PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

THIS PROJECT WAS DEVELOPED UTILIZING THE DEPARTMENT'S ENGINEERING DESIGN PACKAGE (GEOPAK).
GEOPAK Computer Identification No. 102763

INDEX OF SHEETS

	DESCRIPTION	STATIONS
1	TITLE SHEET	
1A	LOCATION MAP	
1B	RIGHT OF WAY DATA SHEET	
~~*1C~~	~~REVISION DATA SHEET~~	
1D	BASE MAPPING	
1E	CONSTRUCTION ALIGNMENT DATA SHEET	
1F	TRANSPORTATION MANAGEMENT PLAN/SOC NARRATIVE	
2	GENERAL NOTES	
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2F(1) thru 2F(3)	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	
	~~INSERTABLE SHEETS~~	
	~~DETAIL SHEETS~~	
3	PLAN SHEET - MEADOW CREEK ROAD	101+09.21 to 110+18.66
3A	PROFILE SHEET - MEADOW CREEK ROAD	101+09.21to 110+18.66
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4	PLAN SHEET - CUL-DE-SAC	
4A	ENTRANCE PROFILES	
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5	DRAINAGE DESCRIPTION SHEET	
6(1) thru 6(3)	STORM SEWER PROFILES	
~~*7(1), 7(2), etc.~~	~~SIGNING & PAVEMENT MARKING PLANS~~	
~~*8(1), 8(2), etc.~~	~~UTILITY CONDUIT PLAN~~	

TOTAL CROSS SECTION SHEETS: 13 (SEE CROSS SECTION SHEET NUMBER 1 FOR INDEX OF SHEETS)
* "STRIKE THROUGH" SHEETS NOT INCLUDED IN 60% SUBMISSION

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE GENERAL NOTES.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2016 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND WIDENED IN ACCORDANCE WITH STANDARD TC-5.11ULS, EXCEPT WHERE OTHERWISE NOTED.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, IS FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.

THIS PROJECT HAS BEEN DEVELOPED USING THE VDOT MINIMUM PLAN GUIDELINES.

COMMONWEALTH OF VIRGINIA

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

MEADOW CREEK ROAD & BARN ROAD RE-ALIGNMENT PLAN

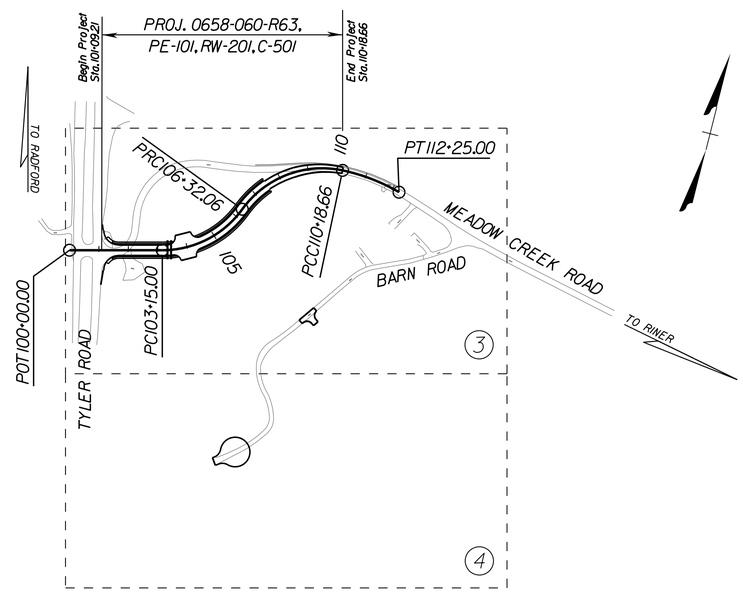
MONTGOMERY COUNTY
FROM: TYLER ROAD, RTE. 600
TO: 0.172 MI. E. TYLER ROAD, RTE. 600

FHWA-534-35003

STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.		658	0658-060-R63 SEE TABULATIONS BELOW FOR SECTION NUMBERS	1

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
Rte. 658 - RURAL MAJOR COLLECTOR, GS-7 - ROLLING - 30 MPH MIN. DES. SPEED	
	Fr: Tyler Road, Rte. 600 To: 0.172 mi. E. of Tyler Road, Rte. 600
ADT (2017)	3,200
ADT (2039)	4,800
T (%) (design hour)	2
V (MPH)	❀
Rte. 627 - RURAL LOCAL ROAD, GS-8 - ROLLING - 25 MPH DES. SPEED	
ADT (2017)	100
ADT (2039)	10
T (%) (design hour)	0
V (MPH)	

❀ See Plan and Profile Sheets for horizontal and vertical curve design speed data



SCALE 0 250' 500'

POPULATION 94,392 (2010 CENSUS)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	LENGTH INCLUDING BRIDGE(S) FEET	LENGTH INCLUDING BRIDGE(S) MILES	LENGTH EXCLUDING BRIDGE(S) FEET	LENGTH EXCLUDING BRIDGE(S) MILES	TYPE PROJECT	DESCRIPTION
0658-060-R63	PE-101		PENG	909.45	0.172	909.45	0.172	Prel. Engr.	Fr: Tyler Road, Rte. 600 To: 0.172 mi. E. of Tyler Road, Rte. 600
	RW-201		ROWA	909.45	0.172	909.45	0.172	R.O.W.	Fr: Tyler Road, Rte. 600 To: 0.172 mi. E. of Tyler Road, Rte. 600
	C-501		1000	909.45	0.172	909.45	0.172	Constr.	Fr: Tyler Road, Rte. 600 To: 0.172 mi. E. of Tyler Road, Rte. 600

NOTE: PROJECT LENGTH BASED ON CONSTRUCTION BASELINE

TIER 1 PROJECT

LOCALLY ADMINISTERED PROJECTS
MONTGOMERY COUNTY
NAME OF LOCALITY
(SIGNATURE)
NAME OF RESPONSIBLE LOCAL GOVERNMENT OFFICAL (TYPED)
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION
DATE — TITLE OF POSITION
(SIGNATURE)
NAME OF RESPONSIBLE LOCAL GOVERNMENT OFFICAL (TYPED)
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
DATE — TITLE OF POSITION

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION
DATE — DISTRICT PLANNING AND INVESTMENT MANAGER
DATE — DISTRICT PROJECT DEVELOPMENT ENGINEER
APPROVED FOR RIGHT OF WAY ACQUISITION
DATE — DISTRICT ENGINEER/ADMINISTRATOR

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
DATE — DISTRICT PLANNING AND INVESTMENT MANAGER
DATE — DISTRICT PROJECT DEVELOPMENT ENGINEER
APPROVED FOR CONSTRUCTION
DATE — DISTRICT ENGINEER/ADMINISTRATOR

CLARKNEXSEN

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	1A

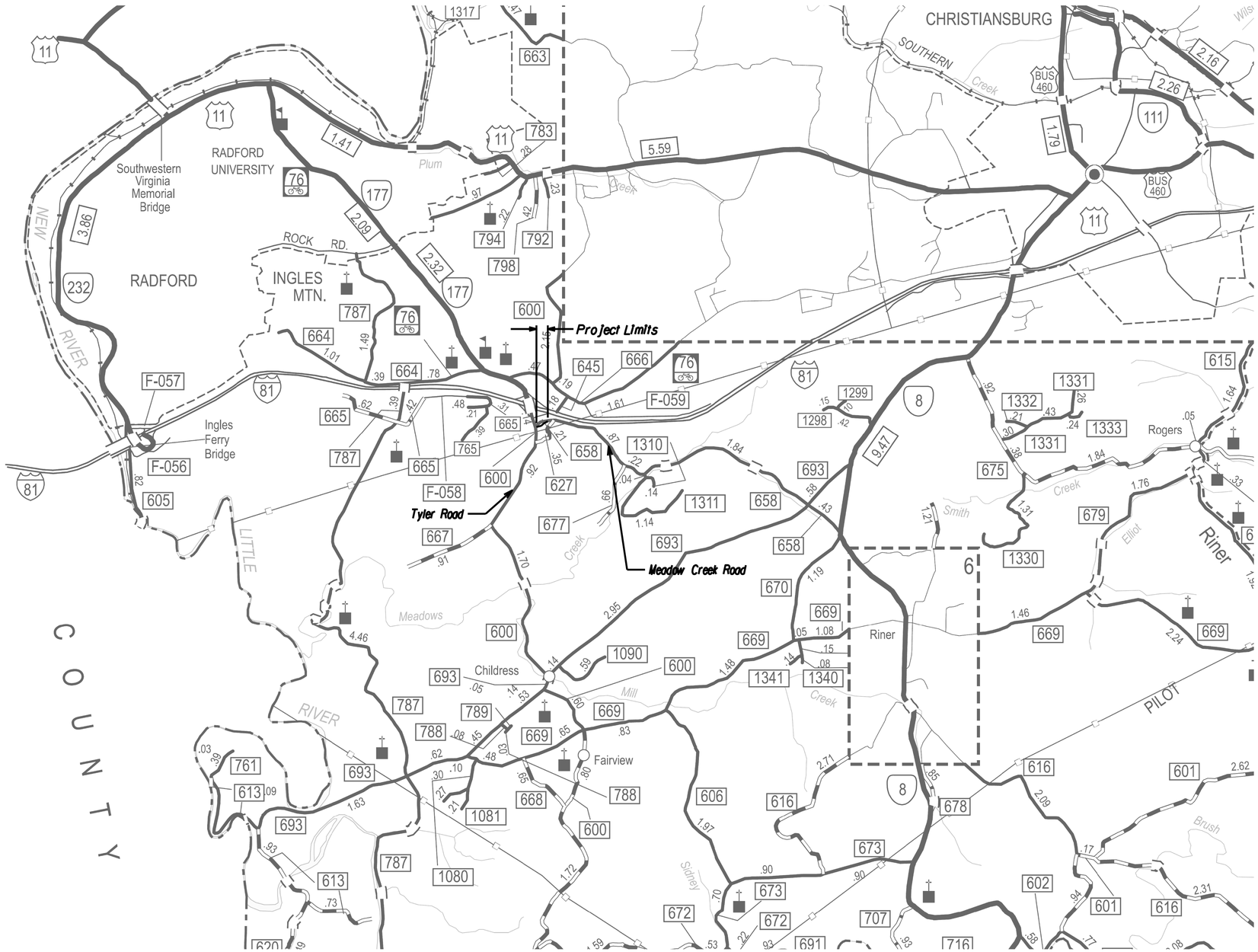
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

FI PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

LOCATION MAP

MONTGOMERY COUNTY



COUNTY OF MONTGOMERY
POPULATION: 94,392
2010 CENSUS

CLARKNEXSEN

NOT TO SCALE	PROJECT 0658-060-R63	SHEET NO. 1A

5:37:35 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63,C-501	IB

FI PLANS

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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

City/County: Montgomery

UPC No.: 102763

PRELIMINARY
RIGHT OF WAY DATA SHEET

PARCEL NO.	LANDOWNER	SHEET NO.	AREA							EASEMENTS								PROFFERS
			TOTAL	FEE TAKING		PRESCRIPTIVE R/W		FEE REMAINDER		PERMANENT		UTILITY		TEMPORARY		TEMPORARY(ENTRANCES)		
			ACRES OR SQUARE FEET	SQ. FEET	ACRES	SQ. FEET	ACRES	SQ. FEET	ACRES	SQ. FEET	ACRES	SQ. FEET	ACRES	SQ. FEET	ACRES	SQ. FEET	ACRES	YES / NO
1	RWW36, LLC	3		34,512	0.792					5,872	0.135							
2	RWW34, LLC	3		932	0.021													
3	RADFORD COMMUNITY HOSPITAL, INC.	3, 4		4,229	0.097													
4	RYAN J. SEELEY	3, 4												878	0.020			

CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	IB

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

BASE MAPPING
(VDOT MINIMUM PLAN PROJECT)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	ID

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

FI PLANS

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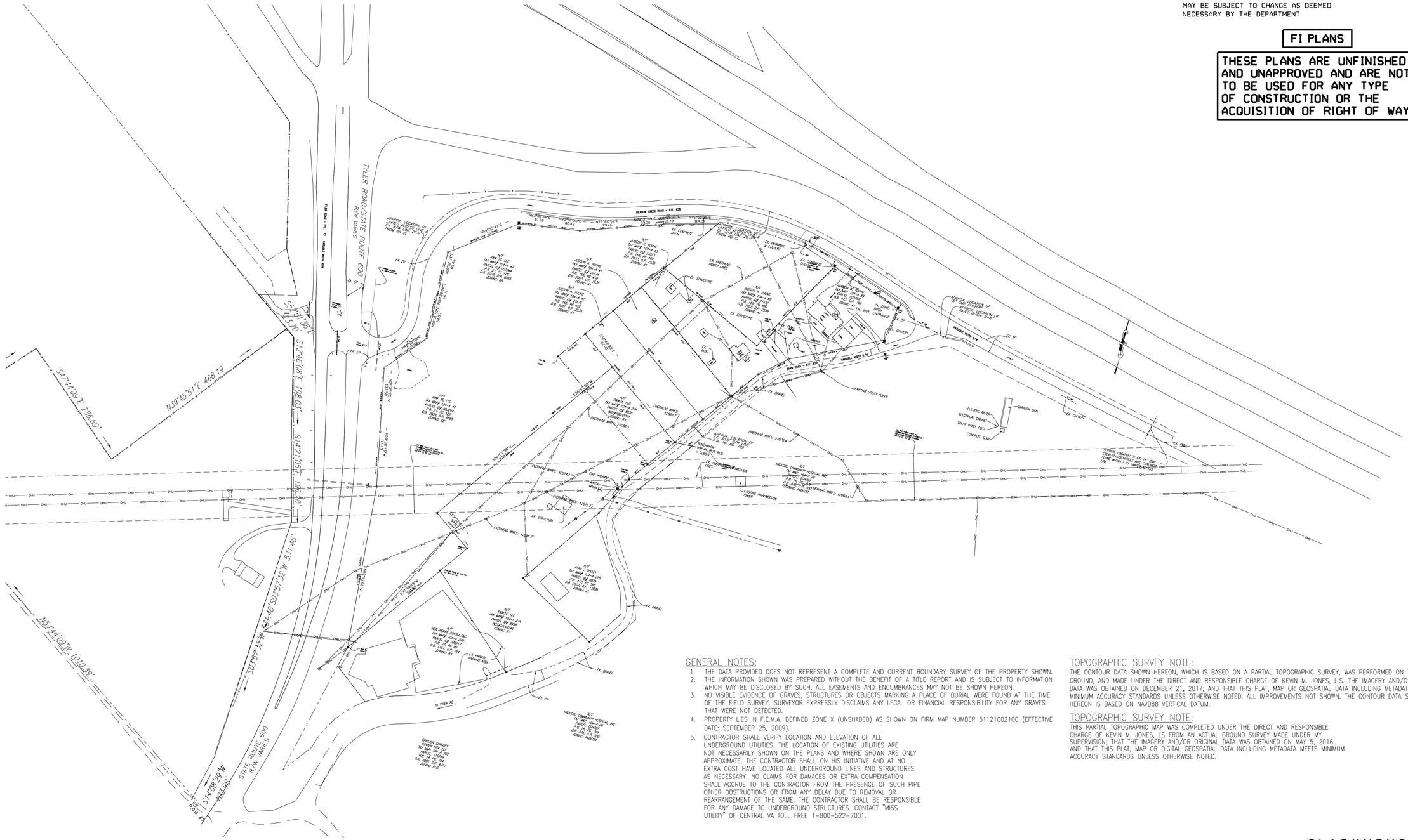

GENERAL NOTES:

1. THE DATA PROVIDED DOES NOT REPRESENT A COMPLETE AND CURRENT BOUNDARY SURVEY OF THE PROPERTY SHOWN.
2. THE INFORMATION SHOWN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO INFORMATION WHICH MAY BE DISCLOSED BY SUCH. ALL EASEMENTS AND ENCUMBRANCES MAY NOT BE SHOWN HEREON.
3. NO VISIBLE EVIDENCE OF GRAVES, STRUCTURES OR OBJECTS MARKING A PLACE OF BURIAL WERE FOUND AT THE TIME OF THE FIELD SURVEY. SURVEYOR EXPRESSLY DISCLAIMS ANY LEGAL OR FINANCIAL RESPONSIBILITY FOR ANY GRAVES THAT WERE NOT DETECTED.
4. PROPERTY LIES IN F.E.M.A. DEFINED ZONE X (UNSHADED) AS SHOWN ON FIRM MAP NUMBER 51121C0210C (EFFECTIVE DATE: SEPTEMBER 25, 2009).
5. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OTHER OBSTRUCTIONS OR FROM ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT "MISS UTILITY" OF CENTRAL VA TOLL FREE 1-800-522-7001.

TOPOGRAPHIC SURVEY NOTE:

THE CONTOUR DATA SHOWN HEREON, WHICH IS BASED ON A PARTIAL TOPOGRAPHIC SURVEY, WAS PERFORMED ON THE GROUND, AND MADE UNDER THE DIRECT AND RESPONSIBLE CHARGE OF KEVIN M. JONES, L.S. THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON DECEMBER 21, 2017; AND THAT THIS PLAT, MAP OR GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED. ALL IMPROVEMENTS NOT SHOWN. THE CONTOUR DATA SHOWN HEREON IS BASED ON NAVD88 VERTICAL DATUM.

TOPOGRAPHIC SURVEY NOTE:

THIS PARTIAL TOPOGRAPHIC MAP WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF KEVIN M. JONES, LS FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON MAY 5, 2016; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 100' 200'	0658-060-R63	ID

54440 PM

PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	IE

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FI PLANS

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CONSTRUCTION ALIGNMENT DATA SHEET

MEADOW CREEK CONSTR. ℄

Beginning chain MEADOW description

Point 1 N 3,563,821.45 E 10,897,616.51 Sta 100+00.00

Course from 1 to PC C1 N 75° 49' 11.70" E Dist 315.00

Curve Data

Curve C1

P.I. Station	104+86.53	N	3,563,940.63	E	10,898,088.21
Delta =	54° 13' 37.23" (LT)				
Degree =	17° 06' 11.58"				
Tangent =	171.53				
Length =	317.06				
Radius =	335.00				
External =	41.36				
Long Chord =	305.36				
Mid. Ord. =	36.81				
P.C. Station	103+15.00	N	3,563,898.61	E	10,897,921.91
P.T. Station	106+32.06	N	3,564,100.12	E	10,898,151.34
C.C.		N	3,564,223.41	E	10,897,839.85

Back = N 75° 49' 11.70" E
Ahead = N 21° 35' 34.47" E
Chord Bear = N 48° 42' 23.08" E

Curve Data

Curve C2

P.I. Station	108+50.12	N	3,564,302.88	E	10,898,231.58
Delta =	66° 07' 19.46" (RT)				
Degree =	17° 06' 11.58"				
Tangent =	218.06				
Length =	386.61				
Radius =	335.00				
External =	64.72				
Long Chord =	365.51				
Mid. Ord. =	54.24				
P.C. Station	106+32.06	N	3,564,100.12	E	10,898,151.34
P.T. Station	110+18.66	N	3,564,311.57	E	10,898,449.47
C.C.		N	3,563,976.84	E	10,898,462.83

Back = N 21° 35' 34.47" E
Ahead = N 87° 42' 53.93" E
Chord Bear = N 54° 39' 14.20" E

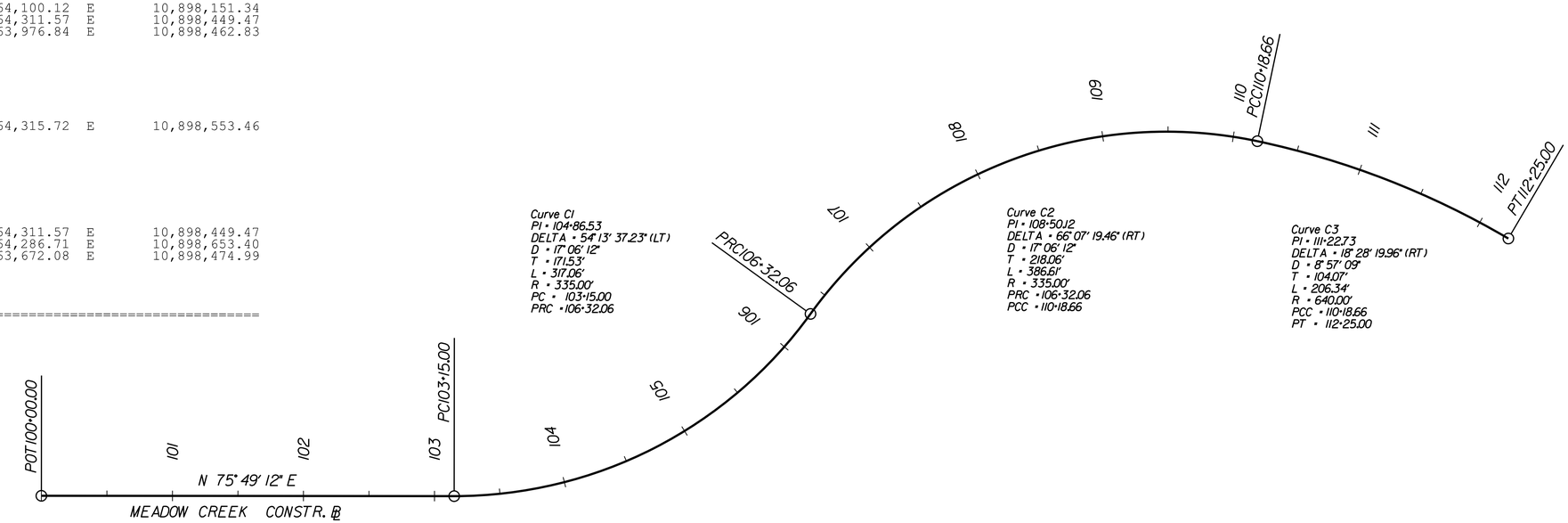
Curve Data

Curve C3

P.I. Station	111+22.73	N	3,564,315.72	E	10,898,553.46
Delta =	18° 28' 19.96" (RT)				
Degree =	8° 57' 08.88"				
Tangent =	104.07				
Length =	206.34				
Radius =	640.00				
External =	8.41				
Long Chord =	205.44				
Mid. Ord. =	8.30				
P.C. Station	110+18.66	N	3,564,311.57	E	10,898,449.47
P.T. Station	112+25.00	N	3,564,286.71	E	10,898,653.40
C.C.		N	3,563,672.08	E	10,898,474.99

Back = N 87° 42' 53.93" E
Ahead = S 73° 48' 46.11" E
Chord Bear = S 83° 02' 56.09" E

Ending chain MEADOW description



CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 50' 100'	0658-060-R63	IE

5:44:11 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

FI PLANS

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TRANSPORATION MANAGEMENT PLAN & SEQUENCE OF CONSTRUCTION NARRATIVE

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63,C-501	IF

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

TEMPORARY TRAFFIC CONTROL PLAN

GENERAL NOTES

Apply Transportation Management Plan Type "A",Category 1

Work Zone Location - Sta.100+00+/- to Sta.112+00+/-

Length and Width of Work Zone - Two separate (200' L) X (20' W) zones

Project work will reduce Meadow Creek Road to a single lane for an intermediate duration duration while the tie-in areas are constructed,but traffic is unaffected otherwise.

Construction equipment and material storage shall be stored outside of the construction clear zone.

Not to exclude other standard layouts or modifications thereof,the following typical traffic control figures apply to the daily safety features employed by the Contractor:

TTC-4J Stationary Operation on a Shoulder
TTC-5J Shoulder Operation with Minor Encroachment
TTC-23J Lane Closure on a Two-Lane Roadway Using Flaggers
TTC-53.0 Signing for Project Limits

The Contractor shall notify each affected property owner at least 24 hours in advance of the start of any work that will require the temporary closure of access.

The major types of travelers impacted by the construction are local residents.

It is not the intent of this plan to enumerate every detail which must be considered in the construction,but only to identify the general activities necessary to provide the proper maintenance of traffic and sequence of construction.

The Contractor shall submit revised traffic control plans to the Engineer for approval prior to the beginning of any revised phase.The traffic control plan shall show all necessary traffic conrol devices including signs,pavement markings and channelizing devices.

The clear zone is to be free of stored materials and parked equipment.Horizontal and vertical sight distances shall not be impacted by parked construction equipment.

All areas excavated more than 2" below the pavement surface which public traffic is on and not protected by a positive barrier within the clear zone shall be backfilled to form an approximately 6:1 safety wedge desirable,4:1 minimum (see Wedge Detail below) at the conclusion of each workday. All costs for placing,maintaining and removing the safety wedge shall be included in the price bid for other items in the contract and no additional compensation will be allowed.

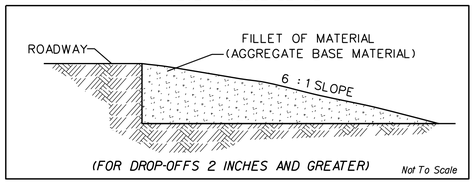
All traffic control devices and signs necessary for maintenance of traffic are to be provided,installed,maintained and removed by the contractor.

The Contractor shall be responsible for maintaining any existing signs,unless otherwise advised by the Engineer to remove or relocate.

During non-working hours,any signs that are not applicable to the existing conditions shall be covered from view of traffic or removed.Any signs that are not applicable to the existing traffic pattern in place shall be covered from view of traffic or removed.

The Contractor is responsible for coordinating the construction,signing and traffic management plan with other adjacent projects under construction.

6:1 PAVEMENT WEDGE DETAIL



PUBLIC COMMUNICATIONS PLAN

In the event of delay times exceeding the minimum established by the responsible District Traffic Engineer for lane closure periods notification shall be provided to the appropriate party as detailed below so that the public can be properly notified:

The Construction Project Manager shall be notified of scheduled work plans and traffic delays.

The Construction Project Manager,the Regional Operations Manager and the Public Affairs staff shall be notified of any unscheduled traffic delays.

The Contractor shall contact the Traffic Operations Center (TOC) 48 hours in advance of posting the PCMS stating the constructions start date.The TOC will develop and post all 511 messages.

Public Communications Contacts:
Construction Project Manager - TBD
District Traffic Engineer - TBD
Regional Operations Manager - TBD
District Public Affairs Manager - TBD
STOC - xxx-xxx-xxxx

TRANSPORTATION OPERATIONS PLAN

Due to road closure the Regional Transportation Operations (TOC) Center shall be reached as follows:

1) In order for the 511 system and VA.Traffic to updated,the Contractor is to advise the VDOT project inspector and/or Construction Manager of planned road closure/lane closure a minimum of 24 hours in advance of the proposed closure.

2) The Contractor shall be responsible for keeping and maintaining a list of local emergency response agency contacts available throughout the project lifecycle.

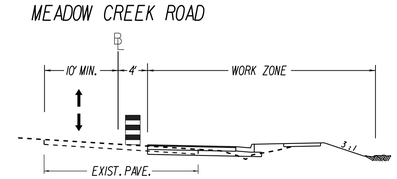
3) Procedures to respond to traffic incidents that may occur in the work zone:
a) Contractor to notify Virginia State Police and VDOT Inspector in charge and Regional Traffic Operation Center.
b) Depending upon severity of incident,the Contractor may have to shut down work.
c) Upon arrival on scene,Virginia State Police will determine the response necessary to allow the traveling public around the incident.
d) Inspector to notify the Area Construction Engineer of incident and take pictures as necessary,especially pictures of the Contractor's work zone to verify the proper setup.
e) Construction Manager to coordinate notification to pertinent State and Local representatives.

4) The Virginia State Police will take control of the incident and direct its clearing and restoration back to normal traffic conditions.

5) The Virginia State Police report of the incident will be reviewed by the Residency Administrator to determine if any modification of the Temporary Traffic Control Plan is necessary.If it is determined that it is necessary,a meeting will be called with the Contractor,VDOT project personel,VDOT traffic safety representatives and the Virginia State Police (if necessary) to discuss modification and implementation of an improved traffic control plan.

TYPICAL SECTION

MEADOW CREEK ROAD



SEQUENCE OF CONSTRUCTION NARRATIVE

1.Install gravel construction entrance off of Tyler Rd and Meadow Creek Rd.All construction traffic shall enter and exit the site via construction entrances only.During wet weather conditions,drivers of construction vehicles shall be required to wash their wheels before entering highway.The existing gravel area near the intersection of Meadow Creek Rd and Tyler Rd shall be used as a staging area for equipment and material stockpile area.

2.Install the storm sewer and concrete ditch system associated with structures 3-16 and 3-17.

3.Construct the proposed ditch that runs along the Barn Road leading to the existing flat bottom ditch to the regional detension basin.

4.Construct the T turnaround and cul-de-sac on Barn Road and install associated signage.

5.Construct the proposed ditch and diversion dike from Meadow Creek Road's realignment, which also leads to the regional detension basin.

6.Clear & grub proposed right-of-way.Topsoil shall be stockpiled and temporarily seeded if encountered and designated for future use.

7.Construct proposed Meadow Creek Road from Sta.102+50 to 107+50.All slopes shall be topsoiled,seeded and mulched within 7 days after reaching final grade.

8.Install the storm sewer system from the Str.3-8 back upstream.

9.Begin constructing the remaining tie-in portions of Meadow Creek Road and the storm sewer crossing from Str.3-1 to 3-2.Utilize Shoulder Operation with Minor Encroachment (TTC-5J) while working on the roadside.

10.Split the remaining construction into two phases utilizing flaggers (TTC-23J).Alternatively, in coordination with VDOT Regional Operations on the lane closure policy and with approval from VDOT,perform this intermediate duration work utilizing a road closure.

11.Demolish and obscure exisiting Meadow Creek Rd pavement,culverts,sections of paved flume,and grade out ditches as shown on plans.

12.Complete fine grading,topsoil,permanently seed and mulch all remaining disturbed areas.

GENERAL NOTES

1. All work is to be performed in accordance with the current Manual of Uniform Traffic Control Devices (MUTCD), the 2016 Road and Bridge Specifications, the 2016 Road and Bridge Standards, the 2011 Virginia Work Area Protection Manual, the 2011 Virginia Supplement to the MUTCD,including each manual's subsequent revisions,and as directed by the Engineer.

2. Lane closures shall be approved by VDOT and the Engineer prior to implementation.

3. Throughout construction, it is the Contractor's responsibility to ensure that all drainage items (temporary and proposed) necessary to provide positive drainage during construction are installed prior to the construction activities.

4. All erosion and sediment control measures and temporary drainage shall be in place prior to beginning any new construction activity.

5. Travel lanes shall be a minimum of 10 feet wide.

6. All signing for the project limits shall be done in accordance with the 2011 Virginia Work Area Protection Manual.These signs shall be installed on all state maintained roadways and remain in place for the duration of the project.

7. All construction signing shall be fabricated and installed in accordance with the 2011 Virginia Work Area Protection Manual, the 2009 MUTCD, the Virginia Supplement to the MUTCD, the Standard Highway Sign Manual, the 2016 Virginia Road and Bridge Specifications and the 2016 Virginia Road and Bridge Standards.

8.The contractor is responsible for coordinating or providing a traffic control plan for proposed road/lane closures necessary for work within the exisiting VDOT right-of-way.

9. The construction techniques employed by the Contractor are to be reviewed by the Engineer. It will be the responsibility of the Contractor to provide safe travel on the existing and/or temporary travel lanes.

15. Any work lighting used during hours of darkness shall be directed away from all moving traffic.

16. Under no circumstances will concurrent construction left and right of any lane of traffic be allowed,unless otherwise directed by the Engineer.

CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	IF

5:48:34 PM

PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	2

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

GENERAL NOTES

GRADING

G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.

G-3 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction. Payment will be made only for quantities actually moved.

G-4 The cost of removal of all existing concrete items located in the area to be graded, including, but not limited to the following, shall be included in the price bid for regular excavation: sidewalks, curb & gutter, paved ditches, small footings, storm sewer pipe, inclets and concrete sign foundations

G-6 The borrow material for this project shall be a minimum CBR 20 or as approved by the Materials Engineer.

DRAINAGE

D-1 The horizontal location of all drainage structures shown on these plans is approximate only, with the exception of structures showing specific stations, special design bridges and storm sewer systems.

D-2 The horizontal location and invert elevations shown for proposed culverts and storm sewer outfall pipes are based on existing survey data and required design criteria. If during construction, it is found that the horizontal location or invert elevations shown on the plans differ significantly from the horizontal location or elevations of the stream or swale in which the culvert or storm sewer outfall pipe is to be placed, the Engineer shall confer with, and get approval from, the applicable District Drainage Engineer before installing the culvert or storm sewer outfall pipe.

D-3 The "H" dimensions shown on plans for drop inlets and junction boxes and the "L.F." dimensions shown for manholes are for estimating purposes and are based on the proposed invert elevations shown for the structure and the anticipated top (rim) elevation based on existing or proposed finished grade. The actual "H" or "L.F." dimensions are to be determined by the contractor from field conditions.

D-6 Pipes shall conform to any of the allowable types shown on sheet 5, within the applicable height of cover limitations.
For strength, sheet thickness, or class designation: available sizes: height of cover limitations:and other restrictions for a particular pipe type or height of cover, see the VDOT Road and Bridge Standard PC-1. Structural plate pipe may be substituted for corrugated pipe of the same size, provided the substitution complies with the applicable sections of the VDOT Road and Bridge Standards PC-1.

D-11 The proposed granular filter blanket for the proposed riprap may be omitted by the Engineer if the slope on which it is to be placed is found to be comprised of material which is coarser than that specified for the proposed granular filter blanket.

D-12 All existing drainage facilities labeled "To Be Abandoned" shall be left in place, backfilled and plugged in accordance with the VDOT Road and Bridge Standard PP-1. Basis of Payment will be C.Y. of Flowable Backfill.

D-13 Existing drainage facilities being utilized as a part of the drainage system, and designated on the plans "To Be Cleaned Out" shall be cleaned as directed by the Engineer. The cost incidental to this shall be included in the contract price for other items.

D-14 Proposed drop inlets with a height (H) less than the standard minimum shown in the VDOT Road and Bridge Standards shall be considered and paid for as Standard Drop Inlets for the type specified. Pipes with less than standard minimum finished height of cover shall be noted as such in the drainage description for the pipe. Specific pipe bedding and cover requirements are provided in the applicable PB-1 and PC-1 standard drawings of the VDOT Road and Bridge Standards.

D-16 When CG-6 or CG-7 is specified on a radius (such as at a street intersection), the Engineer may approve a decrease in the cross slope of the gutter to facilitate proper drainage.

D-17 St'd. SL-1 Safety Slab locations are based on the assumed use of precast structures. If cast-in-place structures are utilized, and the interior chamber dimensions (length and width, or diameter) are less than 4 feet, the safety slabs shall not be installed.

PAVEMENT

P-2 The pavement materials on this project will be paid for on a tonnage basis. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of the theoretical maximum density.

INCIDENTALS

I-5 That portion of the right of way lying within the Clear Zone or within a minimum of 10 feet from the edge of pavement or surfacing or within the limits of the construction slopes beyond 10 feet, shall be cleared and grubbed in accordance with the applicable VDOT Road and Bridge Specifications, Section 301, where sufficient right of way or construction easement is provided.

I-7 Where Standard slope roundoffs would damage trees, bushes or other desirable vegetation, they shall be omitted when so ordered by the Engineer.

I-9 When no centerline alignment is shown for a proposed entrance, the entrance shall be constructed in the same location as the existing entrance.

I-12 St'd. RM-2 right of way monuments shall be set by the Contractor.

I-16 The "underground utilities" survey data on this project has been provided by consultant and copies are available from the Department.

I-18 All pavement markings and traffic flow arrows shown on the roadway construction plans are schematic only. The actual location and application of pavement markings shall be in accordance with Section 704 of the applicable VDOT Road and Bridge Specifications, MUTCD, sequence of construction/traffic control plans, pavement marking plan sheets 7(1) thru 7(3) and as directed by the Engineer.

I-19 The following outside sources, under contract with VDOT, have provided information on this project.

Hydraulic Design	-	Clark Nexsen
Roadway Design	-	Clark Nexsen
Utility Design	-	N/A
Utility Designation	-	Balzer and Associates
Utility Location	-	Balzer and Associates
Survey	-	Balzer and Associates
Bridge Design	-	N/A
Traffic Design	-	Clark Nexsen
Landscape Design	-	N/A

If questions or problems arise during construction, please contact the Area Construction Engineer. DO NOT CONTACT THE OUTSIDE SOURCES.

I-20 The Official Electronic PDF Version of the plans will override the paper copies or prints of specific layers.

Portions of this plan assembly have been CADD generated. To assist in the preparation of the bid and construction of the project, Microstation format (.dgn) files will be made available to the prime contractor during bids and after award of the contract.

I-21 All electronic plan assemblies will include the construction plans in two formats: PDF files and MicroStation format (.dgn) files. Only the PDF files will be considered as part of the official plan assembly.

The MicroStation format (.dgn) files are furnished only as information for the contractor. These plans are developed in layers (levels) to aid in readability. (See the VDOT CADD Manual for CADD Level Structure). However, the construction items may or may not be in the proper layering scheme as described in the VDOT CADD Manual. The Microstation files will only match the scanned files if all required levels are turned on. A Microstation Software license is required to be able to read these files.

EROSION AND SEDIMENT CONTROL (ESC)

E-1 If the removal of Brush Silt Barrier is specified by the plans or required by the Engineer, the cost of removal and disposal of brush shall be in accordance with Section 109 of the applicable VDOT Road and Bridge Specifications.

E-2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.

E-3 The following symbols are used to depict Erosion Control items in the plan assembly:

EC-2, Ty. 1 / EC-2, Ty. 2 / EC-2, Ty. 3 / EC-2, Ty. 4	Denotes Rolled Erosion Control Product, Temporary, St'd. EC-2 Type 1, 2, 3 or 4
EC-3, Ty. 1 / EC-3, Ty. 2 / EC-3, Ty. 3	Denotes Rolled Erosion Control Product, Permanent, St'd. EC-3 Type 1, 2 or 3
TSF-A / TSF-B	Denotes Temporary Silt Fence, St'd EC-5 Type A or B
TDC	Denotes Temporary Diversion Channel, St'd EC-12
DD	Denotes Temporary Diversion Dike, St'd EC-9
TC-I	Denotes Turbidity Curtain, Type - Impervious
TC-P	Denotes Turbidity Curtain, Type - Pervious
RCD-1	Denotes Rock Check Dam, Type I; St'd EC-4
RCD-2	Denotes Rock Check Dam, Type II; St'd EC-4
IP-A	Denotes Inlet Protection, Type A; St'd EC-6
IP-B	Denotes Inlet Protection, Type B; St'd EC-6
TSI	Denotes Slope Interrupter; St'd EC-15

FI PLANS

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CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	2

5:44:13 PM

PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
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SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

TYPICAL SECTIONS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	2A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Schnabel
Richmond, Virginia
MATERIALS ENGINEER

FI PLANS

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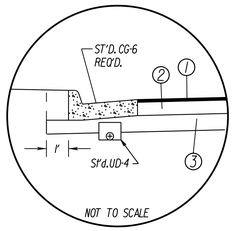
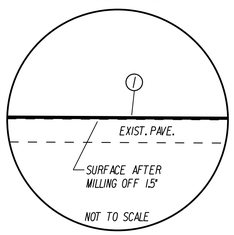
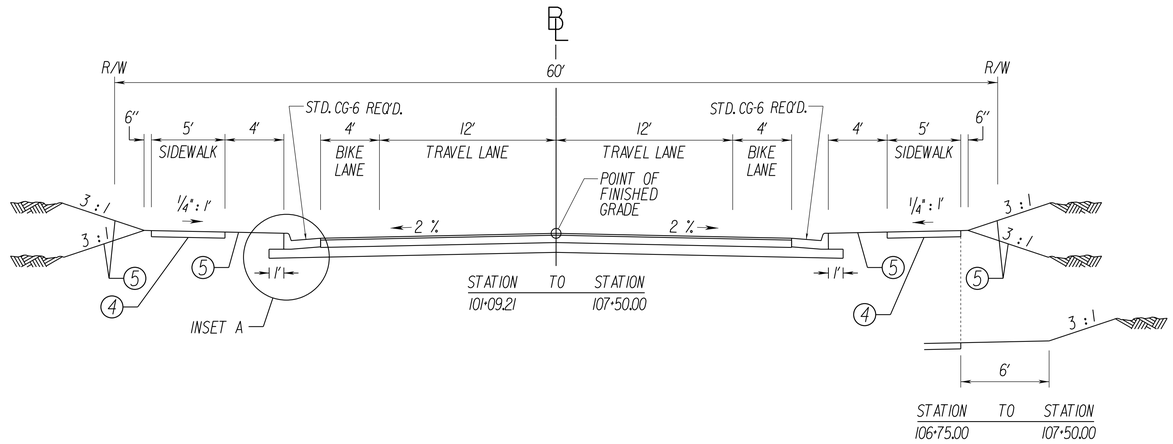
INSET A



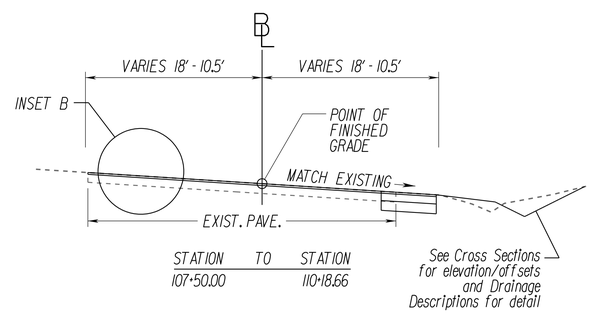
INSET B



MEADOW CREEK ROAD



MEADOW CREEK ROAD



PAVEMENT LEGEND

1. ASPHALT CONCRETE, TYPE SM-9.5A @ 165 LBS./SQ.YD.
2. 6" ASPHALT CONCRETE BASE COURSE, TYPE BM-25.0A
3. 8" AGGREGATE BASE MATERIAL, TYPE I, NO. 21-B
4. 4" HYDRAULIC CEMENT CONCRETE SIDEWALK
5. 4" TOPSOIL CLASS A AND SEED

NOTES:
EXISTING PAVEMENT SHALL BE MILLED A DEPTH OF 1.5" IN AREAS UNDERNEATH PROPOSED PAVEMENT.

FOR BARN ROAD, UTILIZE THE TYPE IV COMMERCIAL PAVEMENT SCHEDULE.

PRIVATE AND COMMERCIAL ENTRANCES

TYPE I
Crusher Run Aggr.

6" Crusher Run Aggr. 25 or 26

TYPE II
Concrete

Concrete Entrance Pavement
7" HES
4" Aggr. Base Mat'l. Ty. I
No. 21B

NOT TO SCALE

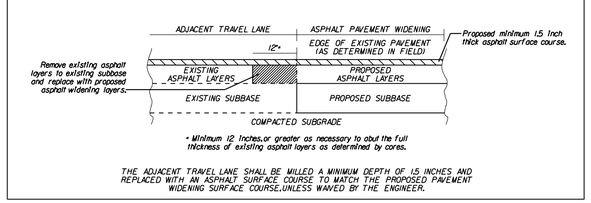
TYPE III
Asphalt

Asphalt Conc. Type SM-9.5A @ 165 Lbs. per S.Y.
4" Aggr. Base Mat'l. Ty. I
No. 21B

TYPE IV
Asphalt Commercial

Asphalt Conc. Type SM-9.5A @ 165 Lbs. per S.Y.
4" Asphalt Conc. Base Course BM-25.0
6" Aggr. Base Mat'l. Ty. I
No. 21B

PAVEMENT WIDENING CONSTRUCTION JOINT DETAIL
IVDOT Road & Bridge Standards, WP-21



* Minimum 12 Inches, or greater as necessary to cut the full thickness of existing asphalt layers as determined by cores.

THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1.5 INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE, UNLESS WAIVED BY THE ENGINEER.

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 5' 10'	0658-060-R63	2A

5:44:41 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
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SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

See Sheet 2 of 3 for Acronyms

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	2F(1)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

FI PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

✱ Denotes information that is to be provided/completed by the VDOT RLD.
✱✱ Denotes information that is to be provided/completed by the contractor.

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2014 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents)for the land disturbance (construction) activity.

SECTION I GENERAL INFORMATION

1. Activity Description - This project will re-align and improve Meadow Creek Road from the intersection of Tyler Road east for 0.17 miles.

2. This land disturbance (construction) activity site is located in the Montgomery County and approximately 2.69 acres will be disturbed by excavation, grading or other construction activities.

3. This proposed activity disturbs one acre or greater and requires coverage under the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) as issued by the DEQ. A copy of the VPDES Construction Permit (VAR10), the registration information (LD-445 form) and the permit coverage letter received from DEQ shall be maintained with other SWPPP documents for this land disturbing (construction) activity.

✱✱ 4. The location of on-site support facilities that will be covered under the VPDES Construction Permit coverage for this land disturbance (construction) activity shall be provided by the contractor and identified on the record set of plans or in other appropriate contract documents. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

✱✱ 5. Evidence of permit coverage shall be provided by the contractor for all support activities located outside of VDOT right of way or easement in the form of the Construction General Permit coverage letter: (List permit number when applicable)

6. List the surface waters that have been identified as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report for sediment, total suspended solids, turbidity, nitrogen or phosphorus. These pollutants are considered benthic impairments:
None

7. Identify the TMDLs where stormwater from construction activities discharges into a watershed with a TMDL waste load allocation established and approved by the State Water Control Board prior to July 1, 2014 for sediment, total suspended solids, turbidity, nitrogen or phosphorus:
None

8. This land disturbance (construction) activity discharges stormwater to the following surface waters that have been identified as exceptional in Section 9VAC25-260-30 A 3 c of the Virginia Administrative Code:
None

9.Locations of surface waters and locations where concentrated stormwater is discharged from this land disturbance (construction) activity are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

10. The ESC and SWM plans (where applicable) for this land disturbance (construction) activity have been developed in accordance with VDOT's Annual Erosion and Sediment Control and Stormwater Management Standards and Specifications as approved by the DEQ.

11. (a) List the RLD for the land disturbance activity: (required for erosion and sediment control)
(b) The following individual(s) has delegated authority to sign all reports required by the construction permit including the SWPPP (LD445E) and inspection reports. The individual(s) has overall responsibility for environmental matters for the project: (required only for permitted projects)

Name	Position

✱ 12. The name of the individual(s) responsible for the inspection of the erosion and sediment control and pollution prevention measures on this land disturbance (construction) activity is identified on the LD-445E form which will be maintained with the other SWPPP documents for this land disturbance (construction) activity (Note: Individual(s) shall be certified through the DEQ ESC Inspector Certification Program and shall be knowledgeable in the area of pollution prevention at construction sites and shall be a VDOT employee or an agent working for VDOT.)

✱ 13. The ESC and P2 inspections for this land disturbing (construction) activity shall follow either Schedule 1 or 2 as defined in Section 107.16(e) of the VDOT Road & Bridge Specifications Special Provision S107J31. Rain gage notes apply only to Inspection Schedule 1.

✱✱ 14. The location of the on-site rain gage that will be used to determine the occurrence of a measurable storm event for the purposes of ESC and Pollution Prevention inspections will be provided by the contractor and identified on the record set of plans or in other appropriate SWPPP documents for this land disturbance (construction) activity:
(List location of rain gage)

The rain gage shall be observed daily at (insert time) to determine the occurrence of a measurable storm event (i.e., 0.25 inches of rainfall or greater in a 24 hour period). A log book shall be maintained to record observation information which shall include (1) the date, (2) the time, (3) whether or not rainfall is occurring at the time of the observation, (4) the amount of accumulated rainfall in the gage, if any, and (5) whether or not an inspection is required based on the amount of accumulated rainfall in the gage.
If there is no rainfall occurring at the time of the observation, the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

If there is rainfall occurring at the time of the observation, the observation information is to be noted in the log book. The rain gage is not to be emptied but left to accumulate additional rainfall until the conclusion of the rainfall event. At the conclusion of the rainfall event, an observation of the rain gage shall be made and the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

15. The following VDOT documents serve the purpose of a) permitted projects b) non-permitted projects in Chesapeake Bay Preservation Areas (CBPA) with 2,500 S.F. to 1.0 acre of land disturbance c) non-permitted projects requiring a SWPPP and d) Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP:

VDOT LD-445: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
VDOT LD-445A: Permitted projects only.
VDOT LD-445B: Permitted projects only.
VDOT LD-445C: Projects that require a permit or SWPPP.
VDOT LD-445D: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
VDOT LD-445E: Permitted projects only.
VDOT LD-445F: Emergency work projects (when applicable).
VDOT LD-445G: Permitted and CBPA projects requesting a Water Quality. Requirement Exception (when applicable).
VDOT LD-445H: Permitted projects only.
VDOT C-107 Part I and Part II: All projects that require a permit or SWPPP.

SECTION II EROSION AND SEDIMENT CONTROL

1. The following variances to the Virginia ESC Regulations have been approved by the DEQ for this land disturbance (construction) activity: None

✱✱ 2. The intended sequence and timing of activities that disturb soils at the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.) shall be provided by the contractor in accordance with Section 108.03 of the VDOT R&B Specifications and shall be included with the other SWPPP documents for this land disturbance (construction) activity.

3. Directions of stormwater flow and approximate slopes anticipated after major grading activities are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

4. Areas of soil disturbance and areas of the site which will not be disturbed are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

5. Locations of major structural and nonstructural ESC measures intended to filter, settle or similarly remove sediment are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. Locations where stabilization practices are expected to occur are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

7. A description of interim and permanent stabilization practices for the site are identified in the applicable sections of the documents identified in the Note 1 of Section III.

✱✱ 8. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated will be provided by the contractor and maintained with the record set of plans or other SWPPP documents for this land disturbance (construction) activity:
(List how this will be tracked and the location)

9.A description and schedule of procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good and effective operating conditions are identified in Sections 107.16 and 303.03 of the VDOT R&B Specifications.

10. Nutrients shall be applied in accordance with Sections 603 and 604 of the VDOT Road and Bridge Specifications. Nutrients shall not be applied during rainfall events.

11. All engineering calculations supporting the design of erosion and sediment control measures proposed for this land disturbance (construction) activity are contained in the project drainage file located in the VDOT Salem District Hydraulics Section and will be made available for review upon request during normal business hours.

12. The temporary erosion and siltation control items shown on the ESC Plan for this land disturbing (construction) activity are intended to provide a general plan for controlling erosion and sediment within the project limits. The ESC Plan is based on field conditions at the time of plan development and an assumed sequence of construction for the project. The contractor, in conjunction with the VDOT Project Engineer and/or ESC Inspector, shall adjust the location, quantity and type of erosion and sediment control items required based on the actual field conditions encountered at the time of construction and the actual scheduling and sequencing of the construction activities. Significant changes to the proposed ESC Plan (e.g., those that require an engineering analysis) shall be submitted to the applicable District Hydraulics Engineer for review and approval. Any changes to the proposed ESC Plan must be noted on the designated record set of plans which shall be retained on the project site and made available upon request during normal business hours.

13. The areas beyond the project's construction area are to be protected from siltation. Perimeter controls such as silt fence, diversion dikes, turbidity curtains, etc. shall be installed prior to any grubbing operations or other earth moving activities.

14. Temporary earthen structures such as dikes and berms are to be stabilized immediately upon installation. Stabilization may include temporary or permanent seeding, riprap, aggregate, sod, mulching, and/or soil stabilization blankets and matting in conjunction with seeding.

15. All channel relocations are to be constructed during the earliest stage of construction and shall be constructed in accordance with all applicable permit requirements and shall be constructed in the dry wherever possible. Stabilization or vegetation shall be established before flow is redirected through the constructed area as directed by the Engineer.

16. The contractor shall plan and implement his land disturbance operations in order to:
a. Control the volume and velocity of stormwater runoff within the site to minimize erosion.
b. Control the peak flow rates, volume and velocity of stormwater discharges to minimize erosion at outlets and in downstream channels.
c. Minimize the amount of soil exposed.
d. Minimize the disturbance of steep slopes.
e. Minimize sediment discharge from the site.
f. Provide and maintain natural buffers around surface waters, direct stormwater runoff to vegetated areas and maximize stormwater infiltration, unless infeasible.
g. Minimize soil compaction (except in those areas where compaction is required by the contract documents) and preserve topsoil where feasible.

✱✱ 17. The name of the individual(s) or contractor(s) responsible for the installation and maintenance of the erosion and sediment control measures shall be supplied by the contractor and maintained with the other SWPPP documents for this land disturbance (construction) activity.

18. Soil stockpiles temporarily placed within the project area or on VDOT right of way or easement shall be stabilized or protected with sediment trapping measures.

19. A construction entrance or other approved measure shall be installed at all locations where construction vehicular traffic access routes intersect a paved or a public road in order to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or a public road surface, the road shall be cleaned thoroughly at the end of each work day by shoveling or sweeping. Removed sediment shall be disposed of in accordance with Section 106.04 of the R&B Specifications.

CLARKNEXSEN

5:44:15 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
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DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	2F(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

FI PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2014 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents)for the land disturbance (construction) activity.

✱ Denotes information that is to be provided/completed by the VDOT RLD.
✱✱ Denotes information that is to be provided/completed by the contractor.

SECTION III SWPPP

1. All documents related to the SWPPP for this land disturbance (construction) activity shall be maintained at the activity site and shall be readily available for review upon request during normal business hours. Such documents include, but are not limited to, the construction plans (or other such documents), the ESC Plan, the Pollution Prevention Plan, the post construction SWM Plan (if applicable), the VDOT R&B Standards and Specifications, Supplemental Specifications, Special Provisions and Special Provision Copied Notes. Documents related to stormwater pollution prevention which are not a part of those documents referenced above, such as a copies of the VPDES Construction Permit coverage letter (when applicable) and the VPDES General Permit For Discharges Of Stormwater From Construction Activities (when applicable) and those required to be developed by the contractor for pollution prevention associated with any on-site support facilities being included in the VPDES Construction Permit coverage for this land disturbance (construction) activity are to be maintained at the activity site with the other SWPPP documents for this land disturbance (construction) activity. Where no facilities are available at the activity site to maintain the SWPPP documents, they are to be kept by or with the designated RLD at a location convenient to the activity site where they would be made available for review upon request during normal business hours.

2. The SWPPP and any subsequent amendments, modifications and updates shall be implemented from commencement of land disturbance until termination of VPDES Construction Permit coverage or completion of land disturbance (construction) activities where no VPDES Construction Permit coverage is required.

✱✱ 3. For all on-site support facilities that will be included in the VPDES Construction Permit coverage for this land disturbance (construction) activity, the contractor shall develop a SWPPP in accordance with, but not limited to, Section 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications. The SWPPP for the on-site support facilities shall be maintained with and become a component of the SWPPP for this land disturbance (construction) activity. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storageareas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

✱ 4. By completing and submitting the SWPPP Certification form LD-445E, the RLD, or his authorized representative, certifies that all documents identified herein to be supplied by the contractor will be reviewed, approved (as applicable) and included with the other SWPPP documents for this land disturbance (construction) activity prior to start of work in those areas identified by such information.

5. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the SWPPP shall be made available for review upon the request of the DEQ, the EPA, the VSMP Authority, the VESCP Authority, local government officials or the operator of a municipal separate storm sewer system (MS4) receiving discharge from the construction site.

✱ 6. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the VDOT RLD shall post, or have posted, a copy of the General Permit coverage letter and a copy of a completed LD-445A form, noting the name and contact information for the VDOT person responsible for the land disturbing (construction) activity and its SWPPP, outside the project's construction office along with other Federal and State mandated information. Where there is no construction office (e.g., a maintenance activity), the permit coverage letter and the LD-445A form are to be maintained with the other SWPPP documents for the land disturbing (construction) activity.

7. The SWPPP shall be made available for review by the public upon request. Such reviews shall be at a time and publicly accessible location convenient to the VDOT and shall be scheduled during normal business hours and no less than once per month.

ACRONYMS

BMP - Best Management Practice
DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWM - Stormwater Management
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VPDES - Virginia Pollutant Discharge Elimination System
VSMP - Virginia Stormwater Management Program
VESCP - Virginia Erosion and Sediment Control Program

SECTION IV POST CONSTRUCTION STORMWATER MANAGEMENT

Choose the appropriate note 1 or 2 that is applicable to the proposed post construction SWM Plan for this land disturbance (construction) activity. (Delete, strikethrough or mark as NA those notes not applicable.)

1. This land disturbance (construction) activity is grandfathered under Section 9VAC25-870-48 of the VSMP Regulations and utilizes the Part IIC technical criteria (i.e., Performance or Technology Based, MS 19, etc.) in Section 9VAC25-870-93 et.seq. of the VSMP Regulations.

~~2. This land disturbance (construction) activity utilizes the Part IID technical criteria (i.e., Runoff Reduction Method, Energy Balance Equation, etc.) in Section 9VAC25-870-62 et seq. of the VSMP Regulations.~~

~~3. An exception for (number) pounds of phosphorus removal has been granted for this land disturbance (construction) activity by the DEQ in its letter dated (date).~~

4. The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance (construction) activity: None

5. The permanent onsite SWM facilities or offsite strategies proposed to meet the water quality/quantity requirements for this land disturbance (construction) activity are listed in Section VI.

6. A description of all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed is included in the construction plan set (or other such documents) for this land disturbance (construction) activity.

7. All engineering calculations supporting the design of the post-construction stormwater management measures for this land disturbance (construction) activity, including an explanation of the technical basis used to select the practices, are contained in the project drainage file located in the VDOT Salem District Hydraulics Section and will be made available for review upon request during normal working business hours.

SECTION V - POLLUTION PREVENTION PLAN

1. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are prohibited:
   a. Wastewater from concrete washouts.
   b. Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.
   c. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance.
   d. Oils, toxic substances or hazardous substances from spills or other releases.
   e. Soaps, solvents or detergents used in equipment and vehicle washing.
   f. There shall be no discharge of floating solids or visible foam in other than trace amounts

2. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are allowed when discharged in compliance with the VPDES Construction Permit:
   a. Discharges from fire fighting activities.
   b. Fire hydrant flushings.
   c. Waters used to wash vehicles or equipment where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
   d. Water used to control dust that has been filtered, settled or similarly treated prior to discharge.
   e. Potable water sources including uncontaminated waterline flushings.
   f. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
   g. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled or leaked material has been removed prior to washing), where soaps, solvents or detergents have not been used and where the wash water has been filtered, settled or similarly treated prior to discharge.
   h. Uncontaminated air conditioning or compressor condensate.
   i. Uncontaminated ground water or spring water.
   j. Foundation or footing drains where flows are not contaminated with process materials such as solvents.
   k. Uncontaminated excavation dewatering, including dewatering trenches and excavations that have been filtered, settled or similarly treated prior to discharge.
   l. Landscape irrigation.

✱✱ 3. The contractor shall develop a Pollution Prevention Plan to address any of his on-site operations that have a potential to generate a pollutant that may reasonably be expected to affect the quality of stormwater discharges from this land disturbance (construction) activity. The Pollution Prevention Plan shall be developed in accordance with, but not limited to, Sections 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications and shall include a narrative with appropriate plan detail and shall be provided on standard 8.5 x 11 inch paper or larger and shall:
   a. Identify the potential pollutant-generating activities and the pollutant that is expected to be exposed to stormwater.
   b. Describe the location where the potential pollutant-generating activities will occur, or if identified on the record set of plans, reference the record set of plans.
   c. Identify all non-stormwater discharges, as described in note two of this section, that are or will be commingled with stormwater discharges from the construction activity, including any on-site support activities.
   d. Identify the person(s) or contractor(s) responsible for implementing and maintaining the pollution prevention practice or practices for each pollutant-generating activity.
   e. Describe the pollution prevention practices and procedures that will be implemented to:
      1) Prevent and respond to leaks, spills, and other releases, including procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases, and procedures for reporting leaks, spills, and other releases in accordance with Section 107.16 of the VDOT Road and Bridge Specifications and the requirements within the VPDES Construction Permit.
      2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities.
      3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials, including procedures for the clean-up of stucco, paint, form release oils, and curing compounds.
      4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing.
      5) Direct concrete wash water into a leak-proof container or leak-proof settling basin. The container or basin shall be designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wash waters and shall not be discharged to surface waters.
      6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes including building products (such as asphalt sealants, copper flashing, roofing materials, adhesives, and concrete admixtures), pesticides, herbicides, insecticides, fertilizers, landscape materials, construction and domestic wastes (such as packaging materials), scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials.
      7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, and sanitary wastes.
      8) Address any other discharge from any potential pollutant-generating activity not listed herein.
      9) Describe and implement procedures for providing pollution prevention awareness (including but not limited to prevention practices, disposal practices and appropriate disposal locations) for all applicable wastes (including any wash water), to appropriate personnel.

CLARKNEXSEN

PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
GENERAL INFORMATION SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	2F(3)

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2014 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

FI PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

ACRONYMS

BMP - Best Management Practice
DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWM - Stormwater Management
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VPDES - Virginia Pollutant Discharge Elimination System
VSMP - Virginia Stormwater Management Program
VESCP - Virginia Erosion and Sediment Control Program

SECTION VI - PERMANENT BMP INFORMATION △

✱ Denotes information that is to be completed by the VDOT RLD.
( ) See note referenced by number in parentheses.

INSTALLED BMP INFORMATION
Table A
(VDOT Owned/Operated)

Plan Sheet(s)	BMP Type (See Table 1 and 3)	County or City	Latitude/Longitude (1) LAT	Latitude/Longitude (1) LONG	State Hydrologic Unit Code (7)	Receiving Stream Name (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3) Impervious	Pervious	TOTAL	✱ BMP Maintenance ID Number (10)	BMP Maintenance Manual (11) SECTION	BMP Inspection Manual (11) SECTION
N/A	**Extended Detention Basin	Montgomery	37.093	-80.502	NE59	Meadow Creek	None	See approved "Woody Mass Grading Plan"			N/A	N/A	N/A

**Stormwater management required due to increased runoff per this watershed's development has been approved by the Montgomery County Engineer under a separate submittal. The plan titled "Woody Mass Grading Plan" dated March 18, 2011 shall be referred to for all matters concerning stormwater management.

ALTERNATIVE BMP INFORMATION
Table B

BMP Type (See Table 2)	Name of Nutrient Credit Generating Entity (6)	County or City (5)	Latitude/Longitude (1) (5) LAT	Latitude/Longitude (1) (5) LONG	State Hydrologic Unit Code (5) (7)	Project Acres Treated Per BMP (3) Impervious	Pervious	TOTAL	Nutrient Credits (lbs./acre/year) Acquired (6) (12)

Table 1: Permanent BMP Types (1999 Va. SWM Handbook)
Bio-Retention Basin
Bio-Retention Filter
Constructed Stormwater Wetlands
Extended Detention Basin
Extended Detention Basin Enhanced
Grassed Swale
Infiltration Basin
Infiltration Trench
Manufactured Treatment Device (MTD) (8)
Retention Basin I
Retention Basin II
Retention Basin III
Sand Filter
Vegetated Filter Strip
Other Approved Types (List Type)

Table 2: Alternative BMP Types
Comprehensive SWM Plan (Regional) Facility
Pollutant Loading Pro Rata Share Program
Purchase of Nutrients Credits
Other Approved Options (List Type) (4)

Table 3: Permanent BMP Types (BMP Clearing House)
Sheet Flow to Vegetated Filter Strip
Grass Channel
Soil Compost Amendment
Permeable Pavement
Infiltration Practice
Bioretention
Dry Swale
Wet Swale
Filtering Practice
Constructed Wetlands
Biorention Conservation
Extended Detention Pond
Wet Pond
Manufactured Treatment Device (MTD)(8)
Other Approved Types (List Type) (4)

NOTES:
(1) In decimal degrees to the nearest one ten-thousandth of a degree.

(2) For streams with no names, list "(Unnamed Tributary to closest stream name)".

(3) Show acres treated to the nearest one tenth acre.

(4) Include agreements with off-site BMP owners.

(5) Information pertains to the alternative BMP option location, where applicable. Exception - Not required for nutrient credit purchase option.

(6) Applies to the purchase of nutrient credits only.

(7) Virginia 6th Order HUC (VAHU6) Example - Y030.

(8) Final approved shop drawings of Manufactured Treatment Devices (MTDs) are to be included with the BMP information submitted with the LD-445D form.

(9) List the name of any impaired water to which the BMP discharges. The determination of impaired water shall be based on those streams listed as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report and shall be the first named waterbody to which the BMP discharges. The impaired waters are those impaired by sediment, total suspended solids, turbidity, nitrogen or phosphorus. These pollutants are considered benthic impairments.

(10) BMP Maintenance ID Number is to be assigned by the District Infrastructure Manager at permit termination or project completion.

(11) Provide the section of each Maintenance manual that pertains to the type of BMP. Both manuals can be found at www.vdot.virginia.gov/business/manuals in the Maintenance selections.
Example: Section 4 would be noted for both the maintenance and inspection manuals for a Bioretention I infiltration BMP.

(12) Nutrient credits purchased to the nearest one hundredth pound.

△ Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project that affects the proposed construction details or potentially affects the information shown in the BMP Tables A and/or B shall be coordinated by the VDOT RLD with the appropriate VDOT District Hydraulics Engineer. The construction plans and the BMP Tables A and/or B are to be formally revised to reflect any authorized/approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the Road Design Manual and the Construction Division IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the record set of construction plans maintained in the VDOT Central Office Plan File Room (Falcon Web Suite). Prior to submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities, the RLD shall have the District Maintenance Infrastructure Manager review the BMPs installed with the project (BMP Table A) for acceptance of maintenance responsibility and to obtain a Maintenance ID number for each BMP listed in BMP Table A. The RLD shall use the information in BMP Tables A and B along with the assigned Maintenance ID number and the date that the BMP became functional as a permanent control measure (for BMPs in Table A only) to complete the LD-445D form when certifying the construction of the BMPs and submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities.

Revised 09/29/16
Sheet 3 of 3

CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	2F(3)

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	3

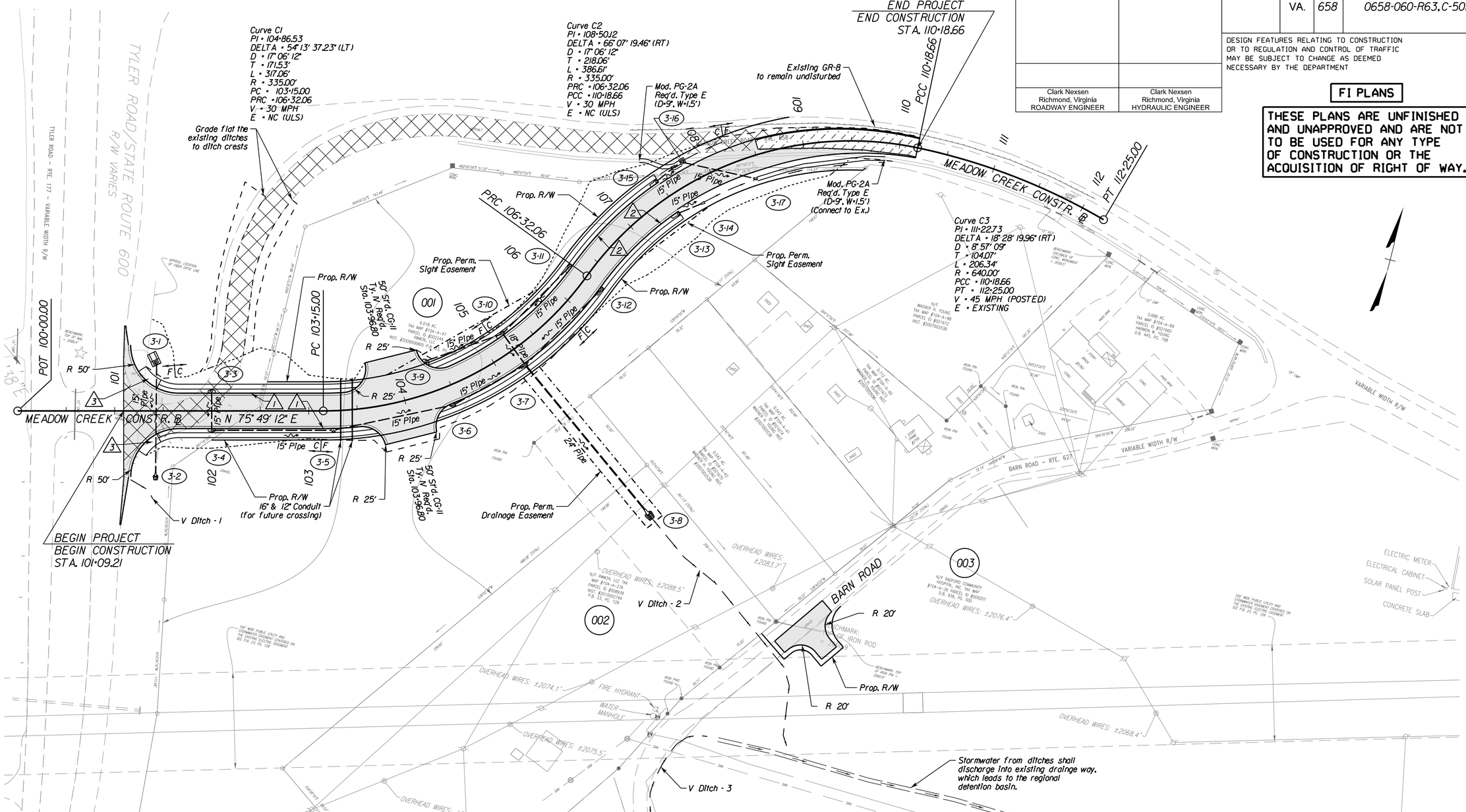
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
ROADWAY ENGINEER

Clark Nexsen
Richmond, Virginia
HYDRAULIC ENGINEER

FI PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



MATCH LINE SEE SHEET 4

LEGEND

- Denotes Demolition of Pavement
- Denotes New Pavement
- Denotes Mill and Overlay of Pavement
- Denotes Saw Cut
- C Denotes Construction Limits In Cuts
- F Denotes Construction Limits In Fills

1. St'd. CG-6 Req'd.
2. St'd. Rad. CG-6 Req'd.
3. St'd. CG-12 Req'd. (Type B)

Note: St'd. UD-4 Req'd. shall be installed under all St'd. CG-6 and tied into the drop inlets

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Typical Sections	2A
Mainline Profile	3A
ESC Plan	3B
Entrance Profiles	4A
Drainage Descr.	5
Storm Sewer Pro.	6(1)-(3)

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 50' 100'	0658-060-R63	3

5:44:21 PM

PROJECT MANAGER Don Brugh, P.E. (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63, C-501	3A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
ROADWAY ENGINEER

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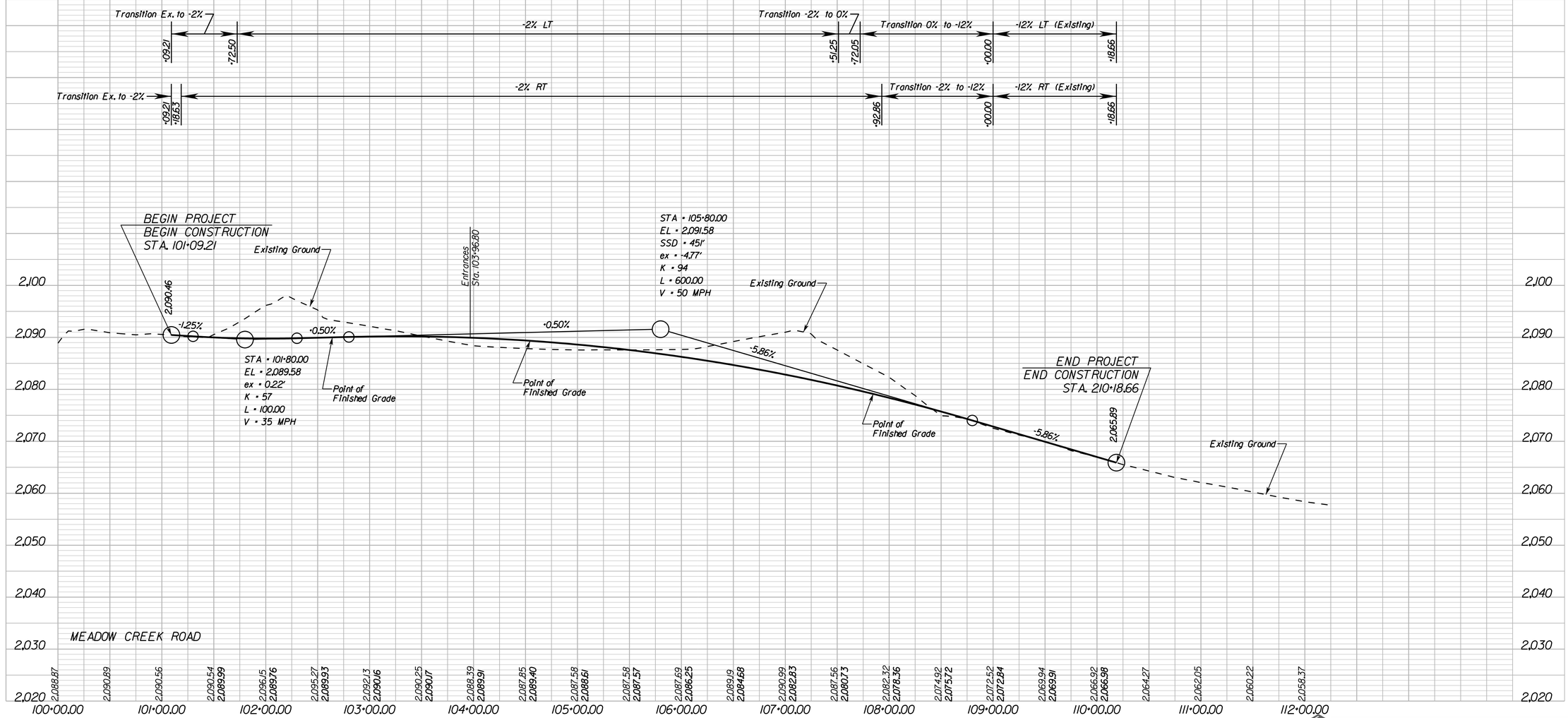

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
HORIZONTAL: 1" = 50' VERTICAL: 1" = 5'	0658-060-R63	3A

5:44:22 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
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SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

EROSION AND SEDIMENT CONTROL PLAN

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	3B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
HYDRAULIC ENGINEER

FI PLANS

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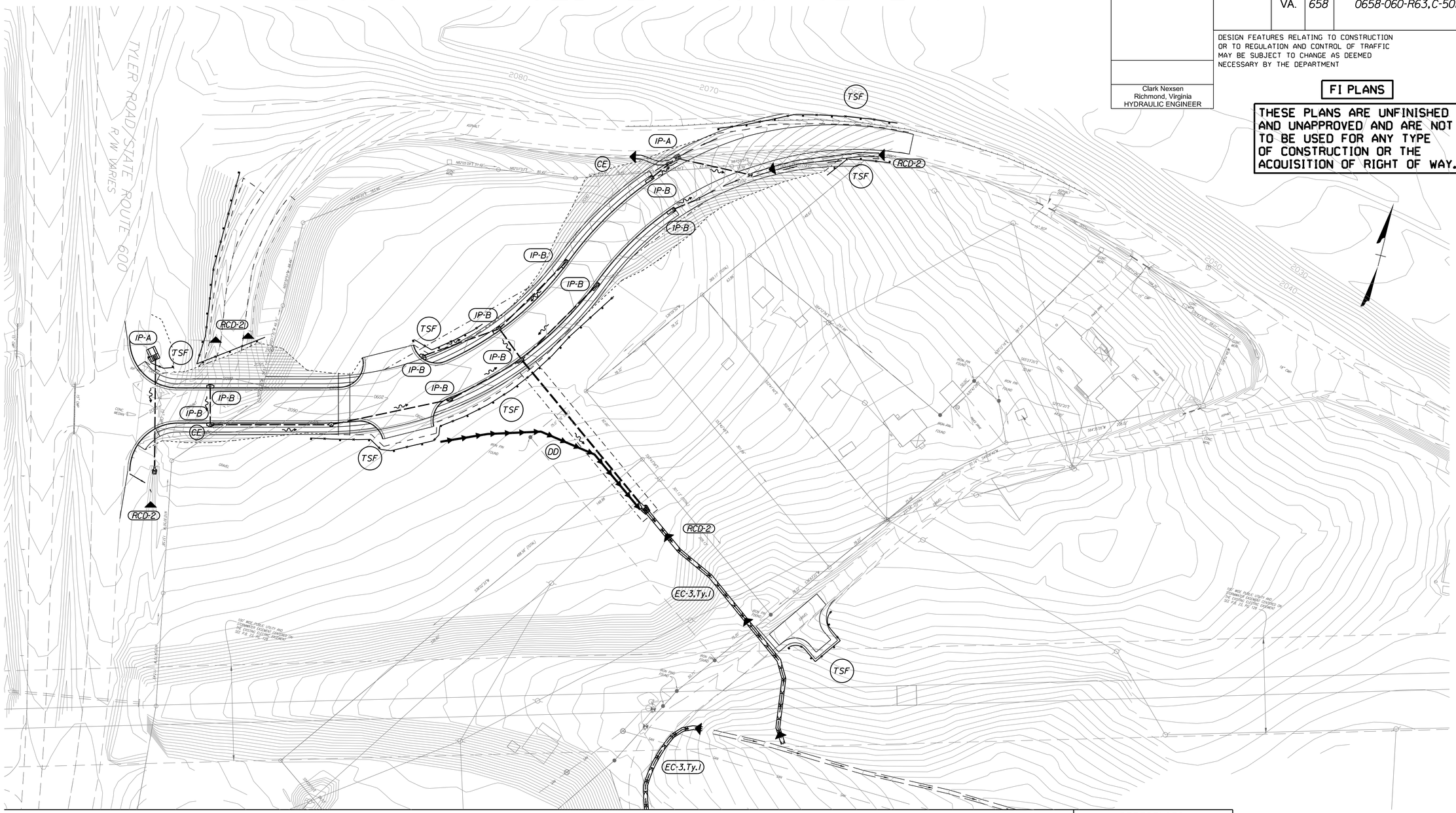

MATCH LINE SEE SHEET 4B

GENERAL NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR ANY SILT LOSS THAT AFFECTS VDOT R?W AS WELL AS CLEANING DITCHES AND EXISTING PIPES WITHIN VDOT R/W AS A RESULT OF SEDIMENT LOSS FROM THE PROPOSED DEVELOPMENT.
2. ALL PROPOSED PIPE OUTLET PROTECTION FROM THE PROPOSED VDOT R/W SHALL BE REVIEWED BY VDOT PERSONEL DURING AND AFTER CONSTRUCTION FOR EFFECTIVENESS.IF THERE IS AN SCOUR OR EROSION PROBLEMS ENCOUNTERED.THE CONTRACTOR SHALL BE REQUIRED TO DO WHATEVER IS NECESSARY TO CORRECT THE PROBLEM WHICH MAY INCLUDE:SODDING,RIPRAP,OR ADDITIONAL APPROVED LININGS.

REFERENCES
(PROFILES,DETAIL & DRAINAGE DESCRIPTION SHEETS,ETC.)

Drainage Descr.	5
Storm Sewer Pro.	6(1)-(3)

NOTE:SEE GENERAL NOTES FOR E&S LEGEND

NOTE:THIS DRAWING TO BE USED FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 50' 100'	0658-060-R63	3B

5:48:38 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	4

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen Richmond, Virginia ROADWAY ENGINEER	Clark Nexsen Richmond, Virginia HYDRAULIC ENGINEER

FI PLANS

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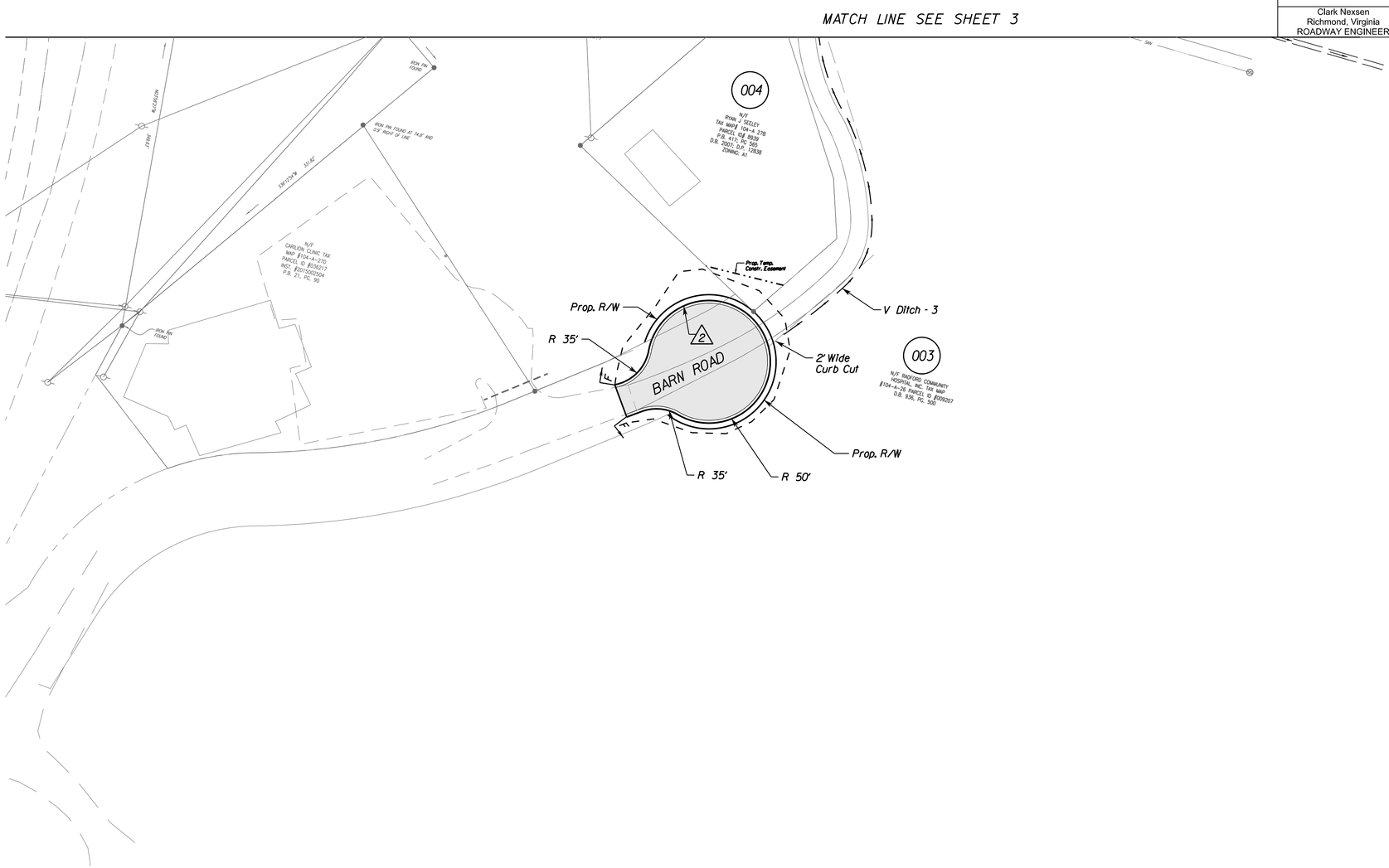

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Typical Sections	2A
Entrance Profiles	4A
ESC Plan	4B
Drainage Descr.	5
Storm Sewer Pro.	6(1)-(3)

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 50' 100'	0658-060-R63	4

5-44427 PM

PROJECT MANAGER Don Brugh, P.E. (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63, C-501	4A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
ROADWAY ENGINEER

FI PLANS

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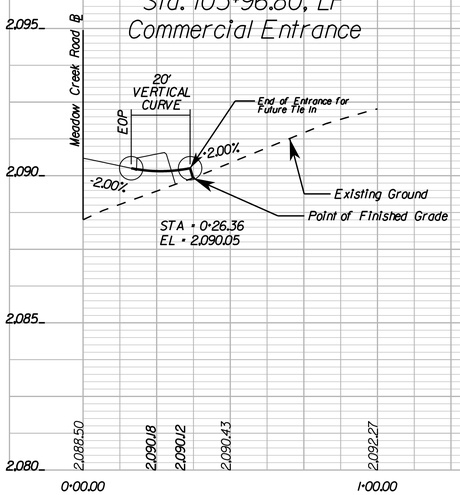
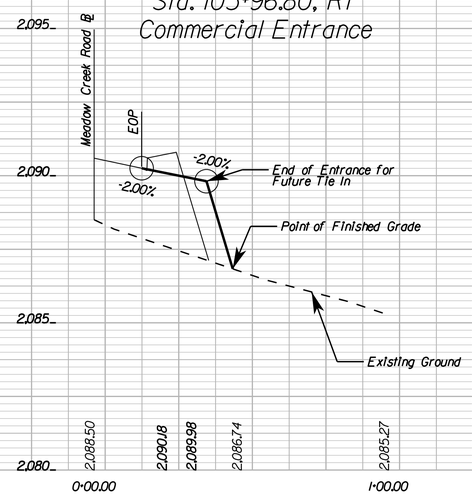
Sta. 103+96.80, LF
Commercial Entrance



Sta. 103+96.80, RT
Commercial Entrance



CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
HORIZONTAL: 1" = 25' VERTICAL: 1" = 5'	0658-060-R63	4A

5:44:28 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
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SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

EROSION AND SEDIMENT CONTROL PLAN

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	658	0658-060-R63,C-501	4B

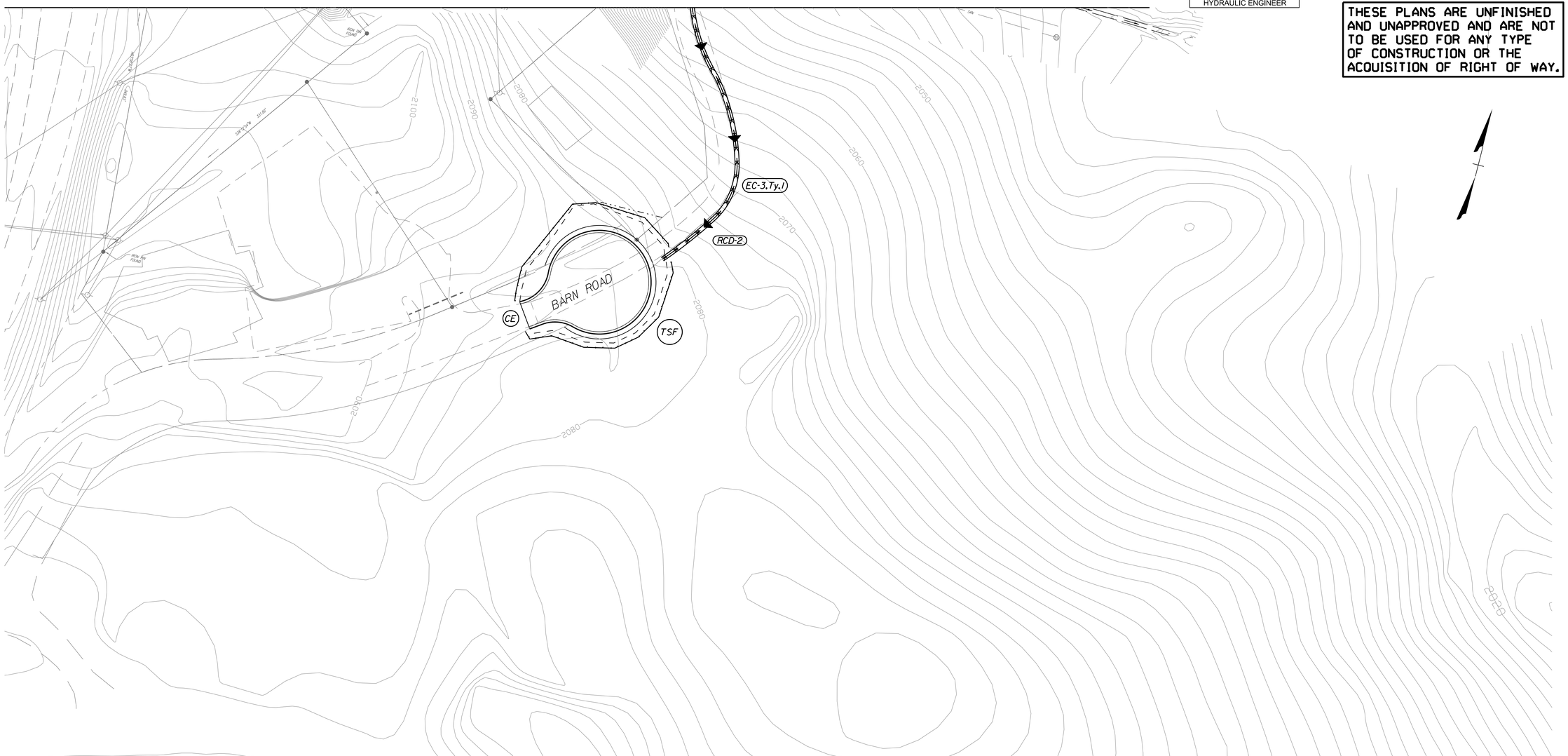
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
HYDRAULIC ENGINEER

FI PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

MATCH LINE SEE SHEET 3B



GENERAL NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR ANY SILT LOSS THAT AFFECTS VDOT R?W AS WELL AS CLEANING DITCHES AND EXISTING PIPES WITHIN VDOT R/W AS A RESULT OF SEDIMENT LOSS FROM THE PROPOSED DEVELOPMENT.
2. ALL PROPOSED PIPE OUTLET PROTECTION FROM THE PROPOSED VDOT R/W SHALL BE REVIEWED BY VDOT PERSONEL DURING AND AFTER CONSTRUCTION FOR EFFECTIVENESS. IF THERE IS AN SCOUR OR EROSION PROBLEMS ENCOUNTERED, THE CONTRACTOR SHALL BE REQUIRED TO DO WHATEVER IS NECESSARY TO CORRECT THE PROBLEM WHICH MAY INCLUDE: SODDING, RIPRAP, OR ADDITIONAL APPROVED LININGS.

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Drainage Descr.	5
Storm Sewer Pro	6(1)-(3)

NOTE: SEE GENERAL NOTES FOR E&S LEGEND

NOTE: THIS DRAWING TO BE USED FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY

CLARKNEXSEN

SCALE	PROJECT	SHEET NO.
0 50' 100'	0658-060-R63	4B

5:44:31 PM

PROJECT MANAGER Dan Brugh,PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

DRAINAGE DESCRIPTIONS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63,C-501	5

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
HYDRAULIC ENGINEER

FI PLANS

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Sheet 3

(3-1) I-St'd. DI-7A Req'd.
Grate A Type I Req'd.
H=3.0', Inv. 2089.5

(3-1)–(3-2) 112'-15" Storm Sewer Pipe Req'd. (2' Cover)
Slit Tight Joint Type
Inv. (In) 2086.5, Inv. (Out) 2086.0

(3-2) I-St'd. ES-1 or 2 (15") End Section Req'd.
Inv. 2086.0
3 Tons St'd. EC-1,Class AI Req'd.
Type A Installation

(3-3) I-St'd. DI-3C, Type B Nose Req'd.
H=3.9', L=6', Inv. 2085.8
Connect UD-4 to DI

(3-3)–(3-4) 38'-15" Storm Sewer Pipe Req'd. (3' Cover)
Slit Tight Joint Type
Inv. (In) 2085.9, Inv. (Out) 2085.7

(3-4) I-St'd. DI-3C, Type B Nose Req'd.
H=4.2', L=6', Inv. 2085.6
Connect UD-4 to DI
St'd.IS-1 Req'd.

(3-4)–(3-5) 123'-15" Storm Sewer Pipe Req'd. (4' Cover)
Slit Tight Joint Type
Inv. (In) 2085.6, Inv. (Out) 2085.0

(3-5) 5.3 Lin. Ft. Std. MH-1 or 2 Req'd.
1 Std. MH-1 Frame & Cover Req'd.
Inv. 2084.9
Connect UD-4 to MH

(3-5)–(3-6) 124'-15" Storm Sewer Pipe Req'd. (4' Cover)
Slit Tight Joint Type
Inv. (In) 2084.9, Inv. (Out) 2084.2

(3-6) I-St'd. DI-3B, Type B Nose Req'd.
H=5.4', L=4', Inv. 2084.1
Connect UD-4 to DI

(3-6)–(3-7) 82'-15" Storm Sewer Pipe Req'd. (4' Cover)
Slit Tight Joint Type
Inv. (In) 2084.1, Inv. (Out) 2083.7

(3-7) I-St'd. DI-3B, Type B Nose Req'd.
H=8.3', L=6', Inv. 2079.9
St'd.IS-1 Req'd.
Connect UD-4 to DI

(3-7)–(3-8) 193'-24" Storm Sewer Pipe Req'd. (6' Cover)
Slit Tight Joint Type
Inv. (In) 2079.9, Inv. (Out) 2078.6

(3-8) I-St'd. ES-1 or 2 (24") End Section Req'd.
Inv. 2078.6
3 Tons St'd. EC-1,Class AI Req'd.
Type A Installation

(3-9) I-St'd. DI-3C, Type B Nose Req'd.
H=5.2', L=6', Inv. 2084.3

(3-9)–(3-10) 82'-15" Storm Sewer Pipe Req'd. (3' Cover)
Slit Tight Joint Type
Inv. (In) 2084.3, Inv. (Out) 2083.0

(3-10) I-St'd. DI-3B, Type B Nose Req'd.
H=8.0', L=8', Inv. 2080.2
Connect UD-4 to DI
St'd.IS-1 Req'd.

(3-10)–(3-7) 38'-18" Storm Sewer Pipe Req'd. (6' Cover)
Slit Tight Joint Type
Inv. (In) 2080.2, Inv. (Out) 2080.0

(3-11) I-St'd. DI-3B, Type B Nose Req'd.
H=4.0', L=8', Inv. 2081.4
Connect UD-4 to DI

(3-11)–(3-10) 96'-15" Storm Sewer Pipe Req'd. (6' Cover)
Slit Tight Joint Type
Inv. (In) 2081.4, Inv. (Out) 2080.4

(3-12) I-St'd. DI-3B, Type B Nose Req'd.
H=3.9', L=8', Inv. 2081.4
Connect UD-4 to DI

(3-12)–(3-7) 109'-15" Storm Sewer Pipe Req'd. (7' Cover)
Slit Tight Joint Type
Inv. (In) 2081.4, Inv. (Out) 2080.0

(3-13) I-St'd. DI-3B, Type B Nose (Cast In Place) Req'd.
H=3.2', L=8', Inv. 2077.6
Connect UD-4 to DI

(3-13)–(3-14) 25'-15" Storm Sewer Pipe Req'd. (2' Cover)
Slit Tight Joint Type
Inv. (In) 2077.6, Inv. (Out) 2077.5

(3-14) I-St'd. ES-1 or 2 (15") End Section Req'd.
Inv. 2077.5

(3-15) I-St'd. DI-3B, Type B Nose Req'd.
H=5.2', L=8', Inv. 2075.6
Connect UD-4 to DI

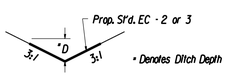
(3-15)–(3-16) 32'-15" Storm Sewer Pipe Req'd. (4' Cover)
Slit Tight Joint Type
Inv. (In) 2075.6, Inv. (Out) 2075.2

(3-16) I-St'd. DI-5 Req'd.
Grate A Type I Req'd.
H=3.0', Inv. 2075.1

(3-16)–(3-17) 75'-15" Storm Sewer Pipe Req'd. (4' Cover)
Slit Tight Joint Type
Inv. (In) 2075.1, Inv. (Out) 2074.7

(3-17) I-St'd. ES-1 or 2 (15") End Section Req'd.
Inv. 2074.7

Prop. Ditch Details



Ditch Callout	*D
V Ditch - 1	r
V Ditch - 2	r
V Ditch - 3	r

ALLOWABLE TYPE OF STORM SEWER PIPE (UNLESS OTHERWISE SHOWN ON PLANS)
(SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 STEEL SPIRAL RIB	POLYMER COATED (10/10) CORRUGATED STEEL SPIRAL RIB	POLYMER COATED (10/10) CORRUGATED STEEL DOUBLE WALL (SMOOTH INTERIOR)	ALUMINUM SPIRAL RIB	POLYVINYLCHLORIDE (PVC) PROFILE WALL PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
ROUTE 658	✓			✓		✓	✓	✓

ALLOWABLE TYPE OF PIPE CULVERT (UNLESS OTHERWISE SHOWN ON PLANS)
(SEE ROAD AND BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 CORRUGATED STEEL	POLYMER COATED (10/10) CORRUGATED STEEL	UNCOATED GALVANIZED CORRUGATED STEEL	GALVANIZED STEEL STRUCTURAL PLATE	GALVANIZED STEEL STRUCTURAL PLATE WITH THICKENED INVERT	CORRUGATED ALUMINUM ALLOY	CORRUGATED ALUMINUM ALLOY STRUCTURAL PLATE	POLYVINYLCHLORIDE (PVC) PROFILE WALL PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE C	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
ROUTE 658	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
ENTRANCES	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓

CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	5

5:44:32 PM

PROJECT MANAGER Dan Brugh, P.E. (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

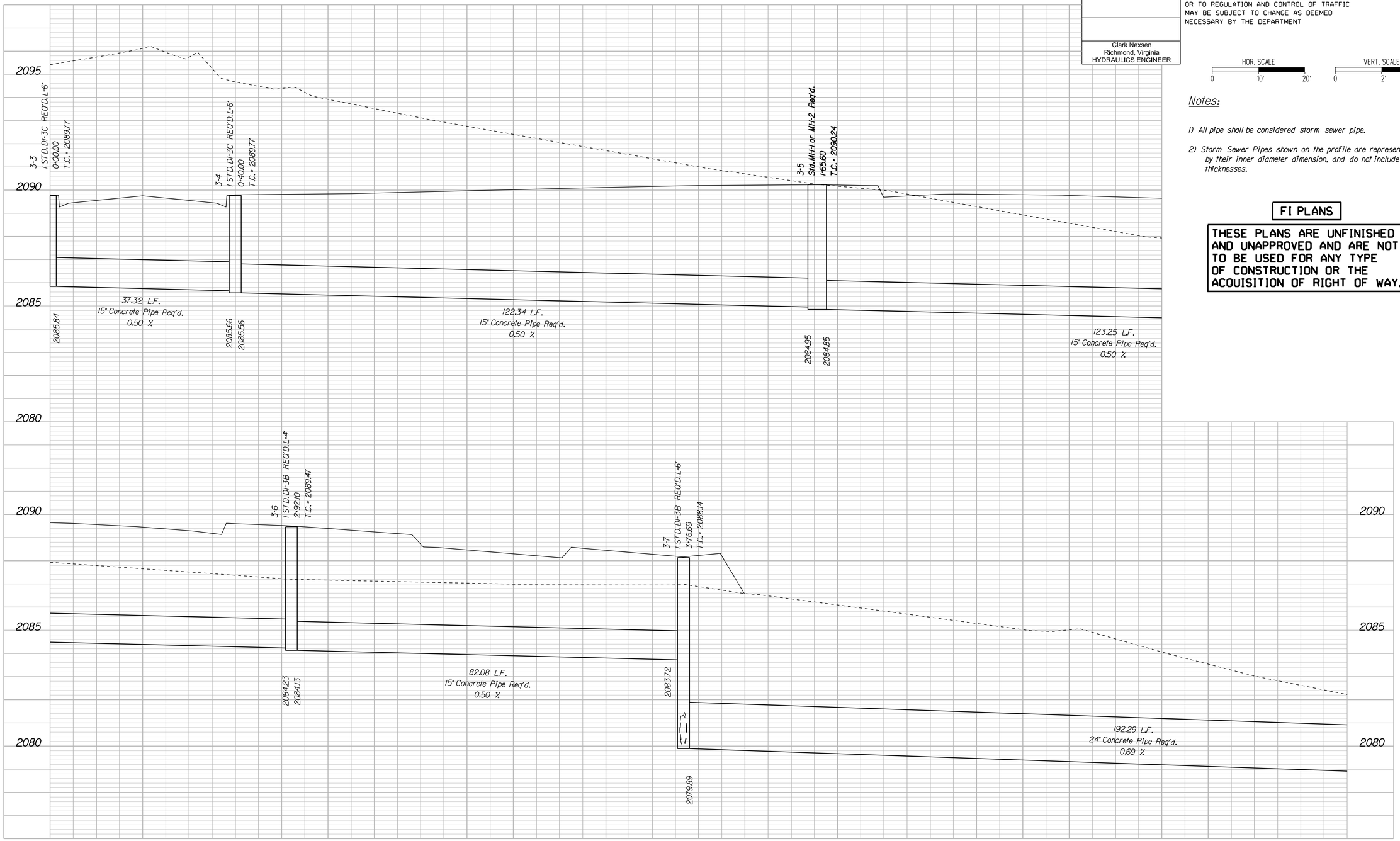
STORM SEWER PROFILES

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63, C-501	6(1)

Clark Nexsen
Richmond, Virginia
HYDRAULICS ENGINEER

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

HOR. SCALE 0 10' 20'
VERT. SCALE 0 2' 4'



Notes:

1) All pipe shall be considered storm sewer pipe.

2) Storm Sewer Pipes shown on the profile are represented by their inner diameter dimension, and do not include wall thicknesses.

FI PLANS

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CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	6(1)

5:44:33 PM

PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

STORM SEWER PROFILES

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63, C-501	6(2)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
HYDRAULICS ENGINEER

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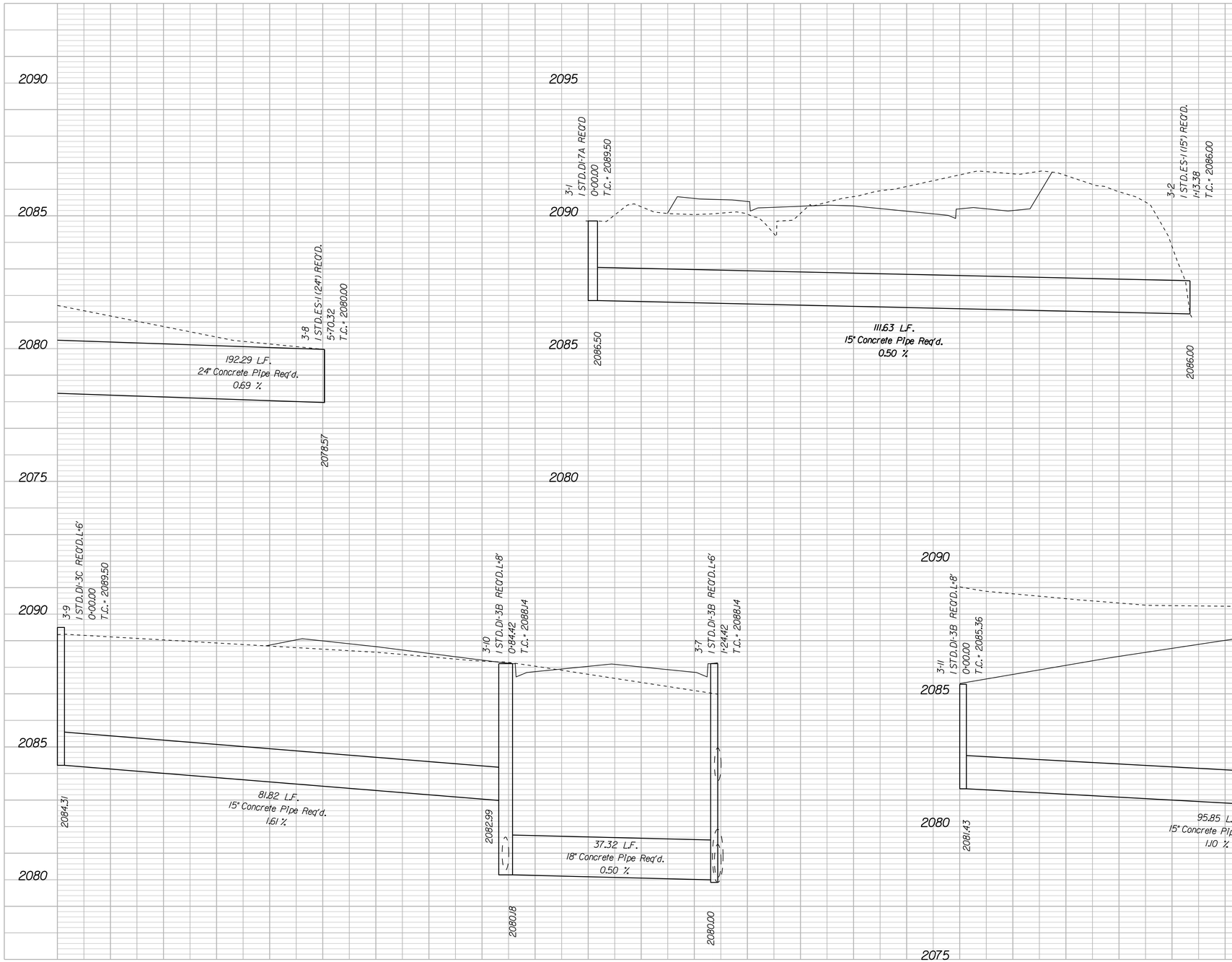

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CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	6(2)

PROJECT MANAGER Dan Brugh, PE (540) 925-2308
SURVEYED BY, DATE Balzer and Associates (540) 381-4290
DESIGN BY Clark Nexsen (804) 644-4690
SUBSURFACE UTILITY BY, DATE Balzer and Associates (540) 381-4290

STORM SEWER PROFILES

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	658	0658-060-R63, C-501	6(3)

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Clark Nexsen
Richmond, Virginia
HYDRAULICS ENGINEER

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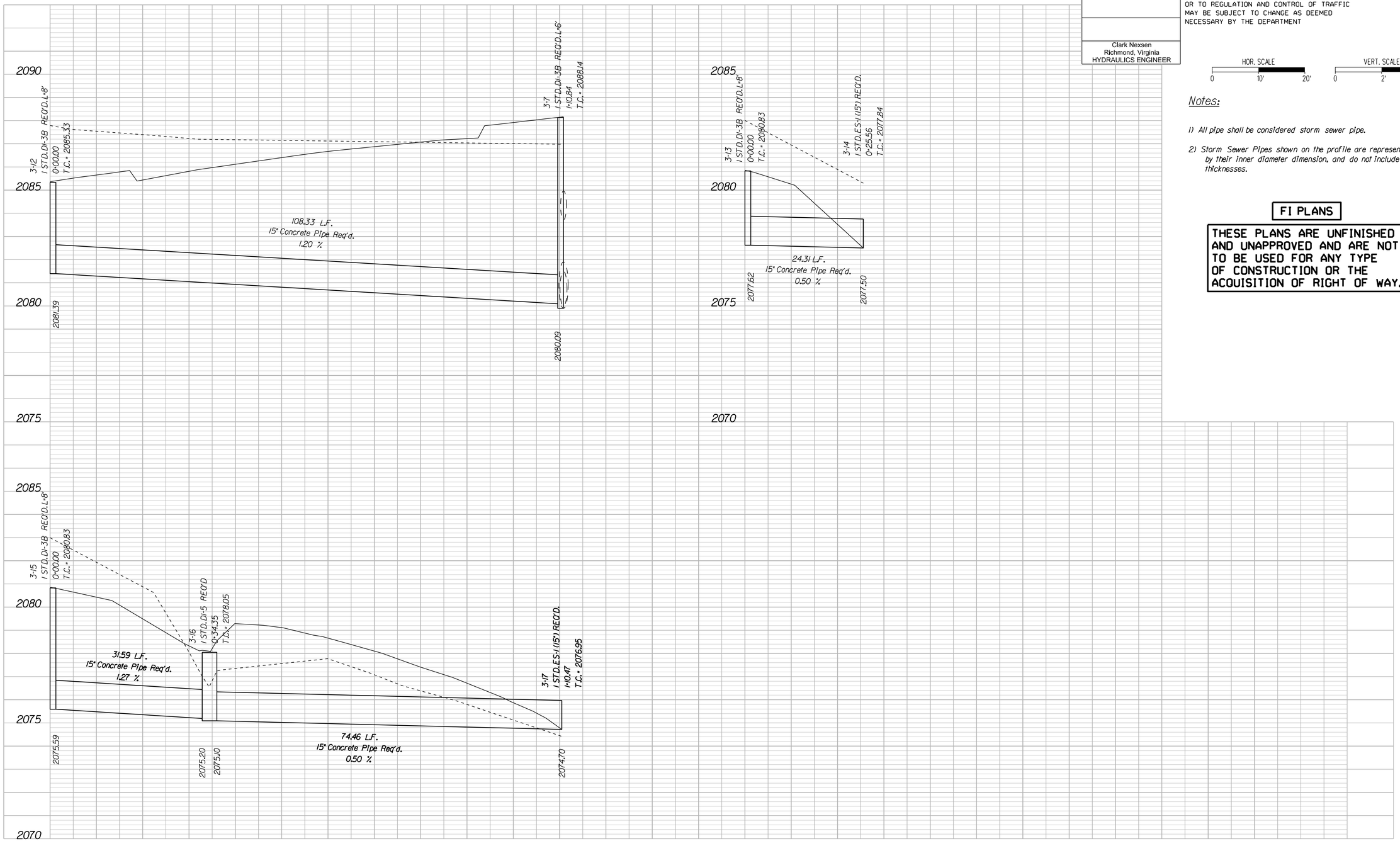

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CLARKNEXSEN

PROJECT	SHEET NO.
0658-060-R63	6(3)