

Wednesday

Hollie Berry  
Mayor

*City of Red Bank*  
**Municipal Planning Commission**

Martin Granum  
City Manager

**REGULAR MEETING AGENDA**

**May 22, 2024**

**6:00 pm**

**Red Bank Court Room**

**3117 Dayton Boulevard**

**I. CALL TO ORDER**

**II. ROLL CALL – Secretary**

☐ Commissioner Browder

☐ Commissioner Kelly

☐ Commissioner Cannon

☐ Commissioner Skonberg

☐ Commissioner Millard

**III. INVOCATION – Commissioner Millard**

**IV. PLEDGE OF ALLEGIANCE – Commissioner Browder**

**V. CONSIDERATION OF THE MINUTES**

1. March 27, 2024

**VI. NEW BUSINESS**

1. Final Plat for Lot 1 West Euclid Trace, Lots 27 and 28

- a. Applicant Presentation
- b. Staff Presentation
- c. **Public Comments**
- d. Discussion/Vote

2. Any properly presented new business

**VII. UNFINISHED BUSINESS**

1. Preliminary Plat for Lima at Lullwater Subdivision

- a. Applicant Presentation
- b. Staff Presentation
- c. **Public Comments**
- d. Discussion/Vote

2. Any properly presented unfinished business

## **VIII. OTHER BUSINESS**

## **IX. ADJOURNMENT**

*City of Red Bank*  
**Municipal Planning Commission**

**REGULAR MEETING AGENDA**

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☒ Commissioner Browder

☒ Commissioner Kelly

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☒ Commissioner Millard

**III. INVOCATION**

**IV. PLEDGE OF ALLEGIANCE**

**V. CONSIDERATION OF THE MINUTES**

1. January 24, 2024

- a. Commissioner Skonberg motioned to approve, Commissioner Cannon seconded, the motion carried.

**VI. NEW BUSINESS**

1. Request to Rezone 309 Morrison Springs Road from R-1 Residential to C-2 Commercial

a. Applicant Presentation

- Mr. Patel presented the application to rezone the property from R-1A to C-2 in order to build a 4,000 SF liquor store; he has been in conversations with city staff to understand site constraints; once rezoned, the applicant will move forward with civil and construction drawings

b. Staff Presentation

- Ashley Gates(SETD) provided a review and recommendation to approve the rezoning; because the Design Review Standards and licensing requirements for liquor stores will mitigate any adverse impacts of the requested zoning

c. Public Comment

- Sharon Shedrick commented in support of local small businesses expanding

d. Discussion/Vote

- Commissioner Cannon requested a site plan (the city of Red Bank does not require a site plan submission for an R-1A to C-2

rezoning application); Mr. Patel provided an napkin sketch of a 4,000 square foot building footprint.

- Commissioner Browder asked how many entrances to the property would be built; Mr. Patel plans for one entrance to be cut close to the Hardee's property.
- Commissioner Browder commented on the increased traffic flow and business along Morrison Springs versus the current location at Plaza North
- Commissioner Browder and Cannon commented on an increase of impervious surface across the site associated with new construction
- Commissioner Browder asked if the neighboring property owners were notified of the rezoning application (there is no requirement to notify adjacent property owners of rezonings at the planning commission level; there is a requirement to notify adjacent property owners at the city commission level where there is a required public hearing and the decision to rezone is made over two different meetings)
- Commissioner Cannon commented that the Regional Planning Agency requires public notification be made when there is new infrastructure, like a curb cut, applied for at the planning commission level; the city of Red Bank does not require public notification for curb cuts

2. Any properly presented new business

- a. Commissioner Browder requested that the next agenda include an item that discusses a public notification for rezonings at the planning commission level

**VII. OTHER BUSINESS**

1. Sharon Shedrick made a citizen comment, inquiring about new business in Red Bank

**VIII. ADJOURNMENT**

are the owners in low sample

[illegible][illegible]

May 02 2024  
Date of Signature

Vicinity Map  
Not in Scale

**REVIEWED**  
By Ashley Gates at 5:01 pm, May 16, 2024

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7

Planning  
Commission  
review  
required  
due to  
fence /  
concrete  
pad across  
lot lines

**General Notes Recured By Hamilton County**

[illegible]

Journal's Notes

1. Water Quality: Comments on the water quality of the receiving water body, including any facilities installed by the permittee to improve water quality, stored or changed in any way without discharging any effluent into the receiving water body.
2. Permit Program: Comments on the permit program, including any recommendations to modify the program.
3. Government Compliance: Comments on the government's compliance with the permit program, including any recommendations to modify the program.
4. Permit Program Review: Comments on the permit program review, including any recommendations to modify the program.
5. Permit Program Review: Comments on the permit program review, including any recommendations to modify the program.

Revised Plat

Lot 1

West Euclid Trace  
Prior Plat Book 118, Page 63  
Lots 27 and 28  
Whitaker Place  
Prior Plat Book 8, Page 15  
Ed Bank, Hamilton County, Tennessee

**DANIEL J. COLLIER, PLS**  
Tennessee Registration No 288  
P.O. BOX 1740  
TRENTON, GEORGIA 30752  
PHONE NO. (706) 657-3777  
DAN\_COLLIER@TVM.NET

Order By: N College  
 Order By: O College  
 Src: 1-40  
 Date: 05-07-2024

Musical score for 'The Rose Tree'. The score is written for a single voice and piano accompaniment. The key signature is one flat (B-flat), and the time signature is 4/4. The melody is simple and catchy, with a repeating chorus. The piano accompaniment provides a steady harmonic support.

Order By N College  
 Rec'd by O'Connor  
 Date 05-07-76



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## MEMORANDUM

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**To:** Members of the Red Bank Planning Commission  
**Cc:** Greg Tate, Public Works Director  
**From:** Ashley Gates, Senior Planner, Southeast Tennessee Development District  
**Date:** May 16, 2024  
**Subject:** Final Plat for Lima at Lullwater

### SUMMARY

**Owner / Applicant:** Lima Sierra LLC  
**Property Address:** Lullwater Road  
**Tax Map #:** 126C B 044  
**Current Use:** 3.8-acre undeveloped tract  
**Proposed Use:** 6 townhouse structures with 4 units each, and 1 townhouse structure with six units  
**Zoning:** R-T\Z with conditions  
**Floodplain?** No  
**Zoning History:** Rezoned in 2017 from R-1 to R-T\Z with conditions while under different ownership  
**SETD Staff Recommendation:** Deny

### ANALYSIS

#### Background

This property was rezoned in 2017 to R-T\Z with conditions. The conditions listed on the ordinance were as follows:

SECTION 1. The Zoning Ordinances and Zoning Maps of this City are hereby amended by rezoning the property located on Lullwater Road, as more particularly describe as per the attached Exhibit B and as shown in Exhibit A, as Hamilton County tax parcel number 126C-B-044, from R-1 Residential Zone to R-T/Z Residential Townhouse/ Zero Lot Line Zone, subject to the following conditions shown on the site plan in Exhibit C.

- a) a community lot is created along the rear lot line of the property that is 25 feet in depth, and the maximum depth practicable behind proposed lot 16; and

- b) a 5-foot-wide sidewalk built to ADA standards along Lullwater Road for the entire length of the property; and
- c) On-street guest parking on Lullwater Road.

Additionally, a site plan showing 16 lots, rear access via an alley, and a detention pond was attached to the ordinance.

In June 2023, a site plan and plat were submitted for this property. Multiple versions have been provided to staff, with the most recent provided on May . The version currently under review includes:

- Five structures with four attached townhomes each
- One structure containing six attached townhomes
- Total of 26 townhomes
- 25-foot wide community lot along the rear of the townhomes
- 7-foot wide parallel parking spaces along Lullwater Road – number of spaces TBD
- 12-foot wide alley providing rear access parallel to Lullwater Road which is to remain private
- Underground stormwater detention
- Electric utilities to be moved underground
- Replacement of sewer main between manholes
- Three fire hydrants

### **Zoning Ordinance**

The plat appears to meet all dimensional requirements of the Zoning Ordinance and the conditional zoning requirements. The site plan is a departure from the site plan approved along with the Zoning Ordinance. Per the City Attorney, townhomes are an acceptable use based on the zoning conditions.

The submitted plans do not meet the screening requirements for the R-T\Z Zone. While there will be a 25-foot wide community lot along the R-1 zoned property, staff has requested details on proposed planting or use of existing vegetation. No rip rap, crushed stone, concrete or exposed impervious materials may be within 10' of this lot line.

### **Subdivision Regulations**

See the attached checklist for the plat submission. Lullwater Road varies in width, with travel lanes as narrow as 7' in places. Red Bank has requested that Lullwater Road be widened to 24',

making the road width more uniform. Red Bank's Subdivision Regulations do not have design standards for alleyways or on-street parking, both of which are proposed in this subdivision.

**Additional comments:**

WWTA: Finds preliminary plat acceptable

From EPB staff:

I have marked up the plat with a 10' power & communication easement along Lullwater Rd, trying to cross the sewer easement relatively quickly. I tried to get a hold of David Nordy to verify the comment that the existing facilities are going to be moved underground, he is out of the office at the moment so I will ask him and have to get back with you. I personally think that is unlikely if not highly unlikely, it would cost a significant amount to get that work done. I would say that each new individual service line, and secondary would be installed underground for sure being why EPB needs the 10' easement. Please see attached for comments.

- Staff has asked for additional confirmation regarding underground utilities

Red Bank Fire Department:

- Fire hydrants as shown on most recent submission are sufficient
- Fire access will be from Lullwater Road
- Requests "NO PARKING" signs with tow company number long alleyway. Fire Department will need access should there ever be a car fire.
  - NOTE: Red Bank Subdivision Regulations do not have standards for alleys

Red Bank Public Works:

- Requested reduced parking along Lullwater Road – developer to resubmit with new parking
- Requested that Lullwater Road be widened to minimum of 24 feet
- Stormwater plan review from engineer:

**Drainage report:**

1. Page 4 of pdf: States the existing condition has a CN of 71 but the entire site is woods with "B" soils. These would normally range between 55 and 66 depending on condition of cover.
2. Page 4 of pdf: States that proposed CN is 76 but no calculation was provided.

3. Starting on page 7: The soils report is from Georgia, not Tennessee. Please provide a soils report and associated HSG for this site. They need to prove that "B" soils exist onsite.
4. Page 17: Existing conditions has 2 acres as wooded but measuring the area in existing conditions show more wooded area. Please confirm.

Plans:

1. Page C305 shows 12" HDPE pipes in series that are allowed to surcharge into stone backfill. This is fine but storage of water should be limited to the height of the pipe. The drainage calculations are currently allowing water to be stored 2-3' above the top of the pipes during the 100-year event.

Hamilton County Water Quality

- No comments received as of 5/16/2024

Aerial Imagery, 2022



## RECOMMENDATION

Staff recommends the following corrections/updates:

1. Provide confirmation from EPB regarding the underground utilities or plans for the relocation of existing utilities
2. Provide road widening plan as proposed at May 2024 Work Session
3. Provided updated parking plan as discussed with Red Bank Public Works at Work Session
4. Show all landscaped buffer areas as required
5. Address all comments from Red Bank Public Works regarding drainage report/plans

Staff does not recommend approval until these items are addressed.

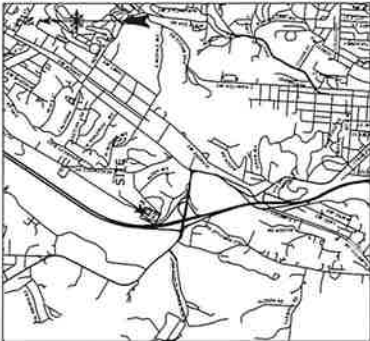
The City of Red Bank's contract with the Southeast Tennessee Development District will end on June 30, 2024. **Southeast Tennessee Development District cannot provide staff review of any plat corrections after that date.** The Planning Commission should confer with Red Bank staff regarding staff oversight of any plan revisions after Planning Commission approval.



# THOUSAND HILLS LULLWATER ROAD RED BANK, TENNESSEE CIVIL CONSTRUCTION PLANS

SHEET LIST TABLE

| SHEET NUMBER | SHEET TITLE                          | REVISION | DATE      |
|--------------|--------------------------------------|----------|-----------|
| C100         | COVER SHEET                          | 1        | 4/22/2024 |
| C101         | NOTES                                | 2        | 8/11/2023 |
| C103         | EXISTING CONDITIONS                  | 0        | 4/6/2023  |
| C201         | SITE PLAN                            | 5        | 5/7/2024  |
| C202         | GRADING PLAN                         | 3        | 4/22/2024 |
| C203         | ROAD PROFILES                        | 2        | 4/22/2024 |
| C204         | ROAD SECTION                         | 2        | 8/11/2023 |
| C205         | SITE DETAILS                         | 2        | 8/11/2023 |
| C301         | STORMDRAINAGE PLAN                   | 4        | 5/7/2024  |
| C302         | STORMDRAINAGE PROFILE                | 1        | 4/22/2024 |
| C303         | STORMDRAINAGE PROFILE                | 1        | 4/22/2024 |
| C304         | STORMDRAINAGE PROFILES               | 1        | 4/22/2024 |
| C305         | STORMDRAINAGE DETAILS                | 2        | 4/22/2024 |
| C306         | STORMDRAINAGE DETAILS                | 2        | 4/22/2024 |
| C401         | SEWER PLAN                           | 1        | 8/11/2023 |
| C501         | WATER PLAN                           | 2        | 5/7/2024  |
| C701         | EROSION CONTROL PLAN - INITIAL PHASE | 1        | 5/18/2023 |
| C702         | EROSION CONTROL PLAN - GRADING PHASE | 2        | 4/22/2024 |
| C703         | EROSION CONTROL PLAN - FINAL PHASE   | 0        | 6/4/2023  |
| C704         | EROSION CONTROL DETAILS              | 0        | 6/4/2023  |



LOCATION MAP  
Scale: 1" = 2000'

CIVIL ENGINEER:

ROCKY CHAMBERS  
400 EAST MAIN STREET  
CHATTANOOGA, TN 37408  
423-600-9110



OWNER:

STEVE PICKETT  
515 AIRPORT RD SUITE 102  
CHATTANOOGA, TN 37421  
PHONE (423)316-4525  
PickettHomes@gmail.com



CHATTANOOGA  
ENGINEERING  
400 East Main Street, Suite 102  
Chattanooga, TN 37408  
www.chattanooga-engineering.com

LULLWATER ROAD  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044



C100

COVER SHEET

GENERAL NOTES

1. ROWWAY, EASEMENT, AND UTILITY STRUCTURES IS FROM A FIELD SURVEY BY THE A.S. GROUP.
2. ALL UTILITIES ARE TO BE DEEPER THAN THE DEPTHS SHOWN ON THE PLANS. ALL UTILITIES ARE TO BE DEEPER THAN THE DEPTHS SHOWN ON THE PLANS. ALL UTILITIES ARE TO BE DEEPER THAN THE DEPTHS SHOWN ON THE PLANS.
3. THE ENGINEER HAS REVIEWED THE PROJECT AND HAS DETERMINED THAT THE PROJECT IS IN ACCORDANCE WITH THE CITY OF CHATTANOOGA'S STANDARDS AND SPECIFICATIONS.
4. THE PROJECT IS TO BE COMPLETED WITHIN THE 180 DAY PERIOD ESTABLISHED BY THE CITY OF CHATTANOOGA.
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STORMWATER DRAINAGE AND DETENTION

1. CONTRACTOR SHALL NOTIFY SURVEYOR AND CITY STORMWATER INSPECTION AT LEAST 48 HOURS PRIOR TO ANY COVER PLACED ON UNDERGROUND SYSTEMS. FAILURE TO DO SO MAY RESULT IN THE EXCAVATION AND/OR REPAIR OF THE SYSTEMS AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL MAINTAIN THE EXISTING DRAINAGE SYSTEMS AND SHALL NOT DISTURB THEM UNLESS NECESSARY. ANY DISTURBANCE OF EXISTING DRAINAGE SYSTEMS SHALL BE PERMITTED BY THE CITY OF CHATTANOOGA'S SITE DEVELOPMENT MANAGER.
3. NOTE: STORMWATER DRAINAGE IS REQUIRED.

COMPACTION REQUIREMENTS

1. COMPACTION REQUIREMENTS: THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION.
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PROJECT SEQUENCE

- IT IS ANTICIPATED THAT THE PROJECT WILL START ON SEPTEMBER 1, 2023 AND WILL BE COMPLETED BY SEPTEMBER 1, 2024. THE PROJECT SEQUENCE WILL BE AS FOLLOWS:
1. INSTALLATION OF CONSTRUCTION ERIE FOR THE DEVELOPMENT
  2. INSTALLATION OF SALT FENCING
  3. EXCAVATION OF THE SUBGRADE
  4. INSTALLATION OF CEMENT CEMENTS
  5. TEMPORARY SEEDING
  6. PERMANENT SEEDING
  7. REMOVAL OF EROSION CONTROL MEASURES

NOTE THAT THE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES HAVE BEEN DESIGNED TO HANDLE THE 5 YEAR, 24-HOUR STORM EVENT.

AND REMOVAL SHALL BE REQUIRED WHEN NECESSARY. SHOULD THE MATERIAL BE TOO WET TO PERMIT PROPER COMPACTION OR ROLLING, ALL MATERIAL SHALL BE DRYED TO THE PROPER MOISTURE CONTENT. THE MATERIAL SHALL BE DRYED TO THE PROPER MOISTURE CONTENT. THE MATERIAL SHALL BE DRYED TO THE PROPER MOISTURE CONTENT.

THE REQUIRED WATER SHALL BE AVAILABLE AT ALL TIMES. SAMPLES OF ALL EMBANKMENT MATERIALS FOR TESTING BOTH BEFORE AND AFTER PLACEMENT AND COMPACTION WILL BE TAKEN ON EACH 100' HORIZONTAL ON THESE ADJUSTMENTS. MATERIALS OF MOISTURE CONTENT IN ORDER TO ACHIEVE THE CORRECT EMBANKMENT DENSITY INCLUDING OPERATIONS SHALL BE PLACED IN THE EMBANKMENT. MATERIALS OF MOISTURE CONTENT IN ORDER TO ACHIEVE THE CORRECT EMBANKMENT DENSITY INCLUDING OPERATIONS SHALL BE PLACED IN THE EMBANKMENT.

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GENERAL LANDSCAPING NOTES

1. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARD SPECIFICATION (ANSI) FOR PLANT MATERIALS.
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11. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARD SPECIFICATION (ANSI) FOR PLANT MATERIALS.
12. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARD SPECIFICATION (ANSI) FOR PLANT MATERIALS.

FINER MATERIAL FORMING A BENCH, CONTACT MASS, ROCK OR BOLLERS SHALL NOT BE DEPOSITED OUTSIDE THE EXCAVATION OR EMBANKMENT AREA. EXCEPT AT PLACES AND IN THE MANNER SPECIFIED BY THE ENGINEER, ALL MATERIALS SHALL BE PLACED IN THE MANNER SPECIFIED BY THE ENGINEER. EXCEPT AT PLACES AND IN THE MANNER SPECIFIED BY THE ENGINEER, ALL MATERIALS SHALL BE PLACED IN THE MANNER SPECIFIED BY THE ENGINEER.

THE REQUIRED WATER SHALL BE AVAILABLE AT ALL TIMES. SAMPLES OF ALL EMBANKMENT MATERIALS FOR TESTING BOTH BEFORE AND AFTER PLACEMENT AND COMPACTION WILL BE TAKEN ON EACH 100' HORIZONTAL ON THESE ADJUSTMENTS. MATERIALS OF MOISTURE CONTENT IN ORDER TO ACHIEVE THE CORRECT EMBANKMENT DENSITY INCLUDING OPERATIONS SHALL BE PLACED IN THE EMBANKMENT.

THE REQUIRED WATER SHALL BE AVAILABLE AT ALL TIMES. SAMPLES OF ALL EMBANKMENT MATERIALS FOR TESTING BOTH BEFORE AND AFTER PLACEMENT AND COMPACTION WILL BE TAKEN ON EACH 100' HORIZONTAL ON THESE ADJUSTMENTS. MATERIALS OF MOISTURE CONTENT IN ORDER TO ACHIEVE THE CORRECT EMBANKMENT DENSITY INCLUDING OPERATIONS SHALL BE PLACED IN THE EMBANKMENT.

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 125C B 044



| NO. | DATE       | REVISION          |
|-----|------------|-------------------|
| 1   | 09/01/2023 | ISSUED FOR PERMIT |
| 2   | 09/01/2023 | ISSUED FOR PERMIT |
| 3   | 09/01/2023 | ISSUED FOR PERMIT |
| 4   | 09/01/2023 | ISSUED FOR PERMIT |
| 5   | 09/01/2023 | ISSUED FOR PERMIT |
| 6   | 09/01/2023 | ISSUED FOR PERMIT |
| 7   | 09/01/2023 | ISSUED FOR PERMIT |
| 8   | 09/01/2023 | ISSUED FOR PERMIT |
| 9   | 09/01/2023 | ISSUED FOR PERMIT |
| 10  | 09/01/2023 | ISSUED FOR PERMIT |

C101

NOTES

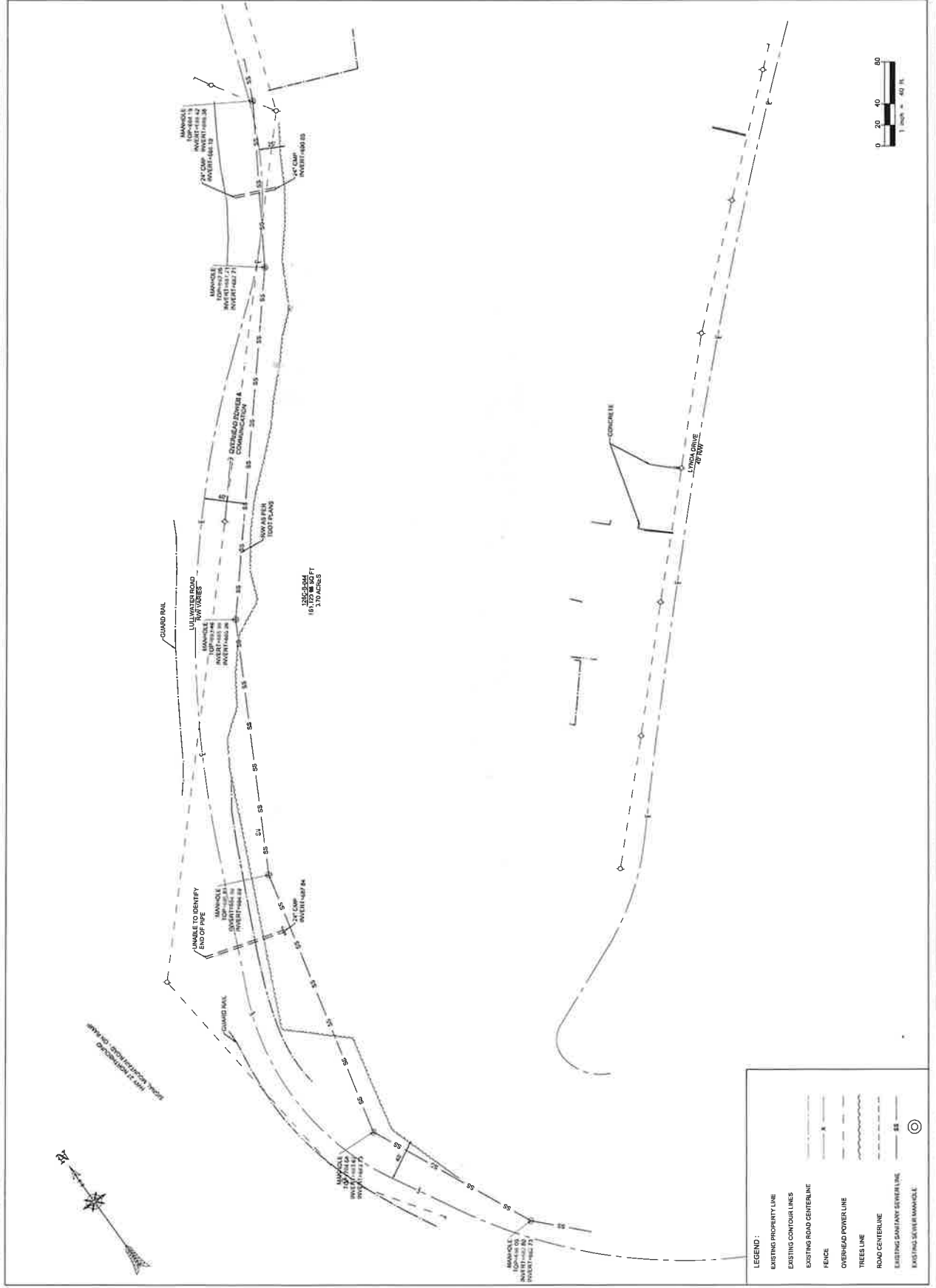




THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044

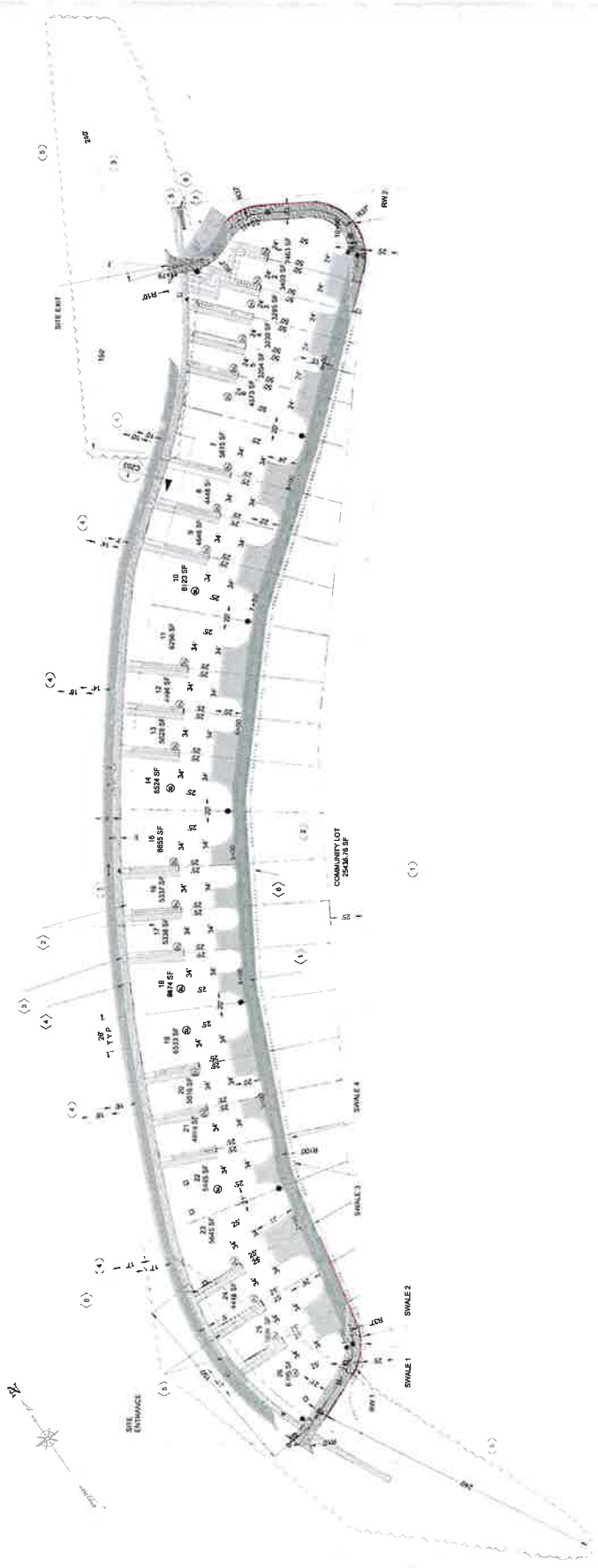


**EXISTING  
CONDITIONS**





| NO. | REVISION                             | DATE       |
|-----|--------------------------------------|------------|
| 1   | PREPARED FOR THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 2   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 3   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 4   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 5   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 6   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 7   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 8   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 9   | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |
| 10  | REVISIONS TO THE CITY OF CHATTAHOOGA | 04/15/2020 |



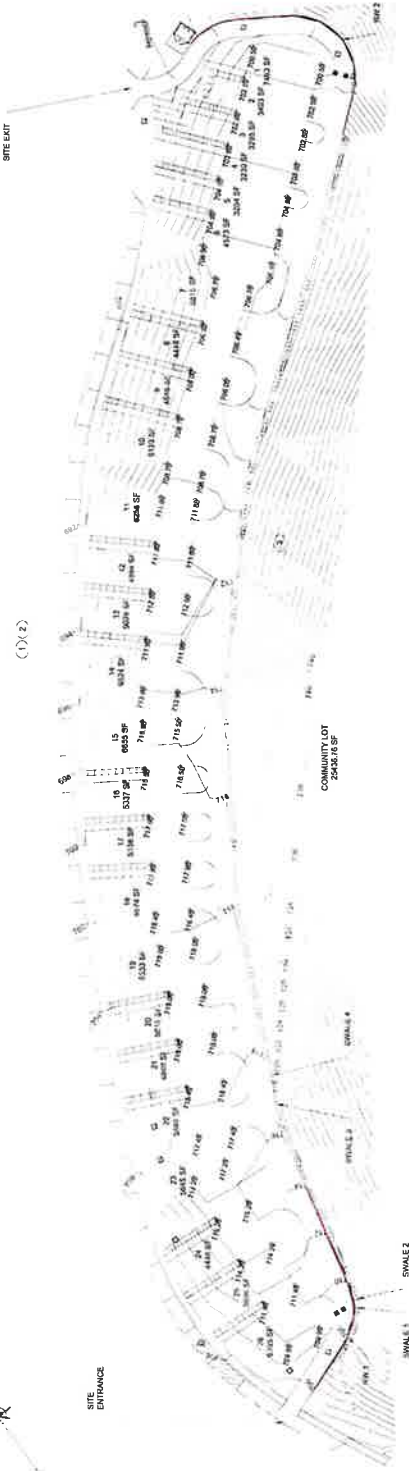
**KEY NOTES**

- | ITEM | DESCRIPTION                 |
|------|-----------------------------|
| (1)  | 12' ALLEYWAY                |
| (2)  | EXISTING 20' SEWER EASEMENT |
| (3)  | 5' SIDEWALK                 |
| (4)  | 12' EXTRUDED CONCRETE CURB  |
| (5)  | ADA RAMP                    |
| (6)  | 2' FLAT BOTTOM SWALE        |
| (7)  | DUMPSTER SCREENING          |
| (8)  | STAIRS                      |
| (9)  | MAIL KIOSK                  |

**LEGEND:**

- EXISTING PROPERTY LINE
- EXISTING ROAD CENTER LINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED PROPERTY LINE
- PROPOSED PARALLEL PARKING LINE
- PROPOSED BUILDING PAD
- PROPOSED 16' RAMPING SWALE
- EXISTING OVERHEAD POWER LINE
- EXISTING SANITARY SEWAGE LINE
- EXISTING SEWER ALIGNMENT
- PROPOSED STORM EASEMENT
- PROPOSED ALLEYWAY CENTERLINE
- PROPOSED PARALLEL PARKING
- PROPOSED SIDEWALK
- PROPOSED PLANT ONE WAY TRAFFIC TO ALLEYWAY
- PROPOSED NEAR DRIVEWAYS
- RIGHT DISTANCE TRIANGLE
- PROPOSED LIGHT POLE
- EXISTING 16' WITH MANHOLE
- PROPOSED SEWER LATERAL





CHATTAHOOCHEE COUNTY, GEORGIA  
400 East Main Street, Suite 200  
Columbus, GA 31906  
Phone: 706.328.1000  
Fax: 706.328.1001  
www.chathamcountyga.gov

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044



Project Name: Lullwater Road Townhouses  
Project Number: 126C B 044  
City: Chattanooga, TN  
County: Hamilton  
State: Tennessee  
Date: 10/15/2015  
Scale: 1" = 40'

C202  
Grading Plan



- LEGEND
- EXISTING CONTOUR LINES
  - PROPOSED MAJOR CONTOURS
  - PROPOSED MINOR CONTOURS
  - PROPOSED RETAINING WALL
  - EXISTING PROPERTY LINE
  - EXISTING ROAD CENTERLINE
  - EXISTING SEWER EASEMENT
  - PROPOSED PROPERTY LINE
  - PROPOSED BUILDING PAD
  - EXISTING SANITARY SEWER LINE
  - EXISTING SEWER MANHOLE
  - PROPOSED GATE INLET
  - PROPOSED HEADWALL
  - PROPOSED JUNCTION BOX



CHATTANOOGA  
ENGINEERING, LLC  
480 East Main Street, Suite 100  
Chattanooga, TN 37402  
Phone: 423.246.1111  
Fax: 423.246.1112  
www.chattanooga-engineering.com

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 128C B 044



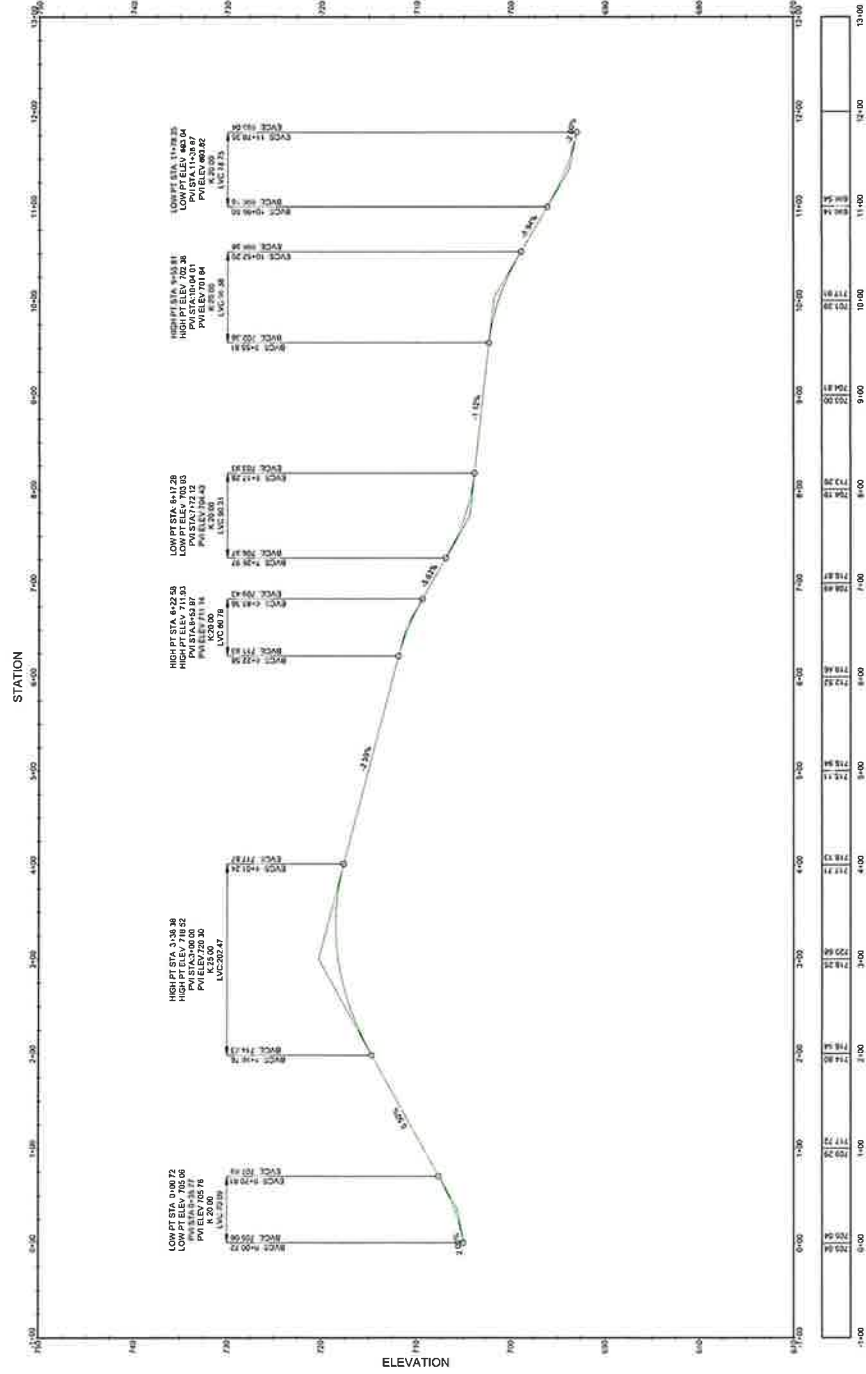
|                |                                                          |
|----------------|----------------------------------------------------------|
| Project Name   | Lullwater Road Townhouses                                |
| Project Number | 2020-001                                                 |
| Client Name    | Chattanooga Engineering, LLC                             |
| Client Address | 480 East Main Street, Suite 100<br>Chattanooga, TN 37402 |
| Client Phone   | 423.246.1111                                             |
| Client Fax     | 423.246.1112                                             |
| Client Email   | info@chattanooga-engineering.com                         |
| Client Website | www.chattanooga-engineering.com                          |
| Client Logo    |                                                          |

**C203**  
ROAD PROFILES

SCALE  
HORIZONTALLY 1" = 40'  
VERTICALLY 1" = 40'



ALLEYWAY PROFILE



LEGEND:

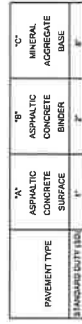
- EXISTING GROUND
- PROPOSED GROUND



THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044



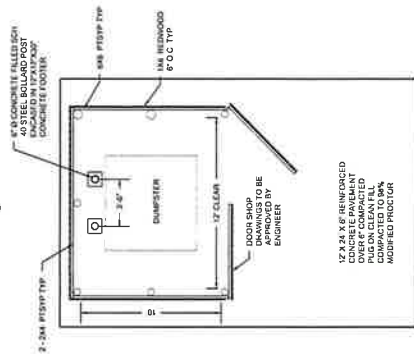
ROAD SECTION



1  
C204

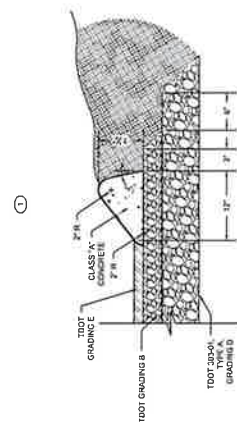
TYPICAL ROADWAY SECTION WITH PARALLEL PARKING ON ONE SIDE

N 12



**NOTE: DUMP SITE  
SCREEN TO BE 6' MIN  
HEIGHT ON ALL SIDES  
INCLUDING THE GATE**

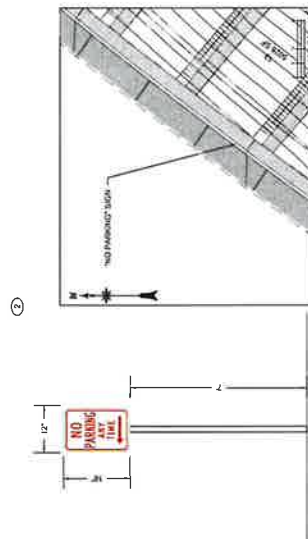
5  
C205



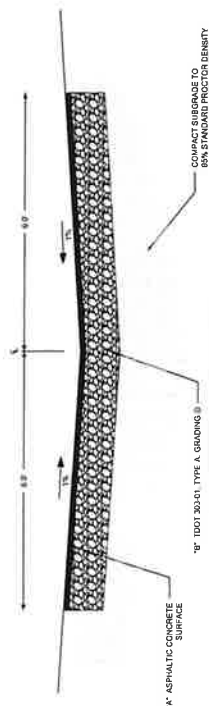
1991

2. EXPANSION JOINT MATERIAL SHALL BE 3/4" PREMOLODED FIBER IN ACCORDANCE WITH SECTION 905.7 - JOINT MATERIALS OF THE ABOVE SPECIFICATIONS
3. EXPANSION JOINTS SHALL BE PLACED AT ALL TANGENT POINTS OF CIRCULAR CURVES 10' OR GREATER IN LENGTH. EXPANSION JOINTS SHALL BE LOCATED SPACES WHERE STRENGTHS MAY DEVELOP AND AT A MAXIMUM SPACING OF 10 FEET.
4. CONTRACTION JOINTS SHALL BE ON A MAXIMUM OF 10' FOOT SPACING BUT NOT LESS THAN 6 FEET.
5. JOISTS OF JOINTS SHALL BE FINISHED ON THE QUARTER INCH MAXI

4 12" EXTRUDED CONCRETE CURB  
N.T.S.



NO PARKING SIGN  
N.T.S.

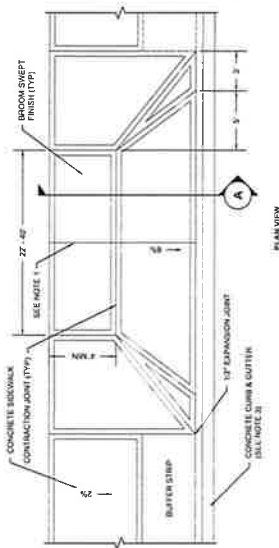


| PAVEMENT TYPE      | "A"<br>ASPHALTIC<br>CONCRETE<br>SURFACE | "B"<br>MINERAL<br>AGGREGATE<br>BASE |
|--------------------|-----------------------------------------|-------------------------------------|
| STANDARD DUTY ISO. | 10                                      | 5                                   |

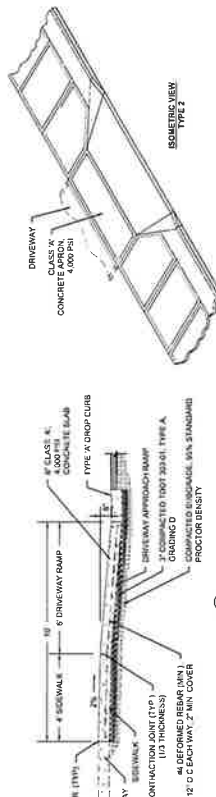
TYPICAL ALLEWAY SECTION

## NOTES

- [illegible]



www



## SECTION A

2 CONCRETE DRIVEWAY APRON  
C205



CHANGING COURSE



CHATTANOOGA  
ENGINEERING, INC.  
400 East Main Street, Suite 100  
Chattanooga, TN 37402  
Phone: 423.840.8100  
www.chattanooga-engineering.com

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044



| NO. | DESCRIPTION | DATE    |
|-----|-------------|---------|
| 1   | DESIGN      | 10/1/18 |
| 2   | REVISION    | 10/1/18 |
| 3   | REVISION    | 10/1/18 |
| 4   | REVISION    | 10/1/18 |
| 5   | REVISION    | 10/1/18 |
| 6   | REVISION    | 10/1/18 |
| 7   | REVISION    | 10/1/18 |
| 8   | REVISION    | 10/1/18 |
| 9   | REVISION    | 10/1/18 |
| 10  | REVISION    | 10/1/18 |

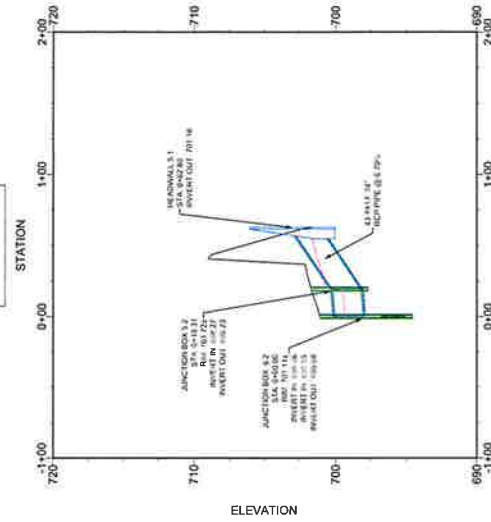
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Sheet No.: 18-001  
Scale: 1" = 40'  
Date: 10/1/18

**C303**

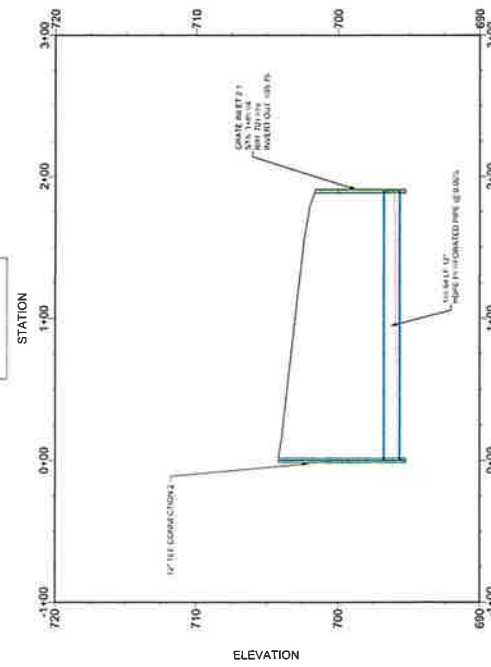
STORMDRAINAGE  
PROFILE

SCALE  
HORIZONTALLY 1" = 40'  
VERTICALLY 1" = 4'

STRM - 5 PROFILE



STRM - 2 PROFILE



LEGEND  
EXISTING GROUND  
PROPOSED GROUND  
HYDRAULIC GRADE LINE



CHATTANOOGA COUNTY, TENNESSEE  
100 East Main Street, Suite 100  
Chattanooga, TN 37402  
Phone: 423.246.2000  
www.chattanooga.gov

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
TAX ID: 126C B 044



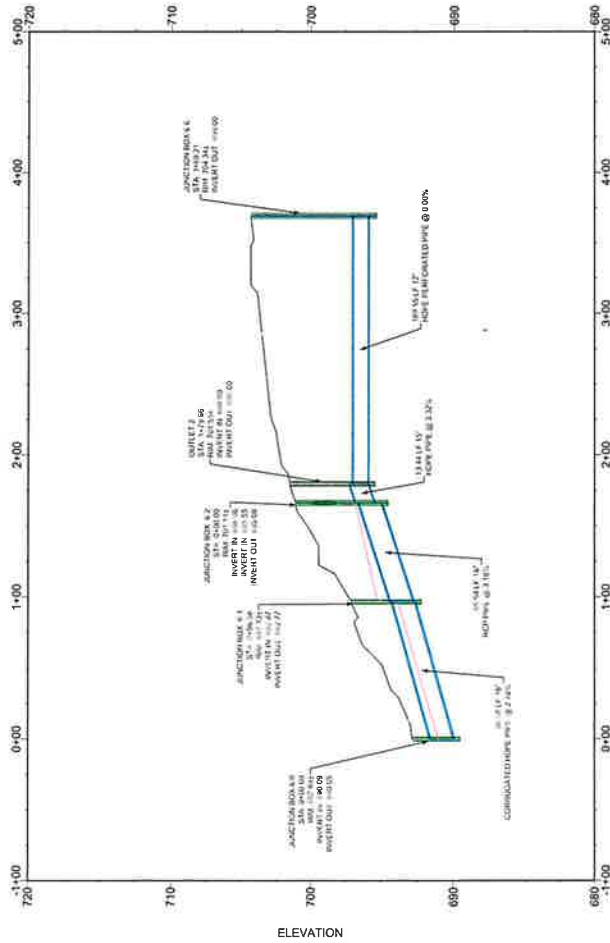
| NO. | DESCRIPTION | DATE      |
|-----|-------------|-----------|
| 1   | DESIGNED BY | 10/1/2010 |
| 2   | CHECKED BY  | 10/1/2010 |
| 3   | APPROVED BY | 10/1/2010 |
| 4   | REVISIONS   |           |

**C304**  
STORM DRAINAGE  
PROFILES

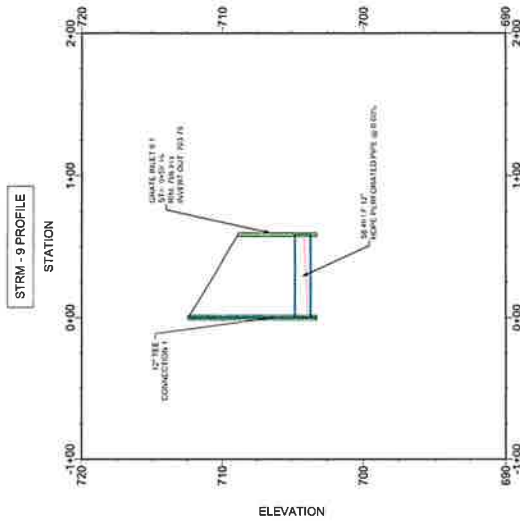
SCALE  
HORIZONTALLY 1" = 40'  
VERTICALLY 1" = 4'

STRM - 6 PROFILE

①

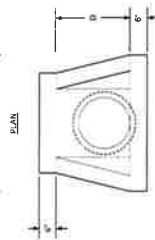


STRM - 9 PROFILE



LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- HYDRAULIC GRADE LINE



**GENERAL NOTES**

1. MINIMUM REINFORCING WIRE REINFORCEMENT 60 XSI 4X4 W7XW7
2. 4,500 PSI CONCRETE
3. PIPE OPENING IN FACE OF WALL SHALL EQUAL PIPE I.D. FOR 12" 30" DIA. PIPE

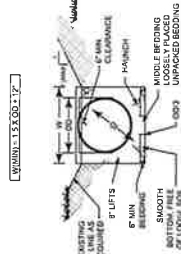
- GENERAL NOTES**
1. MINIMUM REINFORCING WIRE REINFORCEMENT 60 XSI 4X4 W7XW7
  2. 4,500 PSI CONCRETE
  3. PIPE OPENING IN FACE OF WALL SHALL EQUAL PIPE I.D. FOR 12" 30" DIA. PIPE



- SWALE NOTES**
1. REPAIR AND REPLACE ANY DAMAGE TO THE SOD, VEGETATION OR EXISTENCE OF CHASE AS NEEDED
  2. LOOK FOR SIGNS OF EROSION, DISTRESSED VEGETATION, OR CHANNELIZATION OF SHEET FLOW
  3. MAINTAIN VEGETATION BETWEEN 4 TO 6 INCHES TALL, ALLOWING THE GRASS TO GROW TALLER MAY CAUSE IT TO THIN AND BECOME LESS GRASS HEALTHY, PROVIDES GROWTH AND POLLUTANT UPTAKE

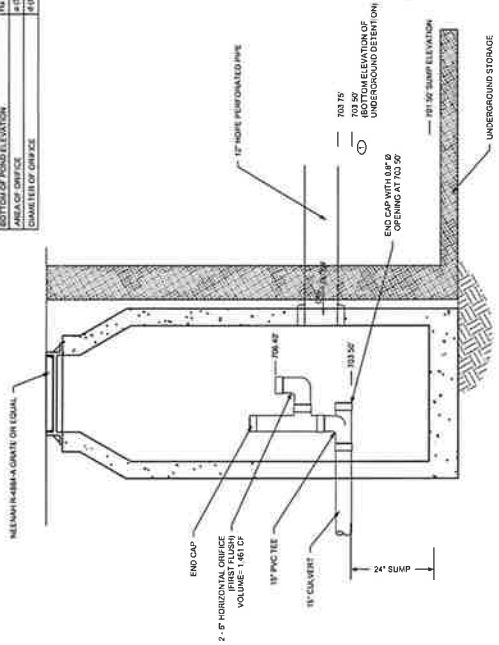


- GENERAL NOTES:**
- ALL HIGH VOLTAGE (90 KV LINE VOLTAGE) PIPE USED FOR GROUNDING AND FOUNDATION APPLICATIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A594 TYPE 5, CURRENT EDITION ALL HOPS MUST BE DELIVERED AND USED SHALL BE A PARTICIPANT IN AFRICAM TYPE 500. PIPE DIA. TYPICAL 1500mm
- CONCRETE METAL PIPE (COP) SHALL BE ALUMINIZED COATED CORRUGATED METAL PIPE SHALL MEET THE REQUIREMENTS OF ASTM A135 TYPE 1
- FOR FOUNDATION AND GROUNDING APPLICATIONS USE ANSIC 600000 FOR ASTM D2219 ALL TYPES SHALL BE ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS
- EXAMPLE PIPE SHALL MEET THE PERFORMANCE REQUIREMENT OF ASTM D2219. JOINTS SHALL BE INSTALLED TO MAINTAIN THE CONNECTION OF THE PIPE SECTION. FOR A CONTINUOUS LINE WILL BE FREE FROM DISCONTINUITIES
- QUALITY TESTING: ASTM A594 TYPE 5, CURRENT EDITION ALL HOPS MUST BE DELIVERED AND USED SHALL BE A PARTICIPANT IN AFRICAM TYPE 500. PIPE DIA. TYPICAL 1500mm
- WORK: NON-SHAPE COATED PIPE IN THIS DESIGN MUST BE SUBSTITUTED
- THE DUCTILE IRON PIPE TYPE B GRADING A 20 METER MEETING THE REQUIREMENTS OF SUBSECTION 691.05 STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED LAYERS NOT EXCEEDING AN R CODE EXCEEDING 150mm SHALL BE USED TO BACKFILL THE PIPE. UNLESS OTHERWISE BACKFILL TO THE LIMIT OF THE BACKFILL COMPACTATION LEVEL OF A NON STANDARD PROCTOR (INDICATED IN THE DESIGN) SHALL BE ACHIEVED BY USE OF COMPACTOR. HORIZONTAL PIPE CONNECTIONS SHALL NOT BE USED OVER THE PIPE ALL



- STORM DRAINAGE PIPE BEDDING**

- 1 CONCRETE SHALL BE 4 000 PSI MIN
- 2 REINFORCING STEEL SHALL CONFORM TO ASTM A615
- 3 MANHOLE SHALL CONFORM TO ASTM C478 FOR  
"PRECAST REINFORCED CONCRETE MANHOLE SECTIONS"
- 4 H 20 DI SIGN LOADING PER ASHTO HS 20-44
- 5 PIPE OPENINGS SHALL RECEIVE NON-SHRINK GROUT



- 8  
C903

| STORAGE DETENTION VOLUME CALCULATION |            | POND ELEVATION |            |
|--------------------------------------|------------|----------------|------------|
| AREA OF POND (sq ft)                 | DEPTH (ft) | ELEVATION (ft) | DEPTH (ft) |
| 1,000                                | 1.0        | 10.0           | 1.0        |
| 2,000                                | 2.0        | 12.0           | 2.0        |
| 3,000                                | 3.0        | 14.0           | 3.0        |
| 4,000                                | 4.0        | 16.0           | 4.0        |
| 5,000                                | 5.0        | 18.0           | 5.0        |
| 6,000                                | 6.0        | 20.0           | 6.0        |
| 7,000                                | 7.0        | 22.0           | 7.0        |
| 8,000                                | 8.0        | 24.0           | 8.0        |
| 9,000                                | 9.0        | 26.0           | 9.0        |
| 10,000                               | 10.0       | 28.0           | 10.0       |
| 11,000                               | 11.0       | 30.0           | 11.0       |
| 12,000                               | 12.0       | 32.0           | 12.0       |
| 13,000                               | 13.0       | 34.0           | 13.0       |
| 14,000                               | 14.0       | 36.0           | 14.0       |
| 15,000                               | 15.0       | 38.0           | 15.0       |
| 16,000                               | 16.0       | 40.0           | 16.0       |
| 17,000                               | 17.0       | 42.0           | 17.0       |
| 18,000                               | 18.0       | 44.0           | 18.0       |
| 19,000                               | 19.0       | 46.0           | 19.0       |
| 20,000                               | 20.0       | 48.0           | 20.0       |
| 21,000                               | 21.0       | 50.0           | 21.0       |
| 22,000                               | 22.0       | 52.0           | 22.0       |
| 23,000                               | 23.0       | 54.0           | 23.0       |
| 24,000                               | 24.0       | 56.0           | 24.0       |
| 25,000                               | 25.0       | 58.0           | 25.0       |
| 26,000                               | 26.0       | 60.0           | 26.0       |
| 27,000                               | 27.0       | 62.0           | 27.0       |
| 28,000                               | 28.0       | 64.0           | 28.0       |
| 29,000                               | 29.0       | 66.0           | 29.0       |
| 30,000                               | 30.0       | 68.0           | 30.0       |
| 31,000                               | 31.0       | 70.0           | 31.0       |
| 32,000                               | 32.0       | 72.0           | 32.0       |
| 33,000                               | 33.0       | 74.0           | 33.0       |
| 34,000                               | 34.0       | 76.0           | 34.0       |
| 35,000                               | 35.0       | 78.0           | 35.0       |
| 36,000                               | 36.0       | 80.0           | 36.0       |
| 37,000                               | 37.0       | 82.0           | 37.0       |
| 38,000                               | 38.0       | 84.0           | 38.0       |
| 39,000                               | 39.0       | 86.0           | 39.0       |
| 40,000                               | 40.0       | 88.0           | 40.0       |
| 41,000                               | 41.0       | 90.0           | 41.0       |
| 42,000                               | 42.0       | 92.0           | 42.0       |
| 43,000                               | 43.0       | 94.0           | 43.0       |
| 44,000                               | 44.0       | 96.0           | 44.0       |
| 45,000                               | 45.0       | 98.0           | 45.0       |
| 46,000                               | 46.0       | 100.0          | 46.0       |
| 47,000                               | 47.0       | 102.0          | 47.0       |
| 48,000                               | 48.0       | 104.0          | 48.0       |
| 49,000                               | 49.0       | 106.0          | 49.0       |
| 50,000                               | 50.0       | 108.0          | 50.0       |
| 51,000                               | 51.0       | 110.0          | 51.0       |
| 52,000                               | 52.0       | 112.0          | 52.0       |
| 53,000                               | 53.0       | 114.0          | 53.0       |
| 54,000                               | 54.0       | 116.0          | 54.0       |
| 55,000                               | 55.0       | 118.0          | 55.0       |
| 56,000                               | 56.0       | 120.0          | 56.0       |
| 57,000                               | 57.0       | 122.0          | 57.0       |
| 58,000                               | 58.0       | 124.0          | 58.0       |
| 59,000                               | 59.0       | 126.0          | 59.0       |
| 60,000                               | 60.0       | 128.0          | 60.0       |
| 61,000                               | 61.0       | 130.0          | 61.0       |
| 62,000                               | 62.0       | 132.0          | 62.0       |
| 63,000                               | 63.0       | 134.0          | 63.0       |
| 64,000                               | 64.0       | 136.0          | 64.0       |
| 65,000                               | 65.0       | 138.0          | 65.0       |
| 66,000                               | 66.0       | 140.0          | 66.0       |
| 67,000                               | 67.0       | 142.0          | 67.0       |
| 68,000                               | 68.0       | 144.0          | 68.0       |
| 69,000                               | 69.0       | 146.0          | 69.0       |
| 70,000                               | 70.0       | 148.0          | 70.0       |
| 71,000                               | 71.0       | 150.0          | 71.0       |
| 72,000                               | 72.0       | 152.0          | 72.0       |
| 73,000                               | 73.0       | 154.0          | 73.0       |
| 74,000                               | 74.0       | 156.0          | 74.0       |
| 75,000                               | 75.0       | 158.0          | 75.0       |
| 76,000                               | 76.0       | 160.0          | 76.0       |
| 77,000                               | 77.0       | 162.0          | 77.0       |
| 78,000                               | 78.0       | 164.0          | 78.0       |
| 79,000                               | 79.0       | 166.0          | 79.0       |
| 80,000                               | 80.0       | 168.0          | 80.0       |
| 81,000                               | 81.0       | 170.0          | 81.0       |
| 82,000                               | 82.0       | 172.0          | 82.0       |
| 83,000                               | 83.0       | 174.0          | 83.0       |
| 84,000                               | 84.0       | 176.0          | 84.0       |
| 85,000                               | 85.0       | 178.0          | 85.0       |
| 86,000                               | 86.0       | 180.0          | 86.0       |
| 87,000                               | 87.0       | 182.0          | 87.0       |
| 88,000                               | 88.0       | 184.0          | 88.0       |
| 89,000                               | 89.0       | 186.0          | 89.0       |
| 90,000                               | 90.0       | 188.0          | 90.0       |
| 91,000                               | 91.0       | 190.0          | 91.0       |
| 92,000                               | 92.0       | 192.0          | 92.0       |
| 93,000                               | 93.0       | 194.0          | 93.0       |
| 94,000                               | 94.0       | 196.0          | 94.0       |
| 95,000                               | 95.0       | 198.0          | 95.0       |
| 96,000                               | 96.0       | 200.0          | 96.0       |
| 97,000                               | 97.0       | 202.0          | 97.0       |
| 98,000                               | 98.0       | 204.0          | 98.0       |
| 99,000                               | 99.0       | 206.0          | 99.0       |
| 100,000                              | 100.0      | 208.0          | 100.0      |

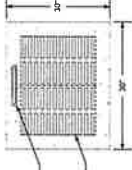
  

| ORFICE SIZE FOR EXTENDED DETENTION       |          |
|------------------------------------------|----------|
| AVERAGE SURFACE AREA OF THE POND (sq ft) | 1,238    |
| DISCHARGE COEFFICIENT                    | 0.6      |
| WATER SURFACE ELEVATION (ft)             | 10.0     |
| WATER SURFACE AREA (sq ft)               | 1,238    |
| COMPUTATIONAL ACCELERATION               | 0.015726 |
| TOP OF STORAGE ELEVATION (ft)            | 10.0     |
| WATER SURFACE AREA (sq ft)               | 1,238    |
| BOTTOM OF POND ELEVATION (ft)            | 7.0      |
| AREA OF ORFICE (sq ft)                   | 0.003    |
| DIAMETER OF ORFICE (in)                  | 0.600    |

- FIRST FLUSH CALCULATIONS**

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1. MAXIMUM SPACING TO CONFORM WITH ASTM C939
2. 4,500 PSI CONCRETE
3. FRAME & GRATE TO BE NEEHAW R-484-A OR APPROVED EQUAL
4. ENVIRONMENTAL NOTICE PLATE TO BE NEEHAW R-2000-C "DUMP NO WASTE, DRINK TO WATERWAYS"



- 3 GRATE INLET DETAIL  
CHS N 13

LULLWATER ROAD  
TOWNHOUSES

RED BANK, TENNESSEE

[illegible]

C305

## STORMDRAINAGE DETAILS



CITY OF CHATTANOOGA  
4000 East Main Street, Suite 400  
Chattanooga, TN 37403  
Phone: 423-249-1000  
Fax: 423-249-1001

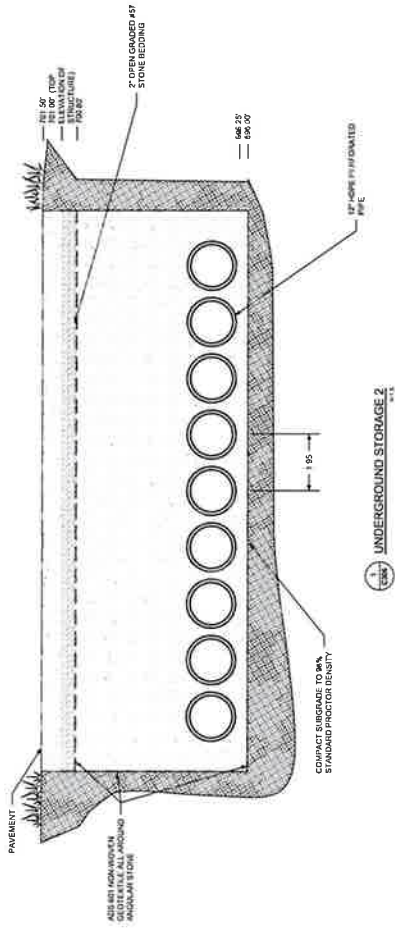
LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044



| NO. | DATE    | DESCRIPTION |
|-----|---------|-------------|
| 1   | 10/1/20 | DESIGN      |
| 2   | 10/1/20 | REVISION    |
| 3   | 10/1/20 | REVISION    |
| 4   | 10/1/20 | REVISION    |
| 5   | 10/1/20 | REVISION    |
| 6   | 10/1/20 | REVISION    |
| 7   | 10/1/20 | REVISION    |
| 8   | 10/1/20 | REVISION    |
| 9   | 10/1/20 | REVISION    |
| 10  | 10/1/20 | REVISION    |

**C306**  
STORMDRAINAGE  
DETAILS

②



② UNDERGROUND STORAGE 2  
N.E.

- NOTES:
1. CONCRETE SHALL BE 4000 PSI.
  2. REINFORCING STEEL SHALL CONFORM TO ASTM A615 AND A618.
  3. PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C900.
  4. PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL BE 48\"/>
  5. PIPE SHALL BE 12\"/>

FIRST FLUSH CALCULATIONS  
DRAINAGE AREA = 3.51 ACRES

FIRST FLUSH VOLUME =  $3.51 \times 1.172 \times 43560 = 3,459 \text{ CUBIC FT}$

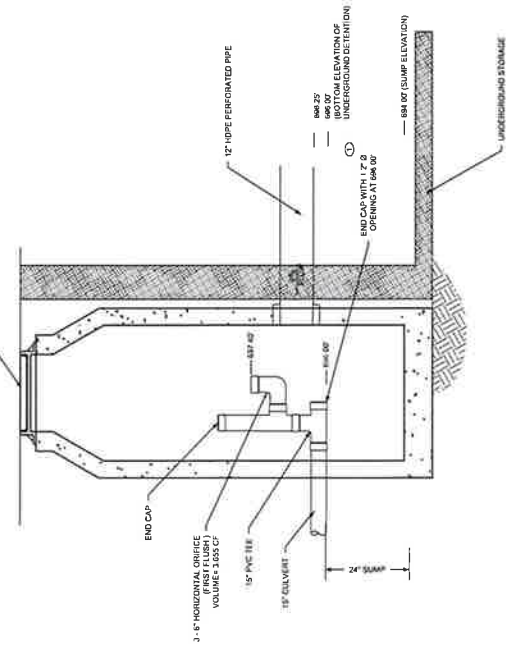
REQUIRED RETENTION VOLUME CALCULATION:

| EXISTING             | PROPOSED             |
|----------------------|----------------------|
| 1. AVAILABLE STORAGE | 1. AVAILABLE STORAGE |
| 2. REQUIRED STORAGE  | 2. REQUIRED STORAGE  |
| 3. EXCESS STORAGE    | 3. EXCESS STORAGE    |
| 4. REQUIRED STORAGE  | 4. REQUIRED STORAGE  |
| 5. REQUIRED STORAGE  | 5. REQUIRED STORAGE  |
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| 9. REQUIRED STORAGE  | 9. REQUIRED STORAGE  |
| 10. REQUIRED STORAGE | 10. REQUIRED STORAGE |

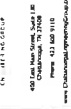
ORFICE SIZE FOR EXTENDED DETENTION

| ORFICE SIZE FOR EXTENDED DETENTION | ORFICE SIZE FOR EXTENDED DETENTION |
|------------------------------------|------------------------------------|
| 1. AVAILABLE STORAGE               | 1. AVAILABLE STORAGE               |
| 2. REQUIRED STORAGE                | 2. REQUIRED STORAGE                |
| 3. EXCESS STORAGE                  | 3. EXCESS STORAGE                  |
| 4. REQUIRED STORAGE                | 4. REQUIRED STORAGE                |
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| 10. REQUIRED STORAGE               | 10. REQUIRED STORAGE               |

NEENAH 14-48M-A GRATE OR EQUAL



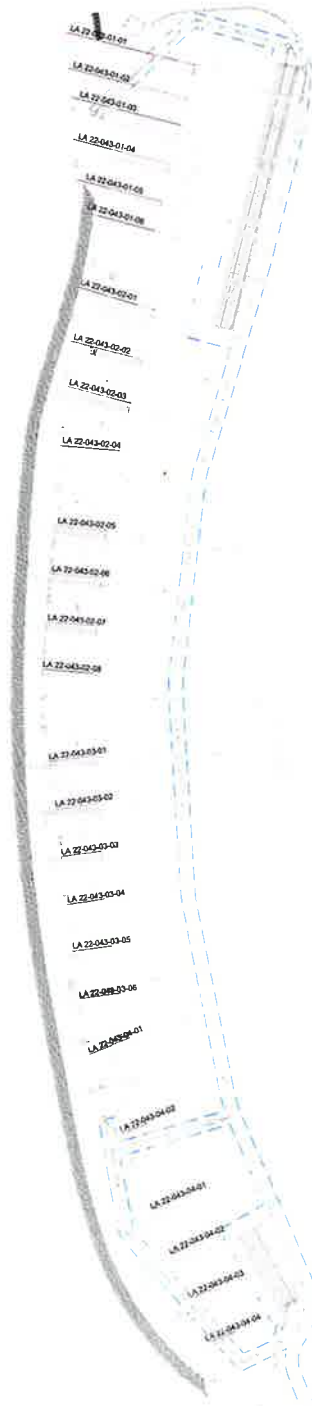
③ UNDERGROUND STORAGE OUTLET STRUCTURE 2  
N.E.



WWWTA\_Project#22-043  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044



SEWER PLAN





CHATTAHOOGA  
1111 N. HILL  
400 East Main Street, Suite 100  
Chattanooga, TN 37402  
Phone: 423.608.9119  
www.chattanooga.gov

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044

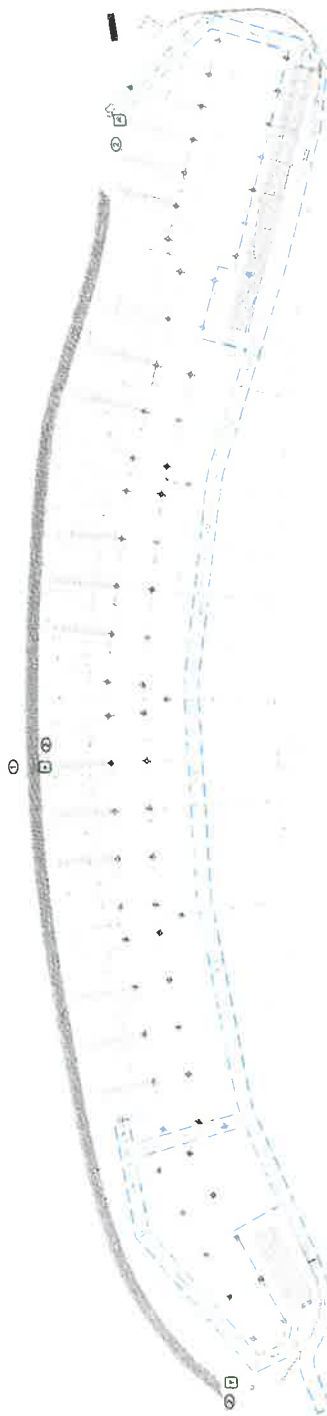


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| 12/16/2023 | ...         | ...    |
| 12/17/2023 | ...         | ...    |
| 12/18/2023 | ...         | ...    |
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| 12/29/2023 | ...         | ...    |
| 12/30/2023 | ...         | ...    |
| 12/31/2023 | ...         | ...    |

CHATTANOOGA  
1111 N. HILL  
400 East Main Street, Suite 100  
Chattanooga, TN 37402  
Phone: 423.608.9119  
www.chattanooga.gov

C501

WATER PLAN



LEGEND





**C701**  
**EROSION CONTROL**  
**PLAN - INITIAL**  
**PHASE**



| Code | Finish            | Map symbol                                                                            | Description                                                                                                                                 |
|------|-------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| (CW) | Concrete Wallout  |  | Disregard area to certain structural loads when the chain of concrete blocks are treated as full delivery of concrete to construction site. |
| (C2) | Construction Exit |  | A lane established and located in any point when the lane is having a construction lane in a public situation.                              |
| (S2) | Salt Friction     | — X —                                                                                 | A salt friction is a temporary reduced brake made on road, synthetic friction have supported by wet or wood posts.                          |
| ---  | ---               | ---                                                                                   | Limits of Distribution                                                                                                                      |



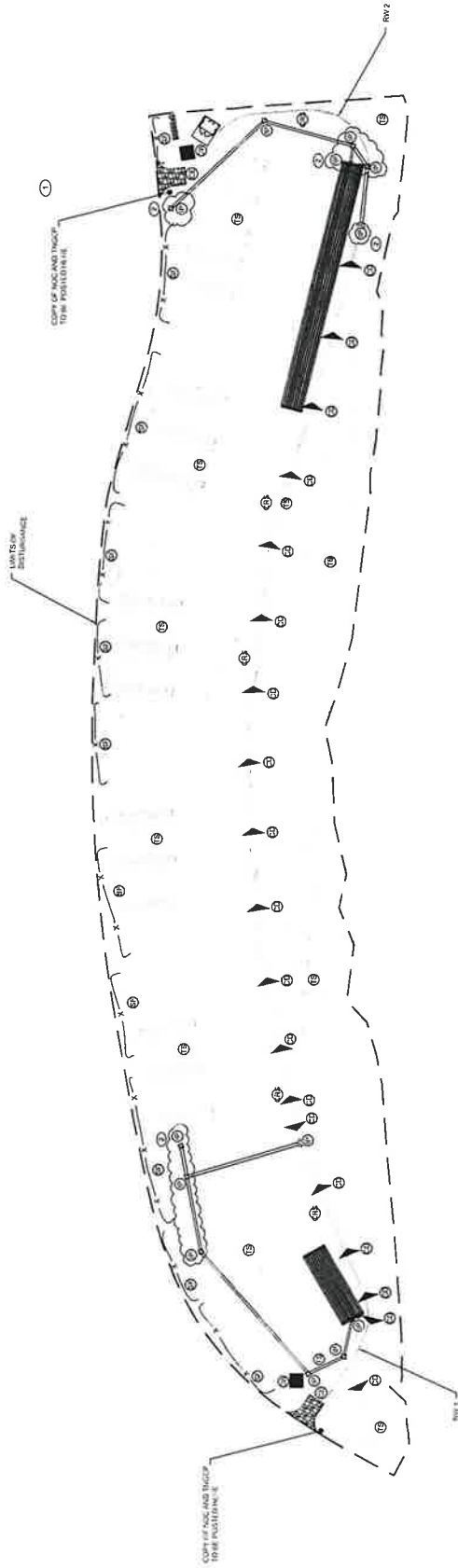
CHATTANOOGA  
TENNESSEE  
445 East Main Street, Suite 101  
Chattanooga, TN 37408  
Phone: 423.249.1111  
www.chattanooga.gov

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044

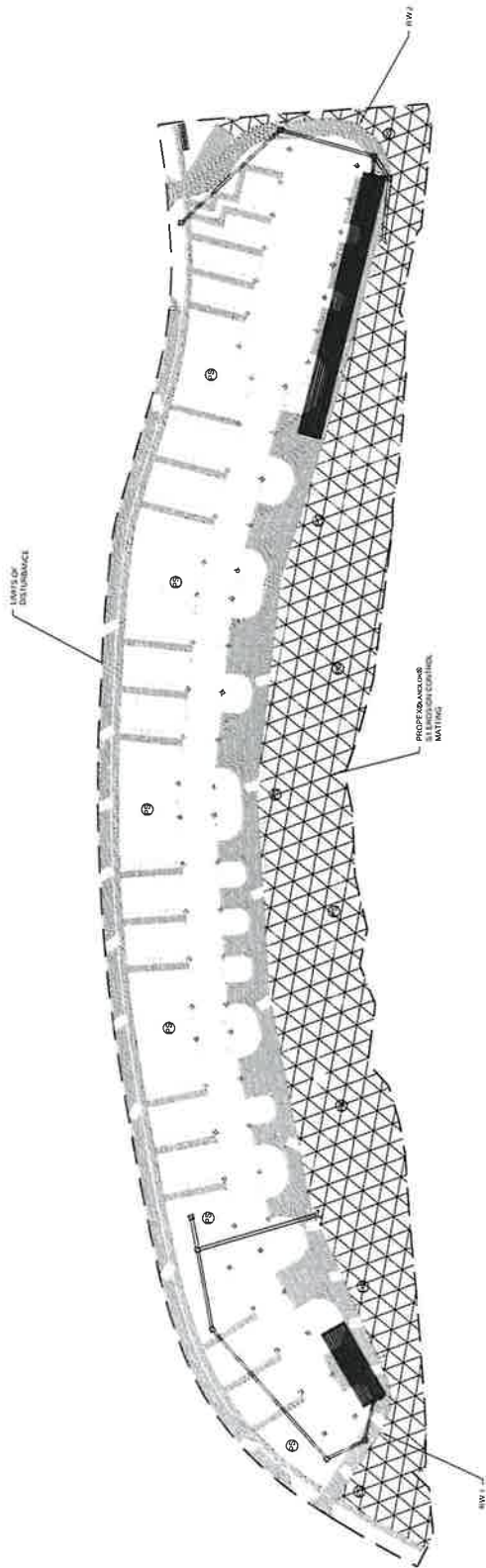


| NO. | DATE    | DESCRIPTION    |
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| 2   | 10/1/10 | Final Design   |
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| 100 | 10/1/10 | Final Design   |

C702  
EROSION CONTROL  
PLAN - GRADING  
PHASE



| Code | Practices                       | Map Symbol | Description                                                                                                                                                                                           |
|------|---------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (E1) | Construction Road Stabilization |            | Temporarily stabilize construction access roads and haul roads to prevent erosion and sedimentation. Use of mulch, straw, or other erosion control materials is required.                             |
| (E2) | Soak Check Ditch                |            | Small temporary barrier, grade control structure or dam constructed across a bank, drainage ditch, or area of concentrated flow.                                                                      |
| (E3) | Grass Erosion Control           |            | Vegetation is to be established in areas where the drain of surface runoff are caused over other delivery of concrete to construction site.                                                           |
| (E4) | Construction Erosion            |            | A, slope stabilized and located in any point where erosion is likely to occur during construction. A, slope stabilized and located in any point where erosion is likely to occur during construction. |
| (E5) | Silt Fence                      |            | A, silt fence is to be installed in areas where erosion is likely to occur during construction. A, silt fence is to be installed in areas where erosion is likely to occur during construction.       |
| (E6) | Silt Trap                       |            | A, silt trap is to be installed in areas where erosion is likely to occur during construction. A, silt trap is to be installed in areas where erosion is likely to occur during construction.         |
| (E7) | Stabilization Area              |            | The establishment of temporary vegetation cover with fast growing species for seasonal protection on disturbed or denuded areas.                                                                      |
| (E8) | Limit of Disturbance            |            |                                                                                                                                                                                                       |



**CRM**

PROPERX2JAN060033  
SILVERMOUNTAIN  
MATING

LULLWATER ROAD  
TOWNHOUSES  
THOUSAND HILLS  
RED BANK, TENNESSEE  
Tax ID: 126C B 044

[illegible]

C703

EROSION CONTROL  
PLAN - FINAL PHASE

| Code | Feature                                                | Map Symbol |                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 99   | Disturbed area<br>Stabilization (with<br>perm seeding) |            | The planting of permanent vegetation with at least 50% native species is required for all permanent stabilization areas for final permanent stabilization. Permanent potential vegetation shall be used to achieve final stabilization. |
|      |                                                        |            | Limit of Disturbance                                                                                                                                                                                                                    |



RED BANK, TENNESSEE  
Tax ID: 1265 B 044



**C704**

**PERMANENT SURFACE TO BE REPAIRED:**

1. COMPLETE REMOVAL TO EXPOSED SUBSTRATE
2. IMMEDIATELY PRIOR TO REMOVAL, BRUSHING THE TOPSOIL. THE SURFACE SHALL BE LOOSEENED BY DISCS OR HARROWS TO A MINIMUM DEPTH OF 2 INCHES TO FACILITATE BONDING OF THE TOPSOIL. THE COVERED SURFACES OF THE PREPARED AREAS TO A UNIFORM DEPTH OF 2 INCHES AFTER COMPACTION. (SEE S-READING IS COMPLETE) THE TOPSOIL SHALL BE
3. SOFTENED TO A DEPTH OF 2 INCHES BY ROLLING WITH A CLIPPODER
4. A GEOTEXTILE IS USED WITH ROLLING WITH A CLIPPODER
5. IF A GEOTEXTILE IS USED INSTANTLY AS PER THE MANUFACTURER'S REQUIREMENTS
6. OTHERWISE, STAYAWAY OR SHALL BE SPREAD OVER THE SURFACE TO A MINIMUM THICKNESS OF 1/2 INCHES. THE SURFACE SHALL BE REPAIRED TO PROVIDE A LOSS DEPTH OF 2 INCHES. THE
7. AREAS NOT MORE THAN 1 INCH
8. AFTER THE SEEDING IS IMPROVED, COMPACTED, THE REPAIRED SHALL BE IMMEDIATELY
9. PROTECTED BY MEANS OF A PROTECTIVE COVERLAIN, WHICH IS TO BE
10. FOOT

4  
C704

PERMANENT COVER SEEDING MIXTURES

PS

TEMPORARY COVER SEEDING MIXTURES TS

TEMPORARY COVER SEEDING MIXTURES TS

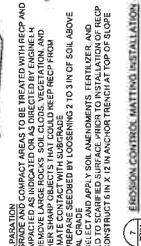


3

C704

**CONCRETE TRUCK WASHOUT AREA**  
N.I.S.

CW



7 EROSION CONTROL MATTING INSTALLATION



**RIP RAP INLET PROTECTION**

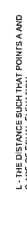


2  
C704

TEMPORARY CONSTRUCTION EXIT

N.T.S.

CE



CHECK DAM CD  
N.Y.S.  
6  
C704



**RIP RAP INLET PROTECTION**



CONSTRUCTION ROAD STABILIZATION



TYPE 'C' SILT FENCE (SF)



 RIP RAP INLET PROTECTION 

