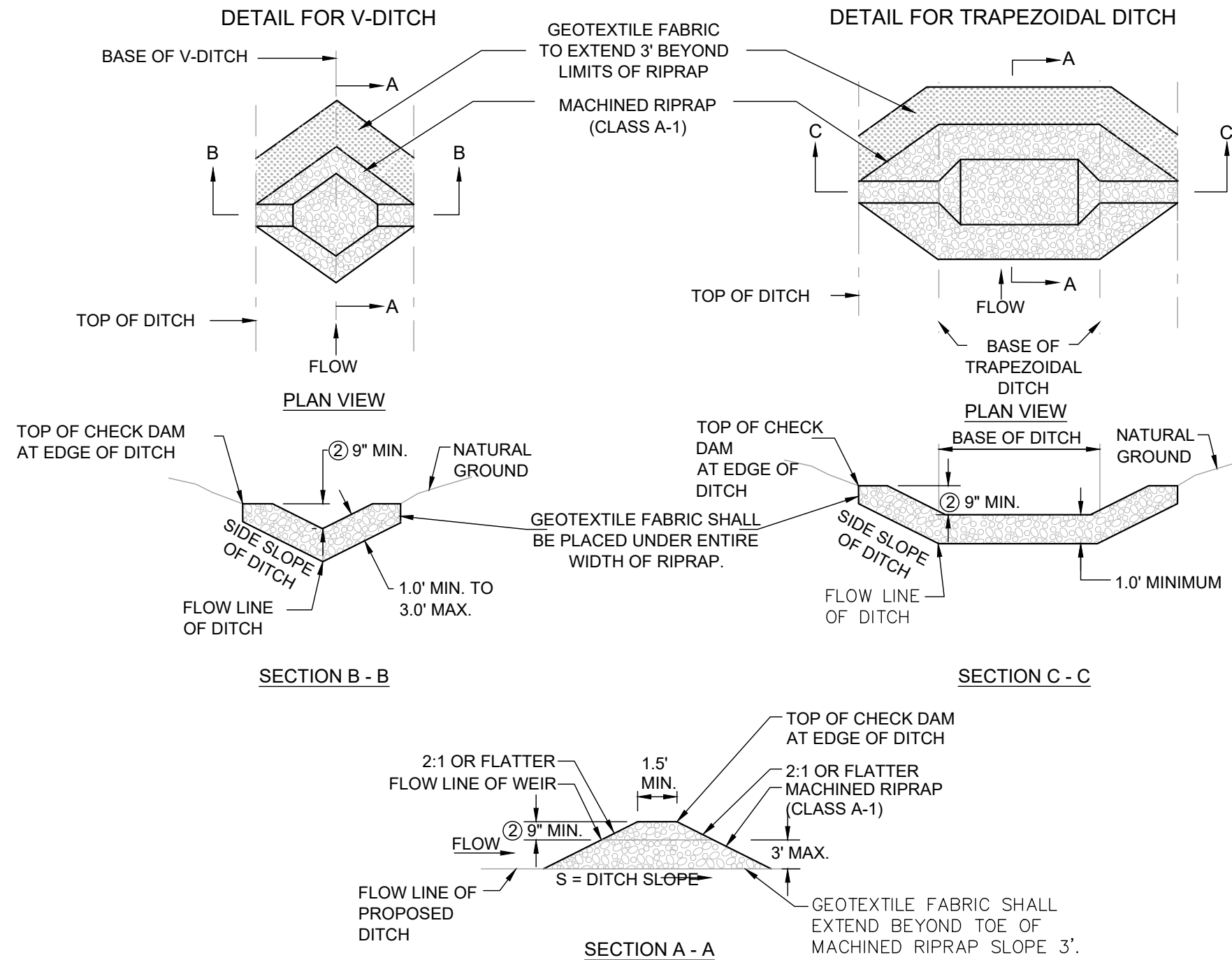
Hc = HEIGHT OF CULVERT
Wc = WIDTH OF CULVERT
LA = LENGTH OF RIP-RAP APRON
WA = WIDTH OF RIP-RAP APRON AT END
D50 = MEDIAN RIP-RAP SIZE
Dmax = MAXIMUM SIZE OF RIP-RAP = 1.5 D50
DA = DEPTH OF RIP-RAP APRON = 1.5 Dmax
SEPARATOR = GEOTEXTILE UNDERLAYMENT OR GRAVEL FILTER BLANKET

Table 10.1. Example Riprap Classes and Apron Dimensions

Class	D ₅₀ (mm)	D ₅₀ (in)	Apron Length ¹	Apron Depth
1	125	5	4D	3.5D ₅₀
2	150	6	4D	3.3D ₅₀
3	250	10	5D	2.4D ₅₀
4	350	14	6D	2.2D ₅₀
5	500	20	7D	2.0D ₅₀
6	550	22	8D	2.0D ₅₀

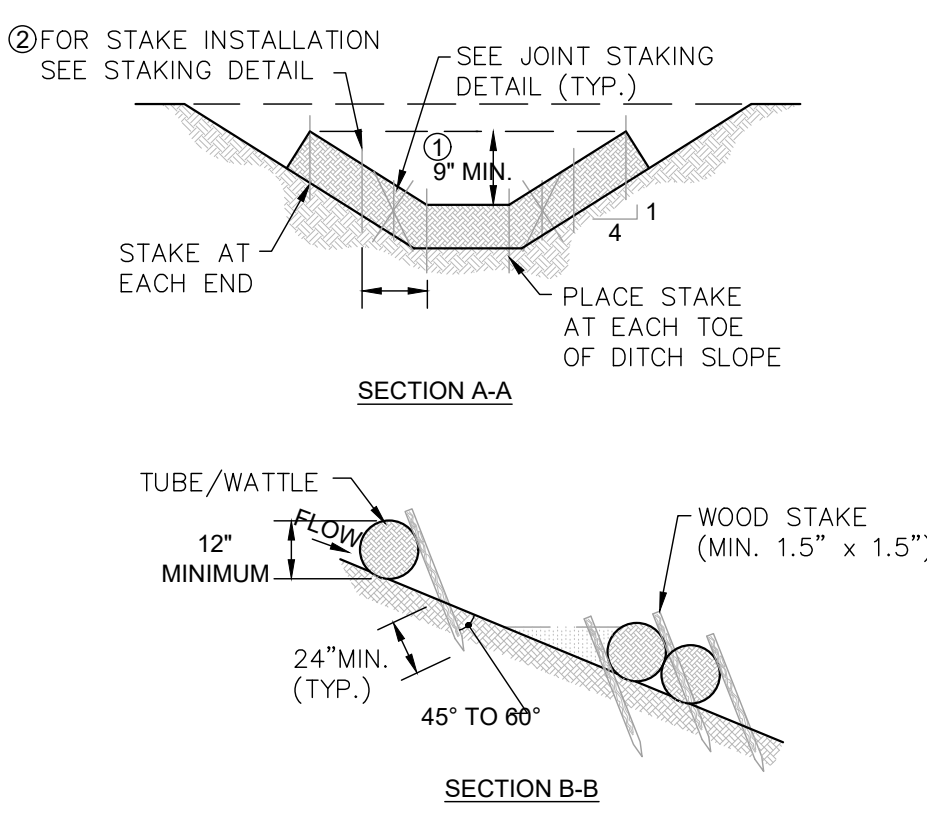
¹D is the culvert rise.

HEADWALL ID	PIPE SIZE (Wc) (FT)	APRON LENGTH (LA) (FT)	APRON END WIDTH (WA) (FT)	AVE. DIA. D50 (IN)	MAX. DIA DMAX (IN)	APRON DEPTH (IN)
HW1	3.5	17.5	15.2	10	20	24
HW2-1	2.5	15	12.5	14	21	31
HW2-2	1.25	6.3	5.4	10	15	24
HW3	2.0	8	7.3	6	9	20



1 OUTLET PROTECTION (DESIGNED TO 100 YR STORM PER HEC-11 STANDARDS)

NOT TO SCALE



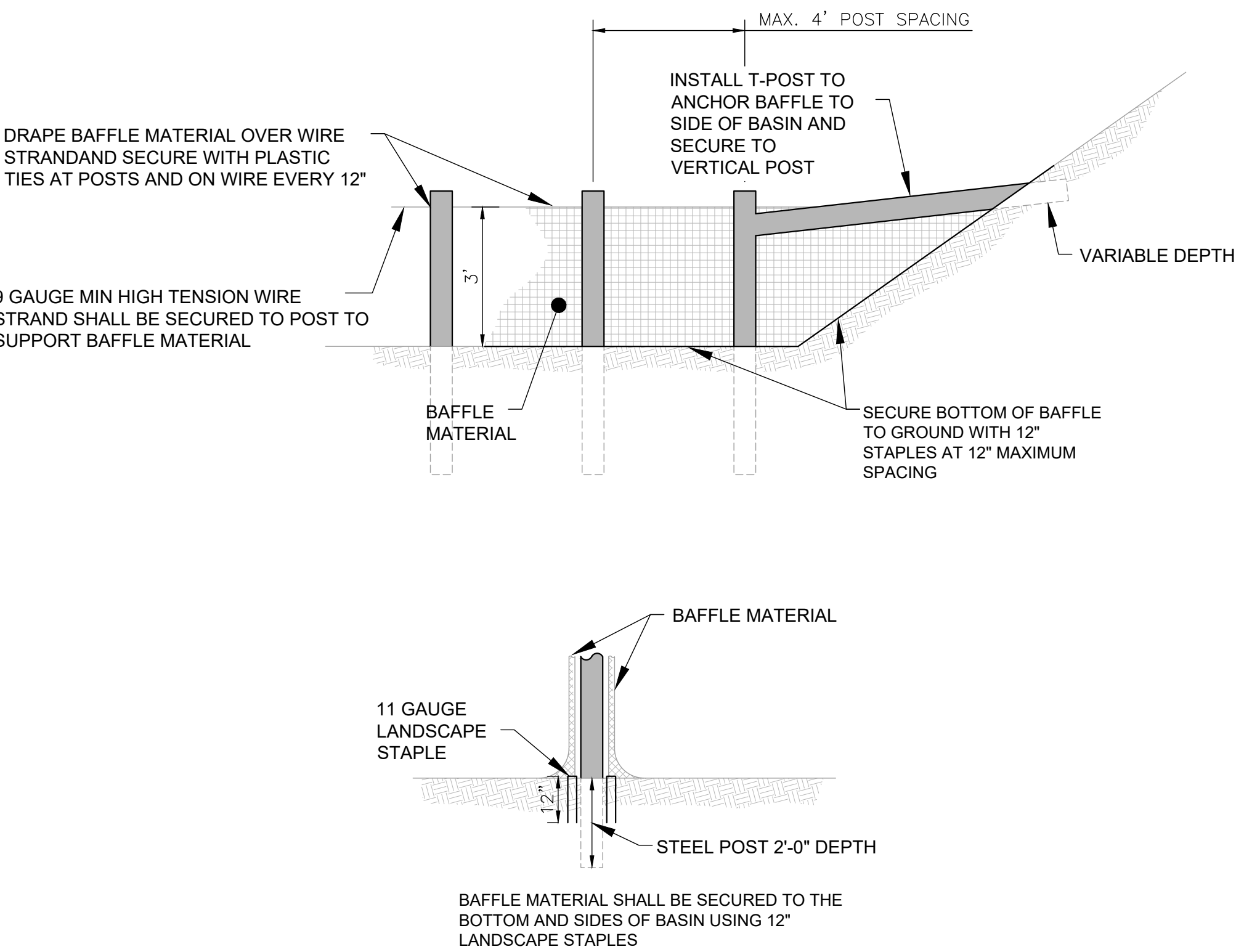
NOTES:
1 THE DEPTH AND WIDTH OF THE WEIR SECTION OF THE WATTLE SHALL BE DESIGNED TO PASS THE 2yr/24hr OR 5yr/24hr STORM EVENT WITHOUT OVERTOPPING THE CHANNEL.
2 STAKE PER MANUFACTURERS RECOMMENDATIONS

4 FIBER ROLLS

NOT TO SCALE

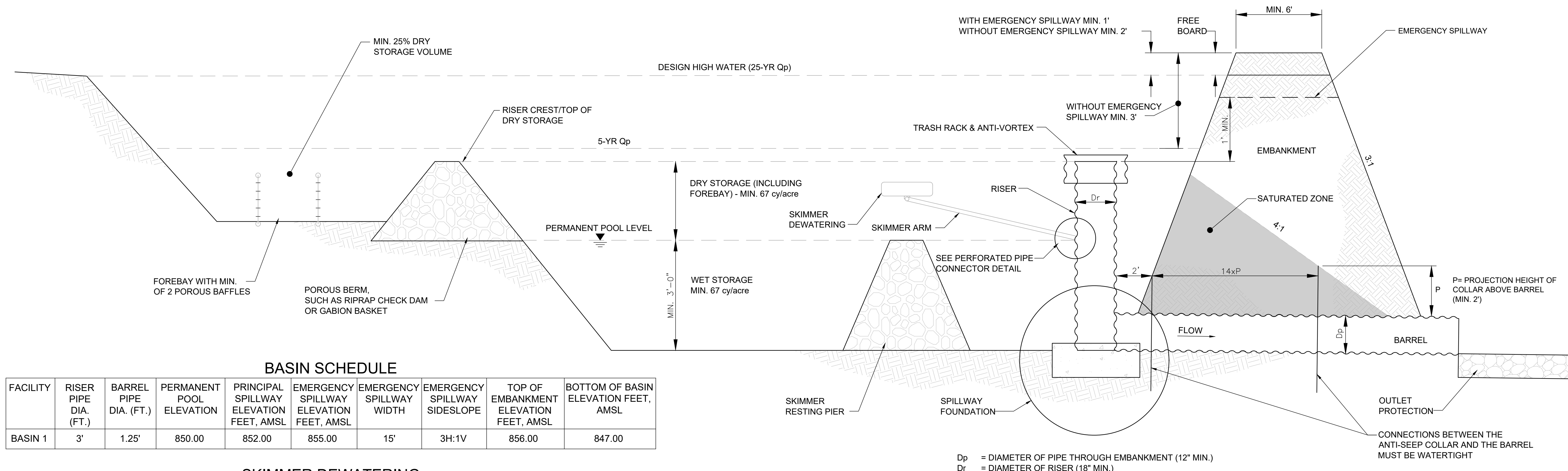
2 CHECK DAM

NOT TO SCALE



5 POROUS BAFFLE

NOT TO SCALE



BASIN SCHEDULE

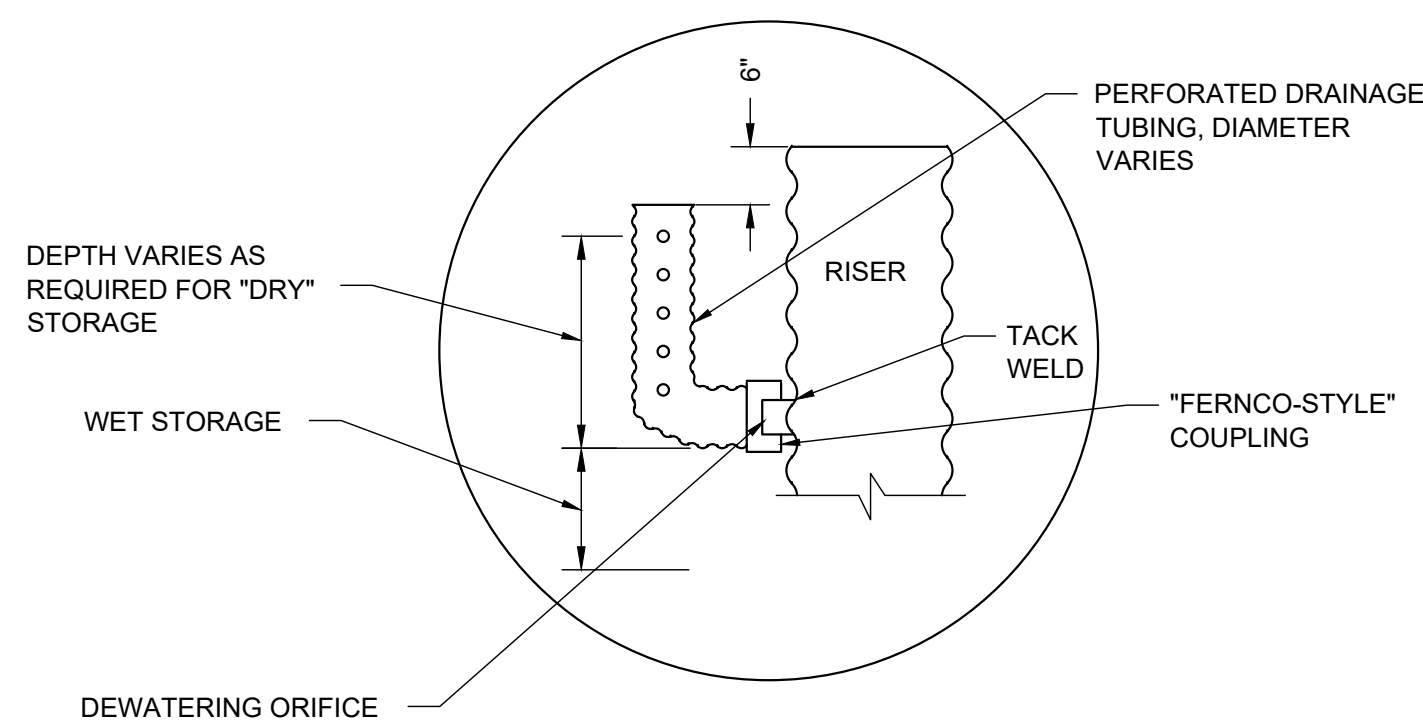
FACILITY	RISER PIPE DIA. (FT.)	BARREL PIPE DIA. (FT.)	PERMANENT POOL ELEVATION	PRINCIPAL SPILLWAY ELEVATION FEET, AMSL	EMERGENCY SPILLWAY ELEVATION FEET, AMSL	EMERGENCY SPILLWAY WIDTH	EMERGENCY SPILLWAY SIDESLOPE	TOP OF EMBANKMENT ELEVATION FEET, AMSL	BOTTOM OF BASIN ELEVATION FEET, AMSL
BASIN 1	3'	1.25'	850.00	852.00	855.00	15'	3H:1V	856.00	847.00

SKIMMER DEWATERING DEVICE SPECIFICATIONS

FACILITY	SKIMMER SIZE	ARM DIAMETER	ORIFICE DIAMETER
BASIN 1	4.0"	4.0"	3.0"

GENERAL NOTES:

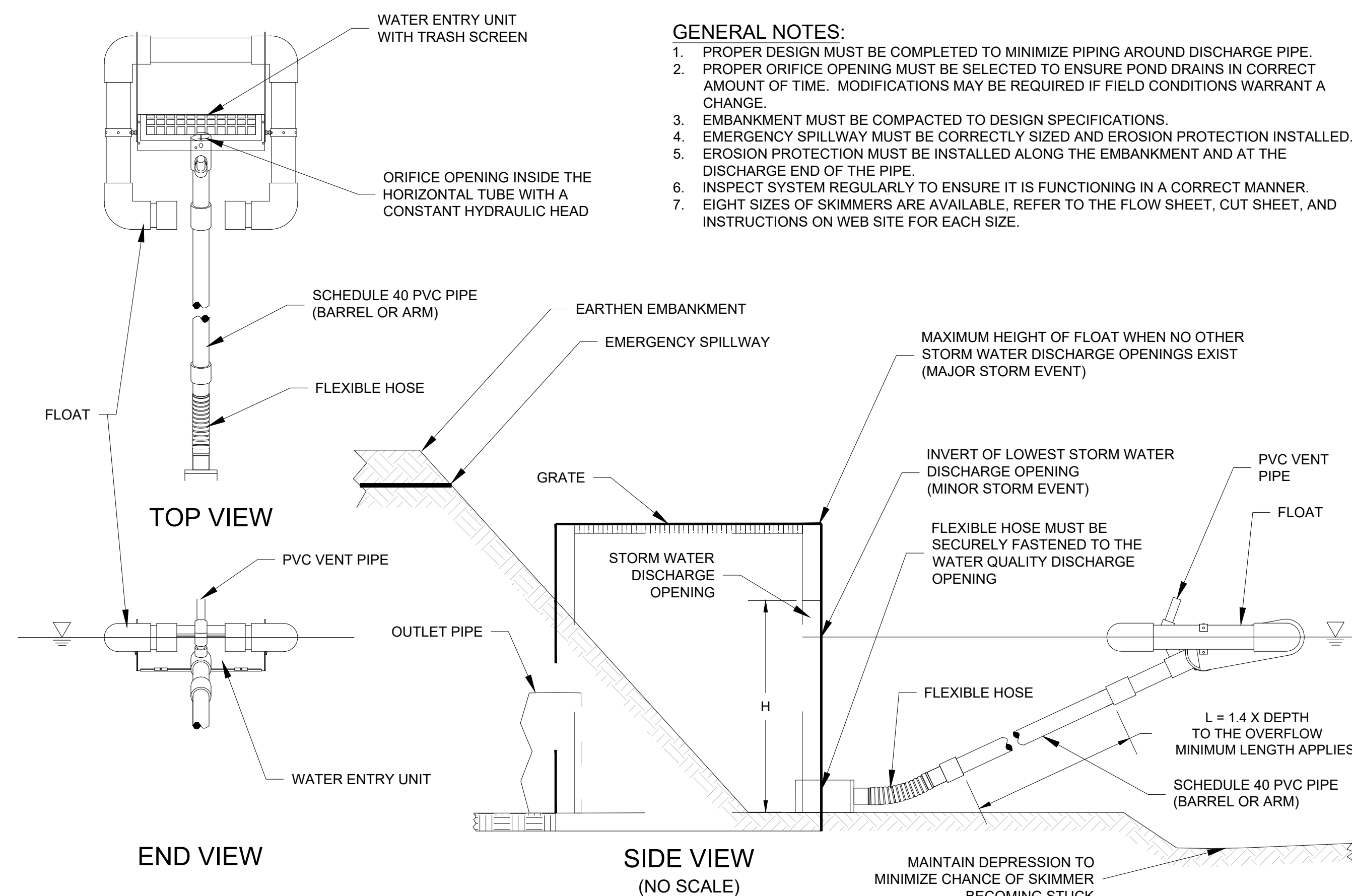
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE. REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

ALTERNATIVE DEWATERING DEVICE
PERFORATED VERTICAL PIPE OR TUBING

1

SEDIMENT BASIN

NOT TO SCALE



FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

FINAL MASTER DEVELOPMENT PLAN

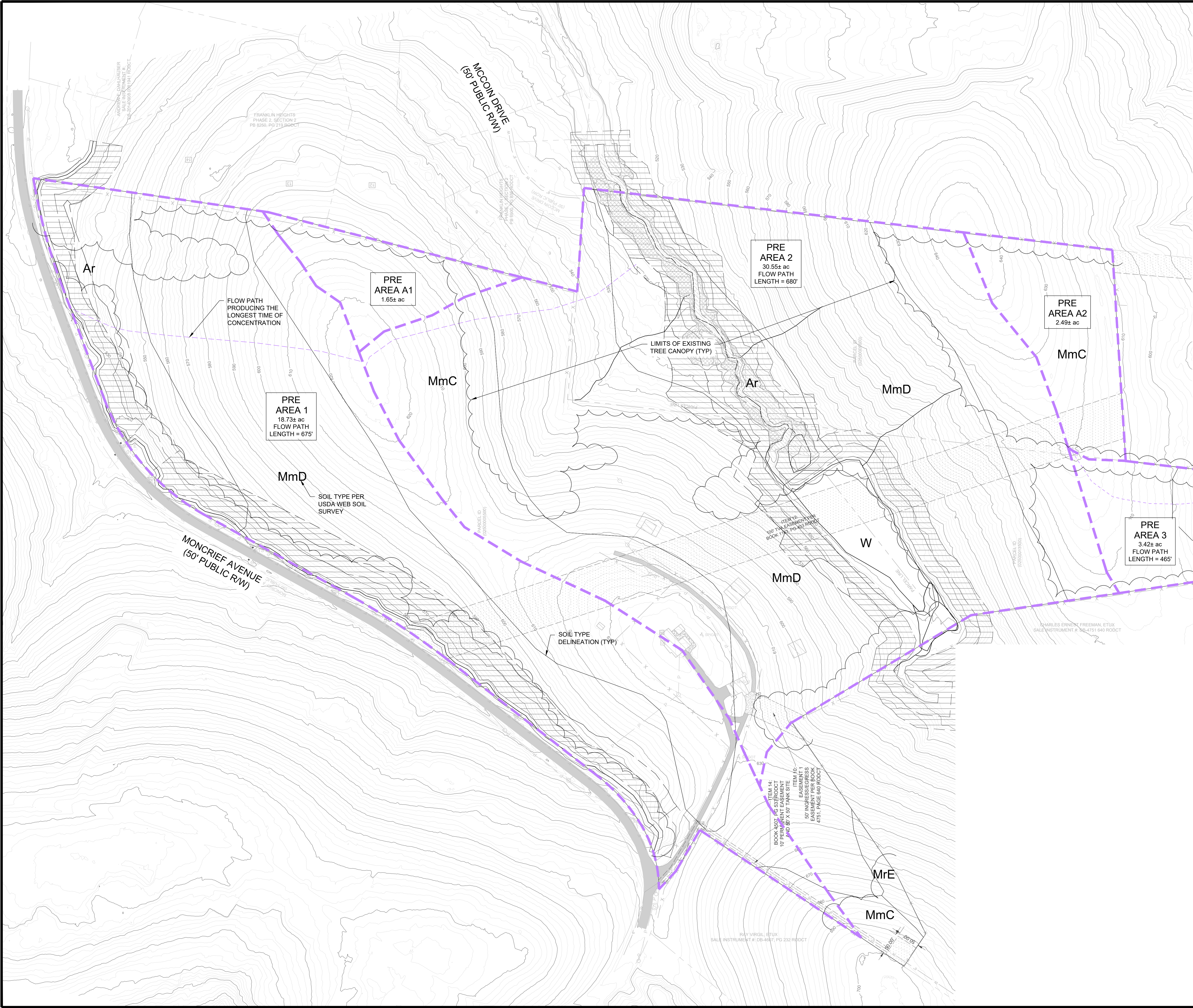
FOR

GOODLETTSVILLE 56

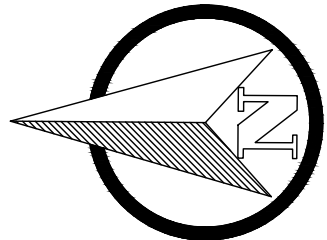
CITY OF GOODLETTSVILLE, TN

SHEET:

C-3.5



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HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



0 100 200
SCALE 1" = 100'

PRE CONSTRUCTION STORMWATER

- PROJECT BOUNDARY
- WATERSHED BOUNDARY (DRAINAGE AREA)
- FLOW PATH

PRE
AREA X
X.XX ac
FLOW PATH
LENGTH = XXX

DRAINAGE AREA NUMBER
AREA ACREAGE
FLOW PATH CREATING
LONGEST TIME OF
CONCENTRATION

DRAINAGE BASIN NOTES:
PRE-DEVELOPMENT CONDITIONS

- AREA 1 IS UNDERLAIN BY PRIMARILY C SOILS
 - CURVE NUMBER (CN) = 76
 - TIME OF CONCENTRATION = 11.6 MIN.
- AREA 2 IS UNDERLAIN BY PRIMARILY C SOILS
 - CURVE NUMBER (CN) = 75
 - TIME OF CONCENTRATION = 11.8 MIN.
- AREA 3 IS UNDERLAIN BY PRIMARILY C SOILS
 - CURVE NUMBER (CN) = 77
 - TIME OF CONCENTRATION = 14.2 MIN.
- AREAS A1 AND A2 SHEET FLOW ACROSS THE NEIGHBORING PROPERTY LINE. IN THE POST CONDITION THE AREAS WILL BE KEPT UNDISTURBED OR REDIRECTED TO AN ADJACENT AREA FOR DETAINMENT.

NOTE:

- PER THE USDA WEBSOIL SURVEY THE SITE IS UNDERLAIN BY PRIMARILY HYDROLOGIC SOIL GROUP (HSG) C TYPE SOILS.
- PER THE USDA URBAN HYDROLOGY FOR SMALL WATERSHEDS TR-55 THE FOLLOWING CURVE NUMBERS APPLY:

HSG B BY COVER TYPE:
WOODS - "FAIR" = 60
PASTURE GRASSLAND OR RANGE - "FAIR" = 69
IMPERVIOUS SURFACE = 98

HSG C BY COVER TYPE:
WOODS - "FAIR" = 70
PASTURE GRASSLAND OR RANGE - "FAIR" = 79
IMPERVIOUS SURFACE = 98

* "FAIR" CORRESPONDS TO THE HYDROLOGIC CONDITION OF THE COVER TYPE.

SEE PROJECT STORMWATER HYDROLOGY AND HYDRAULICS REPORT FOR COVER TYPE BREAKDOWN.



REVISION DESCRIPTION:

REV.	DATE:	DESCRIPTION:
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ISSUE DATE:

09/26/2024

DESIGNED BY:

FCG

DRAWN BY:

FCG

CHECKED BY:

FCG

PARCEL IDS 02500005500, 02500005600, 025000013500, 025000013500, 4652 MAJESTIC MEADOWS DRIVE, NOLANSVILLE, TN 37135

665-7345 mark@fcgcivil.com

FC GAUMMUTZ CIVIL ENGINEER, LLC 1877 ERINGER DRIVE NOLANSVILLE, TN 37135 (406) 686-1467 cee@fcgcivil.com

FINAL MASTER DEVELOPMENT PLAN FOR GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

NOT FOR CONSTRUCTION

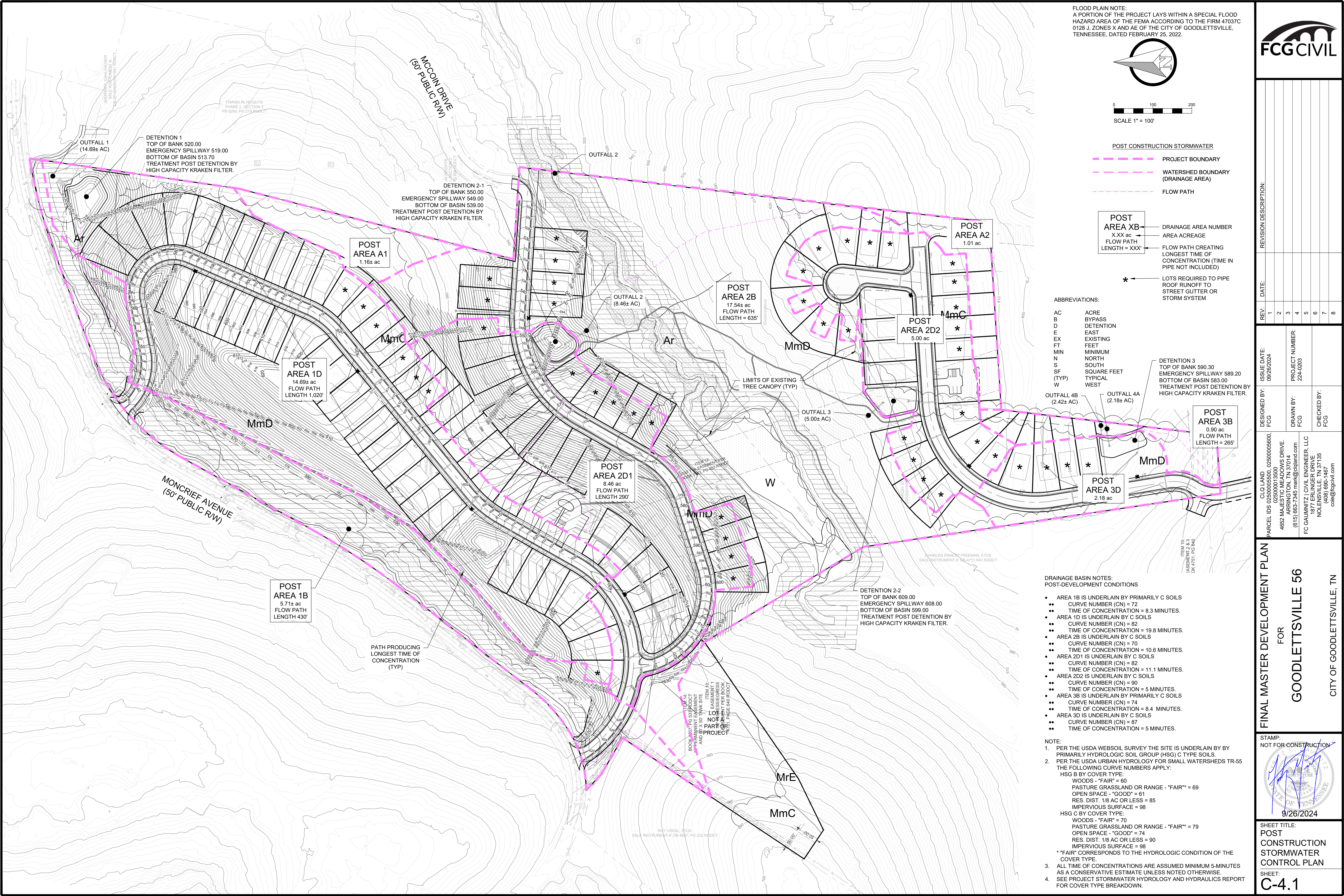


9/26/2024

SHEET TITLE:
PRE
CONSTRUCTION
STORMWATER
CONTROL PLAN

SHEET:

C-4.0



REVISION DESCRIPTION:

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09/26/2024

DESIGNED BY:
FCG

DRAWN BY:
FCG

CHECKED BY:
FCG

PROJECT NUMBER:
224-0203

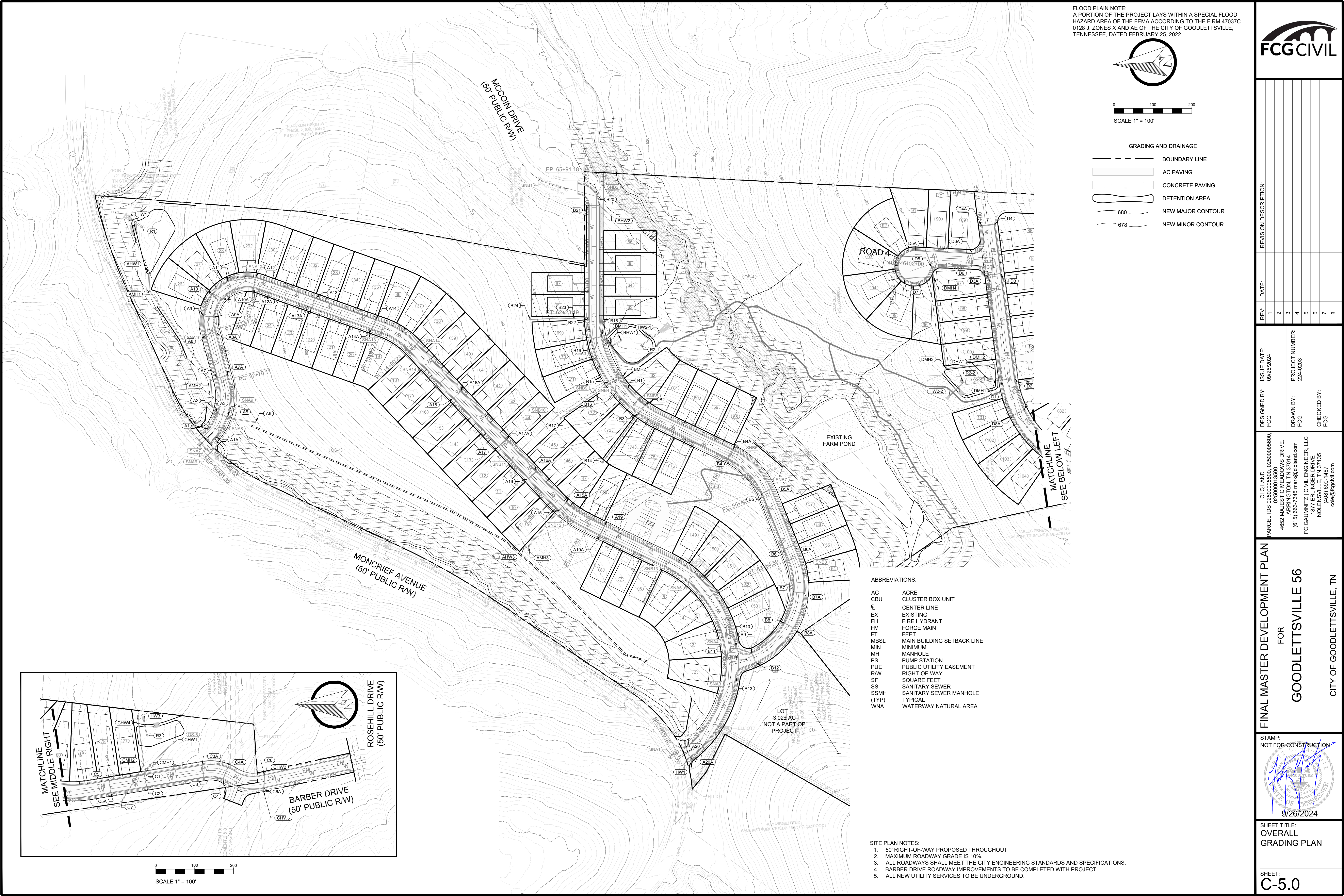
PARCEL IDS 02500005500, 02500005600
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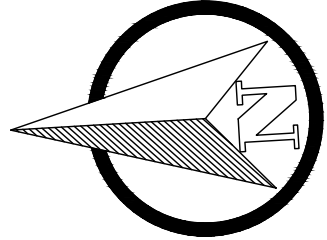
9/26/2024

SHEET TITLE:
POST CONSTRUCTION STORMWATER CONTROL PLAN

SHEET:
C-4.1



FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD
HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



0 100 200
SCALE 1" = 100'



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DESIGNED BY:
FCG

DRAWN BY:
FCG

CHECKED BY:
FCG

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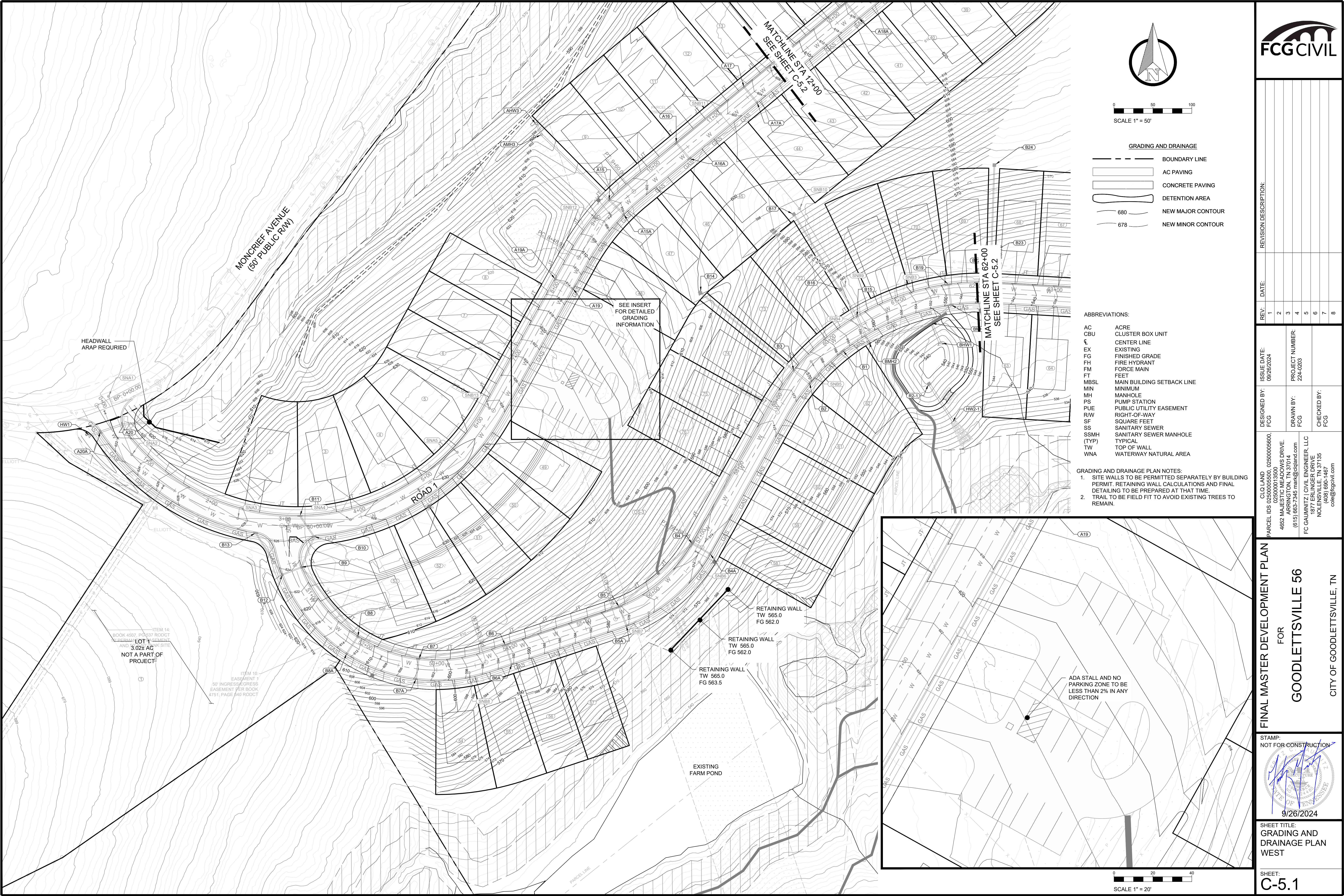
FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION
9/26/2024

SHEET TITLE:
OVERALL
GRADING PLAN

SHEET:
C-5.0



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ISSUE DATE: 09/26/2024	PROJECT NUMBER: 224-0203
DESIGNED BY: FCG	DRAWN BY: FCG
CHECKED BY: FCG	

CLQ LAND
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cee@fcgcivil.com

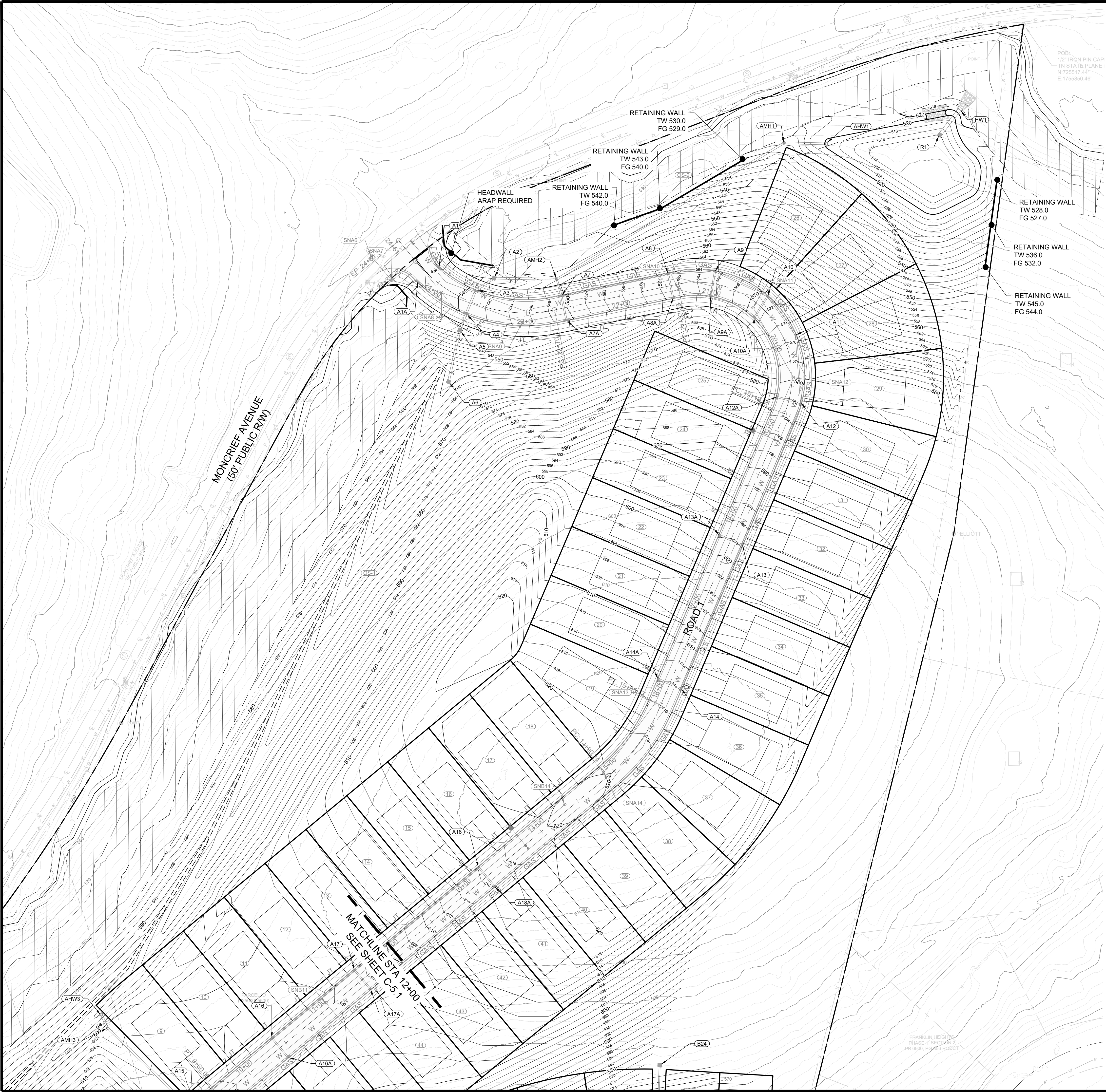
FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE:
GRADING AND
DRAINAGE PLAN
WEST

SHEET:
C-5.1



ABBREVIATIONS:

AC	ACRE
CBU	CLUSTER BOX UNIT
CL	CENTER LINE
EX	EXISTING
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FEET
MBSL	MAIN BUILDING SETBACK LINE
MIN	MINIMUM
MH	MANHOLE
PS	PUMP STATION
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT-OF-WAY
SF	SQUARE FEET
SS	SANITARY SEWER
SSMH (TYP)	SANITARY SEWER MANHOLE TYPICAL
WNA	WATERWAY NATURAL AREA

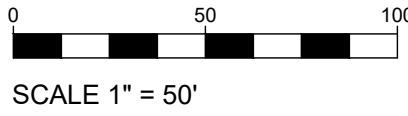
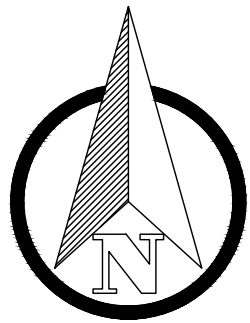
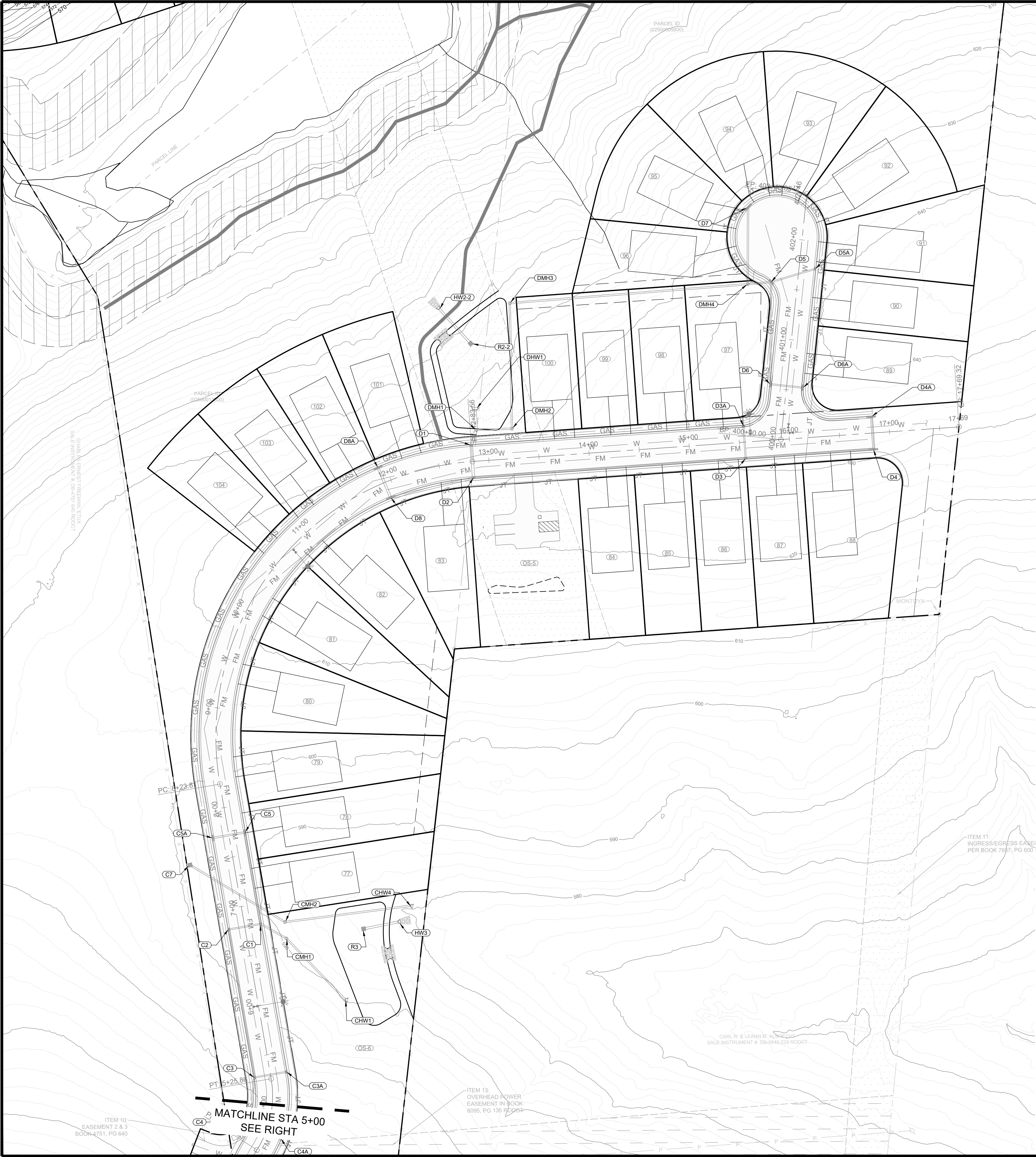
GRADING AND DRAINAGE

---	BOUNDARY LINE
---	AC PAVING
---	CONCRETE PAVING
---	DETENTION AREA
---	NEW MAJOR CONTOUR
---	NEW MINOR CONTOUR



REVISION DESCRIPTION:	REV:	DATE:	ISSUE DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	CLQ LAND	PARCEL IDS	FOR	STAMP:	SHEET TITLE:	SHEET:
	1		09/26/2024	FCG	FCG	FCG	02500005500, 02500005600, 02500001350, 4652 MARIETTA MEADOWS DRIVE, 4652 MARIETTA MEADOWS DRIVE, 4652 MARIETTA MEADOWS DRIVE, (615) 665-7345 mark@fcgcivil.com	4652 MARIETTA MEADOWS DRIVE, 4652 MARIETTA MEADOWS DRIVE, 4652 MARIETTA MEADOWS DRIVE, (615) 665-7345 mark@fcgcivil.com	GOODLETTSVILLE 56	NOT FOR CONSTRUCTION	GRADING AND DRAINAGE PLAN NORTH	C-5.2
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FINAL MASTER DEVELOPMENT PLAN FOR GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

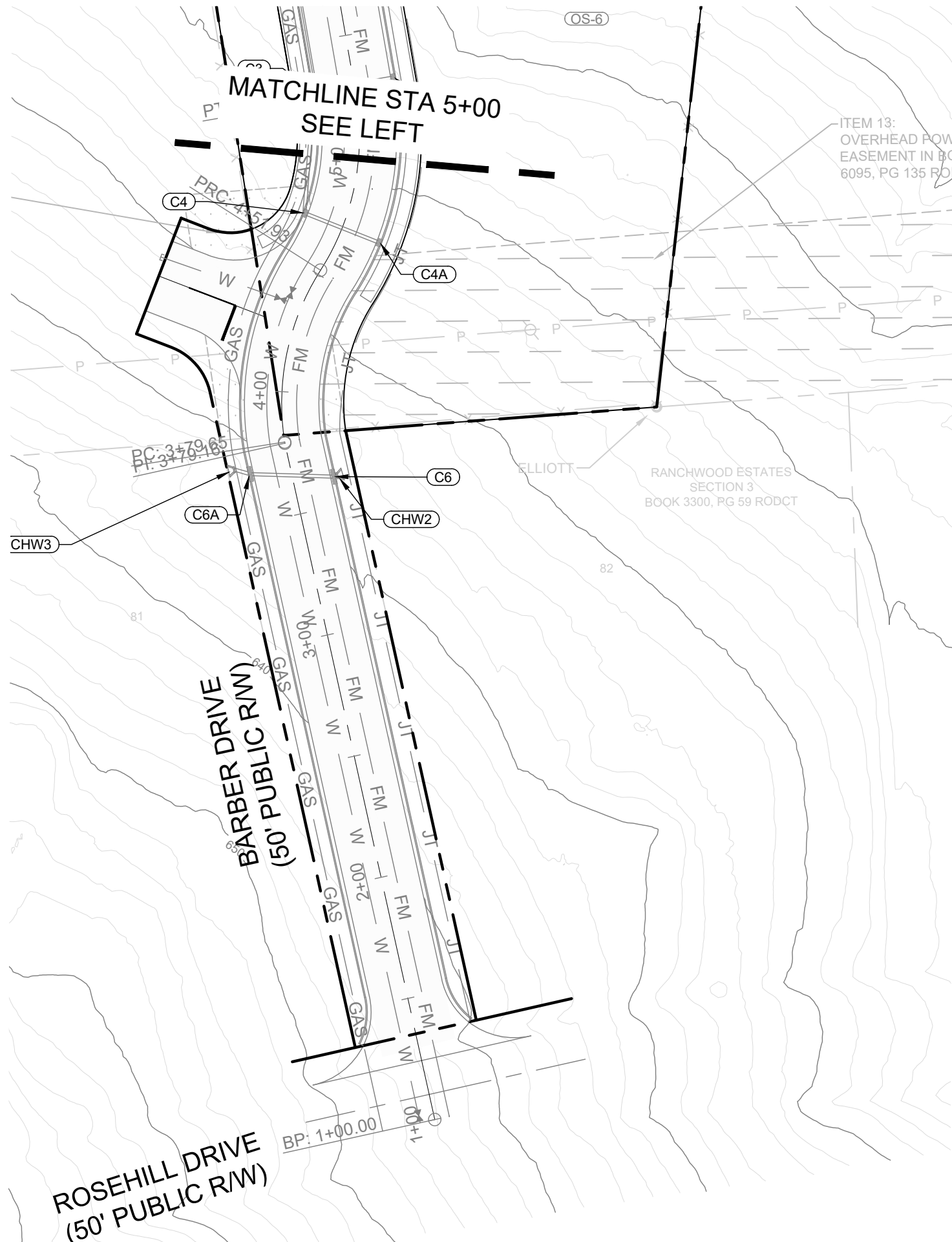


GRADING AND DRAINAGE

- BOUNDARY LINE
- AC PAVING
- CONCRETE PAVING
- DETENTION AREA
- NEW MAJOR CONTOUR
- NEW MINOR CONTOUR

ABBREVIATIONS:

- AC ACRE
- CBU CLUSTER BOX UNIT
- CL CENTER LINE
- EX EXISTING
- FH FIRE HYDRANT
- FM FORCE MAIN
- FT FEET
- MBSL MAIN BUILDING SETBACK LINE
- MIN MINIMUM
- MH MANHOLE
- PS PUMP STATION
- PUE PUBLIC UTILITY EASEMENT
- R/W RIGHT-OF-WAY
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- TYP TYPICAL
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PROJECT NUMBER:
224-0203

DESIGNED BY:
FCG

DRAWN BY:
FCG

CHECKED BY:
FCG

CLQ LAND 02500005500, 02500005600,
025000013500
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FINAL MASTER DEVELOPMENT PLAN

FOR
GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

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9/26/2024

SHEET TITLE:
GRADING AND
DRAINAGE PLAN
SOUTH

SHEET:

C-5.3



REVISION DESCRIPTION:

DATE:

REV:

ISSUE DATE:

DESIGNED BY:

DRAWN BY:

CHECKED BY:

CLQ LAND

PARCEL IDS

FOR

GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE:

STORM

STRUCTURE AND

PIPE TABLES

SHEET:

C-5.4

STRUCTURE TABLE STORM A				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
A1	DOUBLE INLET	RIM = 537.77 FG = 537.77		
A1A	DOUBLE INLET	RIM = 537.55 FG = 537.55		
A2	36"x36" AREA DRAIN	RIM = 540.22 FG = ???	INV. IN = 533.50	INV. OUT =533.50
A3	DOUBLE INLET	RIM = 540.42 FG = 540.42	INV. IN = 533.65	INV. OUT =533.65
A4	DOUBLE INLET	RIM = 540.42 FG = 540.42	INV. IN = 533.85	INV. OUT =533.85
A5	36"x36" AREA DRAIN	RIM = 539.11 FG = ???	INV. IN = 534.00	INV. OUT =534.00
A6	36"x36" AREA DRAIN	RIM = 558.70 FG = 558.70		INV. OUT =550.00
A7	DOUBLE INLET	RIM = 549.20 FG = 549.20	INV. IN = 544.15 INV. IN = 544.15	INV. OUT =544.15
A7A	DOUBLE INLET	RIM = 549.20 FG = 549.20		INV. OUT =544.45
A8	SINGLE INLET	RIM = 560.70 FG = 560.70	INV. IN = 556.20 INV. IN = 556.20	INV. OUT =556.20
A8A	SINGLE INLET	RIM = 560.70 FG = 560.70		INV. OUT =556.50
A9	SINGLE INLET	RIM = 565.20 FG = 565.20	INV. IN = 560.25 INV. IN = 560.25	INV. OUT =560.25
A9A	SINGLE INLET	RIM = 565.20 FG = 565.20		INV. OUT =560.50
A10	SINGLE INLET	RIM = 570.70 FG = 570.70	INV. IN = 566.25 INV. IN = 566.25	INV. OUT =566.25
A10A	SINGLE INLET	RIM = 571.20 FG = 571.20		INV. OUT =566.50
A11	SINGLE INLET	RIM = 575.20 FG = 575.20	INV. IN = 570.50	INV. OUT =570.50
A12	SINGLE INLET	RIM = 581.70 FG = 581.70	INV. IN = 576.65 INV. IN = 576.65	INV. OUT =576.20
A12A	SINGLE INLET	RIM = 581.70 FG = 581.70		INV. OUT =576.95
A13	SINGLE INLET	RIM = 597.70 FG = 597.70	INV. IN = 592.70 INV. IN = 592.70	INV. OUT =592.70
A13A	SINGLE INLET	RIM = 597.70 FG = 597.70		INV. OUT =593.00
A14	SINGLE INLET	RIM = 613.76 FG = 613.76	INV. IN = 608.75	INV. OUT =608.75
A14A	SINGLE INLET	RIM = 613.76 FG = 613.76		INV. OUT =609.05
A15	SINGLE INLET	RIM = 603.97 FG = 603.97	INV. IN = 594.75 INV. IN = 598.45	INV. OUT =594.75
A15A	SINGLE INLET	RIM = 603.97 FG = 603.97	INV. IN = 599.00	INV. OUT =599.00
A16	DOUBLE INLET	RIM = 600.41 FG = 600.41	INV. IN = 595.45 INV. IN = 595.45	INV. OUT =595.45

STRUCTURE TABLE STORM A				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
A16A	DOUBLE INLET	RIM = 600.41 FG = 600.41		INV. OUT =595.70
A17	SINGLE INLET	RIM = 603.18 FG = 603.18	INV. IN = 598.15 INV. IN = 598.15	INV. OUT =598.15
A17A	SINGLE INLET	RIM = 603.18 FG = 603.18		INV. OUT =598.45
A18	SINGLE INLET	RIM = 616.00 FG = 616.00	INV. IN = 611.00	INV. OUT =611.00
A18A	SINGLE INLET	RIM = 616.00 FG = 616.00		INV. OUT =611.30
A19	SINGLE INLET	RIM = 613.88 FG = 613.88	INV. IN = 608.90	INV. OUT =608.90
A19A	DOUBLE INLET	RIM = 613.88 FG = 613.88		INV. OUT =609.15
A20	DOUBLE INLET	RIM = 621.72 FG = 621.72	INV. IN = 613.09	INV. OUT =613.09
A20A	DOUBLE INLET	RIM = 620.98 FG = 620.98	INV. IN = 616.98	INV. OUT =616.98
AHW1	HEADWALL		INV. IN = 518.00	
AHW3	HEADWALL		INV. IN = 594.00	
AMH1	MANHOLE	RIM = 527.52 FG = 527.52	INV. IN = 523.50	INV. OUT =523.50
AMH2	MANHOLE	RIM = 548.37 FG = 548.37	INV. IN = 533.00 INV. IN = 543.50	INV. OUT =533.50
AMH3	MANHOLE	RIM = 600.47 FG = 600.47	INV. IN = 594.10	INV. OUT =594.10
HW1	HEADWALL			INV. OUT =620.00

PIPE TABLE STORM A			
NAME	SIZE	LENGTH	SLOPE
A2 TO AMH2	24" HDPE	61.01	0.76%
A3 TO A2	24" HDPE	19.98	0.63%
A4 TO A3	24" HDPE	25.44	0.78%
A5 TO A4	24" HDPE	16.00	0.78%
A6 TO A5	24" HDPE	55.89	28.73%
A7 TO AMH2	18" HDPE	14.39	3.62%
A7A TO A7	18" HDPE	25.44	1.13%
A8 TO A7	18" HDPE	114.57	10.48%
A8A TO A8	18" HDPE	25.44	1.13%
A9 TO A8	18" HDPE	48.66	8.16%
A9A TO A9	18" HDPE	25.44	0.94%
A10 TO A9	18" HDPE	60.70	9.75%
A10A TO A10	18" HDPE	25.86	0.92%
A11 TO A10	18" HDPE	49.61	8.40%
A12 TO A11	18" HDPE	71.40	7.88%
A12A TO A12	18" HDPE	25.44	1.13%
A13 TO A12	18" HDPE	161.71	9.91%
A13A TO A13	18" HDPE	25.44	1.13%
A14 TO A13	18" HDPE	164.71	9.73%
A14A TO A14	18" HDPE	25.44	1.13%

PIPE TABLE STORM A			
NAME	SIZE	LENGTH	SLOPE
A15 TO AMH3	24" HDPE	118.37	0.54%
A15A TO A15	18" HDPE	25.46	2.06%
A16 TO A15	24" HDPE	112.16	0.62%
A16A TO A16	18" HDPE	25.44	0.95%
A17 TO A16	18" HDPE	111.72	2.39%
A17A TO A17	18" HDPE	25.44	1.13%
A18 TO A17	18" HDPE	169.38	7.56%
A18A TO A18	18" HDPE	24.07	1.12%
A19 TO A15A	18" HDPE	115.24	8.54%
A19A TO A19	18" HDPE	25.44	0.93%
A20 TO	24" HDPE	34.97	33.16%
A20A TO A20	24" HDPE	29.06	13.08%
AMH1 TO AHW1	24" HDPE	40.82	12.69%
AMH2 TO AMH1	24" HDPE	276.21	3.58%
AMH3 TO AHW3	24" HDPE	12.07	0.71%
HW1 TO A20A	24" HDPE	13.88	21.61%

STRUCTURE TABLE STORM D				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
D1	SINGLE INLET	RIM = 607.94 FG = 607.94	INV. IN = 602.25	INV. OUT =602.25
D2	SINGLE INLET	RIM = 607.94 FG = 607.94	INV. IN = 603.00 INV. IN = 602.40	INV. OUT =602.40
D3	SINGLE INLET	RIM = 630.01 FG = 630.01	INV. IN = 625.05 INV. IN = 625.05	INV. OUT =624.00
D3A	SINGLE INLET	RIM = 629.98 FG = 629.98		INV. OUT =625.40
D4	TRIPLE INLET	RIM = 632.71 FG = 632.71	INV. IN = 627.85	INV. OUT =627.85
D4A	TRIPLE INLET	RIM = 632.71 FG = 632.71		INV. OUT =628.20
D5	DOUBLE INLET	RIM = 628.43 FG = 628.43	INV. IN = 624.00 INV. IN = 621.45	INV. OUT =618.45
D5A	SINGLE INLET	RIM = 628.94 FG = 628.94		INV. OUT =624.50
D6	DOUBLE INLET	RIM = 631.84 FG = 631.84	INV. IN = 627.65	INV. OUT =627.65
D6A	DOUBLE INLET	RIM = 631.84 FG = 631.84		INV. OUT =628.00
D7	TRIPLE INLET	RIM = 622.69 FG = 622.69		INV. OUT =619.00
D8	TRIPLE INLET	RIM = 605.75 FG = 605.75	INV. IN = 602.80	INV. OUT =602.80
D8A	TRIPLE INLET	RIM = 605.89 FG = 605.78		INV. OUT =602.95
DHW1	HEADWALL		INV. IN = 602.00	
DMH1	MANHOLE	RIM = 609.02 FG = 609.02	INV. IN = 602.15 INV. IN = 602.90	INV. OUT =602.15
DMH2	MANHOLE	RIM = 610.66 FG = 610.66	INV. IN = 603.70	INV. OUT =603.70
DMH3	MANHOLE	RIM = 610.21 FG = 610.21	INV. IN = 605.00	INV. OUT =605.00
DMH4	MANHOLE	RIM = 627.72 FG = 627.72	INV. IN = 618.20 INV. IN = 618.20	INV. OUT =618.20

PIPE TABLE STORM D			
NAME	SIZE	LENGTH	SLOPE
D1 TO DMH1	30" HDPE	13.39	0.62%
D2 TO D1	30" HDPE	31.43	0.46%
D3 TO D2	18" HDPE	271.43	7.73%
D3A TO D3	15" HDPE	31.44	1.07%
D4 TO D3	18" HDPE	126.23	2.20%
D4A TO D4	15" HDPE	31.44	1.07%
D5 TO DMH4	15" HDPE	20.52	1.07%
D5A TO D5	15" HDPE	44.88	6.62%
D6 TO D5	15" HDPE	100.35	3.59%
D6A TO D6	15" HDPE	31.44	1.07%
D7 TO DMH4	18" HDPE	73.75	1.04%
D8 TO D2	24" HDPE	83.59	0.47%
D8A TO D8	24" HDPE	31.43	0.46%
DMH1 TO DHW1	30" HDPE	16.39	0.78%
DMH2 TO DMH1	18" HDPE	31.46	2.26%
DMH3 TO DMH2	18" HDPE	121.12	1.04%
DMH4 TO DMH3	18" HDPE	234.20	5.55%

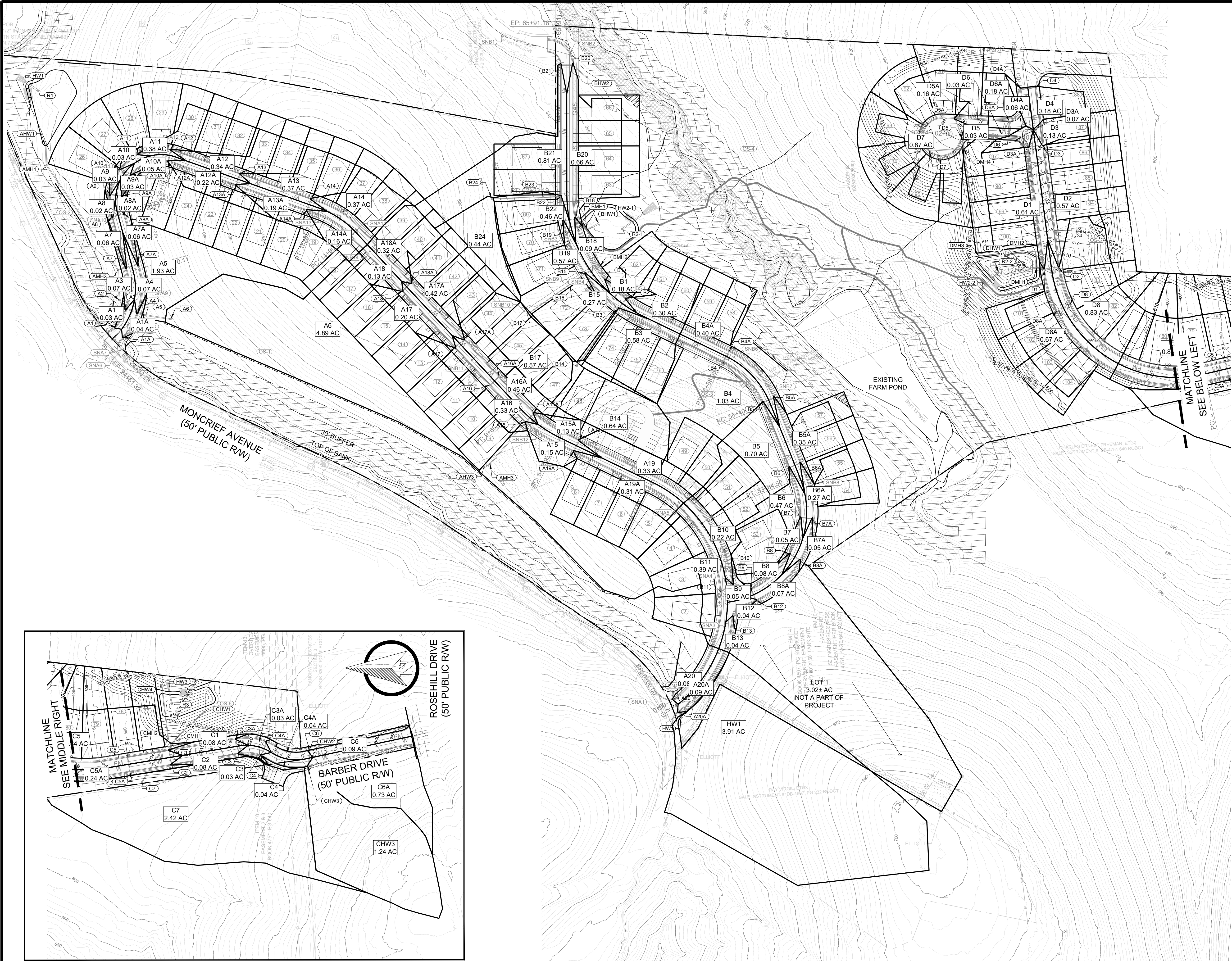
STRUCTURE TABLE STORM B				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
B1	DOUBLE INLET	RIM = 565.07 FG = 565.07	INV. IN = 559.80	INV. OUT =559.80
B2	SINGLE INLET	RIM = 570.21 FG = 570.21	INV. IN = 564.65	INV. OUT =564.60
B3	SINGLE INLET	RIM = 570.20 FG = 570.20	INV. IN = 564.75 INV. IN = 565.10	INV. OUT =565.10
B4	TRIPLE INLET	RIM = 573.51 FG = 573.51	INV. IN = 568.45 INV. IN = 568.45	INV. OUT =567.70
B4A	DOUBLE INLET	RIM = 573.51 FG = 573.51		INV. OUT =568.75
B5	TRIPLE INLET	RIM = 578.11 FG = 578.11	INV. IN = 572.70 INV. IN = 572.45	INV. OUT =572.45
B5A	SINGLE INLET	RIM = 578.11 FG = 578.11		INV. OUT =572.75
B6	TRIPLE INLET	RIM = 592.18 FG = 592.18	INV. IN = 585.50 INV. IN = 585.50	INV. OUT =585.50
B6A	SINGLE INLET	RIM = 592.18 FG = 592.18		INV. OUT =585.75
B7	SINGLE INLET	RIM = 603.67 FG = 603.67	INV. IN = 596.00 INV. IN = 596.00	INV. OUT =596.00
B7A	SINGLE INLET	RIM = 603.67 FG = 603.67		INV. OUT =596.25
B8	SINGLE INLET	RIM = 612.57 FG = 612.57	INV. IN = 604.65 INV. IN = 604.65	INV. OUT =604.65
B8A	SINGLE INLET	RIM = 612.57 FG = 612.57		INV. OUT =604.95
B9	SINGLE INLET	RIM = 623.47 FG = 623.47	INV. IN = 616.70 INV. IN = 616.70	INV. OUT =616.70
B10	DOUBLE INLET	RIM = 625.98 FG = 625.98	INV. IN = 618.90	INV. OUT =618.90
B11	DOUBLE INLET	RIM = 626.18 FG = 626.18		INV. OUT =619.20
B12	SINGLE INLET	RIM = 623.47 FG = 623.47	INV. IN = 617.00	INV. OUT =617.00
B13	DOUBLE INLET	RIM = 627.08 FG = 627.08		INV. OUT =622.30
B14	36"x36" AREA DRAIN	RIM = 599.74 FG = 599.68		INV. OUT =596.80
B15	SINGLE INLET	RIM = 561.07 FG = 561.07	INV. IN = 556.85	INV. OUT =556.85
B16	36"x36" AREA DRAIN	RIM = 562.27 FG = 562.27	INV. IN = 557.30	INV. OUT =557.30
B17	36"x36" AREA DRAIN	RIM = 596.41 FG = 596.41		INV. OUT =590.00
B18	DOUBLE INLET	RIM = 549.07 FG = 549.07	INV. IN = 544.10	INV. OUT =544.10
B19	TRIPLE INLET	RIM = 549.07 FG = 549.07		INV. OUT =544.35
B20	TRIPLE INLET	RIM = 522.65 FG = 522.65	INV. IN = 518.20	INV. OUT =518.20

STRUCTURE TABLE STORM B				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
B21	TRIPLE INLET	RIM = 522.65 FG = 522.65	INV. IN = 518.50	INV. OUT =518.50
B22	TRIPLE INLET	RIM = 544.24 FG = 544.24		INV. OUT =538.50
B23	36"x36" AREA DRAIN	RIM = 545.35 FG = 545.35	INV. IN = 539.00 INV. IN = 538.50	
B24	36"x36" AREA DRAIN	RIM = 576.12 FG = 576.12		INV. OUT =570.15
BHW1	HEADWALL		INV. IN = 542.00	
BHW2	HEADWALL		INV. IN = 517.50	
BMH1	MANHOLE	RIM = 550.73 FG = 550.73	INV. IN = 543.95 INV. IN = 544.45	INV. OUT =543.95
BMH2	MANHOLE	RIM = 562.18 FG = 562.18	INV. IN = 556.95 INV. IN = 556.45	INV. OUT =556.45

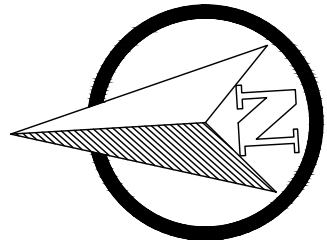
PIPE TABLE STORM B			
NAME	SIZE	LENGTH	SLOPE
TO B23	15" HDPE	36.53	1.30%
B1 TO BMH2	24" HDPE	32.12	8.27%
B2 TO B1	24" HDPE	59.14	8.00%
B3 TO B2	24" HDPE	25.46	1.68%
B4 TO B3	24" HDPE	257.26	1.01%
B4A TO B4	15" HDPE	25.44	1.13%
B5 TO B4	18" HDPE	122.99	3.22%
B5A TO B5	18" HDPE	25.44	1.13%
B6 TO B5	18" HDPE	153.77	8.30%
B6A TO B6	15" HDPE	25.43	0.94%
B7 TO B6	18" HDPE	112.14	9.31%
B7A TO B7	15" HDPE	25.43	0.94%
B8 TO B7	18" HDPE	82.64	10.39%
B8A TO B8	15" HDPE	25.44	1.13%
B9 TO B8	18" HDPE	114.26	10.50%
B10 TO B9	18" HDPE	40.84	5.17%
B11 TO B10	15" HDPE	30.98	0.93%
B12 TO B9	15" HDPE	25.44	1.13%
B13 TO B12	15" HDPE	62.51	8.32%
B14 TO B3	15" HDPE	158.78	20.48%

PIPE TABLE STORM B			
NAME	SIZE	LENGTH	SLOPE
B15 TO BMH2	24" HDPE	33.88	1.10%
B16 TO B15	18" HDPE	39.21	1.11%
B17 TO B16	15" HDPE	117.58	28.73%
B18 TO BMH1	24" HDPE	31.91	0.43%
B19 TO B18	18" HDPE	25.44	0.94%
B20 TO BHW2	18" HDPE	38.97	1.76%
B21 TO B20	18" HDPE	25.44	1.13%
B22 TO B21	15" HDPE	289.06	6.91%
B24 TO B23	15" HDPE	114.32	27.73%
BMH1 TO BHW1	30" HDPE	25.38	6.99%
BMH2 TO BMH1	24" HDPE	81.69	14.20%

STRUCTURE TABLE STORM C				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
C1	SINGLE INLET	RIM = 605.12 FG = 605.12	INV. IN = 595.80 INV. IN = 600.15	INV. OUT = 595.80
C2	SINGLE INLET	RIM = 605.12 FG = 605.12	INV. IN = 600.50	INV. OUT = 600.50
C3	SINGLE INLET	RIM = 617.19 FG = 617.19	INV. IN = 612.55 INV. IN = 612.55	INV. OUT = 612.55
C3A	SINGLE INLET	RIM = 617.19 FG = 617.19		INV. OUT = 612.90
C4	SINGLE INLET	RIM = 622.21 FG = 622.21	INV. IN = 617.40	INV. OUT = 616.50
C4A	SINGLE INLET	RIM = 622.21 FG = 622.21		INV. OUT = 617.75
C5	DOUBLE INLET	RIM = 602.98 FG = 602.98	INV. IN = 597.65	INV. OUT = 597.65
C5A	DOUBLE INLET	RIM = 602.98 FG = 602.98		INV. OUT = 598.00
C6	DOUBLE INLET	RIM = 628.99 FG = 628.92	INV. IN = 626.05	INV. OUT = 626.05
C6A	DOUBLE INLET	RIM = 629.19 FG = 628.32	INV. IN = 626.25	INV. OUT = 626.25
C7	36"x36" AREA DRAIN	RIM = 599.51 FG = 598.80		INV. OUT = 598.30
CHW1	HEADWALL		INV. IN = 592.50	
CHW2	HEADWALL		INV. IN = 626.00	
CHW3	HEADWALL			INV. OUT = 628.50
CHW4	HEADWALL		INV. IN = 582.50	
CMH1	MANHOLE	RIM = 604.94 FG = 604.94	INV. IN = 595.50	INV. OUT = 594.60
CMH2	MANHOLE	RIM = 604.78 FG = 604.78	INV. IN = 594.10	INV. OUT = 594.10



FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD
HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



0 100 200
SCALE 1" = 100'



REVISION DESCRIPTION:

REV.	DATE:
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ISSUE DATE:
09/26/2024

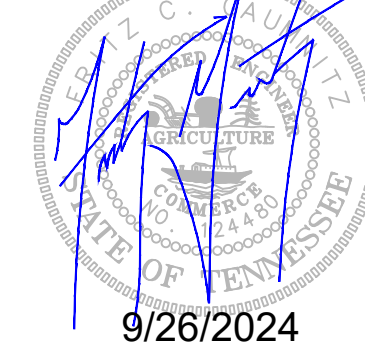
DESIGNED BY:
FCG

PARCEL IDS 02500005500, 02500005500,
025000013500
4652 MARIETTA MEADOWS DRIVE,
NOLANVILLE, TN 37135
(615) 663-7345 mark@fcgcivil.com

FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56

STAMP:

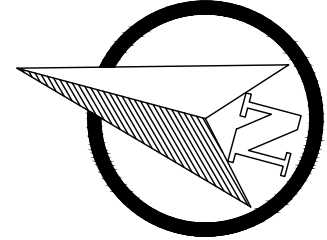
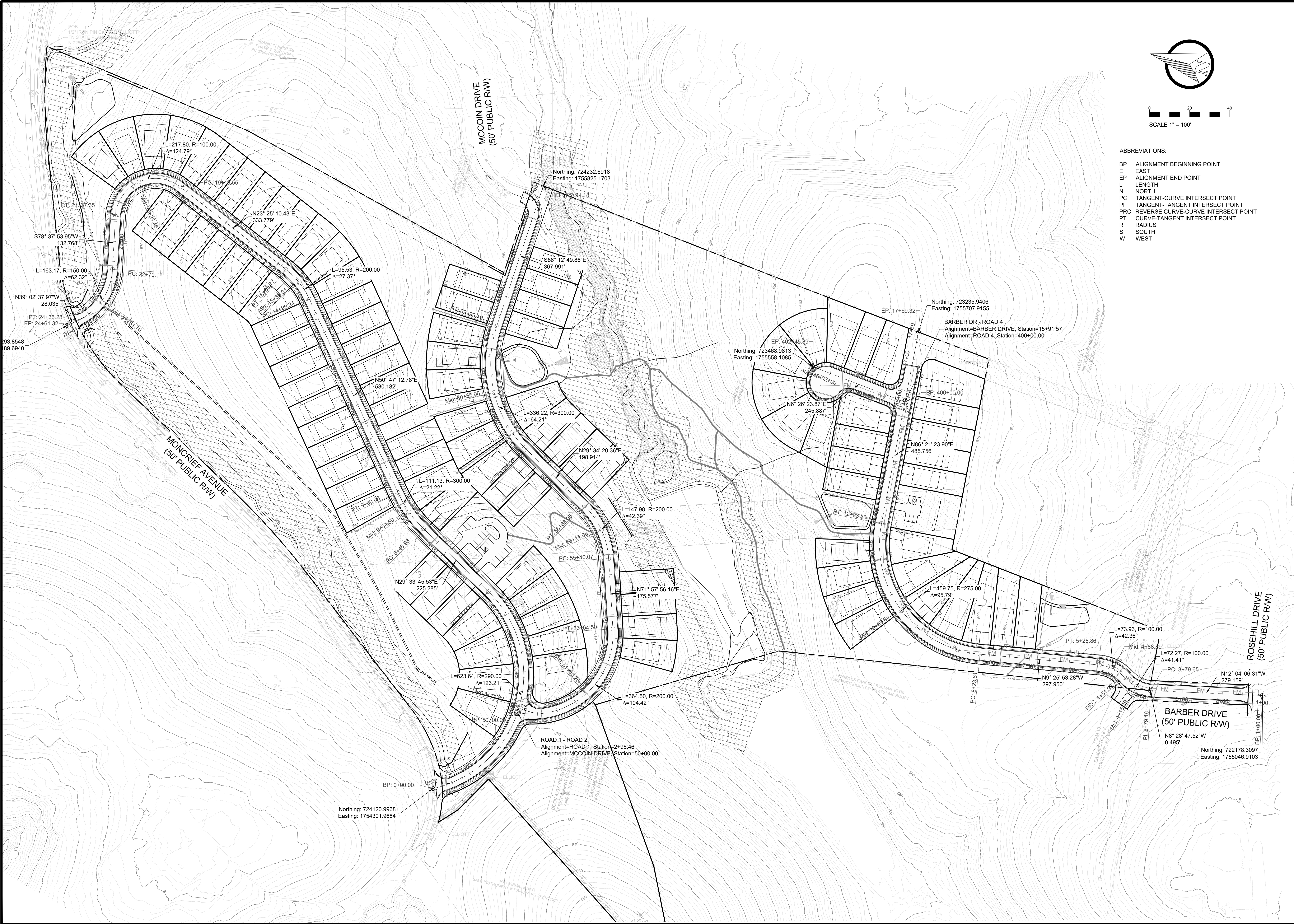
NOT FOR CONSTRUCTION



9/26/2024

SHEET TITLE:
INLET AREA PLAN

SHEET:
C-5.5



0 20 40
SCALE 1" = 100'

ABBREVIATIONS:

- BP ALIGNMENT BEGINNING POINT
- E EAST
- EP ALIGNMENT END POINT
- L LENGTH
- N NORTH
- PC TANGENT-CURVE INTERSECT POINT
- PI TANGENT-TANGENT INTERSECT POINT
- PRC REVERSE CURVE-CURVE INTERSECT POINT
- PT CURVE-TANGENT INTERSECT POINT
- R RADIUS
- S SOUTH
- W WEST

REVISION DESCRIPTION:							
REV:	1	2	3	4	5	6	7
DATE:							

ISSUE DATE:	09/26/2024
DESIGNED BY:	FCG
DRAWN BY:	FCG
CHECKED BY:	FCG
PROJECT NUMBER:	224-0203

CLQ LAND 02500005500, 02500005600, 025000019500
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FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

STAMP:
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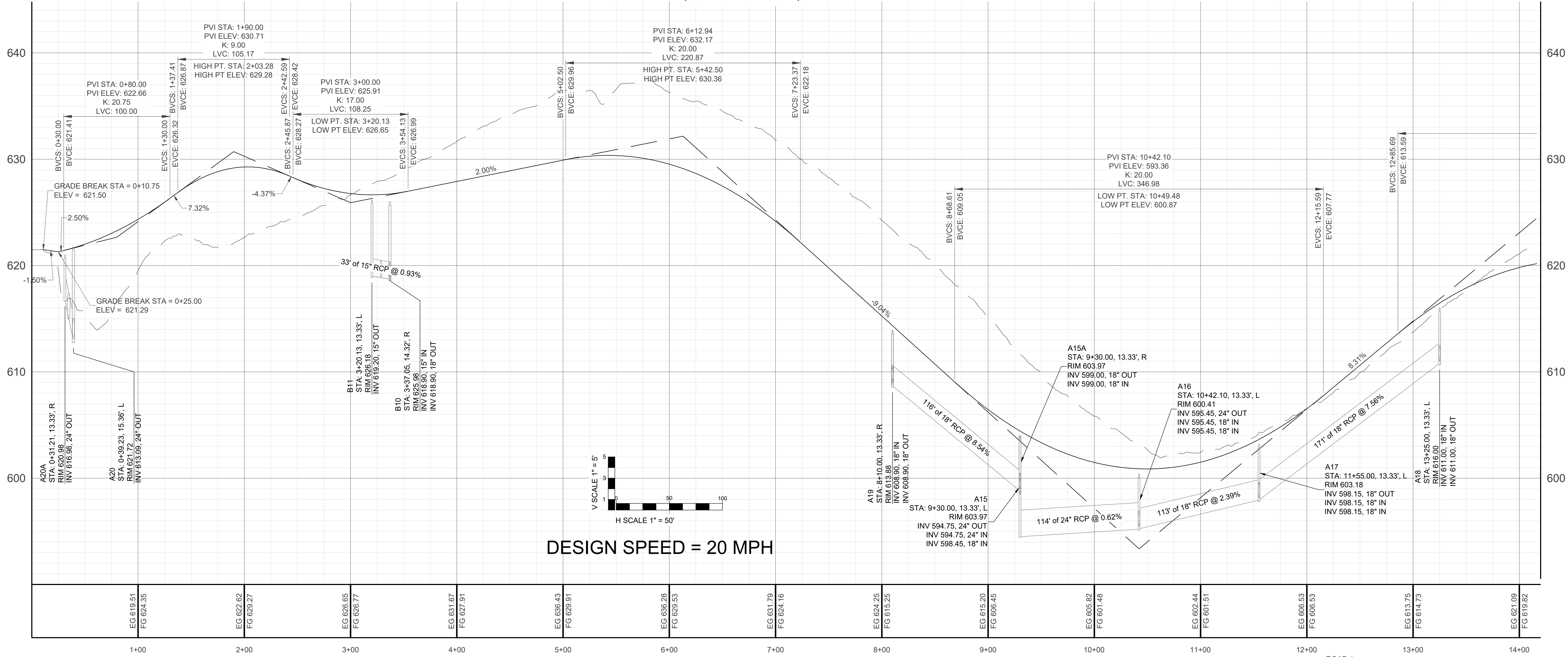
SHEET TITLE:
ROAD ALIGNMENT
PLAN

SHEET:
C-6.0



- ABBREVIATIONS:
- BP ALIGNMENT BEGINNING POINT
 - E EAST
 - EP ALIGNMENT END POINT
 - L LENGTH
 - N NORTH
 - PC TANGENT-CURVE INTERSECT POINT
 - PT TANGENT-TANGENT INTERSECT POINT
 - PRC REVERSE CURVE-CURVE INTERSECT POINT
 - PT CURVE-TANGENT INTERSECT POINT
 - R RADIUS
 - S SOUTH
 - W WEST

ROAD 1
(50' PUBLIC R/W)



DESIGN SPEED = 20 MPH



REVISION DESCRIPTION:

REV: 1 2 3 4 5 6 7 8

DATE:

ISSUE DATE:
09/26/2024

DESIGNED BY:
FCG

DRAWN BY:
FCG

CHECKED BY:
FCG

CLQ LAND
02500005500, 02500005600,
02500001950
4652 MARIETTA MEADOWS DRIVE,
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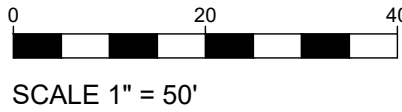
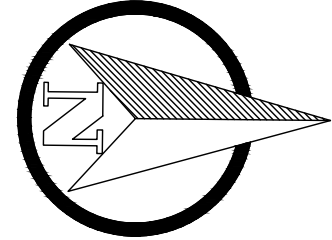
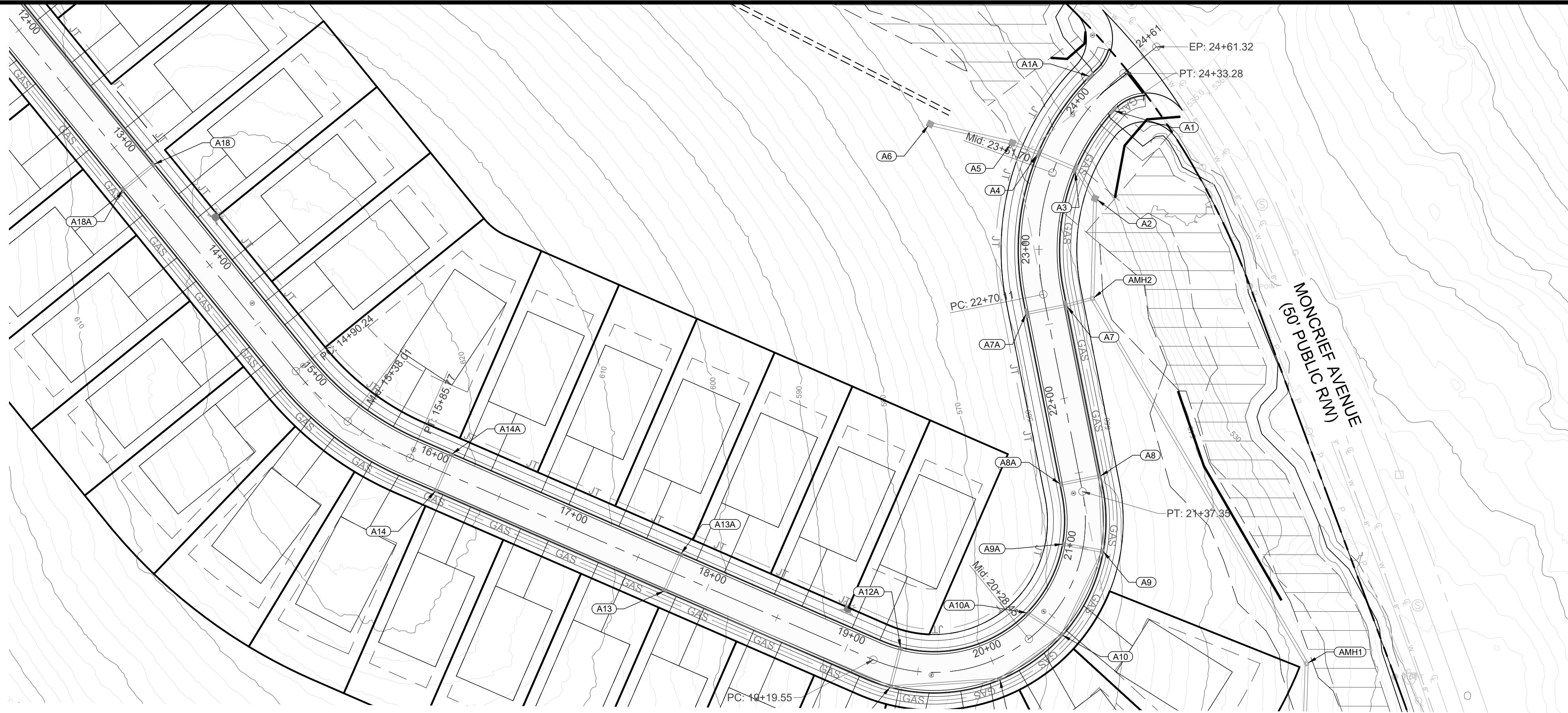
FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56

STAMP:
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9/26/2024

SHEET TITLE:
ROAD 1 PLAN AND
PROFILE

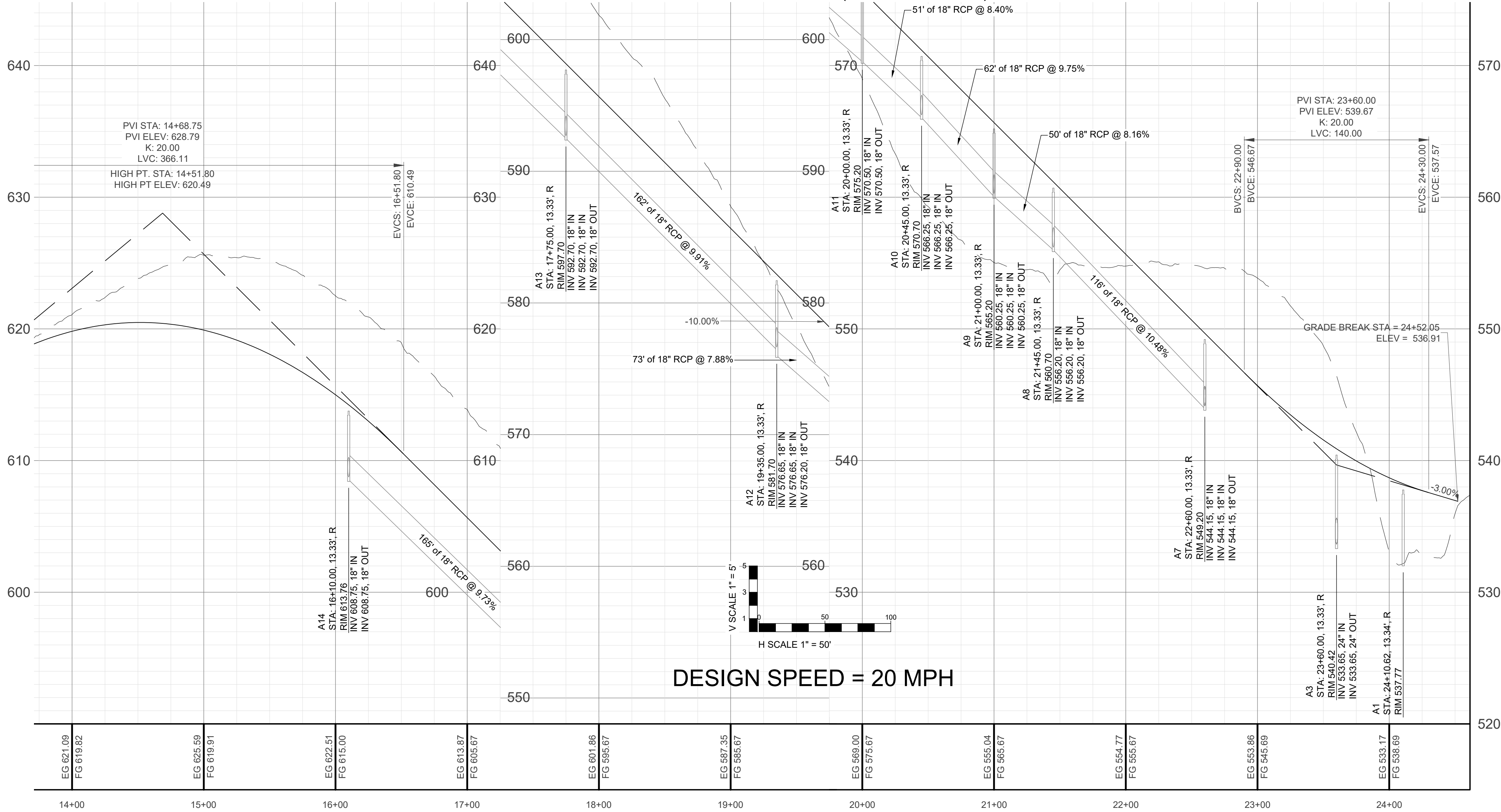
SHEET:
C-6.1



ABBREVIATIONS:

- BP ALIGNMENT BEGINNING POINT
E EAST
EP ALIGNMENT END POINT
L LENGTH
N NORTH
PC TANGENT-CURVE INTERSECT POINT
PT TANGENT-TANGENT INTERSECT POINT
PRC REVERSE CURVE-CURVE INTERSECT POINT
PT CURVE-TANGENT INTERSECT POINT
R RADIUS
S SOUTH
W WEST

ROAD 1
(50' PUBLIC R/W)



REVISION DESCRIPTION:

REV.	DATE:	DESCRIPTION:
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ISSUE DATE:	PROJECT NUMBER:
09/28/2024	224-0203

DESIGNED BY:	DRAWN BY:	CHECKED BY:
FCG	FCG	FCG

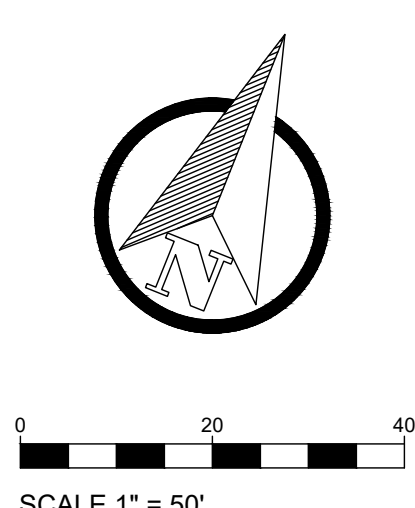
CLQ LAND
02500005500, 02500005600,
025000019500
4652 MAESTRO MEADOWS DRIVE,
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(615) 665-7345 mark@clqland.com
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cog@fcgcivil.com

FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

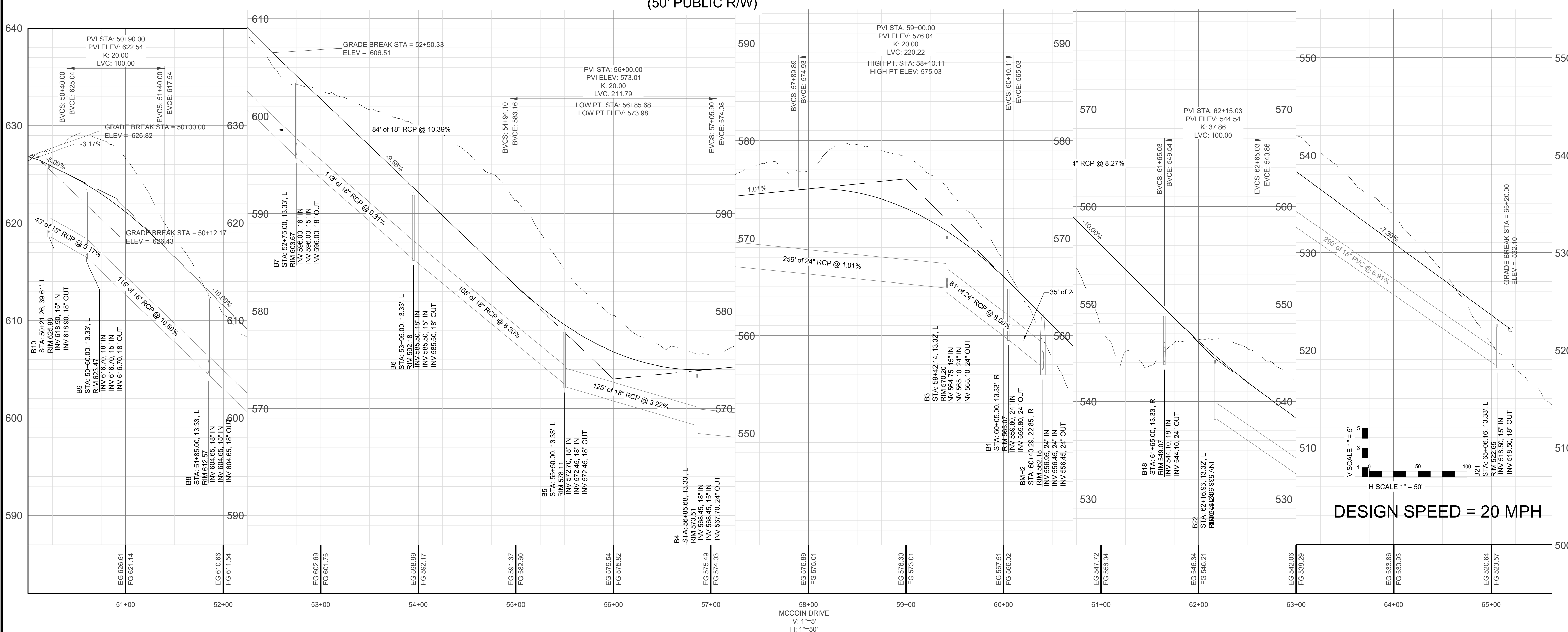


SHEET TITLE:
ROAD 1 PLAN AND
PROFILE

SHEET:
C-6.2



- ABBREVIATIONS:
- BP ALIGNMENT BEGINNING POINT
 - E EAST
 - EP ALIGNMENT END POINT
 - L LENGTH
 - N NORTH
 - PC TANGENT-CURVE INTERSECT POINT
 - PI TANGENT-TANGENT INTERSECT POINT
 - PRC REVERSE CURVE-CURVE INTERSECT POINT
 - PT CURVE-TANGENT INTERSECT POINT
 - R RADIUS
 - S SOUTH
 - W WEST





REV.	DATE	REVISION DESCRIPTION
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ISSUE DATE:	PROJECT NUMBER:
09/26/2024	224-0203

DESIGNED BY:	DRAWN BY:	CHECKED BY:
FCG	FCG	FCG

CLQ LAND	PARCEL IDS	02500005500, 02500005600, 025000019500
4652 MAJESTIC MEADOWS DRIVE, NOLANSVILLE, TN 37135	(615) 663-7345 mark@cdigital.com	FC GAUMMITZ CIVIL ENGINEER, LLC 1877 ERINGER DRIVE NOLANSVILLE, TN 37135 (408) 686-1467 cga@fcga.com

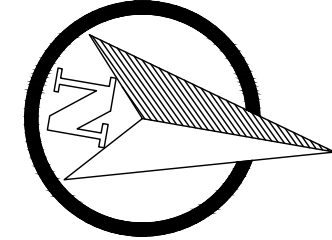
FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE:
MCCOIN DRIVE
PLAN AND PROFILE

SHEET:
C-6.3

0 20 40
SCALE 1" = 50'

ABBREVIATIONS:

BP ALIGNMENT BEGINNING POINT
E EAST
EP ALIGNMENT END POINT
L LENGTH
N NORTH
PC TANGENT-CURVE INTERSECT POINT
PI TANGENT-TANGENT INTERSECT POINT
PRC REVERSE CURVE-CURVE INTERSECT POINT
PT CURVE-TANGENT INTERSECT POINT
R RADIUS
S SOUTH
W WEST

REVISION DESCRIPTION:

REV.	DATE	DESCRIPTION
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ISSUE DATE:
09/26/2024PROJECT NUMBER:
224-0203DESIGNED BY:
FCGDRAWN BY:
FCGCHECKED BY:
FCG

CLQ LAND
PARCEL IDS 02500005500, 02500005600,
025000013500
4652 MAESTRO MEADOWS DRIVE,
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cga@fcga.com

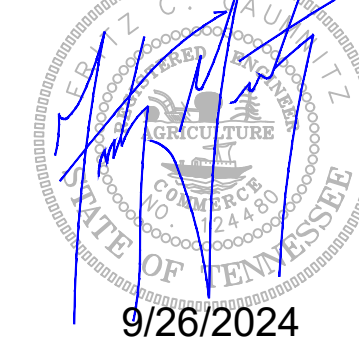
FINAL MASTER DEVELOPMENT PLAN

FOR
GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

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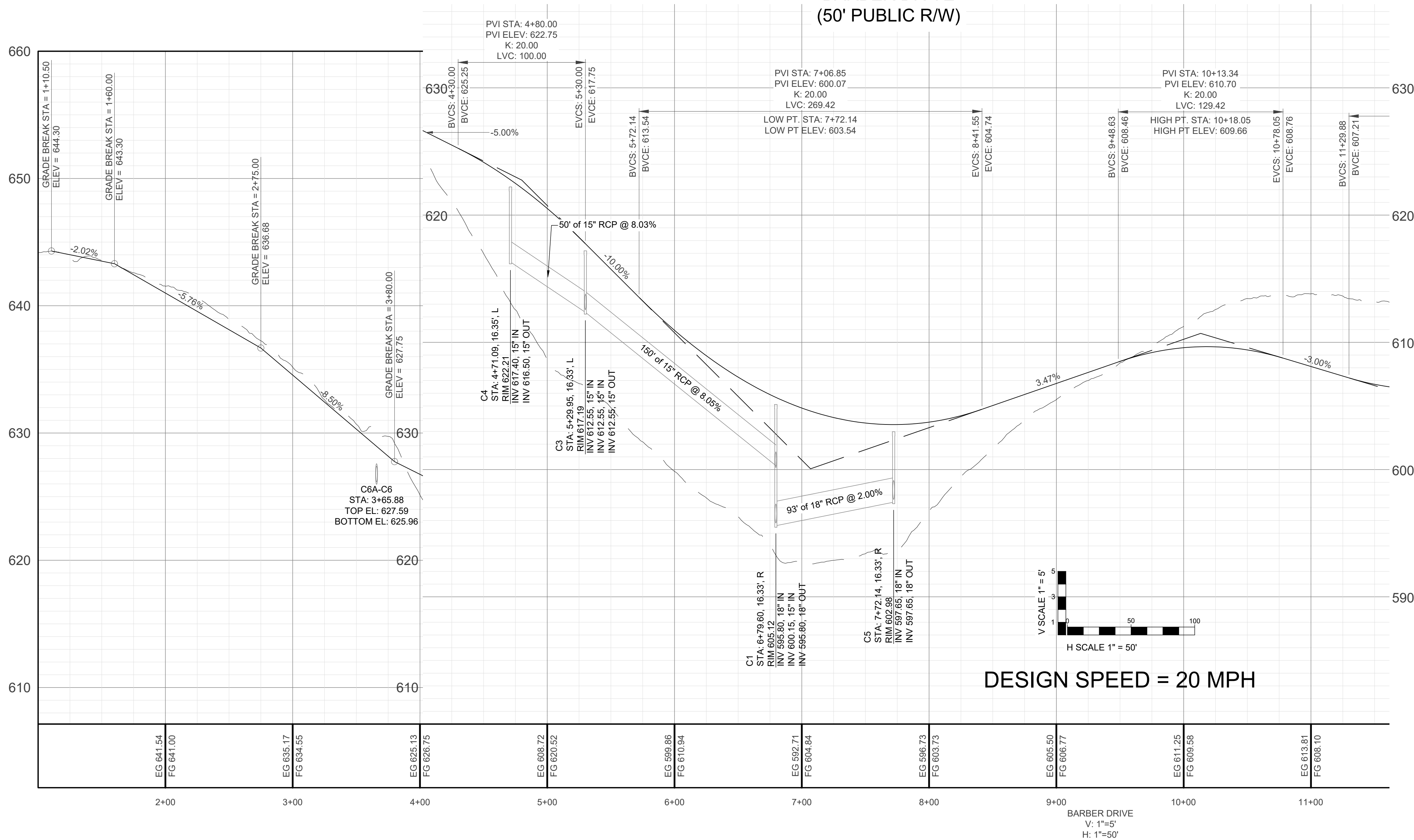


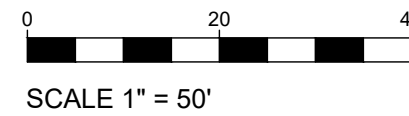
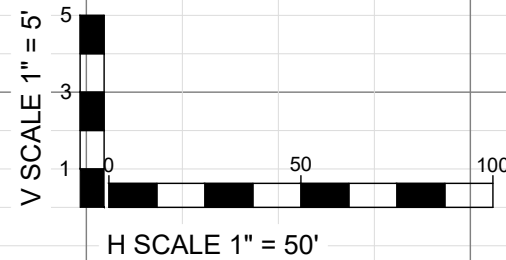
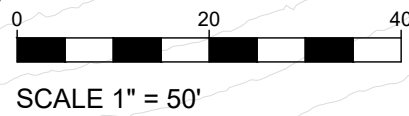
9/26/2024

SHEET TITLE:
BARBER DRIVE
PLAN AND PROFILE

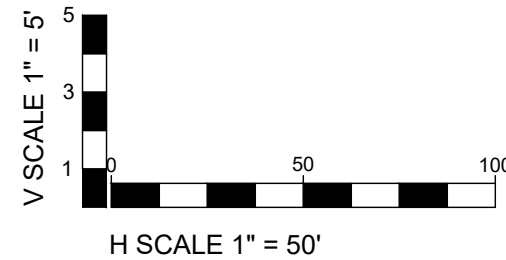
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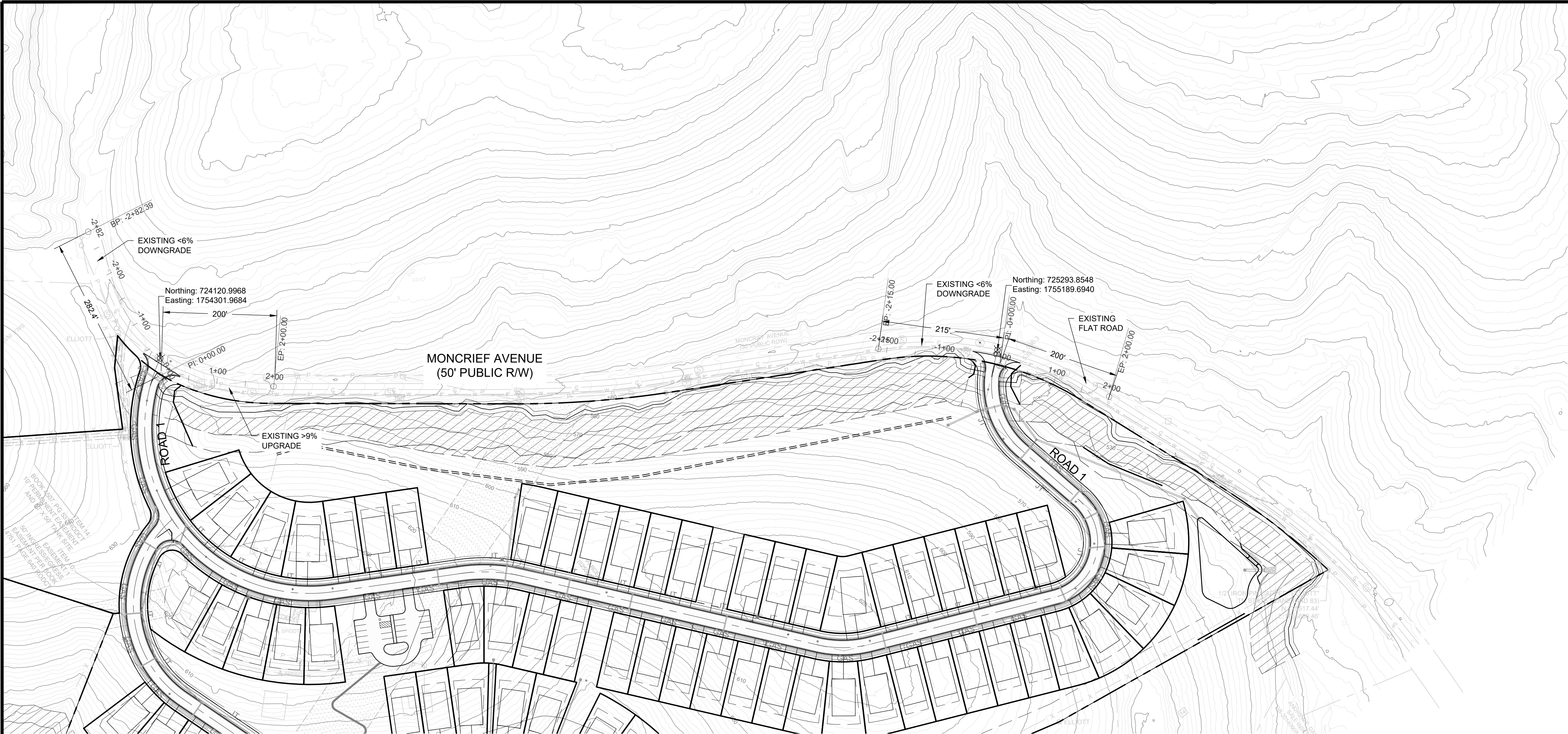
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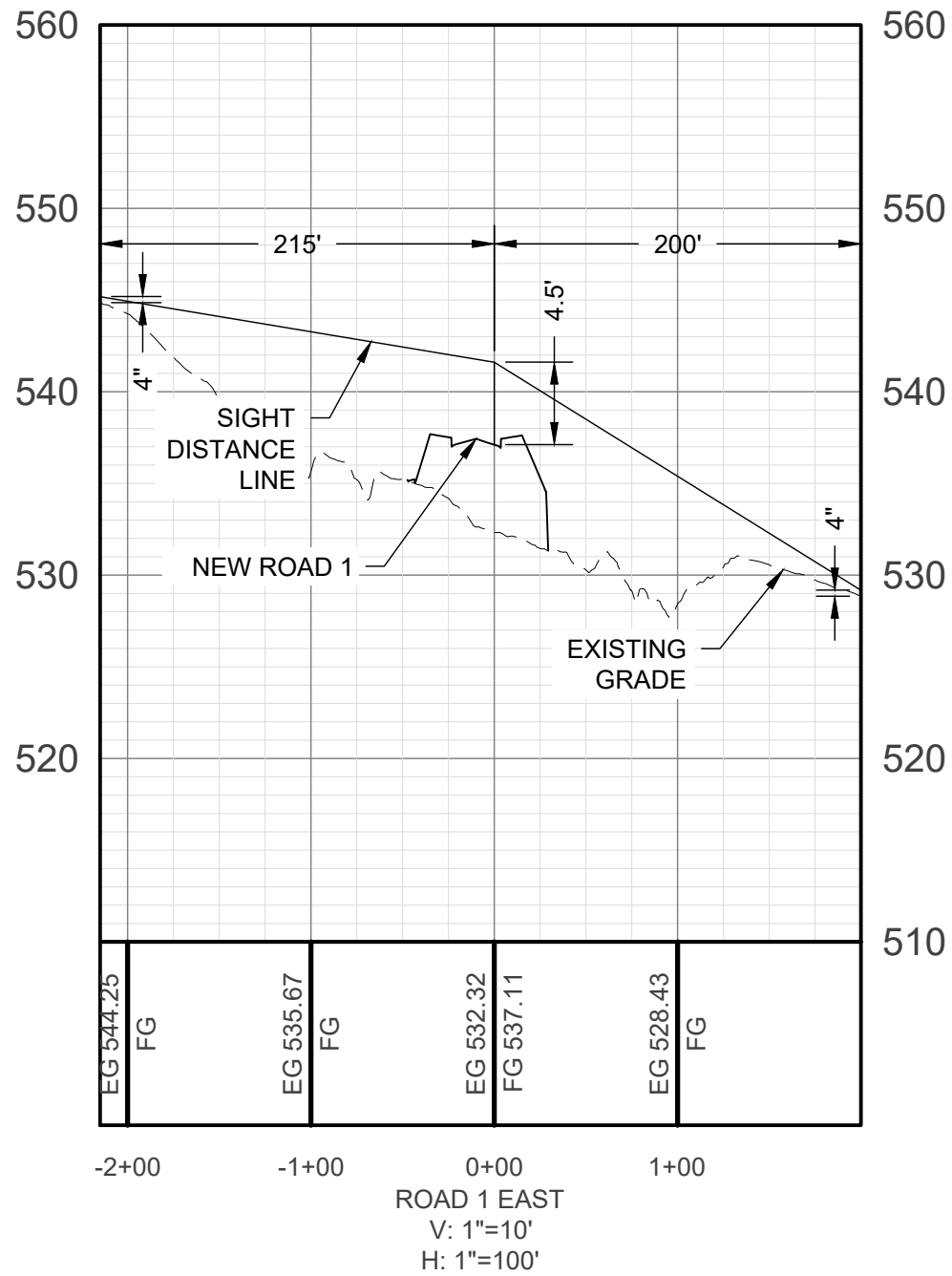
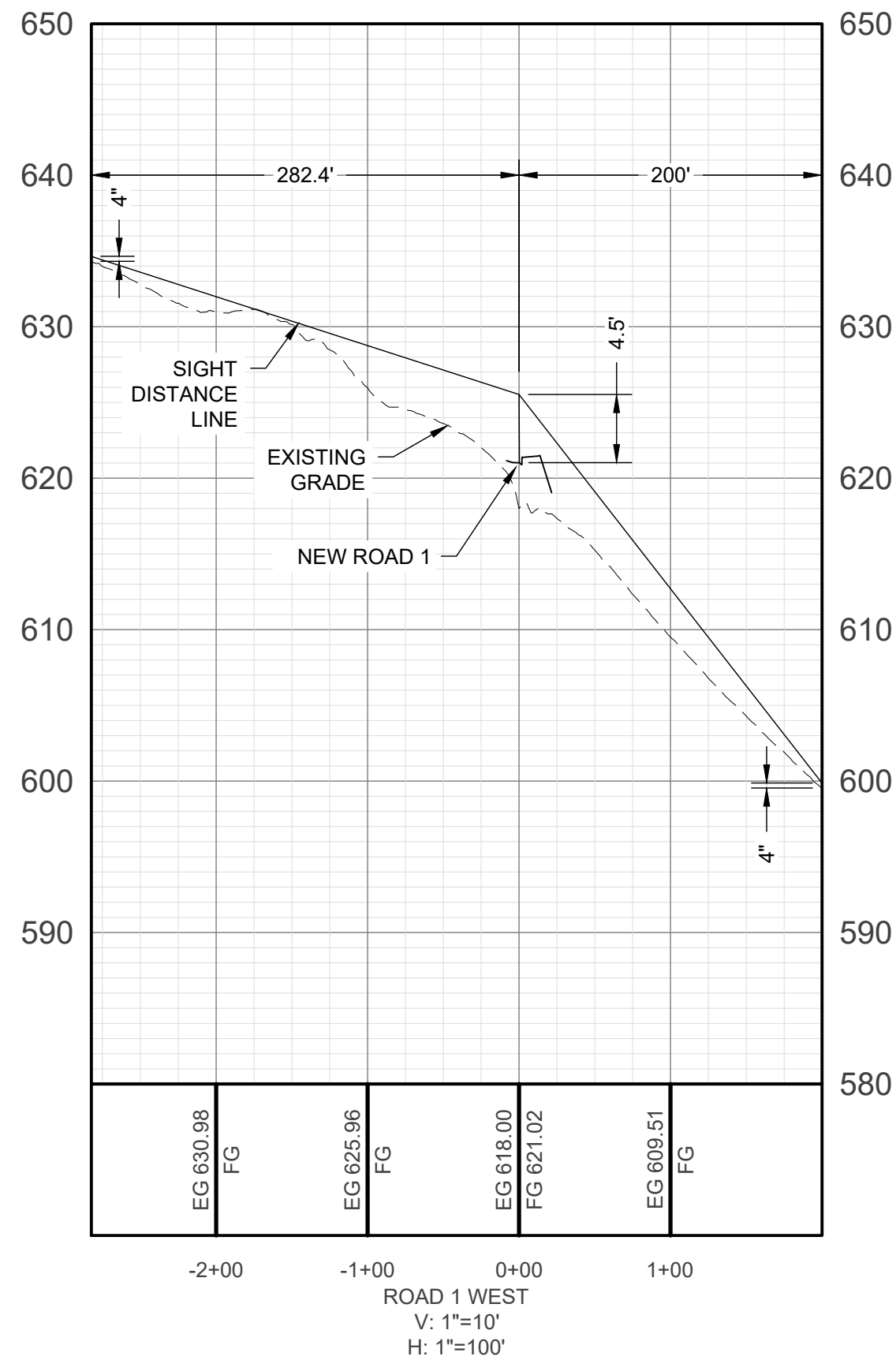
BP	ALIGNMENT BEGINNING POINT
E	EAST
EP	ALIGNMENT END POINT
L	LENGTH
N	NORTH
PC	TANGENT-CURVE INTERSECT POINT
PI	TANGENT-TANGENT INTERSECT POINT
PRC	REVERSE CURVE-CURVE INTERSECT POINT
PT	CURVE-TANGENT INTERSECT POINT
R	RADIUS
S	SOUTH
W	WEST





ABBREVIATIONS:
MPH MILES PER HOUR

- SIGHT DISTANCE PLAN NOTES:
1. STOPPING SIGHT DISTANCE ARE SHOWN PER TABLES 3-1. STOPPING SIGHT DISTANCE ON LEVEL ROADWAYS AT A DESIGN SPEED OF 30 MPH REQUIRES 200 FEET. 3-2. STOPPING SIGHT DISTANCE ON GRADES FOR A DOWNGRADE OF 6% AT A DESIGN SPEED OF 30 MPH REQUIRES 215 FEET. UPGRADE OF 9% REQUIRES 179 FEET.
 2. DISTANCE MEASURED AT 4.5 FEET ABOVE GRADE TO ASSUMED EYE LEVEL TO A POINT 4 INCHES ABOVE GRADE AT THE APPROPRIATE DISTANCE. STARTING POINT BEING APPROXIMATELY 15 FEET BACK FROM PRIMARY ROAD EDGE OF PAVEMENT PER TDOT ROADWAY DESIGN STANDARDS RD11-SD-1 AND AASHTO SECTION 3.2.6.2.



REV.	DATE	REVISION DESCRIPTION
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DESIGNED BY: FCG	ISSUE DATE: 09/26/2024
DRAWN BY: FCG	PROJECT NUMBER: 224-0203
CHECKED BY: FCG	

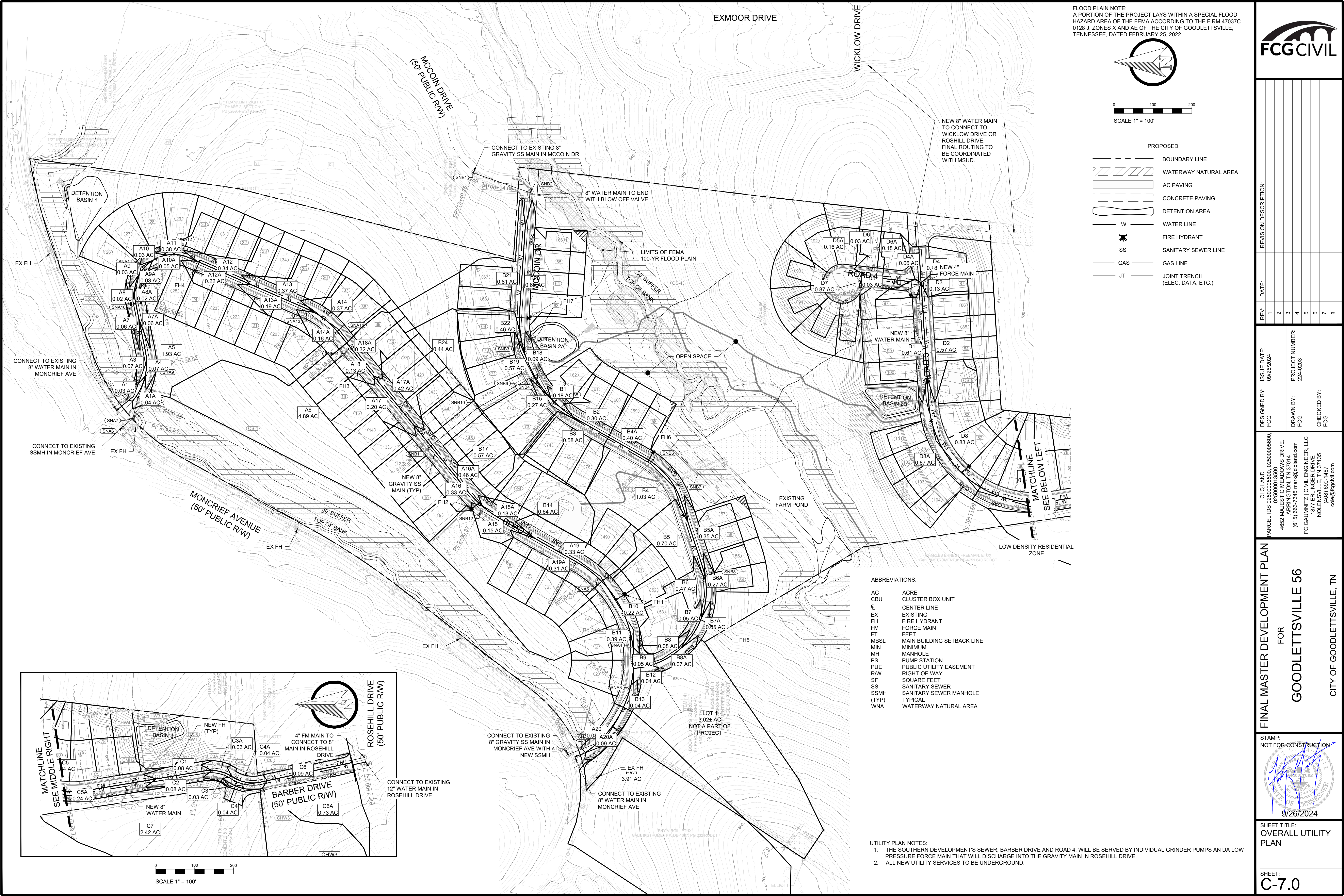
CLQ LAND
PARCEL IDS 02500005500, 02500005600,
025000019500
4652 MAJESTIC MEADOWS DRIVE,
NOLANVILLE, TN 37135
(615) 663-7345 mark@fcgcivil.com
FC GAUMMITZ | CIVIL ENGINEER, LLC
1877 ERLINGER DRIVE
NOLANVILLE, TN 37135
(408) 686-1467
cga@fcgcivil.com

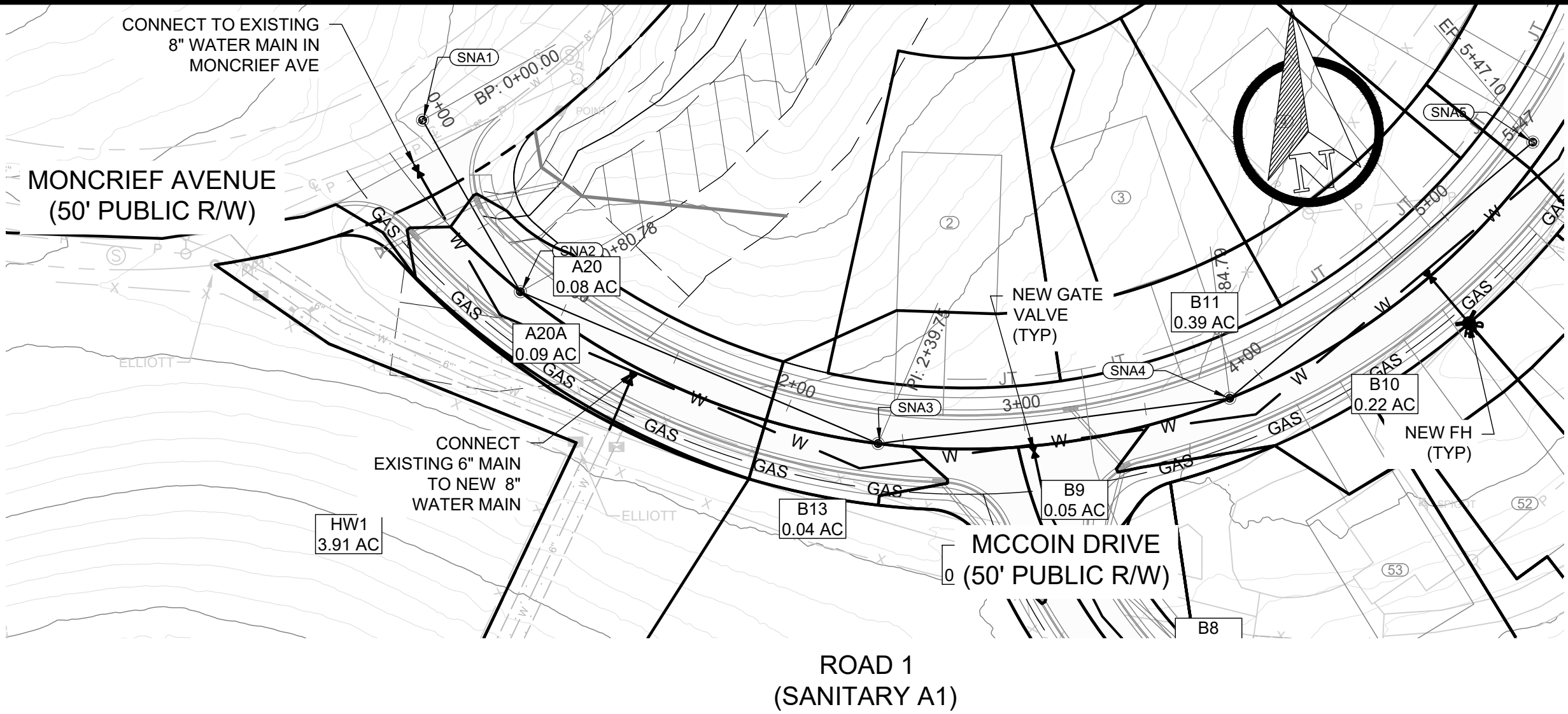
FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION
9/26/2024

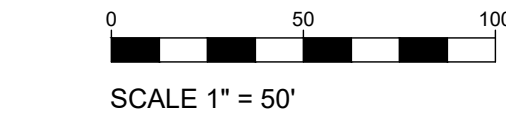
SHEET TITLE:
SIGHT DISTANCE
EXHIBIT

SHEET:
C-6.6





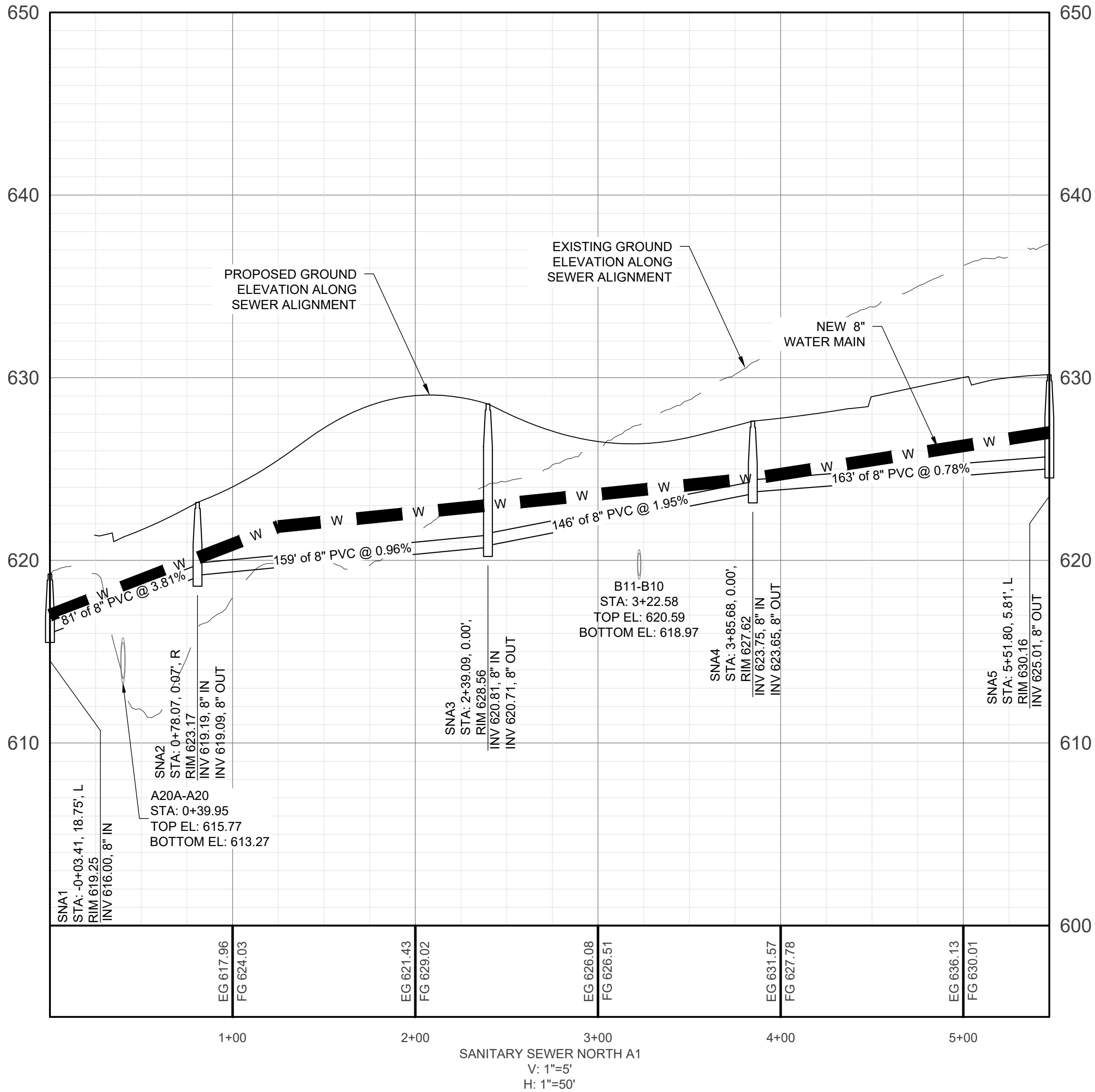
FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD
HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



- PROPOSED
- BOUNDARY LINE
 - Waterway Natural Area
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - W WATER LINE
 - SS SANITARY SEWER LINE
 - GAS GAS LINE
 - JT JOINT TRENCH (ELEC, DATA, ETC.)

ABBREVIATIONS:

- | | |
|-------|----------------------------|
| AC | ACRE |
| CBU | CLUSTER BOX UNIT |
| CL | CENTER LINE |
| EX | EXISTING |
| FH | FIRE HYDRANT |
| FM | FORCE MAIN |
| FT | FEET |
| MBSL | MAIN BUILDING SETBACK LINE |
| MIN | MINIMUM |
| MH | MANHOLE |
| PS | PUMP STATION |
| PUE | PUBLIC UTILITY EASEMENT |
| R/W | RIGHT-OF-WAY |
| SF | SQUARE FEET |
| SS | SANITARY SEWER |
| SSMH | SANITARY SEWER MANHOLE |
| (TYP) | TYPICAL |
| WNA | WATERWAY NATURAL AREA |



REVISION DESCRIPTION:

DATE:

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6

7

8

ISSUE DATE:
09/26/2024

DESIGNED BY:
FCG

CLQ LAND
PARCEL IDS 02500005500, 02500005600,
025000013500
025000013500
4652 MAJESTIC MEADOWS DRIVE,
NOLANSVILLE, TN 37135
(615) 663-7345 mark@cdgintl.com

DRAWN BY:
FCG

PROJECT NUMBER:
224-0203

CHECKED BY:
FCG

FC GAUMMITZ | CIVIL ENGINEER, LLC
1877 ERLINGER DRIVE
NOLANSVILLE, TN 37135
(406) 686-1467
cga@fcgintl.com

FINAL MASTER DEVELOPMENT PLAN

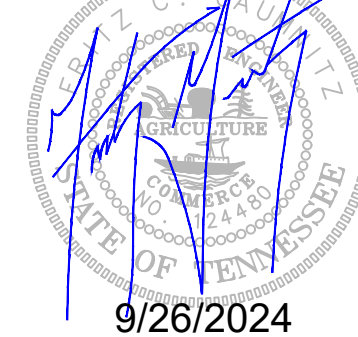
FOR

GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

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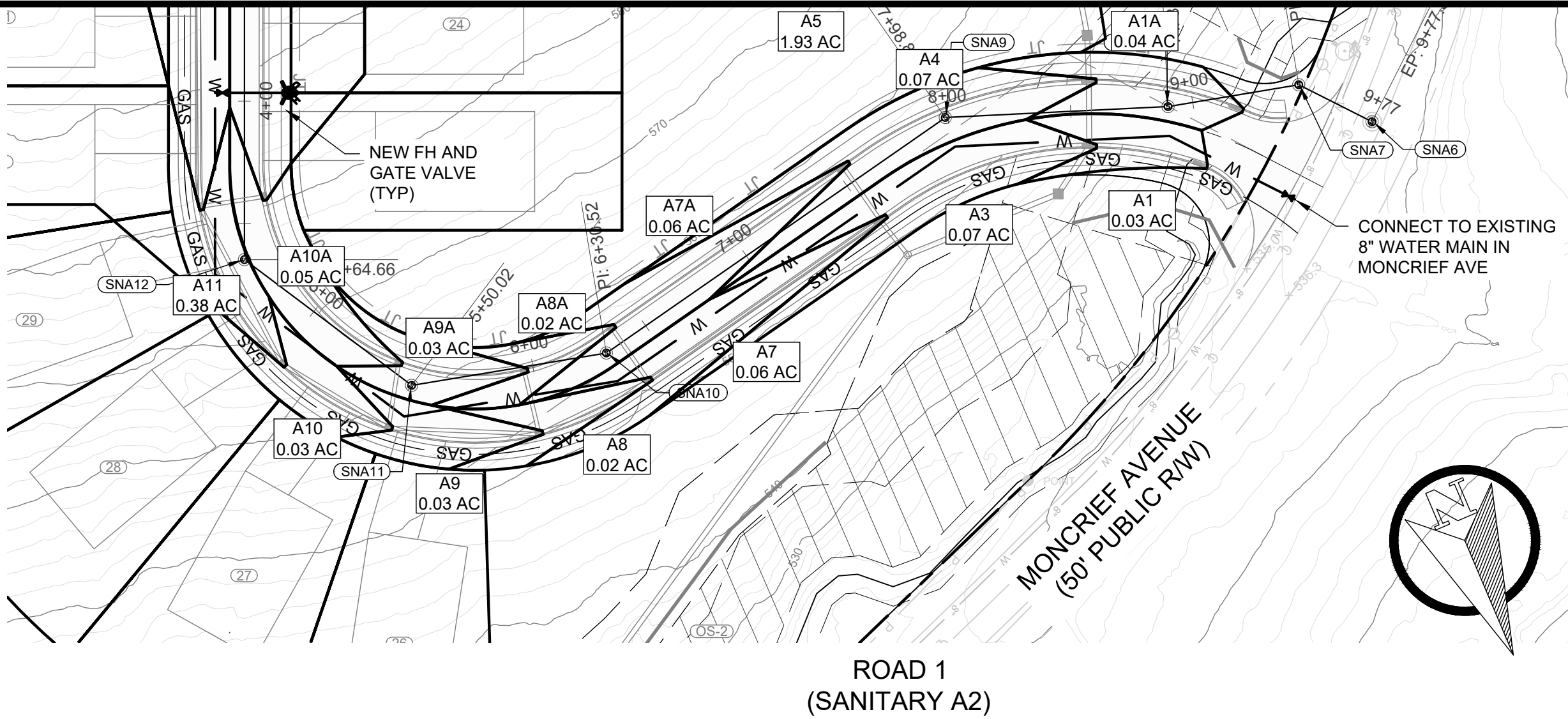
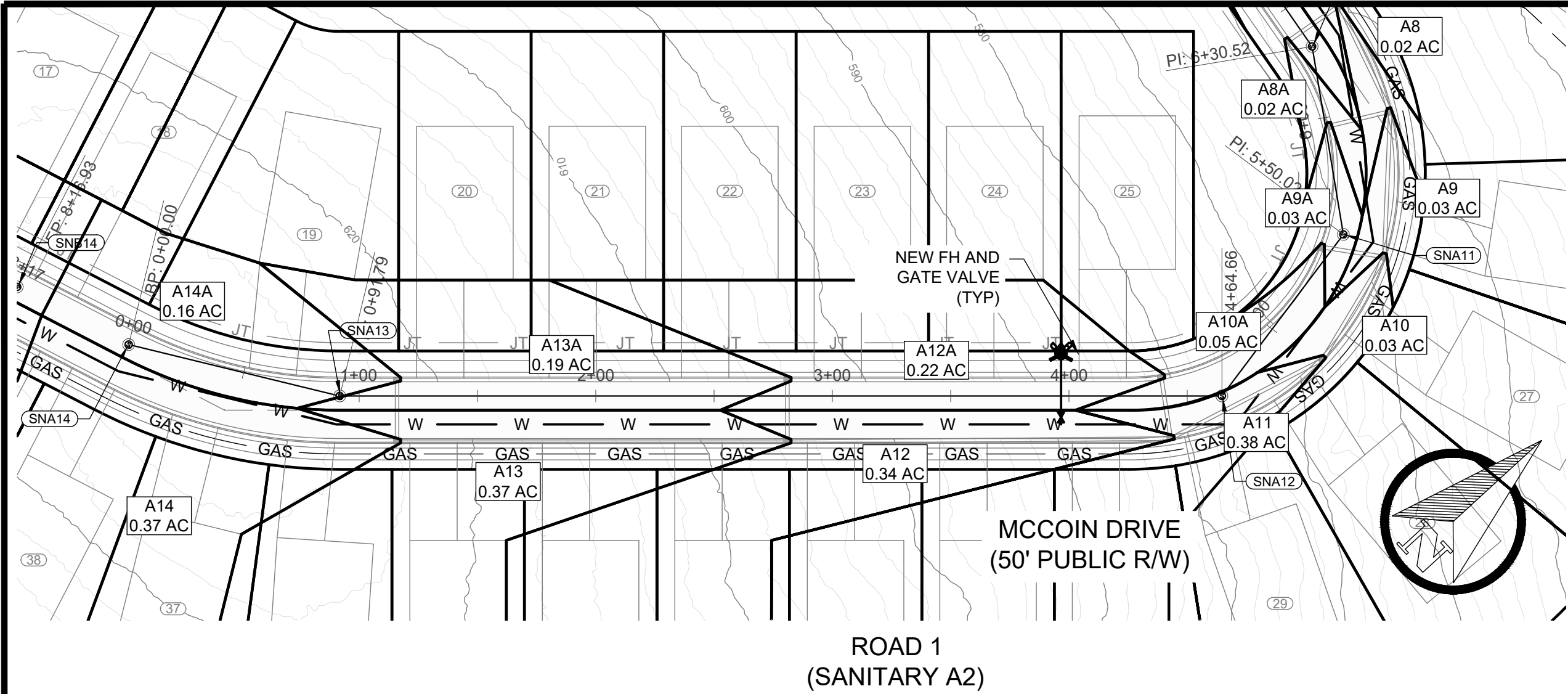
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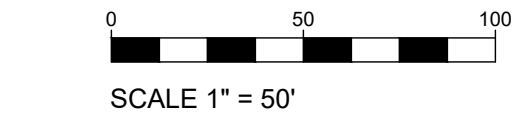
ROAD 1 UTILITY
PLAN AND PROFILE

SHEET:

C-7.1



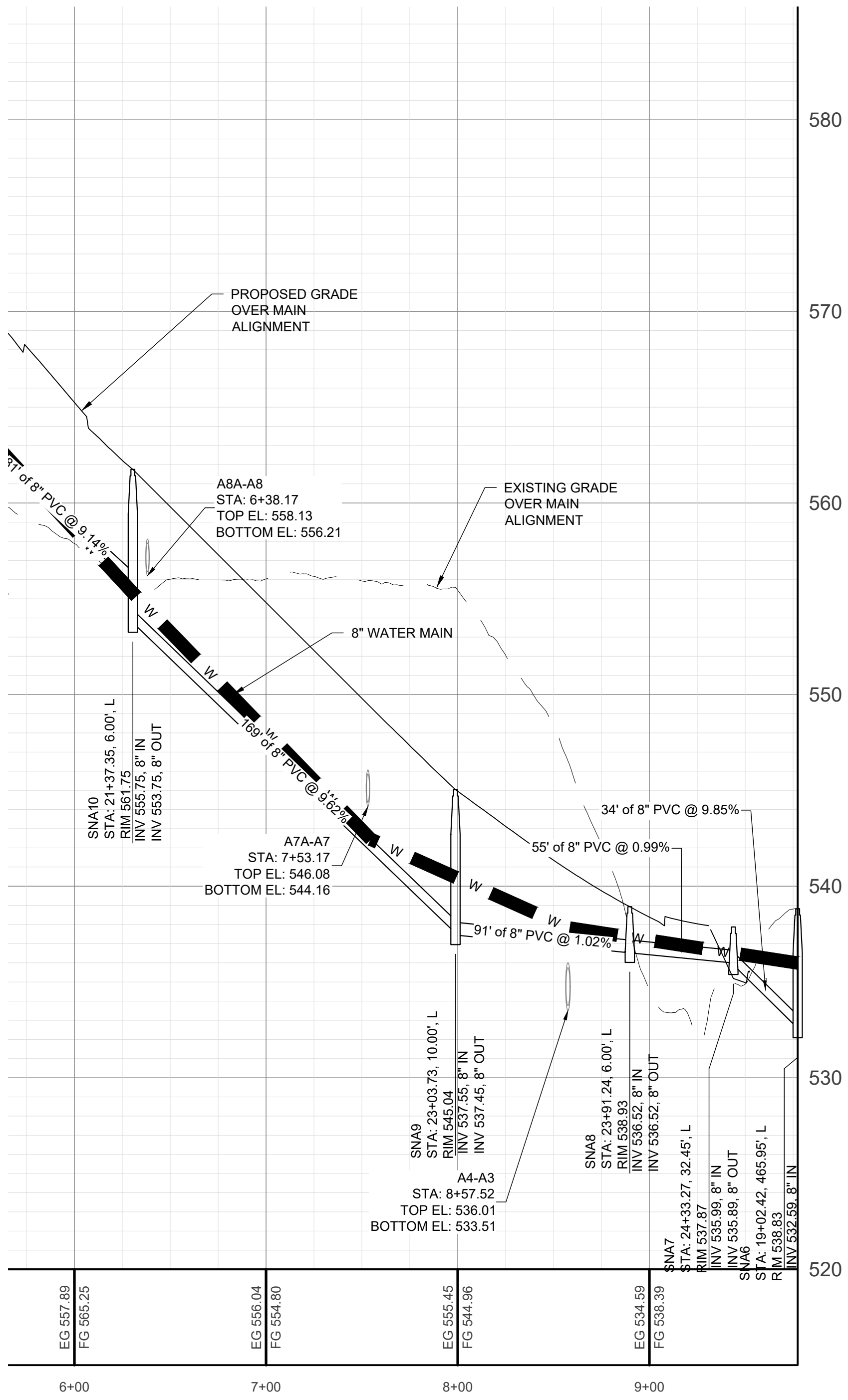
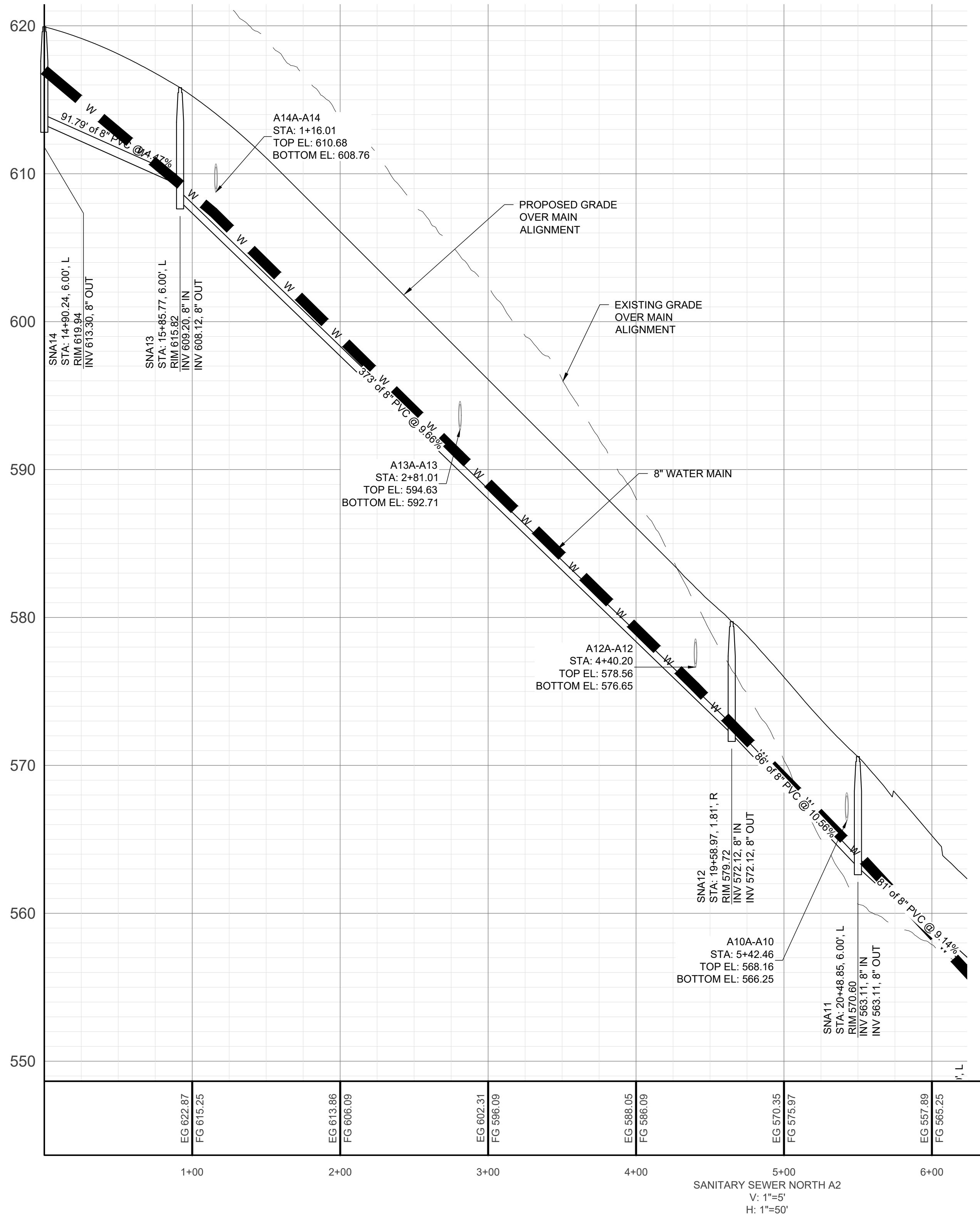
FLOOD PLAIN NOTE:
A PORTION OF THE PROJECT LAYS WITHIN A SPECIAL FLOOD
HAZARD AREA OF THE FEMA ACCORDING TO THE FIRM 47037C
0128 J. ZONES X AND AE OF THE CITY OF GOODLETTSVILLE,
TENNESSEE, DATED FEBRUARY 25, 2022.



- PROPOSED
- BOUNDARY LINE
 - WATERWAY NATURAL AREA
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - W WATER LINE
 - SS SANITARY SEWER LINE
 - GAS GAS LINE
 - JT JOINT TRENCH (ELEC, DATA, ETC.)

ABBREVIATIONS:

- | | |
|-------|----------------------------|
| AC | ACRE |
| CBU | CLUSTER BOX UNIT |
| CL | CENTER LINE |
| EX | EXISTING |
| FH | FIRE HYDRANT |
| FM | FORCE MAIN |
| FT | FEET |
| MBSL | MAIN BUILDING SETBACK LINE |
| MIN | MINIMUM |
| MH | MANHOLE |
| PS | PUMP STATION |
| PUE | PUBLIC UTILITY EASEMENT |
| R/W | RIGHT-OF-WAY |
| SF | SQUARE FEET |
| SS | SANITARY SEWER |
| SSMH | SANITARY SEWER MANHOLE |
| (TYP) | TYPICAL |
| WNA | WATERWAY NATURAL AREA |



REVISION DESCRIPTION:

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ISSUE DATE:

DESIGNED BY:

CLQ LAND

PARCEL IDS

FOR

FINAL MASTER DEVELOPMENT PLAN

STAMP:

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9/26/2024

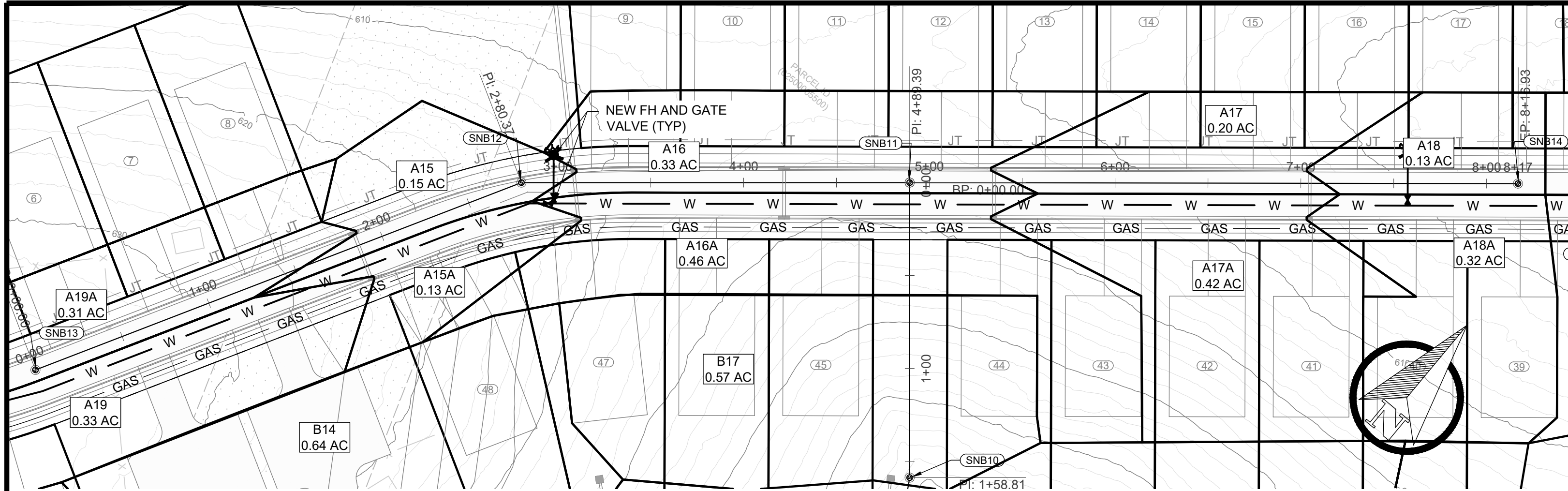
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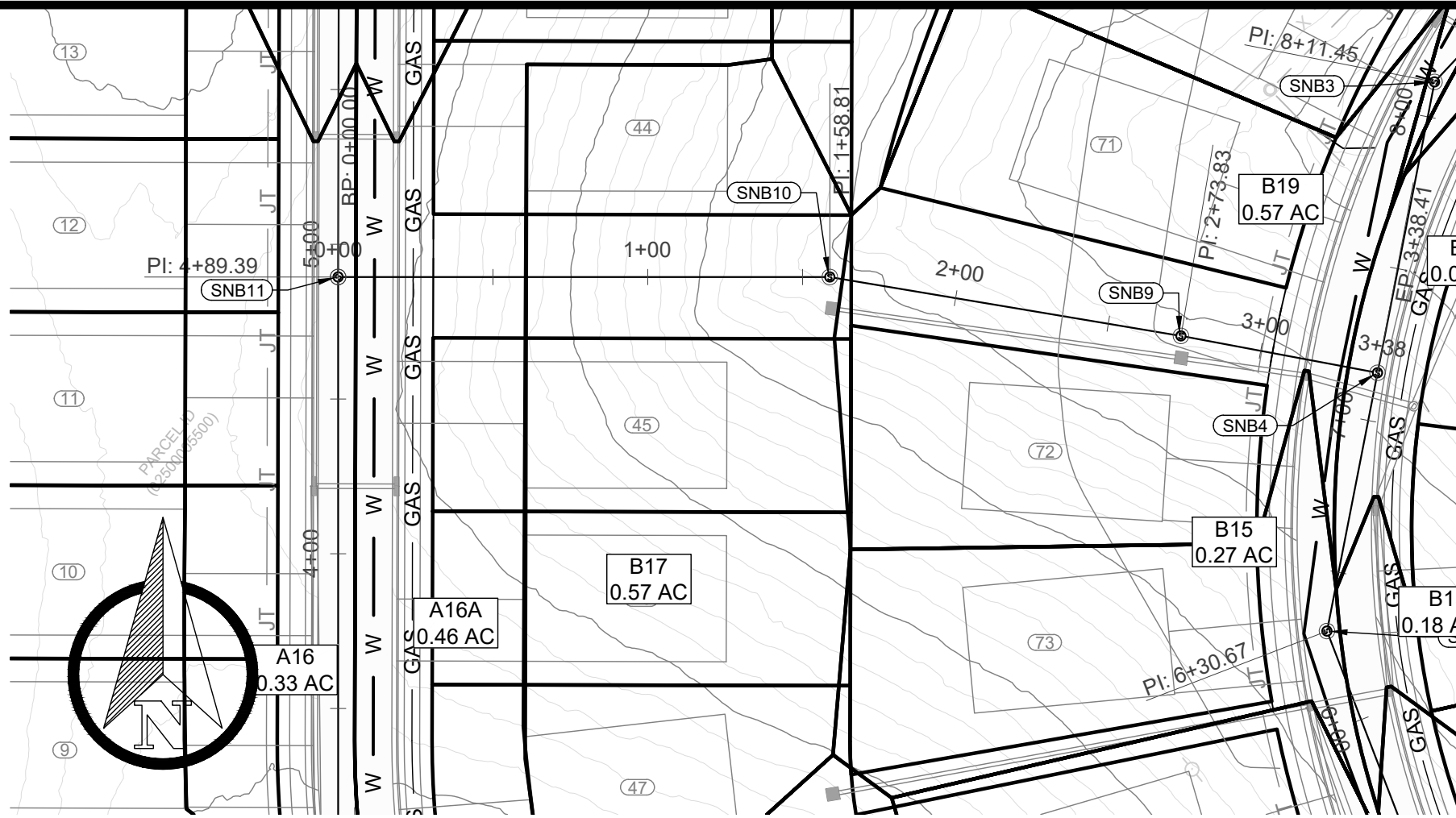
PROFILE

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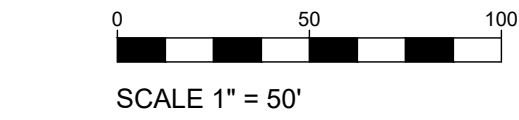
C-7.2



ROAD 1
(SANITARY B1)

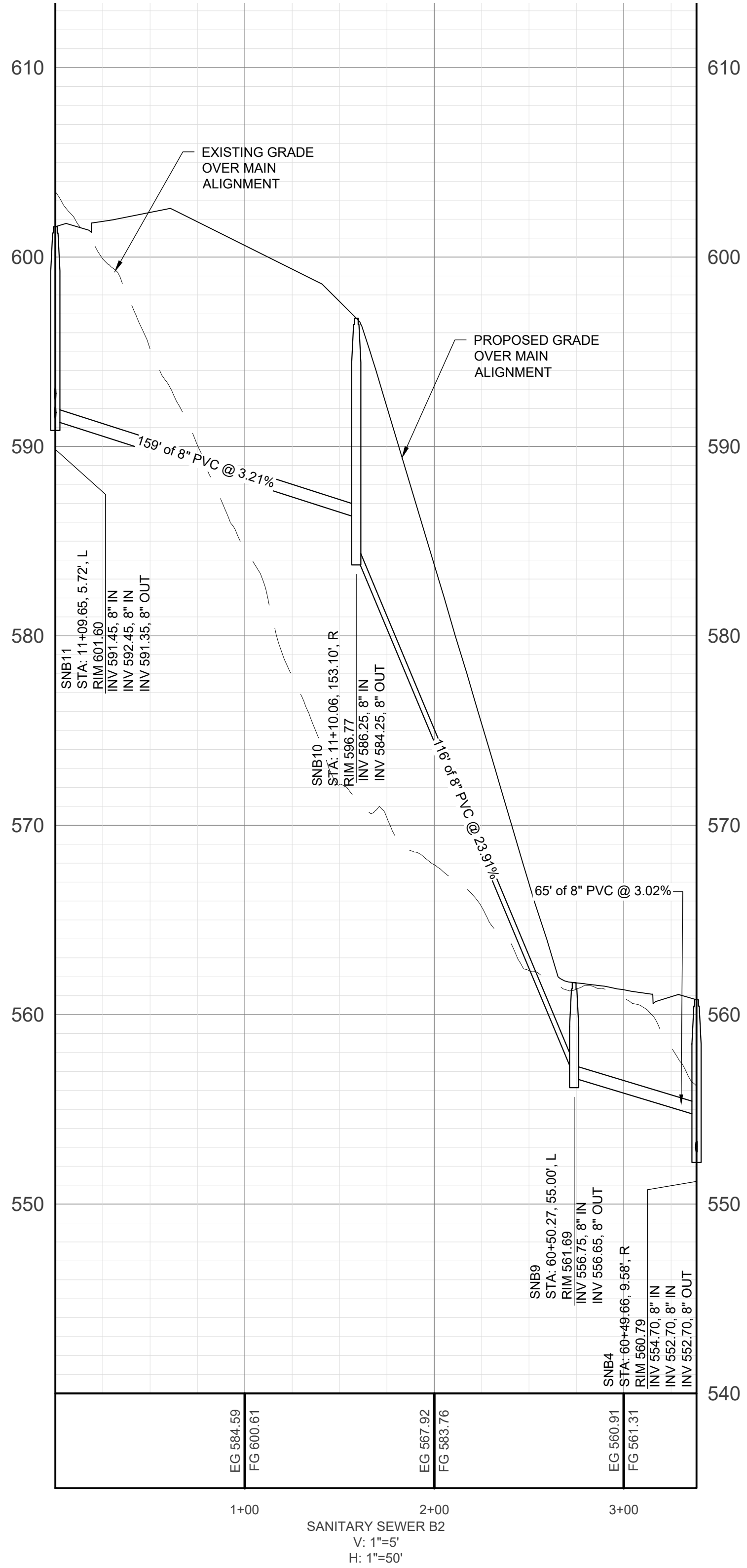
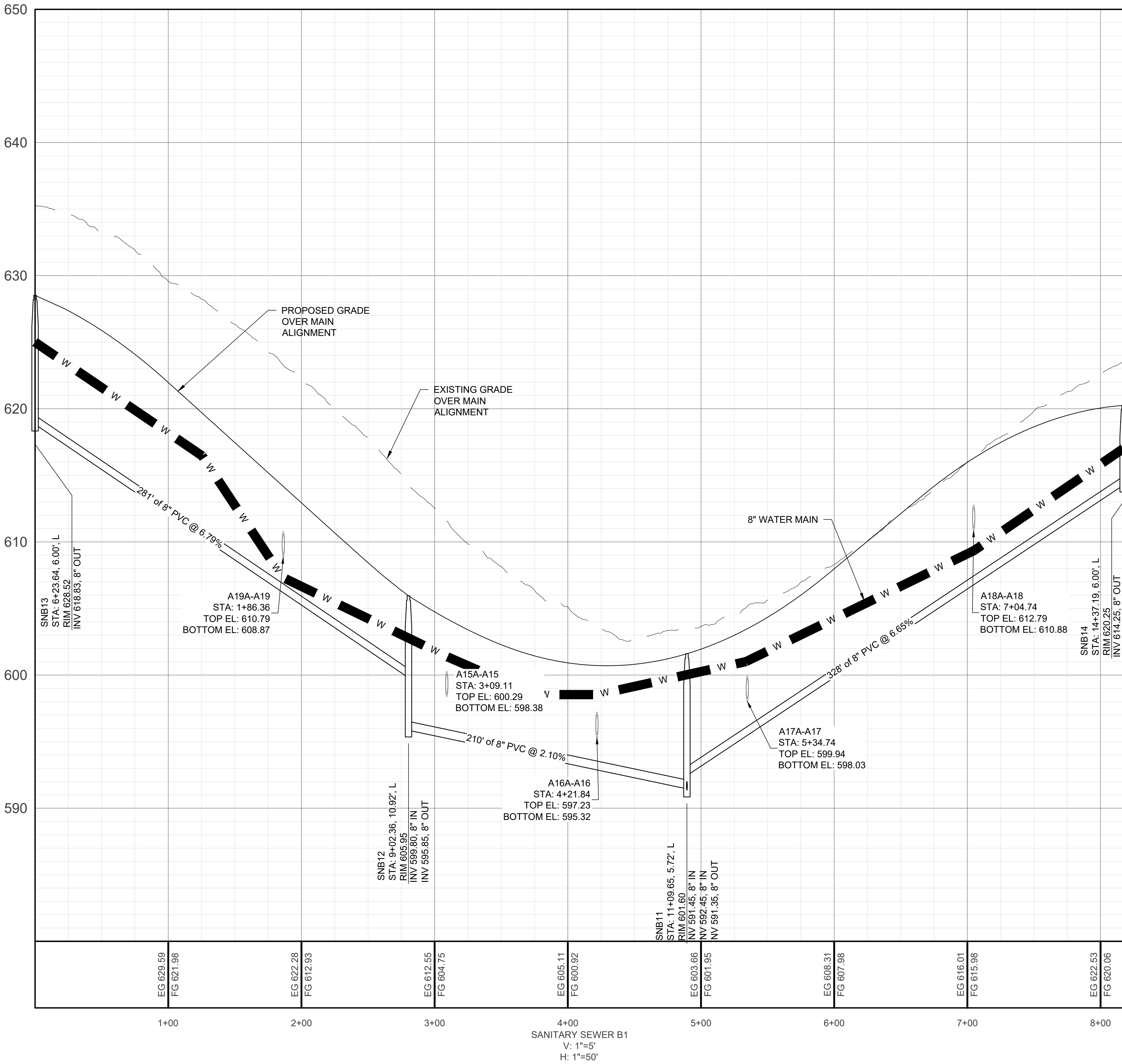


ROAD 1
(SANITARY B2)



- PROPOSED
- BOUNDARY LINE
 - WATERWAY NATURAL AREA
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - W WATER LINE
 - FIRE HYDRANT
 - SS SANITARY SEWER LINE
 - GAS GAS LINE
 - JT JOINT TRENCH (ELEC, DATA, ETC.)

- ABBREVIATIONS:
- | | |
|-------|----------------------------|
| AC | ACRE |
| CBU | CLUSTER BOX UNIT |
| CL | CENTER LINE |
| EX | EXISTING |
| FH | FIRE HYDRANT |
| FM | FORCE MAIN |
| FT | FEET |
| MBSL | MAIN BUILDING SETBACK LINE |
| MIN | MINIMUM |
| MH | MANHOLE |
| PS | PUMP STATION |
| PUE | PUBLIC UTILITY EASEMENT |
| R/W | RIGHT-OF-WAY |
| SF | SQUARE FEET |
| SS | SANITARY SEWER |
| SSMH | SANITARY SEWER MANHOLE |
| (TYP) | TYPICAL |
| WNA | WATERWAY NATURAL AREA |



REVISION DESCRIPTION:

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DRAWN BY:

CHECKED BY:

FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

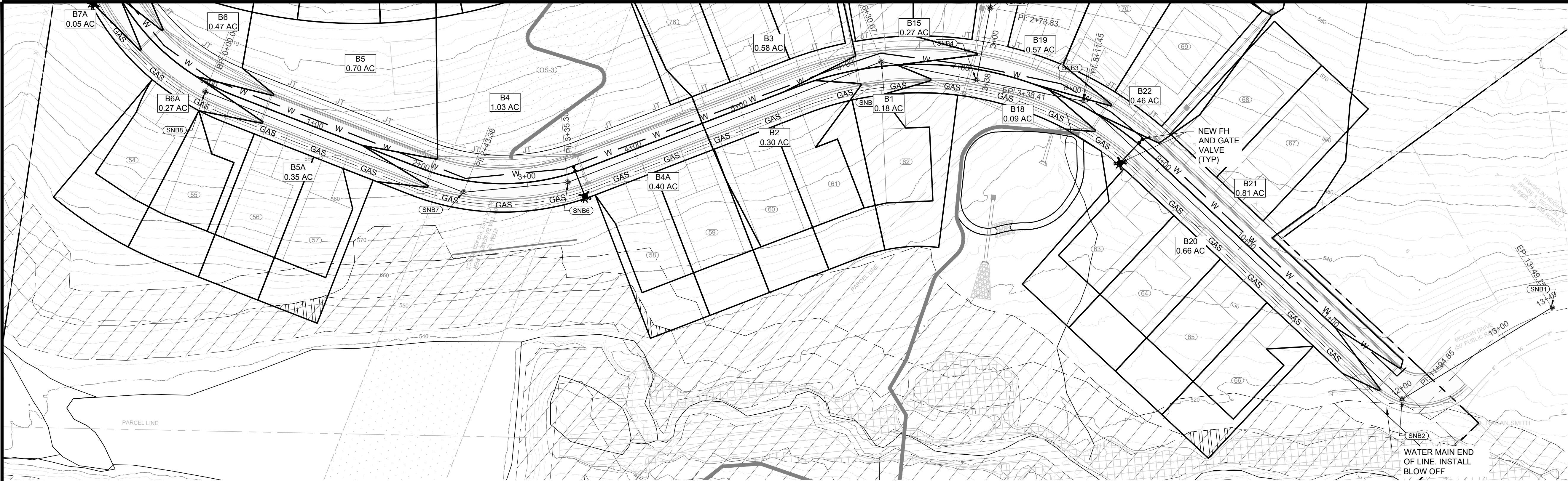
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9/26/2024

SHEET TITLE:
ROAD 1 UTILITY
PLAN AND PROFILE

SHEET:

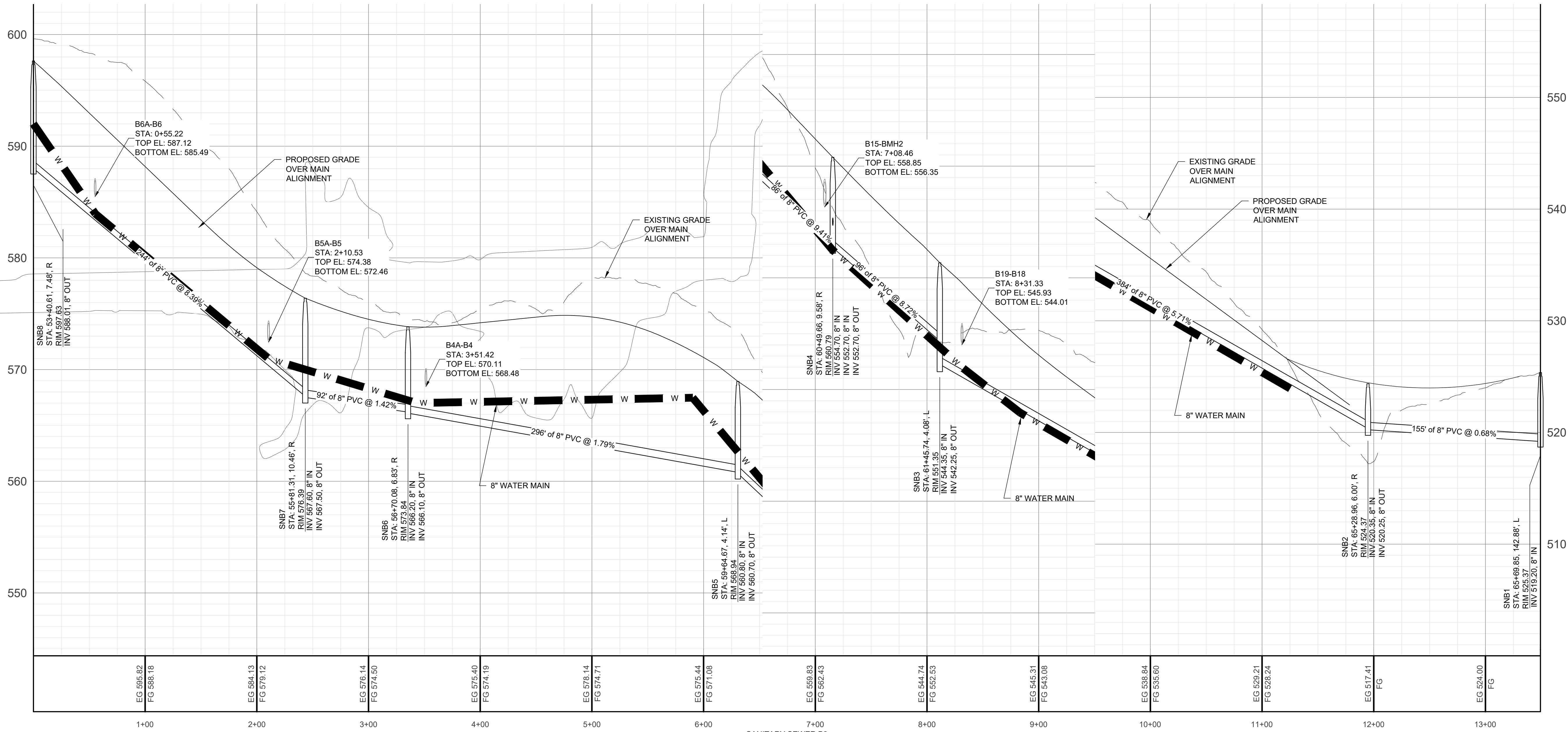
C-7.3



MCCOIN DRIVE
(SANITARY B3)

- PROPOSED
- BOUNDARY LINE
 - Waterway Natural Area
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - W WATER LINE
 - FIRE HYDRANT
 - SS SANITARY SEWER LINE
 - GAS GAS LINE
 - JT JOINT TRENCH (ELEC, DATA, ETC.)

- ABBREVIATIONS:
- | | |
|------------|--------------------------------|
| AC | ACRE |
| CBU | CLUSTER BOX UNIT |
| CL | CENTER LINE |
| EX | EXISTING |
| FH | FIRE HYDRANT |
| FM | FORCE MAIN |
| FT | FEET |
| MBSL | MAIN BUILDING SETBACK LINE |
| MIN | MINIMUM |
| MH | MANHOLE |
| PS | PUMP STATION |
| PUE | PUBLIC UTILITY EASEMENT |
| R/W | RIGHT-OF-WAY |
| SF | SQUARE FEET |
| SS | SANITARY SEWER |
| SSMH (TYP) | SANITARY SEWER MANHOLE TYPICAL |
| WNA | WATERWAY NATURAL AREA |



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ISSUE DATE: 09/26/2024	PROJECT NUMBER: 224-0203
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DESIGNED BY: FCG	DRAWN BY: FCG	CHECKED BY: FCG
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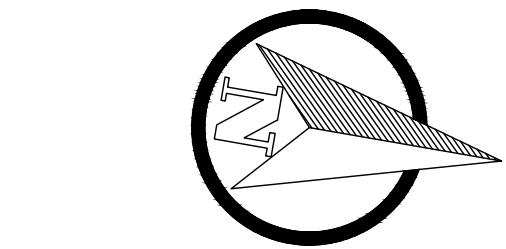
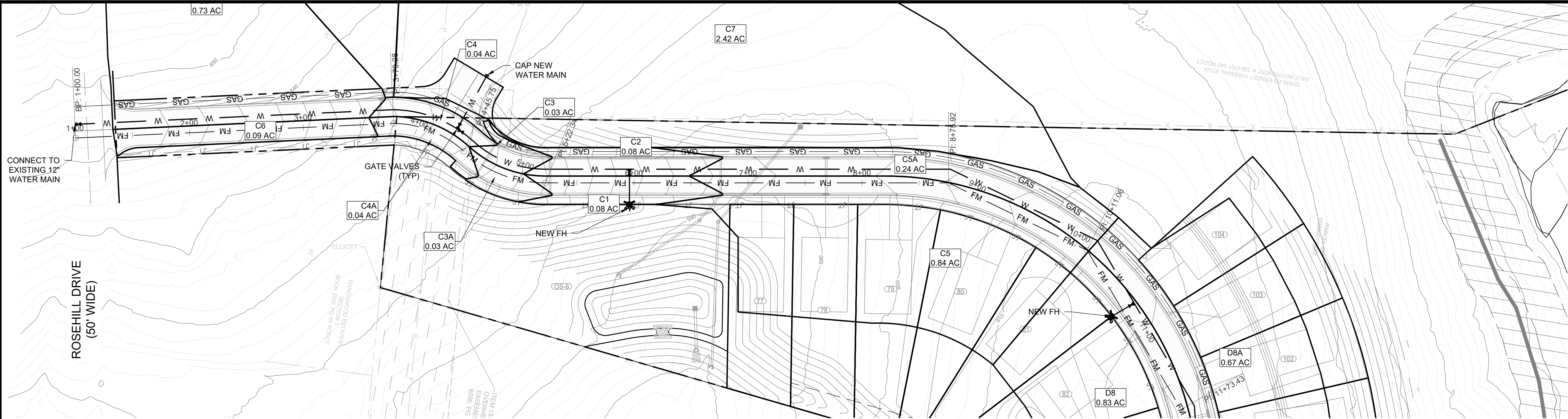
CLQ LAND 02500005500, 02500005600, 025000019500 4652 MARIETTA MEADOWS DRIVE, NOLANVILLE, TN 37135 (615) 665-7345 mark@fcgcivil.com	FC GAUMMITZ CIVIL ENGINEER, LLC 1877 ERINGER DRIVE NOLANVILLE, TN 37135 (408) 686-1467 cga@fcgcivil.com
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FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN



SHEET TITLE:
MCCOIN DRIVE
UTILITY PLAN AND
PROFILE

SHEET:
C-7.4



0 50 100
SCALE 1" = 50'

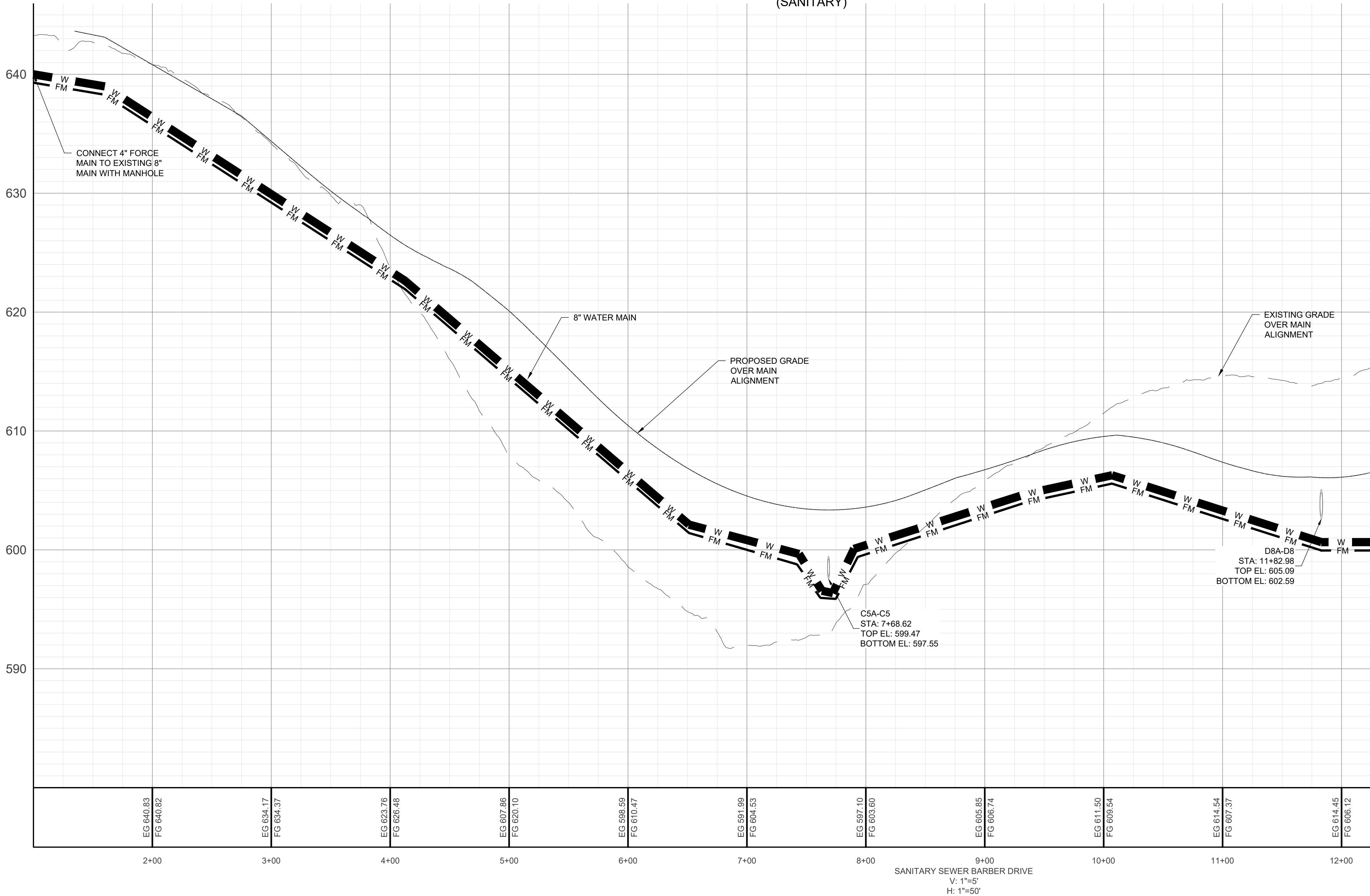
- PROPOSED
- BOUNDARY LINE
 - Waterway Natural Area
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - W WATER LINE
 - FIRE HYDRANT
 - SS SANITARY SEWER LINE
 - GAS GAS LINE
 - JT JOINT TRENCH (ELEC, DATA, ETC.)

ABBREVIATIONS:

- | | |
|-------|----------------------------|
| AC | ACRE |
| CBU | CLUSTER BOX UNIT |
| CL | CENTER LINE |
| EX | EXISTING |
| FH | FIRE HYDRANT |
| FM | FORCE MAIN |
| FT | FEET |
| MBSL | MAIN BUILDING SETBACK LINE |
| MIN | MINIMUM |
| MH | MANHOLE |
| PS | PUMP STATION |
| PUE | PUBLIC UTILITY EASEMENT |
| R/W | RIGHT-OF-WAY |
| SF | SQUARE FEET |
| SS | SANITARY SEWER |
| SSMH | SANITARY SEWER MANHOLE |
| (TYP) | TYPICAL |
| WNA | WATERWAY NATURAL AREA |

NOTES:

- ALL LOTS ALONG BARBER DRIVE AND ROAD 4 TO CONNECT TO FORCE MAIN VIA GRINDER PUMPS AND SERVICE LINES.



REVISION DESCRIPTION:

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ISSUE DATE:

09/26/2024

PROJECT NUMBER:

224-0203

DESIGNED BY:

FCG

DRAWN BY:

FCG

CHECKED BY:

FCG

CLQ LAND
PARCEL IDS 02500005500, 02500005600,
025000019500
025000019500
4652 MAJESTIC MEADOWS DRIVE,
NOLANSVILLE, TN 37135
(615) 665-7345 mark@fcgcivil.com

FC GAUMMUTZ CIVIL ENGINEER, LLC
1877 ERLINGER DRIVE
NOLANSVILLE, TN 37135
(615) 665-7345
cga@fcgcivil.com

FINAL MASTER DEVELOPMENT PLAN

FOR

GOODLETTSVILLE 56

CITY OF GOODLETTSVILLE, TN

STAMP:

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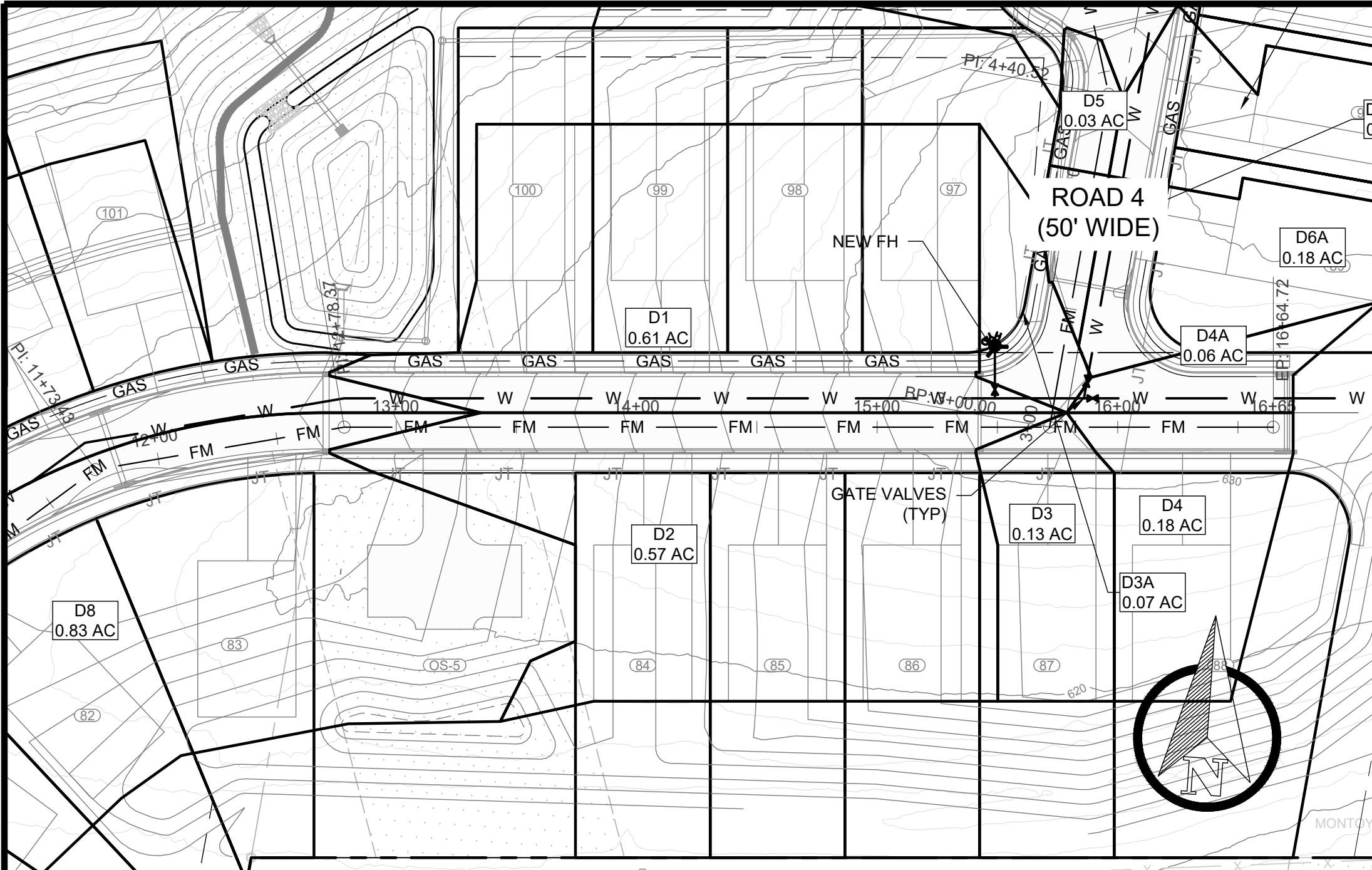


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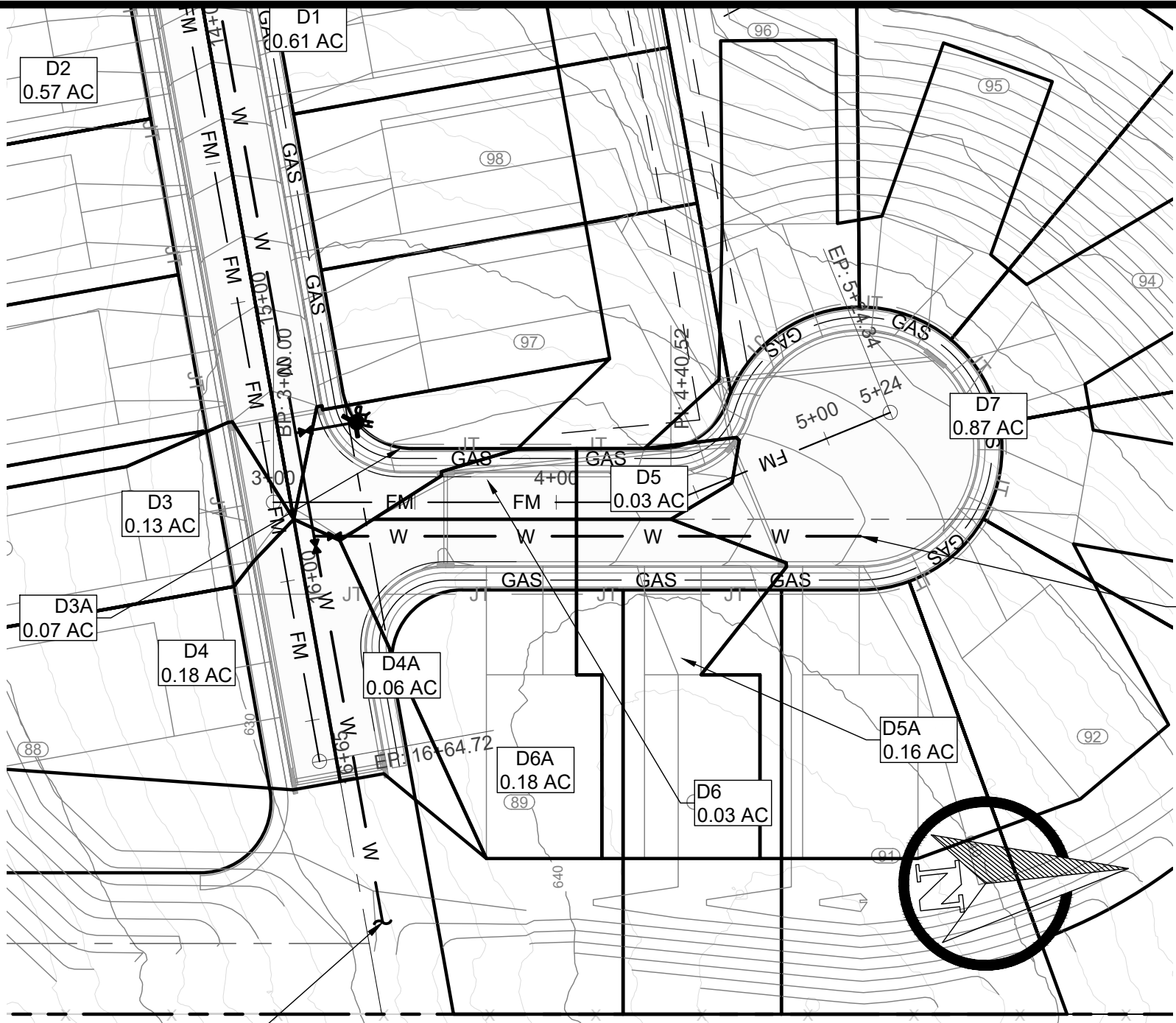
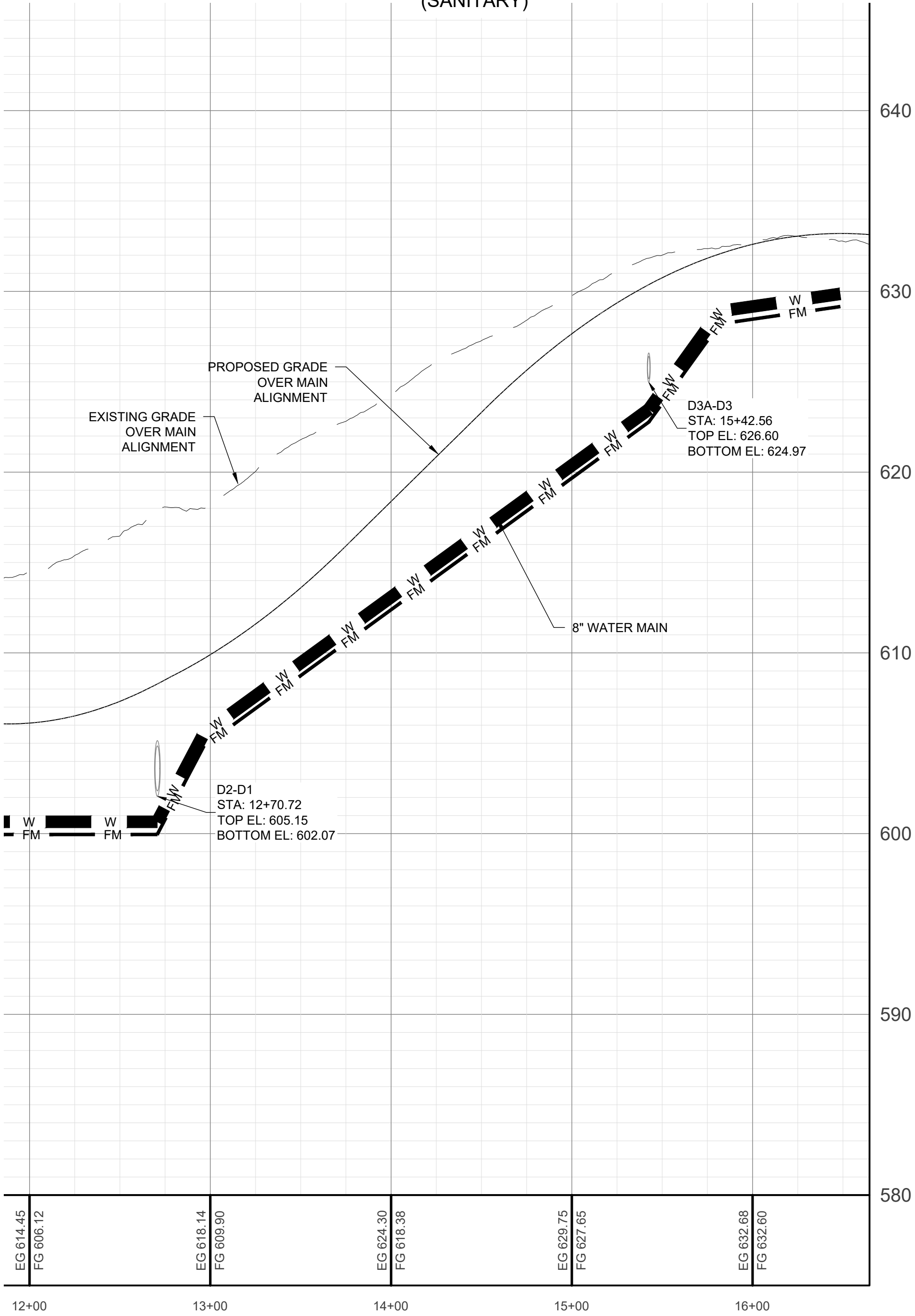
BARBER DRIVE
UTILITY PLAN AND
PROFILE

SHEET:

C-7.5

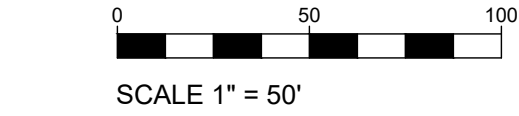
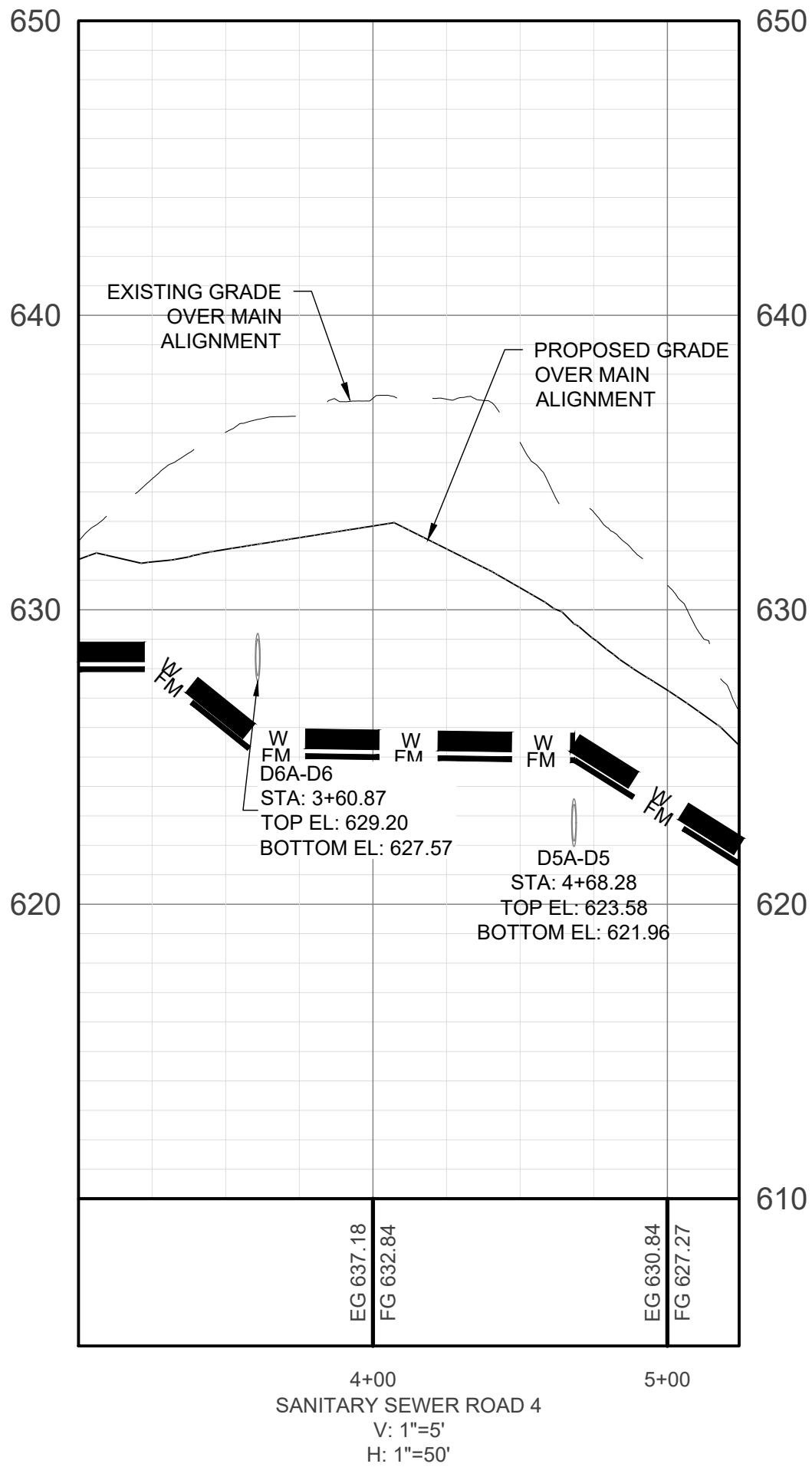


BARBER DRIVE
(SANITARY)



ROAD 4
(SANITARY)

8" WATER MAIN TO
CONTINUE AND CONNECT
TO WICKLOW DRIVE. FINAL
CONNECTION TO BE
COORDINATED WITH MSUD



- PROPOSED
- BOUNDARY LINE
 - /// WATERWAY NATURAL AREA
 - AC PAVING
 - CONCRETE PAVING
 - DETENTION AREA
 - W — WATER LINE
 - ✱ FIRE HYDRANT
 - SS — SANITARY SEWER LINE
 - GAS — GAS LINE
 - JT — JOINT TRENCH (ELEC, DATA, ETC.)

ABBREVIATIONS:

- | | |
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| SS | SANITARY SEWER |
| SSMH | SANITARY SEWER MANHOLE |
| (TYP) | TYPICAL |
| WNA | WATERWAY NATURAL AREA |

NOTES:

- ALL LOTS ALONG BARBER DRIVE AND ROAD 4 TO CONNECT TO FORCE MAIN VIA GRINDER PUMPS AND SERVICE LINES.



REVISION DESCRIPTION:

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DESIGNED BY:

FCG

PARCEL IDS 02500005500, 02500005500, 025000013500

4652 MAJESTIC MEADOWS DRIVE,

GOODLETTSVILLE, TN 37036

(615) 663-7345 mark@fcgcivil.com

FC GAUMMITZ | CIVIL ENGINEER, LLC

1877 ERLINGER DRIVE

NOLANSVILLE, TN 37135

(406) 686-1467

code@fcgcivil.com

DRAWN BY:

FCG

CHECKED BY:

FCG

PROJECT NUMBER:

224-0203

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9/26/2024

SHEET TITLE:

BARBER DRIVE

AND ROAD 4 PLAN

AND PROFILE

SHEET:

C-7.6

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REVISION DESCRIPTION:							
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ISSUE DATE:	09/26/2024
DESIGNED BY:	FCG
DRAWN BY:	FCG
CHECKED BY:	FCG

CLQ LAND PARCEL IDS 02500005500, 02500005600, 025000013500 4652 MAESTRO MEADOWS DRIVE, NOLANSVILLE, TN 37135 (615) 663-7345 mark@cdigital.com	PROJECT NUMBER: 224-0203
FC GAUMMITZ CIVIL ENGINEER, LLC 1877 ERLINGER DRIVE NOLANSVILLE, TN 37135 (408) 686-1467 cde@fgemil.com	

FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN



SHEET TITLE:
SANITARY SEWER
STRUCTURE AND
PIPE TABLES

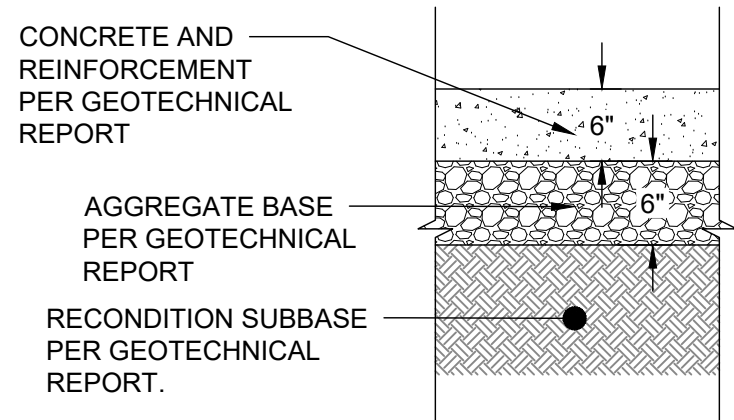
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STRUCTURE TABLE SANITARY NORTH A				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
SNA1	MH	RIM = 619.25 FG = 619.25	INV. IN = 616.00	
SNA2	MH	RIM = 623.17 FG = 623.17	INV. IN = 619.19	INV. OUT =619.09
SNA3	MH	RIM = 628.56 FG = 628.56	INV. IN = 620.81	INV. OUT =620.71
SNA4	MH	RIM = 627.62 FG = 627.62	INV. IN = 623.75	INV. OUT =623.65
SNA5	MH	RIM = 630.16 FG = 630.16		INV. OUT =625.01
SNA6	MH	RIM = 538.83 FG = 538.83	INV. IN = 532.59	
SNA7	MH	RIM = 537.87 FG = 535.18	INV. IN = 535.99	INV. OUT =535.89
SNA8	MH	RIM = 538.93 FG = 538.93	INV. IN = 536.52	INV. OUT =536.52
SNA9	MH	RIM = 545.04 FG = 545.04	INV. IN = 537.55	INV. OUT =537.45
SNA10	MH	RIM = 561.75 FG = 561.75	INV. IN = 555.75	INV. OUT =553.75
SNA11	MH	RIM = 570.60 FG = 570.60	INV. IN = 563.11	INV. OUT =563.11
SNA12	MH	RIM = 579.72 FG = 579.72	INV. IN = 572.12	INV. OUT =572.12
SNA13	MH	RIM = 615.82 FG = 615.82	INV. IN = 609.20	INV. OUT =608.12
SNA14	MH	RIM = 619.94 FG = 619.94		INV. OUT =613.30

PIPE TABLE SANITARY NORTH A			
NAME	SIZE	LENGTH	SLOPE
SNA2 TO SNA1	8" PVC	76.87	3.81%
SNA3 TO SNA2	8" PVC	154.99	0.96%
SNA4 TO SNA3	8" PVC	141.08	1.95%
SNA5 TO SNA4	8" PVC	158.32	0.78%
SNA7 TO SNA6	8" PVC	29.97	9.85%
SNA8 TO SNA7	8" PVC	50.56	0.99%
SNA9 TO SNA8	8" PVC	87.12	1.02%
SNA10 TO SNA9	8" PVC	165.15	9.62%
SNA11 TO SNA10	8" PVC	76.88	9.14%
SNA12 TO SNA11	8" PVC	81.89	10.56%
SNA13 TO SNA12	8" PVC	370.66	9.66%
SNA14 TO SNA13	8" PVC	87.91	4.47%

STRUCTURE TABLE SANITARY NORTH B				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
SNB1	MH	RIM = 525.37 FG = 525.37	INV. IN = 519.20	
SNB2	MH	RIM = 524.37 FG = 777	INV. IN = 520.35	INV. OUT =520.25
SNB3	MH	RIM = 551.35 FG = 551.35	INV. IN = 544.35	INV. OUT =542.25
SNB4	MH	RIM = 560.79 FG = 560.79	INV. IN = 554.70 INV. IN = 552.70	INV. OUT =552.70
SNB5	MH	RIM = 568.94 FG = 568.94	INV. IN = 560.80	INV. OUT =560.70
SNB6	MH	RIM = 573.84 FG = 573.84	INV. IN = 566.20	INV. OUT =566.10
SNB7	MH	RIM = 576.39 FG = 576.39	INV. IN = 567.60	INV. OUT =567.50
SNB8	MH	RIM = 597.63 FG = 597.63		INV. OUT =588.01
SNB9	MH	RIM = 561.69 FG = 561.69	INV. IN = 556.75	INV. OUT =556.65
SNB10	MH	RIM = 596.77 FG = 596.77	INV. IN = 586.25	INV. OUT =584.25
SNB11	MH	RIM = 601.60 FG = 601.60	INV. IN = 591.45 INV. IN = 592.45	INV. OUT =591.35
SNB12	MH	RIM = 605.95 FG = 605.95	INV. IN = 599.80	INV. OUT =595.85
SNB13	MH	RIM = 628.52 FG = 628.52		INV. OUT =618.83
SNB14	MH	RIM = 620.25 FG = 620.25		INV. OUT =614.25

PIPE TABLE SANITARY NORTH B			
NAME	SIZE	LENGTH	SLOPE
SNB2 TO SNB1	8" PVC	150.41	0.68%
SNB3 TO SNB2	8" PVC	380.05	5.71%
SNB4 TO SNB3	8" PVC	92.16	8.72%
SNB5 TO SNB4	8" PVC	81.46	9.41%
SNB6 TO SNB5	8" PVC	291.43	1.79%
SNB7 TO SNB6	8" PVC	87.94	1.42%
SNB8 TO SNB7	8" PVC	240.28	8.39%
SNB9 TO SNB4	8" PVC	60.64	3.02%
SNB10 TO SNB9	8" PVC	114.31	23.91%
SNB11 TO SNB10	8" PVC	154.92	3.21%
SNB12 TO SNB11	8" PVC	205.08	2.10%
SNB13 TO SNB12	8" PVC	277.05	6.79%
SNB14 TO SNB11	8" PVC	324.30	6.65%

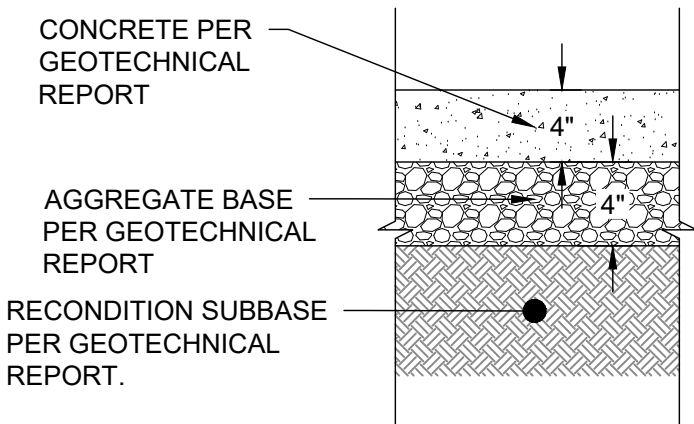


NOTE: MAXIMUM 15-FT BETWEEN TRANSVERSE AND LONGITUDINAL JOINTS PER GEOTECHNICAL REPORT

1

VEHICULAR CONCRETE PAVEMENT

NOT TO SCALE

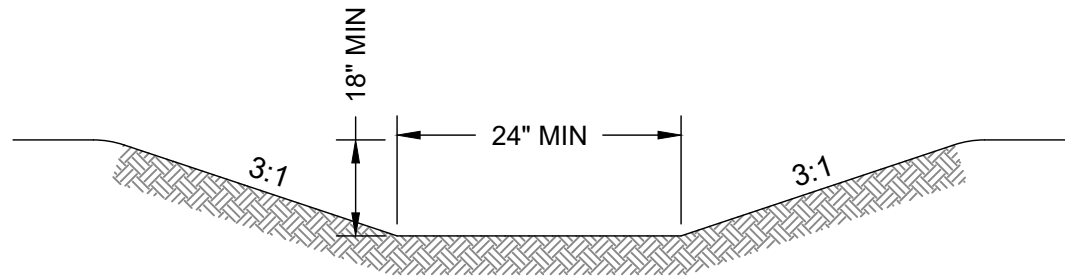


NOTE: MAXIMUM 5-FT BETWEEN JOINTS

2

PEDESTRIAN CONCRETE PAVEMENT

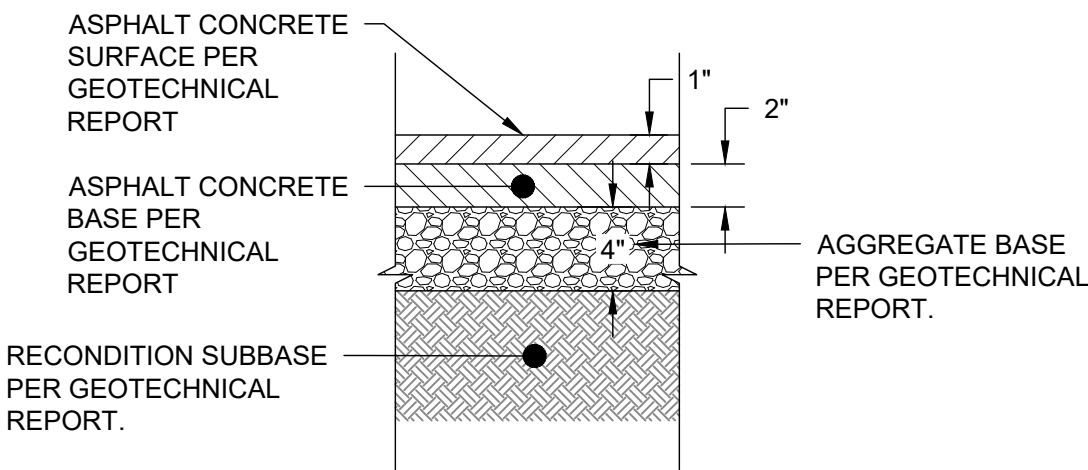
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4

GRASS CHANNEL

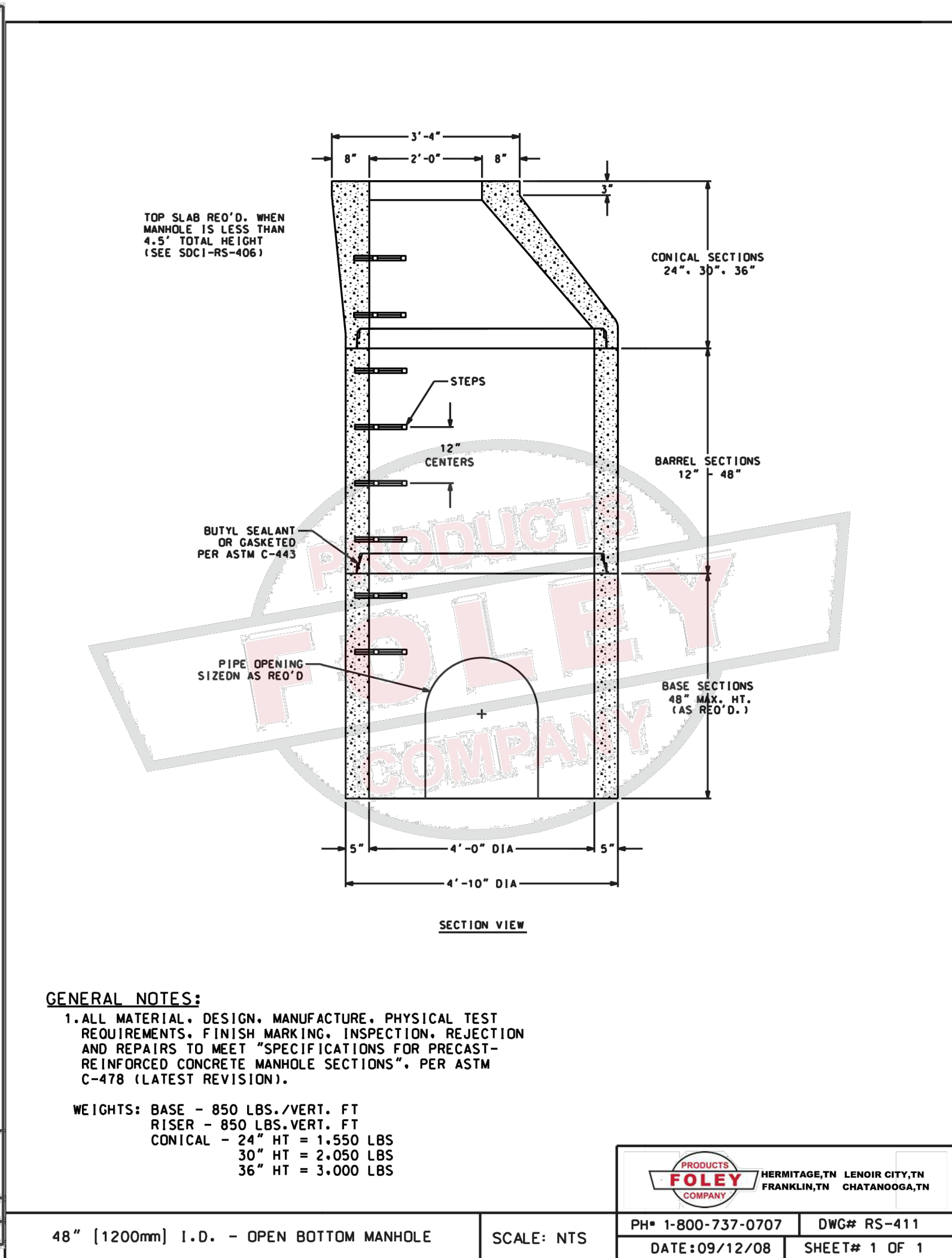
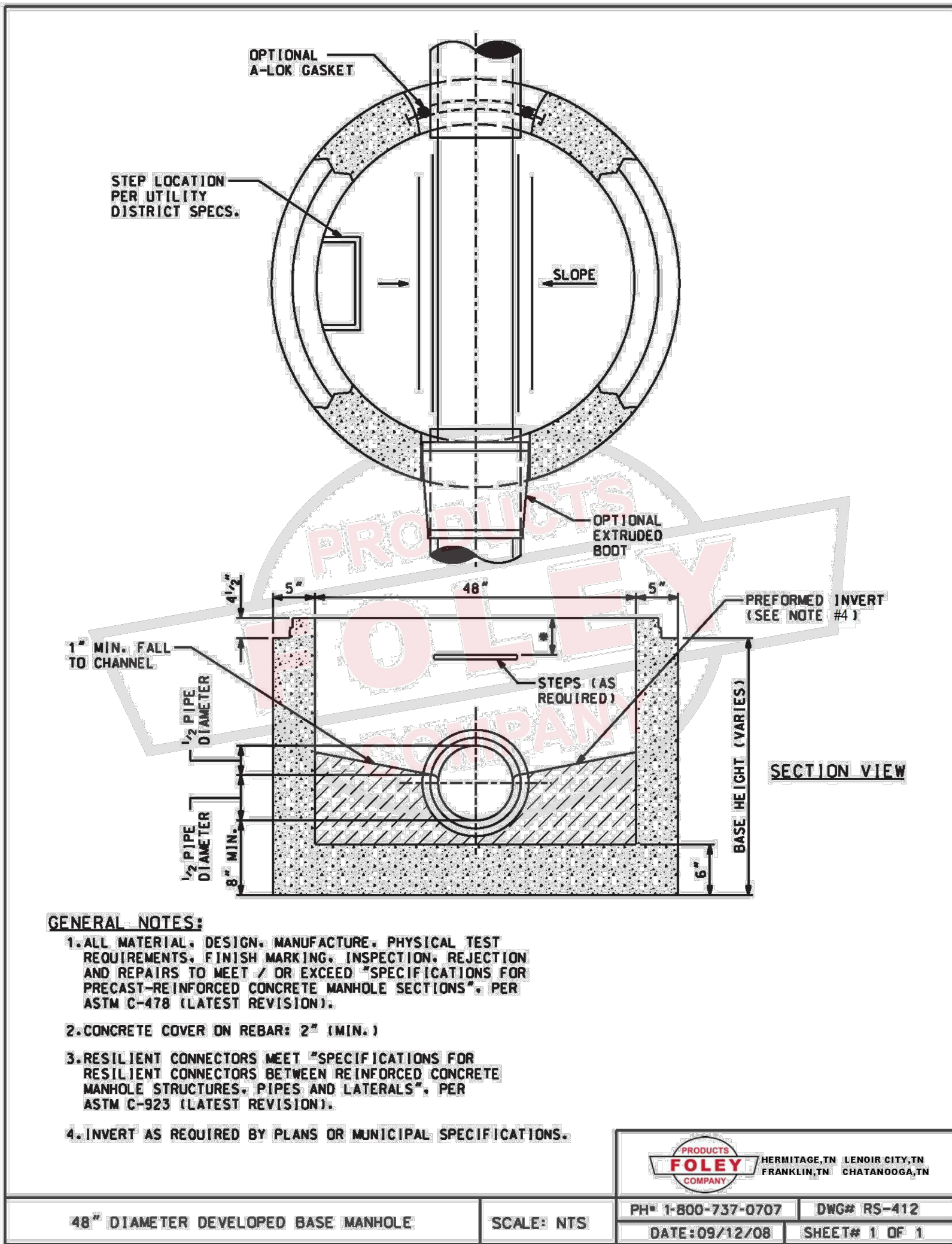
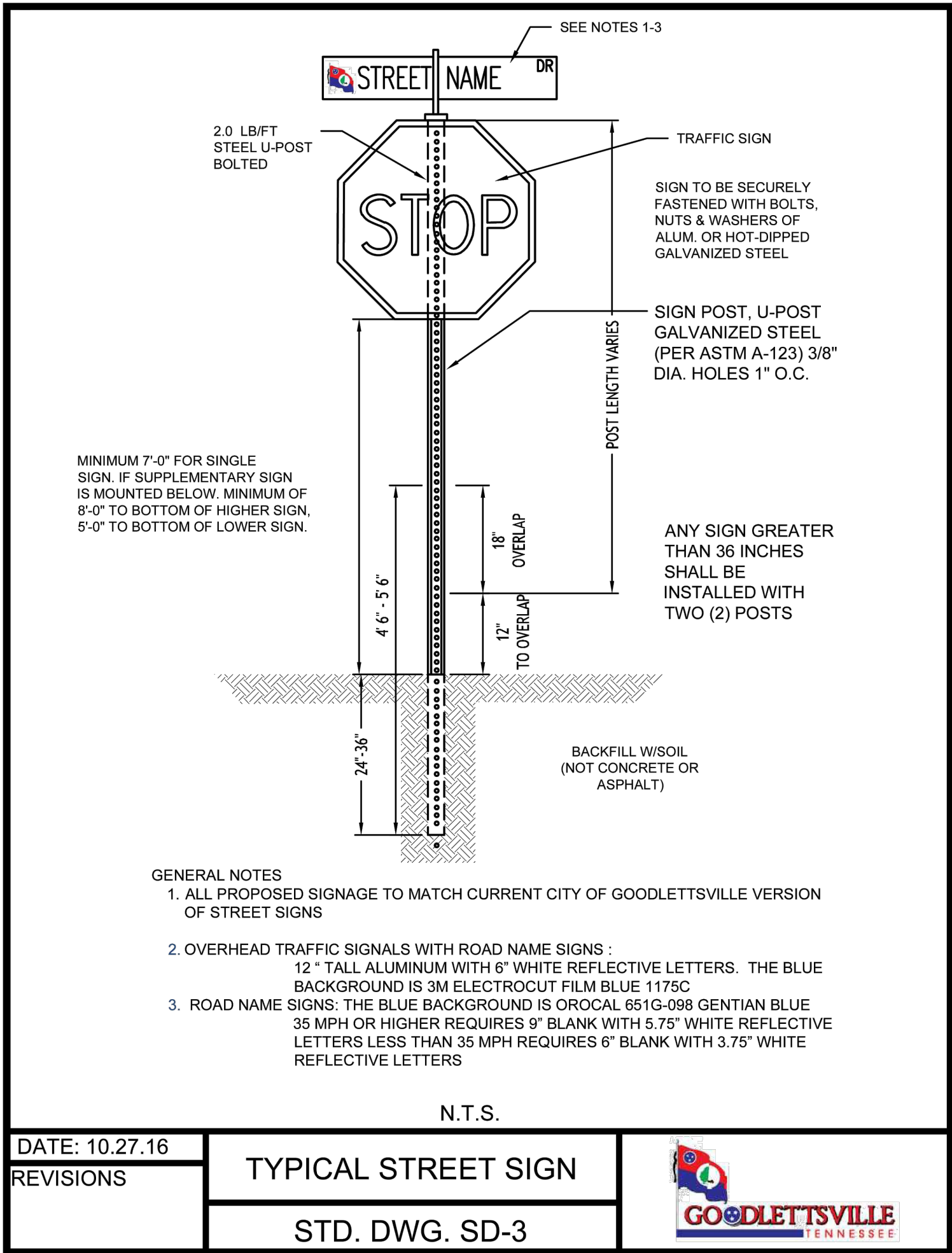
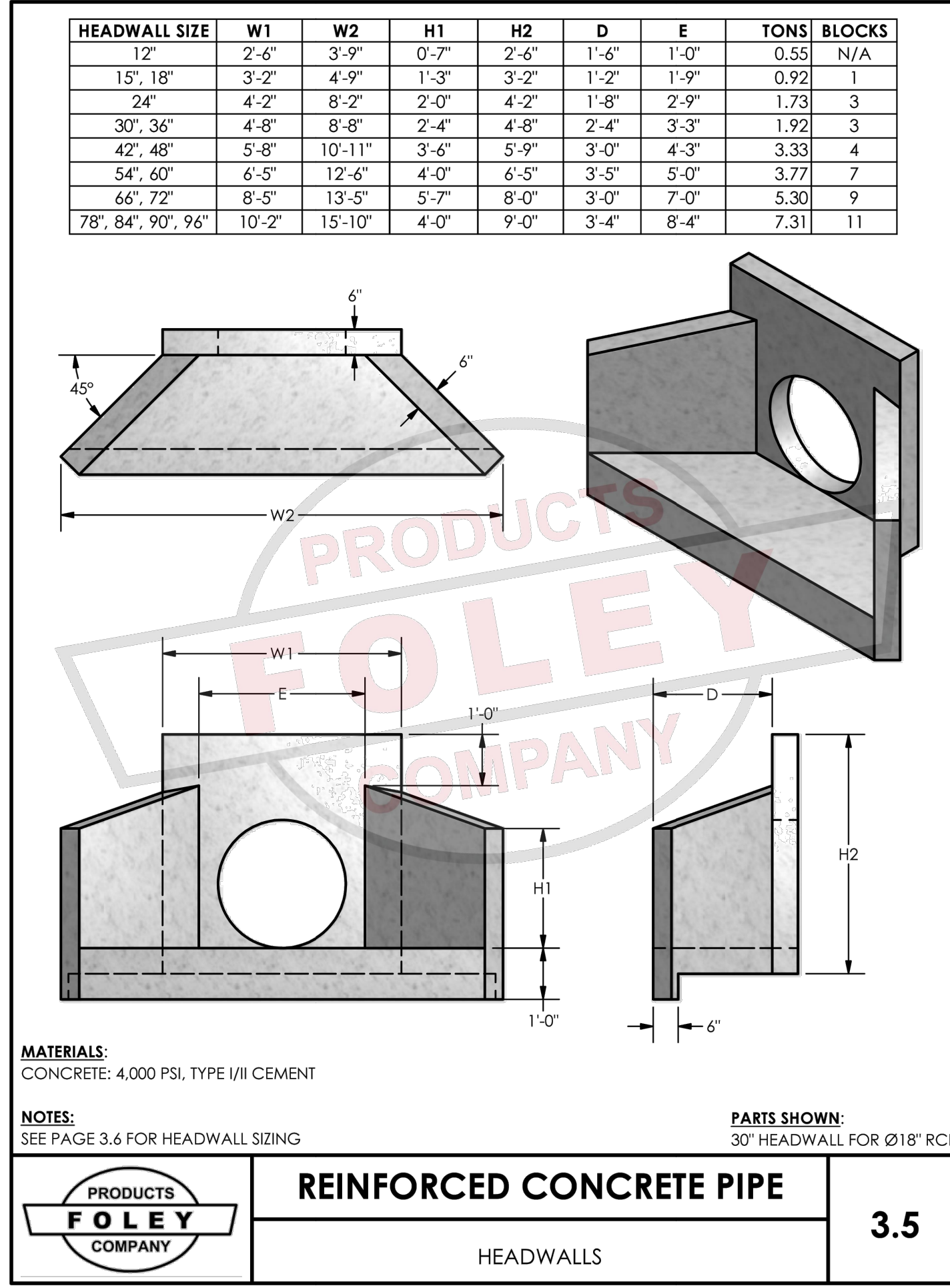
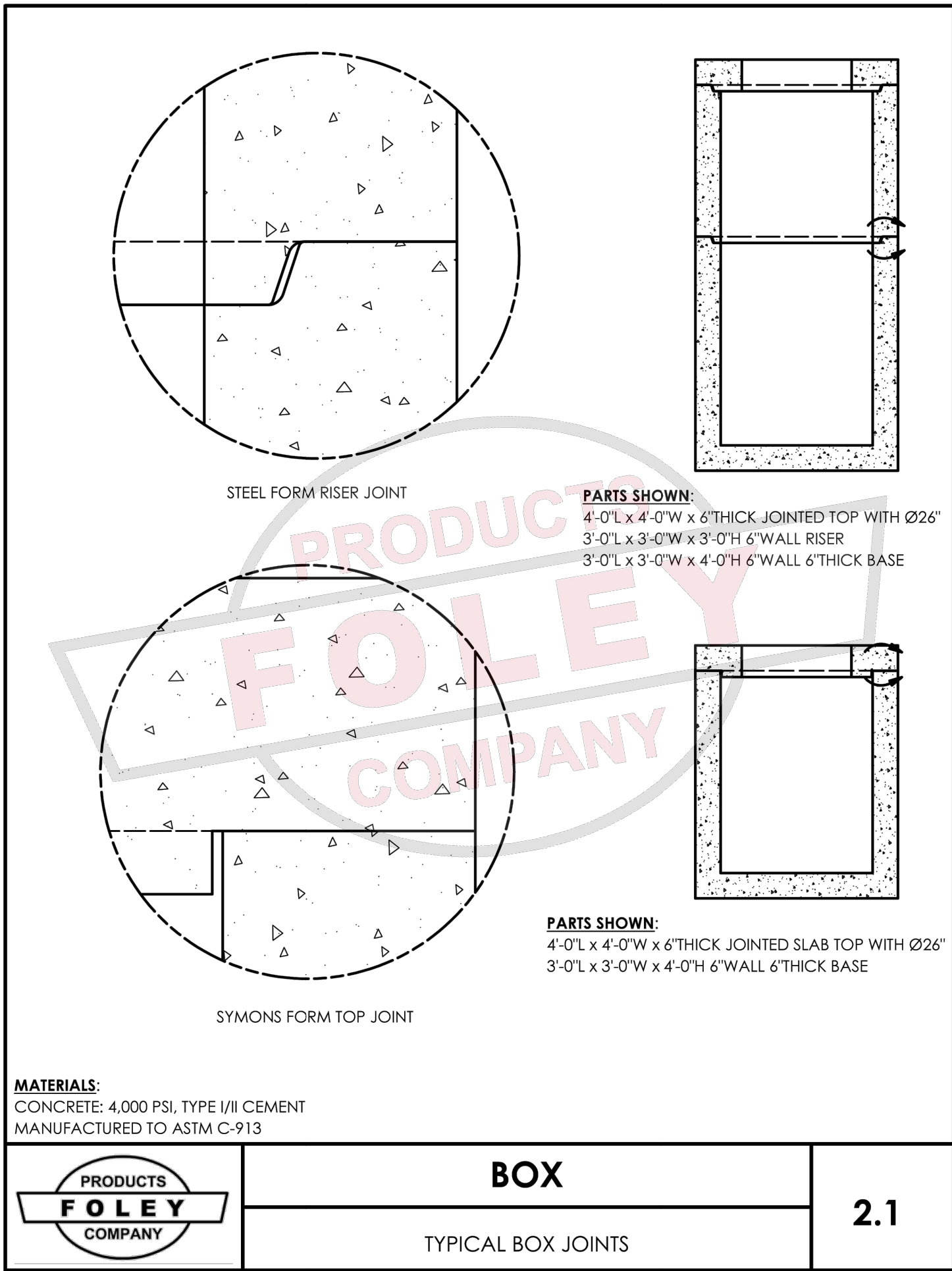
NOT TO SCALE



3

ASPHALT PAVEMENT (LIGHT DUTY THICKNESS)

NOT TO SCALE



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FCG	09/28/2024	224-0203
DRAWN BY:	CHECKED BY:	
FCG	FCG	

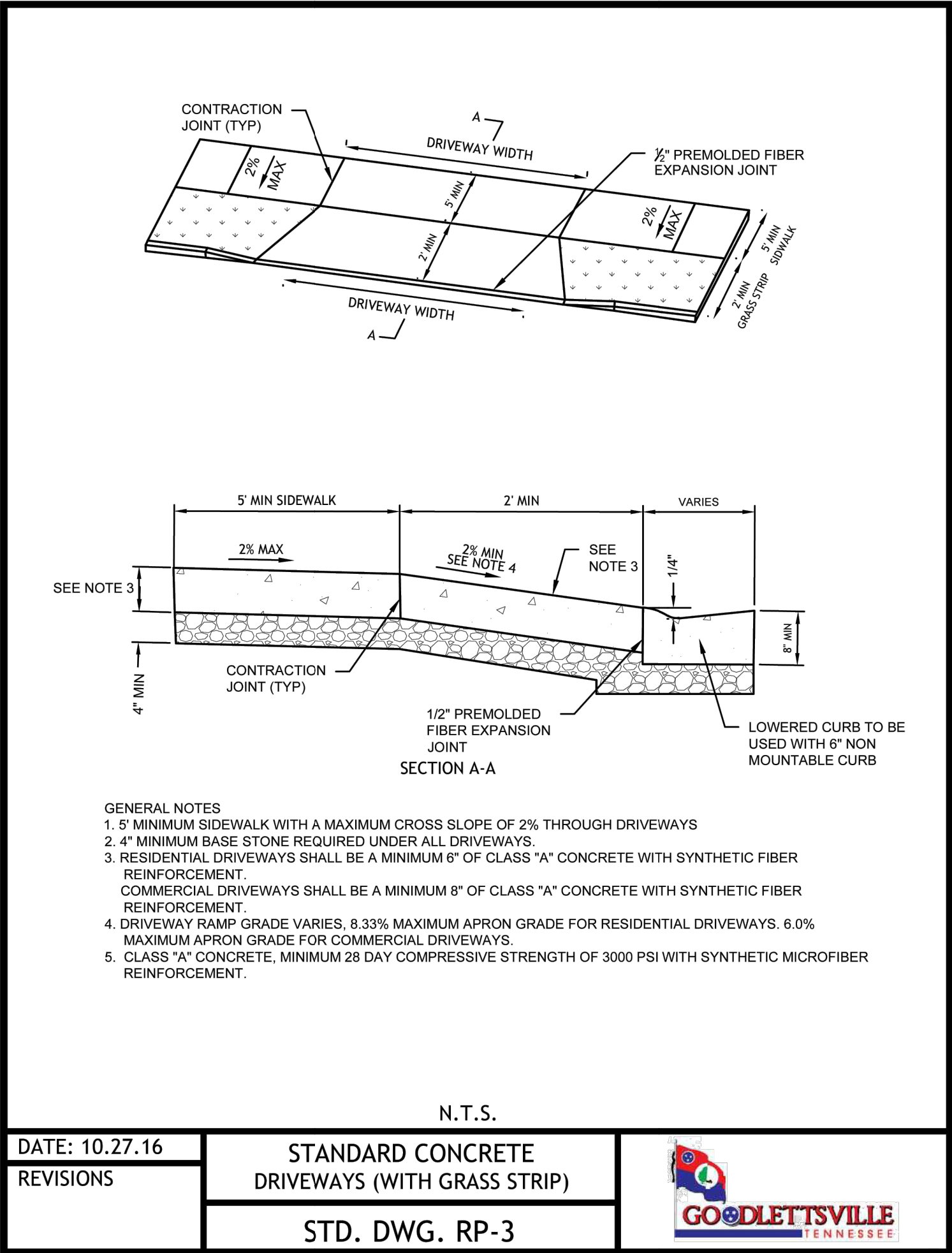
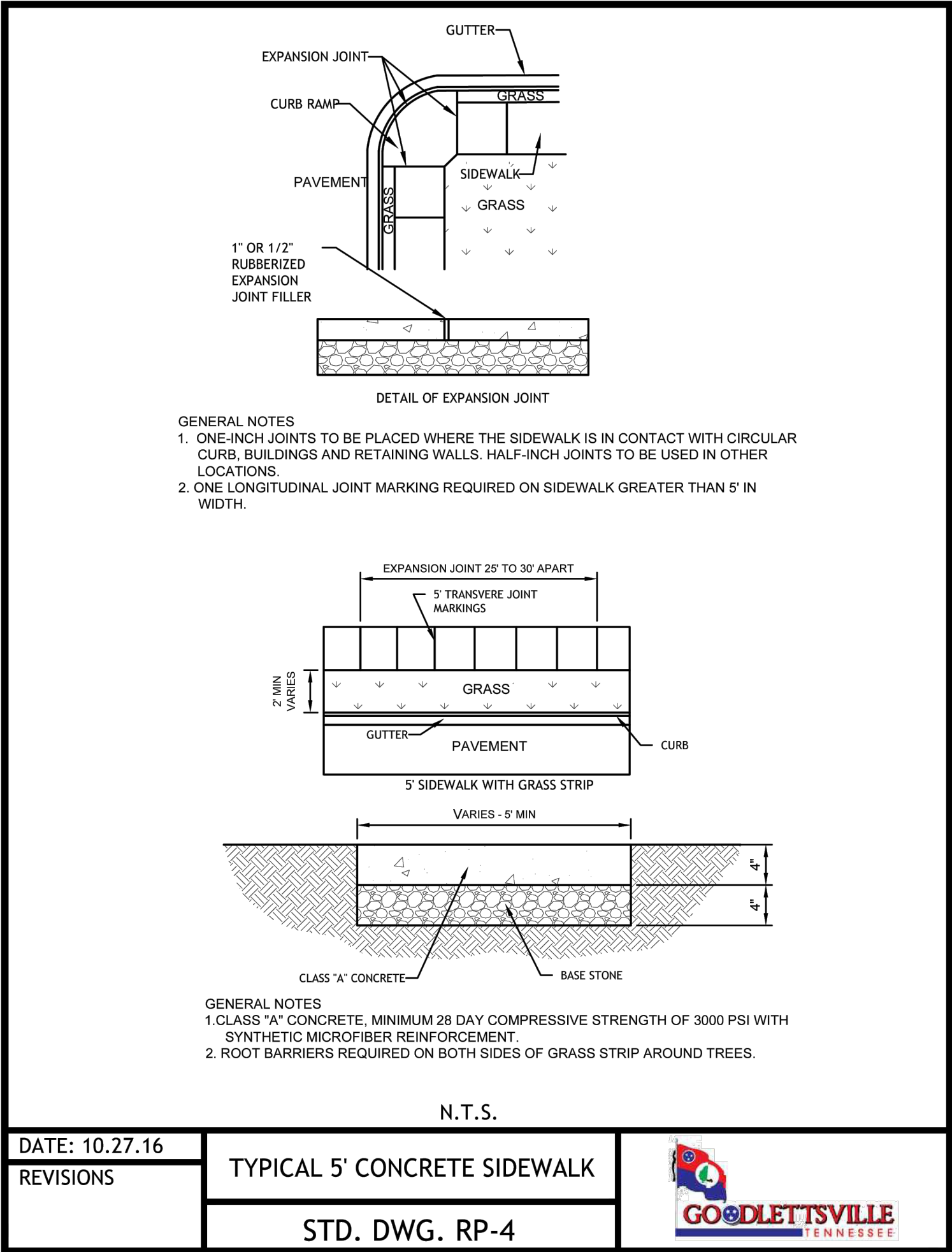
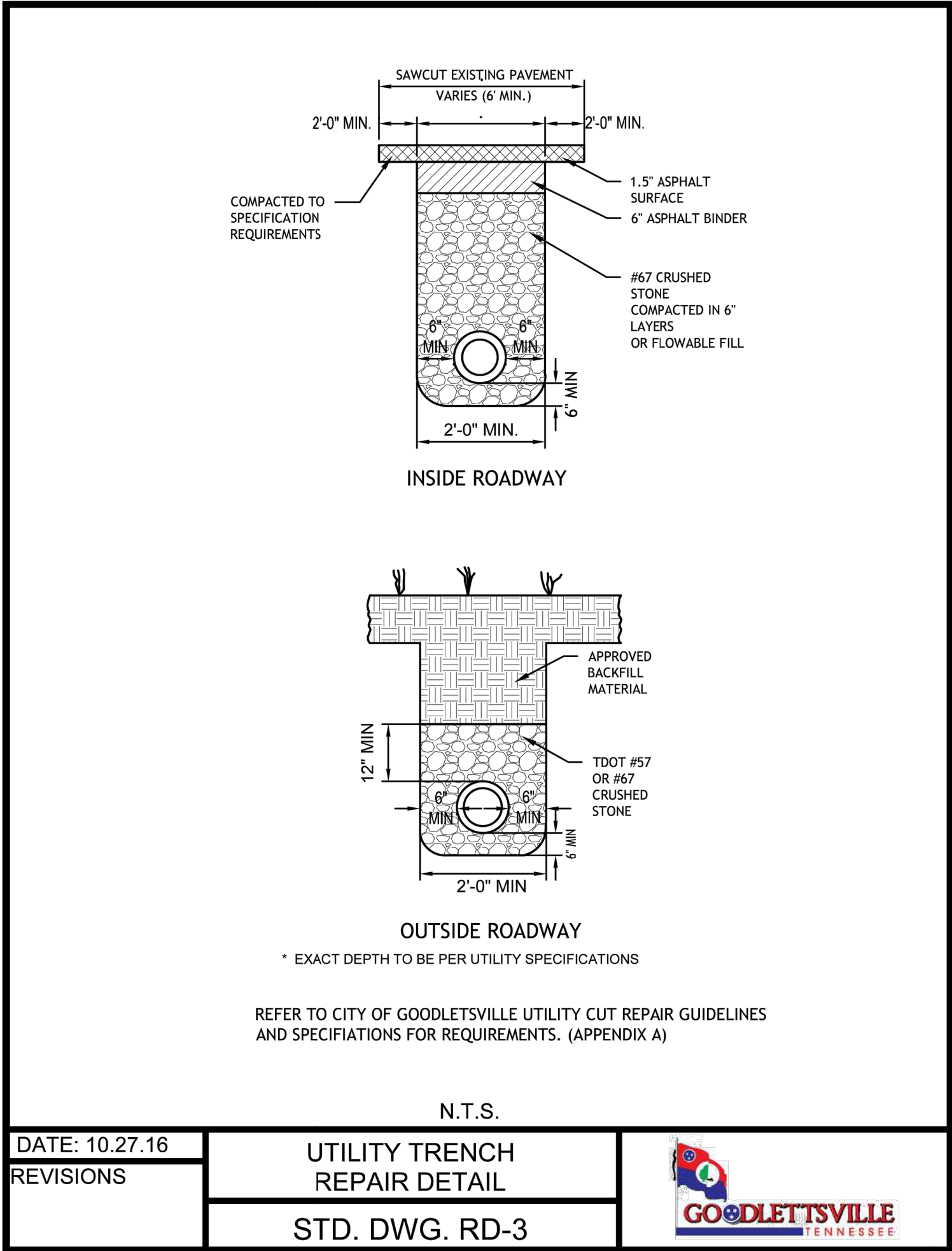
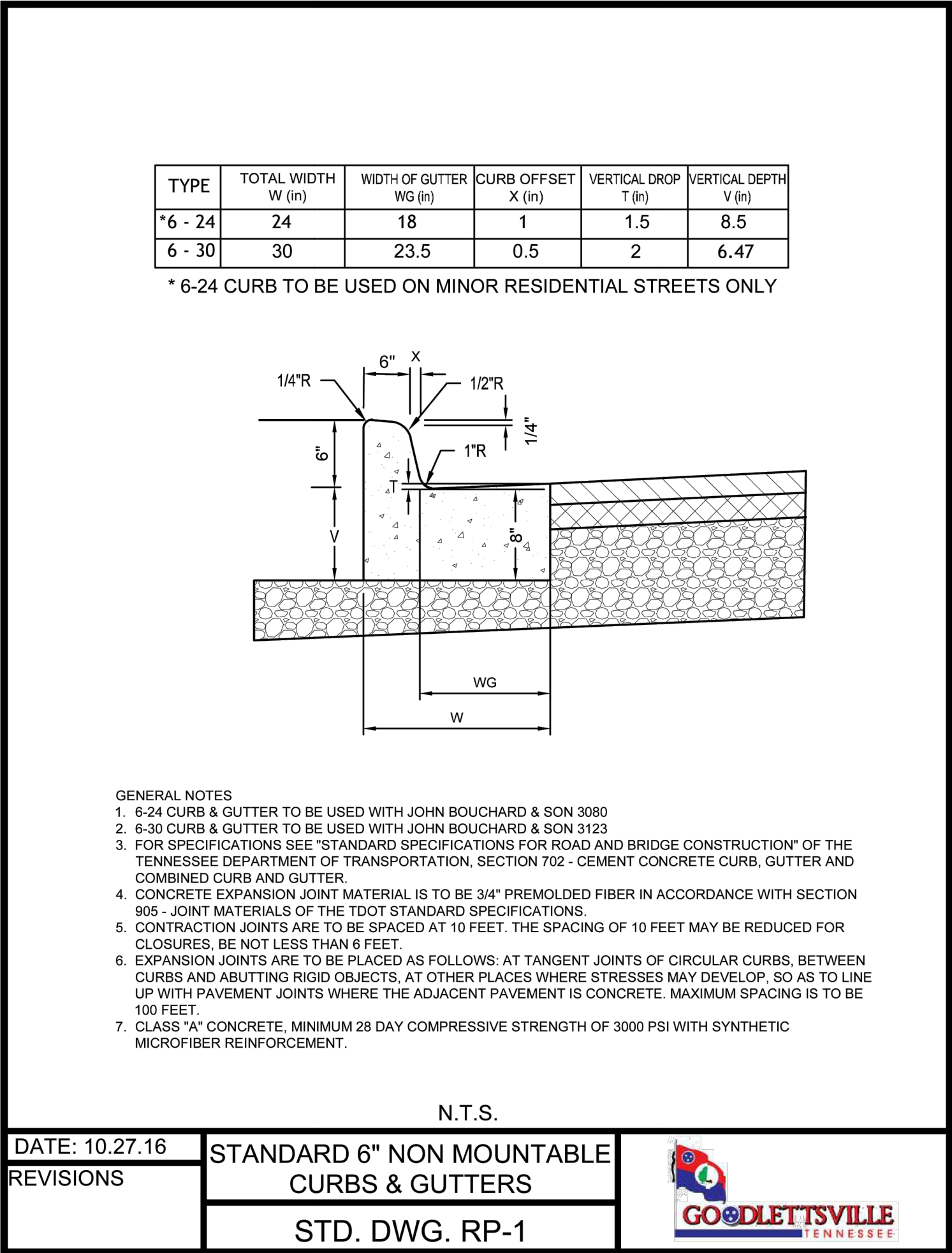
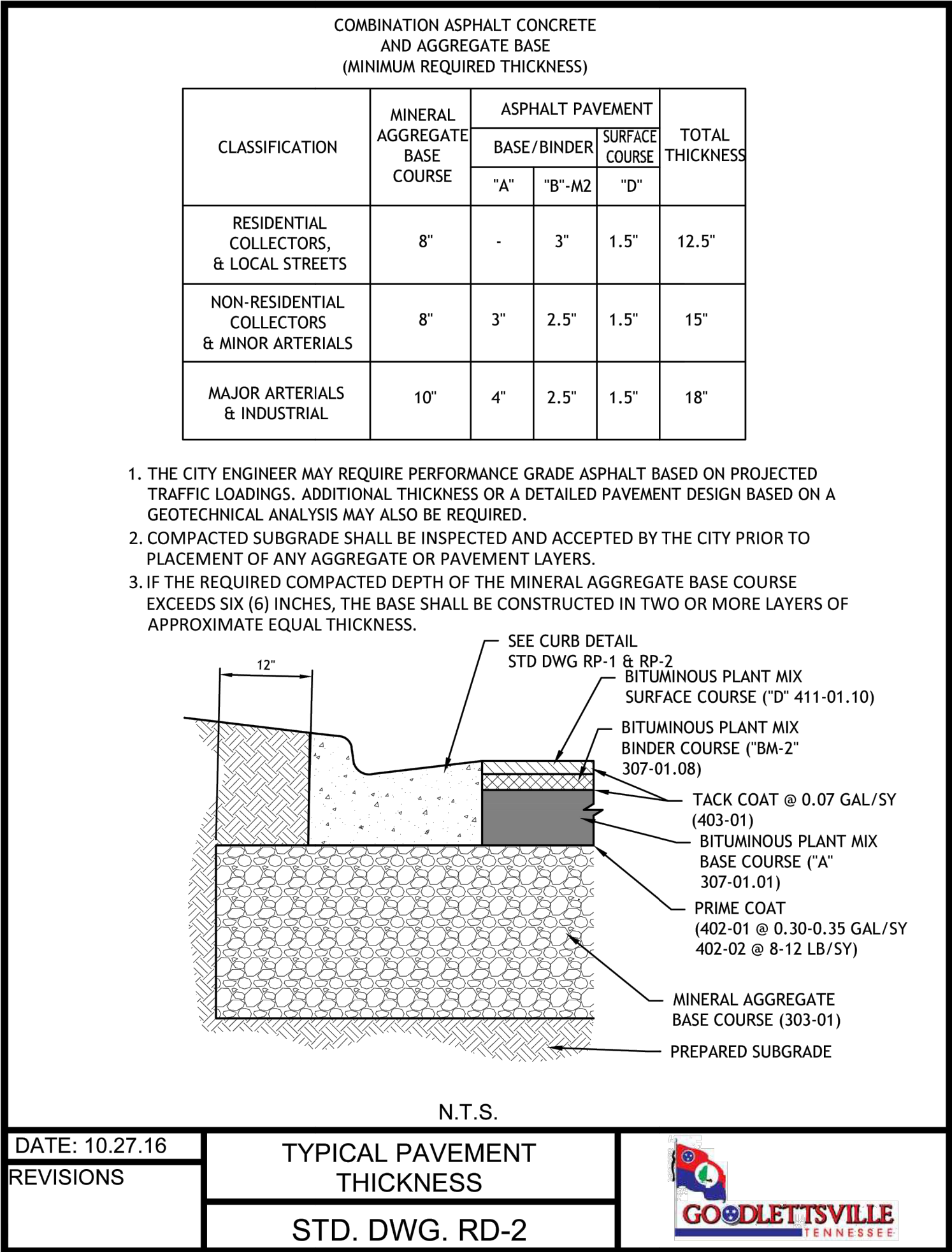
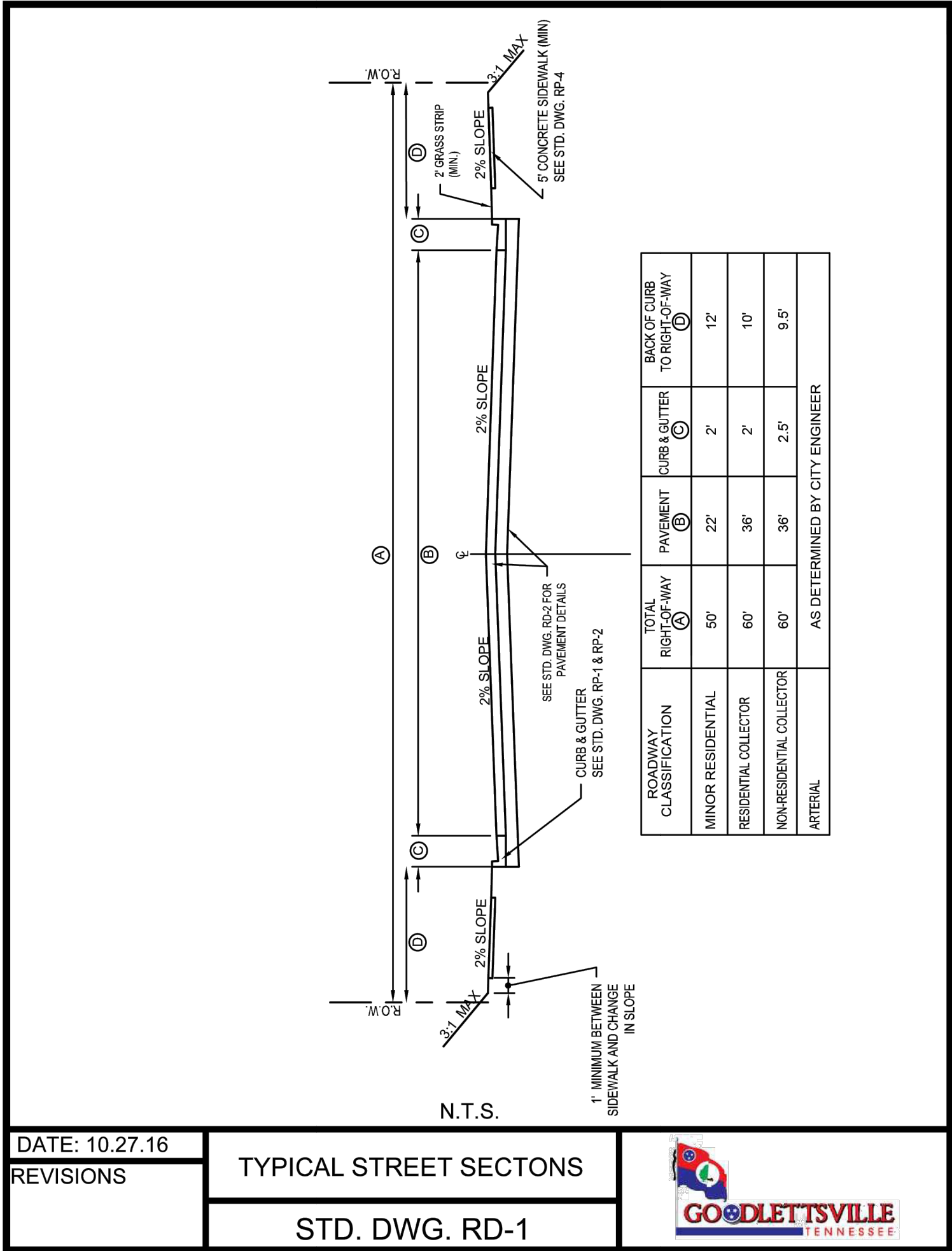
CLQ LAND	02500005500, 02500005600,
PARCEL IDS	025000019500
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FINAL MASTER DEVELOPMENT PLAN
FOR
GOODLETTSVILLE 56
CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION
9/26/2024

SHEET TITLE:
DETAILS

SHEET:
C-8.0



REVISION DESCRIPTION:

REV: 1 2 3 4 5 6 7 8

ISSUE DATE: 09/28/2024

DESIGNED BY: FCG

DRAWN BY: FCG

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FINAL MASTER DEVELOPMENT PLAN
FOR
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CITY OF GOODLETTSVILLE, TN

STAMP:
NOT FOR CONSTRUCTION

9/26/2024

SHEET TITLE:
DETAILS

SHEET:
C-8.2

Draft

Stormwater Hydrology and Hydraulics Report

PROJECT

Goodlettsville 56

466 Moncrief Avenue
Goodlettsville, TN

09/26/2024

By

FC Gaumnitz | Civil Engineer, LLC



FOR

**CLQ Land
Mark Hanson**

4652 Majestic Meadows Drive
Arrington, TN 37014
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OVERVIEW

The project is located within the City of Goodlettsville, TN. The approximate 58.66-acre (60.95 acres per the amended zoning map) project is contained within three parcels that are currently zoned Medium Density Residential Planned Unit Development (MDRPUD) according to the City's official zoning map. The project properties are identified by Metro as having parcel IDs of 02500005500, 02500005600, and 02500013500.

The project has three access points; Moncrief Avenue to the north, McCoin Drive to the east (north of the stream), and Barber Drive to the south. The land will be improved to become a 102-lot subdivision with new public roads.

The property generally drains towards the center stream which flows to the east to McCoin Drive. The project is subject to the Goodlettsville Stormwater Ordinance for stormwater quality and quantity. Detention basins with flow controls have been proposed to mitigate the increase of stormwater runoff due to development. While manholes with 3–4-foot sumps and a baffling system will address the stormwater quality requirements.

EXISTING CONDITIONS

The project consists of three parcels that are irregularly shaped comprised of approximately 58.66 acres. There is a farm pond and stream near the center of the project that flows easterly towards the McCoin Drive dead end and the southern side of an existing single family home subdivision. See construction documents sheet C-4.0 Pre-Construction Stormwater Control Plan for additional details on drainage areas.

The majority of the project is underlain by hydrologic soil group C. With a small portion in the middle portion where the stream is that is in group B. Defined by Technical Resource 55, the soil cover for the

project is a mix of Woods with a hydrologic soil type condition of Good and Pasture and Grassland or Range with a soil type condition of Fair. The corresponding areas and weighted (adjusted) curve numbers for each drainage area has been shown on sheet C-4.0.

PROPOSED CONDITIONS

The improvements consist of impervious surfaces (potential roof, asphalt, and concrete (driveways, sidewalks, curb, and gutters), and pervious areas (trees, shrubs, and grasses).

The roads will be constructed across the ridge of the hills and home sites double loaded on each road as much as practical.

The identified pre-construction drainage areas will be redefined where the majority of each area, if not all, will be intercepted by sheet flowing, or piping the stormwater into drainage basins. The areas where the stormwater bypasses the detention basins have been identified and included in the post construction hydrology calculations.

The soil cover for the proposed development consists of impervious surfaces, residential districts that have 1/8-acre lot or less, Woods with a hydrologic soil type condition of Fair, and Open Space with a hydrologic soil type condition of Good, and a Pasture Grassland or Range with a hydrologic soil type condition of Fair.

See construction documents sheet C-4.1 Post Construction Stormwater Control Plan for the drainage area delineation and weighted (adjusted) curve numbers and sheets C-5.0 through C-5.4 for the grading and drainage information.

STORMWATER QUALITY

Per the amended stormwater management ordinance 23-1071 of the City of Goodlettsville section 18-305 part 4 requires stormwater to be "treated" to improve the quality of the runoff. Part 4 (e) provides a table of acceptable water quality treatment volumes that will achieved an 80% total suspended solid (TSS) removal. This project proposes to use the Kraken Filter by Contech installed downstream of the Detention Basins connected to the low flow orifice that reduces the 1-year design storms peak flow rate. While the larger storms bypass via the riser structure. The calculations will be included in the final report when coordination with the manufacturer is complete.

CALCULATIONS

Using the HydraFlow Hydrographs extension built into Autodesk Civil 3D program, storm hydrographs for each design storm (1-year, 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year) were created using the SCS curve number method and TR-55 worksheets for determining the time of concentration.

The post areas are identified by either being bypass (B) or detained (D). A summary of the Peak Outflow for each hydrograph is shown on the next page. The program report is attached.

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	24.17	34.85	-----	50.05	63.40	82.61	98.32	114.92	Area 1 Pre
2	SCS Runoff	-----	6.253	9.474	-----	14.12	18.19	24.15	29.15	34.49	Area 1B Post
3	SCS Runoff	-----	21.40	29.20	-----	39.92	48.97	61.76	72.07	82.87	Area 1D Post
4	Reservoir	3	6.227	20.37	-----	35.97	46.65	60.60	70.90	81.22	Detention 1
5	Combine	2, 4	10.43	22.14	-----	40.76	55.51	75.03	89.73	104.49	Area 1 Post Total
7	SCS Runoff	-----	36.92	53.94	-----	78.14	99.61	130.62	156.04	182.97	Area 2 Pre
8	SCS Runoff	-----	14.49	23.04	-----	35.57	46.68	63.10	76.98	91.84	Area 2B Post
9	SCS Runoff	-----	15.41	20.96	-----	28.57	34.99	44.05	51.35	58.98	Area 2D1 Post
10	Reservoir	9	1.783	9.317	-----	21.04	29.68	40.82	45.12	47.13	Detention 2-1
11	SCS Runoff	-----	16.48	20.52	-----	25.83	30.18	36.21	41.01	46.00	Area 2D2 Post
12	Reservoir	11	1.742	6.377	-----	14.19	20.41	24.76	26.14	32.56	Detention 2-2
13	Combine	8, 10, 12	17.69	30.71	-----	63.95	92.39	128.17	147.35	170.12	Area 2 Post Total
15	SCS Runoff	-----	4.058	5.820	-----	8.331	10.49	13.60	16.13	18.80	Area 3 Pre
16	SCS Runoff	-----	1.143	1.681	-----	2.447	3.112	4.096	4.906	5.764	Area 3B Post
17	SCS Runoff	-----	5.909	7.649	-----	9.972	11.89	14.57	16.70	18.92	Area 3D Post
18	Reservoir	17	0.218	0.728	-----	4.736	7.295	8.412	8.669	11.06	Detention 3
19	Combine	16, 18	1.343	1.897	-----	6.884	10.37	12.47	13.49	16.22	Area 3 Post Total

For the drainage hydraulics the Storm Sewers extension built into Autodesk Civil 3D program was used. The pipes were designed to contain the 25-year design storm. The program report is attached.



Traffic Impact Study

Goodlettsville 56 Subdivision

September 2024

FOR SUBMITTAL TO:
City of Goodlettsville

PREPARED FOR:
CLQ Land

PREPARED BY:

Kimley»Horn

4031 Aspen Grove Drive, Suite 200
Franklin, TN 37067
615-564-2701
Project Number 118721000



09/03/2024



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Appendix E: Signal Timing Sheets

Appendix F: Turn Lane Warrants

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1.0 EXECUTIVE SUMMARY

This traffic study evaluates the anticipated traffic impacts associated with the *Goodlettsville 56 Subdivision* development. The site is approximately 55.95 acres and is located west of Main Street and south of Moncrief Avenue within the City of Goodlettsville, TN. The site includes parcels 02500005500, 02500005600, and 02500013500 and is currently zoned Medium Density Residential Planned Unit Development (MDRPUD).

The proposed development is planned to consist of 101 single family homes and generate 1018 daily trips, 75 AM peak hour trips and 100 PM peak hour trips. Two existing homes will be torn down prior to the construction of the development. The first phase of horizontal construction is anticipated to take place from April 2025 to April 2026, and subsequent homes will be constructed in phases dependent upon market conditions. It is anticipated that that all homes would be sold in 2.1 years, assuming 4 homes a month are sold.

The results of the analyses show that all study intersections currently operate at an acceptable overall LOS during the AM and PM peak hours. Under the projected Background and Future with Project conditions, all study intersections are projected to continue to operate at an acceptable overall LOS during the AM and PM peak hours.

1.1 DEVELOPMENT IMPROVEMENT RECOMMENDATIONS

The following improvements are recommended to be completed by the *Goodlettsville 56 Subdivision* development.

- Intersection 8 – Rosehill Drive at Site Driveway A
 - Construct one (1) ingress lane and one (1) egress lane.
- Intersection 9 – Moncrief Avenue at Site Driveway B
 - Construct one (1) ingress lane and one (1) egress lane.
- Intersection 10 – Moncrief Avenue at Site Driveway C
 - Construct one (1) ingress lane and one (1) egress lane.

2.0 INTRODUCTION

This traffic study evaluates the anticipated traffic impacts associated with the *Goodlettsville 56 Subdivision* development. The site is approximately 55.95 acres and is located west of Main Street and south of Moncrief Avenue within the City of Goodlettsville, TN. The site includes parcels 02500005500, 02500005600, and 02500013500 and is currently zoned Medium Density Residential Planned Unit Development (MDRPUD).

The proposed development is planned to consist of 101 single family homes and generate 1018 daily trips, 75 AM peak hour trips and 100 PM peak hour trips. Two existing homes will be torn down prior to the construction of the development. The first phase of horizontal construction is anticipated to take place from April 2025 to April 2026, and subsequent homes will be constructed in phases dependent upon market conditions. It is anticipated that that all homes would be sold in 2.1 years, assuming 4 homes a month are sold.

This traffic study evaluates the anticipated traffic impacts associated with the *Goodlettsville 56 Subdivision* development.

The following scenarios are analyzed in this study:

- Existing 2024 Conditions
 - Existing traffic counts and lane configurations
- Projected 2030 Background Conditions
 - Existing traffic counts grown to the build-out year at a standard growth rate and existing lane configurations
- Projected 2030 Future with Project Conditions
 - Existing traffic counts grown to the build-out year at a standard growth rate plus projected traffic associated with the proposed development and existing lane configurations

The study network analyzed in this study consists of the intersections listed in Table 1.

Table 1: Study Intersections

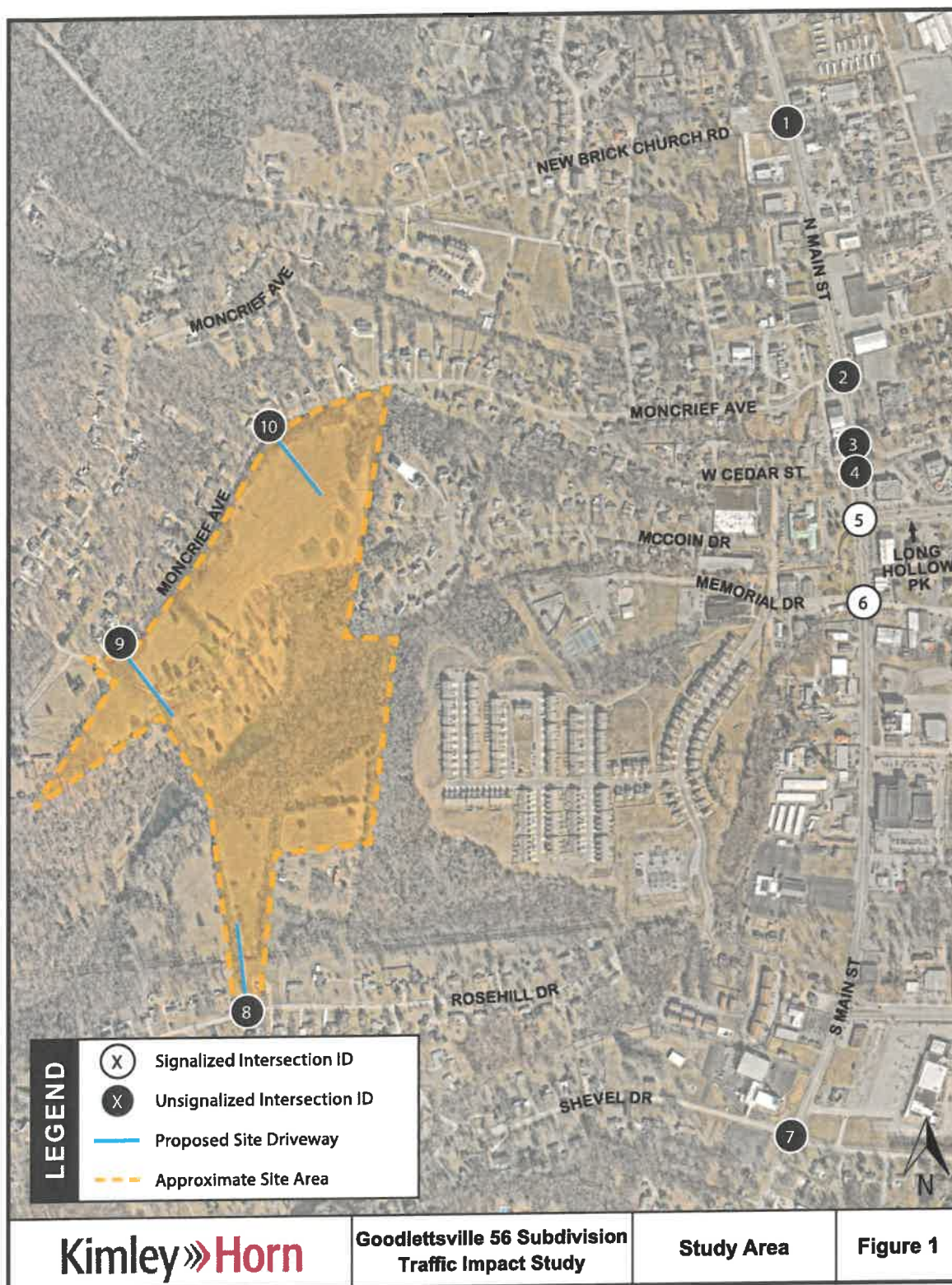
Int #	Intersection	Existing Control
1	New Brick Church Pike/Lindberg Avenue at Main Street	TWSC
2	Moncrief Avenue & Myers Street at Main Street	TWSC
3	East Cedar Street at Main Street	TWSC
4	West Cedar Street at Main Street	TWSC
5	Long Hollow Pike at Main Street	Signalized
6	Memorial Drive & East Avenue at Main Street	Signalized
7	Shevel Drive at Main Street	TWSC

For the purposes of this traffic impact study, the roadways within the study network are assumed to have the following orientations listed in Table 2.

Table 2: Roadway Orientations

Roadway	Orientation
Main Street	North-South
New Brick Church Pike	East-West
Lindberg Avenue	East-West
Moncrief Avenue	East-West
Myers Street	East-West
West Cedar Street	East-West
East Cedar Street	East-West
Long Hollow Pike	East-West
Memorial Drive	East-West
East Avenue	East-West
Shevel Drive	East-West
Rosehill Drive	East-West
Proposed Driveway A	North-South
Proposed Driveway B	North-South
Proposed Driveway C	North-South

The study area and project site are shown in Figure 1. A site plan for the proposed development is included in Appendix A.



3.0 METHODOLOGY

3.1 SCOPING MEETING

A formal virtual scoping meeting with City of Goodlettsville took place on June 6th, 2024. The final scoping documents incorporating assumptions and discussion from the meeting is included in Appendix E.

3.2 DATA COLLECTION

Volume peak hour turning movement counts (TMCs) were performed at each study intersection. The TMCs were collected from 7:00 AM - 9:00 AM for the morning peak period and 4:00 PM - 6:00 PM for the afternoon peak period.

3.3 TRIP GENERATION

Traffic for the proposed development was calculated using equations contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, using equations where available.

Internal capture (or mixed-use) reductions represent the concept that trips generated by individual land uses within a site may remain internal to the site. Mixed-use vehicle trip reductions are calculated using guidance from the *ITE Trip Generation Handbook, 3rd Edition*.

Alternative modes of transportation include pedestrians, bicyclists, and transit users. Alternate mode reductions account for the notion that some site-generated trips will occur by a means other than automobile.

A pass-by trip occurs when a proposed development diverts traffic that is already traveling on a street adjacent to the site. Pass-by reductions are calculated using guidance from the *ITE Trip Generation Handbook, 3rd Edition*.

3.4 CAPACITY ANALYSES

Level-of-service (LOS) determinations were made for the weekday AM and PM peak hours for the study network intersections using *Synchro, Version 12.0*. *Synchro* software uses methodologies contained in the *Highway Capacity Manual, 6th Edition* to determine the operating characteristics of an intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions.

LOS is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions of a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F the worst.

LOS for unsignalized intersections, with stop control on the minor street only, are reported for the side-street approaches and major street left-turns. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delay turning onto a major roadway.

LOS for signalized and all-way stop controlled (AWSC) intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

The LOS criteria for signalized and unsignalized intersections is shown in Table 3.

Table 3: LOS Criteria for Intersections

LOS	Signalized Delay (sec/veh)	Unsignalized Delay (sec/veh)	Description
A	≤ 10.0	≤ 10.0	Operations with very low delay and most vehicles do not stop.
B	> 10.0 and ≤ 20.0	> 10.0 and ≤ 15.0	Operations with good progression but with some restricted movement.
C	> 20.0 and ≤ 35.0	> 15.0 and ≤ 25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	> 35.0 and ≤ 55.0	> 25.0 and ≤ 35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines
E	> 55.0 and ≤ 80.0	> 35.0 and ≤ 50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	> 80.0	> 50.0	Operations that is unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

3.5 TURN LANE WARRANTS

National Cooperative Highway Research Program (NCHRP) Report 457, "Evaluating Intersection Improvements: An Engineering Study Guide", was used to evaluate if left-turn and/or right-turn lanes should be implemented along the major road at a two-way stop-controlled intersection. From within the NCHRP Report 457, the following methodology were applied to perform these evaluations:

- Figure 2-5 ("Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection")
- Figure 2-6 ("Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection")

4.0 EXISTING CONDITIONS

4.1 VEHICULAR NETWORK

Characteristics for the roadways within the study are summarized in Table 4. The existing road geometry is illustrated in Figure 2.

Table 4: Roadway Network

Roadway	# of Lanes	Posted Speed (MPH)	Roadway Classification	2023 AADT
Main Street	5	35	Principal Arterial	21,628
New Brick Church Pike	2	30	Local	1,282
Lindberg Avenue	2	30 ¹	Local	-
Moncrief Street	2	30	Local	-
Myers Street	2	30 ¹	Local	-
East Cedar Street	2	30	Local	-
West Cedar Street	2	30	Local	-
Long Hollow Pike	5	40	Principal Arterial	18,016
Memorial Drive	2	30 ¹	Local	-
East Avenue	2	30	Local	-
Shevel Drive	2	30	Local	-
Rosehill Drive	2	30	Local	-

¹ Not Posted – Assumed Speed

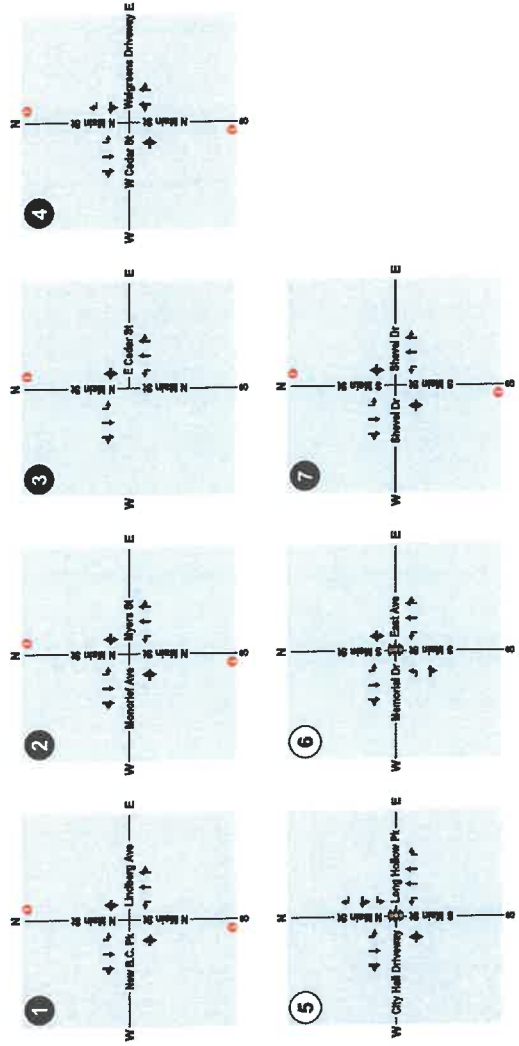
4.2 VEHICULAR VOLUMES

Vehicle peak hour turning movement counts (TMCs) were performed at each study intersection. Peak hours for the study intersections are shown in Table 5. The existing peak hour traffic volumes are shown in Figure 3. The complete traffic count data is provided in Appendix B.

Table 5: Intersection Peak Hours

#	Intersection	Date Collected	AM Peak Hour	PM Peak Hour
1	N Main Street at New Brick Church Pike/Lindberg Avenue	06/27/2024	7:00 – 8:00	4:00 – 5:00
2	N Main Street at Moncrief Avenue/Myers Street	06/27/2024	7:15 – 8:15	4:00 – 5:00
3	N Main Street at E Cedar Street	06/27/2024	7:15 – 8:15	4:00 – 5:00
4	N Main Street at W Cedar Street/Walgreens Driveway	06/27/2024	7:15 – 8:15	4:00 – 5:00
5	Main Street at Long Hollow Pike/City Hall Driveway	06/27/2024	7:15 – 8:15	4:00 – 5:00
6	S Main Street at Memorial Drive/East Avenue	06/27/2024	7:15 – 8:15	4:00 – 5:00
7	S Main Street at Shevel Drive	06/27/2024	7:15 – 8:15	4:00 – 5:00

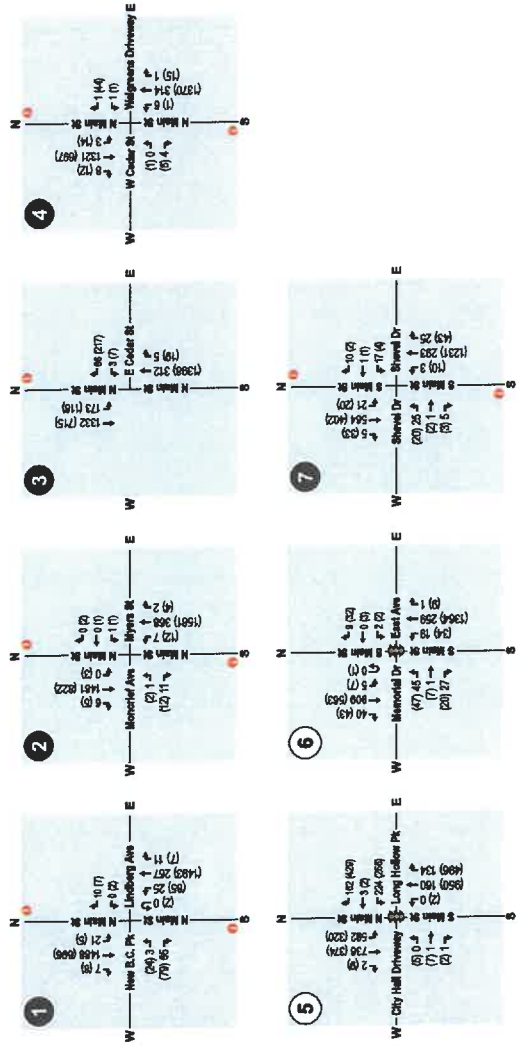
Analysis of the Existing 2024 Conditions is provided in Section 7.1.



LEGEND

	Signalized Intersection ID		Existing Traffic Signal		Existing Lane Configuration
	Unsignalized Intersection ID		Existing Stop Sign		

Kimley»Horn	Goodlettsville 56 Subdivision Traffic Impact Study	Exsiting Intersection Geometry	Figure 2
--------------------	---	---------------------------------------	-----------------



LEGEND			
(X)	Signalized Intersection ID	XX	AM Peak Hour Traffic Volumes
(X)	Unsignalized Intersection ID	(XX)	PM Peak Hour Traffic Volumes
→	Turning Movement		
🚦	Existing Traffic Signal		
🛑	Existing Stop Sign		

5.0 BACKGROUND (YEAR 2030) CONDITIONS

5.1 BACKGROUND (YEAR 2030) VOLUMES

Background traffic is defined as expected traffic on the roadway in future year(s) absent the construction and opening of the proposed project. Background traffic can include a base growth rate based on historical count data as well as population growth data and estimates.

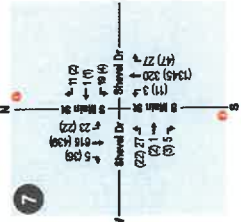
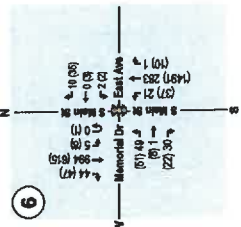
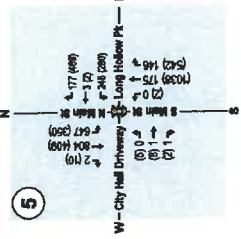
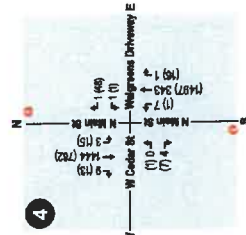
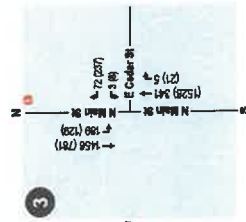
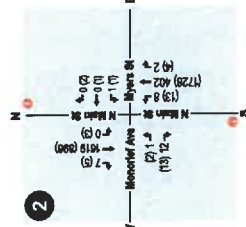
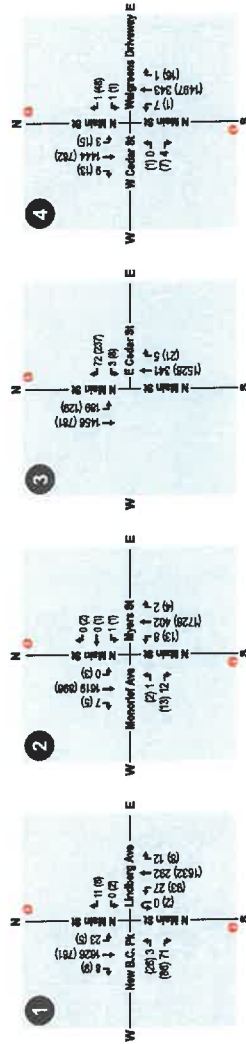
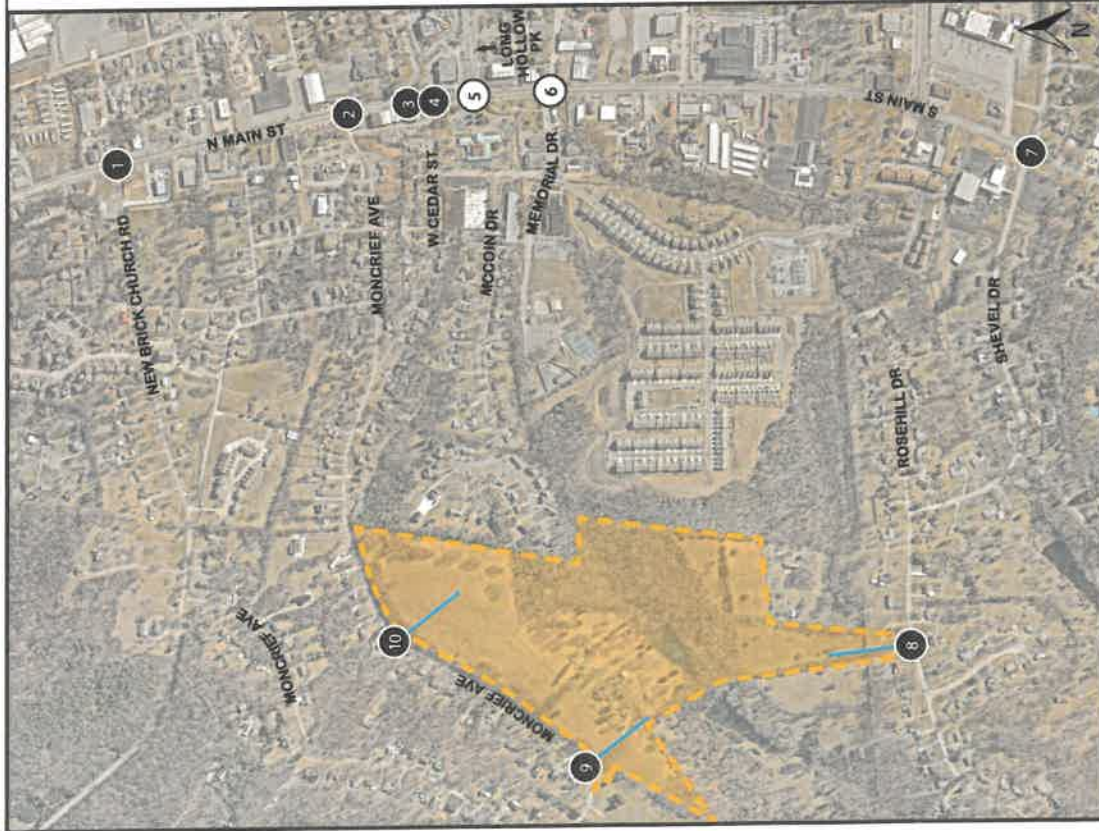
To account for background traffic, the existing traffic volumes were increased by 1.50% per year to account for the expected background growth through the build-out year.

The City of Goodlettsville identified Parkview Preserve at Memorial Drive and Haris Street as a recent development within the vicinity of the *Goodlettsville 56 Subdivision*. At the time of the traffic counts, the project was already constructed, therefore, traffic was already included in the baseline conditions.

The Background volumes are shown in Figure 4.

5.2 FUTURE (YEAR 2030) TRANSPORTATION INFRASTRUCTURE IMPROVEMENTS

The City of Goodlettsville is beginning the Main Street Enhancement Project. This project includes utility, sidewalk, crosswalk, and drainage improvements. It does not include any lane improvements and was not incorporated into the capacity analyses.



LEGEND

	Signalized Intersection ID		Existing Traffic Signal		AM Peak Hour Traffic Volumes
	Unsignalized Intersection ID		Existing Stop Sign		PM Peak Hour Traffic Volumes
	Turning Movement				

6.0 FUTURE (WITH PROJECT) CONDITIONS

6.1 SITE ACCESS

A brief description of each site access point is listed in Table 6.

Table 6: Site Access Details

Int #	Intersection	Control/Movement	Location
8	Rosehill Drive at Site Driveway A	TWSC/Full-movement	~800' west of Shevel Drive
9	Moncrief Avenue at Site Driveway B	TWSC/Full-movement	~3,200' west of W Cedar Street
10	Moncrief Avenue at Site Driveway C	TWSC/Full-movement	~1,700' west of W Cedar Street

6.2 PROJECT TRAFFIC

6.2.1 PROJECT TRIPS

Trip generation for the proposed development was calculated based on the methodology outlined in Section 3.3.

Due to the location and proposed land uses, the trip generation was performed with no reductions to gross trips.

Table 7 summarizes the project trip generation. A detailed trip generation worksheet for the proposed development is provided in Appendix C.

6.2.1 TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution and assignment of new project trips was based on a review of land uses and population densities in the area as well as the existing peak hour turning movement counts.

Figure 5 provides the directional distribution and assignment of new project trips. Figure 6 illustrates the assignment of project trips to the study network.

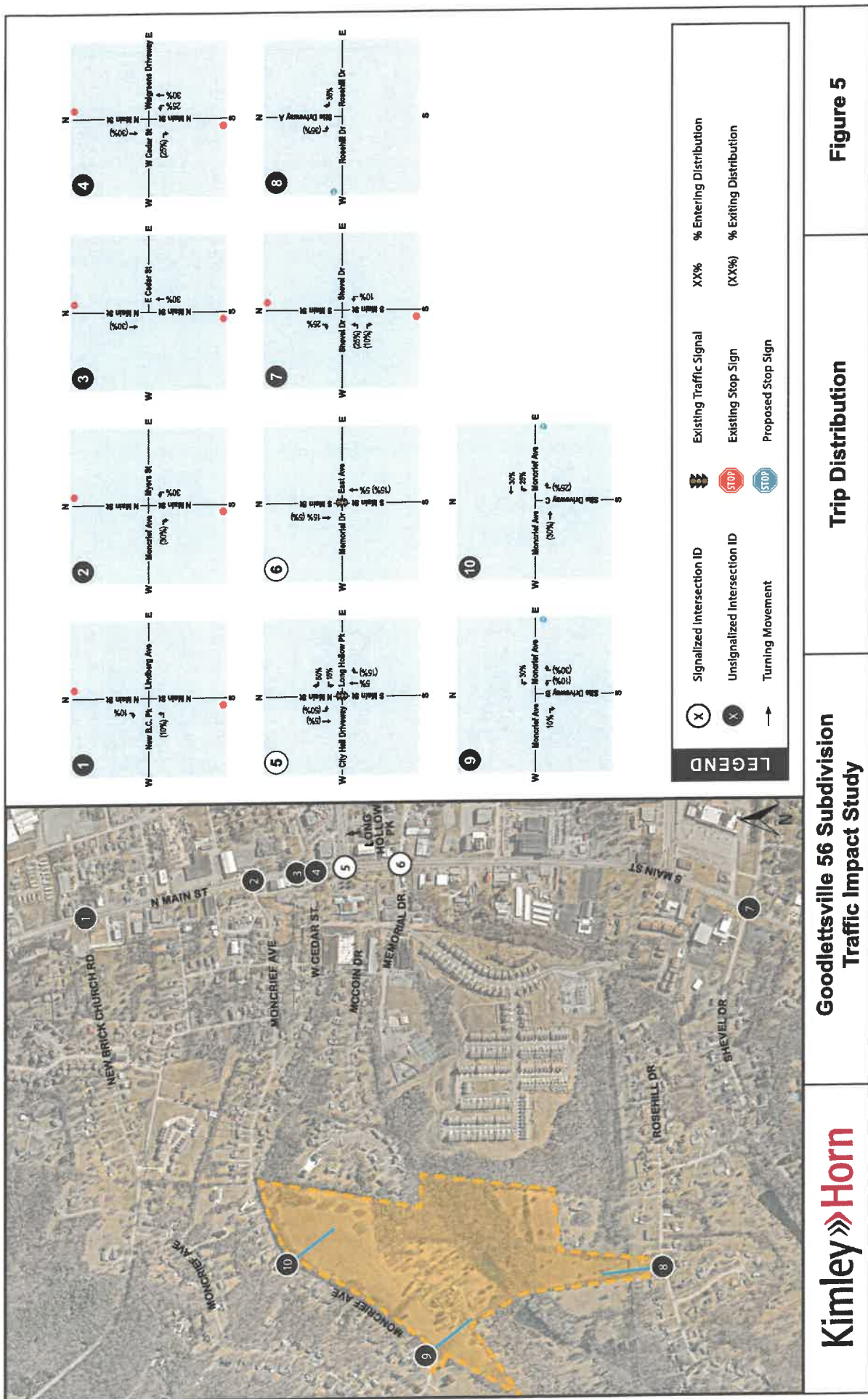
The projected Future peak hour volumes are shown in Figure 7.

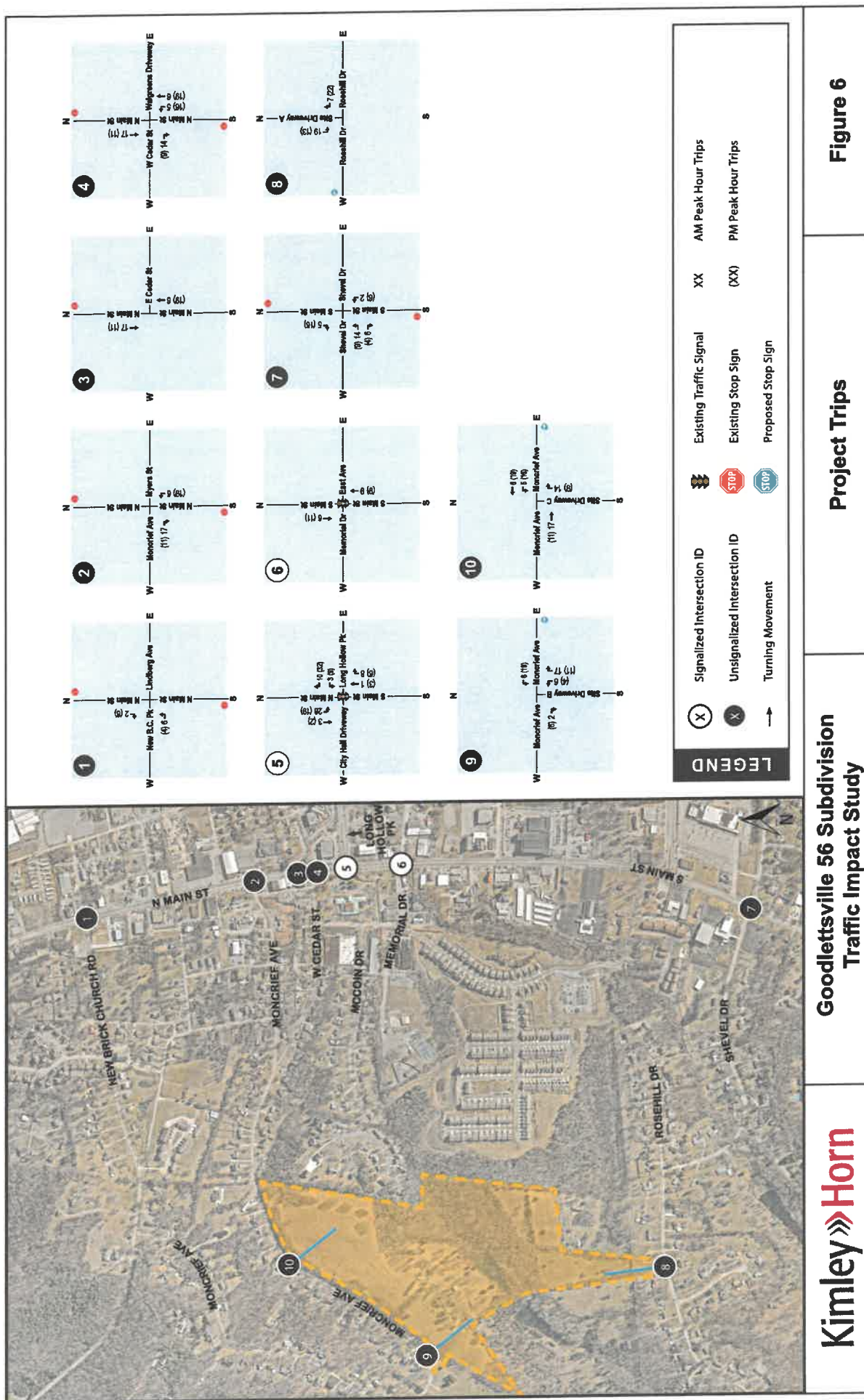
Intersection volume worksheets for all intersections and driveways within the study network are provided in Appendix C.

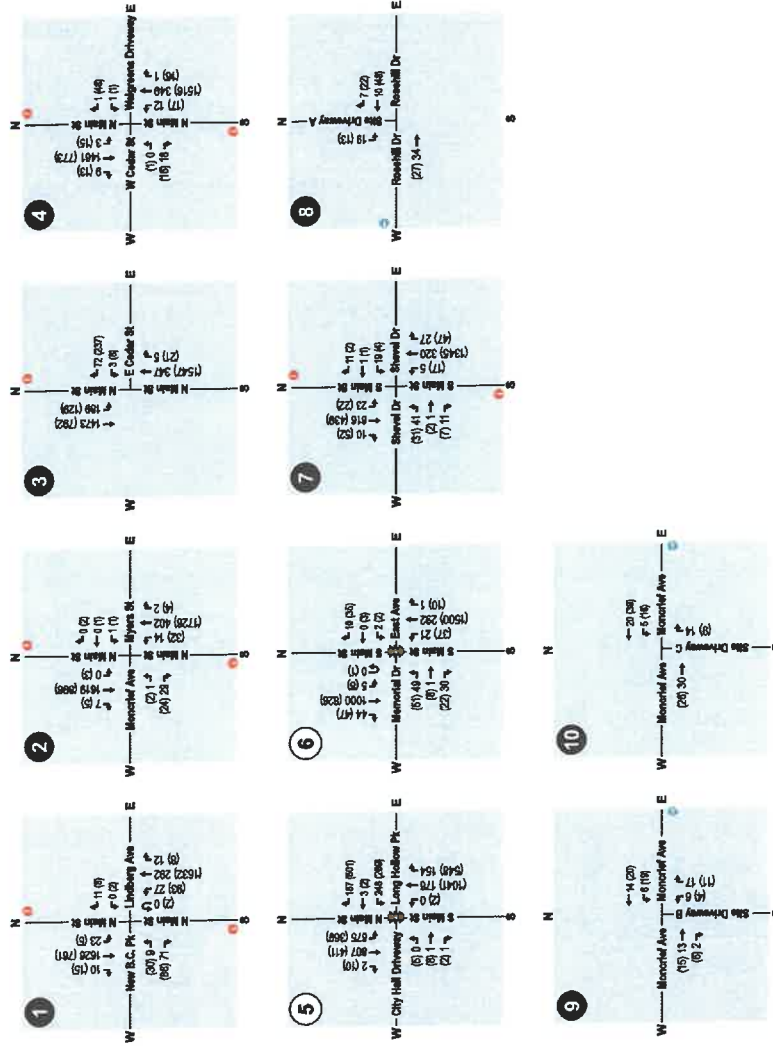
Table 7: Trip Generation

Proposed Trip Generation - Goodlettsville 56 Subdivision										
ITE Code	Land Use	Setting/Location	Density	Daily		AM Peak Hour		PM Peak Hour		
				Total	Exit	Total	Enter	Total	Exit	
210	Single-Family Detached Housing	General Urban/Suburban	101	1,018	509	76	20	100	83	37
GROSS PROPOSED TRIPS				1,018	509	76	20	100	63	37

Notes:







LEGEND			
	Signalized Intersection ID		Existing Traffic Signal
	Unsignalized Intersection ID		Existing Stop Sign
	Turning Movement		Proposed Stop Sign
	AM Peak Hour Traffic Volumes		PM Peak Hour Traffic Volumes

6.3 TURN LANE EVALUATION

The turn lane evaluations were calculated based on the methodology outlined in Section 3.5. The results of the turn lane warrants are summarized in Table 8. Detailed turn lane calculations are provided in Appendix F.

Table 8: Turn Lane Warrants

Int #	Intersection	Movement	Scenario	AM	PM
8	Rosehill Drive at Site Driveway A	WBR	Future with Project	✗	✗
9	Moncrief Avenue at Site Driveway B	EBR	Future with Project	✗	✗
		WBL	Future with Project	✗	✗
10	Moncrief Avenue at Site Driveway C	WBL	Future with Project	✗	✗

Based on the turn lane evaluation, no turn lanes are warranted at the intersection of Rosehill Drive at Site Driveway A (Intersection 8), Moncrief Avenue at Site Driveway B (Intersection 9), or Moncrief Avenue at Site Driveway C (Intersection 10) in the Future with Project conditions.

7.0 TRAFFIC ANALYSIS

7.1 CAPACITY ANALYSIS

The capacity analyses were calculated based on methodology outlined in Section 3.4. The results of the capacity analyses are summarized in Table 9 and Table 10. Detailed capacity reports are provided in Appendix D.

The results of the analyses show that all signalized intersections currently operate at an acceptable overall LOS during the AM and PM peak hours. Under the projected Background and Future with Project conditions, all signalized intersections are projected to continue to operate at an acceptable overall LOS during the AM and PM peak hours.

The intersections of North Main Street at Moncrief Avenue/Myers Street (Intersection 2) and North Main Street at East Cedar Street (Intersection 3) experience movements with a failing LOS of E or F. While failing, the development does not contribute any traffic volumes to these movements. Existing platooning allows for gaps in traffic for minor streets to enter the major corridor. It should be noted that it is not uncommon for side street approaches to experience higher delay during peak periods and in more urban areas.

All movements at the proposed site driveways operate at an acceptable LOS during both the AM and PM peak hours of the Future with Project conditions.

The Future with Project lane configuration is shown in Figure 8.

7.2 ROADWAY ANALYSIS

Moncrief Ave is 20', lacking a shoulder in several segments and across several residential driveways. The proposed project would add just over one vehicle per minute in the peak hour and just over one vehicle every two minutes in the non-peak hours. Therefore, the project will not significantly impact the operation of the road, maintaining its functional operations as a residential corridor.

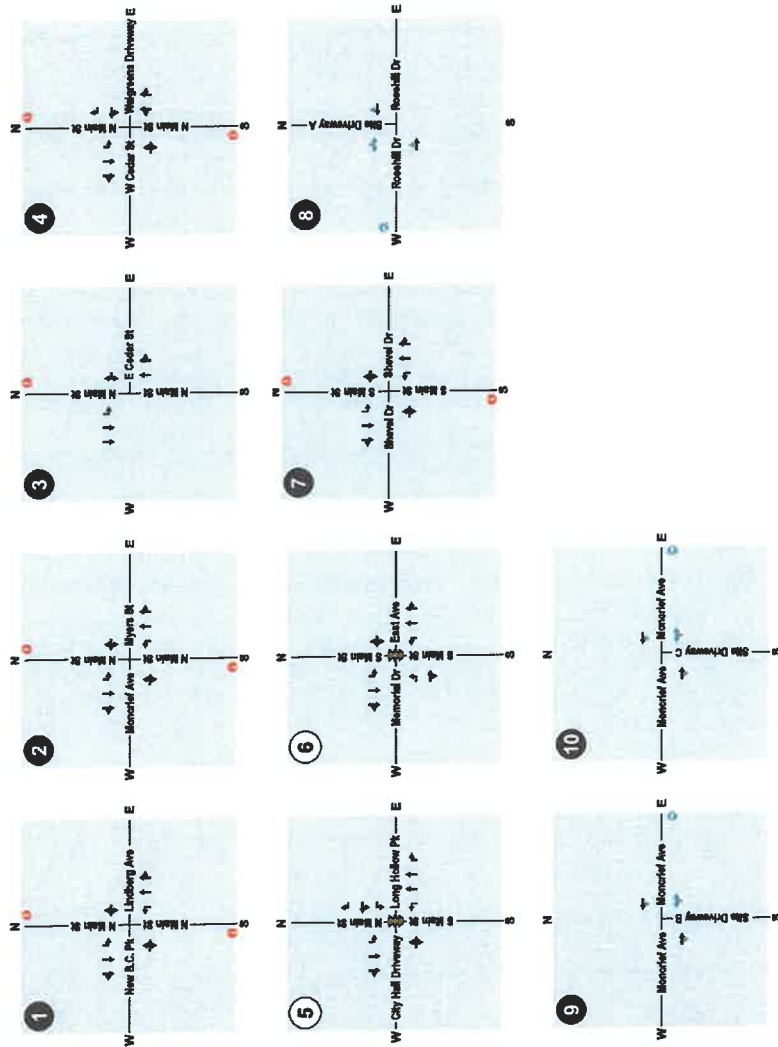
Table 9: LOS Summary

#	Name	Movement	Existing AM		Existing PM		Background AM		Background PM		Future AM		Future PM	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	North Main Street & New Brick Church Pike/Lindberg Avenue	NBL	C	15.0	A	9.6	C	16.7	B	10.0	C	18.7	B	10.0
		SBL	A	8.0	B	13.7	A	8.1	B	14.9	A	8.1	B	14.9
		EB	C	21.9	C	19.4	D	25.6	C	22.6	D	33.6	D	24.6
2	North Main Street & Moncrief Avenue/Myers Street	WB	A	9.5	D	26.3	A	9.6	D	30.0	A	9.6	D	30.0
		NBL	B	13.8	A	9.7	C	15.0	B	10.1	C	15.2	B	10.2
		SBL	A	0.0	B	14.4	A	0.0	C	15.8	A	0.0	C	15.8
3	North Main Street & East Cedar Street	EB	C	18.4	C	15.1	C	20.2	C	16.0	C	19.7	B	14.7
		WB	C	19.4	D	31.1	C	21.3	E	36.5	C	22.7	E	38.7
		SBL	A	8.4	C	16.2	A	8.6	C	18.9	A	8.6	C	19.2
4	South Main Street & West Cedar Street/Walgreens Driveway	WB	B	10.4	E	37.6	B	10.6	F	61.4	B	10.7	F	64.6
		NBL	B	14.0	A	9.3	C	15.2	A	9.5	C	15.8	A	9.7
		SBL	A	8.0	B	13.8	A	8.0	C	15.1	A	8.1	C	15.3
5	Main Street & Long Hollow	EB	B	14.6	B	13.4	C	15.7	B	13.9	C	16.3	B	13.1
		WB	B	13.4	C	17.1	B	14.2	C	18.9	B	14.7	C	19.3
		EBT	E	75.5	E	77.4	E	75.5	E	77.3	E	75.5	E	77.3
6	South Main Street & Memorial Drive/East Avenue	WBL	E	68.6	E	68.9	E	69.5	E	69	E	69.6	E	69.4
		WBT	E	68.3	E	69.5	E	68.8	E	69.7	E	68.6	E	69.8
		WBR	D	38.4	D	61.7	C	34	D	54.2	C	30.7	E	58.8
7	South Main Street & Sheval Drive	NBL	B	19.2	C	25.9	C	22.9	C	18.9	C	26	C	19.1
		NBT	B	19.2	C	27.2	C	22.8	C	31	C	25.9	C	31.5
		SBL	B	11	C	21.5	B	12.9	D	43.5	B	13.7	D	53.4
8	Site Driveway A & Roschill Drive	SBT	A	7.6	A	7.4	A	8.1	A	8	A	8.2	A	8.1
		NB	B	19.2	C	26.3	C	22.9	C	29.8	C	26	C	30
		SB	A	9.1	B	13.9	B	10.3	C	24.1	B	10.7	C	29.2
9	Site Driveway B & Moncrief Avenue	EB	E	75.5	E	77.4	E	75.5	E	77.3	E	75.5	E	77.3
		WB	E	55.9	E	58.3	C	54.5	E	59.9	C	52.7	E	52.8
		EBT	E	19.7	C	31.2	D	20.7	D	35.8	C	21.2	D	38.2
10	Site Driveway C & Moncrief Avenue	EBL	D	45.3	D	46.5	D	45.6	D	46.9	D	46.2	D	46.9
		WBT	D	42.6	D	44	D	42.5	D	44	D	42.5	D	44
		WBT	D	47.5	D	46.1	D	47.6	D	46.1	D	47.6	D	46.1
11	Site Driveway D & Moncrief Avenue	NBL	A	5.2	A	5.4	A	5.7	A	5.8	A	5.7	A	5.6
		NBT	A	4.5	A	9.3	A	4.5	B	10.2	A	4.6	B	10.3
		SBL	A	7.1	A	9.3	A	7.2	A	9.8	A	7.2	A	9.9
12	Site Driveway E & Moncrief Avenue	SBT	B	10.8	B	11	B	11.4	B	11.3	B	11.4	B	11.4
		NB	A	4.5	A	9.2	A	4.6	B	10.1	A	4.7	B	10.2
		SB	B	10.7	B	11	B	11.3	B	11.3	B	11.4	B	11.4
13	Site Driveway F & Moncrief Avenue	EB	D	44.2	D	45.6	D	44.4	D	45.9	D	44.7	D	45.9
		WB	D	47.5	D	46.1	D	47.6	D	46.1	D	47.6	D	46.1
		Intersection	B	11.5	B	11.6	B	12.1	B	12.3	B	12.1	B	12.4
14	Site Driveway G & Moncrief Avenue	NBL	A	9.5	A	8.3	A	9.8	A	8.4	A	9.8	A	8.5
		SBL	A	8.1	B	12.4	A	13.3	B	13.3	A	8.2	B	13.3
		EB	C	15.15	C	20.6	C	16.2	C	23.0	C	16.7	C	23.5
15	Site Driveway H & Moncrief Avenue	WB	B	12.27	D	26.9	B	12.8	D	31.0	B	12.9	D	31.6
		EBL	-	-	-	-	-	-	-	-	-	-	-	-
		SB	-	-	-	-	-	-	-	-	-	-	-	-
16	Site Driveway I & Moncrief Avenue	WBL	-	-	-	-	-	-	-	-	-	-	-	-
		NB	-	-	-	-	-	-	-	-	-	-	-	-
		WBL	-	-	-	-	-	-	-	-	-	-	-	-
17	Site Driveway J & Moncrief Avenue	NBL	-	-	-	-	-	-	-	-	-	-	-	-
		SBL	-	-	-	-	-	-	-	-	-	-	-	-
		WBL	-	-	-	-	-	-	-	-	-	-	-	-

Table 10: Queue Summary

#	Name	Movement	Existing AM		Existing PM		Background AM		Background PM		Future AM		Future PM	
			Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue	Storage	Queue
5	South Main Street & Long Hollow Pike	EBT		11		36		11		37		11		37
		WBL	80	188	80	202	80	202	80	217	80	205	80	222
		WBT		186		207		200		221		201		225
		WBR		41		306		42		363		43		409
		NBL			100	7			100	7			100	7
		NBT		91		483		99		561		100		566
		NBR	90	49	90	418	90	52	90	511	90	53	90	523
6	South Main Street & Memorial Drive/East Avenue	SBL	150	402	150	254	150	474	150	406	150	514	150	454
		SBT		207		107		238		123		241		125
		EBL	50	65	50	66	50	70	50	71	50	70	50	71
		EBT		28		31		30		33		30		33
		WBT		0		35		0		36		0		36
		NBL	80	13	80	19	80	13	80	20	80	13	80	20
		NBT		50		347		54		408		56		413
	100	8	100	11	100	13	100	8	100	13	100	8	100	
		290		166		328		186		331		190		

- 95th percentile volume exceeds capacity, queue may be longer.



LEGEND

	Signalized Intersection ID		Existing Traffic Signal		Existing Lane Configuration
	Unsignalized Intersection ID		Existing Stop Sign		Background Lane Configuration
			Proposed Stop Sign		Future Lane Configuration

8.0 RECOMMENDATIONS

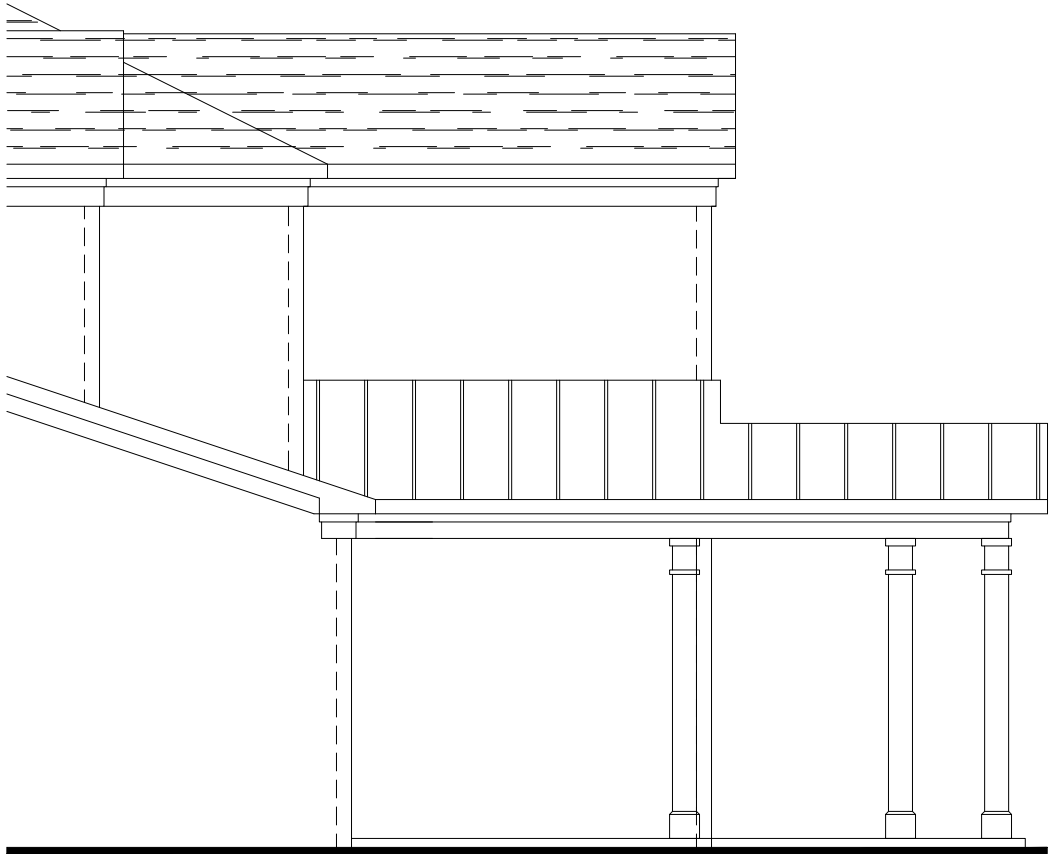
8.1 DEVELOPMENT IMPROVEMENT RECOMMENDATIONS

The following improvements are recommended to serve the traffic associated with the *Goodlettsville 56 Subdivision* development.

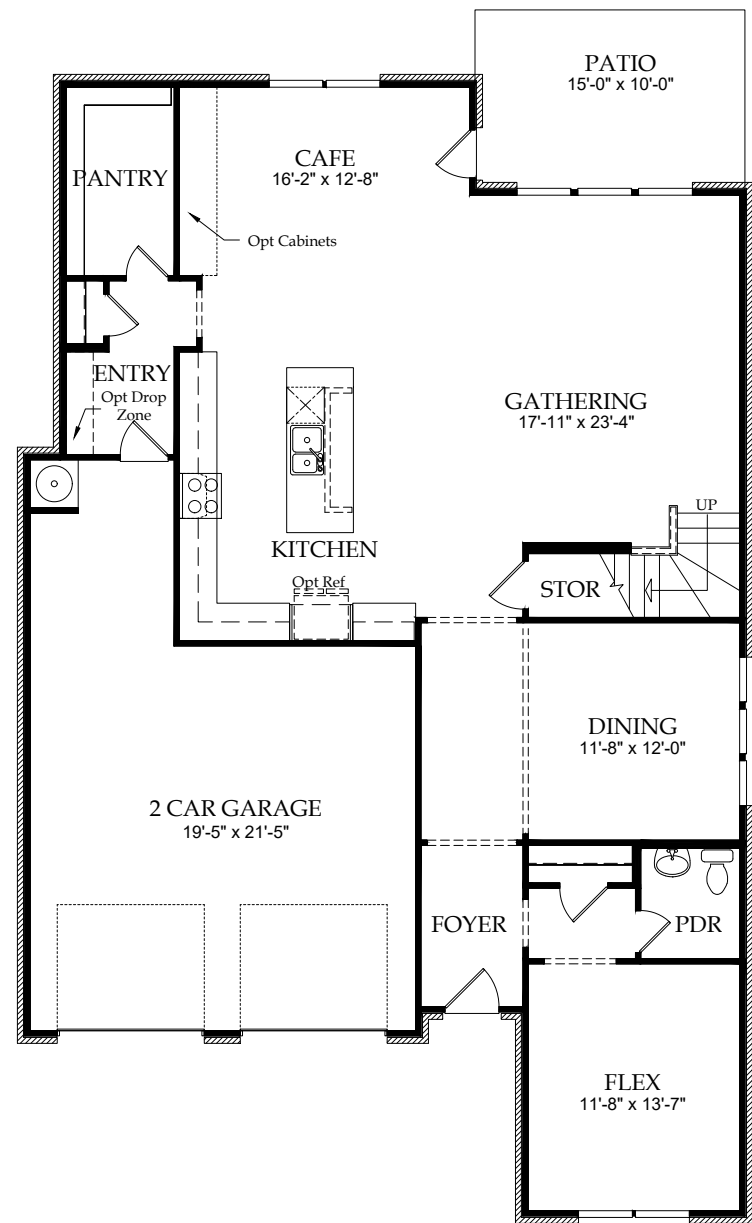
- Intersection 8 – Rosehill Drive at Site Driveway A
 - Construct one (1) ingress lane and one (1) egress lane.
- Intersection 9 – Moncrief Avenue at Site Driveway B
 - Construct one (1) ingress lane and one (1) egress lane.
- Intersection 10 – Moncrief Avenue at Site Driveway C
 - Construct one (1) ingress lane and one (1) egress lane.



Traditional



First Floor



Second Floor

