

# PRELIMINARY SITE DEVELOPMENT PLAN

## 0 EAST HIGH STREET

TAX MAP 50 PARCEL 144  
 PORTION OF TAX MAP 50 PARCEL 18  
 CITY OF CHARLOTTESVILLE, VIRGINIA

VICINITY MAP SCALE : 1"=2000'



### LEGEND

| EXISTING | NEW      | DESCRIPTION                     |
|----------|----------|---------------------------------|
| [Symbol] | [Symbol] | <b>BOUNDARIES</b>               |
| [Symbol] | [Symbol] | BENCHMARK                       |
| [Symbol] | [Symbol] | SITE PROPERTY OR ROW LINE       |
| [Symbol] | [Symbol] | ADJACENT PROPERTY OR ROW LINE   |
| [Symbol] | [Symbol] | BUILDING SETBACK                |
| [Symbol] | [Symbol] | PARKING SETBACK                 |
| [Symbol] | [Symbol] | <b>SITE TEXT</b>                |
| [Symbol] | [Symbol] | PARKING COUNT                   |
| [Symbol] | [Symbol] | <b>TOPOGRAPHY</b>               |
| [Symbol] | [Symbol] | INDEX CONTOUR                   |
| [Symbol] | [Symbol] | INTERVAL CONTOUR                |
| [Symbol] | [Symbol] | SPOT ELEVATION                  |
| [Symbol] | [Symbol] | TOP OF CURB ELEVATION           |
| [Symbol] | [Symbol] | TOP OF WALL ELEVATION           |
| [Symbol] | [Symbol] | BOTTOM OF WALL ELEVATION        |
| [Symbol] | [Symbol] | STREAM                          |
| [Symbol] | [Symbol] | STREAM BUFFER                   |
| [Symbol] | [Symbol] | 100 YEAR FLOODPLAIN             |
| [Symbol] | [Symbol] | <b>BUILDING</b>                 |
| [Symbol] | [Symbol] | BUILDING                        |
| [Symbol] | [Symbol] | RETAINING WALL                  |
| [Symbol] | [Symbol] | STAIRS                          |
| [Symbol] | [Symbol] | EDGE OF PAVEMENT                |
| [Symbol] | [Symbol] | ROAD CENTERLINE                 |
| [Symbol] | [Symbol] | FRONT OF CURB                   |
| [Symbol] | [Symbol] | BACK OF CURB                    |
| [Symbol] | [Symbol] | CG-12 TRUNCATED DOME            |
| [Symbol] | [Symbol] | BIKE PARKING                    |
| [Symbol] | [Symbol] | HANDICAP ACCESSIBLE AISLE       |
| [Symbol] | [Symbol] | HANDICAP PARKING                |
| [Symbol] | [Symbol] | <b>MATERIAL</b>                 |
| [Symbol] | [Symbol] | CONCRETE                        |
| [Symbol] | [Symbol] | RIPRAP                          |
| [Symbol] | [Symbol] | ASPHALT                         |
| [Symbol] | [Symbol] | EC-2 MATTING                    |
| [Symbol] | [Symbol] | EC-3 MATTING                    |
| [Symbol] | [Symbol] | WETLAND                         |
| [Symbol] | [Symbol] | TREELINE                        |
| [Symbol] | [Symbol] | FENCE                           |
| [Symbol] | [Symbol] | <b>UTILITY</b>                  |
| [Symbol] | [Symbol] | UTILITY POLE                    |
| [Symbol] | [Symbol] | GUY WIRE                        |
| [Symbol] | [Symbol] | OVERHEAD UTILITY                |
| [Symbol] | [Symbol] | UNDERGROUND UTILITY             |
| [Symbol] | [Symbol] | UNDERGROUND TELEPHONE           |
| [Symbol] | [Symbol] | UNDERGROUND ELECTRIC            |
| [Symbol] | [Symbol] | <b>STORM</b>                    |
| [Symbol] | [Symbol] | STORM MANHOLE                   |
| [Symbol] | [Symbol] | DROP INLET                      |
| [Symbol] | [Symbol] | STORM SEWER                     |
| [Symbol] | [Symbol] | ROOF DRAIN                      |
| [Symbol] | [Symbol] | <b>SANITARY</b>                 |
| [Symbol] | [Symbol] | SANITARY MANHOLE                |
| [Symbol] | [Symbol] | SANITARY SEWER MAIN             |
| [Symbol] | [Symbol] | SANITARY SEWER LATERAL          |
| [Symbol] | [Symbol] | <b>WATER</b>                    |
| [Symbol] | [Symbol] | WATER LINE                      |
| [Symbol] | [Symbol] | WATER SERVICE LINE              |
| [Symbol] | [Symbol] | WATER METER                     |
| [Symbol] | [Symbol] | WATER METER VAULT               |
| [Symbol] | [Symbol] | FIRE HYDRANT                    |
| [Symbol] | [Symbol] | FIRE DEPARTMENT CONNECTION      |
| [Symbol] | [Symbol] | GAS LINE                        |
| [Symbol] | [Symbol] | <b>EASEMENTS</b>                |
| [Symbol] | [Symbol] | CONSTRUCTION                    |
| [Symbol] | [Symbol] | GRADING                         |
| [Symbol] | [Symbol] | ACCESS                          |
| [Symbol] | [Symbol] | SIGHT DISTANCE                  |
| [Symbol] | [Symbol] | UTILITY                         |
| [Symbol] | [Symbol] | STORMWATER FACILITY MAINTENANCE |
| [Symbol] | [Symbol] | STORMWATER ACCESS               |
| [Symbol] | [Symbol] | DRAINAGE                        |
| [Symbol] | [Symbol] | SANITARY                        |
| [Symbol] | [Symbol] | WATERLINE                       |
| [Symbol] | [Symbol] | GASLINE                         |

### OWNER

50-144: Southern Ventures Inc  
 410 Ednam Drive  
 Charlottesville, VA 22901

### DEVELOPER

Seven Development  
 310 Old Ivy Way, Suite 204  
 Charlottesville, VA 22903

### PLAN PREPARATION

Shimp Engineering, P.C.  
 912 E High Street  
 Charlottesville, VA 22902  
 (434)227-5140

### PROPERTY ADDRESS

0 E High Street  
 Charlottesville, VA 22901

### ZONING

The zoning for TMP 50-144 are as follows, per a determination by City Zoning:

Portion of 50-144 (4.7 AC): R-1S  
 Portion of 50-144 (12.8 AC): B-1  
 Portion of 50-144 (4.4 AC): B-3  
 Portion of 50-144 (0.04 AC): CC Central City Corridor

### SOURCE OF TITLE

DB 426 PG 282

### BENCHMARK

NAVD 88

### SOURCE OF BOUNDARY AND TOPOGRAPHY

ALTA survey provided by Lotts & Associates, P.C., July 7, 2022

Two (2)-ft interval contours provided by LIDAR, Virginia Geographic Information Network, 2016

### FLOODZONE

FEMA flood insurance rate map (community panel 51003C0287D & 51003C0289D), effective date February 4, 2005 shows this property is within Zone AE Regulatory Floodplain. FEMA letter of map revision (LOMR 21-03-0301P), effective date March 16, 2022, established floodway as shown in this site plan.

Field stakeout of floodway limits shall be completed prior to the start of construction for city inspection.

### WATER & SANITARY SERVICES

- All materials used for water and sanitary sewer service lines are to comply with requirements as outlined in both the BOCA Code and the regulations used by the Department of Utilities for the City of Charlottesville.
- All waterline shut downs must be coordinated with and performed by the City. Developer must hand out notices to affected customers at least 48 hours in advance.
- Per the Virginia Department of Health Waterworks Regulations (Part II, Article 3, Section 12 VAC 5-590 through 630), all buildings that have the possibility of contaminating the potable water distribution system (hospitals, industrial sites, breweries, etc.) shall have a backflow prevention device installed within the facility. This device shall meet specifications of the Virginia Uniform Statewide Building Code, shall be tested in regular intervals as required, and test results shall be submitted to the Regulatory Compliance Administrator in the Department of Utilities.
- All buildings that may produce wastes containing more than one hundred (100) parts per million of fats, oil, or grease shall install a grease trap. The grease trap shall meet specifications of the Virginia Uniform Statewide Building Code, maintain records of cleaning and maintenance, and be inspected on regular intervals by the Regulatory Compliance Administrator in the Department of Utilities.
- Please contact the Regulatory Compliance Administrator at 970-3032 with any questions regarding the grease trap or backflow prevention devices.

Demands:

Water: 245 residential units, Max = 29,400 gph, Peak = 44,100 gph

Sewer:

245 residential units = 24,500 gal/day

### CRITICAL SLOPES

There are critical slopes within the project area. No disturbance proposed.

### GENERAL NOTES

- The information and data shown or indicated with respect to the existing underground utilities at or contiguous to the site are based on information and data furnished to the owner and engineer by the owners of such underground facilities or others. The owner or engineer shall not be responsible for the accuracy or completeness of such information or data. The contractor shall have full responsibility for confirming the accuracy of the data, for locating all underground utilities, for coordination of the work with owners of such underground utilities during construction, for the safety and protection thereof and repairing any damage thereto resulting from the work. All of these conditions shall be met at no additional cost to the owner. The contractor shall contact "Miss Utilities" of Virginia at 1-800-552-7001 prior to the start of work.
- When working adjacent to existing structures, poles, etc., the contractor shall use whatever methods that are necessary to protect structures from damage. Replacement of damaged structures shall be at the contractor's expense.
- The contractor shall be responsible for protecting all existing site structures from damage and coordinating work so that the owner can make necessary arrangements to modify/protect existing structures from damages.
- The contractor shall be responsible for notifying all utility owners, adjacent land owners whose property may be impacted and the Virginia Department of Transportation prior to completing any off-site work.
- Contractor shall notify and coordinate all work involving existing utilities with utility owners, at least 72 hours prior to the start of construction.
- Contractor shall immediately report any discrepancies between existing conditions and contract documents to the owner and engineer.
- Contractor shall submit for the approval of the owner submittals of all specified materials listed in the plans, to include shop drawings, manufacturer's specifications and laboratory reports. The owner's approval of submittals will be general and will not relieve the contractor from the responsibility of adherence to the contract and for any error that may exist.
- All bare areas shall be scarified, limed, fertilized, seeded and mulched.
- All trees, saplings, brush, etc. shall be removed from within the right of way and the drainage easements.
- Retaining walls require separate building permits.

### UTILITY MARKINGS

Miss Utility Ticket Number B026501443 - September 24, 2020

### SIGNS

All signs and pavement markings shall conform with the latest edition of the MUTCD Guidelines.

### DESIGN STANDARDS

Buildings to comply with most current Virginia Construction Code

Construction Type: Type 5A

Occupancy: R-2

### RIVANNA WATER & SEWER AUTHORITY NOTES

- All materials and methods of construction shall comply with the latest version of the General Water and Sewer Design and Construction Standards – Version 1.0, adopted in December 2015, except as modified below or modified in special notes.
- RWSA shall approve all construction materials and methods of construction. A preconstruction conference shall be held with RWSA prior to the start of any work.
- The contractor shall be responsible for notifying Miss Utility (1-800-552-7001).
- RWSA Engineer (Victoria Fort at (434) 977-2970 ext. 205) shall be notified three business days prior to the start of construction.
- All work is subject to inspection by RWSA staff. No tie-ins to the existing system shall be made without coordination with and the presence of RWSA staff. No work shall be conducted on RWSA facilities on weekends or holidays without special written permission from RWSA.
- For sanitary sewer line construction: RWSA may require bypass pumping for tie-ins to the existing system. All doghouse manholes must be pressure-tested before a connection is made to the system.
- The location of existing utilities as shown on the plans is from data available at the time of design and is not necessarily complete or accurate. The Contractor shall be responsible for the verification of the location, size and depth of all existing utilities, both surface and subsurface. The Contractor shall immediately notify the Engineer of any discrepancies between the plans and field conditions. The Contractor shall use due diligence to protect all utilities and structures from damage at all times, whether shown on the plans or not. Damage to any existing utilities shall be repaired by the Contractor to the original condition at no additional cost to the Owner.
- Erosion and sediment control facilities shall not be permitted in the RWSA easement without special written permission from RWSA. No grading shall be permitted in the RWSA easement unless permitted otherwise by RWSA in writing.
- No blasting shall be permitted within 100 feet of RWSA facilities without written permission and RWSA approval of the blasting plan. Ground monitoring during blasting and a pre-blast survey may be required. For blasting within 100 feet of any operative RWSA sewerlines, bypass pumping and/or pre- and post-CCTV may be required. RWSA may also require certification from a licensed professional engineer stating that the proposed blasting will not damage any RWSA facilities. Damage to any utilities due to blasting shall be repaired by the Contractor to the original condition at no additional cost to the Owner.
- The contractor shall observe minimum separation requirements for utility crossings. When a crossing is made under an existing facility, adequate structural support shall be provided for the existing pipe. The area of the crossing shall be backfilled with compacted 57 stone to the springline of the existing pipe.
- New water main installations shall be pressure tested, chlorinated, flushed and have water samples approved prior to making any permanent connection to the public water system. Approved methods of filling and flushing new water mains will be required to prevent any contamination of the public water system.
- All easements for new RWSA facilities shall be recorded prior to placing the new facilities into service.
- No permanent structural facilities will be permitted in the RWSA easement. This includes building overhangs, retaining walls, footers for any structure, drainage structures, etc.
- Trees are not permitted in the RWSA easement.

### BUILDING HEIGHT

Per Sec. 34-457, building height shall be a maximum of 45' in the B-1 zone.  
 Proposed building height: 45', 4 stories  
 Building GSF = 322,000 SF

### BUILDING SETBACKS

FRONT & REAR: 20'

SIDE: 22.5' for a 45' building height as on the side of a lot adjoining a residential district or use, there shall be a side yard of 1' for every 2' of building height of the tallest building on the lot, minimum of 10'

### EXISTING USE

Open space, amusement & recreation

### PROPOSED USE

Existing Rivanna River Company to remain (amusement & recreation)

Proposed 245 multifamily residential units: (25) efficiencies, (135) 1-bedroom, (85) 2-bedroom units  
 20 DUA of B-1 zone

### LAND USE SCHEDULE

TMP 50-144

| EXISTING      | Area              | %                 |
|---------------|-------------------|-------------------|
| Building      | 974 SF            | 0.1%              |
| Pavement      | 30,583 SF         | 3.2%              |
| Sidewalk      | 499 SF            | 0.05%             |
| Open Space    | 921,898 SF        | 96.6%             |
| <b>Total=</b> | <b>953,964 SF</b> | <b>(21.9 ac.)</b> |

PROPOSED Area %

Building 80,514 SF 8.4%

Pavement 100,574 SF 10.5%

Sidewalk 22,704 SF 2.4%

Open Space 750,172 SF 78.7%

**Total= 953,964 SF (21.9 ac.)**

PORTION OF TMP 50-144 (0.059 AC of 0.1 AC)

| EXISTING      | Area            | %                  |
|---------------|-----------------|--------------------|
| Building      | 0 SF            | 0%                 |
| Pavement      | 2,565 SF        | 100%               |
| Sidewalk      | 0 SF            | 0%                 |
| Open Space    | 0 SF            | 0%                 |
| <b>Total=</b> | <b>2,565 SF</b> | <b>(0.059 ac.)</b> |

PROPOSED Area %

Building 0 SF 0%

Pavement 1,975 SF 77.0%

Sidewalk 600 SF 23.0%

Open Space 0 SF 0%

**Total= 2,565 SF (0.059 ac.)**

### LAND DISTURBANCE

7.2 AC land disturbed with this site plan proposal

### PARKING SCHEDULE

Required:

Sec. 34-984 -Off-street Parking Requirements

Multifamily Dwellings - 1 parking space per each efficiency, 1- or 2-bedroom unit

(25) efficiencies, (135) 1-bedroom, and (85) 2-bedroom units proposed

Outdoor recreation facilities - 1 space per 600 square feet of usable recreational area

6 parking spaces utilized by current Rivanna River Company operations

Total Parking Required = 251 spaces

Sec. 34-977 -Parking Space Dimensions

Up to 30% of the required off-street parking spaces may be designed as compact car spaces

Total Parking Required = 245 spaces

30% of 245 spaces = 74 compact spaces

Provided:

320 parking spaces (includes 16 compact spaces & 10 HC spaces)

Required Bicycle Parking:

Sec. 34-881 -Bicycle Storage Facilities

Multifamily dwellings: 1 space for every 2 units

( 245 units ) = 122.5 = 123 spaces

Total bicycle parking spaces required: 123 bicycle spaces

Provided:

123 indoor bicycle parking spaces

### FIRE MARSHAL'S NOTES

SITE PLAN:

- VSFFPC 503.3 - Marking Fire Lanes. The location and method of marking fire lanes shall be clearly indicated on the submitted site plan. Fire lanes shall be a minimum of 20 feet in width. Signs and markings to delineate fire lanes as designated by the fire official shall be provided and installed by the owner or his/her agent of the property involved. Fire apparatus roads 20 to 26 feet in width shall be posted or marked on both sides "No Parking - Fire Lane".
- VSFFPC 505.1-The building street number to be plainly visible from the street for emergency responders.
- VSFFPC 506.1 - An approved key box shall be mounted to the side of the front or main entrance.
- VSFFPC 506.1.2 - An elevator key box will be required if the building has an elevator.
- VSFFPC 507.5.4 - Fire hydrants, fire pump test header, fire department connections or fire suppression system control valves shall remain clear and unobstructed by landscaping, parking or other objects.
- VSFFPC 503.2.1 - Overhead wiring or other obstructions shall be higher than 13 feet 6 inches.
- SFFPC 507.5.1.1 - Hydrant for standpipe system - Buildings equipped with a standpipe system installed in accordance with Section 905 shall have a fire hydrant within 100 feet of the fire department connections. The distance shall be permitted to exceed 100 feet where approved by the fire code official.
- VSFFPC 905.3.1 - If the floor level of the highest story is more than 30 feet above the lowest level of fire department vehicle access, then a Class I standpipe system must be installed in addition to the sprinkler system.
- VSFFPC 912.2.1 - The fire department connection shall be located on the street side of the structure unless otherwise approved by the fire code official.
- VSFFPC 3312.1 - An approved water supply for fire protection shall be made available as soon as combustible material arrives on the site. Fire hydrants shall be installed and useable prior to the start of any building construction.
- All pavement shall be capable of supporting fire apparatus weighing 85,000 lbs.
- Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
- Buildings four or more stories in height shall be provided with not less than one standpipe for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet in height above the lowest level of fire department access. Such standpipes shall be provided with fire department hose connections at accessible locations adjacent to usable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring. Installation of the standpipe shall begin once construction begins on the second (2nd) floor.

CONSTRUCTION & DEMOLITION:

- VSFFPC 310.3: 310.5 - No smoking or vaping within the construction safety fence. No smoking signs shall be posted throughout each building under construction as well as outside the building. Should anyone from the Fire Marshal's office witness smoking/vaping within the construction site, he or she may request a 24 hour Stop Work Order from the City Building Official.
- VSFFPC 3304.2 - Waste disposal of combustible debris shall be removed from the building at the end of each workday.
- IFC 1410.1-Access to the building during demolition and construction shall be maintained.
- VSFFPC 3304.6 - Operations involving the use of cutting and welding shall be done in accordance with Chapter 35, of the Virginia Statewide Fire Prevention Code, addressing welding and hotwork operations.
- VSFFPC 3315.1 - Fire extinguishers shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated.
- VSFFPC 3310.1 - Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections, if any. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
- VSFFPC 3311.1 - Where a building has been constructed to a height greater than 50 feet or four (4) stories, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.
- No vehicles or machinery of any type, construction materials or construction debris are to be parked, placed, or stored either in front of and within 15 feet of a fire hydrant.
- VSFFPC 3315.1 - Fire extinguishers shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated.

### CITY PERMITS

- The contractor shall be responsible for obtaining a street cut permit from the City.
- A Temporary Street Closure Permit is required for closure of sidewalks, parking spaces and roadways and is subject to approval by the City Traffic Engineer. The contractor contact information will be provided with the final plans.

### ELECTRIC/ TELEPHONE/ CABLE TV

If feasible, all new service lines for electricity, telephone and cable TV are to be installed underground. Care is to be taken to assure their location does not conflict with any other aspects of the proposed site plan.

### FIRE FLOW

Minimum fire flow is 1,938 gpm. See sheet C16.

### ITE TRIP GENERATION

| Use                            | ITE Code | IV        | AM |     |       | PM |     |       | Daily Total |
|--------------------------------|----------|-----------|----|-----|-------|----|-----|-------|-------------|
|                                |          |           | In | Out | Total | In | Out | Total |             |
| Multifamily Housing (Mid-Rise) | 221      | 245 Units | 23 | 65  | 88    | 66 | 42  | 108   | 1334        |

Trip generation reflects AM and PM peak hour traffic as well as weekday traffic.

### SHEET INDEX: TOTAL 16 SHEETS

- C1 COVER
- C2 EXISTING CONDITIONS & DEMOLITION
- C3 EXISTING CONDITIONS & DEMOLITION
- C4 SITE LAYOUT OVERVIEW
- C5 SITE LAYOUT
- C6 SITE LAYOUT
- C7 GRADING & UTILITY PLAN
- C8 GRADING & UTILITY PLAN
- C9 PRELIMINARY UTILITY PROFILES
- C10 SWM CONCEPT
- C11 VRRM MAPS & CALCULATIONS
- C12 LANDSCAPE PLAN
- C13 LANDSCAPE PLAN
- C14 SITE DETAILS
- C15 SITE EXHIBITS
- C16 WATER & SANITARY DEMAND CALCULATIONS

**SHIMP ENGINEERING**  
 LAND PLANNING - PROJECT MANAGEMENT  
 912 E. HIGH ST. CHARLOTTESVILLE VA, 22902  
 434.227.5140 JUSTIN@SHIMPENGINEERING.COM



PRELIMINARY SITE DEVELOPMENT PLAN

## 0 EAST HIGH STREET

CITY OF CHARLOTTESVILLE, VIRGINIA

SUBMISSION:

2022.08.05

| CURVE | RADIUS  | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|---------------|-------------|
| C-1   | 144.64' | 104.54'    | 102.28'      | N 43°21'13" W | 41°24'34"   |

| LINE | BEARING       | DISTANCE |
|------|---------------|----------|
| L-1  | S 19°42'29" W | 18.31'   |
| L-2  | S 09°48'07" W | 30.78'   |
| L-3  | S 01°57'41" W | 20.45'   |
| L-4  | S 15°27'54" W | 40.87'   |
| L-5  | N 62°58'29" W | 15.00'   |
| L-6  | N 24°13'32" E | 25.45'   |
| L-7  | N 63°46'24" W | 10.98'   |
| L-8  | S 30°39'29" E | 100.03'  |

| CURVE | RADIUS  | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|---------------|-------------|
| C-1   | 144.64' | 104.54'    | 102.28'      | N 43°21'13" W | 41°24'34"   |



**LEGEND**  
 CRITICAL SLOPES LOT REGULATIONS GENERAL

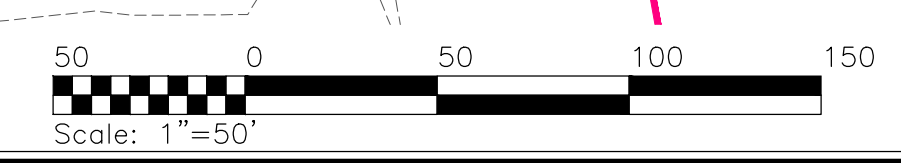
**SHIMP ENGINEERING & ARCHITECTURE**  
 LAND PLANNING • PROJECT MANAGEMENT  
 912 E. HIGH ST. CHARLOTTEVILLE VA 22902  
 JUSTIN@SHIMP-ENGINEERING.COM 434.227.5140



PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTEVILLE, VIRGINIA  
 SUBMISSION:  
 2022.08.05  
 REVISION:  
 2022.12.07

FILE NO. 20.017  
 EXISTING CONDITIONS & DEMOLITION

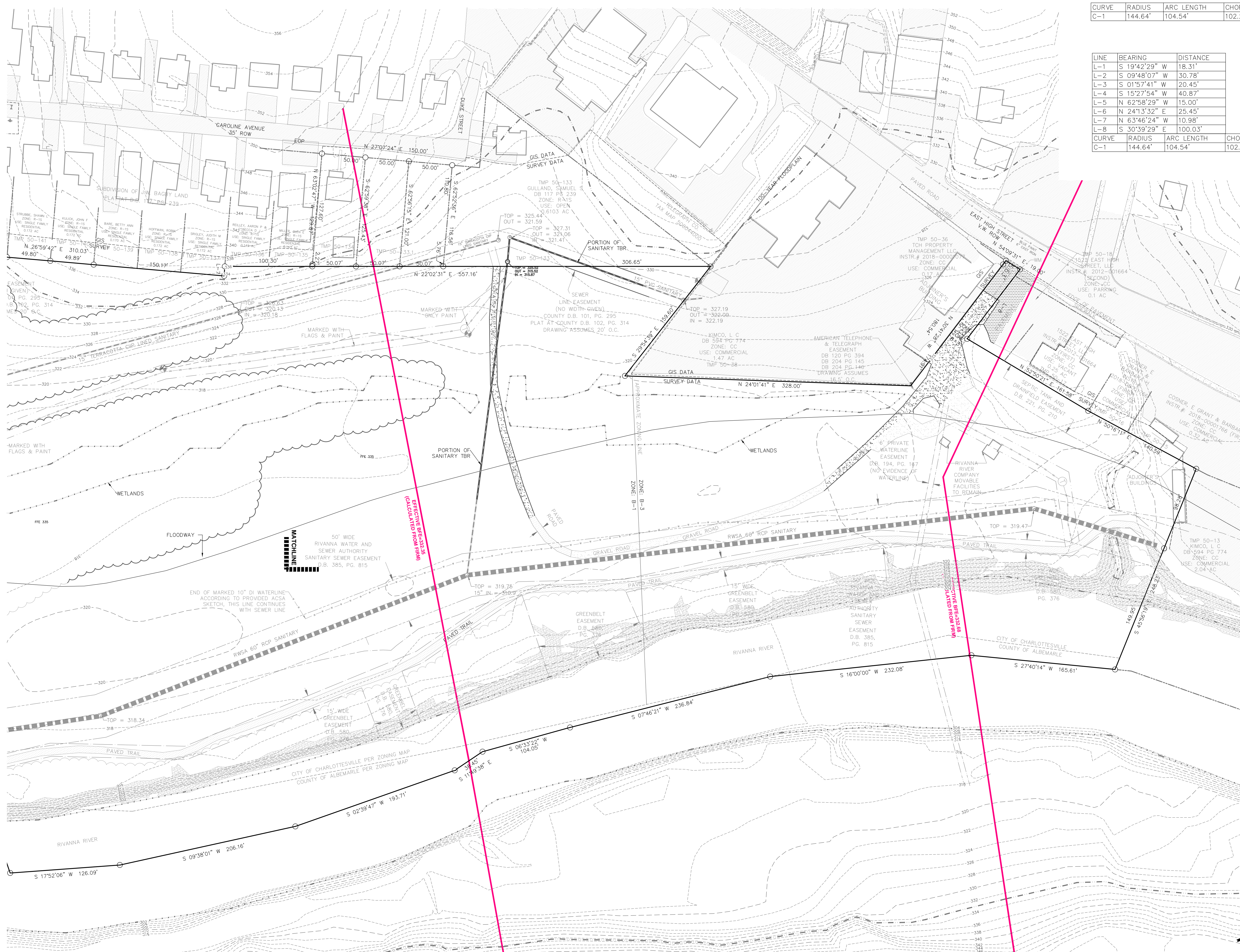


**C2**

| CURVE | RADIUS  | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|---------------|-------------|
| C-1   | 144.64' | 104.54'    | 102.28'      | N 43°21'13" W | 41°24'34"   |

| LINE | BEARING       | DISTANCE |
|------|---------------|----------|
| L-1  | S 19°42'29" W | 18.31'   |
| L-2  | S 09°48'07" W | 30.78'   |
| L-3  | S 01°57'41" W | 20.45'   |
| L-4  | S 15°27'54" W | 40.87'   |
| L-5  | N 62°58'29" W | 15.00'   |
| L-6  | N 24°13'32" E | 25.45'   |
| L-7  | N 63°46'24" W | 10.98'   |
| L-8  | S 30°39'29" E | 100.03'  |

| CURVE | RADIUS  | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|---------------|-------------|
| C-1   | 144.64' | 104.54'    | 102.28'      | N 43°21'13" W | 41°24'34"   |

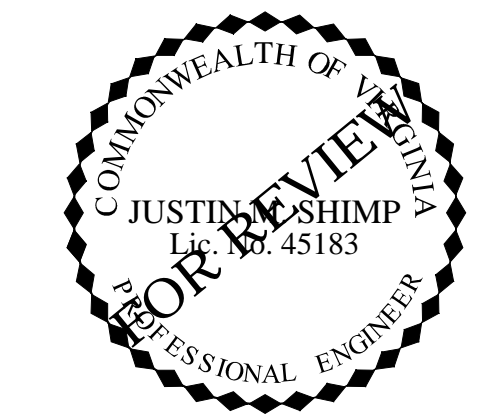


**LEGEND**

|  |   |
|--|---|
|  | CRITICAL SLOPES LOT REGULATIONS GENERAL |
|--|---|

**SHIMP ENGINEERING & ARCHITECTURE**  
 LAND PLANNING • PROJECT MANAGEMENT

912 E. HIGH ST. CHARLOTTESVILLE VA, 22902  
 434.227.5140 JUSTIN@SHIMP-ENGINEERING.COM

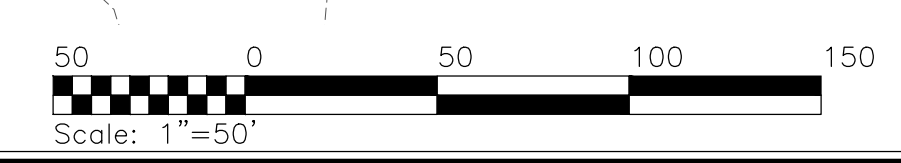


PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION: 2022.08.05  
 REVISION: 2022.12.07

FILE NO. 20.017

EXISTING CONDITIONS & DEMOLITION



**C3**



**LEGEND**  
 CRITICAL SLOPES LOT REGULATIONS GENERAL



912 E. HIGH ST.  
 CHARLOTTESVILLE VA 22902  
 434.227.5140  
 JUSTIN@SHIMP-ENGINEERING.COM

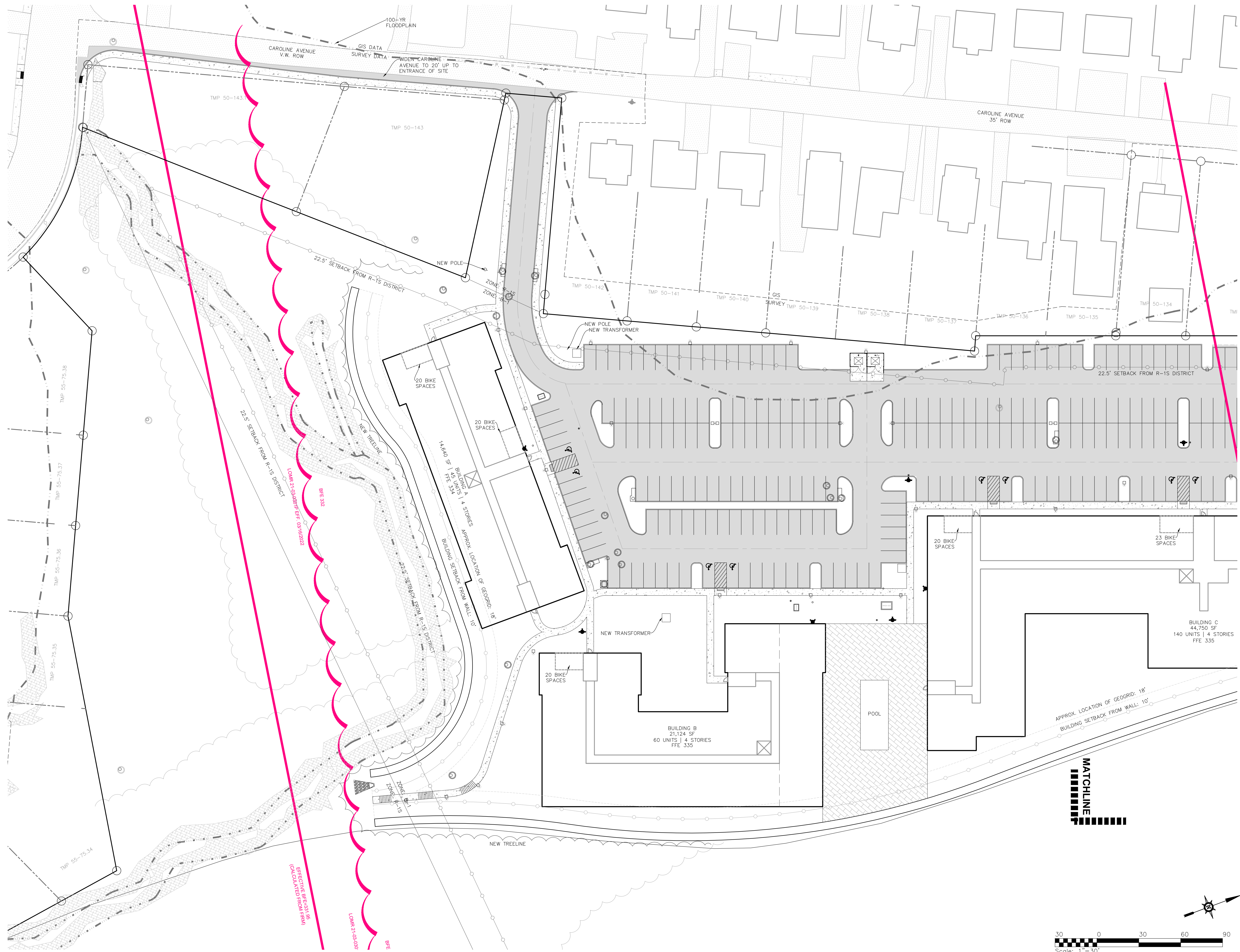


PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION:  
 2022.08.05  
 REVISION:  
 2022.12.07

FILE NO. 20.017  
 SITE LAYOUT OVERVIEW

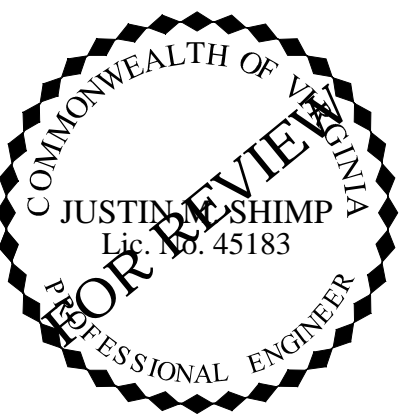
**C4**



**LEGEND**  
 CRITICAL SLOPES LOT REGULATIONS GENERAL



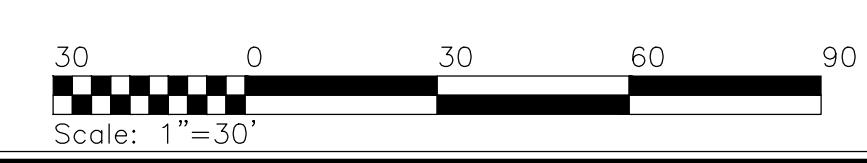
912 E. HIGH ST.  
 CHARLOTTESVILLE VA, 22902  
 434.227.5140  
 JUSTIN@SHIMP-ENGINEERING.COM



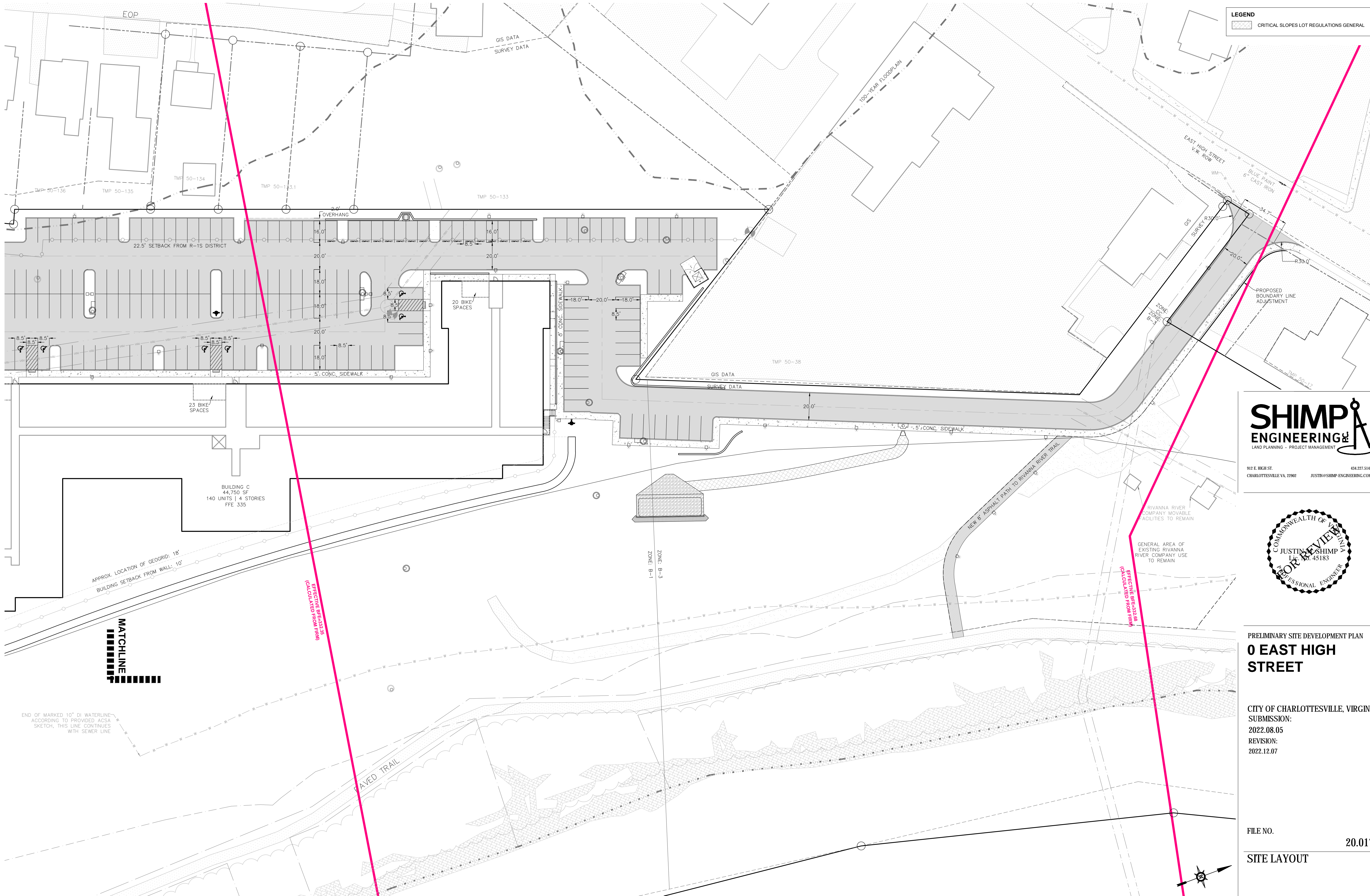
PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION:  
 2022.08.05  
 REVISION:  
 2022.12.07

FILE NO. 20.017  
 SITE LAYOUT



**C5**



**LEGEND**  
 CRITICAL SLOPES LOT REGULATIONS GENERAL

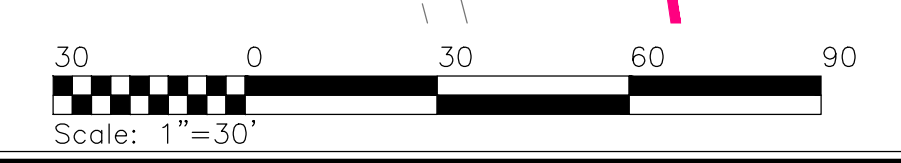
**SHIMP ENGINEERING & ARCHITECTURE**  
 LAND PLANNING • PROJECT MANAGEMENT  
 912 E. HIGH ST. CHARLOTTESVILLE VA, 22902  
 434.227.5140 JUSTIN@SHIMP-ENGINEERING.COM



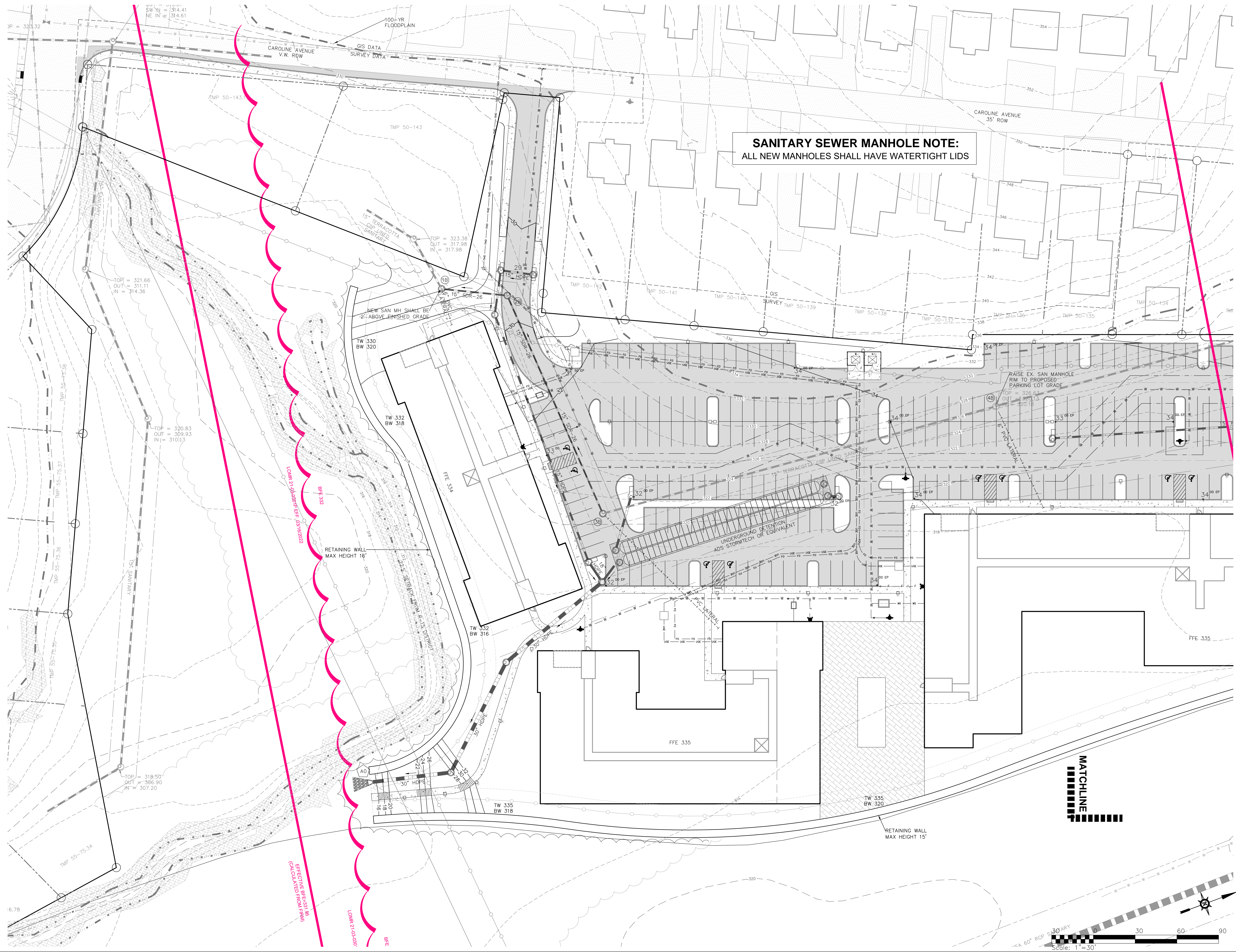
PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION: 2022.08.05  
 REVISION: 2022.12.07

FILE NO. 20.017  
 SITE LAYOUT



**C6**



**SANITARY SEWER MANHOLE NOTE:**  
ALL NEW MANHOLES SHALL HAVE WATERTIGHT LIDS

**LEGEND**  
CRITICAL SLOPES LOT REGULATIONS GENERAL



912 E. HIGH ST.  
CHARLOTTESVILLE VA, 22902  
434.227.5140  
JUSTIN@SHIMP-ENGINEERING.COM

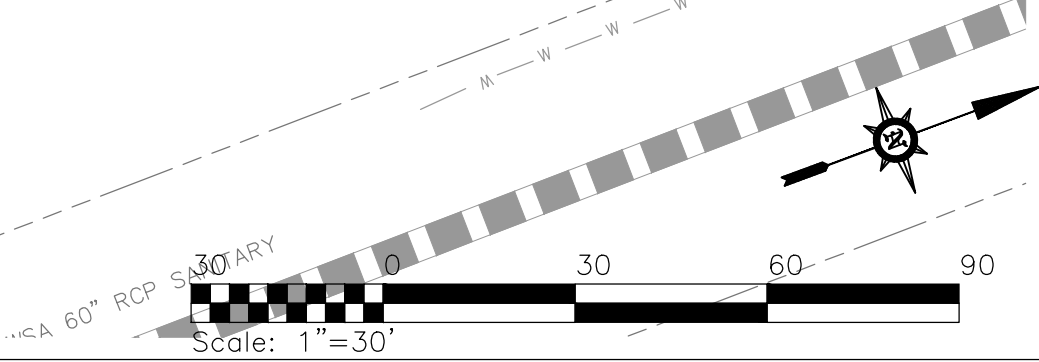
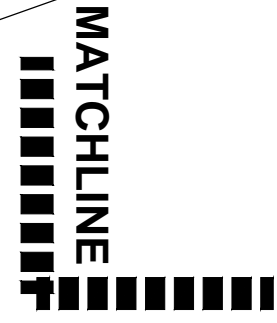


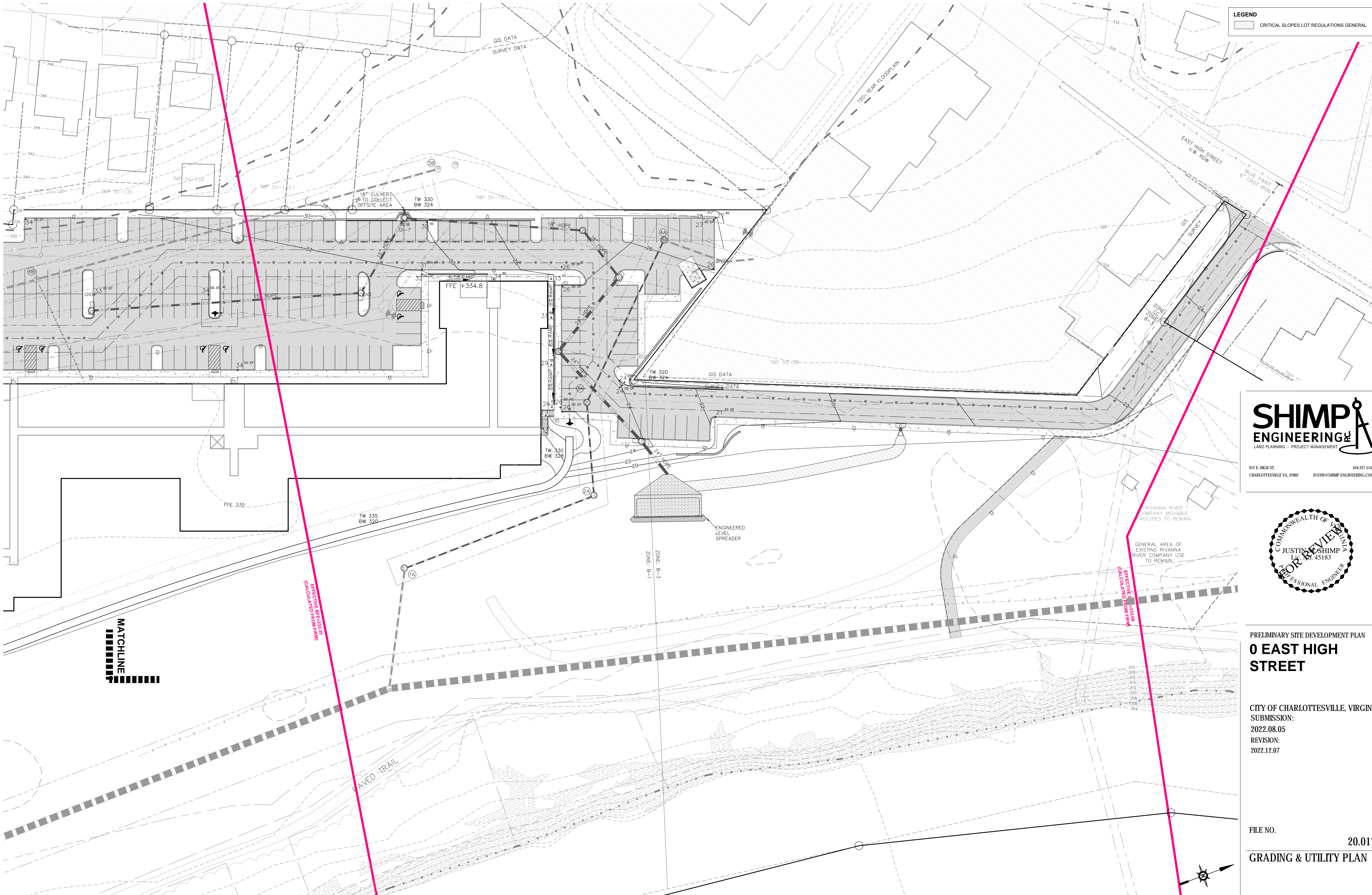
PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
SUBMISSION:  
2022.08.05  
REVISION:  
2022.12.07

FILE NO. 20.017  
GRADING & UTILITY PLAN

C7





**LEGEND**  
 CRITICAL SLOPES LOT REGULATIONS GENERAL

**SHIMP**  
 ENGINEERING &  
 LAND PLANNING • PROJECT MANAGEMENT

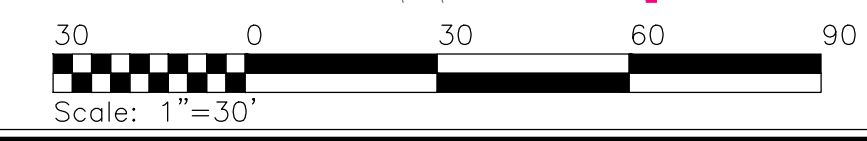
912 E. HIGH ST.  
 CHARLOTTESVILLE VA, 22902  
 434.227.5140  
 JUSTIN@SHIMP-ENGINEERING.COM



PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

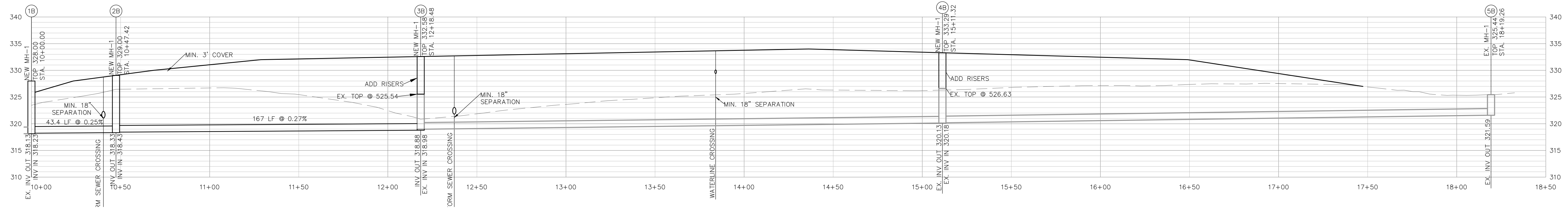
CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION:  
 2022.08.05  
 REVISION:  
 2022.12.07

FILE NO. 20.017  
 GRADING & UTILITY PLAN

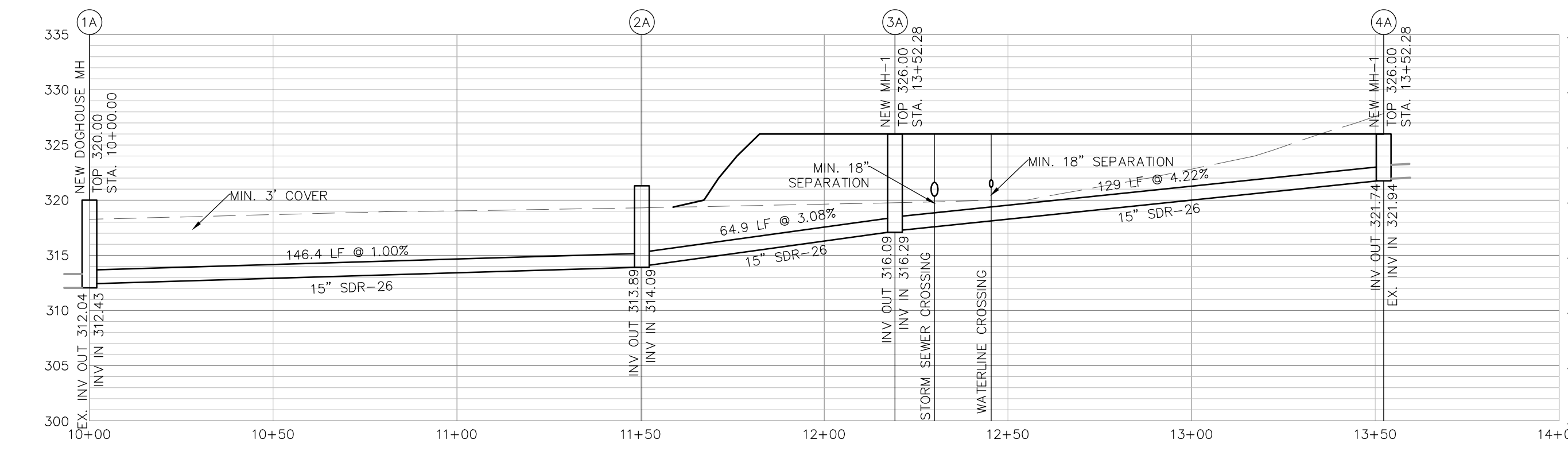


**C8**

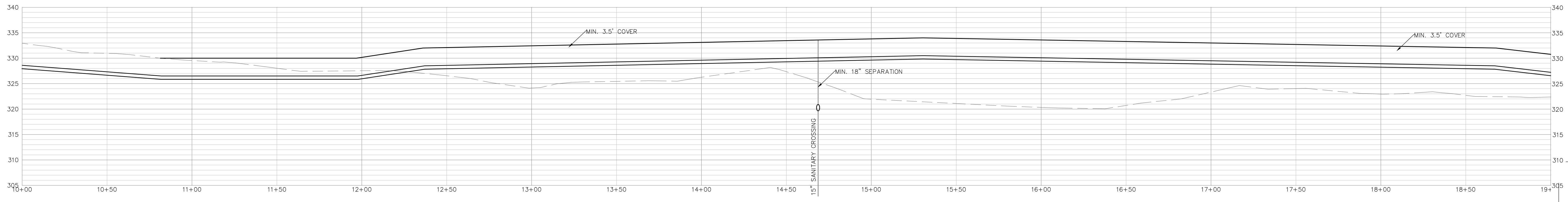




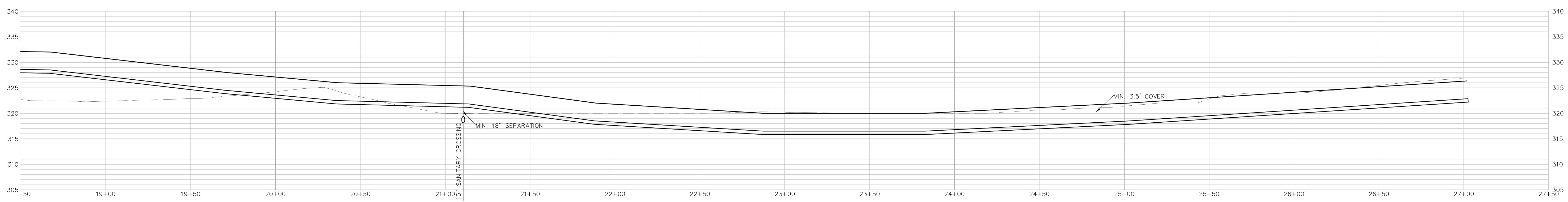
1 SANITARY SEWER PROFILE 1B-4B  
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'



2 SANITARY SEWER PROFILE 1A-4A  
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'

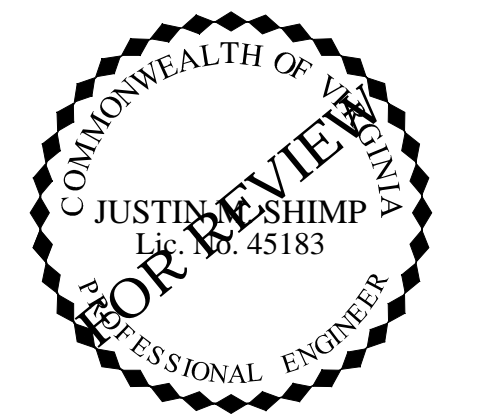


3 WATER MAIN PROFILE - 1  
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'



4 WATER MAIN PROFILE - 2  
 C9 HORIZ. SCALE: 1"=30', VERT. SCALE: 1"=10'

**SHIMP ENGINEERING**  
 LAND PLANNING • PROJECT MANAGEMENT  
 912 E. HIGH ST. CHARLOTTESVILLE VA, 22902 434.227.5140  
 JUSTIN@SHIMP-ENGINEERING.COM



PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION:  
 2022.08.05  
 REVISION:  
 2022.12.07

FILE NO. 20.017

PRELIMINARY UTILITY PROFILES

C9

### Preliminary Quality Calculations


Preliminary site development plan shows conceptual stormwater management plans. Final site plan shall include all required calculations to demonstrate compliance with the outlined methodologies per each outfall.

### Drainage Areas

Refer to sheet C11 for water quality analysis. Final plans shall include all drawings and calculations as applicable per the requirements of each outfall.

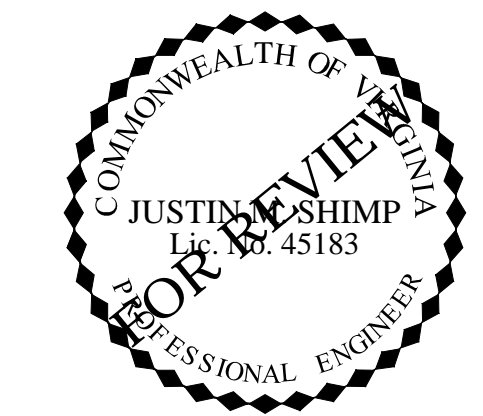
### Overall SWM Quality Strategy

The existing site is a mixture of woods and managed turf. The VRRM new development spreadsheet will compute the required nutrient credits required based upon the proposed development and those credits will be purchased from an approved nutrient credit bank.

|   |   |
|---|---|
| <b>LEGEND</b>   |   |
|  | CRITICAL SLOPES LOT REGULATIONS GENERAL |



912 E. HIGH ST.  
CHARLOTTESVILLE VA, 22902  
434.227.5140  
JUSTIN@SHIMP-ENGINEERING.COM



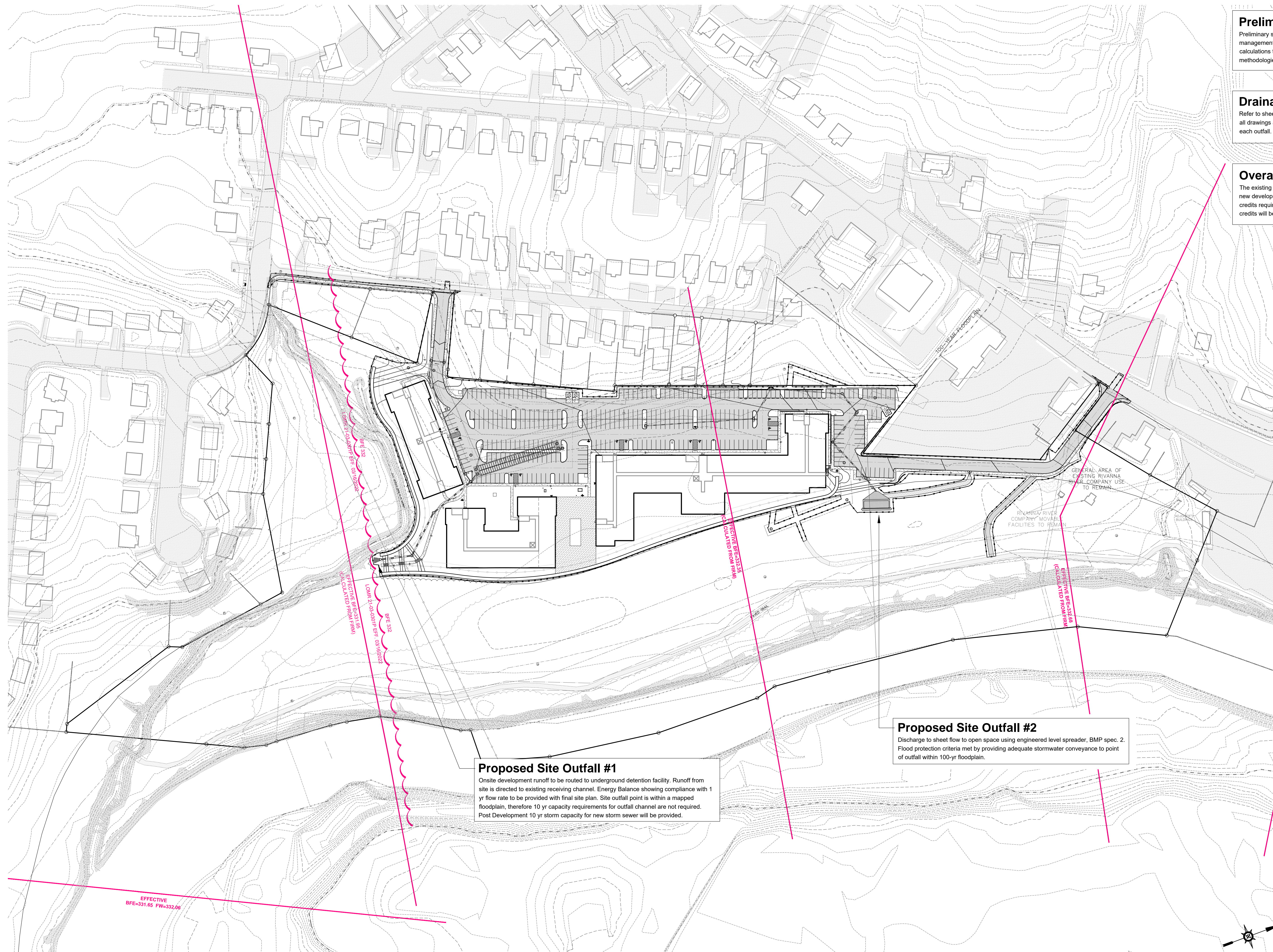
PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
SUBMISSION:  
2022.08.05  
REVISION:  
2022.12.07

FILE NO. 20.017

STORMWATER  
MANAGEMENT CONCEPT

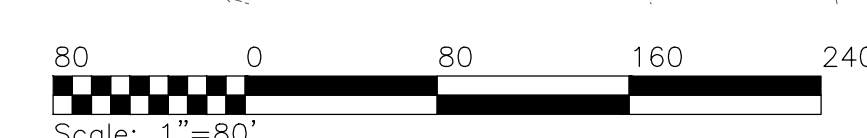
**C10**

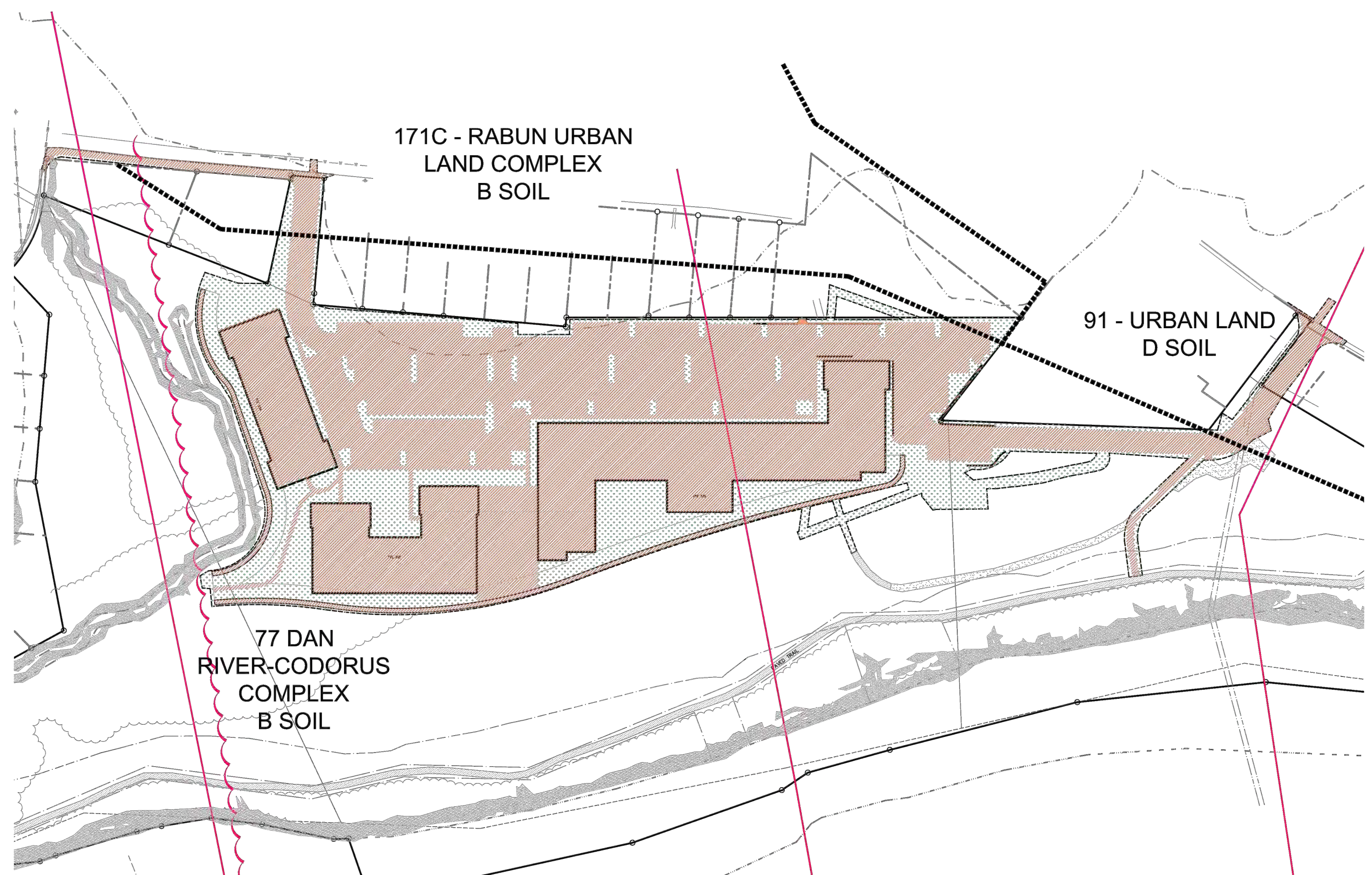
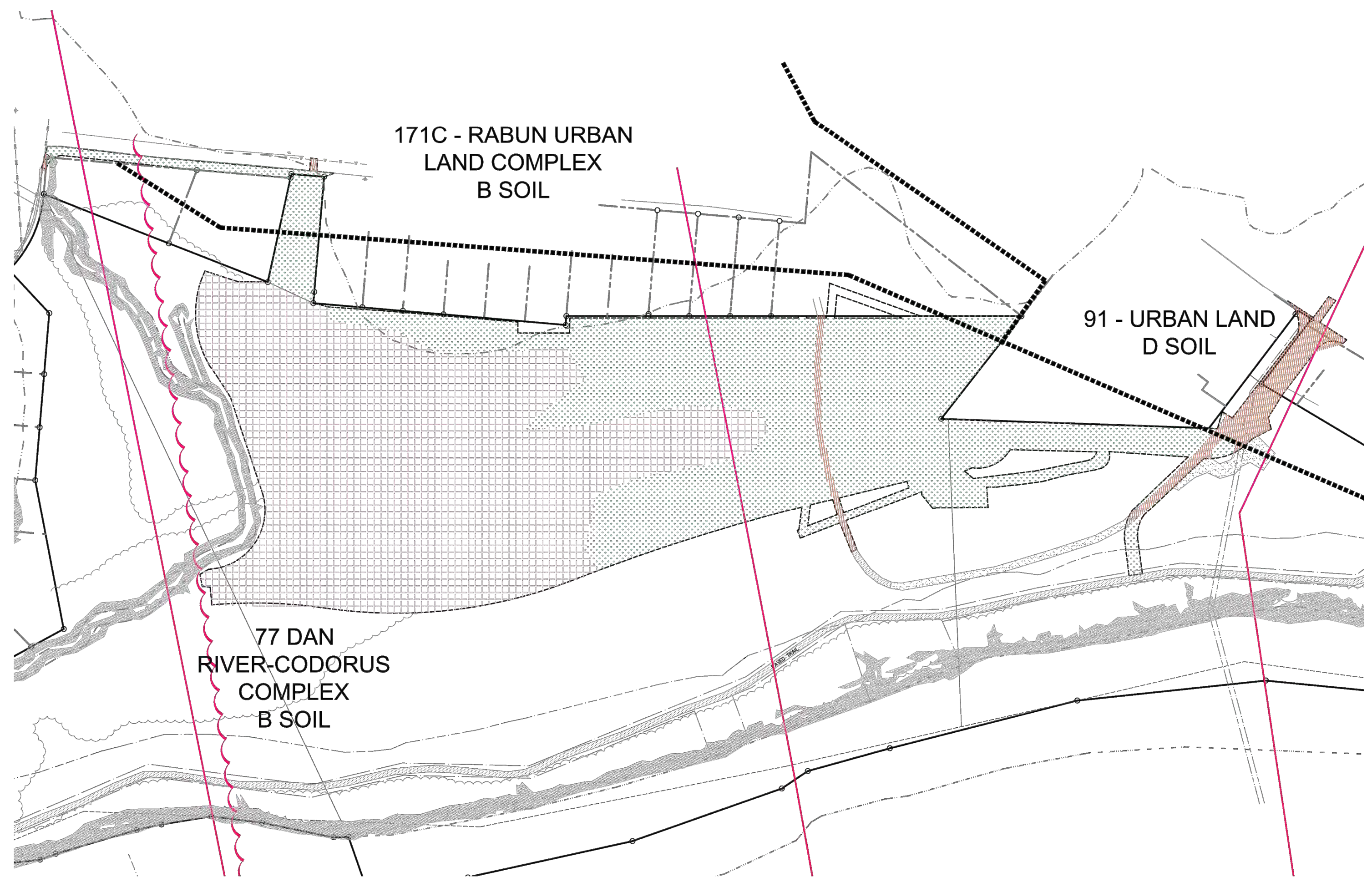


**Proposed Site Outfall #1**  
Onsite development runoff to be routed to underground detention facility. Runoff from site is directed to existing receiving channel. Energy Balance showing compliance with 1 yr flow rate to be provided with final site plan. Site outfall point is within a mapped floodplain, therefore 10 yr capacity requirements for outfall channel are not required. Post Development 10 yr storm capacity for new storm sewer will be provided.

**Proposed Site Outfall #2**  
Discharge to sheet flow to open space using engineered level spreader, BMP spec. 2. Flood protection criteria met by providing adequate stormwater conveyance to point of outfall within 100-yr floodplain.

EFFECTIVE  
AREA AS CALCULATED FROM P101  
AREA AS CALCULATED FROM P102





**Site Results (Water Quality Compliance)**

| Area Checks  | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | AREA CHECK |
|--|--------|--------|--------|--------|--------|------------|
| FOREST/OPEN SPACE (ac)                                 | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | OK         |
| IMPERVIOUS COVER (ac)                                  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | OK         |
| IMPERVIOUS COVER TREATED (ac)                          | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | OK         |
| MANAGED TURF AREA (ac)                                 | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | OK         |
| MANAGED TURF AREA TREATED (ac)                         | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | OK         |
| AREA CHECK   | OK     | OK     | OK     | OK     | OK     |            |
| <b>Site Treatment Volume (ft<sup>3</sup>)</b>          | 11,817 |        |        |        |        |            |
| <b>Runoff Reduction Volume and TP By Drainage Area</b> | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | TOTAL      |
| RUNOFF REDUCTION VOLUME ACHIEVED (ft <sup>3</sup> )    | 0      | 0      | 0      | 0      | 0      | 0          |
| TP LOAD AVAILABLE FOR REMOVAL (lb/yr)                  | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00       |
| TP LOAD REDUCTION ACHIEVED (lb/yr)                     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00       |
| TP LOAD REMAINING (lb/yr)                              | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00       |
| NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)               | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00       |
| <b>Total Phosphorus</b>                                |        |        |        |        |        |            |
| FINAL POST-DEVELOPMENT TP LOAD (lb/yr)                 | 7.42   |        |        |        |        |            |
| TP LOAD REDUCTION REQUIRED (lb/yr)                     | 4.60   |        |        |        |        |            |
| TP LOAD REDUCTION ACHIEVED (lb/yr)                     | 0.00   |        |        |        |        |            |
| TP LOAD REMAINING (lb/yr)                              | 7.42   |        |        |        |        |            |
| REMAINING TP LOAD REDUCTION REQUIRED (lb/yr)           | 4.60   |        |        |        |        |            |
| <b>Total Nitrogen (For Information Purposes)</b>       |        |        |        |        |        |            |
| POST-DEVELOPMENT LOAD (lb/yr)                          | 53.12  |        |        |        |        |            |
| NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)               | 0.00   |        |        |        |        |            |
| REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)       | 53.12  |        |        |        |        |            |

Project Name: 0 E High Street  
 Date: 8/2/2022  
 CLEAR ALL (Ctrl+Shift+R)  
 data input cells (green)  
 constant values (yellow)  
 calculation cells (blue)  
 final results (red)

**Site Information**

**Post-Development Project (Treatment Volume and Loads)**

**Land Cover (acres)**

|   | A Soils | B Soils | C Soils | D Soils | Totals |
|---|---------|---------|---------|---------|--------|
| Forest/Open Space (acres) - undisturbed, protected forest/open space or reforested land |         |         |         |         | 0.00   |
| Managed Turf (acres) - disturbed, graded for yards or other turf to be mowed/managed    |         | 4.40    |         | 0.00    | 4.40   |
| Impervious Cover (acres)  | 2.73    |         |         | 0.07    | 2.80   |
|   |         |         |         |         | 7.20   |

**Constants**

|                                  |      |
|----------------------------------|------|
| Annual Rainfall (inches)         | 43   |
| Target Rainfall Event (inches)   | 1.00 |
| Total Phosphorus (TP) EMC (mg/L) | 0.36 |
| Total Nitrogen (TN) EMC (mg/L)   | 1.86 |
| Target TP Load (lb/acre/yr)      | 0.41 |
| PI (unitless correction factor)  | 0.90 |

**Runoff Coefficients (Rv)**

|                   | A Soils | B Soils | C Soils | D Soils |
|-------------------|---------|---------|---------|---------|
| Forest/Open Space | 0.02    | 0.03    | 0.04    | 0.05    |
| Managed Turf      | 0.15    | 0.20    | 0.22    | 0.25    |
| Impervious Cover  | 0.95    | 0.95    | 0.95    | 0.95    |

**Post-Development Requirement for Site Area**

|                                    |      |
|------------------------------------|------|
| TP Load Reduction Required (lb/yr) | 5.12 |
|------------------------------------|------|

**LAND COVER SUMMARY -- POST DEVELOPMENT**

| Land Cover Summary         |      |
|----------------------------|------|
| Forest/Open Space (acres)  | 0.00 |
| Weighted Rv (forest)       | 0.00 |
| % Forest                   | 0%   |
| Managed Turf Cover (acres) | 4.40 |
| Weighted Rv (turf)         | 0.20 |
| % Managed Turf             | 61%  |
| Impervious Cover (acres)   | 2.80 |
| Rv (impervious)            | 0.95 |
| % Impervious               | 39%  |
| Site Area (acres)          | 7.20 |
| Site Rv                    | 0.49 |

| Treatment Volume and Nutrient Loads           |        |
|---|--------|
| Treatment Volume (acre-ft)                    | 0.2950 |
| Treatment Volume (cubic feet)                 | 12,852 |
| TP Load (lb/yr)                               | 8.07   |
| TN Load (lb/yr) (Informational Purposes Only) | 57.77  |

**SHIMP ENGINEERING**  
 LAND PLANNING - PROJECT MANAGEMENT  
 912 E. HIGH ST. CHARLOTTEVILLE VA, 22902  
 434.227.5140 JUSTIN@SHIMP-ENGINEERING.COM



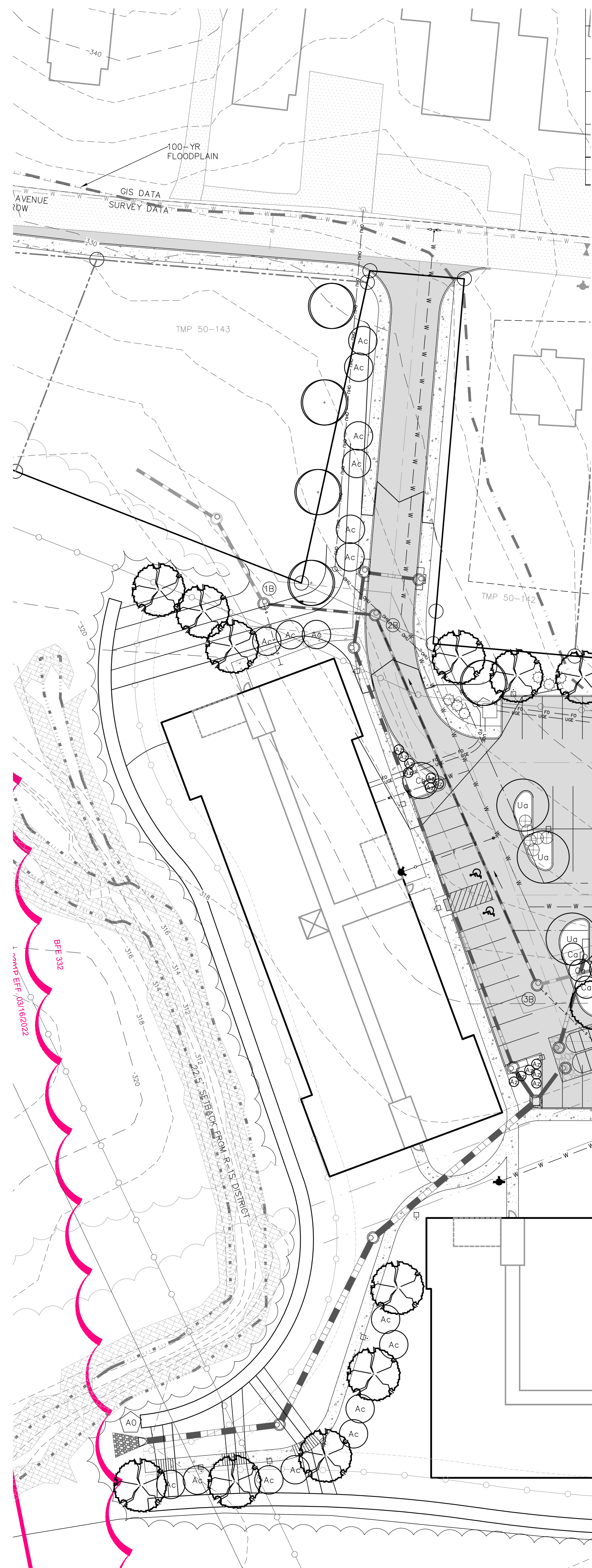
PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTEVILLE, VIRGINIA  
 SUBMISSION: 2022.08.05  
 REVISION: 2022.12.07

FILE NO. 20.017

VRRM MAPS & CALCULATIONS

**C11**



| LANDSCAPE SCHEDULE |                       |                                  |                       |                  |          |                            |           |                 |       |
|--------------------|-----------------------|----------------------------------|-----------------------|------------------|----------|----------------------------|-----------|-----------------|-------|
| Plant Symbol       | Planting Type         | Botanical Name                   | Common Name           | Min. Cal./Height | Quantity | Total Height(ft) in 10 Yrs | Canopy SF | Total Canopy SF |       |
| ⊙                  | Large Deciduous Tree  | <i>Quercus phellos</i>           | Willow Oak            | 2" Cal.          | 17       | 31                         | 370       | 6290            |       |
| ⊗                  | Large Deciduous Tree  | <i>Quercus falcata</i>           | Southern Red Oak      | 2" Cal.          | 28       | 31                         | 424       | 11872           |       |
| ⊖                  | Large Deciduous Tree  | <i>Tilia americana</i>           | American Linden       | 2" Cal.          | 11       | 26                         | 191       | 2101            |       |
| ⊙                  | Large Deciduous Tree  | <i>Ulmus americana</i>           | American Elm          | 2" Cal.          | 20       | 25                         | 397       | 7940            |       |
| ⊙                  | Large Deciduous Tree  | <i>Tilia cordata</i>             | Littleleaf Linden     | 2" Cal.          | 20       | 27                         | 249       | 4980            |       |
| ⊙                  | Medium Deciduous Tree | <i>Carpinus betulus</i>          | European Hornbeam     | 2" Cal.          | 10       | 20                         | 177       | 1770            |       |
| ⊙                  | Ornamental Tree       | <i>Amelanchier canadensis</i>    | Shadblow Serviceberry | 6-8' Ht.         | 21       | 19                         | 130       | 2730            |       |
| ⊙                  | Evergreen Shrub       | <i>Myrica cerifera</i>           | Southern Wax Myrtle   | 12" Ht.          | 64       | 10                         | 44        | 2816            |       |
| ⊙                  | Evergreen Shrub       | <i>Viburnum awabuki</i> 'Chindo' | Chindo Viburnum       | 12" Ht.          | 24       | 10                         | 22        | 528             |       |
| ⊙                  | Evergreen Shrub       | <i>Ilex glabra</i>               | Inkberry Holly        | 12" Ht.          | 51       | 6                          | 23        | 1173            |       |
| ⊙                  | Evergreen Shrub       | <i>Photinia x fraseri</i>        | Photinia              | 12" Ht.          | 18       | 10                         | 20        | 360             |       |
| ⊙                  | Evergreen Shrub       | <i>Rhododendron</i>              | Azalea                | 12" Ht.          | 34       | 4                          | 10        | 340             |       |
| ⊙                  | Evergreen Shrub       | <i>Ilex crenata</i>              | Soft Touch Holly      | 12" Ht.          | 40       | 5                          | 16        | 640             |       |
| ⊙                  | Deciduous Shrub       | <i>Cornus amomum</i>             | Silky Dogwood         | 12" Ht.          | 17       | 8                          | 72        | 1224            |       |
|                    |                       |                                  |                       |                  |          |                            |           | TOTAL SF:       | 44764 |

LANDSCAPING REQUIRED:

SITE REQUIREMENT (SEC. 34-869(b)): 15% CANOPY REQUIRED FOR RESIDENTIAL DENSITIES BETWEEN 10 AND 20 DUA.  
 PROJECT AREA: 6.8 AC (236,208 SF)  
 236,208 SF x 15% = 44,431 SF  
 CANOPY REQUIRED: 44,431 SF  
 CANOPY PROVIDED: 44,764 SF

STREET TREES (SEC. 34-870): 1 LARGE TREE, 40' O.C. ADJ. TO PUBLIC STREET RIGHT-OF-WAY  
 338 LF OF PUBLIC STREET FRONTAGE  
 338 LF ÷ 40 LF ENTRANCES = 318 LF  
 318 LF / 40 = 8  
 REQUIRED: 8 LARGE STREET TREES  
 PROVIDED: 8 LARGE STREET TREES

INTERIOR PARKING AREA (SEC. 24.11.9.3): 5% OF THE PAVED PARKING AREA & 1 MEDIUM SHADE TREE PER 8 PARKING SPACES  
 104,027 SF x 5% = 5,202 SF  
 REQUIRED: 5,202 SF  
 PROVIDED: 8,135 SF

320 SURFACE PARKING SPACES PROVIDED  
 REQUIRED: 40 LARGE OR MEDIUM SHADE TREES  
 PROVIDED: 16 LARGE SHADE TREE + 24 MEDIUM SHADE TREES

PARKING LOT SCREENING (SEC. 34-873): A CONTINUOUS LANDSCAPE BUFFER OF AT LEAST 5' IN WIDTH SHALL BE ESTABLISHED BETWEEN THE EDGE OF A PARKING LOT AND AN ADJACENT PROPERTY. ONE LARGE TREE AND THREE SHRUBS SHALL BE PLANTED FOR EVERY 15' OF LENGTH OF THE PROPERTY LINE.

NOTES:  
 1. All site plantings of trees and shrubs shall be allowed to reach, and be maintained at, mature height; the topping of trees is prohibited. Shrubs and trees shall be pruned minimally and only to support the overall health of the plant.  
 2. All landscaping and screening shall be maintained in a healthy condition by the current owner or property owners' association and replaced when necessary. Replacement material shall comply with the approved landscape plan.  
 3. All new planting shown on the plan will be completed after building and road construction to avoid tree planting damage.  
 4. All disturbed slopes 3:1 or steeper to have low maintenance ground cover.  
 5. Any existing tree proposed to remain shall be replaced in kind if negatively impacted by improvements associated with this project.

LEGEND  
 CRITICAL SLOPES LOT REGULATIONS GENERAL

**SHIMP ENGINEERING & ARCHITECTURE**  
 LAND PLANNING • PROJECT MANAGEMENT

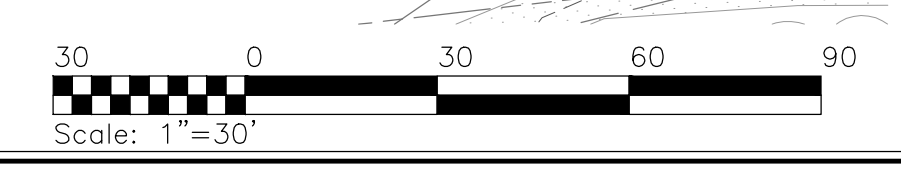
912 E. HIGH ST. CHARLOTTEVILLE VA 22902  
 434.227.5140  
 JUSTIN@SHIMP-ENGINEERING.COM



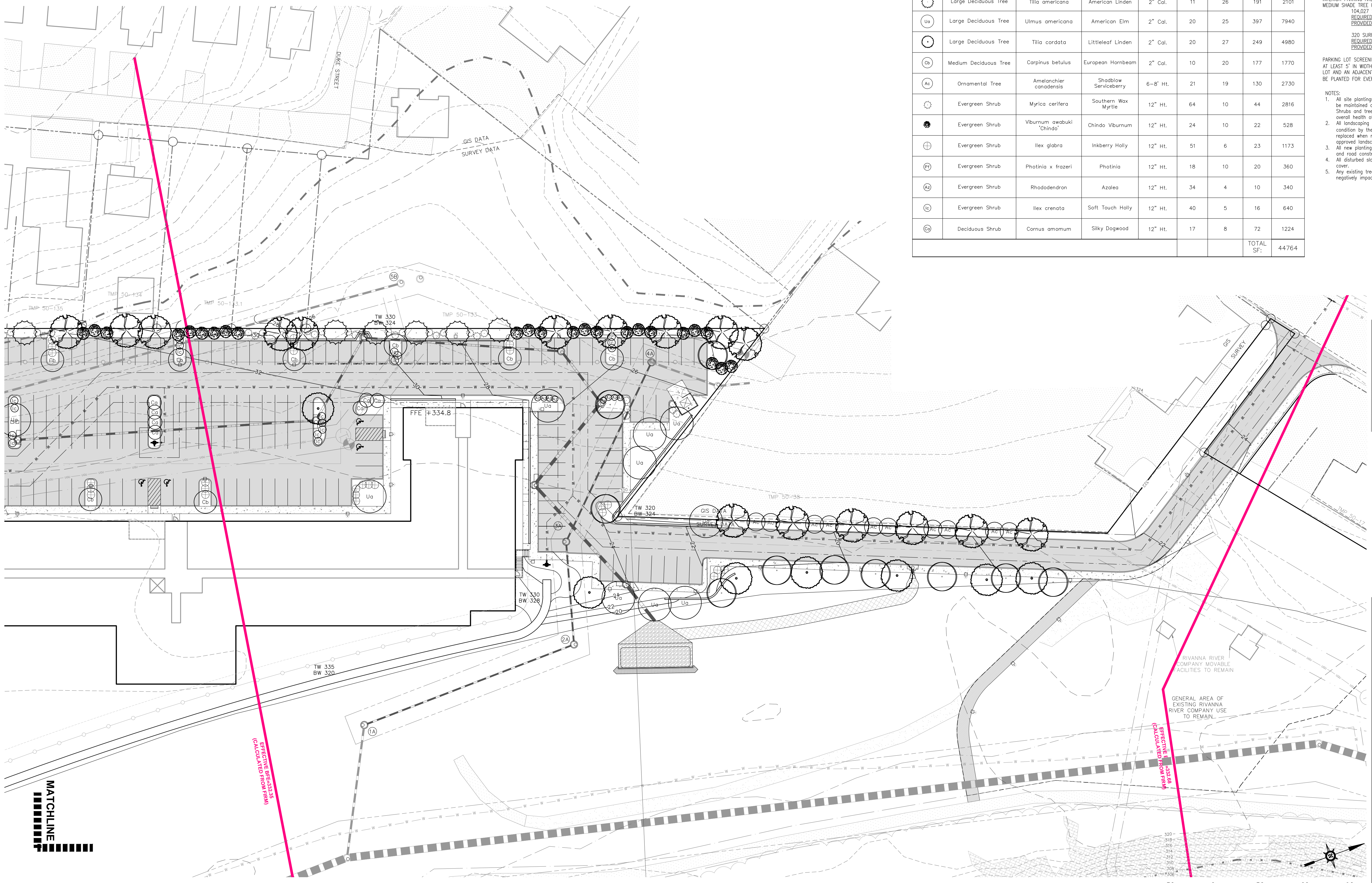
PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTEVILLE, VIRGINIA  
 SUBMISSION: 2022.08.05  
 REVISION: 2022.12.07

FILE NO. 20.017  
 LANDSCAPE PLAN



**C12**



| LANDSCAPE SCHEDULE |                       |                           |                       |                  |          |                            |           |                 |
|--------------------|-----------------------|---------------------------|-----------------------|------------------|----------|----------------------------|-----------|-----------------|
| Plant Symbol       | Planting Type         | Botanical Name            | Common Name           | Min. Cal./Height | Quantity | Total Height(ft) in 10 Yrs | Canopy SF | Total Canopy SF |
| ○                  | Large Deciduous Tree  | Quercus phellos           | Willow Oak            | 2" Cal.          | 17       | 31                         | 370       | 6290            |
| ⊗                  | Large Deciduous Tree  | Quercus falcata           | Southern Red Oak      | 2" Cal.          | 28       | 31                         | 424       | 11872           |
| ⊙                  | Large Deciduous Tree  | Tilia americana           | American Linden       | 2" Cal.          | 11       | 26                         | 191       | 2101            |
| ⊕                  | Large Deciduous Tree  | Ulmus americana           | American Elm          | 2" Cal.          | 20       | 25                         | 397       | 7940            |
| ⊖                  | Large Deciduous Tree  | Tilia cordata             | Littleleaf Linden     | 2" Cal.          | 20       | 27                         | 249       | 4980            |
| ⊗                  | Medium Deciduous Tree | Carpinus betulus          | European Hornbeam     | 2" Cal.          | 10       | 20                         | 177       | 1770            |
| ⊗                  | Ornamental Tree       | Amelanchier canadensis    | Shadblow Serviceberry | 6-8' Ht.         | 21       | 19                         | 130       | 2730            |
| ⊗                  | Evergreen Shrub       | Myrica cerifera           | Southern Wax Myrtle   | 12" Ht.          | 64       | 10                         | 44        | 2816            |
| ⊗                  | Evergreen Shrub       | Viburnum awabuki 'Chindo' | Chindo Viburnum       | 12" Ht.          | 24       | 10                         | 22        | 528             |
| ⊕                  | Evergreen Shrub       | Ilex glabra               | Inkberry Holly        | 12" Ht.          | 51       | 6                          | 23        | 1173            |
| ⊕                  | Evergreen Shrub       | Photinia x fraseri        | Photinia              | 12" Ht.          | 18       | 10                         | 20        | 360             |
| ⊕                  | Evergreen Shrub       | Rhododendron              | Azalea                | 12" Ht.          | 34       | 4                          | 10        | 340             |
| ⊕                  | Evergreen Shrub       | Ilex crenata              | Soft Touch Holly      | 12" Ht.          | 40       | 5                          | 16        | 640             |
| ⊕                  | Deciduous Shrub       | Cornus amomum             | Silky Dogwood         | 12" Ht.          | 17       | 8                          | 72        | 1224            |
|                    |                       |                           |                       |                  |          |                            | TOTAL SF: | 44764           |

LANDSCAPING REQUIRED:

SITE REQUIREMENT (SEC. 34-869(b)): 15% CANOPY REQUIRED FOR RESIDENTIAL DENSITIES BETWEEN 10 AND 20 DIA.  
 PROJECT AREA: 6.8 AC (296,208 SF)  
 296,208 SF x 15% = 44,431 SF  
 CANOPY REQUIRED: 44,431 SF  
 CANOPY PROVIDED: 44,764 SF

STREET TREES (SEC. 34-870): 1 LARGE TREE, 40' O.C. ADJ. TO PUBLIC STREET RIGHT-OF-WAY  
 338 LF OF PUBLIC STREET FRONTAGE  
 338 LF = 40 LF ENTRANCES = 318 LF  
 318 LF / 40 = 8  
 REQUIRED: 8 LARGE STREET TREES  
 PROVIDED: 8 LARGE STREET TREES

INTERIOR PARKING AREA (SEC. 24.11.9.7): 5% OF THE PAVED PARKING AREA & 1 MEDIUM SHADE TREE PER 8 PARKING SPACES  
 104,027 SF x 5% = 5,202 SF  
 REQUIRED: 5,202 SF  
 PROVIDED: 6,135 SF

320 SURFACE PARKING SPACES PROVIDED  
 REQUIRED: 40 LARGE OR MEDIUM SHADE TREES  
 PROVIDED: 16 LARGE SHADE TREE + 24 MEDIUM SHADE TREES

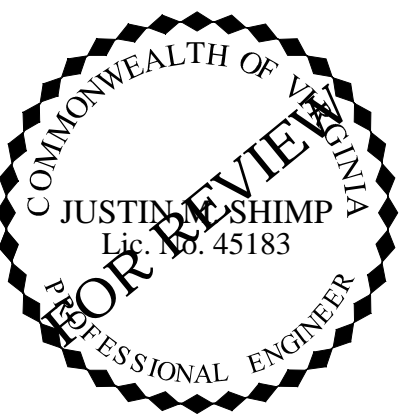
PARKING LOT SCREENING (SEC. 34-873): A CONTINUOUS LANDSCAPE BUFFER OF AT LEAST 5' IN WIDTH SHALL BE ESTABLISHED BETWEEN THE EDGE OF A PARKING LOT AND AN ADJACENT PROPERTY. ONE LARGE TREE AND THREE SHRUBS SHALL BE PLANTED FOR EVERY 15' OF LENGTH OF THE PROPERTY LINE.

NOTES:  
 1. All site plantings of trees and shrubs shall be allowed to reach, and be maintained at, mature height; the topping of trees is prohibited. Shrubs and trees shall be pruned minimally and only to support the overall health of the plant.  
 2. All landscaping and screening shall be maintained in a healthy condition by the current owner or property owners' association and replaced when necessary. Replacement material shall comply with the approved landscape plan.  
 3. All new planting shown on the plan will be completed after building and road construction to avoid tree planting damage.  
 4. All disturbed slopes 3:1 or steeper to have low maintenance ground cover.  
 5. Any existing tree proposed to remain shall be replaced in kind if negatively impacted by improvements associated with this project.

**SHIMP ENGINEERING & ARCHITECTURE**  
 LAND PLANNING • PROJECT MANAGEMENT

912 E. HIGH ST.  
 CHARLOTTESVILLE VA 22902

434.227.5140  
 JUSTIN@SHIMP-ENGINEERING.COM

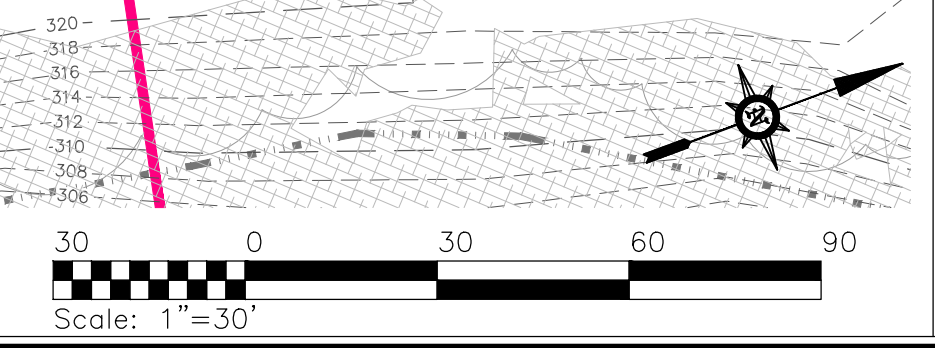


PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION:  
 2022.08.05  
 REVISION:  
 2022.12.07

FILE NO. 20.017  
 LANDSCAPE PLAN

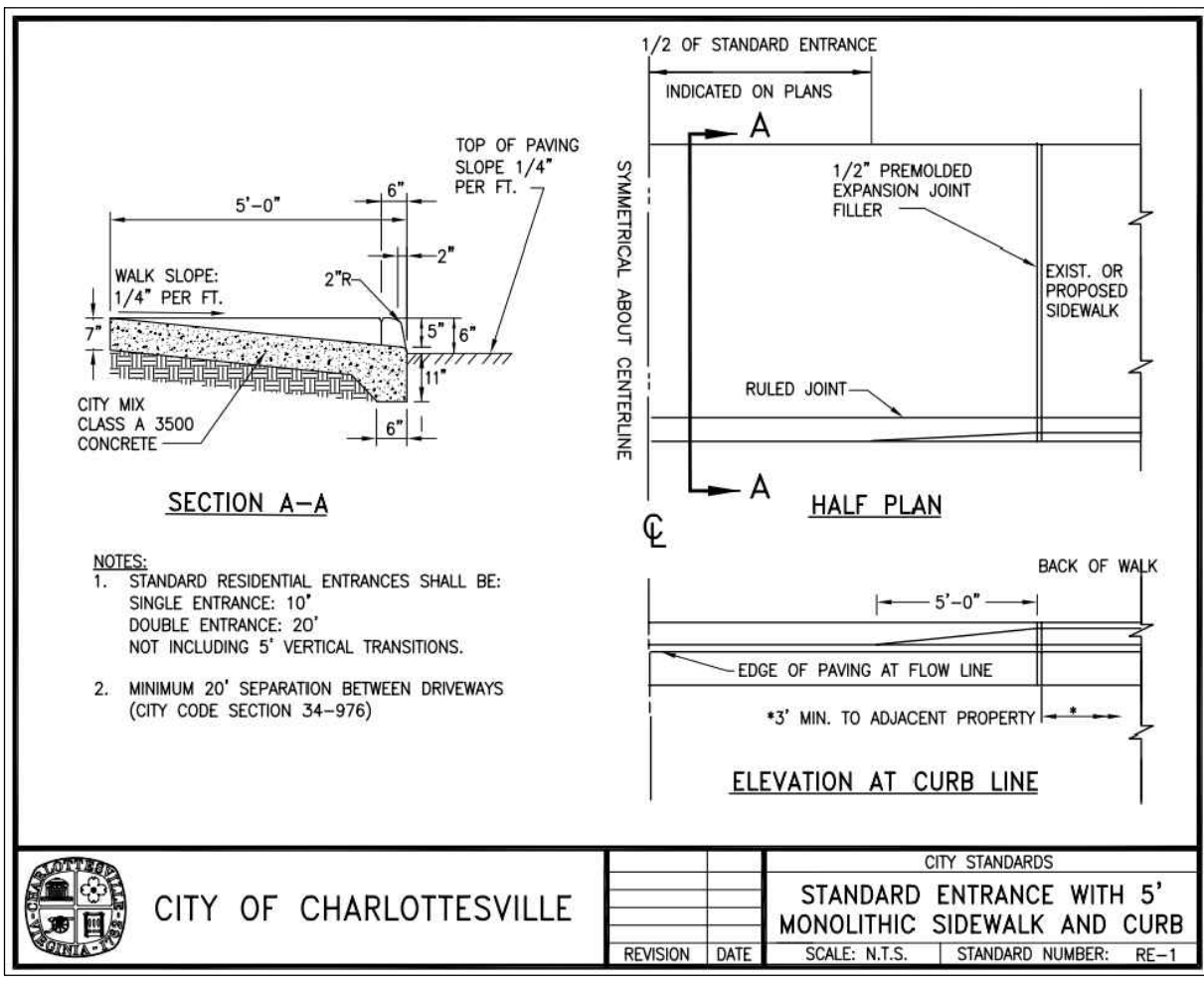
**C13**



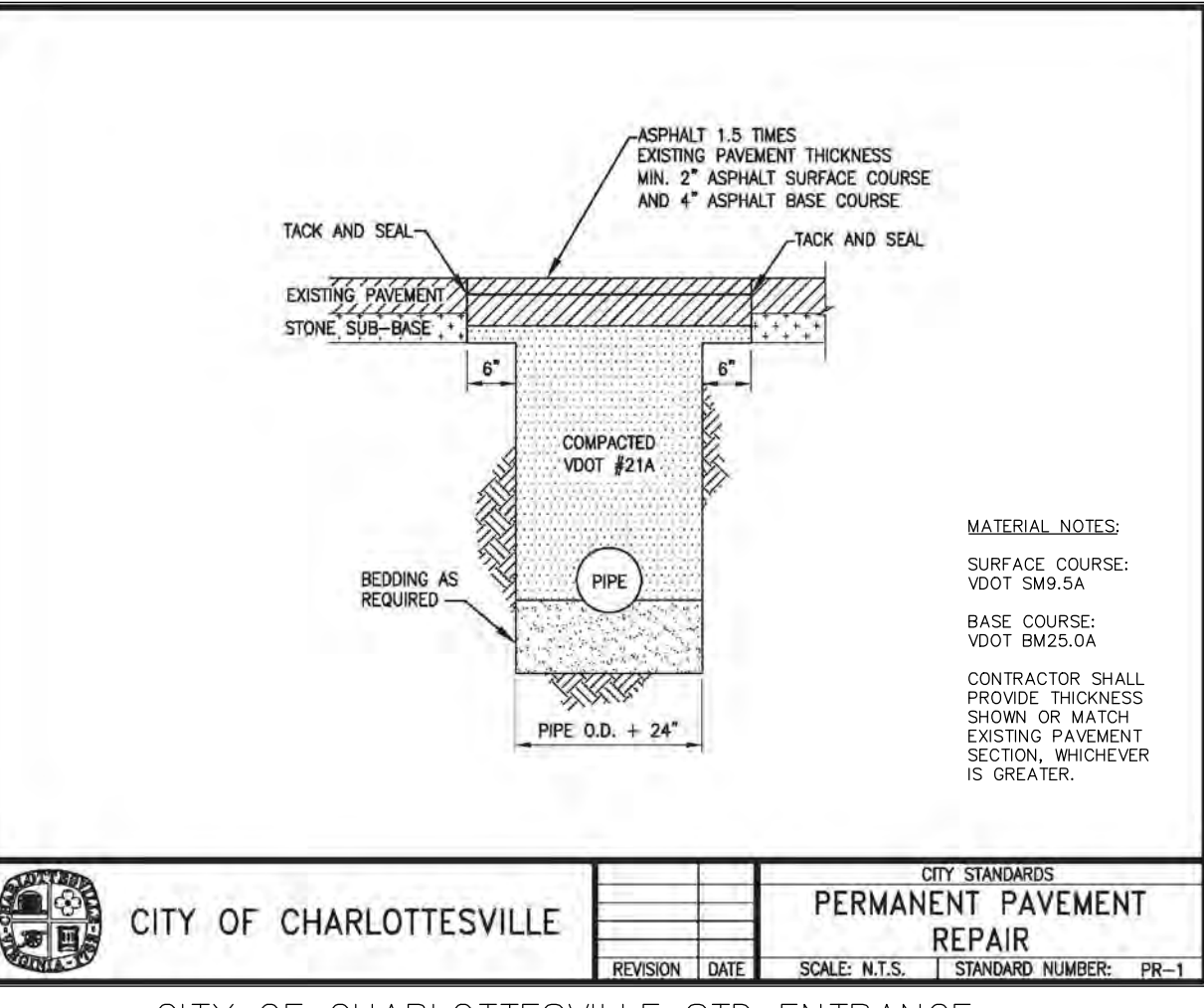
MATCHLINE

EFFECTIVE AREA: 43,338  
 (CALCULATED FROM PLAN)

EFFECTIVE AREA: 43,338  
 (CALCULATED FROM PLAN)



1 CITY OF CHARLOTTESVILLE STD ENTRANCE  
C14 Not To Scale



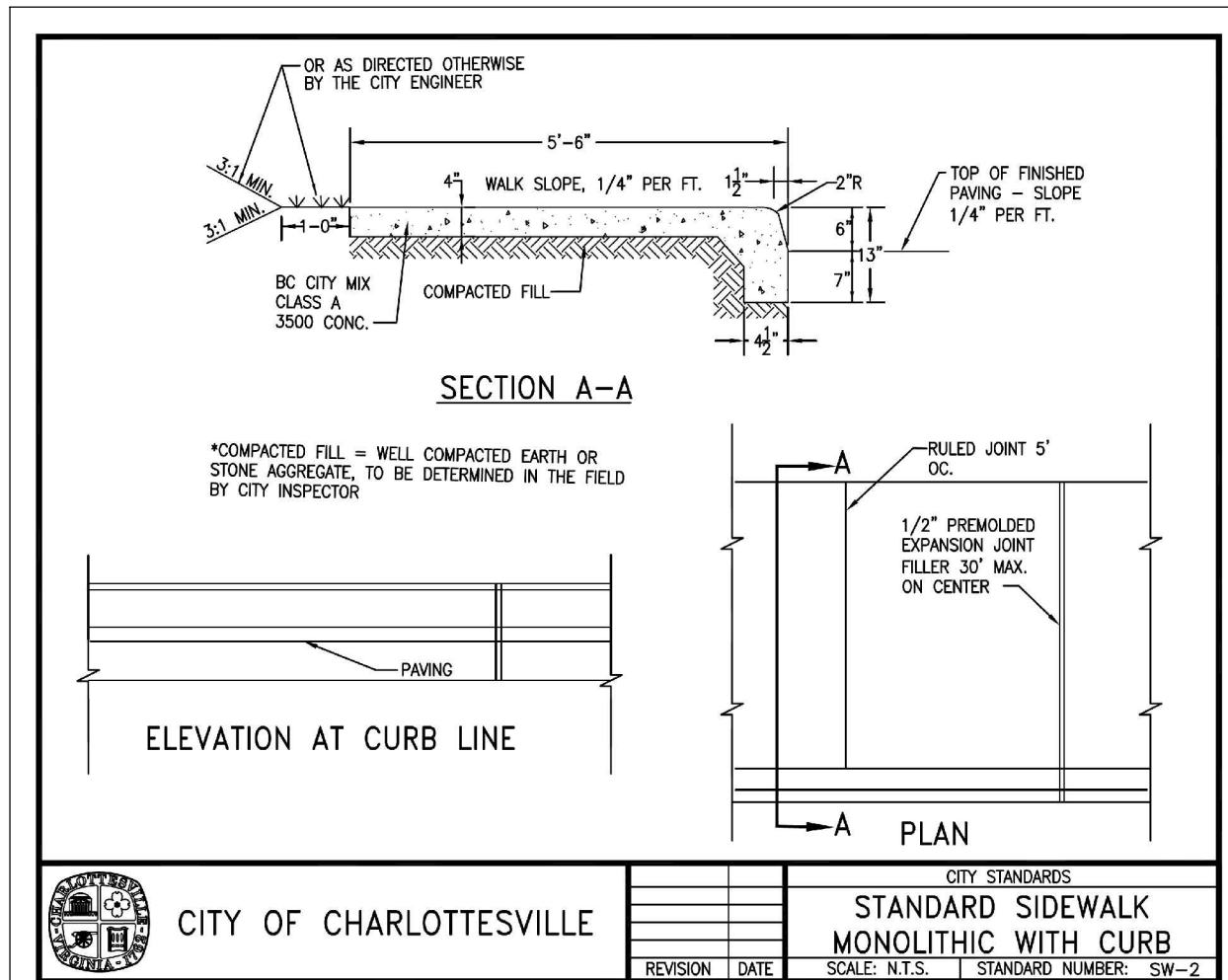
2 CITY OF CHARLOTTESVILLE STD ENTRANCE PERMANENT PAVEMENT REPAIR  
C14 Not To Scale



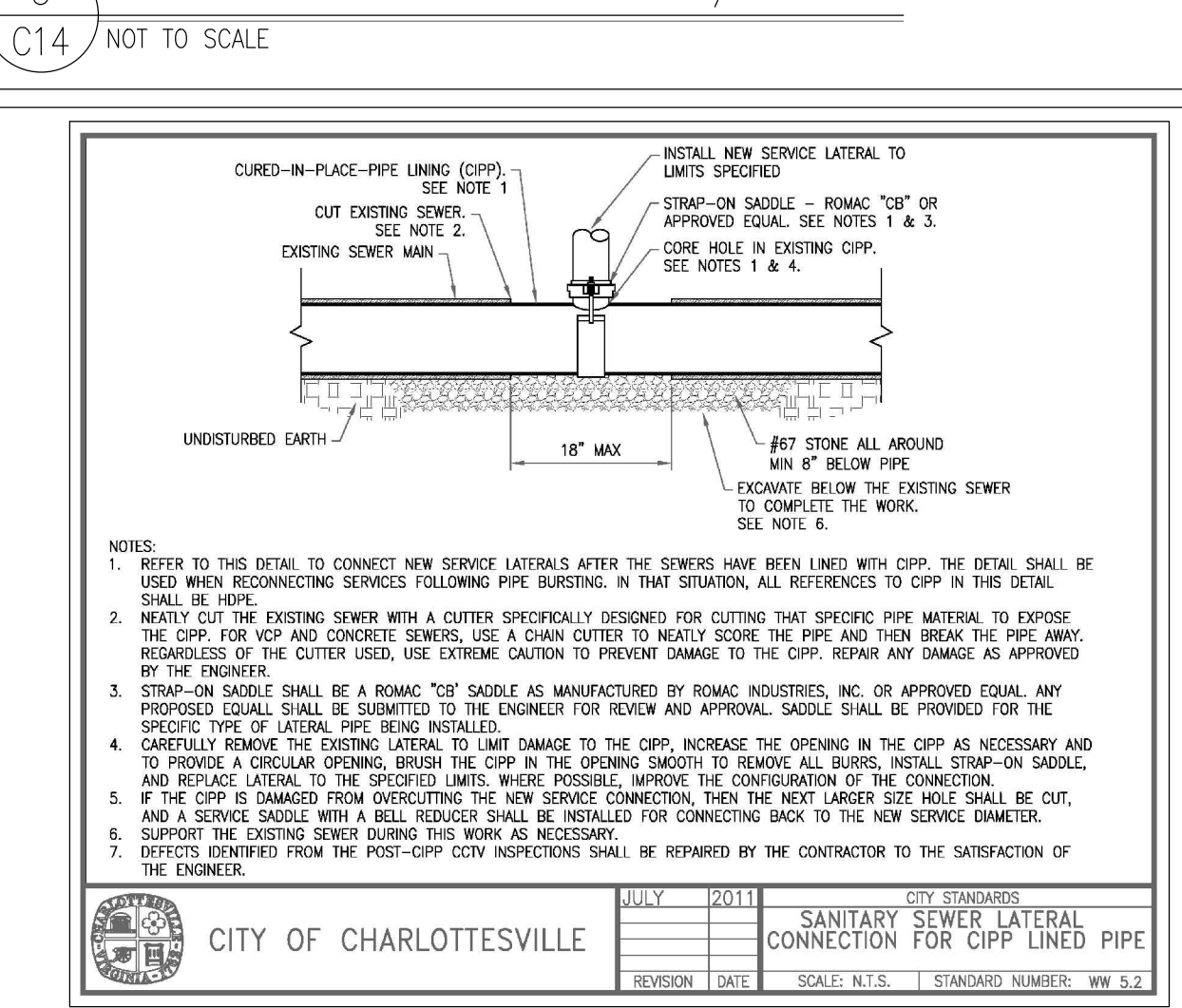
3 HANDICAP PARKING SIGN  
C14 NOT TO SCALE



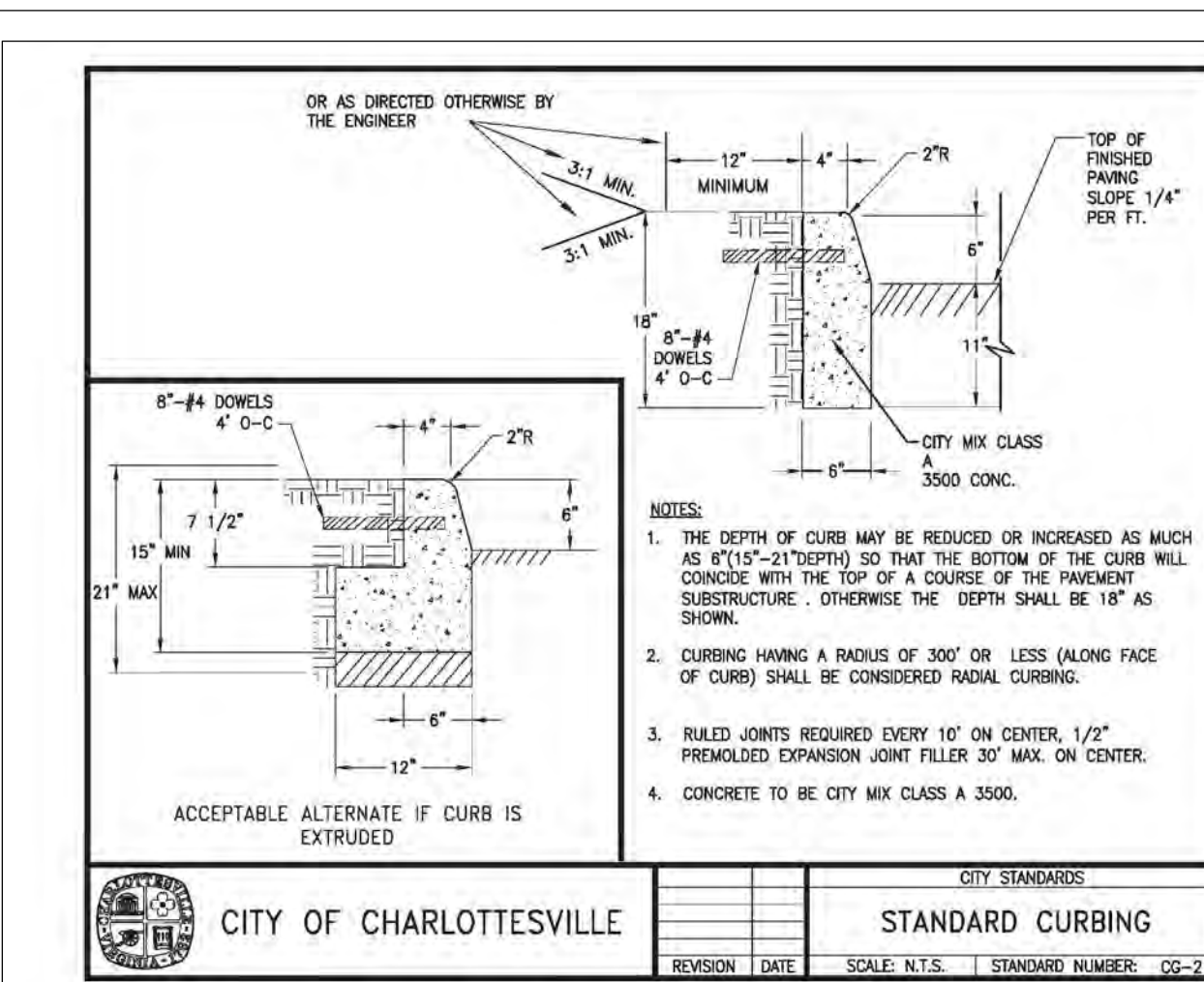
4 PENALTY SIGN DETAIL  
C14 NOT TO SCALE



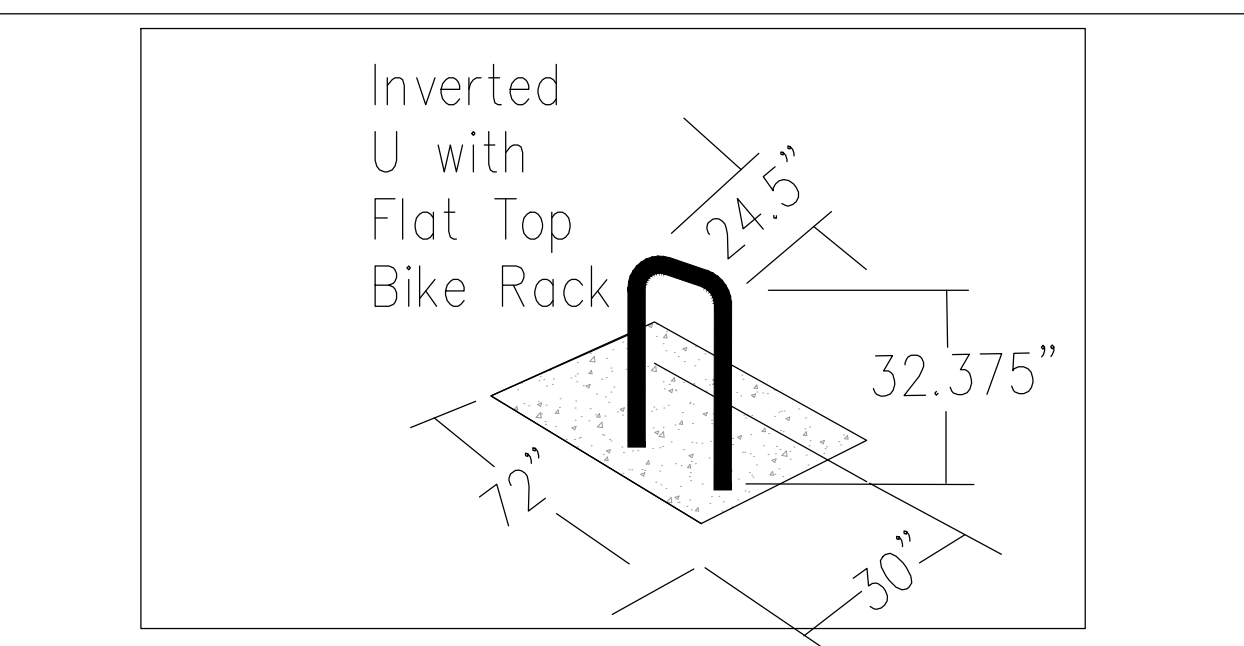
5 CITY OF CHARLOTTESVILLE STANDARD SIDEWALK MONOLITHIC W/ CURB  
C14 NOT TO SCALE



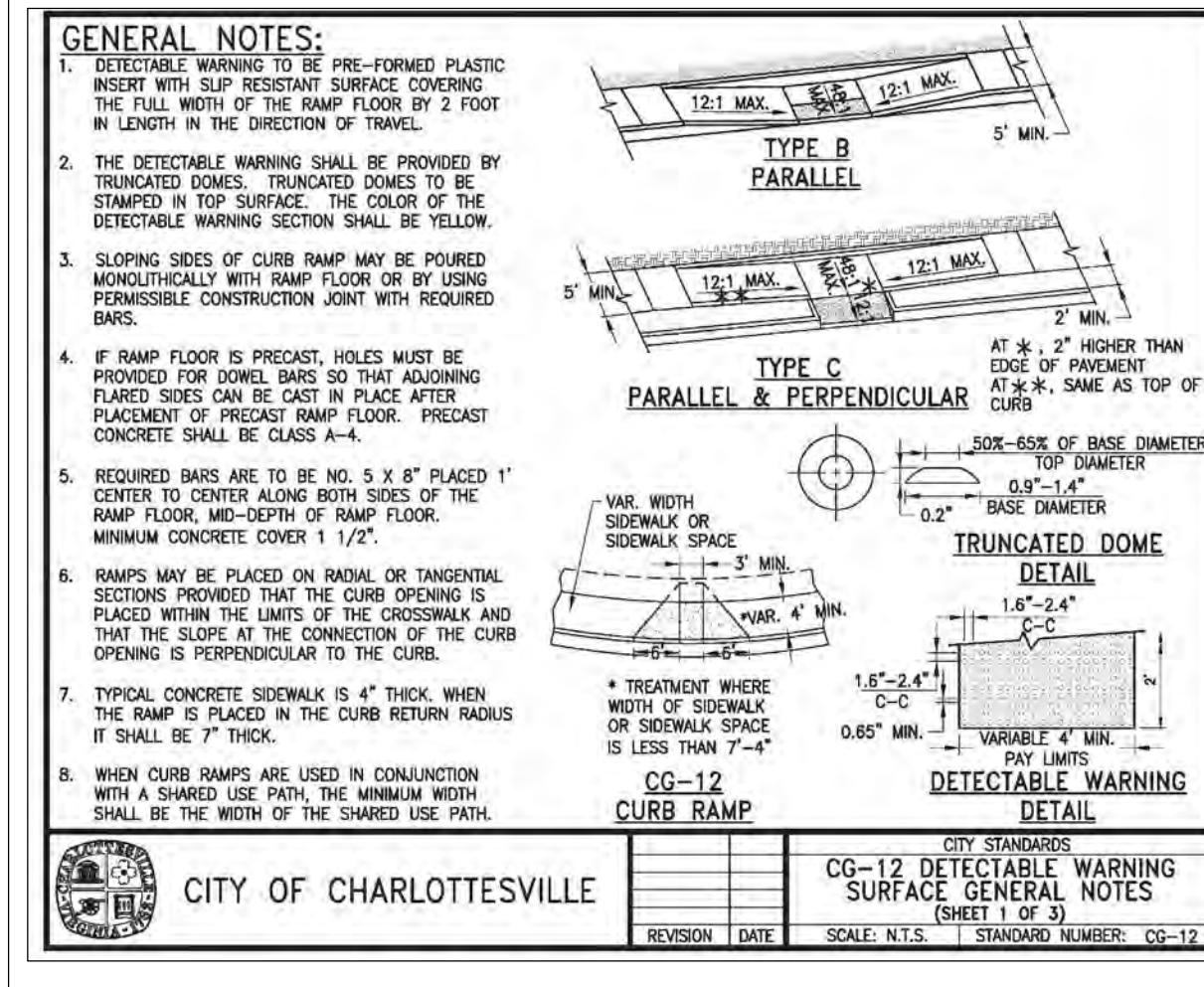
6 CITY OF CHARLOTTESVILLE SANITARY SEWER CONNECTION FOR CIPP LINED PIPE  
C14 Not To Scale



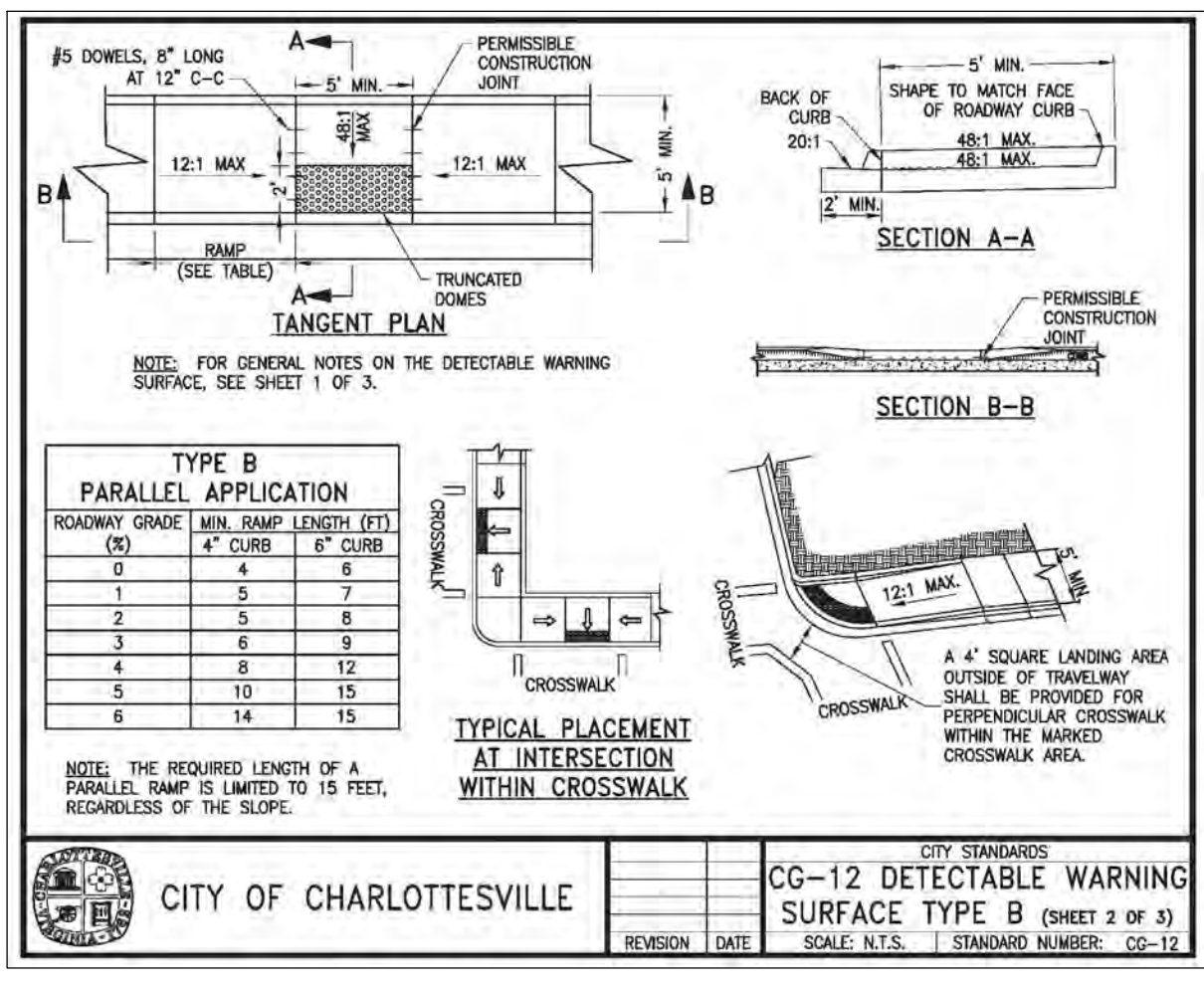
7 CITY OF CHARLOTTESVILLE STANDARD CURBING  
C14 NOT TO SCALE



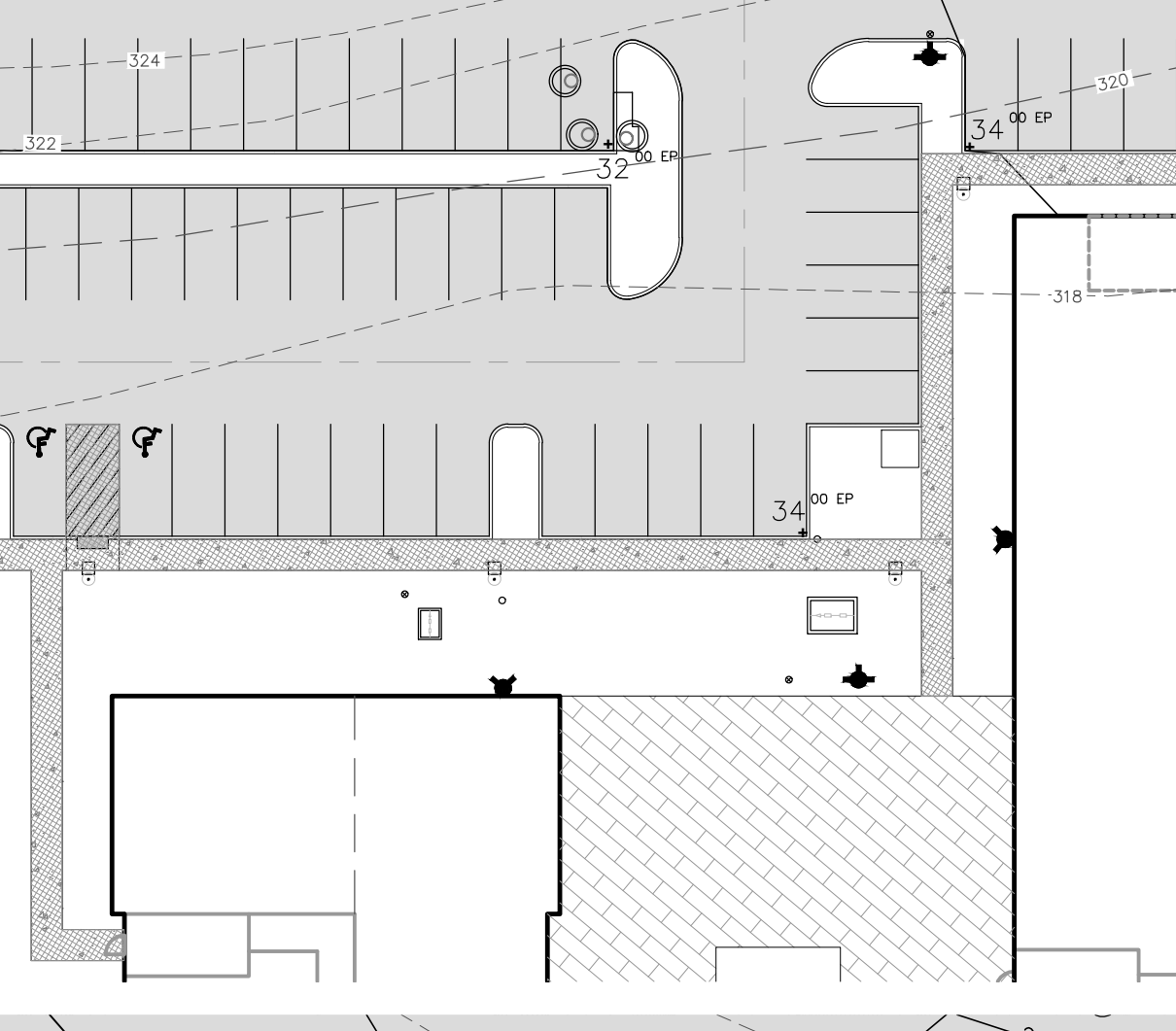
8 INVERTED U BIKE RACK DETAIL  
C14 Not To Scale



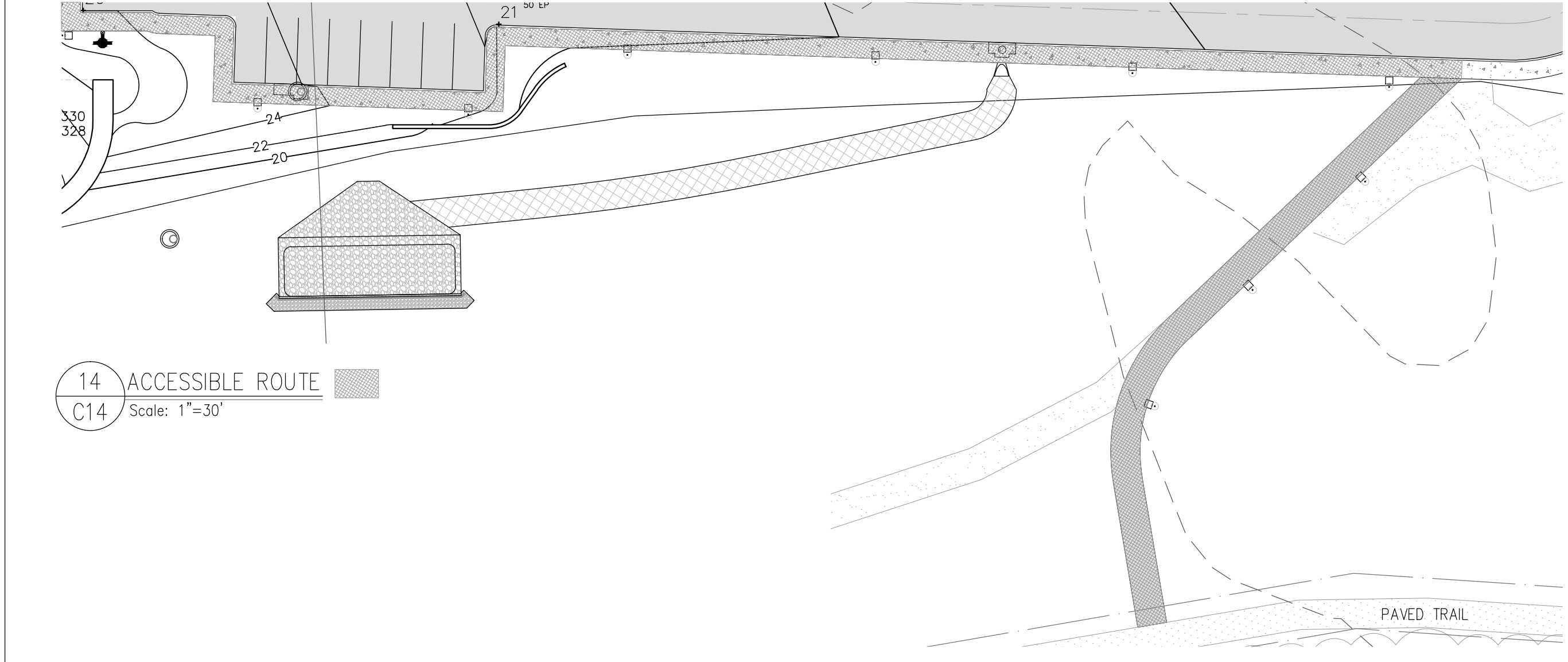
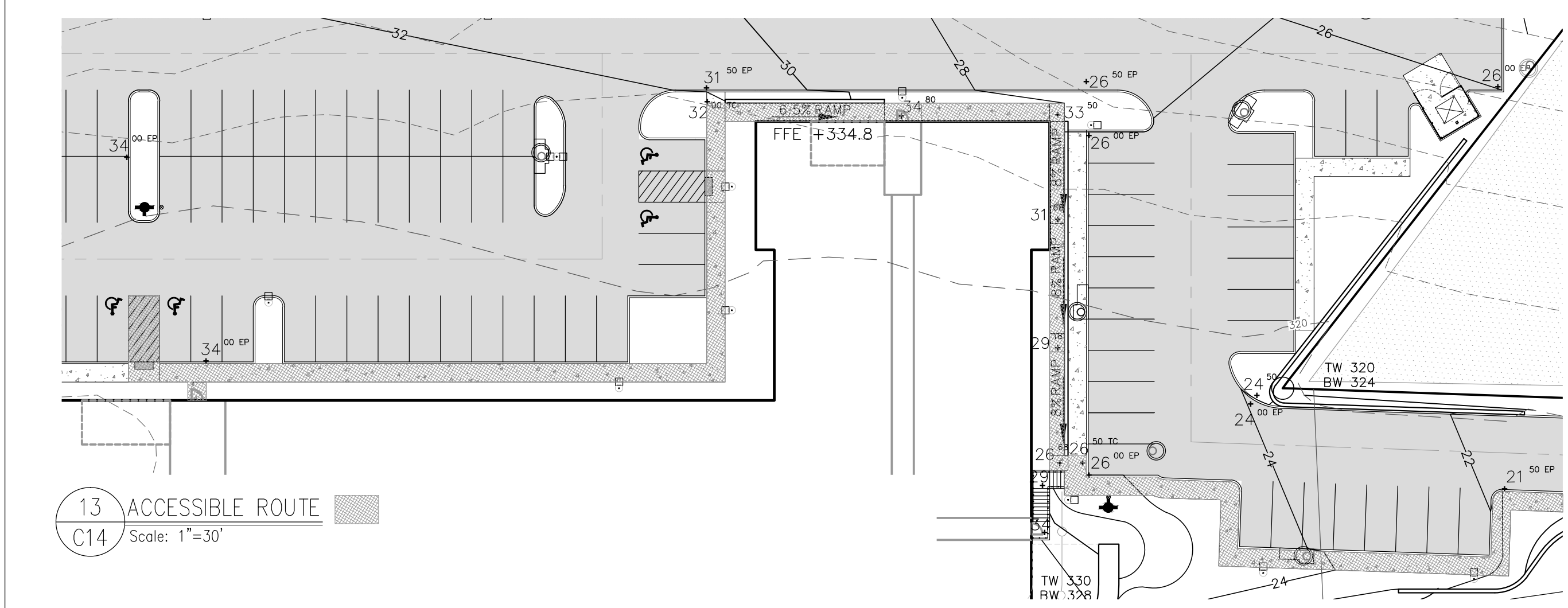
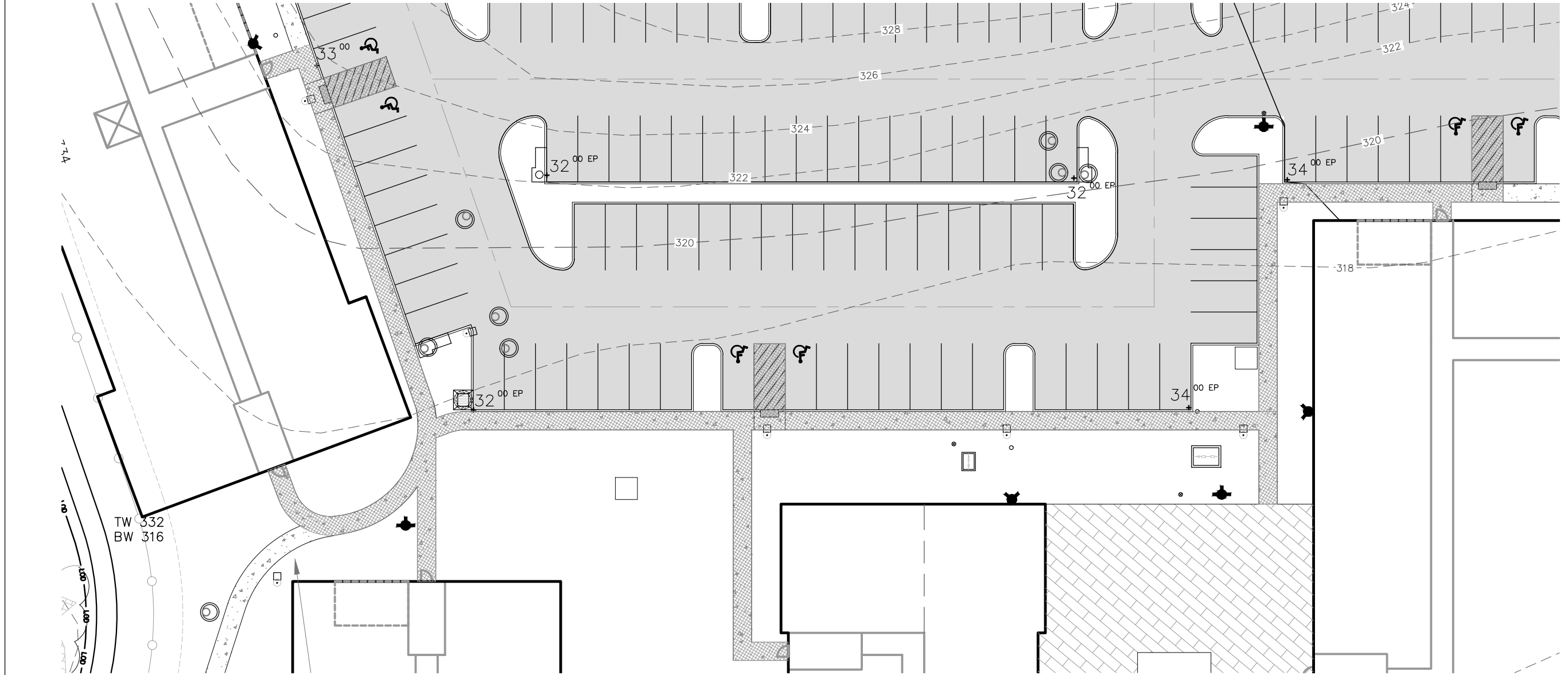
9 CITY OF CHARLOTTESVILLE CG-12 DETECTABLE WARNING SURFACE GENERAL NOTES  
C14 Not To Scale



10 SIDEWALK CONCRETE DETAIL  
C14 Not To Scale



11 CITY OF CHARLOTTESVILLE CG-12 DETECTABLE WARNING SURFACE TYPE B  
C14 Not To Scale

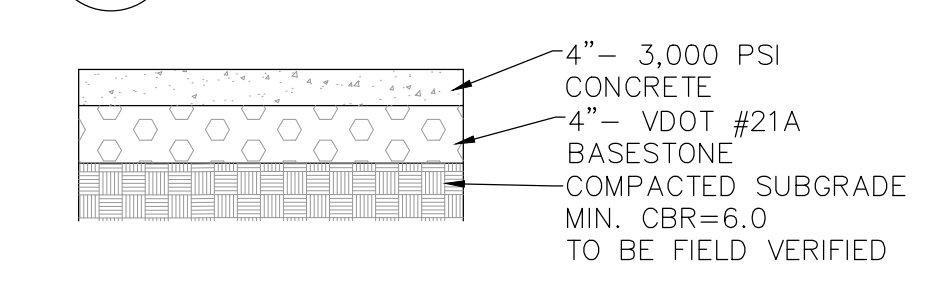


12 ACCESSIBLE ROUTE  
C14 Scale: 1"=30'

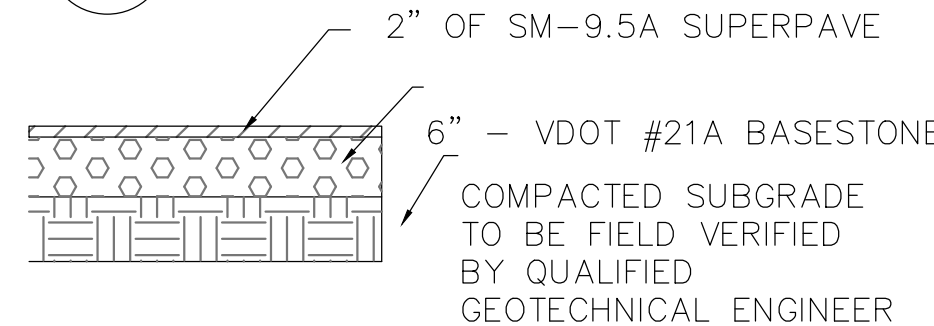
13 ACCESSIBLE ROUTE  
C14 Scale: 1"=30'

14 ACCESSIBLE ROUTE  
C14 Scale: 1"=30'

9 CITY OF CHARLOTTESVILLE CG-12 DETAIL NOT TO SCALE



10 SIDEWALK CONCRETE DETAIL  
C14 Not To Scale



11 PAVEMENT SECTION DETAIL  
C14 Not To Scale

12 ACCESSIBLE ROUTE  
C14 Scale: 1"=30'

**SHIMP ENGINEERING & ARCHITECTURE**

LAND PLANNING • PROJECT MANAGEMENT

912 E. HIGH ST. CHARLOTTESVILLE VA 22902 434.227.5140 JUSTIN@SHIMP-ENGINEERING.COM



PRELIMINARY SITE DEVELOPMENT PLAN

**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA

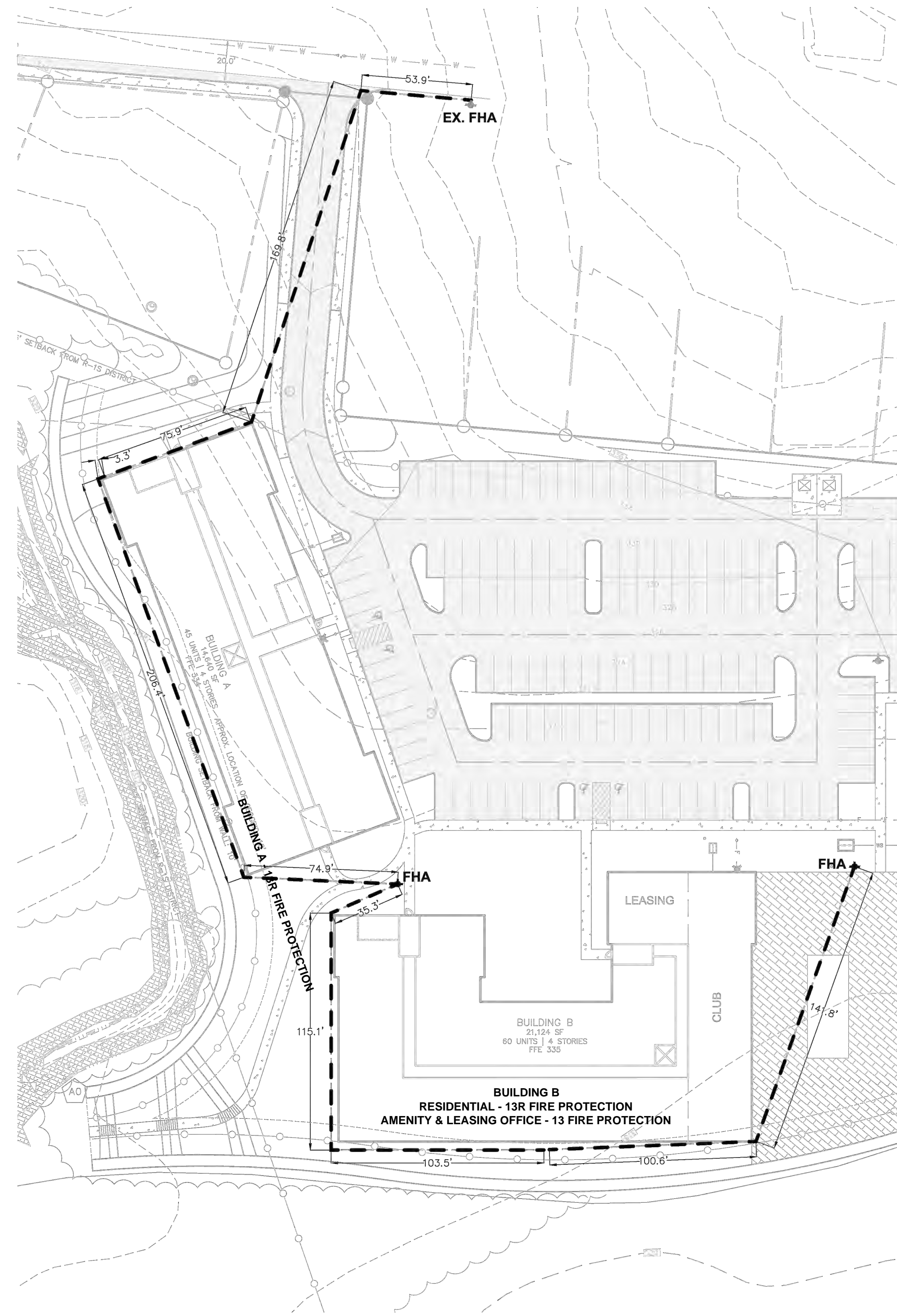
SUBMISSION: 2022.08.05

REVISION: 2022.12.07

FILE NO. 20.017

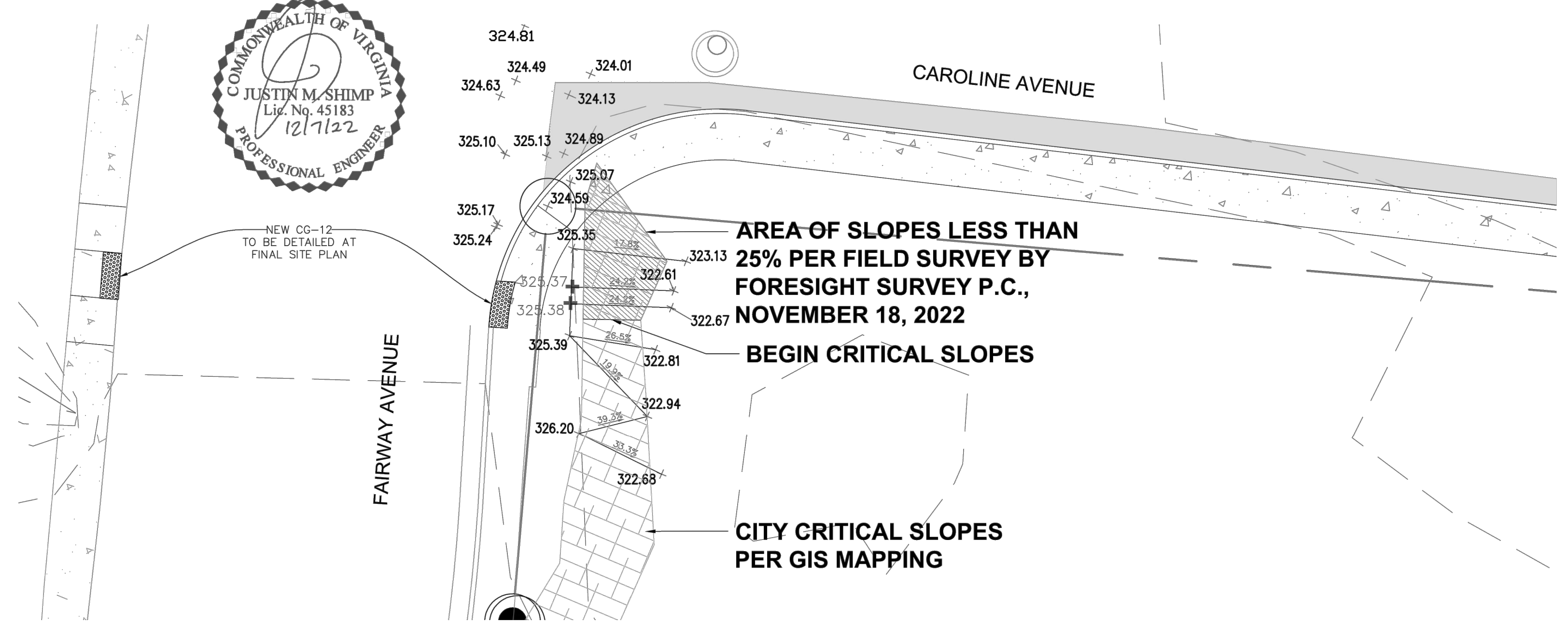
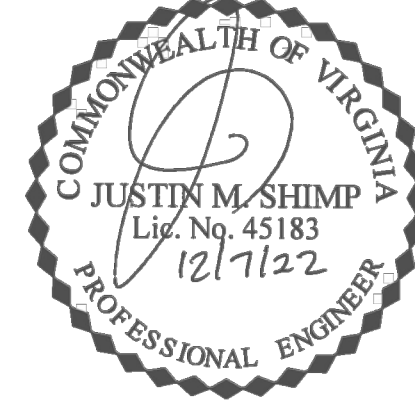
SITE DETAILS

**C14**

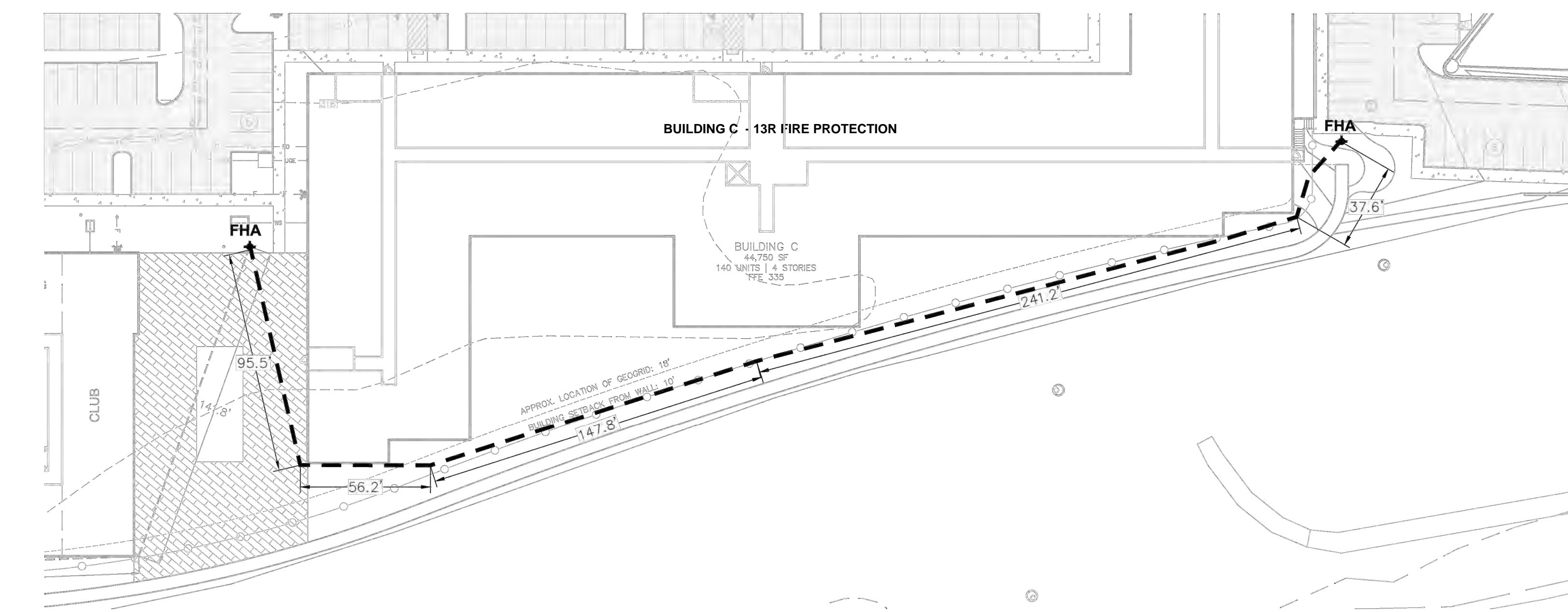
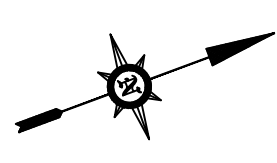


2 DISTANCE BETWEEN FHA & BUILDINGS (MAX 300')  
 C15 SCALE: 1"=40'

**ESTIMATED NEEDED FIRE FLOW AT 1,250 GPM FOR BUILDING A & B**

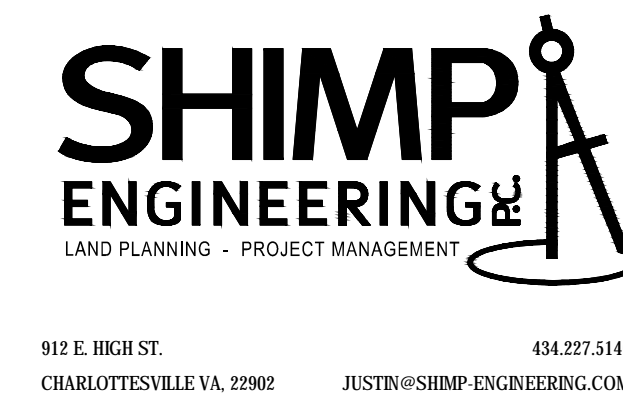


1 PROPOSED SIDEWALK ON CAROLINE AVENUE  
 C15 SCALE: 1"=10'

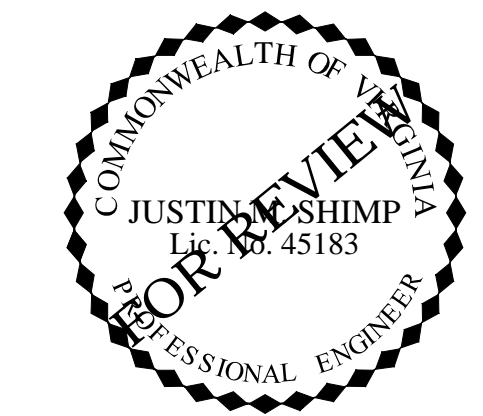


3 DISTANCE BETWEEN FHA & BUILDINGS (MAX 300')  
 C15 SCALE: 1"=40'

**ESTIMATED NEEDED FIRE FLOW AT 1,938 GPM FOR BUILDING C**



912 E. HIGH ST. CHARLOTTESVILLE VA, 22902  
 434.227.5140 JUSTIN@SHIMP-ENGINEERING.COM



PRELIMINARY SITE DEVELOPMENT PLAN  
**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
 SUBMISSION: 2022.08.05  
 REVISION: 2022.12.07

FILE NO. 20.017

SITE EXHIBITS

**C15**

| 0 E High Street Sewer Demand Calculation |           |                 |               |                    |  |
|--|-----------|-----------------|---------------|--------------------|--|
| Use                                      | Bedrooms  | Number of Users | Flow Per User | Total Sewer Demand |  |
|  |           |                 | (gpd)         | (gpd)              |  |
| Bedroom Units * 1.9 persons              | 330 Units | 627 Persons     | 100           | 62700              |  |
|  | Units     | Persons         | 100           | 0                  |  |
|  | SF        | Persons         | 100           | 0                  |  |
| <b>Total Estimated Sewer Demand:</b>     |           |                 |               | <b>62700</b>       |  |

| Water Demand Calculations       |                |              |          |                     |            |
|---------------------------------|----------------|--------------|----------|---------------------|------------|
| Residential 245 units           |                |              |          |                     |            |
| <b>Max Hour Demand</b>          |                |              |          |                     |            |
| Residential:                    |                |              |          |                     |            |
| 2 gpm/unit                      | =              | 490 gpm      | =        | 29400 gph           |            |
| or                              |                |              |          |                     |            |
| Q=11.4*N*0.544                  | =              | 227.306 gpm  | =        | 13638.37 gph        | (not used) |
| Commercial:                     |                |              |          |                     |            |
| Office Space                    | =              | 200/1,000 sf | =        | Average Daily Flows |            |
|                                 |                |              |          | 0.00 gpd            | = 0.00 gph |
| Max Hour                        | =              | 11.84 x 300% | =        | 0.00 gph            |            |
| <b>Total =</b>                  | <b>29400 +</b> | <b>0.00</b>  | <b>=</b> | <b>29400.00 gph</b> |            |
| <b>Peak Hour Demand</b>         |                |              |          |                     |            |
| Residential:                    |                |              |          |                     |            |
| 3 gmp Per                       | =              | 735 gpm      | =        | 44100 gph           |            |
| Commercial:                     |                |              |          |                     |            |
| 1.5' Max Hour Demand Commercial | =              |              | =        | 0.00 gph            |            |
| <b>Total =</b>                  | <b>44100 +</b> | <b>0</b>     | <b>=</b> | <b>44100.00 gph</b> |            |

**BUILDING A**  
SIZING WATER SERVICE LINES AND METERS

CITY OF CHARLOTTESVILLE  
**WATER CUSTOMER DATA SHEET**

|                   |                 |         |        |          |       |
|-------------------|-----------------|---------|--------|----------|-------|
| Customer          | 0 E High Street | Address |        | Zip Code | 22901 |
| Building Address  | 0 E High Street |         |        |          |       |
| Subdivision       |                 | Lot No. | 50-144 | Blk. No. |       |
| Type of Occupancy | Residential     |         |        |          |       |

| Fixture                             | Fixture Value 60 psi | No. of Fixtures | Fixture Value   |
|-------------------------------------|----------------------|-----------------|-----------------|
| Bathub                              | 8 x                  | 54              | = 432           |
| Bedpan Washers                      | 10 x                 |                 | = 0             |
| Bidet                               | 2 x                  |                 | = 0             |
| Dental Unit                         | 2 x                  |                 | = 0             |
| Drinking Fountain - Public          | 2 x                  |                 | = 0             |
| Kitchen Sink                        | 2.2 x                | 44              | = 96.8          |
| Lavatory                            | 1.5 x                | 59              | = 88.5          |
| Showerhead (Shower Only)            | 2.5 x                | 5               | = 12.5          |
| Service Sink                        | 4 x                  |                 | = 0             |
| Toilet - Flush Valve                | 35 x                 |                 | = 0             |
| - Tank Type                         | 4 x                  | 59              | = 236           |
| Urinal - Pedestal Flush Valve       | 35 x                 |                 | = 0             |
| - Wall Flush Valve                  | 16 x                 |                 | = 0             |
| Wash Sink (Each Set of Faucets)     | 4 x                  |                 | = 0             |
| Dishwasher                          | 2 x                  | 44              | = 88            |
| Washing Machine                     | 6 x                  | 44              | = 264           |
| Hose (50 ft Wash Down) - 1/2 in.    | 5 x                  |                 | = 0             |
| - 5/8 in.                           | 9 x                  |                 | = 0             |
| - 3/4 in.                           | 12 x                 |                 | = 0             |
| <b>Combined Fixture Value Total</b> |                      |                 | <b>= 1217.8</b> |

Pressure Factor from Table 4-1 = 1.34gpm 110 psi  
Customer Peak Demand From Fig. 4-2 or 4-3 x Press. Factor = 87.1 gpm  
Add Irrigation - Sections\* x 1.16 or 0.40+ =          gpm  
- 1 Hose-Bib x 9 Hose Bibs x Fixture Value x Press. Factor = 12.06 gpm  
Added Fixed Load =          gpm  
**TOTAL FIXED DEMAND** = 99.16 gpm

\* 100 ft<sup>2</sup> area = 1 section  
+ Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)  
Copyright 2004, American Water Works Association

**BUILDING B**  
SIZING WATER SERVICE LINES AND METERS

CITY OF CHARLOTTESVILLE  
**WATER CUSTOMER DATA SHEET**

|                   |                 |         |        |          |       |
|-------------------|-----------------|---------|--------|----------|-------|
| Customer          | 0 E High Street | Address |        | Zip Code | 22901 |
| Building Address  | 0 E High Street |         |        |          |       |
| Subdivision       |                 | Lot No. | 50-144 | Blk. No. |       |
| Type of Occupancy | Residential     |         |        |          |       |

| Fixture                             | Fixture Value 60 psi | No. of Fixtures | Fixture Value   |
|-------------------------------------|----------------------|-----------------|-----------------|
| Bathub                              | 8 x                  | 76              | = 608           |
| Bedpan Washers                      | 10 x                 |                 | = 0             |
| Bidet                               | 2 x                  |                 | = 0             |
| Dental Unit                         | 2 x                  |                 | = 0             |
| Drinking Fountain - Public          | 2 x                  |                 | = 0             |
| Kitchen Sink                        | 2.2 x                | 61              | = 134.2         |
| Lavatory                            | 1.5 x                | 82              | = 123           |
| Showerhead (Shower Only)            | 2.5 x                | 6               | = 15            |
| Service Sink                        | 4 x                  |                 | = 0             |
| Toilet - Flush Valve                | 35 x                 |                 | = 0             |
| - Tank Type                         | 4 x                  | 82              | = 328           |
| Urinal - Pedestal Flush Valve       | 35 x                 |                 | = 0             |
| - Wall Flush Valve                  | 16 x                 |                 | = 0             |
| Wash Sink (Each Set of Faucets)     | 4 x                  |                 | = 0             |
| Dishwasher                          | 2 x                  | 61              | = 122           |
| Washing Machine                     | 6 x                  | 61              | = 366           |
| Hose (50 ft Wash Down) - 1/2 in.    | 5 x                  |                 | = 0             |
| - 5/8 in.                           | 9 x                  |                 | = 0             |
| - 3/4 in.                           | 12 x                 |                 | = 0             |
| <b>Combined Fixture Value Total</b> |                      |                 | <b>= 1696.2</b> |

Pressure Factor from Table 4-1 = 1.34gpm 110 psi  
Customer Peak Demand From Fig. 4-2 or 4-3 x Press. Factor = 93.8 gpm  
Add Irrigation - Sections\* x 1.16 or 0.40+ =          gpm  
- 1 Hose-Bib x 9 Hose Bibs x Fixture Value x Press. Factor = 12.06 gpm  
Added Fixed Load =          gpm  
**TOTAL FIXED DEMAND** = 105.86 gpm

\* 100 ft<sup>2</sup> area = 1 section  
+ Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)  
Copyright 2004, American Water Works Association

**BUILDING C**  
SIZING WATER SERVICE LINES AND METERS

CITY OF CHARLOTTESVILLE  
**WATER CUSTOMER DATA SHEET**

|                   |                 |         |        |          |       |
|-------------------|-----------------|---------|--------|----------|-------|
| Customer          | 0 E High Street | Address |        | Zip Code | 22901 |
| Building Address  | 0 E High Street |         |        |          |       |
| Subdivision       |                 | Lot No. | 50-144 | Blk. No. |       |
| Type of Occupancy | Residential     |         |        |          |       |

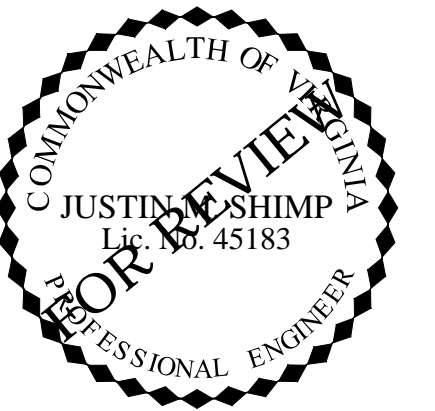
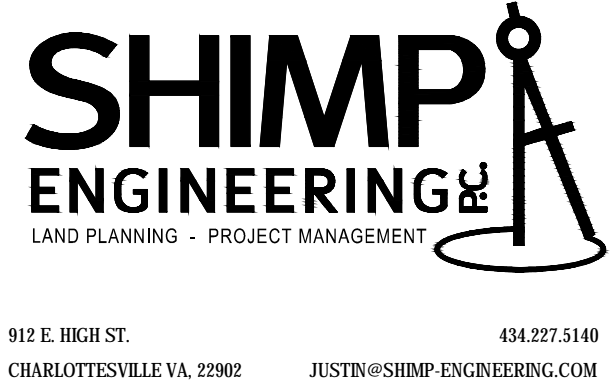
| Fixture                             | Fixture Value 60 psi | No. of Fixtures | Fixture Value   |
|-------------------------------------|----------------------|-----------------|-----------------|
| Bathub                              | 8 x                  | 175             | = 1400          |
| Bedpan Washers                      | 10 x                 |                 | = 0             |
| Bidet                               | 2 x                  |                 | = 0             |
| Dental Unit                         | 2 x                  |                 | = 0             |
| Drinking Fountain - Public          | 2 x                  |                 | = 0             |
| Kitchen Sink                        | 2.2 x                | 140             | = 308           |
| Lavatory                            | 1.5 x                | 175             | = 262.5         |
| Showerhead (Shower Only)            | 2.5 x                | 14              | = 35            |
| Service Sink                        | 4 x                  |                 | = 0             |
| Toilet - Flush Valve                | 35 x                 |                 | = 0             |
| - Tank Type                         | 4 x                  | 175             | = 700           |
| Urinal - Pedestal Flush Valve       | 35 x                 |                 | = 0             |
| - Wall Flush Valve                  | 16 x                 |                 | = 0             |
| Wash Sink (Each Set of Faucets)     | 4 x                  |                 | = 0             |
| Dishwasher                          | 2 x                  | 140             | = 280           |
| Washing Machine                     | 6 x                  | 140             | = 840           |
| Hose (50 ft Wash Down) - 1/2 in.    | 5 x                  |                 | = 0             |
| - 5/8 in.                           | 9 x                  |                 | = 0             |
| - 3/4 in.                           | 12 x                 |                 | = 0             |
| <b>Combined Fixture Value Total</b> |                      |                 | <b>= 3825.5</b> |

Pressure Factor from Table 4-1 = 1.34gpm 110 psi  
Customer Peak Demand From Fig. 4-2 or 4-3 x Press. Factor = 117.92 gpm  
Add Irrigation - Sections\* x 1.16 or 0.40+ =          gpm  
- 2 Hose-Bib x 9 Hose Bibs x Fixture Value x Press. Factor = 24.12 gpm  
Added Fixed Load =          gpm  
**TOTAL FIXED DEMAND** = 142.04 gpm

\* 100 ft<sup>2</sup> area = 1 section  
+ Spray Systems- Use 1.16; Rotary systems- Use 0.40

Figure 4-5 Water customer data sheet

Source: AWWA M22 Sizing Water Service Lines and Meters (Jan. 2004)  
Copyright 2004, American Water Works Association



PRELIMINARY SITE DEVELOPMENT PLAN

**0 EAST HIGH STREET**

CITY OF CHARLOTTESVILLE, VIRGINIA  
SUBMISSION:  
2022.08.05  
REVISION:  
2022.12.07

FILE NO. 20.017

WATER & SANITARY  
DEMAND CALCULATIONS

**C16**