AGENDA

La Vergne Planning Commission

April 25, 2023 at 6:00 PM

- Call meeting to order.
- Determine quorum.

ORDER OF BUSINESS

1. Approve Minutes: March 28, 2023 Public Hearing and March 28, 2023 Regular Meeting

OLD BUSINESS

2. Site Plan - Seventh Day Adventist Church. Requested by Azimtech, Inc. Property located at 271 Jefferson Pike (Tax Map 18N, Parcel 18.01). R-2 (Medium Density Residential) Zoning District. Property owned by Kentucky/Tennessee Conference of Seventh Day Adventists, Inc.

3. Recommendation to the Board of Mayor and Aldermen for Subdivision Acceptance - Lt. Frank Walkup Phases 1 and 2. Property located off Jones Mill Road. Requested by Wamble & Associates. R-1 (Low Density Residential) Zoning District.

4. Site Plan - Dick Buchanan Trailer Storage - Trailer Storage and Two New Buildings of 9,100 & 12,000 Square Feet on 15.47 Acres. Requested by 615 Design Group. Property located on Dick Buchanan Street (Tax Map 14, Parcel 50). I-2 (Heavy Industrial) Zoning District. Property owned by CSJ & Associates, LLC.

5. Site Plan - 5450 Murfreesboro Road - New Retail Building Totaling 11,550 Square Feet on 1.53 Acres. Requested by Huddleston - Steele, Inc. Property located at 5450 Murfreesboro Rd. (Tax Map 18B, Group E, Parcel 3). C-2 (Highway Service Commercial) Zoning District. Property owned by FHMY Realty Investors, LLC.

6. Site Plan - Scott Equipment Parts Building - New Building totaling 20,000 Square Feet & Building Addition of 1,060 Square Feet. Requested by Fulmer - Lucas. Property located at 140 Waldron Road (Tax Map 29, Parcel 5.12). I-2 (Heavy Industrial) Zoning District. Property owned by Scott Equipment, LLC.

7. Site Plan - Carothers Crossing Commercial - 10 Mixed Use Buildings on 1.61 Acres. Requested by SEC. Property located on Carothers Road (Tax Map 29, Parcel 29). PDR (Planned Density Residential) Zoning District. Property owned by Burkitt Hills Investment Group, LLC.

NEW BUSINESS

8. Site Plan - The Ridge, Phase 4, Lot 401 - Open Space, Community Pool & Pool House on 0.55 Acres. Requested by Wamble & Associates. Property located off Rocky Trail (Tax Map 29, Parcel 41.04 and P/O Parcel 41.02). R-1 (Low Density Residential) Zoning District & R-2 (Medium Density Residential) Zoning District. Property owned by Mitchell Bowman dba B & F Development, LLC.

9. Site Plan - Avenue Grading - Addition of 8,188 Square Feet on 4.73 Acres. Requested by Ragan-Smith. Property located at 121 Jones Boulevard (Tax Map 17, Parcel 6). I-2 (Heavy Industrial) Zoning District. Property owned by Barlow Builders.

10. Site Plan - Alterra - Existing Building Totaling Approximately 10,500 Square Feet & Building Addition of 7,300 Square Feet on 5.16 Acres. Requested by Paradym Studio, PLLC. Property Located at 122 Charter Place (Tax Map 29, Parcel 2.05). I-2 (Heavy Industrial) Zoning District. Property owned by 122 Charter Partners, LLC.

11. Recommendation to the Board of Mayor and Aldermen: Rezoning of Property, Requested by Doyle Elkins. 1.16 acres. Property Located at 392 Old Nashville Highway (Tax Map 17E, Group B, Parcel 22). Current Zoning District: R-1 (Low Density Residential) Zoning District; Proposed Zoning District: C-3 (Neighborhood Service Business District) Zoning District. Property owned by Gerges Gerges.

12. Bonds / Letters of Credit Update.

ADJOURN

MINUTES OF THE PUBLIC HEARING OF THE CITY OF LA VERGNE PLANNING COMMISSION HELD ON MARCH 28, 2023, AT LA VERGNE CITY HALL, LA VERGNE, TENNESSEE.

The City of La Vergne Planning Commission held a public hearing on March 28, 2023, in La Vergne City Hall, starting at 6:00 p.m. with Chairman Earl Garvin, Jr. present and presiding.

Members Present

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

ORDER OF BUSINESS

1. **Planning Commission Resolution #2023-01 - A Resolution to Amend the City of La Vergne Fee Schedule Regarding the Fee-in-Lieu Option for Sidewalk Construction as found in Article IV, Section 4-108.5 of the La Vergne Subdivision Regulations.**

No one spoke.

The public hearing for this item was declared closed.

ADJOURNMENT

Chairman Garvin declared the public hearing adjourned at 6:05 p.m.

_____
Chairman

_____
City Recorder

_____
Approved

MINUTES OF THE REGULAR MEETING OF THE CITY OF LA VERGNE PLANNING COMMISSION HELD ON MARCH 28, 2023 AT LA VERGNE CITY HALL, LA VERGNE, TENNESSEE.

The City of La Vergne Planning Commission met in a regular meeting on March 28, 2023 in La Vergne City Hall, starting at 6:05 p.m. with Chairman Earl Garvin, Jr. present and presiding.

Members Present

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

ORDER OF BUSINESS

1. Approve Minutes: February 28, 2023 Regular Meeting.

A motion, made by Vice-Chairman / Mayor Jason Cole, seconded by Secretary Graeme Coates, to approve the minutes of the February 28, 2023 Regular Meeting, was adopted with all voting AYE.

OLD BUSINESS

2. Site Plan - Seventh Day Adventist Church. Requested by Azimtech, Inc. Property located at 271 Jefferson Pike (Tax Map 18N, Parcel 18.01). R-2 (Medium Density Residential) Zoning District. Property owned by Kentucky/Tennessee Conference of Seventh Day Adventists, Inc.

This item was deferred. No action was taken.

3. Recommendation to the Board of Mayor and Aldermen for Subdivision Acceptance - Lt. Frank Walkup Phases 1 and 2. Property located off Jones Mill Road. Requested by Wamble & Associates. R-1 (Low Density Residential) Zoning District.

Mr. Logan gave his report.

City Engineer Gary Lide made comments about the punch list. He stated that they have not completed the punch list items.

Chairman Garvin asked legal if they should defer the item. City Attorney Phillip Dodd stated the board can defer the item.

A motion, made by Vice-Chairman / Mayor Jason Cole, seconded by Secretary Graeme Coates, to defer this item, was approved with all voting AYE.

4. **Site Plan - Dick Buchanan Trailer Storage - Trailer Storage and Two New Buildings of 9,100 & 12,000 Square Feet on 15.47 Acres. Requested by 615 Design Group. Property located on Dick Buchanan Street (Tax Map 14, Parcel 50). I-2 (Heavy Industrial) Zoning District. Property owned by CSJ & Associates, LLC.**

Mr. Logan gave his report.

Mr. CJ Merel, 615 Design Group, Smyrna, approached the podium.

Secretary Coates asked about the Fire Department comment. Mr. Lide stated that it was was corrected.

Secretary Coates asked about the first building's dustless surface length. Mr. Merel stated it should have been corrected on the site plan. A discussion ensued. Secretary Coates stated that he would want to see the site plan corrected.

A motion, made by Secretary Graeme Coates, seconded by Terry Coleman, to defer the item until the next meeting to make the corrections, was approved with all voting AYE.

5. **Recommendation to the Board of Mayor and Aldermen: Rezoning of Property, Requested by CDC, Inc. 5 acres. Property located at 252 Hollandale Road (Tax Map 14, Parcel 23.2). Current Zoning District: R-1 (Low Density Residential) Zoning District; Proposed Zoning District: R-2 (Medium Density Residential) Zoning District. Property owned by Bola Gabriel.**

Mr. Logan gave his report.

Vice-Chairman Cole explained that the rezoning request if not R-3, but R-1 to R-2.

Chairman Garvin asked if there was a representative in the audience. No one approached the podium.

A motion, made by Vice-Chairman Cole, seconded by Jim Hesemann, to suspend the rules to allow the public to speak, was approved with all voting AYE.

Ms. Joyce Gamble, 246 Hollandale Road, approached the podium. She spoke against the rezoning.

Mr. Richard Harris, 131 Suncrest Dr, approached the podium. He spoke against the rezoning.

Chairman Garvin unsuspended the rules to proceed with the regular meeting.

A motion, made by Vice-Chairman / Mayor Cole, seconded by Mark Molnar, to send an unfavorable recommendation to the Board of Mayor and Alderman, was adopted with all voting AYE.

NEW BUSINESS

6. Site Plan - 5450 Murfreesboro Road - New Retail Building Totaling 11,550 Square Feet on 1.53 Acres. Requested by Huddleston - Steele, Inc. Property located at 5450 Murfreesboro Rd. (Tax Map 18B, Group E, Parcel 3). C-2 (Highway Service Commercial) Zoning District. Property owned by FHMY Realty Investors, LLC.

Mr. Logan gave his report.

Mr. Lide stated that the issue with the sewer had been worked out. He made comments about decelerating lanes that were added and removed.

Mr. Chris McGuire, Huddleston Steel, Murfreesboro, approached the podium. He explained the changes and the comments about the decelerate lanes. He stated that the new lane would help with traffic.

Secretary Coates made comments about the lanes. He asked about the 27 items. Mr. Lide stated they were addressed. Secretary Coates asked about the sidewalk length.

Vice-Chairman Cole asked Fire Marshall Brinkley if there should be a fire lane on the north side of the building. Mr. Brinkley stated the parking lot should be adequate space according to the code. Mr. Cole stated that he would like the applicant to see about adding a fire lane to that side of the building.

Vice-Chairman Cole asked about the double dumpster space and screening them. He asked if that could also be added to the site plan. Mr. McGuire stated they have screening for the dumpsters. Mr. Cole asked if it was shown on the plans. Mr. McGuire stated that it was not on the plans but would be added.

A motion, made by Vice-Chairman / Mayor Cole, seconded by Secretary Cole, to defer the item, was approved with all voting AYE.

7. Site Plan - Scott Equipment Parts Building - New Building totaling 20,000 Square Feet & Building Addition of 1,060 Square Feet. Requested by Fulmer - Lucas. Property located at 140 Waldron Road (Tax Map 29, Parcel 5.12). I-2 (Heavy Industrial) Zoning District. Property owned by Scott Equipment, LLC.

This item was deferred. No action was taken.

8. Site Plan - Carothers Crossing Commercial - 10 Mixed Use Buildings on 1.61 Acres. Requested by SEC. Property located on Carothers Road (Tax Map 29, Parcel 29). PDR (Planned Density Residential) Zoning District. Property owned by Burkitt Hills Investment Group, LLC

This item was deferred. No action was taken.

9. Final Plat - Lot 48 Morningside Acres - Two (2) Residential Lots on 5.23 Acres. Requested by Chapdelaine & Associates. Property located on Meadowlark Lane (Tax Map 13H, Group A, Parcel 34). R-1 (Low Density Residential) Zoning District. Property owned by John & Tommye Bamfield.

Mr. Logan gave his report.

Mr. Lide made comments about the incorrect drawing.

A motion was made by Secretary Coates, seconded by Vice-Chairman / Mayor Cole, to accept the final plat as submitted, was approved with all voting AYE.

10. Concept Plan - Mission Hills Apartment Site - 324 Units on 23.78 Acres. Requested by SEC. Property located on Waldron Road (Tax Map 29, Parcel 22.02). R-3 (High Density Residential) Zoning District. Property owned by John M. Gilliland Living Trust.

Mr. Logan gave his report.

Mr. Lide made comments about the traffic impact study.

Mr. Matt Taylor, SEC, 850 Middle Tennessee Blvd, Murfreesboro, approached the podium. Secretary Coates asked if Mr. Taylor could explain the crash gate. Mr. Taylor explained. Secretary Coates asked about the dumpster. Mr. Taylor stated they moved it north of building eight. A discussion about the plan ensued.

Vice-Chairman Cole asked about the plan. Mr. Taylor explained they had moved the compactor and the Walnut Ridge Drive connection. He also made comments about the Vanguard connection. A discussion ensued.

Mr. Terry Rasmussen, BRS, 2000 Mallory Lane, Franklin, approached the podium. He explained the connection regarding Nolewood. He stated that since the community is gated they would prefer not to connect to the single family section.

A motion, made by Secretary Graeme Coates, seconded by Terry Coleman, to accept the concept plan as submitted, was approved with all voting AYE.

11. Recommendation to the Board of Mayor and Aldermen - Ordinance to Amend Article V, Section 5.055 of the La Vergne Zoning Ordinance Regarding Floodway and Flood Fringe Districts.

Mr. Logan gave his report.

Mr. Lide explained the ordinance.

A motion, made by Vice-Chairman / Mayor Jason Cole, seconded by Secretary Graeme Coates, to send a favorable recommendation to the Board of Mayor and Aldermen, was adopted with all voting AYE.

12. Planning Commission Resolution #2023-01 - A Resolution to Amend the City of La Vergne Fee Schedule Regarding the Fee-in-Lieu Option for Sidewalk Construction as found in Article IV, Section 4-108.5 of the La Vergne Subdivision Regulations. (Public Hearing will be held prior to the meeting at 6:00 p.m. on March 28, 2023.)

Mr. Logan gave his report.

Mr. Jim Hesemann asked about the width of the sidewalk. Mr. Logan explained.

A motion, made by Vice-Chairman / Mayor Jason Cole, seconded by Mark Molnar, to approve Planning Commission Resolution #2023-01, was adopted with all voting AYE.

13. Bonds/Letters of Credit Update.

Ms. Juliet Williams updated the board on the status of bonds and letters of credit.

No action was taken.

ADJOURNMENT

There being no further business to come before this meeting, Chairman Garvin declared the meeting adjourned at 6:55 p.m.

_____
Chairman

_____
City Recorder

_____
Approved

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan, Seventh Day Adventist Church. Requested by Azimtech, Inc. Property located at 271 Jefferson Pike (Tax Map 018N, Parcel 18.01). R-2 (Medium Density Residential) Zoning District. Property owned by Kentucky/Tennessee Conference of Seventh Day Adventists, Inc.

Reviewed By: Bo Logan, City Planner
Gary Lide P.E., City Engineer

Summary

On behalf of their client, Azimtech, Inc. is requesting site plan approval for an addition to the Seventh Day Adventist Church located on Jefferson Pike. Currently the property contains several buildings and associated parking and drive aisles.

This item first appeared at PC in September of 2019. Then again in March and June of 2020. After delays due to the City having to cancel several PC meetings because of Covid, the church finally gained approval of their site plan in June 2020. In the earliest versions of the site plan the driveways and parking areas consisted of gravel. Since that time, all driveways and parking areas have been upgraded to a dustless surface, per the ordinance.

The existing structure contains 2,900 square feet of space. The proposed addition to the church will consist of 1,633 square feet. In addition, the church will add about 23,200 square feet of pavement to the site.

The existing parcel is approximately 1.50 acres and is zoned residential.

This particular site is not contained in an overlay district.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

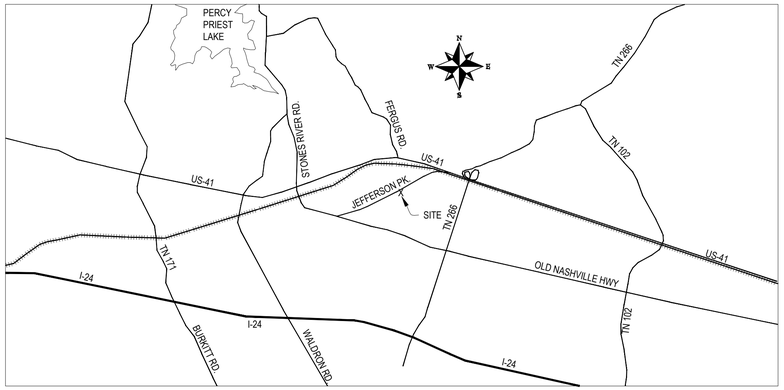
1. As designed, the proposed parking area would slope away from the building at less than 0.1% slope. For all intents and purposes, this is completely flat which means significant ponding of water.
2. The fact that the asphalt in front of the entrance to the multi-use room is only 3-1/4" above the curb inlet grate elevation next to the pond is of concern.

3. The FFE of the building is only 8" above the curb inlet grate elevation next to the pond which is of concern.
4. The top of curb elevations across the parking lot from the building are higher than the FFE which is of concern.
5. Regarding the stormwater calculations, the pre-development calculations are acceptable.
6. Regarding the post-development stormwater calculations, I scaled the dimensions of the detention basin from the plans and compared them against the surface areas shown on "Pond Report" which is page 13 of the calculations. Two items:
    a. The areas which I measured from the plans appeared significantly smaller than those shown in the calculations.
    b. The calculations assume a closed 660 contour around the detention basin. The drawings do not show this contour as closed.
7. Finally, the stormwater calculations show water quantity detention only and do not include calculations demonstrating compliance with Section 14-603 (3) (c) which requires "Development will be required to minimize the impact to stormwater quality by applying structural and/or nonstructural management practices selected to address site-specific conditions. The goal for water quality treatment shall be 80% removal of total suspended solids from the first flush, defined by land use characteristics or at least 0.5-inches where not defined." While it appears that the basin and control structure shown will meet the requirements, calculations must be provided.

Other Concerns

1.

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



VICINITY KEY MAP
NOT TO SCALE

PROPOSED SITE IMPROVEMENT PLAN
CULTURAL CENTER (CHURCH)
271 JEFFERSON PK.
LAVERGNE, TENNESSEE 37086
PARCEL: 018 01801
ZONED: R-2



THE PURPOSE OF THIS SITE PLAN IS TO ADD TO BUILDING FOR GROWTH & RENOVATE THE PARKING LOT FOR A CULTURAL CENTER (CHURCH) FACILITY FOR CODE APPROVAL & TO OBTAIN A PERMITS TO CONSTRUCT.

THE SUBJECT PROPERTY IS EXISTING & ZONED "R-2" WHERE THE INTENDED USE IS PERMITTED.

DEVELOPMENT / SITE DATA

1) THE PURPOSE OF THIS SITE PLAN IS TO ADD TO THE EXISTING BUILDING FOR GROWTH.

2) SUBJECT PROPERTY IS PARCEL #: 018 01801 & PRESENTLY ZONED R-2.
THE INTENDED USE OF A RELIGIOUS INSTITUTION IS PERMITTED.

3) THE SUBJECT PROPERTY IS NOT AFFECTED BY THE 100 YEAR FLOOD PLAIN BASED ON INFORMATION TAKEN FROM F.E.M.A FLOOD ZONE MAP # 47149C0020J EFFECTIVE DATE: 10/16/2008 ZONE "X"

4) MINIMUM REQUIRED SETBACKS :

a.	FRONT	35'	JEFFERSON PIKE
b.	RIGHT SIDE	10'	
c.	LEFT SIDE	10'	
d.	REAR	20'	

5) LOT AREA: 65,432 SQ. FT. 1.50 ± ACRE

6) PROPOSED SITE COVERAGE:

		TOTAL	EXISTING	ADDED
a.	BUILDING AREA	4,940 SQ. FT.	2900	2040
b.	ASPHALT PARKING & SIDEWALKS	24,143 SQ. FT.	785	23358
c.	LANDSCAPE	36,349 SQ. FT.		
d.	IMPERVIOUS AREA	29,083 SQ. FT.		

REV # 1 ADDED DATA

7) PARKING TABULATION:

a.	CHURCHES OR RELIGIOUS USES W/ NO PERMANENT SEATS							
b.	1 PER 50 S.F. OF ASSEMBLY AREA	2,666 S.F.	÷	50	=	53.3	OR	54 SPACES REQUIRED
c.	TOTAL PARKING SPACES REQUIRED =					54		SPACES REQUIRED

8) PROPOSED BUILDING EAVE HEIGHT 25 FT. ABOVE ADJACENT GRADE < 35'

10) MAX FLOOR AREA RATIO (FAR) 0.075 = 7.5 % < 60.0 %

11) MAX IMPERVIOUS AREA RATIO (ISR) 0.444 = 44.4 % < 90.0 %

12) LANDSCAPE AREA RATIO (LAR) 0.556 = 55.6 % > 10.0 %

13) PLEASE SEND ALL CORRESPONDENCE TO ENGINEER:
S. ALI KOLEINI, P.E. & / OR ROLANDO S. AQUINO P.E.
3360 SAWTELLE BLVD. # 101
LOS ANGELES, CA 90066
OFFICE PHONE: (615) 299-7388

CONTACTS

OWNER / DEVELOPER
KY TN CONFERENCE ASSOC. OR 7TH DAY ADVENTISTS INC.
PO BOX 1088
GOODLETTSVILLE, TN 37070-1088
CONTACT: MARLON BONILLA
615-995-0970

CIVIL PLANS
ALI S. KOLEINI P.E.
3360 SAWTELLE BLVD. #101
LOS ANGELES, CA 90066
CELL: 615-347-7903
OFFICE: 615-299-7388

ARCHITECTURAL PLANS
ROLANDO SANTOS AQUINO
5890 Hwy 41A
JOELTON, TN 37080
OFFICE: 615-299-7388

INDEX OF SHEETS

SHEET	DESCRIPTION
CV	COVER SHEET
C1.0	EXISTING CONDITION, EROSION CONTROL & SEDIMENT PLAN & NOTES FOR FINAL EROSION MEASURES
C1.1	FINAL EROSION CONTROL PLAN
C1.2	PROPOSED SITE LAYOUT PLAN
C2	PROPOSED SITE GRADING
C3	SITE PLAN DETAILS
L1	PROPOSED LANDSCAPING SITE PLAN
B1	EXISTING BUILDING FLOOR PLAN
B2	DEMOLITION TO EXISTING FLOOR PLAN
B3	PROPOSED BUILDING FLOOR PLAN
B4	PROPOSED BUILDING ELEVATIONS
B5	PROPOSED BUILDING ELEVATIONS

GENERAL NOTES

1. THE CONTRACTOR IS TO CHECK AND VERIFY ALL BOUNDARY SURVEY, CORNERS, SETBACKS MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR SAME.
2. ALL TREES, STUMPS, OBSTRUCTIONS, ETC. REMOVE FROM THE RIGHT-OF-WAY AND BORROW AREAS ARE TO BE DISPOSED OF BY CONTRACTOR AS APPROVED BY THE OWNER, SO AS TO CAUSE NO POLLUTION TO THE ENVIRONMENT.
3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE DAMAGE OR LOSS OF ANY REFERENCE POINTS, MONUMENTS, HUBS, AND STAKED LOT CORNERS DURING THE CONSTRUCTION OF HIS WORK AND SHALL BEAR THE COST OF REPLACING SAME.
4. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, BUILDINGS, ETC. WHICH ARE TO REMAIN AND NOT BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.
5. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS, AND PAY LEGAL FEES. HE SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE BUILDING LAWS, ORDINANCES, OR REGULATIONS.
6. THE CONTRACTOR MUST UNDERSTAND THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SAME IS ACCEPTED AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
8. THE CONTRACTOR SHALL PROVIDE SUCH BRACING, SHEETING AND SHORING, BLASTING PROTECTION WARNING LIGHTS AND BARRICADES, ETC. AS MANY AS MAY BE NECESSARY FOR THE PROTECTION SHALL COMPLY WITH ALL APPLICABLE SAFETY STATUTES AND RULES REQUIRING CERTAIN OF LIFE AND PROPERTY FOR HIS OWN EMPLOYEES AND THE GENERAL PUBLIC. THE CONTRACTOR SHALL PROVIDE PROTECTIVE PERSONAL APPAREL SUCH AS HARD HATS, EAR PLUGS, EYE SHIELDS, PROTECTIVE SHOES, ETC. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY OR LIABILITY FOR ACTIONS TAKEN BY THE CONTRACTOR ENDANGERING LIFE AND PROPERTY.
9. THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF THE ABOVE NOTED WIRES THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT EACH OF THE UTILITY COMPANIES AND TENNESSEE "ONE CALL" (800) 351-1111 PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF APPROACH TO SUCH LINES.
10. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT DURING CONSTRUCTION UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATION OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITIES.
11. THE CONTRACTOR'S AUTHORIZED FIELD REPRESENTATIVE SHALL CONTACT TENNESSEE ONE CALL 800-351-1111 FOR MARKING ALL UTILITY LINES LOCATIONS BEFORE PERFORMING ANY DIGGING.
12. ALL EROSION CONTROL MEASURES ARE TO BE REMOVED PRIOR TO AS-BUILT APPROVALS.

AZIM TECH ENGINEERING, INC.
CONSULTING ENGINEERS
3360 Sawtelle Blvd #101
Los Angeles, CA 90066
Phone: (615) 347 7903
www.azimtech.com
azimtech.eng@gmail.com

PROJECT DESCRIPTION:
SEVENTH DAY ADVENTISTS
ADDITION TO EXISTING CHURCH
271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

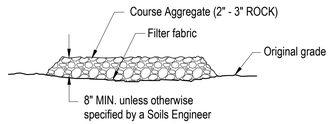
S. ALI KOLEINI
REGISTERED ENGINEER
AGRICULTURE
3/31/23
No. 119930
STATE OF TENNESSEE

REV.	DESCRIPTION	DATE
1	REVISIONS PER PLANNING COMMISSION WORKSHOP COMMENTS	1/19/2023

DESIGNED BY : A.K.
DRAWN BY : R.L.
SCALE : NO SCALE
PROJECT NO.
DATE : 1/19/2023
ISSUED FOR :
FOR APPROVAL
DRAWING TITLE :
COVER SHEET
DRAWING NO.
CV

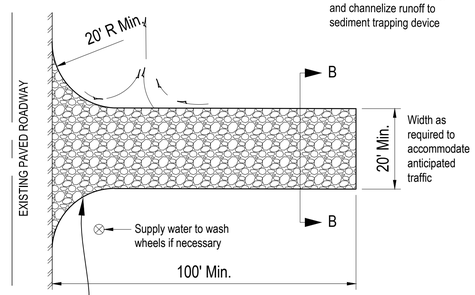
NOTES:

1. ALL MATERIALS, DETAILS, AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STORM WATER MANAGEMENT MANUAL OF THE JURISDICTION HAVING AUTHORITY.
2. STONE IS TO BE MAINTAINED IN A CONDITION AS TO PREVENT MUD TRACKING FROM TIRES BY CONSTRUCTION TRAFFIC
3. TO BE USED AT ALL TEMPORARY EXITS



SECTION B-B
N.T.S.

NOTE:
Construct sediment barrier and channelize runoff to sediment trapping device



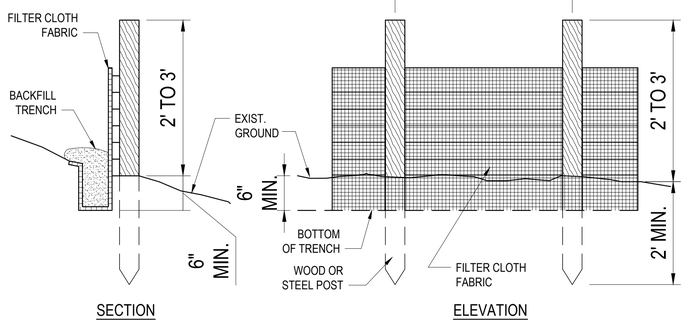
PLAN
N.T.S.

STABILIZED CONSTRUCTION ENTRANCE

SCALE: N.T.S

NOTE: CONTRACTOR TO PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH THE CITY OF LAVERGNE. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRE-CONSTRUCTION MEETING.
CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.

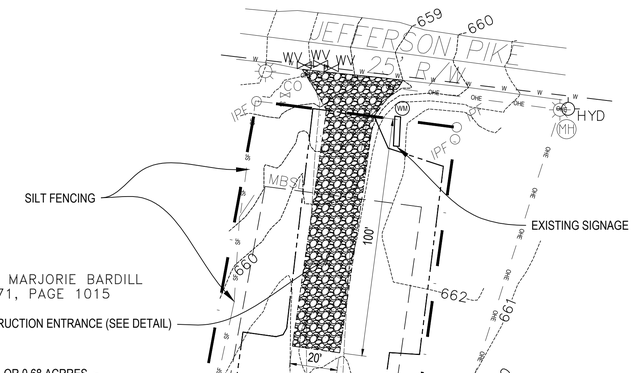
NOTE:
CONSTRUCT IN ACCORDANCE WITH THE STORM WATER MANAGEMENT MANUAL OF THE JURISDICTION HAVING AUTHORITY

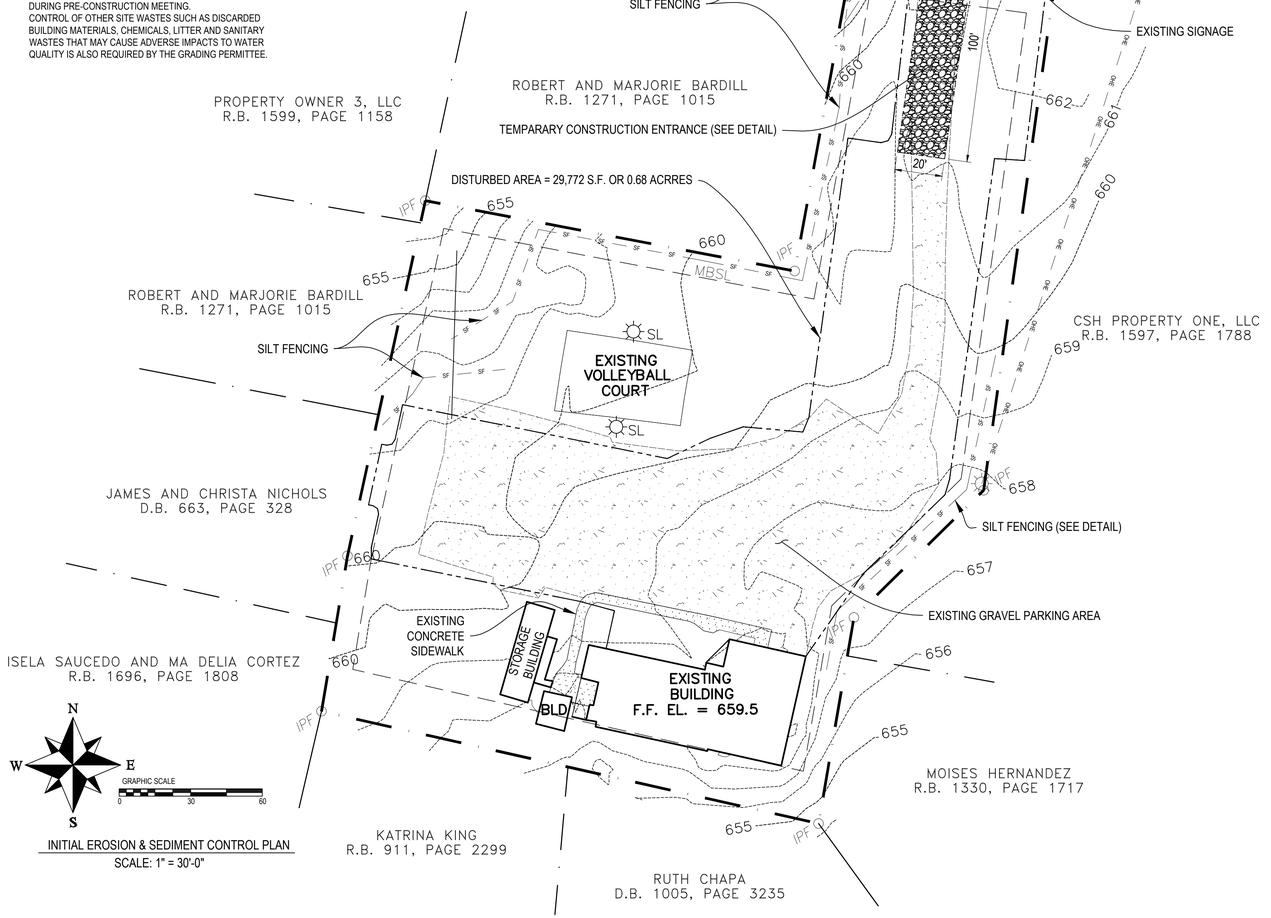


SECTION ELEVATION

TEMPORARY SILT FENCE

SCALE: N.T.S.





INITIAL EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 30'-0"

STORM WATER POLLUTION PREVENTION NOTES (TENNESSEE)

1. THE OWNER AND THE CONTRACTOR ARE REQUIRED TO SUBMIT A NOTICE OF INTENT (NOI) TO DISCHARGE CONSTRUCTION-ACTIVITY STORM WATER APPLICATION TO THE LOCAL TENNESSEE ENVIRONMENTAL ASSISTANCE CENTER AT LEAST 30 DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONSTRUCTION ACTIVITY ANTICIPATED ON THIS PROJECT INCLUDES CLEARING, GRUBBING, GRADING, TOP SOILING AND SEEDING.
3. THE APPROXIMATE TOTAL AREA OF THE SITE IS 1.50 ACRES. THE APPROXIMATE TOTAL AREA OF GRADING PROPOSED IS 0.68 ACRES DISTURBED.
4. THE INCREASE IN POST-CONSTRUCTION IMPERVIOUS AREA IS 0.56ACRES. THE ESTIMATED VOLUME OF RUNOFF FROM THE SITE DUE TO A ONE INCH RAINFALL IS 0.04 ACRE-FEET.
5. THE ANTICIPATED FILL MATERIAL WILL CONSIST OF ON-SITE SOIL AND/OR SHOT ROCK MATERIALS.
6. THE RECEIVING WATER/STORM SEWER OPERATOR IS CITY OF LAVERGNE WATER SERVICES.
7. CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE EXPOSURE TIME OF CLEARED SURFACE AREA. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO EARTH MOVING OPERATIONS. ALL CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS NECESSARY, AND AT MAXIMUM 14 DAY CALENDAR DAYS IN DRY PERIODS AND WITHIN 24 HOURS AFTER ANY RAINFALL EXCEEDING 0.5 INCH WITHIN A 24 HOUR PERIOD.
8. THE CONTRACTOR SHALL DESIGNATE IN WRITING THE NAME AND PHONE NUMBER OF THE INDIVIDUAL RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS.
9. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE REMOVED MORE THAN 20 CALENDAR DAYS PRIOR TO GRADING. ALL GRADED AREAS EXPECTED TO REMAIN UNFINISHED FOR MORE THAN 15 CALENDAR DAYS SHALL BE COVERED WITH TEMPORARY GRASS, SOD, STRAW, MULCH OR FABRIC MATS. PERMANENT SOIL STABILIZATION SHALL BE INSTALLED WITHIN 15 CALENDAR DAYS OF FINAL GRADING.
10. THE CONTRACTOR SHALL MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS AND REPAIRS FOR A MINIMUM OF 3 YEARS AFTER CONSTRUCTION COMPLETION.
11. TEMPORARY SEEDING FOR TENNESSEE PROJECTS INCLUDE THE FOLLOWING OPTIONS:
    JAN 1 - MAY 1 ITALIAN RYE/KOREAN LESPEDEZA/SUMMER OATS
    MAY 1 - JULY 15 SUDAN OR STARR MILLET
    JULY 15 - JAN 1 BALBOA RYE/ITALIAN RYE
12. MULCHING SHALL CONSIST OF LOOSE HAY OR STRAW APPLIED AT THE RATE OF 2 TONS/ACRE.
13. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM TRAPS, SILT FENCES, SEDIMENT SWALES AND ETC. AS NECESSARY AND WHEN CAPACITY HAS BEEN REDUCED BY 50%.
14. STOCKPILES SHALL BE STABILIZED AND PROTECTED FROM EROSION.
15. THE CONTRACTOR IS TO PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH CITY OF LAVERGNE CP-10 AND CP-13 RESPECTIVELY. THE CONTRACTOR IS TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRE-CONSTRUCTION MEETING.
16. I CERTIFY UNDER PENALTY OF THE LAW THAT THESE STORM WATER POLLUTION PREVENTION PLANS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION, AND BY QUALIFIED PERSONNEL WHO PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTED FALSE INFORMATION, INCLUDING THE POSSIBILITY OF A FINE AND IMPRISONMENT.

Ali Koh — SIGNATURE
3/31/23 — DATE

GRADING / EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR KEEPING DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER METHODS.
2. ALL CUT AND FILL AREAS SHALL HAVE A MINIMUM OF 6" TOP SOIL, SHALL RECEIVE 12 POUNDS PER 1000 S.F. OF 6-12-12 FERTILIZER (UNLESS OTHERWISE SPECIFIED IN WRITTEN SPECIFICATIONS).
3. DISTURBED AREAS ARE TO BE GRADED TO DRAIN AS INDICATED IN THE PLAN TO SEDIMENT BARRIERS DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION AND LOCATION OF EXISTING UTILITIES.
5. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION.
6. ANY ACCESS ROAD TO THE SITE SHALL BE BASED ON CRUSHED ASTM #1 STONE, 100' LONG BY 20' WIDE AND 6" DEEP.
7. THE PLACING AND SPREADING IF ANY FILL MATERIAL IS TO BE STARTED AT THE LOWEST POINT AND BROUGHT TO HORIZONTAL LAYERS OF 8" LIFTS.
8. THE FILL MATERIALS TO BE FREE OF ROOTS, SOD, FROZEN SOIL OR DECOMPOSABLE MATERIALS.
9. FILL TO BE COMPACTED TO A MINIMUM IF 95% STANDARD PROCTOR.
10. ALL WORK TO BE PERFORMED AND COMPLETED IN ABSOLUTE COMPLIANCE WITH THE RULES AND REGULATIONS AS SET FORTH IN THE RUTHERFORD COUNTY / CITY OF LAVERGNE SPECIFICATIONS.
11. CONTRACTOR SHALL GIVE ALL NECESSARY NOTICE, OBTAIN ALL PERMITS AND PAY ANY FEES REQUIRED FOR THE COMPLETION OF HIS PORTION OF THE WORK. CONTRACTOR SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE LAWS AND ORDINANCES OR REGULATIONS RELATING TO HIS PORTION OF THE WORK.
12. ANY RETAINING WALL GREATER THAN 4' IN HEIGHT WILL REQUIRE A PEDESTRIAN BARRIER FOR SAFETY. SEE DETAIL SHEET FOR GUARDRAIL DETAIL.
13. ALL EROSION CONTROL MEASURES ARE TO BE REMOVED PRIOR TO AS-BUILT APPROVALS.
15. USE S150 STRAW BLANKETS FOR 3:1 GRADE SLOPES.GRADING PERMITTEE TO INCLUDE BMP'S DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND / OR NOTES REFERRING TO SAID BMP'S SHALL BE SHOWN ON THE EPSC PLAN.
16. STEEP SLOPES ARE TO BE STABILIZED WITHIN 7 DAYS OF FINAL GRADING.

Tennessee Construction Permit Notice of Coverage (NOC) Certification:

I hereby certify that this project does not require coverage under Tennessee Construction General Permit. The Total Disturbed Area is: 0.68 acres.

Check all that apply: This site discharges into waters identified by TDEC as:
☑ Impaired for siltation ☐ Impaired for habitat alterations ☐ Exceptional

Ali Koh — Signature
3/31/2023 — Date

Circle one: Developer (Project Engineer) Other _____

Note: Projects of one (1) or more acres require State permit coverage, while projects of less than one (1) acres do not require State permit coverage. Also, projects of less than one (1) acre that are part of a total development project of one (1) acres require State permit coverage.

LEGEND

○	Existing Iron Rod I.R.(O)
□	Existing Conc. Mon. C.M.(O)
●	Iron Rod (Set) I.R.(N)
⊗	Water Valve
⊠	Water Meter
	Fire Hydrant
Ø	Utility Pole
⟵	Anchor / guy wire
–W–	Water Line
-GAS-	Gas Line
-OHL-	Overhead Utility Line
CMP RCP	Corrugated Metal Pipe Reinforced Concrete Pipe
SS	Sanitary Sewer
R.O.W.	Right Of Way
	Hose Bibb (H.B.)
○ c.o.	Clean–Out

LINETYPE LEGEND

PROPERTY LINE	
1" WATER	1 W
WATER	W
FENCING	X
OVERHEAD ELECTRIC	OHE
SANITARY SEWER	SS
6" SANITARY SEWER	SS 6
STORM DRAIN PIPE	SD
SEDIMENT TUBES	ST
BUILDING OUTLINE	
SILT FENCING	SF
RIGHT OF WAY	
EXISTING MINOR CONTOURS	
EXIST. MAJOR CONTOURS	
PROPOSED CONTOURS	
CENTER OF ROAD	

AZIM TECH ENGINEERING, INC.
CONSULTING ENGINEERS
3360 Sawtelle Blvd #101
Los Angeles, CA 90066
Phone: (615) 347 7903
www.azimtech.com
azimtech.eng@gmail.com

PROJECT DESCRIPTION:
SEVENTH DAY ADVENTISTS
ADDITION TO EXISTING CHURCH
271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

S. ALI KOLENI — REGISTERED ENGINEER — AGRICULTURE — 3/31/23 — No. 119880 — STATE OF TENNESSEE

REV.	DESCRIPTION	DATE

DESIGNED BY : A.K.
DRAWN BY : R.L.
SCALE : 1" = 30'
PROJECT NO.
DATE : 3/31/2023
ISSUED FOR : FOR APPROVAL
DRAWING TITLE : EROISION & SEDIMENT CONTROL PLAN
DRAWING NO. C1.0

GRADING / EROSION CONTROL NOTES

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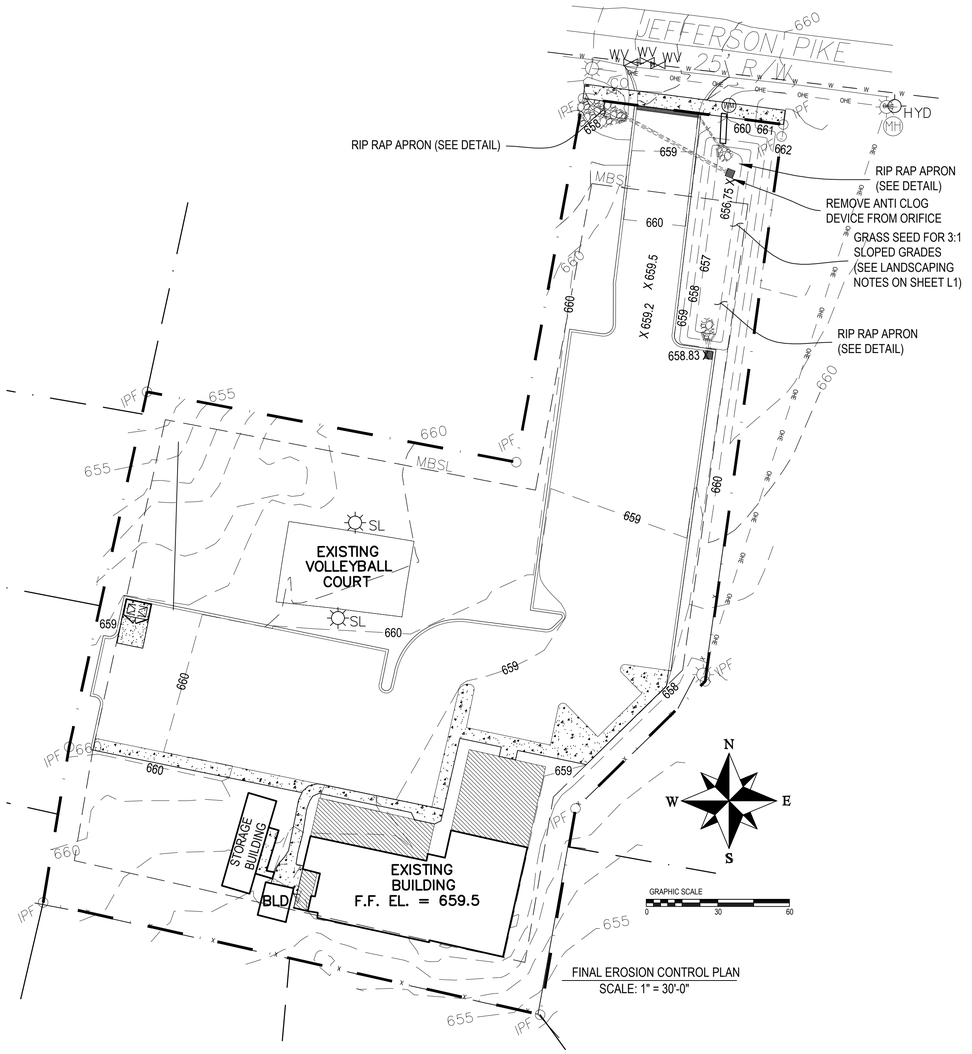
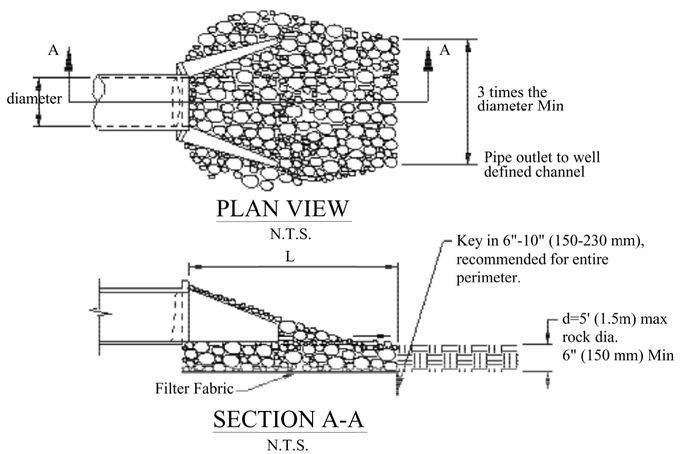


FINAL EROSION CONTROL PLAN
SCALE: 1" = 30'-0"



APRON OUTLET PROTECTION DETAILS

Pipe Diameter in (mm)	Discharge ft ^{3}/s (m^3 /s)	Apron Length, L ft (m)	Rip-Rap D_{50} Diameter Min in (mm)
12 (300)	4.9 (0.14)	10 (3)	4 (100)
	9.89 (0.28)	13 (4)	6 (150)
18 (450)	9.89 (0.28)	10 (3)	6 (150)
THIS SITE →	20.13 (0.57)	16 (5)	8 (200)
	30.01 (0.85)	23 (7)	12 (300)
	39.90 (1.13)	26 (8)	16 (400)
24 (600)	30.01 (0.85)	16 (5)	8 (200)
	39.90 (1.13)	26 (8)	8 (200)
	50.14 (1.42)	26 (8)	12 (300)
	60.03 (1.70)	30 (9)	16 (400)

APRON OUTLET PROTECTION SIZING CHART

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Ali Koh — SIGNATURE

3/31/23 — DATE

LEGEND

○	Existing Iron Rod I.R.(O)
□	Existing Conc. Mon. C.M.(O)
●	Iron Rod (Set) I.R.(N)
⊗	Water Valve
⊠	Water Meter
	Fire Hydrant
⌀	Utility Pole
⟵	Anchor / guy wire
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-GAS-	Gas Line
-OHL-	Overhead Utility Line
CMP RCP	Corrugated Metal Pipe Reinforced Concrete Pipe
SS	Sanitary Sewer
R.O.W.	Right Of Way
†	Hose Bibb (H.B.)
$O_{c.o.}$	Clean–Out

LINETYPE LEGEND

PROPERTY LINE	— · — · —
1" WATER	— 1 W —
WATER	— W — W —
FENCING	— X —
OVERHEAD ELECTRIC	— OHE —
SANITARY SEWER	— SS — SS —
6" SANITARY SEWER	— SS 6 — SS 6 —
STORM DRAIN PIPE	— SD — SD —
SEDIMENT TUBES	— ST — ST —
BUILDING OUTLINE	
SILT FENCING	— SF — SF —
RIGHT OF WAY	— · · —
EXISTING MINOR CONTOURS	- - - - - - - - - - - - - - -
EXIST. MAJOR CONTOURS	- - - - - - - - - - - - - - -
PROPOSED CONTOURS	———
CENTER OF ROAD	———

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CONSULTING ENGINEERS
3360 Sawtelle Blvd #101
Los Angeles, CA 90066
Phone: (615) 347 7903
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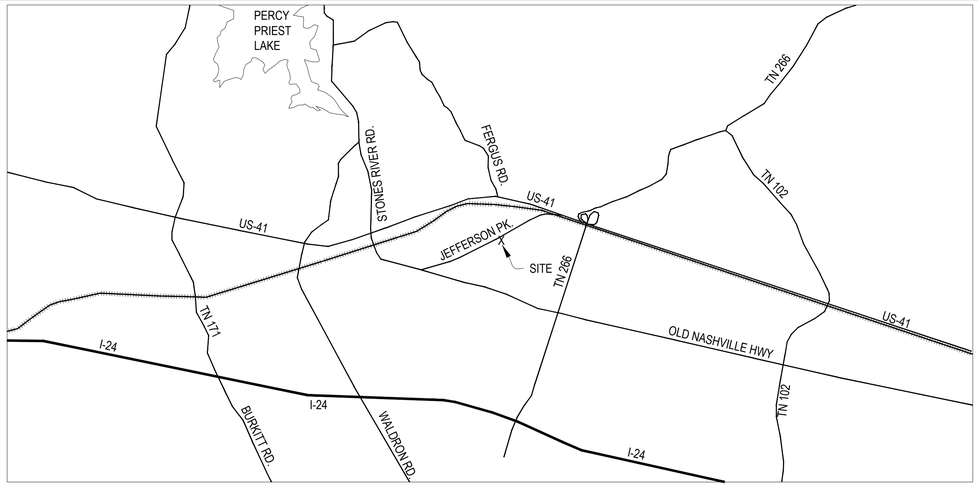
azimtech.eng@gmail.com

PROJECT DESCRIPTION:
SEVENTH DAY ADVENTISTS
ADDITION TO EXISTING CHURCH
271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

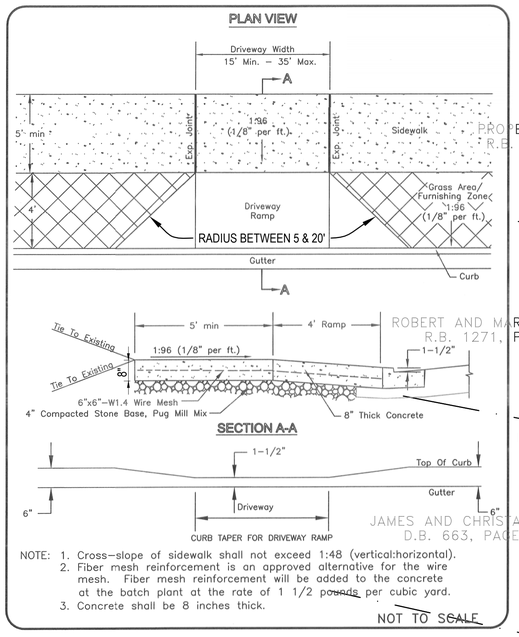
ALI KOLENI — REGISTERED ENGINEER — AGRICULTURE — No. 119939 — 3/31/23 — STATE OF TENNESSEE

DATE	DESCRIPTION	REV.

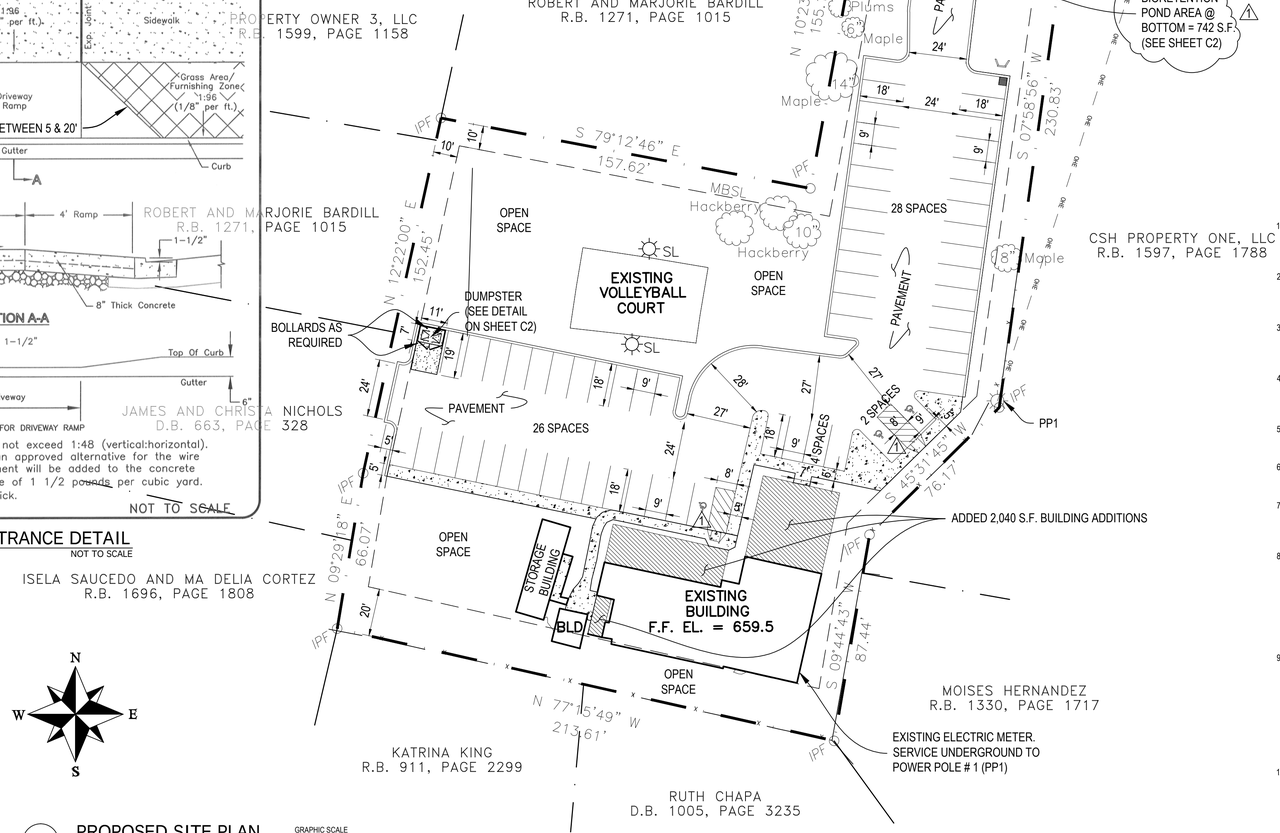
DESIGNED BY :	A.K.
DRAWN BY :	R.L.
SCALE :	1" = 30'
PROJECT NO.	
DATE :	3/31/2023
ISSUED FOR :	FOR APPROVAL
DRAWING TITLE :	FINAL EROSION CONTROL PLAN
DRAWING NO.	C1.1



VICINITY MAP
NOT TO SCALE



2 DRIVEWAY ENTRANCE DETAIL
NOT TO SCALE



1 PROPOSED SITE PLAN
Scale: 1:30

GRAPHIC SCALE
0 30 60

DEVELOPMENT / SITE DATA

1) THE PURPOSE OF THIS SITE PLAN IS TO ADD TO THE EXISTING BUILDING FOR GROWTH.

2) SUBJECT PROPERTY IS PARCEL #: 018 01801 & PRESENTLY ZONED R-2.
THE INTENDED USE OF A RELIGIOUS INSTITUTION IS PERMITTED.

3) THE SUBJECT PROPERTY IS NOT AFFECTED BY THE 100 YEAR FLOOD PLAIN BASED ON INFORMATION TAKEN FROM F.E.M.A FLOOD ZONE MAP # 47149C0020J EFFECTIVE DATE: 10/16/2008 ZONE "X"

4) MINIMUM REQUIRED SETBACKS :

a.	FRONT	35'	JEFFERSON PIKE
b.	RIGHT SIDE	10'	
c.	LEFT SIDE	10'	
d.	REAR	20'	

5) LOT AREA: 65,432 SQ. FT. 1.50 ± ACRE

6) PROPOSED SITE COVERAGE:

		TOTAL	EXISTING	ADDED
a.	BUILDING AREA	4,940 SQ. FT.	2900	2040
b.	ASPHALT PARKING & SIDEWALKS	24,143 SQ. FT.	785	23358
c.	LANDSCAPE	36,349 SQ. FT.		
d.	IMPERVIOUS AREA	29,083 SQ. FT.		

7) PARKING TABULATION:

a.	CHURCHES OR RELIGIOUS USES W/ NO PERMANENT SEATS					
b.	1 PER 50 S.F. OF ASSEMBLY AREA	2,666 S.F.	÷	50 =	53.3 OR 54	SPACES REQUIRED
c.	TOTAL PARKING SPACES REQUIRED =				54	SPACES REQUIRED

8) PROPOSED BUILDING EAVE HEIGHT 25 FT. ABOVE ADJACENT GRADE < 35'

10) MAX FLOOR AREA RATIO (FAR) 0.075 = 7.5 % < 60.0 %

11) MAX IMPERVIOUS AREA RATIO (ISR) 0.444 = 44.4 % < 90.0 %

12) LANDSCAPE AREA RATIO (LAR) 0.556 = 55.6 % > 10.0 %

13) PLEASE SEND ALL CORRESPONDENCE TO ENGINEER:
S. ALI KOLEINI, P.E. & / OR ROLANDO S. AQUINO P.E.
3360 SAWTELLE BLVD. # 101
LOS ANGELES, CA 90066
OFFICE PHONE: (615) 299-7388

GENERAL NOTES

1. THE CONTRACTOR IS TO CHECK AND VERIFY ALL BOUNDARY SURVEY, CORNERS, SETBACKS MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR SAME.
2. ALL TREES, STUMPS, OBSTRUCTIONS, ETC. REMOVE FROM THE RIGHT-OF-WAY AND BORROW AREAS ARE TO BE DISPOSED OF BY CONTRACTOR AS APPROVED BY THE OWNER, SO AS TO CAUSE NO POLLUTION TO THE ENVIRONMENT.
3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE DAMAGE OR LOSS OF ANY REFERENCE POINTS, MONUMENTS, HUBS, AND STAKED LOT CORNERS DURING THE CONSTRUCTION OF HIS WORK AND SHALL BEAR THE COST OF REPLACING SAME.
4. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, BUILDINGS, ETC. WHICH ARE TO REMAIN AND NOT BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.
5. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS, AND PAY LEGAL FEES. HE SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE BUILDING LAWS, ORDINANCES, OR REGULATIONS.
6. THE CONTRACTOR MUST UNDERSTAND THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SAME IS ACCEPTED AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
8. THE CONTRACTOR SHALL PROVIDE SUCH BRACING, SHEETING AND SHORING, BLASTING PROTECTION WARNING LIGHTS AND BARRICADES, ETC. AS MANY AS MAY BE NECESSARY FOR THE PROTECTION SHALL COMPLY WITH ALL APPLICABLE SAFETY STATUTES AND RULES REQUIRING CERTAIN OF LIFE AND PROPERTY FOR HIS OWN EMPLOYEES AND THE GENERAL PUBLIC. THE CONTRACTOR SHALL PROVIDE PROTECTIVE PERSONAL APPAREL SUCH AS HARD HATS, EAR PLUGS, EYE SHIELDS, PROTECTIVE SHOES, ETC. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY OR LIABILITY FOR ACTIONS TAKEN BY THE CONTRACTOR ENDANGERING LIFE AND PROPERTY.
9. THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF THE ABOVE NOTED WIRES THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT EACH OF THE UTILITY COMPANIES AND TENNESSEE "ONE CALL" (800) 351-1111 PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF APPROACH TO SUCH LINES.
10. THE OWNER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR THE POSSIBILITY THAT DURING CONSTRUCTION UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED OR THAT ACTUAL LOCATION OF THOSE SHOWN MAY BE DIFFERENT FROM LOCATIONS DESIGNATED ON THE CONTRACT DRAWINGS. IN AREAS WHERE IT IS NECESSARY THAT EXACT LOCATIONS BE KNOWN OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, FURNISH ALL LABOR AND TOOLS TO EITHER VERIFY AND SUBSTANTIATE OR DEFINITELY ESTABLISH THE POSITION OF UNDERGROUND UTILITIES.
11. THE CONTRACTOR'S AUTHORIZED FIELD REPRESENTATIVE SHALL CONTACT TENNESSEE ONE CALL 800-351-1111 FOR MARKING ALL UTILITY LINES LOCATIONS BEFORE PERFORMING ANY DIGGING.
12. ALL EROSION CONTROL MEASURES ARE TO BE REMOVED PRIOR TO AS-BUILT APPROVALS.

LEGEND

○	Existing Iron Rod I.R.(O)
□	Existing Conc. Mon. C.M.(O)
●	Iron Rod (Set) I.R.(N)
⊗	Water Valve
⊠	Water Meter
⊕	Fire Hydrant
Ø	Utility Pole
⟵	Anchor / guy wire
–W–	Water Line
-GAS-	Gas Line
-OHL-	Overhead Utility Line
CMP RCP	Corrugated Metal Pipe Reinforced Concrete Pipe
SS	Sanitary Sewer
R.O.W.	Right Of Way
†	Hose Bibb (H.B.)
○c.o	Clean–Out

LINETYPE LEGEND

PROPERTY LINE	— · — · —
1" WATER	— 1 W —
WATER	— W — W —
FENCING	— X —
OVERHEAD ELECTRIC	— OHE —
SANITARY SEWER	— SS — SS —
6" SANITARY SEWER	— SS 6 — SS 6 —
STORM DRAIN PIPE	— SD — SD —
SEDIMENT TUBES	— ST — ST —
BUILDING OUTLINE	
SILT FENCING	— SF — SF —
RIGHT OF WAY	— · · —
EXISTING MINOR CONTOURS	- - - - - - - - - -
EXIST. MAJOR CONTOURS	- - - - - - - - - -
PROPOSED CONTOURS	———
CENTER OF ROAD	———

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CONSULTING ENGINEERS
3360 Sawtelle Blvd #101
Los Angeles, CA 90066
Phone: (615) 347 7903
www.azimtech.com
azimtech.eng@gmail.com

PROJECT DESCRIPTION:
SEVENTH DAY ADVENTISTS
ADDITION TO EXISTING CHURCH
271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

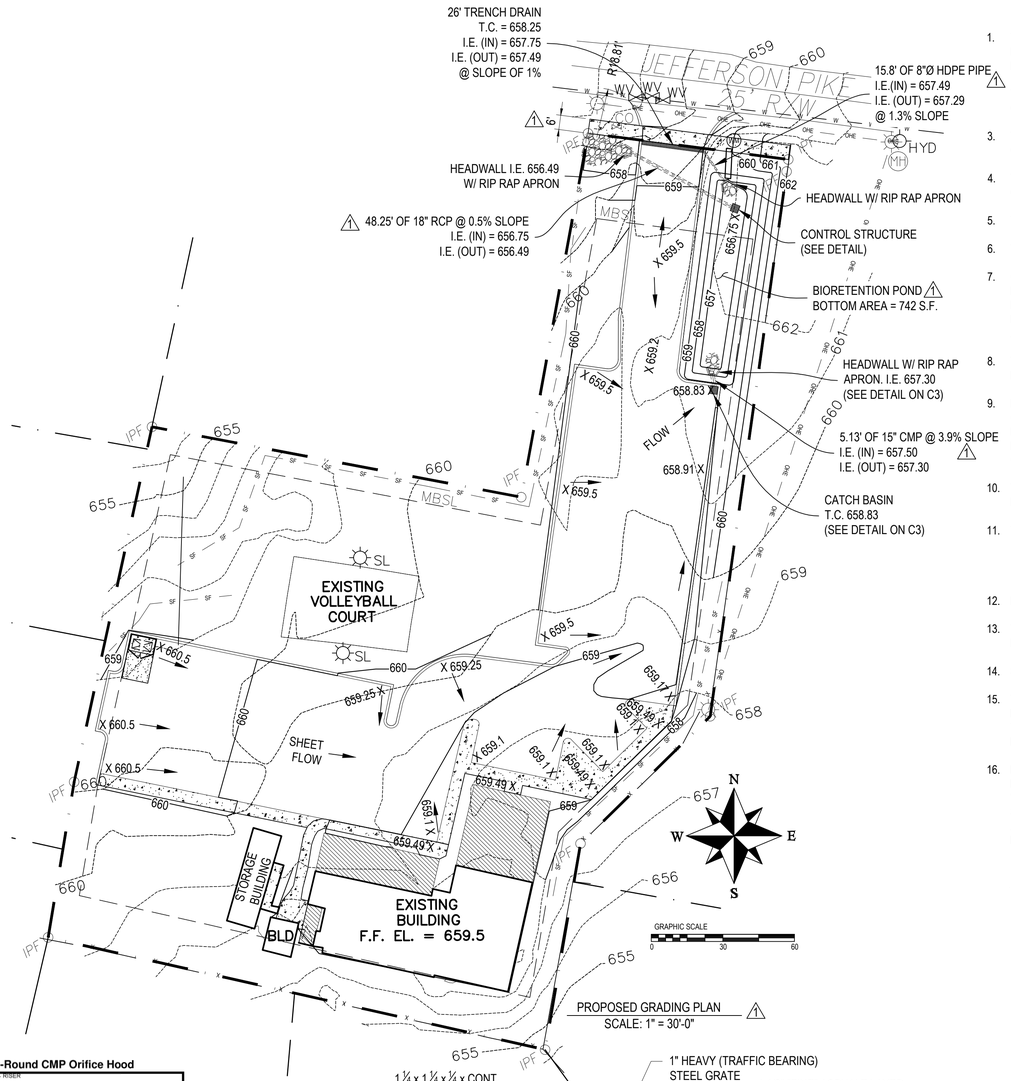
S. ALI KOLEINI REGISTERED ENGINEER AGRICULTURE COMMERCE No. 119690 STATE OF TENNESSEE 3/31/23

REV.	DESCRIPTION	DATE
1	REVISED PER WORKSHOP COMMENTS 1-17-23	1/19/2023

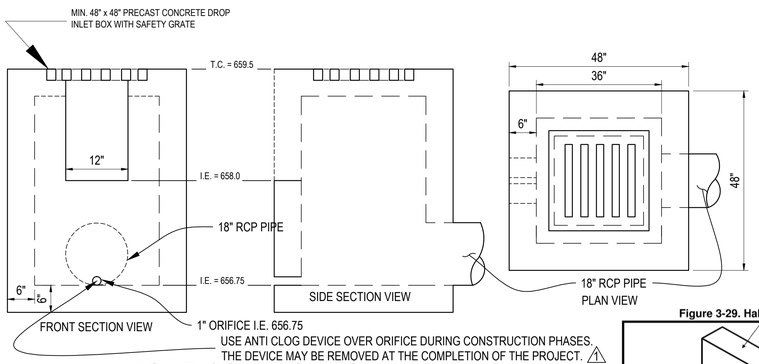
DESIGNED BY : A.K.
DRAWN BY : R.L.
SCALE : 1" = 30'
PROJECT NO.
DATE : 3/31/2023
ISSUED FOR : FOR APPROVAL
DRAWING TITLE : PROPOSED SITE PLAN
DRAWING NO. C1.2

GRADING / EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR KEEPING DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER METHODS.
2. ALL CUT AND FILL AREAS SHALL HAVE A MINIMUM OF 6" TOP SOIL, SHALL RECEIVE 12 POUNDS PER 1000 S.F. OF 6-12-12 FERTILIZER (UNLESS OTHERWISE SPECIFIED IN WRITTEN SPECIFICATIONS).
3. DISTURBED AREAS ARE TO BE GRADED TO DRAIN AS INDICATED IN THE PLAN TO SEDIMENT BARRIERS DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION AND LOCATION OF EXISTING UTILITIES.
5. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION.
6. ANY ACCESS ROAD TO THE SITE SHALL BE BASED ON CRUSHED ASTM #1 STONE, 100' LONG BY 20' WIDE AND 6" DEEP.
7. THE PLACING AND SPREADING IF ANY FILL MATERIAL IS TO BE STARTED AT THE LOWEST POINT AND BROUGHT TO HORIZONTAL LAYERS OF 8" LIFTS.
8. THE FILL MATERIALS TO BE FREE OF ROOTS, SOD, FROZEN SOIL OR DECOMPOSABLE MATERIALS.
9. FILL TO BE COMPACTED TO A MINIMUM IF 95% STANDARD PROCTOR.
10. ALL WORK TO BE PERFORMED AND COMPLETED IN ABSOLUTE COMPLIANCE WITH THE RULES AND REGULATIONS AS SET FORTH IN THE RUTHERFORD COUNTY / CITY OF LAVERGNE SPECIFICATIONS.
11. CONTRACTOR SHALL GIVE ALL NECESSARY NOTICE, OBTAIN ALL PERMITS AND PAY ANY FEES REQUIRED FOR THE COMPLETION OF HIS PORTION OF THE WORK. CONTRACTOR SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE LAWS AND ORDINANCES OR REGULATIONS RELATING TO HIS PORTION OF THE WORK.
12. ANY RETAINING WALL GREATER THAN 4' IN HEIGHT WILL REQUIRE A PEDESTRIAN BARRIER FOR SAFETY. SEE DETAIL SHEET FOR GUARDRAIL DETAIL.
13. ALL EROSION CONTROL MEASURES ARE TO BE REMOVED PRIOR TO AS-BUILT APPROVALS.
15. USE S150 STRAW BLANKETS FOR 3:1 GRADE SLOPES.GRADING PERMITTEE TO INCLUDE BMP'S DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND / OR NOTES REFERRING TO SAID BMP'S SHALL BE SHOWN ON THE EPSC PLAN.
16. STEEP SLOPES ARE TO BE STABILIZED WITHIN 7 DAYS OF FINAL GRADING.



PROPOSED GRADING PLAN
SCALE: 1" = 30'-0"



POND CONTROL BOX DETAIL

SCALE: N.T.S.

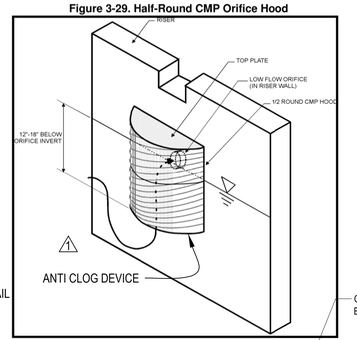
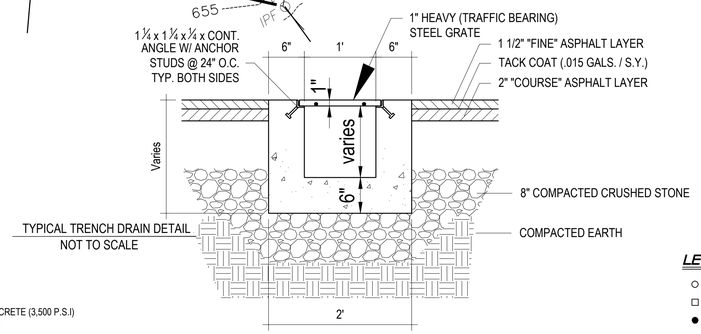
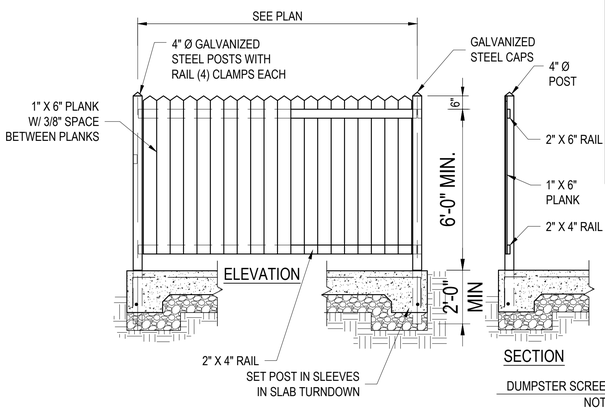


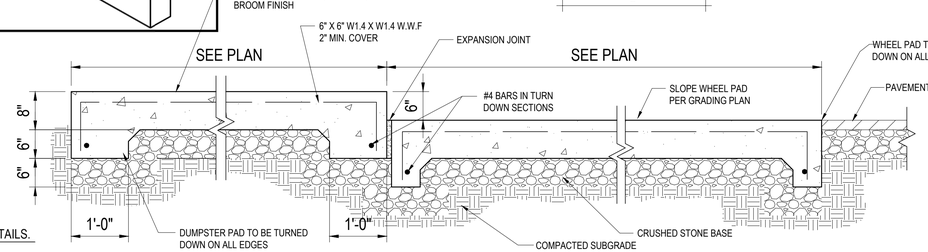
Figure 3-29. Half-Round CMP Orifice Hood



TYPICAL TRENCH DRAIN DETAIL
NOT TO SCALE



DUMPSTER SCREENING & SECTION DETAILS.
NOT TO SCALE



STORM WATER POLLUTION PREVENTION NOTES (TENNESSEE)

1. THE OWNER AND THE CONTRACTOR ARE REQUIRED TO SUBMIT A NOTICE OF INTENT (NOI) TO DISCHARGE CONSTRUCTION-ACTIVITY STORM WATER APPLICATION TO THE LOCAL TENNESSEE ENVIRONMENTAL ASSISTANCE CENTER AT LEAST 30 DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONSTRUCTION ACTIVITY ANTICIPATED ON THIS PROJECT INCLUDES CLEARING, GRUBBING, GRADING, TOP SOILING AND SEEDING.
3. THE APPROXIMATE TOTAL AREA OF THE SITE IS 1.50 ACRES. THE APPROXIMATE TOTAL AREA OF GRADING PROPOSED IS 0.68 ACRES DISTURBED.
4. THE INCREASE IN POST-CONSTRUCTION IMPERVIOUS AREA IS 0.56ACRES. THE ESTIMATED VOLUME OF RUNOFF FROM THE SITE DUE TO A ONE INCH RAINFALL IS 0.04 ACRE-FEET.
5. THE ANTICIPATED FILL MATERIAL WILL CONSIST OF ON-SITE SOIL AND/OR SHOT ROCK MATERIALS.
6. THE RECEIVING WATER/STORM SEWER OPERATOR IS CITY OF LAVERGNE WATER SERVICES.
7. CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE EXPOSURE TIME OF CLEARED SURFACE AREA. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO EARTH MOVING OPERATIONS. ALL CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS NECESSARY, AND AT MAXIMUM 14 DAY CALENDAR DAYS IN DRY PERIODS AND WITHIN 24 HOURS AFTER ANY RAINFALL EXCEEDING 0.5 INCH WITHIN A 24 HOUR PERIOD.
8. THE CONTRACTOR SHALL DESIGNATE IN WRITING THE NAME AND PHONE NUMBER OF THE INDIVIDUAL RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS.
9. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE REMOVED MORE THAN 20 CALENDAR DAYS PRIOR TO GRADING. ALL GRADED AREAS EXPECTED TO REMAIN UNFINISHED FOR MORE THAN 15 CALENDAR DAYS SHALL BE COVERED WITH TEMPORARY GRASS, SOD, STRAW, MULCH OR FABRIC MATS. PERMANENT SOIL STABILIZATION SHALL BE INSTALLED WITHIN 15 CALENDAR DAYS OF FINAL GRADING.
10. THE CONTRACTOR SHALL MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS AND REPAIRS FOR A MINIMUM OF 3 YEARS AFTER CONSTRUCTION COMPLETION.
11. TEMPORARY SEEDING FOR TENNESSEE PROJECTS INCLUDE THE FOLLOWING OPTIONS:
    JAN 1 - MAY 1 ITALIAN RYE/KOREAN LESPEDEZA/SUMMER OATS
    MAY 1 - JULY 15 SUDAN OR STARR MILLET
    JULY 15 - JAN 1 BALBOA RYE/ITALIAN RYE
12. MULCHING SHALL CONSIST OF LOOSE HAY OR STRAW APPLIED AT THE RATE OF 2 TONS/ACRE.
13. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM TRAPS, SILT FENCES, SEDIMENT SWALES AND ETC. AS NECESSARY AND WHEN CAPACITY HAS BEEN REDUCED BY 50%.
14. STOCKPILES SHALL BE STABILIZED AND PROTECTED FROM EROSION.
15. THE CONTRACTOR IS TO PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH CITY OF LAVERGNE CP-10 AND CP-13 RESPECTIVELY. THE CONTRACTOR IS TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRE-CONSTRUCTION MEETING.
16. I CERTIFY UNDER PENALTY OF THE LAW THAT THESE STORM WATER POLLUTION PREVENTION PLANS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION, AND BY QUALIFIED PERSONNEL WHO PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTED FALSE INFORMATION, INCLUDING THE POSSIBILITY OF A FINE AND IMPRISONMENT.

Ali Koh — 3/31/23
SIGNATURE — DATE

Tennessee Construction Permit Notice of Coverage (NOC) Certification:

I hereby certify that this project does not require coverage under Tennessee Construction General Permit. The Total Disturbed Area is: 0.68 acres.

Check all that apply: This site discharges into waters identified by TDEC as:
☑ Impaired for siltation ☐ Impaired for habitat alterations ☐ Exceptional

Ali Koh — 3/31/2023
Signature — Date

Circle one: Developer (Project Engineer) Other _____

Note: Projects of one (1) or more acres require State permit coverage, while projects of less than one (1) acres do not require State permit coverage. Also, projects of less than one (1) acre that are part of a total development project of one (1) acres require State permit coverage.

LINETYPE LEGEND

PROPERTY LINE	——— . ——— . ———
1" WATER	——— 1 W ———
WATER	— W — W —
FENCING	——— X ———
OVERHEAD ELECTRIC	——— OHE ———
SANITARY SEWER	— SS — SS —
6" SANITARY SEWER	— SS 6 — SS 6 —
STORM DRAIN PIPE	— SD — SD —
SEDIMENT TUBES	— ST — ST —
BUILDING OUTLINE	———
SILT FENCING	— SF — SF —
RIGHT OF WAY	———
EXISTING MINOR CONTOURS	----------
EXIST. MAJOR CONTOURS	----------
PROPOSED CONTOURS	———
CENTER OF ROAD	———

LEGEND

○	Existing Iron Rod I.R.(O)
□	Existing Conc. Mon. C.M.(O)
●	Iron Rod (Set) I.R.(N)
⊗	Water Valve
⊠	Water Meter
⊕	Fire Hydrant
∅	Utility Pole
⟵	Anchor / guy wire
— W —	Water Line
-GAS-	Gas Line
-OHL-	Overhead Utility Line
CMP	Corrugated Metal Pipe
RCP	Reinforced Concrete Pipe
SS	Sanitary Sewer
R.O.W.	Right Of Way
†	Hose Bibb (H.B.)
○ co	Clean-Out

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CONSULTING ENGINEERS
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Los Angeles, CA 90066
Phone: (615) 347 7903
www.azimtech.com
azimtech.engr@gmail.com

PROJECT DESCRIPTION:

SEVENTH DAY ADVENTISTS

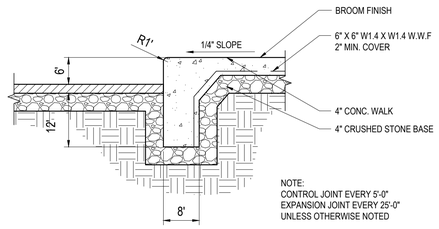
ADDITION TO EXISTING CHURCH

271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

ALI KOUEINI — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 119930 — STATE OF TENNESSEE — 3/31/23

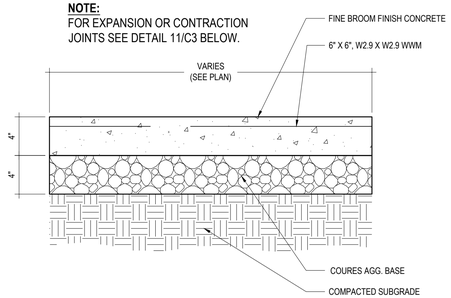
REV.	DESCRIPTION	DATE
	REVISED PER PLANNING WORKSHOP COMMENTS 1.17.23	1/19/2023

DESIGNED BY : A.K.
DRAWN BY : R.I.
SCALE : 1" = 30'
PROJECT NO.
DATE : 3/31/2023
ISSUED FOR : FOR APPROVAL
DRAWING TITLE : PROPOSED GRADING SITE PLAN
DRAWING NO. C2



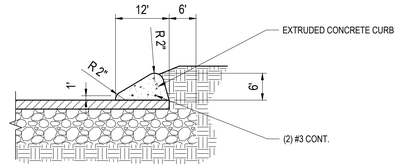
1 C1.1 TURN DOWN CURB @ WALK

SCALE: N.T.S.



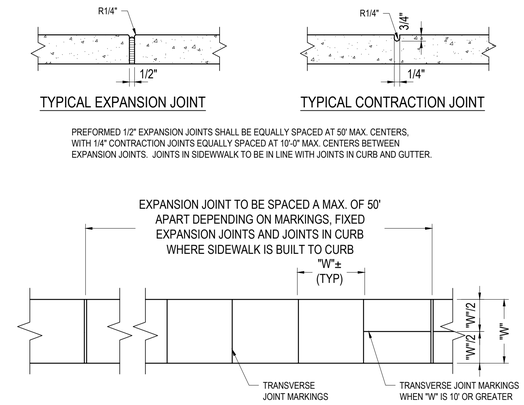
2 C1.1 DETAIL @ TYP. CONCRETE WALK

SCALE: N.T.S



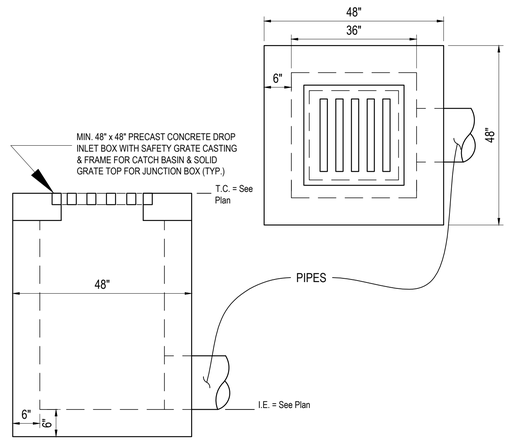
3 C1.1 EXTRUDED CURB DETAIL

SCALE: 3/4" = 1'-0"



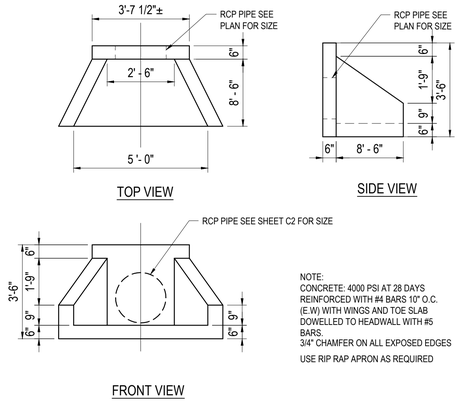
4 C1.1 SIDEWALK JOINT DETAILS

N.T.S



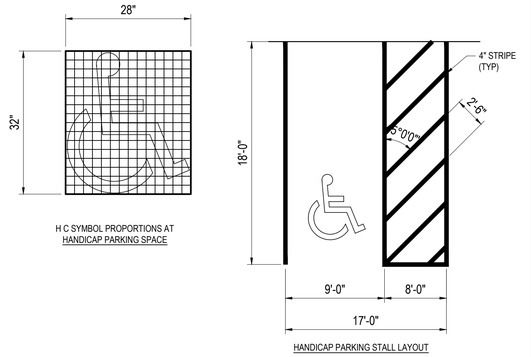
5 C2 TYP. INLET & JUNCTION BOX DETAIL

SCALE: N.T.S.



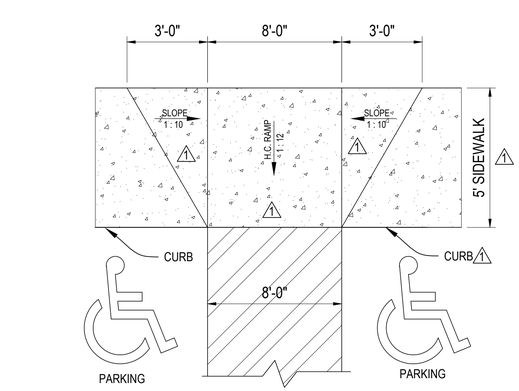
6 C2 DETAIL @ CONCRETE HEADWALLS

SCALE: N.T.S.



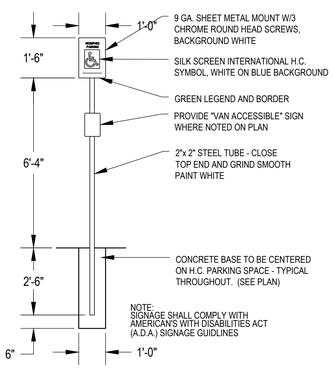
7 C1.1 HANDICAP STALL PARKING

SCALE: N.T.S



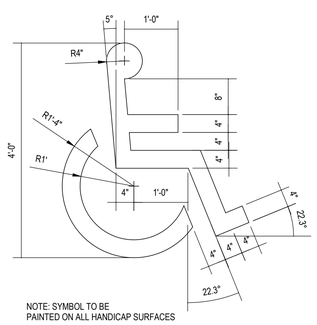
⚠1 8 C1.1 DETAIL @ HANDICAP RAMP

SCALE: N.T.S.



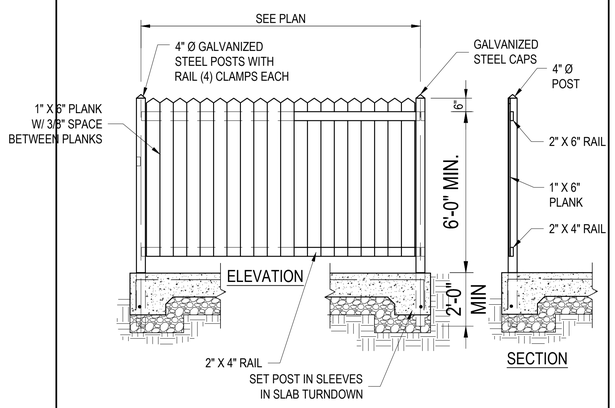
9 C1.1 EXTERIOR HANDICAP SIGN

SCALE: N.T.S.



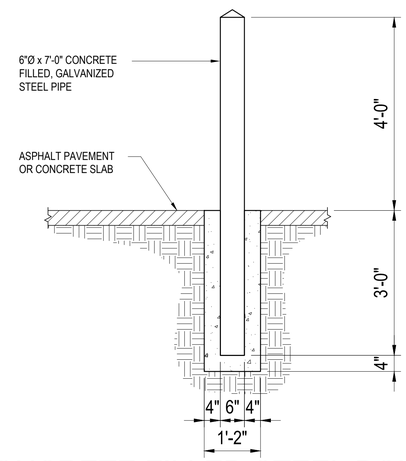
10 C1.1 PAINTED HANDICAP SYMBOL

SCALE: N.T.S.



11 C1.1 DUMPSTER ENCLOSURE

SCALE: N.T.S.



12 C1.1 CONCRETE FILLED STEEL BOLLARD

NOT TO SCALE

AZIM TECH ENGINEERING, INC.
CONSULTING ENGINEERS
3360 Sawtelle Blvd #101
Los Angeles, CA 90066
Phone: (615) 347 7903
www.azimtech.com
azimtech.engr@gmail.com

PROJECT DESCRIPTION:

SEVENTH DAY ADVENTISTS

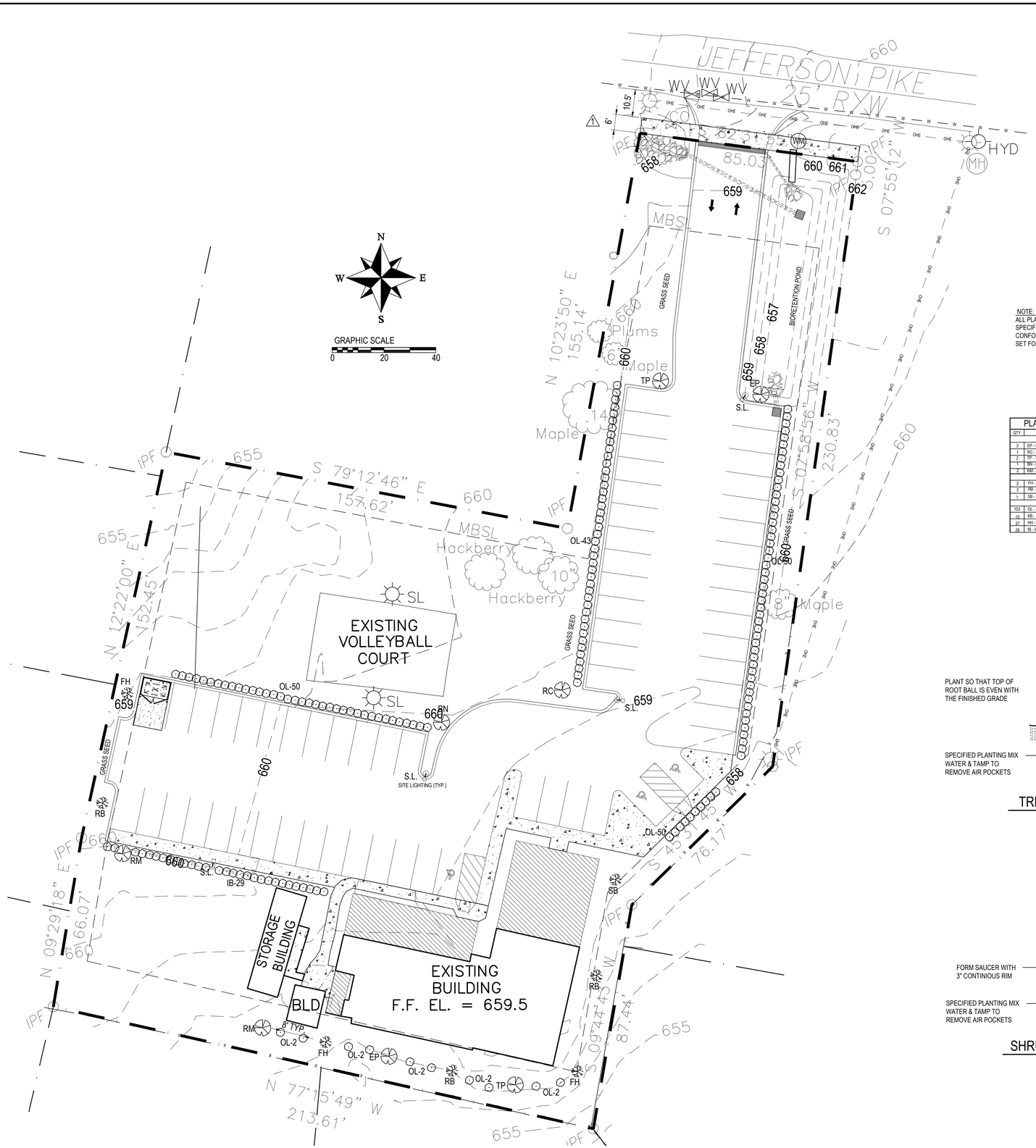
ADDITION TO EXISTING CHURCH

271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

ALI KOLEINI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 119930
3/31/23
STATE OF TENNESSEE

REV.	DESCRIPTION	DATE
1	REVISED PER WORKSHOP COMMENTS 1-17-23	1/19/2023

DESIGNED BY : A.K.
DRAWN BY : R.L.
SCALE : VARIES AS NOTED
PROJECT NO.
DATE : 3/31/2023
ISSUED FOR : FOR APPROVAL
DRAWING TITLE : SITE PLAN DETAILS
DRAWING NO. C3



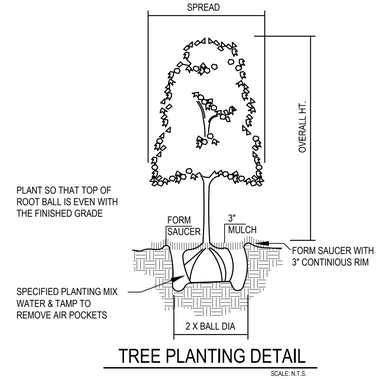
NOTE:
ALL PLANT MATERIAL SPECIFIED HEREON SHALL CONFORM TO THE STANDARDS SET FORTH IN ANSI Z60.1-2004

PLANT LEGEND

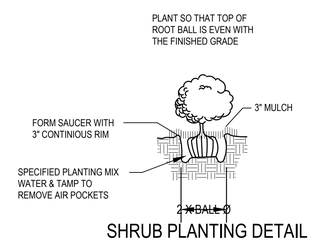
SHRUBS 2'x3' SPREAD	
SHRUBS 3'x3' SPREAD	
UNDERSTORY TREES	
CANOPY TREES (N/A)	
EXISTING TREES (N/A)	

PLANT LIST

QTY.	SPECIES	AT PLANTING MIN. CAL.	AT PLANTING MIN. HT.	SPACING	NOTES AND / OR REMARKS
	CANOPY TREES				
2	EP - Eastern White Pine 'Pinus Strobus' Canopy Evergreen	2"	8'	See Plan	Per ANSI Z60.1-2004
1	RC - Red Cedar 'Juniperus Virginiana' Canopy Evergreen	2"	8'	See Plan	Per ANSI Z60.1-2004
2	TP - Tulip Tree 'Liriodendron Tulipifera' Canopy Deciduous	2"	8'	See Plan	Per ANSI Z60.1-2004
1	BN - River Birch, 'Betula Nigra' Canopy/Deciduous	2"	8'	See Plan	Per ANSI Z60.1-2004
2	RM - Red Maple, 'Acer Rubrum' Canopy Deciduous	2"	8'	See Plan	Per ANSI Z60.1-2004
	UNDERSTORY TREES				
3	FH - Foster Holly 'Ilex x Attenuata Fosteri' Understory Evergreen	2"	6'	See Plan	Per ANSI Z60.1-2004
3	RB - Redbud 'Cercis Canadensis' Understory Deciduous	2"	6'	See Plan	Per ANSI Z60.1-2004
1	SB - SERVICEBERRY (AMELEANCHIER CANADENSIS) (understory)	2"	6'	See Plan	Per ANSI Z60.1-2004
	SHRUBS				
103	OL - Cherry Laurel 'Prunus Laurogerasus Otto Luyken' Shrub Evergreen		2'	3' APART	Grp as Shown
93	KB - Korean Boxwood 'Buxus Sinica Var. Insularis Wintergreen' Shrub Evergreen		2'	3' APART	Grp as Shown
37	HH - Holly 'Ilex x Meserveae Hachfee Castle Spire' Large Shrub Evergreen		2'	3' APART	Grp as Shown
29	IB - Inkberry 'Ilex Glabra' Shrub Evergreen		2'	3' APART	Grp as Shown



TREE PLANTING DETAIL
SCALE: N.T.S.



SHRUB PLANTING DETAIL
SCALE: N.T.S.

LANDSCAPE NOTES AND SPECIFICATIONS

NOTE TO THE LANDSCAPE CONTRACTOR: READ THE NOTES AND PLANT LIST. INSTALL DESIGN AS SHOWN ON THE PLANS. DO NOT SUBSTITUTE PLANT MATERIALS OR OTHERWISE DIVIATE FROM THE PLANS WITHOUT PRIOR APPROVAL. PLANT MATERIAL SHALL CONFORM TO THE STANDARDS SET FORTH IN ANSI Z60.1-2004.

1. SEEDING: All areas disturbed by construction not shown as building, pavement, sod, ground covers, or shrubs shall be seeded with the seed/amendment mix specified at the rate of 11 lbs. per 1,000 sq. ft.. Areas to be seeded shall be leveled to an even, uniform appearance prior to seeding. Fertilizer and agricultural limestone in the specified amounts shall be scarified to a depth of 4 inches except in areas that are hard and compacted. Compacted areas such as those areas that have been used for temporary vehicular access and are deeply compacted shall be scarified to a minimum depth of 8 inches. All stones, brick, sticks, and other foreign materials larger than 1 inch by 1 inch shall be removed from the seedbed surface before seeding. Seed shall be raked into the top 1/4 inch of soil and shall be mulched as specified. Specifications Per 1,000 Square Feet of Seeded Area:

On Site Mix per 1,000 Square Feet
- 3 lbs. Bonanza KY-31 Fescue
- 3 lbs. Rebel II KY-31 Fescue
- 8 lbs. Anthem KY-31 Fescue
- 1/2 lb. Kentucky Bluegrass
- 1 1/2 lbs. Annual Ryegrass

Fertilizer - 10 lbs of 10-10-10
Agricultural Limestone - 75 lbs.
Mulch - 2 1/2 Bales of Cereal Grain Straw

2. Areas to be seeded are indicated on the plans. Sod shall have a similar grass mix as the "On Site Mix" shown above. The Contractor shall submit a list of the seed mix and a sample of the sod to the Owner's Representative for approval prior to delivery of any sod to the site. All stones, brick, sticks, and other foreign materials larger than 1 inch by 1 inch shall be removed from the sod bed surface before placing sod.

3. No substitutions or other deviations from the plans shall be permitted without written permission from the Landscape Architect or Owner's Representative.

4. Any series of trees or shrubs proposed to be placed in a particular arrangement will be field checked for accuracy. The Contractor shall relocate any plants not appropriately arranged.

5. Soil used in backfilling planting pits shall be 4 parts topsoil, 1 part sphagnum peat moss and 1 part sand. The backfilling soil shall be thoroughly mixed using a rotary tiller prior to being placed in the planting pit.

6. Upon securing plant material and before installation, the Contractor shall notify the Owner's Representative for a pre-installation inspection to assure that all plant materials meet specifications.

7. Pre-emergent (Treflan or equivalent) shall be applied to plant bed prior to installation of mulch.

8. All plants shall have a minimum of 3 inches of shredded hardwood bark mulch. The Contractor shall submit a sample of the mulch to the Owner's Representative for approval prior to delivery of any mulch to the site. The mulch shall extend 12 inches beyond the planting pit for individually planted trees. Mulch shall extend 18 inches beyond shrub and ground cover beds. All shrubs shall be planted and mulched in continuous beds. The size of planting pits are shown in the details.

9. Proposed trees shall be staked according to the planting details.

10. Dimensions for height, spread, and trunk caliper on the material schedule are a guide for the minimum desired size of each plant. The dimensions given for the caliper shall always take preference over the other dimensions.

11. The Quantities indicated on the material schedule (Plant List) are provide for the benefit of the Contractor but should not be assumed to always be correct. In the event of any discrepancy, the planting shown on the plans will take precedence over the material schedule. The Contractor shall be responsible for his own quantity calculations and the liability pertaining to those quantities and any related Contract Documents and/or price quotations.

12. WATERING: All trees and shrubs shall be thoroughly watered after pits are backfilled two-thirds full. Water again after the pits are completely backfilled.

13. All plants shall be grade No. 1, properly formed to the species, true to the name as designated in the Standardized Plant Names, current edition, published by the American Joint Committee on Horticulture Nomenclature. The varieties not included are generally in conformity with names accepted in the trade. All plants shall be nursery grown, free from insects, insect eggs, scale, fungus, or disease. All plants shall meet the standard of size, culture, and quality for the highest grades and standards as adopted by the American Nursery and Landscape Association. All plants shall be planted where designated on the Planting Plan.

14. PLANT GUARANTEE AND REPLACEMENT: Plants shall be guaranteed for a period of one year from the date of final acceptance. Any plant that is not in satisfactory condition shall be removed and replaced. The cost of replacement shall be borne by the Landscape Contractor except for possible replacements resulting from removal of any part, vandalism, or acts of neglect on the part of others.

LEGEND

○	Existing Iron Rod I.R.(O)
□	Existing Conc. Mon. C.M.(O)
●	Iron Rod (Set) I.R.(N)
⊗	Water Valve
⊠	Water Meter
	Fire Hydrant
⌀	Utility Pole
⟵	Anchor / guy wire
— W —	Water Line
-GAS-	Gas Line
-OHL-	Overhead Utility Line
CMP	Corrugated Metal Pipe
RCP	Reinforced Concrete Pipe
SS	Sanitary Sewer
R.O.W.	Right Of Way
	Hose Bibb (H.B.)
C.O.	Clean-Out
	SITE LIGHTING (S.L.) POLE MOUNT
	SITE LIGHTING (S.L.) WALL MOUNT

LINETYPE LEGEND

PROPERTY LINE	— · — · —
1" WATER	— 1 W —
WATER	— W — W —
FENCING	— X —
OVERHEAD ELECTRIC	— OHE —
SANITARY SEWER	— SS — SS —
6" SANITARY SEWER	— SS 6 — SS 6 —
STORM DRAIN PIPE	— SD — SD —
SEDIMENT TUBES	— ST — ST —
BUILDING OUTLINE	
SILT FENCING	— SF — SF —
RIGHT OF WAY	— · · —
EXISTING MINOR CONTOURS	- - - - - - - - - -
EXIST. MAJOR CONTOURS	- - - - - - - - - -
PROPOSED CONTOURS	———
CENTER OF ROAD	———

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CONSULTING ENGINEERS
3360 Sawtelle Blvd #101
Los Angeles, CA 90066
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azimtech.eng@gmail.com

PROJECT DESCRIPTION:
SEVENTH DAY ADVENTISTS
ADDITION TO EXISTING CHURCH
271 JEFFERSON PK., LAVERGNE, TN 37086 - PARCEL ID: 018 01801

ALI KOLEINI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 119939
STATE OF TENNESSEE
3/31/23

REV.	DESCRIPTION	DATE
1	REVISED PER WORKSHOP COMMENTS 1-17-23	1/19/2023

DESIGNED BY : A.K.
DRAWN BY : R.L.
SCALE : 1" = 20' - 0"
PROJECT NO.
DATE : 3/31/2023
ISSUED FOR : FOR APPROVAL
DRAWING TITLE : LANDSCAPING SITE PLAN
DRAWING NO. L1

STORMWATER CALCULATIONS FOR

SEVENTH DAY ADVENTISTS

ADDITION TO EXISTING CHURCH

271 JEFFERSON PK.
LAVERGNE, TN 37086
PARCEL ID: 01801801



MARCH 31, 2023

PREPARED BY: S. ALI KOLEINI, P.E.
AZIMTECH ENGINEERING, INC.
3360 SAWTELLE BLVD. #101
LOS ANGELES, CA. 90066
PH: (615) 347-7903
Email: azimtech.eng@gmail.com
Alt. Email: rocklewhite@aol.com

1) Pre-Development Area:

Area A:

Total area: 39,762 sq.ft.

Building & Sidewalk: 3,685 sq.ft.

Gravel area: 11,983 sq.ft.

Grass area: 24,094 sq.ft.

Area B:

Total area: 15,467 sq.ft.

Gravel area: 1,815 sq.ft.

Grass area: 13,652 sq.ft.

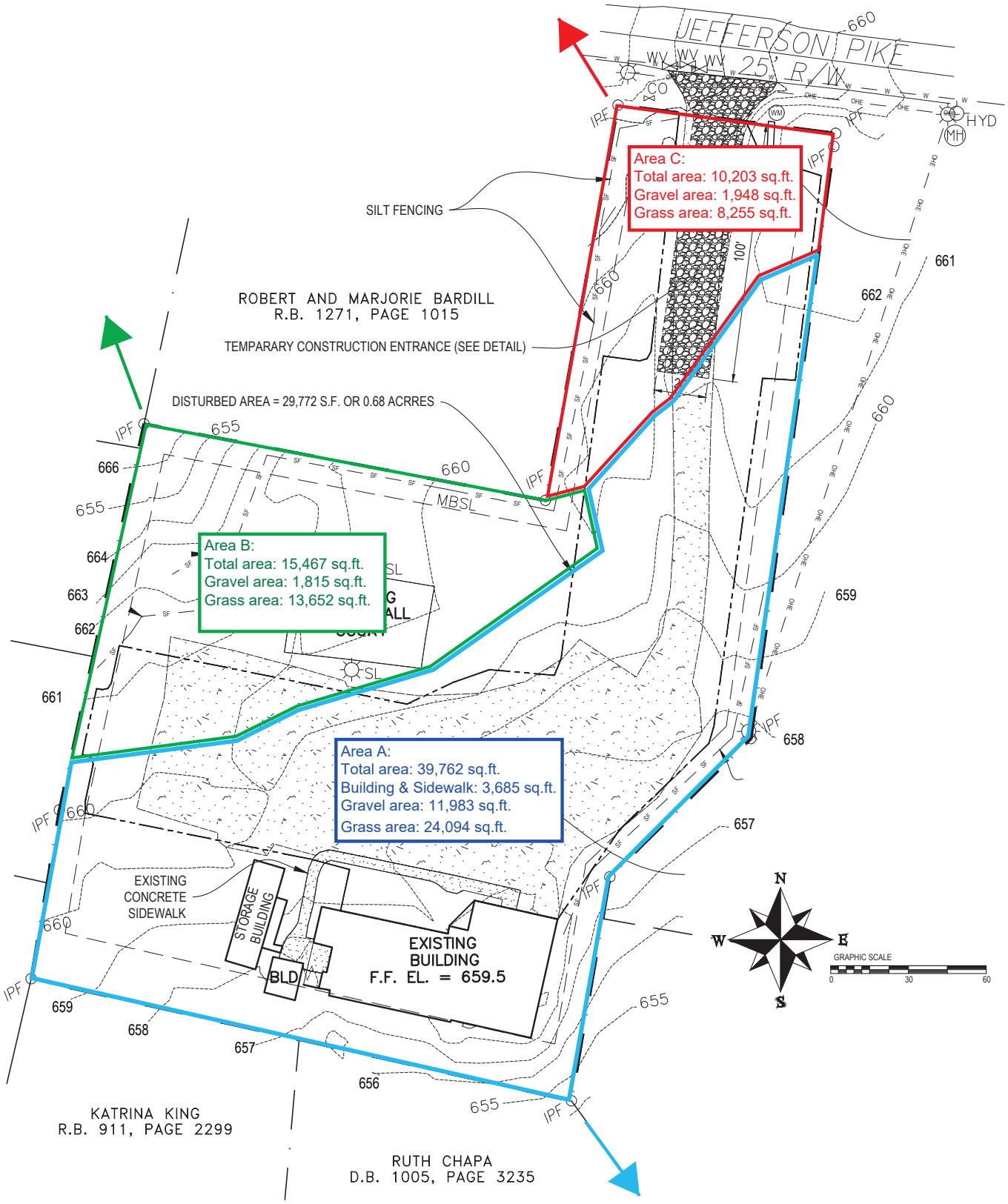
Area C:

Total area: 10,203 sq.ft.

Gravel area: 1,948 sq.ft.

Grass area: 8,255 sq.ft.

Pre-Development Areas



2) Post-Development Area:

Area A:

Total area: 21,490 sq.ft.

Building & Sidewalk: 5,698 sq.ft.

Grass area: 15,792 sq.ft.

Area B:

Total area: 14,611 sq.ft.

Grass area: 14,611 sq.ft.

Area C1:

Total area: 3,169 sq.ft.

Grass area: 3,169 sq.ft.

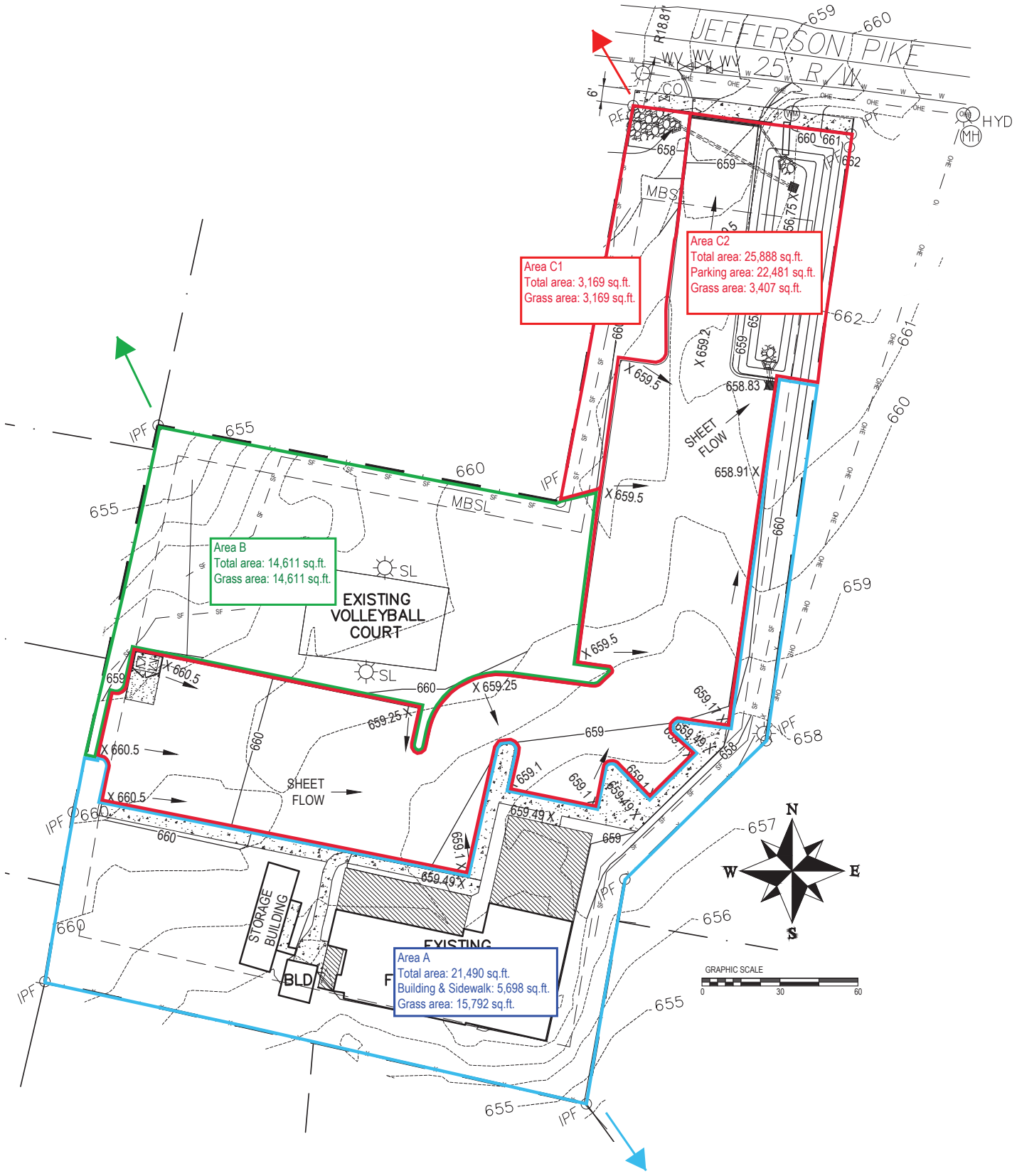
Area C2:

Total area: 25,888 sq.ft.

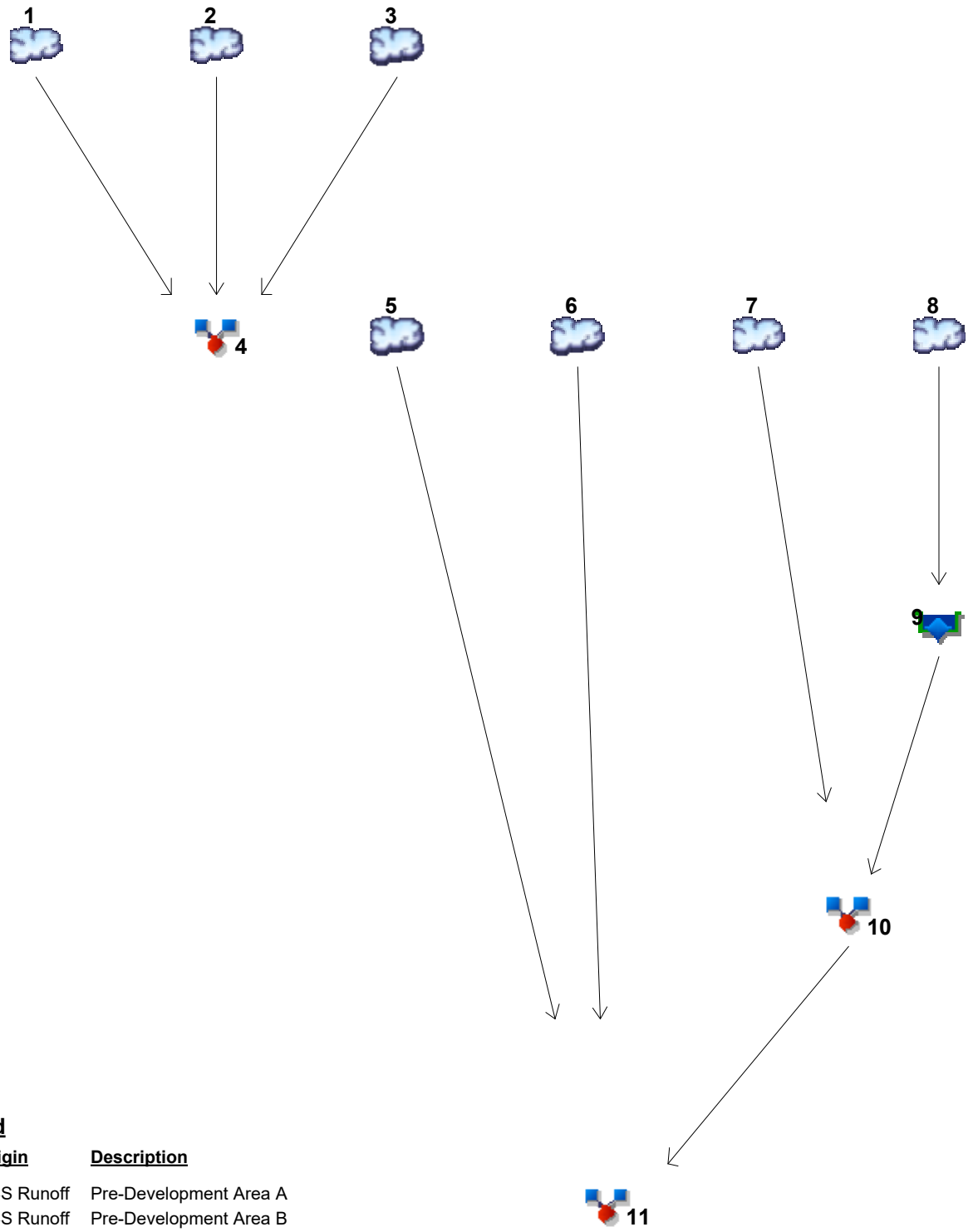
Parking area: 22,481 sq.ft.

Grass area: 3,407 sq.ft.

Post-Development Areas



Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	Pre-Development Area A
2	SCS Runoff	Pre-Development Area B
3	SCS Runoff	Pre-Development Area C
4	Combine	Pre-Developments
5	SCS Runoff	Post-Development Area A
6	SCS Runoff	Post-Development Area B
7	SCS Runoff	Post-Development Area C1
8	SCS Runoff	Post-Development Area C2
9	Reservoir	Rout A
10	Combine	Post-Development Area C
11	Combine	Post-Developments

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	------	-------	2.822	-------	3.786	4.565	5.666	6.556	7.473	Pre-Development Area A
2	SCS Runoff	------	-------	0.908	-------	1.257	1.545	1.958	2.295	2.643	Pre-Development Area B
3	SCS Runoff	------	-------	0.622	-------	0.856	1.047	1.320	1.542	1.771	Pre-Development Area C
4	Combine	1, 2, 3	-------	4.349	-------	5.899	7.157	8.944	10.39	11.89	Pre-Developments
5	SCS Runoff	------	-------	1.503	-------	2.017	2.431	3.018	3.492	3.980	Post-Development Area A
6	SCS Runoff	------	-------	0.845	-------	1.176	1.454	1.853	2.179	2.516	Post-Development Area B
7	SCS Runoff	------	-------	0.174	-------	0.242	0.299	0.381	0.449	0.518	Post-Development Area C1
8	SCS Runoff	------	-------	2.603	-------	3.229	3.725	4.420	4.978	5.552	Post-Development Area C2
9	Reservoir	8	-------	0.236	-------	0.488	0.674	0.929	1.144	1.366	Rout A
10	Combine	7, 9	-------	0.276	-------	0.575	0.829	1.134	1.388	1.650	Post-Development Area C
11	Combine	5, 6, 10	-------	2.585	-------	3.678	4.606	5.863	6.885	7.945	Post-Developments

Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.822	2	716	5,716	------	------	------	Pre-Development Area A
2	SCS Runoff	0.908	2	718	1,827	------	------	------	Pre-Development Area B
3	SCS Runoff	0.622	2	716	1,255	------	------	------	Pre-Development Area C
4	Combine	4.349	2	716	8,798	1, 2, 3	------	------	Pre-Developments
5	SCS Runoff	1.503	2	716	3,044	------	------	------	Post-Development Area A
6	SCS Runoff	0.845	2	718	1,696	------	------	------	Post-Development Area B
7	SCS Runoff	0.174	2	718	349	------	------	------	Post-Development Area C1
8	SCS Runoff	2.603	2	716	5,741	------	------	------	Post-Development Area C2
9	Reservoir	0.236	2	742	3,523	8	658.68	3,512	Rout A
10	Combine	0.276	2	720	3,872	7, 9	------	------	Post-Development Area C
11	Combine	2.585	2	718	8,612	5, 6, 10	------	------	Post-Developments

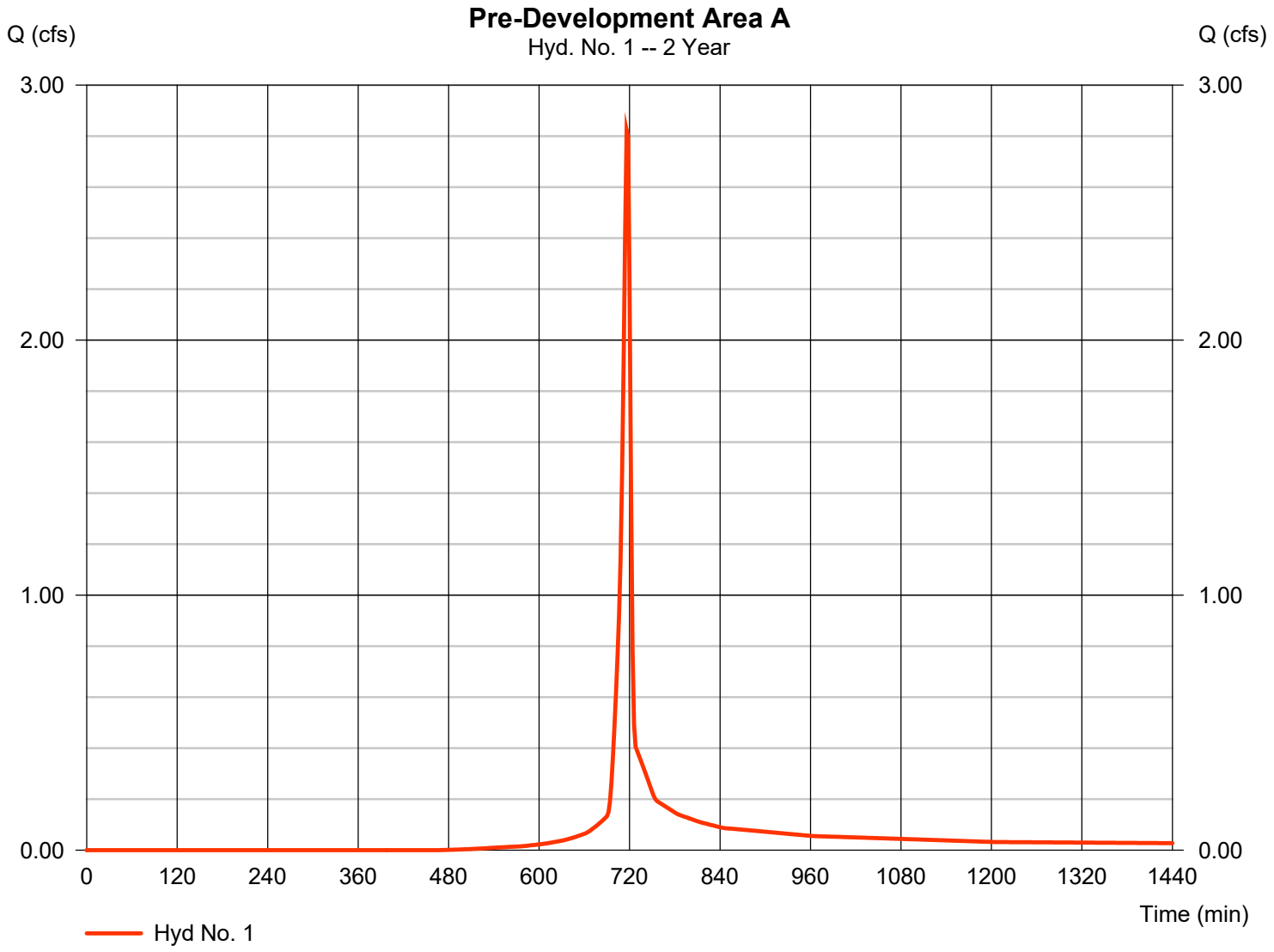
Hydrograph Report

Hyd. No. 1

Pre-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.822 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,716 cuft
Drainage area	=	0.920 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.37 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.090 x 98) + (0.280 x 89) + (0.550 x 79)] / 0.920



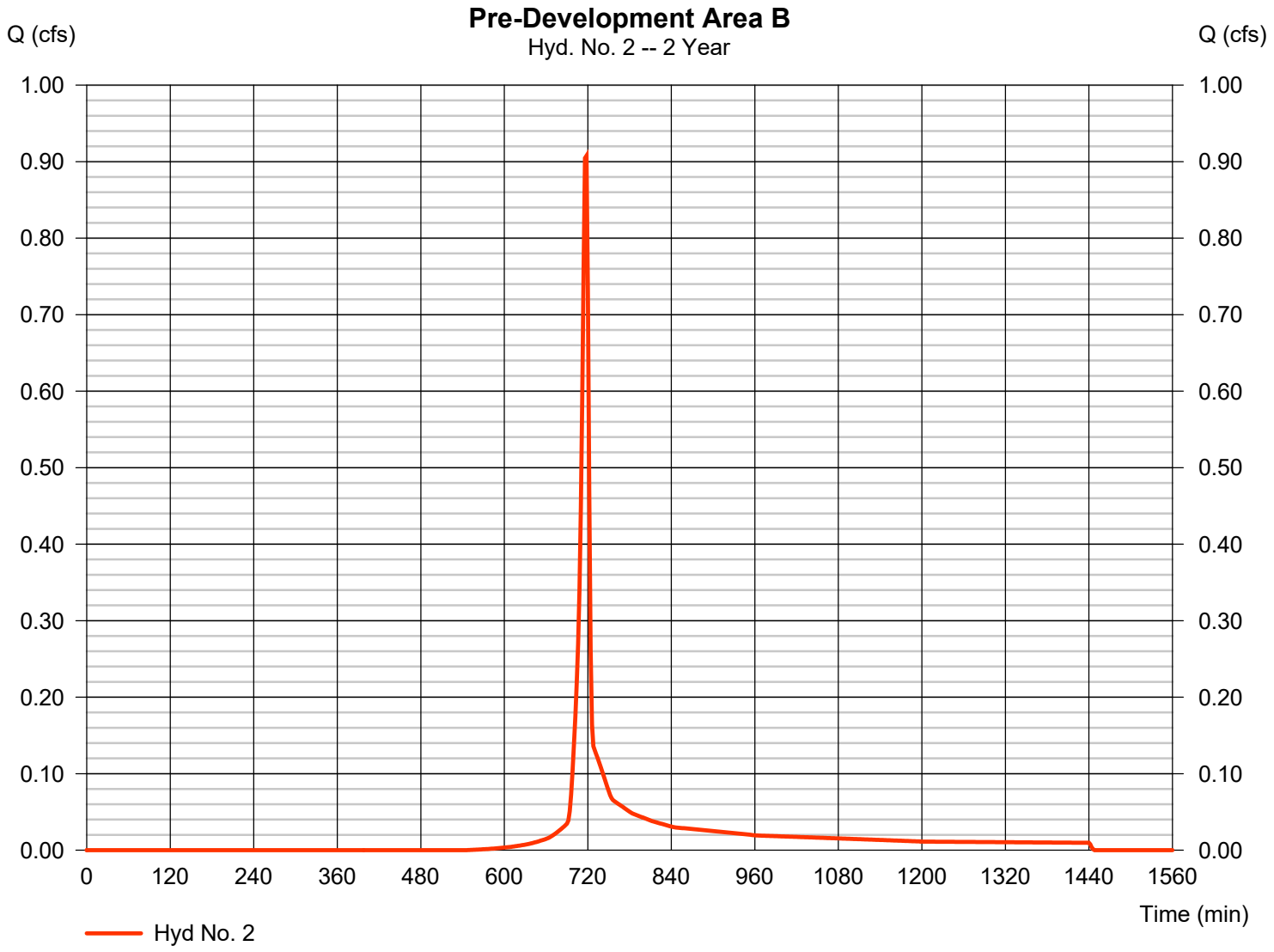
Hydrograph Report

Hyd. No. 2

Pre-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.908 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,827 cuft
Drainage area	=	0.350 ac	Curve number	=	80*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.37 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.310 x 79)] / 0.350



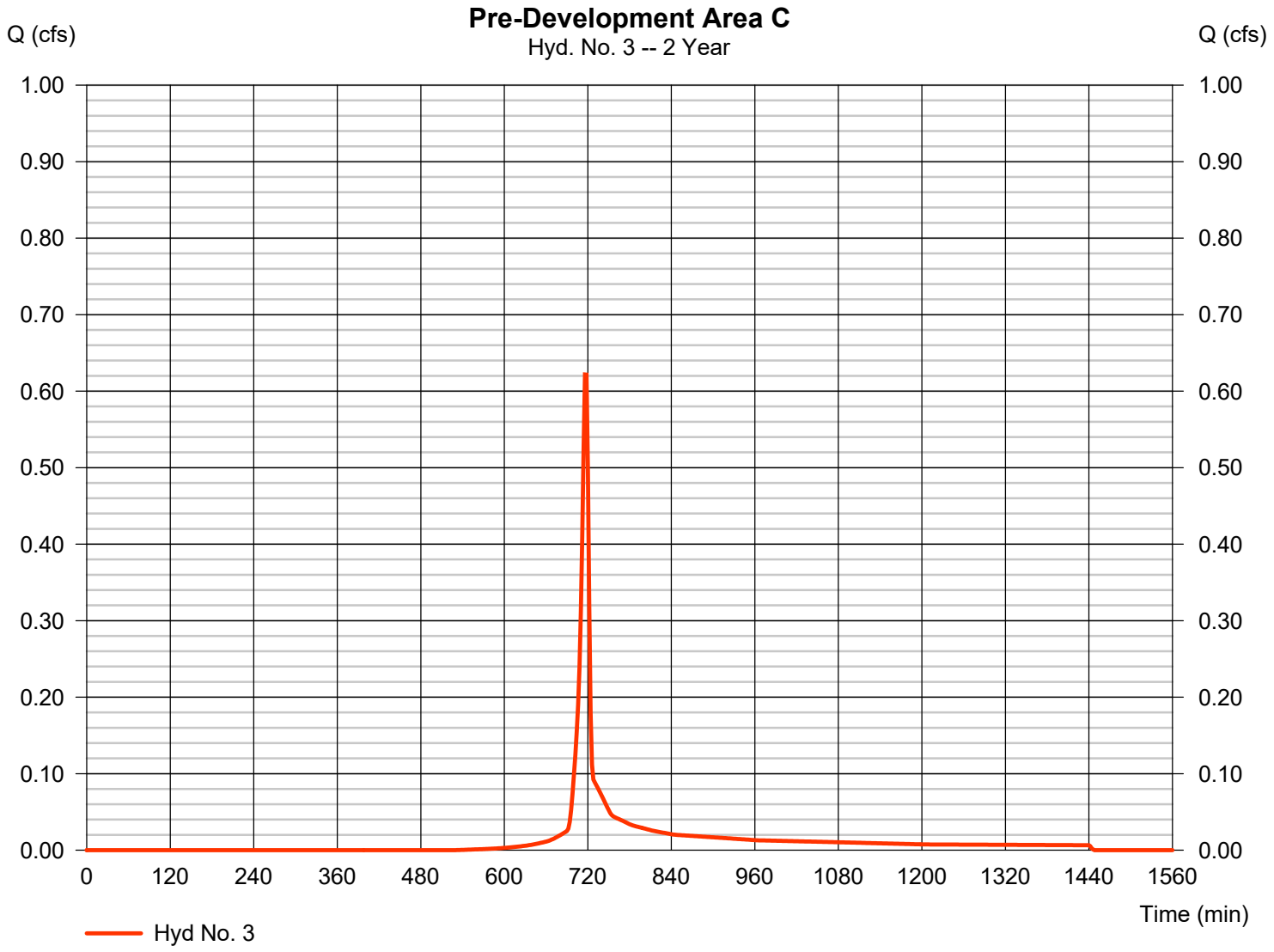
Hydrograph Report

Hyd. No. 3

Pre-Development Area C

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.622 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	1,255 cuft
Drainage area	=	0.230 ac	Curve number	=	81*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.37 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.190 x 79)] / 0.230

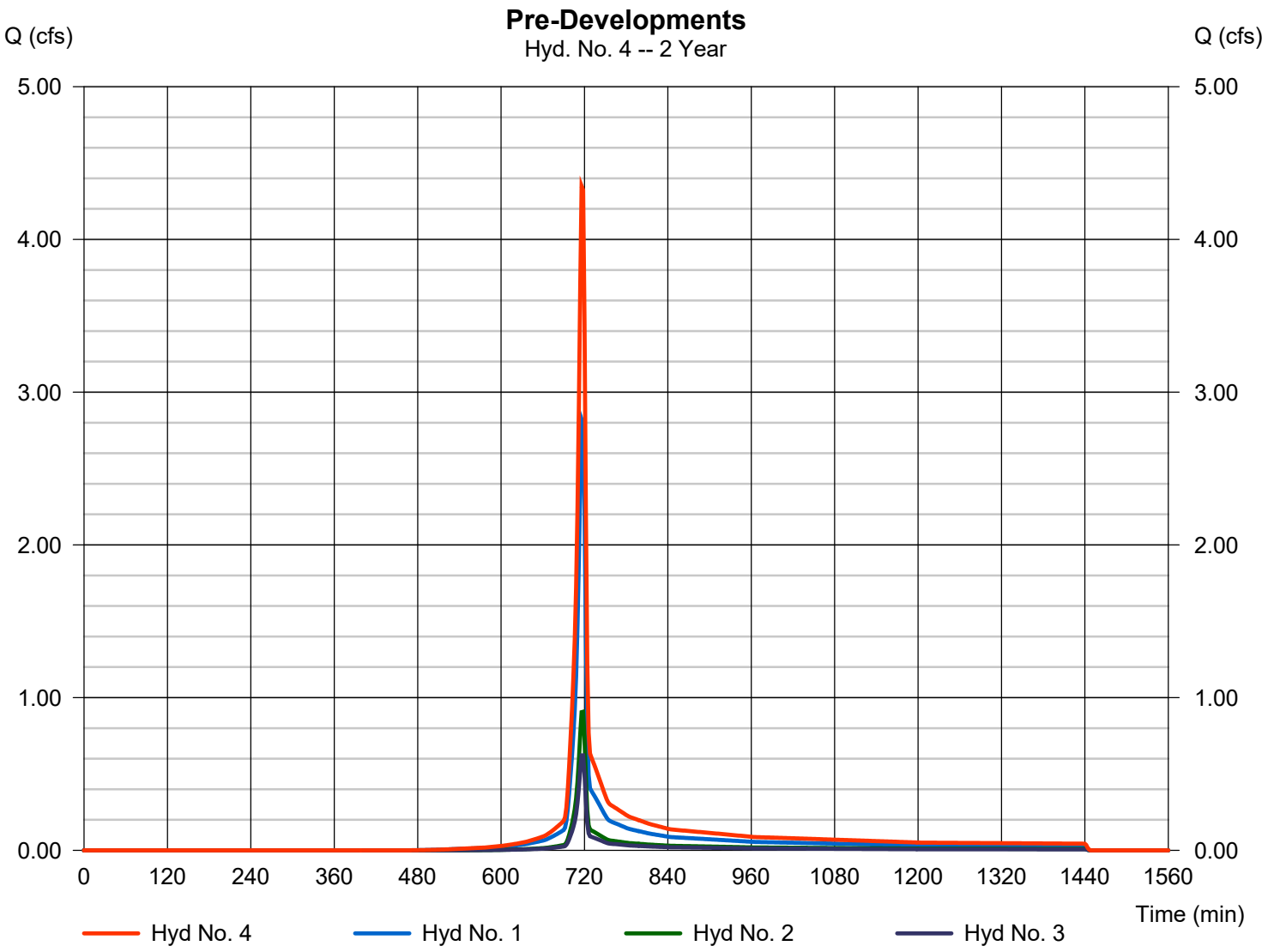


Hydrograph Report

Hyd. No. 4

Pre-Developments

Hydrograph type	= Combine	Peak discharge	= 4.349 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 8,798 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 1.500 ac



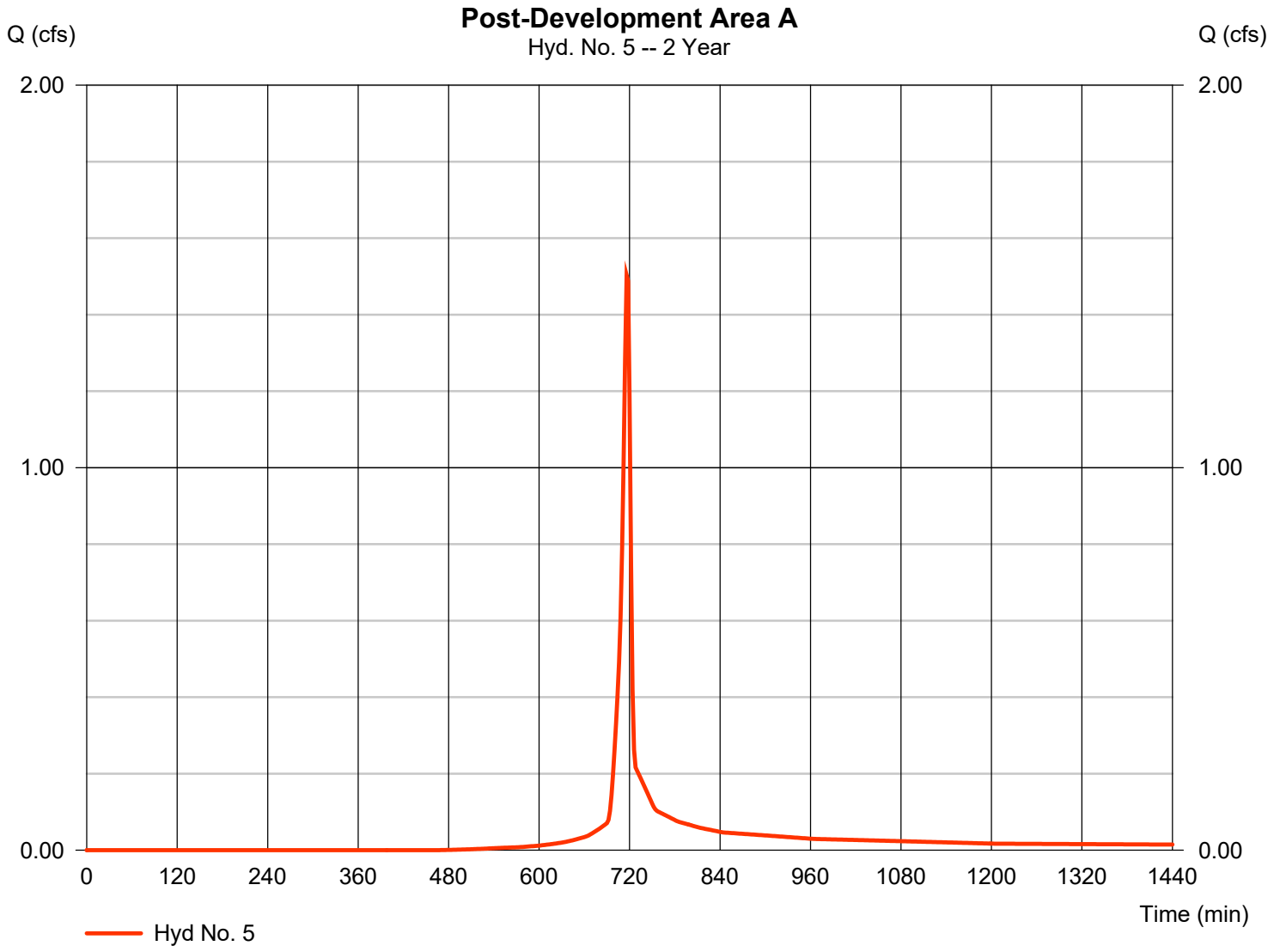
Hydrograph Report

Hyd. No. 5

Post-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.503 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,044 cuft
Drainage area	=	0.490 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.37 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.130 x 98) + (0.360 x 79)] / 0.490



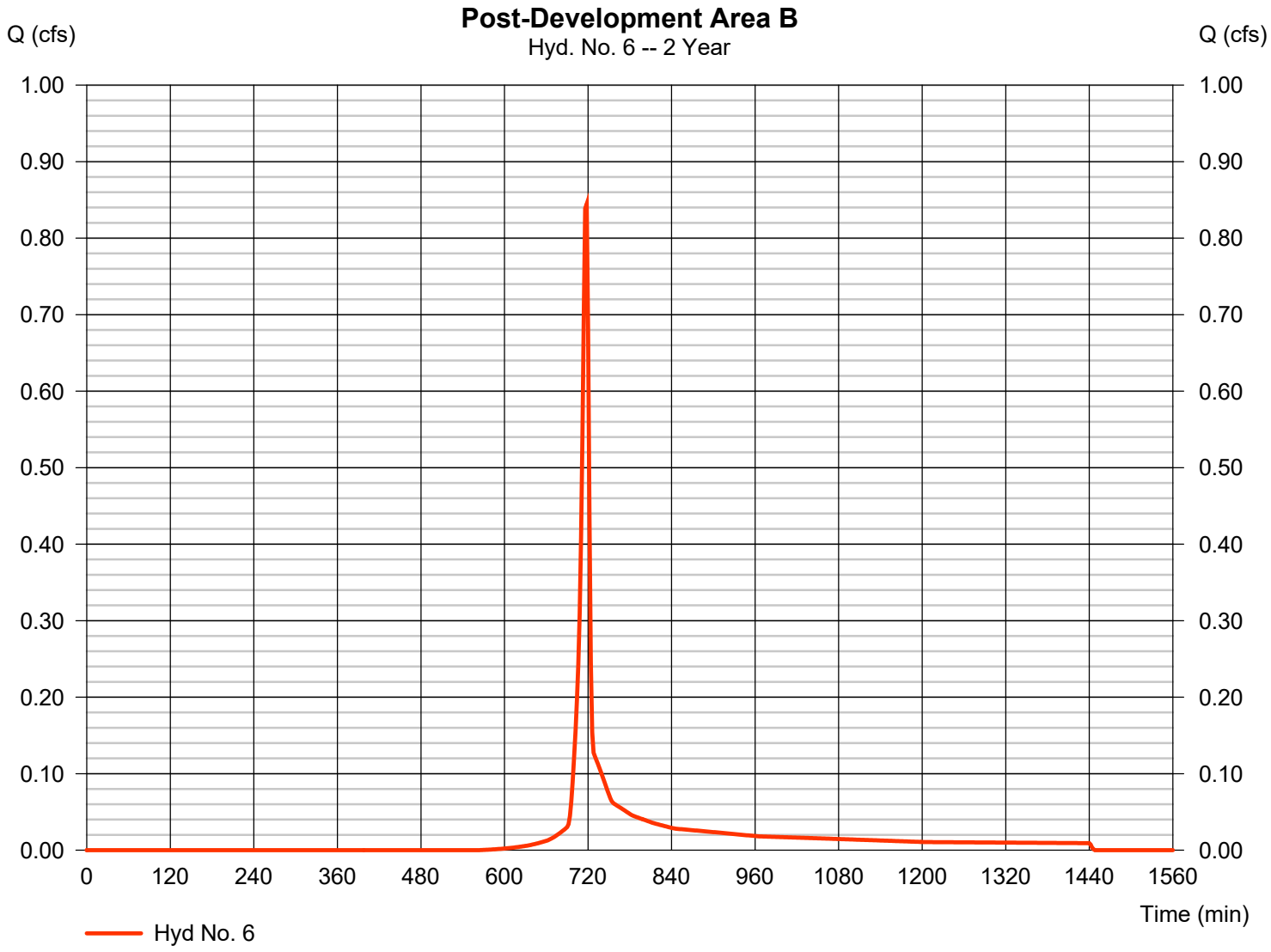
Hydrograph Report

Hyd. No. 6

Post-Development Area B

Hydrograph type	= SCS Runoff	Peak discharge	= 0.845 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,696 cuft
Drainage area	= 0.340 ac	Curve number	= 79*
Basin Slope	= 4.0 %	Hydraulic length	= 133 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.37 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(0.340 x 79)] / 0.340



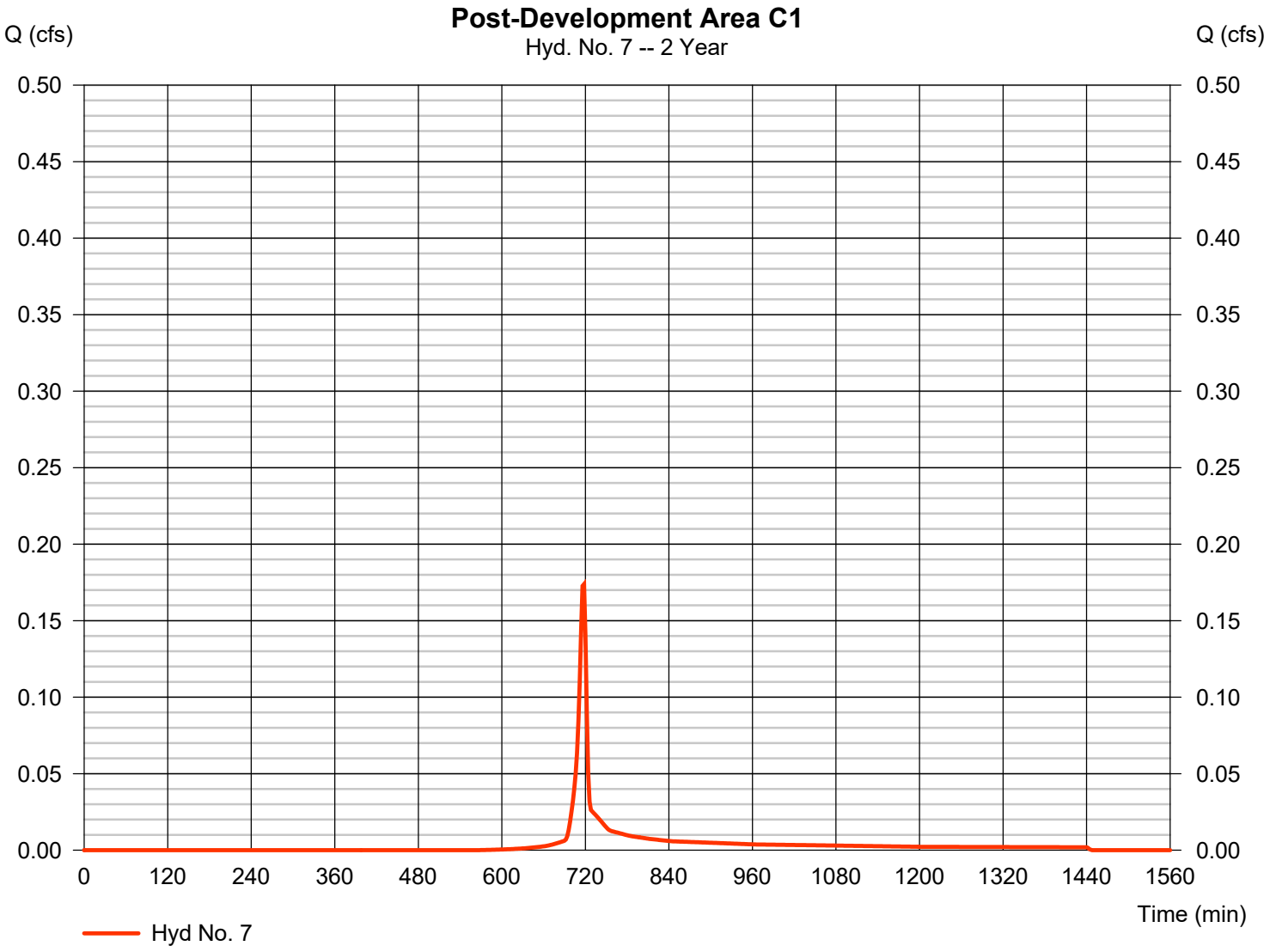
Hydrograph Report

Hyd. No. 7

Post-Development Area C1

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.174 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	349 cuft
Drainage area	=	0.070 ac	Curve number	=	79*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.37 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.070 x 79)] / 0.070



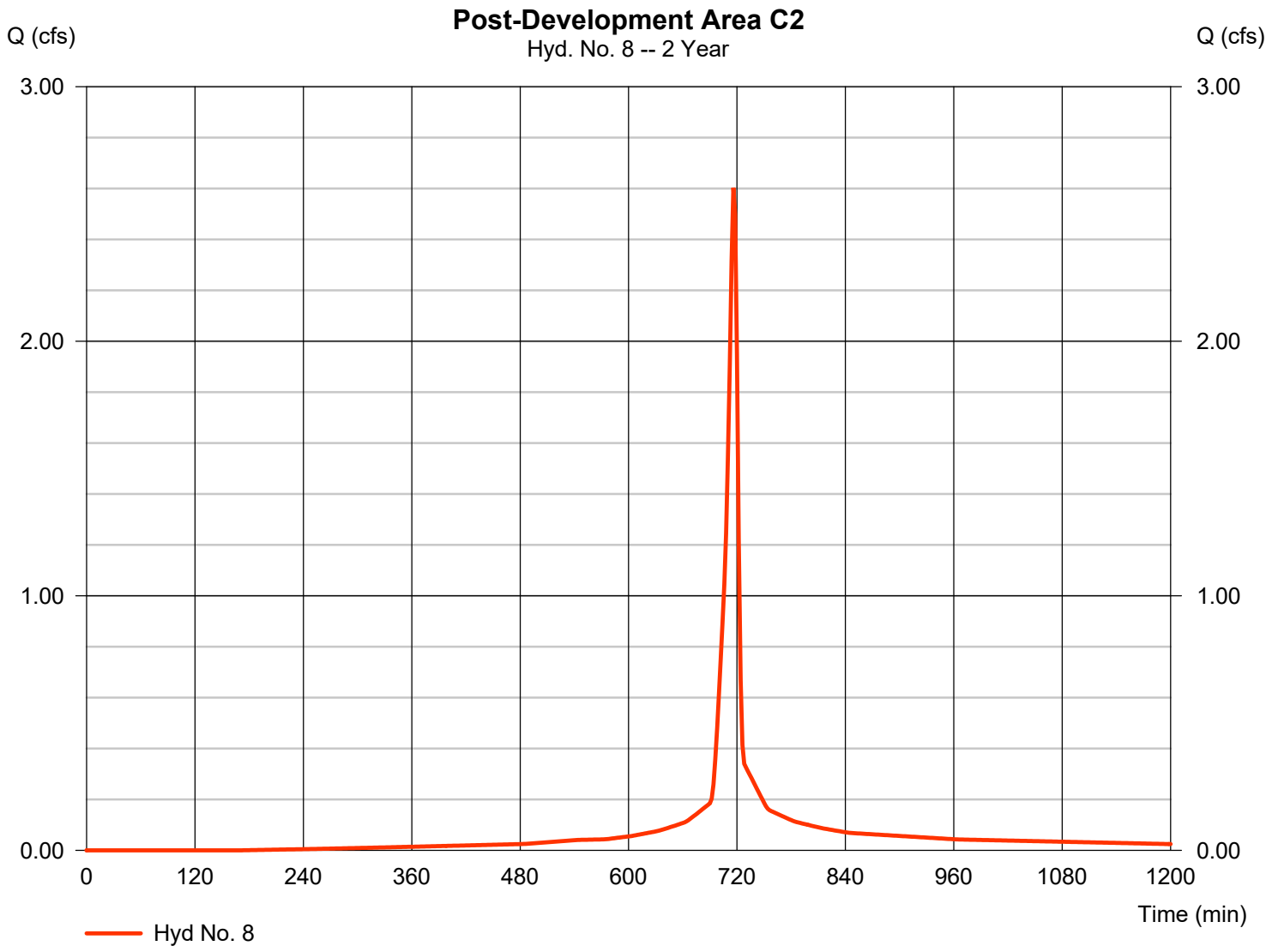
Hydrograph Report

Hyd. No. 8

Post-Development Area C2

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.603 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,741 cuft
Drainage area	=	0.600 ac	Curve number	=	95*
Basin Slope	=	1.0 %	Hydraulic length	=	450 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.37 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.520 x 98) + (0.080 x 79)] / 0.600



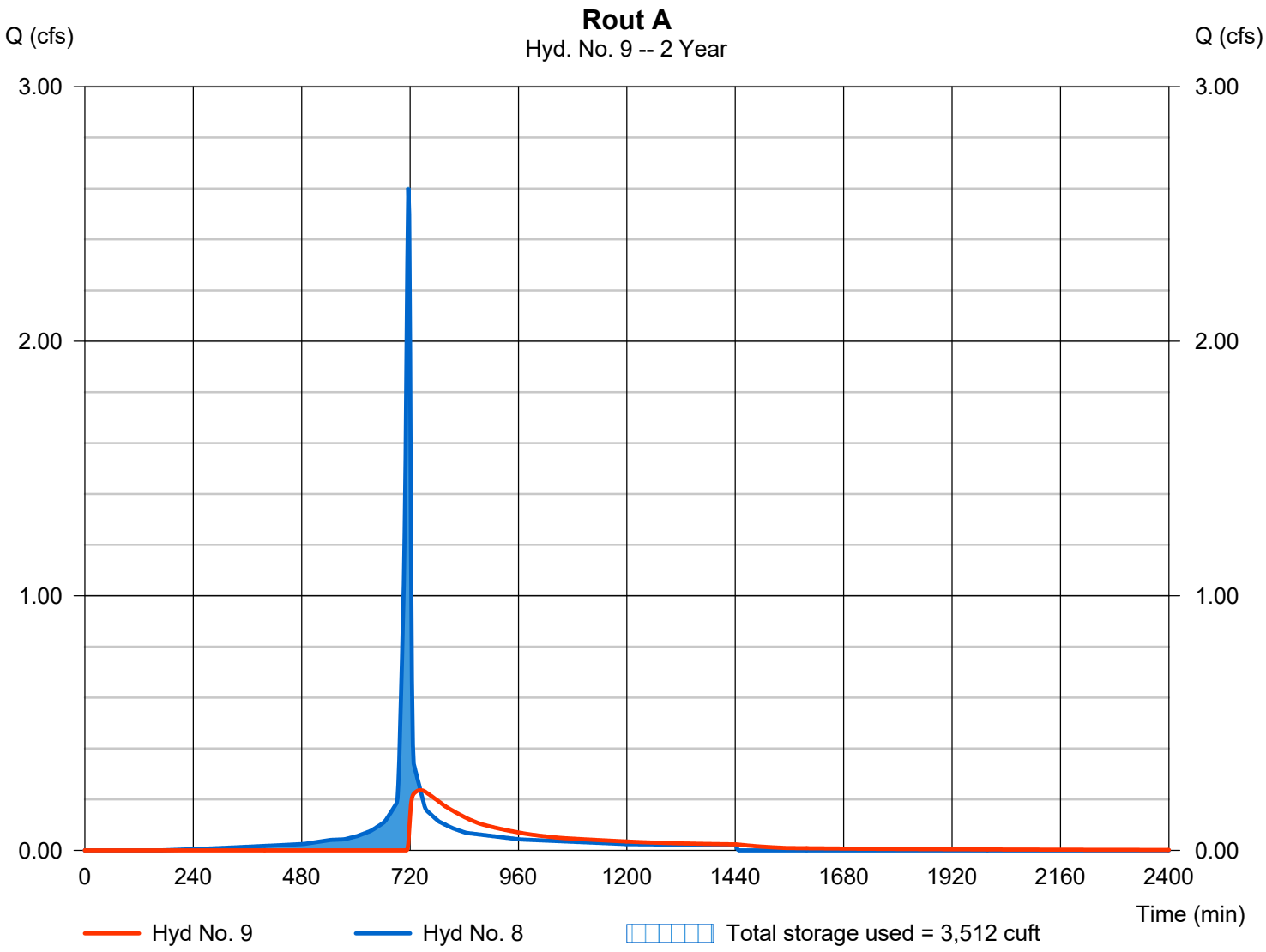
Hydrograph Report

Hyd. No. 9

Rout A

Hydrograph type	=	Reservoir	Peak discharge	=	0.236 cfs
Storm frequency	=	2 yrs	Time to peak	=	742 min
Time interval	=	2 min	Hyd. volume	=	3,523 cuft
Inflow hyd. No.	=	8 - Post-Development Area C2	Max. Elevation	=	658.68 ft
Reservoir name	=	Pond A	Max. Storage	=	3,512 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - Pond A

Pond Data

Contours - User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 657.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	657.00	1,200	0	0
1.00	658.00	2,120	1,638	1,638
2.00	659.00	3,435	2,751	4,389
3.00	660.00	4,748	4,073	8,462

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	9.00	Inactive	Inactive
Span (in)	= 18.00	9.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 657.25	675.50	0.00	0.00
Length (ft)	= 20.00	0.50	0.00	0.00
Slope (%)	= 2.00	1.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.25	0.00	0.00	0.00
Crest El. (ft)	= 658.25	658.00	658.00	658.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	Rect	Rect	Rect
Multi-Stage	= Yes	Yes	Yes	Yes

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

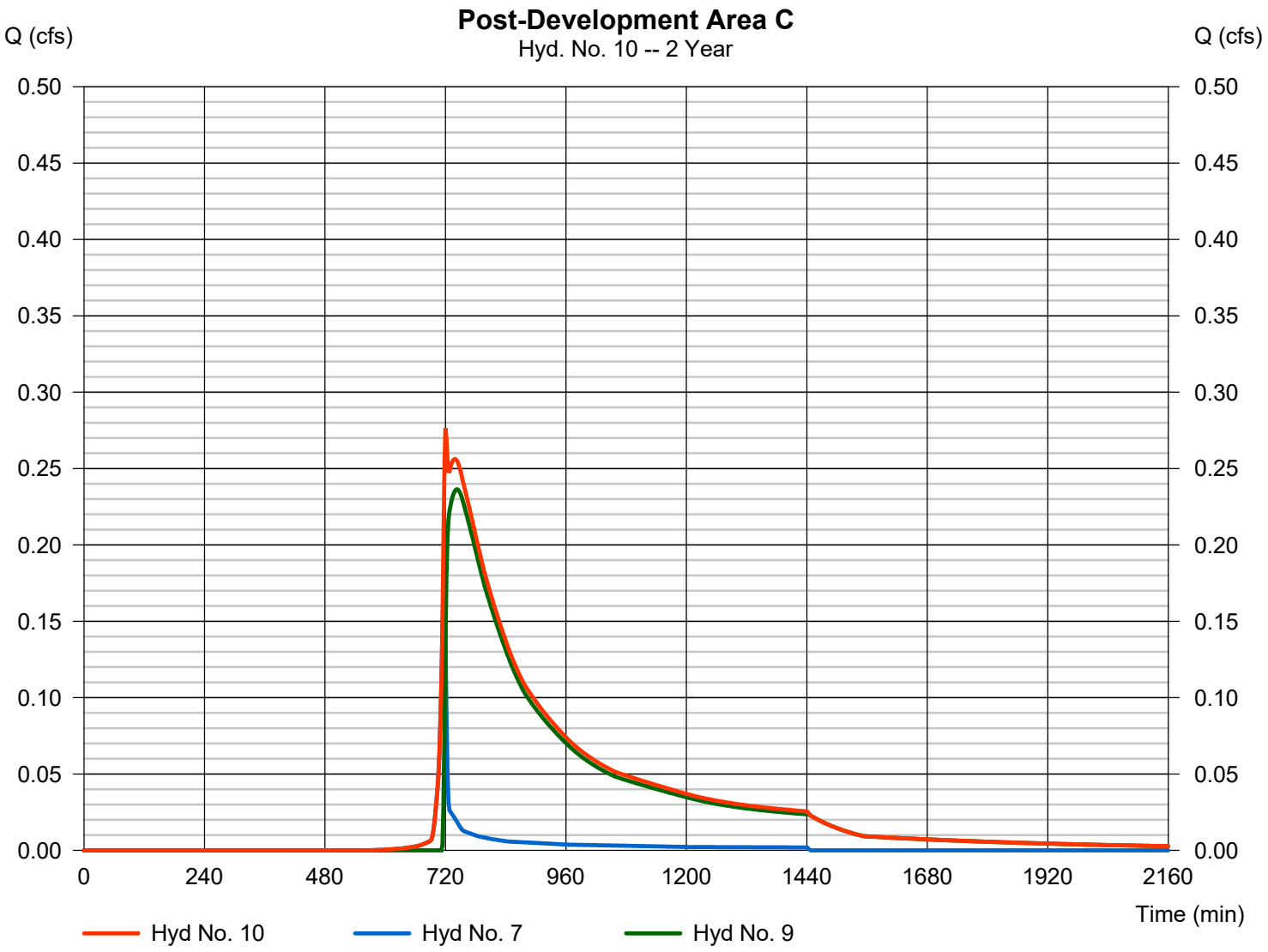
Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	657.00	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.10	164	657.10	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.20	328	657.20	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.30	491	657.30	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.40	655	657.40	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.50	819	657.50	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.60	983	657.60	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.70	1,147	657.70	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.80	1,311	657.80	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
0.90	1,474	657.90	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
1.00	1,638	658.00	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
1.10	1,913	658.10	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
1.20	2,188	658.20	0.00	0.00	---	---	0.00	---	---	---	---	---	0.000
1.30	2,463	658.30	0.01 ic	0.00	---	---	0.01	---	---	---	---	---	0.009
1.40	2,739	658.40	0.05 ic	0.00	---	---	0.05	---	---	---	---	---	0.048
1.50	3,014	658.50	0.11 ic	0.00	---	---	0.10	---	---	---	---	---	0.104
1.60	3,289	658.60	0.17 ic	0.00	---	---	0.17	---	---	---	---	---	0.172
1.70	3,564	658.70	0.25 ic	0.00	---	---	0.25	---	---	---	---	---	0.251
1.80	3,839	658.80	0.34 ic	0.00	---	---	0.34	---	---	---	---	---	0.339
1.90	4,114	658.90	0.44 ic	0.00	---	---	0.44	---	---	---	---	---	0.436
2.00	4,389	659.00	0.55 ic	0.00	---	---	0.54	---	---	---	---	---	0.541
2.10	4,796	659.10	0.65 ic	0.00	---	---	0.65	---	---	---	---	---	0.652
2.20	5,204	659.20	0.77 ic	0.00	---	---	0.77	---	---	---	---	---	0.771
2.30	5,611	659.30	0.93 ic	0.00	---	---	0.90	---	---	---	---	---	0.896
2.40	6,018	659.40	1.03 ic	0.00	---	---	1.03	---	---	---	---	---	1.027
2.50	6,426	659.50	1.16 ic	0.00	---	---	1.16	---	---	---	---	---	1.163
2.60	6,833	659.60	1.31 ic	0.00	---	---	1.31	---	---	---	---	---	1.306
2.70	7,240	659.70	1.48 ic	0.00	---	---	1.45	---	---	---	---	---	1.453
2.80	7,648	659.80	1.61 ic	0.00	---	---	1.61	---	---	---	---	---	1.606
2.90	8,055	659.90	1.77 ic	0.00	---	---	1.76	---	---	---	---	---	1.764
3.00	8,462	660.00	1.97 ic	0.00	---	---	1.93	---	---	---	---	---	1.927

Hydrograph Report

Hyd. No. 10

Post-Development Area C

Hydrograph type	=	Combine	Peak discharge	=	0.276 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	3,872 cuft
Inflow hyds.	=	7, 9	Contrib. drain. area	=	0.070 ac

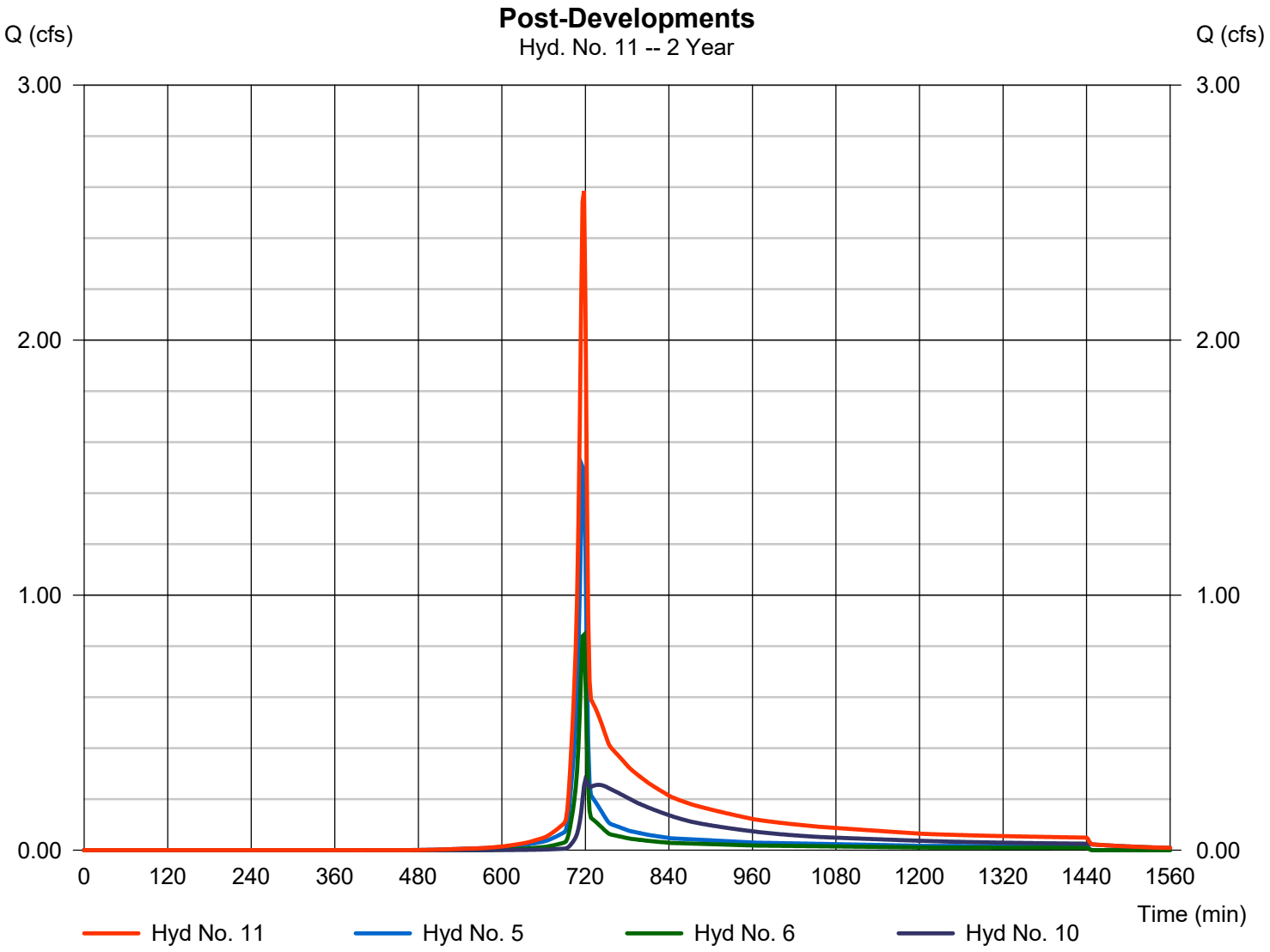


Hydrograph Report

Hyd. No. 11

Post-Developments

Hydrograph type	=	Combine	Peak discharge	=	2.585 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	8,612 cuft
Inflow hyds.	=	5, 6, 10	Contrib. drain. area	=	0.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	3.786	2	716	7,728	------	------	------	Pre-Development Area A
2	SCS Runoff	1.257	2	716	2,540	------	------	------	Pre-Development Area B
3	SCS Runoff	0.856	2	716	1,733	------	------	------	Pre-Development Area C
4	Combine	5.899	2	716	12,002	1, 2, 3	------	------	Pre-Developments
5	SCS Runoff	2.017	2	716	4,116	------	------	------	Post-Development Area A
6	SCS Runoff	1.176	2	716	2,376	------	------	------	Post-Development Area B
7	SCS Runoff	0.242	2	716	489	------	------	------	Post-Development Area C1
8	SCS Runoff	3.229	2	716	7,227	------	------	------	Post-Development Area C2
9	Reservoir	0.488	2	726	5,009	8	658.95	4,252	Rout A
10	Combine	0.575	2	720	5,498	7, 9	------	------	Post-Development Area C
11	Combine	3.678	2	718	11,990	5, 6, 10	------	------	Post-Developments

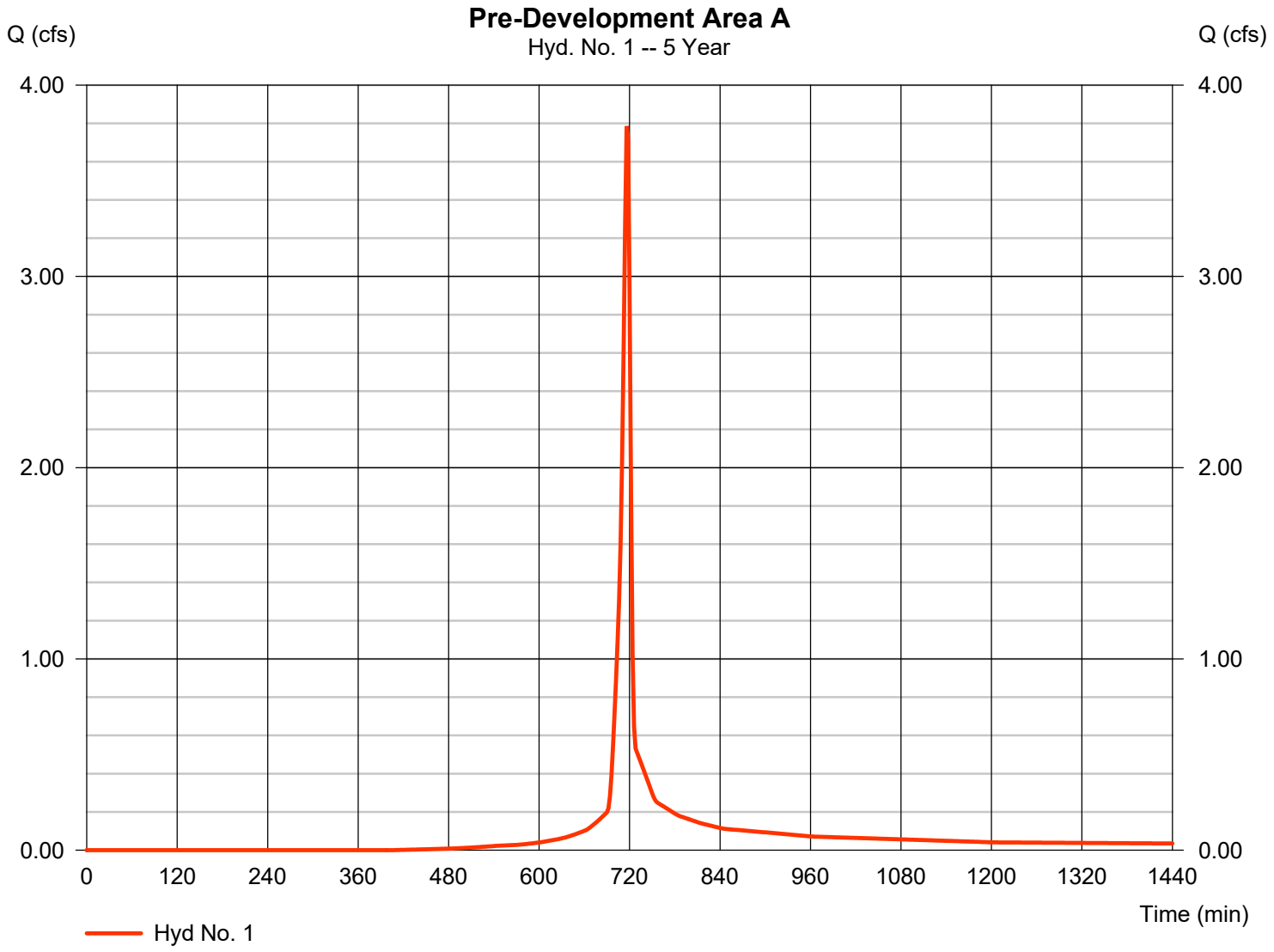
Hydrograph Report

Hyd. No. 1

Pre-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.786 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	7,728 cuft
Drainage area	=	0.920 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.090 x 98) + (0.280 x 89) + (0.550 x 79)] / 0.920



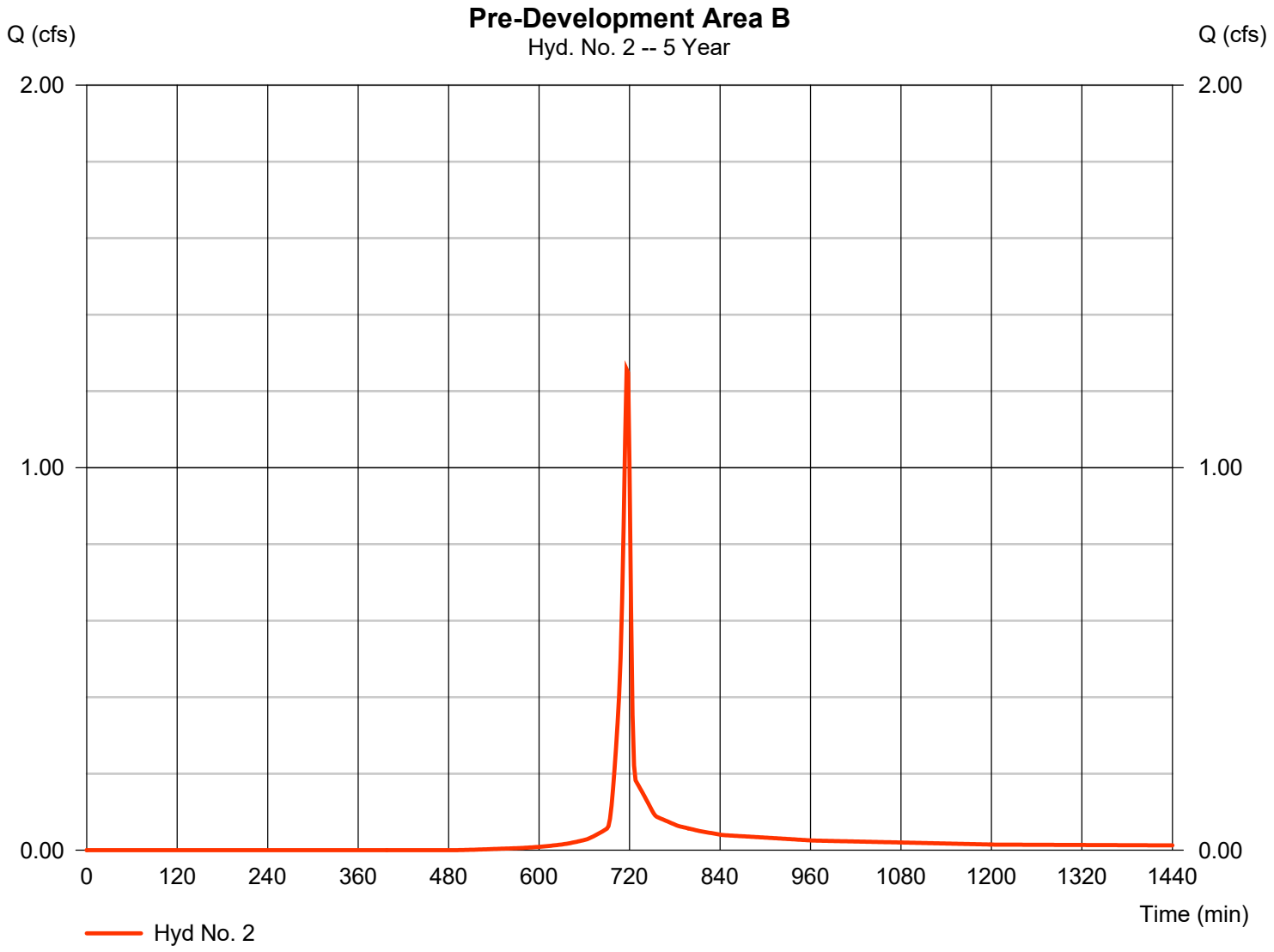
Hydrograph Report

Hyd. No. 2

Pre-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.257 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,540 cuft
Drainage area	=	0.350 ac	Curve number	=	80*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.310 x 79)] / 0.350



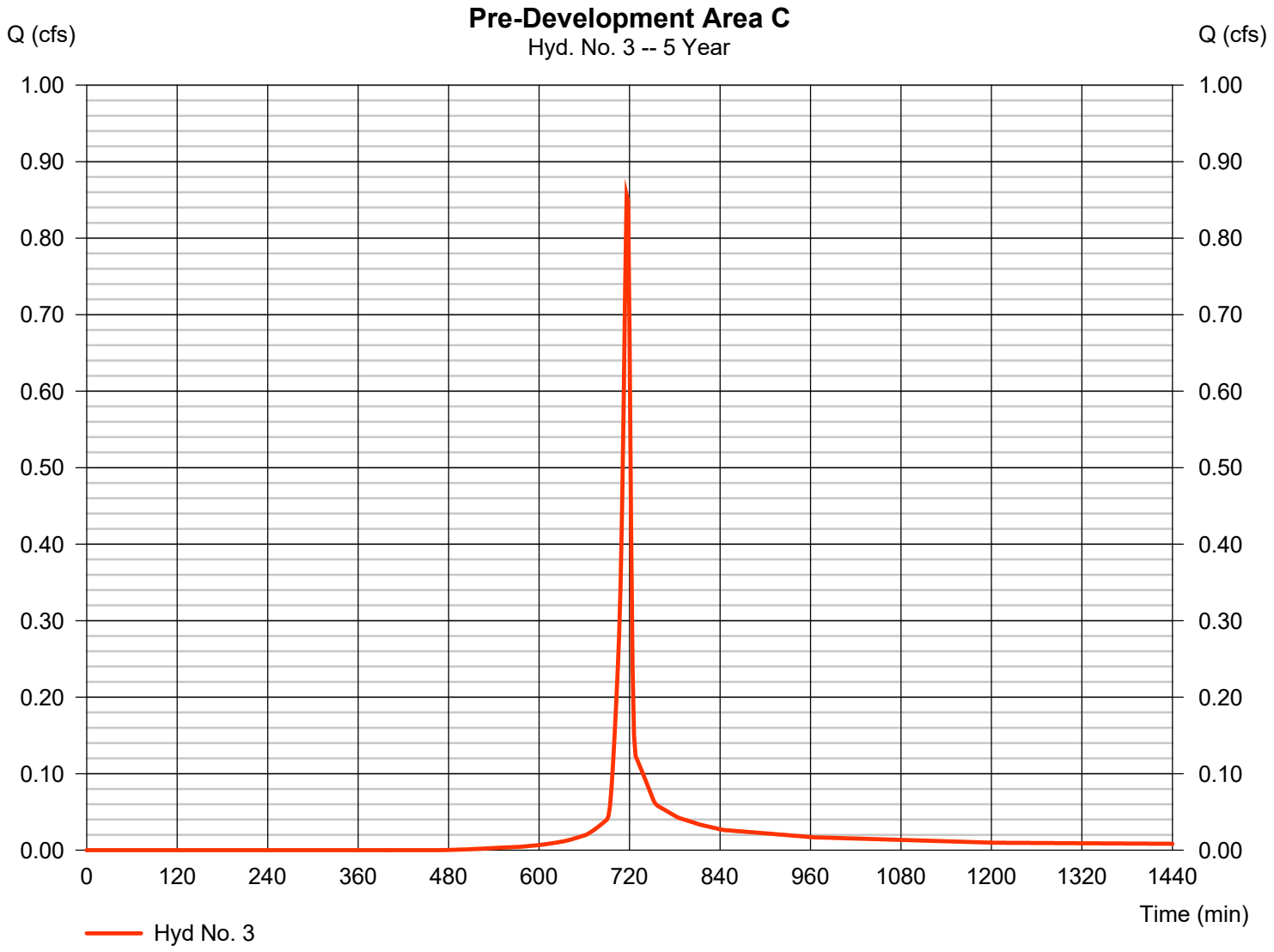
Hydrograph Report

Hyd. No. 3

Pre-Development Area C

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.856 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	1,733 cuft
Drainage area	=	0.230 ac	Curve number	=	81*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.190 x 79)] / 0.230

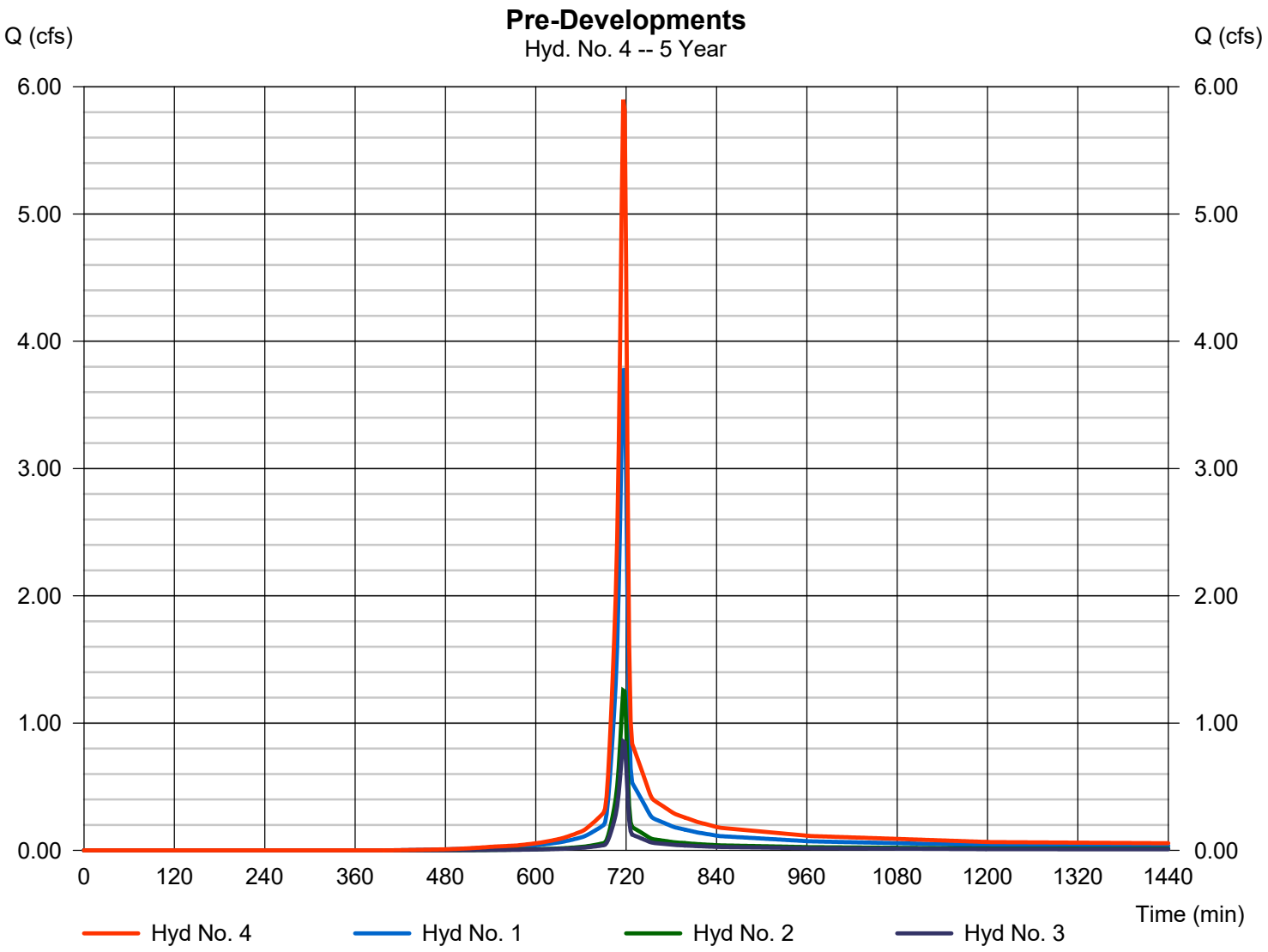


Hydrograph Report

Hyd. No. 4

Pre-Developments

Hydrograph type	= Combine	Peak discharge	= 5.899 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 12,002 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 1.500 ac



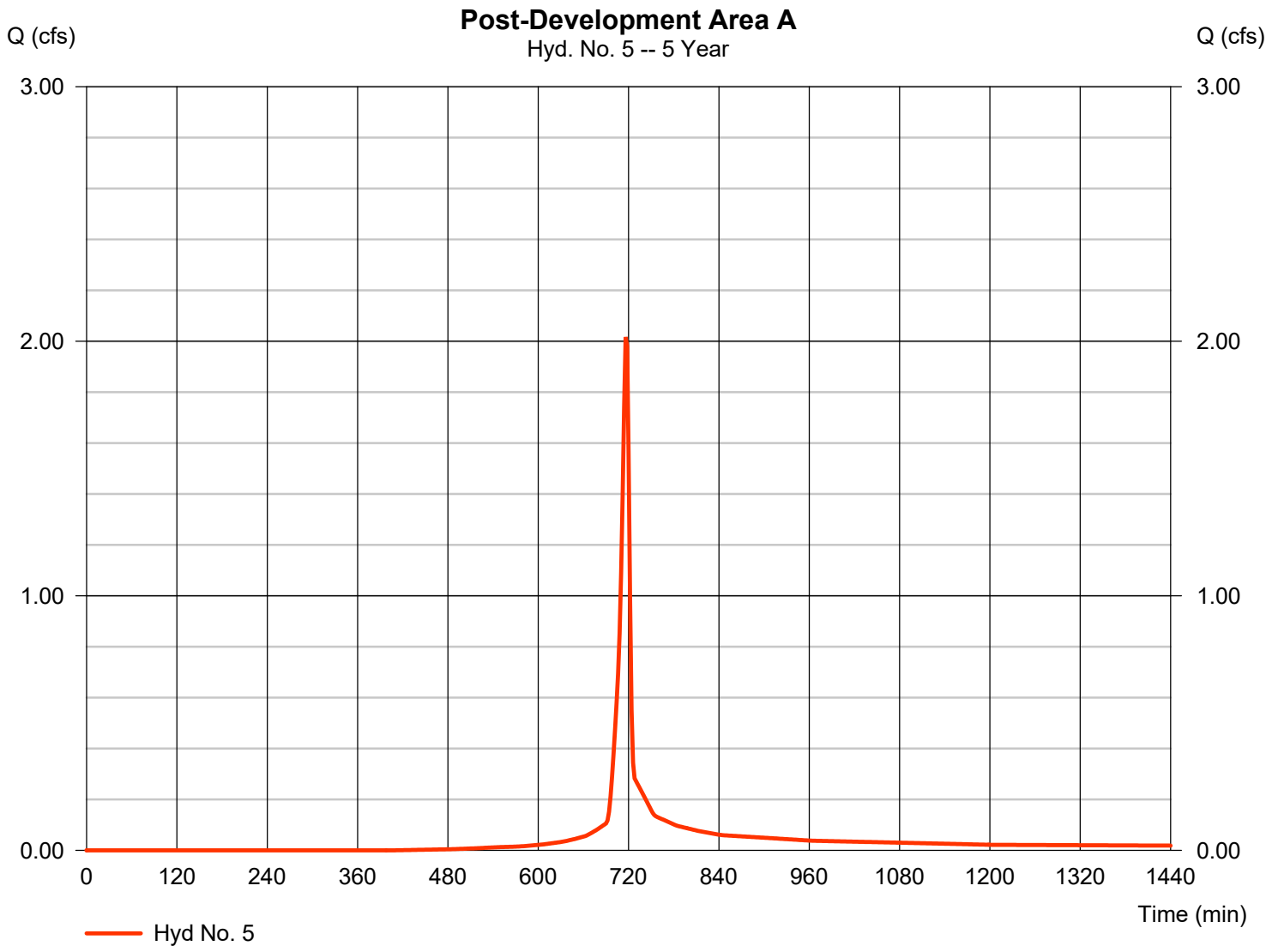
Hydrograph Report

Hyd. No. 5

Post-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.017 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,116 cuft
Drainage area	=	0.490 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.130 x 98) + (0.360 x 79)] / 0.490



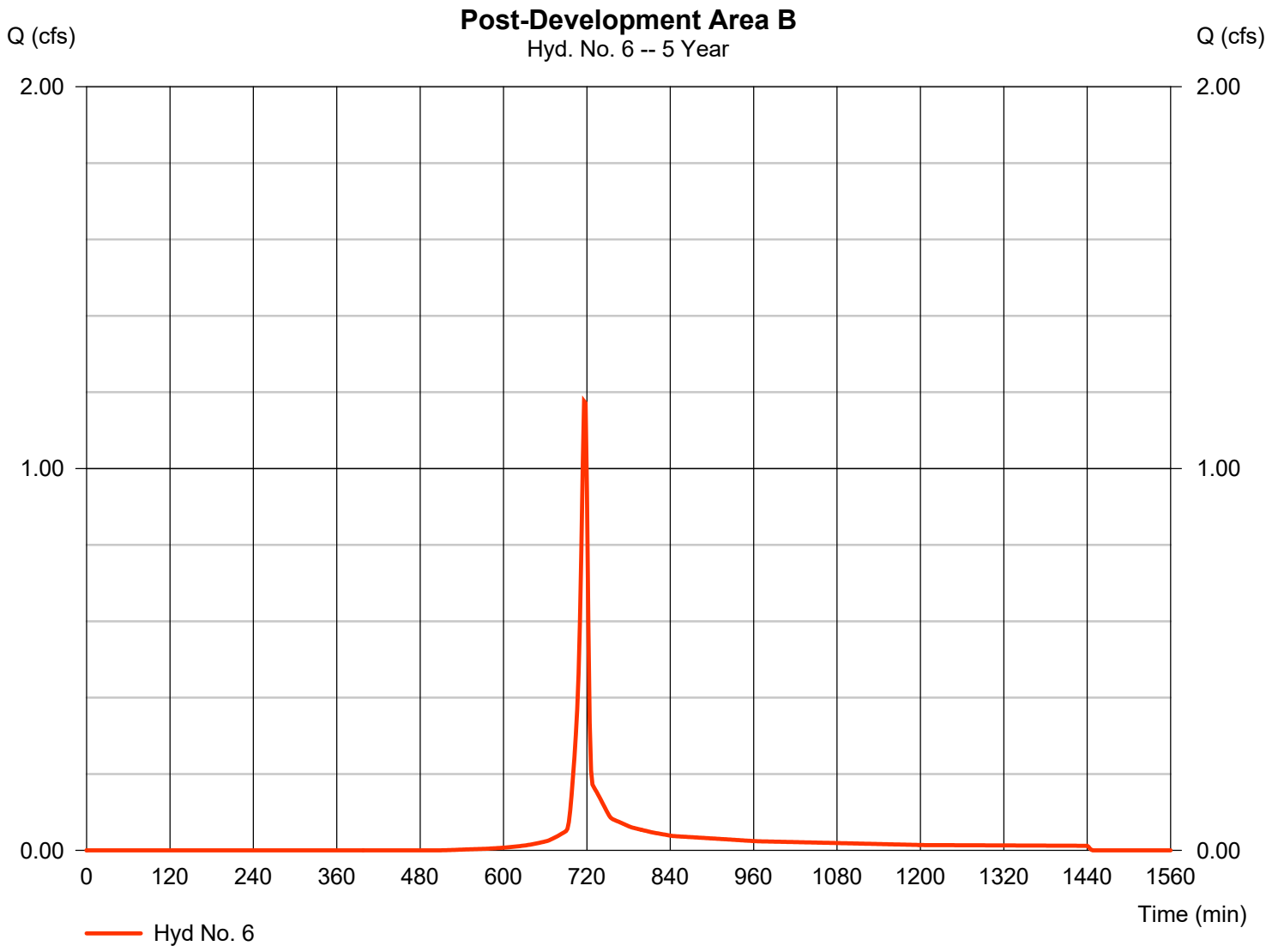
Hydrograph Report

Hyd. No. 6

Post-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.176 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,376 cuft
Drainage area	=	0.340 ac	Curve number	=	79*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.340 x 79)] / 0.340



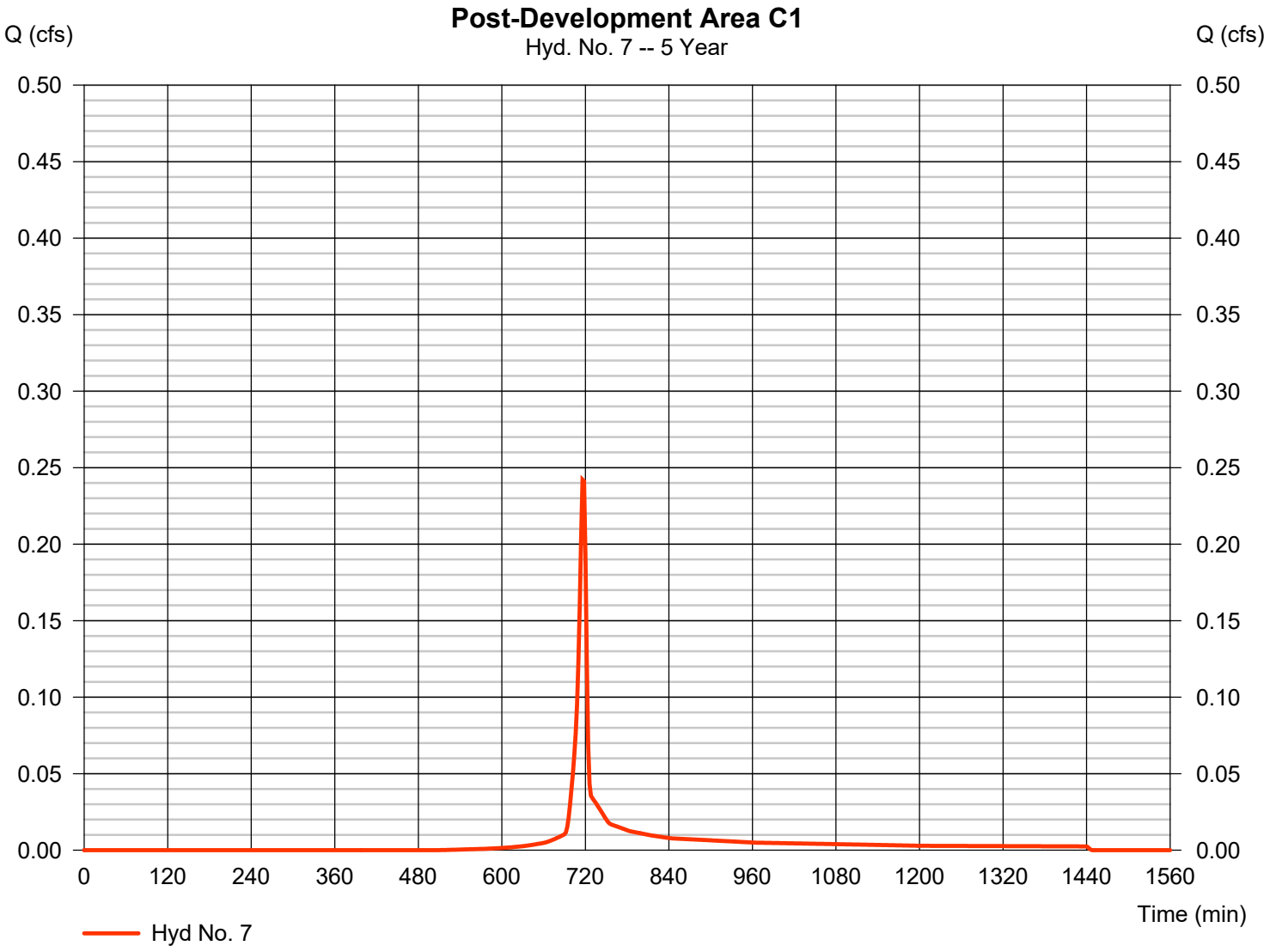
Hydrograph Report

Hyd. No. 7

Post-Development Area C1

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.242 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	489 cuft
Drainage area	=	0.070 ac	Curve number	=	79*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.070 x 79)] / 0.070



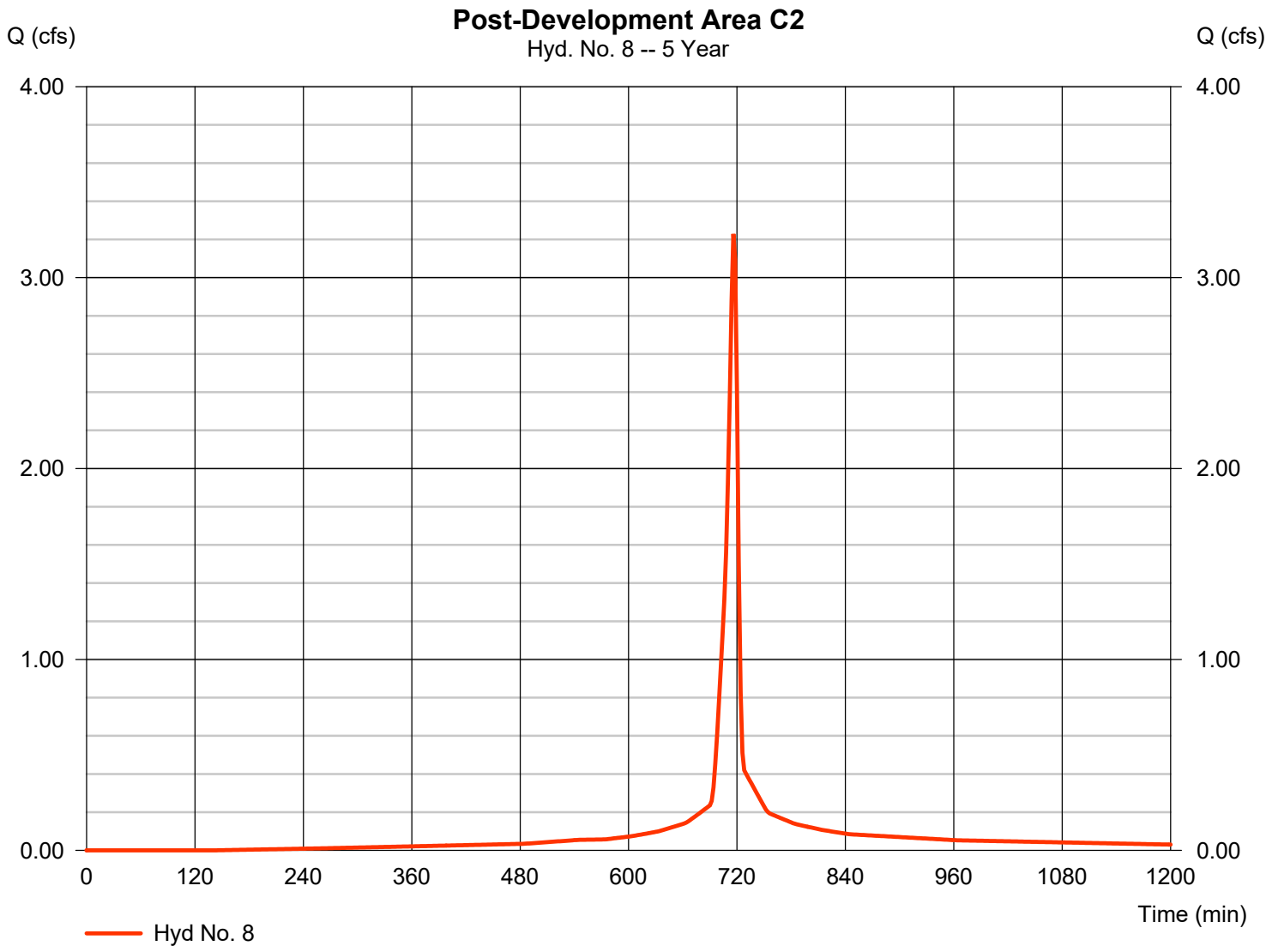
Hydrograph Report

Hyd. No. 8

Post-Development Area C2

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.229 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	7,227 cuft
Drainage area	=	0.600 ac	Curve number	=	95*
Basin Slope	=	1.0 %	Hydraulic length	=	450 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.11 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.520 x 98) + (0.080 x 79)] / 0.600



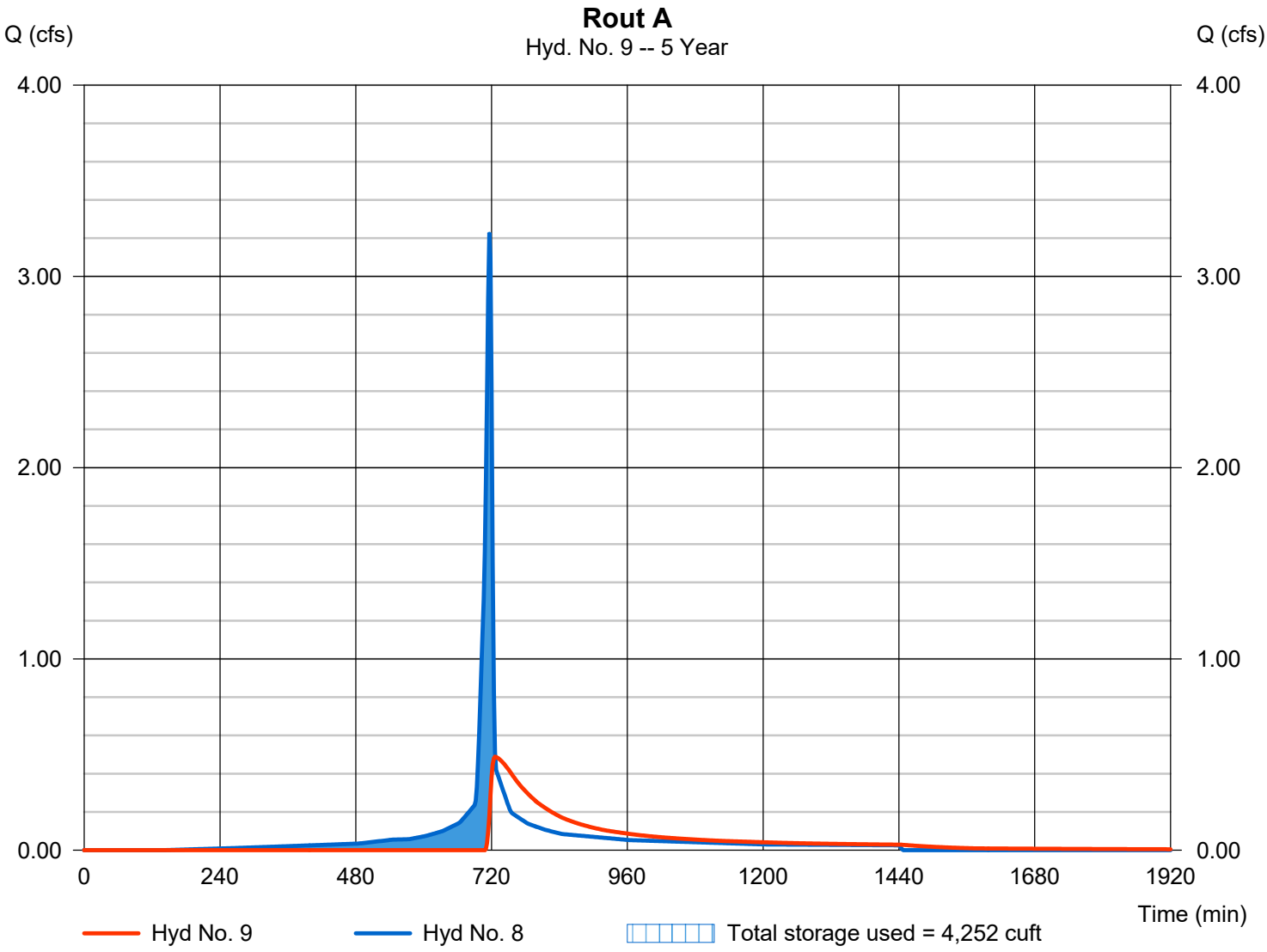
Hydrograph Report

Hyd. No. 9

Rout A

Hydrograph type	=	Reservoir	Peak discharge	=	0.488 cfs
Storm frequency	=	5 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	5,009 cuft
Inflow hyd. No.	=	8 - Post-Development Area C2	Max. Elevation	=	658.95 ft
Reservoir name	=	Pond A	Max. Storage	=	4,252 cuft

Storage Indication method used.

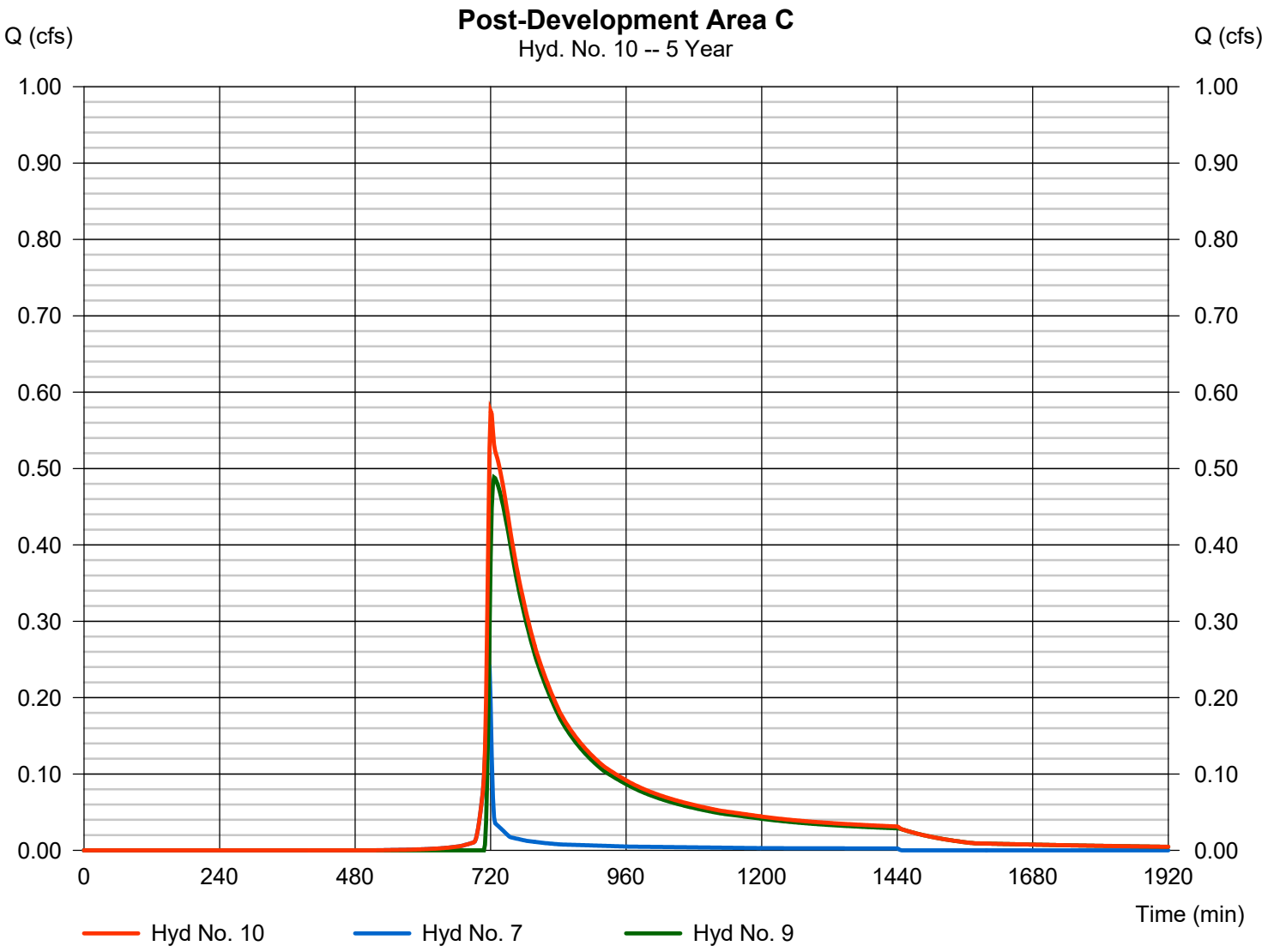


Hydrograph Report

Hyd. No. 10

Post-Development Area C

Hydrograph type	=	Combine	Peak discharge	=	0.575 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	5,498 cuft
Inflow hyds.	=	7, 9	Contrib. drain. area	=	0.070 ac

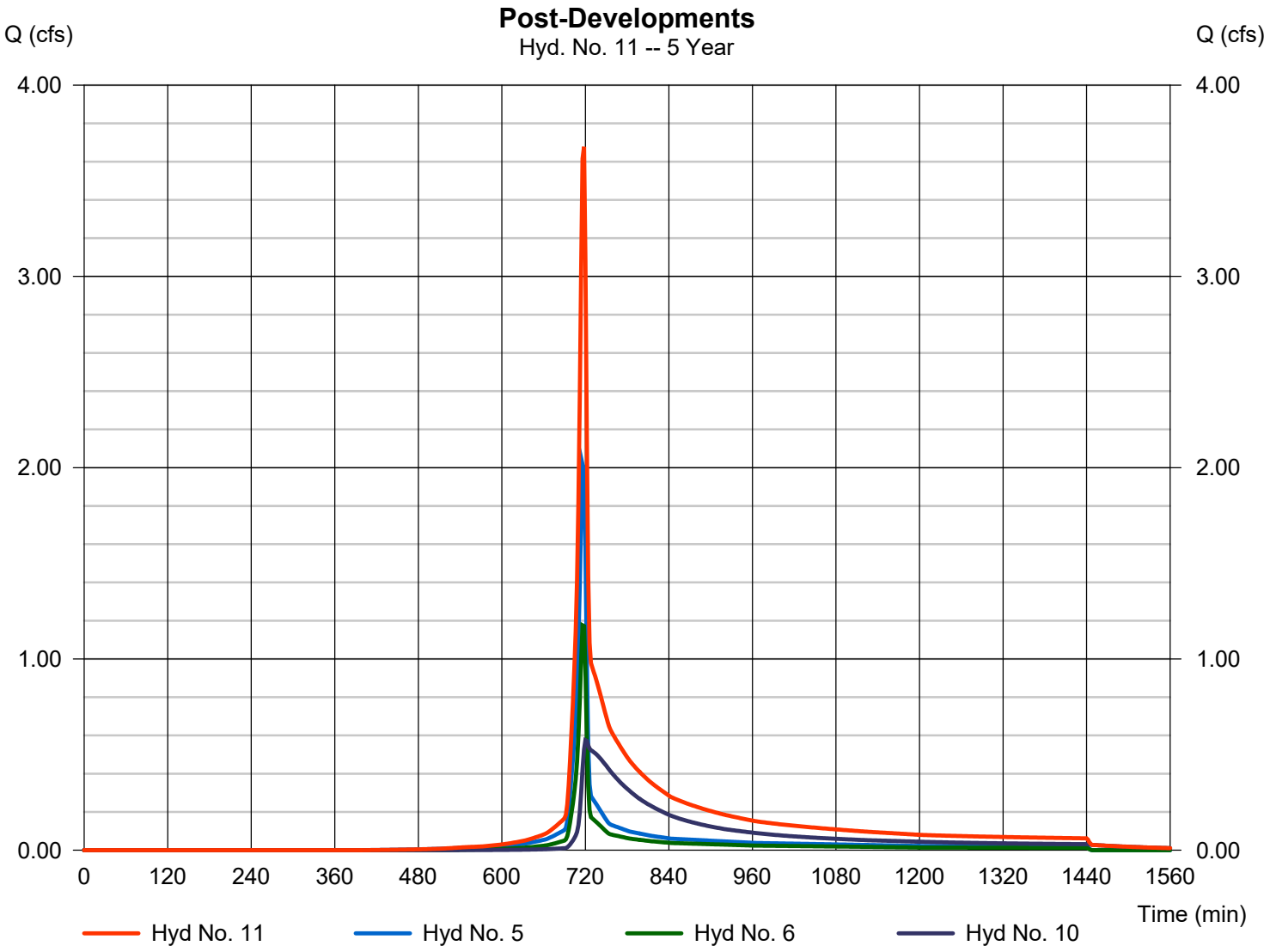


Hydrograph Report

Hyd. No. 11

Post-Developments

Hydrograph type	=	Combine	Peak discharge	=	3.678 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	11,990 cuft
Inflow hyds.	=	5, 6, 10	Contrib. drain. area	=	0.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.565	2	716	9,384	------	------	------	Pre-Development Area A
2	SCS Runoff	1.545	2	716	3,136	------	------	------	Pre-Development Area B
3	SCS Runoff	1.047	2	716	2,130	------	------	------	Pre-Development Area C
4	Combine	7.157	2	716	14,650	1, 2, 3	------	------	Pre-Developments
5	SCS Runoff	2.431	2	716	4,998	------	------	------	Post-Development Area A
6	SCS Runoff	1.454	2	716	2,945	------	------	------	Post-Development Area B
7	SCS Runoff	0.299	2	716	606	------	------	------	Post-Development Area C1
8	SCS Runoff	3.725	2	716	8,418	------	------	------	Post-Development Area C2
9	Reservoir	0.674	2	726	6,200	8	659.12	4,869	Rout A
10	Combine	0.829	2	720	6,806	7, 9	------	------	Post-Development Area C
11	Combine	4.606	2	718	14,749	5, 6, 10	------	------	Post-Developments

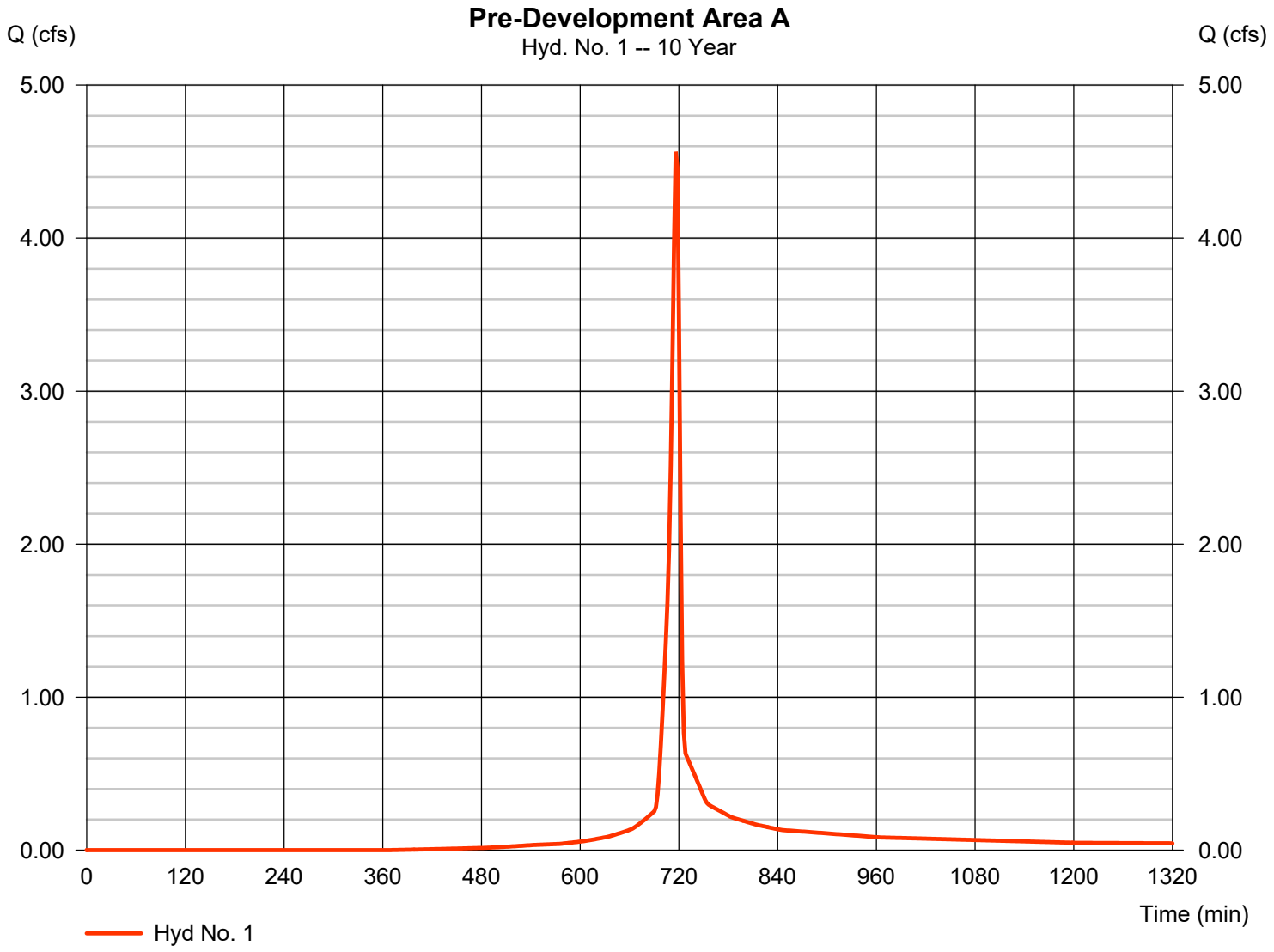
Hydrograph Report

Hyd. No. 1

Pre-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.565 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	9,384 cuft
Drainage area	=	0.920 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.090 x 98) + (0.280 x 89) + (0.550 x 79)] / 0.920



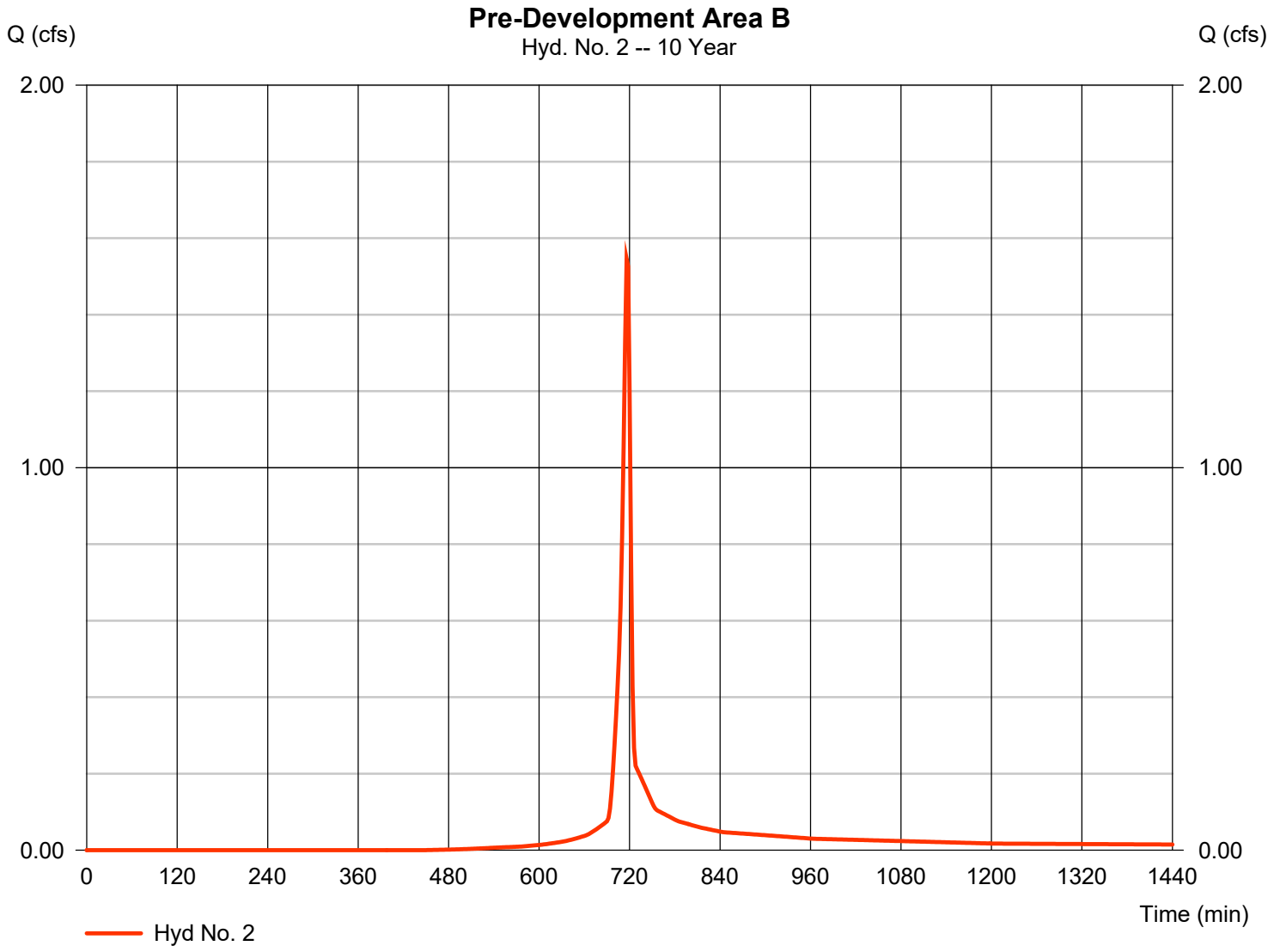
Hydrograph Report

Hyd. No. 2

Pre-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.545 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,136 cuft
Drainage area	=	0.350 ac	Curve number	=	80*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.310 x 79)] / 0.350



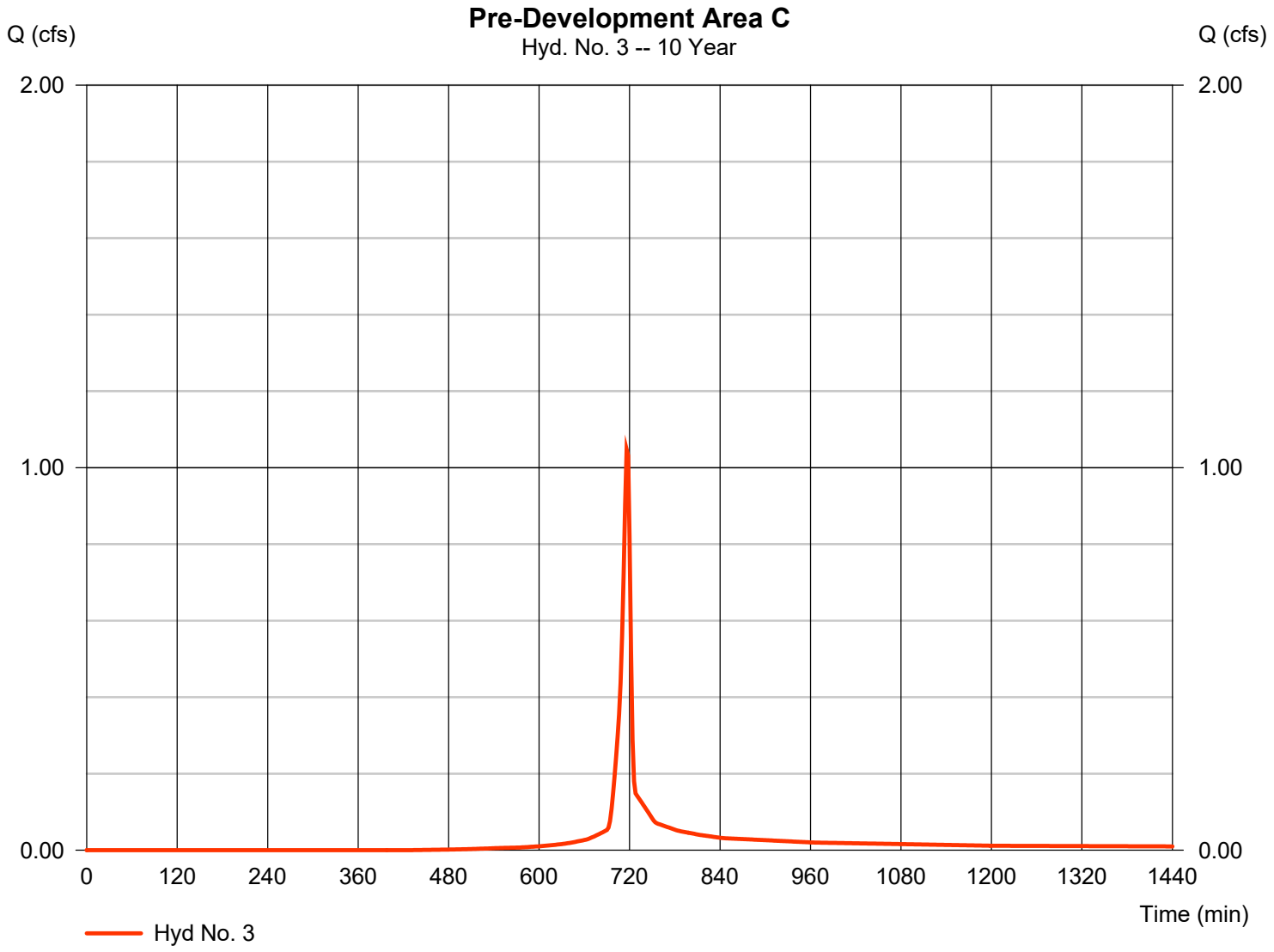
Hydrograph Report

Hyd. No. 3

Pre-Development Area C

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.047 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,130 cuft
Drainage area	=	0.230 ac	Curve number	=	81*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.190 x 79)] / 0.230

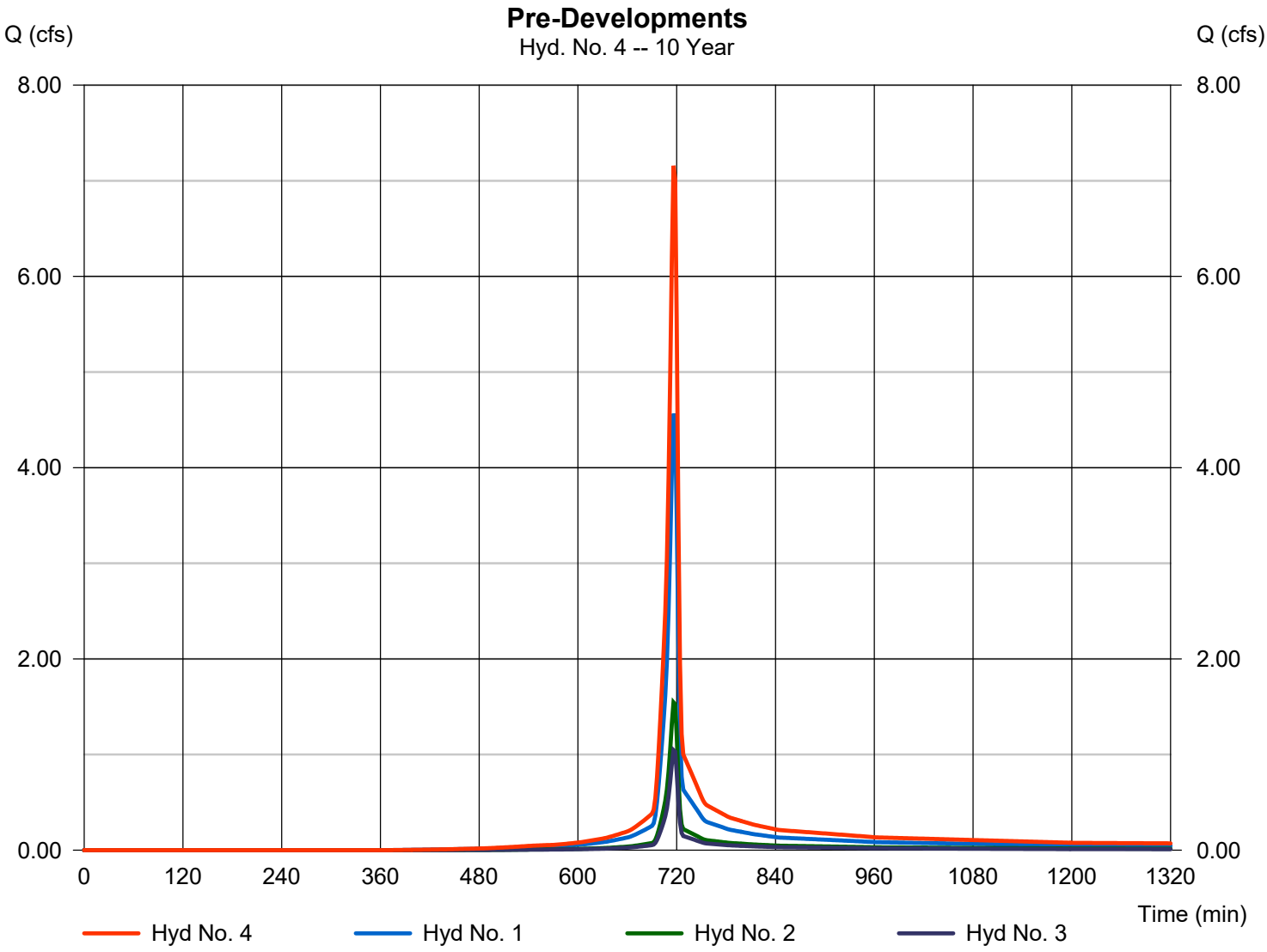


Hydrograph Report

Hyd. No. 4

Pre-Developments

Hydrograph type	= Combine	Peak discharge	= 7.157 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 14,650 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 1.500 ac



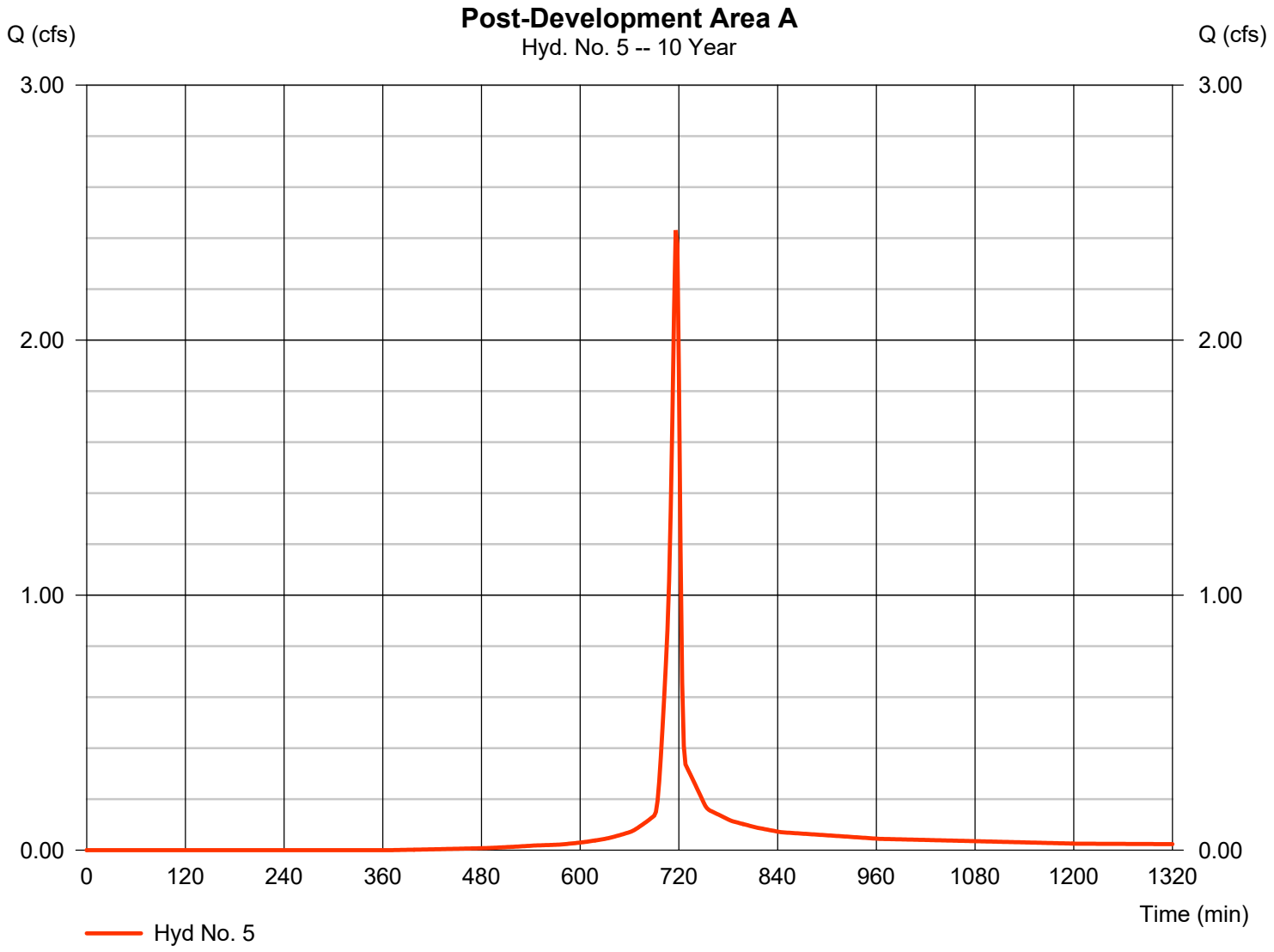
Hydrograph Report

Hyd. No. 5

Post-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.431 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,998 cuft
Drainage area	=	0.490 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.130 x 98) + (0.360 x 79)] / 0.490



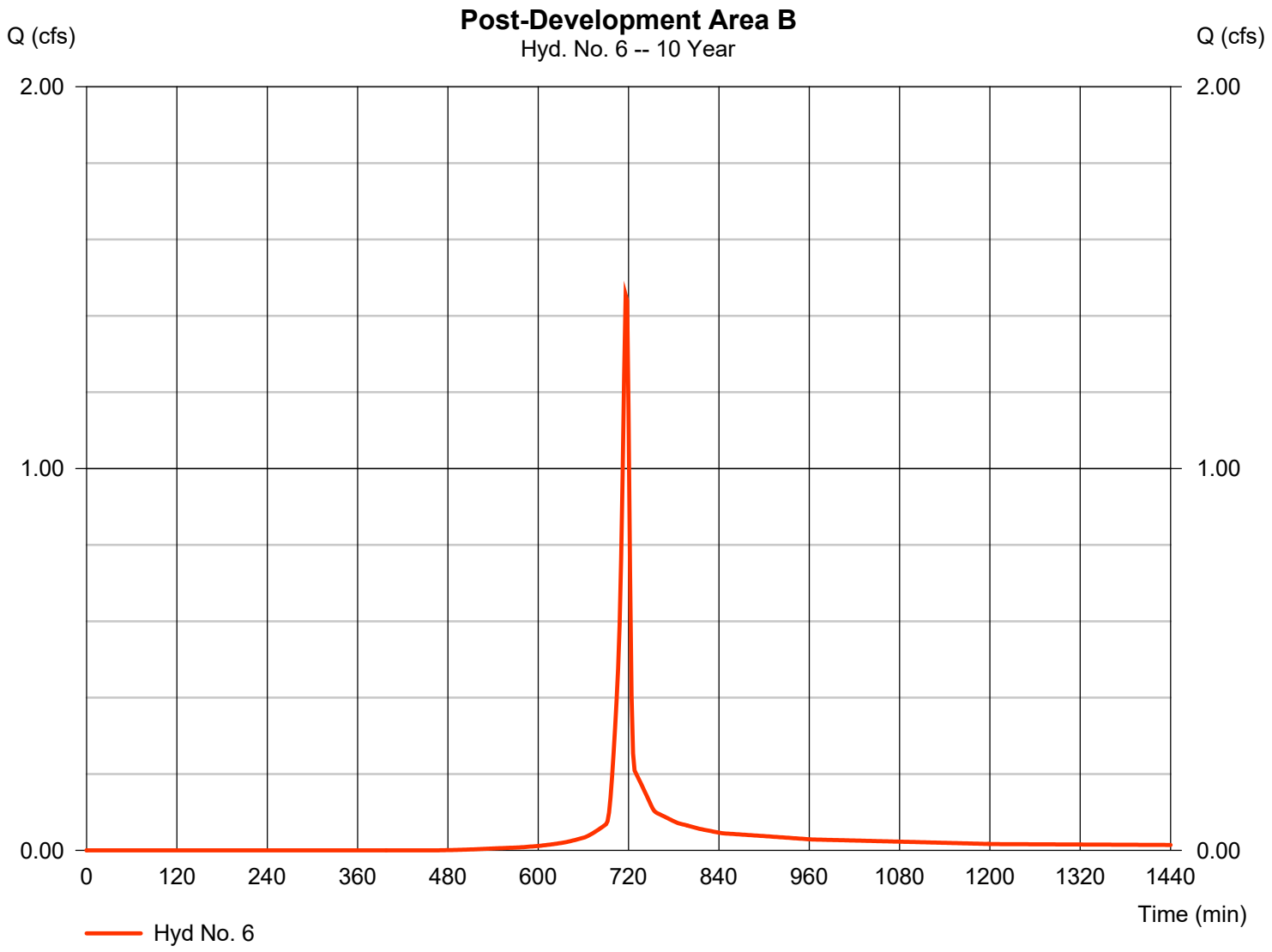
Hydrograph Report

Hyd. No. 6

Post-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.454 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,945 cuft
Drainage area	=	0.340 ac	Curve number	=	79*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.340 x 79)] / 0.340



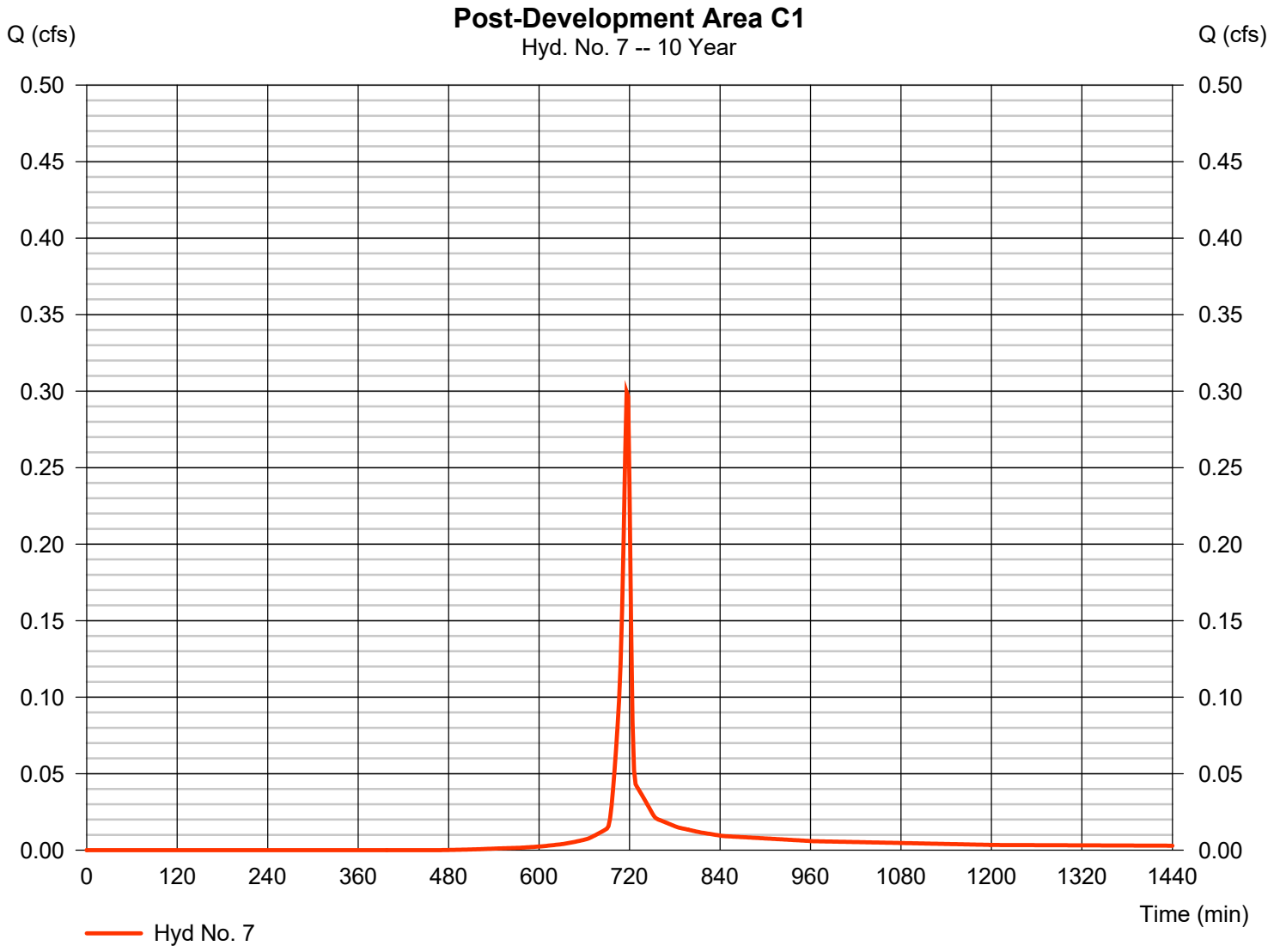
Hydrograph Report

Hyd. No. 7

Post-Development Area C1

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.299 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	606 cuft
Drainage area	=	0.070 ac	Curve number	=	79*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.070 x 79)] / 0.070



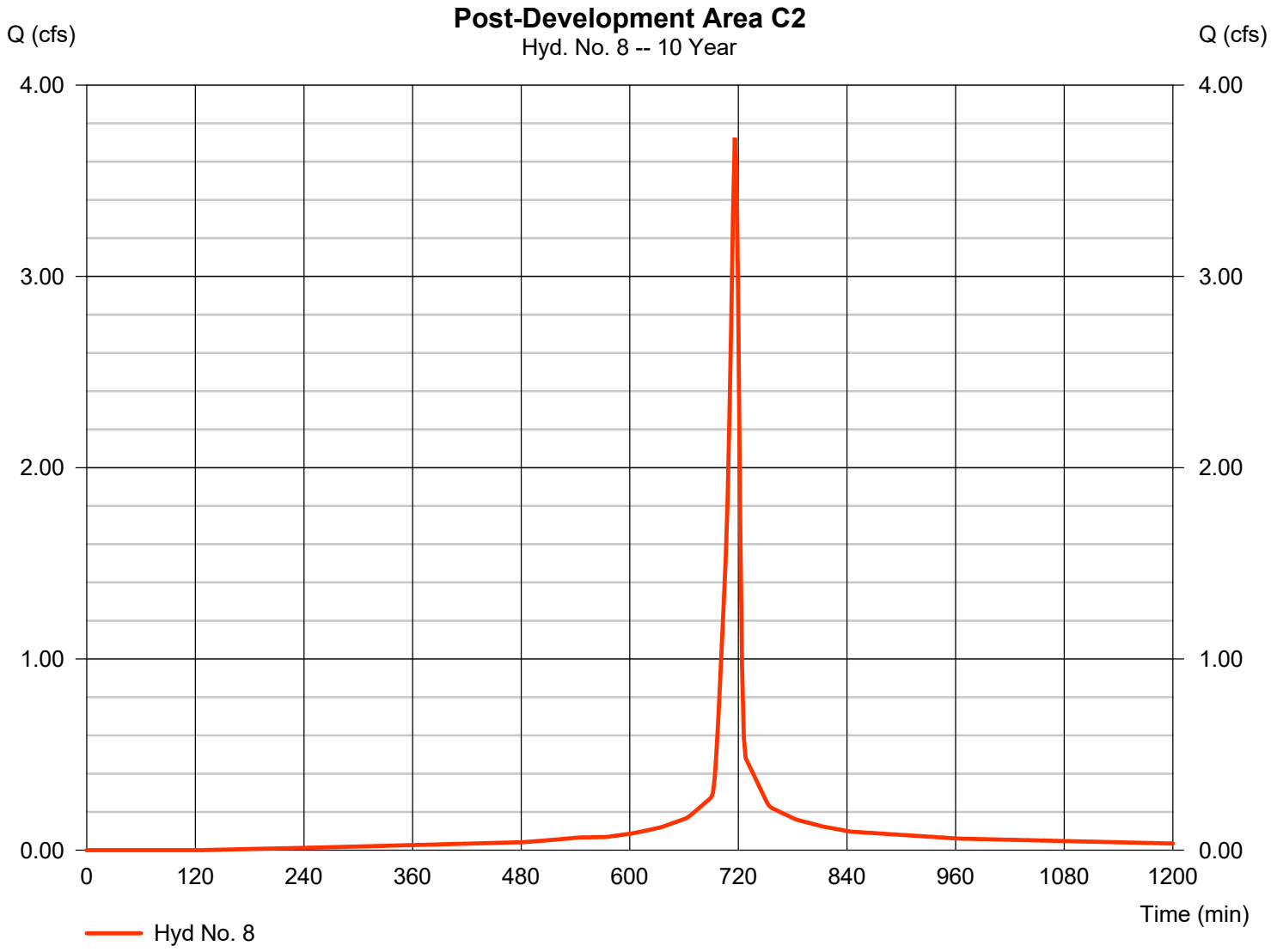
Hydrograph Report

Hyd. No. 8

Post-Development Area C2

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.725 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	8,418 cuft
Drainage area	=	0.600 ac	Curve number	=	95*
Basin Slope	=	1.0 %	Hydraulic length	=	450 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.520 x 98) + (0.080 x 79)] / 0.600



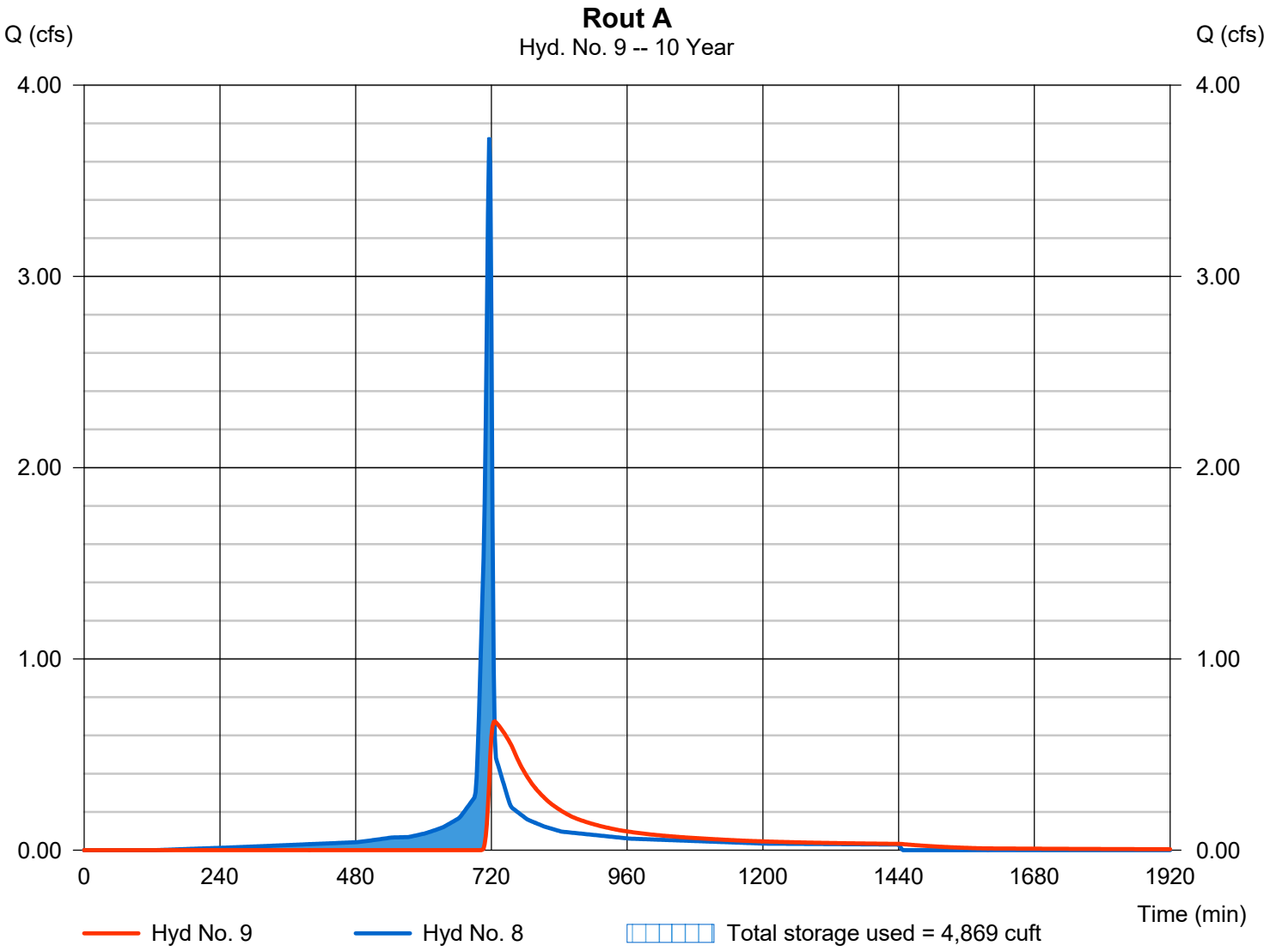
Hydrograph Report

Hyd. No. 9

Rout A

Hydrograph type	=	Reservoir	Peak discharge	=	0.674 cfs
Storm frequency	=	10 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	6,200 cuft
Inflow hyd. No.	=	8 - Post-Development Area C2	Max. Elevation	=	659.12 ft
Reservoir name	=	Pond A	Max. Storage	=	4,869 cuft

Storage Indication method used.

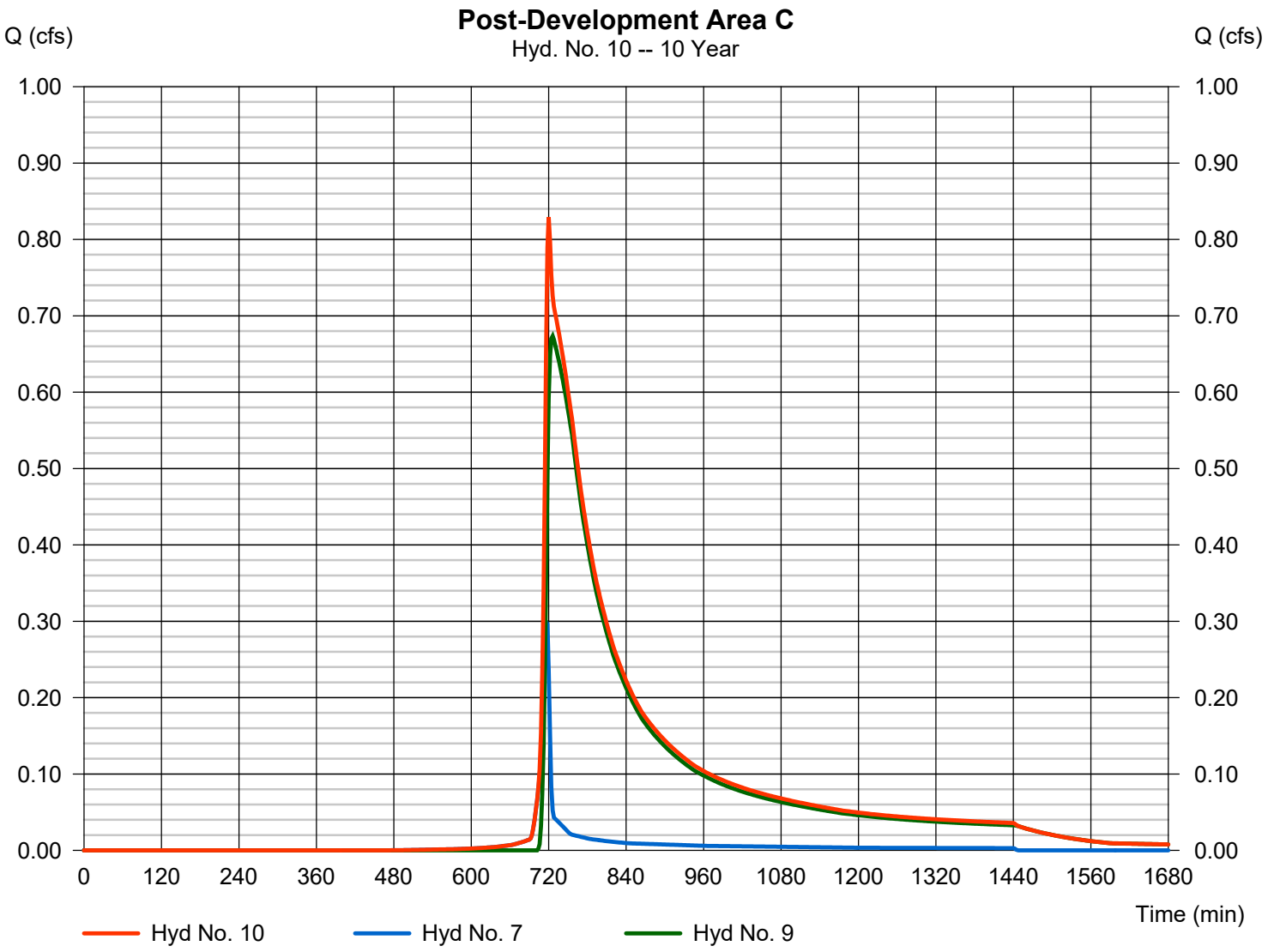


Hydrograph Report

Hyd. No. 10

Post-Development Area C

Hydrograph type	=	Combine	Peak discharge	=	0.829 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	6,806 cuft
Inflow hyds.	=	7, 9	Contrib. drain. area	=	0.070 ac

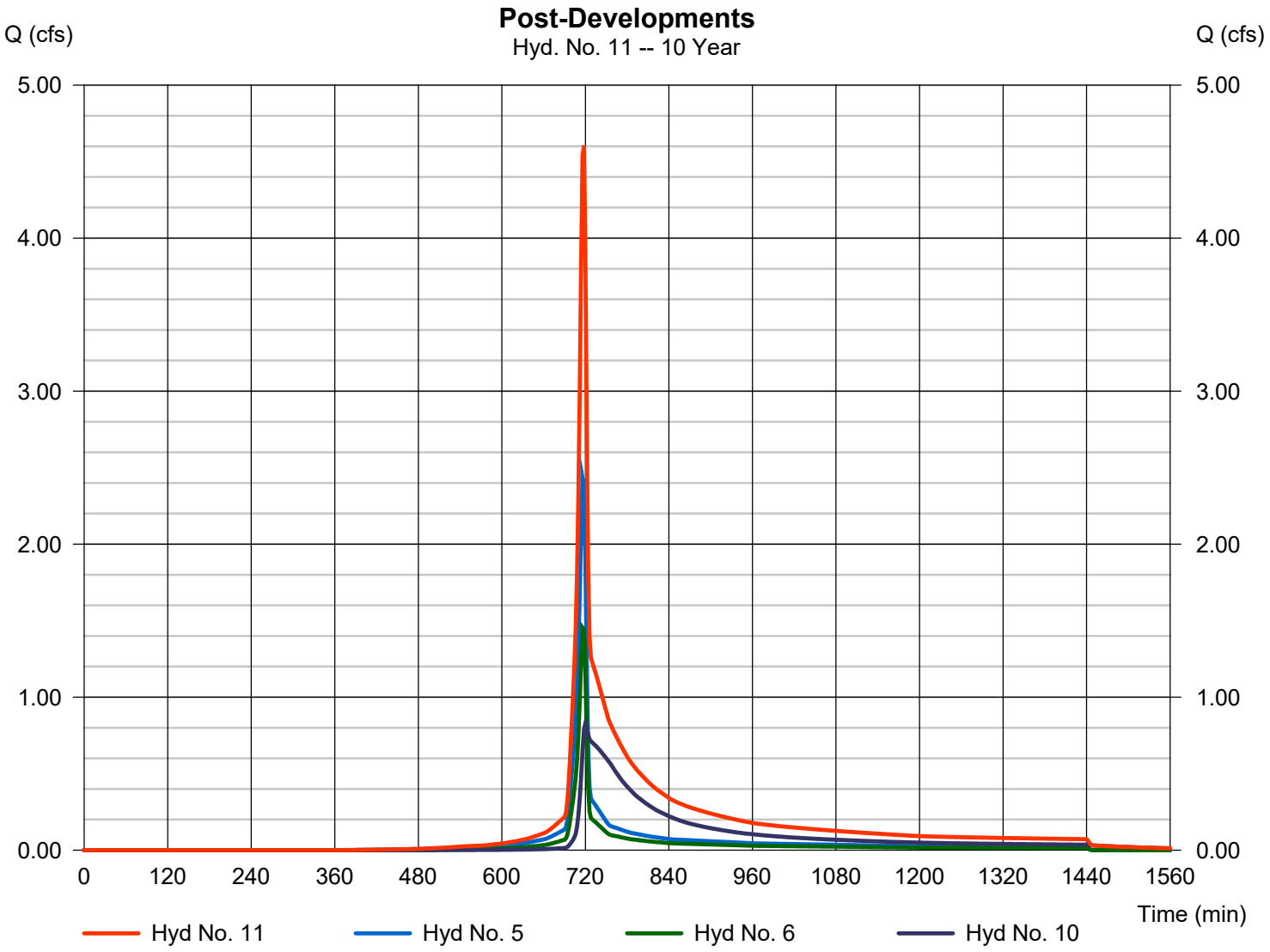


Hydrograph Report

Hyd. No. 11

Post-Developments

Hydrograph type	=	Combine	Peak discharge	=	4.606 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	14,749 cuft
Inflow hyds.	=	5, 6, 10	Contrib. drain. area	=	0.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	5.666	2	716	11,768	------	------	------	Pre-Development Area A
2	SCS Runoff	1.958	2	716	4,002	------	------	------	Pre-Development Area B
3	SCS Runoff	1.320	2	716	2,707	------	------	------	Pre-Development Area C
4	Combine	8.944	2	716	18,477	1, 2, 3	------	------	Pre-Developments
5	SCS Runoff	3.018	2	716	6,268	------	------	------	Post-Development Area A
6	SCS Runoff	1.853	2	716	3,776	------	------	------	Post-Development Area B
7	SCS Runoff	0.381	2	716	777	------	------	------	Post-Development Area C1
8	SCS Runoff	4.420	2	716	10,097	------	------	------	Post-Development Area C2
9	Reservoir	0.929	2	724	7,879	8	659.33	5,714	Rout A
10	Combine	1.134	2	720	8,656	7, 9	------	------	Post-Development Area C
11	Combine	5.863	2	718	18,700	5, 6, 10	------	------	Post-Developments

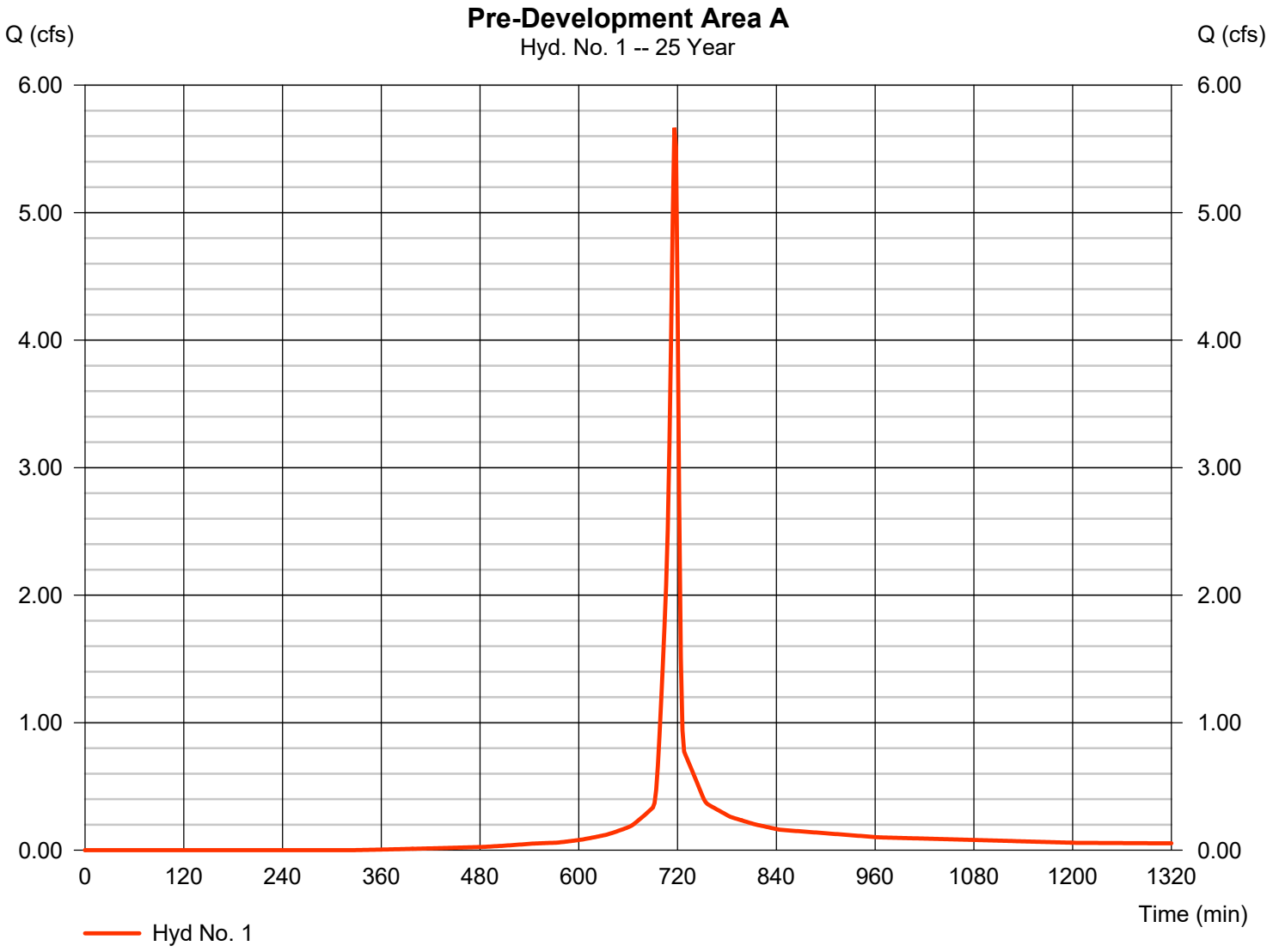
Hydrograph Report

Hyd. No. 1

Pre-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	5.666 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	11,768 cuft
Drainage area	=	0.920 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.090 x 98) + (0.280 x 89) + (0.550 x 79)] / 0.920



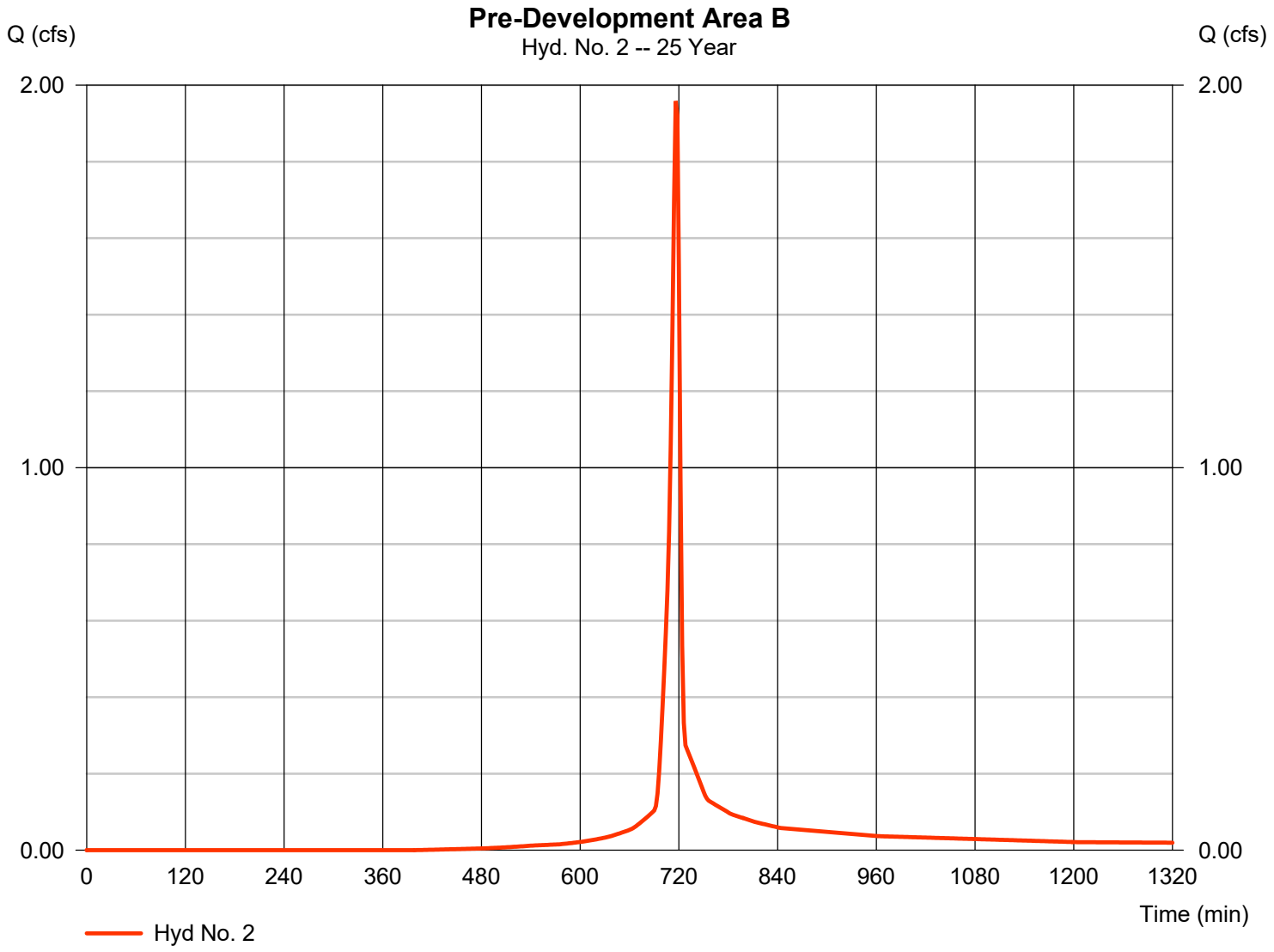
Hydrograph Report

Hyd. No. 2

Pre-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.958 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,002 cuft
Drainage area	=	0.350 ac	Curve number	=	80*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.310 x 79)] / 0.350



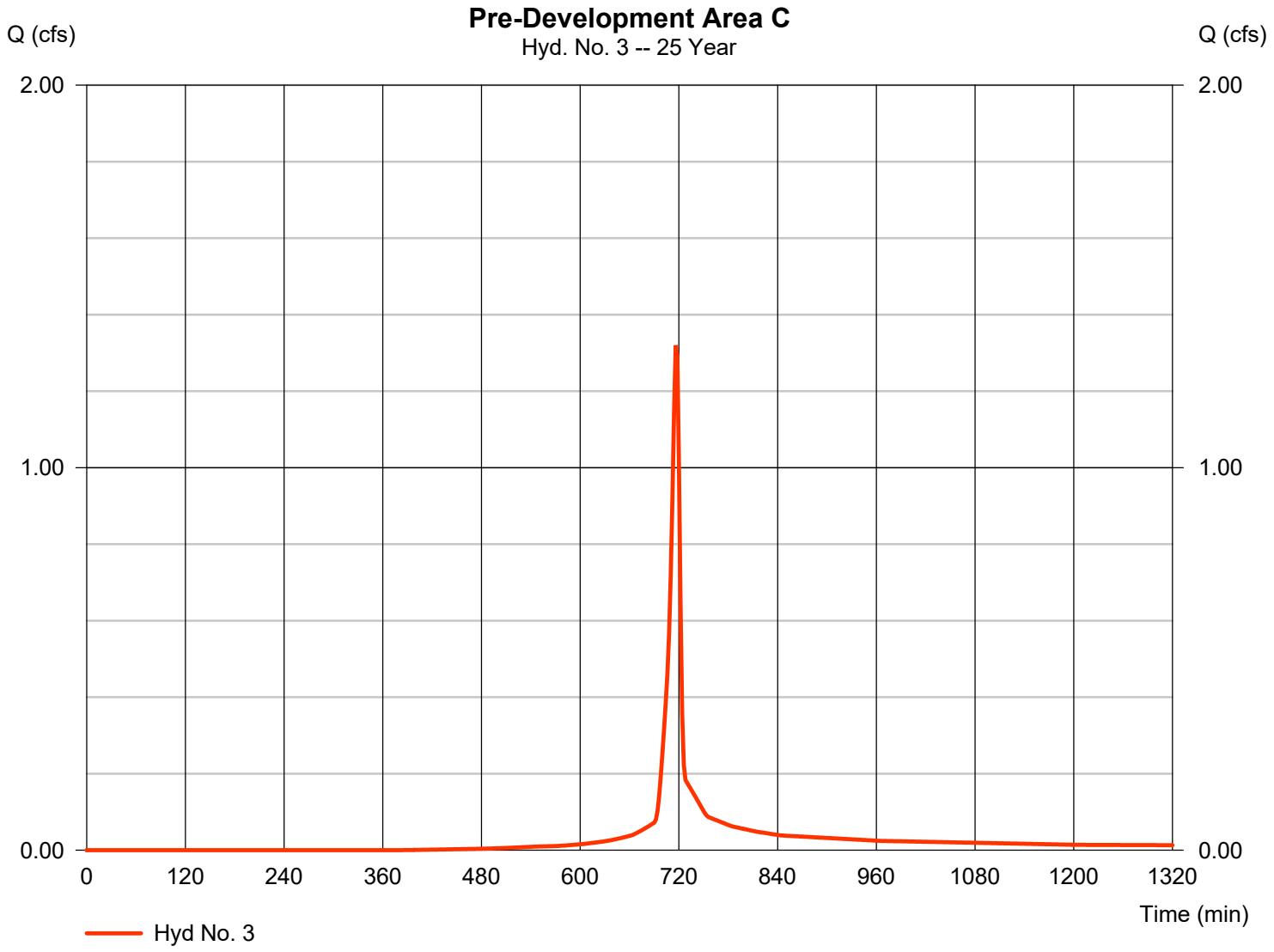
Hydrograph Report

Hyd. No. 3

Pre-Development Area C

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.320 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,707 cuft
Drainage area	=	0.230 ac	Curve number	=	81*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.190 x 79)] / 0.230

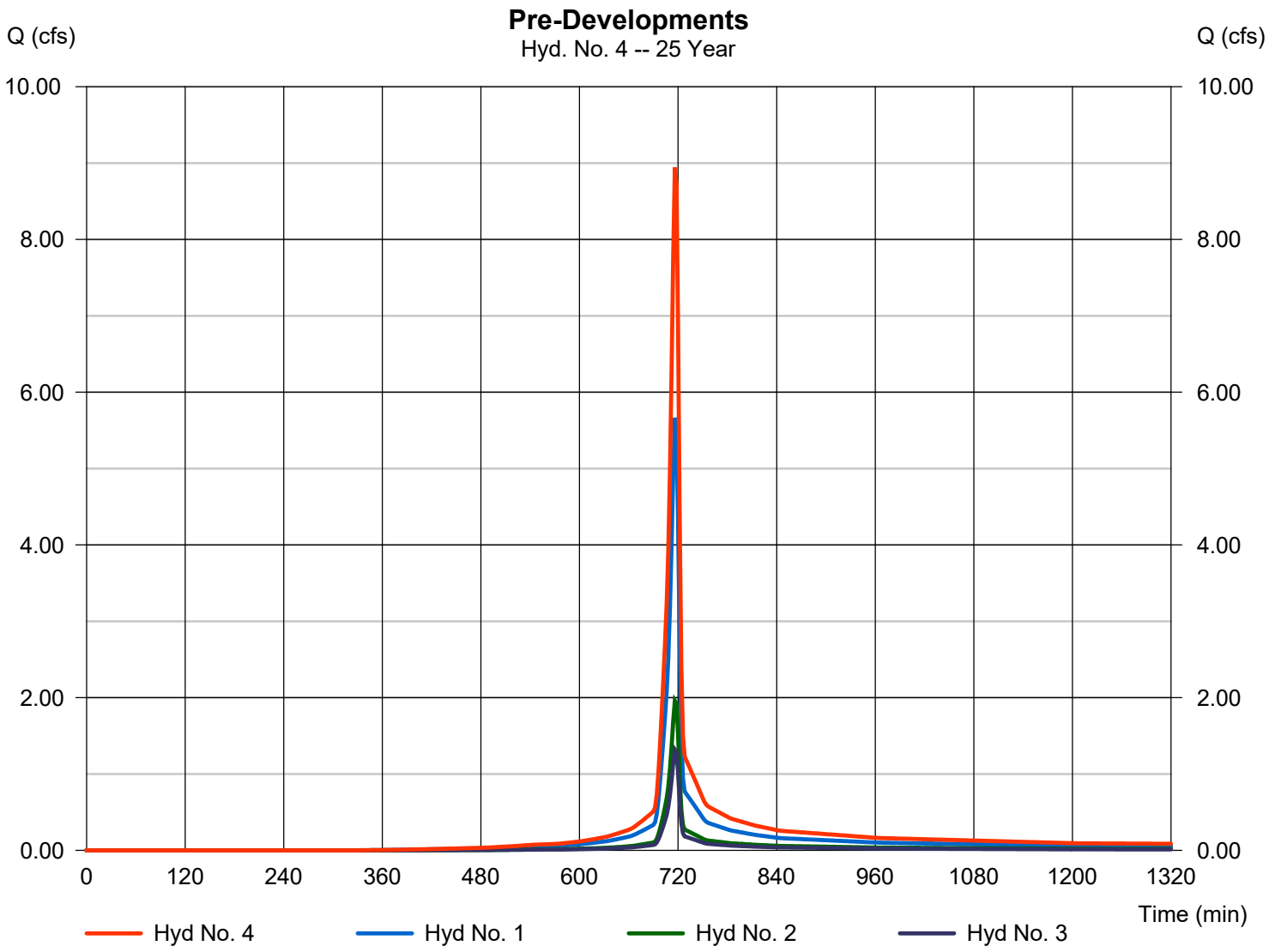


Hydrograph Report

Hyd. No. 4

Pre-Developments

Hydrograph type	= Combine	Peak discharge	= 8.944 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 18,477 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 1.500 ac



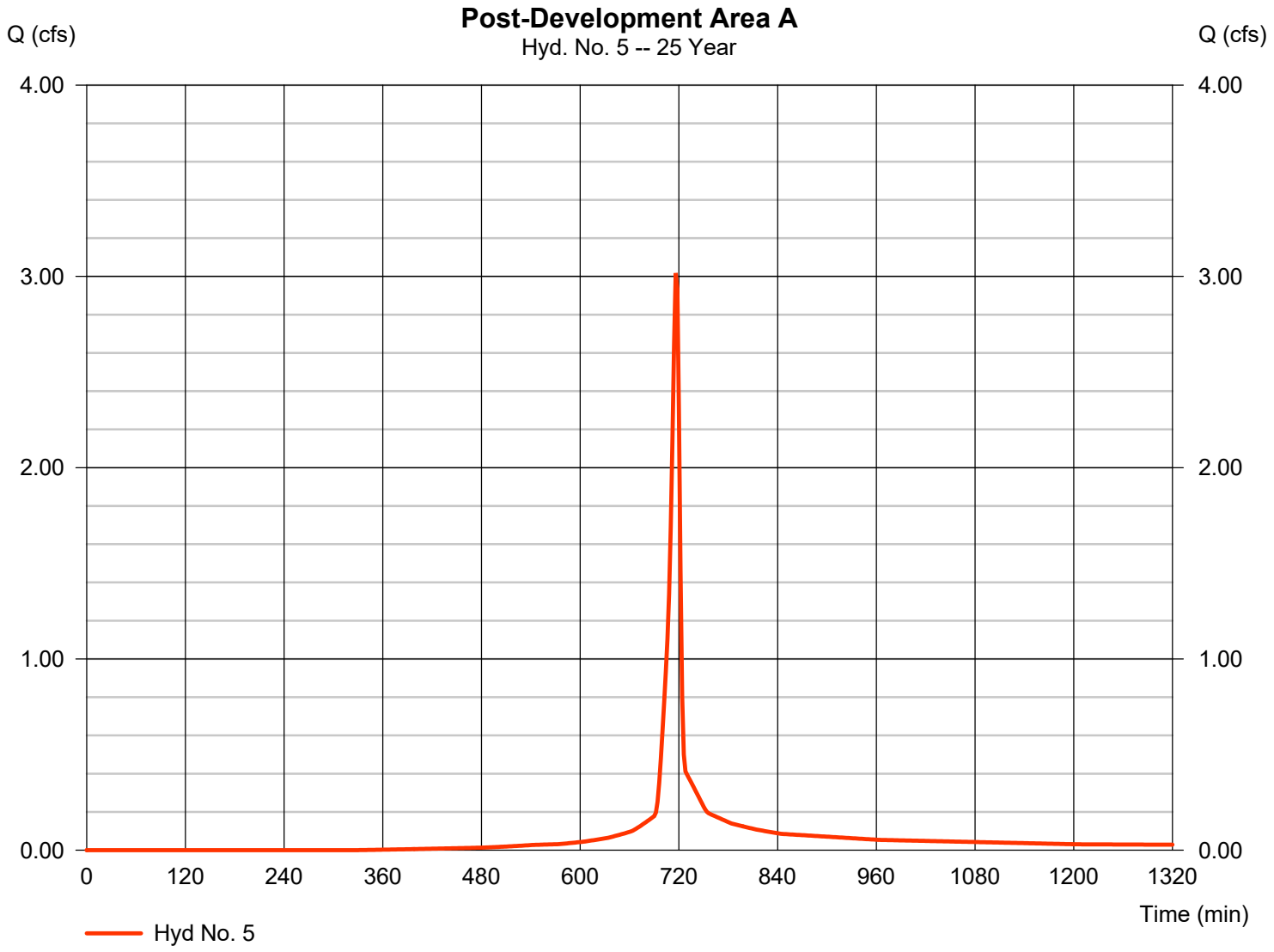
Hydrograph Report

Hyd. No. 5

Post-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.018 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	6,268 cuft
Drainage area	=	0.490 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.130 x 98) + (0.360 x 79)] / 0.490



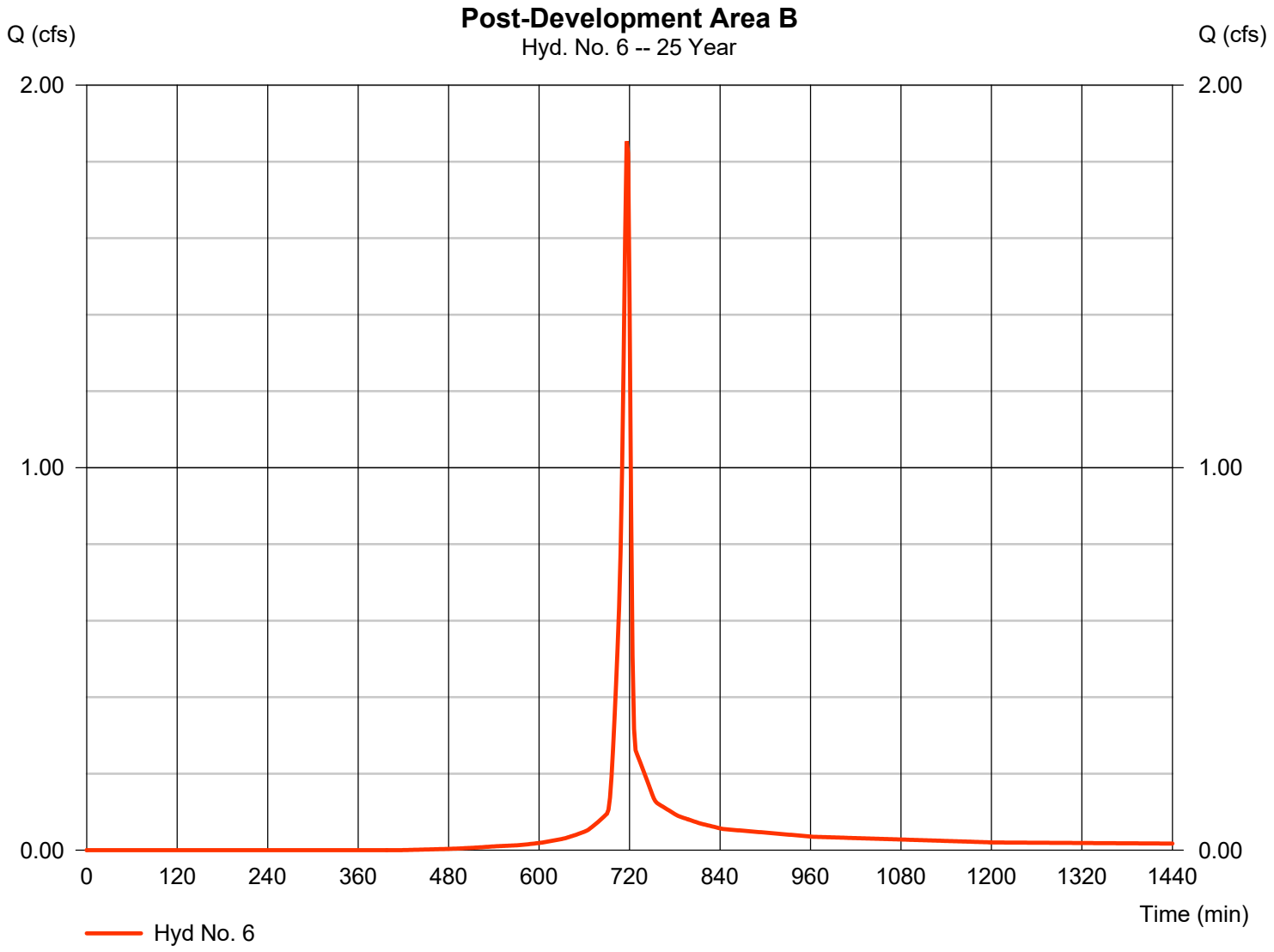
Hydrograph Report

Hyd. No. 6

Post-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.853 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,776 cuft
Drainage area	=	0.340 ac	Curve number	=	79*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.340 x 79)] / 0.340



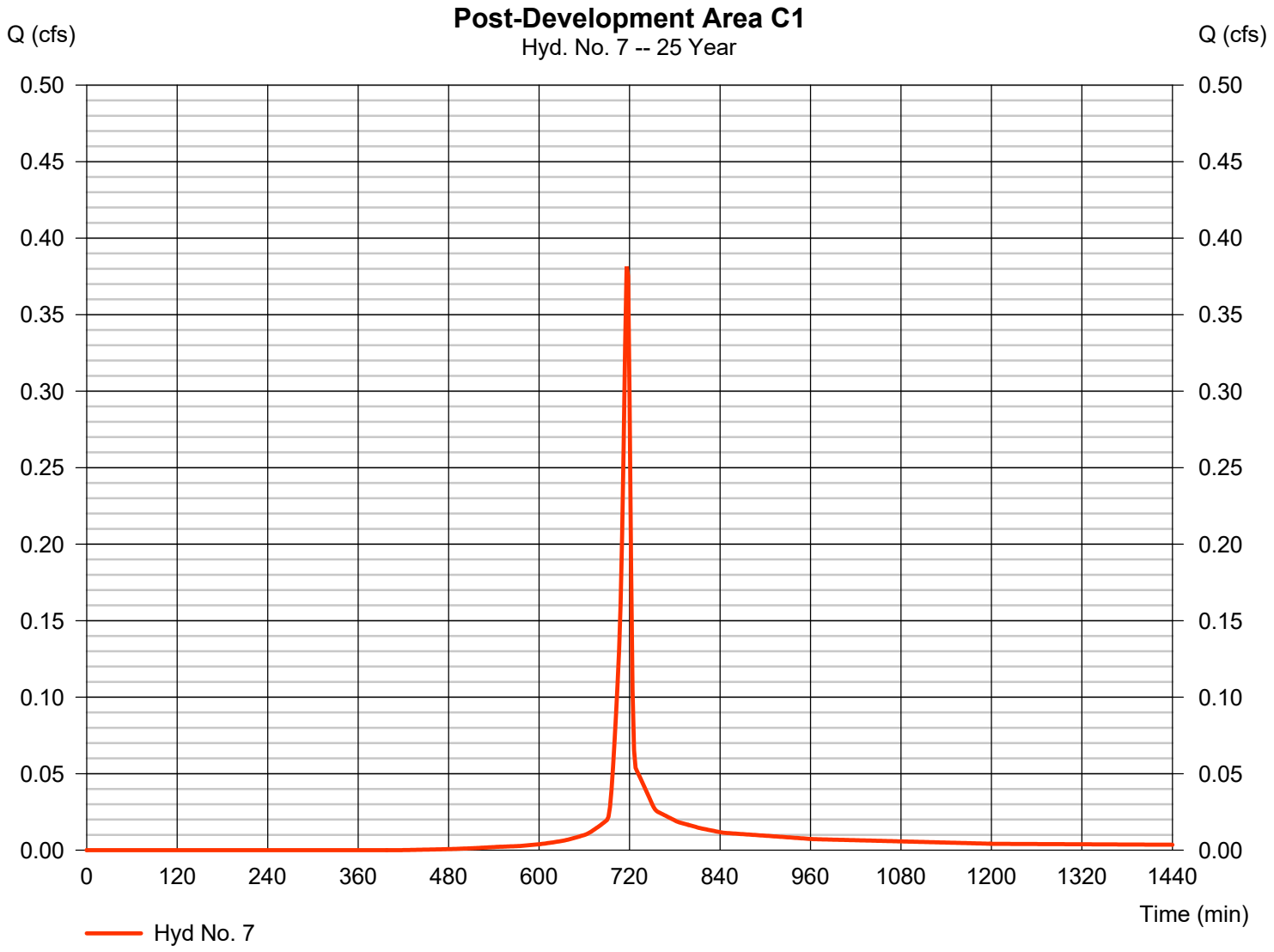
Hydrograph Report

Hyd. No. 7

Post-Development Area C1

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.381 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	777 cuft
Drainage area	=	0.070 ac	Curve number	=	79*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.070 x 79)] / 0.070



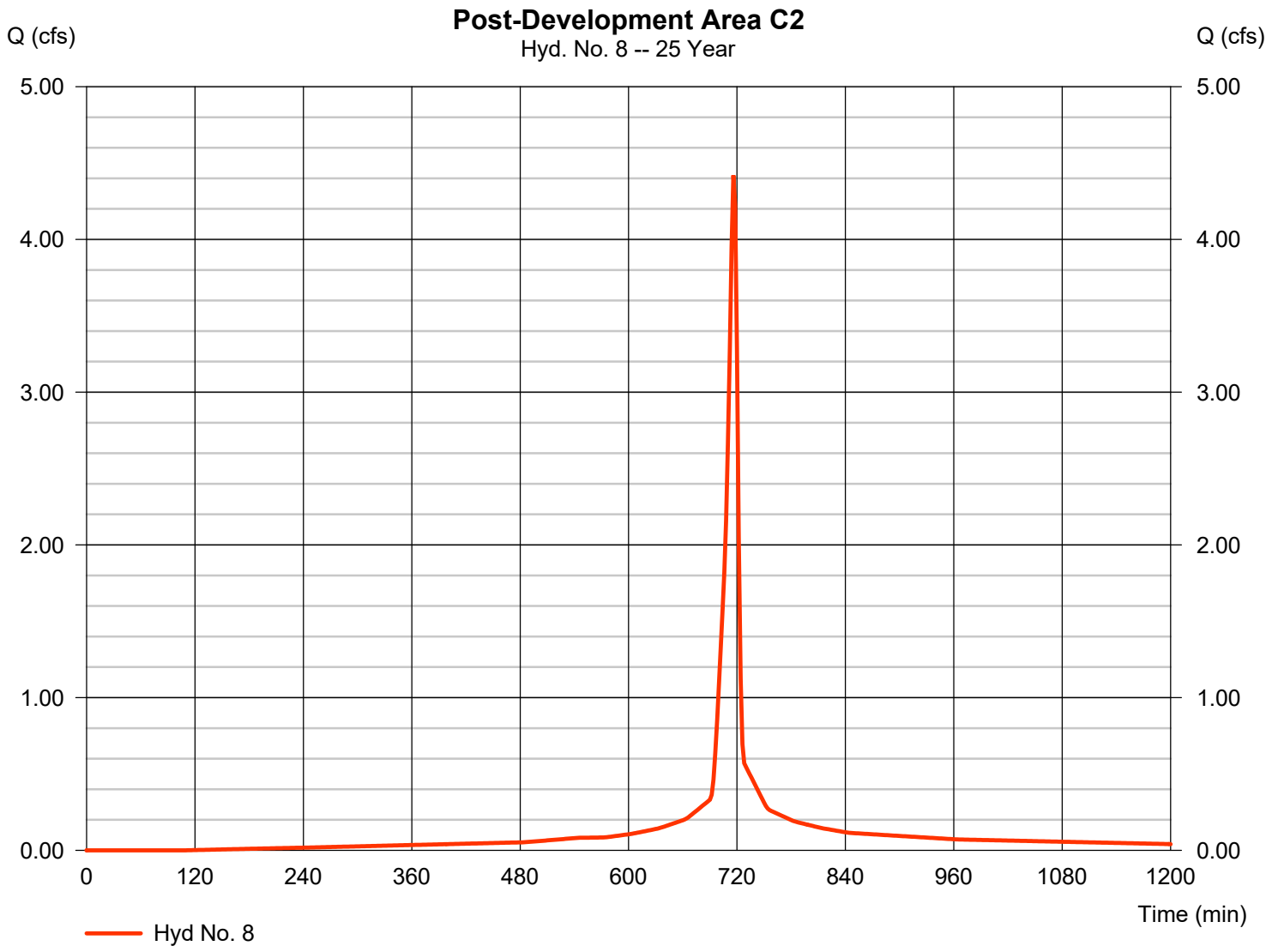
Hydrograph Report

Hyd. No. 8

Post-Development Area C2

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.420 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	10,097 cuft
Drainage area	=	0.600 ac	Curve number	=	95*
Basin Slope	=	1.0 %	Hydraulic length	=	450 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.53 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.520 x 98) + (0.080 x 79)] / 0.600



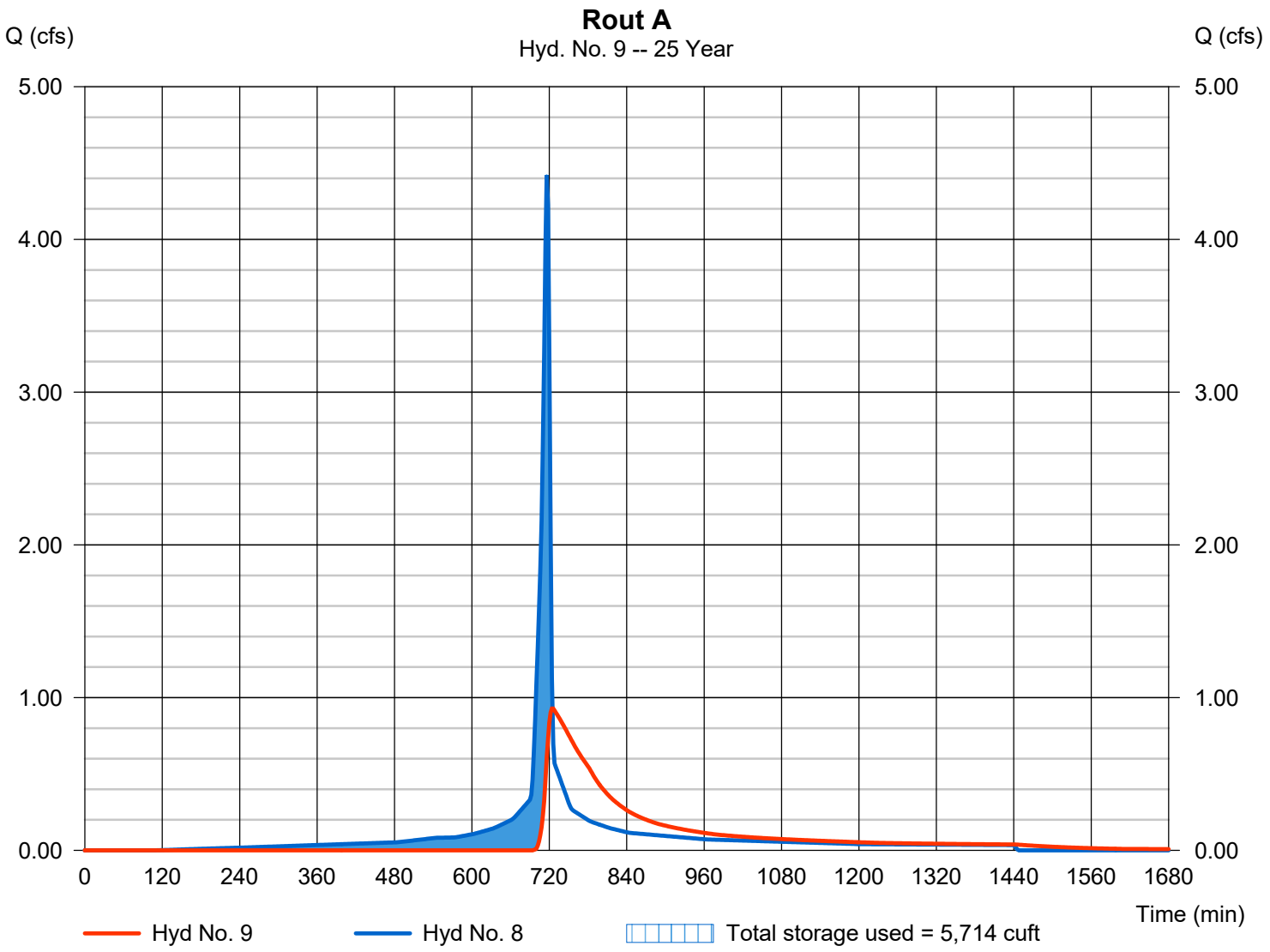
Hydrograph Report

Hyd. No. 9

Rout A

Hydrograph type	=	Reservoir	Peak discharge	=	0.929 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	7,879 cuft
Inflow hyd. No.	=	8 - Post-Development Area C2	Max. Elevation	=	659.33 ft
Reservoir name	=	Pond A	Max. Storage	=	5,714 cuft

Storage Indication method used.

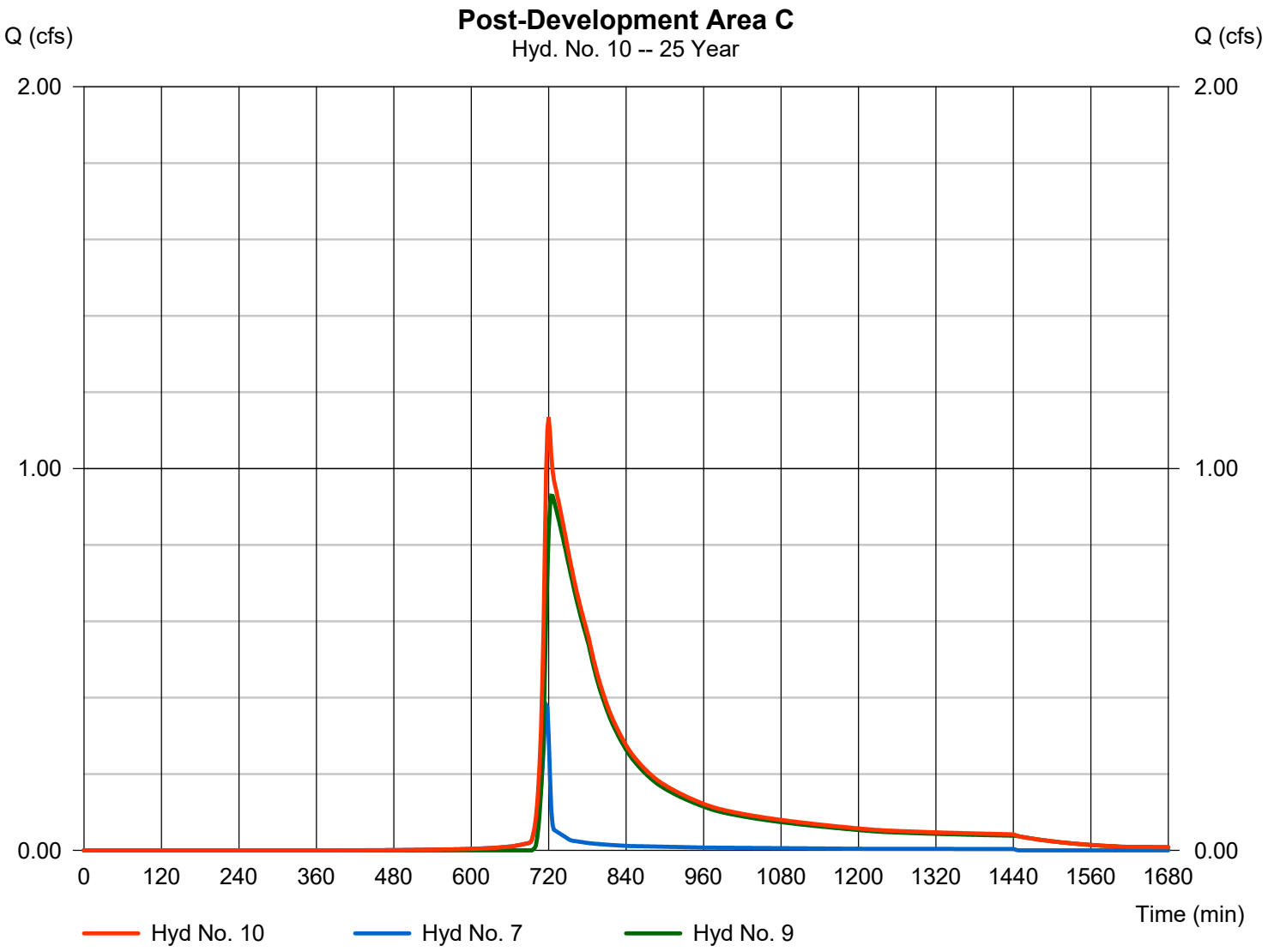


Hydrograph Report

Hyd. No. 10

Post-Development Area C

Hydrograph type	=	Combine	Peak discharge	=	1.134 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	8,656 cuft
Inflow hyds.	=	7, 9	Contrib. drain. area	=	0.070 ac

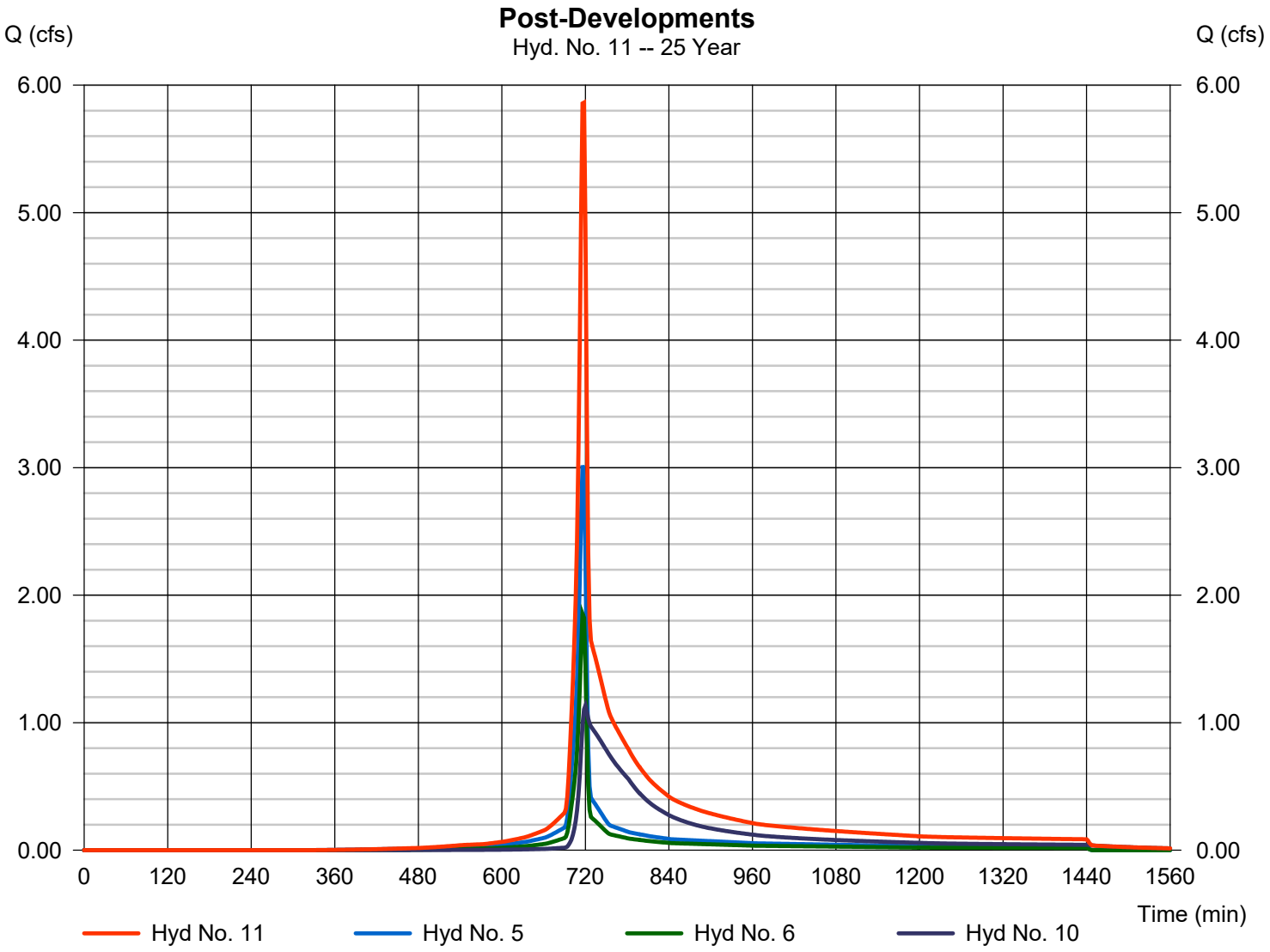


Hydrograph Report

Hyd. No. 11

Post-Developments

Hydrograph type	= Combine	Peak discharge	= 5.863 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 18,700 cuft
Inflow hyds.	= 5, 6, 10	Contrib. drain. area	= 0.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.556	2	716	13,726	------	------	------	Pre-Development Area A
2	SCS Runoff	2.295	2	716	4,719	------	------	------	Pre-Development Area B
3	SCS Runoff	1.542	2	716	3,183	------	------	------	Pre-Development Area C
4	Combine	10.39	2	716	21,628	1, 2, 3	------	------	Pre-Developments
5	SCS Runoff	3.492	2	716	7,310	------	------	------	Post-Development Area A
6	SCS Runoff	2.179	2	716	4,465	------	------	------	Post-Development Area B
7	SCS Runoff	0.449	2	716	919	------	------	------	Post-Development Area C1
8	SCS Runoff	4.978	2	716	11,455	------	------	------	Post-Development Area C2
9	Reservoir	1.144	2	724	9,238	8	659.49	6,368	Rout A
10	Combine	1.388	2	720	10,157	7, 9	------	------	Post-Development Area C
11	Combine	6.885	2	716	21,932	5, 6, 10	------	------	Post-Developments

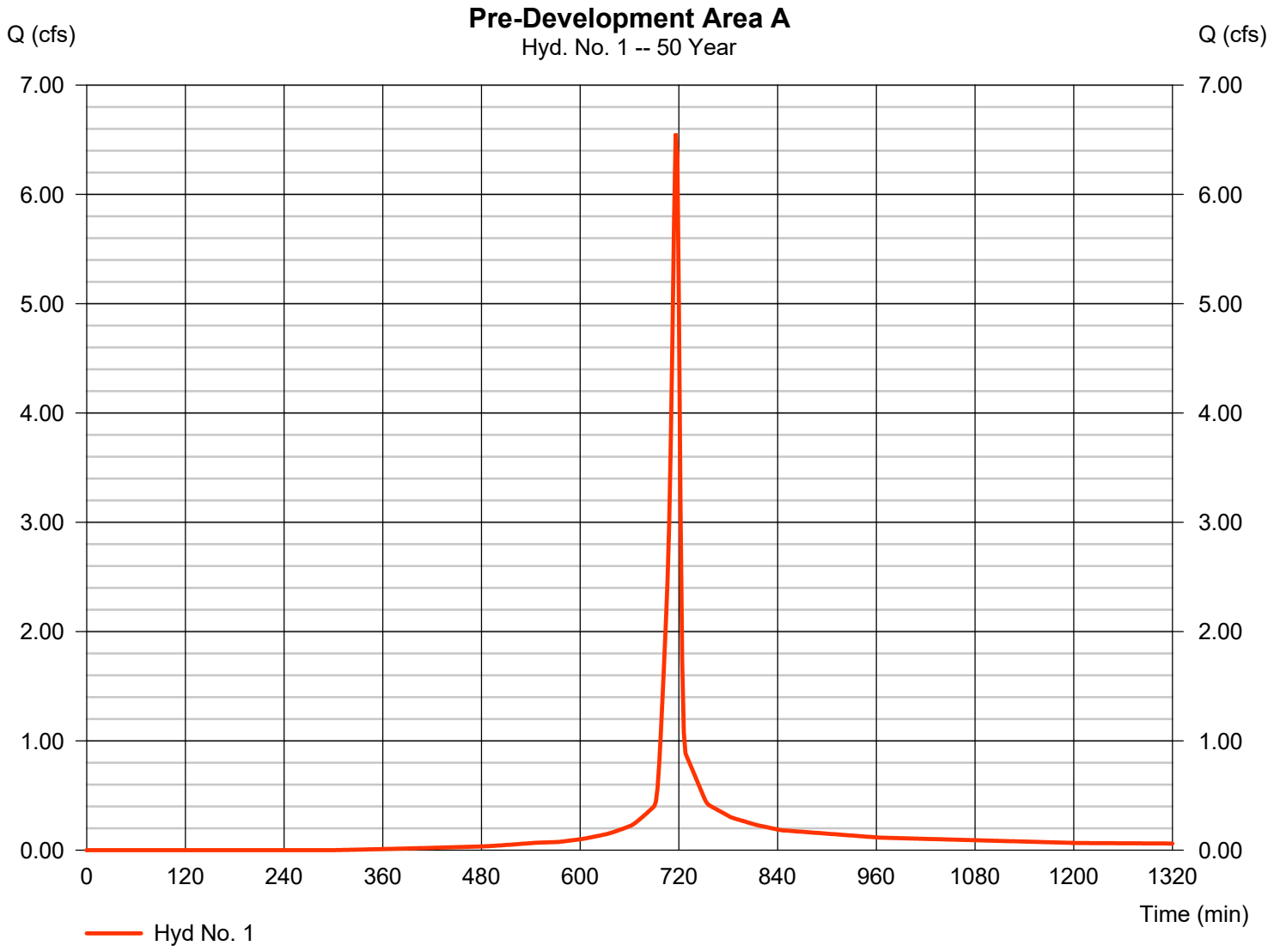
Hydrograph Report

Hyd. No. 1

Pre-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.556 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	13,726 cuft
Drainage area	=	0.920 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.090 x 98) + (0.280 x 89) + (0.550 x 79)] / 0.920



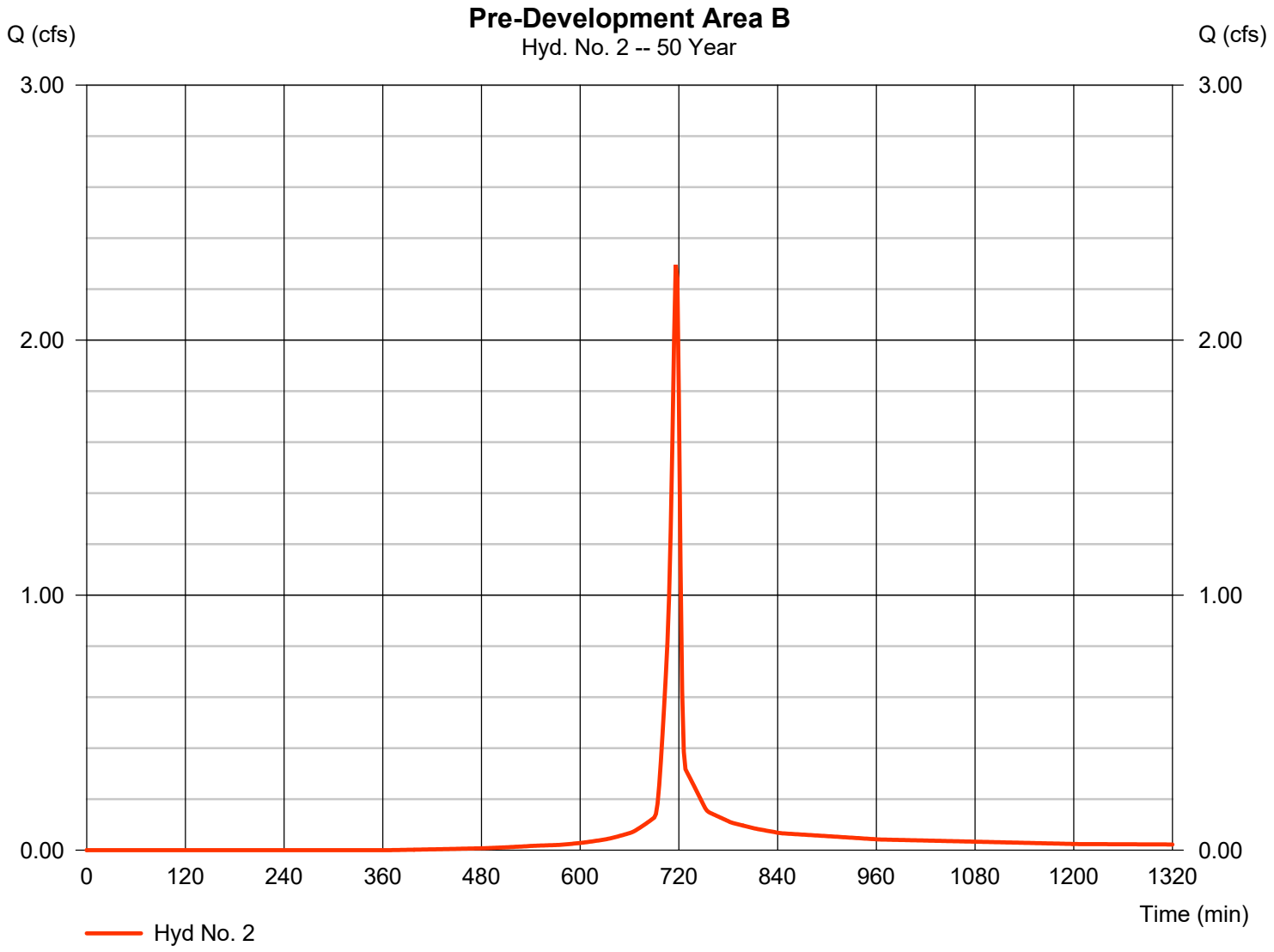
Hydrograph Report

Hyd. No. 2

Pre-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.295 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,719 cuft
Drainage area	=	0.350 ac	Curve number	=	80*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.310 x 79)] / 0.350



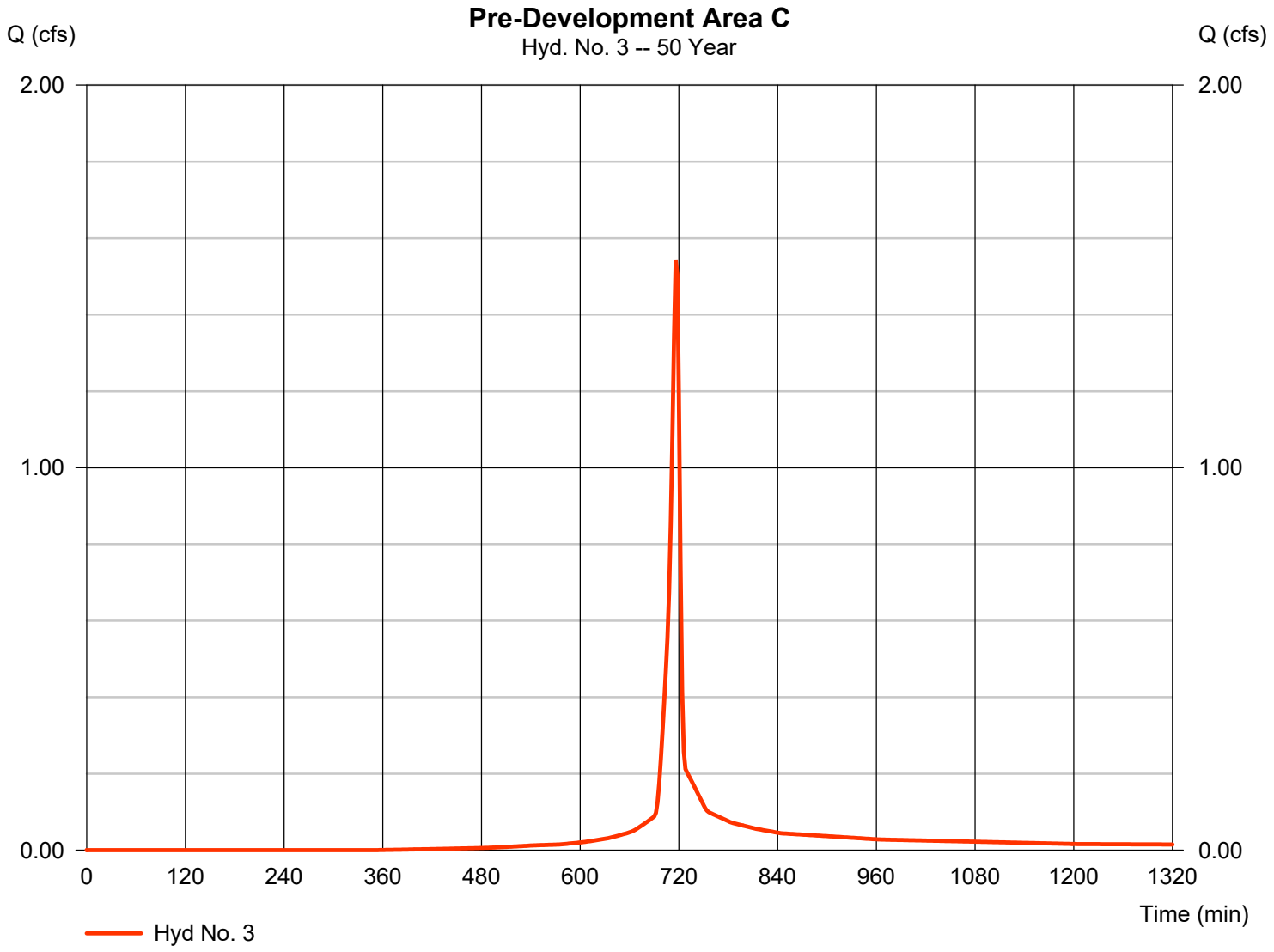
Hydrograph Report

Hyd. No. 3

Pre-Development Area C

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.542 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,183 cuft
Drainage area	=	0.230 ac	Curve number	=	81*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.190 x 79)] / 0.230

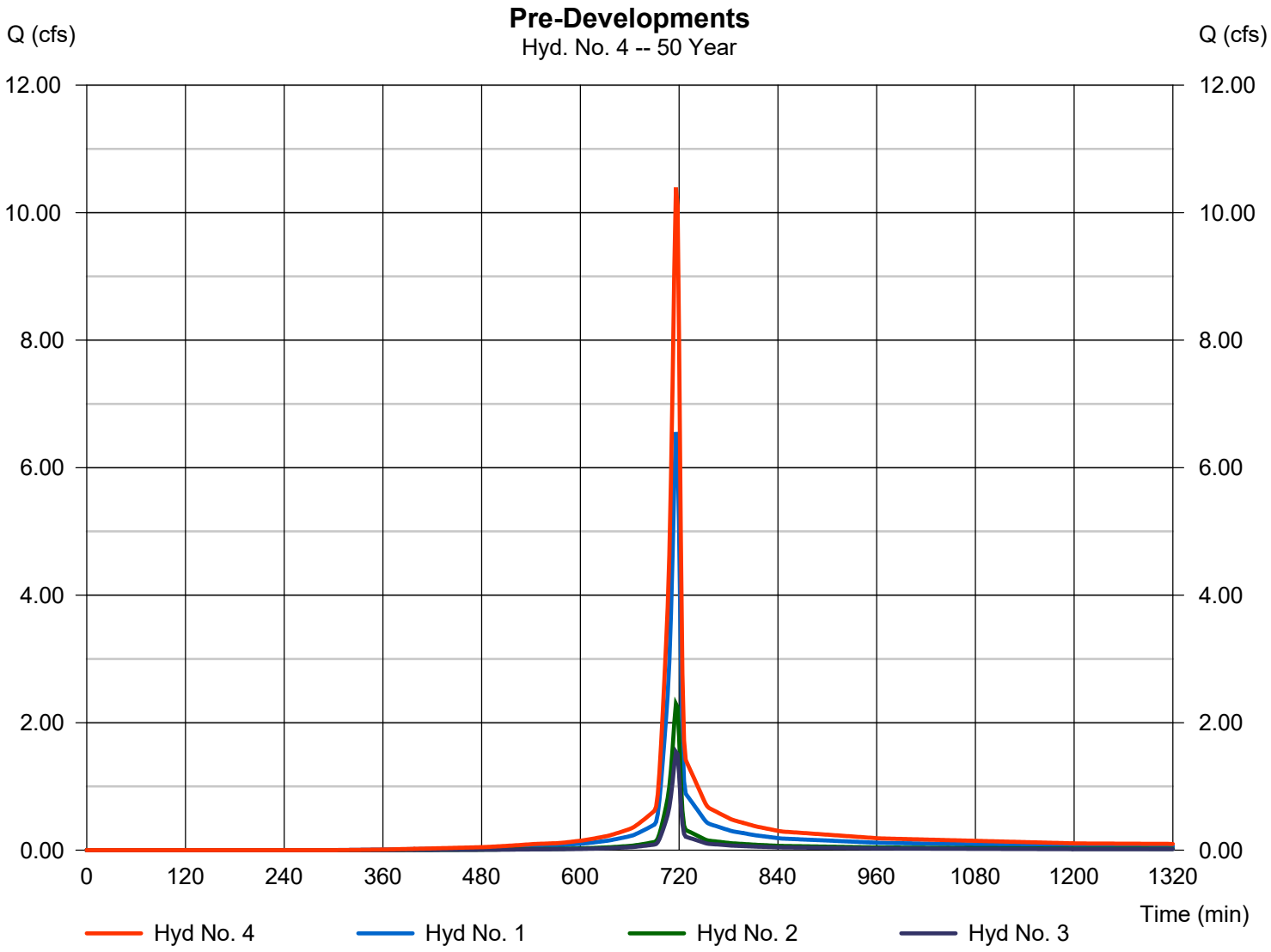


Hydrograph Report

Hyd. No. 4

Pre-Developments

Hydrograph type	= Combine	Peak discharge	= 10.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 21,628 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 1.500 ac



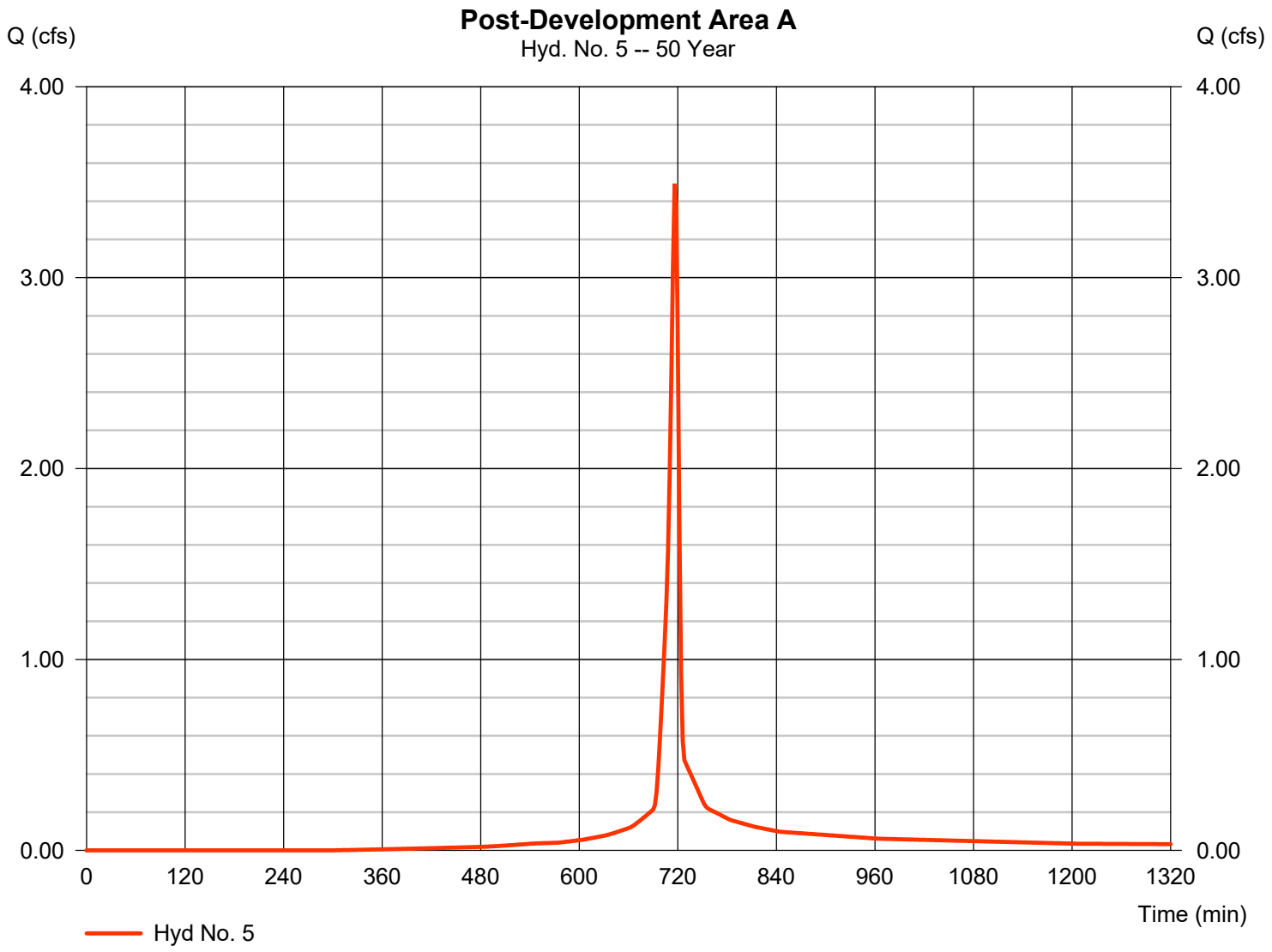
Hydrograph Report

Hyd. No. 5

Post-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.492 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	7,310 cuft
Drainage area	=	0.490 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.130 x 98) + (0.360 x 79)] / 0.490



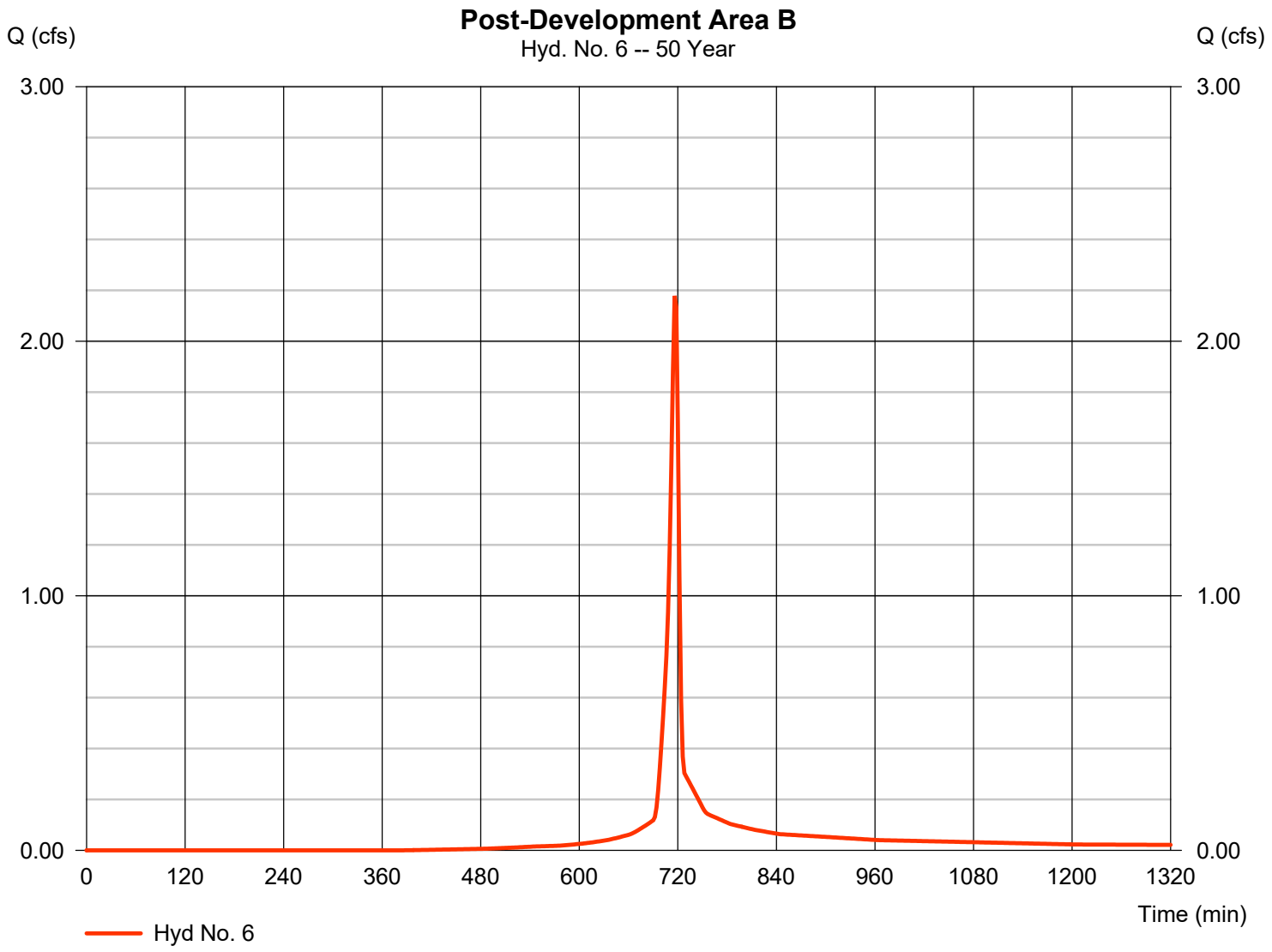
Hydrograph Report

Hyd. No. 6

Post-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.179 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,465 cuft
Drainage area	=	0.340 ac	Curve number	=	79*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.340 x 79)] / 0.340



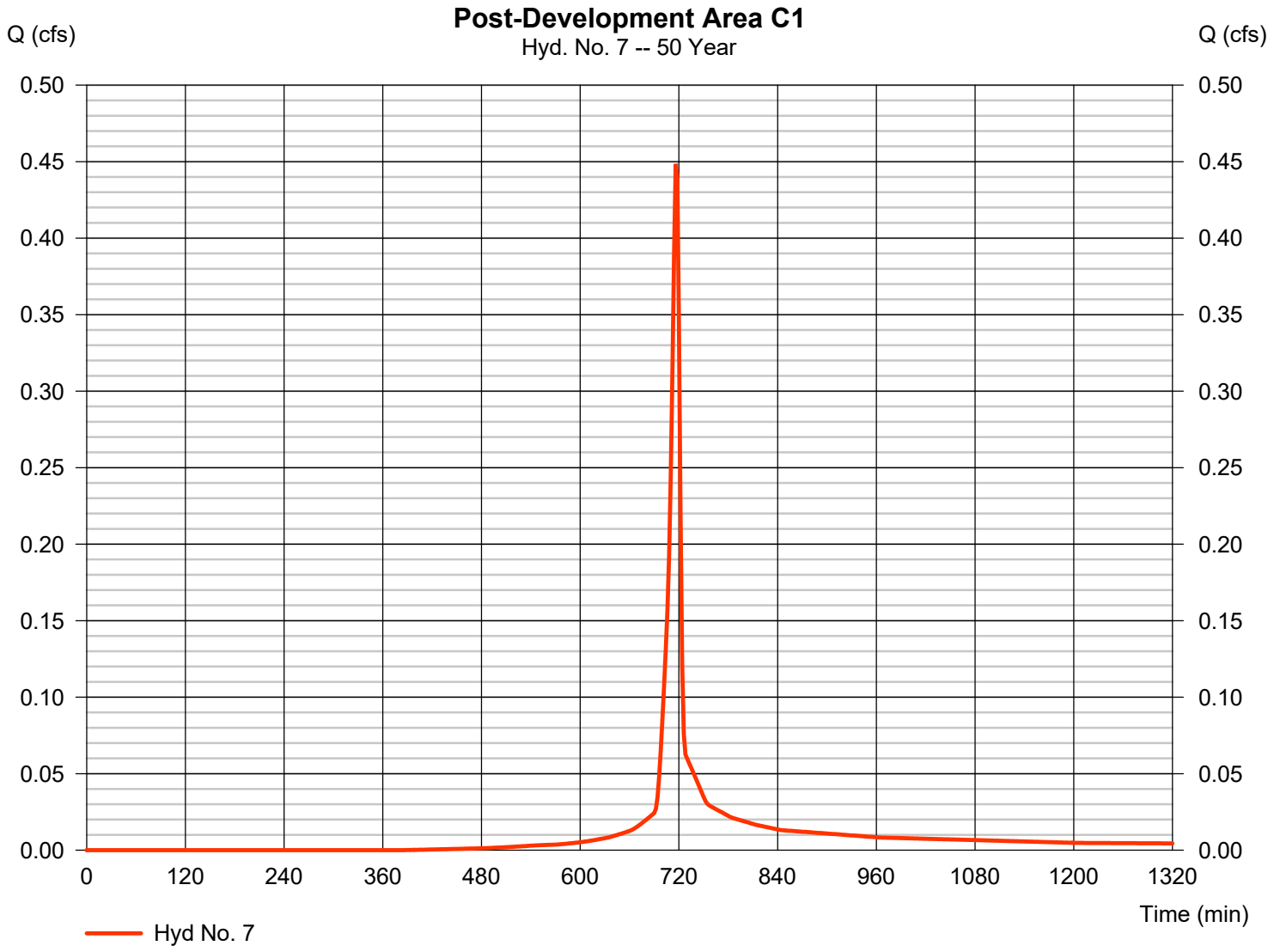
Hydrograph Report

Hyd. No. 7

Post-Development Area C1

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.449 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	919 cuft
Drainage area	=	0.070 ac	Curve number	=	79*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.070 x 79)] / 0.070



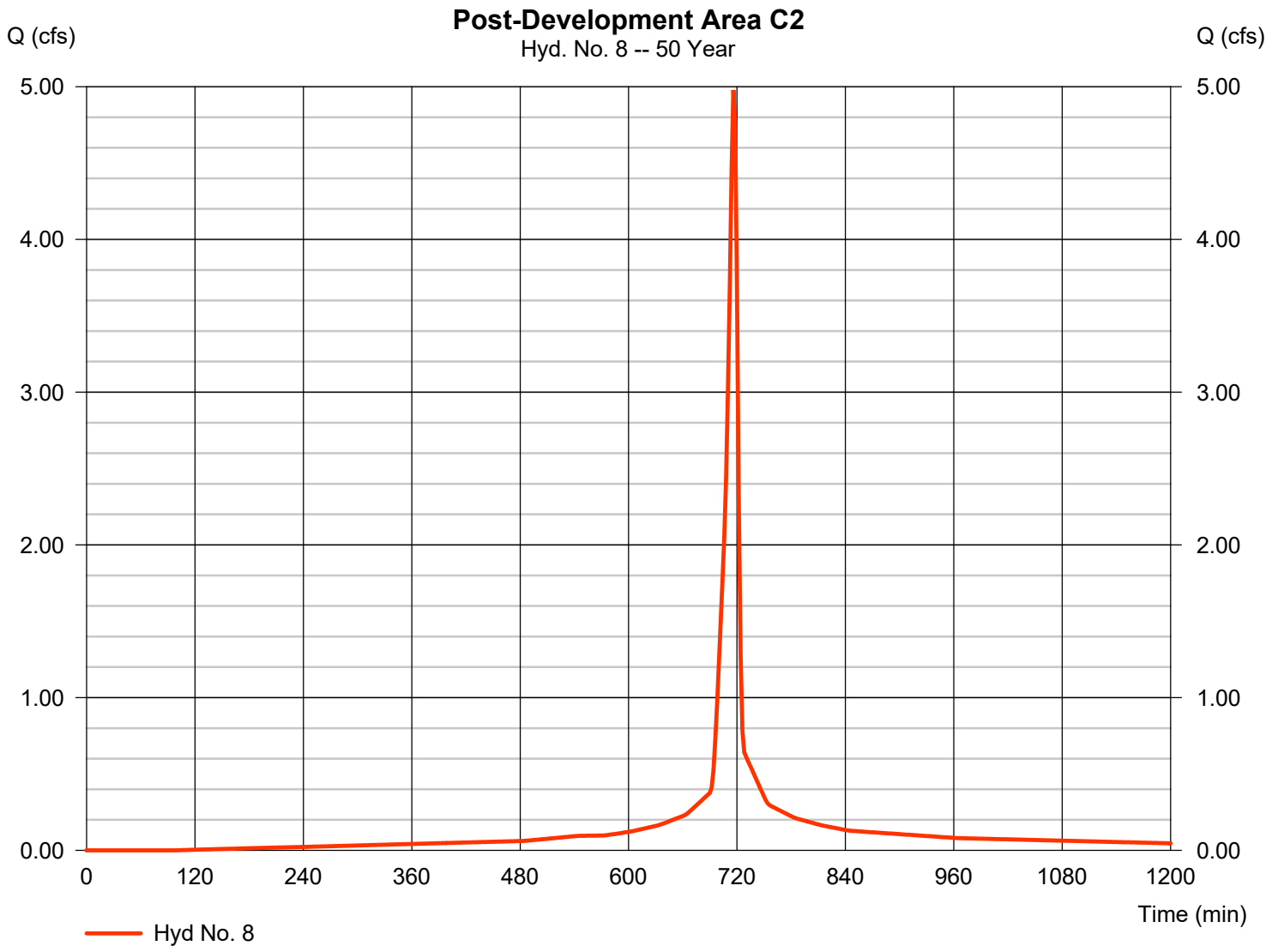
Hydrograph Report

Hyd. No. 8

Post-Development Area C2

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.978 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	11,455 cuft
Drainage area	=	0.600 ac	Curve number	=	95*
Basin Slope	=	1.0 %	Hydraulic length	=	450 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.520 x 98) + (0.080 x 79)] / 0.600



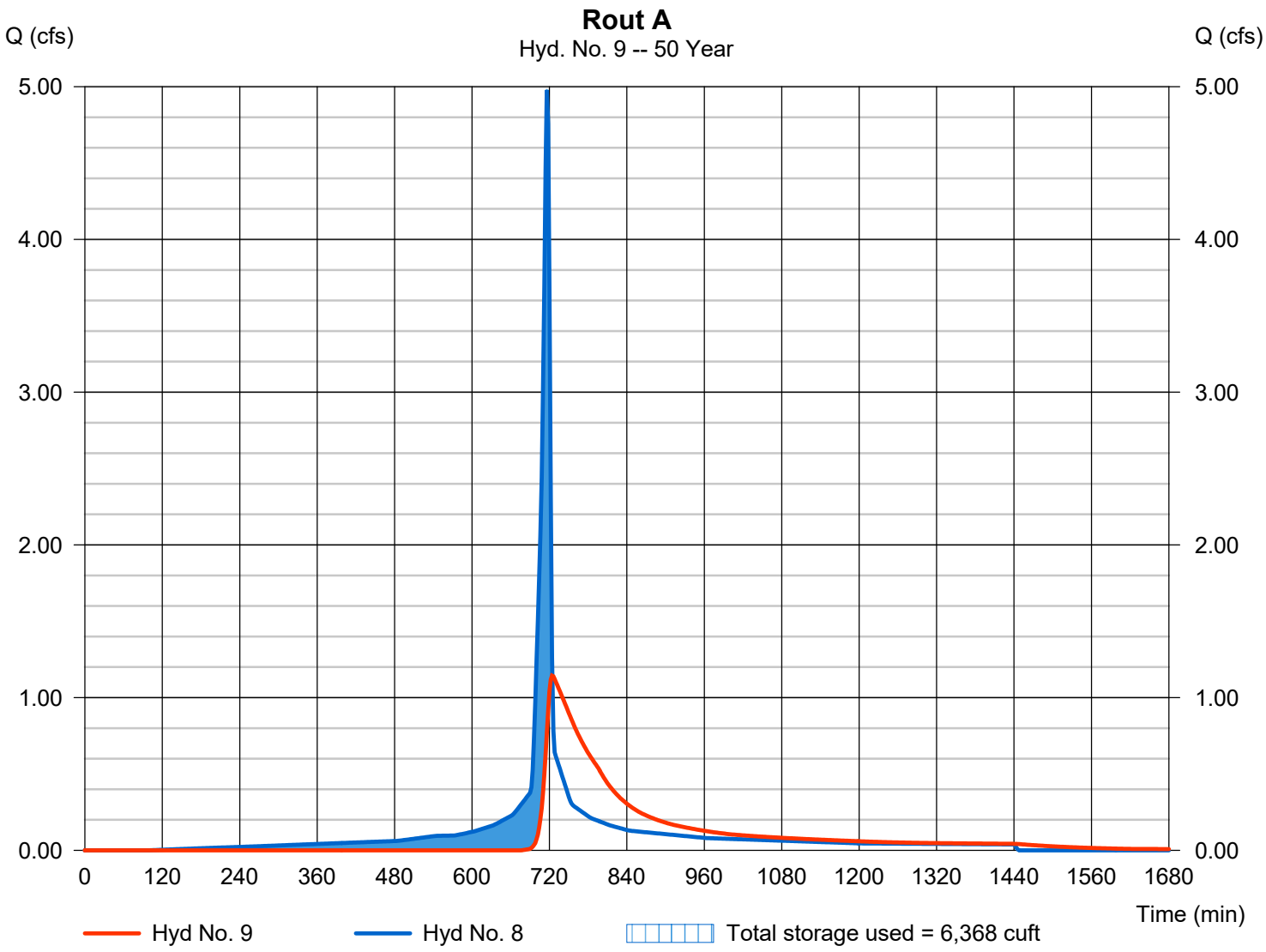
Hydrograph Report

Hyd. No. 9

Rout A

Hydrograph type	=	Reservoir	Peak discharge	=	1.144 cfs
Storm frequency	=	50 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	9,238 cuft
Inflow hyd. No.	=	8 - Post-Development Area C2	Max. Elevation	=	659.49 ft
Reservoir name	=	Pond A	Max. Storage	=	6,368 cuft

Storage Indication method used.

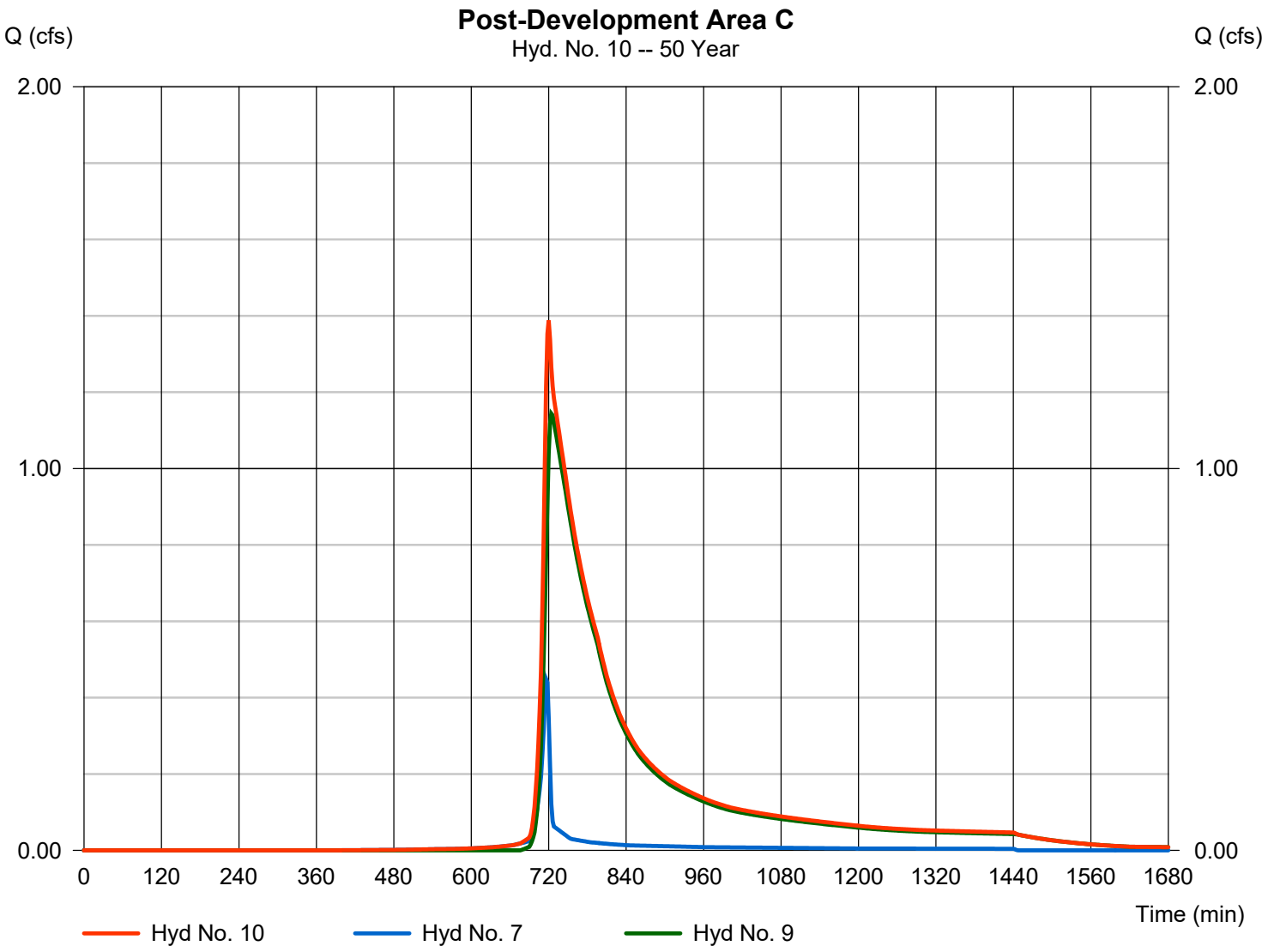


Hydrograph Report

Hyd. No. 10

Post-Development Area C

Hydrograph type	=	Combine	Peak discharge	=	1.388 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	10,157 cuft
Inflow hyds.	=	7, 9	Contrib. drain. area	=	0.070 ac

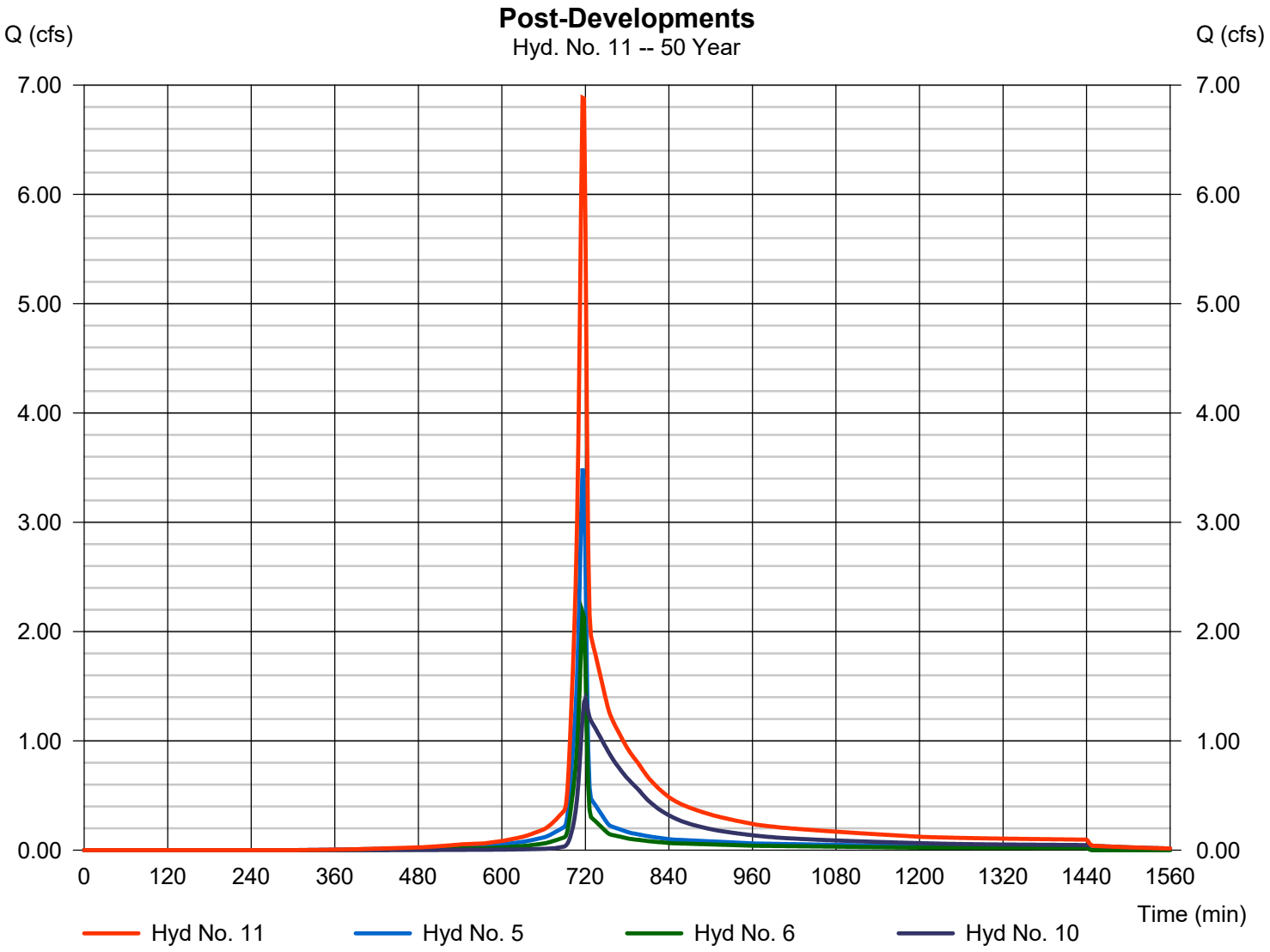


Hydrograph Report

Hyd. No. 11

Post-Developments

Hydrograph type	=	Combine	Peak discharge	=	6.885 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	21,932 cuft
Inflow hyds.	=	5, 6, 10	Contrib. drain. area	=	0.830 ac



Hydrograph Summary Report

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

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.473	2	716	15,766	------	------	------	Pre-Development Area A
2	SCS Runoff	2.643	2	716	5,471	------	------	------	Pre-Development Area B
3	SCS Runoff	1.771	2	716	3,681	------	------	------	Pre-Development Area C
4	Combine	11.89	2	716	24,917	1, 2, 3	------	------	Pre-Developments
5	SCS Runoff	3.980	2	716	8,397	------	------	------	Post-Development Area A
6	SCS Runoff	2.516	2	716	5,188	------	------	------	Post-Development Area B
7	SCS Runoff	0.518	2	716	1,068	------	------	------	Post-Development Area C1
8	SCS Runoff	5.552	2	716	12,856	------	------	------	Post-Development Area C2
9	Reservoir	1.366	2	724	10,638	8	659.64	6,999	Rout A
10	Combine	1.650	2	720	11,706	7, 9	------	------	Post-Development Area C
11	Combine	7.945	2	716	25,291	5, 6, 10	------	------	Post-Developments

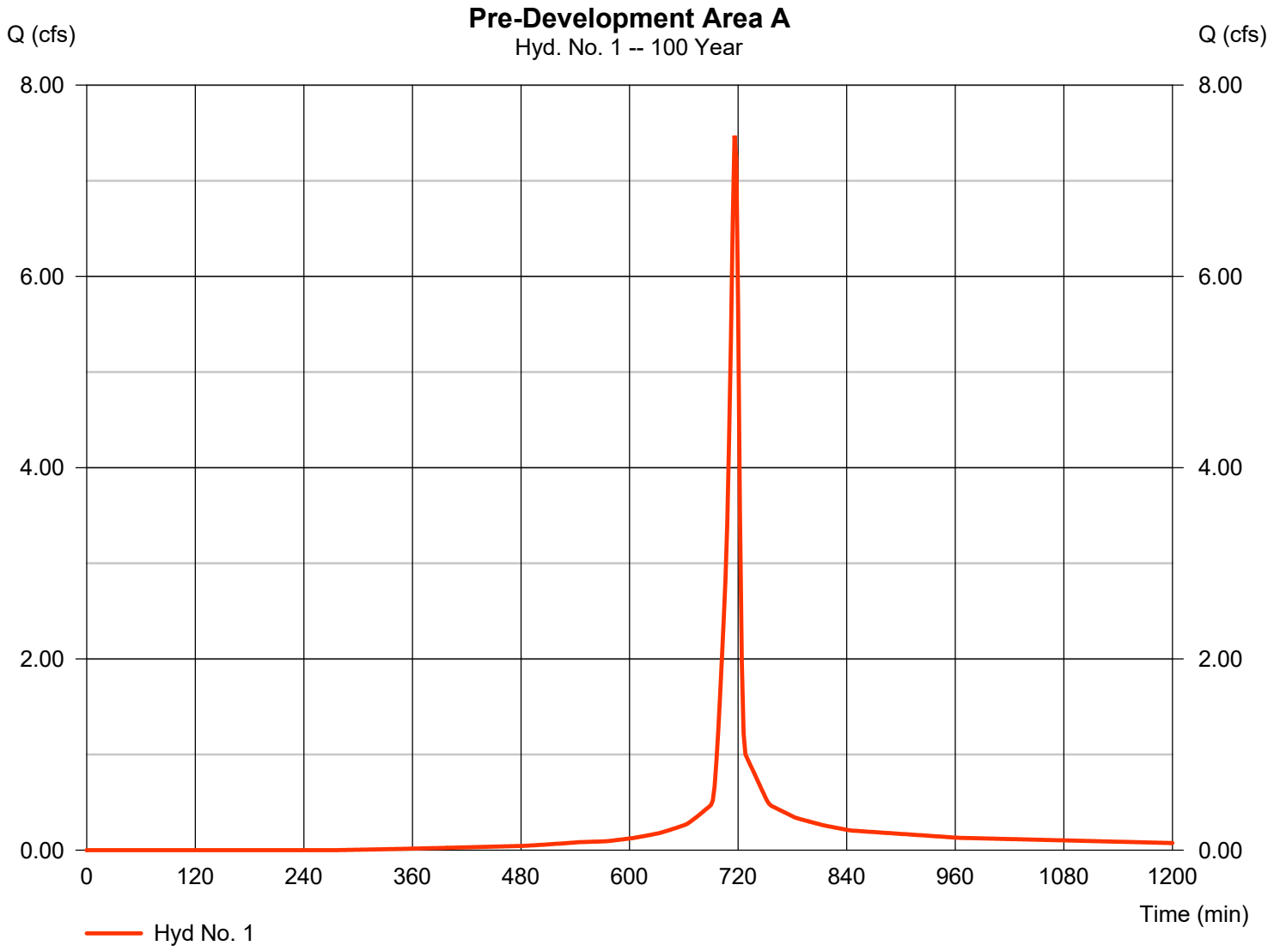
Hydrograph Report

Hyd. No. 1

Pre-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.473 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	15,766 cuft
Drainage area	=	0.920 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.090 x 98) + (0.280 x 89) + (0.550 x 79)] / 0.920



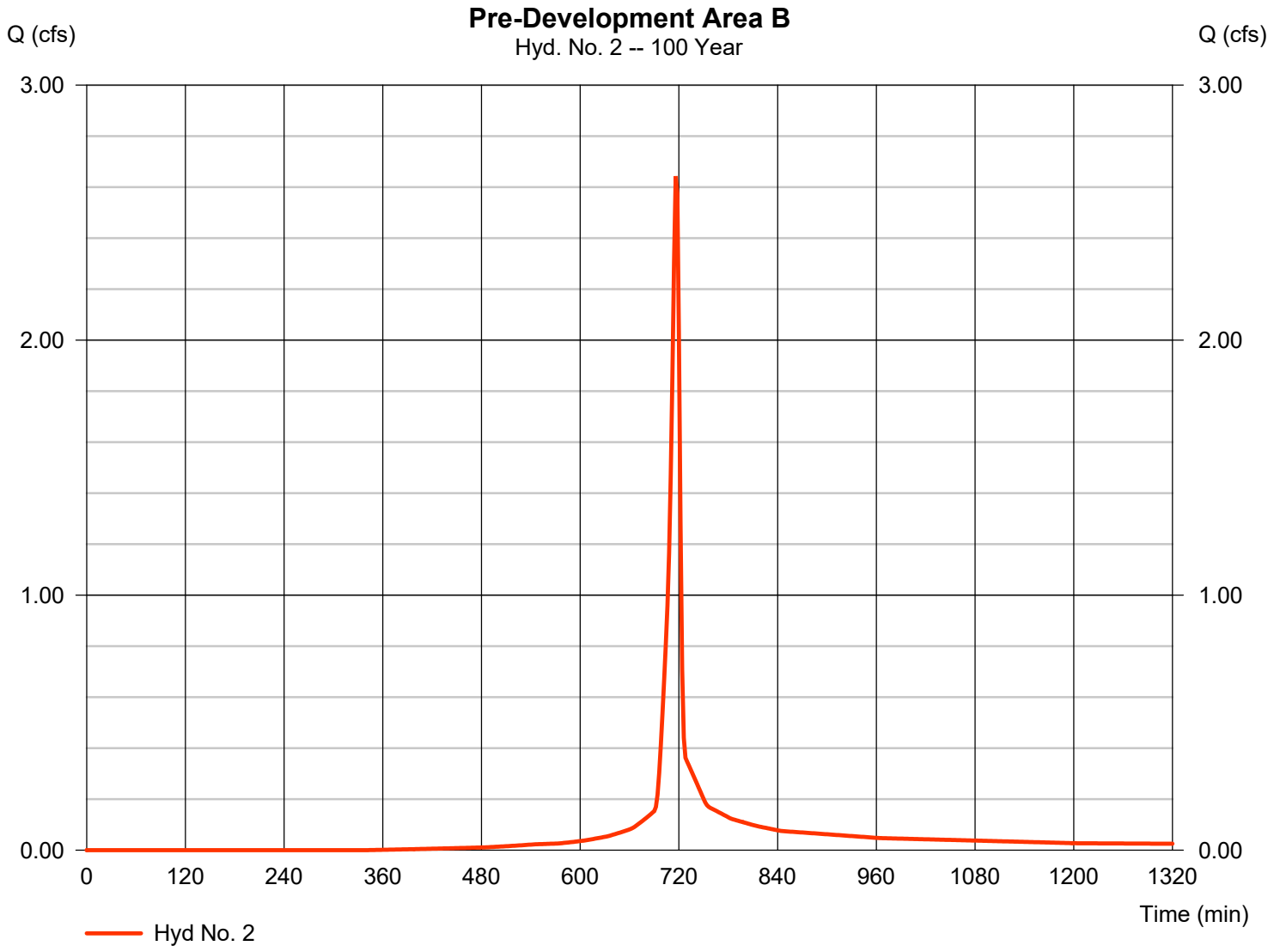
Hydrograph Report

Hyd. No. 2

Pre-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.643 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,471 cuft
Drainage area	=	0.350 ac	Curve number	=	80*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.310 x 79)] / 0.350



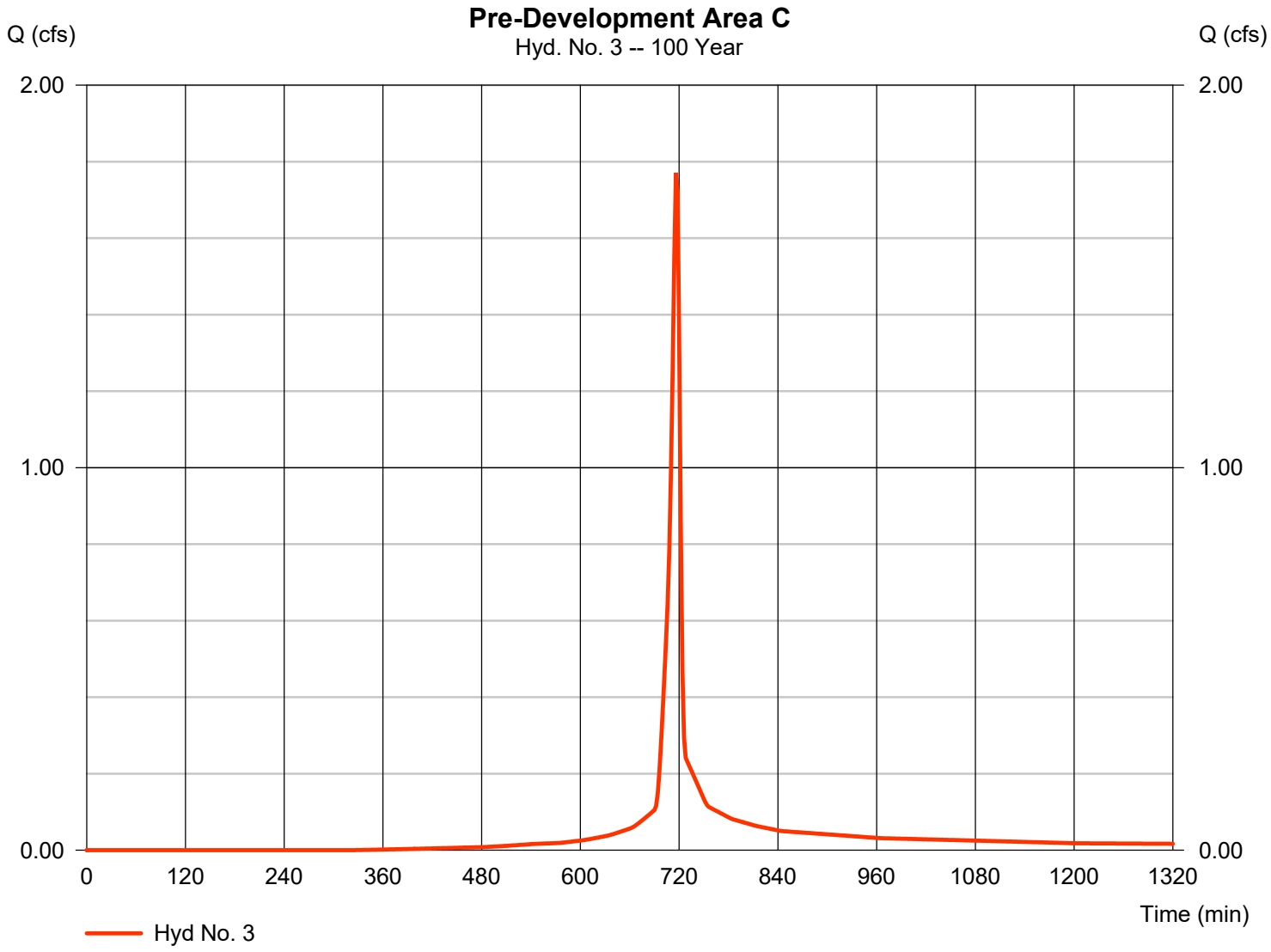
Hydrograph Report

Hyd. No. 3

Pre-Development Area C

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.771 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,681 cuft
Drainage area	=	0.230 ac	Curve number	=	81*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = + (0.040 x 89) + (0.190 x 79)] / 0.230

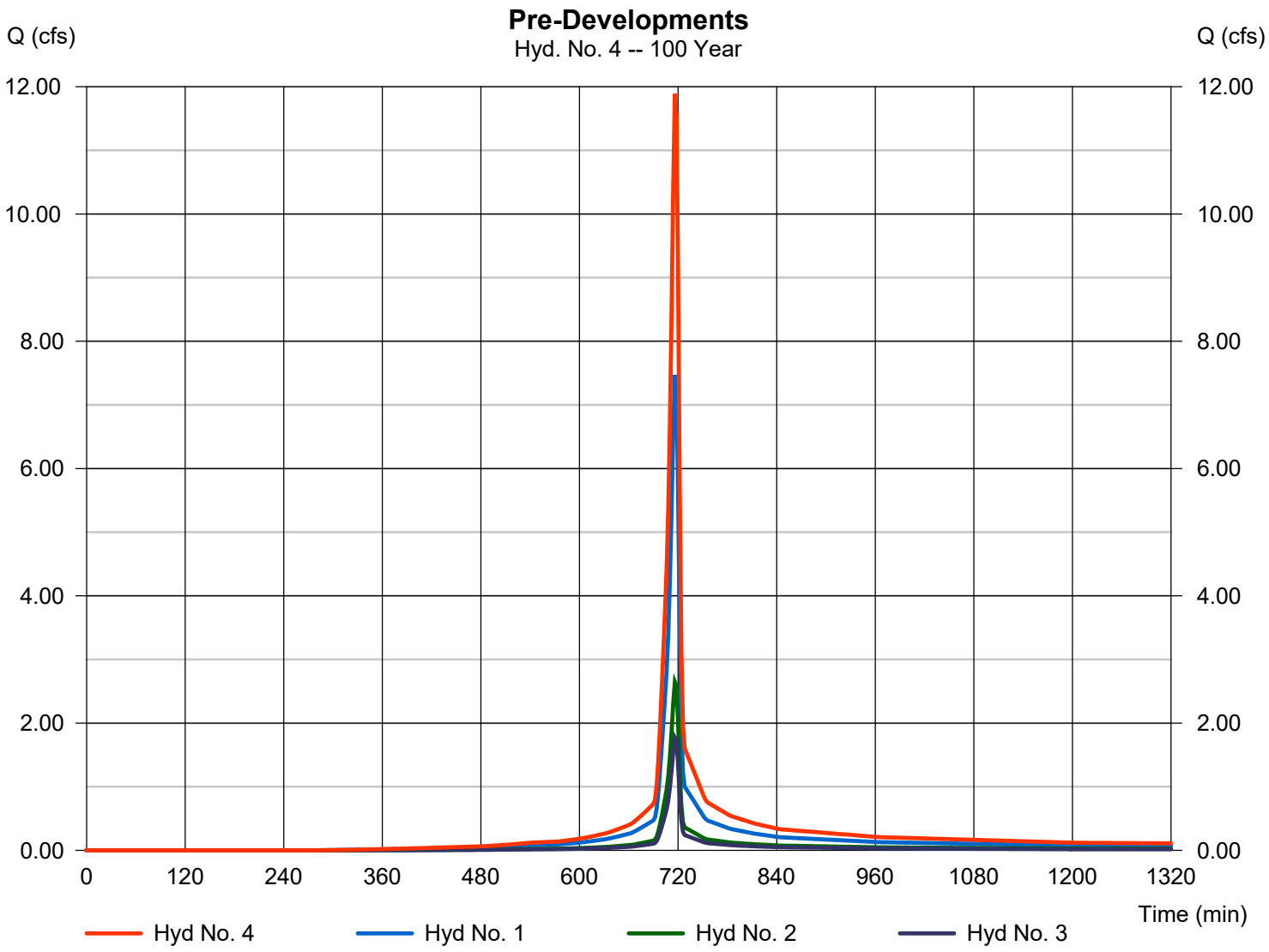


Hydrograph Report

Hyd. No. 4

Pre-Developments

Hydrograph type	= Combine	Peak discharge	= 11.89 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 24,917 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 1.500 ac



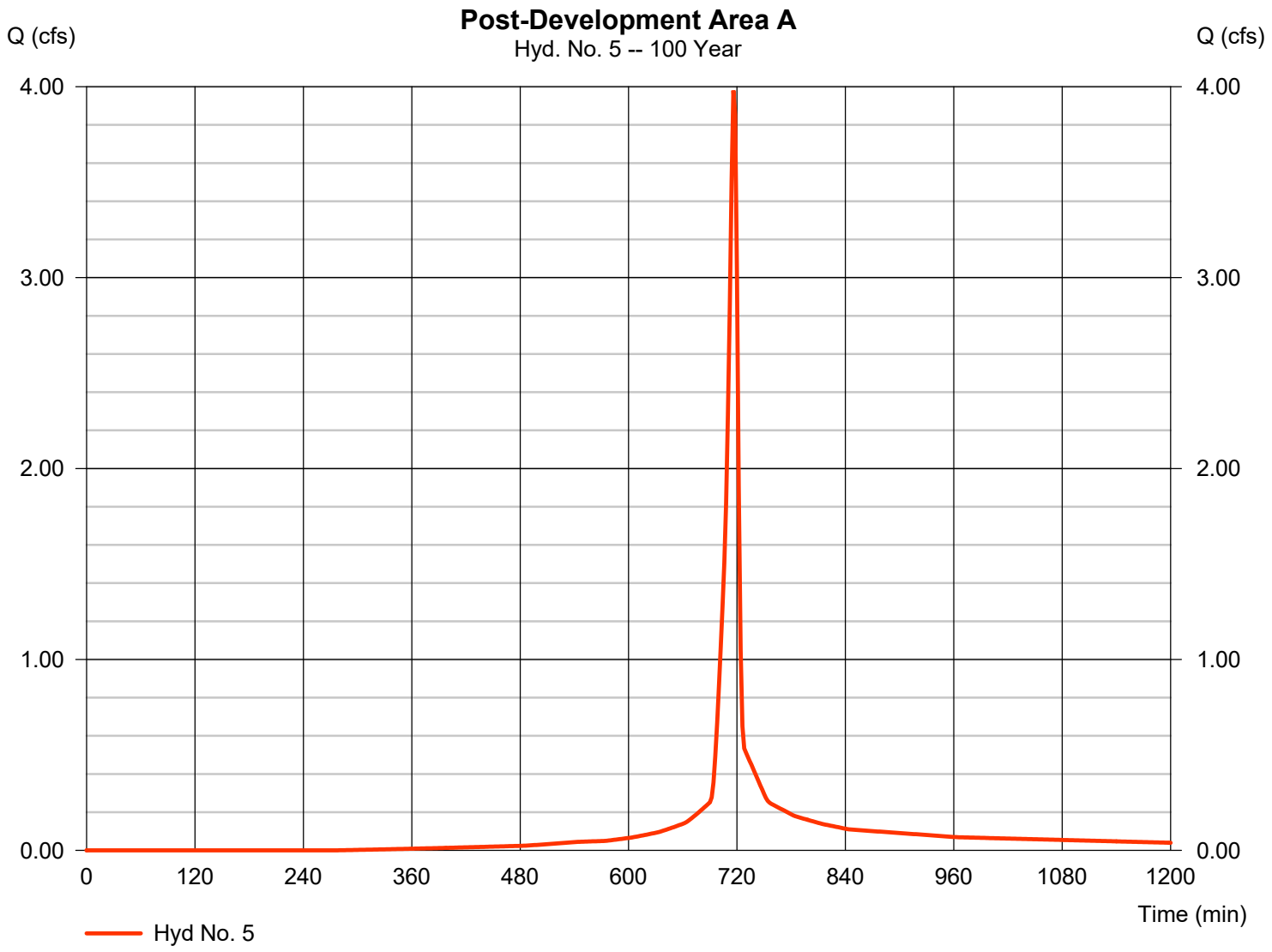
Hydrograph Report

Hyd. No. 5

Post-Development Area A

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.980 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	8,397 cuft
Drainage area	=	0.490 ac	Curve number	=	84*
Basin Slope	=	3.0 %	Hydraulic length	=	178 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.130 x 98) + (0.360 x 79)] / 0.490



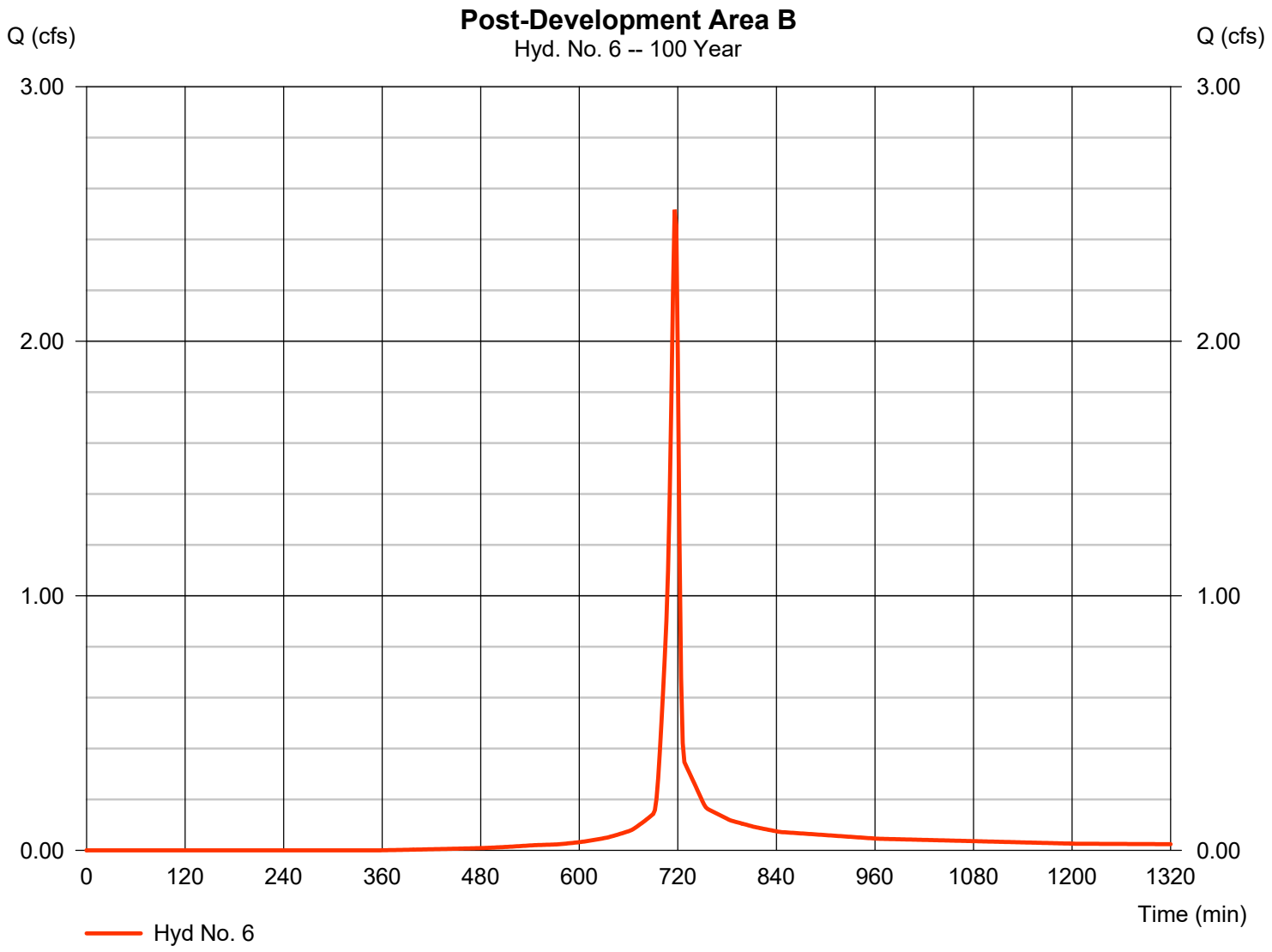
Hydrograph Report

Hyd. No. 6

Post-Development Area B

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.516 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,188 cuft
Drainage area	=	0.340 ac	Curve number	=	79*
Basin Slope	=	4.0 %	Hydraulic length	=	133 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.340 x 79)] / 0.340



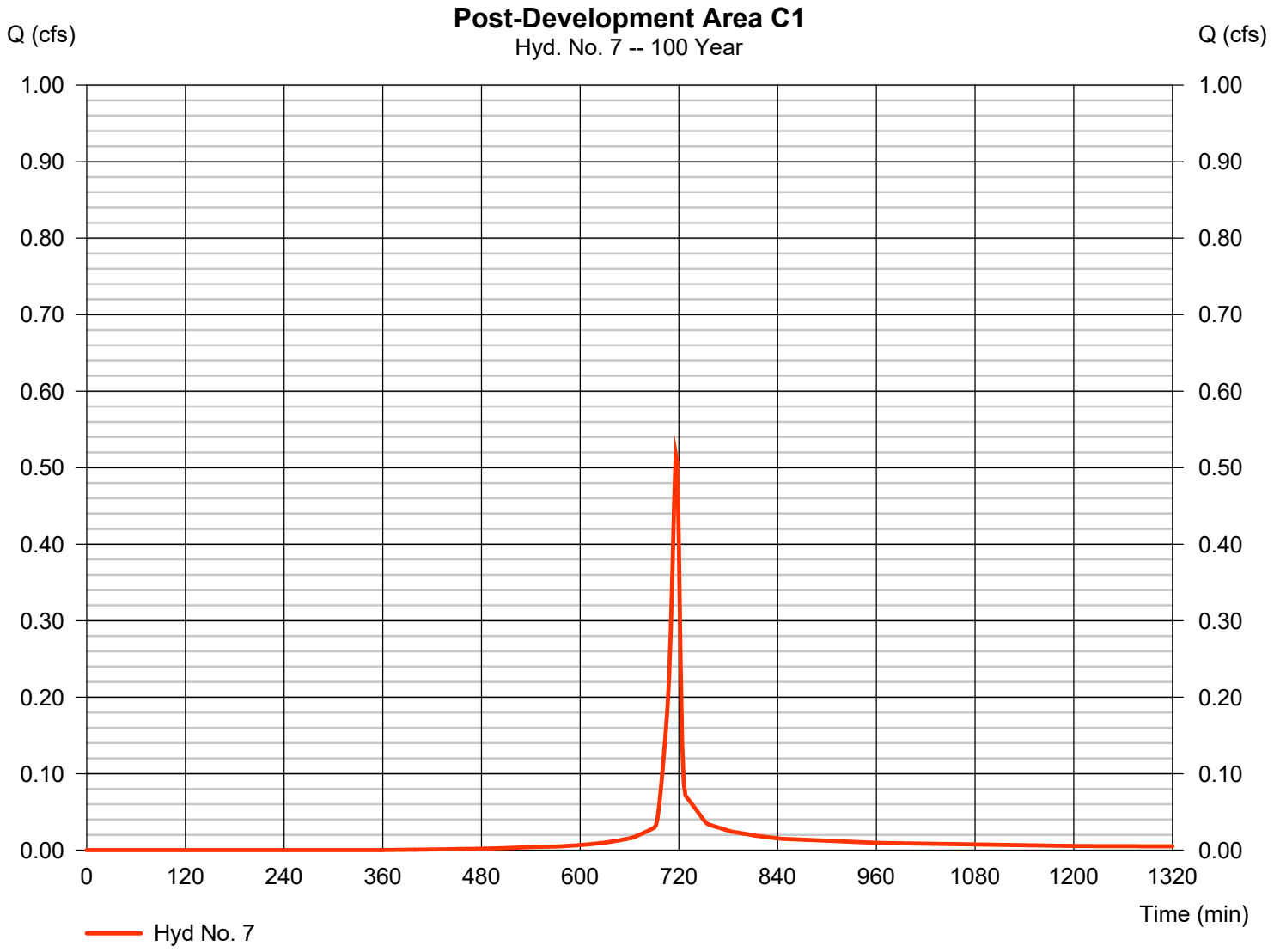
Hydrograph Report

Hyd. No. 7

Post-Development Area C1

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.518 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	1,068 cuft
Drainage area	=	0.070 ac	Curve number	=	79*
Basin Slope	=	3.0 %	Hydraulic length	=	115 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.070 x 79)] / 0.070



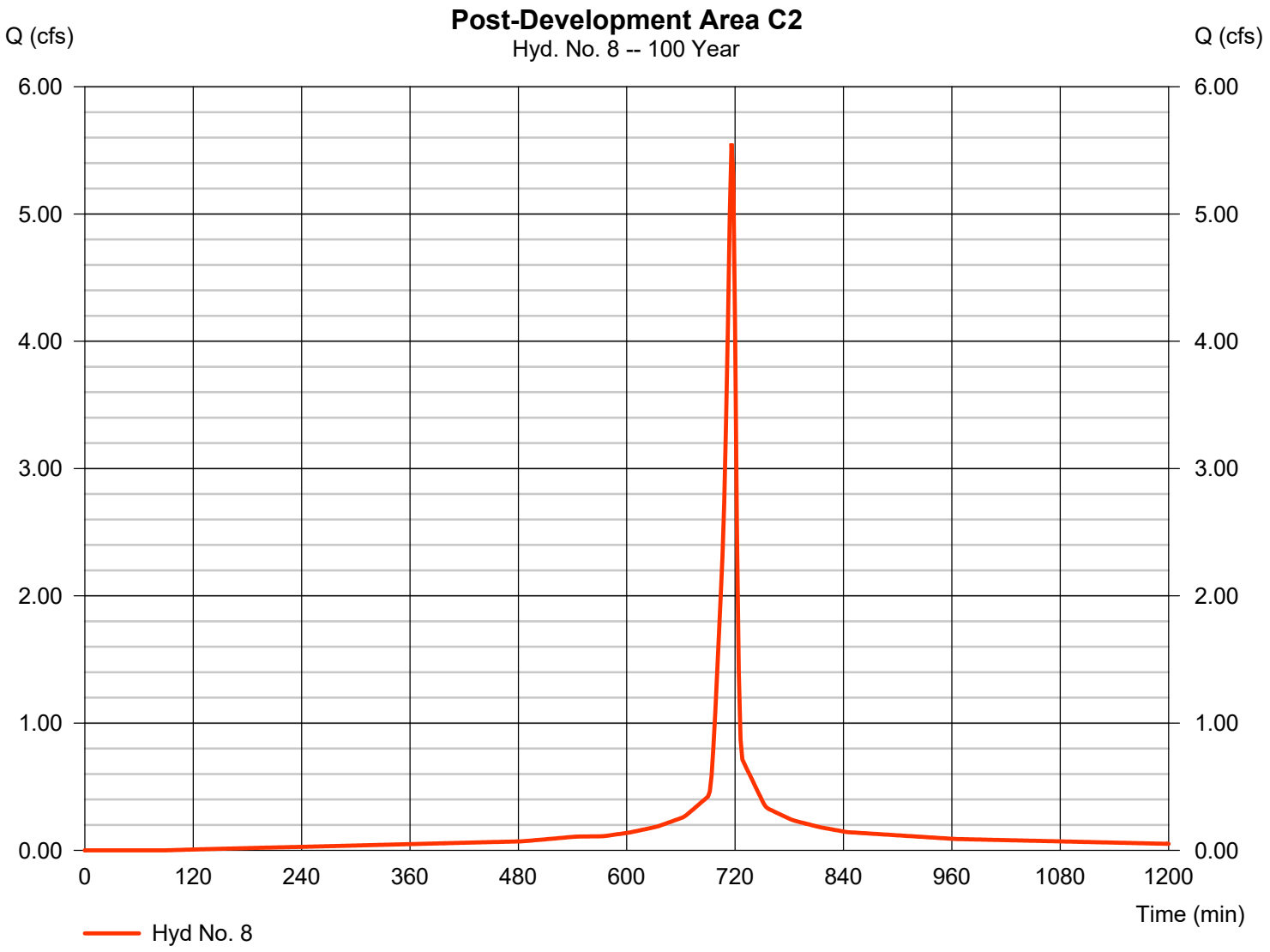
Hydrograph Report

Hyd. No. 8

Post-Development Area C2

Hydrograph type	=	SCS Runoff	Peak discharge	=	5.552 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	12,856 cuft
Drainage area	=	0.600 ac	Curve number	=	95*
Basin Slope	=	1.0 %	Hydraulic length	=	450 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.89 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(0.520 x 98) + (0.080 x 79)] / 0.600



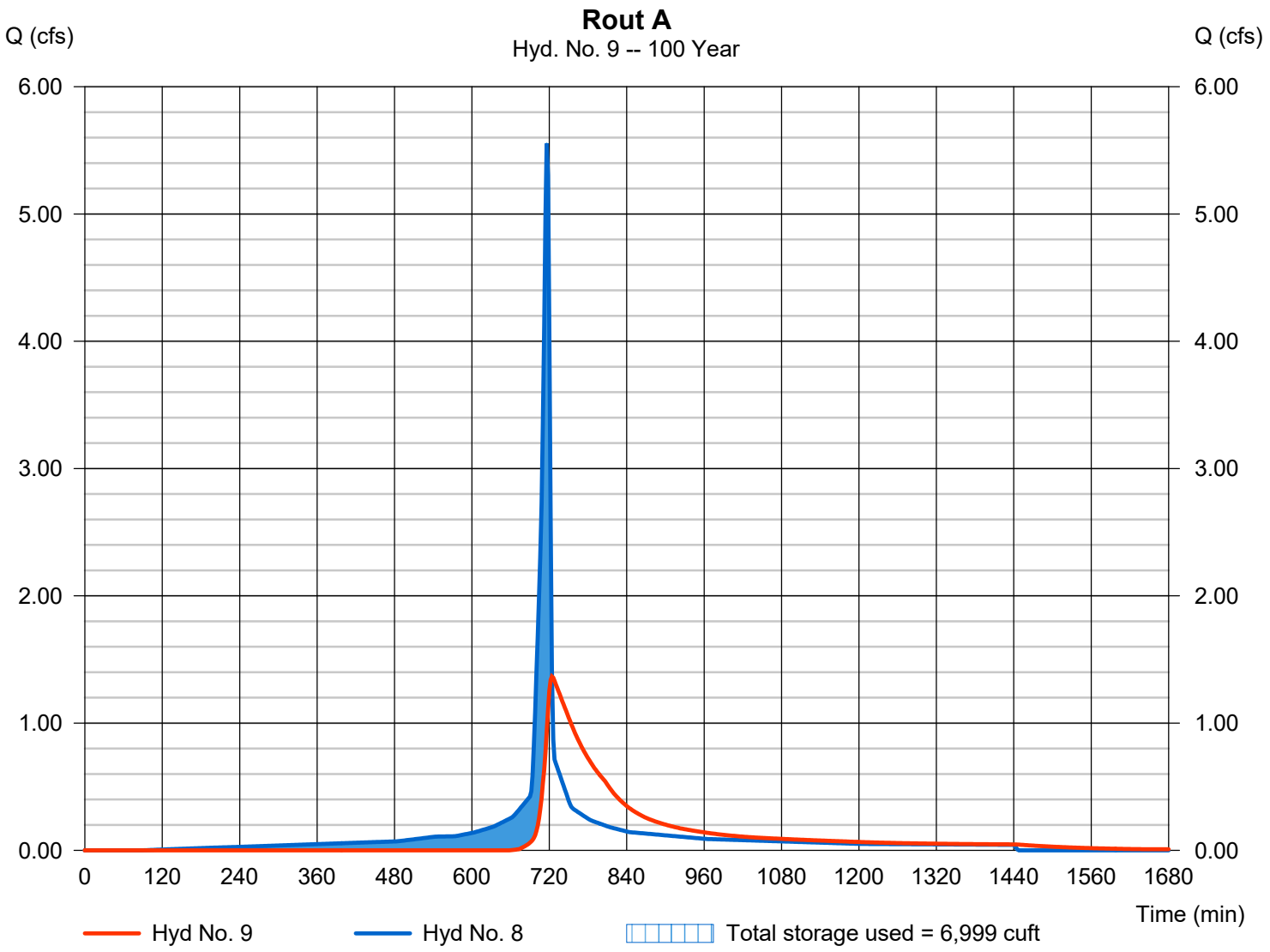
Hydrograph Report

Hyd. No. 9

Rout A

Hydrograph type	=	Reservoir	Peak discharge	=	1.366 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	10,638 cuft
Inflow hyd. No.	=	8 - Post-Development Area C2	Max. Elevation	=	659.64 ft
Reservoir name	=	Pond A	Max. Storage	=	6,999 cuft

Storage Indication method used.

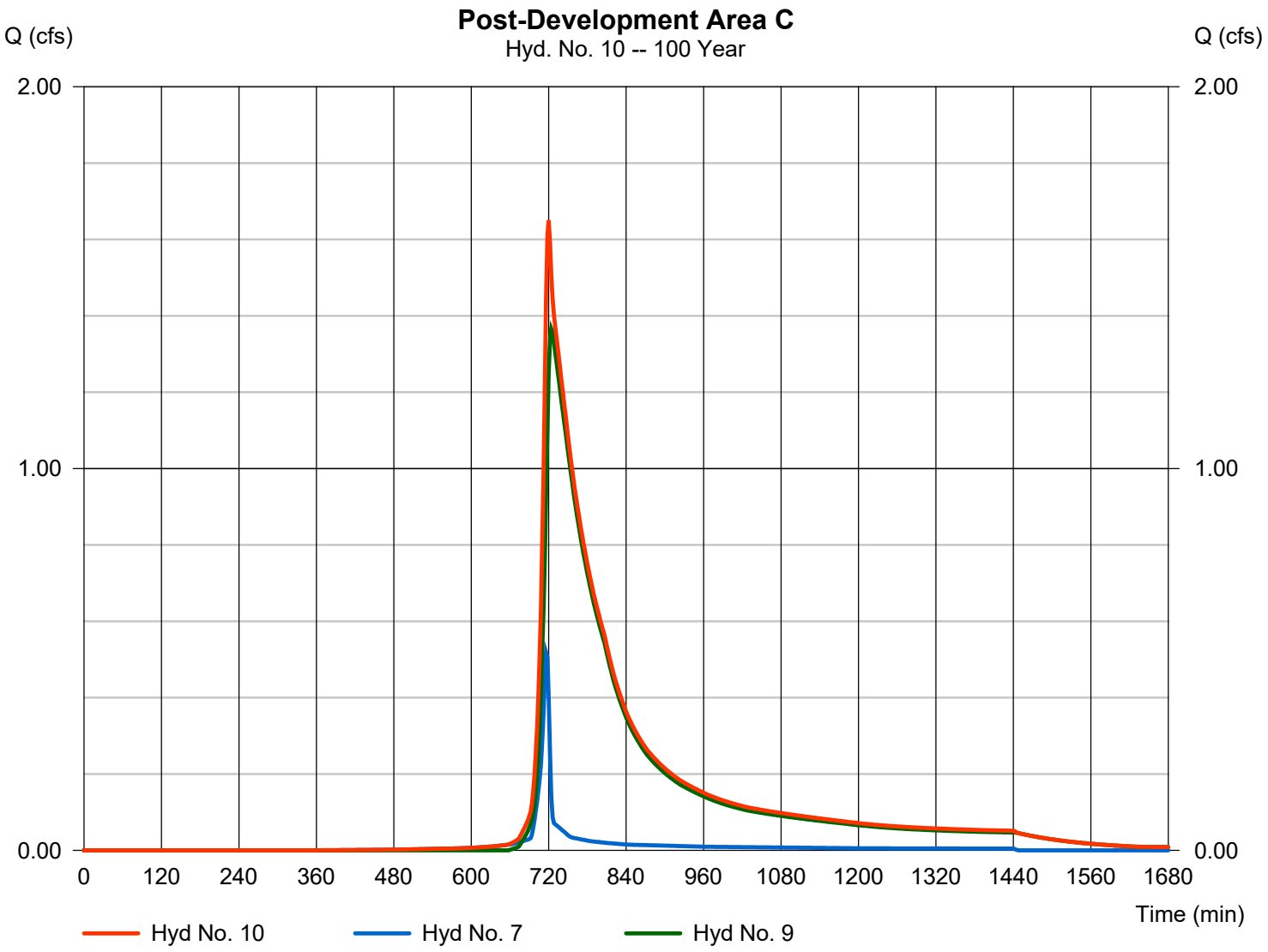


Hydrograph Report

Hyd. No. 10

Post-Development Area C

Hydrograph type	=	Combine	Peak discharge	=	1.650 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	11,706 cuft
Inflow hyds.	=	7, 9	Contrib. drain. area	=	0.070 ac

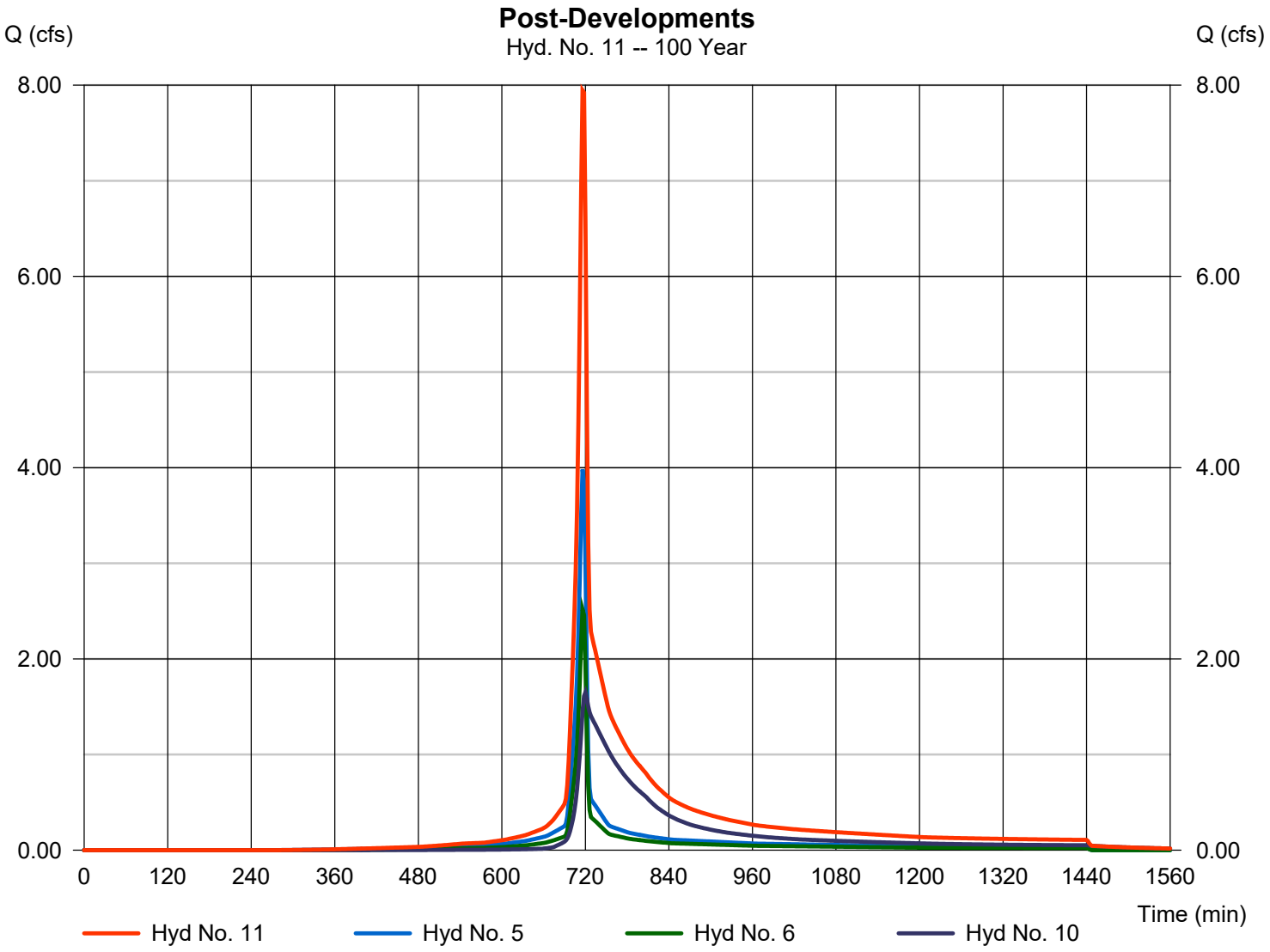


Hydrograph Report

Hyd. No. 11

Post-Developments

Hydrograph type	= Combine	Peak discharge	= 7.945 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 25,291 cuft
Inflow hyds.	= 5, 6, 10	Contrib. drain. area	= 0.830 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	--------
2	21.3913	5.8000	0.6332	--------
3	0.0000	0.0000	0.0000	--------
5	48.6846	10.2000	0.7544	--------
10	66.7074	12.5000	0.7892	--------
25	65.3872	11.5000	0.7499	--------
50	79.9547	12.2000	0.7718	--------
100	170.7964	18.2000	0.9117	--------

File name: Nashville.pcp.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	4.74	3.73	3.13	2.73	2.44	2.22	2.04	1.90	1.78	1.68	1.59	1.51
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.25	5.04	4.27	3.72	3.32	3.00	2.75	2.54	2.36	2.21	2.08	1.97
10	6.97	5.72	4.88	4.28	3.82	3.46	3.17	2.93	2.73	2.55	2.40	2.27
25	7.99	6.55	5.60	4.92	4.40	4.00	3.67	3.40	3.17	2.98	2.81	2.66
50	8.90	7.31	6.25	5.48	4.90	4.45	4.08	3.78	3.52	3.30	3.11	2.94
100	9.72	8.13	7.01	6.17	5.51	4.99	4.56	4.20	3.90	3.64	3.41	3.21

Tc = time in minutes. Values may exceed 60.

Precip. file name: Sample.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	3.37	0.00	4.11	4.70	5.53	6.20	6.89
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Rutherford County, Tennessee



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map



Map Scale: 1:770 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Rutherford County, Tennessee
Survey Area Data: Version 16, Sep 16, 2019

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

Date(s) aerial images were photographed: Feb 14, 2020—Mar 1, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
TaB2	Talbott silt loam, 2 to 5 percent slopes, eroded	2.6	91.7%
TbB3	Talbott silty clay loam, 2 to 5 percent slopes, severely eroded	0.2	8.3%
Totals for Area of Interest		**2.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rutherford County, Tennessee

TaB2—Talbott silt loam, 2 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: kqpr
Elevation: 460 to 1,400 feet
Mean annual precipitation: 45 to 55 inches
Mean annual air temperature: 57 to 63 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Talbott and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Talbott

Setting

Landform: Hillslopes
Landform position (three-dimensional): Side slope
Parent material: Clayey residuum weathered from limestone

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 37 inches: clay
R - 37 to 47 inches: bedrock

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

TbB3—Talbott silty clay loam, 2 to 5 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: kqpt
Elevation: 460 to 1,400 feet
Mean annual precipitation: 45 to 55 inches

Mean annual air temperature: 57 to 63 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Talbott, severely eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Talbott, Severely Eroded

Setting

Landform: Hillslopes
Landform position (three-dimensional): Side slope
Parent material: Clayey residuum weathered from limestone

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 32 inches: clay
R - 32 to 42 inches: bedrock

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Planning Commission Report
Meeting: Apr. 25, 2023

City of La Vergne

Request: Recommendation to the Board of Mayor and Aldermen for Subdivision Acceptance – Lt. Frank Walkup. Property located off Jones Mill Road. Requested by Wamble & Associates. R-1 (Low Density Residential) Zoning District.

Reviewed By: Bo Logan, City Planner
Gary Lide, City Engineer

Summary

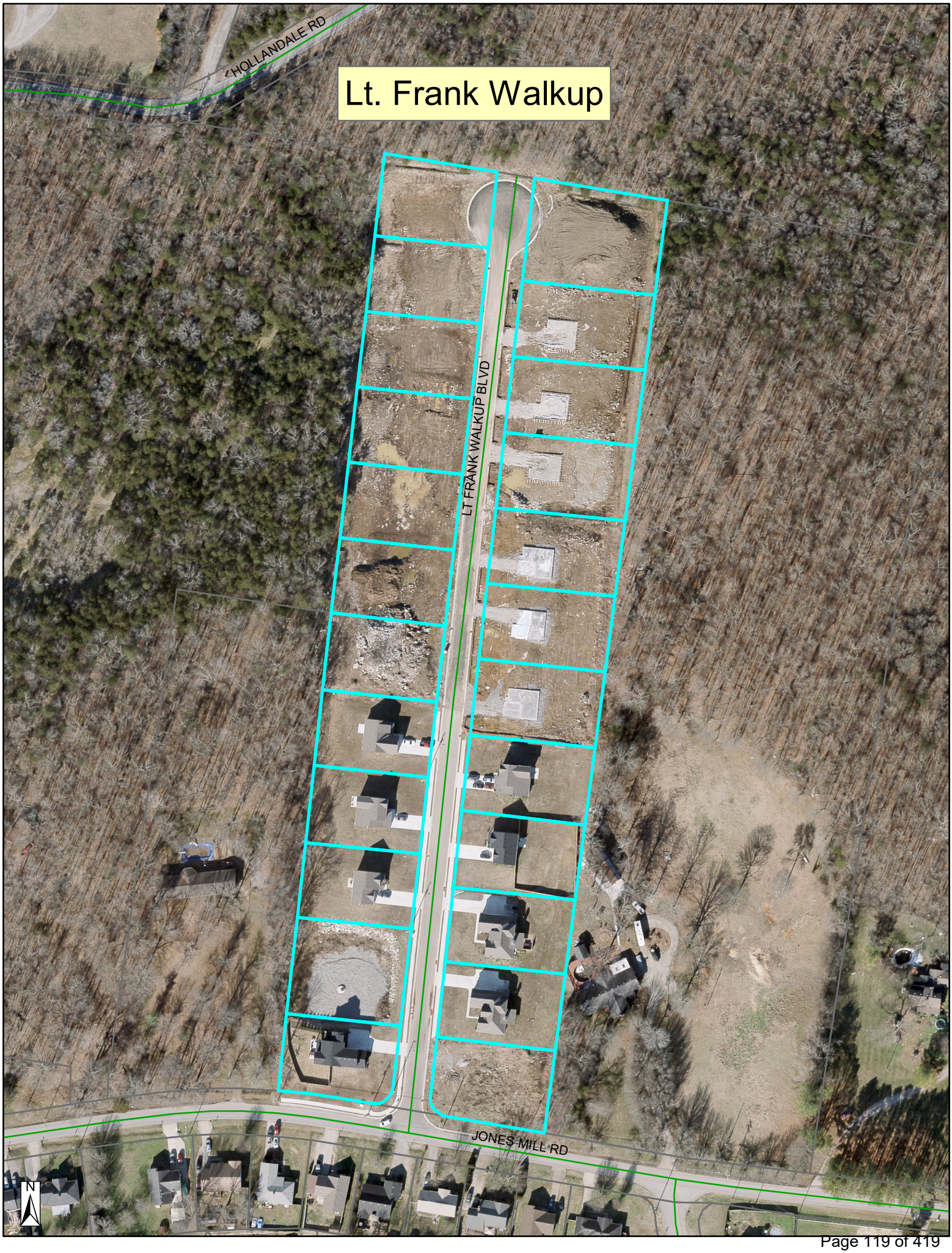
The applicant is requesting subdivision acceptance for Lt. Frank Walkup. Property located off Jones Mill Road.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

1. Mr. Schreibman requested a deferral of this until the May meeting.

Other Concerns

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


Lt. Frank Walkup
HOLLANDALE RD
LT FRANK WALKUP BLVD
JONES MILL RD
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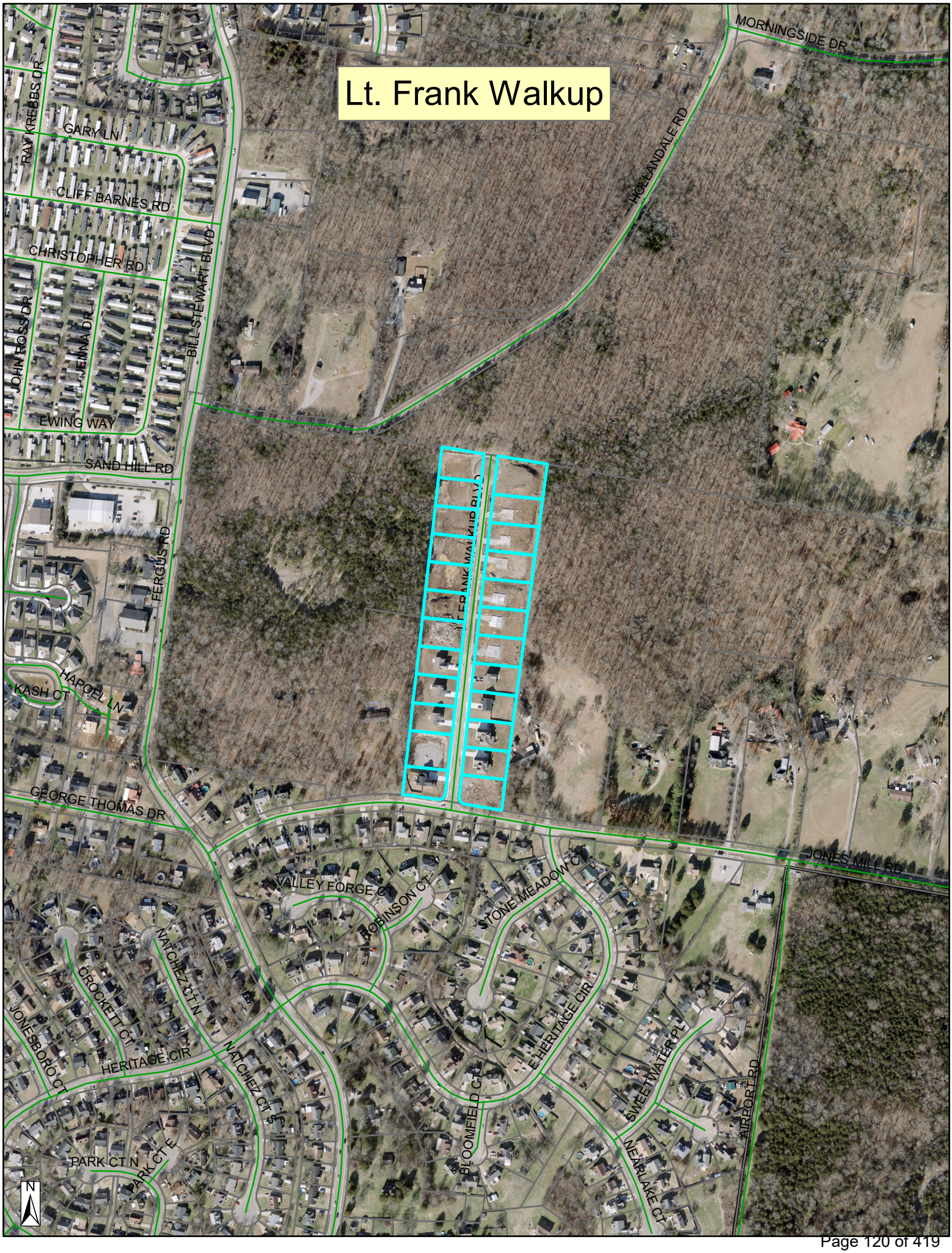
Lt. Frank Walkup
MORNINGSIDE DR
RAY KREBBS DR
GARY LN
CLIFF BARNES RD
CHRISTOPHER RD
JOHN ROSS DR
JENNA DR
BILL STEWART BLVD
HOLLANDALE RD
EWING WAY
SAND HILL RD
FERGUS RD
KASH CT
HAPOEL LN
GEORGE THOMAS DR
LT FRANK WALKUP BLVD
JONES MILL RD
VALLEY FORGE CT
ROBINSON CT
STONE MEADOW CT
NATCHEZ CT N
CROCKETT CT
JONESBORO CT
HERITAGE CIR
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SWEETWATER PL
AIRPORT RD
NEARLAKE CT
PARK CT N
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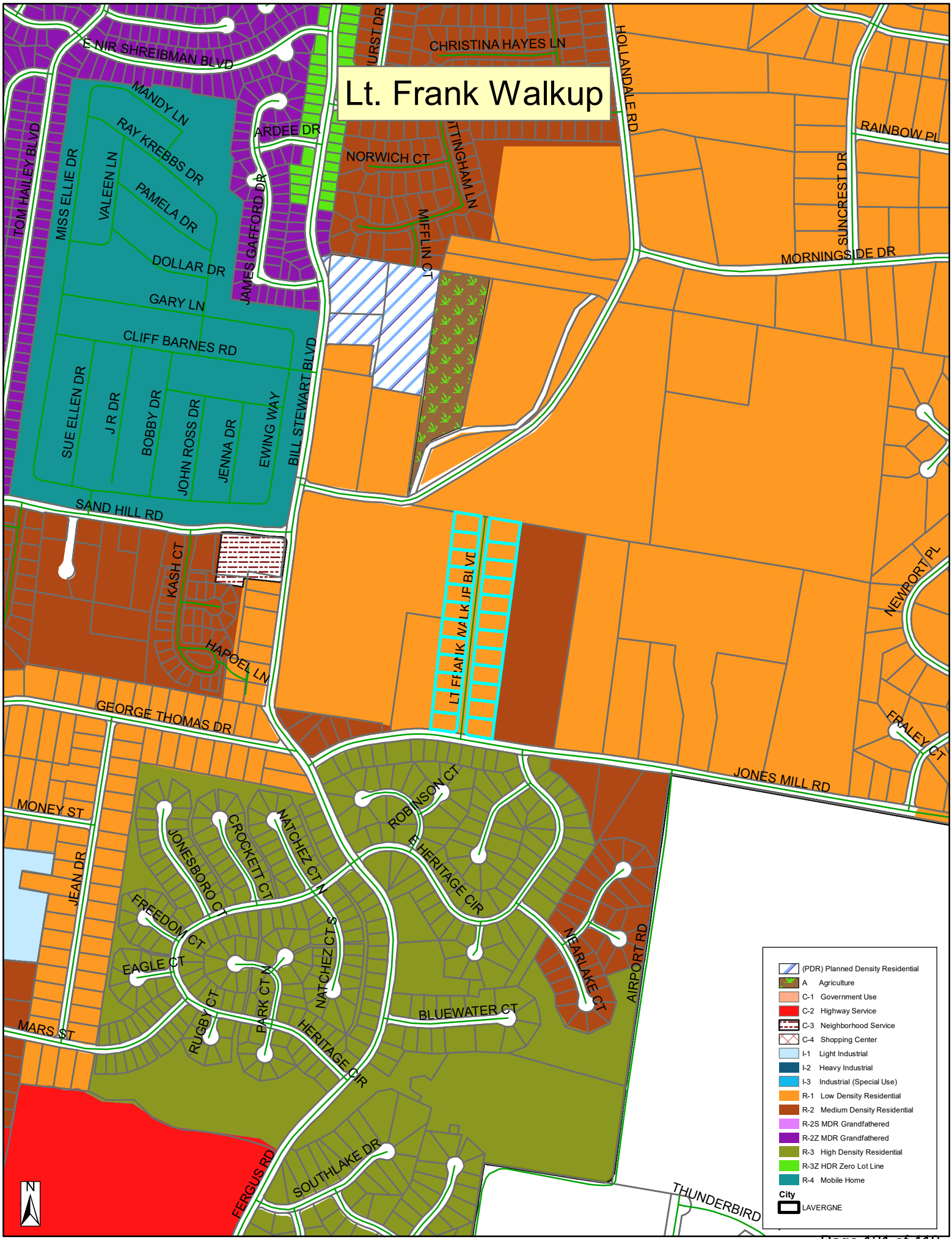

Lt. Frank Walkup
E NIR SHREIBMAN BLVD
MANDY LN
RAY KREBBS DR
ARDEE DR
CHRISTINA HAYES LN
HOLLANDALE RD
RAINBOW PL
SUNCREST DR
TOM HAILEY BLVD
MISS ELLIE DR
VALEEN LN
PAMELA DR
DOLLAR DR
GARY LN
CLIFF BARNES RD
JAMES GAFFORD DR
NORWICH CT
MIFFLIN CT
MORNINGSIDE DR
SUE ELLEN DR
J R DR
BOBBY DR
JOHN ROSS DR
JENNA DR
EWING WAY
BILL STEWART BLVD
SAND HILL RD
KASH CT
HAPOEL LN
LT FRANK WALKUP BLVD
NEWPORT PL
GEORGE THOMAS DR
FRALEY CT
JONES MILL RD
MONEY ST
JEAN DR
JONESBORO CT
CROCKETT CT
NATCHEZ CT N
ROBINSON CT
HERITAGE CIR
FREEDOM CT
EAGLE CT
NATCHEZ CT S
NEARLAKE CT
AIRPORT RD
RUGBY CT
PARK CT N
BLUEWATER CT
MARS ST
HERITAGE CIR
FERGUS RD
SOUTHLAKE DR
THUNDERBIRD
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home
City
LAVERGNE

LT. FRANK WALKUP SUBDIVISION – PHASE 1

OFFER OF IRREVOCABLE DEDICATION

AGREEMENT made this 13th day of February 2023, by and between Nir Homes, Inc., having its office and place of business at P O Box 177, La Vergne, Tennessee, hereinafter designated as the "Developer" and the City of La Vergne, Tennessee, hereinafter designated the "City".

WHEREAS, the City Planning Commission approved on January 30, 2018, a subdivision plat entitled, Lt. Frank Walkup – Phase 1, and said plat was recorded on January 31, 2020, in Plat Cabinet 43, Page 248, Registers Office of Rutherford County, Tennessee;

WHEREAS, said plat designates certain public improvements consisting of streets, sidewalks, water, sanitary sewer, and storm drainage to be dedicated to the City, free and clear of all encumbrances and liens, pursuant to the requirements of the planning commission and local government code; and

WHEREAS, the developer, simultaneously herewith, has posted cash security with the City for the maintenance and dedication of said improvements, if required;

WHEREAS, the developer is desirous of offering for dedication the Lt. Frank Walkup – Phase 1 improvements and land to the City more particularly described on the recorded plat of Lt. Frank Walkup – Phase 1, recorded on January 31, 2020 in Plat Cabinet 43, Page 248, Registers Office Rutherford County, Tennessee, attached hereto;

NOW, THEREFORE, in consideration of the sum of one dollar ($1.00) lawful money of the United States paid by the City to the Developer and other good and valuable consideration, it is mutually **AGREED** as follows:

A. The Developer herewith delivers to the City the Lt. Frank Walkup – Phase 1 improvements shown on the Lt. Frank Walkup – Phase 1 final plat attached hereto, said delivery being a formal offer of dedication to the City until the acceptance or rejection of such offer of dedication by the City of La Vergne Board of Mayor and Alderman.

B. The Developer agrees that said formal offer of dedication is irrevocable and can be accepted by the City at the time.

C. The Developer agrees to complete the maintenance of the land and improvements pursuant to the cash security and the requirements of the City and any ordinances, regulations, requirements, covenants, and agreements that may be imposed by the City with respect thereto and, upon acceptance by the City of the offer of dedication, furnish to the City a sworn statement certifying that the premises are free and clear of all liens and encumbrances.

D. That this irrevocable offer of dedication shall run with the land and shall be binding on all assignees, guarantees, successors, or heirs of the developer.

2-13-2023
Date

Amnon Shreibman, President By
Amnon Shreibman dba Nir Homes, Inc

(CORPORATE SEAL)

FOR THE CITY OF LA VERGNE BY
ATTEST:

_____
Mayor

_____
Date

STATE OF TENNESSEE

COUNTY OF RUTHERFORD **SS.:** _____

On this _____ day of _____, _____, before me personally appeared _____, to me known, who, being by me first duly sworn, did depose and said that he resides in _____; that he is the _____ of _____, the corporate seal affixed to said instrument is such corporate seal; that it was so affixed by order and authority of the Board of Directors of said corporation, and that he signed his name thereto by like order and authority.

_____, My commission expires _____
Notary Public

CO-PARTNERSHIP

STATE OF TENNESSEE)

COUNTY OF WILLIAMSON)

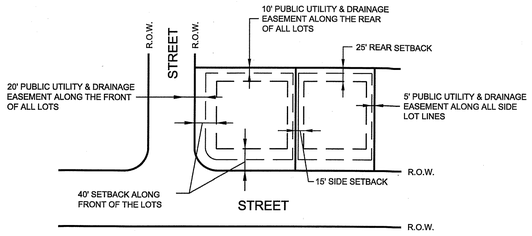
On this 13th day of February, 2023, The foregoing instrument, *Irrevocable Dedication*, was acknowledged before me by James D. Wamble.

Karla J. Lee

Karla J. Lee

KARLA J. LEE
STATE OF TENNESSEE
NOTARY PUBLIC
DAVIDSON COUNTY
MY COMMISSION EXPIRES 5-9-2023

My Commission Expires: 05/09/2023



TYPICAL SETBACK AND
PUBLIC UTILITY & DRAINAGE EASEMENT DETAIL

LEGEND

- POWER POLE w/ANCHORS
- FIRE HYDRANT
- VALVES
- W — WATER LINE
- P — OVERHEAD POWER LINE
- T — OVERHEAD TELEPHONE LINE
- STORM DRAIN
- CONCRETE
- FENCE LINE
- POWER POLE w/LAMP
- IRON ROD (OLD)
- IRON ROD (NEW)
- MONUMENT (NEW)
- CURBS
- PROPOSED FIRE HYDRANT

LOT AREA CHART

LOT NO	AREA (SQ. FT.)
101	15,244
102	15,000
103	15,000
104	15,000
105	16,379
106	16,192
107	16,005
108	15,818
109	16,314
Open Space	19,225

SITE DATA

Tax Map / Parcel	075 / 02413
Zoning District	R-1
Existing Use	Vacant Undeveloped Land
Proposed Use	Single Family Residental Lots
Total no. Units	9
Density	2.09 Lots / Acre
Square footage of each building (Existing And Proposed)	Proposed Varies No Existing
Total Square Footage	187,302 Sq. Ft. / 4.30 Acres
Square Footage of each use	Only One Use
Lot Coverage	35% Maximum
Floor Area Ratio	N/A
Height	35' Maximum
Acreage / Square Footage of lot	0.34 Ac. / 15,000 Sq. Ft. Minimum
Sign Height and Area	N/A

SETBACKS FOR R-1:

	REQUIRED	PROVIDED
Front Building Setback	40'	40'
Side Building Setback	15'	15'
Rear Building Setback	25'	25'
Balance of Property (Future Phase)	6.10 AC. / 265,885 Sq. Ft.	

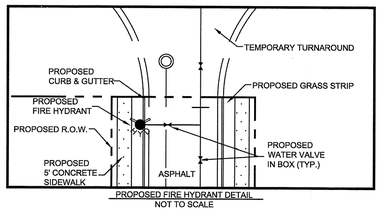
LANDSCAPING

Residential Per Acre	1 Canopy Tree	4.0" Caliper (Min. of 10')
Side Building Setback	1 Understory Tree	1.5" Caliper (Min. of 8')

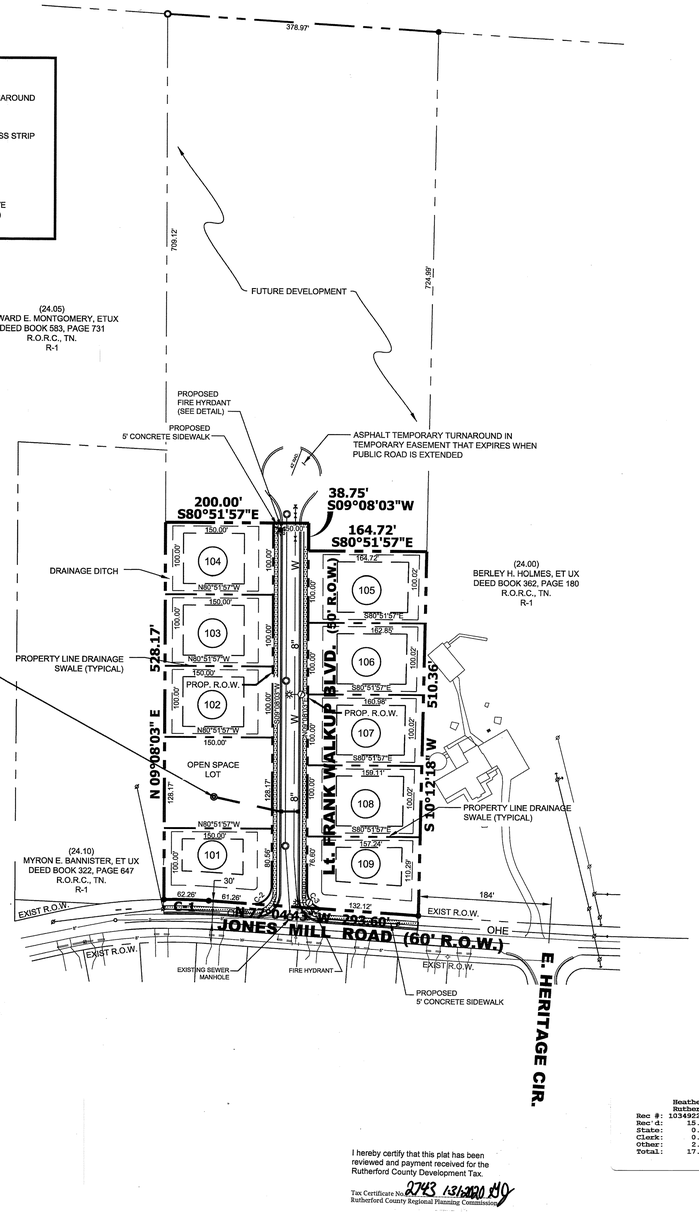
5' Landscaped Buffer Area around parking lots with 3' tall screening (shrubs, etc.)

CURVE DATA CHART

Curve #	Radius	Length	Delta	Chord Direction	Chord Length
C1	728.43'	62.26'	04°53'49"	N76°31'37"W	62.24'
C2	25.00'	40.92'	93°47'14"	S56°01'40"W	36.50'
C3	25.00'	37.62'	86°12'46"	N33°58'20"W	34.17'



PROPOSED FIRE HYDRANT DETAIL
NOT TO SCALE



DRAINAGE EASEMENT FOR STORMWATER

DRAINAGE TO BE DISCHARGED INTO EXISTING SINKHOLE AS APPROVED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION CLASS V INJECTION WELL PERMIT.
SINKHOLE TO BE TREATED TO RECEIVE DRAINAGE AS SHOWN IN DETAIL THIS SHEET.
CLASS V INJECTION WELL PERMIT TO BE ISSUED BY STATE PRIOR TO RECEIVING CITY OF LaVERGNE GRADING PERMIT.

I hereby certify that this plat has been reviewed and payment received for the Rutherford County Development Tax.

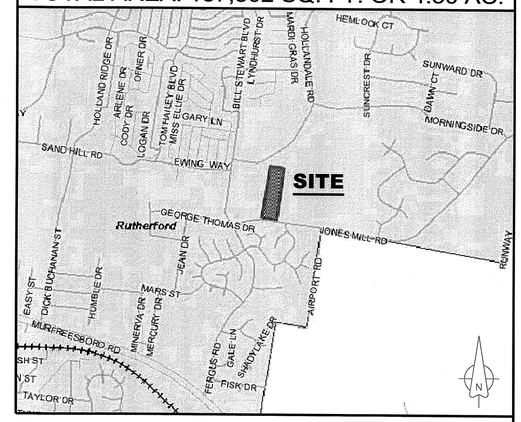
Tax Certificate No. 2743 1/31/2020 HO
Rutherford County Regional Planning Commission

GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

1 inch = 100 ft.

TOTAL AREA: 187,302 SQ. FT. OR 4.30 AC.



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE CITY LIMITS OF LAVERGNE, TENNESSEE AND IS ZONED R-1.
2. THE PROPERTY IS OWNED BY AMNON SHREIBMAN, TRUSTEE.
3. THIS ENTIRE TRACT IS LOCATED IN AN AREA DESIGNATED AS ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOOD PLAIN ON FEMA FIRM MAP NO. 47149C0020 H, EFFECTIVE DATE JANUARY 6, 2007.
4. THE PURPOSE OF THIS FINAL PLAT IS CREATE 9 LOTS.
5. NO HOME SHALL BE FURTHER THAN 500' FROM THE NEAREST FIRE HYDRANT.
6. ALL WATER AND SANITARY SEWER LINES SHOWN HEREON SHALL BE PUBLIC AND DEDICATED TO THE CITY OF LAVERGNE.
7. ALL STREETS TO HAVE CURB AND GUTTER, STORM WATER CONVEYANCE SHALL BE BY OPEN DITCHES ALONG THE REAR LOT LINES AND BY STORM INLETS IN STREETS WITH UNDERGROUND PIPES. CALCULATIONS TO BE SUBMITTED WITH CONSTRUCTION PLANS AND FINAL PLAT.
8. NO GRADING WORK SHALL COMMENCE UNTIL A NOTICE OF COVERAGE FROM THE STATE OF TENNESSEE HAS BEEN ACQUIRED AND THE CITY OF LaVERGNE HAS ISSUED A GRADING PERMIT FOR THIS SITE.
9. THE OWNER/DEVELOPER OR CONTRACTOR SHALL EMPLOY A TESTING AGENCY TO OBSERVE FILL PLACEMENT.
10. AN ENGINEER STAMP BY THE TESTING AGENCY IS REQUIRED FOR EACH LOT CONTAINING FILL MATERIAL.
11. ALL REPORTS FROM THE TESTING AGENCY SHALL BE SUBMITTED TO THE CITY ENGINEER PRIOR TO LOT ACCEPTANCE.
12. STRUCTURAL FILL FOR RESIDENTIAL STRUCTURES SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR DRY DENSITY.
13. ANY SINKHOLE AND/OR DEPRESSION REMEDIATION SHALL BE EVALUATED BY THE TESTING AGENCY.
14. FOUNDATIONS EXCAVATED ON A FILL LOT WILL BE EVALUATED BY THE TESTING AGENCY AND WILL REQUIRE AN ENGINEER'S STAMP. IF FOUNDATIONS ARE EXCAVATED BELOW THE FILL MATERIAL AND INTO IN-SITU MATERIAL, THE MINIMUM REQUIREMENTS WILL BE ALLOWED.
15. ALL ROADS SHALL COMPLY WITH THE PUBLIC WORKS SPECIFICATION MANUAL, PART III, BASE AND SUB-GRADE TREATMENT FOR STREET CONSTRUCTION. THESE SPECIFICATIONS SHALL BE IN THE MINIMUM STANDARDS FOR ANY SUBDIVISION WITHIN THE JURISDICTION AREA.
16. LOCATION AND SIZES FOR STORM DRAINAGE WITH NECESSARY EASEMENTS SHALL BE SHOWN ON THE FINAL SITE DEVELOPMENT PLANS AND ALSO ON THE FINAL SUBDIVISION PLAT.
17. THE LIMITS OF THE EXISTING VEGETATION SHALL BE LOCATED AND DELINEATED ON THE FINAL SITE DEVELOPMENT PLANS.
18. THE RESIDENTIAL REQUIREMENTS FOR LANDSCAPING ARE 1 CANOPY AND 1 UNDERSTORY TREE PER LOT.
19. SLOPES ACROSS THE SITE RANGE FROM 0% TO 14%. THE SOILS TYPES ARE MAINLY ROCK OUTCROPS WITH A COMBINATION OF SILT LOAM.
20. THE FINAL GRADES SHALL BE DELINEATED ON THE FINAL SITE DEVELOPMENT PLANS AND SHALL DEMONSTRATE THE ADAPTABILITY OF PROPOSED STRUCTURES TO THE SITE CONDITIONS.
21. THE RESTRICTIVE COVENANTS FOR THIS DEVELOPMENT SHALL BE CREATED AND RECORDED WITH THE FINAL SUBDIVISION PLAT.
22. NO FILL MATERIAL OR STRUCTURES THAT WOULD IMPEDE THE FLOW OF STORMWATER AS SHOWN SHALL BE ALLOWED IN DRAINAGE EASEMENTS.
23. PUBLIC UTILITY AND DRAINAGE EASEMENTS WHERE SHOWN HEREON ARE INTENDED TO INDICATE AN EASEMENT FOR CONSTRUCTION, OPERATION, AND MAINTENANCE OF PUBLIC UTILITIES AND DRAINAGE WAYS; INCLUDING BUT NOT LIMITED TO SANITARY SEWERS, FORCEMAINS, WATER LINES, AND DRAINAGE PIPES.
24. IT IS THE RESPONSIBILITY OF EACH RESIDENTIAL BUILDER TO DESIGN AND CONSTRUCT A SUITABLE GRADING AND DRAINAGE SCHEME WHICH WILL CONVEY SURFACE WATER, WITHOUT PONDING IN THE LOT OR UNDER THE HOUSE, FROM HIS STRUCTURE TO THE DRAINAGE SYSTEM CONSTRUCTED BY THE SUBDIVISION DEVELOPER.
25. THE STORMWATER DETENTION POND ON THE OPEN SPACE LOT IS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. THE ENTIRE LOT IS DESIGNATED AS A PUBLIC UTILITY AND DRAINAGE EASEMENT.
26. LOTS 101 & 109 SHALL NOT HAVE DIRECT DRIVEWAY ACCESS TO JONES MILL ROAD.
27. PRE-APPLICATION MEETING WAS HELD WITH CITY PLANNER AND CITY ENGINEER ON MAY 15, 2015.
28. LIGHTING PLAN SHOWN HEREON TO BE APPROVED BY POWER COMPANY WHEN FINAL DESIGN IS DEVELOPED.
29. ORIGINAL CONSTRUCTION PLANS APPROVED 2/11/2016.

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Book 1373, Page 3036, Rutherford County Registers Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines, and that offers or irrevocable dedication for all public ways, utilities and other facilities have been filed.

OWNER: Amnon Shreibman

By: Amnon Shreibman Date: 6/18/19

CERTIFICATE OF APPROVAL OF WATER AND SEWER SYSTEMS

I hereby certify (1) that the following water and sewer system outlined or indicated on the final subdivision plat entitled Lt. Frank Walkup Subdivision, Phase One has been installed in accordance with the current local and/or state government requirements, or (2) a surety bond has been posted with the City Commission to assure completion of the following improvements in case of default.

Water System And Sewer System 6/24/19 Date, 2019 — City of La Vergne - Public Works Director

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the La Vergne Subdivision Regulations, with the exception of such variances, if any, as are noted in the minutes of the Planning Commission and that it has been approved for recording in the office of the County Register.

6/25/ Date, 2019 — Secretary, Planning Commission

CERTIFICATE OF APPROVAL OF PUBLIC WAYS FOR BOND POSTING

I hereby certify: (1) that all designated public ways on this final subdivision plat have been installed in an acceptable manner and according to the specifications of the La Vergne Subdivision Regulations, or (2) that a performance bond or other surety has been posted with the planning commission to guarantee completion of all required improvements in case of default.

6/24/19 Date, 2019 — City of La Vergne - Public Works Director

CERTIFICATE OF ACCURACY

I hereby certify that the plan shown and described hereon is true and correct and that this survey exceeds the minimum requirements of an "Urban Land Survey", Catergory "I", as per current Standards of Practice adopted by the Board of Examiners for Land Surveyors for the State of Tennessee and that the ratio of precision is greater than 1:15,000.

J. L. WHITSON — REGISTERED LAND SURVEYOR — DEPARTMENT OF AGRICULTURE — 2748 — TENNESSEE NO. 1732

Heather Dawbarn, Register
Rutherford County Tennessee
Rec #: 1034922 — Rec'd: 15.00 — State: 0.00 — Clerk: 0.00 — Other: 2.00 — Total: 17.00
Instrument #: 2254925
Recorded
1/31/2020 at 10:30 AM
in
Plat Cabinet 43 Pgs 248-248

FINAL PLAT
PHASE ONE
Lt. FRANK WALKUP SUBDIVISION
SECOND CIVIL DISTRICT
La VERGNE, RUTHERFORD COUNTY, TENNESSEE

OWNER:
AMNON SHREIBMAN
P.O. BOX 1746
La VERGNE, TENNESSEE 37086
(615) 793-6663

WAMBLE & ASSOCIATES — Civil Engineering · Land Surveying · Land Planning

PLAT BOOK 43 PAGE 248

REV: JANUARY 18, 2018
DATE: JANUARY 2, 2018

W&A FILE NO.: 249-0306

LT. FRANK WALKUP SUBDIVISION – PHASE 2

OFFER OF IRREVOCABLE DEDICATION

AGREEMENT made this 13th day of February 2023, by and between Nir Homes, Inc., having its office and place of business at P O Box 177, La Vergne, Tennessee, hereinafter designated as the "Developer" and the City of La Vergne, Tennessee, hereinafter designated the "City".

WHEREAS, the City Planning Commission approved on November 27, 2018, a subdivision plat entitled, Lt. Frank Walkup – Phase 2, and said plat was recorded on October 26, 2021, in Plat Cabinet 46, Page 204, Registers Office of Rutherford County, Tennessee;

WHEREAS, said plat designates certain public improvements consisting of streets, sidewalks, water, sanitary sewer, and storm drainage to be dedicated to the City, free and clear of all encumbrances and liens, pursuant to the requirements of the planning commission and local government code; and

WHEREAS, the developer, simultaneously herewith, has posted cash security with the City for the maintenance and dedication of said improvements, if required;

WHEREAS, the developer is desirous of offering for dedication the Lt. Frank Walkup – Phase 2 improvements and land to the City more particularly described on the recorded plat of Lt. Frank Walkup – Phase 2, recorded on October 26, 2021 in Plat Cabinet 46, Page 204, Registers Office Rutherford County, Tennessee, attached hereto;

NOW, THEREFORE, in consideration of the sum of one dollar ($1.00) lawful money of the United States paid by the City to the Developer and other good and valuable consideration, it is mutually **AGREED** as follows:

A. The Developer herewith delivers to the City the Lt. Frank Walkup – Phase 2 improvements shown on the Lt. Frank Walkup – Phase 2 final plat attached hereto, said delivery being a formal offer of dedication to the City until the acceptance or rejection of such offer of dedication by the City of La Vergne Board of Mayor and Alderman.

B. The Developer agrees that said formal offer of dedication is irrevocable and can be accepted by the City at the time.

C. The Developer agrees to complete the maintenance of the land and improvements pursuant to the cash security and the requirements of the City and any ordinances, regulations, requirements, covenants, and agreements that may be imposed by the City with respect thereto and, upon acceptance by the City of the offer of dedication, furnish to the City a sworn statement certifying that the premises are free and clear of all liens and encumbrances.

D. That this irrevocable offer of dedication shall run with the land and shall be binding on all assignees, guarantees, successors, or heirs of the developer.

2-13-2023
Date

Amnon Shreibman, President By Power of Attorney
Amnon Shreibman dba Nir Homes, Inc

(CORPORATE SEAL)

FOR THE CITY OF LA VERGNE BY
ATTEST:

_____
Mayor

_____
Date

STATE OF TENNESSEE

COUNTY OF RUTHERFORD **SS.:** _____

On this _____ day of _____, _____, before me personally appeared _____, to me known, who, being by me first duly sworn, did depose and said that he resides in _____; that he is the _____ of _____, the corporate seal affixed to said instrument is such corporate seal; that it was so affixed by order and authority of the Board of Directors of said corporation, and that he signed his name thereto by like order and authority.

_____, My commission expires _____
Notary Public

CO-PARTNERSHIP

STATE OF TENNESSEE)

COUNTY OF WILLIAMSON)

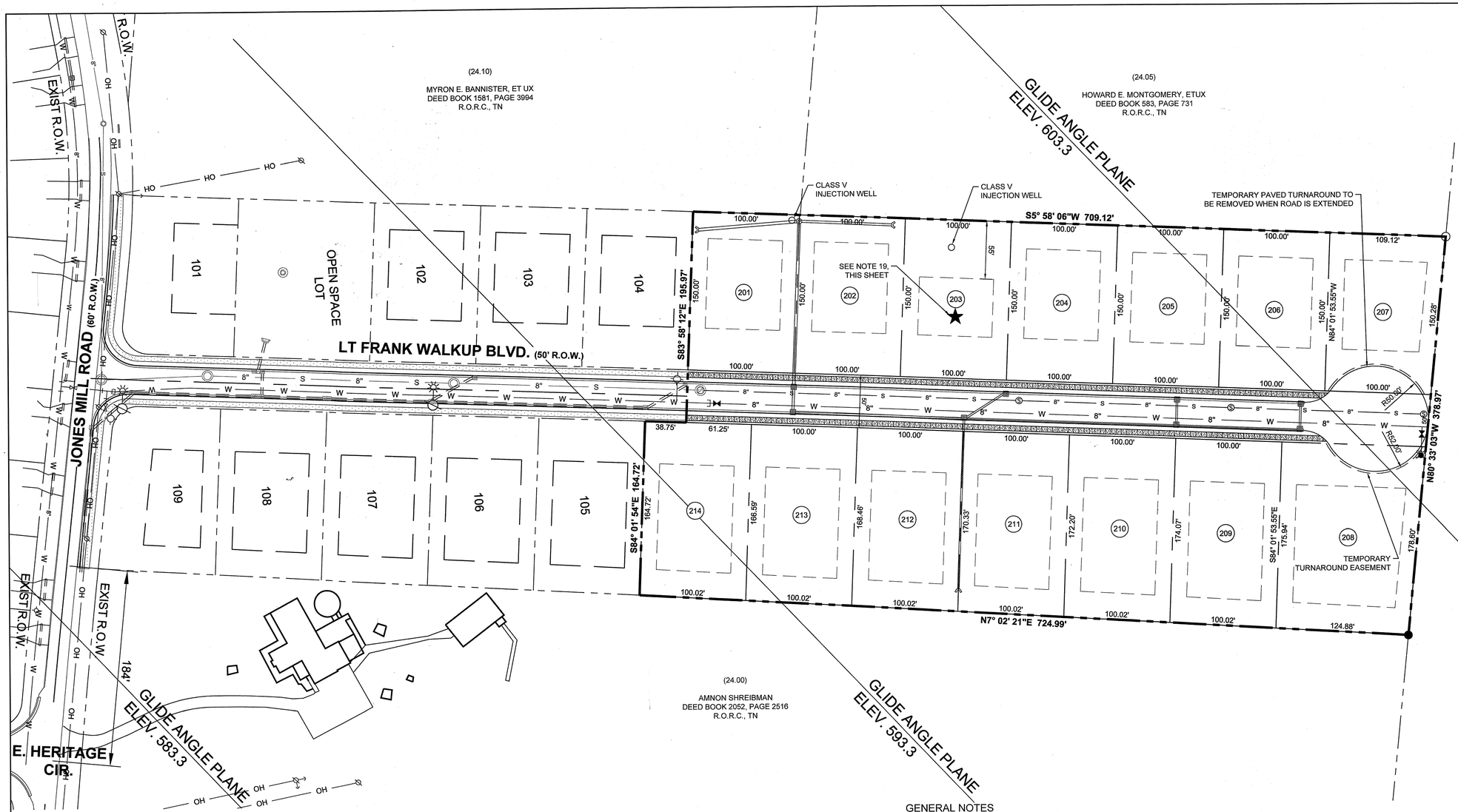
On this 13th day of February, 2023, The foregoing instrument, *Irrevocable Dedication*, was acknowledged before me by James D. Wamble.

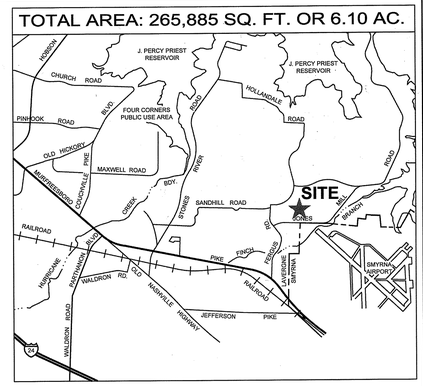
Karla J. Lee

Karla J. Lee

KARLA J. LEE
STATE OF TENNESSEE
NOTARY PUBLIC
DAVIDSON COUNTY
MY COMMISSION EXPIRES 5-9-2023

My Commission Expires: 05/09/2023





VICINITY MAP
NOT TO SCALE

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Record Book 1373 Page 3036, Rutherford County Register's Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines, and that offers or irrevocable dedication for all public ways, utilities and other facilities have been filed.

Owner: Amnon Shreibman

Date: 9/26/2021

Amnon Shreibman - Owner

CERTIFICATE OF APPROVAL OF SEWER SYSTEMS

I hereby certify (1) that the following sewer system outlined or indicated on the final subdivision plat entitled Lt. Frank Walkup Subdivision, Phase Two, has been installed in accordance with the current local and/or state government requirements, or (2) a surety bond has been posted with the City Commission to assure completion of the following improvements in case of default.

Sewer System 10/12 (Date), 2021

City of La Vergne - City Engineer

CERTIFICATE OF APPROVAL OF WATER SYSTEMS

I hereby certify (1) that the following water system outlined or indicated on the final subdivision plat entitled Lt. Frank Walkup Subdivision, Phase Two, has been installed in accordance with the current local and/or state government requirements, or (2) a surety bond has been posted with the City Commission to assure completion of the following improvements in case of default.

Water System 10/12 (Date), 2021

City of La Vergne - City Engineer

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the La Vergne Subdivision Regulations, with the exception of such variances, if any, as are noted in the minutes of the Planning Commission and that it has been approved for recording in the office of the County Register.

10/12 (Date), 2021

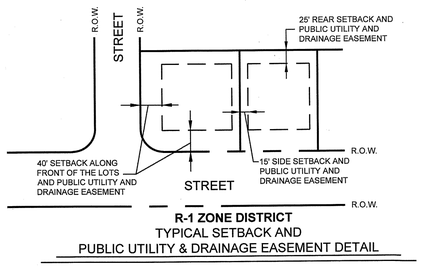
Secretary, Planning Commission

CERTIFICATE OF ACCURACY

I hereby certify that the plan shown and described hereon is true and correct and that this survey exceeds the minimum requirements of an "Urban Land Survey", Catergory "I", as per current Standards of Practice adopted by the Board of Examiners for Land Surveyors for the State of Tennessee and that the ratio of precision is greater than 1:15,000.

J. L. WHITSON — REGISTERED LAND SURVEYOR — TENNESSEE NO. 1752

Heather Dawbarn, Register
Rutherford County Tennessee
Rec #: 1144173
Rec'd: 15.00 Instrument #: 2400268
State: 0.00 Recorded
Clerk: 0.00 10/26/2021 at 2:29 PM
Other: 2.00 in
Total: 17.00 Plat Cabinet 46 Pgs 204-204



R-1 ZONE DISTRICT
TYPICAL SETBACK AND
PUBLIC UTILITY & DRAINAGE EASEMENT DETAIL

SITE DATA	
OWNER	AMNON SHREIBMAN
ADDRESS	LT FRANK WALKUP BLVD.
EXISTING ZONING	R-1
MAP / PARCEL	MAP 14 / PARCELS 24.13
MINIMUM LOT SIZE (ZONING)	15,000 SQ. FT.
MINIMUM LOT SIZE (DESIGNED)	15,000 SQ. FT.
TOTAL SITE AREA	6.10 ACRES
TOTAL NUMBER OF LOTS	14
DENSITY	2.30 LOTS / ACRE
MINIMUM FRONT SETBACK	40'
MINIMUM SIDE SETBACK	15'
MINIMUM REAR SETBACK	25'
OPEN SPACE	0

GRAPHIC SCALE (IN FEET)
50 0 50 100
1 inch = 50 ft.

Lot Table		
Lot #	Square Feet	Acres
201	15000	0.34
202	15000	0.34
203	15000	0.34
204	15000	0.34
205	15000	0.34
206	15000	0.34
207	15684	0.36
208	23080	0.53
209	17500	0.40
210	17313	0.40
211	17126	0.39
212	16939	0.39
213	16752	0.38
214	16565	0.38

GENERAL NOTES

1. The property shown hereon is located within the city limits of La Vergne, Tennessee and is zoned R-1.
2. The property is owned by Amnon Shreibman.
3. This entire tract is located in an area designated as Zone "X" (Areas determined to be outside of the 0.2% annual chance floodplain on FEMA FIRM Map No. 47149C0020J , revised October 16, 2008.
4. No home shall be further than 500' from the nearest fire hydrant.
5. All water and sanitary sewer lines shown hereon shall be public and dedicated to the City of La Vergne.
6. Storm water conveyance shall be by open ditches along the side and rear lot lines and existing ditch lines along existing roads.
7. No grading work shall commence until a notice of coverage from the State of Tennessee has been acquired and the City of La Vergne has issued a grading permit for this site.
8. Sinkholes and/or depressions on lots 201, 202 and 203 shall be repaired in accordance with a Class V Injection Well permit from TDEC.
9. All roads proposed in this development shall comply with the public works specification manual, part iii, base and sub-grade treatment for street construction. These specifications shall be in the minimum standards for any subdivision within the jurisdiction area.
10. The residential requirements for landscaping are 1 canopy and 1 understory tree per lot.
11. No fill material or structures that would impede the flow of stormwater as shown hereon shall be allowed in drainage easements.
12. Public utility and drainage easements where shown hereon are intended to indicate an easement for construction, operation, and maintenance of public utilities and drainage ways; including but not limited to sanitary sewers, forcemains, water lines, and drainage pipes.
13. It is the responsibility of each residential builder to design and construct a suitable grading and drainage scheme which will convey surface water, without ponding in the lot or under the house, from his structure to the drainage system constructed by the subdivision developer.
14. Each lot must accommodate three (3) standard parking spaces.
15. Developer shall be responsible for installing street lights as per City of La Vergne standards. No certificates of occupancy will be issued until street lights are installed according to City standards.
16. A total of 14 lots are proposed in this development.
17. The Preliminary plan was approved on October 30, 2018 by the City of La Vergne Planning Commission for the 14 new lots in this residential development project.
18. All lots are within the approximate limits as shown hereon of tract numbers B-203-E, B-208-E and B-218-E described in Deed book 117, page 193 over which the United States of America acquired certain rights pertaining to air clearance for the Stewart Air Force Base (Smyrna Airport). This property is in near proximity of the runway for the departure and arrival of airplanes for Stewart Air Force Base, therefore, no portion of any houses to be constructed on these lots shall be at an elevation higher than the following Glide Angle Elevations

Lot Number	Calculated Glide Angle Elevation	Lot Number	Calculated Glide Angle Elevation
201	597.0	208	601.7
202	598.4	209	600.1
203	599.8	210	598.8
204	601.2	211	597.4
205	602.6	212	596.0
206	604.0	213	594.6
207	605.4	214	593.3

19. Lots designated thus ★ hereon are Critical Sinkhole lots. In order to construct houses on these designated lots, the builder must provide written house foundation inspection and approval of the house foundation stamped by a professional Geotechnical Engineer to the La Vergne City Engineer for approval prior to pouring the house footings on each lot.

LEGEND

- Utility Pole
- Utility Pole w/Lamp
- Fire Hydrant
- OH — Overhead Utility Line
- S — Sanitary Sewer
- W — Water Line
- WM — Water Meter
- IR (O) — Iron Rod (Old)
- IR (N) — Iron Rod (New)
- CM (O) — Concrete Monument (Old)
- X — Fence Line

PLAT BOOK _____ PAGE _____

REVISION: November 15, 2018
DATE: October 29, 2018

FINAL PLAT
PHASE TWO
Lt. FRANK WALKUP SUBDIVISION
SECOND CIVIL DISTRICT
La VERGNE, RUTHERFORD COUNTY, TENNESSEE

Owner and Developer:
Amnon Shreibman
P.O. Box 177
La Vergne, TN 37086

WAMBLE & Associates, PLLC
Civil Engineering - Land Surveying - Land Planning

W&A FILE NO.: 249-1118

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan – Dick Buchanan Trailer Storage – Trailer Storage and Two New Buildings of 7,000/9,100 Square Feet and 12,000 Square Feet on 15.47 Acres. Requested by 615 Design Group. Property located on Dick Buchanan Street (Tax Map 014, Parcel 50.00). I-2 (Heavy Industrial) Zoning District. Property owned by CSJ & Associates, LLC.

Reviewed By: Bo Logan, City Planner
Gary Lide P.E., City Engineer

Summary

On behalf of their client, 615 Design is requesting site plan approval for a trailer storage lot on Dick Buchanan Street.

This proposal includes two new structures along with parking areas for trailer storage. Vehicle storage areas are permitted outright in industrial zoning.

The total size of the site is 15.47 acres. The two new buildings proposed would be 7,000/9,100 square feet and 12,000 square feet.

This parcel is not contained within the Murfreesboro Road or Waldron Road Overlay Streetscape District, so no overlay provisions apply.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

1.

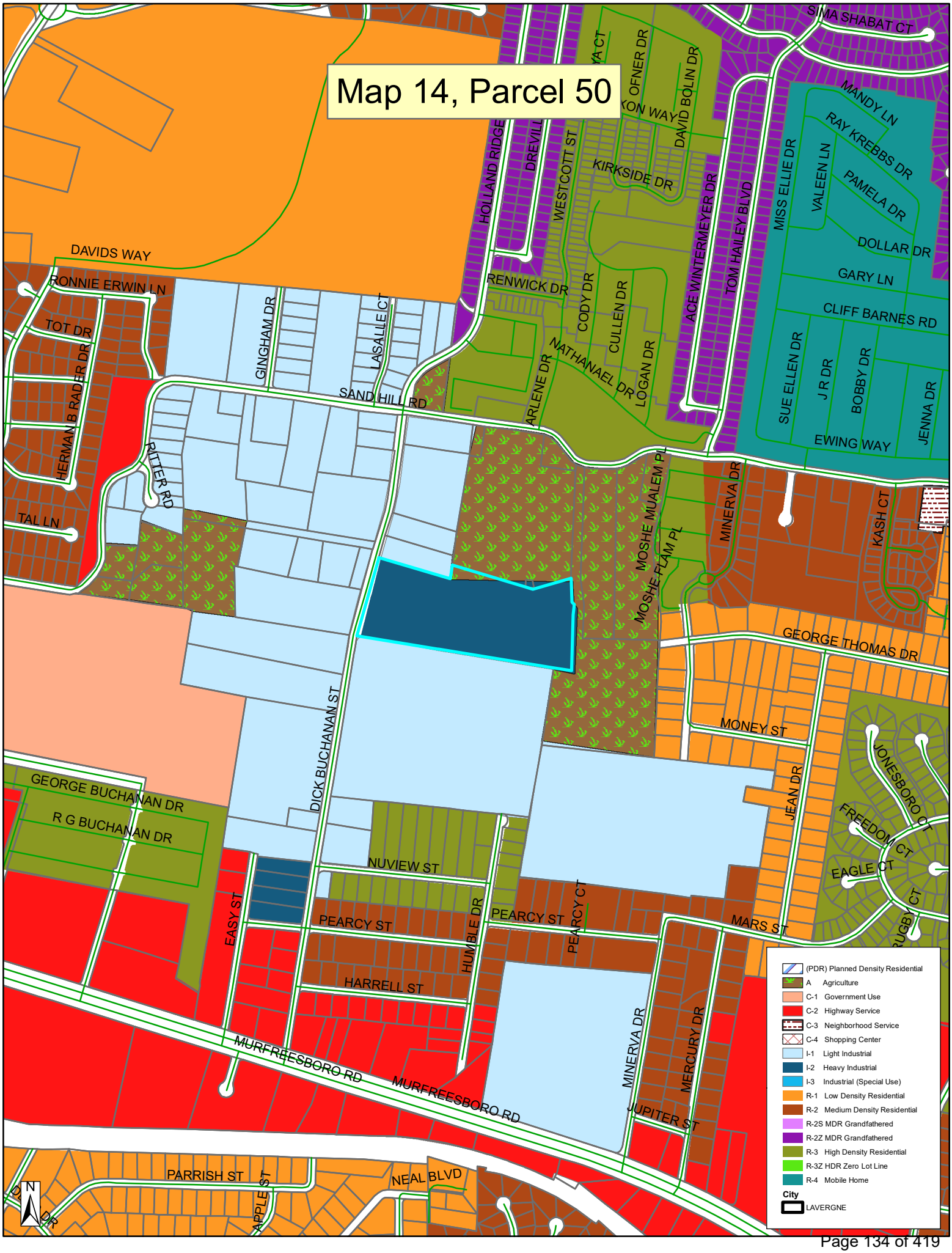
Other Concerns

1.

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


Map 14, Parcel 50
SAND HILL RD
DICK BUCHANAN ST
N


Map 14, Parcel 50
DAVIDS WAY
GINGHAM DR
LASALLE CT
JENNIFER PIERCE DR
JERRY BUTLER DR
SAND HILL RD
ARLENE DR
CODY DR
NATHANAEL DR
LOGAN DR
ACE MINTERMEYER DR
TOM HAILEY BLVD
MISS ELLIE DR
MOSHE MUALEM PL
MOSHE FLAM PL
MINERVA DR
GEORGE THOMAS DR
MONEY ST
DICK BUCHANAN ST
GEORGE BUCHANAN DR
NUVIEW ST
EASY ST
PEARCY ST
HUMBLE DR
PEARCY CT
MARS ST
JEAN DR
MERCURY DR
HARRELL ST
N


Map 14, Parcel 50
SIMA SHABAT CT
MANDY LN
RAY KREBBS DR
PAMELA DR
DOLLAR DR
GARY LN
CLIFF BARNES RD
EWING WAY
JENNA DR
BOBBY DR
JR DR
SUE ELLEN DR
MISS ELLIE DR
VALEEN LN
TOM HAILEY BLVD
ACE WINTERMEYER DR
DAVID BOLIN DR
OFNER DR
KON WAY
KIRKSIDE DR
WESTCOTT ST
HOLLAND RIDGE
DREVILL
RENWICK DR
CODY DR
CULLEN DR
LOGAN DR
NATHANAEL DR
ARLENE DR
DAVIDS WAY
RONNIE ERWIN LN
TOT DR
HERMAN B RADER DR
GINGHAM DR
LASALLE CT
SAND HILL RD
RITTER RD
TAL LN
MOSHE MUALEM PL
MOSHE FLAM PL
MINERVA DR
KASH CT
GEORGE THOMAS DR
MONEY ST
JEAN DR
JONESBORO CT
FREEDOM CT
EAGLE CT
RUGBY CT
MARS ST
DICK BUCHANAN ST
GEORGE BUCHANAN DR
R G BUCHANAN DR
NUVIEW ST
EASY ST
PEARCY ST
HUMBLE DR
PEARCY CT
HARRELL ST
MURFREESBORO RD
MERCURY DR
JUPITER ST
PARRISH ST
APPLE ST
NEAL BLVD
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home
City
LAVERGNE


FOR SALE
15.47 Acres

NON-RESIDENTIAL SITE PLAN SUBMITTAL

470 DICK BUCHANAN STREET

INDUSTRIAL DEVELOPMENT

SITE DATA TABLE

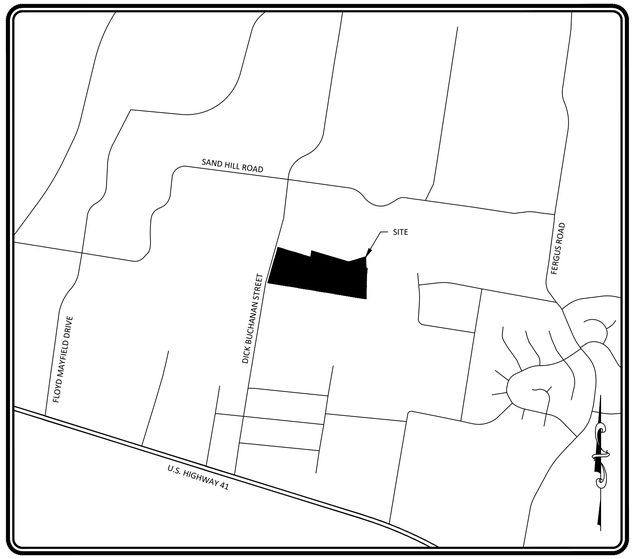
SITE ADDRESS:	470 DICK BUCHANAN STREET LA VERGNE, TN 37086
OWNER:	470 DICK BUCHANAN, LLC
PARCEL ID:	TAX MAP: 014 / PARCEL: 050.00
DEED BOOK: PAGE #:	1651 1955
SITE AREA:	+/- 15.41 ACRES (671,074 SF)
EXISTING ZONING:	I-2 HEAVY INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	INDUSTRIAL
MINIMUM SETBACKS: FRONT: REAR: SIDE:	 40' 15' 20'
EXISTING BUILDING SQ FT:	+/- 1,250 SF
PROPOSED BUILDING SQ FT:	21,100 SF (INDUSTRIAL)
MAX BUILDING HEIGHT:	50'
PROPOSED BLDG HEIGHT:	1 STORY / 20'
PROPOSED BLDG USE:	MINOR MAINTENCE/OFFICE/BREAK ROOM/RESTROOM
DISTURBED AREA:	+/- 15.41 ACRES
MAX LOT COVERAGE:	50%
PROPOSED LOT COVERAGE:	3.1%
PARKING PROVIDED:	398 SPACES

NOTES:

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY B2L LAND SURVEYORS, DATED 03/21/2022.
2. NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD ZONE AE AS PER F.E.M.A. MAP NO. 47149C0020J, DATED 10/16/2008.
3. MAILBOXES TO BE PLACED PER THE POST MASTER'S DIRECTION. CLUSTER MAILBOXES TO BE USED.

TDEC NOTICE OF COVERAGE NOTE

THIS SITE DISTURBS MORE THAN 1 ACRE AND THEREFORE DOES REQUIRE COVERAGE UNDER A TENNESSEE CONSTRUCTION GENERAL PERMIT. THE TOTAL DISTURBED AREA IS: 15.41 ACRES. TDEC PERMIT NUMBER IS TBD.



LOCATION MAP
NOT TO SCALE

CONTACTS

CONTACTS:

OWNER:

470 DICK BUCHANAN, LLC
1200 BRICKELL AVENUE
MIAMI, FL 33131
917-621-6071
jeremy@bay-st.com

CIVIL ENGINEER:

CJ MURRELL
615 DESIGN GROUP
360 QUECREEK CIRCLE
SMYRNA, TN 37167
615-829-6899
cj@615designgroup.com

LANDSCAPE ARCHITECT:

NATE SWEITZER
ARETE LANDSCAPE ARCHITECTURE
9031 HUBBARD STREET
CULVER CITY, CA 90232
330-646-5018
nate@arete-la.com

SURVEYOR:

B2L LAND SURVEYORS
1198 OLD PINNACLE ROAD
JOELTON, TN 37080
615-212-5703
B2LHPS@GMAIL.COM

UTILITY CONTACTS

SEWER:

CITY OF LA VERGNE UTILITIES
5093 MURFREESBORO
LA VERGNE, TN 37086
615-793-9891
MICHAEL DIETZ
MDIETZ@LAVERGNETN.GOV

WATER:

CITY OF LA VERGNE UTILITIES
5093 MURFREESBORO
LA VERGNE, TN 37086
615-287-8662
MICHAEL DIETZ
MDIETZ@LAVERGNETN.GOV

GAS:

SMYRNA UTILITIES
315 S. LOWRY STREET
SMYRNA, TN 37167
615-459-2553
PAULA STANLEY
PAULA.STANLEY@TOWNOFSMYRNA

ELECTRIC:

NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
615-736-6900

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
C0.0	COVER
C1.0	EXISTING CONDITIONS PLAN
C2.0	SITE PLAN
C3.1	EROSION CONTROL PLAN - INITIAL
C3.2	EROSION CONTROL PLAN - INTERMEDIATE
C3.3	EROSION CONTROL PLAN - FINAL
C3.4	EROSION CONTROL DETAILS
C4.0	GRADING PLAN
C4.1	DETENTION POND DETAILS
C5.0	UTILITY PLAN
C5.1	UTILITY DETAILS
C5.2	UTILITY DETAILS
C5.3	UTILITY DETAILS

615 DESIGN GROUP
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www.615designgroup.com

COLTYN J. MURRELL
REGISTERED ENGINEER
No. 122179
STATE OF TENNESSEE
3/29/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

COVER

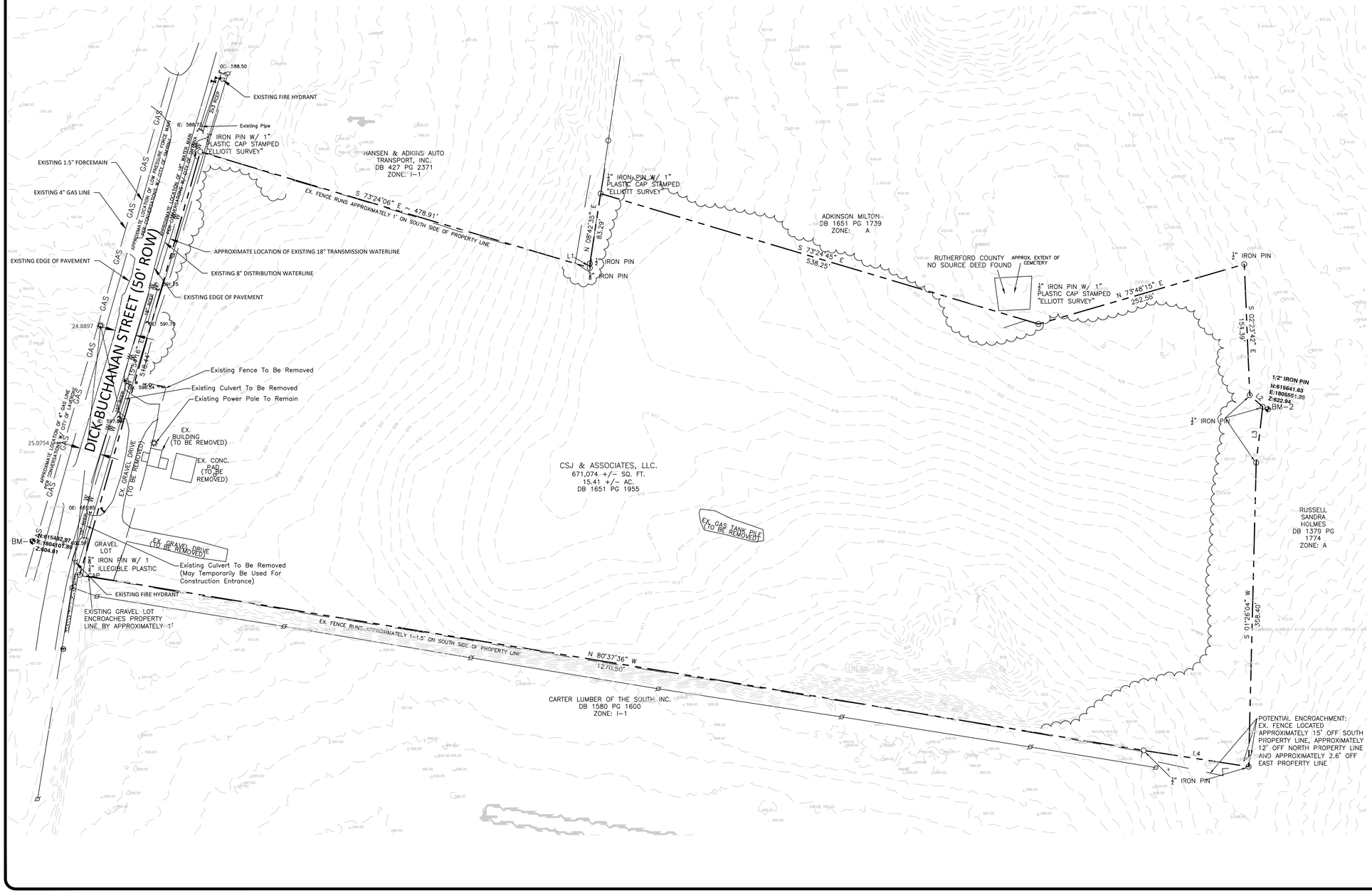
C0.0

EXISTING CONDITIONS NOTES

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY B2L LAND SURVEYORS.
2. CONTRACTOR TO NOTIFY CITY INSPECTOR PRIOR TO ANY DEMOLITION ON SITE.
3. ALL EXISTING STRUCTURES TO BE DEMOLISHED UNLESS OTHERWISE NOTED.
4. PRIOR TO THE START OF DEMOLITION / GRADING OPERATIONS, ALL OVERHEAD AND UNDERGROUND UTILITIES SHALL BE LOCATED. ALL REMOVAL AND / OR RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANIES.
5. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT.
6. ALL MATERIAL REMOVED FROM THE SITE ARE TO BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

EXISTING UTILITIES NOTE

CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OF EXISTING OR PROPOSED UTILITIES. CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. ALL REMOVAL AND/OR RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANIES.



615 DESIGN GROUP
360 QUEENSBERRY CIRCLE, SMYRNA, TN 37167
(615) 220-2085
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COLTYN J. MURRAY
REGISTERED ENGINEER
No. 122173
STATE OF TENNESSEE
3/29/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

EXISTING CONDITIONS PLAN

C1.0

PAVEMENT SCHEDULE (HEAVY DUTY)

- 1.5" 411-E MIX
- 3" 307 BM MIX
- 8" MINERAL AGGREGATE

PAVEMENT SCHEDULE (TAR & CHIP)

- 1.5" TAR AND CHIP
- PRIME COAT
- 8" MINERAL AGGREGATE

PAVEMENT LEGEND

- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED CHIP AND TAR

SITE DATA TABLE

SITE ADDRESS:	470 DICK BUCHANAN STREET LA VERGNE, TN 37086
OWNER:	470 DICK BUCHANAN, LLC
PARCEL ID:	TAX MAP: 014 / PARCEL: 050.00
DEED BOOK: PAGE #:	1651 1955
SITE AREA:	+/- 15.41 ACRES (671,074 SF)
EXISTING ZONING:	I-2 HEAVY INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	INDUSTRIAL
MINIMUM SETBACKS: FRONT: REAR: SIDE:	 40' 15' 20'
EXISTING BUILDING SQ FT:	+/- 1,250 SF
PROPOSED BUILDING SQ FT:	21,100 SF (INDUSTRIAL)
MAX BUILDING HEIGHT:	50'
PROPOSED BLDG HEIGHT:	1 STORY / 20'
PROPOSED BLDG USE:	MINOR MAINTENCE/OFFICE/BREAK ROOM/RESTROOM
DISTURBED AREA:	+/- 15.41 ACRES
MAX LOT COVERAGE:	50%
PROPOSED LOT COVERAGE:	3.1%
PARKING PROVIDED:	398 SPACES

NOTES:

1. EXISTING SURVEY INFORMATION IS DERIVED FROM A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY B2L LAND SURVEYORS, DATED 03/21/2022.
2. NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD ZONE AE AS PER F.E.M.A. MAP NO. 47149C0020J, DATED 10/16/2008.
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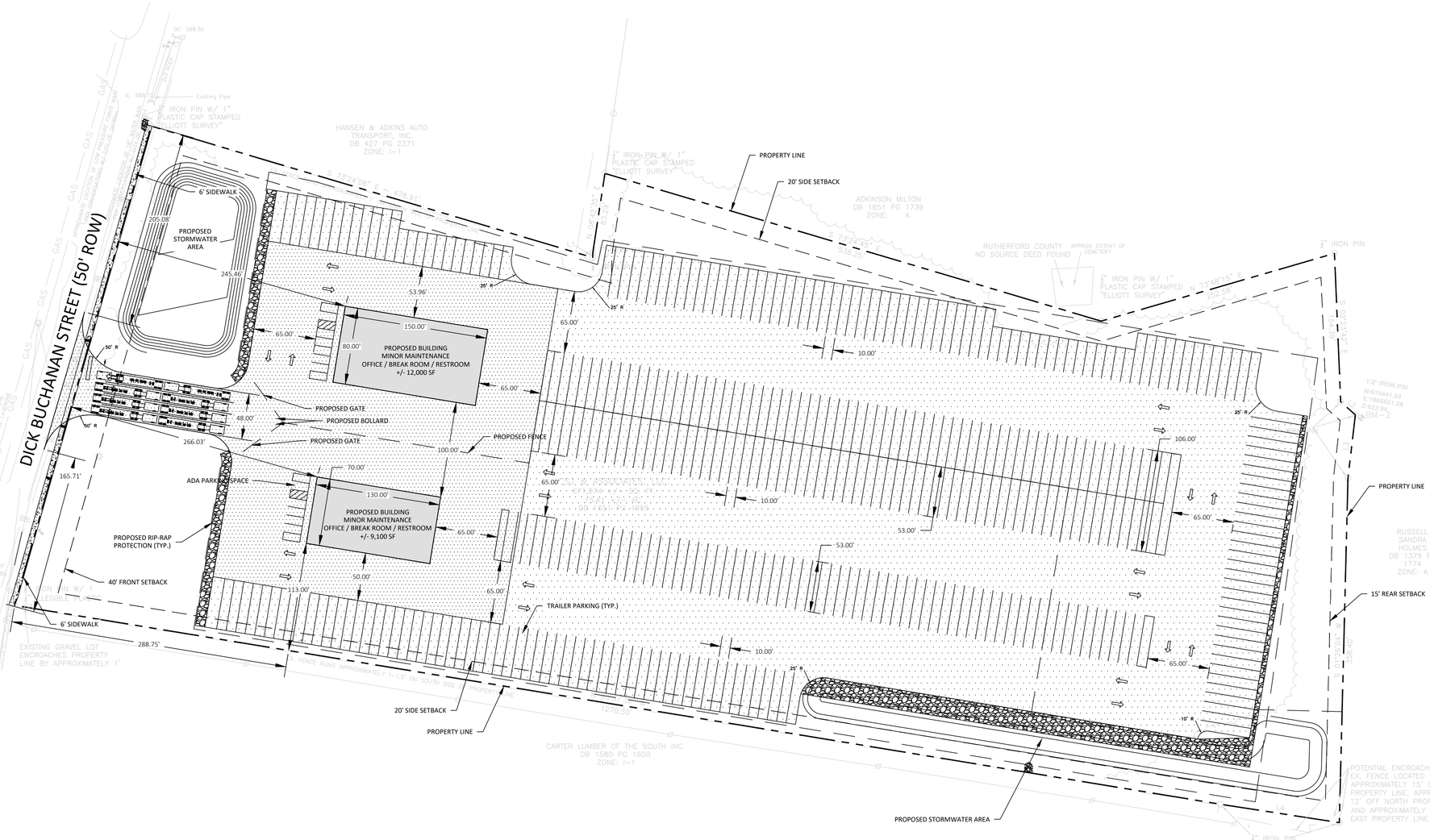

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615.545.2927
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COLTYN J. MURPHY
REGISTERED ENGINEER
No. 122179
STATE OF TENNESSEE
04/04/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

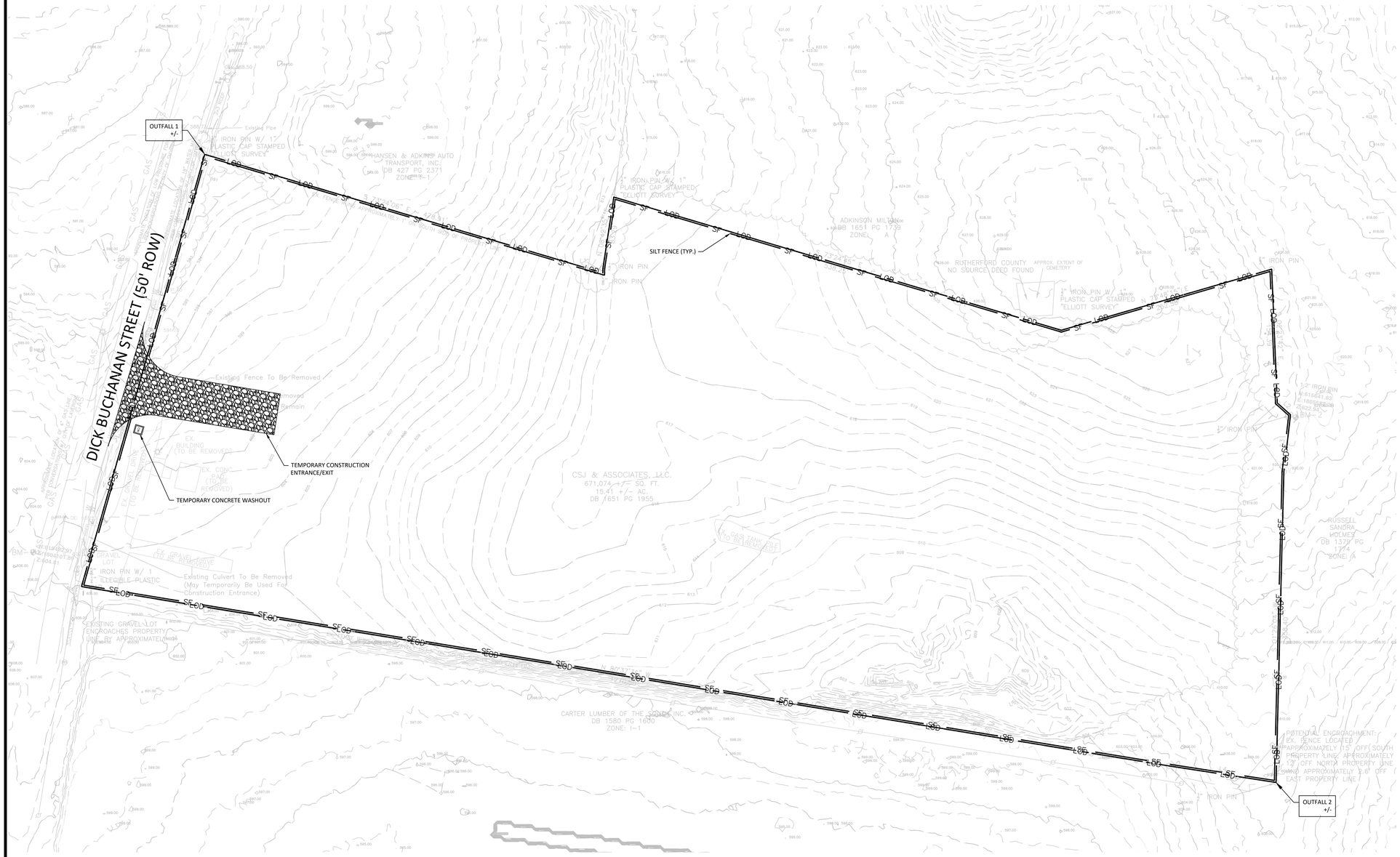
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

SITE PLAN

C2.0



EROSION CONTROL NOTES

1. IN INITIAL EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO ISSUANCE OF GRADING PERMIT AND MUST BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS.
2. ALL CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED ACCORDING TO LOCAL STANDARDS.
3. TEMPORARY CONSTRUCTION ACCESS MUST BE PROVIDED AT ALL POINTS WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. CONTRACTOR TO MAINTAIN ALL PUBLIC ROADWAYS AND KEEP FREE FROM TRACKED MUD AND DIRT.
4. CONTRACTOR NOT TO DISTURB VEGETATION EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
5. WHERE VEGETATION COVER IS USED AS A CONTROL MEASURE, THE PLANTING OF THE VEGETATION COVER DURING WINTER OR DRY MONTHS SHOULD BE AVOIDED.
6. CONSTRUCTION DEBRIS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS AND PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
7. BMP CONTROLS SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND SHALL BE PERFORMED AT LEAST 72 HOURS APART. ANY INADEQUATE CONTROL MEASURE THAT IS NOT FUNCTIONING CORRECTLY SHALL BE REPLACED OR REPAIRED PRIOR TO THE NEXT RAIN EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED FOR REPAIR OR REPLACEMENT IS IDENTIFIED.
8. MULCH AND SEED ALL DISTURBED AREAS WITHIN 14 DAYS FROM WHEN FINAL GRADING IS COMPLETED. STEEP SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITHIN 7 DAYS AFTER FINAL GRADING IS COMPLETED.
9. CONTRACTOR TO MAINTAIN PUBLIC ROADWAYS AND KEEP THEM CLEAR OF TRACKED MUD AND DIRT.
10. THE EROSION CONTROL MEASURES FOR THIS SITE WERE DESIGNED TO HANDLE A 2-YEAR STORM EVENT.
11. CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH CITY OF LA VERGNE. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRE-CONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.
12. STORMWATER DEPARTMENT AND DESIGN ENGINEER ARE TO BE PRESENT DURING INSTALLATION OF BIORETENTION.

EPSC DATA TABLE

TOTAL LIMIT OF DISTURBANCE:	+/- 15.41 AC (671,073 SF)
TOTAL SILT FENCE:	+/- 3,780 LF
EXISTING IMPERVIOUS AREA:	0.21 AC
PROPOSED IMPERVIOUS AREA:	10.87 AC (473,900 SF)

EROSION CONTROL LEGEND

- LOD — LIMIT OF DISTURBANCE
- SF — SILT FENCE
- TP — TREE PROTECTION
- > — DIVERSION DITCH
- EROSION EEL
- OUTLET PROTECTION
- CW — CONCRETE WASHOUT
- INLET PROTECTION
- TS — TEMPORARY STABILIZATION
- PS — PERMANENT STABILIZATION

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COLTYN J. MURPHY
REGISTERED ENGINEER
No. 122172
STATE OF TENNESSEE
5/31/2023

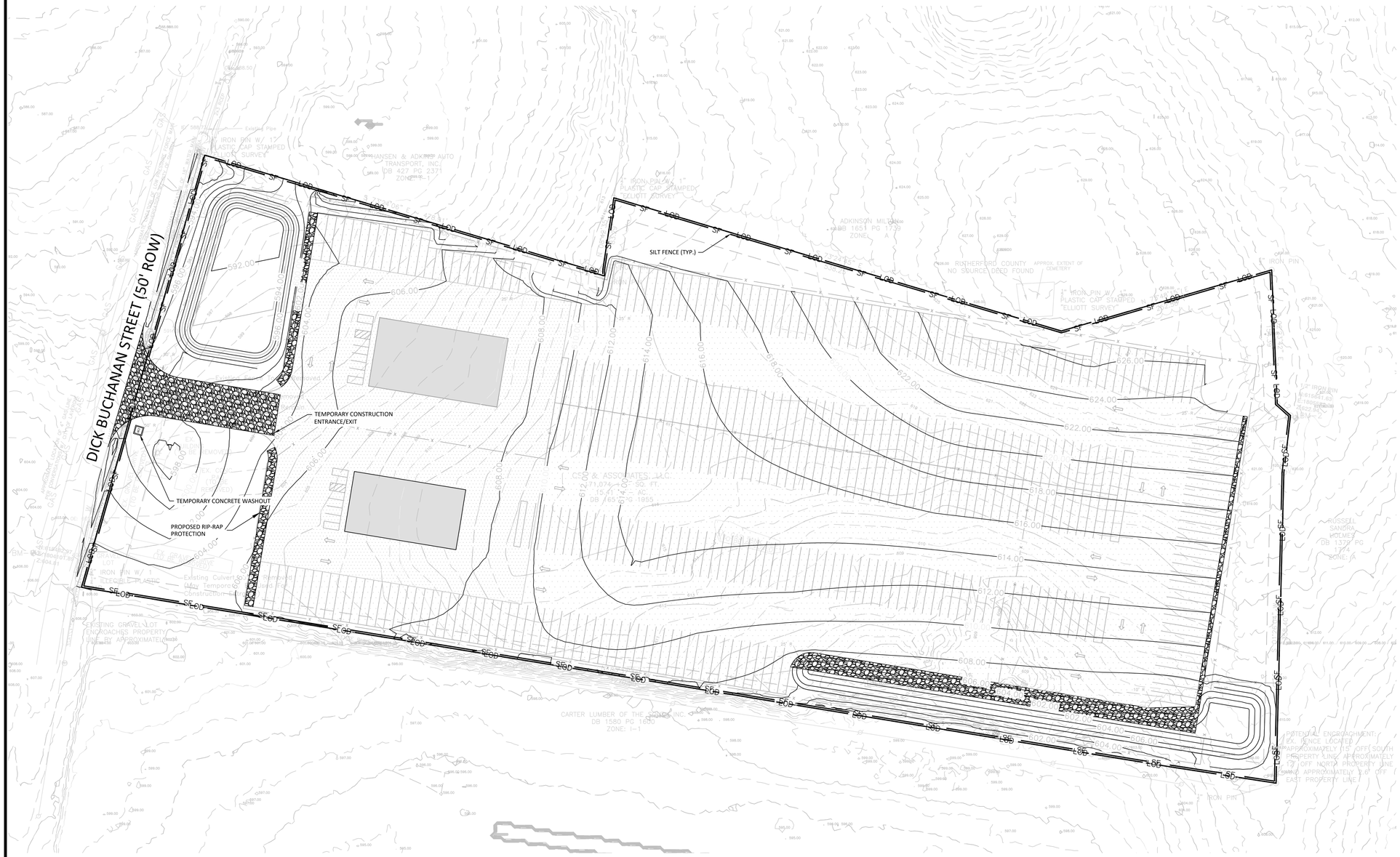
470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

EROSION CONTROL PLAN - INITIAL

C3.1



EROSION CONTROL NOTES

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	INLET PROTECTION
TS	TEMPORARY STABILIZATION
PS	PERMANENT STABILIZATION

615 DESIGN GROUP
360 QUICKCREEK CIRCLE, SMYRNA, TN 37167
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COLTYN J. MURPHY
REGISTERED ENGINEER
No. 122172
STATE OF TENNESSEE
APRIL 7, 2023

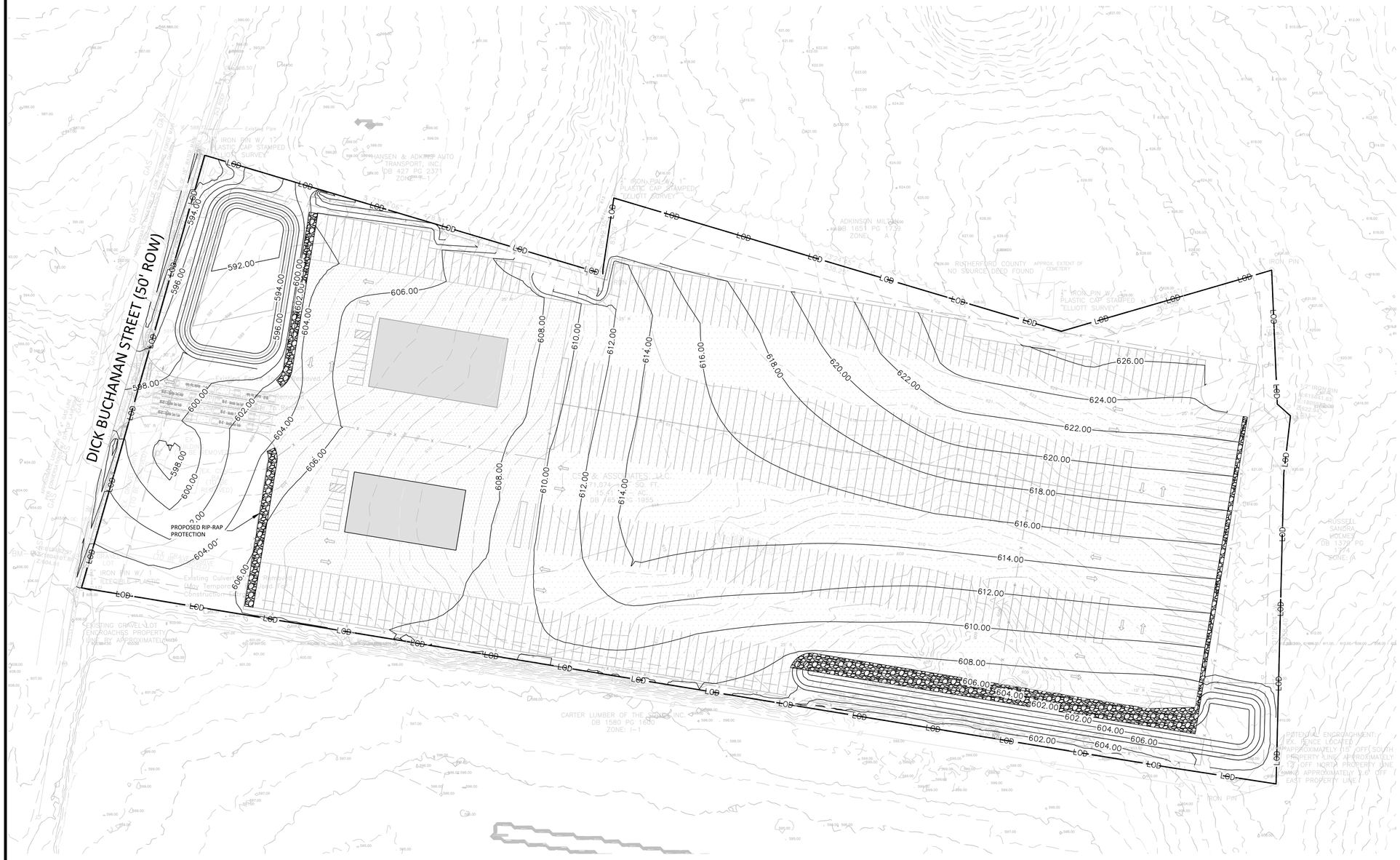
470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

EROSION CONTROL PLAN - INTERMEDIATE

C3.2



EROSION CONTROL NOTES

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EROSION CONTROL LEGEND

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SF	SILT FENCE
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>	DIVERSION DITCH
	EROSION EEL
	OUTLET PROTECTION
CW	CONCRETE WASHOUT
	INLET PROTECTION
TS	TEMPORARY STABILIZATION
PS	PERMANENT STABILIZATION

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COLTYN J. MURPHY
REGISTERED ENGINEER
No. 121173
STATE OF TENNESSEE
3/29/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS

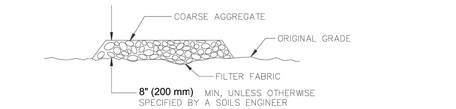
NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

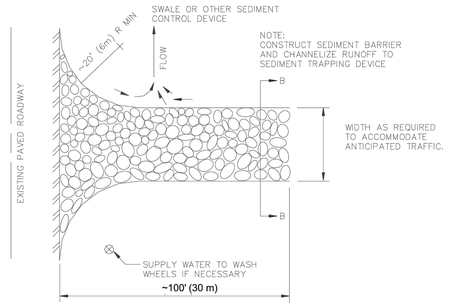
EROSION CONTROL PLAN - FINAL

C3.3

ACTIVITY: Stabilized Construction Entrance	TCP – 03



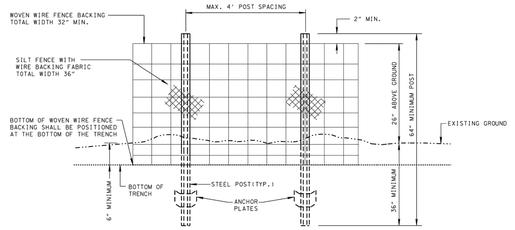
SECTION B–B
N.T.S.



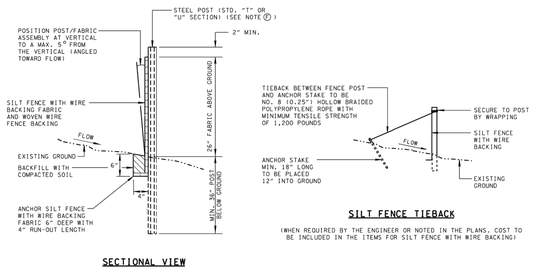
PLAN VIEW
N.T.S.

Figure TCP-03-1
Stabilized Construction Entrance

Volume 4:
Stormwater Best Management Practices –
Temp. Construction Site Management Practices TCP-03-5 September 2013



ELEVATION VIEW



SECTIONAL VIEW

SILT FENCE TIEBACK

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE WITH WIRE BACKING)

EROSION CONTROL PLAN LEGEND: • SFB • SFB • SFB • SILT FENCE WITH WIRE BACKING

REV. 12-18-03: MODIFIED TABLE ⑦ AND GENERAL NOTE Ⓐ.

- REV. 7-29-04: CHANGED VALUES IN TABLE 2 FROM MEAN TO MARV VALUES.
- REV. 4-15-06: MODIFIED FABRIC HEIGHT. ADDED NOTES Ⓒ AND Ⓝ. REVISED TABLE TITLE. REORDERED GENERAL NOTES. REFORMATTED SHEET. REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED NOTES, AND MISC. EDITS TO DRAWING.
- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

SILT FENCE WITH WIRE BACKING FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)
GEOTEXTILE FABRIC TYPE	WOVEN MONOFILAMENT
APPARENT OPENING SIZE (ASTM D4751)	#70 TO #100 STANDARD SIEVE
WATER FLUX (ASTM D4491)	≥ 18 GPM/FT²
TENSILE STRENGTH (ASTM D4632)	≥ 310 LB. (WARP DIRECTION) X 200 LB. (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BURST STRENGTH (ASTM D3786)	≥ 400 PSI
PUNCTURE STRENGTH (ASTM D4833)	≥ 105 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 100 LB. (WARP DIRECTION) X 60 LB. (FILL DIRECTION)

SILT FENCE WITH WIRE BACKING GENERAL NOTES

Ⓐ SILT FENCE WITH WIRE BACKING IS USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. USE SILT FENCE WITH WIRE BACKING UP-GRADIENT TO, AND ALONG THE PERIMETER OF STREAMS, WETLANDS, PONDS, SPRINGS, OR OTHER NATURAL WATER RESOURCES LOCATED WITHIN OR ADJACENT TO THE PROJECT RIGHT-OF-WAY AND AT LARGE FILL SLOPES.

Ⓑ THE MAXIMUM DRAINAGE AREA SIZE FOR CONTINUOUS SILT FENCE WITH BACKING SHALL BE 1 ACRE PER 150 LINEAR FEET OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 290 FEET (AS MEASURED ALONG THE GROUND SURFACE).

Ⓒ WHEN INSTALLED AT THE TOE OF A SLOPE SILT FENCE WITH WIRE BACKING SHOULD BE PLACED 5 FEET TO 10 FEET AWAY FROM THE TOE TO ALLOW SPACE FOR PONDING OF WATER, COLLECTION OF SEDIMENT, AND EASE OF MAINTENANCE AND REMOVAL.

Ⓓ WHEN TWO SECTIONS OF SILT FENCE WITH WIRE BACKING FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.

Ⓔ MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER CLOGGING IS OBSERVED.

Ⓕ STEEL POSTS SHALL BE ROLLED FROM HIGH CARBON STEEL AND SHALL HAVE A MINIMUM WEIGHT OF 1.25 LB/FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH GRADE WEATHER RESISTANT STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF THE WIRE BACKING. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702.

Ⓖ STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE FENCE BACKING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.

Ⓗ FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH THE TIES SPACED EVERY 24 INCHES ALONG TOP AND MIDSECTION.

Ⓘ WOVEN WIRE FENCE BACKING SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM, DESIGN NO. 832-6-11, CLASS 3 COATING.

Ⓙ SILT FENCE WITH BACKING SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF FENCE AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (±0.5%). THE END OF A ROW OF SILT FENCE WITH WIRE BACKING SHOULD BE TURNED UP SLOPE FORMING A J-HOOK TO FILTER ANY CONCENTRATED FLOW BEHIND FENCE.

Ⓚ FOR TRENCH-BASED INSTALLATIONS, SILT FENCING WITH WIRE BACKING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:

- EXCAVATE TRENCH A MAXIMUM OF 4 INCHES WIDE AND 6 INCHES DEEP. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
- DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
- ATTACH WOVEN WIRE FENCE BACKING TO POSTS AND FABRIC TO THE WIRE BACKING USING WIRE TIES, SPACING AND DENSITY OF TIES SHALL BE INSTALLED ACCORDING TO NOTES G AND H
- INSTALL FABRIC IN TRENCH.
- BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
- COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).

Ⓛ ONLY SILT FENCE WITH WIRE BACKING FABRIC LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED. ANY PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE MAY ALSO BE USED.

Ⓜ SILT FENCE WITH WIRE BACKING SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:

209-08.02 TEMPORARY SILT FENCE (WITH BACKING) PER LINEAR FOOT

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE SILT FENCE WITH WIRE BACKING.

Ⓝ SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WITH WIRE BACKING WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER CUBIC YARD.

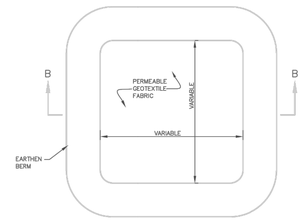
☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SILT FENCE WITH WIRE BACKING

12-18-02 EC-STR-3C



PLAN VIEW
NOT TO SCALE



SECTION B–B
NOT TO SCALE

TYPE "ABOVE GRADE" WITH EATHERN BERMS

1 CONCRETE WASHOUT DETAIL
NOT TO SCALE

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360 QUICKTREE CIRCLE, CANTON, TN 37187
615.210.4000
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COLTYN J. MURRAY
REGISTERED ENGINEER
No. 122179
STATE OF TENNESSEE
APRIL 7, 2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

EROSION CONTROL DETAILS

C3.4

STRUCTURE TABLE		
STRUCTURE NAME:	DESCRIPTION:	RIM:
D2	OUTLET STRUCTURE 2	604.50
A2	HEADWALL	N/A
C4	HEADWALL	N/A
C3	CATCH BASIN	598.09
C2	CATCH BASIN	597.41
C1	HEADWALL	N/A
B2	OUTLET STRUCTURE 1	596.00
A1	HEADWALL	N/A
B1	HEADWALL	N/A
D1	HEADWALL	N/A

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
C3-C4	24"	32.04'	1.00%	RCP
C2-C3	24"	44.00'	1.00%	RCP
C1-C2	24"	47.55'	1.00%	RCP
B1-B2	24"	39.15'	1.00%	RCP
D1-D2	24"	25.50'	0.92%	RCP
A1-A2	N/A	133.41'	3.75%	RCP

NOTE: PIPE A1-A2 TO BE 14" X 23" CONCRETE ELLIPTICAL PIPE

GRADING AND DRAINAGE NOTES

CONSTRUCTION SCHEDULE:
1. PRE-CONSTRUCTION MEETING
2. INSTALL ALL EROSION CONTROL MEASURES
3. EROSION CONTROL INSPECTION BY METRO
4. GRADING PERMIT ISSUED
5. CONSTRUCTION STARTS

CONSTRUCTION SHALL BE COMPLETED WITHIN 12 MONTHS OF THE GRADING PERMIT BEING ISSUED. IF CONSTRUCTION IS NOT COMPLETE IN THAT TIME, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY FOR EXTENSION OF THE GRADING PERMIT.

CONSTRUCTION NOTE:
STORMWATER DEPARTMENT AND DESIGN ENGINEER ARE TO BE PRESENT DURING INSTALLATION OF BIORETENTION MEDIA.

FEMA NOTE:
PORTIONS OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD ZONE AE AS PER F.E.M.A. MAP NO. 47149C0020J, DATED 10/16/2008.

TDEC NOTICE OF COVERAGE NOTE:
THIS PROJECT DISTURBS MORE THAN 1 ACRE AND IS REQUIRED TO APPLY FOR A NOTICE OF COVERAGE UNDER THE TENNESSEE GENERAL CONSTRUCTION PERMIT FROM TDEC.

TOTAL LIMITS OF DISTURBANCE: +/- 15.41 ACRES

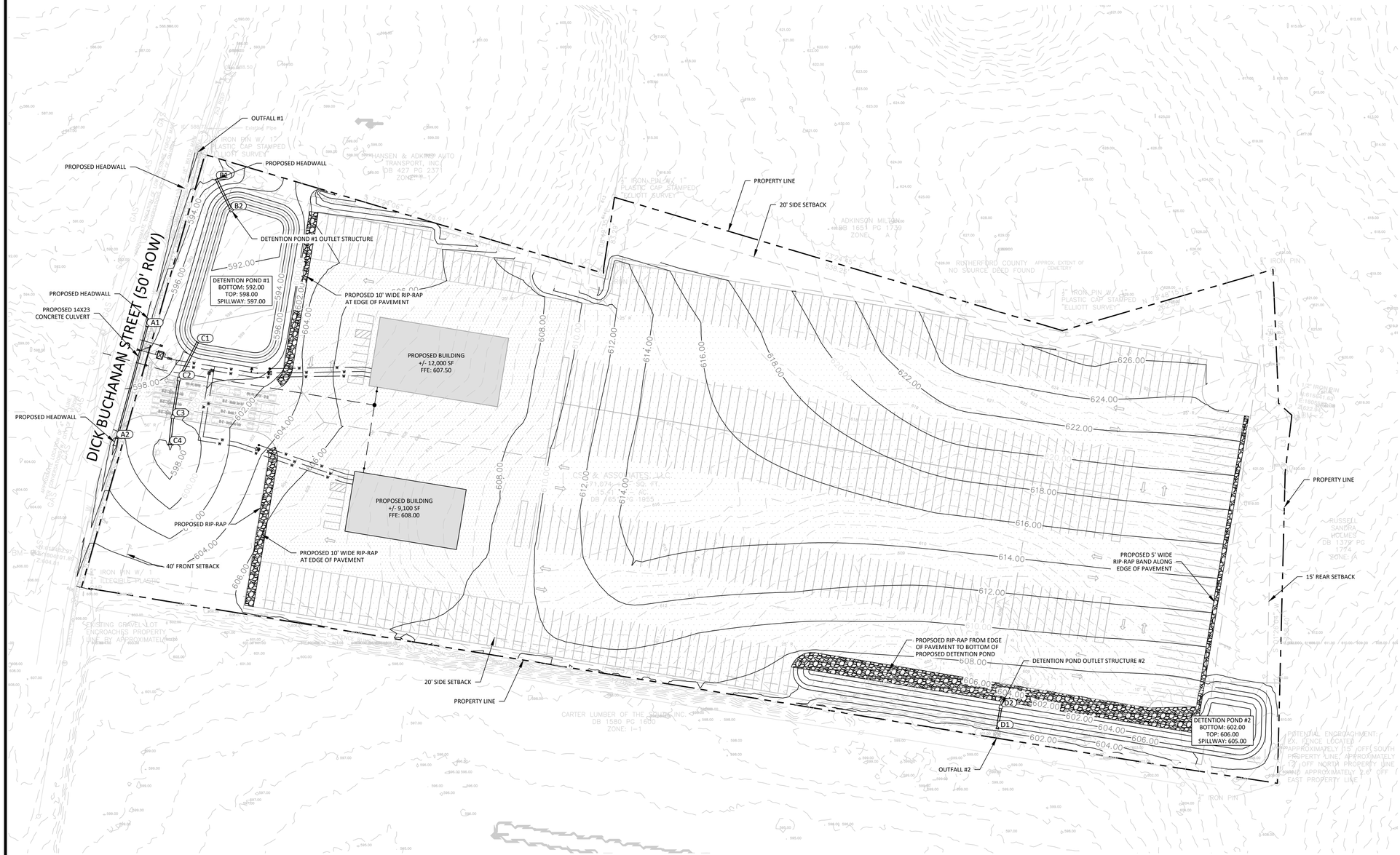
SURFACE QUANTITY DATA TABLE

PRE-DEVELOPMENT SURFACE QUANTITIES:

IMPERVIOUS: **+/- 0.00 AC**
PERVIOUS: **+/- 15.41 AC**

POST-DEVELOPMENT SURFACE QUANTITIES:

IMPERVIOUS: **+/- 10.88 AC**
PERVIOUS: **+/- 4.52 AC**



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360 QUEENSBERRY CIRCLE, SMYRNA, TN 37167
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COLTYN J. MURPHY
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No. 121179
STATE OF TENNESSEE
10/04/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

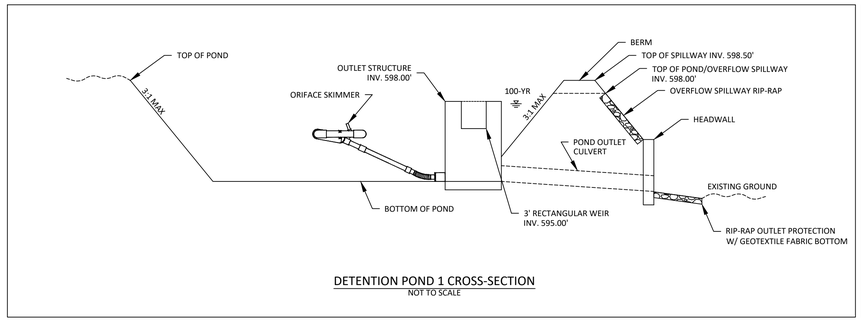
REVISIONS

NUMBER	DESCRIPTION	DATE

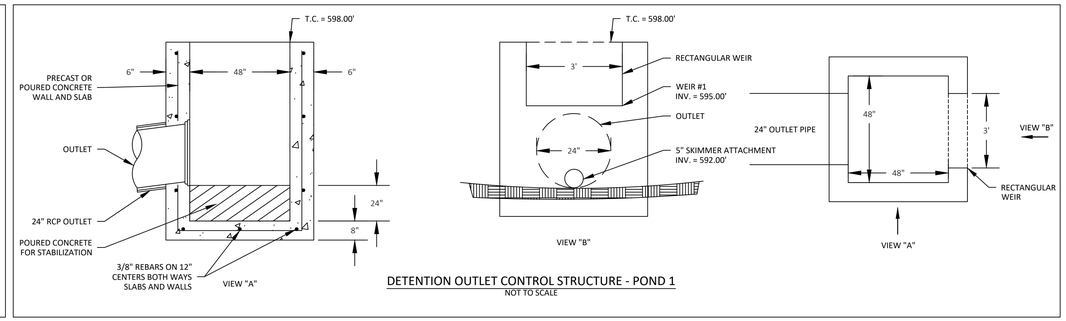
PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

GRADING PLAN

C4.0



DETENTION POND 1 CROSS-SECTION
NOT TO SCALE



DETENTION OUTLET CONTROL STRUCTURE - POND 1
NOT TO SCALE

ONLINE CALCULATORS

CALCULATE FAIRCLOTH SKIMMER® SIZE

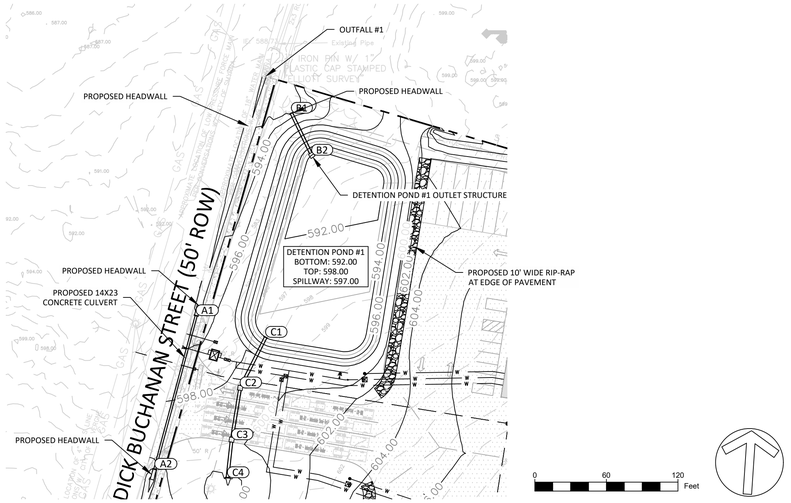
Required Basin volume in cubic feet: 21047

The required basin volume is the actual volume you intend to drain, not the provided or total volume which is often larger. If a pool of water is to be maintained between storms, do not include that volume.

Days to Drain: 1

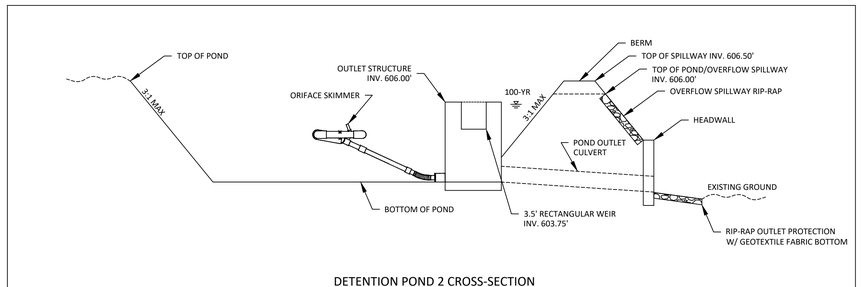
Number of Days to drain is usually determined by local or state regulations. Where there is no requirement 3 days is recommended. Keep in mind the quicker the basin is to drain the larger the skimmer required. In NC, assume 3 days to drain.

SKIMMER SIZE	ORIFICE RADIUS	ORIFICE DIAMETER
5.0 inches	2.0 inches	4.0 inches

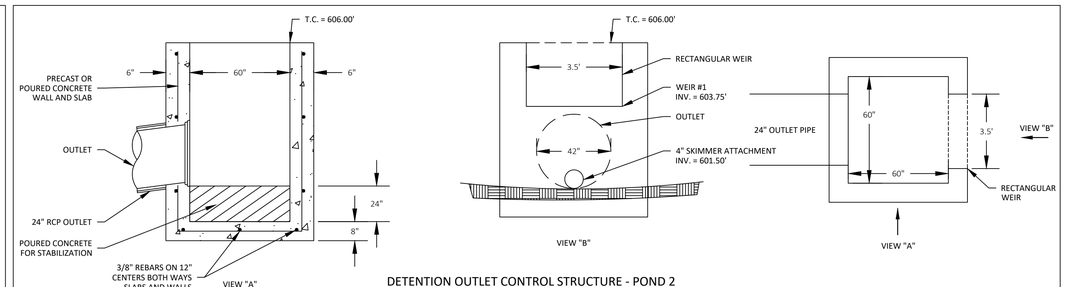


Volume to Treat via low flow oriface

Water Quality Voume Calcs for 80% TSS			
WQ	**0.939**	ac-ft	**40,888.29** ft^3
P	1.100	in	
Rv	0.665	run off coefficient	
A	15.406	acres	
I	70.618	imp ratio	
TOTAL Area	671074	sf	
IMP Area	473900	sf	
Pond 1	**21,047**	ft^3	
Pond 2	**19,841**	ft^3	



DETENTION POND 2 CROSS-SECTION
NOT TO SCALE



DETENTION OUTLET CONTROL STRUCTURE - POND 2
NOT TO SCALE

ONLINE CALCULATORS

CALCULATE FAIRCLOTH SKIMMER® SIZE

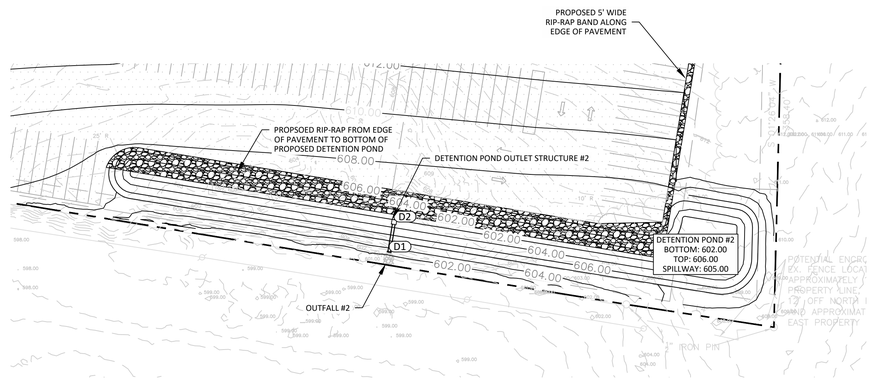
Required Basin volume in cubic feet: 19842

The required basin volume is the actual volume you intend to drain, not the provided or total volume which is often larger. If a pool of water is to be maintained between storms, do not include that volume.

Days to Drain: 1

Number of Days to drain is usually determined by local or state regulations. Where there is no requirement 3 days is recommended. Keep in mind the quicker the basin is to drain the larger the skimmer required. In NC, assume 3 days to drain.

SKIMMER SIZE	ORIFICE RADIUS	ORIFICE DIAMETER
4.0 inches	2.0 inches	4.0 inches



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I	70.618	imp ratio	
TOTAL Area	671074	sf	
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Pond 1	**21,047**	ft^3	
Pond 2	**19,841**	ft^3	

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COLTYN J. MURPHY
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No. 121179
STATE OF TENNESSEE
2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

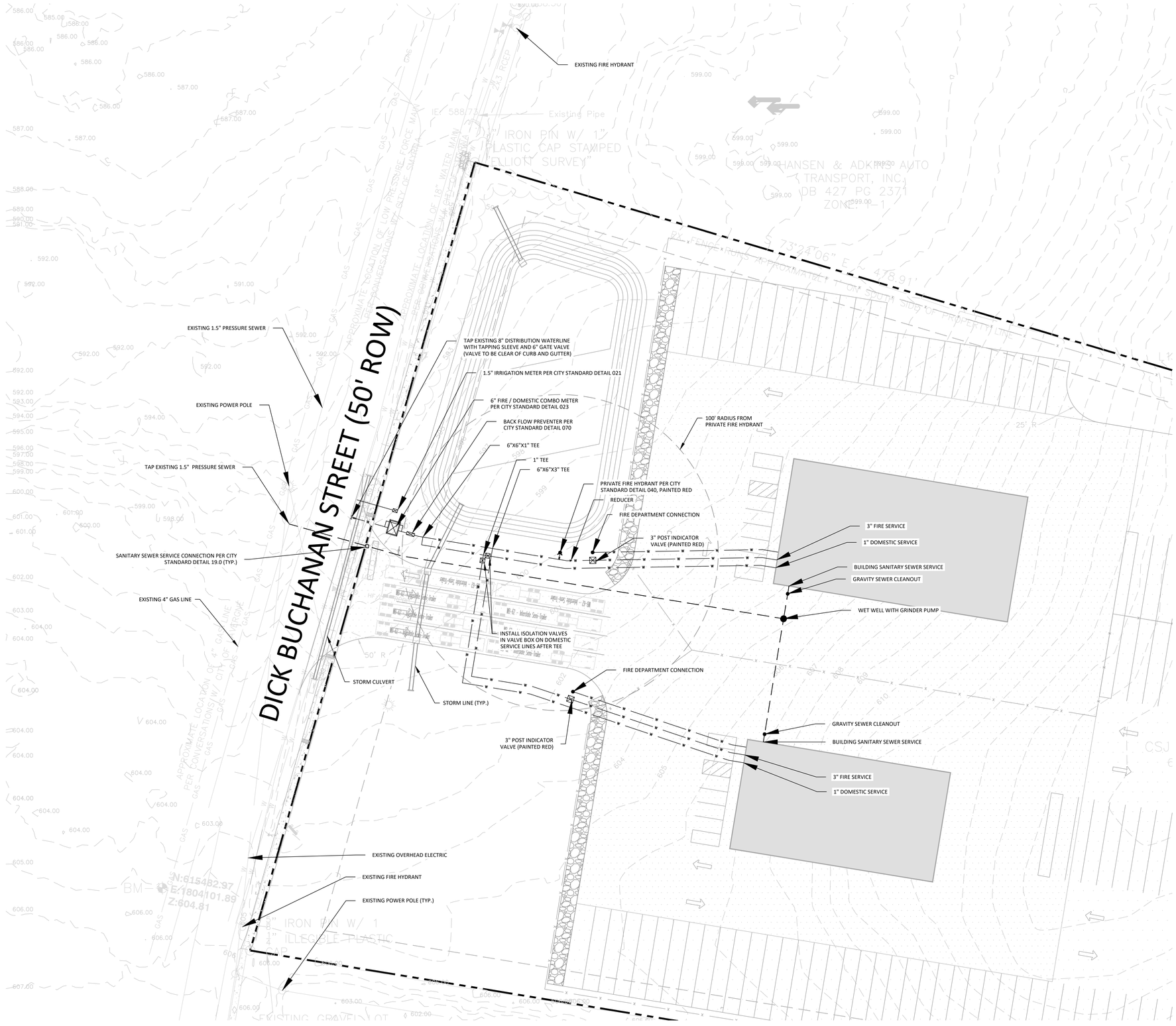
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

DETENTION POND DETAILS

C4.1



UTILITY CONTACTS

SEWER:

CITY OF LA VERGNE UTILITIES
5093 MURFREESBORO
LA VERGNE, TN 37086
615-793-9891
MICHAEL DIETZ
MDIETZ@LAVERGNETN.GOV

WATER:

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5093 MURFREESBORO
LA VERGNE, TN 37086
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MICHAEL DIETZ
MDIETZ@LAVERGNETN.GOV

GAS:

SMYRNA UTILITIES
315 S. LOWRY STREET
SMYRNA, TN 37167
615-459-2553
PAULA STANLEY
PAULA.STANLEY@TOWNOFSMYRNA

ELECTRIC:

NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
615-736-6900

FIRE DEPARTMENT CONNECTION NOTE

1. FIRE DEPARTMENT CONNECTION TO BE PLUMBED TO BUILDING SEPARATELY. PLUMBING TO BE DESIGNED TO AVOID BACK FEEDING DOMESTIC PORTION OF WATER SUPPLY INSIDE BUILDING.

CITY OF LA VERGNE GENERAL NOTES

1. ALL WORK HEREON SHALL CONFORM TO THE CITY OF LA VERGNE STANDARD SPECIFICATIONS AND DETAILS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.
3. DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO TRENCHING. CONTACT THE TENNESSEE UTILITY LOCATION SERVICE AT 811 OR 800-351-1111, 3-10 DAYS BEFORE YOU DIG, NO EXCEPTIONS.
4. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT ON RECORD OR NOT SHOWN ON THESE PLANS.
5. ALL CONSTRUCTION AND OPERATIONS BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH OSHA.
6. THE CONTRACTORS SHALL MAINTAIN A SET OF REDLINE AS-BUILT DRAWINGS AT THE PROJECT SITE UPDATED DAILY. AS-BUILT PLANS SHALL BE PROVIDED TO THE ENGINEER WITHIN 30-DAYS OF SUBSTANTIAL COMPLETION OF THE PROJECT. ELECTRONIC RECORD DRAWINGS SHALL BE PREPARED BY THE ENGINEER AT THE END OF THE PROJECT BASED ON AS-BUILT DRAWINGS SUPPLIED BY THE CONTRACTOR.
7. TRAFFIC CONTROL, SIGNAGE, AND CONSTRUCTION RELATED BARRIERS IS THE RESPONSIBILITY OF THE CONTRACTOR, AND NO TRENCHES SHALL BE LEFT OPEN OVERNIGHT WITHOUT PROPER SAFETY MEASURES SUCH AS BARRICADES, PLATING, OR OTHER AS AGREED BY THE CITY.
8. SURFACE IMPROVEMENTS DAMAGED OR REMOVED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RECONSTRUCTED BY THE CONTRACTOR TO THE LOCAL GOVERNING AGENCY'S REQUIREMENTS.
9. ALL REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ANY MONUMENTS IN PLACE. IF ANY MONUMENT IS DISTURBED OR DESTROYED, THE CONTRACTOR WILL BE REQUIRED TO CONTRACT WITH A REGISTERED LAND SURVEYOR FOR THE RE-ESTABLISHMENT AND MAPPING OF THE DESTROYED MONUMENT.
11. PUBLIC UTILITY AND DRAINAGE EASEMENTS SHALL BE PROVIDED FOR ANY CITY FACILITIES NOT LOCATED IN THE RIGHT OF WAY AND INDICATED ON THE PLANS.
12. ALL UNDERGROUND FACILITIES WITH LATERALS SHALL BE IN PLACE PRIOR TO FINAL PAVING, INCLUDING BUT NOT LIMITED TO DRAINAGE, SEWER, WATER, TELEPHONE, ELECTRICITY, GAS, AND CABLE.
13. ALL CONSTRUCTION WATER TAKEN FROM A CITY FH SHALL BE FROM A CITY APPROVED FIRE HYDRANT METER ASSEMBLY, AND CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE PUBLIC DOMESTIC WATER SYSTEM AT ALL TIMES BY MAINTAINING PROPER CROSS CONNECTION CONTROL PER THE GOVERNING AUTHORITY.
14. THE CONTRACTOR SHALL CONFINE ALL OF HIS ACTIVITIES TO THE AREAS WITHIN THE EXISTING STREET RIGHTS-OF-WAY AND CITY PROPERTY OR EASEMENTS AS SHOWN ON THESE PLANS UNLESS WRITTEN CONSENT IS PROVIDED IN ADVANCE BY THE AFFECTED PROPERTY OWNER.
15. WHERE WATER AND SEWER LINES CROSS OTHER UTILITIES A MINIMUM OF 12" CLEARANCE SHALL BE MAINTAINED.
16. PIPE JOINTS SHALL NOT BE DEFLECTED AT ANY ANGLE GREATER THAT MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURE.
17. VERTICAL PIPE BENDS SHALL BE FULLY RESTRAINED BY MECHANICAL METHODS (JOINT RESTRAINT, TIE-RODS, ETC), NO CREDIT SHALL BE GIVEN FOR CONCRETE THRUST BLOCKS. ANCHOR BLOCK DESIGN WILL BE CONSIDERED ON A CASE BY CASE BASIS.
18. MAINLINE VALVES SHALL ONLY BE INSTALLED ON SLOPES NOT TO EXCEED 6 PERCENT.
19. ALL BURIED BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL.
20. COMBINATION AIR RELEASE AND VACUUM VALVES SHALL BE INSTALLED AT ALL LOCAL HIGH POINTS OF PRESSURIZED UTILITY LINES.
21. SEPARATION OF WATER AND SEWER LINES MUST COMPLY WITH STATE OF TENNESSEE REQUIREMENTS.
22. CITY SEWER CLEANOUTS SHALL BE CUT AND CAPPED BELOW GRADE AND COVERED WITH A BOX AND LID PER THE CITY OF LA VERGNE.
23. SURPLUS AND ALL MATERIAL REMOVED WHICH IS NOT SUITABLE FOR USE IN THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER OR AT A LOCATION UNACCEPTABLE TO ANY JURISDICTIONAL AGENCY.

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COLTYN J. MURPHY
REGISTERED ENGINEER
No. 122173
STATE OF TENNESSEE
4/28/2023

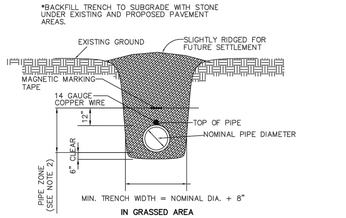
470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

UTILITY PLAN

C5.0



NOTES:

1. SEE STANDARD SPECIFICATIONS FOR FULL BACKFILL REQUIREMENTS.
2. "PIPE ZONE" EXTENDS TO 12" ABOVE TOP OF PIPE AND IS AREA IN WHICH SPECIAL CARE IS TO BE GIVEN TO PLACEMENT AND COMPACTION TO PROTECT PIPE DURING AND AFTER LAYING.
3. LIMIT TRENCH WIDTH AT TOP OF PIPE TO NOMINAL PIPE DIAMETER PLUS 16" UNLESS PERMITTED OTHERWISE BY ENGINEER.
4. TRENCH SHALL BE DUG TO GIVE PIPE FULL AND CONTINUOUS SUPPORT. ALL ROCK TO BE REMOVED WITHIN 6" OF PIPE – BED TO PIPE GRADE WITH CRUSHED STONE BEDDING.
5. PIPE TO BE CONTINUOUSLY SUPPORTED ALONG LENGTH OF PIPE BARREL EXCEPT AT BELL. BELL HOLES ARE REQUIRED SUCH THAT NO BEARING LOAD IS TAKEN BY THE BELL.
6. MAGNETIC MARKING TAPE AND 14 GAUGE COPPER WIRE REQUIRED FOR ALL SEWER.

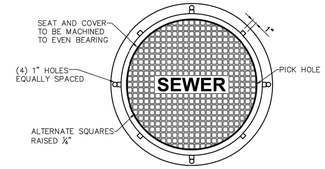
ENGINEERS, INC.
3354 PERIMETER HILL DRIVE, SUITE 140
NASHVILLE, TN 37211
615-834-8300

15.0
TYPICAL TRENCH BACKFILL
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

PUBLIC WORKS DEPARTMENT
148 INTERNATIONAL BLVD.
LA VERGNE, TN 37086
615-793-9891



STANDARD FRAME AND COVER TO BE ACHESON FOUNDRY #A-2024-81S, OR EQUAL WATER TIGHT MANHOLE FRAME AND COVER TO BE ACHESON FOUNDRY #A-2624-71S OR EQUAL

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615-834-8300

10.0
MANHOLE FRAME AND COVER
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

PUBLIC WORKS DEPARTMENT
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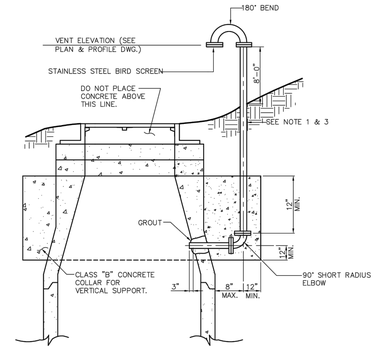
LA VERGNE, TN 37086
615-793-9891



MANHOLE VENT NOTES:

1. ALL PIPING SHALL BE 3"ø DUCTILE IRON WITH FLANGED JOINTS COATED INSIDE AND OUT.
2. PAINT ALL EXPOSED PIPING WITH 2 COATS OF DARK GREEN COAL TAR EPOXY.
3. PROVIDE SUITABLE VENT PIPE SUPPORT.

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7.0
TYPICAL MANHOLE VENT
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

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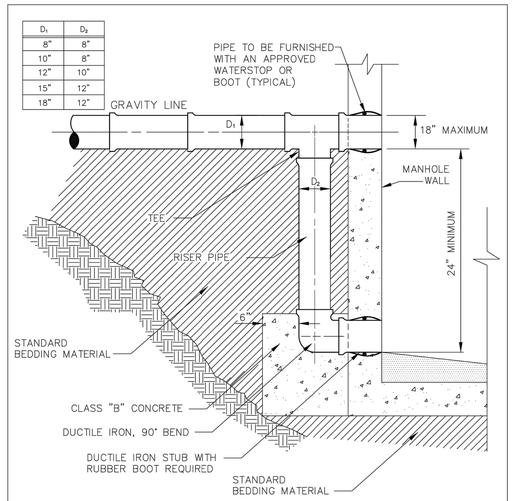
615-793-9891



NOTES

1. SET INLET FROM DROP TO MATCH CROWNS WITH OUTLET EXCEPT THAT MINIMUM FALL ACROSS MANHOLE INVERT MUST BE 3".
2. THE RISER PIPE SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS THAT OF THE INCOMING LINE.

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5.0
PRECAST CONCRETE DROP MANHOLE
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

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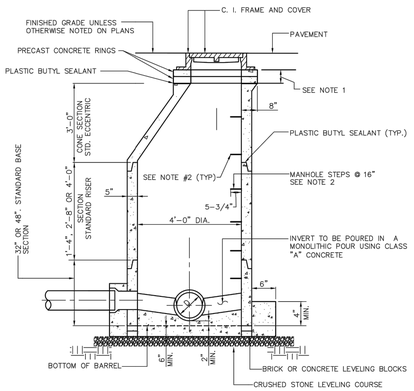

NOTE:

1. FOR BRINGING MANHOLE FRAME AND COVER TO GRADE, USE PRECAST CONCRETE OR CAST IRON RINGS.
2. 3/8 STEEL REINFORCED ROD ENCAPSULATED IN POLYPROPYLENE PLASTIC OR ALUMINUM ALLOY SEE SPECIFICATIONS.
3. RESILIENT CONNECTORS REQUIRED FOR ALL PIPES, REFER TO DETAIL AND SPECIFICATIONS.

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3.0
PRECAST CONCRETE MANHOLE
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

PUBLIC WORKS DEPARTMENT
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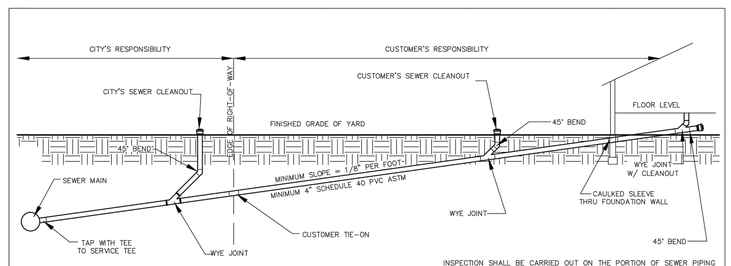
LA VERGNE, TN 37086
615-793-9891



OBJECTIVE:
AS PROVIDED IN THE CITY OF LA VERGNE MUNICIPAL CODE AND THE SEWER USE ORDINANCE, NEW BUILDING SEWER PIPING REQUIRES INSPECTION AND TESTING PRIOR TO COMMENCEMENT OF SANITARY SEWER SERVICE. THIS POLICY ESTABLISHES LA VERGNE SEWER DEPARTMENT MINIMUM INSPECTION AND TESTING REQUIREMENTS TO SAFEGUARD HEALTH, PUBLIC WELFARE, AND PROTECTION OF PROPERTY.

REQUIREMENTS:
NEW SEWER SERVICE PIPING (BUILDING SEWER) SHALL BE WATER TESTED WITH NOT LESS THAN 10 FT HEAD OF WATER AND SHALL PROVE TIGHT. THE WATER SHALL BE KEPT IN THE SYSTEM FOR AT LEAST 15 MINUTES BEFORE INSPECTION STARTS AND UPON INSPECTION SHALL REMAIN AT CONSTANT ELEVATION FOR 15 MINUTES. ALTERNATIVELY, AN AIR TEST OF 5 PSI GAUGE PRESSURE CAN BE HELD FOR A PERIOD OF 15 MINUTES WITHOUT INTRODUCTION OF ADDITIONAL AIR.

INSPECTION SHALL BE CARRIED OUT ON THE PORTION OF SEWER PIPING FROM THE BUILDING TO THE POINT OF CONNECTION TO THE PUBLIC SANITARY SEWER.

INSPECTION AND TESTING OF UNDERGROUND PIPING SHALL BE MADE AFTER THE TRENCHES ARE EXCAVATED, PIPING IS INSTALLED, AND PRIOR TO ANY BACKFILL PUT INTO PLACE.

ADVANCE NOTICE OF AT LEAST 24 HOURS IS REQUIRED FOR INSPECTIONS AND RE-INSPECTIONS AND SHALL BE PREFORMED DURING NORMAL WORKING HOURS.

THE INSPECTION SHALL INCLUDE VISUAL REVIEW OF MATERIAL AND WORKMANSHIP TO ASSURE CODE CONFORMANCE.

A RECORD OF INSPECTION DETAILS SHALL BE KEPT BY THE LA VERGNE PUBLIC WORKS DEPARTMENT.

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1.0
TYPICAL GRAVITY SEWER INSTALLATION
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

PUBLIC WORKS DEPARTMENT
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615-793-9891

615 DESIGN GROUP
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COLTYN J. MURRAY
REGISTERED ENGINEER
No. 122179
STATE OF TENNESSEE
4/19/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

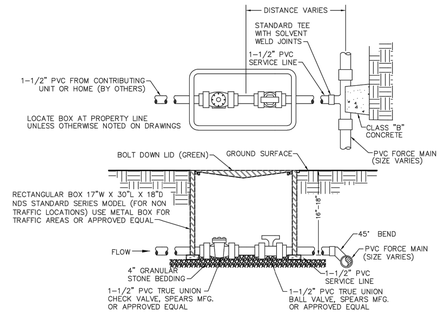
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

UTILITY DETAILS

C5.1



ENGINEERS, INC.
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NASHVILLE, TN 37211
615-834-8300

19.0
TYPICAL PRESSURE SEWER SERVICE LINE CONNECTION
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

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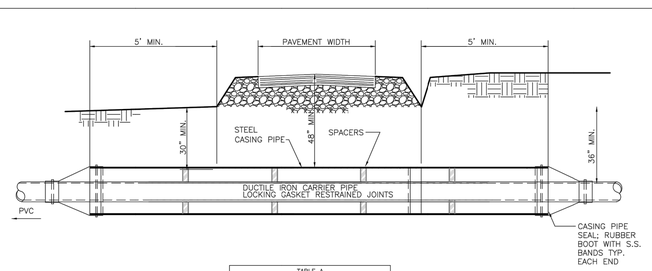

TABLE A		
	WELDED STEEL CASING	
CARRIER SIZE	CASING SIZE	WALL THICKNESS OF CASING PIPE
2"	6"	1/4 "
3"	8"	1/4 "
4"	12"	1/4 "
6"	12"	1/4 "
8"	16"	1/4 "

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17.0
TYPICAL GRAVITY SEWER INSTALLATION
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

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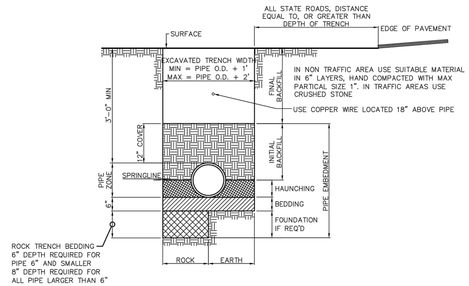

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16.0
PVC PIPE INSTALLATION DETAIL
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

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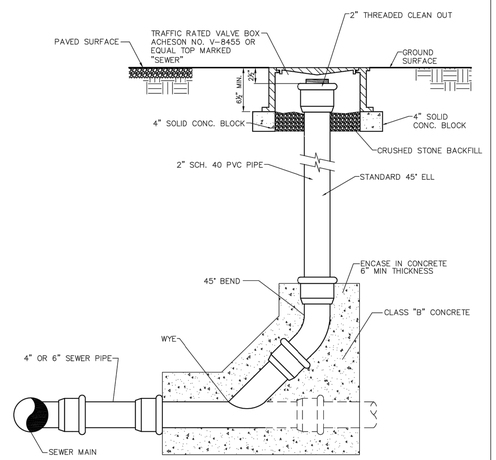

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12.0
CLEAN OUT WITH TRAFFIC BOX
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

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615-793-9891

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COLTYN J. MURRIN
REGISTERED ENGINEER
No. 122173
STATE OF TENNESSEE
APRIL 7, 2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

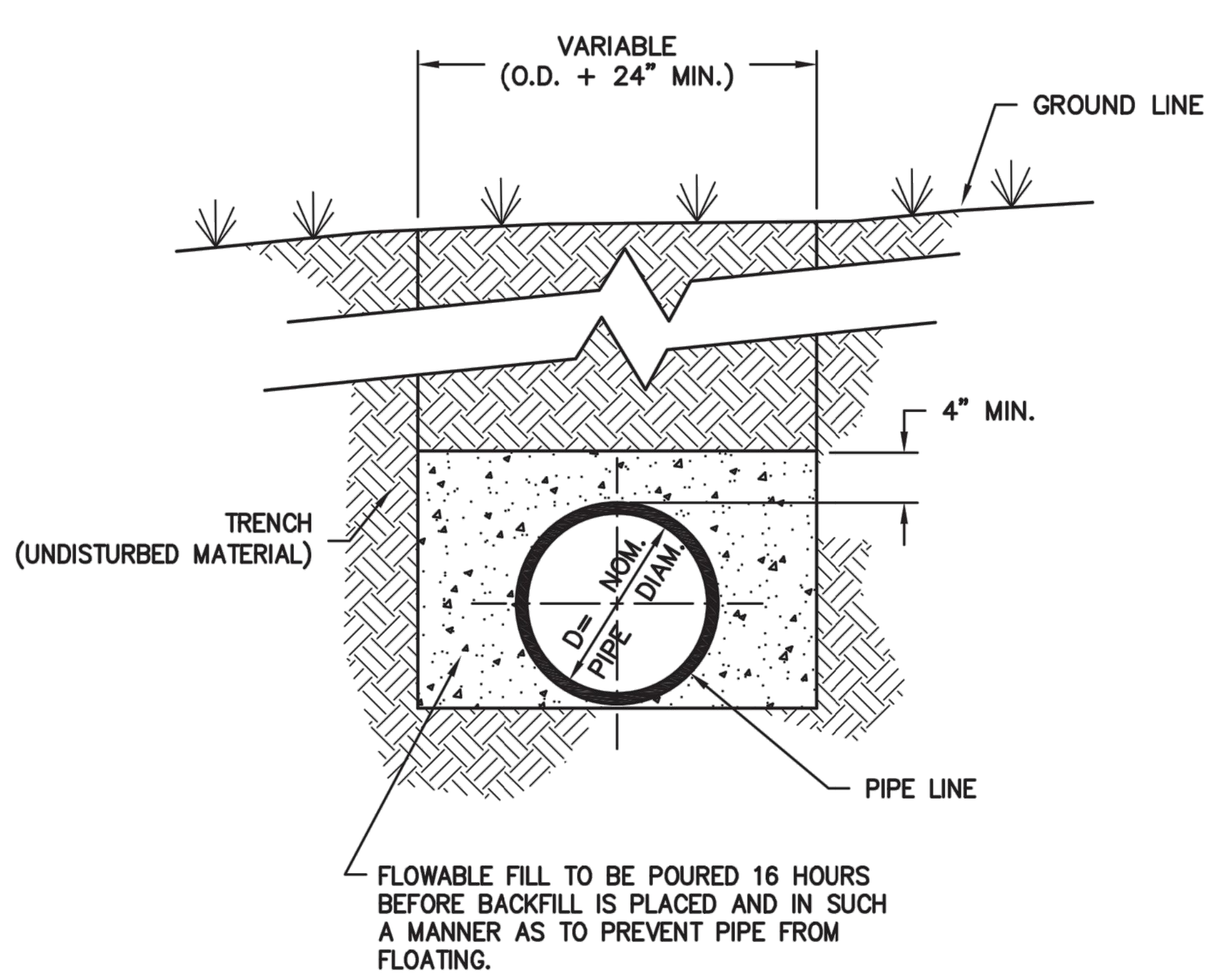
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

UTILITY DETAILS

C5.2



TYPICAL PROTECTION FOR WATER LINES

N.T.S.

Revised September, 2015

STANDARD DETAIL 080

CITY OF LAVERGNE, TENNESSEE
G & M File No. 442-56

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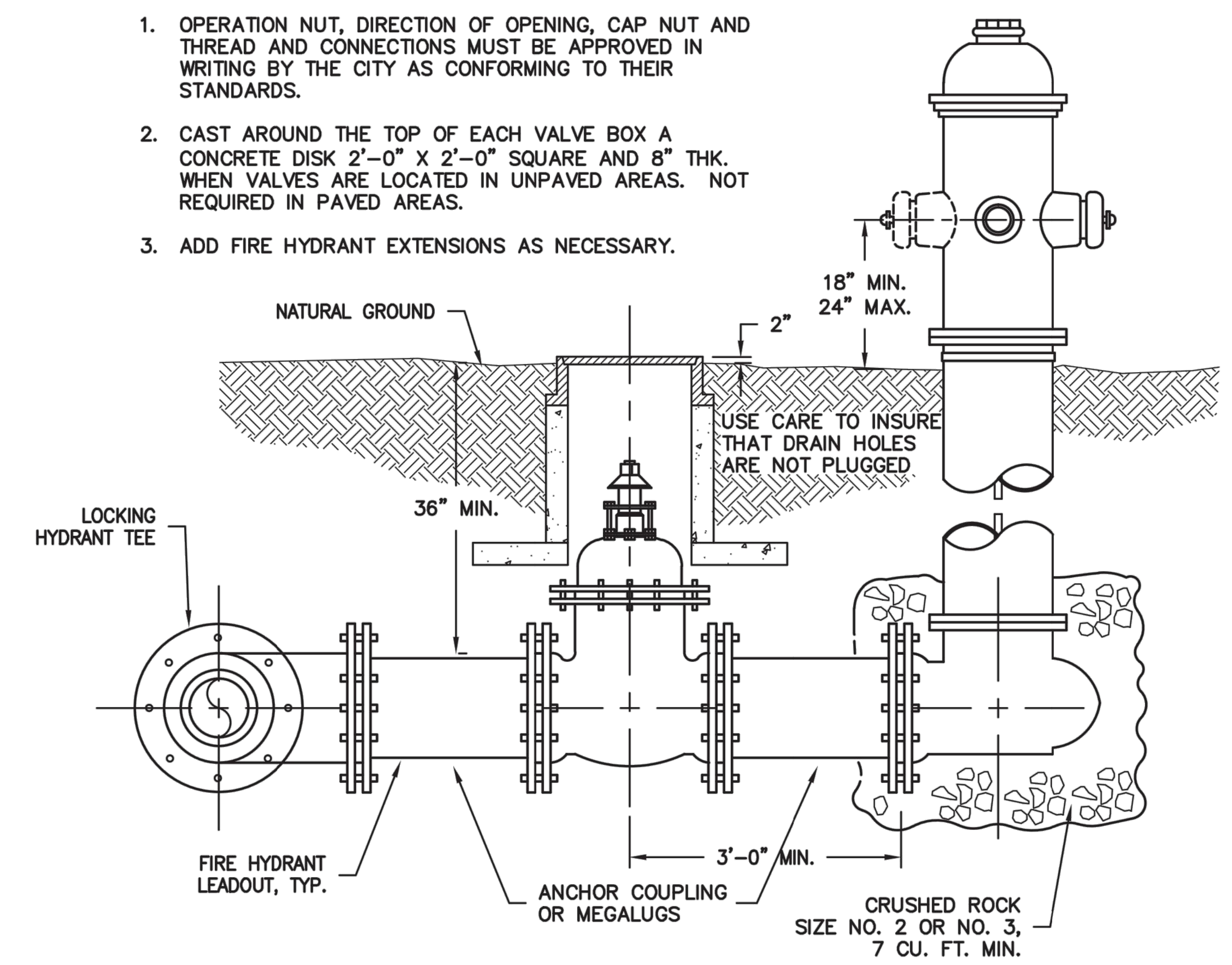
(615) 895-8221 * FAX (615) 895-0632

FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\080 Typical Protection for Water Lines.dwg

NOTES:

1. OPERATION NUT, DIRECTION OF OPENING, CAP NUT AND THREAD AND CONNECTIONS MUST BE APPROVED IN WRITING BY THE CITY AS CONFORMING TO THEIR STANDARDS.
2. CAST AROUND THE TOP OF EACH VALVE BOX A CONCRETE DISK 2'-0" X 2'-0" SQUARE AND 8" THK. WHEN VALVES ARE LOCATED IN UNPAVED AREAS. NOT REQUIRED IN PAVED AREAS.
3. ADD FIRE HYDRANT EXTENSIONS AS NECESSARY.



TYPICAL FIRE HYDRANT SETTING

N.T.S.

Revised September, 2015

STANDARD DETAIL 040

CITY OF LAVERGNE, TENNESSEE
G & M File No. 442-56

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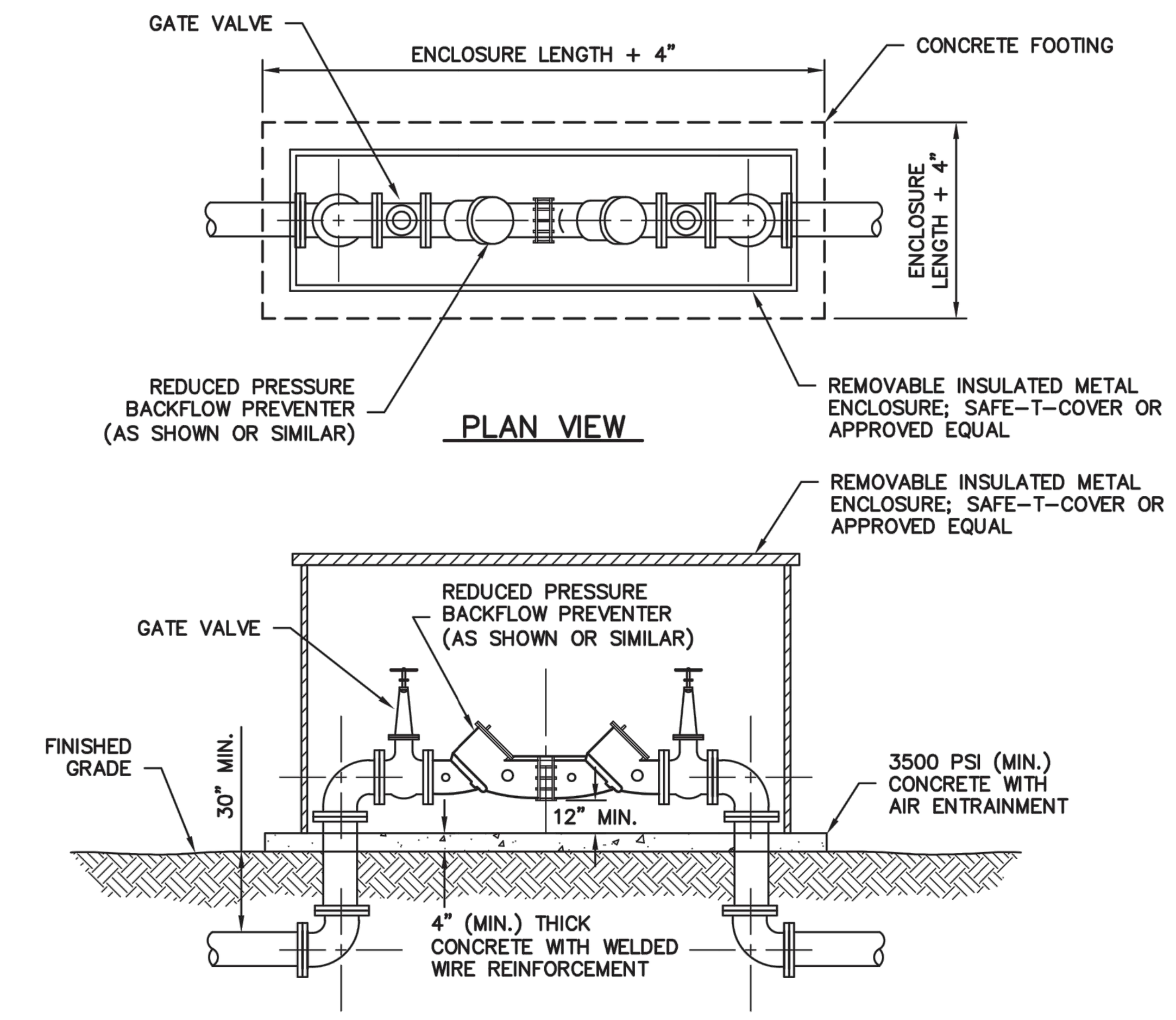
FILE NAME: L: \Engineering\442-56\2015 Updates\040 Drawings\Fire Hydrant Setting.dwg



REDUCED PRESSURE BACKFLOW PREVENTER (ABOVEGROUND)

N.T.S.

Revised August 2017

STANDARD DETAIL 070

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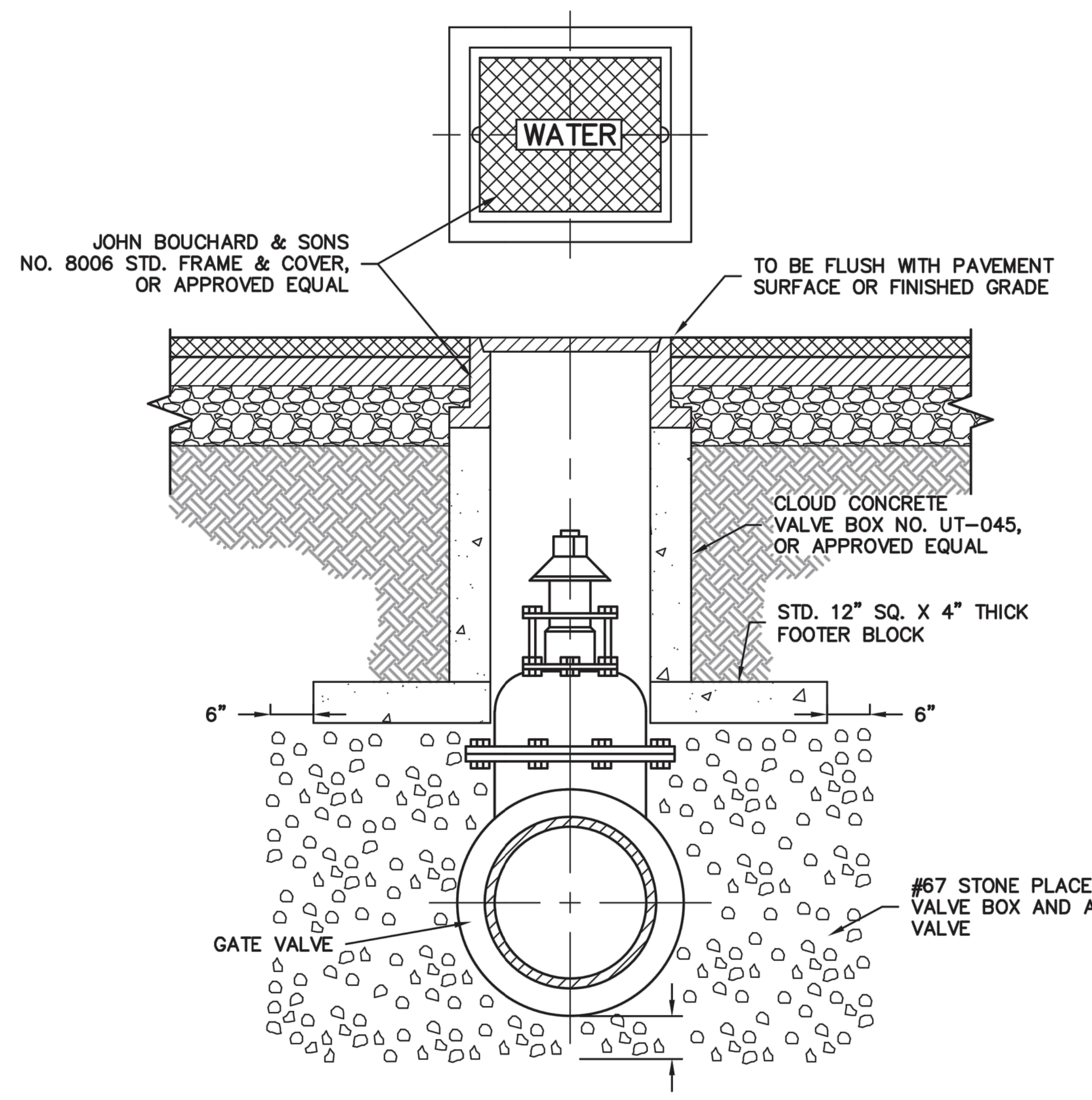
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\070 Reduced Pressure Backflow Preventer.dwg



TYPICAL VALVE BOX SETTING INSIDE & OUTSIDE OF PAVEMENT

N.T.S.

Revised September, 2015

STANDARD DETAIL 030

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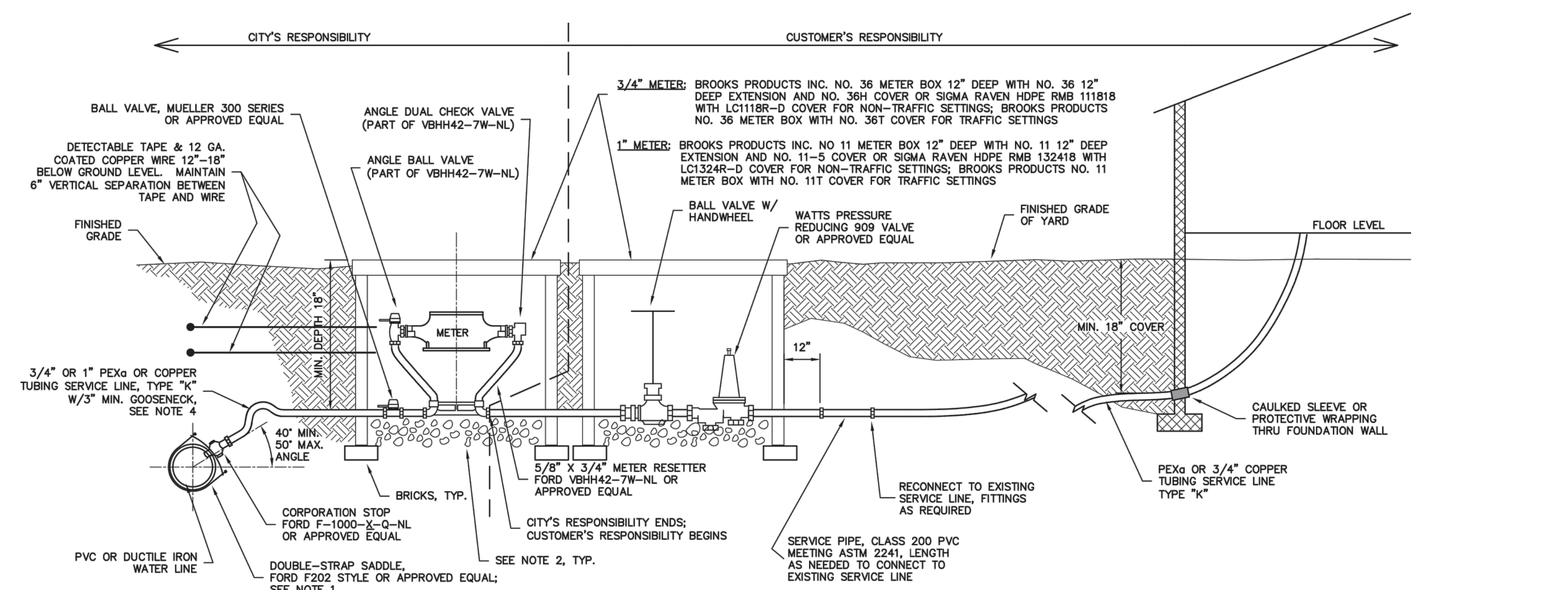
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\030 Typical Valve Box Setting.dwg



NOTES:

1. USE DOUBLE STRAP SADDLE FOR ALL PVC AND DUCTILE IRON PIPE INSTALLATION.
2. PLACE 3" DEEP (MIN.) OF CLEAN 1/2" TO 3/4" CRUSHED STONE IN BOTTOM OF METER BOX.
3. SEE STANDARD SPECIFICATIONS FOR LIST OF SERVICE CONNECTION FITTINGS.
4. METER:
   - 4.1. 3/4 INCH – BADGER MODEL 25, LEAD FREE BRONZE ALLOY OR ENGINEERED POLYMER WITH REMOTE READ TRANSMITTER.
   - 4.2. 1 INCH – BADGER MODEL 70, LEAD FREE BRONZE ALLOY WITH REMOTE READ TRANSMITTER.
5. CASING IS REQUIRED IF THE SERVICE LINE IS UNDER THE ROADWAY.
   - 5.1. CASING PIPE SHALL EXTEND FROM WATER MAIN TAP TO METER OR RIGHT-OF-WAY TO RIGHT-OF-WAY.
   - 5.2. CASING PIPE SHALL BE PVC SCH. 80 AND THE DIAMETER SHALL BE THE OUTSIDE DIAMETER OF THE SERVICE LINE PLUS 2" MINIMUM.
   - 5.3. CASING IS NOT REQUIRED IF WATER MAIN IS NOT UNDER THE PAVEMENT AND WATER METER IS ON THE SAME SIDE OF THE ROAD AS THE WATER MAIN.
6. WHEN PEXa SERVICE LINE IS INSTALLED, DETECTABLE TAPE AND COPPER WIRE SHALL BE INSTALLED AS SHOWN AND PER PARAGRAPHS 22.26 AND 22.27 OF THE STANDARD SPECIFICATIONS. THE ENDS OF THE WIRE SHALL TERMINATE IN A VALVE BOX, METER BOX, OR OTHER APPROVED LOCATION, WHEREBY DETECTION EQUIPMENT MAY BE ATTACHED.

WATER LINE INSPECTION

OBJECTIVE:
As provided in the City of LaVergne Municipal Code new customer potable water service piping requires inspection and testing prior to commencement of potable water service. This policy establishes LaVergne Water Department minimum inspection and testing requirements to safeguard health, public welfare, and the protection of property.

REQUIREMENTS:
New water supply service piping shall be tested and proven tight for 15 minutes under a water pressure of not less than 85 psi or not less than 25 psi above the working pressure under which it is to be operated, whichever is more. The water used for test shall be potable water service.

Inspections shall be carried out on the portion of the piping from the building to the customer (discharge) side of the water meter and is in general the water supply system outside the building. The inspection shall include visual review of materials and workmanship to assure code conformance. A record of the inspection details shall be kept by LaVergne Water Department.

Inspection and testing of underground piping shall be made after trenches are excavated, piping installed and prior to any backfill put in place.

Advance notice of at least 24 hours is required for inspection and re-inspection and shall be performed during normal working hours. Contact the City of LaVergne Water Department at 615-793-9891.

TYPICAL 3/4" OR 1" WATER SERVICE INSTALLATION

N.T.S.

Revised August 2017

STANDARD DETAIL 020

CITY OF LAVERGNE, TENNESSEE
G & M File No. 442-56

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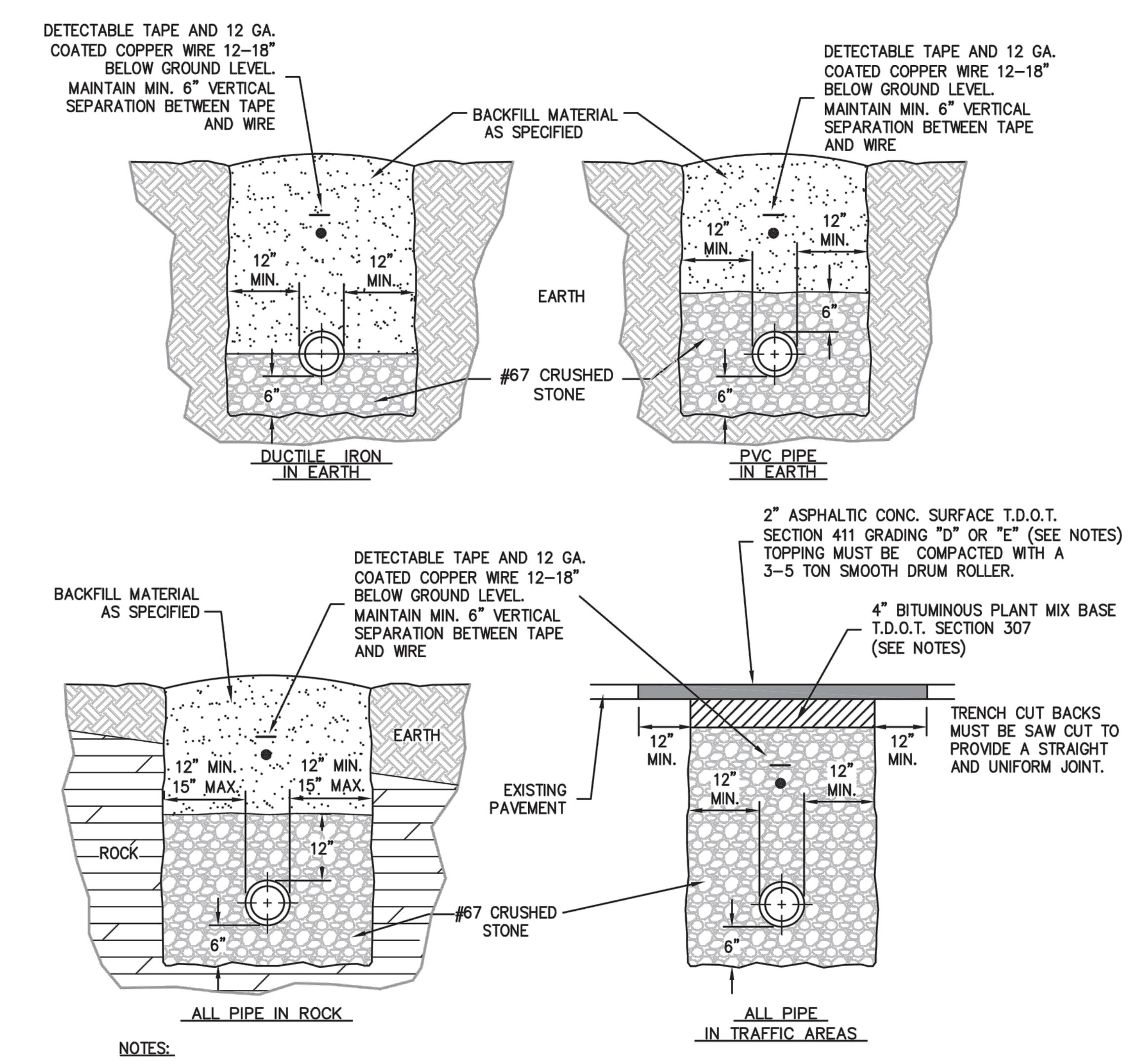
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\020 Typical Water Service Installati



NOTES:

1. FOR ROADWAYS 30' OR GREATER IN WIDTH OR DIVIDED HIGHWAYS WITH 2 OR MORE LANES USE 8" OF BINDER (2 LIFTS) AND 3" OF TOPPING.
2. BINDER SHALL BE INITIALLY INSTALLED FLUSH WITH EXISTING ASPHALT SURFACE AND SHALL BE IN PLACE FOR 2 WEEKS TO ALLOW FOR SETTLING AND COMPACTION. AFTER 2 WEEKS, MILL UP 2" OF THE NEW BINDER AND EXISTING ASPHALT TO THE DIMENSIONS SHOWN IN EACH DIRECTION AND INSTALL 2" OF NEW SURFACE MIX OVER MILLED AREA. REPAINT OR REPLACE, IF THERMOPLASTIC, ALL DELINEATION LINES AND PAVEMENT MARKINGS.
3. WHERE EXISTING SURFACE IS CONCRETE SUBSTITUTE 6" T.D.O.T. ITEM NO. 701-02.
4. FOR RESTORATION OF GRAVEL SURFACES, BACKFILL ENTIRE TRENCH WITH STONE.

STANDARD WATERLINE BEDDING & BACKFILLING

N.T.S.

Revised September, 2015

STANDARD DETAIL 010

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G & M File No. 442-56

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FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\010 Water Line Bedding and Backfilling Detail.dwg

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COLTYN J. MURRELL
REGISTERED ENGINEER
STATE OF TENNESSEE
No. 122172
3/29/2023

470 DICK BUCHANAN STREET
LAVERGNE, TN 37086

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	1046001
DESIGNED BY:	CJM
DRAWN BY:	CJM
DATE:	3/29/2023

UTILITY DETAILS

C5.3

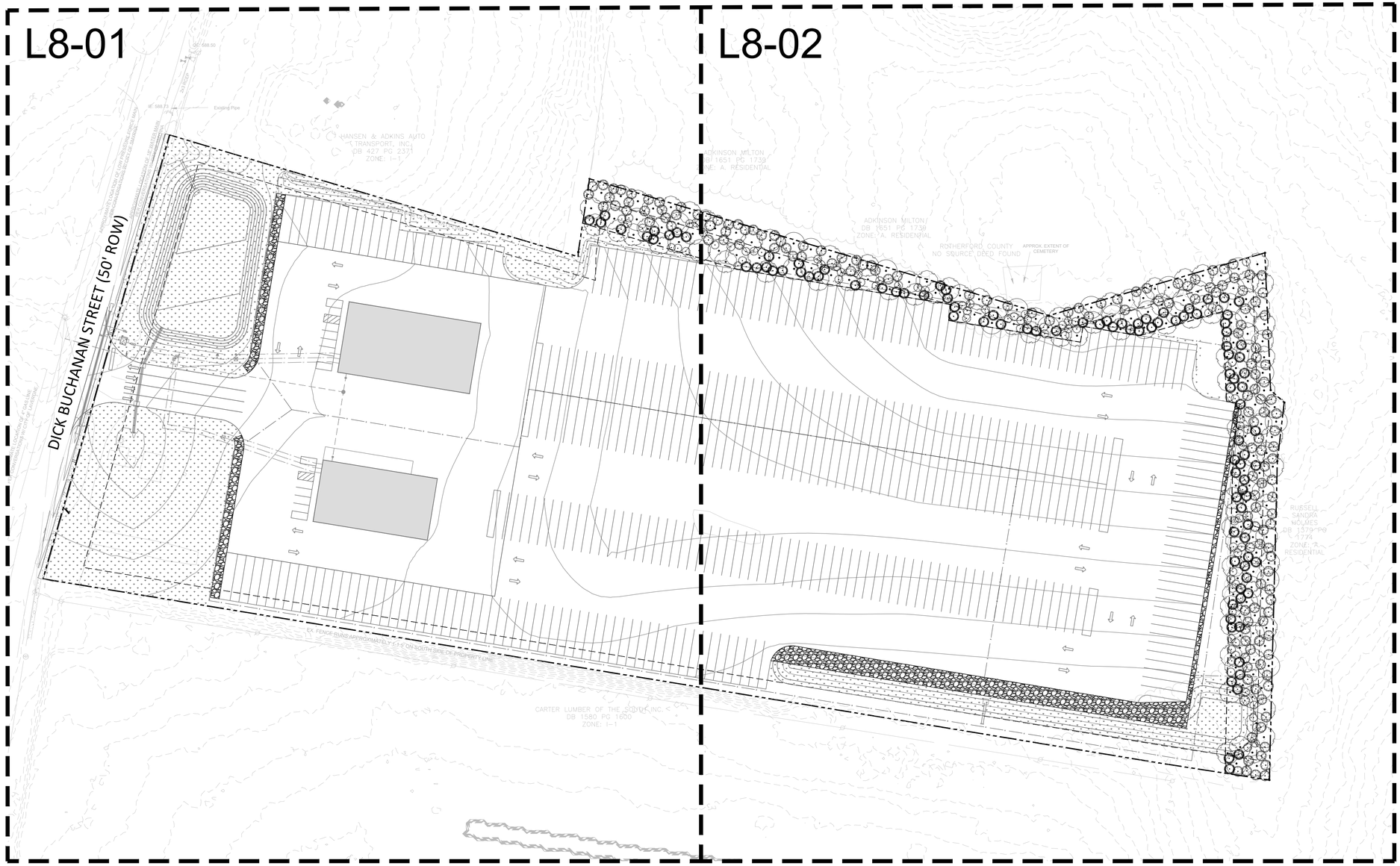
Zoning: I-2 Heavy Industrial
Permit #:
Overlays: None

La Vergne Landscape Requirements:

- Transitional Buffer III: 1,300 LF
  The site has has been previously approved by the City of La Vergne. Based on the approved site plan, we are meeting the 50' min. width for most of the buffer extents except along a portion of the north property line as shown. However, we have provided the required number of trees and shrubs per the Transitional Buffer III requirement, below.
  - One (1) large Evergreen tree | 40' ht. every 10' O.C.
    - Required: 130 | **Provided: 130**
  - One (1) medium Evergreen tree | 20'-40' ht. every 5' O.C.
    - Required: 260 | **Provided: 260**
  - One (1) large Deciduous tree | 50' ht. every 30' O.C.
    - Required: 44 | **Provided: 44**
  - One (1) medium Evergreen shrub <15' ht. every 15' O.C.
    - Required: 87 | **Provided: 87**
- Tree Density:
  - 3 canopy tree, 3 understory tree, 15 shrubs per acre
  - acres: 15.41
  - Canopy trees required: 47 | **Provided: 47**
  - Understory trees required: 47 | **Provided: 47**
  - Shrubs required: 232 | **Provided: 232**

L8-01

L8-02



NORTH 0 30 60 120
ORIGINAL SCALE: 1"=60'

Arête Landscape Architecture
Los Angeles, California
(323) 304-4531
arete-la.com

JONATHAN ALLAN SWEETSER
REGISTERED LANDSCAPE ARCHITECT
03/30/2023

470 DICK BUCHANAN STREET
LA VERGNE, TN

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	001002002
DESIGNED BY:	NAS
DRAWN BY:	NAS
DATE:	03/30/2023

PLANTING REFERENCE PLAN

L8-00



SITE KEYNOTES:

		DETAIL / SHEET	RELATED DETAILS	SPEC. SECTION
9.0	**PLANTING AND LANDSCAPE**			
9.1	B&B Deciduous Tree	1 / L11-01		000000
9.2	B&B Evergreen Tree	2 / L11-01		000000
9.3	Container Shrub	3 / L11-01		000000
9.4	Spade Edging	4 / L11-01		000000

PLANT REFERENCE NOTES

1. Property boundary.
2. Existing poles and overhead lines to remain.
3. Proposed Utilities - Refer to Civil Plans.
4. Proposed building - Refer to Architecture Plans.
5. Proposed detention area - Refer to Civil Plans.
6. Proposed extents of 50' Transitional Buffer Yard.
7. Seed and straw all disturbed softscape areas.

PLANT KEY

LARGE DECIDUOUS TREE	BOTANICAL / COMMON NAME
	Quercus falcata / Southern Red Oak
LARGE EVERGREEN TREE	BOTANICAL / COMMON NAME
	Pinus echinata / Short Leaf Pine
MEDIUM EVERGREEN TREE	BOTANICAL / COMMON NAME
	Juniperus virginiana / Eastern Redcedar
	Picea pungens 'Avatar' / Colorado Spruce
MEDIUM EVERGREEN SHRUB	BOTANICAL / COMMON NAME
	Kalmia latifolia / Mountain Laurel
GROUND COVERS	BOTANICAL / COMMON NAME
	- / Drought Tolerant Bermuda Mix

NORTH

0 15 30 60

ORIGINAL SCALE: 1"=30'

Arête Landscape Architecture
Los Angeles, California
(424) 744-1444
arete-la.com

NOLAN ALLAN SWEATMAN — REGISTERED — LANDSCAPE ARCHITECT — TENNESSEE

03/30/2023

470 DICK BUCHANAN STREET
LA VERGNE, TN

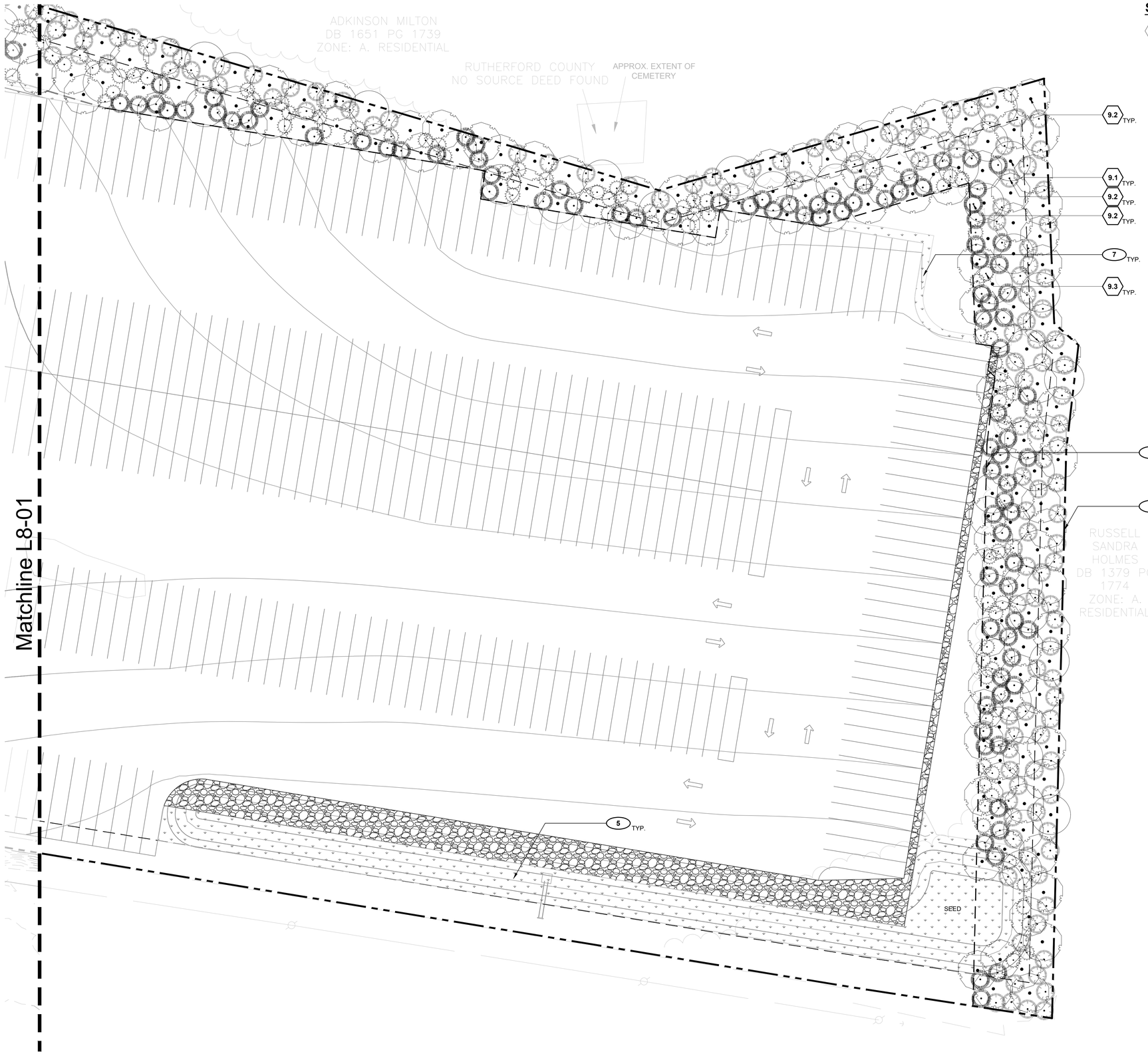
REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	001002002
DESIGNED BY:	NAS
DRAWN BY:	NAS
DATE:	03/30/2023

PLANTING PLAN

L8-01



SITE KEYNOTES:

		DETAIL / SHEET	RELATED DETAILS	SPEC. SECTION
9.0	**PLANTING AND LANDSCAPE**			
9.1	B&B Deciduous Tree	1 / L11-01		000000
9.2	B&B Evergreen Tree	2 / L11-01		000000
9.3	Container Shrub	3 / L11-01		000000
9.4	Spade Edging	4 / L11-01		000000

PLANT REFERENCE NOTES

1. Property boundary.
2. Existing poles and overhead lines to remain.
3. Proposed Utilities - Refer to Civil Plans.
4. Proposed building - Refer to Architecture Plans.
5. Proposed detention area - Refer to Civil Plans.
6. Proposed extents of 50' Transitional Buffer Yard.
7. Seed and straw all disturbed softscape areas.

PLANT KEY

LARGE DECIDUOUS TREE	BOTANICAL / COMMON NAME
	Quercus falcata / Southern Red Oak
LARGE EVERGREEN TREE	BOTANICAL / COMMON NAME
	Pinus echinata / Short Leaf Pine
MEDIUM EVERGREEN TREE	BOTANICAL / COMMON NAME
	Juniperus virginiana / Eastern Redcedar
	Picea pungens 'Avatar' / Colorado Spruce
MEDIUM EVERGREEN SHRUB	BOTANICAL / COMMON NAME
	Kalmia latifolia / Mountain Laurel
GROUND COVERS	BOTANICAL / COMMON NAME
	- / Drought Tolerant Bermuda Mix

NORTH

0 15 30 60
ORIGINAL SCALE: 1"=30'

Arête Landscape Architecture
Los Angeles, California
(323) 868-2650
arete-la.com

JONATHAN ALLAN SWEETWATER
REGISTERED LANDSCAPE ARCHITECT
03/30/2023

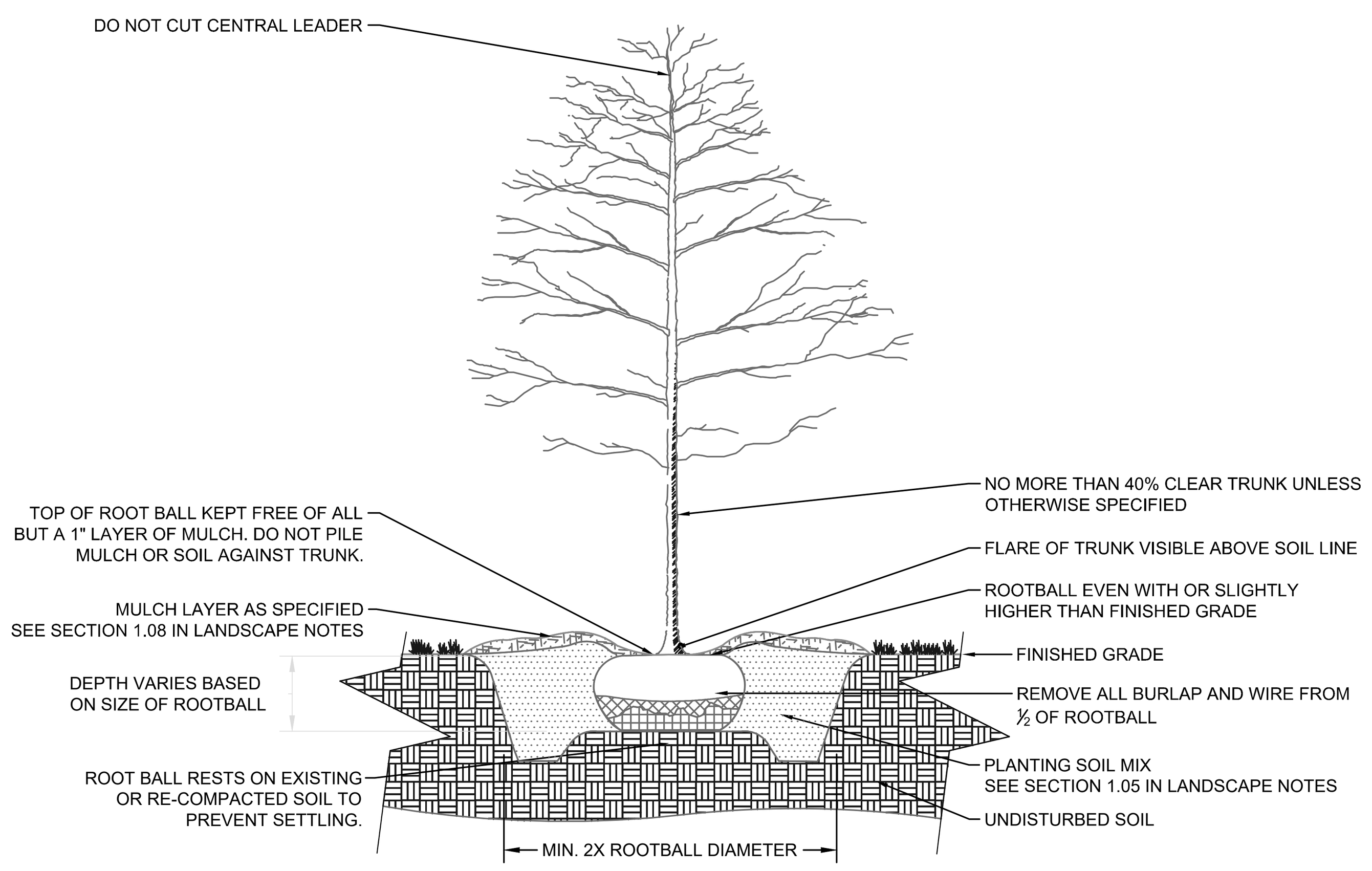
470 DICK BUCHANAN STREET
LA VERGNE, TN

REVISIONS		
NUMBER	DESCRIPTION	DATE

PROJECT #:	001002002
DESIGNED BY:	NAS
DRAWN BY:	NAS
DATE:	03/30/2023

PLANTING PLAN

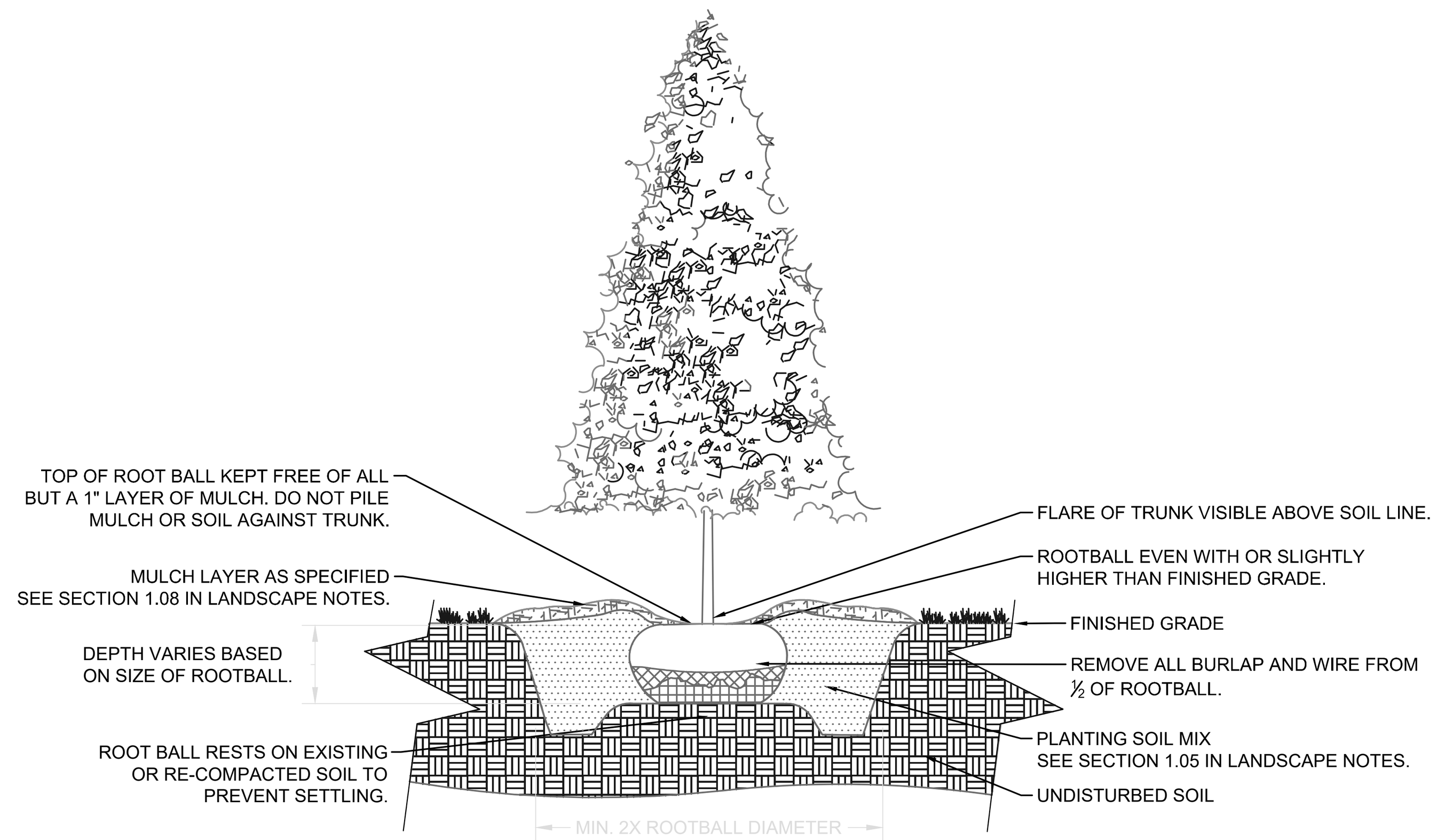
L8-02



1 B&B DECIDUOUS TREE

1"=1'-0"

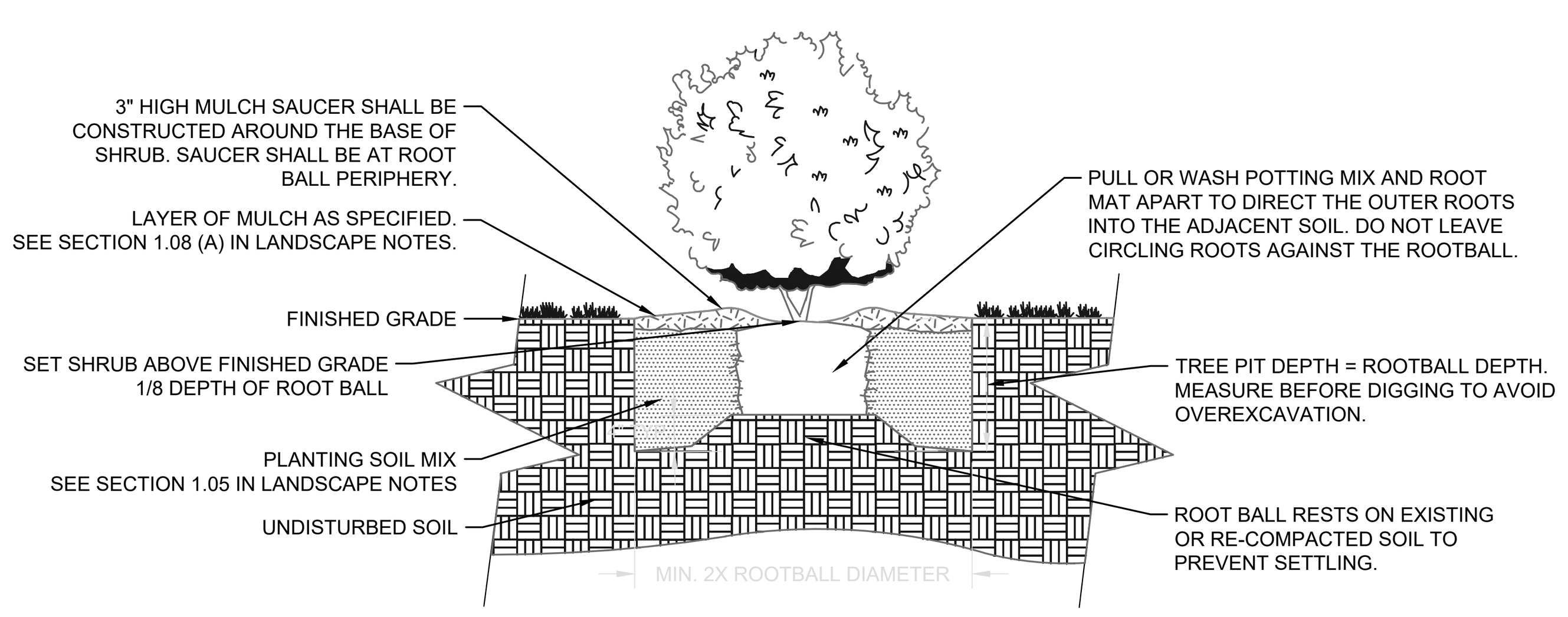
9.1



2 B&B EVERGREEN TREE

1"=1'-0"

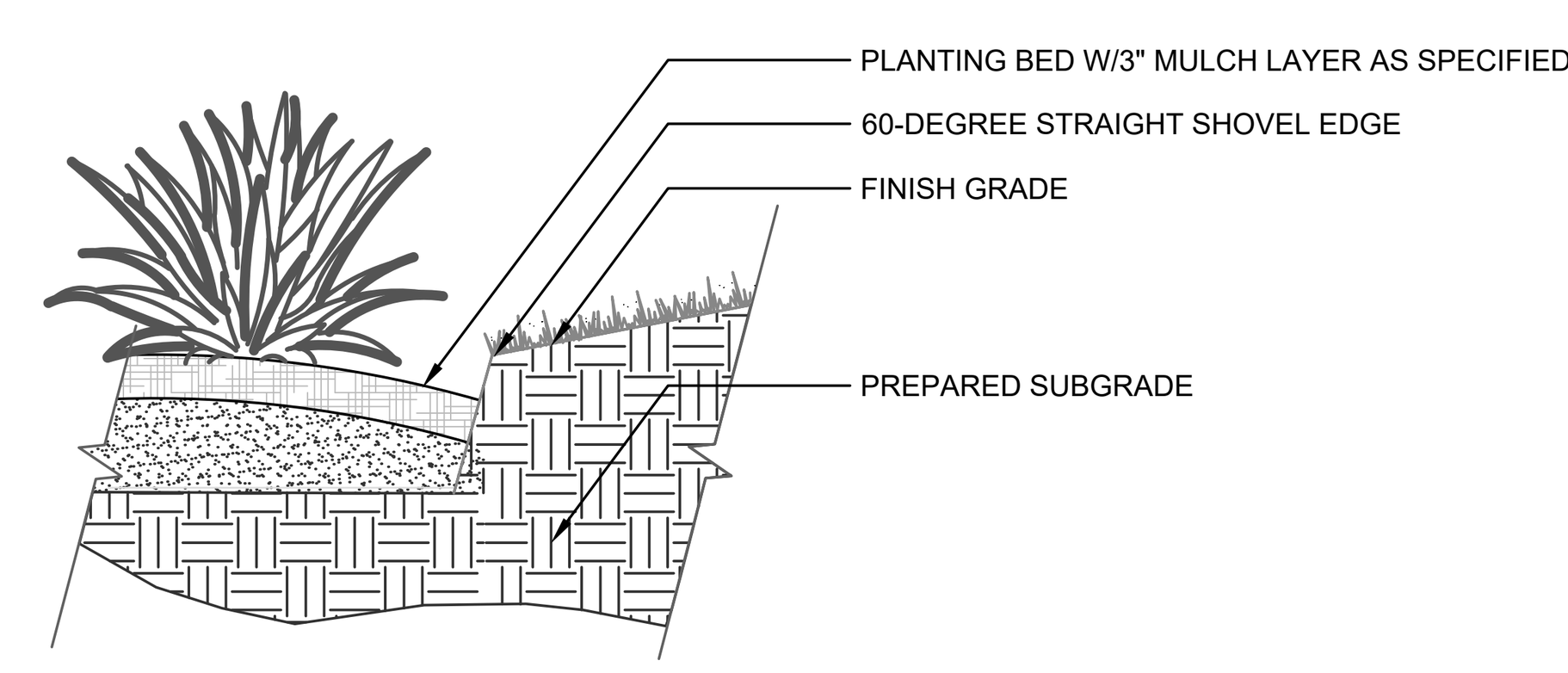
9.2



3 CONTAINER SHRUB

1"=1'-0"

9.3



4 SPADE EDGING

1"=1'-0"

9.4

PLANT SCHEDULE

LARGE DECIDUOUS TREE	BOTANICAL / COMMON NAME	TYPE	SPACING	SIZE	COMMENTS
44	Quercus falcata / Southern Red Oak	B&B	As Shown	2.5" Cal.	Full Grown, Straight Central Leader
LARGE EVERGREEN TREE	**BOTANICAL / COMMON NAME**	**TYPE**	**SPACING**	**SIZE**	**COMMENTS**
130	Pinus echinata / Short Leaf Pine	B&B	As Shown	10`-12` Ht.	Full Grown, No Shearing
MEDIUM EVERGREEN TREE	**BOTANICAL / COMMON NAME**	**TYPE**	**SPACING**	**SIZE**	**COMMENTS**
157	Juniperus virginiana / Eastern Redcedar	B&B	As Shown	6`-8` Ht.	Full Grown, No Shearing
103	Picea pungens 'Avatar' / Colorado Spruce	B&B	As Shown	6`-8` Ht.	Full Grown, No Shearing
MEDIUM EVERGREEN SHRUB	**BOTANICAL / COMMON NAME**	**TYPE**	**SPACING**	**SIZE**	**COMMENTS**
87	Kalmia latifolia / Mountain Laurel	B&B	As Shown	3 Gal.	Full Grown
GROUND COVERS	**BOTANICAL / COMMON NAME**	**TYPE**	**SIZE**	**SPACING**	**COMMENTS**
101,088 sf	- / Drought Tolerant Bermuda Mix	-	-	-	-

Landscape Notes & Specifications

1.01 Scope of work

A. The work consists of: furnishing all labor, materials, equipment, tools, transportation, and any other appurtenances necessary for the completion of this project as shown on the drawings, as included in the plant list, and as herein specified.

B. Work shall include maintenance and watering of all contract planting areas until certification of acceptability by the owner.

C. The contractor shall contact the owner and tennessee one call (800) 351-1111 , two (2) full business days prior to the beginning of work.

D. All landscape material shall be installed and maintained in a manner whereby traffic control signage and devices are visible to motorists and pedestrians.

1.02 Protection of existing structures

A. All existing buildings, walks, walls, paving, piping, other site construction items, and planting already completed or established shall be protected from damage by the contractor unless otherwise specified. all damage resulting from negligence shall be repaired or replaced to the satisfaction of the owner and at no cost to the owner.

B. The contractor shall be responsible for maintaining all necessary bmp devices according to tdot, county, or city standards through the duration of all construction activities.

C. The contractor shall be responsible for locating all utilities, whether public or private, prior to excavation. the owner and design professional shall not be responsible for the accuracy and completeness of any such information or data, and the contractor shall have full responsibility for reviewing and checking all such information and data, for locating all underground facilities during construction, for the safety and protection thereof, and repairing any damage thereto resulting from the work. the cost of compliance with this section will be considered as having been included in the contract price. the contractor shall notify any affected utility companies or agencies in writing at least 48 hours prior to beginning construction.

1.03 Protection of existing plant materials outside limit of work

A. The contractor shall be responsible for all unauthorized cutting or damage to trees and shrubs existing or otherwise, caused by careless equipment operation, material stockpiling, etc. this shall include compaction by driving or parking inside the drip-line and spilling oil, gasoline, or other deleterious materials within the drip-line. no materials shall be burned on site. existing trees killed or damaged so that they are misshapen and/or unsightly shall be replaced at the cost to the contractor of one hundred dollars ($100) per caliper inch on an escalating scale which adds an additional twenty (20) percent per inch over four (4) inches caliper as fixed and agreed liquidated damages. caliper shall be measured six (6) inches above ground level for trees up to and including four (4) inches in caliper and twelve (12) inches above ground level for trees over four (4) inches in caliper.

1.04 Materials

A. Plant materials

1. Plant species and size shall conform to those indicated on the drawings. no substitutions shall be made without written permission from the landscape architect.

2. It is the responsibility of the contractor to verify the number of plant materials required for the planting design.

3. All landscape bed areas are to receive a 3" layer of triple shredded hardwood mulch

1.04.1 Soil mixture (planting medium, planting mix, topsoil mix)

A. Soil mixture (planting medium for plant pits) shall consist of ⅓ loose compost (no greater than 1" siv), ⅓ peat and ⅓ sand, as described below.

B. Topsoil for use in preparing soil mixture for backfilling plant pits shall be fertile, friable, and of a loamy character; reasonably free of subsoil, clay lumps, brush weeds and other litter; free of roots, stumps, stones larger than 2" in any direction, and other extraneous or toxic matter harmful to plant growth. it shall contain three (3) to five (5) percent decomposed organic matter and a ph between 5.5 and 7.0 - submit sample and ph testing results for approval.

C. Sand shall be coarse, clean, well-draining, native sand. contractor shall submit results of soil tests for topsoil and sand proposed for approval by the owner.

D. Trees shall be planted in the existing native soil on site, unless determined to be unsuitable, at which point the contractor shall contact owner's representative to discuss alternate recommendation prior to planting.

E. Contractor to submit samples of soil mixture for owner's representative approval prior to plant installation operations commence.

F. Soil mixture to be tilled a minimum of 4 inches into existing soil prior to planting of any landscape material.

1.05 Water

A. Water necessary for planting and maintenance shall be of satisfactory quality to sustain adequate plant growth and shall not contain harmful, natural or man-made elements detrimental to plants. water meeting the above standard shall be obtained on the site from the owner, if available, and the contractor shall be responsible to make arrangements for its use by his tanks, hoses, sprinklers, etc. if such water is not available at the site, the contractor shall provide satisfactory water from sources off the site at no additional cost to the owner.

* *watering/irrigation restrictions may apply - refer to property's jurisdictional authority.*

1.06 Materials list

A. Quantities necessary to complete the work on the drawings shall be furnished by the contractor. quantity estimates have been made carefully, but the landscape architect or owner assumes no liability for omissions or errors. should a discrepancy occur between the plans and the plant list quantity, the owner's representative shall be notified for clarification prior to bidding or installation. all dimensions and/or sizes specified shall be the minimum acceptable size.

1.07 Fine grading

A. Fine grading under this contract shall consist of final finished grading of lawn and planting areas that have been disturbed during construction.

B. The contractor shall fine grade the lawn and planting areas to bring the rough grade up to final finished grade allowing for thickness of sod and/or mulch depth. contractor shall fine grade by hand and/or with all equipment necessary including a grading tractor with front-end loader for transporting soil within the site.

C. All planting areas shall be graded and maintained for positive drainage to surface/subsurface storm drain systems. areas adjacent to buildings shall slope away from the buildings. refer to civil engineer's plans for final grades, if applicable.

1.08 Planting procedures

A. Cleaning up before commencing work: the contractor shall clean work and surrounding areas of all rubbish or objectionable matter daily. all mortar, cement, and toxic material shall be removed from the surface of all plant beds. these materials shall not be mixed with the soil. should the contractor find such soil conditions beneath the soil which will in any way adversely affect the plant growth, contractor shall immediately call it to the attention of the owner's representative. failure to do so before planting shall make the corrective measures the responsibility of the contractor.

B. Verify locations of all utilities, conduits, supply lines and cables, including but not limited to: electric, gas (lines and tanks), water, sanitary sewer, stormwater systems, cable, and telephone. properly maintain and protect existing utilities. Contact Tennessee One Call at (800) 351-1111 to locate all utilities.

C. The work shall be coordinated with other trades to prevent conflicts. Coordinate planting with irrigation work to assure availability of water and proper location of irrigation appurtenances and plants.

1.09 Lawn sodding

A. The work consists of lawn bed preparation, soil preparation, and sodding complete, in strict accordance with the specifications and the applicable drawings to produce a turf grass lawn acceptable to the owner.

B. Lawn bed preparation: all areas that are to be sodded shall be cleared of any rough grass, weeds, and debris by means of a sod cutter to a depth of three (3) inches, and the ground brought to an even grade. the entire surface shall be rolled with a roller weighing not more than one-hundred (100) pounds per foot of width. During the rolling, all depressions caused by settlement shall be filled with additional soil, and the surface shall be regraded and rolled until presenting a smooth and even finish to the required grade.

C. Soil preparation: prepare loose bed four (4) inches deep. hand rake until all bumps and depressions are removed. Wet prepared area thoroughly.

D. Sodding

1. The contractor shall sod all disturbed areas within the contract limits not covered by hardscape or vegetative material, unless specifically noted otherwise.

2. Sod panels shall be laid tightly together so as to make a solid sodded lawn area. sod shall be laid uniformly against the edges of all curbs and other hardscape elements, paved and planted areas. immediately following sod laying, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly irrigated. if, in the opinion of the owner, top-dressing is necessary after rolling to fill the voids between the sod panels and to even out inconsistencies in the sod, clean sand, as approved by the owner's representative, shall be uniformly spread over the entire surface of the sod and thoroughly watered in. fertilize installed sod as allowed by property's jurisdictional authority.

3. During delivery, prior to, and during the planting of the lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun. all sod shall be stacked so as not to be damaged by sweating or excessive heat and moisture.

E. Lawn maintenance

1. Within the contract limits, the contractor shall produce a dense, well established lawn. the contractor shall be responsible for the repair and re-sodding of all eroded, sunken or bare spots (larger than 12"x12") until certification of acceptability by the owner's representative. Repaired sodding shall be accomplished as in the original work (including re-grading if necessary).

2. Contractor shall be responsible for establishing and maintaining sod/lawn until acceptance by the owner's representative. prior to and upon acceptance, contractor to provide watering/irrigation schedule to owner. Observe all applicable watering restrictions as set forth by the property's jurisdictional authority.

1.10 Cleanup

A. Upon completion of all planting work and before final acceptance, the contractor shall remove all material, equipment, and debris resulting from his work. All paved areas shall be broom-cleaned and the site left in a neat and acceptable condition as approved by the owner's representative.

1.11 Plant material maintenance

A. All plants and planting included under this contract shall be maintained by watering, cultivating, spraying, and all other operations (such as re-staking) necessary to insure a healthy plant condition by the contractor until certification of acceptability by the owner's representative.

1.12 Final inspection and acceptance of work

A. Final inspection at the end of the warranty period shall be on planting, construction and all other incidental work pertaining to this contract. any replacement at this time shall be subject to the same one (1) year warranty (or as specified by the landscape architect or owner in writing) beginning with the time of replacement and ending with the same inspection and acceptance herein described.

1.13 Warranty

A. The life and satisfactory condition of all plant material installed (including sod) by the landscape contractor shall be warrantied by the contractor for a minimum of one (1) calendar year commencing at the time of certification of acceptability by the owner's representative.

B. Replacement: any plant not found in a healthy growing condition during the warranty period shall be removed from the site and replaced within ten (10) days of notice, or between September-November, March-May. All replacements shall be plants of the same kind and size as specified in the plant list. they shall be furnished, planted and mulched as specified at no additional cost to the owner.

C. In the event the owner does not contract with the contractor for landscape maintenance, the contractor is encouraged to visit the project site periodically during the one (1) year warranty period to evaluate maintenance procedures being performed by the owner, and shall notify the owner in writing of maintenance procedures or conditions which threaten vigorous and healthy plant growth. It is suggested such site visits shall be conducted a minimum of once per month for a period of twelve (12) months from the date of acceptance.

Arête Landscape Architecture
Los Angeles, California
nate@arete-la.com
arete-la.com

NATHAN ALLAN SWEITZER
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE No. 1131
03/30/2023

470 DICK BUCHANAN STREET
LA VERGNE, TN

REVISIONS

NUMBER	DESCRIPTION	DATE

PROJECT #:	001002002
DESIGNED BY:	NAS
DRAWN BY:	NAS
DATE:	03/30/2023

PLANTING DETAILS

L11-00


5450 Murfreesboro Rd
MURFREESBORO RD
MURFREESBORO RD
NEAL BLVD
PYBURNS PL
MESSINA CT
N


5450 Murfreesboro Rd
HARRELL ST
MURFREESBORO RD
MURFREESBORO RD
MINERVA DR
JUPITER ST
NEAL BLVD
CARTER DR
SULLIVAN TRL
PYBURNS PL
MESSINA CT
GREAT HOPE CT
TOPVIEW TRL
OGLETREE CT
CENTER ST
LANTERN LIGHT CV
TAYLOR DR
N


5450 Murfreesboro Rd
MONEY ST
DICK BUCHANAN ST
GEORGE BUCHANAN DR
NUVIEW ST
JEAN DR
HERITAGE CIR
EASY ST
HUMBLE DR
PEARCY ST
PEARCY CT
MARS ST
HARRELL ST
MINERVA DR
MERCURY DR
FORTY ONE CT
MURFREESBORO RD
JUPITER ST
PARRISH ST
NEAL BLVD
PYBURN PL
MESSINA CT
OGLETREE CT
VAUGHN ST
APPLE ST
SULLIVAN TRL
TAYLOR DR
LANTERN LIGHT CV
BRIGHT SKY CT
TUNE DR
CANEY FORK CT
ALSUP LN
CAMPBELL PL
INGLES ST
MANKIN PL
MANKIN ST
CENTER ST
HESTER MILLER RD
HILLVIEW DR
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home

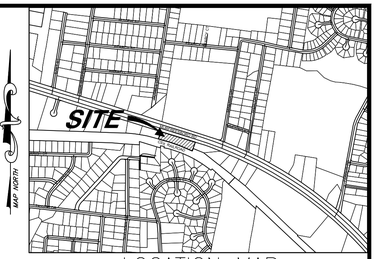

CITY LIMITS JEWELRY
& JEWELRY REPAIR
WATCH & CLOCK REPAIR
Open
MACK
SALE

LEGEND

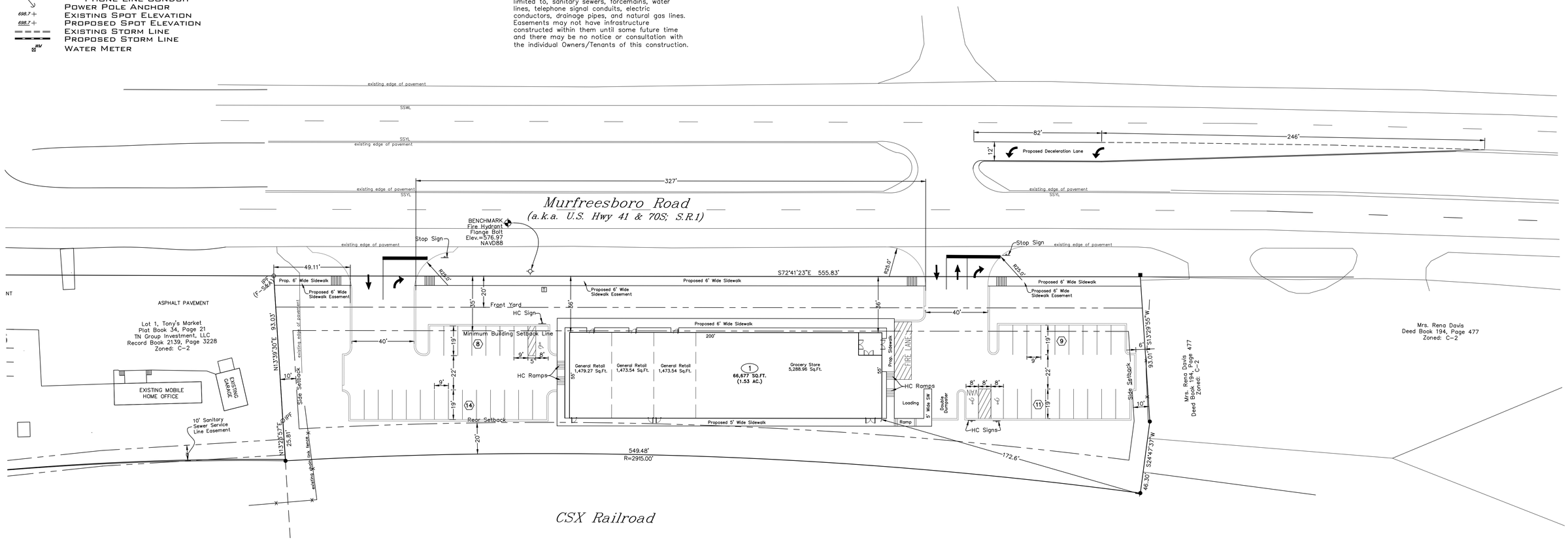
- Power Pole
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Reducer
- Water Valve
- Concrete Thrust Block
- Existing Water Line
- Proposed Water Line
- Existing Sanitary Sewer Line
- Proposed Sanitary Sewer Line
- Existing Manhole
- Proposed Manhole
- Existing Contours
- Proposed Contours
- Gas Meter
- Existing Gas Line
- Proposed Gas Line
- Proposed Underground Electric Line
- **Proposed Underground Data Line Conduit**
- Proposed Underground Phone Line Conduit
- Power Pole Anchor
- Existing Spot Elevation
- Proposed Spot Elevation
- Existing Storm Line
- Proposed Storm Line
- Water Meter

PLAN NOTES

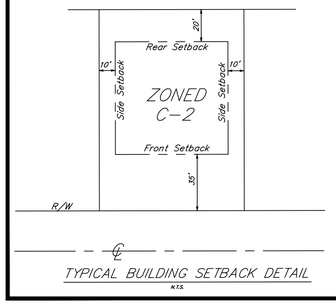
1. In Tennessee, it is a requirement per "The Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known underground utility owners, no less than three nor more than ten working days of their intent to excavate. A list of these utilities may be obtained from the County Register of Deeds. Those utilities that participate in the Tennessee One Call system can be notified by calling toll free 1-800-351-1111.
2. Underground utilities shown were located using available above ground evidence, and also from information obtained from the respective utility companies. The existence or nonexistence of the utilities shown and any other utilities which may be present on this site or adjacent sites should be confirmed with the utility owner prior to commencing any work.
3. Note removed.
4. Parcels may be subject to additional easements, and/or restrictions, by record or prescription, that a complete title search may reveal.
5. Public utility and drainage easements where shown hereon are intended to indicate an easement for construction, operation, and maintenance of public utilities and drainage ways; including, but not limited to, sanitary sewers, forcemains, water lines, telephone signal conduits, electric conductors, drainage pipes, and natural gas lines. Easements may not have infrastructure constructed within them until some future time and there may be no notice or consultation with the individual Owners/Tenants of this construction.
6. For all developments of more than one acre, a State of Tennessee Construction General Permit is required.
7. No work within T.D.O.T. right-of-way without prior written approval from T.D.O.T.
8. Per the Town of La Vergne, development must be sprinkled per the City of La Vergne's fire sprinkler ordinance. A fire protection designer must provide a design from the backflow to the building.
9. Per the Town of La Vergne, no more than 500 feet of open utility trench will be allowed at one time.
10. Per the Town of La Vergne, the proposed sewer grinder pump station and onsite piping will be private and the property owner will be responsible for operation and maintenance.



LOCATION MAP
N.T.S.

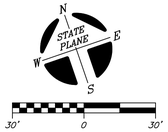


ZONING: C-2 Highway Service
FRONT SETBACK: 35'
SIDE SETBACK: 10'
REAR SETBACK: 20'
FRONT YARD: 20'



TYPICAL BUILDING SETBACK DETAIL
N.T.S.

SITE DATA CHART		
LOT:		
LOT SIZE (S.F.):		66,677
FLOOR AREA RATIO:		0.17
SQUARE FOOTAGE OF PROPOSED BUILDING:		10,988
SQUARE FOOTAGE FOR USE:	GENERAL RETAIL	4,426
	GROCERY	6,562
PROPOSED USE: RETAIL/GROCERY		
PARKING REQUIRED: Retail: 4,426 Sq.Ft. / 300 = 14.75 Grocery: 6,562 Sq.Ft. / 250 = 26.25		41
PARKING PROVIDED:		42
PROPOSED PARKING AREA (Sq.Ft.):		17,757
IMPERVIOUS SURFACE %		50.01%
OPEN SPACE PROVIDED (Sq.Ft.):		33,331
CANOPY TREES REQUIRED (3 PER ACRE):		5
CANOPY TREES PROVIDED:		13
UNDERSTORY TREES REQUIRED (3 PER ACRE):		5
UNDERSTORY TREES PROVIDED:		9
SHRUBS REQUIRED (15 PER ACRE):		23
SHRUBS PROVIDED:		89
IMPERVIOUS SURFACE AREA (Sq.Ft.)		33,346



LEGEND FOR MONUMENTS
IPS ○ IRON PIN SET
IPF ○ IRON PIN FND.
○ RAILROAD SPIKE
FENCE
● SURVEY POINT
△ NAIL
CONC. MARKER FND.

OWNER: FHMY Realty Investors, LLC
Attn: Mina Nagib
ADDRESS: 6645 Sugar Valley Drive
Nashville, TN 37211

Tax Map 18-B, Group E, Parcel 3.00
Record Book 2228, Page 3984

THIS TRACT IS NOT LOCATED IN AN AREA DESIGNATED AS "SPECIAL FLOOD HAZARD" ON THE NATIONAL FLOOD INSURANCE PROGRAM COMMUNITY MAP 470167, PANEL NO. 0020J, ZONE: X, DATED: OCTOBER 16, 2008.

DRAWING REVISIONS		
NO.	DATE	DESCRIPTION
0	08-29-22	Original Issue - For Review
1	09-19-22	Revised Per La Vergne Workshop Comments
2	02-27-23	Revised For Resubmittal to Planning
3	03-20-23	Revised Per La Vergne Workshop Comments
4	03-22-23	Revised Per La Vergne Engineering Comments



HUDDLESTON-STEELE ENGINEERING, INC.
2115 N.W. BROAD STREET, MURFREESBORO, TN 37129
SURVEYING : 893 - 4084, FAX: 893 - 0080

SITE PLAN

5450 Murfreesboro Road
LaVergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022 | Scale: 1"=30' | Sheet 1 of 9

C:\Civil 3D Projects\Farrer- Lavergne\DWG\Nagib Site Plan March 2023.dwg, Site Plan, 3/22/2023 10:30:50 AM, ACAD204

LEGEND

- Power Pole
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Reducer
- Water Valve
- Concrete Thrust Block
- Existing Water Line
- Proposed Water Line
- Existing Sanitary Sewer Line
- Proposed Sanitary Sewer Line
- Existing Manhole
- Proposed Manhole
- Existing Contours
- Proposed Contours
- Gas Meter
- Existing Gas Line
- Proposed Gas Line
- Proposed Underground Electric Line
- **Proposed Underground Data Line Conduit**
- Proposed Underground Phone Line Conduit
- Power Pole Anchor
- 698.7+ Existing Spot Elevation
- 698.7+ Proposed Spot Elevation
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- Proposed Storm Line
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PLAN NOTES

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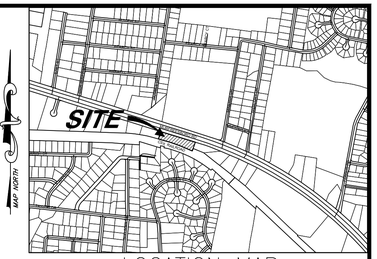
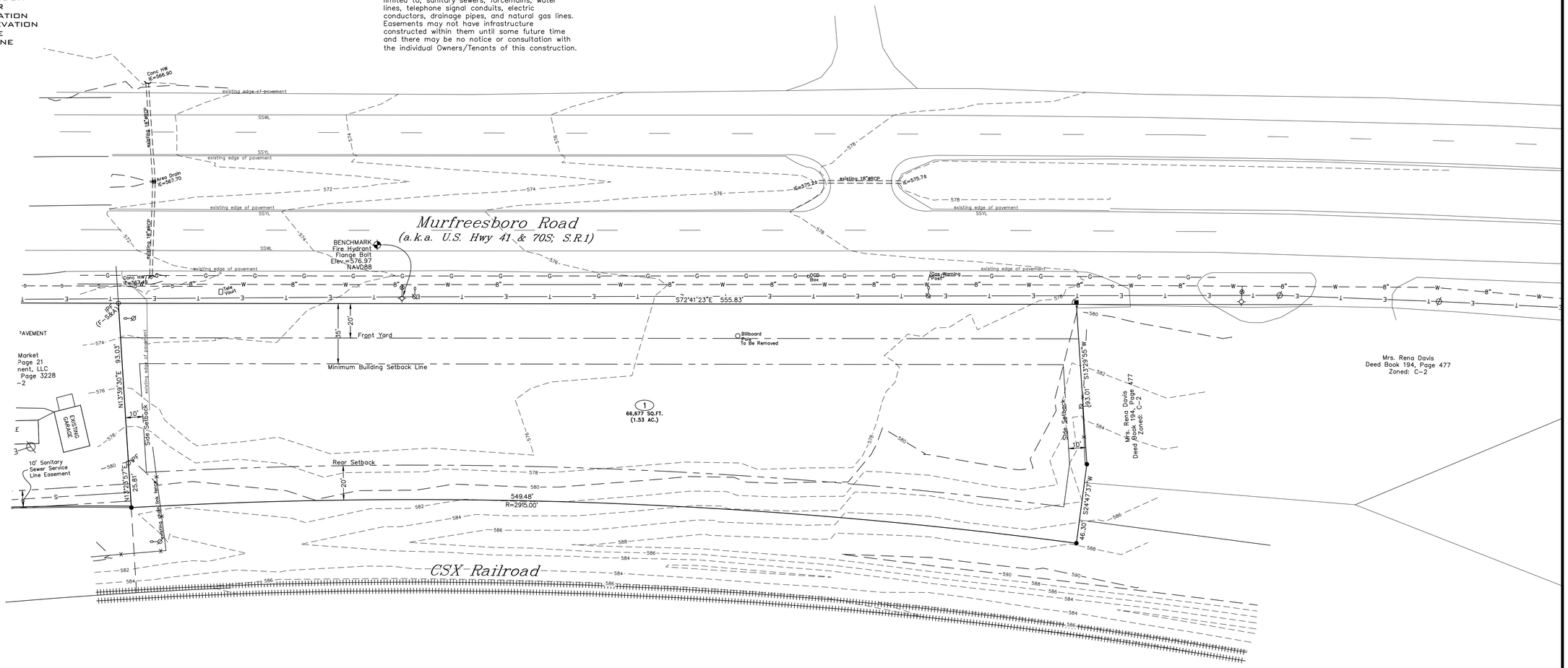


LOCATION MAP
N.T.S.



ZONING: C-2 Highway Service
FRONT SETBACK: 35'
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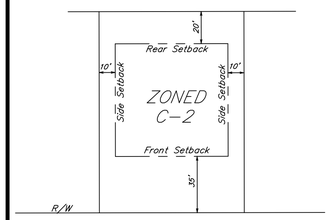
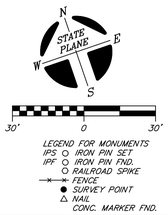
REAR SETBACK: 20'
FRONT YARD: 20'



TYPICAL BUILDING SETBACK DETAIL
N.T.S.



LEGEND FOR MONUMENTS
IPS ○ IRON PIN SET
IPF ○ IRON PIN FND.
○ RAILROAD SPIKE
FENCE
● SURVEY POINT
△ NAIL
CONC. MARKER FND.

OWNER: FHMY Realty Investors, LLC
Attn: Mina Nagib
ADDRESS: 6645 Sugar Valley Drive
Nashville, TN 37211

Tax Map 18-B, Group E, Parcel 3.00
Record Book 2228, Page 3984

THIS TRACT IS NOT LOCATED IN AN AREA DESIGNATED AS "SPECIAL FLOOD HAZARD" ON THE NATIONAL FLOOD INSURANCE PROGRAM COMMUNITY MAP 470167, PANEL NO. 0020J, ZONE: X, DATED: OCTOBER 16, 2008.

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HUDDLESTON-STEELE ENGINEERING, INC.
2115 N.W. BROAD STREET, MURFREESBORO, TN 37129
SURVEYING : 893 - 4084, FAX: 893 - 6080

EXISTING CONDITIONS

5450 Murfreesboro Road
La Vergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022 | Scale: 1"=30' | Sheet 2 of 9

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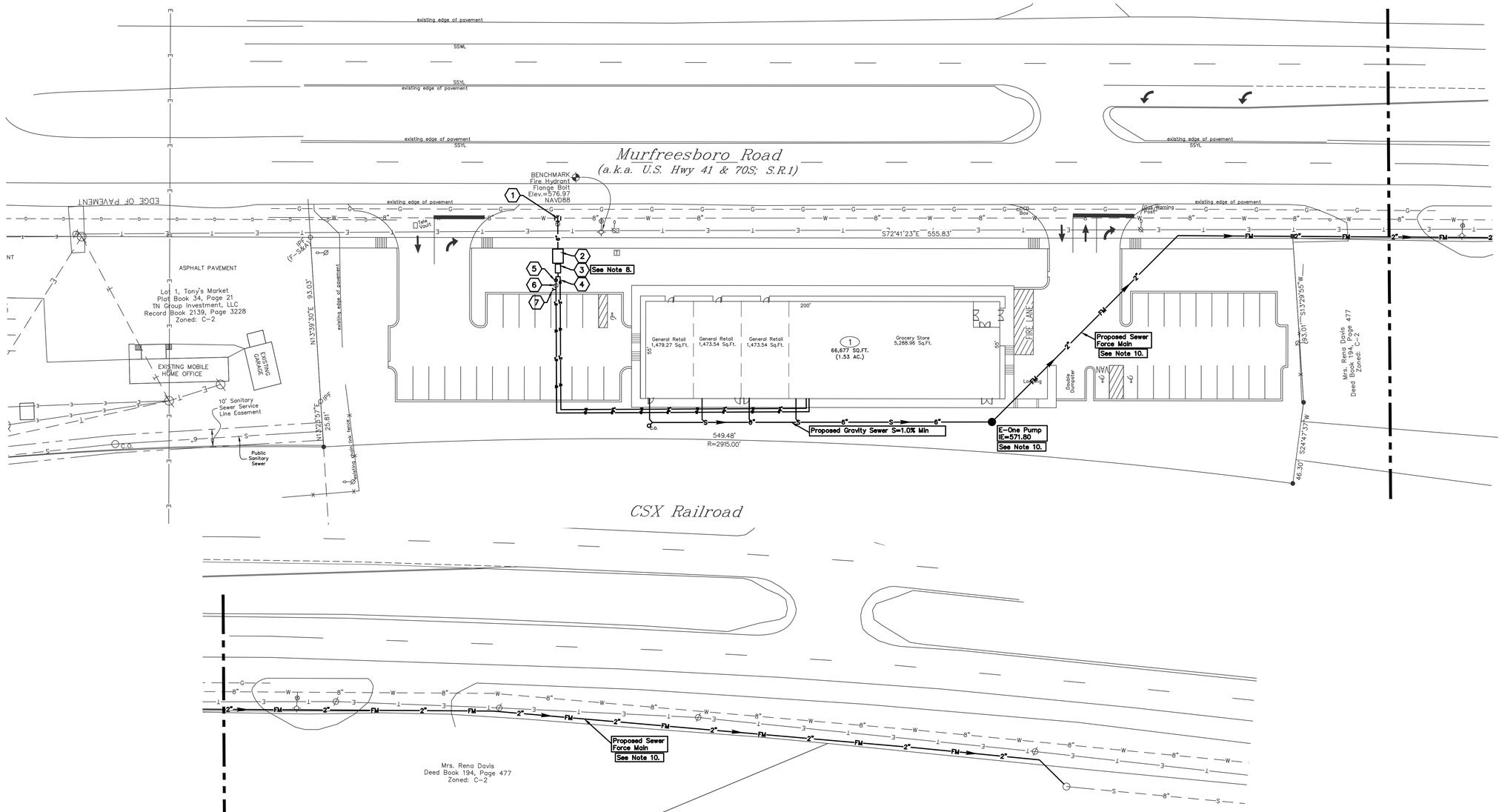
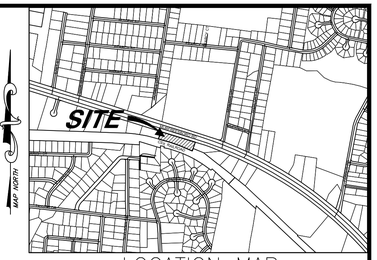


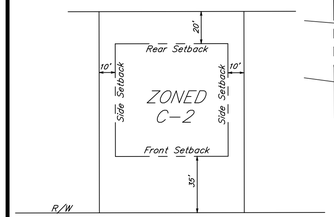


LOCATION MAP
N.T.S.

PLAN NOTES

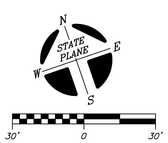
1. In Tennessee, it is a requirement per "The Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known underground utility owners, no less than three nor more than ten working days of their intent to excavate. A list of these utilities may be obtained from the County Register of Deeds. Those utilities that participate in the Tennessee One Call system can be notified by calling toll free 1-800-351-1111.
2. Underground utilities shown were located using available above ground evidence, and also from information obtained from the respective utility companies. The existence or nonexistence of the utilities shown and any other utilities which may be present on this site or adjacent sites should be confirmed with the utility owner prior to commencing any work.
3. Note removed.
4. Parcels may be subject to additional easements, and/or restrictions, by record or prescription, that a complete title search may reveal.
5. Public utility and drainage easements where shown hereon are intended to indicate an easement for construction, operation, and maintenance of public utilities and drainage ways; including, but not limited to, sanitary sewers, forcemains, water lines, telephone signal conduits, electric conductors, drainage pipes, and natural gas lines. Easements may not have infrastructure constructed within them until some future time and there may be no notice or consultation with the individual Owners/Tenants of this construction.
6. For all developments of more than one acre, a State of Tennessee Construction General Permit is required.
7. No work within T.D.O.T. right-of-way without prior written approval from T.D.O.T.
8. Per the Town of La Vergne, development must be sprinkled per the City of La Vergne's fire sprinkler ordinance. A fire protection designer must provide a design from the backflow to the building.
9. Per the Town of La Vergne, no more than 500 feet of open utility trench will be allowed at one time.
10. Per the Town of La Vergne, the proposed sewer grinder pump station and onsite piping will be private and the property owner will be responsible for operation and maintenance.

ZONING: C-2 Highway Service
FRONT SETBACK: 35'
SIDE SETBACK: 10'
REAR SETBACK: 20'
FRONT YARD: 20'



TYPICAL BUILDING SETBACK DETAIL
N.T.S.

Callout	Fixture
1	1- 8"x6" Tapping Sleeve & Valve
2	1- Domestic & Fire Meter Vault
3	1- Reduced Pressure Backflow Preventor
4	1- 6" Tee 2- 6" 90° Bend 1- 6"x 2" Reducer
5	1- Post Indicator Valve
6	1- Check Valve
7	1- Fire Department Connection



LEGEND FOR MONUMENTS
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IPF ○ IRON PIN FND.
○ RAILROAD SPIKE
-x-x- FENCE
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CHRISTOPHER E. FARRER — LICENSED PROFESSIONAL ENGINEER — AGRICULTURAL ENGINEER — NUMBER 123189 — STATE OF TENNESSEE — 03.22.23

SHUDDLESTON-STEELE ENGINEERING, INC.
2115 N.W. BROAD STREET, MURFREESBORO, TN 37129
SURVEYING : 893 - 4084, FAX: 893 - 0080

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UTILITY PLAN

5450 Murfreesboro Road
La Vergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022 | Scale: 1"=30' | Sheet 3 of 9

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LEGEND

- Power Pole
- Existing Fire Hydrant
- Proposed Fire Hydrant
- Reducer
- Water Valve
- Concrete Thrust Block
- Existing Water Line
- Proposed Water Line
- Existing Sanitary Sewer Line
- Proposed Sanitary Sewer Line
- Existing Manhole
- Proposed Manhole
- Existing Contours
- Proposed Contours
- Gas Meter
- Existing Gas Line
- Proposed Gas Line
- Proposed Underground Electric Line
- **Proposed Underground Data Line Conduit**
- Proposed Underground Phone Line Conduit
- Power Pole Anchor
- Existing Spot Elevation
- Proposed Spot Elevation
- Existing Storm Line
- Proposed Storm Line
- Water Meter

PLAN NOTES

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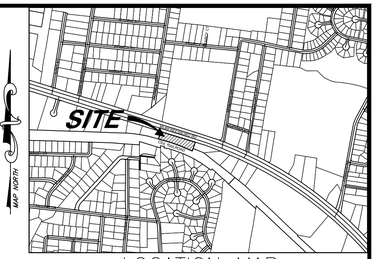
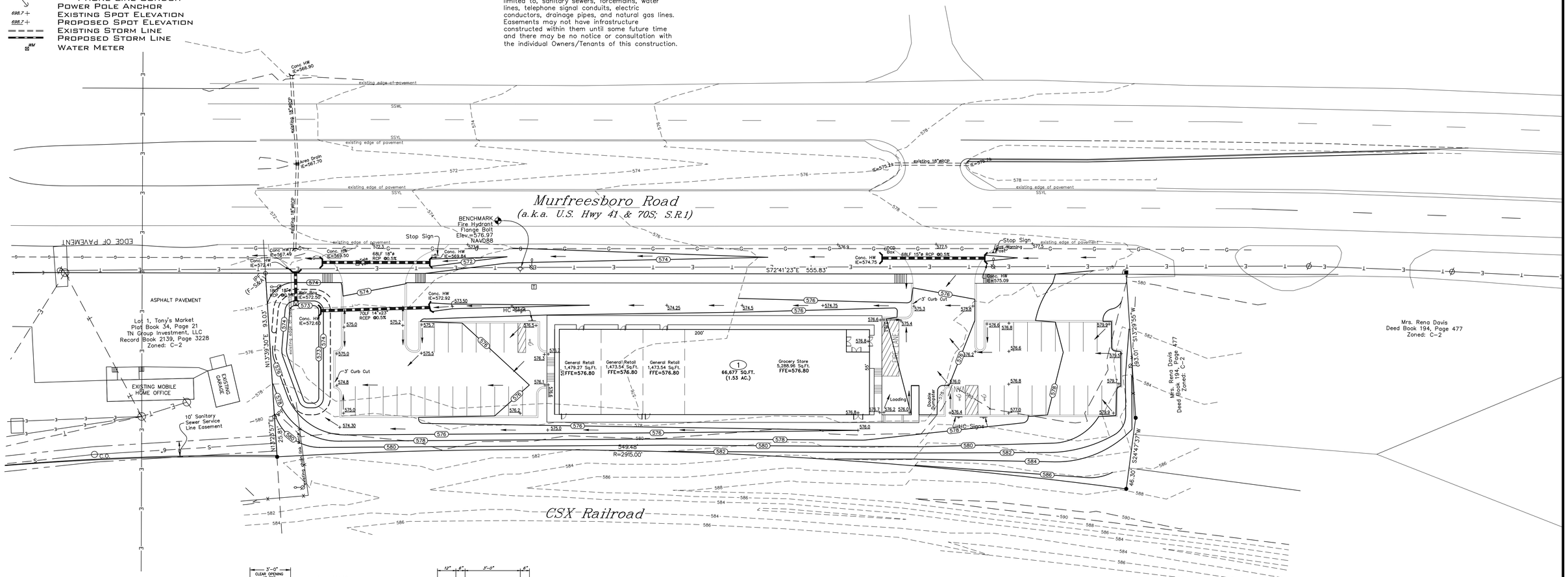


LOCATION MAP
N.T.S.



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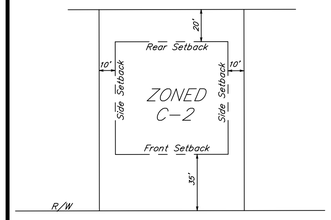

TYPICAL BUILDING SETBACK DETAIL
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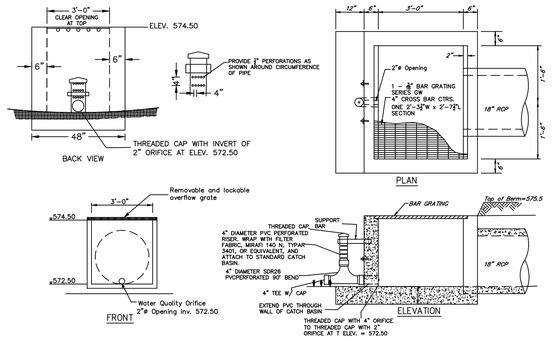

DETENTION OUTLET STRUCTURE DETAIL
N.T.S.



LEGEND FOR MONUMENTS
IPS ○ IRON PIN SET
IPF ○ IRON PIN FND.
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SURVEYING : 893 - 4084, FAX: 893 - 0080

GRADING & DRAINAGE PLAN

5450 Murfreesboro Road
La Vergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022	Scale: 1"=30'	Sheet 4 of 9

C:\Civil 3D Projects\Farrer- Lavergne\DWG\Nagib Site Plan March 2023.dwg, Grading & Drainage, 3/22/2023 10:29:42 AM, ACAD204

1.0 General
1.1 Scope: This work includes providing labor, equipment, materials, installation and maintenance services to complete all landscape installation as indicated in construction documents.
A. Providing and installing all plantings including trees, shrubs, ground cover, turf grass, planting soil mix and mulch
B. Guarantee Period: All landscape plant material shall remain alive and in healthy condition for one full year from time of final acceptance of completed work. Contractor shall replace any dead or unhealthy plant material during the one year guarantee period at no additional cost to the owner.
C. Specified Maintenance Period: Contractor shall fully maintain all landscape material for the duration of the project until final acceptance by the owner. This includes watering, weeding, fertilizing and mowing of grass and general upkeep of all landscape beds. Should any plant material be damaged die or defoliate during this period it shall be replaced immediately with plant material of the same size, species and quality as originally specified.
D. It is the responsibility of the landscape contractor to confirm all material quantities. In the event of a discrepancy, the quantities shown on the plan shall take precedence over the material schedule.
E. No substitutions as to type, size, or spacing of plant materials specified on this plan may be made without the approval of the landscape architect or owner's representative. All substitutions shall be reviewed and approved with the owner's representative and the applicable municipal or state reviewing agency.
F. Contractor shall be required to obtain all permits relative to landscape installation. Any work in municipal or state right of way or utility easements may require a permit from the governing agency.
1.2 Inspection and approval:
A. All plant material may be subject to inspection and approval by the landscape architect or the owners representative in the field or nursery before digging, or at the site before planting or placing or at any other time. Attach secure, durable, legible waterproof labels, stating correct botanical and common names as specified, to at least one shrub or perennial in a grouping and to each tree on site. All labels to be completely removed by contractor at time of final acceptance.
1.3 Job Conditions
A. Examine conditions under which work is to be performed and notify the Landscape Architect of unsatisfactory conditions or any potential field adjustments.Should the landscape contractor encounter unsatisfactory surface or other subsurface drainage conditions, inadequate soil depth, latent soils, hard pan, utility lines or other conditions that will jeopardize the health and vigor of the plants, adjustment must be made by the contractor to insure suitable conditions for proper growth and development of the plants to be installed.
B. Determine locations of underground utilities and perform work in manner which will avoid all possible damage. It is a requirement per the Tennessee "Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known underground utility owners, no less than three nor more than ten working days of their intent to excavate. a list of these utilities may be obtained from the county register of deeds. Those utilities that participate in the Tennessee one call system can be notified by calling 1-800-351-1111. Hand excavate to avoid damage to existing utilities if required.
C. Contractor to remove any debris on site and clear and grub all landscape planting areas prior to grading and planting as part of contract All planting and seeding areas shall be free from weeds prior to planting and mulching. No plant material shall be planted prior to completion of finish grade. Herbicide and or mechanical removal of weeds may be required to insure complete weed removal. Any herbicide applications must be done a minimum of 2 weeks or more prior to time of planting..

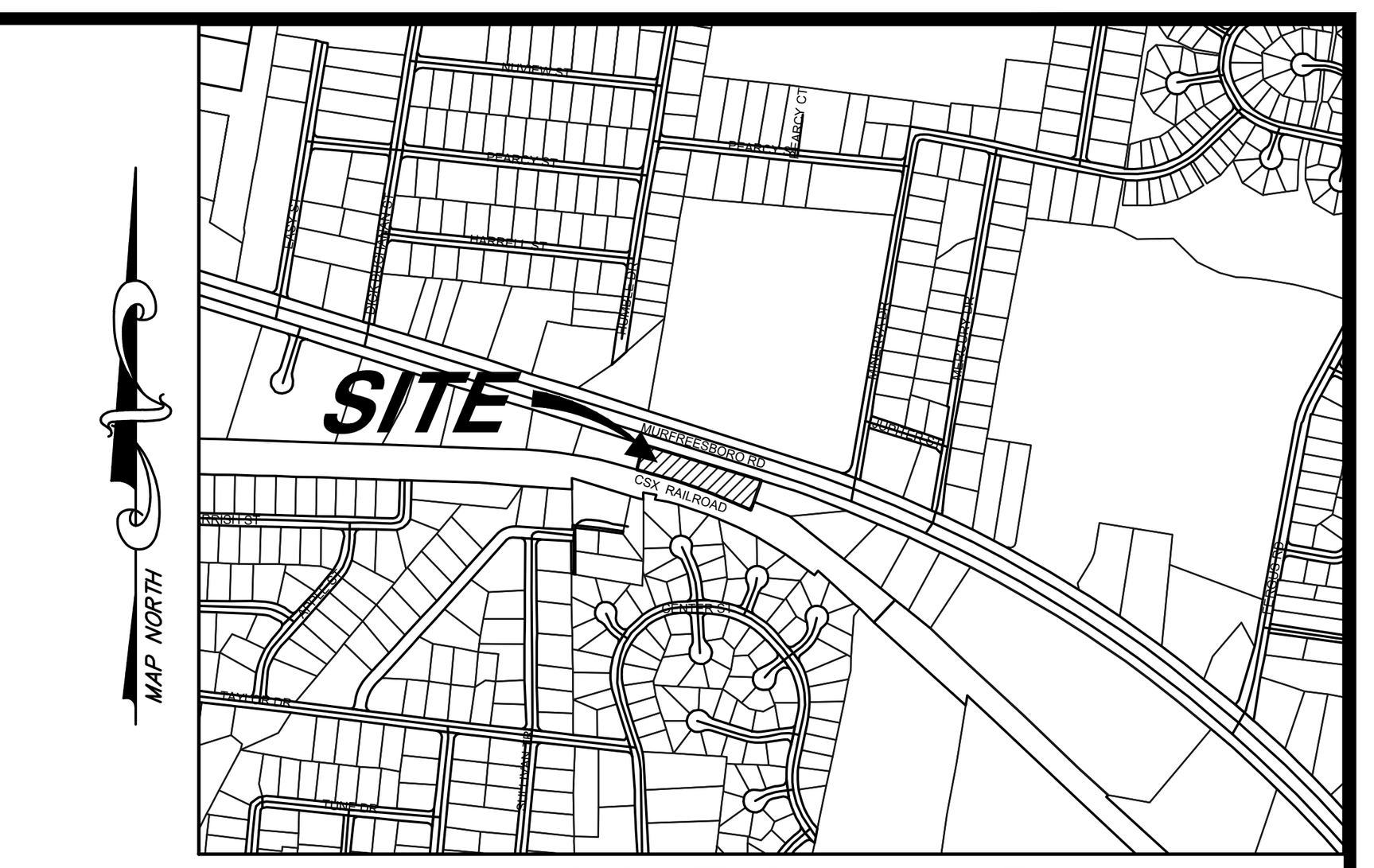
2.0 Materials
2.1 Topsoil:
A. All topsoil shall be stripped and stored for reuse on site prior to grading and excavation work.
B. Topsoil stripped and stored on site, or hauled in for use on site shall meet the following criteria before being spread on site or used in landscape beds or planting mix.
1) To be Fertile, friable naturally occurring topsoil, free of stones, subsoil, clay lumps, hardpan, roots, stumps, branches sticks and other debris larger than one and one half inch in any dimension, free of noxious weeds, grasses, seeds, plants, extraneous matter and any substance harmful to plant growth:
2) Ph range of 5.5 to 7.0
3) Organic matter 5% to 10%
4) Topsoil shall contain a maximum of 35% clay
5) Topsoil shall contain a minimum of 20% sand
2.2 Planting Mix: Shall be thoroughly mixed in proportions specified for plant pits and planting beds
A. 40% Approved material excavated from the pits (If rock or heavy clay is encountered provide 70% topsoil in mix)
B. 30% Topsoil (as defined in 2.1 herein)
C. 30% Organic compost consisting of peat moss, mushroom compost or worm castings. All organic compost must be well aged. No raw wood or other unaged material shall be permitted a part of compost blend.
D. Add 3 lbs of 6-12-12 fertilizer to each cubic yard of topsoil mix during the mixing process, for all plants.
E. All planting mix shall be inoculated with a mycorrhizal fungal product. Mycorrhiza inoculation may be applied with a powder or liquid application. Follow manufacturers directions for proper amount and methods of application.
2.5 Plant Materials:
A. Shall conform to state and federal requirements for disease and insect control, shall be in accordance with American Standard for Nursery Stock, ANSI Z-60.1 (latest approved edition) and shall be subject to approval of owner's representative. Dimensions listed for heights, spread and trunk specifications on the plant material schedule are a guide for the minimum required size of each plant.
B. All plant material must be free from bark damage, well foliated and have a well established root system, without circling roots or root bound pots.
C. First class representatives of their species or variety and true to name and size. Plants that are not of highest quality will be rejected. All plants shall have a well-formed canopy (head) with minimum caliper, height and spread as shown on the plant list. Trunks and canopy shall be shaped be typical of the species. Trees of the same species shall have the following characteristics: matched by branching height, caliper, height of tree, spread of branches and branching structure, and overall canopy shape.
2.6 Seed: Seed shall be delivered to site in original sealed packages bearing the producers guaranteed analysis for percentages of mixtures, purity, germination, weedseed content and inert material. All seed must be fresh, clean and from current seasons seed crop.
A. Variety: Premium Tall Fescue blend (drought tolerant variety)
B. Purity: 95% minimum
C. Percent Germination: 90% minimum
D. Maximum weed seed content: 0.5%
2.7 Sod: Sod shall be premium Bermuda grass. Sod shall strongly rooted and free of weeds, disease and pests. All sod shall be cut and delivered with uniform thickness with no less than 1" soil.
2.8 Mulch: 100% Shredded and Aged Hardwood Mulch or Pine Straw (owners choice as specified on plans) to cover all tree, plant and ground cover pits and landscape beds.
2.9 Fertilizer: Fertilizer shall have a ratio of 6% nitrogen, 12% phosphorus and 12% potassium. Fertilizer shall be granular and mixed into planting mix at the rates as specified in 2.2 herein and at the manufacturers rate for turf grass areas.
3.0 Execution
3.1 Finish Grade and Landscape Bed Preperation
A. Finish grading to be completed by General Contractor. Fine grade soil to eliminate irregularities and ponding from finish grades and to form smooth, consistent grade with positive drainage away from all buildings and structures. All landscape beds are to be tilled to a minimum depth of 8" and covered with fertile topsoil to a minimum depth of 4".
3.2 Topsoil Placement
A. Finish grading to be completed by General Contractor. Fine grade soil to eliminate irregularities and ponding from finish grades and to form smooth, consistent grade with positive drainage away from all buildings and structures.
B. If planting and mulching is not commenced immediately, protect spread topsoil from erosion by force of wind, water or other force, and reestablish eroded, rutted or settled grades to proper finished grade.
C. Spreading of topsoil: All landscape beds and turf grass areas shall have a minimum depth of 4" of topsoil established prior to planting, seeding, sodding or mulching. All topsoil stripped from the site shall be utilized on site to establish the 4" minimum depth required for landscape areas. All excess topsoil beyond the 4" minimum depth shall be evenly spread throughout landscape and turf grass planting areas.
3.3 Planting of Trees, Shrubs and Perennials
A. Do not prune plants without direction and approval of Landscape Architect.
B. Prepare planting mix as specified in 2.2 herein. Place as backfill for all trees, shrubs, and ground cover beds as drawn and detailed.
C. Plant all material as drawn and detailed.
D. Tree Pit Drainage: All trees and shrubs shall be placed in well drained planting pits. If standing water occurs in planting holes the contractor shall provide proper subsurface drainage to insure the plants survival and / or plant material shall be placed in elevated bermed areas to provide proper aeration of root balls.
E. All trees are to be equipped with 20 gallon capacity watering bags to be used during the construction period and left in place for the owners use after final acceptance of the project.
F. If rock is encountered during planting operations, landscape berms or alternated planting locations should be evaluated by landscape architect prior to planting.
G. It is the responsibility of the landscape contractor to verify that each excavated tree or shrub pit will percolate (drain) prior to adding topsoil and installing trees or shrubs. If the soil at a given area does not drain properly, a p v c drain or gravel sump shall be installed, or plantings shall be placed on a berm of planting mix to keep plants out of standing water.
3.4 Seed: Provide an acceptable stand of seed, defined as no bare areas more than 4" square. Provide seed bed preparation with fertilizer, limestone and straw mulch. Maintain seeded areas until final acceptance by Owner or owners representative. Grass shall have at least one mowing before receiving final acceptance.
3.5 Sod:
A. Sod shall be installed within 24 hours of delivery to site. No sod shall remain on pallets for longer than 24 hours after delivery.
B. All areas to receive sod shall be racked to finish grade to eliminate irregularities and ponding and to form smooth, consistent grade with positive drainage. Prepare topsoil with lime and fertilizer as needed.
C. All areas to receive sod shall be racked free of all rocks and debris prior to sod placement.
D. Areas to receive sod shall be slightly moistened immediately prior to laying sod. Sod shall be watered thoroughly after laying.
E. Lay sod tightly with no visible open joints and no overlapping between sod panels. Stagger end joints a minimum of 12" . Cut sections of sod should be uniform and should not exceed 2 feet in width and 10 feet in length.
F. Roll sod after sod has dried from watering to insure a good bond between sod and soil and to level sod areas. Roller shall not exceed 150 lbs.
3.6 Establishment of grass: All distrubed areas of the site are to be seeded and/or sodded to insure protection from erosion and to insure a well established stand of turf grass with no bare patches of exposed soil.

PLANT MATERIALS SCHEDULE

KEY	QUANTITY	SCIENTIFIC NAME/ COMMON NAME	TRUNK	HEIGHT	REMARKS
	9	Cornis florida/ Flowering Dogwood	2 ½" MIN.		
	46	Buxus Koreana Green Velvet Boxwood		24" min.	
	100	Euonymus alatus 'Compactus' Burning Bush		3' min.	Full Symmetrical shape
	8	Acer ginnalaa Flame amur Maple	2 ½" MIN.		Single, Straight Central Leader, Full Canopy
	5	Carpinus betulus 'Fastigiata' Columnar Hornbeam	2 ½" MIN.		Single, Straight Central Leader, Full Canopy
	41	Taxus x media 'Hicksii" Yew Upright Hicksi		3' min.	Full Symmetrical shape

SITE DATA CHART

LOT:		
LOT SIZE (S.F.):		66,677
FLOOR AREA RATIO:		0.17
SQUARE FOOTAGE OF PROPOSED BUILDING:		11,550
SQUARE FOOTAGE FOR USE:	GENERAL RETAIL	5,940
	GROCERY	5,610
PROPOSED USE: RETAIL/GROCERY		
PARKING REQUIRED: Retail: 5,940 Sq.Ft. / 300 = 19.8 = 20 Grocery: 5,610 Sq.Ft. / 250 = 22.44 = 23		43
PARKING PROVIDED:		43
PROPOSED PARKING AREA (Sq.Ft.):		17,757
IMPERVIOUS SURFACE %:		50.01%
OPEN SPACE PROVIDED (Sq.Ft.):		33,331
CANOPY TREES REQUIRED (3 PER ACRE):		5
CANOPY TREES PROVIDED:		13
UNDERSTORY TREES REQUIRED (3 PER ACRE):		5
UNDERSTORY TREES PROVIDED:		9
SHRUBS REQUIRED (15 PER ACRE):		23
SHRUBS PROVIDED:		89
IMPERVIOUS SURFACE AREA (Sq.Ft.)		33,346



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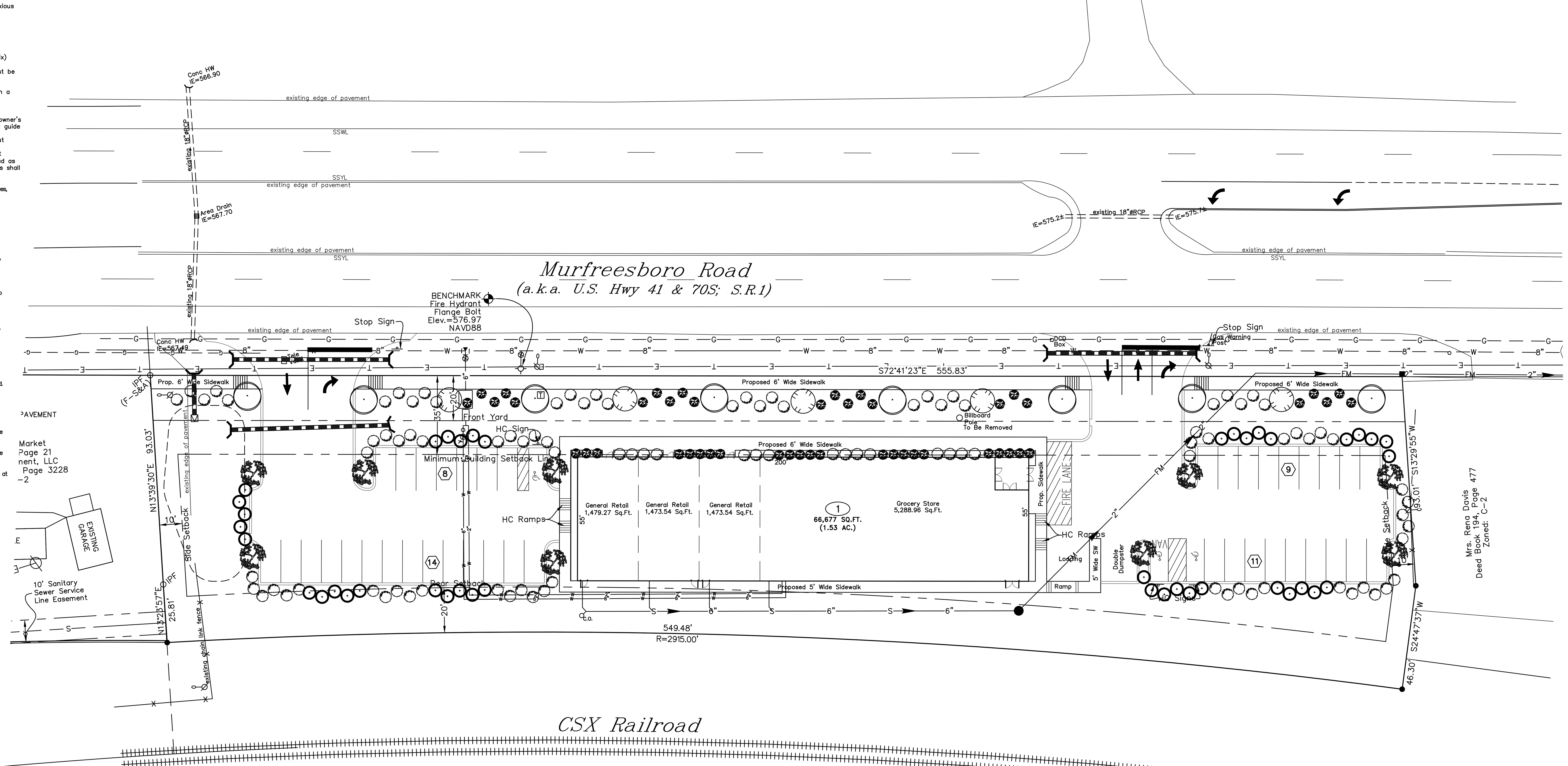
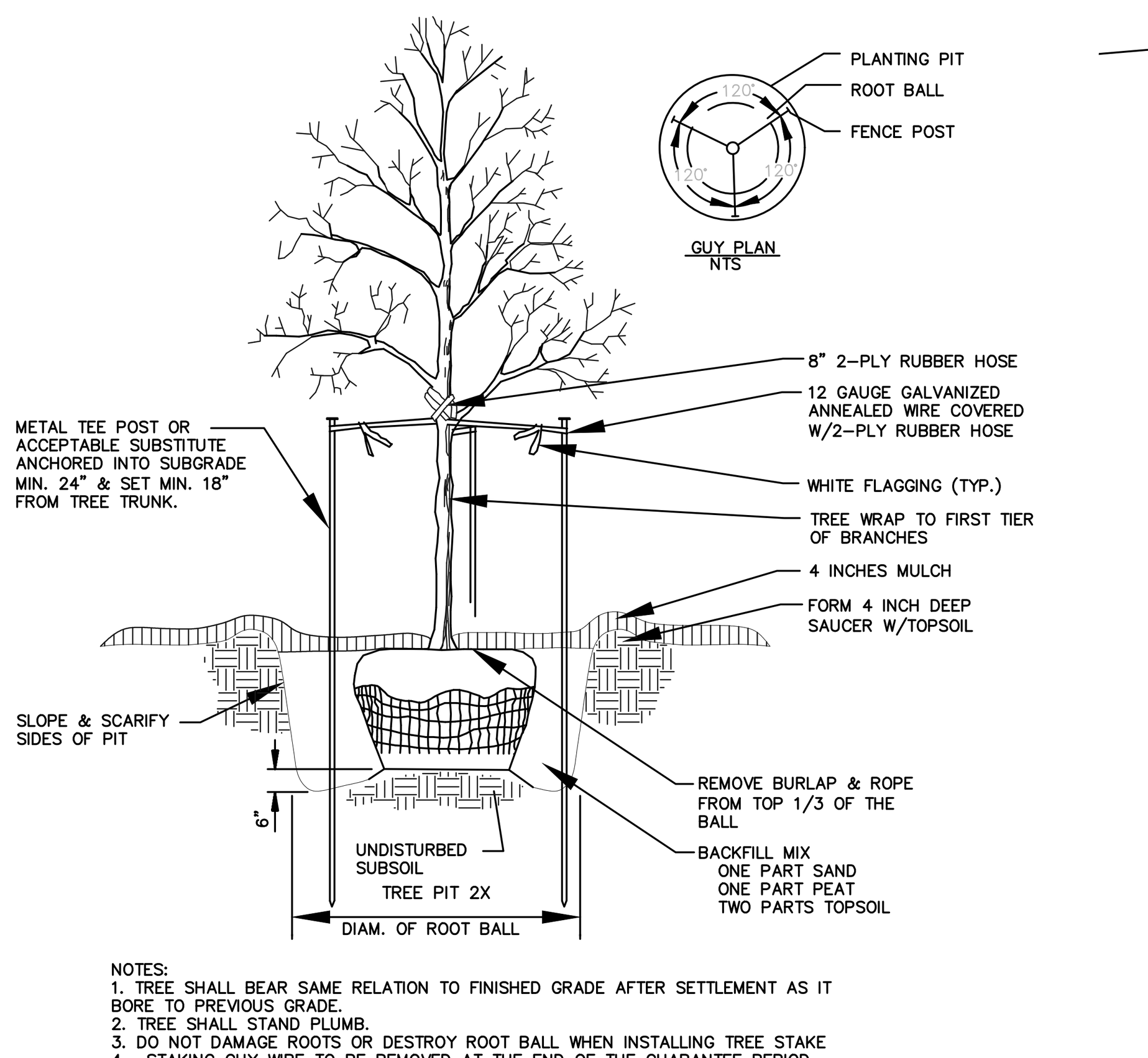
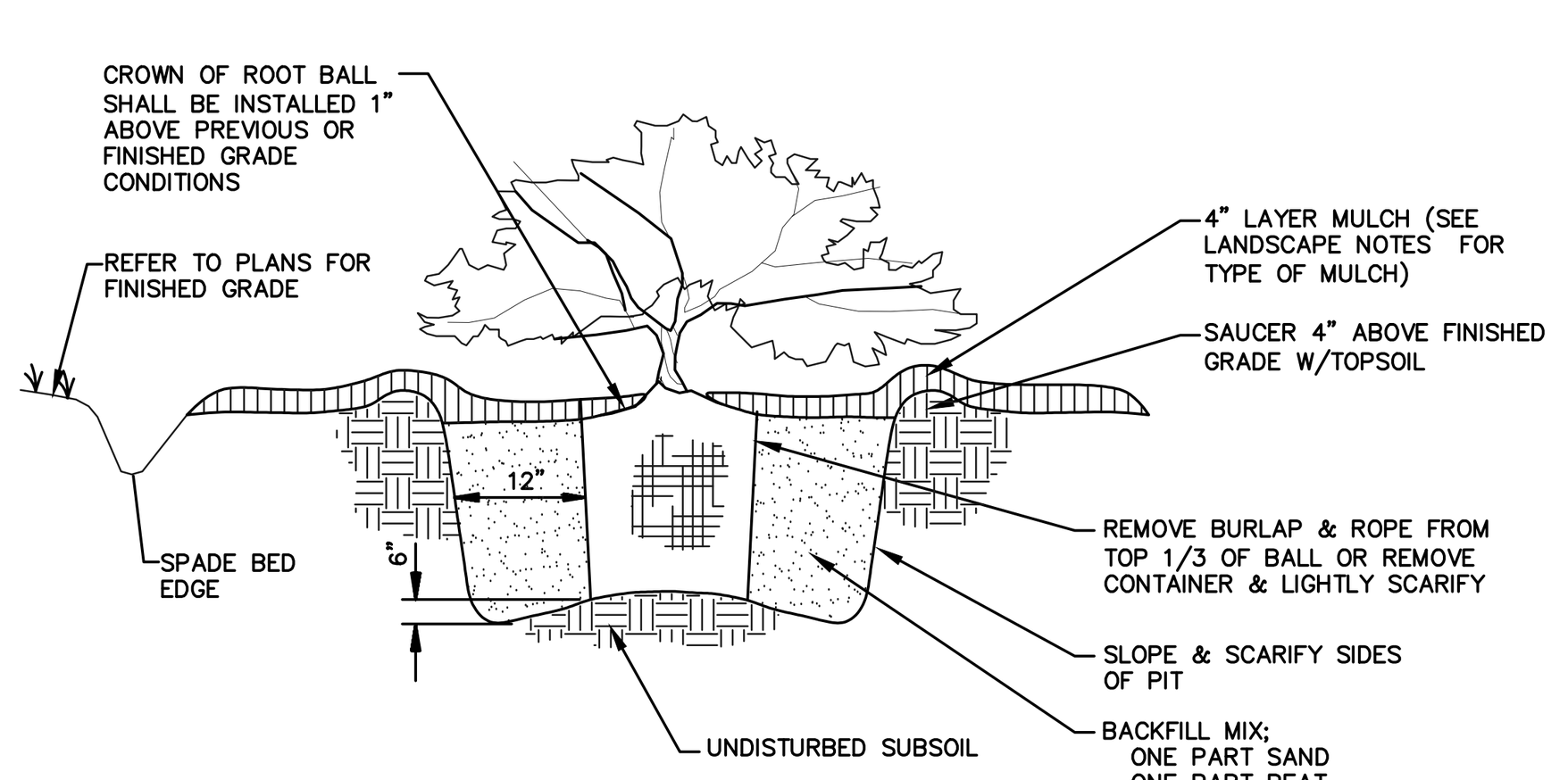




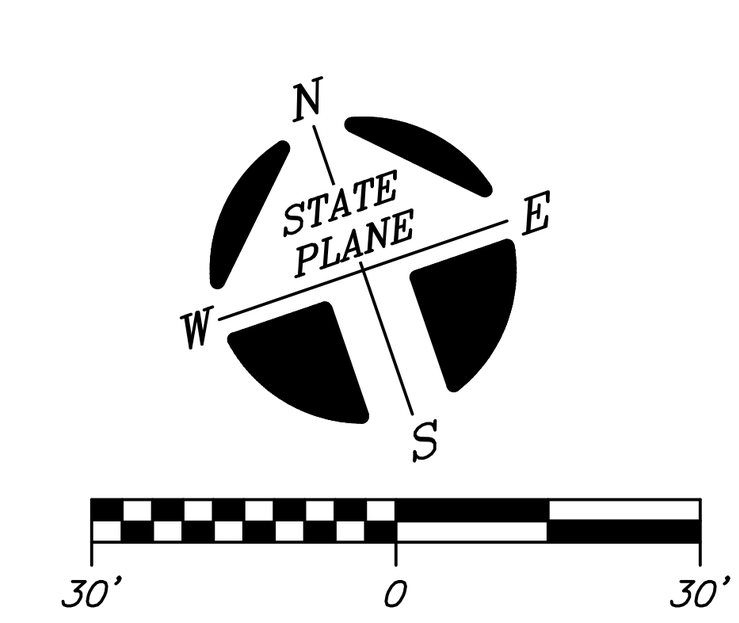
NOTES:
1. TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AFTER SETTLEMENT AS IT BORE TO PREVIOUS GRADE.
2. TREE SHALL STAND PLUMB.
3. DO NOT DAMAGE ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE
4. STAKING GUY WIRE TO BE REMOVED AT THE END OF THE GUARANTEE PERIOD.

TREE PLANTING DETAIL
NTS



NOTE:
WHERE SHRUBS ARE LOCATED IN BED AREAS, 4" LAYER OF MULCH SHALL BE SPREAD OVER THE ENTIRE AREA WITHIN THE BED AREA AS INDICATED ON THE LANDSCAPE PLANS.

SHRUB PLANTING DETAIL
NTS



LEGEND FOR MONUMENTS
IPS ○ IRON PIN SET
IPF ○ IRON PIN FND.
⬡ RAILROAD SPIKE
—×— FENCE
● SURVEY POINT
△ NAIL
CONC. MARKER FND.

OWNER: FHMY Realty Investors, LLC
Attn: Mina Nagib
ADDRESS: 6645 Sugar Valley Drive
Nashville, TN 37211

Tax Map 18-B, Group E, Parcel 3.00
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CHRISTOPHER B. ... STATE OF TENNESSEE, REGISTERED ENGINEER, AGRICULTURE, COMMERCE, No. 122189, 03-22-23

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2115 N.W. BROAD STREET, MURFREESBORO, TN 37129
SURVEYING : 893 - 4084, FAX: 893 - 0080

LANDSCAPE PLAN

5450 Murfreesboro Road LaVergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022	Scale: 1"=30'	Sheet 5 of 9

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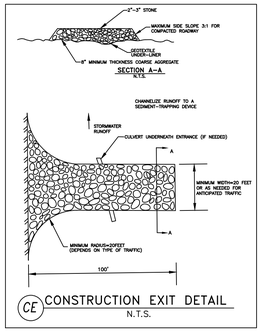
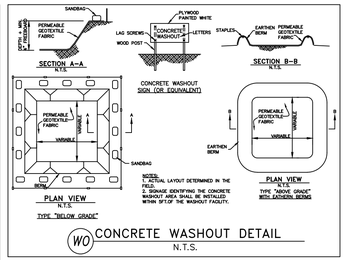
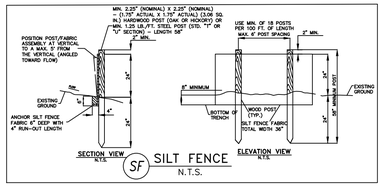
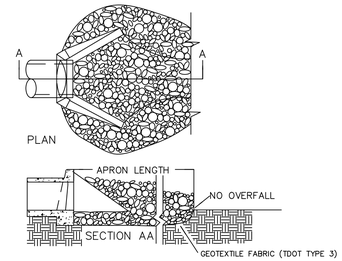
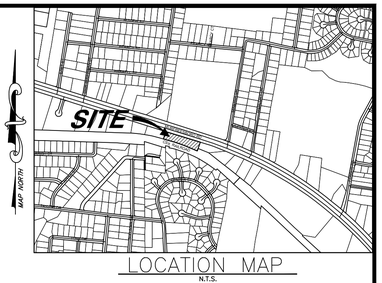




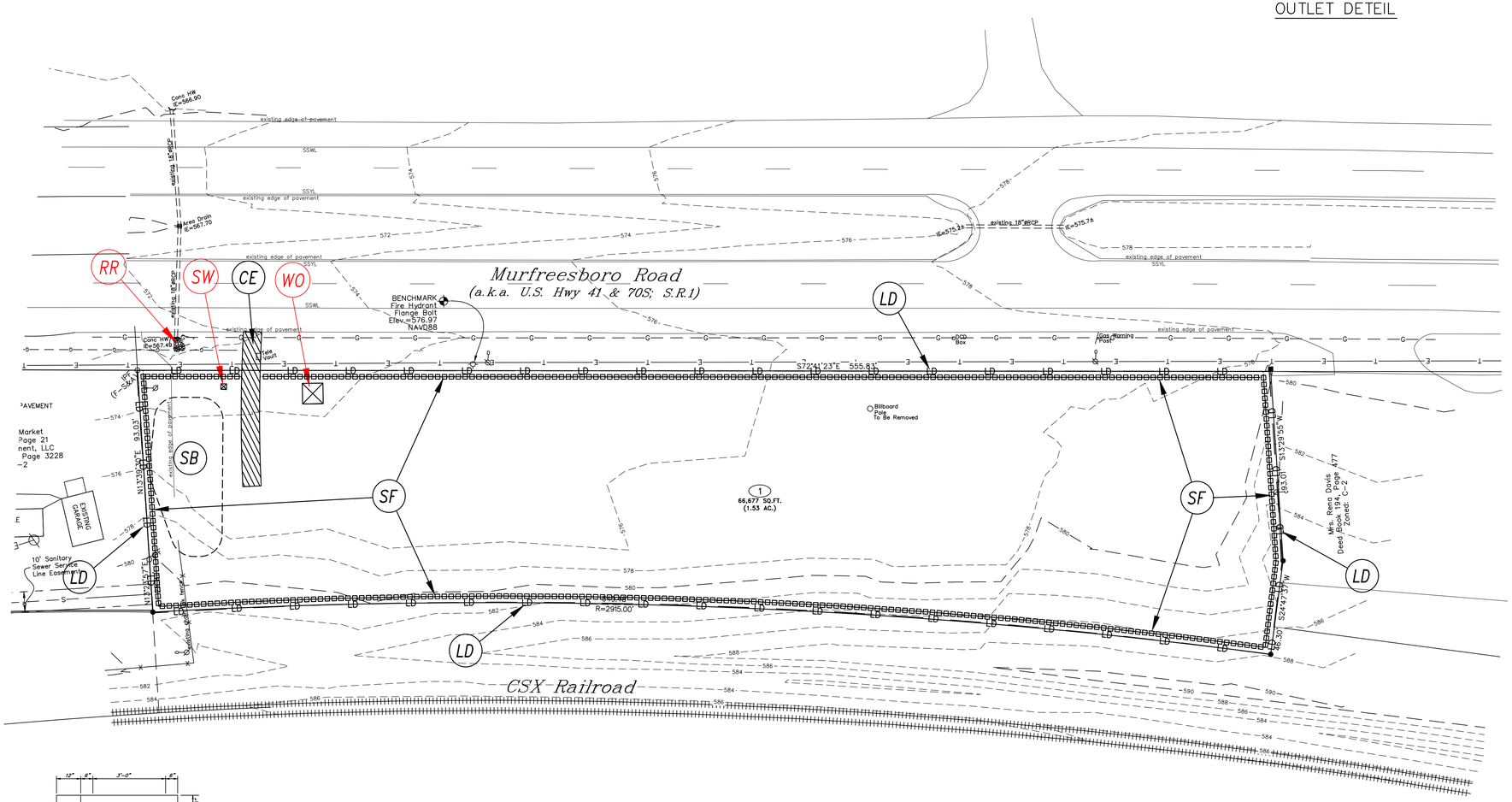


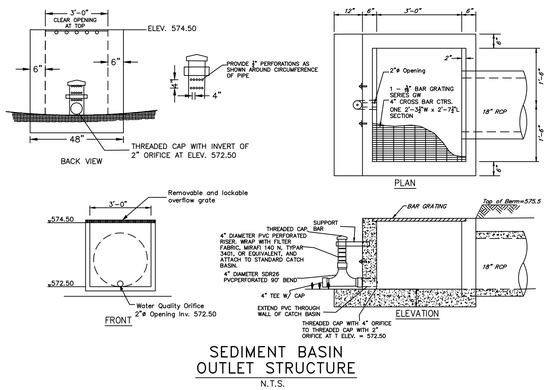


PERMANENT RIP-RAP AT STORMWATER OUTLET DETEIL

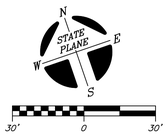


LOCATION MAP
N.T.S.





SEDIMENT BASIN OUTLET STRUCTURE
N.T.S.



LEGEND FOR MONUMENTS
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IPF ○ IRON PIN FND.
○ RAILROAD SPIKE
FENCE
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EROSION CONTROL LEGEND

- SF — SILT FENCE
- RR — RIP RAP WITH REINFORCEMENT MATTING
- CE — CONSTRUCTION EXIT
- SO — SITE OUTFALL
- SW — SWPPP BOX
- WO — CONCRETE WASHOUT
- SB — TEMPORARY SEDIMENT BASIN
- LD — LIMITS OF DISTURBANCE (LD — LD — LD)

EROSION CONTROL MEASURES

EROSION CONTROL INITIAL MEASURES
1. Siltation fence to be installed along perimeter as shown.
2. Install inlet protection of existing area drains.
3. Install construction entrance.
4. Call John Garrigan for an inspection at 893-6441.
5. Attend a preconstruction confrence.
6. Obtain a Land Disturbance Permit from Building and Codes.

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5. Stone check dams are to be installed in ditches once constructed.

EROSION CONTROL FINAL MEASURES
1. Vegetation of ditches and seeding of disturbed areas to be installed as final measures.

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SURVEYING : 893 - 4084, FAX: 893 - 6080

EROSION PREVENTION AND SEDIMENT CONTROL PLAN INITIAL MEASURES

5450 Murfreesboro Road La Vergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022 | Scale: 1"=30' | Sheet 6 of 9

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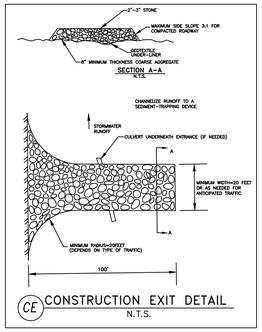
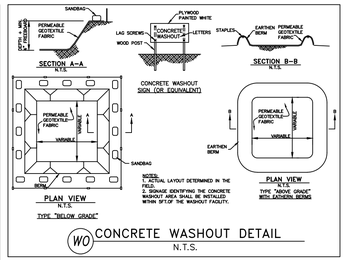
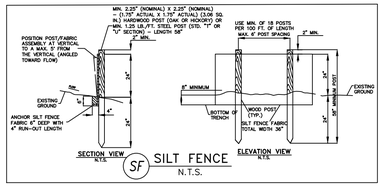
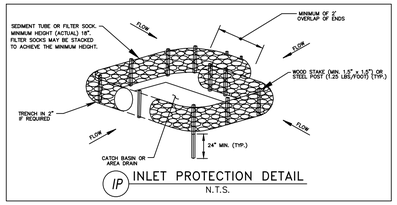
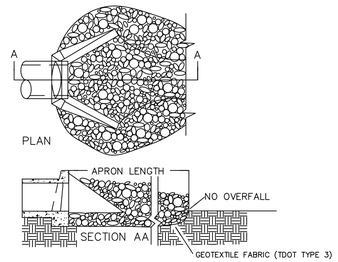


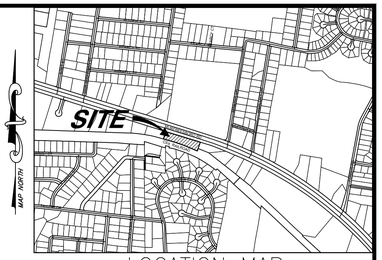








PERMANENT RIP-RAP AT STORMWATER OUTLET DETEIL



LOCATION MAP
N.T.S.

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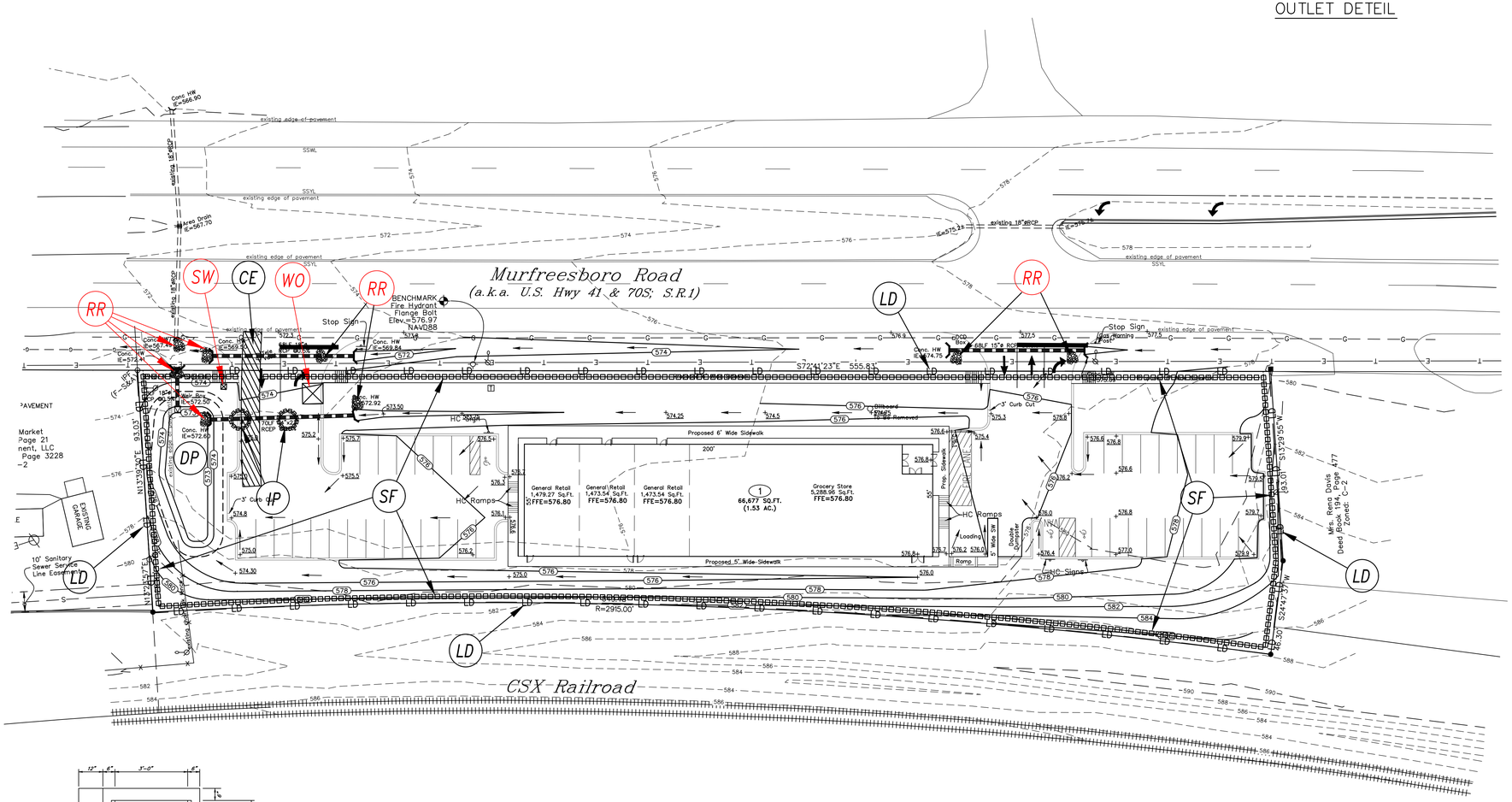
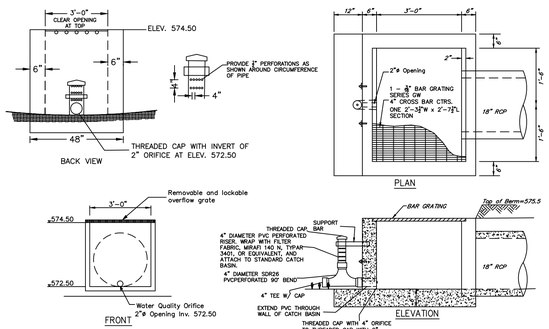
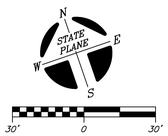
- SO — SITE OUTFALL
- SW — SWPPP BOX
- WO — CONCRETE WASHOUT
- DP — DETENTION POND
- LD — LIMITS OF DISTURBANCE (LD — LD — LD)
- IP — INLET PROTECTION





SEDIMENT BASIN OUTLET STRUCTURE
N.T.S.



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CHRISTOPHER B. GARRIGAN — AGRICULTURE — COMMERCE — 1339 — STATE OF TENNESSEE — 03-22-23

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2115 N.W. BROAD STREET, MURFREESBORO, TN 37129
SURVEYING : 893 - 4084, FAX: 893 - 0080

EROSION PREVENTION AND SEDIMENT CONTROL PLAN INTERMEDIATE MEASURES

5450 Murfreesboro Road La Vergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022	Scale: 1"=30'	Sheet 7 of 9

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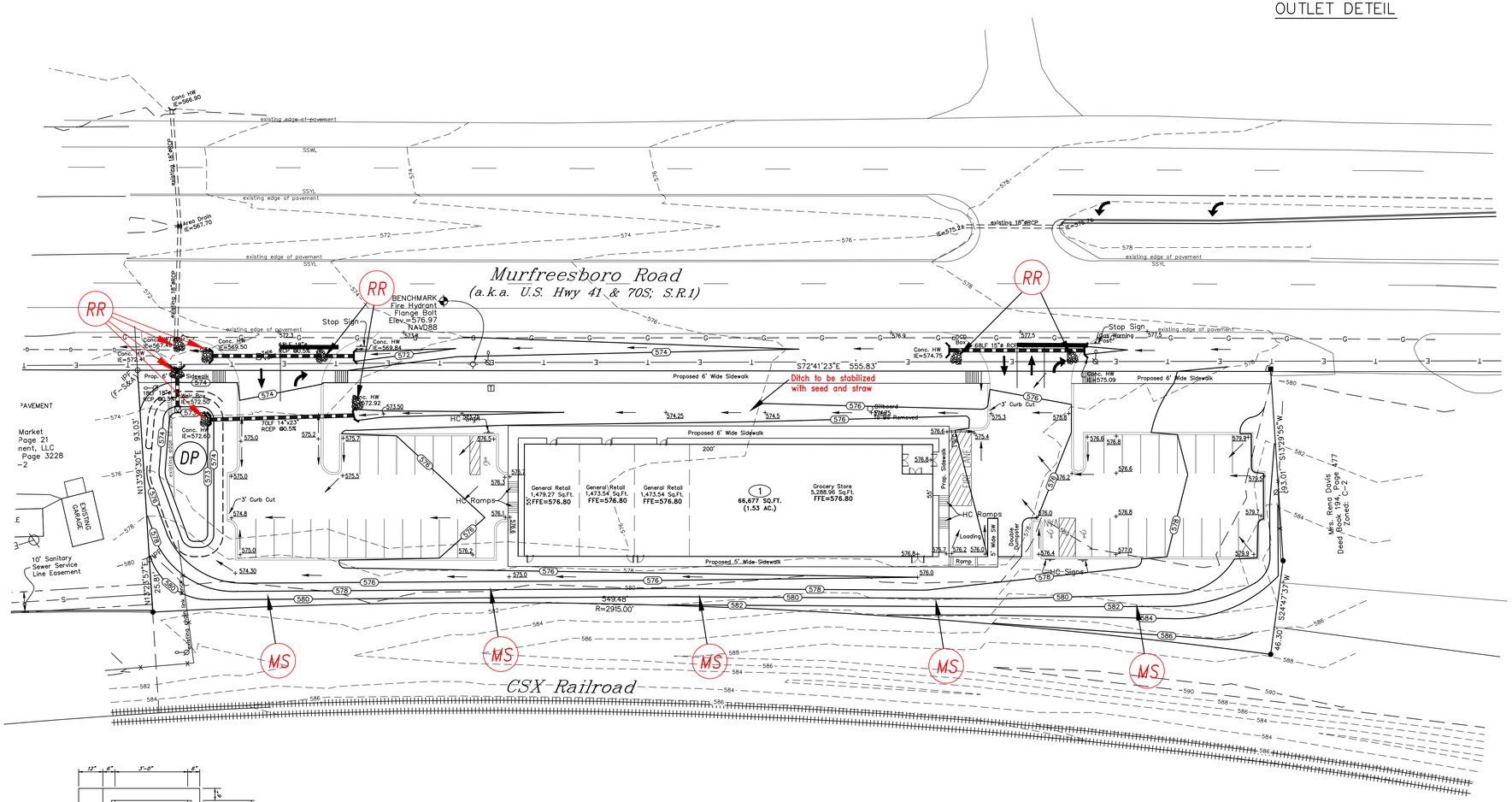

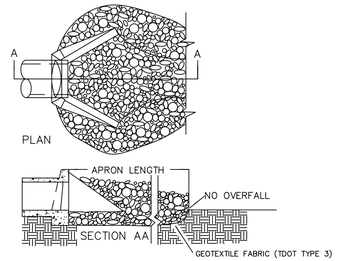

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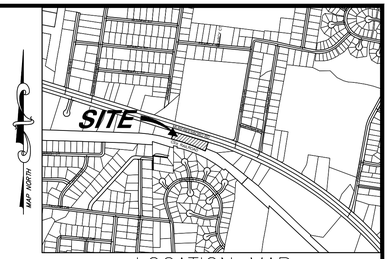

LOCATION MAP
N.T.S.

EROSION CONTROL LEGEND

- (MS) MESH AND SEEDING
- (RR) RIP RAP WITH REINFORCEMENT MATTING
- (SO) SITE OUTFALL
- (DP) DETENTION POND

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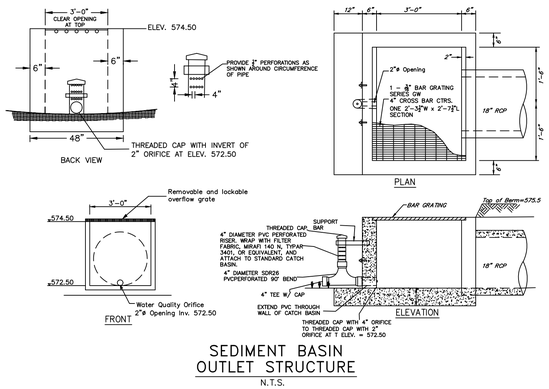

SEDIMENT BASIN OUTLET STRUCTURE
N.T.S.



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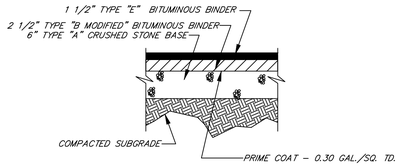

PAVING SECTION

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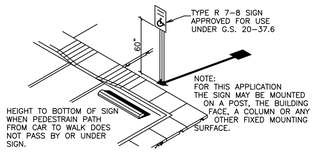
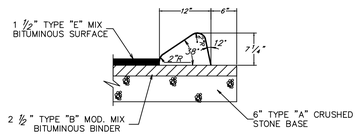


H.C. SIGN AND RAMP DETAILS

N.T.S.



EXTRUDED MOUNTABLE CONCRETE CURB

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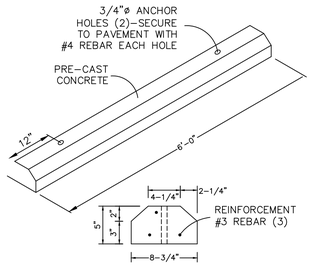

CONCRETE WHEEL STOP

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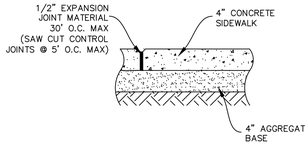
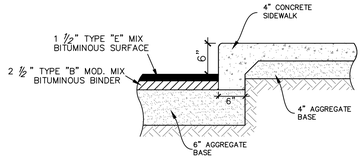


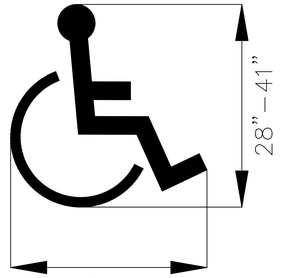
CONCRETE SIDEWALK DETAIL

N.T.S.



SIDEWALK AT PAVEMENT DETAIL

N.T.S.

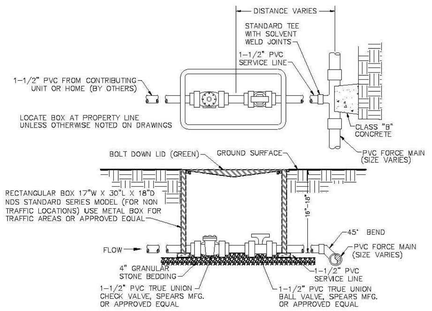


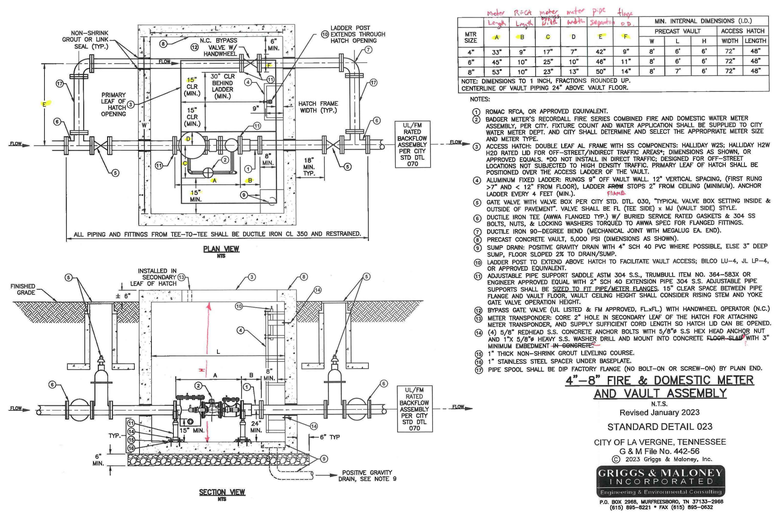
HANDICAP SYMBOL DETAIL

(PER M.U.T.C.D., 2001)

N.T.S.







Meter Size	Pitch A	Length B	Meter Width C	Meter Depth D	Pipe Segments E	Flange F,G	MIN. INTERNAL DIMENSIONS (I.D.) VAULT W	VAULT L	VAULT H	ACCESS HATCH WIDTH	ACCESS HATCH LENGTH
4"	33"	9"	17"	7"	42"	9"	8'	6'	6'	72"	48"
6"	45"	10"	25"	10"	46"	11"	8'	6'	6'	72"	48"
8"	53"	10"	23"	13"	50"	14"	8'	7'	6'	72"	48"

NOTE: DIMENSIONS TO 1 INCH, FRACTIONS ROUNDED UP. CENTERLINE OF VAULT PIPING 24" ABOVE VAULT FLOOR.

NOTES:
1. ROMAC RFDA, OR APPROVED EQUIVALENT.
2. BADGER METER'S RECORDALL FIRE SERIES COMBINED FIRE AND DOMESTIC WATER METER ASSEMBLY, PER CITY. FIXTURE COUNT AND WATER APPLICATION SHALL BE SUPPLIED TO CITY WATER METER DEPT. AND CITY SHALL DETERMINE AND SELECT THE APPROPRIATE METER SIZE AND METER TYPE.
3. ACCESS HATCH: DOUBLE LEAF AL FRAME WITH SS COMPONENTS: HALLIDAY W2S; HALLIDAY H2W H20 RATED LID FOR OFF-STREET/INDIRECT TRAFFIC AREAS*; DIMENSIONS AS SHOWN, OR APPROVED EQUALS. *DO NOT INSTALL IN DIRECT TRAFFIC; DESIGNED FOR OFF-STREET LOCATIONS NOT SUBJECTED TO HIGH DENSITY TRAFFIC. PRIMARY LEAF OF HATCH SHALL BE POSITIONED OVER THE ACCESS LADDER OF THE VAULT.
4. ALUMINUM FIXED LADDER: RUNGS 9" OFF VAULT WALL. 12" VERTICAL SPACING, (FIRST RUNG >7" AND < 12" FROM FLOOR), LADDER 48MM STOPS 2" FROM CEILING (MINIMUM). ANCHOR LADDER EVERY 4 FEET (MIN.). Handh
5. GATE VALVE WITH VALVE BOX PER CITY STD. DTL. 030, "TYPICAL VALVE BOX SETTING INSIDE & OUTSIDE OF PAVEMENT". VALVE SHALL BE FL (TEE SIDE) x MJ (VAULT SIDE) STYLE.
6. DUCTILE IRON TEE (AWWA FLANGED TYP.) W/ BURIED SERVICE RATED GASKETS & 304 SS BOLTS, NUTS, & LOCKING WASHERS TORQUED TO AWWA SPEC FOR FLANGED FITTINGS.
7. DUCTILE IRON 90-DEGREE BEND (MECHANICAL JOINT WITH MEGALUG EA. END).
8. PRECAST CONCRETE VAULT, 5,000 PSI (DIMENSIONS AS SHOWN).
9. SUMP DRAIN: POSITIVE GRAVITY DRAIN WITH 4" SCH 40 PVC WHERE POSSIBLE, ELSE 3" DEEP SUMP, FLOOR SLOPED 2% TO DRAIN/SUMP.
10. LADDER POST TO EXTEND ABOVE HATCH TO FACILITATE VAULT ACCESS; BILCO LU-4, JL LP-4, OR APPROVED EQUIVALENT.
11. ADJUSTABLE PIPE SUPPORT SADDLE ASTM 304 S.S., TRUMBULL ITEM NO. 364-583X OR APPROVED EQUAL WITH 2" SCH 40 EXTENSION PIPE 304 S.S. ADJUSTABLE PIPE SUPPORTS SHALL BE SIZED TO FIT PIPE/METER FLANGES. 15" CLEAR SPACE BETWEEN PIPE FLANGE AND VAULT FLOOR, VAULT CEILING HEIGHT SHALL CONSIDER RISING STEM AND YOKE GATE VALVE OPERATION HEIGHT.
12. BYPASS GATE VALVE (UL LISTED & FM APPROVED, FL-xFL) WITH HANDWHEEL OPERATOR (N.C.)
13. METER TRANSPONDER: CORE 2" HOLE IN SECONDARY LEAF OF THE HATCH FOR ATTACHING METER TRANSPONDER, AND SUPPLY SUFFICIENT CORD LENGTH SO HATCH LID CAN BE OPENED.
14. (4) 5/8" HEXHEAD S.S. CONCRETE ANCHOR BOLTS WITH 5/8"ø S.S HEX HEAD ANCHOR NUT AND 1"X 5/8"ø HEAVY S.S. WASHER DRILL AND MOUNT INTO CONCRETE FLOOR SLAB WITH 3" MINIMUM EMBEDMENT. IN CONCRETE.
15. 1" THICK NON-SHRINK GROUT LEVELING COURSE.
16. 1" STAINLESS STEEL SPACER UNDER BASEPLATE.
17. PIPE SPOOL SHALL BE DIP FACTORY FLANGE (NO BOLT-ON OR SCREW-ON) BY PLAIN END.

4"–8" FIRE & DOMESTIC METER AND VAULT ASSEMBLY

N.T.S.

Revised January 2023

STANDARD DETAIL 023

CITY OF LA VERGNE, TENNESSEE

G & M File No. 442-56

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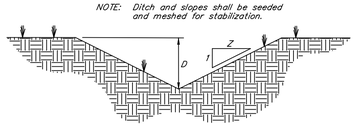
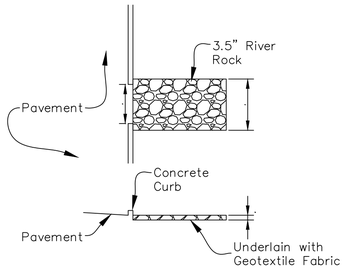
GRIGGS & MALONEY INCORPORATED
Engineering & Environmental Consultants
P.O. BOX 2995, MURFREESBORO, TN 37133-2995
(615) 895-8221 * FAX (615) 895-0632



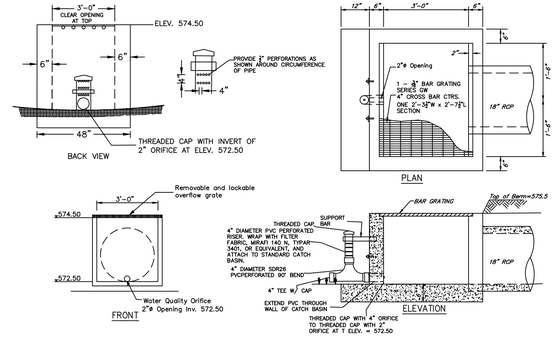
TRIANGULAR SWALE DRAINAGE DITCH

N.T.S.



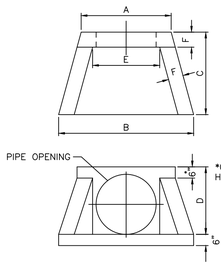
Curb Cut Energy Dissipation Detail

N.T.S.



DETENTION OUTLET STRUCTURE DETAIL

N.T.S.

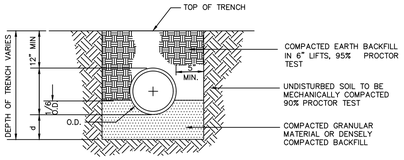


SIZE	AW	BW	CW	DW
A	32"	48"	80"	99"
B	48"	72"	102"	120"
C	30"	44"	54"	56"
D	26"	36"	60"	66"
E	24"	36"	64"	83"
F	6"	8"	8"	8"
MAX. OPENING	22"	32"	55"	75"
WT/*	1,380	3,100	8,100	11,400

General Notes:
1. Minimum Reinforcing: Wire Reinforcement 4x4 W7xW7
2. F'c – 4,500 PSI.
3. Fy – 60 KSI.

CONCRETE HEADWALL DETAIL

N.T.S.



NOTES:
1. WHEN PIPE IS TO BE PLACED IN A FILL SECTION THE COMPACTED FILL SHALL BE PLACED A MIN. OF 12" ABOVE THE PIPE ELEVATION BEFORE THE TRENCH IS EXCAVATED.

2. SUBGRADES SHOULD BE EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED.

PIPE DIA.	D (MIN)
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

TRENCH BEDDING FOR STORM DRAIN CMP & RCP ONLY

N.T.S.

DRAWING REVISIONS		
NO.	DATE	DESCRIPTION
0	08-29-22	Original Issue – For Review
1	09-19-22	Revised Per La Vergne Workshop Comments
2	02-27-23	Revised For Resubmittal to Planning
3	03-20-23	Revised Per La Vergne Workshop Comments
4	03-22-23	Revised Per La Vergne Engineering Comments

19.0

TYPICAL PRESSURE SEWER SERVICE LINE CONNECTION

NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

CTI ENGINEERS, INC.
3354 PERIMETER HILL DRIVE, SUITE 140
NASHVILLE, TN 37211
615-834-8300

PUBLIC WORKS DEPARTMENT
148 INTERNATIONAL BLVD.
LA VERGNE, TN 37086
615-793-9891

CHRISTOPHER R. FARRER — 03-22-23 — REGISTERED AGRICULTURE ENGINEER — 12-2196 — COMMERCE — STATE OF TENNESSEE

HUDDLESTON-STEELE ENGINEERING, INC.
2115 N.W. BROAD STREET, MURFREESBORO, TN 37129
SURVEYING : 893 – 4084, FAX: 893 – 0080

DETAILS

5450 Murfreesboro Road
La Vergne, TN

3rd Civil District of Rutherford County, Tennessee

Date: August, 2022	*N.T.S.*	*Sheet 9 of 9*

C:\Civil 3D Projects\Farrer - Lavergne\DWG\Nagib Site Plan March 2023.dwg, Site Plan, 3/22/2023 10:27:56 AM, ACAD204

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan – Scott Equipment – Building Addition of 1,060 Square Feet & Parking Lot. Requested by Fulmer - Lucas. Property located at 140 Waldron Road (Tax Map 29, Parcel 5.12). I-2 (Heavy Industrial) Zoning District. Property owned by Scott Equipment, LLC.

Reviewed By: Bo Logan, City Planner

Summary

On behalf of their client, Fulmer Engineering is requesting site plan approval for a proposed addition & a new parking lot to be built on Waldron Road. The total size of the site is 15.72 acres. This parcel is contained within the Waldron Road Overlay Streetscape District and must adhere to the applicable overlay provisions.

In September of 2018 the applicant appeared before the La Vergne Planning Commission and gained site plan approval on their original building.

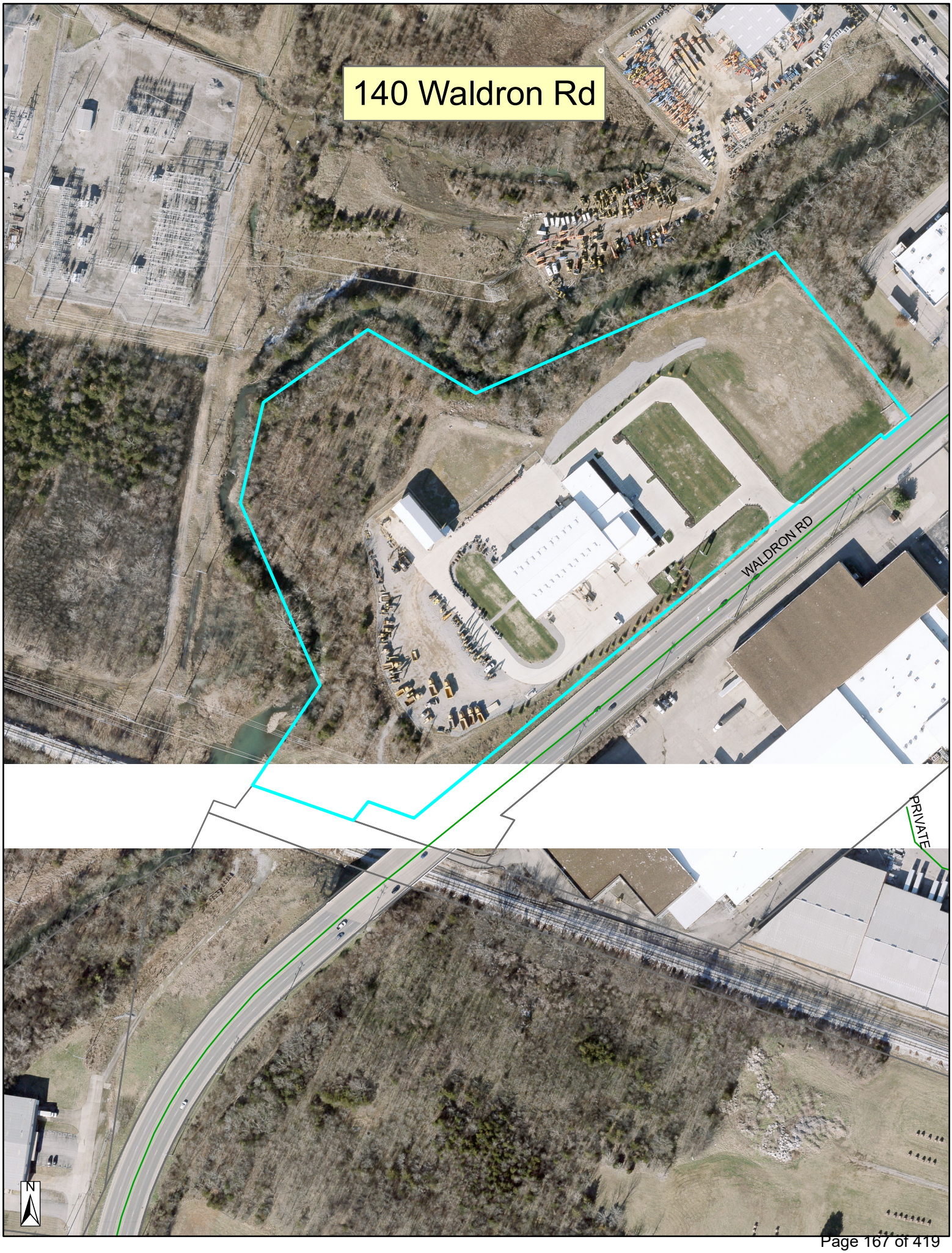
Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

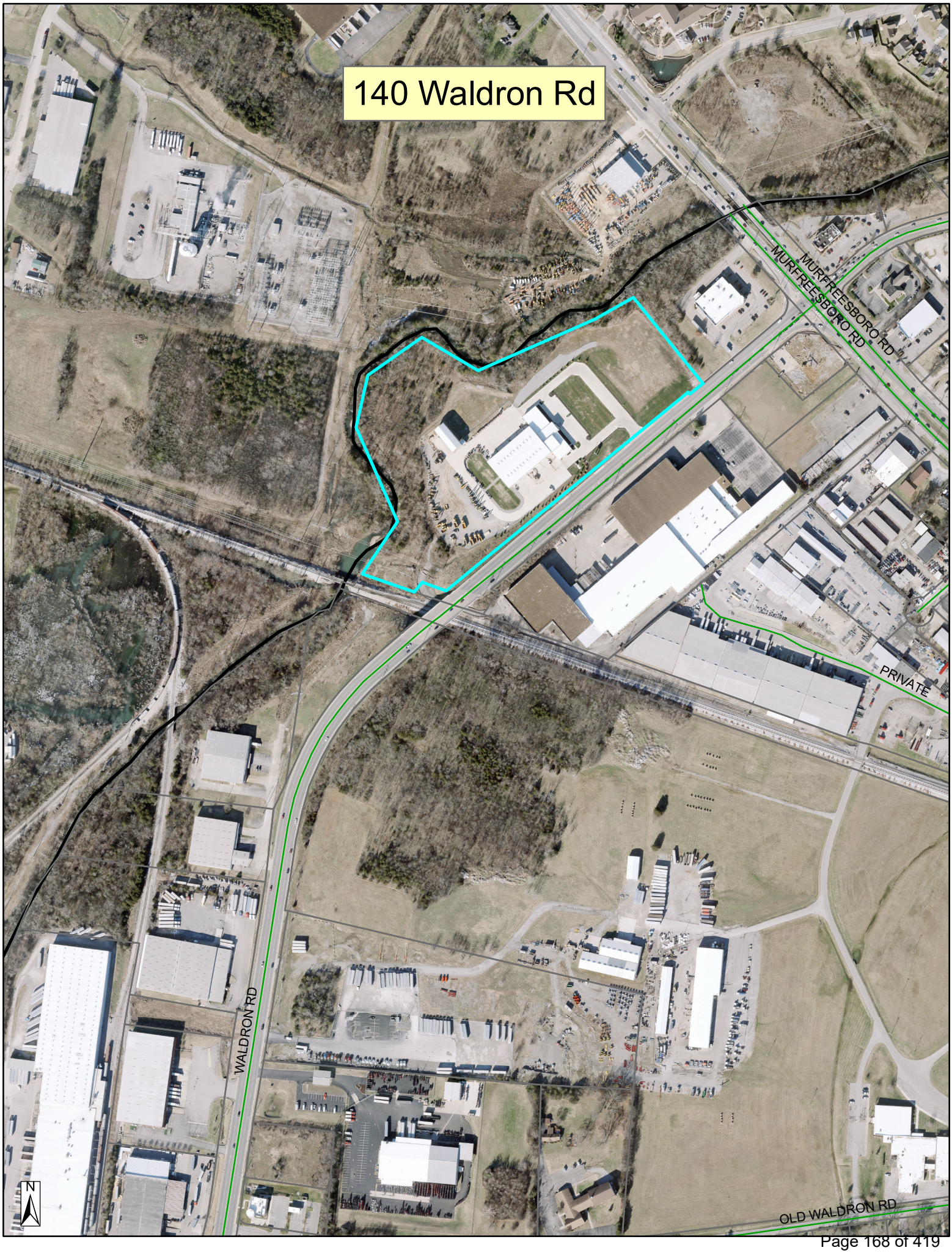
1.

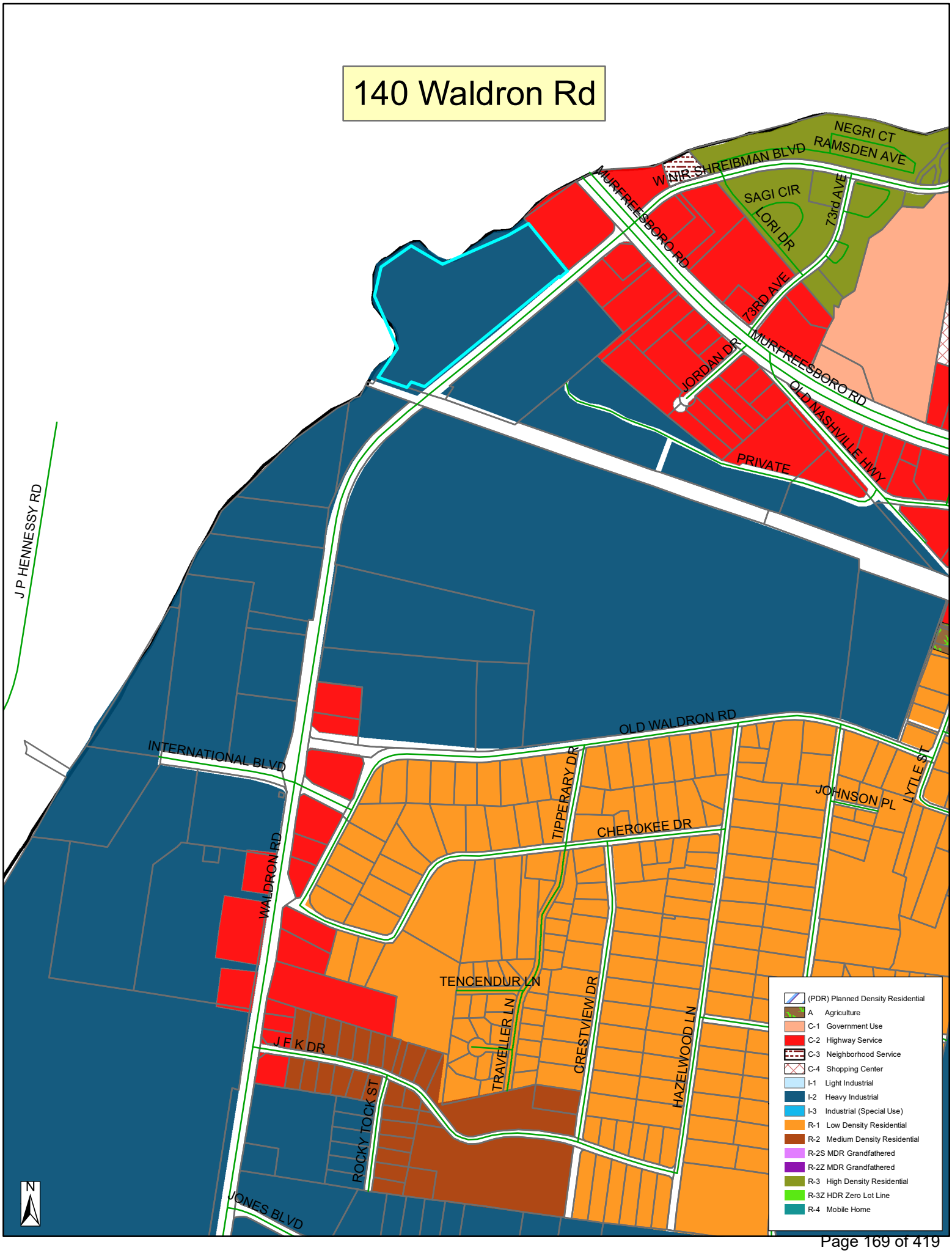
Other Concerns

1.

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


140 Waldron Rd
WALDRON RD
PRIVATE
N


140 Waldron Rd
MURFREESBORO RD
MURFREESBORO RD
PRIVATE
WALDRON RD
OLD WALDRON RD
N


140 Waldron Rd
NEGRI CT
RAMSDEN AVE
W NIR SHREIBMAN BLVD
MURFREESBORO RD
SAGI CIR
LORI DR
73rd AVE
73RD AVE
JORDAN DR
MURFREESBORO RD
OLD NASHVILLE HWY
PRIVATE
J P HENNESSY RD
INTERNATIONAL BLVD
OLD WALDRON RD
TIPPERARY DR
JOHNSON PL
LYTLE ST
CHEROKEE DR
WALDRON RD
TENCENDUR LN
TRAVELLER LN
CRESTVIEW DR
HAZELWOOD LN
J F K DR
ROCKY TOCK ST
JONES BLVD
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home


VOLVO
TADANO
KOBELCO


SCOTT
EQUIPMENT
HEAVY-DUTY COMMITMENT


SCOTT
EQUIPMENT


VOLVO
CASE

Know what's below. Call before you dig.

SITE DEVELOPMENT PLANS FOR:
WALDRON PARTS BUILDING
140 WALDRON ROAD
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE 37086
TAX MAP 015 PARCEL 0170.03

DEVELOPER
SCOTT EQUIPMENT COMPANY, LLC
365 CANAL STREET, SUITE 2330
NEW ORLEANS, LA 70130

CONTACT: ERIC GOEBEL
504-405-3552

CIVIL ENGINEER
FULMER ENGINEERING, LLC
2002 RICHARD JONES ROAD - SUITE B200
NASHVILLE, TENNESSEE 37215

CONTACT: JAY FULMER
615-516-8477

LAND SURVEYOR
GULF STATES ENGINEERING, INC.
600 AZALEA ROAD
MOBILE, ALABAMA 36609

CONTACT: DOUGLAS BALL-CHANDLER
251-460-4646

ARCHITECT
R. ALEXANDER ARCHITECTURE, P.L..L.C.
104 SIOUX COURT
HENDERSONVILLE, TN 37075

CONTACT: RICK ALEXANDER
615-587-8249

LANDSCAPE ARCHITECT
HEIBERT +BALL LAND DESIGN
1894 GEN. GEO. PATTON DRIVE SUITE 400
FRANKLIN, TN 37067

CONTACT: CONNOR BALL
615-376-2421



VICINITY MAP
N.T.S

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
V-1.00	TOPOGRAPHIC SURVEY
C0.1	SITE DEMOLITION PLAN
C1.0	SITE LAYOUT PLAN
C2.0	SITE GRADING & EPSC PLAN
C3.0	SITE DETAILS
A100	BUILDING ELEVATIONS

SURVEY INFO
PROVIDED BY: GULF STATES ENGINEERING, INC.
DATUM: TENNESSEE STATE PLANE (NAD83 & NAVD 88)

FULMER LUCAS
2002 RICHARD JONES RD - SUITE B200
NASHVILLE, TENNESSEE 37215
INFO@FULMERLUCAS.COM - (615) 345-3770

JOSEPH KYLE HOLLOWAY
REGISTERED ENGINEER
AGRICULTURE
No. 120959
STATE OF TENNESSEE
RKH 03/21/23

SITE DEVELOPMENT PLANS FOR:
SCOTT EQUIPMENT PARTS BUILDING ADDITION
140 WALDRON ROAD
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE 37086

DR.	DATE	DESCRIPTION
JKH	04/05/2023	INITIAL PLANNING COMMISSION SUBMITTAL

COVER SHEET

C0.0

1123-04 SCOTT EQUIPMENT PARTS BUILDING

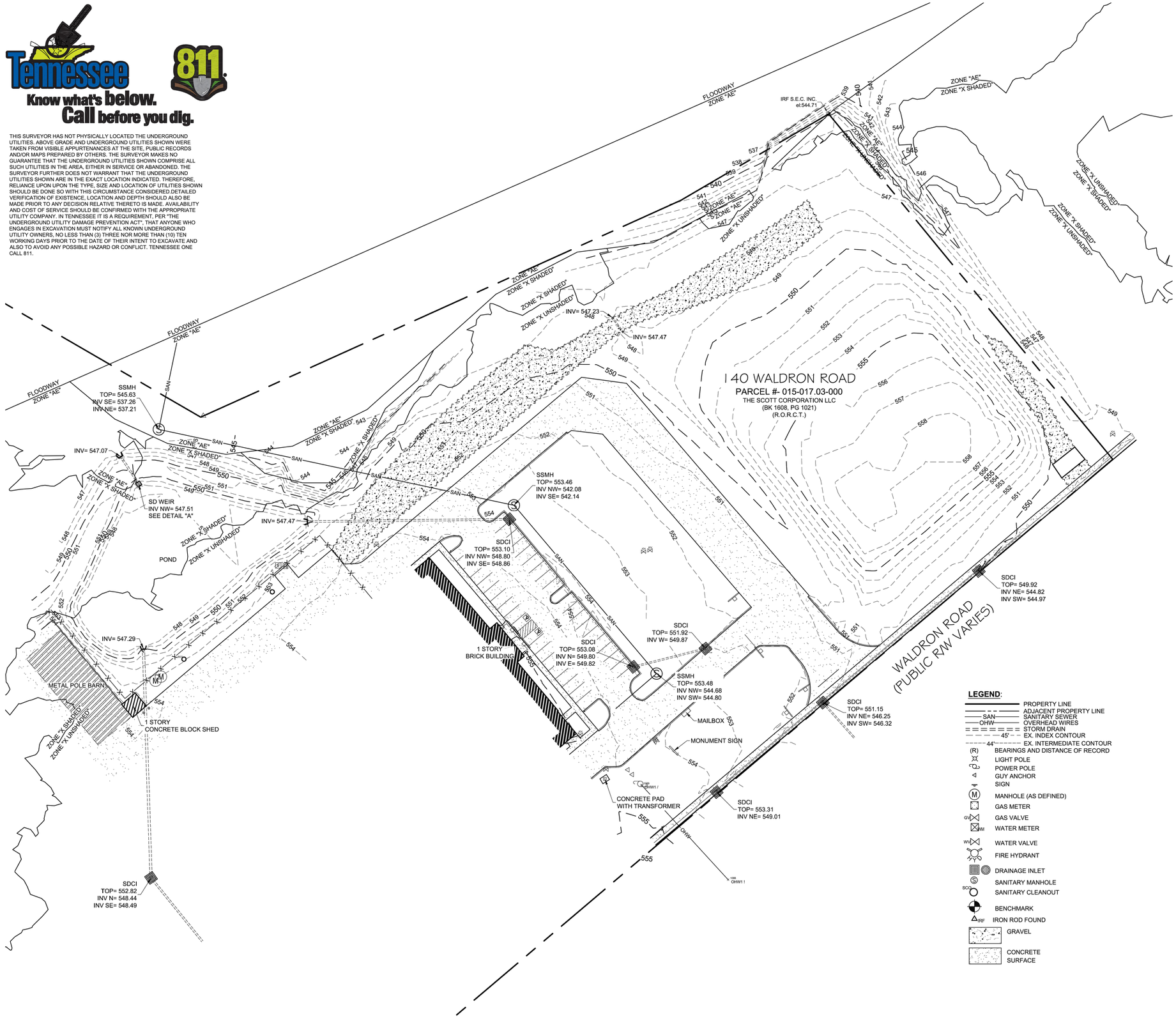
Wednesday, April 5, 2023
P:\1123 Scott Equipment\01 - Waldron Parts Bldg\02 - Cad\Sheets\1123-04_Cover Sheet.dwg

Know what's below.
Call before you dig.

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED.DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.



VICINITY MAP



LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- SAN — SANITARY SEWER
- OHW — OVERHEAD WIRES
- STORM DRAIN
- 45' — EX. INDEX CONTOUR
- 44' — EX. INTERMEDIATE CONTOUR
- (R) BEARINGS AND DISTANCE OF RECORD
- LIGHT POLE
- POWER POLE
- GUY ANCHOR
- SIGN
- M — MANHOLE (AS DEFINED)
- GAS METER
- GV — GAS VALVE
- WM — WATER METER
- WV — WATER VALVE
- FIRE HYDRANT
- DRAINAGE INLET
- S — SANITARY MANHOLE
- SCO — SANITARY CLEANOUT
- BENCHMARK
- IRF — IRON ROD FOUND
- GRAVEL
- CONCRETE SURFACE

0 40 80 Feet

SCALE: 1" = 40'
T.S.P.C.S.

DEED REFERENCE

BEING PARCEL ID# 015-017.03-000, RUTHERFORD COUNTY. BEING THE SAME AS CONVEYED TO THE SCOTT CORPORATION, LLC AS RECORDED IN BOOK 1608, PG 1021 REGISTERS OFFICE RUTHERFORD COUNTY, TENNESSEE.

GENERAL NOTES:

1. THIS PROPERTY IS LOCATED IN ZONE "AE", "X SHADED", AND "X UNSHADED" AREA OF MINIMAL FLOODING AS PER FEMA FLOOD MAP 47149C0015H WITH AN EFFECTIVE DATE ON 01/05/2007.
2. PROPERTIES CURRENTLY ZONED: I-2: HEAVY INDUSTRIAL.
3. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY EFFECT THE USE OR DEVELOPMENT OF THE PARCEL.
4. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS, OR ENTITY, IF ANY, NAMED HEREON. THIS DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT AN EXPRESS WRITTEN CONSENT BY THE SURVEYOR.
5. HEREON PROPERTY IS SUBJECT TO THE RESTRICTIONS AND REGULATIONS SET FORTH BY THE RUTHERFORD COUNTY & LA VERGNE PLANNING COMMISSION.
6. NO LIABILITY WILL BE ACCEPTED BEYOND THAT OF THE FOUR (4) YEAR STATUTE OF LIMITATIONS (T.C.A. 28-3-114 & T.C.A. 28-3-202) ORIGINATING FROM THE FIELD DATE SHOWN HEREON.
7. THIS SURVEY IS NOT A GENERAL PROPERTY SURVEY AS DEFINED UNDER RULES OF TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS, TENNESSEE ANNOTATIVE CODE CHAPTER 0820-3-07.
8. WATER AND SANITARY SEWER MAPS HAVE BEEN REQUESTED.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT I AM LICENSED TO PRACTICE THE PROFESSION OF LAND SURVEYING IN THE STATE OF TENNESSEE AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF AND IN MY PROFESSIONAL OPINION, DO HEREBY STATE THE FOLLOWING:

THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE REQUIREMENTS OF A TOPOGRAPHIC SURVEY AND CONFORMS TO THE ACCURACY AS CURRENTLY DEFINED AND ADOPTED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYOR

DOUGLAS W. BALL-CHANDLER, RLS #2588 — DATE 2/9/2023

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY
A	2/9/2023	ISSUED FOR REVIEW	CDE	DBC	DBC

GSE Gulf States Engineering, Inc.
www.GSEeng.com
Gulfport Mobile Nashville
600 Azalea Rd. Mobile, AL 36609
(T)251-460-4646 (F)251-460-4649

SEAL
DOUGLAS W. BALL-CHANDLER
REGISTERED
AGRICULTURE
LAND SURVEYOR
STATE OF TENNESSEE 2588

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TITLE
SCOTT EQUIPMENT
PARTIAL TOPOGRAPHIC SURVEY
140 WALDRON ROAD
LA VERGNE, TENNESSEE

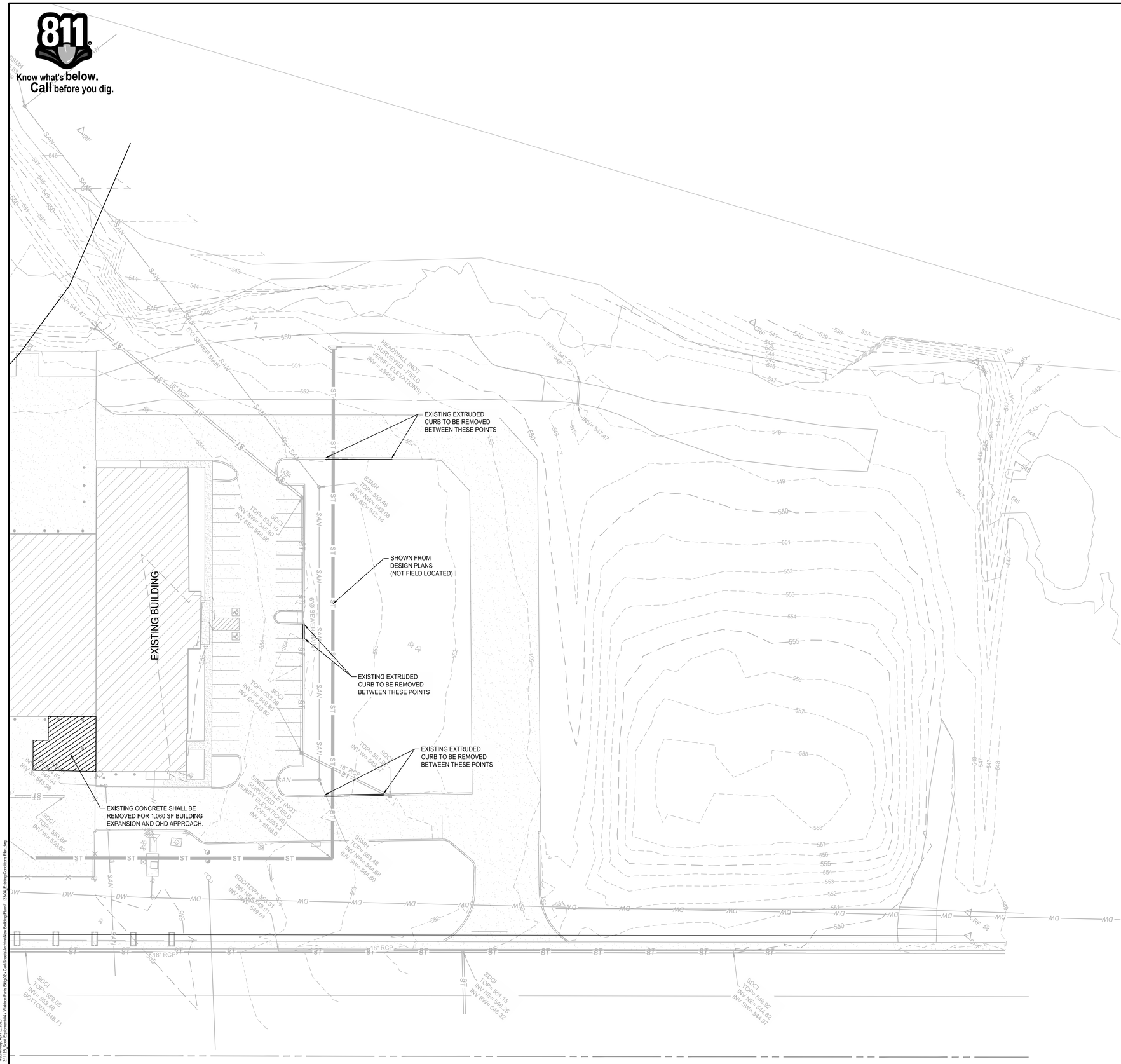
DRAWN:	CHECKED:	APPROVED:
CDE	DBC	DBC

DATE:	SCALE:
2/9/2023	1" = 40'

DRAWING NUMBER: TS23004
REVISION: A

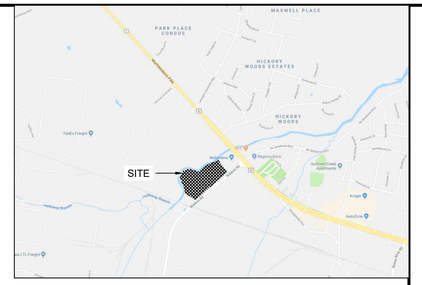
V-1.00

811 Know what's below. Call before you dig.



LEGEND

- IRON ROD (OLD)
- BENCHMARK
- CATCH BASIN
- FIRE HYDRANT
- SEWER MANHOLE
- EXISTING TREE
- WATER VALVE
- WATER METER
- IRON ROD (NEW)
- UTILITY POLE



VICINITY MAP
N.T.S

MAP REFERENCE:

OWNER(S): THE SCOTT CORPORATION, LLC

FEMA MAP NO. 47149C0015H DATED 1/5/2007
PROPERTY IN FLOOD ZONE AE AND X

GENERAL NOTES:

1. GENERAL CONTRACTOR (GC) IS TO CONFORM TO ALL LOCAL CODES AND OBTAIN ALL PERMITS PRIOR TO BEGINNING WORK.
2. GC SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. GC SHALL TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ALL CONTRACTOR CAUSED DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
3. GC SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND OR OVERHEAD ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK, THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF ELECTRICAL WIRES, THE ELECTRICAL COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN.
4. IN EASEMENTS AND RIGHTS-OF-WAY, GC SHALL PROTECT AND RESTORE SAID PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING AT THE COMMENCEMENT OF CONSTRUCTION, EXCEPT WHERE NOTED.
5. GC IS TO PHOTOGRAPH ALL EXISTING CONDITIONS PRIOR TO INITIATING CONSTRUCTION.
6. CLEAR THE ENTIRE CONSTRUCTION AREA OF ALL WEEDS, BUSHES, TREES NOTED FOR REMOVAL OR WITHIN GRADING BOUNDARY, STUMPS, ASPHALT, CONCRETE, CURBS AND OTHER PROTRUDING OBSTRUCTIONS NOT DESIGNATED TO REMAIN.
7. ALL MATERIALS NOT TO REMAIN ARE TO BE DISPOSED OF OFF SITE AT A PROPERLY PERMITTED LOCATION.
8. GC IS RESPONSIBLE FOR CLEANING AND MAINTAINING HAUL ROUTES AND CONTROLLING DUST. CLEANING SHOULD BE CONTINUOUS DURING ACTIVE WORK.
9. GC IS RESPONSIBLE FOR ALL NECESSARY EROSION CONTROL TO KEEP SEDIMENT ON SITE, EVEN IF IT IS NOT DIRECTLY SHOWN ON THE PLANS. ANY EROSION CONTROL NEEDED NOT SHOWN ON THE PLANS SHALL BE MARKED ON THE PLANS.
10. GC SHALL NOT DISTURB EXISTING CONDITIONS OUTSIDE OF THE PROJECT PROPERTY UNLESS SHOWN ON THE PLANS OR WITH PERMISSION OF THE PROPERTY OWNER. ANY UNAUTHORIZED DAMAGES SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
11. ALL CURB AND GUTTER TO BE DEMOLISHED SHALL BE REMOVED TO THE NEAREST JOINT. CONTRACTOR TO FIELD VERIFY LIMITS AS JOINTS ARE NOT SHOWN ON THE PLANS.

0 15 30 60 90
SCALE: 1" = 30'

SURVEY INFO
PROVIDED BY: GULF STATES ENGINEERING, INC.
DATUM: TENNESSEE STATE PLANE (NAD83 & NAVD 88)

FULMER LUCAS
2002 RICHARD JONES RD - SUITE B200
NASHVILLE, TENNESSEE 37215
INFO@FULMERLUCAS.COM - (615) 345-3770

JAMES K. HOLLAND 102350 LICENSED PROFESSIONAL ENGINEER AGRICULTURE STATE OF TENNESSEE 4/04/2023

SITE DEVELOPMENT PLANS FOR:
SCOTT EQUIPMENT PARTS BUILDING ADDITION
140 WALDRON ROAD
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE 37086

DR.	DATE	DESCRIPTION
JKH	04/05/2023	INITIAL PLANNING COMMISSION SUBMITTAL

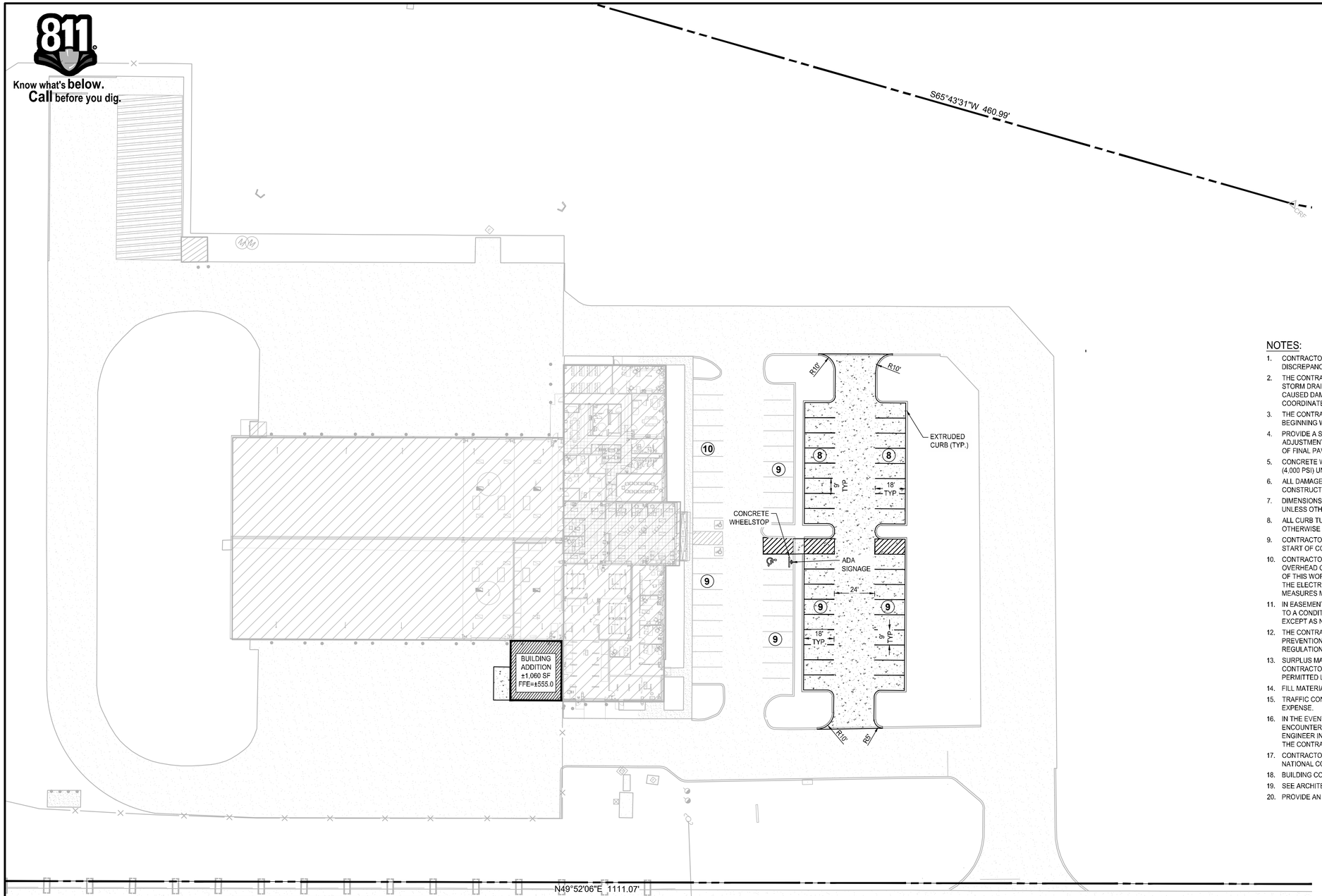
SITE DEMOLITION PLAN

C0.1

1123-04 SCOTT EQUIPMENT PARTS BUILDING

Wednesday, April 5, 2023
Z:\Projects\2023\1123-04 - Waldron Parts Bldg\02 - Cad\Sheets\Architecture Building Plans\1123-04_Existing Conditions Plan.dwg

811
Know what's **below.**
Call before you dig.



SITE DATA:

ADDRESS:	140 WALDRON ROAD
TAX MAP / PARCEL:	MAP 015 / PARCEL 0170.03
PARCEL ACREAGE:	15.72 ACRES (684,798 SF)
DISTURBED ACREAGE:	2.6 ACRES
ZONING DISTRICT:	I-2 HEAVY INDUSTRIAL (EXISTING)
EXISTING USE:	MACHINERY SALES AND SERVICE
PROPOSED USE:	MACHINERY SALES AND SERVICE
BUILDING (SF):	1,060 SF PROPOSED ADDITION 35,560 SF EXISTING PRIMARY BUILDING
BUILDING HEIGHT:	26' - 6" FROM FFE
FAR:	0.055 PROPOSED (36,620 SF / 684,798 SF) 0.052 EXISTING (35,560 SF / 684,798 SF)
SIGN HEIGHT & AREA:	NO NEW SIGNAGE PROPOSED
FEMA MAP:	47149C0015H, DATED 1/5/2007
PARKING REQUIRED:	36 SPACES (1 SP/400 SF OF OFFICE AND 1 SP/4,000 SF GROSS FLOOR AREA)
PARKING PROVIDED:	71 SPACES (W/ 3 ADA SPACES INCLUDED)

NOTES:

1. CONTRACTOR SHALL CHECK ALL FINISHED GRADES AND DIMENSION IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND INVERT OF ALL EXISTING UTILITIES AND STORM DRAINAGE. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR CONTRACTOR CAUSED DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
3. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND OBTAIN ALL PERMITS PRIOR TO BEGINNING WORK.
4. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAYBE NECESSARY. INSTALL ALL UTILITIES PRIOR TO INSTALLATION OF FINAL PAVEMENT.
5. CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH. ALL CONCRETE SHALL BE CLASS "A" (4,000 PSI) UNLESS OTHERWISE NOTED.
6. ALL DAMAGE TO EXISTING ASPHALT PAVEMENT TO REMAIN WHICH RESULTS FROM NEW CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
7. DIMENSIONS ARE TO THE FACE OF CURBS, EDGE OF CONCRETE, OR TO THE FACE OF BUILDING, UNLESS OTHERWISE NOTED.
8. ALL CURB TURNOUT, EDGE OF PAVEMENT, AND STRIPING RADII ARE FOUR FEET (4') UNLESS OTHERWISE NOTED.
9. CONTRACTOR TO VERIFY ALL REQUIRED CLEARANCES FROM OVERHEAD POWER LINES PRIOR TO THE START OF CONSTRUCTION.
10. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD OR UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK , THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF THE ABOVE NOTED WIRES, THE ELECTRICAL COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES MUST BE TAKEN.
11. IN EASEMENTS AND RIGHTS-OF-WAYS, CONTRACTOR SHALL PROTECT AND RESTORE SAID PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING AT THE COMMENCEMENT OF CONSTRUCTION, EXCEPT AS NOTED.
12. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY AOC OF AMERICA, INC. AND THE "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" ISSUED BY THE U.S. DEPARTMENT OF LABOR.
13. SURPLUS MATERIAL NOT REQUIRED FOR SITE CONSTRUCTION SHALL BE DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE AFTER THE OWNER'S APPROVAL AT A PROPERLY PERMITTED LOCATION.
14. FILL MATERIAL REQUIRED SHALL BE BORROWED AT THE CONTRACTOR'S EXPENSE.
15. TRAFFIC CONTROL, IF REQUIRED, SHALL BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
16. IN THE EVENT OF ANY DISCREPANCY AND/OR ERROR FOUND IN THE DRAWINGS, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE ENGINEER IN WRITING BEFORE PROCEEDING WITH THE WORK. IF THE ENGINEER IS NOT NOTIFIED, THE CONTRACTOR SHALL TAKE RESPONSIBILITY FOR THE COST OF ANY REVISION.
17. CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES AND THE REQUIREMENTS OF THE LOCAL UTILITY COMPANIES.
18. BUILDING CONTROL POINTS, GRADE AND OFFSET STAKES ARE TO BE SET BY THE CONTRACTOR.
19. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
20. PROVIDE AN EXPANSION JOINT BETWEEN THE DRIVEWAY AND THE ROAD.

PAVING LEGEND

EXISTING CONCRETE

PROPOSED CONCRETE (MATCH EXISTING)

0 15 30 60 90

SCALE: 1" = 30'

SURVEY INFO
PROVIDED BY: GULF STATES ENGINEERING, INC.
DATUM: TENNESSEE STATE PLANE (NAD83 & NAVD 88)

FULMER LUCAS
2002 RICHARD JONES RD - SUITE B200
NASHVILLE, TENNESSEE 37215
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JOHN HUTCHISON
REGISTERED
LANDSCAPE
ARCHITECT
AGRICULTURE
No. 102950
STATE OF TENNESSEE
10/03/2023

SITE DEVELOPMENT PLANS FOR:
SCOTT EQUIPMENT PARTS BUILDING ADDITION
140 WALDRON ROAD
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE 37086

DR.	DATE	DESCRIPTION
JKH	04/05/2023	INITIAL PLANNING COMMISSION SUBMITTAL

SITE LAYOUT PLAN

C1.0

1123-04 SCOTT EQUIPMENT PARTS BUILDING

Wednesday, April 5, 2023
P:\1123 Scott Equipment\01 - Waldron Parts Bldg\02 - Cad\Sheets\1123-04 Site Layout Plan.dwg

Know what's below. Call before you dig.

NOC NOTE:

I HEREBY CERTIFY THAT THIS PROJECT WILL NOT REQUIRE COVERAGE UNDER A TENNESSEE CONSTRUCTION GENERAL PERMIT. THE TOTAL DISTURBED AREA IS: ±0.3 AC. THE RECEIVING WATER (EAST BRANCH HURRICANE CREEK) IS LISTED AS NOT IMPAIRED.

CHECK ALL THAT APPLY - THIS SITE DISCHARGES INTO WATERS IDENTIFIED BY TDEC AS:

- ☐ IMPAIRED FOR SILTATION
- ☐ IMPAIRED FOR HABITAT ALTERATION
- ☐ EXCEPTIONAL

SIGNATURE: Josh Hutcheson DATE: 03/27/2023

CIRCLE ONE: DEVELOPER (PROJECT ENGINEER) OTHER _____

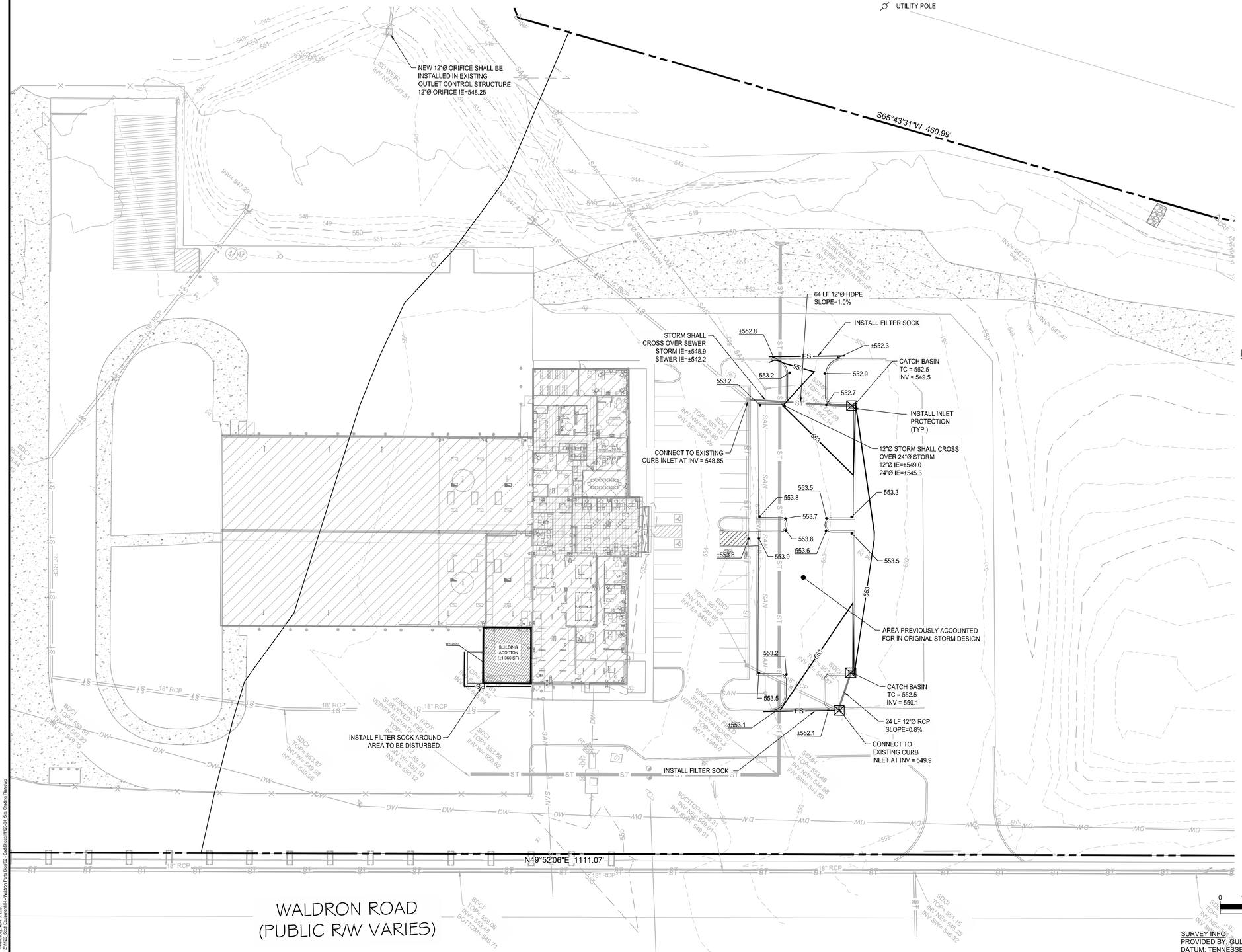
EROSION CONTROL LEGEND:

- ⊠ INLET PROTECTION
- SF / FS — WIRE BACKED SILT FENCE , WEIGHTED SEDIMENT TUBE OR APPROVED EQUAL
- LOD — LIMITS OF DISTURBANCE

LEGEND

- IRON ROD (OLD)
- BENCHMARK
- CATCH BASIN
- FIRE HYDRANT
- SEWER MANHOLE
- EXISTING TREE
- WV WATER VALVE
- WM WATER METER
- IRON ROD (NEW)
- UTILITY POLE

NOTE: ONCE SITE IS STABILIZED FOR U&O RELEASE ALL REMAINING ESPC MEASURES SHOULD BE REMOVED AND DISPOSED OF IN A PROPER MANNER



GRADING PLAN NOTES:

1. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO TOP OF SUBGRADE WITH CRUSHED STONE UNLESS PUBLIC WORKS SPECIFICATIONS REQUIRE FLOWABLE FILL.
2. CONTRACTOR TO VERIFY ALL EXISTING UTILITY ELEVATIONS AND GRADES PRIOR TO BEGINNING WORK. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES FROM THE PLANS.
3. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF DETAILED ENGINEERING GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTIONS OF THE INTENT OR ANY PROBLEMS WITH CONTINUITY OF GRADES, THE ENGINEER SHOULD BE CONTACTED IMMEDIATELY PRIOR TO BEGINNING WORK.
4. NO TREES ARE TO BE REMOVED AND/OR VEGETATION DISTURBED EXCEPT AS NECESSARY FOR GRADING PURPOSES AND ONLY AS APPROVED BY OWNER'S REPRESENTATIVE.
5. TOPSOIL IS TO BE STRIPPED FROM ALL CUT AND FILL AREAS. IF POSSIBLE, STOCKPILE AND REDISTRIBUTE A MINIMUM OF 6" OF TOPSOIL OVER FINISHED LANDSCAPED AREAS UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.
6. FILL MATERIAL REQUIRED SHALL BE PLACED UNDER THE SUPERVISION OF A GEOTECHNICAL TESTING FIRM AND BE BORROWED AT THE CONTRACTOR'S EXPENSE.
7. ALL GRADED AREAS, INCLUDING SLOPES, ARE TO BE SODDED OR MULCHED AND SEEDED WITHIN 14 DAYS AFTER GRADING IS SUSPENDED OR COMPLETED.
8. ALL SLOPES EQUAL TO OR GREATER THAN 3:1 MUST BE STABILIZED WITHIN 7 DAYS AFTER GRADING IS SUSPENDED OR COMPLETED.
9. GRADING OPERATIONS ARE NOT TO BEGIN UNTIL EROSION CONTROL HAS BEEN INSTALLED AS SHOWN ON DRAWINGS, INSPECTED BY METRO STORMWATER DEPARTMENT, AND THE GRADING PERMIT HAS BEEN ISSUED.
10. SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT OR REPLACED WHEN APPROXIMATELY 33% FILLED WITH SEDIMENT OR DIRECTED BY THE EROSION CONTROL SPECIALIST.
11. ALL DIMENSIONS AND LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.
12. WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER NEEDED FOR THE INTENDED PURPOSE IN THE OPINION OF THE DESIGNATED SITE EROSION CONTROL SPECIALIST, THEY MAY BE REMOVED.
13. THE CONTRACTOR SHALL PROVIDE THE NECESSARY PROTECTION FOR TREES TO REMAIN IN ACCORDANCE WITH CITY SPECIFICATIONS. DO NOT OPERATE OR STORE HEAVY EQUIPMENT NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF TREES TO REMAIN.
14. IF NEEDED, CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH METRO STORMWATER BMP CP-10 AND CP-13. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRE-CONSTRUCTION MEETING.
15. PRIOR TO FINAL ACCEPTANCE AND INSPECTION, SEDIMENT MUST BE REMOVED ALL NEW AND EXISTING STRUCTURES AND WATER QUALITY SYSTEMS.
16. CONTRACTOR SHALL PROVIDE ENGINEER WITH AS-BUILT SURVEY INFORMATION OF STORMWATER QUALITY AND QUANTITY INFRASTRUCTURE FOR ANALYSIS AND DETERMINATION THE INFRASTRUCTURE HAS BEEN INSTALLED PER THE INTENT OF THE PLAN. CONTRACTOR IS TO ALLOW 30 DAYS FOR THE ENGINEER TO SUBMIT SUCH DETERMINATION TO THE STORMWATER DEPARTMENT FOR THEIR APPROVAL PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
17. GC IS TO PHOTOGRAPH INSTALLATION OF ALL WATER QUALITY INFRASTRUCTURE.

EROSION & SEDIMENT CONTROL NOTES:

1. ALL PERIMETER MEASURES MUST BE IN PLACE BEFORE GRADING.
2. ALL STOCKPILES ARE TO BE CONTAINED ON THE PROJECT PROPERTY UNLESS WRITTEN PERMISSION IS GIVEN BY THE ADJACENT PROPERTY OWNER. INSTALL SILT FENCE AT THE BASE OF ANY STOCKPILES.
3. ALL GRADED SLOPES 3:1 OR STEEPER AND DITCH BOTTOMS SHALL RECEIVE PROPER EROSION CONTROL BLANKETS/MATTING OR SOD.
4. ALL FIELD ADJUSTMENT OF EROSION CONTROL MEASURES SHALL BE NOTED ON THE PLANS KEPT IN THE JOB TRAILER.
5. WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER NEEDED FOR THE INTENDED PURPOSE IN THE OPINION OF THE DESIGNATED SITE EROSION CONTROL SPECIALIST, THEY MAY BE REMOVED.
6. CONTRACTOR TO PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH CITY OF LA VERGNE SPECIFICATIONS. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRECONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE. LOCATION OF AND/OR NOTES REFERRING TO THESE BMP'S SHALL BE SHOWN ON THE EPSC PLAN.
7. ALL DISTURBED AREAS ARE TO BE PERMANENTLY STABILIZED PER THE LANDSCAPE PLAN. ALL AREAS NOT OTHERWISE RECEIVING SOD OR OTHER PLANTING SHALL RECEIVE SEED AND STRAW PER THE SPECIFICATIONS INCLUDED WITHIN TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK.
8. NO TREES ARE TO BE REMOVED AND/OR VEGETATION DISTURBED EXCEPT AS NECESSARY FOR GRADING PURPOSES AND ONLY AS APPROVED BY OWNER'S REPRESENTATIVE.
9. ALL GRADED AREAS, INCLUDING SLOPES, ARE TO BE SODDED OR MULCHED AND SEEDED WITHIN 14 DAYS AFTER GRADING IS SUSPENDED OR COMPLETED.
10. ALL SLOPES EQUAL TO OR GREATER THAN 3:1 MUST BE STABILIZED WITHIN 7 DAYS AFTER GRADING IS SUSPENDED OR COMPLETED.
11. GRADING OPERATIONS ARE NOT TO BEGIN UNTIL EROSION CONTROL HAS BEEN INSTALLED AS SHOWN ON DRAWINGS, INSPECTED BY METRO STORMWATER DEPARTMENT, AND THE GRADING PERMIT HAS BEEN ISSUED.
12. SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT OR REPLACED WHEN APPROXIMATELY 33% FILLED WITH SEDIMENT OR DIRECTED BY THE EROSION CONTROL SPECIALIST.
13. ALL DIMENSIONS AND LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DESIGNATED BY THE OWNER'S REPRESENTATIVE.
14. THE CONTRACTOR SHALL PROVIDE THE NECESSARY PROTECTION FOR TREES TO REMAIN IN ACCORDANCE WITH CITY SPECIFICATIONS. DO NOT OPERATE OR STORE HEAVY EQUIPMENT NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF TREES TO REMAIN.
15. PRIOR TO FINAL ACCEPTANCE AND INSPECTION, SEDIMENT MUST BE REMOVED ALL NEW AND EXISTING STRUCTURES AND WATER QUALITY SYSTEMS.

0 15 30 60 90
SCALE: 1"=30'

SURVEY INFO:
PROVIDED BY: GULF STATES ENGINEERING, INC.
DATUM: TENNESSEE STATE PLANE (NAD83 & NAVD 88)

FULMER LUCAS
2002 RICHARD JONES RD - SUITE B200
NASHVILLE, TENNESSEE 37215
INFO@FULMERLUCAS.COM - (615) 345-3770

JOSHUA R. HUTCHESON — REGISTERED LANDSCAPE ARCHITECT — AGRICULTURE — No. 102950 — STATE OF TENNESSEE — 3/27/2023

SITE DEVELOPMENT PLANS FOR:
SCOTT EQUIPMENT PARTS BUILDING ADDITION
140 WALDRON ROAD
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE 37086

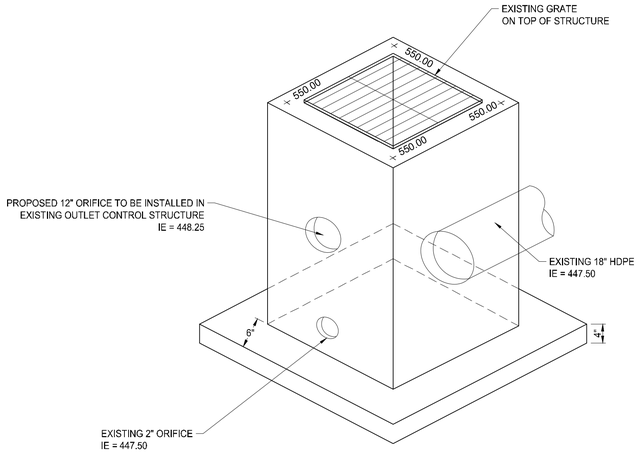
DR.	DATE	DESCRIPTION
JKH	04/05/2023	INITIAL PLANNING COMMISSION SUBMITTAL

SITE GRADING & EPSC PLAN

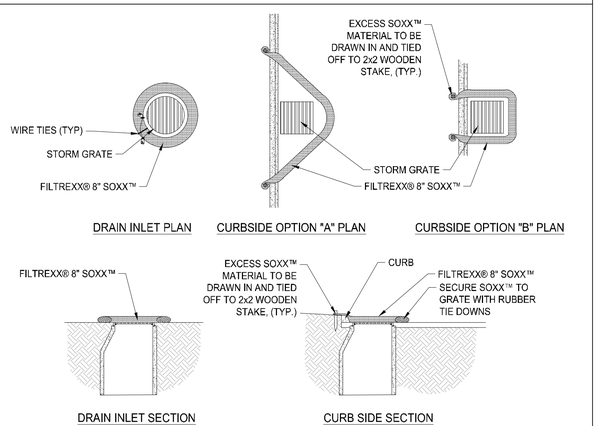
C2.0

1123-04 SCOTT EQUIPMENT PARTS BUILDING

Wednesday, April 5, 2023
Z:\1123-04 Scott Equipment - Waldron Parts Bldg\C2 - Civil\Sheets\1123-04_Site Grading Plan.dwg



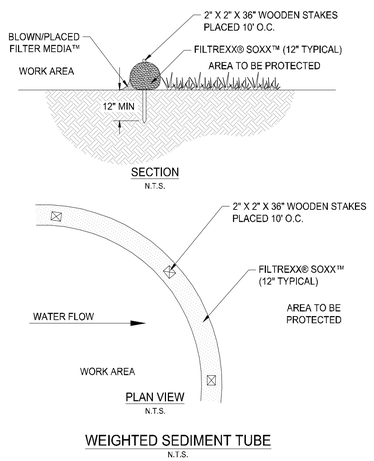
EXISTING POND OUTLET CONTROL STRUCTURE
N.T.S.



DRAIN INLET PLAN | CURBSIDE OPTION "A" PLAN | CURBSIDE OPTION "B" PLAN

DRAIN INLET SECTION | CURB SIDE SECTION

INLET PROTECTION
N.T.S.



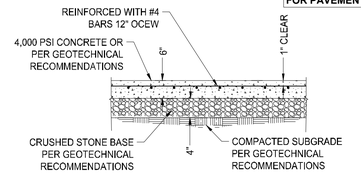
SECTION
N.T.S.

PLAN VIEW
N.T.S.

WEIGHTED SEDIMENT TUBE
N.T.S.

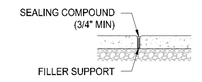
NOTE:
EXPANSION JOINTS ARE TO BE SPACED 25' TO 30' APART
DEPENDING ON TRANSVERSE JOINT MARKINGS.

PAVEMENT SECTIONS ARE SHOWN FOR REFERENCE ONLY. SEE GEOTECHNICAL REPORT FOR PAVEMENT DESIGN.



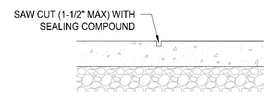
HEAVY DUTY CONCRETE SECTION
N.T.S.

NOTE:
30' MAXIMUM SPACING.

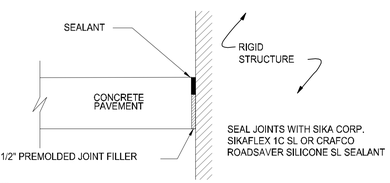


EXPANSION JOINT
N.T.S.

NOTE:
REFER TO THE GEOTECHNICAL REPORT FOR
ADDITIONAL RECOMMENDATIONS .



CONTROL JOINT
N.T.S.



NOTE:
PROVIDE ISOLATION JOINT WHERE CONCRETE
PAVEMENT ABUTS A RIGID STRUCTURE.

ISOLATION JOINT
N.T.S.

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JOHN R. HOLLOWAY
REGISTERED
LANDSCAPE
ARCHITECT
AGRICULTURE
No. 102959
STATE OF TENNESSEE
4/04/2023

SITE DEVELOPMENT PLANS FOR:
SCOTT EQUIPMENT PARTS BUILDING ADDITION
140 WALDRON ROAD
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE 37086

DR.	DATE	DESCRIPTION
JRH	04/05/2023	INITIAL PLANNING COMMISSION SUBMITTAL

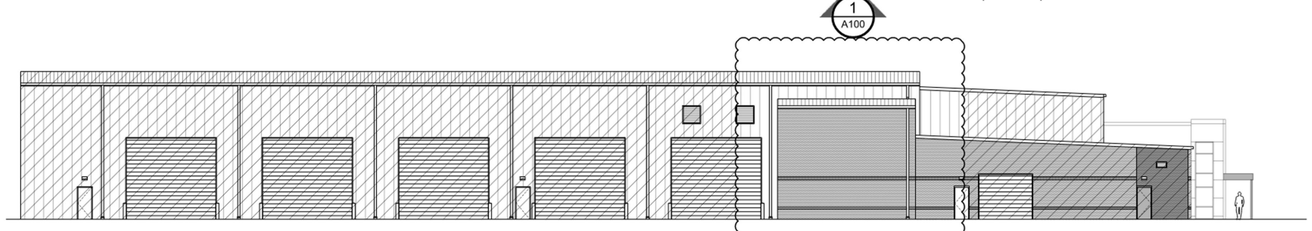
SITE DETAILS

C3.0

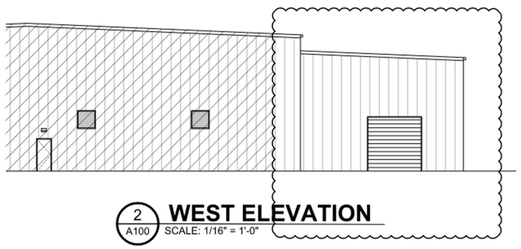
1123-04 SCOTT EQUIPMENT PARTS BUILDING



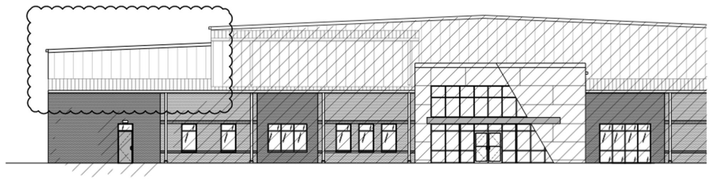
ROOF PLAN
SCALE: 1/16" = 1'-0"



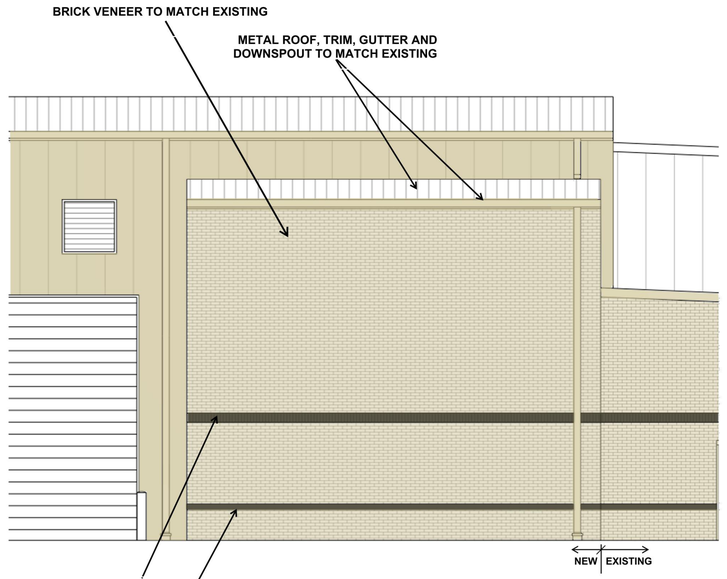
1 A100 **SOUTH ELEVATION**
SCALE: 1/16" = 1'-0"



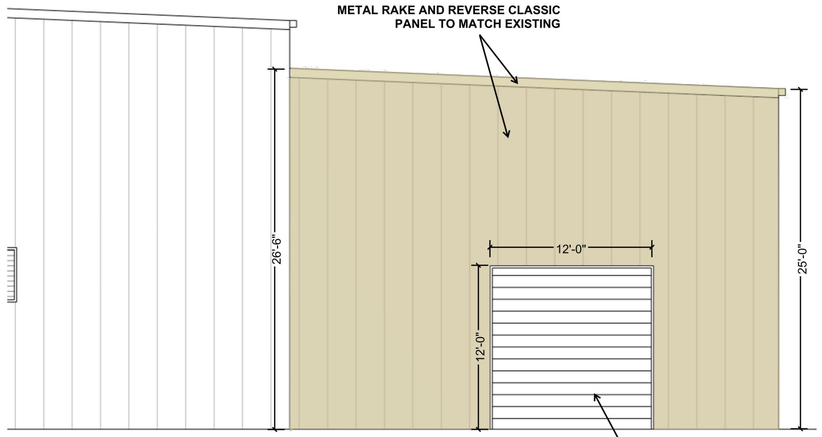
2 A100 **WEST ELEVATION**
SCALE: 1/16" = 1'-0"



3 A100 **EAST ELEVATION**
SCALE: 1/16" = 1'-0"



4 A100 **SOUTH ELEVATION LG**
SCALE: 3/16" = 1'-0"



5 A100 **WEST ELEVATION LG**
SCALE: 3/16" = 1'-0"

R.ALEXANDER ARCHITECTURE P.L.L.C.
104 SIOUX CT
HENDERSONVILLE, TN 37075
615.587.8249
rick@alex-arch.com

CARTER GROUP, LLC
GENERAL CONTRACTORS • DESIGN/BUILD SERVICES • CONSTRUCTION MANAGERS
517 HAGAN STREET
NASHVILLE, TN 37203
615-234-4977
WWW.CARTERGROUPLLC.COM

ADDITION TO EXISTING BUILDING

SCOTT EQUIPMENT RENOVATION
140 WALDRON RD, LA VERGNE, TN 37086

REV	DATE	DESCRIPTION

Project #

Date 3.27.23

Sheet **A100**

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Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan – Carothers Crossing Commercial – 10 Mixed Use Buildings on 1.61 Acres. Requested by SEC. Property located on Carothers Road (Tax Map 29, Parcel 29). PDR (Planned Density Residential) Zoning District. Property owned by Burkitt Hills Investment Group, LLC.

Reviewed By: Bo Logan, City Planner
Gary Lide P.E., City Engineer

Summary

On behalf of the applicant, SEC is requesting approval of the Final Plat for Carothers Crossing Commercial to be located on 1.61 acres. The property is located on Carothers Road in southern La Vergne, on the south side of Carothers Road.

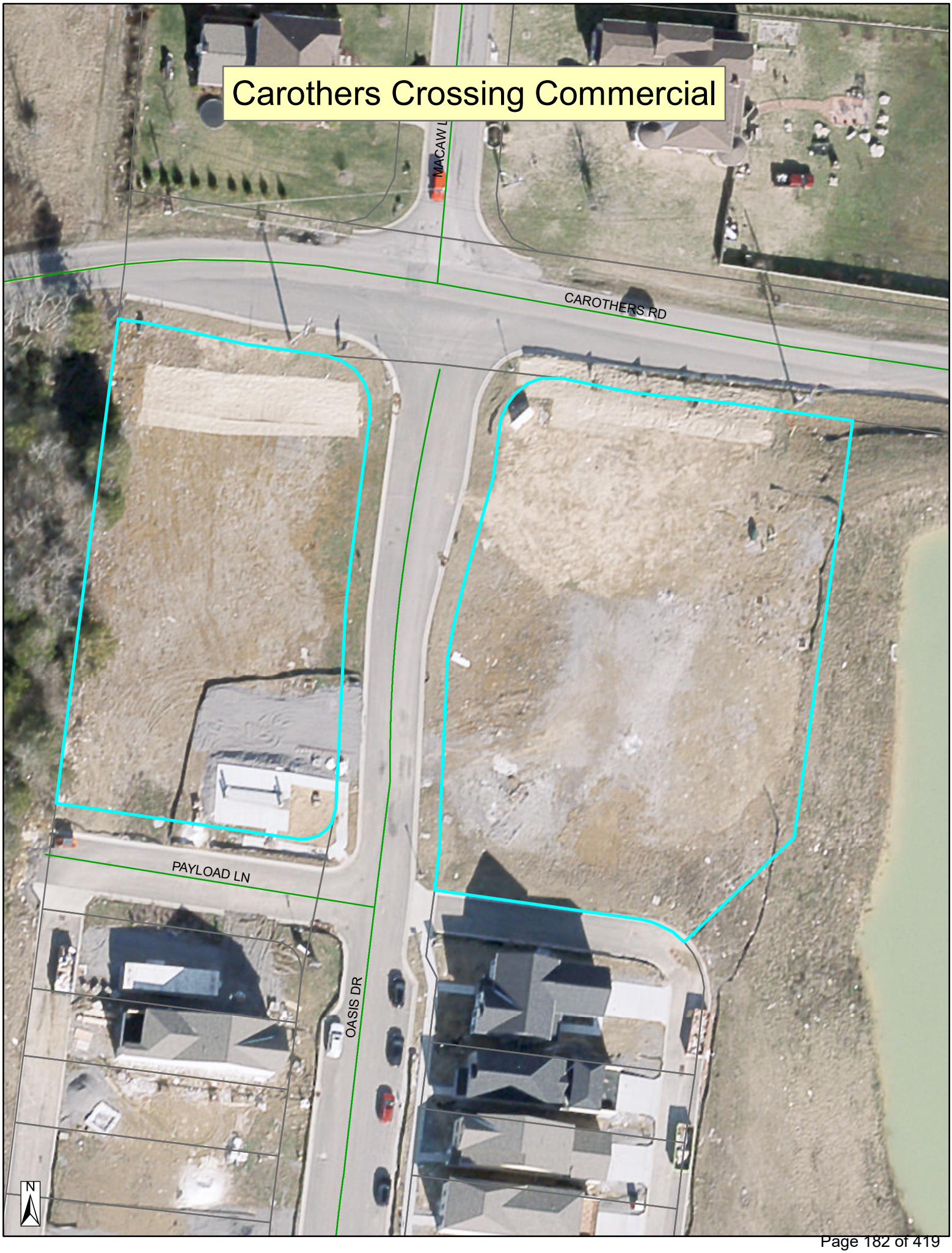
The purpose of the site plan is to present the proposed layout for commercial development. This phase will consist of 10 mixed use buildings and is shown as parcel 29 on Rutherford County Tax Map 029.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

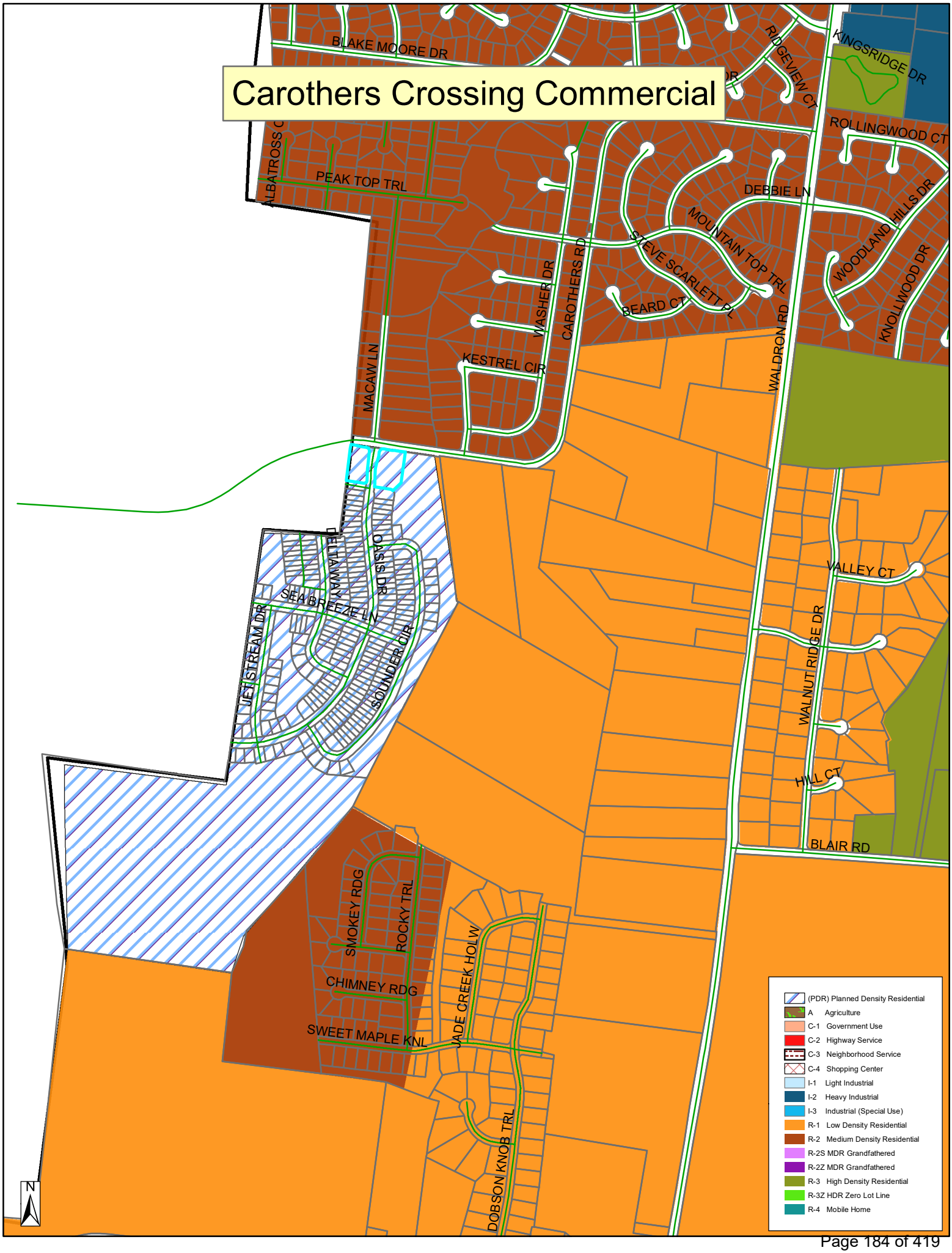
Other Concerns

1.

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


Carothers Crossing Commercial
MACAW L
CAROTHERS RD
PAYLOAD LN
OASIS DR
N

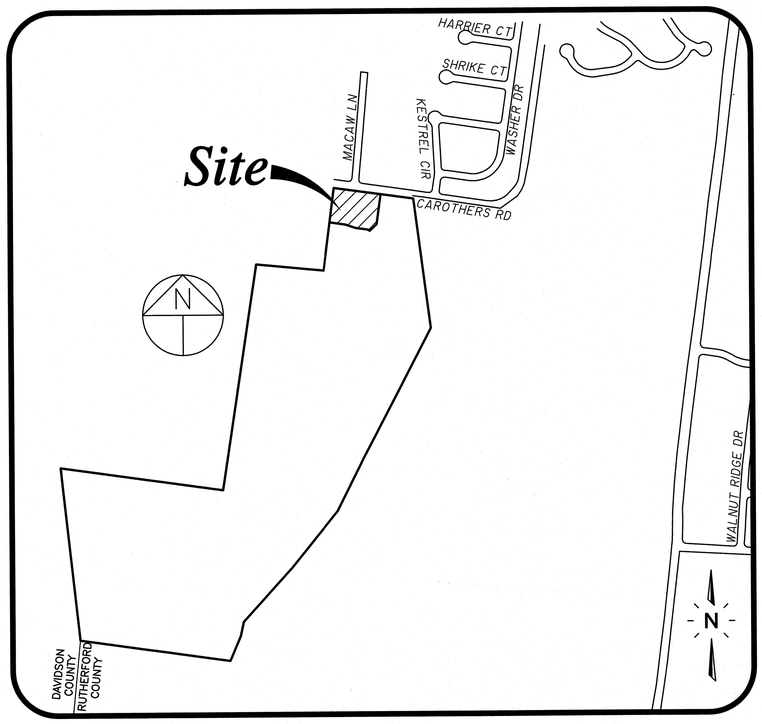

Carothers Crossing Commercial
HARRIER CT
SHRIKE CT
KESTREL CIR
MACAW LN
WASHER DR
CAROTHERS RD
SOUNDER CIR
OASIS DR
FREEBOARD ALY
SEA BREEZE LN
JET STREAM DR
DELTA WAY
N


Carothers Crossing Commercial
BLAKE MOORE DR
RIDGEVIEW CT
KINGSRIDGE DR
ROLLINGWOOD CT
ALBATROSS
PEAK TOP TRL
DEBBIE LN
MOUNTAIN TOP TRL
STEVE SCARLETT PL
WOODLAND HILLS DR
KNOLLWOOD DR
WASHER DR
CAROTHERS RD
BEARD CT
WALDRON RD
MACAW LN
KESTREL CIR
OASIS DR
SEABREEZE LN
SOUNDER CIR
JETSTREAM DR
VALLEY CT
WALNUT RIDGE DR
HILL CT
BLAIR RD
SMOKEY RDG
ROCKY TRL
CHIMNEY RDG
SWEET MAPLE KNL
JADE CREEK HOLW
DOBSON KNOB TRL
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home

Carothers Crossing Commercial

La Vergne, Tennessee

Site Plan and Construction Drawings



Site Location Map

Not To Scale

Drawing Index

Sheet No.	Title
C0.0	Cover Sheet
C0.1	General Notes
C0.2	Master Plan
C1.0	Site Plan
C2.0	Existing Conditions and Initial EPSC Plan
C3.0	Intermediate EPSC Plan
C4.0	Final EPSC Plan
C5.0	Grading and Drainage Plan
C6.0-6.1	Details
A1-A6	Architectural Plans
L1.0	Landscape Plans
PH1.0	Photometrics
S1.0	Retaining Wall Standards

Owner/Developer:

Burkitt Hills Investment Group, LLC
105 Westpark Dr.
Brentwood, TN 37027

Floodplain Note:

No portion of this Site Lies Within the 100yr flood hazard area, as defined by F.E.M.A. Community Panel No. 47149C0105H, Dated January 05, 2007.

Land Data:

Zoning: PDR
10 Mixed Use Buildings on 1.61± Ac.
2 Commercial Lots

Building Setbacks:

Front: 10'
Side: 5'
Rear: 22'

Deed Reference:

The Property Shown Heron Is Tax Map 29, Parcel 29.00
Deed Book 1737, Page 3857 Rutherford County Register Of Deeds.
3rd Civil District
10th County Commission

Approved by the LaVergne Planning Commission, with such exceptions or conditions as are indicated in the Minutes of the Commission on 9-25-18.

Preliminary Plat Approval Shall Not Constitute Final Approval For Recording Purposes.

SEC, Inc. SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: RHOUZE@SEC-CIVIL.COM FAX: (615) 895-2567

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By: Richard Houze Date: 4/17/23

Richard Houze, P.E. TN. Reg. #108494

R. RICHARD HOUZE — REGISTERED ENGINEER — AGRICULTURE — NUMBER 108494 — 4/17/23 — STATE OF TENNESSEE

Watershed: East Branch Hurricane Creek

Sheet C0.0
Carothers Crossing Commercial
S.E.C. Project #18038
Submitted: 1-5-2023
Revised: 3-21-2023 Comments
4-6-2023 Comments

Site Clearing & Demolition Notes:

1. Before starting demolition operations, refer to Sheet ___ Existing Conditions & Initial EPSC Plan.

2. Demolition includes the following within the property lines:
   1) Transfer benchmark control to new locations outside the disturbed area prior to commencing demolition operations (when applicable)
   2) Provide temporary barricades and other forms of protection as required to protect owner's personnel property and general public from injury due to demolition work.
   3) Demolition and removal of site improvements.
   4) Disconnecting, capping or sealing, and abandoning/removing site utilities in place (whichever is applicable)

3. Promptly remove waste materials, unsuitable and excess topsoil and other clearing debris from Owner's property and dispose of off site.

4. Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain.

5. Existing foundations and utilities may be encountered across the site. If encountered, these items may require removal as indicated on the drawings. Resulting excavations should be backfilled with properly compacted select fill.

6. Removal includes digging out stumps and roots. Remove all stumps, roots over 4–inches in diameter and matted roots within the limits of grubbing to depths as follows:
   1) Footings: 18 inches
   2) Walks: 12 inches
   3) Roads: 18 inches
   4) Parking Areas: 12 inches
   5) Lawn Areas: 18 inches
   6) Fills: 12 inches

7. Remove reinstall, and relocate; items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage reinstall items in locations indicated.

8. Provide protection necessary to prevent damage to existing improvements indicated to remain in place. Protect benchmarks, existing structures, roads, sidewalks, paving and curbs against damage from vehicular or foot traffic.
   1) Protect improvements on adjoining properties and on the Owner's property.
   2) Restore damaged improvements to their original condition, as acceptable to parties having jurisdiction.

9. Contractor shall schedule demolition activities with the construction project manager.

10. Comply with applicable requirements of federal, state and local laws, regulations and codes of the authorities having jurisdiction for the disposal of trees, shrubs and other cleared material.

11. Conduct site clearing operations to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do NOT close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.

12. Obtain approved borrow soil materials off–site when sufficient satisfactory soil materials are not available on–site.

13. Maintain existing utilities indicated to remain in service and protect them against damage throughout construction operations.
   1) Do not interrupt exist utilities serving occupied or operating facilities, except when authorized in writing by engineer and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to owner and to governing authorities.
   2) Contractor shall coordinate with appropriate utility owner when disconnecting, removing, or relocating existing utility services.

14. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
   1) Erect temporary protection, barricades as per local governing authorities.
   2) Protect existing site improvements and appurtenances to remain.

15. Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to remain in place.
   1) Protect tree root systems from damage due to deleterious materials caused by run–off or spillage during mixing, use or discarding of construction materials or drainage from stored materials. Protect root systems from compaction, flooding, erosion or excessive wetting.
   2) Engage a qualified tree surgeon to remove branches from trees, if required, to clear for new construction. Where cutting is required, tree surgeon shall cut branches and roots with sharp pruning instruments; do not break or chop.

16. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

17. Clean adjacent buildings and improvement of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of demolition.

18. Damages: Promptly repair damages to adjacent facilities caused by demolition operations at the contractors cost.

19. Remove existing above–grade and below–grade improvements necessary to permit construction and other work as indicated.

20. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on–site.

21. Do NOT Burn or bury materials on site.

22. Contractor to sawcut existing pavement to remain prior to curb, gutter, pavement, etc. removal.

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

24. Utilities shown are based on visual observations and utility markings. Contractor shall call TN One Call and confirm locations prior to starting work.

General Plan Notes:

1. Prior to starting construction the contractor shall be responsible for making sure that all required permits and approvals have been obtained. No construction or fabrication shall begin until the contractor has received and thoroughly reviewed all plans and other documents approved by all of the permitting authorities.

2. All work shall be performed in accordance with these plans, specifications, and the requirements and standards of the local governing authority. The soils report and recommendations set forth therein are a part of the required construction documents and take precedence unless specifically noted otherwise on the plans. The contractor shall notify the construction/project manager of any discrepancy between soils report and plans, etc.

3. Upon receipt of point coordinate data, the contractor shall run an independent vertical control traverse to check benchmarks and a horizontal control traverse through given points to confirm geometric data and submit to the engineer prior to any construction.

4. The locations of underground facilities shown on the plan are based on field surveys and city records. It shall be the contractor's full responsibility to contact the various utility companies to locate their facilities prior to the starting construction. No additional compensation shall be paid to the contractor for work having to be redone due to information shown incorrectly on these plans if such notification has not been given.

5. All work within the rights of way shall be in accordance with the governing jurisdiction and specifications.

6. Contractor shall coordinate any maintenance of traffic with the owner's representative and the local jurisdiction prior to construction.

7. Contractor shall at all times ensure that SWPP measures protecting existing drainage facilities be in place prior to the commencement of any phase of the site construction or land alteration.

8. Upon completion of project, contractor shall clean the paved areas prior to removal of temporary sediment controls, as directed by the city and/or construction/project manager. If power washing is used, no sediment laden water shall be washed into the storm system. All sediment laden material on pavement or within the storm system shall be collected and removed from the site at contractor's expense.

9. Rock may be present requiring some rock excavation for utility installation. No extra compensation shall be given for rock excavation.

10. These project construction documents shall not constitute a contractual relationship between the engineer and the contractor.

11. The engineer shall not be responsible for construction of safety means, methods, techniques, sequence's, or procedures utilized by the contractor or subcontractors.

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

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

14. No more than 500 feet of open utility trench will be allowed at one time.

Site Plan Notes:

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

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

3. The contractor shall stake all improvements using the geometric data provided in the drawings. It is the sole responsibility of the contractor to completely stake and check all improvements to ensure adequate positioning, both horizontal and vertical, prior to the installation of any improvements. No digital file will be provided.

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

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

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

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

8. The contractor shall stake all improvements using the geometric data provided in the drawings. It is the sole responsibility of the contractor to completely stake and check all improvements to ensure adequate positioning, both horizontal and vertical, prior to the installation of any improvements. No digital file will be provided.

9. Coordinates referenced are for construction staking purposes and are site assigned. They should be considered local coordinates for this project only.

10. All parking space striping and markings on site shall be 4" wide white painted stripes. Other markings shall be as shown.

11. All dimensions and radii are given to face of curb unless otherwise noted.

12. Asphalt paving: do not apply prime and tack coats when temperature is below 50° F, or when base is wet. Apply asphalt paving only when temperature is above 40° F and when base is dry.

13. Materials:
   13A) Subgrade: Cohesive subgrade shall be compacted to 96% compaction. Cohesion less subgrade shall be compacted to 100% compaction.
   13B) Subbase: Unless otherwise noted on these plans, base shall consist of water bonded limestone, crushed rock or DGA.
   13C) Asphalt: Bituminous concrete hot plant mix binder course and asphalt topping plant mix shall be applied over base, minimum temperature time of placement shall be 225° F.

14. Cast in place concrete: All concrete work shall conform to all requirements of American Concrete Institute ACI 301 and applicable sections of ASTM C–94 (latest ed.) for ready mixed concrete.

15. All concrete shall be in–transit mixed concrete, 5% air–entrained and shall attain a minimum compression strength of 4,000 p.s.i. in twenty–eight (28) days.

16. Slump: Maximum allowable slump will be five (5) inches.

17. Concrete Materials:
   17A) Portland cement: Gray portland cement, ASTM C–150 (latest ed.) type 1. All concrete shall contain not less than five bags of cement per cubic yard.
   17B) Aggregates: ASTM C–33 (latest ed.).
   17C) Sand: Hard, durable, clean, sharp, natural sand free from clay, loam, dust or organic matter.
   17D) Water: Clean, potable, free from oil, acids, alkali, organic matter and other deleterious substances.
   17E) Admixture: Air type to meet ASTM C–260 (latest ed.)

18. Related Materials:
   18A) Curing Compound: "Horncure 300" as manufactured by A.C. Horn Company, (800) 654–0402. This product is not to be used on the interior floor slab.

19. Reinforcing materials shall be uncoated and free from excessive rust, mill scale, oil, grease and other deleterious matter. No. 4 Bars 16" O.C. both ways. Joints to be sawed at 15" foot centers for transverse and longitudinal joints.

20. All above grade exterior concrete surfaces shall be cured with curing compound sprayed on in strict compliance with manufacturer's directions.

21. Weather Requirements:
   21A) Hot Weather Placing: No concrete shall be placed when the air temperature is greater than 90° F unless the following special procedures have been included in the contract and reviewed by the engineer: temperature of the concrete when placed shall not be greater than 90° F. Procedures for cooling, retarding and protecting in–place concrete during hot weather shall be in accordance with ACI 305. Provide special procedures required to control concrete temperature and to protect surfaces from drying out, mixing water may be chilled or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water, use of liquid nitrogen to cool concrete is the contractor's option.
   21B) Cold Weather Placing: Do not mix or place when atmospheric temperature will fall below 40° F, or when conditions indicate temperature will fall below 40° F within 72 hours. Concrete deposited shall have temperature not less than 60° F. Reinforcement, forms and ground which concrete will contact shall be completely free of frost. Keep concrete and form work at a temperature not less than 50° F for not less than 72 hours after pouring. Comply with requirements of ACI 305 (latest ed.) for cold weather protection.

22. Concrete tests shall be authorized by the owner on an as needed basis.

23. All exterior curb shall have expansion joints at 100'–0" O.C., and construction joints at 10'–0" O.C. (unless otherwise specified on the detail sheets).

24. All concrete shall have a medium transverse finish.

25. Subgrade shall be free of extraneous materials. Proof–roll soil subgrade with heavy, pneumatic tired equipment immediately prior to placing stone base. Any soft or unstable zones detected thereby shall be undercut to firm soil and backfilled with engineered earth fill compacted as specified. The subgrade for all pavements shall be uniformly stable before any stone base is installed. No base materials shall be placed if the subgrade indicates pumping.

26. Surface preparation, spreading and laying, compacting and rolling operations shall conform with asphalt institute recommended specifications.

27. Inspect area to be paved and ensure that all subgrade conditions are sufficiently carried out to ensure a good paving job. A finished surface shall not vary more than 1/8" in 10 feet when tested with a straight edge applied parallel with, or at right angle, to centerline of asphalt surface. Humps or depressions which exceed specified tolerances or which retain water shall be immediately corrected by removing the defective work and replacing it with new material at the contractor's expense.

Grading And Drainage Plan Notes:

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

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

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

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

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

6. No portion of this site lies within a 100 year flood hazard area, as defined by F.E.M.A. Community Panel No. 47149C0105H dated January 5, 2007.

7. Before starting grading operations, see the Existing Conditions and Initial EPSC plan notes and details.

8. Prior to site construction activity, the contractor shall install all SWPP measures to protect existing drainage facilities. Contractor shall prevent siltation from leaving the site at all times.

9. Strip building and pavement areas of all organic topsoils. Stockpile suitable topsoils for respreading onto landscape areas. All excess excavated materials shall be removed from the site at the contractor's expense.

10. Site grading shall be performed in accordance with these plans and specifications. The contractor shall be responsible for removing all soft, yielding or unsuitable materials and replacing with suitable materials as specified by the Geotechnical Engineer.

11. Contractor shall submit a compaction report prepared by a Licensed Geotechnical Engineer, verifying that all filled areas and subgrade areas within the building pad area and areas to be paved have been compacted in accordance with these plans and specifications. Notify project engineer if any unsuitable soils are found.

12. Compaction testing is mandatory for parking lot, building slab and foundations sub–grade.

13. Fill under paved areas and slabs on grade shall be compacted per specifications and geotechnical report. Deposit fill material in horizontal layers as recommended by Geotechnical Engineer and compact each layer with a mechanical tamper. Base course pavement shall be compacted to 100% standard proctor.

14. It is the earthwork contractor's responsibility to maintain the site soils and engineered fills with a workable moisture content range to obtain the required in–place density. Scarifying and drying operation should be included in the contractor's price and should not be considered and extra for the contract.

15. Following grading of subsoil to subgrade elevations the contractor shall place topsoil to a depth as specified on L.A. Plans in all disturbed areas which are not to be paved. Smoothly finish grade to meet surrounding lawn areas and ensure positive drainage. Stockpiled topsoil shall be screened prior to respreading. Topsoils shall be free of subsoil, debris, brush and stones larger than 1" in any dimension. Rock hounding in place will not be permitted. All excess topsoil shall be legally disposed of off site.

16. After fine grading topsoil, contractor shall stabilize per L.A. plans, mulch, fertilize and water until a healthy stand of grass is obtained. The restoration shall closely follow construction.

17. Elevations given are at bottom face of curb and/or finished pavement grade unless otherwise specified on grading plan. All pavement shall be laid on a straight, eve, and uniform grade with a minimum of 1% slope toward the collection points unless otherwise specified on the grading plan. DO not allow negative grades or ponding of water.

18. Contractor shall provide butt end joint to meet existing pavement in elevation at drive returns and ensure positive drainage.

Propose Summary:

Construction of 30 Multi–use units with associated infrastructure.

SITE ENGINEERING CONSULTANTS
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SEC, Inc.
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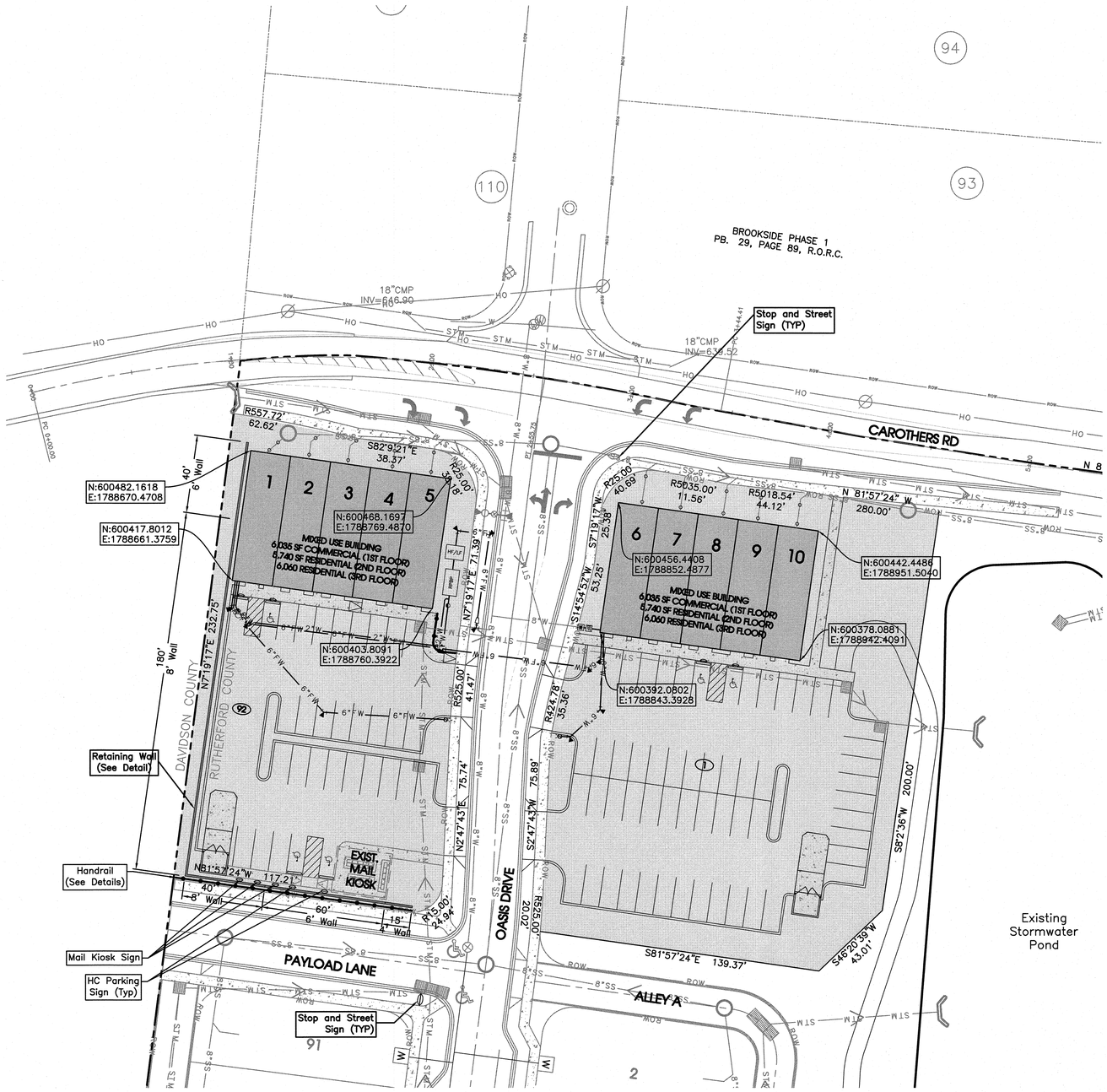
RICHARD HOLZE — 102.001 — REGISTERED PROFESSIONAL ENGINEER — STATE OF TENNESSEE

Carothers Crossing Commercial
Site Plans
LaVergne, Tennessee

REVISED: 3–21–2023 Comments 4–6–2023 Comments	
DRAWN: MLG	
DATE: 1–5–2023	
CHECKED: RH	
FILE NAME: 18038Carothers_Site	
SCALE: NTS	
JOB NO. 18038	
SHEET: C0.1	Notes

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:52 AM; User: Michelle Galbo



Legend:

☐	EXIST. CONCRETE MONUMENT	⊕	BENCHMARK
●	IRON PIN SET (I.P.S.)	♿	HANDICAP SYMBOL
○	IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION
⊸	EXIST. SIGN POST	⊷	HC SIGN
○	EXIST. SEWER CLEANOUT	⊸	PROPOSED SIGN POST
◎	EXIST. MANHOLE (SEWER & PHONE)	•	CONCRETE BOLLARD
▦	EXIST. CATCH BASIN (STORM SEWER)	▭	WHEEL STOP
⊗	EXIST. WATER/GAS VALVE	⌐⌐	CONCRETE SIDEWALK
T	EXIST. TELEPHONE RISER	═══	EXTRUDED CURB
G	EXIST. GAS RISER	═══	CURB & GUTTER
E	ELECTRICAL ENCLOSURE	➡	TRAFFIC ARROW
W	EXIST. WATER METER	➡	TURN LANE ARROWS
○	EXIST. UTILITY POLE	1	REVISION NUMBER
◇	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION
◐	POST INDICATOR VALVE	Ⓐ	DRAINAGE PIPE DESIGNATION
◩	BLOW OFF VALVE	⊙⊙	RIP RAP
▱	REDUCER	↷	RUNOFF FLOW ARROW
⊙	REMOTE FIRE DEPT. CONNECTION	⊏⊐	INLET FILTER PROTECTION
▶	CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION
▬	DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION
⊂	FIRE DEPT. CONNECTION	>	SEWER/STORM FLOW DIRECTION
⊸⊷	FIRE HYDRANT	▣	CATCH BASIN
⊗	GATE VALVE & BOX	▣	CURB INLET
W	WATER METER	●	AREA DRAIN
G	GAS METER	—	HEADWALL
⊠	GREASE TRAP	⌣	WINGED HEADWALL
○	EXTERIOR CLEANOUT ECO	⌐⌐	CONCRETE SWALE
○	MANHOLE	⊠	TYPE X-HEADWALL
●⊙	LIGHT POLE	⊕	CANOPY LIGHT

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E
EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	
PROPOSED GAS LINE	GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	
PROPOSED SANITARY SEWER	8"SS
EXISTING WATER	W W
PROPOSED WATER	8"W
FORCEMAIN	FM FM
FORCEMAIN RETURN	FMR FMR
FLOODWAY	FW FW
JOINT TRENCH	

Know what's **below.**
Call before you dig.

N

30' 0 30' 60'
SCALE: 1"= 30'

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RICHARD HOUZE — 101 — STATE OF TENNESSEE

Carothers Crossing Commercial
Site Plans
LaVergne, Tennessee

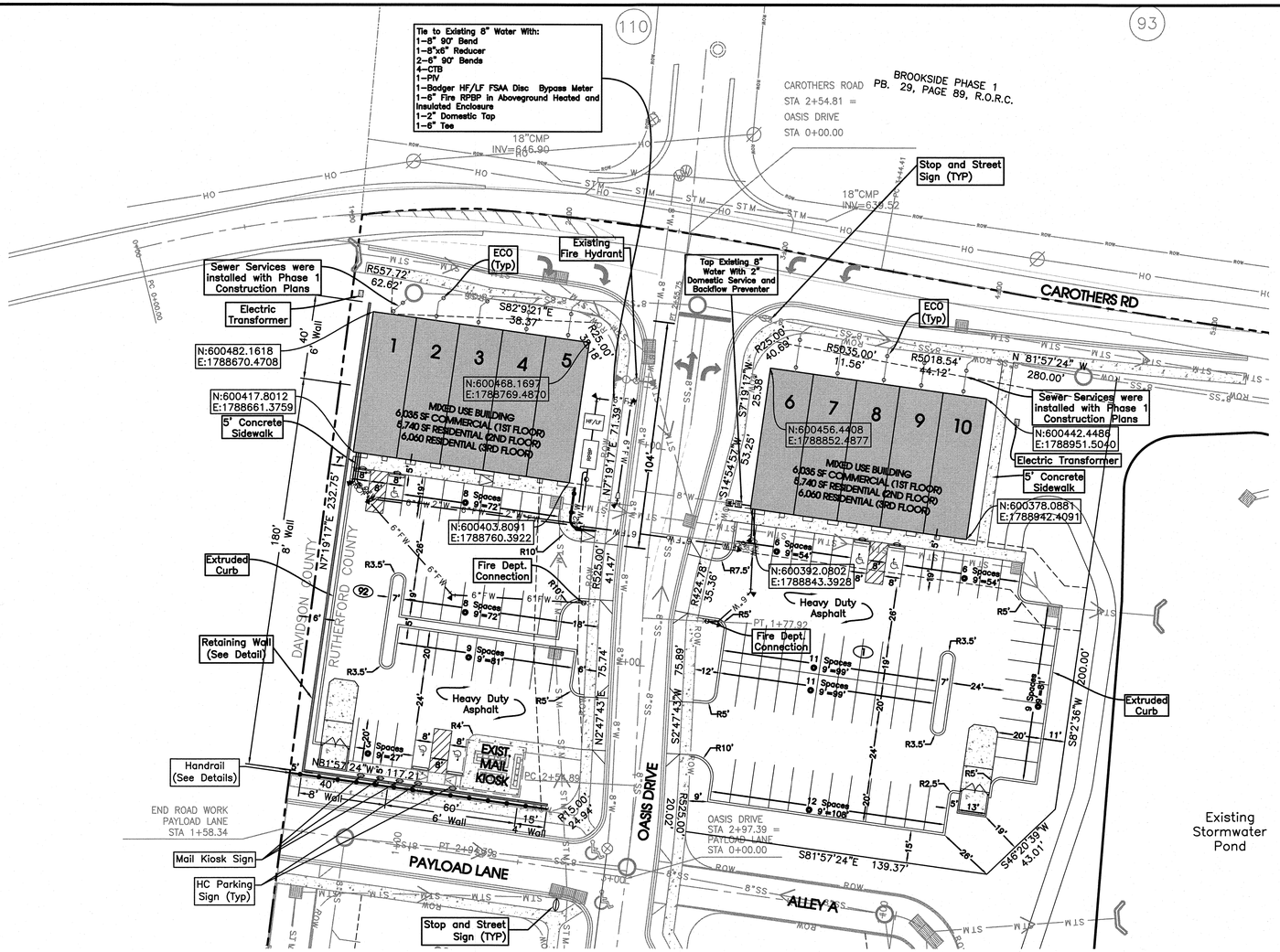
REVISED: 3-21-2023 Comments
4-6-2023 Comments

DRAWN: MLG
DATE: 1-5-2023
CHECKED: RH
FILE NAME: 18038Carothers_Site
SCALE: 1"=30'
JOB NO. 18038

Master Plan

SHEET: C0.2

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:53 AM: User: Michelle Galbo



Parking Requirements

2 Spaces per Residential Unit (20 Units)
5 Spaces per Commercial Unit (8 Units)
20 X 2 = 40 Spaces
8 X 5 = 40 Spaces
80 Spaces Required

Parking Count

80 - Proposed Car Parking Spaces
6 - Proposed Handicap Parking Spaces
3 - Proposed Dedicated Mail Parking Spaces
89 - Total Proposed Parking Spaces

NOTES:
1) All Parking Areas, Driveways, Drive Aisles, Etc. Must Be 100% Dustless.

Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
EXIST. SIGN POST		HC SIGN	
EXIST. SEWER CLEANOUT		PROPOSED SIGN POST	
EXIST. MANHOLE (SEWER and PHONE)		CONCRETE BOLLARD	
EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB and GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE		REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION	
CONCRETE THRUST BLOCK	63.25 x	PROPOSED SPOT ELEVATION	
DOUBLE DETECTOR CHECK VALVE	(63.25) x	EXIST. SPOT ELEVATION	
FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION	
FIRE HYDRANT		CATCH BASIN	
GATE VALVE and BOX		CURB INLET	
WATER METER		AREA DRAIN	
GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE- X- HEADWALL	

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

Know what's below. Call before you dig.

30' 0 30' 60'
SCALE: 1"= 30'

SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: RHOUZE@SECINC.COM FAX: (615) 895-2567

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The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the contractor to determine the means and methods of construction to be employed on the site to ensure compliance with the design as noted, described, and illustrated. The engineer assumes no administrative liability or responsibility in the assurance that the site is constructed in accordance with the construction plans.

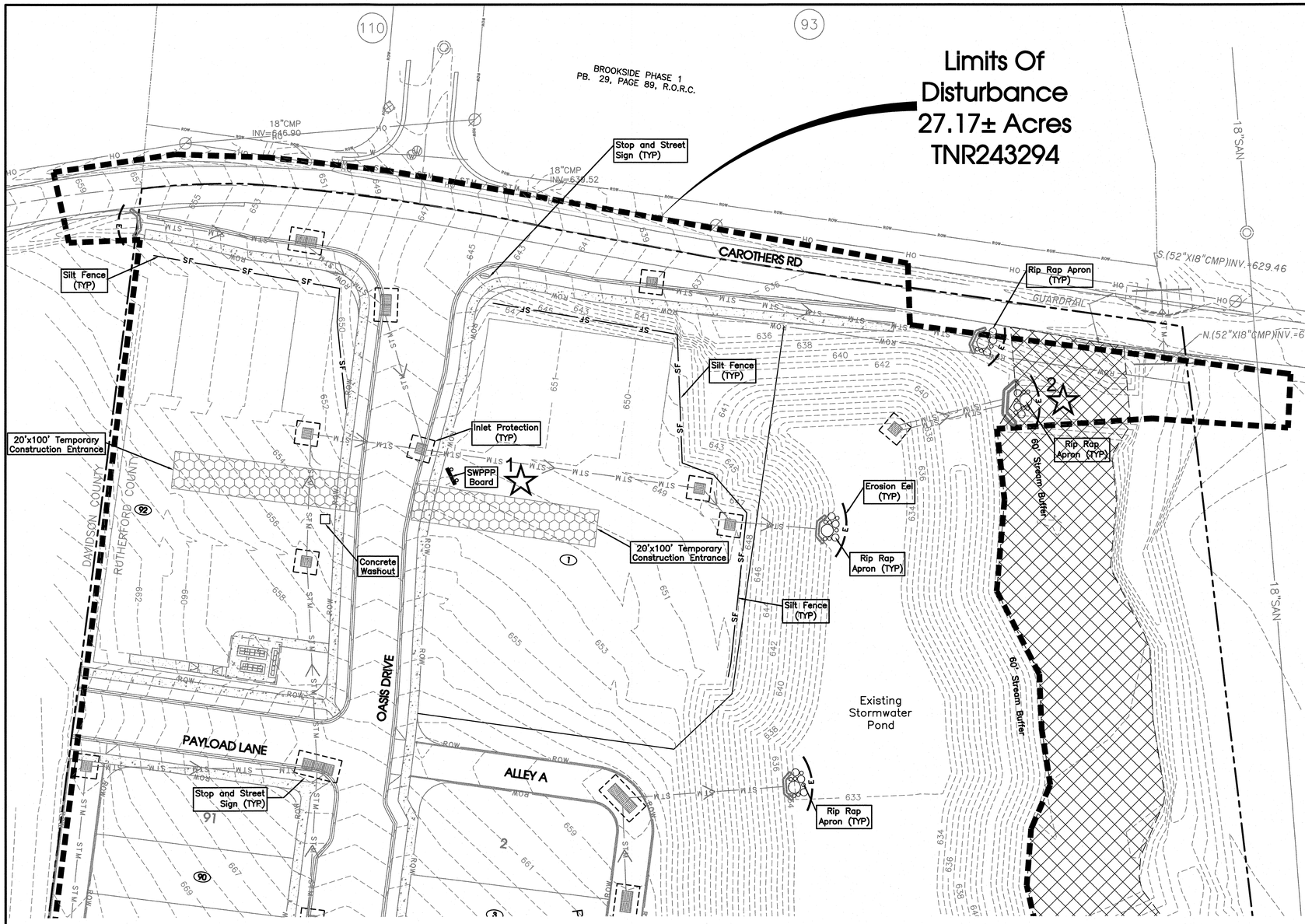
RICHARD HOUZE — REGISTERED ENGINEER — STATE OF TENNESSEE

Carothers Crossing Commercial
Site Plans
LaVergne, Tennessee

REVISED: 3-21-2023 Comments
1-6-2023 Comments
DRAWN: MLG
DATE: 1-5-2023
CHECKED: RH
FILE NAME: 18038Carothers_Site
SCALE: 1"=30'
JOB NO. 18038
SHEET: C1.0

Site Plan

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:53 AM; User: Michelle Gobo



Storm Water Pollution Prevention Notes:

Before starting demolition or construction operations, refer to Demolition SWPPP and Construction SWPPP.

1. **The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent silt from leaving site. Silt will not be allowed beyond construction limits.**
2. **The contractor is responsible for removing silt from site if not reusable on-site and assuring plan alignment and grade in all ditches at completion of construction.**
3. **Erosion control measures shall be provided for all cut and fill operations within the limits of the construction site, throughout the construction period to provide the site with maximum protection from erosion at all times.**
4. **Erosion control measures are to be installed prior to any grading on-site and are to be maintained in place until stabilization of erodable soils has been accomplished.**
5. **The Storm Water Pollution Prevention Plan (SWPPP) is an integral part of the Erosion Prevention and Sediment Control (EPSC) Plan and should be followed during all phases of construction (bidding, site work, final stabilization).**
6. **Any graded or disturbed areas shall have 4 inches of topsoil, seed, mulch, fertilizer and water applied until a healthy stand of grass is obtained unless otherwise noted on plans. The restoration shall closely follow construction.**
7. **The construction drawings shall be made available on site at all times and presented upon request. If unforeseen storm water pollution prevention is encountered, additional Storm Water Pollution Prevention (SWPP) measures may be requested by the owner, county engineer, project engineer, or soil conservation service representative at anytime. Such requests shall be implemented immediately at contractor's expense.**
8. **All Storm Water Pollution Prevention items shall be installed as shown or noted on this sheet.**
9. **Apply temporary seeding and mulching in all areas that shall be inactive for 15 days or more. All disturbed and eroded earth shall be regraded and seeded within 7 days with seeding, as defined above and as shown on the table below to establish stability and provided sediment control.**

Seeding Dates	Seed Type	Application Rate Per 1,000 Sq.Ft.
March 1 - August 15	Oats Perennial Rye Grass Or Tall Fescue	3#
August 16 - November 1	Rye, Wheat or Perennial Rye Grass Tall Fescue	1#
After November 1	Straw or Hay Mulch	2-3 Bales
Seed Bed Preparation	Lime 10-10-10 or 12-12-12 Fertilizer	100# 12-15#

10. **Permanent vegetation shall be installed within 7 days at the completion of any graded area, weather permitting.**
11. **At such time rough grading or the site is complete and drainage diverts to inlets, inlet sediment filters shall be installed at all inlet structures to keep piping systems free of siltation.**
12. **Silt barriers shall be installed around all existing or new storm inlets, catch basins, yard drains. Install rock check dams for headwall inlets for storm water pollution prevention.**
13. **Storm water pollution prevention measures shall be installed around all dirt or topsoil stockpiles and other temporarily disturbed areas.**
14. **Contractor shall inspect all SWPPP measures daily and repair as necessary to prevent erosion. Siltation shall be removed from areas where failures have occurred and corrective action taken within 24 hours to maintain all SWPPP items.**
15. **Silt barriers, construction entrances, and silt fences shall remain in place until a good stand of grass has been obtained and/or paving operations are complete. Contractor shall keep silt from entering any storm drainage system. Once site has been completely stabilized, and silt in pipes and drainage swales shall be removed within 10 days.**
16. **Temporary sedimentation and storm water pollution prevention measures must be inspected and logged by the contractor for inspection, lofting shall be weekly and after rain storms.**
17. **Utility companies must comply with all storm water pollution prevention measures as defined on the storm water pollution prevention plans, details and notes.**
18. **All storm water pollution prevention practices shall be installed before any other earth moving occurs.**
19. **The contractors shall use temporary sediment filter bags as necessary to control sediment runoff.**
20. **The following storm water pollution prevention and sediment control measures will be used on this site:**
    - **A) Sediment control barrier**
    - **B) Filter fabric inlet protection**
    - **C) Construction entrance**
    - **D) Concrete washout facility**
    - **E) Check dams**
    - **F) Temporary seeding**
    - **G) Erosion control blanket**
    - **H) Permanent seeding or sodding**
21. **Sediment shall be removed from sediment controls as necessary but at least when the design capacity of the control has been reduced by 50%.**
22. **All chemicals must be properly stored, while all spills must be cleaned ASAP, and all litter must be kept to a minimum.**

Construction Sequence:

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

Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
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EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD	
EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB & GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE	1	REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION	
CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION	
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GATE VALVE & BOX		CURB INLET	
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GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE X-HEADWALL	
LIGHT POLE		CANOPY LIGHT	

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E
EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	
PROPOSED GAS LINE	GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	
PROPOSED SANITARY SEWER	8"SS
EXISTING WATER	W W
PROPOSED WATER	8"W
FORCEMAIN	FM FM
FORCEMAIN RETURN	FMR FMR
FLOODWAY	FW FW
JOINT TRENCH	

OUTFALLS

NUMBER	DESCRIPTION	DRAINAGE AREA DISTURBED	NON-DISTURBED PASS THRU	TOTAL	RECEIVING FEATURE
1	TEMP. CONSTRUCTION EXIT	0.10 Ac.	0.00 Ac.	0.10 Ac.	EAST BRANCH HURRICANE CREEK
2	DETENTION POND	23.19 Ac.	27.35 Ac.	50.54 Ac.	EAST BRANCH HURRICANE CREEK

EXISTING ON-SITE CONDITIONS

COVER	SCS CLASSIFICATION	AREA (Ac)
WOODS	WOODS IN GOOD CONDITION B SOILS, CN=55	3.06
WOODS	WOODS IN GOOD CONDITION C SOILS, CN=70	12.19
WOODS	WOODS IN GOOD CONDITION D SOILS, CN=77	11.57
PAVED STREETS W/ DITCHES	PAVED STREETS W/ DITCHES B SOILS, CN=89	0.01
PAVED STREETS W/ DITCHES	PAVED STREETS W/ DITCHES D SOILS, CN=93	0.26
	COMPOSITE CN=72	

PROPOSED ON-SITE CONDITIONS

COVER	SCS CLASSIFICATION	AREA (Ac)
PAVED ROADS	ROADS, CN=98	6.82
PAVED STREETS W/ DITCHES	PAVED STREETS W/ DITCHES B SOILS, CN=89	0.01
PAVED STREETS W/ DITCHES	PAVED STREETS W/ DITCHES D SOILS, CN=93	0.26
OPEN SPACE	OPEN SPACE B SOILS, CN=61	2.98
OPEN SPACE	OPEN SPACE C SOILS, CN=74	1.33
OPEN SPACE	OPEN SPACE D SOILS, CN=80	2.50
RESIDENTIAL ⅛ ACRE LOTS	RESIDENTIAL 50% IMPERVIOUS C SOILS, CN=80	7.09
RESIDENTIAL ⅛ ACRE LOTS	RESIDENTIAL 50% IMPERVIOUS D SOILS, CN=85	6.11
	COMPOSITE CN=66	

1 ☆ Outfall

LIMITS OF DISTURBANCE

EPSC Phasing

Initial: Silt Fence Along Downgradient Perimeter Construction Entrance Check Dams In Existing Ditches Filter Fabric Inlet Protection

Intermediate: Temporary Seeding Temporary Sediment Basins Filter Fabric Inlet Protection Check Dams In Proposed Ditches Silt Fence To Protect Ditches Erosion Control Blanket Installation At Prescribed Locations

Final: Seeding And Stabilization Of All Disturbed Areas

811 Know what's below. Call before you dig.

N

30′ 0 30′ 60′

SCALE: 1"= 30′

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RICHARD HOLZE — 103 — REGISTERED ENGINEER — STATE OF TENNESSEE

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Site Plans
LaVergne, Tennessee

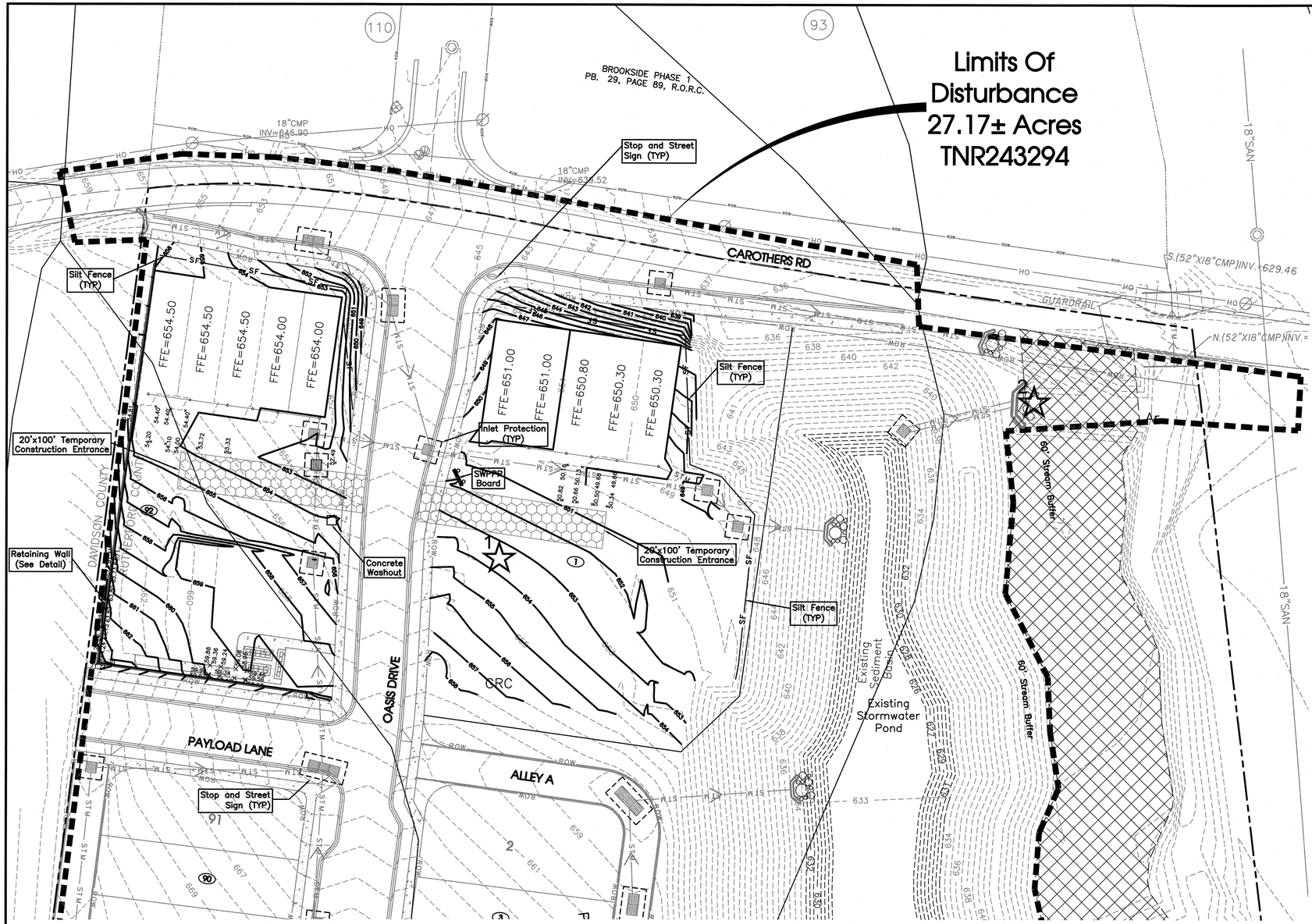
REVISED: 3-21-2023 Comments
4-5-2023 Comments

DRAWN: MLG
DATE: 1-5-2023
CHECKED: RH
FILE NAME: 18038Carothers_Site
SCALE: 1"=30'
JOB NO. 18038

Existing Conditions and Initial EPSC Plan

SHEET: C2.0

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:53 AM; User: Michelle Gatto



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EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	
PROPOSED GAS LINE	GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	
PROPOSED SANITARY SEWER	8"SS
EXISTING WATER	W W
PROPOSED WATER	8"W
FORCEMAIN	FM FM
FORCEMAIN RETURN	FMR FMR
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JOINT TRENCH	

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OPEN SPACE	OPEN SPACE D SOILS, CN=80	2.50
RESIDENTIAL ⅛ ACRE LOTS	RESIDENTIAL 50% IMPERVIOUS C SOILS, CN=80	7.09
RESIDENTIAL ⅛ ACRE LOTS	RESIDENTIAL 50% IMPERVIOUS D SOILS, CN=85	6.11
	COMPOSITE CN=66	

NOTES:

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

2) **Inlet Protection, Erosion Blanket & Temporary Stabilization (I.E. Seed & Mulch) Will Be Installed By General Contractor. Permanent Stabilization Measure (I.E. Sod, Landscape,Pavement) Will Be Installed By Contractor.)**

3) **Contractor To Stabilize All Disturbed Areas After Construction.**

1 ☆ Outfall

LIMITS OF DISTURBANCE

EPSC Phasing

Initial: Silt Fence Along Downgradient Perimeter Construction Entrance Check Dams In Existing Ditches Filter Fabric Inlet Protection

Intermediate: Temporary Seeding Temporary Sediment Basins Filter Fabric Inlet Protection Check Dams In Proposed Ditches Silt Fence To Protect Ditches Erosion Control Blanket Installation At Prescribed Locations

Final: Seeding And Stabilization Of All Disturbed Areas

Know what's below. Call before you dig.

30' 0 30' 60'

SCALE: 1"= 30'

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LANDSCAPE ARCHITECTURE
MURFREESBORO, TENNESSEE 37130
PHONE: (615) 890-7901 E-MAIL: RHOUZE@SECTENN.COM FAX: (615) 895-2567

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SEC, Inc.

RICHARD HOUZE 102 TENNESSEE REGISTERED LANDSCAPE ARCHITECT STATE OF TENNESSEE

The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the contractor to construct the site in accordance with these plans and specifications. Any deviation from these plans must be approved in writing with the design as noted, described, and illustrated. The engineer assumes no administrative liability or responsibility in the assurance that the site is constructed in accordance with the construction plans.

Carothers Crossing Commercial
Site Plans
LaVergne, Tennessee

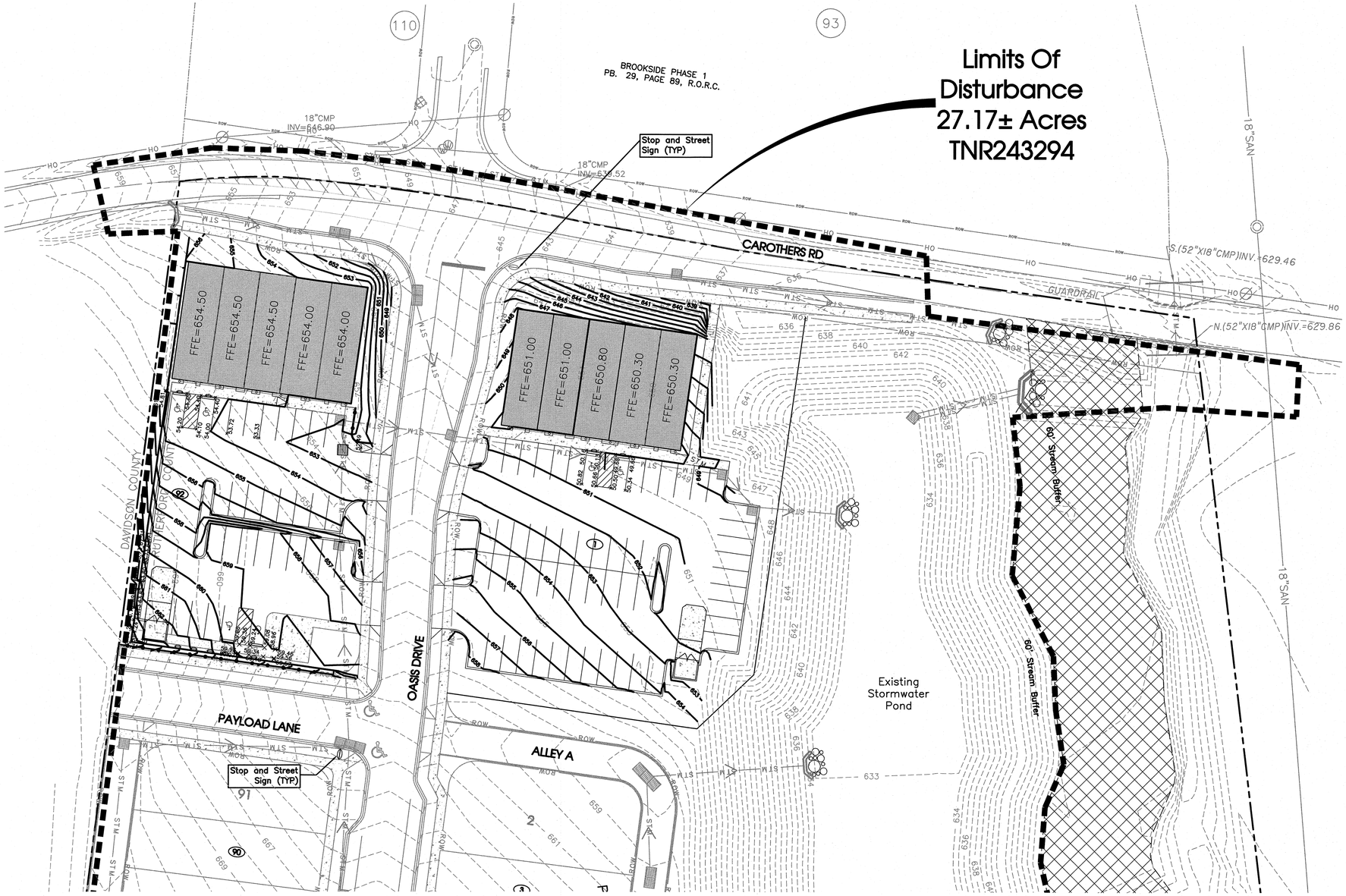
Intermediate EPSC Plan

REVISED: 3-21-2023 Comments
4-6-2023 Comments
DRAWN: MLG
DATE: 1-5-2023
CHECKED: RH
FILE NAME: 18038Carothers_Site
SCALE: 1"=30'
JOB NO. 18038
SHEET: C3.0

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:52 AM User: Michelle Gabo

NOTE:
All unpaved areas to be seeded and strawed, at a minimum, at completion of construction.

Areas 3:1 or steeper will require seed and matting.



Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
EXIST. SIGN POST		HC SIGN	
EXIST. SEWER CLEANOUT		PROPOSED SIGN POST	
EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD	
EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB & GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE		REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION	
CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION	
DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION	
FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION	
FIRE HYDRANT		CATCH BASIN	
GATE VALVE & BOX		CURB INLET	
WATER METER		AREA DRAIN	
GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE X-HEADWALL	
LIGHT POLE		CANOPY LIGHT	

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E
EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	
PROPOSED GAS LINE	GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	
PROPOSED SANITARY SEWER	8"SS
EXISTING WATER	W W
PROPOSED WATER	8"W
FORCEMAIN	FM FM
FORCEMAIN RETURN	FMR FMR
FLOODWAY	FW FW
JOINT TRENCH	

811 Know what's below. Call before you dig.

N

30' 0 30' 60'
SCALE: 1"= 30'

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RICHARD HOUZE — 103 — REGISTERED PROFESSIONAL ENGINEER — STATE OF TENNESSEE

Carothers Crossing Commercial
Site Plans
LaVergne, Tennessee

REVISED: 3-21-2023 Comments 4-6-2023 Comments	
DRAWN: MLG	
DATE: 1-5-2023	
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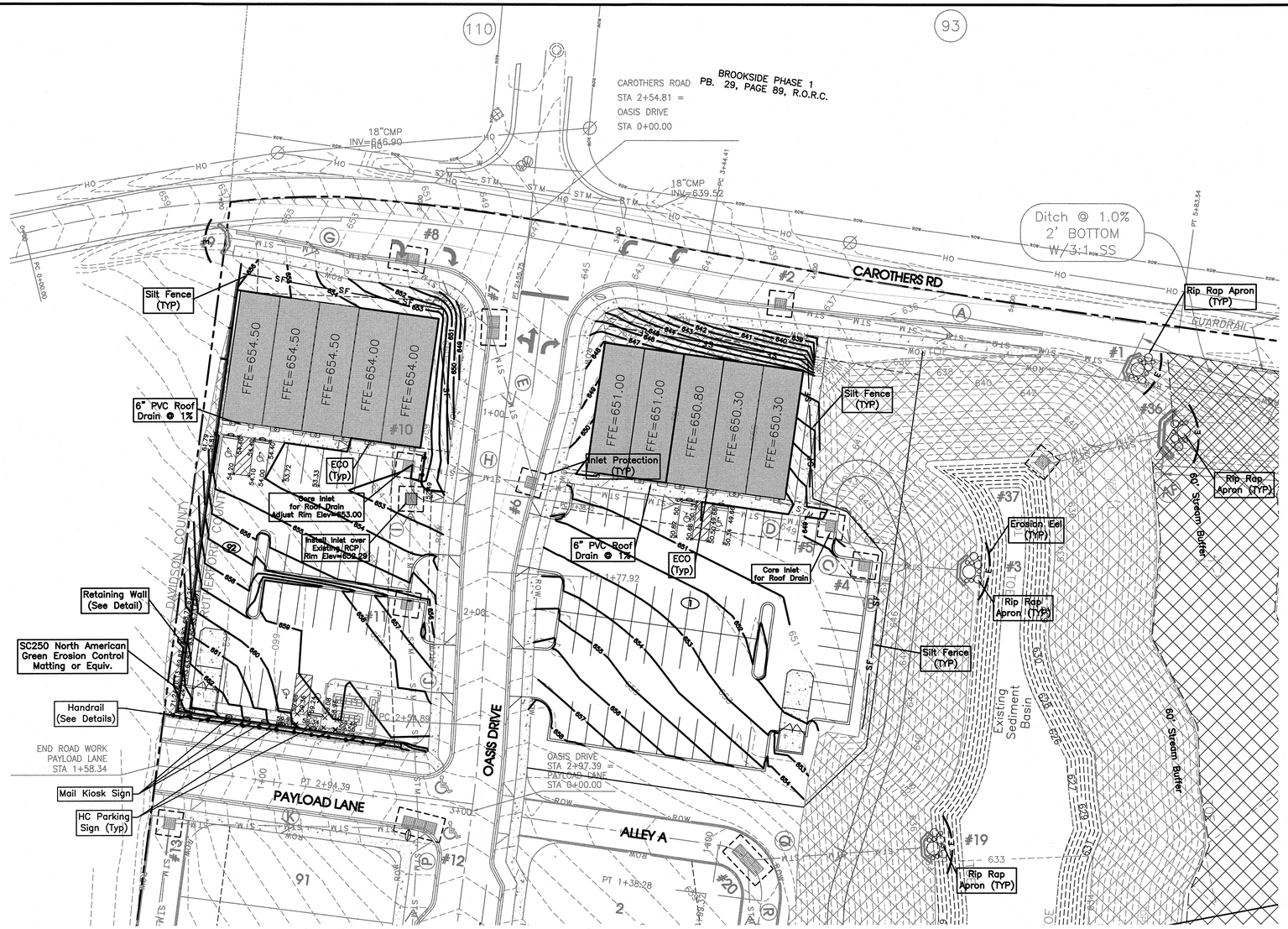
FILE NAME: 18038Carothers_Site	
SCALE: 1"=30'	
JOB NO. 18038	
SHEET: C4.0	

Final EPSC Plan

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:53 AM User: Michelle Celbo



NOTE:
See Retaining Wall Standard for wall details, apply chamfered wall joint at 50' max spacing.

DRAINAGE STRUCTURE TABLE

NAME	T.O.G. ELEV (FT)	DESCRIPTION	JB&S CASTING #
#1	–	CONCRETE WINGED HW	–
#2	638.00	SINGLE BOX	1–3104V
#3	636.03	CONCRETE WINGED HW	
#4	648.64	SINGLE BOX	1–3103
#5	648.28	SINGLE BOX	1–3103
#6	650.66	SINGLE BOX	1–3104V
#7	647.29	DOUBLE BOX	2–3104
#8	650.66	DOUBLE BOX	2–3104V
#9	655.58	CONCRETE WINGED HW	
#10	652.23	SINGLE BOX	1–3103
#11	655.99	SINGLE BOX	1–3103
#12	660.97	TRIPLE BOX	3–3104
#13	670.77	SINGLE BOX	1–4220
#19	–	ENERGY DISSIPATING HW	–
#20	657.72	TRIPLE BOX	3–4220
#36	–	CONCRETE WINGED HW	–
#37	640.50	SINGLE BOX	7514

DRAINAGE PIPE TABLE

NAME	STRUC (DN)	STRUC (UP)	INV (DN)	INV (UP)	LENGTH (FT)	SLOPE (%)	TYPE	SIZE (IN)	BARRELS	MANNING'S N
A	#1	#2	631.95	634.05	175	1.20	RCP III	15	1	0.013
B	#3	#4	632.50	637.76	46	11.34	HDPE	30	1	0.012
C	#4	#5	637.76	640.97	23	14.00	RCP III	30	1	0.013
D	#5	#6	640.97	642.48	151	1.00	RCP III	30	1	0.013
E	#6	#7	643.48	644.29	81	1.00	RCP III	18	1	0.013
F	#7	#8	644.29	647.66	53	6.41	RCP III	18	1	0.013
G	#8	#9	647.66	654.10	90	7.16	RCP III	18	1	0.013
H	#6	#10	645.48	648.23	62	4.44	RCP III	30	1	0.013
I	#10	#11	648.23	651.99	67	5.62	RCP III	30	1	0.013
J	#11	#12	652.49	657.46	114	4.34	RCP III	24	1	0.013
K	#12	#13	657.46	660.59	124	2.52	RCP III	24	1	0.013
Q	#19	#20	633.00	646.00	87	14.95	HDPE	18	1	0.012
AF	#36	#37	631.40	632.00	60	1.00	RCP III	36	2	0.013

Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
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IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
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EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB and GUTTER	
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EXIST. WATER METER		TURN LANE ARROWS	
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FIRE HYDRANT		CATCH BASIN	
GATE VALVE and BOX		CURB INLET	
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GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE– X– HEADWALL	

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

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Grading and Drainage Plan

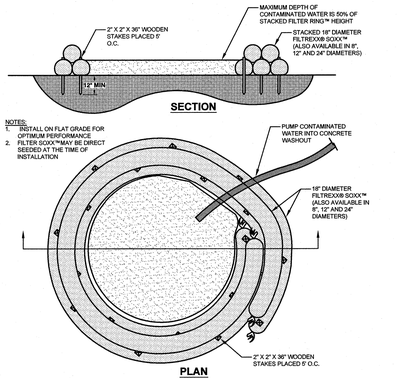
SHEET: C5.0

811 Know what's below. Call before you dig.

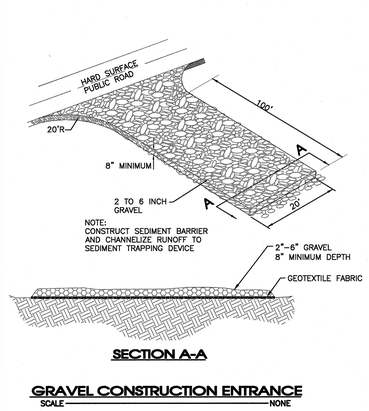
N

30' 0 30' 60'
SCALE: 1"= 30'

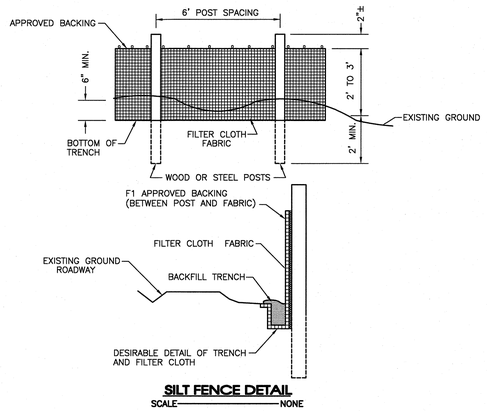
Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:53 AM User: Michelle Golbo



FILTREXX® CONCRETE WASHOUT
SCALE — NONE



GRAVEL CONSTRUCTION ENTRANCE
SCALE — NONE



SILT FENCE DETAIL
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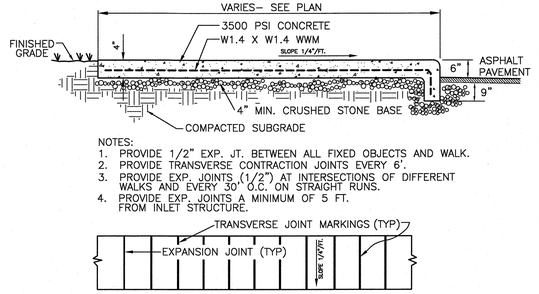
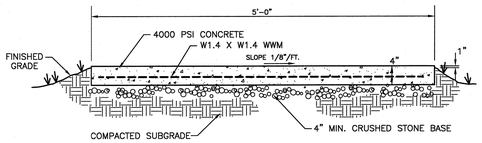
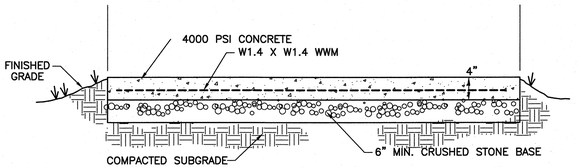


CONCRETE SIDEWALK WITH TURN DOWN CURB
SCALE — NONE

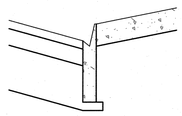


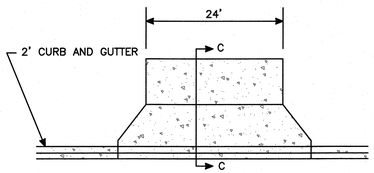
NOTES:
1. PROVIDE 1/2" EXP. JT. BETWEEN ALL FIXED OBJECTS AND WALK.
2. PROVIDE CONTRACTION JOINTS EVERY 6' AND EXTEND AT LEAST 1/3 OF DEPTH OF SLAB.
3. PROVIDE EXP. JOINTS (1/2") AT INTERSECTIONS OF DIFFERENT WALKS AND EVERY 30' O.C. ON STRAIGHT RUNS.
HOA IS RESPONSIBLE FOR MAINTENANCE OF SIDEWALKS.

CONCRETE SIDEWALK
SCALE — NONE

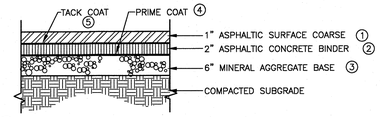


NOTES:
1. PROVIDE 1/2" EXP. JT. BETWEEN ALL FIXED OBJECTS AND WALK.
2. PROVIDE CONTRACTION JOINTS EVERY 6' AND EXTEND AT LEAST 1/3 OF DEPTH OF SLAB.
3. PROVIDE EXP. JOINTS (1/2") AT INTERSECTION OF DRIVE AND EVERY 30' O.C. ON STRAIGHT RUNS.
4. HOA IS RESPONSIBLE FOR MAINTENANCE OF MAIL KIOSK DRIVE.





DRIVEWAY RAMP
SCALE — NONE



① BITUMINOUS SURFACE: (1" PER SQ. TD. = 106 LBS)
TDOT 411-01.01 – MINERAL AGGREGATE (ASC) GRADING "E"
TDOT 411-01.02 – ASPHALTIC CEMENT (ASC) GRADING "E"

② BITUMINOUS BINDER: (1" PER SQ. YD. = 110 LBS.)
TDOT 307-03.11 – BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "B"

③ MINERAL AGGREGATE: (2.03 TON / CU. YD.)
TDOT 303-01 – MINERAL AGGREGATE TYPE "A" BASE, GRADING "D"

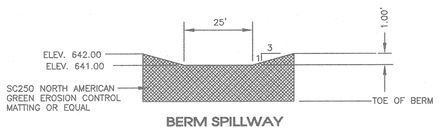
④ PRIME COAT:
TDOT 402-01 – BITUMINOUS MATERIAL FOR PRIME COAT (PC) 0.30-0.35 GAL/SQ. YD.
TDOT 402-02 – AGGREGATE FOR COVER MATERIAL (PC) 8-12 LB/SQ. YD.

⑤ TACK COAT:
TDOT 403-01 – BITUMINOUS MATERIAL FOR TACK COAT (TC) 0.02 GAL/SQ. YD.

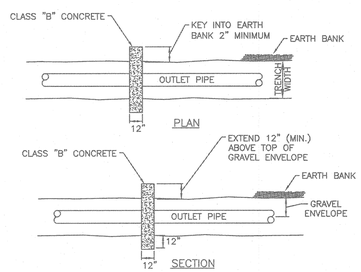
TYPICAL PAVEMENT SECTIONS
SCALE — NONE

4.	ELEVATIONS								OUTLET PIPE			*
	A	B	C	D	E	F	G	H	SIZE	LENGTH	SLOPE	ORIFICE SIZE
POND	642.00	632.00	631.40	640.50	10'	4'	634.60	3'	2-36"	SEE PLAN	1.00%	3.5"

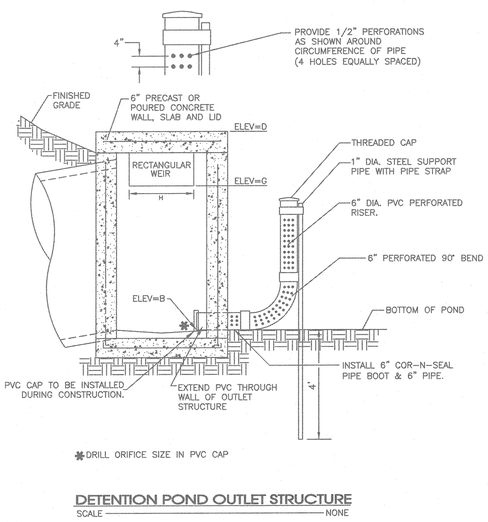
Previously Installed



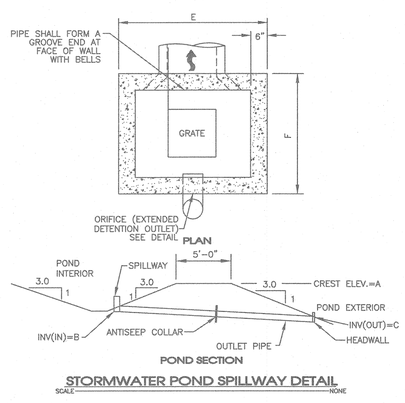
BERM SPILLWAY



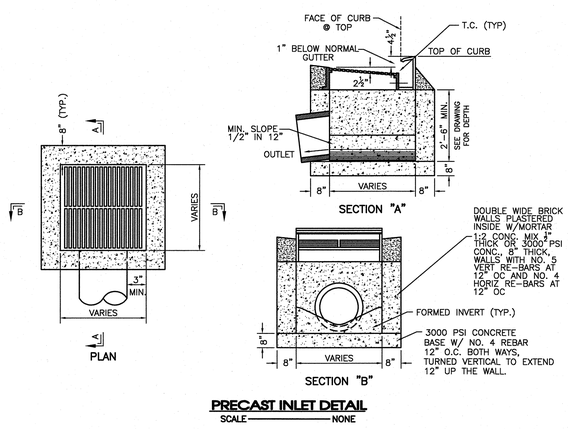
ANTI-SEEP COLLAR
SCALE — NONE



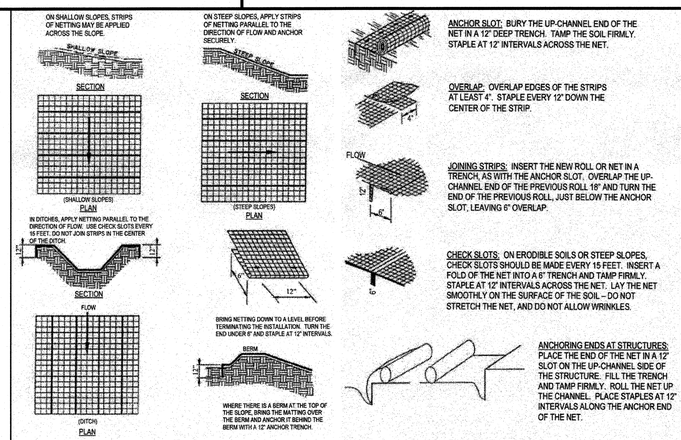
DETENTION POND OUTLET STRUCTURE
SCALE — NONE



STORMWATER POND SPILLWAY DETAIL
SCALE — NONE



PRECAST INLET DETAIL
SCALE — NONE



ORIENTATION OF NETTING AND MATTING

Figure TCP-09-2
Mat Anchoring and Layout

Figure TCP-09-1
Mat Anchoring

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RICHARD HOUZE — STATE OF TENNESSEE — REGISTERED ENGINEER — No. 109

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Details

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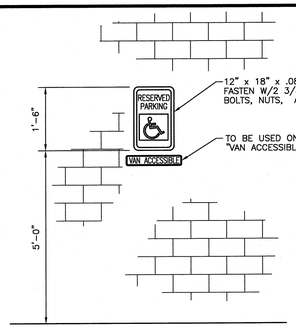


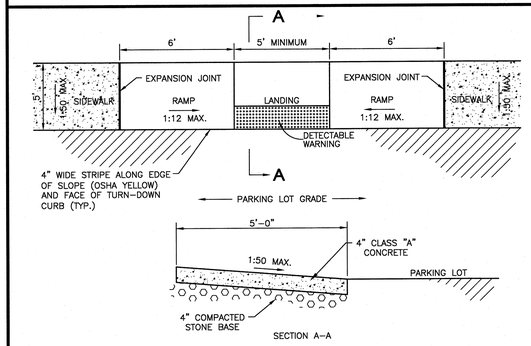
12" x 18" x .080" STD. HANDICAP SIGN. FASTEN W/2 3/8" DIA. CADMIUM PLATED BOLTS, NUTS, AND LOCKWASHERS.

TO BE USED ONLY ON SPACES DESIGNATED "VAN ACCESSIBLE"

NOTE:
HANDICAP PARKING SIGN SHALL CONFORM WITH CURRENT STATE AND LOCAL CODES AND REGULATIONS.

WALL MOUNTED HANDICAP PARKING SIGN DETAIL

SCALE — NONE



SECTION A-A

GENERAL NOTES:

1. LANDING SHALL BE FLUSH WITH EDGE OF PAVEMENT.

2. SURFACE TEXTURE OF THE CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT. THE SURFACE SHALL BE COARSE BROOMED FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

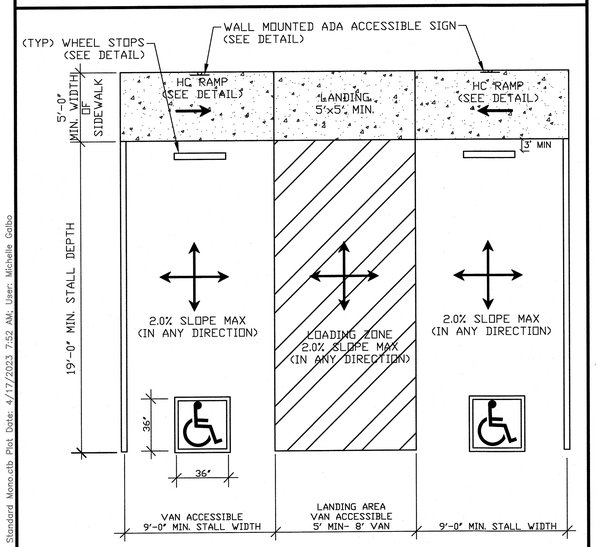
3. RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12 (VERTICAL:HORIZONTAL) AND SHALL NOT BE REQUIRED TO EXCEED 8 FEET (96 INCHES) IN LENGTH.

4. HANDICAP RAMP SHALL BE CONSTRUCTED WITH DETECTABLE WARNINGS WHICH SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 INCHES, A NOMINAL HEIGHT OF 0.2 INCHES AND A NOMINAL CENTER-TO-CENTER SPACING OF 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, WITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED SHALL BE YELLOW BRICK PAVERS AND SHALL PROVIDE CONTRAST AND BE AN INTEGRAL PART OF THE WALKING SURFACE. THE PAVERS SHALL COMPLY WITH THE CURRENT REQUIREMENTS SET FORTH IN THE ADA AND BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND FOR 2 FEET FROM THE BOTTOM OF THE RAMP.

5. A CURB RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH 4.29.2 OF ADA REQUIREMENTS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

HANDICAP RAMP

SCALE — NONE

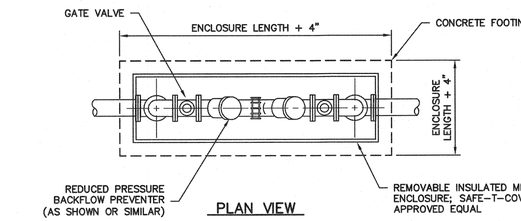


HANDICAP STALL DETAIL

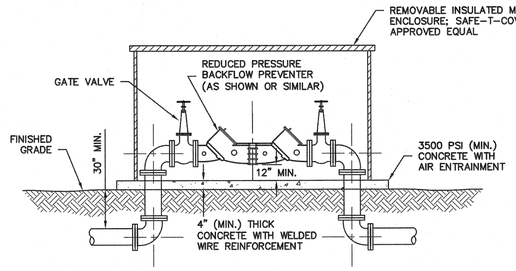
SCALE — NONE

GENERAL NOTES:

1. VERTICAL ACCESSIBLE SIGN DOES NOT HAVE TO BE POLE-MOUNTED AND MAY BE MOUNTED TO THE BUILDING FASCIA INSTEAD. (LOCAL AND STATE REGULATIONS TO SUPERSEDE)



PLAN VIEW



ELEVATION

REDUCED PRESSURE BACKFLOW PREVENTER (ABOVEGROUND)

N.T.S.

Revised August 2017

STANDARD DETAIL 070

CITY OF LAVERGNE, TENNESSEE

G & M File No. 442-56

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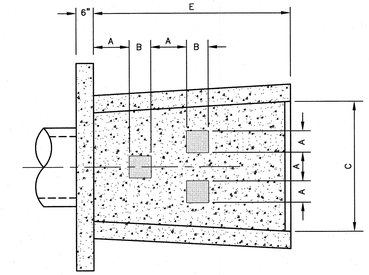
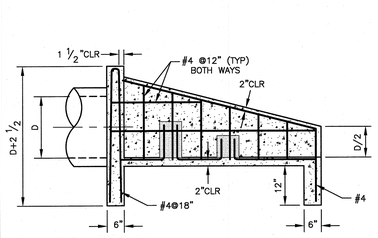
Engineering & Environmental Consulting
P.O. BOX 2968, MURFREESBORO, TN 37133-2968
(615) 895-8221 * FAX (615) 895-0632

FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\070 Reduced Pressure Backflow Preventer.dwg

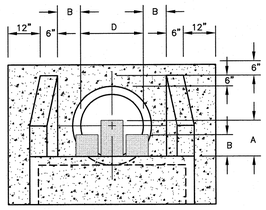


DIMENSIONS IN INCHES												
A	9	10	12	14	15	16	18	21	24	27	30
B	6	7	8	9	10	11	12	14	16	18	20
C	32	42	48	54	60	66	72	84	96	108	120
D	18	21	24	27	30	33	36	42	48	54	60
E	54	63	72	81	90	99	108	126	144	162	180

PLAN VIEW



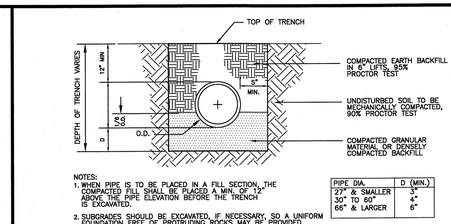
SIDE VIEW



FRONT VIEW

ENERGY DISSIPATER OUTLET STRUCTURE

SCALE — NONE

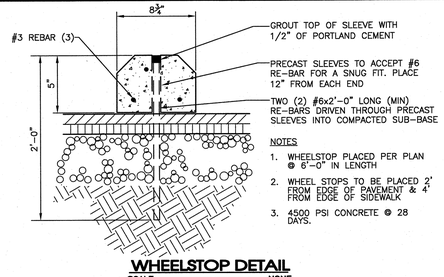


NOTES:
1. WHEN PIPE IS TO BE PLACED IN A FILL SECTION, THE COMPACTED FILL SHALL BE PLACED A MIN. OF 12" ABOVE THE PIPE ELEVATION BEFORE THE TRENCH IS EXCAVATED.
2. SUBGRADES SHOULD BE EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED.

PIPE DIA.	D (MIN.)
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

TRENCH BEDDING FOR STORM DRAIN CMP AND RCP ONLY

SCALE — NONE

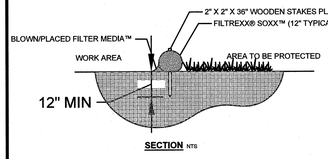


NOTES

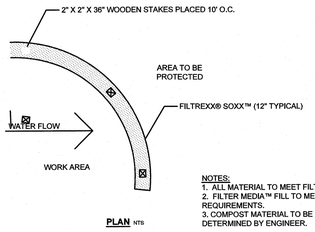
1. WHEELSTOP PLACED PER PLAN @ 6'-0" IN LENGTH
2. WHEEL STOPS TO BE PLACED 2' FROM EDGE OF PAVEMENT & 4" FROM EDGE OF SIDEWALK
3. 4500 PSI CONCRETE @ 28 DAYS.

WHEELSTOP DETAIL

SCALE — NONE



SECTION NTS

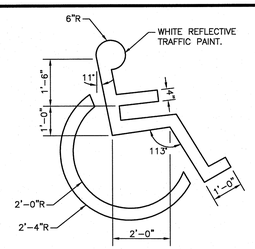


PLAN NTS

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

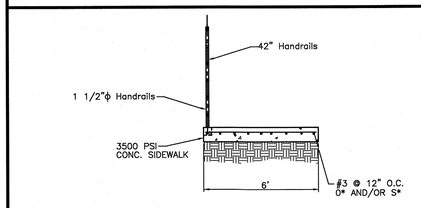
FILTREXX SEDIMENT CONTROL

SCALE — NONE



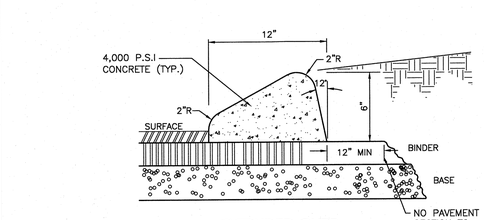
HANDICAP SYMBOL DETAIL

SCALE — NONE



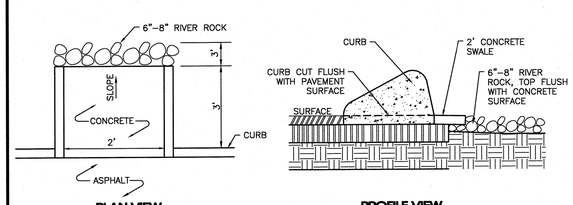
HANDRAIL DETAIL

SCALE — NONE



EXTRUDED CURB

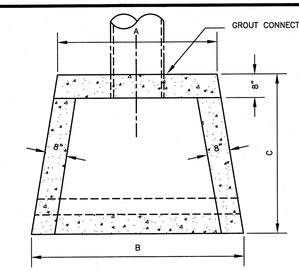
SCALE — NONE

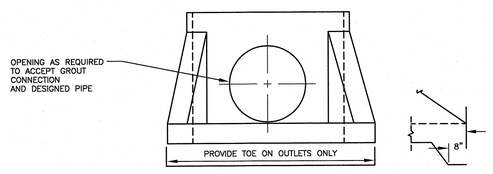


PLAN VIEW PROFILE VIEW

TYPICAL CURB CUT FOR DRAINAGE

SCALE — NONE



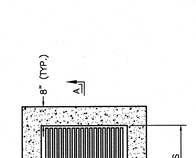


REINFORCED WITH NO.4 REBAR @ 10" C/C, E.W., ALL WALLS AND SLABS
CONCRETE: 4,000 P.S.I. AT 28 DAYS

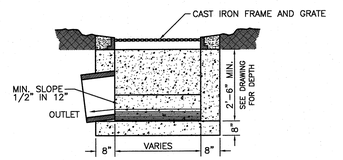
PIPE SIZE	A	B	C
24" O.D. MAX.	48"	72"	44"
39" O.D. MAX.	72"	96"	50"
53" O.D. MAX.	96"	120"	56"

WINGED HEADWALL

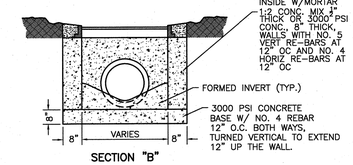
SCALE — NONE



PLAN



SECTION "A"



SECTION "B"

PRECAST CATCH BASIN DETAIL

SCALE — NONE

SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE (615) 890-7901 FAX (615) 895-2567
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The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the contractor to construct the site in accordance with the plans and specifications. Any deviation from these plans must be reviewed with the design as noted, described, and illustrated. The engineer assumes no administrative liability or responsibility in the assurance that the site is constructed in accordance with the construction plans.

RICHARD HOLZE — 10/15/2023 — STATE OF TENNESSEE — REGISTERED ENGINEER

Carothers Crossing Commercial
Site Plans
LaVergne, Tennessee

REVISED: 3-21-2023 Comments
1-6-2023 Comments

DRAWN: MLG
DATE: 1-5-2023
CHECKED: RH
FILE NAME: 18038Carothers_Site
SCALE: NTS
JOB NO. 18038

Details

SHEET: C6.1

Plot Style: S.E.C. Standard Mono.ctb Plot Date: 4/17/2023 7:52 AM User: Michelle Galbo

BUILDING CODE ANALYSIS

BUILDING CODES: 2018 INTERNATIONAL BUILDING CODE , 2018 IPC, IMC, IFireC, 2017 IElectricC,
AND ICC A117.1–2017

BUILDING TYPES: MIXED USE:

B BUSINESS – LEVEL 1
SHELL SPACE FOR FUTURE TENANT OCCUPANCY.
PERMITS FOR INDIVIDUAL SUITE TENANT OCCUPANCY TO BE APPLIED FOR SEPARATELY.
AND R–2 RESIDENTIAL – LEVELS 2 AND 3

OCCUPANCY SEPARATION:
BETWEEN B AND R–2: HORIZONTAL SEPARATION AT LEVEL 2 FLOOR: 1 HR (SPRINKLED) PER TABLE 508.4
WALLS BETWEEN DWELLING UNITS: ½ HR PER 708.3. EXCEPTION 2. (SPRINKLED)
FLOORS BETWEEN DWELLING UNITS: ½ HR. PER 711.2.4.3, EXCEPTION.(SPRINKLED)

CONSTRUCTION TYPE: VB

BUILDING HEIGHT: PER TABLE 504.3 FOR B OR R OCC = 60' FOR TYPEVB –SPRINKLED
ACTUAL BUILDING HEIGHT = 35'–5"

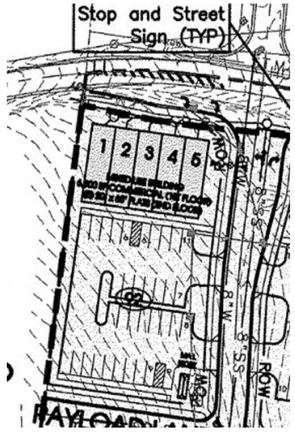
NUMBER OF STORIES: PER TABLE 504.4 FOR B OR R OCC. = 3 STORIES FOR TYPEVB –SPRINKLED
ACTUAL NUMB. OF STORIES = 3

BUILDING AREA: PER TABLE 506.2= 27,000SF FOR B OCC. TYPEVB –SPRINKLED
21,000SF FOR R–2 OCC., TYPE VB –SPRINKLED
ACTUAL BUILDING AREA = 6585 SF

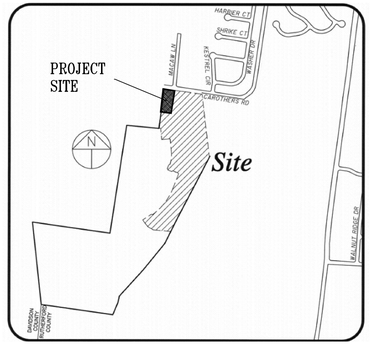
SPRINKLER: LEVEL 1 – PER NFPA 13
LEVELS 2 &3 – PER NFPA 13R (PER INTERNATIONAL FIRE CODE 903.3.1.2)

ACCESIBILITY: RESTROOMS AT 1ST LEVEL FOR FUTURE OCCUPANCY ARE ACCESSIBLE.
R–2 OCCUPANCY IS ON SECOND AND THIRD LEVELS ACCESSIBLE ONLY BY STAIRWAYS
WITH AGGREGATE FLOOR AREA PER UNIT OF NOT MORE THAN 1070 SF/UNIT.
THEREFORE, RESIDENTIAL UNITS NOT REQUIRED TO BE ACCESSIBLE.

EXITING: NUMBER OF EXITS: PER TABLE 1006.3.3(1), ONE EXIT FOR R–2 OCC. IS PERMITTED FOR MAX
TRAVEL DISTANCE OF 125'.
THE ACTUAL MAX. COMMON PATH OF TRAVEL DISTANCE IS 95' (SEE SHEET A–3, UNIT 4)
EXIT ENCLOSURE: EXIT ENCLOSURE REQUIRED BY 1023.2 IN ACCORDANCE WITH SEC. 707.
FIRE RESISTANCE RATING NOT LESS THAN 1 HOUR CONNECTING LESS THAN 4 STORIES.
A FIRE RESISTIVE RATING OF 1 HOUR IS PROVIDED AT EXIT STAIRS.



SITE PLAN – (NTS)
REFER TO DEVELOPER'S SITE DRAWINGS
FOR COMPLETE SITE PLAN INFORMATION



AREA LOCATION PLAN – (NTS)

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E12– THIRD FLOOR PLAN –FIRE ALARM
E13– LIGHTING SCHEDULES AND DETAILS
E14– ELECTRICAL SPECIFICATIONS

HAMLET MIXED USE BUILDING
101 OASIS DRIVE,
LAVERGNE, TN

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DALAMAR HOMES

HAMLET MIXED USE
101 Oasis Drive
Lavergne, TN.

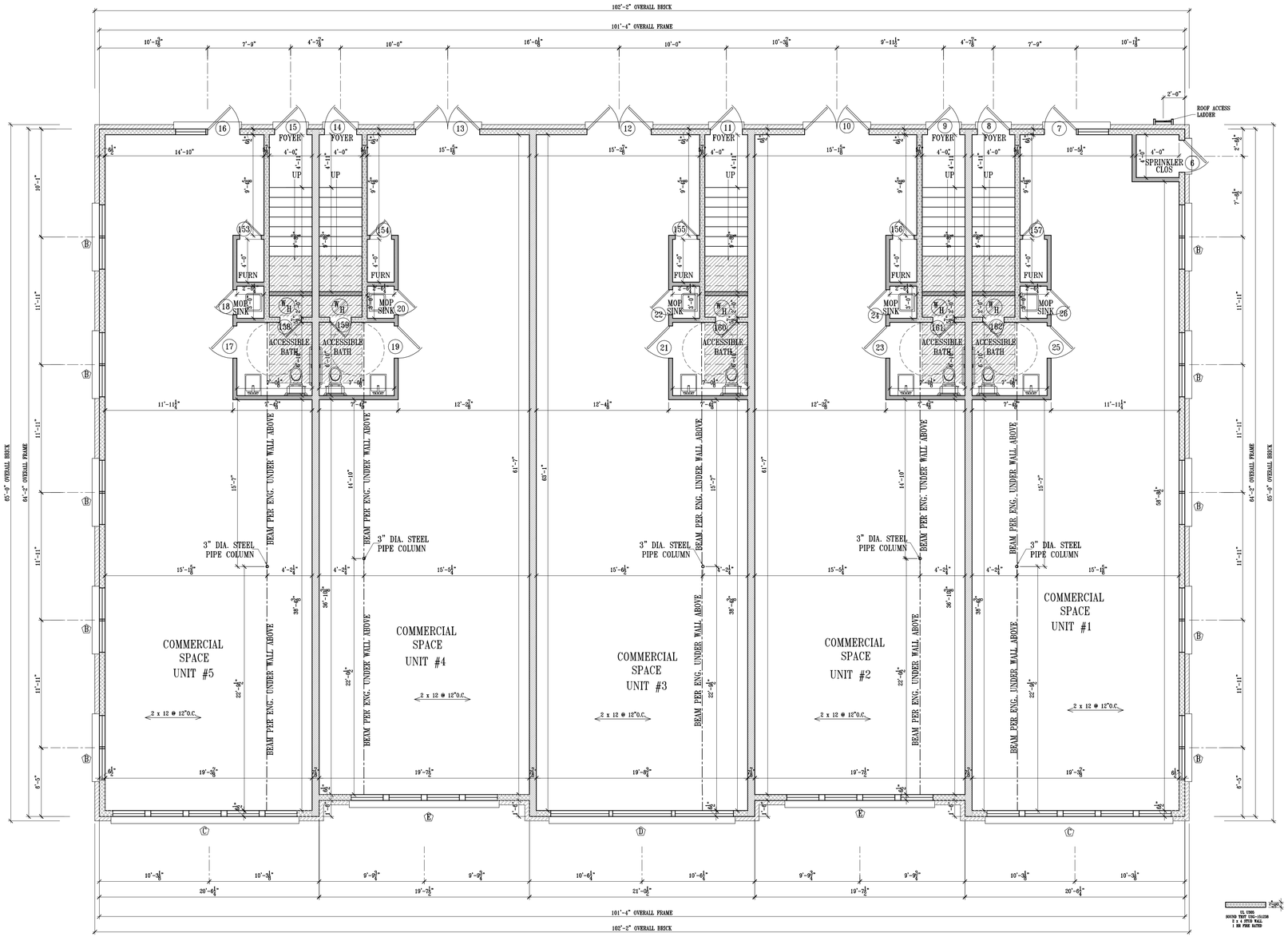
*

No.	Revision	Date

JOB NO:
DATE: 03/10/2023
DRAWN: BEW
CHECKED:
CAD FILE:

ARTHUR R. NAVE REGISTERED ARCHITECT STATE OF TENNESSEE
Arnave 1/12/23

T1



FIRST LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

NOTE!
ALL FURNACES
TO BE ELECTRIC.
GAS FURNACES
WILL NOT BE USED

NOTE!
ALL WATER HEATERS
TO BE ELECTRIC.
GAS WATER HEATERS
WILL NOT BE USED

WALL TYPE LEGEND

UL U305
SOUND TEST 1505-151230
2 x 4 STUD WALL
1 HR FIRE RATED

UL U305
SOUND TEST 1505-151202
2 x 6 STUD WALL
1 HR FIRE RATED

2 x 4 STUD WALL @ 16" O.C.
1/2" GYPSUM WALL BOARD INTERIOR
AND EXTERIOR SIDE FOR STRUCTURAL
SHEATHING

2 x 4 STUD WALL
1/2" GYPSUM BOARD BOTH SIDES
NON FIRE RATED

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DALAMAR HOMES

HAMLET MIXED USE
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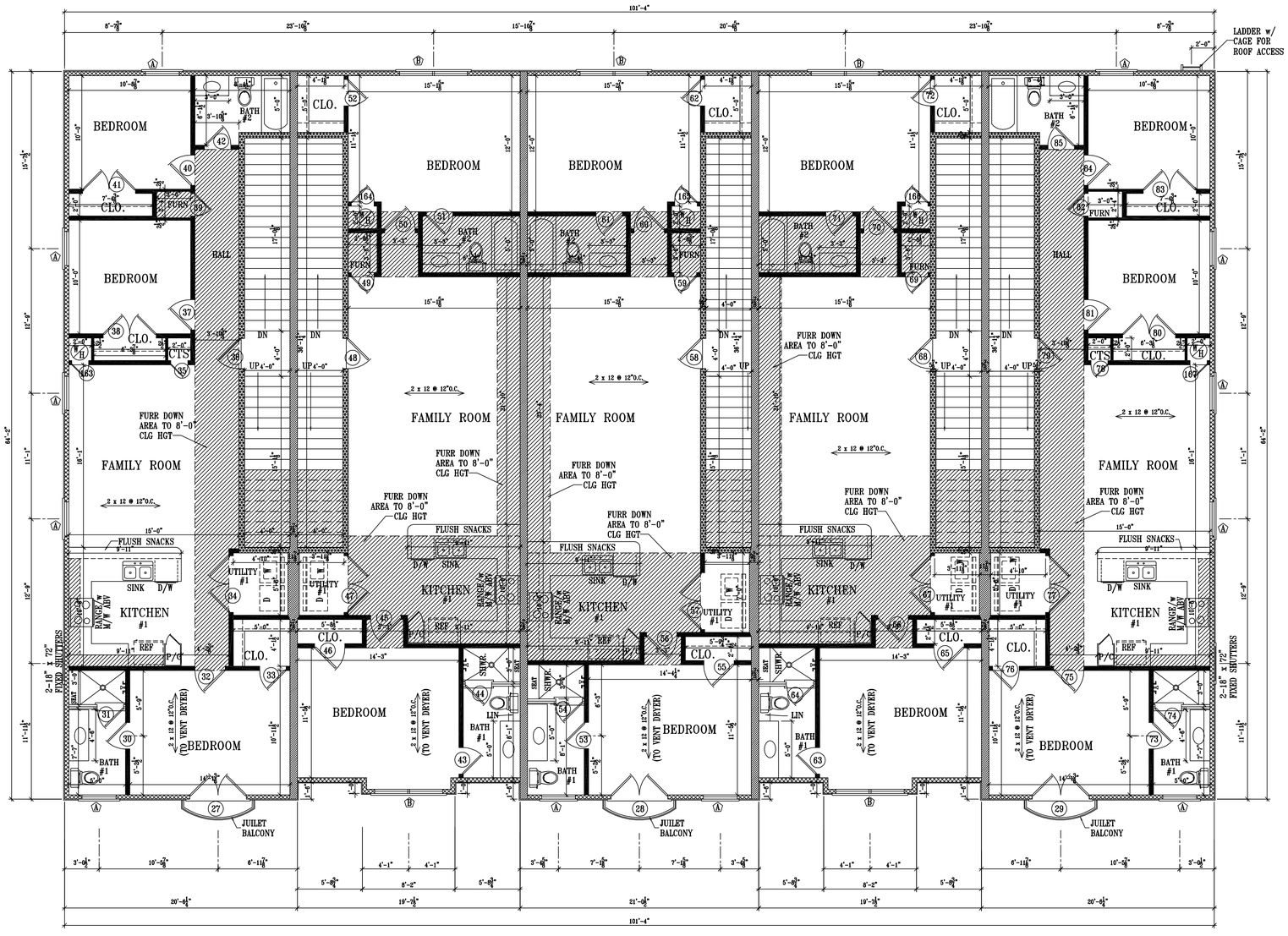
STATE OF TENNESSEE

ARNAVE 1/12/23

A1



SECOND LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

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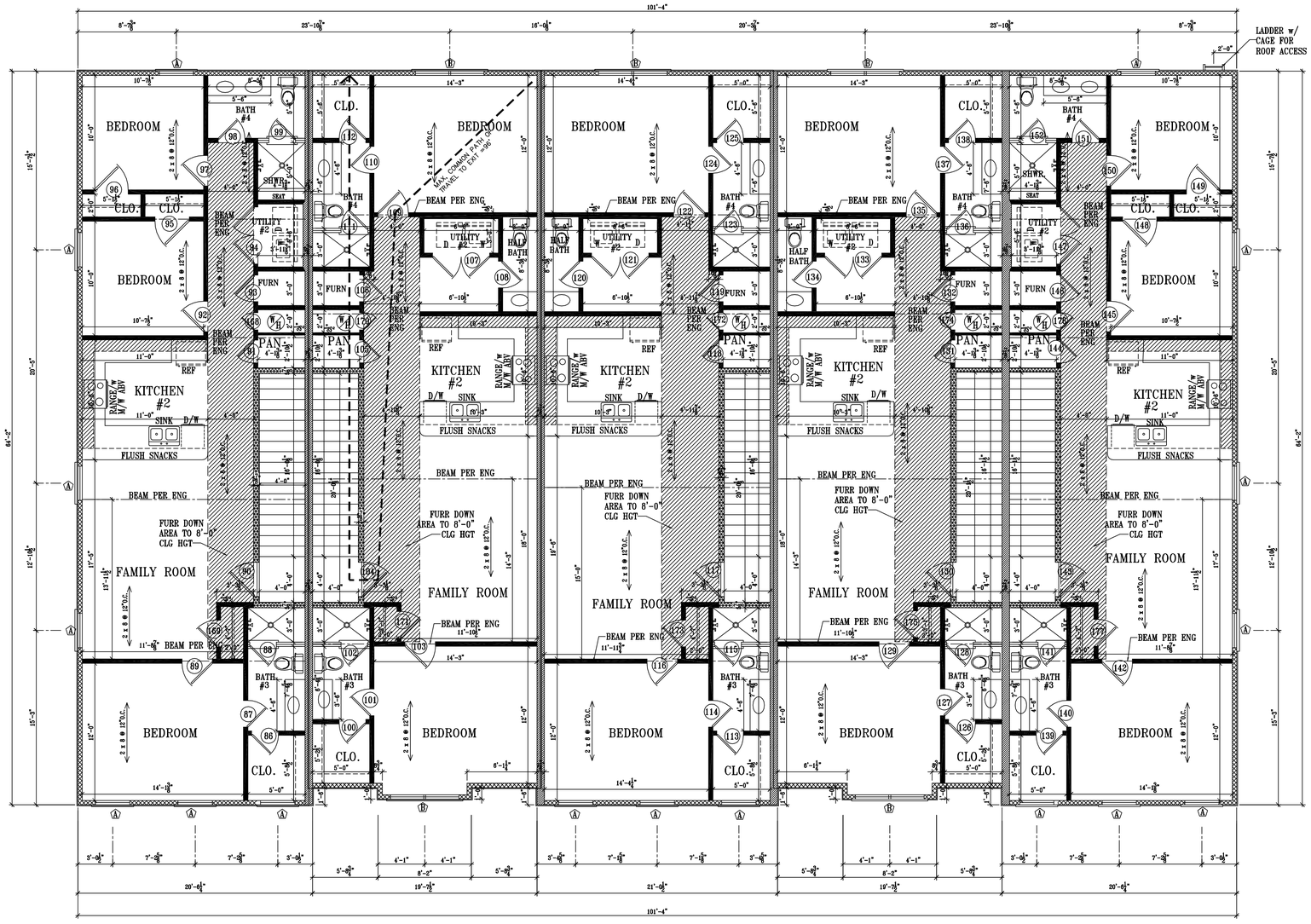
ARNAVE 1/12/23

A2



THIRD LEVEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

UNIT 5 UNIT 4 UNIT 3 UNIT 2 UNIT 1

1 HR. TYPE
WOOD TRUSS TWO-LAYERS
2 x 4 STUD WALL
1 HR FIRE RATED

1 HR. TYPE
WOOD TRUSS ONE-LAYER
2 x 4 STUD WALL
1 HR FIRE RATED

2 x 4 STUD WALL @ 16" O.C.
1/2" GYPSUM WALL BOARD INTERIOR
AND SHEATHING REF. FOR STRUCTURAL
BRACINGS

2 x 4 STUD WALL
1/2" GYPSUM BOARD BOTH SIDES
NON FIRE RATED

NOTE!
ALL FURNACES
TO BE ELECTRIC.
GAS FURNACES
WILL NOT BE USED

NOTE!
ALL WATER HEATERS
TO BE ELECTRIC.
GAS WATER HEATERS
WILL NOT BE USED

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CAD FILE:

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REGISTERED ARCHITECT
STATE OF TENNESSEE
ARNAVE 1/12/23

A3

DOOR SCHEDULE

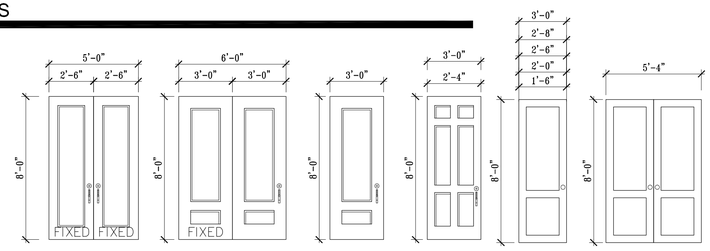
DOOR NO.	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	MATERIAL DOOR	MATERIAL FRAME	RATING	REMARKS	THRESHOLD
FIRST LEVEL FLOOR PLAN									
6	3'-0"	8'-0"	1-3/4"	G	WOOD	WOOD			
7	(2) 3'-0"	8'-0"	1-3/4"	E	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
8	3'-0"	8'-0"	1-3/4"	F	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
9	3'-0"	8'-0"	1-3/4"	F	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
10	(2) 3'-0"	8'-0"	1-3/4"	E	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
11	3'-0"	8'-0"	1-3/4"	F	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
12	(2) 3'-0"	8'-0"	1-3/4"	E	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
13	(2) 3'-0"	8'-0"	1-3/4"	E	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
14	3'-0"	8'-0"	1-3/4"	F	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
15	3'-0"	8'-0"	1-3/4"	F	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
16	(2) 3'-0"	8'-0"	1-3/4"	E	WOOD	WOOD		3/4 GLASS	ACCESSIBLE
17	3'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		ACCESSIBLE HARDWARE	
18	2'-4"	8'-0"	1-3/8"	G	WOOD	WOOD			
19	3'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		ACCESSIBLE HARDWARE	
20	2'-4"	8'-0"	1-3/8"	G	WOOD	WOOD			
21	3'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		ACCESSIBLE HARDWARE	
22	2'-4"	8'-0"	1-3/8"	G	WOOD	WOOD			
23	3'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		ACCESSIBLE HARDWARE	
24	2'-4"	8'-0"	1-3/8"	G	WOOD	WOOD			
25	3'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		ACCESSIBLE HARDWARE	
26	2'-4"	8'-0"	1-3/8"	G	WOOD	WOOD			
153	2'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		INSULATED	
154	2'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		INSULATED	
155	2'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		INSULATED	
156	2'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		INSULATED	
157	2'-0"	8'-0"	1-3/8"	G	WOOD	WOOD		INSULATED	
158	2'-0"	6'-8"	1-3/8"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
159	2'-0"	6'-8"	1-3/8"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
160	2'-0"	6'-8"	1-3/8"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
161	2'-0"	6'-8"	1-3/8"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
162	2'-0"	6'-8"	1-3/8"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
SECOND LEVEL FLOOR PLAN									
27	(2) 2'-6"	8'-0"	1-3/4"	D	WOOD	WOOD		STORE FRONT – FULL GLASS	
28	(2) 2'-6"	8'-0"	1-3/4"	D	WOOD	WOOD		STORE FRONT – FULL GLASS	
29	(2) 2'-6"	8'-0"	1-3/4"	D	WOOD	WOOD		STORE FRONT – FULL GLASS	
30	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
31	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
32	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
33	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
34	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
35	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD			
36	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
37	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
38	(2) 2'-4"	6'-8"	1-3/8"	J	WOOD	WOOD			
39	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
40	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
41	(2) 2'-4"	6'-8"	1-3/8"	J	WOOD	WOOD			
42	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
43	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
44	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
45	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
46	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
47	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
48	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
49	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
50	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
51	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
52	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
53	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
54	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
55	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
56	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
57	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
58	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
59	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
60	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
61	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
62	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
63	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
64	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
65	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
66	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
67	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
68	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
69	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
70	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
71	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
72	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
73	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
74	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
75	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
76	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
77	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
78	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
79	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
80	(2) 2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
81	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
82	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
83	(2) 2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
84	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
85	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
163	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
164	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
165	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
166	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
167	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	

THIRD LEVEL FLOOR PLAN

86	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
87	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
88	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
89	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
90	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
91	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
92	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
93	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
94	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
95	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
96	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
97	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
98	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
99	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
100	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
101	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
102	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
103	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
104	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
105	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
106	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
107	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
108	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
109	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
110	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
111	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
112	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
113	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
114	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
115	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
116	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
117	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
118	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
119	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
120	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
121	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
122	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
123	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
124	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
125	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
126	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
127	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
128	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
129	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
130	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
131	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
132	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
133	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
134	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
135	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
136	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
137	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
138	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
139	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
140	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
141	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
142	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
143	2'-8"	6'-8"	1-3/4"	G	WOOD	WOOD		INSULATED / 3/4 HR FIRE RATED	
144	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
145	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
146	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
147	(2) 2'-6"	6'-8"	1-3/8"	J	WOOD	WOOD			
148	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
149	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
150	2'-8"	6'-8"	1-3/8"	H	WOOD	WOOD			
151	2'-4"	6'-8"	1-3/8"	H	WOOD	WOOD			
152	2'-4"	7'-0"			GLASS			GLASS SHOWER DOOR	
168	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
169	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
170	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
171	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
172	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
173	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
174	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
175	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			
176	1'-6"	6'-8"	1-3/8"	H	WOOD	WOOD		INSULATED	
177	2'-0"	6'-8"	1-3/8"	H	WOOD	WOOD			

DOOR TYPES

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

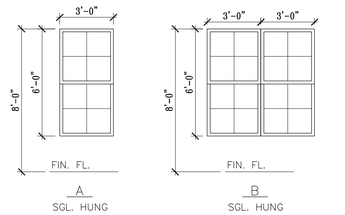


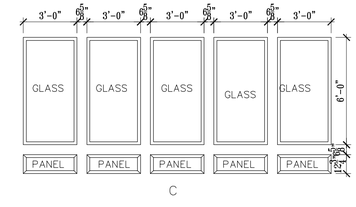
WINDOW SCHEDULE

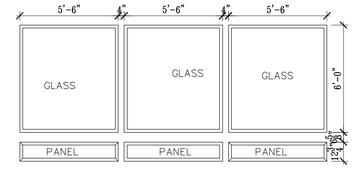
NO.	WINDOW SIZE	STYLE	QTY
A	3/0 x 6/0	SINGLE HUNG	29
B	(2) 3/0 x 6/0	SINGLE HUNG	20
C	STORE FRONT	FIXED	2
D	STORE FRONT	FIXED	1
E	STORE FRONT	FIXED	2

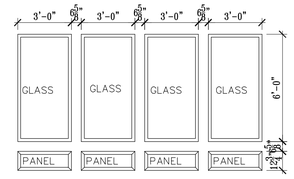
WINDOW TYPES

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









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DALAMAR HOMES

HAMLET MIXED USE
101 Oasis Drive
Lavergne, TN.

*

No.	Revision	Date

JOB NO:
DATE: 03/10/2023
DRAWN: BEW
CHECKED:
CAD FILE:

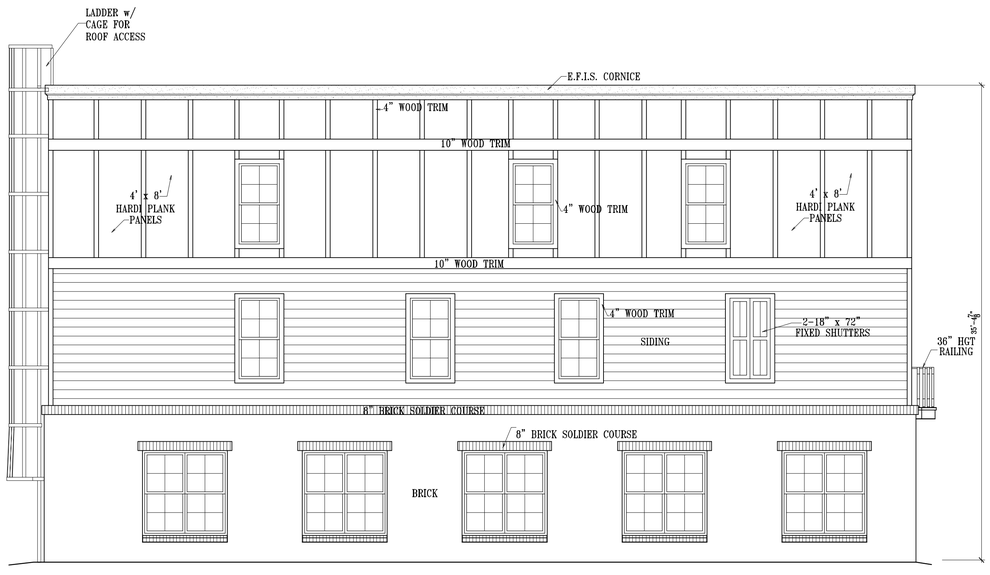
ARTHUR R. NAVE REGISTERED ARCHITECT STATE OF TENNESSEE
12/12/23

A4



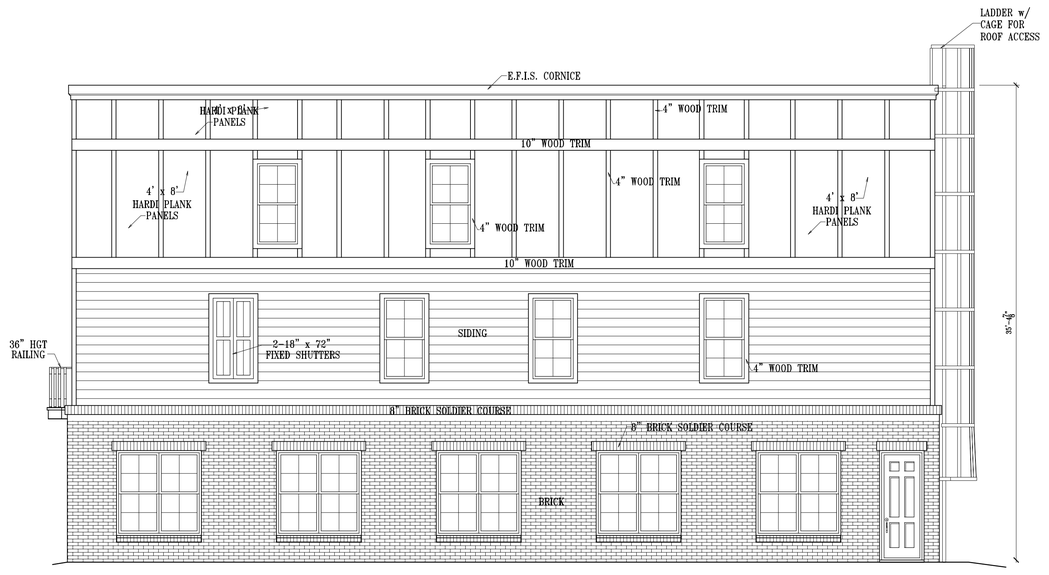
NORTH ELEVATION

SCALE: 3/16" = 1'-0"



WEST ELEVATION

SCALE: 3/16" = 1'-0"



EAST ELEVATION

SCALE: 3/16" = 1'-0"

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*

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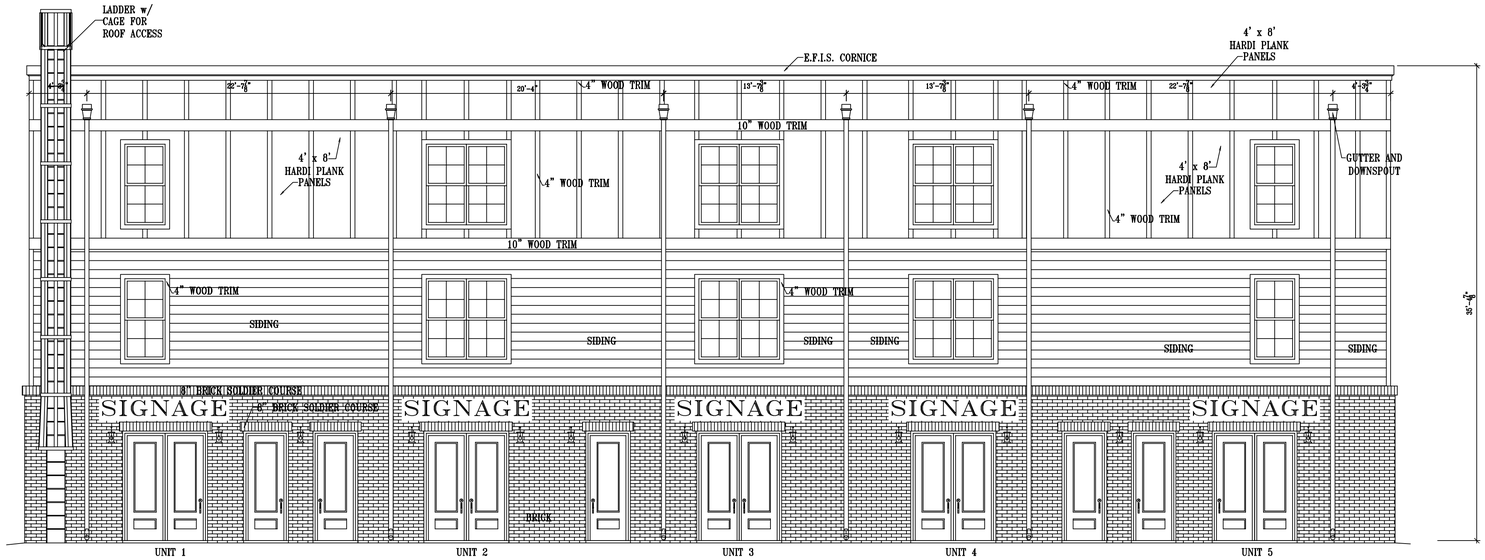
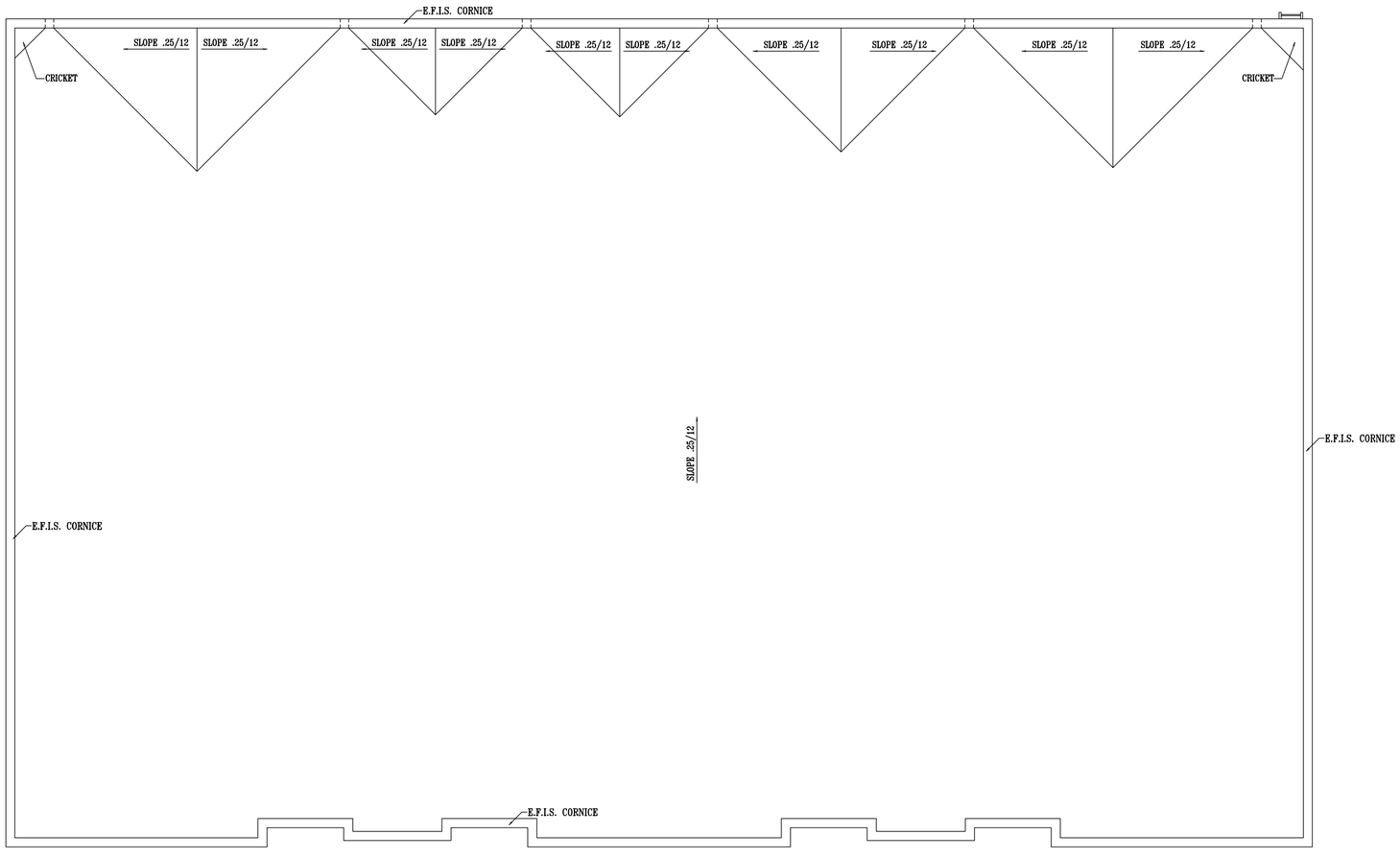
ARTHUR R. NAVE REGISTERED ARCHITECT STATE OF TENNESSEE
ARNAVE 1/12/23

A5



SOUTH ELEVATION

SCALE: 3/16" = 1'-0"



ROOF PLAN

SCALE: 3/16" = 1'-0"

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DALAMAR HOMES

HAMLET MIXED USE
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Lavergne, TN.

*

No.	Revision	Date

JOB NO:
DATE: 03/10/2023
DRAWN: BEW
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CAD FILE:

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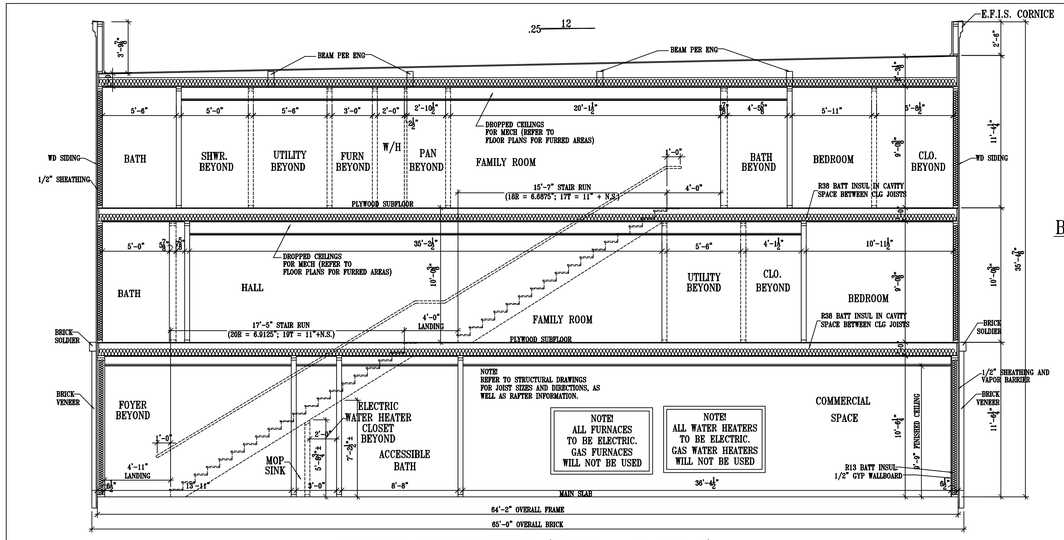
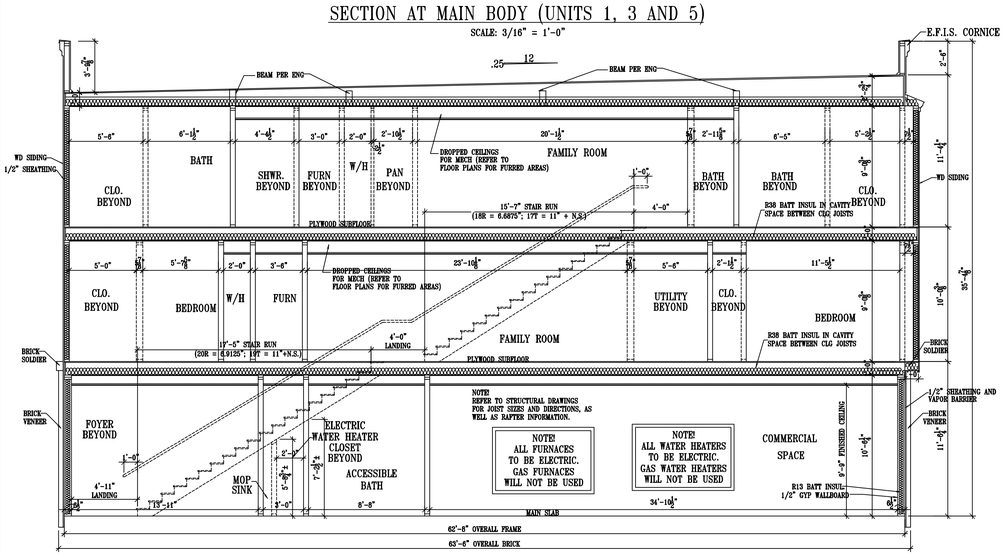
1/12/23

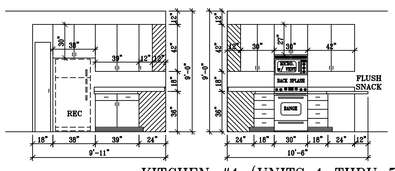
A6



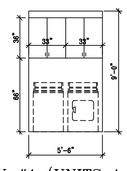
SECTION AT MAIN BODY (UNITS 1, 3 AND 5)
SCALE: 3/16" = 1'-0"



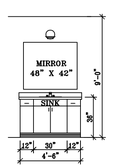
SECTION AT MAIN BODY (UNITS 2 AND 4)
SCALE: 3/16" = 1'-0"



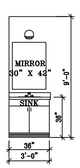
KITCHEN #1 (UNITS 1 THRU 5)
SCALE: 3/16" = 1'-0"



UTILITY #1 (UNITS 1 THRU 5)
SCALE: 3/16" = 1'-0"



BATH #1 (UNITS 1 AND 5)
SCALE: 3/16" = 1'-0"



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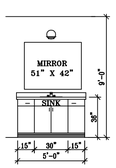

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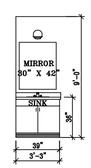

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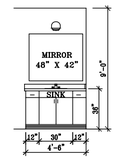
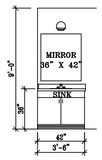
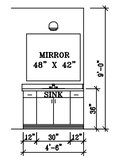


BATH #3 (UNITS 1 AND 5)
SCALE: 3/16" = 1'-0"



BATH #3 (UNITS 2 THRU 4)
SCALE: 3/16" = 1'-0"



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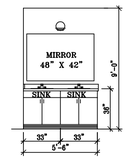
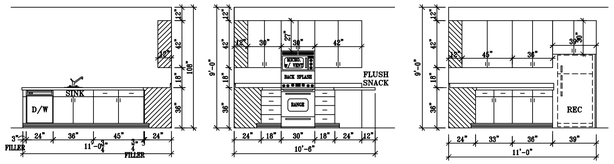
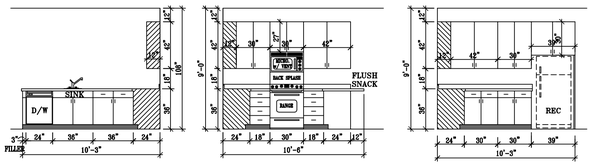


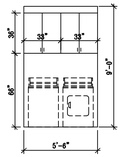
BATH #4 (UNITS 1 AND 5)
SCALE: 3/16" = 1'-0"



KITCHEN #2 (UNITS 1 THRU 5)
SCALE: 3/16" = 1'-0"



KITCHEN #2 (UNITS 2 THRU 4)
SCALE: 3/16" = 1'-0"



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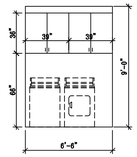
SCALE: 3/16" = 1'-0"



UTILITY #2 (UNITS 2 THRU 4)
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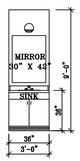

HALF BATH (UNITS 2 THRU 4)
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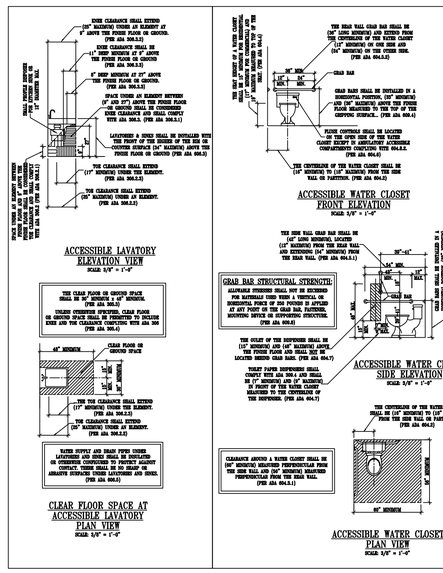

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DALAMAR HOMES

HAMLET MIXED USE
101 Oasis Drive
Lavergne, TN.

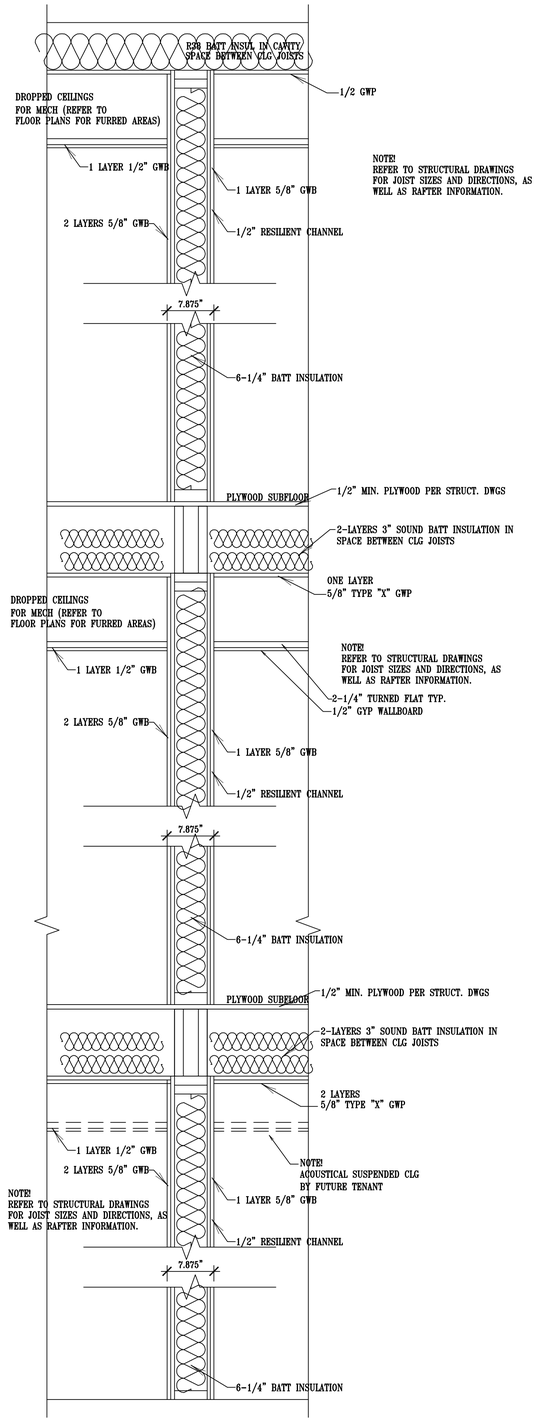
*

No.	Revision	Date

JOB NO:
DATE: 03/10/2023
DRAWN: BEW
CHECKED:
CAD FILE:

ARTHUR R. NAVE REGISTERED ARCHITECT STATE OF TENNESSEE
1/12/23

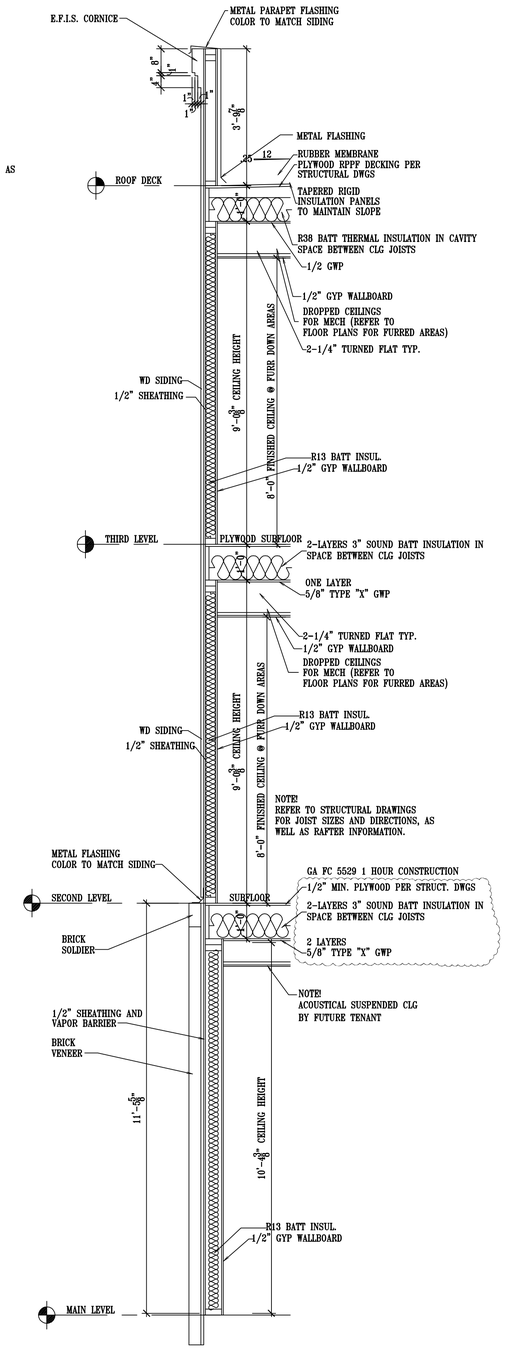
A7



UL U305 (USG-161202)

1 HR FIRE WALL SECTION

SCALE: 1" = 1'-0"

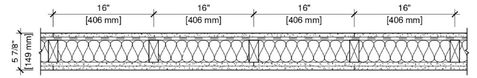


TYPICAL WALL SECTION

SCALE: 1/2" = 1'-0"

DESIGN NO. **UL U305**

FIRE RATING:	1 HOUR
STC RATING:	50
SOUND TEST:	USG-151238
SYSTEM THICKNESS:	5-7/8" [149 MM]
LOCATION:	INTERIOR
FRAMING TYPE:	WOOD STUD (LOAD-BEARING)



ASSEMBLY REQUIREMENTS:

GYPSUM PANELS:	ONE LAYER 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)
RESILIENT CHANNEL:	1/2" [12.7 MM] RESILIENT CHANNEL, 25 GA. (0.018"), 24" [610 MM] O.C.
WOOD STUDS:	2" X 4" [38 X 89 MM] WOOD STUDS, 16" [406 MM] O.C.
INSULATION:	3 1/2" [89 MM] KNAUF ECOBATT® INSULATION
GYPSUM PANELS:	TWO LAYERS 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)

GENERAL WALL NOTES:

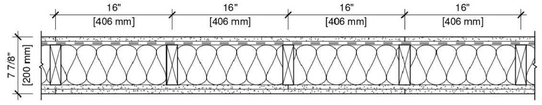
1. REFER TO APPLICABLE CODES REQUIREMENTS TO ENSURE COMPLIANCE PRIOR TO CONSTRUCTION.
2. FOR THE MOST UP-TO-DATE DETAILS, INCLUDING CONSTRUCTION VARIATIONS, REFER TO THE PUBLISHED DESIGN.
3. WHERE DESIGN NO. INDICATES "PER", THE FIRE RATING IS BASED ON LABORATORY TEST DATA OF THE REFERENCED SIMILARLY CONSTRUCTED ASSEMBLIES.
4. STUD SIZES AND INSULATION THICKNESS ARE MINIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
5. STUD AND FASTENER SPACINGS ARE MAXIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
6. PANEL ORIENTATION SHALL BE AS SPECIFIED IN THE PUBLISHED DESIGN.
7. FIRE-RATINGS ARE FROM BOTH SIDES UNLESS OTHERWISE STATED.
8. FIRE-RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, INCREASE STUD MATERIAL THICKNESS, DECREASE STUD SPACING, DECREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH.
9. WHERE ACOUSTICAL PERFORMANCE IS PROVIDED IN AN ESTIMATED RANGE, THE VALUES ARE BASED ON LABORATORY TEST DATA OF SIMILARLY CONSTRUCTED ASSEMBLIES.
10. SOUND-RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, DECREASE STUD MATERIAL THICKNESS, INCREASE STUD SPACING, INCREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH. MODIFICATIONS MUST NOT EXCEED LIMITATIONS OF FIRE RATING.

UL U305 (USG-161202)

1 HR FIRE WALL SECTION

DESIGN NO. **UL U305**

FIRE RATING:	1 HOUR
STC RATING:	53
SOUND TEST:	USG-161202
SYSTEM THICKNESS:	7-7/8" [200 MM]
LOCATION:	INTERIOR
FRAMING TYPE:	WOOD STUD (LOAD-BEARING)



ASSEMBLY REQUIREMENTS:

GYPSUM PANELS:	ONE LAYER 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)
RESILIENT CHANNEL:	1/2" [12.7 MM] RESILIENT CHANNEL, 25 GA. (0.018"), 24" [610 MM] O.C.
WOOD STUDS:	2" X 6" [38 X 140 MM] WOOD STUDS, 16" [406 MM] O.C.
INSULATION:	6-1/4" [159 MM] KNAUF ECOBATT® INSULATION
GYPSUM PANELS:	TWO LAYERS 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)

GENERAL WALL NOTES:

1. REFER TO APPLICABLE CODES REQUIREMENTS TO ENSURE COMPLIANCE PRIOR TO CONSTRUCTION.
2. FOR THE MOST UP-TO-DATE DETAILS, INCLUDING CONSTRUCTION VARIATIONS, REFER TO THE PUBLISHED DESIGN.
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5. STUD AND FASTENER SPACINGS ARE MAXIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
6. PANEL ORIENTATION SHALL BE AS SPECIFIED IN THE PUBLISHED DESIGN.
7. FIRE-RATINGS ARE FROM BOTH SIDES UNLESS OTHERWISE STATED.
8. FIRE-RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, INCREASE STUD MATERIAL THICKNESS, DECREASE STUD SPACING, DECREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH.
9. WHERE ACOUSTICAL PERFORMANCE IS PROVIDED IN AN ESTIMATED RANGE, THE VALUES ARE BASED ON LABORATORY TEST DATA OF SIMILARLY CONSTRUCTED ASSEMBLIES.
10. SOUND-RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, DECREASE STUD MATERIAL THICKNESS, INCREASE STUD SPACING, INCREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH. MODIFICATIONS MUST NOT EXCEED LIMITATIONS OF FIRE RATING.

UL U305 (USG-151238)

1 HR FIRE WALL SECTION



Hourly Rating: 1-hour

Fire Test Reference: GA FC 5529

Floor/Ceiling Wood-Framed

Base Layer: 5/8" (15.9 mm) ToughRock® Fireguard X® Products or 5/8" (15.9 mm) DensArmor Plus® Fireguard® gypsum panels applied at right angles to 2" x 10" wood joists 24" (610 mm) o.c. with 1-1/4" (32 mm) drywall screws 24" (610 mm) o.c. Face Layer: 5/8" (15.9 mm) ToughRock® Fireguard X® Products or 5/8" (15.9 mm) DensArmor Plus Fireguard gypsum panels applied perpendicular to joists through base layer with 1-7/8" (48 mm) Type W or S screws 12" (305 mm) o.c. at joints and intermediate joists. Face layer joints offset 24" (610 mm) from base layer joints, 1-1/2" (38 mm) Type G drywall screws placed 2" (51 mm) back on either side of face layer end joints 12" (305 mm) o.c. Wood joist supporting 1/2" (12.7 mm) plywood with exterior glue applied perpendicular to top of joists with 8d nails. Ceiling provides one-hour fire resistance protection for framing, including trusses.

Approved for Assembly:

DensArmor Plus® Fireguard C® Products,DensArmor Plus® Fireguard® Products,DensElement® Barrier Sheathing,DensGlass® Fireguard® Sheathing,DensShield® Fireguard® Tile Backer,ToughRock® Fireguard C® Products,ToughRock® Fireguard X® Mold-Guard® Products,ToughRock® Fireguard X® Products,ToughRock® Lite-Weight Fire-Rated Products

GA FC 5529

1 HR FIRE FLOOR/ CEILING SECTION

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HAMLET MIXED USE
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*

No.	Revision	Date

JOB NO:
DATE: 03/10/2023
DRAWN: BEW
CHECKED:
CAD FILE:

ARTHUR R. NAVE REGISTERED ARCHITECT STATE OF TENNESSEE 1/12/23

A8

Carothers Crossings Commercial

LANDSCAPE PLAN

SITE DATA
SITE AREA: 1.61 ACRES
SITE ZONING: PDR

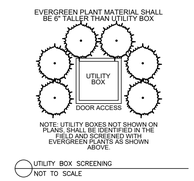
LANDSCAPE REQUIREMENTS (AS PER ARTICLE 3.130 SECTION C)

REQUIRED LANDSCAPING

	REQUIRED	PROVIDED
(CANOPY TREES)		
3 SHADE TREE / ACRE	5 TREES	17 TREES
(UNDERSTORY TREES)		
3 UNDERSTORY TREE / ACRE	5 TREES	5 TREES
(18" SHRUBS)		
15 SHRUBS / ACRE	24 SHRUBS	139 SHRUBS

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

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



UTILITY BOX SCREENING
NOT TO SCALE

811 Know what's **below.** **Call** before you dig.

N

20' 0 20' 40'

SCALE: 1"= 20'

SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 WWW.SEC-CIVIL.COM FAX: (615) 895-2567

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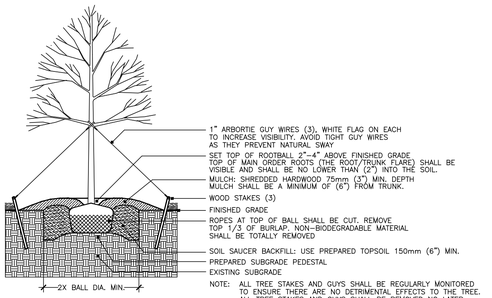
The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in total accordance with the design as noted, described, and illustrated. The engineer assumes no administrative liability or responsibility in the assurance that the site is constructed in accordance with the construction plans.

STATE OF TENNESSEE
ROBERT S. MCCLEAN
LICENSED LANDSCAPE ARCHITECT
04/17/2023
REVIEW SET
NOT FOR CONSTRUCTION

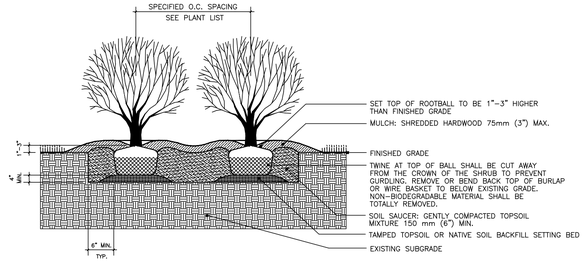
Carothers Crossing Commercial
Site Plan
LaVergne, Tennessee

Landscape Plan

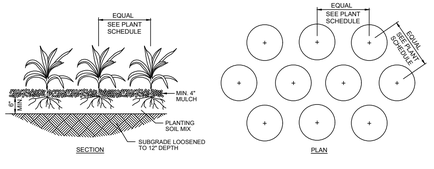
REVISED:	
03-20-2023: Staff Comments	
03-27-2023: Staff Comments	
04-10-2023: Staff Comments	
04-17-2023: Staff Comments	
DRAWN: KMG	
DATE: 02-27-2023	
CHECKED: RSM	
FILE NAME: 18038CarothersSite_LA	
SCALE: 1" = 20'	
JOB NO. 18038	
SHEET: L1.0	



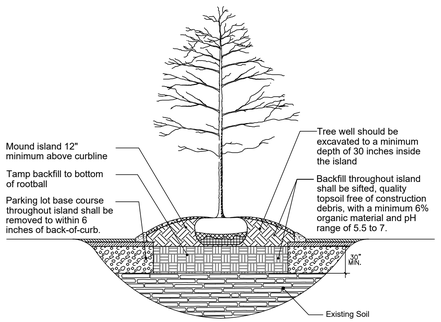
DECIDUOUS TREE PLANTING
NOT TO SCALE



SHRUB PLANTING – BALL AND BURLAP – MULTIPLE
NOT TO SCALE



GROUND COVER & PERENNIAL PLANTING
NOT TO SCALE



Tree Planting Detail
For Parking Lot Island or Median

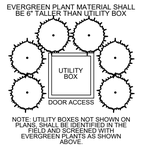
PLANT SCHEDULE

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	ASL	7	ACER SACCHARUM `LEGACY` / LEGACY SUGAR MAPLE	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	BC	2	BETULA NIGRA `CULLY` TM / HERITAGE BIRCH	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	LS	8	LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` TM / ROUND-LOBED SWEET GUM	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
UNDERSTORY TREES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	CA2	2	CERCIS CANADENSIS `ACE OF HEARTS` / ACE OF HEARTS REDBUD	B & B	2"CAL	10` - 12`		AS SHOWN	4` CLEAR TRUNK, FULL CANOPY, MATCHED*
	CR	3	CORNUS X `RUTBAN` / AURORA FLOWERING DOGWOOD	B & B	2"CAL	10` - 12`		AS SHOWN	4` CLEAR TRUNK, FULL CANOPY, MATCHED*
DECIDUOUS SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	HP	5	HYDRANGEA PANICULATA `JANE` / LITTLE LIME HARDY HYDRANGEA	CONT.		12"	12"	4` O.C.	FULL, WELL-BRANCHED, MATCHED
	SBN	20	SPIRAEA X BUMALDA `NEON FLASH` / NEON FLASH SPIREA	CONT.		12"	12"	3` O.C.	WELL-BRANCHED, DENSE, MATCHED
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	AG	44	ABELIA X GRANDIFLORA `KALEIDOSCOPE` / GLOSSY ABELIA	CONT.		36"	36"	5` O.C.	WELL-BRANCHED, DENSE, MATCHED
	BB	29	BUXUS MICROPHYLLA JAPONICA `GREEN BEAUTY` / GREEN BEAUTY BOXWOOD	CONT.		36"	36"	5` O.C.	DENSE, FULL, MATCHED
	BMW	36	BUXUS MICROPHYLLA `WINTER GEM` / GLOBE WINTER GEM BOXWOOD	CONT.		12"	12"	3` O.C.	WELL-BRANCHED, DENSE, MATCHED
	EJ	10	EUONYMUS JAPONICUS `AUREO-MARGINATUS` / GOLDEN EUONYMUS	CONT.		12"	12"	4` O.C.	FULL, WELL-BRANCHED, MATCHED
	ICS	2	ILEX CRENATA `STEEDS` / STEEDS JAPANESE HOLLY	CONT.		36"	36"	4` O.C.	DENSE, FULL, MATCHED
	IG	49	ILEX GLABRA `SHAMROCK` / INKBERRY	CONT.		36"	36"	5` O.C.	FULL , WELL BRANCHED, MATCHED
	NL	8	NANDINA DOMESTICA `LEMON LIME` / LEMON LIME NANDINA	CONT.		18"	18"	4` O.C.	DENSE, FULL, MATCHED
	NL*	31	NANDINA DOMESTICA `LEMON LIME` / LEMON LIME NANDINA	CONT.		12"	12"	4` O.C.	DENSE, FULL, MATCHED
	TC	11	THUJA OCCIDENTALIS `CONGABE` / FIRE CHIEF ARBORVITAE	CONT.		18"	18"	4` O.C.	DENSE, FULL, MATCHED
GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	SS2	12	SCHIZACHYRIUM SCOPARIUM `THE BLUES` / THE BLUES LITTLE BLUESTEM	1 GAL		12" - 18"	12"	2` O.C.	WELL ROOTED AND FULL TO EDGES OF CONTAINER

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

LANDSCAPE NOTES

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



UTILITY BOX SCREENING
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S. MORGAN CHEAN
LICENSED LANDSCAPE ARCHITECT
STATE OF TENNESSEE
REVIEW SET
NOT FOR CONSTRUCTION
04/04/2023

Carothers Crossing Commercial
Site Plan
LaVergne, Tennessee

Landscape Details & Notes

REVISED:
03-20-2023: Staff Comments
03-27-2023: Staff Comments
04-10-2023: Staff Comments
04-17-2023: Staff Comments

DRAWN: KMG
DATE: 02-27-2023
CHECKED: RSM
FILE NAME: 18038CarothersSite_LA
SCALE: N/A
JOB NO. 18038
SHEET: L2.0

Carothers Crossing Commercial

PHOTOMETRIC PLAN

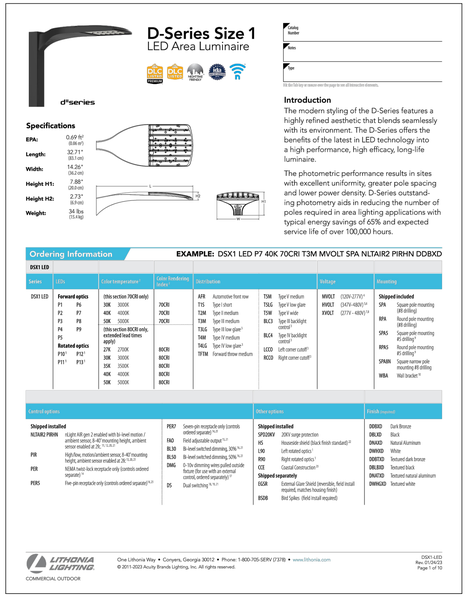


PLAN NOTES:

1. SEE LIGHTING SCHEDULE FOR MOUNTING HEIGHTS. NO LIGHT SHALL BE MOUNTED 20' ABOVE FINISHED GRADE.
2. PROPOSED PRODUCT SUBSTITUTIONS SHALL HAVE DESIGN SPECIFICATION EQUAL OR COHERENT WITH THE SITE PHOTOMETRIC CALCULATIONS. ALL SUBSTITUTIONS MUST BE SUBMITTED FOR REVIEW TO RUTHERFORD COUNTY BEFORE SUBSTITUTIONS CAN BE APPROVED.
3. ALL PROPOSED POLES ADJACENT TO PROPERTY LINES SHALL HAVE A 35 DEGREE SHIELD AS SPECIFIED.

LIGHTING SCHEDULE NOTES

1. ALL LIGHTS SHALL BE LED.
2. MOUNTING HEIGHT SHALL INCLUDE ANY BASE THAT IT MAY BE MOUNTED UPON.
3. ALL LIGHT COLOR SHALL BE 4,000 KELVIN (WHITE LIGHT) UNLESS STATED OTHERWISE IN THE LIGHTING SCHEDULE.
4. NO SUBSTITUTIONS ARE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND LANDSCAPE ARCHITECT ON RECORD.
5. LIGHT FIXTURE MATERIAL SHALL BE DIECAST ALUMINUM. POLE MATERIAL SHALL BE STEEL.
6. ALL LIGHTING FIXTURES AND POLES SHALL BE BLACK.
7. ALL POLES SHALL BE SQUARE UNLESS NOTED OTHERWISE.
8. CONTRACTOR/INSTALLER SHALL VERIFY MANUFACTURE TEMPLATE BEFORE DRILLING HOLES FOR LIGHTING FIXTURES.
9. LIGHT POLE FOOTERS SHALL BE DESIGNED BY A STRUCTURAL ENGINEER PER THE PROVIDED FOUNDATION DETAIL.



D-Series Size 1
LED Area Luminaire

d-series

Specifications

EPA: 0.69 ft² (0.06 m²)
Length: 32.71" (83.1 cm)
Width: 14.26" (36.2 cm)
Height H1: 7.86" (20.0 cm)
Height H2: 2.73" (6.9 cm)
Weight: 34 lbs (15 kg)

Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Color Rendering Index	Distribution	Voltage	Mounting
DSX1 LED	Forward optics P1 P6 P2 P7 P3 P8 P4 P9 P5 Rotated optics P10 P12 P11 P13	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare[1] T4M Type IV medium T4LG Type IV low glare[1] TFTM Forward throw medium	T5W Type V medium T5LG Type V low glare T5VW Type V wide BLC3 Type III backlight control[1] BLC4 Type IV backlight control[1] LCCO Left corner cutoff[1] RCCO Right corner cutoff[1]	MVOLT (120V-277V)[2] HVOLT (347V-480V)[2] XVOLT (277V - 480V)[2]	Shipped included SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting (#5 drilling)[3] RPA5 Round pole mounting (#5 drilling)[3] SPABN Square narrow pole mounting (#8 drilling) WBA Wall bracket[4]

Control options		Other options		Finish (required)	
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[5,6,7,8,9]	PER7 Seven-pin receptacle only (controls ordered separately)[10,11]	Shipped installed SPD20KV 20KV surge protection PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[5,6,8,9]	Shipped installed SPD20KV 20KV surge protection HS Houseside shield (black finish standard)[12] L90 Left rotated optics[1] R90 Right rotated optics[1] CCE Coastal Construction[13]	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white
PER Nlight two-wire enabled sensor, 8-40' mounting height, ambient sensor enabled at 2fc[5,6,8,9]	FAO Field adjustable output[10,11]	Shipped separately EGSR External Glare Shield (reversible, field install required, matches housing finish)		
PERS Five-pin receptacle only (controls ordered separately)[10,11]	BL30 Bi-level switched dimming, 30% [10,11]	BSTR Bird Spikes (field install required)		
	BL50 Bi-level switched dimming, 50% [10,11]			
	DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[11]			
	DS Dual switching [10,11]			

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

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DSX1-LED
Rev. 01/26/23
Page 1 of 10

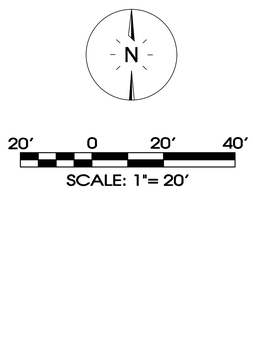
West Parking Lot Calculations	
AVERAGE FOOT-CANDLES	1.49
MAXIMUM FOOT-CANDLES	3.3
MINIMUM FOOT-CANDLES	0.4
MINIMUM TO MAXIMUM FC RATIO	0.11
MAXIMUM TO MINIMUM FC RATIO	8.73
AVERAGE TO MINIMUM FC RATIO	4.01

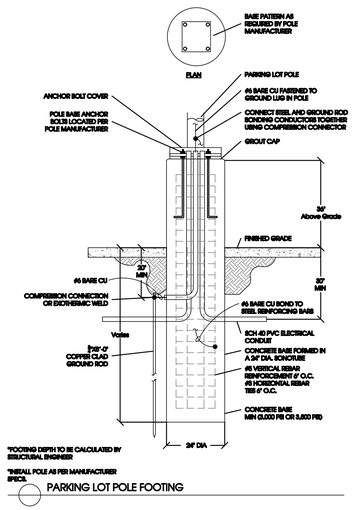
East Parking Lot Calculations	
AVERAGE FOOT-CANDLES	1.45
MAXIMUM FOOT-CANDLES	3.4
MINIMUM FOOT-CANDLES	0.3
MINIMUM TO MAXIMUM FC RATIO	0.09
MAXIMUM TO MINIMUM FC RATIO	11.75
AVERAGE TO MINIMUM FC RATIO	5.07

Site Boundary	
AVERAGE FOOT-CANDLES	0.10
MAXIMUM FOOT-CANDLES	0.5
MINIMUM FOOT-CANDLES	0.0

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MOUNTING	MODEL	MOUNTING HEIGHT	QUANTITY	LAMP DEPRECIATION
A		D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 5 Wide	POLE	Lithonia Lighting, DSX1 LED P4 40K 70CRI T5W	20'	4	0.9
B		D-Series Size 1 Area Luminaire P1 Performance Package 4000K CCT 70 CRI Type 3 Extreme Backlight Control External Glare Shield	POLE	Lithonia Lighting, DSX1 LED P1 40K 70CRI BLC3 EGS	20'	1	0.9





*FOOTING DEPTH TO BE CALCULATED BY STRUCTURAL ENGINEER

**INSTALL POLE AS PER MANUFACTURER SPECS.

PARKING LOT POLE FOOTING

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REVIEW SET
(Not to be used for construction)
10/6/2023

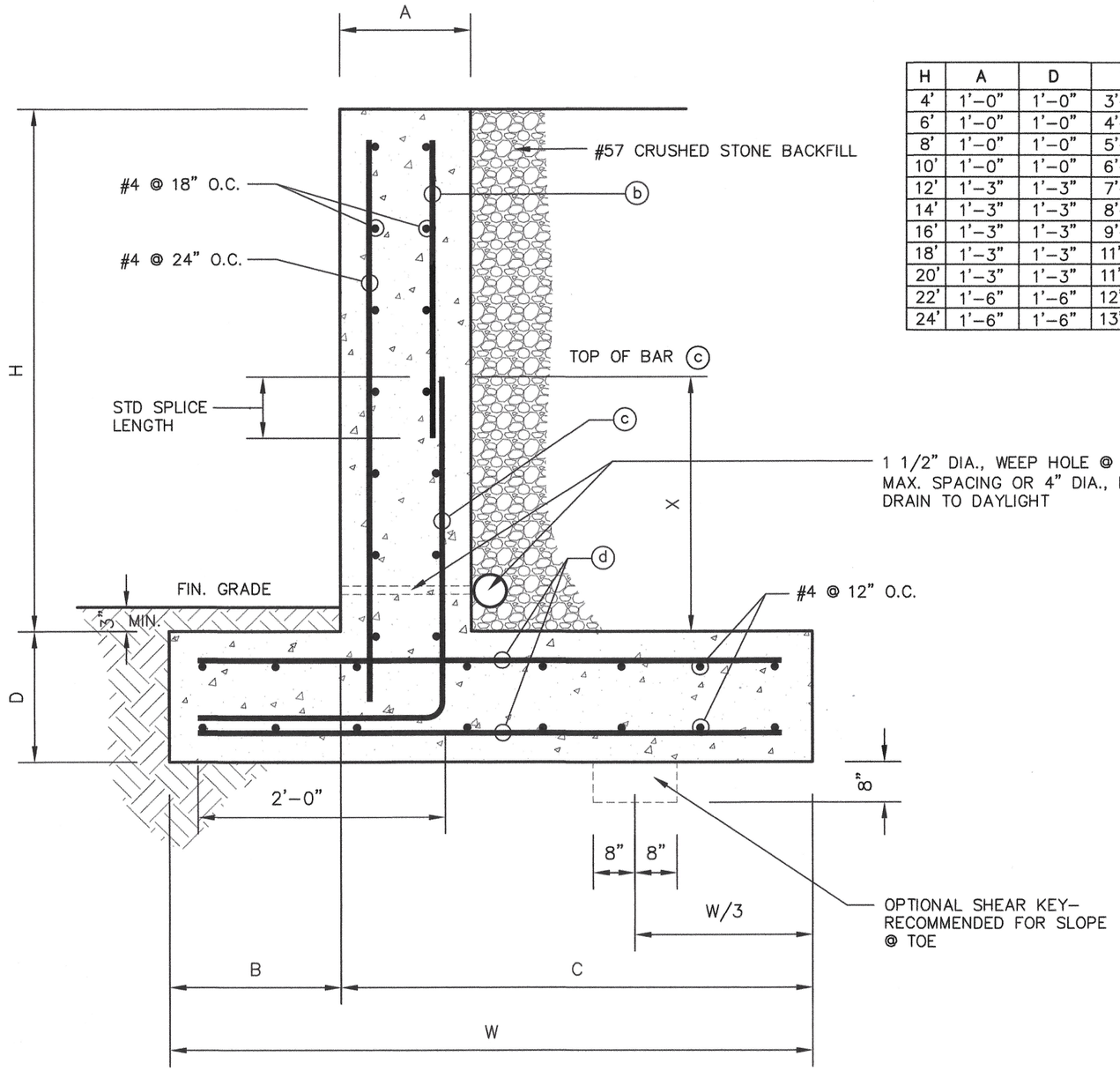
Carothers Crossing Commercial
Site Plan
Rutherford County, Tennessee

REVISED:
03-27-2023: Staff Comments
04-10-2023: Staff Comments
04-17-2023: Staff Comments

DRAWN:
DATE: 02-27-2023
CHECKED: RSM
FILE NAME: 18038project_PH
SCALE: 1" = 20'
JOB NO. 18038

Photometric Plan

SHEET: PH 1.0



H	A	D	W	B	C	ⓑ	ⓒ	ⓓ	X
4'	1'-0"	1'-0"	3'-0"	1'-0"	2'-0"	#4 @ 24" O.C.	#5 @ 24" O.C.	#5 @ 24" O.C.	--
6'	1'-0"	1'-0"	4'-0"	1'-0"	3'-0"	#4 @ 24" O.C.	#5 @ 24" O.C.	#5 @ 24" O.C.	--
8'	1'-0"	1'-0"	5'-0"	2'-0"	3'-0"	#4 @ 24" O.C.	#5 @ 12" O.C.	#5 @ 12" O.C.	3'-0"
10'	1'-0"	1'-0"	6'-0"	2'-0"	4'-0"	#4 @ 24" O.C.	#5 @ 8" O.C.	#5 @ 8" O.C.	5'-0"
12'	1'-3"	1'-3"	7'-0"	2'-0"	5'-0"	#4 @ 16" O.C.	#6 @ 8" O.C.	#5 @ 8" O.C.	6'-0"
14'	1'-3"	1'-3"	8'-0"	3'-0"	5'-0"	#6 @ 32" O.C.	#6 @ 8" O.C.	#6 @ 8" O.C.	6'-0"
16'	1'-3"	1'-3"	9'-0"	3'-0"	6'-0"	#6 @ 24" O.C.	#6 @ 6" O.C.	#6 @ 6" O.C.	7'-0"
18'	1'-3"	1'-3"	11'-0"	4'-0"	7'-0"	#6 @ 24" O.C.	② #6 @ 12" O.C.	② #5 @ 12" O.C.	8'-0"
20'	1'-3"	1'-3"	11'-0"	4'-0"	7'-0"	#6 @ 10" O.C.	② #6 @ 10" O.C.	② #5 @ 10" O.C.	8'-0"
22'	1'-6"	1'-6"	12'-0"	4'-0"	8'-0"	#6 @ 16" O.C.	② #6 @ 8" O.C.	② #5 @ 8" O.C.	9'-0"
24'	1'-6"	1'-6"	13'-0"	5'-0"	8'-0"	#6 @ 12" O.C.	② #6 @ 6" O.C.	② #5 @ 6" O.C.	10'-0"

NOTE: ② = BUNDLED BAR TIE @ 6" O.C.



PROJECT NAME:
RETAINING WALL STANDARDS

SHEET NAME:
SECTION VIEW

GBE engineering
GOODLETTSVILLE, TN

DRAWN BY: TDA	DATE: 1-31-23
CHECKED BY: GBE	DATE: 2-2-23
JOB # 23-25	

SHEET:
S-1 of 1

G:\Shared drives\Shared Files\Drawings\Symbols, Standards & Details\Details\Details\RetainingWall Dtl\Greg Edrington_Retaining Wall 2-22-23.dwg, 2/22/2023 2:45:55 PM

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan – The Ridge, Phase 4, Lot 401 – Open Space, Community Pool & Pool House on 0.55 Acres. Requested by Wamble & Associates. Property located off Rocky Trail (Tax Map 029, Parcel 41.04 and P/O Parcel 41.02). R-1 (Low Density Residential) Zoning District & R-2 (Medium Density Residential) Zoning District. Property owned by Mitchell Bowman dba B & F Development, LLC.

Reviewed By: Bo Logan, City Planner
Gary Lide, PE, City Engineer

Summary

The applicant is requesting site plan approval for a community pool and pool house at The Ridge on Lake Road. This specific property is located off Rocky Trail. The applicant originally proposed this pool lot to be part of a seven-lot development, but the pool lot was removed from the other lots and was platted separately.

Proposed structures consist of a one-story building (pool house) and a swimming pool. Also, associated parking areas and driveways will be constructed.

The total space of the pool house equals 600 square feet. The pool will be sized 17' x 37'.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

1. (Not a technical comment, for information) The developer's written response to the question from the Planning Commission regarding whether the developer will be providing the playground and dog park equipment has gone through several iterations. The final answer to this question was provided in an e-mail from Jimmy Pitts of Michael's Homes to Karla Lee (Wamble and Associates) and Gary Lide, dated 20 April 2023, which stated "B&F Development will pay for the playground and dog park." In a follow-up e-mail on 21 April, Mr. Pitts confirmed his understanding that the playground and dog park equipment must be installed prior to Certificate of Occupancy.

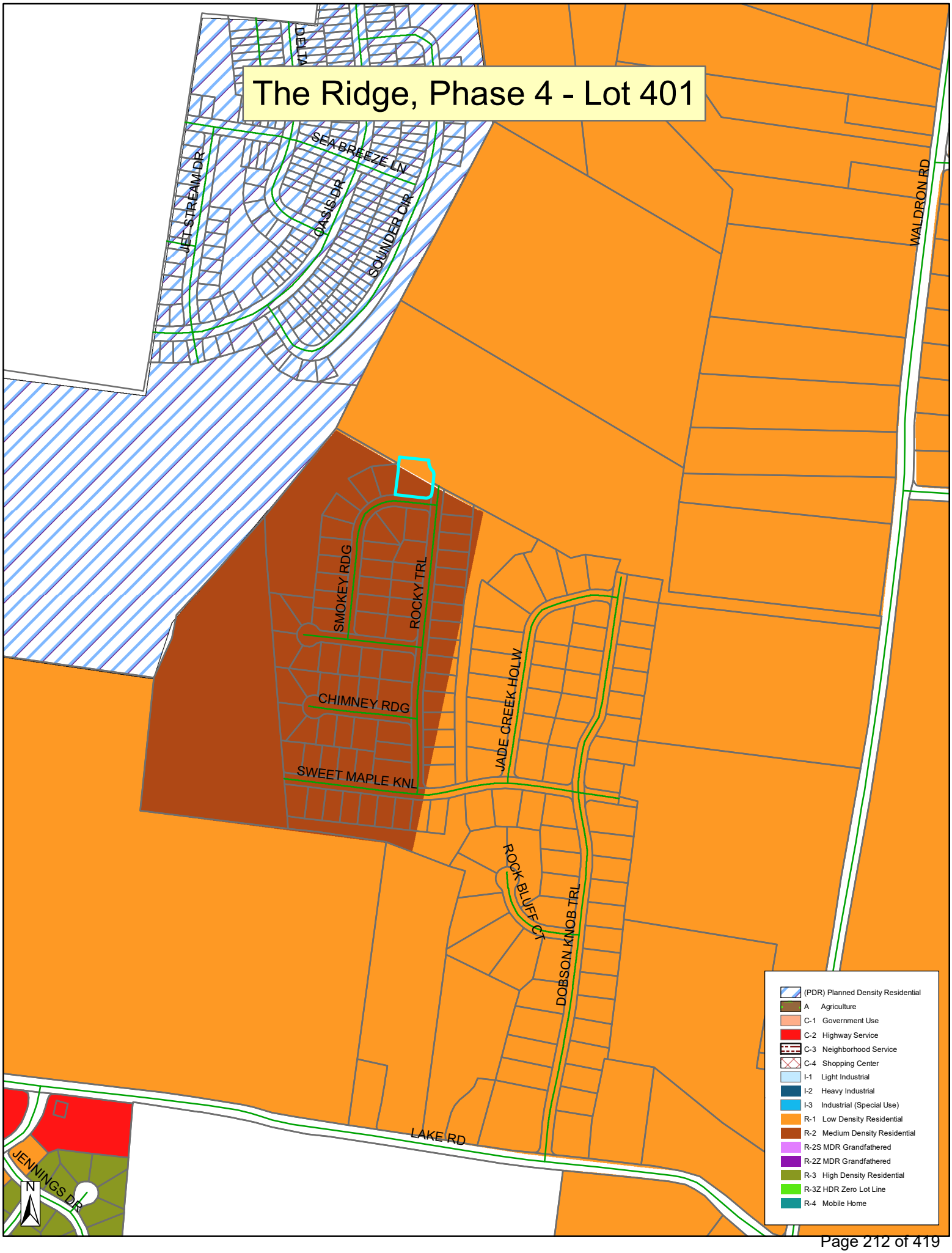
Other Concerns

1.

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


The Ridge, Phase 4 - Lot 401
SMOKEY RDG
ROCKY TRL
N


The Ridge, Phase 4 - Lot 401
JET STREAM DR
SMOKEY RDG
ROCKY TRL
THUNDERHEAD RDG
CHIMNEY RDG
SWEET MAPLE KNL
SWEET MAPLE KNL
JADE CREEK HOLW
DOBSON KNOB TRL
N


The Ridge, Phase 4 - Lot 401
DELTA
SEA BREEZE LN
JET STREAM DR
OASIS DR
SOUNDER CIR
WALDRON RD
SMOKEY RDG
ROCKY TRL
CHIMNEY RDG
JADE CREEK HOLW
SWEET MAPLE KNL
ROCK BLUFF CT
DOBSON KNOB TRL
LAKE RD
JENNINGS DR
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home



Site Construction Plans

The Ridge Subdivision
Amenity Area

La Vergne, Rutherford County, Tennessee



SITE LOCATION MAP
SCALE: 1"= 1000'

Sheet List Table	
Sheet Number	Sheet Title
C-0.0	COVER SHEET
C-1.0	SITE PLAN
C-2.0	SITE DETAILS
L-1.0	LANDSCAPE PLAN

Owner/Developer:

MICHAEL'S HOMES

1980 OLD FORT PARKWAY MURFREESBORO, TN 37129

Contact: JIMMY PITTS - (615) 300-7600

Civil Engineering & Land Surveying:

Wamble & Associates, PLLC

216 Centerview Drive, Suite 180

Brentwood, Tennessee 37027

Contact: James D. Wamble, PE, RLS - (615) 251-9555

Tennessee 811
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JAMES D. WAMBLE REGISTERED PROFESSIONAL ENGINEER 03-27-2023 STATE OF TENNESSEE

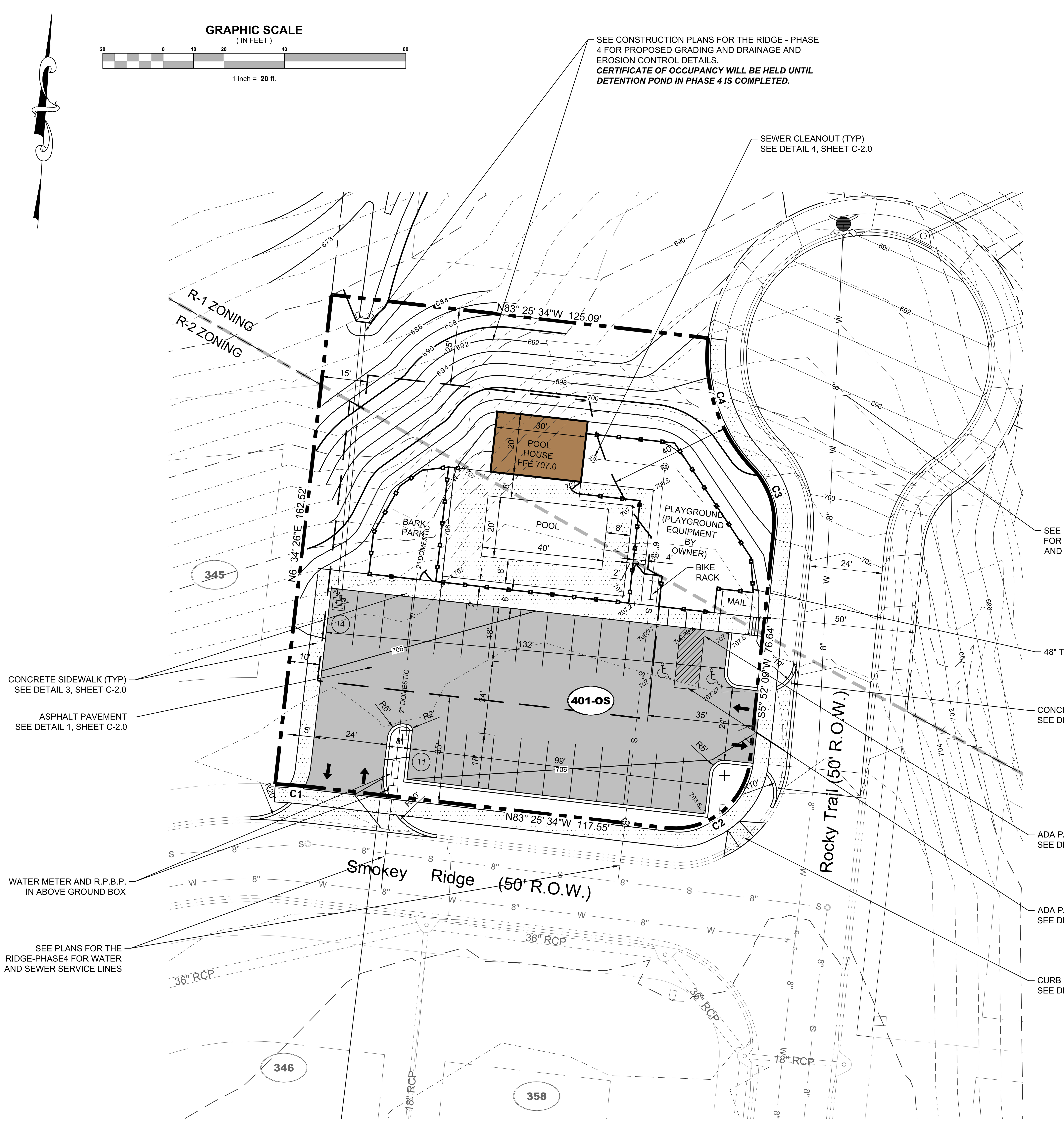
REVISIONS:
05-05-2022 ADDRESS CITY REVIEW COMMENTS
05/23/2022 ADDRESS CITY WORKSHOP COMMENTS

DATE: March 28, 2022

W&A NO.: 925-0121

SHEET NUMBER:

C-0.0



SITE DATA

Project Name:	The Ridge Subdivision Amenity Area
Map/Parcel:	29/41.04 & Part of 29/41.02
Subdivision	The Ridge - Phase 4
Lot numbers:	401-OS
Address:	Smokey Ridge (# not assigned)
City:	La Vergne
County:	Rutherford
State:	Tennessee
Civil District:	2nd
Existing zoning:	R-1 & R-2 (Residential)
Proposed Use:	Recreation
Total Site Area:	23,869.2 Sq. Ft., or 0.55 Acres
Minimum required setback lines:	
Front yard:	40 Feet (R-1) & 35 Feet (R-2)
Side yard:	10 Feet
Rear yard:	25 Feet
Building Setback:	40 Feet (R-1) & 35 Feet (R-2)
Owners Name:	Michael's Homes
Address:	1980 Old Fort Parkway Murfreesboro, TN 37129
Phone number:	(615) 300-7600
Email address:	jimmy@michaelshomestn.com
Contact name:	Mr. Jimmy Pitts
Applicant / Engineer :	Wamble & Associates, PLLC
Address:	40 Middleton Street Nashville, TN 37210
Phone number:	(615) 251-9555
Contact names:	James D. Wamble, PE, RLS
Total Building Sq. Ft.:	600 Sq. Ft.
Building Height:	One Story
Parking Provided:	23 Spaces + 2 H.C. Spaces = 25 Spaces Provided

SITE PLAN NOTES:

1. THE PURPOSE OF THIS APPLICATION IS FOR SITE PLAN APPROVAL TO CONSTRUCT A SWIMMING POOL, POOL HOUSE, AND MAIL CENTER FOR THE RIDGE SUBDIVISION ON LOT 401-OS IN THE RIDGE - PHASE 4.
2. ANY EXCAVATION, FILL OR DISTURBANCE OF THE EXISTING GROUND ELEVATION MUST BE DONE IN ACCORDANCE WITH THE CITY OF La Vergne STORM WATER MANAGEMENT ORDINANCE.
3. CITY OF La Vergne SHALL BE PROVIDED SUFFICIENT AND UNENCUMBERED INGRESS AND EGRESS AT ALL TIMES IN ORDER TO MAINTAIN, REPAIR, REPLACE, AND INSPECT ANY STORMWATER FACILITIES WITHIN THE PROPERTY.
4. ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN MEETS THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT.
5. THIS PROJECT WILL MEET CURRENT REQUIREMENTS OF THE CITY OF La Vergne ZONING CODE FOR TREE REPLACEMENT/LANDSCAPING.

SANITARY SEWER NOTES

1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATION OF THE CITY OF La Vergne AND THE TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT.
2. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL EXISTING UTILITIES. IF ANY EXISTING LINES ARE FOUND DURING EXCAVATION THAT ARE NOT SHOWN ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
3. ALL WATER AND SANITARY SEWER CONSTRUCTION SHALL BE PERFORMED IN A MANNER THAT WILL PROVIDE AT A MINIMUM OF 10' HORIZONTAL AND/OR 18" VERTICAL SEPARATION BETWEEN THE WATER MAIN AND THE SANITARY SEWER LINE.
4. SDR 26 P.V.C. SANITARY SEWER LINE TO BE INSTALLED WITH A MINIMUM COVER OF 5' IN PAVED AREAS AND 4' IN UNPAVED AREAS. FOR AREAS WITH LESS THAN 5' MINIMUM COVER IN PAVED AREAS DUCTILE IRON PIPE (DIP) SHALL BE USED.
5. GRAVITY SANITARY SEWER PIPE TO BE SDR 26 P.V.C. WITH ASTM D 3034 DESIGNATION, UNLESS NOTED OTHERWISE.
6. EXCAVATION FOR WATER MAIN AND SANITARY SEWER LINE SHALL BE UNCLASSIFIED AND SHALL EXTEND TO 6" BELOW THE BOTTOM OF THE SANITARY SEWER PIPE AND 6" BELOW THE BOTTOM OF THE WATER PIPE IF IN ROCK.
7. SANITARY SEWER PIPE TO BE BEDDED IN A CLEAN 1/2" TO 3/4" CRUSHED ENVELOPE EXTENDING FROM 6" BELOW THE BOTTOM OF THE PIPE TO 6" ABOVE THE TOP OF THE PIPE. BACKFILL ABOVE THIS CRUSHED STONE ENVELOPE TO SUBGRADE WITH STONE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL APPLICABLE UTILITY SERVICE FEES AND/OR CHARGES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SEQUENCING OF CONSTRUCTION OF ALL UTILITIES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES OR STORM SEWERS AND THAT POWER OR TELEPHONE POLE LOCATIONS DO NOT CONFLICT WITH UNDER-GROUND UTILITIES.
10. SANITARY SEWER SERVICES TO BE 6" P.V.C. TERMINATED AT R.O.W. WITH BOX FRAME AND COVER.
11. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND SUPPLIES REQUIRED FOR SERVICE AS INDICATED ON THESE PLANS AND SHALL PROVIDE A COMPLETE WORKING SYSTEM APPROVED BY THE CITY OF La Vergne.
12. CONTRACTOR TO OBTAIN A COPY OF THE CITY OF La Vergne SANITARY SEWER SPECIFICATIONS AND KEEP A SET ON THE JOB SITE DURING CONSTRUCTION.

WATER NOTES:

1. ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATION OF THE CITY OF La Vergne AND THE TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT.
2. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL EXISTING UTILITIES. IF ANY EXISTING LINES ARE FOUND DURING EXCAVATION THAT ARE NOT SHOWN ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
3. ALL WATER AND SANITARY SEWER CONSTRUCTION SHALL BE PERFORMED IN A MANNER THAT WILL PROVIDE AT A MINIMUM OF 10' HORIZONTAL AND/OR 18" VERTICAL SEPARATION BETWEEN THE WATER MAIN AND THE SANITARY SEWER LINE.
4. WATER MAIN TO BE INSTALLED WITH A MINIMUM COVER OF 36" IN ROADWAYS & 30" IN ALL OTHER AREAS.
5. EXCAVATION FOR WATER MAIN AND SANITARY SEWER LINE SHALL BE UNCLASSIFIED AND SHALL EXTEND TO 6" BELOW THE BOTTOM OF THE SANITARY SEWER PIPE AND 6" BELOW THE BOTTOM OF THE WATER PIPE IF IN ROCK.
6. WATER LINE PIPE TO BE BACKFILLED TO SUBGRADE WITH ENGINEERED FILLED MATERIAL COMPACTED TO 95% OPTIMUM DENSITY IN ALL AREAS. WHERE UTILITIES ARE PLACED IN ROADWAY BACKFILL WITH NO. 67 GRADED STONE.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL APPLICABLE UTILITY SERVICE FEES AND/OR CHARGES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SEQUENCING OF CONSTRUCTION OF ALL UTILITIES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES OR STORM SEWERS AND THAT POWER OR TELEPHONE POLE LOCATIONS DO NOT CONFLICT WITH UNDER- GROUND UTILITIES.
9. WATER SERVICES TO BE 2" TYPE "K" COPPER OR PEXa. TAPS ON WATER MAIN SPACED 24" APART AS SHOWN HEREON. WATER SERVICE TO INCLUDE INSTALLATION OF METER BOXES BY CONTRACTOR WITHOUT METERS, METERS TO BE SUPPLIED BY THE CITY OF La Vergne. WATERMETERS TO BE LOCATED ON THE R.O.W. LINE.
10. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND SUPPLIES REQUIRED FOR SERVICE AS INDICATED ON THESE PLANS AND SHALL PROVIDE A COMPLETE WORKING SYSTEM APPROVED BY THE CITY OF La Vergne.
11. CONTRACTOR TO OBTAIN A COPY OF THE CITY OF La Vergne WATER SPECIFICATIONS AND KEEP A SET ON THE JOB SITE DURING CONSTRUCTION.

CITY OF LA VARGNE GENERAL NOTES

1. ALL WORK HEREON SHALL CONFORM TO THE CITY OF LA VERGNE STANDARD SPECIFICATIONS AND DETAILS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF LA VERGNE 48 HOURS PRIOR TO BEGINNING WORK.
3. DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES SHALL BE DETERMINED BY THE CONTRACTOR BY PRIOR TO TRENCHING. CONTACT THE TENNESSEE UTILITY LOCATION SERVICE AT 811 OR 800-351-1111, 3-10 DAYS BEFORE YOU DIG, NO EXCEPTIONS.
4. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT ON RECORD OR NOT SHOWN ON THESE PLANS.
5. ALL CONSTRUCTION AND OPERATIONS BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH OSHA.
6. THE CONTRACTORS SHALL MAINTAIN A SET OF REDLINE AS-BUILT DRAWINGS AT THE PROJECT SITE UPDATED DAILY. RECORD DRAWINGS SHALL BE PREPARED AT THE END OF THE PROJECT TO REFLECT ALL FIELD MODIFICATIONS TO THE CONSTRUCTED WORK AND PROVIDE THEM TO THE CITY WITHIN 30 DAYS OF PROJECT COMPLETION.
7. TRAFFIC CONTROL, SIGNAGE, AND CONSTRUCTION RELATED BARRIERS IS THE RESPONSIBILITY OF THE CONTRACTOR, AND NO TRENCHES SHALL BE LEFT OPEN OVERNIGHT WITHOUT PROPER SAFETY MEASURES SUCH AS BARRICADES, PLATING, OR OTHER AS AGREED BY THE CITY.
8. SURFACE IMPROVEMENTS DAMAGED OR REMOVED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RECONSTRUCTED BY THE CONTRACTOR TO THE LOCAL GOVERNING AGENCY'S REQUIREMENTS.
9. ALL REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ANY MONUMENTS IN PLACE. IF ANY MONUMENT IS DISTURBED OR DESTROYED, THE CONTRACTOR WILL BE REQUIRED TO CONTRACT WITH A REGISTERED LAND SURVEYOR FOR THE RE-ESTABLISHMENT AND MAPPING OF THE DESTROYED MONUMENT.
11. PUBLIC UTILITY AND DRAINAGE EASEMENTS SHALL BE PROVIDED FOR ANY CITY FACILITIES NOT LOCATED IN THE RIGHT OF WAY AND INDICATED ON THE PLANS.
12. ALL UNDERGROUND FACILITIES WITH LATERALS SHALL BE IN PLACE PRIOR TO FINAL PAVING, INCLUDING BUT NOT LIMITED TO DRAINAGE, SEWER, WATER, TELEPHONE, ELECTRICITY, GAS, AND CABLE.
13. ALL CONSTRUCTION WATER SHALL BE TAKEN FROM A CITY APPROVED FIRE HYDRANT METER.
14. THE CONTRACTOR SHALL CONFINE ALL OF HIS ACTIVITIES TO THE AREAS WITHIN THE EXISTING PROPOSED STREET RIGHTS-OF-WAY AND CITY PROPERTY OR EASEMENTS AS SHOWN ON THESE PLANS UNLESS WRITTEN CONSENT IS PROVIDED BY THE AFFECTED PROPERTY OWNER.
15. WHERE WATER AND SEWER LINES CROSS OTHER UTILITIES A MINIMUM OF 12" CLEARANCE SHALL BE MAINTAINED.
16. PIPE JOINTS SHALL NOT BE DEFLECTED AT ANY ANGLE GREATER THAT MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURE.
17. VERTICAL PIPE BENDS SHALL BE FULLY RESTRAINED BY PIPE JOINT RESTRAINT, NO CREDIT SHALL BE GIVEN FOR CONCRETE BLOCKS.
18. MAINLINE VALVES SHALL ONLY BE INSTALLED ON SLOPES NOT TO EXCEED 6 PERCENT.
19. ALL BURIED BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL.
20. COMBINATION AIR RELEASE AND VACUUM VALVES SHALL BE INSTALLED AT ALL HIGH POINTS.
21. SEPARATION OF WATER AND SEWER UNES MUST COMPLY WITH TDEC REQUIREMENTS.
22. CITY SEWER CLEANOUTS SHALL BE CUT AND CAPPED BELOW GRADE AND COVERED WITH A BOX AND LID PER THE CITY OF LA VERGNE.
23. SURPLUS AND ALL MATERIAL REMOVED WHICH IS NOT SUITABLE FOR USE IN THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL COGNIZANT AGENCIES.

UTILITY DISCLAIMER

THE UNDERGROUND UTILITIES HAVE NOT BEEN PHYSICALLY LOCATED. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THERE ARE NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THIS SURVEY DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

Tennessee811 Know what's below. Call before you dig.

EXISTING LEGEND

Symbol	Description
Ø	Utility Pole
Ø☼	Utility Pole w/Lamp
⌖	Fire Hydrant
Ⓢ	Sewer Manhole
▤	Storm Drain
—— OH ——	Overhead Utility Line
—— S ——	Sanitary Sewer
—— W ——	Water Line
IR (O)	Iron Rod (Old)
IR (N)	Iron Rod (New)

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length	Tangent
C1	12.22	175.00	4.00	S85° 25' 33"E	12.21	6.11
C2	39.58	25.00	90.70	N51° 13' 17"E	35.57	25.31
C3	21.87	25.00	50.12	N19° 11' 23"W	21.18	11.69
C4	47.01	53.00	50.82	S18° 50' 14"E	45.49	25.18

WAMBLE & ASSOCIATES PLLC
Civil Engineering
Land Surveying
Land Planning
216 Centerview Dr., Ste 180
Brentwood, TN 37027
615.251.9555

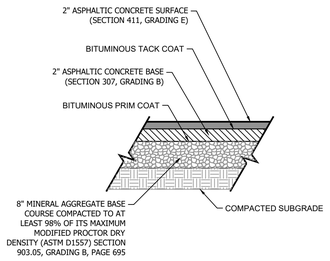
SITE PLAN

THE RIDGE SUBDIVISON - AMENITY AREA
La VERGNE, RUTHERFORD COUNTY, TENNESSEE
OWNER AND DEVELOPER
MICHAEL'S HOMES
234 W. NORTHFIELD BLVD
MURFREESBORO, TENNESSEE 37129
CONTACT NAME/PHONE/EMAIL:
JIMMY PITTS - 615-270-3111 - jimmy@michaelshomestn.com

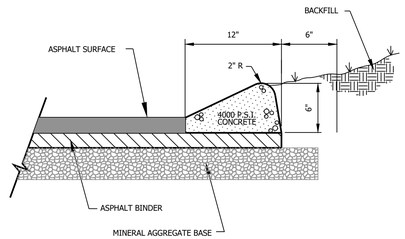
JAMES D. WAMBLE
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 014236
STATE OF TENNESSEE
03-27-2023

REVISIONS:
05-05-2022 ADDRESS CITY REVIEW COMMENTS
05/23/2022 ADDRESS CITY WORKSHOP COMMENTS

DATE: April 25, 2022
W&A NO.: 925-0217
SHEET NUMBER:
C-1.0

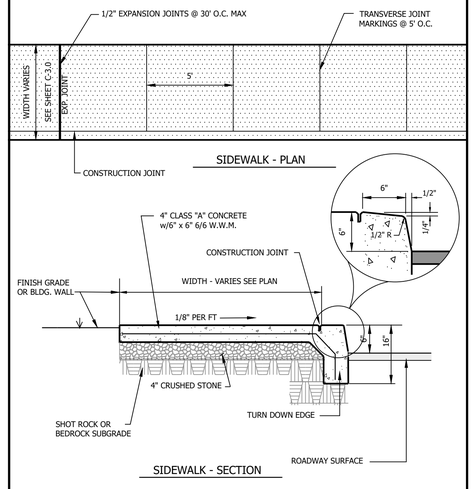


ASPHALT PAVEMENT 1

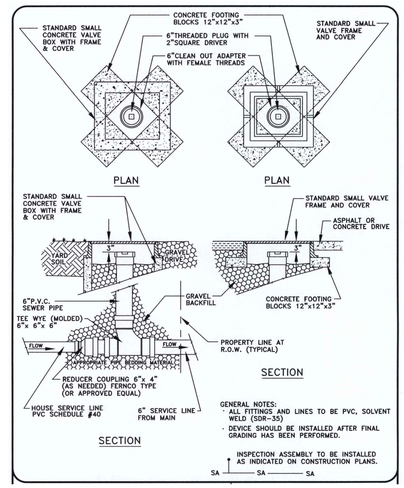


NOTE: CURB SETS ON STONE BASE IN LIGHT DUTY PAVEMENT

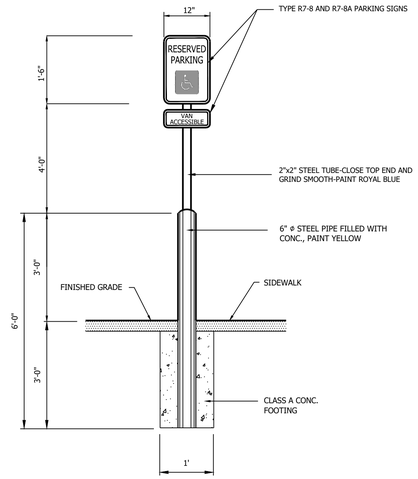
CONCRETE CURB 2



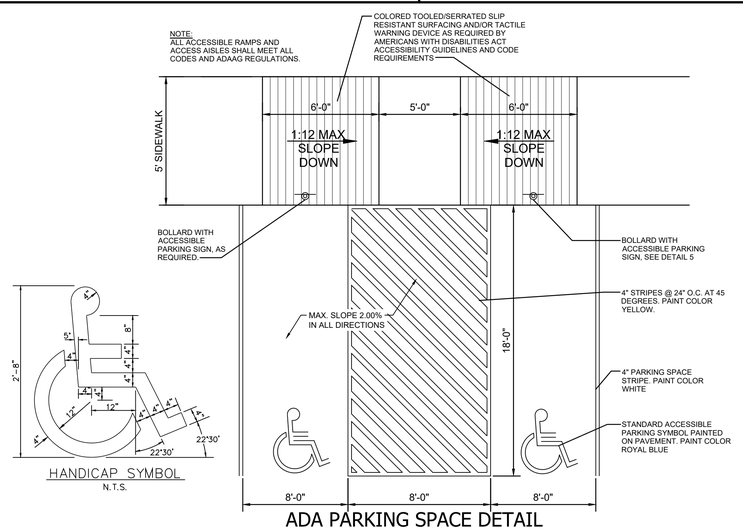
CONCRETE SIDEWALK 3



TYPICAL CLEANOUT 4

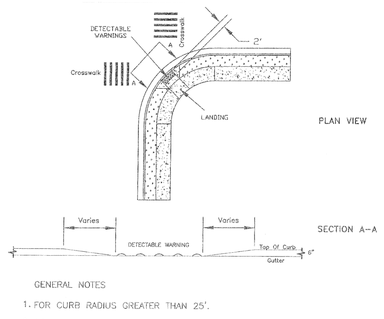


ADA PARKING SIGN 5



HANDICAP SYMBOL
N.T.S.

ADA PARKING SPACE DETAIL 6



GENERAL NOTES

1. FOR CURB RADIUS GREATER THAN 25'.
2. SEE CURB RAMP STANDARD DRAWINGS FOR CONSTRUCTION DETAILS.
3. ALL MARKINGS TO CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. THE LAYOUT, SIZE, DIMENSIONS, HEIGHT OF THE DETECTABLE WARNINGS SHALL MEET THE LATEST DESIGN STANDARDS AS ISSUED BY THE ACCESS BOARD.
5. THE DETECTABLE WARNINGS AND INSTALLATIONS SHALL MEET THE MPW SPECIFICATION 02523.
6. IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY AMONG THE PLANS AND THESE STANDARD DETAILS, THE REQUIREMENTS OF THE STANDARD DETAILS SHALL GOVERN.
7. THE COLOR OF THE DETECTABLE WARNING STRIP SHALL BE "SAFETY YELLOW".

CURB RAMP 7

WAMBLE & ASSOCIATES, P.L.L.C.
Civil Engineering
Land Surveying
Land Planning
216 Centerview Dr., Ste 180
Brentwood, TN 37027
615.251.9555

SITE DETAILS

THE RIDGE SUBDIVISON - AMENITY AREA
La VERGNE, RUTHERFORD COUNTY, TENNESSEE
OWNER AND DEVELOPER
MICHAEL'S HOMES
234 W. NORTHFIELD BLVD
MURFREESBORO, TENNESSEE 37129
CONTACT NAME/PHONE/EMAIL
JIMMY PITTS - 615-270-3111 - jimmy@michaelshomestn.com

JAMES D. WAMBLE
REGISTERED
LICENSED
03-21-2023
STATE OF TENNESSEE

REVISIONS:
05-05-2022 ADDRESS CITY REVIEW COMMENTS
05/23/2022 ADDRESS CITY WORKSHOP COMMENTS

DATE: April 25, 2022
W&A NO.: 925-0217
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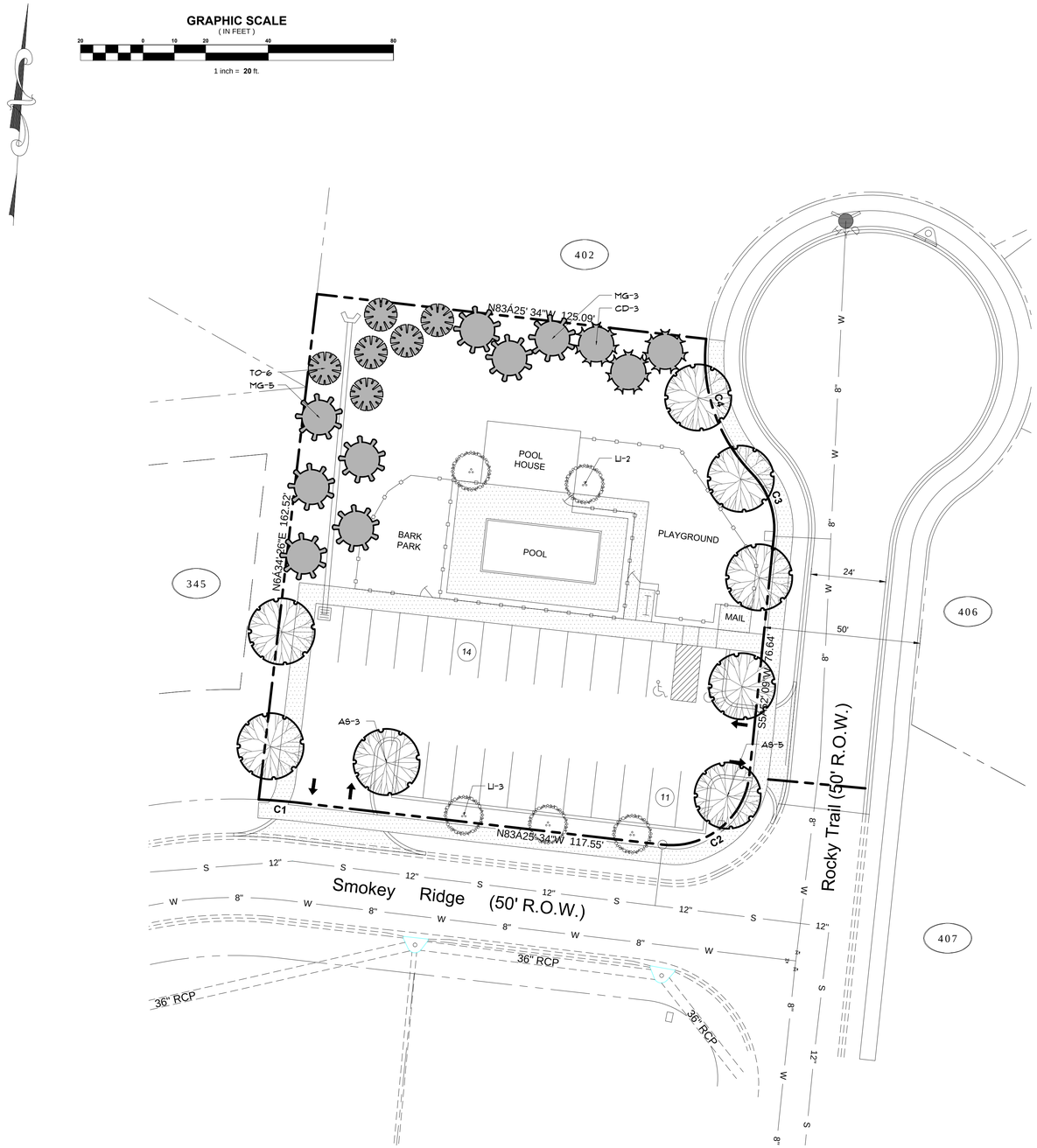
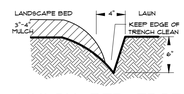
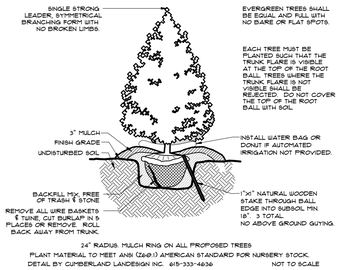
C-2.0

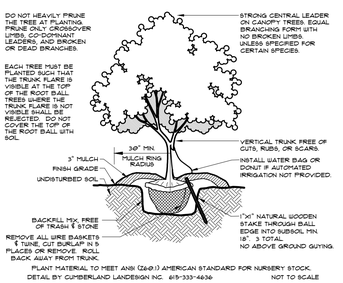




MULCH BED EDGE



EVERGREEN TREE PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL

NOTES

PRIOR TO EXCAVATION AND INSTALLATION FIELD VERIFY ALL UTILITIES.

REMOVE STONE OVER 1/4", CLAY POCKETS, & FINE GRADE ALL PLANTING AREAS.

NEW PLANTING AREAS SHALL BE FERTILIZED WITH 12# / 1000 S.F. OF 10-10-10 FERTILIZER OR CONTAIN 30% ADDED 'HOLY COW' (OR EQUAL) MIX TOPSOIL AMENDMENT.

NEW PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF SHREDDED BARK MULCH. FINELY GROUND, NO NUGGETS, 1/2" DIAMETER MAX. PIECES. REFUSE & STONE FREE. PINE STRAW ACCEPTABLE PER CLIENT APPROVAL, NO PINE NUGGETS OR SYNTHETIC MULCH.

VERIFY ALL QUANTITIES. IN THE EVENT OF A DISCREPANCY, CONTACT THE DESIGNER.

NOTIFY THE LANDSCAPE ARCHITECT OF ANY FEATURES SUCH AS WALKWAYS, WINDOWS, OR BUILT ELEMENTS WHICH CONFLICT WITH THE PLANTING PLAN.

EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE.

ALL DISTURBED AREAS SHALL BE PLANTED WITH TURF AS INDICATED ON THE MATERIALS SCHEDULE.

NO PLANT MATERIALS SHOULD BE SUBSTITUTED WITHOUT AUTHORIZATION.

PLANT SIZES SHOWN ARE MINIMUMS REQUIRED BY THE LOCAL MUNICIPALITY AND MATERIALS SHOWN HAVE BEEN SELECTED SPECIFICALLY FOR THIS PROJECT.

WIRE BASKETS SHALL BE COMPLETELY REMOVED, BURLAP SHALL BE CUT TOP TO BOTTOM IN 5 PLACES. BURY NATURAL TWINE. DISPOSE OF SYNTHETIC ROPE AND TRUNK WRAP OFFSITE.

SUB-GRADE STAKE TREES IN PLACE PER DETAIL – NO GUYING, NO ABOVE GROUND STAKES..

NO CANOPY TREE SHALL BE LOCATED WITHIN 20' OF AN OVERHEAD UTILITY, POWER LINE, OR LIGHT POLE (UNLESS SPECIFIC VERTICAL / NARROW CULTIVAR (10')).

NO CANOPY TREE SHALL BE LOCATED WITHIN A GAS, WATER, SEWER, UNDERGROUND ELECTRIC, CABLE, FIBER, OR PUBLIC UTILITY EASEMENT WITHOUT SIGNING OF A RELEASE WAIVER AND APPROVAL BY THE EASEMENT HOLDER.

LOCATING PLANT MATERIALS WITHIN DRAINAGE IS ACCEPTABLE. MATERIALS SHALL BE NO CLOSER THAN 3' FROM THE CENTER OF FLOWLINE.

ADHERE TO THESE NOTES TO FACILITATE DESIGNER, MUNICIPALITY, AND CLIENT APPROVAL.

MATERIALS SCHEDULE

KEY	#	DESCRIPTION	HEIGHT	WIDTH	TRUNK	NOTES
AS	8	Acer saccharum 'Legacy'/ Legacy Sugar Maple	13'-15'	6'-7'	3.0"	Matched, Symmetrical
CD	3	Cedrus deodara/ Deodar Cedar	7' Min.	3'-4'	FTB	
LI	5	Lagerstroemia indica/ Crapemyrtle	7' Min.	3'-4'		3 Cane, 1" Each
MG	8	Magnolia grandiflora/ Southern Magnolia	9' Min.	4'-5'	FTB	
TO	6	Thuja occidentalis 'Green Giant'/ Green Giant Arborvitae	7' Min.	3'-4'	FTB	Or Equal
TURF						
SEED		Rebel II Fine Bladed Fescue	Seed at 5 lbs per 1,000 sf Install w/ weed free Straw			
MISCELLANEOUS			REMARKS			
Mulch Bed		Hardwood Bark Mulch	Minimum 3" depth throughout.			

NOTES
FTB = Full To Bottom

cumberlandesign@bellsouth.net
615-333-4636 615-512-3018
www.landscapearchitect-tn.com

PLANTING PLAN

THE RIDGE SUBDIVISON - AMENITY AREA
La VERGNE, RUTHERFORD COUNTY, TENNESSEE

PREPARED FOR:
MICHAEL'S HOMES
234 W. NORTHFIELD BLVD
MURFREESBORO, TENNESSEE 37129
CONTACT NAME/PHONE/EMAIL:
JIMMY PITTS - 615-270-3111 - jimmy@michaelshomestn.com

ROBERT BRIAN LANDRY
LICENSED
LANDSCAPE ARCHITECT
TENNESSEE
LANDRY

REVISIONS:

DATE: April 19, 2022

W&A NO.: 925-0217

SHEET NUMBER:
L-1.0

RETREAT AT FINCH BRANCH - PHASES 1 THROUGH 5 - AMENITIES
DEVELOPER RESPONSES TO VERBAL COMMENTS FROM THE PLANNING COMMISSION WORKSHOP

Comment #4: (C-1.0) Please provide initial, intermediate, and final EPSC plans along with BMP details and remove references to The Ridge Phase 4 plans.
Response #4: Initial, Intermediate, and final EPSC plans along with BMP details have been added to the plan set on Sheets C-4.0-C-4.3.

Comment #5: (C-1.0) Please provide Site Utility Plan and remove references to The Ridge Phase 4 plans.
Response #5: Site Utility Plan has been added to the plan set on Sheet C-5.0.

Other Comments from Commission Members:
Comment #1: The residents of The Ridge have not seen the site plan for the amenity lot.
Response #1: The site plan for the amenity lot is public record. A survey was sent to the residents of The Ridge. The survey included the size of the pool (20' x 40'). Of those that participated, 69.3% was for the amenity lot as the developer chose to build it.

Comment #2: How many phases of The Ridge will this pool service?
Response #2: This amenity lot is meant for the five phases of The Ridge that has already been granted and preliminary plat approved. None of the future phases are planned to use this pool.

Comment #3: Will the developer be providing the playground equipment? On the plans it states, 'Playground Equipment by Owner'.
Response #3: At this time, there are no plans for the developer to provide the playground equipment. Both the playground area and the dog park area are place holders in the design for future construction when funding is secured.

CHANGED BY E-MAIL FROM JIMMY PITTS TO GINGY UDELL DATE 4/20/23.

I'm enclosing ten (10) full-size prints of the Site Plan for your review and consideration of this project in the Planning Commission meeting on 04/25/2023.

We appreciate your assistance. If you have any questions or need additional information, please don't hesitate to contact me.

Sincerely,

Kimberly Flood

Kimberly Flood

cc: Mitchel Bowman
Gary Lide, City of La Vergne

Gary Lide

From: Jimmy Pitts [jimmy@michaelshomestn.com]
Sent: Thursday, April 20, 2023 1:00 PM
To: Karla Lee; Gary Lide
Cc: Bo Logan; Mitchell Bowman; Kimberly Flood; Jimmy Yates; Danny Wamble
Subject: Re: The Ridge Pool and Poolhouse

B&F Development will pay for the playground and dog park.

Get Outlook for iOS

From: Karla Lee <karlalee@wambleassociates.com>
Sent: Thursday, April 20, 2023 12:37:21 PM
To: Gary Lide <glide@lavergnetn.gov>
Cc: Bo Logan <blogan@lavergnetn.gov>; Jimmy Pitts <jimmy@michaelshomestn.com>; Mitchell Bowman <mitchell.bowman59@gmail.com>; Kimberly Flood <kimberly.flood@wambleassociates.com>; Jimmy Yates <jcyates@wambleassociates.com>; Danny Wamble <jdwamble@wambleassociates.com>
Subject: RE: The Ridge Pool and Poolhouse

From Danny:

Hi Gary,

I have discussed the construction of the dog park and playground with our client, Michael's Homes. We would like to amend our response to Planning Commission review comment #3 as follows:

> *Michael's Homes will pay for and construct the dog park and playground.*

I think this should resolve all issues, since there were no technical comments. Please let me know if you need anything else from us. Otherwise, Kimberly Flood or I will see you on Tuesday (4/25) for the Planning Commission meeting.

Thanks,
Danny

Karla Lee
Wamble & Associates, PLLC
216 Centerview Drive, Suite 180
Brentwood, TN 37027
615-251-9555
karlalee@wambleassociates.com

WAMBLE & Associates, PLLC
Civil Engineering • Land Surveying • Land Planning

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Gary Lide

From: Jimmy Pitts [jimmy@michaelshomestn.com]
Sent: Friday, April 21, 2023 11:10 AM
To: Gary Lide; Karla Lee
Cc: Bo Logan; Mitchell Bowman; Kimberly Flood; Jimmy Yates; Danny Wamble
Subject: RE: The Ridge Pool and Poolhouse

Understood.

Thanks

From: Gary Lide <glide@lavergnetn.gov>
Sent: Friday, April 21, 2023 7:41 AM
To: Jimmy Pitts <jimmy@michaelshomestn.com>; Karla Lee <karlalee@wambleassociates.com>
Cc: Bo Logan <blogan@lavergnetn.gov>; Mitchell Bowman <mitchell.bowman59@gmail.com>; Kimberly Flood <kimberly.flood@wambleassociates.com>; Jimmy Yates <jcyates@wambleassociates.com>; Danny Wamble <jdwamble@wambleassociates.com>
Subject: RE: The Ridge Pool and Poolhouse

Mr. Pitts:

Please confirm your understanding that the City will not consider the project as complete and issue a Certificate of Occupancy until the playground and dog park are installed.

Thank you

-Gary
Gary Lide, PE
Director of Engineering

City of La Vergne
Engineering Department
5175 Murfreesboro Road
La Vergne, TN 37086

☎ 615.287.8703
Cell 615.971.4069
✉glide@LaVergneTN.gov

Please consider the environment before printing this email or any attachments.

From: Jimmy Pitts [mailto:jimmy@michaelshomestn.com]
Sent: Thursday, April 20, 2023 1:00 PM
To: Karla Lee; Gary Lide
Cc: Bo Logan; Mitchell Bowman; Kimberly Flood; Jimmy Yates; Danny Wamble
Subject: Re: The Ridge Pool and Poolhouse

B&F Development will pay for the playground and dog park.

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan – Avenue Grading – Addition of 8188 Square Feet on 4.73 Acres. Requested by Ragan-Smith. Property located at 121 Jones Boulevard (Tax Map 017, Parcel 6.00). I-2 (Heavy Industrial) Zoning District. Property owned by Barlow Builders.

Reviewed By: Bo Logan, City Planner
Gary Lide, City Engineer

Summary

On behalf of their client, Ragan-Smith is requesting site plan approval for a proposed addition to an existing building at the corner of Jones Boulevard and Waldron Road. There is a one-story building along with a two-story addition indicated on the plan. The total lot size is 4.73 acres.

The existing building contains 8,651 sq. ft. The added space is slated to become office area for the business and would total 8188 sq. feet. The space in the rear (to the northeast) is an existing gravel lot and is partly made of concrete.

A total of 14 parking spaces are being provided where 12 are required.

This parcel is contained within the Murfreesboro Road/Waldron Overlay Streetscape District and must adhere to the applicable overlay provisions.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

1. Full-size color elevations are required;
2. Sidewalk is required along all frontage including all of Jones;
3. Landscape Plan should address Overlay requirements;
4. The entire building must be brought up to meet standards of Murfreesboro Road Overlay Streetscape District;
5. A 5' wide Landscaped Buffer Area must be installed around all parking lots with 3' minimum tall screening (shrubs, etc.);
6. Add detail and note on all sheets to indicate installation of a 5' sidewalk along frontage;
7. Show widths of ingress/egress at Jones Blvd.;
8. It is understood that a site plan for this property was previously approved. However, that approval expired on 31 March 2023. Therefore, this review is being conducted without regard to the previous site plan.

9. (C1.2) Provide lane striping and dimensions for egress onto Waldron Road.
10. (C1.2) Please confirm that no trucks heavier than 5 tons will utilize the entrance off of Waldron Road. If truck traffic is expected, then the light duty pavement section shown will be insufficient.
11. (C1.2) Provide a distance from the intersection of Waldron Road with Jones Boulevard to the proposed entrance off of Waldron Road.
12. (C1.1) Provide height and type of proposed fencing.
13. (C3.1) Provide calculations demonstrating that the requirements of City Ordinance 14-603(3) regarding stormwater quality are being met by this design.
14. (C3.1) Provide calculations demonstrating that the requirements of City Ordinance 14-603(4) regarding stormwater quantity are being met by this design.
15. (C3.1) Include in the title for this sheet that it is the 'Intermediate' erosion control plan
16. (C4.1) Relocate fire department connection to be a minimum of 50' away from the building and within 100' of the existing fire hydrant.
17. (C4.1) The sanitary sewer from the building is shown as a 6" gravity line. Please change it to a force main and size appropriately. Call Scott Tatalovich with any questions.
18. (C4.1) Provide a detail of the connection of the private force main serving this property with the public force main in Waldron Road. Call Scott Tatalovich with any questions.
19. (C4.1) Plans say 4" water, I believe a new 6" service was recently installed. Do they wish to take it out or was that a typo?
20. (C4.1) City needs a new fixture count form if things have changed so we can size the water meter.
21. (C4.1) Onsite grinder pump, tank, and force main to City Sewer Service Connection will be privately owned and maintained by the property owner.
22. (C4.1) Sewer service connection shall be per City Std Dtl 19.0.
23. (C4.1) Grinder pump tank shall not be in parking lot. There shall be an above ground control panel installed adjacent the pump station.
24. (C4.1) Discharge force main from the grinder pump tank shall be sized to retain at least 3 feet per second velocity.
25. (C1.1) Will the existing gravel area between the new asphalt drive and the existing concrete pad be used for parking? The zoning ordinance requires the following for parking areas: "all parking lots and spaces shall be covered with a dustless, asphalt material and spaces lined and marked." Gravel is not considered by the City of La Vergne to be a dustless asphalt material. Please explain why the use of gravel in these areas meets the requirements of the zoning ordinance. To be discussed with Planning Commission.

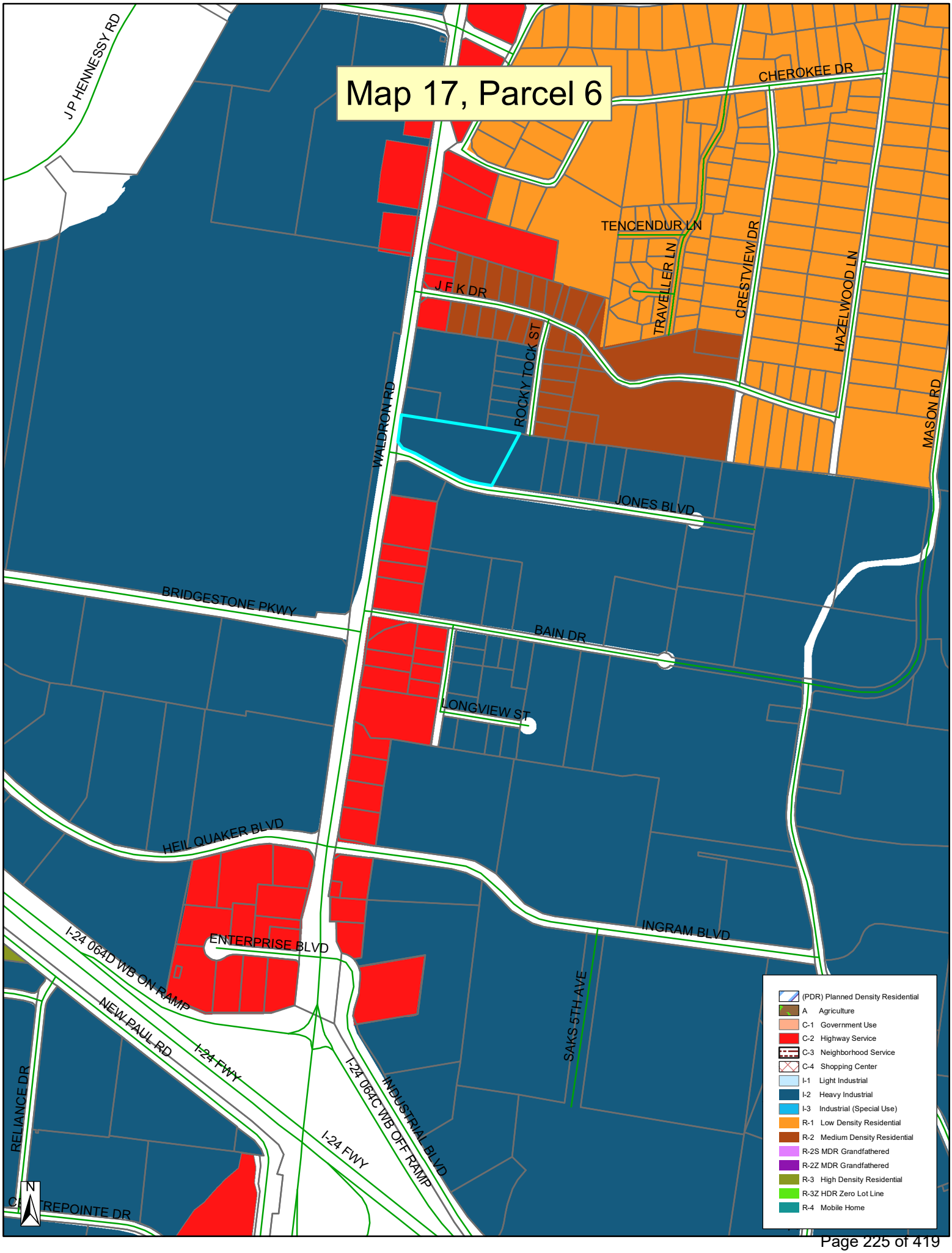
Other Concerns

1.

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

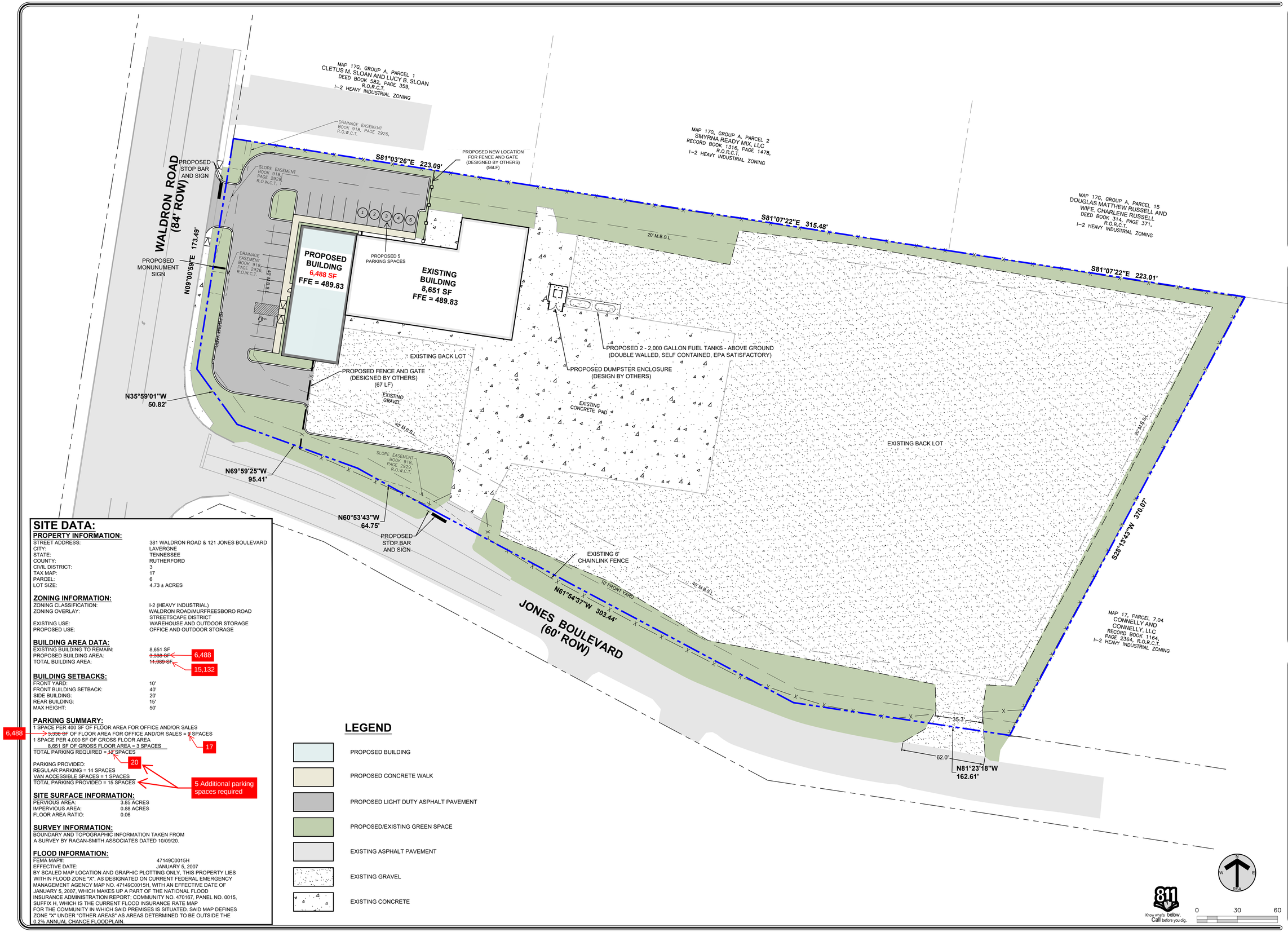

Map 17, Parcel 6
WALDRON RD
ROCKY TOCK ST
JONES BLVD
N


Map 17, Parcel 6
CHEROKEE DR
TENCENDUR LN
TRAVELLER LN
J F K DR
WALDRON RD
ROCKY TOCK ST
JONES BLVD
BRIDGESTONE PKWY
BAIN DR
CHEERFUL PL
LONGVIEW ST
N


Map 17, Parcel 6
J P HENNESSY RD
CHEROKEE DR
TENCENDUR LN
TRAVELLER LN
CRESTVIEW DR
HAZELWOOD LN
MASON RD
J F K DR
ROCKY TOCK ST
WALDRON RD
JONES BLVD
BRIDGESTONE PKWY
BAIN DR
LONGVIEW ST
HEIL QUAKER BLVD
INGRAM BLVD
ENTERPRISE BLVD
I-24 064D WB ON RAMP
NEWLPAUL RD
I-24 FWY
I-24 064C WB OFF RAMP
INDUSTRIAL BLVD
SAKS 5TH AVE
RELIANCE DR
I-24 FWY
REPOINTE DR
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home


Greenrise


Greenrise



SITE DATA:

PROPERTY INFORMATION:

STREET ADDRESS:	381 WALDRON ROAD & 121 JONES BOULEVARD
CITY:	LAVERGNE
STATE:	TENNESSEE
COUNTY:	RUTHERFORD
CIVIL DISTRICT:	3
TAX MAP:	17
PARCEL:	6
LOT SIZE:	4.73 ± ACRES

ZONING INFORMATION:

ZONING CLASSIFICATION:	I-2 (HEAVY INDUSTRIAL)
ZONING OVERLAY:	WALDRON ROAD/MURFREESBORO ROAD STREETSCAPE DISTRICT
EXISTING USE:	WAREHOUSE AND OUTDOOR STORAGE
PROPOSED USE:	OFFICE AND OUTDOOR STORAGE

BUILDING AREA DATA:

EXISTING BUILDING TO REMAIN:	8,651 SF
PROPOSED BUILDING AREA:	~~3,339 SF~~ 6,488
TOTAL BUILDING AREA:	~~11,989 SF~~ 15,132

BUILDING SETBACKS:

FRONT YARD:	10'
FRONT BUILDING SETBACK:	40'
SIDE BUILDING:	20'
REAR BUILDING:	15'
MAX HEIGHT:	50'

PARKING SUMMARY:

1 SPACE PER 400 SF OF FLOOR AREA FOR OFFICE AND/OR SALES
~~3,338 SF~~ 6,488 OF FLOOR AREA FOR OFFICE AND/OR SALES = ~~9~~ 17 SPACES
1 SPACE PER 4,000 SF OF GROSS FLOOR AREA
8,651 SF OF GROSS FLOOR AREA = 3 SPACES
TOTAL PARKING REQUIRED = ~~12~~ 20 SPACES

PARKING PROVIDED:
REGULAR PARKING = 14 SPACES
VAN ACCESSIBLE SPACES = 1 SPACES
TOTAL PARKING PROVIDED = 15 SPACES

5 Additional parking spaces required

SITE SURFACE INFORMATION:

PERVIOUS AREA:	3.85 ACRES
IMPERVIOUS AREA:	0.88 ACRES
FLOOR AREA RATIO:	0.06

SURVEY INFORMATION:

BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY BY RAGAN-SMITH ASSOCIATES DATED 10/09/20.

FLOOD INFORMATION:

FEMA MAP#: 47149C0015H
EFFECTIVE DATE: JANUARY 5, 2007
BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47149C0015H, WITH AN EFFECTIVE DATE OF JANUARY 5, 2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470167, PANEL NO. 0015, SUFFIX H, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

LEGEND

- PROPOSED BUILDING
- PROPOSED CONCRETE WALK
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED/EXISTING GREEN SPACE
- EXISTING ASPHALT PAVEMENT
- EXISTING GRAVEL
- EXISTING CONCRETE

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Murfreesboro 615-546-6555
ragansmith.com

01/18/2023

EXHIBIT PURPOSES ONLY

NOT FOR CONSTRUCTION

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS

121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

REV.	DATE:	DESCRIPTION:
1	03-22-2021	PER CITY COMMENTS

WK. ORDER	1954
JOB NO.	20124
DESIGNED:	EMP
DRAWN:	GBB
SCALE:	1"=30'
DATE:	MARCH 22, 2021

OVERALL SITE LAYOUT PLAN

C1.1

G:\2012\20124\CIVIL ENGINEERING\PLAN SHEETS\C1.1 SITE LAYOUT PLAN.DWG
PLOTTED BY GABE BENTLEY ON 3/22/2021 7:21 AM LAST UPDATED BY GBENTLEY ON 3/19/2021 3:55 PM

SITE PLANS

AVENUE GRADING OFFICE BUILDING

FOR

BARLOW BUILDERS

SITE DATA:

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BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY BY RAGAN-SMITH ASSOCIATES DATED 10/09/20.

FLOOD INFORMATION:

FEMA MAP#: 47149C0015H
EFFECTIVE DATE: JANUARY 5, 2007

BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47149C0015H, WITH AN EFFECTIVE DATE OF JANUARY 5, 2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT, COMMUNITY NO. 470167, PANEL NO. 0015, SUFFIX H, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED, SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

CONTACTS

OWNER/DEVELOPER

BARLOW BUILDERS
BYRD CAIN
3020 STANSBERRY LANE, SUITE 101
FRANKLIN, TN 37069
615-376-1680
BYRDCAIN@BELLSOUTH.NET

CIVIL

RAGAN-SMITH ASSOCIATES
ERIC PARL
315 WOODLAND STREET
NASHVILLE, TN 37206
(615) 244-8591
EPARL@RAGANSMITH.COM

LANDSCAPE ARCHITECTURE

RAGAN-SMITH ASSOCIATES
ANDREW TARSI
315 WOODLAND STREET
NASHVILLE, TN 37206
(615) 244-8591
ATARSI@RAGANSMITH.COM

ARCHITECTURE

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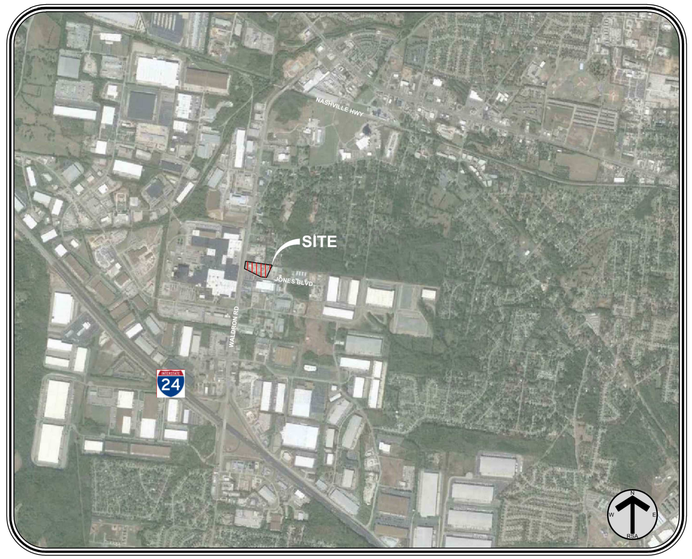
J.R. ROLLINS
3020 STANSBERRY LANE, SUITE 101
FRANKLIN, TN, 37069
(615) 376-1680
JR@BARLOWBUILDERS.COM



MAP SOURCE: GOOGLE EARTH PRO-2020

LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET	DESCRIPTION
C0.0	COVER SHEET

CIVIL PLANS

C0.1	CIVIL NOTES
C0.2	EXISTING CONDITIONS
C0.3	DEMOLITION PLAN
C1.1	OVERALL SITE LAYOUT PLAN
C1.2	ENLARGED SITE LAYOUT PLAN
C2.1	INITIAL EROSION CONTROL PLAN
C3.1	SITE GRADING, DRAINAGE & EROSION CONTROL PLAN
C3.2	FINAL EROSION CONTROL PLAN
C4.1	UTILITY PLAN
C5.1	CONSTRUCTION DETAILS
C5.2	CONSTRUCTION DETAILS

LANDSCAPE ARCHITECTURAL PLANS

L1.1	LANDSCAPE PLAN
L1.2	LANDSCAPE NOTES AND DETAILS

ARCHITECTURAL PLANS

1	ARCHITECTURAL ELEVATIONS - FRONT AND RIGHT SIDE
2	ARCHITECTURAL ELEVATIONS - REAR AND LEFT SIDE

CITY OF LA VERGNE
RUTHERFORD COUNTY, TENNESSEE

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Nashville 615-244-8591
Murfreesboro 615-546-9500
ragansmith.com

ERIC MICHAEL PARL
REGISTERED ENGINEER
AGRICULTURE
10/04/21
No. 121596
STATE OF TENNESSEE

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

REV. #	DATE:	DESCRIPTION:
2	10-04-2021	PER CITY COMMENT
1	03-22-2021	PER CITY COMMENTS

JOB NO. 20124
WK. ORDER 1954
DESIGNED: EMP
DRAWN: GBB
SCALE: NOT TO SCALE
DATE: MARCH 22, 2021

COVER SHEET

C0.0

G:\20124-1954\LDA_ENGINEERING\PLAN SHEETS\C0.0 COVER SHEET.DWG
PLOTTED BY ERIC M. PARL ON 10/5/2021 9:58 AM - LAST UPDATED BY GBERTLEY ON 3/1/2021 1:13 PM

RSA STANDARD NOTES

SITE GENERAL NOTES

1. The contractor shall verify the location of all existing utilities in the proximity of the construction area and report any discrepancies to the owner's representative prior to beginning work.
2. The contractor shall conform to all local, state and federal codes and obtain all permits prior to beginning work.
3. The contractor shall check all finished grades and dimensions and report any discrepancies to the owner's representative prior to beginning work.
4. Dimensions are to the face of curb, edge of concrete and face of building unless noted otherwise.
5. Proposed building footprint is for graphic purposes only. Contractor shall use the current architectural drawings for building stakeout and verify that there are no discrepancies with these plans.
6. All traffic markings shall conform to the manual of uniform traffic control device (MUTCD). All pavement marking shall be thermoplastic unless directed otherwise by the owner's representative.
7. All handicap ramps, parking spaces and accessible routes shall comply with the current ADA requirements.
8. Exterior door landings shall be provided per the local building code. Contractor shall coordinate door locations and adjacent sidewalk/landing grades with these plans and report any discrepancies to the owner's representative.

SITE CONSTRUCTION NOTES

1. The necessary permits for the work shown on these site development plans will be obtained by the contractor prior to commencement of any work on this project. The contractor shall give all necessary notices and obtain all permits and pay all fees involved in securing said permits. He shall also comply with all city, county and state building laws, ordinances or regulations relating to the construction of the project.
2. The contractor shall be responsible for and shall bear all expenses of field staking necessary for site and building layout. All layout shall be performed in accordance with the site layout plan.
3. The location of existing piping and underground utilities, such as water and gas lines, electrical and telephone conduits, etc., as shown on this portion of the plans have been determined from the best available information by actual surveys, or taken from the records and drawings of the existing utilities. However, the civil engineer does not assume responsibility that, during construction, the possibility of utilities other than those shown may be encountered or that actual location of those shown may vary somewhat from the location designated on this portion of the plans. In areas where it is necessary that the exact locations of underground lines be known, the contractor shall, at this own expense, furnish all labor and tools to either verify and substantiate or definitively establish the location of the lines.
4. The contractor must understand that the work is entirely at his risk until same is accepted and he will be held responsible for its safety by the owner. Therefore, the contractor shall furnish and install all necessary temporary works for the protection of the work, including barricades, warning signs, and lights.
5. The site development portion of this project will be subject to the inspection and final approval of the local planning, codes, water and sewer departments (and/or utility districts), engineering/public works departments and fire marshal's office.
6. If, during the construction of the site development portion of this project, a question of intent or clarity arises from either the plans or specifications, the contractor will immediately bring the matter to the attention of the civil engineer or owner's representative for resolution before the affected work items are initiated or pursued further.
7. The contractor will exercise extreme caution in the use of equipment in and around overhead and/or underground power lines. If at any time in the pursuit of this work the contractor must work in close proximity of the above-noted lines, the electric and/or telephone companies shall be contacted prior to such work and the proper safety measures taken. The contractor should make a thorough examination of the overhead lines in the project area prior to the initiation of construction.
8. The contractor shall be responsible for any damage done to the premises or adjacent premises, or injuries to the public during the construction of the work, caused by himself, his subcontractors, or the carelessness of any of his employees.

DEMOLITION NOTES

1. The contractor will be required to remove all excavated materials and such items shall become the property of the contractor. All items shall be properly disposed of at an off-site location. The contractor shall outline any and all possible haul routes and shall be prepared to submit such to the local jurisdiction public works department, the civil engineer and other authorities for approval.
2. If, at any time, prior to or during the demolition work, hazardous material is encountered, the contractor shall notify the owner's representative and appropriate governmental agency.
3. The contractor shall notify adjacent owners of work that may affect their property, potential noise, utility outage or disruption. Such operations shall be conducted by the contractor with minimum interference to adjacent owners. Adjacent egress and access shall be properly maintained at all times. Do not close or obstruct any roadways, parking or sidewalks without permission from the adjacent owners or the local jurisdiction public works department.
4. Prior to the commencement of demolition/grading operations, all overhead and underground utilities shall be located. All removal and/or relocation of utilities shall be coordinated with the respective utility companies.
5. 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 or around the utilities, the contractor will be required to furnish such equipment at no additional cost to owner.
6. The contractor will be solely responsible for contacting all affected utilities prior to submitting his bid to determine the extent to which utility disconnections and/or adjustments will have upon the schedule of the work for the project. Some utility facilities may need to be adjusted concurrently with the contractor's operations, while some work may be required 'around' utility facilities that will remain in place. It is understood and agreed that the contractor will receive no additional compensation for delays or inconvenience caused by the utility adjustment.

EROSION PREVENTION AND SEDIMENT CONTROLS

1. All control measures must be properly installed and maintained in accordance with the manufacturer's specifications, TDEC and local standards.
2. Design, inspection, and maintenance of BMPs described and shown on these plans shall be consistent or exceed recommendations contained in the current edition of TDEC's Tennessee erosion control handbook.
3. BMP capacity [sediment traps, silt fences, sedimentation ponds, and other sediment control] shall not be reduced by more than 50% at any given time. if periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the contractor must replace or modify the control for relevant site situations.
4. Where permanent or temporary vegetation cover is used as a control measure, the timing of the planting is critical. planning for planting of vegetation cover during winter or dry months should be avoided.
5. If sediment escapes the permitted area, off-site accumulations of sediment that have not reached a stream must be removed at a frequency sufficient to minimize offsite impacts. The contractor shall not initiate remediation/restoration of a stream without consulting the division first. The NOI general permit does not authorize access to private property, arrangements concerning removal of sediment on adjoining property must be settled by the contractor and adjoining landowner.
6. Litter, construction debris, and construction chemicals exposed to storm water shall be picked up prior to anticipated storm events or before being carried off of the site by wind or otherwise prevented from becoming a pollutant source for storm water discharges. After use, materials used for EPSC should be removed or otherwise prevented from becoming a pollutant source for storm water discharge.
7. Erodible material storage areas (including overburden and stockpiles of soil) and borrow pits are considered part of the site and should be addressed with appropriate bmp's accordingly.
8. Pre-construction vegetative ground cover shall not be destroyed, removed, or disturbed more than 15 days prior to grading or earth moving unless the area is stabilized. contractor shall sequence events to minimize the exposure time of graded or denuded areas. Clearing and grubbing shall be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site should be preserved to the maximum extent practicable.
9. EPSC measures must be in place and functional before moving operations begin and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workaday, but must be replaced at the end of the workday.
10. The following records shall be maintained on or near site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease or a portion of the site; the dates when stabilization measures are initiated; inspection records and rainfall records. Contractor shall maintain a rain gauge and daily rainfall records at the site, or use a reference site for a record of daily amount of precipitation.
11. A copy of the SWPPP shall be retained on-site and should be accessible to the director and the public. Once site is inactive or does not have an onsite location adequate to store the SWPPP, the location of the SWPPP, along with a contact phone number, shall be posted on-site. If the SWPPP is located off-site, reasonable local access to the plan, during normal working hours, must be provided.
12. Off-site vehicle tracking of sediments and the generation of dust shall be minimized. A stabilized construction access (a point of entrance/exit to a construction site) shall be constructed as needed to reduce the tracking of mud and dirt onto public roads by construction vehicles.
13. Inspections must be performed at least twice every calendar week. Inspections shall be performed at least 72 hours apart. where sites or portions of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions or due to extreme drought, such inspection has to be conducted once per month until thawing or precipitation results in runoff or construction activities resumes. Inspection requirement do not apply to definable areas that have been finally stabilized, as designed by the engineer. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the local environmental field office, or the division's Nashville central office for projects of TDOT or TVA. Should the division discover that monthly inspection of the division discover that monthly inspections of the site are not appropriate due to insufficient stabilization measures or otherwise, twice weekly inspections shall resume. The division may inspect the site to confirm or deny the notification to conduct monthly inspections.
14. Inspectors performing the required twice weekly inspections must have an active certification and a record of certification must be kept on site. Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event, but in no case more than 7 days after the need identified.
15. Outfall points shall be inspected to determine whether EPSC measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.
16. Refueling construction equipment and construction equipment maintenance shall be performed in a designated placed determined by the contractor. Any spills to be cleaned up immediately and clean up to follow TDEC standards.

SITE GRADING & STORM DRAINAGE NOTES

1. Erosion control sediment barriers and tree protection barrier shall be installed prior beginning site work.
2. No heavy equipment shall cross or be stored outside the limits of construction, within tree protections zones, or under the drip line of existing trees to remain.
3. Topsoil stripped from areas to be graded shall be stockpiled on site in a location approved by the owner's representative. Drainage shall be routed around stockpile locations for the duration of grading operations. Erosion control measures shall be installed to prevent loss of topsoil material.
4. Prior to beginning construction, contractor shall review geotechnical report.
5. All cut and fill shall be performed under the direction/observation of the geotechnical engineer.
6. The suitability of soils for fill material shall be determined by the geotechnical engineer.
7. Unless directed otherwise by geotechnical engineer, all fill areas shall be raised in lifts not exceeding 8" in thickness. the relative compaction of each layer shall not be less than 95% of the standard proctor maximum dry density (ASTM D-698) in all areas of fill within open areas and 98% of same specification for areas under roads, parking, sidewalks, building slabs, and foundations.
8. All grading shall be completed to the grades indicated within these plans. final grades shall provide proper drainage and prevent standing water.
9. All storm drainage castings to be John Bouchard & Sons Co. or approved equal, unless otherwise noted.
10. All storm drainage pipes to be RCP, Class III, unless otherwise noted.
11. Installation of pipe material shall be placed with a screen stone envelope and when under pavement entire trench to be backfilled with screen stone to subgrade. Size of stone, envelopes, and trenches to be specified by municipalities for public lines and private lines to adhere to common practices for installation requirements.

SITE UTILITY NOTES

1. All materials and workmanship for utility lines and appurtenances shall be in strict compliance with the governing utility company and local codes. Prior to construction contractor shall notify utility company. (see utility contact information)
2. Contractor shall coordinate site electrical, gas, telephone, and cable with the respective utility company for service layout and design information. Any proposed layout of these utilities depicted on these drawings is graphical only and not intended to represent design of these utilities.
3. Prior to commencement of construction, contractor shall obtain all permits and pay any required tap and connection fees.
4. All trenching, pipe laying and backfilling shall be in accordance with federal OSHA regulations.
5. Site contractor shall construct all utility services to within 5' of building.
6. Contractor shall be responsible for coordinating the sequencing of construction for all utility lines to avoid conflicts.
7. Contractor shall coordinate size and location of water, sewer and stormwater connections to the building as depicted on the building mechanical plans and the site utility plan and notify the engineer or owner's representative of any discrepancies.
8. Water services lines ¼" - 3" shall be Type-K copper and 4" or larger shall be ductile iron pipe - Class 52 unless otherwise required by utility company.
9. Fire line installation and thrust blocking location and sizing shall be per N.F.P.A. and local fire department requirements.
10. Water meter manufacturer/model number and vault specifications shall be per the water utility company.
11. Backflow device (RPBP/DDCVA) manufacturer/model number shall be per the water utility company.
12. Contractor shall install hot box enclosure (pre-finished dark green) on all exterior above-ground backflow devices. Domestic and fire backflow devices shall be heated. Contractor shall coordinate providing appropriate electrical service to backflow device.
13. Contractor shall coordinate location of backflow device with the building mechanical drawings.
14. Sanitary sewer service lines shall be SDR 35 PVC unless specified otherwise.
15. Maintain a 10' horizontal and 18" vertical separation between sanitary sewer and water lines.
16. All fire line mains to be installed by licensed fire protection contractor.
17. Installation of pipe material shall be placed with a screen stone envelope and when under pavement entire trench to be backfilled with screen stone to subgrade. Size of stone, envelopes, and trenches to be specified by municipalities for public lines and private lines to adhere to common practices for installation requirements.

TREE PROTECTION NOTES

1. Any required excavation in or around the protection zone to accommodate underground services, footings, etc., shall be indicated on the plan, and shall be excavated by hand. In addition, related root pruning shall be accomplished by a certified arborist via ansi a-300-95 standard so as to minimize impact of the general root system. No disturbance, including trenching, is permitted within tree protection zones.
2. The storage of building materials or stockpiling shall not be permitted within the limits of or against the protection barriers.
3. Trees within the protection barriers must be adequately cared for throughout the construction process (i.e., they must be watered sufficiently, particularly if the tree's root system has been disturbed by excavation). Fill shall not be placed upon the root system in such a manner as to endanger the health or life of the affected tree.
4. Tree protection barrier shall be constructed prior to the issuance of any permits and shall remain intact throughout the entire period of construction.

GEOTECHNICAL NOTE

1. No geotechnical study has been conducted on this site. however, the design for the site improvements shown on this plan has relied on experience with similar projects and similar soil/site conditions. 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.

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ERIC MICHAEL PARR
REGISTERED ENGINEER
AGRICULTURE
03/22/21
COMMERCE
No. 121996
STATE OF TENNESSEE

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

NO.	DESCRIPTION:	DATE:
1	-	-
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WK. ORDER 1954
JOB NO. 20124
DESIGNED: EMP
DRAWN: GBB
SCALE: NOT TO SCALE
DATE: MARCH 22, 2021

CIVIL NOTES

C0.1

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EXISTING CONDITIONS

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DATE:	MARCH 22, 2021

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AVENUE GRADING OFFICE BUILDING

FOR

BARLOW BUILDERS

121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

STATE OF TENNESSEE
ERIC MICHAEL PARL
REGISTERED ENGINEER
CERTIFICATE NO. 120,143

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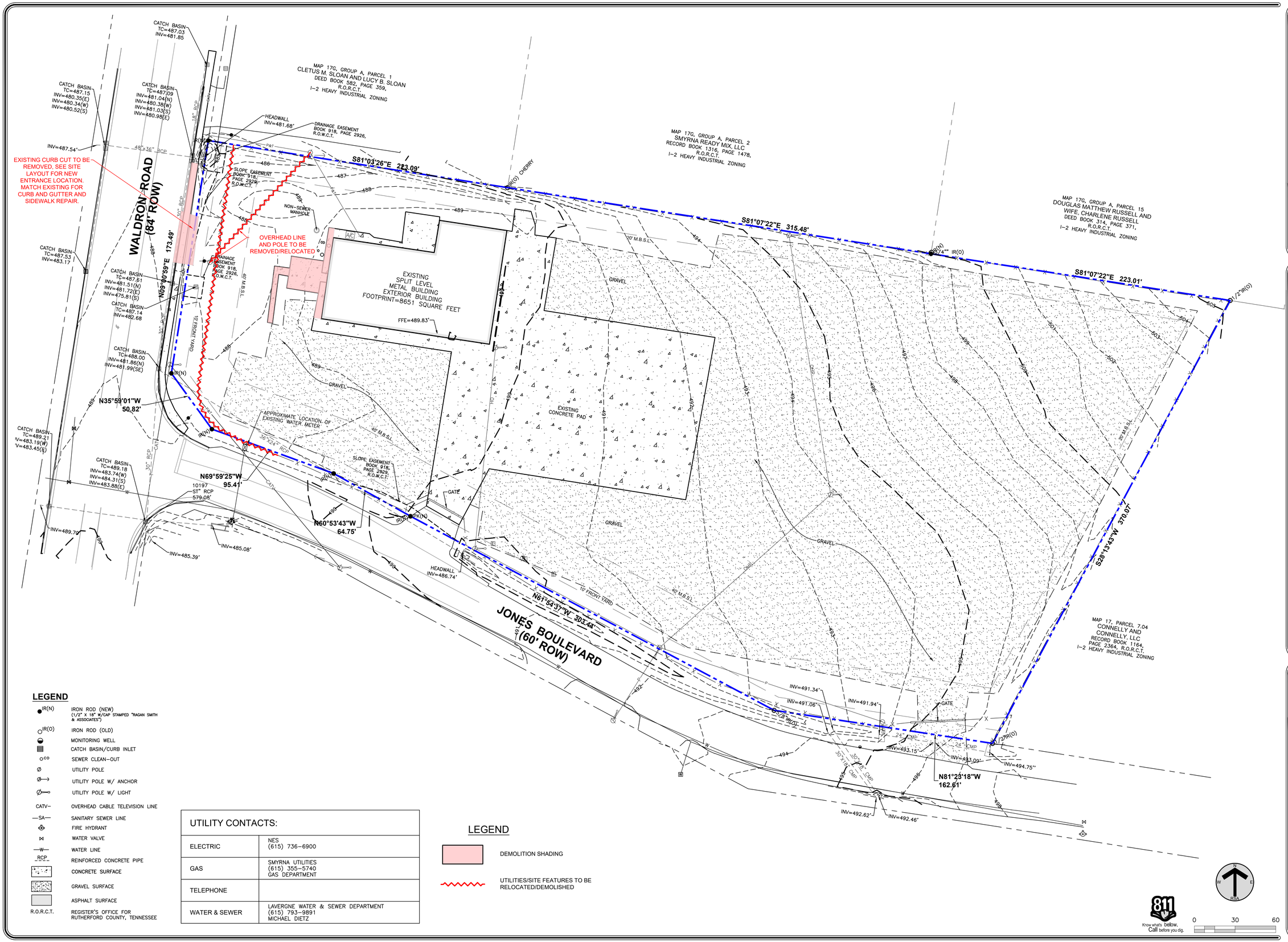

LEGEND

- IR(N) — IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")
- IR(O) — IRON ROD (OLD)
- MONITORING WELL
- CATCH BASIN/CURB INLET
- SEWER CLEAN-OUT
- UTILITY POLE
- UTILITY POLE W/ ANCHOR
- UTILITY POLE W/ LIGHT
- CATV — OVERHEAD CABLE TELEVISION LINE
- —SA— SANITARY SEWER LINE
- FIRE HYDRANT
- WATER VALVE
- —W— WATER LINE
- RCP — REINFORCED CONCRETE PIPE
- CONCRETE SURFACE
- GRAVEL SURFACE
- ASPHALT SURFACE
- R.O.R.C.T. — REGISTER'S OFFICE FOR RUTHERFORD COUNTY, TENNESSEE

UTILITY CONTACTS:	
ELECTRIC	NES (615) 736-6900
GAS	SMYRNA UTILITIES (615) 355-5740 GAS DEPARTMENT
TELEPHONE	
WATER & SEWER	LAVERGNE WATER & SEWER DEPARTMENT (615) 793-9891 MICHAEL DIETZ

LEGEND

DEMOLITION SHADING

UTILITIES/SITE FEATURES TO BE RELOCATED/DEMOLISHED

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AVENUE GRADING OFFICE BUILDING

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121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

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DATE:	MARCH 22, 2021

DEMOLITION PLAN

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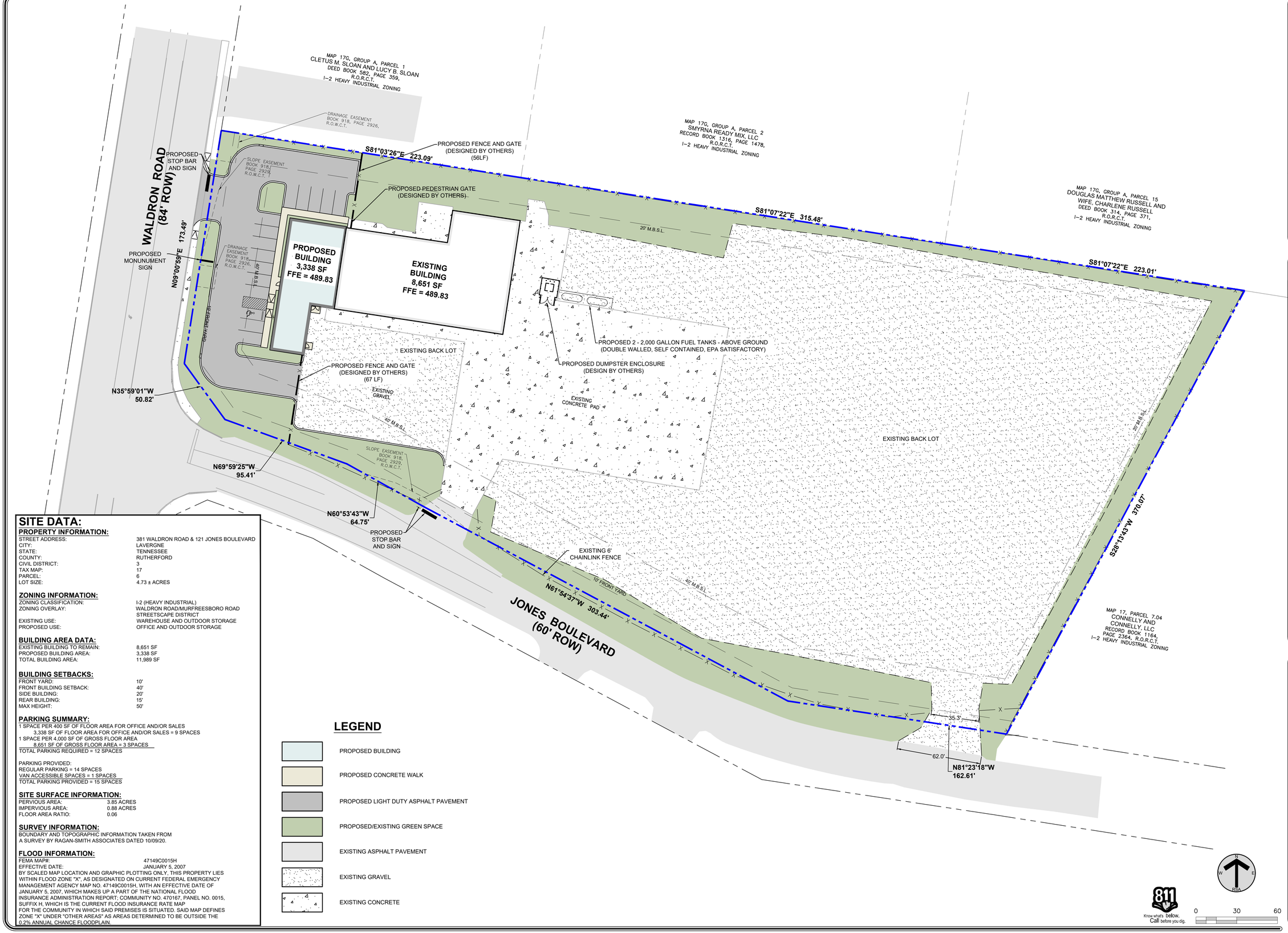

SITE DATA:

PROPERTY INFORMATION:

STREET ADDRESS:	381 WALDRON ROAD & 121 JONES BOULEVARD
CITY:	LAVERGNE
STATE:	TENNESSEE
COUNTY:	RUTHERFORD
CIVIL DISTRICT:	3
TAX MAP:	17
PARCEL:	6
LOT SIZE:	4.73 ± ACRES

ZONING INFORMATION:

ZONING CLASSIFICATION:	I-2 (HEAVY INDUSTRIAL)
ZONING OVERLAY:	WALDRON ROAD/MURFREESBORO ROAD STREETSCAPE DISTRICT
EXISTING USE:	WAREHOUSE AND OUTDOOR STORAGE
PROPOSED USE:	OFFICE AND OUTDOOR STORAGE

BUILDING AREA DATA:

EXISTING BUILDING TO REMAIN:	8,651 SF
PROPOSED BUILDING AREA:	3,338 SF
TOTAL BUILDING AREA:	11,989 SF

BUILDING SETBACKS:

FRONT YARD:	10'
FRONT BUILDING SETBACK:	40'
SIDE BUILDING:	20'
REAR BUILDING:	15'
MAX HEIGHT:	50'

PARKING SUMMARY:

1 SPACE PER 400 SF OF FLOOR AREA FOR OFFICE AND/OR SALES
3,338 SF OF FLOOR AREA FOR OFFICE AND/OR SALES = 9 SPACES
1 SPACE PER 4,000 SF OF GROSS FLOOR AREA
8,651 SF OF GROSS FLOOR AREA = 3 SPACES
TOTAL PARKING REQUIRED = 12 SPACES

PARKING PROVIDED:
REGULAR PARKING = 14 SPACES
VAN ACCESSIBLE SPACES = 1 SPACES
TOTAL PARKING PROVIDED = 15 SPACES

SITE SURFACE INFORMATION:

PERVIOUS AREA:	3.85 ACRES
IMPERVIOUS AREA:	0.88 ACRES
FLOOR AREA RATIO:	0.06

SURVEY INFORMATION:

BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY BY RAGAN-SMITH ASSOCIATES DATED 10/09/20.

FLOOD INFORMATION:

FEMA MAP#:	47149C0015H
EFFECTIVE DATE:	JANUARY 5, 2007

BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47149C0015H, WITH AN EFFECTIVE DATE OF JANUARY 5, 2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470167, PANEL NO. 0015, SUFFIX H, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

LEGEND

- PROPOSED BUILDING
- PROPOSED CONCRETE WALK
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED/EXISTING GREEN SPACE
- EXISTING ASPHALT PAVEMENT
- EXISTING GRAVEL
- EXISTING CONCRETE

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BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

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OVERALL SITE LAYOUT PLAN

C1.1

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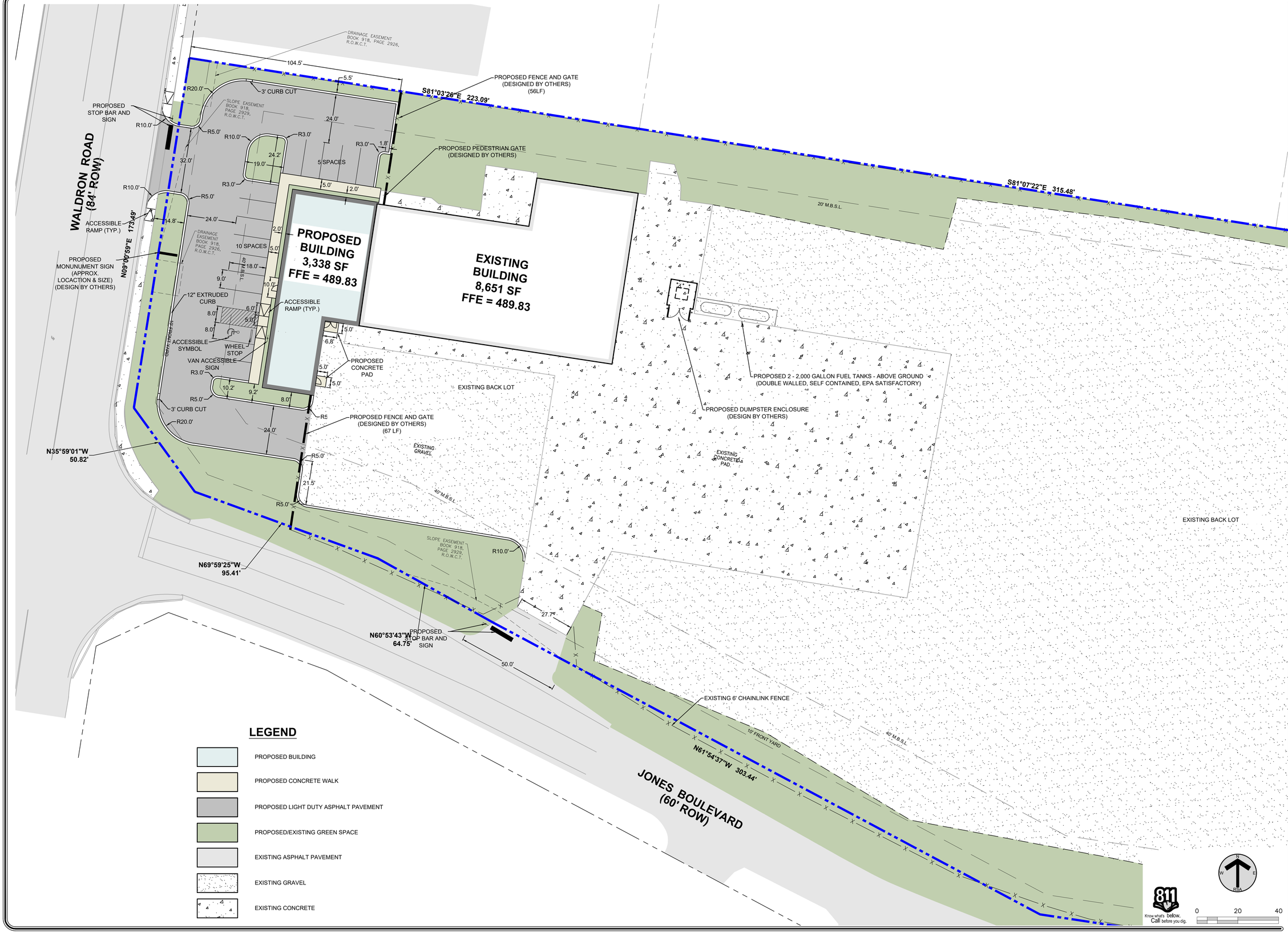

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ENLARGED SITE LAYOUT PLAN

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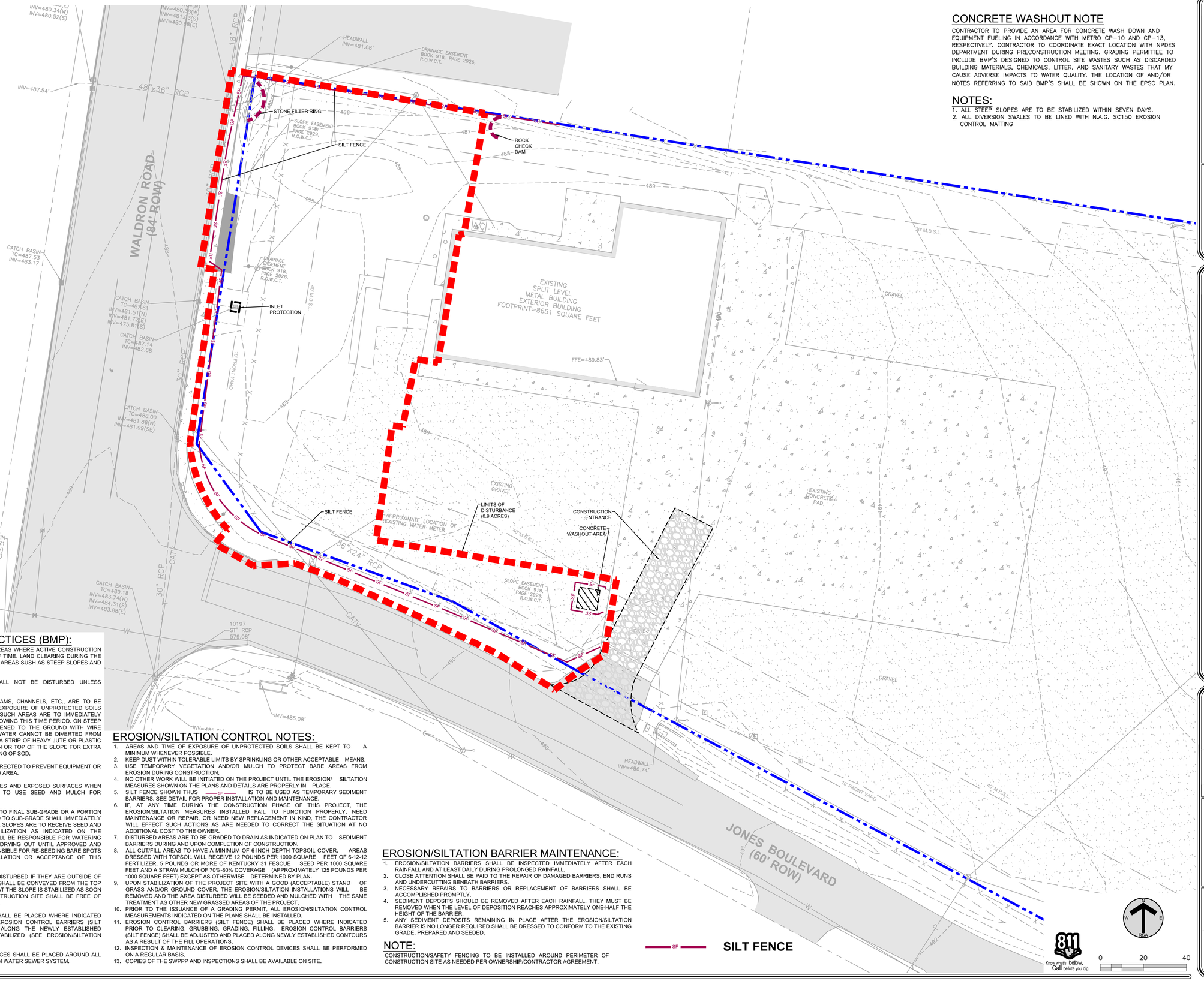

CONCRETE WASHOUT NOTE

CONTRACTOR TO PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH METRO CP-10 AND CP-13, RESPECTIVELY. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRECONSTRUCTION MEETING. GRADING PERMITTEE TO INCLUDE BMP'S DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND/OR NOTES REFERRING TO SAID BMP'S SHALL BE SHOWN ON THE EPSC PLAN.

NOTES:

1. ALL STEEP SLOPES ARE TO BE STABILIZED WITHIN SEVEN DAYS.
2. ALL DIVERSION SWALES TO BE LINED WITH N.A.G. SC150 EROSION CONTROL MATTING

BEST MANAGEMENT PRACTICES (BMP):

LAND CLEARING SHALL TAKE PLACE ONLY IN AREAS WHERE ACTIVE CONSTRUCTION WILL BEGIN WITHIN A REASONABLE AMOUNT OF TIME. LAND CLEARING DURING THE RAINY SEASON SHALL BE AVOIDED IN SENSITIVE AREAS SUSH AS STEEP SLOPES AND BUFFERS, IF POSSIBLE.

ANY NATURAL WATERCOURSE ON SITE SHALL NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY.

DENUDED AREAS, SOIL STOCKPILES, DIKES, DAMS, CHANNELS, ETC., ARE TO BE SEEDED AND MULCHED. AREAS AND TIME OF EXPOSURE OF UNPROTECTED SOILS SHALL BE KEPT TO A MAXIMUM OF 15 DAYS. SUCH AREAS ARE TO IMMEDIATELY RECEIVE SEED AND MULCH STABILIZATION FOLLOWING THIS TIME PERIOD. ON STEEP SLOPES AND CHANNELS, SOD SHALL BE FASTENED TO THE GROUND WITH WIRE STAPLES OR WOOD PEGS. WHERE SURFACE WATER CANNOT BE DIVERTED FROM FLOWING OVER THE FACE OF SLOPES, INSTALL A STRIP OF HEAVY JUTE OR PLASTIC NETTING AND FASTEN TIGHT ALONG THE CROWN OR TOP OF THE SLOPE FOR EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD.

SUITABLE BARRICADES AND GUARDS SHALL BE ERECTED TO PREVENT EQUIPMENT OR MATERIAL FROM BEING PLACED ON ANY PLANTED AREA.

PLASTIC LINING SHALL BE USED ON ALL DITCHES AND EXPOSED SURFACES WHEN TIME DOES NOT PERMIT THE CONTRACTOR TO USE SEED AND MULCH FOR STABILIZATION.

SLOPE AND DITCHES THAT ARE CONSTRUCTED TO FINAL SUB-GRADE OR A PORTION OF ANY SLOPE OR DITCH THAT IS CONSTRUCTED TO SUB-GRADE SHALL IMMEDIATELY RECEIVE TOPSOIL AND FINAL STABILIZATION. ALL SLOPES ARE TO RECEIVE SEED AND MULCH. ALL DITCHES SHALL RECEIVE STABILIZATION AS INDICATED ON THE CONSTRUCTION PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING SEEDED AREAS TO PREVENT THE SOIL FROM DRYING OUT UNTIL APPROVED AND ACCEPTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-SEEDING BARE SPOTS FOR A PERIOD OF ONE YEAR AFTER INSTALLATION OR ACCEPTANCE OF THIS PROJECT.

STEEP AND UNSTABLE SLOPES SHALL NOT BE DISTURBED IF THEY ARE OUTSIDE OF THE APPROVED GRADING PLAN AREA. RUNOFF SHALL BE CONVEYED FROM THE TOP OF THE SLOPE IN A SAFE MANNER ENSURING THAT THE SLOPE IS STABILIZED AS SOON AS POSSIBLE. ALL RUNOFF EXITING THE CONSTRUCTION SITE SHALL BE FREE OF EXCESSIVE SEDIMENT, AND OTHER POLLUTANTS.

EROSION CONTROL BARRIERS (SILT FENCE) SHALL BE PLACED WHERE INDICATED PRIOR TO CLEARING, GRUBBING, GRADING. EROSION CONTROL BARRIERS (SILT FENCE) SHALL BE ADJUSTED AND PLACED ALONG THE NEWLY ESTABLISHED CONTOURS UNTIL THE DEVELOPMENT IS STABILIZED (SEE EROSION/SILTATION CONTROL NOTES)

STREET AND/OR CURB INLET PROTECTION DEVICES SHALL BE PLACED AROUND ALL INLETS UPON THE CONSTRUCTION OF THE STORM WATER SEWER SYSTEM.

EROSION/SILTATION CONTROL NOTES:

1. AREAS AND TIME OF EXPOSURE OF UNPROTECTED SOILS SHALL BE KEPT TO A MINIMUM WHENEVER POSSIBLE.
2. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
3. USE TEMPORARY VEGETATION AND/OR MULCH TO PROTECT BARE AREAS FROM EROSION DURING CONSTRUCTION.
4. NO OTHER WORK WILL BE INITIATED ON THE PROJECT UNTIL THE EROSION/ SILTATION MEASURES SHOWN ON THE PLANS AND DETAILS ARE PROPERLY IN PLACE.
5. SILT FENCE SHOWN THUS ——SF—— IS TO BE USED AS TEMPORARY SEDIMENT BARRIERS. SEE DETAIL FOR PROPER INSTALLATION AND MAINTENANCE.
6. IF, AT ANY TIME DURING THE CONSTRUCTION PHASE OF THIS PROJECT, THE EROSION/SILTATION MEASURES INSTALLED FAIL TO FUNCTION PROPERLY, NEED MAINTENANCE OR REPAIR, OR NEED NEW REPLACEMENT IN KIND, THE CONTRACTOR WILL EFFECT SUCH ACTIONS AS ARE NEEDED TO CORRECT THE SITUATION AT NO ADDITIONAL COST TO THE OWNER.
7. DISTURBED AREAS ARE TO BE GRADED TO DRAIN AS INDICATED ON PLAN TO SEDIMENT BARRIERS DURING AND UPON COMPLETION OF CONSTRUCTION.
8. ALL CUT/FILL AREAS TO HAVE A MINIMUM OF 6-INCH DEPTH TOPSOIL COVER. AREAS DRESSED WITH TOPSOIL WILL RECEIVE 12 POUNDS PER 1000 SQUARE FEET OF 6-12-12 FERTILIZER, 5 POUNDS OR MORE OF KENTUCKY 31 FESCUE SEED PER 1000 SQUARE FEET AND A STRAW MULCH OF 70%-80% COVERAGE (APPROXIMATELY 125 POUNDS PER 1000 SQUARE FEET) EXCEPT AS OTHERWISE DETERMINED BY PLAN.
9. UPON STABILIZATION OF THE PROJECT SITE WITH A GOOD (ACCEPTABLE) STAND OF GRASS AND/OR GROUND COVER, THE EROSION/SILTATION INSTALLATIONS WILL BE REMOVED AND THE AREA DISTURBED WILL BE SEEDED AND MULCHED WITH THE SAME TREATMENT AS OTHER NEW GRASSED AREAS OF THE PROJECT.
10. PRIOR TO THE ISSUANCE OF A GRADING PERMIT, ALL EROSION/SILTATION CONTROL MEASUREMENTS INDICATED ON THE PLANS SHALL BE INSTALLED.
11. EROSION CONTROL BARRIERS (SILT FENCE) SHALL BE PLACED WHERE INDICATED PRIOR TO CLEARING, GRUBBING, GRADING, FILLING. EROSION CONTROL BARRIERS (SILT FENCE) SHALL BE ADJUSTED AND PLACED ALONG NEWLY ESTABLISHED CONTOURS AS A RESULT OF THE FILL OPERATIONS.
12. INSPECTION & MAINTENANCE OF EROSION CONTROL DEVICES SHALL BE PERFORMED ON A REGULAR BASIS.
13. COPIES OF THE SWPPP AND INSPECTIONS SHALL BE AVAILABLE ON SITE.

EROSION/SILTATION BARRIER MAINTENANCE:

1. EROSION/SILTATION BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
2. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BARRIERS, END RUNS AND UNDERCUTTING BENEATH BARRIERS.
3. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.
4. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
5. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE EROSION/SILTATION BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

NOTE:

CONSTRUCTION/SAFETY FENCING TO BE INSTALLED AROUND PERIMETER OF CONSTRUCTION SITE AS NEEDED PER OWNERSHIP/CONTRACTOR AGREEMENT.

SF SILT FENCE

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INITIAL EROSION CONTROL PLAN

C2.1

G:\20124-1954\1-CIVIL ENGINEERING\PLAN SHEETS\C2.1 INITIAL EROSION CONTROL PLAN.DWG
PLOTTED BY ERIC M. PARR, ON 10/5/2021 7:48 AM LAST UPDATED BY EPARR, ON 10/5/2021 7:14 AM



GRADING NOTE (ACCESSIBLE ENTRANCE):

ALL ENTRANCES ON ANY BUILDING WHICH IS CONSIDERED A HANDICAP ACCESSIBLE ENTRANCE IS TO BE PROVIDED FOR A MINIMUM OF 60"x60" LANDING FOR A SINGLE DOOR AND A 72"x60" LANDING FOR A DOUBLE DOOR, IF A PROPOSED ACCESS EXCEEDS A 72" WIDTH THE LANDING IS TO ACCOMMODATE SAID ACCESS WIDTH. SAID LANDING IS NOT TO EXCEED A 1% GRADE (1/8"/FOOT FALL) IN ANY DIRECTION. CONTRACTOR IS TO COORDINATE WITH DESIGNING ARCHITECT FOR ALL LOCATIONS, LAYOUTS, ELEVATIONS AND TREATMENTS TO ANY PROPOSED BUILDING ACCESS.

STORM DRAINAGE NOTES:

1. ALL STORMWATER WORKS ON THIS PROJECT WILL BE CONSTRUCTED TO BE IN COMPLIANCE WITH THE CITY OF LA VERGNE WORKS SPECIFICATIONS AND REQUIREMENTS.
2. TRENCHES FOR STORMWATER PIPING WILL BE BEDDED WITH 4" OF CRUSHED STONE TO RECEIVE THE CULVERT PIPE AND GIVE A UNIFORM BEARING ALONG THE RUN OF THE TRENCH. REMAINING TRENCH SECTION TO BE BACKFILLED WITH CLEAN STONE #57 TO TOP OF PIPE OR TO SUBGRADE WHEN LOCATED IN PAVEMENT.
3. TOP OF CASTING EL. REFERS TO TOP OF GRATE OF "K" AND "M" & "H" CASTINGS. DRAINAGE STRUCTURE CASTING SHALL BE DRY SET WHEN BUILT AND MORTAR SET LATER WHEN ADJUSTED TO GRADE OF FINAL SURFACE TREATMENT.
4. B.W. REFERS TO FINISHED GRADE AT BOTTOM OF WALL.

LEGEND

- PROPOSED BUILDING
- PROPOSED CONCRETE WALK
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED/EXISTING GREEN SPACE
- EXISTING GRAVEL
- EXISTING CONCRETE

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ERIC MICHAEL PARR
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 121996
STATE OF TENNESSEE
03/22/21

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

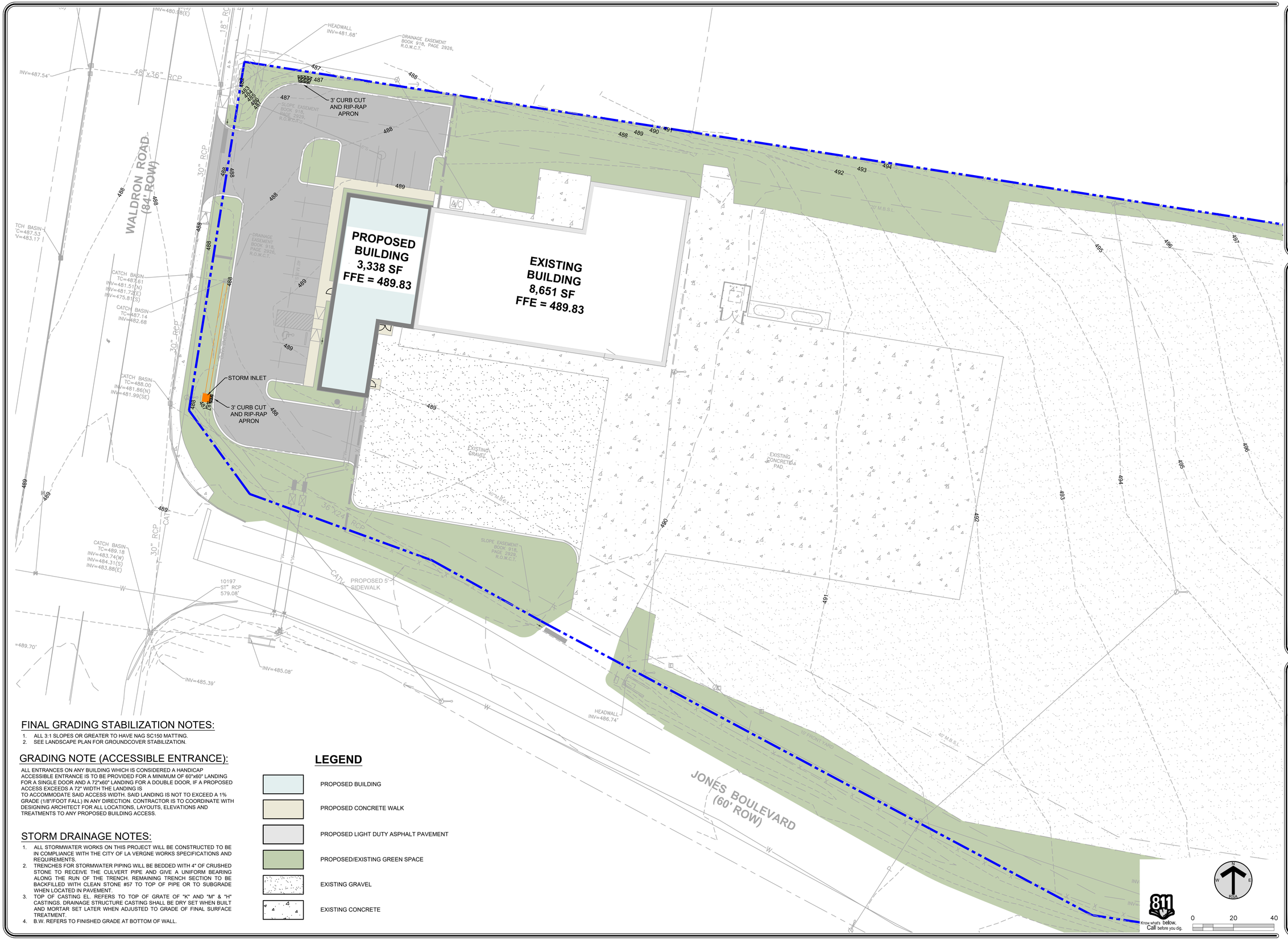
#	REV. DATE:	DESCRIPTION:
1	03-22-2021	PER CITY COMMENTS

JOB NO. 20124 | WK. ORDER 1954
DESIGNED: EMP
DRAWN: GBB
SCALE: 1"=20'
DATE: MARCH 22, 2021

SITE GRADING, DRAINAGE & EROSION CONTROL PLAN

C3.1

G:\20124.1954\CIVIL ENGINEERING\PLAN SHEETS\C3.1 SITE GRADING DRAINAGE & EROSION CONTROL PLAN.DWG
PLOTTED BY GAGE BENTLEY ON 3/22/2021 7:22 AM LAST UPDATED BY GBENTLEY ON 3/22/2021 7:18 AM



FINAL GRADING STABILIZATION NOTES:

1. ALL 3:1 SLOPES OR GREATER TO HAVE NAG SC150 MATTING.
2. SEE LANDSCAPE PLAN FOR GROUNDCOVER STABILIZATION.

GRADING NOTE (ACCESSIBLE ENTRANCE):

ALL ENTRANCES ON ANY BUILDING WHICH IS CONSIDERED A HANDICAP ACCESSIBLE ENTRANCE IS TO BE PROVIDED FOR A MINIMUM OF 60"x60" LANDING FOR A SINGLE DOOR AND A 72"x60" LANDING FOR A DOUBLE DOOR, IF A PROPOSED ACCESS EXCEEDS A 72" WIDTH THE LANDING IS TO ACCOMMODATE SAID ACCESS WIDTH. SAID LANDING IS NOT TO EXCEED A 1% GRADE (1/8"/FOOT FALL) IN ANY DIRECTION. CONTRACTOR IS TO COORDINATE WITH DESIGNING ARCHITECT FOR ALL LOCATIONS, LAYOUTS, ELEVATIONS AND TREATMENTS TO ANY PROPOSED BUILDING ACCESS.

STORM DRAINAGE NOTES:

1. ALL STORMWATER WORKS ON THIS PROJECT WILL BE CONSTRUCTED TO BE IN COMPLIANCE WITH THE CITY OF LA VERGNE WORKS SPECIFICATIONS AND REQUIREMENTS.
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3. TOP OF CASTING EL. REFERS TO TOP OF GRATE OF "K" AND "M" & "H" CASTINGS. DRAINAGE STRUCTURE CASTING SHALL BE DRY SET WHEN BUILT AND MORTAR SET LATER WHEN ADJUSTED TO GRADE OF FINAL SURFACE TREATMENT.
4. B.W. REFERS TO FINISHED GRADE AT BOTTOM OF WALL.

LEGEND

- PROPOSED BUILDING
- PROPOSED CONCRETE WALK
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED/EXISTING GREEN SPACE
- EXISTING GRAVEL
- EXISTING CONCRETE

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ERIC MICHAEL PAPE
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03/12/21

AVENUE GRADING OFFICE BUILDING

FOR

BARLOW BUILDERS

121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

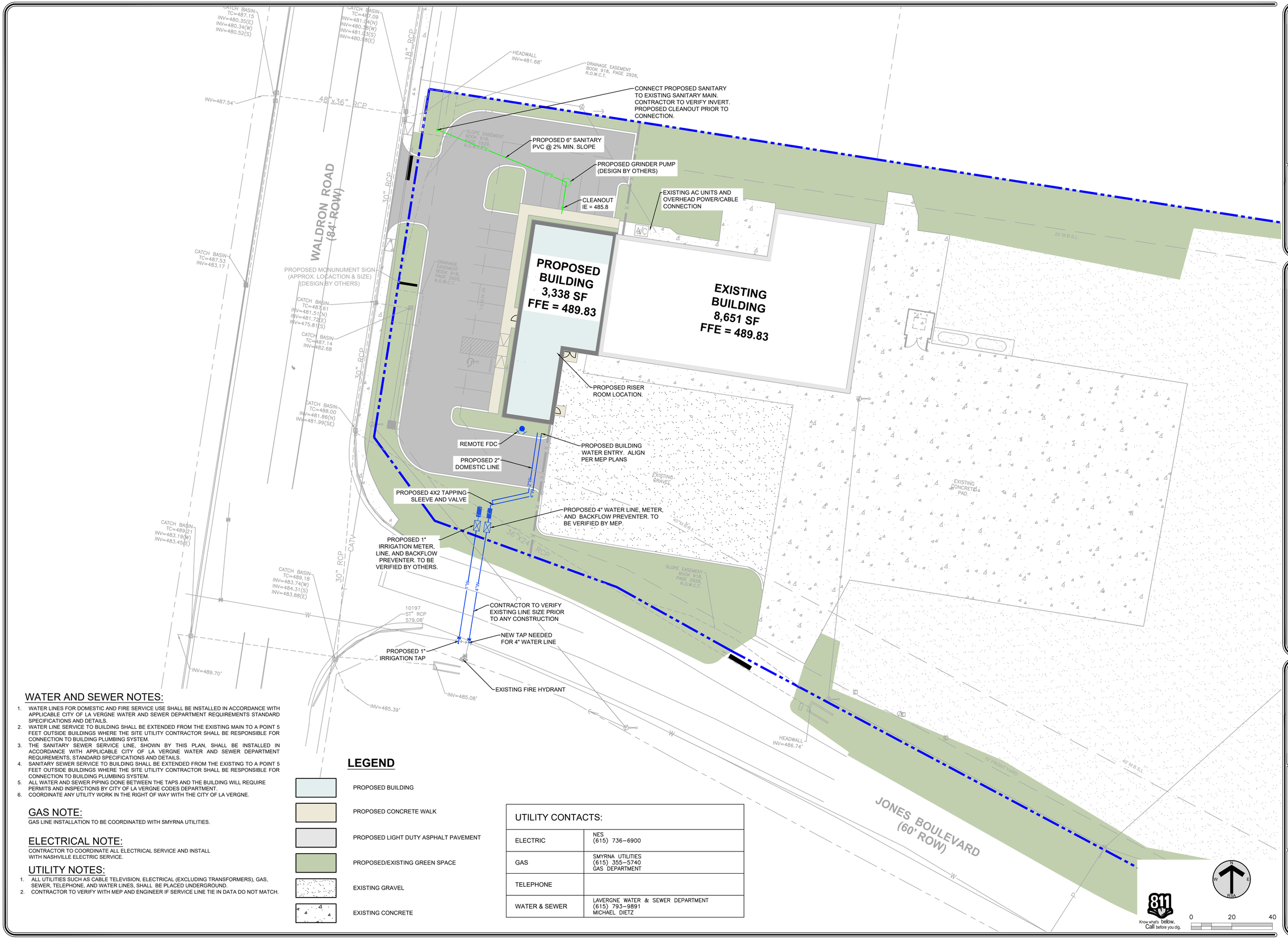
REV. #	DESCRIPTION:	DATE:
-	-	-

JOB NO.	20124
WK. ORDER	1954
DESIGNED:	EMP
DRAWN:	GBB
SCALE:	1"=20'
DATE:	MARCH 22, 2021

FINAL EROSION CONTROL PLAN

C3.2

© 20124-1954-CIVIL ENGINEERING\3-PLAN SHEETS\C3.1 FINAL EROSION CONTROL PLAN.DWG
PLOTTED BY GAGE BENTLEY ON 3/22/2021 7:22 AM LAST UPDATED BY GBENTLEY ON 3/19/2021 4:08 PM



WATER AND SEWER NOTES:

1. WATER LINES FOR DOMESTIC AND FIRE SERVICE USE SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CITY OF LA VERGNE WATER AND SEWER DEPARTMENT REQUIREMENTS STANDARD SPECIFICATIONS AND DETAILS.
2. WATER LINE SERVICE TO BUILDING SHALL BE EXTENDED FROM THE EXISTING MAIN TO A POINT 5 FEET OUTSIDE BUILDINGS WHERE THE SITE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTION TO BUILDING PLUMBING SYSTEM.
3. THE SANITARY SEWER SERVICE LINE, SHOWN BY THIS PLAN, SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CITY OF LA VERGNE WATER AND SEWER DEPARTMENT REQUIREMENTS, STANDARD SPECIFICATIONS AND DETAILS.
4. SANITARY SEWER SERVICE TO BUILDING SHALL BE EXTENDED FROM THE EXISTING TO A POINT 5 FEET OUTSIDE BUILDINGS WHERE THE SITE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTION TO BUILDING PLUMBING SYSTEM.
5. ALL WATER AND SEWER PIPING DONE BETWEEN THE TAPS AND THE BUILDING WILL REQUIRE PERMITS AND INSPECTIONS BY CITY OF LA VERGNE CODES DEPARTMENT.
6. COORDINATE ANY UTILITY WORK IN THE RIGHT OF WAY WITH THE CITY OF LA VERGNE.

GAS NOTE:

GAS LINE INSTALLATION TO BE COORDINATED WITH SMYRNA UTILITIES.

ELECTRICAL NOTE:

CONTRACTOR TO COORDINATE ALL ELECTRICAL SERVICE AND INSTALL WITH NASHVILLE ELECTRIC SERVICE.

UTILITY NOTES:

1. ALL UTILITIES SUCH AS CABLE TELEVISION, ELECTRICAL (EXCLUDING TRANSFORMERS), GAS, SEWER, TELEPHONE, AND WATER LINES, SHALL BE PLACED UNDERGROUND.
2. CONTRACTOR TO VERIFY WITH MEP AND ENGINEER IF SERVICE LINE TIE IN DATA DO NOT MATCH.

LEGEND

- PROPOSED BUILDING
- PROPOSED CONCRETE WALK
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED/EXISTING GREEN SPACE
- EXISTING GRAVEL
- EXISTING CONCRETE

UTILITY CONTACTS:	
ELECTRIC	NES (615) 736-6900
GAS	SMYRNA UTILITIES (615) 355-5740 GAS DEPARTMENT
TELEPHONE	
WATER & SEWER	LAVERGNE WATER & SEWER DEPARTMENT (615) 793-9891 MICHAEL DIETZ

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AVENUE GRADING OFFICE BUILDING
FOR
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1	03-22-2021	PER CITY COMMENTS

JOB NO. 20124
WK. ORDER 1954
DESIGNED: EMP
DRAWN: GBB
SCALE: 1"=20'
DATE: MARCH 22, 2021

UTILITY PLAN

C4.1

G:\20124-SMR-CIVIL ENGINEERING\PLAN SHEETS\C4.1 UTILITY PLAN.DWG
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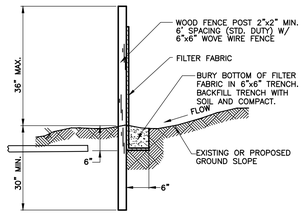
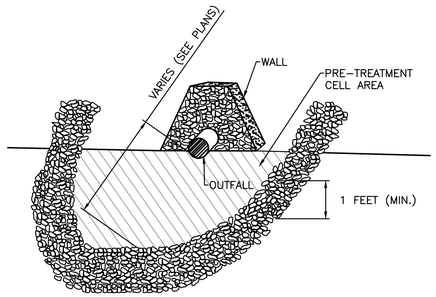


TO BE INSTALLED AS NOTED ON PLAN BEFORE COMMENCING GRADING OPERATION AND LEFT IN PLACE UNTIL A GOOD STAND OF GRASS IS ESTABLISHED OVER ALL DISTURBED AREAS. PRIOR TO INSTALLATION, CONTRACTOR SHOULD CONFIRM WITH THE CITY OF FRANKLIN ENGINEERING DEPT. THAT THIS DETAIL IS THE CURRENT AND APPROVED EROSION/SILTATION BARRIER.

EROSION/SILTATION FENCE

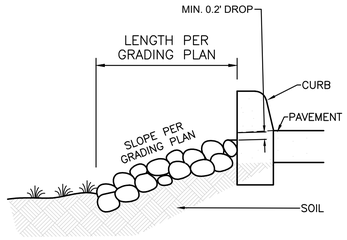
NOT TO SCALE

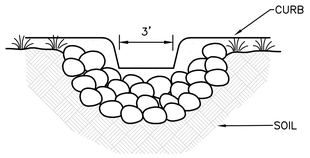


PERSPECTIVE VIEW

STONE FILTER RING

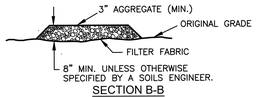
NOT TO SCALE



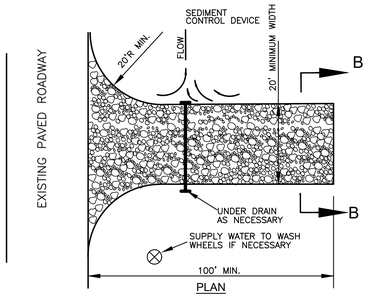


CURB CUT AND RIP-RAP

NOT TO SCALE



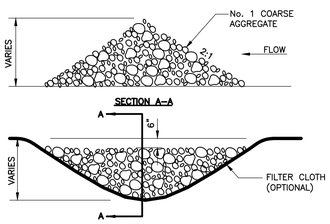
SECTION B-B



PLAN

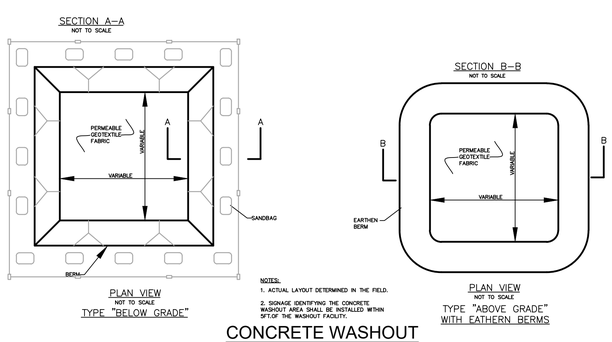
STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



ROCK CHECK DAM

NOT TO SCALE



NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5FT OF THE WASHOUT FACILITY.

CONCRETE WASHOUT

NOT TO SCALE

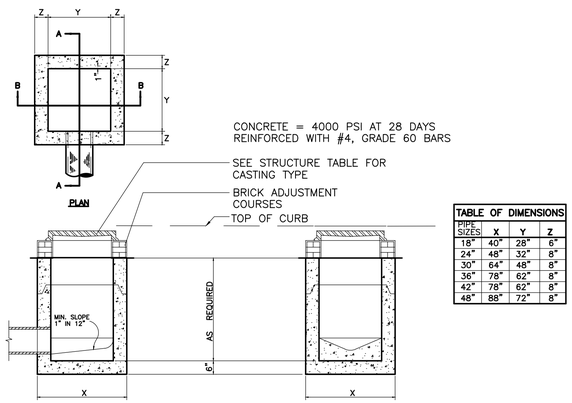
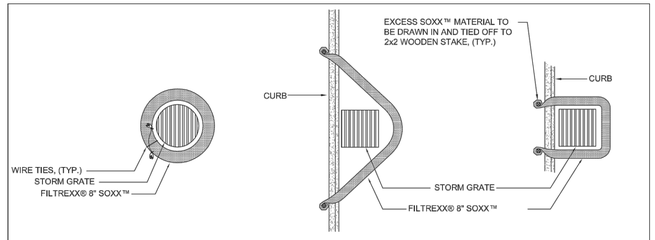


TABLE OF DIMENSIONS			
PIPE SIZES	X	Y	Z
18"	40"	28"	6"
24"	48"	32"	8"
30"	64"	48"	8"
36"	78"	62"	8"
42"	78"	62"	8"
48"	88"	72"	8"

SINGLE INLET (PRECAST)

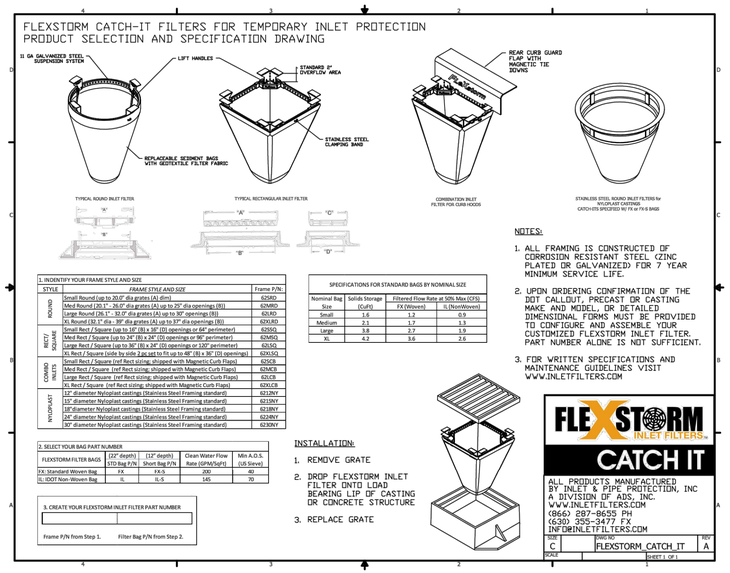
NOT TO SCALE
SEE TABLE FOR MINIMUM DIMENSION BASED ON PIPE SIZE



NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX® INLET PROTECTION

NTS



1. INDENTIFY YOUR FRAME STYLE AND SIZE			
STYLE	FRAME STYLE AND SIZE	Frame P/N:	
ROUNDS	Small Round (up to 20.0" dia grates (A) dim)	62SRD	
	Med Round (20.1" – 26.0" dia grates (A) up to 25" dia openings (Bi))	62MRD	
	Large Round (26.1" – 32.0" dia grates (A) up to 30" openings (Bi))	62LRD	
	XL Round (32.1" dia - 38" dia grates (A) up to 37" dia openings (Bi))	62XLRD	
RECT/ SQUARE	Small Rect / Square (up to 16" (B) x 30" (D) openings or 64" perimeter)	62SSQ	
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	62MSQ	
	Large Rect / Square (up to 36" (B) x 24" (D) openings or 120" perimeter)	62LSQ	
	XL Rect / Square (side by side 2 pc set to fit up to 48" (B) x 36" (D) openings)	62XLSQ	
COMBO INLETS	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62SCB	
	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62MCB	
	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62LCB	
	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62XLCB	
NYLOPLAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NY	
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NY	
	18"diameter Nyloplast castings (Stainless Steel Framing standard)	6218NY	
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NY	
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NY	

2. SELECT YOUR BAG PART NUMBER				
FLEXSTORM FILTER BAGS	(22" depth)	(12" depth)	Clean Water Flow	Min A.O.S.
	STD Bag P/N	Short Bag P/N	Rate (GPM/SqFt)	(US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
IL: IDOT Non-Woven Bag	IL	IL-S	145	70

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER		
Frame P/N from Step 1.	Filter Bag P/N from Step 2.	

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE			
Nominal Bag Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max (CFS)	
		FX (Woven)	IL (NonWoven)
Small	1.6	1.2	0.9
Medium	2.1	1.7	1.3
Large	3.8	2.7	1.9
XL	4.2	3.6	2.6

NOTES:

1. ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
2. UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
3. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

INSTALLATION:

1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

FLEXSTORM INLET FILTERS
CATCH IT
ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC A DIVISION OF ABS, INC.
WWW.INLETFILTERS.COM
(866) 287-8655 PH
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TITLE	DRAWING	REV
C	FLEXSTORM_CATCH_IT	A
SCALE	SHEET 1 OF 1	

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10/12/21

AVENUE GRADING OFFICE BUILDING

FOR

BARLOW BUILDERS

121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

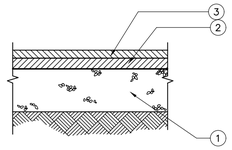
DESCRIPTION:	DATE:	REV.

JOB NO.	WK. ORDER
20124	1954
DESIGNED:	EMP
DRAWN:	GBB
SCALE:	NOT TO SCALE
DATE:	MARCH 22, 2021

CONSTRUCTION DETAILS

C5.1

G:\20124.054\CIVIL ENGINEERING\PLAN SHEETS\C3 CONSTRUCTION DETAILS.DWG
PLOTTED BY GABE BENTLEY ON 3/22/2021 7:22 AM LAST UPDATED BY GBENTLEY ON 3/19/2021 11:37 AM

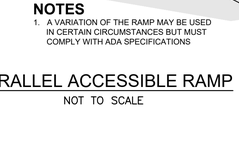


NOTES:
1. THIS PAVEMENT SECTION IS BASED ON TYPICAL AREA SOIL TYPES, SITE CONDITIONS AND LOADING. CONTRACTOR SHALL REFER TO GEOTECHNICAL STUDY FOR SITE SPECIFIC PAVEMENT RECOMMENDATIONS.
2. REFER TO "TDOT STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION" FOR PAVING MATERIALS AND SPECIFICATIONS.

LIGHT DUTY PAVEMENT
NOT TO SCALE

PROPOSED PAVEMENT SCHEDULE

	MATERIAL	THICKNESS (INCHES)	TDOT GRADING
1.	AGGREGATE BASE	6	C or D
2.	ASPHALT BASE	2.0	B–Modified
3.	ASPHALT SURFACE	1.0	D or E

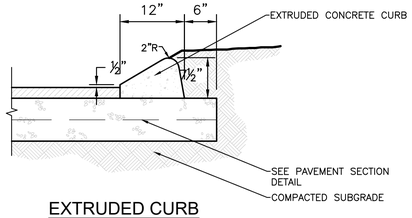


NOTES:
1. THIS PAVEMENT SECTION IS BASED ON TYPICAL AREA SOIL TYPES, SITE CONDITIONS AND LOADING. CONTRACTOR SHALL REFER TO GEOTECHNICAL ENGINEER FOR SITE SPECIFIC PAVEMENT RECOMMENDATIONS.

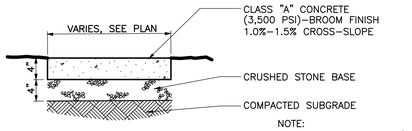
HEAVY DUTY PAVEMENT
NOT TO SCALE

PROPOSED PAVEMENT SCHEDULE

	MATERIAL	THICKNESS (INCHES)	TDOT GRADING
1.	AGGREGATE BASE	8.0	C or D
2.	ASPHALT BASE	2.5	B–Modified
3.	ASPHALT SURFACE	1.0	D or E



EXTRUDED CURB
NOT TO SCALE



NOTE:
CONTROL JOINT EVERY 5', RUBBERIZED EXPANSION JOINT EVERY 25', UNLESS OTHERWISE NOTED.

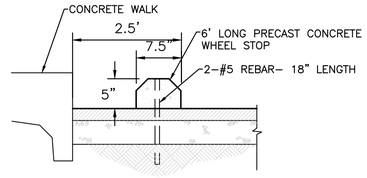
CONCRETE WALK
NOT TO SCALE



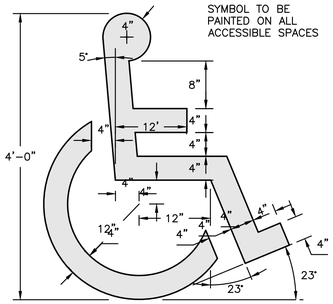
NOTE:
CONTROL JOINT EVERY 5', EXPANSION JOINT EVERY 25', UNLESS OTHERWISE NOTED.

DOWELS AT JOINTS:
7/8" DIAMETER X 18" LONG @ 12" C–C

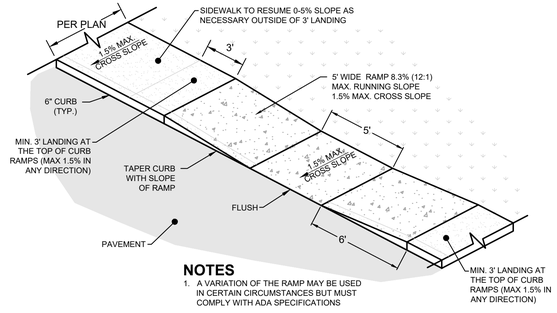
CONCRETE PAVEMENT
NOT TO SCALE



PRECAST CONCRETE WHEEL STOP
NOT TO SCALE

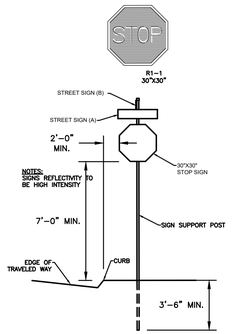


PAINTED ACCESSIBLE SYMBOL
NOT TO SCALE

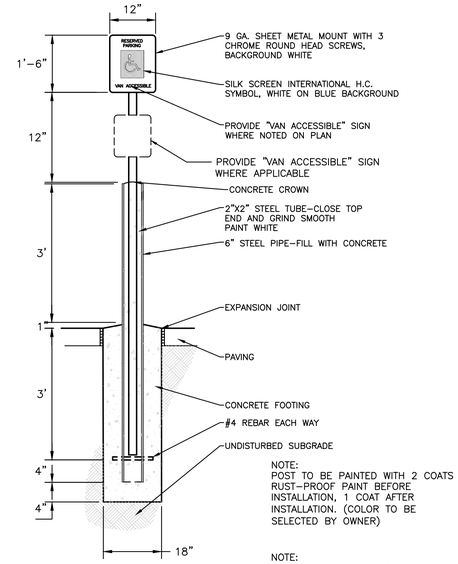


NOTES
1. A VARIATION OF THE RAMP MAY BE USED IN CERTAIN CIRCUMSTANCES BUT MUST COMPLY WITH ADA SPECIFICATIONS

PARALLEL ACCESSIBLE RAMP
NOT TO SCALE



TYPICAL SIGN DETAIL
NOT TO SCALE



NOTE:
POST TO BE PAINTED WITH 2 COATS RUST–PROOF PAINT BEFORE INSTALLATION, 1 COAT AFTER INSTALLATION. (COLOR TO BE SELECTED BY OWNER)

NOTE:
SIGNAGE SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (A.D.A.) SIGNAGE GUIDELINES

EXTERIOR ACCESSIBLE SIGN
NOT TO SCALE

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ragansmith.com

ERIC MICHAEL PAGE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 121996
STATE OF TENNESSEE
10/12/21

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

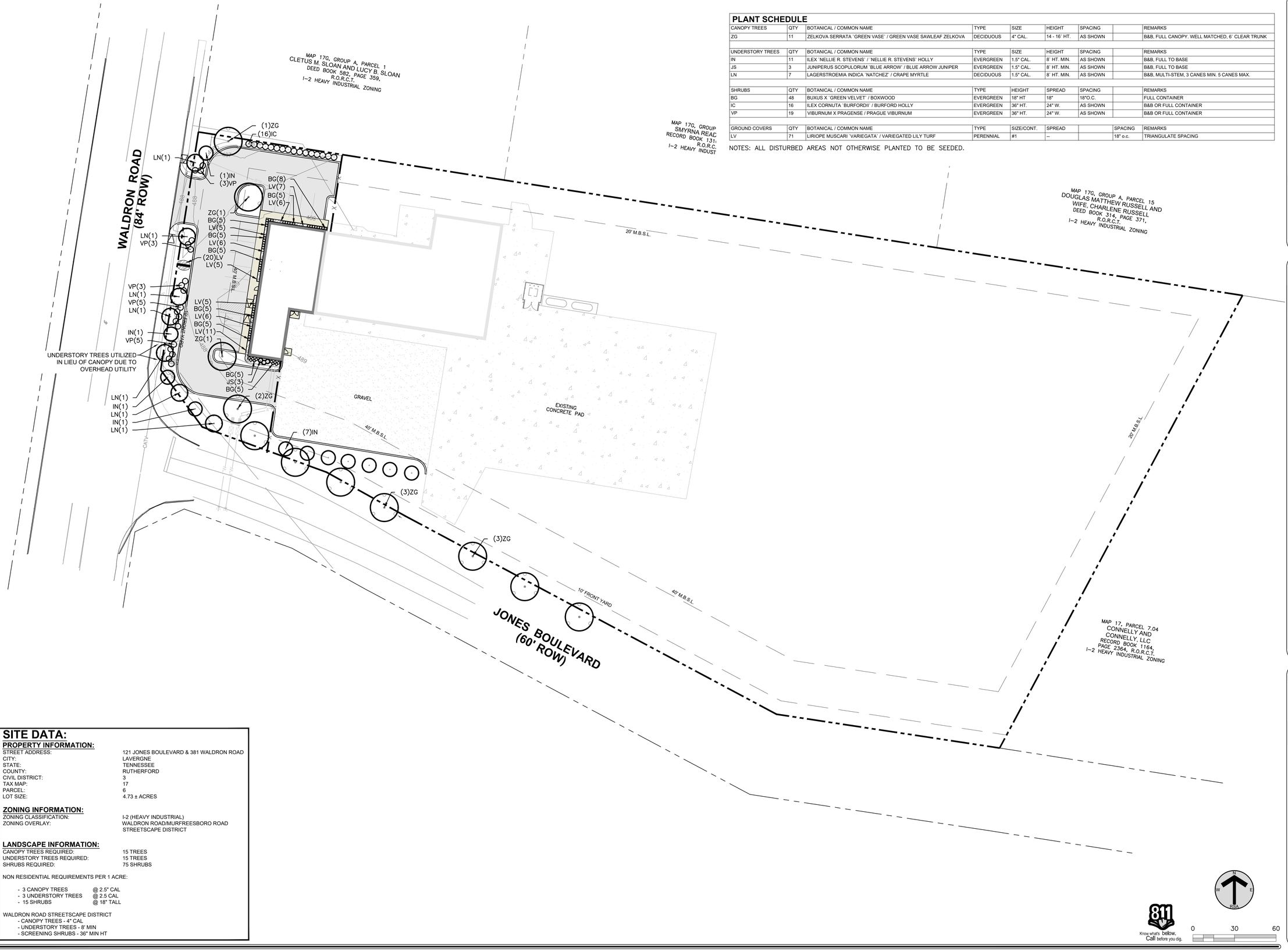
REV.	DATE:	DESCRIPTION:

JOB NO. 20124 | WK. ORDER 1954
DESIGNED: EMP
DRAWN: GBB
SCALE: NOT TO SCALE
DATE: MARCH 22, 2021

CONSTRUCTION DETAILS

C5.2

G:\20124.1954\CIVIL ENGINEERING\PLAN SHEETS\C1 CONSTRUCTION DETAILS.DWG
PLOTTED BY GAGE BENTLEY ON 3/22/2021 7:22 AM LAST UPDATED BY GBENTLEY ON 3/19/2021 11:37 AM



PLANT SCHEDULE

CANOPY TREES	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE	HEIGHT	SPACING		REMARKS
ZG	11	ZELKOVA SERRATA `GREEN VASE` / GREEN VASE SAWLEAF ZELKOVA	DECIDUOUS	4" CAL.	14 - 16' HT.	AS SHOWN		B&B, FULL CANOPY. WELL MATCHED, 6' CLEAR TRUNK
UNDERSTORY TREES	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE	HEIGHT	SPACING		REMARKS
IN	11	ILEX `NELLIE R. STEVENS` / `NELLIE R. STEVENS` HOLLY	EVERGREEN	1.5" CAL.	8` HT. MIN.	AS SHOWN		B&B, FULL TO BASE
JS	3	JUNIPERUS SCOPULORUM `BLUE ARROW` / BLUE ARROW JUNIPER	EVERGREEN	1.5" CAL.	8` HT. MIN.	AS SHOWN		B&B, FULL TO BASE
LN	7	LAGERSTROEMIA INDICA `NATCHEZ` / CRAPE MYRTLE	DECIDUOUS	1.5" CAL.	8` HT. MIN.	AS SHOWN		B&B, MULTI-STEM, 3 CANES MIN. 5 CANES MAX.
SHRUBS	QTY	BOTANICAL / COMMON NAME	TYPE	HEIGHT	SPREAD	SPACING		REMARKS
BG	48	BUXUS X `GREEN VELVET` / BOXWOOD	EVERGREEN	18" HT	18"	18"O.C.		FULL CONTAINER
IC	16	ILEX CORNUTA `BURFORDII` / BURFORD HOLLY	EVERGREEN	36" HT.	24" W.	AS SHOWN		B&B OR FULL CONTAINER
VP	19	VIBURNUM X PRAGENSE / PRAGUE VIBURNUM	EVERGREEN	36" HT.	24" W.	AS SHOWN		B&B OR FULL CONTAINER
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE/CONT.	SPREAD		SPACING	REMARKS
LV	71	LIRIOPE MUSCARI `VARIEGATA` / VARIEGATED LILY TURF	PERENNIAL	#1	--		18" o.c.	TRIANGULATE SPACING

NOTES: ALL DISTURBED AREAS NOT OTHERWISE PLANTED TO BE SEEDED.

SITE DATA:

PROPERTY INFORMATION:

STREET ADDRESS:	121 JONES BOULEVARD & 381 WALDRON ROAD
CITY:	LAVERGNE
STATE:	TENNESSEE
COUNTY:	RUTHERFORD
CIVIL DISTRICT:	3
TAX MAP:	17
PARCEL:	6
LOT SIZE:	4.73 ± ACRES

ZONING INFORMATION:

ZONING CLASSIFICATION:	I-2 (HEAVY INDUSTRIAL)
ZONING OVERLAY:	WALDRON ROAD/MURFREESBORO ROAD STREETSCAPE DISTRICT

LANDSCAPE INFORMATION:

CANOPY TREES REQUIRED:	15 TREES
UNDERSTORY TREES REQUIRED:	15 TREES
SHRUBS REQUIRED:	75 SHRUBS

NON RESIDENTIAL REQUIREMENTS PER 1 ACRE:

- 3 CANOPY TREES @ 2.5" CAL
- 3 UNDERSTORY TREES @ 2.5 CAL
- 15 SHRUBS @ 18" TALL

WALDRON ROAD STREETSCAPE DISTRICT
- CANOPY TREES - 4" CAL
- UNDERSTORY TREES - 8' MIN
- SCREENING SHRUBS - 36" MIN HT

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ragansmith.com

SCOTT MICHAEL BENNICH
REGISTERED
TENNESSEE NO. 329
LANDSCAPE ARCHITECT

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

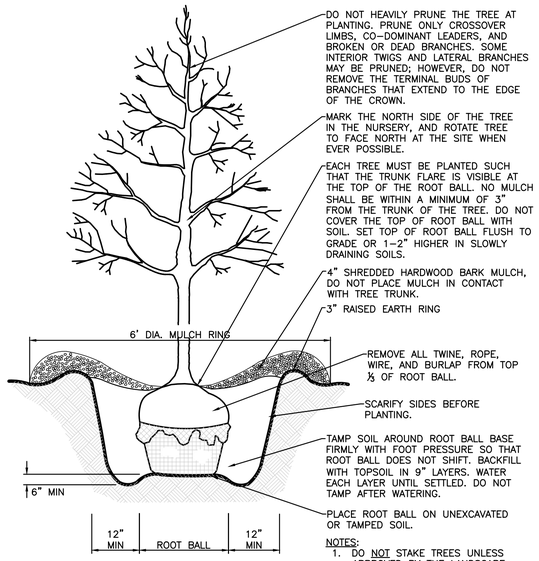
REV. #	DATE:	DESCRIPTION:
1	03/22/2021	PER CITY COMMENTS

JOB NO.	20124
WK. ORDER	1954
DESIGNED:	APT
DRAWN:	APT
SCALE:	1"=30'
DATE:	MARCH 22, 2021

LANDSCAPE PLAN

L1.1

G:\20124-1954-CIVIL ENGINEERING\LA SHEETS\L1.1 LANDSCAPE PLAN.DWG
PLOTTED BY ANDREW TARR ON 3/18/2021 8:32 AM LAST UPDATED BY ATARR ON 3/18/2021 8:28 AM

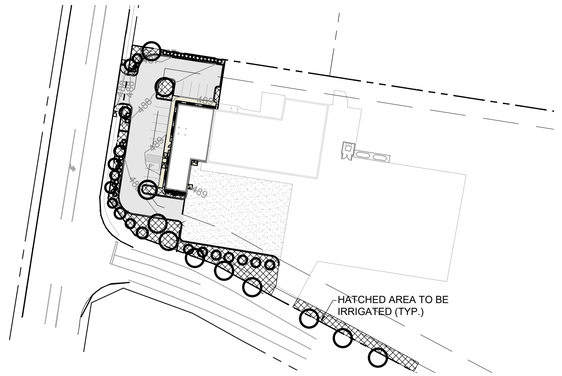


TREE PLANTING
NOT TO SCALE

NOTES:
1. DO NOT STAKE TREES UNLESS APPROVED BY THE LANDSCAPE ARCHITECT. IF STAKED, REMOVE AFTER ONE GROWING SEASON.
2. DO NOT WRAP TREE TRUNKS UNLESS APPROVED BY THE LANDSCAPE ARCHITECT. REMOVE WRAP AFTER PLANTING.
3. NON-BIODEGRADABLE BURLAP TO BE REMOVED OR ROLLED UNDER ROOT BALL AFTER PLANT IS PLACED IN HOLE.

IRRIGATION NOTES:

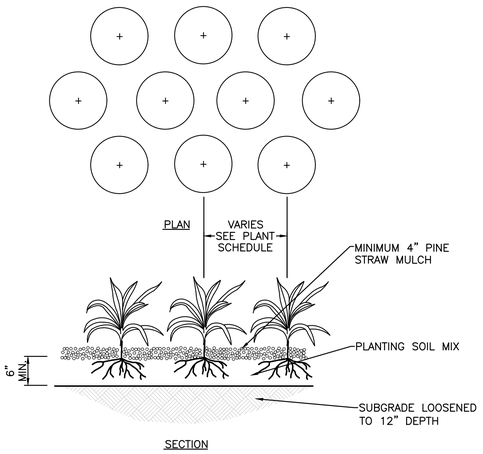
1. ALL PROPOSED PLANTED AREAS ARE TO BE IRRIGATED UTILIZING FULL COVERAGE DESIGN.
2. SUBMIT PROPOSED IRRIGATION PLAN TO THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR GENERAL REVIEW AND ACCEPTANCE.
3. PROPOSED IRRIGATION SYSTEM SHOULD UTILIZE ANY WATER PUBLIC SYSTEMS IF ACCESSIBLE.
4. PROPOSED IRRIGATION DESIGN SHOULD UTILIZE WATER EFFICIENT DESIGN TECHNIQUES SUCH AS THE USE OF DRIP IRRIGATION, MOISTURE SENSORS AND RAIN SENSORS TO MAXIMIZE WATER EFFICIENCY.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING AN IRRIGATION SYSTEM THAT FUNCTIONS PROPERLY PER THE INTENT OF THE DESIGN. SHOULD THE IRRIGATION CONTRACTOR SEE A FLAW IN THE PROPOSED DESIGN AND/OR FINDS A PROBLEM IN THE FIELD THAT WILL NEGATIVELY AFFECT THE PERFORMANCE OF THE PROPOSED IRRIGATION SYSTEM, THE SAID CONTRACTOR IS RESPONSIBLE FOR INFORMING THE LANDSCAPE ARCHITECT/OWNER'S REPRESENTATIVE PRIOR TO INSTALLING OR ORDERING MATERIAL FOR THE PROPOSED IRRIGATION SYSTEM.
6. IRRIGATION PLANS TO BE SUBMITTED PRIOR TO ISSUANCE OF PERMITS.



IRRIGATION AREA PLAN
NOT TO SCALE

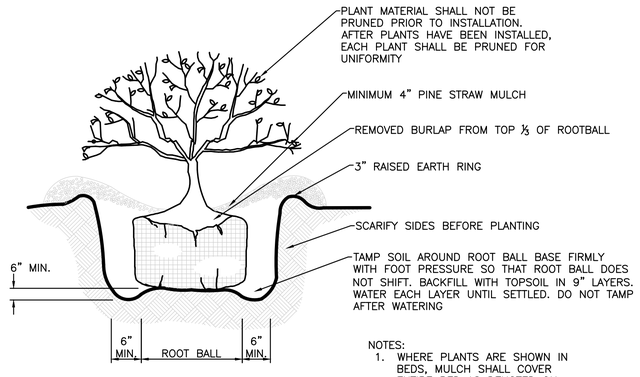
PLANTING NOTES:

1. ANY SERIES OF TREES TO BE PLACED IN A PARTICULAR ARRANGEMENT WILL BE FIELD CHECKED FOR ACCURACY. ANY PLANTS MISARRANGED WILL BE RELOCATED.
2. SOIL USED IN BACKFILLING PLANTING PITS SHALL BE TOPSOIL AND MIXED WITH 25% PEAT BY VOLUME. EXCEPT FOR ERICACEOUS PLANTS, VERY ACID OR SOUR SOIL (SOIL HAVING A pH less than 6) SHALL BE MIXED WITH SUFFICIENT LIME TO PRODUCE A SLIGHTLY ACID REACTION (A pH of 6.0 to 6.5). ADD 10-10-10 COMMERCIAL FERTILIZER AT THE RATE OF 2 POUNDS PER CUBIC YARD. MIX BOTH FERTILIZER AND PEAT THOROUGHLY BY HAND OR ROTARY TILLER.
3. SOIL USED IN BACKFILLING ERICACEOUS PLANTS SHALL BE TOPSOIL MIXED WITH 50% PEAT BY VOLUME. ADD 5-10-5 COMMERCIAL FERTILIZER AT THE RATE OF 5 POUNDS PER CUBIC YARD. MIX BOTH FERTILIZER AND PEAT THOROUGHLY BY HAND OR ROTARY TILLER.
4. UPON SECURING PLANT MATERIAL AND BEFORE INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR A PRE-INSTALLATION INSPECTION TO VERIFY ALL PLANT MATERIAL MEETS SPECIFICATION. MATCH TREES OF SAME SPECIES IN GROWTH CHARACTER AND UNIFORMITY.
5. APPLY HERBICIDE (TREFLAN OR EQUIVALENT) TO ALL PLANT BEDS PRIOR TO PLANTING FOR NOXIOUS WEED CONTROL AT A RATE OF 2 POUNDS PER 1,000 SQUARE FEET.
6. CONTRACTOR SHALL SUBMIT A 10 OUNCE SAMPLE OF THE TOPSOIL PROPOSED TO A TESTING LABORATORY FOR ANALYSIS. SUBMIT TEST RESULTS WITH RECOMMENDATIONS FOR SUITABILITY TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
7. PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED.
8. SELECTIVELY TRIM TREE BRANCHES BY 25%, MAINTAINING NATURAL SHAPE. PRUNE ALL DEAD AND BROKEN BRANCHES IN TREES AND SHRUBS. REMOVE TAGS, TWINE OR OTHER NON-BIODEGRADABLE MATERIAL.
9. SCARIFY SUBSOIL IN PLANTING BEDS TO A DEPTH OF 3 INCHES. ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL.
10. CONTRACTOR SHALL PROVIDE SMOOTH, NEATLY TRENCHED (3 INCH DEEP) BED EDGES.
11. ALL PLANTING BEDS TO HAVE A MINIMUM 4 INCH DEEP PINE BARK MULCH, PINE STRAW MULCH OR OTHER MULCH AS SPECIFIED.
12. DIMENSIONS FOR TRUNK CALIPER, HEIGHTS, AND SPREAD SPECIFIED ON THE MATERIAL SCHEDULE ARE A GENERAL GUIDE FOR THE MINIMUM REQUIRED SIZE OF EACH PLANT. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH A.N.S.I. Z60 "AMERICAN STANDARD FOR NURSERY STOCK" (CURRENT EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
13. THE QUANTITIES INDICATED ON THE MATERIAL SCHEDULE ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR, BUT SHOULD NOT BE ASSUMED TO ALWAYS BE CORRECT. IN THE EVENT OF A DISCREPANCY, THE PLANTING PLAN (PLANT SYMBOLS) WILL TAKE PRECEDENCE OVER THE MATERIAL SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATIONS AND THE LIABILITY PERTAINING TO THOSE QUANTITIES AND ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS.
14. CONTRACTOR TO WARRANTY ALL MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.



SECTION

GROUNDCOVER PLANTING
NOT TO SCALE



NOTES:
1. WHERE PLANTS ARE SHOWN IN BEDS, MULCH SHALL COVER ENTIRE BED AS DENOTED ON THE PLANS.
2. CONTAINER GROWN PLANT MATERIAL MAY BE SUBSTITUTED FOR BURLAP MATERIAL

SHRUB PLANTING
NOT TO SCALE

SEEDING NOTES:

1. SEED ALL DISTURBED AREAS WITH TURF-TYPE TALL FESCUE. THE SEED SHALL BE A BLEND OF 3-5 VARIETIES (ADDRESSING BOTH COLD HARDINESS AND DROUGHT TOLERANCE) FROM THE TOP 10% SELECTIONS IN THE NATIONAL TURFGRASS EVALUATION PROGRAM (N.T.E.P) TALL FESCUE TRIALS, MOST RECENT EVALUATION YEAR (WWW.NTEP.ORG). THE SEED SHALL BE CROP AND WEED FREE. SEED AT THE RATE OF 5 POUNDS PER 1,000 S.F. ALL SEED TO BE 98% PURE WITH 85% GERMINATION AND CONFORM TO ALL STATE REQUIREMENTS FOR GRASS SEED. THE FERTILIZER TO BE 6-12-12 COMMERCIAL TYPE WITH 50% OF ITS ELEMENTS DERIVED FROM ORGANIC SOURCES.
2. PLACE STRAW MULCH ON SEEDED AREAS. STRAW TO BE OATS OR WHEAT STRAW, FREE FROM WEEDS, FOREIGN MATTER DETRIMENTAL TO PLANT LIFE, AND DRY. HAY OR CHOPPED CORNSTALKS ARE NOT ACCEPTABLE.
3. THE CONTRACTOR SHALL VERIFY THAT THE PREPARED SOIL BASE IS READY TO RECEIVE WORK. CULTIVATE THE TOPSOIL TO A DEPTH OF 4 INCHES WITH A MECHANICAL TILLER AND SUBSEQUENTLY RAKE UNTIL SMOOTH. REMOVE FOREIGN MATERIALS COLLECTED DURING CULTIVATION AND RAKING OPERATIONS.
4. APPLY FERTILIZER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. LIMESTONE MAY BE APPLIED WITH THE FERTILIZER. APPLY FERTILIZER AFTER SMOOTH RAKING AND PRIOR TO ROLLER COMPACTION AND MIX THOROUGHLY IN THE UPPER 2 INCHES OF TOPSOIL.
5. APPLY SEED EVENLY IN TWO INTERSECTING DIRECTIONS AND RAKE IN LIGHTLY. WATER TOPSOIL LIGHTLY PRIOR TO APPLYING SEED. DO NOT SEED AREA IN EXCESS OF THAT WHICH CAN BE MULCHED ON THE SAME DAY.
6. ROLL SEEDED AREA WITH ROLLER NOT EXCEEDING 112 POUNDS.
7. IMMEDIATELY FOLLOWING SEEDING AND COMPACTING, APPLY STRAW MULCH AT THE RATE OF ONE AND ONE HALF BALES PER 1,000 SQUARE FEET. IMMEDIATELY AFTER MULCHING, APPLY WATER WITH A FINE SPRAY AND SATURATE THE GROUND TO A DEPTH OF 4 INCHES.
8. CONTRACTOR IS RESPONSIBLE FOR WATERING SEEDED AREAS TO PREVENT GRASS AND SOIL FROM DRYING OUT UNTIL THE INSTALLATION IS INSPECTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE.
9. CONTRACTOR IS RESPONSIBLE FOR RESEEDING BARE SPOTS FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF INSTALLATION.

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SCOTT MICHAEL BENNICH
REGISTERED
TENNESSEE NO.
LANDSCAPE ARCHITECT

AVENUE GRADING OFFICE BUILDING
FOR
BARLOW BUILDERS
121 JONES BOULEVARD & 381 WALDRON ROAD, LAVERGNE RUTHERFORD COUNTY, TENNESSEE

REV. #	DESCRIPTION:	DATE:
-	-	-

JOB NO. 20124 | WK. ORDER 1954
DESIGNED: APT
DRAWN: APT
SCALE: NOT TO SCALE
DATE: MARCH 22, 2021

LANDSCAPE NOTES AND DETAILS

L1.2

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PLOTTED BY: ANDREW TARSI ON: 3/19/2021 8:52 AM LAST UPDATED BY: ATARSI ON: 3/19/2021 8:28 AM



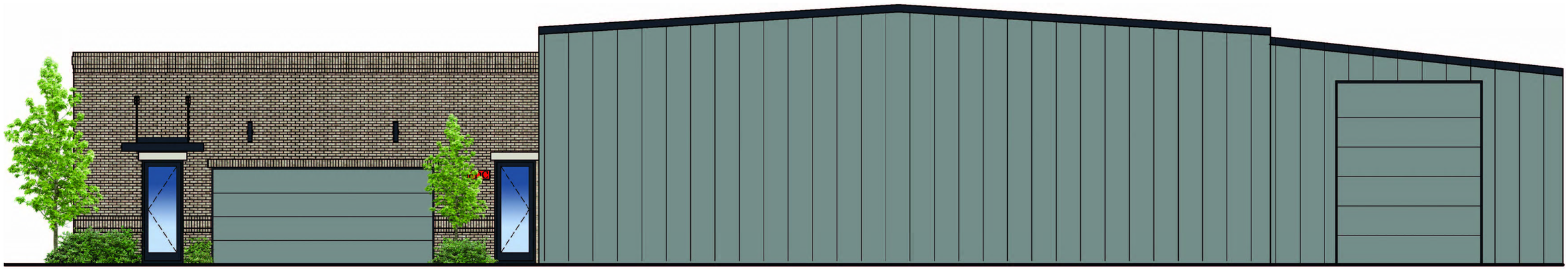
FRONT ELEVATION

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



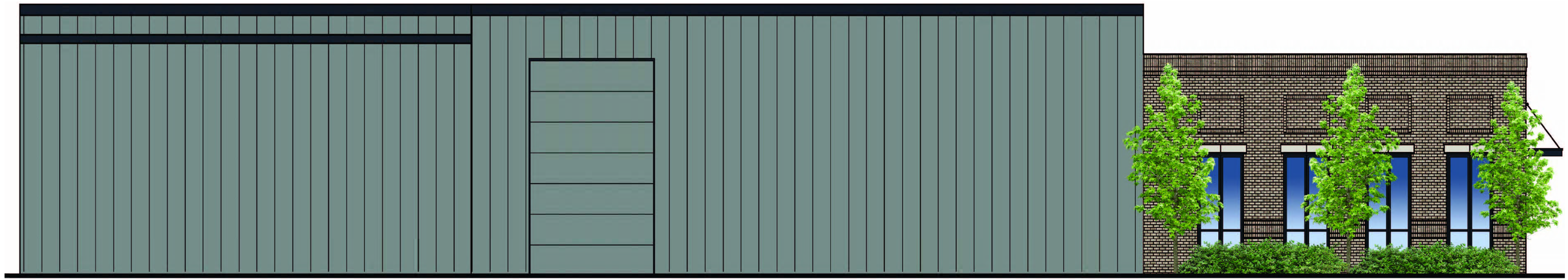
RIGHT SIDE ELEVATION

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



REAR ELEVATION

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



LEFT SIDE ELEVATION

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

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Site Plan – Alterra – Existing Building totaling approximately 10,500 Square Feet & Building Addition of 7,300 Square Feet on 5.16 Acres. Requested by Paradym Studio, PLLC. Property located at 122 Charter Place (Tax Map 029, Parcel 2.05). I-2 (Heavy Industrial) Zoning District. Property owned by 122 Charter Partners, LLC.

Reviewed By: Bo Logan, City Planner
Gary Lide P.E., City Engineer

Summary

On behalf of their client, Paradym is requesting site plan approval for a proposed addition to an existing building at 122 Charter Place. There is a one-story building along with a two-story addition indicated on the plan. The total lot size is 5.16 acres.

The existing building contains 10,500 sq. ft. The added space is slated to become office area for the business and would total 7300 sq. feet. The space in the rear is an existing gravel lot.

A total of 19 parking spaces are being provided where 17 are required.

This parcel is contained within the South Waldron Overlay Streetscape District and must adhere to the applicable overlay provisions.

Technical Items, Per Section 3-110.A of the City of La Vergne Zoning Ordinance

1. Architectural materials board is required that has actual samples of all materials including paint and trim colors;
2. Sidewalk is required along all frontage; **Applicant will request to pay fee in lieu;**
3. The entire building must be brought up to meet standards of the Overlay Streetscape District;
4. (Not a technical comment, for discussion) Developer has added concrete approaches around the new addition to the building and will be discussing that paving layout before the Planning Commission.

Other Concerns

1.

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


122 Charter Place
CHARTER PL
N


122 Charter Place
I-24 FWY
I-24 064E EB OFF RAMP
I-24 064B EB ON RAMP
I-24 064C WB OFF RAMP
I-24 FWY
NEW PAUL RD
CENTREPOINTE DR
CENTRE POINTE DR
CHARTER PL
SPRINGDALE CT
BROOKRIDGE DR
STONE RIDGE PKWY
CEDAR RIDGE DR
KINGSRIDGE DR
WALDRON RD
CAROTHERS RD
ROLLINGWOOD CT
DEBBIE CT
DEBBIE LN
WOODLAND HILLS DR
N


122 Charter Place
I-24 064D WB ON RAMP
NEW PAUL RD
I-24 FWY
I-24 064C WB OFF RAMP
SAKS 5TH AVE
I-24 064A EB OFF RAMP
CENTREPOINTE DR
I-24 064B EB ON RAMP
CENTRE POINTE DR
I-24 FWY
INDUSTRIAL BLVD
CHARTER PL
CREEK GLEN CV
EVERGREEN CV
STONE RIDGE PKWY
SUNNYVIEW CT
BROOKRIDGE DR
CEDAR RIDGE DR
ARMSTRONG CT
KINGSRIDGE DR
CAROTHERS RD
ROLLINGWOOD CT
MOUNTAIN BREEZE CT
DEBBIE CT
WALDRON RD
SILVER BIRCH LN
DEBBIE LN
STEVE SCARLETT PL
OAKWOOD CV
KNOLLWOOD DR
BRUSHY RIDGE DR
BRIARGROVE DR
SPANISH OAK CIR
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home






122


MATTHEWS
OR LEASE
JAY REEVES
NO
PARKING
AT
ANYTIME


122
L&L
Equipment Sales
122 Charter Place
615-793-8830


122
L&L
Equipment Sales
122 Chrver Place
615-793-8830




122


AUTHORIZED
VEHICLES
AND
Personnel
Only!


AUTHORIZED
VEHICLES
ONLY



Building Addition For

Alterra

122 Charter Place, La Vergne, TN 37086

Site Plan - Technical Review Submittal

Sheet Index:

Survey
COVER SHEET
C100 - Demolition Plan
C200 - Site Plan
C201 - Site Layout
C210 - Site Details
C211 - Site Details
C212 - Site Details
C213 - Site Details
C214 - Site Details
C300 - Grading Plan
C301 - Accessibility Enlargement
C400 - Pre Developed Drainage Area Map
C401 - Post Developed Drainage Area Map
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C404 - Water Quality Map
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C413 - Drainage Details
C500 - Pre-Construction SWPPP
C501 - SWPPP
C502 - Final SWPPP
C510 - SWPPP Details
C511 - SWPPP Details
C600 - Utility Plan
C610 - Utility Details
C611 - Utility Details
C612 - Utility Details
L1.0 - Landscape Plan
L1.1 - Landscape Notes
A201C - Architectural Elevations

Civil Engineer:



INGRAM CIVIL ENGINEERING GROUP, LLC
212 Overlook Circle Ste. 105
Brentwood, Tennessee 37027
615.370.7964 Office
615.370.1273 Fax
STATE OF TENNESSEE
PROFESSIONAL ENGINEER
LICENSE # 113398
SAMUEL H. BOHANNON

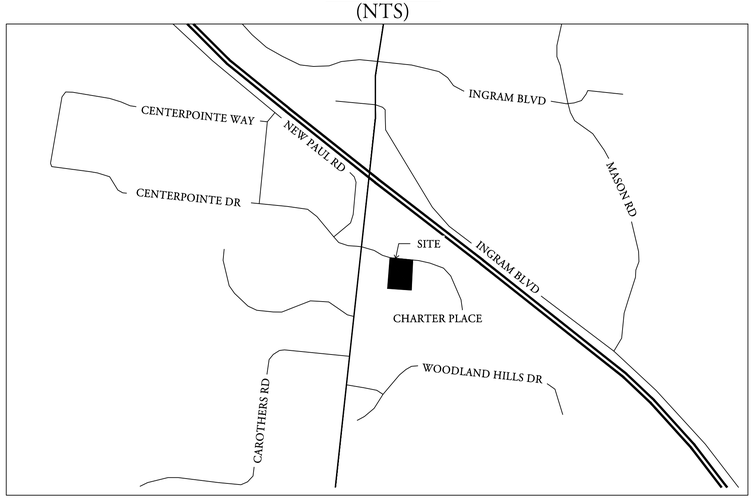
Landscape Architect:

Heibert + Ball Land Design
1894 Gen. George Patton Dr.
Suite 400
Franklin, TN 37067
615-376-2421
Registered LA: Connor L. Ball
License # 808

Site Data Table:

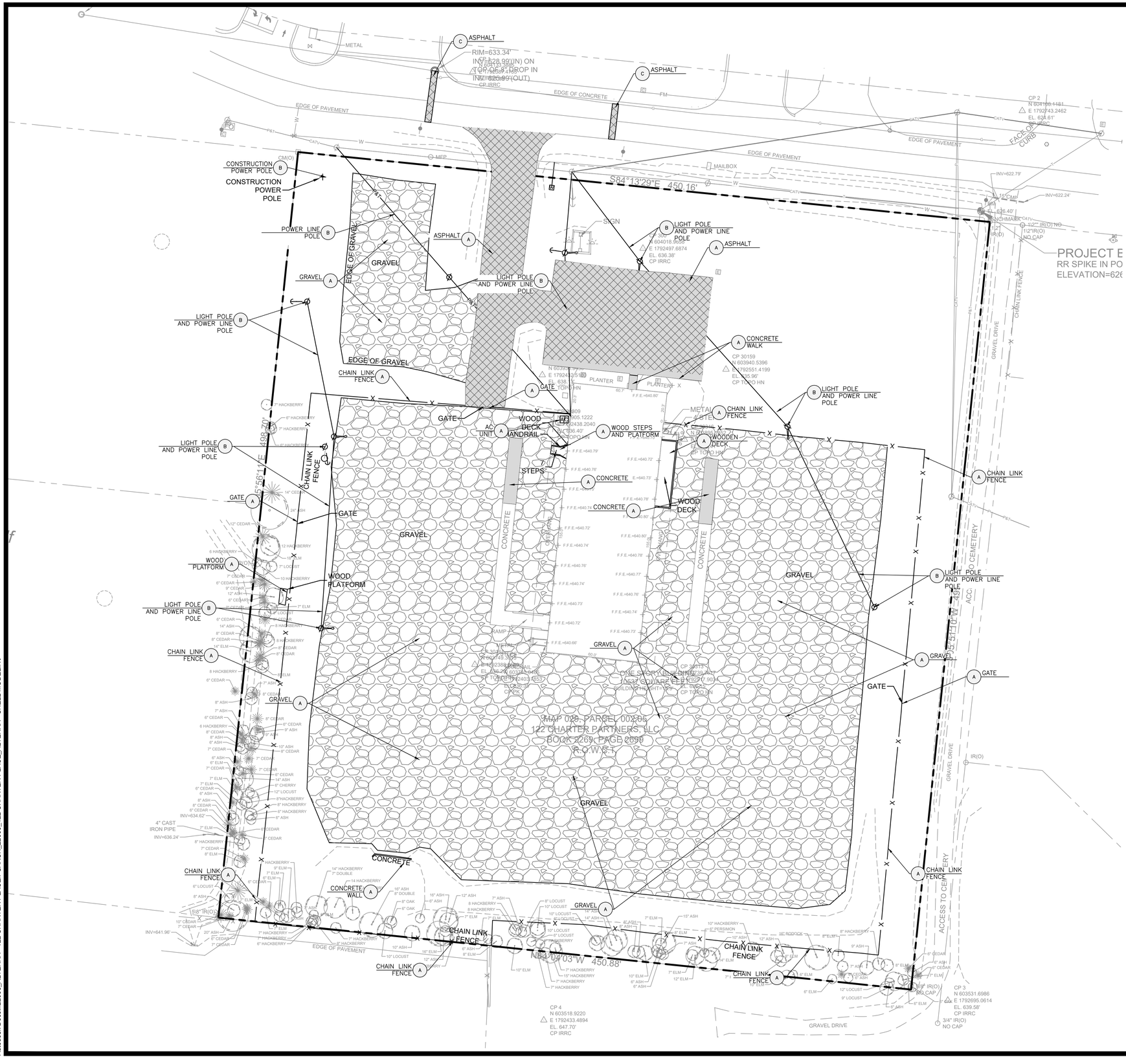
Zoning District: Heavy Industrial (I-2)
Existing Use: Industrial
Proposed Use: Industrial
Total Site Acreage = 5.16 Acres
Building Height = 18.9', Stories = 1, Max = 50'
Proposed Parking = 19 (standard), 2 (accessible)
Gross Floor Area = 17,892 sf
Impervious Surface Ratio = 56.01%
Floor Area Ratio = 7.96%, Max = 50%
Pervious Area (green space) = 2.57 Acres

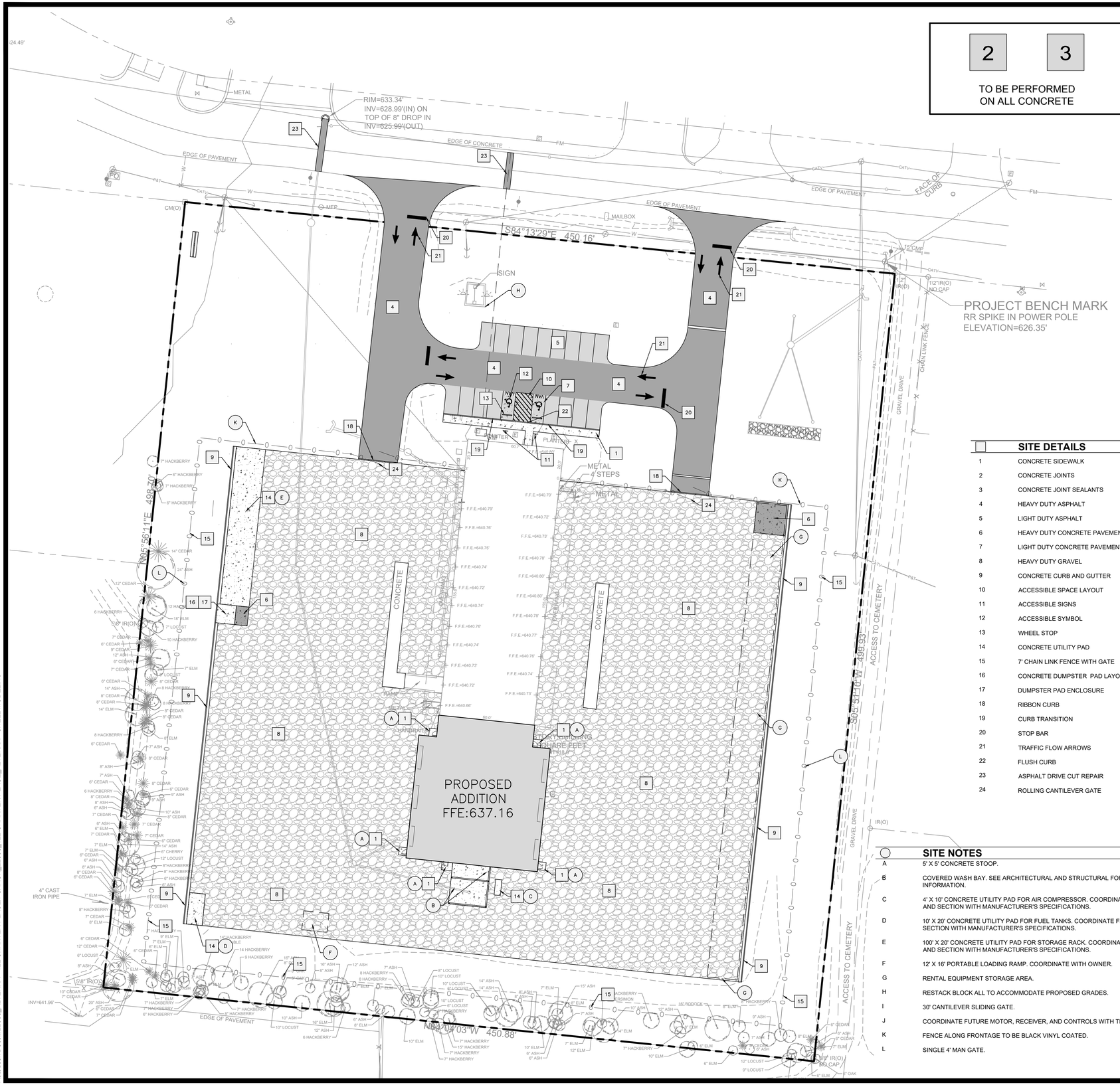
Vicinity Map:
(NTS)

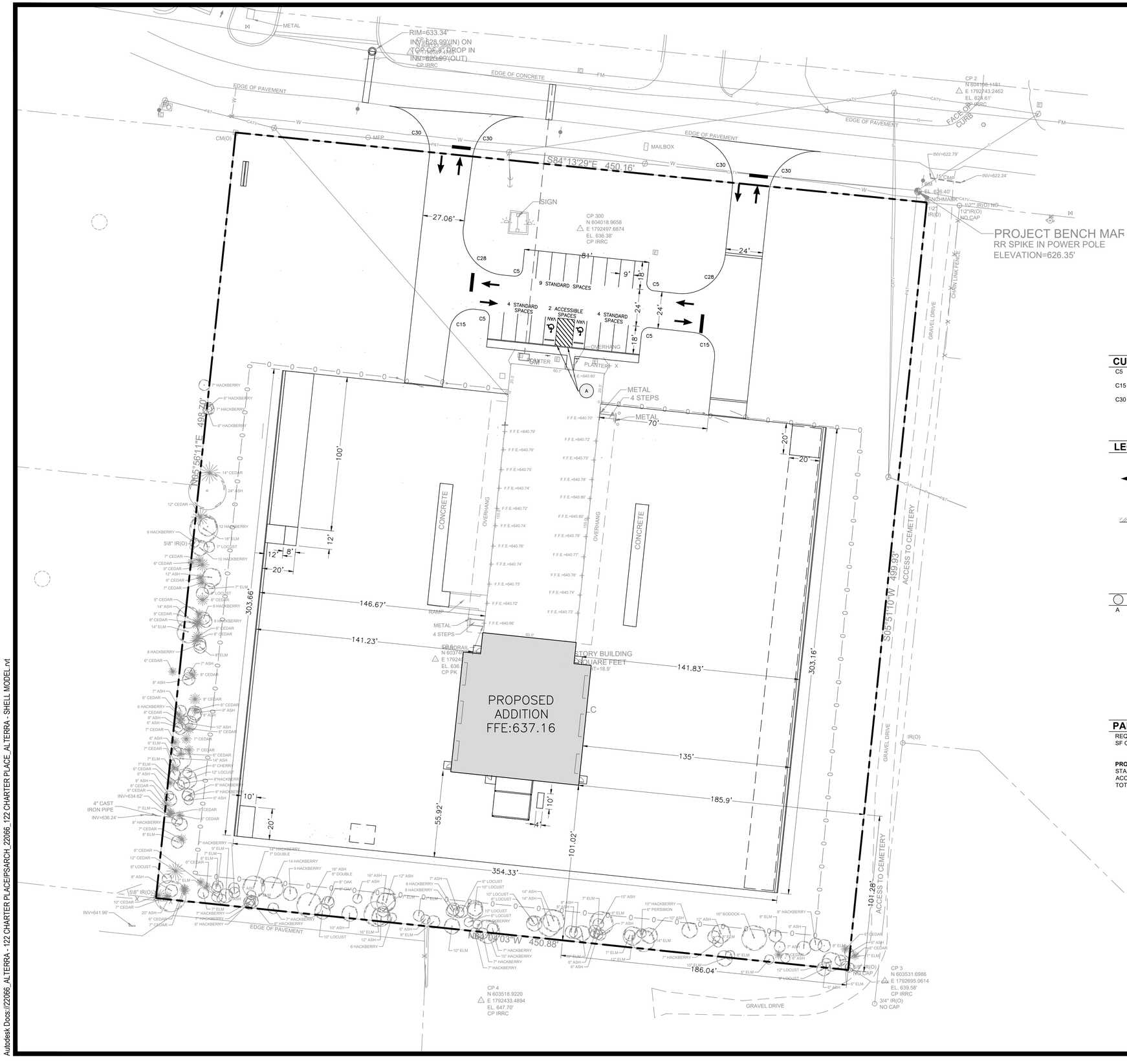


Revision Box

Agency Review-Not for Construction


ASPHALT
RIM=633.34'
INV=628.99'(IN) ON
INV=628.99'(OUT)
CP IRRC
EDGE OF PAVEMENT
EDGE OF CONCRETE
S84°13'29"E 450.16'
CONSTRUCTION POWER POLE
POWER LINE POLE
LIGHT POLE AND POWER LINE POLE
GRAVEL
EDGE OF GRAVEL
CHAIN LINK FENCE
GATE
WOOD DECK
HANDRAIL
WOOD STEPS AND PLATFORM
STEPS
CONCRETE
WOODEN DECK
CONCRETE WALK
PLANTER
AC UNIT
WOOD PLATFORM
CONCRETE WALL
MAP 028, PARCEL 002.05
122 CHARTER PARTNERS, LLC
BOOK 4269, PAGE 2699
R.O.W.
ONE STORY TELEPHONE BUILDING
1637 SQUARE FEET
BUILDING HEIGHT=15'
N82°09'03"W 450.88'
S7°51'56"W 498.20'
MAILBOX
SIGN
FACE OF CURB
15" CMP
GRAVEL DRIVE
ACCESS TO CEMETERY
CHAIN LINK FENCE
EDGE OF PAVEMENT
PROJECT E
RR SPIKE IN PO
ELEVATION=626
CP 1
N 603518.9220
E 1792433.4894
EL. 647.70'
CP IRRC
CP 2
N 604166.1181
E 1792743.2462
EL. 624.61'
CP IRRC
CP 3
N 603531.6986
E 1792695.0614
EL. 639.58'
CP IRRC
CP 4
N 603518.9220
E 1792433.4894
EL. 647.70'
CP IRRC
CP 30159
N 603940.5396
E 1792551.4199
EL. 635.96'
CP TOP/D HN
LIGHT POLE AND POWER LINE POLE #30
N 604018.8858
E 1792497.6874
EL. 636.38'
CP IRRC
CP 30158
N 603940.3908
E 1792368.3008
EL. 636.26'
CP TOP/D HN
CP 30157
N 603939.5809
E 1792405.1222
EL. 636.40'
CP TOP/D HN
CP 30159
N 603940.5396
E 1792551.4199
EL. 635.96'
CP TOP/D HN
CP 30160
N 603939.7298
E 1792438.2040
EL. 636.40'
CP TOP/D HN
CP 30161
N 603939.7298
E 1792438.2040
EL. 636.40'
CP TOP/D HN
CP 30162
N 603939.7298
E 1792438.2040
EL. 636.40'
CP TOP/D HN
CP


2
3
TO BE PERFORMED ON ALL CONCRETE
PROJECT BENCH MARK
RR SPIKE IN POWER POLE
ELEVATION=626.35'
PROPOSED ADDITION
FFE:637.16
S84°13'29"E 450.16'
N84°04'03"W 450.88'
S05°56'11"E 498.20'
N05°56'11"W 499.03'
RIM=633.34'
INV=628.99'(IN) ON
TOP OF 8" DROP IN
INV=625.99'(OUT)
EDGE OF PAVEMENT
EDGE OF CONCRETE
FACE OF CURB
MAILBOX
SIGN
METAL
CM(O)
MEP
FM
CATV
GRAVEL DRIVE
CHAIN LINK FENCE
ACCESS TO CEMETERY
CONCRETE
RAMP
HANDRAIL
PLANTER
METAL STEPS
1/2" IR(O)
1/2"IR(O) NO CAP
5/8" IR(O)
5/8" IR(O) NO CAP
4" CAST IRON PIPE
INV=641.96'
F.F.E.=640.70'
F.F.E.=640.79'
F.F.E.=640.76'
F.F.E.=640.75'
F.F.E.=640.74'
F.F.E.=640.72'
F.F.E.=640.74'
F.F.E.=640.76'
F.F.E.=640.73'
F.F.E.=640.72'
F.F.E.=640.66'
F.F.E.=640.72'
F.F.E.=640.73'
F.F.E.=640.74'
F.F.E.=640.76'
F.F.E.=640.77'
F.F.E.=640.78'
F.F.E.=640.80'
F.F.E.=640.80'
F.F.E.=640.78'
F.F.E.=640.76'
F.F.E.=640.74'
F.F.E.=640.72'
F.F.E.=640.73'
F.F.E.=640.74'
F.F.E.=640.75



CURVE TABLE

C5	R: 5'
C15	R:15'
C30	R:30'

LEGEND: SITE LAYOUT

L1	LINEAR DIMENSION
C1	PROPOSED CURVE RADIUS DIMENSION
	PROPOSED FLUSH CONDITION

SITE NOTES

A FLUSH CONDITION.

PARKING TABLE

REQUIRED CITY PARKING (1 SPACE/400 SF OF OFFICE/SALE PLUS 1 SPACE/4000 SF OF GFA: 1/400 SF + 1/4000 SF=X SPACES)

PROPOSED	
STANDARD	17
ACCESSIBLE	2
TOTAL	19

SITE LAYOUT PLAN

30 0 30 60
GRAPHIC SCALE

AGENCY REVIEW - NOT FOR CONSTRUCTION

P. STUDIO

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL C. MCMAHANON
REGISTERED ENGINEER
AGRICULTURE
3-24-2023
COMMERCE
No. 00113308
STATE OF TENNESSEE

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

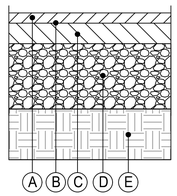
DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
SITE LAYOUT PLAN

C201

3/10/2023 2:30:13 PM
Autodesk Docs://22066_ALTERRA - 122 CHARTER PLACE/PSARCH_22066_122 CHARTER PLACE_ALTERRA - SHELL MODEL.rvt



Ⓐ 1.5" ASPHALTIC SURFACE COURSE

Ⓑ TACK COAT

Ⓒ 2" ASPHALTIC BINDER

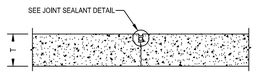
Ⓓ 8" MINERAL AGGREGATE BASE COURSE COMPACTED TO 98% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

Ⓔ 12" SUBGRADE COMPACTED TO 95% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

ASPHALT PAVEMENT SECTION (LIGHT DUTY)
(NOT TO SCALE)

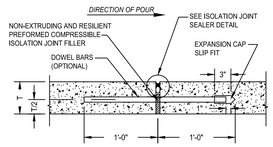
NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

5



NOTE: UNLESS OTHERWISE NOTED.
PROVIDE AT NOMINAL 15' x 12' GRID SPACING

CONTRACTION JOINT



NOTE:
1- PROVIDE ISOLATION JOINT AT A MAX. 25' SPACING UNLESS OTHERWISE NOTED.
2- DOWEL BARS, IF USED, TO BE NO. 5 (SMOOTH) DOWEL 24" O.C., L=2', TREAT FREE END OF DOWEL WITH HEAVY GREASE TO ELIMINATE BOND.

ISOLATION JOINT

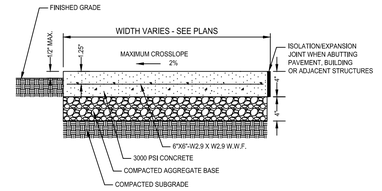
NOTE:
1- COORDINATE ALL JOINTS WITH TECHNICAL SPECIFICATIONS
2- DOWEL BARS ARE NOT TO BE USED UNLESS SPECIFICALLY NOTED.

T = PAVEMENT THICKNESS
TE = THICKNESS OF ADJACENT PAVEMENT

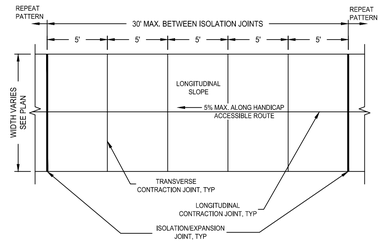
COORDINATE WITH TECHNICAL SPECIFICATIONS.

CONCRETE JOINT DETAILS (TYP)
(NOT TO SCALE)

3



TRANSVERSE SECTION



WALK WIDTH	LONGITUDINAL CONT. JOINT
0' - 5'-11"	NONE
6' - 7'-11"	ONE ALONG WALK AT CENTERLINE
8' - 12'	TWO ALONG WALK AT THIRD POINTS

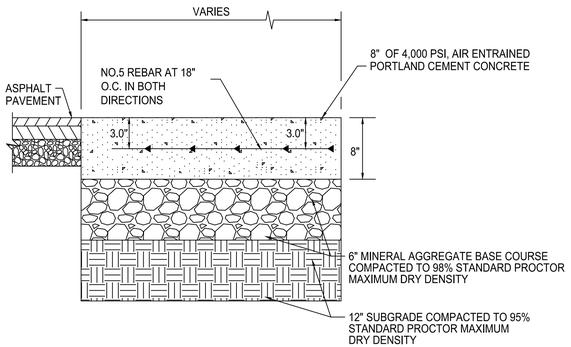
PARTIAL PLAN

SEE TYPICAL JOINT AND JOINT SEALANT DETAILS
COORDINATE WITH TECHNICAL SPECIFICATIONS.

CONCRETE WALK (TYP)
(NOT TO SCALE)

1

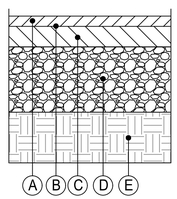
NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.



CONCRETE PAVEMENT-HEAVY DUTY
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

6



Ⓐ 1.5" ASPHALTIC SURFACE COURSE

Ⓑ TACK COAT

Ⓒ 3" ASPHALTIC BINDER

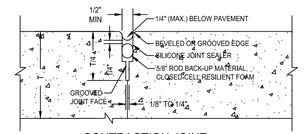
Ⓓ 8" MINERAL AGGREGATE BASE COURSE COMPACTED TO 98% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

Ⓔ 12" SUBGRADE COMPACTED TO 95% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

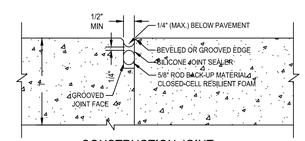
ASPHALT PAVEMENT SECTION (HEAVY DUTY)
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

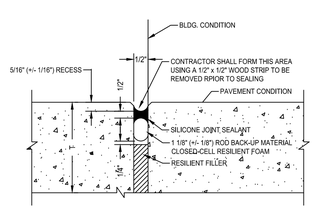
4



CONTRACTION JOINT



CONSTRUCTION JOINT



ISOLATION / EXPANSION JOINT

T = PAVEMENT THICKNESS
COORDINATE W/ TECHNICAL SPECIFICATIONS

CONCRETE JOINT SEALANT DETAILS
(NOT TO SCALE)

2

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. MCSHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00113398
STATE OF TENNESSEE
3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING

SITE DETAILS

C210

AGENCY REVIEW - NOT FOR CONSTRUCTION

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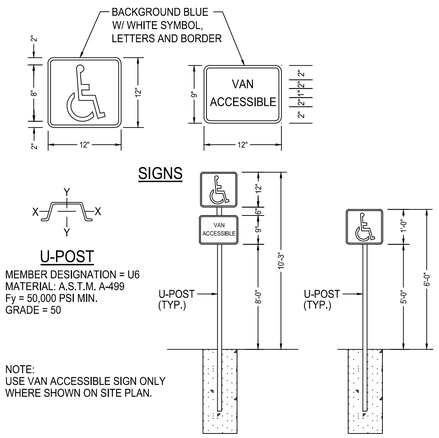
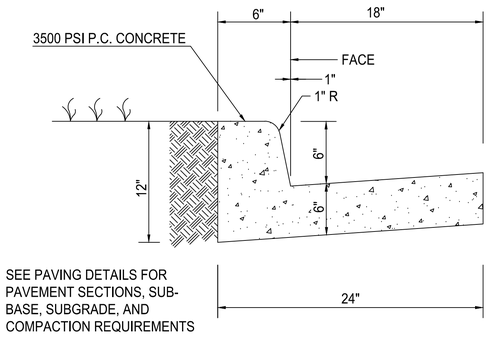
Autodesk Docs://22066_ALTERRA - 122 CHARTER PLACE/PSARCH_22066_122 CHARTER PLACE_ALTERRA - SHELL MODEL.rvt



ACCESSIBLE PARKING SIGNS
(NOT TO SCALE)

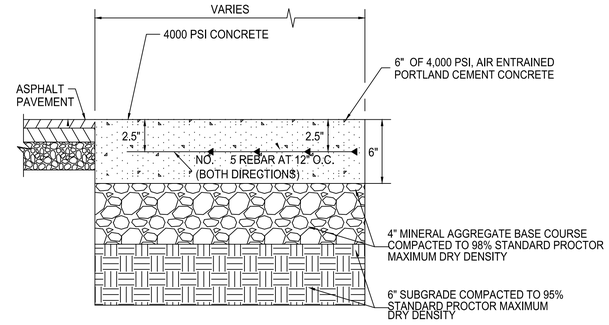
NOTE:
SIGNS DESIGNATING DISABLED PARKING SHALL INDICATE THAT UNAUTHORIZED OR IMPROPERLY PARKED VEHICLES MAY BE TOWED AND THE DRIVER FINED TWO HUNDRED DOLLARS ($200), AND SHALL ALSO PROVIDE THE NAME AND TELEPHONE NUMBER OF THE TOWING COMPANY OR THE NAME AND TELEPHONE NUMBER OF THE PROPERTY OWNER, LESSEE OR AGENT IN CONTROL OF THE PROPERTY.

11



CONCRETE CURB & GUTTER
(NOT TO SCALE)

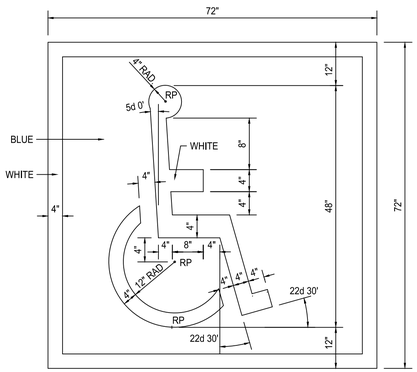
9



CONCRETE PAVEMENT-LIGHT DUTY
(NOT TO SCALE)

NOTE: $ *(27(&+ 5(3257 :,7+ 3$9(0(17 5(&20(1'$7,216 :$6 127 3529,'(' 72 7+((1*,1((5)25 '(6,*1 385326(6 6(&7,216 $5(%$6(' 21 67$1'$5' (1*,1((5,1* 35$&7,&(

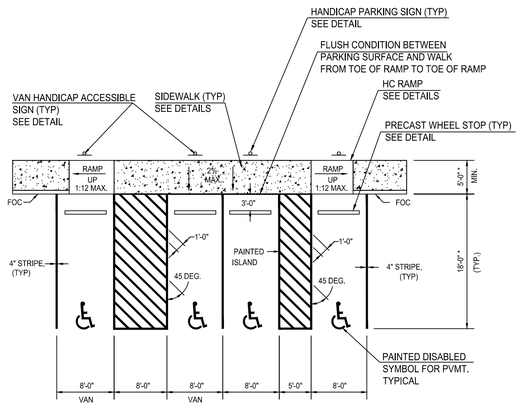
7



NOTES:
1. RP = RADIUS POINT
2. PROVIDE PAINT COLOR IN ACCORDANCE WITH LOCAL REQUIREMENTS. (TYPICALLY WHITE SYMBOL ON BLUE SQUARE BACKGROUND WITH 4" WHITE BORDER)

ACCESSIBLE SYMBOL-PAINTED
(NOT TO SCALE)

12

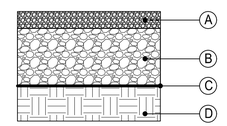


* ALL AREAS INSIDE PARKING, LOADING AISLES AND WALKS DIRECTLY IN FRONT OF ACCESSIBLE SPACES SHALL BE LESS THAN 2% SLOPE IN ALL DIRECTIONS.

* COORDINATE DIMENSIONS WITH SITE PLAN

ACCESSIBLE PARKING SPACE LAYOUT
(NOT TO SCALE)

10



Ⓐ 2" OF #57 STONE OR CRUSHER RUN

Ⓑ 6" OF 2"-3" GRANULAR FREE DRAINING STONE

Ⓒ HEAVY WEIGHT WOVEN FABRIC
US 315 OR EQUAL

Ⓓ 8" SUBGRADE TO BE COMPACTED TO 98%
STANDARD PROCTOR

COORDINATE w/ GEOTECH REPORT AND TECHNICAL SPECIFICATIONS

GRAVEL SECTION HEAVY DUTY
(NOT TO SCALE)

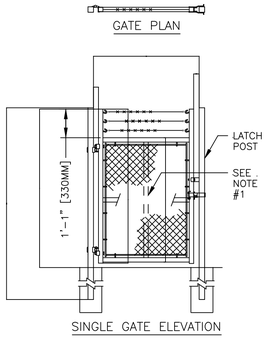
NOTE: $ *(27(&+ 5(3257 :,7+ 3$9(0(17 5(&20(1'$7,216 :$6 127 3529,'(' 72 7+((1*,1((5)25 '(6,*1 385326(6 6(&7,216 $5(%$6(' 21 67$1'$5' (1*,1((5,1* 35$&7,&(

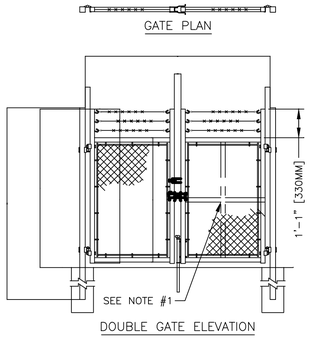
8

P.
STUDIO
3$5$'<0 678',2 3//&
ALTERRA -
122 CHARTER
PLACE
92/
$''',7,21
&+$57(5 3/$&(
/$ 9(5*1(71
,668(')25
/HDVH 2XWOLQH
6FKHPDWLF 'HVI
'HVLJQ 'HYHORS
&RQVWUXFWLRQ
&RQVWUXFWLRQ
5(9,6,21
352-(&7 180%(5
'5$:1 %<
&(0
'$7(
'5$:,1*
SITE DETAILS
C211

SAMUEL R. MCSHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00113398
STATE OF TENNESSEE
3-24-2023

$XWRGHVN ' 'RFV 30 ' ~~B$/7(55$ &+$57(5 3/$&(36$55&+ ~~B &+$57(5 3/$&(6+(// 02'(/ UYW





SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM HT INCLUDING BARBED WIRE	ACTUAL DIM	ACTUAL DIM
7'–0" [2134MM]	6'–10" [2083MM]	5'–8 1/2" [1740MM]
8'–0" [2438MM]	7'–10" [2388MM]	6'–8 1/2" [2045MM]
9'–0" [2743MM]	8'–10" [2692MM]	7'–8 1/2" [2350MM]
10'–0" [3048MM]	9'–10" [2997MM]	8'–8 1/2" [2654MM]
11'–0" [3353MM]	10'–10" [3302MM]	9'–8 1/2" [2959MM]
12'–0" [3658MM]	11'–10" [3607MM]	10'–8 1/2" [3264MM]
13'–0" [3962MM]	12'–10" [3912MM]	11'–8 1/2" [3569MM]

SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
3'–0" [914MM] THROUGH 6'–0" [1829MM]	2 1/2" [63.5MM] SQ OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
7'–0" [2134MM] THROUGH 10'–0" [3048MM]	3" [76MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
11'–0" [3353MM] THROUGH 12'–0" [3658MM]	4" [102MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
13'–0" [3962MM] THROUGH 18'–0" [5486MM]	6" [152MM] SQ OR 6.625" [168MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]
19'–0" [5791MM] THROUGH 20'–0" [6096MM]	8" [203MM] SQ OR 8.625" [219MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]

DOUBLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
8'–0" [2438MM] THROUGH 12'–0" [3658MM]	2 1/2" [63.5MM] SQ OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
14'–0" [4267MM] THROUGH 24'–0" [7315MM]	3" [76MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
26'–0" [7925MM] THROUGH 36'–0" [10973MM]	6" [152MM] SQ OR 6.625" [168MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]
38'–0" [11582MM] THROUGH 40'–0" [12192MM]	8" [203MM] SQ OR 8.625" [219MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]

NOTES:
1. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER–HALCO ONLY.
2. CENTER UPRIGHT REQUIRED ON GATE LEAVES 8'–0" [2438MM] & WIDER. CENTER RAIL REQUIRED ON GATE LEAVES 10'–0" [3048MM] & HIGHER.
3. THIS DWG CORRESPONDS WITH DWGS 3–1020R, 3–1025R, 3–1025M & 3–1025L.

ANCHOR FENCE Products
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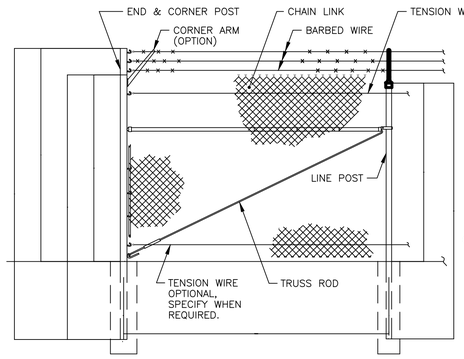
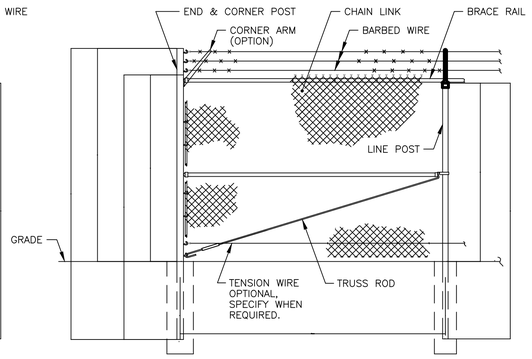
TYPICAL SWING GATES WITH BARBED WIRE

DIMENSIONS & SPECIFICATIONS

BY:	JRR
DATE:	01–04–96
REV:	B
REV DATE:	06–05–98
DWG:	3–1001
LAYER:	1
SCALE:	1/4" = 1'–0"



FENCE SECTION ELEVATION
WITHOUT TOP RAIL & WITH BARBED WIRE



FENCE SECTION ELEVATION
WITH TOP RAIL & WITH BARBED WIRE

FENCE HEIGHT	UPRIGHT END & CORNER POSTS		LINE POSTS		CORNER POSTS WITH CORNER ARM	
NOM HT INCLUDING BARBED WIRE	B–1 BAR LENGTH	H–1 HEIGHT ABOVE GRADE	B–2 BAR LENGTH	H–2 HEIGHT ABOVE GRADE	B–3 BAR LENGTH	H–3 HEIGHT ABOVE GRADE
7'–0" [2134MM]	10'–0" [3048MM]	7'–0 5/8" [2150MM]	8'–8" [2642MM]	5'–8 7/8" [1749MM]	9'–0" [2743MM]	6'–0 5/8" [1845MM]
8'–0" [2438MM]	11'–0" [3353MM]	8'–0 5/8" [2454MM]	9'–8" [2946MM]	6'–8 7/8" [2054MM]	10'–0" [3048MM]	7'–0 5/8" [2150MM]
9'–0" [2743MM]	12'–0" [3658MM]	9'–0 5/8" [2759MM]	10'–8" [3251MM]	7'–8 7/8" [2359MM]	11'–0" [3353MM]	8'–0 5/8" [2454MM]
10'–0" [3048MM]	13'–0" [3962MM]	10'–0 5/8" [3064MM]	11'–8" [3556MM]	8'–8 7/8" [2664MM]	12'–0" [3658MM]	9'–0 5/8" [2759MM]
11'–0" [3353MM]	14'–0" [4267MM]	11'–0 5/8" [3369MM]	12'–8" [3861MM]	9'–8 7/8" [2969MM]	13'–0" [3962MM]	10'–0 5/8" [3064MM]
12'–0" [3658MM]	15'–0" [4572MM]	12'–0 5/8" [3674MM]	13'–8" [4166MM]	10'–8 7/8" [3273MM]	14'–0" [4267MM]	11'–0 5/8" [3369MM]

NOTES:
1. THIS DWG CORRESPONDS WITH DWGS 1–1020, 1–1040, 1–1120 & 1–1140.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER–HALCO ONLY.

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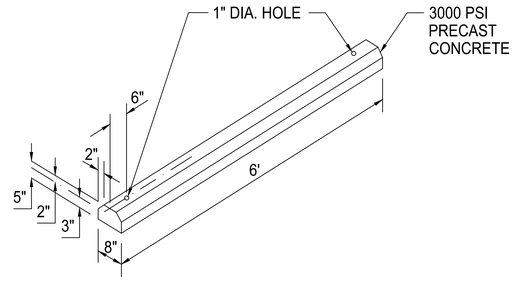
TYPICAL HIGH FENCE WITH BARBED WIRE

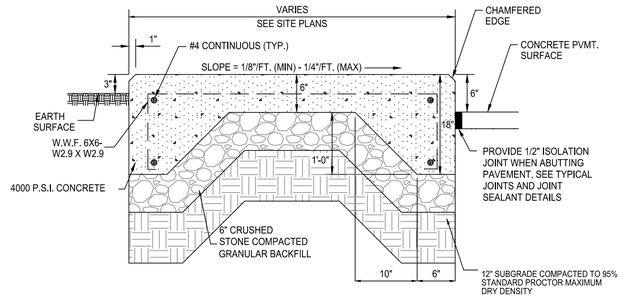
DIMENSIONS & SPECIFICATIONS

BY:	JRR
DATE:	09–27–95
REV:	B
REV DATE:	06–04–98
DWG:	1–1001
LAYER:	1
SCALE:	1/4" = 1'–0"



REQUIRES 2 - #4 X 2'-0" STEEL BAR STAKES FOR EACH CURB SECTION. CURB REINFORCED W/ 2 #3 REBARS. LOCATE PARKING CURB 3' FROM FACE OF SIDEWALK HEADER OR EDGE OF PAVEMENT.

WHEEL STOP
(NOT TO SCALE)



COORDINATE WITH TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.

CONCRETE UTILITY PAD
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

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ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. MCMANNON REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 00113398 STATE OF TENNESSEE 3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066

DRAWN BY: CEM

DATE: 03.27.23

DRAWING
SITE DETAILS

C212

AGENCY REVIEW - NOT FOR CONSTRUCTION

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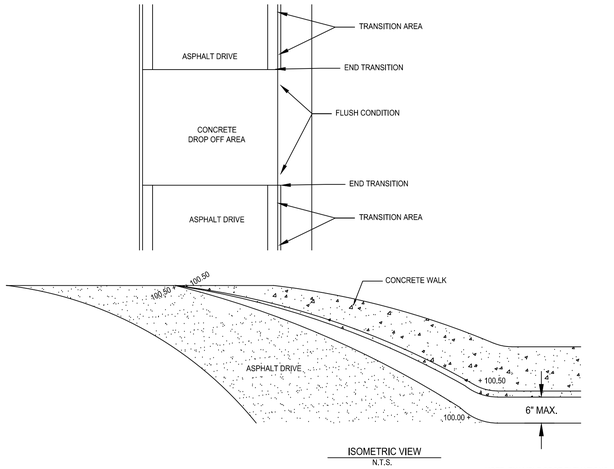
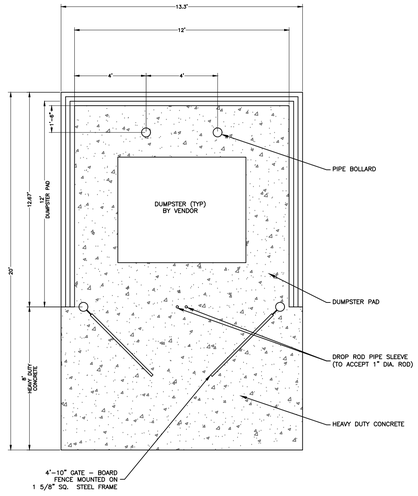
Autodesk Docs://22066_ALTERRA - 122 CHARTER PLACE/PSARCH_22066_122 CHARTER PLACE_ALTERRA - SHELL MODEL.rvt

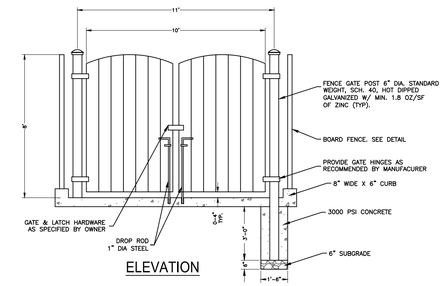


CURB TRANSITION
(NOT TO SCALE)

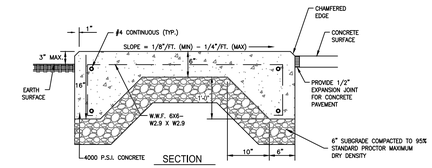
19



PLAN VIEW



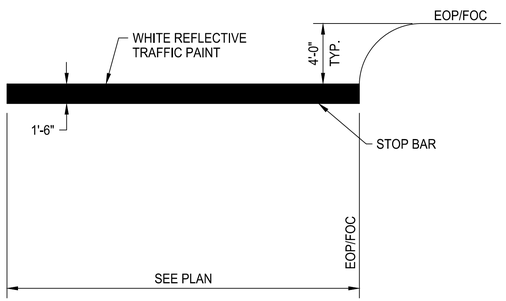
ELEVATION



COORDINATE WITH TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.

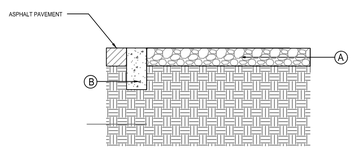
DUMPSTER PAD LAYOUT - 1 BAY
WITH WOOD FENCE ENCLOSURE
(NOT TO SCALE)

16



STOP BAR
(NOT TO SCALE)

20



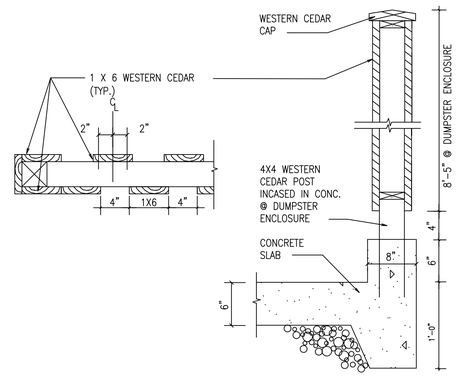
Ⓐ HEAVY DUTY GRAVEL SECTION

Ⓑ 8" WIDE CONCRETE STRIP. EXTEND TO DEPTH OF 8" ASPHALT CRUSHED STONE BASE COURSE.

SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS

CONCRETE RIBBON CURB
(NOT TO SCALE)

18



WOOD DUMPSTER SCREEN FENCE
(NOT TO SCALE)

17

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ALTERRA -
122 CHARTER
PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. MCSHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00113398
STATE OF TENNESSEE
3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
SITE DETAILS

C213

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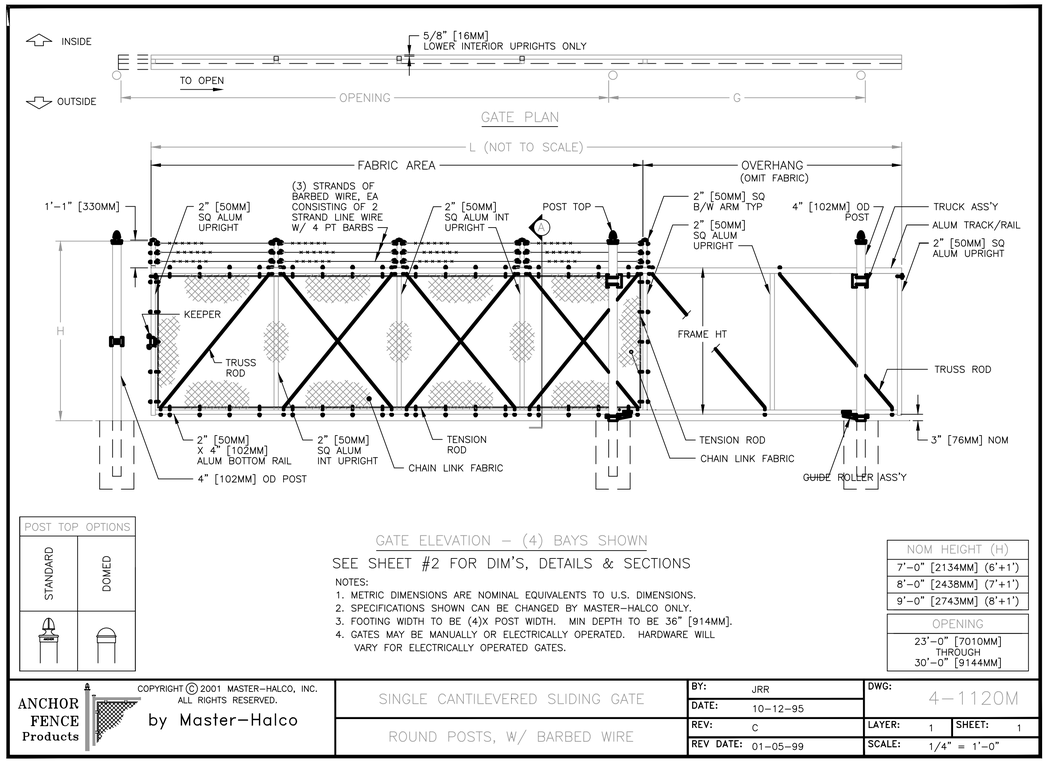
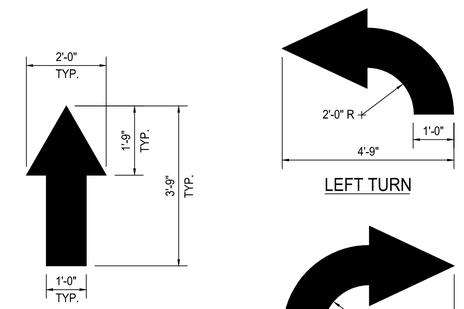
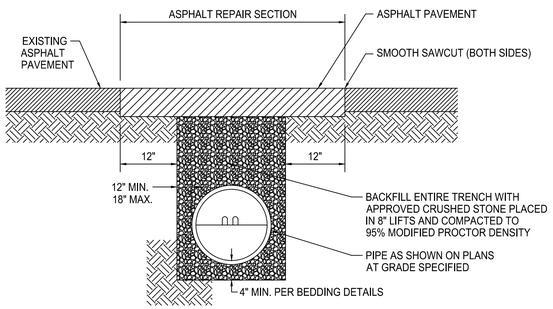
AGENCY REVIEW - NOT FOR CONSTRUCTION

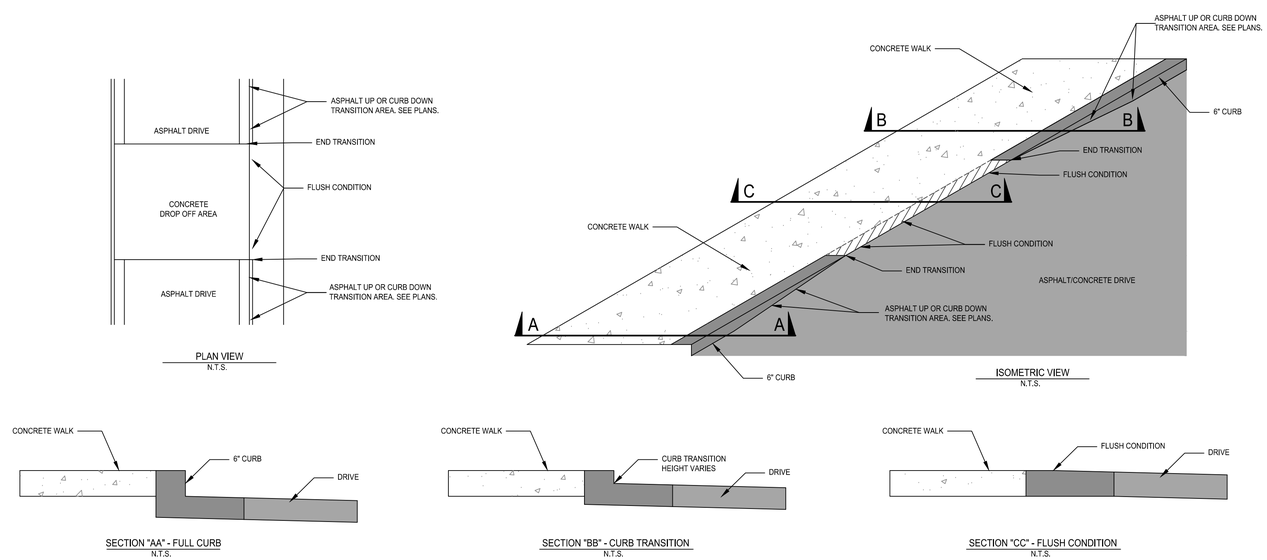




TRAFFIC FLOW ARROW
(NOT TO SCALE)



ASPHALT STREET OR DRIVE CUT / REPAIR
(NOT TO SCALE)



FLUSH CURB CONDITION
(NOT TO SCALE)

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ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. MCLANNON REGISTERED ENGINEER DEPARTMENT OF AGRICULTURE COMMERCE No. 00113398 STATE OF TENNESSEE 3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066
DRAWN BY: CEM
DATE: 03.27.23
DRAWING
SITE DETAILS
C214

AGENCY REVIEW - NOT FOR CONSTRUCTION

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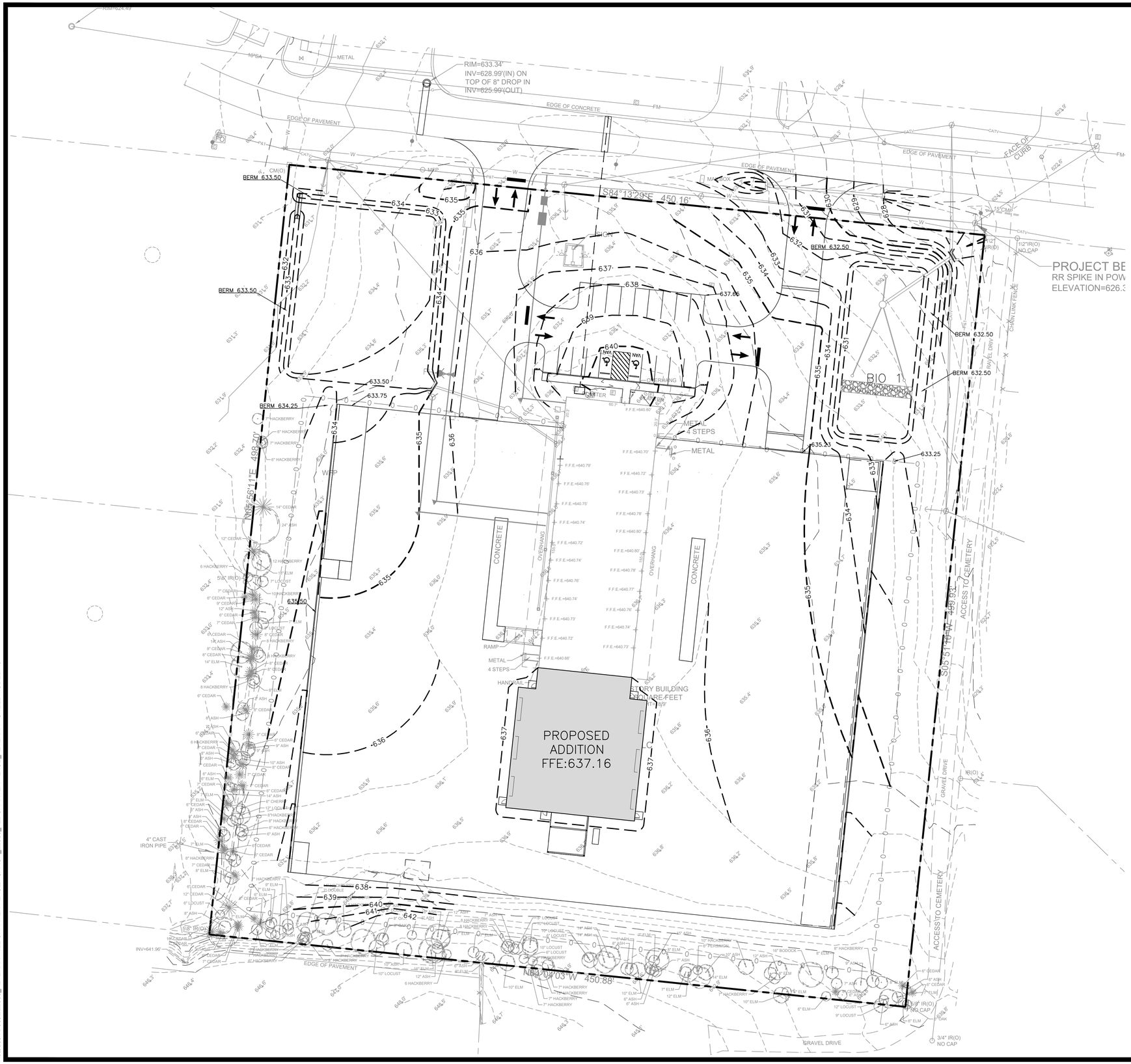

GENERAL GRADING NOTES

1. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.

2. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND SIX INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE AND AREAS TO BE SODDED). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY LOCATIONS OF ANY UNDERGROUND UTILITIES. THE CONTRACTOR IS TO VERIFY LOCATION OF OVERHEAD UTILITIES. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

4. THE CONTRACTOR IS TO CONTROL TRAFFIC FLOW DURING TIME OF CONSTRUCTION. ANY AND ALL TRAFFIC CONTROL IMPLEMENTED DURING THIS PROJECT SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

5. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CITY OF LA VERGNE/RUTHERFORD COUNTY AND THE TENNESSEE D.O.T. REGULATIONS.

6. CONTRACTOR TO COORDINATE LOCATION OF TOP SOIL STOCKPILE AREA WITH OWNER. SILT FENCE SHALL BE PLACED AROUND PERIMETER OF THE STOCKPILE FOR EROSION AND SEDIMENT CONTROL.

7. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL PERMIT FEES. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND ORDINANCES AND RECEIVE APPROPRIATE APPROVALS WHERE REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.

8. ALL LANDSCAPED SLOPES SHALL BE THREE FEET (3') HORIZONTAL TO ONE FOOT (1') VERTICAL OR FLATTER.

9. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO EARTHWORK AND DRAINAGE. SHOULD CONTRACTOR HAVE QUESTIONS WITH THIS INTENT, HE SHALL CONTACT THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.

10. SLOPE GROUND AWAY FROM BUILDING AT TWO PERCENT (2%) MINIMUM.

11. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

12. SEGMENTAL WALL DESIGNER TO PROVIDE SITE SPECIFIC SHOP DRAWINGS FOR ALL RETAINING WALLS FOR CIVIL ENGINEER REVIEW PRIOR TO ORDERING WALL SYSTEM.

GRADING NOTES

A	-

GRADING PLAN

GRAPHIC SCALE 30 0 30 60

AGENCY REVIEW - NOT FOR CONSTRUCTION

STUDIO

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL C. MCMAHON REGISTERED ENGINEER CIVIL AGRICULTURE COMMERCE No. 00113395 STATE OF TENNESSEE
3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING

GRADING PLAN

C300

3/10/2023 2:30:13 PM
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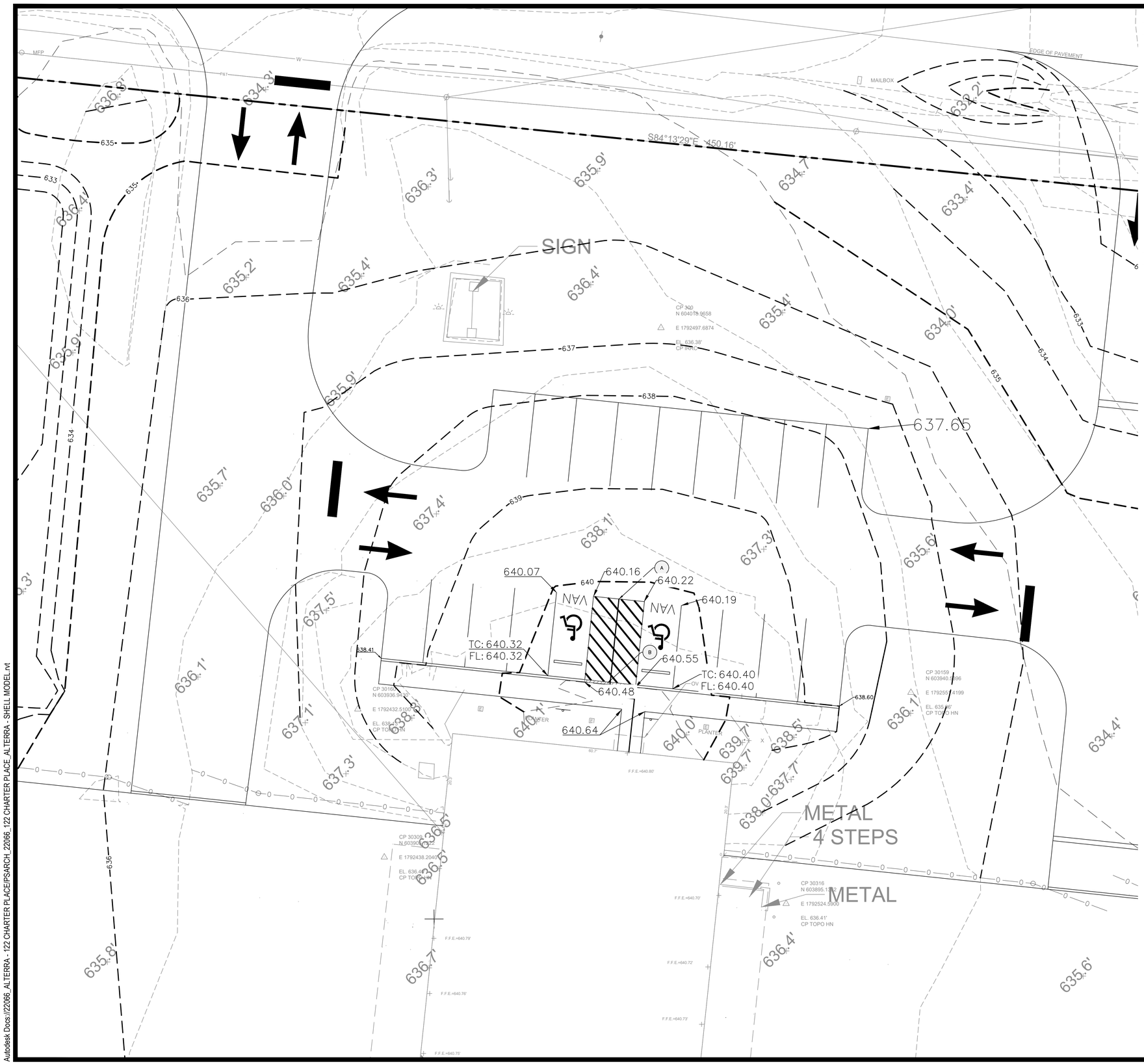

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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL C. MCMANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00113398
STATE OF TENNESSEE
3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
ACCESSIBILITY ENLARGEMENT
C301

AGENCY REVIEW - NOT FOR CONSTRUCTION

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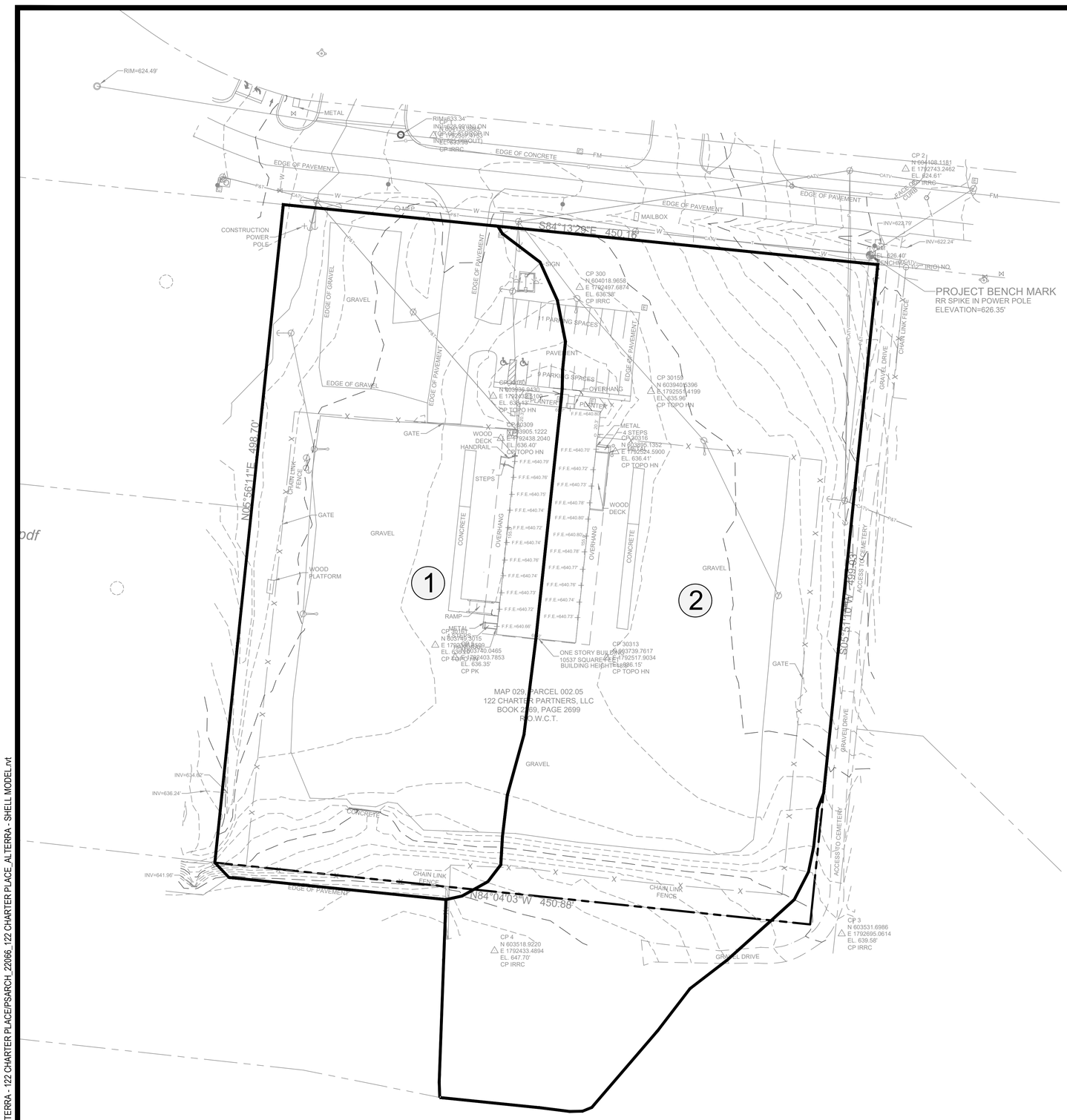

PRE-DEVELOPED DRAINAGE AREAS

	Gravel		Impervious		Pervious		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Area 1	53,609	1.23	14,489	0.33	42,178	0.97	110,277	2.53
Area 2	47,994	1.10	10,403	0.24	84,868	1.95	143,266	3.29
Total	101,604	2.33	24,892	0.57	127,046	2.92	253,543	5.82

PRE-DEVELOPED DRAINAGE MAP

GRAPHIC SCALE 40 0 40 80

AGENCY REVIEW - NOT FOR CONSTRUCTION

STUDIO

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL T. MOHANIOT
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 001113108
STATE OF TENNESSEE
3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING

PRE-DEVELOPED DRAINAGE MAP

C400

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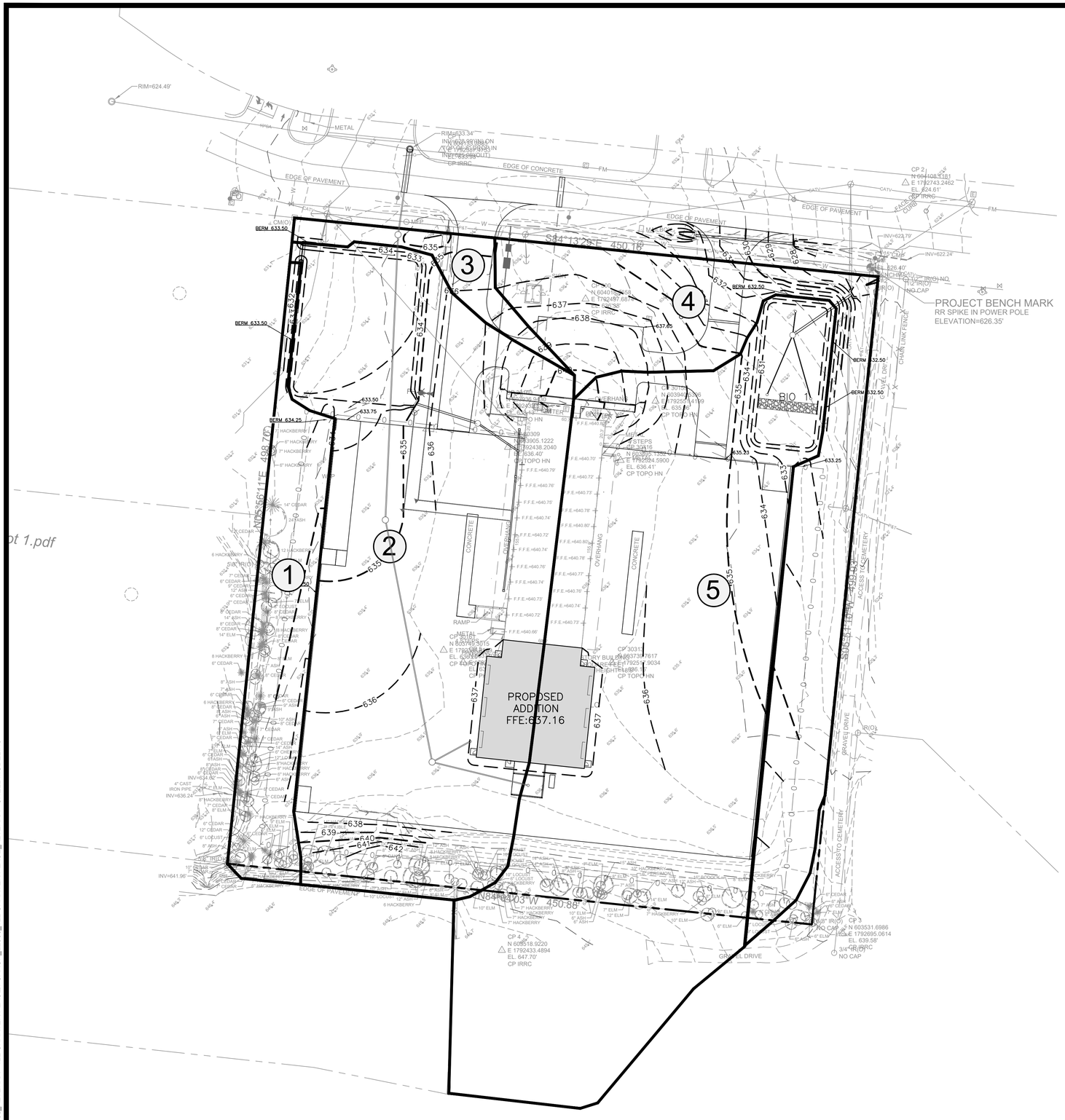
Autodesk Docs://22066_ALTERRA - 122 CHARTER PLACE/PSARCH_22066_122 CHARTER PLACE_ALTERRA - SHELL MODEL.rvt



POST-DEVELOPED DRAINAGE AREAS

	Impervious		Pervious		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Area 1	0	0.00	18,202	0.42	18,202	0.42
Area 2	59,380	1.36	25,888	0.59	85,269	1.96
Area 3	2,037	0.05	3,041	0.07	5,078	0.12
Area 4	22,897	0.53	16,723	0.38	39,619	0.91
Area 5	57,479	1.32	47,897	1.10	105,376	2.42
Total	141,792	3.26	111,750	2.57	253,543	5.82

POST-DEVELOPED DRAINAGE MAP

GRAPHIC SCALE 40 0 40 80

AGENCY REVIEW - NOT FOR CONSTRUCTION

STUDIO

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BRENTWOOD, TN 37027
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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL T. MOHANNON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 0011398 STATE OF TENNESSEE 3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066

DRAWN BY: CEM

DATE: 03.27.23

DRAWING: POST-DEVELOPED DRAINAGE MAP

C401

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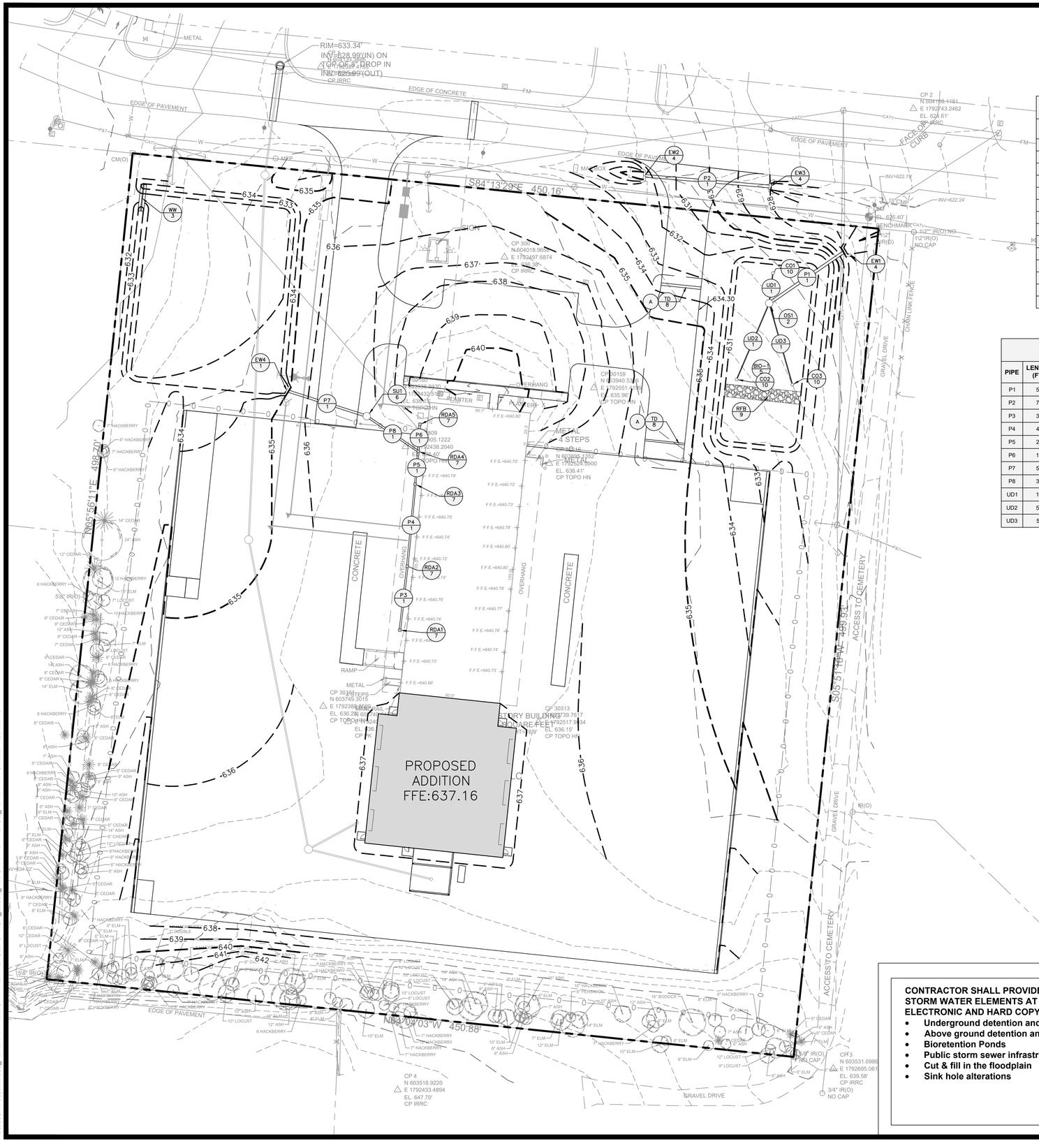

STRUCTURE TABLE				
STRUCTURE	RIM ELEV.	INVERT ELEV.	TYPE	NOTE
CO1	631.00	626.80		
CO2	631.00	627.01		
CO3	632.00	626.53		
EW1	630.00	626.00		
EW2	632.50	629.50		
EW3	628.27	626.00		
EW4	635.00	633.00		
OS1	631.67	626.71		
RDA1	636.53	633.99		
RDA2	636.53	633.80		
RDA3	636.53	633.55		
RDA4	636.53	633.45		
RDA5	636.76	633.37		
SU1	636.75	633.25		

PIPE SCHEDULE

PIPE	LENGTH (FT.)	SIZE (IN.)	TYPE	SLOPE (%)	NOTES
P1	55	15	RCP	1.29%	Concrete Pipe
P2	76	15	RCP	4.61%	Concrete Pipe
P3	39	10	HDPE	0.49%	HDPE Pipe
P4	49	10	HDPE	0.51%	HDPE Pipe
P5	20	10	HDPE	0.50%	HDPE Pipe
P6	16	12	HDPE	0.50%	HDPE Pipe
P7	50	12	RCP	0.50%	Concrete Pipe
P8	37	12	HDPE	0.54%	HDPE Pipe
UD1	18	4	HDPE	0.50%	Perforated HDPE Pipe
UD2	50	4	HDPE	0.60%	Perforated HDPE Pipe
UD3	51	4	HDPE	0.59%	Perforated HDPE Pipe

CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL STORM WATER ELEMENTS AT PROJECT COMPLETION IN ELECTRONIC AND HARD COPY FORMATS.

- **Underground detention and water quality infrastructure**
- **Above ground detention and water quality infrastructure**
- **Bioretention Ponds**
- **Public storm sewer infrastructure**
- **Cut & fill in the floodplain**
- **Sink hole alterations**

GENERAL DRAINAGE NOTES

1. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.

2. CONTRACTOR HAS THE OPTION TO BID THE FOLLOWING MATERIAL FOR THE STORM SEWER SYSTEM, EXCEPT WHERE OTHERWISE NOTED: RCP OR SIPP, AS INDICATED ON THIS PLAN, WHERE THE WORD PIPE IS USED. ALL PIPES SHALL HAVE A MAXIMUM ROUGHNESS COEFFICIENT ("N") OF .013 AND SHALL MEET OR EXCEED THE PIPE MANUFACTURERS REQUIREMENTS FOR MINIMUM AND MAXIMUM COVER. CONTRACTOR SHALL REFER TO THE SITE WORK SPECIFICATIONS SECTION FOR STORM SEWER SYSTEMS FOR ACCEPTABLE TYPE AND MATERIAL.

3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY LOCATIONS OF ANY UNDERGROUND UTILITIES. THE CONTRACTOR IS TO VERIFY LOCATION OF OVERHEAD UTILITIES. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

4. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN THE SPECIFICATIONS ALL STORM DRAIN PIPES ARE MEASURED FROM CENTER OF STRUCTURES AND ENDS OF FLARED END SECTIONS.

5. THE CONTRACTOR IS TO CONTROL TRAFFIC FLOW DURING TIME OF CONSTRUCTION. ANY AND ALL TRAFFIC CONTROL IMPLEMENTED DURING THIS PROJECT SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

6. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CITY OF XXX/XXX COUNTY AND THE XXX D.O.T. REGULATIONS.

7. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL PERMIT FEES. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND ORDINANCES AND RECEIVE APPROPRIATE APPROVALS WHERE REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.

8. ALL NEW STRUCTURES SHALL HAVE ANY SEDIMENT REMOVED PRIOR TO ACCEPTANCE.

9. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO EARTHWORK AND DRAINAGE. SHOULD CONTRACTOR HAVE QUESTIONS WITH THIS INTENT, HE SHALL CONTACT THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.

10. ADJUST ALL CASTINGS TO MATCH FINISH GRADES.

11. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

12. CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL STORM WATER ELEMENTS AT PROJECT COMPLETION IN ELECTRONIC AND HARD COPY FORMATS.

DRAINAGE NOTES

A ASPHALT AND TRENCH INTERCEPTIONS FOR DUST CONTROL.

DRAINAGE DETAILS

1	TRENCH AND BEDDING
2	OUTLET STRUCTURE
3	WEIR WALL OUTLET STRUCTURE
4	WINGED ENDWALL
5	BIO-RETENTION
6	SWIRL UNIT
7	DOWNSPOUT ADAPTER
8	TRENCH DRAIN
9	ROCK FOREBAY
10	CLEANOUT

LEGEND: DRAINAGE

- PROPOSED CATCH BASIN
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED STORM LINE (P# 1)
- NYLOPLAST DRAIN BASIN
- WINGED ENDWALL/HEADWALL

DRAINAGE PLAN

GRAPHIC SCALE 30 0 30 60

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL T. MCMANNON — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 0011396 — STATE OF TENNESSEE — 3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

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DRAWING

DRAINAGE PLAN

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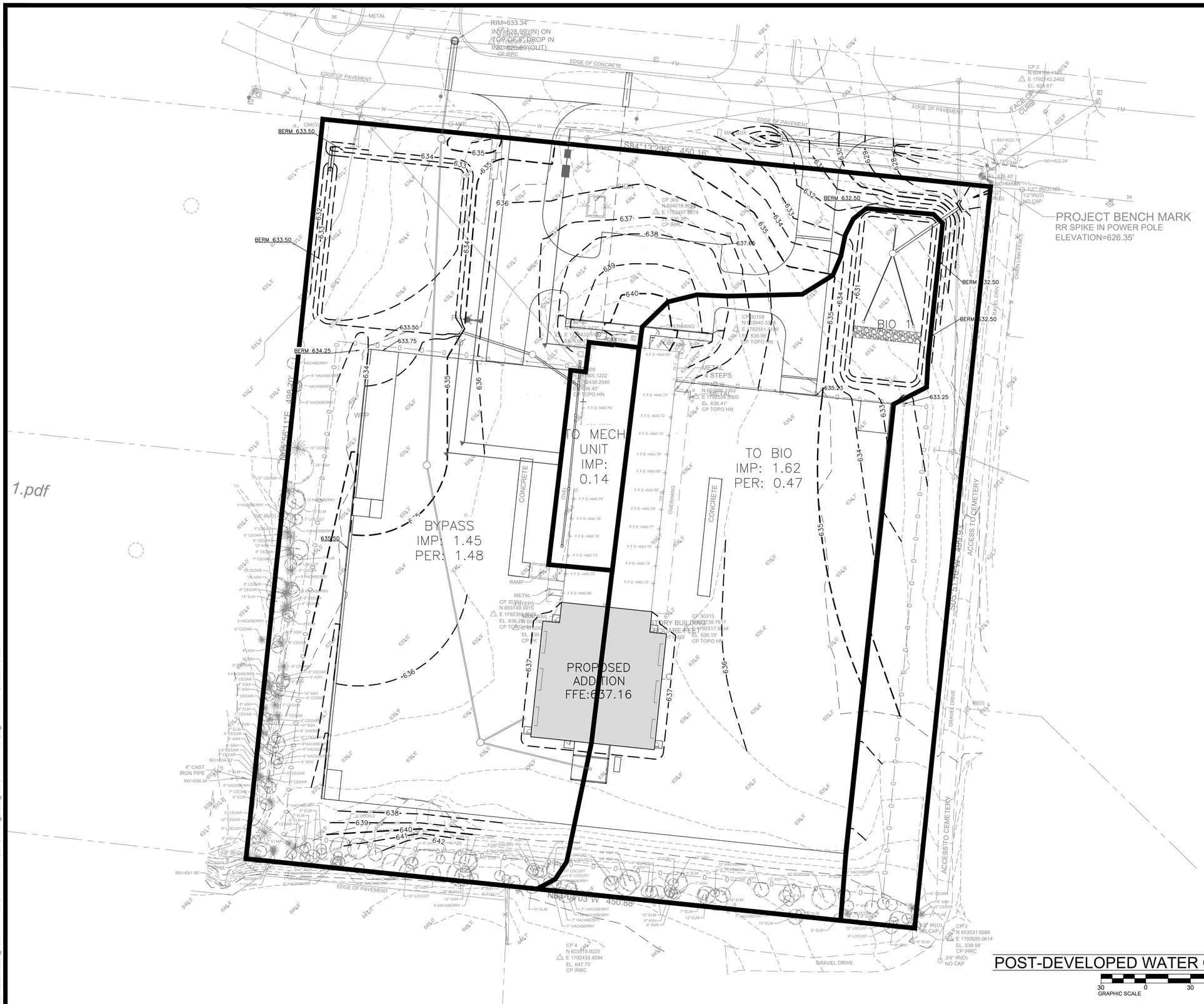

POST-DEVELOPED WATER QUALITY DRAINAGE MAP

AGENCY REVIEW - NOT FOR CONSTRUCTION

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122 CHARTER PLACE
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SAMUEL T. MOHANNON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 001113[illegible] STATE OF TENNESSEE 3-24-2023

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DRAWING POST-DEVELOPED WATER QUALITY DRAINAGE MAP

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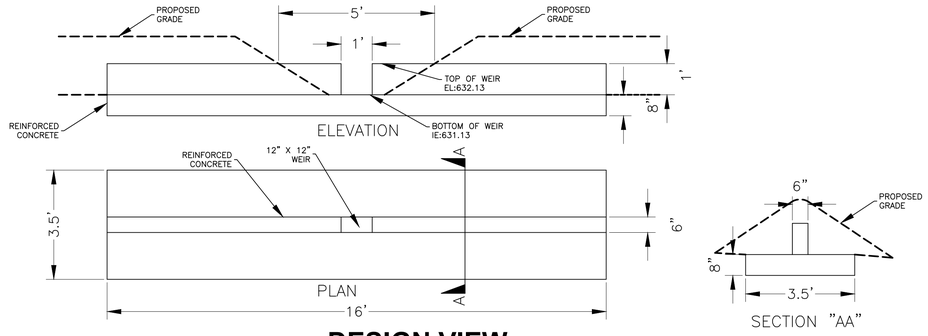
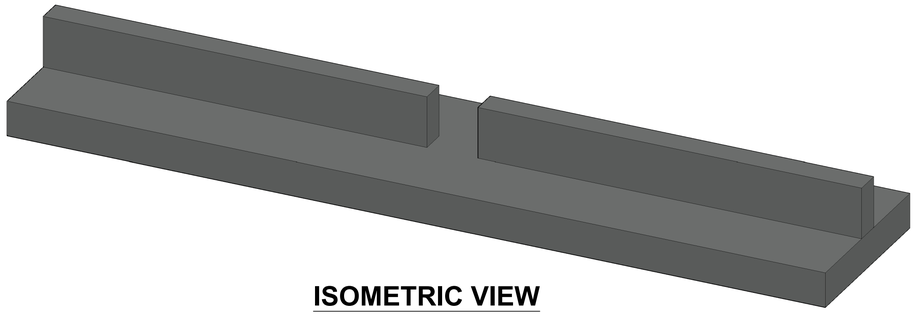


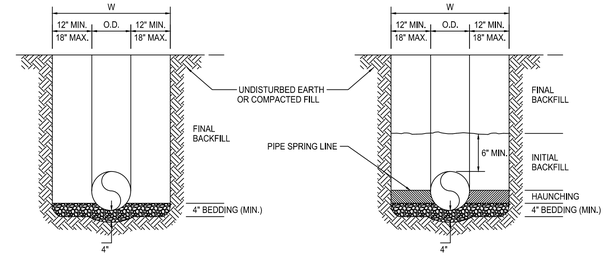
DESIGN VIEW



ISOMETRIC VIEW

WEIR WALL OUTLET STRUCTURE
SCALE: NTS

WW 3



RIGID PIPE
(NOT TO SCALE)

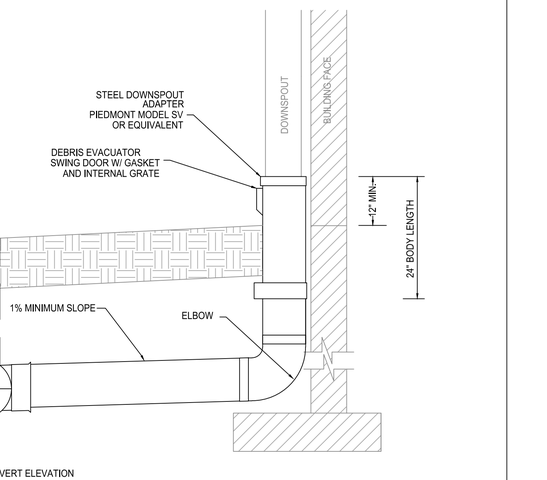
FLEXIBLE PIPE
(NOT TO SCALE)

GENERAL NOTES:

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION.)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3 AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS SHALL BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS.)

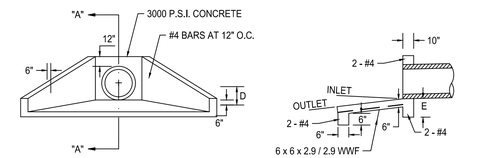
STORM SEWER TRENCH AND BEDDING
(NOT TO SCALE)

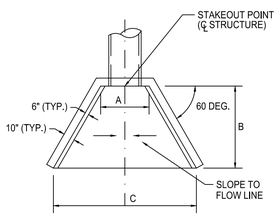
TB 1



ROOF DRAIN ADAPTER (TYP)
(NOT TO SCALE)

RDA 7



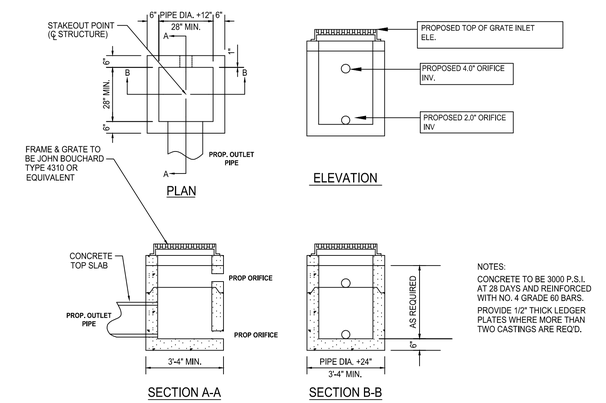


DIMENSIONS TABLE						
DIA.	A	B	C	D	E	
8"	20"	30"	60"	6"	8"	
12"	20"	30"	60"	6"	8"	
15"	23"	36"	72"	6"	8"	
18"	28"	42"	84"	9"	8"	
24"	34"	48"	96"	9"	8"	
30"	40"	54"	108"	12"	10"	
36"	48"	60"	120"	15"	10"	
42"	54"	66"	132"	18"	10"	
48"	60"	72"	144"	21"	12"	
54"	66"	78"	156"	24"	12"	
60"	72"	84"	168"	24"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

NOTE: ALL EXPOSED EDGES OF CONCRETE SHALL BE CAMFERED ONE INCH.

WINGED ENDWALL/HEADWALL
(NOT TO SCALE)

EW 4



NOTES:
CONCRETE TO BE 3000 P.S.I. AT 28 DAYS AND REINFORCED WITH NO. 4 GRADE 60 BARS.
PROVIDE 1/2" THICK LEDGER PLATES WHERE MORE THAN TWO CASTINGS ARE REQ'D.

COORDINATE WITH TECHNICAL SPECIFICATIONS

OUTLET STRUCTURE-PROPOSED
(NOT TO SCALE)

OS1 2

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

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SAMUEL H. MCLANNON REGISTERED ENGINEER DEPARTMENT OF AGRICULTURE COMMERCE No. 00113398 STATE OF TENNESSEE 3-24-2023

ISSUED FOR
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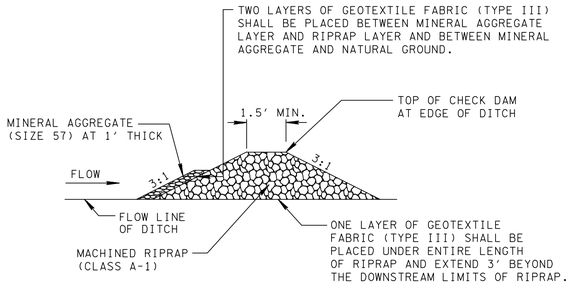
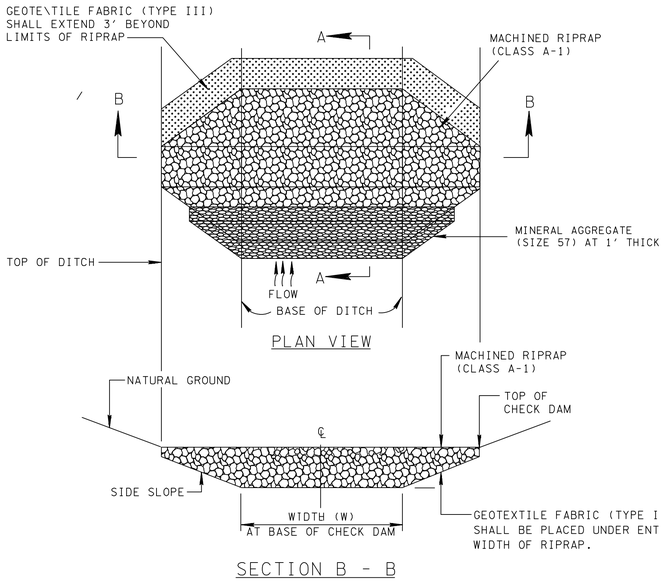


SECTION A - A

DETAIL FOR TRAPEZOIDAL DITCH



SECTION B - B

ROCK FOREBAY CHECK DAM
SCALE:DTS

RFB
9

NOTE 1: CHARACTERISTICS OF BIORETENTION SOIL MIX ARE AS FOLLOWS. THE PLANTING SOIL MUST BE SANDY LOAM TEXTURE PER USDA TEXTURAL TRIANGLE:

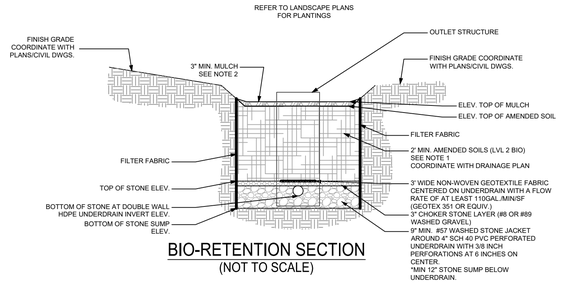
a. FERTILE, FRIABLE NATURALLY OCCURRING TOPSOIL, FREE OF STONES, SUBSOIL, CLAY LUMPS, HARDPAN, ROOTS, STUMPS, BRANCHES, STICKS AND OTHER DEBRIS LARGER THAN TWO INCHES IN DIAMETER IN ANY DIMENSION; FREE OF NOXIOUS WEEDS, GRASSES, SEEDS, PLANTS, EXTRANEOUS MATTER AND ANY SUBSTANCE HARMFUL TO PLANT GROWTH.
b. pH 5.5 TO 6.5
c. ORGANIC MATTER 5% TO 10%
d. SAND 70% TO 85%
e. SILT AND CLAY 10% - 20% WITH NO MORE THAN 10% CLAY

THE SOIL MIX SHOULD HAVE AN INFILTRATION RATE OF AT LEAST 1 TO 2 INCHES PER HOUR. THE CONTRACTOR SHOULD HAVE A SOIL TEST PERFORMED PRIOR TO INSTALLING PLANT MATERIAL TO ENSURE THE MINIMUM INFILTRATION RATE.

NOTE 2: 100% SHREDDED HARDWOOD OR PINE STRAW.
a. FREE FROM WOOD, WOOD SHAVINGS, CAMBIUM, SAWDUST, LEAVES, TWIGS, INSECTS, GRASSES, WEEDS, PLANTS AND THEIR SEEDS, OTHER FOREIGN MATERIAL AND ANY OTHER SUBSTANCE HARMFUL TO PLANT GROWTH.

NOTE 3: UNDERDRAIN TO BE 6" DUAL WALL HDPE OR SDR 35 PVC PIPE WITH ⅜ IN. PERFORATIONS AT 6 IN. ON CENTER. AASHTO M 252. PLACE PERFORATED PIPE AT BASE OF RESERVOIR LAYER.

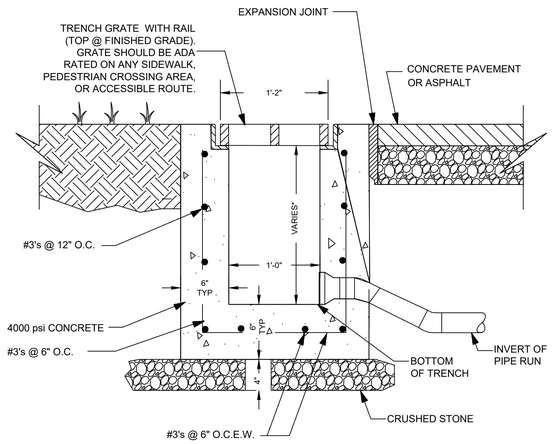
CONTRACTOR, ENGINEER, OR OWNERS REPRESENTATIVE SHALL NOTIFY MWS DEVELOPMENT REVIEW AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF THE PLANTING SOIL FILTER BED. AT THE COMPLETION OF INSTALLATION, THE ABOVE REFERENCED PERSON WILL COLLECT ONE SAMPLE PER BIORETENTION BED FOR ANALYSIS AND CONFIRMATION OF THE SOIL CHARACTERISTICS AS DEFINED BY GIP-01, FILTER MEDIA AND SURFACE COVER, SECTION 6.6, PAGE 20



BIO-RETENTION SECTION
(NOT TO SCALE)

BIO-1
5

Bioretention Cell #1 Elevation & Volume Information				
Contributing Drainage Area (CDA)	2.09	Acres		
Level Cell	2			
Required WQv	7448	CF Total		
Reqd Forebay Volume	1118	CF (15% of Total)		
Reqd Treatment Volume	6331	CF (85% of Total)		
Forebay Area Provided (SF)	1200		Depth (ft)	Tv
Storage Layer 100% Voids	632.00	Top of Forebay (Elev)	1	1200
	631.00	Bottom of Forebay (Elev)	0	0
				1200 TV Provided
		Equivilant Depth (Ft)	1	
		Minimum Required Surface Area (SF)	1118	
Treatment Area Provided (SF)	3377	(% Tv Provided = 111%)		
Storage Layer 100% Voids	631.20	Top of Water storage (Elev)	1.2	4052
Mulch Layer 0% Voids	630.00	Top of Mulch (Elev)	0.25	0
Soil Layer 25% Voids	629.75	Top of Soil (Elev)	2	1689
Stone Layer 40% Voids	627.75	Top of Stone (Elev)	1	1351
Stone Layer 0% Voids	626.75	Bottom of Stone @ Underdrain (Elev)	1	0
	625.75	Bottom of Stone Sump Where Applicable		7092 Tv Provided
		Equivilant Depth (Ft)	2.10	
		Minimum Required Surface Area (SF)	3015	
Top of Outlet Control Structure Inle	631.20			100-Yr
Invert of Underdrain @ O.C.S.	626.75			Water Level
Invert of O.C.S.				
Note: Contractor shall construct Bioretention Cell per Standard Detail to elevations shown here.				



NOTE:
BOTTOM OF TRENCH DRAIN TO BE FORMED AT A MINIMUM 1.0% LONGITUDINAL SLOPE. LOW POINT TO BE LOCATED AT MOUTH OF OUTLET PIPE.

TRENCH DRAIN SECTION
NOT TO SCALE

TD
8

SU
6

MECHANICAL SWIRL UNIT DETAIL

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VOL. 2 ADDITION

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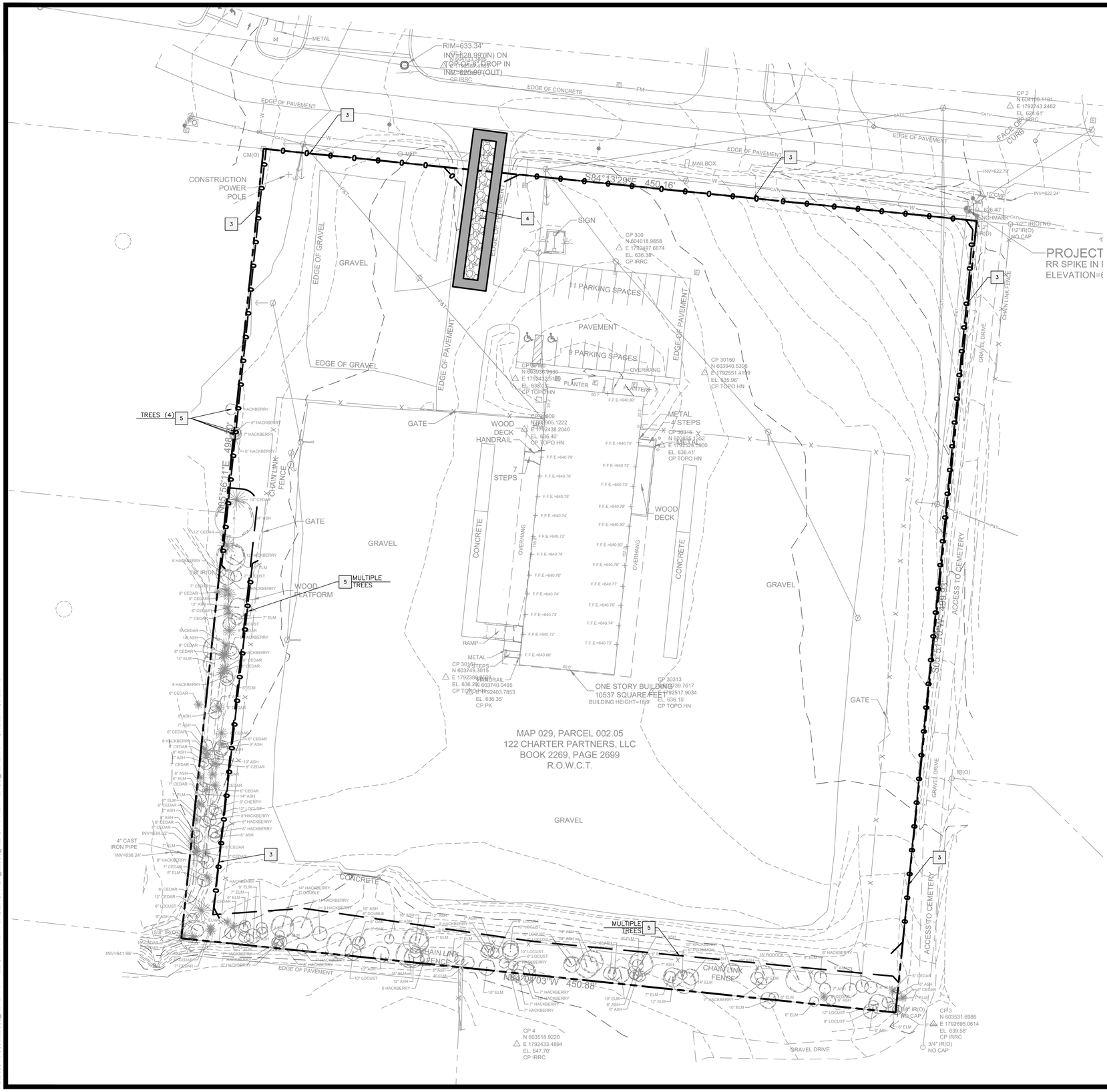

GENERAL SWPPP NOTES

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS AND DESCRIBED ELSEWHERE IN THE CONTRACT DOCUMENTS IS TO PROVIDE A BARRIER FOR SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENTATION SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION OF THE PROPOSED PROJECT.

2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.

3. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.

4. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION. ALL DIMENSIONS AND LOCATIONS OF EROSION CONTROL MEASURES SHALL BE SUBJECT TO ADJUSTMENT AS DEEMED NECESSARY BY ON-SITE INSPECTION.

5. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.

6. DRAINAGE INLETS SHALL BE PROTECTED BY INLET SEDIMENT FILTER.

7. ANY ACCESS ROUTES TO THE SITE SHALL BE BASED WITH CRUSHED STONE.

8. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

9. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED. NO TREES ARE TO BE REMOVED AND/OR VEGETATION DISTURBED EXCEPT AS NECESSARY FOR GRADING PURPOSES.

10. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF TENNESSEE, COMMISSION OF ENVIRONMENTAL QUALITY OR OTHER JURISDICTION REQUIREMENTS.

11. THE CONTRACTOR SHALL AT NO TIME USE ANY SINK HOLE AS MATERIAL STORAGE OR DISPOSAL.

12. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

○ PRE-CON SWPPP NOTES

A -

□ SWPPP DETAILS

1	RIP-RAP
2	INLET PROTECTION
3	SEDIMENTATION BARRIER
4	TEMPORARY CONSTRUCTION ENTRANCE
5	TREE PROTECTION
6	MATTING AND BLANKETS

LEGEND: PRE-CON SWPPP

- INLET PROTECTION
- TREE PROTECTION
- SEDIMENTATION BARRIER
- CHECK DAM
- TEMPORARY CONSTRUCTION ENTRANCE
- RIP-RAP OUTLET PROTECTION

PRE-CON SWPPP

30 0 30 60
GRAPHIC SCALE

AGENCY REVIEW - NOT FOR CONSTRUCTION

P.
STUDIO
PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. HOHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 0011339
STATE OF TENNESSEE
3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066
DRAWN BY: CEM
DATE: 03.27.23
DRAWING: PRE-CON STORM WATER POLLUTION PREVENTION PLAN

C500

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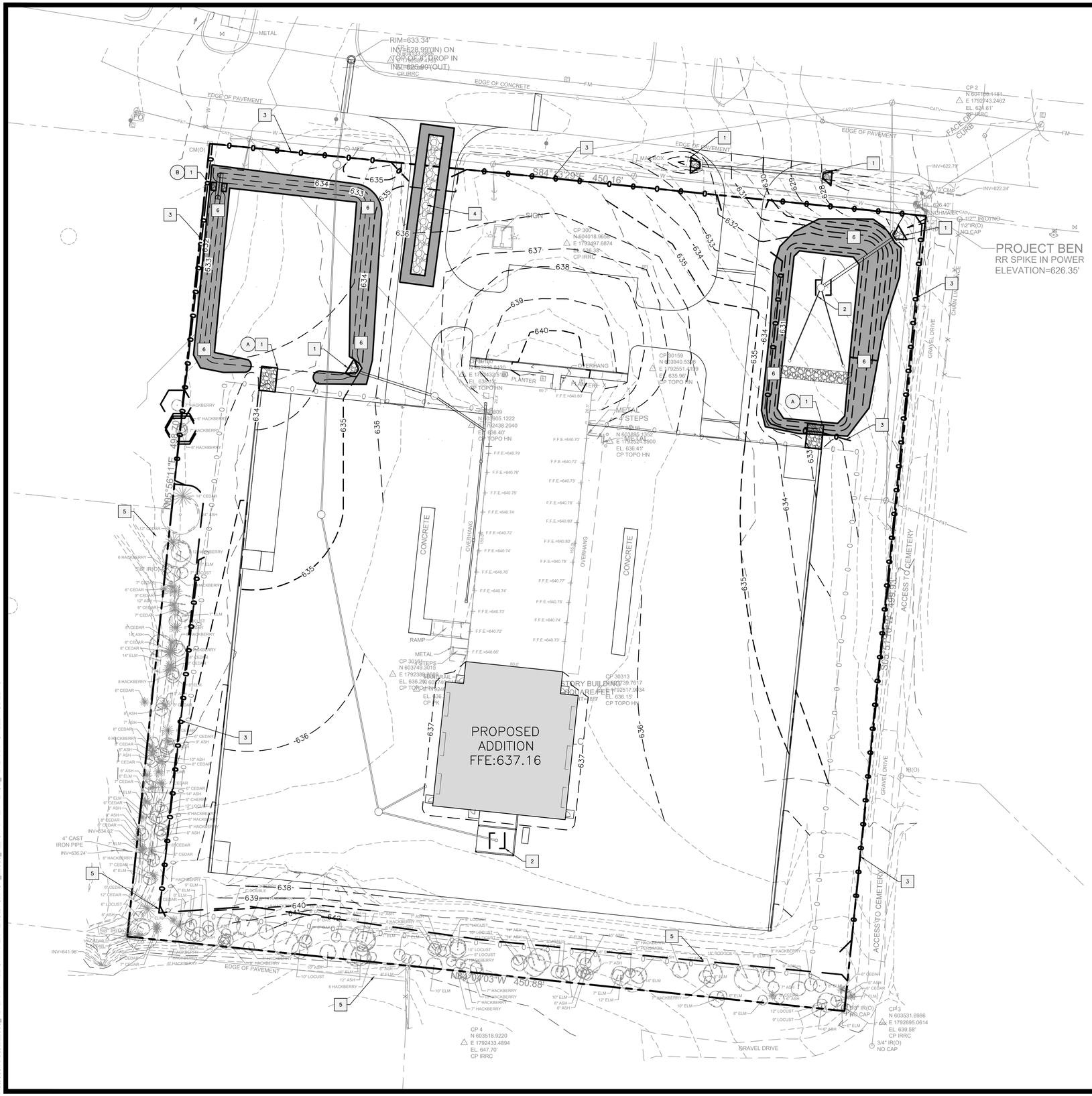

GENERAL SWPPP NOTES

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS AND DESCRIBED ELSEWHERE IN THE CONTRACT DOCUMENTS IS TO PROVIDE A BARRIER FOR SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENTATION SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION OF THE PROPOSED PROJECT.

2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.

3. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.

4. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION. ALL DIMENSIONS AND LOCATIONS OF EROSION CONTROL MEASURES SHALL BE SUBJECT TO ADJUSTMENT AS DEEMED NECESSARY BY ON-SITE INSPECTION.

5. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.

6. DRAINAGE INLETS SHALL BE PROTECTED BY INLET SEDIMENT FILTER.

7. ANY ACCESS ROUTES TO THE SITE SHALL BE BASED WITH CRUSHED STONE.

8. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

9. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED. NO TREES ARE TO BE REMOVED AND/OR VEGETATION DISTURBED EXCEPT AS NECESSARY FOR GRADING PURPOSES.

10. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF TENNESSEE, COMMISSION OF ENVIRONMENTAL QUALITY OR OTHER JURISDICTION REQUIREMENTS.

11. THE CONTRACTOR SHALL AT NO TIME USE ANY SINK HOLE AS MATERIAL STORAGE OR DISPOSAL.

12. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

SWPPP NOTES

A	10' WIDE X 15' LONG RIP-RAP APRON
B	5' WIDE X 3' LONG RIP-RAP APRON

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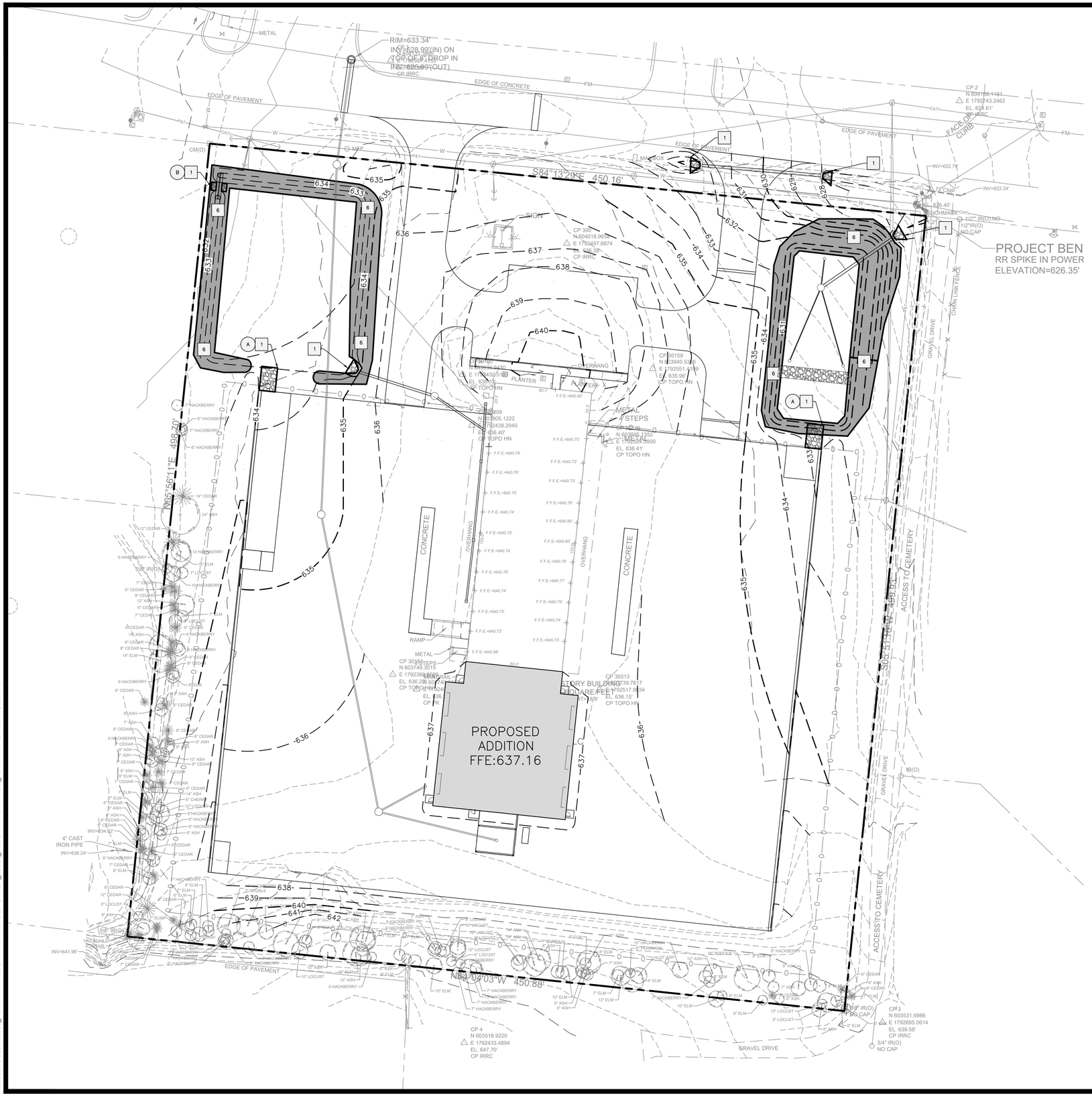

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FINAL SWPPP

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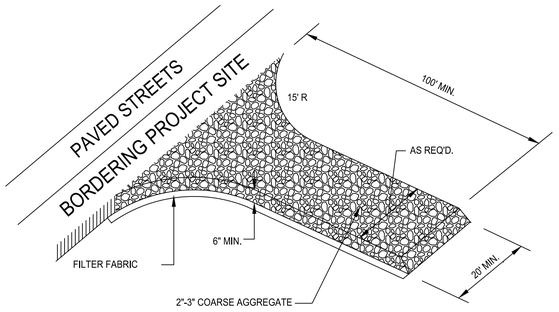
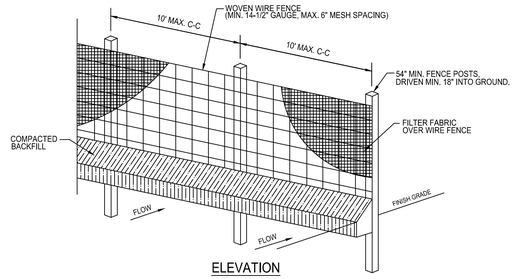


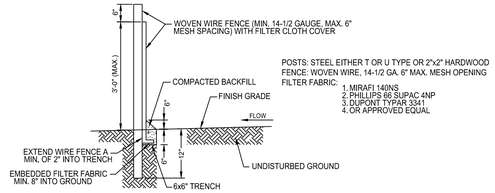
NOTE:
GRAVEL PAD IS REQUIRED TO PROVIDE BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PAVED STREETS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST.

TEMPORARY CONSTRUCTION ENTRANCE
(NOT TO SCALE)

4



ELEVATION



POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14-1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC: 1. MIRAFI 140NS
2. PHILLIPS 66 SUPAC 4NP
3. DUPONT TYPAR 3341
4. OR APPROVED EQUAL

CROSS-SECTION

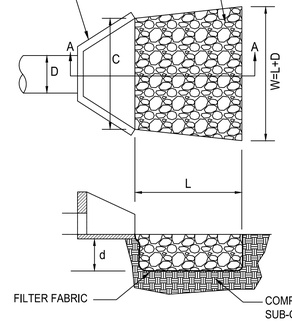
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE OR BEFORE SEDIMENT HAD ACCUMULATED TO ONE-THIRD OF THE ABOVE GROUND HEIGHT OF ANY PERIMETER CONTROL.

SEDIMENTATION BARRIER/ SILT FENCE
(NOT TO SCALE)

3

DRAINAGE STRUCTURE: IN SOME INSTANCES THIS STRUCTURE MAY BE A PIPE, END SECTION, SPLASH PAD OR CURB CUT. (SEE PLAN)
SEE PLAN FOR LENGTH (L) AND WIDTH (W) OF RIP-RAP STABILIZATION AT CURB CUTS.

RIP-RAP STABILIZATION TO BE HAND PLACED NATIVE STONE UNDERLAIN BY NON-WOVEN GEOTEXTILE FABRIC. SEE PLAN FOR LENGTH AND D50.

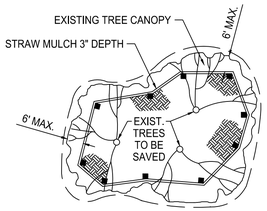


APRON LINING TO BE FILTER FABRIC, MIRAFI 500X OR EQUIVALENT.

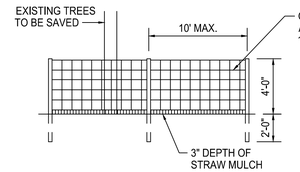
L=LENGTH OF RIP-RAP
D=OUTLET PIPE DIAMETER
C=MATCH WIDTH OF HEADWALL
d=DEPTH OF STONE, 1.5 TIMES MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6"

RIP-RAP OUTLET PROTECTION
(NOT TO SCALE)

1



PLAN - TYPICAL FENCE



ELEVATION - TYPICAL FENCE

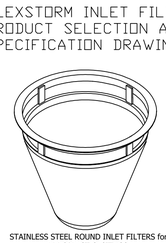
NOTES:
1. REMOVE ALL EXISTING CONCRETE OR ASPHALT PAVING WITH THE LIMITS OF THE BARRICADED AREA. IF REMOVAL CREATES A POTENTIAL WATER POCKET, IT SHALL BE FILLED TO PROVIDE POSITIVE DRAINAGE.
2. REMOVE ALL VINES FROM TREES IN BARRICADED AREA.
3. REMOVE DEAD OR DAMAGED LIMBS AND PAINT ALL WOUNDS WITH TREE WOUND PAINT.
4. NO BARRICADE SHALL BE PLACED MORE THAN 6' INSIDE CANOPY OF EXISTING TREES.
5. PROTECT ALL TREES TO BE SAVED FROM EXCAVATION FOR UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, GAS, SEWER AND WATER LINES.
6. NO EXCAVATION SHALL TAKE PLACE WITHIN THE CANOPY LINE OF EXISTING TREES TO BE SAVED. PAINT ALL CUT ROOTS (1 1/2" DIA. AND LARGER) WITH ASPHALT BASE TREE WOUND PAINT.
7. SEE SPECIFICATIONS FOR DEFINITION OF TREE PROTECTION ZONE

ORANGE COPOLYMER MESH CONSTRUCTION AREA FENCE WITH OPENINGS APPROXIMATELY 1.3" X 1.3" AND NORMAL POROSITY OF 75%.

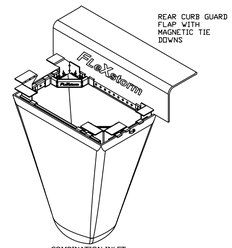
TREE PROTECTION
(NOT TO SCALE)

5

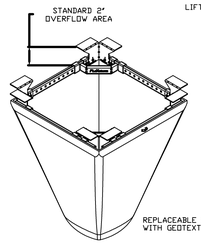
FLEXSTORM INLET FILTERS PRODUCT SELECTION AND SPECIFICATION DRAWING

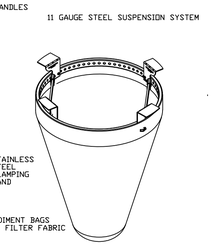


STAINLESS STEEL ROUND INLET FILTERS for NYLOPLAST CASTINGS
CATCH-ITS SPECIFIED W/ FX or FX-S BAGS



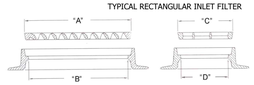
COMBINATION INLET FILTER FOR CURB HOODS



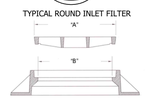


REPLACEABLE SEDIMENT BAGS WITH GEOTEXTILE FILTER FABRIC

TYPICAL RECTANGULAR INLET FILTER



TYPICAL ROUND INLET FILTER

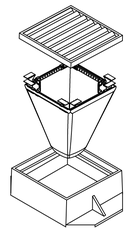


1. INDENTIFY YOUR FRAME STYLE, SIZE, AND MATERIAL

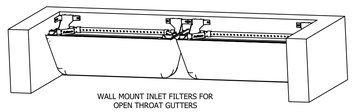
STYLE	FRAME STYLE AND SIZE	Frame P/N:
ROUND	Small Round (up to 20.0" dia grates (A) dim)	6ZSRD
	Med Round (20.1" - 26.0" dia grates (A) up to 25" dia openings (B))	6ZMRD
	Large Round (26.1" - 32.0" dia grates (A) up to 30" openings (B))	6ZLRD
	XL Round (32.1" dia - 39" dia grates (A) up to 37" dia openings (B))	6ZXLRD
RECT/ SQUARE	Small Rect / Square (up to 16" (B) x 16" (D) openings or 64" perimeter)	6ZSSQ
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	6ZMSQ
	Large Rect / Square (up to 36" (B) x 24" (D) openings or 120" perimeter)	6ZLSQ
	XL Rect / Square (side by side 2 pc set to fit up to 48" (B) x 36" (D) openings)	6ZXLSQ
CONIRO INLETS	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZSCB
	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZMCB
	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZLCB
	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZXLCB
NYLOPLAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NY
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NY
	18"diameter Nyloplast castings (Stainless Steel Framing standard)	6218NY
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NY
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NY
WALL MOUNT	Open Throat Gutters - Curb Opening Size	
	Up to 4' (1 Filter and Mounting Hardware)	6ZWM1
	Between 4' and 8' (2 Filters and Mounting Hardware)	6ZWM2
	Between 8' and 12' (3 Filters and Mounting Hardware)	6ZWM3
	Between 12' and 16' (4 Filters and Mounting Hardware)	6ZWM4
UPGRADED FRAMING MATERIAL OPTIONS (STANDARD IS ZINC PLATED)		SUFFIX
CHROME PLATED FRAMING FOR HIGH SALT EXPOSURE		- CHR
STAINLESS STEEL FRAMING FOR HIGH SALT AND/OR CHEMICAL EXPOSURE		- SS

2. SELECT YOUR FILTER BAG PART NUMBER

FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



WALL MOUNT INLET FILTERS FOR OPEN THROAT GUTTERS

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE

Nominal Bag Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max FX (Woven)	PC (Post Constr)	IL (Non Woven)	* PC Oil Retent (Oz)	**PCP Oil Retent (Oz)
Small	1.6	1.2	0.8	0.9	66	155
Medium	2.1	1.8	1.2	1.3	96	185
Large	3.8	2.2	1.5	1.6	120	209
XL	4.2	3.6	2.4	2.6	192	370

* PC filter bag at 50% max adsorption capacity
** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

		-	
Frame P/N from Step 1.	Filter Bag P/N from Step 2.		Framing Material

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC
DISTRIBUTED BY ADS
WWW.INLETFILTERS.COM
(866) 287-8655 PH
(630) 355-3477 FX
INFO@INLETFILTERS.COM

SIZE	DWG NO	REV
SCALE		SHEET 1 OF 1

2

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6.17

RECP

ROLLED EROSION CONTROL PRODUCTS

Definition

Rolled erosion control products are manufactured or fabricated into rolls designed to reduce soil erosion and assist in the growth, establishment and protection of vegetation. Examples of RECP's are blankets, nets, and matting.

Purpose

Erosion control mats and blankets are intended to protect soil and hold seed and mulch in place on slopes and in channels so that vegetation can become well established. Turf reinforcement mats can be used to permanently reinforce grass in drainage ways during high flows. Nets are made of high tensile material woven into an open net which overlays mulch materials. Blankets are made of interlocking fibers, typically held together by a biodegradable or photodegradable netting (for example, excelsior or straw blankets). They generally have lower tensile strength than nets, but cover the ground more completely. Coir (coconut fiber) fabric comes as both nets and blankets.

Conditions Where Practice Applies

Rolled Erosion Control Products (RECP's) should be used to aid permanent vegetated stabilization of slopes 2:1 or greater and with more than 10 feet of vertical relief. RECP's should also be used when mulch cannot be adequately tacked and where immediate ground cover is required to prevent erosion damage.

RECP's should be used to aid in permanent stabilization of vegetated channels when runoff velocity will exceed 2 ft/sec on bare earth during the 2-year rainfall event that produces peak runoff. The product selected must have a permissible shear stress that exceeds the shear stress of the design runoff event.

Planning Considerations

- Good ground contact is critical to the effectiveness of these products. If good ground contact is not achieved, runoff can concentrate under the product, resulting in significant erosion.
- Nets must be used in conjunction with mulch. Excelsior, woven straw blankets and coir (coconut fiber) blankets may be installed without mulch. There are many other types of erosion control nets and blankets on the market that may be appropriate in certain circumstances. In general, most nets (e.g. jute matting) require mulch in order to prevent erosion because they have a fairly open structure. Blankets typically do not require mulch because they usually provide complete protection of the surface.
- Most netting used with blankets is photodegradable, meaning they break down under sunlight (not UV stabilized). However, this process can take months or years even under bright sun. Once vegetation is established, sunlight does not reach the mesh. It is not uncommon to find non-degraded netting still in place several years after the installation. This can be a problem if maintenance requires the use of mowers or ditch cleaning equipment. In addition, birds and small animals can become trapped in the netting.

Construction Specifications

Construction

Even if properly designed, if not properly installed, RECP's will probably not function as desired. Proper installation is imperative. Even if properly installed, if not properly timed and nourished, vegetation will probably not grow as desired. Proper seed/vegetation selection is also imperative.

Grade the surface of installation areas so that the ground is smooth and loose. When seeding prior to installation, follow the steps for seed bed preparation, soil amendments, and seeding in *Surface Stabilization*, 6.1. All gullies, rills, and any other disturbed areas must be fine graded prior to installation. Spread seed before RECP installation. (**Important**: Remove all large rocks, dirt clods, stumps, roots, grass clumps, trash, and other obstructions from the soil surface to allow for direct contact between the soil surface and the RECP.)

Terminal anchor trenches are required at RECP ends and intermittent trenches must be constructed across channels at 25-foot intervals. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width, while intermittent trenches need be only 6 inches deep and 6 inches wide.

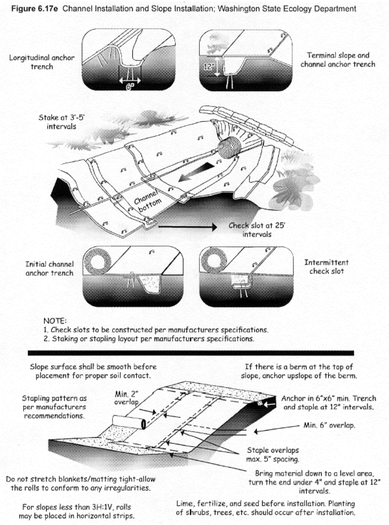
Installation for Slopes— Place the RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill, and compact. Unroll the RECP down (or along) the slope maintaining direct contact between the soil and the RECP. Overlap adjacent rolls a minimum of 3 inches. Pin the RECP to the ground using staples or pins in a 3 foot center-to-center pattern. Less frequent stapling/pinning is acceptable on moderate slopes.

6

Maintenance

1. Inspect Rolled Erosion Control Products at least weekly and after each significant (1/2 inch or greater) rain fall event repair immediately.
2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.
5. Monitor and repair the RECP as necessary until ground cover os established.

Figure 6.17e Channel Installation and Slope Installation; Washington State Ecology Department



MATTING & BLANKETS
(NOT TO SCALE)

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. MCSHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 0011398
STATE OF TENNESSEE
3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checket)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

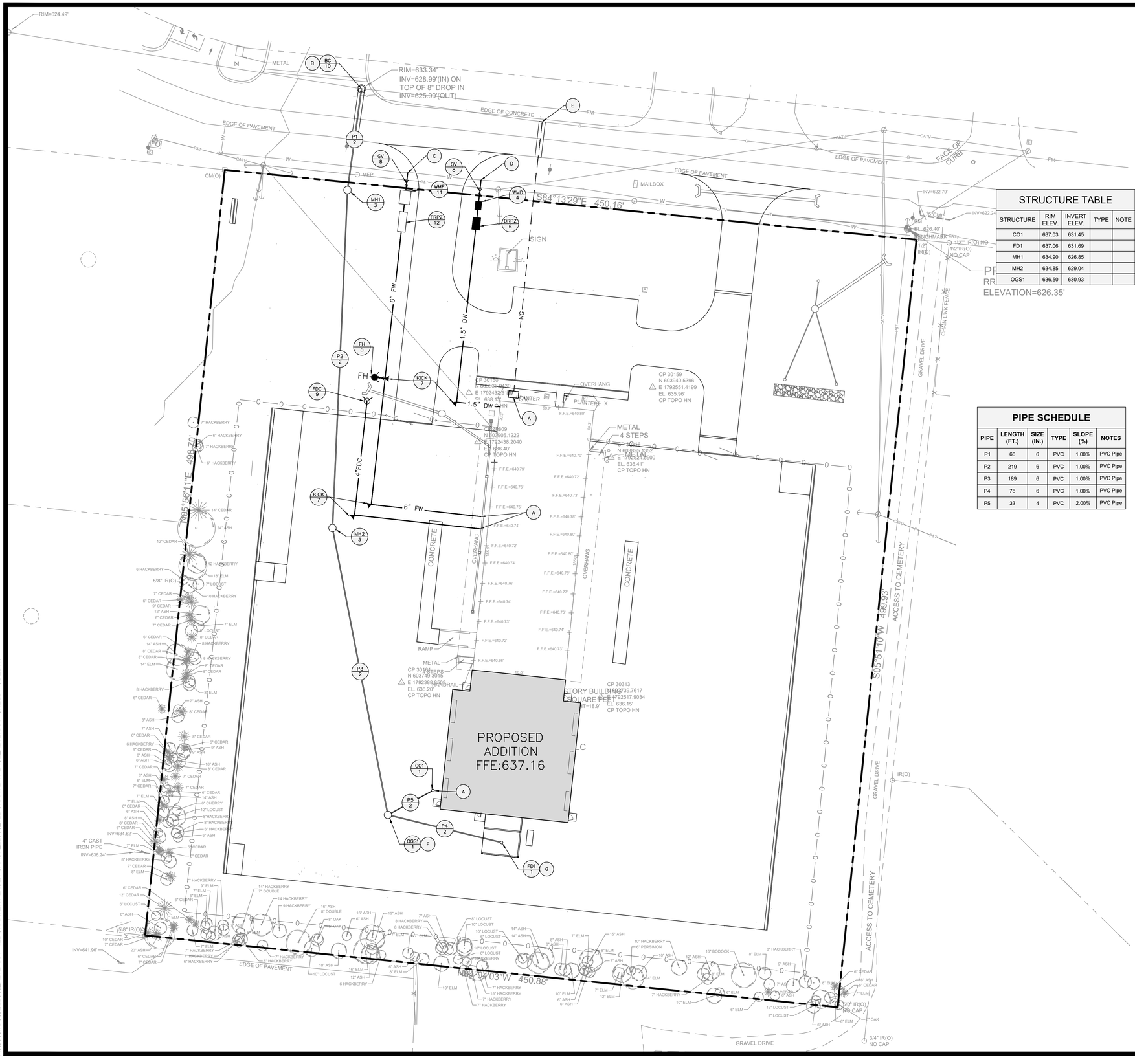
DATE:
03.27.23

DRAWING
SWPPP DETAILS

C511

3/10/2023 2:30:13 PM
Autodesk Docs://22066_ALTERRA - 122 CHARTER PLACE/PSARCH_22066_122 CHARTER PLACE_ALTERRA - SHELL MODEL.rvt

AGENCY REVIEW - NOT FOR CONSTRUCTION



STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INVERT ELEV.	TYPE	NOTE
CO1	637.03	631.45		
FD1	637.06	631.69		
MH1	634.90	626.85		
MH2	634.85	629.04		
OGS1	636.50	630.93		

PIPE SCHEDULE

PIPE	LENGTH (FT.)	SIZE (IN.)	TYPE	SLOPE (%)	NOTES
P1	66	6	PVC	1.00%	PVC Pipe
P2	219	6	PVC	1.00%	PVC Pipe
P3	189	6	PVC	1.00%	PVC Pipe
P4	76	6	PVC	1.00%	PVC Pipe
P5	33	4	PVC	2.00%	PVC Pipe

GENERAL UTILITY NOTES

1. UNLESS OTHERWISE NOTED, ALL WATER LINES SHALL BE PVC WITH 3' MIN. COVER.

2. UNLESS OTHERWISE NOTED, ALL SANITARY SEWER LINES SHALL BE PVC WITH 4' MIN. COVER.

3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

4. ALL ELECTRICAL, TELEPHONE AND GAS EXTENSIONS, INCLUDING SERVICE LINES, SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.

6. PRIOR TO THE CONSTRUCTION OF ANY CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN AND/OR ANY DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATION FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND IT'S CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

7. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS:
ALL WATER LINE FITTINGS SHALL BE INSTALLED WITH THRUST BLOCKING (SEE UTILITY DETAILS, THESE PLANS). ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL (SEE UTILITY DETAILS, THESE PLANS). ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL (SEE UTILITY DETAILS, THESE PLANS).

8. PRIVATE SEWER LINES MUST BE INSTALLED BY A LICENSED PLUMBER AND MUST BE INSTALLED IN ACCORDANCE WITH THE PLUMBING CODE OF THE GOVERNING AUTHORITY.

9. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL PERMIT FEES. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND ORDINANCES AND RECEIVE APPROPRIATE APPROVALS WHERE REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.

10. SEE MP&E PLANS FOR CONTINUATION OF UTILITIES INTO BUILDINGS. THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF THE CONNECTIONS OF THE SITE UTILITIES WITH THE BUILDING UTILITIES.

11. ADJUST ALL CASTINGS TO MATCH FINISH GRADES.

12. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

13. NOTE TO SPRINKLER CONTRACTOR:
THE FOLLOWING FLOW AND PRESSURE DATA HAS BEEN CALCULATED BY THE CITY OF LA VERGNE, LA VERGNE. FIRE DEPT. ON 02-23-23.

UTILITY NOTES

A	SEE PLUMBING FOR CONTINUATION INTO BUILDING
B	TIE TO EXISTING MANHOLE AT 626.19 ELEVATION, CONTRACTOR TO FIELD VERIFY INVERT.
C	FIRE WATER TAP, COORDINATE WITH CITY OF LA VERGNE PUBLIC WORKS
D	DOMESTIC WATER TAP, COORDINATE WITH CITY OF LA VERGNE PUBLIC WORKS
E	GAS TAP, COORDINATE WITH GAS PROVIDER
F	OIL AND GREASE SEPARATOR, COORDINATE WITH PLUMBING PLANS
G	FLOOR DRAIN, COORDINATE WITH PLUMBING PLANS

UTILITY DETAILS

1	EXTERIOR CLEANOUT
2	UTILITY TRENCH & BEDDING
3	MANHOLE
4	1.5" DOMESTIC WATER METER
5	FIRE HYDRANT
6	1.5" REDUCED PRESSURE BACKFLOW PREVENTOR (ABOVEGROUND)
7	CONCRETE THRUST BLOCK
8	GATE VALVE WITH BOX
9	FIRE DEPARTMENT CONNECTION
10	BOOT CONNECTION TO MANHOLE
11	6" FIRE WATER METER
12	6" REDUCED PRESSURE BACKFLOW PREVENTOR

LEGEND: UTILITY

- NG — PROPOSED GAS LINE
- W — PROPOSED WATER LINE
- P# 1 — PROPOSED SANITARY SEWER LINE
- PROPOSED MANHOLE
- PROPOSED WATER METER
- GM — PROPOSED GAS METER
- PROPOSED WATER VALVE
- PROPOSED WATER CONNECTION W/ KICKER
- PROPOSED CLEANOUT
- PROPOSED FIRE HYDRANT
- PROPOSED BACK FLOW ASSEMBLY
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED DOUBLE DETECTOR CHECK VALVE ASSEMBLY

UTILITY PLAN

30 0 30 60
GRAPHIC SCALE

P. STUDIO
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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. MCSHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 0011339
STATE OF TENNESSEE
3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

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CEM

DATE:
03.27.23

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UTILITY PLAN

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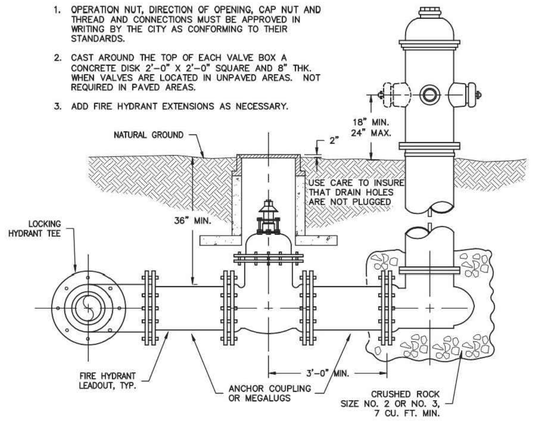
AGENCY REVIEW - NOT FOR CONSTRUCTION

NOTES:

1. OPERATION NUT, DIRECTION OF OPENING, CAP NUT AND THREAD AND CONNECTIONS MUST BE APPROVED IN WRITING BY THE CITY AS CONFORMING TO THEIR STANDARDS.
2. CAST AROUND THE TOP OF EACH VALVE BOX A CONCRETE DISK 2'-0" X 2'-0" SQUARE AND 8" THK. WHEN VALVES ARE LOCATED IN UNPAVED AREAS. NOT REQUIRED IN PAVED AREAS.
3. ADD FIRE HYDRANT EXTENSIONS AS NECESSARY.



TYPICAL FIRE HYDRANT SETTING
N.T.S.

Revised September, 2015

STANDARD DETAIL 040

CITY OF LAVERGNE, TENNESSEE

G & M File No. 442-56

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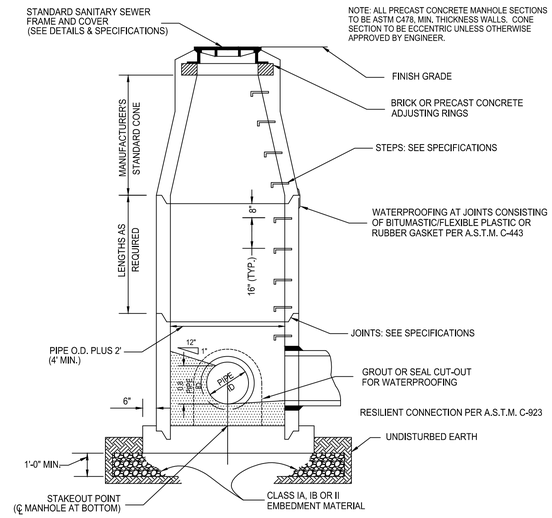
(615) 895-8221 * FAX (615) 895-0632

FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\070 Reduced Pressure Backflow Preventer.dwg

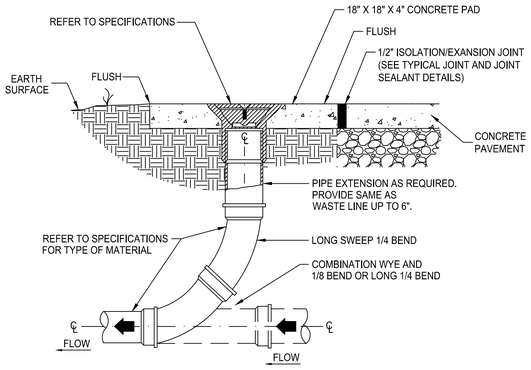
FH 5



COORDINATE WITH TECHNICAL SPECIFICATIONS

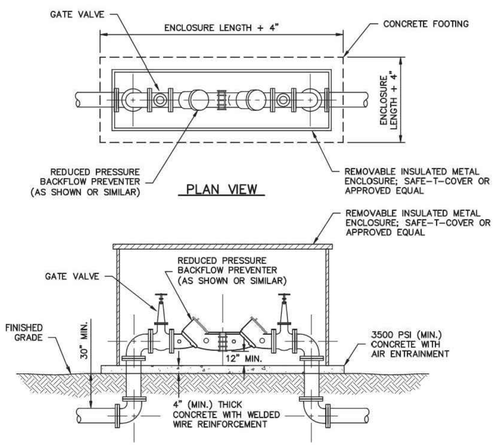
SANITARY SEWER MANHOLE
(NOT TO SCALE)

MH 3



EXTERIOR CLEANOUT
(NOT TO SCALE)

CO 1



ELEVATION

1.5" REDUCED PRESSURE BACKFLOW PREVENTER (ABOVEGROUND)
N.T.S.

Revised August 2017

STANDARD DETAIL 070

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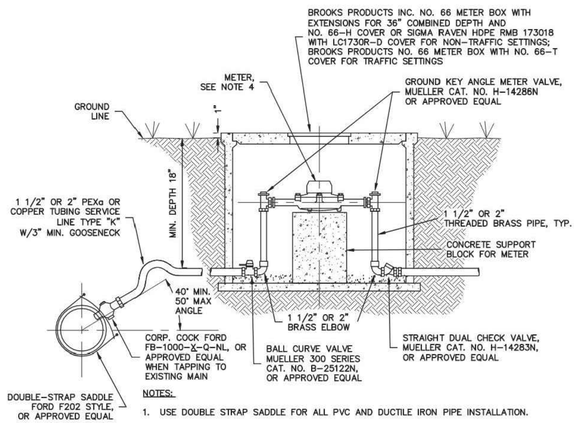
RPZ 6



NOTES:

1. USE DOUBLE STRAP SADDLE FOR ALL PVC AND DUCTILE IRON PIPE INSTALLATION.
2. PLACE 3" DEEP OF CLEAN 1/2" TO 3/4" CRUSHED STONE IN BOTTOM OF METER BOX.
3. FITTINGS: TUBING-PEXa OR TYPE "K" COPPER SERVICE LINE.
4. METER:
   - 4.1. 1 1/2 INCH – BADGER MODEL RCDL-120, LEAD FREE BRONZE ALLOY WITH REMOTE READ TRANSMITTER, OR APPROVED EQUAL.
   - 4.2. 2 INCH – BADGER MODEL RCDL-170, LEAD FREE BRONZE ALLOY WITH REMOTE READ TRANSMITTER, OR APPROVED EQUAL.

1 1/2" OR 2" DISC METER WATER SERVICE ASSEMBLY
N.T.S.

Revised August 2017

STANDARD DETAIL 021

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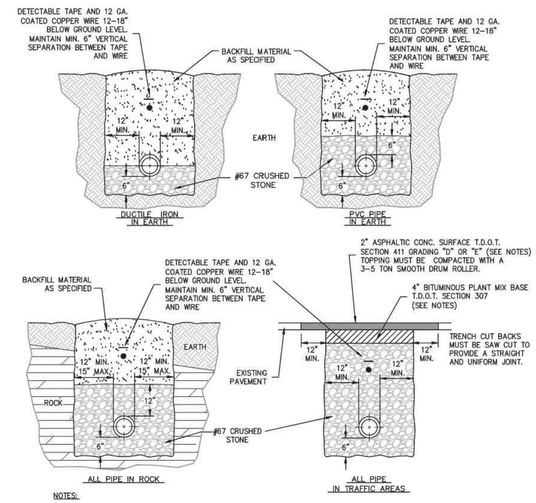
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\021 Disc Meter Water Service Assembly.dwg

WMD 4



NOTES:

1. FOR ROADWAYS 30' OR GREATER IN WIDTH OR DIVIDED HIGHWAYS WITH 2 OR MORE LANES USE 8" OF BINDER (2 LIFTS) AND 3" OF TOPPING.
2. BINDER SHALL BE INITIALLY INSTALLED FLUSH WITH EXISTING ASPHALT SURFACE AND SHALL BE IN PLACE FOR 2 WEEKS TO ALLOW FOR SETTLING AND COMPACTION. AFTER 2 WEEKS, MILL UP 2" OF THE NEW BINDER AND EXISTING ASPHALT TO THE DIMENSIONS SHOWN IN EACH DIRECTION AND INSTALL 2" OF NEW SURFACE MIX OVER MILLED AREA. REPAINT OR REPLACE, IF THERMOPLASTIC, ALL DELINEATION LINES AND PAVEMENT MARKINGS.
3. WHERE EXISTING SURFACE IS CONCRETE SUBSTITUTE 6" T.D.O.T. ITEM NO. 701-02.
4. FOR RESTORATION OF GRAVEL SURFACES, BACKFILL ENTIRE TRENCH WITH STONE.

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STANDARD WATERLINE BEDDING & BACKFILLING
N.T.S.

Revised September, 2015

STANDARD DETAIL 010

CITY OF LAVERGNE, TENNESSEE

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TB 2

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ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. MCMANNON REGISTERED ENGINEER AGRICULTURE 3-24-2023 COMMERCE No. 00113398 STATE OF TENNESSEE

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066

DRAWN BY: CEM

DATE: 03.27.23

DRAWING

UTILITY DETAILS

C610

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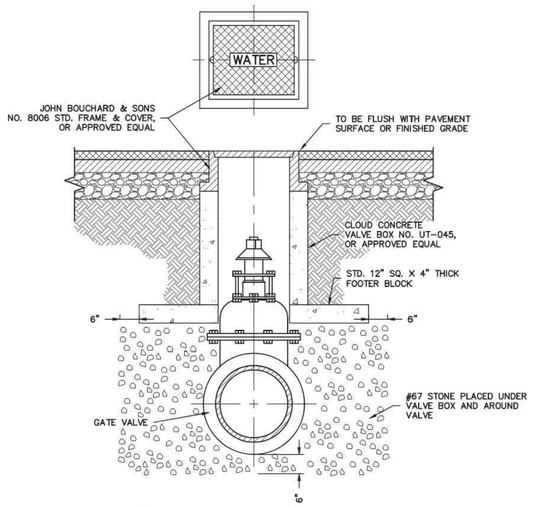

TYPICAL VALVE BOX SETTING INSIDE & OUTSIDE OF PAVEMENT

N.T.S.

Revised September, 2015

STANDARD DETAIL 030

CITY OF LAVERGNE, TENNESSEE

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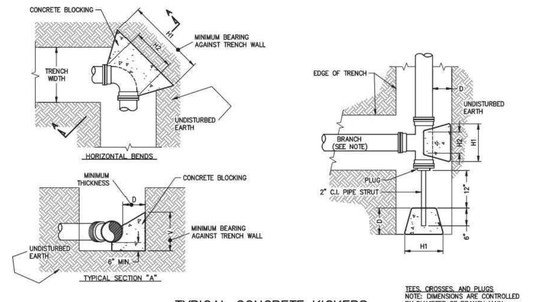
VB
8



TYPICAL CONCRETE KICKERS

N.T.S.

NOTE: SEE SHEET 2 FOR TABLE OF DIMENSIONS FOR CONCRETE BLOCKERS.

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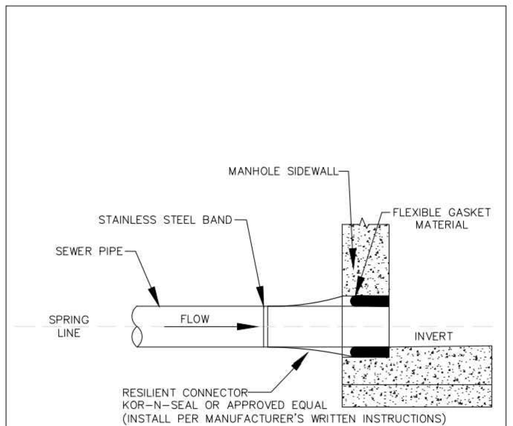
Revised September, 2015

STANDARD DETAIL 081

CITY OF LAVERGNE, TENNESSEE

G & M File No. 442-56

FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\081 Typical Concrete Kickers.dwg



CTI ENGINEERS, INC.
3354 PERIMETER HILL DRIVE, SUITE 140
NASHVILLE, TN 37211
615-834-8300

6.0

RESILIENT BOOT CONNECTION FOR SEWER PIPE TO MANHOLE DETAIL

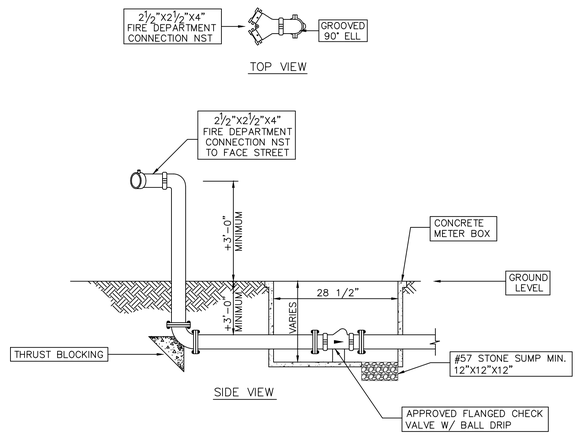
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

STANDARD SEWER DETAILS

PUBLIC WORKS DEPARTMENT
148 INTERNATIONAL BLVD.
LA VERGNE, TN 37086
615-793-9891

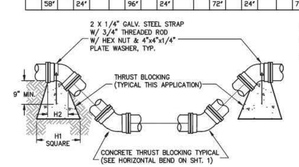
BC
10



FIRE DEPARTMENT REMOTE SIAMESE CONNECTION

FDC
9

TABLE BASED ON 4,000 PSF SOIL CAPACITY AND 150 PSI WORKING PRESSURES + SOIL DESIGN ENGINEER SHALL SIZE FOR SPECIFIC SITE CONDITIONS AND PRESSURES.	TABLE OF DIMENSIONS FOR CONCRETE BLOCKERS																								
	TEES, CROSSES, & PLUGS				90° BENDS				45° BENDS				22-1/2° BENDS				11-1/4° BENDS				PIPE SIZE
	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	
	18"	10"	12"	18"	1.90	18"	41"	45°	18"	1.90	18"	6"	12"	18"	1.50	18"	6"	12"	18"	1.50	18"	6"	12"	18"	1.50	2"&2-1/4"
	24"	12"	12"	18"	2.25	24"	12"	12"	18"	2.25	18"	8"	12"	18"	1.60	18"	8"	12"	18"	1.60	18"	8"	12"	18"	1.60	3" & 4"
	24"	16"	18"	18"	3.58	30"	16"	18"	18"	4.85	24"	10"	16"	18"	3.25	24"	10"	16"	18"	3.25	24"	10"	16"	18"	3.20	6"
	36"	18"	18"	18"	5.05	39"	18"	24"	18"	7.30	30"	11"	18"	18"	3.95	30"	11"	18"	18"	3.95	24"	11"	16"	18"	3.40	8"
	48"	24"	18"	24"	7.15	54"	30"	24"	18"	10.25	24"	18"	21"	18"	4.60	24"	18"	21"	18"	4.60	24"	18"	21"	18"	4.60	10"
	54"	30"	24"	24"	13.4	54"	32"	36"	24"	18.15	42"	18"	24"	24"	9.60	24"	18"	24"	24"	6.66	24"	18"	21"	24"	6.10	12"
	60"	32"	30"	24"	17.9	60"	40"	42"	24"	25.0	44"	24"	30"	24"	13.2	30"	24"	24"	24"	9.28	27"	21"	24"	24"	7.90	14"
	66"	34"	36"	24"	22.5	69"	48"	48"	24"	29.0	48"	30"	36"	24"	17.8	36"	30"	27"	24"	11.8	27"	24"	27"	24"	9.10	16"
	66"	36"	40"	24"	27.5	69"	48"	48"	24"	33.0	48"	30"	36"	24"	17.8	36"	30"	29"	24"	13.8	27"	30"	29"	24"	11.6	18"
		38"		24"			48"		24"			40"		24"			36"		24"			30"	40"		28"		20"
		42"		24"			60"		24"			48"		24"			42"		24"				42"		32"		24"
		58"		24"			96"		24"			72"		24"			72"		24"				49"		36"		36"



TYPICAL CONCRETE KICKERS

N.T.S.

NOTES:

1. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
2. THRUST BLOCKING TO BE POURED-IN-PLACE 3000 psi (MIN.) CONCRETE.

Revised September, 2015

STANDARD DETAIL 081

CITY OF LAVERGNE, TENNESSEE

G & M File No. 442-56

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FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\081 Typical Concrete Kickers.dwg

KICK
7

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761 OLD HICKORY BLVD #301
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call | 615.258.5562
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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. MCSHANNON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00113398 STATE OF TENNESSEE 3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
UTILITY DETAILS

C611

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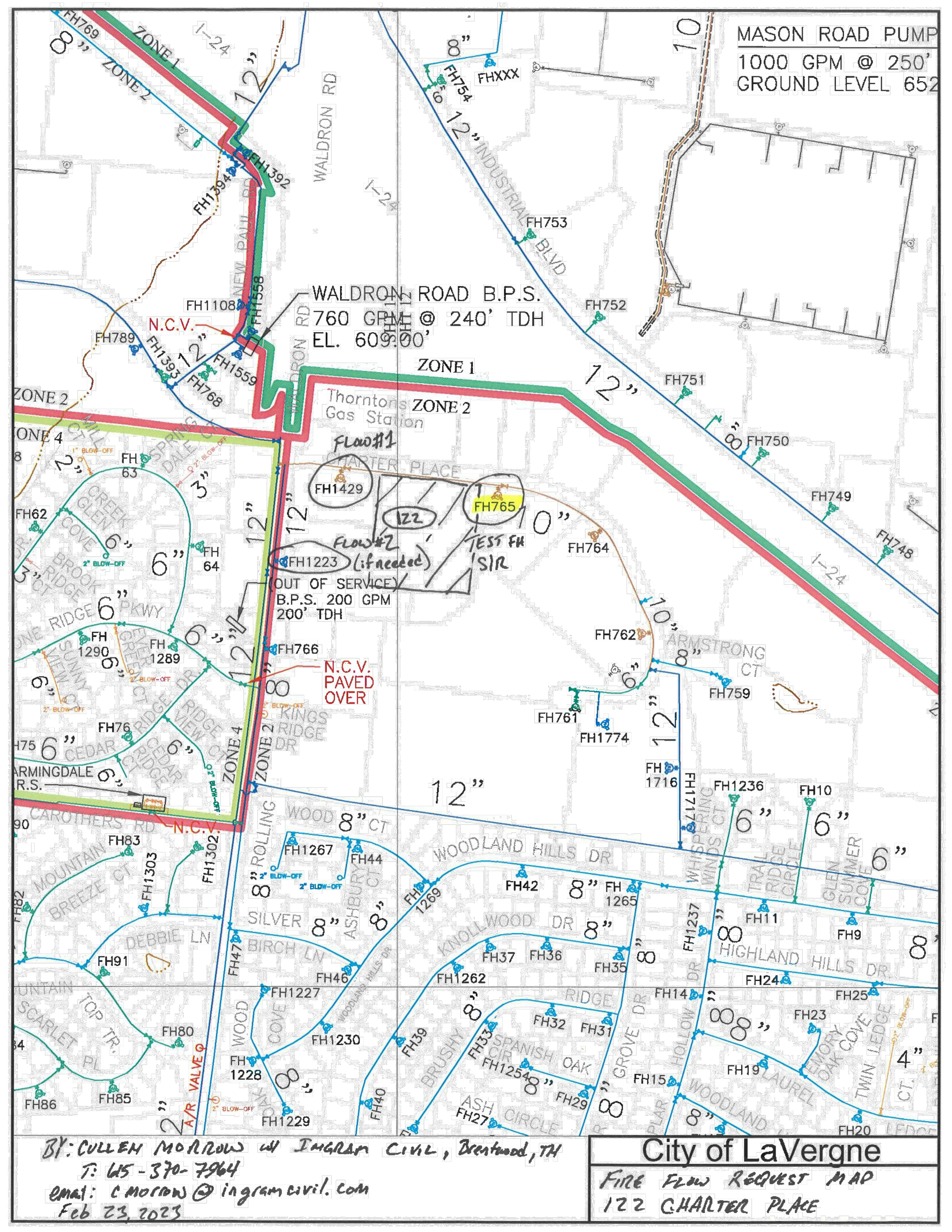


LA VERGNE
TENNESSEE
PUBLIC WORKS

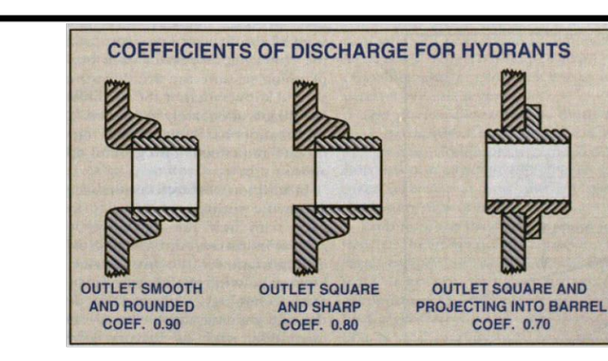
CUSTOMER DATA AND FIRE HYDRANT FLOW TEST FORM

Contact Info.:	Chris Morrow, Ingram Civil, 615-370-7964, cmorrow@ingramcivil.com	Fire Flow Request Date:	2/23/2023
Project Address:	122 Charter Place		
Test Date:	Sunday, March 12, 2023		

FH Purpose	FH # and/or Location	Static Pressure (psi)	Residual Pressure (psi)	FH Elev. (ft)	Calc'd Fire Flow Avail. in Main(s) @ 20 psi (gpm)
Static/Residual:	FH765 e/b Chater Place approx 900' e/o Waldron Rd	132	120	623	5,434

		FH Orifice Type [1]	FH Nozzle Size [2] (inches)	# of Nozzles Flowed	Start Time	Stop Time	Duration (min)	Pitot (psi)	FH Elev. (ft)	Water Loss (gallons)	FH Flowrate (gpm)
Flow Hydrant 1:	FH1429 e/b Chater Place approx 200' e/o Waldron Rd	0.9	2.5	1	7:40 AM	7:44 AM	4	94	625	6,507	1,627
Flow Hydrant 2:							0			0	0
Flow Hydrant 3:							0			0	0
										6,507	1,627

Values For Orifice Type [1]	
0.9	Rounded Outlet (inside of barrel)
0.8	Sharp Edged Outlet (Inside of barrel)
0.7	Sharp Edged Outlet (Projecting into FH barrel)
0.95	Flow Straightening on Testing Unit



Values For FH Nozzle [2] (inches)	
2.5	Hose Connection
4	Pumper Connection
4.5	Pumper Connection
Measured	Insert measured **inside diameter** of nozzle (inches)

ENGINERING REVIEW

Pressure Zone:	Zone 2, Sanford Knob Tank HWL 940, FF 894	Sys. HGL Elev.
BPS Data:	MR BPS @ 125psi, pad 653', HGL = 942'	
Water Tank Levels:	Sanford Knob @ 85% Full = 933'	933
Waterline Size/Type:	12"	
Reviewed By:	S. Tatalovich	Date: 3/13/2023

COMMENTS: Static pressure drop greater >10psi. Static pressure is accurate. Flow results in range for a 12" waterline. No reason to suspect a closed valve. The test is good.

Calculations

FH Elev:	623	
Static FH Pressure (pressure x 2.31):	305	ft
Static FH HGL:	928	
Tank Water Level:	933	
Static FH HGL:	928	
Background System Dynamic Loss @ Test FH:	5	ft
Background System Dynamic Loss @ Test FH:	2.2	psi
System Pressure Drop Due to FH Test:	12.0	psi
System Pressure Drop Due to FH Test:	9%	

FH Test
Data Collection Form

Test Date	3/12/23

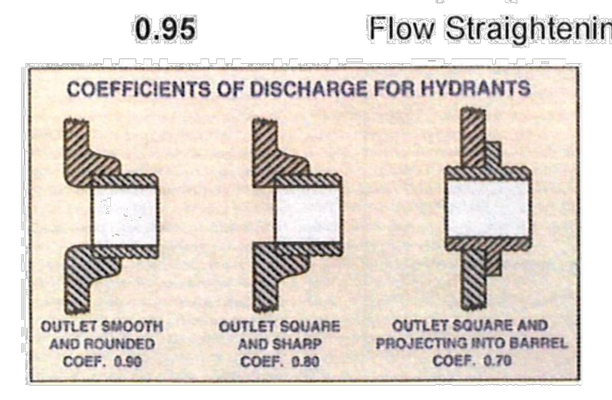
TEST FH

Test FH #	FH-765
Test FH Location	
Static Pressure	132
Residual Pressure	120

FLOW FHs	FLOW FH#1	FLOW FH#2	FLOW FH#3
Flow FH #	FH-1429		
Flow FH Location			
Test Start Time	7:40		
Test Stop Time	7:44		
Pitot Pressure	94		
Nozzle Coefficient [1]	0.9		
Nozzle Diameter [2]	2.5		
# Nozzles Flowed [3]	1		

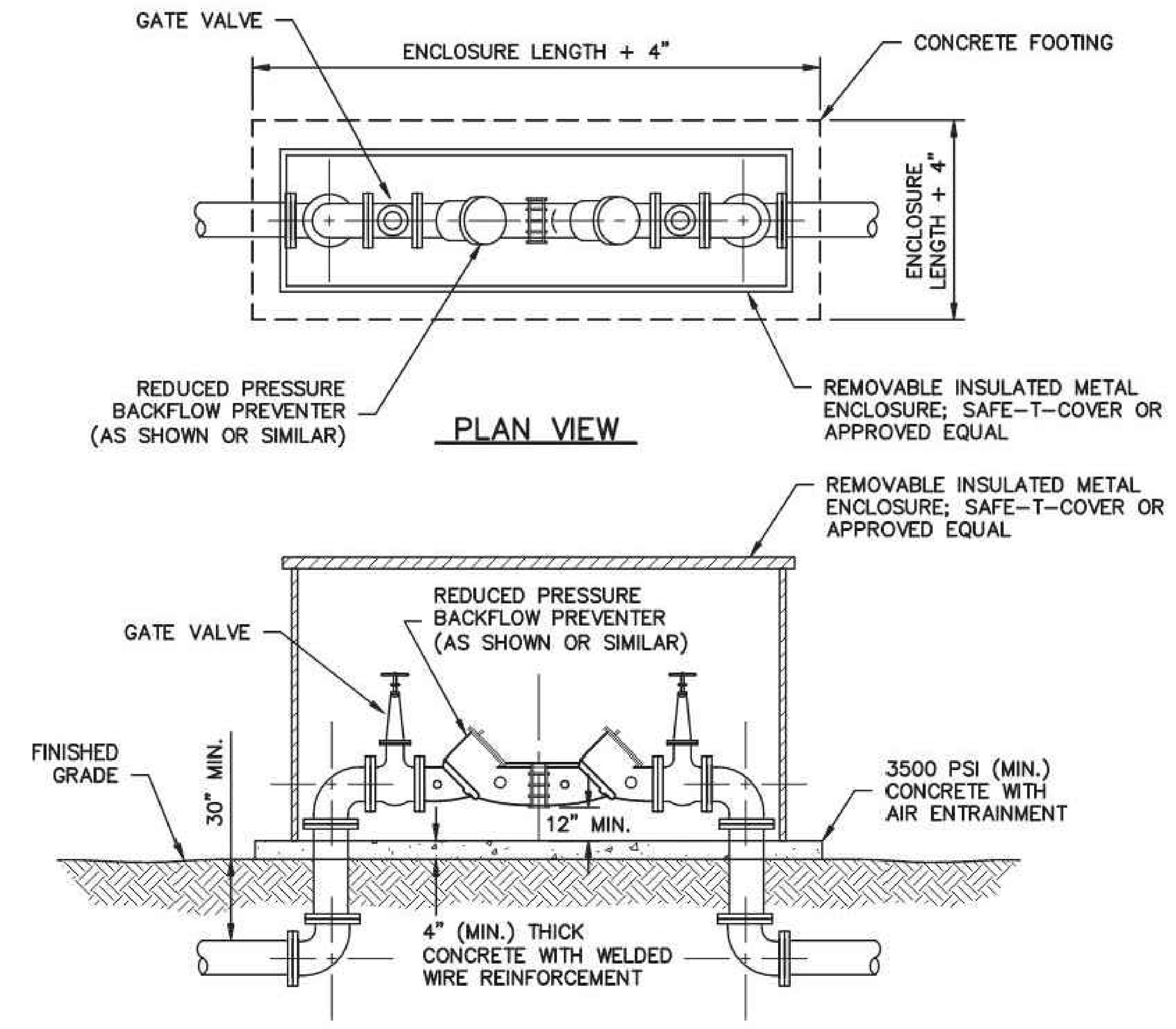
NOTES: ALL PRESSURES IN GREEN CELLS MUST BE TAKEN SIMULTANEOUSLY.
[1] Coefficient Values

0.9	Rounded Outlet (inside of barrel)
0.8	Sharp Edged Outlet (Inside of barrel)
0.7	Sharp Edged Outlet (Projecting into FH barrel)
0.95	Flow Straightening on Testing Unit



[2] Nozzle Diameter — Is internal diameter
[3] #Nozzles — List the number of nozzles opened (flowed) at that flow FH.

FIRE FLOW TEST



6" REDUCED PRESSURE BACKFLOW PREVENTER (ABOVEGROUND)
N.T.S.
Revised August 2017
STANDARD DETAIL 070
CITY OF LAVERGNE, TENNESSEE
G & M File No. 442-56
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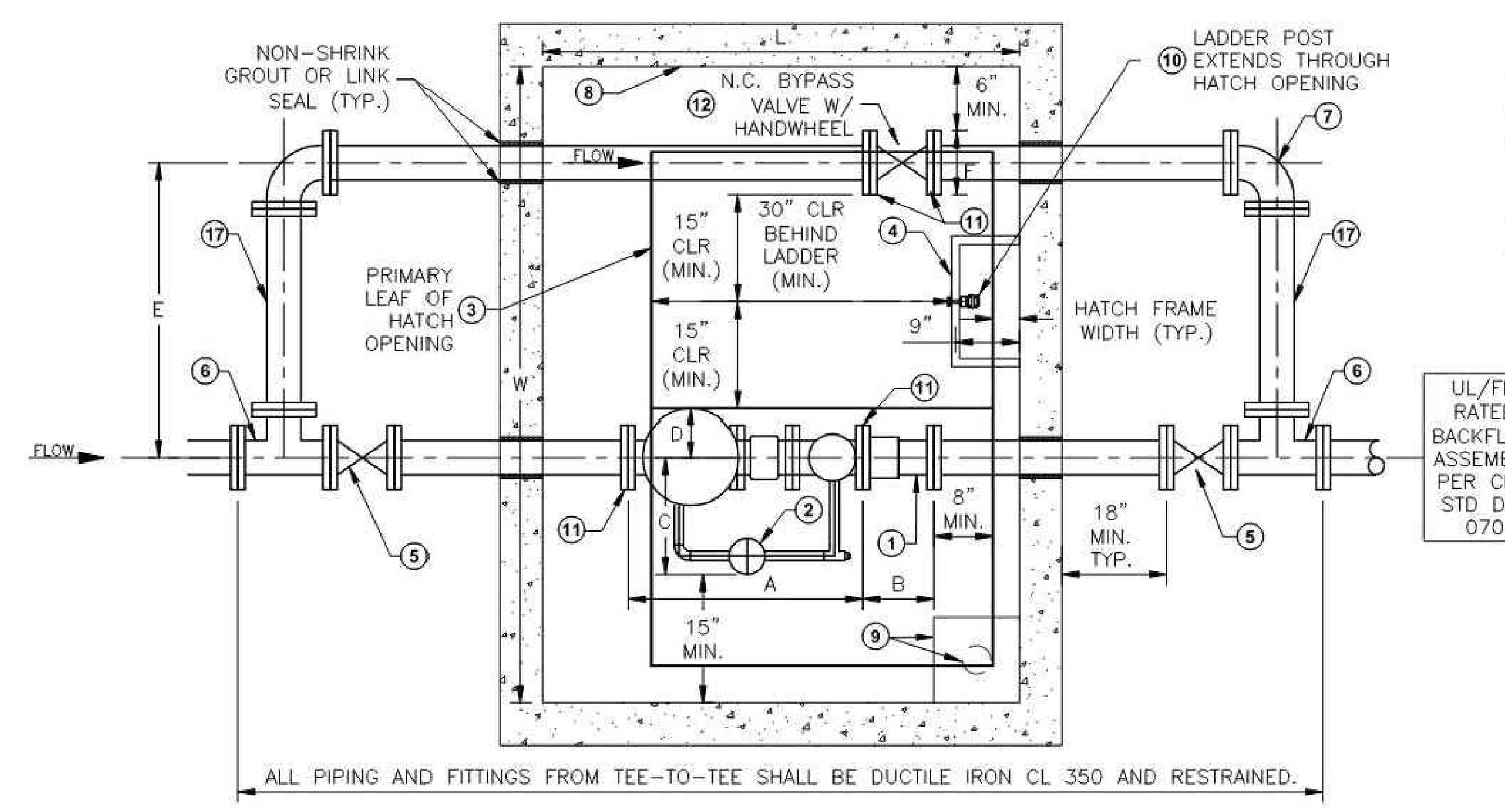
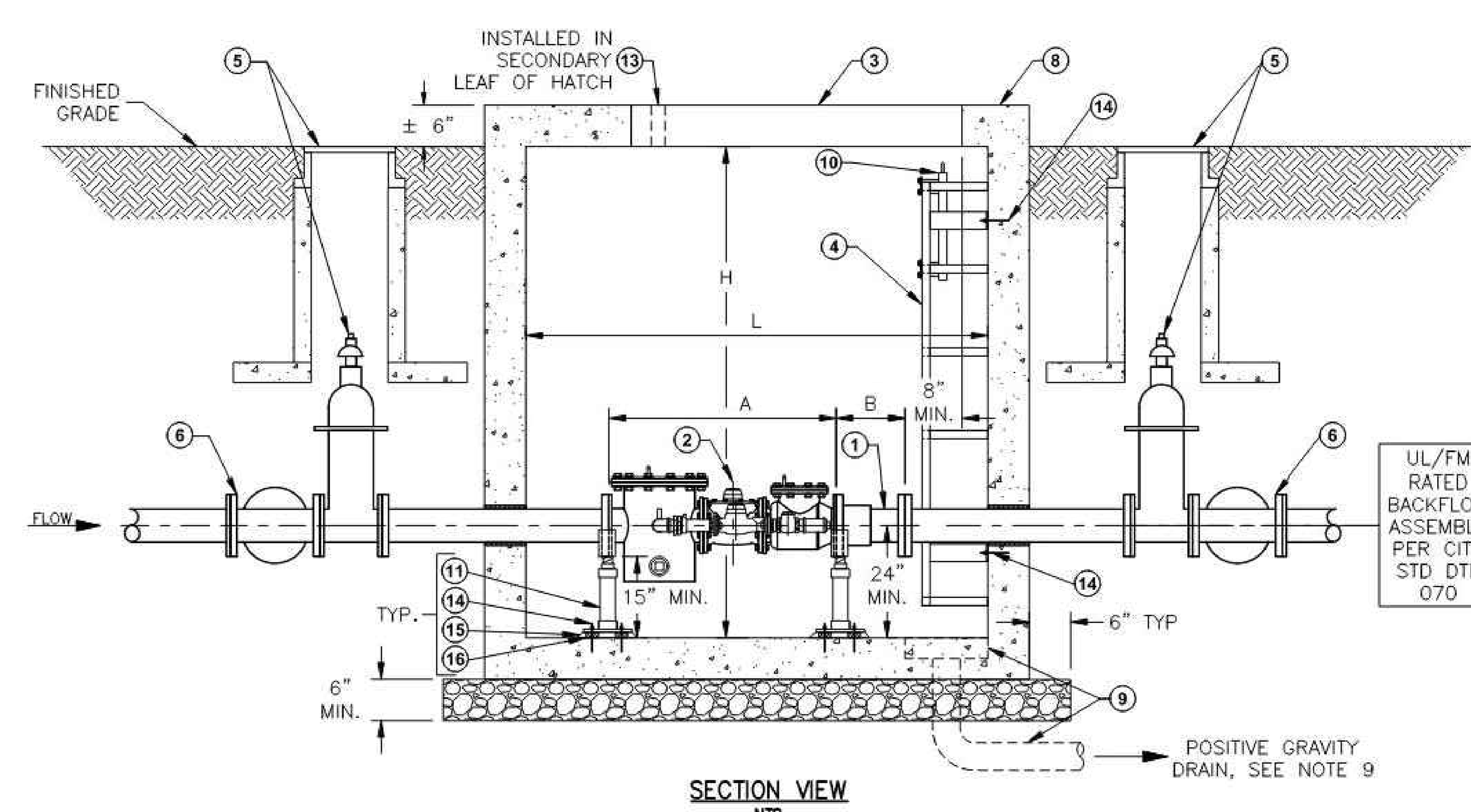
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\070 Reduced Pressure Backflow Preventer.dwg

RPZ
12





L:\Engineering\442 City of La Vergne\442-56 Standard Specifications\442-56 Drawings\023 Fire Meter Assembly in Vault for domestic and fire service Rev1-6-23.dwg LAYOUT: MODEL SAVED: 3/1/2023 8:56 AM PAGESETUP: ---- PLOTTED: 3/1/2023

WMF
10

	METER LENGTH	RFCA LENGTH	METER BYPASS WIDTH	METER WIDTH	PIPE SEPARATION	FLANGE O.D.	MIN. INTERNAL DIMENSIONS (I.D.)				
							PRECAST VAULT			ACCESS HATCH	
MTR SIZE	A	B	C	D	E	F	W	L	H	WIDTH	LENGTH
4"	33"	9"	17"	7"	42"	9"	8'	6'	6'	72"	48"
6"	45"	10"	25"	10"	46"	11"	8'	6'	6'	72"	48"
8"	53"	10"	23"	13"	50"	14"	8'	7'	6'	72"	48"

NOTE: DIMENSIONS TO 1 INCH, FRACTIONS ROUNDED UP. CENTERLINE OF VAULT PIPING 24" ABOVE VAULT FLOOR.

NOTES:

1. ROMAC RFCA, OR APPROVED EQUIVALENT.
2. BADGER METER'S RECORDALL FIRE SERIES COMBINED FIRE AND DOMESTIC WATER METER ASSEMBLY, PER CITY. FIXTURE COUNT AND WATER APPLICATION SHALL BE SUPPLIED TO CITY WATER METER DEPT. AND CITY SHALL DETERMINE AND SELECT THE APPROPRIATE METER SIZE AND METER TYPE.
3. ACCESS HATCH: DOUBLE LEAF AL FRAME WITH SS COMPONENTS: HALLIDAY W2S; HALLIDAY H2W H20 RATED LID FOR OFF-STREET/INDIRECT TRAFFIC AREAS*; DIMENSIONS AS SHOWN, OR APPROVED EQUALS. *DO NOT INSTALL IN DIRECT TRAFFIC; DESIGNED FOR OFF-STREET LOCATIONS NOT SUBJECTED TO HIGH DENSITY TRAFFIC. PRIMARY LEAF OF HATCH SHALL BE POSITIONED OVER THE ACCESS LADDER OF THE VAULT.
4. ALUMINUM FIXED LADDER: RUNGS 9" OFF VAULT WALL. 12" VERTICAL SPACING, (FIRST RUNG >7" AND < 12" FROM FLOOR), LADDER FRAME STOPS 2" FROM CEILING (MINIMUM). ANCHOR LADDER EVERY 4 FEET (MIN.).
5. GATE VALVE WITH VALVE BOX PER CITY STD. DTL. 030, "TYPICAL VALVE BOX SETTING INSIDE & OUTSIDE OF PAVEMENT". VALVE SHALL BE FL (TEE SIDE) x MJ (VAULT SIDE) STYLE.
6. DUCTILE IRON TEE (AWWA FLANGED TYP.) W/ BURIED SERVICE RATED GASKETS & 304 SS BOLTS, NUTS, & LOCKING WASHERS TORQUED TO AWWA SPEC FOR FLANGED FITTINGS.
7. DUCTILE IRON 90-DEGREE BEND (MECHANICAL JOINT WITH MEGALUG EA. END).
8. PRECAST CONCRETE VAULT, 5,000 PSI (DIMENSIONS AS SHOWN).
9. SUMP DRAIN: POSITIVE GRAVITY DRAIN WITH 4" SCH 40 PVC WHERE POSSIBLE, ELSE 3" DEEP SUMP, FLOOR SLOPED 2% TO DRAIN/SUMP.
10. LADDER POST TO EXTEND ABOVE HATCH TO FACILITATE VAULT ACCESS; BILCO LU-4, JL LP-4, OR APPROVED EQUIVALENT.
11. ADJUSTABLE PIPE SUPPORT SADDLE ASTM 304 S.S., TRUMBULL ITEM NO. 364-583X OR ENGINEER APPROVED EQUAL WITH 2" SCH 40 EXTENSION PIPE 304 S.S. ADJUSTABLE PIPE SUPPORTS SHALL BE SIZED TO FIT PIPE/METER FLANGES. 15" CLEAR SPACE BETWEEN PIPE FLANGE AND VAULT FLOOR, VAULT CEILING HEIGHT SHALL CONSIDER RISING STEM AND YOKE GATE VALVE OPERATION HEIGHT.
12. BYPASS GATE VALVE (UL LISTED & FM APPROVED, FL.xFL.) WITH HANDWHEEL OPERATOR (N.C.)
13. METER TRANSPONDER: CORE 2" HOLE IN SECONDARY LEAF OF THE HATCH FOR ATTACHING METER TRANSPONDER, AND SUPPLY SUFFICIENT CORD LENGTH SO HATCH LID CAN BE OPENED.
14. (4) 5/8" REDHEAD S.S. CONCRETE ANCHOR BOLTS WITH 5/8"ø S.S HEX HEAD ANCHOR NUT AND 1"X 5/8"ø HEAVY S.S. WASHER DRILL AND MOUNT INTO CONCRETE WITH 3" MINIMUM EMBEDMENT.
15. 1" THICK NON-SHRINK GROUT LEVELING COURSE.
16. 1" STAINLESS STEEL SPACER UNDER BASEPLATE.
17. PIPE SPOOL SHALL BE DIP FACTORY FLANGE (NO BOLT-ON OR SCREW-ON) BY PLAIN END.

4"–8" FIRE & DOMESTIC METER AND VAULT ASSEMBLY
N.T.S.
Revised January 2023
STANDARD DETAIL 023
CITY OF LA VERGNE, TENNESSEE
G & M File No. 442-56
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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H BOHANNON — REGISTERED ENGINEER — AGRICULTURE COMMERCE — No. 00113398 — STATE OF TENNESSEE — 3-24-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066
DRAWN BY: CEM
DATE: 03.27.23
DRAWING
UTILITY DETAILS
C612

AGENCY REVIEW - NOT FOR CONSTRUCTION

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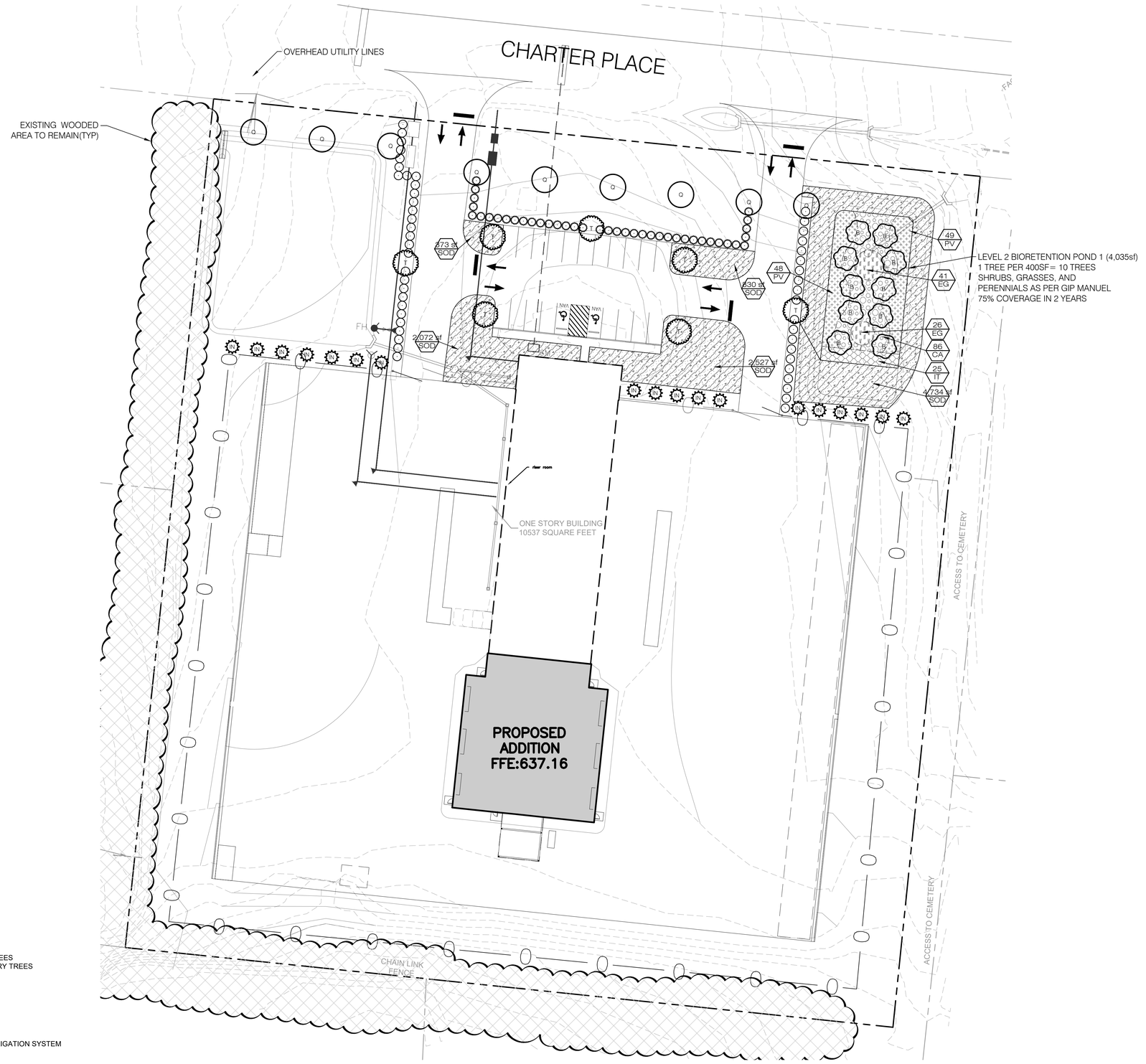


ALTERRA
LANDSCAPE PLAN

SITE DATA
SITE AREA: ± 5.16 AC

SITE ZONING: I-2 HEAVY INDUSTRIAL
SURROUNDING ZONE:I-2 HEAVY INDUSTRIAL

REQUIRED LANDSCAPE:		PROVIDED:
3 CANOPY TREES PER ACRE	= 16 (2.5") CANOPY TREES	16 (2.5") CANOPY TREES
3 UNDERSTORY TREES PER ACRE	= 16 (1.5") UNDERSTORY TREES	18 (1.5") UNDERSTORY TREES
15 SHRUBS PER ACRE	= 78 (18" HT) SHRUBS	82 (36" HT) SHRUBS

PARKING LOT SCREEN:
SCREEN PARKING LOTS FROM ROAD WITH 36" HT SCREEN

TRANSITIONAL SCREENING
-NONE REQUIRED

ALL PROPOSED TREES AND SHRUBS TO BE IRRIGATED WITH CONTRACTOR DESIGN BUILD IRRIGATION SYSTEM

NORTH SCALE: 1" = 30' (0, 30, 60, 90 feet)

HB LAND DESIGN
1894 Gen. Geo. Patton Dr.
Suite 400
Franklin, TN 37067
Tel: 615.376.2421
www.hblanddesign.com

PROPOSED SITE FOR:
122 CHARTER PLACE - ALTERRA
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE

CONNOR L. BALL REGISTERED LANDSCAPE ARCHITECT 07/12/2024

Job # - 23149
BY: cb

L1.0 LANDSCAPE PLAN

BIORETENTION NOTES:

1. Verify that the bioretention areas have been constructed in compliance of the requirements of the construction documents prior to beginning work
2. Care should be taken to minimize compaction to soils within the limits of the bioretention area(s)
3. No machinery (other than walk behind rototillers) shall be used within the limits of the bioretention area(s)
4. Dig a test percolation pit (1'x1'x1'x deep and fill with water. Monitor to verify that all the water has drained from the pit within a 24 hour period. If water remains after 24 hours, cease all work on the bioretention area(s) and contact the Civil Engineer for further instructions
5. The work required for construction of the bioretention area(s) consists of removal of weeds, preparation of planting areas, mulching, and clean up.
6. Contractor is responsible for keeping the bioretention area free from sediment resulting from storm-water runoff.
7. The contractor shall conduct all site preparation activities to not allow 'sediment loss' to the bioretention areas.
8. Provide or verify installation of a silt fence prior to commencement of construction around the circumference of the bioretention area(s)
9. Begin construction of the bioretention area(s) after adjacent areas have been stabilized with stone or vegetation.
10. Comply with the Water Quality Control Act of 1971, including revisions, and other applicable laws, ordinances, and regulations.
11. The Contractor shall correct, at his own expense, any work that does not comply with the requirements of the contract.
12. The Contractor shall assume responsibility for protection of public streets, curbs, and utilities from damages from the Contractor's operations. Plan work to avoid ponding, flooding, ad sediment loss on site and upon adjacent properties.
13. Meet the requirements of all rules and regulations governing the respective utilities. Protect active utilities from damage during construction.
14. If active utilities are encountered in the course of excavation other than those indicated on the survey or civil plans, protect them from damage and relocate them in accordance with the Engineer's written instructions. Remove inactive utilities if such are encountered
15. The finished surface shall be free from any lumps of earth, rocks, stones, debris, or other improper materials. No trees, trunks, shrubs, stumps, undergrowth, or building rubbish will be permitted in the grading grading.
16. 17. Scarify top 6" of soil by hand or with a walk behind rotoriller to the planting area. Tractors or other heavy machinery are NOT allowed within the bioretention area(s)
17. Remove all weeds with three applications (at 2 week intervals) of a systemic herbicide such as Roundup during the period that weeds are actively growing and prior to preparing the bioretnetion area for planting.

811 Know what's **below.** **Call** before you dig.

PLANT STANDARDS

The standards set forth in "American Standard for Nursery Stock" represent general guideline specifications only and will constitute minimum quality requirements for plant material. All plants must meet minimum size noted at the materials schedule. And meet the characteristics stated on this drawing. All material installed on the site MUST meet or exceed these specifications. Any trees or shrubs not meeting these standards can be rejected at time of inspection.

TREE SPECIFICATIONS: ALL TREES SHALL HAVE THE FOLLOWING CHARACTERISTICS:

1. Deciduous trees shall have one dominant single straight trunk with the tip of the leader on the main trunk left intact and the terminal bud on the central leader is at the highest point on the tree.
2. Trees with forked trunks are acceptable if all the following conditions are met:
   a. The fork occurs in the upper 1/3 of the tree.
   b. One fork is less than 2/3 the diameter of the dominant fork.
   c. The top 1/3 of the smaller fork is removed at the time of planting.
3. No branch is greater than 2/3 the diameter of the trunk directly above the branch.
4. The trunk and/or major branches shall not touch
5. Several branches are larger in diameter and obviously more dominant.
6. Branching habit is more horizontal than vertical, and no branches are oriented nearly vertical to the trunk.
7. Branches are evenly distributed around the trunk with no more than one major branch located directly above another and the crown is full of foliage evenly distributed around the tree
8. Crown spread shall look proportional to the tree.
9. NO flush cuts or open trunk wounds or other bark injury
10. Root ball meets all ANSI standards and is appropriately sized

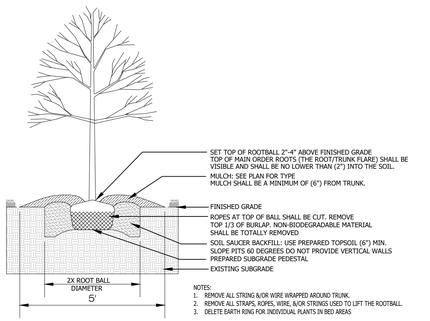
DEFICIENCIES NOT ACCEPTED:

1. Tip dieback on 5% of branches
2. Crown thin/spasely foliated
3. Included bark
4. Major Branches touching
5. Asymmetrical branching

Landscape shall not obstruct visibility or access to fire protection equipment including, but not limited to, fire hydrants and fire department connections

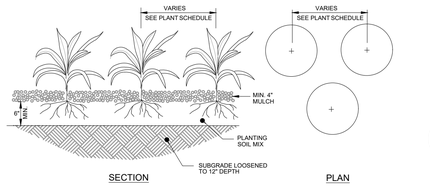
PLANTING NOTES:

1. Refer to all written specifications; adhere to Plans and Specifications for all phases of work.
2. Verify all utility locations in the field before work begins. Repair damaged utilities to owners satisfaction at no additional cost.
3. Verify all material quantities on the drawing during bidding and pricing. In the event of a discrepancy, the quantities drawn on the plan will take precedence over the material schedule.
4. All materials are subject to the approval of the Landscape Architect, City, and Owner.
5. Once unloaded from truck, immediately stand all trees up. DO NOT lie the trees down. This will reduce the risk of sunscald.
6. Plants shall meet specifications. Root balls shall meet or exceed size standards as set forth by 'American Standards for Nursery Stock'. Main leaders of all trees shall remain intact.
7. Mulch plant pits and planting beds with specified mulch to the depth indicated on drawings.
8. Prepare all topsoil used in tree, shrub, and seed mixes in accordance with the specifications
9. Discard any material which turns brown or defoliates within 5 days after planting. Replace immediately with approved specified material at no additional cost.
10. Maintain all plant material and lawns until project is accepted in full by the City.
11. Guarantee all workmanship and materials for a period of 1 calendar year.
12. Install all plant material in accordance with all local codes and ordinances. Obtain any required permits necessary to complete the work.
13. Provide 6" of topsoil for lawn areas (12" min. over rock), min. 24' of topsoil for shrub zones, and min. 48" deep for tree pits. Refer to specific root ball sizes for the min. diameter tree pit.
14. Trees shall be first quality representatives of their species and shall meet all requirements otherwise stipulated. The Landscape Architect reserves the right to reject plant materials in the field, at the growing location, or at the job site at any time during the project.
15. Test all tree pits for drainage. Any tree pit that holds water for more than 24 hours shall be installed using filter fabric wrapped perforated drainage tube (sloped to low point) and a washed pea gravel pit well drain



DECIDUOUS TREE PLANTING

P-NO-12



GROUNDCOVER PLANTINGS

GROUNDCOVER, GRASSES, AND PERENNIALS

LANDSCAPE NOTES:

1. Contractor responsible for locating and protecting all underground utilities prior to digging.
2. Contractor responsible for protecting existing trees from damage during construction as shown on plans.
3. Contractor to install 6" minimum depth of clean, friable topsoil at all planting beds and lawn areas prior to fine grading. see topsoil specification sheet I-1.3.
4. All shrub beds (existing and new) to be mulched with a 3-4 inch minimum layer of mulch .
5. Existing grass in proposed planting areas to be killed and removed and area to be hand raked to remove all rocks and debris larger than 1 inch in diameter prior to planting shrubs or laying sod. Landscape contractor to provide fine grading.
6. Any existing grass disturbed during construction to be fully removed, re-graded and replaced. All tire marks and indention to be repaired.
7. Soil to be tested to determine fertilizer and lime requirements and distributed prior to laying sod.
8. Sod to be delivered fresh (cut less than 24 hours prior to arriving on site), laid immediately, rolled, and watered thoroughly immediately after planting. edge of sod adjacent to mulch beds to be shovel cut. All sod to be delivered in largest rolls available. there shall be no gaps between sod joints.
9. Planting mix to be provided as specified in the landscape specifications.
10. The landscape contractor shall guarantee all plants installed for one full year from date of acceptance. All plants shall be alive and at a vigorous rate of growth at the end of the guarantee period. The landscape contractor shall not be responsible for acts of god or vandalism.
11. Any plant that is determined dead, in an unhealthy or unsightly condition, lost its shape due to dead branches or other symptoms of poor, non-vigorous growth, as determined by the landscape architect, shall be replaced by the landscape contractor at no cost to owner.
12. Prior to installation, the landscape contractor shall inspect the subgrade, general site conditions, verify elevations, utility locations, irrigation, approve topsoil provided by general contractor and observe the site conditions under which the work is to be done. Notify general contractor of any unsatisfactory conditions, and work shall not proceed until such conditions have been corrected.
13. Water all plant material that are newly planted thoroughly twice in first 24 hours and apply mulch immediately.
14. All trees and shrubs shall be coordinated with lighting plan prior to installation.
15. All shrubs to be 3' back of curb.
16. All areas of disturbance outside of landscape beds shall be repaired with turf.
17. Any utility structure, light poles, sign, or other feature may not be added to any required landscape island in such a manner that would displace the required element(s) (trees, shrubs, etc.)

SUBSTITUTION NOTE:

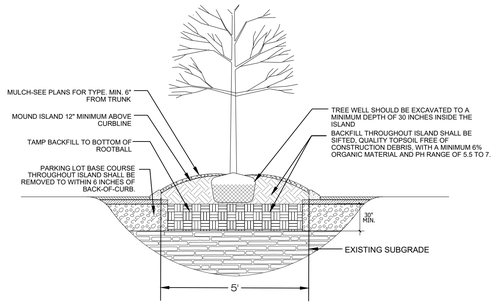
1. Requirements shown are per the City Zoning Ordinance. Substitutions are not allowed unless approved by the City and Heibert+Ball Land Design

TO AVOID OVERHEAD LIGHT POLE CONFLICTS:

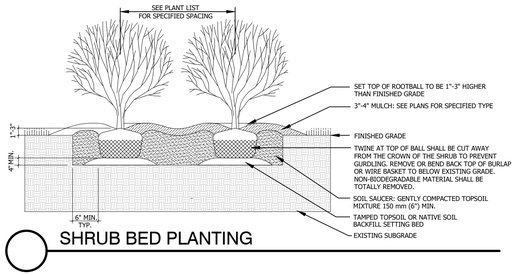
In the event proposed canopy trees are in conflict (within 15') with proposed or existing light pole locations, the landscape contractor shall stop work and contact Heibert+Ball Land Design immediately for coordination and field adjustment

TO AVOID OVERHEAD UTILITY CONFLICTS:

In the event proposed canopy trees are in conflict (within 25') with proposed or existing overhead utility locations, the landscape contractor shall stop work and contact Heibert+Ball Land Design immediately for coordination and field adjustment.



PARKING ISLAND TREE PLANTING
FOR PARKING LOT ISLAND OR MEDIAN



SHRUB BED PLANTING

PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
T	7	Tulip Poplar / Liriodendron tulipifera 5` Clear Trunk. Evenly Branched. Matched. See Tree Specifications	B & B	2.5"Cal	12`-14` HT
Q	9	Willow Oak / Quercus phellos 5` Clear Trunk. Evenly Branched. Matched. See Tree Specifications	B & B	2.5"Cal	12`-14` HT
BIORETENTION TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
B	10	Duraheat River Birch / Betula nigra `Duraheat` 3 Cane Min., Full Rounded Head. See Tree Specifications	B & B		6`-8` HT
UNDERSTORY TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
IN	18	Nellie Stevens Holly / Ilex x `Nellie R Stevens` Full to Base. Full Dense Form. See Tree Specifications	B & B	1.5"Cal	6`-8` HT
SHRUBS	QTY	COMMON / BOTANICAL NAME	HT / CONT.	WIDTH	
	40	Dwarf Burford Holly / Ilex cornuta `Burfordii Nana` Full; Dense Form	36" HT		
·	49	Prague Viburnum / Viburnum x pragense Full; Dense Form	36" HT		

PLANT SCHEDULE

BIORETENTION PLANTS	CODE	QTY	COMMON / BOTANICAL NAME	CONT
	CA	86	Beautyberry / Callicarpa americana Full; Well Rooted Containers #3 Containers Installed 60" O.C. in Triangular Pattern	#3 Container
	EG	67	Gateway Joe-Pye Weed / Eupatorium maculatum `Gateway` Install #1 Containers in Trianglar spacing 24" O.C.	#1 Container
	IT	25	Merlot Sweetspire / Itea virginica `Merlot` Full; Well Rooted Containers #3 Containers Installed 48" O.C. in Triangular Pattern	#3 Container
	PV	97	Dallas Blues Switch Grass / Panicum virgatum `Dallas Blues' Full; Well Rooted Containers #1 Containers Installed 48" O.C. in Triangular Pattern	#1 Container
GROUND COVERS	CODE	QTY	COMMON / BOTANICAL NAME	CONT
	SOD	10,536 sf	Drought Tolerant Fescue Blend / Turf Sod Install Sod as per specifications over finished graded area free of debris. Stagger seems, do not overlap. Roll twice.	sod

WHEN THE TERMS "POT", "CONTAINER", OR "CALIPER" ARE USED TO DESCRIBE MINIMUM SIZE AT PLANTING, THE ESTABLISHED AMERICAN STANDARD FOR NURSERY STOCK SHALL APPLY.
THAT IS: •"ALL CONTAINER GROWN (DECIDUOUS OR CONIFER) SHRUBS SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD.
THEY SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION." "AN ESTABLISHED CONTAINER GROWN (DECIDUOUS OR CONIFER) SHRUB SHALL BE A
(DECIDUOUS OR CONIFER) SHRUB TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE
ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER." •CONTAINER SIZE MAY BE CONVERTED TO MINIMUM HEIGHT/SPREAD AS FOLLOWS:
1 GALLON = 12" TO 15" HEIGHT OR SPREAD
3 GALLON = 15"-18" HEIGHT OR SPEAD
5 GALLON = 18" TO 24" HEIGHT OR SPREAD
7 GALLON = 24" TO 30" HEIGHT OR SPREAD

PLAN NOTES:

1. ALL LANDSCAPE BEDS SHALL BE NEATLY TRENCHED WITH A BED EDGE AND HAVE 3" MINIMUM DEPTH OF PINE BARK MULCH.
2. ALL TREES AND SHRUBS SHALL BE COORDINATED WITH LIGHTING PLAN PRIOR TO INSTALLATION. LIGHT POLES MUST NOT BE LOCATED IN TREE ISLANDS. ALL TREES TO BE INSTALLED 15' FROM ANY LIGHT POLE.
3. ALL AREAS OF DISTURBANCE NOT SPECIFIED AS SOD SHALL BE SEEDED WITH REBEL III TALL FESCUE UNLESS OTHERWISE NOTED ON GRADING PLANS

LAND DESIGN
1894 Gen. Geo. Patton Dr.
Suite 400
Franklin, TN 37067
Tel: 615.376.2421
www.hblanddesign.com

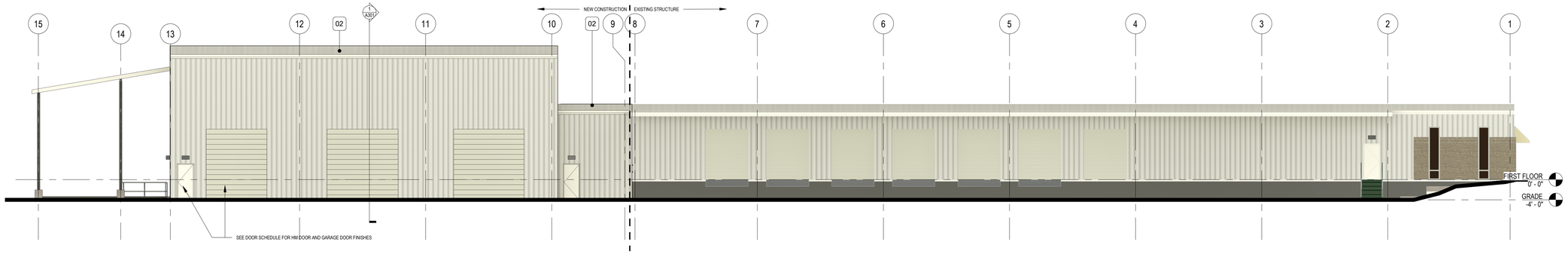
PROPOSED SITE FOR:
122 CHARTER PLACE - ALTERRA
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE

CONNOR L. BALL REGISTERED LANDSCAPE ARCHITECT AGRICULTURE COMMERCE ENVIRONMENT ARCHITECTURE

Job # - 23149
BY: cb

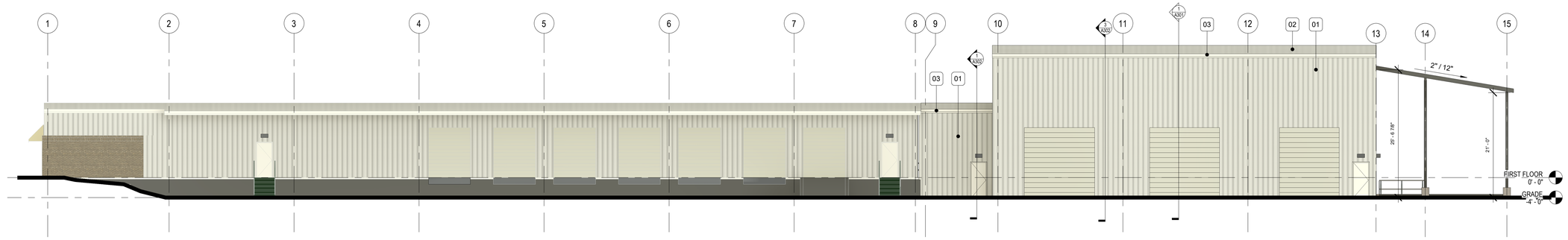
LANDSCAPE NOTES

L1.1



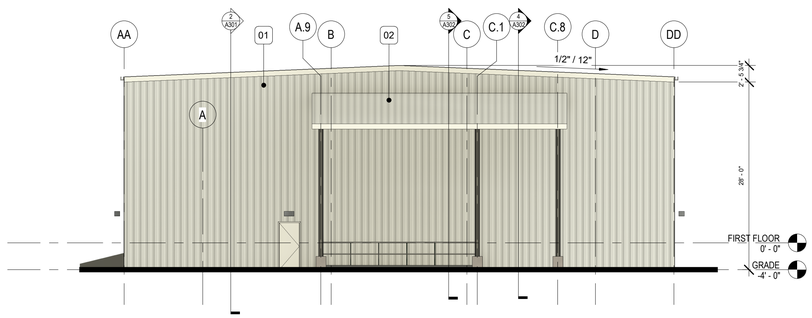
4 EAST ELEVATION - COLOR

3/32" = 1'-0"



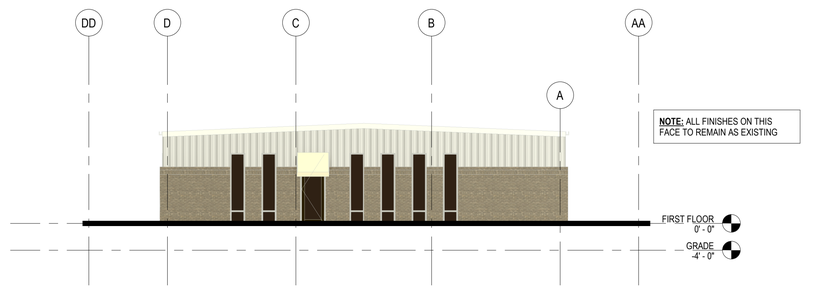
3 WEST ELEVATION - COLOR

3/32" = 1'-0"



2 SOUTH ELEVATION - COLOR

3/32" = 1'-0"



1 NORTH ELEVATION - EXISTING TO REMAIN - COLOR

3/32" = 1'-0"

MATERIALS CALCULATIONS (OLD + NEW CONSTRUCTION)

EAST ELEVATIONS			WEST ELEVATIONS			SOUTH ELEVATIONS			NORTH ELEVATIONS		
BRICK	139 SF	3.32 %	BRICK	139 SF	3.32 %	BRICK	0 SF	0 %	BRICK	390 SF	52.49 %
METAL	3,390 SF	81.02 %	METAL	3,390 SF	81.02 %	METAL	2,436 SF	100 %	METAL	353 SF	47.51 %
OTHER	655 SF	15.65%	OTHER	655 SF	15.65%						
TOTAL	**4,184 SF**		**TOTAL**	**4,184 SF**		**TOTAL**	**2,436 SF**		**TOTAL**	**743 SF**	

EXTERIOR FINISH SCHEDULE

MARK	MATERIAL	STYLE/COLOR	MANUF.	REP. CONTACT	NOTES	SPECS
01	METAL WALL PANEL	MATCH EXISTING			BY PEMB MANUF	
02	METAL ROOF	MATCH EXISTING			BY PEMB MANUF	
03	GUTTER	MATCH EXISTING			BY PEMB MANUF	

STUDIO

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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE RENOVATION & ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

ISSUED FOR

- [ ] Lease Outline Diagram
- [ ] Schematic Design
- [x] Design Development
- [ ] Construction (95% Checkset)
- [ ] Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
KP

DATE:
03.24.23

DRAWING
EXTERIOR ELEVATIONS - COLOR

A201C

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DRAINAGE REPORT

FOR

A BUILDING ADDITION AT 122 CHARTER PLACE

BY

INGRAM CIVIL ENGINEERING GROUP

ENGINEER OF RECORD:
SAM BOHANNON, P.E.



ICEG PROJECT # 117023

MARCH 24, 2023

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NARRATIVE

SOIL MAP

FEMA FLOOD MAP

DRAINAGE AREAS MAP

PRE AND POST DEVELOPMENT CALCULATIONS

UNDERDRAIN SIZING SHEET

METRO NASHVILLE WATER QUALITY SPREADSHEET

DRAINAGE CALCULATION NARRATIVE

The following drainage calculations illustrate drainage run-off produced by the proposed 7,400 square feet building addition and site improvements at 122 Charter Place, La Vergne, Tennessee. These calculations are to be coordinated with the proposed construction documents for the above-mentioned project. Parcel ID: 029-002.05-000, parcel # 00205, acreage: 5.16.

The existing site consists of two drainage areas with an outfall for each. The existing site's condition included a 10,600 square feet industrial building, gravel drives and storage area, and impervious front parking lot. The east side of the site flows to the northeast corner of the site to a roadside ditch. The west side of the site flows north to the northwest corner of the site to a roadside ditch. The pre-developed drainage area breakdowns as follows:

Pre-Drainage Area	Outfall Label	Description
1	Out-West	Combination of sheet flow and shallow concentrated flow to roadside ditch.
2	Out-East	Combination of sheet flow and shallow concentrated flow to roadside ditch.

The proposed site consists of the building addition, heavy duty gravel, reworked parking lot, grass areas, detention pond, mechanical swirl unit, and bioretention pond. The east side of the site flows through the bioretention pond and out to a roadside ditch. The west side of the site flows through a detention pond and out to a roadside ditch. Most impervious areas, including roof area, pavement, and some yard areas, are being directed through either mechanical swirl unit or bioretention pond to meet water quality requirements. The treated runoff then flows into the detention pond or bioretention pond to satisfy the required detention requirements. The post develop drainage area breakdowns as follows:

Post Drainage Area	Outfall Label	Description
1	Out-West	Sheet flows to grass channel and off site.
2	Out-West	Sheet flows through detention pond.
3	Out-West	Sheet flows to roadside ditch.
4	Out-East	Sheet flows to grass channel and off site.
5	Out-East	Sheet flows through bioretention pond.

Water Quality/Treatment

The site will be treated by a 4,100 square feet bioretention pond and a mechanical swirl unit to meet the 80% TSS removal requirements. The west side of the roof area's runoff will be treated by a mechanical swirl unit. The east side of the site will sheet flow to the bioretention pond to be treated. Refer to sheet C404, Water Quality Sheet, for more information on the contributing drainage area for each treatment method.

See attached Metro Nashville stormwater LID spreadsheet.

Water Quantity/Detention

Detention for the west side of the site will be provided by a detention pond in the northwest corner of the site. Detention for the east side of the site will be provided by the bio-retention on the northeast corner of the site.

The site is not in the 100-year floodplain.

The post development flows are lower than the pre-development as shown in the following calculations.

The site has two soil groups on site, C and D. For the type C soil group a CN of 79 was utilized. The soil group type D a CN of 84 was used. For all impervious areas a CN of 98 was used.

Detention Calculations
Rainfall Data

2 year	3.60 in.
5 year	4.50 in.
10 year	5.00 in.
25 year	5.80 in.
50 year	6.40 in.
100 year	6.90 in.

The pre and post development runoff are as follows:

Storm Event	Pre Out-East (cfs)	Post Out-East (cfs)
2 YR	11.13	4.36
5 YR	15.23	10.67
10 YR	17.51	13.54
25 YR	21.18	17.01
50 YR	23.92	17.78
100 YR	26.19	18.43

Storm Event	Pre Out-West (cfs)	Post Out-West (cfs)
2 YR	8.19	4.96
5 YR	11.10	8.49
10 YR	12.68	10.46
25 YR	15.24	13.40
50 YR	17.25	15.49
100 YR	18.76	17.17



Map Scale: 1:1,520 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Rutherford County, Tennessee
Survey Area Data: Version 19, Sep 15, 2022

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

Date(s) aerial images were photographed: Feb 14, 2020—Mar 1, 2020

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ByB	Byler silt loam, 2 to 5 percent slopes	C	0.4	4.7%
Eg	Egam silt loam	C	0.0	0.4%
GRC	Gladeville-Rock outcrop complex, 2 to 15 percent slopes, extremely stony	D	4.1	49.3%
TaB2	Talbott silt loam, 2 to 5 percent slopes, eroded	C	0.3	3.7%
TaC2	Talbott silt loam, 5 to 12 percent slopes, eroded	C	3.5	41.9%
Totals for Area of Interest			**8.2**	**100.0%**

Description

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

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

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

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

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

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

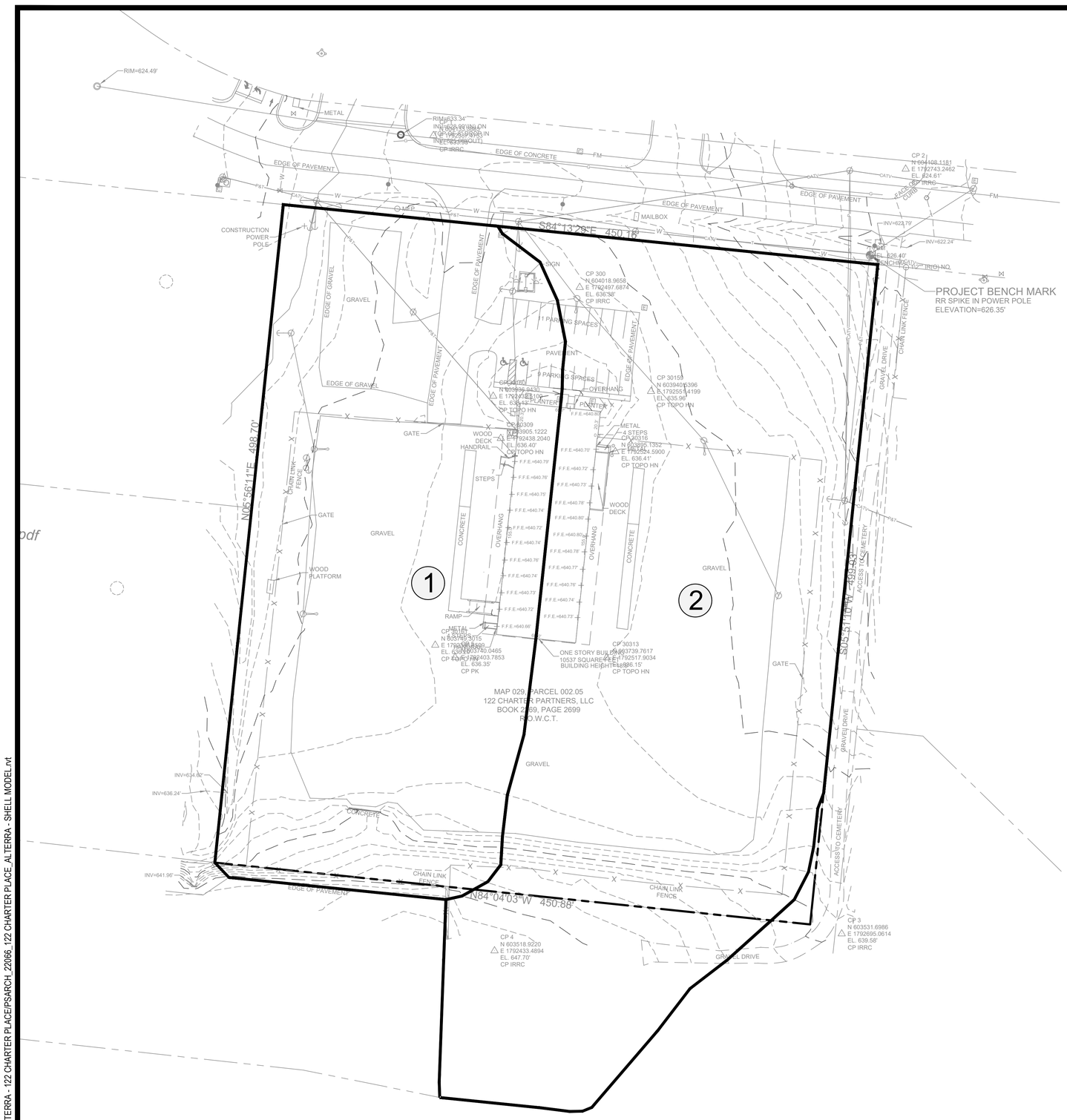
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



PRE-DEVELOPED DRAINAGE AREAS

	Gravel		Impervious		Pervious		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Area 1	53,609	1.23	14,489	0.33	42,178	0.97	110,277	2.53
Area 2	47,994	1.10	10,403	0.24	84,868	1.95	143,266	3.29
Total	101,604	2.33	24,892	0.57	127,046	2.92	253,543	5.82

PRE-DEVELOPED DRAINAGE MAP

GRAPHIC SCALE 40 0 40 80

AGENCY REVIEW - NOT FOR CONSTRUCTION

STUDIO

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761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL T. MOHANIOT
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 0011310B
STATE OF TENNESSEE
3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING

PRE-DEVELOPED DRAINAGE MAP

C400

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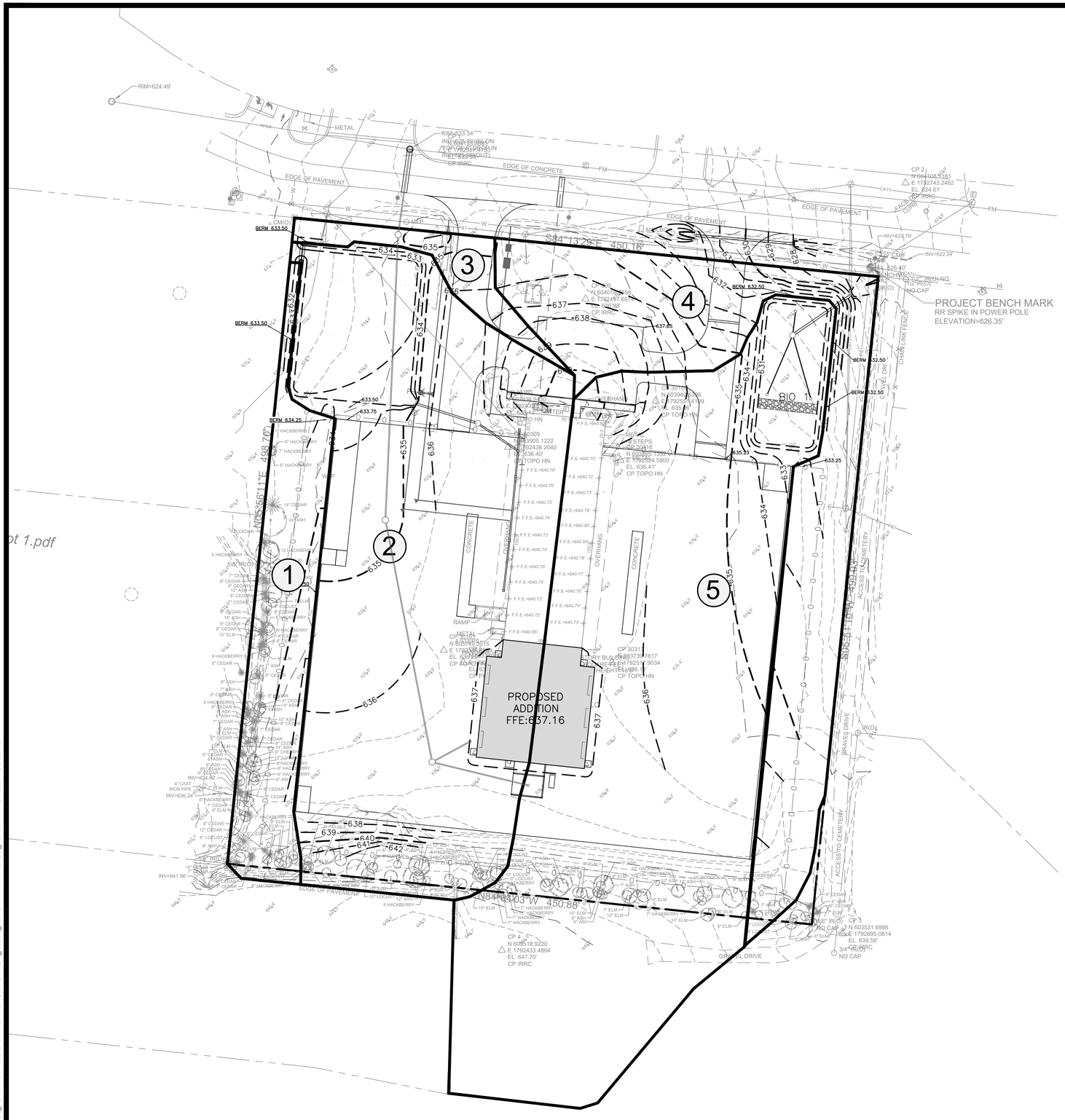

POST-DEVELOPED DRAINAGE AREAS

	Impervious		Pervious		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Area 1	0	0.00	18,202	0.42	18,202	0.42
Area 2	59,380	1.36	25,888	0.59	85,269	1.96
Area 3	2,037	0.05	3,041	0.07	5,078	0.12
Area 4	22,897	0.53	16,723	0.38	39,619	0.91
Area 5	57,479	1.32	47,897	1.10	105,376	2.42
Total	141,792	3.26	111,750	2.57	253,543	5.82

POST-DEVELOPED DRAINAGE MAP

40 0 40 80
GRAPHIC SCALE

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761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL T. MOHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 001113395
STATE OF TENNESSEE
3-24-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
POST-DEVELOPED DRAINAGE MAP

C401

AGENCY REVIEW - NOT FOR CONSTRUCTION

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MWS LID Site Design Tool

Project Name	Alterra Building Addition
Parcel Identification #	
Engineer	Sam Bohannon

Combined Sewer Overlay?	**NO**
Pre or Post Development Worksheet?	**Post**
Target Runoff Reduction Requirement =	**60%**

See Section 7.2.1 in Metro SWMM Volume 1

Capture Depth=	**1**	**inch**
Cistern Capture=		**% Total Vol captured**

From Cistern Design Tool

MWS LID SITE DESIGN TOOL VERSION 11 - October 20, 2021

Instructions

1. Input cells are in Green.
2. Break Site Into Sub areas by single soils and land use type combinations.
3. Assign a code to each subarea and input the code into column C. Descriptions can be entered in column B.
4. Input the subarea drainage area in column D.
5. Input treatment credit code (Column F) for the first tier of treatments
6. Input additional treatment code as desired (Column I) for any subarea
7. Adjust until you reach 80% reduction or better (Cell N turns green if 80% reached).
8. If 80% reduction is not reached and it has been decided that GIPs in series is an option use Step 3a to place GIPs in series . Their respective treatment volumes are calculated in column W. This volume is separate from GIPs upstream.

Percent Volume Reduction-Based Calculations

Step 1: Lay out the site and divide it into sub-areas each of a specific land use type and Rv.					Step 1a: Change any basic land use types through reforesting, permeable pavement or green roofs - or through use of open space for a GIP.			Step 2: Treat impervious areas through the use of sheet flow			Step 3: Treat primarily impervious areas with structural GIPs either in series with Step 3 intrinsic GIPs or alone downstream from Steps 1 and 2 land use.			Size controls for Step 3 by assigning structure ID to each sub-area, combining sub-areas into one structure if appropriate.			Step 3a Treatment in Series Calculation - Place Structural GIPs in same row as upstream GIP			Size controls for Step 3a in series by assigning a sequential structure ID to each area treated in series.				
Step1 Basic Land Use					**Step 1a Modified LU**			**Step 2 Intrinsic GIPs**			**Step 3 Structural GIPs**			**Structure ID**	**IA Capture**		**Step 3a Structural GIPs in Series**			**Structure ID**	**IA Capture**		**Nominal Curve Number**	
Subarea	Description	Code	Acres	Base Rv	Code	Acres	Eff Rv1	Code	Trtmt VR1	Eff Rv2	Code	Trtmt VR2	Eff Rv3	Site GIP ID Number	Tv Multiplier	Tv (cf)	Code	Trtmt VR2	Eff Rv4	Site GIP ID Number	Tv Multiplier	Structure in Series Tv (cf)	Step 1	Step 1A
1	Imp to Bypass	IA	1.62	0.95	IA	1.62	0.95		0	0.95	B2	0.8	0.19		1.25	6,983		0	0.19		0.00	-	98	98
2	Per (D) to Bio	TD	0.28	0.23	TD	0.28	0.23		0	0.23	B2	0.8	0.05		1.25	292		0	0.05		0.00	-	84	84
3	Per (C) to Bio	TC	0.19	0.20	TC	0.19	0.20		0	0.20	B2	0.8	0.04		1.25	172		0	0.04		0.00	-	79	79
4	Imp Bypass	IA	1.45	0.95	IA	1.45	0.95		0	0.95		0	0.95		0.00	-		0	0.95		0.00	-	98	98
5	Per Bypass	TD	0.85	0.23	TD	0.85	0.23		0	0.23		0	0.23		0.00	-		0	0.23		0.00	-	84	84
6	Per Bypass	TC	0.63	0.20	TC	0.63	0.20		0	0.20		0	0.20		0.00	-		0	0.20		0.00	-	79	79
7	Imp to Mech Unit	IA	0.14	0.95	IA	0.14	0.95		0	0.95	B2	0.8	0.19		1.25	603		0	0.19		0.00	-	98	98
8				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
9				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
10				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
11				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
12				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
13				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
14				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
15				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
16				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
17				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
18				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
47				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
76				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
105				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
134				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
162				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
191				0.00		0	0.00		0	0.00		0	0.00		0.00	-		0	0.00		0.00	-	0	0
			Weighted Rv	0.673		Weighted Rv	0.673		Weighted Rv	0.673		Weighted Rv	0.398		Step 3 Tv Total	8,051			0.398		Final Tv Total	8,051	91.9	91.9
			Total Area=	5.16		Total Area=	5.16			3.47			2.06						2.06					
			% Removal	32.7%		% Removal	32.7%		% Removal	32.7%		% Removal	60.2%					% Removal	60.2%					

↑ THIS CELL WILL TURN GREEN WHEN TARGET RUNOFF REDUCTION MET ↑

Bio-Retention Area #1

Drawdown

Infiltration Rate	2.00	IN/HR	*Ammended Soil Infiltration Rate*
Bottom Surface Area	4,062	SF	*Area of Bottom of Bio-Retention Area*
Q, Flowrate	0.19	CFS	*Q=[(infiltration rate/12)*(bottom area/3600seconds)]*

Underdrain Sizing

Q, Flowrate	1.88	CFS	*Q From Drawdown Section X10*
D, Required Diameter of Single Pipe	1.78	IN	*D = [(16*Q*n)/(S^0.5)]^(3/8); n=0.011, S = 0.005*

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	2-YR	Cumulative	inches	Tennessee	Rutherford	2.00	3.60	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	110277.02	484.00	87.58	3.60	2.32	5.88	8.65	0 00:07:19
2	DA2	143266.01	484.00	85.47	3.60	2.14	7.05	11.16	0 00:05:00

Subbasin Hydrology

Subbasin : DA1

Input Data

Area (ft²)	110277.02
Peak Rate Factor	484
Weighted Curve Number	87.58
Rain Gage ID	Rain Gage-01

Composite Curve Number

32

Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
Paved parking & roofs	14489.19	C	98
Gravel roads	27480.31	D	91
Gravel roads	26128.99	C	89
50 - 75% grass cover, Fair	26155.3	C	79
50 - 75% grass cover, Fair	16023.28	D	84
Composite Area & Weighted CN	110277.07		87.58

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.4	0.015	0
Flow Length (ft) :	51.7	103	0
Slope (%) :	16	2	0
2 yr, 24 hr Rainfall (in) :	3.6	3.6	0
Velocity (ft/sec) :	0.17	1.15	0
Computed Flow Time (min) :	5.2	1.5	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	51	67	0
Slope (%) :	2	8	0
Surface Type :	Unpaved	Grassed waterway	Unpaved
Velocity (ft/sec) :	2.28	4.24	0
Computed Flow Time (min) :	0.37	0.26	0

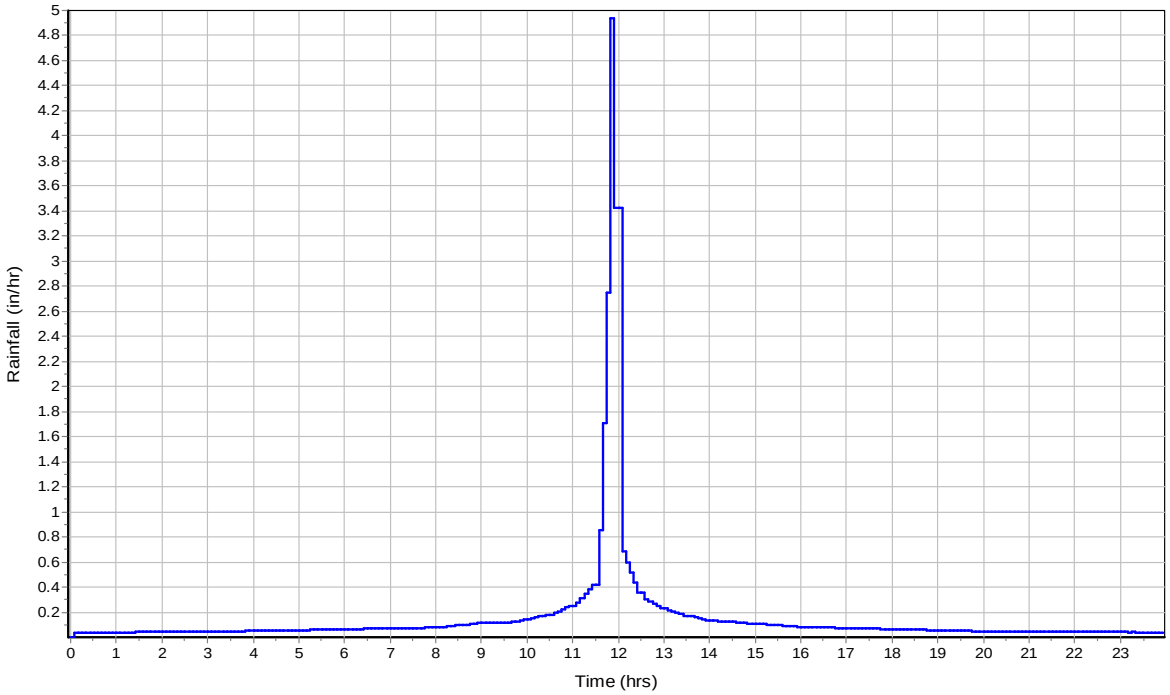
Total TOC (min) 7.33

Subbasin Runoff Results

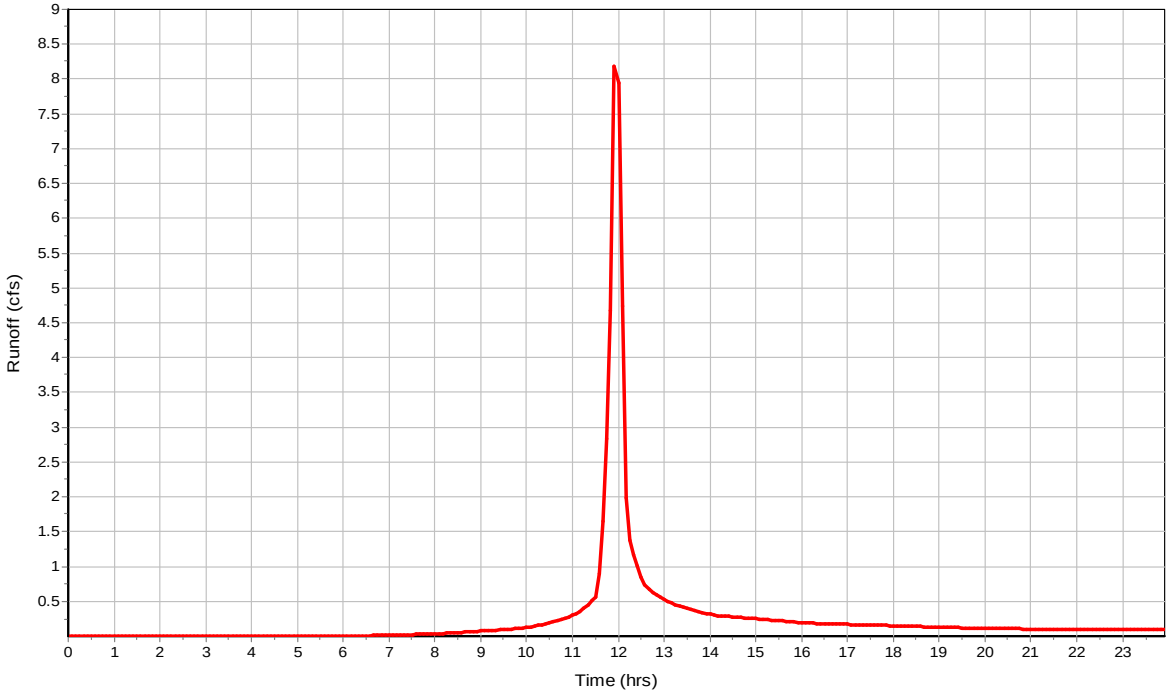
Total Rainfall (in)	3.6
Total Runoff (in)	2.32
Peak Runoff (cfs)	8.65
Weighted Curve Number	87.58
Time of Concentration (days hh:mm:ss)	0 00:07:20

Subbasin : DA1

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : DA2

Input Data

Area (ft²)	143266.01
Peak Rate Factor	484
Weighted Curve Number	85.47
Rain Gage ID	Rain Gage-01

Composite Curve Number

32 Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
Paved parking & roofs	10403.22	C	98
Gravel roads	28324.11	D	91
Gravel roads	19670	C	89
50 - 75% grass cover, Fair	38448.02	D	84
50 - 75% grass cover, Fair	46420.72	C	79
Composite Area & Weighted CN	143266.07		85.47

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.015	0	0
Flow Length (ft) :	150	0	0
Slope (%) :	2	0	0
2 yr, 24 hr Rainfall (in) :	3.6	0	0
Velocity (ft/sec) :	1.23	0	0
Computed Flow Time (min) :	2.03	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	71.3	336.5	0
Slope (%) :	2	8	0
Surface Type :	Unpaved	Grassed waterway	Unpaved
Velocity (ft/sec) :	2.28	4.24	0
Computed Flow Time (min) :	0.52	1.32	0

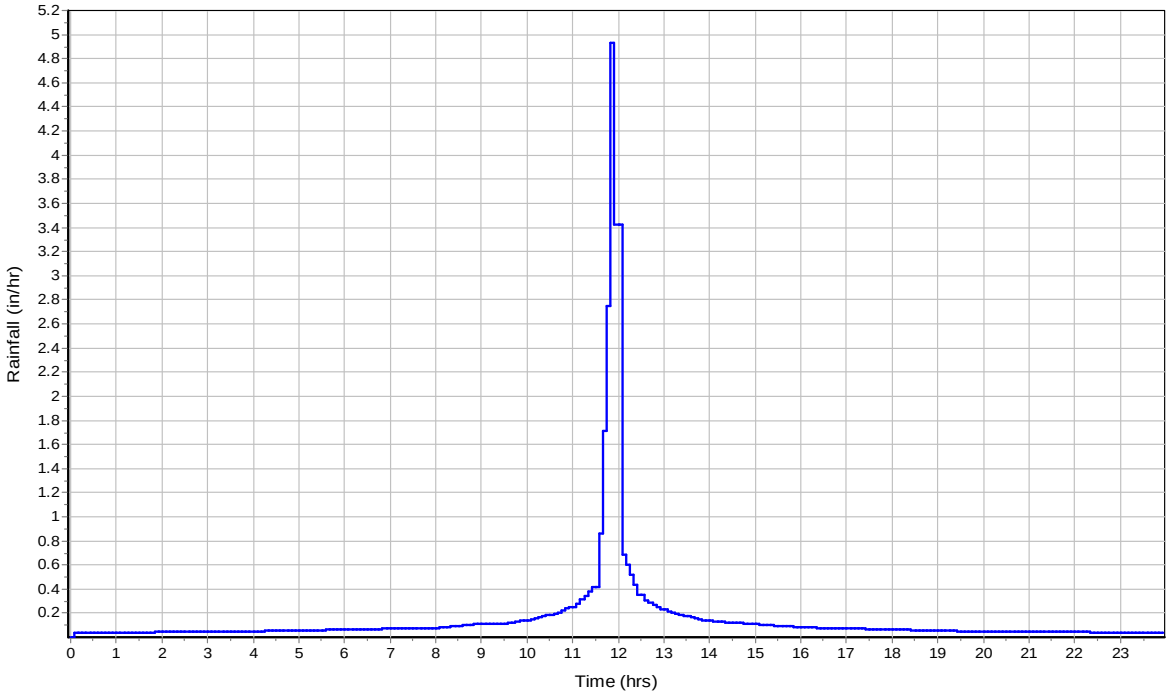
Total TOC (min) 3.87

Subbasin Runoff Results

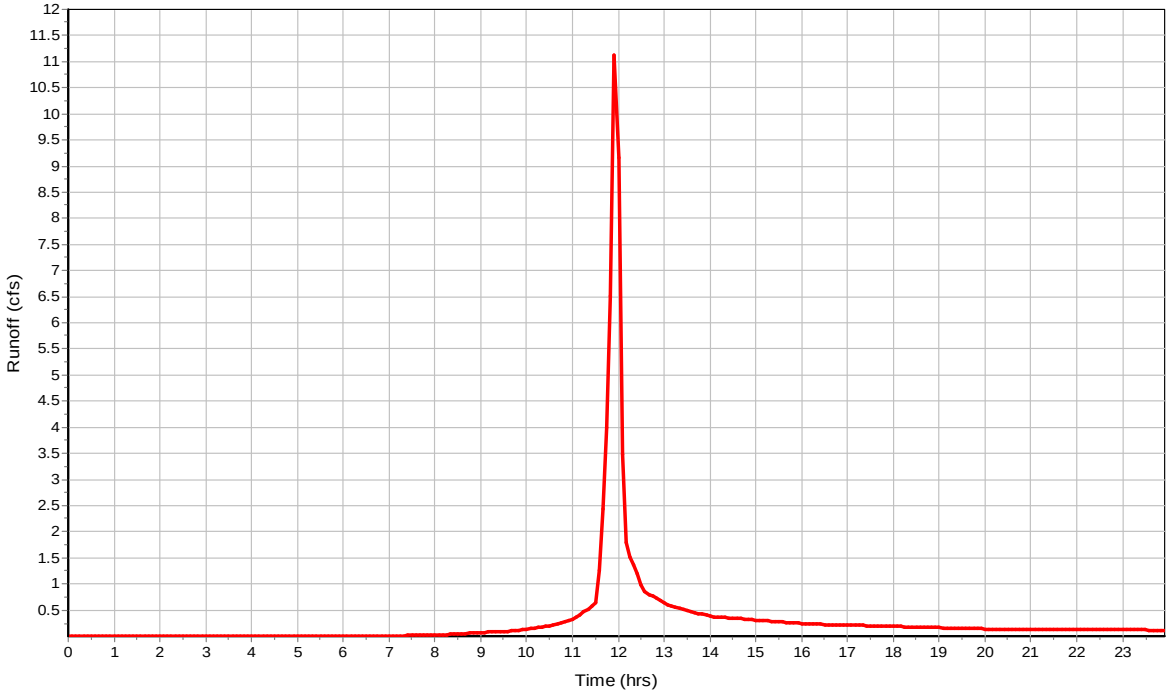
Total Rainfall (in)	3.6
Total Runoff (in)	2.14
Peak Runoff (cfs)	11.16
Weighted Curve Number	85.47
Time of Concentration (days hh:mm:ss)	0 00:03:52

Subbasin : DA2

Rainfall Intensity Graph



Runoff Hydrograph



Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	5-YR	Cumulative	inches	Tennessee	Rutherford	5.00	4.50	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	110277.02	484.00	87.58	4.50	3.16	7.99	11.62	0 00:07:19
2	DA2	143266.01	484.00	85.47	4.50	2.95	9.71	15.25	0 00:05:00

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	10-YR	Cumulative	inches	Tennessee	Rutherford	10.00	5.00	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	110277.02	484.00	87.58	5.00	3.63	9.18	13.28	0 00:07:19
2	DA2	143266.01	484.00	85.47	5.00	3.41	11.23	17.54	0 00:05:00

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	25-YR	Cumulative	inches	Tennessee	Rutherford	25.00	5.80	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	110277.02	484.00	87.58	5.80	4.39	11.11	15.93	0 00:07:19
2	DA2	143266.01	484.00	85.47	5.80	4.16	13.70	21.19	0 00:05:00

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	50-YR	Cumulative	inches	Tennessee	Rutherford	50.00	6.40	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	110277.02	484.00	87.58	6.40	4.97	12.57	17.91	0 00:07:19
2	DA2	143266.01	484.00	85.47	6.40	4.73	15.56	23.94	0 00:05:00

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100-YR	Cumulative	inches	Tennessee	Rutherford	100.00	6.90	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	110277.02	484.00	87.58	6.90	5.45	13.79	19.56	0 00:07:19
2	DA2	143266.01	484.00	85.47	6.90	5.21	17.14	26.23	0 00:05:00

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	2-YR	Cumulative	inches	Tennessee	Rutherford	2.00	3.60	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	19423.01	484.00	79.79	3.60	1.70	0.76	1.10	0 00:08:03
2	DA2	84519.99	484.00	91.97	3.60	2.73	5.30	8.09	0 00:05:00
3	DA3	4619.02	484.00	90.23	3.60	2.56	0.27	0.42	0 00:06:20
4	DA4	39618.95	484.00	84.71	3.60	2.08	1.89	2.22	0 00:17:13
5	DA5	105403.96	484.00	89.95	3.60	2.54	6.14	9.53	0 00:05:00

Subbasin Hydrology

Subbasin : DA1

Input Data

Area (ft²)	19423.01
Peak Rate Factor	484
Weighted Curve Number	79.79
Rain Gage ID	Rain Gage-01

Composite Curve Number

32

Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
50 - 75% grass cover, Fair	3087.27	D	84
50 - 75% grass cover, Fair	16335.74	C	79
Composite Area & Weighted CN	19423.01		79.79

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.4	0	0
Flow Length (ft) :	50	0	0
Slope (%) :	5	0	0
2 yr, 24 hr Rainfall (in) :	3.6	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	8.06	0	0

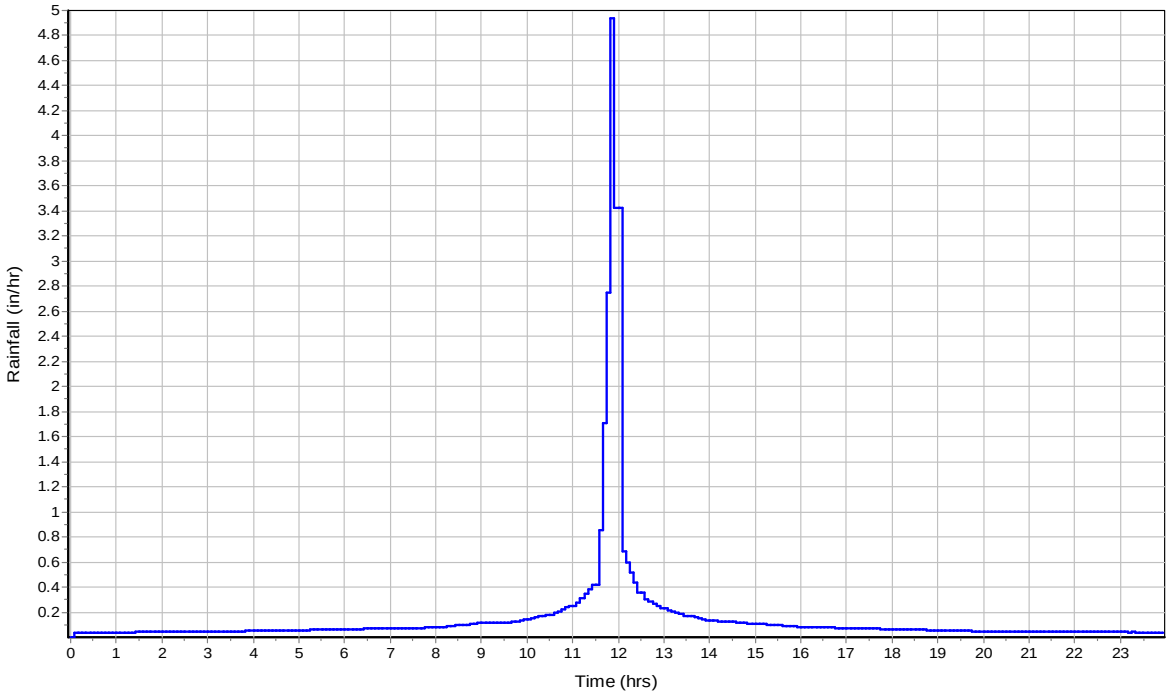
Total TOC (min) 8.06

Subbasin Runoff Results

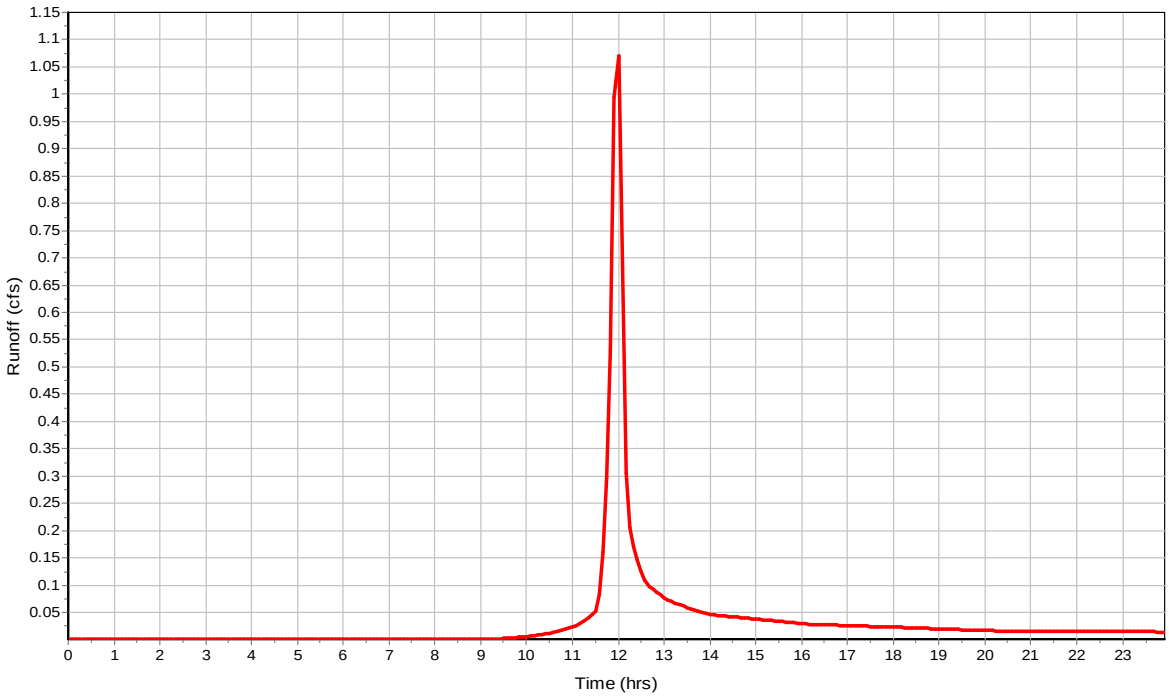
Total Rainfall (in)	3.6
Total Runoff (in)	1.7
Peak Runoff (cfs)	1.1
Weighted Curve Number	79.79
Time of Concentration (days hh:mm:ss)	0 00:08:04

Subbasin : DA1

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : DA2

Input Data

Area (ft²)	84519.99
Peak Rate Factor	484
Weighted Curve Number	91.97
Rain Gage ID	Rain Gage-01

Composite Curve Number

32 Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
Paved parking & roofs	44379.89	C	98
50 - 75% grass cover, Fair	14674.8	D	84
50 - 75% grass cover, Fair	10465.2	C	79
Gravel roads	15000.02	D	91
Composite Area & Weighted CN	84519.91		91.97

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.01	0	0
Flow Length (ft) :	100	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	3.6	0	0
Velocity (ft/sec) :	1.19	0	0
Computed Flow Time (min) :	1.4	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	180.9	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	1.49	0	0

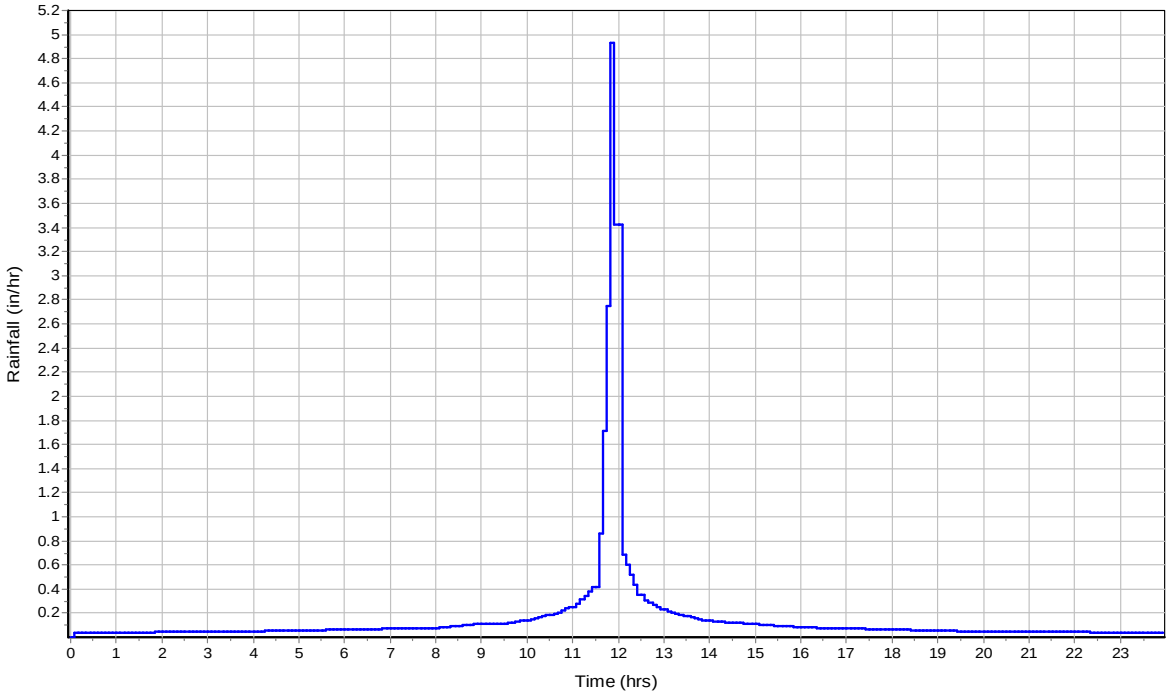
Total TOC (min) 2.88

Subbasin Runoff Results

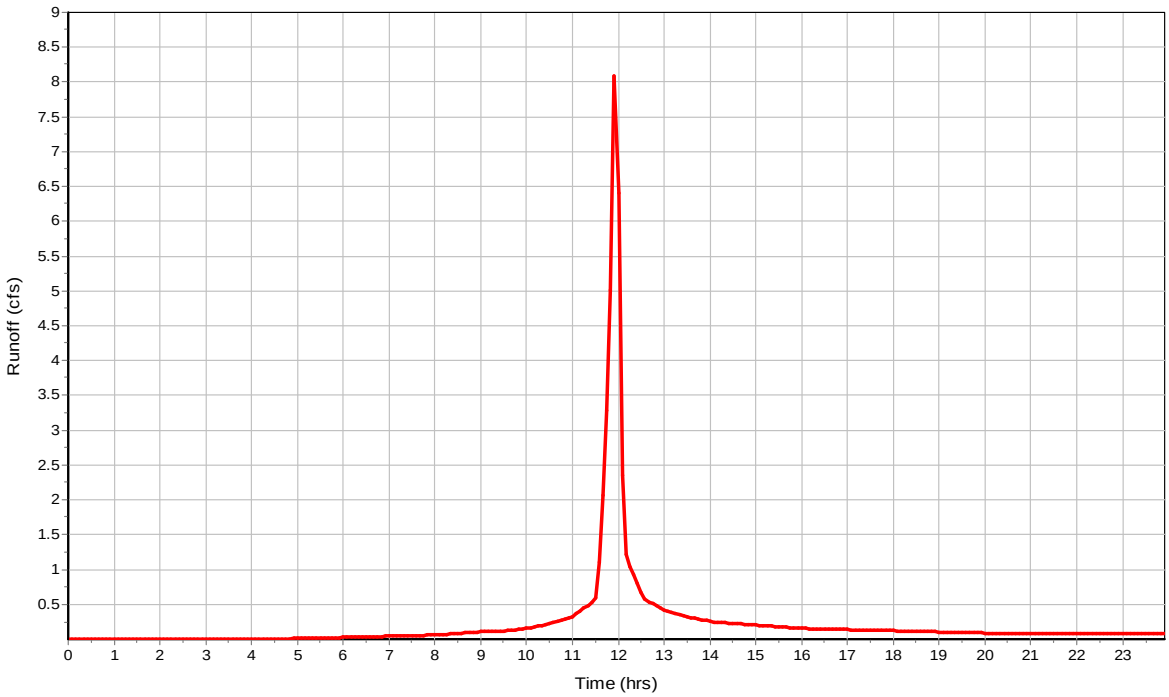
Total Rainfall (in)	3.6
Total Runoff (in)	2.73
Peak Runoff (cfs)	8.09
Weighted Curve Number	91.97
Time of Concentration (days hh:mm:ss)	0 00:02:53

Subbasin : DA2

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : DA3

Input Data

Area (ft²)	4619.02
Peak Rate Factor	484
Weighted Curve Number	90.23
Rain Gage ID	Rain Gage-01

Composite Curve Number

32 Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
Paved parking & roofs	2056.99	C	98
50 - 75% grass cover, Fair	2561.98	D	84
Composite Area & Weighted CN	4618.97		90.23

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.01	0.4	0.01
Flow Length (ft) :	58	29	87
Slope (%) :	5	5	5
2 yr, 24 hr Rainfall (in) :	3.6	3.6	3.6
Velocity (ft/sec) :	2.04	0.09	2.21
Computed Flow Time (min) :	0.47	5.21	0.66

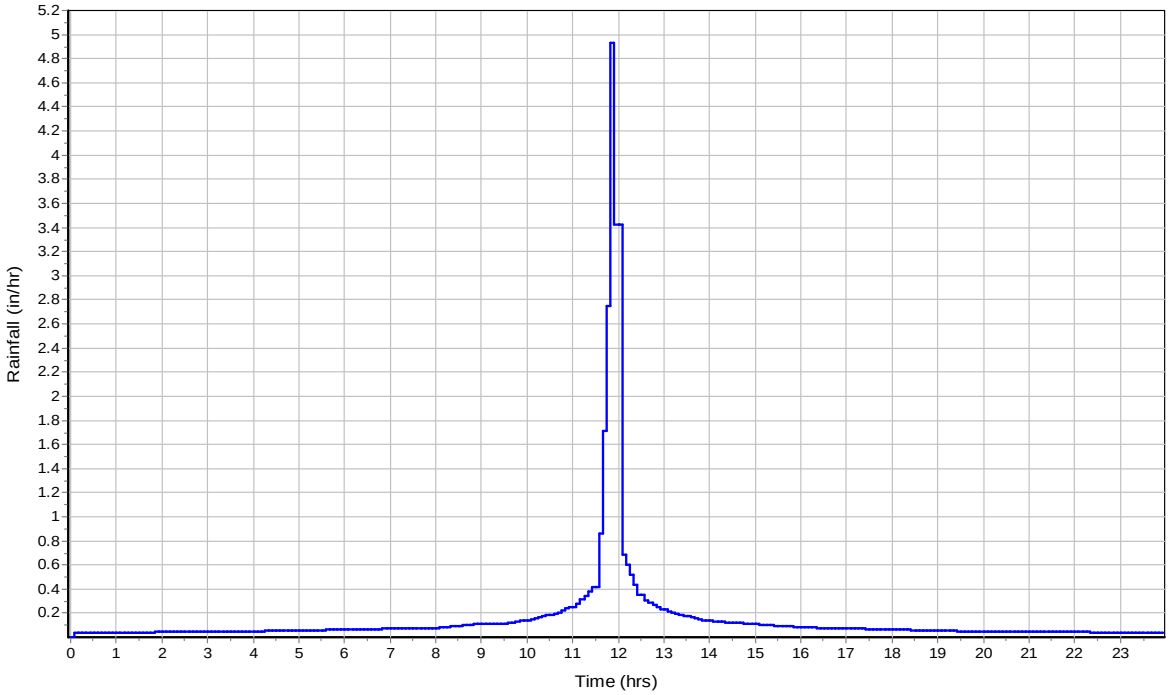
Total TOC (min) 6.34

Subbasin Runoff Results

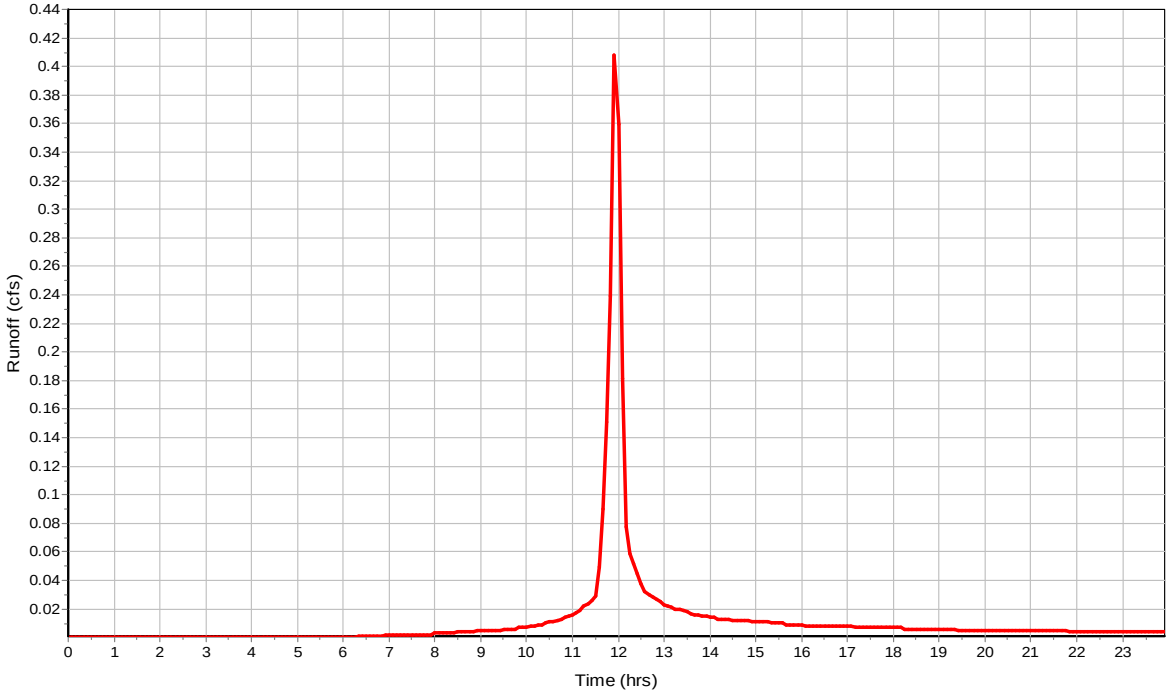
Total Rainfall (in)	3.6
Total Runoff (in)	2.56
Peak Runoff (cfs)	0.42
Weighted Curve Number	90.23
Time of Concentration (days hh:mm:ss)	0 00:06:20

Subbasin : DA3

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : DA4

Input Data

Area (ft²)	39618.95
Peak Rate Factor	484
Weighted Curve Number	84.71
Rain Gage ID	Rain Gage-01

Composite Curve Number

32 Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
Paved parking & roofs	5695.38	C	98
50 - 75% grass cover, Fair	10298.63	C	79
50 - 75% grass cover, Fair	23624.94	D	84
Composite Area & Weighted CN	39618.95		84.71

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.4	0	0
Flow Length (ft) :	150	0	0
Slope (%) :	10	0	0
2 yr, 24 hr Rainfall (in) :	3.6	0	0
Velocity (ft/sec) :	0.17	0	0
Computed Flow Time (min) :	14.71	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	174	428	0
Slope (%) :	2	8	0
Surface Type :	Unpaved	Paved	Unpaved
Velocity (ft/sec) :	2.28	5.75	0
Computed Flow Time (min) :	1.27	1.24	0

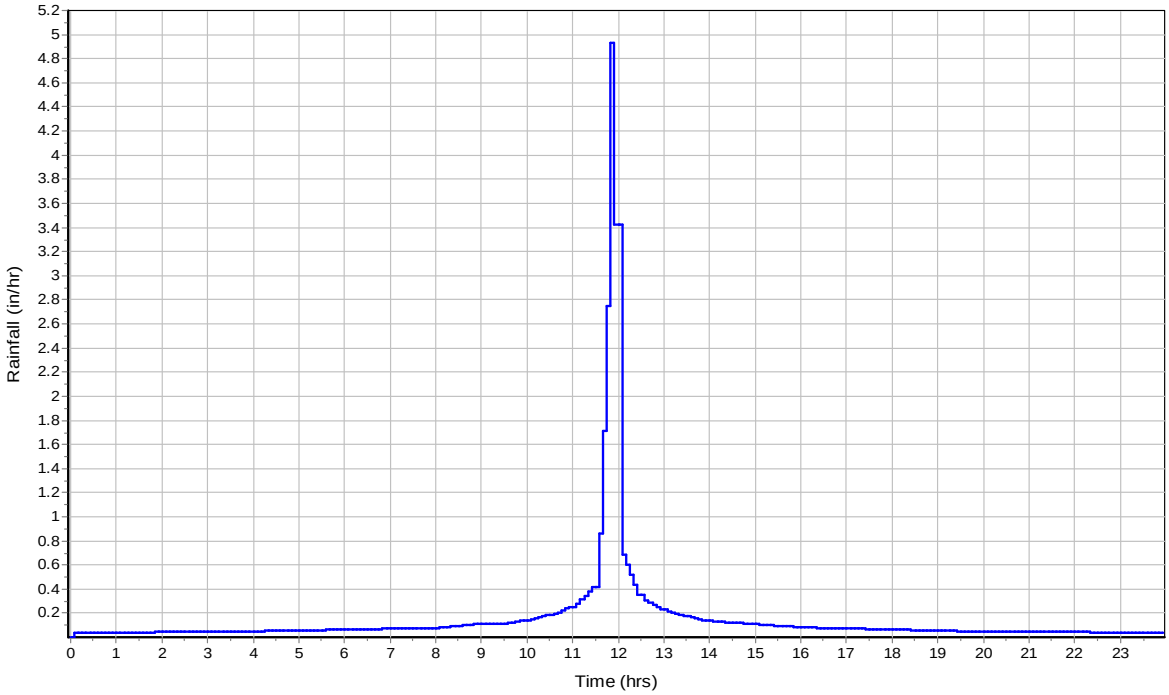
Total TOC (min) 17.22

Subbasin Runoff Results

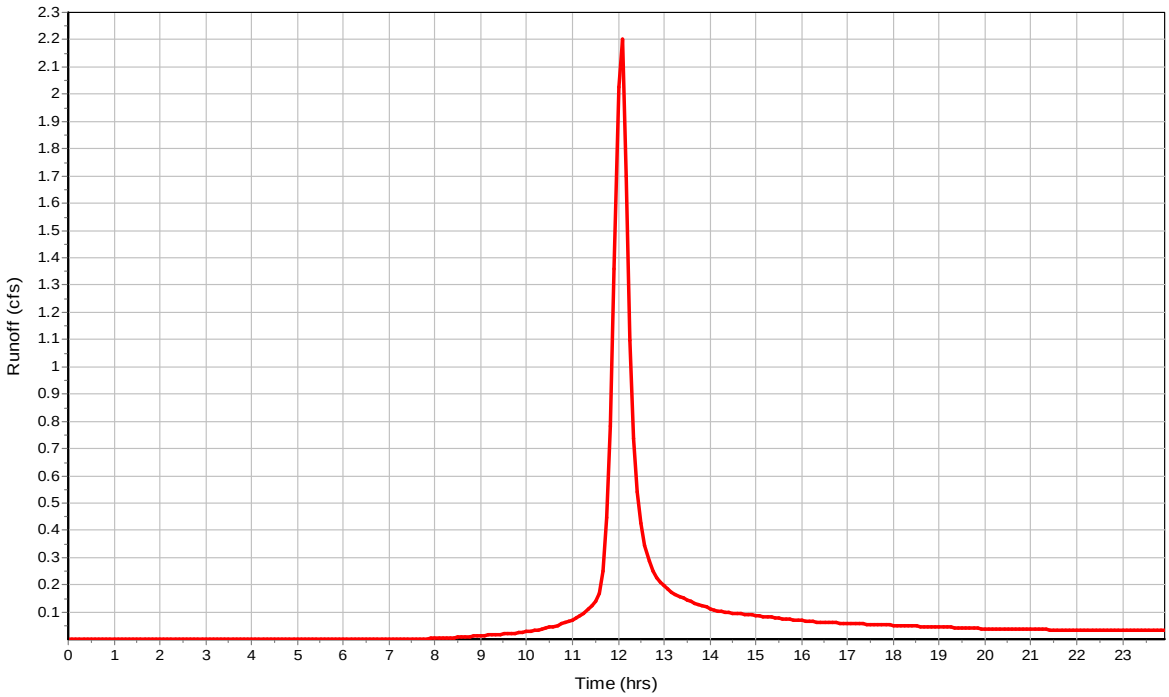
Total Rainfall (in)	3.6
Total Runoff (in)	2.08
Peak Runoff (cfs)	2.22
Weighted Curve Number	84.71
Time of Concentration (days hh:mm:ss)	0 00:17:13

Subbasin : DA4

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : DA5

Input Data

Area (ft²)	105403.96
Peak Rate Factor	484
Weighted Curve Number	89.95
Rain Gage ID	Rain Gage-01

Composite Curve Number

32 Soil/Surface Description	Area (ft²)	Soil Group	Curve Number
Paved parking & roofs	57478.81	C	98
50 - 75% grass cover, Fair	12368.95	D	84
50 - 75% grass cover, Fair	35556.2	C	79
Composite Area & Weighted CN	105403.96		89.95

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.01	0	0
Flow Length (ft) :	150	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	3.6	3.6	0
Velocity (ft/sec) :	1.29	0	0
Computed Flow Time (min) :	1.93	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	177	0	0
Slope (%) :	2	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.87	0	0
Computed Flow Time (min) :	1.03	0	0

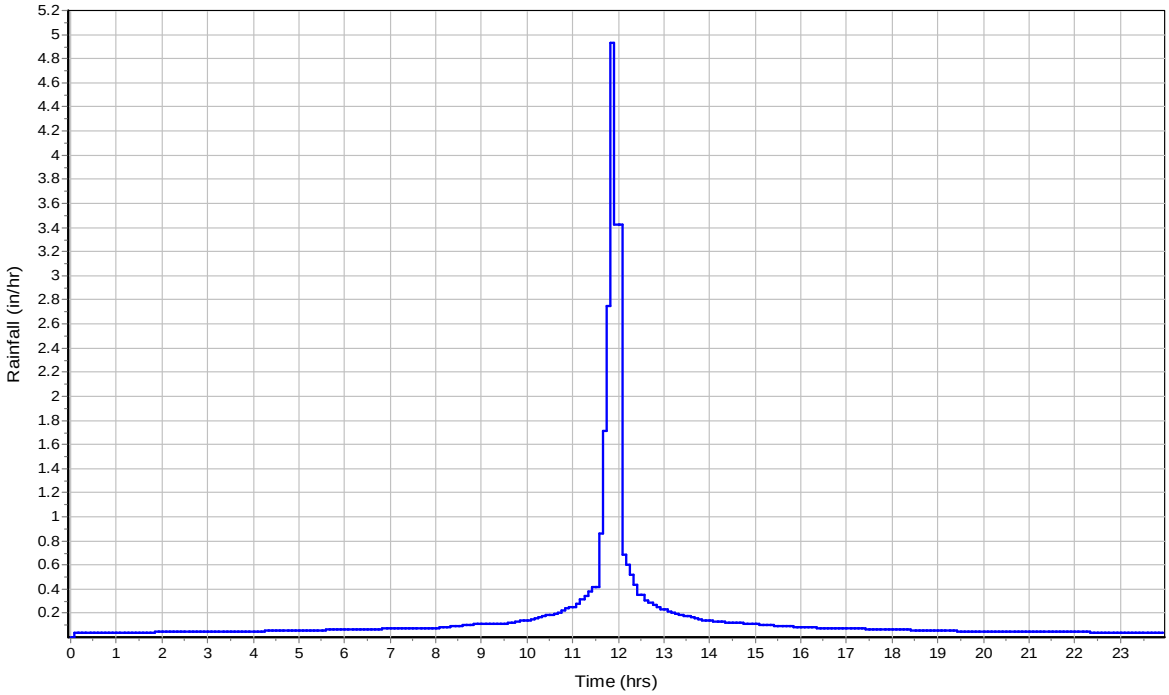
Total TOC (min) 2.96

Subbasin Runoff Results

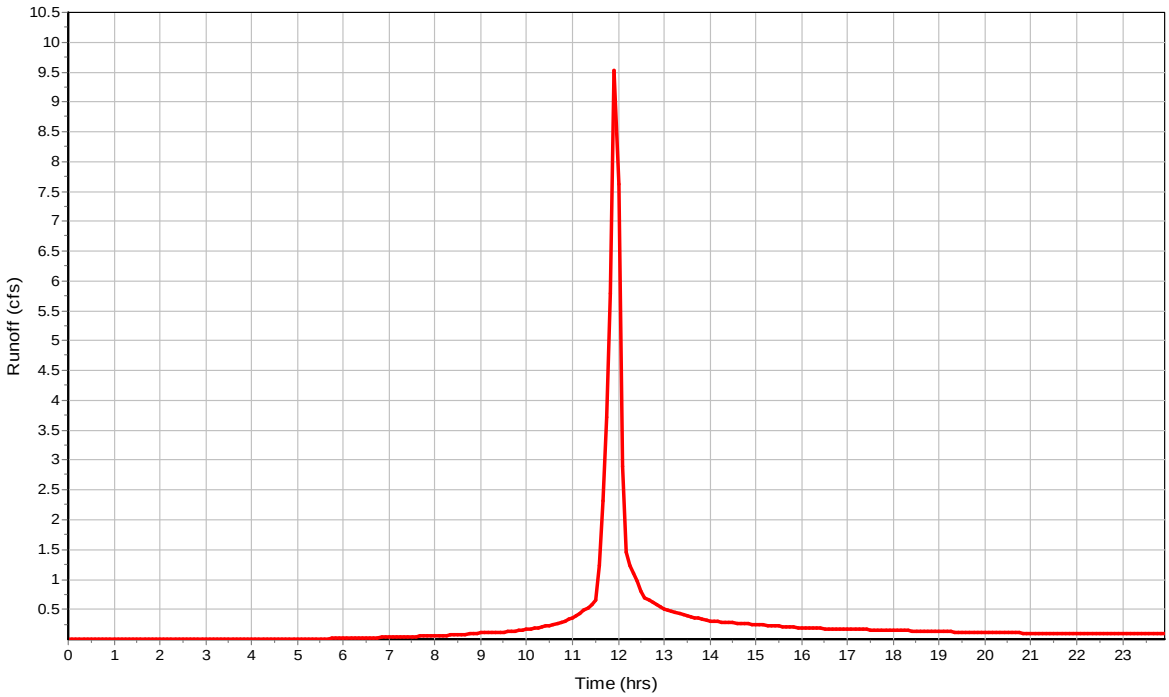
Total Rainfall (in)	3.6
Total Runoff (in)	2.54
Peak Runoff (cfs)	9.53
Weighted Curve Number	89.95
Time of Concentration (days hh:mm:ss)	0 00:02:58

Subbasin : DA5

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : BIO1

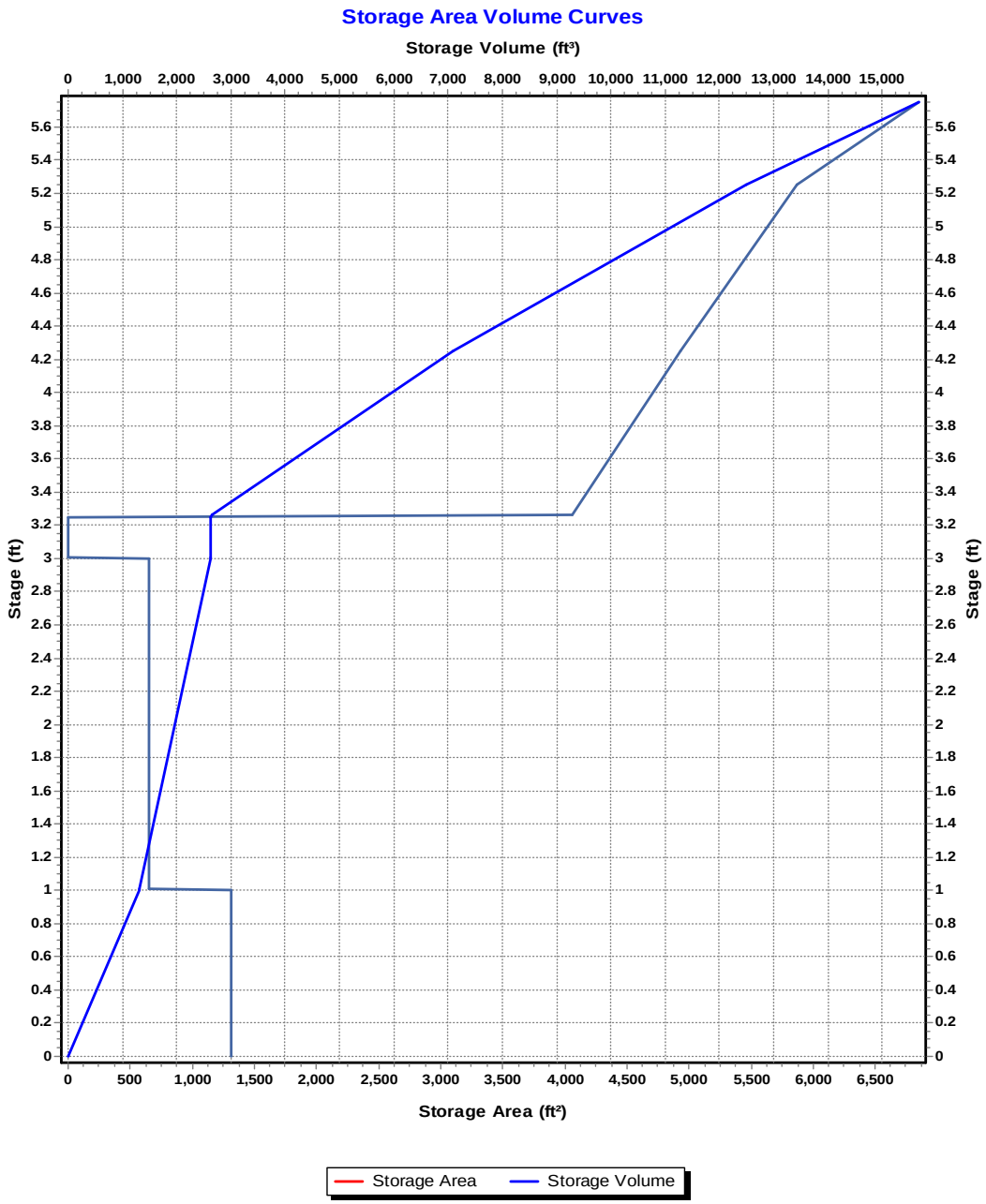
Input Data

Invert Elevation (ft)	626.75
Max (Rim) Elevation (ft)	632.90
Max (Rim) Offset (ft)	6.15
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-626.75
Ponded Area (ft²)	3747.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : bio1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1309.5	0
1	1309.5	1309.5
1.01	654.75	1319.32
3	654.75	2622.27
3.01	1	2625.55
3.25	1	2625.79
3.26	4061.7	2646.1
4.25	4934.6	7099.27
5.25	5864.015	12498.58
5.75	6850	15677.08


Storage Area Volume Curves
Storage Volume (ft³)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000 15,000
Stage (ft)
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
Storage Area (ft²)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500
Storage Area
Storage Volume

Storage Node : BIO1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	LOW FLOW	Side	CIRCULAR	No	1.78			626.75	0.61
2	MID	Side	Rectangular	No		6.00	12.00	631.20	0.63
3	OVER FLOW	Bottom	Rectangular	No		24.00	24.00	631.70	0.63

Output Summary Results

Peak Inflow (cfs)	9.52
Peak Lateral Inflow (cfs)	9.52
Peak Outflow (cfs)	2.28
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	631.78
Max HGL Depth Attained (ft)	5.03
Average HGL Elevation Attained (ft)	629.2
Average HGL Depth Attained (ft)	2.45
Time of Max HGL Occurrence (days hh:mm)	0 12:12
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : DETENTION1

Input Data

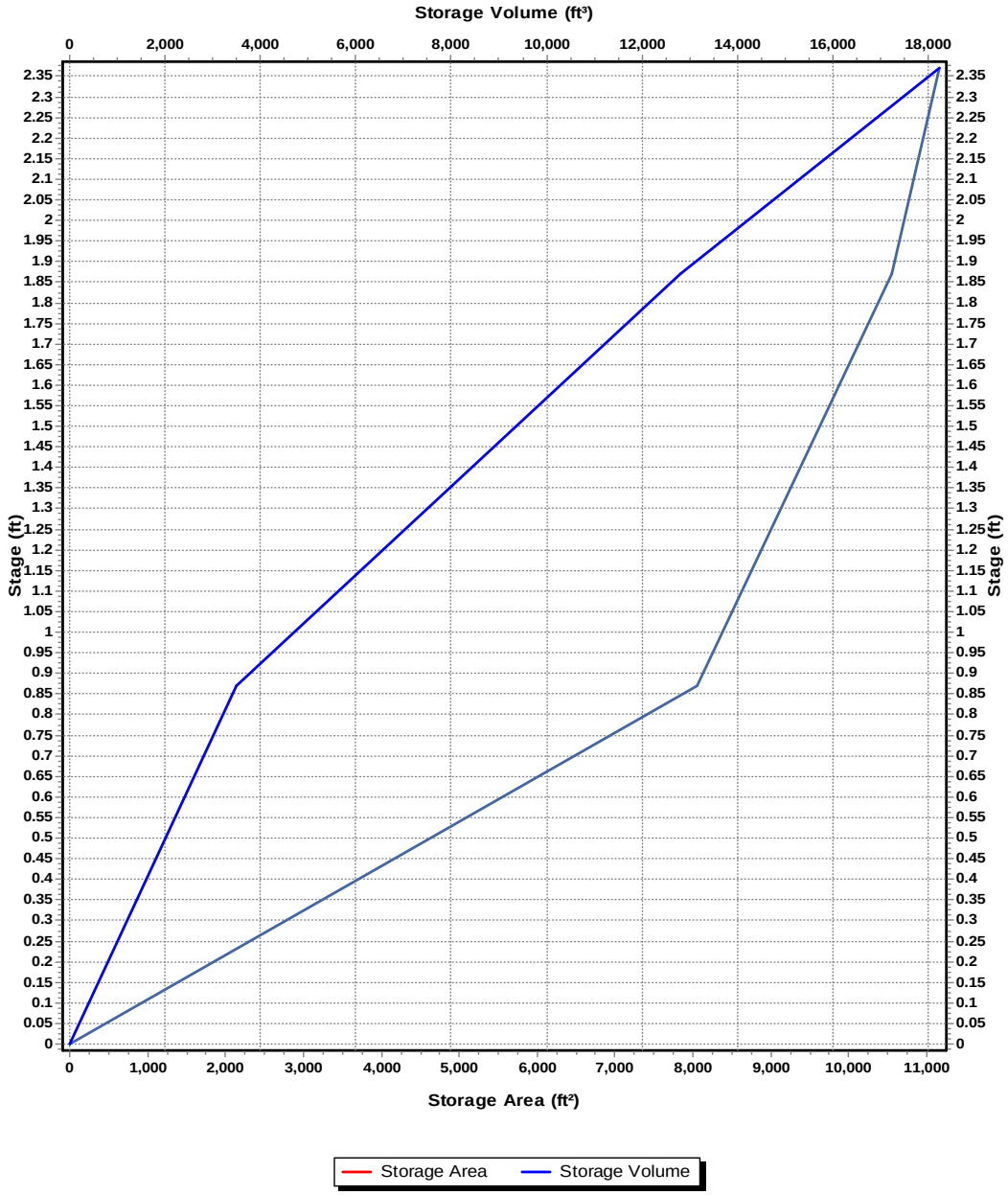
Invert Elevation (ft)	631.13
Max (Rim) Elevation (ft)	633.50
Max (Rim) Offset (ft)	2.37
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-631.13
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : det1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1	0
0.87	8049	3501.75
1.87	10553	12802.75
2.37	11162	18231.5

Storage Area Volume Curves



Storage Node : DETENTION1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	DET LOW	Side	Rectangular	No		12.00	12.00	631.13	0.63
2	DET OVER	Bottom	Rectangular	No		24.00	60.00	632.13	0.63

Output Summary Results

Peak Inflow (cfs)	8.09
Peak Lateral Inflow (cfs)	8.09
Peak Outflow (cfs)	3.83
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.16
Max HGL Depth Attained (ft)	1.03
Average HGL Elevation Attained (ft)	631.25
Average HGL Depth Attained (ft)	0.12
Time of Max HGL Occurrence (days hh:mm)	0 12:08
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	5-YR	Cumulative	inches	Tennessee	Rutherford	5.00	4.50	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	19423.01	484.00	79.79	4.50	2.44	1.09	1.59	0 00:08:03
2	DA2	84519.99	484.00	91.97	4.50	3.60	6.98	10.51	0 00:05:00
3	DA3	4619.02	484.00	90.23	4.50	3.41	0.36	0.55	0 00:06:20
4	DA4	39618.95	484.00	84.71	4.50	2.88	2.62	3.06	0 00:17:13
5	DA5	105403.96	484.00	89.95	4.50	3.39	8.21	12.56	0 00:05:00

Storage Nodes

Storage Node : BIO1

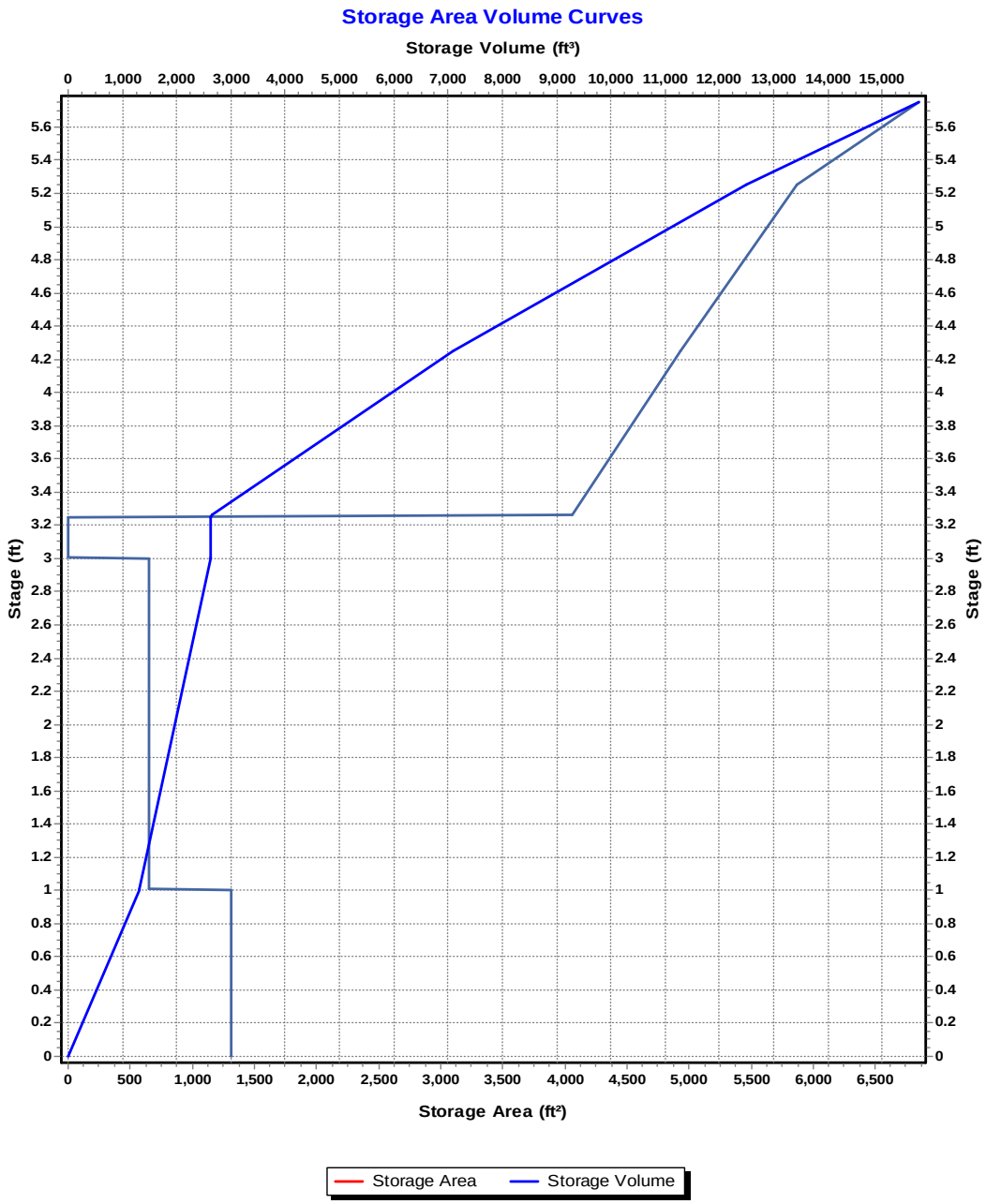
Input Data

Invert Elevation (ft)	626.75
Max (Rim) Elevation (ft)	632.90
Max (Rim) Offset (ft)	6.15
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-626.75
Ponded Area (ft²)	3747.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : bio1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1309.5	0
1	1309.5	1309.5
1.01	654.75	1319.32
3	654.75	2622.27
3.01	1	2625.55
3.25	1	2625.79
3.26	4061.7	2646.1
4.25	4934.6	7099.27
5.25	5864.015	12498.58
5.75	6850	15677.08


Storage Area Volume Curves
Storage Volume (ft³)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000 15,000
Stage (ft)
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
Storage Area (ft²)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500
Storage Area
Storage Volume

Storage Node : BIO1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	LOW FLOW	Side	CIRCULAR	No	1.78			626.75	0.61
2	MID	Side	Rectangular	No		6.00	12.00	631.20	0.63
3	OVER FLOW	Bottom	Rectangular	No		24.00	24.00	631.70	0.63

Output Summary Results

Peak Inflow (cfs)	12.55
Peak Lateral Inflow (cfs)	12.55
Peak Outflow (cfs)	7.78
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.06
Max HGL Depth Attained (ft)	5.31
Average HGL Elevation Attained (ft)	629.35
Average HGL Depth Attained (ft)	2.6
Time of Max HGL Occurrence (days hh:mm)	0 12:06
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : DETENTION1

Input Data

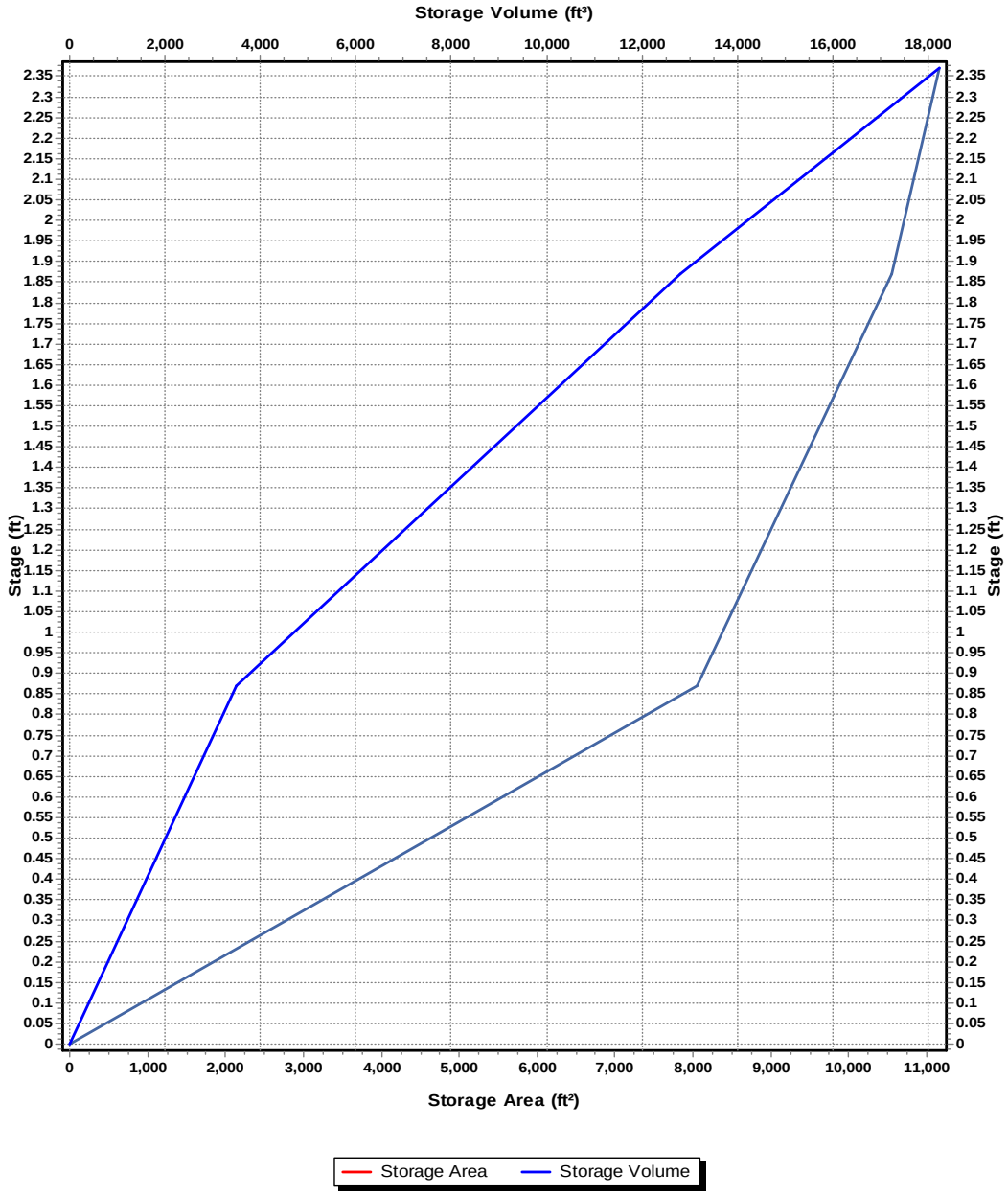
Invert Elevation (ft)	631.13
Max (Rim) Elevation (ft)	633.50
Max (Rim) Offset (ft)	2.37
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-631.13
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : det1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1	0
0.87	8049	3501.75
1.87	10553	12802.75
2.37	11162	18231.5

Storage Area Volume Curves



Storage Node : DETENTION1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	DET LOW	Side	Rectangular	No		12.00	12.00	631.13	0.63
2	DET OVER	Bottom	Rectangular	No		24.00	60.00	632.13	0.63

Output Summary Results

Peak Inflow (cfs)	10.5
Peak Lateral Inflow (cfs)	10.5
Peak Outflow (cfs)	6.69
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.28
Max HGL Depth Attained (ft)	1.15
Average HGL Elevation Attained (ft)	631.28
Average HGL Depth Attained (ft)	0.15
Time of Max HGL Occurrence (days hh:mm)	0 12:06
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	10-YR	Cumulative	inches	Tennessee	Rutherford	10.00	5.00	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	19423.01	484.00	79.79	5.00	2.87	1.28	1.87	0 00:08:03
2	DA2	84519.99	484.00	91.97	5.00	4.09	7.93	11.84	0 00:05:00
3	DA3	4619.02	484.00	90.23	5.00	3.90	0.41	0.62	0 00:06:20
4	DA4	39618.95	484.00	84.71	5.00	3.34	3.04	3.53	0 00:17:13
5	DA5	105403.96	484.00	89.95	5.00	3.87	9.37	14.24	0 00:05:00

Storage Nodes

Storage Node : BIO1

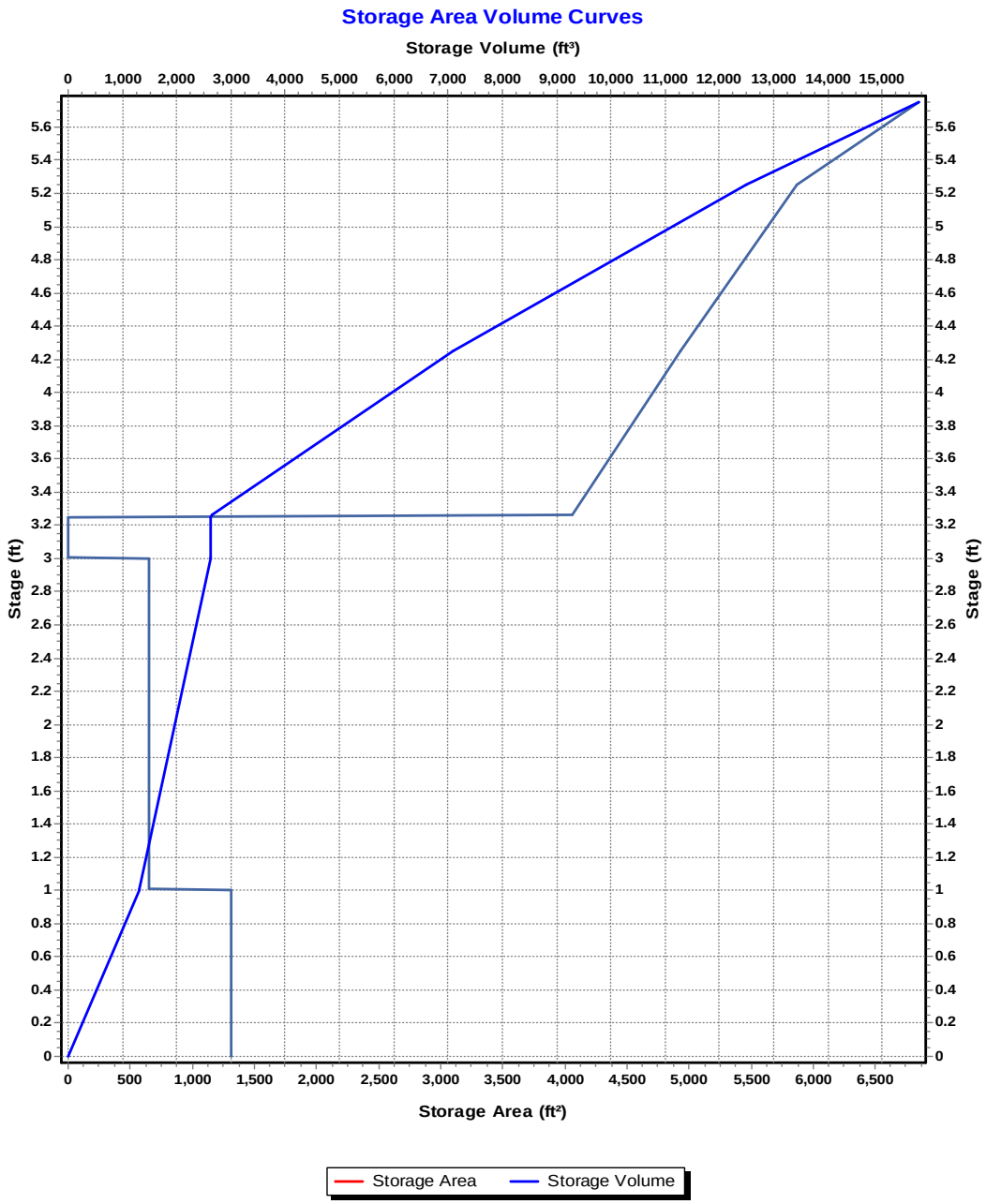
Input Data

Invert Elevation (ft)	626.75
Max (Rim) Elevation (ft)	632.90
Max (Rim) Offset (ft)	6.15
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-626.75
Ponded Area (ft²)	3747.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : bio1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1309.5	0
1	1309.5	1309.5
1.01	654.75	1319.32
3	654.75	2622.27
3.01	1	2625.55
3.25	1	2625.79
3.26	4061.7	2646.1
4.25	4934.6	7099.27
5.25	5864.015	12498.58
5.75	6850	15677.08


Storage Area Volume Curves
Storage Volume (ft³)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000 15,000
Stage (ft)
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
Storage Area (ft²)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500
Storage Area
Storage Volume

Storage Node : BIO1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	LOW FLOW	Side	CIRCULAR	No	1.78			626.75	0.61
2	MID	Side	Rectangular	No		6.00	12.00	631.20	0.63
3	OVER FLOW	Bottom	Rectangular	No		24.00	24.00	631.70	0.63

Output Summary Results

Peak Inflow (cfs)	14.23
Peak Lateral Inflow (cfs)	14.23
Peak Outflow (cfs)	10.24
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.15
Max HGL Depth Attained (ft)	5.4
Average HGL Elevation Attained (ft)	629.43
Average HGL Depth Attained (ft)	2.68
Time of Max HGL Occurrence (days hh:mm)	0 12:05
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : DETENTION1

Input Data

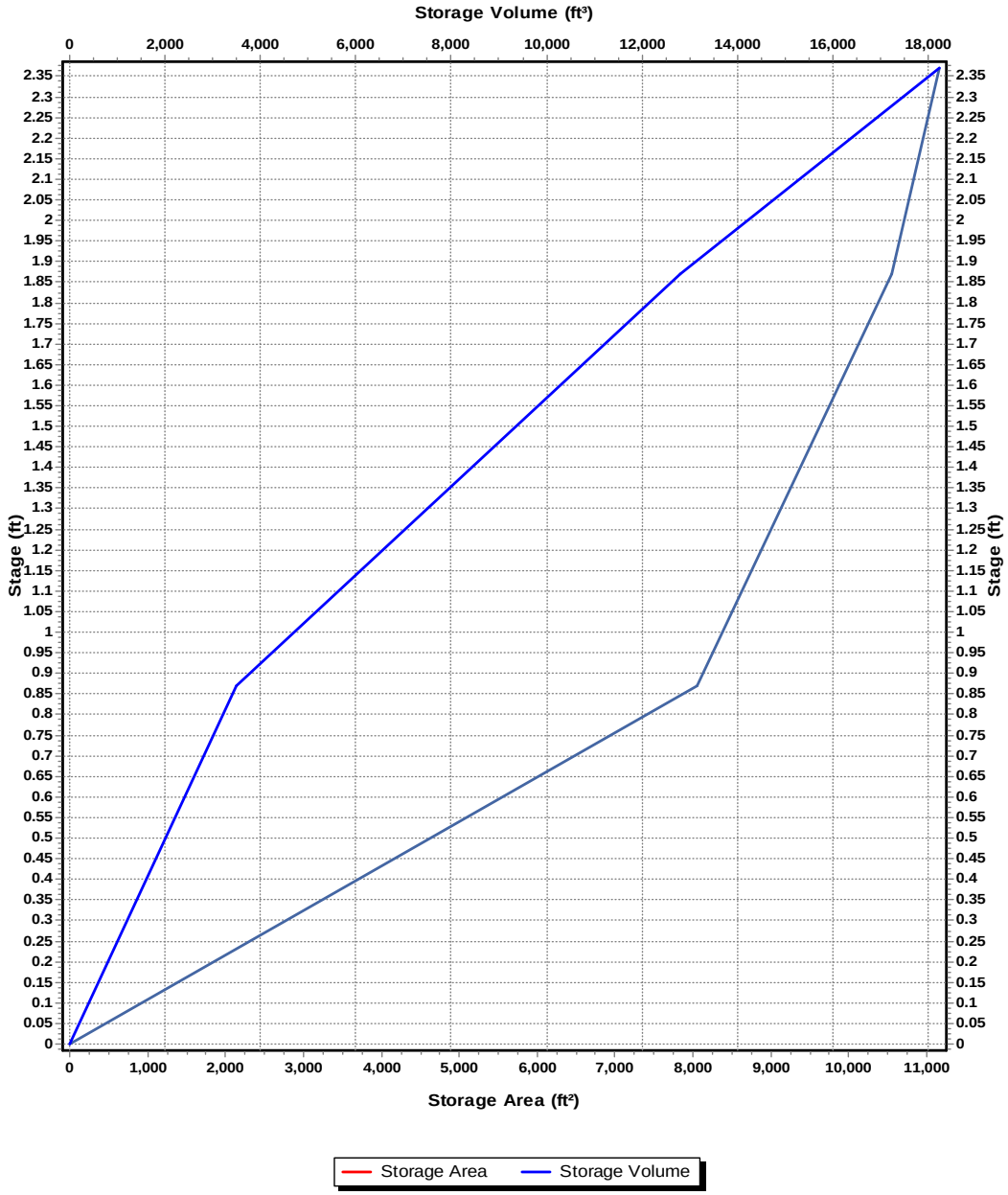
Invert Elevation (ft)	631.13
Max (Rim) Elevation (ft)	633.50
Max (Rim) Offset (ft)	2.37
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-631.13
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : det1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1	0
0.87	8049	3501.75
1.87	10553	12802.75
2.37	11162	18231.5

Storage Area Volume Curves



Storage Node : DETENTION1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	DET LOW	Side	Rectangular	No		12.00	12.00	631.13	0.63
2	DET OVER	Bottom	Rectangular	No		24.00	60.00	632.13	0.63

Output Summary Results

Peak Inflow (cfs)	11.83
Peak Lateral Inflow (cfs)	11.83
Peak Outflow (cfs)	8.26
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.33
Max HGL Depth Attained (ft)	1.2
Average HGL Elevation Attained (ft)	631.29
Average HGL Depth Attained (ft)	0.16
Time of Max HGL Occurrence (days hh:mm)	0 12:05
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	25-YR	Cumulative	inches	Tennessee	Rutherford	25.00	5.80	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	19423.01	484.00	79.79	5.80	3.58	1.60	2.32	0 00:08:03
2	DA2	84519.99	484.00	91.97	5.80	4.87	9.45	13.96	0 00:05:00
3	DA3	4619.02	484.00	90.23	5.80	4.67	0.50	0.74	0 00:06:20
4	DA4	39618.95	484.00	84.71	5.80	4.08	3.71	4.29	0 00:17:13
5	DA5	105403.96	484.00	89.95	5.80	4.65	11.24	16.91	0 00:05:00

Storage Nodes

Storage Node : BIO1

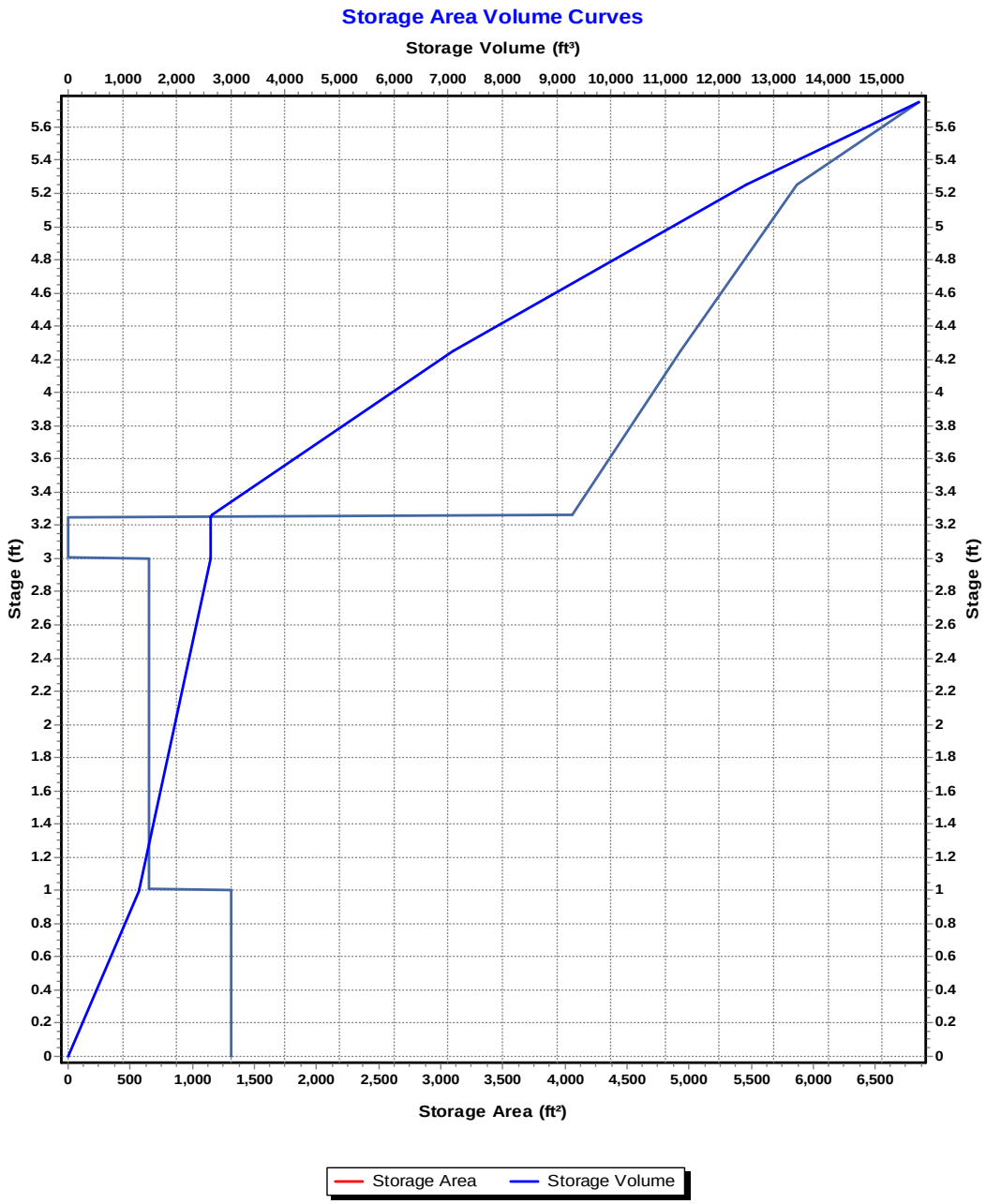
Input Data

Invert Elevation (ft)	626.75
Max (Rim) Elevation (ft)	632.90
Max (Rim) Offset (ft)	6.15
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-626.75
Ponded Area (ft²)	3747.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : bio1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1309.5	0
1	1309.5	1309.5
1.01	654.75	1319.32
3	654.75	2622.27
3.01	1	2625.55
3.25	1	2625.79
3.26	4061.7	2646.1
4.25	4934.6	7099.27
5.25	5864.015	12498.58
5.75	6850	15677.08


Storage Area Volume Curves
Storage Volume (ft³)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000 15,000
Stage (ft)
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
Storage Area (ft²)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500
Storage Area
Storage Volume

Storage Node : BIO1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	LOW FLOW	Side	CIRCULAR	No	1.78			626.75	0.61
2	MID	Side	Rectangular	No		6.00	12.00	631.20	0.63
3	OVER FLOW	Bottom	Rectangular	No		24.00	24.00	631.70	0.63

Output Summary Results

Peak Inflow (cfs)	16.86
Peak Lateral Inflow (cfs)	16.86
Peak Outflow (cfs)	13.29
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.28
Max HGL Depth Attained (ft)	5.53
Average HGL Elevation Attained (ft)	629.55
Average HGL Depth Attained (ft)	2.8
Time of Max HGL Occurrence (days hh:mm)	0 12:05
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : DETENTION1

Input Data

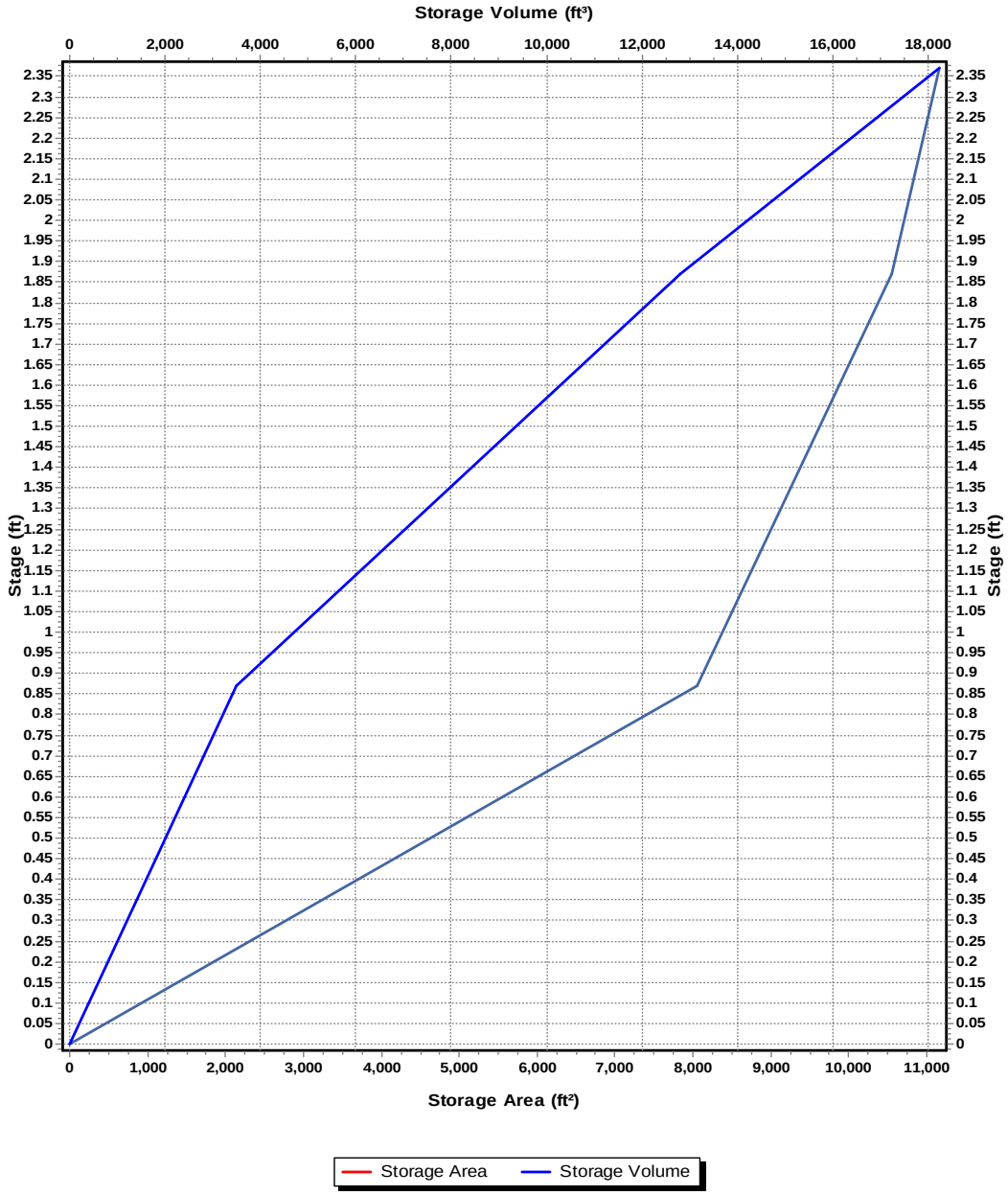
Invert Elevation (ft)	631.13
Max (Rim) Elevation (ft)	633.50
Max (Rim) Offset (ft)	2.37
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-631.13
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : det1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1	0
0.87	8049	3501.75
1.87	10553	12802.75
2.37	11162	18231.5

Storage Area Volume Curves



Storage Node : DETENTION1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	DET LOW	Side	Rectangular	No		12.00	12.00	631.13	0.63
2	DET OVER	Bottom	Rectangular	No		24.00	60.00	632.13	0.63

Output Summary Results

Peak Inflow (cfs)	13.93
Peak Lateral Inflow (cfs)	13.93
Peak Outflow (cfs)	10.6
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.39
Max HGL Depth Attained (ft)	1.26
Average HGL Elevation Attained (ft)	631.31
Average HGL Depth Attained (ft)	0.18
Time of Max HGL Occurrence (days hh:mm)	0 12:05
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	50-YR	Cumulative	inches	Tennessee	Rutherford	50.00	6.40	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	19423.01	484.00	79.79	6.40	4.12	1.84	2.66	0 00:08:03
2	DA2	84519.99	484.00	91.97	6.40	5.46	10.59	15.55	0 00:05:00
3	DA3	4619.02	484.00	90.23	6.40	5.26	0.56	0.82	0 00:06:20
4	DA4	39618.95	484.00	84.71	6.40	4.65	4.23	4.85	0 00:17:13
5	DA5	105403.96	484.00	89.95	6.40	5.23	12.66	18.91	0 00:05:00

Storage Nodes

Storage Node : BIO1

Input Data

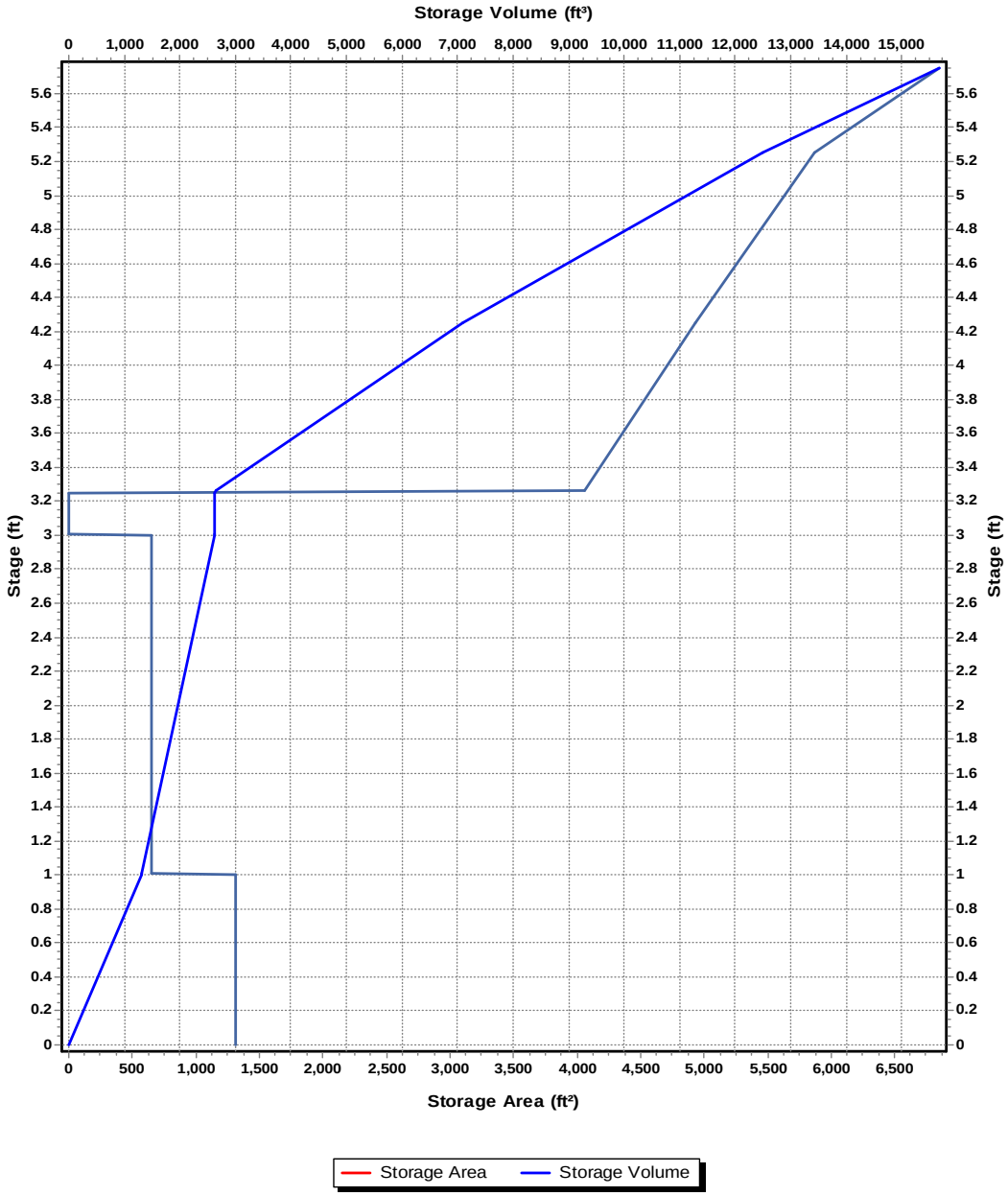
Invert Elevation (ft)	626.75
Max (Rim) Elevation (ft)	632.90
Max (Rim) Offset (ft)	6.15
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-626.75
Ponded Area (ft²)	3747.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : bio1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1309.5	0
1	1309.5	1309.5
1.01	654.75	1319.32
3	654.75	2622.27
3.01	1	2625.55
3.25	1	2625.79
3.26	4061.7	2646.1
4.25	4934.6	7099.27
5.25	5864.015	12498.58
5.75	6850	15677.08

Storage Area Volume Curves



Storage Node : BIO1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	LOW FLOW	Side	CIRCULAR	No	1.78			626.75	0.61
2	MID	Side	Rectangular	No		6.00	12.00	631.20	0.63
3	OVER FLOW	Bottom	Rectangular	No		24.00	24.00	631.70	0.63

Output Summary Results

Peak Inflow (cfs)	18.89
Peak Lateral Inflow (cfs)	18.89
Peak Outflow (cfs)	13.95
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.43
Max HGL Depth Attained (ft)	5.68
Average HGL Elevation Attained (ft)	629.64
Average HGL Depth Attained (ft)	2.89
Time of Max HGL Occurrence (days hh:mm)	0 12:05
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : DETENTION1

Input Data

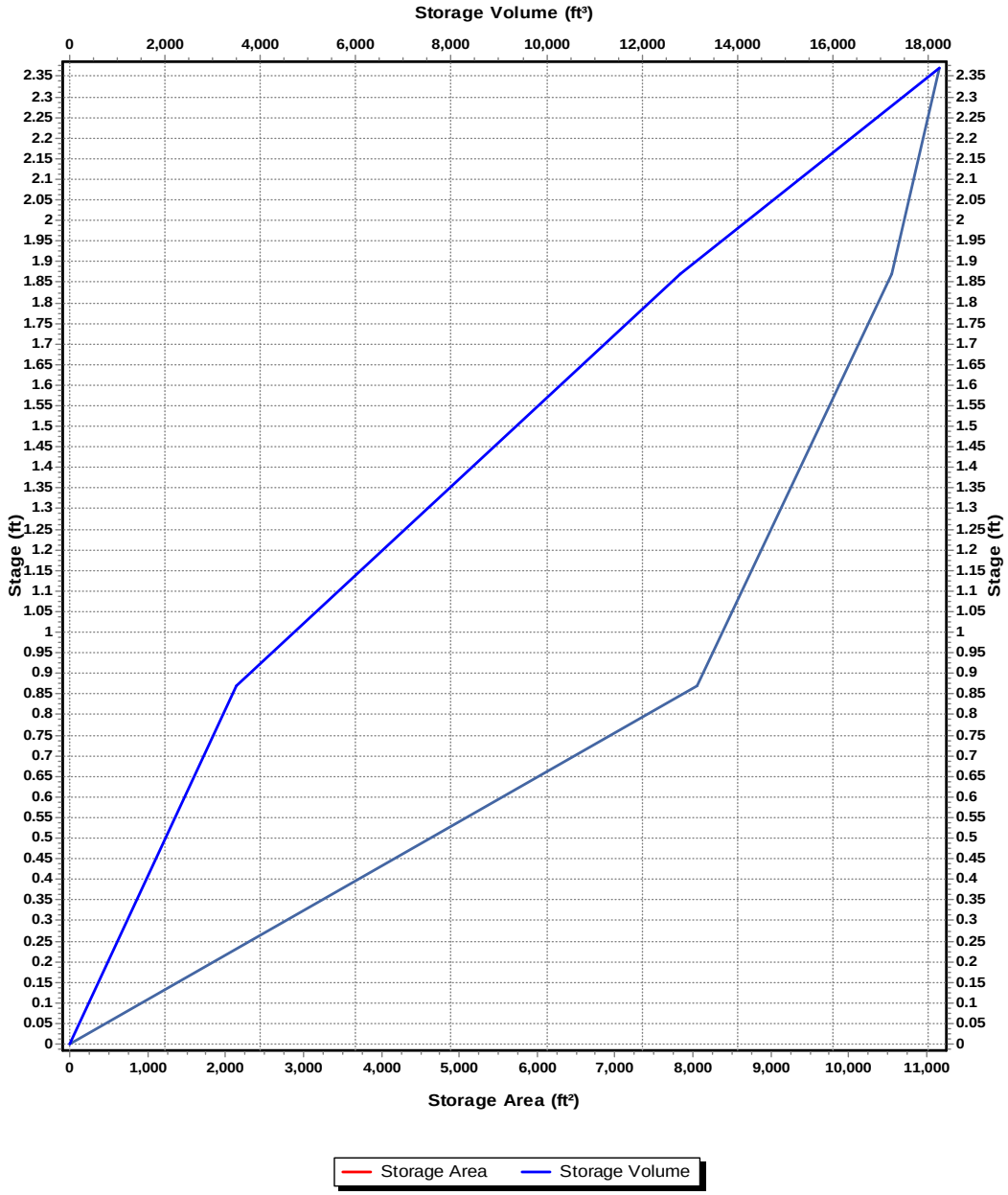
Invert Elevation (ft)	631.13
Max (Rim) Elevation (ft)	633.50
Max (Rim) Offset (ft)	2.37
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-631.13
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : det1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1	0
0.87	8049	3501.75
1.87	10553	12802.75
2.37	11162	18231.5

Storage Area Volume Curves



Storage Node : DETENTION1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	DET LOW	Side	Rectangular	No		12.00	12.00	631.13	0.63
2	DET OVER	Bottom	Rectangular	No		24.00	60.00	632.13	0.63

Output Summary Results

Peak Inflow (cfs)	15.54
Peak Lateral Inflow (cfs)	15.54
Peak Outflow (cfs)	12.28
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.43
Max HGL Depth Attained (ft)	1.3
Average HGL Elevation Attained (ft)	631.32
Average HGL Depth Attained (ft)	0.19
Time of Max HGL Occurrence (days hh:mm)	0 12:04
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100-YR	Cumulative	inches	Tennessee	Rutherford	100.00	6.90	SCS Type II 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ft²)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	DA1	19423.01	484.00	79.79	6.90	4.58	2.04	2.95	0 00:08:03
2	DA2	84519.99	484.00	91.97	6.90	5.95	11.55	16.87	0 00:05:00
3	DA3	4619.02	484.00	90.23	6.90	5.75	0.61	0.89	0 00:06:20
4	DA4	39618.95	484.00	84.71	6.90	5.12	4.66	5.33	0 00:17:13
5	DA5	105403.96	484.00	89.95	6.90	5.72	13.84	20.56	0 00:05:00

Storage Nodes

Storage Node : BIO1

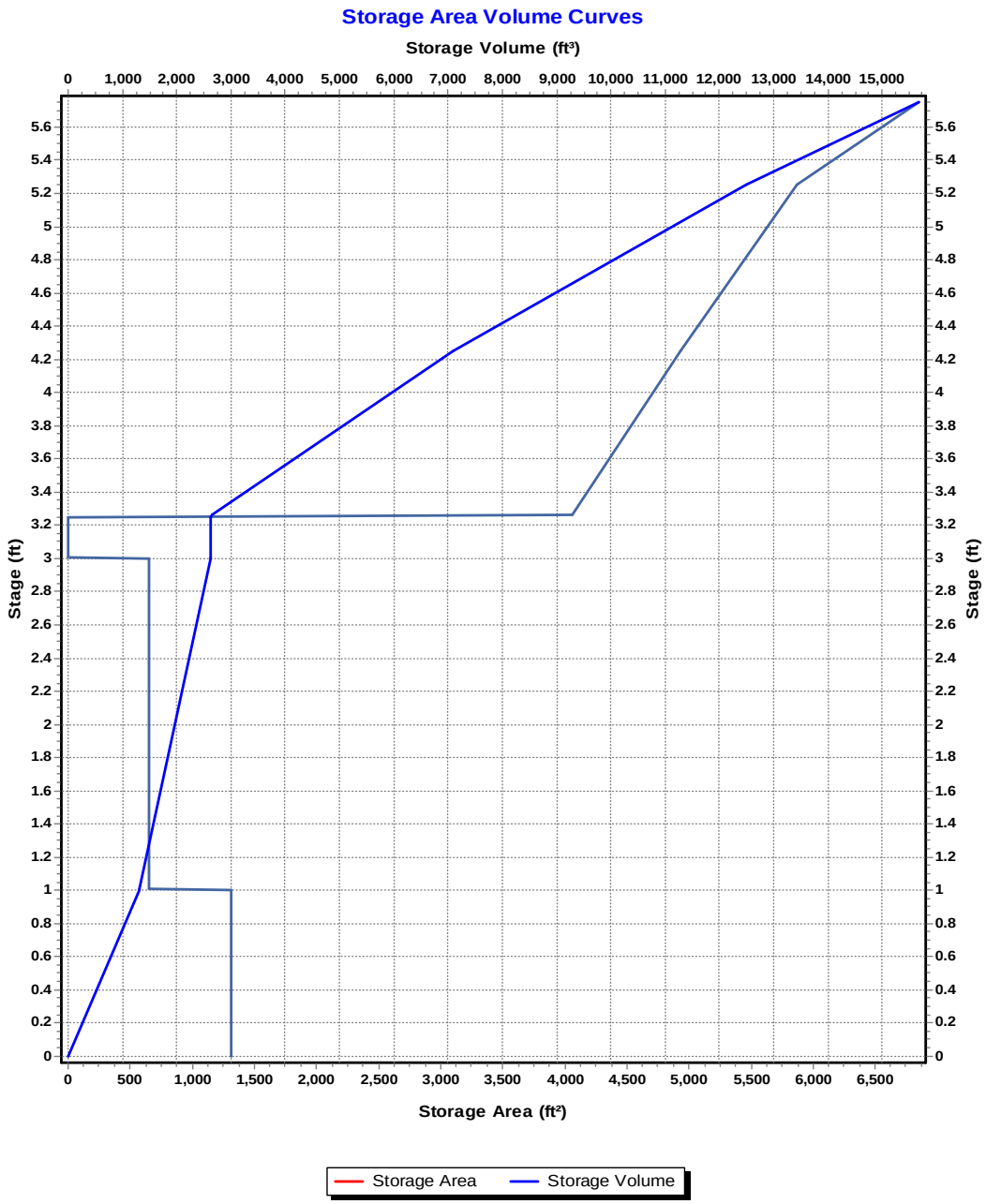
Input Data

Invert Elevation (ft)	626.75
Max (Rim) Elevation (ft)	632.90
Max (Rim) Offset (ft)	6.15
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-626.75
Ponded Area (ft²)	3747.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : bio1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1309.5	0
1	1309.5	1309.5
1.01	654.75	1319.32
3	654.75	2622.27
3.01	1	2625.55
3.25	1	2625.79
3.26	4061.7	2646.1
4.25	4934.6	7099.27
5.25	5864.015	12498.58
5.75	6850	15677.08


Storage Area Volume Curves
Storage Volume (ft³)
0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000 15,000
Stage (ft)
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5 5.2 5.4 5.6
Storage Area (ft²)
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500
Storage Area
Storage Volume

Storage Node : BIO1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	LOW FLOW	Side	CIRCULAR	No	1.78			626.75	0.61
2	MID	Side	Rectangular	No		6.00	12.00	631.20	0.63
3	OVER FLOW	Bottom	Rectangular	No		24.00	24.00	631.70	0.63

Output Summary Results

Peak Inflow (cfs)	20.52
Peak Lateral Inflow (cfs)	20.52
Peak Outflow (cfs)	14.04
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.57
Max HGL Depth Attained (ft)	5.82
Average HGL Elevation Attained (ft)	629.71
Average HGL Depth Attained (ft)	2.96
Time of Max HGL Occurrence (days hh:mm)	0 12:06
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : DETENTION1

Input Data

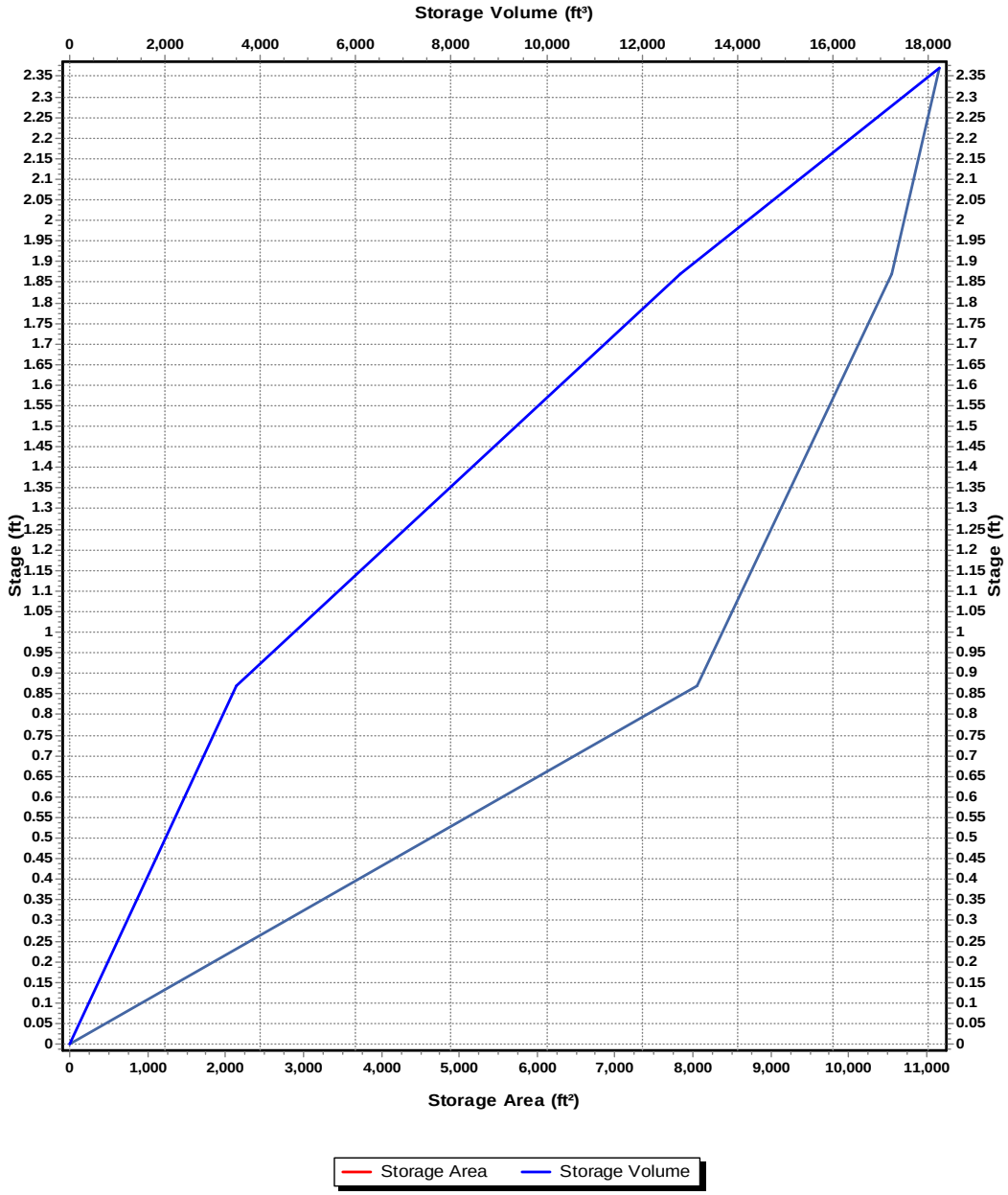
Invert Elevation (ft)	631.13
Max (Rim) Elevation (ft)	633.50
Max (Rim) Offset (ft)	2.37
Initial Water Elevation (ft)	0.00
Initial Water Depth (ft)	-631.13
Ponded Area (ft²)	0.00
Evaporation Loss	0.00

Storage Area Volume Curves

Storage Curve : det1

Stage (ft)	Storage Area (ft²)	Storage Volume (ft³)
0	1	0
0.87	8049	3501.75
1.87	10553	12802.75
2.37	11162	18231.5

Storage Area Volume Curves



Storage Node : DETENTION1 (continued)

Outflow Orifices

SN	Element ID	Orifice Type	Orifice Shape	Flap Gate	Circular Orifice Diameter (in)	Rectangular Orifice Height (in)	Rectangular Orifice Width (in)	Orifice Invert Elevation (ft)	Orifice Coefficient
1	DET LOW	Side	Rectangular	No		12.00	12.00	631.13	0.63
2	DET OVER	Bottom	Rectangular	No		24.00	60.00	632.13	0.63

Output Summary Results

Peak Inflow (cfs)	16.83
Peak Lateral Inflow (cfs)	16.83
Peak Outflow (cfs)	13.63
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	632.47
Max HGL Depth Attained (ft)	1.34
Average HGL Elevation Attained (ft)	631.33
Average HGL Depth Attained (ft)	0.2
Time of Max HGL Occurrence (days hh:mm)	0 12:04
Total Exfiltration Volume (1000-ft³)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Building Addition For

Alterra

122 Charter Place, La Vergne, TN 37086

Site Plan - Technical Review Submittal

Sheet Index:

Survey
COVER SHEET
C100 - Demolition Plan
C200 - Site Plan
C201 - Site Layout
C210 - Site Details
C211 - Site Details
C212 - Site Details
C213 - Site Details
C214 - Site Details
C300 - Grading Plan
C301 - Accessibility Enlargement
C400 - Pre Developed Drainage Area Map
C401 - Post Developed Drainage Area Map
C402 - Drainage Plan
C404 - Water Quality Map
C410 - Drainage Details
C411 - Drainage Details
C412 - Drainage Details
C413 - Drainage Details
C500 - Pre-Construction SWPPP
C501 - SWPPP
C502 - Final SWPPP
C510 - SWPPP Details
C511 - SWPPP Details
C600 - Utility Plan
C610 - Utility Details
C611 - Utility Details
C612 - Utility Details
L1.0 - Landscape Plan
L1.1 - Landscape Notes
A201C - Architectural Elevations

Civil Engineer:



INGRAM CIVIL ENGINEERING GROUP, LLC
212 Overlook Circle Ste. 105
Brentwood, Tennessee 37027
615.370.7964 Office
615.370.1273 Fax
STATE OF TENNESSEE
PROFESSIONAL ENGINEER
LICENSE # 113398
SAMUEL H. BOHANNON

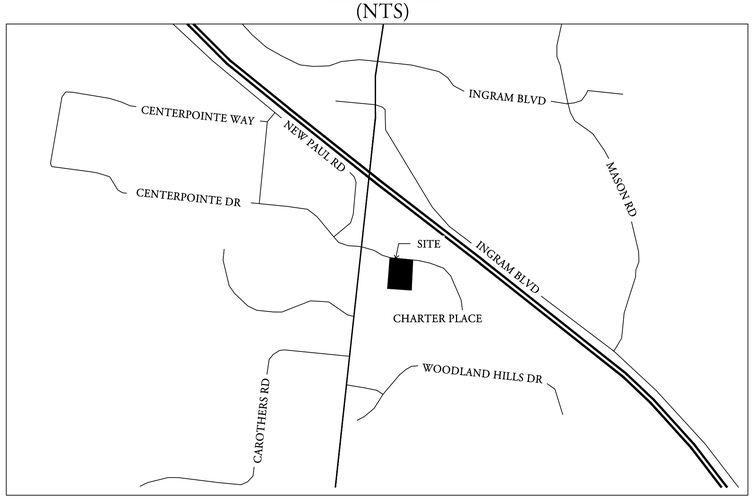
Landscape Architect:

Heibert + Ball Land Design
1894 Gen. George Patton Dr.
Suite 400
Franklin, TN 37067
615-376-2421
Registered LA: Connor L. Ball
License # 808

Site Data Table:

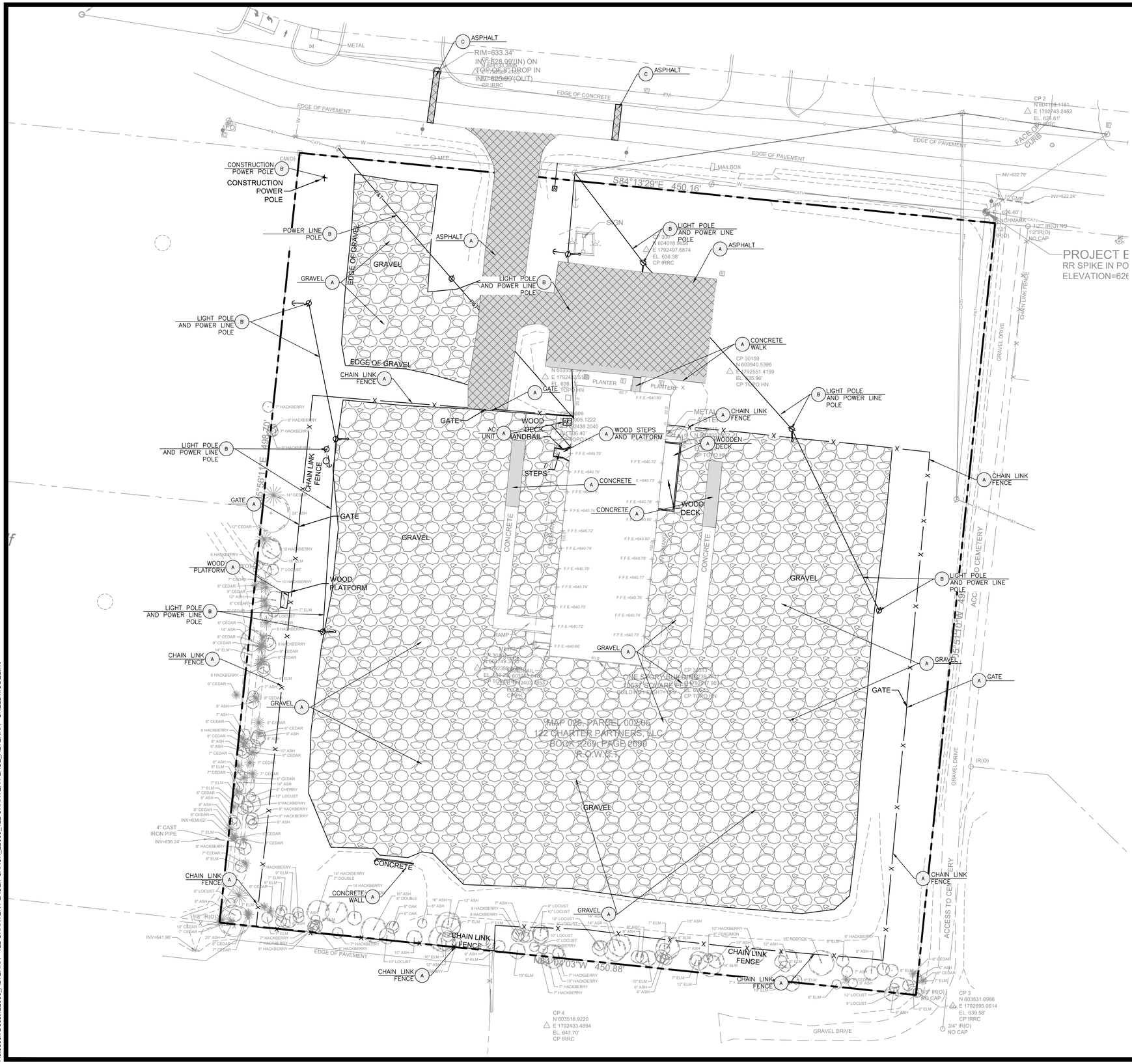
Zoning District: Heavy Industrial (I-2)
Existing Use: Industrial
Proposed Use: Industrial
Total Site Acreage = 5.16 Acres
Building Height = 18.9', Stories = 1, Max = 50'
Proposed Parking = 19 (standard), 2 (accessible)
Gross Floor Area = 17,892 sf
Impervious Surface Ratio = 56.01%
Floor Area Ratio = 7.96%, Max = 50%
Pervious Area (green space) = 2.57 Acres

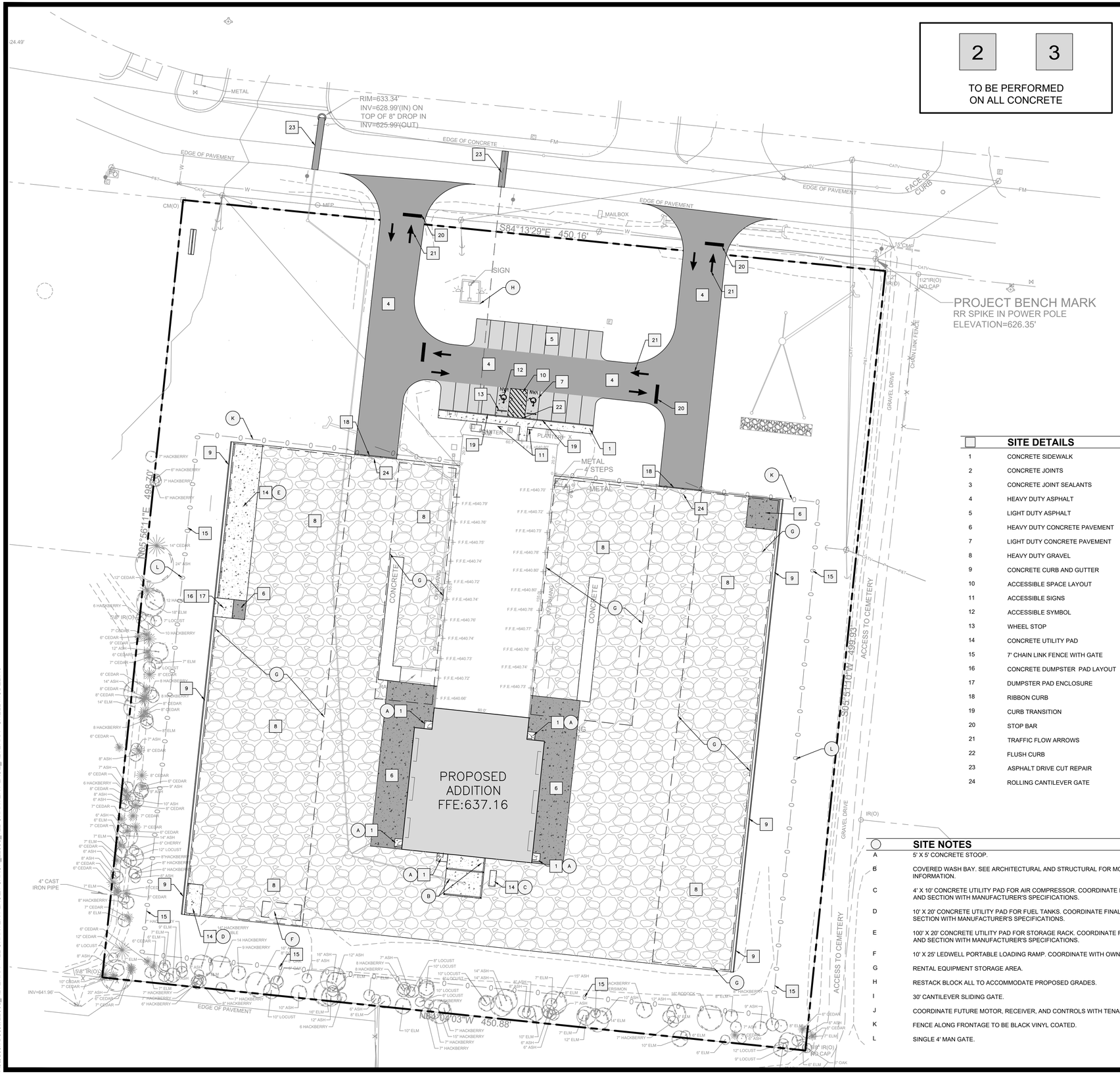
Vicinity Map:
(NTS)



Revision Box

Agency Review-Not for Construction


ASPHALT
RIM=633.34'
INV=628.99'(IN) ON
INV=628.99'(OUT)
CP IRRC
EDGE OF PAVEMENT
EDGE OF CONCRETE
S84°13'29"E 450.16'
CONSTRUCTION POWER POLE
POWER LINE POLE
LIGHT POLE AND POWER LINE POLE
SIGN
MAILBOX
GRAVEL
EDGE OF GRAVEL
CHAIN LINK FENCE
GATE
CONCRETE WALK
WOOD DECK
HANDRAIL
WOOD STEPS AND PLATFORM
STEPS
CONCRETE
WOODEN DECK
PLANTER
AC UNIT
WOOD PLATFORM
RAMP
CONCRETE WALL
GRAVEL DRIVE
ACCESS TO CEMETERY
FACE OF CURB
15" CMP
INV=622.79'
INV=622.24'
CP 2
N 604166.1181
E 1792743.2462
EL. 624.61'
5/8" IRRC
CP 30159
N 603940.5396
E 792551.4199
EL. 635.96'
CP TOMO HN
CP 30213
N 604018.8658
E 1792497.6874
EL. 636.38'
CP IRRC
CP 30214
N 603905.1222
E 1792438.2040
EL. 636.40'
CP TOMO HN
CP 30215
N 603809
E 1792432.5189
EL. 636.10'
CP TOMO HN
CP 30216
N 603809
E 1792432.5189
EL. 636.10'
CP TOMO HN
CP 30217
N 603809
E 1792432.5189
EL. 636.10'
CP TOMO HN
CP



SITE DETAILS

1	CONCRETE SIDEWALK
2	CONCRETE JOINTS
3	CONCRETE JOINT SEALANTS
4	HEAVY DUTY ASPHALT
5	LIGHT DUTY ASPHALT
6	HEAVY DUTY CONCRETE PAVEMENT
7	LIGHT DUTY CONCRETE PAVEMENT
8	HEAVY DUTY GRAVEL
9	CONCRETE CURB AND GUTTER
10	ACCESSIBLE SPACE LAYOUT
11	ACCESSIBLE SIGNS
12	ACCESSIBLE SYMBOL
13	WHEEL STOP
14	CONCRETE UTILITY PAD
15	7' CHAIN LINK FENCE WITH GATE
16	CONCRETE DUMPSTER PAD LAYOUT
17	DUMPSTER PAD ENCLOSURE
18	RIBBON CURB
19	CURB TRANSITION
20	STOP BAR
21	TRAFFIC FLOW ARROWS
22	FLUSH CURB
23	ASPHALT DRIVE CUT REPAIR
24	ROLLING CANTILEVER GATE

SITE NOTES

A	5' X 5' CONCRETE STOOP.
B	COVERED WASH BAY. SEE ARCHITECTURAL AND STRUCTURAL FOR MORE INFORMATION.
C	4' X 10' CONCRETE UTILITY PAD FOR AIR COMPRESSOR. COORDINATE FINAL SIZE AND SECTION WITH MANUFACTURER'S SPECIFICATIONS.
D	10' X 20' CONCRETE UTILITY PAD FOR FUEL TANKS. COORDINATE FINAL SIZE AND SECTION WITH MANUFACTURER'S SPECIFICATIONS.
E	100' X 20' CONCRETE UTILITY PAD FOR STORAGE RACK. COORDINATE FINAL SIZE AND SECTION WITH MANUFACTURER'S SPECIFICATIONS.
F	10' X 25' LEDWELL PORTABLE LOADING RAMP. COORDINATE WITH OWNER.
G	RENTAL EQUIPMENT STORAGE AREA.
H	RESTACK BLOCK ALL TO ACCOMMODATE PROPOSED GRADES.
I	30' CANTILEVER SLIDING GATE.
J	COORDINATE FUTURE MOTOR, RECEIVER, AND CONTROLS WITH TENANT.
K	FENCE ALONG FRONTAGE TO BE BLACK VINYL COATED.
L	SINGLE 4' MAN GATE.

GENERAL SITE NOTES

1. SITE LAYOUT FOR ALTERRA BY INGRAM CIVIL ENGINEERING GROUP, LLC, BASED ON SITE SURVEY BY RAGAN SMITH ON 03-06-2023.

2. ORIGINAL TOPOGRAPHICAL INFORMATION IS BASED ON A SURVEY BY RAGAN SMITH ON 03-06-2023. THE ENGINEER, THE OWNER, OR ANY OF THE OWNER'S CONSULTANTS SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION.

3. ALL CIVIL/SITE WORK ELEMENTS INDICATED TO BE CONSTRUCTED ON THE PLANS ARE TO BE BUILT IN STRICT ACCORDANCE WITH THE STANDARDS ADOPTED BY THE CITY OF LA VERGNE/RUTHERFORD COUNTY, UNLESS SPECIFICALLY NOTED OTHERWISE. ALL SITE WORK MUST ALSO COMPLY WITH THE CITY OF LA VERGNE/RUTHERFORD COUNTY ENVIRONMENTAL REQUIREMENTS AND FEDERAL EPA REQUIREMENTS.

4. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

5. DIMENSIONS LOCATING THE BUILDING IN RELATIONSHIP TO THE PROPERTY LINES HAVE BEEN PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. WHERE POSSIBLE, COORDINATES CAN BE USED TO ESTABLISH PHYSICAL LENGTHS ALONG THE BUILDING PERIMETER. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FROM STRUCTURAL AND ARCHITECTURAL DRAWINGS THE ACTUAL EXTENT OF THE BUILDING ON THE PROPERTY. BUILDING LAYOUT SHALL BE BASED SOLELY ON DIMENSIONAL INFORMATION PROVIDED ON STRUCTURAL AND ARCHITECTURAL DRAWINGS. DISCREPANCIES WHICH IMPACT SITE LAYOUT SHOULD BE IMMEDIATELY REPORTED TO THE ENGINEER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL SITE FEATURES, (BUILDINGS, ROADS, PARKING, PADS, WALKS, ETC.) AND WILL EMPLOY A LAND SURVEYOR LICENSED TO PRACTICE IN THE PROJECT'S REGION OF CONSTRUCTION TO STAKE OUT AND MAINTAIN ALL REQUIRED CONTROL POINTS THROUGHOUT THE LIFE OF THE PROJECT. THE SURVEYOR SHALL CERTIFY TO THE ENGINEER, IN WRITING, THAT THE LAYOUT IN THE FIELD SUBSTANTIALLY CONFORMS TO THE LAYOUT INDICATED ON THE CONTRACT DOCUMENTS. LAYOUT DISCREPENCIES OR CHANGES SHOULD BE SO NOTED TO THE ENGINEER.

7. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE DAMAGE OR LOSS OF ANY REFERENCE POINTS, MONUMENTS, HUBS, AND STAKED LOT CORNERS DURING THE CONSTRUCTION OF THE WORK AND SHALL BEAR ANY COST ASSOCIATED WITH REPAIR.

8. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL PERMIT FEES. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND ORDINANCES AND RECEIVE APPROPRIATE APPROVALS WHERE REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.

9. MATERIALS AND PROCESSES OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. WHILE THE ENGINEER HAS PROVIDED, FOR THE CONVENIENCE OF THE CONTRACTOR, DRAWINGS OUTLINING CERTAIN REQUIRED OSHA MINIMUM SAFETY PRACTICES, THE ENGINEER DOES NOT ACCEPT RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION OR FOR VERIFYING THAT SUCH MEASURES ARE IMPLEMENTED ON SITE. MAINTAINING A SAFE ENVIROMENT DURING THE PROMULGATION OF THE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER, THE OWNER AND OTHER CONSULTANTS, HAVE NO EXPERTISE, NOR ACCEPT ANY LIABILITY, IMPLIED OR OTHERWISE, FOR MATERIALS AND PROCESSES OF CONSTRUCTION.

10. THE CONTRACTOR SHALL NOT COMMENCE ANY WORK WHICH IS NOT UNDER THE CONTROL OR OWNERSHIP OF THE OWNER WITHOUT WRITTEN PERMISSION FROM THE PROPERTY'S OWNER OR CONTROLLING INTEREST. WHERE CONTROLLING INTEREST IS A LOCAL, STATE, OR FEDERAL AGENCY, THEN APPROVAL FOR CONSTRUCTION SHALL CONSTITUTE AUTHORITY TO COMMENCE WORK.

11. WHERE NOT SPECIFICALLY NOTED OTHERWISE, ALL CONCRETE FINISHES SHALL BE SLIP RESISTANT PER TECHNICAL SPECIFICATIONS.

12. ALL ACCESSIBLE PARKING SPACES, INDICATED WITH THE GRAPHIC ACCESSIBLE SYMBOL, DENOTE ACCESSIBLE PARKING SPACES. THESE SPACES ARE DESIGNED TO CONFORM TO ADA AND TENNESSEE ACCESSIBILITY STANDARD SPECIFICATIONS. ALL INDICATED SPACES SHALL RECEIVE THE PAINTED SYMBOL AND APPROPRIATE IDENTIFICATION SIGNAGE. WHERE REQUIREMENTS ARE DIFFERENT OR IN EXCESS OF THESE, THE CONTRACTOR WILL ALLOW FOR THOSE ADDITIONAL REQUIREMENTS IN HIS PRICE AND PROMPTLY SUBMIT THEM TO THE ENGINEER.

13. THE CONTRACTOR IS RESPONSIBLE FOR USING THE ONE-CALL SYSTEM OR OTHER MEANS TO CONTACT AND VERIFY LOCATIONS OF ALL UTILITIES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR REPAIRS TO DAMAGED UTILITIES.

14. THE CONTRACTOR IS TO CONTROL TRAFFIC FLOW DURING TIME OF CONSTRUCTION. ANY AND ALL TRAFFIC CONTROL IMPLEMENTED DURING THIS PROJECT SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

15. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY MUST BE IN ACCORDANCE WITH CITY OF LA VERGNE/RUTHERFORD COUNTY AND TENNESSEE D.O.T. REGULATIONS.

LEGEND: SITE

- PROPOSED HC ACCESSIBLE PARKING SPACE (SEE SITE DETAIL)
- L1 — LINEAR DIMENSION
- C1 — PROPOSED CURVE RADIUS DIMENSION
- PROPOSED SIGN
- PROPOSED PRECAST WHEEL STOP
- PROPOSED TRAFFIC ARROW (SEE SITE DETAIL)
- PROPOSED STOP BAR (SEE SITE DETAIL)
- PROPOSED CROSS WALK MARKING
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED LIGHT DUTY CONCRETE PAVEMENT
- PROPOSED CONCRETE WALK
- PROPOSED HEAVY DUTY GRAVEL

SITE PLAN

30 0 30 60
GRAPHIC SCALE

AGENCY REVIEW - NOT FOR CONSTRUCTION

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. BOHANNON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00113398 STATE OF TENNESSEE 4-14-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066
DRAWN BY: CEM
DATE: 03.27.23
DRAWING
SITE PLAN

C200

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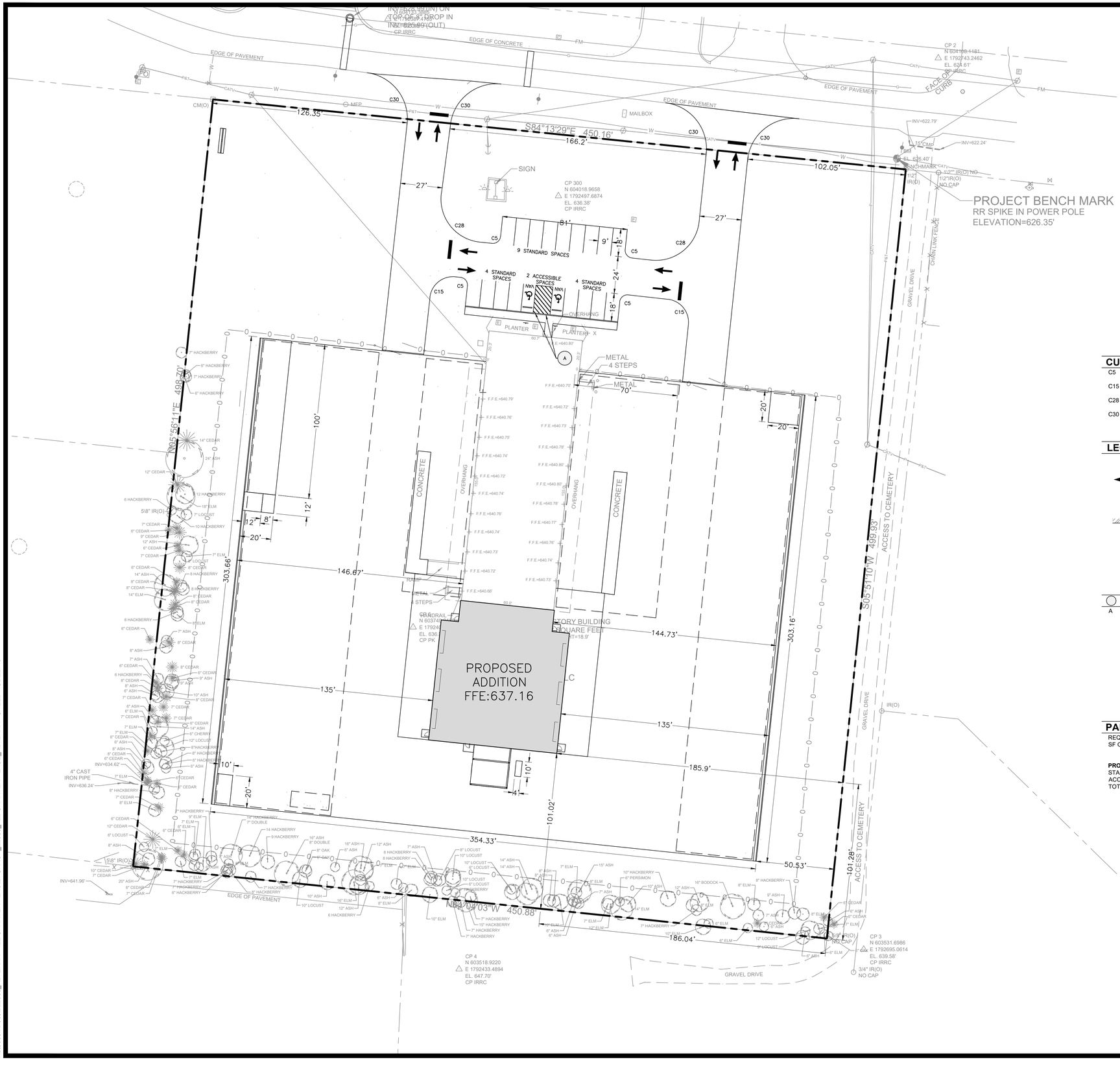

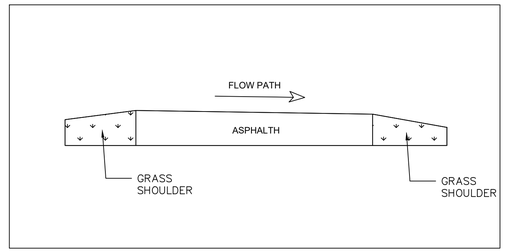

TYPICAL DRIVE ENTRY CROSS SECTION

CURVE TABLE

C5	R: 5'
C15	R:15'
C28	R:28'
C30	R:30'

LEGEND: SITE LAYOUT

L1	LINEAR DIMENSION
C1	PROPOSED CURVE RADIUS DIMENSION
	PROPOSED FLUSH CONDITION

SITE NOTES

A FLUSH CONDITION.

PARKING TABLE

REQUIRED CITY PARKING (1 SPACE/400 SF OF OFFICE/SALE PLUS 1 SPACE/4000 SF OF GFA: 1/400 SF + 1/4000 SF=X SPACES)

PROPOSED

STANDARD	17
ACCESSIBLE	2
TOTAL	19

SITE LAYOUT PLAN

GRAPHIC SCALE 30 0 30 60

AGENCY REVIEW - NOT FOR CONSTRUCTION

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DRAWING

SITE LAYOUT PLAN

C201

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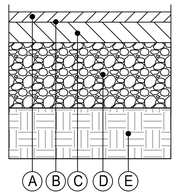


Ⓐ 1.5" ASPHALTIC SURFACE COURSE

Ⓑ TACK COAT

Ⓒ 2" ASPHALTIC BINDER

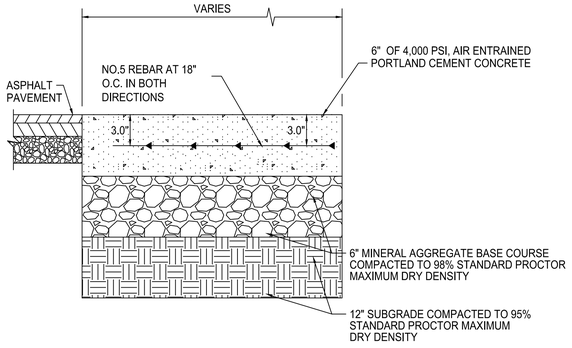
Ⓓ 6" MINERAL AGGREGATE BASE COURSE COMPACTED TO 98% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

Ⓔ 12" SUBGRADE COMPACTED TO 95% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

ASPHALT PAVEMENT SECTION (LIGHT DUTY)
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

5



CONCRETE PAVEMENT-HEAVY DUTY
(NOT TO SCALE)

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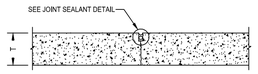
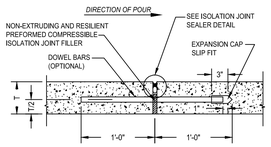
6



NOTE: UNLESS OTHERWISE NOTED.
PROVIDE AT NOMINAL 15' x 12' GRID SPACING

CONTRACTION JOINT



NOTE:
1- PROVIDE ISOLATION JOINT AT A MAX. 25' SPACING UNLESS OTHERWISE NOTED.
2- DOWEL BARS, IF USED, TO BE NO. 5 (SMOOTH) DOWEL 24" O.C., L=2'. TREAT FREE END OF DOWEL WITH HEAVY GREASE TO ELIMINATE BOND.

ISOLATION JOINT

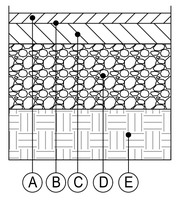
NOTE:
1- COORDINATE ALL JOINTS WITH TECHNICAL SPECIFICATIONS
2- DOWEL BARS ARE NOT TO BE USED UNLESS SPECIFICALLY NOTED.

T = PAVEMENT THICKNESS
TE = THICKNESS OF ADJACENT PAVEMENT

COORDINATE WITH TECHNICAL SPECIFICATIONS.

CONCRETE JOINT DETAILS (TYP)
(NOT TO SCALE)

3



Ⓐ 1.5" ASPHALTIC SURFACE COURSE

Ⓑ TACK COAT

Ⓒ 2.5" ASPHALTIC BINDER

Ⓓ 8" MINERAL AGGREGATE BASE COURSE COMPACTED TO 98% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

Ⓔ 12" SUBGRADE COMPACTED TO 98% OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY

ASPHALT PAVEMENT SECTION (HEAVY DUTY)
(NOT TO SCALE)

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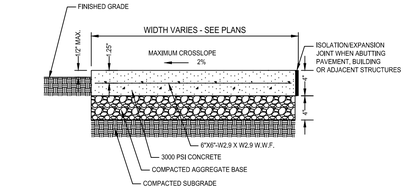
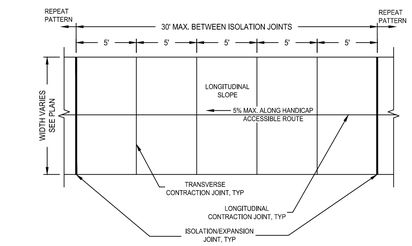
4



TRANSVERSE SECTION



WALK WIDTH	LONGITUDINAL CONT. JOINT
0' - 5'-11"	NONE
6' - 7'-11"	ONE ALONG WALK AT CENTERLINE
8' - 12'	TWO ALONG WALK AT THIRD POINTS

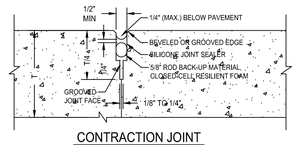
PARTIAL PLAN

SEE TYPICAL JOINT AND JOINT SEALANT DETAILS
COORDINATE WITH TECHNICAL SPECIFICATIONS.

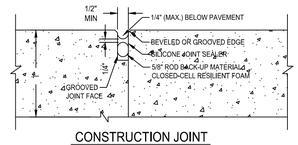
CONCRETE WALK (TYP)
(NOT TO SCALE)

1

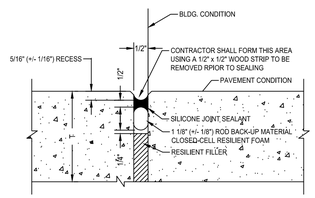
NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.



CONTRACTION JOINT



CONSTRUCTION JOINT



ISOLATION / EXPANSION JOINT

T = PAVEMENT THICKNESS
COORDINATE W/ TECHNICAL SPECIFICATIONS

CONCRETE JOINT SEALANT DETAILS
(NOT TO SCALE)

2

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. HUBBARD SHANNON
REGISTERED ENGINEER
AGRICULTURE
4-14-2023
COMMERCE
No. 001133398
STATE OF TENNESSEE

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
SITE DETAILS

C210

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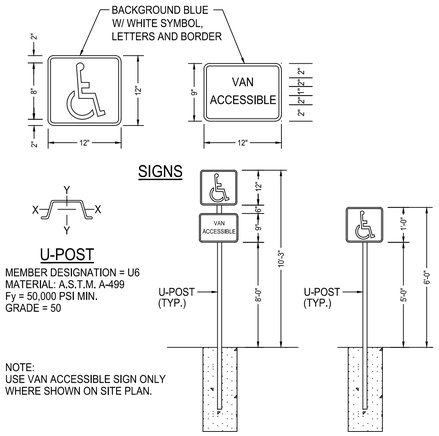
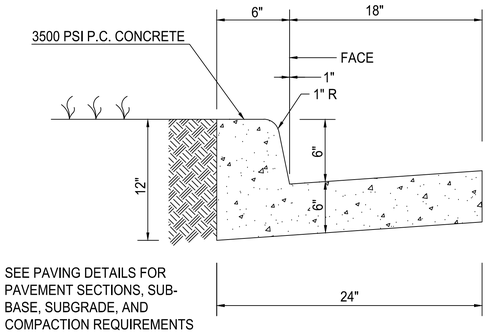


ACCESSIBLE PARKING SIGNS
(NOT TO SCALE)

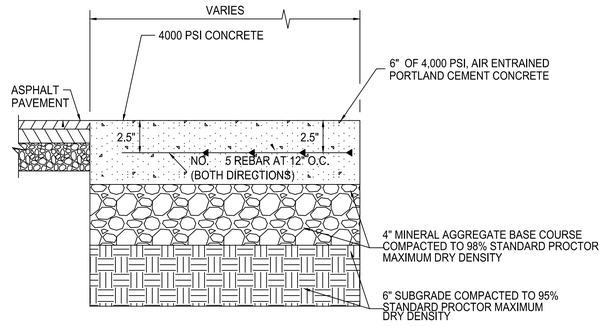
NOTE:
SIGNS DESIGNATING DISABLED PARKING SHALL INDICATE THAT UNAUTHORIZED OR IMPROPERLY PARKED VEHICLES MAY BE TOWED AND THE DRIVER FINED TWO HUNDRED DOLLARS ($200), AND SHALL ALSO PROVIDE THE NAME AND TELEPHONE NUMBER OF THE TOWING COMPANY OR THE NAME AND TELEPHONE NUMBER OF THE PROPERTY OWNER, LESSEE OR AGENT IN CONTROL OF THE PROPERTY.

11



CONCRETE CURB & GUTTER
(NOT TO SCALE)

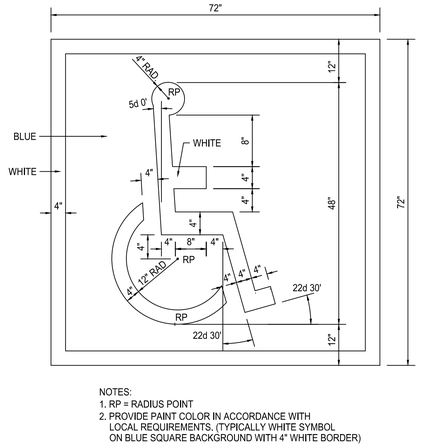
9



CONCRETE PAVEMENT-LIGHT DUTY
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

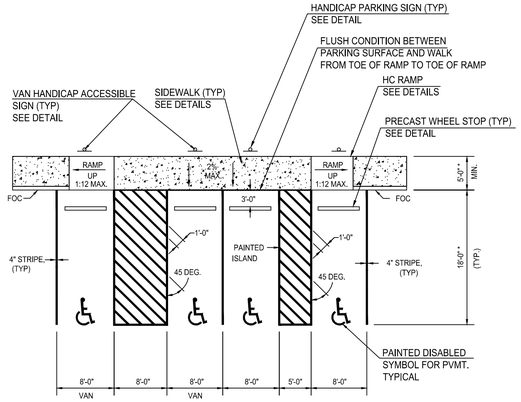
7



NOTES:
1. RP = RADIUS POINT
2. PROVIDE PAINT COLOR IN ACCORDANCE WITH LOCAL REQUIREMENTS, (TYPICALLY WHITE SYMBOL ON BLUE SQUARE BACKGROUND WITH 4" WHITE BORDER)

ACCESSIBLE SYMBOL-PAINTED
(NOT TO SCALE)

12

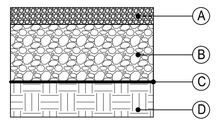


* ALL AREAS INSIDE PARKING, LOADING AISLES AND WALKS DIRECTLY IN FRONT OF ACCESSIBLE SPACES SHALL BE LESS THAN 2% SLOPE IN ALL DIRECTIONS.

* COORDINATE DIMENSIONS WITH SITE PLAN

ACCESSIBLE PARKING SPACE LAYOUT
(NOT TO SCALE)

10



Ⓐ 2" OF #57 STONE OR CRUSHER RUN

Ⓑ 6" OF 2"-3" GRANULAR FREE DRAINING STONE

Ⓒ HEAVY WEIGHT WOVEN FABRIC
US 315 OR EQUAL

Ⓓ 8" SUBGRADE TO BE COMPACTED TO 98%
STANDARD PROCTOR

COORDINATE w/ GEOTECH REPORT AND TECHNICAL SPECIFICATIONS

GRAVEL SECTION HEAVY DUTY
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

8

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ALTERRA -
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22066

DRAWN BY:
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DRAWING
SITE DETAILS

C211

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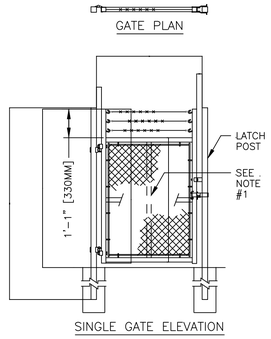
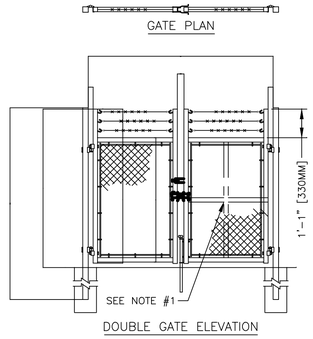


SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM HT INCLUDING BARBED WIRE	ACTUAL DIM	ACTUAL DIM
7'–0" [2134MM]	6'–10" [2083MM]	5'–8 1/2" [1740MM]
8'–0" [2438MM]	7'–10" [2388MM]	6'–8 1/2" [2045MM]
9'–0" [2743MM]	8'–10" [2692MM]	7'–8 1/2" [2350MM]
10'–0" [3048MM]	9'–10" [2997MM]	8'–8 1/2" [2654MM]
11'–0" [3353MM]	10'–10" [3302MM]	9'–8 1/2" [2959MM]
12'–0" [3658MM]	11'–10" [3607MM]	10'–8 1/2" [3264MM]
13'–0" [3962MM]	12'–10" [3912MM]	11'–8 1/2" [3569MM]



SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
3'–0" [914MM] THROUGH 6'–0" [1829MM]	2 1/2" [63.5MM] SQ OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
7'–0" [2134MM] THROUGH 10'–0" [3048MM]	3" [76MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
11'–0" [3353MM] THROUGH 12'–0" [3658MM]	4" [102MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
13'–0" [3962MM] THROUGH 18'–0" [5486MM]	6" [152MM] SQ OR 6.625" [168MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]
19'–0" [5791MM] THROUGH 20'–0" [6096MM]	8" [203MM] SQ OR 8.625" [219MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]

DOUBLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
8'–0" [2438MM] THROUGH 12'–0" [3658MM]	2 1/2" [63.5MM] SQ OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
14'–0" [4267MM] THROUGH 24'–0" [7315MM]	3" [76MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
26'–0" [7925MM] THROUGH 36'–0" [10973MM]	6" [152MM] SQ OR 6.625" [168MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]
38'–0" [11582MM] THROUGH 40'–0" [12192MM]	8" [203MM] SQ OR 8.625" [219MM] OD	FOR GATE POSTS: SQ–2 1/4" [57MM] RND–3 1/2" [89MM]

NOTES:
1. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER–HALCO ONLY.
2. CENTER UPRIGHT REQUIRED ON GATE LEAVES 8'–0" [2438MM] & WIDER. CENTER RAIL REQUIRED ON GATE LEAVES 10'–0" [3048MM] & HIGHER.
3. THIS DWG CORRESPONDS WITH DWGS 3–1020R, 3–1025R, 3–1025M & 3–1025L.

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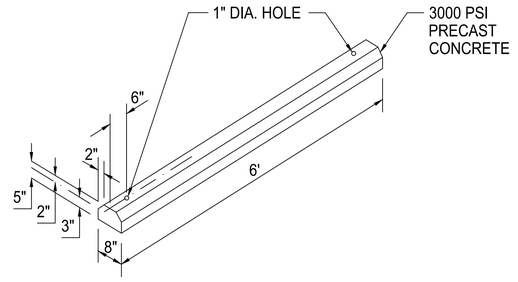
ANCHOR FENCE Products by Master–Halco

TYPICAL SWING GATES WITH BARBED WIRE

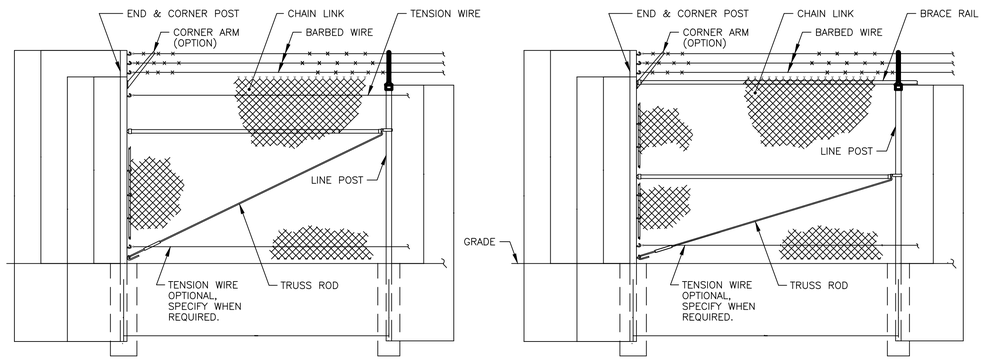
DIMENSIONS & SPECIFICATIONS

BY: JRR	DWG: 3–1001
DATE: 01–04–96	
REV: B	LAYER: 1
REV DATE: 06–05–98	SCALE: 1/4" = 1'–0"



REQUIRES 2 - #4 X 2'-0" STEEL BAR STAKES FOR EACH CURB SECTION. CURB REINFORCED W/ 2 #3 REBARS. LOCATE PARKING CURB 3' FROM FACE OF SIDEWALK HEADER OR EDGE OF PAVEMENT.

WHEEL STOP
(NOT TO SCALE)



FENCE SECTION ELEVATION
WITHOUT TOP RAIL & WITH BARBED WIRE

FENCE SECTION ELEVATION
WITH TOP RAIL & WITH BARBED WIRE

FENCE HEIGHT	UPRIGHT END & CORNER POSTS		LINE POSTS		CORNER POSTS WITH CORNER ARM	
NOM HT INCLUDING BARBED WIRE	B–1 BAR LENGTH	H–1 HEIGHT ABOVE GRADE	B–2 BAR LENGTH	H–2 HEIGHT ABOVE GRADE	B–3 BAR LENGTH	H–3 HEIGHT ABOVE GRADE
7'–0" [2134MM]	10'–0" [3048MM]	7'–0 5/8" [2150MM]	8'–8" [2642MM]	5'–8 7/8" [1749MM]	9'–0" [2743MM]	6'–0 5/8" [1845MM]
8'–0" [2438MM]	11'–0" [3353MM]	8'–0 5/8" [2454MM]	9'–8" [2946MM]	6'–8 7/8" [2054MM]	10'–0" [3048MM]	7'–0 5/8" [2150MM]
9'–0" [2743MM]	12'–0" [3658MM]	9'–0 5/8" [2759MM]	10'–8" [3251MM]	7'–8 7/8" [2359MM]	11'–0" [3353MM]	8'–0 5/8" [2454MM]
10'–0" [3048MM]	13'–0" [3962MM]	10'–0 5/8" [3064MM]	11'–8" [3556MM]	8'–8 7/8" [2664MM]	12'–0" [3658MM]	9'–0 5/8" [2759MM]
11'–0" [3353MM]	14'–0" [4267MM]	11'–0 5/8" [3369MM]	12'–8" [3861MM]	9'–8 7/8" [2969MM]	13'–0" [3962MM]	10'–0 5/8" [3064MM]
12'–0" [3658MM]	15'–0" [4572MM]	12'–0 5/8" [3674MM]	13'–8" [4166MM]	10'–8 7/8" [3273MM]	14'–0" [4267MM]	11'–0 5/8" [3369MM]

NOTES:
1. THIS DWG CORRESPONDS WITH DWGS 1–1020, 1–1040, 1–1120 & 1–1140.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER–HALCO ONLY.

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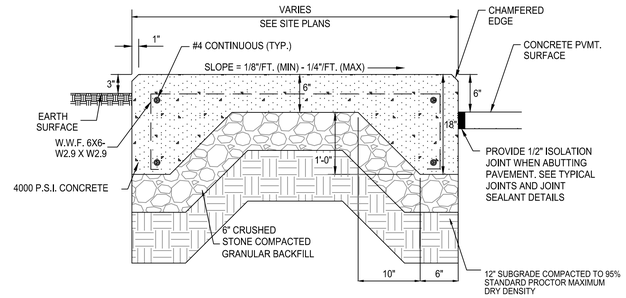
ANCHOR FENCE Products by Master–Halco

TYPICAL HIGH FENCE WITH BARBED WIRE

DIMENSIONS & SPECIFICATIONS

BY: JRR	DWG: 1–1001
DATE: 09–27–95	
REV: B	LAYER: 1
REV DATE: 06–04–98	SCALE: 1/4" = 1'–0"



COORDINATE WITH TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.

CONCRETE UTILITY PAD
(NOT TO SCALE)

NOTE: A GEOTECH REPORT WITH PAVEMENT RECOMENDATIONS WAS NOT PROVIDED TO THE ENGINEER FOR DESIGN PURPOSES, SECTIONS ARE BASED ON STANDARD ENGINEERING PRACTICE.

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ALTERRA - 122 CHARTER PLACE
VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL HUBBARD HANNON
REGISTERED ENGINEER
AGRICULTURE
4-4-2023
COMMERCE
NO. 00113398
STATE OF TENNESSEE

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066

DRAWN BY: CEM

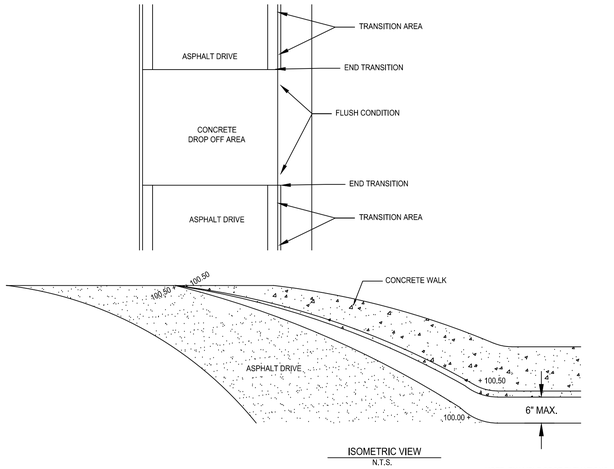
DATE: 03.27.23

DRAWING
SITE DETAILS

C212

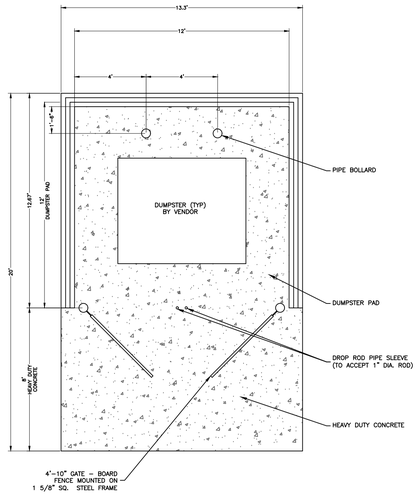
AGENCY REVIEW - NOT FOR CONSTRUCTION

3/10/2023 2:30:13 PM
Autodesk Docs://22066_ALTERRA - 122 CHARTER PLACE/PSARCH_22066_122 CHARTER PLACE_ALTERRA - SHELL MODEL.rvt

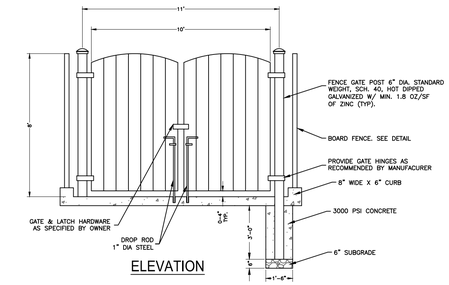


CURB TRANSITION
(NOT TO SCALE)

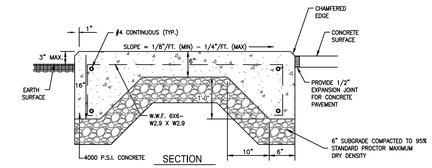
19



PLAN VIEW



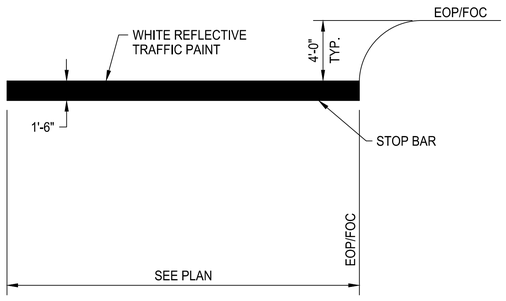
ELEVATION



COORDINATE WITH TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.

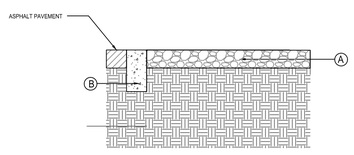
DUMPSTER PAD LAYOUT - 1 BAY WITH WOOD FENCE ENCLOSURE
(NOT TO SCALE)

16



STOP BAR
(NOT TO SCALE)

20



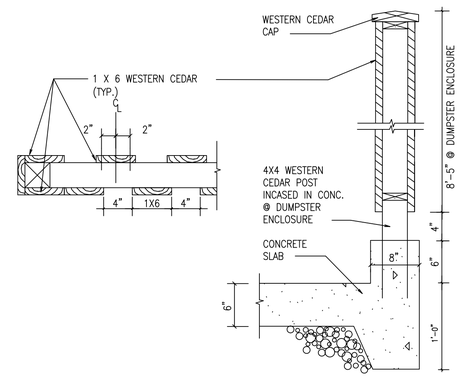
A HEAVY DUTY GRAVEL SECTION

B 8" WIDE CONCRETE STRIP. EXTEND TO DEPTH OF 8" ASPHALT CRUSHED STONE BASE COURSE.

SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS

CONCRETE RIBBON CURB
(NOT TO SCALE)

18



WOOD DUMPSTER SCREEN FENCE
(NOT TO SCALE)

17

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. BOHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00113398
STATE OF TENNESSEE
4-4-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
SITE DETAILS

C213

AGENCY REVIEW - NOT FOR CONSTRUCTION

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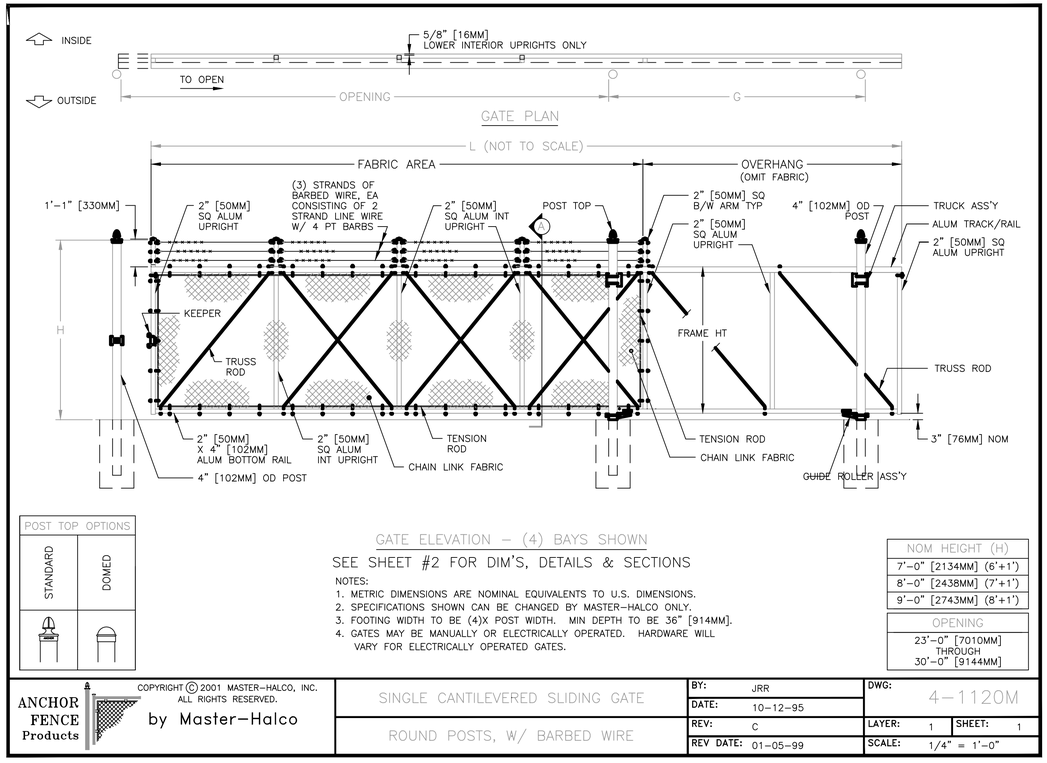

POST TOP OPTIONS	
STANDARD	DOMED

GATE ELEVATION – (4) BAYS SHOWN

SEE SHEET #2 FOR DIM'S, DETAILS & SECTIONS

NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER–HALCO ONLY.
3. FOOTING WIDTH TO BE (4)X POST WIDTH. MIN DEPTH TO BE 36" [914MM].
4. GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES.

NOM HEIGHT (H)
7'–0" [2134MM] (6'+1')
8'–0" [2438MM] (7'+1')
9'–0" [2743MM] (8'+1')

OPENING
23'–0" [7010MM] THROUGH 30'–0" [9144MM]

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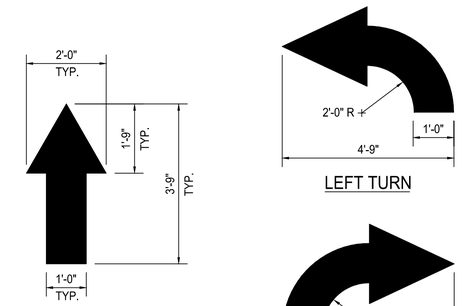
ANCHOR FENCE Products by Master–Halco

SINGLE CANTILEVERED SLIDING GATE

ROUND POSTS, W/ BARBED WIRE

BY:	JRR	DWG:	4–1120M
DATE:	10–12–95		
REV:	C	LAYER: 1	SHEET: 1
REV DATE:	01–05–99	SCALE:	1/4" = 1'–0"

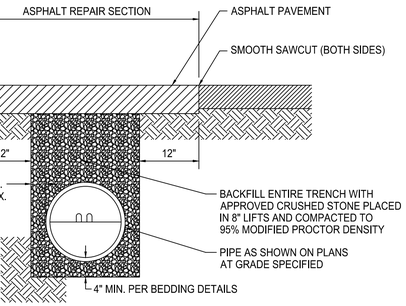
24



NOTE:
ALL TRAFFIC FLOW ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT PER DIMENSIONS ABOVE

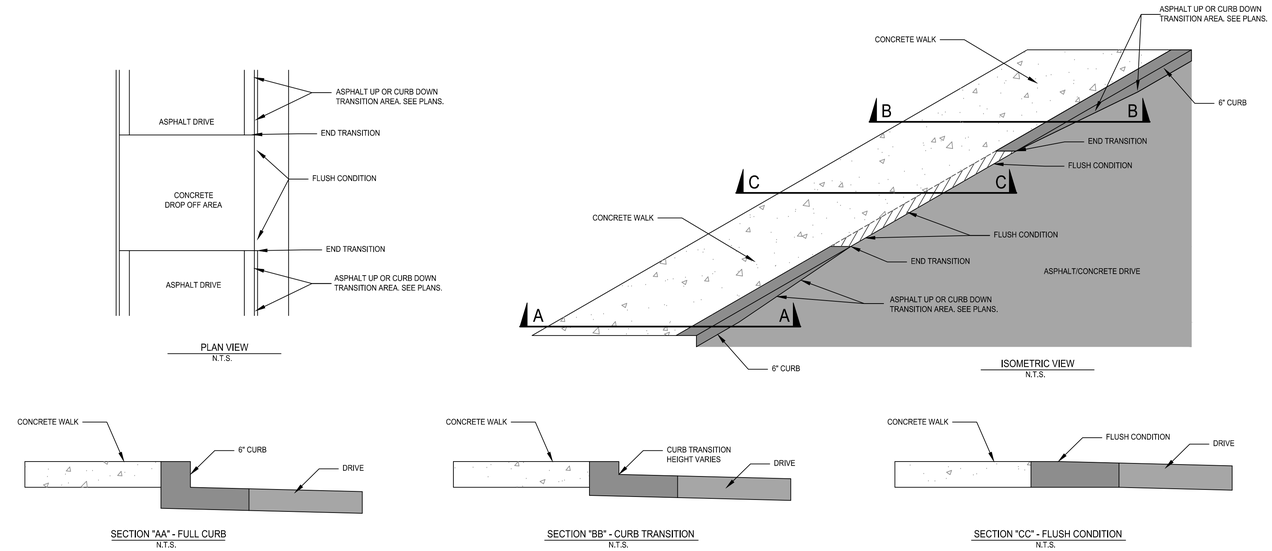
TRAFFIC FLOW ARROW
(NOT TO SCALE)

21



ASPHALT STREET OR DRIVE CUT / REPAIR
(NOT TO SCALE)

23



FLUSH CURB CONDITION
(NOT TO SCALE)

22

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ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086



ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
SITE DETAILS

C214

AGENCY REVIEW - NOT FOR CONSTRUCTION

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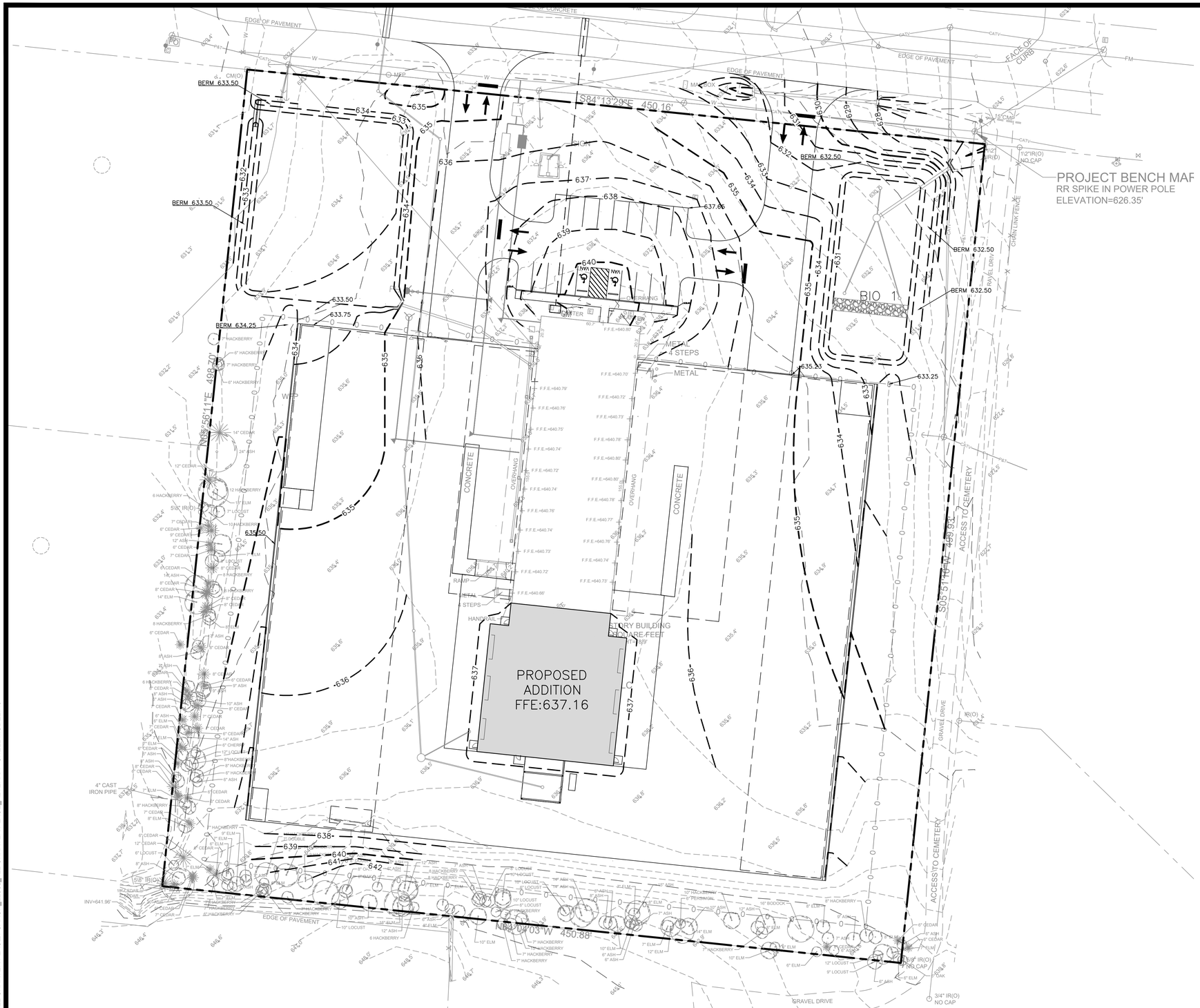

GENERAL GRADING NOTES

1. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.

2. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND SIX INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE AND AREAS TO BE SODDED). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY LOCATIONS OF ANY UNDERGROUND UTILITIES. THE CONTRACTOR IS TO VERIFY LOCATION OF OVERHEAD UTILITIES. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

4. THE CONTRACTOR IS TO CONTROL TRAFFIC FLOW DURING TIME OF CONSTRUCTION. ANY AND ALL TRAFFIC CONTROL IMPLEMENTED DURING THIS PROJECT SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

5. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CITY OF LA VERGNE/RUTHERFORD COUNTY AND THE TENNESSEE D.O.T. REGULATIONS.

6. CONTRACTOR TO COORDINATE LOCATION OF TOP SOIL STOCKPILE AREA WITH OWNER. SILT FENCE SHALL BE PLACED AROUND PERIMETER OF THE STOCKPILE FOR EROSION AND SEDIMENT CONTROL.

7. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL PERMIT FEES. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND ORDINANCES AND RECEIVE APPROPRIATE APPROVALS WHERE REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.

8. ALL LANDSCAPED SLOPES SHALL BE THREE FEET (3') HORIZONTAL TO ONE FOOT (1') VERTICAL OR FLATTER.

9. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO EARTHWORK AND DRAINAGE. SHOULD CONTRACTOR HAVE QUESTIONS WITH THIS INTENT, HE SHALL CONTACT THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.

10. SLOPE GROUND AWAY FROM BUILDING AT TWO PERCENT (2%) MINIMUM.

11. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

12. SEGMENTAL WALL DESIGNER TO PROVIDE SITE SPECIFIC SHOP DRAWINGS FOR ALL RETAINING WALLS FOR CIVIL ENGINEER REVIEW PRIOR TO ORDERING WALL SYSTEM.

GRADING NOTES

A -

GRADING PLAN

GRAPHIC SCALE 30 0 30 60

AGENCY REVIEW - NOT FOR CONSTRUCTION

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. POHANNON
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COMMERCE
No. 00113398
STATE OF TENNESSEE
4-14-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING

GRADING PLAN

C300

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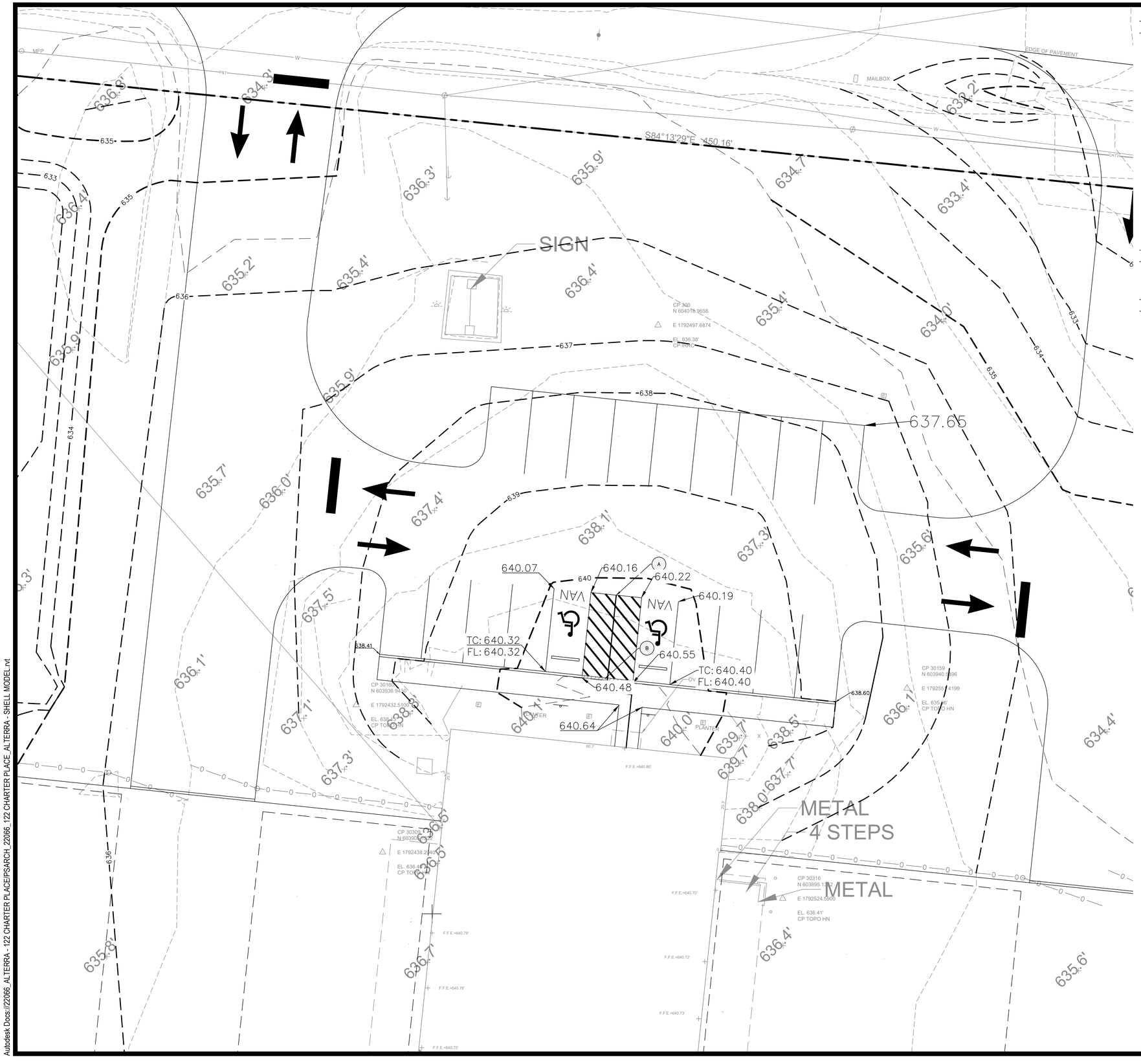

LEGEND: ACCESSIBILITY

- ACCESSIBILITY ROUTE
- FLUSH CONDITION

ACCESSIBILITY NOTES

A	ACCESSIBILITY ROUTE
B	FLUSH CONDITION

ACCESSIBILITY DETAILS

1	-

ACCESSIBILITY ENLARGEMENT

10 0 10 20
GRAPHIC SCALE

P. STUDIO

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

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LA VERGNE, TN 37086

SAMUEL H. BOHANNON
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No. 00113398
STATE OF TENNESSEE
4-4-2023

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REVISIONS

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22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
ACCESSIBILITY ENLARGEMENT

C301

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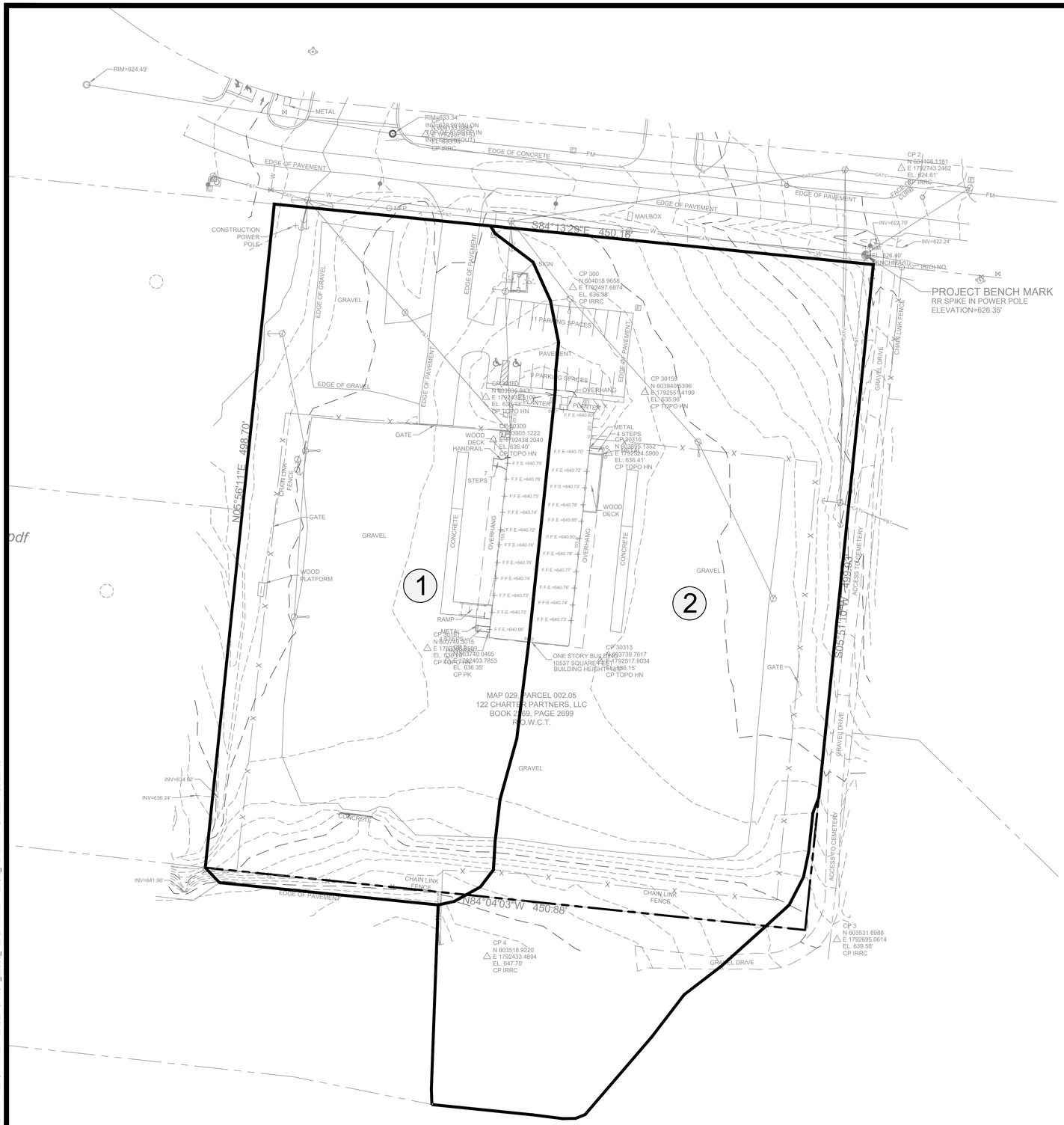

PRE-DEVELOPED DRAINAGE AREAS

	Gravel		Impervious		Pervious		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Area 1	53,609	1.23	14,489	0.33	42,178	0.97	110,277	2.53
Area 2	47,994	1.10	10,403	0.24	84,868	1.95	143,266	3.29
Total	101,604	2.33	24,892	0.57	127,046	2.92	253,543	5.82

PRE-DEVELOPED DRAINAGE MAP

GRAPHIC SCALE 40 0 40 80

AGENCY REVIEW - NOT FOR CONSTRUCTION

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL P. SHANNON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00113398 STATE OF TENNESSEE 4-4-2023

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- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING

PRE-DEVELOPED DRAINAGE MAP

C400

3/10/2023 2:30:13 PM
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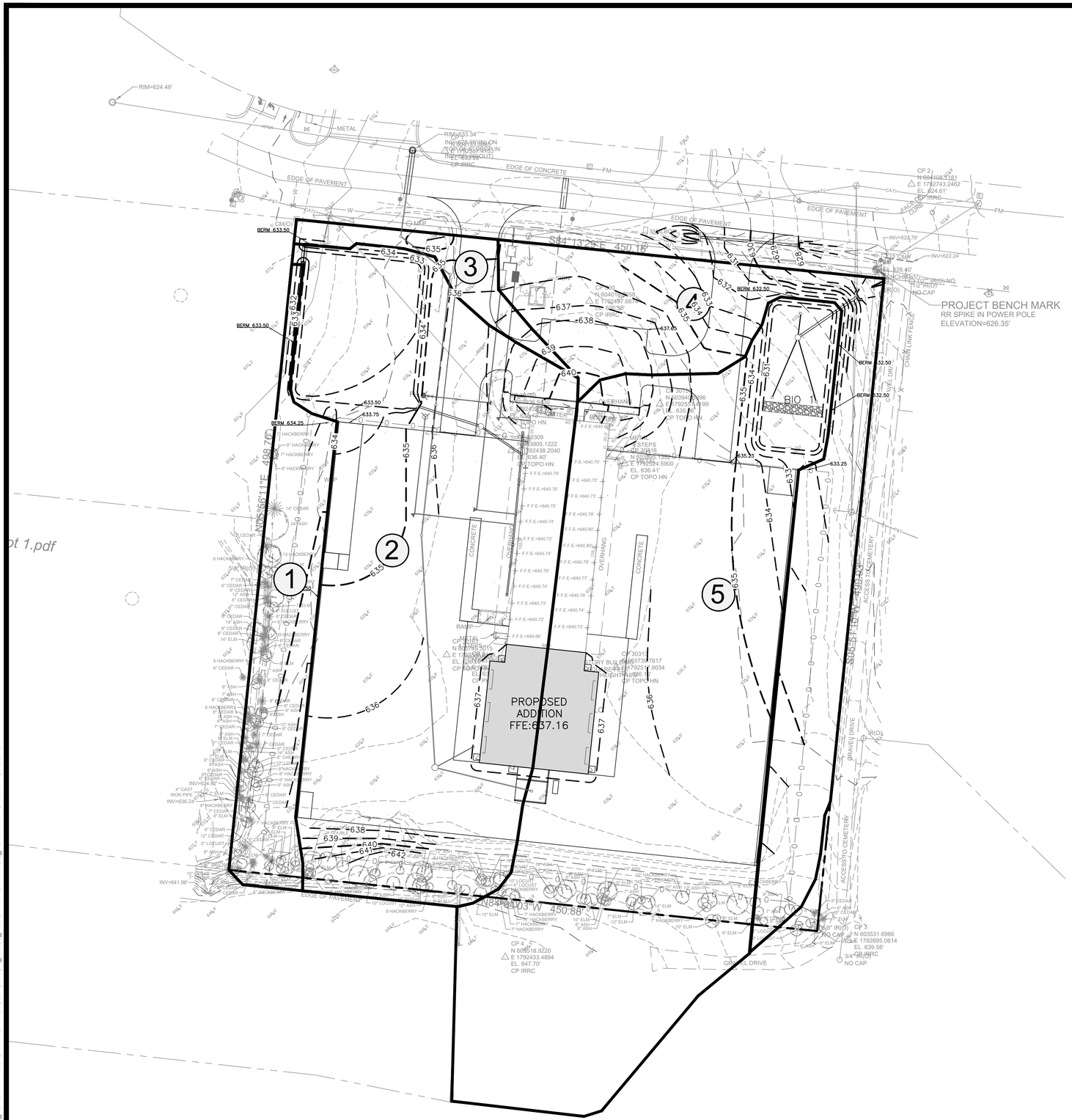

POST-DEVELOPED DRAINAGE AREAS

	Impervious		Pervious		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Area 1	0	0.00	18,202	0.42	18,202	0.42
Area 2	59,380	1.36	25,888	0.59	85,269	1.96
Area 3	2,037	0.05	3,041	0.07	5,078	0.12
Area 4	22,897	0.53	16,723	0.38	39,619	0.91
Area 5	57,479	1.32	47,897	1.10	105,376	2.42
Total	141,792	3.26	111,750	2.57	253,543	5.82

POST-DEVELOPED DRAINAGE MAP

GRAPHIC SCALE 40 0 40 80

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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. BOHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00113398
STATE OF TENNESSEE
4-4-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066
DRAWN BY: CEM
DATE: 03.27.23
DRAWING: POST-DEVELOPED DRAINAGE MAP

C401

AGENCY REVIEW - NOT FOR CONSTRUCTION

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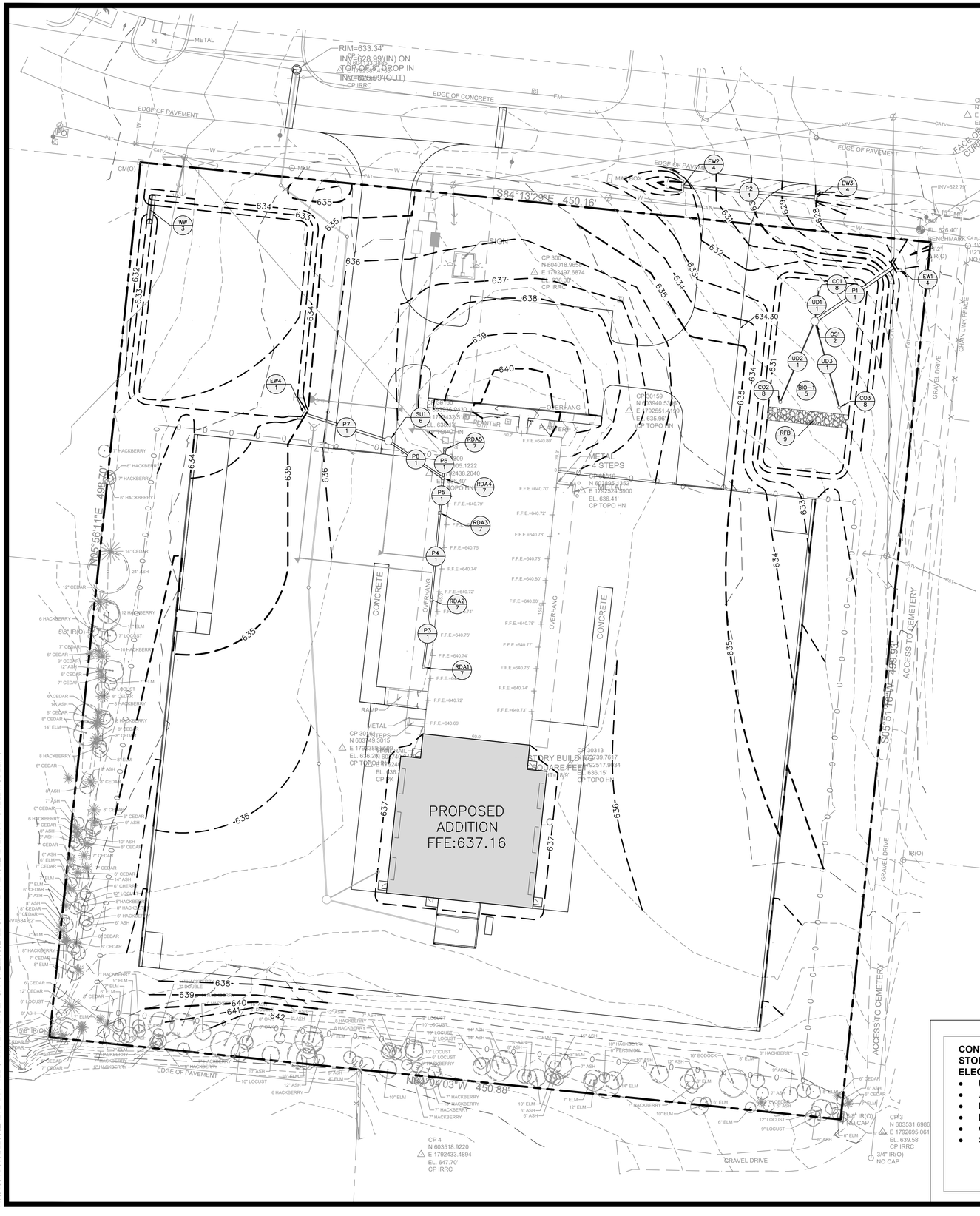
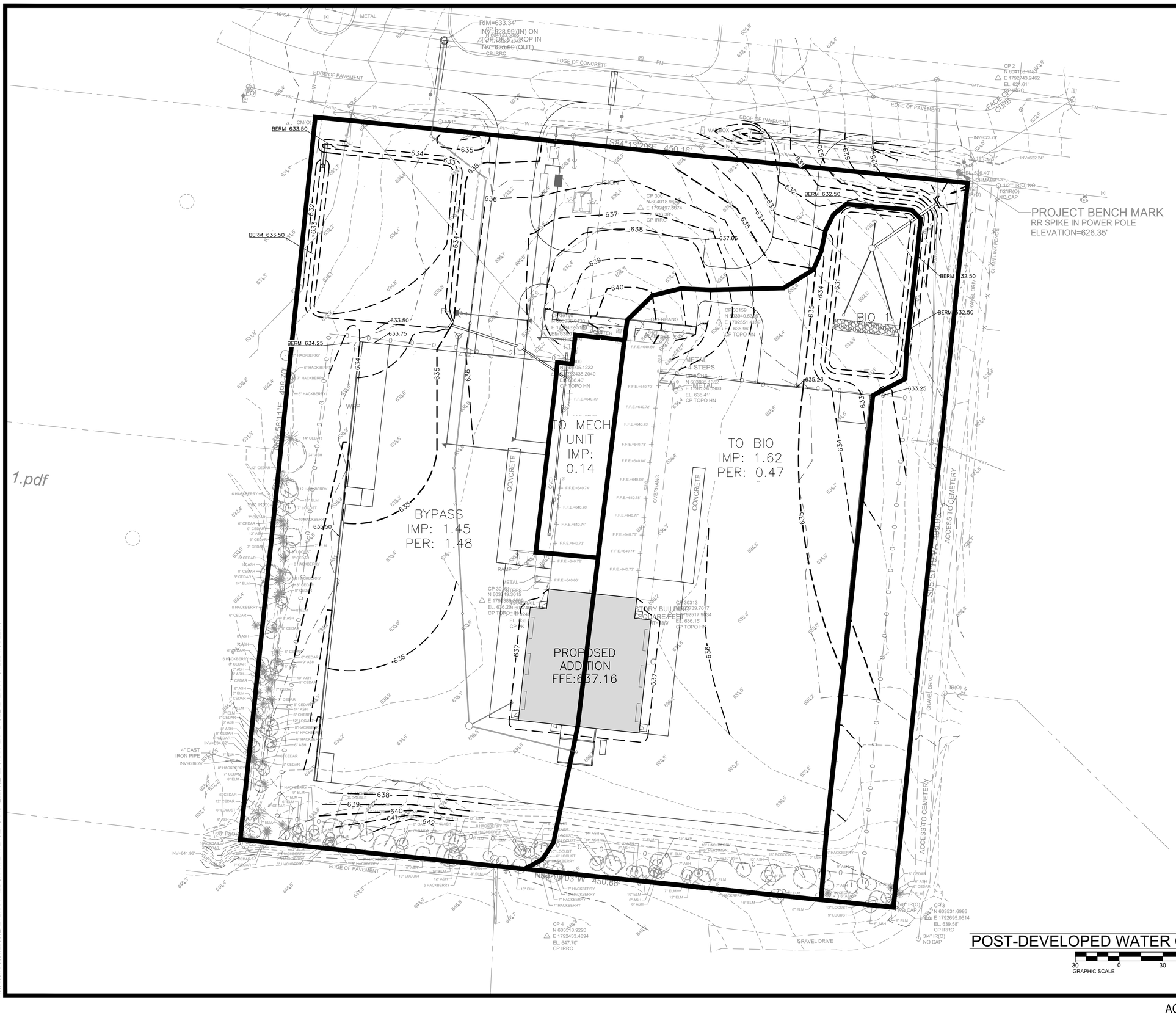

PROPOSED ADDITION FFE:637.16
S84°13'20"E 450.16'
N84°04'03"W 450.88'
S05°51'41"W 499.93'
N05°56'11"E 498.20'
EDGE OF PAVEMENT
EDGE OF CONCRETE
CONCRETE
OVERHANG
RAMP
GRAVEL DRIVE
ACCESS TO CEMETERY
CHAIN LINK FENCE
FACE OF CURB
METAL STEPS
RIM=633.34'
INV=628.99'(IN) ON
TOP OF 8" DROP IN
INV=625.99'(OUT)
CP 1
N 604118.1181
E 1792743.2462
EL. 624.61'
CP IRRC
CP 2
N 604166.9653
E 1792497.6874
EL. 636.38'
CP IRRC
CP 3
N 603531.6986
E 1792695.0613
EL. 639.58'
CP IRRC
CP 4
N 603518.9220
E 1792433.4894
EL. 647.70'
CP IRRC
CP 5
N 603886.4352
E 1792554.3900
EL. 636.41'
CP TOPO HN
CP 30313
N 603739.7617
E 1792517.6884
EL. 636.15'
CP TOPO HN
CP 30314
N 603749.3015
E 1792388.8001
EL. 636.20'
CP TOPO HN
CP 30315
N 603739.7617
E 1792517.6884
EL. 636.15'
CP TOPO HN
CP 30316
N 603749.3015
E 1792388.8001
EL. 636.20'
CP TOPO HN
CP 30317
N 603886.4352
E 1792554.3900
EL. 636.41'
CP TOPO HN
CP 30318
N 603886.4352
E 1792554.3900
EL. 636.41'
CP TOPO HN
CP 30319
N 603886.4352
E 1792554.3900
EL. 636.41'
CP TOPO HN
CP



POST-DEVELOPED WATER QUALITY DRAINAGE MAP

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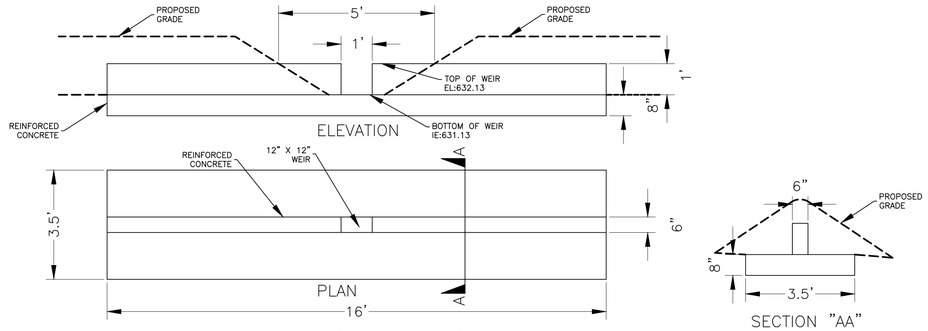
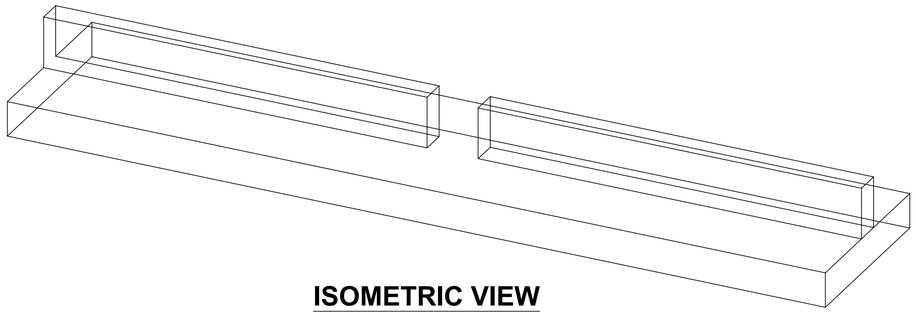


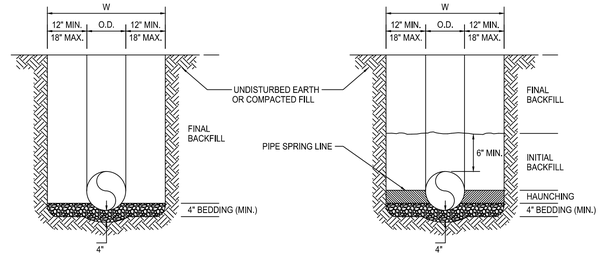
DESIGN VIEW



ISOMETRIC VIEW

WEIR WALL OUTLET STRUCTURE
SCALE: NTS

WW 3



RIGID PIPE
(NOT TO SCALE)

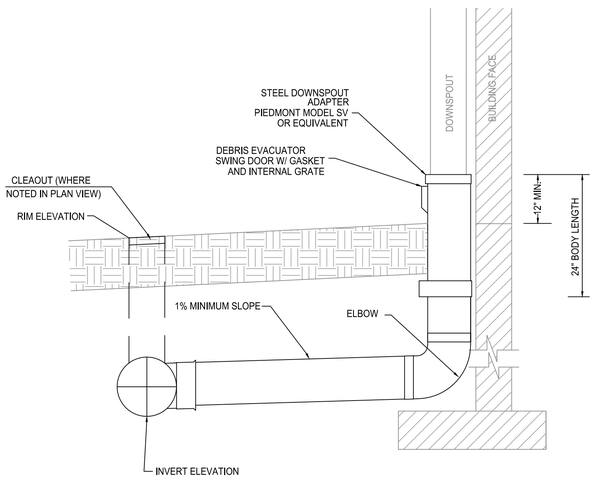
FLEXIBLE PIPE
(NOT TO SCALE)

GENERAL NOTES:

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION.)
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3 AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS SHALL BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS.)

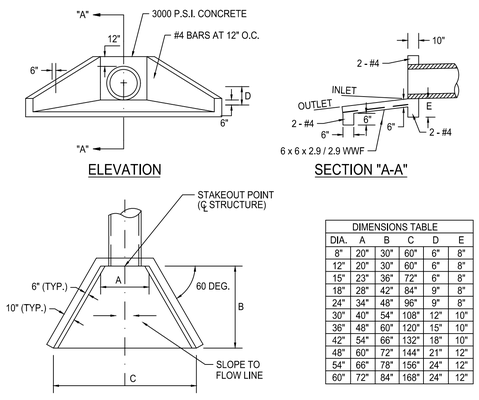
STORM SEWER TRENCH AND BEDDING
(NOT TO SCALE)

TB 1



ROOF DRAIN ADAPTER (TYP)
(NOT TO SCALE)

RDA 7

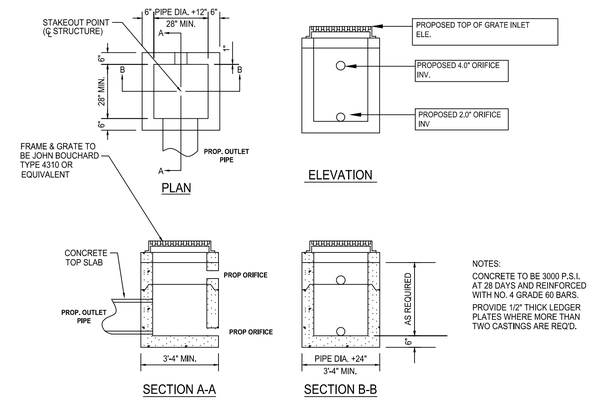


DIMENSIONS TABLE					
DIA.	A	B	C	D	E
8"	20"	30"	60"	6"	8"
12"	20"	30"	60"	6"	8"
15"	23"	36"	72"	6"	8"
18"	28"	42"	84"	9"	8"
24"	34"	48"	96"	9"	8"
30"	40"	54"	108"	12"	10"
36"	48"	60"	120"	15"	10"
42"	54"	66"	132"	18"	10"
48"	60"	72"	144"	21"	12"
54"	66"	78"	156"	24"	12"
60"	72"	84"	168"	24"	12"

NOTE: ALL EXPOSED EDGES OF CONCRETE SHALL BE CAMFERED ONE INCH.

WINGED ENDWALL/HEADWALL
(NOT TO SCALE)

EW 4



NOTES:
CONCRETE TO BE 3000 P.S.I. AT 28 DAYS AND REINFORCED WITH NO. 4 GRADE 60 BARS.
PROVIDE 1/2" THICK LEDGER PLATES WHERE MORE THAN TWO CASTINGS ARE REQ'D.

COORDINATE WITH TECHNICAL SPECIFICATIONS

OUTLET STRUCTURE-PROPOSED
(NOT TO SCALE)

OS1 2

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ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
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DRAWING
DRAINAGE DETAILS

C410

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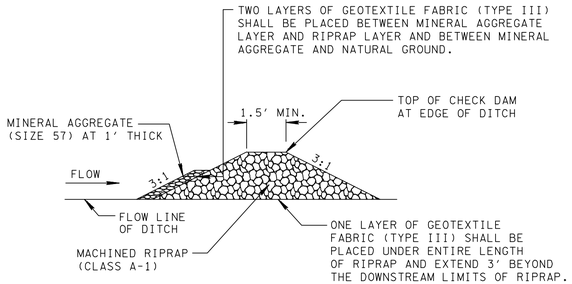
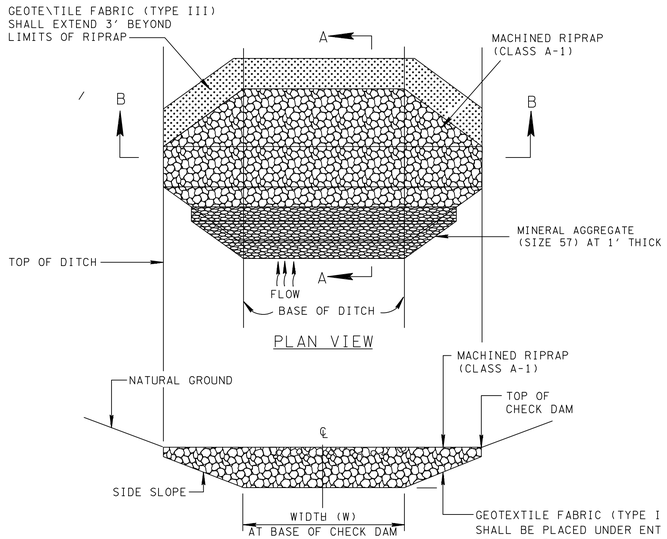


SECTION A - A

DETAIL FOR TRAPEZOIDAL DITCH



SECTION B - B

ROCK FOREBAY CHECK DAM
SCALE:DTS

RFB
9

NOTE 1: CHARACTERISTICS OF BIORETENTION SOIL MIX ARE AS FOLLOWS. THE PLANTING SOIL MUST BE SANDY LOAM TEXTURE PER USDA TEXTURAL TRIANGLE:

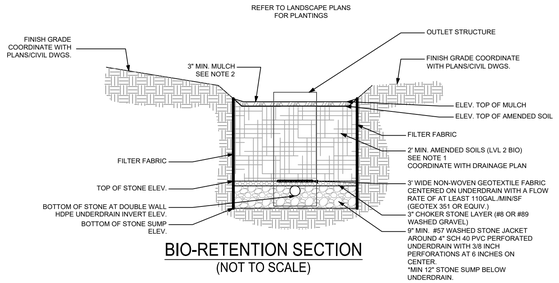
a. FERTILE, FRIABLE NATURALLY OCCURRING TOPSOIL, FREE OF STONES, SUBSOIL, CLAY LUMPS, HARDPAN, ROOTS, STUMPS, BRANCHES, STICKS AND OTHER DEBRIS LARGER THAN TWO INCHES IN DIAMETER IN ANY DIMENSION; FREE OF NOXIOUS WEEDS, GRASSES, SEEDS, PLANTS, EXTRANEOUS MATTER AND ANY SUBSTANCE HARMFUL TO PLANT GROWTH.
b. pH 5.5 TO 6.5
c. ORGANIC MATTER 5% TO 10%
d. SAND 70% TO 85%
e. SILT AND CLAY 10% - 20% WITH NO MORE THAN 10% CLAY

THE SOIL MIX SHOULD HAVE AN INFILTRATION RATE OF AT LEAST 1 TO 2 INCHES PER HOUR. THE CONTRACTOR SHOULD HAVE A SOIL TEST PERFORMED PRIOR TO INSTALLING PLANT MATERIAL TO ENSURE THE MINIMUM INFILTRATION RATE.

NOTE 2: 100% SHREDDED HARDWOOD OR PINE STRAW.
a. FREE FROM WOOD, WOOD SHAVINGS, CAMBIUM, SAWDUST, LEAVES, TWIGS, INSECTS, GRASSES, WEEDS, PLANTS AND THEIR SEEDS, OTHER FOREIGN MATERIAL AND ANY OTHER SUBSTANCE HARMFUL TO PLANT GROWTH.

NOTE 3: UNDERDRAIN TO BE 6" DUAL WALL HDPE OR SDR 35 PVC PIPE WITH ⅜ IN. PERFORATIONS AT 6 IN. ON CENTER. AASHTO M 252. PLACE PERFORATED PIPE AT BASE OF RESERVOIR LAYER.

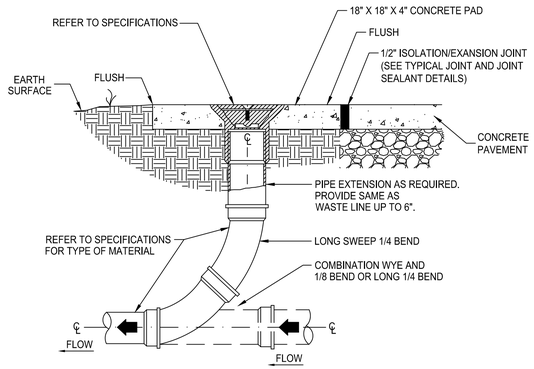
CONTRACTOR, ENGINEER, OR OWNERS REPRESENTATIVE SHALL NOTIFY MWS DEVELOPMENT REVIEW AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF THE PLANTING SOIL FILTER BED. AT THE COMPLETION OF INSTALLATION, THE ABOVE REFERENCED PERSON WILL COLLECT ONE SAMPLE PER BIORETENTION BED FOR ANALYSIS AND CONFIRMATION OF THE SOIL CHARACTERISTICS AS DEFINED BY GIP-01, FILTER MEDIA AND SURFACE COVER, SECTION 6.6, PAGE 20



BIO-RETENTION SECTION
(NOT TO SCALE)

BIO-1
5

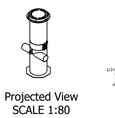
Bioretention Cell #1 Elevation & Volume Information					
Contributing Drainage Area (CDA)	2.09	Acres			
Level Cell	2				
Required WQv	7448	CF Total			
Reqd Forebay Volume	1118	CF (15% of Total)			
Reqd Treatment Volume	6331	CF (85% of Total)			
Forebay Area Provided (SF)	1200		Depth (ft)	Tv	
Storage Layer 100% Voids	632.00	Top of Forebay (Elev)	1	1200	
	631.00	Bottom of Forebay (Elev)	0	0	
				1200	Tv Provided
		Equivilant Depth (Ft)	1		
		Minimum Required Surface Area (SF)	1118		
Treatment Area Provided (SF)	3377	(% Tv Provided = 111%)			
Storage Layer 100% Voids	631.20	Top of Water storage (Elev)	1.2	4052	
Mulch Layer 0% Voids	630.00	Top of Mulch (Elev)	0.25	0	
Soil Layer 25% Voids	629.75	Top of Soil (Elev)	2	1689	
Stone Layer 40% Voids	627.75	Top of Stone (Elev)	1	1351	
Stone Layer 0% Voids	626.75	Bottom of Stone @ Underdrain (Elev)	1	0	
	625.75	Bottom of Stone Sump Where Applicable		7092	Tv Provided
		Equivilant Depth (Ft)	2.10		
		Minimum Required Surface Area (SF)	3015		
Top of Outlet Control Structure Inle	631.20			100-Yr	
Invert of Underdrain @ O.C.S.	626.75			Water Level	
Invert of O.C.S.					
Note: Contractor shall construct Bioretention Cell per Standard Detail to elevations shown here.					



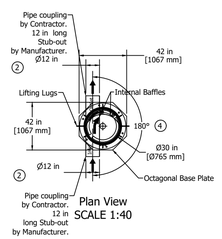
EXTERIOR CLEANOUT
(NOT TO SCALE)

TD
8

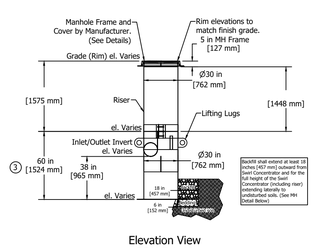
Aqua-Swirl Polymer Coated Steel (PCS) Stormwater Treatment System



Projected View
SCALE 1:80



Plan View
SCALE 1:40



Elevation View
SCALE 1:40

Please see accompanied Aqua-Swirl specification notes. See Site Plan for actual system orientation. Approximate dry (pick) weight: 1000 lbs [500 kg].

1. As an alternative, 42 in [1067 mm] diameter, HS-20/25 rated precast concrete rings may be substituted. 14 in [356 mm] thickness must be maintained.
2. AS-2 BYP inlet/outlet pipe size ranges from 8 in [203 mm] to 15 in [381 mm].
3. AS-2 chamber height may vary from 52 in [1321 mm] to 60 in [1524 mm], depending on inlet/outlet pipe size.
4. Orientation may vary from a minimum of 90° to a maximum of 180°.

AquaShield
Aqua-Swirl Concentrator
AS-2 BYP CW STD
Aqua-Swirl Concentrator Model Standard Detail

Structure #:	AS-2 STD	Reviewed	Rev. Date
Drawn By:	GRivera		
Scale:	As Shown		
Date:	9/26/2018		

U.S. Patent No. 9524473 and other Patent Pending

SU
6

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VOL. 2 ADDITION

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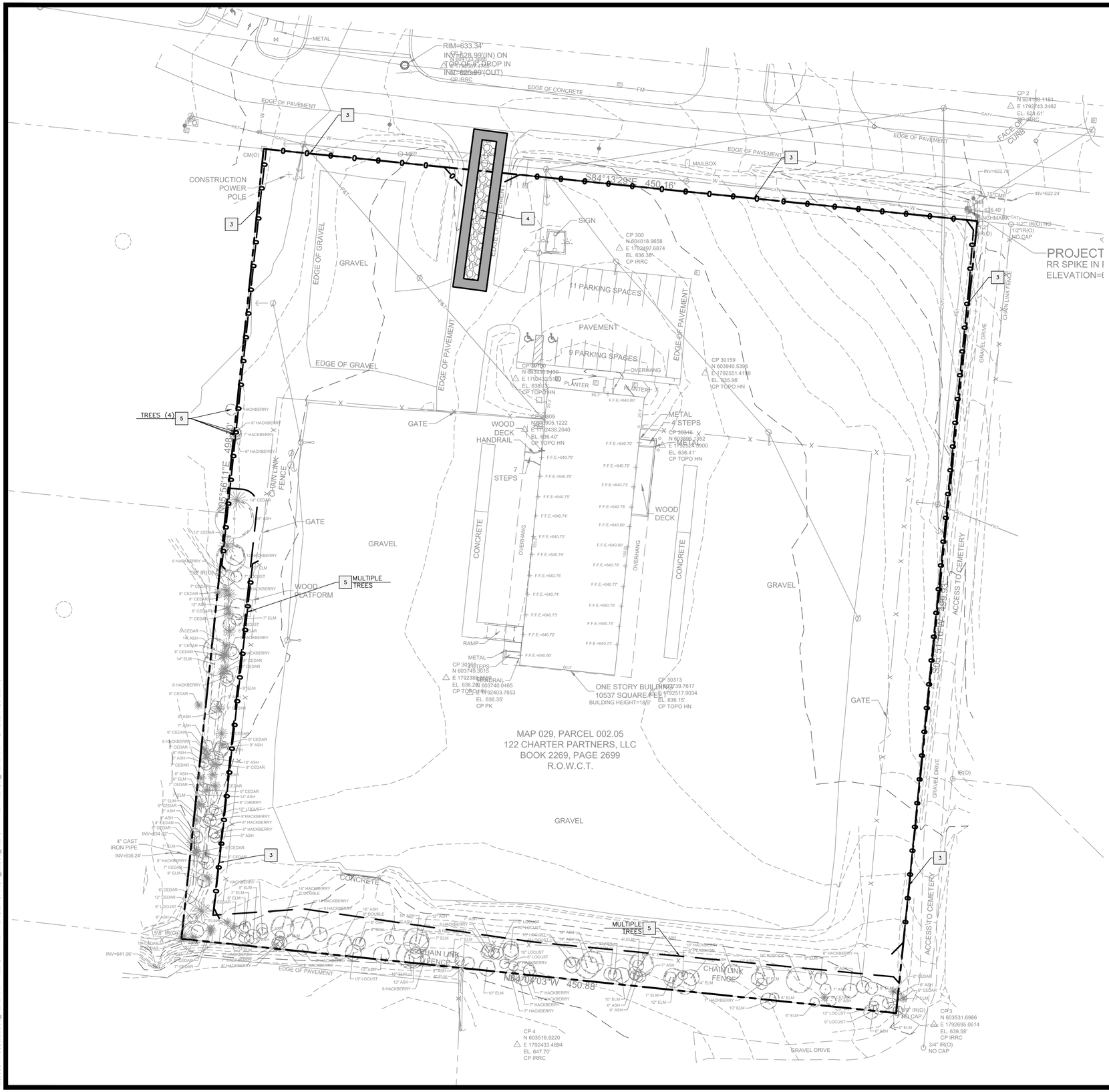

GENERAL SWPPP NOTES

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS AND DESCRIBED ELSEWHERE IN THE CONTRACT DOCUMENTS IS TO PROVIDE A BARRIER FOR SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENTATION SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION OF THE PROPOSED PROJECT.

2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.

3. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.

4. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION. ALL DIMENSIONS AND LOCATIONS OF EROSION CONTROL MEASURES SHALL BE SUBJECT TO ADJUSTMENT AS DEEMED NECESSARY BY ON-SITE INSPECTION.

5. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.

6. DRAINAGE INLETS SHALL BE PROTECTED BY INLET SEDIMENT FILTER.

7. ANY ACCESS ROUTES TO THE SITE SHALL BE BASED WITH CRUSHED STONE.

8. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

9. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED. NO TREES ARE TO BE REMOVED AND/OR VEGETATION DISTURBED EXCEPT AS NECESSARY FOR GRADING PURPOSES.

10. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF TENNESSEE, COMMISSION OF ENVIRONMENTAL QUALITY OR OTHER JURISDICTION REQUIREMENTS.

11. THE CONTRACTOR SHALL AT NO TIME USE ANY SINK HOLE AS MATERIAL STORAGE OR DISPOSAL.

12. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

◯ PRE-CON SWPPP NOTES

A -

☐ SWPPP DETAILS

1	RIP-RAP
2	INLET PROTECTION
3	SEDIMENTATION BARRIER
4	TEMPORARY CONSTRUCTION ENTRANCE
5	TREE PROTECTION
6	MATTING AND BLANKETS

LEGEND: PRE-CON SWPPP

- INLET PROTECTION
- TREE PROTECTION
- SEDIMENTATION BARRIER
- CHECK DAM
- TEMPORARY CONSTRUCTION ENTRANCE
- RIP-RAP OUTLET PROTECTION

PRE-CON SWPPP

30 0 30 60
GRAPHIC SCALE

P. STUDIO

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DRAWING
PRE-CON STORM WATER POLLUTION PREVENTION PLAN

C500

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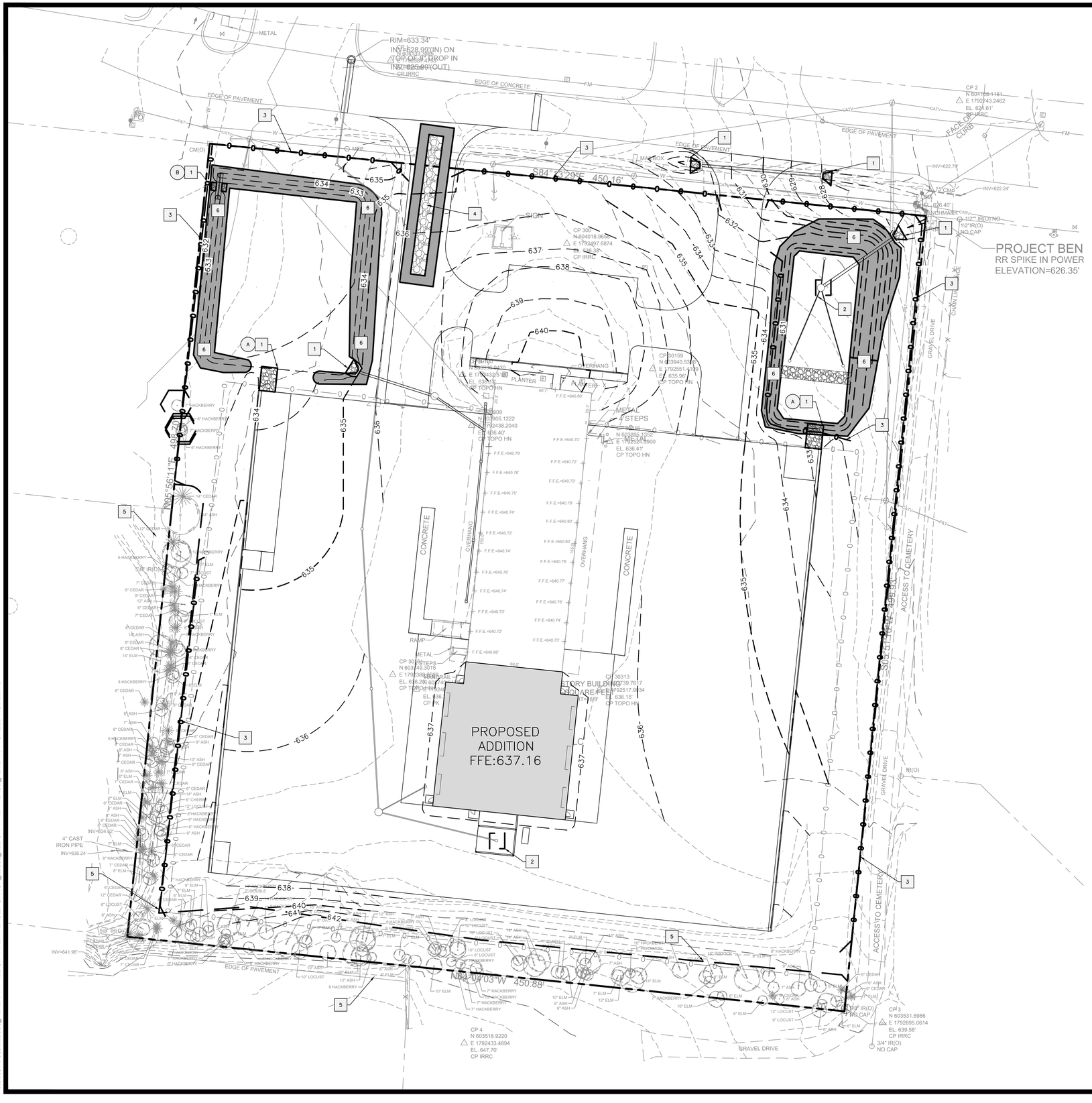

GENERAL SWPPP NOTES

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS AND DESCRIBED ELSEWHERE IN THE CONTRACT DOCUMENTS IS TO PROVIDE A BARRIER FOR SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENTATION SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION OF THE PROPOSED PROJECT.

2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.

3. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.

4. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION. ALL DIMENSIONS AND LOCATIONS OF EROSION CONTROL MEASURES SHALL BE SUBJECT TO ADJUSTMENT AS DEEMED NECESSARY BY ON-SITE INSPECTION.

5. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.

6. DRAINAGE INLETS SHALL BE PROTECTED BY INLET SEDIMENT FILTER.

7. ANY ACCESS ROUTES TO THE SITE SHALL BE BASED WITH CRUSHED STONE.

8. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

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SWPPP NOTES

A	10' WIDE X 15' LONG RIP-RAP APRON
B	5' WIDE X 3' LONG RIP-RAP APRON

SWPPP DETAILS

1	RIP-RAP
2	INLET PROTECTION
3	SEDIMENTATION BARRIER
4	TEMPORARY CONSTRUCTION ENTRANCE
5	TREE PROTECTION
6	MATTING AND BLANKETS

LEGEND: PRE-CON SWPPP

- INLET PROTECTION
- TREE PROTECTION
- SEDIMENTATION BARRIER
- CHECK DAM
- TEMPORARY CONSTRUCTION ENTRANCE
- RIP-RAP OUTLET PROTECTION

SWPPP

GRAPHIC SCALE 30 0 30 60

AGENCY REVIEW - NOT FOR CONSTRUCTION

P. STUDIO

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. BOHANNON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00113398 STATE OF TENNESSEE 4-14-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066

DRAWN BY: CEM

DATE: 03.27.23

DRAWING
STORM WATER POLLUTION PREVENTION PLAN

C501

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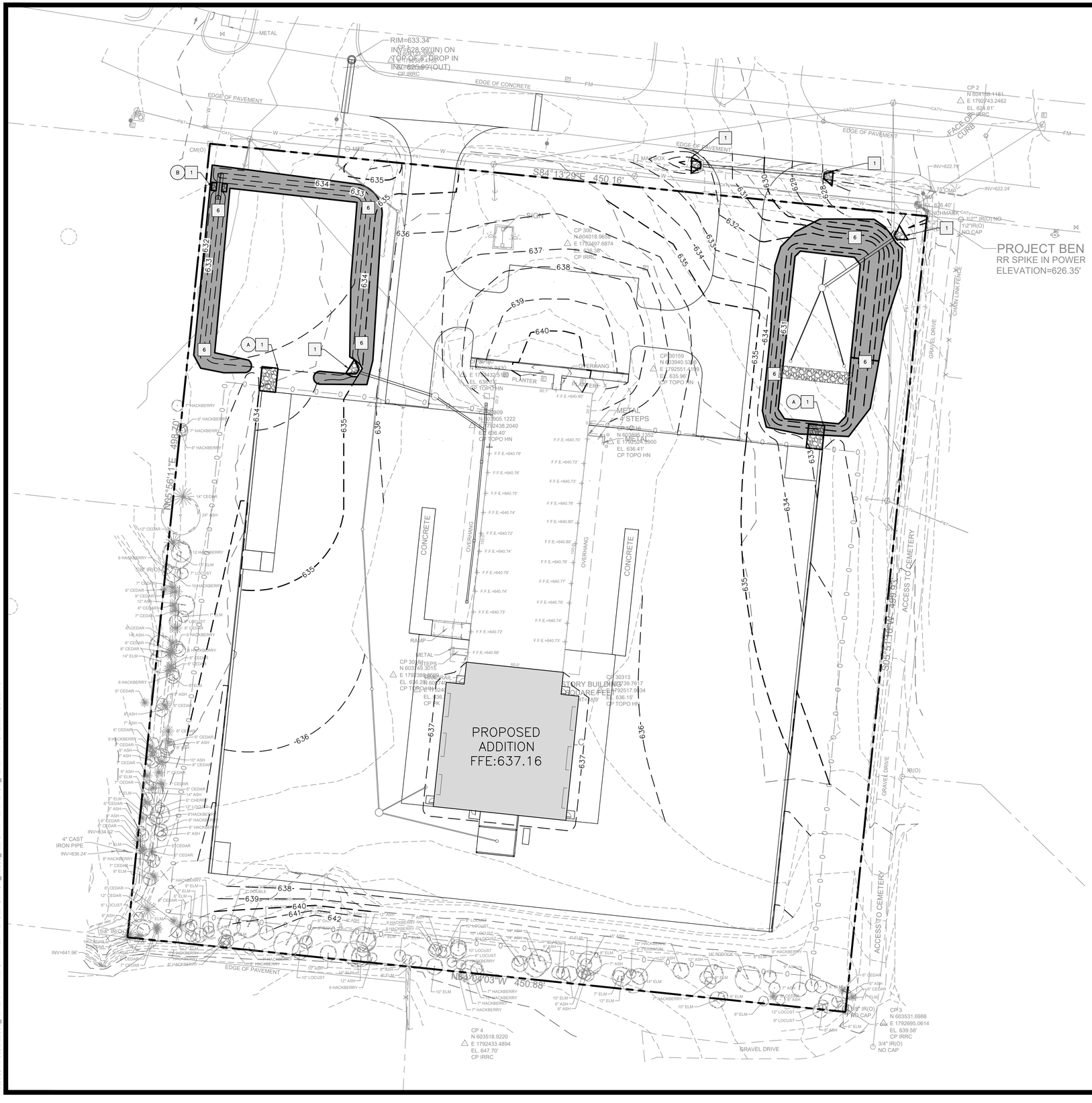

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SWPPP NOTES

A	-

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FINAL SWPPP

GRAPHIC SCALE 30 0 30 60

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C502

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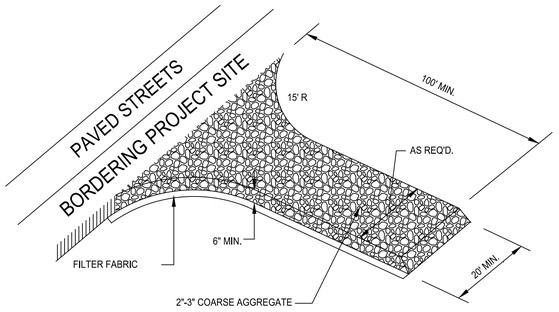
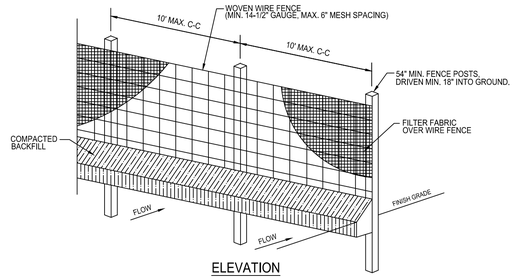


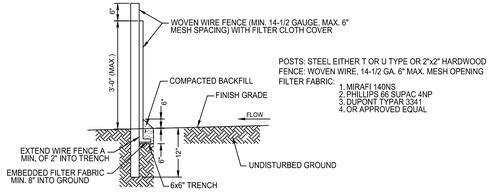
NOTE:
GRAVEL PAD IS REQUIRED TO PROVIDE BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PAVED STREETS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST.

TEMPORARY CONSTRUCTION ENTRANCE
(NOT TO SCALE)

4



ELEVATION



POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14-1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:
1. MIRAFI 140NS
2. PHILLIPS 66 SUPAC 4NP
3. DUPONT TYPAR 3341
4. OR APPROVED EQUAL

CROSS-SECTION

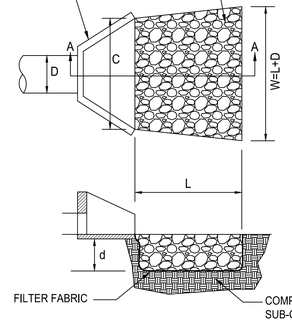
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE OR BEFORE SEDIMENT HAD ACCUMULATED TO ONE-THIRD OF THE ABOVE GROUND HEIGHT OF ANY PERIMETER CONTROL.

SEDIMENTATION BARRIER/ SILT FENCE
(NOT TO SCALE)

3

DRAINAGE STRUCTURE: IN SOME INSTANCES THIS STRUCTURE MAY BE A PIPE, END SECTION, SPLASH PAD OR CURB CUT. (SEE PLAN)
SEE PLAN FOR LENGTH (L) AND WIDTH (W) OF RIP-RAP STABILIZATION AT CURB CUTS.

RIP-RAP STABILIZATION TO BE HAND PLACED NATIVE STONE UNDERLAIN BY NON-WOVEN GEOTEXTILE FABRIC. SEE PLAN FOR LENGTH AND D50.

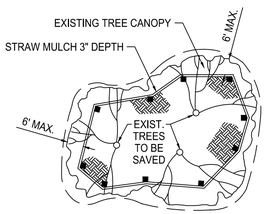


APRON LINING TO BE FILTER FABRIC, MIRAFI 500X OR EQUIVALENT.

L=LENGTH OF RIP-RAP
D=OUTLET PIPE DIAMETER
C=MATCH WIDTH OF HEADWALL
d=DEPTH OF STONE, 1.5 TIMES MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6"

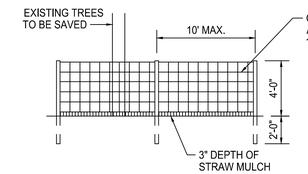
RIP-RAP OUTLET PROTECTION
(NOT TO SCALE)

1



PLAN - TYPICAL FENCE

NOTES:
1. REMOVE ALL EXISTING CONCRETE OR ASPHALT PAVING WITH THE LIMITS OF THE BARRICADED AREA. IF REMOVAL CREATES A POTENTIAL WATER POCKET, IT SHALL BE FILLED TO PROVIDE POSITIVE DRAINAGE.
2. REMOVE ALL VINES FROM TREES IN BARRICADED AREA.
3. REMOVE DEAD OR DAMAGED LIMBS AND PAINT ALL WOUNDS WITH TREE WOUND PAINT.
4. NO BARRICADE SHALL BE PLACED MORE THAN 6' INSIDE CANOPY OF EXISTING TREES.
5. PROTECT ALL TREES TO BE SAVED FROM EXCAVATION FOR UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, GAS, SEWER AND WATER LINES.
6. NO EXCAVATION SHALL TAKE PLACE WITHIN THE CANOPY LINE OF EXISTING TREES TO BE SAVED. PAINT ALL CUT ROOTS (1 1/2" DIA. AND LARGER) WITH ASPHALT BASE TREE WOUND PAINT.
7. SEE SPECIFICATIONS FOR DEFINITION OF TREE PROTECTION ZONE

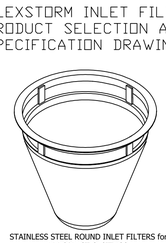


ELEVATION - TYPICAL FENCE

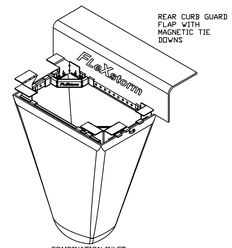
TREE PROTECTION
(NOT TO SCALE)

5

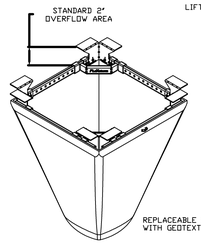
FLEXSTORM INLET FILTERS PRODUCT SELECTION AND SPECIFICATION DRAWING

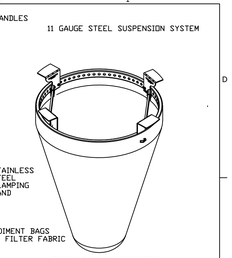


STAINLESS STEEL ROUND INLET FILTERS for NYLOPLAST CASTINGS
CATCH-ITS SPECIFIED W/ FX or FX-S BAGS



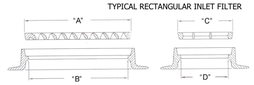
COMBINATION INLET FILTER FOR CURB HOODS



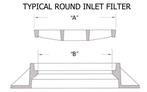


REPLACEABLE SEDIMENT BAGS WITH GEOTEXTILE FILTER FABRIC

TYPICAL RECTANGULAR INLET FILTER



TYPICAL ROUND INLET FILTER

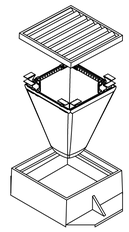


1. INDENTIFY YOUR FRAME STYLE, SIZE, AND MATERIAL

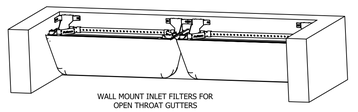
STYLE	FRAME STYLE AND SIZE	Frame P/N:
ROUND	Small Round (up to 20.0" dia grates (A) dim)	6ZSRD
	Med Round (20.1" - 26.0" dia grates (A) up to 25" dia openings (B))	6ZMRD
	Large Round (26.1" - 32.0" dia grates (A) up to 30" openings (B))	6ZLRD
	XL Round (32.1" dia - 39" dia grates (A) up to 37" dia openings (B))	6ZXLRD
RECT/ SQUARE	Small Rect / Square (up to 16" (B) x 16" (D) openings or 64" perimeter)	6ZSSQ
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	6ZMSQ
	Large Rect / Square (up to 36" (B) x 24" (D) openings or 120" perimeter)	6ZLSQ
	XL Rect / Square (side by side 2 pc set to fit up to 48" (B) x 36" (D) openings)	6ZXLSQ
CONIRO INLETS	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZSCB
	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZMCB
	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZLCB
	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	6ZXLCB
NYLOPLAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NY
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NY
	18"diameter Nyloplast castings (Stainless Steel Framing standard)	6218NY
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NY
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NY
WALL MOUNT	Open Throat Gutters - Curb Opening Size	
	Up to 4' (1 Filter and Mounting Hardware)	6ZWM1
	Between 4' and 8' (2 Filters and Mounting Hardware)	6ZWM2
	Between 8' and 12' (3 Filters and Mounting Hardware)	6ZWM3
	Between 12' and 16' (4 Filters and Mounting Hardware)	6ZWM4
UPGRADED FRAMING MATERIAL OPTIONS (STANDARD IS ZINC PLATED)		SUFFIX
CHROME PLATED FRAMING FOR HIGH SALT EXPOSURE		- CHR
STAINLESS STEEL FRAMING FOR HIGH SALT AND/OR CHEMICAL EXPOSURE		- SS

2. SELECT YOUR FILTER BAG PART NUMBER

FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



WALL MOUNT INLET FILTERS FOR OPEN THROAT GUTTERS

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE

Nominal Bag Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max FX (Woven)	PC (Post Constr)	IL (Non Woven)	* PC Oil Retent (Oz)	**PCP Oil Retent (Oz)
Small	1.6	1.2	0.8	0.9	66	155
Medium	2.1	1.8	1.2	1.3	96	185
Large	3.8	2.2	1.5	1.6	120	209
XL	4.2	3.6	2.4	2.6	192	370

* PC filter bag at 50% max adsorption capacity
** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

Frame P/N from Step 1.	Filter Bag P/N from Step 2.	-	Framing Material

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC
DISTRIBUTED BY ADS
WWW.INLETFILTERS.COM
(866) 287-8655 PH
(630) 355-3477 FX
INFO@INLETFILTERS.COM

SIZE	DWG NO	REV
SCALE		SHEET 1 OF 1

2

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DRAWING
SWPPP DETAILS

C510

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6.17

RECP

ROLLED EROSION CONTROL PRODUCTS

Definition

Rolled erosion control products are manufactured or fabricated into rolls designed to reduce soil erosion and assist in the growth, establishment and protection of vegetation. Examples of RECP's are blankets, nets, and matting.

Purpose

Erosion control mats and blankets are intended to protect soil and hold seed and mulch in place on slopes and in channels so that vegetation can become well established. Turf reinforcement mats can be used to permanently reinforce grass in drainage ways during high flows. Nets are made of high tensile material woven into an open net which overlays mulch materials. Blankets are made of interlocking fibers, typically held together by a biodegradable or photodegradable netting (for example, excelsior or straw blankets). They generally have lower tensile strength than nets, but cover the ground more completely. Coir (coconut fiber) fabric comes as both nets and blankets.

Conditions Where Practice Applies

Rolled Erosion Control Products (RECP's) should be used to aid permanent vegetated stabilization of slopes 2:1 or greater and with more than 10 feet of vertical relief. RECP's should also be used when mulch cannot be adequately tacked and where immediate ground cover is required to prevent erosion damage.

RECP's should be used to aid in permanent stabilization of vegetated channels when runoff velocity will exceed 2 ft/sec on bare earth during the 2-year rainfall event that produces peak runoff. The product selected must have a permissible shear stress that exceeds the shear stress of the design runoff event.

Planning Considerations

- Good ground contact is critical to the effectiveness of these products. If good ground contact is not achieved, runoff can concentrate under the product, resulting in significant erosion.
- Nets must be used in conjunction with mulch. Excelsior, woven straw blankets and coir (coconut fiber) blankets may be installed without mulch. There are many other types of erosion control nets and blankets on the market that may be appropriate in certain circumstances. In general, most nets (e.g. jute matting) require mulch in order to prevent erosion because they have a fairly open structure. Blankets typically do not require mulch because they usually provide complete protection of the surface.
- Most netting used with blankets is photodegradable, meaning they break down under sunlight (not UV stabilized). However, this process can take months or years even under bright sun. Once vegetation is established, sunlight does not reach the mesh. It is not uncommon to find non-degraded netting still in place several years after the installation. This can be a problem if maintenance requires the use of mowers or ditch cleaning equipment. In addition, birds and small animals can become trapped in the netting.

Construction Specifications

Construction

Even if properly designed, if not properly installed, RECP's will probably not function as desired. Proper installation is imperative. Even if properly installed, if not properly timed and nourished, vegetation will probably not grow as desired. Proper seed/vegetation selection is also imperative.

Grade the surface of installation areas so that the ground is smooth and loose. When seeding prior to installation, follow the steps for seed bed preparation, soil amendments, and seeding in *Surface Stabilization*, 6.1. All gullies, rills, and any other disturbed areas must be fine graded prior to installation. Spread seed before RECP installation. (**Important**: Remove all large rocks, dirt clods, stumps, roots, grass clumps, trash, and other obstructions from the soil surface to allow for direct contact between the soil surface and the RECP.)

Terminal anchor trenches are required at RECP ends and intermittent trenches must be constructed across channels at 25-foot intervals. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width, while intermittent trenches need be only 6 inches deep and 6 inches wide.

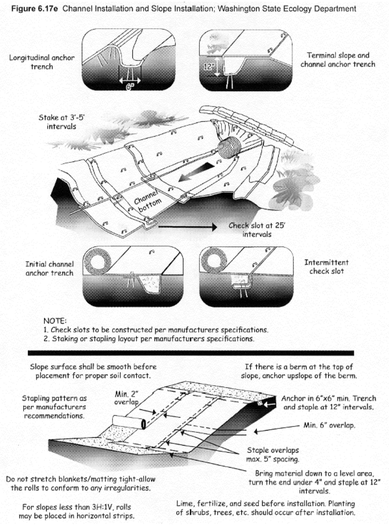
Installation for Slopes— Place the RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill, and compact. Unroll the RECP down (or along) the slope maintaining direct contact between the soil and the RECP. Overlap adjacent rolls a minimum of 3 inches. Pin the RECP to the ground using staples or pins in a 3 foot center-to-center pattern. Less frequent stapling/pinning is acceptable on moderate slopes.

6

Maintenance

1. Inspect Rolled Erosion Control Products at least weekly and after each significant (1/2 inch or greater) rain fall event repair immediately.
2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.
5. Monitor and repair the RECP as necessary until ground cover os established.

Figure 6.17e Channel Installation and Slope Installation; Washington State Ecology Department



MATTING & BLANKETS
(NOT TO SCALE)

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL HUBBARD CANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 001133398
STATE OF TENNESSEE
4-14-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
SWPPP DETAILS

C511

AGENCY REVIEW - NOT FOR CONSTRUCTION

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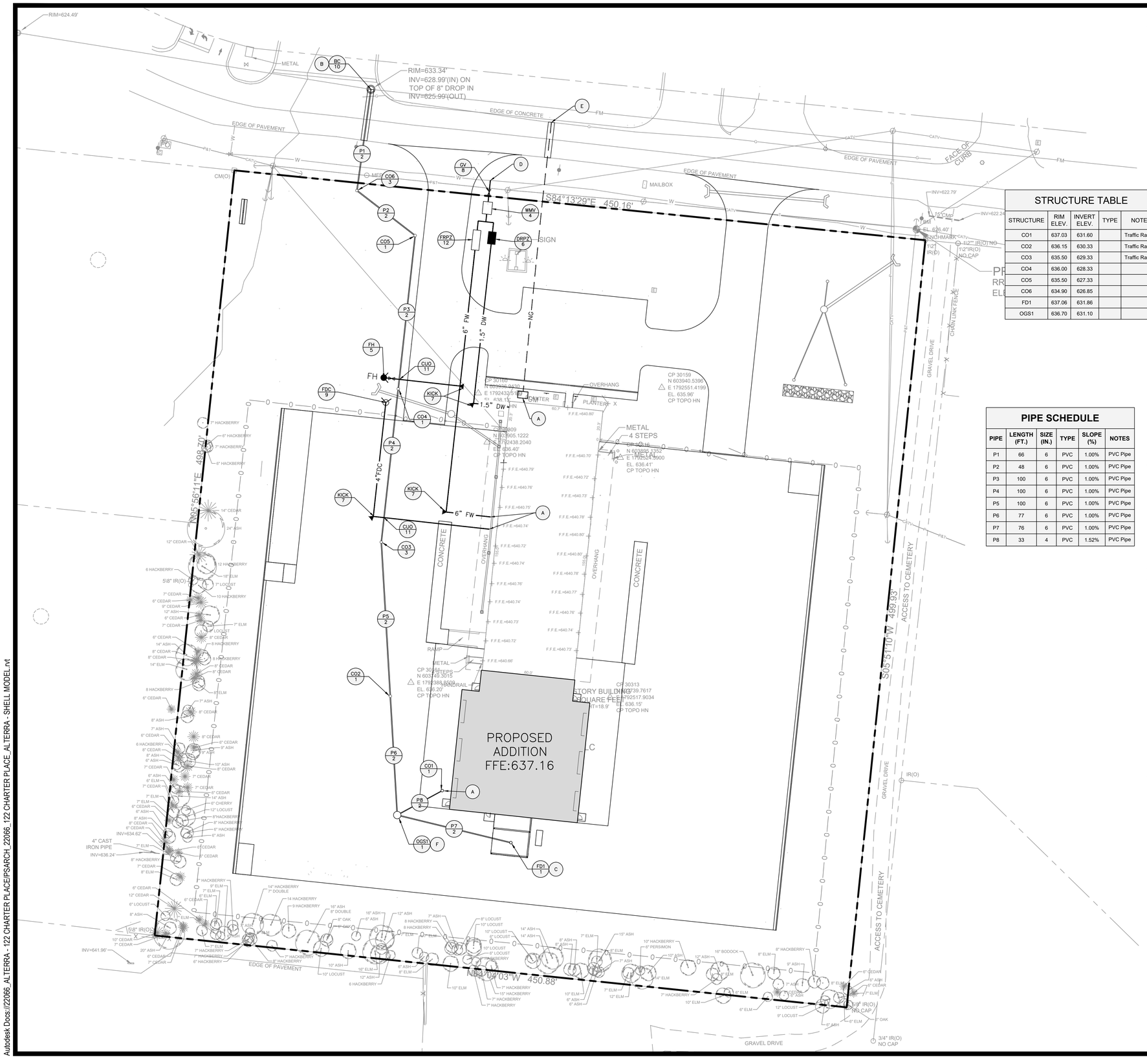

GENERAL UTILITY NOTES

1. UNLESS OTHERWISE NOTED, ALL WATER LINES SHALL BE PVC WITH 3' MIN. COVER.

2. UNLESS OTHERWISE NOTED, ALL SANITARY SEWER LINES SHALL BE PVC WITH 4' MIN. COVER.

3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

4. ALL ELECTRICAL, TELEPHONE AND GAS EXTENSIONS, INCLUDING SERVICE LINES, SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.

6. PRIOR TO THE CONSTRUCTION OF ANY CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN AND/OR ANY DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATION FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

7. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS:
ALL WATER LINE FITTINGS SHALL BE INSTALLED WITH THRUST BLOCKING (SEE UTILITY DETAILS, THESE PLANS). ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL (SEE UTILITY DETAILS, THESE PLANS). ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL (SEE UTILITY DETAILS, THESE PLANS).

8. PRIVATE SEWER LINES MUST BE INSTALLED BY A LICENSED PLUMBER AND MUST BE INSTALLED IN ACCORDANCE WITH THE PLUMBING CODE OF THE GOVERNING AUTHORITY.

9. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, AND PAY ALL PERMIT FEES. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL CODES AND ORDINANCES AND RECEIVE APPROPRIATE APPROVALS WHERE REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.

10. SEE MP&E PLANS FOR CONTINUATION OF UTILITIES INTO BUILDINGS. THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF THE CONNECTIONS OF THE SITE UTILITIES WITH THE BUILDING UTILITIES.

11. ADJUST ALL CASTINGS TO MATCH FINISH GRADES.

12. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE THESE DRAWINGS. PRINTED DIMENSIONS WHICH ARE OMITTED OR IN CONFLICT SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR REVIEW AND RESPONSE. DIMENSIONS ARE FROM FACE OF CURB / EDGE OF PAVEMENT AND FACE OF BUILDING, UNLESS NOTED OTHERWISE.

13. NOTE TO SPRINKLER CONTRACTOR:
THE FOLLOWING FLOW AND PRESSURE DATA HAS BEEN CALCULATED BY THE CITY OF LA VERGNE, LA VERGNE. FIRE DEPT. ON 02-23-23. SEE SHEET C612.

STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INVERT ELEV.	TYPE	NOTE
CO1	637.03	631.60		Traffic Rated
CO2	636.15	630.33		Traffic Rated
CO3	635.50	629.33		Traffic Rated
CO4	636.00	628.33		
CO5	635.50	627.33		
CO6	634.90	626.85		
FD1	637.06	631.86		
OGS1	636.70	631.10		

PIPE SCHEDULE

PIPE	LENGTH (FT.)	SIZE (IN.)	TYPE	SLOPE (%)	NOTES
P1	66	6	PVC	1.00%	PVC Pipe
P2	48	6	PVC	1.00%	PVC Pipe
P3	100	6	PVC	1.00%	PVC Pipe
P4	100	6	PVC	1.00%	PVC Pipe
P5	100	6	PVC	1.00%	PVC Pipe
P6	77	6	PVC	1.00%	PVC Pipe
P7	76	6	PVC	1.00%	PVC Pipe
P8	33	4	PVC	1.52%	PVC Pipe

UTILITY NOTES

A	SEE PLUMBING FOR CONTINUATION INTO BUILDING
B	TIE TO EXISTING MANHOLE AT 626.19 ELEVATION, CONTRACTOR TO FIELD VERIFY INVERT.
C	FLOOR DRAIN, COORDINATE WITH PLUMBING PLANS
D	6" WATER TAP, COORDINATE WITH CITY OF LA VERGNE PUBLIC WORKS
E	GAS TAP, COORDINATE WITH GAS PROVIDER
F	OIL AND GREASE SEPARATOR, COORDINATE WITH PLUMBING PLANS

UTILITY DETAILS

1	EXTERIOR CLEANOUT
2	UTILITY TRENCH & BEDDING
3	MANHOLE
4	6" FIRE AND DOMESTIC METER AND VAULT ASSEMBLY
5	FIRE HYDRANT
6	1.5" REDUCED PRESSURE BACKFLOW PREVENTOR (ABOVEGROUND)
7	CONCRETE THRUST BLOCK
8	GATE VALVE WITH BOX
9	FIRE DEPARTMENT CONNECTION
10	BOOT CONNECTION TO MANHOLE
11	CROSSING UNDER OBSTRUCTION
12	6" REDUCED PRESSURE BACKFLOW PREVENTOR

LEGEND: UTILITY

- PROPOSED GAS LINE
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED MANHOLE
- PROPOSED WATER METER
- PROPOSED GAS METER
- PROPOSED WATER VALVE
- PROPOSED WATER CONNECTION W/ KICKER
- PROPOSED CLEANOUT
- PROPOSED FIRE HYDRANT
- PROPOSED BACK FLOW ASSEMBLY
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED DOUBLE DETECTOR CHECK VALVE ASSEMBLY

UTILITY PLAN

30 0 30 60
GRAPHIC SCALE

AGENCY REVIEW - NOT FOR CONSTRUCTION

P. STUDIO
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BRENTWOOD, TN 37027
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email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. BOHANNON
REGISTERED ENGINEER
AGRICULTURE
4-14-2023
COMMERCE
No. 00113398
STATE OF TENNESSEE

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checset)
- ■ Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
CEM

DATE:
03.27.23

DRAWING
UTILITY PLAN

C600

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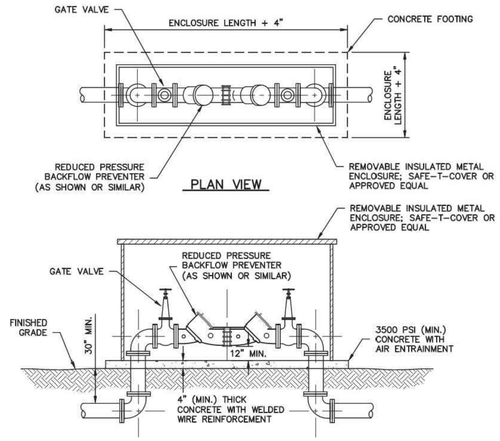

REDUCED PRESSURE BACKFLOW PREVENTER (ABOVEGROUND)

N.T.S.

Revised August 2017

STANDARD DETAIL 070

CITY OF LAVERGNE, TENNESSEE

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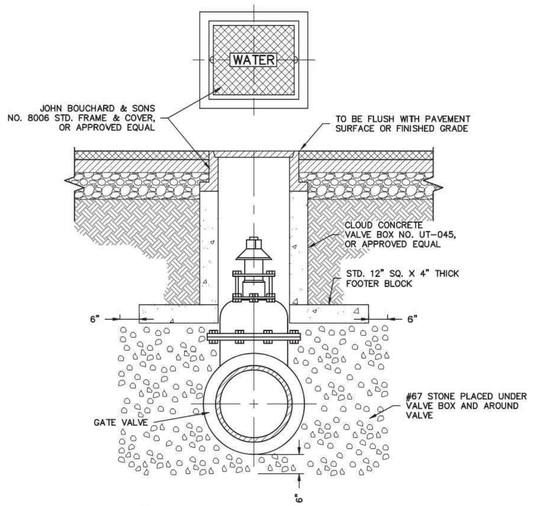
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\070 Reduced Pressure Backflow Preventer.dwg

RPZ 6



TYPICAL VALVE BOX SETTING INSIDE & OUTSIDE OF PAVEMENT

N.T.S.

Revised September, 2015

STANDARD DETAIL 030

CITY OF LAVERGNE, TENNESSEE

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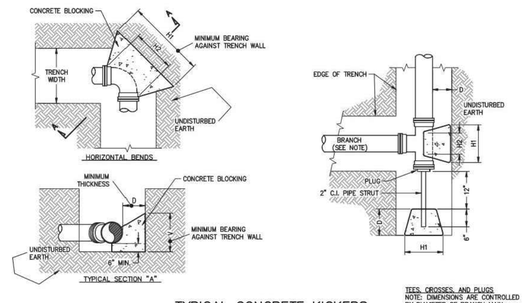
FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\030 Typical Valve Box Setting.dwg

VB 8



TYPICAL CONCRETE KICKERS

N.T.S.

NOTE: SEE SHEET 2 FOR TABLE OF DIMENSIONS FOR CONCRETE BLOCKERS.

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Revised September, 2015

STANDARD DETAIL 081

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Sheet 1 of 2

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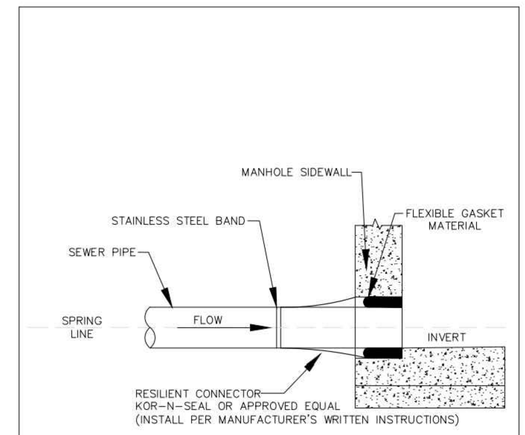


CTI ENGINEERS, INC.
3354 PERIMETER HILL DRIVE, SUITE 140
NASHVILLE, TN 37211
615-834-8300

6.0

RESILIENT BOOT CONNECTION FOR SEWER PIPE TO MANHOLE DETAIL

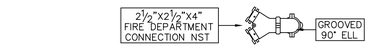
NOT TO SCALE

CITY OF LA VERGNE, TENNESSEE

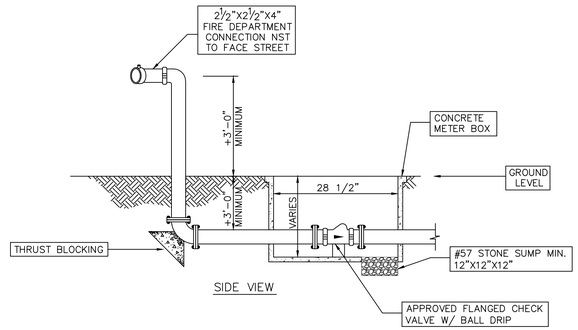
STANDARD SEWER DETAILS

PUBLIC WORKS DEPARTMENT
148 INTERNATIONAL BLVD.
LA VERGNE, TN 37086
615-793-9891

BC 10



TOP VIEW



SIDE VIEW

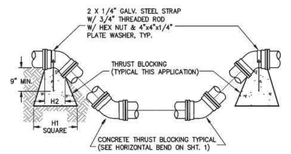
FIRE DEPARTMENT REMOTE SIAMESE CONNECTION

FDC 9

TABLE BASED ON 4,000 PSF SOIL CAPACITY AND 150 PSI WORKING PRESSURES + SOZ. DESIGN ENGINEER SHALL SIZE FOR SPECIFIC SITE CONDITIONS AND PRESSURES.

TABLE OF DIMENSIONS FOR CONCRETE BLOCKERS

TEES, CROSSES, & PLUGS					90° BENDS					45° BENDS					22-1/2° BENDS					11-1/4° BENDS					PIPE SIZE
H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	H1	H2	V	D	C.F.	
18"	10"	12"	18"	1.90	18"	41"	45°	18"	1.90	18"	6"	12"	18"	1.58	18"	6"	12"	18"	1.58	18"	6"	12"	18"	1.50	2"&2-1/4"
24"	12"	12"	18"	2.25	24"	12"	18"	18"	2.25	18"	8"	12"	18"	1.66	18"	8"	12"	18"	1.66	18"	8"	12"	18"	1.60	3" & 4"
24"	16"	18"	18"	3.38	30"	16"	18"	18"	4.05	24"	10"	16"	18"	3.26	24"	10"	16"	18"	3.26	24"	10"	16"	18"	3.20	6"
36"	18"	18"	18"	5.05	39"	18"	24"	18"	7.30	30"	11"	18"	18"	3.95	30"	11"	18"	18"	3.95	24"	11"	16"	18"	3.40	8"
48"	24"	18"	24"	7.15	54"	30"	24"	18"	10.25	24"	18"	21"	18"	4.60	24"	18"	21"	18"	4.60	24"	18"	21"	18"	4.60	10"
54"	30"	24"	24"	13.4	54"	30"	36"	24"	18.15	42"	18"	24"	24"	9.60	24"	18"	24"	24"	6.60	24"	18"	21"	24"	6.10	12"
60"	32"	30"	24"	17.9	60"	40"	42"	24"	25.0	44"	24"	30"	24"	13.2	30"	24"	24"	24"	9.26	27"	21"	24"	24"	7.90	14"
66"	34"	36"	24"	22.5	69"	48"	48"	24"	29.0	48"	30"	36"	24"	17.8	36"	30"	27"	24"	11.8	27"	24"	27"	24"	9.10	16"
66"	36"	40"	24"	27.5	69"	48"	48"	24"	33.0	48"	30"	36"	24"	17.8	36"	30"	29"	24"	13.8	27"	30"	29"	24"	11.0	18"
	38"		24"			48"		24"			40"		24"			36"		24"			36"	40"		28"		20"
	42"		24"			60"		24"			48"		24"			42"		24"			42"	32"				24"
	58"		24"			96"		24"			72"		24"			72"		24"			48"	36"				36"



TYPICAL CONCRETE KICKERS

N.T.S.

NOTES:

1. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
2. THRUST BLOCKING TO BE POURED-IN-PLACE 3000 psi (MIN.) CONCRETE.

Revised September, 2015

STANDARD DETAIL 081

CITY OF LAVERGNE, TENNESSEE

G & M File No. 442-56

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Sheet 2 of 2

KICK 7

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761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
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ALTERRA - 122 CHARTER PLACE VOL. 2 ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL E. HUBBARD CANNON — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 001133398 — STATE OF TENNESSEE — 4-14-2023

ISSUED FOR

- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066

DRAWN BY: CEM

DATE: 03.27.23

DRAWING

UTILITY DETAILS

C611

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AGENCY REVIEW - NOT FOR CONSTRUCTION

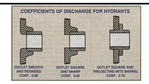
LA VERGNE
TENNESSEE
PUBLIC WORKS

CUSTOMER DATA AND FIRE HYDRANT FLOW TEST FORM

Contact Info.: Chris Morrow, Ingram Civil, 615-370-7964, cmorrow@ingramcivil.com
Fire Flow Request Date: 2/23/2023
Project Address: 122 Charter Place
Test Date: Sunday, March 12, 2023

FH Purpose	FH # and/or Location						Static Pressure (psi)	Residual Pressure (psi)	FH Elev. (ft)		Calc'd Fire Flow Avail. in Main(s) @ 20 psi (gpm)
Static/Residual:	FH765 e/b Chater Place approx 900' e/o Waldron Rd						132	120	623		5,434
		FH Orifice Type [1]	FH Nozzle Size [2] (inches)	# of Nozzles Flowed	Start Time	Stop Time	Duration (min)	Pitot (psi)	FH Elev. (ft)	Water Loss (gallons)	FH Flowrate (gpm)
Flow Hydrant 1:	FH1429 e/b Chater Place approx 200' e/o Waldron Rd	0.9	2.5	1	7:40 AM	7:44 AM	4	94	625	6,507	1,627
Flow Hydrant 2:							0			0	0
Flow Hydrant 3:							0			0	0
										6,507	1,627

Values For Orifice Type [1]	
0.9	Rounded Outlet (inside of barrel)
0.8	Sharp Edged Outlet (Inside of barrel)
0.7	Sharp Edged Outlet (Projecting into FH barrel)
0.95	Flow Straightening on Testing Unit



Values For FH Nozzle [2] (inches)	
2.5	Hose Connection
4	Pumper Connection
4.5	Pumper Connection
Measured	Insert measured **inside diameter** of nozzle (inches)

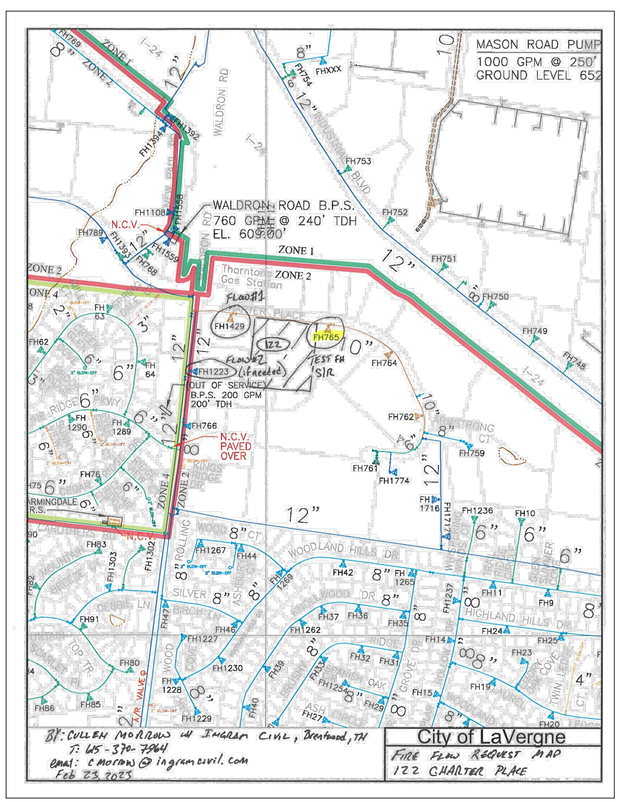
ENGINERING REVIEW

		Sys. HGL
Pressure Zone:	Zone 2, Sanford Knob Tank HWL 940, FF 894	
BPS Data:	MR BPS @ 125psi, pad 653', HGL = 942'	Elev.
Water Tank Levels:	Sanford Knob @ 85% Full = 933'	933
Waterline Size/Type:	12"	
Reviewed By:	S. Tatalovich	Date: 3/13/2023

COMMENTS: Static pressure drop greater >10psi. Static pressure is accurate. Flow results in range for a 12" waterline. No reason to suspect a closed valve. The test is good.

Calculations

FH Elev:	623	
Static FH Pressure (pressure x 2.31):	305	ft
Static FH HGL:	928	
Tank Water Level:	933	
Static FH HGL:	928	
Background System Dynamic Loss @ Test FH:	5	ft
Background System Dynamic Loss @ Test FH:	2.2	psi
System Pressure Drop Due to FH Test:	12.0	psi
System Pressure Drop Due to FH Test:	9%	



FH Test Data Collection Form

Test Date	3/12/23

TEST FH

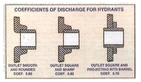
Test FH #	FH-765
Test FH Location	
Static Pressure	132
Residual Pressure	120

FLOW FHs	FLOW FH#1	FLOW FH#2	FLOW FH#3
Flow FH #	FH-1429		
Flow FH Location			
Test Start Time	7:40		
Test Stop Time	7:44		
Pitot Pressure	94		
Nozzle Coefficient [1]	0.9		
Nozzle Diameter [2]	2.5		
# Nozzles Flowed [3]	1		

NOTES: ALL PRESSURES IN GREEN CELLS MUST BE TAKEN SIMULTANEOUSLY.

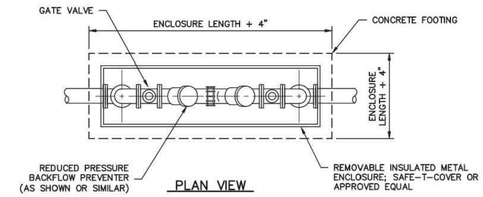
[1] Coefficient Values

0.9	Rounded Outlet (inside of barrel)
0.8	Sharp Edged Outlet (inside of barrel)
0.7	Sharp Edged Outlet (Projecting into FH barrel)
0.95	Flow Straightening on Testing Unit

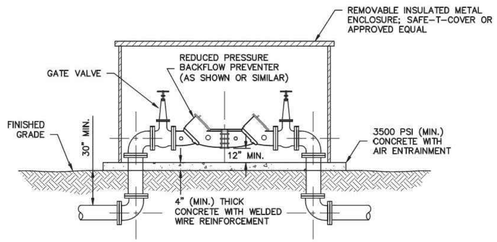


[2] Nozzle Diameter — Is internal diameter
[3] #Nozzles — List the number of nozzles opened (flowed) at that flow FH.

FIRE FLOW TEST



PLAN VIEW



ELEVATION

6" REDUCED PRESSURE BACKFLOW PREVENTER (ABOVEGROUND)

N.T.S.

Revised August 2017

STANDARD DETAIL 070

CITY OF LAVERGNE, TENNESSEE

G & M File No. 442-56

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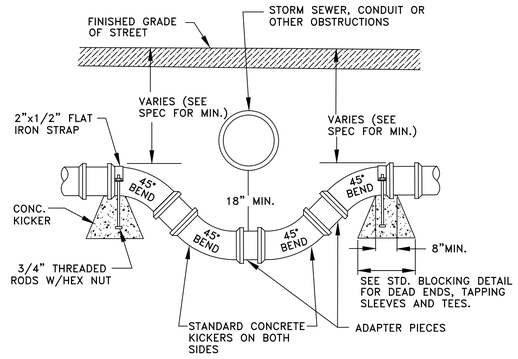
GRIGGS & MALONEY INCORPORATED
Engineers • Environmental • Surveying
P.O. BOX 2968, MURFREESBORO, TN 37133-2968
(615) 895-8221 • FAX (615) 895-0632

FILE NAME: L: \Engineering\442-56\2015 Updates\Drawings\070 Reduced Pressure Backflow Preventer.dwg

RPZ
12

NOTE: SEE STD. BLOCKING DETAIL DWG. FOR TABLE OF DIMENSION FOR CONCRETE KICKERS



NOTE: SIZE OF KICKER, CLAMP & RODS SHALL BE INCREASED IF SPECIFIED ON LAYOUT SHEET OR BY THE ENGINEER.

METHOD OF CROSSING UNDER OBSTRUCTIONS

CROSSING UNDER OBSTRUCTIONS
(NOT TO SCALE)

CUO
11

PARADYM STUDIO, PLLC
761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE
VOL. 2
ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

SAMUEL H. BOHANNON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 0011398
STATE OF TENNESSEE
4-4-2023

ISSUED FOR
- ☐ Lease Outline Diagram
- ☐ Schematic Design
- ☐ Design Development
- ☐ Construction (95% Checkset)
- ■ Construction

REVISIONS

PROJECT NUMBER: 22066
DRAWN BY: CEM
DATE: 03.27.23
DRAWING
UTILITY DETAILS
C612

AGENCY REVIEW - NOT FOR CONSTRUCTION

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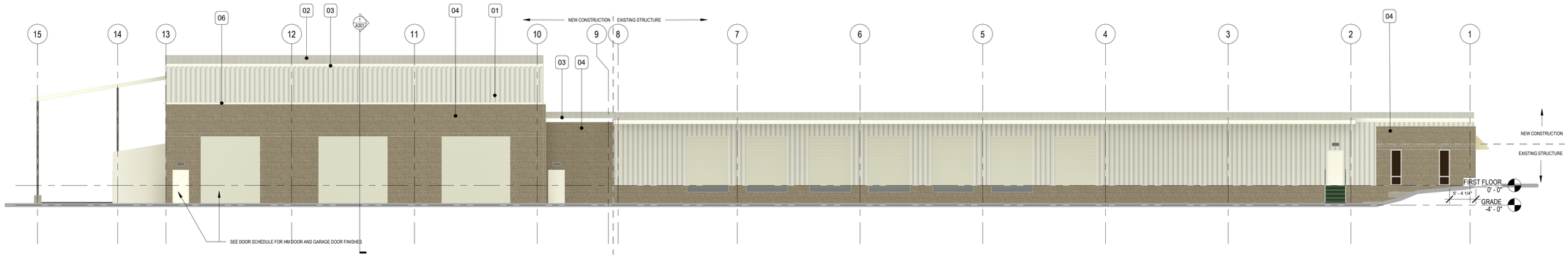
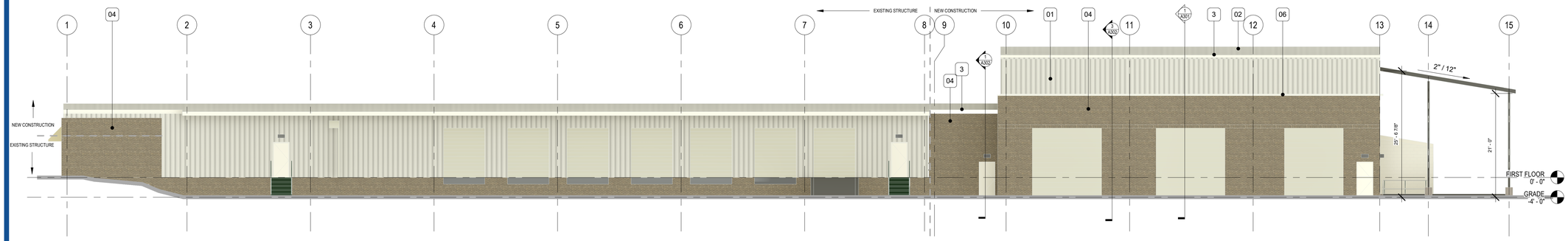


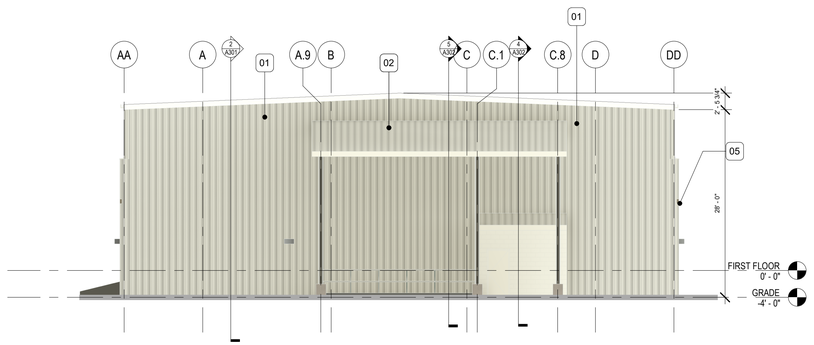
1 EAST ELEVATION - COLOR OPTION 02

3/32" = 1'-0"



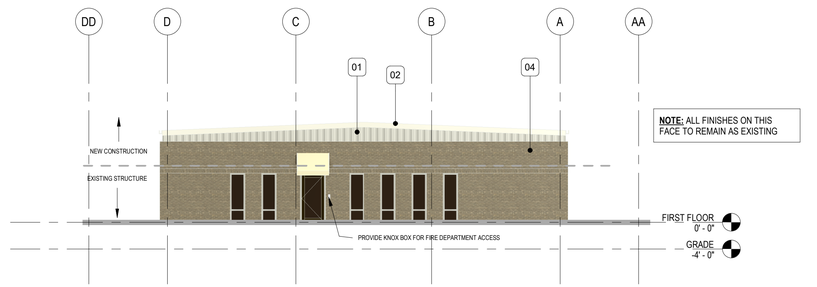
2 WEST ELEVATION - COLOR OPTION 02

3/32" = 1'-0"



3 SOUTH ELEVATION - COLOR OPTION 02

3/32" = 1'-0"



4 NORTH ELEVATION - COLOR OPTION 02

3/32" = 1'-0"

MATERIALS CALCULATIONS (OLD + NEW CONSTRUCTION)

EAST ELEVATIONS			WEST ELEVATIONS			SOUTH ELEVATIONS			NORTH ELEVATIONS		
BRICK	2,113 SF	50.50 %	BRICK	2,113 SF	50.50 %	BRICK	320 SF	13.14 %	BRICK	607 SF	81.25%
METAL	2,071 SF	49.50 %	METAL	2,071 SF	49.50 %	METAL	2,116 SF	86.86%	METAL	140 SF	18.75%
OTHER	0 SF	0%	OTHER	0 SF	0%						
TOTAL	**4,184 SF**		**TOTAL**	**4,184 SF**		**TOTAL**	**2,436 SF**		**TOTAL**	**747 SF**	

EXTERIOR FINISH SCHEDULE OPTION 02

MARK	MATERIAL	STYLE/COLOR	MANUF.	REP. CONTACT	NOTES	SPECS
01	METAL WALL PANEL	MATCH EXISTING			BY PEMB MANUF	
02	METAL ROOF	MATCH EXISTING			BY PEMB MANUF	
03	GUTTER	MATCH EXISTING			BY PEMB MANUF	
04	BRICK	MATCH EXISTING				
05	BRICK - SOLDIER COURSE	MATCH EXISTING				
06	BRICK - ROWLOCK COURSE	MATCH EXISTING				

P. STUDIO

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761 OLD HICKORY BLVD #301
BRENTWOOD, TN 37027
call | 615.258.5562
email | hello@paradymstudio.com

ALTERRA - 122 CHARTER PLACE RENOVATION & ADDITION

122 CHARTER PLACE
LA VERGNE, TN 37086

STEVEN C. REUTER
LICENSED ARCHITECT
AGRICULTURE
No. 00110261
STATE OF TENNESSEE
4/17/23

ISSUED FOR

- [ ] Lease Outline Diagram
- [ ] Schematic Design
- [x] Design Development
- [ ] Construction (95% Checkset)
- [ ] Construction

REVISIONS

PROJECT NUMBER:
22066

DRAWN BY:
TH

DATE:
04.17.23

DRAWING
EXTERIOR ELEVATIONS - COLORED

A202C

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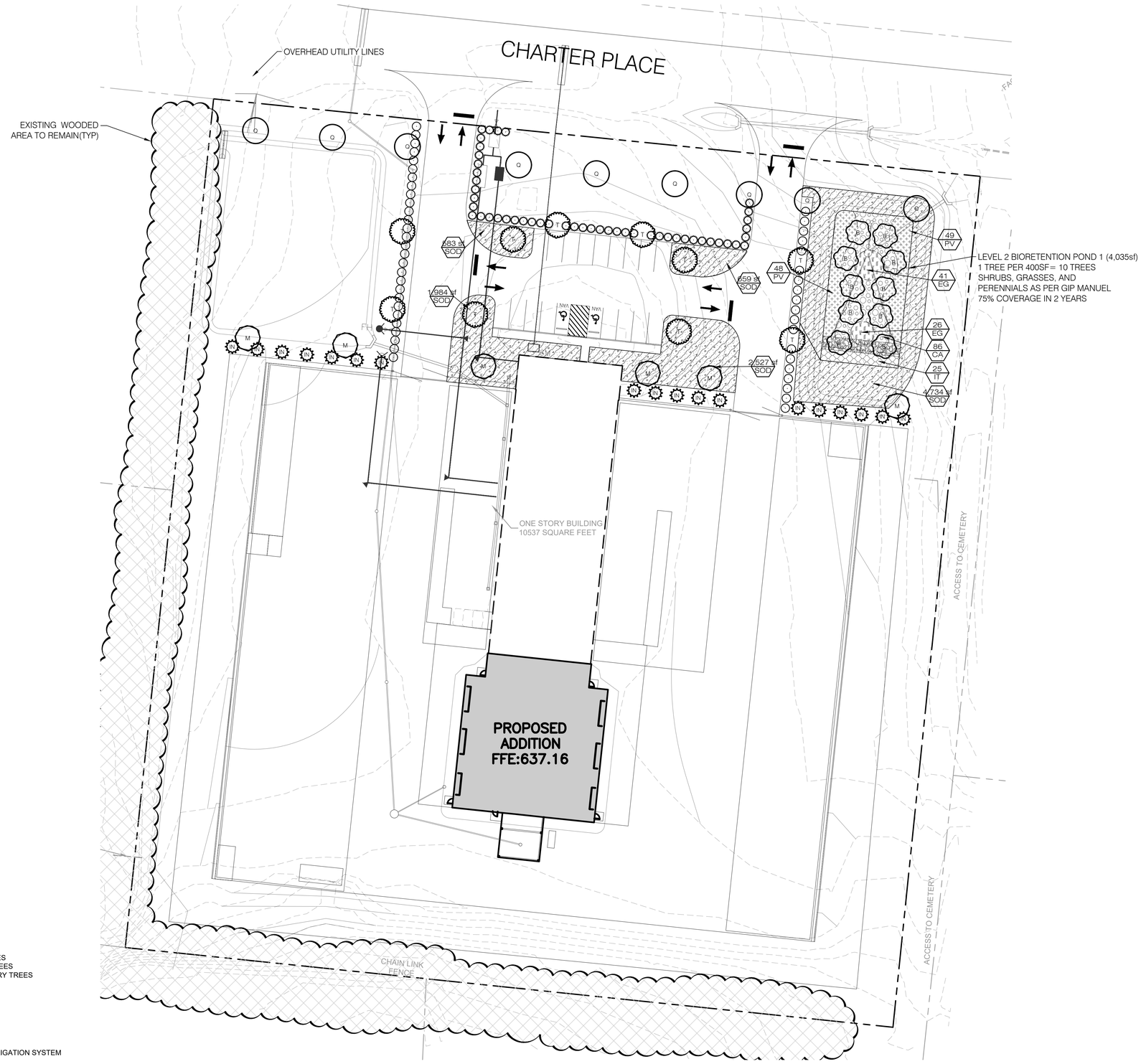


ALTERRA
LANDSCAPE PLAN

SITE DATA
SITE AREA: ± 5.16 AC

SITE ZONING: I-2 HEAVY INDUSTRIAL
SURROUNDING ZONE:I-2 HEAVY INDUSTRIAL

REQUIRED LANDSCAPE:		PROVIDED:	
4" CALIPER STREET TREES PER OVERLAY	= 9 (4" STREET TREES)	9 (4")	STREET TREES
3 CANOPY TREES PER ACRE	= 16 (2.5") CANOPY TREES	16 (2.5")	CANOPY TREES
3 UNDERSTORY TREES PER ACRE	= 16 (1.5") UNDERSTORY TREES	18 (1.5")	UNDERSTORY TREES
15 SHRUBS PER ACRE	= 78 (18" HT) SHRUBS	82 (36" HT)	SHRUBS

PARKING LOT SCREEN:
SCREEN PARKING LOTS FROM ROAD WITH 36" HT SCREEN

TRANSITIONAL SCREENING
-NONE REQUIRED

ALL PROPOSED TREES AND SHRUBS TO BE IRRIGATED WITH CONTRACTOR DESIGN BUILD IRRIGATION SYSTEM

LAND DESIGN
1894 Gen. Geo. Patton Dr.
Suite 400
Franklin, TN 37067
Tel: 615.376.2421
www.hblanddesign.com

PROPOSED SITE FOR:
122 CHARTER PLACE - ALTERRA
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE

CONNOR L. BALL
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE
12-12-24

Job # - 23149
BY: cb

L1.0
LANDSCAPE PLAN

BIORETENTION NOTES:

1. Verify that the bioretention areas have been constructed in compliance of the requirements of the construction documents prior to beginning work
2. Care should be taken to minimize compaction to soils within the limits of the bioretention area(s)
3. No machinery (other than walk behind rototillers) shall be used within the limits of the bioretention area(s)
4. Dig a test percolation pit (1'x1'x1'x deep and fill with water. Monitor to verify that all the water has drained from the pit within a 24 hour period. If water remains after 24 hours, cease all work on the bioretention area(s) and contact the Civil Engineer for further instructions
5. The work required for construction of the bioretention area(s) consists of removal of weeds, preparation of planting areas, mulching, and clean up.
6. Contractor is responsible for keeping the bioretention area free from sediment resulting from storm-water runoff.
7. The contractor shall conduct all site preparation activities to not allow "sediment loss" to the bioretention areas.
8. Provide or verify installation of a silt fence prior to commencement of construction around the circumference of the bioretention area(s)
9. Begin construction of the bioretention area(s) after adjacent areas have been stabilized with stone or vegetation.
10. Comply with the Water Quality Control Act of 1971, including revisions, and other applicable laws, ordinances, and regulations.
11. The Contractor shall correct, at his own expense, any work that does not comply with the requirements of the contract.
12. The Contractor shall assume responsibility for protection of public streets, curbs, and utilities from damages from the Contractor's operations. Plan work to avoid ponding, flooding, ad sediment loss on site and upon adjacent properties.
13. Meet the requirements of all rules and regulations governing the respective utilities. Protect active utilities from damage during construction.
14. If active utilities are encountered in the course of excavation other than those indicated on the survey or civil plans, protect them from damage and relocate them in accordance with the Engineer's written instructions. Remove inactive utilities if such are encountered
15. The finished surface shall be free from any lumps of earth, rocks, stones, debris, or other improper materials. No trees, trunks, shrubs, stumps, undergrowth, or building rubbish will be permitted in the grading grading.
16. 17. Scarify top 6" of soil by hand or with a walk behind rototiller to the planting area. Tractors or other heavy machinery are NOT allowed within the bioretention area(s)
17. Remove all weeds with three applications (at 2 week intervals) of a systemic herbicide such as Roundup during the period that weeds are actively growing and prior to preparing the bioretnetion area for planting.

811 Know what's **below.** **Call** before you dig.

PLANT STANDARDS

The standards set forth in "American Standard for Nursery Stock" represent general guideline specifications only and will constitute minimum quality requirements for plant material. All plants must meet minimum size noted at the materials schedule. And meet the characteristics stated on this drawing. All material installed on the site MUST meet or exceed these specifications. Any trees or shrubs not meeting these standards can be rejected at time of inspection.

TREE SPECIFICATIONS: ALL TREES SHALL HAVE THE FOLLOWING CHARACTERISTICS:

1. Deciduous trees shall have one dominant single straight trunk with the tip of the leader on the main trunk left intact and the terminal bud on the central leader is at the highest point on the tree.
2. Trees with forked trunks are acceptable if all the following conditions are met:
   a. The fork occurs in the upper 1/3 of the tree.
   b. One fork is less than 2/3 the diameter of the dominant fork.
   c. The top 1/3 of the smaller fork is removed at the time of planting.
3. No branch is greater than 2/3 the diameter of the trunk directly above the branch.
4. The trunk and/or major branches shall not touch
5. Several branches are larger in diameter and obviously more dominant.
6. Branching habit is more horizontal than vertical, and no branches are oriented nearly vertical to the trunk.
7. Branches are evenly distributed around the trunk with no more than one major branch located directly above another and the crown is full of foliage evenly distributed around the tree
8. Crown spread shall look proportional to the tree.
9. NO flush cuts or open trunk wounds or other bark injury
10. Root ball meets all ANSI standards and is appropriately sized

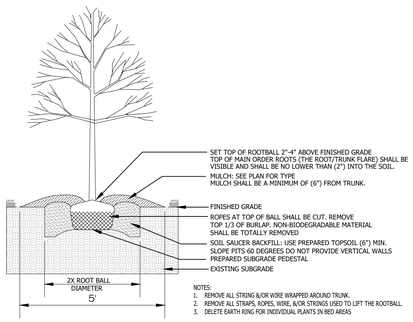
DEFICIENCIES NOT ACCEPTED:

1. Tip dieback on 5% of branches
2. Crown thin/spasely foliated
3. Included bark
4. Major Branches touching
5. Asymmetrical branching

Landscape shall not obstruct visibility or access to fire protection equipment including, but not limited to, fire hydrants and fire department connections

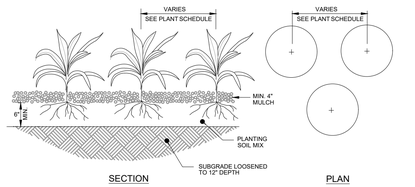
PLANTING NOTES:

1. Refer to all written specifications; adhere to Plans and Specifications for all phases of work.
2. Verify all utility locations in the field before work begins. Repair damaged utilities to owners satisfaction at no additional cost.
3. Verify all material quantities on the drawing during bidding and pricing. In the event of a discrepancy, the quantities drawn on the plan will take precedence over the material schedule.
4. All materials are subject to the approval of the Landscape Architect, City, and Owner.
5. Once unloaded from truck, immediately stand all trees up. DO NOT lie the trees down. This will reduce the risk of sunscald.
6. Plants shall meet specifications. Root balls shall meet or exceed size standards as set forth by 'American Standards for Nursery Stock'. Main leaders of all trees shall remain intact.
7. Mulch plant pits and planting beds with specified mulch to the depth indicated on drawings.
8. Prepare all topsoil used in tree, shrub, and seed mixes in accordance with the specifications
9. Discard any material which turns brown or defoliates within 5 days after planting. Replace immediately with approved specified material at no additional cost.
10. Maintain all plant material and lawns until project is accepted in full by the City.
11. Guarantee all workmanship and materials for a period of 1 calendar year.
12. Install all plant material in accordance with all local codes and ordinances. Obtain any required permits necessary to complete the work.
13. Provide 6" of topsoil for lawn areas (12" min. over rock), min. 24" of topsoil for shrub zones, and min. 48" deep for tree pits. Refer to specific root ball sizes for the min. diameter tree pit.
14. Trees shall be first quality representatives of their species and shall meet all requirements otherwise stipulated. The Landscape Architect reserves the right to reject plant materials in the field, at the growing location, or at the job site at any time during the project.
15. Test all tree pits for drainage. Any tree pit that holds water for more than 24 hours shall be installed using filter fabric wrapped perforated drainage tube (sloped to low point) and a washed pea gravel pit well drain



DECIDUOUS TREE PLANTING

P-NO-12



GROUNDCOVER PLANTINGS

GROUNDCOVER, GRASSES, AND PERENNIALS

LANDSCAPE NOTES:

1. Contractor responsible for locating and protecting all underground utilities prior to digging.
2. Contractor responsible for protecting existing trees from damage during construction as shown on plans.
3. Contractor to install 6" minimum depth of clean, friable topsoil at all planting beds and lawn areas prior to fine grading. see topsoil specification sheet I-1.3.
4. All shrub beds (existing and new) to be mulched with a 3-4 inch minimum layer of mulch .
5. Existing grass in proposed planting areas to be killed and removed and area to be hand raked to remove all rocks and debris larger than 1 inch in diameter prior to planting shrubs or laying sod. Landscape contractor to provide fine grading.
6. Any existing grass disturbed during construction to be fully removed, re-graded and replaced. All tire marks and indention to be repaired.
7. Soil to be tested to determine fertilizer and lime requirements and distributed prior to laying sod.
8. Sod to be delivered fresh (cut less than 24 hours prior to arriving on site), laid immediately, rolled, and watered thoroughly immediately after planting. edge of sod adjacent to mulch beds to be shovel cut. All sod to be delivered in largest rolls available. there shall be no gaps between sod joints.
9. Planting mix to be provided as specified in the landscape specifications.
10. The landscape contractor shall guarantee all plants installed for one full year from date of acceptance. All plants shall be alive and at a vigorous rate of growth at the end of the guarantee period. The landscape contractor shall not be responsible for acts of god or vandalism.
11. Any plant that is determined dead, in an unhealthy or unsightly condition, lost its shape due to dead branches or other symptoms of poor, non-vigorous growth, as determined by the landscape architect, shall be replaced by the landscape contractor at no cost to owner.
12. Prior to installation, the landscape contractor shall inspect the subgrade, general site conditions, verify elevations, utility locations, irrigation, approve topsoil provided by general contractor and observe the site conditions under which the work is to be done. Notify general contractor of any unsatisfactory conditions, and work shall not proceed until such conditions have been corrected.
13. Water all plant material that are newly planted thoroughly twice in first 24 hours and apply mulch immediately.
14. All trees and shrubs shall be coordinated with lighting plan prior to installation.
15. All shrubs to be 3' back of curb.
16. All areas of disturbance outside of landscape beds shall be repaired with turf.
17. Any utility structure, light poles, sign, or other feature may not be added to any required landscape island in such a manner that would displace the required element(s) (trees, shrubs, etc.)

SUBSTITUTION NOTE:

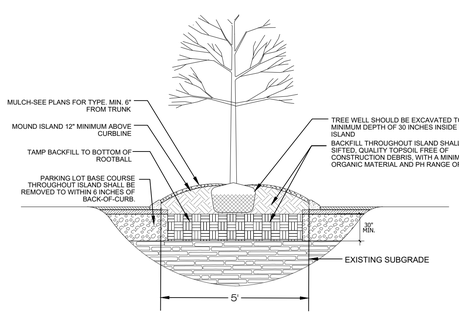
1. Requirements shown are per the City Zoning Ordinance. Substitutions are not allowed unless approved by the City and Heibert+Ball Land Design

TO AVOID OVERHEAD LIGHT POLE CONFLICTS:

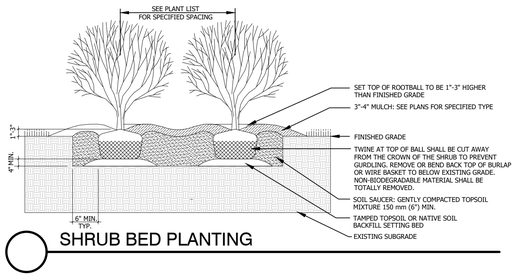
In the event proposed canopy trees are in conflict (within 15') with proposed or existing light pole locations, the landscape contractor shall stop work and contact Heibert+Ball Land Design immediately for coordination and field adjustment

TO AVOID OVERHEAD UTILITY CONFLICTS:

In the event proposed canopy trees are in conflict (within 25') with proposed or existing overhead utility locations, the landscape contractor shall stop work and contact Heibert+Ball Land Design immediately for coordination and field adjustment.



PARKING ISLAND TREE PLANTING
FOR PARKING LOT ISLAND OR MEDIAN



SHRUB BED PLANTING

PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
M	6	October Glory Maple / Acer rubrum `October Glory` 5` Clear Trunk. Evenly Branched. Matched. See Tree Specifications	B & B	2.5"Cal	12`-14` HT
T	10	Tulip Poplar / Liriodendron tulipifera 5` Clear Trunk. Evenly Branched. Matched. See Tree Specifications	B & B	2.5"Cal	12`-14` HT
BIORETENTION TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
B	10	Duraheat River Birch / Betula nigra `Duraheat` 3 Cane Min.. Full Rounded Head. See Tree Specifications	B & B		6`-8` HT
STREET TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
Q	9	Willow Oak / Quercus phellos 5` Clear Trunk. Evenly Branched. Matched. See Tree Specifications	B & B	4"Cal	12`-14` HT
UNDERSTORY TREES	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
IN	18	Nellie Stevens Holly / Ilex x `Nellie R Stevens` Full to Base. Full Dense Form. See Tree Specifications	B & B	1.5"Cal	6`-8` HT
SHRUBS	QTY	COMMON / BOTANICAL NAME	HT / CONT.	WIDTH	
D	49	Dwarf Burford Holly / Ilex cornuta `Burfordii Nana` Full; Dense Form	36" HT		
P	47	Prague Viburnum / Viburnum x pragense Full; Dense Form	36" HT		

PLANT SCHEDULE

BIORETENTION PLANTS	CODE	QTY	COMMON / BOTANICAL NAME	CONT
	CA	86	Beautyberry / Callicarpa americana Full; Well Rooted Containers #3 Containers Installed 60" O.C. in Triangular Pattern	#3 Container
	EG	67	Gateway Joe-Pye Weed / Eupatorium maculatum `Gateway` Install #1 Containers in Trianglar spacing 24" O.C.	#1 Container
	IT	25	Merlot Sweetspire / Itea virginica `Merlot` Full; Well Rooted Containers #3 Containers Installed 48" O.C. in Triangular Pattern	#3 Container
	PV	97	Dallas Blues Switch Grass / Panicum virgatum `Dallas Blues` Full; Well Rooted Containers #1 Containers Installed 48" O.C. in Triangular Pattern	#1 Container
GROUND COVERS	CODE	QTY	COMMON / BOTANICAL NAME	CONT
	SOD	10,355 sf	Drought Tolerant Fescue Blend / Turf Sod Install Sod as per specifications over finished graded area free of debris. Stagger seems, do not overlap. Roll twice.	sod

WHEN THE TERMS "POT", "CONTAINER", OR "CALIPER" ARE USED TO DESCRIBE MINIMUM SIZE AT PLANTING, THE ESTABLISHED AMERICAN STANDARD FOR NURSERY STOCK SHALL APPLY.
THAT IS: •"ALL CONTAINER GROWN (DECIDUOUS OR CONIFER) SHRUBS SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD.
THEY SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION." "AN ESTABLISHED CONTAINER GROWN (DECIDUOUS OR CONIFER) SHRUB SHALL BE A
(DECIDUOUS OR CONIFER) SHRUB TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE
ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER." •CONTAINER SIZE MAY BE CONVERTED TO MINIMUM HEIGHT/SPREAD AS FOLLOWS:
1 GALLON = 12" TO 15" HEIGHT OR SPREAD
3 GALLON = 15"-18" HEIGHT OR SPEAD
5 GALLON = 18" TO 24" HEIGHT OR SPREAD
7 GALLON = 24" TO 30" HEIGHT OR SPREAD

PLAN NOTES:

1. ALL LANDSCAPE BEDS SHALL BE NEATLY TRENCHED WITH A BED EDGE AND HAVE 3" MINIMUM DEPTH OF PINE BARK MULCH.
2. ALL TREES AND SHRUBS SHALL BE COORDINATED WITH LIGHTING PLAN PRIOR TO INSTALLATION. LIGHT POLES MUST NOT BE LOCATED IN TREE ISLANDS. ALL TREES TO BE INSTALLED 15' FROM ANY LIGHT POLE.
3. ALL AREAS OF DISTURBANCE NOT SPECIFIED AS SOD SHALL BE SEEDED WITH REBEL III TALL FESCUE UNLESS OTHERWISE NOTED ON GRADING PLANS

HB LAND DESIGN
1894 Gen. Geo. Patton Dr.
Suite 400
Franklin, TN 37067
Tel: 615.376.2421
www.hblanddesign.com

PROPOSED SITE FOR:
122 CHARTER PLACE - ALTERRA
LA VERGNE, RUTHERFORD COUNTY, TENNESSEE

CONNOR L. BALL REGISTERED AGRICULTURAL & ENVIRONMENTAL LANDSCAPE ARCHITECT

Job # - 23149
BY: cb

L1.1 LANDSCAPE NOTES

Planning Commission Report
Meeting: April 25, 2023

City of La Vergne

Request: Recommendation to the Board of Mayor and Aldermen: Rezoning of Property, Requested by Doyle Elkins. 1.16 acres. Property located at 392 Old Nashville Highway (Tax Map 017E, Group B, Parcel 22.00). Current Zoning District: R-1 (Low Density Residential) Zoning District; Proposed Zoning District: C-3 (Neighborhood Service Business District) Zoning District. Property owned by Gerges Gerges.

Reviewed By: Bo Logan, Planning Director

Summary

The applicant, Doyle Elkins, is requesting to rezone approximately 1.16 acres from R-1 (Low Density) to C-3 (Neighborhood Service Business District).

The property is located at 392 Old Nashville Hwy.

Per the applicant, the purpose of the rezoning is to be able to pursue the development of a market or grocery store. There is no formal plan offered at this time.

The main zoning in the area is R-1 and R-2. There is scattered C-2 along the entire Old Nashville corridor. C-3 exists at main intersections.

The property that borders this site on the southeast is R-1 and R-2. The property to the north side is zoned R-1 (Low Density Residential).

Technical Items

1. (from Public Works) Customer should apply at Public Works for water and sewer availability letters.

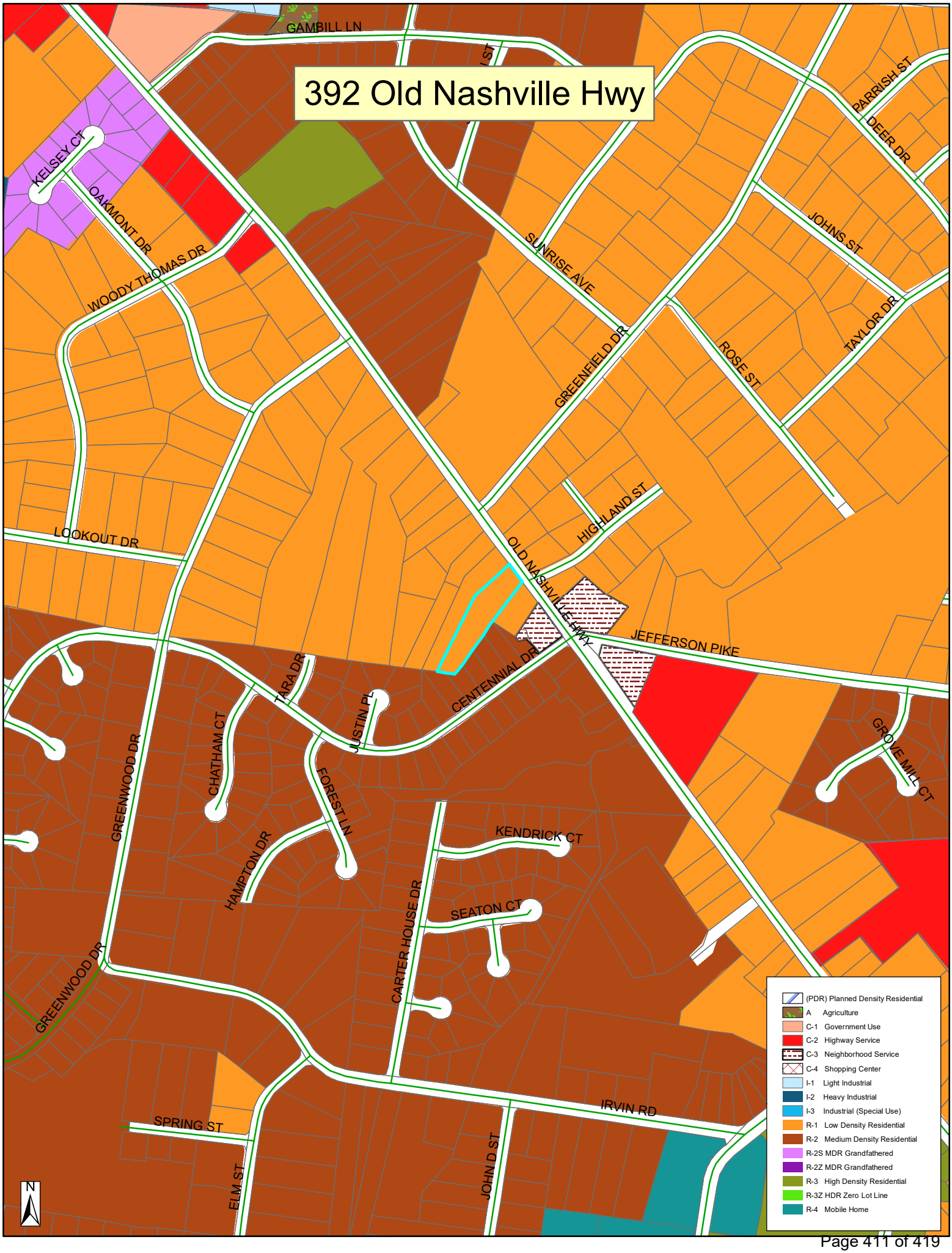
Other Concerns

1.

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


392 Old Nashville Hwy
OLD NASHVILLE HWY
CENTENNIAL DR
N


392 Old Nashville Hwy
GREENWOOD DR
GREENFIELD DR
ROSE ST
HIGHLAND CT
HIGHLAND ST
JEFFERSON PIKE
TARA DR
JUSTIN PL
CENTENNIAL DR
OLD NASHVILLE HWY
FOREST LN
HAMPTON DR
CARTER HOUSE DR
KENDRICK CT
SEATON CT
N


392 Old Nashville Hwy
GAMBILL LN
KELSEY CT
OAKMONT DR
WOODY THOMAS DR
SUNRISE AVE
PARRISH ST
DEER DR
JOHNS ST
TAYLOR DR
ROSE ST
GREENFIELD DR
HIGHLAND ST
LOOKOUT DR
OLD NASHVILLE HWY
JEFFERSON PIKE
CENTENNIAL DR
TARA DR
JUSTIN PL
CHATHAM CT
GREENWOOD DR
FOREST LN
HAMPTON DR
KENDRICK CT
SEATON CT
CARTER HOUSE DR
GROVE MILL CT
IRVIN RD
SPRING ST
ELM ST
JOHN D ST
N
(PDR) Planned Density Residential
A Agriculture
C-1 Government Use
C-2 Highway Service
C-3 Neighborhood Service
C-4 Shopping Center
I-1 Light Industrial
I-2 Heavy Industrial
I-3 Industrial (Special Use)
R-1 Low Density Residential
R-2 Medium Density Residential
R-2S MDR Grandfathered
R-2Z MDR Grandfathered
R-3 High Density Residential
R-3Z HDR Zero Lot Line
R-4 Mobile Home




PROPERTY
REZONING
REQUESTED
FOR INFO CALL
287-8702
392

City of La Vergne, Tennessee

5093 Murfreesboro Road, La Vergne, TN 37086 ♦ (615) 793-6295

REZONING REQUEST APPLICATION

For a Rezoning Request, the City of La Vergne **requires** the following:

1. Completion of this application. Please type or print the information in blue or black ink.
2. A map of the property. (See Zoning Ordinance for Specific Details.)
3. A label matrix with a list of Names **and** addresses of all adjacent property owners within 500 feet.
4. A legal description of the property, if available.
5. If the applicant is not the property owner, a letter from the property owner must be attached giving the applicant the authority to request rezoning.
6. A letter summarizing the project proposal, including the proposed usage of the land, reason for the rezoning request and justification for the rezoning request.
7. Payment of a Non-Refundable $300.00 application fee. (Checks should be made payable to "City of La Vergne")

Request No. _____ **Date Submitted:** _____
(Assigned by the City Recorder)

SECTION 1 - Applicant Information (Any Correspondence from the City will be addressed to the applicant.)

☒ Property Owner ☐ Purchaser of Property ☐ Engineer ☐ Trustee
☐ Architect ☐ Other: _____

Name: Gerges Gerges Phone #: (615) 870-9467

Business: _____ E-Mail: _____

Address: 392 old Nashville Hwy Best Way to Contact: Phone
(Mail, E-Mail, Phone)

City: La Vergne State: TN Zip: 37086

SECTION 2 - Property Information for the Rezoning Request

Tax Map	Parcel(s)	Current Zoning District	Requested Zoning District	# of Acres	Property Owner
017EB 022.00	017EB02200 00003018H	Single Family R-1	Commerical Services C-3	1.2	Gerges Gerges

*** Reason for Rezoning must be included on an attached sheet.

Contact Person Print Name Gerges Gerges

Address 388 old Nashville Hwy. La vergne TN Zip Code 37086

Daytime Phone (615) 870-9467 Fax _____ E-mail _____

The undersigned has read the application associated with the above listed review request and is familiar with the information submitted herewith. It is agreed and understood that the undersigned will be held responsible for its accuracy. The undersigned warrants their authority to bind the owner and to subject the property to restrictions and conditions that may be attached to the proposed development.

Applicant (if other than owner)

Print Name _____ Signature _____

Address _____ Zip Code _____

Daytime Phone _____

Owner(s)

Print Name Gerges Gerges Signature _____

Address 388 Old Nashville Hwy, LaVergne Zip Code 37086

Daytime Phone 615 870-9467

Print Name Sherrin Mena Signature _____

Address 388 Old Nashville Hwy, LaVergne Zip Code 37086

Daytime Phone (615) 870-9467

Certification Statement

I hereby certify that Gerges Gerges is the owner of the property located at 392 OLD NASHVILL HWY 37086 which is the subject of this application, and that I, Gerges Gerges, in my capacity as food market, am authorized to sign this application on behalf of the owner.

I understand that knowingly providing false information on this Application may result in any action taken heron being declared null and void. I further understand that pursuant to TCA 39-16-301 et seq., knowingly making a material false statement, or otherwise providing false information with the intent to mislead a public servant in the performance of his duty is punishable as a Class B misdemeanor.

Gerges Gerges
Signature

03/27/2023
Date

Gerges Gerges
Printed Name and Title

Note: A Certification Statement must be submitted with an application form requiring the owner's signature if the owner of the subject property is a corporation, limited liability company, partnership, association, trustee, etc., or if someone other than the owner signs the application. All Certification Statements **must** be notarized.

Becci Steed
Notary Signature

03/27/2023
Date

BECCI STEED
RUTHERFORD COUNTY, TENN.
STATE OF TENNESSEE NOTARY PUBLIC

City of La Vergne Planning Department
5175 Murfreesboro Road
La Vergne, TN 37086
Phone: 615-287-8702 Fax: 615-213-8692

CITY OF LA VERGNE
PLAN REVIEW APPLICATION

For Staff Use Only
Project Name: _____ **Date:** _____ **Fee:** _____

Please submit Application Forms in person to the City of La Vergne Codes Building Front Desk/City Planner

Project Name: Gerges Gerges

Project Address: 392 old Nashville Hwy. Lavergne, TN 37086

Land Use Existing: Single family Residential

Land Use Proposed: Commircial Services

Existing Zoning District _____

Tax Map(s) & Parcel Number(s): 017 E B 022.00

Check one or more of the following:

_____ Concept Plan for Major Subdivision
_____ Preliminary Subdivision Plat for Major Subdivision
_____ Final Subdivision Plat for Minor Subdivision
_____ Final Subdivision Plat for Major Subdivision
_____ Final Subdivision Plat for Condominium

_____ Site Plan
X Variance* Zoning Change
_____ Special Exception*
_____ Road or alley abandonment

*These requests require an additional application form.

******NOTE: A letter explaining the proposal must accompany all requests.******

Environmental Constraints on Site?

1. Are there slopes of 12-20% or greater on site? Yes (No)
2. Is the development located in a local regulatory flood plain/zone? Yes (No)

Engineer/Designer (if applicable) Print Name DOYLE ELKINS

Address 520 W. LYTLE ST Ste B Zip Code 37130

Daytime Phone (615) 904-8625 Fax _____ E-mail: elkinsdoyle@gmail.com

Attorney (if applicable) Print Name _____

Address _____ Zip Code _____

Daytime Phone _____ Fax _____ E-mail _____

Project Name: Gerges Gerges

Project Address: 392 old Nashville Hwy. La vergne, TN 37086

Existing Land Use: Single Family Residential

Proposed Land Use: Commerical Services (Food Market)

Total Acreage of Project / Rezoning: 1.2 Acr

The rezoning process takes approximately three to four months depending on when the application is received by the City. The request must go to the Planning Commission where it receives a recommendation to the Board of Mayor and Aldermen. The Board of Mayor and Aldermen must approve a Rezoning Ordinance on two readings and hold a public hearing before the rezoning request is considered approved.

Applicant's Signature: _____ **Date:** _____



TN S.P.C. System
(NAD 83).

200' RADIUS

OLD NASHVILLE HWY (50' R.O.W.)

S 44°50'01" E 83.00'

N 43°28'11" E 191.00'

211.37'

ZONED
R-1

REDIKER
M/P: 017E B 023.00
LEGAL REFER: 1917-1653

ZONED
R-1

REDIKER
M/P: 017L C 001.00
LEGAL REFER: 2006-2185
PLAT: 12/197

ZONED
R-1

MENA M/P: 017E B 021.00 LEGAL REFER: 1743-3173

N 22°58'11" E 360.00'

50,600 S.F.
1.1616 Acres

485.00'

109.17'

S 64°29'18" E

5.71'

N 31°14'01" E

65.45'

GHATAS
M/P: 017L C 002.00
LEGAL REFER: 2312-3619
PLAT: 12/197

78.95'

HOGSTEN
M/P: 017L C 003.00
LEGAL REFER: 1229-2297
PLAT: 12/197

78.95'

ALTO ASSET CO. 1, LLC
M/P: 017L C 004.00
LEGAL REFER: 1845-1529
PLAT: 12/197

ZONED
R-1

79.00'
N 87°27'59" W

34.27'

44.73'

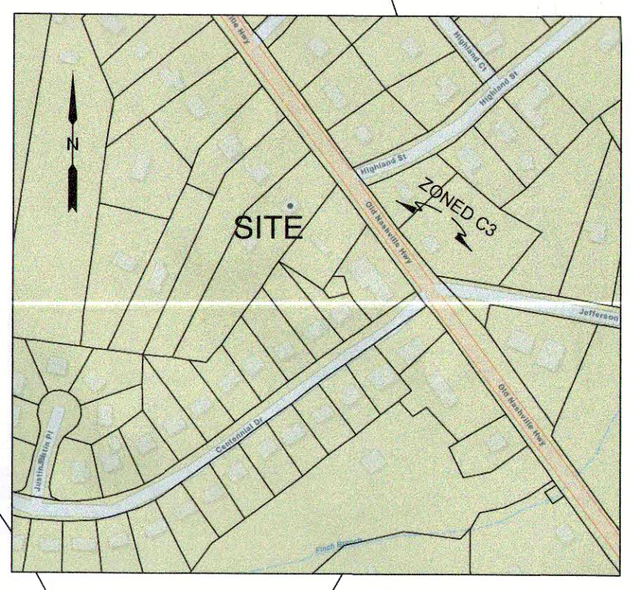
44.57'

YOUNG
M/P: 017L C 005.00
LEGAL REFER: 2307-1608
PLAT: 12/197

ZONED
R-1

MAJANO-MARTINEZ
M/P: 017L C 006.00
LEGAL REFER: 1751-3240
PLAT: 12/197

ZONED
R-1



VICINITY MAP NOT TO SCALE

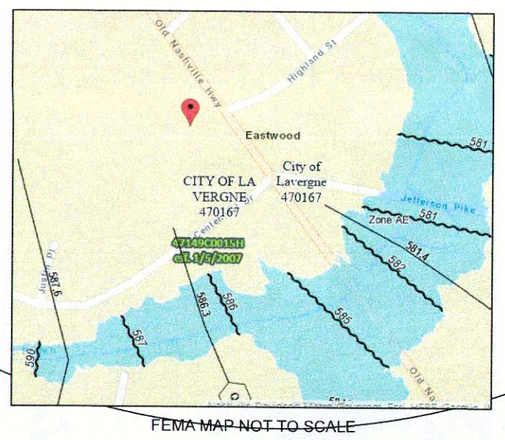
LEGEND

These standard symbols will be found in the drawing.

- CONC MONUMENT
- STORM WATER MH
- S W CATCH BASIN
- SEWER MANHOLE
- SEWER CLEANOUT
- WATER METER
- WATER VALVE
- IRON PIN FOUND
- IRON PIN SET
- DEED POINT
- PK NAIL
- FENCE POST
- PP XRMR
- PWR/LGT POLE
- FIRE HYDRANT
- PROPERTY LINE
- SETBACK LINE
- ROAD - CTR LINE
- ROAD R.O.W.
- WATER LINE
- POWER OH LINE
- FENCE
- SS LINE
- STORM WATER
- BLDG OUTLINE
- P.U.D.E. 20'

0 40 80 120

OWNER INFORMATION:
GERGES, G
392 OLD NASHVILLE HWY
La VERGNE, TN 37086
M/P: 017E B 022.00
LEGAL REFER: 1605-1011
50,600 S.F.
1.1616 Acres



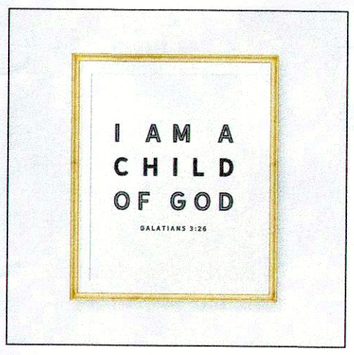
FEMA MAP NOT TO SCALE

ZONING CHANGE REQUEST
CURRENT R-1
REQUESTED C-3

FLOOD INSURANCE NOTE:
By graphics plotting only, this property is in **ZONE X** of the Flood Insurance Rate Map, Community Panel No. 47149C0015H effective date of 01/05/2007. Exact designations can only be determined by an Elevation Certificate. Based on the above information, this property IS NOT in a Special Flood Hazard Area.

GENERAL NOTES

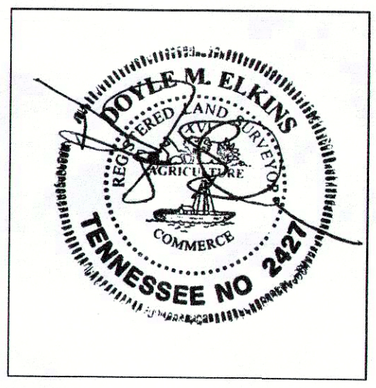
1. In Tennessee, it is a requirement of "The Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all underground utility owners, no less than three nor more than ten working days of their intent to excavate. A list of these utilities may be obtained from the County Register of Deeds. Those utilities that participate in the Tennessee One Call System can be notified by calling toll free 1-800-351-1111.
2. Underground utilities shown were located using available above ground evidence, as well as information obtained from the respective companies. The existence or nonexistence of the utilities shown or any other utilities which may be present on this site or adjacent sites should be confirmed with the utility owner prior to commencing any work.
3. It is the responsibility of each residential builder to design and construct a suitable grading and drainage scheme which will convey surface water, without ponding in the lot or under the house, from his structure to the drainage system.
4. Parcels may be subject to additional easements , and /or restrictions, by record or prescription, that a complete title search may reveal.
5. Public utility and drainage easements, where shown hereon, are intended to indicate an easement for construction, operation, and maintenance of public utilities and drainage ways, including, but not limited to: sanitary sewers, force mains, water lines, telephone signal conduits, electric conductors, drainage pipes, and natural gas lines.
6. Bearings based on the Tennessee State Plane Coordinate System (NAD 83).



Doyle Elkins
Professional Land Surveyor
Registered in TN & AL

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

Elkinsdoyle@gmail.com



I HEREBY CERTIFY THIS IS A CATEGORY I SURVEY AND THE RATIO OF PRECISION FOR THE UNADJUSTED SURVEY IS GREATER THAN 1:15,000 AS SHOWN HEREON.

ZONING EXHIBIT

GERGES - M/P: 017E B 022.00

392 OLD NASHVILLE HIGHWAY
La VERGNE, TN 37086
RUTHERFORD COUNTY

PREPARED FOR: GERGES GERGES

DATE	SCALE	SHEET	DRAWN BY	PROJECT
MAR 21, 2023	1" = 40'	1 OF 1	TVM/DME	23057