CouNTY OFAMHERST

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Perteet Sllce of Virginia

Department of Community Development

Division of Planning & Zoning

TELEPHONE (434) 946-9303

FAX (434) 946-9370

AMHERST COUNTY ADMINI STRAT ION BUI LDING
153 WASH! GTO STREET
P. 0. Box 390
AMHERST, VIRGI IA 24521

June 26, 2019

SENT VIA E-MAIL AND HAND DELIVERED
Waukeshaw Development, LLC
Attn: Dave McCo rmac k
245 East Bank Street
Petersburg, VA 23803

RE: Site Plan #2019-262 for Phelps Road Apartments in the R-3 Multi- Family Residential District;
123 Phelps Road;
Tax Map Parcel# 155D-A-44

The follow ing com ments need to be addressed regarding planning and zoning:

I. Per Section 11 04.02.5.a, include on the cove r shee t signa ture blocks for the Zoning Adminis trator, Virginia Department of Trans portation, and Amherst Co unt y Service Authority.
OK. Done.

2. Per Section 1605. b, include in the la ndscaping calculations one tree per 50' of street frontage and one shrub per IO' of street frontage.
OK. Done. Please see Sheet C5.

3. Per Section 1605 .d, ind icate that planting islands are a mini mum of 50 square feet (per tree).
OK. Done. Please see Sheet C5.

A set of five (5) revised plans are due back to this office on July 8, 2019 in order for the request to be beard at the July 18, 2019 Planning Commission meeting.
Please contact the Planning & Zoning Division with questions or comments at (434) 946-9303 or via email at jsb ryant@cou ntyofamherst.com.

Sincere ly,

Dylan M Bishop

Dylan M. Bisho p
Assistant Zoning Administrator/Pla nner

AMHERST COUNTY SERVICE AUTHORITY

P. 0. BOX 100
MADISON HEIGHTS, VA 24572-0100
PHONE {434) 845-1605
FAX {434) 845-1613

June 24, 2019

Ms. Dylan M. Bishop
Assistant Zoning Administrator/Planner
Amherst County Dept. of Planning and Zoning
PO Box 390
Amherst, VA 24521

RE: Phelps School Site Plan
123 Phelps Road, Madison Heights

Dear Ms. Bishop:

In response to your request, I have reviewed the referenced plan and appurtenant documents. The following comments are provided, for your use and forwarding to the applicant :

1. The public road immediately southeast of the property is Center St.; High St. connects to Center St. at the northeast corner nf the property (see the attached excerpt from the County GIS system). OK. Street names have been corrected.
2. Availability and connection fees for the new water and wastewater service connections will be determined when the site plans are finalized and approved for permits and construction. OK. So noted.
3. On Sheet C2, Note 8 should be revised to correct "Atkins" to "Hopkins". Oops. Sorry.
4. The existing 6" public water main along the Phelps Rd. site frontage is too small for the addition of 40 - 50 new services, along with fire protection for the building, without adversely impacting service to the site and existing customers. The required upsize to at least an 8" line along Phelps Road from Rte. 163 to Center St. needs to be described by the plans. OK. Done. New water main by ACSA shown per email from Bob Hopkins dated 7-2-19.
5. The existing water service line and meter to the building may be undersized for the proposed 2½" water service line. The engineer should confirm the sizes and sufficiency of the existing service line and meter to provide proper service to the proposed building. Peak flow is only 60 gpm. Please see calcs. attached.
6. The separate service lines to the building for domestic water service and fire protection do not meet ACSA requirements. Refer to ACSA Standard Detail FP-1, Fire Protection Vault - Private Sprinkler/ F.H. 2" -10". OK. Plans have been revised to include domestic service in vault per ACSA detail. Same is coord. per email dated 7-2-19.
7. In preliminary discussions with County staff, it was assumed that the vault in Comment 6 would be sited behind the building, with a connection to an upgrade to 8" of the existing 2" water main along Center St. This is not a requirement, but a suggestion to the applicant. OK. Fire and domestic services and vault location and water mains have been revised per email dated 7-2-19.
8. The wastewater servi::e line should be aligned for a perpendicular connection to the existing ACSA public sanitary sewer in Phelps Rd, instead of a longer, diagonal crossing of the Phelps Rd./ High St. intersection to connect to the existing manhole. The diagonal line creates a maintenance issue for ACSA. VDOT also does not like service lines diagonally crossing intersections and is likely to oppose the proposed connection. OK. Done.
9. Is a single 6" sanitary sewer service sufficient for 40 - 50 apartments? The subject line size has been increased to 8".

10. In addition to the public water main upgrades along Phelps Rd. and Center St. at developer expense, ACSA would like to upgrade the existing 6" water main along Phelps Rd. from Center St. to East St., at its expense, to complete the elimination of the 6" bottleneck in the water main between Rte. 163 and East St. I defer to follow-up communication as response to this comment.

11. In addition to the public water main upgrades along Phelps Rd. and Center St. at developer expense, ACSA would like to u;:igrade the existing 2" water main along High St., at its expense, to improve water service and provide fire protection with a hydrant near the Center St./ High St. intersection. Likewise, I defer to follow-up communication as response to this comment.

12. How can the improvements discussed in Comments 10 and 11 be incorporated into the const ruct io n project for Phelps Rd. School re-development, to maximize efficiency and minimize cost? This is addressed in subsequent communications.

13. The Comment 11 suggestion of a new public fire hydrant would elim inate the need for the privat e fire hydrant shown near the fire protection vault, though it is the applicant's decision as to whether to delete the private equipment. OK. So noted. The private hydrant has been deleted.

14. The various ACSA standard detail numbers (see Sheet C4) should be included in the callouts of the subject features on the plans. OK. So noted.

15. Water Note 2 on Sheet C-3 : Per Section 3.1.2.2 of the ACSA technical specifications, the applican t will need to show that the pressure in the water main will never exceed 90 psi for the proposed substitution of Class 150, SDR 18, C900 PVC pipe for the typically required Class 200, SDR 14, C900 PVC pipe. Unless it can be adequately demonstrated that line pressures will never exceed 90 psi, Class 200, SDR 14, C900 PVC pipe must be used. OK. Note revised.

16. What is the developer's intention regarding the construction of the required water and sewer main upgrades and installation of the public portions of the water and sewer services? ACSA requires pre-qualification of contractors working on existing ACSA water and sewer lines, as well as proposed public lines to be accepted by ACSA for ownership and operat ion. A copy of the pre-qualifi cat io n form is attached. As an alte rnat ive, the developer can select an already pre-qualified contractor from the attached list, which would minimize cost and construction problems, as these contractors are all local and very familiar with ACSA requirements. It is our understanding that this comment is no longer applicable per subsequent communications.

17. The following notes should be added to Sheet C3: OK. Done. Please see new general notes 8 and 9.

    THE CONTRACTOR SHALL NOT OPERATE ANY PUBLIC WATER OR SEWER FACILITIES, BUT SHALL CONTACT ACSA TO COORDINATE OPERATION.

    WATER AND SEWER SERVICES FROM THE MAINS TO THE PROPERTY LINE SHALL BE INSTALLED BY ACSA AT LOCATIONS PROVIDED BY APPLICANT, UPON PAYMENT OF REQUIRED NEW SERVICE FEES.

18. The following ACSA standard detail need to be included in the final site plan submittal: OK. Done.

    CS-2 Typical Water or Sewer Main Location Within VDOT Right-of-Way

Thank you for the opportunity to review the plans. There may be additional review comments when the plans are re-submitted. Please contact me if there are any questions.

Sincerely,

AMHERST COUNTY SERVICE AUTHORITY

Robert A. Hopkins, PE
Director of Public Utilities

Enclosures (3)

5-29-19

CITY OF ACSA

Water Customer Data Sheet

Customer Phelps School Address 123 Phelps Rd.
Building Address Madison Heights Zip Code 24572
Subdivision _____ Lot No. _____ Blk. No. _____
Type of Occupancy 40 Unit Apartments

(34) 1 BR
(6) 2 BR

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Bathtub	8	×	46	=	368
Bedpan Washers	10	×		=	
Bidet	2	×		=	
Dental Unit	2	×		=	
Drinking Fountain – Public EWC?	2	×	2	=	4
Kitchen Sink	2.2	×	40	=	88
Lavatory	1.5	×	46	=	69
Showerhead (Shower Only)	2.5	×		=	
Service Sink	4	×	3	=	12
Toilet – Flush Valve	35	×		=	
– Tank Type	4	×	46	=	184
Urinal – Pedestal Flush Valve	35	×		=	
– Wall Flush Valve	16	×		=	
Wash Sink (Each Set of Faucets)	4	×		=	
Dishwasher	2	×	40	=	80
Washing Machine	6	×	40	=	240
Hose (50 ft Wash Down) – 1/2 in.	5	×		=	
– 5/8 in.	9	×		=	
– 3/4 in.	12	×		=	

Combined Fixture Value Total = 1,045

Customer Peak Demand From Fig. 4 – 2 or 4 – 3 × Press. Factor = 60 gpm

Add Irrigation – _____ Sections* × 1.16 or 0.40† = _____ gpm
– _____ Hose Bibs × Fixture Value × _____ Press. Factor = _____ gpm
Added Fixed Load = _____ gpm
TOTAL FIXED DEMAND = _____ gpm

*100 ft² area = 1 section
†Spray systems – Use 1.16; Rotary systems – Use 0.40

∴ use 1 1/2" Meter

High Normal = 50 gpm
Max Flow = 100 gpm

Figure 4-5 Water customer data sheet

Table C-18 Friction loss in pipe—C=130—2 1/2-in. polyvinyl chloride pipe

C=130	SDR17 ID* = 2.497		SDR21 Sch. 40 ID = 2.561		SDR26 ID = 2.615	
Flow *gpm*	Head Loss *ft/100 ft*	Velocity *ft/s*	Head Loss *ft/100 ft*	Velocity *ft/s*	Head Loss *ft/100 ft*	Velocity *ft/s*
20	0.38	1.31	0.33	1.25	0.30	1.19
25	0.57	1.64	0.50	1.56	0.46	1.49
30	0.80	1.97	0.71	1.87	0.64	1.79
35	1.06	2.29	0.94	2.18	0.85	2.09
40	1.36	2.62	1.21	2.49	1.09	2.39
45	1.70	2.95	1.50	2.80	1.35	2.69
50	2.06	3.28	1.82	3.11	1.65	2.99
60	2.89	3.93	2.55	3.74	2.31	3.58
70	3.84	4.59	3.40	4.36	3.07	4.18
80	4.92	5.24	4.35	4.98	3.93	4.78
90	6.12	5.90	5.41	5.61	4.89	5.38
100	7.44	6.55	6.58	6.23	5.94	5.97
110	8.88	7.21	7.85	6.85	7.09	6.57
120	10.43	7.86	9.22	7.47	8.33	7.17
130	12.09	8.52	10.69	8.10	9.66	7.77
140	13.87	9.17	12.26	8.72	11.08	8.36
150	15.76	9.83	13.94	9.34	12.59	8.96
160	17.76	10.48	15.70	9.97	14.19	9.56
170			17.57	10.59	15.87	10.16

*ID=inside diameter—ASTM D2241

NOTE: To convert psi to kPa: psi × 6.89476; to convert gpm to m^3/hr: gpm × 0.227

Jeff Robinson

To: Jeffery Kessler
Subject: RE: Phelps Road Apartments Site Plan Appl. #2019 - 262, Amherst Co. Development Review Committee July 26, 2019 Meeting

From: Jeffery Kessler <jefferyb.kessler@vdot.virginia.gov>
Sent: Tuesday, June 25, 2019 7:03 PM
To: dmbishop@countyofamherst.com
Cc: jsbryant@countyofamherst.com; robinsonj@jrallpc.com; P. E. Robert A. Hopkins <rhopkins@acsava.com>; Sara.Brown@vdot.virginia.gov
Subject: Phelps Road Apartments Site Plan Appl. #2019 - 262, Amherst Co. Development Review Committee July 26, 2019 Meeting

Dylan,

In review of Jeff Robinson & Associates June 3, 2019 site plans for the Phelps School (Phelps Road Apartments) in Madison Heights, we offer the following initial comments.

1. The main roadway entrance to the development is proposed along High Street (Route 1026) and located in a curve. While sight distance (intersection or stopping?) is shown along each approach, minimum sight distance is also required for vehicles making a left turn from High Street into the entrance from opposing through vehicles along high Street. OK. Done. Please see sight distance map added to new Sheet C4.

2. The plan will need to depict any additional vehicle or pedestrian access from or along the state roadway, including any planned on street parking. All parking and pedestrian access is planned from rear parking lot. We are able to provide (89) parking spaces which is more than the minimum (80) spaces required.....2 spaces x 40 units.

3. The site plan depicts 91 parking places but did not include ITE Trip Generation numbers for the development. ITE data added to VDOT notes on new Sheet C4.

4. The entrance geometrics will be based on the design vehicle turning movements. OK. So noted.

5. The plans are to also depict the width of the existing road (High Street) and current VDOT publicized traffic count. OK. Done.

6. Additional entrance sight plan details as depicted in the attached VDOT Site Plan Check List are to be addressed which includes but not limited to use, location, sight distance(s), design vehicle turning templates, geometrics, drainage, plan notes, VDOT signature block and maintenance of traffic plan. OK. See new Sheet C4.
7. The method and location of any utility requested to be placed within VDOT right-of-way will require the approval of the facility's owner and the acceptance of VDOT as part of the final plan approval. A VDOT permit is required for any utility work within our right-of-way. OK. So noted.

8. Attached is a copy of the VDOT site plan notes for inclusion, along with guidance on preparing the required maintenance of traffic plan. OK. See new Sheet C4.

9. Due to the nature of these comments and those from other agencies, subsequent review of revised plans for approval will be required. VDOT approval of plans will only come about once all agencies have approved them. OK. So noted.

10. Our office will accept electronic files of signed and sealed site plan revisions and support documents during the review process. Signed and sealed hard copies of the final site plans along with an electronic file in PDF format will be required for final acceptance and signature. OK. So noted.

Upon final plan acceptance, a Land Use Permit will be required prior to construction of any work in VDOT right of way. Additional information about Land Use Permitting as well as the required forms can be found on the VDOT website at: http://www.virginiadot.org/business/bu-landusepermits.asp

The developer and consultant may visit the Land Developers Information Center at http://www.virginiadot.org/info/land_use.asp for additional guidance on VDOT site plan submissions and reference material.

I will be happy to discuss any specific questions pertaining to these comments or the site plans.

Sincerely,
Jeff

Jeffery B. Kessler, P.E.
Area Land Use Engineer
VDOT - Lynchburg
434.856.8293
JefferyB.Kessler@VDOT.Virginia.gov

Jeff Robinson

To: Jeffery Kessler
Subject: RE: Phelps School - Entrance Design

From: Jeffery Kessler <jefferyb.kessler@vdot.virginia.gov>
Sent: Tuesday, July 2, 2019 1:48 PM
To: dmbishop@countyofamherst.com
Cc: jsbryant@countyofamherst.com; rhopkins@acsava.com; nmyoung@countyofamherst.com; sabryant@countyofamherst.com; Jeff Robinson <robinsonj@jrallpc.com>; Sara.Brown@vdot.virginia.gov
Subject: RE: Phelps School - Entrance Design

Dylan,

Option A's approach may work with the following items addressed.

1. Verify Design Vehicle Type (SU-40) with Co. Emergency Services for their Ladder Truck. OK. Done. Please see attached. Ladder truck dimensions better match SU-30 or S-BUS-40 turning paths.
2. Extend turning template (reverse layout) to complete turn. OK. Done. Please see attached.
3. Revise location of the park entrance to satisfy VDOT's Minimum Entrance Throat Offset (RDM Appendix F – Table 4-2) OK. Done. Throat depth = 35' provided per Table 4-2.

In addition, Jeff Robinson's email of June 27, 2019 provided sight distance measurements for left turns into the complex from Center Street which appear adequate and are to be included as part of the signed and sealed site plans.

Ple4ase notify me if you have any questions.

Sincerely,
Jeff

Jeffery B. Kessler, P.E.
Area Land Use Engineer
VDOT - Lynchburg
434.856.8293
JefferyB.Kessler@VDOT.Virginia.gov

From: Jeff Robinson [mailto:robinsonj@jrallpc.com]
Sent: Thursday, June 27, 2019 4:59 PM
To: dmbishop@CountyOfAmherst.com
Cc: JefferyB.Kessler@VDOT.Virginia.gov; jsbryant@CountyOfAmherst.com; rhopkins@acsava.com; nmyoung@CountyOfAmherst.com; sabryant@CountyOfAmherst.com
Subject: Phelps School - Entrance Design

Good afternoon, can someone send me Sam's (I think I got name right) contact info. I wanna call him re. dimensions of ladder truck. I'm using WB-40 template for entrance design which I think is plenty big. I'd like to verify though.

Also, please see my Option A for entrance design. I'm still stuck on my original design as best option. The ladder truck can maneuver comfortably if I eliminate parking spaces 64 and 79. Existing utility poles do not conflict and lines of sight are good. Consolidated access for County parking lot is comfortable and new entrance consumes little of County parcel.

JEFF ROBINSON
& ASSOCIATES, LLPC

CONSULTING ENGINEER
Post Office Box 66
Emporia, Virginia 23847
434-634-8665 ph
434-634-0254 fx
robinsonj@jrallpc.com

STORMWATER CALCULATIONS

FOR

PHELPS SCHOOL

123 PHELPS ROAD
MADISON HEIGHTS, VA 24572

July 5, 2019

Prepared For:
Waukeshaw Development, Inc.
245 East Bank Street
Petersburg, VA 23803

COMMONWEALTH OF VIRGINIA
JEFF B. ROBINSON
Lic. No. 021655
PROFESSIONAL ENGINEER

7-5-19

Index:

Sheet 1: Drainage Worksheet
Sheet 2: Pre-Dev. Drain. Map
Sheet 3-5: Post-Dev. Drain. Map
Attach A: Photos

JEFF ROBINSON & ASSOCIATES, LLPC
CONSULTING ENGINEER
Post Office Box 66
Emporia, Virginia 23847
Office: 434-634-8665
email: robinsonj@jrallpc.com

JOB: Phelps School
SHEET NO. 1 OF 3
CALCULATED BY: JBR DATE: 7-5-19
CHECKED BY: DATE:
SCALE:

- Drainage Worksheet:

- Pre-Dev. Cond.: See Map, Sh 2.

  $Q_{pre} = CiA$, $A = 0.407$ ac.

  Cavg: Grass = .022 ac. x .35 = .008
  Asphalt = .306 ac. x .90 = .347
  .407 ac. .355

  $\therefore C_{avg} = \frac{.355}{.407} = .872$

  $t_t + OLF$ = 115' @ 1.67% w/ C = .9 = 3.99 min.

	B	D	E
2 Yr	60.72	13.0	.88
10 Yr	43.8	9.25	.72

  $i_2 = 5.02$ iph, $i_{10} = 6.82$ iph

  $\therefore Q_2 = (.872)(5.02)(.407) = 1.782$ cfs
  $Q_{10} = (.872)(6.82)(.407) = 2.42$ cfs

- Post-Dev. Cond.: See Map Sh 3.

  $Q_{post} = CiA$, $A = 0.407$ ac.

  Cavg: Grass = .070 ac. x .35 = .025
  Asphalt = .337 ac. x .90 = .304
  .407 ac. .328

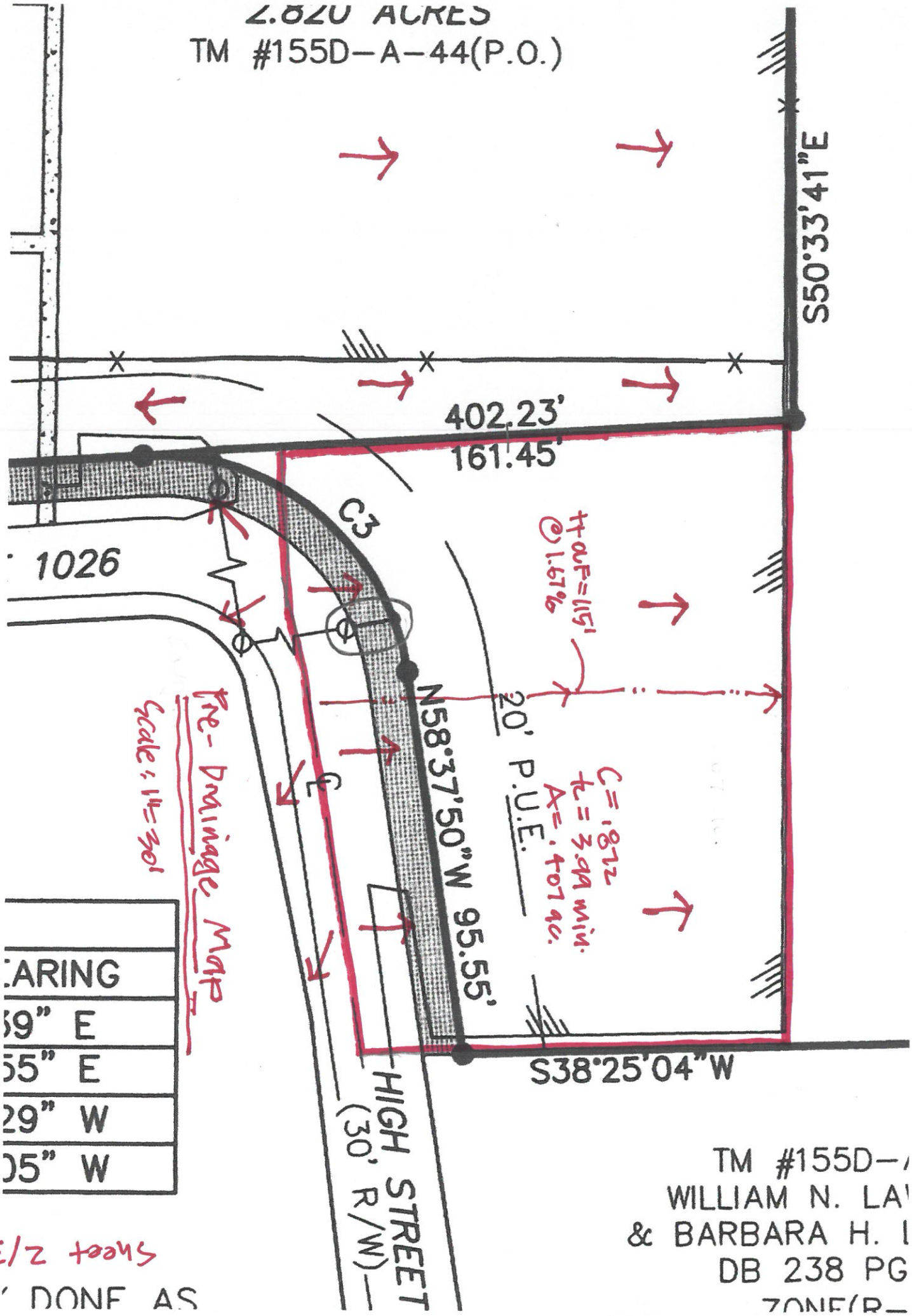
  $\therefore C_{avg} = \frac{.328}{.407} = .806$

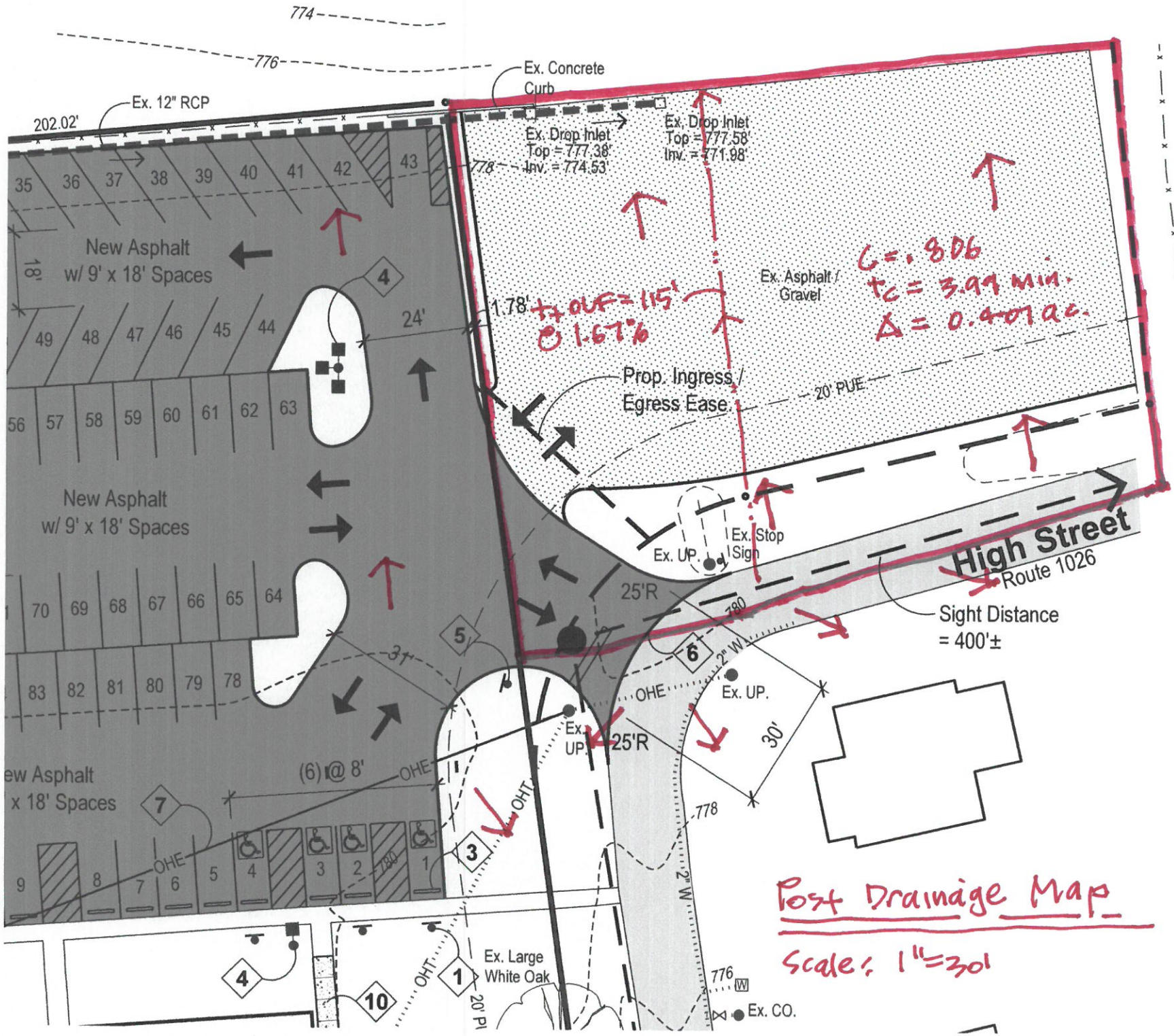
  t_t OLF = same as pre, $t_c = 3.99$ min.
  i_2 & i_{10} same as pre:
  $i_2 = 5.02$ iph, $i_{10} = 6.82$ iph

  $\therefore Q_2 = (.806)(5.02)(.407) = 1.65$ cfs
  $Q_{10} = (.806)(6.82)(.407) = 2.24$ cfs

- Summary:

	Post		Pre	
2 Yr.	1.65	<	1.78	∴ OK
10 Yr.	2.24	<	2.42	∴ OK


2.820 ACRES
TM #155D-A-44(P.O.)
S50°33'41"E
402.23'
161.45'
C3
1026
N58°37'50"W 95.55'
20' P.U.E.
S38°25'04"W
HIGH STREET
(30' R/W)
Pre-Drainage Map
Scale: 1"=30'
C=.872
tc=3.99 min.
A=.407 ac.
HAUF=115'
@1.67%
BEARING
39" E
55" E
29" W
05" W
E/2 trees
DONE AS
TM #155D-
WILLIAM N. LA
& BARBARA H.
DB 238 PG
ZONE(R-



General Note

1. Owner:
   Developer:
2. Legal Informatio
3. Site Address:
4. Zoning:
5. Lot Size:
6. Building Size:
7. Building Height:
8. Lot Area:
9. Lot Frontage:
10. Lot Coverage:
11. Setback:
12 Side Yard:
13. Rear Yard:
14. Parking:

Sheet 3/3

Attach. A

1/3

Jeff Robinson

From: jmgreer@CountyOfAmherst.com
Sent: Wednesday, July 3, 2019 10:46 AM
To: robinsonJ@jrallpc.com; sabryant@CountyOfAmherst.com
Cc: fire79ct@comcast.ne
Subject: Fw: Truck 1 measurements

See below.

Joseph M. Greer, AAS, NRP
Amherst County Public Safety
Administration Captain

Cell: (434)-221-2879
Office: (434)-946-9307
Email: jmgreer@countyofamherst.com

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----- Forwarded by Joey M Greer/Amherst on 07/03/2019 10:46 AM -----

From: EARL TAYLOR <fire79ct@comcast.net>
To: Jamey <jmgreer@countyofamherst.com>
Cc: sabryant@countyofamherst.com
Date: 07/03/2019 08:56 AM
Subject: Truck 1 measurements

Height 11`10" by factory plate

Length 39'10" by factory plate

width 8'4" by factory plate

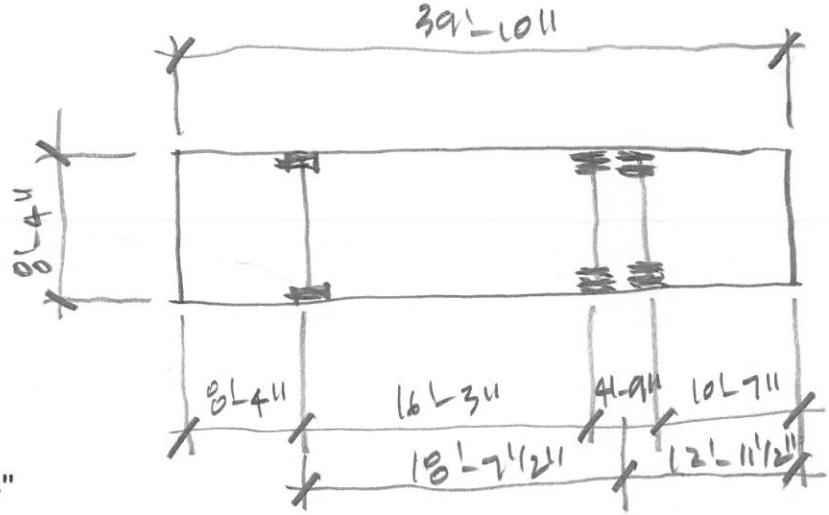
Front axle to first rear 16'3"

First rear to second rear 4'9"

Front bumper to center steer axle 8'4"

Rear bumper to rear axle center 10'7"

Truck 1 has a total of three (3) axles



2/3

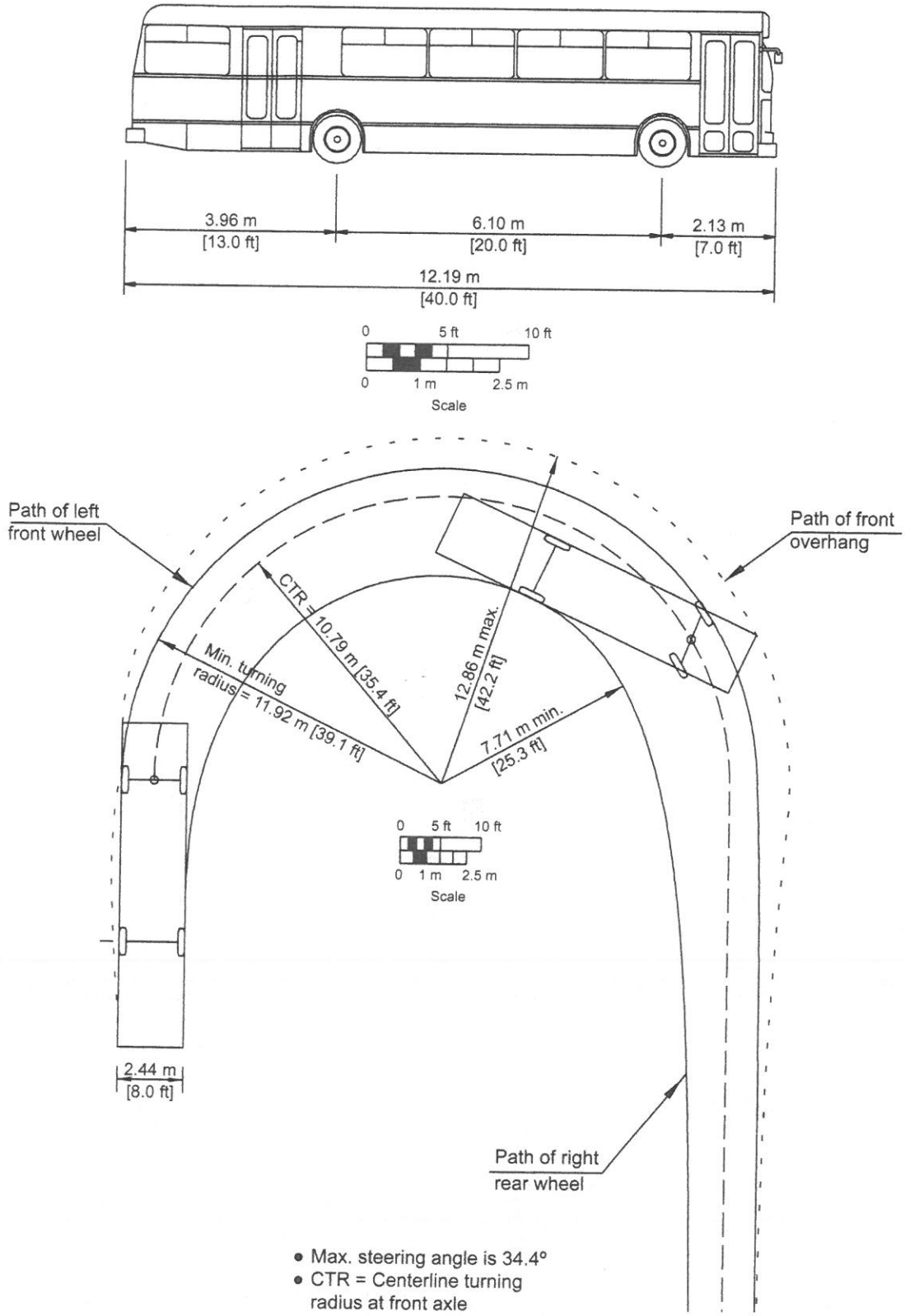


Figure 2-8. Minimum Turning Path for Large School Bus (S-BUS-12 [S-BUS-40]) Design Vehicle

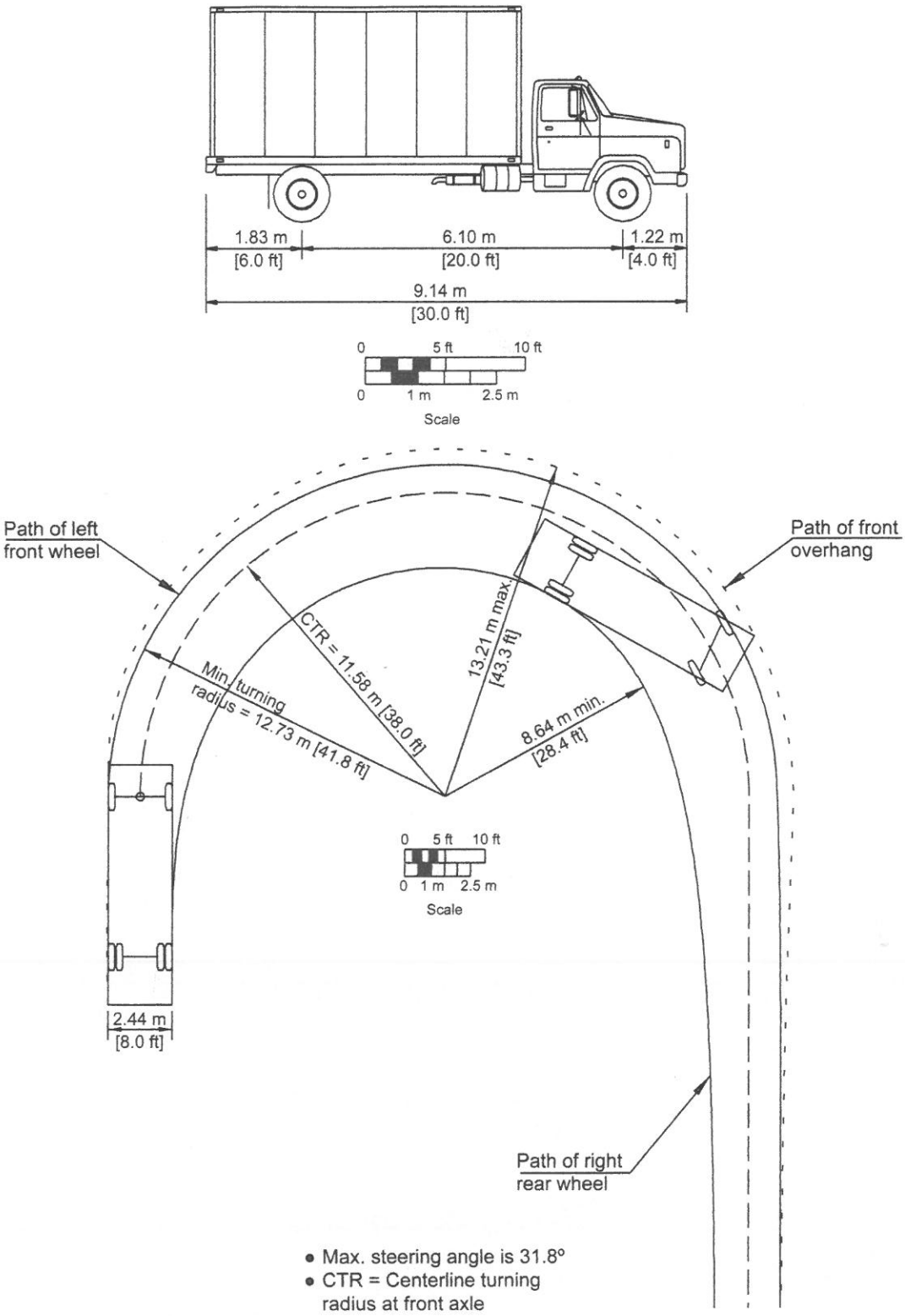


Figure 2-2. Minimum Turning Path for Single-Unit Truck (SU-9 [SU-30]) Design Vehicle

1/3

Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Residents**
On a: **Weekday**

Residents:
1BR: 17x1 = 17
17x2 = 34
2BR: 6x2 = 12
40 units 63 Resi

Setting/Location: **General Urban/Suburban**
Number of Studies: 6 out of 6
Avg. Num. of Residents: 182
Directional Distribution: 50% entering , 50% exiting

Vehicle Trip Generation per Resident

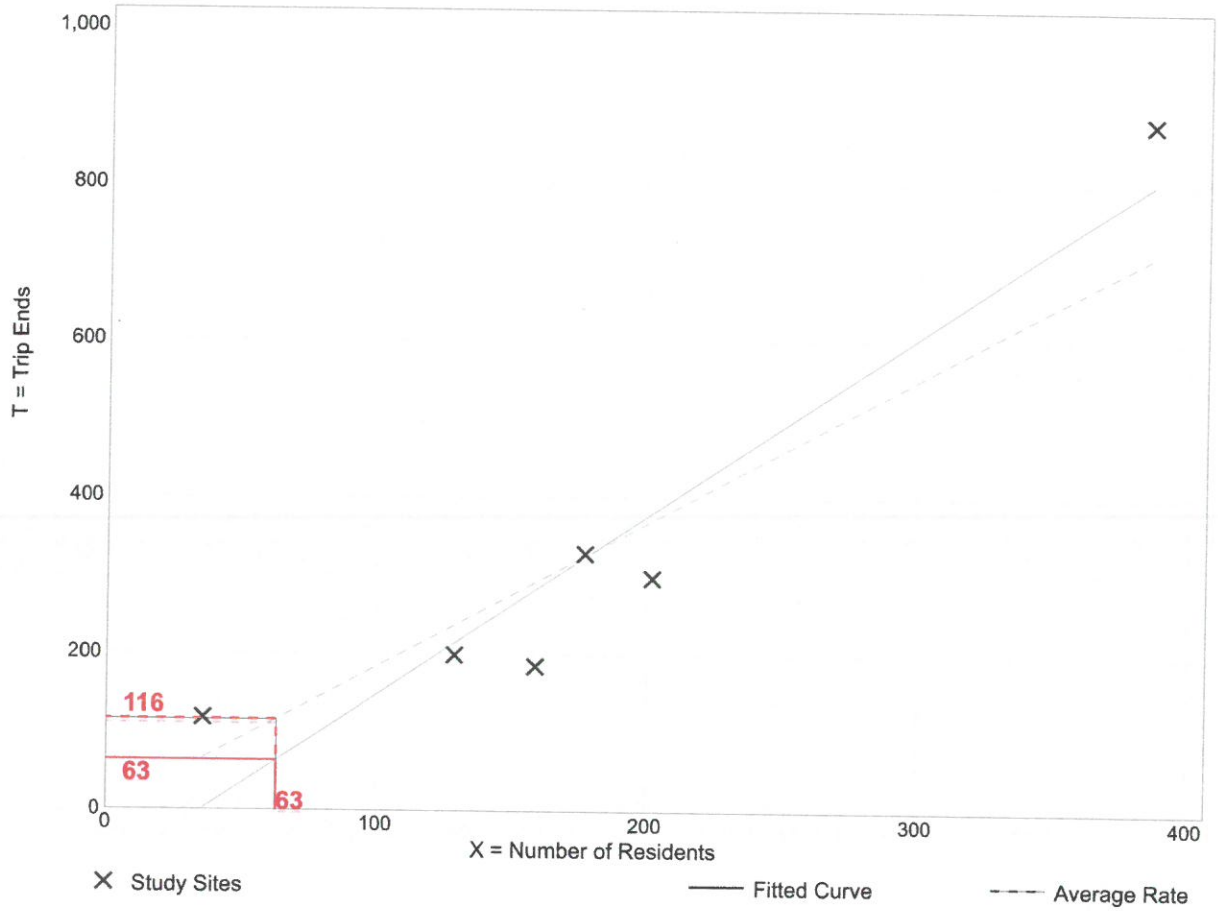
Average Rate	Range of Rates	Standard Deviation
1.84	1.16 - 3.28	0.54

Data Filtered By: [Region: UnitedStates], [Years: 2003-2016], [IV Value: 36-386]

Data Plot and Equation

Caution – Filtered Data Set

Set IV Size: 63 | Calculated Trip Ends: 116(Avg),63(FC)



Fitted Curve Equation: T = 2.29(X) - 81.02

R^2= 0.91

Trip Generation Manual, 10th Edition • Institute of Transportation Engineers

2/3

Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Residents**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6 out of 6
Avg. Num. of Residents: 182
Directional Distribution: 26% entering , 74% exiting

Vehicle Trip Generation per Resident

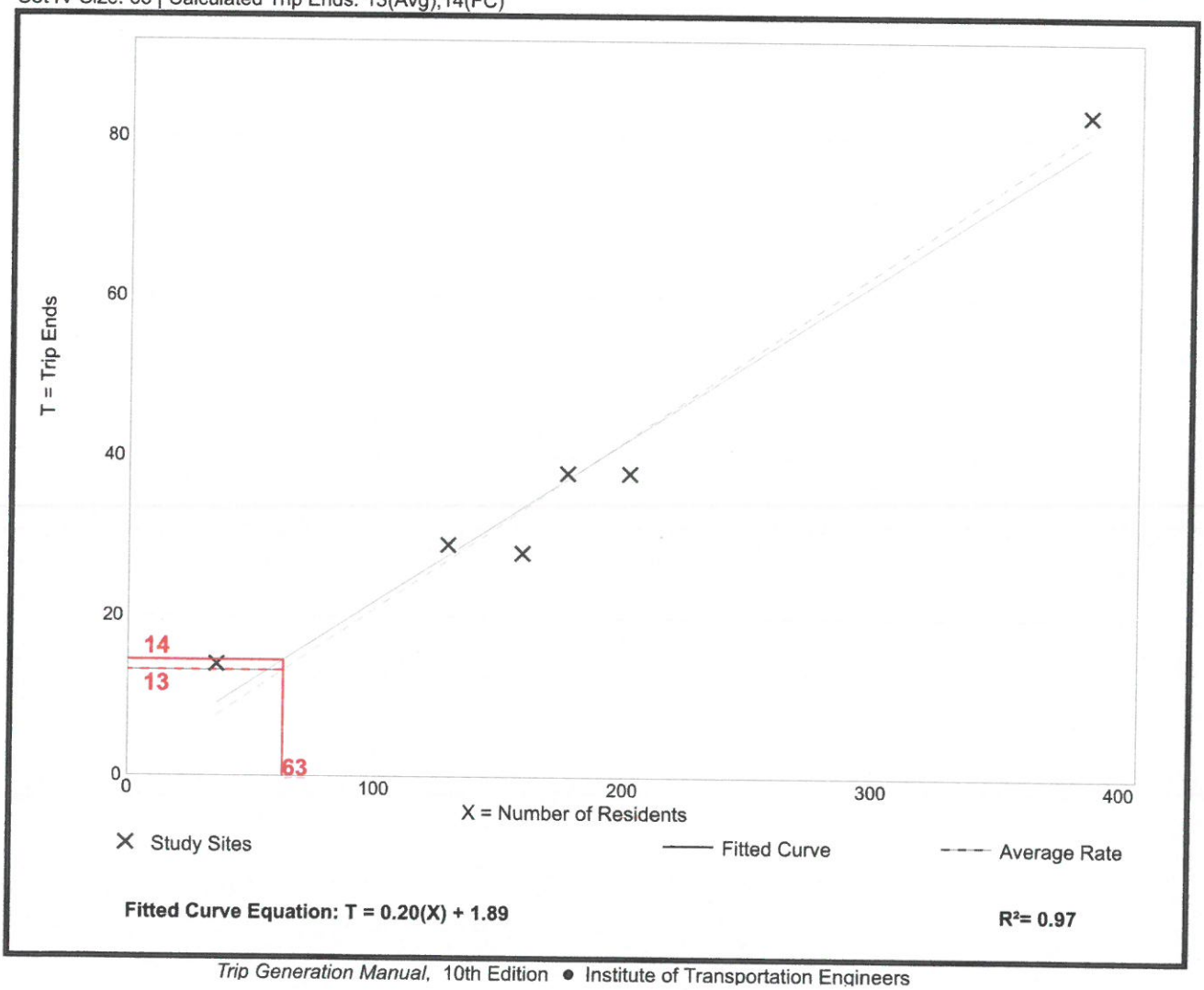
Average Rate	Range of Rates	Standard Deviation
0.21	0.18 - 0.39	0.04

Data Filtered By: [Region: UnitedStates], [Years: 2003-2016], [IV Value: 36-386]

Data Plot and Equation

Caution – Filtered Data Set

Set IV Size: 63 | Calculated Trip Ends: 13(Avg),14(FC)



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3/3

Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Residents**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 6 out of 6
Avg. Num. of Residents: 182
Directional Distribution: 61% entering , 39% exiting

Vehicle Trip Generation per Resident

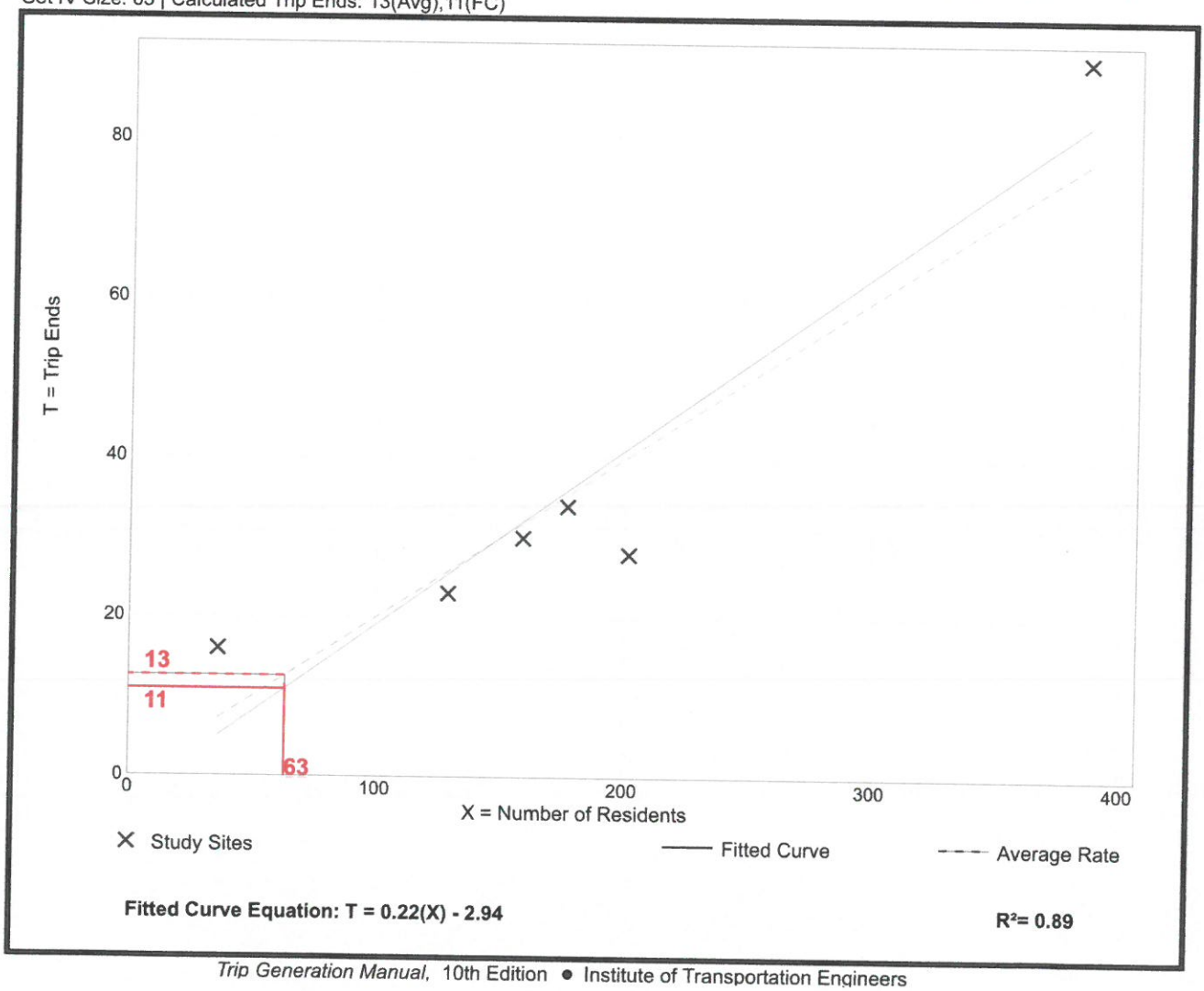
Average Rate	Range of Rates	Standard Deviation
0.20	0.14 - 0.44	0.06

Data Filtered By: [Region: UnitedStates], [Years: 2003-2016], [IV Value: 36-386]

Data Plot and Equation

Caution – Filtered Data Set

Set IV Size: 63 | Calculated Trip Ends: 13(Avg),11(FC)



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SITE PLAN CHECKLIST

Lynchburg District 2016

Project Name: Phelps School

Connects to road name: Center St./High St. **Connects to route #:** 1026

County: Amherst **County Project No.:** 2019-262

Applicant: Dave McCormack **Phone No.:** 804-677-5728

Street Address: 123 Phelps Rd, Madison Heights, VA 24572

		Sheet where shown	If item is not provided, explain below
SUBMITTAL PACKAGE			
Project Narrative	Two (2) copies including a detailed description of the project.		N/A
Project Plan	Two (2) folded copies.	X	
Project Rezoning	Two (2) bound copies of the official rezoning approval, proffers, and conditions.		SER2019-033
Drainage Report	Two (2) bound copies including narrative, summary of results, Drainage Area Maps, and all applicable calculations for hydrology; including storm frequencies according to the VDOT Drainage Manual: Form LD-268 ditches, form LD-269 culverts, form LD-229 pipes, form LD-204 structures, form LD-347 HGL, storm water management, outfalls and MS-19.	X	
Geotechnical Report	If the site plan includes a proposed public road, include two (2) bound copies in accordance with the Pavement Design Guide for Subdivision and Secondary Roads in Virginia for the commercial entrance.		N/A
Pavement Design Calculations	If the site plan includes a proposed public road, include two (2) bound copies in accordance with the Pavement Design Guide for Subdivision and Secondary Roads in Virginia. The commercial entrance pavement design shall match or exceed the existing road pavement.		N/A
Traffic Information	Two (2) bound copies including functional classification of roadways, existing AADT, ITE Code, Trip Generation Report, Turn Lane and Taper Warrant Analysis, and Driveway Intersection Analysis, at a minimum, according to VTIS 24VAC30-155-60. Contact Land Use Engineer to determine if additional traffic analyses are required.	X	
Waivers/ Exceptions	Appropriate form(s) signed, sealed, and completed in its entirety. Include index listing the form and all attachments.		N/A
COVER SHEET			
1	Project name and date of preparation.	X	
2	Seal and signature on each sheet by a professional engineer or land surveyor, licensed by the Commonwealth of Virginia.	X	
3	Title block information, index of sheets, consulting firm and contact information, including e-mail address.	X	
4	Owner and Developer name and contact information(street address, not P.O. Box)	X	
5	Vicinity Map with state route numbers and north arrow.	X	

Project Name: Phelps School

6	Latitude/Longitude of the connection to the state maintained road.		N/A
7	Reference all previously approved master plans, waivers, variances or proffers approved for this site by case number and date.		N/A
8	Legend detailing graphic descriptions for all road items, drainage & utility items.	X	
9	Parcel identification, legal reference, tax map reference, numbers, present zoning, proposed rezoning, and total acreage.	X	
10	Regulatory Floodplain and 100 Year Flood Elevation.		N/A
11	VDOT Lynchburg District Standard Notes (current version).	X	
12	Signature block that plan is "Acceptable to VDOT"	X	
	GENERAL INFORMATION		
13	Survey and mapping control information including north arrow, benchmark, datum, elevations, and tie distance to nearest intersection of a state route.	X	
14	Graphic Scale (1"=50' or larger) Horizontal. Graphic Scale (1"=5' or larger) Vertical	X	
15	Provide parcel identification, tax map reference numbers, owners' names, present zoning, and use of all abutting parcels	X	
16	Clearly identify the site layout, including lot numbers, acreage in lots, right of way, and total acres.	X	
17	Label existing State maintained roadways with street name, route numbers, and right of way width.	X	
18	Show the latest version of all VDOT Standards Details applicable to the development, including PB-1, IS-1, ES-1, WP-2, CG-6, CG-12, etc.	X	
19	Identify areas of right of way dedication.		N/A
20	Identify building locations, use, square footage, and distance from right of way.	X	
21	Identify all existing and proposed easements within or immediately adjacent to State maintained right of way, include use, legal reference, and bearings and distances.	X	
	DRAINAGE		
22	Provide detailed drainage area maps defining the contributing areas and sub-areas, in acres, used for computations.	X	
23	Provide an offsite drainage area map at a maximum scale 1"= 200'.		N/A
24	Show all storm sewer structures by type and number. Stations on plan must match stations on profile. Show top and invert elevation of each structure.		N/A
25	Show field located limits of existing and proposed 100yr flood zones and backwater inundation.		N/A
26	Identify the size, length, and slope of all culverts and storm sewer in plan and profile. Identify type and class of pipe to be installed.		N/A
27	Identify all storm water management facilities, structures, access roads, stabilization and fencing as applicable		N/A
28	Grading plan: existing contours and proposed contours, both at 1ft or 2ft intervals, and finished floor elevations.		N/A
29	Identify the 10 year & 100 year storm water elevations in management facilities on the plan		N/A

Project Name: Phelps School

30	Identify the direction of drainage flow for roadways, storm sewers, gutters, and ditches.		N/A
31	Identify the receiving storm water conveyance and provide MS-19.		N/A
32	Identify the type, length, slope, cross section, and stabilization measures of all proposed ditches in accordance with the drainage report outlined above.		N/A
	EROSION CONTROL		
33	Identify the limits of construction within and immediately adjacent to the right of way.	X	
34	Show temporary construction access to state maintained right of way in accordance with MS-17.		N/A
35	Provide adequate erosion control measures for all areas within and immediately adjacent to State maintained right of way receiving runoff from construction activities in accordance with the current Virginia Erosion & Sediment Control Handbook.		N/A
36	Identify the location of the staging and stockpile areas and applicable erosion control measures.		N/A
37	Address restoration within and immediately adjacent to State maintained right of way	X	
	RIGHT OF WAY & GEOMETRICS		
38	Identify entrance type and label geometrics including radii, width, landing slope, throat length, and spot elevations.	X	
39	Show design vehicle turning templates on entrance plan.	X	See Sh. C4
40	Identify lengths and widths of existing and proposed tapers and turn storage lanes.		N/A
41	Show all existing entrances, street connections, crossovers, etc. that are located along both sides of the existing roadway that may be affected by the development.		N/A
42	Provide connectivity to adjacent parcels for vehicular and pedestrian access.		N/A
43	Identify the distance measured from the centerline of the proposed entrances and intersections to the centerline of the nearest entrances, street connections, crossovers, etc. per access management spacing requirements.		N/A
44	Identify geometrics of proposed and/or modified roadway centerlines, including delta, radius, arc length, chord, tangent and stationing at PC, PT, and intersections.		N/A
45	Show all proposed street frontage and intersection improvements including proposed landscaping and signs.	X	
46	Show sight distance triangles for required minimum distance and applicable sight easements at all entrances and intersections, including left turn(AASHTO).	X	See Sh. C4
47	Identify the radius of all returns to the face of curb or edge of pavement.	X	
48	Provide profiles of intersection and stopping sight distances at each relevant location, including existing roads.		N/A
49	Provide site specific cross sections at key locations including, but not limited to, entrances, pavement widening, ditch relocations, culvert crossings, etc.		N/A
50	Provide roadway Landscape Plan, if any.		N/A
51	Provide roadway Lighting Plan, if any.		N/A
	TRAFFIC		
52	Label existing and proposed speed limits of all roadways.	X	

Project Name: Phelps School

53	Identify all existing and proposed pavement markings and signage in accordance with the 2009 MUTCD, revised 2012. This shall include enough of the surrounding roadway to identify traffic interactions and conflicts with the proposed driveway(s).		N/A
54	Identify proposed right of way lines, pavement widths, and entrance geometrics.		N/A
55	Provide an overall view of how traffic will flow in and out of the site and how it will affect adjacent driveways, public roads, and nearest intersections, including the nearest signalized intersections, to demonstrate a full picture of the road network. This shall include enough of the surrounding roadway to identify traffic interactions and conflicts with the proposed driveway(s). At a minimum, this will include the adjacent side of the street, medians and median openings and any driveways or public roads along the frontage of the property (or within 500 feet of the commercial entrance.		N/A
56	Provide a Traffic Control Plan in accordance with the 2015 Virginia Work Area Protection Manual.	X	See Sh. C4
57	Provide a note on the plans informing the contractor of a responsibility to contact the VDOT Transportation Operations Center at 540-375-0170 regarding shoulder or lane closures.	X	See Sh. C4, note # 4, T.O.P.
	UTILITIES		
58	Provide utility profiles for any proposed work in State maintained right of way		N/A
59	Identify and label all existing and proposed underground and overhead utilities within and immediately adjacent to State maintained right of way including deed reference.	X	
60	Identify the owner(s) of all proposed utilities.		N/A
61	Identify the minimum depth of all underground utilities in plan and profile views.		N/A
62	Verify clear zone requirements are met when locating utilities within State maintained right of way.		N/A
	OTHER		
63	VDOT Waiver.		N/A
64	VDOT Exception.		N/A
65	Official written request.		N/A
66	MS-4		N/A
67	Bicycle path		N/A
Please provide any additional information that will assist VDOT in this review.			

Project Name: Phelps School

NOTE:

a) Any previously approved plan that is to be considered with this plan submittal shall be included. All modifications shall be clearly noted and adequately addressed.

b) Any calculations or reports previously approved by the Department that are to be considered with this plan submittal shall be included and re-certified by the applicant's engineer. All modifications shall be clearly noted and adequately addressed.

c) The developer is responsible for supplying sufficient information for the Department to verify existing and proposed entrance and road design features adequately serve the existing roadway and the proposed development.

d) All construction methods and materials within State maintained right of way shall comply with the current standards and specifications of the Virginia Department of Transportation.

e) All commercial entrances must meet VDOT standards and specifications in accordance with current Access Management 24VAC30-73 and Appendix 'F'.

CERTIFICATION

I certify that the above stated information is included in the attached plans and reports.

Engineer or Land Surveyor 'B' signature

021655
VA LIC #

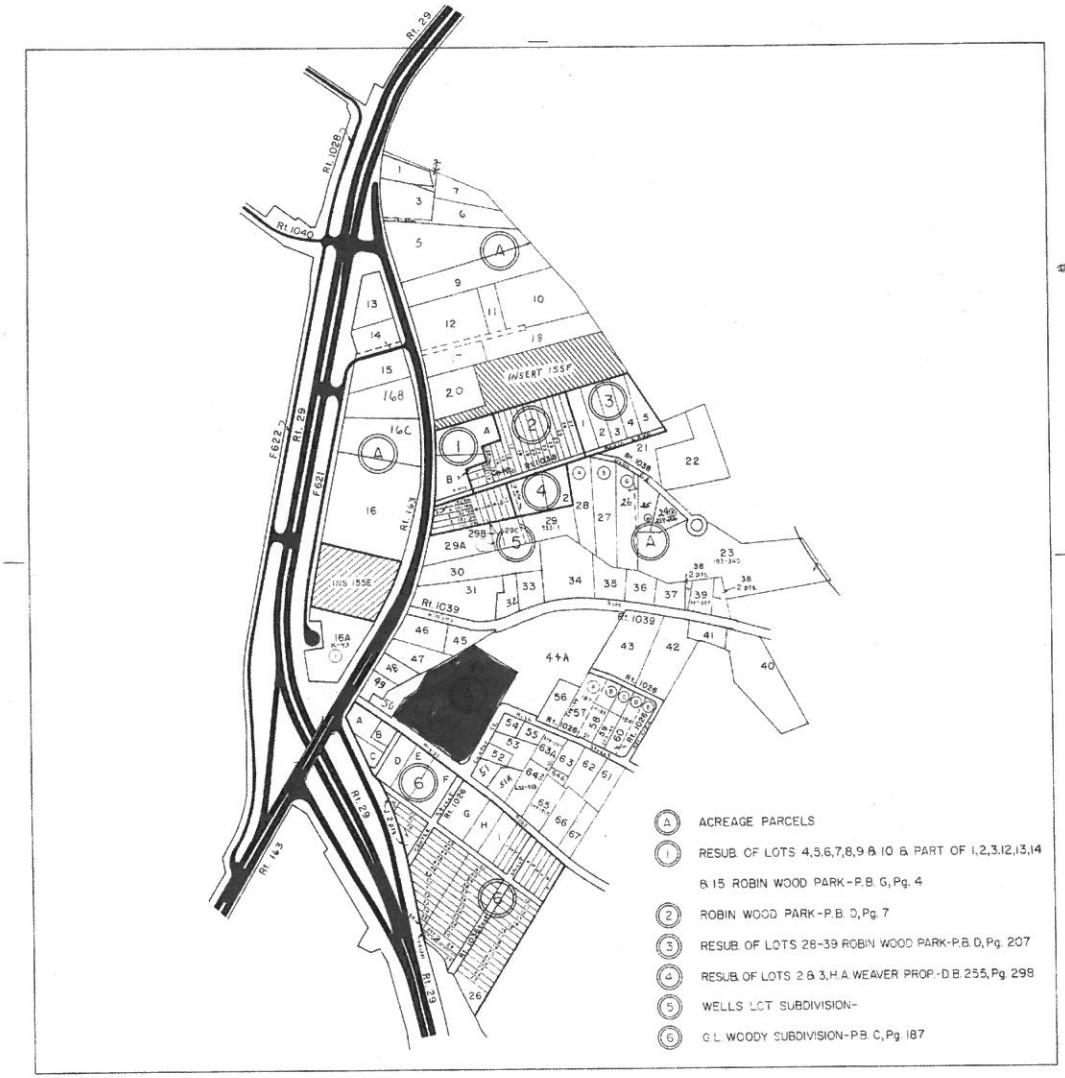
7-5-19
date

Jeff B. Robinson
Engineer or Land Surveyor 'B' printed name

COMMONWEALTH OF VIRGINIA
JEFF B. ROBINSON
Lic. No. 021655
PROFESSIONAL ENGINEER

Phelps Rd Apts

AMHERST COUNTY



SANITARY DISTRICT

INSERT 155D

REVISED 12/31/88