STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.		612 658	(NFO) 0612-047-631 0658-047-R97 (SEE TABULATION BELOW FOR SECTION NUMBERS)	1

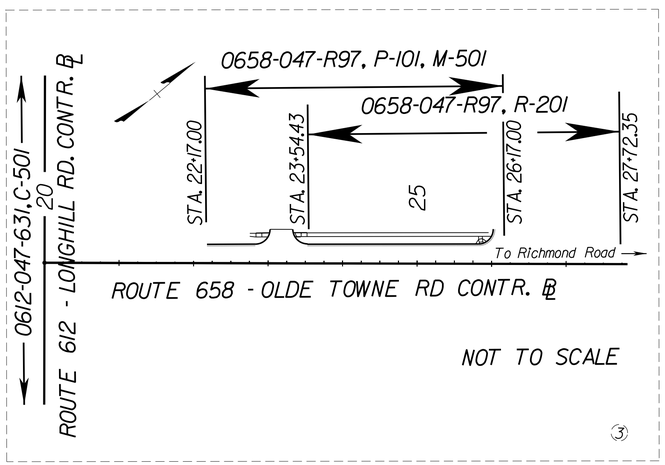
FOR INDEX OF SHEETS SEE SHEET
1B for Proj.: 0612-047-631, P101, R201, C501
1B for Proj.: 0658-047-R97, P101, R201, M501

NOTE:
UPC 100921 AND UPC 108805 PROJECTS ARE SUMMARIZED INDIVIDUALLY IN THEIR RESPECTIVE PLAN SETS

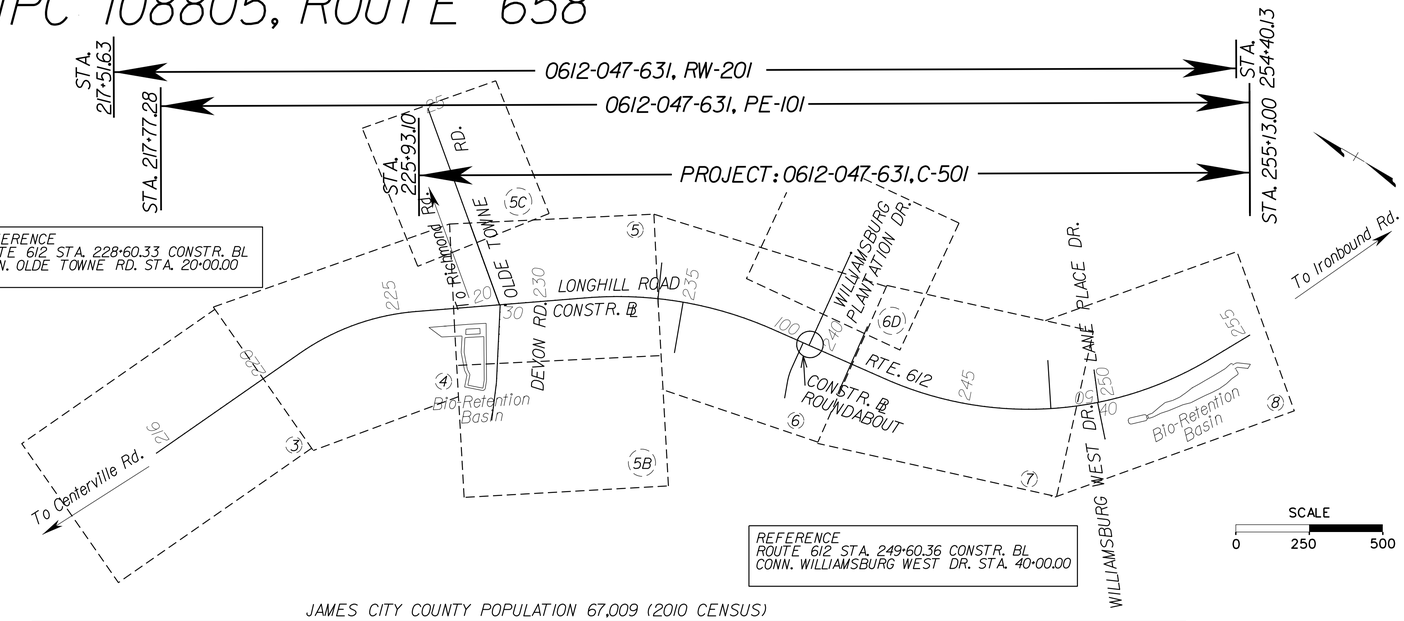
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

BUNDLE ADVERTISEMENT
UPC 100921, ROUTE 612
UPC 108805, ROUTE 658



REFERENCE
ROUTE 612 STA. 228+60.33 CONSTR. BL
CONN. OLDE TOWNE RD. STA. 20+00.00



REFERENCE
ROUTE 612 STA. 249+60.36 CONSTR. BL
CONN. WILLIAMSBURG WEST DR. STA. 40+00.00

JAMES CITY COUNTY POPULATION 67,009 (2010 CENSUS)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	LENGTH INCLUDING BRIDGE(S) FEET	LENGTH INCLUDING BRIDGE(S) MILES	LENGTH EXCLUDING BRIDGE(S) FEET	LENGTH EXCLUDING BRIDGE(S) MILES	BRIDGE PLAN NO.	TYPE PROJECT	DESCRIPTION
0612-047-631	PE-101	STP-5A03(682)		100921	3,735.72	0.708	3,735.72	0.708		PRELIM. ENGR.	FROM: 0.205 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
											TO: 0.105 MI. S. OF WILLIAMSBURG WEST DRIVE
	RW-201	STP-5A03(683)		100921	3688.50	0.6986	3688.50	0.6986		RIGHT OF WAY	FROM: 0.210 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
											TO: 0.091 MI. S. OF WILLIAMSBURG WEST DRIVE
	C-501	STP-5A03(684)	1000	100921	2,919.90	0.553	2,919.90	0.553		CONSTR.	FROM: 0.051 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
											TO: 0.105 MI. S. OF WILLIAMSBURG WEST DRIVE
0658-047-R97	PE-101			108805	400	0.0758	400	0.0758		PRELIM. ENGR.	FR: 217 FT NE OF RTE 612
											TO: 617 FT NE OF RTE 612
	RW-201			108805	417.92	0.0792	418.77	0.0793		RIGHT OF WAY	FR: 354.58 FT NE OF RTE 612
											TO: 773.35 FT NE OF RTE 612
	M-501		1000	108805	400	0.0758	400	0.0758		CONSTR.	FR: 217 FT NE OF RTE 612
											TO: 617 FT NE OF RTE 612

Project Lengths are based on Construction Baseline.

PROJECT MANAGER KENNETH D. MCKINNA P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE DANNY WILLIAMS, LS (757) 925-2657 (Hampton Roads)
DESIGN BY N. DIANE GEOUGE (757) 925-3624 (Hampton Roads)
SUBSURFACE UTILITY BY, DATE ACCUMARK (804) 767-3147

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FOR INDEX OF SHEETS SEE SHEET 1B

THIS PROJECT WAS DEVELOPED UTILIZING THE DEPARTMENT'S ENGINEERING DESIGN PACKAGE (GEOPAK).
GEOPAK Computer Identification No. (UPC 100921)

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
CITY,TOWN OR VILLAGE
RIGHT OF WAY LINE
FENCE LINE
UNFENCED PROPERTY LINE
FENCED PROPERTY LINE
WATER LINE
SANITARY SEWER LINE
GAS LINE
ELECTRIC UNDERGROUND CABLE
TRAVELED WAY
GUARD RAIL
RETAINING WALL
RAILROADS
BASE OR SURVEY LINE

LEVEE OR EMBANKMENT
BRIDGES
CULVERTS
DROP INLET
POWER POLES
TELEPHONE OR TELEGRAPH POLES
TELEPHONE OR TELEGRAPH LINES
HEDGE
TREES
HEAVY WOODS
GROUND ELEVATION
GRADE ELEVATION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

JAMES CITY COUNTY
LONGHILL ROAD
FROM: 0.205 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
TO: 0.105 MI. S. OF WILLIAMSBURG WEST DRIVE

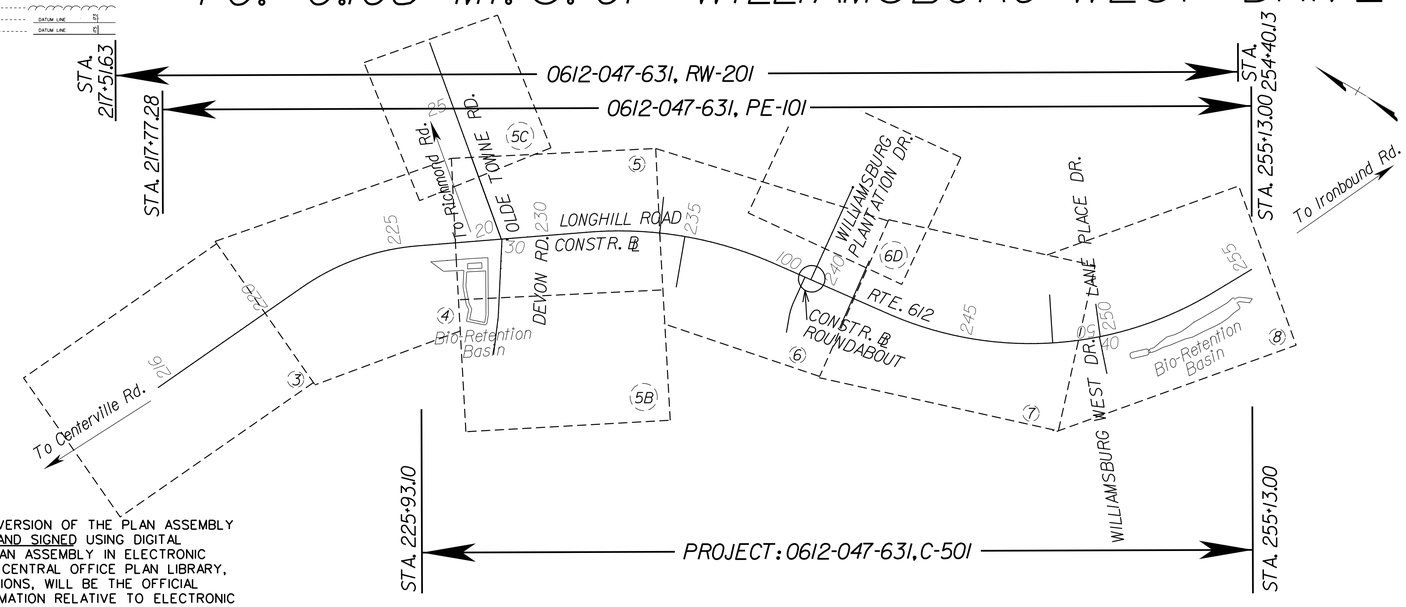
FHWA-534 DATA 24003

STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	STP-5A03(***) (SEE TABULATION BELOW FOR SECTION NUMBERS)	612	(NFO) 0612-047-631 (SEE TABULATION BELOW FOR SECTION NUMBERS)	1

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA

ROAD NAMES	RTE. 612 LONHILL RD.	OLDE TOWNE RD.	DEVON RD.
FUNCTIONAL CLASSIFICATION	URBAN - MINOR ARTERIAL LEVEL 45 MPH MIN. DES. SPEED	MAJOR COLLECTOR LEVEL - 35 MPH MIN. DES. SPEED	LOCAL ROAD LEVEL - 25 MPH MIN. DES. SPEED
PROJECT DESCRIPTION	Fr: 0.205 MI. N. INT. RTE. 658 OLDE TOWNE ROAD To: 0.088 MI. S. OF WILLIAMSBURG WEST DRIVE	Fr: 0.009 MI. N. INT. RTE. 612 LONGHILL RD. To: 0.076 MI. N. OF RTE. 612 LONGHILL RD.	Fr: 0.007 MI. S. INT. RTE. 612 LONGHILL RD To: 0.045 MI. S. OF RTE. 612 LONGHILL RD.
ADT (2016)	17,069	(2017) 8743	(2017) 1250
ADT (2040)	21,500	11,000	1600
DHV	2,000	1100	160
D (%) (design hour)	40/60	50/50	60/40
T (%) (design hour)	1%	3.2%	3.8%
V (MPH)	*	*	*

* See Plan and Profile Sheets for Horizontal and Vertical Curve Design Speeds



PROJECT MANAGER KENNETH D. MCKINNA P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE DANNY WILLIAMS, LS (757) 925-2657 (Hampton Roads)
DESIGN BY N. DIANE GEOUGE (757) 925-3624 (Hampton Roads)
SUBSURFACE UTILITY BY, DATE ACCUMARK (804) 767-3147

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, HAS BEEN SEALED AND SIGNED USING DIGITAL SIGNATURES AND THE OFFICIAL PLAN ASSEMBLY IN ELECTRONIC FORMAT IS STORED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE THE 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-5.11U, EXCEPT WHERE OTHERWISE NOTED.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, ARE 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.

REFERENCE
ROUTE 612 STA. 228+60.33 CONSTR. BL
CONN. OLDE TOWNE RD. STA. 20+00.00

REFERENCE
ROUTE 612 STA. 249+60.36 CONSTR. BL
CONN. WILLIAMSBURG WEST DR. STA. 40+00.00

SCALE
0 250 500

JAMES CITY COUNTY POPULATION 67,009 (2010 CENSUS)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	LENGTH INCLUDING BRIDGE(S) FEET	LENGTH INCLUDING BRIDGE(S) MILES	LENGTH EXCLUDING BRIDGE(S) FEET	LENGTH EXCLUDING BRIDGE(S) MILES	BRIDGE PLAN NO.	TYPE PROJECT	DESCRIPTION
0612-047-631	PE-101	STP-5A03(682)		100921	3,735.72	0.708	3,735.72	0.708		PRELIM. ENGR.	FROM: 0.205 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
											TO: 0.105 MI. S. OF WILLIAMSBURG WEST DRIVE
	RW-201	STP-5A03(683)		100921	3688.50	0.6986	3688.50	0.6986		RIGHT OF WAY	FROM: 0.210 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
											TO: 0.091 MI. S. OF WILLIAMSBURG WEST DRIVE
	C-501	STP-5A03(684)	1000	100921	2,919.90	0.553	2,919.90	0.553		CONSTR.	FROM: 0.051 MI. N. INT. RTE. 658 OLDE TOWNE ROAD
											TO: 0.105 MI. S. OF WILLIAMSBURG WEST DRIVE

Project Lengths are based on Construction Baseline.

TIER 2 PROJECT

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

12/4/17 DATE	KIM PRYOR INFRASTRUCTURE INVESTMENT DIRECTOR
12/13/17 DATE	SUSAN KEEN STATE LOCATION AND DESIGN ENGINEER
12/15/17 DATE	JOHN W. LAWSON CHIEF FINANCIAL OFFICER
12/15/17 DATE	GARRETT MOORE CHIEF ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION

12/15/17 DATE	RICHARD L. WALTON JR. CHIEF OF POLICY

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

12/04/18 DATE	KIM PRYOR INFRASTRUCTURE INVESTMENT DIRECTOR
12/11/18 DATE	SUSAN H. KEEN STATE LOCATION AND DESIGN ENGINEER
12/14/18 DATE	JOHN W. LAWSON CHIEF FINANCIAL OFFICER
DATE	~~STATE STRUCTURE AND BRIDGE ENGINEER~~

APPROVED FOR CONSTRUCTION

12/17/18 DATE	GARRETT MOORE CHIEF ENGINEER

APPROVED

DATE	DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

REVISED

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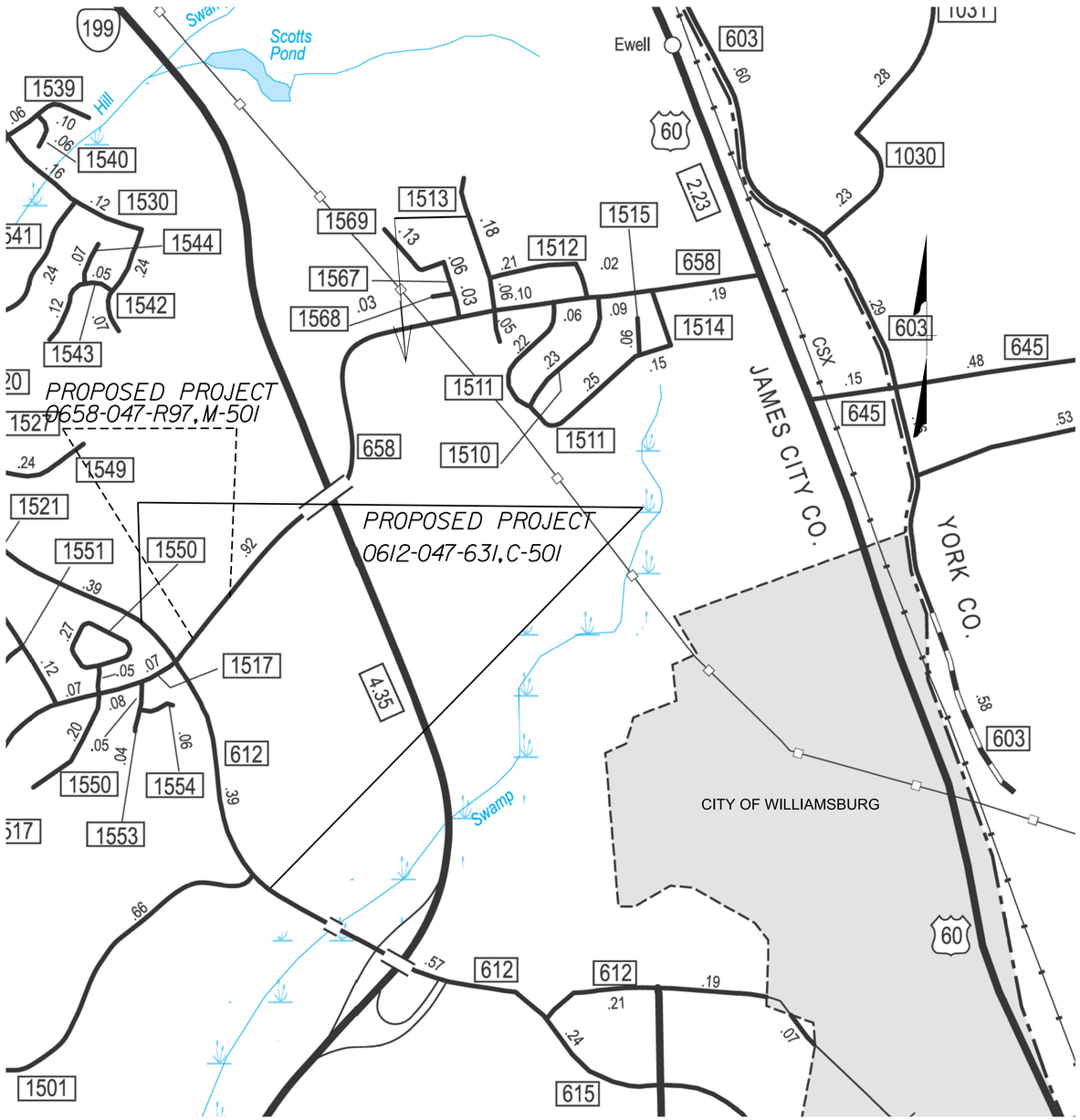
PROJECT MANAGER _ Ken McKinna (757) 925-2406
SURVEYED BY, DATE _Dapny Williams (757) 956-3271_
DESIGN BY _ _ _ _ _ _ _Diane Gesouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE _<Surveyor Name (000) 000-0000 (District)>
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,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

LOCATION MAP

JAMES CITY COUNTY



NOT TO SCALE

	PROJECT	SHEET NO.
	0612-047-631	1A

PROJECT MANAGER Kenneth McKinna (757) 956-3271
SURVEYED BY, DATE Dandy Williams (757) 925-2652
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE Accumark, Inc. (804) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

INDEX OF SHEETS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
1/08/18 5/10/19	VA.	612	0612-047-631, RW-201, C-501	1B

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

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	LOCATION MAP
1B	INDEX OF SHEETS
1C	RIGHT OF WAY DATA SHEET
1D	REVISION DATA SHEET
~~1E~~	~~NOT USED~~
1F(1) thru 1F(3)	SURVEY ALIGNMENT DATA SHEETS
1G(1) - 1G(2)	CONSTRUCTION ALIGNMENT DATA SHEETS
1H	TRANSPORTATION OPERATIONS PLAN
1H(1) - 1H(2)	SEQUENCE OF CONSTRUCTION
1H(3)	TEMPORARY DRAINAGE DESCRIPTIONS
1H(4)	MOT SUMMARY
1H(5) - 1H(7)	TEMPORARY SIGNAL PLANS
1J1(5) thru 1J1(8)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 1
1J1A(5) thru 1J1A(8)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 1A
1J1B(5) thru 1J1B(8)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 1B
1J1C(5) thru 1J1C(8)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 1C
1J2(3) thru 1J2(7)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 2
1J2A(3) thru 1J2A(6)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 2A
1J2B(3) thru 1J2B(6)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 2B
1J2C(3) thru 1J2C(6)	TEMPORARY TRAFFIC CONTROL PLAN PHASE 2C
1K - 1K(1)	UTILITY TEST HOLE DATE SHEETS
2	GENERAL NOTES
2A - 2 I	TYPICAL SECTIONS
2J - 2K	DRAINAGE DESCRIPTIONS
2L	STORMWATER MANAGEMENT & DITCH DETAIL SHEET
2M - 2N	STORM SEWER PROFILES
2O - 2Q	DRAINAGE SUMMARIES
2R	EROSION CONTROL SUMMARY
2S	PAVEMENT & INCIDENTAL SUMMARIES
2T	DEMOLITION OF BUILDINGS & CLEARING OF PARCELS
2U	GRADING DIAGRAM AND SUMMARY
2V	ROADSIDE DEVELOPMENT SHEET
2W - 2X - 2Y(1) - 2Y(2)	SWPPP SHEETS
2Z	DETAIL SHEET
2AA	CONCRETE STAKING RADIAL OFFSETS

SHEET NO.	DESCRIPTION	STATIONS
3 - 3A - 3B - 3C - 3RW	PLAN, PROFILE, CONC. STAKING, E&S & RW SHEETS	217+51.63 to 220+00
4 - 4A - 4B - 4C - 4RW	PLAN, PROFILE, CONC. STAKING, E&S & RW SHEETS	220+00 to 227+00
5 - 5A - 5E - 5F - 5RW	PLAN, PROFILE, CONC. STAKING, E&S & RW SHEETS	227+00 to 234+00
5B - 5D - 5G - 5BRW	PLAN, PROFILE, E&S & RW SHEETS	DEVON ROAD
5C - 5CRW	PLAN & RW SHEETS	OLDE TOWNE RD.
6 - 6A - 6B - 6C - 6E(1) - 6E(2) - 6F - 6RW	PLAN, PROFILE, DRAIN. DESC, E&S, RW & UTILTIY SHEETS	234+00 to 241+00
6D - 6DRW	PLAN & RW SHEETS	WILLIAMSBURG PLANTATION DR.
7 - 7A - 7C - 7D - 7E - 7RW	PLAN, PROFILE, E&S, CONC. STAKING & RW SHEETS	241+00 to 248+00
8 - 8A - 8B - 8C - 8RW	PLAN, PROFILE, CONC. STAKING, E&S & RW SHEETS	
9 & 10	ENTRANCE PROFILES	
11(1), 11(2), 11(2A), 11(2B)1, 2, 3	TRAFFIC CONTROL DEVICE PLANS, NOTES & DETAILS	
11(3) - 11(8)	TRAFFIC CONTROL DEVICE PLANS, SIGNING & PAVEMENT MARKINGS	
12(1), 12(1)2, 12(2), 12(2A)1&2, 12(2B)	SIGNAL PLANS, NOTES & DETAILS	
12(3)	SIGNAL PLANS, LONGHILL ROAD & OLDE TOWNE ROAD/DEVON ROAD	
12(4)	SIGNAL PLANS, LONGHILL ROAD & WILLIAMSBURG WEST DRIVE/LANE PLACE DRIVE	
13(1) - 13(8)	TRAFFIC CONTROL DEVICE PLANS, LIGHTING PLANS & DETAILS	
14(1) - 14(16)	UTILITY PLANS	
15(1) - 15(8)	LANDSCAPE ARCHITECTURE PLANS (Landscaping, Wetland Mitigation, Bioretention Details)	

TOTAL CROSS SECTION SHEETS 58

PROJECT MANAGER Kenneth McKinna, PE (757) 956-3271
SURVEYED BY, DATE Danny Williams, LS (757) 925-2657
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISED	REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
7/13/18 7/19/18 8/15/18 11/09/18	1/08/18 1/16/18 1/17/18 2/08/18 4/06/18 4/17/18	VA.	612	0612-047-631, RW-201 C-501	IC

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: JAMES CITY COUNTY

UPC No.: 100921

PRELIMINARY
RIGHT OF WAY DATA SHEET

PARCEL NO.	LANDOWNER	SHEET NO.	AREA (Areas greater than or equal to 1 acre will be shown in acres to 3 decimal places (x.xxx). Areas less than 1 acre will be shown to square feet (x,xxx).)																PROFFERS
			TOTAL	FEE TAKING		PRESCRIPTIVE R/W		FEE REMAINDER		EASEMENTS									
										PERMANENT		UTILITY		TEMPORARY		TEMPORARY (ENTRANCES)			
			ACRES OR SQUARE FEET	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	YES / NO
001	LOIS SAUNIER HORNSBY & ROBERT S. HORNSBY, CO-EXECUTORS, ET ALS	3,4	8.260 ac	5,014 sf				8.145 ac				14,755 sf		7,118 sf				
002	WINDSOR FOREST ASSOCIATION	3,4,5,5B,6	6.028 ac	58,792 sf				4.678 ac				32,211 sf		19,507 sf				
003	WILLIAMSBURG BUSINESS CENTER UNIT OWNERS ASSOCIATION, PHASE I	4	1.9 ac	2,976 sf				1.832 ac				6,833 sf		4,782 sf				
~~004~~																		
005	CITIZENS AND FARMERS BANK	4,5,5C	1.5 ac	4,775 sf				1.390 ac		347 sf		12,991 sf		8,247 sf				
006	BUCKROE PARTNERS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY	5	0.718 ac	2,748 sf				0.655 ac		60 sf				2,294 sf				
007	WILLIAMSBURG PLANTATION OWNERS ASSOCIATION A VIRGINIA NONSTOCK CORPORATION	5,6,6D,7	32.09 ac	58,806 sf				30.740 ac				33,864 sf		42,467 sf				
~~008~~																		
009	TRUSTEES OF WELLSPRING UNITED METHODIST CHURCH	6	6.00 ac	2,675 sf				5.939 ac		4,335 sf		4,151 sf		11,989 sf				
010	TRUSTEES OF KING OF GLORY LUTHERAN CHURCH	6,7,8	13.85 ac	9,792 sf				13.625 ac				13,425 sf		17,294 sf				
011	RLH III, LLC, A VIRGINIA LIMITED LIABILITY COMPANY	7,8	10.820 ac	38,821 sf				9.929 ac		103 sf		13,999 sf		14,563 sf				
012	RLH III, LLC, A VIRGINIA LIMITED LIABILITY COMPANY	8	10.607 ac	364 sf				10.598 ac				3,610 sf		1,883 sf				
014	KCE OLDE TOWNE, LLC	5,5C	3.241 ac	5,971 sf				3.104 ac				20,415 sf		5,225 sf				
015	MOHAMAD O. BARBARJI & KIMBERLY C. SCOTT-BARBARJI	4	0.31 ac					0.310 ac				2,255 sf						
016	WARREN K FUNKE JR	4,5,5B	0.34 ac					0.340 ac				3,146 sf						
017	CAROL SHUTT	5B	0.31 ac					0.310 ac				3,340 sf						
~~018~~																		
~~019~~																		
~~020~~																		
021	MC & CV PACIFIC LLC	5C	1.50 ac					1.500 ac				5,181 sf						
022	HORSLEY TREOLO HOLDINGS LLC	5C	1.45 ac					1.450 ac				1,023 sf						
023	WILLIAMSBURG BUSINESS CENTER UNIT OWNERS ASSOCIATION, PHASE II	4	2.78 ac	1,793 sf				2.739ac				1,469 sf						

PROJECT	SHEET NO.
0612-047-631	IC

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE Accumack (804) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISION DATA SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	ID

State Project: 0612-047-631, PE-101, RW-201, C-501
Federal Project: STP-5A03 (683)
From: 0.205 Mi. N. Int. Rte. 658 Olde Towne Road
To: 0.105 Mi. S. of Williamsburg West Drive
UPC Number: 100921

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

R1 January 8, 2018 — 0612-047-631, RW-201

Sheet 1B: Revised to show Sheet 1D is added to the plan set.

Sheet 1C: Revised Landowner of Parcel 003, From Robert Saunier Hornsby and Ann S. Hornsby To Unit Owners of Williamsburg Bussiness Center Phase I, A Condominium.

Sheet 4 & 4RW: Changed name to Unit Owners of Williamsburg Business Center, Phase I, a Condominium, deleating Robert Saunier Hornsby and Ann S. Hornsby.

Added Deed Book 730, Page 342, deleated DB 241, PG 619 and DB 241, PG 622.

This revision was made in accordance with Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated January 08, 2018.

R2 January 16, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised Landowner of Parcel 017, From William F. Shutt III and Carol Shutt. To Carol Shutt

Sheet 5B & 5BRW: Revised Landowner of Parcel 017, from William F. Shutt III and Carol Shutt to Carol Shutt.

This revision was made in accordance with an email from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated January 11, 2018.

R3 January 17, 2018 — 0612-047-631, RW-201

Sheet 1C: Amended Parcel Data for Parcel 010 to include "Trustees of" King of Glory Lutheran Church.

Sheet 6, 6RW, 7, 7RW, 8 & 8RW: Amended Parcel Data for Parcel 010 to include "Trustees of" King of Glory Lutheran Church. Add one source deed; Instrument # 090006836.

This revision was made in accordance with an email from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated January 17, 2018.

R4 February 08, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised Landowner of Parcel 006, to be shown as Buckroe Partners, LLC, a cancelled California limited liability company, or its successors, heirs or assigns, and/or Olde Towne Square, Ltd., a Virginia corporation.

Sheet 5 &5RW: Revised Landowner of Parcel 006, to be shown as Buckroe Partners, LLC, a cancelled California limited liability company, or its successors, heirs or assigns, and/or Olde Towne Square, Ltd., a Virginia corporation.

This revision was made in accordance with an email from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated February 7, 2018.

R5 February 8, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised to show that Parcel 002 is also shown on Sheet 6.

Sheet 6: Revised Parcel incorrectly shown as Parcel 8 to the correct number Parcet 2.

This revision was made in accordance with an email from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated February 7, 2018.

R6 April 4, 2018 — 0612-047-631, RW-201

Sheet 2T: Corrected the Location information for demolition numers D5, D7, D10, D15, D900, and D906

Sheets 1C, 5, 5RW, 5C, 5CRW: Corrected ownership data for Parcel 014.

Sheet 6: Made the Demolition Numbers listed on Sheet 2T visible on the Plan Sheet. revision on Sheet 6 was made in accordance with an email from Michael Robinson,

The revision on Sheet 2T was made as per the Project Manager Ken McKinna.

The revision on Parcel 014 was made made in accordance with an email from Michael Robinson, SR/WA Southeaster Regional Right of Way Division, dated April 5, 2018

The revision on Sheet 6 was made made in accordance with an email from Mike Robinson, SR/WA Southeast Regional Right of Way Division, dated March 27, 2018

R7 April 17, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised Landowner of Parcel 006, to be shown as Buckroe Partners, LLC, a California limited liability company.

Sheet 5 &5RW: Revised Landowner of Parcel 006, to be shown as Buckroe Partners, LLC, a California limited liability company.

This revision was made in accordance with an email from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated February 7, 2018.

R8 June 21, 2018 — 0612-047-631, RW-201

Sheet 6: Revised the Utility Easement Owners of Parcel 002, to be shown as Dominion Energy and Verizon.

This revision was made in accordance with an email from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated June 20, 2018.

R9 July 13, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised Landowner of Parcel 003, to be shown as Williamsburg Business Center Unit Owners Association, Phase I. and Parcel 023, to be shown as Williamsburg Business Center Unit Owners Association, Phase II.

Sheets 4 & 4RW: Revised Landowner of Parcel 003, to be shown as Williamsburg Business Center Unit Owners Association, Phase I. and Parcel 023, to be shown as Williamsburg Business Center Unit Owners Association, Phase II.

This revision was made in accordance with an e-mail from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated July 12, 2018.

R10 July 19, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised Landowner of Parcel 011, to be shown as RLH III, LLC

Sheets 7, 7RW, 8 & 8RW: Revised Landowner of Parcel 011, to be shown as RLH III, LLC.

This revision was made in accordance with an e-mail from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated July 17, 2018.

R11 August 15, 2018 — 0612-047-631, RW-201

Sheet 1C: Revised Landowner of Parcel 011& 012, to be shown as RLH III, LLC, A Virginia Limited Liability Company.

Sheets 7, 7RW, 8 & 8RW: Revised Landowner of Parcel 011 & 012, to be shown as RLH III, LLC, A Virginia Limited Liability Company.

This revision was made in accordance with an e-mail from Michael Robinson, SR/WA Southeast Regional Right of Way Division, dated August 13, 2018.

R12 August 17, 2018 — 0612-047-631, RW-201

Sheets 2T, 4, & 5: Revised Demolition number on Parcel 001 from D-1 to D-16. Revised demolition numbers on Parcel 002 from D-9 and D-906 to D-17 and D-911.

This revision was made in accordance with a Building Data Report received from Michael Robinson, SR/WA 8-17-18

R13 November 09, 2018 — 0612-047-631, RW-201

Sheets 1C, 5, & 5RW: Revised Sheet 1C: Corrected the ownership of Parcel 006. Sheet 5 Replaced the missing owner data for Parcel 006 & 007. Sheet 5RW : Identified Parcel 016.

This revision was made under the request of the Project Manager.

R14 January 29, 2019 — 0612-047-631, RW-201

Sheet 2T: Deleted Parcel 008 and revised landowner information for Parcels 001, 002 & 011 to match the ownership shown on the Right of Way Data Sheet.

This revision was made at the direction of the Project Manager.

R15 April 15, 2019 — 0612-047-631, RW-201

Sheet 2O, 2P & 2Q: Changed the Units for Modify Existing Structure from LF to Ea to match the Units shown in the bid proposal.

Sheet 14(8): Corrected the Station and Offset fo the waterline that read "242+42.6, 61.4' LT" to read "250+42.6, 61.4' LT".

The change to Sheets 2O, 2P & 2Q was made at the direction of the District Hydraulics Engineer. The change to Sheet 14(8) was made at the direction of the VDOT District Utilities Section.

R16 May 10, 2019 — 0612-047-631, RW-201

Sheet 1B revised to include the fourth SWPPP sheet.

Sheets 2W, 2X & 2Y Replaced with Sheets 2W, 2X, 2Y(1) & 2Y(2).

This revision was made at the direction of the District Hydraulics Engineer so the SWPPP General Information Sheets would comply with the requirements of the VPDES General Permit for Discharges of Stormwater From Construction Activities issued July 1, 2019.

R17 June 5, 2019 — 0612-047-631, RW-201

Sheet 1H(3) Clarified notes related to the temporary drainage structures and showed structure T6-9 is part of Phase 1A.

Sheet 1H(4) Increased the quantity for Temporary (Construction) Sign to include signs for identifying business and church entrances.

Sheet 1J1(8) Showed work to be done in future phases as gray rather than bold.

Sheet 1J1A(8) Added structure T8-26.

This revision was made at the direction of the District Hydraulics Engineer and the project Construction Manager.

R18 June 7, 2019 — 0612-047-631, RW-201

Sheet 2S Incidental Summary revised to include miscellaneous hydraulic concrete areas on the landscaping plans under Hydr. Cement Sidewalk 4".

Sheet 12(02) revised to include a pay item for the Pedestrian signals on the Signal Plans.

Sheet 13(7) has been revised to correct mislabeled wattage information on the Lighting Plans.

Sheets 15(2A), 15(5), 15(6) & 15(8) revised to show that miscellaneous hydraulic concrete areas which are colored and impressed are to be constructed as sidewalk 4".

This revision was made at the direction of the Construction Division in response to contractors' questions.

R19 June 25, 2019 — 0612-047-631, RW-201

Sheet 2Q has been revised to include missing quantities for structure T5B-7.

Sheet 12(2) has been revised to show an increase in the Accessible Pedestrian System Pushbutton Stations on the Traffic Plans.

Sheet 13(2) has been revised to add & delete Pay Items to the Lighting Plans.

Sheet 13(2A) has been revised to add more information about the decorative light poles.

Sheets 15(1) and 15(2B) have been revised to change the reference to only "Brick Herringbone" and "Adobe Red" colors to the Landscaping Plans.

This revision was made at the direction of the Construction Division in response to contractors' questions.

PROJECT	SHEET NO.
0612-047-631	ID

PROJECT MANAGER Ken McKinna, P.E. (757) 956-3271
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1F(01)

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

SURVEY ALIGNMENTS

POINT ID.	STATION	BEARING	PROJECT COORDINATES NORTH (Y)	EAST (X)
	Survey Traverse Rte 612			
SS	10+00.000	Disk 47-0377	362,443.148	3,778,166.607
		N 89° 35' 12" E		
PI	18+42.270	Disk 47-0376	362,449.224	3,779,008.855
		N 72° 12' 29" E		
PI	24+42.470	"T-Bar" #13	362,632.622	3,779,580.349
		S 89° 35' 20" E		
PI	29+60.830	"T-Bar" #12	362,628.902	3,780,098.696
		S 63° 29' 40" E		
PI	37+38.700	"PK Nail" #11	362,281.751	3,780,794.805
		S 72° 55' 50" E		
PI	48+35.870	"T-Bar" #10	361,959.698	3,781,843.644
		S 45° 36' 55" E		
PI	55+42.190	"PK Nail" #9	361,465.647	3,782,348.422
		S 64° 38' 39" E		
PI	60+66.250	"T-Bar" #8	361,241.224	3,782,821.997
		N 83° 13' 26" E		
PI	68+81.260	"T-Bar" #7	361,337.387	3,783,631.314
		N 70° 51' 33" E		
PI	73+90.710	Disk 47-0375	361,504.431	3,784,112.599
		N 80° 14' 52" E		
PI	88+24.890	Disk 47-0374	361,747.363	3,785,526.055
		N 73° 18' 55" E		
PI	94+22.150	JCC AZMK #310	361,918.840	3,786,098.169
		S 74° 05' 21" E		
PI	99+61.840	"PK Nail" #6	361,770.889	3,786,617.184
		S 46° 05' 08" E		
PI	104+46.140	"PK Nail" #5	361,434.986	3,786,966.062
		S 30° 44' 57" E		
PI	118+26.310	"PK Nail" #4	360,248.849	3,787,671.716
		S 60° 02' 28" E		
PI	122+81.400	Disk 47-0373	360,021.587	3,788,065.999
		S 62° 41' 26" E		
PI	127+41.020	"PK Nail" #3	359,810.715	3,788,474.390
		S 59° 57' 02" E		
PI	136+24.990	Disk 47-0372	359,368.070	3,789,239.549
		S 28° 14' 44" E		
PI	145+90.790	"PK Nail" #2	358,517.270	3,789,696.615
		S 2° 40' 25" E		
PI	154+02.550	"T-Bar" #1	357,706.393	3,789,734.481
		S 27° 36' 58" E		
PI	160+38.590	Disk 47-0371	357,142.815	3,790,029.314
		S 60° 09' 27" E		
PI	173+32.840	Disk 47-0370	356,498.774	3,791,151.942
		S 63° 17' 27" E		
PI	182+13.520	Disk 47-0348	356,102.942	3,791,938.653

Project Benchmark Origin "A262 1942"
Elevation = 95.33' NAVD88
Description:
1.1 MILES NORTHEAST ALONG CSX RAILROAR FROM THE STATION IN WILLIAMSBURG AT THE OVERPASS ROUTE 60. DISK IS SET VERTICALLY IN THE EAST FACE CONCRETE FOUNDATION SUPPORTING 3 CONCRETE PILLARS FOR THE ROUTE 60 OVERPASS BRIDGE. DISK IS 26.3' WEST OF THE WEST RAIL OF CSX RAILROAD.

BENCH MARKS

BM - VDOT DISK 47-0377
0 RT STA 10+00 TRAV RTE 612

BENCH MARK ELEV.= 99.03

BM - JCC DISK #309
72.2' RT STA 12+08.2 TRAV RTE 612

BENCH MARK ELEV.= 100.98

BM - VDOT DISK 47-0376
0 RT STA 18+42.27 TRAV RTE 612

BENCH MARK ELEV.= 98.08

BM - "T-BAR" #13
0 RT STA 24+42.47 TRAV RTE 612

BENCH MARK ELEV.= 95.46

BM - "T-BAR" #12
0 RT STA 29+60.83 TRAV RTE 612

BENCH MARK ELEV.= 100.09

BM - "PK NAIL" #11
0 RT STA 37+38.70 TRAV RTE 612

BENCH MARK ELEV.= 101.08

BM - "T-BAR" #10
0 RT STA 48+35.87 TRAV RTE 612

BENCH MARK ELEV.= 84.02

BM - "PK NAIL" #9
0 RT STA 55+42.19 TRAV RTE 612

BENCH MARK ELEV.= 83.39

BM - "T-BAR" #8
0 RT STA 60+66.25 TRAV RTE 612

BENCH MARK ELEV.= 79.37

BM - "T-BAR" #7
0 RT STA 68+81.26 TRAV RTE 612

BENCH MARK ELEV.= 71.53

BM - VDOT DISK 47-0375
0 RT STA 73+90.71 TRAV RTE 612

BENCH MARK ELEV.= 66.74

BM - VDOT DISK 47-0374
0 RT STA 88+24.89 TRAV RTE 612

BENCH MARK ELEV.= 48.97

BM - JCC DISK AZMK #310
0 RT STA 94+22.15 TRAV RTE 612

BENCH MARK ELEV.= 45.33

BM - "PK NAIL" # 6
0 RT STA 99+61.84 TRAV RTE 612

BENCH MARK ELEV.= 42.99

BENCH MARKS

BM - "PK NAIL" #5
0 RT STA 104+46.14 TRAV RTE 612

BENCH MARK ELEV.= 53.15

BM - "PK NAIL" #4
0 RT STA 118+26.31 TRAV RTE 612

BENCH MARK ELEV.= 112.03

BM - VDOT DISK 47-0373
0 RT STA 122+81.40 TRAV RTE 612

BENCH MARK ELEV.= 111.84

BM - "PK NAIL" #3
0 RT STA 127+41.02 TRAV RTE 612

BENCH MARK ELEV.= 105.05

BM - VDOT DISK 47-0372
0 RT STA 136+24.99 TRAV RTE 612

BENCH MARK ELEV.= 93.42

BM - "PK NAIL" #2
0 RT STA 145+90.79 TRAV RTE 612

BENCH MARK ELEV.= 102.26

BM - "T-BAR" #1
0 RT STA 154+02.55 TRAV RTE 612

BENCH MARK ELEV.= 90.83

BM - VDOT DISK 47-0371
0 RT STA 160+38.59 TRAV RTE 612

BENCH MARK ELEV.= 77.01

BM - VDOT DISK 47-0370
0 RT STA 173+32.84 TRAV RTE 612

BENCH MARK ELEV.= 85.76

BM - VDOT DISK 47-0348
0 RT STA 182+13.52 TRAV RTE 612

BENCH MARK ELEV.= 81.03

PROJECT MANAGER Ken McKinna, PE (757) 956-3271
SURVEYED BY, DATE Danny Williams, LS (757) 925-2657
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IF(02)

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

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

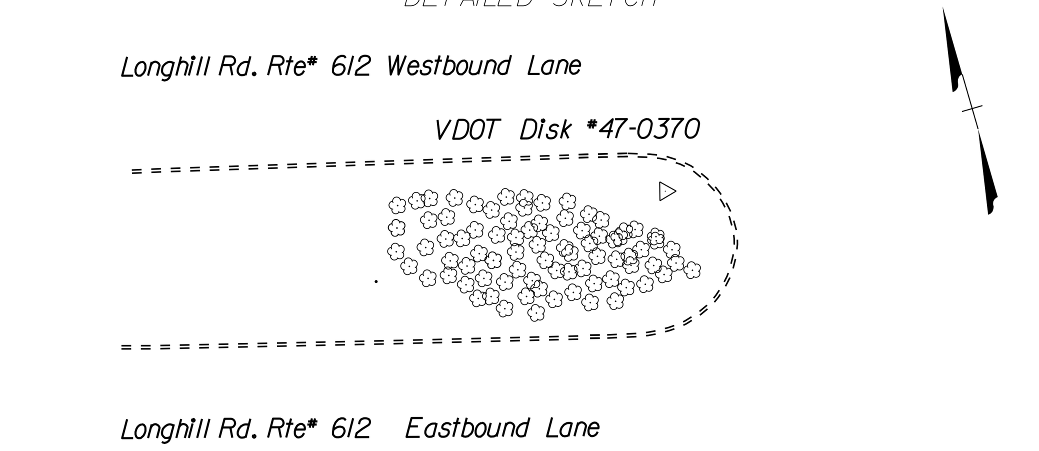
Control Station I.D. 047 - 0370 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 299°50' 33" to 47-0371
Latitude: 37° 017' 57.91622" N (5decimal places)
Longitude: 76° 44' 45.89131" W (5decimal places)
Geoid Separation (N): -35.1397
Ellipsoid Height (h): -9.0009 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,655,487.6430 m
North (Y) 1,108,655.6068 m
Ortho. Elevation 26.139 m

V. D. O. T. Project Coordinates
East (X) 3,791,151.9235 ft.
North (Y) 356,498.7607 ft.
Elevation 85.76 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED "047-0370" SET IN CONC. APPROX. 3" BELOW GROUND LEVEL. DISK IS LOCATED IN THE MEDIAN OF LONGHILL ROAD NEAR THE INTERSECTION OF RTE 612 & 199, IN THE WEST SIDE OF INTERSECTION.

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

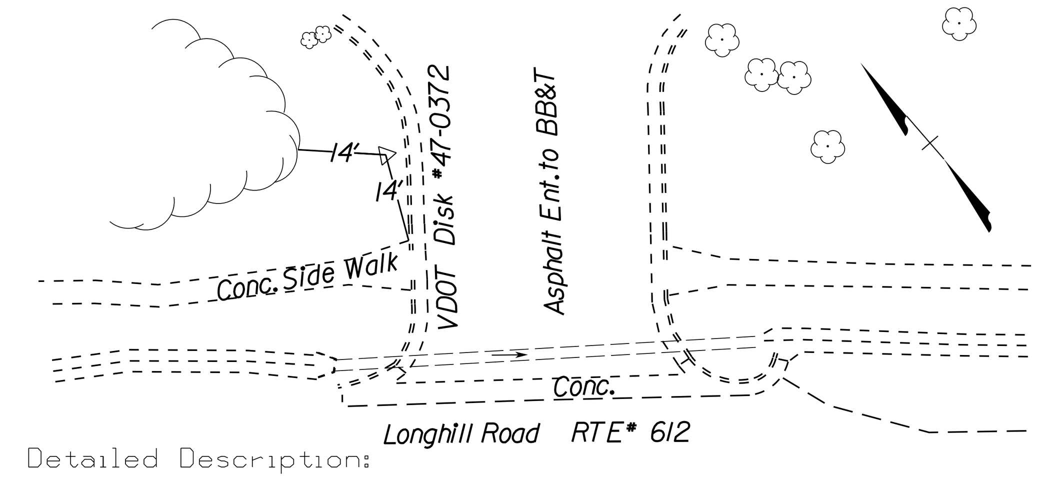
Control Station I.D. 047 - 0372 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 299° 06' 44" to 47-0373
Latitude: 37° 18' 26.63056" N (5decimal places)
Longitude: 76° 45' 08.89796" W (5decimal places)
Geoid Separation (N): -35.113
Ellipsoid Height (h): -6.6402 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,654,904.7742 m
North (Y) 1,109,530.1264 m
Ortho. Elevation 28.474 m

V. D. O. T. Project Coordinates
East (X) 3,789,239.5325 ft.
North (Y) 359,368.0572 ft.
Elevation 93.42 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED "047-0372" SET IN CONC. APPROX. 3" BELOW GROUND LEVEL. DISK IS LOCATED NORTHEAST OF RTE 612 IN ENT TO BB&T BANK 14' NORTH FROM SIDEWALK AND CURB AND GUTTER, 14' SOUTHEAST OF WOOD LINE.

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

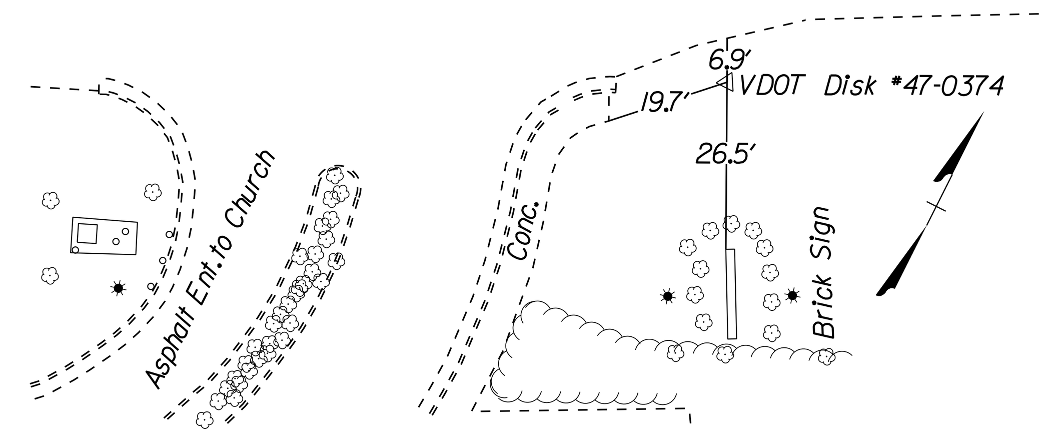
Control Station I.D. 47-0374 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 260° 14' 52" to 47-0375
Latitude: 37° 18' 50.82766" N (5decimal places)
Longitude: 76° 45' 54.31254" W (5decimal places)
Geoid Separation (N): -35.0775
Ellipsoid Height (h): -20.1505 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,653,772.9573 m
North (Y) 1,110,255.3011 m
Ortho. Elevation 14.927 m

V. D. O. T. Project Coordinates
East (X) 3,785,526.0442 ft.
North (Y) 361,747.3535 ft.
Elevation 48.97 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED 47-0374 SET IN CONC 1" BELOW GROUND LEVEL. DISK LOCATED SOUTHEAST OF RTE 612, 6.9' SOUTHEAST OF EDGE OF PAVEMENT, 19.7' NORTHEAST OF BACK OF CONC SIDEWALK, 26.5' NORTHWEST OF BRICK SIGN OF CHURCH

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

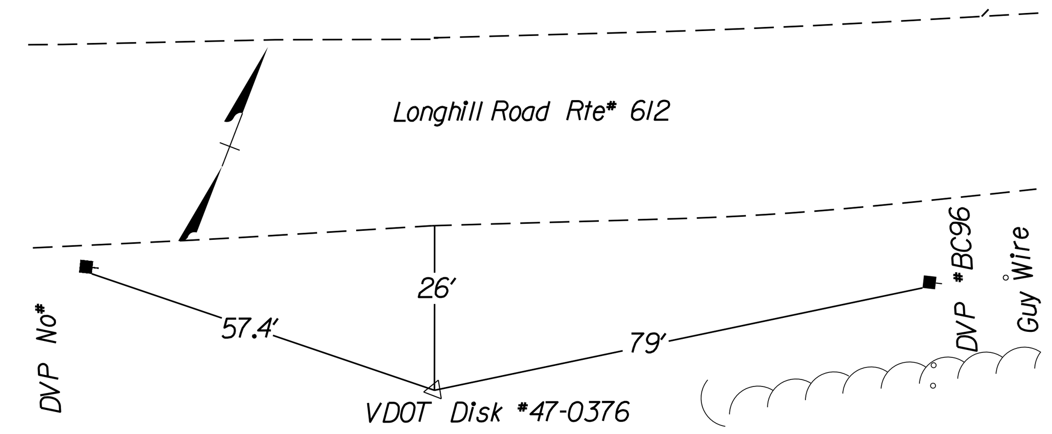
Control Station I.D. 47-0376 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 269° 35' 12" to 47-0377
Latitude: 37° 18' 58.94231" N (5decimal places)
Longitude: 76° 47' 14.81505" W (5decimal places)
Geoid Separation (N): -35.0281
Ellipsoid Height (h): -5.1323 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,651,786.6134 m
North (Y) 1,110,469.2207 m
Ortho. Elevation 29.896 m

V. D. O. T. Project Coordinates
East (X) 3,779,008.8551 ft.
North (Y) 362,449.2231 ft.
Elevation 98.08 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED 47-0376 SET IN CONC 1" BELOW GROUND LEVEL. DISK LOCATED 600' EAST OF THE INTERSECTION OF RTE 612 & RTE 614 26' SOUTH OF THE SOUTH EP OF RTE. 612

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

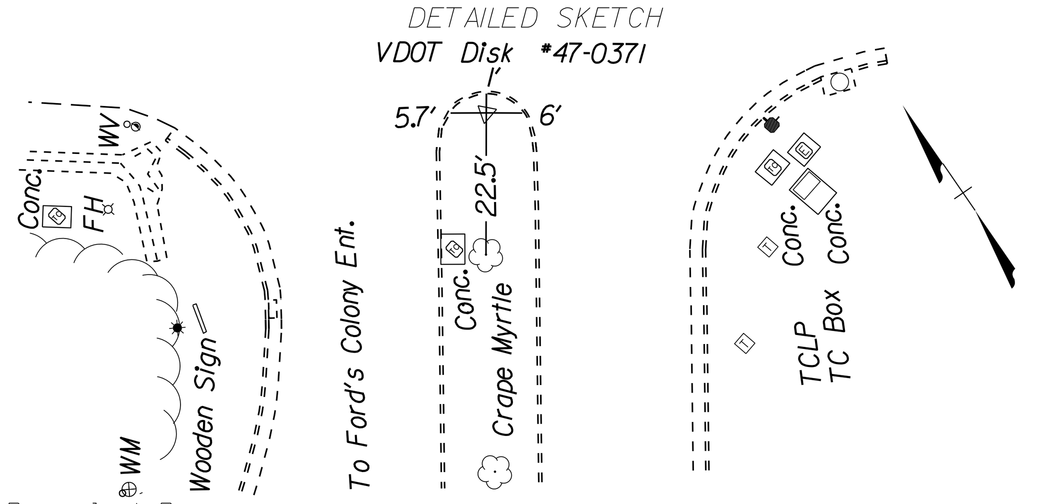
Control Station I.D. 047 - 0371 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO.. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 119° 50' 33" to 47-0370
Latitude: 37° 18' 04.48873" N (5decimal places)
Longitude: 76° 44' 59.63499" W (5decimal places)
Geoid Separation (N): -35.129
Ellipsoid Height (h): -11.6571 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,655,145.4819 m
North (Y) 1,108,851.9018 m
Ortho. Elevation 23.472 m

V. D. O. T. Project Coordinates
East (X) 3,790,029.2939 ft.
North (Y) 357,142.8041 ft.
Elevation 77.01 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED "047-0371" SET IN CONC. APPROX. 3" BELOW GROUND LEVEL. DISK IS LOCATED IN THE MEDIAN OF THE ENT. TO FORD'S COLONY JUST SOUTHWEST OF RTE 612, 1' BACK OF CURB AND GUTTER

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

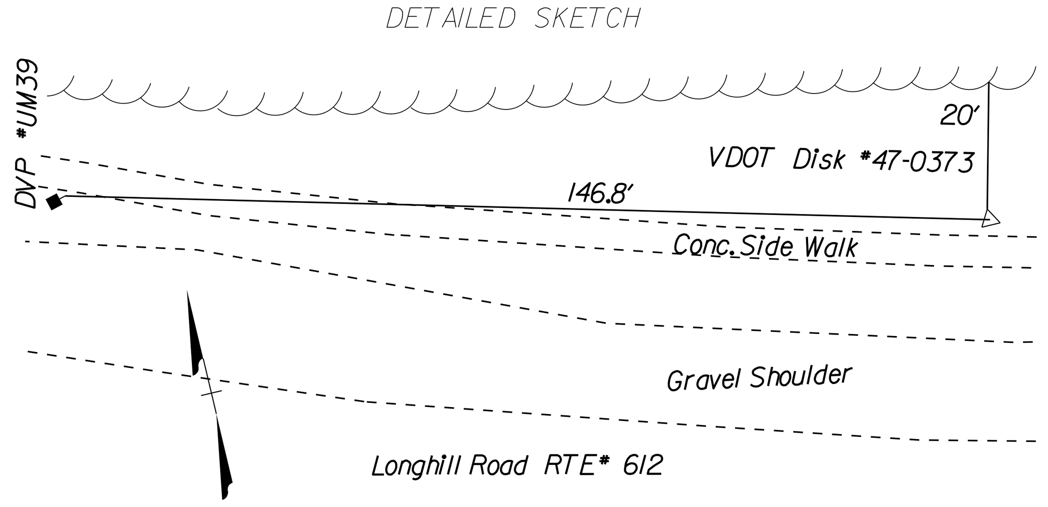
Control Station I.D. 047 - 0373 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 119° 06' 44" to 47-0372
Latitude: 37° 18' 33.30529" N (5decimal places)
Longitude: 76° 45' 23.27166" W (5decimal places)
Geoid Separation (N): -35.102
Ellipsoid Height (h): -1.0123 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,654,547.0933 m
North (Y) 1,109,729.3096 m
Ortho. Elevation 34.090 m

V. D. O. T. Project Coordinates
East (X) 3,788,065.9824 ft.
North (Y) 360,021.5768 ft.
Elevation 91.266 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED "047-0373" SET IN CONC. APPROX. 3" BELOW GROUND LEVEL. DISK IS LOCATED NORTHEAST OF RTE 612 BACK OF CONC. SIDEWALK, 146.8' SOUTHEAST OF DVP #UM39

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

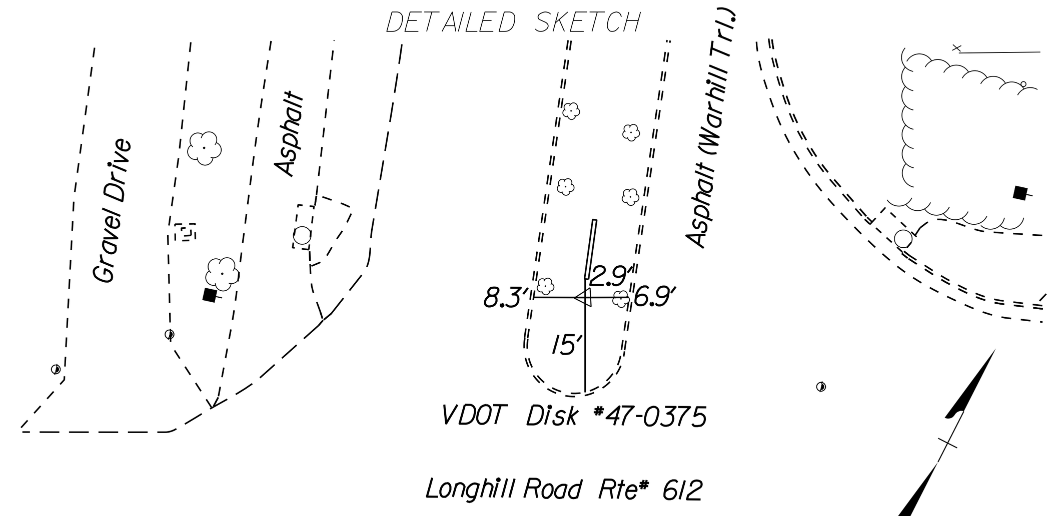
Control Station I.D. 047 - 0375 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 80° 14' 52" to 47-0374
Latitude: 37° 18' 48.68267" N (5decimal places)
Longitude: 76° 46' 11.86125" W (5decimal places)
Geoid Separation (N): -35.0688
Ellipsoid Height (h): -14.7270 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,653,342.1567 m
North (Y) 1,110,181.2594 m
Ortho. Elevation 20.342 m

V. D. O. T. Project Coordinates
East (X) 3,784,112.5886 ft.
North (Y) 361,504.4229 ft.
Elevation 66.74 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH



Detailed Description:
STANDARD METAL DISK STAMPED "047-0375" SET IN CONC. APPROX. 3" BELOW GROUND LEVEL. DISK IS LOCATED AT THE INTERSECTION OF RTE 612 & WARHILL TRL. IN THE MEDIAN OF ENT. 2.9' SOUTHEAST OF SIGN, 15' NORTHWEST BACK OF CURB.

LD-200 (REV. 8/2000)

Virginia Department of Transportation Horizontal Control

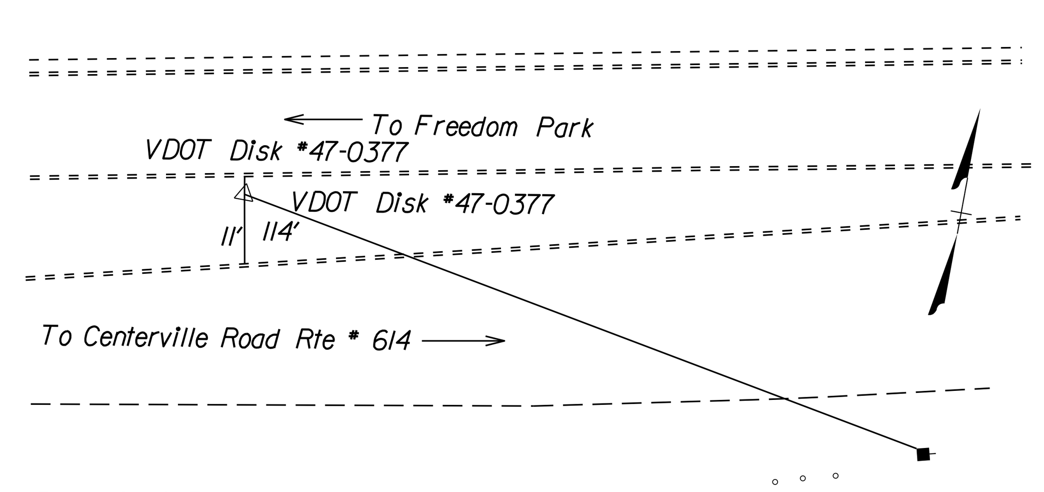
Control Station I.D. 047 - 0377 Project 0612-047-157,C501
Route 612 City/County JAMES CITY CO. Date 06-30-06
Established By R.O.Harmon
Vertical Datum Based On NAVD88 Geoid 99 or (03) (circle one)
Horizontal Datum Based On NAD83 (93HARN)
Azimuth to Station 89° 35' 12" to 47-0376
Latitude: 37° 18' 59.03318" N (5decimal places)
Longitude: 76° 47' 25.24083" W (5decimal places)
Geoid Separation (N): -35.022
Ellipsoid Height (h): -4.8391 (WGS 84)
Control Based on: Station (name or PID) HARN 015 or
Project (monument no.) ____________ Order: ___
Virginia State Plane Coordinates – NAD 83 Metric Values
East (X) 3,651,529.9085 m
North (Y) 1,110,467.3690 m
Ortho. Elevation 30.183 m

V. D. O. T. Project Coordinates
East (X) 3,778,166.6070 ft.
North (Y) 362,443.1477 ft.
Elevation 99.03 ft.
Zone North (South) (circle one)
Horizontal Closure __________

To convert state plane metric units to VDOT project values, use the following formula.
1. Reduce the Easting Metric Values By 2.5 Million Meters. The South and North Zone Northing Metric Values By 1 and 2 Million Respectively.
2. Multiply These Values by the U.S. Survey Foot (3.280833333)
3. Multiply These Values by Combined Scale and Elevation Factor (1.00005) for the County.
Reverse This Proceedure to Transform VDOT Project Coordinates to NAD 83Metric Plane Coordinates

* Sketch and Detailed Description on Other Side *

DETAILED SKETCH

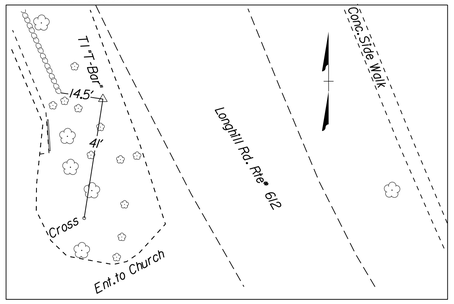


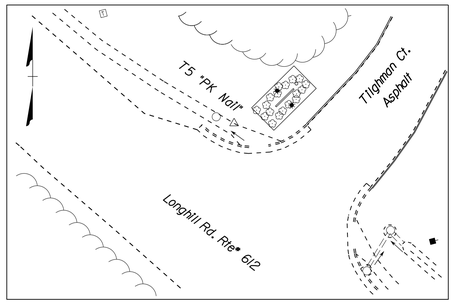
Detailed Description:
STANDARD METAL DISK STAMPED "047-0377" SET IN CONC. APPROX. 3" BELOW GROUND LEVEL. DISK IS LOCATED 215' WEST INTERSECTION RTE 612 AND RTE 614 IN THE GRASS MEDIAN TO THE ENTRANCE OF FREEDOM PARK

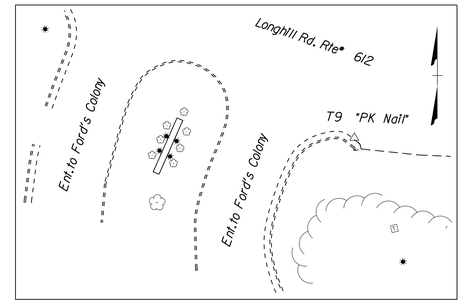
PROJECT MANAGER Ken McKinna, P.E. (757) 956-3271
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

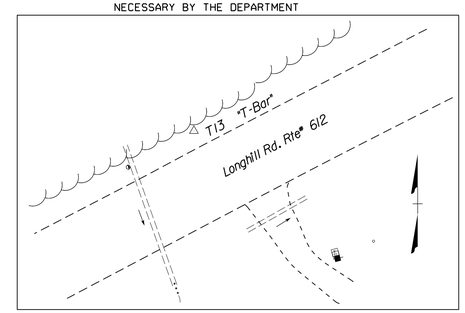
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1F(03)

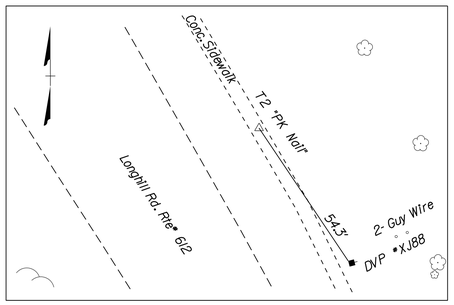
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

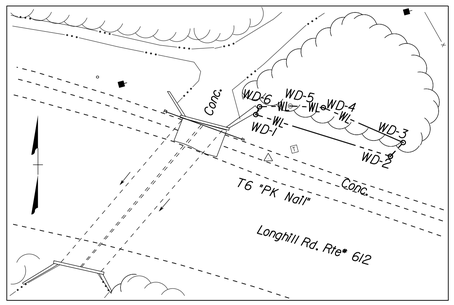


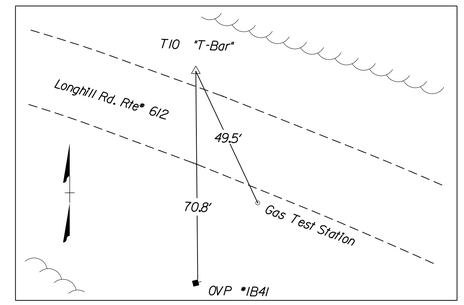


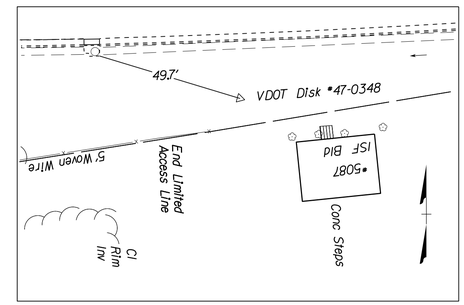


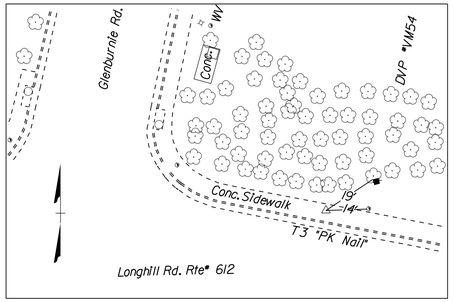


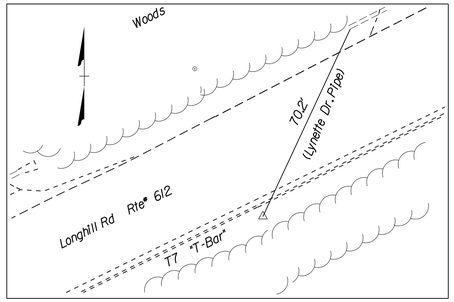


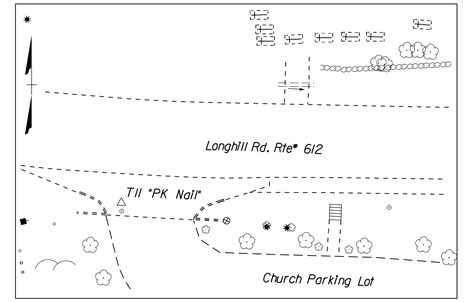


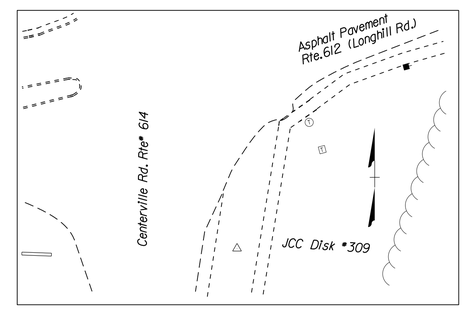


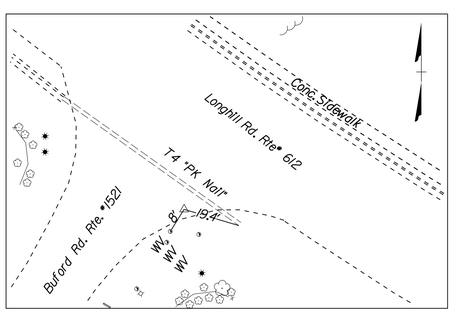


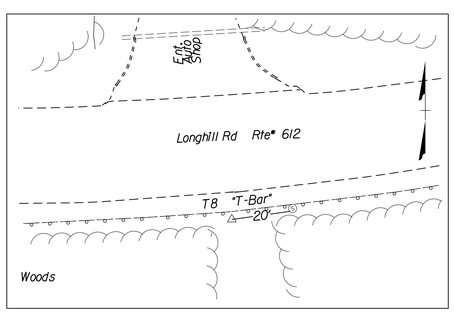


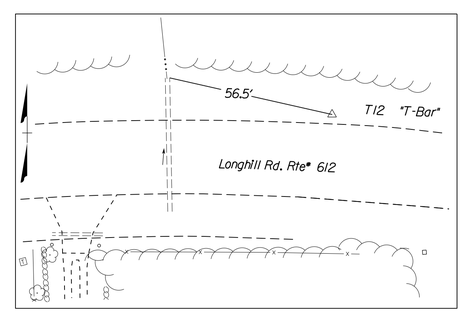


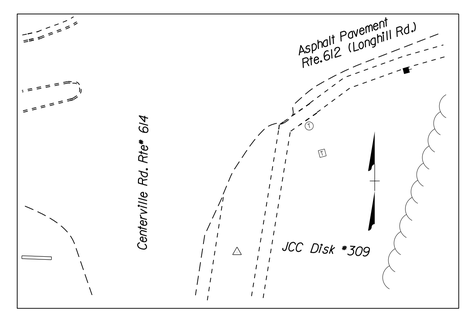












PROJECT	SHEET NO.
0612-047-631	1F(03)

PROJECT MANAGER Ken McKinna, P.E. (757) 956-3271
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657
DESIGN BY Diane Geouge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1G(1)

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

CONSTRUCTION ALIGNMENT

MAINLINE BASELINE RTE. 612

<• 1 Describe Chain ML

Chain ML contains:
D200 CUR RTE612CUR1 CUR RTE612CUR2 CUR RTE612CUR3 D204

Beginning chain ML description
****

Point D200 N 359,848.99 E 3,788,301.64 Sta 215+56.36

Course from D200 to PC RTE612CUR1 S 65° 07' 33.03" E Dist 596.68

Curve Data
•----------•

Curve RTE612CUR1
P.I. Station 223+69.35 N 359,507.02 E 3,789,039.22
Delta = 30° 15' 37.88" (RT)
Degree = 7° 09' 43.10"
Tangent = 216.31
Length = 422.52
Radius = 800.00
External = 28.73
Long Chord = 417.62
Mid.Ord. = 27.73
P.C. Station 221+53.04 N 359,598.01 E 3,788,842.97
P.T. Station 225+75.56 N 359,329.54 E 3,789,162.87
C.C. N 358,872.22 E 3,788,506.47

Back = S 65° 07' 33.03" E
Ahead = S 34° 51' 55.15" E
Chord Bear = S 49° 59' 44.09" E

Course from PT RTE612CUR1 to PC RTE612CUR2 S 34° 51' 55.15" E Dist 583.30

Curve Data
•----------•

Curve RTE612CUR2
P.I. Station 234+87.43 N 358,581.35 E 3,789,684.14
Delta = 28° 22' 06.38" (RT)
Degree = 4° 24' 26.52"
Tangent = 328.57
Length = 643.66
Radius = 1,300.00
External = 40.88
Long Chord = 637.10
Mid.Ord. = 39.63
P.C. Station 231+58.86 N 358,850.94 E 3,789,496.31
P.T. Station 238+02.52 N 358,254.89 E 3,789,721.32
C.C. N 358,107.80 E 3,788,429.67
Back = S 34° 51' 55.15" E
Ahead = S 6° 29' 48.77" E
Chord Bear = S 20° 40' 51.96" E

Course from PT RTE612CUR2 to PC RTE612CUR3 S 6° 29' 48.77" E Dist 423.46

MAINLINE BASELINE RTE. 612
Continued

Curve Data
•----------•

P.I. Station 248+48.69 N 357,215.44 E 3,789,839.69
Delta = 54° 51' 05.62" (LT)
Degree = 4° 46' 28.73"
Tangent = 622.71
Length = 1,148.81
Radius = 1,200.00
External = 151.95
Long Chord = 1,105.44
Mid.Ord. = 134.87
P.C. Station 242+25.98 N 357,834.15 E 3,789,769.23
P.T. Station 253+74.79 N 356,916.87 E 3,790,386.15
C.C. N 357,969.93 E 3,790,961.53
Back = S 6° 29' 48.77" E
Ahead = S 61° 20' 54.40" E
Chord Bear = S 33° 55' 21.58" E

Course from PT RTE612CUR3 to D204 S 61° 20' 54.40" E Dist 155.82

Point D204 N 356,842.16 E 3,790,522.88 Sta 255+30.61

****
Ending chain ML description

NEW POINT RD. BASELINE

<• 3 Describe Chain NEWPOINT

Chain NEWPOINT contains:
D410 D411

Beginning chain NEWPOINT description
****

Point D410 N 359,474.36 E 3,789,033.19 Sta 60+00.00

Course from D410 to D411 N 33° 23' 11.98" E Dist 96.49
Point D411 N 359,554.93 E 3,789,086.28 Sta 60+96.49

****
Ending chain NEWPOINT description

DEVON ROAD BASELINE

<• 1 Describe Chain DEVONRD

Chain DEVON contains:
D475 D476 D477 D478

Beginning chain DEVON description
****

Point D475 N 359,093.94 E 3,789,327.02 Sta 30+00.00
Course from D475 to D476 S 62° 29' 24.02" W Dist 265.13
Point D476 N 358,971.48 E 3,789,091.87 Sta 32+65.13
Course from D476 to D477 S 66° 52' 43.28" W Dist 176.98
Point D477 N 358,901.98 E 3,788,929.10 Sta 34+42.12
Course from D477 to D478 S 74° 02' 45.69" W Dist 151.12
Point D478 N 358,860.44 E 3,788,783.80 Sta 35+93.24

****
Ending chain DEVON description

OLDE TOWNE RD. BASELINE RTE. 658

<• 5 Describe Chain RTE658

Chain RTE658 contains:
RTE6591 RTE6582 RTE6583
Beginning chain RTE658 description
****

Point RTE6591 N 359,095.89 E 3,789,325.66 Sta 20+00.00
Course from RTE6591 to RTE6582 N 39° 42' 23.60" E Dist 629.37
Point RTE6582 N 359,580.08 E 3,789,727.73 Sta 26+29.37
Course from RTE6582 to RTE6583 N 39° 42' 23.60" E Dist 468.56
Point RTE6583 N 359,940.56 E 3,790,027.07 Sta 30+97.93

****
Ending chain RTE658 description

LANE PLACE BASELINE

<• 1 Describe Chain REGENCYRD

Chain REGENCYRD contains:
D404 D405

Beginning chain REGENCYRD description
****

Point D404 N 357,171.74 E 3,790,065.49 Sta 50+00.00

Course from D404 to D405 N 52° 00' 56.11" E Dist 149.55
Point D405 N 357,263.77 E 3,790,183.36 Sta 51+49.55

****
Ending chain REGENCYRD description

WILLIAMSBURG WEST RD. BASELINE

<• 2 Describe Chain FORDSCOLONY

Chain FORDSCOLONY contains:
D402 D403

Beginning chain FORDSCOLONY description
****

Point D402 N 357,173.84 E 3,790,063.62 Sta 40+00.00

Course from D402 to D403 S 48° 15' 58.13" W Dist 128.18
Point D403 N 357,088.51 E 3,789,967.97 Sta 41+28.18

****
Ending chain FORDSCOLONY description

PROJECT MANAGER Ken McKinna, P.E. (757) 925-2406
SURVEYED BY, DATE Danny Williams, LS (757) 925-2657
DESIGN BY Diane Geouge (757) 925-3624
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

CONSTRUCTION ALIGNMENT

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1G(2)

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

LONGHILL ROAD ROUNDABOUT

Curve Data
x----------x

Curve RTE612CUR4
P.I. Station 1+00.00 N 358,117.17 E 3,789,786.09
Delta = 360° 00' 00.00" (LT)
Degree = 127° 19' 26.24"
Tangent = 0.00
Length = 282.74
Radius = 45.00
External = 90.00
Long Chord = 0.00
Mid.Ord. = 90.00
P.C. Station 1+00.00 N 358,117.17 E 3,789,786.09
P.T. Station 3+82.74 N 358,117.17 E 3,789,786.09
C.C. N 358,117.17 E 3,789,741.09
Back = Due North
Ahead = Due North
Chord Bear = Due North

WILLIAMSBURG PLANTATION DRIVE

Point LHV218 N 358,118.18 E 3,789,736.89 Sta 100+00.00

Course from LHV218 to LHV219 N 84° 10' 12.63" E Dist 200.00

Point LHV219 N 358,138.50 E 3,789,935.86 Sta 102+00.00

METHODIST CHURCH ENTRANCE

Point LHV222 N 358,561.68 E 3,789,647.86 Sta 100+00.00
Course from LHV222 to PC METH_ENTR_3 S 69° 26' 05.34" W Dist 43.14

Curve Data
x----------x

Curve METH_ENTR_3
P.I. Station 100+75.00 N 358,535.34 E 3,789,577.64
Delta = 35° 20' 31.20" (LT)
Degree = 57° 17' 44.81"
Tangent = 31.86
Length = 61.68
Radius = 100.00
External = 4.95
Long Chord = 60.71
Mid.Ord. = 4.72
P.C. Station 100+43.14 N 358,546.53 E 3,789,607.46
P.T. Station 101+04.83 N 358,508.95 E 3,789,559.78
C.C. N 358,452.90 E 3,789,642.59
Back = S 69° 26' 05.34" W
Ahead = S 34° 05' 34.15" W
Chord Bear = S 51° 45' 49.75" W

Course from PT METH_ENTR_3 to LHV223 S 34° 05' 34.15" W Dist 104.82
Point LHV223 N 358,422.15 E 3,789,501.02 Sta 102+09.65

LUTHERAN CHURCH ENTRANCE

Point BRDWD11 N 358,139.91 E 3,789,734.41 Sta 100+00.00
Course from BRDWD11 to PC LUTH_ENTR_3 S 84° 06' 26.90" W Dist 93.60

Curve Data
x----------x

Curve LUTH_ENTR_3
P.I. Station 101+18.97 N 358,127.70 E 3,789,616.07
Delta = 14° 27' 24.01" (LT)
Degree = 28° 38' 52.40"
Tangent = 25.37
Length = 50.46
Radius = 200.00
External = 1.60
Long Chord = 50.33
Mid.Ord. = 1.59
P.C. Station 100+93.60 N 358,130.30 E 3,789,641.30
P.T. Station 101+44.07 N 358,118.87 E 3,789,592.29
C.C. N 357,931.36 E 3,789,661.84
Back = S 84° 06' 26.90" W
Ahead = S 69° 39' 02.89" W
Chord Bear = S 76° 52' 44.89" W

Course from PT LUTH_ENTR_3 to BRDWD12 S 69° 39' 02.89" W Dist 55.94
Point BRDWD12 N 358,099.42 E 3,789,539.84 Sta 102+00.01

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

TRANSPORTATION OPERATIONS PLAN

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1H

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

TRANSPORTATION OPERATIONS PLAN

1. Contractor shall follow the process to notify the Hampton Roads Traffic Operations Center to place lane closure information on the 511 system and LCAMS, as specified in the SPECIAL PROVISION FOR LANE CLOSURE COORDINATION (LCC)/LANE CLOSURE IMPLEMENTATION (LCI) SP801-000100-01.

2. The following is a list of local emergency contact agencies:
a) James City County Police Department 757-253-1800
b) Haz-Mat Center (if spill involved) -911

3. Procedures to respond to traffic incidents that may occur in the work zone:
a) Contractor to notify James City County Police Department and VDOT Inspector in Charge and Smart Traffic Center.
b) Depending upon severity of incident, contractor may have to shut down work.
c) Upon arrival on scene, James City County Police Department to determine response necessary to allow traveling public around incident.
d) Inspector to notify Construction Manager/Resident Administrator of incident and take pictures as necessary, especially pictures of contractors work zone to verify the proper setup.

4. Process of notification of incident to be followed is:
Contractor to call: Construction Manager: P.K. Das 757-897-8952
Construction Manager shall notify the following:
a) Regional Traffic Operation Center, Shift Supervisor: TBD
b) Project Maintenance of Traffic Coordinators: TBD
c) Residency Administrator: Christopher Carroll 757-253-5140
d) Area Construction Engineer: Eric Thornton 804-920-3319
e) District Work Zone Safety Coordinator: John Sabato 757-956-3143
f) District Traffic Engineer: Mike Corwin 757-956-3137
g) District Public Affairs Manager: TBD

5. The James City County Police Department will take control of the incident and direct its clearing and restoration to normal traffic conditions.

6. The James City County Police Department 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 to alter the plan, a meeting will be called with the contractor, VDOT project personnel, VDOT traffic safety representatives and the James City County Police Department (if necessary) to discuss modification and implementation of an improved traffic control plan.

PUBLIC COMMUNICATIONS PLAN

VDOT Construction staff to coordinate with District Public Affairs to publish announcements regarding construction activities and effect on traffic flow. Contractor to submit a TWLA schedule. Contractor to submit planned lane closure and any shift in traffic or flagging operations for the following week by 3 P.M. on Tuesday. Contractor to confirm their intent for approved lane closure and any shift in traffic or flagging operations a minimum of 24 hours in advance.

TEMPORARY TRAFFIC CONTROL PLAN

General Notes:

1. This project is a Type B project for purposes of developing a Traffic Management Plan.

2. The project location is from approximately 0.164 miles west of the Route 199 SB Off-Ramp and Route 612 (Longhill Road) intersection to approximately 0.057 miles east of the Glenburnie Road and Route 612 (Longhill Road) intersection. The length of the project is 0.661 miles.

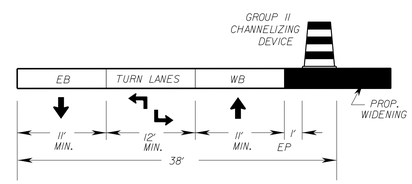
3. The following typical traffic control specifications from the 2011 Virginia Work Area Protection Manual, Revision 1 will be used: TTC-1.1, TTC-4.1, TTC-5.1, TTC-6.1, TTC-23.1, TTC-24.1, TTC-26.1, TTC-27.1, TTC-28.1, TTC-29.1, TTC-35.1, TTC-36.1, TTC-40.1, TTC-43.1, TTC-52.1, TTC-53.0, TTC-55.1, TTC-59.1, TTC-60.0, and TTC-67.0 as required. Other TTCs may be used with approval from the Engineer.

4. Route 612 is a Minor Urban Arterial road with 45 MPH speed limit. The volume of traffic eastbound and westbound was approximately 17,000 vehicles per day in 2016. Types of traffic include trucks, commuters, travelers and residents.

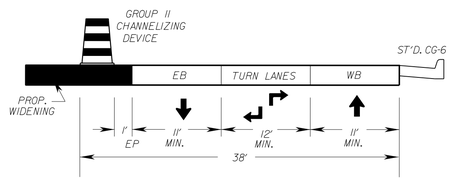
5. There are no identified areas within the right of way for the contractor to store equipment and materials. The contractor must make arrangements for these areas according to VDOT policies.

6. Typical Sections - MOT / SOC Typical sections are shown in this sheet.

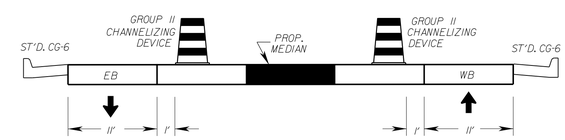
TYPICAL SECTION PHASE 1A/2A



TYPICAL SECTION PHASE 1B/2B



TYPICAL SECTION PHASE 1C/2C



PROJECT	SHEET NO.
0612-047-631	1H

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

SEQUENCE OF CONSTRUCTION

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1H(1)

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

Unless otherwise approved or directed by the Engineer, the Contractor shall plan and prosecute the work in accordance with the following:

1. All work is to be performed in accordance with the latest revision of the 2011 WORK AREA PROTECTION MANUAL, and as directed by the Engineer.

2. The phases in the Sequence of Construction shall be followed unless the Contractor submits and secures the approval of the Engineer for a sequence which will both expedite construction and lessen the effect of such construction upon the traveling public. Portions of roadways in the different phases may be constructed provided they do not interfere with existing traffic flow and/or do not cause any delay in the project completion. Under no circumstance will concurrent construction left and right of any lane be allowed. (Unless otherwise directed by the Engineer.)

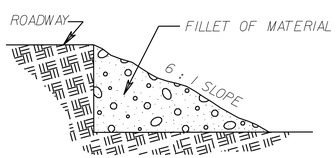
3. One lane of traffic on each direction shall be maintained between the hours of 6:00 a.m. to 9:00 p.m. (Unless otherwise directed by the Engineer).

4. Flagging operations on Route 612 and Route 658 will be allowed between the hours of 9:00 p.m. to 6:00 a.m. (Unless otherwise directed by the Engineer). Flagging operations on all other side streets will be allowed between 9:00 p.m. to 6:00 a.m. and from 9:00 a.m. to 3:00 p.m. (Unless otherwise directed by the Engineer). Traffic shall not be stopped on any public road for more than five minutes at any time during flagging operations. Access to adjacent properties and connecting streets shall be maintained at all times during construction.

5. It is not the intent of the sequence of construction plan to enumerate every detail which must be considered in the construction of each stage, but only to show the general features necessary to provide for proper handling of traffic.

6. All areas excavated below existing pavement surface and within the clear zone, at the conclusion of each workday, shall be backfilled with aggregate base material to form an approximate 6:1 wedge against the existing pavement surface for the safety and protection of vehicular traffic. All cost of placing, maintaining and removing 6:1 wedge shall be included in the price bid for other items in the contract and no additional compensation will be allowed.

FILLET OF MATERIAL



7. The Contractor shall provide temporary drainage as required to prevent ponding of water on the roadway and adjacent properties. Any temporary drainage structures on the project are the contractor's responsibility. The cost of such structures is to be included in the cost of other items.

8. Provide "Drop Inlet Silt Traps" at all proposed and existing drop inlets during construction of the project.

9. The Contractor will be responsible for providing pedestrian passage at all times during construction.

10. Group II Channelizing Devices shall be installed and removed so as not to present any hazards to the motoring public. The placement and removal of the channelizing devices are to be coordinated by the Project Safety Officer.

11. Except as is necessary to maintain traffic, work shall not be performed on Sundays or the following holidays without permission of the Engineer: January 1, Memorial Day, July 4, Labor Day, Thanksgiving Day, and Christmas Day. If any of these holidays occurs on a Sunday, then the following Monday shall be considered the holiday. Engineer will coordinate with churches in the vicinity of the project for road work to occur on Ash Wednesday, Good Friday, day before Easter, and Christmas Eve.

12. The clear zone is to be free of stored materials and parked equipment also; sight distances at intersections should not be impacted by parked construction vehicles.

13. When proceeding from one stage of construction to another stage of construction any existing or construction pavement markings that do not align with the new traffic patterns and/or necessary markings shall be eradicated and restriped.

14. Work described in these SOC and MOT plans will also be used for UPC 108805, Olde Towne Rd Turn Lane Extension.

15. Please refer to plan sheet 1H(2) for specific temporary sidewalk sequence of construction details and general notes.

16. Please refer to plan sheet 1H(3) for specific drainage sequence of construction details and general notes.

TEMPORARY PAVEMENT RECOMMENDATIONS

Base - 6.0" minimum of Aggregate Base Material Type I, Size No. 21-B
Depth may be increased as needed or in lieu of fill.

Surface - 3.0" of Asphalt Concrete Type BM- 25.0A

SEQUENCE OF CONSTRUCTION

Phase 1:

1. Traffic to remain in current alignment.
2. Relocate in-plan utilities from Sta. 234 + 00 to the end of project.
3. Build temporary sidewalk on north side of Longhill Road between Sta. 233+00 to Sta. 249+25. Temporary sidewalk shall be placed adjacent to the utility easement.
4. Build temporary pavement on Williamsburg Plantation Drive.
5. Install PCMS on east and west directions of Route 199 prior to Longhill Road exit to alert drivers of construction. PCMS message to be approved by Engineer.
6. Install temporary signal at Longhill Rd/Williamsburg West at end of this stage.

Phase 1A:

1. EB traffic to remain in current alignment for entire length of project this phase.
2. WB traffic to remain in current alignment between Begin of Construction to Sta. 235 + 00. From Sta. 235 + 00 to Sta. 244 + 25, WB traffic shift to center lane. Between Sta. 244 + 25 and End of Construction, WB traffic to remain in current alignment.
3. Construct proposed WB lanes outside of existing roadway footprint and entrances (including north side of Roundabout) to IM course with C&G.
4. Build multi-use path between Sta. 234+00 to end of project.
5. Install Erosion and Sediment Control with a sediment basin later to be converted into SWM basins (8-13).
6. Construct the Phase I portion of the waterline.

Phase 1B:

1. WB and EB traffic to remain in current alignment between Begin of Construction to Sta. 235 + 00.
2. Shift EB and WB traffic to new WB lanes from Sta. 235 + 00 to End of Construction. (EB lanes shift to existing lanes at Sta. 253 + 25.)
3. Modify signal at Route 612 and Williamsburg West Drive to allow for new traffic configuration.
4. Demolish previous temporary pavement and sidewalk and build new temporary pavement on Williamsburg Plantation Drive.
5. Construct proposed EB lanes and entrances (including south side of Roundabout) to IM course with C&G.

Phase 1C:

1. EB traffic and WB traffic shifts to outer lanes from Sta. 235+00 to End of Construction.
2. Construct medians and inner lanes to IM course with C&G.
3. Modify signal at Route 612 and Williamsburg West Drive to allow for new traffic configuration.
4. Convert sediment basin into SWM basins (8-13) after upstream areas have been stabilized.
5. Install permanent signage between Sta 235+00 to end of project.

Phase 2:

1. Traffic to remain in existing alignment at the conclusion of Phase 1C.
2. Relocate in-plan utilities from beginning of project to Sta. 234+00.
3. Build temporary sidewalk on north side of Longhill Road between beginning of project to Sta. 233+00. Temporary sidewalk shall be placed adjacent to the utility easement.
4. Install Erosion and Sediment Control with a sediment basin later to be converted into SWM basin (5-29).
5. Construct extended right turn lane on Olde Towne Road under project 0658-047-R97
6. Construct the appropriate sections of the Phase 2 portion of the waterline.
7. Construct the relocated sewer line on Devon Rd.
8. Install temporary signal at Longhill Rd/Devon Rd at end of this stage.

Phase 2A:

1. Traffic to remain in existing alignment between beginning of construction to Sta. 235+00 (EB lanes shift back to new alignment built on Phase 1C beginning on Sta. 235+00).
2. Construct proposed WB lanes between beginning of project to Sta. 235+00 to IM course with C&G.
3. Build multi-use path between beginning of project to Sta. 234+00.

Phase 2B:

1. WB and EB traffic to remain in current alignment between Beginning of Construction to Sta. 229 + 50.
2. Shift EB and WB traffic to new WB lanes from Sta. 229+50 to Sta 235+00 (EB lanes shift back to new alignment built on Phase 1C beginning on Sta. 235+00).
3. Construct proposed EB lanes and entrances between beginning of project to Sta. 235+00 to IM course with C&G.
4. Construct the appropriate sections of the Phase 2 portion of the waterline.
5. Re-construct Devon Rd.

Phase 2C:

1. EB traffic and WB traffic shifts to outer lanes from beginning of project to Sta. 235+00.
2. Construct medians and inner lanes to IM course with C&G.
3. Modify signal at Route 612 and Route 658 to allow for new traffic configuration.
4. Convert sediment basin into SWM basins (5-29) after upstream areas have been stabilized.
5. Install permanent signage between beginning of project to Sta. 235+00.

Phase 3:

1. Construct transitions at each end of project, from Williamsburg West Drive to Route 199 ramp and from Route 658 intersection to New Point Road/Glenburnie Road right turn lane tie-in.
2. Overlay surface mix asphalt. Mill and overlay areas not previously demolished.
3. Install permanent pavement markings for entire project.
4. Remove PCMS on east and west directions of Route 199 prior to Longhill Road exit.

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

SEQUENCE OF CONSTRUCTION
TEMPORARY SIDEWALK

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1H(2)

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TEMPORARY SIDEWALK NOTES

Temporary sidewalk to be constructed in the approximate locations indicated on Sequence of Construction plan sheets and/or cross sections. The Contractor can make alterations with the approval of the Engineer.

1. All sections of the temporary sidewalk shall be ADA compliant (see St'd. CG-12 for general requirements for ADA compliance of ramps).

2. The temporary sidewalk is to be 5 feet wide except that short sections (200 feet maximum) may be 4 feet wide where space does not allow 5 foot width.

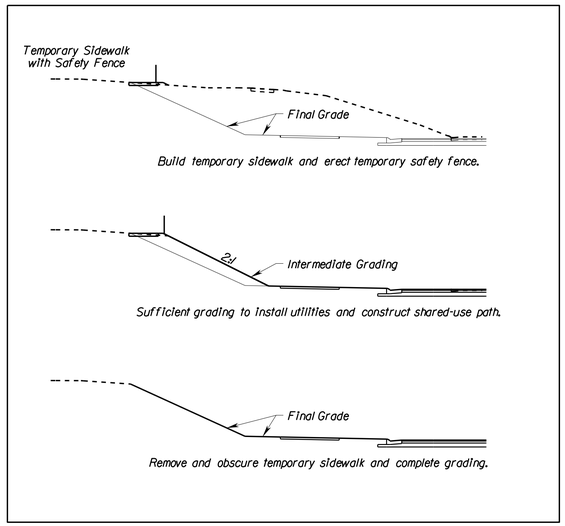
3. Street crossings and commercial entrance crossings shall include ramps with detectable warning surfaces.

4. Temporary Safety Fence shall be placed along the temporary sidewalk to separate pedestrians from work areas.

5. The price of construction items for the temporary sidewalk shall include the cost of removing the sidewalk including obscuring the area where the sidewalk was placed and replacing any curbs which were removed when the sidewalk was constructed.

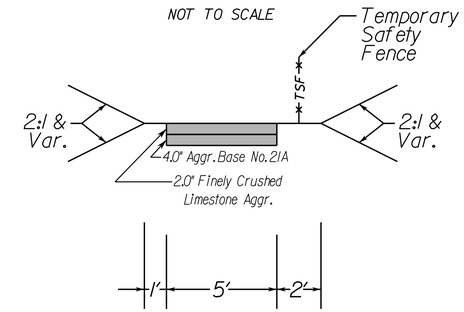
6. From Station 247+50 Lt to Station 248+50 Lt the berm shall be restored to the height shown on the cross sections (the height the berm would have been without the temporary sidewalk).

Method to Maintain Pedestrian Access During Phases 1A and 2A



TEMPORARY SIDEWALK TYPICAL SECTION

NOT TO SCALE



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
Mainline Profile
Drainage Descr.
Conn. Profiles
Entr. Profiles

PROJECT	SHEET NO.
0612-047-631	1H(2)

PROJECT MANAGER _ KEN MCKINNA,PE (757) 956-3271
SURVEYED BY, DATE DANNY R.WILLIAMS (757) 925-2657
DESIGN BY _ Michael N.Poblete (757) 956-3268
SUBSURFACE UTILITY BY, DATE _ ACCUMARK,INC.(757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

TEMPORARY DRAINAGE DESCRIPTION & SUMMARY

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC DESIGN

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/5/19	VA.	612	0612-047-631,C-501	1H(3)

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

PHASE 1A

(T6-9) 3.4 LF TEMPORARY MH-1 OR 2
1-ST'D. MH-1 FRAME & COVER REQ'D.
INV. 96.90
CONNECT UD-2 TO MH

(T7-3) 4.7 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 81.66

(T7-4) 3 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 80.96

(T7-6) 4.9 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 77.85
1 - ST'D. IS-1 REQ'D.

(T7-7) 2.5 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 76.20
1 - ST'D. IS-1 REQ'D.

(T8-2) 4.9 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 69.37

(T8-6) 4.3 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 62.55

(T8-8) 7.3 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 61.70

(T8-26) TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE
H = 5.6, INV. 56.00
WHEN CONVERTING TO BIORETNTION BASIN
RAISE TOP BY 0.60' TO ELEV.62.2

PHASE 1B

(T6-5) 4.4 LF TEMPORARY MH-1 or 2
1 - ST'D. MH-1 FRAME AND COVER REQ'D.
INV. 94.76
CONNECT UD-2 TO MH

(T7-16) 2.8 LF TEMPORARY MH-1 or 2
1 - ST'D. MH-1 FRAME AND COVER REQ'D.
INV. 91.44
1 - ST'D. IS-1 REQ'D.
CONNECT UD-2 TO MH

PHASE 2A

(T4-13) 3.7' LF TEMPORARYMH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 82.88
1 - ST'D. IS-1 REQ'D.

STRUCTURE	MH-1 OR 2 *	MH-1 FRAME & COVER **	15" STORM SEWER PIPE **	EC-1 CLASS I **	REMARKS
	LF	Ea.	LF	TONS	
T7-3	4.7	1			
T7-4	3	1			
T7-6	4.9	1			1 ST'D. IS-1
T7-7	2.5	1			1 ST'D. IS-1
T8-2	4.9	1			
T8-6	4.3	1			
T8-8	7.3	1			
T8-26					RAISE TOP BY 0.60' TO ELEV.62.2
T6-5	4.4	1			CONNECT UD-2 TO MH
T6-9	3.4	1			CONNECT UD-2 TO MH
T7-16	2.8	1			1 ST'D. IS-1, CONNECT UD-2 TO MH
T4-13	3.7	1			1 ST'D. IS-1
T5-13	6.3	1			
T5-19	4.0	1			
T5-20	2.0	1			
T5-21	7.5	1			
T5B-7					DI-7 Type A1
T5B-7 TO OUT			24	2	
TOTAL	65.7	15	24	2	

Note:
See drainage descriptions for corresponding permanent structures.
See special provision for temporary drainage. All pipes are permanent installation except for T5B-7 to OUT.
* Incidental to the corresponding permanent structure.
** Included in the drainage summary.

PHASE 2B

(T5-13) 6.3 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 90.85
1 - ST'D. IS-1 REQ'D.

(T5-19) 4.0 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 89.90

(T5-20) 2.5 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 88.02

(T5-21) 7.5 LF TEMPORARY MH-1 or 2 REQ'D.
1 - ST'D. FRAME AND COVER REQ'D.
INV. 82.50

(T5B-7) TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE
1 - ST'D. DI-7 REQ'D.TYPE A1
INV. 75.50

(T5B-7) (OUT) 24' - 15" STORM SEWER PIPE REQ'D. (6' COVER)
INV.(IN) 75.50, INV.(OUT) 75.20
2 TONS EC-1 CLASS I

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 956-3271 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY Federico Gontoruk, P.E. (804) 343-9046 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/5/2019	VA.	612	0612-047-631, C-501	1H4

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

SUMMARY OF QUANTITIES

TCD Discipline	MAINTENANCE OF TRAFFIC																																						
Summary Notes					1																																		
Item Description / ITEM NO.	Aggregrate Base Material Type I No.21A	Aggregrate Material Cap	Asphalt Concrete Curb MC-3	Type 3 Barricade 4'	Temporary (Construction) Sign	Group 2 Channelizing Devices	Portable Changeable Message Sign	Flagger Service		Remove Existing Pavement Marking Arrow Eradication	Type B Class II Pavement Line Marking 8"	Eradicate Existing Linear Pavement Marking	Temporary Pavement Marker 1 Way	Temporary Pavement Marker 2 Way	Temporary Pavement Symbol Marking (Thru Arrow), Type A	Temp. Pvmt Symbol Mrkg Single Turn Arrow TY. A	Type D, Class II Temp. Pvmt Mrkg 4"	Type D, Class II Temp. Pvmt Mrkg 8"	Type D, Class II Temp. Pvmt Mrkg 24"	Temporary Traffic Control Signal																			
UNIT	10123	10250	12311	24150	24160	24278	24279	24282		24504	54045	54105	54240	54242	54443	54457	54512	54516	54524	52002																			
	TON	TON	L.F.	EA.	S.F.	DAY	HR	HR		EA.	L.F.	L.F.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.																			
	220	110	536	4	694	35,963	11,880	500		54	160	24,857	80	10	5	32	24,664	1,240	321	2																			
TOTAL	220	110	536	4	694	35,963	11,880	500		54	160	24,857	80	10	5	32	24,664	1,240	321	2																			

SUMMARY NOTES

(1) This quantity shall also include signs M4-V6a and M4-V6b to read as follows:
- "C&F Bank" (Qty 2)
- "7-Eleven" (Qty 2)
- "Olde Towne Square" (Qty 2)
- "King of Glory Lutheran Church and Preschool" (Qty 1)
- "Wellspring United Methodist Church" (Qty 1)
- "Williamsburg Plantation" (Qty 1)

Design and location of the signs shall be submitted to the Engineer for approval prior to fabrication or installation.

NON-BID ITEMS

Police Patrol Uniformed Traffic Control	ITEM NO.	24355	T.E.C.
	UNIT	HOUR	
	QUANTITY	100	

MAINTENANCE OF TRAFFIC PLANS

SUMMARY OF QUANTITIES

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	1H4

PROJECT MANAGER K.E.N. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
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SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IH5

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

INDEX OF SHEETS

Sheet No.:	Sheet Description:
IH(5)	Index of Sheets, General Notes & Legend
IH(6)	Temporary Traffic Signal Plan - Longhill Road and Olde Towne Rd./Devon Rd.
IH(7)	Temporary Traffic Signal Plan - Longhill Road and Country Club Rd./Entrance

Notes:

1. The Temporary Traffic Control Signals are summarized on Sheet IH4.

GENERAL NOTES FOR TEMPORARY SIGNALS

1. THE CONTRACTOR SHALL KEEP EACH TRAFFIC SIGNAL IN THE PROJECT LIMITS OPERATIONAL AT ALL TIMES DURING CONSTRUCTION THROUGH THE USE OF THE EXISTING SIGNAL, THE TEMPORARY SIGNAL, THE PERMANENT SIGNAL OR ANY COMBINATION THEREOF. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, RELOCATE, AND REMOVE EXISTING, TEMPORARY, AND PROPOSED TRAFFIC SIGNAL EQUIPMENT AND ALL NECESSARY HARDWARE AS NEEDED THROUGHOUT THE DURATION OF CONSTRUCTION AND IN CONFORMANCE WITH THE APPLICABLE SPECIFICATIONS.

2. THE TEMPORARY SIGNALIZATION PLANS INCLUDED IN THE PROJECT PLAN ASSEMBLY SHALL BE FOLLOWED UNLESS THE CONTRACTOR SUBMITS ALTERNATE TEMPORARY SIGNALIZATION PLANS TO THE ENGINEER. ALL ALTERNATE TEMPORARY SIGNALIZATION PLANS SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.

   THESE TEMPORARY SIGNALIZATION PLANS HAVE BEEN DESIGNED FOR THE SEQUENCE OF CONSTRUCTION (S.O.C.)/MAINTENANCE OF TRAFFIC (M.O.T.) SCHEME CONTAINED IN THE PROJECT PLAN ASSEMBLY. THE CONTRACTOR SHALL INCLUDE REVISED TEMPORARY SIGNALIZATION PLANS WITH ALL ALTERNATE S.O.C./M.O.T. SUBMISSIONS. ALL ALTERNATE TEMPORARY SIGNALIZATION PLANS SHALL BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.

3. THE CONTRACTOR SHALL RELOCATE THE EXISTING AND TEMPORARY TRAFFIC SIGNAL HEADS AND APPURTENANCES (WOOD POLES, SPAN WIRE, SIGNS, DETECTORS, ETC.) AND REVISE THE SIGNAL PHASING AND TIMING AS MANY TIMES AS DEEMED NECESSARY DURING CONSTRUCTION TO MAINTAIN AND PROTECT TRAFFIC AS SHOWN ON THE PLANS OR AS PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

4. ALL TEMPORARY TRAFFIC SIGNAL WORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE PLANS, THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD & BRIDGE SPECIFICATIONS DATED 2007, VDOT ROAD & BRIDGE STANDARDS DATED 2008, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2003 EDITION (MUTCD), THE VIRGINIA SUPPLEMENT TO THE MUTCD, THE 2002 NATIONAL ELECTRICAL CODE, SPECIAL PROVISION COPIED NOTES AND SPECIAL PROVISIONS AT THE TIME OF THIS ADVERTISEMENT.

5. AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" (1-800-552-7001) IN ORDER TO DETERMINE THE EXTENT AND LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT HIS OWN EXPENSE ANY EXISTING UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC., THAT ARE DAMAGED DURING CONSTRUCTION.

6. TRAFFIC SIGNAL HEADS NOT IN USE AND OVERHEAD TRAFFIC SIGNAL SIGNS NOT APPLICABLE TO THE CURRENT TRAFFIC PATTERN SHALL BE COVERED IN ACCORDANCE WITH SECTION 703.03(C) UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THE COVERS ON THE DEVICES UNTIL SUCH DEVICES ARE REMOVED OR RESTORED TO OPERATION.

7. WOOD POLES TO BE INSTALLED IN ACCORDANCE WITH VDOT ST'D WD-2. WOOD POLE SIZE AND CLASS SHALL BE DETERMINED BY THE CONTRACTOR.

8. A CONTINUOUS WIRE (NO SPLICES) SHALL BE RUN BETWEEN THE CONTROLLER CABINET AND THE TERMINAL IN THE FIRST SIGNAL HEAD. JUMPERS BETWEEN THE SIGNAL HEAD OF SIMILAR PHASES ARE PERMITTED BUT SHALL HAVE NO SPLICES.

9. ALL TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE 12 INCH LED SECTIONS WITH TUNNEL VISORS ON ALL INDICATIONS. INSTALLATION SHALL BE IN ACCORDANCE WITH VDOT ST'Ds. SIGNAL HEAD SECTION MATERIAL SHALL CONFORM TO SECTION 703.02(e) FOR THE APPLICABLE TYPE OF INSTALLATION.

10. ALL UNUSED WIRES IN THE SIGNAL HEADS SHALL BE CAPPED INDIVIDUALLY WITH CRIMP TYPE CAPS.

11. THROUGHOUT THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE DETECTION ON THE EXISTING, TEMPORARY, AND/OR NEW ROADWAY ALIGNMENT FOR ALL INTERSECTION APPROACHES OR AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, RELOCATE AND REVISE THE NECESSARY EQUIPMENT TO PROVIDE VEHICLE DETECTION DURING EACH STAGE/PHASE OF CONSTRUCTION. DURING CONSTRUCTION, IF A DETECTOR BECOMES NON-OPERATIONAL, THE ASSOCIATED PHASE SHALL BE PUT ON MAX RECALL AND THE CONTRACTOR SHALL PROVIDE DETECTION WITHIN 24 HOURS. VIDEO DETECTION IS SHOWN HEREIN, BUT THE TYPE OF DETECTION USED SHALL BE AT THE CONTRACTOR'S DISCRETION. DETECTION FOR TRAVEL LANES SHOWN IS APPROXIMATE. ALL DETECTION ZONES SHALL BE COORDINATED AND APPROVED BY THE ENGINEER.

12. THE CONTRACTOR SHALL LABEL ALL SPARE WIRES IN THE CONTROLLER CABINET, IN ACCORDANCE WITH SECTION 700.04(g) OF THE ROAD AND BRIDGE SPECIFICATIONS.

13. THE CONTRACTOR SHALL BE RESPONSIBLE TO RETURN ALL DISTURBED AREAS, LANDSCAPING (TREES, SHRUBS, FLOWERS, ETC.) AND FENCING TO THEIR ORIGINAL STATE AT THE COMPLETION OF ALL WORK. DISTURBED AREAS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 603 AND SECTION 605 OF THE SPECIFICATIONS, AND ALL COST FOR THIS ITEM SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS. NO SEPARATE MEASUREMENT WILL BE MADE.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SIGNAL CABLE SLACK TO ACCOMMODATE ALL SIGNAL HEAD RELOCATIONS DURING CONSTRUCTION.

15. THE CONTRACTOR SHALL MONITOR TRAFFIC CONDITIONS DURING TEMPORARY SIGNALIZATION AND SHALL ADJUST THE GREEN INDICATION TIMINGS AS NECESSARY TO MINIMIZE DELAY AND QUEUING. THE CONTRACTOR SHALL ALSO ADJUST SIGNAL TIMINGS AS DIRECTED BY THE ENGINEER.

16. YELLOW AND ALL RED CLEARANCE INTERVAL TIMINGS SHALL BE CALCULATED AND IMPLEMENTED FOR EACH PHASE OF CONSTRUCTION. ALL YELLOW AND ALL RED CLEARANCE INTERVAL TIMINGS SHALL ADHERE TO THE METHODOLOGY IN TRAFFIC ENGINEERING MEMORANDUM #306 (TE-306) AND SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA. THE CONTRACTOR SHALL SUBMIT THE SEALED CLEARANCE INTERVAL TIMING CALCULATIONS TO THE NWRO SIGNAL TIMINGS ENGINEERS FOR REVIEW A MINIMUM OF TWO (2) WEEKS PRIOR TO IMPLEMENTATION.

17. PAVEMENT MARKINGS ARE SHOWN ON THE SIGNAL PLANS FOR REPRESENTATIONAL PURPOSES ONLY. ACTUAL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE TEMPORARY SIGNING AND PAVEMENT MARKING PLANS.

18. ALL SIGNAL EQUIPMENT SHALL BE REMOVED FROM THE EXISTING SIGNAL INSTALLATION. THE CONTROLLER CABINET, THE UPS CABINET AND ALL CONTENTS THEREIN SHALL BE SALVAGED AND RETURNED TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION. PLEASE CONTACT DAVID PERREIRA AT 804-840-7872 FORTY EIGHT (48) HOURS IN ADVANCE TO COORDINATE THE DELIVERY OF THE CABINETS.
   ALL OTHER EQUIPMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH R & B SPECIFICATIONS 510.

TEMPORARY SIGNAL LEGEND

PLAN ITEM		PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Wood Pole			
Pedestal Pole and Foundation (St'd. PF-2)			
Pedestal Pole and Foundation (St'd. PA-3)			
Traffic Signal Head	w/ Backplate		
	w/o Backplate		
Relocated Traffic Signal Head	w/ Backplate		
	w/o Backplate		
Pedestrian Signal Head			
Pedestrian Pushbutton & Sign		P.B.	P.B.
Traffic Signal Sign	Mast Arm or Span Wire Mt'd.		
	Pole Mounted		
Emergency Vehicle Pre-emption (EVP) Sensor	w/ Conf. Light		
	w/o Conf. Light		
Video Detection Camera			
Junction Box (St'd. as noted on plans)		J	J
Video Detection Zone (Size as noted on plans)		VDZ	VDZ
Conduit			

PLAN ITEM		PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Controller Cabinet	Ground Mounted		
	Pole Mounted		
Flashing Beacon			

LABELS

Cable and Conduit	A	Proposed Pedestrian Signal Head	P2	Emergency Preemption Detector	EVP-3
Junction Box	S3	Existing Pedestrian Signal Head	P2		
Signal Pole & Controller	A	Sign	S-1		
Proposed Signal Head	2	Phase	Ø1		
Existing Signal Head	2	Video Detection Camera	VDC-1		

PROJECT	SHEET NO.
0612-047-631	IH5

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Wilnolx, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

Signal Pole & Controller Legend

(ALL DIMENSIONS ARE TO CENTER OF POLE)

(A) WOOD SIGNAL POLE (WD-2)
50' RT of Longhill Rd Constr. ℄ Sta. 229 + 9
Pole A to Pole B
Signal Placement: 57', 69', 80'
Install Signal Cabinet and Controller on Wood Signal Pole
Install Electrical Service Type SE-3 Type A on Wood Signal Pole

(B) WOOD SIGNAL POLE (WD-2)
51' RT of Longhill Rd. Constr. ℄ Sta. 227 + 86
Pole B to Pole C
Signal Placement: 54', 66', 78'

(C) WOOD SIGNAL POLE (WD-2)
77' LT of Longhill Rd. Constr. ℄ Sta. 227 + 85
Pole C to Pole D
Signal Placement: 68', 78'

(D) WOOD SIGNAL POLE (WD-2)
63' LT of Ramp A Constr. ℄ Sta. 229 + 13
Pole D to Pole A
Signal Placement: 66', 78', 90'

Color Sequence Chart

SIGNALS	SIGNAL	PHASES 1	2	3	4	5	6	COMBINATIONS 1-5	1-6	2-5	2-6	FLASH
	1	→G	→FY					→G	→G	→FY	→FY	Y*
	2		G							G	G	Y
	3			G								
	3A			G / →G								
	4				→G							
	4A				G / →G							
	4B				G→							
	5					→G	→FY	→G	→FY	→G	→FY	Y*
	6						G		G		G	Y
	P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
	P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

Empty box denotes RED indication (Red ball or red arrow as appropriate)
When operating, the FY indication shall operate in a flashing mode.

*The Y arrow signal face (second from the top) shall flash during FLASH operation. The FY arrow signal face (third from the top) shall be blank during FLASH operation.

DW denotes DON'T WALK indication.

W denotes WALK indication.

COMMONWEALTH OF VIRGINIA
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VDOT Location & Design
Richmond, Virginia
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REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1H6

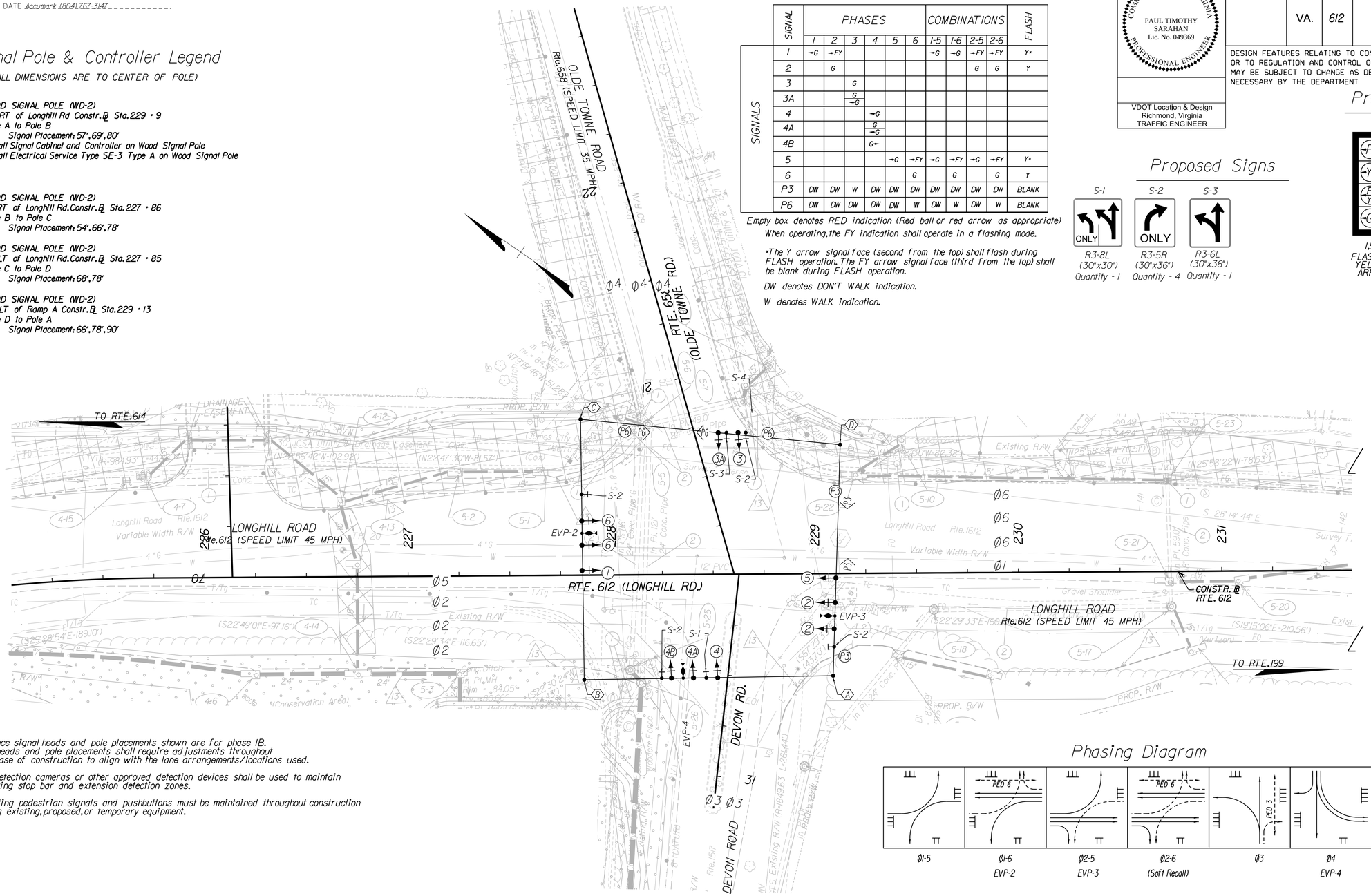
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Proposed Signs

S-1 R3-8L (30"x30") Quantity - 1
S-2 R3-5R (30"x36") Quantity - 4
S-3 R3-6L (30"x36") Quantity - 1

Proposed Signals

1,5 FLASHING YELLOW ARROW
2,3,6
4
4B
3A,4A
SP-9 P3,P6



Note: Reference signal heads and pole placements shown are for phase 1B. Signal heads and pole placements shall require adjustments throughout each phase of construction to align with the lane arrangements/locations used.

Video detection cameras or other approved detection devices shall be used to maintain all existing stop bar and extension detection zones.

All existing pedestrian signals and pushbuttons must be maintained throughout construction utilizing existing, proposed, or temporary equipment.

Phasing Diagram

Ø1-5 | Ø1-6 EVP-2 | Ø2-5 EVP-3 | Ø2-6 (Soft Recall) | Ø3 | Ø4 EVP-4

SCALE 0 25' 50'

SPEED LIMITS	
Longhill Rd.	45 MPH
Olde Towne Rd.	35 MPH
Devon Rd.	25 MPH

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
MOT Plan Sheets 1J1B(5)

TRAFFIC CONTROL DEVICE PLANS

TEMPORARY TRAFFIC SIGNAL PLAN

LONGHILL ROAD &
OLD TOWNE ROAD/DEVON ROAD
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	1H6

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1H7

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COMMONWEALTH OF VIRGINIA
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Richmond, Virginia
TRAFFIC ENGINEER

Note: Reference signal heads and pole placements shown are for phase 1B. Signal heads and pole placements shall require adjustments throughout each phase of construction to align with the lane arrangements/locations used.

Video detection cameras or other approved detection devices shall be used to maintain all existing stop bar and extension detection zones.

All existing pedestrian signals and pushbuttons must be maintained throughout construction utilizing existing, proposed, or temporary equipment.

Signal Pole & Controller Legend

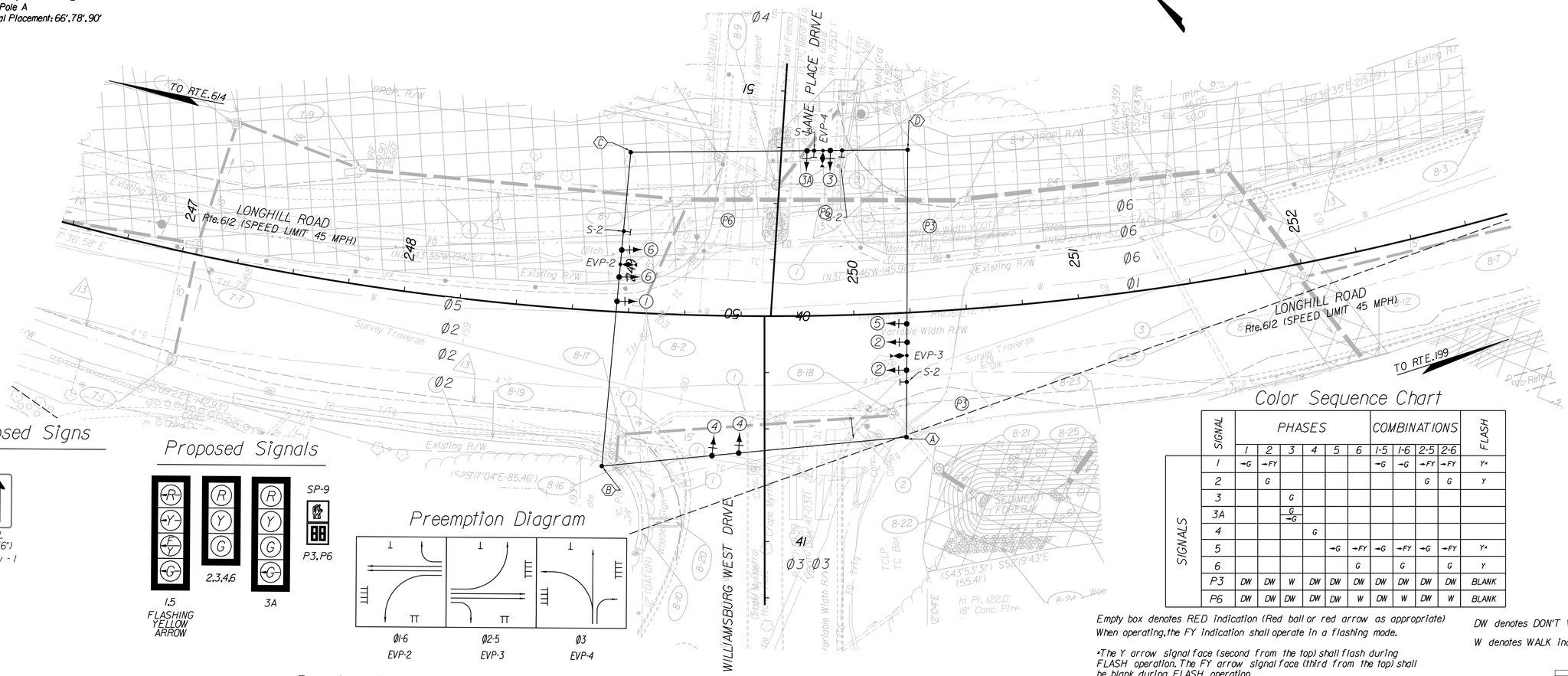
(ALL DIMENSIONS ARE TO CENTER OF POLE)

(A) WOOD SIGNAL POLE (WD-2)
55' RT of Longhill Rd Constr.℄ Sta.250+21
Pole A to Pole B
Signal Placement: 75', 87'
Install Signal Cabinet and Controller on Wood Signal Pole
Install Electrical Service Type SE-3 Type A on Wood Signal Pole

(B) WOOD SIGNAL POLE (WD-2)
69' RT of Longhill Rd. Constr.℄ Sta.248+92
Pole B to Pole C
Signal Placement: 74', 85', 96'

(C) WOOD SIGNAL POLE (WD-2)
71' LT of Longhill Rd. Constr.℄ Sta.248+97
Pole C to Pole D
Signal Placement: 78', 89'

(D) WOOD SIGNAL POLE (WD-2)
67' LT of Ramp A Constr.℄ Sta.250+28
Pole D to Pole A
Signal Placement: 66', 78', 90'



Proposed Signs

S-2: R3-5R (30"x36") Quantity - 3

S-3: R3-6L (30"x36") Quantity - 1

Proposed Signals

1,5: FLASHING YELLOW ARROW

2,3,4,6

3A

SP-9: P3, P6

Preemption Diagram

Ø1-6 EVP-2

Ø2-5 EVP-3

Ø3 EVP-4

Color Sequence Chart

	SIGNAL	PHASES 1	2	3	4	5	6	COMBINATIONS 1-5	1-6	2-5	2-6	FLASH
SIGNALS	1	→G	→FY					→G	→G	→FY	→FY	Y*
	2		G							G	G	Y
	3			G								
	3A			G / →G								
	4				G							
	5					→G	→FY	→G	→FY	→G	→FY	Y*
	6						G		G		G	Y
	P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
	P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

Empty box denotes RED indication (Red ball or red arrow as appropriate)
When operating, the FY indication shall operate in a flashing mode.

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DW denotes DON'T WALK indication.

W denotes WALK indication.

SCALE 0 25' 50'

Phasing Diagram

Ø1-5

Ø1-6 (PED 6)

Ø2-5

Ø2-6 (PED 6) (Soft Recall)

Ø3 (PED 3)

Ø4

JUNCTION BOX LEGEND

All Junction Boxes shall conform to St'd. JB-S2 unless otherwise noted on the plans.

(S3) Denotes St'd. JB-S3

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
MOT Plan Sheets 1JIB(8)

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL PLAN
LONGHILL ROAD &
WILLIAMSBURG WEST DRIVE/LANE PLACE DRIVE
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	1H7

PROJECT MANAGER KEN. MCKINNA, P.E. (757)956-3270
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SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO
	VA.	612	0612-0047-631, C-501	1J1(5)

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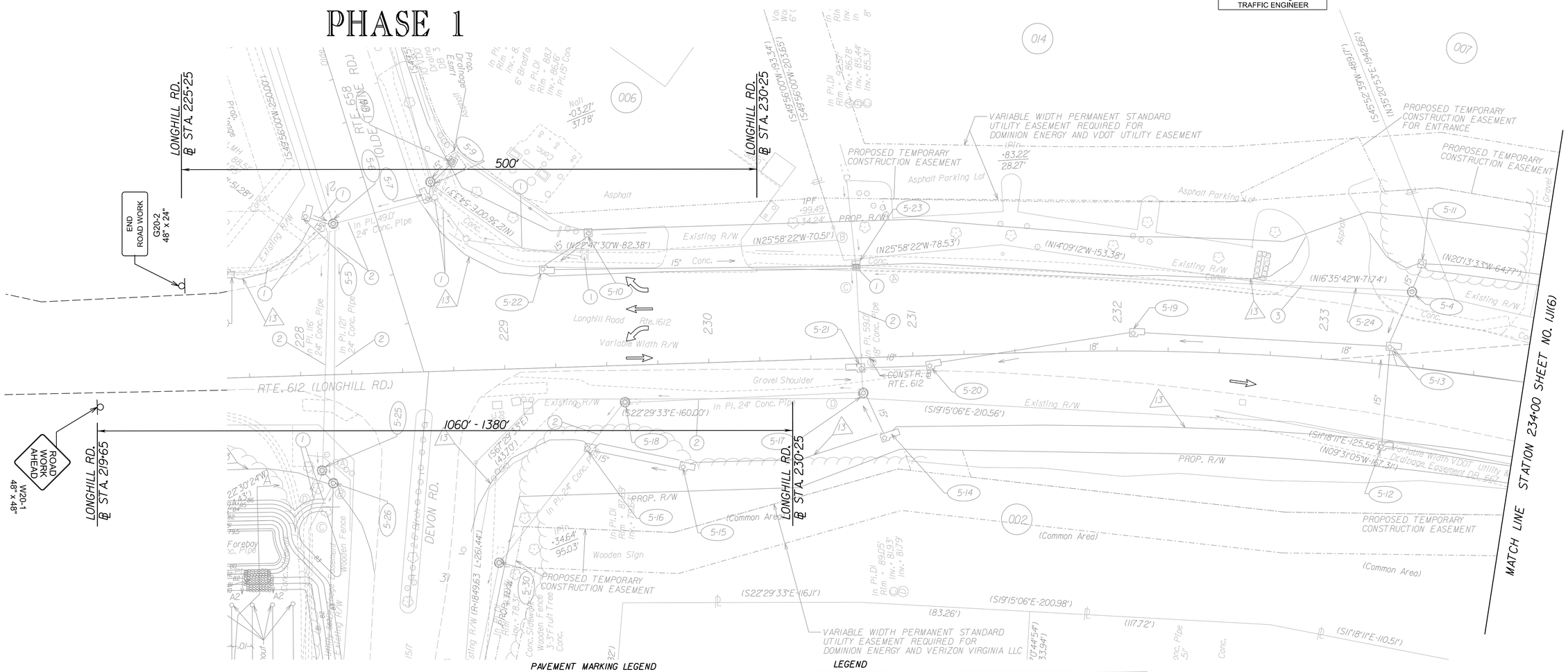

PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

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

SOC GENERAL NOTES 1H(1)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J1(5)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3271
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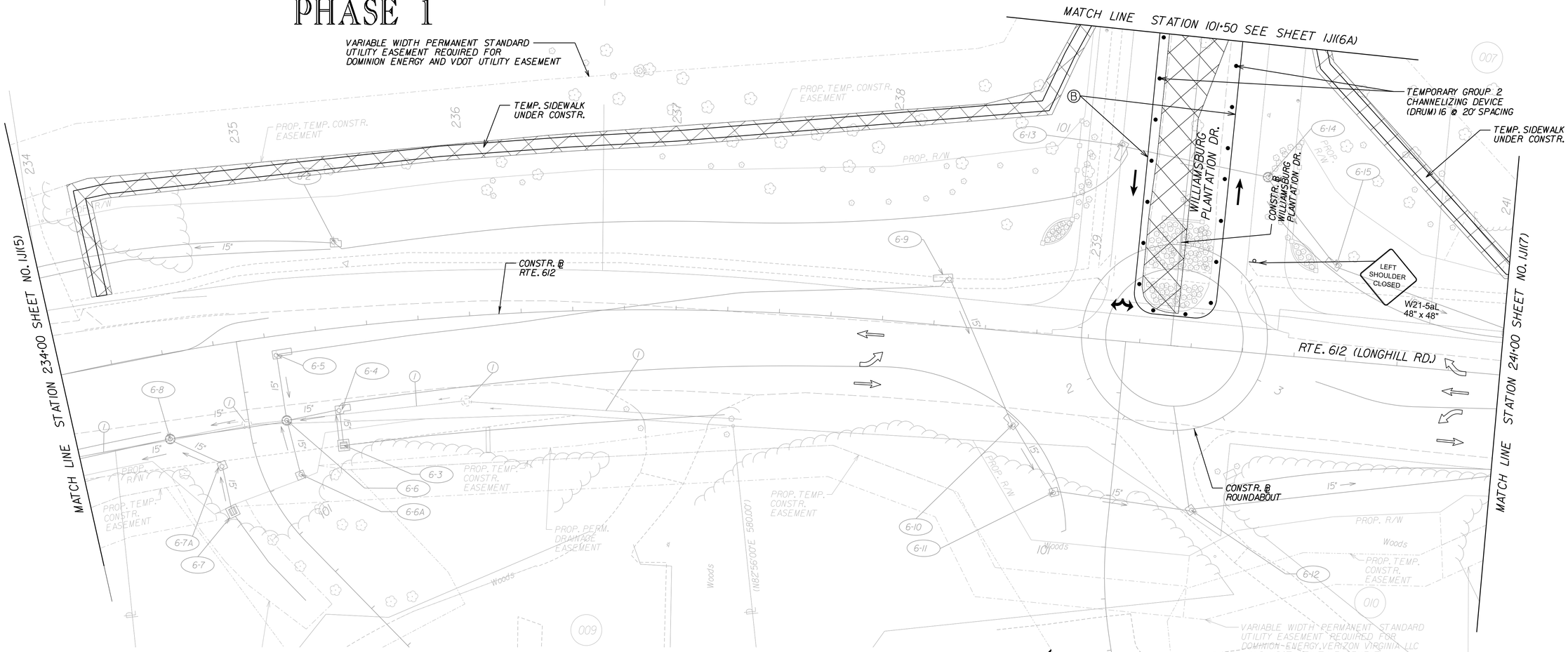
LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1



PAVEMENT MARKING LEGEND

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LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
SOC GENERAL NOTES	IH(1)
WILLIAMSBURG PLANTATION DRIVE PHASE I	IJI(6A)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJI(6)

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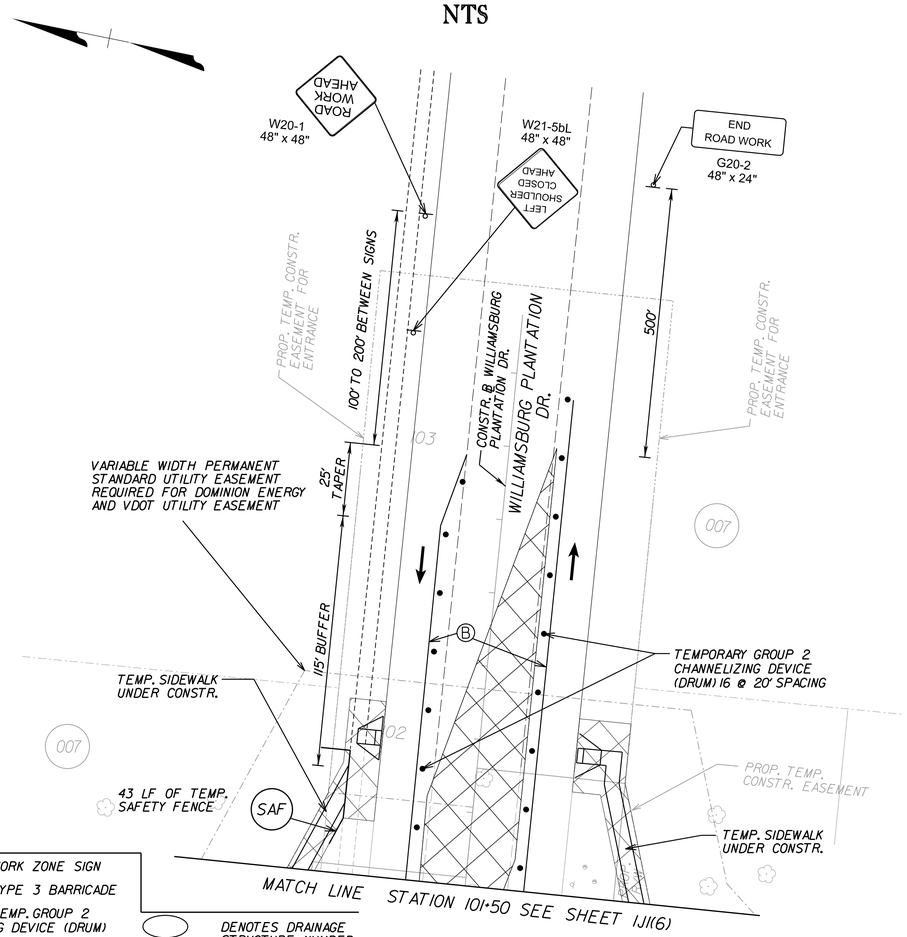
LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1

NTS



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- (SAF) DENOTES TEMPORARY SAFETY FENCE

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

SOC GENERAL NOTES 1H(1)

PROJECT	SHEET NO.
0612-047-631	1JI(6A)

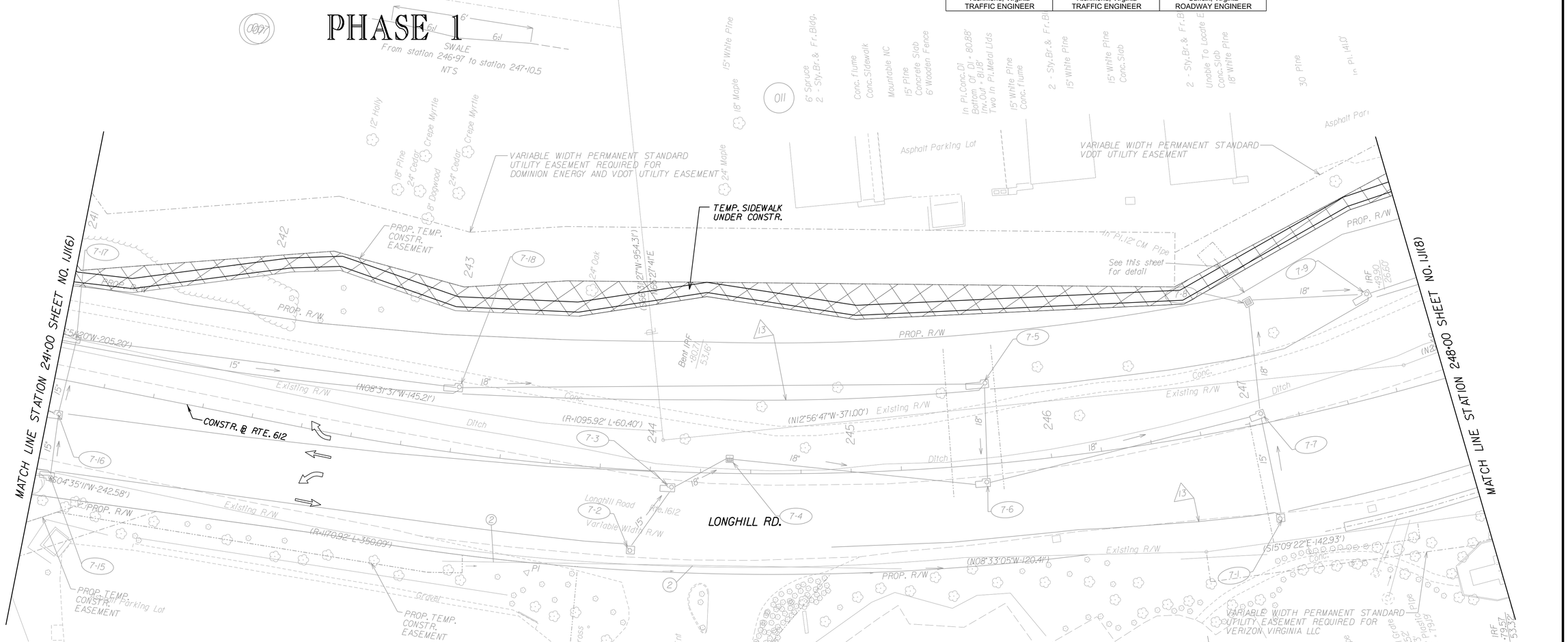
PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUGE (757) 925-3624 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1

COMMONWEALTH OF VIRGINIA JEFFREY SCOTT KUTTESCH Lic. No. 047612 PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA FEDERICO JORGE GONTARUK Lic. No. 047937 PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA KENNETH DAVID McKINNA Lic. No. 042625 PROFESSIONAL ENGINEER
Rummel, Klepper, & Kahl, LLP Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Suffolk, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1JI(7)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
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- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

SCALE
0 25' 50'

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

SOC GENERAL NOTES 1H(1)

PROJECT	SHEET NO.
0612-047-631	1JI(7)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY EDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

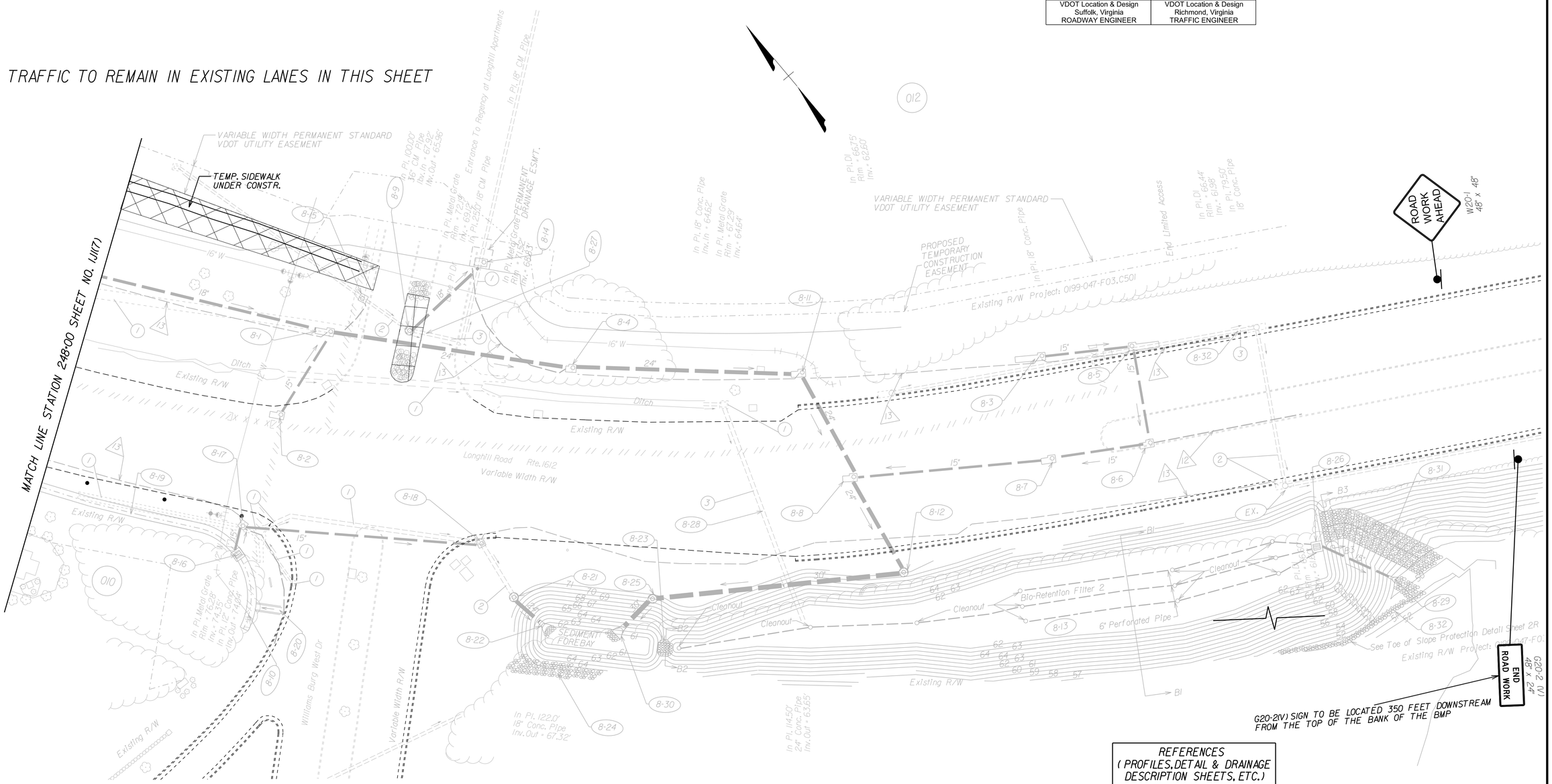
COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/5/2019	VA.	612	0612-0047-631, C-501	1J1(8)

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

TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE F, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE F, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE F, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE F, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE F, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE F, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE F, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE F, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile 8
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J1(8)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3270
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY N. DIANE GEOUGE (757) 925-3624
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1JIA(5)

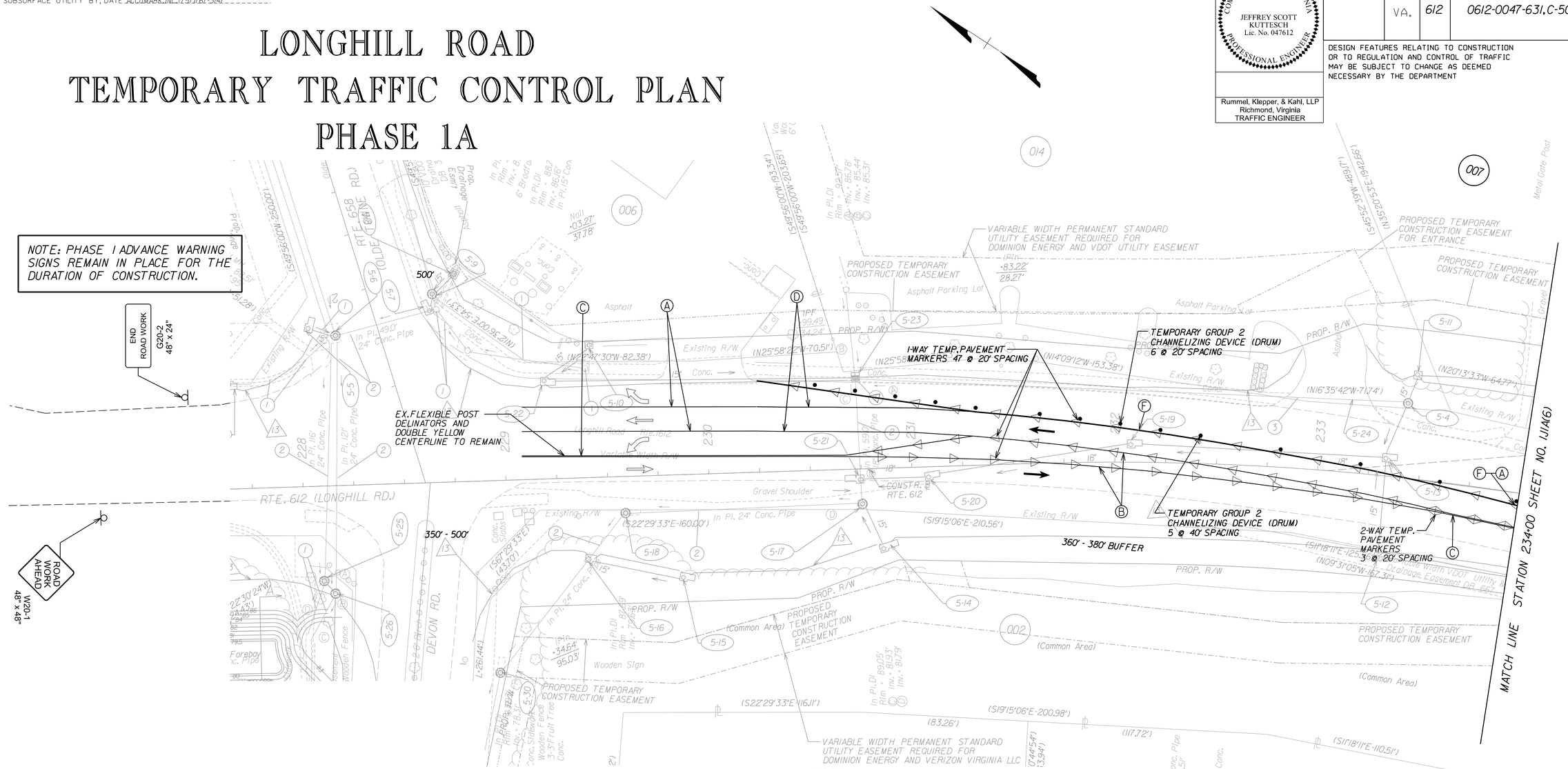
COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

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

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1A

NOTE: PHASE I ADVANCE WARNING SIGNS REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION.



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
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- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

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

SOC GENERAL NOTES 1H(1)

SCALE
0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1JIA(5)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1A

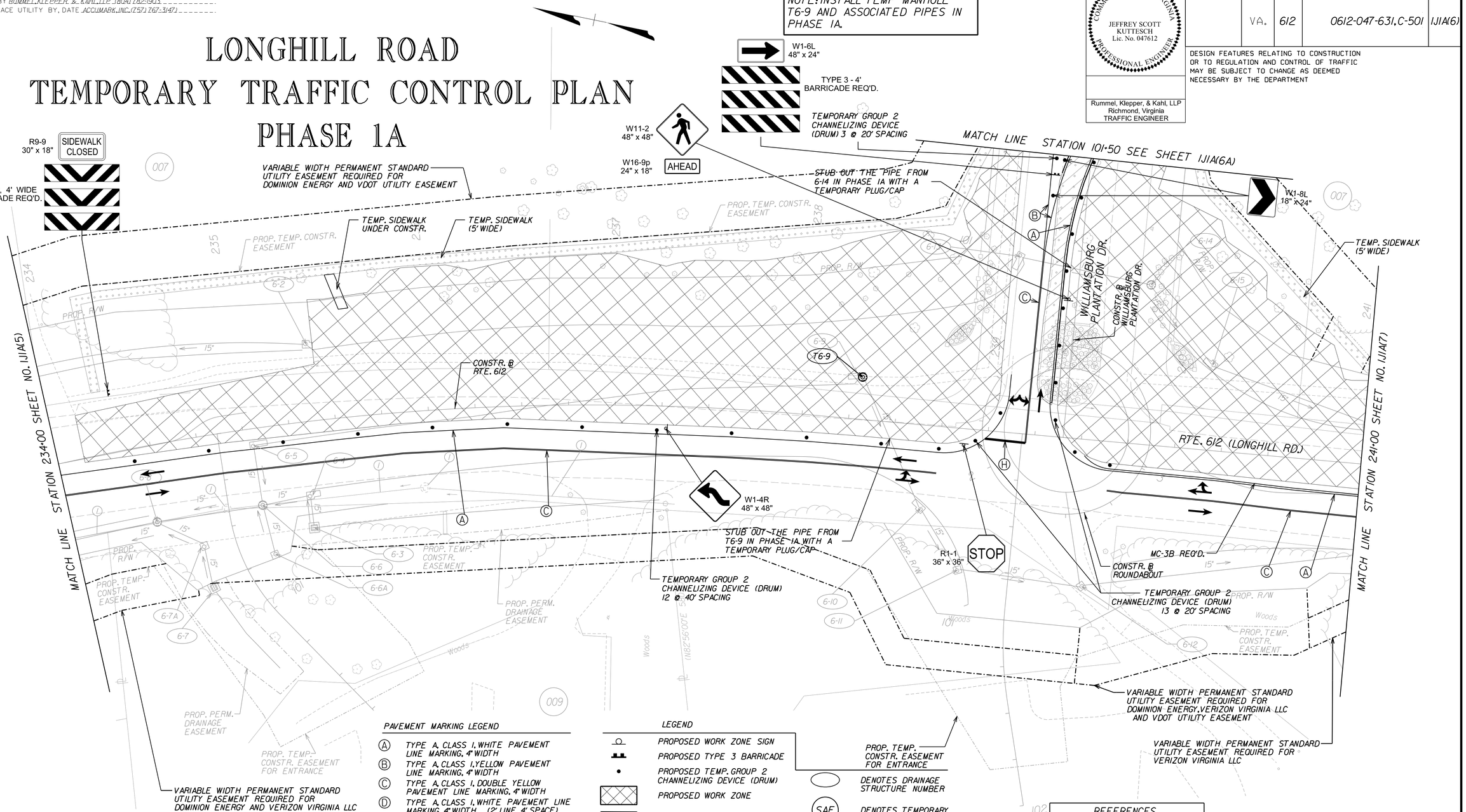
NOTE: INSTALL TEMP MANHOLE T6-9 AND ASSOCIATED PIPES IN PHASE 1A.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1J1A(6)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
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- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

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

SOC GENERAL NOTES	1H(1)
WILLIAMSBURG PLANTATION DRIVE PHASE 1A	1J1A(6A)

SCALE
0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J1A(6)

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD TEMPORARY TRAFFIC CONTROL PLAN

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

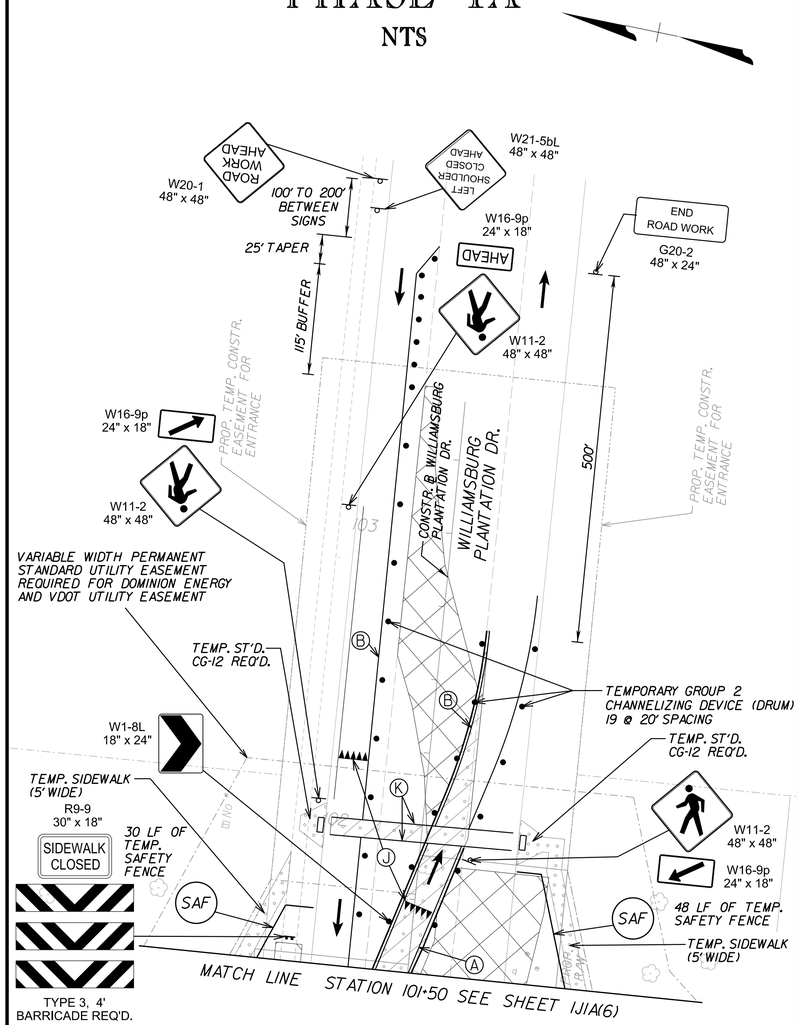
Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1JIA (6A)

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

PHASE 1A

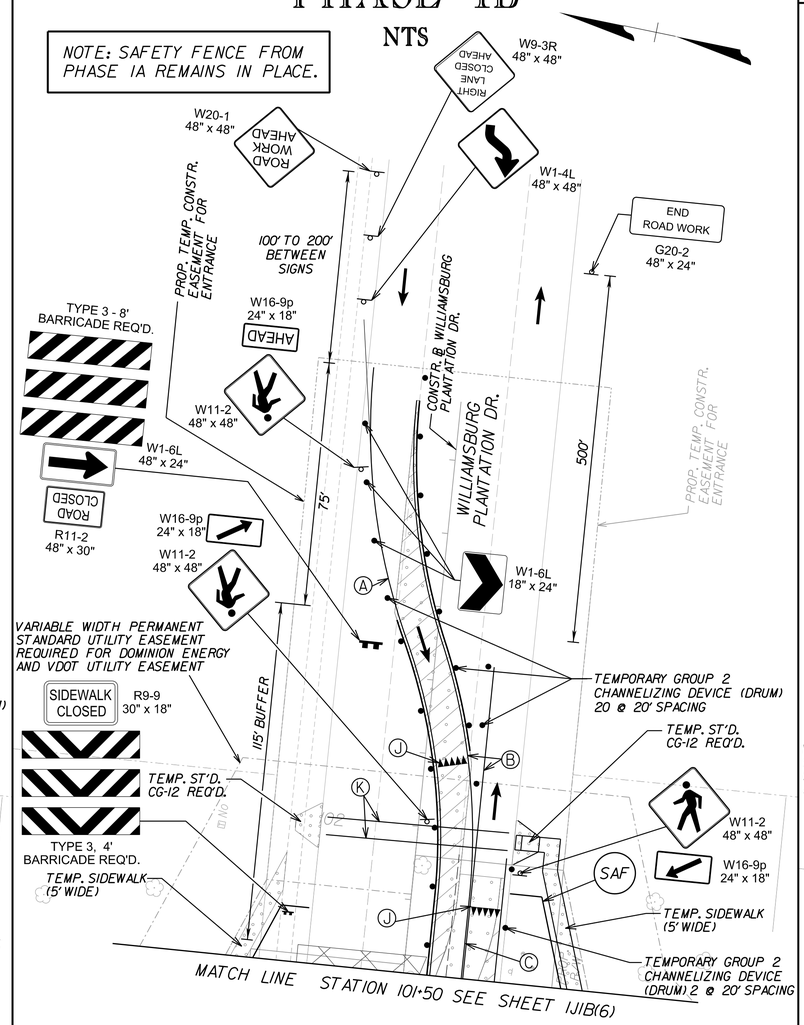
NTS



PHASE 1B

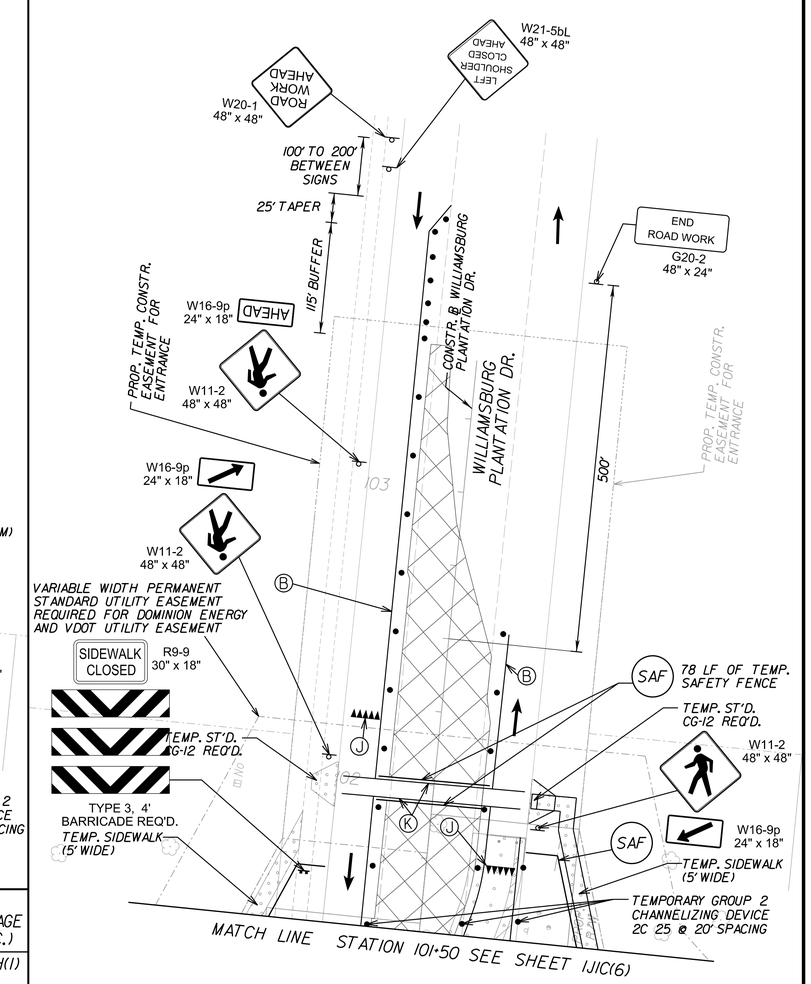
NTS

NOTE: SAFETY FENCE FROM PHASE 1A REMAINS IN PLACE.



PHASE 1C

NTS



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
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- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

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

SOC GENERAL NOTES 1H(1)

WILLIAMSBURG PLANTATION DRIVE

PHASE 1A	1JIA(6)
PHASE 1B	1JIB(6)
PHASE 1C	1JIC(6)

PROJECT	SHEET NO.
0612-047-631	1JIA(6A)

12/13/2018
10:15:45 PM

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Plotted By: amoy

PROJECT MANAGER KEN. MCKINNA, P.E. (757)956-3271
SURVEYED BY, DATE DANNY R.WILLIAMS (757) 925-2657
DESIGN BY N.DIANE GEOUGE (757) 925-3624 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

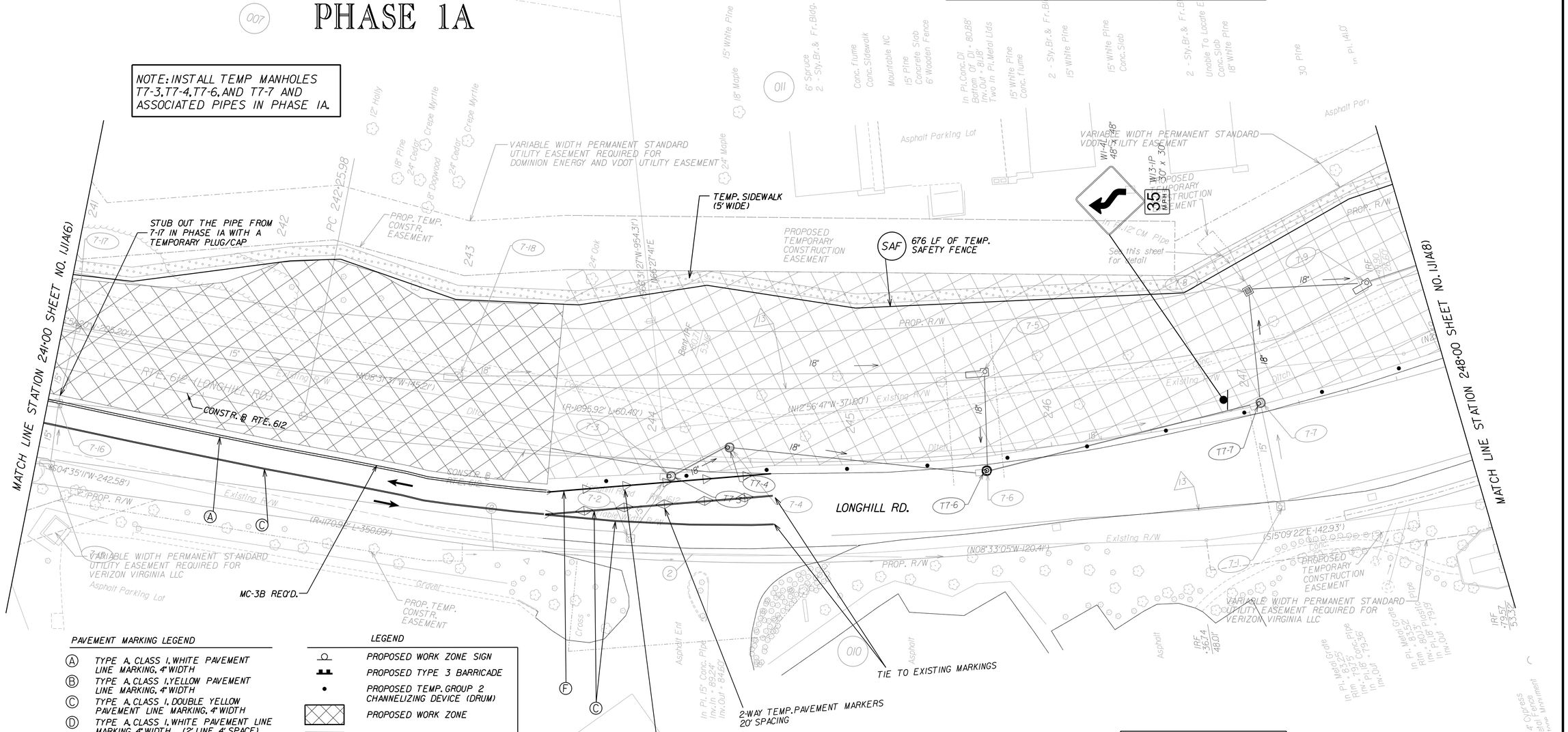
JEFFREY SCOTT KUTTESCH Lic. No. 047612	FEDERICO JORGE GONTARUK Lic. No. 047937	KENNETH DAVID McKINNA Lic. No. 042625
Rummel, Klepper, & Kahl, LLP Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Suffolk, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1JIA(7)

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

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1A

NOTE: INSTALL TEMP MANHOLES T7-3, T7-4, T7-6, AND T7-7 AND ASSOCIATED PIPES IN PHASE 1A.



PAVEMENT MARKING LEGEND

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LEGEND

- PROPOSED WORK ZONE SIGN
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- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

SCALE 0 25' 50'

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

SOC GENERAL NOTES 1H(1)

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.

PROJECT	SHEET NO.
0612-047-631	1JIA(7)

12/13/2018

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY EE DERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1A

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

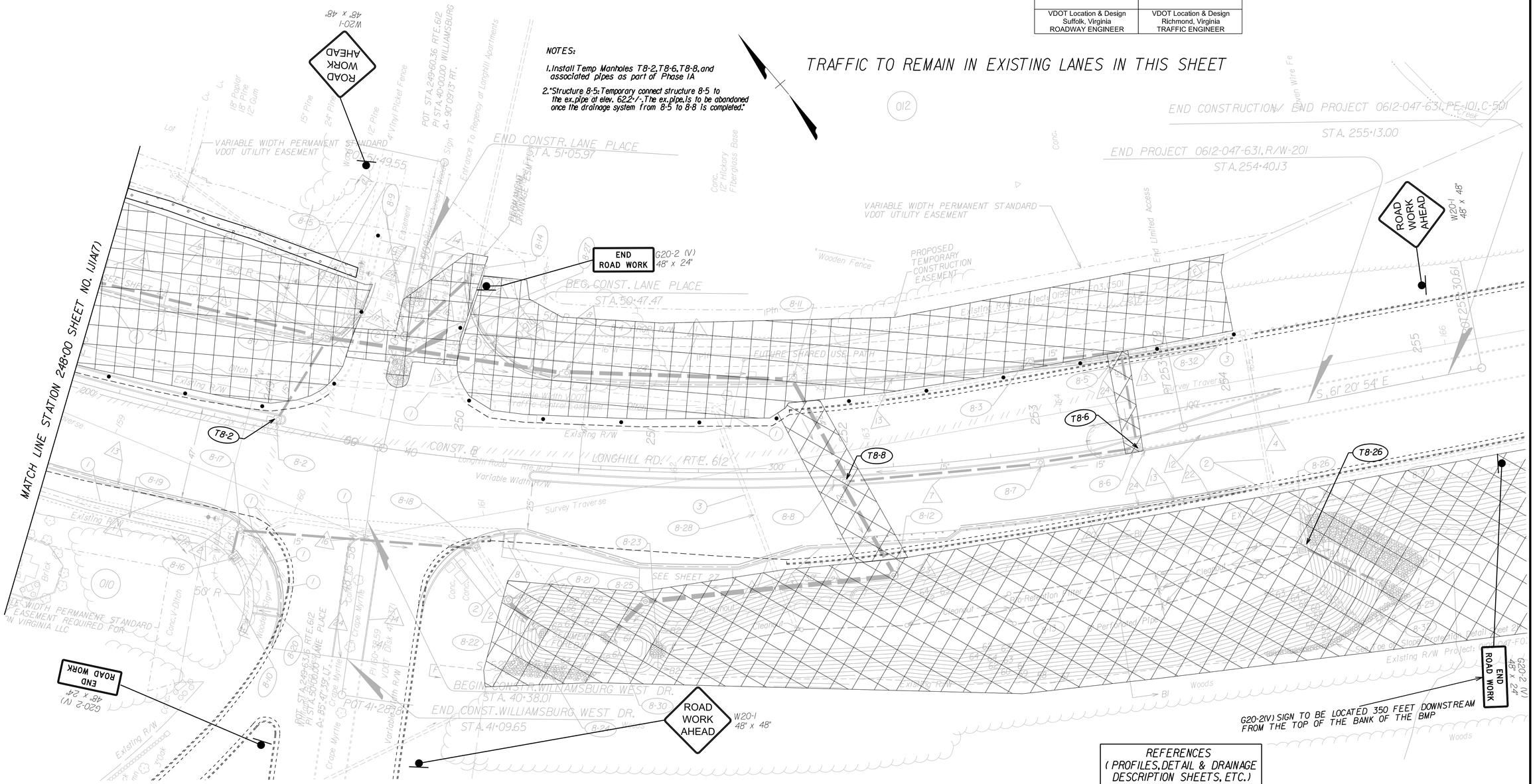
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/5/2019	VA.	612	0612-0047-631, C-501	1J1A(8)

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

NOTES:

1. Install Temp Manholes T8-2, T8-6, T8-8, and associated pipes as part of Phase 1A
2. "Structure 8-5: Temporary connect structure 8-5 to the ex. pipe at elev. 62.2+/-. The ex. pipe is to be abandoned once the drainage system from 8-5 to 8-8 is completed."

TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile	8
Drainage Descr.	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J1A(8)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY N. DIANE GEOUGE (757) 925-3624
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

NOTE: SAFETY FENCE FROM PHASE 1A REMAINS IN PLACE.

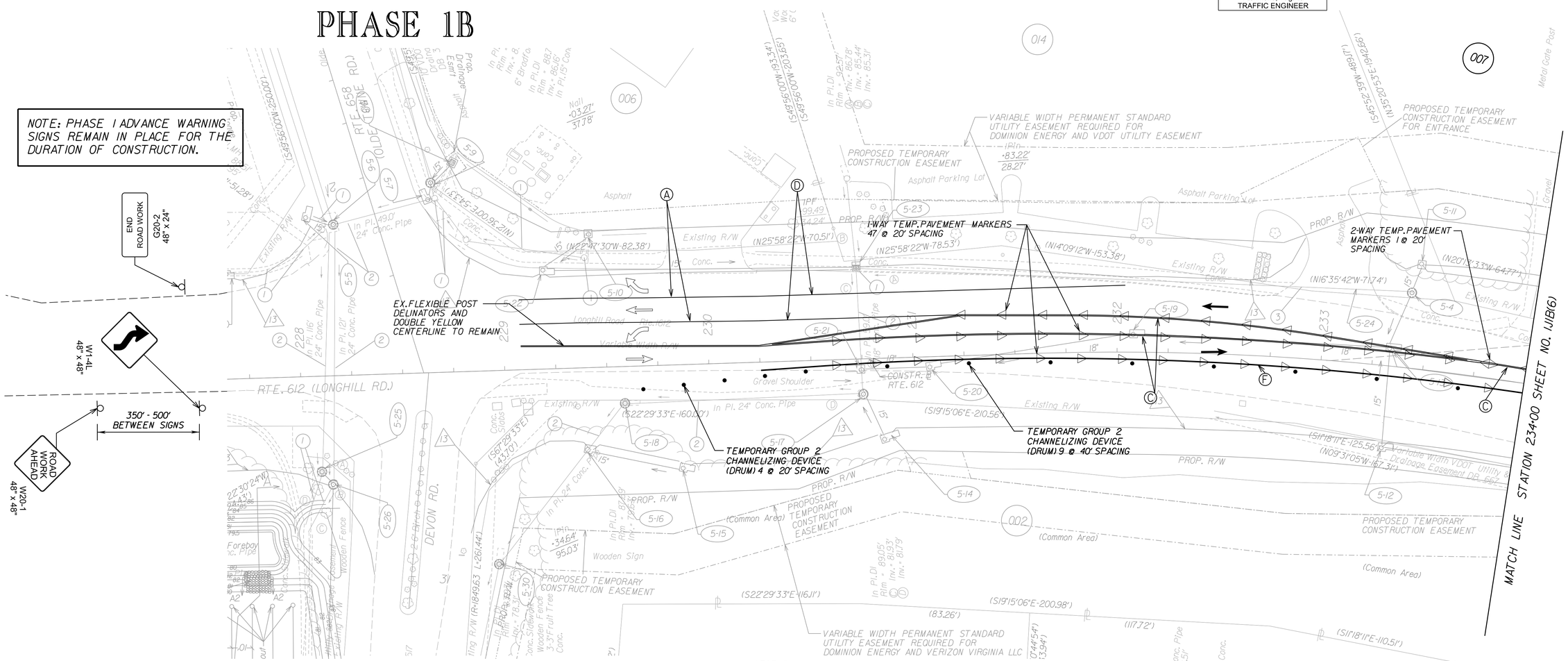
LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1B

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1JIB(5)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

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

SOC GENERAL NOTES 1H(1)

SCALE
0 25' 50'

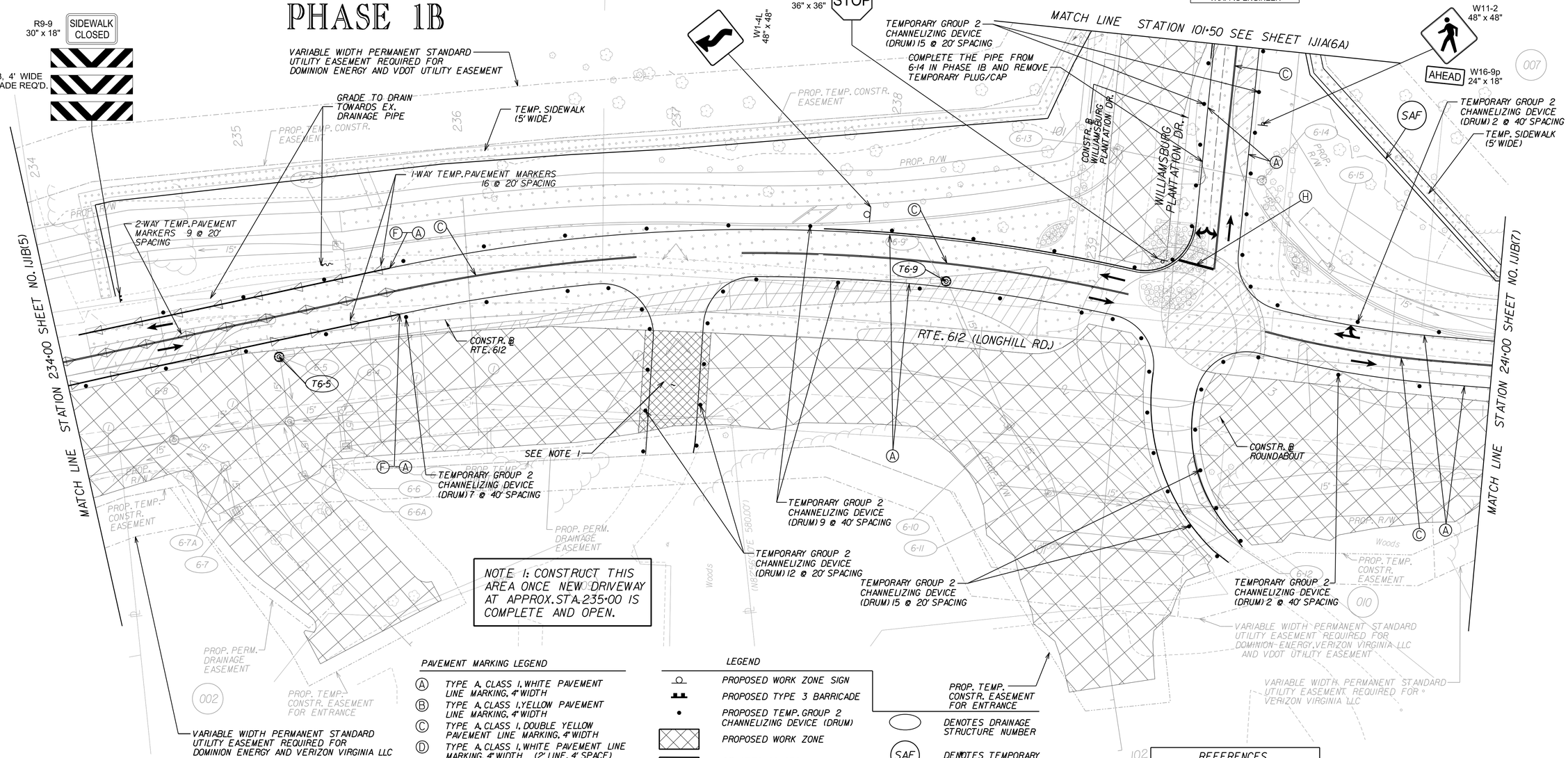
PROJECT	SHEET NO.
0612-047-631	1JIB(5)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1B

NOTE: SAFETY FENCE FROM PHASE IA REMAINS IN PLACE.

NOTE: TEMP MANHOLE T6-9 TO REMAIN. INSTALL TEMP MANHOLE T6-5 AND ASSOCIATED PIPES IN PHASE IB.



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

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

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IJIB(6)

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)
WILLIAMSBURG PLANTATION DRIVE PHASE IB IJIA(6A)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJIB(6)

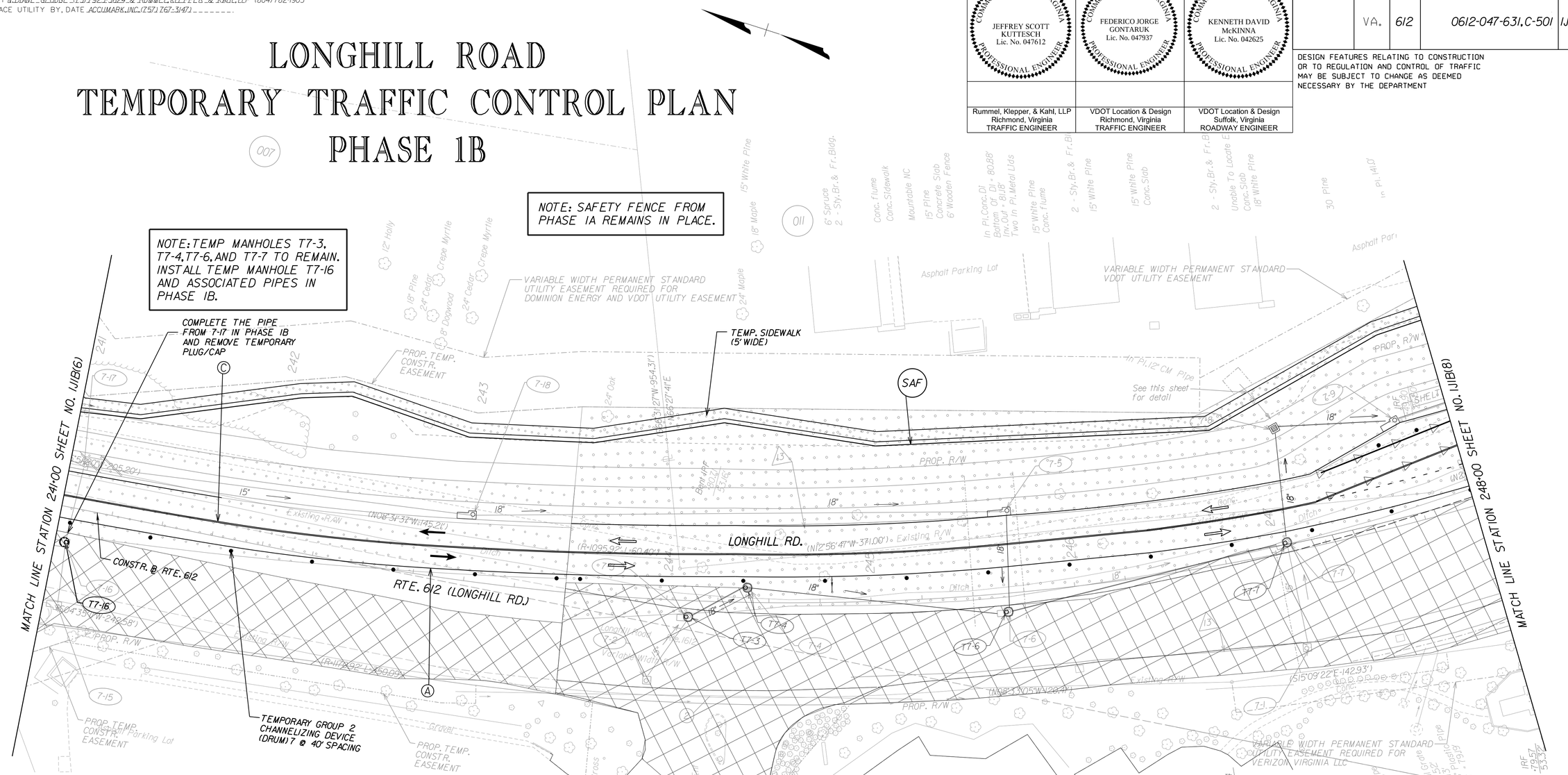
PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY N. DIANE GEOUGE (757) 925-3624 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA JEFFREY SCOTT KUTTESCH Lic. No. 047612 PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA FEDERICO JORGE GONTARUK Lic. No. 047937 PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA KENNETH DAVID McKINNA Lic. No. 042625 PROFESSIONAL ENGINEER
Rummel, Klepper, & Kahl, LLP Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Suffolk, Virginia ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IJIB(7)

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

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1B



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

SCALE
0 25' 50'

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)

PROJECT	SHEET NO.
0612-047-631	IJIB(7)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

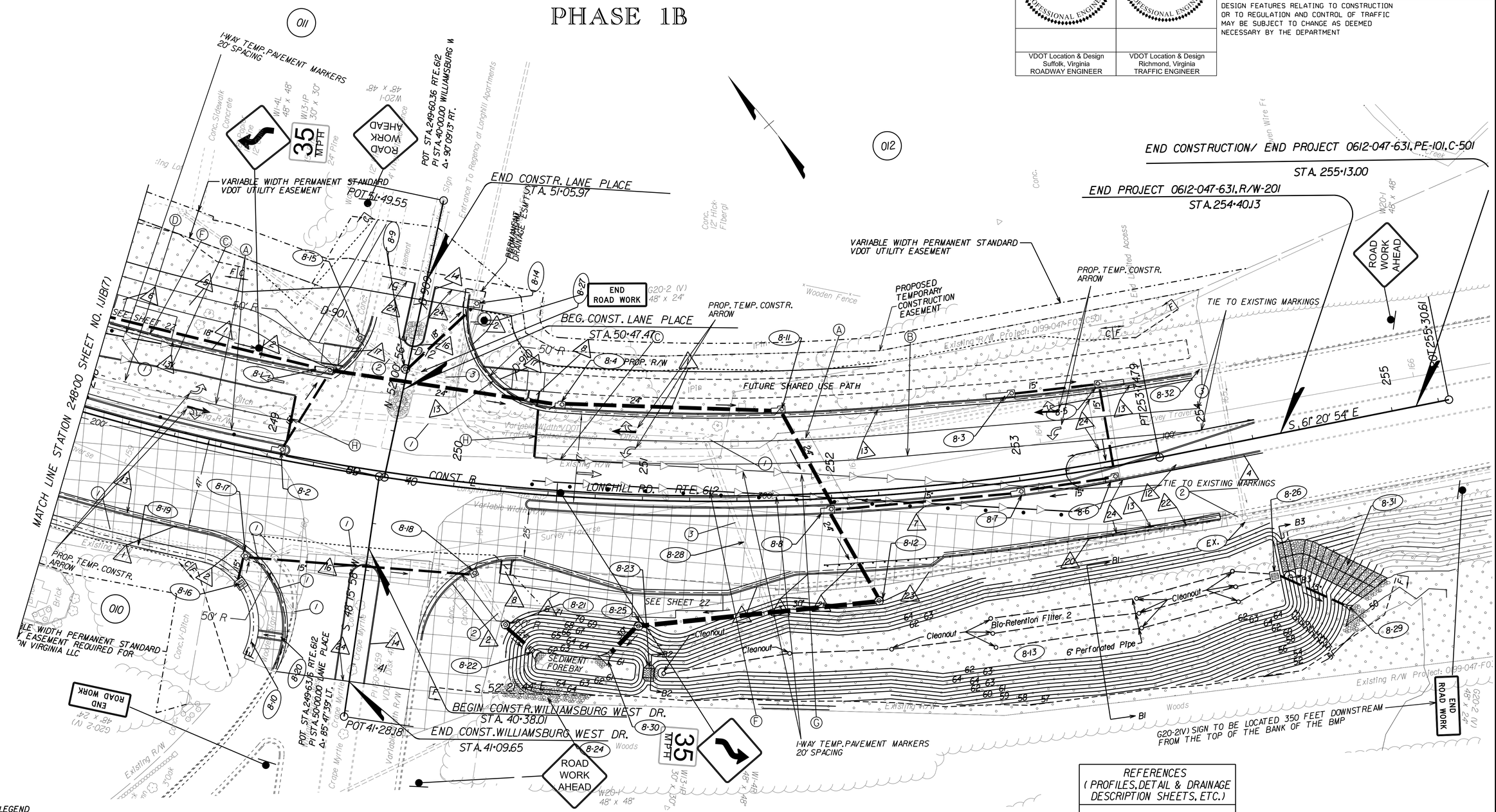
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1B

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA — Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — FEDERICO JORGE GONTARUK — Lic. No. 047937 — PROFESSIONAL ENGINEER
VDOT Location & Design, Richmond, Virginia — TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1JIB(8)

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



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile 8
Drainage Descr.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1JIB(8)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3270
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY N. DIANE GEOUGE (757) 925-3624
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

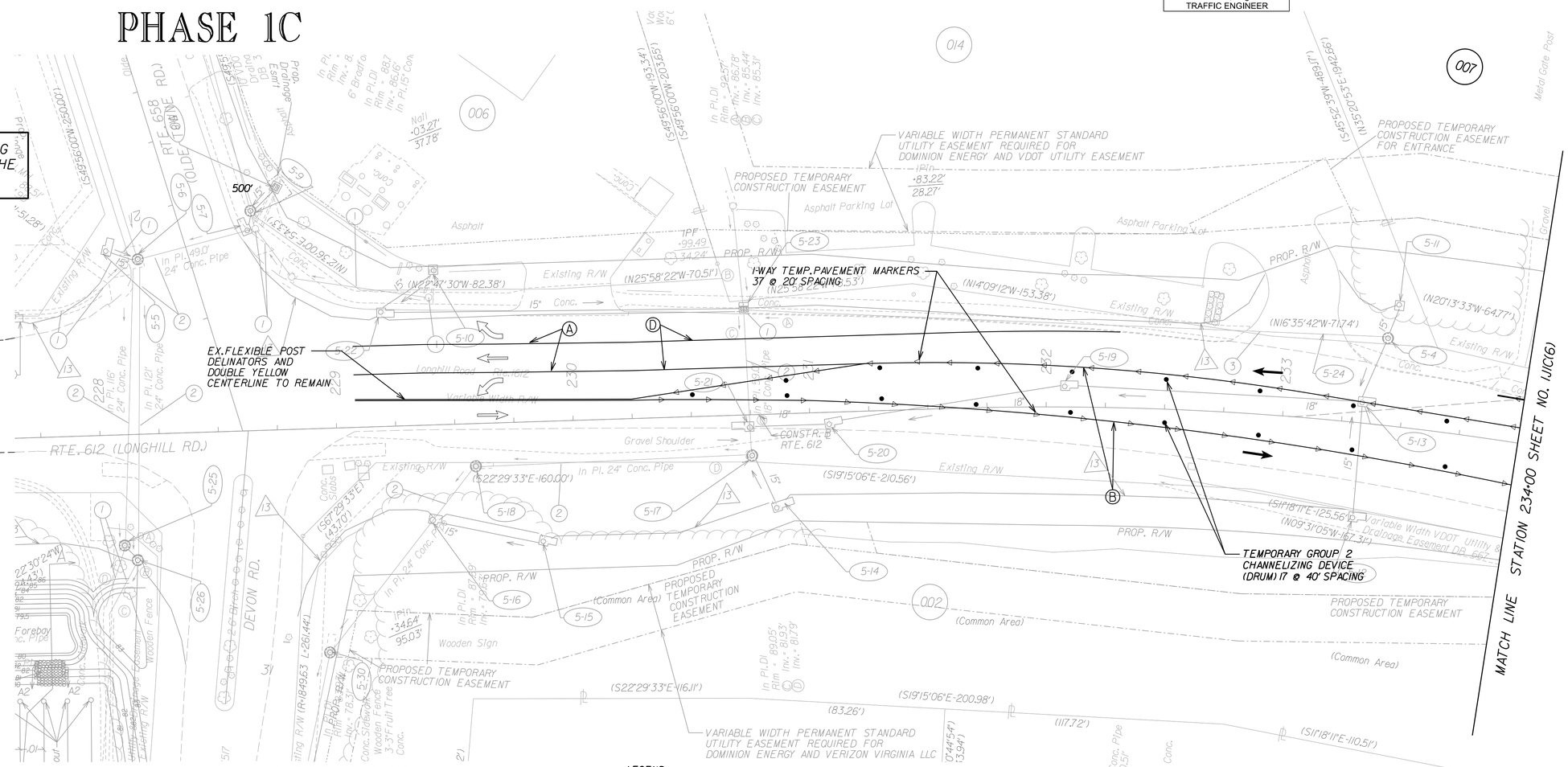
LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1C

NOTE: SAFETY FENCE FROM PHASE 1A REMAINS IN PLACE.

NOTE: PHASE 1 ADVANCE WARNING SIGNS REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION.

END ROAD WORK
G20-2
48" x 24"

ROAD WORK AHEAD
W20-1
48" x 48"



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1JIC(5)

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

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

SOC GENERAL NOTES 1H(1)

SCALE
0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1JIC(5)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3270
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1C

NOTE: SAFETY FENCE FROM PHASE 1A REMAINS IN PLACE.

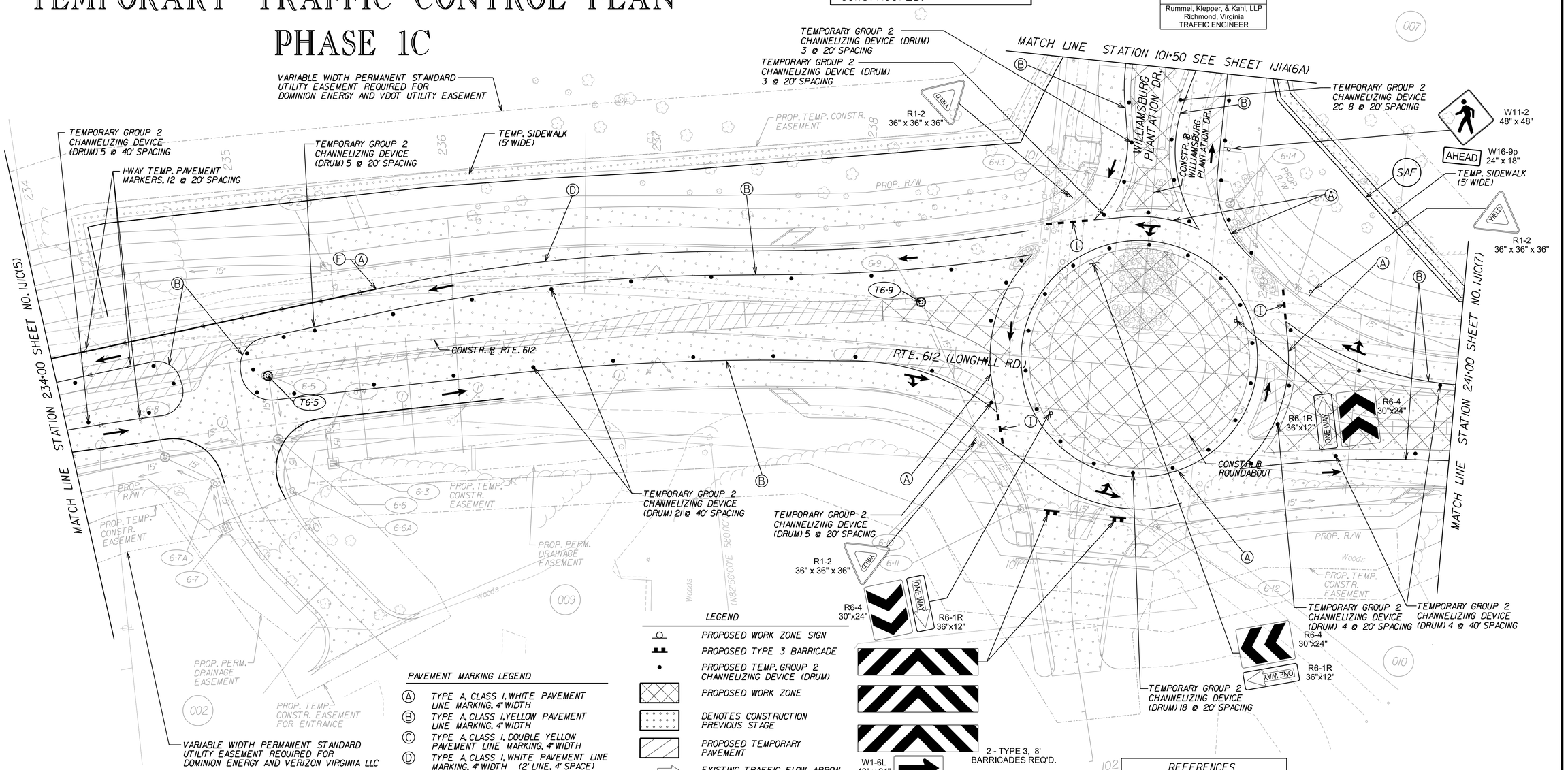
NOTE: TEMP MANHOLE T6-5 TO REMAIN. TEMP MANHOLES T6-9 TO BE REMOVED AND PERMANENT STRUCTURE 6-9 CONSTRUCTED.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1JIC(6)

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



LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
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- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

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

SOC GENERAL NOTES	1H(1)
WILLIAMSBURG PLANTATION DRIVE PHASE 1C	1JIA(6A)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1JIC(6)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY N. DIANE GEOUGE (757) 925-3624 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA — JEFFREY SCOTT KUTTESCH Lic. No. 047612 — PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA — FEDERICO JORGE GONTARUK Lic. No. 047937 — PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA Lic. No. 042625 — PROFESSIONAL ENGINEER
Rummel, Klepper, & Kahl, LLP Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Richmond, Virginia TRAFFIC ENGINEER	VDOT Location & Design Suffolk, Virginia ROADWAY ENGINEER

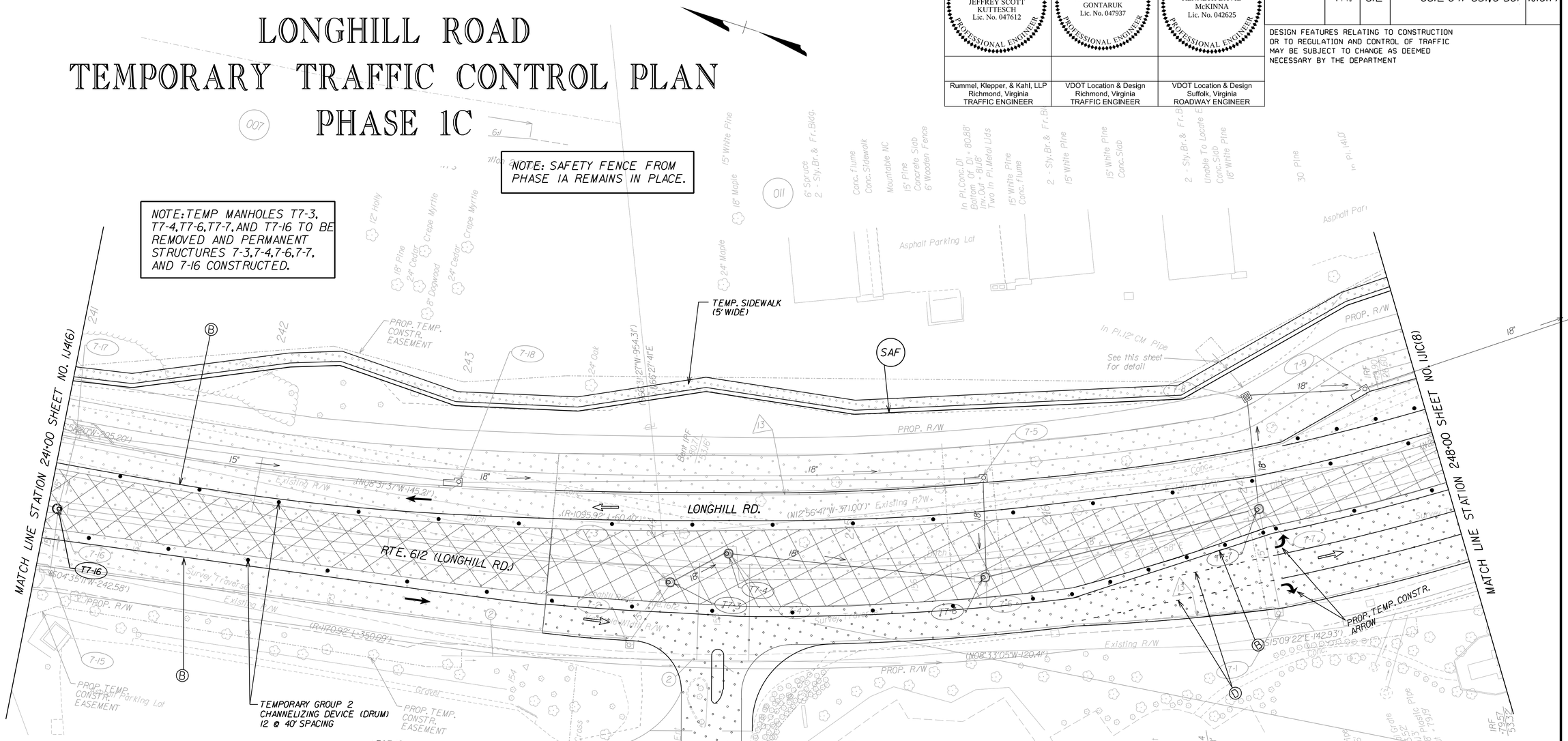
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	1JIC(7)

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

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1C

NOTE: SAFETY FENCE FROM PHASE IA REMAINS IN PLACE.

NOTE: TEMP MANHOLES T7-3, T7-4, T7-6, T7-7, AND T7-16 TO BE REMOVED AND PERMANENT STRUCTURES 7-3, 7-4, 7-6, 7-7, AND 7-16 CONSTRUCTED.



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

SCALE 0 25' 50'

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES 1H(1)

PROJECT	SHEET NO.
0612-047-631	1JIC(7)

PROJECT MANAGER KEN. MCKINNA, PE. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE. (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 1C

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER
VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J1C(8)

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

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	8
Drainage Descr.	

LEGEND

- (ellipse) Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- Ⓐ TYPE A WHITE PAVEMENT LINE MARKING, 4" WIDTH
- Ⓑ TYPE A YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- Ⓒ TYPE A DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- Ⓓ TYPE A WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- Ⓔ TYPE A WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- Ⓕ TYPE A WHITE PAVEMENT LINE MARKING, 8" WIDTH
- Ⓖ TYPE A YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- Ⓗ TYPE A WHITE PAVEMENT LINE MARKING, 24" WIDTH
- ① Denotes existing structure & pipe to be removed.
- ② Denotes existing structure & pipe to be cleaned out.

SCALE 0 25' 50'

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

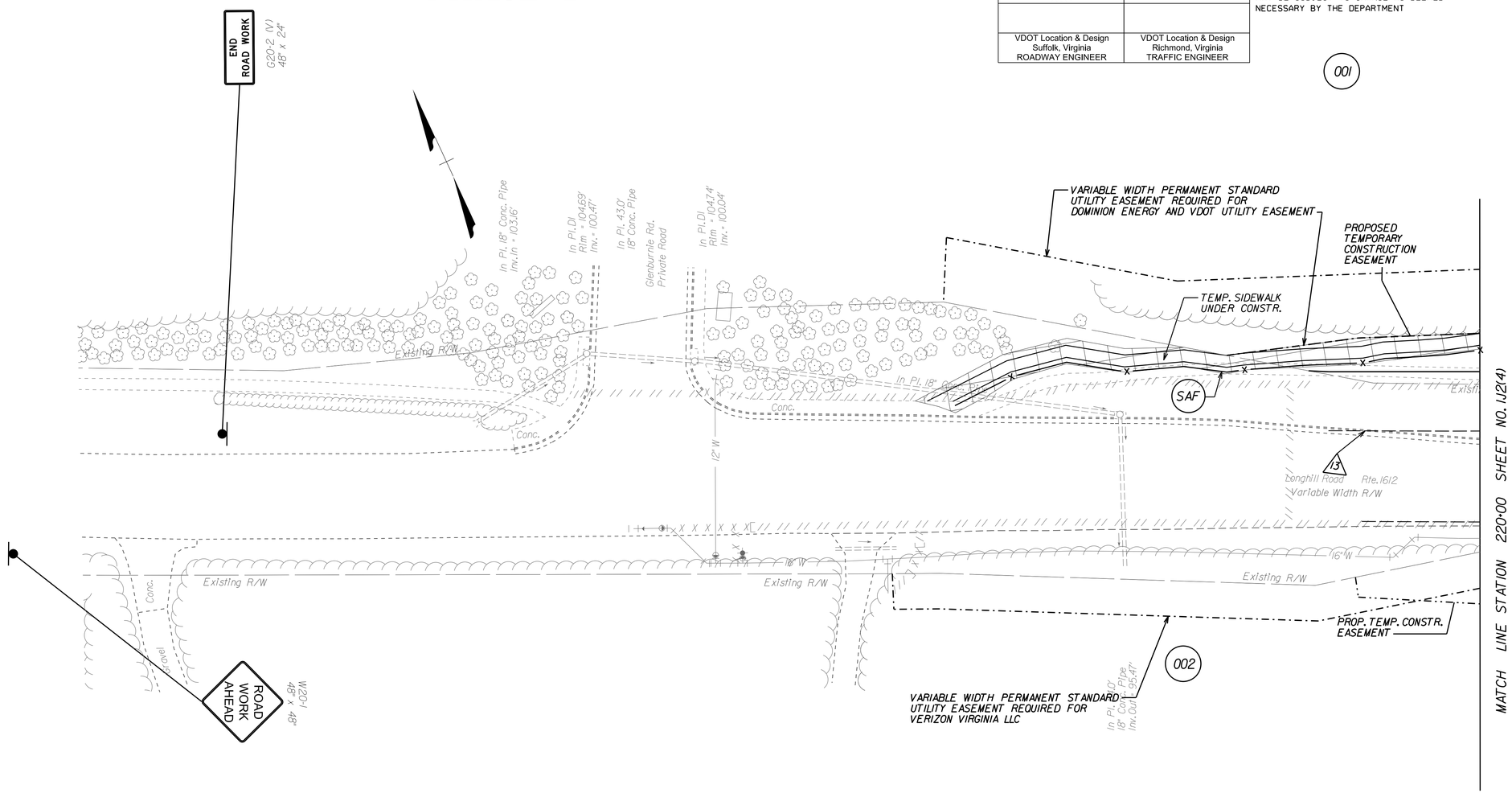
COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2(3)

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
PHASE 2



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- SAF — Denotes Temporary Safety Fence

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	3
Drainage Descr.	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2(3)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

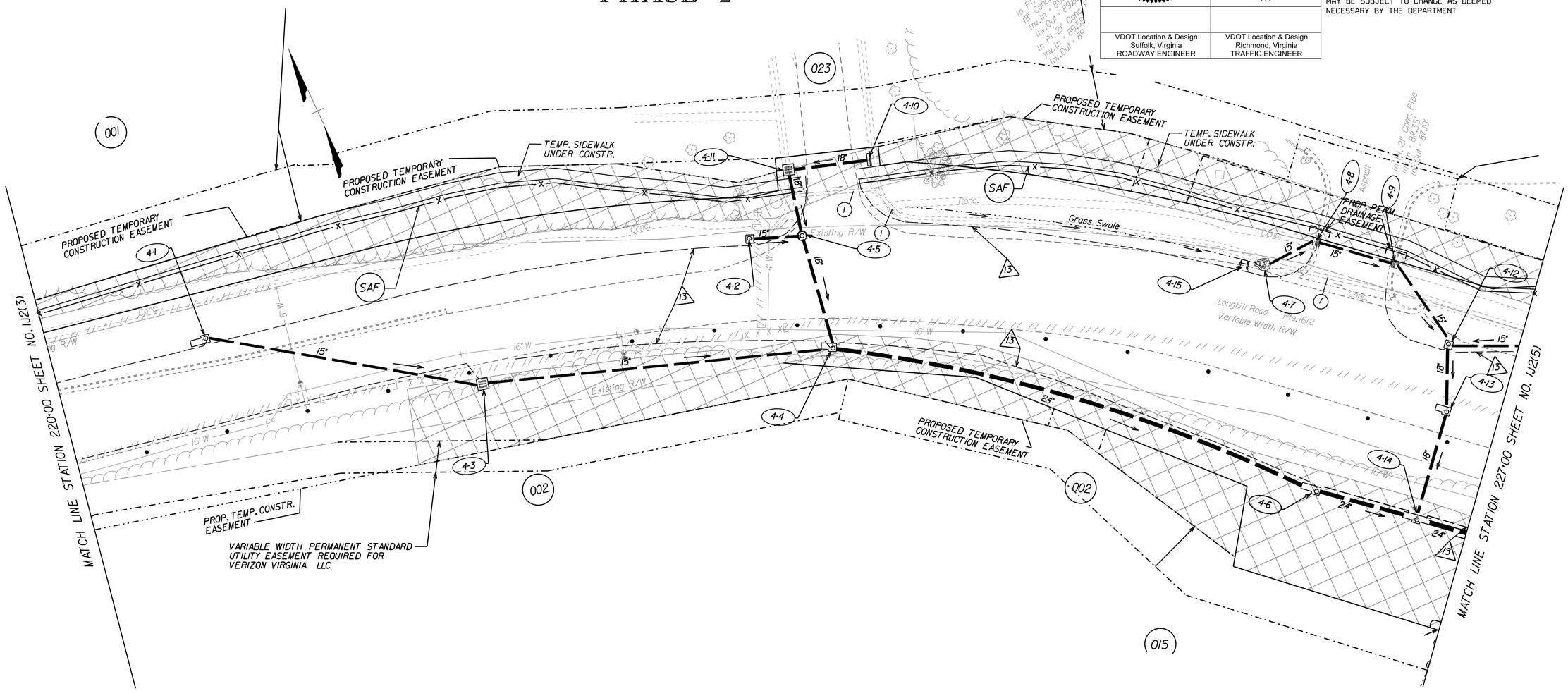
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER
VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	IJ2(4)

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



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- SAF — Denotes Temporary Safety Fence

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

Mainline Profile	4
Drainage Descr.	

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJ2(4)

8/31/2018
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Plotted By: WAP04107$

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

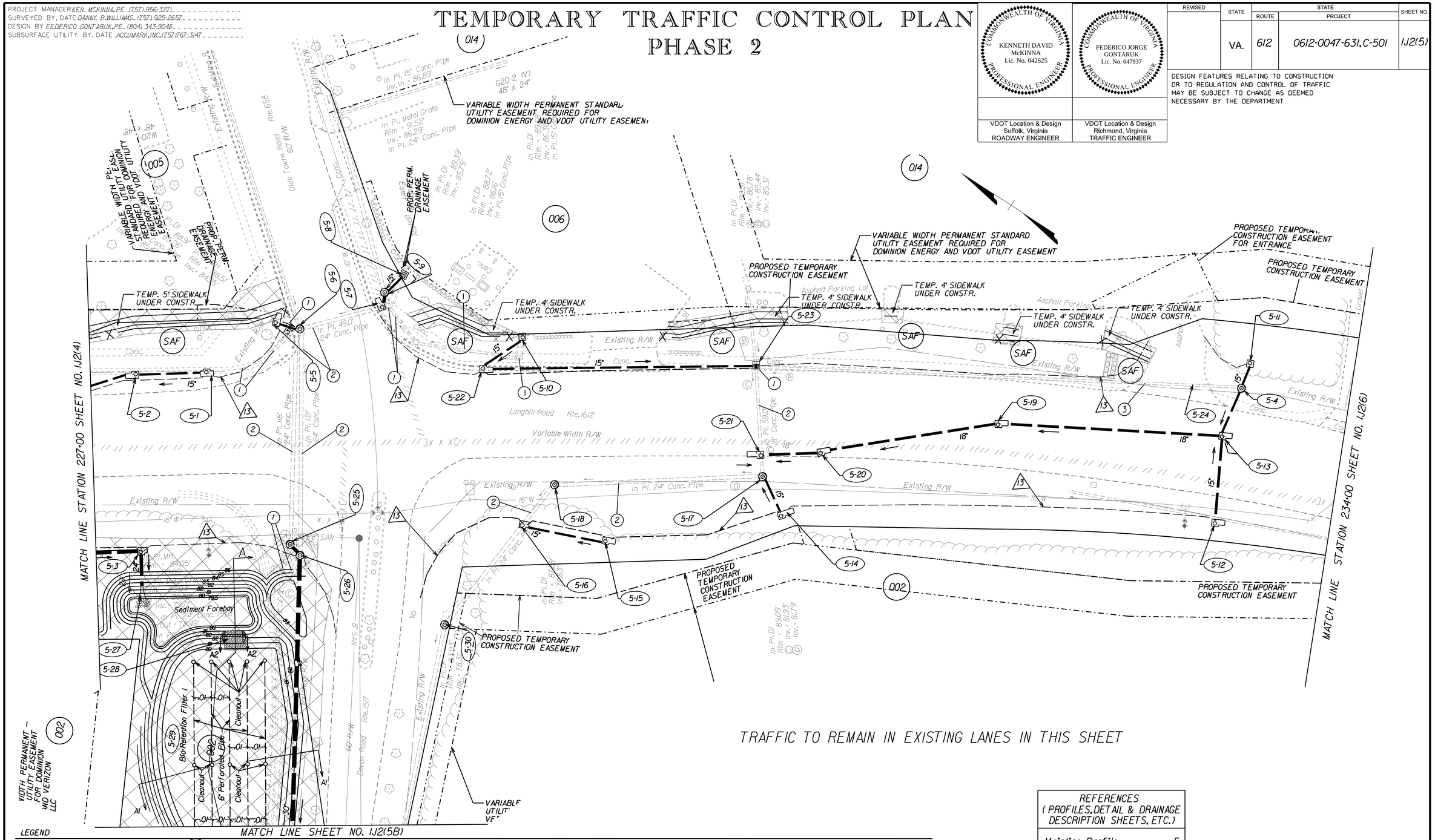
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2(5)

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



LEGEND

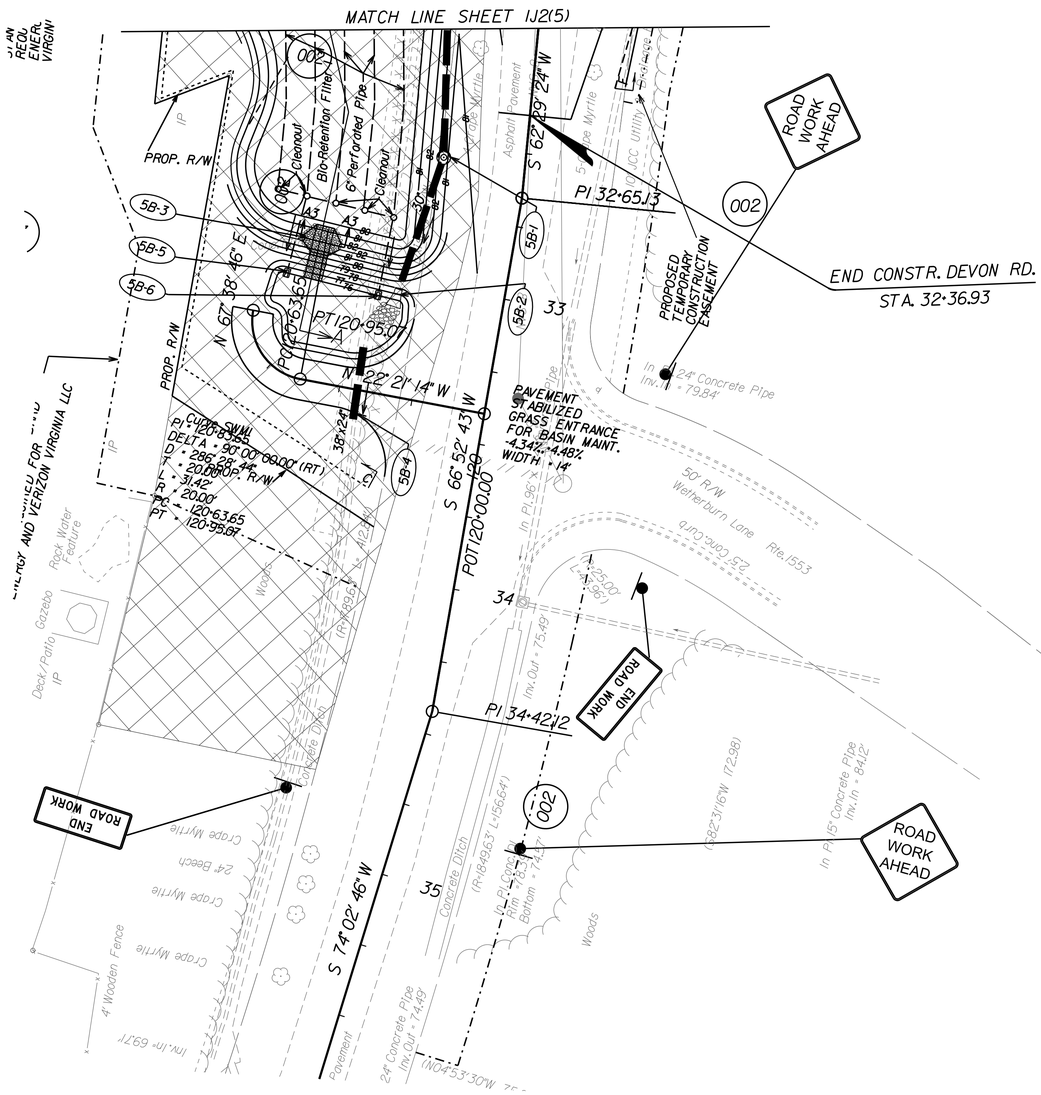
- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- SAF Denotes Temporary Safety Fence

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	5
Drainage Descr.	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2(5)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2(5b)

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

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- SAF — Denotes Temporary Safety Fence

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

Mainline Profile 5
Drainage Descr.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J2(5b)

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS, (757) 925-2657
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2

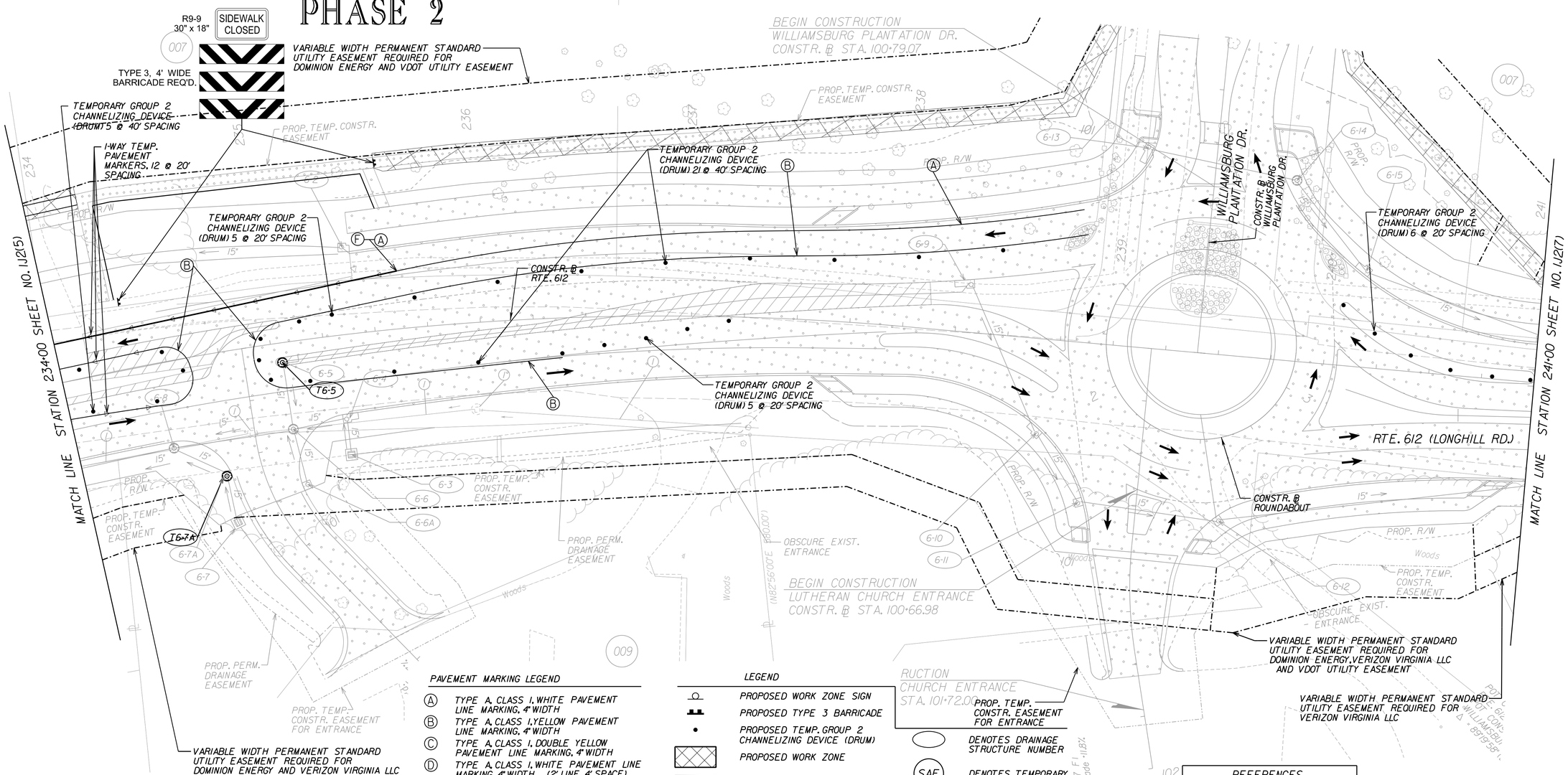
NOTE: TEMP MANHOLES T6-5 AND T6-7A TO REMAIN.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IJ2(6)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJ2(6)

PROJECT MANAGER KEN MCKINNA,PE (757)956-3271
SURVEYED BY, DATE DANNY R.WILLIAMS (757)925-2657
DESIGN BY N.DIANE GEQUGE (757) 925-3624 & RUMMEL,KLEPPER & KAHL,LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK,INC.(757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASES 2, 2A, 2B, AND 2C

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

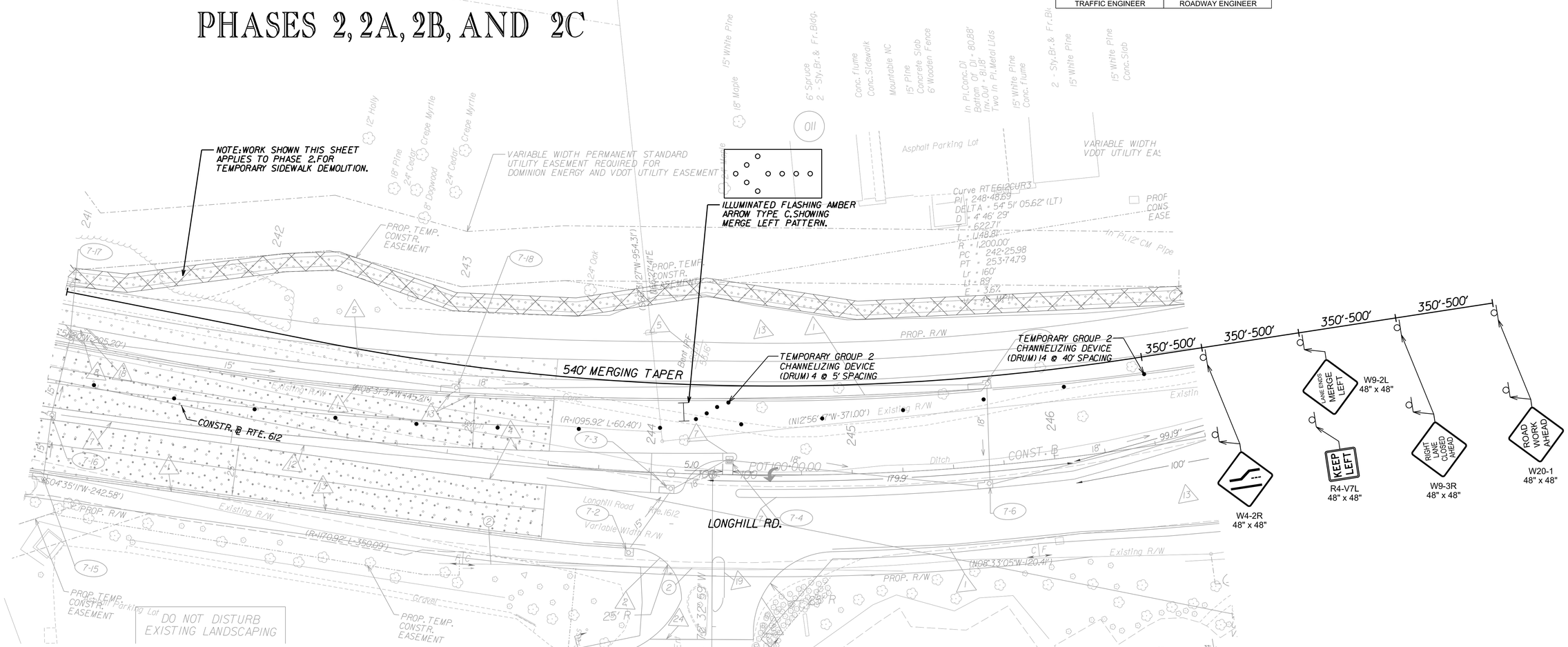
Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	IJ2(7)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

SCALE
0 25' 50'

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)

PROJECT	SHEET NO.
0612-047-631	IJ2(7)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2A

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — FEDERICO JORGE GONTARUK Lic. No. 047937 — PROFESSIONAL ENGINEER
VDOT Location & Design, Richmond, Virginia — TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2A(3)

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

001

Utility Owners

Water and Sewer:
James City Service Authority
101-E Mounts Bay Road
Williamsburg, VA 23185
Robert Carswell 757-592-1799

Hampton Roads Sewer District
1436 Air Rail Avenue
Virginia Beach, VA 23455
757.460.2261

Power:

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell

Telecomm:

Cox Communications
Vicki Kincaid
HFC Designer III/EAST REGION Design Team
757-222-6579 / 757-369-6261

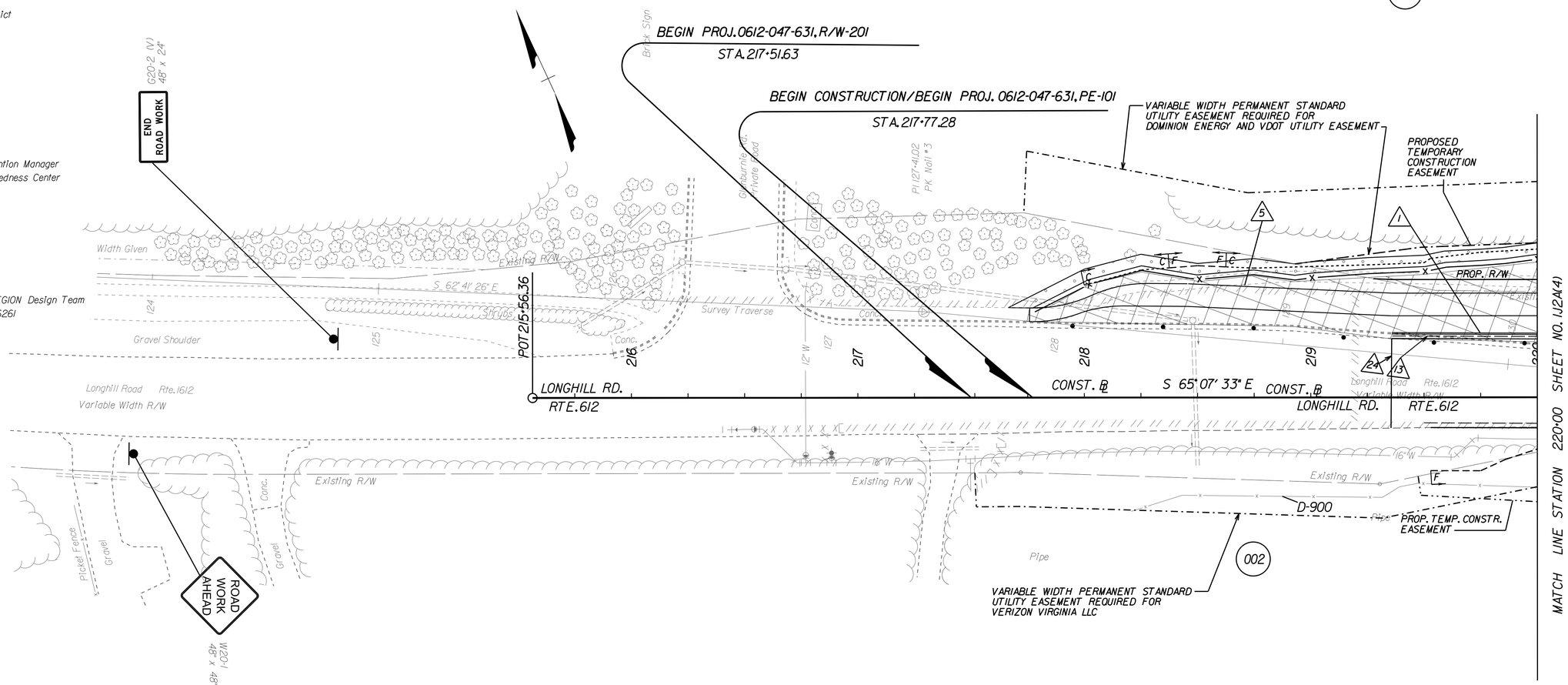
Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

James City Information
Mike Bowler
757-890-0143
Metro Fiber
Ray Dehart
757-876-9637

Gas:

Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757-455-2000

Kevin D. Starke
Senior Engineering Technician
Engineering Services
757-616-7529 office
757-449-0825 mobile
757-616-7517 fax



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	3
Drainage Descr.	

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2A(3)

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Plotted By: WAP04107$

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

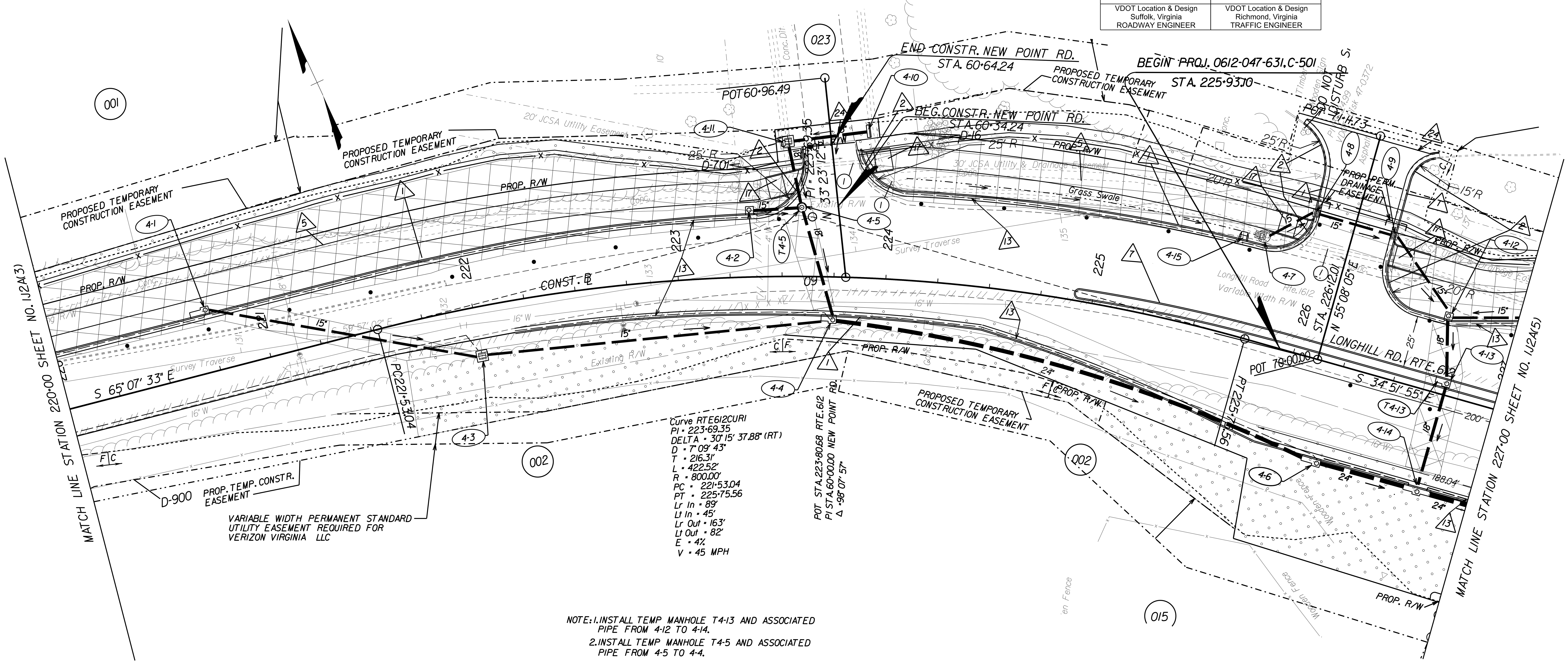
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2A

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA, Lic. No. 042625 — PROFESSIONAL ENGINEER
COMMONWEALTH OF VIRGINIA — FEDERICO JORGE GONTARUK, Lic. No. 047937 — PROFESSIONAL ENGINEER

VDOT Location & Design, Suffolk, Virginia, ROADWAY ENGINEER
VDOT Location & Design, Richmond, Virginia, TRAFFIC ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2A(4)

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



NOTE: 1. INSTALL TEMP MANHOLE T4-13 AND ASSOCIATED PIPE FROM 4-12 TO 4-14.
2. INSTALL TEMP MANHOLE T4-5 AND ASSOCIATED PIPE FROM 4-5 TO 4-4.

TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4
Drainage Descr.	

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A WHITE PAVEMENT LINE MARKING, 4" WIDTH
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- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J2A(4)

8/31/2018
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Plotted By: WAP04107$

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2A

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

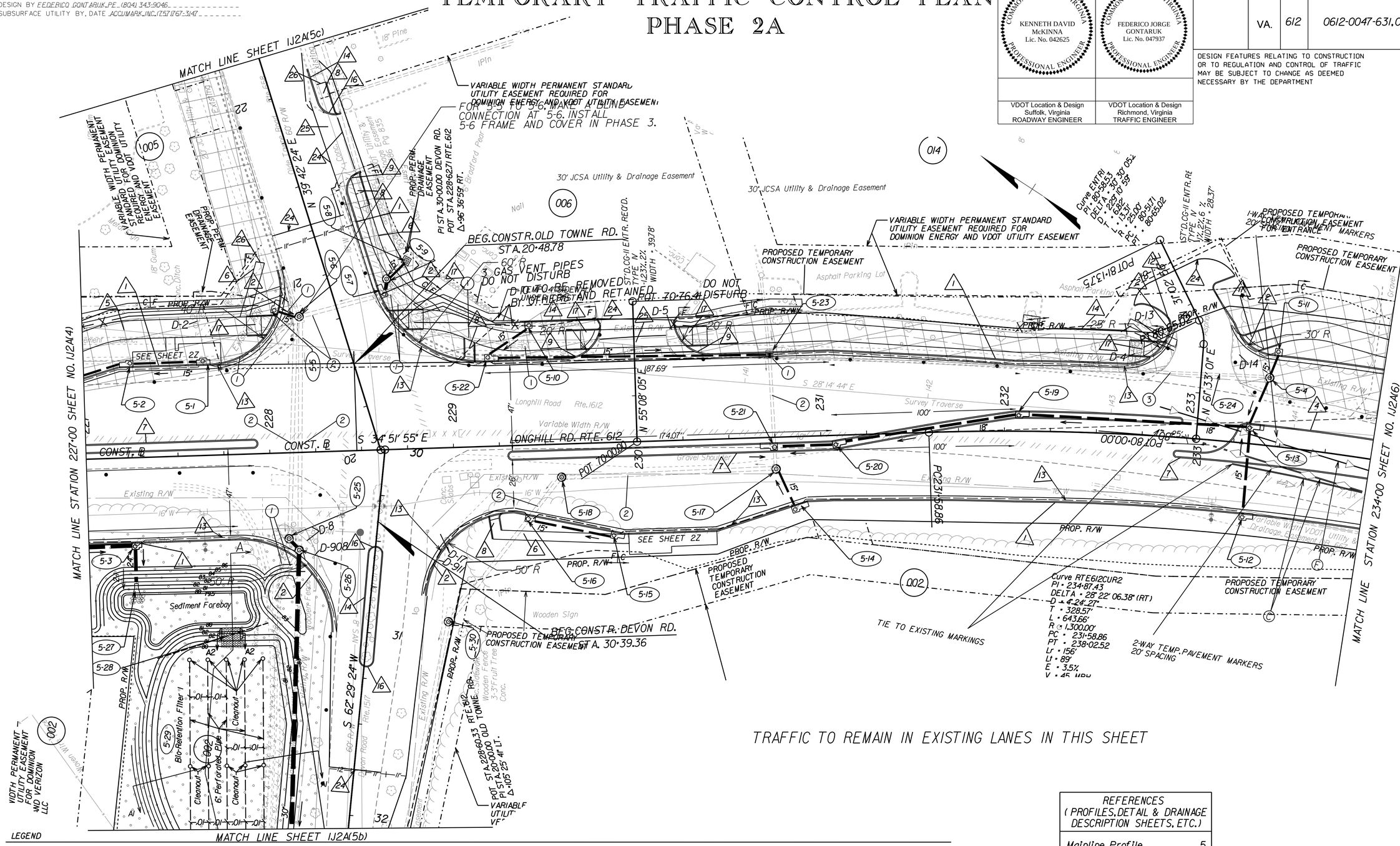
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2A(5)

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



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile 5
Drainage Descr.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J2A(5)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2A

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

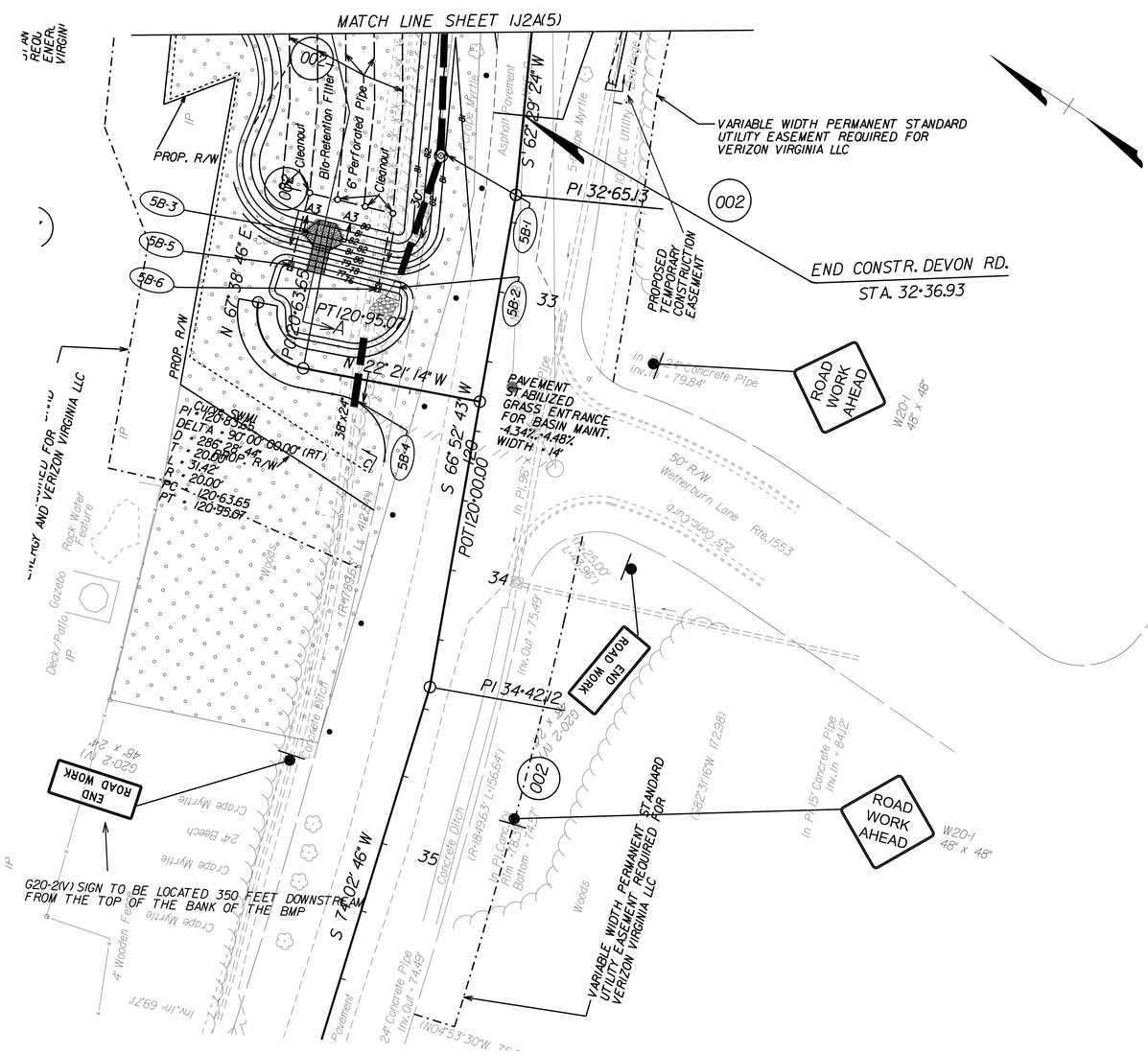
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2A(5b)

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



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
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- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
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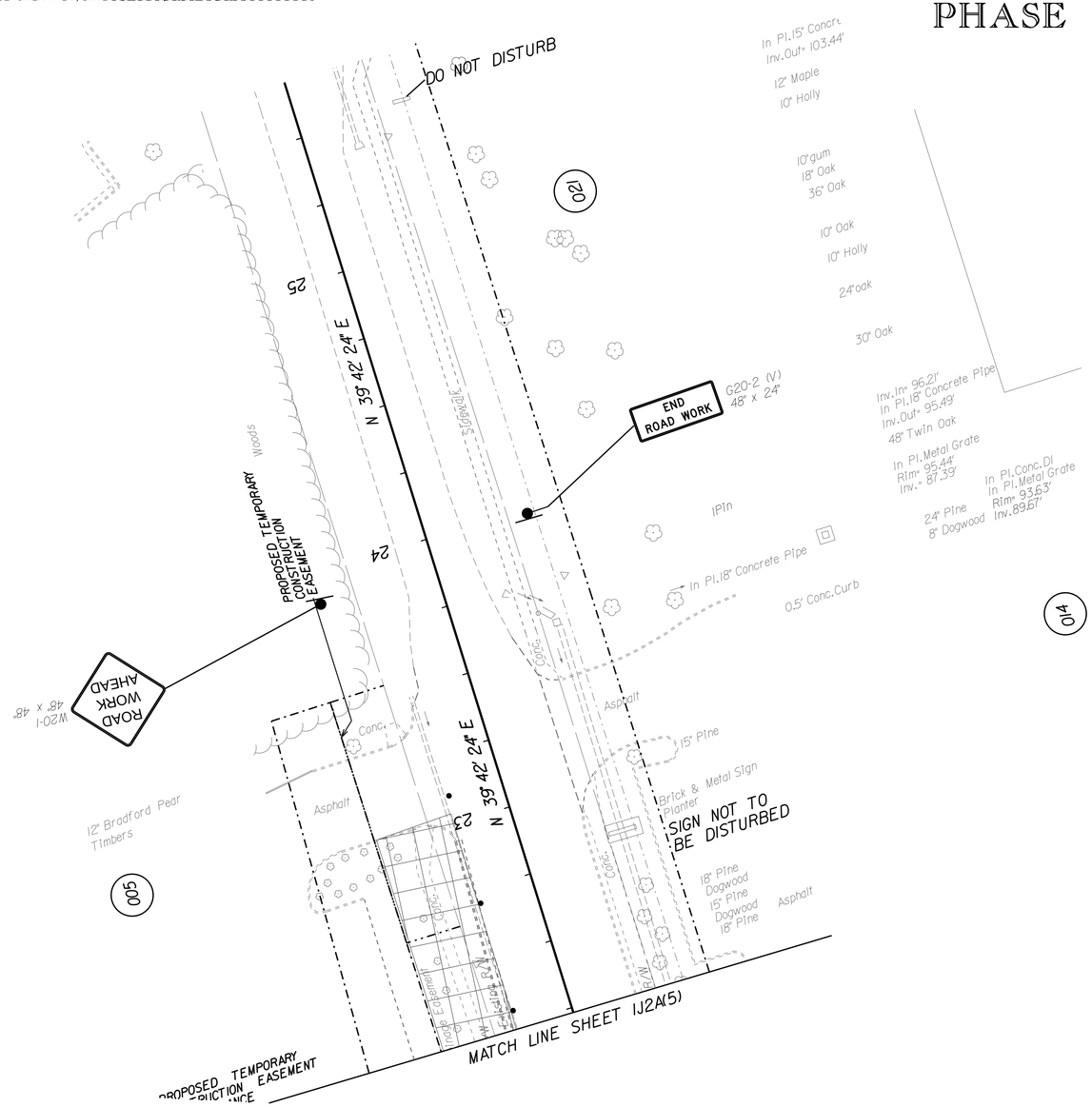
REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile 5
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2A(5b)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2A



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2A(5c)

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

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
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- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
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REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile 5
Drainage Descr.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J2A(5c)

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2A

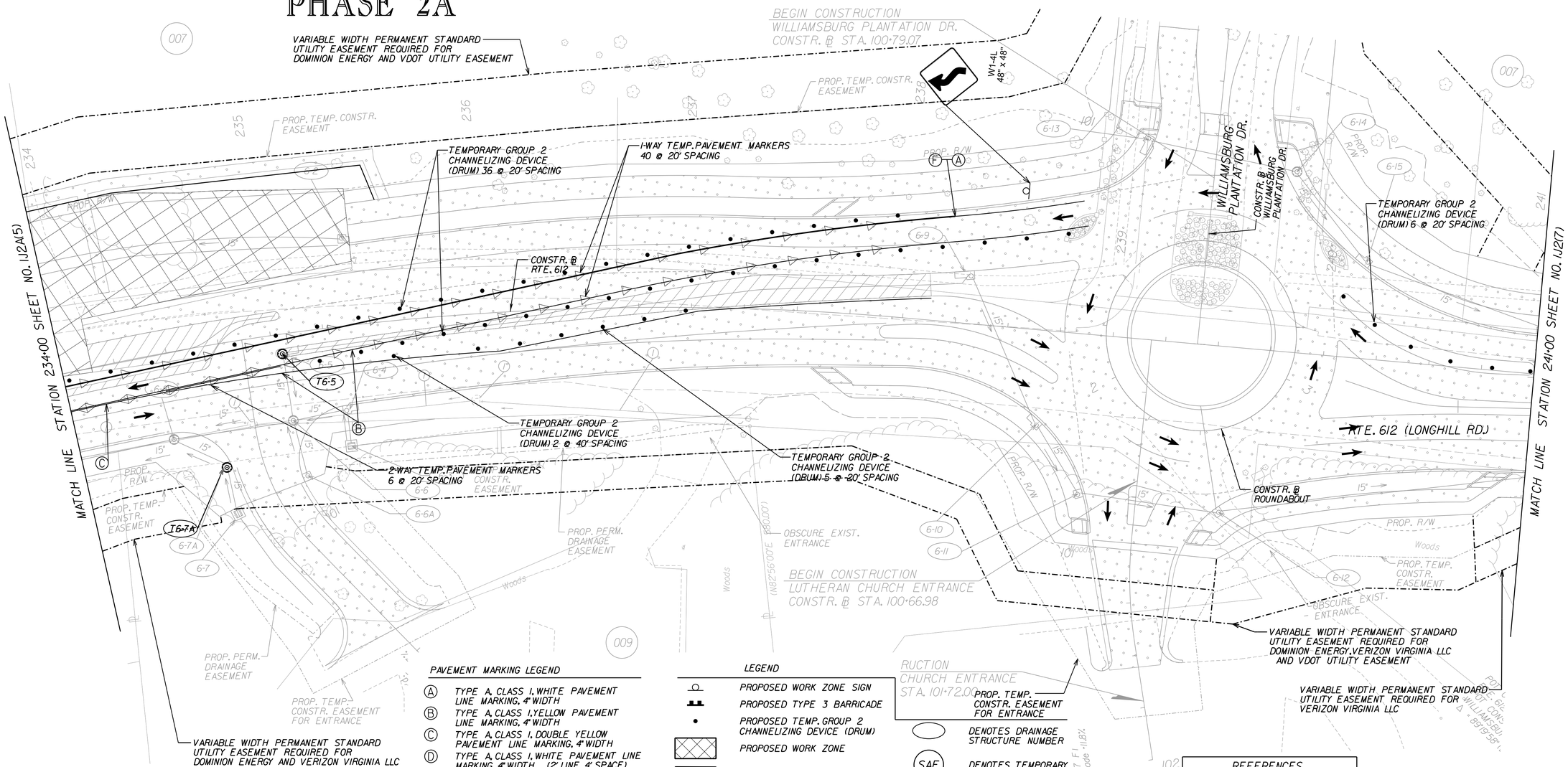
NOTE: TEMP MANHOLES T6-5 AND T6-7A TO REMAIN.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IJ2A(6)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJ2A(6)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2B

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2B(3)

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

Utility Owners

Water and Sewer:
James City Service Authority
101-E Mounts Bay Road
Williamsburg, VA 23185
Robert Carswell 757-592-1799

Hampton Roads Sewer District
1436 Air Rail Avenue
Virginia Beach, VA 23455
757.460.2261

Power:

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell

Telecomm:

Cox Communications
Vicki Kincaid
HFC Designer III/EAST REGION Design Team
757-222-6579 / 757-369-6261

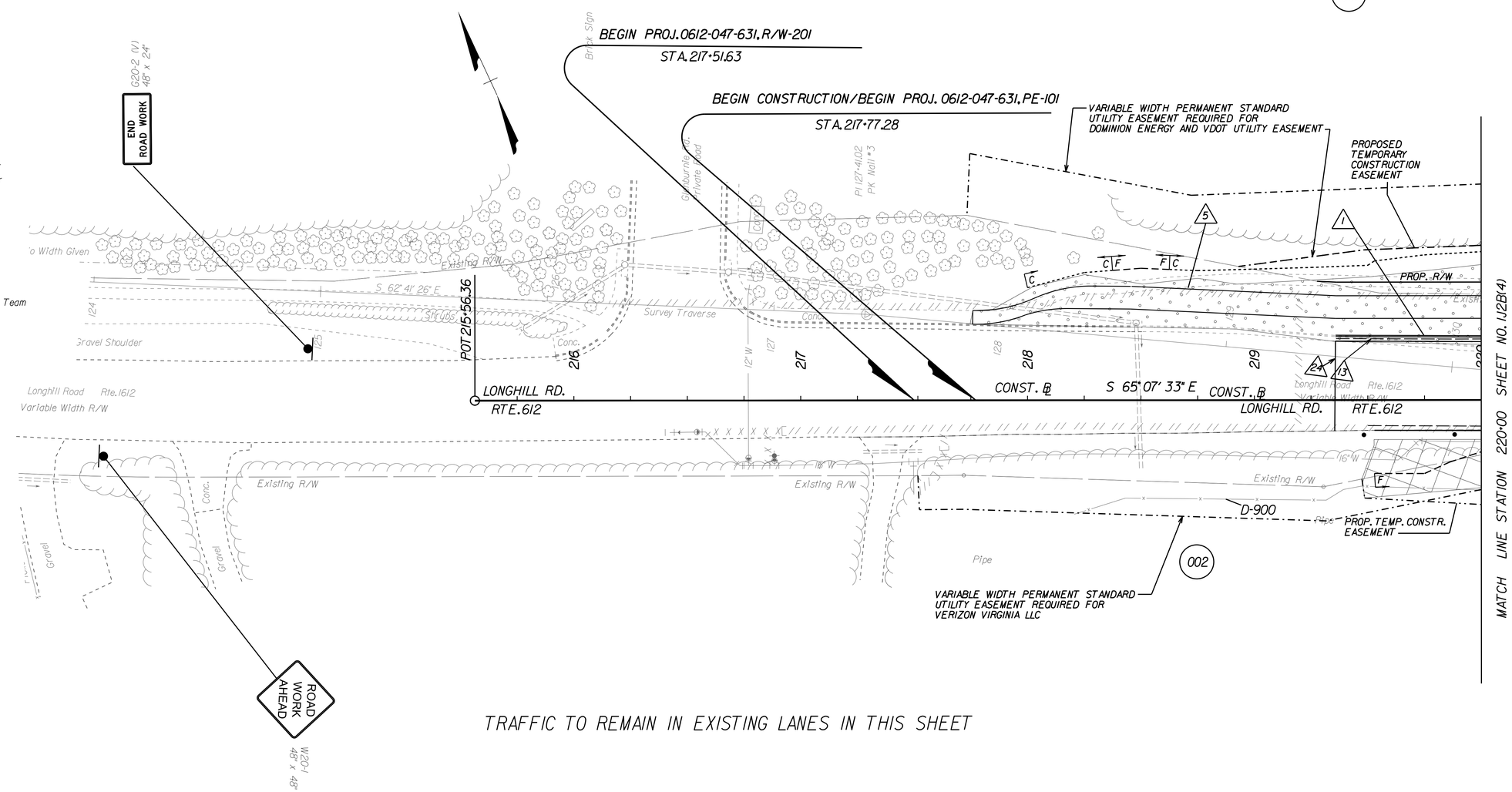
Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

James City Information
Mike Bowler
757-890-0143
Metro Fiber
Ray Dehart
757-876-9637

Gas:

Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757-455-2000

Kevin D. Starke
Senior Engineering Technician
Engineering Services
757-616-7529 office
757-449-0825 mobile
757-616-7517 fax



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
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- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
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- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile 3
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2B(3)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2B

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

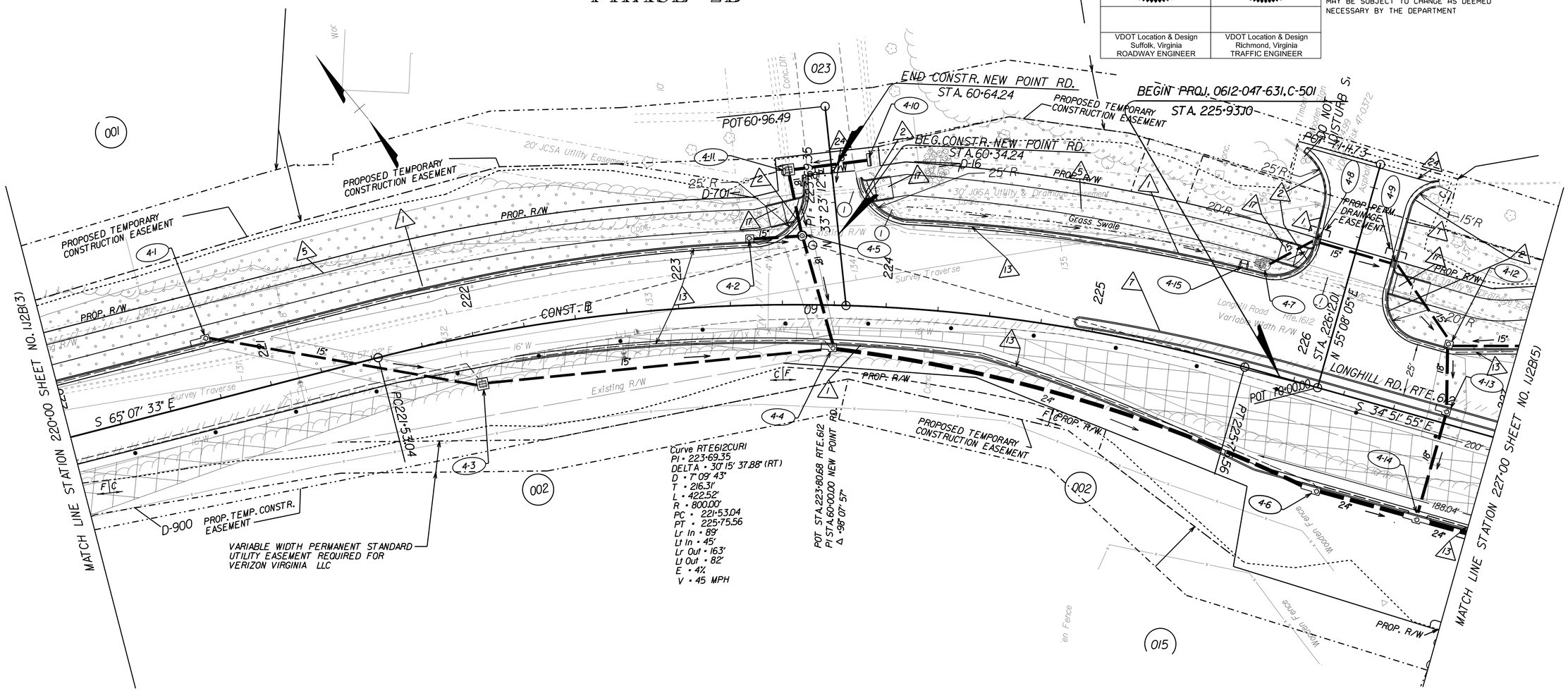
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2B(4)

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



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
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- Type III Barricade
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- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
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- (1) Denotes existing structure & pipe to be removed.
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REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile	4
Drainage Descr.	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2B(4)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2B

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
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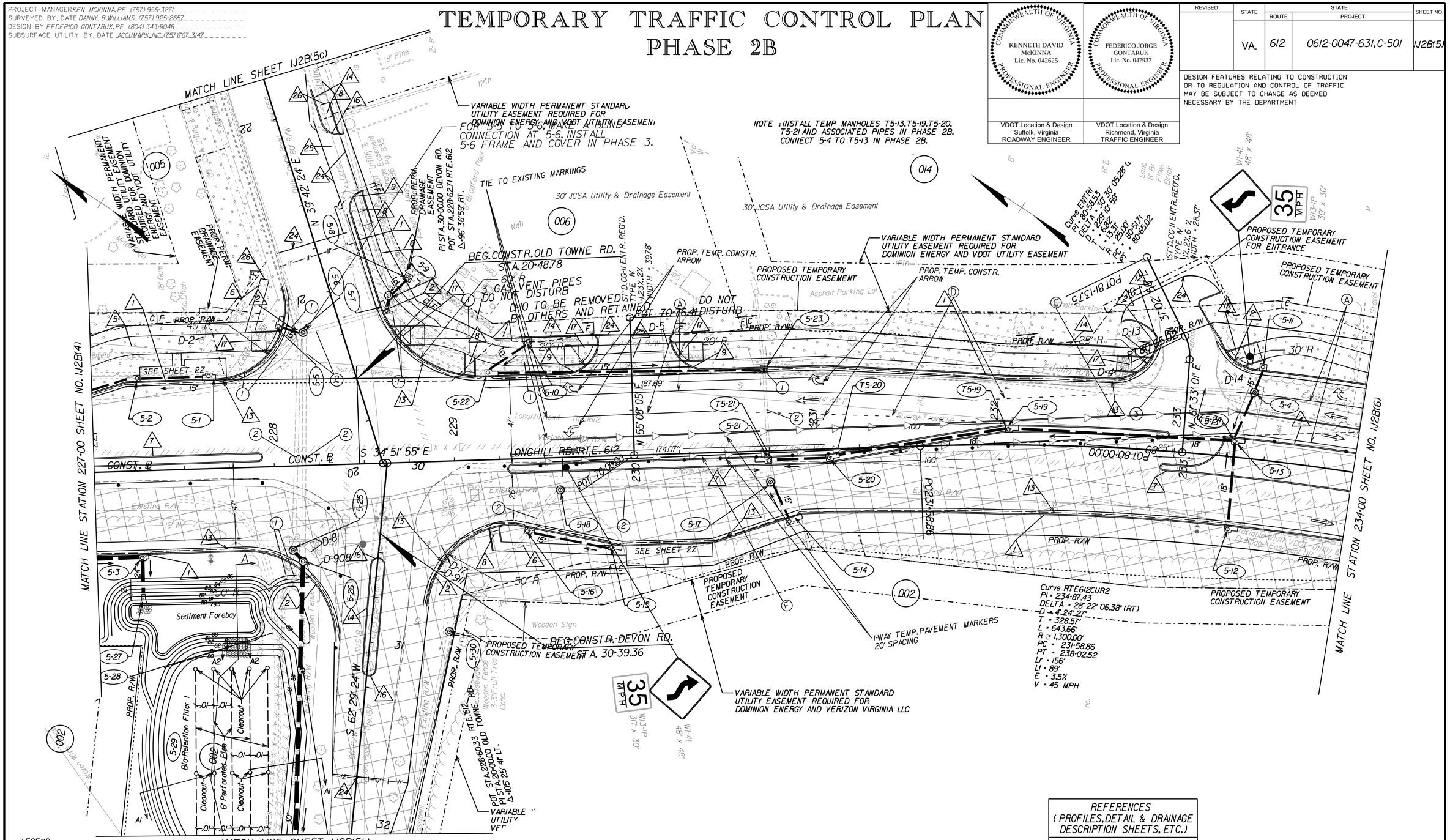
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	IJ2B(5)

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



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
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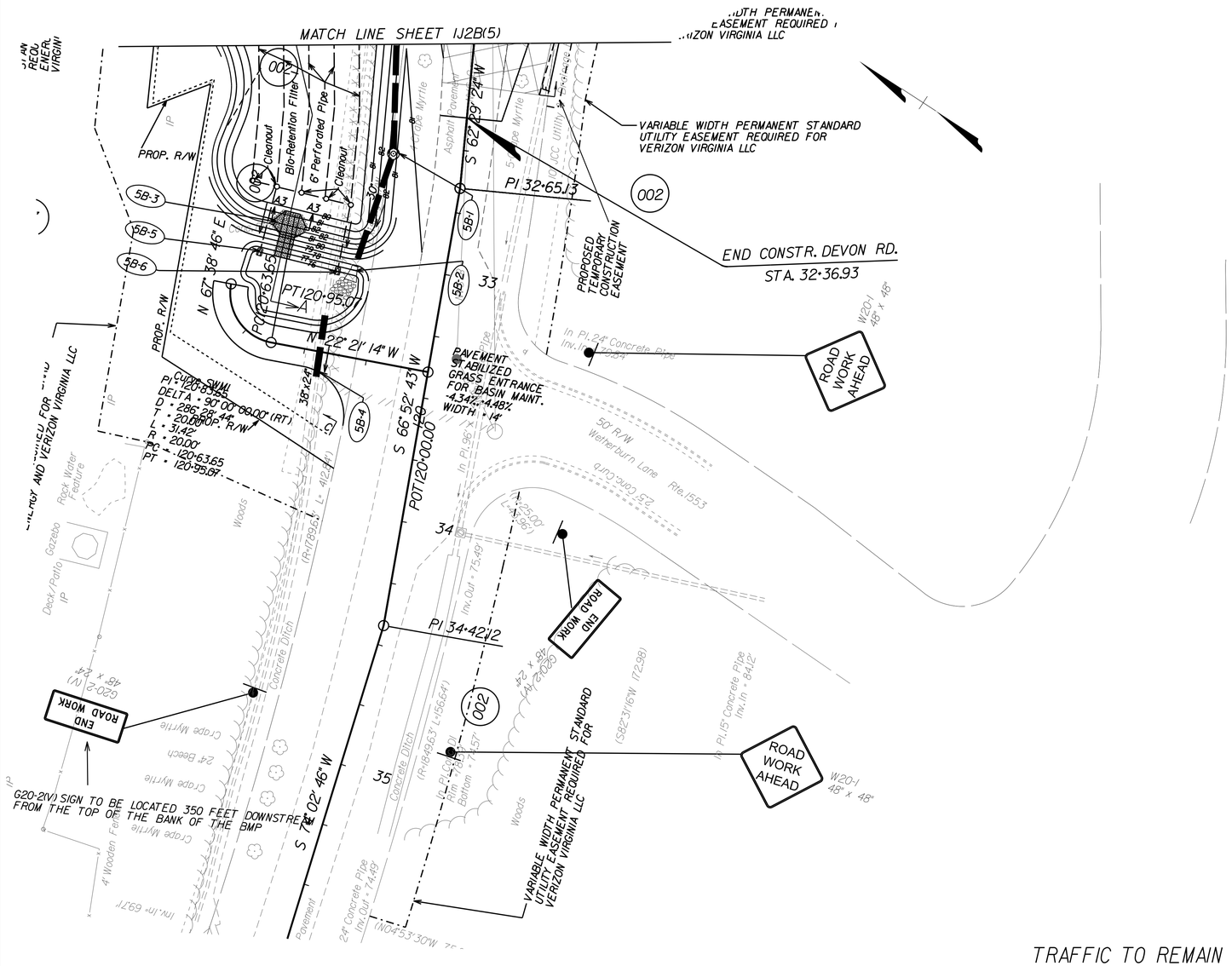
REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile	5
Drainage Descr.	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	IJ2B(5)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2B



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2b(5b)

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

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

LEGEND

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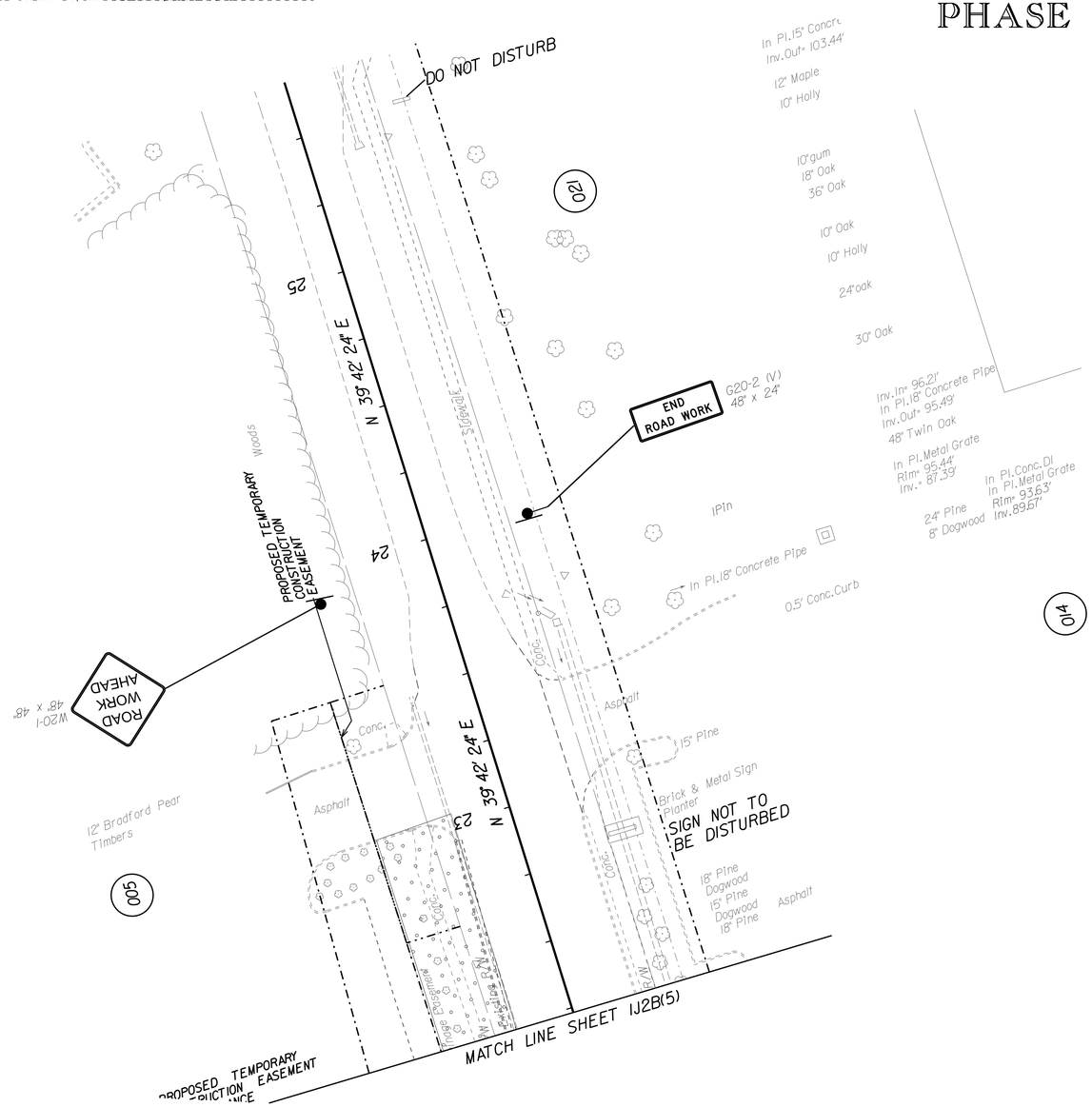
REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile 5
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2B(5b)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2B



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
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VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2B(5c)

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

LEGEND

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

Mainline Profile 5
Drainage Descr.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J2B(5c)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3270
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2B

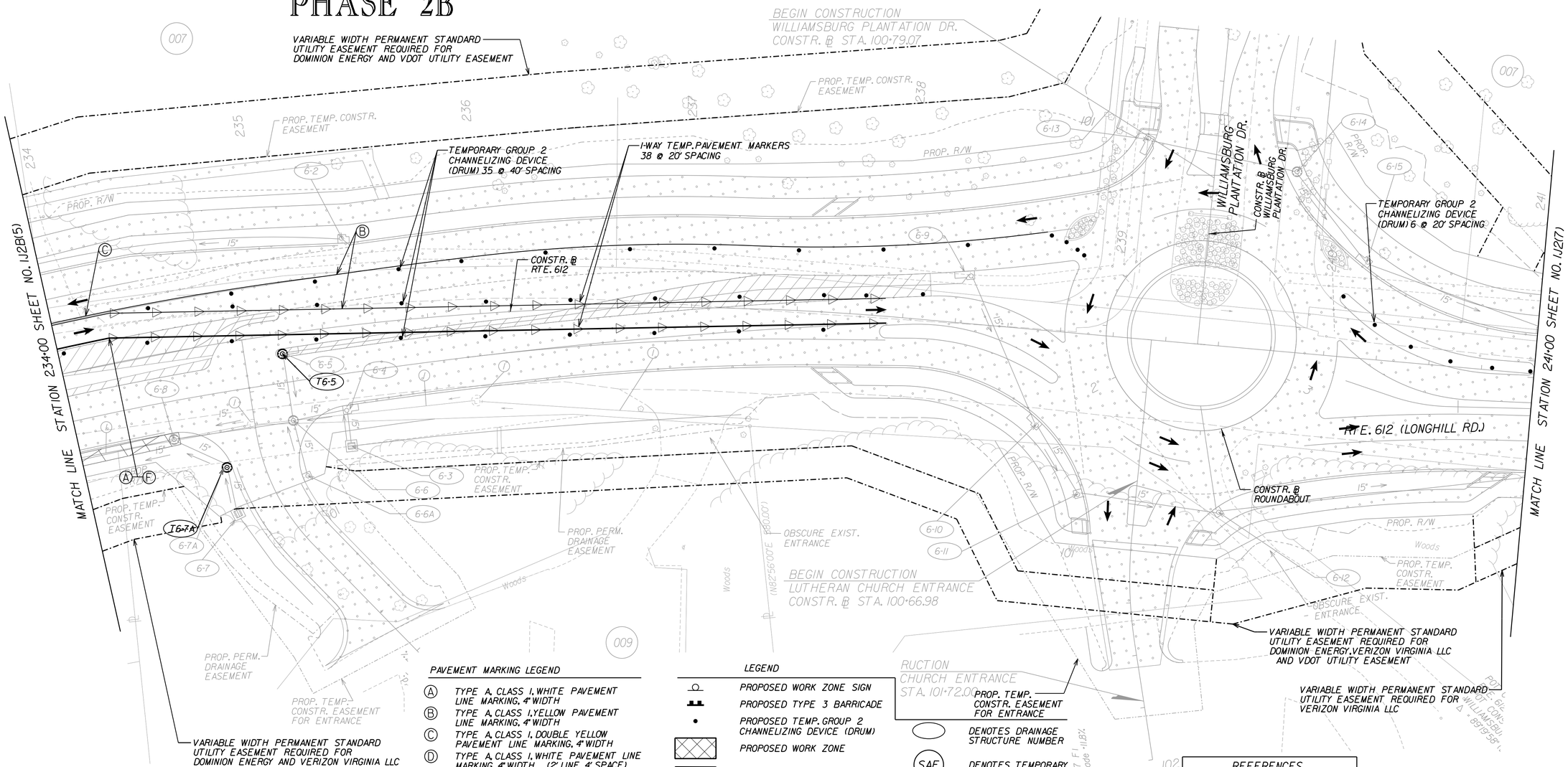
NOTE: TEMP MANHOLE T6-5 REMAIN. TEMP MANHOLE T6-7A TO BE REMOVED AND PERMANENT STRUCTURE 6-7A CONSTRUCTED.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IJ2B(6)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (I) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 16" WIDTH (3' LINE, 3' SPACE)
- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJ2B(6)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2C

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2C(3)

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

Utility Owners

Water and Sewer:
James City Service Authority
101-E Mounts Bay Road
Williamsburg, VA 23185
Robert Carswell 757-592-1799

Hampton Roads Sewer District
1436 Air Rail Avenue
Virginia Beach, VA 23455
757.460.2261

Power:

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell

Telecomm:

Cox Communications
Vicki Kincaid
HFC Designer III/EAST REGION Design Team
757-222-6579 / 757-369-6261

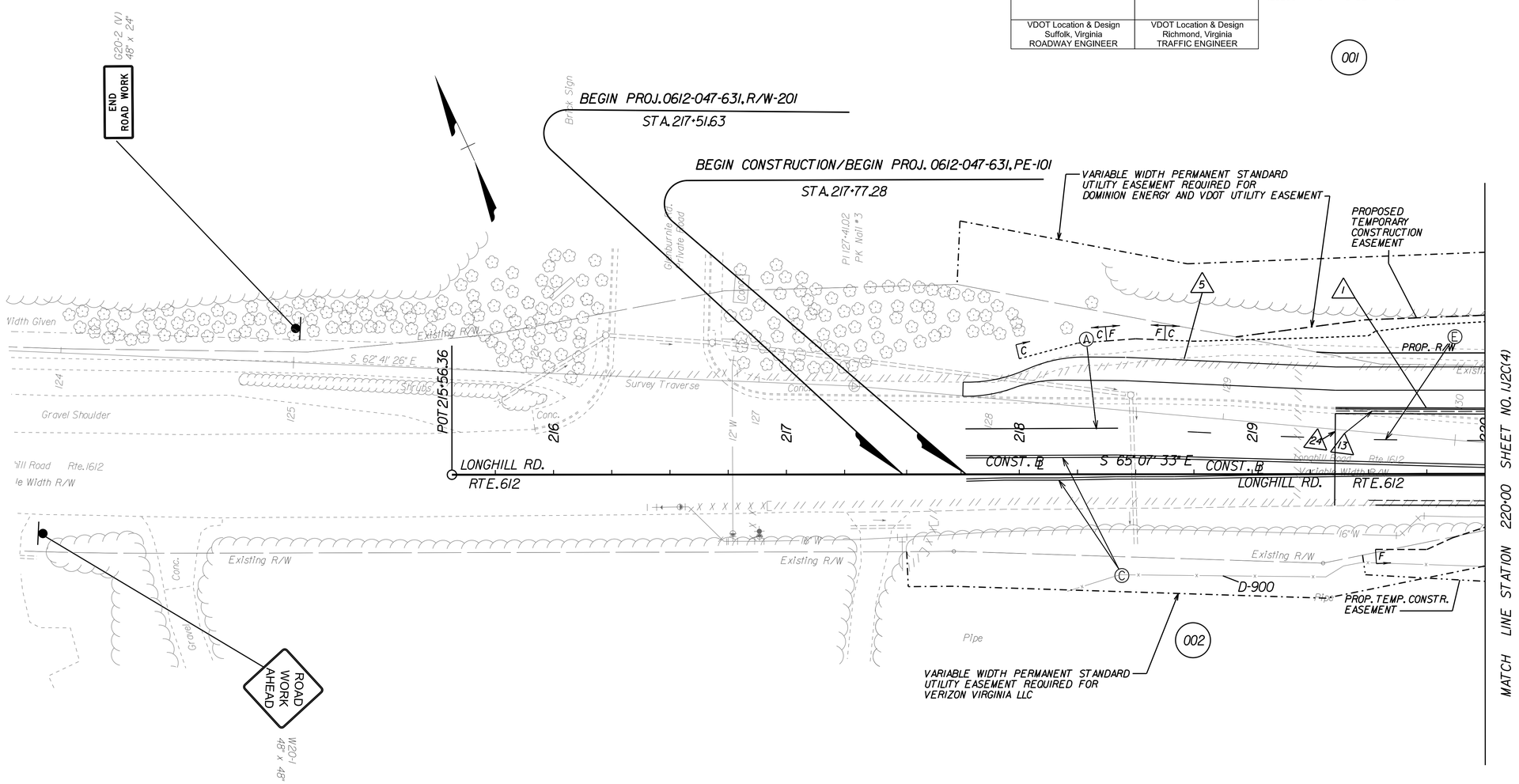
Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

James City Information
Mike Bowler
757-890-0143
Metro Fiber
Ray Dehart
757-876-9637

Gas:

Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757-455-2000

Kevin D. Starke
Senior Engineering Technician
Engineering Services
757-616-7529 office
757-449-0825 mobile
757-616-7517 fax



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE A, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE A, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE A, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile 3A
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2C(3)

PROJECT MANAGER KEN MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, P.E. (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2C

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

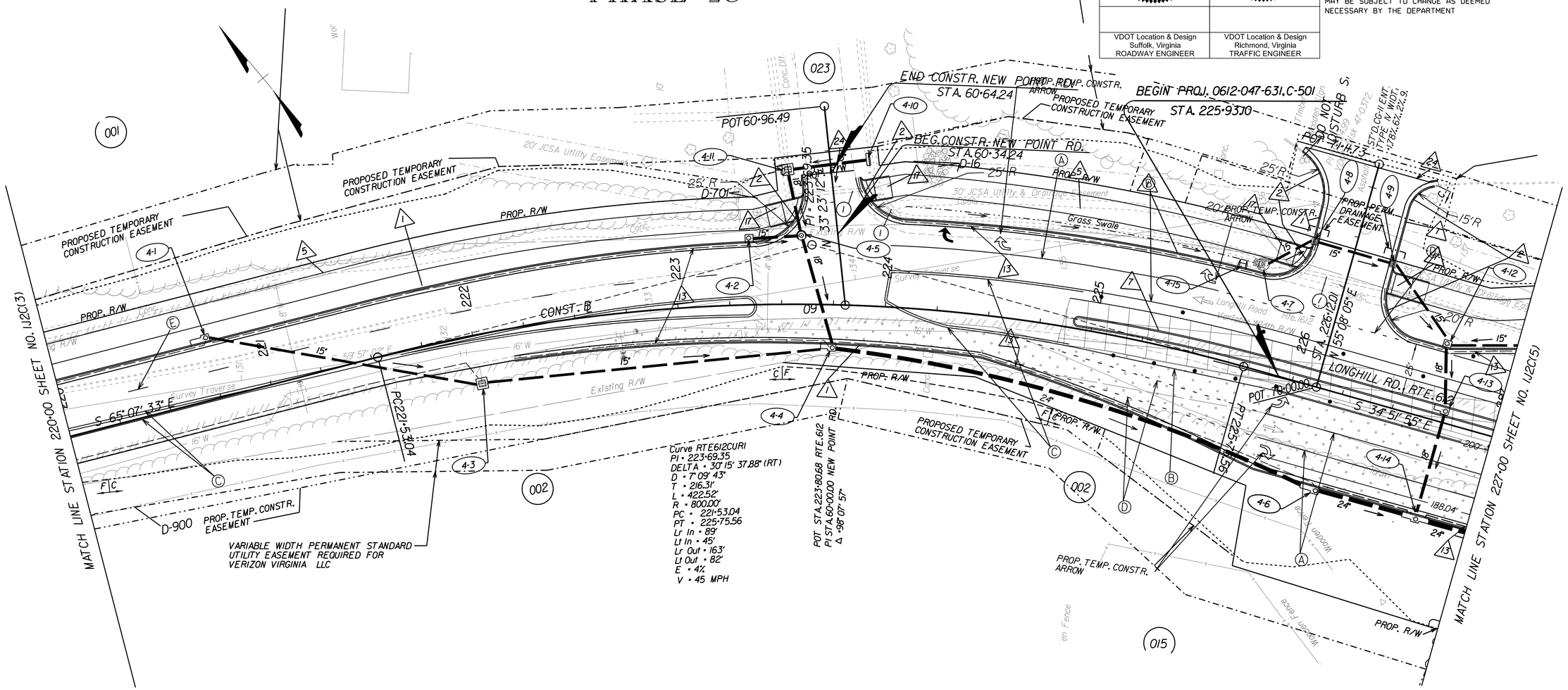
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2C(4)

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



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
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- (G) TYPE A, YELLOW PAVEMENT LINE MARKING, 8" WIDTH
- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

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

Mainline Profile 4
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2C(4)

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Plotted By: WAP04107$

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2C

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

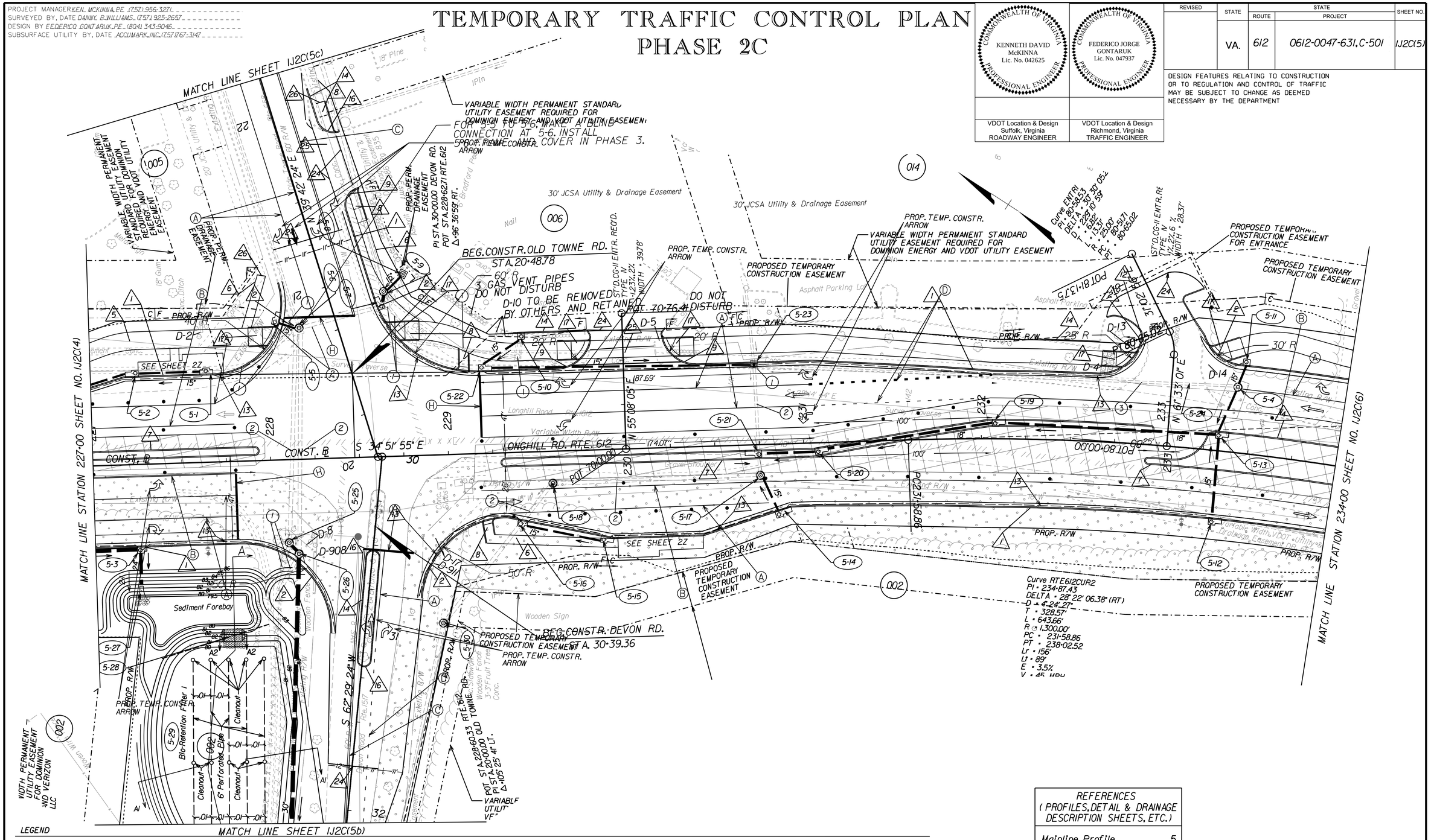
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	IJ2C(5)

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



LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
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- (H) TYPE A, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.

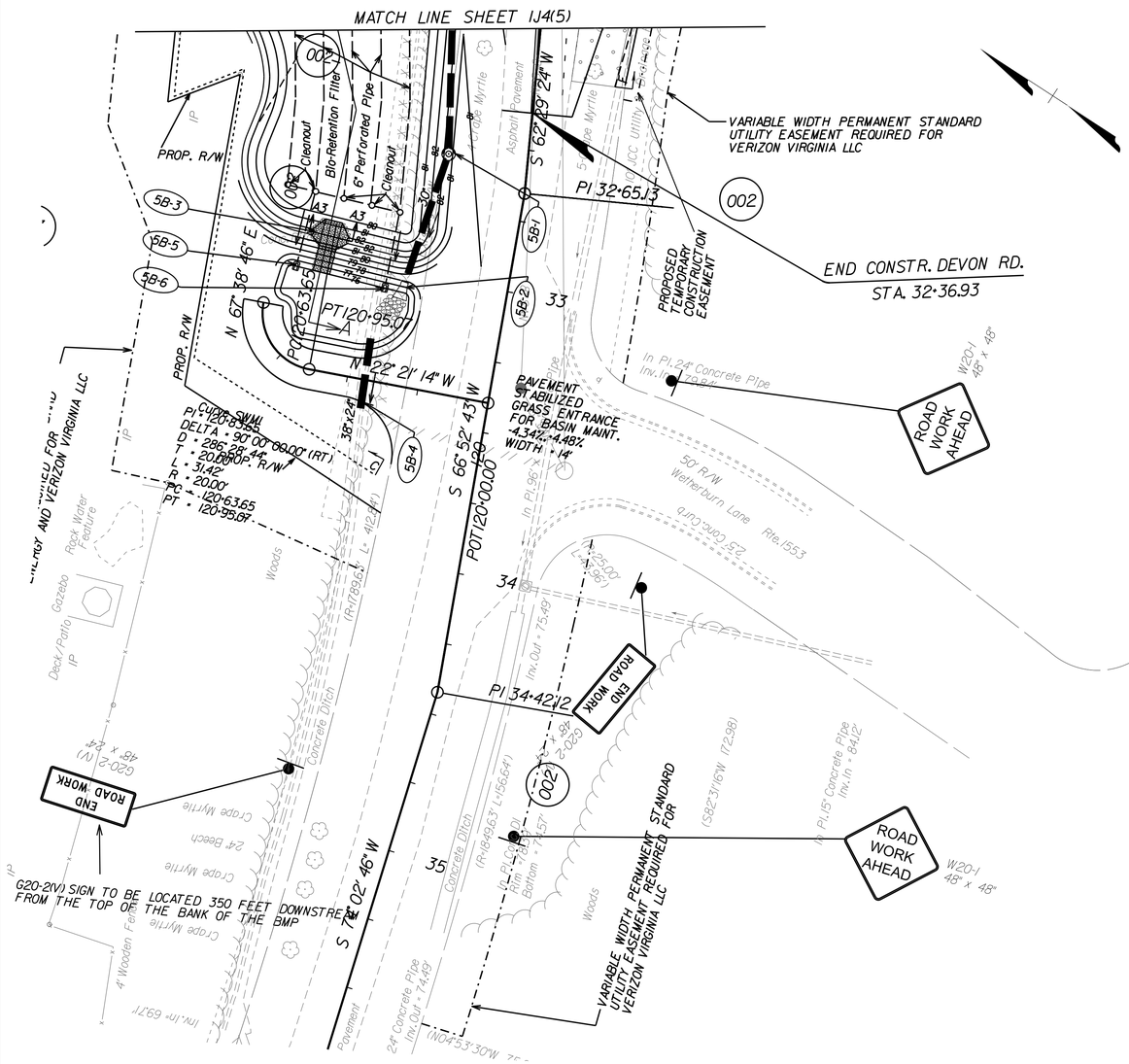
REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile 5
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	IJ2C(5)

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2C



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

VDOT Location & Design Suffolk, Virginia ROADWAY ENGINEER	VDOT Location & Design Richmond, Virginia TRAFFIC ENGINEER
KENNETH DAVID McKINNA Lic. No. 042625	FEDERICO JORGE GONTARUK Lic. No. 047937

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2C(5b)

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

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
- Denotes Construction Previous Stage
- Denotes Temporary Pavement
- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
- (A) TYPE A, WHITE PAVEMENT LINE MARKING, 4" WIDTH
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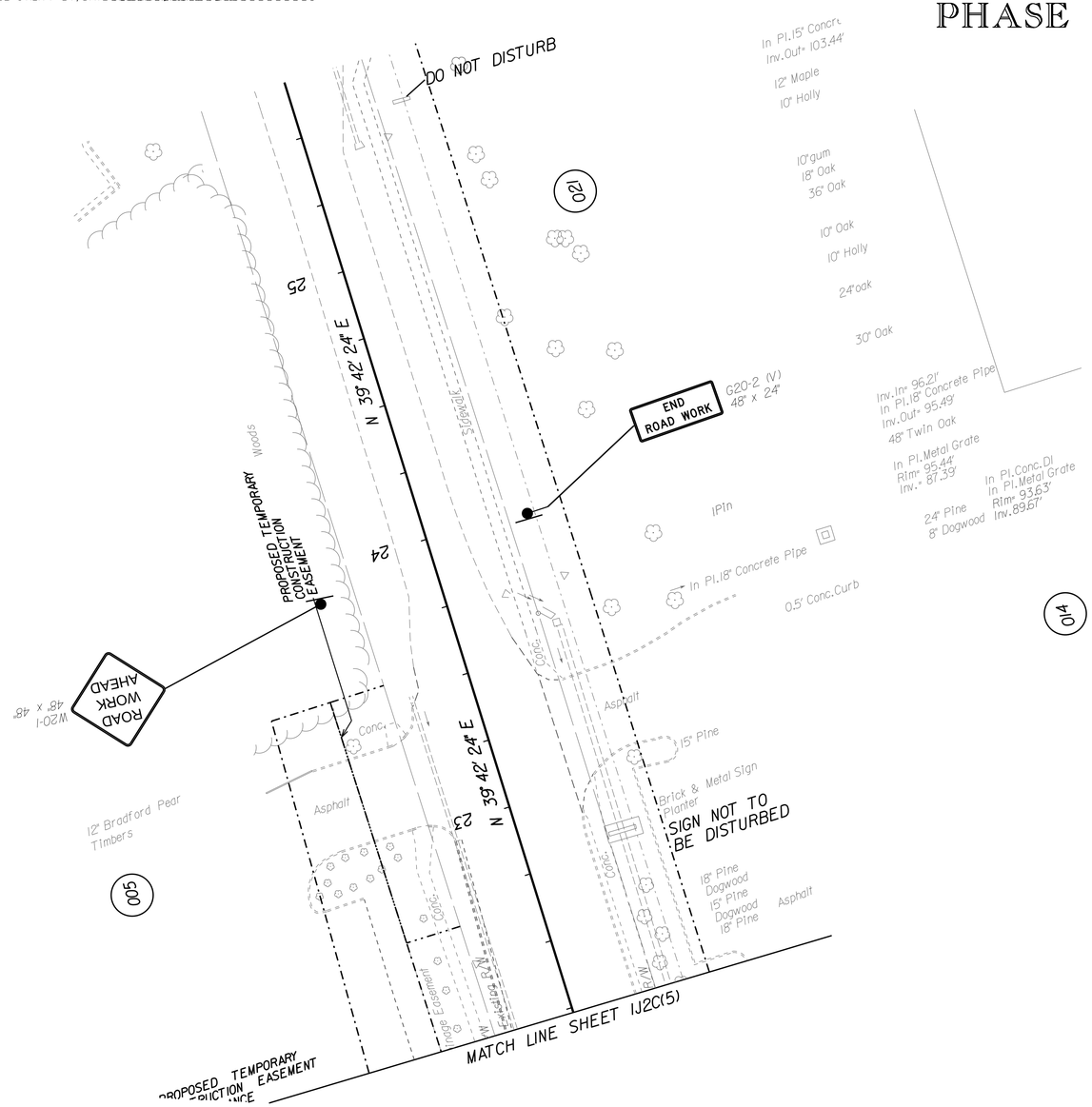
REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	5
Drainage Descr.	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	1J2C(5b)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY FEDERICO GONTARUK, PE (804) 343-9046
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2C



TRAFFIC TO REMAIN IN EXISTING LANES IN THIS SHEET

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
FEDERICO JORGE GONTARUK
Lic. No. 047937
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	1J2C(5c)

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

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction This Stage
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- Temporary Sign Support
- Group 2 Channelizing Device
- Type III Barricade
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REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

Mainline Profile 5
Drainage Descr.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	1J2C(5c)

PROJECT MANAGER KEN. MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

LONGHILL ROAD
TEMPORARY TRAFFIC CONTROL PLAN
PHASE 2C

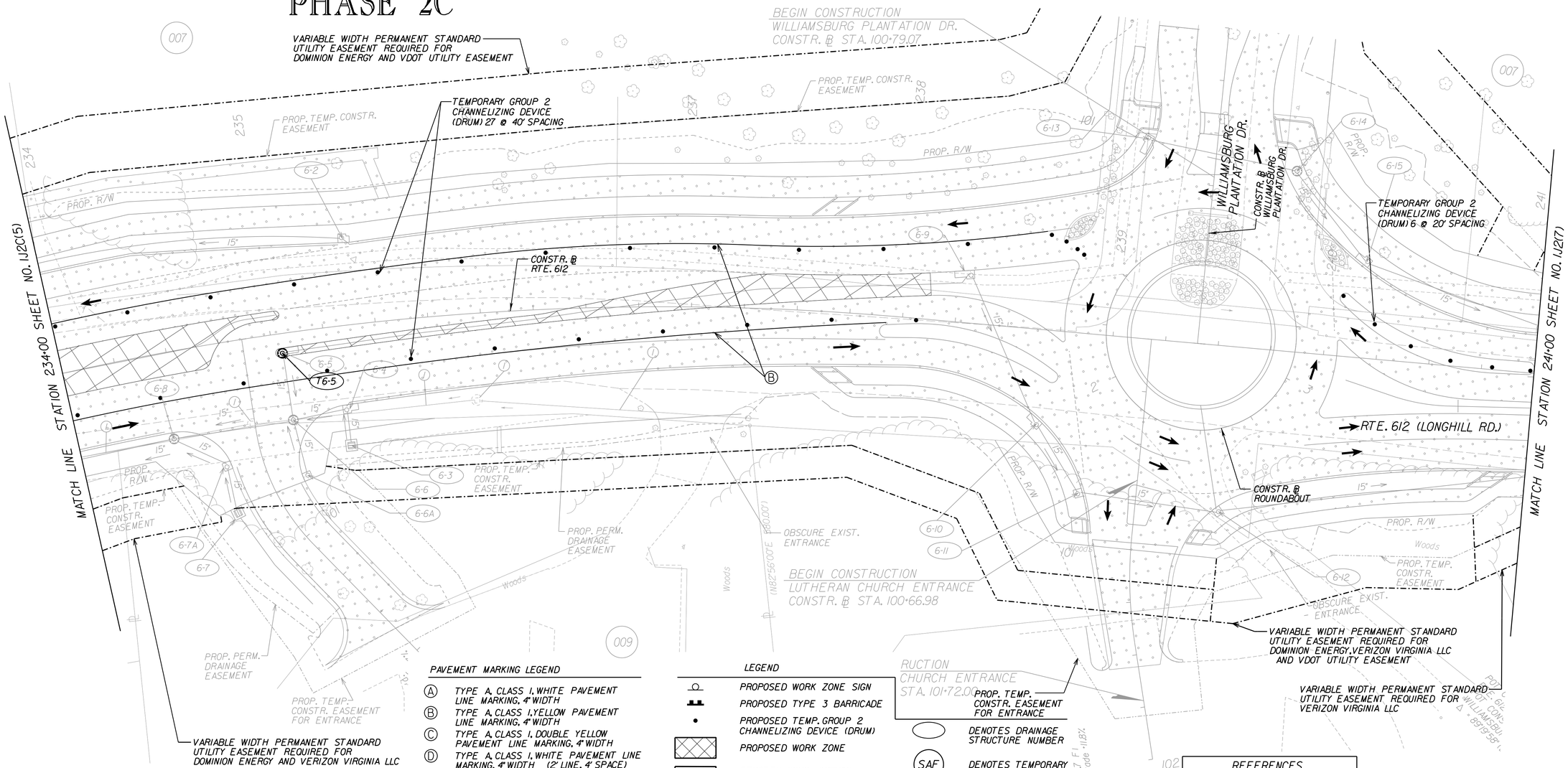
NOTE: TEMP MANHOLE T6-5 TO BE REMOVED AND PERMANENT STRUCTURE 6-5 CONSTRUCTED.

COMMONWEALTH OF VIRGINIA
JEFFREY SCOTT KUTTESCH
Lic. No. 047612
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	IJ2C(6)

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



PAVEMENT MARKING LEGEND

- (A) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
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- (H) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
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- (J) TYPE A, CLASS I, WHITE PAVEMENT YEILD LINE MARKING, 24" WIDTH x 36" LONG
- (K) TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

LEGEND

- PROPOSED WORK ZONE SIGN
- PROPOSED TYPE 3 BARRICADE
- PROPOSED TEMP. GROUP 2 CHANNELIZING DEVICE (DRUM)
- PROPOSED WORK ZONE
- DENOTES CONSTRUCTION PREVIOUS STAGE
- PROPOSED TEMPORARY PAVEMENT
- EXISTING TRAFFIC FLOW ARROW
- TRAFFIC FLOW ARROW
- ONE-WAY TEMPORARY TRAFFIC MARKER
- TWO-WAY TEMPORARY TRAFFIC MARKER
- DENOTES DRAINAGE STRUCTURE NUMBER
- SAF — DENOTES TEMPORARY SAFETY FENCE

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

REFERENCES
(PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)
SOC GENERAL NOTES IH(1)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	IJ2C(6)

PROJECT MANAGER K. McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY, DATE DANNY WILLIAMS, LS 757-925-2657
DESIGN BY Michael N. Poblete (757) 956-3268 (Hampton Roads District)
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		0612-047-631	1K

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

PLAN SHEET	TEST HOLE	DISTANCE (FEET)	(1) STATION & ROADWAY SURVEY BASELINE (RTE 612)	OWNER	TYPE OF FACILITY	(2) ELEV. (FEET)	(3) CONFLICT YES/NO	(4) REMARKS	UTILITY (5) ADJUSTMENT REQUIRED
N/A	1	L16.97	131+00.86	2	(2) 2" Fiber Optic	94.54'	YES	Encompasses Test Hole 1 & 2	YES
N/A	3	R12.62	131+79.39	4	4" Gas	92.21'	YES		YES
N/A	4	R15.31	131+79.37	3	12" Water	91.73'	YES		YES
N/A	5	R18.73	131+93.48	1	4" Telephone	92.35'	YES		YES
N/A	6	L34.85	133+75.83	2	(2) 2" Fiber Optic	85.99'	YES	Encompasses Test Hole 6 & 7	YES
N/A	8	R15.88	133+82.02	4	4" Gas	87.18'	YES		YES
N/A	9	R18.72	133+84.93	3	12" Water	86.72'	YES		YES
N/A	10	R25.88	133+84.68	1	4" Telephone	86.86'	YES		YES
N/A	11	L14.98	135+30.31		No Utilites Found	94.01'	——	Encompasses Test Hole 11 & 12	
N/A	13	R14.90	135+65.86	1	3" Telephone	82.13'	NO	8.30' CLEARANCE	NO
N/A	14	R52.61	134+60.86	1	4" Telephone	86.15'	YES		YES
N/A	15	R14.91	136+32.79		No Utilites Found	91.99'	——	Encompasses Test Hole 15 & 16	
N/A	17	R18.98	136+08.85	1	2.5" Telephone	88.96'	YES	1.35' CLEARANCE	YES
N/A	18	R22.03	136+43.04	1	4" Telephone	87.72'	——	1.04' CLEARANCE	YES
N/A	19	R59.13	137+16.38	4	4" Gas	83.54'	YES		YES
N/A	20	R62.23	137+13.10	3	12" Water	82.73'	YES	0.26' CLEARANCE	YES
N/A	21	R80.44	137+20.99	1	1" Telephone	84.42'	YES		YES
N/A	22	R83.53	137+21.49	5	(3) 1.5" Electric	83.17'	YES		YES
N/A	23	R93.36	137+22.69	1	4" Telephone	83.52'	YES		YES
N/A	24	R25.89	137+43.50	1	2.5" Telephone	84.60'	YES		YES
N/A	25	L24.31	138+50.34	4	4" Gas	83.92'	YES	0.96' CLEARANCE	YES
N/A	26	L23.43	138+55.15	1	2" Telephone	84.00'	YES	0.87' CLEARANCE	YES
N/A	27	L36.19	139+09.13	1	2.5" Telephone	84.75'	YES	0.54' CLEARANCE	YES
N/A	28	L17.09	139+75.72	1	Telephone & Electric	86.18'	YES	Electric is Privately Owned	YES
N/A	29	L13.45	139+75.71	2	(2) 2" Fiber Optic	85.55'	YES	0.40' CLEARANCE Encompasses Test Hole 29 & 30	YES
N/A	31	L4.92	139+74.48	2	(2) 2" Fiber Optic	85.20'	YES	0.48' CLEARANCE	YES
N/A	32	L17.08	141+09.09		No Utilites Found	92.46'	NO	5.47' CLEARANCE Encompasses Test Hole 32 & 34	
N/A	33	L19.96	141+11.75	1	2" Telephone	88.37'	YES	Conflict/ DI-3A	YES
N/A	35	R55.24	141+27.12	1	0.25" Telephone	89.71'	YES	Conflict/ 15" pipe	YES
N/A	36	R57.18	141+28.62	1	2" Fiber Optic	89.59'	YES	Conflict/ 15" pipe	YES
N/A	37	R22.36	141+90.34	3	12" Water	88.39'	YES	0.62' CLEARANCE	YES
N/A	38	R17.30	141+97.61	4	4" Gas	88.40'	YES	0.86' CLEARANCE	YES
N/A	39	L26.63	143+89.91	2	(2) 2" Fiber Optic	91.49'	YES	1.30' CLEARANCE	YES
N/A	41	L13.90	143+81.09	1	2" Telephone	92.39'	YES		YES
N/A	42	R22.70	143+71.64	4	4" Gas	91.62'	YES		YES
N/A	43	R25.84	143+66.65	3	12" Water	91.31'	YES		YES
N/A	44	R321.45	138+85.50	5	1.5" Electric	78.65'	YES	0.35' CLEARANCE	YES
N/A	44A	R49.99	144+73.47	1	2" Fiber Optic	93.42'	YES		YES
N/A	45	R63.62	144+87.68		No Utilites Found	98.22'	——		
N/A	46	R65.17	144+87.64	1	1.5" Telephone	96.42'	YES	1.86' CLEARANCE	YES

PLAN SHEETS	TEST HOLES	DISTANCE (FEET)	(1) STATION & ROADWAY SURVEY CENTERLINE (RTE 612)	OWNER	TYPE OF FACILITY	(2) ELEV. (FEET)	(3) CONFLICT YES/NO	(4) REMARKS	UTILITY (5) ADJUSTMENT REQUIRED
N/A	47	R48.45	145+43.84	4	4" Gas	93.88'	YES	1.22' CLEARANCE	YES
N/A	48	R78.65	145+62.90	1	1.5" Telephone	97.29'	YES	1.0' CLEARANCE	YES
N/A	49	R80.59	145+63.72	1	1.5" Telephone	97.48'	YES	1.23' CLEARANCE	YES
N/A	50	L55.03	146+63.54	3	12" Water	100.48'	NO	3.19' CLEARANCE	NO
N/A	51	L29.60	148+85.29	1	Telephone & Fiber Optic	98.68'	YES	0.55' CLEARANCE	YES
N/A	53	L20.24	148+89.08	1	(2) 2" Fiber Optic	96.06'	YES	0.16' CLEARANCE Encompasses Test Hole 53 & 54	YES
N/A	55	R20.76	149+18.55	4	4" Gas	95.98'	YES		YES
N/A	56	R23.19	149+18.63	1	1.5" Telephone	95.53'	YES		YES
N/A	57	R24.39	149+20.56	1	1.5" Telephone	96.73'	YES		YES
N/A	58	L58.21	151+31.05	1	Telephone & Fiber Optic	93.22'	YES		YES
N/A	60	L54.60	151+49.38	2	(2) 2" Fiber Optic	92.65'	YES	Encompasses Test Hole 60 & 61	YES
N/A	62	R8.94	151+61.00	4	4" Gas	91.15'	YES	0.45' CLEARANCE	YES
N/A	63	L64.33	152+29.38	2	(2) 2" Fiber Optic	89.47'	YES	Encompasses Test Hole 63 & 64	YES
N/A	65	L73.94	153+07.11	1	Telephone & Fiber Optic	91.30'	NO	3.12' CLEARANCE Encompasses Test Hole 65 & 66	NO
N/A	67	L86.62	154+40.33	1	2.5" Telephone	90.47'	NO	4.83' CLEARANCE See Form for Additonal Utilities Found	NO
N/A	68	L25.05	154+77.60	3	12" Water	82.88'	YES	0.81' CLEARANCE	YES
N/A	69	L25.33	156+39.67	1	2" Telephone	80.80'	YES	1.0' CLEARANCE Encompasses Test Hole 69 & 70	YES

1– Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

2 – James City Information
Mike Bowler
757–890–0143
Metro Fiber
Ray Dehart
757–876–9637

3 – James City Service Authority
101–E Mounts Bay Road
Williamsburg, VA 23185
Robert Carswell 757–592–1799

4 – Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757–455–2000
Kevin D. Starke
Senior Engineering Technician
Engineering Services
757–616–7529 office
757–449–0825 mobile
757–616–7517 faX

5 – Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804–771–3655
804–514–2277 cell

RICE ASSOCIATES
10661 GASKINS WAY
MANASSAS, VA 20109
(703) 968–3200 www.ricesurveys.com

RICE #VT1600.78
James City County
ROUTE 612, 100921
TEST HOLE SUMMARY SHEET
DATA: 06/15/17

ACCUMARK
9500 KING AIR COURT
ASHLAND, VA. 23005
(800) 542–2990 www.accumark.us

ACCUMARK #17–081
James City County
ROUTE 612, 100921
TEST HOLE SUMMARY SHEET
DATE: 03/30/17

NOTES:

(1) ALL TEST HOLES ARE REFERENCED FROM THE SURVEY BASELINE UNLESS OTHERWISE NOTED.

(2) ELEVATIONS SHOWN HEREON ARE TO THE TOP OF THE FACILITY UNLESS OTHERWISE NOTED.

(3) YES OR NO; NO INDICATES NO DIRECT CONFLICT, HOWEVER, CLEARANCE MAY BE LESS THAN ACCEPTABLE TO UTILITY OWNER.

(4) REMARKS TO INCLUDE CLEARANCE DIMENSION (REGARDLESS OF DISTANCE).

(5) YES OR NO; INFORMATION TO BE PROVIDED BY THE VDOT DISTRICT UTILITY ENGINEER.

(6) TEST HOLES 20, 37, 43, 78, AND 82 PERFORMED BY RICE ASSOCIATES.

– SEE TEST HOLE CERTIFICATION FORM FOR ADDITIONAL INFORMATION.

Revised 1–95
SPECIAL DESIGN SECTION
DRAWING NO. A–41

PROJECT	SHEET NO.
0612–047–631	1K

PROJECT MANAGER K.McKinna, P.E. (757) 956-3221 (Hampton Roads District)
SURVEYED BY, DATE DANNY WILLIAMS, LS 757-925-2657 (Hampton Roads District)
DESIGN BY Michael N. Poblete (757) 956-3268 (Hampton Roads District)
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631	1K(1)

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

UNDERGROUND UTILITIES TEST HOLE INFORMATION

PLAN SHEET	TEST HOLE	DISTANCE (FEET)	(1) STATION & ROADWAY SURVEY BASELINE (RTE 612)	OWNER	TYPE OF FACILITY	(2) ELEV. (FEET)	(3) CONFLICT YES/NO	(4) REMARKS	UTILITY (5) ADJUSTMENT REQUIRED
N/A	72	L18.02	156+39.03	2	(2) 2" Fiber Optic	78.70'	YES	Encompasses Test Hole 71 & 72	YES
N/A	73	L4.54	156+35.09	3	12" Water	78.50'	YES		YES
N/A	74	L31.46	157+76.11	1	2" Telephone	78.35'	YES	0.56' CLEARANCE Encompasses Test Hole 74 & 75	YES
N/A	76	L26.37	157+77.22	2	(2) 2" Fiber Optic	74.94'	YES	0.93' CLEARANCE Encompasses Test Hole 76 & 77	YES
N/A	78	L4.49	157+83.66	3	12" Water	75.42'	YES	0.88' CLEARANCE	YES
N/A	79	R28.93	157+76.06	4	4" Gas	78.06'	YES		YES
N/A	80	L85.37	159+90.36	3	8" Water	68.88'	YES		YES
N/A	81	L91.38	159+99.03		No Utilites Found	72.80'			
N/A	82	L34.65	159+82.49	3	12" Water	69.69'	NO	5.62' CLEARANCE	NO
N/A	83	R16.79	159+85.50	3	8" Water	71.24'	YES		YES
N/A	84	R22.14	159+76.36	1	2" Telephone	73.06'	YES	0.34' CLEARANCE	YES
N/A	85	R25.45	159+75.92	1	1.5" Telephone	73.69'	YES	1.09' CLEARANCE	YES
N/A	86	L68.47	161+40.57	1	2.5" Telephone	68.04'	YES		YES
N/A	87	L57.15	161+91.49	1	2.5" Telephone	67.05'	YES	0.44' CLEARANCE	YES
N/A	88	L46.13	162+30.30	2	Fiber Optic	67.27'	YES	0.68' CLEARANCE	YES
N/A	89	L33.22	162+81.54	3	12" Water	63.98'	NO	3.57' CLEARANCE	NO
N/A	90	L29.12	162+71.16	1	Telephone	64.33'	YES		YES
N/A	91	R58.69	162+87.83	4	4" Gas	68.29'	NO	4.5' CLEARANCE	NO
N/A	92	R59.33	162+87.90		0.25" Unknown	70.69'	NO	7.17' CLEARANCE	NO
N/A	93	L72.64	159+78.71	1	2.5" Telephone	72.54'	YES	0.75' CLEARANCE 1.67' CLEARANCE	YES
N/A	93A	L70.32	159+79.02		No Utilites Found	74.49'	—		
N/A	94	L66.93	159+78.69	2	(2) 2" Fiber Optic	70.36'	YES	Encompasses Test Hole 94 & 95	YES
N/A	96	L53.94	133+44.08	3	1" Water	93.48'	YES	2.03' CLEARANCE	YES
N/A	97	L26.85	133+54.74	3	1" Water	91.05'	YES		YES
N/A	98	R9.57	160+83.79	4	2.5" Gas	72.79'	YES	0.42' CLEARANCE	YES
N/A	110	L102.89	157+42.73	1	1.5" Telephone	80.35'	NO	3.14' CLEARANCE	NO

PLAN SHEETS	TEST HOLES	DISTANCE (FEET)	(1) STATION & ROADWAY SURVEY CENTERLINE (RTE 612)	OWNER	TYPE OF FACILITY	(2) ELEV. (FEET)	(3) CONFLICT YES/NO	(4) REMARKS	UTILITY (5) ADJUSTMENT REQUIRED

1– Verizon
William C. Swann Jr
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Highway Department
2600 Brittons Hill Rd
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804.772.4409
804.772.5978

2 – James City Information
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Ray Dehart
757–876–9637

3 – James City Service Authority
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Robert Carswell 757–592–1799

4 – Virginia Natural Gas
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757–455–2000
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Engineering Services
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757–449–0825 mobile
757–616–7517 faX

5 – Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804–771–3655
804–514–2277 cell

RICE ASSOCIATES
10661 GASKINS WAY
MANASSAS, VA 20109
(703) 968–3200 www.ricesurveys.com

RICE #VT1600.78
James City County
ROUTE 612, 100921
TEST HOLE SUMMARY SHEET
DATE: 06/15/17

ACCUMARK
9500 KING AIR COURT
ASHLAND, VA. 23005
(800) 542–2990 www.accumark.us

ACCUMARK #17–081
James City County
ROUTE 612, 100921
TEST HOLE SUMMARY SHEET
DATE: 03/30/17

NOTES:

(1) ALL TEST HOLES ARE REFERENCED FROM THE SURVEY BASELINE UNLESS OTHERWISE NOTED.

(2) ELEVATIONS SHOWN HEREON ARE TO THE TOP OF THE FACILITY UNLESS OTHERWISE NOTED.

(3) YES OR NO; NO INDICATES NO DIRECT CONFLICT, HOWEVER, CLEARANCE MAY BE LESS THAN ACCEPTABLE TO UTILITY OWNER.

(4) REMARKS TO INCLUDE CLEARANCE DIMENSION (REGARDLESS OF DISTANCE).

(5) YES OR NO; INFORMATION TO BE PROVIDED BY THE VDOT DISTRICT UTILITY ENGINEER.

(6) TEST HOLES 20, 37, 43, 78, AND 82 PERFORMED BY RICE ASSOCIATES.

– SEE TEST HOLE CERTIFICATION FORM FOR ADDITIONAL INFORMATION.

Revised 1–95
SPECIAL DESIGN SECTION
DRAWING NO. A–41

PROJECT	SHEET NO.
0612–047–631	1K(1)

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads)
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657 (Hampton Roads)
DESIGN BY Diane Geouge (757) 956-3263 (Hampton Roads)
SUBSURFACE UTILITY BY, DATE Accumark (804) 762-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, 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, pedestrian ramps curbing, curb & gutter and paved ditch.

G-6 The borrow material for this project shall be a minimum CBR - 10 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-7 All pipe on this project shall be concrete. For strength, sheet thickness, or class designation; available sizes; height of cover limitations; and other restrictions for a particular pipe type or height cover, see the applicable sections of the VDOT Road and Bridge Standards PC-1.

D-8 Where open joint pipe is to be used, no joint shall be opened a distance exceeding 25% of the spigot length. Sealing of the pipe joint shall be in accordance with Section 302 of the applicable VDOT Road and Bridge Specifications.

D-9 A pipe joint length different from that stated on the plans may be used. An adjustment in the percentage of open joint (not to exceed 25% of the spigot length) or amount of bevel shall be made that will obtain the radius stated on the plans. Extra payment for this adjustment will not be allowed. The proposed adjustment shall be approved by the Engineer prior to installation of the pipe line.

D-10 The proposed riprap may be omitted by the Engineer if the slope designated for placement of riprap is found to be comprised of solid rock or closely consolidated boulders with soundness, size and weight equal to, or exceeding, the specifications for the proposed riprap.

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.

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-8A Clearing and grubbing shall be confined to those areas needed for construction. No trees or shrubs in ungraded areas shall be cut without the permission of 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-16 The "underground utilities" survey data on this project has been provided by consultant and copies are available from the Department.

I-17 For method of constructing Straight-Line Taper Lanes in curb and/or curb and gutter sections, see typical details on Sheet 2Z.

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 11(3) thru 11(8) and as directed by the Engineer.

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

Hydraulic Design	-	Rummel, Klepper & Kahl, LLP (Sta. 234+00 to Sta. 243+50)
Roadway Design	-	Rummel, Klepper & Kahl, LLP (Sta. 234+00 to Sta. 243+50)
Utility Design	-	Whitman, Requardt & Assoc.
Utility Designation	-	Accumark
Utility Location	-	Accumark
Survey	-	N/A - VDOT
Bridge Design	-	N/A
Traffic Design	-	N/A - VDOT
Landscape Design	-	N/A - VDOT

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.

STORMWATER MANAGEMENT

S-1 CLEARING AND GRUBBING OF SWM BASIN SITE - The area where the dam is to be constructed and the area upstream of the dam, to an elevation equal to the crest of the dam (maximum ponded water elevation), shall be cleared and grubbed in accordance with Section 301 of the applicable VDOT Road and Bridge Specifications.

S-2 SWM BASIN DAM CONSTRUCTION - The dam for detention basins (no permanent pool) shall conform to the details contained in the plans and shall be constructed in accordance with Section 303 of the applicable VDOT Road and Bridge Specifications. The native material on which the dam will set shall meet the specifications for AASHTO Type A-4 or finer material. Where the native material does not meet this requirement, the area beneath the dam is to be excavated a minimum of 4' and backfilled with a material meeting the AASHTO Type A-4 or finer classification unless otherwise specified in the plans. The material used for the embankment of the dam shall be AASHTO Type A-4 or finer or otherwise specified in the plans. Dams with foundation and embankment material not meeting the above requirements or dams greater than 15' in height, or dams for retention basins (permanent pool) shall incorporate a membrane-lined trench, a homogenous embankment with seepage controls, a zoned embankment or other such approved designs as specified in the plans.

S-3 SWM BASIN OUTLET PIPE - The pipe culvert under or through the dam for detention basins (no permanent pool) shall be reinforced concrete pipe with rubber gaskets in accordance with Section 232 and 212 of the applicable VDOT Road and Bridge Specifications. A concrete cradle shall extend the full length of the pipe culvert in accordance with the Standard Drawings. The connection between the pipe culvert and the SWM-1 Drainage Structure (or other control structure) shall be made watertight as approved by the Engineer and the cost shall be included in the price bid for pipe.

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
	Denotes Limits of Disturbance

PROJECT MANAGER Ken McKinna, P.E. (757) 956-3271
SURVEYED BY Dean B. Minnix, L.S. (757) 925-2660
DESIGN SUPERVISED BY Ken McKinna, P.E. (757) 956-3271
DESIGN BY N. Diane Geauge (757) 925-3624 (Hampton Roads District)

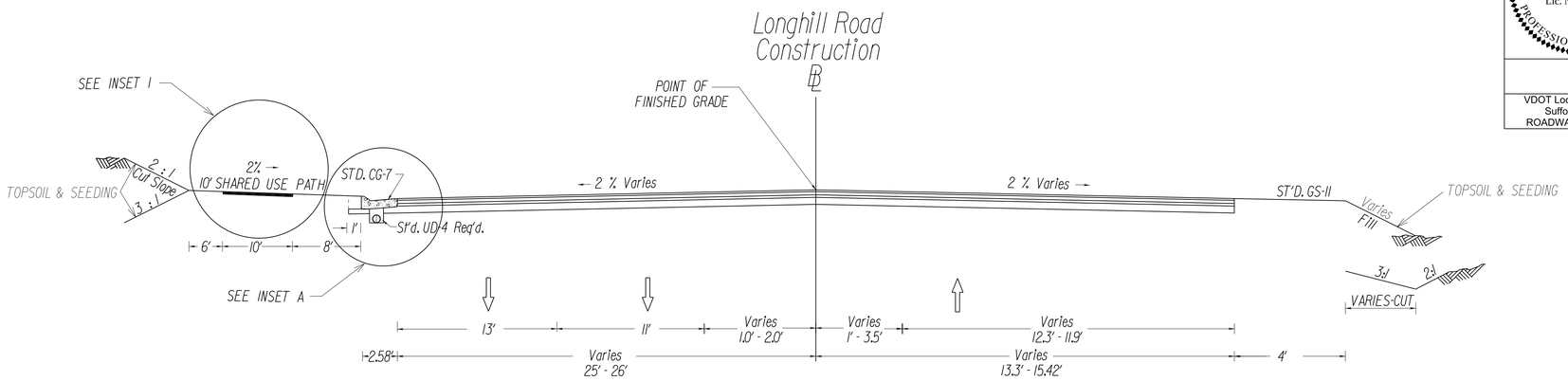
TYPICAL SECTIONS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	2A

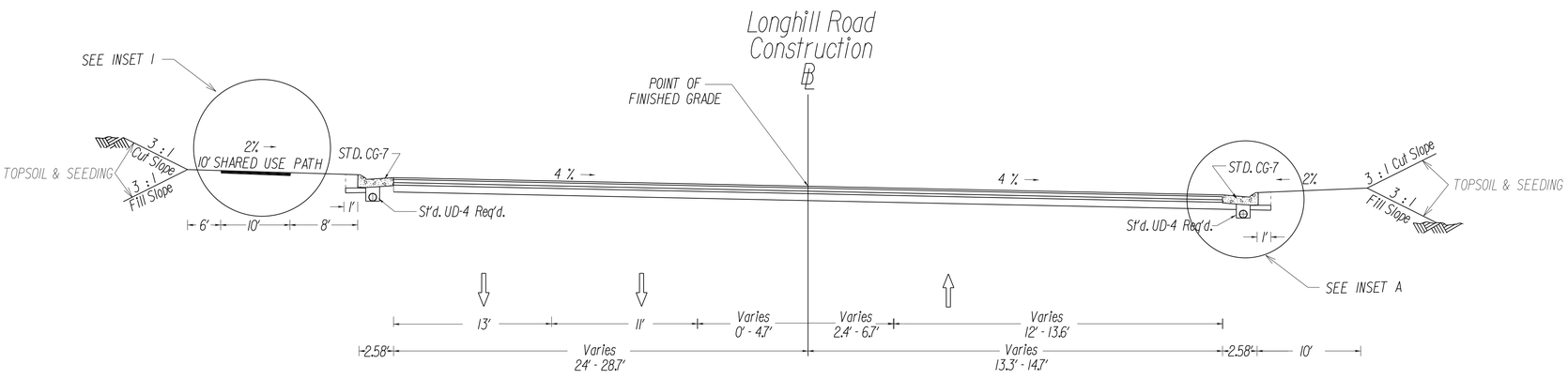
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA — Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

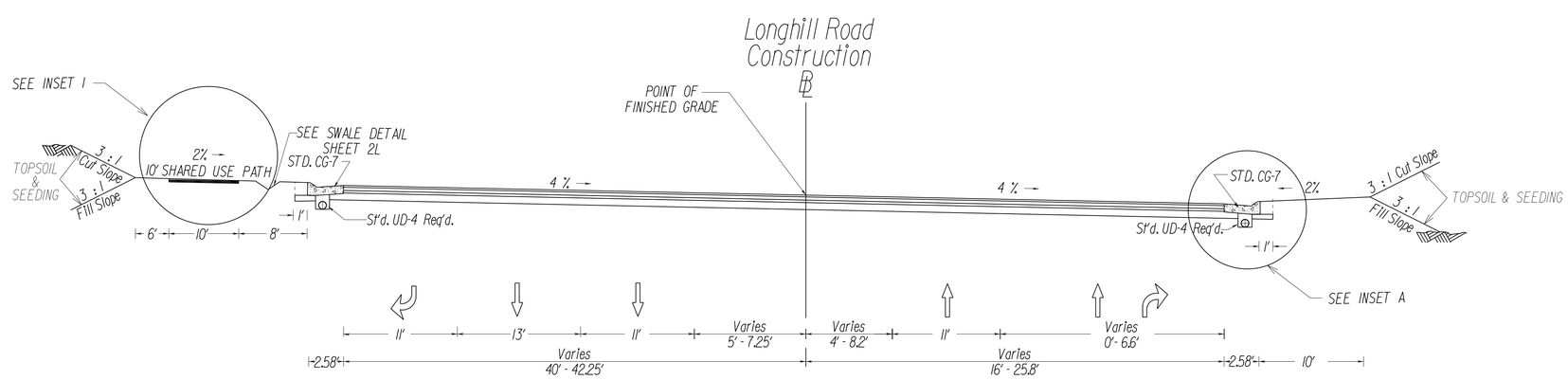
COMMONWEALTH OF VIRGINIA — THOMAS RICHARD TATE — Lic. No. 026620 — PROFESSIONAL ENGINEER
VDOT Materials, Suffolk, Virginia — MATERIALS ENGINEER



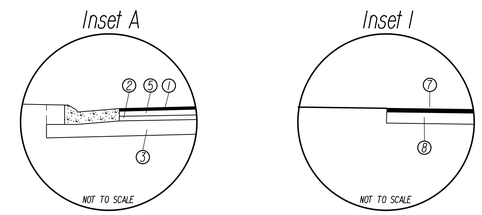
FROM Station 219+35.80 TO Station 222+18.13
N.T.S.



FROM Station 222+18.13 TO Station 223+75.00
N.T.S.



FROM Station 223+75.00 TO Station 224+93.30
N.T.S.



LEGEND

1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
5. 2" of Asphalt Concrete Type IM-19.0A @ 220 lbs/yd^2
7. 2" of Asphalt Concrete Type SM-9.5A @ 220 lbs/yd^2
8. 6" of Aggregate Base Material RAP

NOTES:

1. Remove a minimum of 0.50' (6") of topsoil and rootmat.
2. The RAP base material used in the shared use path shall be free of deleterious materials. It shall meet the gradation requirements of VDOT Aggregate Base Material Size No. 21A or Size 21B in the 2017 VDOT Road & Bridge Specifications Section 208 Table II-9 or as approved by the District Materials Engineer.

INDEX OF TYPICALS

FROM	TO	SHEET NO.
219+35.80	222+18.13	2A
222+18.13	223+75.00	2A
223+75.00	224+93.30	2A
224+93.30	225+93.10	2B
225+93.10	228+50.00	2B
228+50.00	231+06.11	2B
231+06.11	232+96.29	2C
232+96.29	235+42.00	2C
235+42.00	237+89.00	2D
237+89.00	238+79.00	2D
WILLIAMSBURG PLANT. DR.		2D
ROUNDABOUT		2E
240+04.50	242+75.00	2F
242+75.00	243+50.00	2F
243+50.00	244+44.80	2G
244+44.80	247+08.26	2G
247+08.26	249+60.00	2C
249+60.00	253+27.86	2C
253+27.86	254+27.45	2G
OLDE TOWNE RD		2G
DEVON RD		2H
		2I

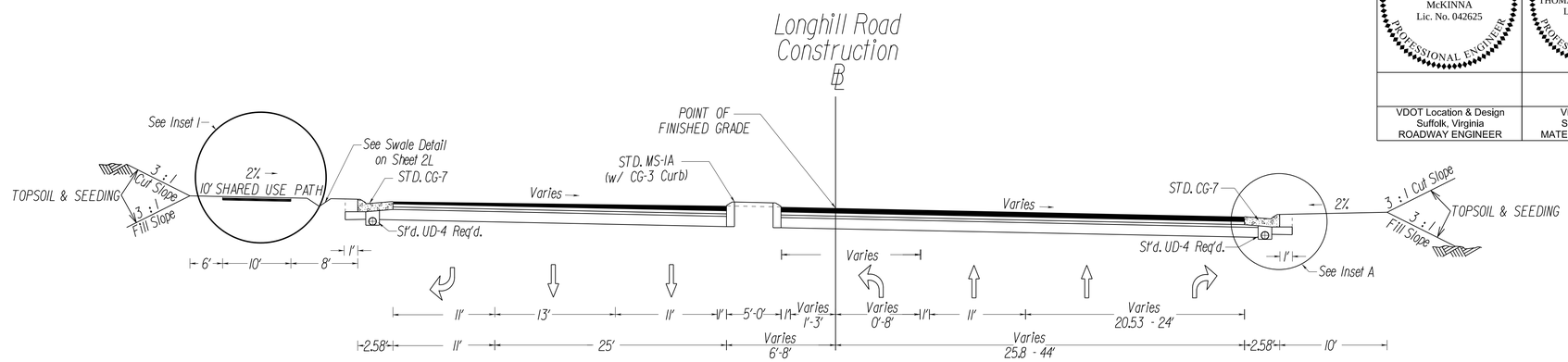
PROJECT MANAGER Kenneth McKinna, P.E. (757) 925-2406 (Hampton Roads District)
SURVEYED BY Danny Williams, L.S. (757) 925-2657 (Hampton Roads District)
DESIGN SUPERVISED BY Kenneth McKinna, P.E. (757) 925-2406 (Hampton Roads District)
DESIGN BY N. Diane Geauge (757) 925-3624 (Hampton Roads District)

TYPICAL SECTIONS

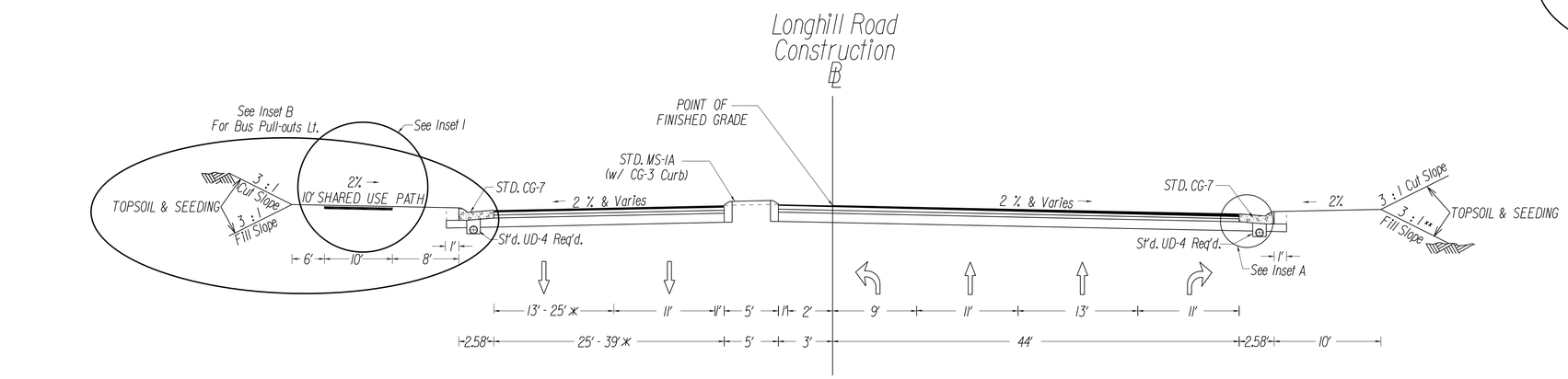
COMMONWEALTH OF VIRGINIA KENNETH DAVID McKINNA Lic. No. 042625 PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA THOMAS RICHARD TATE Lic. No. 026620 PROFESSIONAL ENGINEER
VDOT Location & Design Suffolk, Virginia ROADWAY ENGINEER	VDOT Materials Suffolk, Virginia MATERIALS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	2B

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

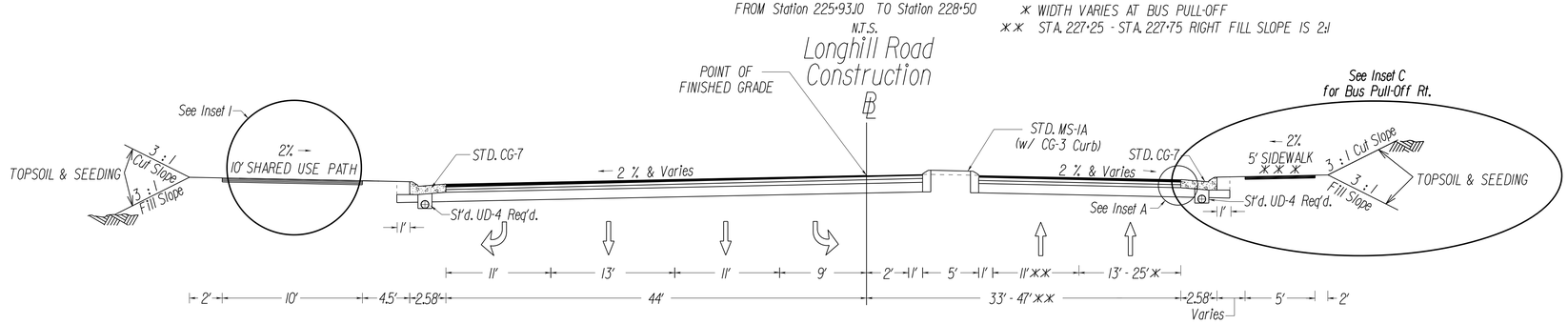


FROM Station 224+93.30 TO Station 225+93.10
N.T.S.



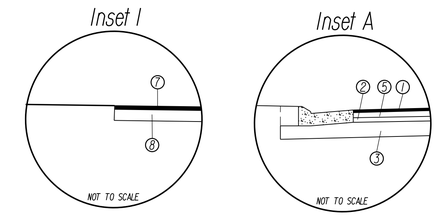
FROM Station 225+93.10 TO Station 228+50
N.T.S.

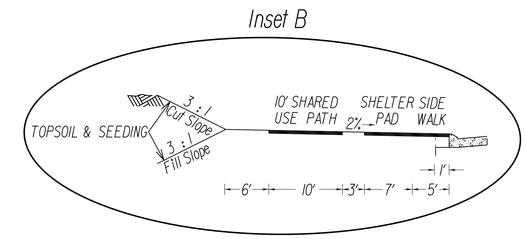
* WIDTH VARIES AT BUS PULL-OFF
** STA. 227+25 - STA. 227+75 RIGHT FILL SLOPE IS 2:1



FROM Station 228+50 TO Station 231+06.11
N.T.S.

* WIDTH VARIES AT BUS PULL-OFF
** STA. 229+31.83 INCREASE WIDTH BY 1'
*** SIDEWALK ENDS AT STA. 230+33.00



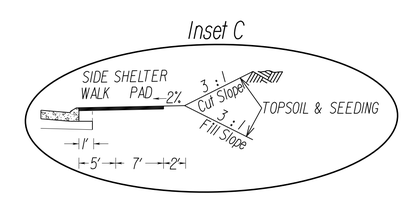


LEGEND

1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
5. 2" of Asphalt Concrete Type IM-19.0A @ 220 lbs/yd^2
7. 2" of Asphalt Concrete Type SM-9.5A @ 220 lbs/yd^2
8. 6" of Aggregate Base Material RAP

NOTES:

1. Remove a minimum of 0.50' (6") of topsoil and rootmat.
2. Hydro.Cement Concrete Sidewalk 7" req'd for sidewalk and shelter pad.
3. The RAP base material used in the shared use path shall be free of deleterious materials. It shall meet the gradation requirements of VDOT Aggregate Base Material Size No. 21A or Size 21B in the 2017 VDOT Road & Bridge Specifications Section 208 Table 11-9 or as approved by the District Materials Engineer.



PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY Danny Williams, L.S. (757) 925-2657 (Hampton Roads District)
DESIGN SUPERVISED BY Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
DESIGN BY N. Diane Geauge (757) 956-3263 (Hampton Roads District)

TYPICAL SECTIONS

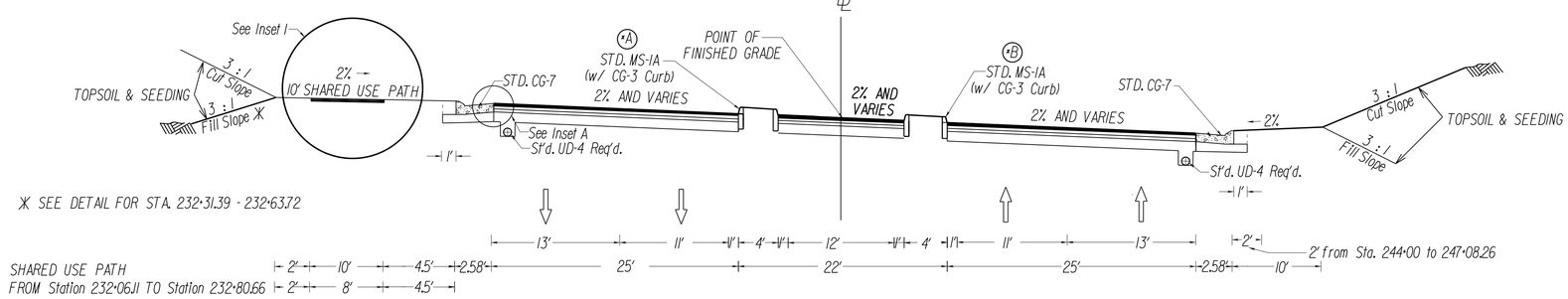
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	2C

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — THOMAS RICHARD TATE Lic. No. 026620 — PROFESSIONAL ENGINEER
VDOT Materials, Suffolk, Virginia — MATERIALS ENGINEER

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

Longhill Road Construction



✗ SEE DETAIL FOR STA. 232+31.39 - 232+63.72

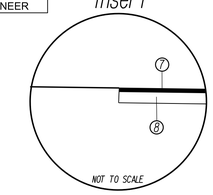
SHARED USE PATH
FROM Station 232+06.11 TO Station 232+80.66

FROM Station 231+06.11 TO Station 232+96.29
FROM Station 244+44.80 Station 247+08.26
N.T.S.

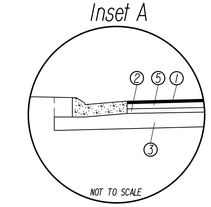
•A -DENOTES THIS LOCATION ONLY
•B -DENOTES THIS LOCATION ONLY (Superelevation is opposite from what is depicted)

Note 1: From Sta. 231+06.11 to Sta. 232+06.11 median transitions from •B position to •A position and from 5' width to 4' width.
Note 2: From Sta. 246+08.26 to Sta. 247+08.26 median transitions from •B position to •A position and from 4' width to 5' width.

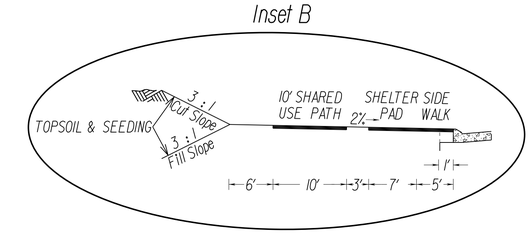
Inset I



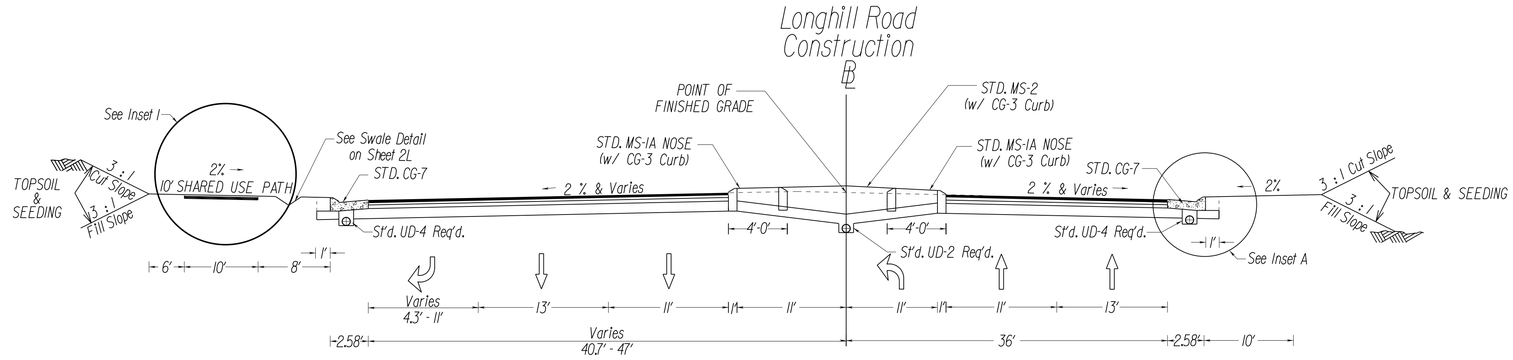
Inset A



Inset B

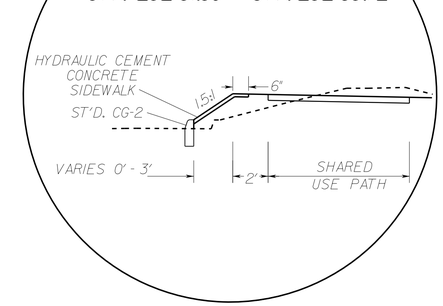


Longhill Road Construction

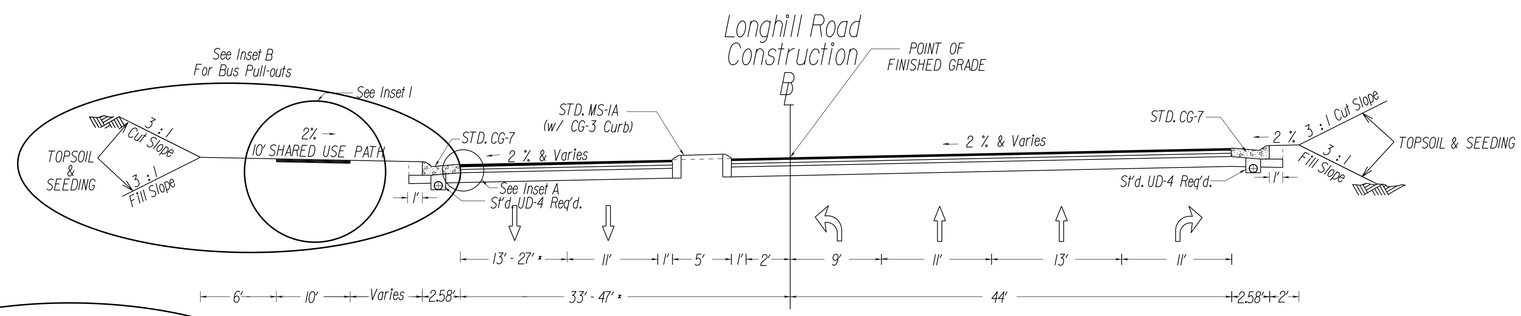


FROM Station 232+96.29 TO Station 235+42
N.T.S.

DETAIL FOR STA. 232+31.39 - STA. 232+63.72

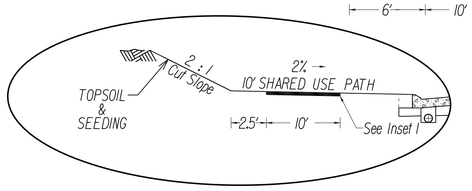


Longhill Road Construction



FROM Station 247+08.26 TO Station 249+60
N.T.S.

* WIDTH VARIES AT BUS PULL-OFF



FROM Station 247+50.00 TO Station 248+50
N.T.S.

LEGEND

1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd²
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
5. 2" of Asphalt Concrete Type IM-19.0A @ 220 lbs/yd²
7. 2" of Asphalt Concrete Type SM-9.5A @ 220 lbs/yd²
8. 6" of Aggregate Base Material RAP

NOTES:

1. Remove a minimum of 0.50' (6") of topsoil and rootmat.
2. The RAP base material used in the shared use path shall be free of deleterious materials. It shall meet the gradation requirements of VDOT Aggregate Base Material Size No.21A or Size 21B in the 2017 VDOT Road & Bridge Specifications Section 208 Table II-9 or as approved by the District Materials Engineer.

PROJECT	SHEET NO.
0612-047-631	2C

PROJECT MANAGER Ken Mcklnna, P.E. (757) 956-3271
SURVEYED BY Dean R. Mlnolx, L.S. (757) 925-2660
DESIGN SUPERVISED BY Ken Mcklnna, P.E. (757) 956-3271
DESIGN BY Rummel, Klepper & Kahl, LLP. (804) 782-1903

TYPICAL SECTIONS

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

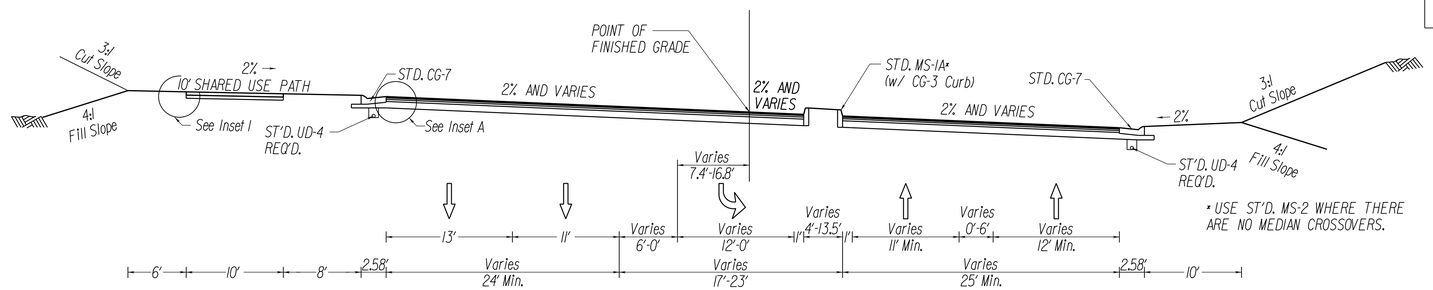
COMMONWEALTH OF VIRGINIA
THOMAS RICHARD TATE
Lic. No. 026620
PROFESSIONAL ENGINEER

VDOT Materials
Suffolk, Virginia
MATERIALS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	2D

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

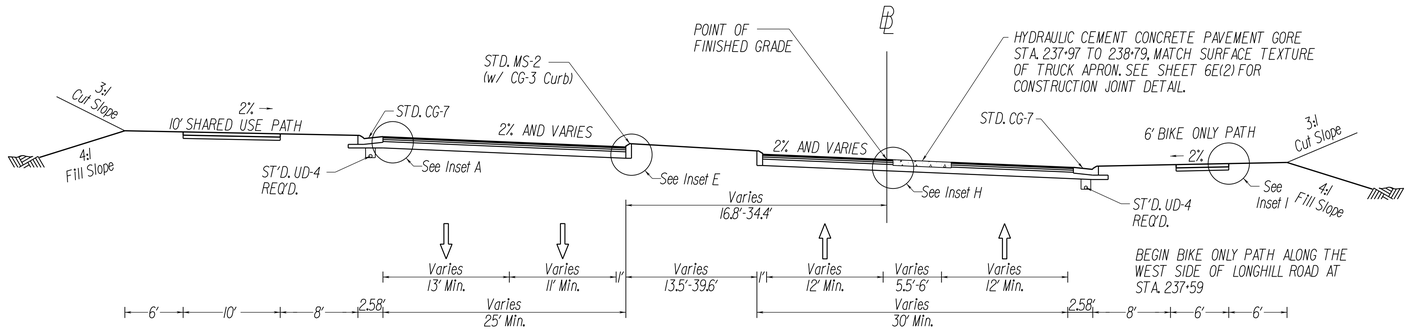
Longhill Road Construction



* USE ST'D. MS-2 WHERE THERE ARE NO MEDIAN CROSSOVERS.

FROM STATION 235+42 TO STATION 237+89
N.T.S.

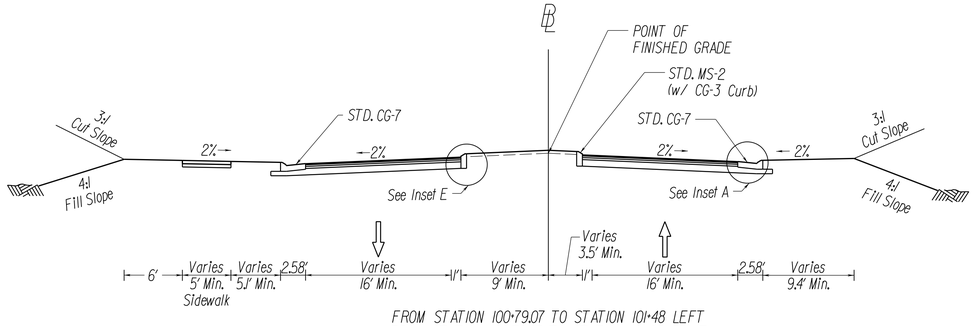
Longhill Road Construction



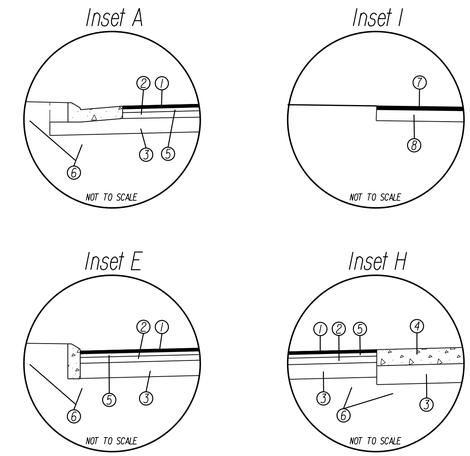
BEGIN BIKE ONLY PATH ALONG THE WEST SIDE OF LONGHILL ROAD AT STA. 237+59

FROM STATION 237+89 TO STATION 238+79
N.T.S.

Williamsburg Plantation Drive Construction



FROM STATION 100+79.07 TO STATION 101+48 LEFT
FROM STATION 100+79.07 TO STATION 101+85 RIGHT
N.T.S.



1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
4. 8" Hydraulic Cement Concrete Pavement
5. 2" Asphalt Concrete Type 19A
6. Approved Regular Borrow (See General Note G-6 on Sheet 2)
7. 2" of Asphalt Concrete Type SM-9.5A @ 165 lbs/yd^2
8. 6" of Aggregate Base Material RAP

NOTES:

Remove a minimum of 0.50' (6") of topsoil and rootmat.

The RAP base material used in the shared-use path shall be free of deleterious material. It shall meet the gradation requirements of VDOT Aggregate Base Material Size No. 21A or 21B in the 2017 VDOT Road and Bridge Specifications, Section 208, Table II-9 or as approved.

PROJECT	SHEET NO.
0612-047-631	2D

PROJECT MANAGER Kenneth D. McKinna, P.E. (757) 956-3271 (Hampton Rds)
SURVEYED BY Dean R. Minnix, L.S. (757) 925-2660 (Hampton Rds)
DESIGN SUPERVISED BY Kenneth D. McKinna, P.E. (757) 956-3271 (Hampton Rds)
DESIGN BY Rummel, Klepper & Kahl, LLP. (804) 782-1903

TYPICAL SECTIONS

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

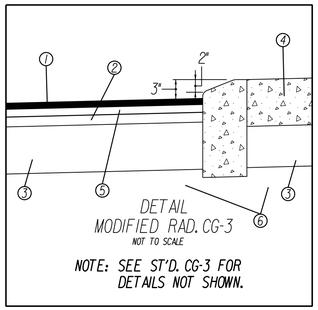
Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

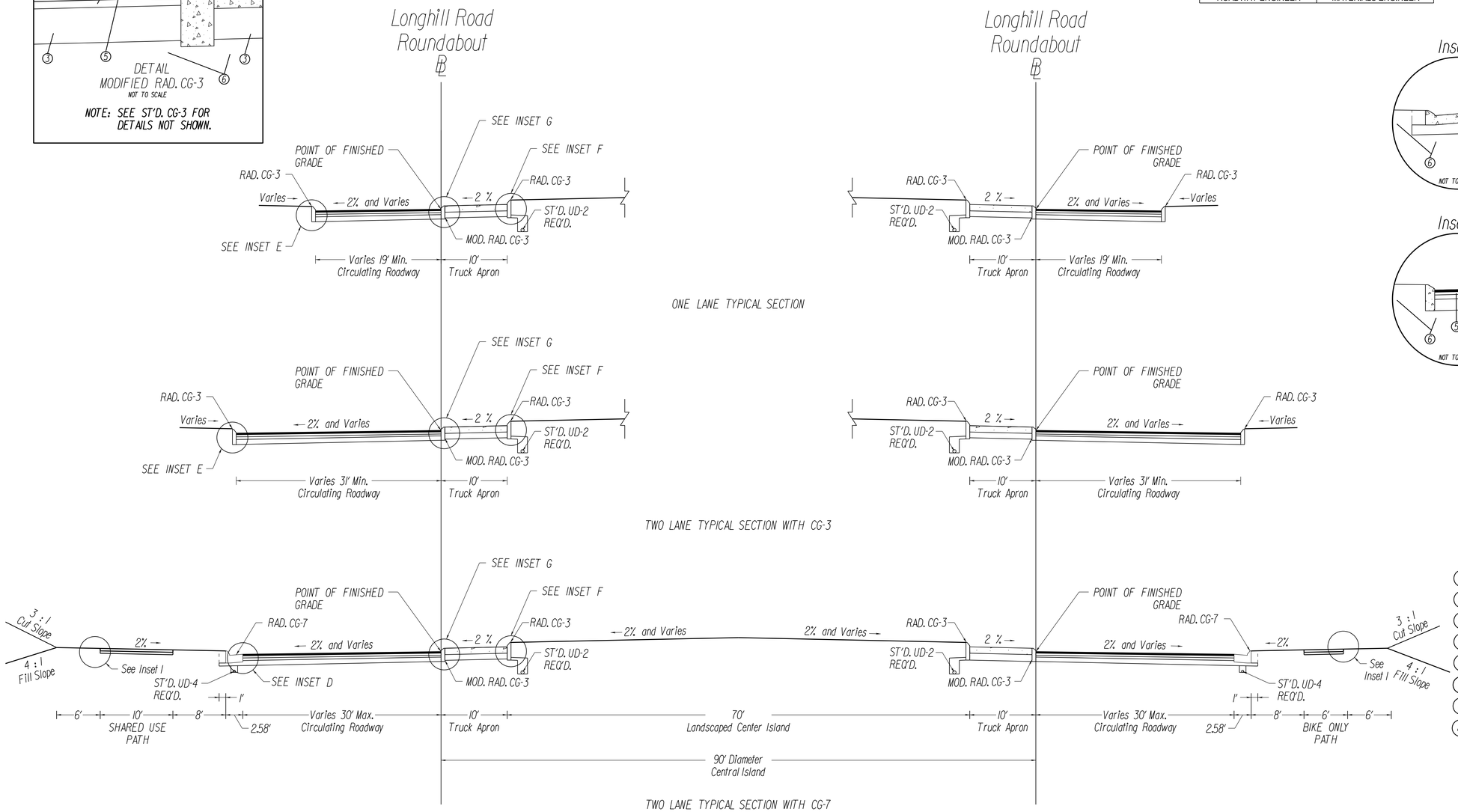
COMMONWEALTH OF VIRGINIA
THOMAS RICHARD TATE
Lic. No. 026620
PROFESSIONAL ENGINEER

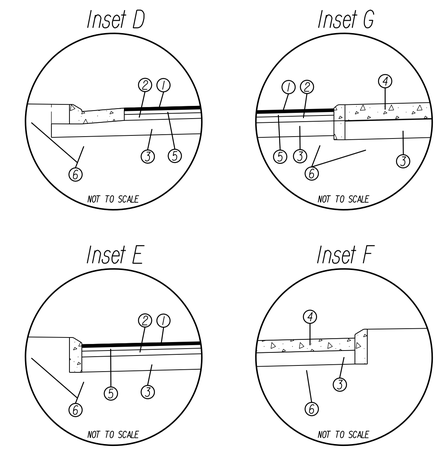
VDOT Materials
Suffolk, Virginia
MATERIALS ENGINEER

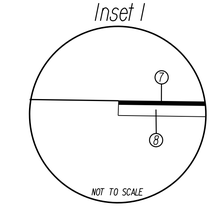
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	0612	0612-047-631, RW-201 C-501	2E

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









1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
4. 8" Hydraulic Cement Concrete Pavement
5. 2" Asphalt Concrete Type 19A
6. Approved Regular Borrow (See General Note G-6 on Sheet 2)
7. 2" of Asphalt Concrete Type SM-9.5A @ 165 lbs/yd^2
8. 6" of Aggregate Base Material RAP

NOTES:

Remove a minimum of 0.50' (6") of topsoil and rootmat.

The RAP base material used in the shared-use path shall be free of deleterious material. It shall meet the gradation requirements of VDOT Aggregate Base Material Size No. 21A or 21B in the 2017 VDOT Road and Bridge Specifications, Section 208, Table II-9 or as approved.

See Sheet 6E(1) for truck apron construction joint detail.

LONGHILL RD. ROUNDABOUT
℄ STA. 1+00.00 TO STA. 3+82.74

	PROJECT	SHEET NO.
	0612-047-631	2E

PROJECT MANAGER Ken Mckinney, P.E. (757) 956-3271
SURVEYED BY Dean R. Minnix, L.S. (757) 925-2660
DESIGN SUPERVISED BY Ken Mckinney, P.E. (757) 956-3271
DESIGN BY Rummel, Klepper & Kahl, LLP (804) 782-1903

TYPICAL SECTIONS

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

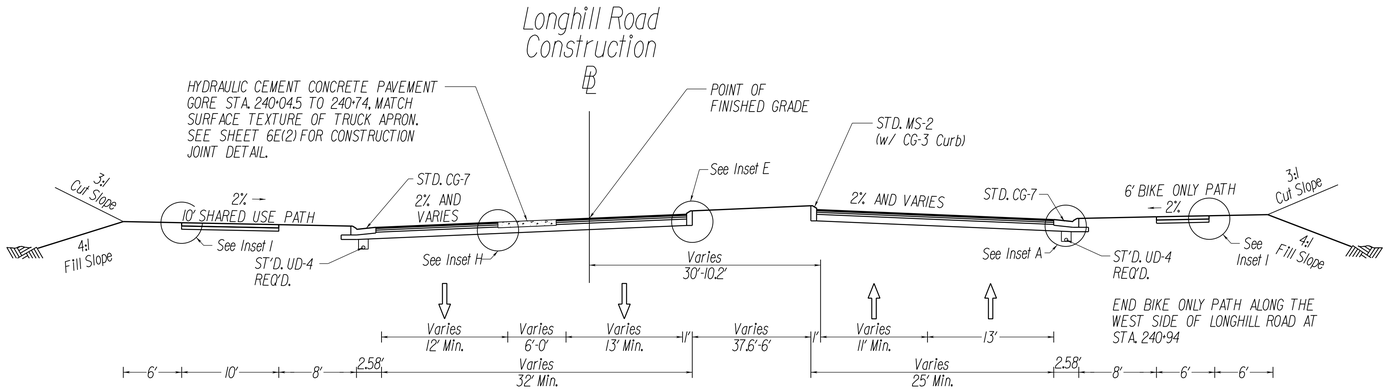
Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
THOMAS RICHARD TATE
Lic. No. 026620
PROFESSIONAL ENGINEER

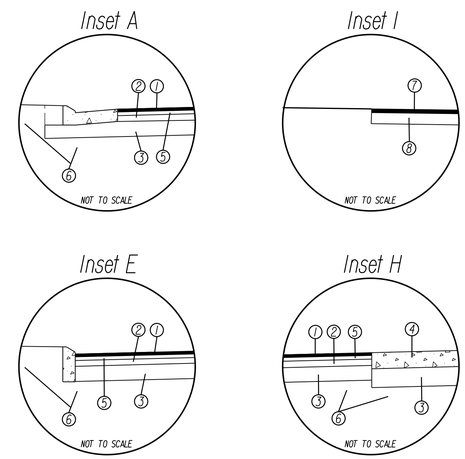
VDOT Materials
Suffolk, Virginia
MATERIALS ENGINEER

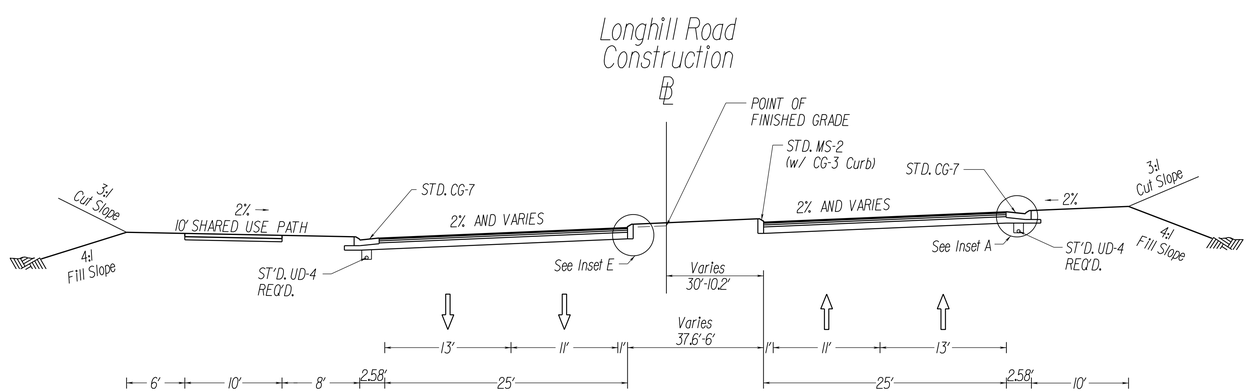
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	2F

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



FROM STATION 240+04.5 TO STATION 242+75
N.T.S.





FROM STATION 242+75 TO STATION 243+50
N.T.S.

1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
4. 8" Hydraulic Cement Concrete Pavement
5. 2" Asphalt Concrete Type 19A
6. Approved Regular Borrow (See General Note G-6 on Sheet 2)
7. 2" of Asphalt Concrete Type SM-9.5A @ 165 lbs/yd^2
8. 6" of Aggregate Base Material RAP

NOTES:

Remove a minimum of 0.50' (6") of topsoil and rootmat.

The RAP base material used in the shared-use path shall be free of deleterious material. It shall meet the gradation requirements of VDOT Aggregrate Base Material Size No. 21A or 21B in the 2017 VDOT Road and Bridge Specifications, Section 208, Table 11-9 or as approved.

PROJECT	SHEET NO.
0612-047-631	2F

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY Danny Williams, L.S. (757) 925-2657 (Hampton Roads District)
DESIGN SUPERVISED BY Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
DESIGNED BY N. Diane Geauge (757) 956-3263 (Hampton Roads District)

TYPICAL SECTIONS

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

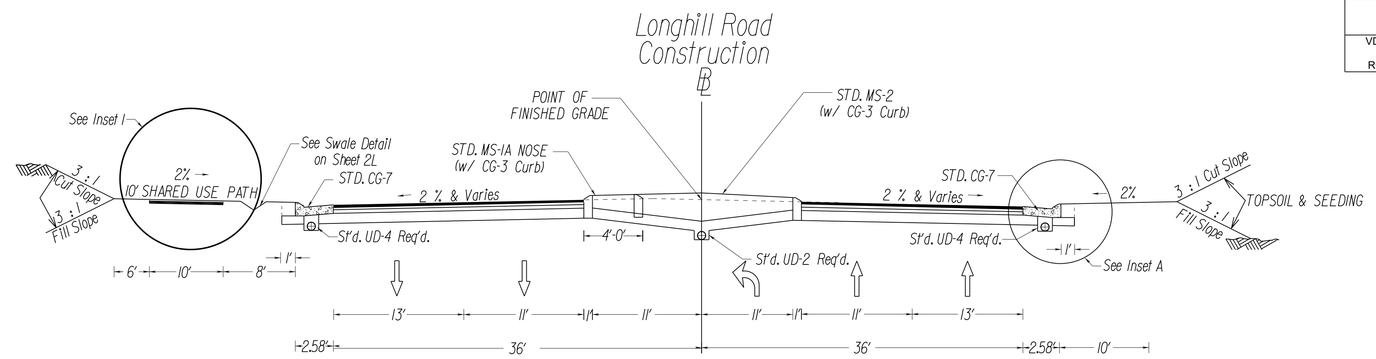
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
THOMAS RICHARD TATE
Lic. No. 026620
PROFESSIONAL ENGINEER

VDOT Materials
Suffolk, Virginia
MATERIALS ENGINEER

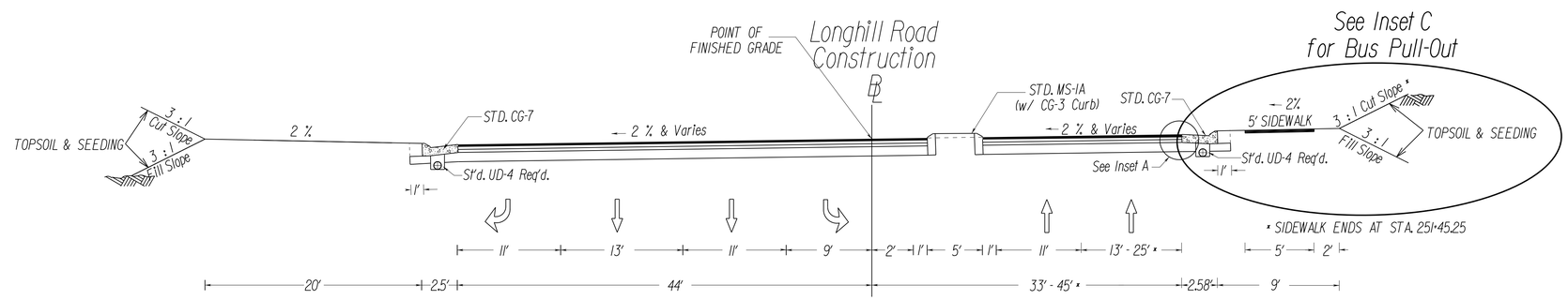
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	2G

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



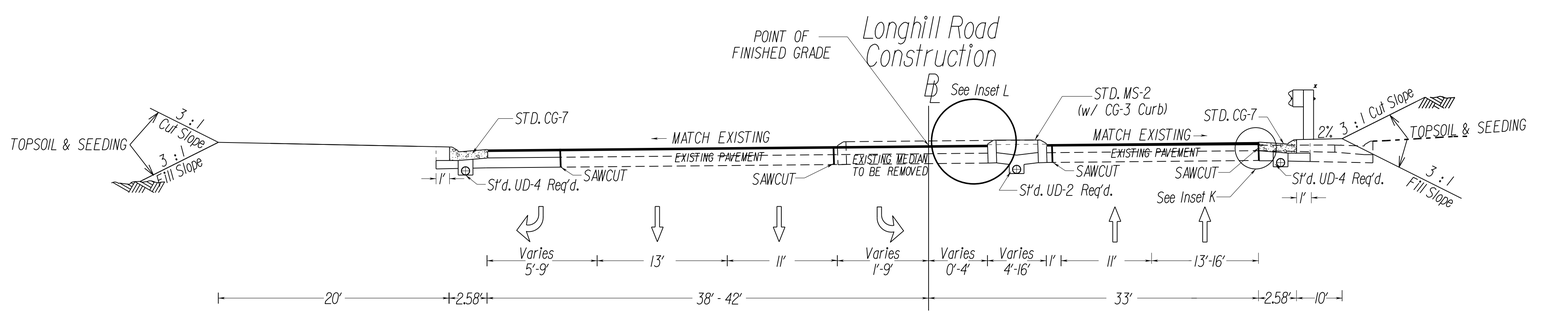
FROM Station 243+50.00 TO Station 244+44.80
N.T.S.

* MEDIAN WIDTH VARIES FROM 16.7' AT STA. 243+50 TO 19.8' AT STA. 244+12.59



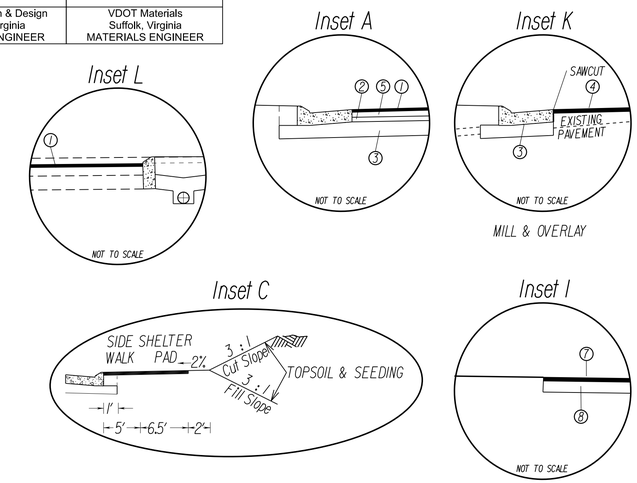
FROM Station 249+60.00 TO Station 253+27.86
N.T.S.

* WIDTH VARIES AT BUS PULL-OFF



FROM Station 253+27.86 TO Station 254+27.45
N.T.S.

*BEGIN ST'D. GR-MGS2 AND GR-MGS1 AT STA. 251+94.00 RT.



LEGEND

1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd²
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
4. Variable depth milling 0"-2" and 1.5" of Asphalt Concrete SM-9.5D @ 165 lbs/yd
5. 2" of Asphalt Concrete Type IM-19.0A @ 220 lbs/yd²
7. 2" of Asphalt Concrete Type SM-9.5A @ 220 lbs/yd²
8. 6" of Aggregate Base Material RAP

NOTES:

1. Remove a minimum of 0.50' (6") of topsoil and rootmat.
2. Hydro.Cement Concrete Sidewalk 7" req'd for sidewalk and shelter pad.
3. The RAP base material used in the shared use path shall be free of deleterious materials. It shall meet the gradation requirements of VDOT Aggregate Base Material Size No. 21A or Size 21B in the 2017 VDOT Road & Bridge Specifications Section 208 Table 11-9 or as approved by the District Materials Engineer.

PROJECT	SHEET NO.
0612-047-631	2G

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY Danny Williams, L.S. (757) 925-2657 (Hampton Roads District)
DESIGN SUPERVISED BY Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
DESIGN BY N. Diane Geauge (757) 956-3263 (Hampton Roads District)

TYPICAL SECTIONS

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

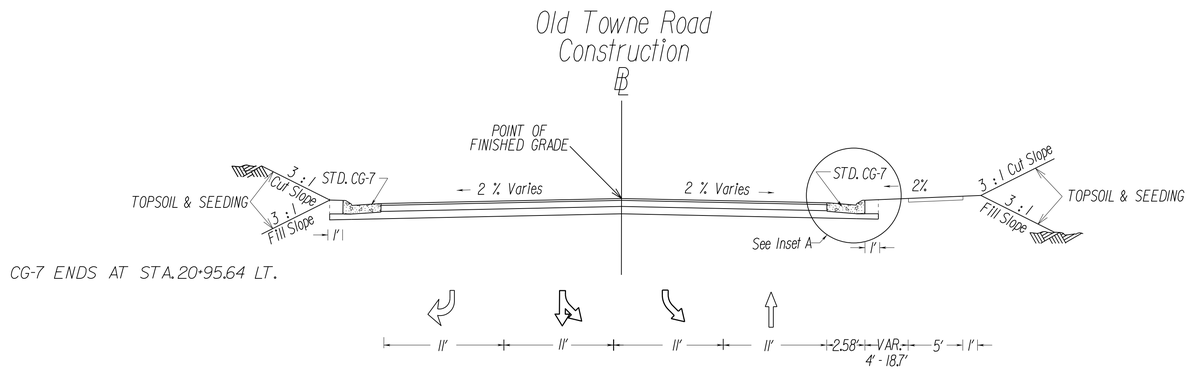
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
THOMAS RICHARD TATE
Lic. No. 026620
PROFESSIONAL ENGINEER

VDOT Materials
Suffolk, Virginia
MATERIALS ENGINEER

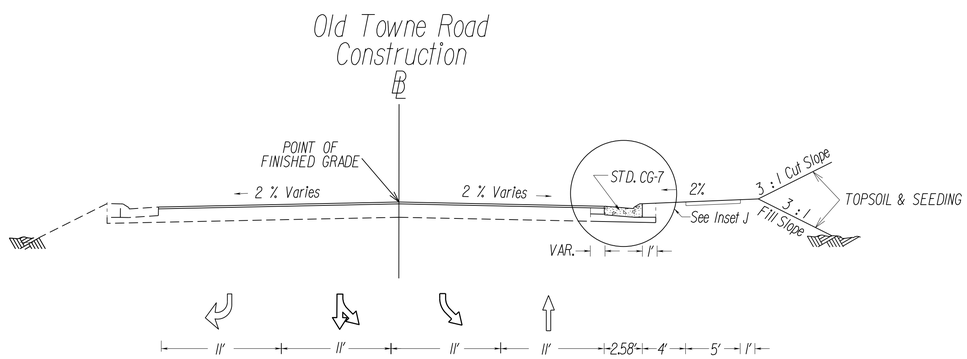
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	2H

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

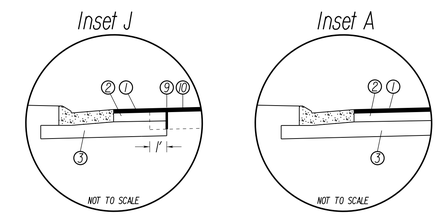


CG-7 ENDS AT STA. 20+95.64 LT.

FROM Station 20+48.78 TO Station 21+28.04
N.T.S.



FROM Station 21+28.04 TO Station 26+17.00
N.T.S.



NOTES:

1. Remove a minimum of 0.50' (6") of topsoil and rootmat.
2. Hydro. Cement Concrete Sidewalk 4" req'd for sidewalk.

LEGEND

1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2
2. 4" of Asphalt Concrete Type BM-25.0A
3. 8" of Aggregate Base Material Type I No. 21B
9. Sawcut
10. Flexible Pavement Planning (0" - 2")

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY Danny Williams, L.S. (757) 925-2657 (Hampton Roads District)
DESIGN SUPERVISED BY Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
DESIGNED BY N. Diane Geauge (757) 956-3263 (Hampton Roads District)

TYPICAL SECTIONS

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
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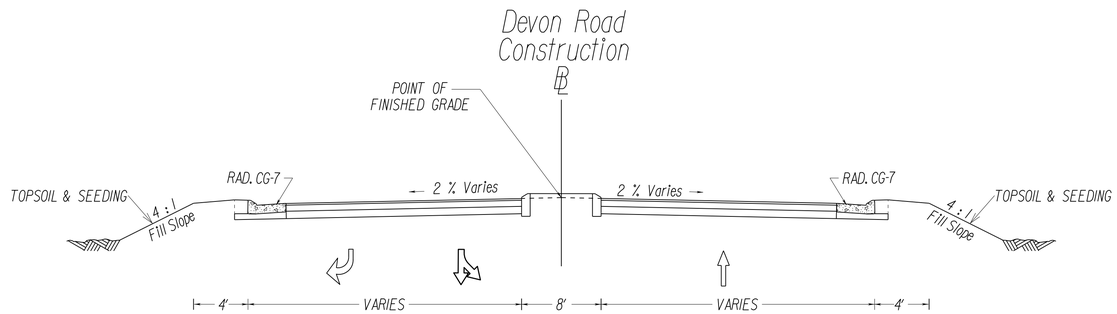
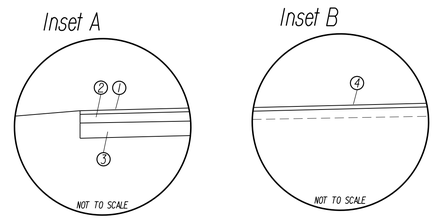
VDOT Materials
Suffolk, Virginia
MATERIALS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501.	2-1

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



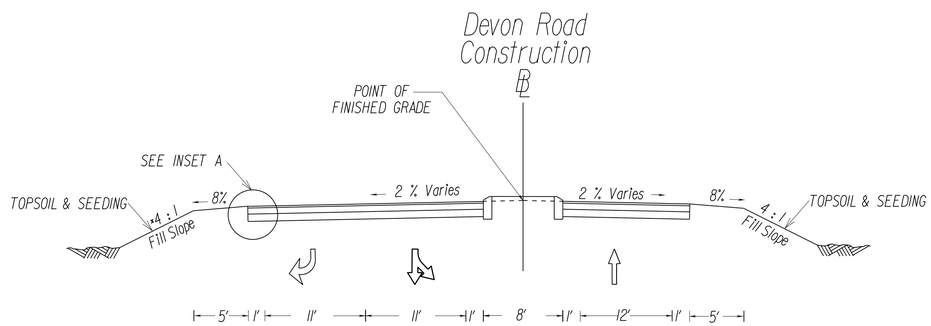
RAISED LANDSCAPE MEDIAN BEGS. AT STA. 30+52.84 AND ENDS AT STA. 31+18.68
FROM Station 30+39.36 TO Station 30+77.11 Lt.
FROM Station 30+39.36 TO Station 31+01.65 Rt.
N.T.S.



LEGEND

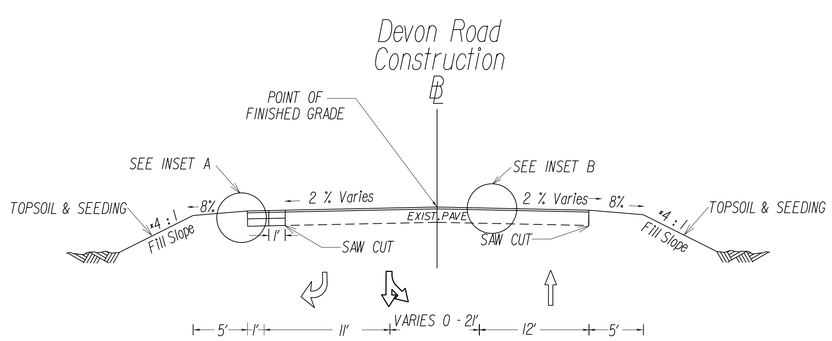
1. 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd
2. 2.5" of Asphalt Concrete Type BM-25.0A
3. 6" of Aggregate Base Material Type I No. 21B
4. Flexible Pavement Planing and 1.5" of Asphalt Concrete Type SM-9.5D @ 165 lbs/yd^2

Notes:
1. Remove a minimum of 0.50' (6") of topsoil and rootmat.



RAISED LANDSCAPE MEDIAN BEGS. AT STA. 30+52.84 AND ENDS AT STA. 31+18.68
FROM Station 30+77.11 TO Station 31+75.75 Lt.
FROM Station 31+01.65 TO Station 31+75.75 Rt.
N.T.S.

*NOTE: FROM STA. 31+50 LT TRANSITION FILL SLOPE TO 2:1 AT STA. 31+75 LT. FROM STA. 31+75 LT TO STA. 32+00 LT TRANSITION FILL SLOPE BACK TO 4:1



FROM Station 31+75.75 TO Station 32+36.93
N.T.S.

PROJECT	SHEET NO.
0612-047-631	2-1

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MICHAEL N. POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

DRAINAGE DESCRIPTIONS

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	2J

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

(4-1) I - ST'D. DI-3B REQ'D. **
L = 6', H = 4.8', INV. 94.00

(4-1)-(4-3) 132' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 94.00, INV.(OUT) 90.10

(4-2) I - ST'D. DI-3A REQ'D. **
H = 3.9', INV. 89.75

(4-2)-(4-5) 22' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 89.75, INV.(OUT) 89.67

(4-3) I - ST'D. DI-5 REQ'D. GRATE TYPE AI
H = 6.3', INV. 87.80 **
I - ST'D. PG-2A TYPE E COVER REQ'D.

(4-3)-(4-4) 168' - 15" STORM SEWER REQ'D.(2' COVER)
INV.(IN) 87.80, INV.(OUT) 87.27

(4-4) I - ST'D. DI-3B REQ'D. **
L = 6', H = 7.9', INV. 83.20, I - ST'D. IS-I REQ'D.

(4-4)-(4-6) 242' - 24" STORM SEWER PIPE REQ'D.(5' COVER)
(780' Radius w/ open joints - using 8' pipe joint lengths)
Joints are to be opened a maximum of 25% of the spigot or tongue length. INV.(IN) 83.20, INV.(OUT) 82.35

(4-5) 8.3' ST'D. MH-I or 2 REQ'D.
I - ST'D. FRAME AND COVER REQ'D.
INV. 84.20, I - ST'D. IS-I REQ'D.

(4-5)-(4-4) 52' - 18" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 84.20, INV.(OUT) 83.70

(4-6) I - ST'D. DI-3B REQ'D. **
L = 6', H = 5.3', INV. 82.25, I - ST'D. IS-I REQ'D.

(4-6)-(4-14) 48' - 24" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 82.25, INV.(OUT) 82.05

(4-7) I - ST'D. DI-12B REQ'D. GRATE TYPE II
H= 3.4', INV. 85.98, L=4'

(4-7)-(4-8) 20' - 15" STORM SEWER REQ'D.(3' COVER)
INV.(IN) 85.98, INV.(OUT) 85.95

(4-8) I - ST'D. DI-2A REQ'D. **
H = 6.0', INV. 85.85, I - ST'D. IS-I REQ'D.

(4-8)-(4-9) 36' - 15" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 85.85, INV.(OUT) 85.75

(4-9) I - ST'D. DI-2A REQ'D.
H = 5.6', INV. 85.50, I - ST'D. IS-I REQ'D.

(4-9)-(4-12) 46' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 85.50, INV.(OUT) 84.55

(4-10) I - ST'D. 18" EW-I REQ'D.
0.697 CY CONCRETE CLASS A3
INV. 89.90

(4-10)-(4-11) 38' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 89.90, INV.(OUT) 87.61

(4-11) I - ST'D. DI-5 REQ'D. GRATE TYPE AI
H=6.4', INV. 84.65
I - ST-D. PG-2A TYPE E COVER

(4-11)-(4-5) 36' - 18" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 84.65, INV.(OUT) 84.30

(4-12) I - ST'D. DI- 3A REQ'D. **
H = 5.2', INV. 83.05

(4-12)-(4-13) 30' - 18" STORM SEWER REQ'D.(4' COVER)
INV.(IN) 83.05, INV.(OUT) 82.98

(4-13) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.7'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 88.28

(4-13)-(4-14) 52' - 18" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 82.88, INV.(OUT) 82.45

(4-14) I - ST'D. DI-3C REQ'D. **
L = 12', H = 5.3', INV. 81.95, I - ST'D. IS-I REQ'D.

(4-14)-(5-3) 48' - 24" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 81.95, INV.(OUT) 81.65

(4-15) 3' CURB CUT REQ'D.
0.16 CY CONCRETE CLASS AE

(5-1) I - ST'D. DI-3C REQ'D. **
L = 6', H = 3.9', INV. 83.60

(5-1)-(5-2) 38' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 83.60, INV.(OUT) 83.51

(5-2) I - ST'D. DI-3B REQ'D.
L = 6', H = 4.3', INV. 83.41 **, I - ST'D. IS-I REQ'D.

(5-2)-(4-12) 58' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 83.41, INV.(OUT) 83.30

(5-3) I - ST'D. DI-3B REQ'D. **
L = 4', H = 5.8', INV. 81.55, I - ST'D. IS-I REQ'D.

(5-3)-(5-27) 18' - 24" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 81.55, INV.(OUT) 80.00

(5-4) 3.7' ST'D. MH-I or 2 REQ'D.
I - ST'D. FRAME AND COVER REQ'D.
INV.(IN) 93.85, I - ST'D. IS-I REQ'D.
(TEMP CONNECT TO EX. PIPE)

(5-4)-(5-13) 26' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 93.85, INV.(OUT) 90.95

(5-5) I - ST'D. DI-3B REQ'D.
L = 6', H = 3.8', INV 85.10
(LESS THAN MINIMUM HEIGHT)

(5-5)-(5-6) 10' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 85.10, INV.(OUT) 85.05

(5-6) ADJUST EXISTING MANHOLE
ADJUST TO GRADE, RAISE 0.17'
I - ST'D. MH-I FRAME AND COVER REQ'D.
PROPOSED GRADE ELEV. 88.68

(5-7) I - ST'D. DI-3B REQ'D.
L = 6', H = 3.3', INV. 85.69
CONNECT TO EXISTING PIPE
(LESS THAN MINIMUM HEIGHT)

(5-8) I - ST'D. DI-I REQ'D.
H = 3.3' INV. 86.58

(5-8)-(5-9) 12' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 86.58, INV.(OUT) 86.54

(5-9) 3' ST'D. MH-I or 2 REQ'D.
I - ST'D. MH-I FRAME AND COVER REQ'D.
INV. 85.79
(CONNECT TO EXISTING PIPE)

(5-9)-(5-7) 4' - 24" STORM SEWER PIPE REQ'D.(1' COVER)
INV.(IN) 85.79, INV.(OUT) 85.69
(LESS THAN MINIMUM COVER)

(5-10) I - ST'D. DI-3A REQ'D.
H=4.30', INV. 86.21

(5-10)-(5-22) 28' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 86.21, INV.(OUT) 86.00

(5-11) I - ST'D. DI-3A REQ'D. **
H = 4.8', INV. 93.99

(5-11)-(5-4) 12' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 93.99, INV.(OUT) 93.95

(5-12) I - ST'D. DI-3B REQ'D. **
L = 6', H = 4.5', INV. 91.20

(5-12)-(5-13) 48' - 15" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 91.20, INV.(OUT) 90.95

(5-13) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 2.0'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6' ***
PROPOSED TOP ELEV. 97.35

(5-13)-(5-19) 124' - 18" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 90.85, INV.(OUT) 90.00

(5-14) I - ST'D. DI-3B REQ'D. **
L = 8', H = 4.1', INV. 88.57

(5-14)-(5-17) 20' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 88.57, INV.(OUT) 88.50

(5-15) I - ST'D. DI-3B REQ'D. **
L = 6', H = 3.9', INV. 86.78

(5-15)-(5-16) 44' - 15" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 86.78, INV.(OUT) 86.26

(5-16) I - ST'D. DI-3BB REQ'D. **
L = 4', H = 11.0' +/-, INV. 79.21
(CONNECT TO EXISTING PIPE)

(5-17) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 3.5'
I - ST'D. MH-I FRAME AND COVER REQ'D.
PROPOSED GRADE ELEV. 92.51

(5-18) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 3'
I - ST'D. MH-I FRAME AND COVER REQ'D.
PROPOSED GRADE ELEV. 90.69

(5-19) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.8'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 95.70

(5-19)-(5-20) 98' - 18" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 89.90, INV.(OUT) 89.10

(5-20) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 3.2'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 93.70

(5-20)-(5-21) 30' - 18" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 88.02, INV.(OUT) 87.76

(5-21) MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 3.3'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 93.30
(CONNECT TO EXISTING PIPE)

(5-22) I - ST'D. DI-3B REQ'D. **
L = 6', H = 3.9', INV. 85.90

(5-22)-(5-23) 150' - 15" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 85.90, INV.(OUT) 85.52

(5-23) I - ST'D. DI-2A REQ'D. **
H = 7.7', INV. 85.52
(CONNECT TO THREE EXIST. PIPE)

(5-24) 272.1' - 15" ABANDON PIPE
12.37 CY FLOWABLE FILL
0.06 CY CONCRETE PLUGS

(5-25) 3.0' ST'D. MH-I or 2 REQ'D.
I-ST'D. FRAME AND COVER REQ'D.
INV. 80.66

(5-25)-(5-26) 6' - 24" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 80.66, INV.(OUT) 79.71
**

(5-26) 8.0' ST'D. MH-I or 2 REQ'D.
I - ST'D. MH-I FRAME AND COVER REQ'D.
INV. 79.21

(5-26)-(5-B1) 192' - 30" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 79.21, INV.(OUT) 75.90
(CONNECT TO EXISTING PIPE)

(5-27) I - ST'D. 24" ES-I REQ'D.
INV. 80.00
5.33 TONS EC-I CLASS I
TYPE A INSTALLATION

(5-28) 17 TONS DRY RIP-RAP REQ'D. CLASS I 26"
12 SY GEOTEXTILE DRAINAGE FABRIC

(5-29) 1 BIO-RETENTION FILTER 1 REQ'D.
(SEE SHEET 2L FOR DETAILS)
3384 CY SWM BASIN EXCAVATION
1815 CY BIO-RETENTION SOIL MIXTURE
978 TONS BEDDING MATERIAL AGGR. NO. 57
476 CY SHREDDED CYPRESS MULCH
605 SY DRAINAGE GEOTEXTILE FABRIC
857' - 6" PERFORATED PIPE REQ'D.
WITH 15 CLEANOUTS
50' - 6" NON-PERFORATED PIPE REQ'D.

(5-30) MODIFY EXISTING INLET
I - ST'D. MH-I FRAME AND COVER REQ'D.
TOP ELEV. 83.77

NOTES:

1. UNLESS OTHERWISE NOTED, ALL PIPE AND STORM SEWER PIPE SHALL HAVE SILT-TIGHT JOINTS.

2. ALL STORM SEWER PIPE SHALL BE CLASS III CONCRETE.

3. TYPE A NOSE SHALL BE USED IN ALL DI-3'S WITH CG-3 & CG-7.

4. ** CONNECT UD - 4 TO DI

5. *** CONNECT UD - 2 TO DI

6. SEE TEMPORARY DESCRIPTION FOR CORRESPONDING TEMPORARY STRUCTURE. SEE SPECIAL PROVISION ON TEMPORARY DRAINAGE.

PROJECT	SHEET NO.
0612-047-631	2J

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MICHAEL N. POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

DRAINAGE DESCRIPTIONS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	2K

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, 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

5B-1 — 5.5' ST'D. MH-1 or 2 REQ'D.
1 - ST'D. MH-1 FRAME AND COVER REQ'D.
INV. 75.80

5B-1 – 5B-2 — 44' - 30" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 75.80, INV.(OUT) 75.30

5B-2 — 1 - ST'D. 30" ES-1 REQ'D.
INV. 75.30
8.33 TONS EC-1 CLASS 1
TYPE A INSTALLATION

5B-3 — 20 TONS DRY RIP-RAP REQ'D.
CLASS 1
30 SY GEOTEXTILE DRAINAGE FABRIC

5B-4 — 24' - 38" x 24" ELLIPTICAL CONC.
CONCRETE ENTRANCE PIPE (1' COVER)

5B-5 — 1 - ST'D. EW-12 REQ'D. INV. 75.30
0.21 CY CONCRETE CLASS A3, SLOPE 2:1

5B-6 — 1 - ST'D. EW-12 REQ'D. INV. 75.30
0.21 CY CONCRETE CLASS A3, SLOPE:2:1

(SEE DRAINAGE DESCRIPTION SHEET 6B FOR STRUCTURES 6-1 to 7-18)

7-1 — 1 - ST'D. DI-3A REQ'D. **
H = 5.9', INV. 76.66

7-1 – 7-7 — 50' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 76.66, INV.(OUT) 76.45

7-2 — 1 - ST'D. DI-3A REQ'D.
H = 5.1', INV.84.02

7-2 – 7-3 — 34' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 84.02, INV.(OUT) 83.62

7-3 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.4'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 87.77

7-3 – 7-4 — 30' - 18" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 81.66, INV.(OUT) 81.06

7-4 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 3.1'
CONVERT MANHOLE TO DI
ADD DI-2A
PROPOSED TOP ELEV. 87.07

7-5 — 1 -ST'D. DI-3B REQ'D.
L = 10', H = 4.2', INV.78.31

7-4 – 7-6 — 126' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 80.96, INV.(OUT) 80.15

7-6 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.7'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 84.45

7-5 – 7-6 — 46' - 18" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 78.31, INV.(OUT) 77.95

7-7 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 2.3'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 80.70

7-6 – 7-7 — 138' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 77.85, INV.(OUT) 76.30

7-7 – 7-8 — 52' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 76.20, INV.(OUT) 75.46

7-8 — 1 - ST'D. DI-5 REQ'D. GRATE TYPE A1
H = 3.3', INV.75.36, 1 - ST'D. IS-1 REQ'D.
1 - ST'D. PG-2A TYPE E COVER REQ'D.

7-8 – 7-9 — 56' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 75.36, INV.(OUT) 73.07

7-9 — 1 - ST'D. DI-3B REQ'D. **
L = 8', H = 4.2', INV. 72.97, 1 - ST'D. IS-1 REQ'D.

7-9 – 8-1 — 142' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 72.97, INV.(OUT) 69.07

8-1 — 1 - ST'D. DI-3B REQ'D. **
L = 8', H = 4.7', INV. 68.47, 1 - ST'D. IS-1 REQ'D.

8-1 – 8-4 — 122' - 24" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 68.47, INV.(OUT) 65.89

8-2 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.1'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 75.37

8-2 – 8-1 — 46' - 15" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 69.37, INV.(OUT) 69.22

8-3 — 1 - ST'D. DI-3B REQ'D. **
L=14', H = 3.9', INV. 62.67

8-3 – 8-5 — 44' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 62.67, INV.(OUT) 62.61

8-4 — 1 - ST'D. DI-3B REQ'D. **
L = 4', H = 4.3', INV.65.76

8-4 – 8-11 — 114' - 24" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 65.76, INV.(OUT) 63.51

8-5 — 1 - ST'D. DI-3B REQ'D. **
L=14', H = 4.5', INV.62.11
(TEMP. CONNECT TO EXIST. PIPE INV. 62.2 ±)

8-5 – 8-6 — 46' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 62.61, INV.(OUT) 62.55

8-6 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.1'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6' ***
PROPOSED TOP ELEV. 67.95

8-6 – 8-7 — 48' - 15" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 62.55, INV.(OUT) 62.49

8-7 — 1 - ST'D.DI-3B REQ'D.
L= 6', H = 5.3', INV. 62.49

8-7 – 8-8 — 98' - 15" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 62.49, INV.(OUT) 62.35

8-8 — MODIFY EXISTING MANHOLE
ADJUST TO GRADE, RAISE 1.1'
CONVERT MANHOLE TO DI
ADD DI-3B, L=6'
PROPOSED TOP ELEV. 68.49

8-8 – 8-12 — 50' - 24" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 61.70, INV.(OUT) 61.15

8-9 — MODIFY EXISTING INLET, ADJUST TO GRADE
1 - ST'D.MH-1 FRAME & COVER TOP ELEV. 72.19
(CONNECT TO MANHOLE)

8-9 – 8-14 — 46' - 18" STORM SEWER PIPE REQ'D.(2' COVER)
INV.(IN) 69.12, INV.(OUT) 68.49
(CONNECT TO EXISTING STRUCTURE)

8-10 — 1 - ST'D. PG-2A TYPE CI D=10" REQ'D.
19 SY CONCRETE CLASS A3

8-11 — 1 - ST'D. DI-3B REQ'D. **
L = 4', H = 4.7', INV.63.41, 1 - ST'D. IS-1 REQ'D.

8-11 – 8-8 — 56' - 24" STORM SEWER PIPE REQ'D.(4' COVER)
INV.(IN) 63.41, INV.(OUT) 61.80

8-12 — 8.2' ST'D. MH-1 OR 2 REQ'D.
1 - ST'D. MH-1 FRAME AND COVER REQ'D.
INV. 61.15

8-12 – 8-25 — 124' - 30" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 61.15, INV.(OUT) 60.80

8-13 — 1 BIO-RETENTION FILTER 2 REQ'D.
(SEE SHEET 2L FOR DETAILS)
2910 CY SWM BASIN EXCAVATION
1020 CY BIO-RETENTION SOIL MIXTURE
705 TONS BEDDING MATERIAL AGGR.NO. 57
264 CY SHREDDED CYPRESS MULCH
2.6 TONS 6" NO. 1 STONE
933 SY GEOTEXTILE DRAINAGE FABRIC
1090 SY LOW PERMEABILITY LINER
632' - 6" PERFORATED REQ'D.
WITH 12 CLEANOUTS

8-14 — 1 - ST'D. DI-3D REQ'D.
H = 3.7', INV. 68.49
(LESS THAN MINIMUM HEIGHT)
(CONNECT TO EXISTING PIPE)

8-15 — 1 - ST'D. DI-3A REQ'D. **
H = 3.8', INV. 69.89
(CONNECT TO EXISTING PIPE)

8-16 — 1 - ST'D. DI-5 REQ'D. GRATE TYPE A1
H=3.8', INV.71.17
1 - ST'D. PG-2A TYPE CI D=10" COVER

8-16 – 8-17 — 12' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 71.17, INV.(OUT) 71.13

8-17 — 1 - ST'D. DI-3A REQ'D. **
H = 6.2', INV. 71.03, 1 - ST'D. IS-1 REQ'D.

8-17 – 8-18 — 118' - 15" STORM SEWER PIPE REQ'D.(3' COVER)
INV.(IN) 71.03, INV.(OUT) 70.69
(CONNECT TO EXISTING STRUCTURE

8-18 — MODIFY EXISTING DI
REPLACE DI TOP W/ ST'D. DI-3A
NEW TOP ELEV. 74.02

8-19 — 1 - ST'D. PG-2A TYPE CI D=10" REQ'D.
73 SY CONCRETE CLASS A3

8-20 — 3' CURB CUT REQ'D.
0.52 CY CONCRETE CLASS A3

8-21 — 8.0' ST'D. MH-1 or 2 REQ'D.
1 - ST'D. MH-1 FRAME AND COVER REQ'D.
INV. 62.36

8-21 – 8-22 — 16' - 24" STORM SEWER PIPE REQ'D.(5' COVER)
INV.(IN) 62.36, INV.(OUT) 60.70

8-22 — 1 - ST'D. 24" ES-1 REQ'D.
5.33 TONS EC-1 CLASS 1 REQ'D.
INV. 60.70, TYPE A INTALLATION

8-23 — 10 TONS DRY RIP-RAP REQ'D.
CLASS 1
2 SY GEOTEXTILE DRAINAGE FABRIC

8-24 — 130 TONS DRY RIP-RAP REQ'D.
CLASS 1
90 SY GEOTEXTILE DRAINAGE FABRIC

8-25 — 8.4' ST'D. MH-1 OR 2 REQ'D.
1 - ST'D. MH-1 FRAME AND COVER REQ'D.
INV. 60.80

8-25 – 8-30 — 18' - 30" STORM SEWER PIPE REQ'D.(6' COVER)
INV.(IN) 60.80, INV.(OUT) 60.70
8.33 TONS EC-1 CLASS 1 REQ'D.
INV. 60.70, TYPE A INSTALLATION

8-26 — ADJUST EXISTING DI
RAISE TOP 0.6' (ELEV. 62.2')
(CONNECT BMP UNDERDRAINS)

8-26 – 8-29 — 38' - 15" STORM SEWER PIPE REQ'D.(9' COVER)
INV.(IN) 56.00, INV.(OUT) 50.88
3.5 CY CLASS A3 CONCRETE CRADLE WITH RUBBER GASKETS REQ'D.

8-27 — 25' - 15" ABANDON PIPE
1.13 CY FLOWABLE FILL
0.06 CY CONCRETE PLUGS

8-28 — 115' - 24" ABANDON PIPE
13.34 CY FLOWABLE FILL
0.10 CY CONCRETE PLUGS

8-29 — 1 - ST'D. 15" ES-1 EQ'D.
2 TONS EC-1 CLASS 1 REQ'D.
INV. 50.88, TYPE A INSTALLATION

8-30 — 1 - ST'D. 30" ES-1 REQ'D.
INV. 60.70
8.33 TONS EC-1 CLASS 1
TYPE A INSTALLATION

8-31 — 130 TONS DRY RIP-RAP REQ'D. CLASS 1
135 SY GEOTEXTILE DRAINAGE FABRIC

8-32 — 10 TONS DRY RIP-RAP REQ'D. CLASS A1 26"

NOTES:

1. UNLESS OTHERWISE NOTED, ALL PIPE AND STORM SEWER PIPE SHALL HAVE SILT-TIGHT JOINTS.
2. ALL STORM SEWER PIPE SHALL BE CLASS III CONCRETE
3. TYPE A NOSE SHALL BE USED IN ALL DI-3'S WITH CG-3 AND CG-7
4. ** CONNECT UD - 4 TO DI
5. *** CONNECT UD - 2 TO DI
6. SEE TEMPORARY DRAINAGE DESCRIPTION FOR CORRESPONDING TEMPORARY STRUCTURE. SEE SPECIAL PROVISION ON TEMPORARY DRAINAGE.

PROJECT	SHEET NO.
0612-047-631	2K

PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MICHAEL N. POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

BIO-RETENTION & DITCH DETAILS

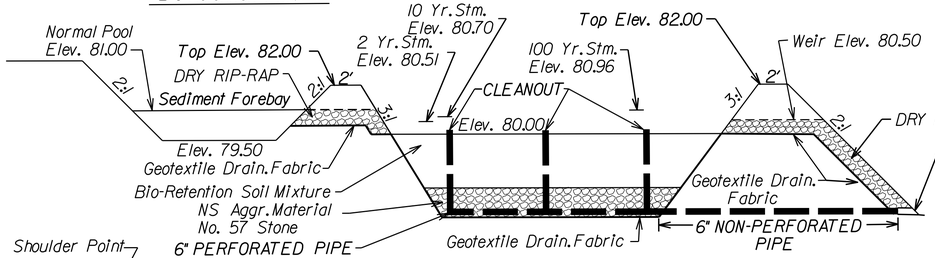
COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULICS DESIGN

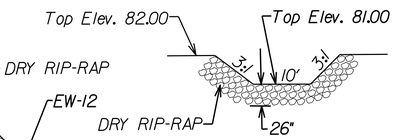
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	2L

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

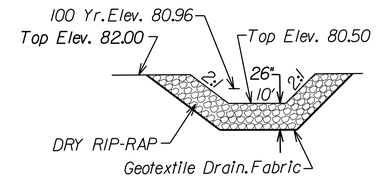
Bio-Retention Filter 1



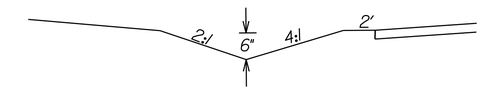
SECTION A - A
NTS
Structure 5-29



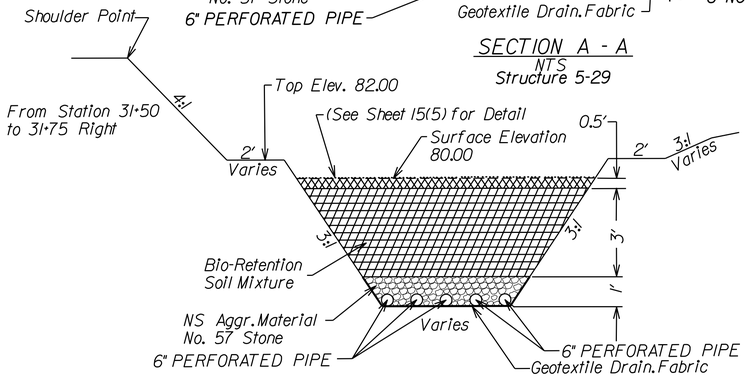
SECTION A2 - A2
NTS
Structure 5-28



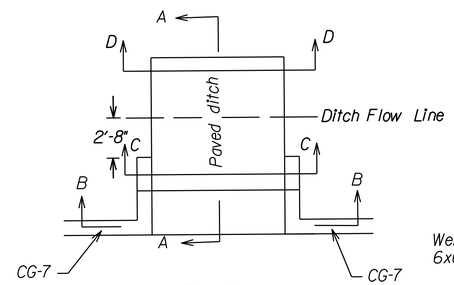
SECTION A3 - A3
EMERGENCY SPILLWAY DETAIL
NTS
Structure 5B-3



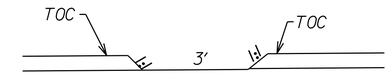
Swale Detail
nts
From Station 224+00 to 225+69 Left



SECTION A1 - A1
Structure 5-29
NTS



Plan View
nts



Section B - B
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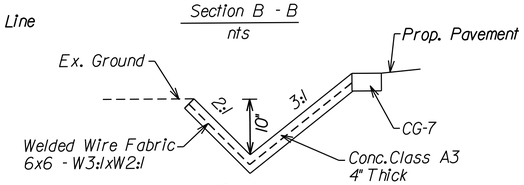

Section A - A
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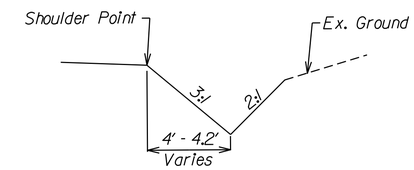
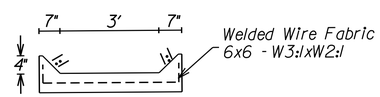
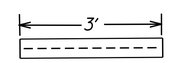


Ditch Detail
nts
From Station 220+25 to 222+00 Right

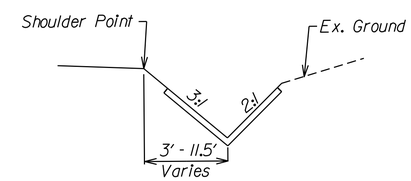


Section C - C
nts



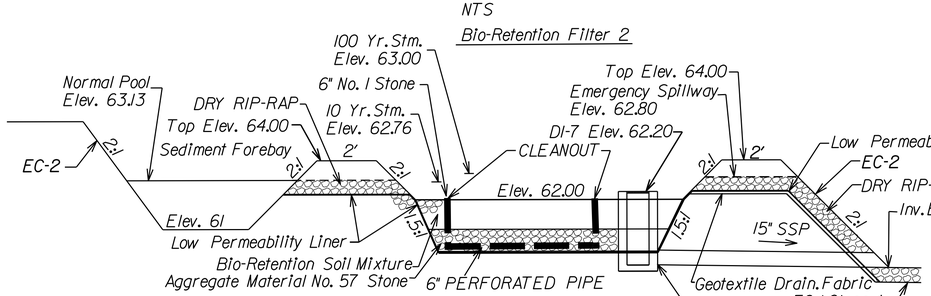
Section D - D
nts

CURB CUT AND PAVED FLUME
Paved Flume Invert is to Match Prop. Ditch

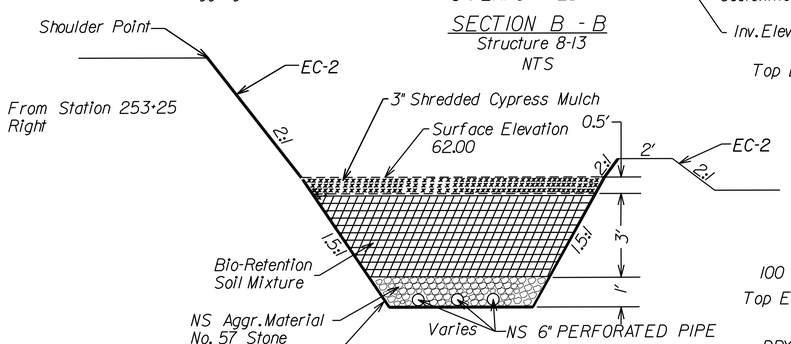


Ditch Detail
PG-2A Type CI D=10"
nts
From Station 247+35 to 249+00 Right

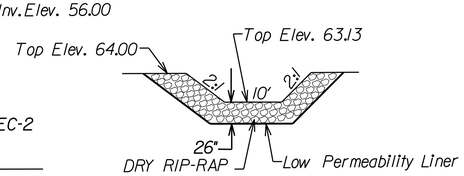
Bio-Retention Filter 2



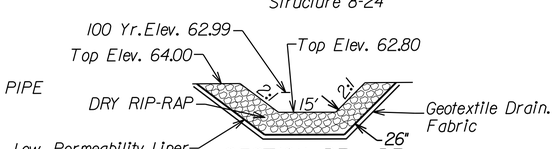
SECTION B - B
Structure 8-13
NTS



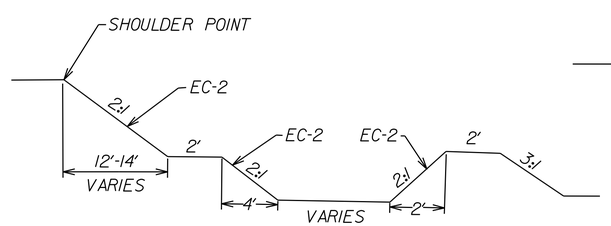
SECTION B1 - B1
Structure 8-13
NTS



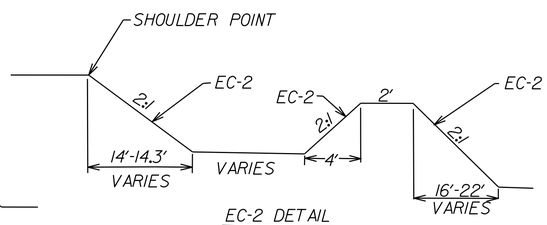
SECTION B2 - B2
NTS
Structure 8-24



SECTION B3 - B3
EMERGENCY SPILLWAY
NTS
Structure 8-26



EC-2 DETAIL
NTS
FROM STATION 226+85 TO 227+85 RT.



EC-2 DETAIL
NTS
FROM STATION 252+00 TO 254+50 RT.

PROJECT	SHEET NO.
0612-047-631	2L

8/30/2018
10:09:18 AM

d100921002md.dgn
Plotted By: WAP04107$

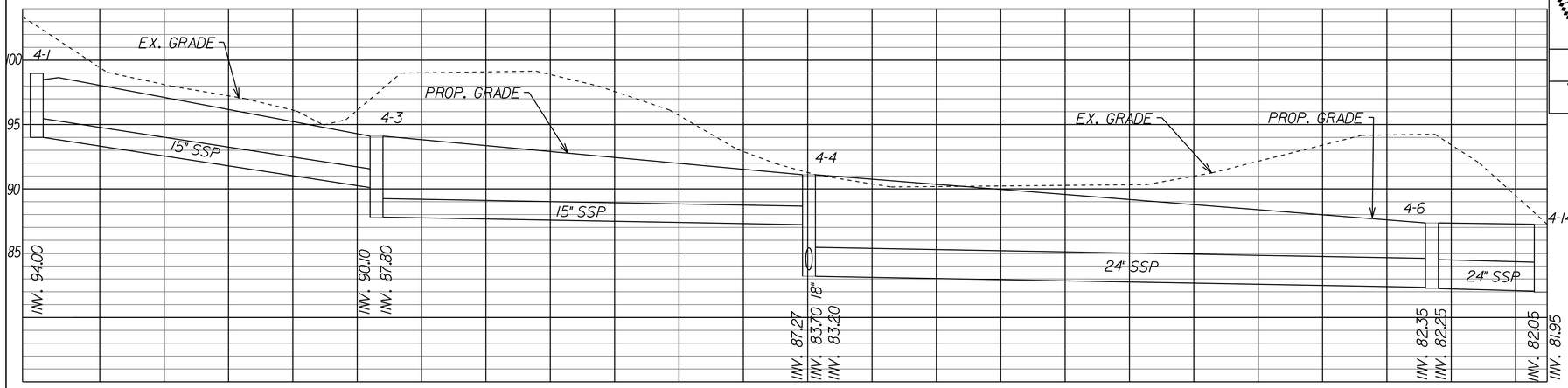
PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MICHAEL N. POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

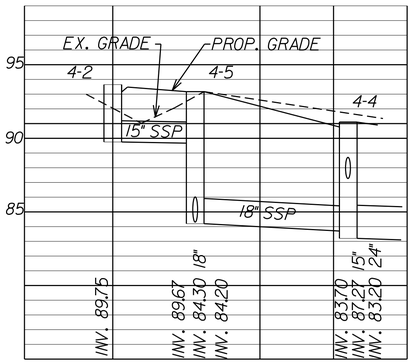
COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

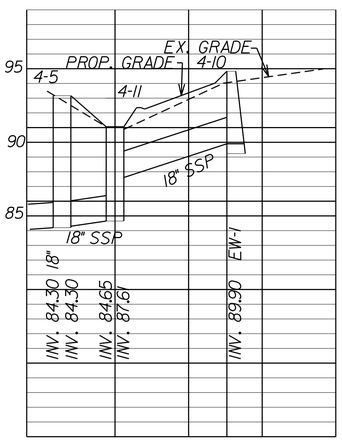
VDOT Location & Design
Suffolk, Virginia
HYDRAULIC DESIGN

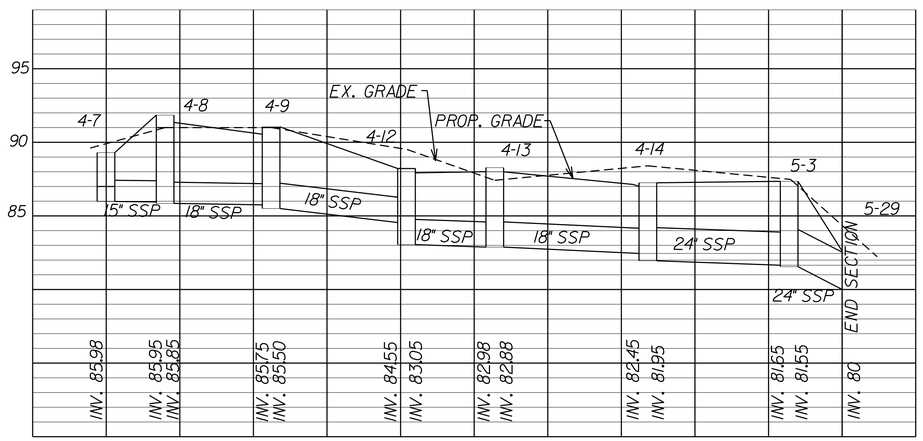
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	2M

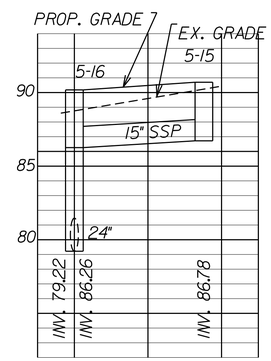
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

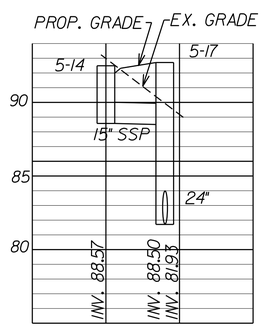


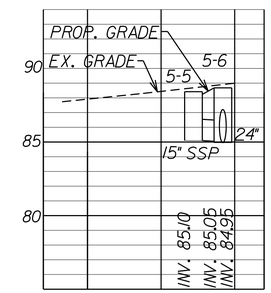


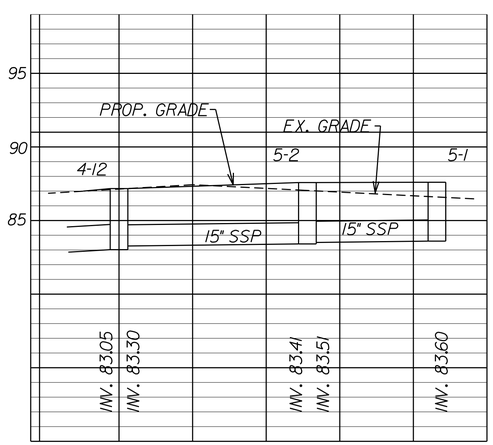


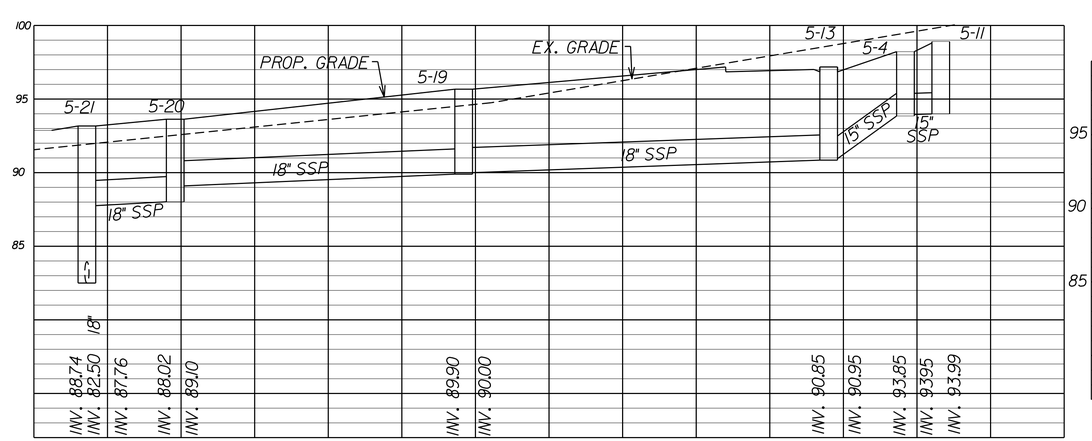


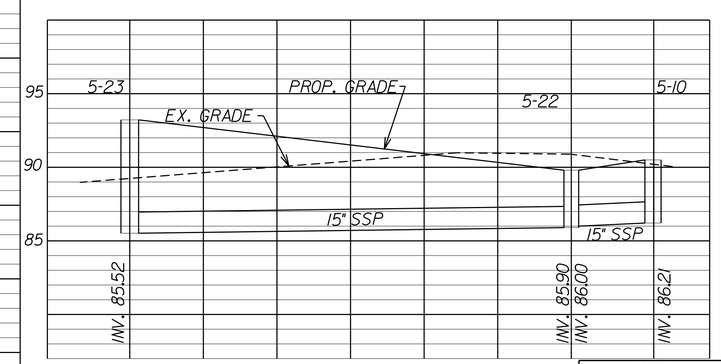












NOTE:
NOT TO SCALE

PROJECT	SHEET NO.
0612-047-631	2M

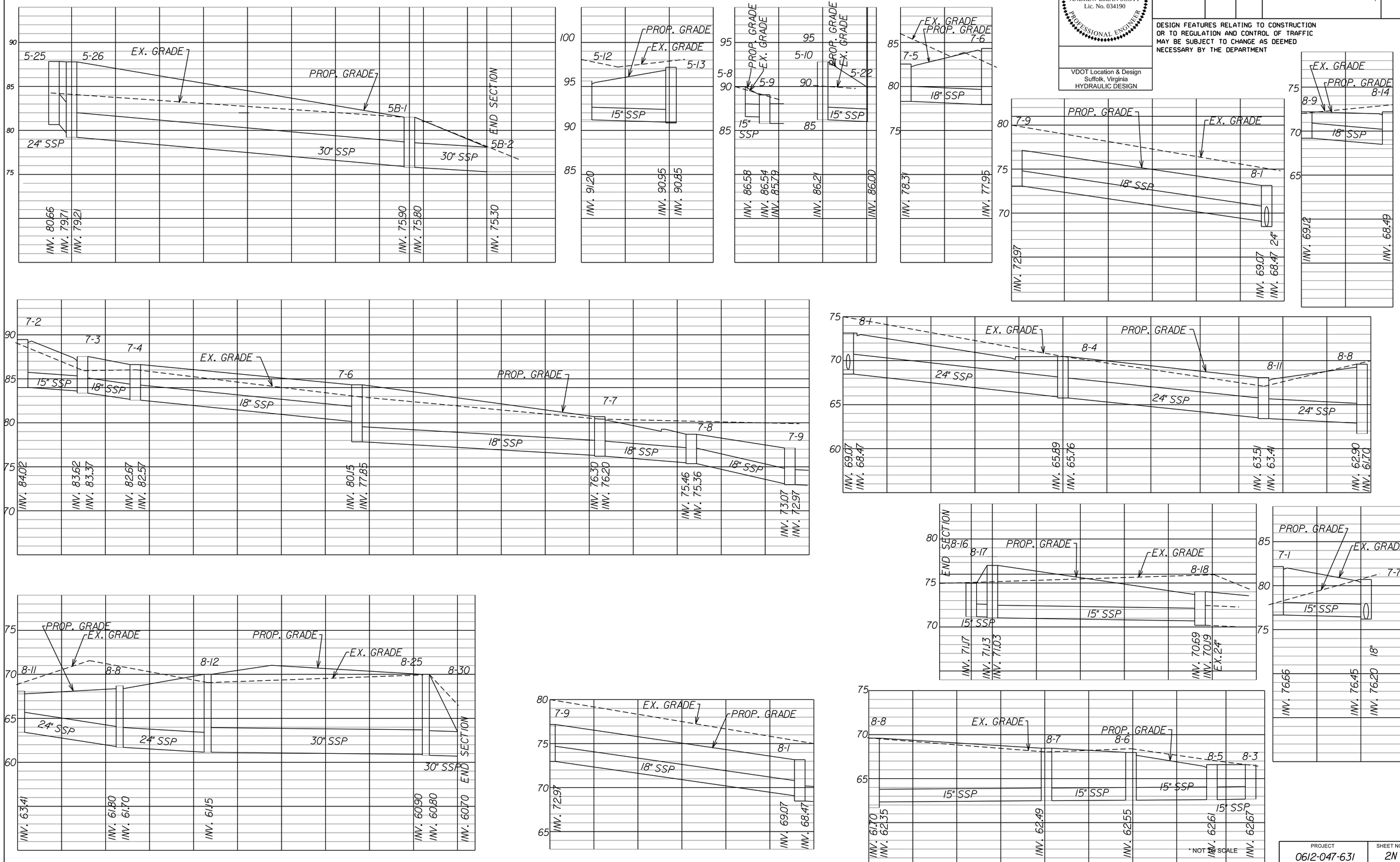
PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MICHAEL N. POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC DESIGN

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-0047-631, C-501	2N

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



PROJECT	SHEET NO.
0612-047-631	2N

PROJECT MANAGER - K.Mekinna, P.E.(757) 956-3274 (Hampton Roads District)
SURVEYED BY, DATE - Danny Williams, LS- (757) 925-2657 -(Hampton Roads District)
DESIGN BY - Michael N. Peblete -(757)-956-3268 -(Hampton Roads -District)> - -
SUBSURFACE UTILITY BY, DATE - ACCUMARK -(757)-767-3147- - - - - - - - -

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
4/15/2019	VA.	612	0612-047-631, C-501	2 0

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

DRAINAGE SUMMARY

Structure	Cover	Storm Sewer Pipe 15"	Storm Sewer Pipe 18"	Storm Sewer Pipe 24"	Storm Sewer Pipe 30"	38"x24" Elliptical Conc. Pipe	End Section 15" ES-1	End Section 24" ES-1	End Section 30" ES-1	Manholes MH-1 or 2	Manholes MH-1 Frame & Cover	Modify Existing Structure	Adjust Existing Structure	Drop Inlets DI-1	DI-2A	DI-3A	DI-3B L = 4'	DI-3B L = 6'	DI-3B L = 8'	DI-3B L = 10'	DI-3B L = 14'	DI-3BB L = 4'	DI-3BB L = 8'	DI-3C L = 6'	DI-3C L = 12'	DI-3D	DI-5	DI-7	DI-12B, L=4'	PAVED DITCH, PG-2A	Concrete Class A3 MISC.	SWM Basin Excavation	Bio-Retention Soil Mixture	6" Perforated Pipe	Pipe SWM Basin Underdrain Cleanouts	Permanent SWM Facility As-Built Documentation Construction Record Documents	6" Non-Perforated Pipe	Aggr. Matl. No. 1	Aggr. Material No. 57 Stone	Shredded Cypress Mulch	Geotextile Drainage Fabric	Low Permeability Liner	Erosion Control Stone St'd EC-1 Class A1	Erosion Control Stone St'd EC-1 Class I	Abandoned Pipes Flowable Fill	Dry Rip - Rap Class 1 26"	EndWall, Standard EW-12	Remarks
	ft	ft	ft	ft	ft	ft	Ea	Ea	Ea	LF	Ea	Ea	Ea	Ea	Ea	Ea.	Ea.	Ea.	Ea.	Ea.	Ea	Ea.	Ea.	Ea.	Ea	Ea	Ea.	Ea	Ea	SY	CY	CY	CY	LF	Ea.	LS	LF	TON	TON	CY	SY	SY	Tons	Tons	CY	Tons	Ea	
4-1																		1																														
4-1 To 4-3	2.0	132																																														
4-2																1																																
4-2 To 4-5	2.0	22																																														
4-3																											1																					St'd. PG-2A Type E cover, Grate Type A1
4-3 To 4-4	2.0	168																																														
4-4																		1																														1-St'd. IS-1 Req'd.
4-4 T0 4-6	5.0			242																																												780'radius w/open joints using 8' pipe joint length
4-5										8.3	1																																					1-St'd. IS-1 Req'd.
4-5 To 4-4	6.0		52																																													
4-6																		1																														1-St'd. IS-1 Req'd.
4-6 To 4-14	3.0			48																																												
4-7																													1																			Grate Type II
4-7 To 4-8	3.0	20																																														
4-8															1																																	1-St'd. IS-1 Req'd.
4-8 To 4-9	4.0	36																																														
4-9															1																																	1-St'd. IS-1 Req'd.
4-9 To 4-12	2.0		46																																													
4-10																															0.697																	18" EW-1
4-10 To 4-11	2.0		38																																													
4-11																											1																					St'd. PG-2A Type E cover, Grate Type A1
4-11 To 4-5	6.0		36																																													
4-12																1																																
4-12 To 4-13	4.0		30																																													
4-13											1	1						1																														Modify manhole, adjust to grade, raise 1.7'
4-13 To 4-14	4.0		52																																													
4-14																									1																							1-St'd. IS-1 Req'd.
4-14 To 5-3	2.0			48																																												
4-15																															0.16																	3' Curb Cut
5-1																								1																									
5-1 To 5-2	2.0	38																																														
5-2																		1																														1-St'd. IS-1 Req'd.
5-2 To 4-12	2.0	58																																														
5-3																	1																															1-St'd. IS-1 Req'd.
5-3 To 5-27	3.0			18																																												
5-4										3.7	1																																					1-ST'D. IS-1 REQ'D. (Temp connect to existing pipe)
5-4 To 5-13	3.0	26																																														
5-5																		1																														Less than minimum height
5-5 To 5-6	2.0	10																																														
5-6											1		1																																			Adjust ex. Manhole, adjust to grade, raise 0.17'
5-7																		1																														Less tnan minimum height (Connect to existing pipe)
5-8														1																																		
5-8 To 5-9	2.0	12																																														
5-9										3.0	1																																					Connect to existing pipe
5-9 To 5-7	1.0			4																																												Less than minimum cover
5-10																1																																
5-10 To 5-22	2.0	28																																														
5-11																1																																
5-11 To 5-4	3.0	12																																														
5-13											1	1					1																															
5-13 To 5-19	4.0		124																																													
5-12																		1																														Less than minimum height
5-12 To 5-13	4.0	48																																														
5-14																			1																														
5-14 To 5-17	2.0	20																																														
5-15																		1																															
5-15 To 5-16	2.0	44																																														
5-16																						1																										Connect to existing pipe
5-17											1	1																																				Modify existing Manhole, adjust to grade, raise 3.5'
5-18											1	1																																				Modify existing Manhole, adjust to grade, raise 3'
5-19											1	1						1																														Modify existing Manhole, adjust to grade, raise 1.8'
5-19 To 5-20	3.0		98																																													
5-20											1	1						1																														Modify existing Manhole, adjust to grade, raise 3.2'
5-20 To 5-21	2.0		30																																													
5-21											1	1											1																									Connect to existing pipe
5-22																		1																														
5-22 To 5-23	4.0	150																																														
5-23															1																																	Connect to three existing pipe
5-24																															0.06														12.37			
5-25										3.0	1																																					
5-25 To 5-26	5.0			6																																												
5-26										8.0	1																																					
5-26 To 5-B1	4.0				192																																											
5-27								1																																			5.33					Type A installation
5-28																																									12				17			
Total		824	506	366	192	0	0	1	0	26.00	13	7.00	1	1	3	4	2	12	1	0	0	1	1	1	1	0	2	0	1	0	0.92	0	0	0	0	LS	0	0	0	0	12	0	0	5.33	12.37	17	0	

PROJECT	SHEET NO.
0612-047-631	2 0

PROJECT MANAGER K. Mckinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY, DATE Danny Williams, LS (757) 925-2657 (Hampton Roads District)
DESIGN BY Michael N. Poblete (757) 956-3268 (Hampton Roads District)
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
4/15/2019	VA.	612	0612-047-631, C-501	2P

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

DRAINAGE SUMMARY

Structure	Cover	Storm Sewer Pipe				38"x24" Elliptical Conc. Pipe	End Section			Manholes		Modify Existing Structure	Adjust Existing Structure	Drop Inlets																	PAVED DITCH, PG-2A	Concrete Class A3 MISC.	SWM Basin Excavation	Bio - Retention Soil Mixture	6" Perforated Pipe	Pipe SWM Basin Underdrain Cleanouts	Permanent SWM Facility As-Built Documentation Record Documents	6" Non-Perforated Pope	6" No. 1 Stone	Aggr. Material No. 57 Stone	Shredded Cypress Mulch	Geotextile Drainage Fabric	Low Permeability Liner	Erosion Control Stone St'd EC-1		Abandoned Pipes Flowable Fill	Rip - Rap Class 1, D=26"	EndWall, Standard EW-12	Remarks
																	DI-3B				DI-3BB		DI-3C																									
																	L= 4'	L = 6'	L = 8'	L = 10'	L = 14'	L = 4'	L = 8'	L = 6'	L = 12'	DI-3B, L=6' TOP	DI-3D	DI-5	D1-7	DI-12B, L=4'																		
		15"	18"	24"	30"		15" ES-1	24" ES-1	30" ES-1	MH-1 or 2	MH-1 Frame & Cover			DI-1	DI-2A	DI-3A																															
Structure	ft	ft	ft	ft	ft	ft	Ea	Ea	Ea	LF	Ea	Ea	Ea	Ea.	Ea	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea	Ea.	Ea	Ea.	Ea	SY	CY	CY	CY	LF	Ea.	LS	LF	TON	TON	CY	SY	SY	Tons	Tons	CY	Tons	Ea	
5-29											1																						3384	1815	857	15		50		978		605							Bio-Retention Filter 1
5-30																																																	
5B-1										5.5	1																																						
5B-1 To 5B-2	2.0				44																																												
5B-2									1																																		8.33					Type A installation
5B-3																																									30				20			
5B-4	1.0					24																																										
5B-5																																0.21																1	
5B-6																																0.21																1	
6-2																	1																																1-St'd. IS-1 Req'd.
6-2 To 5-11	2.0	201																																															500' radius w/ open joints using 8' pipe joint length
6-3																												1																					St'd. PG-2A Type E cover, Grate Type A1
6-4																		1																															1-St'd. IS-1 Req'd.
6-3 To 6-4	2.0	15																																															
6-4 To 6-6	3.0	23																																															
6-5											1	1							1																														Modify existing Manhole, adjust to grade, raise 1.1'
6-6										4.0	1																																						1-St'd. IS-1 Req'd.
6-5 To 6-6	2.0	29																																															
6-6A																1																																	Less than minimum height
6-6A To 6-6	2.0	24																																															
6-6 To 6-8	3.0	54																																															
6-7																												1																					St'd. PG-2A Type A1 cover, Grate Type A1
6-7 To 6-7A	2.0	20																																															
6-7A											1	1				1																																	1 -St'd. IS-1 Req'd.
6-7A To 6-8	3.0	26																																															
6-8										3.9	1																																						1-St'd. IS-1 Req'd.
6-8 To 5-12	3.0	106																																															
6-9											1	1							1																														Modify existing Manhole, adjust to grade, raise 1.0'
6-10																		1																															1-St'd. IS-1 Req'd.
6-9 To 6-10	2.0	75																																															
6-10 To 6-11	2.0	36																																															
6-11																1																																	1-St'd. IS-1 Req'd.
6-11 To 6-12	3.0	65																																															
6-12																1																																	1-St'd. IS-1 Req'd.
6-12 To 7-15	3.0	152																																															
6-13											1	1							1																														Modify existing Manhole, adjust to grade, raise 0.7'
6-13 To 6-14	3.0	70																																															
6-14										4.5	1																																						1-St'd. IS-1 Req'd.
6-15																		1																															1-St'd. IS-1 Req'd.
6-14 To 6-15	4.0	53																																															
6-15 To 7-17	3.0	91																																															
7-1																1																																	
7-1 To 7-7	3.0	50																																															
7-2																1																																	
7-2 To 7-3	3.0	34																																															
7-3											1	1						1																															Modify existing Manhole, adjust to grade, raise 1.4'
7-3 To 7-4	3.0		30																																														
7-4											1	1			1																																	Modify existing Manhole, adjust to grade, raise 3.1'
7-4 To 7-6	2.0		126																																														
7-5																				1																													
7-5 To 7-6	4.0		46																																														
7-6											1	1						1																															Modify existing Manhole, adjust to grade, raise 1.7'
7-6 To 7-7	5.0		138																																														
7-7											1	1						1																															Modify existing Manhole, adjust to grade, raise 2.3'
7-7 To 7-8	2.0		52																																														
7-8																												1																					St'd. PG-2A Type E cover, Grate Type A1, 1-St'd. IS-1 Req'd.
7-8 To 7-9	2.0		56																																														
7-9																			1																														1-St'd. IS-1 Req'd.
7-9 To 8-1	2.0		142																																														
7-15																		1																															1-St'd. IS-1 Req'd.
7-15 to 7-16	3.0	29																																															
7-16											1	1						1																															Modify existing Manhole, adjust to grade, raise 2.2'
7-16 To 7-17	2.0	36																																															
7-17																			1																														1-St'd. IS-1 Req'd.
7-17 To 7-18	3.0	189																																															
7-18																			1																														I-St'd. IS-1 Req'd.
7-18 To 7-5	2.0		259																																														
Total		1378	849	0	44	24	0	0	1	17.9	14	9	0	0	1	6	1	8	6	1	0	0	0	0	0	0	0	3	0	0	0	0.42	3384	1815	857	15	LS	50	0	978	0	635	0	0	8.33	0	20	2	

PROJECT	SHEET NO.
0612-047-631	2P

PROJECT MANAGER K. McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY, DATE Danny Williams, LS (757) 925-2657 (Hampton Roads District)
DESIGN BY Michael N. Poblete (757) 956-3268 (Hampton Roads District)
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767-3147

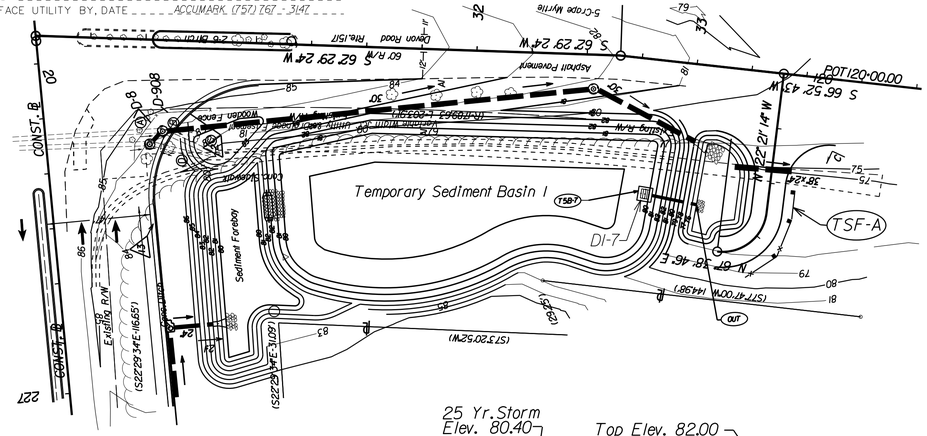
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
4/15/2019 6/25/2019	VA.	612	0612-047-631, C-501	2Q

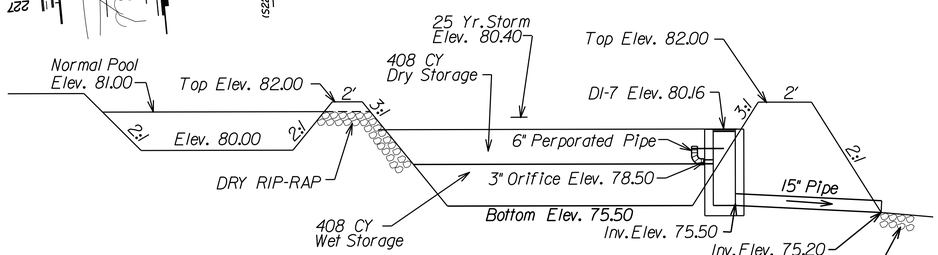
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

DRAINAGE SUMMARY

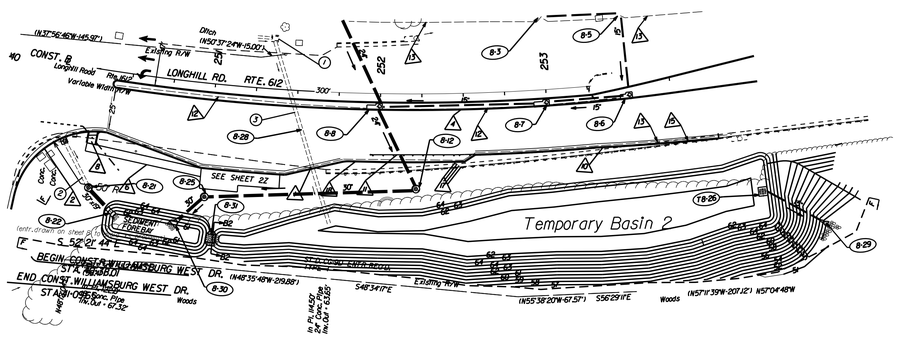
		Storm Sewer Pipe					End Section			Manholes							Drop Inlets																															
																	DI-3B					DI-3BB		DI-3C																							
	Cover	15"	18"	24"	30"	38"x24" Elliptical Conc. Pipe	15" ES-1	24" ES-1	30" ES-1	MH-1 or 2	MH-1 Frame & Cover	Modify Existing Structure	Adjust Existing Structure	DI-1	DI-2A	DI-3A	L= 4'	L = 6'	L = 8'	L = 10'	L = 14'	L = 4'	L = 8'	L = 6'	L = 12'	DI-3D	DI-5	D1-7	DI-12B, L=4'	PAVED DITCH, PG-2A	Concrete Class A3 MISC.	SWM Basin Excavation	Bio - Retention Soil Mixture	6" Perforated Pipe	Pipe SWM Basin Underdrain Cleanouts	Permanent SWM Facility As-Built Documentation Construction Record Documentations	6" Non-Perforated Pope	Aggr. Matt. No. 1	Aggr. Material No. 57 Stone	Shredded Cypress Mulch	Geotextile Drainage Fabric	Low Permeability Liner	Erosion Control Stone St'd EC-1 Class A1	Erosion Control Stone St'd EC-1 Class I	Abandoned Pipes Flowable Fill	Dry Rip - Rap Class 1 26"	EndWall, Standard EW-12	Remarks
Structure	ft	ft	ft	ft	ft	ft	Ea	Ea	Ea	LF	Ea	Ea.	Ea	Ea.	Ea	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea	Ea.	Ea	Ea.	Ea	SY	CY	CY	CY	LF	Ea.	LS	LF	TON	TON	CY	SY	SY	Tons	Tons	CY	Tons	Ea	
8-1																		1																													1-St'd. IS-1 Req'd.
8-1 To 8-4	2			122																																											
8-2											1	1						1																													Modify manhole, adjust to grade, raise 1.1'
8-2 To 8-1	4	46																																													
8-3																					1																										
8-3 To 8-5	3	44																																													
8-4																	1																														
8-4 To 8-11	2			114																																											
8-5																					1																										Temp connect to existing pipe Inv. 62.2+/-
8-5 To 8-6	3	46																																													
8-6											1	1						1																													Modify existing Manhole, adjust to grade, raise 1.1'
8-6 To 8-7	4	48																																													
8-7																		1																													
8-7 To 8-8	5	98																																													
8-8											1	1						1																													Modify existing Manhole, adjust to grade, raise 1.1'
8-8 To 8-12	5			50																																											
8-9											1	1																																			Adjust to proposed grade Elev. 72.19 (Connect to Manhole)
8-9 To 8-14	2		46																																												
8-10																													19																		Type C1, D=10"
8-11																	1																														1 -St'd. IS-1 Req'd.
8-11 To 8-8	4			56																																											
8-12										8.2	1																																				
8-12 To 8-25	6				124																																										
8-13																															2910	1020	632	12			2.6	705	264	933	1090						Bio-Retention Filter 2
8-14																										1																						Connect to existing pipe
8-15																1																															Connect to existing pipe
8-16																											1																				St'd. PG-2A Type C1 cover, Grate Type A1
8-16 To 8-17	3	12																																													
8-17																1																															1 - St'd. IS-1 Req'd.
8-17 To 8-18	3	118																																													Connect to existing structure
8-18																1																															Modify existing DI Top Elev. 74.02
8-19																													73																			Type C1, D=10"
8-20																														0.52																		3' Curb Cut
8-21										8.0	1																																				
8-21 To8-22	5			16																																											
8-22								1																																		5.33					Type A Installation
8-23																																								2				10.0		
8-24																																								90				130.0		
8-25										8.4	1																																				
8-25 To 8-30	6				18																																					8.33					Type A Installation
8-26													1														1																					Raise Top by 0.60'
8-26 To 8-29	9	38																												3.5																		Concrete Cradle with Rubber Gaskets
8-27																														0.06														1.13			
8-28																														0.1														13.34			
8-29							1																																			2.0					Type A Installation
8-30									1																																	8.33					Type A Installation
8-31																																								135				130.0		
8-32																																												10.0		Toe of slope protection
T5B-7	6	24																									1															2.0					
Total This Sheet		474	46	358	142	0	1	1	1	24.6	7	4	1	0	0	3	2	4	1	0	2	0	0	0	0	1	1	2	0	92	4.18	2910	1020	632	12	LS	0	2.6	705	264	1160	1090	0	25.99	14.47	280.0	0	
Total Sheet # (1)		824	506	366	192	0	0	1	0	26.0	13	7	1	1	3	4	2	12	1	0	0	1	1	1	1	0	2	0	1	0	0.92	0	0	0	0	LS	0	0	0	0	12	0	0	5.33	12.37	17.0	0	
Total Sheet #(2)		1378	849	0	44	24	0	0	1	17.9	14	9	0	0	1	6	1	8	6	1	0	0	0	0	0	0	3	0	0	0	0.42	3384	1815	857	15	LS	50	0	978	0	635	0	0	8.33	0	20.0	2	
Grand Total		2676	1401	724	378	24	1	2	2	68.5	34	20	2	1	4	13	5	24	8	1	2	1	1	1	1	1	6	2	1	92	5.52	6294	2835	1489	27	LS	50	2.6	1683	264	1807	1090	0.00	39.65	26.84	317.0	2	

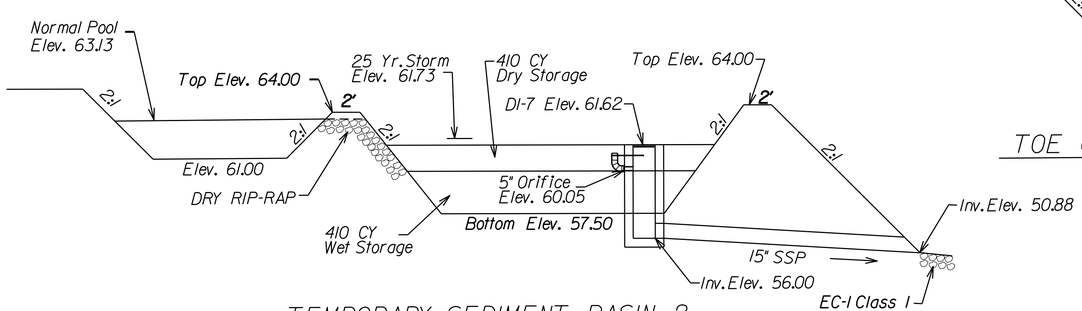
PROJECT MANAGER Ken McKinna,PE (757) 956-3271
SURVEYED BY, DATE Danny Williams,LS (757) 925 - 2657
DESIGN BY Michael Poblete (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767 - 3147





TEMPORARY SEDIMENT BASIN 1





TEMPORARY SEDIMENT BASIN 2

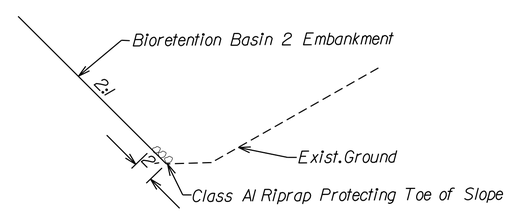
NTS

EROSION CONTROL SUMMARY

Sheet Number	Erosion Control Mulch	Rolled Erosion Ctrl Product EC-2 Type I	Rock Check Dam Type I EC-4 ✳	Rock Check Dam Type II EC-4	Temporary Silt Fence A EC-5	Temporary Silt Fence B EC-5	INLET PROTECTION Type A (27451)	INLET PROTECTION Type B (27461)	Sediment Retention Roll 18" Min	Siltation Control Excavation	Temporary Construction Entrance ESC-INS ✳	Temp Sediment Basin Excavation
	SY	SY	Ea.	Ea.	L.F.	L.F.	Ea.	Ea.	L.F.	CY	Ea.	CY
4		230		2	354		4	10		171	1	
5				1	1500		2	17		779		816
5B				2	616					106		
6												
6C		31		2	287		2	11		135		
7				4	484		1	11		154		
7C		106		3				4		21		
8		1243		3	800	408	1	16	130	711	1	820
Total	810	1610	1	17	4041	408	10	69	130	2077	2	1636

✳ NOT A PAY ITEM

✳✳ LOCATION TO BE DETERMINED DURING CONSTRUCTION.



TOE OF SLOPE PROTECTION

NTS

Note:
1. 5" orifice shall be plugged when converting sediment basin to Bioretention Filter.
2. For final Bio-Retention basin increase height of DI-7 by 0.60 feet.

POST INSTALLATION INSPECTION ✳						
STORM SEWER PIPE		PIPE (ALL PIPE INSTALLATION ON PLANS NOT IDENTIFIED AS STORM SEWER PIPE				
SIZE	LF	SIZE	LF	10% OF TOTAL	INDIVIDUAL INSTALLATION	QUANTITY TO INSPECT (LF)
15"	2676	15"				
18"	1401	18"				
24"	738	24"				
30"	378	30"				
		38"x24"	24	2	24	24
SUBTOTALS	5193					24
TOTALS TO BE INSPECTED					5217	

✳ Not a pay item.

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULICS DESIGN

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		0612-047-631, C-501	2R

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

PROJECT MANAGER KEN. MCKINNA, P.E. (757)956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/7/2019	VA.	612	0612-047-631, C-501	2S

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

WORK TO BE DONE BY STATE FORCES		
RM-2	EACH	84

PAVEMENT SUMMARY

Sheet NO.	ASPHALT CONCRETE TY. SM-9.5D	ASPHALT CONCRETE TY. IM-19.0A	ASPHALT CONCRETE TY. BM-25.0A	AGGR. MAT'L NO. 21B
	TONS	TONS	TONS	TONS
3	20	27	33	123
4	389	518	597	2,401
5	682	914	1,078	4,121
5B	8	10	2	
5C	140			
6	546	602	1,035	3,607
6D	6	7	49	121
7	422	551	703	2,589
8	554	613	767	2,759
Total	2,767	3,242	4,264	15,721

INCIDENTAL SUMMARY

Sheet NO.	MOBILIZATION	CONSTRUCTION SURVEYING (CONSTRUCTION)	CLEARING & GRUBBING	CRUSHER RUN AGGR. NO. 25 OR 26	HYDRAULIC CEMENT CONC. STD. PR-2	GUARDRAIL GR-MGS1	GUARDRAIL GR-MGS2	GUARDRAIL GR-MGS4	REMOVE EXISTING GUARDRAIL	STD. CURB CG-3	CURB. MOD. RADIAL CG-3	STD. RADIAL CURB CG-3	STD. CURB CG-2	RADIAL CURB CG-2	STD. COMB. CURB & GUTTER CG-7	RAD. COMB. CURB & GUTTER CG-7	CG-12 DETECTABLE WARNING SURFACE	UNDERDRAIN UD-2	UNDERDRAIN UD-4	MEDIAN STRIP MS-1A	MEDIAN STRIP MS-2	PAVEMENT - STABLIZED GRASS ENTRANCE	SIGN ISLAND SI-2	FLEXIBLE PAVE. PLANING 0"-2"	HYDR. CEMENT CONC. SIDEWALK 4"	HYDR. CEMENT CONC. SIDEWALK 7"	DEMOLITION OF PAVEMENT (FLEXIBLE)	DEMOLITION OF PAVEMENT (RIGID)	SAW-CUT ASPH CONC (FULL DEPTH)	SAW-CUT HYDRAULIC CEMENT CONCRETE ITEMS - SIDEWALK	ASPHALT CONCRETE TY. SM-9.5A **	AGGR. MAT'L. RAP **	FIELD OFFICE TYPE II	ALLAYING DUST	OBSCURING ROADWAY	PROGRESS SCHEDULE BASELINE	PROGRESS SCHEDULE UPDATES	REMOVE EXIST. CURB
	L.S.	L.S.	AC	TON	SY	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	SY	LF	LF	SY	LF	SY	SY	SY	SY	SY	SY	SY	LF	LF	TONS	TONS	MO	HR	UNIT	LS	EA	LF
3															65	183			114								265		40		26	81						
4													118		1,093	370	10		1,372	118							3,293		94		79	248						
5													492	68	998		17	57	939	220	60			539	211	36	5,320	119	342	8	63	200						
5B																						121		176														
5C																								1,801														
6				50	945					2	283	220			976	534	9	627	1,210	113	445				13		4,226		17	5	115	358			0.7			207
6D										17		19			48	24											64		16									
7															1,308	100	2		1,284	213	208		13		13		3,722		51		85	267						
8						132	1	1	230				253	44	752	291	8	76	1,107	189	76			618	134	36	4,727		435		18	58						
15(5)																									38	See Note*												
15(6)																									21	See Note*												
15(8)																									42	See Note*												
Total	L.S.	L.S.	2.5	50	945	132	1	1	230	19	283	239	863	112	5,240	1,502	46	760	6,026	853	789	121	13	3,134	472	72	21,616	119	995	13	386	1,212	26	600	0.7	LS	24	207

⊗ DENOTES ITEM(S) TO BE PAID FOR ON THE BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE CURRENT ROAD AND BRIDGE SPECIFICATIONS.

** DENOTES ITEM(S) FOR SHARED USE PATH

NOTE*: HYDR. CEMENT 4" ON LANDSCAPING SHEETS IS ALSO COLORED AND IMPRESSED.

PROJECT MANAGER Kenneth McKinna PE 757-956-3271
SURVEYED BY, DATE Danny Williams LS 757-925-2657
DESIGN BY N. Diane Geauge 757-956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK INC. 757-767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
04/06/18 04/06/18 08/17/18 01/29/19	VA.	612	0612-047-631, C-501	2T

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

DEMOLITION OF BUILDINGS & CLEARING OF PARCEL

SHEET NO.	PARCEL NUMBER	LANDOWNER	DEMO. NO.			STATION	DESCRIPTION	CLEARING OF PARCEL	DEMOLITION OF BUILDINGS	REMARKS
3, 3RW, 4, 4RW, 5, 5RW, 5B, 5BRW, 6, 6RW	2	Windsor Forest Association	----	----	----		Parcel Clearing	LS		
5, 5RW, 6, 6RW, 7, 7RW	7	Williamsburg Plantation Owners Association	----	----	----		Parcel Clearing	LS		
7, 7RW, 8, 8RW	11	RLH III LLC, A Virginia Limited Liability Company	----	----	----		Parcel Clearing	LS		
5	2	Windsor Forest Association	D908	0		228+15 +/- Rt.	Fencing		LS	
3,4	2	Windsor Forest Association	D900	0			Fencing		LS	
5	2	Windsor Forest Association	D8	0		228+15 +/- Rt.	Sign		LS	
4	3	Williamsburg Business Center Unit Owners Association, Phase 1	D701	0		223+40 +/- Lt.	Non-Significant Sign & Light		LS	
4	1	Lois Saunier Hornsby & Robert S. Honsby, Co-Executors	D16	0		224+20 +/- Lt.	Significant Sign		LS	
5	5	Citizens and Farmers Bank	D2	0		227+60 +/- Lt.	Metal Sign		LS	
5	6	Buckroe Partners LLC	D10	0		229+25 +/- Lt.	Sign & Lights		LS	To be removed by others and retained by owners
5	6	Buckroe Partners LLC	D5	0		230+20 +/- Lt.	Light Pole		LS	
6	7	Williamsburg Plantation Owners Association	D904	0		240+00 +/- Lt.	Planter		LS	
6	7	Williamsburg Plantation Owners Association	D903	0		100+75 +/-	Brick Columns and Fencing		LS	
6	7	Williamsburg Plantation Owners Association	D902	0		238+80 +/- Lt.	Planter		LS	
6	7	Williamsburg Plantation Owners Association	D15	0		239+40 +/- Lt.	Light Pole		LS	
6	7	Williamsburg Plantation Owners Association	D7	0		239+40 +/- Lt.	Significant Sign		LS	
5	2	Windsor Forest Association	D911	0		229+00 Rt	Fencing		LS	
5	2	Windsor Forest Association	D17	0		229+00 +/- Rt.	Sign & Light		LS	
6	9	Wellspring United Methodist Church	D704	0		237+15 +/- Rt.	Lightpole		LS	
6	9	Wellspring United Methodist Church	D703	0		236+75 +/- Rt.	Lightpole		LS	
6	9	Wellspring United Methodist Church	D6	0		236+15 +/- Rt.	Significant Sign & Floodlights		LS	
8	11	RLH III LLC, A Virginia Limited Liability Company	D910	0		250+10 +/- Lt.	Fencing		LS	
8	11	RLH III LLC, A Virginia Limited Liability Company	D909	0		249+60 +/- Lt.	Fencing		LS	
	11	RLH III LLC, A Virginia Limited Liability Company	D901	0		249+15 +/- Lt.	Fencing		LS	
8	11	RLH III LLC, A Virginia Limited Liability Company	D12	0		249+60 +/- Lt.	Significant Sign w/ Lights		LS	
5	14	KCE Olde Towne LLC	D14	0		233+20 +/- Lt.	Light Pole		LS	
5	14	KCE Olde Towne LLC	D13	0		232+90 +/- Lt.	Light Pole		LS	
5	14	KCE Olde Towne LLC	D4	0		232+75 +/- Lt.	Significant Sign		LS	

PROJECT MANAGER Ken McKinna PE 757-956-3271
SURVEYED BY, DATE Danny Williams LS 757-925-2657
DESIGN BY N. Diane Gauge 757-956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK INC 757-767-3147

GRADING DIAGRAM AND SUMMARY

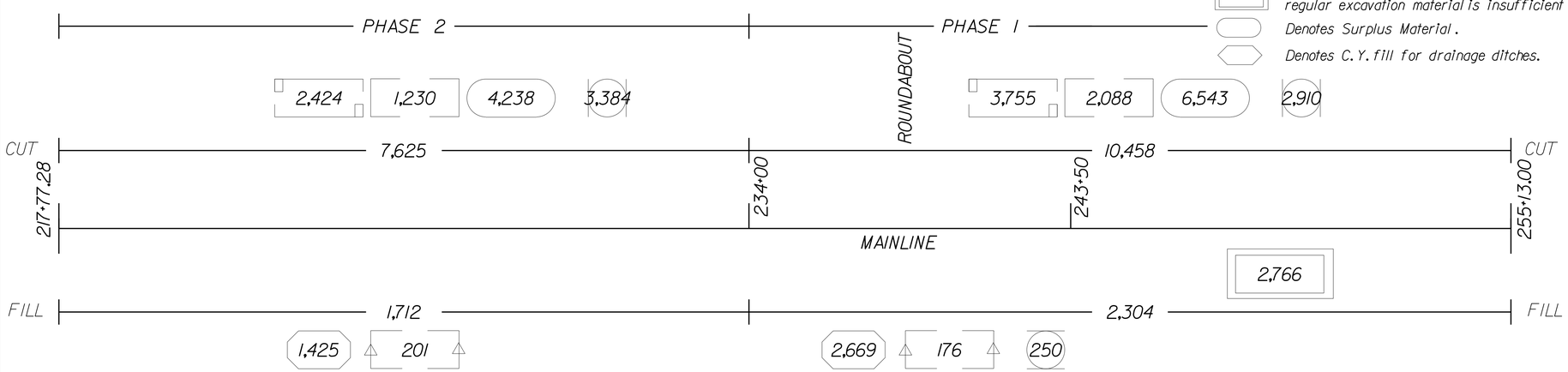
COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	2U

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

- ⊢130⊣ Fill — Denotes fill quantity from computer listings and/or manual cross-sections.
- ⊢130⊣ Cut — Denotes cut quantity from computer listings and/or manual cross-sections. Quantity adjusted for demolition of pavement.
- Denotes C.Y. root mat material in cut areas which is included in Regular Excavation quantities.
- Denotes C.Y. root mat material removed from fill sections and backfilled with Regular Excavation and/or Borrow Excavation
- (C) Denotes C.Y. Regular Excavation from private entrances.
- (F) Denotes C.Y. fill for private entrances.
- Denotes C.Y. unsuitable material above subgrade which is included in Regular Excavation.
- Denotes C.Y. of excavation of unsuitable mat'l. below subgrade and backfilled with (specify material)
- Denotes C.Y. Regular Excavation from drainage ditches.
- Denotes C.Y. Minor Structure Excavation.
- Denotes C.Y. existing pavement to be removed as "Demolition of Pavement" from fill sections and backfilled with Regular Excavation and/or Borrow Excavation
- Denotes C.Y. existing pavement to be removed as Demolition of Pavement in cut sections within construction limits and is not included in the Regular Excavation quantities.
- Denotes C.Y. Haul. (Haul Material shown will be C.Y. of mat'l. not compacted.)
- Denotes C.Y. fill for S.W.M. (Stormwater Management Basin)
- Denotes C.Y. cut from S.W.M. (Stormwater Management Basin)
- Denotes Borrow Material (Min. CBR, 10) if suitable regular excavation material is insufficient
- Denotes Surplus Material.
- Denotes C.Y. fill for drainage ditches.



- ⊗ Denotes item(s) to be paid for on the basis of plan quantities in accordance with the applicable provisions of the current VDOT Road and Bridge Specifications.
- (1) Cut quantity shown does not include the material removed as Demolition of Pavement.
- (2) Quantity shown for use in Grading Diagram only. See other Summaries for pay item(s).
- (3) Included in Total Regular Excavation.
- (4) Included in Roadway Cut quantity.
- (5) Quantities for Temporary Sediment Basins and Temporary Sediment Traps are included with the Stormwater Management Basin quantities.
- (6) Denotes pay item.
- (7) Included in total fill quantity.
- (8) This quantity comes from the computer listings and/or manual cross-sections and may be adjusted for other quantities.
- (9) Volumes obtained for Cut Ditches and Fill Ditches not included in computer listings.
- (10) Includes settlement of in-place soil.

Location	⊗ Roadway Cut (1) (8)	Root Mat in Cut Sections	Root Mat in Fill Sections	⊗ (9) Cut - Ditches	(9) Fill - Ditches	Unsuitable Material: Below Subgrade	Unsuitable Material: Above Subgrade	(10) Roadway Fill (8)	Entrances: Cut	Entrances: Fill	Total Regular Excavation (6)	Total Fill	(2) Demolition of Pavement	(2) Minor Structure Excavation	(5) (2) Stormwater Management Basins: Cut	(5) (2) Stormwater Management Basins: Fill	(6) Borrow (Embankment)
	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
PHASE 1																	
234+00-243+50	4,204	2,013	1,687					1,102	1,382	72	7,273	2,861	1,206				0
243+50-254+00	6,254	1,742	982					1,202			7,236	2,434	1,058		2,910	250	2,766
PHASE 2																	
217+77-234+00	7,625	2,424	1,425					1,712			9,050	3,387	1,431		3,384		0
FORMULAS	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
TOTALS	(3) 18,083	(4) 6,179	(3) (7) 4,094	(3)	(7)	(3) (7)	(4)	(7) 4,016	(3) 1,382	(7) 72	23,559	8,682	3,695		6,294	(7) 250	2,766

FORMULAS

Roadway Cut (C) = Unadjusted Cut from Computer Listings or Manual Cross-Sections minus (-) Demolition of Pavement.

Roadway Fill (J) = Fill Required plus (+) Material for Backfill of Demolition of Pavement Areas in Fill (for heights of fill < 3 feet below subgrade)

Total Reg. Excav. (M) = C + E + F + H + K

Total Fill (N) = J + E + G + H + L + R

Borrow (S) = [N - ([C + F + K + P + Q - D - I] x Compaction Factor)] ÷ Compaction Factor for Borrow Site (Assumed to be 88%)

~~(Embankment) (S) = N - (C + F + K + P + Q - D - I) (Embankment = Total Fill - Usable Cut) Estimated Material to be obtained off-site.~~

The borrow quantity shown was computed on the basis of the average shrinkage or swell factor for the general vicinity of the project. The contractor will be responsible for determining the actual factor for the site(s) from which he proposes to secure borrow material needed to complete this project.

~~The embankment quantity shown has not been adjusted for shrinkage or swell factors. The contractor will be responsible for determining the effect of the shrinkage or swell factor of the embankment material, and no adjustment will be made in pay quantities for this factor. The contractor shall determine the actual quantity of embankment material needed to complete this project.~~

NOTE: In this section it is assumed the cut material is not suitable or is not available for use as fill, however, per Section 303.04(b) & (k), suitable on-site regular excavation is to be used on this project before using off-site borrow material.

PROJECT	SHEET NO.
0612-047-631	2U

PROJECT MANAGER _ _ _KENNETH McKINNA, P.E. 757-956-3221_ _ _ _ _ _ _
SURVEYED BY, DATE _ _ _ DANNY WILLIAMS 757 -925-2657_ _ _ _ _ _ _ _
DESIGN BY _ _ _N. QIANE GEOUGE 757-956-3263 _ _ _ _ _ _ _ _ _ _ _ _ _
SUBSURFACE UTILITY BY, DATE _ _ _ACCUMARK, INC. 757-767-3147_ _ _ _ _ _
HAMPTON ROADS DISTRICT DESIGN UNIT

ROADSIDE DEVELOPMENT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	2V

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

CORE MIX

MIX	LBS./ ACRES	DESCRIPTION
1	▲	✳ 100% CERTIFIED FINE FESCUE
2	▲ 100	100% CERTIFIED TALL FESCUE
3	▲	50% CERTIFIED TALL FESCUE ✳ 50% CERTIFIED FINE FESCUE
4	▲	50% ORCHARDGRASS 50% CERTIFIED KENTUCKY BLUEGRASS
5	▲ 100	100% BERMUDAGRASS
C 1, 2 & 3	▲	CUSTOM MIX
T1	▲	50% CERTIFIED TALL FESCUE 50% BARLEY, WINTER RYE OR WINTER WHEAT
T2	▲	50% FOXTAIL MILLET 50% CERTIFIED TALL FESCUE

ADDITIVES

TYPE	LBS./ ACRES	DESCRIPTION
A	▲ 10	100% LOVEGRASS
B	▲	100% BARLEY, WINTER RYE OR WINTER WHEAT
C	▲ 20	100% FOXTAIL MILLET
D	▲ 20	100% ANNUAL RYEGRASS
E	▲	100% BLUE GRAMA
F	▲	100% ALFALFA
G	▲	100% WHITE CLOVER
H	▲	✳✳ 100% CROWN VETCH (LEGUME)
I	▲	✳✳ 100% SERICEA LESPEDEZA (LEGUME)
J	▲	✳✳ 100% BIRDSFOOT TREFOIL (LEGUME)
K	▲	POLLINATOR SEED MIX

✳ FINE FESCUES INCLUDE CHEWINGS, CREEPING RED, HARD, SHEEP. SEE SEEDING SCHEDULE FOR TYPE(S) SPECIFIED FOR THIS PROJECT.

▲ ALL RATES TO BE SPECIFIED BY THE DISTRICT ROADSIDE MANAGER

✳✳ THESE ADDITIVES ARE NOT TO BE USED IN AREAS THAT WILL BE MOWED. (SLOPES 3:1 OR FLATTER)

SECTION OF SEED LOCATIONS

ROADSIDE DEVELOPMENT SUMMARY

PROJECT NUMBERS AND/OR LOCATION DESC.	REGULAR SEED	OVER SEEDING	LEGUME SEED	LEGUME OVER SEEDING	TEMPORARY SEED	⊗⊗TOPSOIL (CLASS A 2" DEPTH)	LIME	FERTILIZER N NITROGEN	FERTILIZER P PHOSPHORUS	FERTILIZER K POTASSIUM	HECP (TYPE 1)	HECP (TYPE 2)	HECP (TYPE 3)	HECP (TYPE 4)
	LBS.	LBS.	LBS.	LBS.	LBS.	ACRES	TONS	LBS.	LBS.	LBS.	S. Y.	S. Y.	S. Y.	S. Y.
0612-047-631, C-501 *SEE NOTE BELOW	796	351			**358	2.94 AC	13	360	545	273		17,689	13,533	
	796	351			** 358	2.94 AC	13	360	545	273		17,689	13,533	

* REGULAR SEEDING IS FOR AREAS NOT COVERED BY SEEDING IN LANDSCAPE PLANS - SEE SHEET 15(1). TEMPORARY SEEDING IS FOR ALL DISTURBED AREAS INCLUDING INTERMEDIATE GRADING DEPICTED ON SHEET 1H(2).

⊗⊗ DENOTES ITEM(S) TO BE PAID FOR ON THE BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE CURRENT ROAD AND BRIDGE SPECIFICATIONS.

** NOT A PAY ITEM, INCLUDED IN REGULAR SEED

NOTES:

1 RECOMMENDATIONS FOR THE APPLICATION OF SEED MIXTURES (CORE MIX AND ADDITIVES), FERTILIZER, LIME, ETC. WERE OBTAINED FROM THE DISTRICT ROADSIDE MANAGER.

2 ALL SEED, FERTILIZER, LIME, MULCH, ETC. MUST BE IN CONFORMANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS AND ANY APPLICABLE INFORMATIONAL & INSTRUCTIONAL MEMORANDA.

3 APPROXIMATELY 2.94 ACRES WILL BE DISTURBED ON THIS PROJECT AND WILL REQUIRE THE ESTABLISHMENT OF GRASSES AND/OR LEGUMES.

4 REGULAR SEED SHALL BE APPLIED AT THE RATES SHOWN IN THE CORE MIX, ADDITIVES, AND WHERE APPLICABLE, CUSTOM SEED MIX TABLES. SEEDING QUANTITIES SHOWN IN THE ROADSIDE DEVELOPMENT SUMMARY TABLE ARE BASED ON THE HIGHEST "NORMAL" SEEDING RATE FOR EACH CORE MIX (BY SEASON FOR BOTH MOWED AREAS AND NON- MOWED SLOPES), WITH A 25% INCREMENTAL ADJUSTMENT TO ACCOUNT FOR SEEDING PROGRESSION, SEEDING AFTER SIGN OR GUARDRAIL INSTALLATION, AND OTHER MINOR UNPLANNED DISTURBANCES.

5 REGULAR SEED SHALL BE FERTILIZED AT THE RATES SHOWN IN THE FERTILIZER SUMMARY TABLE. THE TOTAL FERTILIZER QUANTITIES SHOWN IN THE TABLES INCLUDES THE 25% INCREMENTAL ADJUSTMENT DESCRIBED ABOVE.

6 OVER SEEDING RATES SHALL BE 100% OF THE REGULAR SEED RATE WITHOUT THE INCREMENTAL ADJUSTMENT.

7 OVER SEEDING SHALL ONLY INCLUDE FERTILIZER ONCE, AT THE RATE SHOWN IN THE FERTILIZER SUMMARY TABLE. ADDITIONAL OVER SEEDING MAY BE DONE WITH NO FERTILIZER APPLIED, OR A SOIL TEST MAY BE PERFORMED TO DETERMINE THE SPECIFIC NUTRIENTS NECESSARY TO ESTABLISH THE GRASSES AND/OR LEGUMES.

8 THE ENGINEER WILL REQUIRE THE CONTRACTOR TO PERFORM SUPPLEMENTAL SEEDING WHEN LESS THAN 75% UNIFORM STAND OF THE PERMANENT GRASS (AND LEGUMES) SPECIFIED IN THE MIXTURES IS OBTAINED. (ANNUAL SPECIES SUCH AS RYE AND MILLET ARE TEMPORARY VARIETIES AND REQUIRE SUPPLEMENTAL SEEDING.)

9 LEGUME SEED SHALL BE INOCULATED WITH THE APPROPRIATE STRAIN AND RATE OF BACTERIA. FOR ADDRESSED, USE FIVE TIMES (5X) THE AMOUNT OF INOCULATE RECOMMENDED BY THE MANUFACTURER

10 THE DATE SEED IS APPLIED SHALL BE USED TO DETERMINE WHETHER TO USE HULLED OR UN HULLED SEED FOR BERMUDA GRASS AND SERICEA LESPEDEZA.
SPRING & SUMMER (3/1 TO 9/15): USE HULLED SEED
FALL & WINTER (9/16 TO 2/29): USE UN HULLED SEED.

11 EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ON AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 14 DAYS DURING THE DORMANT PERIOD (11/16 TO 2/29).

12 WHEN EROSION CONTROL MULCH IS USED, IT SHALL PROVIDE 100% COVERAGE OF ALL DENUDED AREAS.

13 HEP SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS (OR RECOMMENDATIONS).

SEEDING SCHEDULE

CODES LISTED IN TABLE REFER TO THE LISTS OF CORE MIXES & ADDITIVES, WHICH SHOW SEED NAMES & APPLICATION RATES FOR THIS PROJECT.	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE
	SPRING MONTH & DATE		SUMMER MONTH & DATE		FALL MONTH & DATE		WINTER/DORMANT MONTH & DATE	
	3/1 to 5/15		5/16 to 9/15		9/16 to 11/15		11/16 to 2/29	
0612-047-631	(2)AD	(2)D	(5)C	(5)C	(2)AD	(2)D	(2)AD	(2)D
✳ SPECIFIED TYPE(S) OF FINE FESCUE								

FERTILIZER AND LIME SUMMARY

	FERTILIZER GRADE	APPLICATION RATE (FERTILIZER)	NITROGEN (N)	PHOSPHORIC ACID (P)	POTASH (K)	APPLICATION RATE (LIME)
	(N-P-K)	(lbs/ac)	(lbs/ac)			(tons/ac)
REGULAR SEED	15-30-15	250	37.5	75	37.5	2.0
INCREMENTAL ADJUSTMENT (P.S. Only)	15-30-15	250	37.5	75	37.5	2.0
TEMPORARY SEED	15-30-15	125	18.75	37.5	18.75	1.0
OVERSEEDING	46-0-0	65	30	0	0	1.0

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY, DATE Danny Williams L.S. (925) 925-2657 (Hampton Roads District)
DESIGN BY Michael Poblete (757) 956-3268 (Hampton Roads District)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
5/10/19	VA.	612	0612-047-631, C-501	2W

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

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

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, 2019 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 activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, 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 (as defined in the latest IIM 242) 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.

I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that this document and all other documents related to the SWPPP, as identified on the SWPPP General Information Sheets, are maintained at the activity site, or at a location convenient to the activity site where no on-site facilities are available, and such documents will be made available for review upon request in accordance with the provisions of the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10) when applicable. Where the SWPPP documents are not stored on-site, a copy of such documents shall be in the possession of those with day to day operational control over the implementation of the SWPPP whenever they are on site.

* or ** Delegated Authority Signature"

Signature: _____
Printed Name: _____
Date: _____

(1) See Section 1, Item 11 relating to delegation of authority, and form LD-445H (Delegation of Authority).

ACRONYMS

CBPA - Chesapeake Bay Preservation Act
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
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
WLA - Waste Load Allocation
SWM - Stormwater Management

SECTION I GENERAL INFORMATION

1. Activity Description - To relieve congestion on Longhill Road by widening from two lanes to four lanes separated by a raised median and enhancing bicycle, pedestrian, and bus accomodation.

2. This land disturbance (construction) activity site is located in James City and approximately 11.36 acres will be disturbed by excavation, grading or other construction activities.

3. (Include one of the following notes as appropriate)

A. 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 & LD-445C forms) and the permit coverage letter received from DEQ shall be maintained with other SWPPP documents for this land disturbing activity.

~~B. This proposed activity disturbs less than one acre and is exempt from coverage under the VPDES General Permit for Discharges of Stormwater from Construction Activities (the VPDES Construction Permit) as issued by the DEQ.~~

~~C. This proposed activity is exempt from coverage under the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) as issued by the DEQ because it is considered a routine maintenance activity (i.e., the proposed activity is intended to maintain the original line and grade, hydraulic capacity or original construction of the project or involves the paving of an existing roadway with a compacted or impervious surface and the reestablishment of associated ditches and shoulders).~~

** 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. Written 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 VPDES Permit * or Letter from VSMP Authority stating coverage not needed)

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 TMDL's 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, 2016 for sediment, total suspended solids, turbidity, nitrogen or phosphorus: None

8. This land disturbance 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. Chisel Run

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

11. List the RLD and other responsible parties for the land disturbance activity: (required for erosion and sediment control). The following individual(s) have "delegated authority" to sign all reports required by the construction permit including the SWPPP General Information Sheets and Inspection Reports (C-107). Reference form LD-445H for delegation of authority (form 445H for the project is hereby incorporated by reference into this SWPPP). These individual(s) has/have overall responsibility or the environmental matters for the project: (required only for permitted projects):

Name	Position	Responsibility
Josh Gormer, PE	RLD	Certify the SWPPP (with date & sig.)
	Certified Inspector	Sign (C-107) Inspection Form Part 1
	Certified Inspector	Sign (C-107) Inspection Form Part 2

* 12. The name of the VDOT individual(s) responsible for the oversight inspection in accordance with IIM-LD-256 on these land disturbance construction activities as identified on these SWPPP General Information Sheets. The names will be updated and maintained with the other SWPPP documents for this land disturbance activity.

VDOT Individuals	Position	Responsibility
	NPDES	NPDES coordinator responsible for the oversight inspection in accordance with IIM-LD-256
Andrew B. Scott, PE	Dist. Hyd. Engineer	District Hydraulic Engineer or designee(s) responsible for the review & the coordination approval of ESC SWM plan modification(s).

* 13. The ESC and P2 inspections for this land disturbing (construction) activity shall follow (Select Schedule 1 or 2, if schedule *2 is used, void note *14) as defined in 2016 R&B Specifications except for Section 107.16(e) 4.an Inspection Requirements Rain gauge 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 activity:
(List location of rain gage).

The rain gage shall be observed daily at " 9:00 am " 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 are applicable to 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 and ESC projects > 10,000 s.f. but <1 acre.
VDOT LD-445A: Permitted projects only.
VDOT LD-445C: Projects that require a permit, ESC Plan, 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-445F: Emergency work projects (when applicable).
Water Quality Requirement (when applicable)
VDOT LD-445H: Permitted projects only.
VDOT C-107 Part I and Part II. All projects that require a permit or SWPPP.
VDOT LD-445I: AS&S Approval Form (when applicable)

16. If there is an excessive loading of sediment from the project (i.e. more than to be expected from the project with an implemented ESC plan) that is discovered within a local watershed with a sediment TMDL that allocates a WLA to VDOT's MS4, (see note *7) the contractor shall investigate the area of concern at the site within 24 hours of discovery and ensure all erosion and sediment control best management practices are being implemented in accordance with the permits approved standards and specifications required by Part I.B of the current Construction General Permit. If corrective action is necessary, the contractor shall initiate corrective actions no later than 5 business days after the initial investigation.

17. If excessive loading of sediment from a land disturbing activity that is not the responsibility of the contractor is discovered discharging into a MS-4, the contractor shall notify the municipality with jurisdiction over erosion and sediment control activities.

* Denotes information that is to be provided/completed by the RLD.

** Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

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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

SECTION II EROSION AND SEDIMENT CONTROL

✱✱ 1. 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 the current edition of Section 108.03 of the VDOT R&B Specifications and shall be included with the other SWPPP documents for this land disturbance (construction) activity.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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 IV.

✱✱ 7. 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)

8. 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 the current edition of Sections 107.16 and 303.03 of the VDOT R&B Specifications.

9. Nutrients shall be applied in accordance with the current edition of Sections 603 and 604 of the VDOT Road and Bridge Specifications. Nutrients shall not be applied during rainfall events. Top soil shall be applied in accordance with the current edition of section 602 of the latest Road and Bridge Specifications.

10. 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 Hampton Roads District Hydraulics Section and will be made available for review upon request during normal business hours.

11. 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, elimination of a perimeter control, change to ESC concept that would affect the quantity or direction of flow of water) 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.

12. The areas beyond the project's construction limits 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.

13. 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.

14. 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.

15. 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.

✱✱ 16. 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.

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

18. 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.

19. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.

The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance (construction) activity: (list all approved exceptions and include a brief description of the exception, the date approved and the approving DEQ Office)

Type(1)	Regulation Modified(2)	Approval Date(3)	Description of Variance

(1) Type of modification (Variance from ESC regulations, or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.

SECTION III POST CONSTRUCTION STORMWATER MANAGEMENT

Choose the appropriate note 1A or 1B 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. (Include one of the following notes as appropriate)

~~✱ A. This land disturbance 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.~~

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

~~2. An exception for (number) pounds of phosphorus removal has been granted for this land disturbance activity by the DEQ in its letter dated (date).~~

~~3. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.~~

~~The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance activity: (list all approved exceptions and include a brief description of the exception, the date approved and the approving DEQ Office)~~

Type(1)	Regulation Modified(2)	Approval Date(3)	Description of Waiver

~~(1) Type of modification (Variance, or Exception from SWM Regulations or Deviation from published guidance)~~
~~(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)~~
~~(3) Date that variance/exception/deviation was approved by DEQ.~~

4. 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.

5. 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.

6. 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 Hampton Roads District Hydraulics Section and will be made available for review upon request during normal working business hours.

ACRONYMS

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DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
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VESCP - Virginia Erosion and Sediment Control Program
WLA - Waste Load Allocation
SWM - Stormwater Management

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

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

Revised 5/1/19

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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

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

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, 2019 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 outside the Chesapeake Bay Preservation Area, 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 IV 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 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, 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.

4. 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.

✱ 5. 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.

6. 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.

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, from 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 firefighting 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 managed in a manner to avoid stream impacts.
   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, waste concrete and sanitary wastes.
      8) Address any other discharge from any potential pollutant-generating activity not listed herein.
      9) Minimize the exposure of waste materials to precipitation by closing or covering waste containers during precipitation events and at the end of the business day, or implementing other similarly effective practices. Minimization of exposure is not required in case where the exposure to precipitation will not result in a discharge of pollutants.
      10) 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.

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

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

Revised 5/1/19

PROJECT MANAGER Kenneth McKinna, P.E. (757) 956-3271 (Hampton Roads District)
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657 (Hampton Roads District)
DESIGN BY Michael Poblete (757) 956-3268 (Hampton Roads District)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
5/10/19	VA.	612	0612-047-631, C-501	2Y(2)

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

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

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, 2019 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 VI - PERMANENT BMP INFORMATION △

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

INSTALLED BMP INFORMATION
(VDOT Owned/Operated)

Plan Sheet(s)	Date BMP Made Functional	Type of BMP Installed (See Table A and C)	Geographic Location (County or City)	Latitude/Longitude (1) LAT	Latitude/Longitude (1) LONG	VA 6th Order HUC (7)	Receiving Water (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3) Impervious	Acres Treated Per BMP (3) Pervious	Acres Treated Per BMP (3) TOTAL	✱ BMP Maintenance ID Number (10)	BMP Maintenance Manual (11) SECTION	BMP Inspection Manual (11) SECTION
Sheet 5 & 5B		Bio-Retention Basin	York County	37.3064 N	76.7531 W	JL31	Chisel Run	None	3.01	3.08	6.09		4	4
Sheet 8		Bio-Retention Basin	York County	37.3031 N	76.7512 W	JL31	Chisel Run	None	3.59	1.68	5.27		4	4

ALTERNATIVE BMP INFORMATION

Plan Sheet(s)	Date	Type of BMP Installed (See Table B)	Geographic Location (County or City) (5)	Latitude/Longitude (1) (5) LAT	Latitude/Longitude (1) (5) LONG	VA 6th Order HUC (5) (7)	Receiving Water (2)	Name of Impaired Water (9)

Perpetual Nutrient Credits Acquired for Project

Name of Nutrient Credit Generating Entity (6)	Nutrient Credits (lbs./TP./year) Acquired (6) (12)

△ 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 informationshown 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 construction record drawings maintained in the VDOT Central Office Plan File Room (ProjectWise). 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 Division 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 informationin 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.

Table A: 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)
Detention Basin

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

Table C: Permanent BMP Types (BMP Clearing House)
Sheet Flow to Vegetated Filter Strip
Grass Channel
Soil Compost Amendment
Permeable Pavement (Level 1)
Permeable Pavement (Level 2)
Infiltration Practice (Level 1)
Infiltration Practice (Level 2)
Bioretention (Level 1)
Bioretention (Level 2)
Dry Swale (Level 1)
Dry Swale (Level 2)
Wet Swale (Level 1)
Wet Swale (Level 2)
Filtering Practice (Level 1)
Filtering Practice (Level 2)
Constructed Wetlands (Level 1)
Constructed Wetlands (Level 2)
Extended Detention Pond (Level 1)
Extended Detention Pond (Level 2)
Wet Pond (Level 1)
Wet Pond (Level 2)
Manufactured Treatment Device (MTD)(8)
Other Approved Types (List Type)

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

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

(3) Show acres treated to the nearest one hundreths 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 - YO30.

(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.

(10) BMP Maintenance ID Number is to be assigned by the District Maintenance Division at permit termination or project completion. This ID number shall be assigned prior to the permit close out process and entered by the area construction engineer under this column, per IIM-LD-95

(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.

Revised 5/1/19

PROJECT MANAGER KENNETH. McKINNA, PE 757-956-3271
SURVEYED BY, DATE DANNY WILLIAMS, LS 757-925-2657
DESIGN BY N. DIANE GEQUIGE 757-956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. 757-767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

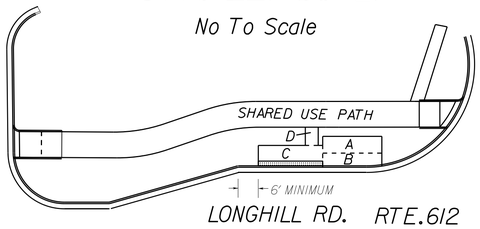
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	2Z

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

BUS STOP ARRANGEMENT AND DETAILS

STA. 227+50 LT

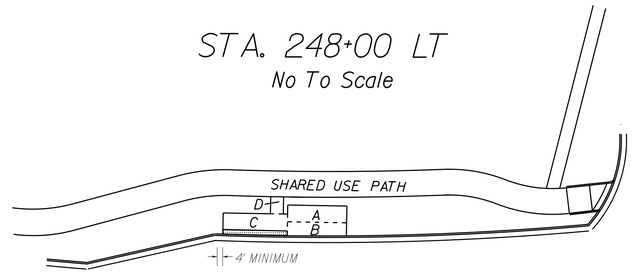
No To Scale



LONGHILL RD. RTE.612

STA. 248+00 LT

No To Scale

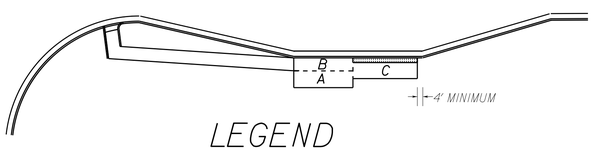


LONGHILL RD. RTE.612

STA. 230+00 RT

No To Scale

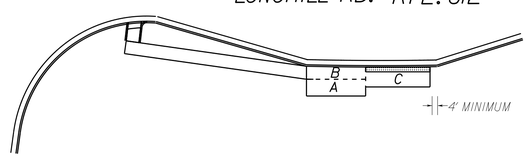
LONGHILL RD. RTE.612



STA. 251+25 RT

No To Scale

LONGHILL RD. RTE. 612



LEGEND

A 7' x 23' SHELTER PAD

B 5' OF SIDEWALK IN FRONT OF SHELTER PAD

C 8' x 25' BOARDING PLATFORM WITH DETECTABLE WARNING SURFACE

D 5' SIDEWALK

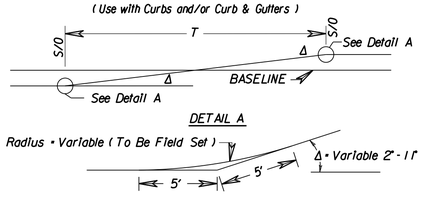
NOTES:

CONSTRUCT SHELTER PAD AS ST'D. HYDR. CONC. SIDEWALK 7", AND CONSTRUCT BOARDING PLATFORM AS ST'D. HYDR. CONC. SIDEWALK 4".

SEE STANDARD CG-12 FOR DETAILS OF DETECTABLE WARNING SURFACE.

TYPICAL STRAIGHT - LINE TAPER LANE

(Use with Curbs and/or Curb & Gutters)



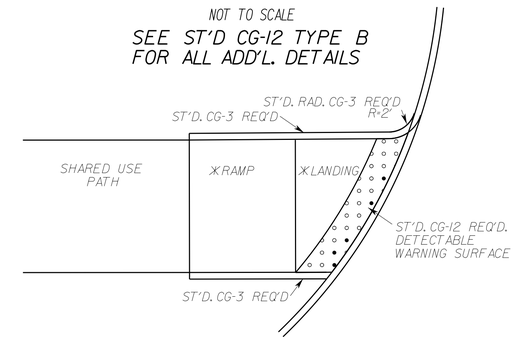
T - See plans for Length of T.

S/O - See plans for Stations and Offsets.

DETAIL OF CURB CUT RAMPS FOR SHARED USE PATH

NOT TO SCALE

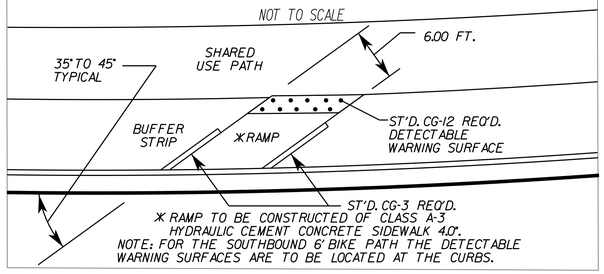
SEE ST'D CG-12 TYPE B FOR ALL ADD'L. DETAILS



* RAMP AND LANDING TO BE CONSTRUCTED OF CLASS A-3 HYDRAULIC CEMENT CONCRETE SIDEWALK 4.0".

DETAIL OF STREET CONNECTIONS TO SHARED USE PATH AT ROUNDABOUT

NOT TO SCALE



* RAMP TO BE CONSTRUCTED OF CLASS A-3 HYDRAULIC CEMENT CONCRETE SIDEWALK 4.0".
NOTE: FOR THE SOUTHBOUND 6' BIKE PATH THE DETECTABLE WARNING SURFACES ARE TO BE LOCATED AT THE CURBS.

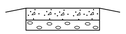
PRIVATE AND COMMERCIAL ENTRANCES

NOT TO SCALE

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. 21A or 21B

TYPE III
Asphalt

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

TYPE IV
Asphalt Commercial

Asphalt Conc. Type
SM-9.5A or SM-9.5D @ 165 Lbs. per S.Y.
2" Asphalt Conc. Base Course
IM-19.0A
2.5" Asphalt Conc. Base Course
BM-25.0
8" Aggr. Base Mat'l. Ty. I
No. 21A or 21B

The type of entrance (I, II, III, IV) to be constructed will be determined by the existing condition at the time of construction.

PROJECT	SHEET NO.
0612-047-631	2Z

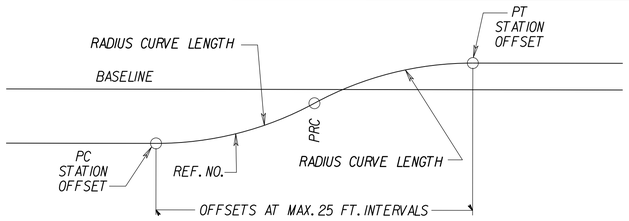
PROJECT MANAGER KENNETH. McKINNA (757)956-3271 (Hampton Roads. District)
SURVEYED BY, DATE DANNY. WILLIAMS.LS.(757)925-3624 (Hampton Roads District)
DESIGN BY N.DIANE. GEQUIGE. (757)956-3263. (Hampton Roads. District). _ _ _
SUBSURFACE UTILITY BY, DATE ACCUMARK.INC.(757)767-3147 _ _ _ _ _ _ _ _ _

CONCRETE STAKING RADIAL OFFSETS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	2AA

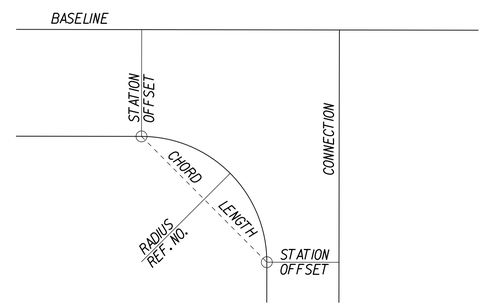
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

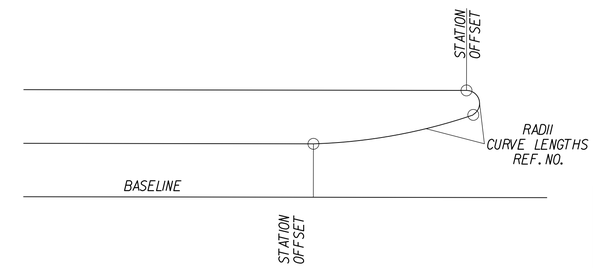
TURN LANES - REVERSE CURVE DATA



LOCATION (REF. NO.)	BASELINE	REVERSE CURVE	OFFSET	L OR R	CURVE LENGTH	RADIUS	LOCATION (REF. NO.)	BASELINE	REVERSE CURVE	OFFSET	L OR R	CURVE LENGTH	RADIUS
SHEET - ITEM	STATION	POINT	FEET		FEET	FEET	SHEET - ITEM	STATION	POINT	FEET		FEET	FEET

RADIAL OFFSETS / BULLET NOSE DATA





LOCATION (REF. NO.)	BASELINE		CONNECTION		RADIUS LENGTH	CHORD LENGTH	CURVE LENGTH	LOCATION (REF. NO.)	BASELINE		CONNECTION		RADIUS LENGTH	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	STATION	OFFSET	STATION	OFFSET	FEET	FEET	FEET	SHEET - ITEM	STATION	OFFSET	STATION	OFFSET	FEET	FEET	FEET
4-1	223+37.04	29.99	60+57.20	14.01	25	35.8	38.96	7-1	243+94.49	37.44			25	34.78	38.00
4-2	224+07.86	42.35	60+74.00	13.40	25	30.99	33.43	7-2	244+18.16	61.98			47.38	58.88	63.54
4-3	225+72.30	45.59	70+66.12	19.90	20	28.33	31.47	7-3	244+38.12	60.57			3		9.41
4-4	226+51.88	35.00	70+54.30	19.56	20	28.12	31.18	7-4	244+38.06	60.43			8		7.72
4-5	225+91.46	85.21			25	28	29.73	7-5	244+34.57	67.30			1		2.17
4-6	226+31.42	95.00			15	16.66	17.66	7-6	244+12.59	10.01			5		6.19
4-7	224+93.24	6.03			2.5	5	7.85	7-7	244+17.32	6.57			20		24.71
	224+92.83	1.62						7-8	244+41.23	7.01			1.85		5.81
5-1	227+69.04	49.12	20+71.63		40	63.75	73.76	7-9	244+44.80	11.00			2		6.28
5-2	229+18.42	46.00	20+86.31	24.20	60	71.67	77.67	8-1	249+26.52	48.99			50	37.87	38.84
5-3	229+62.18	46.00			20	25.03	25.20	8-2	249+62.55	76.62			5.69		18.54
	229+81.65	62.32						8-3	249+96.19	101.78			50	75.43	85.46
5-4	230+41.61	46.00			20	26.30	28.77		250+50.32	46.00					
	230+21.85	63.36						8-4	249+08.93	8.0			2.5		7.85
5-5	232+63.40	38.00			25	32.27	35.08	8-5	250+41.22	3.01			2.5		7.85
	232+86.84	59.23						8-6	249+79.11	46.00			50	78.92	90.95
5-6	232+84.33	64.89			7.44	6.17	6.87		250+23.54	109.19					
5-7	232+72.56	70.97			22	13.80	14.02	8-7	24953.07	55.12			7.97		25.22
5-8	232+67.25	69.84			8	7.23	5.84		249+68.33	54.80					
5-9	233+42.10	49.00			25	27.72	29.58	8-8	249+92.56	82.81			50	68.56	75.37
	233+19.59	63.99							250+39.25	35.00					
5-10	233+07.33	81.25			3.03	3.89	4.42								
	233+08.52	85.33													
5-11	227+81.33	46.00	31+01.63	18.57	50	72.41	80.97								
5-12	229+31.88	36.01	30+77.09	29.55	50	66.51	72.76								
5-13			30+56.90	3.66	3.98	7.46	12.54								
			30+56.78	4.29											
5-14	227+91.21	8.0			2.5	5									
	227+91.21	3.00													
5-15	229+32.04	3.00			2.5	5									
	229+31.88	8.00													
5-16	323+94.61	11.00			2	4									
	23+94.61	11.00													
5-17	232+94.61	7.00			2	4									
	232+94.74	11.00													
5-18	233+06.11	7			20	24.76									
	233+26.29	7.36													
5-19	233+26.29	7.36			5	6.04									
	233+31.08	11													
5-20	21+37.99	23.85			10	13.68									
	21+48.04	33.11													
5-21	21+90.19	23.11			10	14.50									
	21+80.29	33.69													

PROJECT	SHEET NO.
0612-047-631	2AA

PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY. R. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE. GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULICS ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 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

Utility Owners

Water and Sewer:
James City Service Authority
101-E Mounts Bay Road
Williamsburg, VA 23185
Robert Carswell 757-592-1799

Hampton Roads Sewer District
1436 Air Rail Avenue
Virginia Beach, VA 23455
757.460.2261

Power:

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell

Telecomm:

Cox Communications
Vicki Kincaid
HFC Designer III/EAST REGION Design Team
757-222-6579 / 757-369-6261

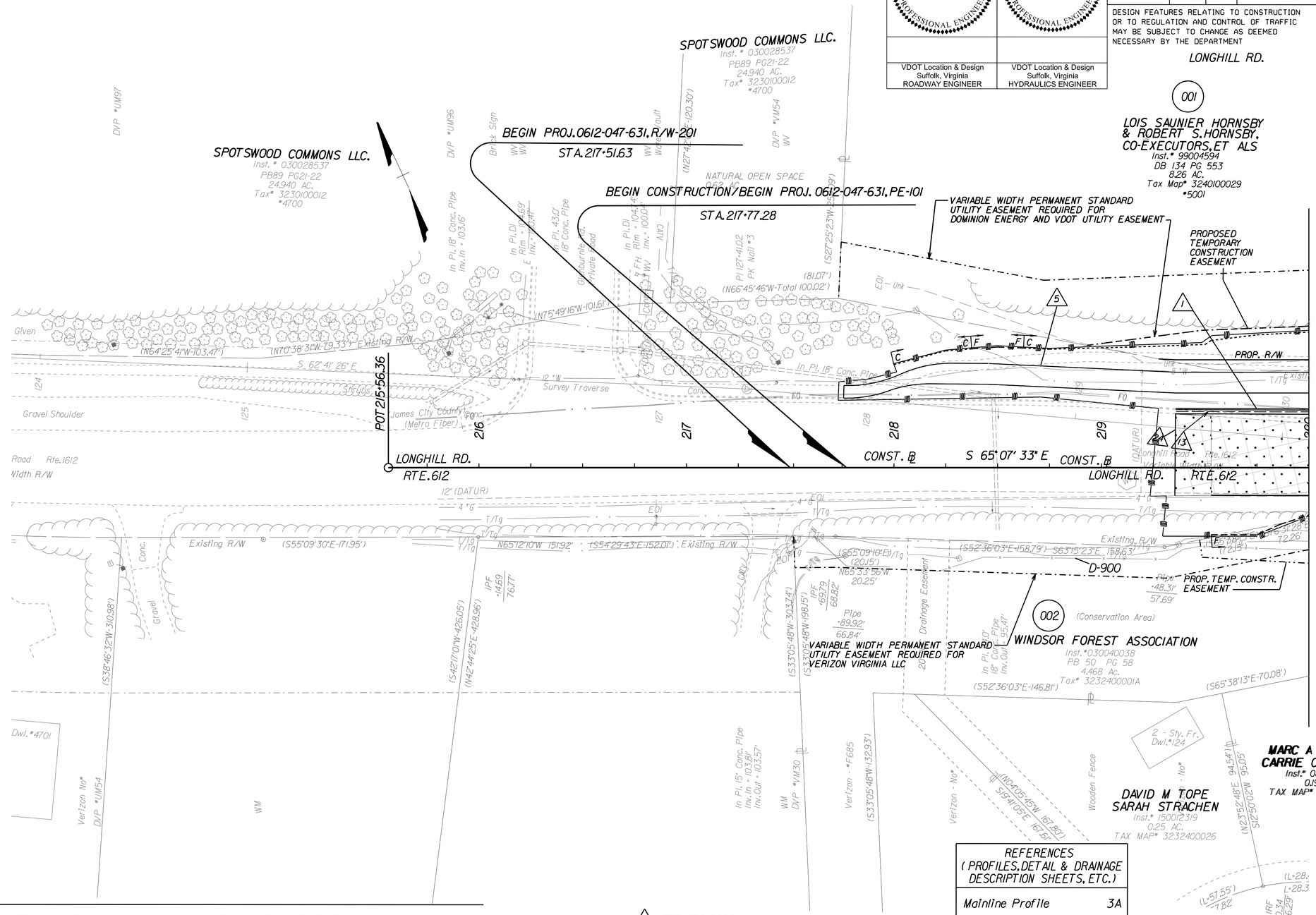
Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

James City Information
Mike Bowler
757-890-0143
Metro Fiber
Ray Dehart
757-876-9637

Gas:

Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757-455-2000

Kevin D. Starke
Senior Engineering Technician
Engineering Services
757-616-7529 office
757-449-0825 mobile
757-616-7517 fax



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	3A
Drainage Descr.	
Concrete Staking	3B

LEGEND

- Denotes Drainage Structure Number
- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' / 00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
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- Denotes Prop. Pavement

- 1 — ST'D. CG-7 REQ'D.
- 5 — 10' SHARED USE PATH
- 13 — ST'D. UD-4 REQ'D.
- 24 — SAW CUT ASPH. CONC. (FULL DEPTH) REQ'D.

NOTES
See General Notes for E&S Legend

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	3

HAMPTON ROADS DISTRICT DESIGN UNIT

PROJECT MANAGER KENNETH McKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

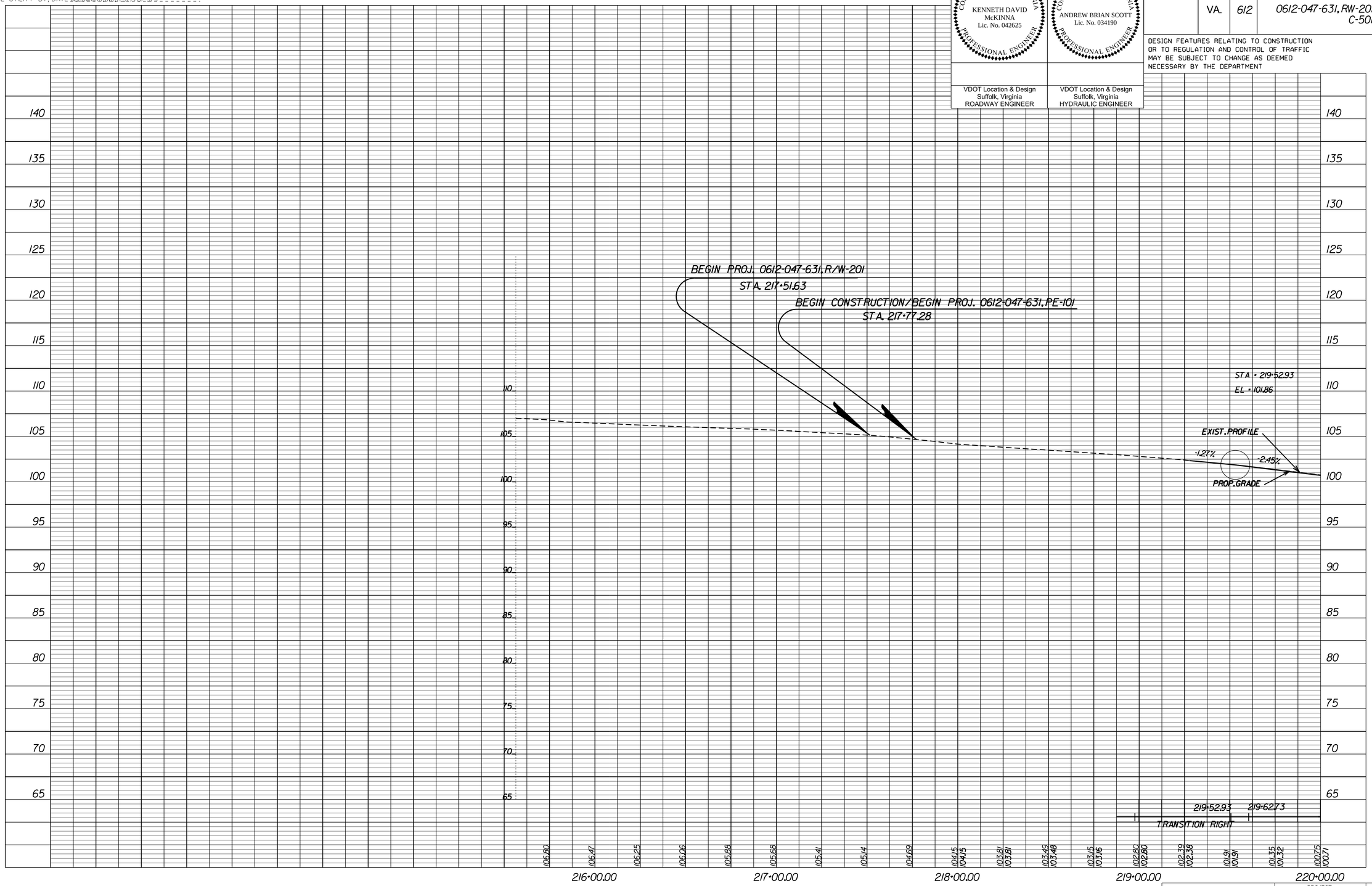
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 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



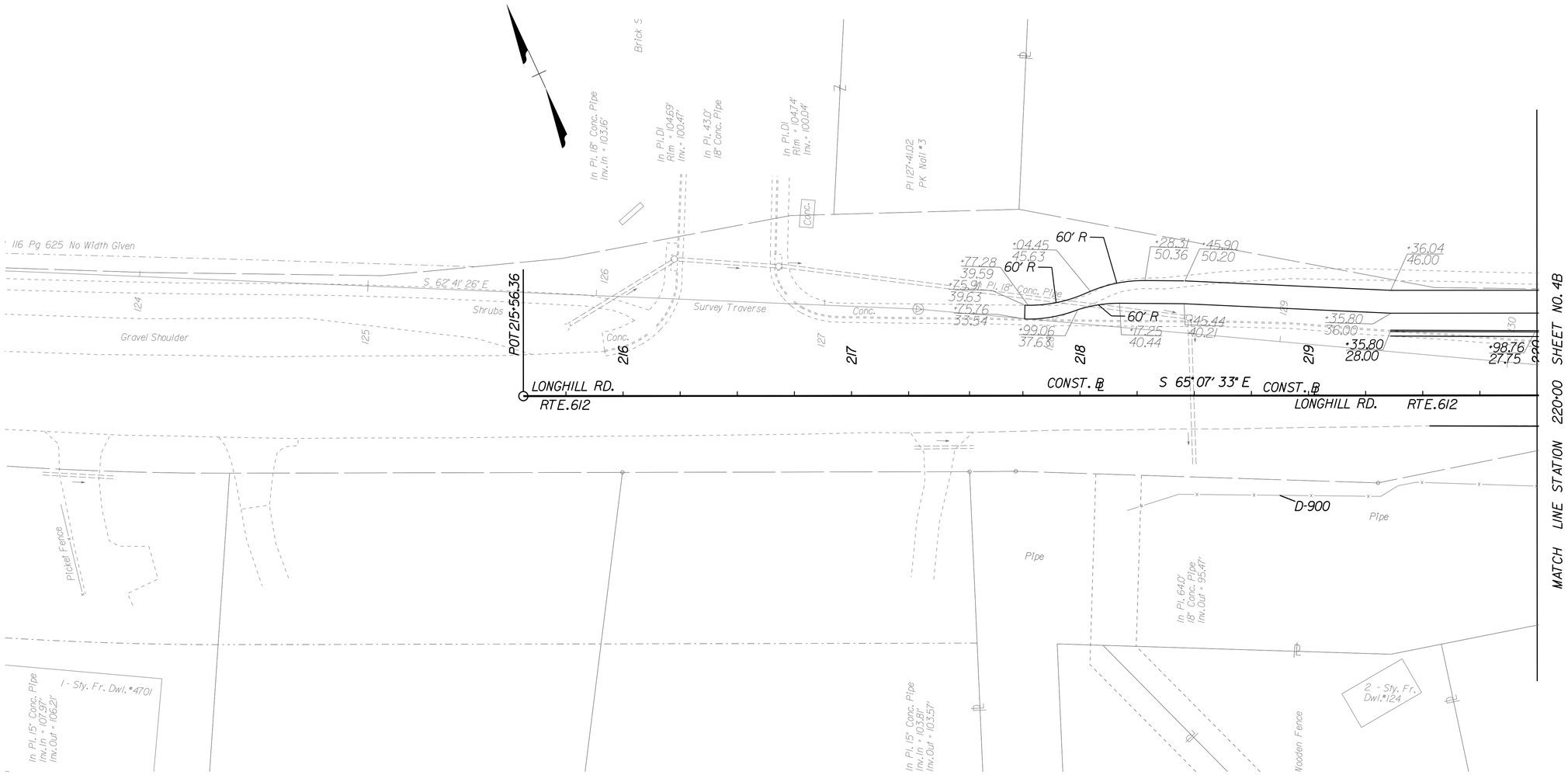
PROJECT	SHEET NO.
0612-047-631	3A

PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, 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

CONCRETE STAKING DATA



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	3A
See Sheet 2AA for Radial Offsets	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	3B

PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY. R. WILLIAMS. (757) 925-2657
DESIGN BY N. DIANE. GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

EROSION & SEDIMENT CONTROL PLAN

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	3C

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

LONGHILL RD.

Utility Owners

Water and Sewer:
James City Service Authority
101-E Mounts Bay Road
Williamsburg, VA 23185
Robert Carswell 757-592-1799

Hampton Roads Sewer District
1436 Air Rail Avenue
Virginia Beach, VA 23455
757.460.2261

Power:

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell

Telecomm:

Cox Communications
Vicki Kincaid
HFC Designer III/EAST REGION Design Team
757-222-6579 / 757-369-6261

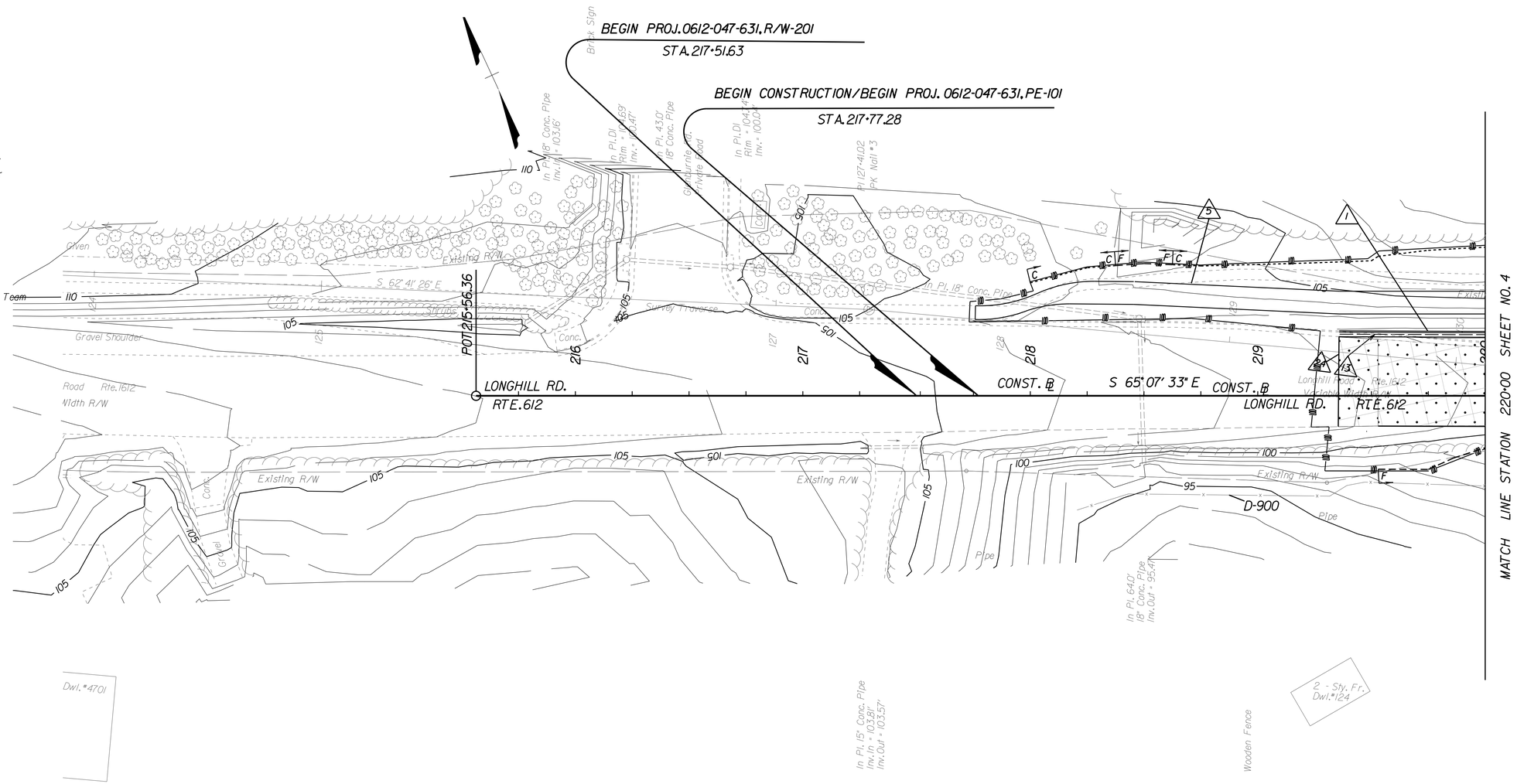
Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

James City Information
Mike Bowler
757-890-0143
Metro Fiber
Ray Dehart
757-876-9637

Gas:

Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757-455-2000

Kevin D. Starke
Senior Engineering Technician
Engineering Services
757-616-7529 office
757-449-0825 mobile
757-616-7517 fax



LEGEND

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- C ____ Denotes Construction Limits In Cuts
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- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- (3) Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid
- 1 ST'D. CG-7 REQ'D.
- 5 10' SHARED USE PATH
- 13 ST'D. UD-4 REQ'D.

NOTES
See General Notes for E&S Legend

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

Mainline Profile 3A
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	3C

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201, C-501	3RW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Survey
Suffolk, Virginia
LAND SURVEYOR

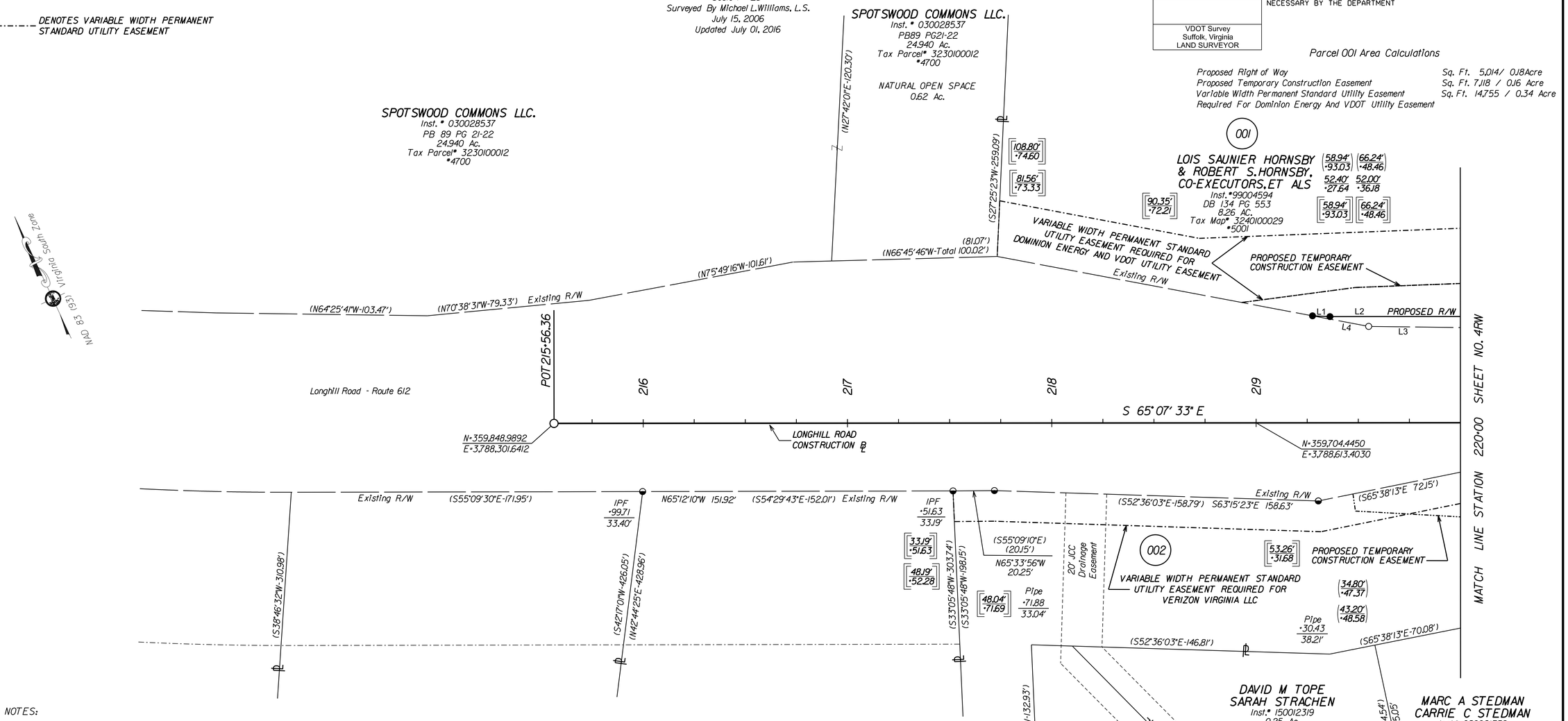
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

LINE LEGEND

- 00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED
- 00.00' / 00.00 — DENOTES PROPOSED R/W
- (00.00' / 00.00) — DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- [00.00' / 00.00] — DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT

LINE TABLE

LINE	BEARING	DISTANCE
L1	S62°27'28"E	8.55'
L2	S65°07'33"E	178.89'
L3	N64°22'51"W	159.58'
L4	N54°25'24"W	27.96'



Parcel 001 Area Calculations

Proposed Right of Way	Sq. Ft. 5,014 / 0.18 Acre
Proposed Temporary Construction Easement	Sq. Ft. 7,118 / 0.16 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And VDOT Utility Easement	Sq. Ft. 14,755 / 0.34 Acre

Parcel 002 Area Calculations

Proposed Right of Way	Sq. Ft. 58,792 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 19,507 / 0.45 Acre
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 15,354 / 0.35 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 16,857 / 00.39 Acre

GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

NOTE: All Stations And Offsets Are From The Construction Baseline
Bearings And Distances In Parenthesis Are Record Data

LEGEND

- ○ Computed Point
- ◒ Monumentation Found (As Noted)
- ● RM-2 (5/8" Rebar w/Cap)
- —·—·— Indicates Permanent Easement

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	3RW

8/30/2018
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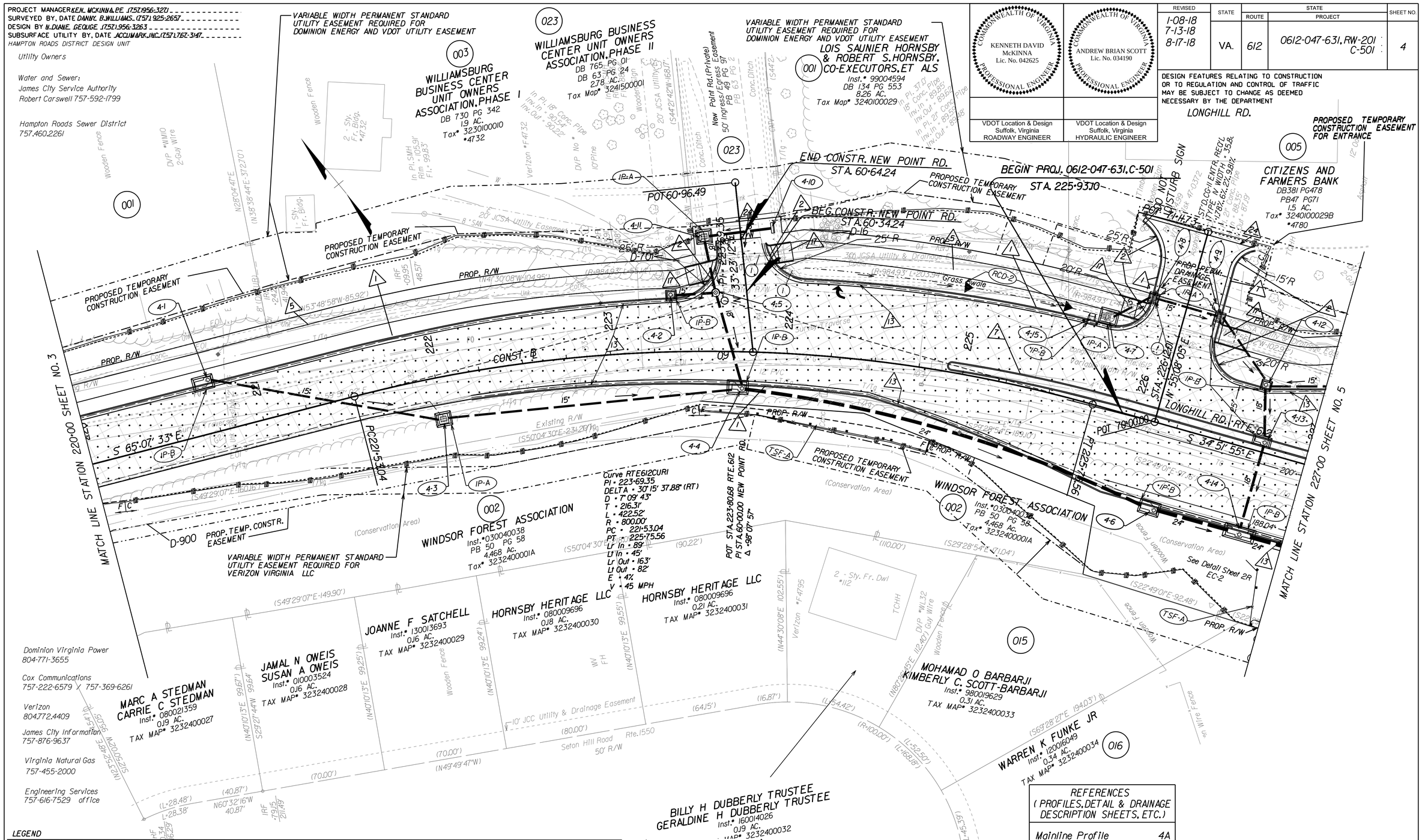
Plotted By: WAPO41073

PROJECT MANAGER: KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE: DANNY B. WILLIAMS (757) 925-2657
DESIGN BY: N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE: ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261



REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
1-08-18 7-13-18 8-17-18	VA.	612	0612-047-631, RW-201 C-501	4

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA — Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — ANDREW BRIAN SCOTT — Lic. No. 034190 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — HYDRAULIC ENGINEER

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

LEGEND

- Denotes Drainage Structure Number
- Denotes Construction Limits In Cuts
- Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- .00' / •00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (.00') / (•00) — Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [.00'] / [-00] — Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- ① Denotes existing structure & pipe to be removed.
- ② Denotes existing structure & pipe to be cleaned out.
- ③ Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement

1 ST'D. CG-7 REQ'D.
2 RAD. CG-7 REQ'D.
5 10' SHARED USE PATH
7 ST'D. MS-1A REQ'D.
12 ST'D. UD-2 REQ'D.
13 ST'D. UD-4 REQ'D.
17 CURB CUT RAMP SEE SHEET 2Z
24 SAW CUT ASPH. CONC. (FULL DEPTH) REQ'D.

NOTES
See General Notes for E&S Legend

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

Mainline Profile	4A
Drainage Descr.	2J & 2K
Entrance Profiles	9
Concrete Staking	4B
Radial Offset	2AA

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	4

HAMPTON ROADS DISTRICT DESIGN UNIT

PROJECT MANAGER KENNETH McKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

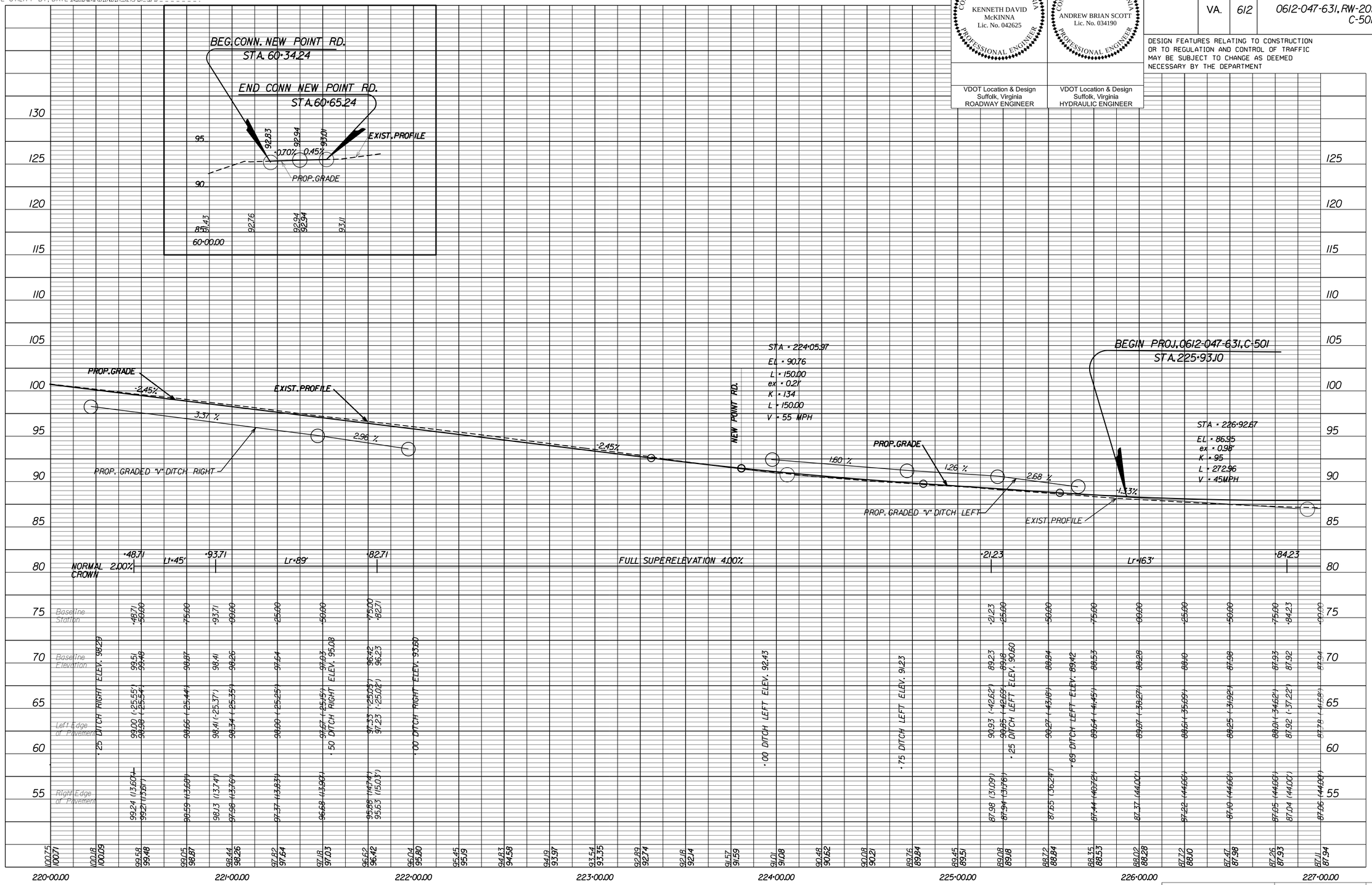
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 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



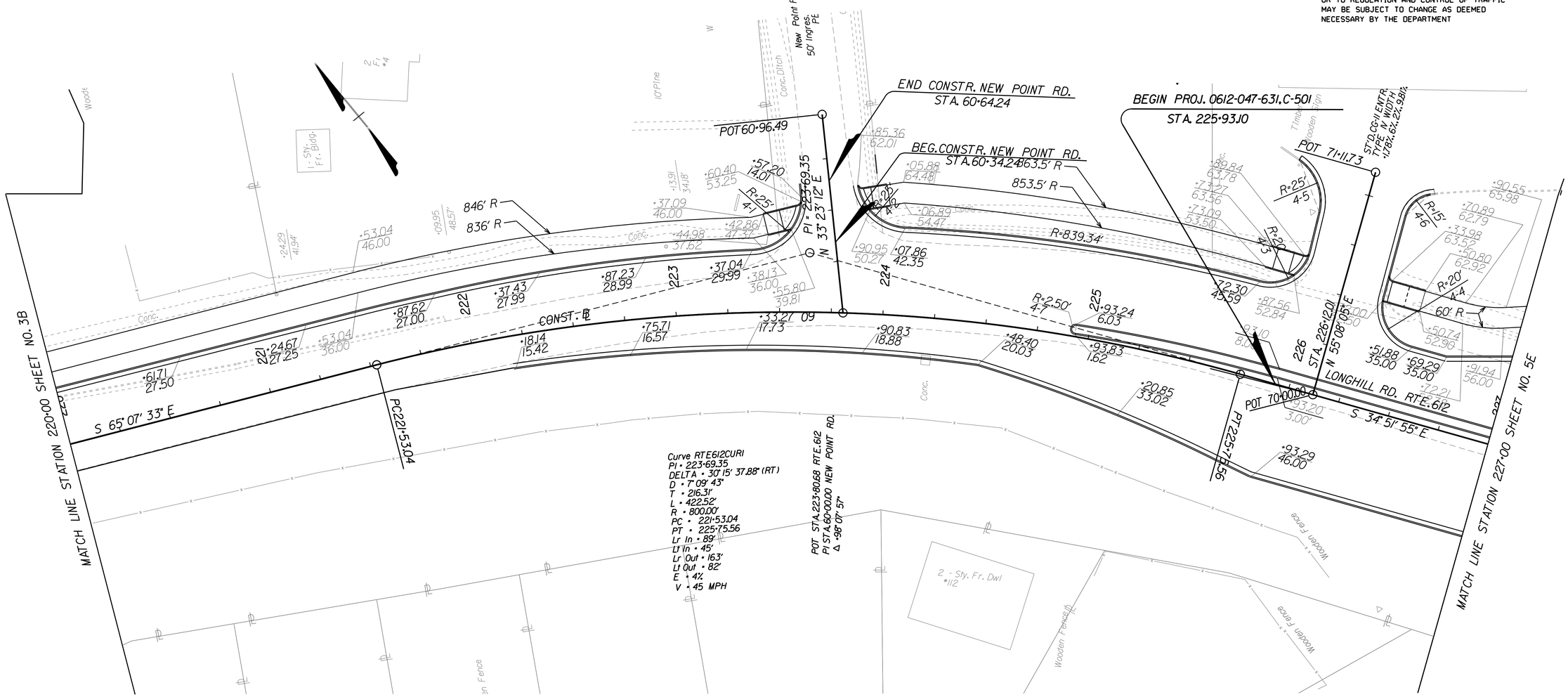
PROJECT	SHEET NO.
0612-047-631	4A

PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE. GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, 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

CONCRETE STAKING DATA



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4A
See Sheet 2AA for Radial Offsets	

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	4B

8/30/2018
1:41:05 PM

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Plotted By: WAP04107$

PROJECT MANAGER KEN. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MIKE POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

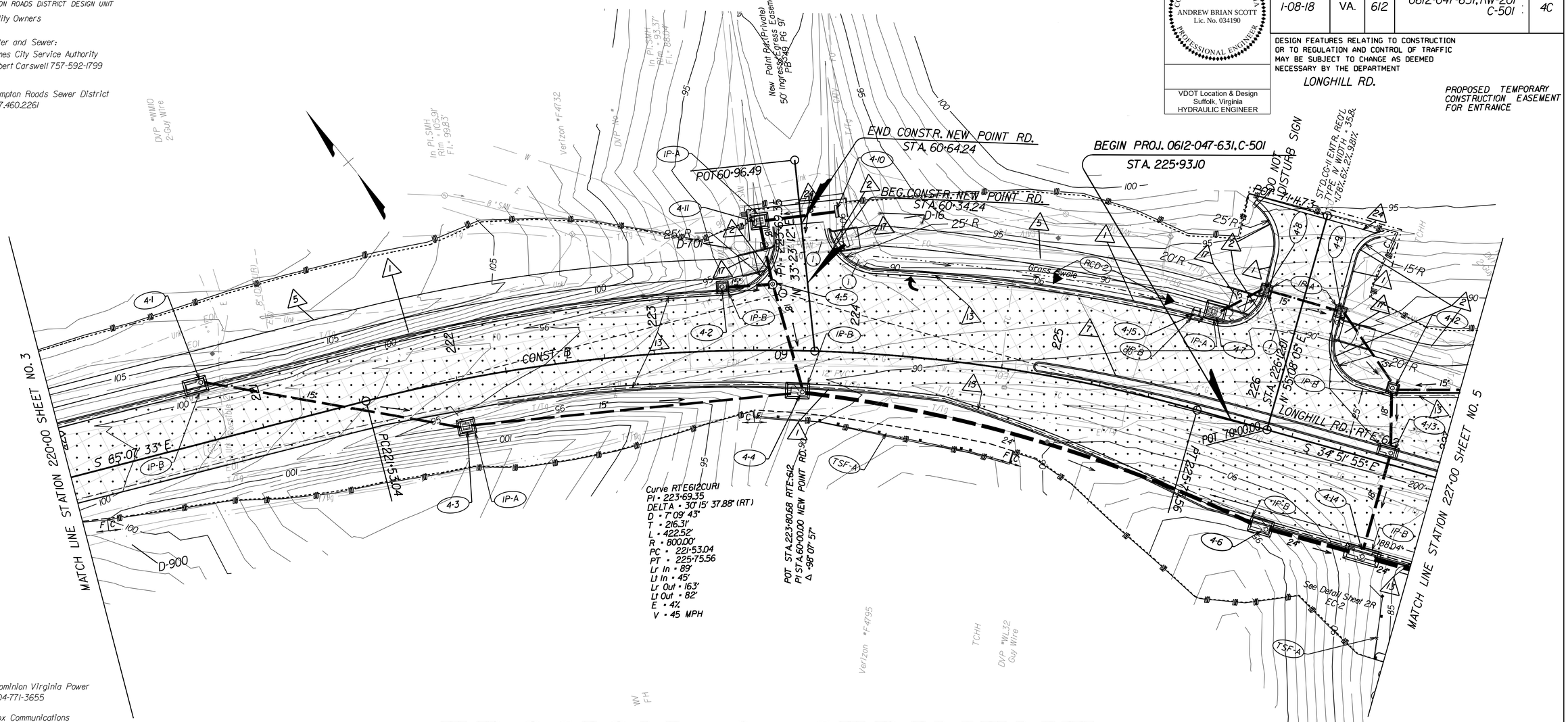
VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
1-08-18	VA.	612	0612-047-631, RW-201 C-501	4C

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

LONGHILL RD.

PROPOSED TEMPORARY CONSTRUCTION EASEMENT FOR ENTRANCE



EROSION & SEDIMENT CONTROL PLAN

Dominion Virginia Power
804-771-3655

Cox Communications
757-222-6579 / 757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office

LEGEND

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- Denotes Prop. Pavement
- (1) ST'D. CG-7 REQ'D.
- (2) RAD. CG-7 REQ'D.
- (5) 10' SHARED USE PATH
- (7) ST'D. MS-1A REQ'D.
- (12) ST'D. UD-2 REQ'D.
- (13) ST'D. UD-4 REQ'D.
- (17) CURB CUT RAMP SEE SHEET 2Z

NOTES
See General Notes for E&S Legend

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4A
Drainage Descr.	2J & 2K
Entrance Profiles	9

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	4C

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

NOTE: All Stations And Offsets Are From The Construction Baseline. Bearings And Distances In Parenthesis Are Record Data

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01-08-18 07-13-18	VA.	612	0612-047-631, RW-201, C-501	4RW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Survey
Suffolk, Virginia
LAND SURVEYOR

NAD 83 (93) Virginia State Plane

(001)
LOIS SAUNIER HORNSBY & ROBERT S. HORNSBY, CO-EXECUTORS, ET ALS
Inst.# 99004594
DB 134 PG 553
8.26 Ac.
Tax Map# 3240100029
#5001

Parcel 003 Area Calculations

Proposed Right of Way	Sq. Ft. 2,976 / 0.07 Acre
Proposed Temporary Construction Easement	Sq. Ft. 4,782 / 0.11 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 6,833 / 0.16 Acre
Required For Dominion Energy And VDOT Utility Easement	

Parcel 001 Area Calculations

Proposed Right of Way	Sq. Ft. 5,014 / 0.18Acre
Proposed Temporary Construction Easement	Sq. Ft. 7,118 / 0.16 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 14,755 / 0.34 Acre
Required For Dominion Energy And VDOT Utility Easement	

(003)
WILLIAMSBURG BUSINESS CENTER UNIT OWNERS ASSOCIATION, PHASE I
DB 730 PG 342
1.9 Ac.
Tax Map# 3230100010
#4732

(023)
WILLIAMSBURG BUSINESS CENTER UNIT OWNERS ASSOCIATION, PHASE II
DB 765 PG 01
PB 63 PG 24
2.78 Ac.
Tax Map# 3241500001

Parcel 023 Area Calculations

Proposed Right of Way	Sq. Ft. 1,793 / 0.04 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 1,469 / 0.03 Acre
Required For Dominion Energy And VDOT Utility Easement	

(001)
LOIS SAUNIER HORNSBY & ROBERT S. HORNSBY, CO-EXECUTORS, ET ALS
Inst.#99004594
DB 134 PG 553
8.26 Ac.
Tax Map# 3240100029

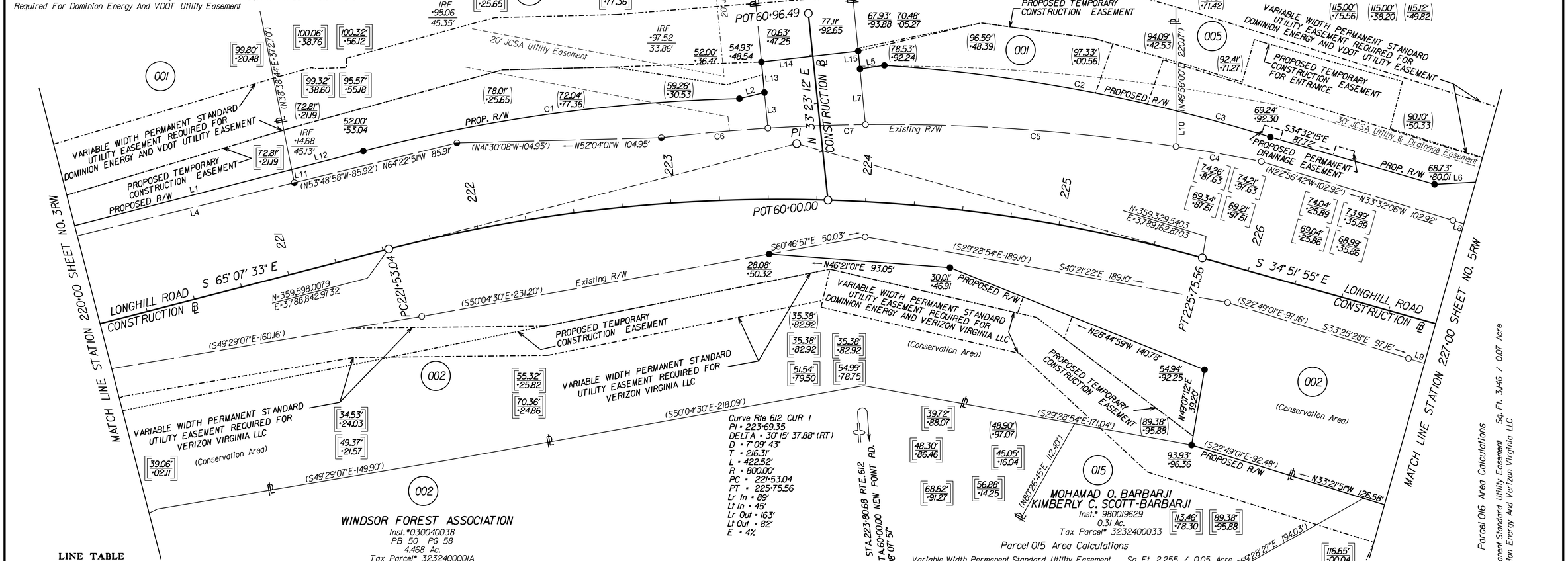
Parcel 001 Area Calculations

Proposed Right of Way	Sq. Ft. 5,014 / 0.18Acre
Proposed Temporary Construction Easement	Sq. Ft. 7,118 / 0.16 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 14,755 / 0.34 Acre
Required For Dominion Energy And VDOT Utility Easement	

(005)
CITIZENS AND FARMERS BANK
DB 381 PG 478
PB 47 PG 71
1.5 Ac.
Tax Parcel# 3240100029B
#4780

Parcel 005 Area Calculations

Proposed Right of Way	Sq. Ft. 4,775 / 0.11 Acre
Proposed Temporary Construction Easement	Sq. Ft. 8,247 / 0.19 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 12,991 / 0.30 Acre
Required For Dominion Energy And VDOT Utility Easement	
Proposed Permanent Drainage Easement	Sq. Ft. 347 / 0.01 Acre



(002)
WINDSOR FOREST ASSOCIATION
Inst.#030040038
PB 50 PG 58
4.468 Ac.
Tax Parcel# 3232400001A

Parcel 002 Area Calculations

Proposed Right of Way	Sq. Ft. 58,792 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 19,507 / 0.45 Acre
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 15,354 / 0.35 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 16,857 / 00.39 Acre

(015)
MOHAMAD O. BARBARJI
KIMBERLY C. SCOTT-BARBARJI
Inst.# 980019629
0.31 Ac.
Tax Parcel# 3232400033

Parcel 015 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 2,255 / 0.05 Acre

(016)
WARREN K FUNKE JR
Inst.# 120016049
0.34 Ac.
Tax Parcel# 3232400034

Parcel 016 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 3,146 / 0.07 Acre

LINE TABLE

LINE	BEARING	DISTANCE
L1	S65°07'33"E	178.89'
L2	S64°23'13"E	13.20'
L3	S33°47'32"W	18.41'
L4	N64°22'51"W	159.58'
L5	S59°06'20"E	12.64'
L6	S53°39'00"E	37.11'
L7	N33°47'32"E	28.69'
L8	N33°22'54"W	81.58'
L9	S33°12'01"E	116.65'
L10	N39°20'43"E	18.32'
L11	S28°04'47"W	6.88'
L12	S65°07'33"E	37.98'
L13	N33°47'32"E	15.76'
L14	S57°01'57"E	50.00'
L15	S33°47'32"W	9.28'

CURVE TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	13°08'13" (RT)	852.00'	195.35'	S 58°33'26" E	194.92'
C2	09°59'30" (RT)	869.50'	151.63'	S 41°45'45" E	151.44'
C3	03°18'50" (RT)	869.50'	50.29'	S 35°06'34" E	50.28'
C4	02°35'15" (LT)	984.93'	44.48'	N 40°36'30" W	44.48'
C5	09°18'13" (LT)	984.93'	159.93'	N 46°35'24" W	159.75'
C6	03°11'48" (LT)	984.93'	54.95'	N 55°44'47" W	54.94'
C7	02°54'52" (LT)	984.93'	50.10'	N 52°41'27" W	50.09'

GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

LINE LEGEND

·00.00 / 00.00'	DENOTES EXISTING MONUMENTATION AS NOTED
00.00' / ·00.00	DENOTES PROPOSED R/W
(00.00' / ·00.00)	DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
[00.00' / ·00.00]	DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT
[00.00' / ·00.00]	DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT

LEGEND

- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	4RW

1/31/2019
3:38:29 PM

d100921005.dgn
Plotted By: WAP04107$

PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEDUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

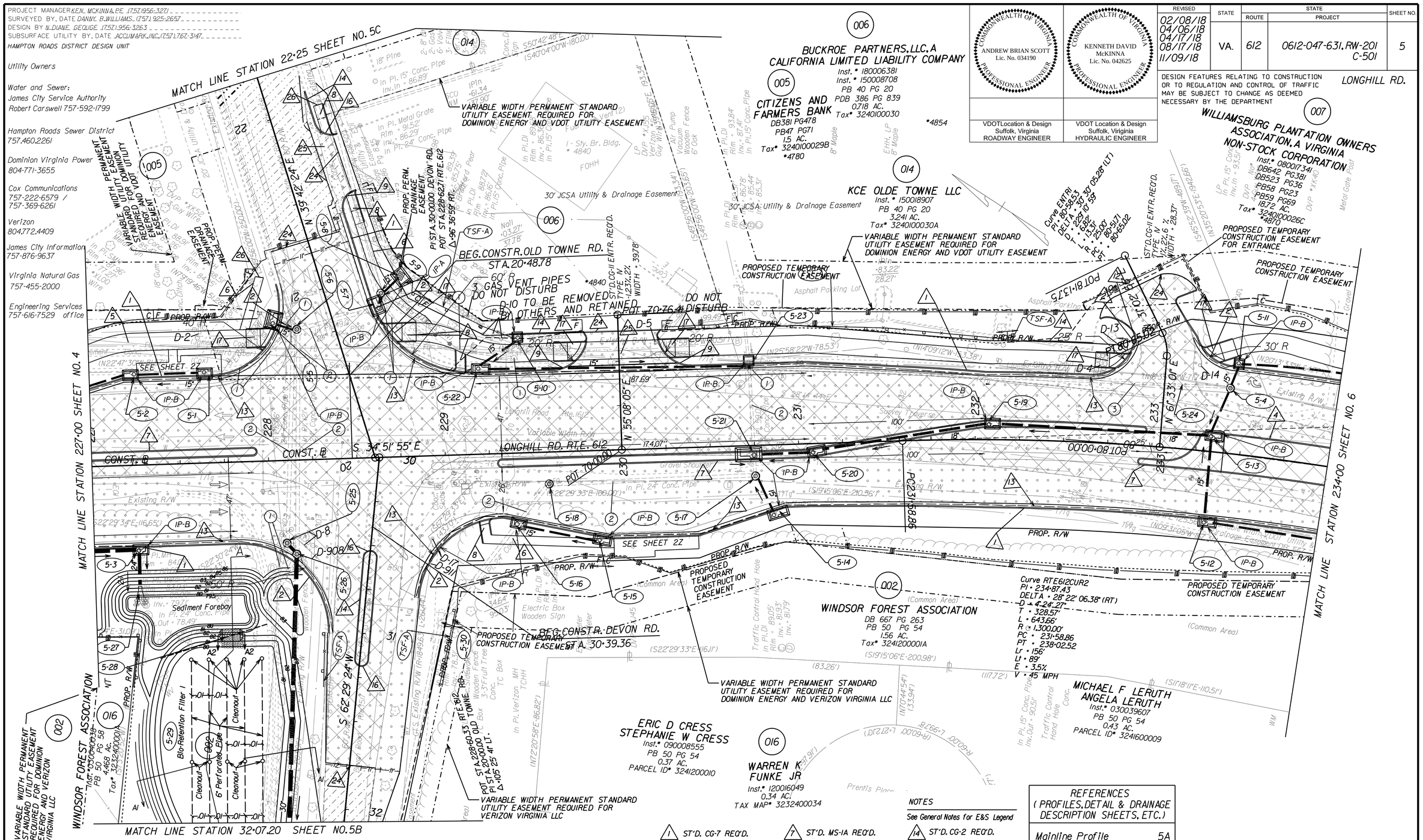
Cox Communications
757-222-6579 /
757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office



REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
02/08/18 04/06/18 04/17/18 08/17/18 11/09/18	VA.	612	0612-047-631, RW-201 C-501	5

COMMONWEALTH OF VIRGINIA — ANDREW BRIAN SCOTT — Lic. No. 034190 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA — Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — HYDRAULIC ENGINEER

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

LEGEND

- Denotes Drainage Structure Number
- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' / ·00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' / ·00) — Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' / ·00] — Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- (3) Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid

1. ST'D. CG-7 REQ'D.
2. RAD. CG-7 REQ'D.
4. ST'D. MS-2 REQ'D.
5. 10' SHARED USE PATH
6. 5' CEM. CONC. SIDEWALK
7. ST'D. MS-1A REQ'D.
8. ST'D. CG-12 TYPE 'B' REQ'D.
9. RAD. CG-3 REQ'D.
12. ST'D. UD-2 REQ'D.
13. ST'D. UD-4 REQ'D.
14. ST'D. CG-2 REQ'D.
16. RAD. CG-2 REQ'D.
17. CURB CUT RAMP SEE SHEET 2Z
24. SAW CUT ASPH. CONC. (FULL DEPTH) REQ'D.
25. DEMOLITION OF PAVEMENT RIGID
26. SAW CUT HYDRAULIC CEMENT CONCRETE ITEMS - SIDEWALK REQ'D.

NOTES

See General Notes for E&S Legend

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

Mainline Profile	5A
Drainage Descr.	2J & 2K
Conn. Profiles	5A & 5D
Entrance Profiles	9
SWM Details	2L
SWM E&S	2R
Concrete Staking	5E
Radial Offsets	2AA

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	5

11/20/2018
11:22:31 AM

d100921005a.dgn
Plotted By: WAP04107$

HAMPTON ROADS DISTRICT DESIGN UNIT

PROJECT MANAGER KENNETH McKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

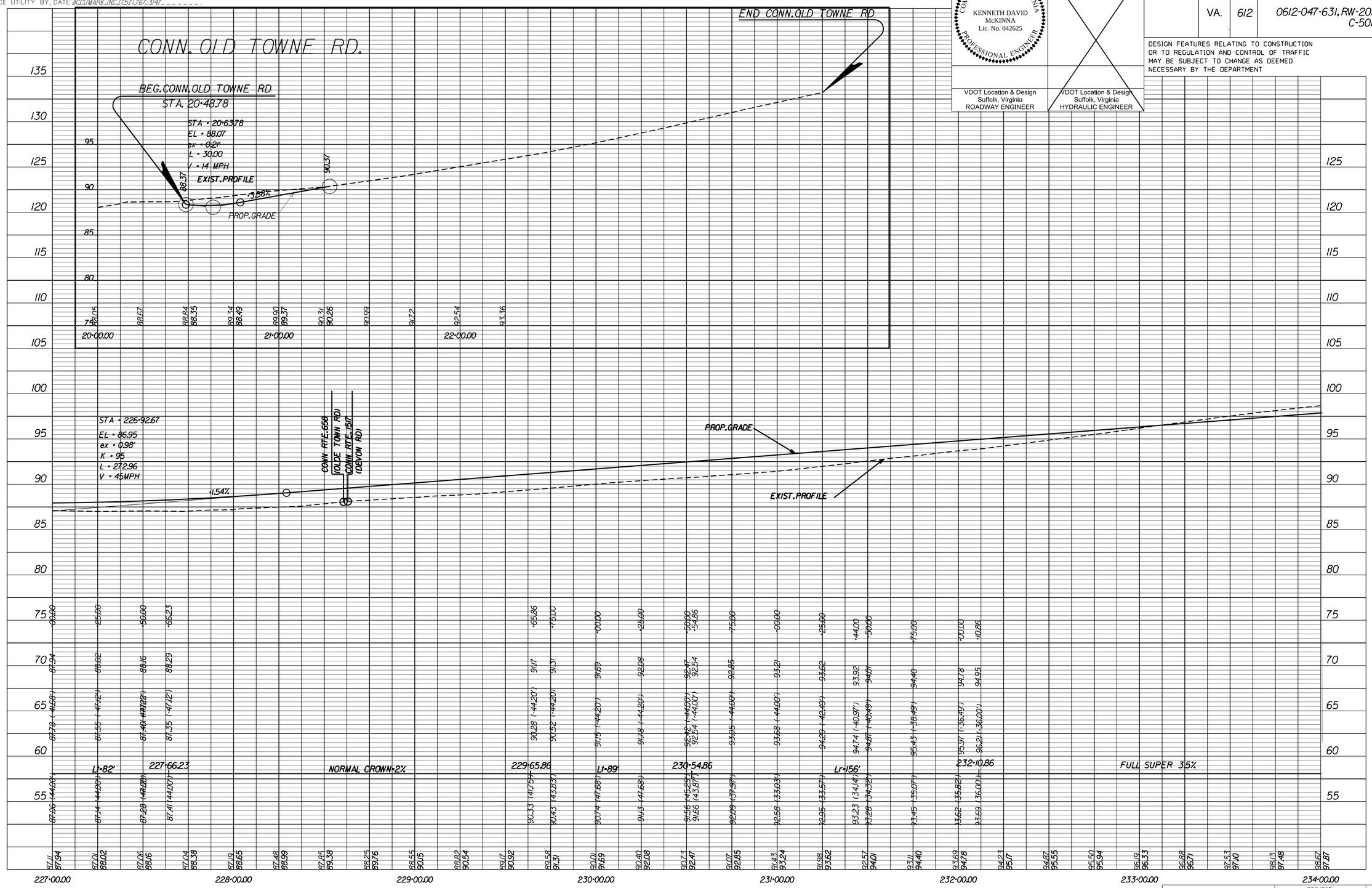
COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	5A

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



PROJECT	SHEET NO.
0612-047-631	5A

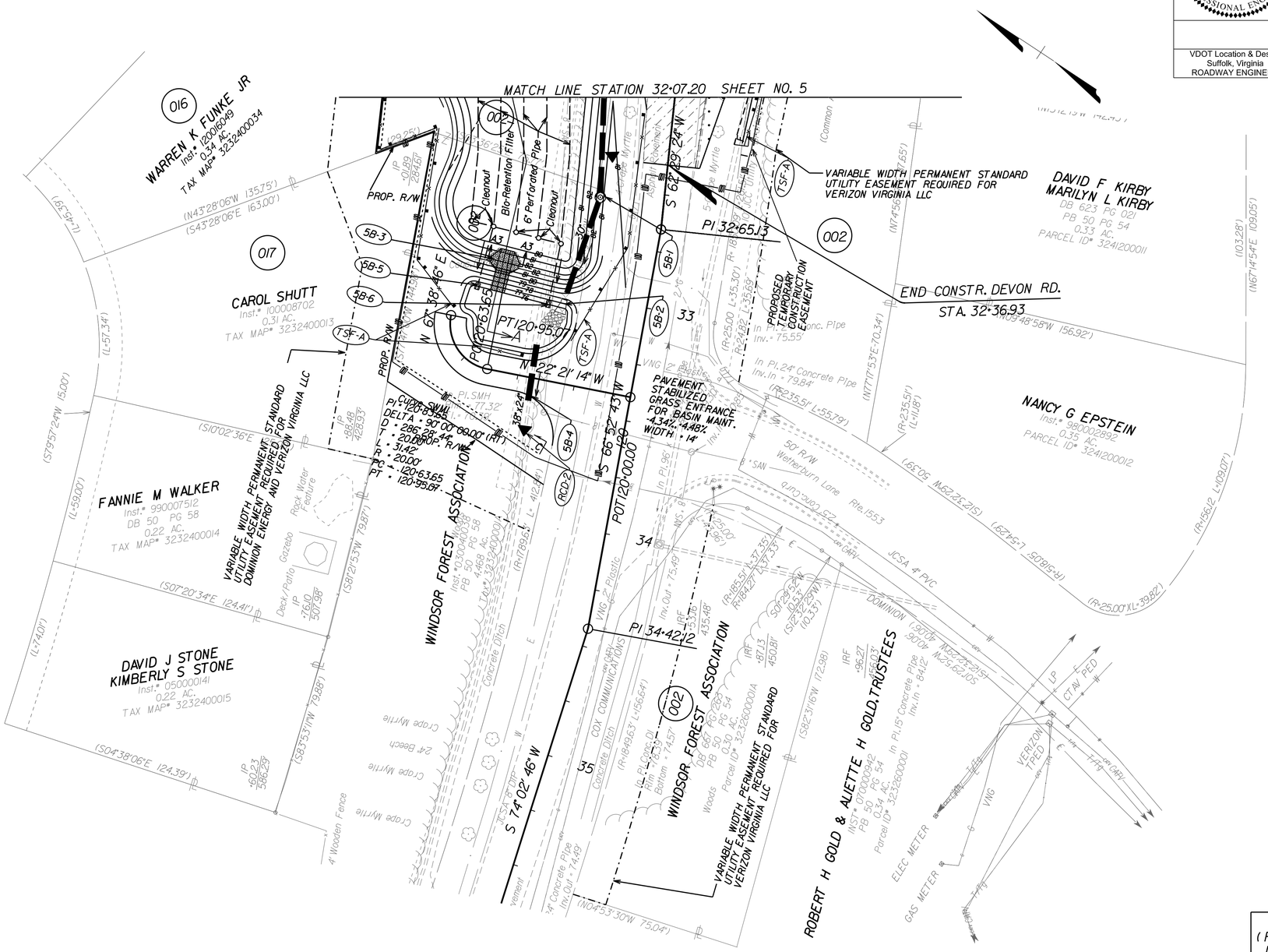
PROJECT MANAGER Ken McKinna, P.E. (757) 956-3271
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657
DESIGN BY N. Diane Gauge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA, Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — ANDREW BRIAN SCOTT, Lic. No. 034190 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — HYDRAULICS ENGINNER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/16/18	VA.	612	0612-047-631, RW-201 C-501	5B

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



LEGEND

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- ③ Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid

NOTES

See General Notes for E&S Legend

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

Conn Profile	5D
Drainage Descr.	2J & 2K
SWM Details	2L
SWM E&S	2R

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	5B

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
01-16-18	VA.	612	0612-047-631, RW-201, C-501	5BRW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

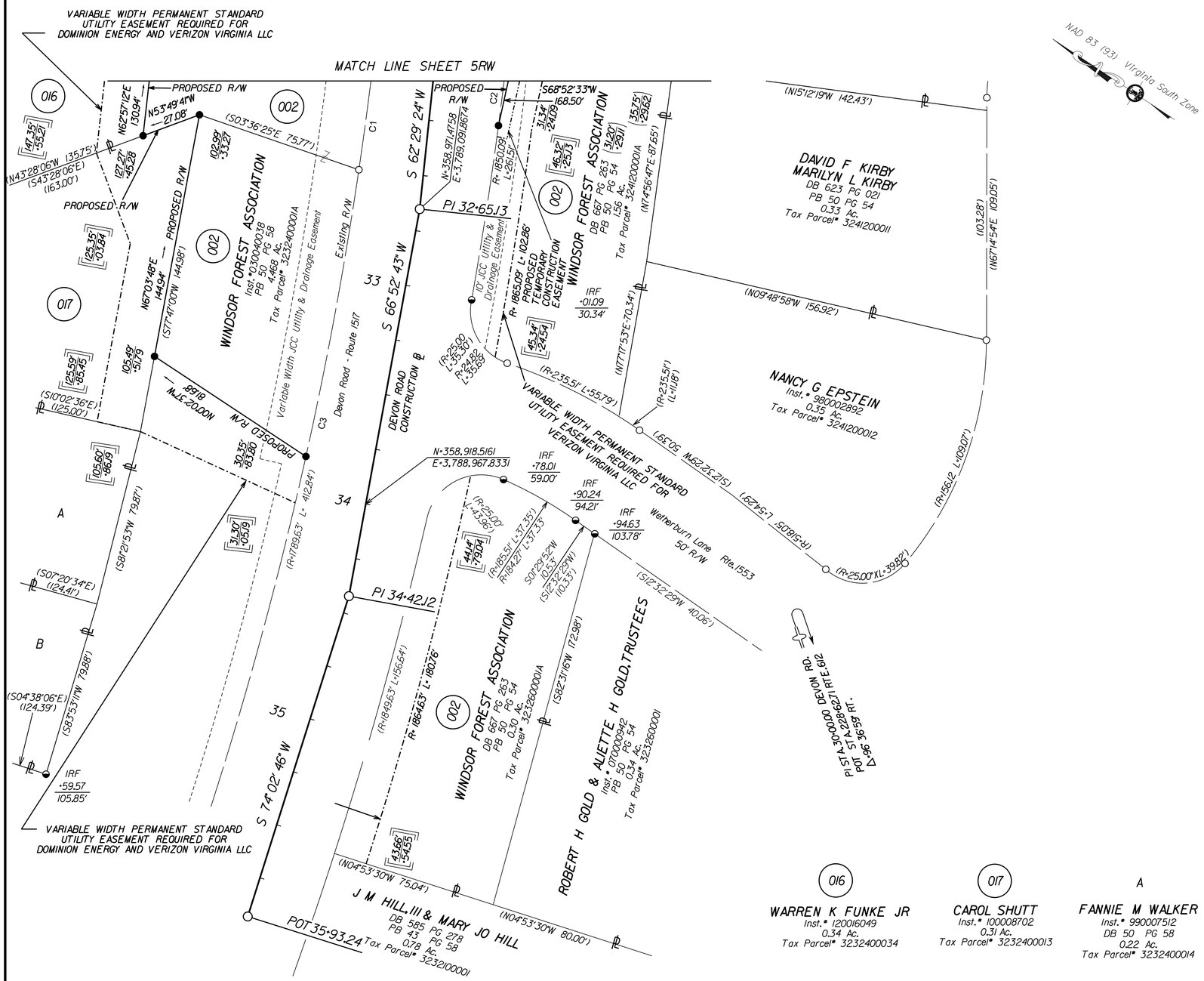
VDOT Survey
Suffolk, Virginia
SURVEYOR

LEGEND

- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement

LINE LEGEND

- ·00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED
- 00.00' / ·00.00 — DENOTES PROPOSED R/W
- (00.00' / ·00.00) — DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- [00.00' / ·00.00] — DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT



CURVE TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	06°31'42" (RT)	1789.63'	203.91'	S 61°36'52"W	203.80'
C2	05°38'34" (LT)	1850.09'	182.20'	N 61°13'12"E	182.13'
C3	04°11'58" (RT)	1789.63'	131.17'	S 66°58'41"W	131.14'

Parcel 002 Area Calculations

Proposed Right of Way	Sq. Ft. 58,792 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 19,507 / 0.45 Acre
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 15,354 / 0.35 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 16,857 / 00.39 Acre

Parcel 016 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 3,146 / 0.07 Acre

Parcel 017 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 3,340 / 0.08 Acre

GENERAL NOTES:

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4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631,C501, UPC# 100921

NOTE: All Stations And Offsets Are From The Construction Baseline Bearings And Distances In Parenthesis Are Record Data

016	017	A	B
WARREN K FUNKE JR	CAROL SHUTT	FANNIE M WALKER	DAVID J STONE KIMBERLY S STONE
Inst.# 120016049	Inst.# 100008702	Inst.# 990007512	Inst.# 050000141
0.34 Ac.	0.31 Ac.	DB 50 PG 58	0.22 Ac.
Tax Parcel# 3232400034	Tax Parcel# 3232400013	0.22 Ac.	Tax Parcel# 3232400015
		Tax Parcel# 3232400014	

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	5BRW

11/28/2018
11:24:27 AM

d10092l005cdgn
Plotted By: WAP04107$

PROJECT MANAGER K.E.N. MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS, L.S. (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

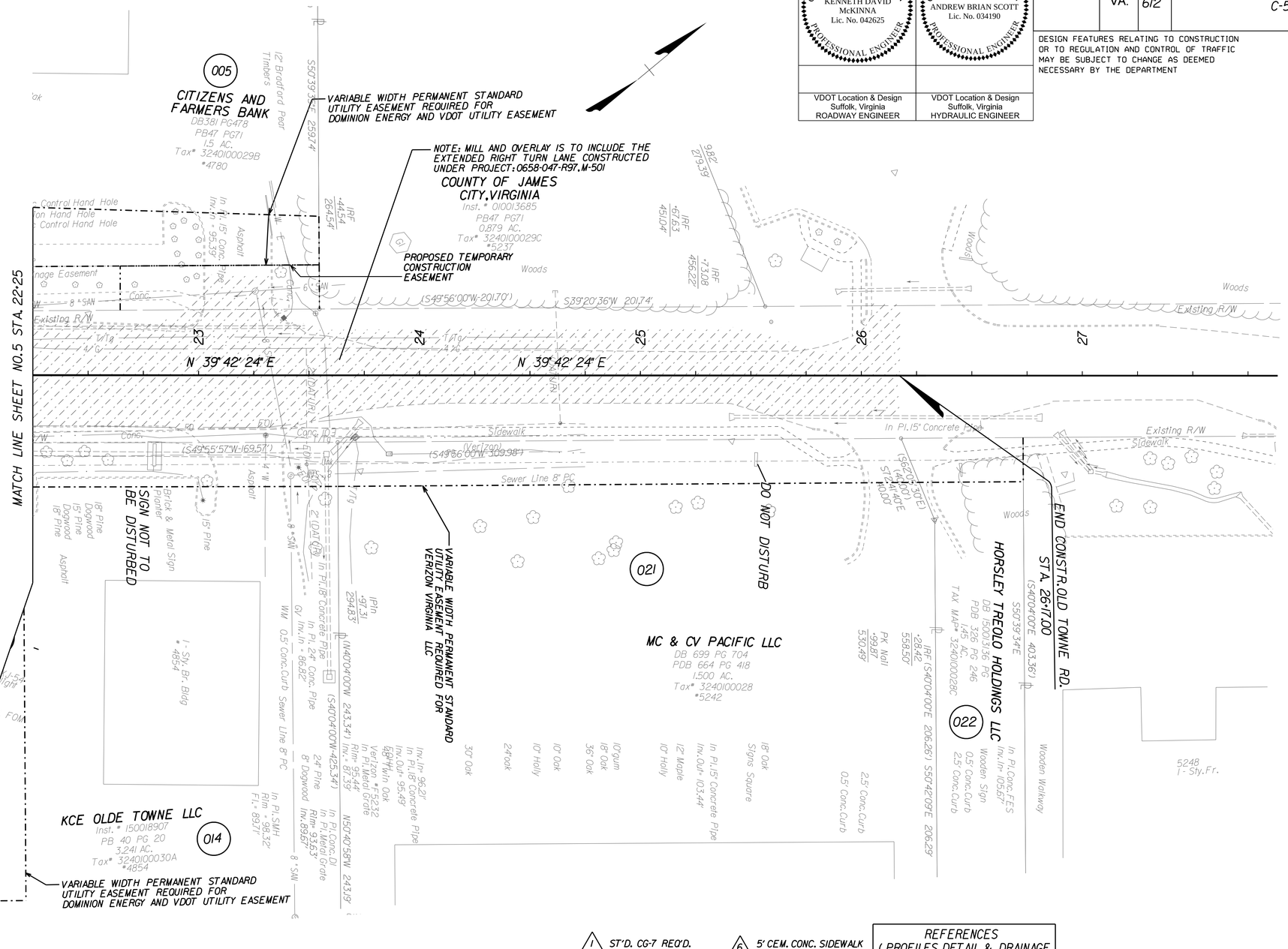
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
04/06/18	VA.	612	0612-047-631, RW-201 : C-501 :	5C

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



LEGEND

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- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' / ·00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' / ·00) — Figures in parenthesis and dot-dot-dashed lines denote Temporary Easements.
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- ② Denotes existing structure & pipe to be cleaned out.
- ③ Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid w/1.5" SM-9.5D

NOTES
See General Notes for E&S Legend

1. ST'D. CG-7 REQ'D.
2. RAD. CG-7 REQ'D.
3. ST'D. CG-3 REQ'D.
4. ST'D. MS-2 REQ'D.
5. 10' SHARED USE PATH
6. 5' CEM. CONC. SIDEWALK
7. RAD. CG-2 REQ'D.
8. ST'D. CG-12 REQ'D.
9. MOD. CG-12B REQ'D.
12. ST'D. RAD. CG-3 REQ'D.

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

Mainline Profile
Drainage Descr.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612 - 047 - 631	5C

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
11-30-17 04-06-18	VA.	612	0612-047-631, RW-201, C-501	5CRW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Survey
Suffolk, Virginia
SURVEYOR

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

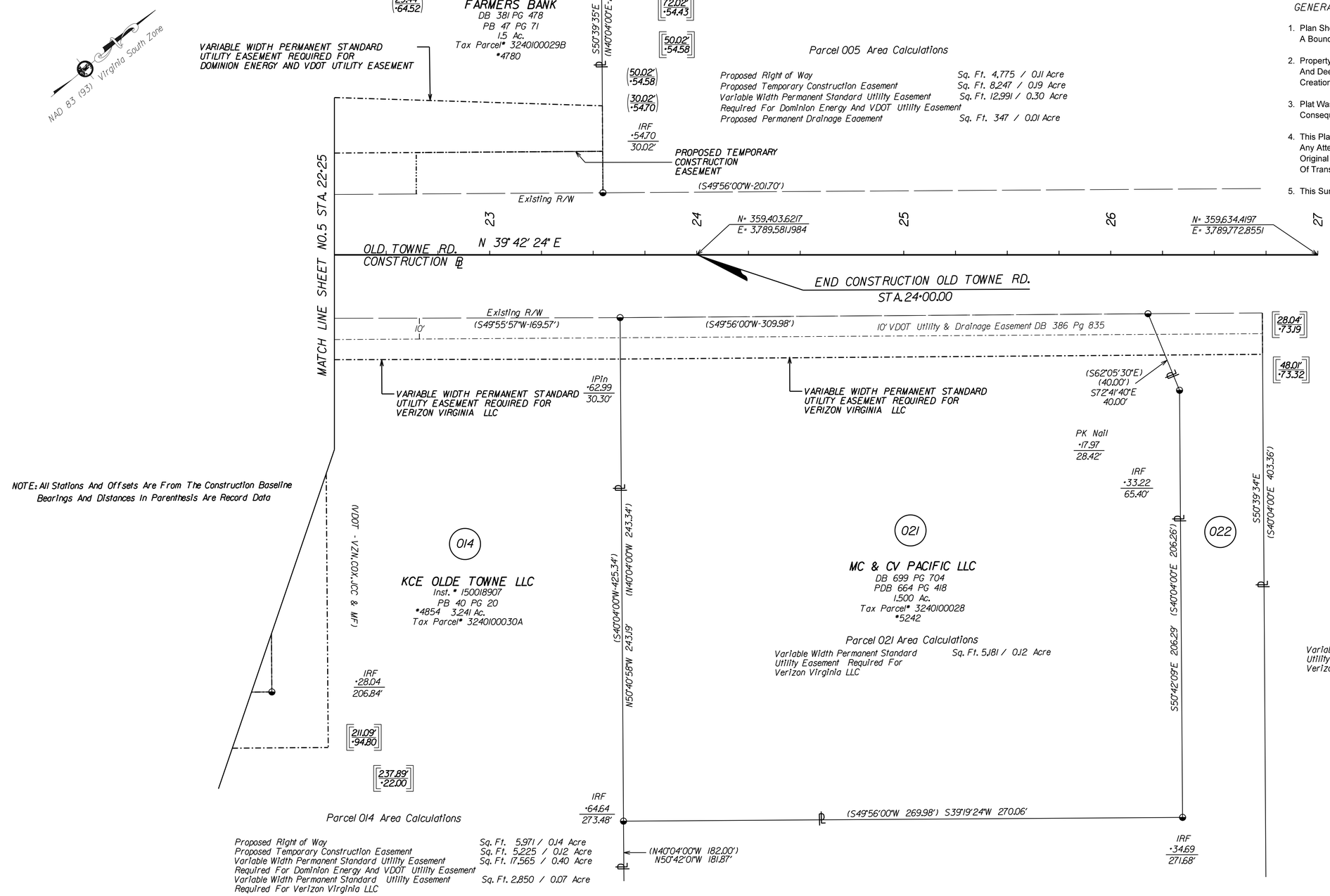
James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

LINE LEGEND

·00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED

(00.00' / ·00.00) — DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT

[00.00' / ·00.00] — DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT



Parcel 005 Area Calculations

Proposed Right of Way	Sq. Ft. 4,775 / 0.11 Acre
Proposed Temporary Construction Easement	Sq. Ft. 8,247 / 0.19 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And VDOT Utility Easement	Sq. Ft. 12,991 / 0.30 Acre
Proposed Permanent Drainage Easement	Sq. Ft. 347 / 0.01 Acre

Parcel 021 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 5,181 / 0.12 Acre

Parcel 022 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 1,023 / 0.02 Acre

Parcel 014 Area Calculations

Proposed Right of Way	Sq. Ft. 5,971 / 0.14 Acre
Proposed Temporary Construction Easement	Sq. Ft. 5,225 / 0.12 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And VDOT Utility Easement	Sq. Ft. 17,565 / 0.40 Acre
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 2,850 / 0.07 Acre

GENERAL NOTES:

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2. Property Line Information Is Based On Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
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5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

LEGEND

- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	5CRW

8/30/2018
1:40:52 PM

dl0092l005d.dgn
Plotted By: WAP04107$

PROJECT MANAGER KEN. MCKINNA (757) 956-3271
SURVEYED BY, DATE DANNY R.WILLIAMS, LS (757) 925-2657
DESIGN BY N.DIANE GEOUGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK INC. (804) 767-3147

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

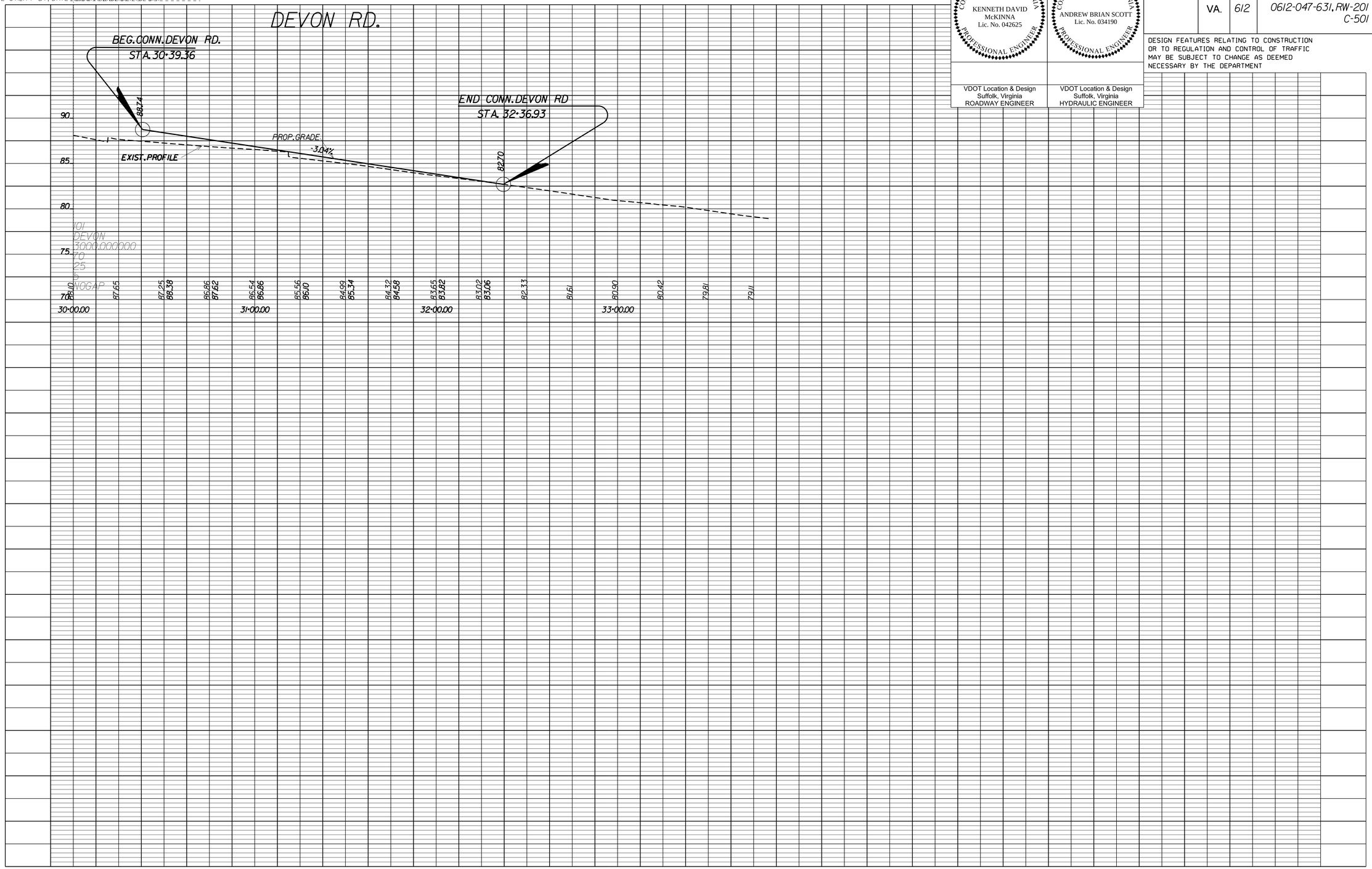
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	5D

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



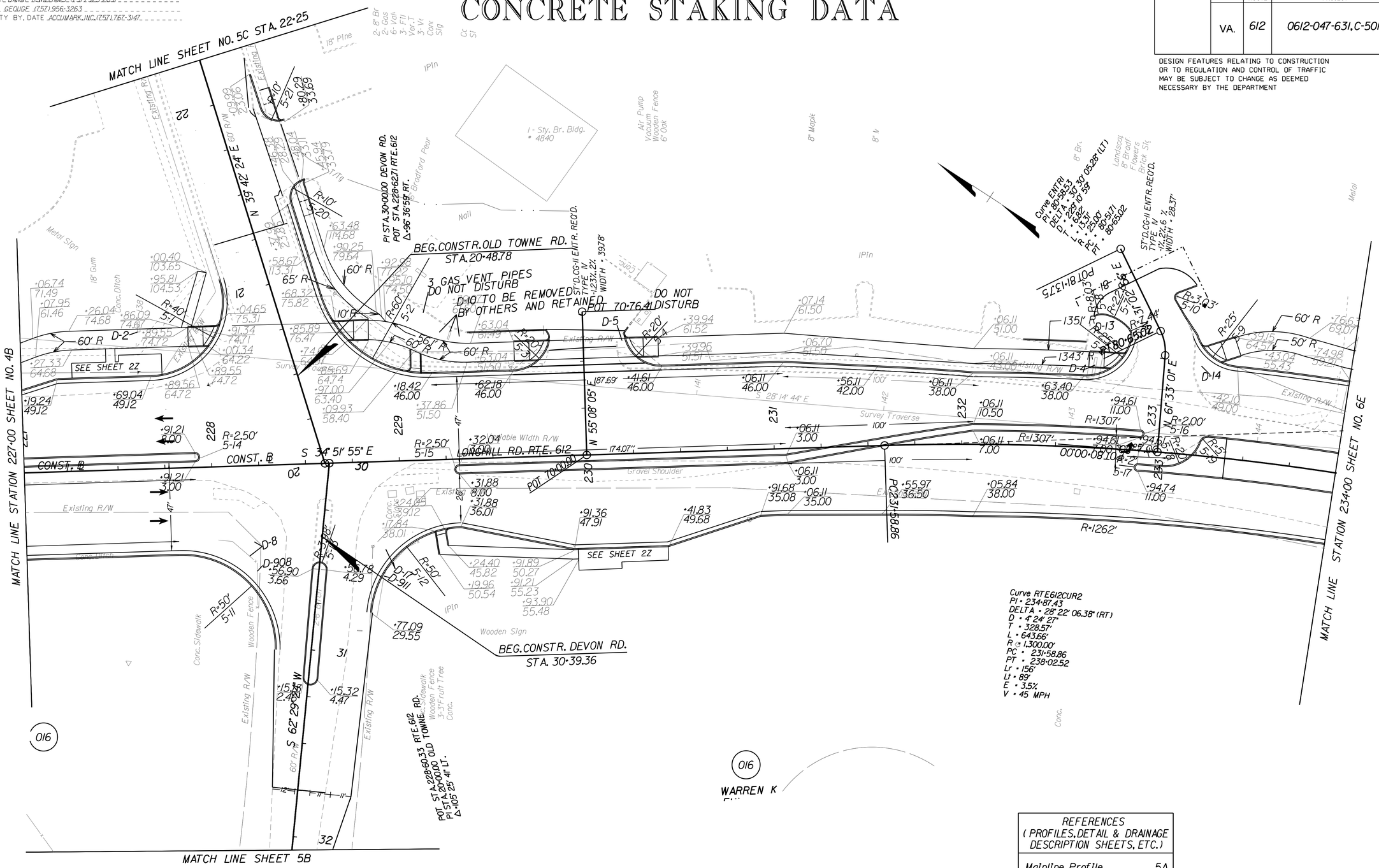
PROJECT	SHEET NO.
0612-047-631	5D

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

CONCRETE STAKING DATA

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	5E

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



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	5A
Radial Offset Data	2AA

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	5E

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY MIKE POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

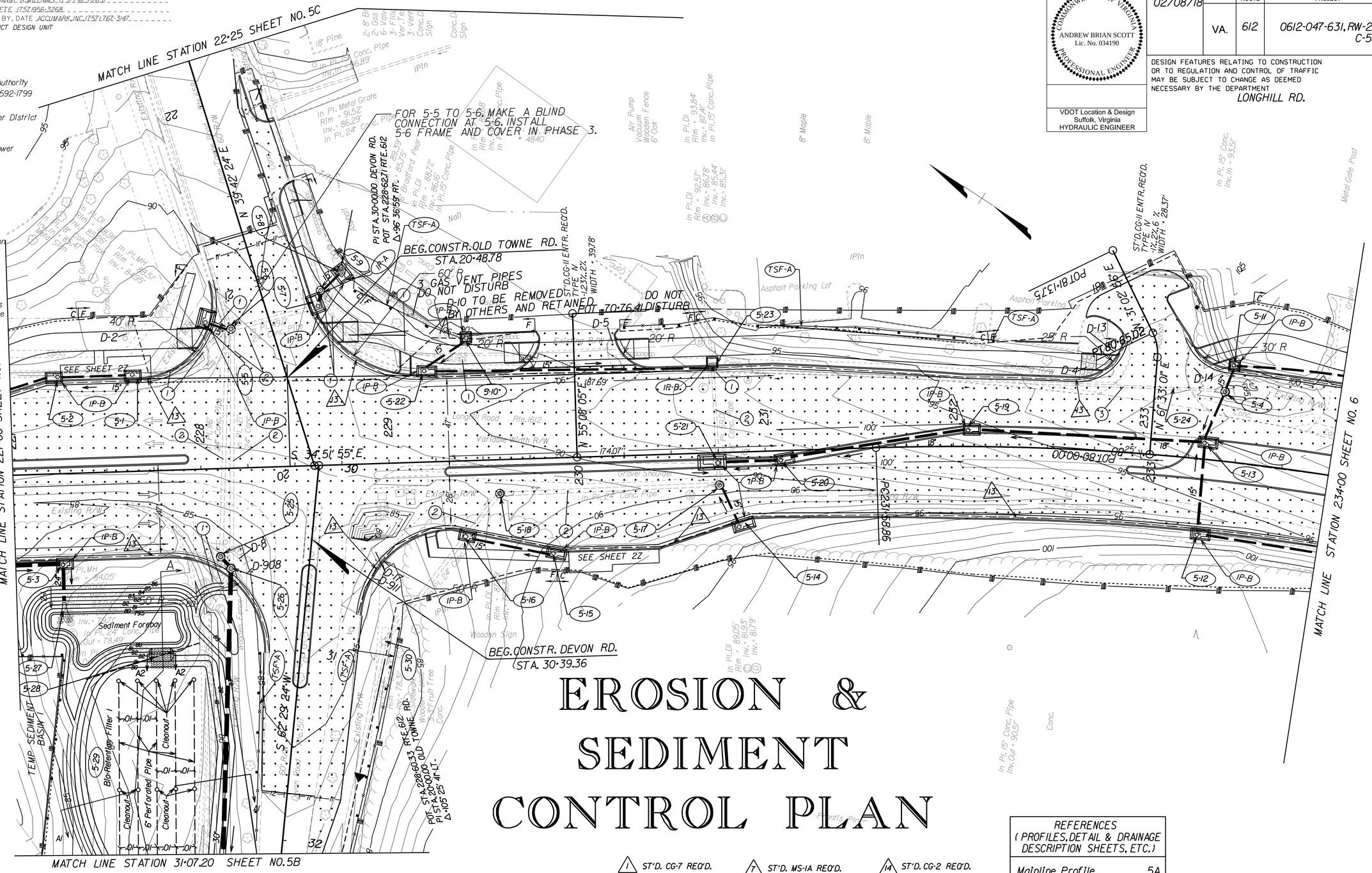
Cox Communications
757-222-6579 /
757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office



EROSION & SEDIMENT CONTROL PLAN

LEGEND

- Denotes Drainage Structure Number
- C - - - - Denotes Construction Limits In Cuts
- F _ _ Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' / ·00 Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' / ·00) Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' / ·00] Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- ① Denotes existing structure & pipe to be removed.
- ② Denotes existing structure & pipe to be cleaned out.
- ③ Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid

NOTES

See General Notes for E&S Legend

1. ST'D. CG-7 REQ'D.
2. RAD. CG-7 REQ'D.
4. ST'D. MS-2 REQ'D.
5. 10' SHARED USE PATH
6. 5' CEM. CONC. SIDEWALK
7. ST'D. MS-1A REQ'D.
8. ST'D. CG-12 TYPE B REQ'D.
9. RAD. CG-3 REQ'D.
12. ST'D. UD-2 REQ'D.
13. ST'D. UD-4 REQ'D.
14. ST'D. CG-2 REQ'D.
15. MOD. CG-7 REQ'D.
16. RAD. CG-2 REQ'D.
17. CURB CUT RAMP SEE SHEET 2Z

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

Mainline Profile	5A
Drainage Descr.	2J & 2K
Conn. Profiles	5A & 5D
Entrance Profiles	9
SWM Details	2L
SWM E&S	2R

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
02/08/18	VA.	612	0612-047-631, RW-201 C-501	5F

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

LONGHILL RD.

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	5F

PROJECT MANAGER Ken McKinna, P.E. (757) 956-3271
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657
DESIGN BY MIKE POBLETE (757) 956-3268
SUBSURFACE UTILITY BY, DATE ACCUMARK (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

EROSION & SEDIMENT CONTROL PLAN

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/16/18	VA.	612	0612-047-631, RW-201 C-501	5G

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

LEGEND

- Denotes Drainage Structure Number
- C ..... Denotes Construction Limits in Cuts
- F _ _ Denotes Construction Limits in Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' / 00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' / 00) — Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' / 00] — Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- (3) Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid

NOTES
See General Notes for E&S Legend

1. ST'D. CG-7 REQ'D.
2. RAD. CG-7 REQ'D.
3. ST'D. CG-3 REQ'D.
4. ST'D. MS-2 REQ'D.
5. 10' SHARED USE PAT'H
6. 5' CEM. CONC. SIDEWALK
7. RAD. CG-2 REQ'D.
8. ST'D. CG-12 REQ'D.
9. MOD. CG-12B REQ'D.
12. ST'D. RAD. CG-3 REQ'D.

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

Conn Profile	5D
Drainage Descr.	2J & 2K
	2L
	2R

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	5G

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

LEGEND
- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement

VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT REQUIRED FOR DOMINION ENERGY AND VDOT UTILITY EASEMENT

MATCH LINE SHEET NO. 5C STA. 22+25

LINE TABLE

LINE	BEARING	DISTANCE
L1	S53°39'00"E	37.11'
L2	S10°29'07"W	8.82'
L3	S50°42'48"E	4.63'
L4	S39°16'05"W	6.54'
L5	S39°16'05"W	2.86'

CURVE TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	03°10'25" (RT)	1356.00'	75.11'	S 31°11'17" E	75.10'
C2	01°07'56" (RT)	1373.45'	27.14'	S 27°19'54" E	27.14'
C3	06°31'42" (RT)	1789.63'	203.91'	S 61°36'52"W	203.80'
C4	09°19'01" (LT)	1250.00'	203.26'	N 28°08'11"W	203.04'
C5	05°38'34" (LT)	1850.09'	182.20'	N 61°13'12"E	182.13'
C6	04°33'04" (RT)	1373.45'	136.24'	S 24°29'24" E	109.07'

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Survey
Suffolk, Virginia
SURVEYOR

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
02-08-2018 04-06-2018 04-17-2018 11-09-2018	VA.	612	0612-047-631, RW-201, C-501	5RW

005 CITIZENS AND FARMERS BANK
DB 381 PG 478
PB 47 PG 71
1.5 Ac.
Tax Parcel# 3240100029B

006 BUCKROE PARTNERS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY
Inst.# 180006381
Inst.# 150008708
PB 40 PG 20
PDB 386 PG 839
0.718 Ac.
Tax Parcel# 3240100030

Parcel 006 Area Calculations

Proposed Right of Way	Sq. Ft. 2,748 / 0.06 Acre
Proposed Temporary Construction Easement	Sq. Ft. 2,294 / 0.05 Acre
Proposed Permanent Drainage Easement	Sq. Ft. 60 / 0.001 Acre

007 WILLIAMSBURG PLANTATION OWNERS ASSOCIATION, A VIRGINIA NONSTOCK CORPORATION
Inst.# 080017341
DB 642 PG 381
DB 523 PG 36
PB 59 PG 69
PB 58 PG 23
32.09 Ac.
Tax Parcel# 3240100026C
#4870

014 KCE OLDE TOWNE LLC
Inst.# 150018907
PB 40 PG 20
3.241 Ac.
Tax Parcel# 3240100030A

Parcel 014 Area Calculations

Proposed Right of Way	Sq. Ft. 5,971 / 0.14 Acre
Proposed Temporary Construction Easement	Sq. Ft. 5,225 / 0.12 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 17,565 / 0.40 Acre
Required For Dominion Energy And VDOT Utility Easement	
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 2,850 / 0.07 Acre

Parcel 007 Area Calculations

Proposed Right of Way	Sq. Ft. 58,806 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 42,467 / 0.97 Acre
Variable Width Permanent Standard Utility Easement For Dominion Energy And VDOT	Sq. Ft. 33,864 / 0.77 Acre

002 WINDSOR FOREST ASSOCIATION
Inst.# 030040038
PB 50 PG 58
4.468 Ac.
Tax Parcel# 3232400001A

002 WINDSOR FOREST ASSOCIATION
DB 667 PG 263
PB 50 PG 54
1.56 Ac.
Tax Parcel# 3241200001A

016 WARREN K FUNKE JR
Inst.# 120016049
0.34 Ac.
Tax Parcel# 3232400034

Parcel 005 Area Calculations

Proposed Right of Way	Sq. Ft. 4,775 / 0.11 Acre
Proposed Temporary Construction Easement	Sq. Ft. 8,247 / 0.19 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And VDOT Utility Easement	Sq. Ft. 12,991 / 0.30 Acre
Proposed Permanent Drainage Easement	Sq. Ft. 347 / 0.01 Acre

Parcel 002 Area Calculations

Proposed Right of Way	Sq. Ft. 58,792 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 19,507 / 0.45 Acre
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 15,354 / 0.35 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 16,857 / 00.39 Acre

Parcel 016 Area Calculations

Variable Width Permanent Standard Utility Easement Required For Dominion Energy And Verizon Virginia LLC	Sq. Ft. 3,146 / 0.07 Acre

MATCH LINE SHEET 5BRW
MATCH LINE SHEET NO. 4RW
MATCH LINE SHEET NO. 6RW
MATCH LINE STATION 227+00
MATCH LINE STATION 234+00

LINE LEGEND

00.00' / 00.00'	DENOTES EXISTING MONUMENTATION AS NOTED
00.00' / 00.00'	DENOTES PROPOSED R/W
(00.00' / 00.00')	DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
[00.00' / 00.00']	DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT
[00.00' / 00.00']	DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT

Curve RTE612CUR2
PI = 234+87.43
DELTA = 28° 22' 06.38" (RT)
D = 4° 24' 27"
T = 328.57'
L = 643.66'
R = 1,300.00'
PC = 231+58.86
PT = 238+02.52
Lr = 156'
Lt = 89'
E = 3.5%

GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

NOTE: All Stations And Offsets Are From The Construction Baseline
Bearings And Distances In Parenthesis Are Record Data

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	5RW

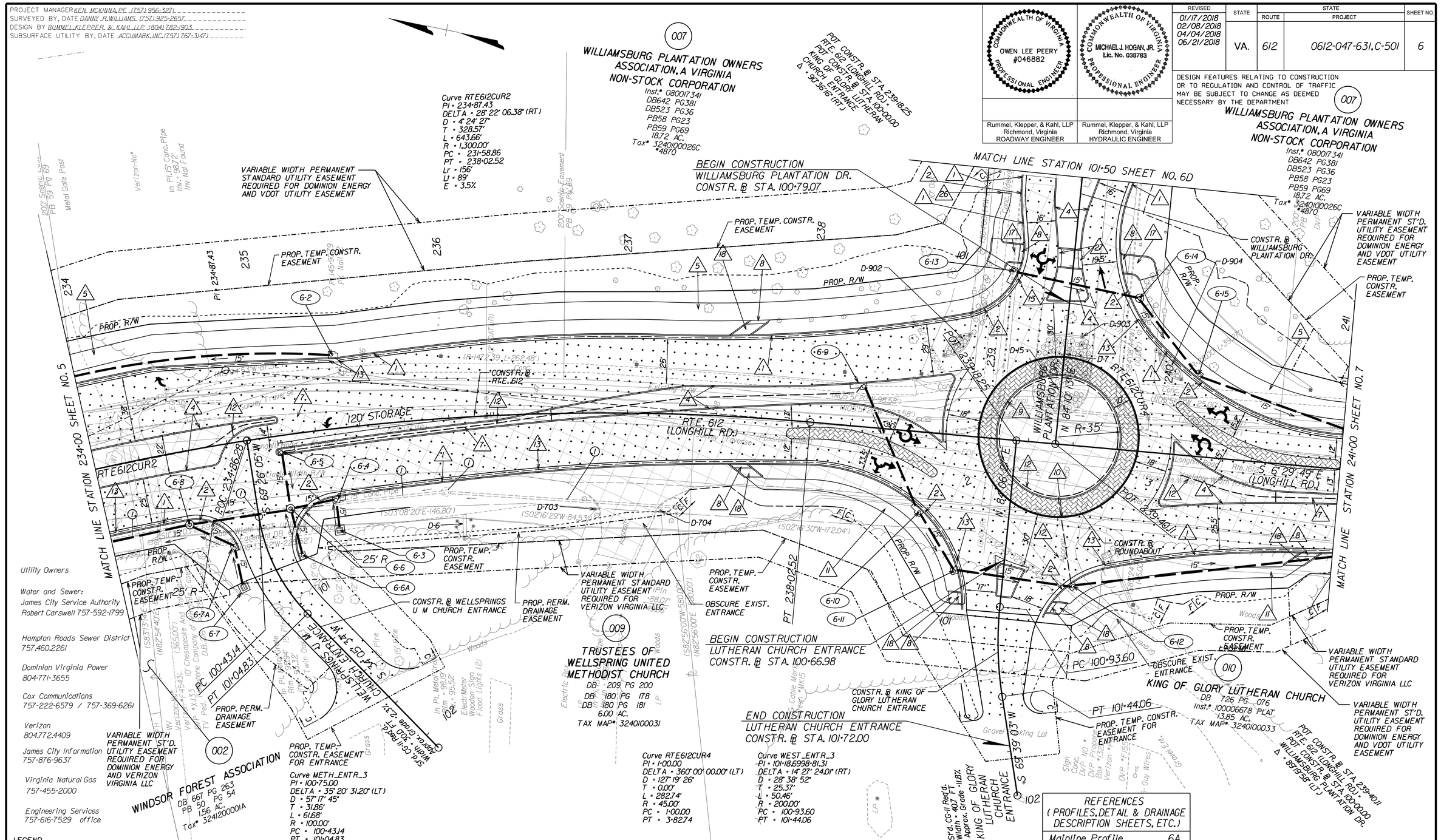
PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/17/2018 02/08/2018 04/04/2018 06/21/2018	VA.	612	0612-047-631, C-501	6

COMMONWEALTH OF VIRGINIA — OWEN LEE PEERY #046882 — PROFESSIONAL ENGINEER
Rummel, Klepper, & Kahl, LLP, Richmond, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — MICHAEL J. HOGAN, JR. Lic. No. 038783 — PROFESSIONAL ENGINEER
Rummel, Klepper, & Kahl, LLP, Richmond, Virginia — HYDRAULIC ENGINEER

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



LEGEND

- Denotes Drainage Structure Number
- C Denotes Construction Limits In Cuts
- F Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- Denotes Areas Of Textured Pavement.
- Denotes Areas Of New Pavement.
- 00' ·00 Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' ·00) Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' ·00] Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- 1 Denotes existing structure & pipe to be removed.
- 2 Denotes existing structure & pipe to be cleaned out.
- 1 ST'D. CG-7 REQ'D.
- 2 RAD. CG-7 REQ'D.
- 3 ST'D. CG-3 REQ'D.
- 4 ST'D. MS-2 REQ'D.
- 5 10' SHARED USE PATH
- 7 ST'D. MS-1A REQ'D.
- 8 ST'D. CG-12 REQ'D.
- 9 RAD. CG-3 REQ'D.
- 10 MOD. CG-3 REQ'D.
- 11 6' BIKE PATH
- 12 ST'D. UD-2 REQ'D.
- 13 ST'D. UD-4 REQ'D.
- 17 CURB CUT RAMP (SEE DETAIL SHEET 2Z)
- 18 BIKE RAMP (SEE DETAIL SHEET 2Z)
- 26 SAW CUT HYDRAULIC CEMENT CONCRETE ITEMS - SIDEWALK, REQ'D.
- 27 ST'D. CG-12 TYPE M2, 10' WIDTH REQ'D.

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

Mainline Profile	6A
Williamsburg Plantation Dr. Profile	10
Roundabout Details	6E(1-2)
Roundabout Profile	6F
Entrance Profiles	10
Drainage Descr.	6B
Storm Sewer Profiles	7E

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	6

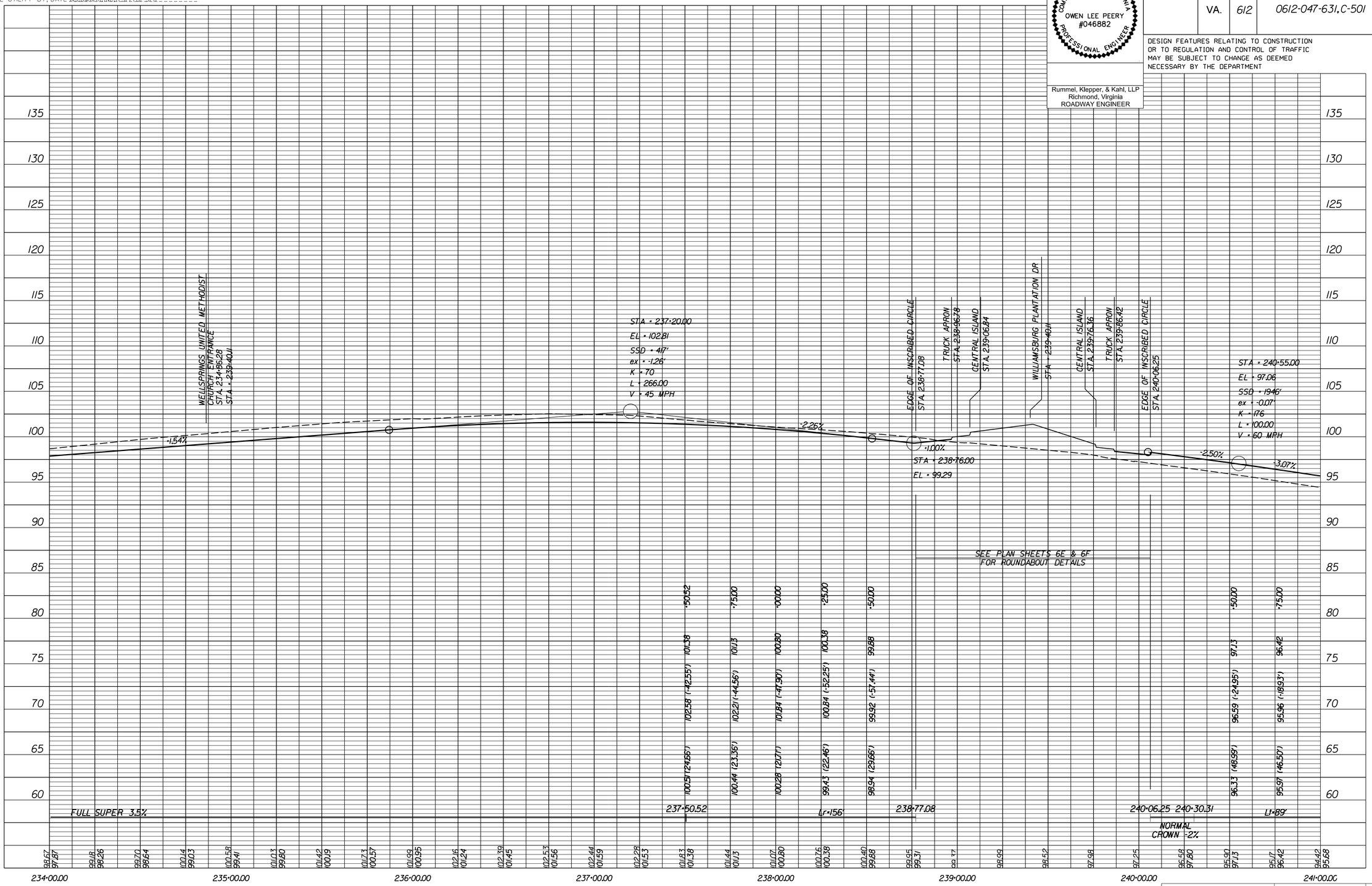
PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	6A

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



PROJECT	SHEET NO.
0612-047-631	6A

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

DRAINAGE DESCRIPTIONS & DITCH DETAILS

COMMONWEALTH OF VIRGINIA
MICHAEL J. HOGAN, JR.
Lic. No. 038783
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	6B

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

Sheet 5

(5-11) See VDOT Drainage Descriptions (Sheet 2J)

(5-12) See VDOT Drainage Descriptions (Sheet 2J)

Sheet 6

(6-1) Not Used

(6-2) 1 St'd. DI-3B Req'd.
L = 4' H = 3.9'
Inv. 97.63
1 St'd. IS-1 Req'd.
Connect UD-4 to DI

(6-2)-(5-11) 201'- 15" Storm Sewer Pipe (2' Cover)
(500' Radius with open joints - using 8' pipe joint lengths)
Joints are to be opened a maximum of 25% of the spigot or tongue length.
Inv(In) = 97.63, Inv(Out) = 95.09

(6-3) 1 St'd. DI-5 Type 1 Grate Req'd.
St'd. PG-2A Type E Cover
H = 3.0' Inv. 95.05

(6-4) 1 St'd. DI-3B Req'd.
L = 6' H = 4.1'
Inv. 94.66
1 St'd. IS-1 Req'd.
Connect UD-4 to DI

(6-3)-(6-4) 15'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 95.05, Inv(Out) = 94.76

(6-5) Modify Existing MH*
Adjust To Grade, Raise 1.1'
Convert Exist Manhole to DI
Add DI-3B, L=8'
Proposed Top Elev. = 100.24

(6-6) 4.0 LF St'd. MH-1 or MH-2 Req'd.
1 St'd. MH-1 Frame & Cover Req'd.
Inv. 93.87
1 St'd. IS-1 Req'd.

(6-6A) 1 St'd. DI-3A Req'd.
H = 3.0' (Less than Min. H)
Inv. 94.20

(6-6A)-(6-6) 24'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 94.20, Inv(Out) = 94.00

(6-4)-(6-6) 23'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 94.66, Inv(Out) = 94.37

(6-5)-(6-6) 29'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 95.75, Inv(Out) = 94.87

(6-7) 1 St'd. DI-5 Type 1 Grate Req'd.
St'd. PG-2A Type A1 Cover
H = 3.5' Inv. 93.50

(6-7A) Modify Existing MH*
Adjust To Grade, Lower 1.6'
Convert Exist Manhole to DI
Add DI-3A
Proposed Top Elev. = 97.83

(6-7)-(6-7A) 20'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 93.50, Inv(Out) = 93.35

(6-8) 3.9 LF St'd. MH-1 or MH-2 Req'd.
1 St'd MH-1 Frame & Cover Req'd.
Inv. 93.00
1 St'd. IS-1 Req'd.

(6-6)-(6-8) 54'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 93.87, Inv(Out) = 93.22

(6-7A)-(6-8) 26'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 93.25, Inv(Out) = 93.10

(6-8)-(5-12) 106'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 93.10, Inv(Out) = 92.30

(6-9) 1 St'd. DI-3B Req'd.
L = 8' H = 3.9'
Inv. 96.90
Connect UD-2 to DI

(6-10) 1 St'd. DI-3B Req'd.
L = 6' H = 3.9'
Inv. 94.85
1 St'd. IS-1 Req'd.

(6-9)-(6-10) 75'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 96.90, Inv(Out) = 94.95

(6-11) 1 St'd. DI-3A Req'd.
H = 3.9'
Inv. 94.24
1 St'd. IS-1 Req'd.
Connect UD-4 to DI

(6-10)-(6-11) 36'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 94.85, Inv(Out) = 94.34

(6-12) 1 St'd. DI-3A Req'd.
H = 4.4'
Inv. 93.51
1 St'd. IS-1 Req'd.
Connect UD-2 to DI

(6-11)-(6-12) 65- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 94.24, Inv(Out) = 93.61

(6-13) Modify Existing MH*
Adjust To Grade, Raise 1.2'
Convert Exist Manhole to DI
Add DI-3B, L=8'
Proposed Top Elev. = 98.70

(6-14) 4.5 LF St'd. MH-1 or MH-2 Req'd.
1 St'd. MH-1 Frame & Cover Req'd.
Inv. 93.29
1 St'd. IS-1 Req'd.

(6-13)-(6-14) 70'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 94.12, Inv(Out) = 93.39

(6-15) 1 St'd. DI-3B Req'd.
L = 6' H = 5.1'
Inv. 92.65
1 St'd. IS-1 Req'd.

(6-14)-(6-15) 53'- 15" Storm Sewer Pipe (4' Cover)
Inv(In) = 93.29, Inv(Out) = 92.75

Sheet 7

(7-5) See VDOT Drainage Descriptions (Sheet 2K)

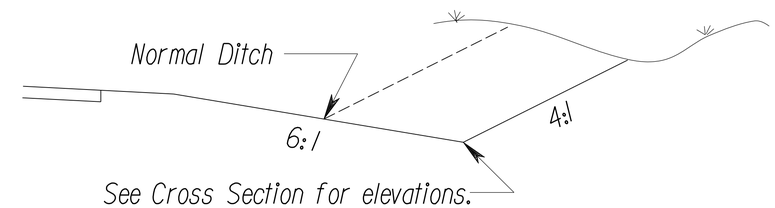
(7-15) 1 St'd. DI-3B Req'd.
L = 6' H = 3.9'
Inv. 91.86
1 St'd. IS-1 Req'd.
Connect UD-4 to DI

(6-12)-(7-15) 152'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 93.51, Inv(Out) = 91.96

(7-16) Modify Existing MH*
Adjust To Grade, Raise 2.3'
Convert Exist Manhole to DI
Add DI-3B, L=6'
Proposed Top Elev. = 96.54

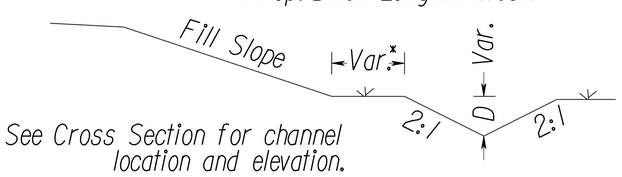
(7-15)-(7-16) 29'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 91.86, Inv(Out) = 91.54

Prop. Ditch Methodist Church Entrance



See Cross Section for elevations.
Stations 100+75 to 101+25 RT

Prop. Ditch Longhill (West)



See Cross Section for channel location and elevation.

Stations 235+25 to 237+25 RT

(7-17) 1 St'd. DI-3B Req'd.
L = 8' H = 4.5'
Inv. 90.93
1 St'd. IS-1 Req'd.

(6-15)-(7-17) 91'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 92.65, Inv(Out) = 91.03

(7-16)-(7-17) 36'- 15" Storm Sewer Pipe (2' Cover)
Inv(In) = 91.44, Inv(Out) = 91.03

(7-18) 1 St'd. DI-3B Req'd.
L = 8' H = 3.9'
Inv. 85.37
1 St'd. IS-1 Req'd.
Connect UD-4 to DI

(7-17)-(7-18) 189'- 15" Storm Sewer Pipe (3' Cover)
Inv(In) = 90.93, Inv(Out) = 85.47

(7-18)-(7-5) 259'- 18" Storm Sewer Pipe (2' Cover)
Inv(In) = 85.37, Inv(Out) = 78.41

Notes:

Unless otherwise noted, all pipe and storm sewer pipe shall have silt-tight joints.

All storm sewer pipe shall be Class III concrete.

PROJECT	SHEET NO.
0612-047-631	6B

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

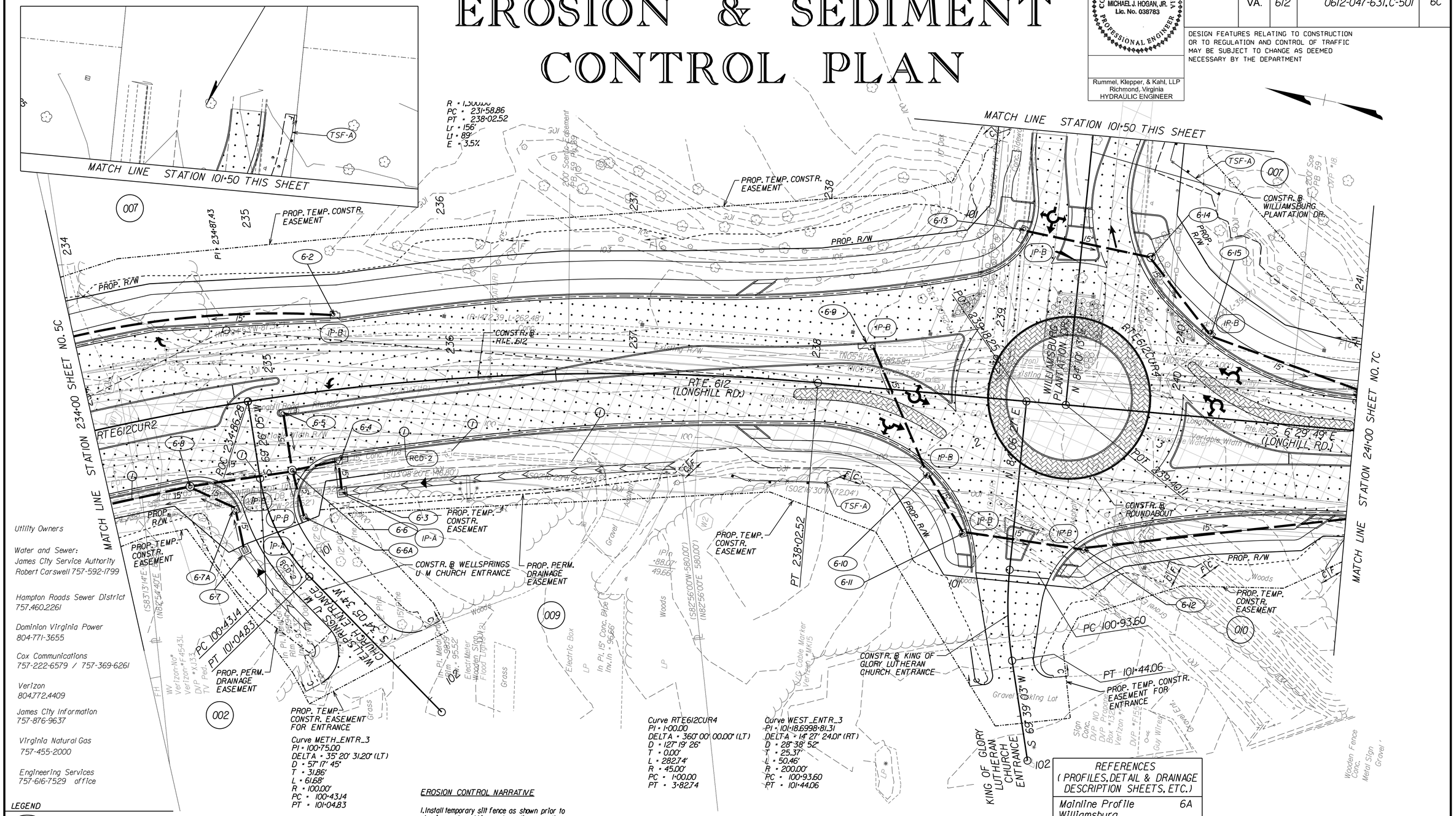
EROSION & SEDIMENT CONTROL PLAN

COMMONWEALTH OF VIRGINIA
MICHAEL J. HOGAN, JR.
Lic. No. 038783
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	6C

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



Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

Cox Communications
757-222-6579 / 757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office

LEGEND

- Denotes Drainage Structure Number
- C - - - Denotes Construction Limits In Cuts
- F _ _ _ Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- Denotes Areas Of Textured Pavement.

EROSION CONTROL NARRATIVE

1. Install temporary silt fence as shown prior to clearing and grubbing and grading operations.
2. Provide temporary construction entrance with washrack at each construction exit location.
3. Install temporary sediment basin.
4. Provide drop inlet protection as strorm drain is installed.
5. Provide permanent seeding along side slopes as grading proceeds.

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

Mainline Profile	6A
Williamsburg Plantation Dr. Profile	10
Roundabout Profile	10
Entrance Profiles	10
Drainage Descr.	6B
Utility Owners	3
E&S Legend	2

PROJECT	SHEET NO.
0612-047-631	6C

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	6D

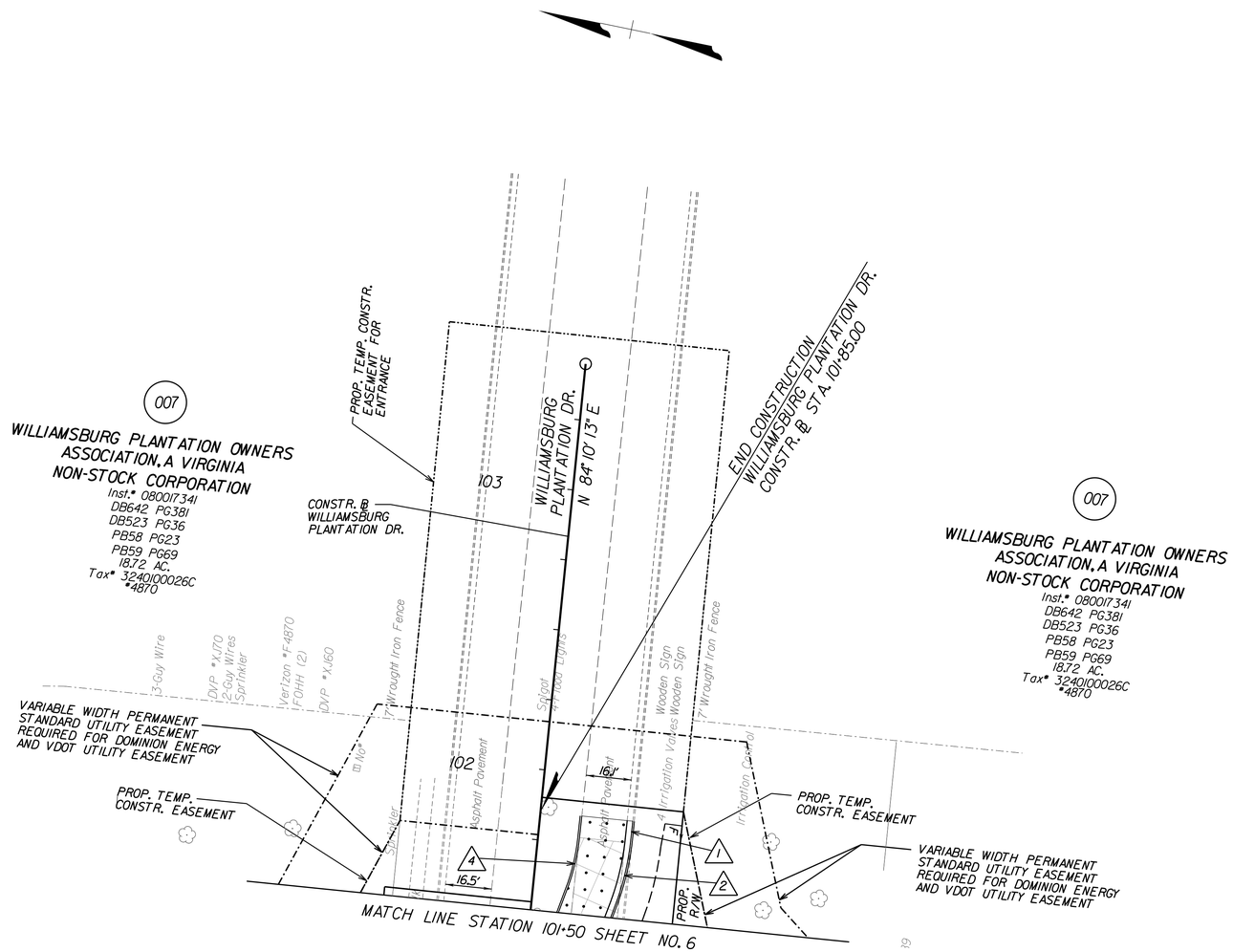
COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
MICHAEL J. HOGAN, JR.
Lic. No. 038783
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
HYDRAULIC ENGINEER

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



Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

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Cox Communications
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James City Information
757-876-9637

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757-616-7529 office

LEGEND

- Denotes Drainage Structure Number
- C Denotes Construction Limits In Cuts
- F Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- Denotes Areas Of Textured Pavement.
- Denotes Areas Of New Pavement.
- 00' +00 Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' +00) Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' +00] Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- 1 ST'D. CG-7 REQ'D.
- 2 RAD. CG-7 REQ'D.
- 3 ST'D. CG-3 REQ'D.
- 4 ST'D. MS-2 REQ'D.
- 5 10' SHARED USE PATH
- 7 ST'D. MS-1A REQ'D.
- 8 ST'D. CG-12 REQ'D.
- 9 RAD. CG-3 REQ'D.
- 10 MOD. CG-3 REQ'D.
- 11 6' BIKE PATH
- 12 ST'D. UD-2 REQ'D.
- 13 ST'D. UD-4 REQ'D.
- 17 CURB CUT RAMP (SEE SHEET 2Z)

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

Williamsburg Plantation Dr. Profile	10

SCALE
0 25' 50'

PROJECT	SHEET NO.
0612-047-631	6D

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201, C-501	6DRW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Survey
Suffolk, Virginia
SURVEYOR

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

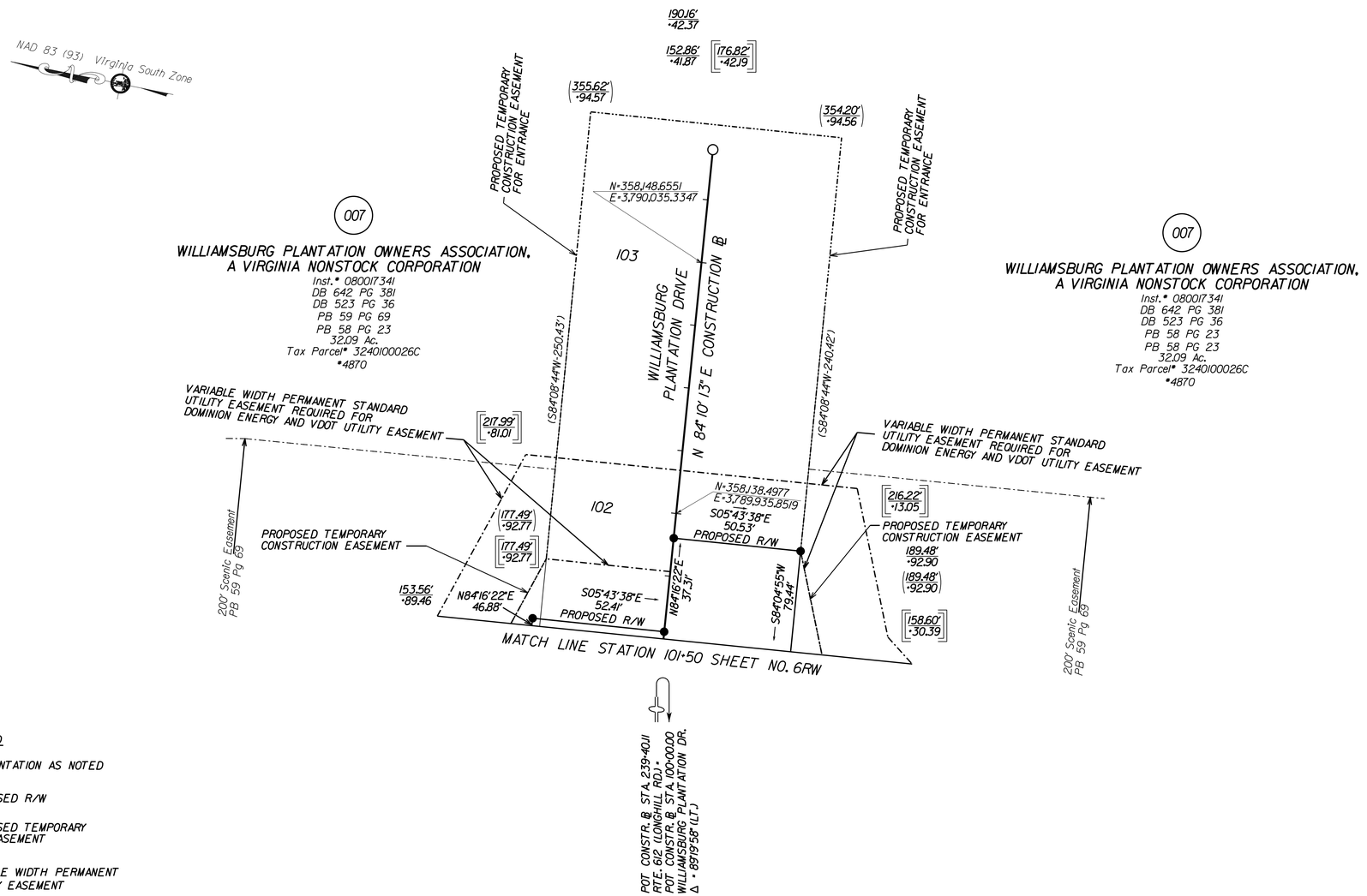
James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

LEGEND

● RM-2 (5/8" Rebar w/Cap)
-·-·- Indicates Permanent Easement

Parcel 007 Area Calculations

Proposed Right of Way	Sq. Ft. 58,806 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 42,467 / 0.97 Acre
Variable Width Permanent Standard Utility Easement For Dominion Energy And VDOT	Sq. Ft. 33,864 / 0.78 Acre



LINE LEGEND

·00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED

00.00' / ·00.00 ——— DENOTES PROPOSED R/W

(00.00' / ·00.00) -·-·-·- DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT

[00.00' / ·00.00] -·-·-·- DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT

GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

NOTE: All Stations And Offsets Are From The Construction Baseline
Bearings And Distances In Parenthesis Are Record Data

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	6DRW

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

ROUNDABOUT DETAILS

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	6E(1)

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

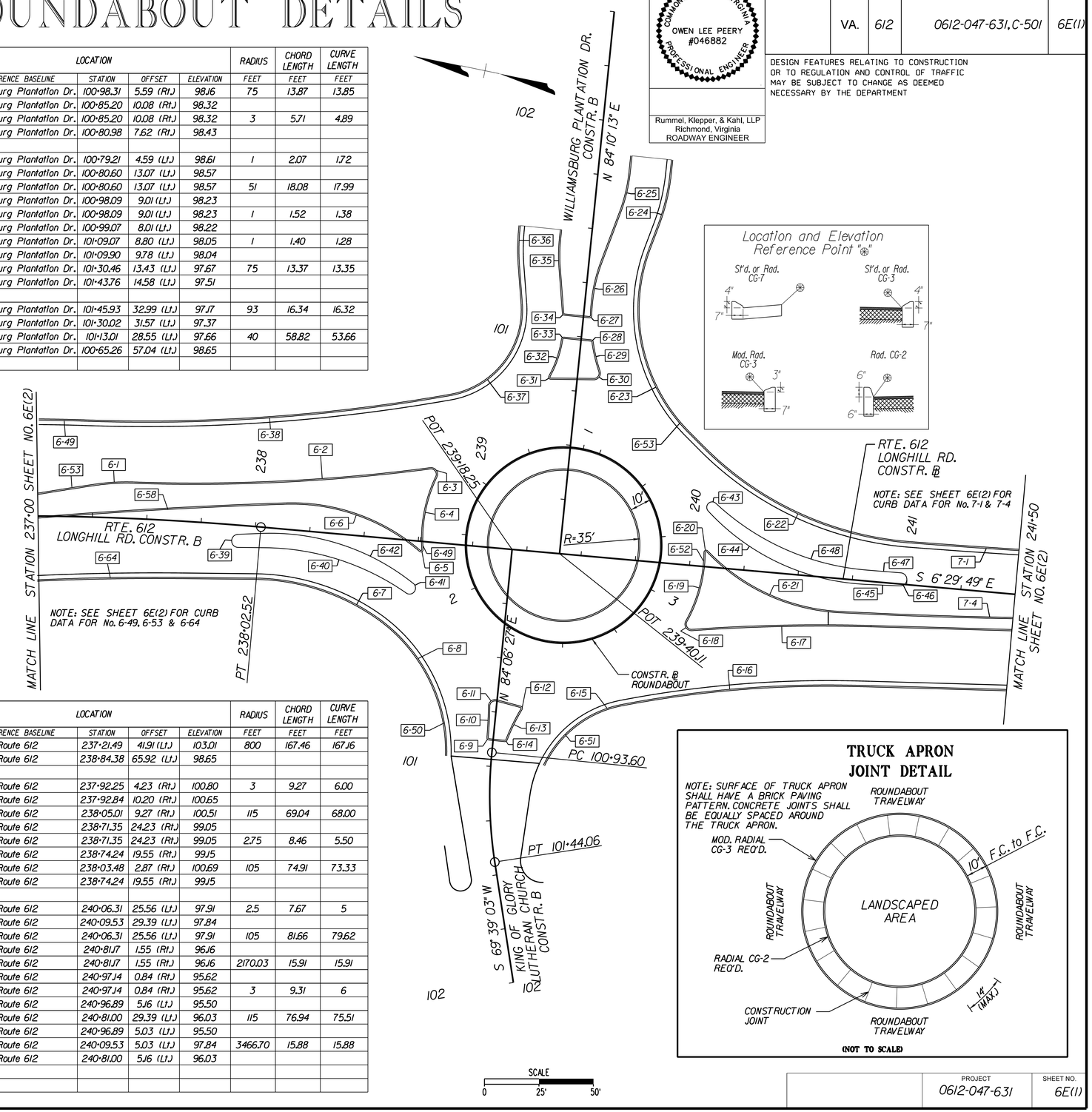
Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

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

REF. NO.	LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
6-1 (P.C.C.)	Route 612	237+25.66	15.11 (Lt.)	102.05	100	17.99	17.97
6-1 (P.R.C.)	Route 612	237+43.33	16.78 (Lt.)	102.01			
6-2 (P.R.C.)	Route 612	237+43.33	16.78 (Lt.)	102.01	830	136.31	136.15
6-2 (P.R.C.)	Route 612	238+77.26	34.03 (Lt.)	99.28			
6-3 (P.R.C.)	Route 612	238+77.26	34.03 (Lt.)	99.28	3	6.45	5.28
6-3 (P.R.C.)	Route 612	238+80.72	30.05 (Lt.)	99.15			
6-4 (P.R.C.)	Route 612	238+80.72	30.05 (Lt.)	99.15	66	30.32	30.59
6-4 (P.O.C.)	Route 612	238+77.08	0	99.33			
6-49 (P.O.C.)	Route 612	238+77.08	0	99.33	66	3.70	3.71
6-49 (P.R.C.)	Route 612	238+77.36	3.69 (Rt.)	99.30			
6-5 (P.C.)	Route 612	238+75.79	4.67 (Rt.)	99.30	1	2.35	1.84
6-5 (P.R.C.)	Route 612	238+77.36	3.69 (Rt.)	99.35			
6-6 (P.C.C.)	Route 612	238+12.42	11.41 (Lt.)	99.35	90	66.44	64.94
6-6 (P.T.)	Route 612	238+75.79	4.67 (Rt.)	100.84			
6-7 (P.C.)	Route 612	238+01.09	21.59 (Rt.)	100.27	100	59.61	58.73
6-7 (P.C.C.)	Route 612	238+60.02	34.64 (Rt.)	98.73			
6-8 (P.C.C.)	King of Glory Entrance	100+37.01	58.83 (Rt.)	98.73	75	51.22	52.27
6-8 (P.O.C.)	King of Glory Entrance	100+74.96	23.37 (Rt.)	98.0			
6-50 (P.O.C.)	King of Glory Entrance	100+74.96	23.37 (Rt.)	98.0	75	22.10	22.18
6-50 (P.T.)	King of Glory Entrance	100+98.44	20.47 (Rt.)	98.74			
6-9 (P.C.)	King of Glory Entrance	100+88.07	1.93 (Rt.)	98.68	1	1.54	1.39
6-9 (P.T.)	King of Glory Entrance	100+87.10	2.93 (Rt.)	98.62			
6-10 (P.C.)	King of Glory Entrance	100+85.70	2.96 (Rt.)	98.58	200	13.13	13.13
6-10 (P.R.C.)	King of Glory Entrance	100+72.58	3.66 (Rt.)	98.43			
6-11 (P.R.C.)	King of Glory Entrance	100+72.58	3.66 (Rt.)	98.43	3	5.45	4.73
6-11 (P.T.)	King of Glory Entrance	100+69.37	0.19 (Rt.)	98.53			
6-12 (P.C.)	King of Glory Entrance	100+71.20	11.11 (Lt.)	98.46	1	1.85	1.60
6-12 (P.R.C.)	King of Glory Entrance	100+72.61	11.85 (Lt.)	98.42			
6-13 (P.R.C.)	King of Glory Entrance	100+72.61	11.85 (Lt.)	98.42	90	15.73	15.71
6-13 (P.R.C.)	King of Glory Entrance	100+87.33	6.37 (Lt.)	98.59			
6-14 (P.R.C.)	King of Glory Entrance	100+87.33	6.37 (Lt.)	98.59	1	1.30	1.21
6-14 (P.T.)	King of Glory Entrance	100+88.07	5.41 (Rt.)	98.62			
6-51 (P.C.)	King of Glory Entrance	100+97.59	24.09 (Lt.)	98.66	50	25.04	24.78
6-51 (P.O.C.)	King of Glory Entrance	100+74.96	36.51 (Lt.)	97.89			
6-15 (P.O.C.)	King of Glory Entrance	100+74.96	36.51 (Lt.)	97.89	50	22.02	21.84
6-15 (P.C.C.)	King of Glory Entrance	100+65.87	56.98 (Lt.)	98.08			
6-16 (P.C.C.)	Route 612	239+73.98	64.54 (Rt.)	98.08	500	100.44	100.27
6-16 (P.C.C.)	Route 612	240+73.04	46.65 (Rt.)	95.90			
6-17 (P.R.C.)	Route 612	240+03.57	29.79 (Rt.)	97.75	827	82.51	82.48
6-17 (P.C.C.)	Route 612	240+85.54	20.71 (Rt.)	95.82			
6-18 (P.R.C.)	Route 612	240+00.35	29.79 (Rt.)	97.86	3	6.45	5.28
6-18 (P.R.C.)	Route 612	240+03.57	25.61 (Rt.)	97.75			
6-19 (P.R.C.)	Route 612	240+00.35	25.61 (Rt.)	97.86	66	26.36	26.18
6-19 (P.O.C.)	Route 612	240+06.25	0	97.99			
6-52 (P.O.C.)	Route 612	240+06.25	0	97.99	66	6.54	6.54
6-52 (P.R.C.)	Route 612	240+05.85	6.48 (Lt.)	97.96			
6-20 (P.R.C.)	Route 612	240+05.85	6.48 (Lt.)	97.96	1	2.35	1.84
6-20 (P.T.)	Route 612	240+07.49	7.33 (Lt.)	97.97			
6-21 (P.C.)	Route 612	240+09.03	6.04 (Lt.)	97.97	90	66.11	64.63
6-21 (P.C.C.)	Route 612	240+70.15	14.98 (Rt.)	96.86			
6-22 (P.C.)	Route 612	240+00.22	52.77 (Lt.)	97.98	150	106.49	104.27
6-22 (P.C.C.)	Route 612	240+99.71	17.20 (Lt.)	95.15			
6-53 (P.C.)	Williamsburg Plantation Dr.	100+59.50	52.13 (Rt.)	98.05	80	15.25	15.23
6-53 (P.O.C.)	Williamsburg Plantation Dr.	100+70.50	41.06 (Rt.)	98.16			
6-23 (P.O.C.)	Williamsburg Plantation Dr.	100+70.50	41.06 (Rt.)	98.16	80	76.21	73.36
6-23 (P.T.)	Williamsburg Plantation Dr.	101+43.93	24.86 (Rt.)	97.30			
6-24 (P.C.)	Williamsburg Plantation Dr.	101+54.43	27.66 (Rt.)	97.17	93	23.46	23.39
6-24 (P.T.)	Williamsburg Plantation Dr.	101+77.18	30.70 (Rt.)	97.00			
6-25 (P.T.)	Williamsburg Plantation Dr.	101+77.29	14.70 (Rt.)	97.32	75	18.92	18.87
6-25 (P.C.)	Williamsburg Plantation Dr.	101+58.59	12.20 (Rt.)	97.46			
6-26 (P.T.)	Williamsburg Plantation Dr.	101+35.18	5.99 (Rt.)	97.75	75	25.26	25.14
6-26 (P.R.C.)	Williamsburg Plantation Dr.	101+10.07	3.71 (Rt.)	98.06			
6-27 (P.R.C.)	Williamsburg Plantation Dr.	101+10.07	3.71 (Rt.)	98.06	1	1.65	1.47
6-27 (P.C.)	Williamsburg Plantation Dr.	101+09.07	2.71 (Rt.)	98.09			
6-28 (P.T.)	Williamsburg Plantation Dr.	100+99.07	4.62 (Rt.)	98.18	1	1.33	1.24
6-28 (P.R.C.)	Williamsburg Plantation Dr.	100+98.31	5.59 (Rt.)	98.16			

REF. NO.	LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
6-29 (P.R.C.)	Williamsburg Plantation Dr.	100+98.31	5.59 (Rt.)	98.16	75	13.87	13.85
6-29 (P.R.C.)	Williamsburg Plantation Dr.	100+85.20	10.08 (Rt.)	98.32			
6-30 (P.R.C.)	Williamsburg Plantation Dr.	100+85.20	10.08 (Rt.)	98.32	3	5.71	4.89
6-30 (P.C.)	Williamsburg Plantation Dr.	100+80.98	7.62 (Rt.)	98.43			
6-31 (P.C.)	Williamsburg Plantation Dr.	100+79.21	4.59 (Lt.)	98.61	1	2.07	1.72
6-31 (P.R.C.)	Williamsburg Plantation Dr.	100+80.60	13.07 (Lt.)	98.57			
6-32 (P.R.C.)	Williamsburg Plantation Dr.	100+80.60	13.07 (Lt.)	98.57	51	18.08	17.99
6-32 (P.R.C.)	Williamsburg Plantation Dr.	100+98.09	9.01 (Lt.)	98.23			
6-33 (P.R.C.)	Williamsburg Plantation Dr.	100+98.09	9.01 (Lt.)	98.23	1	1.52	1.38
6-33 (P.T.)	Williamsburg Plantation Dr.	100+99.07	8.01 (Lt.)	98.22			
6-34 (P.C.)	Williamsburg Plantation Dr.	101+09.07	8.80 (Lt.)	98.05	1	1.40	1.28
6-34 (P.T.)	Williamsburg Plantation Dr.	101+09.90	9.78 (Lt.)	98.04			
6-35 (P.C.)	Williamsburg Plantation Dr.	101+30.46	13.43 (Lt.)	97.67	75	13.37	13.35
6-35 (P.T.)	Williamsburg Plantation Dr.	101+43.76	14.58 (Lt.)	97.51			
6-36 (P.T.)	Williamsburg Plantation Dr.	101+45.93	32.99 (Lt.)	97.17	93	16.34	16.32
6-36 (P.C.)	Williamsburg Plantation Dr.	101+30.02	31.57 (Lt.)	97.37			
6-37 (P.T.)	Williamsburg Plantation Dr.	101+13.01	28.55 (Lt.)	97.66	40	58.82	53.66
6-37 (P.C.)	Williamsburg Plantation Dr.	100+65.26	57.04 (Lt.)	98.65			

REF. NO.	LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
6-38 (P.C.C.)	Route 612	237+21.49	41.91 (Lt.)	103.01	800	167.46	167.16
6-38 (P.C.C.)	Route 612	238+84.38	65.92 (Lt.)	98.65			
6-39 (P.C.)	Route 612	237+92.25	4.23 (Rt.)	100.80	3	9.27	6.00
6-39 (P.T.)	Route 612	237+92.84	10.20 (Rt.)	100.65			
6-40 (P.C.)	Route 612	238+05.01	9.27 (Rt.)	100.51	115	69.04	68.00
6-40 (P.R.C.)	Route 612	238+71.35	24.23 (Rt.)	99.05			
6-41 (P.R.C.)	Route 612	238+71.35	24.23 (Rt.)	99.05	2.75	8.46	5.50
6-41 (P.R.C.)	Route 612	238+74.24	19.55 (Rt.)	99.15			
6-42 (P.R.C.)	Route 612	238+03.48	2.87 (Rt.)	100.69	105	74.91	73.33
6-42 (P.T.)	Route 612	238+74.24	19.55 (Rt.)	99.15			
6-43 (P.C.C.)	Route 612	240+06.31	25.56 (Lt.)	97.91	2.5	7.67	5
6-43 (P.R.C.)	Route 612	240+09.53	29.39 (Lt.)	97.84			
6-44 (P.C.C.)	Route 612	240+06.31	25.56 (Lt.)	97.91	105	81.66	79.62
6-44 (P.C.C.)	Route 612	240+81.17	1.55 (Rt.)	96.16			
6-45 (P.C.C.)	Route 612	240+81.17	1.55 (Rt.)	96.16	2170.03	15.91	15.91
6-45 (P.C.C.)	Route 612	240+97.14	0.84 (Rt.)	95.62			
6-46 (P.C.C.)	Route 612	240+97.14	0.84 (Rt.)	95.62	3	9.31	6
6-46 (P.R.C.)	Route 612	240+96.89	5.16 (Lt.)	95.50			
6-47 (P.C.C.)	Route 612	240+81.00	29.39 (Lt.)	96.03	115	76.94	75.51
6-47 (P.R.C.)	Route 612	240+96.89	5.03 (Lt.)	95.50			
6-48 (P.R.C.)	Route 612	240+09.53	5.03 (Lt.)	97.84	3466.70	15.88	15.88
6-48 (P.C.C.)	Route 612	240+81.00	5.16 (Lt.)	96.03			



TRUCK APRON JOINT DETAIL

NOTE: SURFACE OF TRUCK APRON SHALL HAVE A BRICK PAVING PATTERN. CONCRETE JOINTS SHALL BE EQUALLY SPACED AROUND THE TRUCK APRON.

(NOT TO SCALE)

PROJECT	SHEET NO.
0612-047-631	6E(1)

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

ROUNDABOUT DETAILS

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

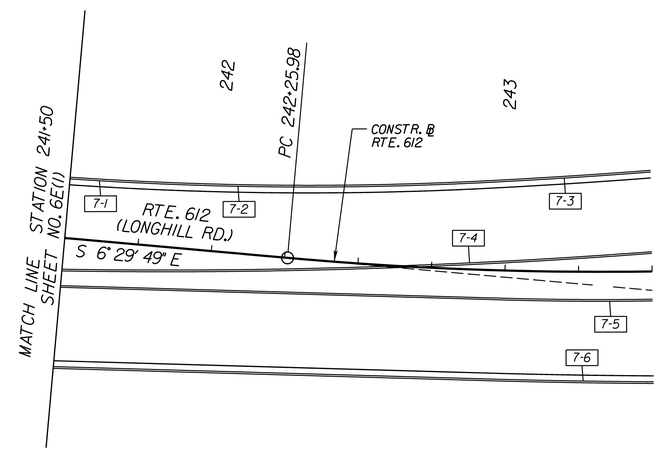
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	6E(2)

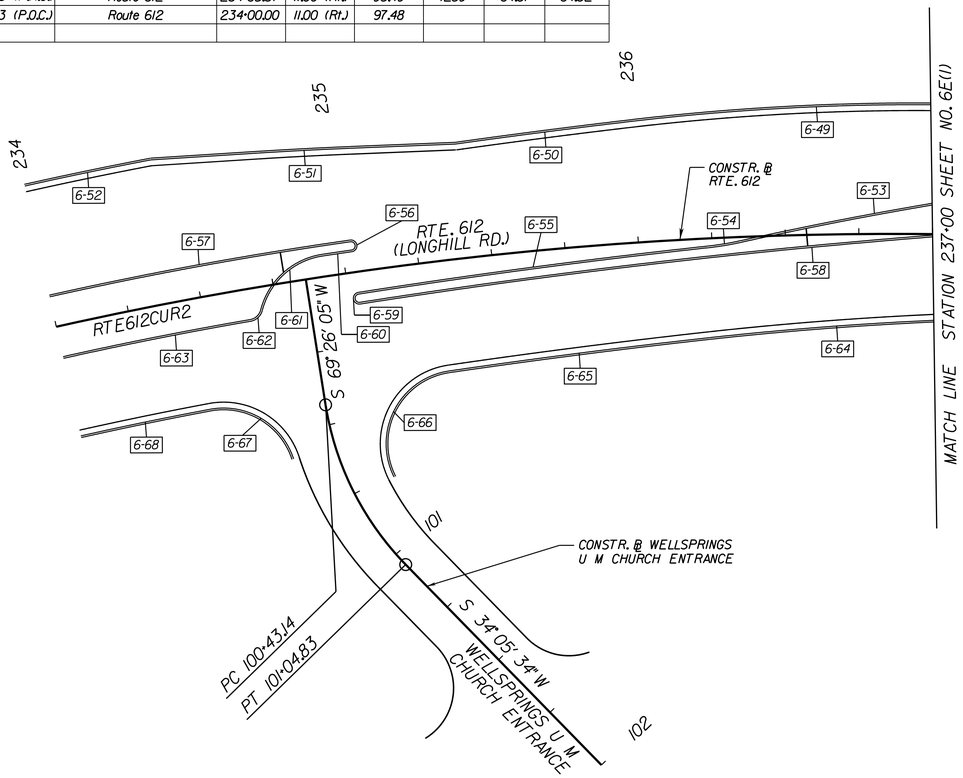
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

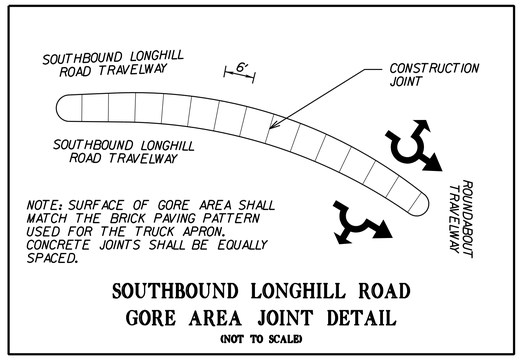
REF. NO.	LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
6-49 (P.R.C.)	Route 612	237+21.49	41.91 (Lt.)	103.01	827	124.15	124.26
6-49 (P.C.C.)	Route 612	236+01.28	39.25 (Lt.)	102.33			
6-50 (P.C.C.)	Route 612	236+01.28	39.25 (Lt.)	102.33	2603.72	61.13	61.13
6-50 (P.O.C.)	Route 612	235+42.02	36.85 (Lt.)	101.35			
6-51 (P.T.)	Route 612	235+07.36	39.88 (Lt.)	100.92	1338	31.36	31.36
6-51 (P.C.)	Route 612	234+77.16	42.94 (Lt.)	100.56			
6-52 (P.T.)	Route 612	234+42.06	47.00 (Lt.)	100.16	1349	43.65	43.65
6-52 (P.O.C.)	Route 612	234+00.00	47.00 (Lt.)	99.51			
6-53 (P.C.C.)	Route 612	237+25.66	15.11 (Lt.)	102.05	1282.97	103.92	103.95
6-53 (P.R.C.)	Route 612	236+34.67	1.26 (Rt.)	101.29			
6-54 (P.R.C.)	Route 612	236+34.67	1.26 (Rt.)	101.29	100	4	6.31
6-54 (P.R.C.)	Route 612	236+23.72	2.57 (Rt.)	101.14			
6-55 (P.R.C.)	Route 612	236+23.72	2.57 (Rt.)	101.14	2558.72	120	120.01
6-55 (P.C.C.)	Route 612	235+03.32	6.99 (Rt.)	99.22			
6-56 (P.R.C.)	Route 612	235+03.08	7.00 (Lt.)	99.71	2	11.01	11.02
6-56 (P.C.C.)	Route 612	235+03.08	11.00 (Lt.)	99.88			
6-57 (P.C.C.)	Route 612	235+03.08	11.00 (Lt.)	99.88	1311	92.91	92.93
6-57 (P.O.C.)	Route 612	234+00.00	11.00 (Lt.)	98.25			
6-58 (P.C.C.)	Route 612	238+12.54	11.44 (Lt.)	100.84	2555.81	309.30	309.49
6-58 (P.R.C.)	Route 612	235+03.38	10.99 (Rt.)	99.08			
6-59 (P.R.C.)	Route 612	235+03.38	10.99 (Rt.)	99.00	2	4	6.23
6-59 (P.C.C.)	Route 612	235+03.32	6.99 (Rt.)	99.22			
6-60 (P.R.C.)	Route 612	235+03.08	7.00 (Lt.)	99.71	1307	9.73	9.73
6-60 (P.C.C.)	Route 612	234+93.43	7.00 (Lt.)	99.56			
6-61 (P.C.C.)	Route 612	234+93.43	7.00 (Lt.)	99.56	25	27.86	29.55
6-61 (P.R.C.)	Route 612	234+69.96	8.04 (Rt.)	98.67			
6-62 (P.R.C.)	Route 612	234+69.96	8.04 (Rt.)	98.67	5	5.43	5.74
6-62 (P.R.C.)	Route 612	234+65.37	11.00 (Rt.)	98.49			
6-63 (P.R.C.)	Route 612	234+65.37	11.00 (Rt.)	98.49	1289	64.81	64.82
6-63 (P.O.C.)	Route 612	234+00.00	11.00 (Rt.)	97.48			

REF. NO.	LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
6-64 (P.T.)	Route 612	237+67.91	23.74 (Rt.)	100.47	1186	142.20	142.28
6-64 (P.C.C.)	Route 612	236+22.54	31.69 (Rt.)	100.10			
6-65 (P.C.C.)	Route 612	236+22.54	31.69 (Rt.)	100.10	2527.72	89.18	89.18
6-65 (P.C.C.)	Route 612	235+30.91	35.47 (Rt.)	98.65			
6-66 (P.C.C.)	Route 612	235+30.91	35.47 (Rt.)	98.65	25	40.60	47.38
6-66 (P.C.)	Methodist Church Entrance	101+76.34	12.50 (Lt.)	97.05			
6-67 (P.T.)	Methodist Church Entrance	101+57.52	12.78 (Rt.)	97.11	25	33.01	36.05
6-67 (P.C.C.)	Route 612	234+46.19	36.00 (Rt.)	97.32			
6-68 (P.C.C.)	Route 612	234+46.19	36.00 (Rt.)	97.32	1262	44.84	44.84
6-68 (P.O.C.)	Route 612	234+00.00	36.00 (Rt.)	96.61			

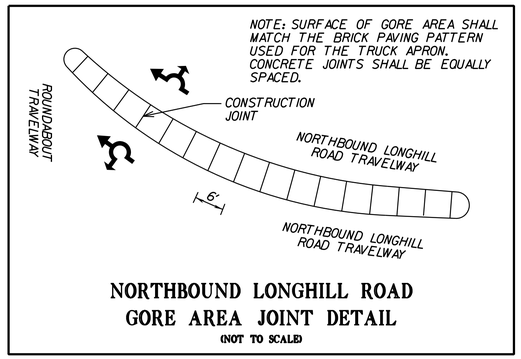
REF. NO.	LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
SHEET - ITEM	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
7-1 (P.C.C.)	Route 612	240+99.69	17.20 (Lt.)	99.35	3452.70	60.32	60.32
7-1 (P.C.C.)	Route 612	241+60.00	18.42 (Lt.)	93.47			
7-2 (P.C.C.)	Route 612	241+60.00	18.42 (Lt.)	93.47	1186	130.12	130.18
7-2 (P.C.C.)	Route 612	242+91.29	27.58 (Lt.)	89.40			
7-3 (P.C.C.)	Route 612	242+91.29	27.58 (Lt.)	89.40	2156.03	57.30	57.30
7-3 (P.O.C.)	Route 612	243+50.00	31.77 (Lt.)	87.85			
7-4 (P.C.C.)	Route 612	240+70.36	14.98 (Rt.)	96.86	2183.03	280.14	280.33
7-4 (P.O.C.)	Route 612	243+50.00	6.72 (Lt.)	88.76			
7-5 (P.C.)	Route 612	242+84.54	10.01 (Rt.)	90.68	1210.01	55.92	55.92
7-5 (P.O.C.)	Route 612	234+50.00	10.01 (Rt.)	89.36			
7-6 (P.C.)	Route 612	242+84.54	35.01 (Rt.)	91.58	2569.83	57.18	57.18
7-6 (P.O.C.)	Route 612	234+50.00	35.01 (Rt.)	90.285			







SOUTHBOUND LONGHILL ROAD GORE AREA JOINT DETAIL
(NOT TO SCALE)



NORTHBOUND LONGHILL ROAD GORE AREA JOINT DETAIL
(NOT TO SCALE)

SCALE
0 25' 50'

PROJECT	SHEET NO.
0612-047-631	6E(2)

PROJECT MANAGER KEN. MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

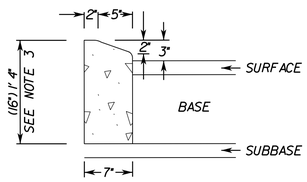
ROUNDABOUT DETAILS

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	6F

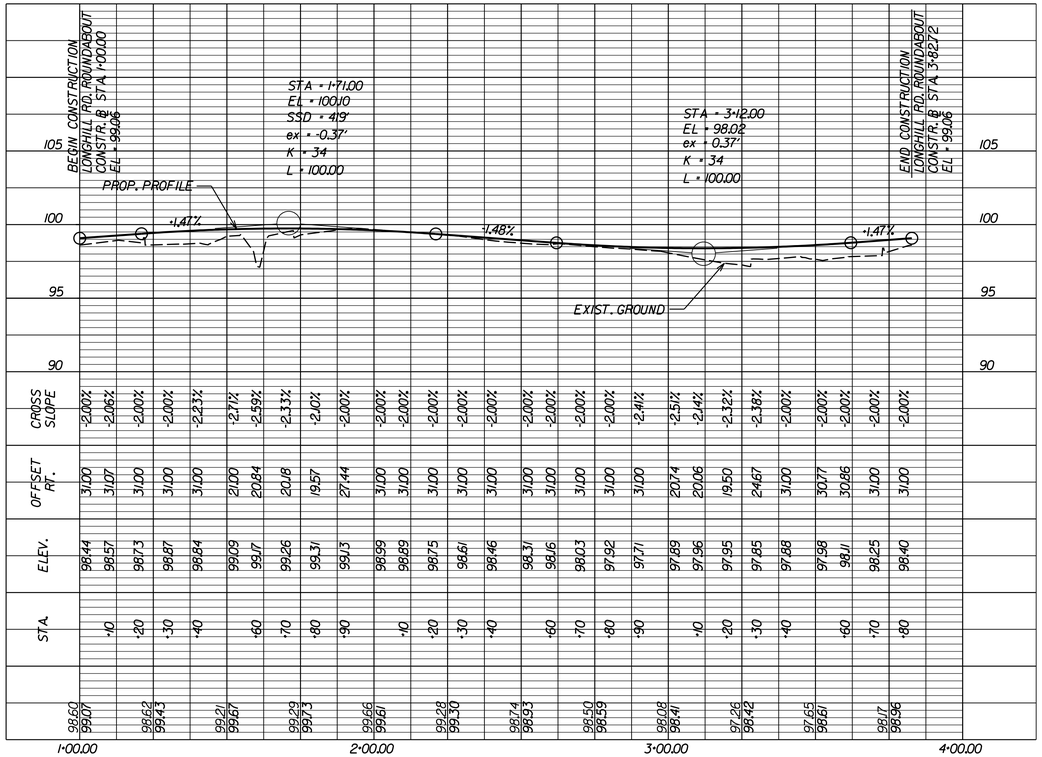
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

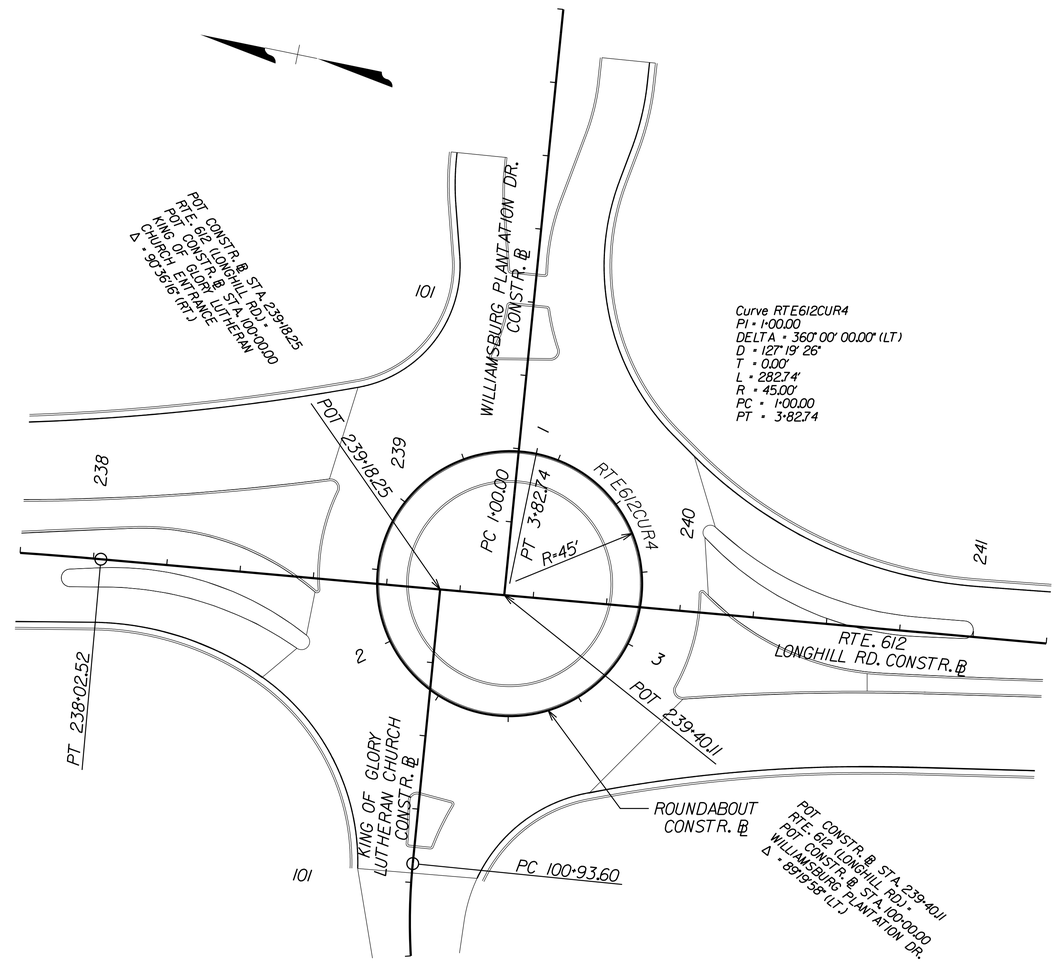


RAD. CG-3 Modified
(Not to Scale)

Notes:

1. This Item may be precast or cast in place
2. Concrete to be Class A3 if cast in place, 4000psi if precast
3. The depth of curb maybe reduced as much as 3" (13" depth) or increased as much as 3" (19" depth) in order that the bottom of the curb will coincide with the top of a course of the pavement substructure. Otherwise, the depth is to be 16" as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.
4. The Modification To The Radial CG-3 Is To Reduce The Exposed Height of The Curb As Shown. Modified Curb Shall Be Paid For As Radial CG-3 respectively.





Curve RTE612CUR4
PI = 1+00.00
DELTA = 360° 00' 00.00" (LT)
D = 127° 19' 26"
T = 0.00'
L = 282.74'
R = 45.00'
PC = 1+00.00
PT = 3+82.74

SCALE
0 25' 50'

PROJECT	SHEET NO.
0612-047-631	6F

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
01-17-18	VA.	612	0612-047-631, RW-201, C-501	6RW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Location and Design
Suffolk, Virginia
SURVEYOR

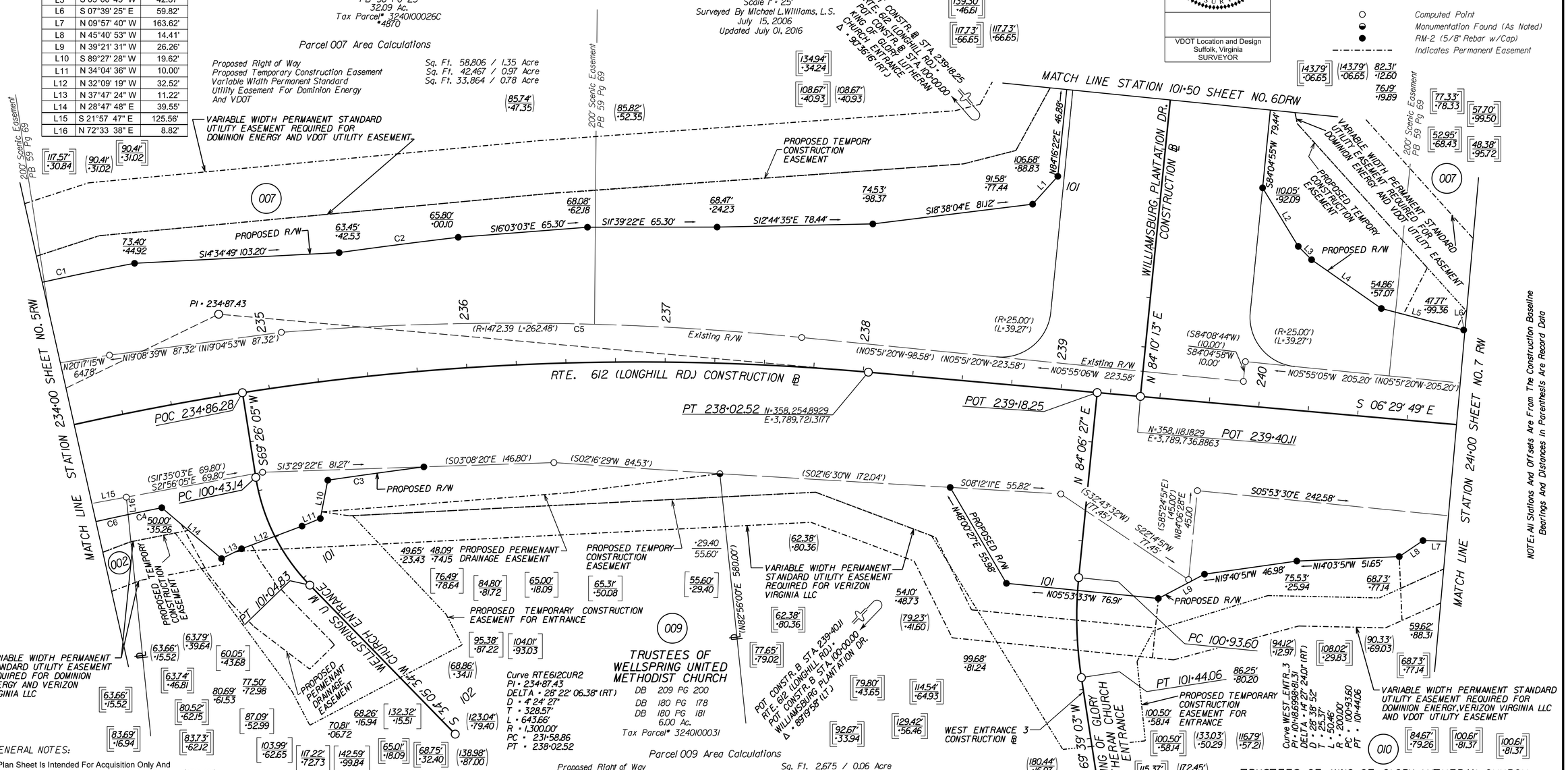
NAD 83 (93) Virginia South Zone

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 59°28' 34" E	18.92'
L2	S 47°01' 32" W	34.49'
L3	S 33°31' 09" W	9.52'
L4	S 23°21' 01" W	42.87'
L5	S 03°00' 45" W	42.87'
L6	S 07°39' 25" E	59.82'
L7	N 09°57' 40" W	163.62'
L8	N 45°40' 53" W	14.41'
L9	N 39°21' 31" W	26.26'
L10	S 89°27' 28" W	19.62'
L11	N 34°04' 36" W	10.00'
L12	N 32°09' 19" W	32.52'
L13	N 37°47' 24" W	11.22'
L14	N 28°47' 48" E	39.55'
L15	S 21°57 47" E	125.56'
L16	N 72°33 38" E	8.82'

LEGEND

- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement



GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

CURVE TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	04°33'04" (RT)	1373.45'	136.24'	S 24°29'24" E	109.07'
C2	01°19'06" (RT)	2628.30'	60.48'	S 18°54'27" E	60.48'
C3	01°06'45" (LT)	2515.72'	48.84'	N 19°30'05" W	48.84'
C4	00°47'40" (LT)	1250.00'	17.33'	N 23°04'50" W	17.33'
C5	10°12'52" (LT)	1472.39'	262.49'	N 11°01'31" W	262.14'
C6	09°19'01" (LT)	1250.00'	203.26'	N 28°08'11" W	203.04'

LINE LEGEND

- ·00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED
- 00.00' / ·00.00 — DENOTES PROPOSED R/W
- 00.00' / ·00.00 — PROPOSED PERMENANT DRAINAGE EASEMENT
- (00.00' / ·00.00) — DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- [00.00' / ·00.00] — DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	6RW

11/27/2018
9:46:07 AM

d1009210007.dgn
Plotted By: WAP04107$

PROJECT MANAGER K.N. MCKINNA, P.E. (757) 956-3270
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263, RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA — OWEN LEE PEERY #046882 — PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA — MICHAEL J. HOGAN, JR. Lic. No. 038783 — PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA Lic. No. 042625 — PROFESSIONAL ENGINEER	COMMONWEALTH OF VIRGINIA — ANDREW BRIAN SCOTT Lic. No. 034190 — PROFESSIONAL ENGINEER
Rummel, Klepper, & Kahl, LLP Richmond, Virginia ROADWAY ENGINEER	Rummel, Klepper, & Kahl, LLP Richmond, Virginia HYDRAULIC ENGINEER	VDOT Location and Design Suffolk, Virginia ROADWAY ENGINEER	VDOT Location and Design Suffolk, Virginia HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/17/18 07/19/18 08/15/18	VA.	612	0612-047-631, RW-201 C-501	7

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

LONGHILL RD.

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

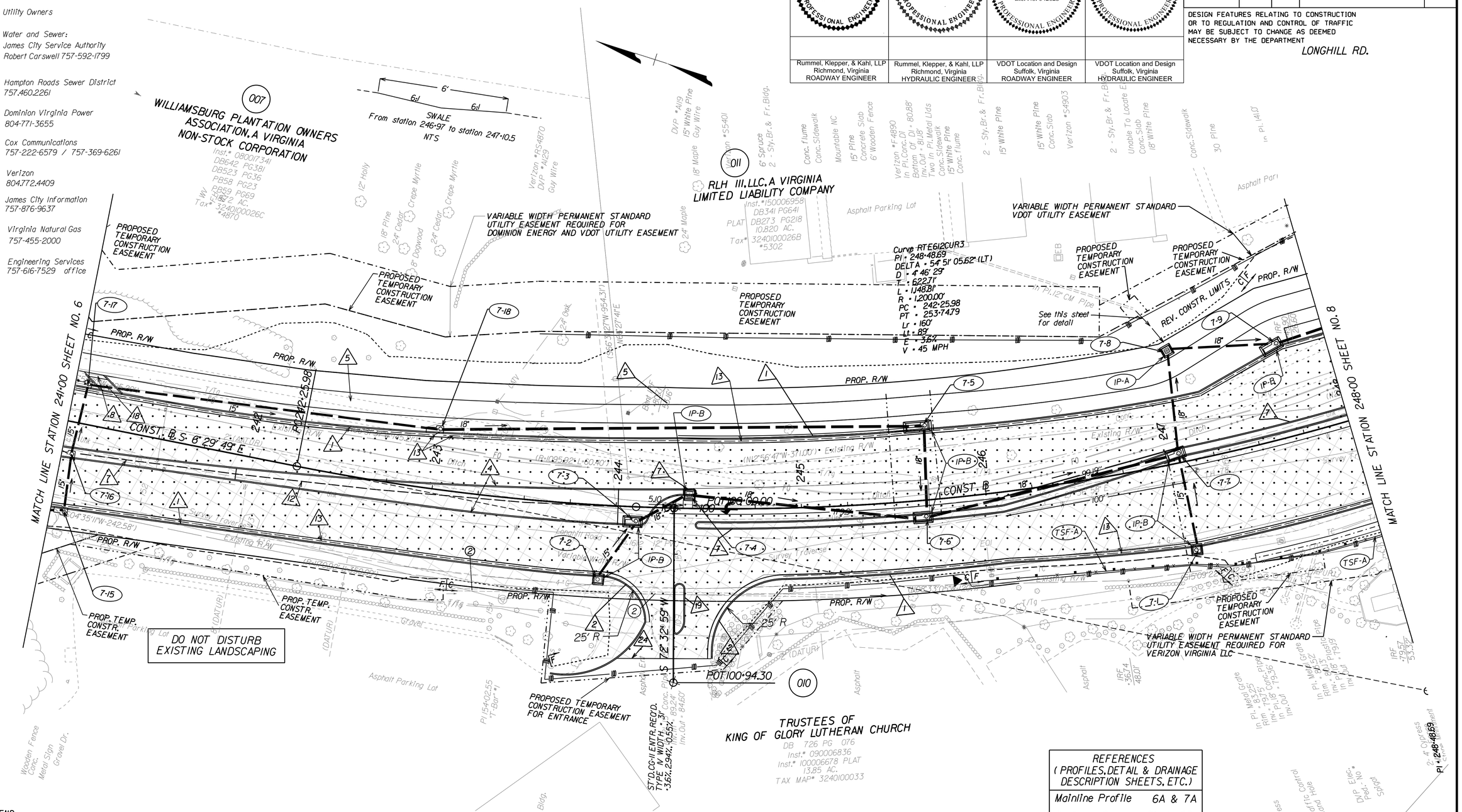
Cox Communications
757-222-6579 / 757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office



LEGEND

- Denotes Drainage Structure Number
- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' ·00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' ·00) — Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' ·00] — Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- (3) Denotes existing structure & pipe to be abandoned.
- Denotes Prop. Pavement

NOTES

See General Notes for E&S Legend

- (1) ST'D. CG-7 REQ'D.
- (2) RAD. CG-7 REQ'D.
- (4) ST'D. MS-2 REQ'D.
- (5) 10' SHARED USE PATH
- (7) ST'D. MS-1A REQ'D.
- (8) ST'D. CG-12 REQ'D.
- (12) ST'D. UD-2 REQ'D.
- (13) ST'D. UD-4 REQ'D.
- (18) BIKE RAMP (SEE DETAIL SHEET 2Z)

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	6A & 7A
Drainage Descr.	2K & 6B
Conn. Profiles	
Entr. Profiles	9
Concrete Staking	6E(2) & 7C
Radial Offset	2AA

- (19) ST'D. SIGN ISLAND SI-2 REQ'D.
- (24) SAW CUT ASPH. CONC. (FULL DEPTH) REQ'D.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	7

HAMPTON ROADS DISTRICT DESIGN UNIT

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY DIANE GEOUGE (757) 956-3263 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

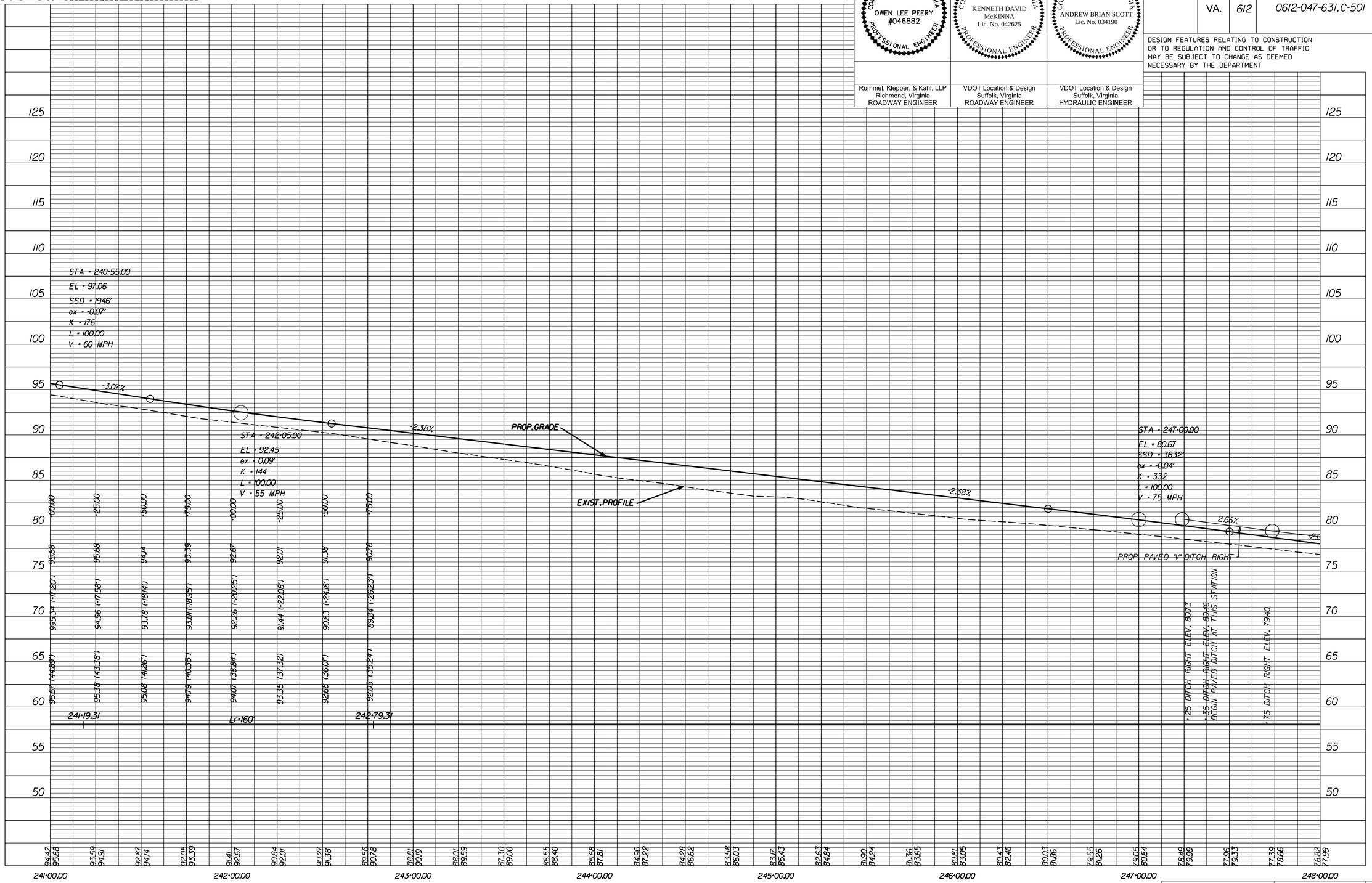
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	7A

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



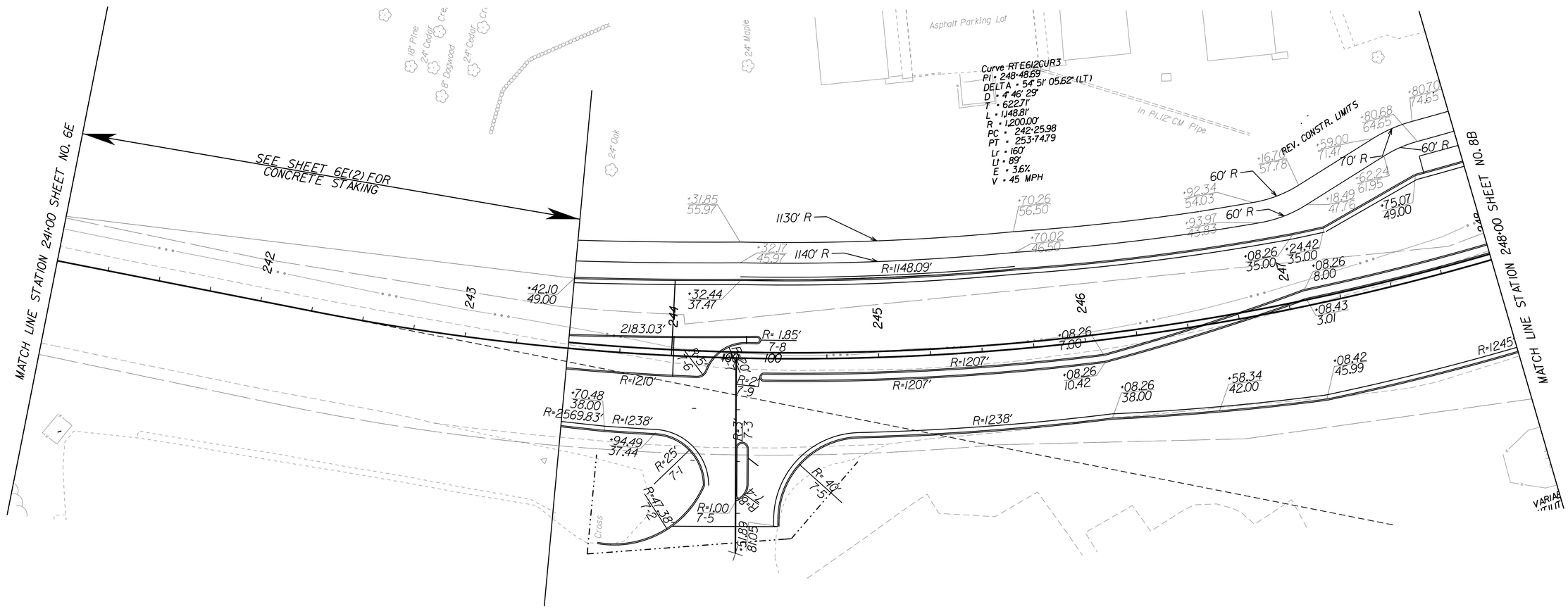
PROJECT	SHEET NO.
0612-047-631	7A

PROJECT MANAGER Ken McKlana, PE (757) 956-3271 Hampton Roads District
SURVEYED BY, DATE Danny Williams, L.S. (757) 925-2657 Hampton Roads District
DESIGN BY N. Diane Gauge (757) 956-3263 Hampton Road District
SUBSURFACE UTILITY BY, DATE Accumark, Inc. (757) 767-3147

CONCRETE STAKING DATA

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	7C

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



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	8A
Radial Offset	2AA

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	7C

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

EROSION & SEDIMENT CONTROL PLAN

COMMONWEALTH OF VIRGINIA
MICHAEL J. HOGAN, JR.
Lic. No. 038783
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	7D

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

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

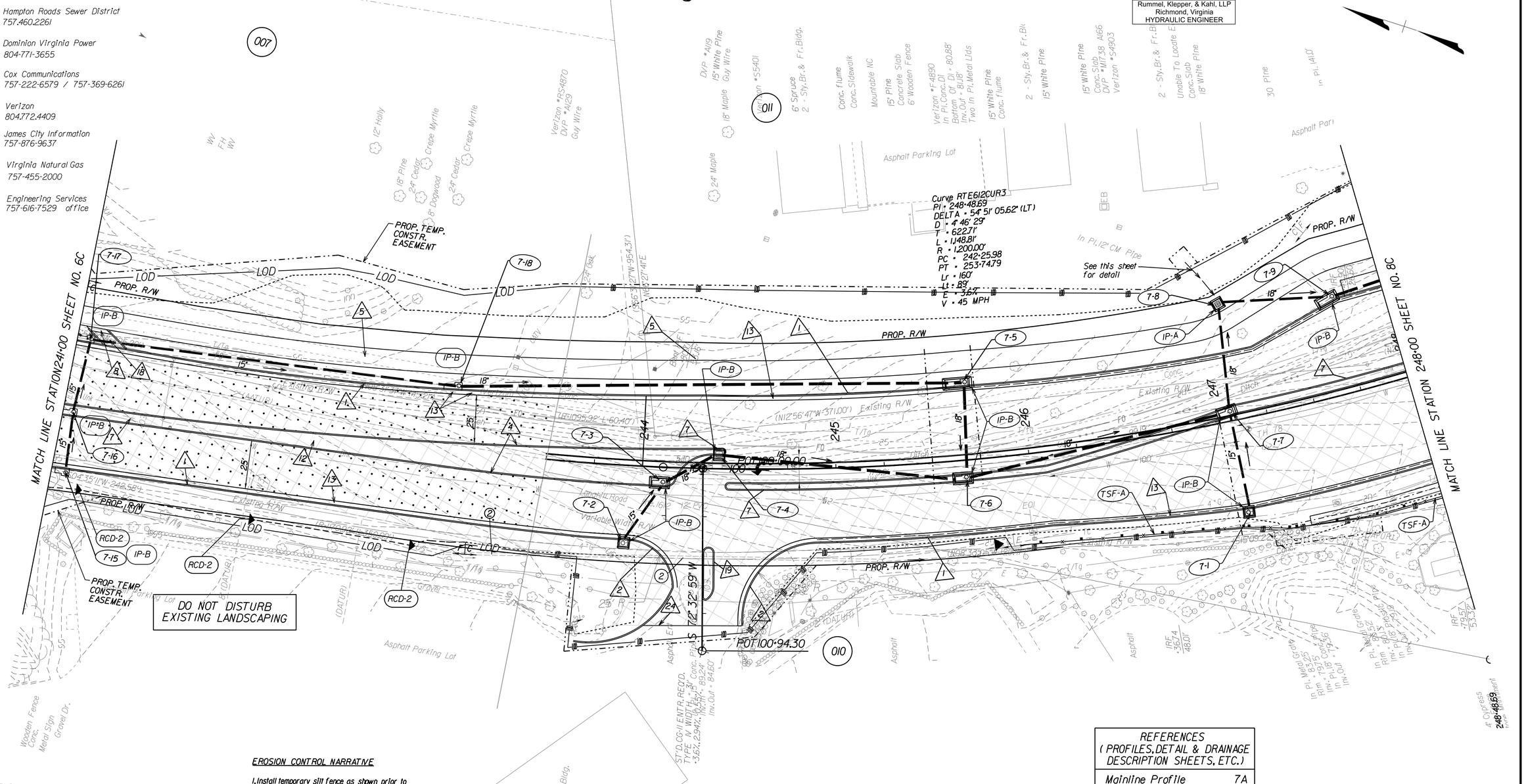
Cox Communications
757-222-6579 / 757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office



LEGEND

- Denotes Drainage Structure Number
- C Denotes Construction Limits In Cuts
- F Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.

EROSION CONTROL NARRATIVE

1. Install temporary silt fence as shown prior to clearing and grubbing and grading operations.
2. Provide temporary construction entrance with washrack at each construction exit location.
3. Install temporary sediment basin.
4. Provide drop inlet protection as strorm drain is installed.
5. Provide permanent seeding along side slopes as grading proceeds.

SCALE
0 25' 50'

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

Mainline Profile	7A
Entrance Profiles	9
Utility Owners	3
Drainage Descr.	2K & 6B
E&S Legend	2

PROJECT	SHEET NO.
0612-047-631	7D

HAMPTON ROADS DISTRICT DESIGN UNIT

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY DIANE GEOUGE (757) 956-3263 & RUMMEL, KLEPPER & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

STORM SEWER PROFILES

COMMONWEALTH OF VIRGINIA
MICHAEL J. HOGAN, JR.
Lic. No. 038783
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	7E

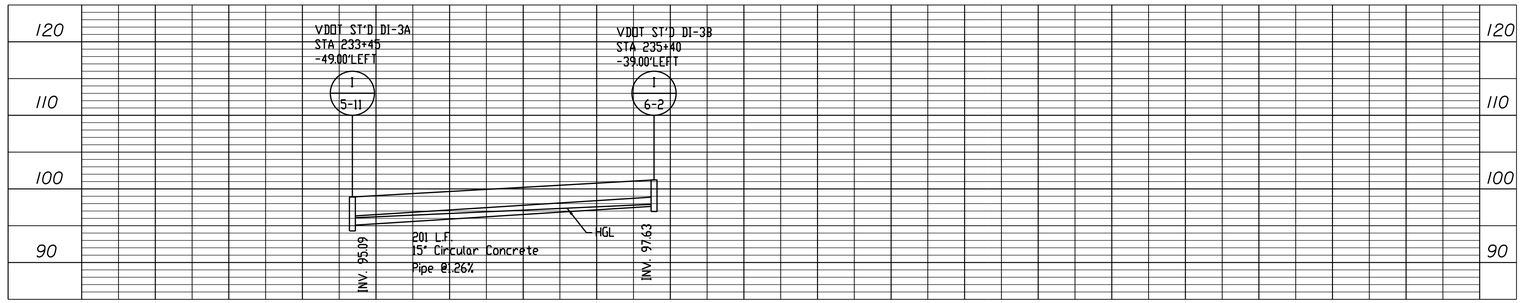
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Scale:
1" = 10'
1" = 50'

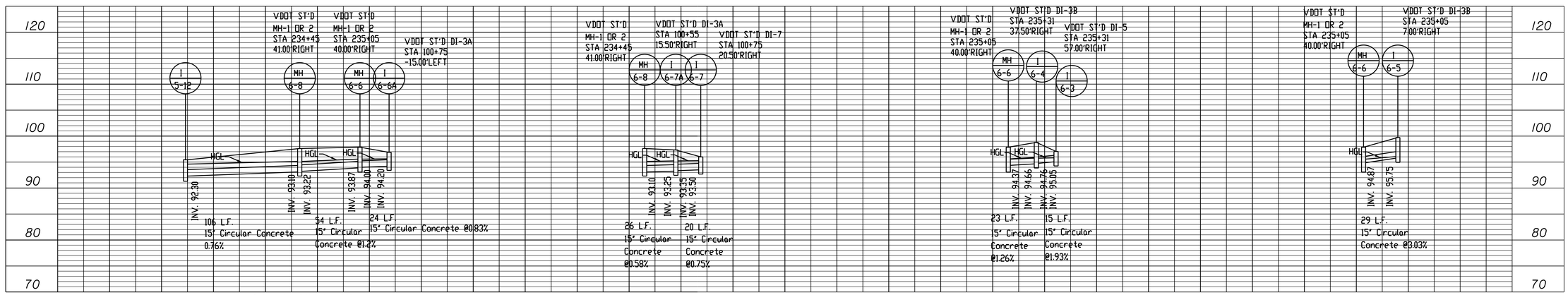
Notes:

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

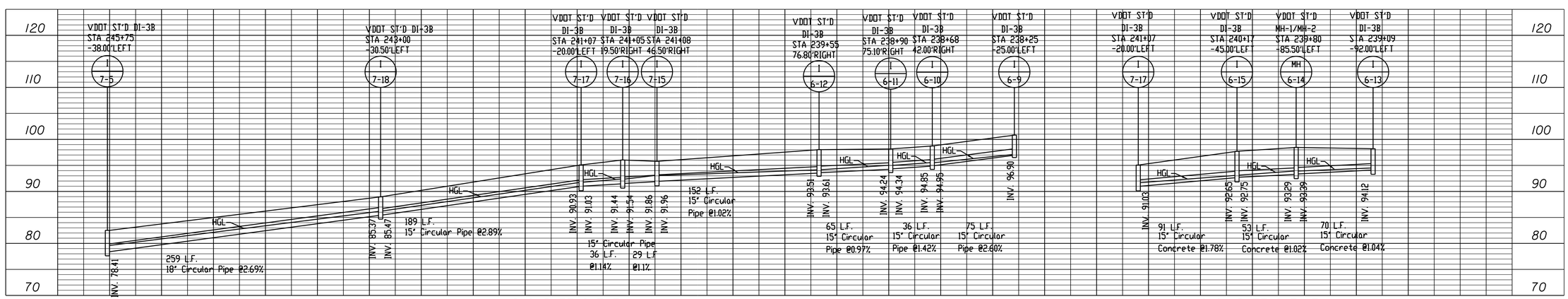
2) See Sheet 1H for Utility Test Hole Information.



I 6-2 TO I 5-11



I 6-6A TO MH 5-12 | I 6-7 TO MH 6-8 | I 6-3 TO MH 6-6 | I 6-5 TO MH 6-6



I 6-9 TO I 7-5 | I 6-13 TO I 7-17

PROJECT	SHEET NO.
0612-047-631	7E

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01-17-18 07-19-18 08-15-18	VA.	612	0612-047-631, RW-201, C-501	7RW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

VDOT Survey
Suffolk, Virginia
SURVEYOR

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

NAD 83 (93) Virginia South Zone

LEGEND

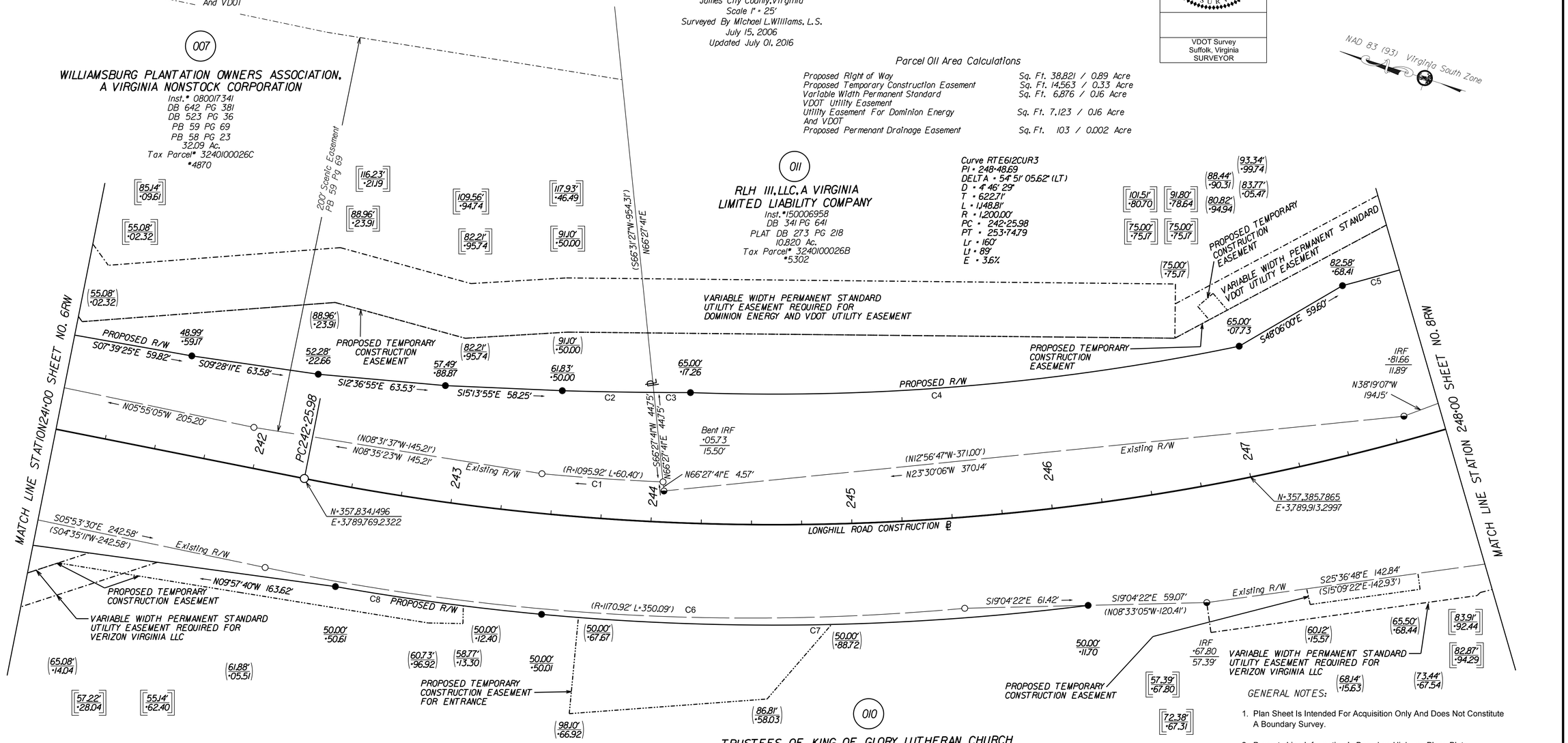
- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement

Parcel 007 Area Calculations

Proposed Right of Way	Sq. Ft. 58,806 / 1.35 Acre
Proposed Temporary Construction Easement	Sq. Ft. 42,467 / 0.97 Acre
Variable Width Permanent Standard Utility Easement For Dominion Energy And VDOT	Sq. Ft. 33,864 / 0.78 Acre

Parcel 011 Area Calculations

Proposed Right of Way	Sq. Ft. 38,821 / 0.89 Acre
Proposed Temporary Construction Easement	Sq. Ft. 14,563 / 0.33 Acre
Variable Width Permanent Standard VDOT Utility Easement	Sq. Ft. 6,876 / 0.16 Acre
Utility Easement For Dominion Energy And VDOT	Sq. Ft. 7,123 / 0.16 Acre
Proposed Permenant Drainage Easement	Sq. Ft. 103 / 0.002 Acre



Parcel 010 Area Calculations

Proposed Right of Way	Sq. Ft. 9,792 / 0.22 Acre
Proposed Temporary Construction Easement	Sq. Ft. 17,294 / 0.40 Acre
Variable Width Permanent Standard Utility Easement Required For Verizon Virginia LLC	Sq. Ft. 9,099 / 0.21 Acre
Variable Width Permanent Standard Utility Easement Required For Dominion Energy, Verizon Virginia LLC And VDOT Utility Easement	Sq. Ft. 4,326 / 0.10 Acre

LINE LEGEND

- ·00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED
- 00.00' / ·00.00 — DENOTES PROPOSED R/W
- (00.00' / ·00.00) — DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- [00.00' / ·00.00] — DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT

CURVE TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	03°09'28" (RT)	1095.92'	60.40'	N 13°52'06"W	60.39'
C2	01°13'40" (LT)	2128.03'	45.60'	S 16°37'48"E	45.60'
C3	00°29'22" (LT)	2128.03'	18.18'	S 17°29'19"E	18.18'
C4	13°52'07" (LT)	1135.00'	274.73'	S 22°33'51"E	274.06'
C5	02°51'00" (LT)	1117.42'	55.58'	S 33°49'16"E	55.57'
C6	17°07'46" (LT)	1170.92'	350.06'	S 14°23'26"E	348.76'
C7	12°29'41" (RT)	1250.00'	272.59'	N 18°39'58"W	272.05'
C8	04°44'45" (RT)	1250.00'	103.54'	N 10°02'45"W	103.51'

GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631, C501, UPC# 100921

NOTE: All Stations And Offsets Are From The Construction Baseline
Bearings And Distances In Parenthesis Are Record Data

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	7RW

11/26/2018
1:51:40 PM

LIMITED ACCESS HIGHWAY d:\0092\008\490 Plotted By: WAP Date: 11/26/2018 By Resolution of State Highway and Transportation Commission dated 10-16-86

PROJECT MANAGER KEN. MCKINNA, P.E. (757)956-3270
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

Cox Communications
757-222-6579 / 757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office

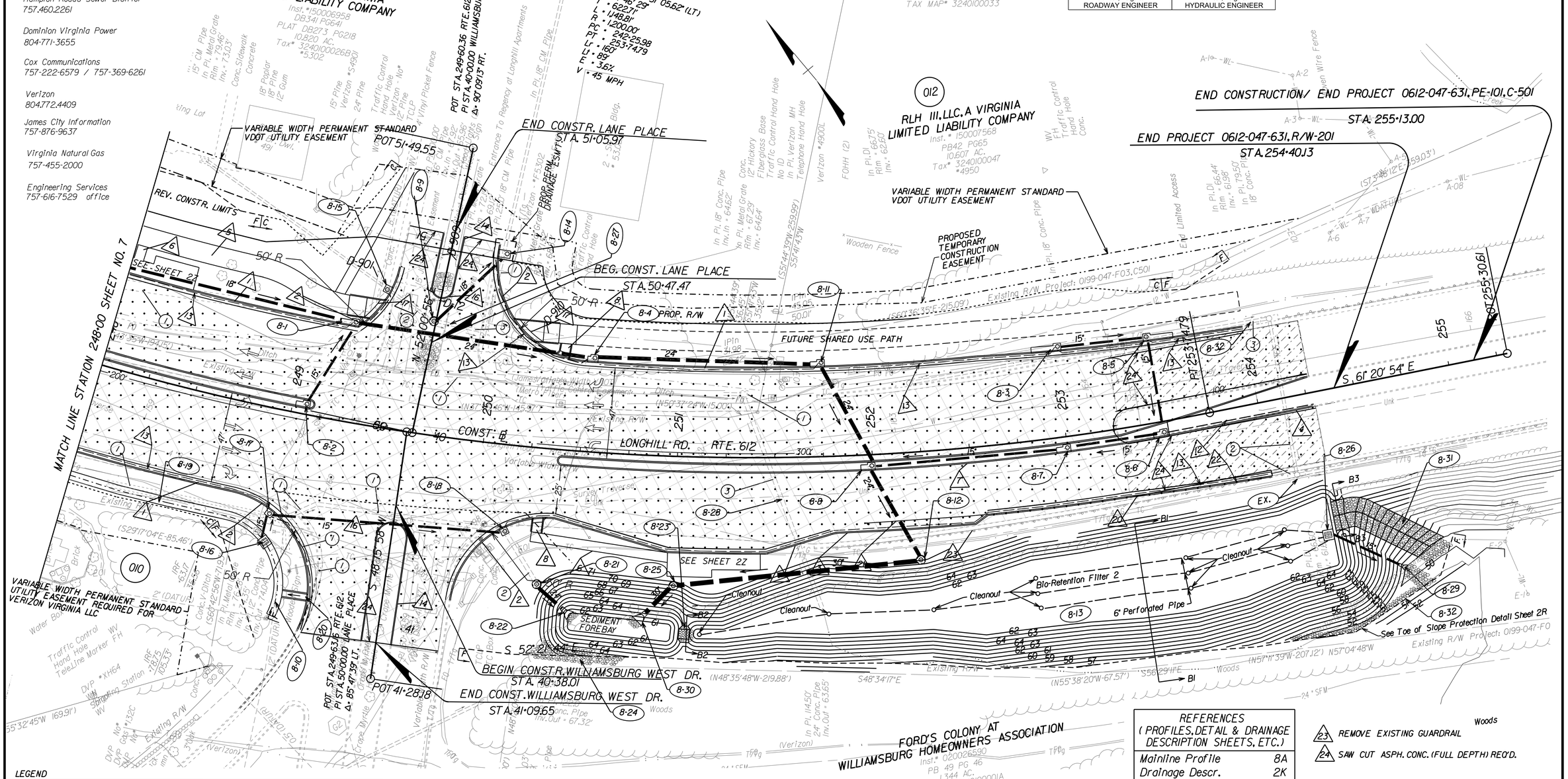
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
01/17/18 07/19/18 08/15/18	VA.	612	0612-047-631, RW-201 C-501	8

COMMONWEALTH OF VIRGINIA — KENNETH DAVID McKINNA — Lic. No. 042625 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA — ANDREW BRIAN SCOTT — Lic. No. 034190 — PROFESSIONAL ENGINEER
VDOT Location & Design, Suffolk, Virginia — HYDRAULIC ENGINEER

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

LONGHILL RD.



LEGEND

- Denotes Drainage Structure Number
- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- Denotes Prop. Pavement
- Denotes Pavement to be milled and overlaid
- GV
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- (3) Denotes existing structure & pipe to be abandoned.

NOTES
See General Notes for E&S Legend

1	ST'D. CG-7 REQ'D.	5	10' SHARED USE PATH	12	ST'D. UD-2 REQ'D.	17	CURB CUT RAMP SEE SHEET 2Z
2	RAD. CG-7 REQ'D.	6	5' CEM. CONC. SIDEWALK	13	ST'D. UD-4 REQ'D.	20	ST'D. GR-MGS1 REQ'D.
3	ST'D. CG-3 REQ'D.	7	ST'D. MS-1A REQ'D.	14	ST'D. CG-2 REQ'D.	21	ST'D. GR-MGS2 REQ'D.
4	ST'D. MS-2 REQ'D.	8	ST'D. CG-12 TYPE B REQ'D.	16	RAD. CG-2 REQ'D.	22	ST'D. GR-MGS4 REQ'D.

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

Mainline Profile	8A
Drainage Descr.	2K
Conn. Profiles	8A
Entr. Profiles	9
SWM Details	2L
SWM E&S	2R
Concrete Staking	8B
Radial Offset	2AA

23 REMOVE EXISTING GUARDRAIL
24 SAW CUT ASPH. CONC. (FULL DEPTH) REQ'D.

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	8

8/30/2018
10:13:01 AM

dl0092l008a.dgn
Plotted By: WAP04107$

HAMPTON ROADS DISTRICT DESIGN UNIT

PROJECT MANAGER KENNETH McKINNA, PE (757) 956-3221
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

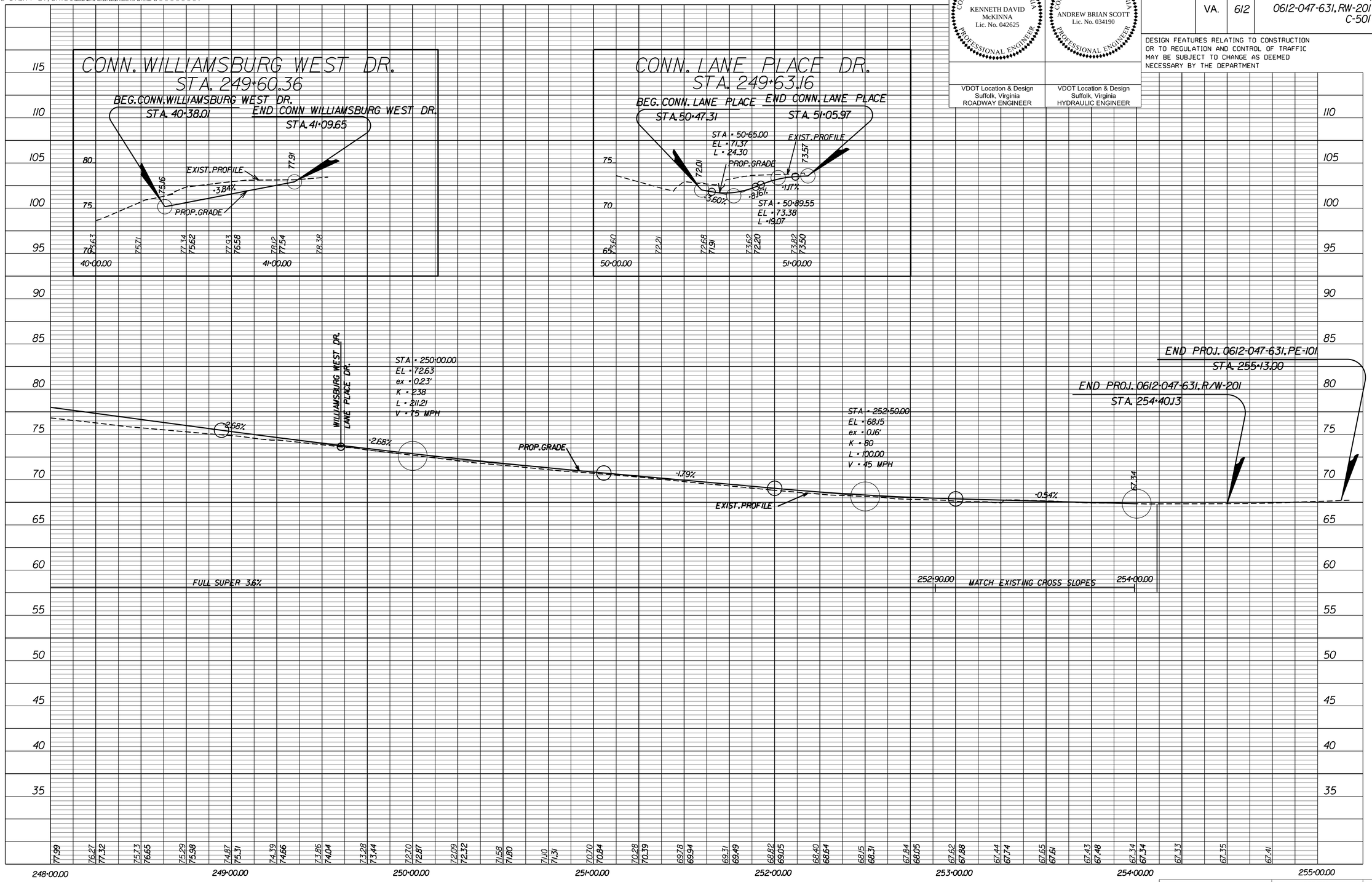
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAULIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	8A

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



PROJECT	SHEET NO.
0612-047-631	8A

LIMITED ACCESS HIGHWAY

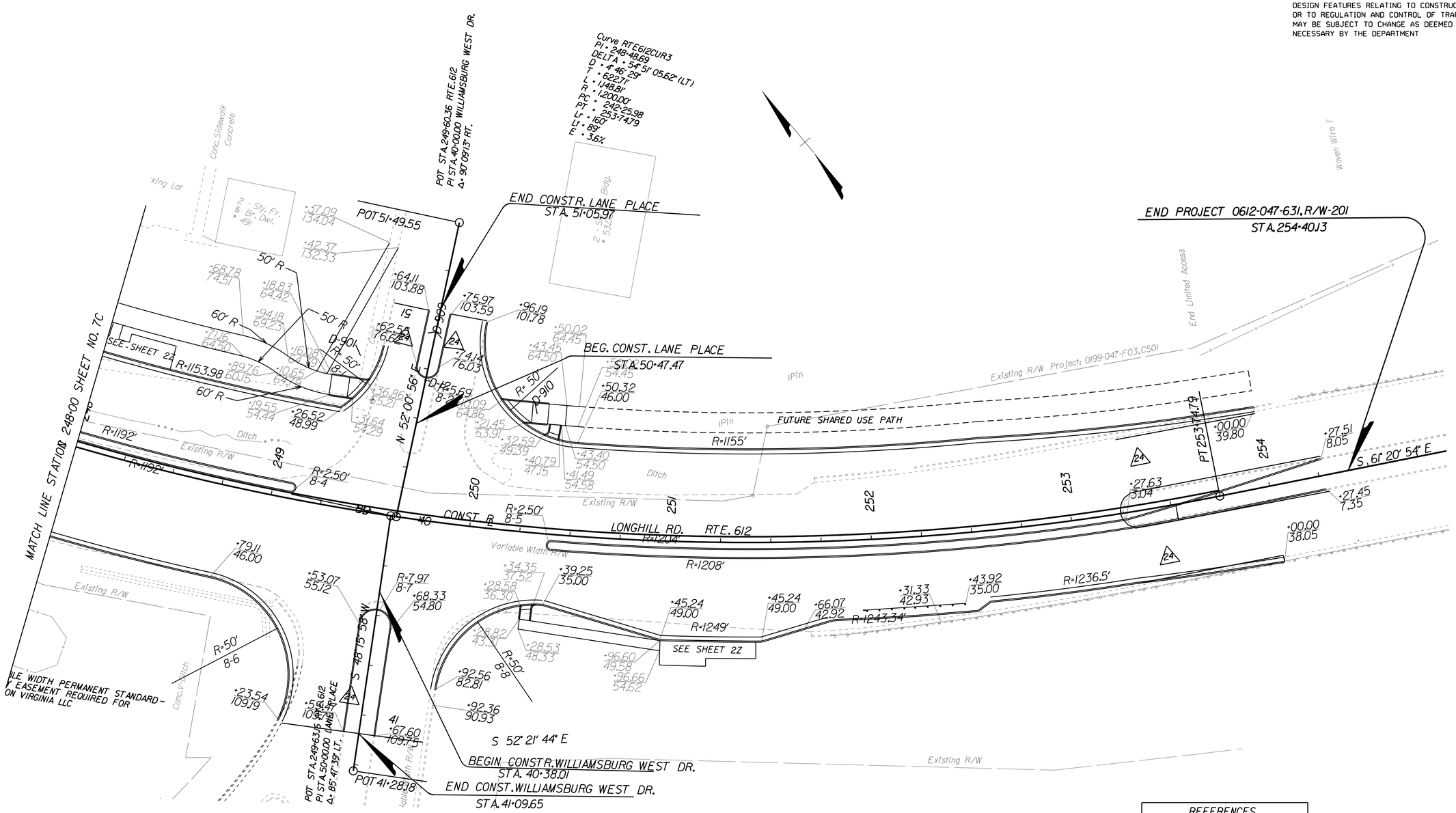
d0092008.dgn
Plotted By: WAFT-Tyler Mills
By Resolution of State Highway and Transportation Commission dated 10-16-86

PROJECT MANAGER KEN MCKINNA, P.E. (757) 956-3271
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

CONCRETE STAKING DATA

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	8B

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



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	8A
Radial Offets	2AA

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	8B

12/20/2018
9:56:17 AM

LIMITED ACCESS HIGHWAY — By Resolution of State Highway and Transportation Commission dated 10-16-86

d0092008.dgn
Plotted By: WAFFLEWOOD

PROJECT MANAGER KEN MCKINNA, P.E. (757)956-3072
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY N. DIANE GEQUIGE (757)956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 762-3147
HAMPTON ROADS DISTRICT DESIGN UNIT

EROSION & SEDIMENT CONTROL PLAN

Utility Owners

Water and Sewer:
James City Service Authority
Robert Carswell 757-592-1799

Hampton Roads Sewer District
757.460.2261

Dominion Virginia Power
804-771-3655

Cox Communications
757-222-6579 / 757-369-6261

Verizon
804.772.4409

James City Information
757-876-9637

Virginia Natural Gas
757-455-2000

Engineering Services
757-616-7529 office

COMMONWEALTH OF VIRGINIA
ANDREW BRIAN SCOTT
Lic. No. 034190
PROFESSIONAL ENGINEER

VDOT Location & Design
Suffolk, Virginia
HYDRAUILIC ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
01/17/18	VA.	612	0612-047-631, RW-201 C-501	8C

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

LONGHILL RD.

23 REMOVE EXISTING GUARDRAIL

LEGEND

- Denotes Drainage Structure Number
- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- Denotes Prop. Pavement
- Denotes Pavement to be milled and overlaid
- GV
- 1 Denotes existing structure & pipe to be removed.
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- 3 Denotes existing structure & pipe to be abandoned.

NOTES
See General Notes for E&S Legend

1	ST'D. CG-7 REQ'D.	5	10' SHARED USE PATH	12	ST'D. UD-2 REQ'D.	17	CURB CUT RAMP SEE SHEET 2Z
2	RAD. CG-7 REQ'D.	6	5' CEM. CONC. SIDEWALK	13	ST'D. UD-4 REQ'D.	20	ST'D. GR-MGS1 REQ'D.
3	ST'D. CG-3 REQ'D.	7	ST'D. MS-1A REQ'D.	14	ST'D. CG-2 REQ'D.	21	ST'D. GR-MGS2 REQ'D.
4	ST'D. MS-2 REQ'D.	8	ST'D. CG-12 TYPE B REQ'D.	16	RAD. CG-2 REQ'D.	22	ST'D. GR-MGS4 REQ'D.

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

Mainline Profile	8A
Drainage Descr.	2K
Conn. Profiles	8A
Entr. Profiles	9
SWM Details	2L
SWM E&S	2R

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	8C

RIGHT OF WAY PLAN SHEET SHOWING PROPERTY FOR COMMONWEALTH OF VIRGINIA

James City County, Virginia
Scale 1" = 25'
Surveyed By Michael L. Williams, L.S.
July 15, 2006
Updated July 01, 2016

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
01-17-18 07-19-18 08-15-18	VA.	612	0612-047-631, RW-201, C-501	8RW

COMMONWEALTH OF VIRGINIA
MICHAEL L. WILLIAMS
Lic. No. 2076
LAND SURVEYOR

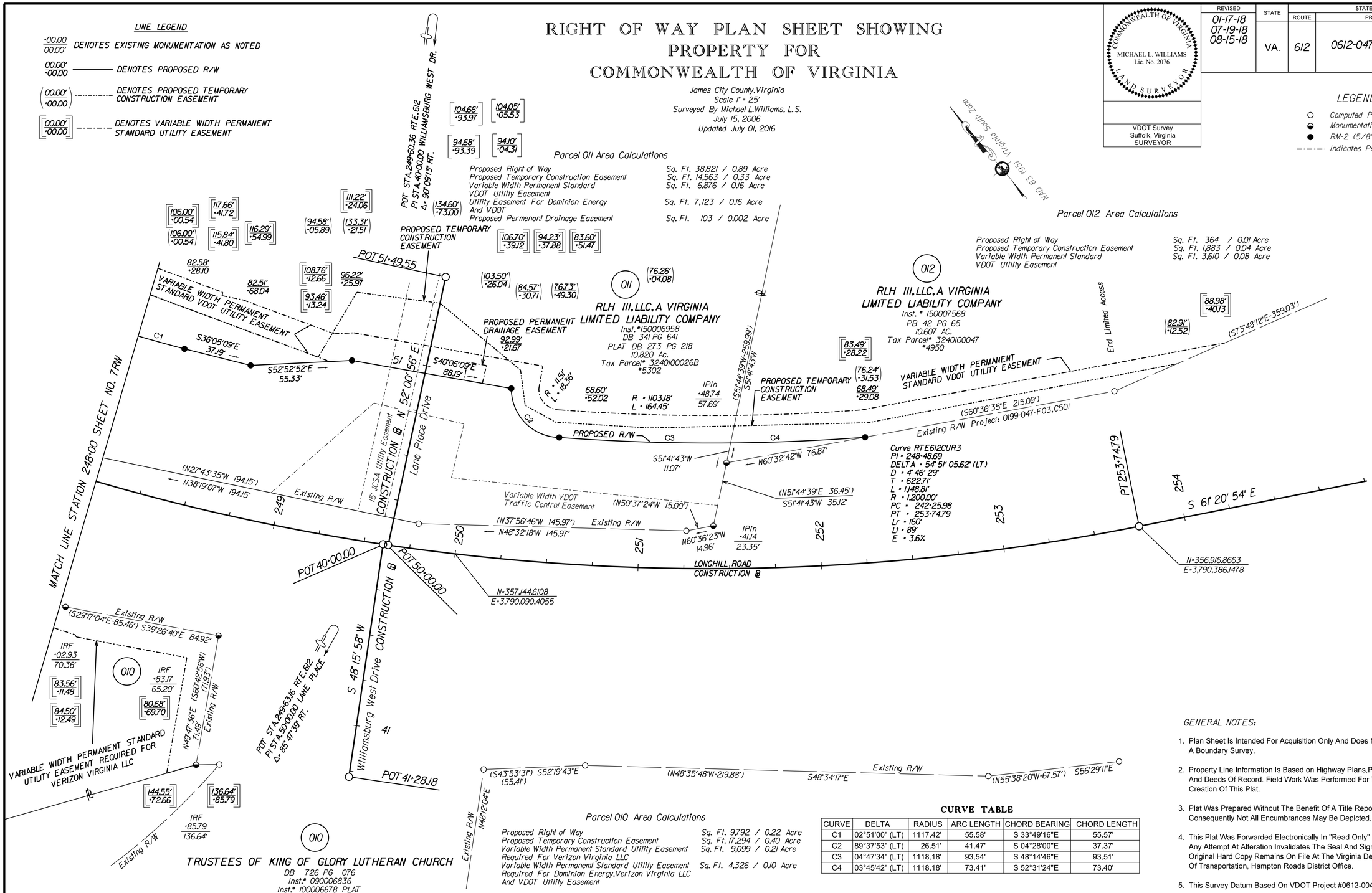
VDOT Survey
Suffolk, Virginia
SURVEYOR

LINE LEGEND

- ·00.00 / 00.00' — DENOTES EXISTING MONUMENTATION AS NOTED
- 00.00' / ·00.00 — DENOTES PROPOSED R/W
- (00.00' / ·00.00) — DENOTES PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- [00.00' / ·00.00] — DENOTES VARIABLE WIDTH PERMANENT STANDARD UTILITY EASEMENT

LEGEND

- Computed Point
- Monumentation Found (As Noted)
- RM-2 (5/8" Rebar w/Cap)
- Indicates Permanent Easement



Parcel 011 Area Calculations

Proposed Right of Way	Sq. Ft. 38,821 / 0.89 Acre
Proposed Temporary Construction Easement	Sq. Ft. 14,563 / 0.33 Acre
Variable Width Permanent Standard	Sq. Ft. 6,876 / 0.16 Acre
VDOT Utility Easement	
Utility Easement For Dominion Energy And VDOT	Sq. Ft. 7,123 / 0.16 Acre
Proposed Permenant Drainage Easement	Sq. Ft. 103 / 0.002 Acre

Parcel 012 Area Calculations

Proposed Right of Way	Sq. Ft. 364 / 0.01 Acre
Proposed Temporary Construction Easement	Sq. Ft. 1,883 / 0.04 Acre
Variable Width Permanent Standard	Sq. Ft. 3,610 / 0.08 Acre
VDOT Utility Easement	

Parcel 010 Area Calculations

Proposed Right of Way	Sq. Ft. 9,792 / 0.22 Acre
Proposed Temporary Construction Easement	Sq. Ft. 17,294 / 0.40 Acre
Variable Width Permanent Standard Utility Easement	Sq. Ft. 9,099 / 0.21 Acre
Required For Verizon Virginia LLC	
Variable Width Permanemt Standard Utility Easement Required For Dominion Energy, Verizon Virginia LLC And VDOT Utility Easement	Sq. Ft. 4,326 / 0.10 Acre

CURVE TABLE

CURVE	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	02°51'00" (LT)	1117.42'	55.58'	S 33°49'16"E	55.57'
C2	89°37'53" (LT)	26.51'	41.47'	S 04°28'00"E	37.37'
C3	04°47'34" (LT)	1118.18'	93.54'	S 48°14'46"E	93.51'
C4	03°45'42" (LT)	1118.18'	73.41'	S 52°31'24"E	73.40'

GENERAL NOTES:

1. Plan Sheet Is Intended For Acquisition Only And Does Not Constitute A Boundary Survey.
2. Property Line Information Is Based on Highway Plans, Plats And Deeds Of Record. Field Work Was Performed For The Creation Of This Plat.
3. Plat Was Prepared Without The Benefit Of A Title Report, Consequently Not All Encumbrances May Be Depicted.
4. This Plat Was Forwarded Electronically In "Read Only" Format. Any Attempt At Alteration Invalidates The Seal And Signature. An Original Hard Copy Remains On File At The Virginia Department Of Transportation, Hampton Roads District Office.
5. This Survey Datum Based On VDOT Project #0612-0047-631,C501, UPC# 100921

NOTE: All Stations And Offsets Are From The Construction Baseline Bearings And Distances In Parenthesis Are Record Data

SCALE	PROJECT	SHEET NO.
0 12.5' 25' 50'	0612-047-631	8RW

HAMPTON ROADS DISTRICT DESIGN UNIT

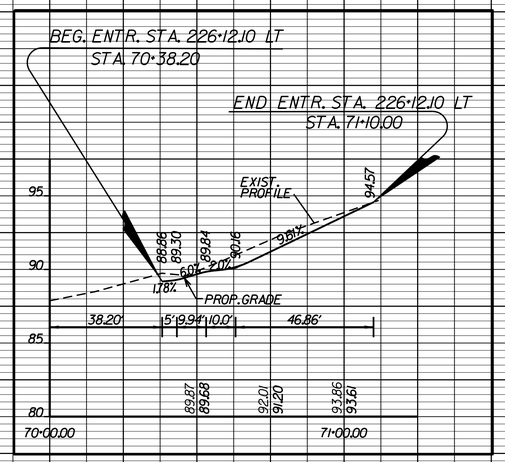
PROJECT MANAGER Kenneth_McKinna (757) 956-3271
SURVEYED BY, DATE Danny_Williams_LS (757)925-2657
DESIGN BY N_Dlaoe_Geauge (757) 956-3263
SUBSURFACE UTILITY BY, DATE ACCUMARK_INC. (757)767-3147

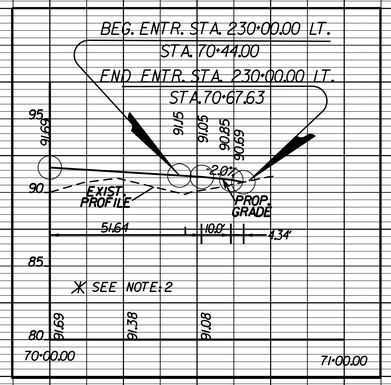
COMMONWEALTH OF VIRGINIA
KENNETH DAVID McKINNA
Lic. No. 042625
PROFESSIONAL ENGINEER

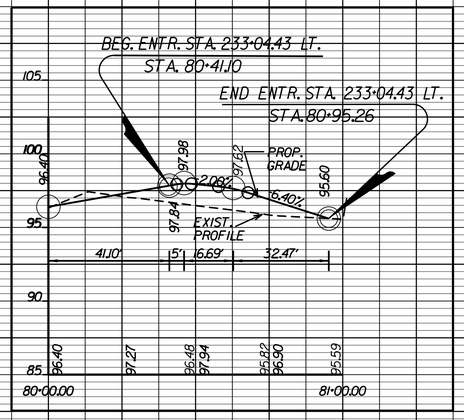
VDOT Location & Design
Suffolk, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, RW-201 C-501	9

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



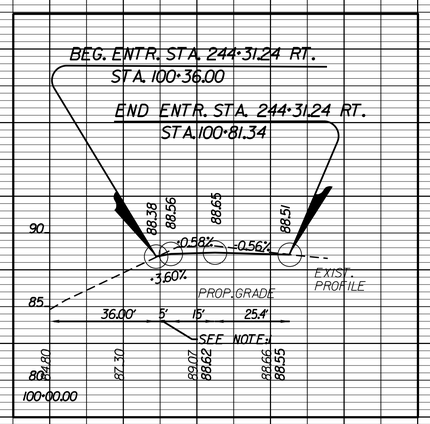


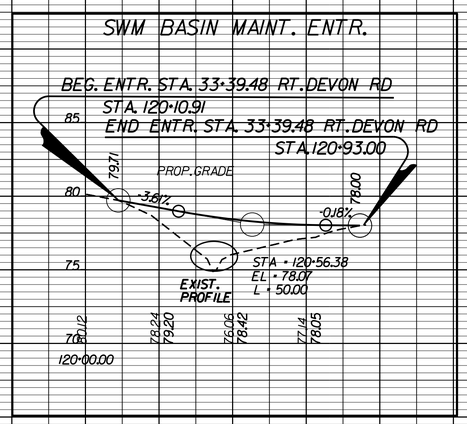


SHEET NOTES

NOTE 1: WHERE THE PEDESTRIAN ACCESS ROUTE CROSSES THE ENTRANCE THE CROSS SLOPE SHALL BE 2%.

NOTE 2: THE DEPTH FOR SIDEWALK & CURB RAMPS FOR THE SPECIFIED ENTRANCE SHALL BE INCREASED TO 7". (SEE CG-13)





PROJECT	SHEET NO.
0612-047-631	9

12/14/2018
10:59:21 AM

d10092\0010.dgn
Plotted By: RK&K - JHH

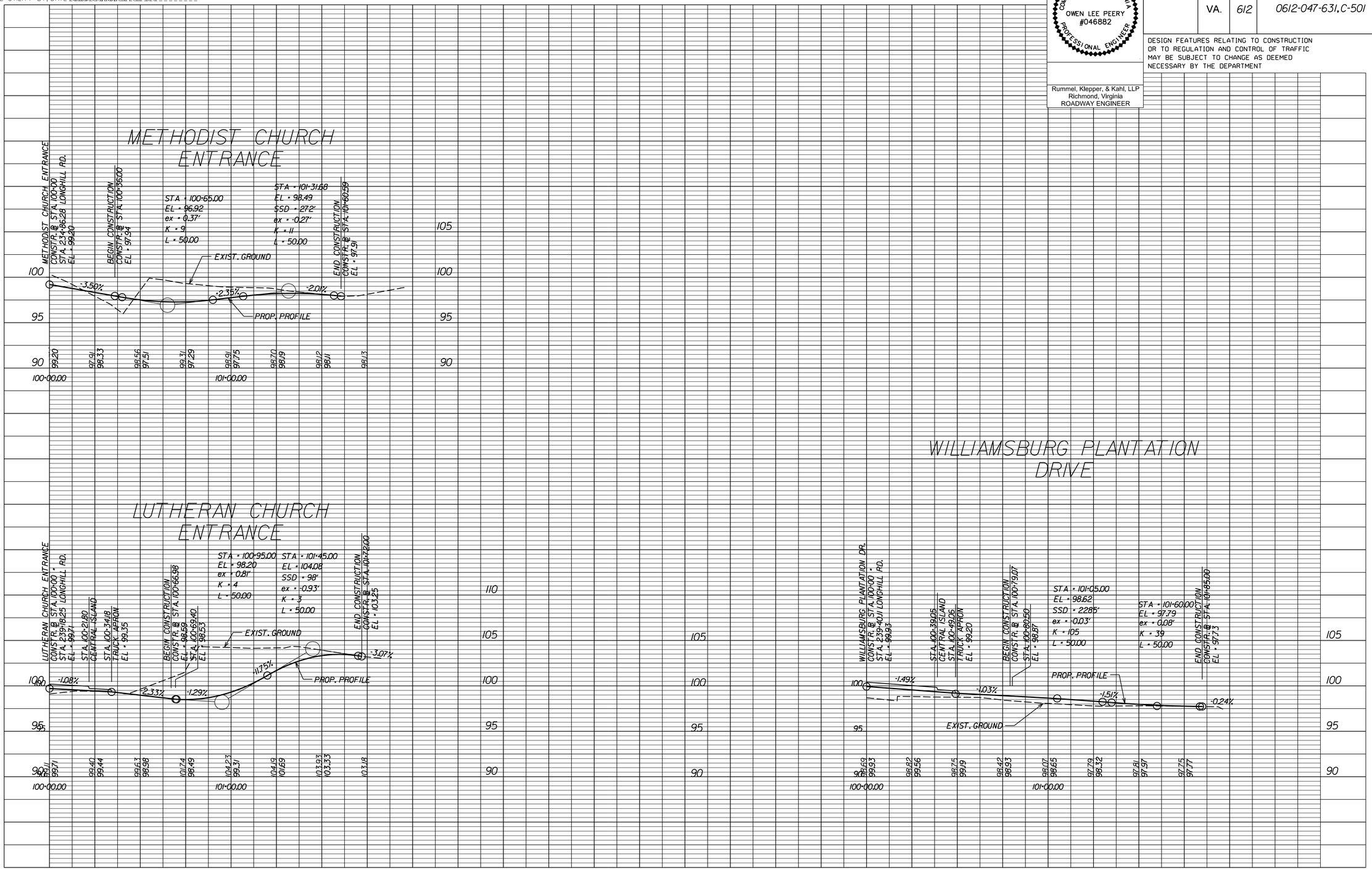
PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY WILLIAMS (757) 925-2657
DESIGN BY RUMMEL, KLEPPER, & KAHL, LLP (804) 782-1903
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

COMMONWEALTH OF VIRGINIA
OWEN LEE PEERY
#046882
PROFESSIONAL ENGINEER

Rummel, Klepper, & Kahl, LLP
Richmond, Virginia
ROADWAY ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	10

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



PROJECT	SHEET NO.
0612-047-631	10

12/14/2018

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	II(1)

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

INDEX OF SHEETS

Sheet No.:	Sheet Description:
II(1)	Index of Sheets, General Notes & Legends
II(2)	Summary of Quantities
II(2A)	Sign Figure Details
II(2B)1 - II(2B)3	Sign Schedule
II(3) thru II(8)	Signing & Pavement Marking Plans

GENERAL NOTES - SIGNING

1. All existing signs are to remain unless otherwise noted.

2. Signs are to be installed within R/W or easement.

3. The locations of all underground and overhead utilities shown on these plans are approximate only and may not be accurate. At least 72 hours prior to beginning signing work, the Contractor shall contact "Miss Utility of Virginia" at 1-800-552-7001 in order to determine the extent and location of all underground utilities within the project limits.
If the Contractor perceives a conflict between utilities and the proposed traffic signing equipment, the Contractor shall notify the Engineer immediately so that the conflict may be reviewed.

4. Sign panel design for signs mounted on Square Tube Posts shall conform to St'd. STP-1. The Contractor shall verify the design of all sign panel assembly types not shown in this St'd. with the Engineer.

GENERAL NOTES - PAVEMENT MARKING

1. All existing conflicting pavement markings shall be eradicated.

2. Stop bars are to be installed a minimum of 4' and a maximum of 30' in advance of the nearest edge of the intersecting roadway or as directed by the Engineer.

3. All proposed pavement markings shall tie into the existing markings at the limit of the proposed pavement markings.

4. Pavement markings on existing pavement are to remain unless noted otherwise on the plans. Existing pavement markings shown outside the limits of the new markings are approximate and shown for reference only.

5. All new pavement marking arrows included in project are noted on plans. All other arrows shown on the plans are existing (hollow arrows) or denote the direction of travel.

6. All turn lane arrows, turn lane skip/solid lines and stop bars shall be located per St'd. PM-3.

7. Stop bars shall be no closer than 4' from crosswalks. Stop bars on shared use paths shall not be placed over tactile strips.

8. The width of crosswalks shall be 10' and shall be in accordance with The Road and Bridge Std's. PM-3 for Crosswalk Markings.

STANDARD SIGN LEGEND

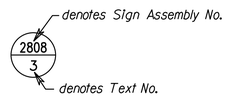
PLAN ITEM	PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Single Post Sign Support		
Double Post Sign Support		
Triple Post Sign Support		
Flashing Beacon		
O/H Cantilever Sign Support		
O/H Span Sign Support		

SIGN CALL-OUTS

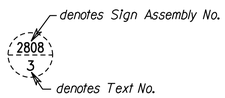
Existing Sign to Remain or to be Relocated	
Existing Sign to be Removed	
Proposed Sign Panel	

SIGN LABELS

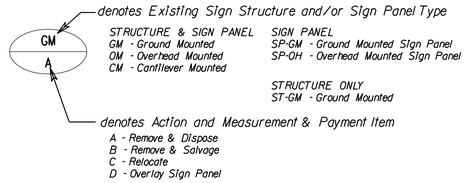
Proposed Sign Assemblies



Relocated Sign Assemblies



Sign Relocation or Payable Sign Disposal/Salvage



Signs noted on plans to be removed that do not have an accompanying sign label shall not be measured separately for payment. Removal and disposal for such signs shall be incidental to other contract items.

PAVEMENT MARKING LEGEND

(A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH

(B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH

(C) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH

(D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)

(E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)

(F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH

(G) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (2' LINE, 4' SPACE)

(H) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (3' LINE, 9' SPACE)

(J) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH

(K) PAVEMENT MESSAGE MARKING (BUS) TYPE B, CLASS II

(L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B, CLASS II

(M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B, CLASS II

(N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B, CLASS II

(P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B, CLASS II

(R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B, CLASS II

(S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B, CLASS II

(T) PAVEMENT SYMBOL MARKING, (BICYCLIST THRU ARROW) TYPE B, CLASS II

(U) PAVEMENT SYMBOL MARKING, (HELMETED BICYCLIST) TYPE B, CLASS II

(V) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS
INDEX OF SHEETS, GENERAL NOTES & LEGENDS
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	II(1)

PROJECT MANAGER Kenneth D.McKinna,P.E.(757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R.Minnix,LS (757) 925-2660 (Hampton Roads)
DESIGN BY S.A.Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	11(2)

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

SUMMARY OF QUANTITIES

TCD Discipline	SIGNING														PAVEMENT MARKINGS												
Summary Notes	⊗								①																		②
Item Description / ITEM NO. / UNIT / SHEET NO.	Sign Panel	Sign Post STP-I, 2", 14 GAUGE	Sign Post STP-I, 2 3/16", 10 GAUGE	Sign Post STP-I, 2 1/2", 10 GAUGE	Sign Post STP-I, 2 1/2", 12 GAUGE	Concrete Foundation STP-I,Type C	Concrete Foundation STP-I,TYPE D	Concrete Foundation STP-I,TYPE E	Relocate Existing Ground Mounted Sign Panel	Relocate Existing Ground Mounted Sign Structure & Sign Panel	Remove & Salvage Existing Ground Mounted Sign Structure & Sign Panel	Remove & Dispose Existing Ground Mounted Sign Structure & Sign Panel			Type B,Class I,Pavement Line Marking 4"	Type B,Class I,Pavement Line Marking 6"	Type B,Class I,Pavement Line Marking 8"	Type B,Class I,Pavement Line Marking 24"	Eradication of Existing Linear Pavement Markings	Pavement Message Marking "ONLY" Type B,Class II	Pavement Symbol Marking, Single Turn Arrow, Type B,Class II	Pavement Symbol Marking (Double Turn Arrow Thru/Lt or Rt) Type B,Class II	Pavement Symbol Marking, Triple Turn Arrow, Type B,Class II	Pavement Symbol Marking, (Yield 1' x 1.5') Type B,Class II	Pavement Symbol Marking, (Bicyclist Thru Arrow) Type B,Class II	Pavement Symbol Marking, (Helmeted Bicyclist) Type B,Class II	Pavement Message,8" Character Type B,Class II
	50108	50430	50432	50434	50436	50487	50488	50489	50902	50902	50902	50902			54032	54034	54037	54042	54105	54393	54575	54578	54582	54622	54652	54660	54262
	S.F.	LF.	LF.	LF.	LF.	EA.	EA.	EA.	EA.	EA.	EA.	EA.			LF.	LF.	LF.	LF.	LF.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.
11(3)	14.5	12	--	--	30	--	1	2	--	--	--	--			980	--	345	--	100	1	2	--	--	--	--	--	--
11(4)	45	--	--	13	65	1	--	5	--	1	--	--			3,085	140	195	60	--	1	7	--	--	--	--	--	--
11(5)	71	136	--	--	52	--	11	4	2	1	--	--			4,345	--	--	440	--	1	12	4	--	--	--	--	3
11(5c)	--	--	--	--	--	--	--	--	--	--	--	--			1,195	--	--	--	--	--	1	1	--	--	--	--	--
11(6)	188.25	195	24	60	166	4	15	13	--	--	1	--			3,660	--	60	195	--	--	5	10	--	80	4	4	--
11(7)	45	49	--	--	52	--	4	4	--	--	--	--			3,190	--	--	35	--	--	5	4	--	--	--	--	--
11(8)	49	95	--	--	37	--	8	3	2	--	--	1			2,900	--	--	440	100	1	7	1	1	--	--	--	3
TOTAL	413	487	24	73	402	5	39	31	4	2	1	1			19,355	140	600	1,170	200	4	39	20	1	80	4	4	6

SUMMARY NOTES

⊗ Denotes Item to be paid for on the basis of Plan Quantity in accordance with current Road & Bridge Specifications.

① Relocate Existing Ground Mounted Sign Panel shall include all required Sign Bracing and Mounting Hardware.

② This Pay Item refers to the Pavement Message Marking "BUS".

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 E. BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS
SUMMARY OF QUANTITIES

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(2)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Mlynek, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	11(2A)

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

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

FIGURE 1

SIGN DETAIL

SIGN NUMBER	603, 616	
WIDTH x HGHT.	4'-0" x 1'-0"	
BORDER WIDTH	0.5"	
BORDER INSET	0"	
PANEL RADIUS	1.5"	
MOUNTING	Ground	
BACKGROUND	TYPE:	Reflective
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective
	COLOR:	White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are in inches.tenths

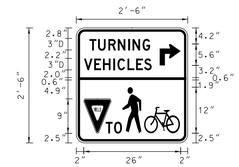
Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

L	o	n	g	h	i	l	l	R	d	LENGTH	SERIES/SIZE
4.9	9.2	13.8	18.3	23.1	27.7	29.9	32.1	37.5	40.7	38.1	D 2000 64.5,43

FIGURE 2

SIGN DETAIL



SIGN NUMBER	512, 513, 801, 810	
WIDTH x HGHT.	2'-6" x 2'-6"	
BORDER WIDTH	0.63"	
BORDER INSET	0.38"	
PANEL RADIUS	1.88" plus 0.38"	
MOUNTING	Ground	
BACKGROUND	TYPE:	Reflective
	COLOR:	Black/White
LEGEND/BORDER	TYPE:	Reflective
	COLOR:	Black/Black

SYMBOL	ROT	X	Y	WID	HT
ARROW	0	22.5	20.2	5.6	5.7
Pedestrain	0	12.4	2.5	5.2	12
Bicycle	0	18.3	2.5	9.6	6.9

Dimensions are in inches.tenths

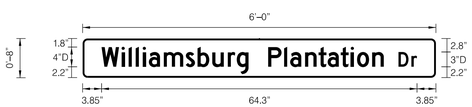
Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

T	U	R	N	I	N	G	LENGTH	SERIES/SIZE
3.6	5.9	8.6	11.2	13.9	15.1	17.8	16.3	D 2000 3
V	E	H	I	C	L	E	S	
2.1	4.8	7.2	9.9	11.1	13.8	16.1	18.2	D 2000 3
T	O							
7.9	10.2						4.4	D 2000 3

FIGURE 3

SIGN DETAIL



SIGN NUMBER	631	
WIDTH x HGHT.	6'-0" x 0'-8"	
BORDER WIDTH	0.38"	
BORDER INSET	0"	
PANEL RADIUS	1"	
MOUNTING	Ground	
BACKGROUND	TYPE:	Reflective
	COLOR:	Green
LEGEND/BORDER	TYPE:	Reflective
	COLOR:	White/White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

W	i	l	l	i	a	m	s	b	u	r	g		P	l	a	n	t	a	t	i	o	SERIES/SIZE
3.9	7.9	9.4	10.8	12.3	13.5	16.5	21	23.4	26.4	29.6	31.4	33.8	37.8	41.1	42.3	45.3	48.1	49.9	52.6	54.7	55.9	D 2000 43,32,3
n	D	r																			LENGTH	
59	64.4	67																			64.3	

VDOT

LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING

1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS

SIGNING & PAVEMENT MARKINGS
SIGN FIGURE DETAILS

JAMES CITY COUNTY

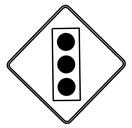
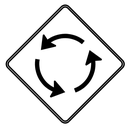
PROJECT	SHEET NO.
0612-047-631	11(2A)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Wilnoix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(2B)11

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

SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.) per ASSEMBLY	SIGN PANEL AREA (s.f.) ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	PROP. F'D'N. ST'D.	REMARKS
1	401, 406, 507		R1-1	30"	30"	3	6.25	18.75	STP-1 2½" 12 GA.	E	
	629, 630			18"	18"	2	2.25	4.5	STP-1 2" 14 GA.	D	
2	605, 606, 613, 614, 618, 619, 626, 627		R1-2	36"	36"	8	4	32	STP-1 2" 14 GA.	D	
3	404, 509		R2-1	30"	36"	2	7.5	15	STP-1 2½" 12 GA.	E	
4	503, 506, 508, 511, 601, 615, 702, 705, 802, 805, 808, 809		R4-7	24"	30"	12	5	60	STP-1 2" 14 GA.	D	
5	408, 602		W3-3	30"	30"	2	6.25	12.5	STP-1 2½" 12 GA.	E	
6	611, 701		W3-2	30"	30"	2	6.25	12.5	STP-1 2½" 12 GA.	E	
7	516, 703		W2-6	30"	30"	2	6.25	12.5	STP-1 2½" 12 GA.	E	
8	604, 612, 617, 625		R6-4A	48"	24"	4	8	32	STP-1 2½" 12 GA.	E	
9	607, 610		W11-15	30"	30"	2	6.25	22.5	STP-1 2½" & 2 3/16" 10 GA.	C	
			W11-15P	24"	18"	2	3				
			W16-7PL	24"	12"	2	2				
10	608, 609		W11-15	30"	30"	2	6.25	22.5	STP-1 2½" & 2 3/16" 10 GA.	C	
			W11-15P	24"	18"	2	3				
			W16-7PR	24"	12"	2	2				
11	620, 624		W11-1	24"	24"	2	4	12	STP-1 2½" 12 GA.	E	
			W16-7PL	24"	12"	2	2				

NOTES:

1) ALL SIGNS SHALL BE ORIENTATED AS SHOWN ON THE PLANS.
2) SIGN COLOR COMBINATIONS SHALL BE IN ACCORDANCE WITH THE FHWA SHS BOOK AND THE 2011 VIRGINIA SHS BOOK OR AS NOTED IN THE PLANS.
3) ALL POSITIVE CONTRAST GUIDE AND SPECIFIC SERVICE SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-3 OR L-4 UNLESS OTHERWISE NOTED IN THE REMARKS. ALL OTHER SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-1 OR L-2 UNLESS OTHERWISE NOTED IN THE REMARKS.
4) ALL BLACK SHEETING SHALL BE NON-REFLECTIVE.
5) SIGN STRUCTURES SHALL BE INSTALLED PER THE NOTED SIGN ST'D.
6) ALL ST'D. STP-1 STRUCTURES TO BE SINGLE POST UNLESS OTHERWISE NOTED.
7) IF APPLICABLE, SEE SHEET 2D FOR NON-STANDARD TYPE VA AND VIA SIGN STRUCTURE DETAILS.

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
SIGNING AND PAVEMENT MARKINGS
SIGN SCHEDULE

JAMES CITY COUNTY

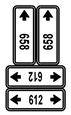
PROJECT	SHEET NO.
0612-047-631	11(2B)11

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(2B)12

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

SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.) per ASSEMBLY	SIGN PANEL AREA (s.f.) ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	PROP. F'D'N. ST'D.	REMARKS
12	621, 623		W11-1	24"	24"	2	4	12	STP-1 2½" 12 GA.	E	
			W16-7PR	24"	12"	2	2				
13	807		R3-17	24"	18"	1	3	4.33	STP-1 2" 14 GA.	D	
			R3-17BP	24"	8"	1	1.33				
14	803, 804		M1-V3aB	24"	9"	4	1.5	6	STP-1 2" 14 GA.	D	(See Note 8)
15	502		M1-V3aR	24"	9"	1	1.5	6	STP-1 2" 14 GA.	D	(See Note 8)
			M1-V3aL	24"	9"	1	1.5				
			M1-V3aB	24"	9"	2	3				(See Note 8)
16	301, 405	RIGHT LANE MUST TURN RIGHT	R3-7R	30"	30"	2	6.25	12.5	STP-1 2½" 12 GA.	E	
17	603, 616	Longhill Rd	D3-1	48"	12"	2	4	8	STP-1 2" 14 GA.	D	(See Figure 1)

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.) per ASSEMBLY	SIGN PANEL AREA (s.f.) ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	PROP. F'D'N. ST'D.	REMARKS
18	501, 510, 704, 806	BUSS SIGN	EXIST.	-	-	4	-	-	STP-1 2" 14 GA.	D	
		NOT USED									
20	302, 514, 515	PATH NARROWS	W5-4a	18"	18"	3	2.25	6.75	STP-1 2" 14 GA.	D	
21	512, 513, 801, 810	TURNING VEHICLES	R10-15R (Mod)	30"	30"	4	6.25	25	STP-1 2½" 12 GA.	E	(See Figure 2)
22	504, 505, 628, 706		R3-2	24"	24"	3	4	12	STP-1 2" 14 GA.	D	
23	631	Williamsburg Plantation Dr	D3-1	72"	8"	1	4	4	STP-1 2" 14 GA.	D	(See Figure 3)
24	407		R2-1 R4-7	30" 24"	36" 30"	1 1	7.5 5	7.5 5	STP-1 2½" 10 GA.	C	

NOTES:

1) ALL SIGNS SHALL BE ORIENTATED AS SHOWN ON THE PLANS.
2) SIGN COLOR COMBINATIONS SHALL BE IN ACCORDANCE WITH THE FHWA SHS BOOK AND THE 2011 VIRGINIA SHS BOOK OR AS NOTED IN THE PLANS.
3) ALL POSITIVE CONTRAST GUIDE AND SPECIFIC SERVICE SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-3 OR L-4 UNLESS OTHERWISE NOTED IN THE REMARKS. ALL OTHER SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-1 OR L-2 UNLESS OTHERWISE NOTED IN THE REMARKS.
4) ALL BLACK SHEETING SHALL BE NON-REFLECTIVE.
5) SIGN STRUCTURES SHALL BE INSTALLED PER THE NOTED SIGN ST'D.
6) ALL ST'D. STP-1 STRUCTURES TO BE SINGLE POST UNLESS OTHERWISE NOTED.
7) IF APPLICABLE, SEE SHEET 2D FOR NON-STANDARD TYPE VA AND VIA SIGN STRUCTURE DETAILS.
8) SIGN PANELS SHALL BE MOUNTED BACK TO BACK AND BRACED PER ST'D. STP-1.

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
SIGNING AND PAVEMENT MARKINGS
SIGN SCHEDULE

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(2B)12

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(2B)3

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

SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.) per ASSEMBLY	SIGN PANEL AREA (s.f.) ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	PROP. F'D'N. ST'D.	REMARKS
25	303, 629, 708, 811	ON ROAD	W11-1	24"	24"	4	4	24	STP-1 2½" 12 GA.	E	
			W11-VP2	24"	12"	4	2				
26	622.707		R3-8 (Mod.)	30"	30"	2	6.25	12.5	STP-1 2½" 12 GA.	E	

NOTES:

1) ALL SIGNS SHALL BE ORIENTATED AS SHOWN ON THE PLANS.
2) SIGN COLOR COMBINATIONS SHALL BE IN ACCORDANCE WITH THE FHWA SHS BOOK AND THE 2011 VIRGINIA SHS BOOK OR AS NOTED IN THE PLANS.
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4) ALL BLACK SHEETING SHALL BE NON-REFLECTIVE.
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6) ALL ST'D. STP-1 STRUCTURES TO BE SINGLE POST UNLESS OTHERWISE NOTED.
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8) SIGN PANELS SHALL BE MOUNTED BACK TO BACK AND BRACED PER ST'D. STP-1.

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
SIGNING AND PAVEMENT MARKINGS
SIGN SCHEDULE
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(2B)3

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Wilonk, L.S. (757) 925-2660 (Hampton Roads)
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SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
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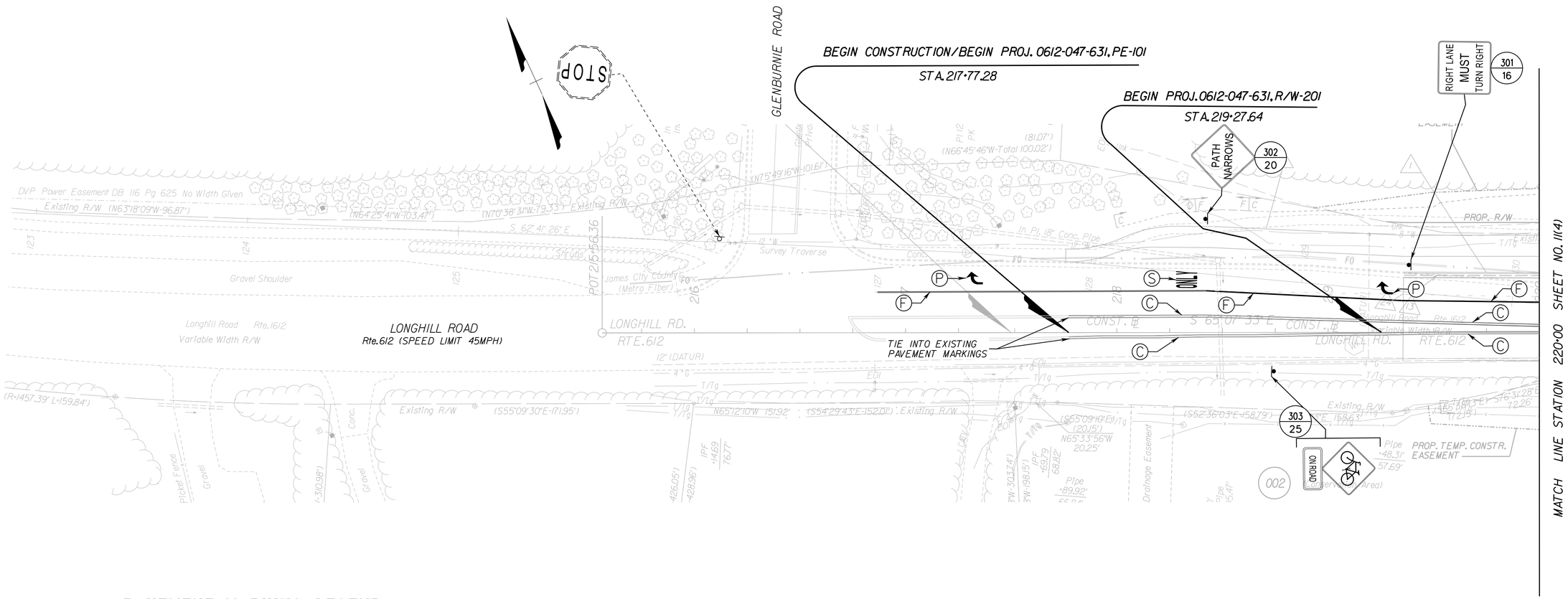
VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(3)

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



PAVEMENT MARKING LEGEND

- (A) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH
- (B) TYPE B.CLASS I.YELLOW PAVEMENT LINE MARKING.4" WIDTH
- (C) TYPE B.CLASS I.DOUBLE YELLOW PAVEMENT LINE MARKING. 4" WIDTH
- (D) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH (2' LINE.4' SPACE)
- (E) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH (10' LINE.30' SPACE)
- (F) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.8" WIDTH
- (G) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.8" WIDTH (2' LINE.4' SPACE)
- (H) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.8" WIDTH (3' LINE.9' SPACE)
- (J) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH
- (K) PAVEMENT MESSAGE MARKING (BUS) TYPE B.CLASS II
- (L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B.CLASS II
- (M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B.CLASS II
- (N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B.CLASS II
- (P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B.CLASS II
- (R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B.CLASS II
- (S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B.CLASS II
- (T) PAVEMENT SYMBOL MARKING.(BICYCLIST THRU ARROW) TYPE B.CLASS II
- (U) PAVEMENT SYMBOL MARKING.(HELMETED BICYCLIST) TYPE B.CLASS II
- (V) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.6" WIDTH

SCALE
0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
Roadway Plan Sheet 3

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS PLAN
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(3)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

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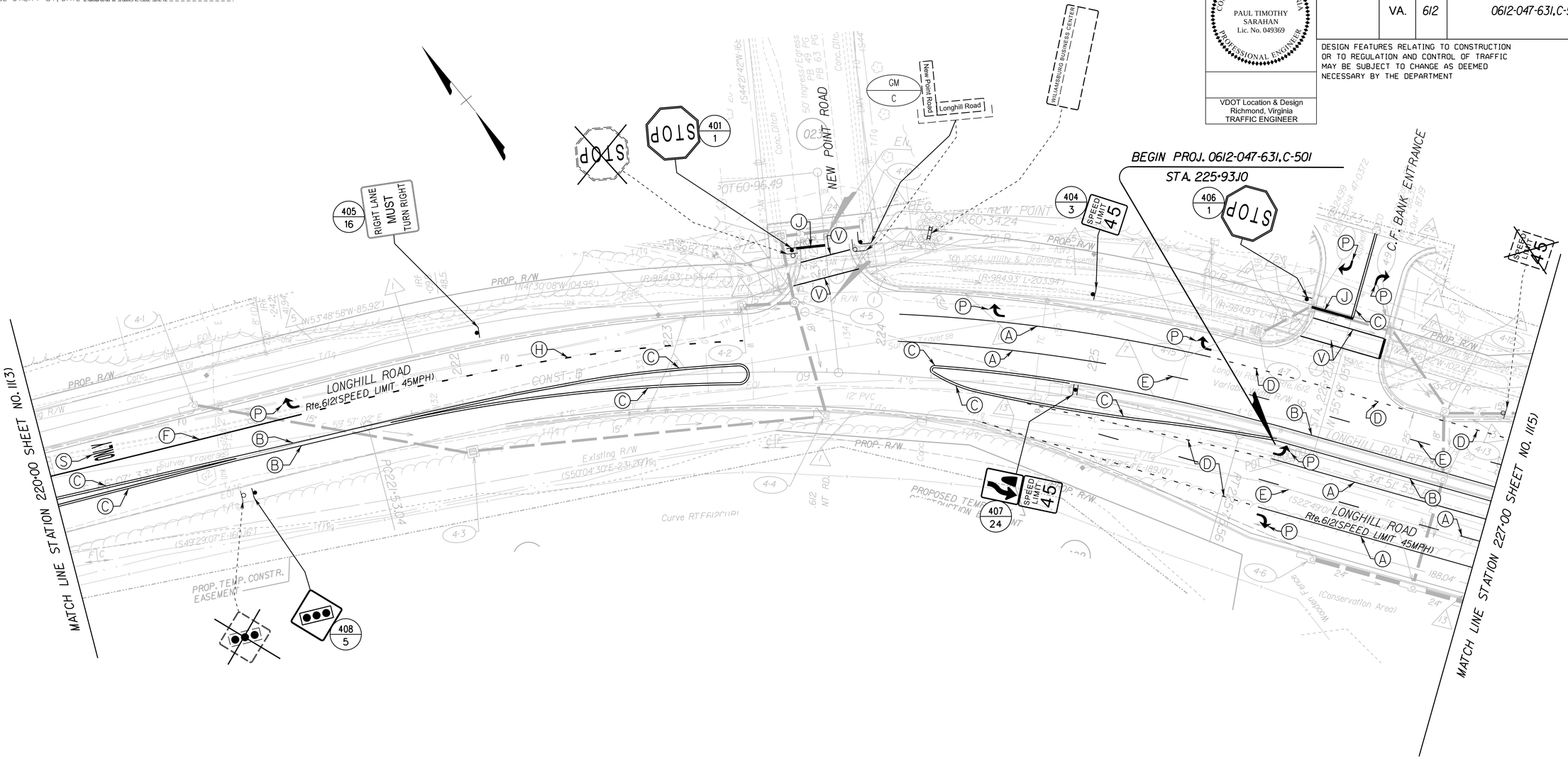
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(4)

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



PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (2' LINE, 4' SPACE)
- (H) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (3' LINE, 9' SPACE)
- (J) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (K) PAVEMENT MESSAGE MARKING (BUS) TYPE B, CLASS II
- (L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B, CLASS II
- (M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B, CLASS II
- (N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B, CLASS II
- (P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B, CLASS II
- (R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B, CLASS II
- (S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B, CLASS II
- (T) PAVEMENT SYMBOL MARKING, (BICYCLIST THRU ARROW) TYPE B, CLASS II
- (U) PAVEMENT SYMBOL MARKING, (HELMETED BICYCLIST) TYPE B, CLASS II
- (V) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

SCALE 0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
Roadway Plan Sheet 4

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS PLAN
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(4)

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PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
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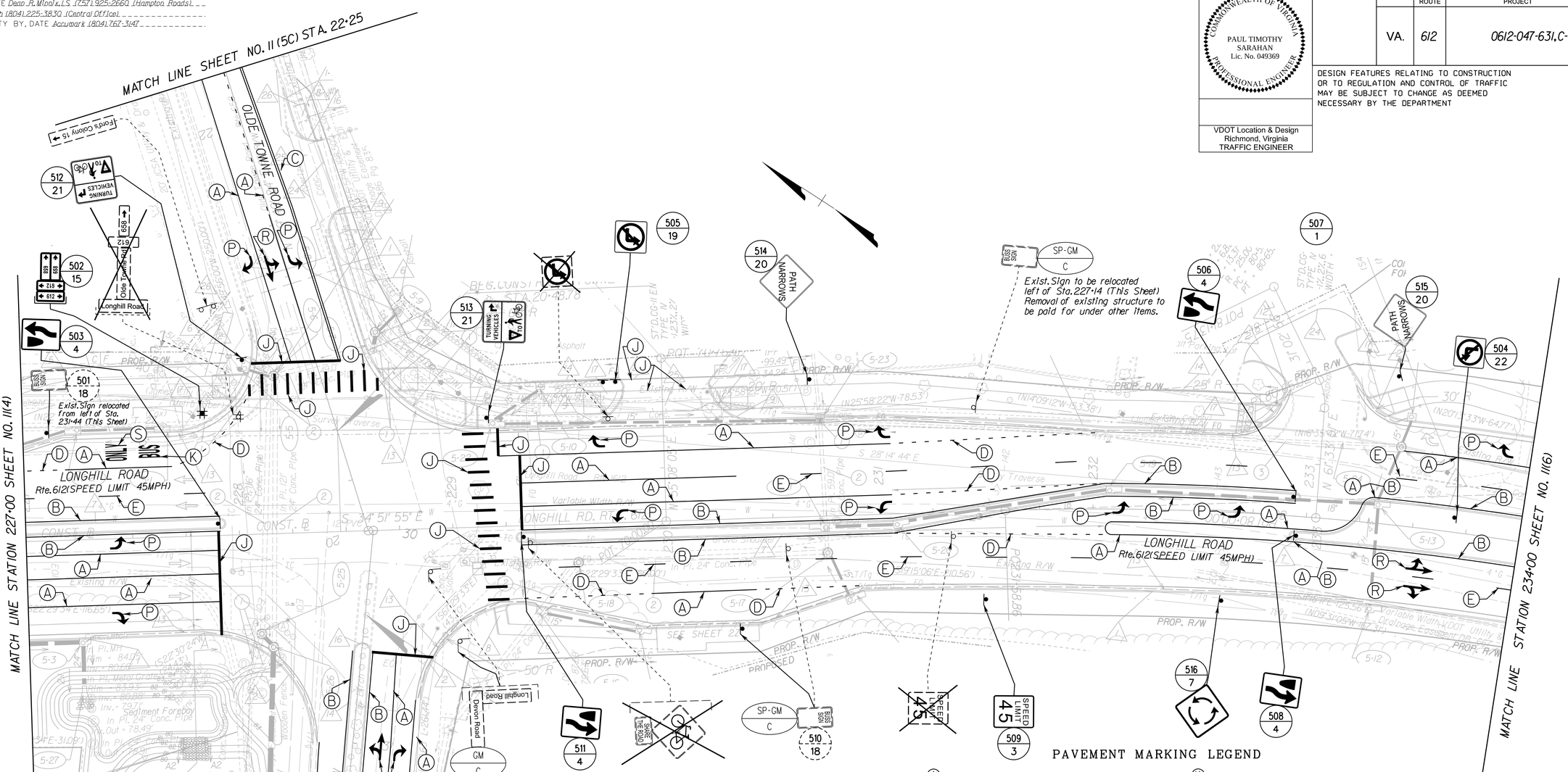
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(5)

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



PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (2' LINE, 4' SPACE)
- (H) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (3' LINE, 9' SPACE)
- (J) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (K) PAVEMENT MESSAGE MARKING (BUS) TYPE B, CLASS II
- (L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B, CLASS II
- (M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B, CLASS II
- (N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B, CLASS II
- (P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B, CLASS II
- (R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B, CLASS II
- (S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B, CLASS II
- (T) PAVEMENT SYMBOL MARKING, (BICYCLIST THRU ARROW) TYPE B, CLASS II
- (U) PAVEMENT SYMBOL MARKING, (HELMETED BICYCLIST) TYPE B, CLASS II
- (V) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

SCALE 0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)

Roadway Plan Sheet	5
Traffic Signal Plan Sheet	12(3)

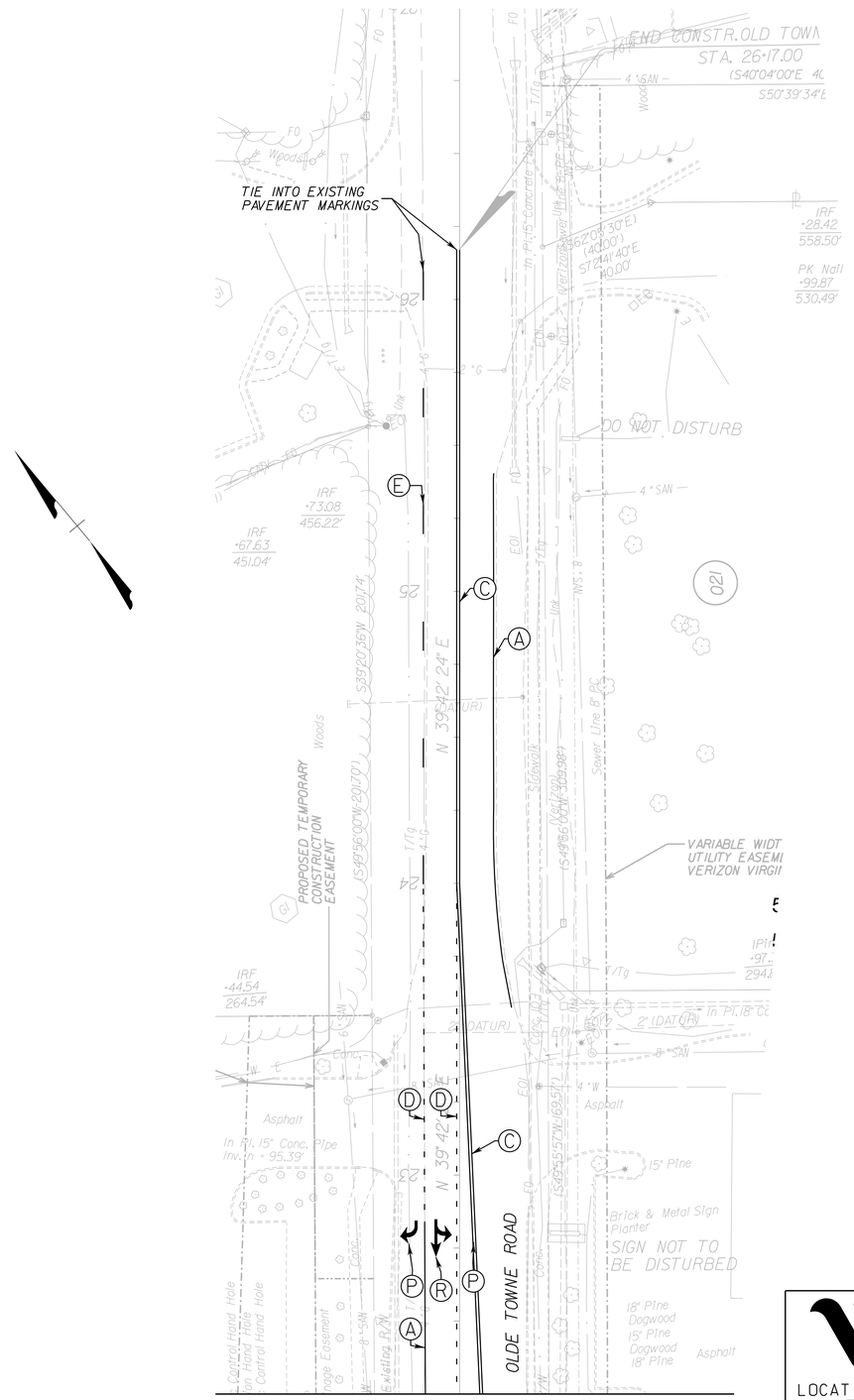
TRAFFIC CONTROL DEVICE PLANS

SIGNING & PAVEMENT MARKINGS PLAN

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(5)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147



COMMONWEALTH OF VIRGINIA
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VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(5C)

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

SCALE
0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
Roadway Plan Sheet 5C

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS PLAN

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(5C)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
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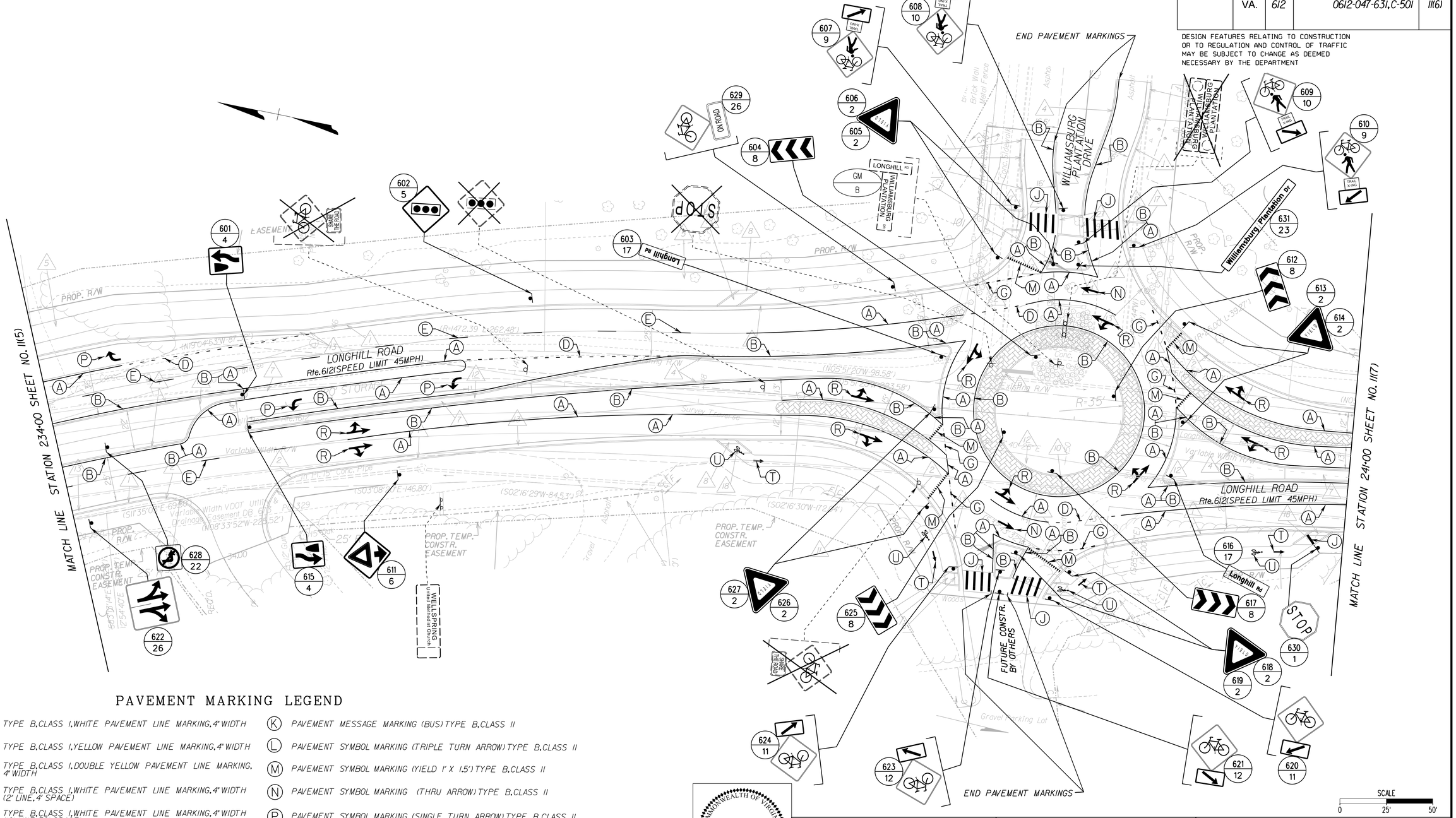
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(6)

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



PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (2' LINE, 4' SPACE)
- (H) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (3' LINE, 9' SPACE)
- (J) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (K) PAVEMENT MESSAGE MARKING (BUS) TYPE B, CLASS II
- (L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B, CLASS II
- (M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B, CLASS II
- (N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B, CLASS II
- (P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B, CLASS II
- (R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B, CLASS II
- (S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B, CLASS II
- (T) PAVEMENT SYMBOL MARKING, (BICYCLIST THRU ARROW) TYPE B, CLASS II
- (U) PAVEMENT SYMBOL MARKING, (HELMETED BICYCLIST) TYPE B, CLASS II
- (V) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH

COMMONWEALTH OF VIRGINIA
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Richmond, Virginia
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LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
Roadway Plan Sheet 6

TRAFFIC CONTROL DEVICE PLANS

SIGNING & PAVEMENT MARKINGS PLAN

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(6)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
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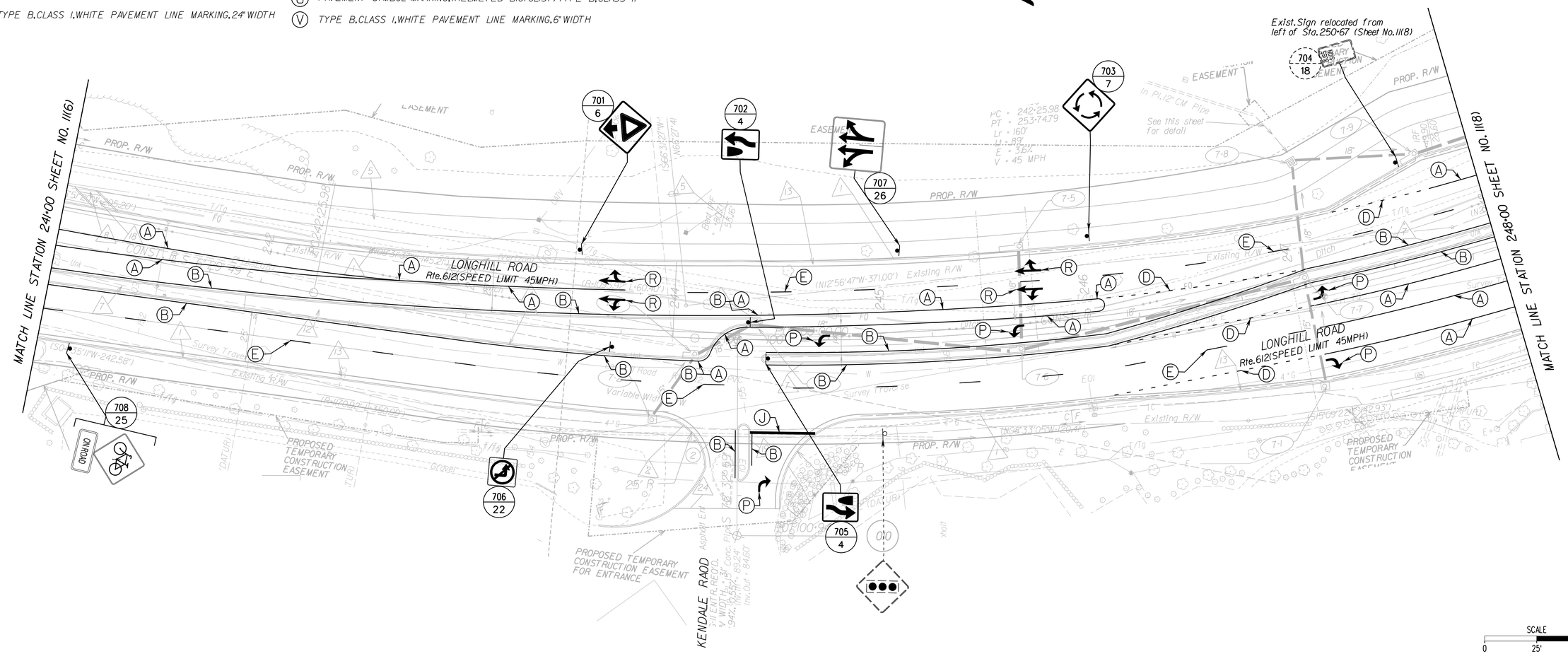
VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(7)

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

PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (2' LINE, 4' SPACE)
- (H) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (3' LINE, 9' SPACE)
- (J) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (K) PAVEMENT MESSAGE MARKING (BUS) TYPE B, CLASS II
- (L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B, CLASS II
- (M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B, CLASS II
- (N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B, CLASS II
- (P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B, CLASS II
- (R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B, CLASS II
- (S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B, CLASS II
- (T) PAVEMENT SYMBOL MARKING, (BICYCLIST THRU ARROW) TYPE B, CLASS II
- (U) PAVEMENT SYMBOL MARKING, (HELMETED BICYCLIST) TYPE B, CLASS II
- (V) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH



SCALE
0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)
Roadway Plan Sheet 7

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS PLAN
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(7)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

PAVEMENT MARKING LEGEND

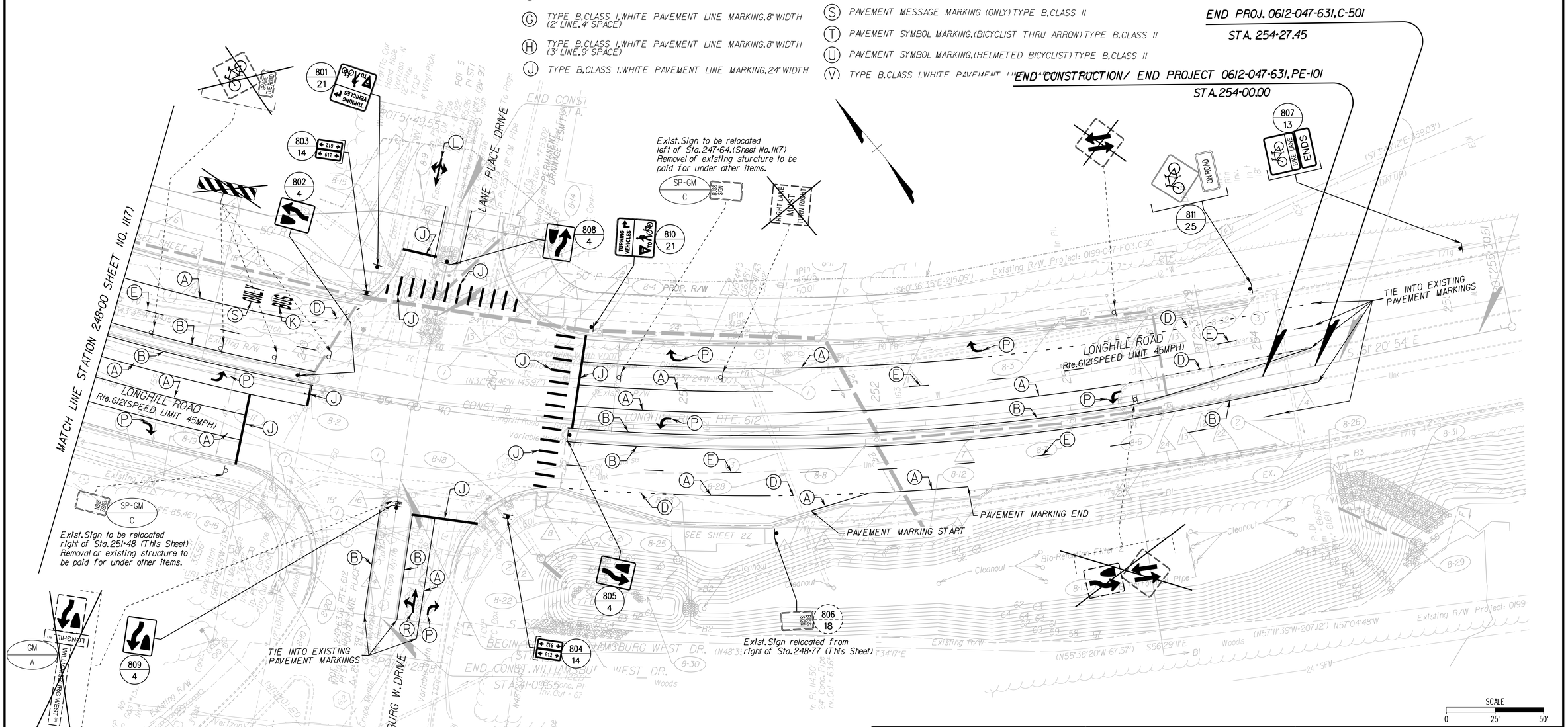
- (A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 4' SPACE)
- (E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
- (F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH
- (G) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (2' LINE, 4' SPACE)
- (H) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 8" WIDTH (3' LINE, 9' SPACE)
- (J) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (K) PAVEMENT MESSAGE MARKING (BUS) TYPE B, CLASS II
- (L) PAVEMENT SYMBOL MARKING (TRIPLE TURN ARROW) TYPE B, CLASS II
- (M) PAVEMENT SYMBOL MARKING (YIELD 1' X 1.5') TYPE B, CLASS II
- (N) PAVEMENT SYMBOL MARKING (THRU ARROW) TYPE B, CLASS II
- (P) PAVEMENT SYMBOL MARKING (SINGLE TURN ARROW) TYPE B, CLASS II
- (R) PAVEMENT SYMBOL MARKING (DOUBLE TURN ARROW THRU/LT OR RT) TYPE B, CLASS II
- (S) PAVEMENT MESSAGE MARKING (ONLY) TYPE B, CLASS II
- (T) PAVEMENT SYMBOL MARKING, (BICYCLIST THRU ARROW) TYPE B, CLASS II
- (U) PAVEMENT SYMBOL MARKING, (HELMETED BICYCLIST) TYPE B, CLASS II
- (V) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	11(8)

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



VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)

Roadway Plan Sheet	8
Traffic Signal Plan Sheet	12(4)

TRAFFIC CONTROL DEVICE PLANS
SIGNING & PAVEMENT MARKINGS PLAN

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	11(8)

PROJECT MANAGER Kenneth D. McKinna, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY Dean R. Minor, L.S. (757) 925-2660 (Hampton Roads)
DESIGN SUPERVISED BY Paul Sarahan, P.E. (804) 786-4457 (Central Office)
DESIGN BY Al Smith (804) 225-3830 (Central Office)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	12(1)1

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

INDEX OF SHEETS

Sheet No.:	Sheet Description:
12(1)1 & 12(1)2	Index of Sheets, General Notes & Legend
12(2)	Summary of Quantities
12(2A)1 & 12(2A)2	Sign Figure Details
12(2B)	Insertable Sheet
12(3)	Traffic Signal Plan - Int. of Longhill Road & Olde Towne Road/Devon Road
12(4)	Traffic Signal Plan - Int. of Longhill Road & Williamsburg West Drive/Lane Place Drive

STANDARD TRAFFIC SIGNAL LEGEND

PLAN ITEM		PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Metal Signal Pole & Foundation and Mast Arm (As noted in Signal Pole Legend)			
Pedestal Pole and Foundation (St'd. PF-2)			
Pedestal Pole and Foundation (St'd. PA-3)			
Traffic Signal Head	w/ Backplate		
	w/o Backplate		
Pedestrian Signal Head			
Pedestrian Pushbutton & Sign		P.B.	P.B.
Traffic Signal Sign	Mast Arm or Span Wire Mt'd.		
	Pole Mounted		E
Emergency Vehicle Pre-emption (EVP) Sensor			
	w/ Conf. Light		
	w/o Conf. Light		
Video Detection Camera			
Junction Box (St'd. as noted on plans)		J	J
Signal Luminaire (250 W) and Arm			
Signal Luminaire (400 W) and Arm			
Loop Detector (Size as noted on plans)		6' x 20'	6' x 20'
Video Detection Zone (Size as noted on plans)		VDZ 6' x 20'	VDZ 6' x 20'
Conduit			

PLAN ITEM		PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Electrical Service Meter		SM	SM
Electrical Service Safety Switch (Disconnect)		SD	SD
Controller Cabinet	Ground Mounted	CC	CC
	Pole Mounted	CC	CC
Master Controller Cabinet	Ground Mounted	MC	MC
	Pole Mounted	MC	MC
Controller Cabinet & Foundation	Std. CF-1	CC 1	CC 1
	Std. CF-3	CC 3	CC 3
	Std. CF-4	CC 4	CC 4
Master Controller Cabinet & Foundation	Std. CF-1	MC 1	MC 1
	Std. CF-3	MC 3	MC 3
	Std. CF-4	MC 4	MC 4

LABELS

Signal Pole or Controller	A	Proposed Signal Head	2	Signal Phasing	Ø2	Sign	S-1
Cable and Conduit	A	Existing Signal Head	2	Pedestrian Phasing	P2	Video Detection Camera	VDC-1
Junction Box	S3	Proposed Pedestrian Signal Head	P2			Emergency Preemption Detector	EVP-1
		Existing Pedestrian Signal Head	P2				

GENERAL NOTES - TRAFFIC SIGNALS

1. The following items shall be in accordance with standards listed below:
   - Signal Pole Foundation PF-8
   - Conduit Installation ..... ECI-1 or Bored
   - Signal Head Hangers SM-3
   - Sign Hanger SMD-2
   - Junction Box JB-S2, JB-S3
   - Controller Cabinet Foundation CF-5
   - Electrical Service SE-3
2. Traffic signal foundation depths and above ground foundation projection/reveal (if needed) shall be determined by the Contractor in accordance with PF-8 standards after the signal pole soil test bores are completed. Signal poles and foundations shall be in accordance with Special Provisions including maximum loading conditions. The pole supplier shall provide foundations designs and shop drawings that are signed sealed by a Professional Engineer. The top of all signal pole foundations shall be installed 4" above the highest point of the roadway pavement in which the mast is extending over, to allow for required signal head to pavement distances per the MUTCD.
3. Signal pole foundations may be field adjusted within the designated corners no more than 2' in any direction from the plan locations, provided that the revised foundation locations:
   Remain out of the clear zone and pavement sections.
   Remain within the right of way or proposed easement.
   Does not conflict with utilities.
   Does not limit sight distance.
   Does not affect drainage.
   Allow the signal heads to be adjusted with the same alignment with the designated travel lanes as shown on the plans, and is in accordance with the PF-8 Concrete Foundation Standard detail referenced to the installation.
4. The Contractor shall verify mast arm lengths and signal head lane coverage prior to the installation of signal pole foundations.
5. All poles shall be field staked by the Contractor and inspected by the Engineer and Contractor per Section 700 prior to installation of foundations.
6. Traffic signal heads and mast arm signs may be field adjusted no more than 2' in either direction on the mast arms, provided they remain within the designated travel lane assignments. If further adjustment is needed, the Project Inspector shall contact Mr. Chuck Dixon at 757-925-1679.
7. All unused wires in the signal heads shall be capped individually using crimp type caps.
8. The Controller Cabinet & CF-4 foundation may be relocated within the designated corner provided it remains within the right of way or proposed easement, outside of the clear zone and pavement sections, does not conflict with utilities, does not limit sight distance, and is in accordance with the Electric Service Standard detail referenced to the installation.
9. Junction boxes may be relocated in the field as necessary provided they remain within the right of way, do not conflict with utilities and remain outside the pavement section.
10. The placement of 6' x 40' loops shown on the plans shall be 2' in front of stop bars and all 6' x 6' loops shall be installed at the distances specified on the plans.
11. The electric service connection and service line locations may be field adjusted as necessary provided all equipment remains within the right of way or proposed easement, does not conflict with utilities and remains outside of the pavement sections.
12. All underground and overhead utilities shown on these plans are approximate only and may not be complete. At least 72 hours prior to beginning signal work, the Contractor shall contact "Miss Utility of Virginia" at 1-800-552-7001 in order to determine the extent, location, and identify all of the utilities within the work area. At least 5 full working days prior to beginning signal work, the Contractor shall contact Mr. Mike Wilder with VDOT at 757-925-2471 in order to determine the extent and location of all underground signal equipment owned by VDOT with the project limits. If the Contractor perceives a conflict between utilities and the proposed traffic signal equipment, the Contractor shall notify the Engineer immediately so that the conflict may be reviewed. The Contractor shall be responsible for repairing or replacing, at their own expense, any existing utilities, pavement, concrete items, etc. that are damaged or disturbed during construction.
13. Conduit systems shall be bonded in accordance with Section 700 of the Road and Bridge Specifications.
14. Pavement Markings shown on the signal plans are for representation only. Actual Pavement Markings shall be in accordance with the Pavement Marking Plans.
15. All equipment is to be installed within the existing or proposed R/W or easement.
16. The Contractor shall notify Mr. Chuck Dixon at 757-925-1679, at least 48 hours prior to removal of existing controller cabinet and equipment.
17. All underground and overhead utilities shown on these plans are approximate only and may not be complete.
18. The contractor will provide signal timings. The contractor shall contact Mr. James Lewis at (757) 238-2834 at least two weeks in advance of signal timing implementation.
19. The contractor shall coordinate all signal timings, including red and yellow clearance intervals with Mr. James Lewis at 757-238-2834.
20. The Contractor shall maintain signal communications at all times.
21. Temporary signals shall only utilize video detection for vehicle detection.
22. Traffic Signal equipment removed from service shall remain the property of VDOT. The Contractor shall contact Mr. Steve Rawls at (757) 925-1659 at least two weeks prior to removal and delivery of the signal equipment to coordinate salvaging and disposal.
23. If the Contractor perceives a conflict between utilities and the proposed traffic signal equipment, the Contractor shall notify the Engineer immediately so that the conflict may be reviewed. The Contractor shall be responsible for repairing or replacing, at their own expense, any existing utilities, pavement, concrete items, pipes, etc. that are damaged during construction.
24. All traffic signal and signing work and adjustments to proposed signals shall be constructed in accordance with the Plans, the Virginia Department of Transportation (VDOT) Road & Bridge Specifications dated 2016, VDOT Road & Bridge Standards dated 2016, the Manual on Uniform Traffic Control Devices, 2009 Edition (MUTCD), the 2011 Virginia Supplement to the MUTCD, the 2002 National Electrical Code, Special Provision Copied Notes and Special Provisions at the time of advertisement.
25. Emergency preemption detectors and confirmation lights shall be located as shown on the plans, however, may be field adjusted as necessary to provide optimal detection capabilities. Wiring shall be adjusted as necessary if the detector and light locations are modified.
26. Accessible Pedestrian Signals and Detectors shall be used. Pushbuttons shall be located a maximum of 10" from the pedestrian travelway (sidewalk). Extender Arms may be used for pushbuttons as noted on the plans or as required to meet the 10" requirement.

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL
INDEX OF SHEETS, GENERAL NOTES & LEGENDS (Sheet 1 of 2)
JAMES CITY COUNTY

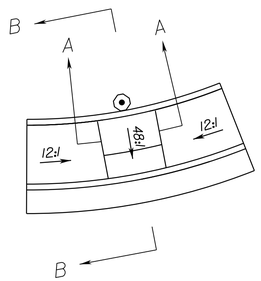
PROJECT	SHEET NO.
0612-047-631	12(1)1

PROJECT MANAGER Kenneth D.McKinna,P.E.,(757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R.Minnix,L.S.,(757) 925-2660 (Hampton Roads)
DESIGN BY S.A.Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

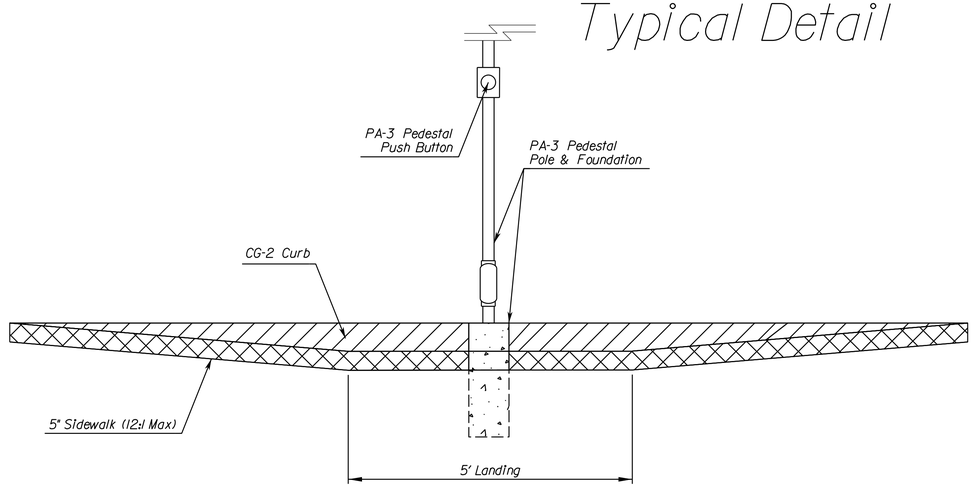
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	12(1)2

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

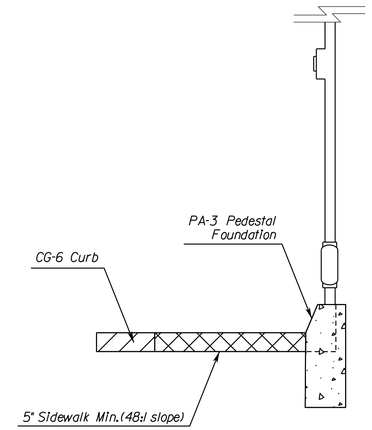
Pole Foundation Built Into Curb Typical Detail



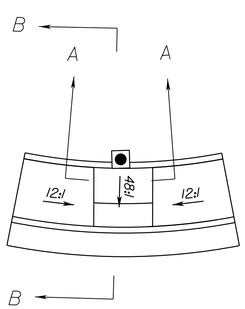
PA-3 DETAIL
(N.T.S.)



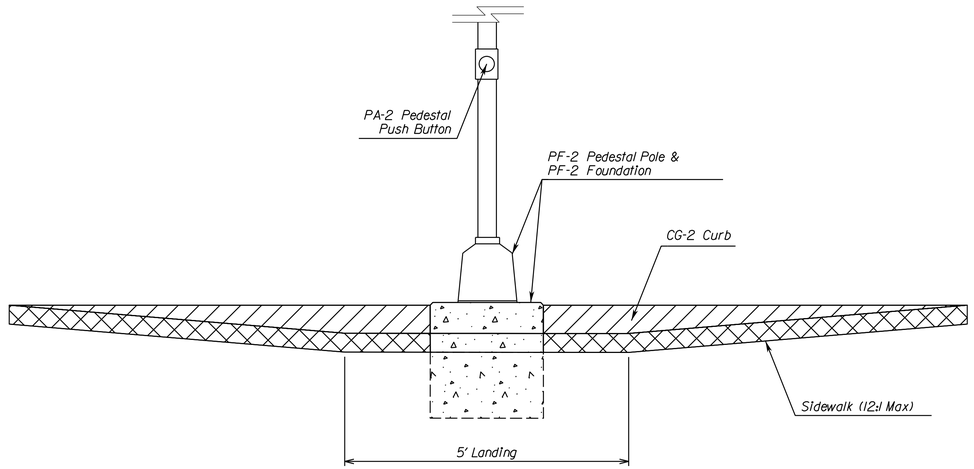
SECTION A-A
(N.T.S.)



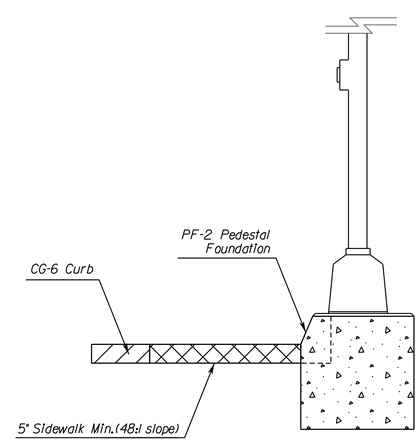
SECTION B-B
(N.T.S.)



PA-2 AND PF-2 DETAIL
(N.T.S.)

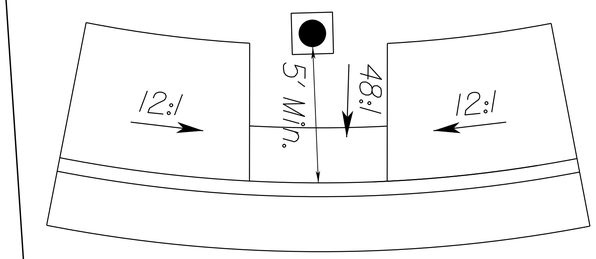


SECTION A-A
(N.T.S.)



SECTION B-B
(N.T.S.)

Pole Foundation Flush Installation Typical Detail



All installation details shall be per St'd PF-2, except that the 5' Min. distance may be measured to the pole.

NOTE:

Signs and Pushbuttons must be rotated parallel to the associated crosswalk.

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL
INDEX OF SHEETS, GENERAL NOTES & LEGENDS (Sheet 2 of 2)
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	12(1)2

PROJECT MANAGER Kenneth D. McKinna, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, LS (757) 925-2660 (Hampton Roads)
DESIGN BY S. A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/7/2019 06/25/2019	VA.	612	0612-047-631, C-501	12(2)

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

SUMMARY OF QUANTITIES

		TCD Discipline	SIGNALS																																								
		Summary Notes	⊗			①		②																																			
		Item Description / ITEM NO.	Sign Panel	ATC Cabinet - 5-Door Configuration	Electrical Service SE-3, Type B	Traffic Signal Head Section 12" LED	Accessible Pedestrian System Pushbutton Stations	Pedestrian Actuation PA-3	Pedestal Pole PF-2, 10'	Concrete Foundation Signal Pole PF-8	Concrete Foundation PF-2	Concrete Foundation CF-5	Signal Pole MP-3, Type D	Signal Pole MP-3, Type E1	Mast Arm 30'	Mast Arm 49'	Mast Arm 60'	Mast Arm 65'	EVP Detection System 3-Way	EVP Detector Cable	Loop Detector Amplifier	8/3 Conductor Cable	14/2 Conductor Cable	14/4 Conductor Cable	14/7 Conductor Cable	14/1 Enclosed Conductor Cable	14/2 Conductor Cable Shielded	Hanger Assembly SM-3, One Way	Hanger Assembly SMB-2, One Way	Hanger Assembly SMB-3, One Way	Mounting Extender	Loop Sawcut 3/8"	Loop Sawcut 5/8"	Remove Existing Pole	Remove Existing Foundation	Remove Existing Signal Head	Remove Existing Controller	Remove Existing Manhole/Junction Box	Remove Existing Emergency Preemption Detectors	Uninterruptible Power Supply Type I	Uninterruptible Power Supply Battery Pack	Uninterruptible Power Supply Cabinet Detached	Modify Signal	
		UNIT	50108	52002	52425	51184	52002	51199	51210	51238	51240	51243	51479	51480	51485	51487	51488	51489	51523	51525	51540	51598	51600	51602	51607	51615	51700	51830	51834	51838	52002	51912	51913	51933	51934	51935	51936	51937	51963	51993	51995	51997	52002
Int. No.	Intersection	SHEET NO.	S.F.	EA.	EA.	EA.	EA.	EA.	EA.	C.Y.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	L.F.	L.F.	EA.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	L.F.	L.F.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.
1	Rte. 612 (Longhill Road) & Old Towne Road/Devon Road	12(3)	116	1	1	37	4	2	2	44	2	1	2	2	1	1	1	1	1	690	10	30	800	1,870	500	3,160	6,640	11	2	2	2	1,050	140	4	5	14	1	12	3	1	1	1	1
2	Rte. 612 (Longhill Road) & Williamsburg West Dr/Lane Place Dr	12(4)	92	1	1	33	4	2	2	44	2	1	3	1	--	3	1	--	1	810	9	30	850	2,040	590	2,430	5,430	10	2	2	1	800	110	2	3	10	1	9	3	1	1	1	1
		TOTAL	208	2	2	70	8	4	4	88	4	2	5	3	1	4	2	1	2	1,500	19	60	1,650	3,910	1,090	5,590	12,070	21	4	4	3	1,850	250	6	8	24	2	21	6	2	2	2	2

		TCD Discipline	SIGNALS														
		Summary Notes															
		Item Description / ITEM NO.	Luminaire Arm 18'	8 Conductor Cable	Conductor Cable, No. 8 EGC	Junction Box JB-S2	Junction Box JB-S3	Electrical Service Grounding Electrode (10')	1" PVC Conduit	Bored Conduit 2"	Bored Conduit 3"	2" PVC Conduit	3" PVC Conduit	Trench Excavation EC1-1	Test Bore	McCain ATC 2070 controller with D-4 firmware	Pedestrian Signal Head SP-9
		UNIT	52002	55080	55126	55587	55588	56014	56021	56050	56051	56053	56054	56200	56205	52002	52404
Int. No.	Intersection	SHEET NO.	EA.	L.F.	L.F.	EA.	EA.	EA.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	EA.
1	Rte. 612 (Longhill Road) & Old Towne Road/Devon Road	12(3)	4	1,610	2,470	15	1	5	70	610	730	1,260	110	1,430	4	1	4
2	Rte. 612 (Longhill Road) & Williamsburg West Dr/Lane Place Dr	12(4)	4	1,600	2,980	18	1	5	100	490	710	1,750	170	2,010	4	1	4
		TOTAL	8	3,210	5,450	33	2	10	170	1,100	1,440	3,050	280	3,440	8	2	8

SUMMARY NOTES

⊗ Denotes item to be paid for on the basis of Plan Quantity in accordance with current Road & Bridge Specifications.

① Signal heads shall be polycarbonate. Included in the cost of this item are the retroreflective backplates and cap visors.

② The pay item for "Pedestrian Actuation PA-3" does not include the pushbutton or sign. The pushbutton and sign will be paid for under pay item "Accessible Pedestrian System Pushbutton Stations".

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL
SUMMARY OF QUANTITIES

JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	12(2)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
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COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

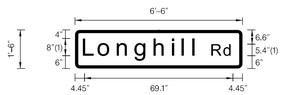
VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	12(2A)1

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

FIGURE 1

SIGN DETAIL



SIGN NUMBER	S-4
WIDTH x HGHT.	6'-6" x 1'-6"
BORDER WIDTH	1.5"
BORDER INSET	0"
PANEL RADIUS	2.25" plus 0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Black/White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT

Dimensions are in inches.tenths

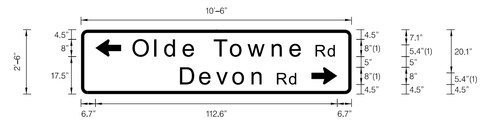
Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

L	o	n	g	h	i	l	l	R	d	LENGTH	SERIES/SIZE
											Clearview Hwy-5-W
4.4	11.3	20.2	28.5	37.3	45.8	50.5	55.4	64	69.6	69.1	8/6.5.5.4/4.4

FIGURE 2

SIGN DETAIL



SIGN NUMBER	S-5
WIDTH x HGHT.	10'-6" x 2'-6"
BORDER WIDTH	1.5"
BORDER INSET	0"
PANEL RADIUS	3" plus 0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	6.7	17.5	8	12
AR_Type D	270	107.3	4.5	8	12

Dimensions are in inches.tenths

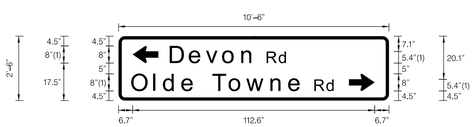
Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

O	l	d	e		T	o	w	n	e	R	d	LENGTH	SERIES/SIZE
													Clearview Hwy-5-W
24.7	34.9	39.5	48.1	54	62.4	70.1	78.2	89.6	97.9	109.8	115.4	94.6	8/6.5.5.4/4.4
D	e	v	o	n	R	d							Clearview Hwy-5-W
46.8	55.8	63.4	71.3	80.2	91.7	97.4						54.5	8/6.5.5.4/4.4

FIGURE 3

SIGN DETAIL



SIGN NUMBER	S-6
WIDTH x HGHT.	10'-6" x 2'-6"
BORDER WIDTH	1.5"
BORDER INSET	0"
PANEL RADIUS	3" plus 0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Black/White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	6.6	17.5	8	12
AR_Type D	270	107.3	4.5	8	12

Dimensions are in inches.tenths

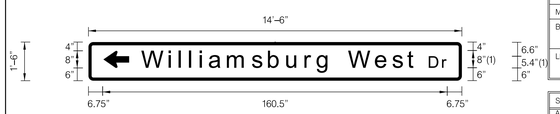
Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

D	e	v	o	n	R	d																LENGTH	SERIES/SIZE
																							Clearview Hwy-5-W
24.6	33.5	41.2	49	57.9	69.5	75.2																54.5	8/6.5.5.4/4.4
O	l	d	e		T	o	w	n	e	R	d												Clearview Hwy-5-W
6.6	16.9	21.5	30	35.9	44.3	52.1	60.1	71.5	79.8	91.7	97.4											94.6	8/6.5.5.4/4.4

FIGURE 4

SIGN DETAIL



SIGN NUMBER	S-7
WIDTH x HGHT.	14'-6" x 1'-6"
BORDER WIDTH	1.5"
BORDER INSET	0"
PANEL RADIUS	2.25" plus 0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	6.7	6	8	12

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

W	i	l	l	i	a	m	s	b	u	r	g		W	e	s	t	D	r				LENGTH	SERIES/SIZE
24.6	37.4	42.2	47.1	51.9	56.1	64.6	76.1	83.8	92.3	100.8	106.4	112.3	121	133.6	141.6	148.5	158.4	164.6				142.5	Clearview Hwy-5-W 8/6.5.5.4/4.4

VDOT

LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING

1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS

TRAFFIC SIGNAL
SIGN FIGURE DETAILS

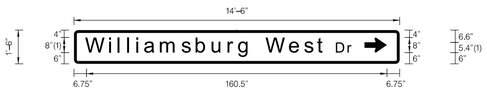
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	12(2A)1

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minnix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

FIGURE 5

SIGN DETAIL



SIGN NUMBER	S-8
WIDTH x HGHT.	14'-6" x 1'-6"
BORDER WIDTH	1.5"
BORDER INSET	0"
PANEL RADIUS	2.25" plus 0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	270	155.2	6	8	12

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

W	I	I	I	I	a	m	s	b	u	r	g		W	e	s	t	D	r			LENGTH	SERIES/SIZE
6.7	19.5	24.2	29.1	33.9	38.2	46.7	58.1	65.8	74.3	82.8	88.5	94.3	103	115.7	123.6	130.5	140.4	146.7			142.5	Clearview Hwy-5-W 8/6.5,5.4/4.4

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	12(2A)2

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

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL
SIGN FIGURE DETAILS

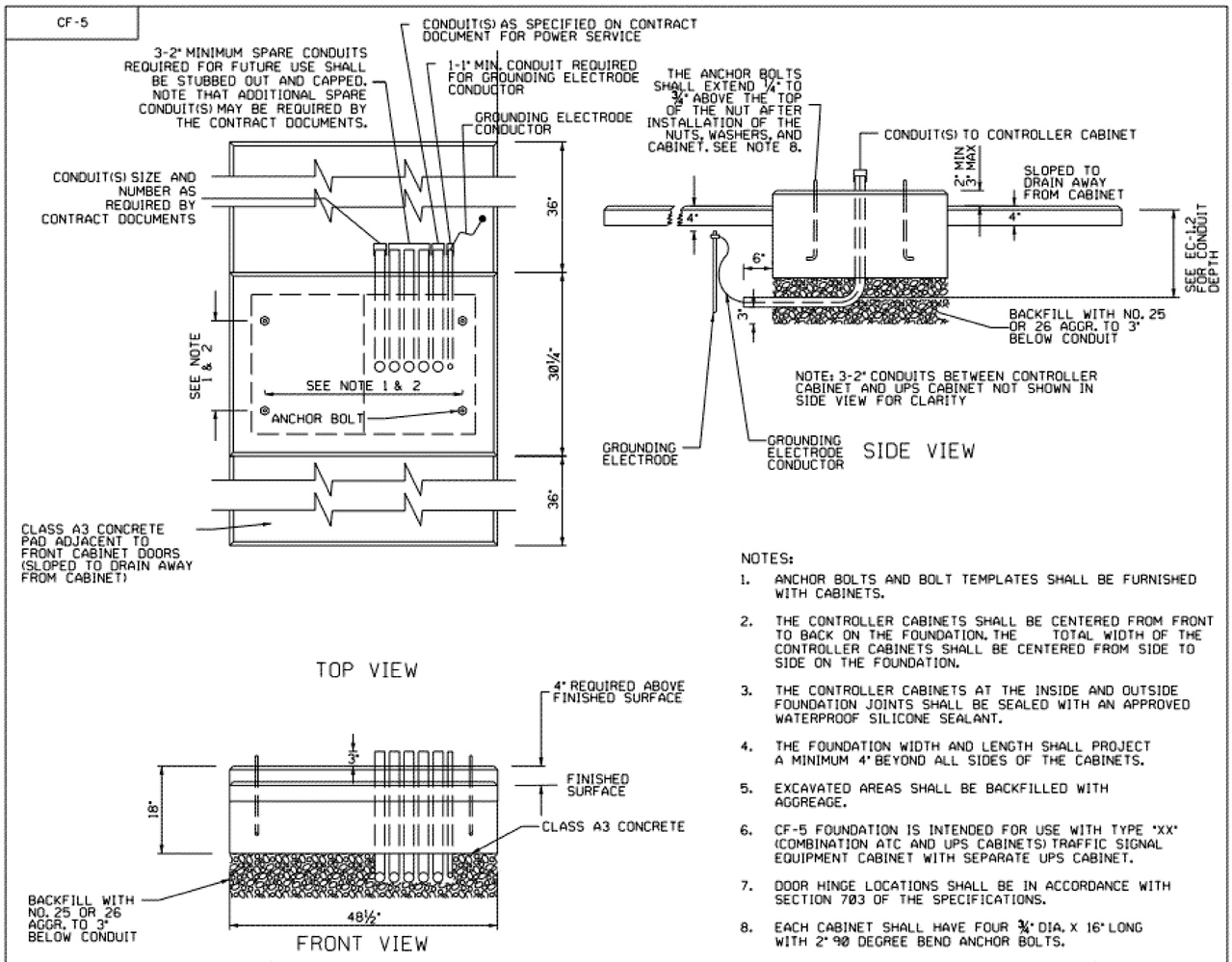
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	12(2A)2

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	6/2	0612-047-631,C-501	12/28

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

CF-5



NOTES:

1. ANCHOR BOLTS AND BOLT TEMPLATES SHALL BE FURNISHED WITH CABINETS.
2. THE CONTROLLER CABINETS SHALL BE CENTERED FROM FRONT TO BACK ON THE FOUNDATION. THE TOTAL WIDTH OF THE CONTROLLER CABINETS SHALL BE CENTERED FROM SIDE TO SIDE ON THE FOUNDATION.
3. THE CONTROLLER CABINETS AT THE INSIDE AND OUTSIDE FOUNDATION JOINTS SHALL BE SEALED WITH AN APPROVED WATERPROOF SILICONE SEALANT.
4. THE FOUNDATION WIDTH AND LENGTH SHALL PROJECT A MINIMUM 4" BEYOND ALL SIDES OF THE CABINETS.
5. EXCAVATED AREAS SHALL BE BACKFILLED WITH AGGREAGE.
6. CF-5 FOUNDATION IS INTENDED FOR USE WITH TYPE "XX" (COMBINATION ATC AND UPS CABINETS) TRAFFIC SIGNAL EQUIPMENT CABINET WITH SEPARATE UPS CABINET.
7. DOOR HINGE LOCATIONS SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE SPECIFICATIONS.
8. EACH CABINET SHALL HAVE FOUR ¾" DIA. X 16" LONG WITH 2" 90 DEGREE BEND ANCHOR BOLTS.

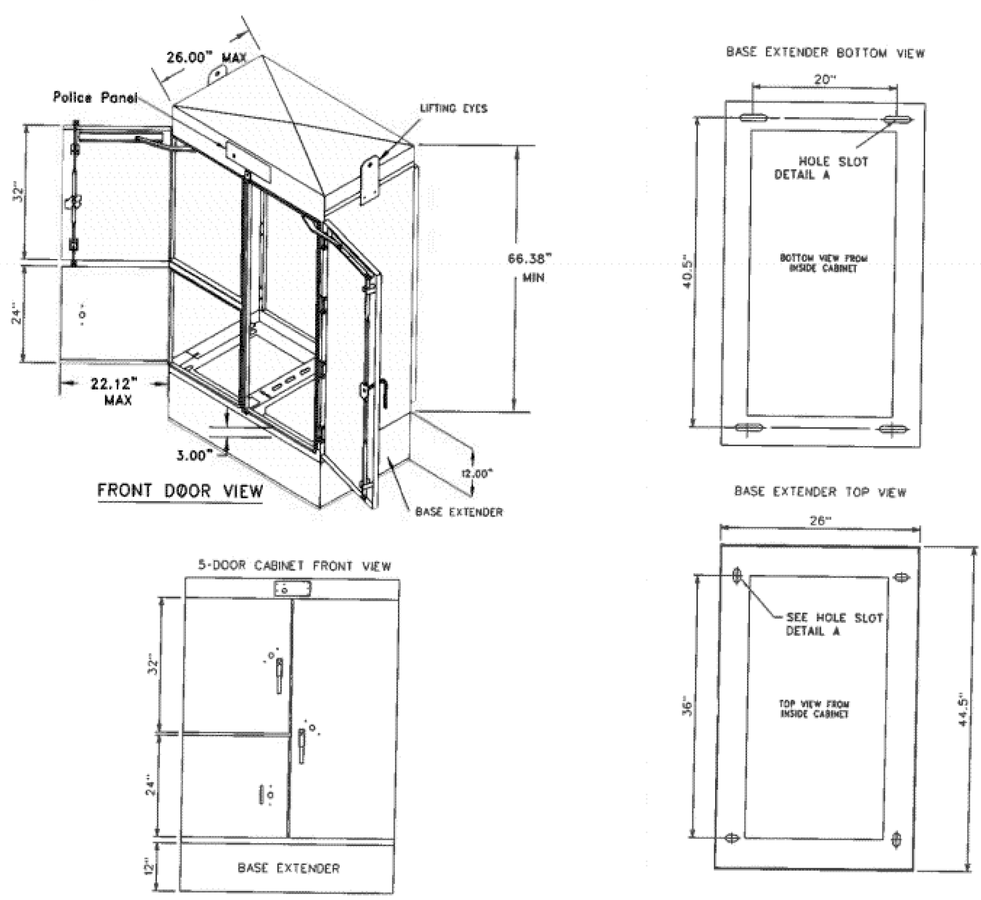
VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1	REVISION DATE

CABINET FOUNDATION DETAILS

SPECIFICATION REFERENCE

5 DOOR



VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1	REVISION DATE
	00/00

ATC CABINET 2 - 5 DOOR CONFIGURATION

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

SHEET NO. 12/28
PROJECT 0612-047-631

PROJECT MANAGER Kenneth D. McAlister, P.E. (757) 925-2436 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minick, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 727-3147

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Plotted By: paulsarahan

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Minix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

Signal Pole & Controller Legend

(ALL DIMENSIONS ARE TO CENTER OF POLE)

(1) CONTROLLER CABINET & FOUNDATION (CF-5)

(A) MAST ARM POLE MP-3, TYPE E1
52.9' RT. of Rte. 612 Constr. ℄ Sta. 229+22
60' Arm 270° Angle to Rte. 612 Constr. ℄
Signal Placement: 26', 39', 51'
Sign Placement: 10', 17.5'
Emergency Preemption Detector: 32.5'
18' Luminaire Arm, 270° Angle to Constr. ℄

(B) MAST ARM POLE MP-3, TYPE D
70.0' RT. of Rte. 612 Constr. ℄ Sta. 228+10
49' Arm 0° Angle to Rte. 612 Constr. ℄
Signal Placement: 21', 31.5', 43.5'
Sign Placement: 9.5', 16', 38'
Emergency Preemption Detector: 26.5'
18' Luminaire Arm, 267° Angle to Constr. ℄

(C) MAST ARM POLE MP-3, TYPE E1
62.3' LT. of Rte. 612 Constr. ℄ Sta. 227+73
65' Arm 90° Angle to Rte. 612 Constr. ℄
Signal Placement: 35.5', 47.5', 60'
Sign Placement: 13', 22.5'
Emergency Preemption Detector: 41.5'
18' Luminaire Arm, 91° Angle to Constr. ℄

(D) MAST ARM POLE TYPE MP-3, TYPE D
78.4' LT. of Rte. 612 Constr. ℄ Sta. 228+77
30' Arm 180° Angle to Rte. 612 Constr. ℄
Signal Placement: 15.5', 25'
Sign Placement: 5.5', 11.5', 21'
18' Luminaire Arm, 88° Angle to Constr. ℄

(E) PEDESTAL POLE (PF-2), 10'
63.2' LT. of Rte. 612 Constr. ℄ Sta. 227+96
Extender Arm required for pushbutton.

(F) PEDESTRIAN ACTUATION (PA-3)
76.8' LT. of Rte. 612 Constr. ℄ Sta. 228+71

(G) PEDESTAL POLE (PF-2), 10'
51.0' LT. of Rte. 612 Constr. ℄ Sta. 229+06
Extender Arm required for pushbutton.

(H) PEDESTRIAN ACTUATION (PA-3)
40.1' RT. of Rte. 612 Constr. ℄ Sta. 229+25

NOTE: Luminaires on combination signal poles shall be equivalent to 250w LED (26,000 Lumens) installed at a mounting height of 28.5' from the finished roadway surface to the center of the luminaire.

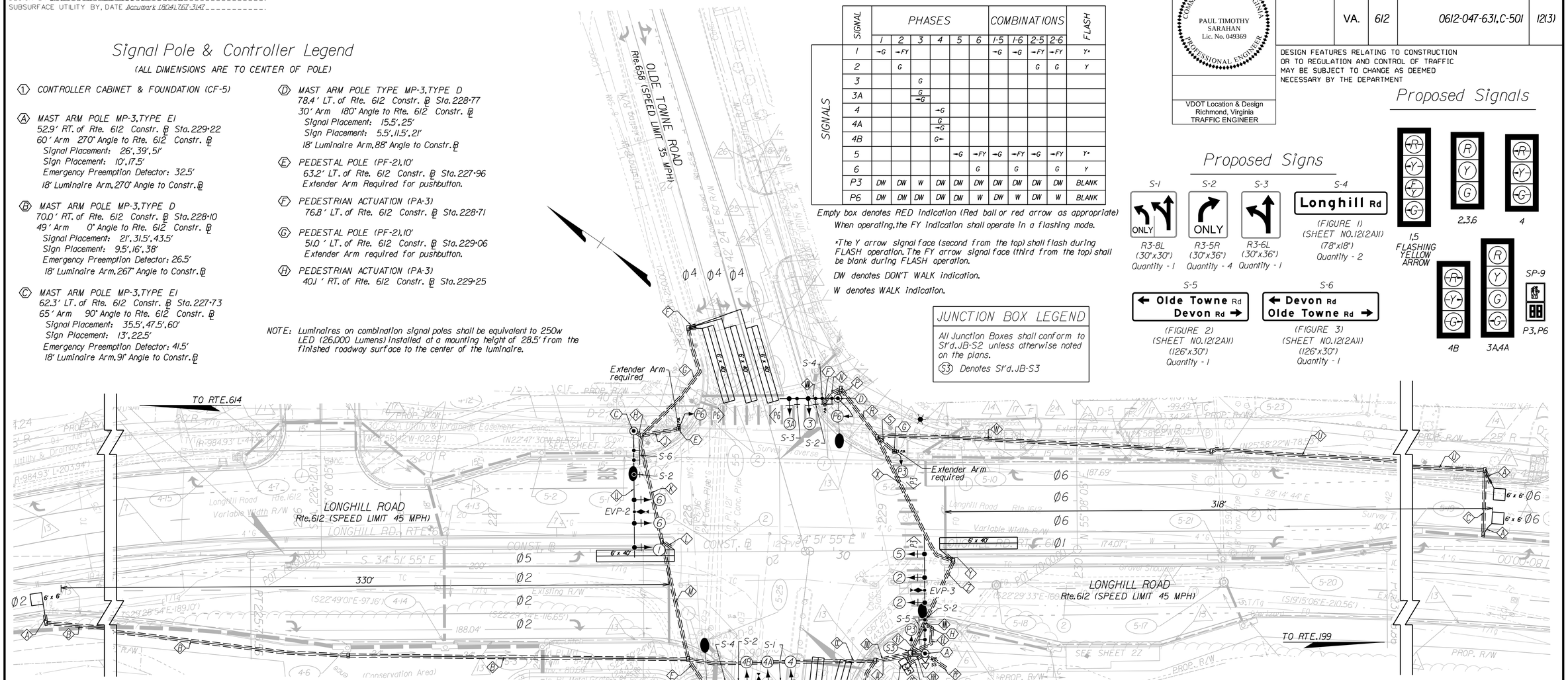
Color Sequence Chart

SIGNALS	PHASES 1	2	3	4	5	6	COMBINATIONS 1-5	1-6	2-5	2-6	FLASH
1	→G	→FY					→G	→G	→FY	→FY	Y*
2		G							G	G	Y
3			G								
3A			G / →G								
4				→G							
4A				G / →G							
4B				G→							
5					→G	→FY	→G	→FY	→G	→FY	Y*
6						G		G		G	Y
P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

Empty box denotes RED indication (Red ball or red arrow as appropriate)
When operating, the FY indication shall operate in a flashing mode.
*The Y arrow signal face (second from the top) shall flash during FLASH operation. The FY arrow signal face (third from the top) shall be blank during FLASH operation.
DW denotes DON'T WALK indication.
W denotes WALK indication.

JUNCTION BOX LEGEND

All Junction Boxes shall conform to St'd. JB-S2 unless otherwise noted on the plans.
(S3) Denotes St'd. JB-S3



CABLE AND CONDUIT LEGEND

- (A) 1 - 1" PVC Conduit
- (B) 2" PVC Conduit - 1-14/2c(s), 1-EGC(*)
- (C) 2" Bored Conduit - 1-14/2c(s), 1-EGC(*)
- (D) Not Used
- (E) 3" PVC Conduit - 2-14/4c, 1-EPDC, 1-EGC(*)
  2" PVC Conduit - 2-*8, 1-EGC(*)
- (F) 3 - 1" PVC Conduits
- (G) 2" PVC Conduit - 3-14/2c(s), 1-EGC(*)
- (H) 3" PVC Conduit - 1-14/7c, 1-14/4c, 1-EPDC, 1-EGC(*)
  2" PVC Conduit - 2-*8, 1-EGC(*)
- (J) 2" PVC Conduit - 1-14/4c, 1-14/2c, 1-EGC(*)
- (K) 3" Bored Conduit - 1-14/7c, 2-14/4c, 1-14/2c, 1-EPDC, 3-14/2c(s), 1-EGC(*)
  2" Bored Conduit - 2-*8, 1-EGC(*)
  3" Bored Conduit (Spare) - 1-EGC(*)
- (L) 1 - 1" PVC Conduit
- (M) 3" Bored Conduit - 1-14/7c, 2-14/4c, 1-14/2c, 1-EPDC, 4-14/2c(s), 1-EGC(*)
  2" Bored Conduit - 2-*8, 1-EGC(*)
  3" Bored Conduit (Spare) - 1-EGC(*)
- (N) 2" PVC Conduit - 1-14/2c, 1-EGC(*)
- (P) 3" PVC Conduit - 2-14/4c, 1-EGC(*)
  2" PVC Conduit - 2-*8, 1-EGC(*)
- (R) 3" PVC Conduit - 2-14/4c, 1-14/2c, 1-EGC(*)
  2" PVC Conduit - 2-*8, 1-EGC(*)
- (S) 2" PVC Conduit - 1-14/4c, 1-14/2c, 1-EGC(*)
- (T) 2 - 1" PVC Conduits
- (U) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
- (V) Not Used
- (W) 2" Bored Conduit - 2-14/2c(s), 1-EGC(*)
- (X) 3" Bored Conduit - 3-14/4c, 2-14/2c, 2-14/2c(s), 1-EGC(*)
  2" Bored Conduit - 2-*8, 1-EGC(*)
  3" Bored Conduit (Spare) - 1-EGC(*)
- (Y) 1 - 1" PVC Conduit
- (Z) 3" Bored Conduit - 3-14/4c, 2-14/2c, 3-14/2c(s), 1-EGC(*)
  2" Bored Conduit - 2-*8, 1-EGC(*)
  3" Bored Conduit (Spare) - 1-EGC(*)
- (AA) Not Used
- (BB) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
- (CC) 3" Bored Conduit - 1-14/7c, 4-14/4c, 1-14/2c, 2-EPDC, 5-14/2c(s), 1-EGC(*)
  2" Bored Conduit - 3-*8, 1-EGC(*)
  3" Bored Conduit (Spare) - 1-EGC(*)
- (DD) 3" PVC Conduit - 1-14/7c, 4-14/4c, 1-14/2c, 2-EPDC, 7-14/2c(s), 1-EGC(*)
  2" PVC Conduit - 3-*8, 1-EGC(*)
- (EE) 2" PVC Conduit - 1-14/2c, 1-EGC(*)
- (FF) 3" PVC Conduit - 1-14/7c, 2-14/4c, 1-EPDC, 1-EGC(*)
  2" PVC Conduit - 2-*8, 1-EGC(*)
- (GG) 2" PVC Conduit - 1-8/3c, 1-EGC (*)
- (HH) 2" PVC Conduit - 3-*8, 1-EGC(*)
- (JJ) 3" PVC Conduit - 2-14/7c, 8-14/4c, 4-14/2c, 1-EGC(*)
  3" PVC Conduit - 10-14/2(s), 3-EPDC, 1-EGC(*)
  3" PVC Conduit (Spare) - 1-EGC(*)
- (KK) 2-14/4c (HDS 4, 4A, 4B), 1-EPDC
- (LL) 1-14/7c (HD 1), 1-14/4c (HDS 6), 1-EPDC
- (MM) 1-14/4c (HDS 3, 3A)
- (NN) 1-14/7c (HD 5), 1-14/4c (HDS 2), 1-EPDC
- (PP) 3" PVC Conduit - For Electrical Service

EGC - Equipment Grounding Cable
* If required for a Bonded System
2-*8 - Used for each Intersection Luminaire
EPDC - Emergency Preemption Detector Cable
(s) - Shielded Cable

SPEED LIMITS

Longhill Rd.	45 MPH
Olde Towne Rd.	35 MPH
Devon Rd.	25 MPH

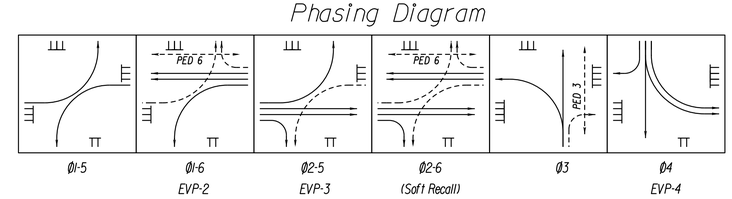
Proposed Signs

S-1 R3-8L (30"x30") Quantity - 1
S-2 R3-5R (30"x36") Quantity - 4
S-3 R3-6L (30"x36") Quantity - 1
S-4 Longhill Rd (FIGURE 1) (SHEET NO. 12(2A)1) (78"x18") Quantity - 2
S-5 Olde Towne Rd / Devon Rd (FIGURE 2) (SHEET NO. 12(2A)1) (126"x30") Quantity - 1
S-6 Devon Rd / Olde Towne Rd (FIGURE 3) (SHEET NO. 12(2A)1) (126"x30") Quantity - 1

Proposed Signals

1, 5 FLASHING YELLOW ARROW
2, 3, 6
4
4B
3A, 4A
SP-9
P3, P6

Phasing Diagram



Ø1-5
Ø1-6 EVP-2
Ø2-5 EVP-3
Ø2-6 (Soft Recall)
Ø3
Ø4 EVP-4

SCALE 0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES (PLAN AND DETAIL SHEETS)

Roadway Plan Sheets	4, 5
Signing and Pavement Marking Plan Sheets	11(4), 11(5)

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
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VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	12(3)

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

TRAFFIC CONTROL DEVICE PLANS

TRAFFIC SIGNAL PLAN

LONGHILL ROAD &
OLD TOWNE ROAD/DEVON ROAD
JAMES CITY COUNTY

PROJECT 0612-047-631
SHEET NO. 12(3)

PROJECT MANAGER Kenneth D. McKlana, P.E. (757) 925-2406 (Hampton Roads)
SURVEYED BY, DATE Dean R. Wilnoix, L.S. (757) 925-2660 (Hampton Roads)
DESIGN BY S.A. Smith (804) 225-3830 (Central Office)
SUBSURFACE UTILITY BY, DATE Accumark (804) 767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	12(4)

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

COMMONWEALTH OF VIRGINIA
PAUL TIMOTHY SARAHAN
Lic. No. 049369
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

Signal Pole & Controller Legend

(ALL DIMENSIONS ARE TO CENTER OF POLE)

(1) CONTROLLER CABINET & FOUNDATION (CF-5)

(A) MAST ARM POLE MP-3, TYPE D
52.0' RT. of Rte. 612 Constr. ℄ Sta. 250+39.92
49' Arm 272° Angle to Rte. 612 Constr. ℄
Signal Placement: 25', 37.5', 45.5'
Sign Placement: 10.5', 20'
Emergency Preemption Detector: 31.5'
18' Luminaire Arm, 245° Angle to Constr. ℄

(B) MAST ARM POLE MP-3, TYPE D
75.8' RT. of Rte. 612 Constr. ℄ Sta. 249+14.6
49' Arm 3° Angle to Rte. 612 Constr. ℄
Signal Placement: 24', 36.8'
Sign Placement: 10'
18' Luminaire Arm, 315° Angle to Constr. ℄

(C) MAST ARM POLE MP-3, TYPE E1
59.0' LT. of Rte. 612 Constr. ℄ Sta. 248+81.62
60' Arm 87° Angle to Rte. 612 Constr. ℄
Signal Placement: 32.5', 44.5', 55'
Sign Placement: 12', 23'
Emergency Preemption Detector: 38.5'
18' Luminaire Arm, 55° Angle to Constr. ℄

(D) MAST ARM POLE TYPE MP-3, TYPE D
67.64 LT. of Rte. 612 Constr. ℄ Sta. 250+20.28
49' Arm 181° Angle to Rte. 612 Constr. ℄
Signal Placement: 27.5', 38'
Sign Placement: 15.5', 22.5', 35'
Emergency Preemption Detector: 31'
18' Luminaire Arm, 117° Angle to Constr. ℄

(E) PEDESTRIAN ACTUATION (PA-3)
66.3' LT. of Rte. 612 Constr. ℄ Sta. 250+15

(F) PEDESTAL POLE (PF-2), 10'
52.7' LT. of Rte. 612 Constr. ℄ Sta. 250+34
Extender Arm required for pushbutton.

(G) PEDESTRIAN ACTUATION (PA-3)
39.0' RT. of Rte. 612 Constr. ℄ Sta. 250+35

(H) PEDESTAL POLE (PF-2), 10'
53.7' LT. of Rte. 612 Constr. ℄ Sta. 249+28
Build PF-2 Foundation into curb.

NOTE: Luminaires on combination signal poles shall be equivalent to 250w LED (26,000 Lumens) installed at a mounting height of 28.5' from the finished roadway surface to the center of the luminaire.

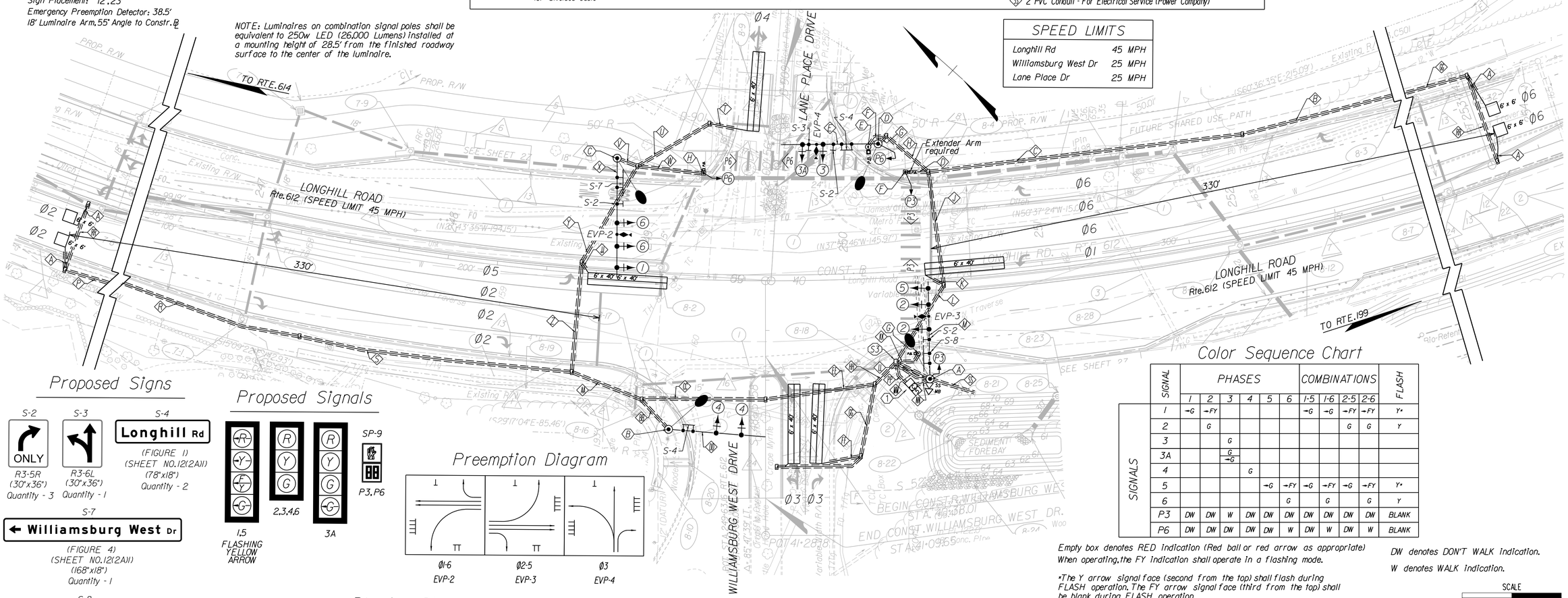
CABLE AND CONDUIT LEGEND

(A) 1 - 1" PVC Conduits
(B) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
(C) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
(D) 2" PVC Conduit - 1-14/4c, 1-14/2c, 1-EGC(*)
(E) 1-14/4c (HDs 3, 3A), 1-EPDC
(F) 2" PVC Conduit - 1-14/2c, 1-EGC(*)
(G) 3" PVC Conduit - 2-14/4c, 1-EPDC, 1-EGC(*)
2" PVC Conduit - 2-*8, 1-EGC(*)
(H) 3" PVC Conduit - 2-14/4c, 1-14/2c, 1-EPDC, 1-EGC(*)
2" PVC Conduit - 2-*8, 1-EGC(*)
(J) 3" Bored Conduit - 3-14/4c, 2-14/2c, 1-EPDC, 2-14/2c(s), 1-EGC(*)
2" Bored Conduit - 2-*8, 1-EGC(*)
3" Bored Conduit (Spare) - 1-EGC(*)
(K) 1 - 1" PVC Conduit
(L) 3" Bored Conduit - 3-14/4c, 2-14/2c, 1-EPDC, 3-14/2c(s), 1-EGC(*)
2" Bored Conduit - 2-*8, 1-EGC(*)
3" Bored Conduit (Spare) - 1-EGC(*)
(M) 1-14/7c (HD 5), 1-14/4c (HDs 2), 1-EPDC
(N) 2 - 1" PVC Conduits
(P) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
(R) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
(S) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
(T) 1 - 1" PVC Conduit
(U) 2" PVC Conduit - 1-14/2c(s), 1-EGC(*)
(V) 3" PVC Conduit - 1-14/7c, 1-14/4c, 1-EPDC, 1-EGC(*)
2" PVC Conduit - 2-*8, 1-EGC(*)
(W) 2" PVC Conduit - 1-14/4c, 1-14/2c, 1-EGC(*)
(X) 1-14/7c (HD 11), 1-14/4c (HDs 6), 1-EPDC
(Y) 3" Bored Conduit - 1-14/7c, 2-14/4c, 1-14/2c, 1-EPDC, 1-14/2c(s), 1-EGC(*)
2" Bored Conduit - 2-*8, 1-EGC(*)
3" Bored Conduit (Spare) - 1-EGC(*)
(Z) 3" Bored Conduit - 1-14/7c, 2-14/4c, 1-14/2c, 1-EPDC, 2-14/2c(s), 1-EGC(*)
2" Bored Conduit - 2-*8, 1-EGC(*)
3" Bored Conduit (Spare) - 1-EGC(*)
(AA) 3" PVC Conduit - 1-14/7c, 2-14/4c, 1-14/2c, 1-EPDC, 4-14/2c(s), 1-EGC(*)
2" PVC Conduit - 2-*8, 1-EGC(*)
(BB) 3" PVC Conduit - 1-14/4c, 1-EGC(*)
2" PVC Conduit - 2-*8, 1-EGC(*)
(CC) 3" Bored Conduit - 1-14/7c, 3-14/4c, 1-14/2c, 1-EPDC, 4-14/2c(s), 1-EGC(*)
2" Bored Conduit - 3-*8, 1-EGC(*)
3" Bored Conduit (Spare) - 1-EGC(*)
(DD) 1-14/4c (HDs 4)
(EE) 3" Bored Conduit - 1-14/7c, 3-14/4c, 1-14/2c, 1-EPDC, 4-14/2c(s), 1-EGC(*)
2" Bored Conduit - 3-*8, 1-EGC(*)
3" Bored Conduit (Spare) - 1-EGC(*)
(FF) 2 - 1" PVC Conduits
(GG) 2" PVC Conduit - 2-14/2c(s), 1-EGC(*)
(HH) 3" PVC Conduit - 1-14/7c, 3-14/4c, 1-14/2c, 1-EPDC, 6-14/2c(s), 1-EGC(*)
2" PVC Conduit - 3-*8, 1-EGC(*)
(JJ) 1 - 1" PVC Conduit
(KK) 2" PVC Conduit - 1-14/2c, 1-EGC(*)
(LL) 3" PVC Conduit - 1-14/7c, 2-14/4c, 1-EPDC, 1-EGC(*)
2" PVC Conduit - 2-*8, 1-EGC(*)
(MM) 2" PVC Conduit - 3-*8, 1-EGC(*)
(NN) 2" Conduit - 1-8/3c, 1-EGC (*)
(PP) 3" PVC Conduit - 2-14/7c, 8-14/4c, 4-14/2c, 1-EGC(*)
3" PVC Conduit - 3-EPDC, 9-14/2c(s), 1-EGC(*)
3" PVC Conduit (Spare) - 1-EGC(*)
(QQ) 2" Bored Conduit - 1-14/2c(s), 1-EGC(*)
(SS) 2" PVC Conduit - For Electrical Service (Power Company)

2-*8 - Used for each Intersection Luminaire
EPDC - Emergency Preemption Detector Cable
(s) - Shielded Cable
EGC - Equipment Grounding Cable
* If required for a Bonded System

SPEED LIMITS

Longhill Rd	45 MPH
Williamsburg West Dr	25 MPH
Lane Place Dr	25 MPH



Proposed Signs

S-2: R3-5R (30"x36") Quantity - 3
S-3: R3-6L (30"x36") Quantity - 1
S-4: Longhill Rd (FIGURE 1) (SHEET NO.12(2A)1) (78"x18") Quantity - 2
S-7: ← Williamsburg West Dr (FIGURE 4) (SHEET NO.12(2A)1) (168"x18") Quantity - 1
S-8: Williamsburg West Dr → (FIGURE 5) (SHEET NO.12(2A)2) (168"x18") Quantity - 1

Proposed Signals

1,5 FLASHING YELLOW ARROW
2,3,4,6
3A
SP-9 P3,P6

Preemption Diagram

Ø1-6 EVP-2
Ø2-5 EVP-3
Ø3 EVP-4

Phasing Diagram

Ø1-5
Ø1-6 (PED 6)
Ø2-5
Ø2-6 (PED 6) (Soft Recall)
Ø3 (PED 3)
Ø4

Color Sequence Chart

	SIGNAL	PHASES 1	2	3	4	5	6	COMBINATIONS 1-5	1-6	2-5	2-6	FLASH
SIGNALS	1	→G	→FY					→G	→G	→FY	→FY	Y*
	2		G							G	G	Y
	3			G								
	3A			G / →G								
	4				G							
	5					→G	→FY	→G	→FY	→G	→FY	Y*
	6						G		G		G	Y
	P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
	P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

Empty box denotes RED indication (Red ball or red arrow as appropriate)
When operating, the FY indication shall operate in a flashing mode.

*The Y arrow signal face (second from the top) shall flash during FLASH operation. The FY arrow signal face (third from the top) shall be blank during FLASH operation.

DW denotes DON'T WALK indication.

W denotes WALK indication.

SCALE 0 25' 50'

JUNCTION BOX LEGEND

All Junction Boxes shall conform to St'd. JB-S2 unless otherwise noted on the plans.
(S3) Denotes St'd. JB-S3

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)

Roadway Plan Sheets	7,8
Signing and Pavement Marking Plan Sheets	11(7), 11(8)

TRAFFIC CONTROL DEVICE PLANS

TRAFFIC SIGNAL PLAN

LONGHILL ROAD &
WILLIAMSBURG WEST DRIVE/LANE PLACE DRIVE
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	12(4)

PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY WILLIAMS, L.S. (757) 925-2657, (HAMPTON ROADS DISTRICT)
DESIGN BY SAEED JON SAYYAR, P.E. (804) 786-0138 C.D.
SUBSURFACE UTILITY BY, DATE ACCUMARK INC. (757) 767-3147, 10/04/2016.

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

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C501	13(1)

GENERAL NOTES - LIGHTING

INDEX OF SHEETS

Sheet No:	Sheet Description:
13(1)	Index of Sheets, General Notes & Legends
13(2)	Traffic Summary of Quantities
13(3) - 13(8)	Roadway & Pedestrian Lighting Plan

1. The following items and operations shall conform to the standard listed below:

   Lighting Pole Foundation LF-1
   Lighting Pole LP-1, LP-2
   Conduit Installation ..... ECI-1 or Bored
   Junction Box JB-S2, JB-S3
   Control Center CCW-1
   Electrical Service SE-6

2. Lighting Pole foundation depths and above ground foundation projection/reveal (if needed) shall be determined by the Contractor in accordance with the current Road & Bridge Standards. Lighting poles and foundations shall be in accordance with the current Road & Bridge Standards. The pole supplier shall provide a bolt template for the foundation, which shall be centered utilizing the LF-1 foundation.

3. Lighting pole foundations may be field adjusted no more than 2' in any direction from the plan locations, provided that the revised foundation locations:
   Remain out of the clear zone and pavement sections.
   Remain within the right of way or propose easement.
   Does not conflict with utilities.
   Does not conflict with vehicle or pedestrians travel way.
   Does not limit sight distance.
   Does not affect drainage.
   Allow the lighting pole foundations to be adjusted with the same alignment with the designated location shown on the plans, and is in accordance with the LF-1 Lighting Pole Foundation Installation Details. If further adjustment is needed, the Project Inspector shall contact the Design Engineer on the plans. All modifications to the lighting pole placement more than $2\frac{9}{32}$ shall be approved by the engineer and shown on the as-built plans. All poles shall be field staked by the Contractor and inspected by the Engineer and Contractor per the specifications prior to installation of foundations.

4. The Controller Cabinet & CF-4 foundation may be relocated within the designated area provided it remains within the right of way or proposed easement, outside of the clear zone and pavement sections, does not conflict with utilities, does not limit sight distance, and is in accordance with the Electric Service Standard detail referenced to the installation.

5. Junction boxes may be relocated in the field as necessary provided they remain within the right of way, do not conflict with utilities and remain outside the pavement section.

6. The electric service connection and service line locations may be field adjusted as necessary provided all equipment remains within the right of way or proposed easement, does not conflict with utilities and remains outside the pavement sections.

7. All underground and overhead utilities shown on these plans are approximate only and may not be complete. At least 72 hours prior to beginning signal work, the Contractor shall contact "Miss Utility of Virginia" at 1-800-552-7001 in order to determine the extent, location, and identify all of the utilities within the work area. If the Contractor perceives a conflict between utilities and the proposed lighting equipment, the Contractor shall notify the Engineer immediately so that the conflict may be reviewed. The Contractor shall be responsible for repairing or replacing at their own expense, any existing utilities, pavement, concrete items, etc. that are damaged or disturbed during construction.

8. Conduits shown on these plans are diagrammatic and actual conduit runs shall be modified as field conditions warrant. All modifications to the conduit runs shall be approved by the engineer and shown on the as-built plans. Conduit systems shall be bonded in accordance with Section 700 of the Road & Bridge Specifications.

9. Pavement markings shown on the signal plans are for representation only. Please see Pavement Marking plans for details.

10. All equipment is to be installed within the existing or proposed R/W or easement.

11. All underground and overhead utilities shown on these plans are approximate only and may not be complete.

12. All roadway lighting standards shall include breakaway base unless otherwise noted on the plans.

STANDARD LIGHTING LEGEND

PLAN ITEM	PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING	PLAN ITEM	PLAN SYMBOL PROPOSED	PLAN SYMBOL EXISTING
Highmast - 2 Luminaire			Light Pole		
Highmast - 4 Luminaire			Light Pole Foundation		
Highmast - 6 Luminaire			Breakaway Base (LP-1 & LP-2)		
Highmast - 8 Luminaire			Lighting Control Center, Type	CCW-1A	CCW-1E
Roadway Luminaire			Junction Box	J	J
Offset Luminaire			Electrical Service	SE-6	SE-E
Signal Luminaire			Conduit		
Decorative Luminaire			Luminaire Arm		
Underbridge Luminaire			LABELS		
			Cable and Conduit	A	

LIGHTING LABELS

Proposed Lighting Cobrahead

Denotes Location of Light Pole in reference to Baseline → Station, Offset Const. ℄
Denotes Luminaire Type, Wattage, Arm Length, Mounting Height → Type, 150W- 18'- 30'

Existing Lighting Decorative

Denotes Location of Light Pole in reference to Baseline → Station, Offset Const. ℄
Denotes Luminaire Type, Wattage, Mounting Height → Type, 52W- 16'

VDOT
CENTRAL REGION OPERATIONS
TRAFFIC ENGINEERING
2430 PINE FOREST DRIVE
COLONIAL HEIGHTS, VA 23834

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL MODIFICATION
INDEX OF SHEETS, GENERAL NOTES & LEGEND
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(1)

PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY WILLIAMS, L.S. (757) 925-2657, (HAMPTON ROADS DISTRICT)
DESIGN BY SAEED JON SAYYAR, P.E. (804) 786-0138, (C.O.)
SUBSURFACE UTILITY BY, DATE ACCUMARK INC. (757) 767-3147, 10/04/2016.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/25/2019	VA.	612	0612-047-631, C501	13(211

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

SUMMARY OF QUANTITIES

TCD Discipline		LIGHTING																										
Summary Notes		5	5	5				5				1		2 & 4							3 & 4	3 & 4						
Item Description / ITEM NO.		Electrical Service SE-6	Concrete Foundation CF-2	Conductor Cable No.6 (EGC)	6 Conductor Cable	Concrete Foundation LF-1, Type A	Lighting Pole LP- 40'-18' Arm	Control Center CCW-1, Type C	Junction Box JB-S2			Decorative Concrete Foundation	Decorative Light Pole	Luminaire Conventional Decorative LED 52 Watt		2" PVC Conduit	Bored Conduit 2"	Trench Excavation EC1-1	Electrical Service Grounding Electrode (10')		Luminaire Conventional Signal pole LED 210 Watt	Luminaire Conventional Roadway pole LED 210 Watt						
UNIT		55343	51246	55128	55060	55140	59000	55352	55587			59000	59000	55505		56053	56050	65200	56014		55505	55505						
Project / SHEET NO.		EA.	EA.	L.F.	L.F.	EA.	EA.	EA.	EA.			EA.	EA.	EA.		L.F.	L.F.	L.F.	EA.		EA.	EA.						
Longhill Road	13(3)-13(8)	2	2	4700	15,000	23	23	2	15			34	34	34		6,500	750	6,500	10		8	23						
	TOTAL	2	2	4700	15,000	23	23	2	15			34	34	34		6,500	750	6,500	10		8	23						

NOTES

1. Decorative concrete foundation shall be designed and furnished by the pole manufacturer.
2. Decorative Luminaire shall be type ASYM distribution with CCT of 3000K.
3. Roadway Luminaire shall be type III distribution with CCT of 3000K.
4. See plan sheet 13(2A) for details on decorative pole / Luminaire.
5. The Contractor is resposible to coordinate with the local utilities for the best service drop locations. The distance from the source of primary power shall be kept as short as possible to minimize losses due to voltage drop. The Contractor is resposible for locating all existing utilities and lighting systems before proceeding with the work.

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
TRAFFIC SIGNAL
SUMMARY OF QUANTITIES
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(211

PROJECT MANAGER KENNETH. McKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY DANIY. WILLIAMS, L.S. (757) 925-2657 (HAMPTON ROADS DISTRICT)
DESIGN SUPERVISED BY Saeed "Joe" Sayyar, P.E. (804) 786-0138 (C.O.)
DESIGNED BY Adam Dixon (804) 786-9745 (C.O.)

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/25/2019	VA.	1	0612-047-631, C-501	13(2A)

COMMONWEALTH OF VIRGINIA
SAEED SAYYAR
Lic. No. 027677
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

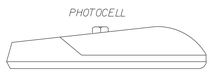
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

ELECTRICAL SERVICE

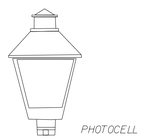
SERVICE LOCATION NO.	STANDARD	TYPE	VOLTAGE	SAFETY SWITCH			CONTROL CENTER WIRING CCW-1	
				VOLTAGE	AMPERAGE	FUSE AMPERAGE	CONTACTOR AMPERAGE	TYPE
1 & 2	SE-6	A	240/120	240	100	60	30	C

PANEL BOARD SCHEDULE

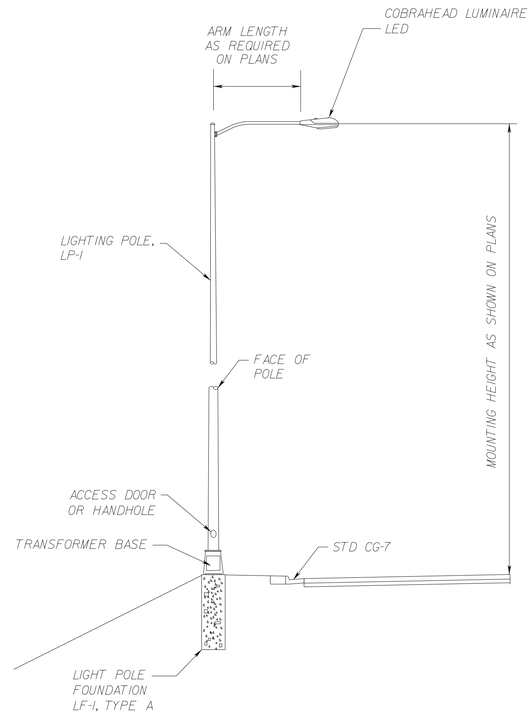
LOAD DESCRIPTION	WIRE SIZE	AMPERAGE BRKR. AMPS	AMPERAGE LOAD AMPS	AMPERAGE CIRCUIT NUMBER	SOLID NEUTRAL L1	L2	SN	AMPERAGE CIRCUIT NUMBER	AMPERAGE LOAD AMPS	AMPERAGE BRKR. AMPS	WIRE SIZE	LOAD DESCRIPTION
PHOTOCELL	10	15	1.7	1				2	-	25	6	LIGHT
LIGHT	6	25	-	3				4	-	25	6	LIGHT
LIGHT	6	25	-	5				6	-	25	6	LIGHT
LIGHT	6	25	-	7				8	-	25	6	LIGHT
LIGHT	6	25	-	9				10	Spare			
			Spare	11				12	Spare			



COBRAHEAD LUMINAIRE

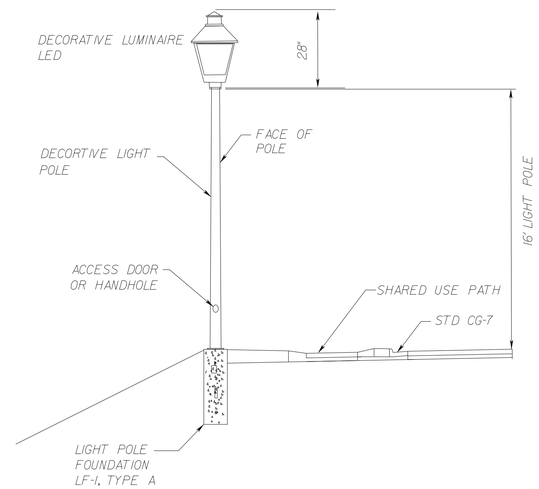


DECORATIVE LUMINAIRE



LIGHTING POLE LOCATION DETAIL "A"

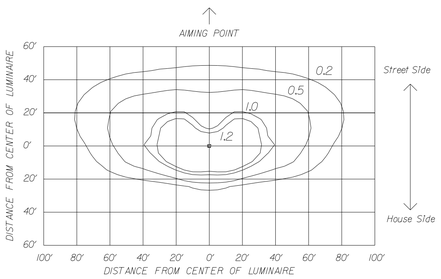
NOT TO SCALE



LIGHTING POLE LOCATION DETAIL "B"

NOT TO SCALE

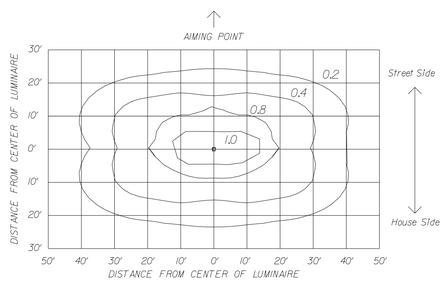
ROADWAY LIGHTING



ISOFOOTCANDLE DIAGRAM *
MAX 210-WATT LED ROADWAY LUMINAIRE
MIN 20,000 LUMENS, CCT 3000K
40-FT MOUNTING HEIGHT
COBRAHEAD LUMINAIRE

N.T.S.

* ISOFOOT CANDLE DIAGRAM REPRESENTS THE LUMINAIRE ILLUMINATION PATTERN WITH A LIGHT LOSS FACTOR OF 0.85.



ISOFOOTCANDLE DIAGRAM *
MAX 52-WATT LED ROADWAY LUMINAIRE
MIN 4,900 LUMENS, CCT 3000K
16-FT MOUNTING HEIGHT
DECORATIVE LUMINAIRE

N.T.S.

* ISOFOOT CANDLE DIAGRAM REPRESENTS THE LUMINAIRE ILLUMINATION PATTERN WITH A LIGHT LOSS FACTOR OF 0.85.

LUMINAIRE SHALL DISPLAY THE OLD FASHIONED TRADITIONAL LANTERN TYPE POST TOP LIGHTING

SHARED USE PATH

DECORATIVE POLE SHALL INCLUDE STRUCTURAL REVIEW AND PE SEAL BY AN ENGINEER. DECORATIVE LIGHT POLE- 16' POLE HEIGHT, ROUND TAPERED STEEL ROADWAY LIGHTING POLE SHAFT CONFORMS TO ASTM A1011 GRADE 50 OR ASTM A240 GRADE 201LN STANDARDS AND FORMED WITH A CONSTANT LINEAR TAPER. FEATURES (SET/4) ANCHOR BOLTS WITH TWO GALVANIZED HEXAGONAL NUTS PER ASTM A563 GRADE DH WITH EACH BOLT, 2 FLAT WASHERS PER ASTM F436 FULLY GALVANIZED, ANCHOR STYLE BASE PLATE, REINFORCED HANDHOLE WITH REMOVABLE COVER, GROUND LUG, 2-3/8" OR 3" O.D. TENON, HOT DIP GALVANIZED FINISH THROUGHOUT AND PAINTED USING MILLERBOND WET COAT PAINT PROCESS (PAINTED BLACK AND SHALL BE Fed ID # number FS 27038).

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 E. BROAD STREET
RICHMOND, VA 23219

TRAFFIC CONTROL DEVICE PLANS
LIGHTING
TYPICAL POLE LOCATION DETAILS
& PANELBOARD SCHEDULE
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(2A)

9/7/2018
11:59:36 AM

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Plotted By: WAP04107$

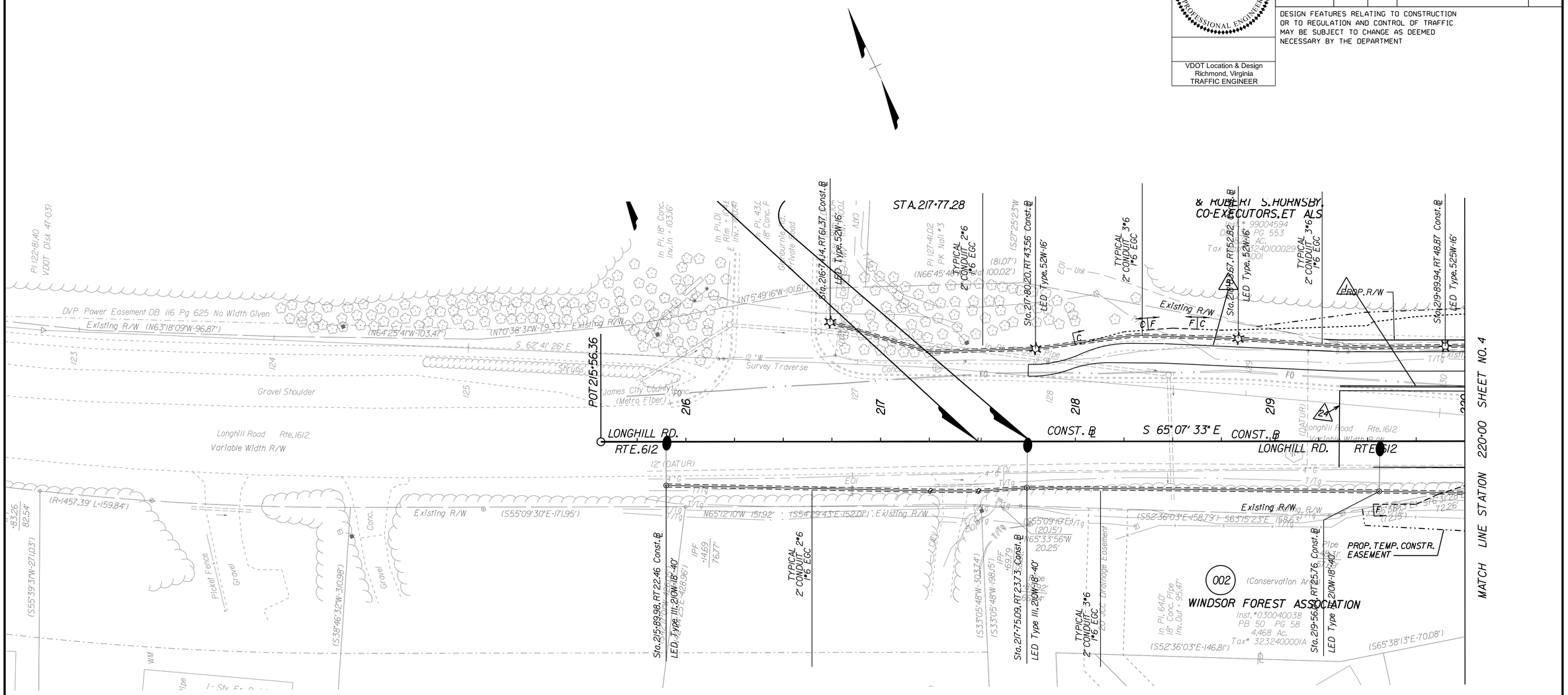
PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY R. WILLIAMS, L.S. (757) 925-2657 (HAMPTON ROADS DISTRICT)
DESIGN BY SAEED JON. SAYYAR, P.E. (804) 786-0138 (C.D.)
SUBSURFACE UTILITY BY, DATE

COMMONWEALTH OF VIRGINIA
SAEED SAYYAR
Lic. No. 027677
PROFESSIONAL ENGINEER

VDOT Location & Design
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	13(3)

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



SCALE
0 25' 50'

VDOT
LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
RICHMOND, VA 23219

REFERENCES
(PLAN AND DETAIL SHEETS)

Roadway Plan Sheet(s)	3

TRAFFIC CONTROL DEVICE PLANS
LIGHTING PLAN

LONGHILL ROAD
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(3)

PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657 (HAMPTON ROADS DISTRICT)
DESIGN BY SAEED JON. SAYYAR, P.E. (804) 786-0138 (C.D.)
SUBSURFACE UTILITY BY, DATE

COMMONWEALTH OF VIRGINIA
SAEED SAYYAR
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PROFESSIONAL ENGINEER

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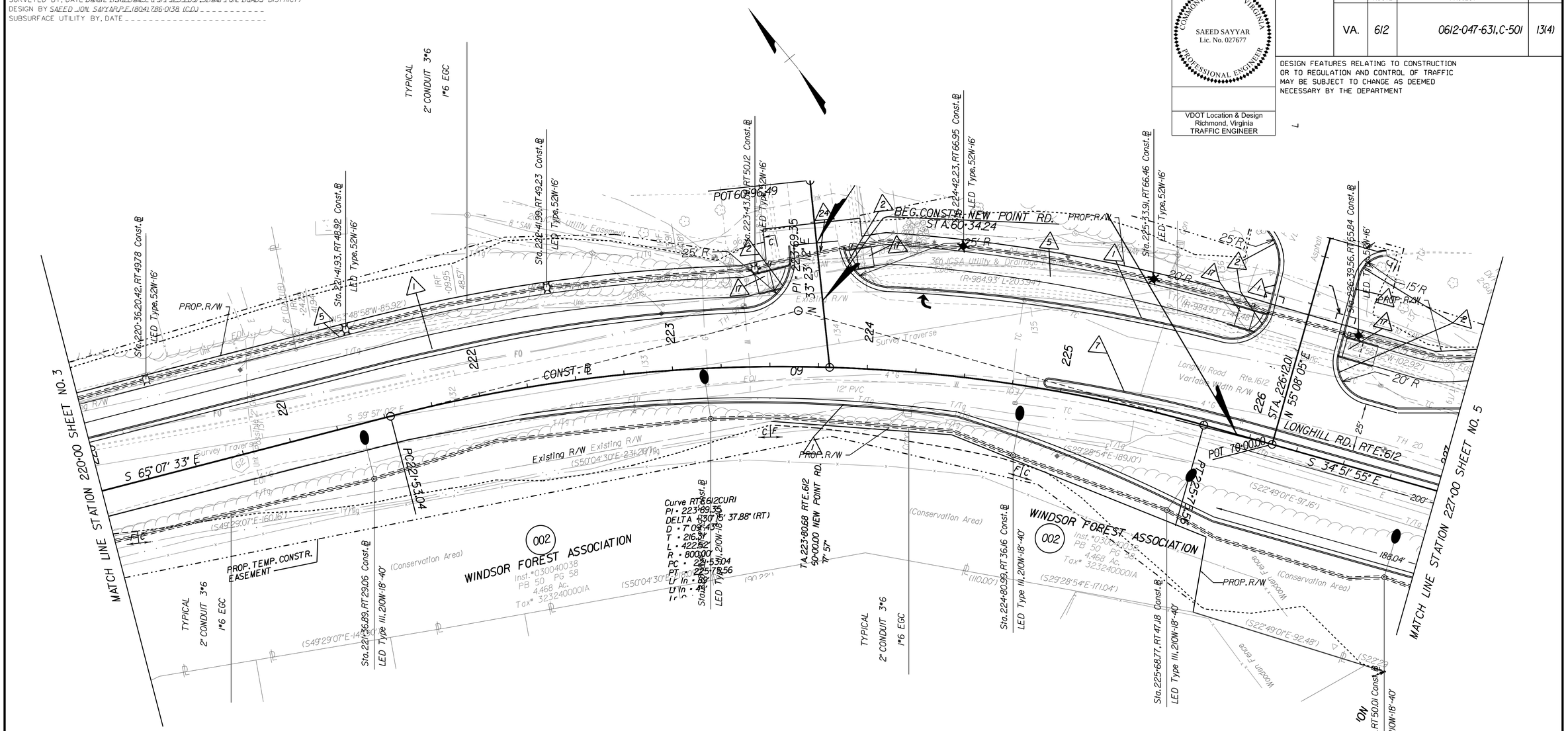
Richmond, Virginia
TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	13(4)

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



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1401 EAST BROAD STREET
RICHMOND, VA 23219

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LIGHTING PLAN

LONGHILL ROAD
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(4)

PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY R. WILLIAMS, L.S. (757) 925-2657, (HAMPTON ROADS DISTRICT)
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	VA.	612	0612-047-631, C-501	13(5)

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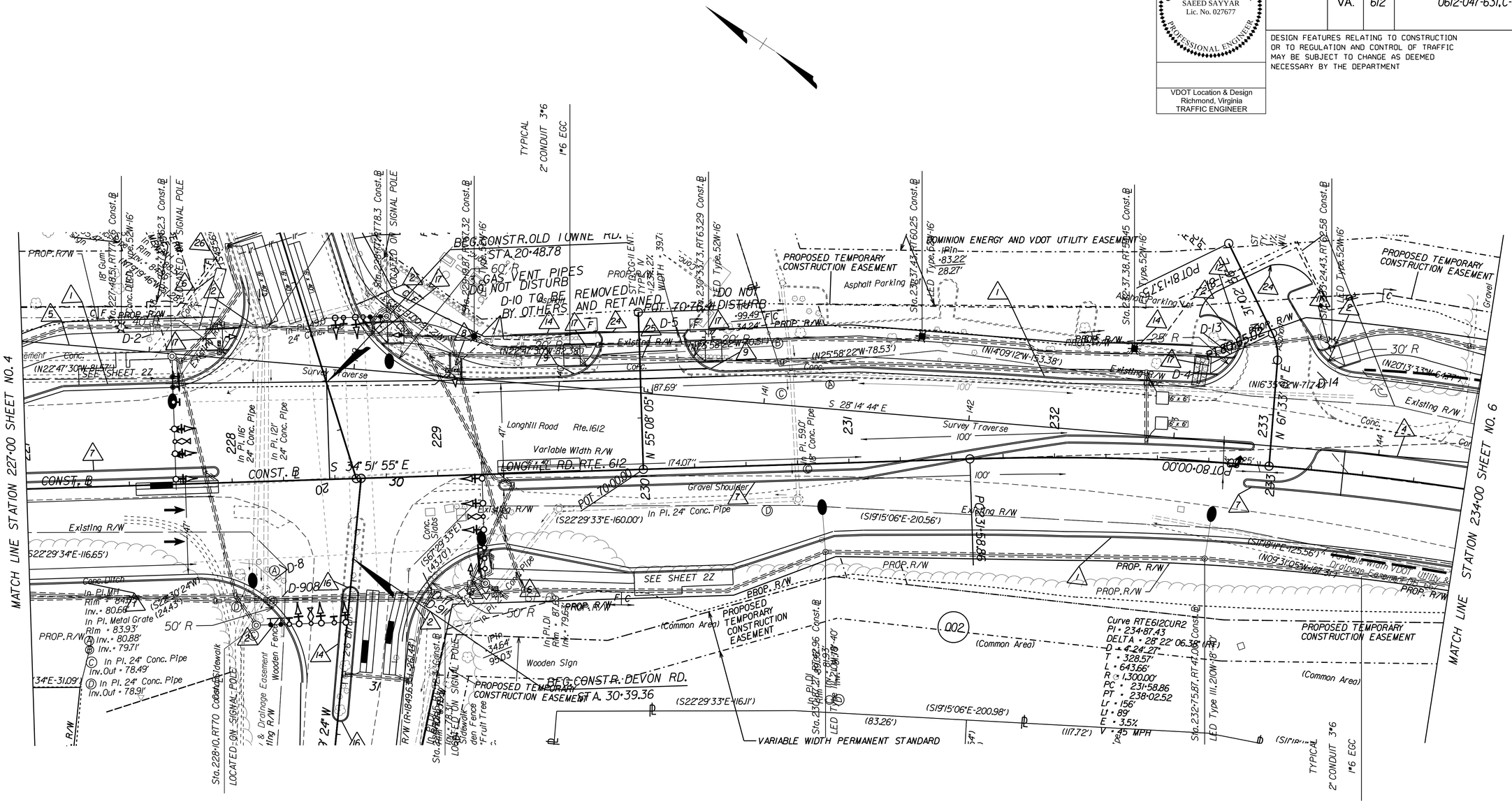

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TRAFFIC CONTROL DEVICE PLANS
LIGHTING PLAN

LONGHILL ROAD
JAMES CITY COUNTY

PROJECT	SHEET NO.
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PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY R. WILLIAMS, L.S. (757) 925-2657 (HAMPTON ROADS DISTRICT)
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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	13(6)

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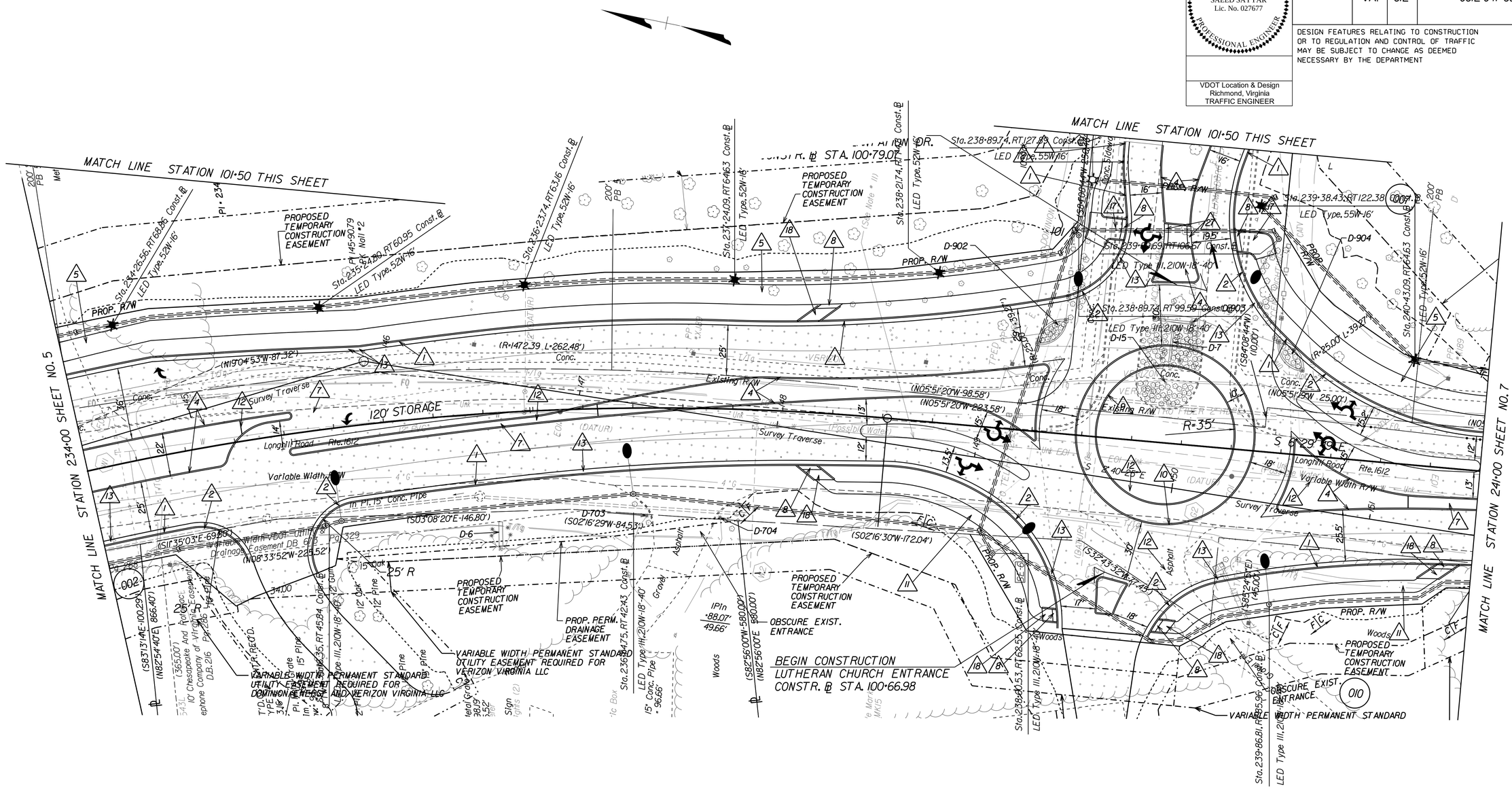

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TRAFFIC CONTROL DEVICE PLANS
LIGHTING PLAN

LONGHILL ROAD
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(6)

PROJECT MANAGER KENNETH MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY R. WILLIAMS, L.S. (757) 925-2657 (HAMPTON ROADS DISTRICT)
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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/7/2019	VA.	612	0612-047-631,C-501	13(7)

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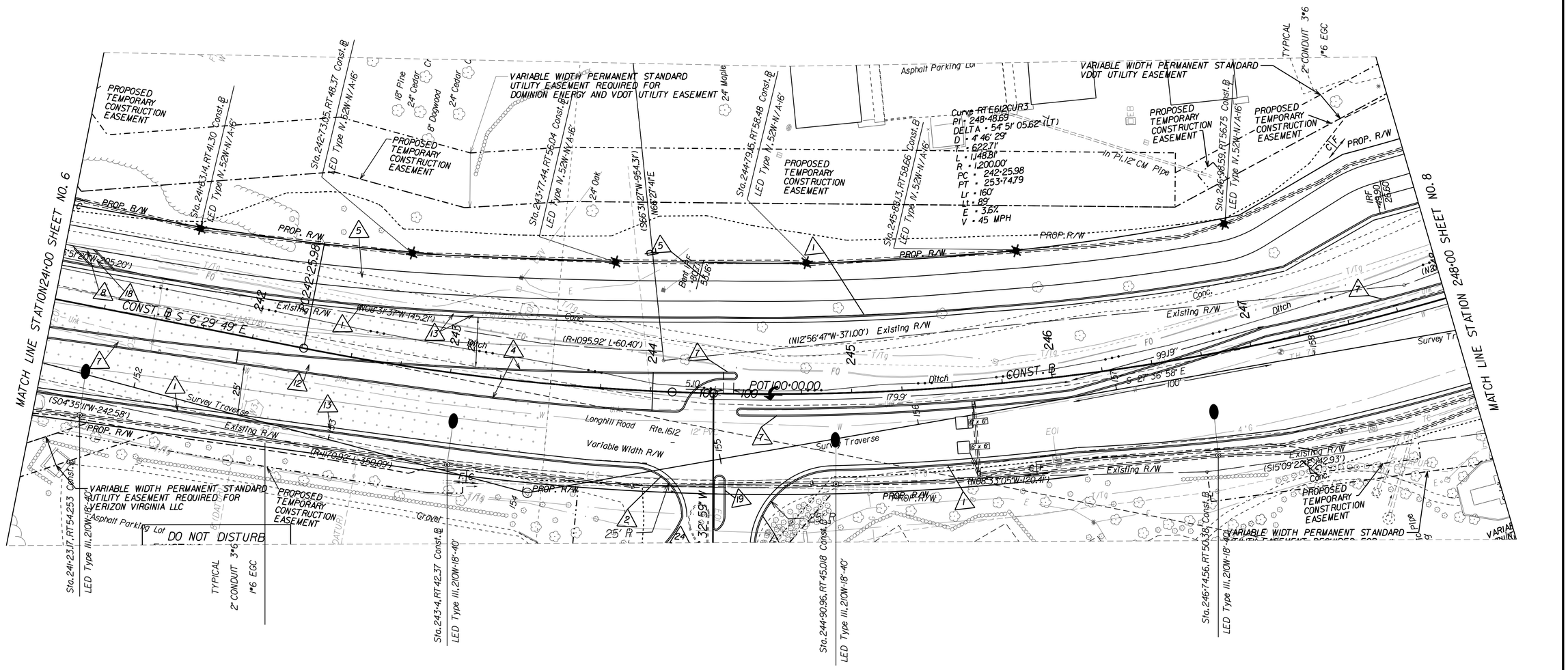

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RICHMOND, VA 23219

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TRAFFIC CONTROL DEVICE PLANS
LIGHTING PLAN
LONGHILL ROAD
JAMES CITY COUNTY

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0612-047-631	13(7)

PROJECT MANAGER KENNETH. MCKINNA, P.E. (757) 956-3271 (HAMPTON ROADS DISTRICT)
SURVEYED BY, DATE DANNY. R. WILLIAMS, L.S. (757) 925-2657 (HAMPTON ROADS DISTRICT)
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TRAFFIC ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
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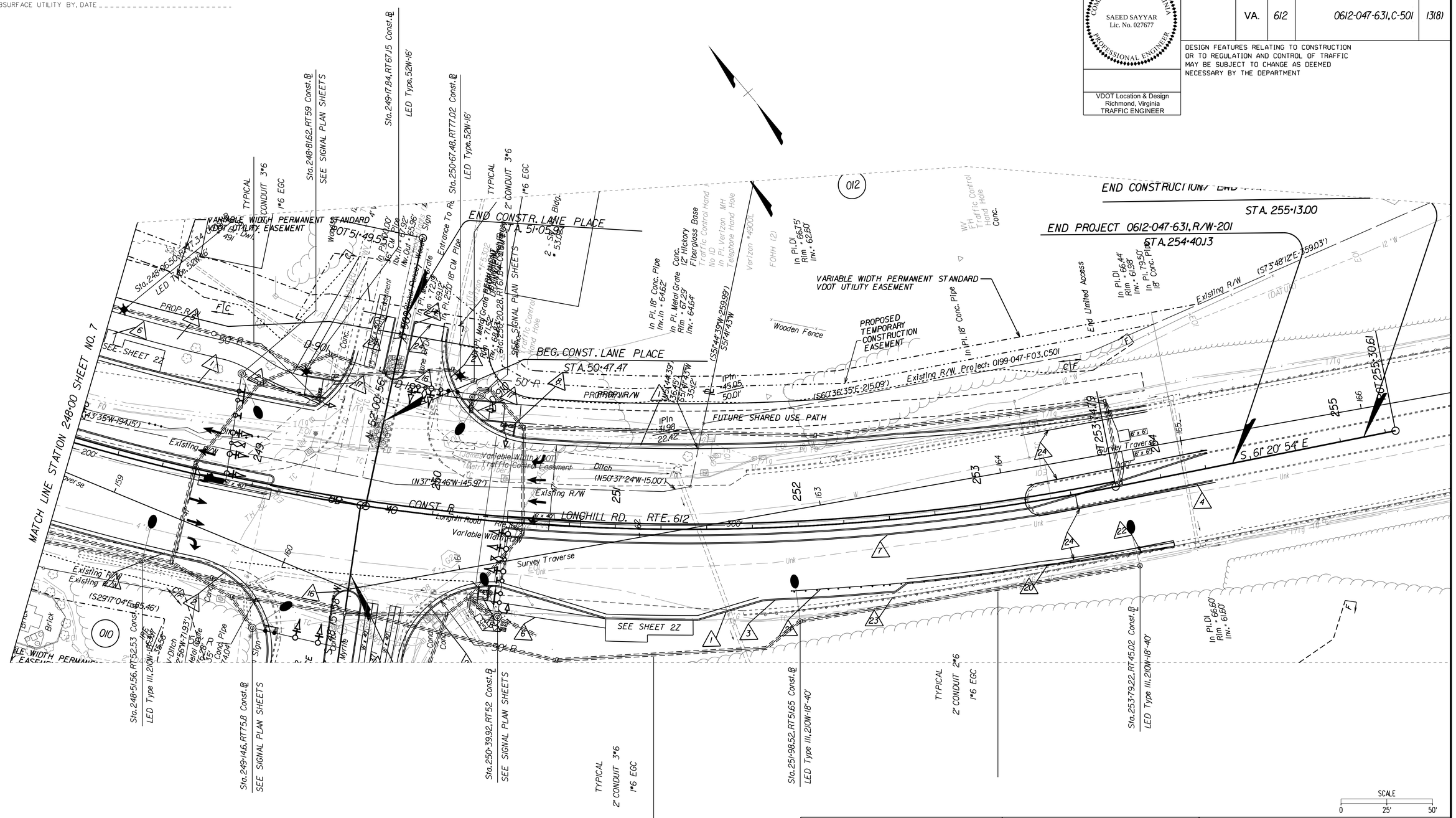

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LOCATION AND DESIGN DIVISION
TRAFFIC ENGINEERING
1401 EAST BROAD STREET
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TRAFFIC CONTROL DEVICE PLANS
LIGHTING PLAN

LONGHILL ROAD
JAMES CITY COUNTY

PROJECT	SHEET NO.
0612-047-631	13(8)

THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER KEN. MCKINNA, PE (757)925-2406
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM, WHERE APPLICABLE, TO THE CURRENT EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, AS WELL AS PLAN NOTES AND DETAILS.

2. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE JCSA AND AT NO EXPENSE TO THE DEPARTMENT. ANY DAMAGES OR UNSCHEDULED INTERUPTION OF SERVICE SHALL BE REPORTED IMMEDIATELY TO JCSA OPERATIONS AT (757) 229-7421.

3. THE LOCATIONS, DEPTHS AND SIZES OF EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM AVAILABLE UTILITY RECORDS AND FIELD UTILITY SURVEYS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY WITH TEST HOLES THE LOCATION, ELEVATION, TYPE, ROUNDNESS AND SIZE OF ALL EXISTING UNDERGROUND UTILITIES AND POINTS OF CONNECTION PRIOR TO EXCAVATION AND ORDERING OF MATERIALS AND INSTALLATION FOR THIS PROJECT. ALL COST ASSOCIATED WITH ADDITIONAL UNDERGROUND UTILITY LOCATING SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE BID.

4. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 811 TO REQUEST FIELD UTILITY LOCATIONS AT LEAST 72 HOURS BEFORE BEGINNING ANY EXCAVATION OR CONSTRUCTION SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT.

5. SYSTEM SHUTDOWN OPERATION:

   A. THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF UTILITY CONSTRUCTION A MINIMUM OF 30 DAYS PRIOR TO UTILITY ADJUSTMENT FIELD EFFORTS. THE SEQUENCE OF UTILITY CONSTRUCTION SHALL CONSIST OF A PRELIMINARY LIST OF DATES FOR UTILITY TIE-INS, CONNECTIONS AND SHUTDOWNS. THE CONTRACTOR SHALL ALSO PROVIDE AT THIS TIME THE ANTICIPATED SHUTDOWN TIME REQUIRED AS WELL AS ANTICIPATED TIME OF DAY SCHEDULED FOR THE TIE-INS, CONNECTIONS AND SHUTDOWNS.

   B. CONTRACTOR SHALL GIVE A TWO (2) WEEK NOTICE IN WRITING TO THE ENGINEER, JCSA OPEATIONS AND JCSA ENGINEERING FOR EACH CONNECTION AND/OR ADJUSTMENT TO THE EXISTING FACILITIES OWNED BY JCSA.

   C. THE EXISTING JCSA FACILITIES SHALL BE DEACTIVATED FOR A MAXIMUM PERIOD OF SIX (6) HOURS FOR EACH SCHEDULED SHUTDOWN. THE CONTRACTOR SHALL MAKE AS MANY CONNECTIONS AS PRACTICAL DURING EACH SHUTDOWN PERIOD.

   D. ALL SEWER SYSTEMS MUST REMAIN ACTIVE.

   E. PRIOR TO CUTTING ANY WATER OR SEWER MAIN, THE CONTRACTOR SHALL HAVE ALL FITTINGS, VALVES AND PIPE AT THE SITE AND SHALL VERIFY IN THE PRESENCE OF THE ENGINEER, JCSA OPEARTIONS AND JCSA ENGINEERING, THROUGH FIELD MEASUREMENTS, THAT ALL PIPING, FITTINGS AND VALVES WILL ALIGN AND FIT PROPERLY WITH THE EXISTING FACILITIES. FURTHER, ALL NEWLY CONSTRUCTED PIPE AND APPURTENANCES SHALL HAVE PASSED ALL NECESSARY TESTS IN THE PRESENCE OF AN INSPECTOR FROM THE JCSA OPERATIONS AND/OR JCSA ENGINEERING AND SHALL BE CAPABLE OF BEING ACTIVATED ONCE THE ADJUSTMENT WORK HAS BEEN COMPLETED. CONNECTIONS TO EXISTING LINES SHALL BE MADE ONLY AFTER THE LINE IS INSTALLED, TESTED, AND APPROVED BY THE ENGINEER.

6. ALL RELOCATED WATER MAINS AND SANITARY SEWER MAINS SHALL HAVE A MINIMUM FINAL COVER OF 36-INCHES, UNLESS NOTED OTHERWISE ON THE PLANS. ALL RELOCATIONS MUST HAVE A MINIMUM TEMPORARY COVER OF 24-INCHES AT ALL TIMES DURING CONSTRUCTION.

7. THE CONTRACTOR SHALL CUT, CAP AND REMOVE ANY ABANDONED WATER MAIN OR SANITARY SEWER MAIN HAVING LESS THAN 24-INCHES OF FINISHED COVER REMAINING OVER THE PIPE, UNLESS OTHERWISE NOTED. ALL COSTS ASSOCIATED WITH THE REMOVAL OF ABANDONED PIPE SHALL BE INCLUDED IN THE COST BID FOR THE ASSOCIATED PAY ITEMS.

8. THE CONTRACTOR SHALL NOT PERFORM ANY GRADING OPERATIONS OVER EXISTING WATER AND SEWER FACILITIES WITHIN THE PROJECT WHICH WOULD IN ANY WAY JEOPARDIZE SERVICES UNTIL THE PROPOSED WATER AND SEWER FACILITIES ARE INSTALLED AND PLACED INTO OPERATION AND EXISTING WATER AND SEWER FACILITIES ARE ABANDONED. ANY DEVIATION MUST BE APPROVED BY THE ENGINEER.

9. NOTES ON PLAN SHEETS CONTAINED WITHIN A BOX REFER TO PAY ITEMS INDICATED IN THE QUANTITY SUMMARIES. NOTES ON PLAN SHEETS NOT WITHIN A BOX ARE TO CLARIFY CONSTRUCTION REQUIRED AND SHALL BE INCLUDED IN THE UNIT PRICE FOR THE ASSOCIATED PAY ITEM.

10. ALL ITEMS OF MATERIAL, LABOR, SUPPLIES OR EQUIPMENT THAT ARE NOT SPECIFICALLY ENUMERATED FOR PAYMENT AS SEPARATE ITEMS, BUT WHICH ARE REQUIRED TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS, ARE CONSIDERED INCIDENTAL. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR INCIDENTAL ITEMS.

GENERAL NOTES (CONT'D)

11. CONTRACTOR SHALL FURNISH ONE ELECTRONIC COPY OF ALL SHOP DRAWINGS TO THE ENGINEER PRIOR TO CONSTRUCTION AND/OR INSTALLATION OF JCSA FACILITIES AND RELATED ITEMS. ANY ITEMS INSTALLED PRIOR TO APPROVAL OF SHOP DRAWINGS ARE DONE AT THE CONTRACTOR'S RISK AND MAY BE SUBJECT TO REMOVAL AND CORRECT INSTALLATION AT THE CONTRACTOR'S EXPENSE.

12. SUBMITTALS:

   A. SUBMIT SHOP DRAWINGS (1 COMPLETE SET) OF THE FOLLOWING. IN ADDITION TO SUBMITTALS REQUIRED BY OTHER SECTIONS OF THE CONTRACT DOCUMENTS:
      PIPE, FIRE HYDRANTS
      LONG SOLID SLEEVES,
      VALVES, VALVE BOXES
      AIR VENTS, FITTINGS, GASKETS
      METHOD OF JOINT RESTRAINT
      RESTRAINED JOINTS, RETAINER GLANDS
      DISSIMILAR MATERIAL PIPE JOINTS
      FLUSHIING, TESTING, AND DISINFECTION PROCEDURES
      MANHOLES, MANHOLE CONNECTIONS
      MANHOLE COATINGS, FRAME & COVERS,
      SEQUENCE OF CONSTRUCTION
      BEDDING STONE, SELECT BACKFILL MATERIAL
      COMPACTION EQUIPMENT

13. ITEMS DESIGNATED "TBA" AND/OR // // // // // // // // // ARE TO BE ABANDONED IN PLACE USING FLOWABLE FILL.
ITEMS DESIGNATED "TBR" AND/OR X X X X X X X X X X X X ARE TO BE REMOVED.
ABANDONMENT OR REMOVAL OF EXISTING WATER AND SANITARY SEWER FACILITIES SHALL CONFORM TO SECTION 520 OF THE CURRENT VDOT ROAD AND BRIDGE SPECIFICATIONS AND ALL COSTS FOR ABANDONMENT OR REMOVAL OF ANY EXISTING FACILITIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ASSOCIATED PAY ITEMS.

14. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS.

WATER AND SEWER CONSTRUCTION NOTES

1. NO VALVES OR OTHER CONTROL DEVICES ON THE EXISTING WATER AND SEWER SYSTEMS SHALL BE OPERATED FOR ANY PURPOSE BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY JCSA OPERATIONS AT (757) 757-229-7421.

2. ALL CONNECTIONS TO EXISTING WATER SYSTEMS TO INCLUDE SADDLES, SERVICE LINES, TAPPING SLEEVES, AND VALVES AND DIRECT TAPS, AND CONNECTIONS TO EXISTING SANITARY SEWER SYSTEMS TO INCLUDE SADDLES, LATERALS, MANHOLE CONNECTIONS, FORCE MAIN CONNECTIONS, ETC. SHALL BE SCHEDULED WITH JCSA. THE CONNECTION SHALL BE MADE ONLY IN THE PRESENCE OF JCSA.

3. EXISTING MAINS AND WATER SERVICES SHALL REMAIN IN SERVICE UNTIL NEW MAINS AND SERVICES ARE PLACED IN SERVICE AND APPROVED BY THE ENGINEER. PROPOSED FIRE HYDRANTS SHALL REMAIN COVERED BY MEANS OF SECURELY ATTACHED BURLAP BAGS UNTIL TESTED AND PLACED IN SERVICE.

4. THE CONTRACTOR SHALL NOT INSTALL WATER OR SANITARY SEWER JOINTS BENEATH PROPOSED OR EXISTING UTILITIES OR PROPOSED STORM DRAINAGE CROSSING UNDER THESE STRUCTURES. A MINIMUM OF 24-INCHES BEYOND THE OUTSIDE OF THE FOREIGN PIPE OR UTILITY SHALL BE REQUIRED WHEN PLACING JOINTS, UNLESS OTHERWISE SHOWN ON THE PLANS.

5. INSTALL VALVES WITH OPERATOR STEMS IN THE VERTICAL PLANE THROUGH THE PIPE AXIS AND PERPENDICULAR TO THE PIPE AXIS. LOCATE VALVES AS SHOWN ON DRAWINGS.

6. VALVE STEM EXTENSIONS SHALL BE INSTALLED WHEN THE DISTANCE FROM THE OPERATING NUT TO TOP OF VALVE BOX FRAME IS GREATER THAN 36-INCHES. THE EXTENSION SHALL REPLACE OR BE SECURELY ATTACHED TO THE NORMAL 2-INCH SQUARE OPERATING NUT. SHALL BE AT LEAST AS STRONG AS THE VALVE STEM SHALL BE COATED IN ACCORDANCE WITH AWWA C500 AND C550.

7. WATER MAIN AND SANITARY SEWER PIPE SHALL BE LAID WITH BELL ENDS FACING THE DIRECTION OF LAYING. WHERE GRADE IS 10 PERCENT OR GREATER, PIPE SHALL BE LAID UPHILL WITH BELL ENDS UPGRADE.

8. ALL EXISTING VALVE BOXES, SANITARY SEWER MANHOLES AND CLEAN OUTS SHALL BE RELOCATED AND/OR ADJUSTED TO FINISH GRADE, AS REQUIRED, REGARDLESS IF THEY ARE SHOWN ON THE PLANS.

9. THE CONTRACTOR, WITH HIS ASSOCIATED MATERIALS SUPPLIERS, SHALL PROVIDE CERTIFICATION ACCEPTABLE TO THE ENGINEER, THAT ALL PIPE MATERIALS SUPPLIED ON THE PROJECT MEET OR EXCEED THE SPECIFICATIONS.

10. ALL THRUST PROTECTION INSTALLED UNDER THIS CONTRACT SHALL BE PLACED BEFORE BACK FILLING OF THE TRENCH AND SHALL BE INSPECTED BY THE ENGINEER. TEMPORARY BUTTRESSING FOR TESTING SHALL BE PROVIDED BY THE CONTRACTOR. INSTALLATION OF APPROVED RETAINER GLANDS, TIE RODS, AND OTHER THRUST RESTRAINTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS.

WATER AND SEWER CONSTRUCTION NOTES (CONT'D)

11. ALL IN-LINE VALVES OF ABANDONED WATER MAINS, SHALL BE ABANDONED BY HAVING JCSA OPERATIONS CLOSE THE VALVE. THE CONTRACTOR SHALL THEN REMOVE THE OPERATING NUT AND CASTINGS. BACKFILL WITH SELECT MATERIAL AND PERFORM THE NECESSARY RESTORATION.

12. CONTRACTOR SHALL RESTRAIN EXISTING PIPE AT CONNECTIONS TO PROPOSED PIPE AND AT PLUGS IN ACCORDANCE WITH THE RESTRAINED LENGTH OF PIPE SCHEDULE SHOWN IN THE DRAWINGS.

13. CONTRACTOR SHALL RECORD AND PROVIDE TO THE ENGINEER ACTUAL GROUND TOP OF PIPE ELEVATIONS, ACTUAL STATIONS AND OFFSETS, AT ALL FITTINGS, CONNECTION POINTS AND HORIZONTAL DEVIATIONS GREATER THAN 24-INCHES FROM THE PLANS. STATION REFERENCES SHALL BE TIED TO CONSTRUCTION CENTER LINE FOR THE ROADWAY IMPROVEMENTS. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER WITHIN FIVE (5) DAYS OF COMPLETION OF THE UTILITY ADJUSTMENTS.

14. THE CONTRACTOR SHALL SCHEDULE HYDRANT INSTALLATIONS SO THAT NO TWO HYDRANTS IN LINE WILL BE OUT OF SERVICE AT THE SAME TIME. THE CONTRACTOR SHALL ALSO SEQUENCE EACH HYDRANT INSTALLATION FOR MINIMAL AMOUNT OF DOWNTIME. ALL POSSIBLE TRENCHING AND ASSEMBLY REQUIRED FOR THE NEW HYDRANT SHALL BE DONE PRIOR TO TAKING THE OLD HYDRANT OFF LINE. THE CONTRACTOR SHALL COORDINATE WITH JCSA OPERATIONS FOR TESTING AND PAINTING OF NEW HYDRANTS. FIRE HYDRANT PAINTING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF INSTALLATION.

15. ALL WATER MAINS SHALL BE FULLY FLUSHED, PRESSURE TESTED, DISINFECTED, AND SATISFACTORY BACTERIOLOGICAL SAMPLES OBTAINED. FLUSHING OF WATER MAINS SHALL BE SCHEDULED WITH THE JCSA INSPECTOR A MINIMUM OF 3 BUSINESS DAYS PRIOR TO THE FLUSHING. CONTRACTOR SHALL PROVIDE THE REQUIRED DURATION AND VOLUME TO THE INSPECTOR. FLUSHING WILL BE SCHEDULED ONLY ON MONDAYS, UNLESS AUTHORIZED OTHERWISE BY JCSA.

16. NEW, RELOCATED, OR REPAIRED WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651-14, LATEST REVISION. THE DISINFECTION PROCEDURE SHALL BE CARRIED OUT AFTER COMPLETION OF CONSTRUCTION AND IMMEDIATELY BEFORE THE MAINS AREA PLACED INTO SERVICE. DURING CONSTRUCTION, PRECAUTIONS SHALL BE TAKEN TO PROTECT PIPE INTERIORS, FITTINGS, AND VALVES AGAINST CONTAMINATION. CLEANING AND SWABBING BY ORDINARY FLUSHING AND DISINFECTION PROCEDURES. THE CLEANING AND SWABBING SHALL BE PERFORMED WITH A 5% HYPOCHLORITE DISINFECTION SOLUTION, OR OTHER DISINFECTION AGENT AS APPROVED BY THE JCSA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY TREATING THE DISCHARGE DURING DISINFECTION, TESTING, AND FLUSHING ACTIVITIES IN ACCORDANCE WITH ALL ENVIRONMENTAL REGULATIONS REQUIRED BY JCSA.

17. WATER MAIN TESTING: WATER MAIN TESTING MUST BE WITNESSED BY AUTHORIZED PERSONNEL OF JCSA OPERATIONS AND SHALL BE IN ACCORDANCE WITH AWWA C-600, LATEST REVISION, EXCEPT AS MODIFIED HEREIN OR NOTED OTHERWISE:

   A. WATER FOR THE FIRST PRESSURE TEST WILL BE FURNISHED BY JCSA. IF SUBSEQUENT TESTS ARE REQUIRED AS DETERMINED BY THE ENGINEER, WATER WILL BE PURCHASED AT CONTRACTORS EXPENSE THROUGH A HYDRANT METER OBTAINED FROM JCSA.

   B. TEST PRESSURE SHALL BE 1.5 TIMES THE WORKING PRESSURE OR 150 PSI WHICHEVER IS GREATER MEASURED FROM THE HIGH POINT IN THE LINE.

   C. AFTER THE SPECIFIED PRESSURE IS REACHED AND HAS STABILIZED, ANY PRESSURE DROP DURING THE DURATION OF THE TEST WILL BE CONSIDERED A FAILURE. IF THE PRESSURE IS HIGHER THAN REQUIRED AT THE START OF THE TEST IT SHALL BE THE BASE PRESSURE FOR DETERMINING COMPLIANCE. ANY PRESSURE DROP SHALL BE CONSIDERED A FAILURE.

18. THE CONTRACTOR SHALL NOTE THAT ALL WATER SERVICE CONNECTIONS (FROM MAIN TO METER) WILL BE PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE AT LEAST FIVE (5) DAYS NOTICE AND COORDINATE WITH JCSA OPERATIONS FOR THE TRANSFER OF SERVICES FROM THE EXISTING MAIN TO THE PROPOSED MAIN, BEFORE ACTIVATING ANY PROPOSED WATER MAINS, AND BEFORE DEACTIVATING/ABANDONING ANY EXISTING WATER MAIN.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEWAGE OVERFLOWS OR SPILLAGE DURING SANITARY SEWER SYSTEM CONNECTIONS, ONCE GRAVITY SANITARY SEWER FACILITIES HAVE BEEN SHUT DOWN OR PUMP STATIONS PUMPED DOWN. THE METHOD FOR MAINTAINING SEWAGE CONVEYANCE SHALL BE APPROVED BY JCSA ENGINEERING AND THE ENGINEER PRIOR TO SYSTEM SHUTDOWN.

20. THE CONTRACTOR SHALL UTILIZE STRAPS INSTEAD OF CHAINS, CABLES, OR UNPADDED FORKS TO HANDLE PIPE AND FITTINGS. HANDLING OF LINED DUCTILE IRON FITTINGS - DUCTILE IRON FITTINGS LINED WITH ANY OF THE STANDARD CORROSION RESISTANT LININGS MUST BE HANDLED ONLY FROM THE OUTSIDE OF THE FITTING. NO FORKS, CHAINS CHOKER CABLES, HOOKS OR STRAPS SHALL BE PLACED INSIDE THE PIPE OR FITTINGS FOR LIFTING, RIGGING, POSITIONING, OR LAYING.

COMMONWEALTH OF VIRGINIA
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Whitman Requardt & Associates
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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(1)

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WATER AND SEWER CONSTRUCTION NOTES (CONT'D)

21. ALL SANITARY SEWER PIPE SHALL BE PVC NON-PRESSURE PIPE AT DEPTHS OF 3-FEET TO 12-FEET DEEP. WHERE CONDITIONS DICTATE THAT THE COVER BE LESS THAN 3-FEET, DUCTILE IRON PIPE WILL BE REQUIRED, AND THE INSTALLATION SHALL BE APPROVED BY THE JCSA. FOR DEPTHS OF SEWER EXCEEDING 12-FEET, DUCTILE IRON PIPE SHALL BE USED.

22. ALL NEW GRAVITY SEWER PIPE SHALL BE LOW PRESSURE AIR TESTED IN ACCORDANCE WITH ASTM F1417. TESTING SHALL BE PERFORMED ON ALL GRAVITY SEWER MAINS, INCLUDING SERVICE LATERALS AND CLEANOUTS.

    NO TESTING SHALL BE PERFORMED ON SANITARY SEWER LINES UNTIL 30 DAYS FOLLOWING COMPLETE FILLING OF THE TRENCH TO THE PROPOSED SUBGRADE ELEVATION.

23. ALL NEW GRAVITY SEWER PIPE AND SERVICE LATERALS REQUIRE POST-INSTALLATION CCTV INSPECTION. CCTV INSPECTION SHALL NOT BE PERFORMED UNTIL ALL WORK, INLCUDING ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.

24. ALL NEW AND REHABILITATED (COATED) SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C1244. VACUUM TESTING SHALL BE PERFORMED WITH CHIMNEY RINGS AND CASTINGS INSTALLED.

25. MAINTAIN A 10-FOOT HORIZONTAL SEPARATION OF WATER AND SEWER MAINS, AND AN 18-INCH VERTICAL SEPARATION WHERE HORIZONTAL SEPARATION IS NOT POSSBLE IN CONFORMANCE WITH SECTION 12VAC5-590-1150. SEPARATION OF WATER MAINS AND SEWERS.

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2	UTILITY QUANTITY SUMMARIES	N/A
3	PLAN SHEET - LONGHILL RD. STA. 215+56.36 TO 220+00	3
4	PLAN SHEET - LONGHILL RD. STA. 220+00 TO 227+00	4
5	PLAN SHEET - LONGHILL RD. STA. 227+00 TO 234+00 (WATER)	5
5A	PLAN SHEET - LONGHILL RD. STA. 227+00 TO 234+00 (SEWER)	5A
5B	PLAN SHEET - DEVON RD. SEWER	5B
6	PLAN SHEET - LONGHILL RD. STA. 234+00 TO 241+00	6
7	PLAN SHEET - LONGHILL RD. STA. 241+00 TO 248+00	7
8	PLAN SHEET - LONGHILL RD. STA. 248+00 TO 254+27.45	8
9	PROFILE SHEET - WATER MAIN W-1	N/A
10	PROFILE SHEET - WATER MAIN W-1 (CONT'D.)	N/A
11	PROFILE SHEET - WATER MAIN W-1 (CONT'D.)	N/A
12	PROFILE SHEET - WATER MAIN W-2, W-3, W-4	N/A
13	PROFILE SHEET - WATER MAIN W-5, W-6, W-7	N/A
14	PROFILE SHEET - SANITARY SEWER MAIN S-1	N/A
15	WATER CONSTRUCTION DETAILS	N/A
15A	WATER CONSTRUCTION DETAILS (CONT'D.)	N/A
16	SEWER CONSTRUCTION DETAILS	N/A

NOTE: EACH UTILITY PLAN SHEET HAS A BASE NUMBER WITH A SUFFIX NUMBER IN PARENTHESES (EXAMPLE 14(4), 14(5), ETC.). REFERENCES WITHIN UTILITY ADJUSTMENT PLANS REFER TO THE SUFFIX NUMBER ONLY.

UTILITY ADJUSTMENT PLANS

WATER AND SANITARY SEWER FACILITIES
RTE. 612 (LONGHILL ROAD)
JAMES CITY COUNTY, VIRGINIA

PREPARED BY:
WHITMAN, REQUARDT AND ASSOCIATES
11870 MERCHANTS WALK, SUITE 100
NEWPORT NEWS, VIRGINIA 23606

PROJECT	SHEET NO.
0612-047-631	14(1)

THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER KEN. MCKINNA, PE ..(757)925-2406. _____
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657. _____
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101 _____.
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC.(757) 767-3147) _____.

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(1A)

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

MATERIAL NOTES

1. ALL PRODUCTS SHALL MEET "BUY AMERICA" REQUIREMENTS. EXCEPT AS OTHERWISE SPECIFIED, ALL IRON AND STEEL PRODUCTS (INCLUDING MISCELLANEOUS STEEL ITEMS SUCH AS FASTENERS, NUTS, BOLTS, AND WASHERS) TO BE PERMANMENTLY INCORPORATED INTO THE PROJECT SHALL MEET THE VDOT SPECIAL PROVISIONS FOR USE OF DOMESTIC MATERIAL, LATEST REVISION.

2. DUCTILE IRON WATER MAINS SHALL CONFORM TO AWWA C150 AND C151. CLASS OF PIPE SHALL BE SPECIAL CLASS 52 DIP FOR PIPE SIZES LESS THAN 16-INCH AND SPECIAL CLASS 51 DIP FOR PIPE SIZES GREATER THAN OR EQUAL TO 16-INCH IN ACCORDANCE WITH AWWA C150 TABLE 50.15. FOR BURIAL DEPTHS EXCEEDING THOSE ALLOWED BY THE CLASS, PIPE AND FITTINGS SHALL CONFORM WITH AWWA C110, C115, OR AWWA C153. THE MINIMUM ACCEPTABLE PRESSURE RATING SHALL BE 250 PSI. IF COMPACT FITTINGS ARE USED THEN THE MINIMUM ACCEPTABLE PRESSURE RATING SHALL BE 350 PSI. ALL FITTINGS SHALL BE MECHANICAL JOINT UNLESS NOTED OTHERWISE. DUCTILE IRON WATER MAIN PIPE SHALL BE AS MANUFACTURED BY:

   1. AMERICAN CAST IRON PIPE COMPANY
   2. U.S. PIPE AND FOUNDRY COMPANY
   3. MCWANE DUCTILE IRON PIPE COMPANY

   A. JOINTS: USE PUSH-ON OR MECHANICAL JOINTS CONFORMING WITH ALL APPLICABLE PROVISIONS OF AWWA C111, OR RESTRAINED JOINT AS SPECIFIED BELOW. WHERE FLANGED JOINT PIPE OR FLANGED FITTINGS ARE REQUIRED FOR CONNECTIONS, VERIFY AND COORDINATE BOLT HOLE DRILLING WITH MANUFACTURER. FLANGED JOINTS SHALL CONFORM TO AWWA C115 LATEST REVISION.

   B. DEFLECTION: ALLOWABLE DEFLECTION SHALL BE 50% OF THE MAXIMUM DEFLECTION ALLOWED BY AWWA C600, TABLE 4 AND 5. MECHANICAL JOINTS WITH METAL TIE RODS WILL BE PROHIBITED IN AREAS WHERE PIPE IS DEFLECTED.

   C. EXTERIOR COATING OF ALL DUCTILE IRON PIPE, JOINTS, AND FITTINGS SHALL BE PROVIDED AS REQUIRED BY AWWA C110, C111, C115, C151, OR C153 AS APPLICABLE. ALL PIPES, JOINTS, AND FITTINGS SHALL BE EXAMINED AFTER LAYING TO DETERMINE IF THE COATING HAS BEEN DAMAGED DURING INSTALLATION. ANY DAMAGE AREAS AND ALL JOINTS SHALL BE COATED WITH APPROXIMATELY 1 MIL OF A BITUMINOUS COATING.

   D. INTERIOR LINING FOR ALL WATER MAIN PIPE, FORCE MAIN PIPE AND ALL FITTINGS SHALL BE CEMENT MORTAR LINING IN ACCORDANCE WITH AWWA C104, DOUBLE-LINED THICKNESS INCLUDING ASPHALTIC SEAL.

   E. PIPE RESTRAINING LENGTHS SHALL BE IN ACCORDANCE WITH THE PIPELINE PROFILES. RESTRAINED PIPE SHALL MEET THE FOLLOWING CRITERIA:

   MECHANICAL JOINT PIPE WITH RETAINER GLANDS:
   ALL PIPE WHERE RETAINER GLANDS ARE INSTALLED SHALL HAVE A BRINELL HARDNESS NUMBER (BHN) OF 180-200 TO ALLOW PROPER ACTIVATION OF GLAND. RETAINER GLAND SHALL BE U.L. LISTED AS MANUFACTURED BY: EBBA IRON, INC. SERIES 1100 "MEGALUG"; FORD METER BOX COMPANY, INC. SERIES 1400 "UNI-FLANGE" OR "M.J. GRIPPER" BY U.S. PIPE AND FOUNDRY.

   F. CONNECTIONS: UNLESS OTHERWISE NOTED, CONNECTIONS TO EXISTING MAINS SHALL BE USING M.J. SOLID SLEEVE FITTINGS. SLEEVES SHALL BE LONG PATTERN, SOLID TYPE MADE OF DUCTILE IRON WITH A MINIMUM PRESSURE RATING OF 250 PSI. SLEEVES SHALL BE MANUFACTURED BY THE DUCTILE IRON PIPE MANUFACTURER. THE CONTRACTOR IS REQUIRED TO VERIFY THE OUTSIDE DIAMETER OF THE EXISTING MAINS AND COORDINATE REQUIRED MODIFICATIONS, IF ANY, TO THE SLEEVE AND GLAND (MACHINING AND OTHERWISE) WITH THE MANUFACTURER, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

   G. BEDDING AND BACKFILL: IN ACCORDANCE WITH VDOT STANDARD UB-1, TYPE 2. INITIAL BACKFILL SHALL BE SELECT MATERIAL. TYPE II (MIN. CBR-20) FOR CUT & PARTIAL CUT AREAS ONLY. INITIAL BACKFILL FOR AREAS WHERE EMBANKMENT IS TO BE PLACED TO ACHIEVE SUBGRADE, SHALL BE EXCAVATED EMBANKMENT MATERIAL.

   H. IF ADDITIONAL BENDS (16 IN OR LARGER) ARE REQUIRED, THE PRICE FOR THESE BENDS SHALL BE BASED ON UNIT COST FOR THE ASSOCIATED WATER MAIN PAY ITEM. IF ADDITIONAL BENDS (LESS THAN 16 IN) ARE REQUIRED, THE PRICE FOR THESE BENDS SHALL BE CONSIDERED INCIDENTAL TO THE ASSOCIATED WATER MAIN PAY ITEM.

   I. ALL WATER MAIN PIPING SHALL BE ENCASED IN POLYETHYLENE WRAP. POLYETHYLENE WRAP SHALL HAVE A NOMINAL THICKNESS OF 0.008 IN (8 MILS) AND BE MANUFACTURED OF VIRGIN POLYETHYLENE MATERIAL CONFORMING TO THE REQUIREMENTS OF ASTM D1248. THE ENCASEMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF AWWA C105. THE PRICE FOR THE POLYETHYLENE ENCASEMENT SHALL BE CONSIDERED INCIDENTAL TO THE ASSOCIATED WATER MAIN PAY ITEM.

MATERIAL NOTES (CONT'D)

3. GATE VALVES AND BOXES FOR WATER MAINS FROM 4 INCHES UP TO AND INCLUDING 12 INCHES IN DIAMETER SHALL CONFORM TO AWWA C509 OR C515 LATEST REVISION. GATE VALVES SHALL BE RESILIENT SEATED, HAVING A RUBBER ENCAPSULATED IRON DISC, RATED FOR 150 PSI MINIMUM WORKING PRESSURE, EQUIPPED WITH "O" RING SEALS AND MECHANICAL JOINTS (UNLESS NOTED OTHERWISE), IRON BODY, AND SUITABLE FOR BURIED SERVICE. GATE VALVES SHALL BE VERTICAL, NUT-OPERATED, NON-RISING STEM TYPE. GATE VALVES SHALL BE AS MANUFACTURED BY:

   1. KENNEDY VALVE COMPANY KENSEAL II
   2. MUELLER VALVE COMPANY SERIES 2360
   3. APPROVED EQUAL

   ALL VALVES FOR WATER MAINS SHALL OPEN LEFT (COUNTER CLOCKWISE). ALL INTERIOR FERROUS SURFACES OF ALL VALVES SHALL BE COATED IN ACCORDANCE WITH ANSI/AWWA C550 USING A COATING APPROVED BY THE VIRGINIA DEPARTMENT OF HEALTH FOR CONTACT WITH POTABLE WATER AND SHALL NOT CONTAIN LEAD, COAL TAR RESINS, LAMPBLACK, CARBON BLACK, OR BITUMINOUS MATERIALS. THE EXTERIOR SURFACES SHALL RECEIVE TWO COATS OF A HEAVY COAL TAR COATING OR AN ASPHALTIC VARNISH OR THE MANUFACTURER'S STANDARD EXTERIOR COATING. GATE VALVES AND VALVE BOXES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL ON SHEET 15.

4. BUTTERFLY VALVES SHALL CONFORM TO AWWA C504. UNLESS OTHERWISE INDICATED, BUTTERFLY VALVES SHALL BE SHORTBODY CONFIGURATION. BOLTS AND NUTS SHALL BE STAINLESS STEEL.

   MANUAL OPERATORS SHALL BE OF THE TRAVELING NUT OR WORM GEAR TYPE, SEALED, GASKETED, AND LUBRICATED FOR UNDERGROUND SERVICE.

   THE VALVE SHALL BE OPERABLE WITH A MAXIMUM INPUT OF 150 POUND-FEET ON THE OPERATING NUT, AND BE ABLE TO WITHSTAND AND OVERLOAD INPUT TORQUE OF 450 POUND-FEET AT FULL OPEN AND FULL CLOSED POSITIONS WITHOUT DAMAGE TO THE OPERATOR OR VALVE. THE DISC SHALL BE CAPABLE OF HOLDING IN ANY INTERMEDIATE POSITION WITHOUT CREEP OR FLUTTER. BUTTERFLY VALVES SHALL BE AS MANUFACTURED BY:

   1. M&H STYLE 4500
   2. KEYSTONE FIGURE 504
   3. MUELLER LINESEAL III
   4. PRATT GROUNDHOS

5. FIRE HYDRANTS SHALL BE OF THE DRY BARREL TYPE AND SHALL CONFORM TO AWWA C502. THE HYDRANT FLOW RATE SHALL BE 1250 GALLONS PER MINUTE WITH NOT MORE THAN 5 PSI PRESSURE DROP THROUGH THE STEAMER NOZZLE. FIRE HYDRANTS SHALL HAVE TWO (2) HOSE NOZZLES PLACED 180 DEGREES APART AND ONE (1) STEAMER NOZZLE. OPERATING NUT SHALL TURN LEFT (COUNTER CLOCKWISE) TO OPEN HYDRANT AND THE TRAFFIC COUPLING SHALL ALLOW FOR 360 DEGREE ADJUSTMENT OF THE UPPER STANDPIPE. HYDRANT BASE SHALL BE A 6 INCH MECHANICAL JOINT BELL, DESIGNED FOR CONNECTION TO A HORIZONTAL 6 INCH DUCTILE IRON PIPE HYDRANT BRANCH WITH RETAINER GLANDS. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL ON SHEET 15.

   FIRE HYDRANTS SHALL BE:

   1. MUELLER CENTURION A423
   2. AFC OR AMERICAN DARLING MODEL B84B
   3. KENNEDY GUARDIAN K-81
   4. U.S. PIPE METROPOLITAN 250 MODEL 94

   THE DOME, CHAINS, AND NOZZLES SHALL BE PAINTED GLOSS-WHITE. THE UPPER STAND PIPE SHALL BE PAINTED WITH AN ALKYD GLOSS ENAMEL (COLOR=OSHA RED)

6. AIR RELEASE VALVES

   A. AIR RELEASE VALVES SHALL BE AS INDICATED IN THE DETAIL ON SHEET 16.

   B. BRASS PIPE SHALL BE RED BRASS PIPE MEETING THE REQUIREMENTS OF ASTM B 43. PIPE SIZES, WALL THICKNESS AND DIMENSIONS SHALL MEET THE REQUIREMENTS OF ASTM B251, TABLE 1 FOR REGULAR PIPE. BRASS PIPE FITTINGS SHALL BE SCREWED END MALLEABLE IRON PATTERN MEETING THE REQUIREMENTS OF ANSI B16.15. THEY SHALL BE FINISHED ROUGH, UNLESS OTHERWISE SPECIFIED. UNIONS SHALL BE OF ALL BRASS OR BRONZE WITH GOUND JOINTS AND SHALL BE LEFT SEMI-FINISHED. FITTINGS SHALL BE RATED FOR STEAM WORKING PRESSURE UP TO 125 PSI. JOINTS SHALL BE SCREWED TYPE WITH THREADS CLEAN CUT, TAPERED AND SMOOTH, MEETING THE REQURIEMENTS OF ANSI B2.1.

MATERIAL NOTES (CONT'D)

7. WATER SERVICE CONNECTIONS:

   A. ALL TUBING SHALL BE SEAMLESS, TYPE K SOFT COPPER SUITABLE FOR POTABLE WATER SERVICE IN ACCORDANCE WITH ASTM B-88-88A AND AWWA C-800, LATEST REVISION.

   B. CORPORATION STOPS SHALL BE FULL PORT BALL VALVES OF CAST BRASS ALLOY WITH AWWA TAPER ("CC") THREADED INLET BY COPPER FLAIR OUTLET FOR ¾-INCH THROUGH 1½-INCH SIZES. CORPORATION STOPS SHALL BE AS MANUFACTURED BY FORD METER BOX COMPANY, MUELLER COMPANY OR A. Y. MCDONALD MANUFACTURING COMPANY.

   C. ANGLE VALVES, WITH PADLOCK WINGS, SHALL BE FULL PORT BALL VALVES OF CAST BRONZE WITH COPPER FLARE INLET AND MALE PIPE (NPT) THREADED OUTLET FOR SIZES UP TO AND INCLUDING 1-INCH, AND FLARED OUTLET FOR SIZES LARGER THAN 1-INCH. ANGLE VALVES SHALL BE AS MANUFACTURED BY FORD METER BOX COMPANY, MUELLER COMPANY OR A. Y. MCDONALD MANUFACTURING COMPANY.

   D. WATER METERS AND METER BOXES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS ON SHEET 15. WATER METERS SHALL BE NEPTUNE MODEL T-10, TRU/FLO COMPOUND, OR PROTECTUS III FIRE SERVICE METERS AS MANUFACTURED BY THE NEPTUNE TECHNOGOLY GROUP, INC., OR AS APPROVED BY JCSA, AND SHALL REGISTER IN GALLONS. WATER METERS 2-INCHES AND SMALLER SHALL BE INSTALLED BY JCSA. WATER METER 2-INCH AND LARGER SHALL BE INSTALLED BY THE CONTRACTOR WITH INSTALLATION WITNESSED BY JCSA.

8. CONTRACTOR SHALL ADHERE TO THE VDOT SPECIAL PROVISION FOR CONNECTIONS TO, REMOVAL OF, AND THE HANDLING OF ASBESTOS CEMENT (A/C) PIPE.

9. ALL CONCRETE SHALL BE CLASS A3 IF CAST-IN-PLACE AND CLASS A4 IF PRECAST.

10. ADJUST EXISTING SANITARY SEWER MANHOLE FRAME AND COVER, SEWER CLEANOUTS, VALVE BOXES, AND EXISTING AIR RELEASE VALVE MANHOLE IN ACCORDANCE WITH SECTIONS 510 AND 520 OF THE CURRENT VDOT ROAD AND BRIDGE SPECIFICATIONS. FRAME AND COVER SHALL BE SET FLUSH WITH THE PROPOSED GRADE AND INCLUDING CROSS SLOPES OF PAVEMENTS.

11. SANITARY SEWER POLYVINYL CHLORIDE (PVC) NON-PRESSURE PIPE

   A. PVC PIPE SHALL BE INTEGRAL BELL AND SHALL BE FURNISHED IN 20-FOOT LAYING LENGTHS WITH GASKETED JOINTS, EXCEPT WHERE SPECIFIED OTHERWISE IN THE CONTRACT DOCUMENTS.

   B. PIPE AND FITTINGS SHALL BE MANUFACTURED FROM APPROVED PVC COMPOUND CONFORMING TO ASTM D1784.

   C. PVC PIPE SIZES 4-INCHES THROUGH 15-INCHES IN DIAMETER SHALL CONFORM TO ASTM D3034 SDR 26.

   D. JOINTS SHALL MEET ALL REQUIREMENTS OF ASTM D3034, SECTION 6 AND SHALL CONFORM TO THE PERFORMANCE REQUIREMENTS OF ASTM D3212. RESTRAINED JOINTS SHALL BE PROVIDED WHERE SHOWN IN THE CONTRACT DOCUMENTS.

   E. RUBBER GASKETS SHALL MEET PHYSICAL REQUIREMENTS SPECIFIED IN ASTM F477 AND ASTM D1869.

12. SANITARY MANHOLES

   A. PRECAST CONCRETE MANHOLES SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C478 AND SHALL CONFORM TO THE DETAIL ON SHEET 16.

   B. LIFTING DEVICES SHALL BE USED IN LIEU OF THRU-WALL LIFTING HOLES, UNLESS APPROVED BY THE OWNER. LIFT VOIDS SHALL BE FILLED WITH NON-SHRINK GROUT UPON INSTALLATION. GROUT TO BE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS.

   C. MANHOLE JOINTS SHALL BE SEALED WITH PROFILE GASKET (TYPE 4G MANUFACTURED BY PRESS SEAL CORP. OR EQUAL), OR BUTYL RESIN SEALANTS, OR EQUAL. JOINTS SHALL BE WATERTIGHT. GASKETS AND SEALANTS FOR SECTION JOINTS SHALL MEET THE REQUIREMENTS OF ASTM C443 OR ASTM C990.

   D. THE MANHOLE FRAME AND COVER SHALL CONFORM TO AASHTO M105. FRAME AND COVERS ARE TO BE EVEN GRAINED AND FREE FROM UNSIGHTLY DEFECTS, AND SHALL BE MACHINED TO INSURE A UNIFORM BEARING IN ALL POSITIONS. THE FRAME AND COVER; INCLUDING DUST COVER, LOCKING COVER, AND WATERTIGHT ASSEMBLIES, WHERE REQUIRED, SHALL CONFORM TO THE DETAIL ON SHEET 15. CASTING SHALL BE FINISHED WITH A MINIMUM OF ONE COAT (2 MILS) OF BITUMINOUS ASPHALTIC COATINGS, OR IN ACCORDANCE WITH MANHOLE COATING PROCEDURES, DESCRIBED BELOW.

MATERIAL NOTES (CONT'D)

   E. MANHOLE STEPS SHALL BE CORROSION-RESISTANT AND SHALL BE ONE-HALF INCH GRADE 60 STEEL REINFORCING ROD ENCAPSULATED IN A COPOLYMER POLYPROPYLENE. THE STEPS SHALL CONFORM WITH ASTM C478 AND TO THE DIMENSIONS SHOWN ON THE STANDARD DETAILS.

   F. PIPE CONNECTIONS SHALL BE FLEXIBLE RUBBER PIPE-TO-MANHOLE CONNECTIONS OF THE LOCKED-IN FACTORY ASSEMBLED RUBBER RING TYPE UTILIZING A STAINLESS STEEL BAND AS MANUFACTURED BY NPC, INC. (KOR-N-SEAL), INTERNATIONAL PRECAST SUPPLY FLEXIBLE PIPE, OR PRESS-SEAL GASKET CORP. (PSX OR PRESS BOOT) GASKET ADJUSTABLE RING. THE RESILIENT FLEXIBLE MANHOLE CONNECTOR SHALL CONFORM TO ASTM C443 AND ASTM C923 AND THE STAINLESS STEEL BAND SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS. OTHER FLEXIBLE CONNECTORS MUST BE APPROVED BY THE OWNER.

   G. MANHOLE INVERTS SHALL BE BUILT UP OF BRICKWORK AND CEMENT MORTAR TO MATCH THE INSIDE DIAMETERS OF THE CONNECTING SEWERS (BRICKS SHALL BE SURFACED WITH CEMENT MORTAR, 59*64-INCH THICK AND SHALL BE TROWEL FINISHED). INVERT CHANNELS AND MANHOLE BOTTOMS SHALL BE SHAPED AND SMOOTHED WITH SAND-CEMENT GROUT OR AS OTHERWISE APPROVED BY THE OWNER. INVERTS SHALL HAVE A POSITIVE SLOPE AS INDICATED ON THE DETAIL ON SHEET 15. WHEN BENCHING AND CHANNEL SHAPING IS PERFORMED PRIOR TO MANHOLE FIELD INSTALLATION, ADEQUATE CLEAR SPACE MUST BE PROVIDED TO ALLOW ADJACENT PIPING TO BE PROPERLY INSERTED IN THE MANHOLE AND "BROUGHT HOME" AT THE PIPE JOINT.

   H. TO ENHANCE THE BONDING CAPACITY BETWEEN THE MANHOLE OR STRUCTURE AND A COATING SYSTEM, A CONCRETE SURFACE PROFILE (CSP), AS DEFINED BY THE INTERNATIONAL CONCRETE REPAIR INSTITUTE'S (ICRI) GUIDELINE NO. 03732 DATED JANUARY 1997, AND AS SPECIFIED BY THE COATING MANUFACTURER'S REQUIREMENTS, SHALL BE PROVIDED ON ALL INTERIOR SURFACES OF MANHOLES OR STRUCTURES DESIGNATED TO RECEIVE PROTECTIVE COATINGS.

   I. SECTIONS ARE TO BE ASSEMBLED SO AS TO PROVIDE A PLUMB STRUCTURE WITH UNIFORM BEARING AT ALL JOINTS, AND AT THE BASE SLAB.

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER	12" SAN	12" SAN
WATER MAIN	12" W	12" W
WATER METER & BOX	⊗	⊗
WATER VALVE & BOX	◑	◑
WATER AIR RELEASE VALVE	Ⓦ	●
FIRE HYDRANT	⌖	⌖
SANITARY SEWER MANHOLE	Ⓢ	○ ADJUST ● NEW OR RECONSTRUCT
SEWER CLEANOUT	⋈ ○	● C.O.
SEWER AIR RELEASE VALVE	Ⓢ	●

PROJECT	SHEET NO.
0612-047-631	14(1A)

PROJECT MANAGER K.E.N. MCKINNA, P.E. (757)925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657.
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SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)

MATERIAL NOTES (CONT'D)

13. SANITARY MANHOLE COATINGS

A. PRODUCTS ARE TO BE STORED AND HANDLED ACCORDING TO THIER MATERIAL SAFETY DATE SHEETS AND THE MANUFACTURER'S INSTRUCTIONS.

B. COATINGS ARE TO BE APPLIED TO MANHOLES/ STURUCTURES IN STRICT ACCORDANCE WITH THE COATING MANUFACTURER'S REQUIREMENTS.

C. MANHOLE COATINGS SHALL BE 100% SOLIDS EPOXY IN ACCORDANCE WITH THE FOLLOWING:

1. THE MONOLITHIC HIGH-BUILD EPOXY COATING SHALL CONSIST OF A 100% SOLIDS EPOXY FORMULATED WITH EXCEPTIONALLY HIGH PHYSICAL STRENGTHS AND BROAD RANGE CHEMICAL RESISTANCE. THE COATING SYSTEM COVERAGE SHALL BE A MINIMUM OF 100 MILS AND SHALL BE DETERMINED BY THE MANUFACTURER. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION FOR THE RECOMMENDED THICKNESS.

2. THE EPOXY COATING SHALL HAVE A ONE-YEAR LABOR AND MATERIALS, NON-PRORATED WARRANTY TO STOP INFILTRATION AND FURTHER DETERIORATION OF THE STRUCTURE.

3. THE EPOXY COATING SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS:

TEST	PROPERTY	RESULTS
ASTM-D-790	FLEXURAL STRENGTH	12,443 PSI
ASTM-D-695	COMPRESSIVE STRENGTH, YIELD	12,870 PSI
ASTM-D-638	TENSILE STRENGTH	6,640 PSI
ASTM-D-638	% ELONGATION @ MAX LOAD	1.53%
ASTM-D-2240	HARDNESS, SHORE D	80
ASTM-D-256	IMPACT, IZOD	0.345 FT. LB/IN OF NOTCH

4. THE EPOXY COATING SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS AFTER SEVEN DAY CURING:

TEST	PROPERTY	RESULTS
ASTM-D2240-75	HARDNESS	82 SHORE D
ASTM-638	ULTIMATE ELONGATION	6%

5. CHEMICAL RESISTANCE: THE CORROSION RESISTANCE OF THE EPOXY COATING SHALL BE TESTED BY THE COATING MANUFACTURER IN ACCORDANCE WITH ASTM D543. THE RESULT OF EXPOSURE TO THE CHEMICAL SOLUTIONS LISTED BELOW SHALL PRODUCE LOSS OF NOT MORE THAN 20 % OF THE INITIAL PHYSICAL PROPERTIES WHEN TESTED IN ACCORDANCE WITH ASTM D543 FOR A PERIOD OF NOT LESS THAN 1 YEAR AT A TEMPERATURE OF 73.4^ F PLUS OR MINUS 3.6^ F. FOR APPLICATIONS OTHER THAN MUNICIPAL WASTEWATER, CONDUCT CHEMICAL RESISTANCE TESTS WITH ACTUAL SAMPLES OF THE FLUID TO BE TRANSPORTED THROUGH THE MANHOLE AND IN ACCORDANCE WITH PROCEDURES APPROVED BY THE OWNER.

CONCENTRATIONS OF CHEMICAL SOLUTIONS
FOR CHEMICAL RESISTANCE TEST

CHEMICAL SOLUTION	CONCENTRATION, (%)
TAP WATER (PH 6-9)	100
NITRIC ACID	5
PHOSPHORIC ACID	10
SULFURIC ACID	10
PETROLEUM HYDROCARBON BASED FUELS (E.G. GASOLINE, DIESEL, ETC.)	100
VEGETABLE OIL - 1	100
DETERGENT - 2	0.1
SOAP - 2	0.1
DOMESTIC SEWAGE	100

1 COTTON SEED, CORN, OR MINERAL OIL
2 AS PER ASTM D543

6. OTHER MATERIALS: NO OTHER MATERIAL SHALL BE USED WITH THE ABOVE MIXES WITHOUT PRIOR APPROVAL OR RECOMMENDATION FROM THE MANUFACTURER.

7. THE MANUFACTURER SHALL WARRANT THAT THE PRODUCTS ARE PRODUCED IN CONFORMITY WITH ITS STANDARD SPECIFICATIONS OR FORMULATIONS WITHIN RECOGNIZED TOLERANCES, FREE OF ADULTERATION OR CONTAMINATION, AND THAT THE PRODUCT WILL PERFORM IN ACCORDANCE WITH REPRESENTATIONS IN THE MANUFACTURER'S LITERATURE AND TECHNICAL DATA SHEETS WHEN PROPERLY APPLIED IN STRICT CONFORMANCE WITH THE PRINTED INSTRUCTIONS ON CONTAINER AND PRESCRIBED IN TECHNICAL DATA INSTRUCTIONS AND WHEN APPLIED TO A PROPERLY PREPARED SURFACE.

D. MANHOLE EPOXY COATINGS SHALL BE APPLIED TO A MINIMUM DRY FILM THICKNESS OF 125 MILS.

MATERIAL NOTES (CONT'D)

14. SANITARY MANHOLE FRAME SEALS

A. MANHOLE FRAME SEALS SHALL BE COMPOSED OF FLEXIBLE, PLEATED, HIGH QUALITY RUBBER GLAND WITH STAINLESS STEEL EXPANSION BANDS, AND SHALL BE DESIGNED TO CONFORM TO THE INSIDE SHAPE OF THE CHIMNEY AREA OF THE MANHOLE FRAMES.

1. THE RUBBER GLAND MATERIAL COMPOUND SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ASTM C 923, WITH A MINIMUM TENSILE STRENGTH OF 1,500 PSI,
A MAXIMUM COMPRESSION SET OF 18%, AND A DUROMETER HARDNESS OF 48 (PLUS/MINUS 5).

2. THE MANHOLE FRAME SEALS SHALL BE CONTAINED IN-PLACE ON THE INSIDE OF THE MANHOLE FRAME CHIMNEY AREA THROUGH THE USE OF STAINLESS STEEL EXPANSION BANDS DESIGNED TO EXPAND TO FORM A COMPRESSION SEAL BETWEEN THE RUBBER GLAND AND THE MANHOLE CHIMNEY AREA SURFACE.

3. THE BANDS SHALL BE FABRICATED OF 16 GAUGE TYPE 304 STAINLESS STEEL CONFORMING TO ASTM A 240, AND SHALL BE EQUIPPED WITH A POSITIVE LOCKING, WORM-SCREW TYPE MECHANISM. SCREW HARDWARE SHALL BE TYPE 304 STAINLESS STEEL CONFORMING TO ASTM F 593 AND ASTM F 594.

B. FRAME SEALS SHALL ONLY BE INSTALLED WITH THE CEMENTITIOUS LINING AND EPOXY COATING SYSTEMS. FRAME SEALS ARE NOT REQUIRED WITH THE INSTALLATION OF FIBERGLASS INSERT LINER.

C. ACCEPTABLE MANUFACTURER: CRETEX OR EQUAL.

15. SANITARY MANHOLE FRAME SEALANTS

A. INTERNAL MANHOLE FRAME SEALANT SHALL BE FLEX-SEAL, OR EQUAL, AND SHALL BE COMPOSED OF A CORROSION RESISTANT AROMATIC FLEXIBLE URETHANE RESIN COATING TO BE APPLIED TO THE INTERNAL OR EXTERNAL WALL OF THE ADJUSTMENT RING AREA.

1. THE AROMATIC URETHANE RESIN LINER PRIMER SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS:

TEST	PROPERTY	RESULTS
ASTM-D-1004	TEAR RESISTANCE	210 LB. L/IN
ASTM-D-903	ADHESIVE STRENGTH	400 LB. L/IN
ASTM-D-412	TENSILE STRENGTH	3,200 PSI
ASTM-D-442	ELONGATION	400%
ASTM-D-2240	HARDNESS	85

2. THE AROMATIC URETHANE RESIN LINER FINAL COAT SHALL HAVE THE FOLLOWING MINIMUM REQUIREMENTS:

TEST	PROPERTY	RESULTS
ASTM-D-1004	TEAR RESISTANCE	155 LB. L/IN
ASTM-D-903	ADHESIVE STRENGTH	175 LB. L/IN
ASTM-D-412	TENSILE STRENGTH	1,150 PSI
ASTM-D-442	ELONGATION	800%
ASTM-D-2240	HARDNESS	75

SANITARY MANHOLE REHABILITATION NOTES

1. MANHOLE COATINGS

A. SURFACE PREPARATION

SURFACE PREPARATION IS THE PROCESS BY WHICH SOUND, CLEAN, AND SUITABLY ROUGHENED SURFACES ARE PRODUCED ON CONCRETE SUBSTRATES. THIS PROCESS INCLUDES THE REMOVAL OF UNSOUND CONCRETE AND BOND-INHIBITING FILMS, STRENGTH VERIFICATION, OPENING THE PORE STRUCTURE, VERIFICATION OF MOISTURE CONTENT, AND ESTABLISHING PROFILES SUITABLE FOR THE APPLICATION OF THE SPECIFIED PROTECTIVE SYSTEM.

THE CONTRACTOR AND APPLICATOR MUST ABIDE BY ALL ENVIRONMENTAL CONTROLS AND REQUIREMENTS SPECIFIED IN THE CONTRACT DOCUMENTS DURING SURFACE PREPARATION AND COATINGS APPLICATION. EXCESS DUST, NOISE, VIBRATIONS, AND THE LOSS FROM THE JOB SITE OF CONCRETE DUST AND SLURRIES MUST BE AVOIDED. SLURRIES MUST BE CONTAINED, COLLECTED, AND DISPOSED OF IN AN OWNER APPROVED METHOD. IF CONTRACTOR AND APPLICATOR FAIL TO ADEQUATELY CONTROL EMISSIONS FROM THE WORK SITE, OWNER MAY TAKE ALL NECESSARY CORRECTIVE ACTIONS AND WITHHOLD THE COSTS FOR SUCH FROM MONIES DUE THE CONTRACTOR.

THE CONTRACTOR SHALL ABIDE BY ALL VOSHA AND OTHER APPLICABLE WORK AREA SAFETY AND PROTECTION REQUIREMENTS DURING SURFACE PREPARATION ACTIVITIES.

SANITARY MANHOLE REHABILITATION NOTES (CONT'D)

1. INSTALLATION OF THE EPOXY COATING SHALL NOT COMMENCE UNTIL THE CONCRETE SUBSTRATE HAS PROPERLY CURED AND PREPARED IN ACCORDANCE WITH COATINGS MANUFACTURER'S RECOMMENDATIONS.

2. ALL CONTAMINANTS INCLUDING: OILS, GREASE, UNSOUND OR INCOMPATIBLE EXISTING COATINGS, WAXES, FORM RELEASE AGENTS, CURING COMPOUNDS, EFFLORESCENCE, SEALERS, SALTS, CONCRETE DUST, OR OTHER CONTAMINANTS SHALL BE REMOVED.

3. ALL CONCRETE THAT IS NOT SOUND OR HAS BEEN DAMAGED SHALL BE REMOVED TO A SOUND CONCRETE SURFACE OR REPLACED.

4. TEMPERATURE OF THE SURFACE TO BE COATED SHOULD BE MAINTAINED BETWEEN 40^ F AND 120^ F DURING APPLICATION. PRIOR TO AND DURING APPLICATION, CARE SHOULD BE TAKEN TO AVOID EXPOSURE OF DIRECT SUNLIGHT OR OTHER INTENSE HEAT SOURCE TO THE STRUCTURE BEING COATED. WHERE VARYING SURFACE TEMPERATURES DO EXIST, CARE SHOULD BE TAKEN TO APPLY THE COATING WHEN THE SURFACE TEMPERATURE IS FALLING VERSUS RISING.

5. APPLICATOR SHALL INSPECT ALL SPECIFIED SURFACES PRIOR TO SURFACE PREPARATION. APPLICATOR SHALL NOTIFY THE CONTRACTOR AND THE OWNER WITHIN 24 HOURS OF ALL MANHOLES/STRUCTURES:

A. WHOSE CONCRETE IS NOT SOUND OR HAS BEEN DAMAGED.
B. OR ARE NOT OTHERWISE SUITABLE FOR SURFACE PREPARATION.

6. ONCE THE APPLICATOR AND CONTRACTOR ARE IN AGREEMENT THAT THE SURFACES TO BE COATED ARE IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS, CONTRACTOR SHALL NOTIFY OWNER. THE OWNER, AT ITS DISCRETION, MAY THEN PERFORM INSPECTIONS AS NECESSARY TO ASSURE THAT THE STRUCTURE IS READY FOR THE APPLICATION OF THE COATING SYSTEM.

7. SHOULD ANY SURFACE BE FOUND TO BE INADEQUATE FOR ACCEPTANCE OF COATING, OR SHOULD THE STRUCTURE FAIL TO MEET THE STRUCTURAL REQUIREMENTS OF THE REFERENCED SPECIFICATIONS, SUCH STRUCTURES SHALL BE EITHER REPAIRED TO THE COMPLETE SATISFACTION OF THE OWNER OR REMOVED FROM THE PROJECT SITE AND REPLACED WITH A NEW STRUCTURE, ALL AT NO EXPENSE TO THE OWNER. REPLACEMENT STRUCTURES SHALL BE SUBJECT TO THE SAME REQUIREMENTS FOR STRUCTURAL INTEGRITY AND SURFACE PREPARATION.

B. APPLICATION REQUIREMENTS

1. APPLICATION PROCEDURES SHALL CONFORM TO THE RECOMMENDATIONS OF THE COATING MANUFACTURER, INCLUDING MATERIAL HANDLING, MIXING, ENVIRONMENTAL CONTROLS DURING APPLICATION, SAFETY, AND APPLICATION EQUIPMENT.

2. UNLESS SPECIFIED ELSEWHERE HEREIN, THE APPLICATOR SHALL COMPLY WITH THE MANUFACTURER'S MOST RECENT WRITTEN INSTRUCTIONS WITH RESPECT TO THE FOLLOWING:
A. MIXING OF ALL MATERIALS.
B. STORAGE, PROTECTION AND HANDLING OF ALL MATERIALS.
C. SURFACE PREPARATION HAS BEEN PROPERLY PERFORMED AND SURFACES BROUGHT TO THE APPROPRIATE CSP PROFILE.
D. RECOAT LIMITATIONS AND CURE TIMES.
E. MINIMUM AMBIENT, SUBSTRATE AND ATMOSPHERIC TEMPERATURES,
F. SUBSTRATE'S DEGREE OF DRYNESS, RELATIVE HUMIDITY, AND DEW POINT OF AIR.
G. APPLICATION.
H. FINAL CURING.
I. USE OF PROPER APPLICATION EQUIPMENT.
J. CLEANUP AND DISPOSAL.

3. THE APPLICATOR MUST FOLLOW THE MINIMUM AND MAXIMUM RECOAT LIMITATION TIMES AND RELATED TEMPERATURE RANGE RESTRICTIONS BETWEEN SUCCESSIVE LIFTS, PER MANUFACTURER'S STATED REQUIREMENTS.

4. THE APPLIED COATING SYSTEM SHALL BE PROTECTED FROM DAMAGE DURING CURING AND SHALL BE CURED AS RECOMMENDED BY THE MANUFACTURER. AMBIENT CONDITIONS SHALL BE CONTROLLED AND MAINTAINED DURING CURING AS REQUIRED BY THE MANUFACTURER.

5. THE APPLICATOR SHALL BE RESPONSIBLE FOR COATING ALL OPENINGS, INCLUDING THE TOP OF MANHOLE CONE AND PIPE PENETRATIONS; AND, JOINTS (FOLLOWING FIELD APPLICATION OF GROUTING). ANY DEFICIENCIES IN THE FINISHED COATING SHALL BE REPAIRED BY THE APPLICATOR ACCORDING TO THE PROCEDURES PROVIDED BY THE COATING MANUFACTURER.

6. THE EPOXY COATING SYSTEM SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM TOTAL DRY FILM THICKNESS OF 125 MILS.

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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(1B)

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

SANITARY MANHOLE REHABILITATION NOTES (CONT'D)

C. REHABILITATION PROCEDURES

1. PLACE COVER OVER INVERT TO PREVENT EXTRANEOUS MATERIAL FROM ENTERING THE SEWER LINES.

2. ALL FOREIGN MATERIAL SHALL BE REMOVED FROM THE MANHOLE WALL AND BENCH USING A HIGH-PRESSURE WATER SPRAY (MINIMUM 1200 PSI). LOOSE AND PROTRUDING BRICK, MORTAR, AND CONCRETE SHALL BE REMOVED USING A MASON'S HAMMER AND CHISEL AND/OR SCRAPER. FILL ANY LARGE VOIDS WITH QUICK-SETTING PATCHING MIX. THE SURFACE TO BE REPAIRED MUST BE CLEAN AND FREE OF ANY LOOSE MATERIALS WITH WALLS TOTALLY SATURATED WITH WATER.

3. MINOR LEAKS SHALL BE STOPPED USING THE QUICK-SETTING SPECIALLY FORMULATED INFILTRATION CONTROL MIX AND SHALL BE MIXED AND APPLIED PER MANUFACTURER'S RECOMMENDATIONS. SOME LEAKS MAY REQUIRE WEEP HOLES TO LOCALIZE THE INFILTRATION DURING THE APPLICATION, AFTER WHICH THE WEEP HOLES SHALL BE PLUGGED WITH THE QUICK-SETTING INFILTRATION CONTROL MIX PRIOR TO THE FINAL LINER APPLICATION. WHEN SEVERE INFILTRATION IS PRESENT, DRILLING MAY BE REQUIRED IN ORDER TO PRESSURE GROUT USING A CEMENTITIOUS OR CHEMICAL GROUT. MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED WHEN PRESSURE GROUTING IS REQUIRED.

4. AFTER ALL PREPARATION WORK HAS BEEN COMPLETED, REMOVE ALL LOOSE MATERIAL AND WASH WALL AGAIN.

5. ANY BENCH, INVERT, OR SERVICE LINE REPAIRS SHALL BE MADE AT THIS TIME USING THE QUICK-SETTING PATCHING MIX PER MANUFACTURER'S RECOMMENDATIONS.

6. INVERT REPAIR SHALL BE PERFORMED ON ALL INVERTS WITH VISIBLE DAMAGE OR INFILTRATION. AFTER BLOCKING FLOW THROUGH THE MANHOLE AND THOROUGHLY CLEANING INVERT, THE QUICK-SETTING PATCH MIX SHALL BE APPLIED TO THE INVERT IN AN EXPEDITIOUS MANNER. THE MIX SHALL BE TROWELED UNIFORMLY ONTO THE DAMAGED INVERT EXTENDING OUT ONTO THE BASE OF THE MANHOLE SUFFICIENTLY TO TIE INTO THE STRUCTURAL/STRUCTURALLY ENHANCED MONOLITHIC LINER TO BE APPLIED. THE FINISHED INVERT SURFACES SHALL BE SMOOTH AND FREE OF RIDGES. THE FLOW MAY BE RE-ESTABLISHED IN THE MANHOLE WITHIN 30 MINUTES AFTER PLACEMENT OF THE MIX. UPON COMPLETION OF THE INVERT REPAIR AND LINING, THERE SHALL BE A SMOOTH TRANSITION FROM THE INVERT TO ALL OF THE LINED AND UNLINED INCOMING AND OUTGOING CONNECTIONS.

7. WATERTIGHT SEAL BETWEEN PIPE LINER AND MANHOLE LINER: WHERE A MANHOLE HAS BEEN LINED THROUGH WITH A PIPELINE LINER, THE CONTRACTOR SHALL PREPARE A WATERTIGHT SEAL AND SMOOTH TRANSITION BETWEEN THE PIPE LINER AND MANHOLE LINER SYSTEM. NO LEAKAGE OR GAPS WILL BE ALLOWED. THE METHOD OF SEALING AND PREPARING A SMOOTH TRANSITION SHALL BE APPROVED BY THE OWNER.

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SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)

SANITARY MANHOLE REHABILITATION NOTES (CONT'D)

8. EPOXY MANHOLE MONOLITHIC LINING SYSTEM (EMMLS) INSTALLATION:

A. FIELD ACCEPTANCE OF EMMLS SHALL BE BASED ON THE OWNER'S EVALUATION OF THE PROPER MONOLITHIC LINING OF THE MANHOLE. FIELD ACCEPTANCE SHALL ALSO BE BASED ON THE OWNER'S EVALUATION OF THE APPROPRIATE INSTALLATION AND CURING TEST DATA ALONG WITH REVIEW OF THE MANHOLE INSPECTIONS.

B. THE EMMLS SHALL PROVIDE A CONTINUOUS MONOLITHIC LINING WITH UNIFORM THICKNESS THROUGHOUT THE MANHOLE INTERIOR. IF THE THICKNESS OF THE EMMLS IS NOT UNIFORM OR IS LESS THAN SPECIFIED, IT SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

C. THE OWNER WILL MEASURE THE EMMLS CURED THICKNESS BY PHYSICALLY CUTTING THROUGH THE LINING (BY DRILLING OR CORING) AND MAKING A DIRECT MEASUREMENT. THERE WILL BE UP TO TWO THICKNESS MEASUREMENT LOCATIONS IN EACH EMMLS MANHOLE. A SUITABLE NON-DESTRUCTIVE TYPE OF THICKNESS MEASUREMENT MAY ALSO BE USED.

D. ALL THE EMMLS THICKNESS MEASUREMENT LOCATIONS SHALL BE REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THESE REPAIRS SHALL BE INCLUDED IN THE TWO YEAR EMMLS GUARANTEE.

E. THE CONTRACTOR SHALL ALSO PERFORM IN-PLACE TESTING IN EACH MANHOLE TO VERIFY THE ADHESION OF THE EMMLS TO THE EXISTING MANHOLE SUBSTRATE. ADHESION STRENGTH TESTS SHALL BE IN ACCORDANCE WITH ASTM D7234 AND THE TEST AREA SHALL BE ISOLATED FROM THE REMAINING PORTION OF THE MANHOLE BY CORING THROUGH THE LINER INTO THE SUBSTRATE. TWO TESTS SHALL BE PERFORMED IN EACH MANHOLE AT LOCATIONS DIRECTED BY THE OWNER. TESTING SHALL CONSIST OF A CALIBRATED PULL TEST. ALL EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR. SAMPLES MUST MEET A MINIMUM PRESSURE RESISTANCE OF 400 PSI.

F. THERE SHALL BE NO CRACKS, VOIDS, PINHOLES, UNCURED SPOTS, DRY SPOTS, LIFTS, DELAMINATIONS OR OTHER TYPE DEFECTS IN THE EMMLS.

D. MANHOLE FRAME AND COVER REPLACEMENT

1. EXCAVATION AND SITE RESTORATION IN PAVED AND UNPAVED AREAS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF VDOT ROAD AND BRIDGE SPECIFICATIONS TO A MINIMUM OF ESTABLISHED PRE-CONSTRUCTION CONDITIONS.

2. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING MANHOLE FRAMES AND COVERS, AS SPECIFIED IN THE CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER, TO REPAIR ANY DAMAGE TO THE CHIMNEY OR CORBEL CAUSED BY THE REMOVAL OF THE EXISTING MANHOLE FRAME.

3. NEW REPLACEMENT FRAMES AND COVERS SHALL BE AS SPECIFIED IN THE MATERIAL NOTES AND DETAILS.

4. REPAIR OF MANHOLE CHIMNEY AND CORBEL, REQUIRING EXCAVATION (WHEN DIRECTED BY THE OWNER):

5. IN PAVED AREAS:

A. THE REMOVAL OF THE MANHOLE FRAME SHALL BE ACCOMPLISHED BY MAKING A SQUARE CUT OF SUFFICIENT SIZE IN THE PAVEMENT.

B. MATERIAL IN THE EXPOSED AREA SHALL BE DUG OUT TO A SUFFICIENT DEPTH TO PERMIT THE REQUIRED REPAIRS. ALL EXCESS MATERIAL, INCLUDING PAVEMENT, SHALL BE DISPOSED OF IN ACCORDANCE WITH VDOT ROAD AND BRIDGE STANDARDS.

C. BACKFILL MATERIALS SHALL BE IN ACCORDANCE WITH VDOT ROAD AND BRIDGE STANDARDS.

D. BACKFILL SHALL BE REPLACED AND COMPACTED TO PREVENT SETTLEMENT AND TO RESTORE THE SETTING TO A CONDITION EQUAL TO OR BETTER THAN THAT FOUND. BACKFILL SHALL NOT COVER THE MANHOLE.

E. THE SURFACING NEEDED TO COVER THE EXPOSED AREA (CONCRETE OR ASPHALT) SHALL CONFORM TO THE EXISTING PAVEMENT. IT SHALL BE PLACED TO THE SAME ELEVATION AND GRADE AND HAVE A THICKNESS EQUAL TO OR GREATER THAN THE EXISTING PAVEMENT.

F. REPLACEMENT OF PAVEMENT NOT SATISFACTORILY PERFORMED BY THE CONTRACTOR SHALL BE REWORKED AT NO EXPENSE TO THE OWNER.

SANITARY MANHOLE REHABILITATION NOTES (CONT'D)

6. IN UNPAVED AREAS:

A. ONLY NECESSARY EXCAVATION AROUND MANHOLE SHALL BE PERFORMED.

B. BACKFILL SHALL BE REPLACED AND COMPACTED TO PREVENT SETTLEMENT AND TO RESTORE THE SETTING TO A CONDITION EQUAL TO OR BETTER THAN THAT FOUND. BACKFILL SHALL NOT COVER THE MANHOLE.

C. ANY PRIVATE PROPERTY ELEMENT OR STRUCTURE THAT IS REMOVED FOR ACCESS TO THE MANHOLE SHALL BE REPLACED BY THE CONTRACTOR TO EXISTING OR BETTER CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.

D. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FALLING DEBRIS FROM DAMAGING THE MANHOLE TROUGH AND/OR ENTERING THE SEWER. THE DAMAGED OR DETERIORATED PORTIONS OF THE EXISTING MANHOLE CHIMNEY AND CORBEL SHALL BE REMOVED AND PROPERTY DISPOSED OF BY THE CONTRACTOR.

E. THE CHIMNEY AND CORBEL SHALL BE REPAIRED OR REBUILT WITH NEW BRICK OR PRECAST CONCRETE GRADE RINGS AS APPROPRIATE TO RECONSTRUCT THE CHIMNEY TO THE HEIGHT NEEDED FOR THE FRAME AND COVER TO MEET THE REQUIRED GRADE. THE MANHOLE FRAME SHALL BE SEALED USING EITHER A MANUFACTURED OR APPLIED SEALING METHOD.

E. INTERIOR FLEXIBLE CHIMNEY SEALANTS

1. INTERIOR FLEXIBLE CHIMNEY SEALANTS SHALL PROVIDE CORROSION PROTECTION AND PREVENT INFILTRATION THROUGH THE INTERIOR OF THE MANHOLE FRAME AND CHIMNEY AREA OF THE MANHOLE. INTERIOR FLEXIBLE CHIMNEY SEALANTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. INTERIOR FLEXIBLE CHIMNEY SEALANTS SHALL PREVENT LEAKAGE OF WATER INTO THE MANHOLE THOUGH THE FRAME JOINT AREA AND THE AREA ABOVE THE MANHOLE CONE INCLUDING ALL EXTENSIONS TO THE CHIMNEY AREA. THE SEALANT SHALL REMAIN FLEXIBLE ALLOWING FOR REPEATED VERTICAL OR HORIZONTAL MOVEMENTS OF THE FRAME DUE TO FROST LIFT, GROUND MOVEMENT, OR THE THERMAL MOVEMENT OF PAVEMENT. THE FINAL LINER MATERIAL SHALL BE MADE OF NO LESS THAN 170 MILS OF CORROSION RESISTANT FLEXIBLE URETHANE RESIN COATING TO BE APPLIED TO THE INSIDE WALL OF THE ENTIRE CHIMNEY AREA AS DESCRIBED ABOVE. THE PRODUCT SHALL HAVE A MINIMUM ELONGATION OF 800% AND A DUROMETER HARDNESS OF 75. FINAL LINER SHALL HAVE A MINIMUM TENSILE AND ADHESION STRENGTHS OF 1150 PSI AND 175 LB. L/IN. RESPECTIVELY. THE MANHOLE SEALANT SHALL CONFORM TO THE PHYSICAL REQUIREMENTS OF ASTM D412 STANDARD TEST METHODS FOR VULCANIZED RUBBER AND THERMOPLASTIC RUBBERS AND THERMOPLASTIC ELASTOMERS-TENSION.

2. SEALANT SHALL EQUAL OR EXCEED "FLEX-SEAL" AS MANUFACTURED BY SEALING SYSTEMS, INC., LORETTO, MN

F. LINER AND COATING ACCEPTANCE AND TESTING

1. THE OWNER MAY ENTER THE MANHOLES TO INSPECT THE BENCHING, INVERT CHANNELS, MANHOLE WALL/PIPE CONNECTIONS, SURFACE PREPARATION, AND OTHER PARTS OF THE WORK. THE CONTRACTOR SHALL PROVIDE FORCED AIR VENTILATION, GAS MONITORS AND DETECTORS, HARNESSES, LIGHTS, ETC. FOR THE OWNER TO ENTER THE MANHOLE AND PERFORM THE INSPECTION IN COMPLETE ACCORDANCE WITH OSHA REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

2. THE FINISHED MANHOLE SURFACE SHALL BE CONTINUOUS AND AS FREE AS COMMERCIALLY PRACTICABLE FROM SIGNIFICANT DEFECTS. ANY DEFECTS WHICH WILL AFFECT, IN THE FORESEEABLE FUTURE, OR WARRANTY PERIOD, THE INTEGRITY OR STRENGTH OF THE MANHOLE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, IN A MANNER MUTUALLY AGREED UPON BY THE OWNER AND THE CONTRACTOR.

3. THERE SHALL BE NO CRACKS, VOIDS, PINHOLES, UNCURED SPOTS, DRY SPOTS, LIFTS, DELAMINATIONS OR OTHER TYPE DEFECTS IN THE LINER. IF ANY DEFECTS ARE DISCOVERED AFTER LINER HAS BEEN INSTALLED, IT SHALL BE REPAIRED OR REPLACED IN A SATISFACTORY MANNER WITHIN 72 HOURS AND AT NO ADDITIONAL COST TO THE OWNER. THIS REQUIREMENT SHALL APPLY FOR THE ENTIRE GUARANTEE PERIOD.

4. ACTIVE INFILTRATION THROUGH THE LINING SYSTEM BE ZERO.

5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING TESTING TIMES WITH THE ENGINEER SCHEDULE AS THE FIELD REPRESENTATIVE MAY BE INVOLVED IN OTHER TASKS FOR SCOPE ON THIS PROJECT.

6. EPOXY MANHOLE MONOLITHIC LINING SYSTEM (EMMLS)

A. VISUALLY VERIFY THE ABSENCE OF LEAKS.

B. HOLIDAY DETECTION TEST: A HOLIDAY DETECTION TEST SHALL BE PERFORMED IN ACCORDANCE WITH

C. PULL OFF TEST IN ACCORDANCE WITH ASTM D4541 WITH A MINIMUM ACCEPTABLE PULL STRENGTH OF 250PSI. THE FAILURE POINT OF THE PULL MUST LOCATED WITHIN THE SUBSTRATE NOT WITHIN THE COATING THICKNESS.

D. A VACUUM TEST CONFORMING TO THE REQUIREMENTS OF ASTM C1244 SHALL BE PERFORMED BY THE CONTRACTOR ON EVERY MANHOLE PRIOR TO ACCEPTANCE.

SANITARY MANHOLE REHABILITATION NOTES (CONT'D)

7. VACUUM TEST:

A. THE VACUUM TEST SHALL BE IN ACCORDANCE WITH ASTM C1244. VACUUM TESTING SHALL BE PERFORMED WITH CHIMNEY RINGS AND CASTINGS INSTALLED. VACUUM TESTS ARE REQURIED ON COATED MANHOLES.

B. ALL PIPE ENTRIES INTO THE MANHOLE SHALL BE PLUGGED. THE COMPRESSION BAND OF THE MANHOLE VACUUM TESTING EQUIPMENT SHALL BE INFLATED TO CREATE A SEAL BETWEEN THE VACUUM EQUIPMENT BASE AND THE TOP OF THE MANHOLE.

C. IF THE CONTRACTOR BACKFILLS AROUND THE MANHOLE PRIOR TO TESTING, TEN (10) INCHES OF MERCURY SHALL BE APPLIED TO THE MANHOLE AND THE TIME MEASURED FOR THE VACUUM TO DROP FROM 10-INCHES TO 9-INCHES SHALL BE RECORDED. THE TEST DURATION FOR A 48-INCH DIAMETER MANHOLE IS 60 SECONDS; THE TEST DURATION FOR A 60-INCH DIAMETER MANHOLE IS 75 SECONDS.

D. IF THE VACUUM DROP IS GREATER THAN 1-INCH OF MERCURY DURING THE TEST PERIOD, NECESSARY REPAIRS SHALL BE MADE AND THE VACUUM TEST AND REPAIRS SHALL BE REPEATED UNTIL THE MANHOLE PASSES THE TEST.

E. APPROPRIATE CONSIDERATION/ADJUSTMENT SHALL BE GIVEN TO MANHOLES THAT HAVE BEEN BACKFILLED PRIOR TO THE VACUUM TEST PER ASTM C1244.

8. COATING SYSTEMS SHALL BE TESTED DURING COATING APPLICATIONS AND AFTER MANHOLES HAVE BEEN INSTALLED.

A. DURING COATING THE APPLICATOR SHALL REGULARLY PERFORM AND RECORD COATING THICKNESS USING A WET FILM THICKNESS GAUGE MEETING ASTM D4414 - STANDARD PRACTICE FOR MEASUREMENT OF WET FILM THICKNESS OF ORGANIC COATINGS BY NOTCHED GAUGES, TO ENSURE A MONOLITHIC COATING AND UNIFORM THICKNESS DURING APPLICATION. A MINIMUM OF THREE (3) READINGS PER 200 SQUARE FEET OF SURFACE AREA SHALL BE RECORDED. APPLICATOR SHALL SUBMIT DOCUMENTATION ON THICKNESS READINGS TO THE OWNER ON A DAILY BASIS WHEN COATING APPLICATION IS UNDERWAY.

B. THE APPLICATOR SHALL PERFORM HOLIDAY TESTING ON ALL COATED SURFACES IN THE PRESENCE OF THE OWNER. AFTER THE COATING HAS DRIED AND SET HARD TO THE TOUCH, AN INDUCED HOLIDAY SHALL THEN BE INTRODUCED ON THE COATED CONCRETE SURFACE AND SHALL SERVE TO DETERMINE THE MINIMUM/MAXIMUM VOLTAGE TO BE USED TO TEST THE COATING FOR HOLIDAYS AT THE PARTICULAR AREA.

C. THE SPARK TESTER SHALL BE INITIALLY SET AT 100 VOLTS PER 1 MIL OF FILM THICKNESS APPLIED BUT MAY BE ADJUSTED AS NECESSARY TO DETECT THE INDUCED HOLIDAY (REFER TO NACE RP0188-99). ALL DETECTED HOLIDAYS SHALL BE MARKED AND REPAIRED BY ABRADING THE COATING SURFACE WITH GRIT DISK PAPER OR OTHER HAND TOOLING METHOD. AFTER ABRADING AND CLEANING, ADDITIONAL COATING MATERIAL CAN BE HAND APPLIED TO THE REPAIR AREA. ALL TOUCH-UP AND REPAIR PROCEDURES SHALL FOLLOW THE COATING MANUFACTURERS RECOMMENDATIONS.

D. AFTER MANHOLES HAVE BEEN INSTALLED AND ALL REQUIRED TESTING OF COATINGS AND ASSEMBLY HAVE BEEN PERFORMED, THE OWNER WILL PERFORM A VISUAL TEST TO VERIFY THAT NO DAMAGE TO THE COATING SYSTEM OCCURRED DURING INSTALLATION. ANY DEFICIENCIES IN THE FINISHED COATING SHALL BE MARKED AND REPAIRED BY THE APPLICATOR ACCORDING TO THE PROCEDURES PROVIDED BY THE COATING MANUFACTURER.

9. FINAL ACCEPTANCE

A. AFTER THE VARIOUS TYPES OF REHABILITATION WORK HAVE BEEN COMPLETED, THE WORK SHALL BE VISUALLY INSPECTED FOR COMPLIANCE AND TESTED FOR WATER TIGHTNESS BY THE CONTRACTOR IN THE PRESENCE OF THE OWNER. IF A WATER TIGHTNESS TEST CANNOT BE CONDUCTED ON THE PROPOSED PRODUCT AND/OR REHABILITATED MANHOLE, THE CONTRACTOR SHALL NOTE THAT WITH THE MANHOLE REHABILITATION PRODUCT SHOP DRAWING SUBMITTALS AND SHALL PROVIDE AN ALTERNATE TEST METHOD FOR REVIEW AND APPROVAL BY THE OWNER, AT NO ADDITIONAL EXPENSE TO THE OWNER. IF A POST-REHABILITATION WATER TIGHTNESS TEST IS NOT PROVIDED, THE CONTRACTOR WILL NOT RECEIVE FULL COMPENSATION FOR THE MANHOLE REHABILITATION TASKS. THE OWNER RESERVES THE RIGHT TO INSPECT THE REHABILITATED MANHOLES DURING THE WARRANTY PERIOD. ANY LEAKAGE OR DEFECTS IN THE WORK FOUND BY THIS INSPECTION SHALL BE CORRECTED BY THE CONTRACTOR WITHIN 30 DAYS FROM NOTICE, AT NO ADDITIONAL COST TO THE OWNER.

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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

SEQUENCE OF CONSTRUCTION

1. EXECUTE THE FOLLOWING INSTALLATIONS IN THE SEQUENCE INDICATED. PROCEDURE FOR ACCOMPLISHING EACH INSTALLATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ALL MATERIAL, EQUIPMENT, LABOR AND APPURTENANCES (INCLUDING TEMPORARY PLUGS, COUPLINGS, ETC.) REQUIRED TO ACCOMPLISH INSTALLATIONS IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION SHALL BE INCLUDED IN THE BID COST FOR THE ASSOCIATED PAY ITEM. AN ALTERNATE SEQUENCE MAY BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. THE ENTIRE LENGTH OF MAIN LINE UTILITY ADJUSTMENTS SHALL BE CONSTRUCTED, TESTED, AND DISINFECTED AS REQUIRED BY SPECIFICATIONS PRIOR TO CONNECTION WITHOUT INTERRUPTION TO ANY EXISTING SERVICE. CONNECTION PIPING SHALL BE TESTED AND DISINFECTED AS REQUIRED BY THE SPECIFICATIONS.

2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE PROPOSED WATER FACITIES SHOWN ON THESE PLANS WITH THE PHASING OF THE ROADWAY CONSTRUCTION AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS. AS A RESULT, THE UTILITY ADJUSTMENTS AND RELOCATIONS MAY REQUIRE MULTIPLE MOBILIZATIONS OR EQUIPMENT AND MATERIALS ASSOCIATED WITH PHASED CONSTRUCTION, IF MULTIPLE MOBILIZATIONS ARE REQUIRED TO COORDINATE THE INSTALLATION OF IN-PLAN UTILITIES WITH THE SEQUENCE OF CONSTRUCTION, THEN THE COST SHALL BE INCLUED IN THE UNIT PRICE BID FOR SUPPLYING AND INSTALLING D.I. WATER MAIN.

3. LANE CLOSURES AND STOPPAGES OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS.

4. RESTRAINT OF ALL EXISTING PIPE SHALL BE PERFORMED TO THE EXTENT POSSIBLE PRIOR TO ANY OUTAGE OF UTILITY SERVICE.

5. OFFSETS AND OTHER ADJUSTMENTS SHALL BE PRE-FABRICATED TO THE EXTENT POSSIBLE PRIOR TO THE OUTAGE.

6. THE DEFINITION OF TERMS USED IN THE SEQUENCE OF CONSTRUCTION ARE AS FOLLOWS:

SHUTDOWN: SHUTDOWN OF JCSA WATER AND SEWER SHALL BE IN ACCORDANCE WITH GENERAL NOTES AND LIMITED TO THE DAYS/ HOURS INDICATED BELOW, EXCLUSIVE OF HOLIDAYS.

WATER MAIN - 7:00 A.M. TO 4:00 P.M. (MONDAY THROUGH FRIDAY).

GRAVITY SEWER - NO SHUTDOWN ALLOWED.

INSTALL: ALL EFFORTS REQUIRED TO EXCAVATE, ASSEMBLE AND PLACE PIPE AND BACK FILL IN ACCORDANCE WITH PLANS AND SPECIFICATIONS. ALL INSTALLATIONS SHALL BE TESTED, CHLORINATED AND/OR DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS STATED ABOVE.
SEWER.

CONNECTIONS: PIPE ASSEMBLIES, SLEEVES, FITTINGS, VALVES, TEMPORARY AND/OR PERMANENT PLUGS AND COUPLINGS AS INDICATED ON THE PLANS OR AS REQUIRED TO ACHIEVE SEQUENCE OF CONSTRUCTION AT LOCATIONS WHERE PROPOSED WORK MEETS EXISTING FACILITIES.

ACTIVATE: UPON COMPLETION OF INSTALLATION, TESTING AND THE ENGINEER'S APPROVAL IN ACCORDANCE WITH PLANS AND SPECIFICATIONS, PLACE THE FACILITY INTO OPERATION.

7. TRANSFER OF INDIVIDUAL WATER SERVICES SHALL BE CONDUCTED BY JCSA OPERATIONS. CONTRACTOR SHALL CONTACT JCSA OPERATIONS AT (757) 229-7421.

8. SEQUENCE

A. TYPICAL SEQUENCE FOR RELOCATIONS
1. PHASE 1: INSTALL AND TEST NEW WATER MAIN PIPING UP TO APPROXIMATELY STA. 234+00. SUPPORT OR RESTRAIN EXISTING UTILITIES DURING INSTALLATION, AS REQUIRED. TEMPORARILY CONNECT PHASE 1 NEW WATER MAIN TO EXISTING WATER MAIN. ABANDON PORTION OF 12" WATER MAIN EAST OF STA. 234+00.
2. PHASE 2: INSTALL AND TEST NEW WATER MAIN PIPING FROM STA. 234+00 TO STA. 216+00. ONCE PHASE 2 WATER MAIN HAS BEEN TESTED CONNECT TO PHASE 1 WATER MAIN. INSTALL AND TEST NEW SANITARY SEWER GRAVITY MAIN. SUPPORT OR RESTRAIN EXISTING UTILITIES DURING INSTALLATION, AS REQUIRED. ABANDON REMAINING 12" WATER MAIN.
3. SHUT DOWN EXISTING UTILITY SERVICE. MAINTAIN CONTINUOUS RELIABILITY OF THE SANTIARY SEWER SYSTEM.
4. REMOVE EXISTING UTILITY AS REQUIRED TO ACCOMMODATE CONNECTIONS. MAKE CONNECTIONS TO EXISTING UTILITY.
5. ACTIVATE EXISTING UTILITY. CONDUCT VISUAL INSPECTION OF THE CONNECTIONS PRIOR TO BACKFILLING.
6. ABANDON OR REMOVE EXISTING UTILITY, AS REQUIRED.

12/12/2018
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THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER KEN. MCKINNA, PE. (757)925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657.
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(2)

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

LONGHILL ROAD SUMMARY OF WATER MAIN PAY ITEMS

SHEET NO.	¾" WATER SERVICE LINE	1" WATER SERVICE LINE	4" D. I. WATER MAIN	6" D. I. WATER MAIN	8" D. I. WATER MAIN	12" D. I. WATER MAIN	16" D. I. WATER MAIN	4" GATE VALVE & BOX	6" GATE VALVE & BOX	8" GATE VALVE & BOX	12" GATE VALVE & BOX	16" BUTTERFLY VALVE & BOX	FIRE HYDRANT	⅝" WATER METER & BOX	2" AIR RELEASE VALVE & BOX	SHEET NO.
	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	
3	15	-	-	5	-	84	415	-	1	-	1	1	1	-	2	3
4	-	-	50	12	53	-	705	1	1	1	-	1	1	1	2	4
5	-	12	-	31	13	-	956	-	2	2	-	3	2	-	2	5
6	-	-	92	-	-	19	836	1	-	-	2	3	-	-	2	6
7	-	-	-	9	-	-	680	-	1	-	-	1	1	-	-	7
8	-	-	-	8	8	188	495	-	1	1	1	3	1	-	-	8
TOTAL	15	12	142	65	74	291	4,087	2	6	4	4	12	6	1	8	TOTAL

LONGHILL ROAD SUMMARY OF WATER MAIN PAY ITEMS (CONT'D)

SHEET NO.	16" BEND (90°)	16" BEND (45°)	16" BEND (22 ½°)	16" BEND (11 ¼°)	16" BRANCH (16" x 16" TEE)	16" BRANCH (16" x 12" TEE)	16" BRANCH (16" x 8" TEE)	16" BRANCH (16" x 6" TEE)	16" BRANCH (16" x 4" TEE)	16" REDUCER (16" x 12")	16" SOLID SLEEVES	CONNECT TO EXIST. AC PIPE	REMOVAL OF EXIST. AC PIPE	SHEET NO.
	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	L.F.	
3	2	8	-	2	-	1	-	1	-	1	-	1	88	3
4	-	8	1	4	-	-	1	1	1	-	-	-	31	4
5	-	9	2	2	1	-	2	2	-	1	-	1	70	5
6	-	7	2	5	-	2	-	-	1	-	-	-	-	6
7	-	2	1	1	-	-	-	1	-	-	-	-	-	7
8	-	4	-	1	-	1	1	-	-	-	1	-	-	8
TOTAL	2	38	6	15	1	4	4	5	2	2	1	2	189	TOTAL
	TOTAL 16" BENDS = 61				TOTAL 16" BRANCHES = 15									

LONGHILL ROAD SUMMARY OF SANITARY SEWER PAY ITEMS

SHEET NO.	8" SAN. SEWER PIPE	SANITARY SEWER MANHOLE	ADJUST EXIST FRAME & COVER	MANHOLE FRAME & COVER WF & C-1	RECONSTRUCT EXISTING SANITARY MANHOLE	SHEET NO.
	L.F.	L.F.	EA.	EA.	L.F.	
3	-	-	-	-	-	3
4	-	-	2	1	12	4
5A	197	11	2	2	12	5A
5B	146	11	-	1	-	5B
6	-	-	-	-	-	6
7	-	-	-	-	-	7
8	-	-	-	-	-	8
TOTAL	343	22	4	4	24	TOTAL

12/12/2018
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PROJECT MANAGER KEN. MCKINNA, PE. (757) 925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)
HAMPTON ROADS DISTRICT DESIGN UNIT

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(3)

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

LONGHILL RD.

Utility Owners

Water and Sewer:
James City Service Authority
119 Tewning Road
Williamsburg, VA 23188
Michael Youshock
757.259.5451

Hampton Roads Sewer District
1436 Air Rail Avenue
Virginia Beach, VA 23455
757.460.2261

Power:

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell

Telecomm:

Cox Communications
Vicki Kincaid
HFC Designer III/EAST REGION Design Team
757-222-6579 / 757-369-6261

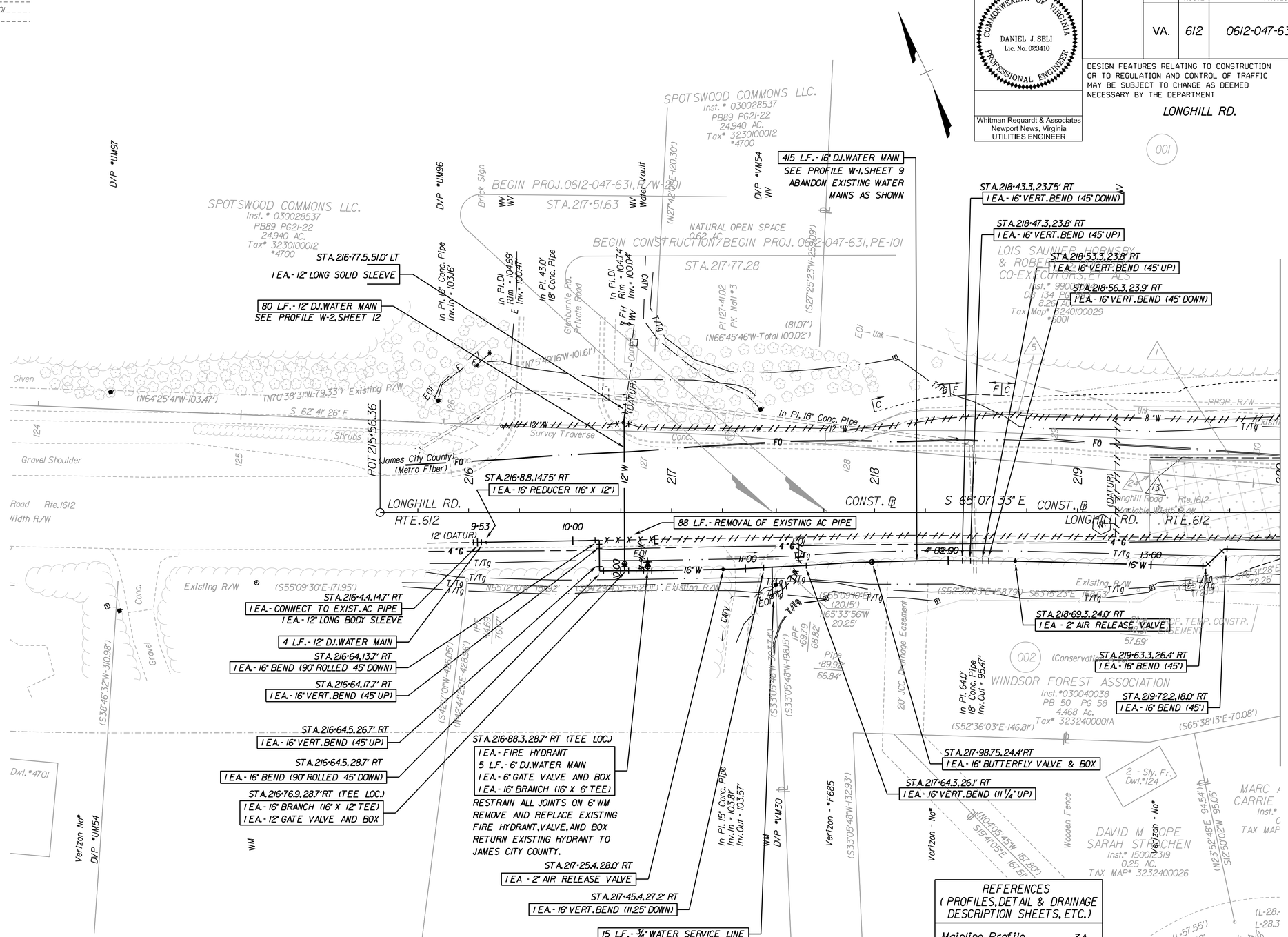
Verizon
William C. Swann Jr
Verizon Virginia Inc.
Outside Plant Engineering
Highway Department
2600 Brittons Hill Rd
2nd Floor
Richmond, VA 23230
804.772.4409
804.772.5978

James City Information
Mike Bowler
757-890-0143
Metro Fiber
Ray Dehart
757-876-9637

Gas:

Virginia Natural Gas
150 W. Main St.
Norfolk, VA 23502
757-455-2000

Kevin D. Starke
Senior Engineering Technician
Engineering Services
757-616-7529 office
757-449-0825 mobile
757-616-7517 fax



LEGEND

- Denotes Drainage Structure Number
- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' ·00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
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- [00' ·00] — Figures in double brackets and dot - dot - dashed lines denote Permanent Utility Easements.
- (1) Denotes existing structure & pipe to be removed.
- (2) Denotes existing structure & pipe to be cleaned out.
- Denotes Prop. Pavement
- Denotes Pavement to be Milled and Overlaid
- 1 ST'D. CG-7 REQ'D.
- 2 RAD. CG-7 REQ'D.
- 3 ST'D. CG-3 REQ'D.
- 4 ST'D. MS-2 REQ'D.
- 5 10' SHARED USE PATH
- 6 5' CEM. CONC. SIDEWALK

NOTES
See General Notes for E&S Legend

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

Mainline Profile	3A
Drainage Descr.	-
Conn. Profiles	-
Entr. Profiles	-

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	14(3)

12/12/2018
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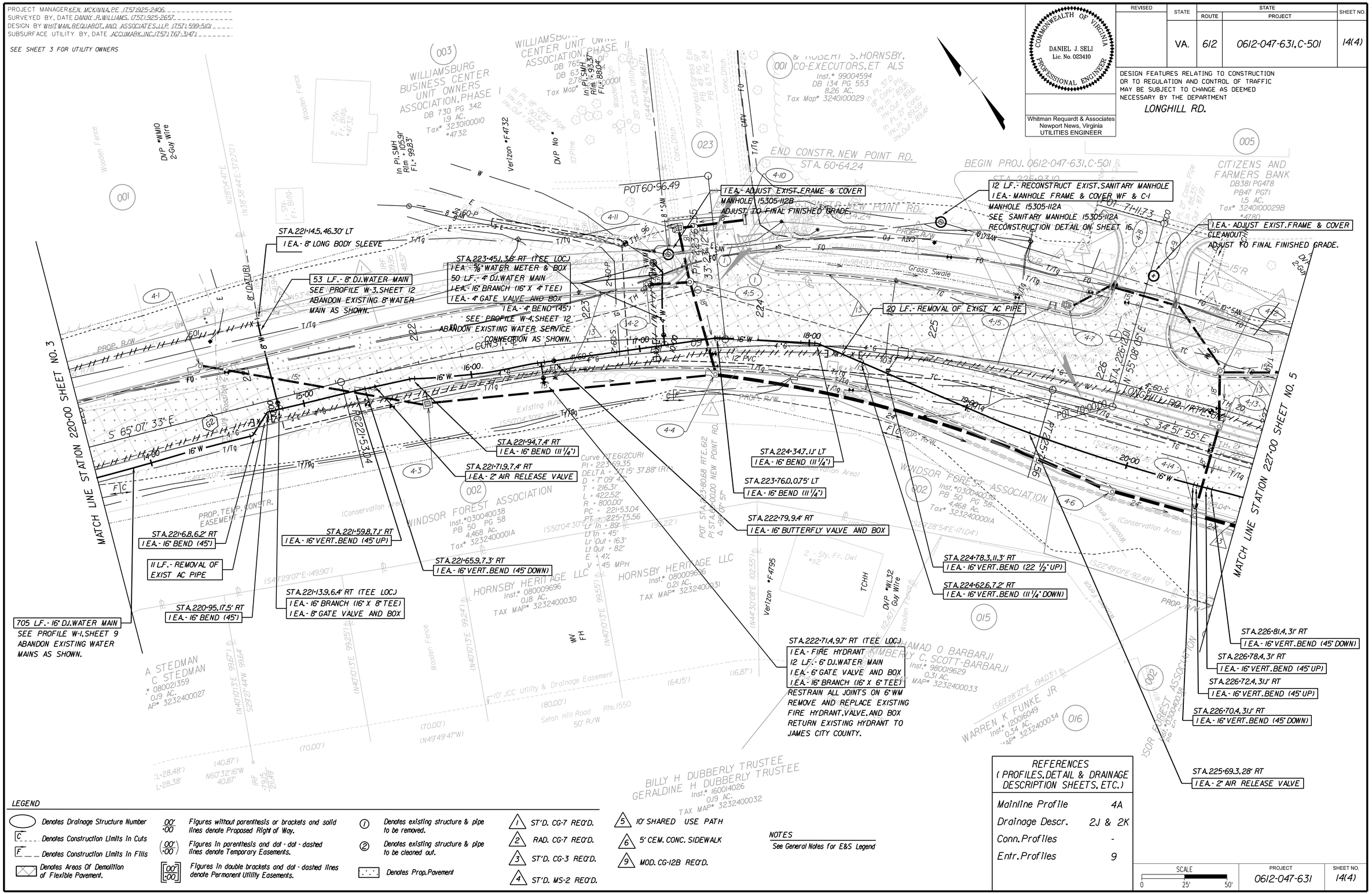
THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER K.N. MCKINNA, PE (757)925-2406
SURVEYED BY, DATE DANNY R. WILLIAMS (757)925-2657
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

SEE SHEET 3 FOR UTILITY OWNERS



REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(4)

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

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

LONGHILL RD.

LEGEND

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- (1) ST'D. CG-7 REQ'D.
- (2) RAD. CG-7 REQ'D.
- (3) ST'D. CG-3 REQ'D.
- (4) ST'D. MS-2 REQ'D.
- (5) 10' SHARED USE PATH
- (6) 5' CEM. CONC. SIDEWALK
- (9) MOD. CG-12B REQ'D.

NOTES
See General Notes for E&S Legend

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	4A
Drainage Descr.	2J & 2K
Conn. Profiles	-
Entr. Profiles	9

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	14(4)

12/12/2018
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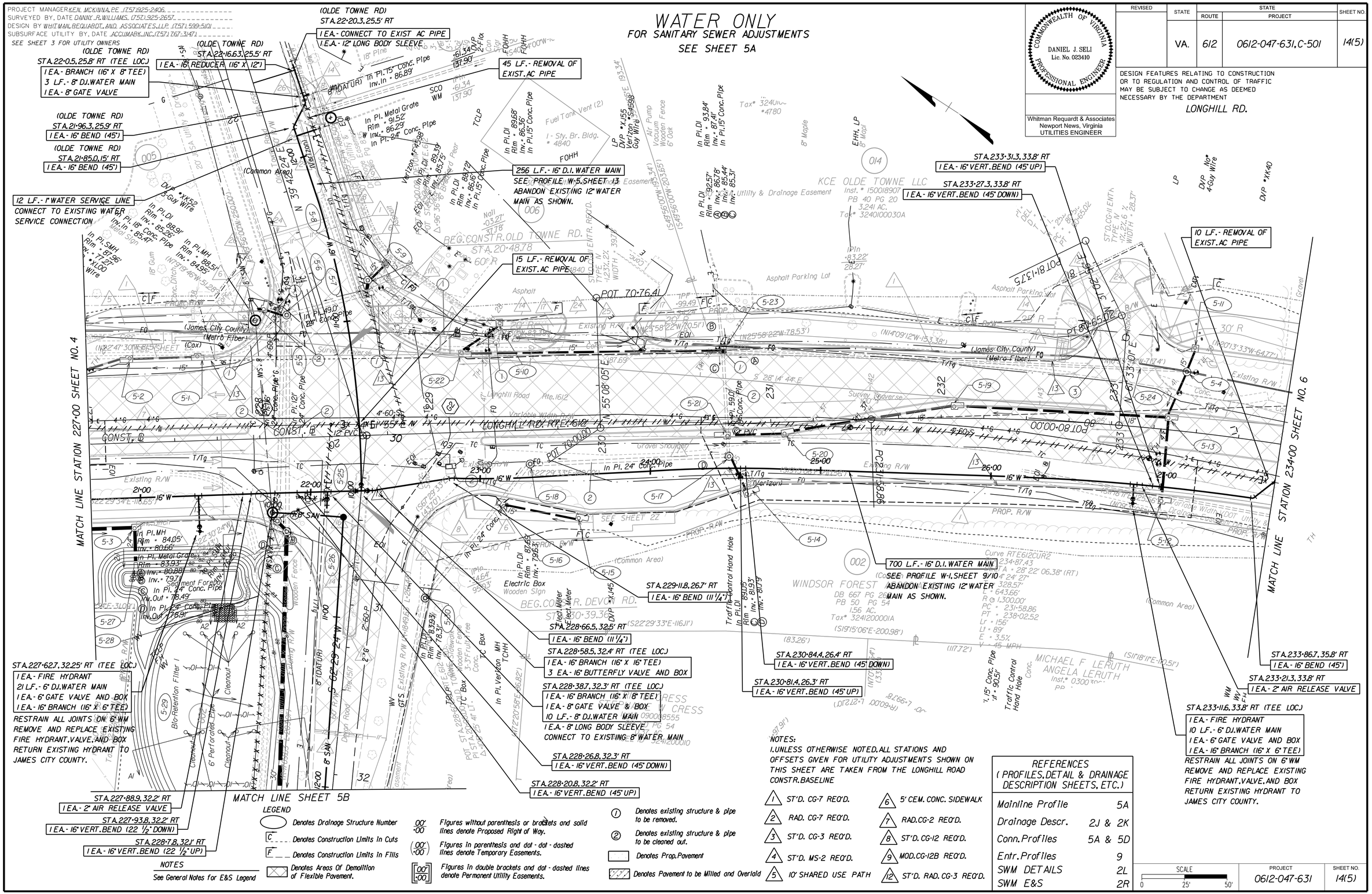
THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER KEN. MCKINNA, PE (757) 925-2406
SURVEYED BY, DATE DANNY R. WILLIAMS (757) 925-2657
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147
SEE SHEET 3 FOR UTILITY OWNERS

WATER ONLY
FOR SANITARY SEWER ADJUSTMENTS
SEE SHEET 5A



REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(5)

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
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PROFESSIONAL ENGINEER

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Newport News, Virginia
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LONGHILL RD.

NOTES:
1. UNLESS OTHERWISE NOTED, ALL STATIONS AND OFFSETS GIVEN FOR UTILITY ADJUSTMENTS SHOWN ON THIS SHEET ARE TAKEN FROM THE LONGHILL ROAD CONSTR. BASELINE

1. ST'D. CG-7 REQ'D.
2. RAD. CG-7 REQ'D.
3. ST'D. CG-3 REQ'D.
4. ST'D. MS-2 REQ'D.
5. 10' SHARED USE PATH
6. 5' CEM. CONC. SIDEWALK
7. RAD. CG-2 REQ'D.
8. ST'D. CG-12 REQ'D.
9. MOD. CG-12B REQ'D.
12. ST'D. RAD. CG-3 REQ'D.

LEGEND

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- Denotes Pavement to be Milled and Overlaid

NOTES
See General Notes for E&S Legend

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

Mainline Profile	5A
Drainage Descr.	2J & 2K
Conn. Profiles	5A & 5D
Entr. Profiles	9
SWM DETAILS	2L
SWM E&S	2R

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	14(5)

12/12/2018
12:31:44 PM

THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

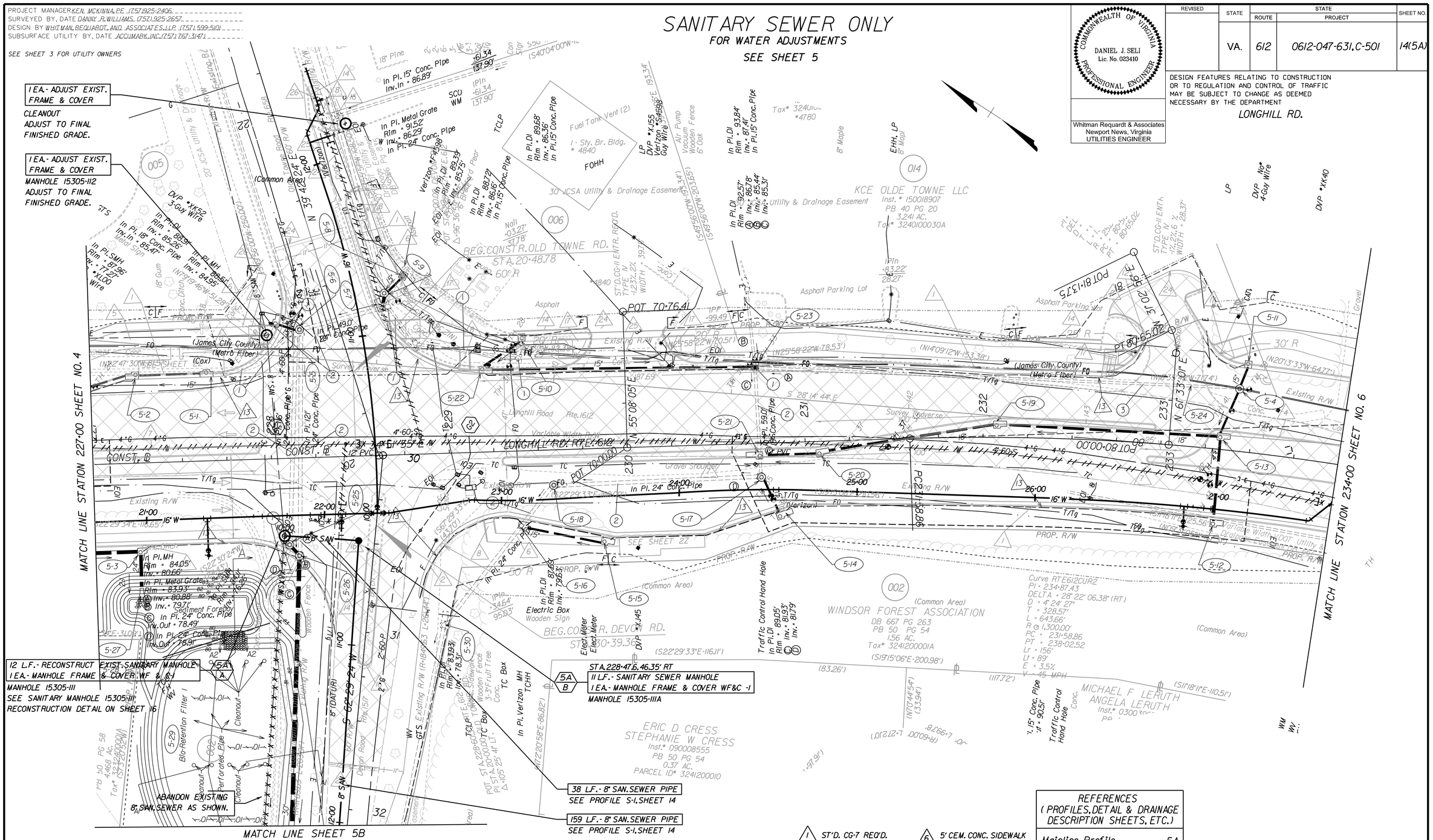
PROJECT MANAGER KEN. MCKINNA, PE (757) 925-2406
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147

SEE SHEET 3 FOR UTILITY OWNERS

SANITARY SEWER ONLY

FOR WATER ADJUSTMENTS

SEE SHEET 5



REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(5A)

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

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

LONGHILL RD.

NOTES

See General Notes for E&S Legend

LEGEND

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1 ST'D. CG-7 REQ'D.
2 RAD. CG-7 REQ'D.
3 ST'D. CG-3 REQ'D.
4 ST'D. MS-2 REQ'D.
5 10' SHARED USE PATH
6 5' CEM. CONC. SIDEWALK
7 RAD. CG-2 REQ'D.
8 ST'D. CG-12 REQ'D.
9 MOD. CG-12B REQ'D.
12 ST'D. RAD. CG-3 REQ'D.

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

Mainline Profile	5A
Drainage Descr.	2J & 2K
Conn. Profiles	5A & 5D
Entr. Profiles	9
SWM DETAILS	2L
SWM E&S	2R

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	14(5A)

12/12/2018
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THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER KEN. MCKINNA, PE. (757) 925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP. (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)

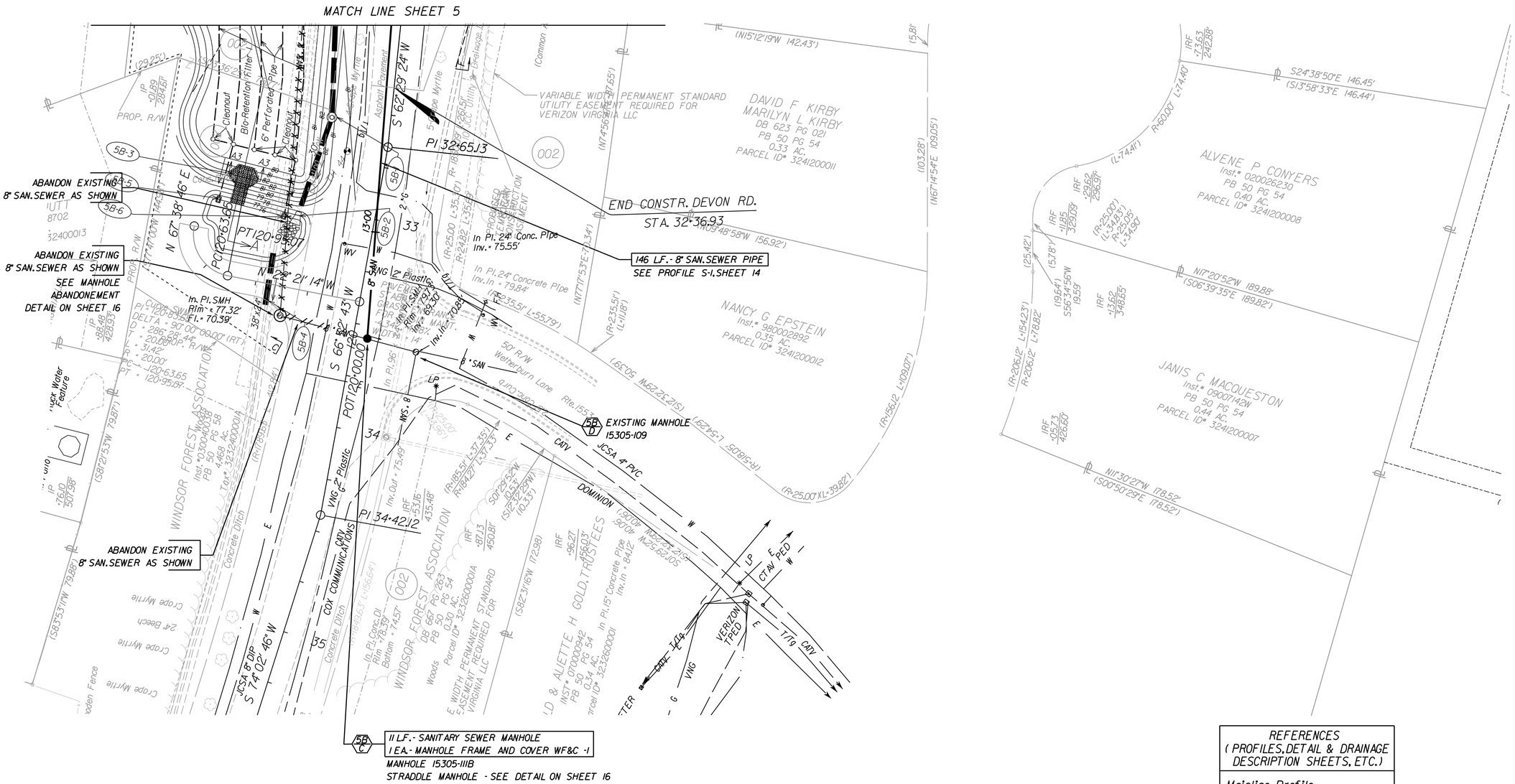
SEE SHEET 3 FOR UTILITY OWNERS

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(5B)

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



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	-
Drainage Descr.	2J & 2K
Conn. Profiles	5D
Entr. Profiles	10
SWM DETAILS	2L
SWM E&S	2R

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	14(5B)

12/12/2018
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THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

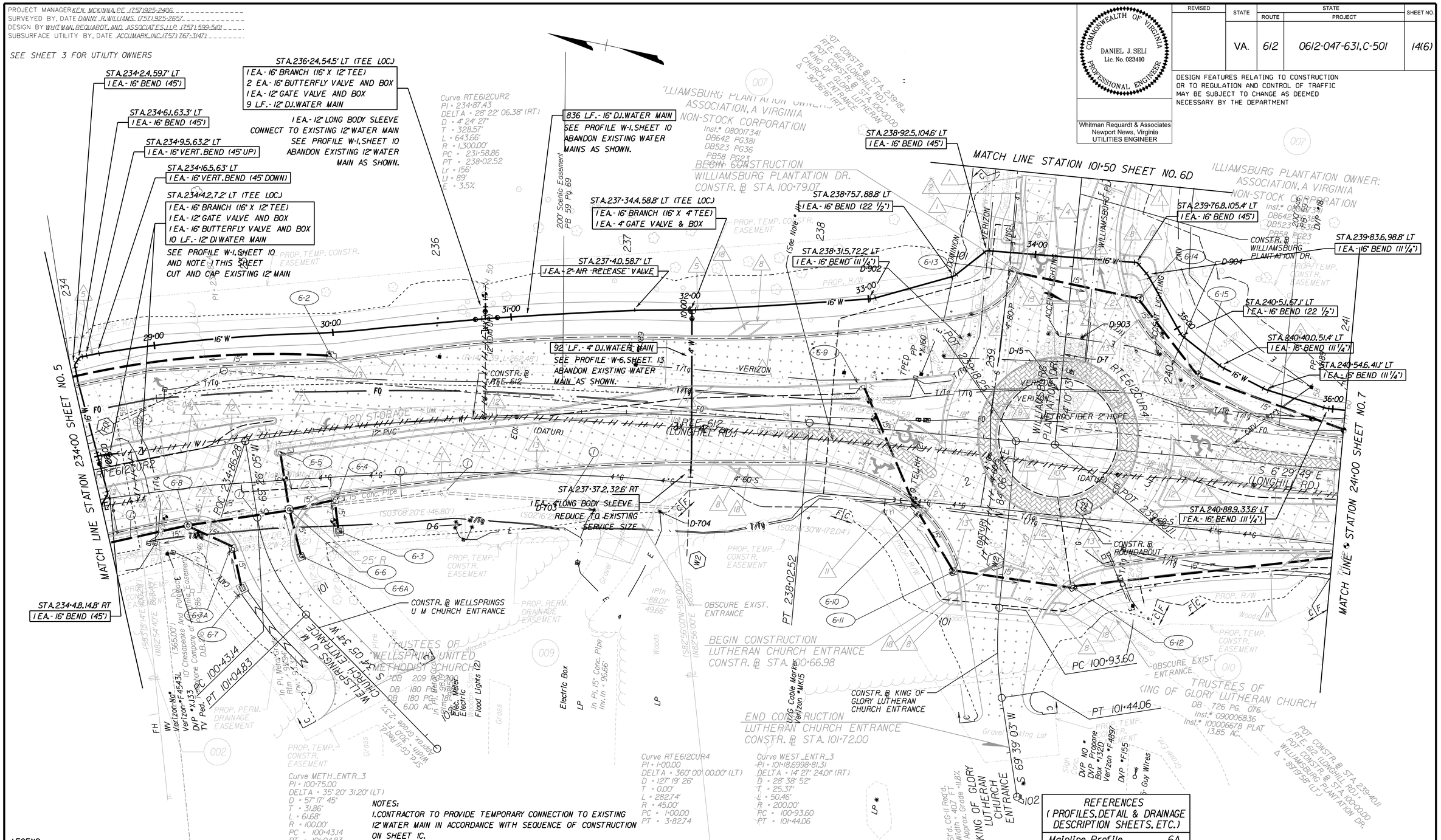
PROJECT MANAGER KEN. MCKINNA, PE (757)925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657.
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(6)

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



NOTES:
1. CONTRACTOR TO PROVIDE TEMPORARY CONNECTION TO EXISTING 12" WATER MAIN IN ACCORDANCE WITH SEQUENCE OF CONSTRUCTION ON SHEET 1C.

ALERT: SITE PLAN PROPOSED FOR THIS AREA. CHECK FOR THE SITE PLAN CONSTRUCTION AT EACH STAGE OF PROJECT DEVELOPMENT AND ORDER ADDITIONAL SURVEY WHEN CONSTRUCTED. PROFFERED R/W (PERM. EASEMENT) SHOULD BE CHECKED AT R/W STAGE.

NOTES:
See General Notes for E&S Legend

LEGEND

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- C — Denotes Construction Limits In Cuts
- F — Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- Denotes Areas Of Textured Pavement.
- 00' / 00 — Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
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- 2 RAD. CG-7 REQ'D.
- 3 ST'D. CG-3 REQ'D.
- 4 ST'D. MS-2 REQ'D.
- 5 10' MULTI USE PATH
- 6 5' CEM. CONC. SIDEWALK
- 7 ST'D. MS-1A REQ'D.
- 8 ST'D. CG-12 REQ'D.
- 9 RAD. CG-3 REQ'D.
- 10 MOD. CG-3 REQ'D.
- 11 6' BIKE PATH
- 12 ST'D. UD-2 REQ'D.
- 13 ST'D. UD-4 REQ'D.

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

Mainline Profile	6A
Williamsburg Plantation Dr. Profile	10A
Roundabout Details	6E
Roundabout Profile	6F
Entrance Profiles	10
Drainage Descr.	6B
Storm Sewer Profiles	7E

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	14(6)

12/12/2018
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PROJECT MANAGER KEN. MCKINNA, PE. (757)925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657.
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SEE SHEET 3 FOR UTILITY OWNERS

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
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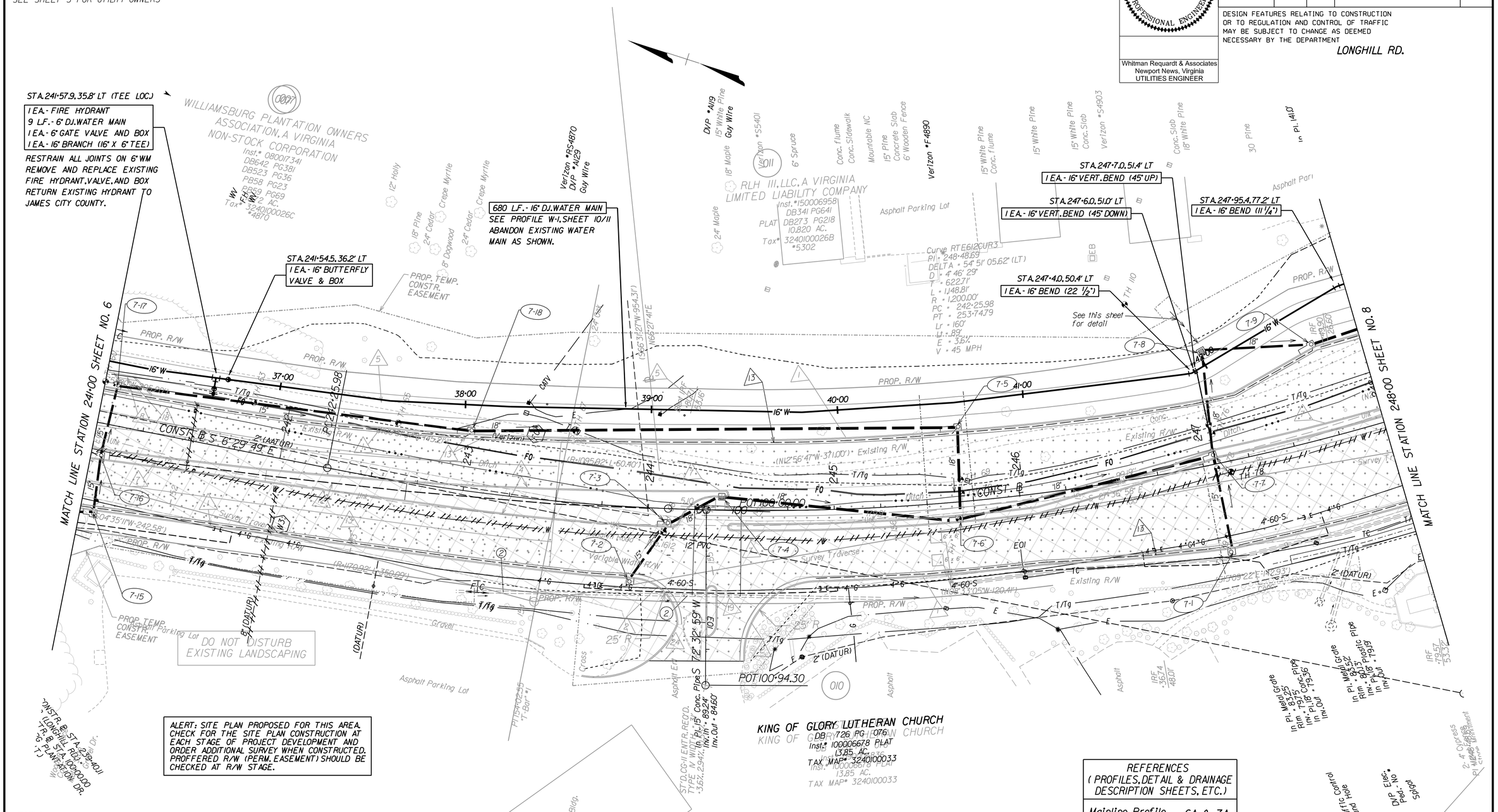
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	14(7)

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

LONGHILL RD.



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- C Denotes Construction Limits In Cuts
- F Denotes Construction Limits In Fills
- Denotes Areas Of Demolition of Flexible Pavement.
- 00' ·00 Figures without parenthesis or brackets and solid lines denote Proposed Right of Way.
- (00' ·00) Figures in parenthesis and dot - dot - dashed lines denote Temporary Easements.
- [00' ·00] Figures in double brackets and dot - dashed lines denote Permanent Utility Easements.
- 1 Denotes existing structure & pipe to be removed.
- 2 Denotes existing structure & pipe to be cleaned out.
- Denotes Prop. Pavement
- 1 ST'D. CG-7 REQ'D.
- 2 RAD. CG-7 REQ'D.
- 3 ST'D. CG-3 REQ'D.
- 4 ST'D. MS-2 REQ'D.
- 5 10' SHARED USE PATH
- 6 5' CEM. CONC. SIDEWALK

NOTES

See General Notes for E&S Legend

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Mainline Profile	6A & 7A
Drainage Descr.	2K & 6B
Conn. Profiles	-
Entr. Profiles	9

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	14(7)

4/15/2019
10:14:23 AM

LIMITED ACCESS HIGHWAY By Resolution of State Highway and Transportation Commission dated 10-16-86

THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

PROJECT MANAGER KEN. MCKINNA, PE (757) 925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757) 925-2657.
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757) 599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757) 767-3147)

SEE SHEET 3 FOR UTILITY OWNERS

COMMONWEALTH OF VIRGINIA
KEVIN B. WILLIAMS
Lic. No. 035183
PROFESSIONAL ENGINEER

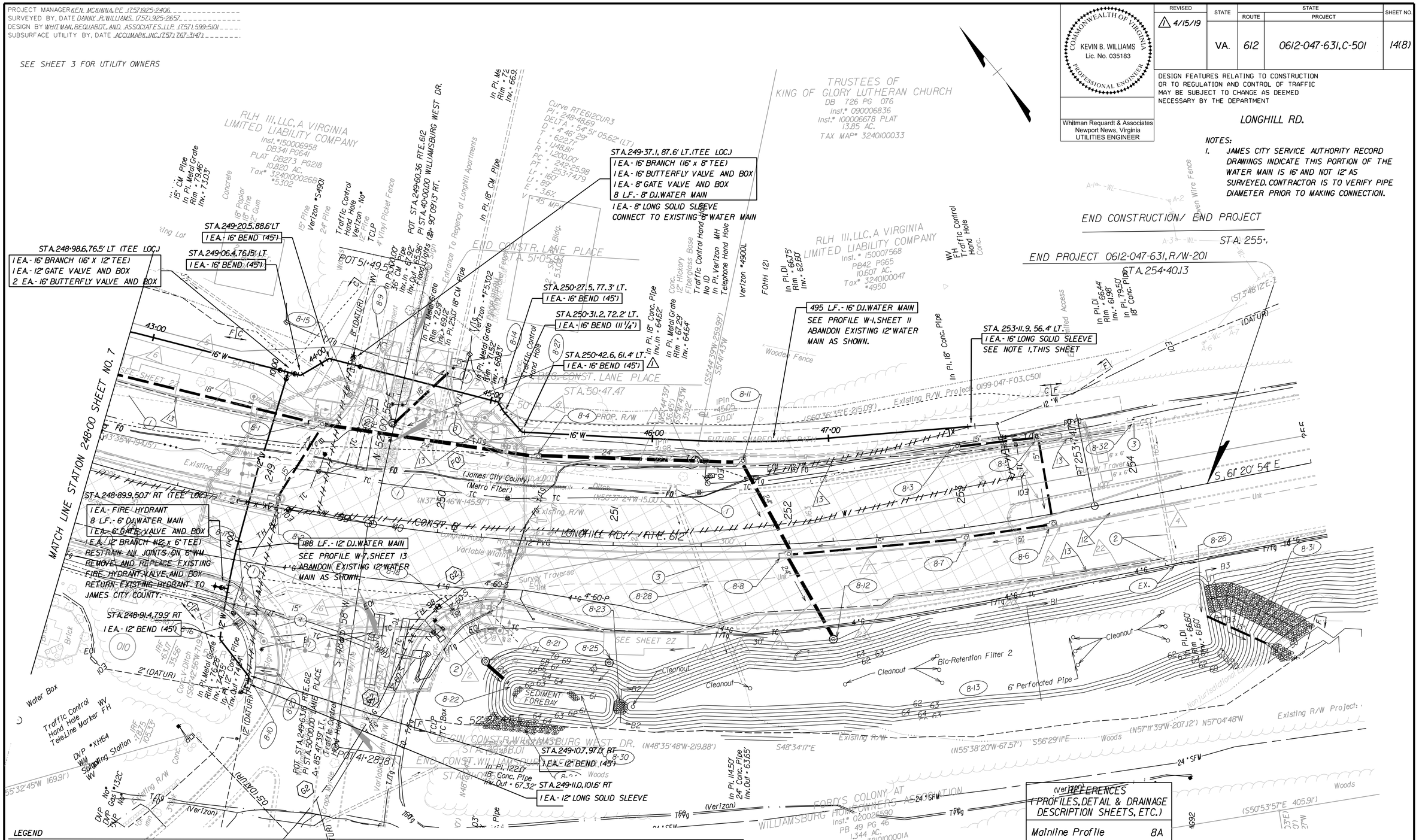
Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
1 4/15/19	VA.	612	0612-047-631, C-501	14(8)

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

LONGHILL RD.

NOTES:
1. JAMES CITY SERVICE AUTHORITY RECORD DRAWINGS INDICATE THIS PORTION OF THE WATER MAIN IS 16" AND NOT 12" AS SURVEYED. CONTRACTOR IS TO VERIFY PIPE DIAMETER PRIOR TO MAKING CONNECTION.



LEGEND

- Denotes Drainage Structure Number
- C ____ Denotes Construction Limits In Cuts
- F __ Denotes Construction Limits In Fills
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- (1) Denotes existing structure & pipe to be removed.
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NOTES
See General Notes for E&S Legend

- (1) ST'D. CG-7 REQ'D.
- (2) RAD. CG-7 REQ'D.
- (3) ST'D. CG-3 REQ'D.
- (4) ST'D. MS-2 REQ'D.
- (5) 10' SHARED USE PATH
- (6) 5' CEM. CONC. SIDEWALK
- (7) RAD. CG-2 REQ'D.
- (8)
- (9) DETECTABLE WARNING SURFACE REQ'D.
- (10) ST'D. GR-2 REQ'D.
- (11) ST'D. GR-7 REQ'D.
- (14) ST'D. CG-2 REQ'D.
- Denotes Prop. Pavement
- Denotes Pavement to be milled and overlaid

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

Mainline Profile	8A
Drainage Descr.	2K
Conn. Profiles	8A
Entr. Profiles	9
SWM DETAILS	2L
SWM E&S	2R

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	14(8)

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PROJECT MANAGER KEN MCKINNA,PE (757)925-2406
SURVEYED BY, DATE DANNY R.WILLIAMS (757)925-2657
DESIGN BY Whitman, Requardt and Associates,LLP (757)599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK,INC.(757)767-3147

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	14(9)

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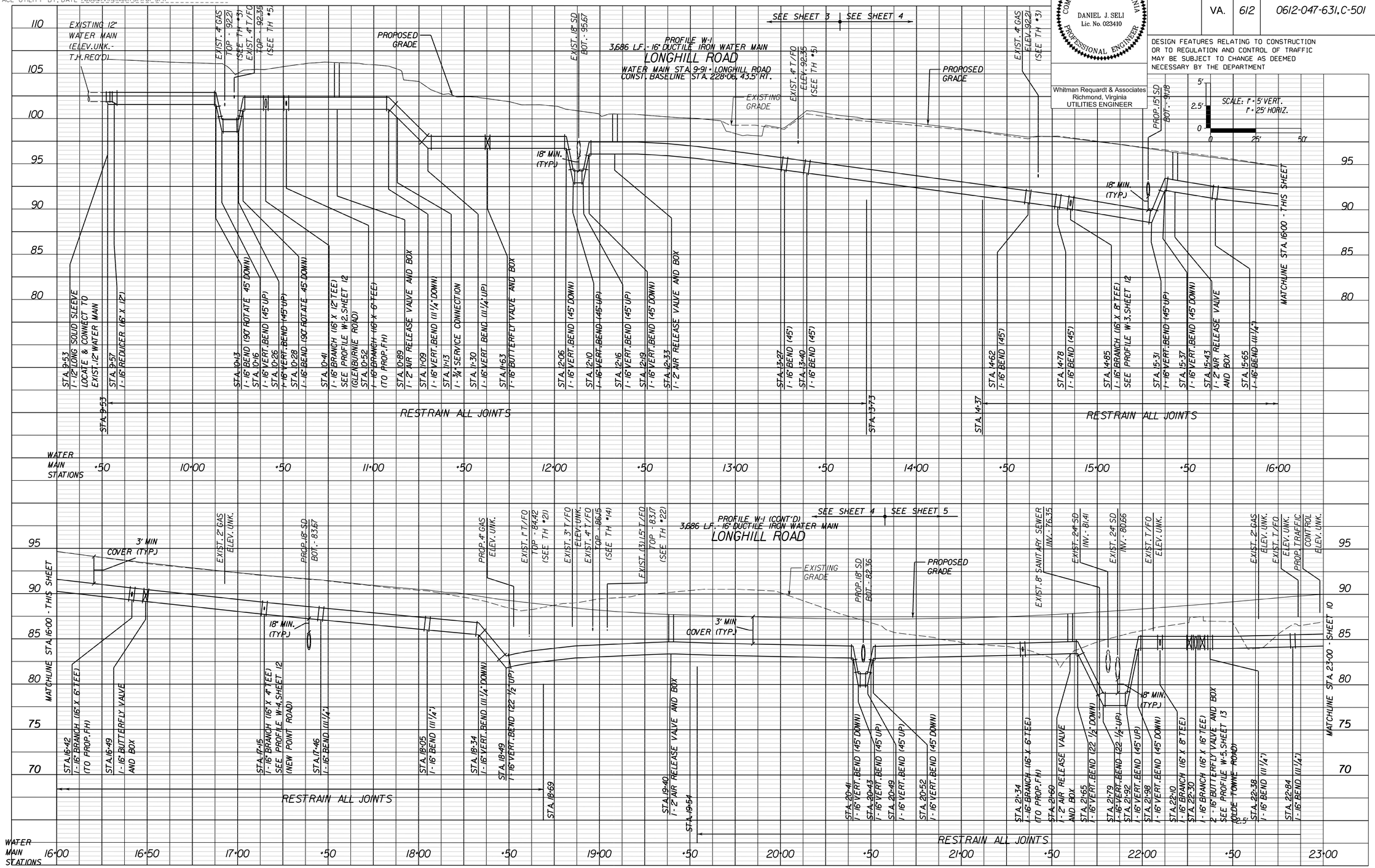
Whitman Requardt & Associates
Richmond, Virginia
UTILITIES ENGINEER



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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	14(10)

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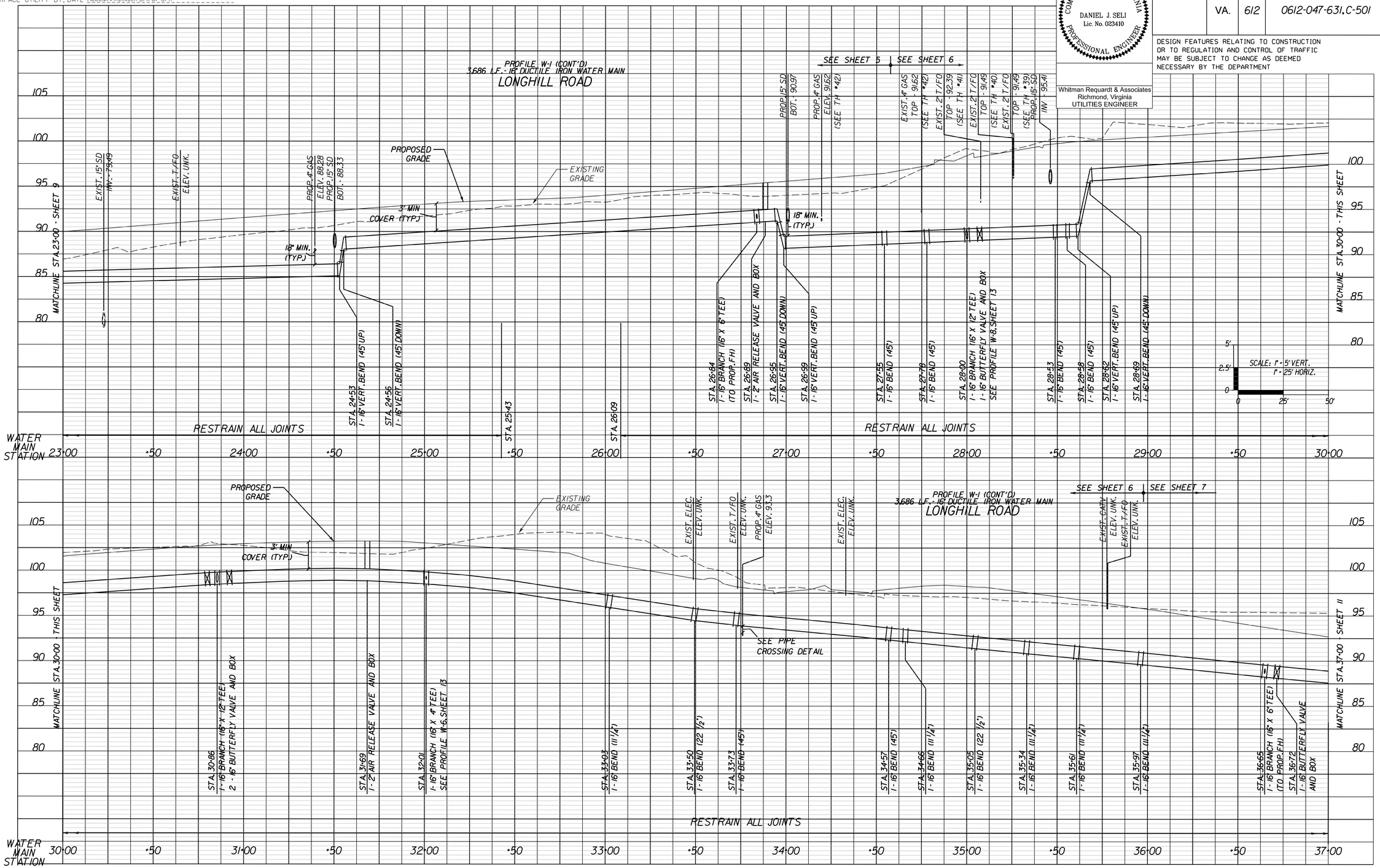

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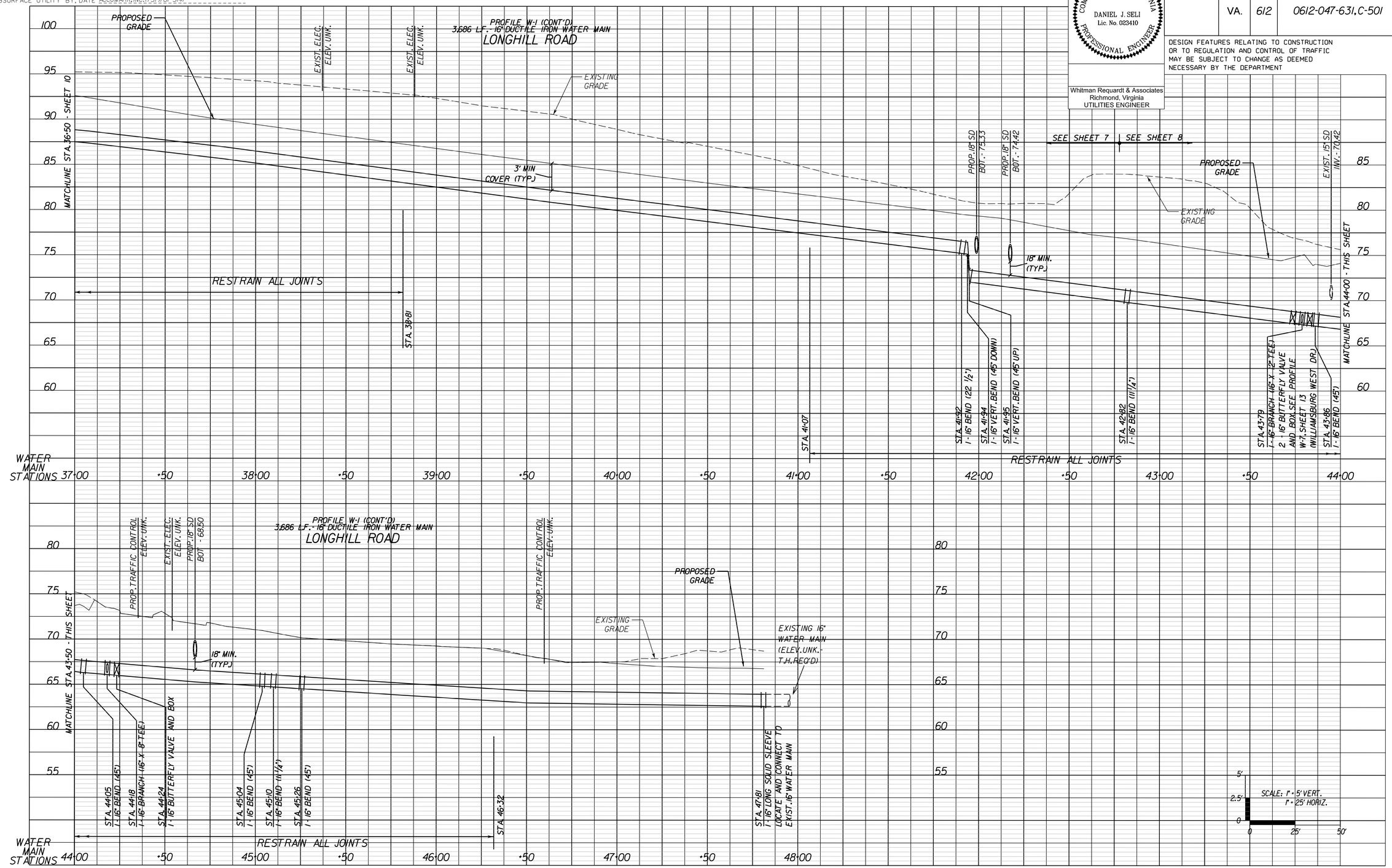

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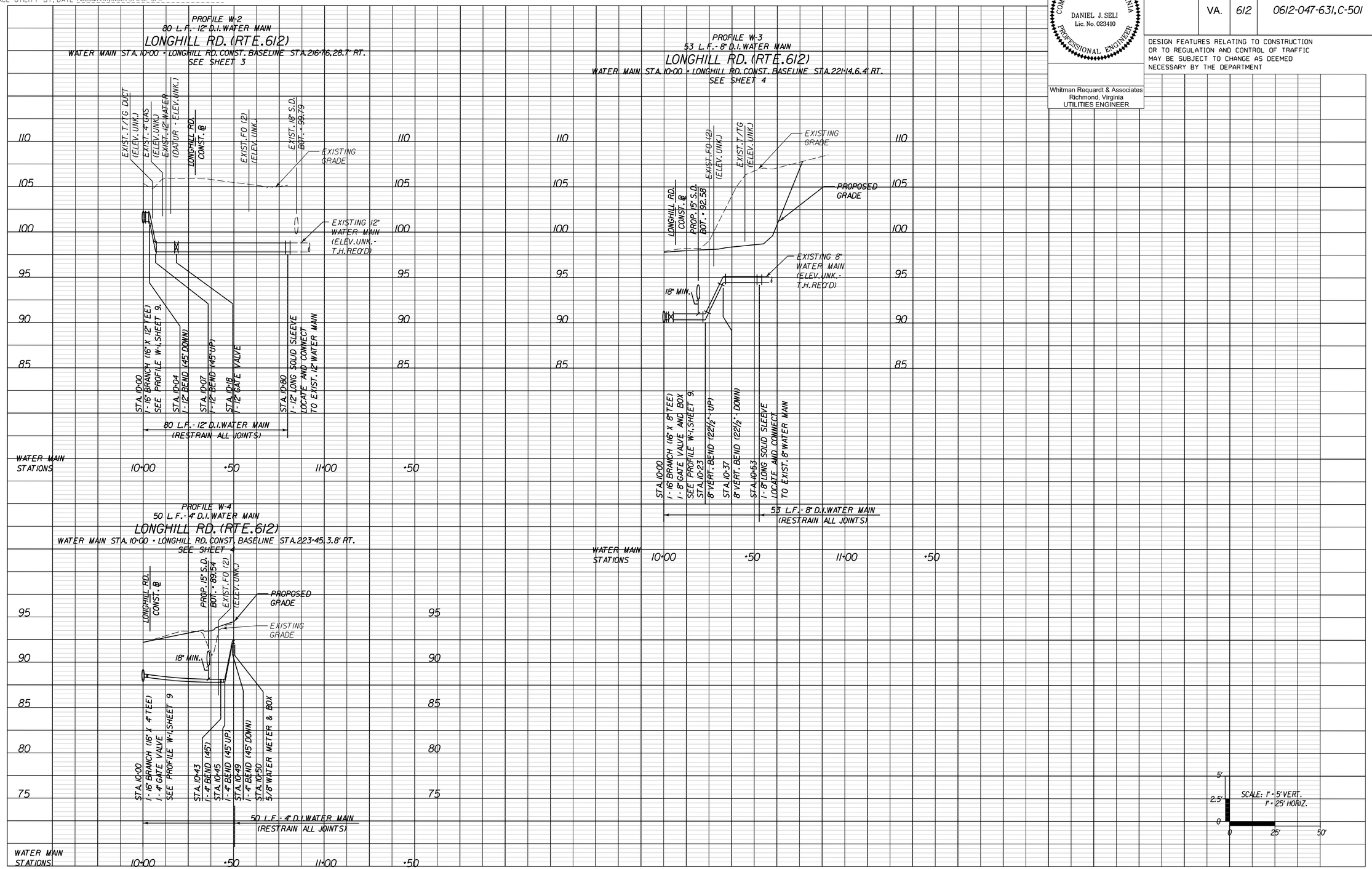

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	VA.	612	0612-047-631,C-501	14(13)

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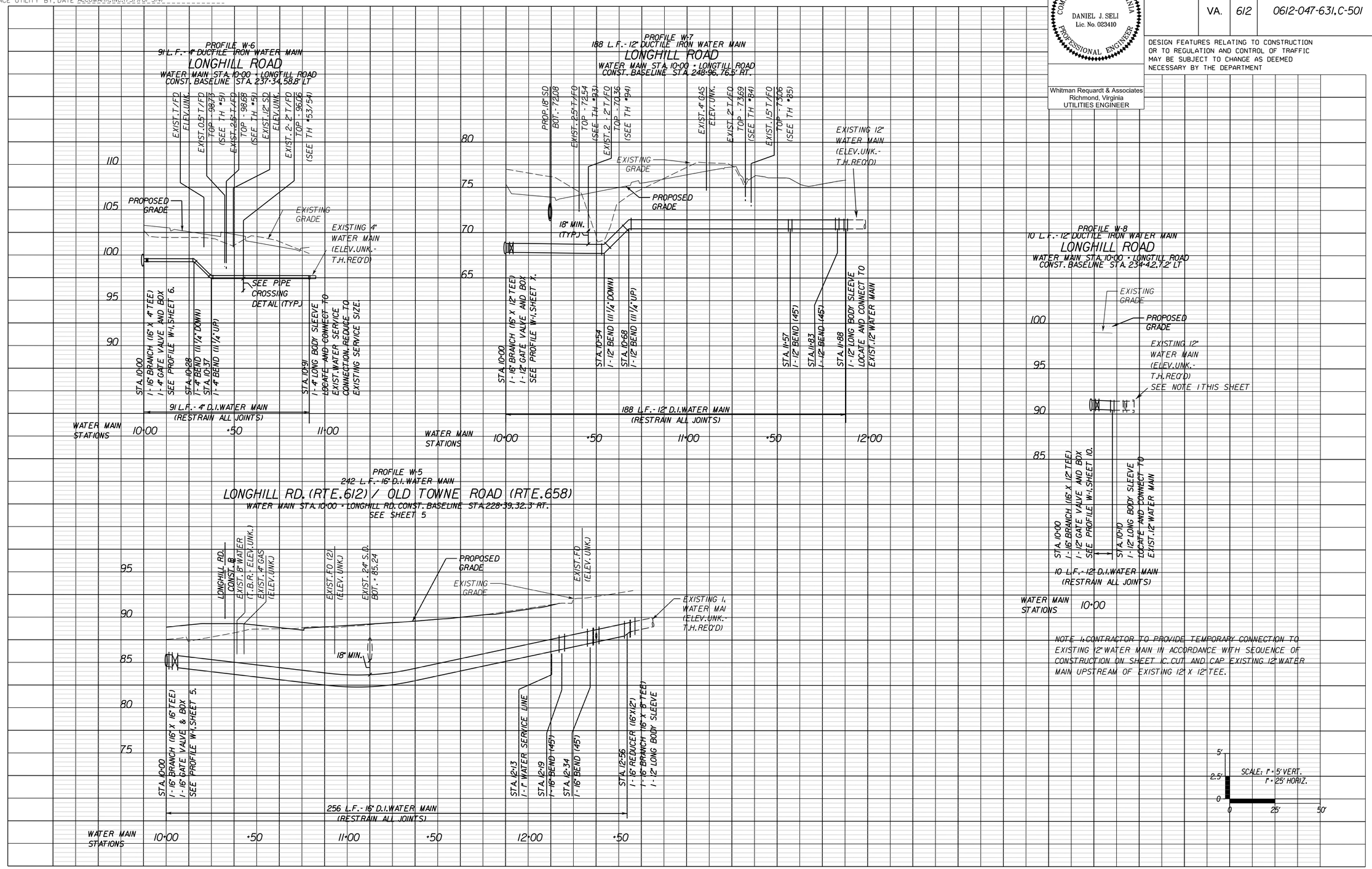

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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	14(14)

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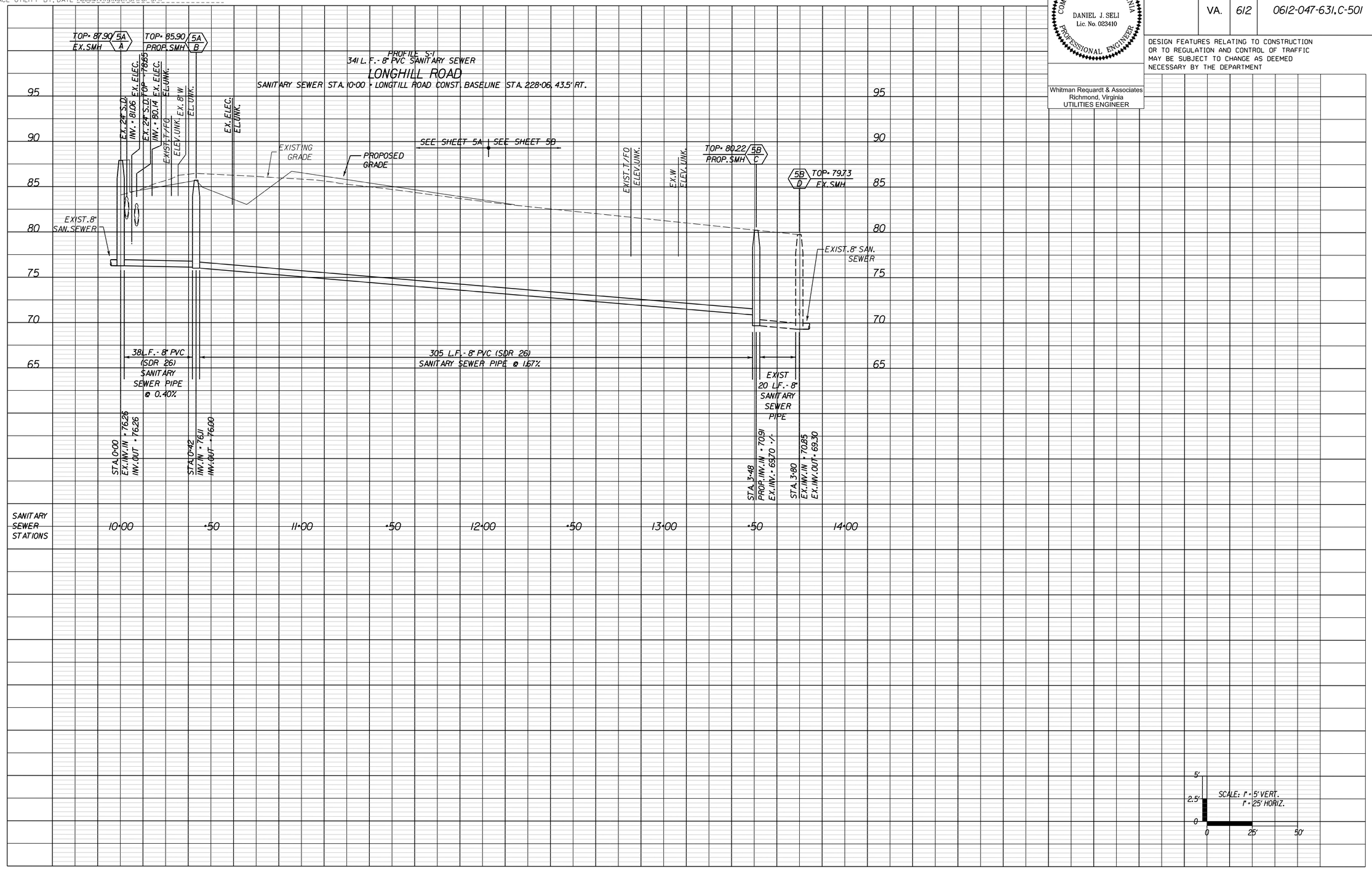

PROJECT	SHEET NO.
0612-047-631	14(14)

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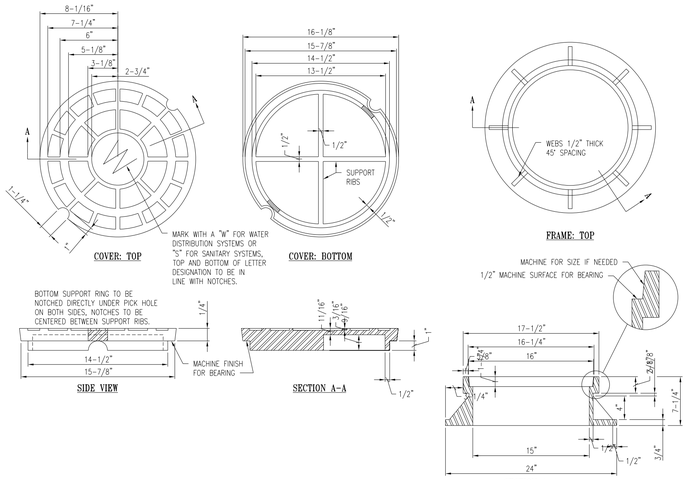
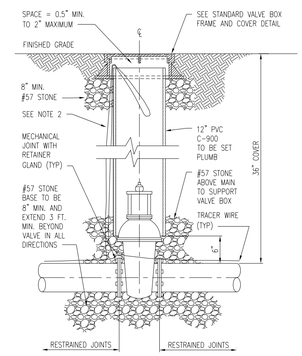


NOTES:

1. ALL GRAY IRON CASTINGS SHALL CONFORM TO LATEST EDITION OF AASHTO M105, CLASS 35B AND SHALL BE OF UNIFORM QUALITY.
2. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±.
3. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.

STANDARD VALVE BOX FRAME AND COVER

NOT TO SCALE

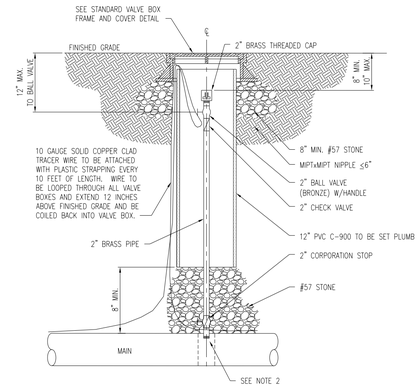


NOTES:

1. THE TOP OPERATING NUT SHALL BE NO MORE THAN 12 TO 24-INCHES BELOW THE TOP RIM OF THE VALVE BOX (AS MEASURED FROM FINAL GRADE). THE CONTRACTOR SHALL INSTALL AN APPROVED VALVE STEM EXTESION DEVICES WHERE NECESSARY TO COMPLY WITH THE REQUIREMENT. IF OPERATING NUT IS GREATER THAN 36" BELOW TOP OF VALVE BOX FRAME, A VALVE STEM EXTENSION MAY BE INSTALLED. THE EXTENSION SHALL REPLACE OR BE SECURELY ATTACHED TO THE NORMAL 2 INCH SQUARE OPERATING NUT, SHALL BE AT LEAST AS STRONG AS THE VALVE STEM, AND SHALL BE COATED IN ACCORDANCE WITH AWWA C550. VALVE STEM EXTENSIONS MUST BE APPROVED BY THE LOCALITY.
2. PLASTIC COATED 10 GAUGE SOLID COPPER TRACER WIRE TO BE ATTACHED WITH PLASTIC STRAPPING EVERY 10 FEET OF LENGTH. WIRE TO BE LOOPED THROUGH VALVE BOX AND EXTEND 12 INCHES ABOVE FINISHED GRADE AND COILED BACK INTO VALVE BOX.

VALVE SETTING

NOT TO SCALE



NOTES:

1. 2" BRASS PIPE AND FITTINGS SHALL BE USED FOR AIR RELEASE ASSEMBLY.
2. BRASS SADDLES ARE REQUIRED ON ALL PIPE DIAMETERS FOR ALL PIPE MATERIALS.
3. ALL BRASS FITTINGS SHALL HAVE IRON PIPE THREADS.
4. BRASS PIPE SHALL HAVE MALE IRON PIPE THREADS AT EACH END.
5. THE CORPORATION STOPS SHALL BE MANUFACTURED WITH AWWA/CC TAPERED INLET THREADS.
6. CORPORATION STOPS JOINING TO EXISTING GALVANIZED PIPING OR PROPOSED BRASS PIPE SHALL HAVE FEMALE IRON THREADS.
7. FOR CORPORATION STOPS JOINING TO GALVANIZED OR BRASS PIPING, USE FORD METER BOX CO., MODEL FB1600.
8. REFER TO VALVE SETTING DETAIL

FITTING	INLET THREAD	OUTLET THREAD
CORP. STOP	AWWA/CC	FEMALE IRON PIPE
BALL VALVE	FEMALE IRON PIPE	FEMALE IRON PIPE
THREADED CAP	FEMALE IRON PIPE	N/A

MANUAL AIR VENT ASSEMBLY

NOT TO SCALE

STATE	ROUTE	PROJECT	SHEET NO.
VA.	612	0612-047-631,C-501	14(15)

REVISED

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

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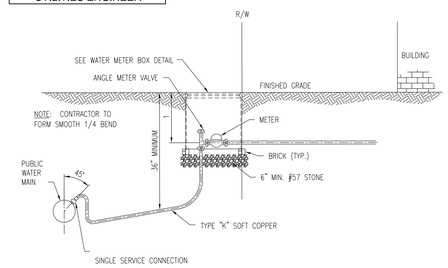


NOTES:

1. ALL WATER MAINS SHALL BE TAPPED USING A TAPPING SADDLE. SADDLE SHALL BE DESGNED AND SIZED FOR THE WATER MAIN ON WHICH THE SADDLE IS TO BE INSTALLED. SADDLE SHALL MEET THE FOLLOWING REQUIREMENTS.
   A. SADDLE BODIES SHALL BE 85-5-5-5 CAST BRONZE PER ASTM B62 OR B584. STRAPS SHALL BE STAINLESS STEEL, 18-8, TYPE 304 FULLY PASSIVATED FOR CORROSION RESISTANCE.
   B. THREADS SHALL BE AWWA C-800 CC/TAPER
   C. THE SADDLE BAND SHALL BE A MINIMUM OF 3.5-INCHES IN WIDTH
   D. THE SADDLE SHALL BE PROVIDED WITH BUNA-N RUBBER GASKET MEETING ASTM D2000 TO SEAL THE SADDLE AND THE MAIN PIPE.
   E. THE NUTS, WASHERS, BANDS, AND BOLTS SHALL BE 18-8 STAINLESS STEEL.
   F. ACCEPTABLE MANUFACTURERS ARE THE FORD METER BOX CO. INC., MODEL FS2202/FS3303/FPS202, JCM MODEL 406, ROMAC INDUSTRIES INC., STYLE 202N, CASCADE PRODUCTS STYLE CN52, OR APPROVED EQUAL.

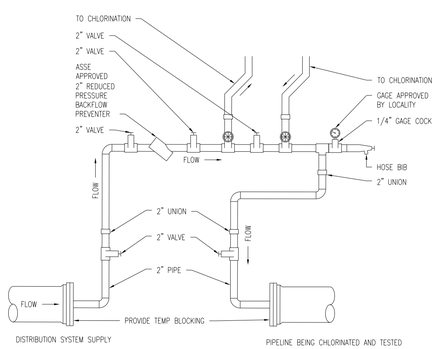
2.METER SHALL BE 5/8" MINIMUM THRU 1" MAXIMUM.

3.INSTALL METER BOX BETWEEN THE CURB AND GUTTER AND THE SIDEWALK. METER BOXES SHALL NOT BE INSTALLED IN DRIVEWAYS OR SIDEWALKS.

4.ALL BENDS IN TYPE K COPPER SHALL BE MADE USING AN APPROPRIATE PIPE BENDING TOOL. THERE SHALL BE NO CRIMPS IN THE PIPE LINE.

WATER SERVICE INSTALLATION

NOT TO SCALE

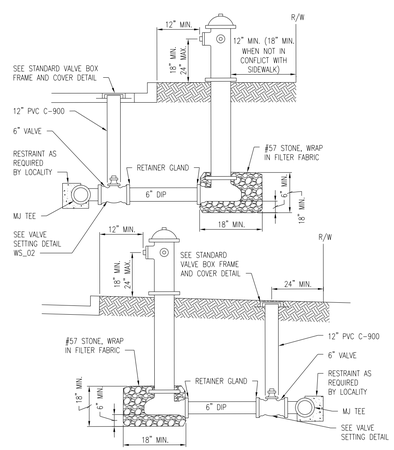


NOTES:

1. ALL VALVES TO BE 2" BALL VALVES.
2. ALL PIPING SHALL BE PROTECTED FROM THE WEATHER DURING FREEZING CONDITIONS.
3. BACKFLOW PREVENTER SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LOCALITY'S APPROVED CROSS CONNECTION CONTROL PROGRAM.
4. THE RPZ SHALL NOT BE INSTALLED IN A PIT OR AREA SUBJECT TO FLOODING.

TEMPORARY MANIFOLD FOR TEST AND CHLORINATION

NOT TO SCALE



NOTES:

1. HYDRANT TO BE SET WITH BREAKABLE COUPLING APPROXIMATELY 3" ABOVE FINISHED GRADE.
2. STEAMER NOZZLE IS TO FACE ROADWAY UNLESS OTHERWISE NOTED.
3. TRACER WIRE REQUIRED.
4. ALL VALVES TO BE MJ.
5. WHEN FIRE HYDRANT IS TO BE INSTALLED WITHIN EXISTING OR PROPOSED VDOT RIGHT-OF-WAY, HYDRANTS SHALL BE LOCATED IN ACCORDANCE WITH VDOT REQUIREMENTS.
6. HYDRANT(S) SHALL BE PAINTED IN ACCORDANCE WITH LOCALITY REQUIREMENTS.

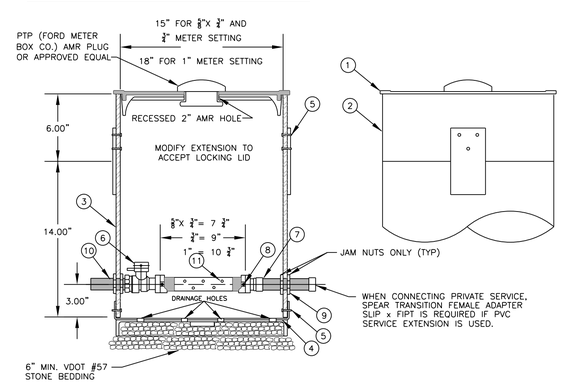
FIRE HYDRANT SETTING (TYPE 1)

NOT TO SCALE

ITEM	DESCRIPTION	QTY.
1	CAST IRON LID WITH RECESSED HOLE AND OPENING FOR RADIO READ ANTENNA	1
2	EXTENSION RING (6")	1
3	(SEE DWG. FOR DIA.) x 14" LG. X 0.300 WALL PVC PIPE	1
4	HDPE, STAINLESS STEEL OR ALUM. BOTTOM CAP	1
5	RIVET (STAINLESS STEEL) (TYP.)	10
6	BALL VALVE (LOCKING)	1
7	OUTLET PIECE	1
8	METER NUT	1
9	LOCK NUT (TYP.)	4
10	NIPPLE	1
11	IDLER (PVC) (PERFORATED)	1

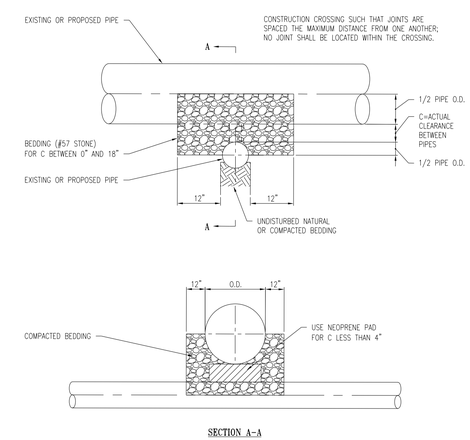
NOTES:

1. METER BOX AND ASSESORIES SHALL BE AS MANUFACTURED BY THE FORD METER CO., INC., MUELLER CO., A.Y. McDONALD Mfg. CO., OR APPROVED EQUAL MEETING THE DIMENSIONS AND COMPONENTS AS SHOWN IN THE DETAIL.
2. THE INLET VALVE, CLAMPING DEVICE AND OUTLET FITTING SHALL BE WATERWORKS BRASS IN ACCORDANCE WITH AWWA C800.
3. METER BOX SHALL BE SIZED AS SPECIFIED ON SITE PLAN.
4. AMR HOLE SHALL BE RECESSED.
5. PIPING, FITTINGS AND VALVE FOR 5/8" OR 3/4" METERS SHALL BE 3/4". FOR 1" METERS PIPING, FITTINGS AND VALVE SHALL BE 1".



5/8 x 3/4 THRU 1" WATER METER BOX

NOT TO SCALE



PIPE CROSSING

NOT TO SCALE

PROJECT	SHEET NO.
0612-047-631	14(15)

12/12/2018
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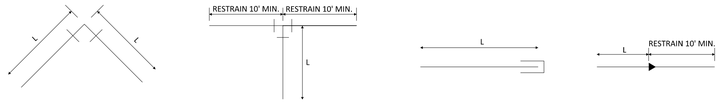


HORIZONTAL/ VERTICAL BEND TEE PLUG & VALVES REDUCER

NOTE: L = CORRESPONDING LENGTH BELOW (FT)

MINIMUM RESTRAINED JOINT LENGTHS (L, FT)

FITTING	11.25°	22.5°	45°	90°	PLUG/ VALVE	REDUCER	TEE
4" HORIZONTAL BEND	2	4	8	18	-	-	-
6" HORIZONTAL BEND	3	5	11	26	-	-	-
8" HORIZONTAL BEND	3	7	14	33	-	-	-
12" HORIZONTAL BEND	5	9	19	46	-	-	-
16" HORIZONTAL BEND	6	12	24	58	-	-	-
4" VERTICAL BEND	6	13	35	-	-	-	-
6" VERTICAL BEND	9	18	37	-	-	-	-
8" VERTICAL BEND	11	23	48	-	-	-	-
12" VERTICAL BEND	16	33	68	-	-	-	-
16" VERTICAL BEND	21	42	87	-	-	-	-
4" PLUG/ VALVE	-	-	-	-	63	-	-
6" PLUG/ VALVE	-	-	-	-	90	-	-
8" PLUG/ VALVE	-	-	-	-	116	-	-
12" PLUG/ VALVE	-	-	-	-	163	-	-
16" PLUG/ VALVE	-	-	-	-	209	-	-
16 X 16	-	-	-	-	-	-	170
16 X 12	-	-	-	-	-	89	103
16 X 8	-	-	-	-	-	152	30
16 X 6	-	-	-	-	-	176	5
16 X 4	-	-	-	-	-	193	5
12 X 12	-	-	-	-	-	-	125
12 X 8	-	-	-	-	-	86	53
12 X 6	-	-	-	-	-	119	11
12 X 4	-	-	-	-	-	141	5
8 X 8	-	-	-	-	-	-	78
8 X 6	-	-	-	-	-	48	38
8 X 4	-	-	-	-	-	83	5
6 X 6	-	-	-	-	-	-	53
6 X 4	-	-	-	-	-	46	9

NOTES:

1. LOOPED WATER SYSTEMS SHALL HAVE RESTRAINT PROVIDED ON BOTH SIDES OF ALL VALVES AND FITTINGS.
2. LENGHTS SHOWN ABOVE ARE MINIMUM REQUIREMENTS, CONDITIONS WORSE THAN THE DESIGN PARAMETERS INDICATED, WHETHER ANTICIPATED DURING DESIGN OR ENCOUNTERED DURING CONSTRUCTION, WILL REQUIRE SUBMITTALS OF DESIGN CALCULATIONS FOR REVIEW AND APPROVAL.
3. COMPUTATIONS BASED ON FORD METER BOX UNIFLANGE PIPE THRUST RESTRAINT PROGRAM V.3.00.
4. DEPTH OF BURY ON LOW SIDE OF VERTICAL BENDS ASSUMED AS 6 FEET.
5. VALVES CALCULATED AS DEAD END FITTING TYPE.

DESIGN PARAMETERS
TEST PRESSURE = 150 PSI; PIPE MATERIAL = DUCTILE IRON WITH POLYWRAP
TRENCH TYPE = IV; SOIL TYPE = ML; DEPTH OF BURY = 3'; SAFETY FACTOR = 1.5

JOINT RESTRAINT TABLE
FOR DUCTILE IRON PIPE

PROJECT	SHEET NO.
0612-047-631	14(15A)

12/12/2018
12:41:52 PM

THIS SHEET FOR UTILITY ADJUSTMENT/RELOCATION ONLY

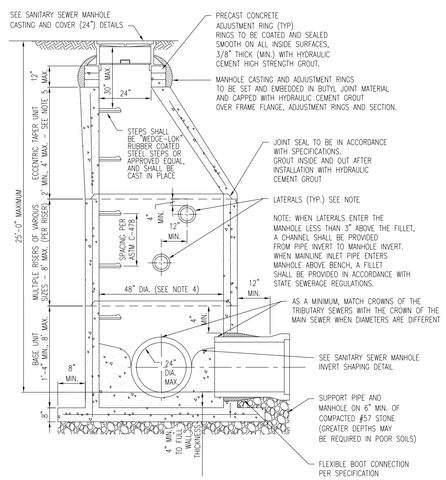
PROJECT MANAGER K.E.N. MCKINNA, P.E. (757)925-2406.
SURVEYED BY, DATE DANNY R. WILLIAMS. (757).925-2657.
DESIGN BY WHITMAN, REQUARDT, AND ASSOCIATES, LLP (757).599-5101
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC.(757) 767-3147)

COMMONWEALTH OF VIRGINIA
DANIEL J. SELI
Lic. No. 023410
PROFESSIONAL ENGINEER

Whitman Requardt & Associates
Newport News, Virginia
UTILITIES ENGINEER

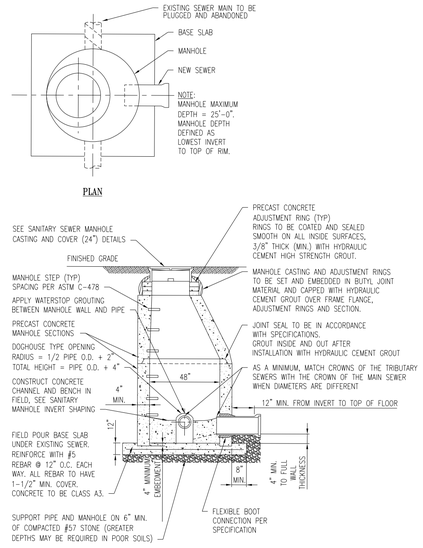
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631,C-501	14(16)

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



NOTES:
1. PRECAST CONCRETE MANHOLE TO BE IN COMPLIANCE WITH ASTM C-478.
2. WALL THICKNESS TO BE 5" MINIMUM FOR 48" INSIDE DIAMETER MANHOLES AND 6" MINIMUM FOR 60" INSIDE DIAMETER MANHOLES.
3. INSIDE DIAMETER OF MANHOLE MUST INCREASE TO 60" WHEN MANHOLE DEPTH IS GREATER THAN 12 FEET. 60" DIAMETER TO BE CONTINUOUS UP TO CONE SECTION.
4. MAXIMUM OF FOUR LATERALS PER MANHOLE.
5. IF LATERALS ARE TO ENTER INTO THE ECCENTRIC TAPER UNIT, THEY MUST ENTER ON THE NON-TAPERED SIDE.

STANDARD PRECAST CONCRETE MANHOLE WITH EXTENDED MONOLITHIC BASE
NOT TO SCALE



NOTES:
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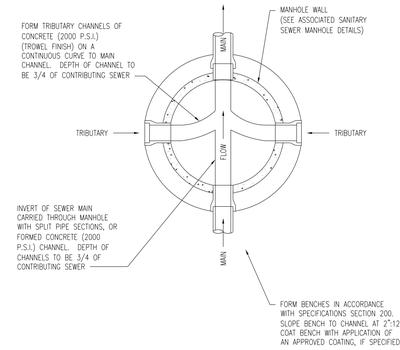
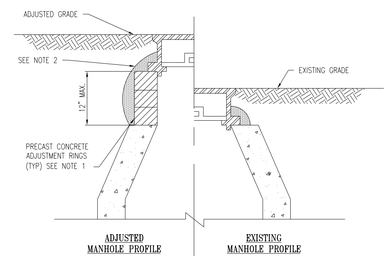
2. WALL THICKNESS TO BE 5" MINIMUM FOR 48" INSIDE DIAMETER MANHOLES AND 6" MINIMUM FOR 60" INSIDE DIAMETER MANHOLES.
3. INSIDE DIAMETER OF MANHOLE MUST INCREASE TO 60" WHEN MANHOLE DEPTH IS GREATER THAN 12 FEET. 60 INCH DIAMETER TO BE CONTINUOUS UP TO CONE SECTION.
4. FLAT TOP SLABS ARE NOT PERMITTED, UNLESS AUTHORIZED BY JCSA.

SANITARY SEWER STRADDLE MANHOLE
NOT TO SCALE

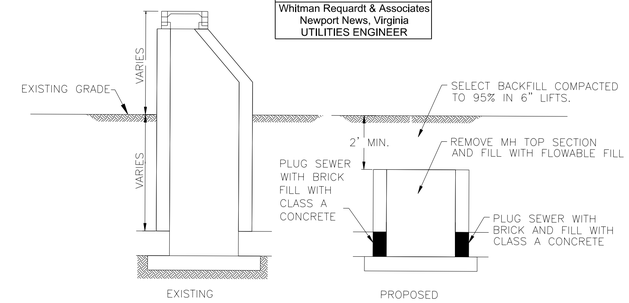


SANITARY SEWER MANHOLE INVERT SHAPING
NOT TO SCALE



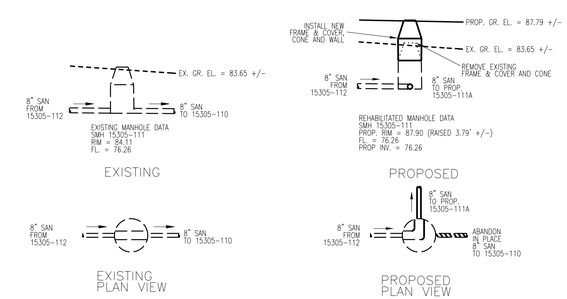
NOTES:
1. RINGS TO BE COATED AND SEALED SMOOTH ON ALL INSIDE SURFACES, 3/8" THICK (MIN.) WITH HYDRAULIC CEMENT HIGH STRENGTH GROUT.
2. MANHOLE CASTING AND ADJUSTMENT RINGS TO BE SET AND IMBEDDED IN BUTYL JOINT MATERIAL AND CAPPED WITH HYDRAULIC CEMENT GROUT OVER FRAME FLANGE, ADJUSTMENT RINGS AND SECTION.
3. FOUNDATION, FOOTING PAD, LOWEST BARREL SECTION OF MANHOLE AND PIPES SHALL REMAIN UNDISTURBED.

SANITARY SEWER MANHOLE ADJUSTMENT
NOT TO SCALE



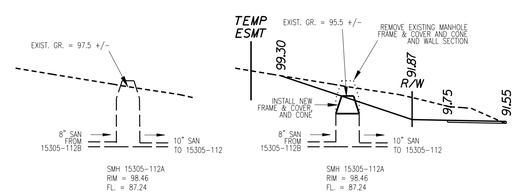
NOTES:
1. CONTRACTOR SHALL REMOVE EXISTING MANHOLE A MINIMUM OF TWO FEET BELOW EXISTING GRADE AND FILL WITH FLOWABLE FILL.
2. EXISTING INVERTS SHALL BE PLUGGED WITH BRICKS AND FILLED WITH CLASS A CONCRETE.
3. CONTRACTOR SHALL PLACE SELECT BACKFILL TO 95% IN 6" LIFTS ABOVE REMAINING MANHOLE.

SANITARY MANHOLE ABANDONMENT
NOT TO SCALE



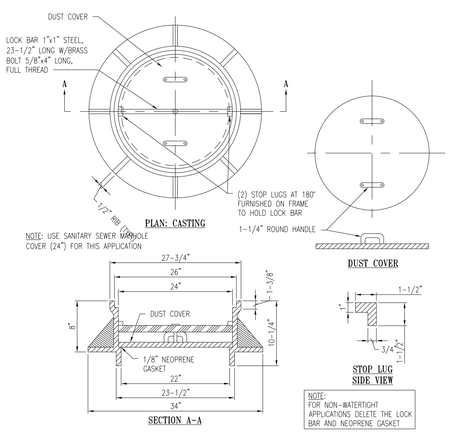
NOTES
1. BYPASS FLOW AROUND MANHOLE
2. REMOVE EXISTING FRAME & COVER AND CONE
3. INSTALL NEW 8" PVC – REFORM EXISTING BENCH AS NEEDED TO ACCOMODATE NEW PIPE CONNECTION, CORE INTO EXISTING WALL, INSTALL NEW FLEXIBLE BOOT AND PIPE.
4. 8" PIPE FLOWING TO 15305-110: CUT OUT PIPE PROTRUDING INTO MANHOLE FLUSH WITH MANHOLE WALL AND PLUG.
5. INSTALL NEW WALL SECTION, CONE, AND FRAME & COVER PER SPECIFICATIONS AND NEW MANHOLE DETAIL
6. REHABILITATE EXISTING WALL, PIPE CONNECTIONS, BENCH AND CHANNEL PER SPECIFICATIONS AND DETAILS
7. VACUUM TEST

SANITARY MANHOLE 15305-111 RECONSTRUCTION
NOT TO SCALE



NOTES:
1. REMOVE FRAME & COVER, CONE AND WALL SECTION FROM EXISTING MANHOLE.
2. INSTALL NEW FRAME & COVER AND CONE SECTION
SIZE NEW ITEMS TO SIT 2" ABOVE THE PROPOSED FINISHED GRADE ON THE UPHILL SIDE.
3. INSTALL FRAME SEALANT PER SPECIFICATIONS
4. COAT THE INTERIOR OF MANHOLE WALL, PIPE CONNECTIONS, BENCH AND CHANNEL PER SPECIFICATIONS
5. VACUUM TEST

SANITARY MANHOLE 15305-112A RECONSTRUCTION
NOT TO SCALE

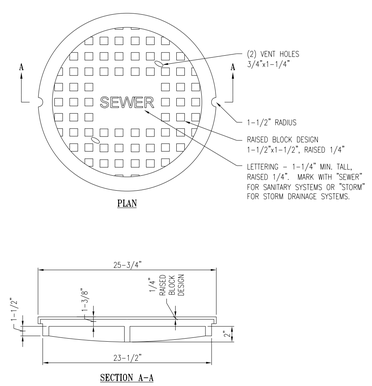


NOTE: USE SANITARY SEWER MANHOLE COVER (24") FOR THIS APPLICATION

NOTE:
FOR NON-WATERTIGHT APPLICATIONS DELETE THE LOCK BAR AND NEOPRENE GASKET

NOTES:
1. ALL GRAY IRON CASTINGS SHALL CONFORM TO LATEST EDITION OF AASHTO M105, CLASS 35B AND SHALL BE OF UNIFORM QUALITY.
2. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±.
3. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.

SANITARY SEWER MANHOLE CASTING (24")
NOT TO SCALE



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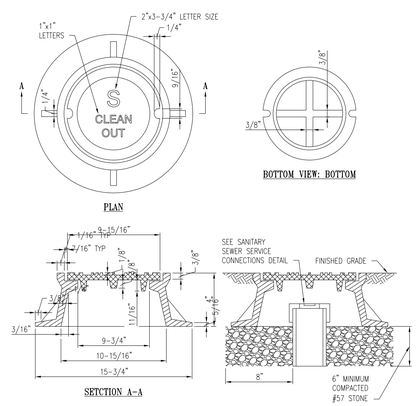
SANITARY SEWER MANHOLE COVER (24")
NOT TO SCALE



NOTES:
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2. ALL CASTING DIMENSIONS SHALL HAVE A TOLERANCE OF 1/8"±.
3. ALL CASTINGS SHALL BE CLEANED BY SHOT BLASTING AND HAND CHIPPING UTILIZING STANDARD INDUSTRY PRACTICES PRIOR TO SHOP APPLICATION OF ASPHALTIC COATING, BY DIPPING.

SANITARY SERVICE LATERAL CLEAN OUT FRAME AND COVER
NOT TO SCALE

PROJECT	SHEET NO.
0612-047-631	14(16)

PROJECT MANAGER Ken McKinna, PE (757) 956-3271
SURVEYED BY, DATE Danny R. Williams (757) 925-2657
DESIGN BY Dale Huff, CLA (540) 643-2514 or (540) 577-8231
SUBSURFACE UTILITY BY, DATE Accumark, Inc. (757) 767-3147

LANDSCAPE GENERAL NOTES AND SUMMARY

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

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/25/19	VA.	612	0612-047-631, C501	15(1)

General Notes

1. All planting shall be in accordance with VDOT Road and Bridge Specifications dated 2007.
2. All planting and site work shall be within the right of way or construction easement.
3. The planting season for this project shall be from: October 25
   through: March 15
4. All plants must be in place by March 15 in order that replacements may be made prior to March 30.
5. Size of plants indicated on this summary sheet refer to size of plants delivered to the project site, not after they have been pruned.
6. Plants shall be set in the planting pit, at the proper depth, on tamped soil mix. Soil mix shall then be filled around the roots to approximately 75% of the depth of the pit, tamped, and thoroughly watered. After settlement of the soil, the remainder of the pit shall be filled with soil mix and again watered, all within the same day of planting. The same procedure shall be followed in planting replacements.
7. During the establishment period the contractor shall water each plant with the following minimum quantities of water for each watering.
   (A) Deciduous Trees over 10' Ht. - 12 gallons per pit
   (B) Deciduous Trees 10' Ht. or less - 6 gallons per pit
   (C) Shrubs - 2 gallons per pit
   (D) Ground Covers/Perennials - 1 gallon per pit
   (E) Sod - 1" on surface.
   (F) In addition the Contractor will fill all 25 G. Tree Gators.
   The Contractor shall water all living plants every 2 weeks during the period between April 1 and May 31; every 2 weeks during the period between June 1 and September 30; and every 4 weeks during the period between October 1 and November 30. For Contractor's bidding purposes, this assumes a total of 18 times per year, and is included in the cost per plant. See note 32.
8. The Landscape Architect shall be given the opportunity to inspect and approve all plant material at its source prior to digging or delivery. If this opportunity is waived, a representative sample of each species may be required for approval prior to shipment of the total quantity.
9. Utility data has not been collected for this project. Prior to any construction, excavation, or landscaping, the contractor shall assume the responsibility of locating and verifying all utilities, above and/or below ground, public and/or private that may exist and cross through the areas of construction.
10. Major trees shall not be planted under overhead wires at any time.
11. Location of plant materials shown on the plans are schematic only and shall be adjusted as required for changes due to actual field conditions by the Landscape Architect.
12. The mulching material for this project shall be:
    SHREDDED HARDWOOD BARK
    (See Standard 1201.08 for Mulch Specifications)
13. Unless otherwise noted on the plans, all street type trees will receive oversize planting pits. See Detail.
14. Definition of abbreviation:
    - CAL. - Caliper
    - HGT. - Height
    - B & B - Balled & Burlapped
    - CONT. - Container
    - B.R. - Bareroot
    - EA. - Each
    - L.F. - Linear Feet
    - C.Y. - Cubic Yard
    - S.F. - Square Feet
    - HR - Hour
15. Planting pits for container material shall be twice the width of the container and equal to the depth of the container.
16. All integrally colored and impressed concrete will be MATCRETE/INCRETE or equal and the Integral Color will be Adobe Red. Score and Expansion joints are shown on the plans per Distict Materials Engineer. Wherever the concrete meets any other surface or joint, a 8" tooled, patterned edge will be implemented. A sample panel of the special concrete will be formed, poured, and tooled by the Contractor for inspection prior to proceeding. This sample panel will be inspected and approved by the Landscape Architect in conjunction with the Engineer prior to work proceeding. The impressed pattern will be Brick Herringbone imprinted radially. One contact for the MATCRETE/Increte product (Regional Representative) is Mr. Rodney Tozier 540-387-2261.
17. All integrally colored and impressed concrete surfacing requires expansion joints as determined by the District Materials Engineer. Shop drawings will be required from the concrete finisher that reflect how these expansion joints will relate to score joints so that a pattern is developed throughout the finishing. Shop drawings will be submitted for approval by to the Landscape Architect in conjunction with the Engineer.
18. On-center spacing shown is approximate and spacing shall be per the plan.
19. Cost for watering, vegetation control, litter pick-up from mulched areas and mulch refreshment for each visit as needed and directed by the Engineer is to be included in the cost per plant. See note 32.
20. For all trees, a 25 Gallon Tree Gator will be installed as part of the unit price for the plant. These will be filled during the watering schedule as indicated on the summary sheet, installed per the manufacturer recommendation and as approved by the Landscape Architect. See note 32.
21. All oversize planting pits shall be excavated and reviewed for approval by the Landscape Architect prior to backfilling or planting trees.
22. Under no circumstance will the root flare on shrubs and trees be covered with mulch or improved backfill. Root ball baskets will be removed entirely, burlap untied, and dropped to bottom of pit.
23. Seeding overlay "R", above, is a VDOT approved mix and will be installed per the manufacturers optimal recommendation. For seeding overlay mix "X", above, the contractor will submit a regional conservation wetlands seeding mix to the Engineer for approval by the Landscape Architect. For estimating purposes, consult Ernst Conservation Seeding, VDOT Hampton Roads lo-gro mix.
24. The contractor will initiate a consultation meeting with the Engineer and the Landscape Architect no less than 3 months prior to commencing operations.

PLANT KEY	BOTANICAL NAME	COMMON NAME (PAY ITEMS)	QTY.	UNIT	SIZE	Caliper	MIN.PIT SIZE DIAM. X DEPTH	MIN. WIDTH SPREAD OF BRANCHING	WATERING KEY	HT. OF BRNCH ING	ADDITIONAL REMARKS
A	Quercus robur 'Fastigiata'	Upright English Oak	138	Each	12' min.	3"	See "Oversize Planting Pit" detail		A	42"	B & B
B	Quercus bicolor	Swamp White Oak	68	Each	12' min.	2.5"	See "Oversize Planting Pit" detail		A	42"	B & B
C	Quercus phellos	Willow Oak	27	Each	10' min.	2"	See "Oversize Planting Pit" detail		A	42"	B & B
D	Ilex opaca	American Holly	93	Each	8' min.	2"-3"	See "Oversize Planting Pit" detail	5'-8'	A		B & B full compact field grown natural
E	Cryptomeria 'Black Dragon'	Black Dragon Cryptomeria	68	Each	30' min.		See "Oversize Planting Pit" detail		A		5 gal. cont., linear beds mulched when in medians, see note 34
F	Cercis canadensis	Eastern Red Bud	106	Each	8'-10'	1.5"	See "Oversize Planting Pit" detail		A	42"	
G	Laegerstromia indica 'x' fauriei	Tuscarora Crepe Myrtle	126	Each	8' min.	1.5"	See "Oversize Planting Pit" detail		A	42"	B & B 3 stem min. clump
H	Ilex x attenuata 'Savannah'	Savannah Foster's Hybrid Holly	72	Each	8' min.	2"	See "Oversize Planting Pit" detail	5' base	A		B & B full compact natural
I	Fagus grandifolia	American Beech	31	Each	14' min.	3"	See "Oversize Planting Pit" detail		A	42"	B & B
J	Cedrus deodar	Deodar Cedar	27	Each	10' min.	2"	See "Oversize Planting Pit" detail		A		B & B matched heavy
K	Acer palmatum 'Sangu Kaku'	Sangu Kaku Coralbark Maple	41	Each	6' min.	1.5"	See "Oversize Planting Pit" detail		A	42"	Natural stock not grafted, matched as available
L	Panicum virgatum 'Heavy Metal'	Heavy Metal Switch Grass	563	Each	Gallon		12"x12" full		D		1' on center typical, container
M	Sod	Bermuda Grass	6,823	S.Y.							
N	Laegerstroemia indica 'x' fauriei	Commanche Crepe Myrtle	6	Each	8' min.	1.5"	See "Oversize Planting Pit" detail		A	42"	B & B 5 stem min. clump
O	Juniperus horizontalis 'Plumosa' Youngstown	Youngstown Juniper	8	Each	5 gallon		See "Oversize Planting Pit" detail				B & B or cont. matched
P	Magnolia grandifolia 'Little Gem'	Little Gem Magnolia	80	Each	6'-8'	1.5"	See "Oversize Planting Pit" detail				Heavy B & B spring planting only, see note 35
Q	Cryptomeria japonica 'Elegans'	Elegans Cryptomeria	14	Each	4'-5'	2"	See "Oversize Planting Pit" detail				Matched
R	Seeding Overlay	Conservation Seed Mix	19	LB			Per manufacturers optimal conditions				Min. 13 lbs per acre, see note 23
S	Integrally Colored and Impressed Concrete		1,523	S.Y.							See note 16 and special provision
T	NOT USED										
U	Chamaecyparis obtusa 'Nana Gracilis'	Dwarf Hinoki Falsecypress	131	Each	3 gallon		20"x18" cont. 24"	18"	C		Uniform
V	Spirea alba	Meadow Sweet	7,056	Each	Quart		12"x12"				Quart or larger container
W	Salix 'Dwarf Blue Canyon Arctic'	Dwarf Blue Canyon Arctic Willow	10	Each	5 gallon						5 gal. container
X	Seeding Overlay	30" Wetlands Mix	4	LB							Min. 13 lbs per acre, see note 23
Z	Bulb Mix		2,500	Each							500 bulbs per each of 5 locations, see note 34
		MISC. ITEMS									
		MULCHING	15	C.Y.							
		BED PREPARATION	12	UNIT	UNIT = 100 S.F.						
		REMULCHING	9	C.Y.							
		*WATERING	20	UNIT	UNIT = 1000 GAL.						Includes furnishing, installing
		*VEGETATION CONTROL	5	UNIT	UNIT = EACH COMPLETE PROJECT WEEDING OPERATION						and filling watering bags on an
		OVERSIZE PLANTING PIT	808	EACH							every 14 day rotation basis.
		ORNAMENTAL STONE COVER	346	S.Y.							
		BOULDERS	9	EACH							
		STEEL EDGING	145	L.F.							
		*NOT A PAY ITEM									

25. DELIVERY AND INSPECTION:
    (A) - The VDOT Landscape Architect shall be given the opportunity to inspect and select plants utilizing a VDOT Plant Identifiation tag at the source of supply prior to digging or final purchase.
    (A) - The Landscape Architect shall also inspect the Plants upon delivery to ensure that plants are living viable, disease free, pest free, that all trees have a basal flare at the top of the root container or root ball and are not covered with additional soil, that all trees have a central dominant leader, and that all plants are healthy and in a condition suitable for immediate planting. Plants not meeting these specifications will be rejected.
26. STORAGE:
    (A) - Plants that are not to be installed within 48 hours of delivery shall be hilled in with shredded bark mulch to completely cover the container or root ball, and shall be watered in sufficiently to saturate the mulch. A site shall be selected by the Horticulturalist that is in the shade from 11:00 AM to dusk, or a shade structure may be erected on site to provide shade.
    (B) - Plants shall be monitored daily for signs of stress and shall be watered in daily until planted.
    (C) - Plants that have shed their foliage or plants with foliage that has turned brown due to stress shall not be planted and shall be removed from the project site.
    (D) - In no case shall plants be stored in a closed storage unit where natural light and water cannot penetrate.
    (E) - Plants stored on site for more than 21 days shall be rejected.
27. PRUNING:
    The Landscape Architect (or his representative) shall inspect plants and direct the Contractor to prune limbs and roots according to the following:
    (A) - LIMBS: While laying down on side, inspect the tree crown, and make clean pruning cuts as necessary to remove codominant leaders, dead or broken branches, and basal suckers.
    (B) - All above ground pruning shall be made just outside the branch collar and all basal suckers back to the point of origin, even if from the root system. Trees having co -dominate leaders within the lower 2/3's of the crown shall be rejected. Reduction pruning of co-dominate leaders will be limited to limbs less than 1.5" inches in diameter.
    (C) - ROOTS: Inspect root zone for potential stem girdling roots (SGRs), "J" roots, or any roots starting to encircle around the stem or root system. Prune away defective roots back to live tissue.
28. STAKEOUT:
    (A) - The Contractor shall stakeout proposed plant locations of trees and shrubs in reasonable conformance with the plans, making adjustments for existing trees not to be disturbed. Staking shall be wood stakes (color coded with paint), or metal (color coded with flags) to differentiate between large trees, small trees, evergreen trees, large shrubs and small shrubs. The location of shrub masses shall be outlined with paint. The Landscape Architect shall review and approve the proposed stakeout and/ or call for adjustments in the location of plant materials by the contractor prior to beginning planting operations.
29. PRE-EMERGENT AND FERTILIZER APPLICATION:
    (A) - Top-dress each planting pit with a granular, slow release pre-emergent herbicide and fertilizer as approved by the Landscape Architect. For beds, apply pre-emergent throughout the bed at the manufacturer's specified rate.
    (B) Then apply a 3" layer of mulch as specified, being careful to keep mulch away from the trunk base.
    (C) - Cost for pre-emergent and fertilizer application shall be included in the Contract Unit Price Bid for Each Tree and Shrub.
30. BEDS:
    (A) - In bed areas, existing turf and weeds shall be eradicated by removal or herbicide spraying. Herbicide must be applied at least One Week before Bed Preparation. Any soil removed with weeds/turf shall be replaced with composted yard waste prior to planting operations. See Section 605 of the Specifications for "BED PREPARATION".
31. PLANTING OPERATIONS COORDINATION MEETING:
    (A) - Following award of the project, and at least 3 months prior to Planting Operations the Contractor shall schedule a meeting with the Engineer, and the Landscape Architect to review elements of the plans and expectations for quality of materials, workmanship, manner of executing the work, site preparation and maintenance during the establishment period.
32. WATERING, WEEDING, PEST CONTROL DURING PLANT ESTABLISHMENT PERIOD:
    (A) - Generally, NO WATER WELLS/SAUCERS (except on downward side of sloped plant pits) shall be constructed with subsoil.
    (B) - Watering for all deciduous and evergreen trees shall be accomplished by use of 20 gallon (Min.) Watering Tubes / Bags as specified in the attached Special Provisions.
    (C) - Water trees and evergreens routinely, filling Watering Tubes / Bags once every 14 days from May 1st through Oct. 30th. Remove Watering Tubes / Bags at the end of the first full growing season. If drought conditions persist. Fill bags every week.
    (D) - All other plants shall be watered every 7 days (minimum) at the following rates unless there has been 1" or more of rainfall for that specific week.:
        i -Shrubs or Grasses 24" height or greater: - 2 Gallons Per Pit (Min.)
        ii -Shrubs or Grasses less than 24" height: - 1 Gallon Per Pit (Min.)
        iii - Ground Covers - 0.5 Gallon Per Pit. (Min.)
    (E) - Contractor is responsible for controlling pests, plant disease and removing weed growth in tree rings and plant beds throughout the establishment period. Project shall be inspected on a weekly basis (in concert with watering during the growing season) and corrective action taken for control of weed growth and pest infestations by pesticide and herbicide spraying as directed by the Landscape Architect.
    (F) - Watering rates shown are for the minimum amount depending on weather, and the price for watering is to be included in the cost per plant.
33. TERMINUS OF ESTABLISHMENT PERIOD:
    (A) - A final inspection of the project shall be made at the terminus of the Establishment period to identify dead, dying, damaged and diseased plants to be removed and replaced in kind. Plants shall be replaced at the contractor's expense.
    (B) - Should tree stakes and guys be used, all above-ground materials shall be removed & discarded off-site after first full growing season (end of October). Plants shall stand plumb and be maintained upright and at a positive grade throughout the establishment period.
    (C) - Any water wells that may have been constructed (on sloped pits only) shall be a TEMPORARY aid and shall be removed after first full growing season (end of October). Tree rings shall be weed-free and shall be remulched at the end of the establishment period.
    (D) - Discard all trash and debris generated during operations off-site at an appropriate waste facility. No waste materials shall be buried in planting pits/beds or otherwise left on-site.
34. Bulbs (1/3 Mt. Hood Daffodil, 1/3 Grape Hyacinth, 1/3 Ivory Floradale Tulip by weight) applied in linear median strip with cryptomeria.
35. In addition to improved backfill for all planting holes, Diehard Transplant or other approved mycorrhizal blend shall be used according to manufacturers recommendations.
36. Improved Backfill will be 60% Class B Topsoil and 40% Organic Compost as approved by the Landscape Architect in conjunction with the Engineer.

COMMONWEALTH OF VIRGINIA
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PROJECT MANAGER _ Ken McKinna, PE (757) 956-3271 _
SURVEYED BY, DATE _ Danny R. Williams (757) 925-2657 _
DESIGN BY _ Dale Huff, CLA (540) 643-2514 or (540) 577-8231 _
SUBSURFACE UTILITY BY, DATE _ Accumark, Inc. (757) 767-3147 _

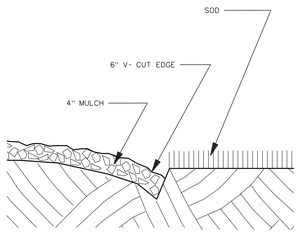
LANDSCAPE DETAILS

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

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	15(2)

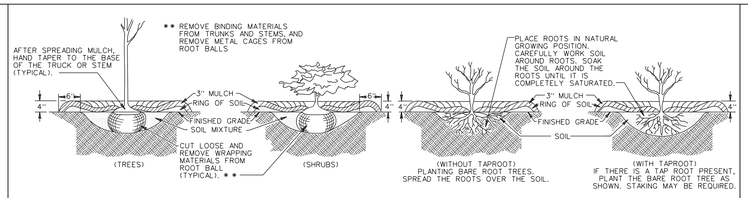
WINFRED DALE HUFF, JR.
Lic. No. 000681
COMMONWEALTH OF VIRGINIA
LANDSCAPE ARCHITECT

VDOT Location & Design
Richmond, Virginia
LANDSCAPE ARCHITECT



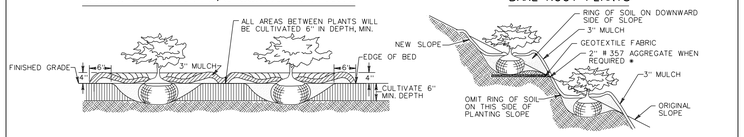
TYPICAL EDGING DETAIL FOR INDIVIDUAL PLANT PITS

NTS



BALLED & BURLAPPED, & CONTAINER PLANTS

BARE ROOT PLANTS



BED PLANTING

SLOPE PLANTING

* WHEN A PORTION OF A PLANT BED EXTENDS INTO AN AREA STEEPER THAN 4:1, CULTIVATION OF THAT PORTION SHALL BE OMITTED AND THE ENTIRE AREA BETWEEN PLANTS SHALL BE MULCHED TO BLEND IN WITH THE CULTIVATED BED.
* PLANTING BEDS (CULTIVATED AND NON-CULTIVATED) SHALL BE CUT TO A MAXIMUM 4" IN HEIGHT BY MOWING, AND SHALL AFTERWARDS BE TREATED WITH HERBICIDE AS APPROVED AND DIRECTED BY THE ENGINEER AT LEAST 2 WEEKS PRIOR TO CULTIVATION, PLANTING, OR MULCHING.
* SFM FOLLOWING BED DESIGNATION STANDS FOR SQUARE FEET OF MULCH AT THE INDICATED QUANTITY.

* ON SLOPES STEEPER THAN 3:1, THE FRONT CENTER OF THE PIT SHALL BE MODIFIED WHEN REQUIRED * TO INCLUDE A "V" CUT THE FULL DEPTH OF THE PIT. THE PIT SHALL BE DUG 2" DEEPER THAN SHOWN ON THE SUMMARY SHEET AND BACKFILLED WITH 2" OF #357 AGGREGATE, DAYLIGHTED TO THE SLOPE FACE, AND COVERED WITH GEOTEXTILE FABRIC PRIOR TO BACKFILLING WITH SOIL MIXTURE.

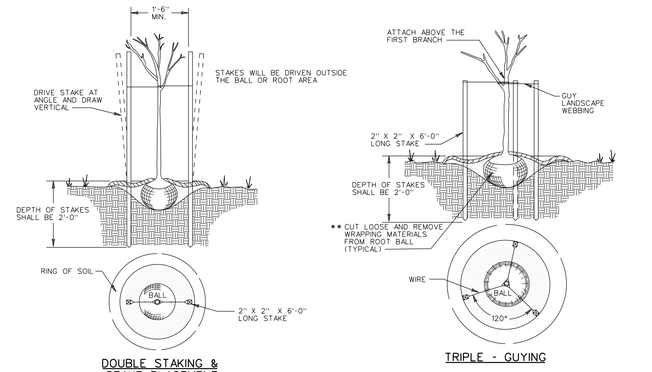
* SEE NOTE FOR PIT DRAINAGE MODIFICATION FOR SLOPE PLANTING THIS SHEET.

GENERAL NOTES:

1. SEE LANDSCAPE SUMMARY SHEET.
2. ROOT BALL SHALL BE POSITIONED, LEVEL WITH FINISHED GRADE. SOIL MIXTURE SHALL TAPER ONTO BUT NOT OVER TOP OF THE ROOT BALL. MULCH SHALL EXTEND AT THE PROPER DEPTH OVER THE ENTIRE ROOT BALL AND PLANTING PIT, AND SHALL BE HAND TAPERED TO THE BASE OF ALL TRUNKS AND STEMS AFTER SPREADING.

PLANTING DETAILS

NTS



DOUBLE STAKING & STAKE PLACEMENT

DECIDUOUS TREES LESS THAN 2" IN CALIPER
EVERGREEN TREES LESS THAN 4 FEET IN HEIGHT
SHRUBS 4 FEET OR MORE IN HEIGHT.

TRIPLE - GUYING

DECIDUOUS TREES 2" IN CALIPER OR GREATER
EVERGREEN TREES 4 FEET IN HEIGHT OR GREATER

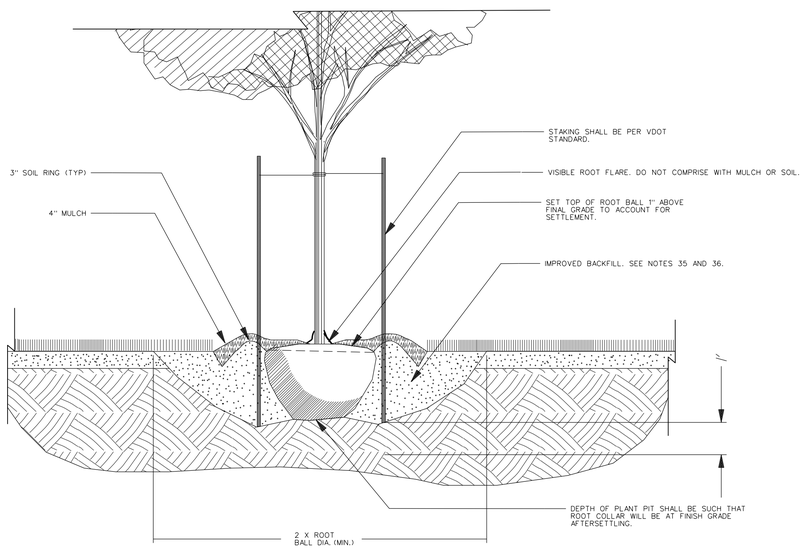
GENERAL NOTES

1. ALL DECIDUOUS TREES OVER 4 FT. IN HEIGHT AND ALL EVERGREEN TREES OVER 4 FT. IN HEIGHT OR TALLER SHALL BE STAKED AND GUYED WITH 3 STAKES AS SHOWN.
2. MULTIPLE STEMMED DECIDUOUS TREES 4 FT. IN HEIGHT SHALL BE STAKED WITH 3 STAKES IN SUCH A MANNER AS TO STABILIZE 3 MAINSTEMS.
3. THE WOOD STAKES SHALL BE 2"X2"X6'-0" LONG DRESSED HARDWOOD AND DECAY RESISTANT.

** REMOVE BINDING MATERIALS FROM TRUNKS AND STEMS, AND REMOVE METAL CAGES FROM ROOT BALLS.

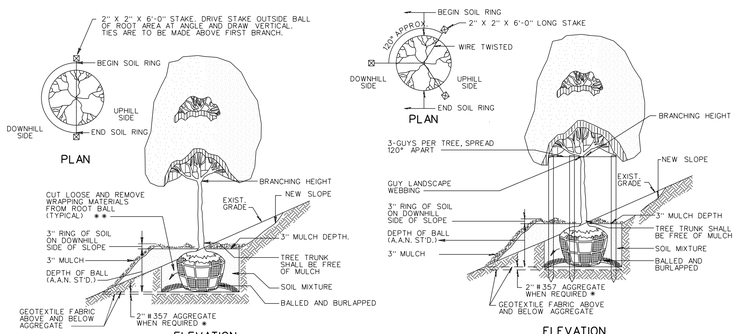
PLANTING DETAILS STAKING, GUYING

NTS



OVERSIZE PLANTING PIT DETAIL FOR ALL TREES 2" CALIPER OR GREATER

NTS



GENERAL NOTES

1. ALL DECIDUOUS TREES 2" IN CALIPER OR MORE AND ALL EVERGREEN TREES OVER 4' IN HEIGHT SHALL BE STAKED OR GUYED AS SHOWN.
2. MULTIPLE STEMED DECIDUOUS TREES OVER 4' IN HEIGHT SHALL BE STAKED WITH 3 STAKES IN SUCH A MATTER AS TO STABILIZE 3 MAINSTEMS
3. THE WOOD STAKES SHALL BE CONSTRUCTION GRADE, ROUGH OR DRESSED, OF SOUND HARDWOOD, DECAY RESISTANT, AND OF THE SIZE INDICATED IN THE DETAILS.
4. ON SLOPES STEEPER THAN 3:1, THE FRONT CENTER OF THE PIT SHALL BE MODIFIED WHEN REQUIRED * TO INCLUDE A "V" CUT THE FULL DEPTH OF THE PIT. THE PIT SHALL BE DUG 2" DEEPER THAN SHOWN IN THE SUMMARY SHEET AND BACKFILLED WITH 2" OF #357 AGGREGATE DAYLIGHTED TO THE SLOPE FACE, AND COVERED WITH GEOTEXTILE FABRIC PRIOR TO BACK- FILLING WITH SOIL MIXTURE.

* PIT DRAINAGE MODIFICATION FOR SLOPE PLANTING (WHEN REQUIRED)

** REMOVE BINDING MATERIALS FROM TRUNKS AND STEMS, AND REMOVE METAL CAGES FROM ROOT BALLS.

SLOPE PLANTING DETAILS PLANTING, STAKING, GUYING

NTS

PROJECT	SHEET NO.
0612-047-631	15(2)

PROJECT MANAGER _ Ken McKinna, PE (757) 956-3271
SURVEYED BY, DATE _ Danny R. Williams (757) 925-2657
DESIGN BY _ Dale Huff, CLA (540) 643-2514 or (540) 577-8231
SUBSURFACE UTILITY BY, DATE _ Accumark, Inc. (757) 767-3147

HARDSCAPE AND PLANTING SECTION DETAILS

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

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/19	VA.	612	0612-047-631, C-501	15(2A)

COMMONWEALTH OF VIRGINIA
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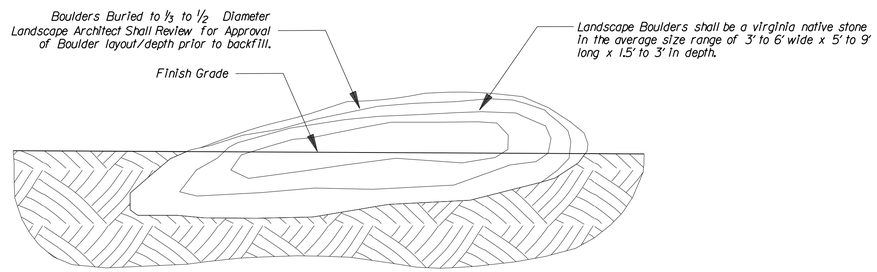
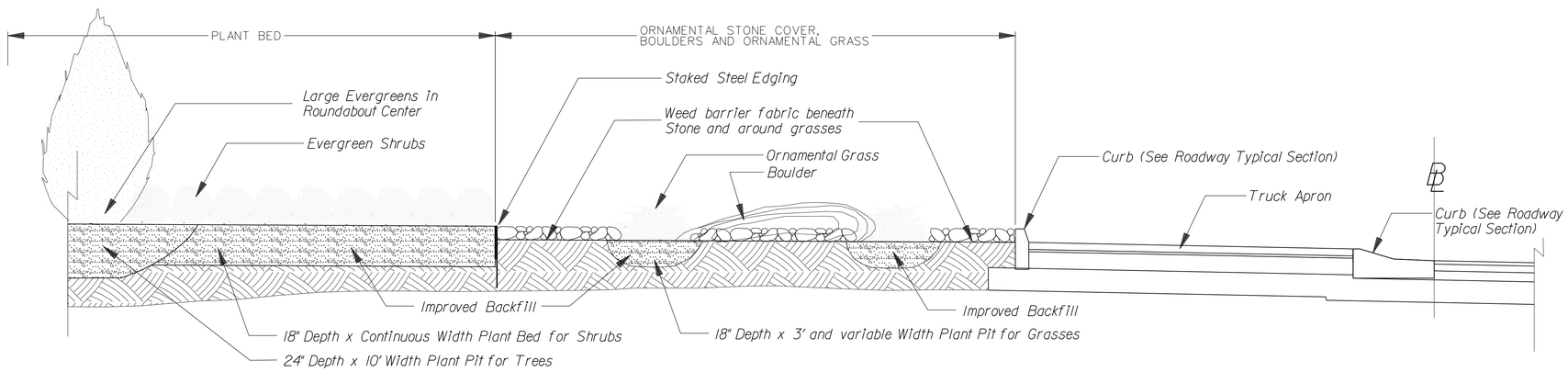
Lic. No. 000681
LANDSCAPE ARCHITECT

VDOT Location & Design
Richmond, Virginia
LANDSCAPE ARCHITECT





SECTION AT ROUNDABOUT

NTS

MISC. MATERIALS, PROCEDURES, MEASUREMENT AND PAYMENT:

ORNAMENTAL STONE COVER: shall be naturally rounded River Stone in naturally occuring beige, brown to blue-grey tones. Stone shall be 3" to 7" in diameter by 3" to 7" in length (approximate). Stone shall be laid to make a uniform ornamental ground cover that is an average of 5" to 7" in depth (Approximate). The approximate coverage is 36-40 S.F. per Ton at 5" Depth.

Ornamental Stone Cover shall be measured and paid for in units of Square Yards, including furnishing and installing geotextile fabric "weed barrier" and stone, compete in place.

Pay Item: Ornamental Stone Cover
Pay Unit: Square Yard

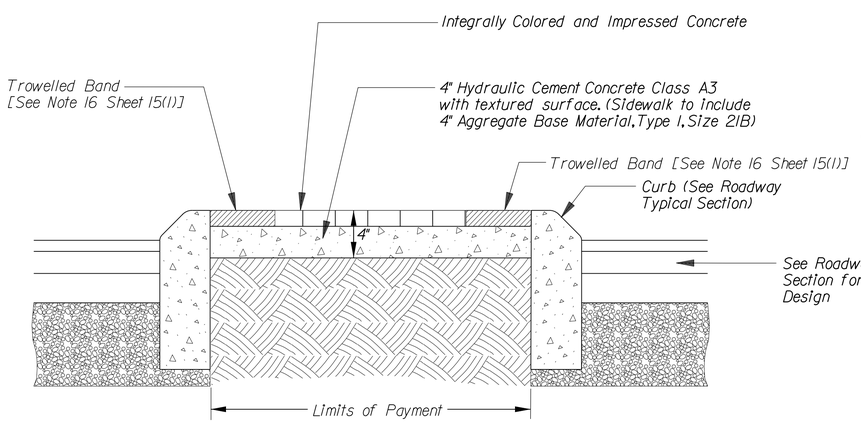
STEEL EDGING: For use around inside perimiter of Ornamntal Stone Cover, shall be 1/8" (min.) thick by 10" Depth Steel Edging set with 24" length spikes, factory painted Black, Brown or Dark Green and shall be measured and paid for in Units of Linear Feet (L.F.)

Pay Item: Steel Edging
Pay Unit: L.F.

BOULDERS: Landscape Boulders shall be a virginia native stone in the average size range of 3' to 6' wide x 5' to 9' long x 1.5' to 3' in depth. Boulders shall be measured and paid for in units of Each Boulder delivered and set in place as detailed herein.

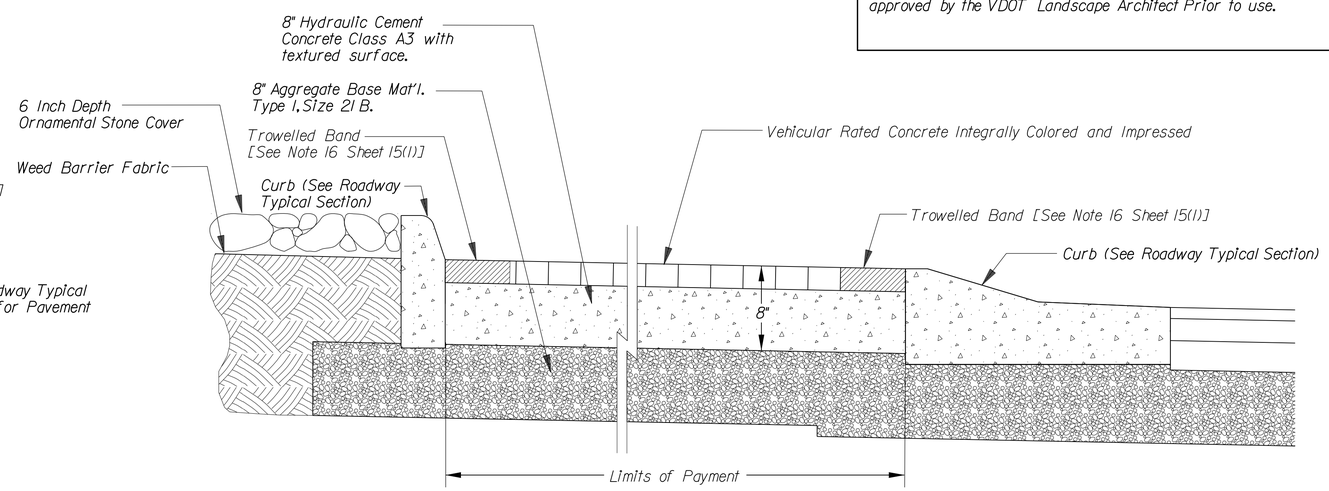
Pay Item: Boulder
Pay Unit: Each

PLANT BED and TREE PITS FOR ROUNDABOUT CENTER:
Section 605, Planting, replaced with the Following:
1. Contractor shall excavate plant bed to a depth of 18 inches, and Tree Pits to a depth of 24 inches. Contractor shall dispose of excavated material as directed by the Engineer.
2. The VDOT Landscape Achitect shall review excavation and the Contractor shall not proceed until excavation is approved.
3. Once Approved, the Contractor shall backfill excavated area with Composted Yard Waste (See Section 244.02(j) of the Specifications.) Note that Composted Yard Waste Material for Planting must be approved by the VDOT Landscape Architect Prior to use.



SECTION DETAIL AT CONCRETE MEDIAN, SIGN ISLAND & SIDEWALK

NTS



SECTION AT ROUNDABOUT TRUCK APRON

NTS

PROJECT MANAGER _ Ken McKinna, PE (757) 956-3271
SURVEYED BY, DATE _ Danny R. Williams (757) 925-2657
DESIGN BY _ Dale Huff, CLA (540) 643-2514 or (540) 577-8231
SUBSURFACE UTILITY BY, DATE _ Accumark, Inc. (757) 767-3147

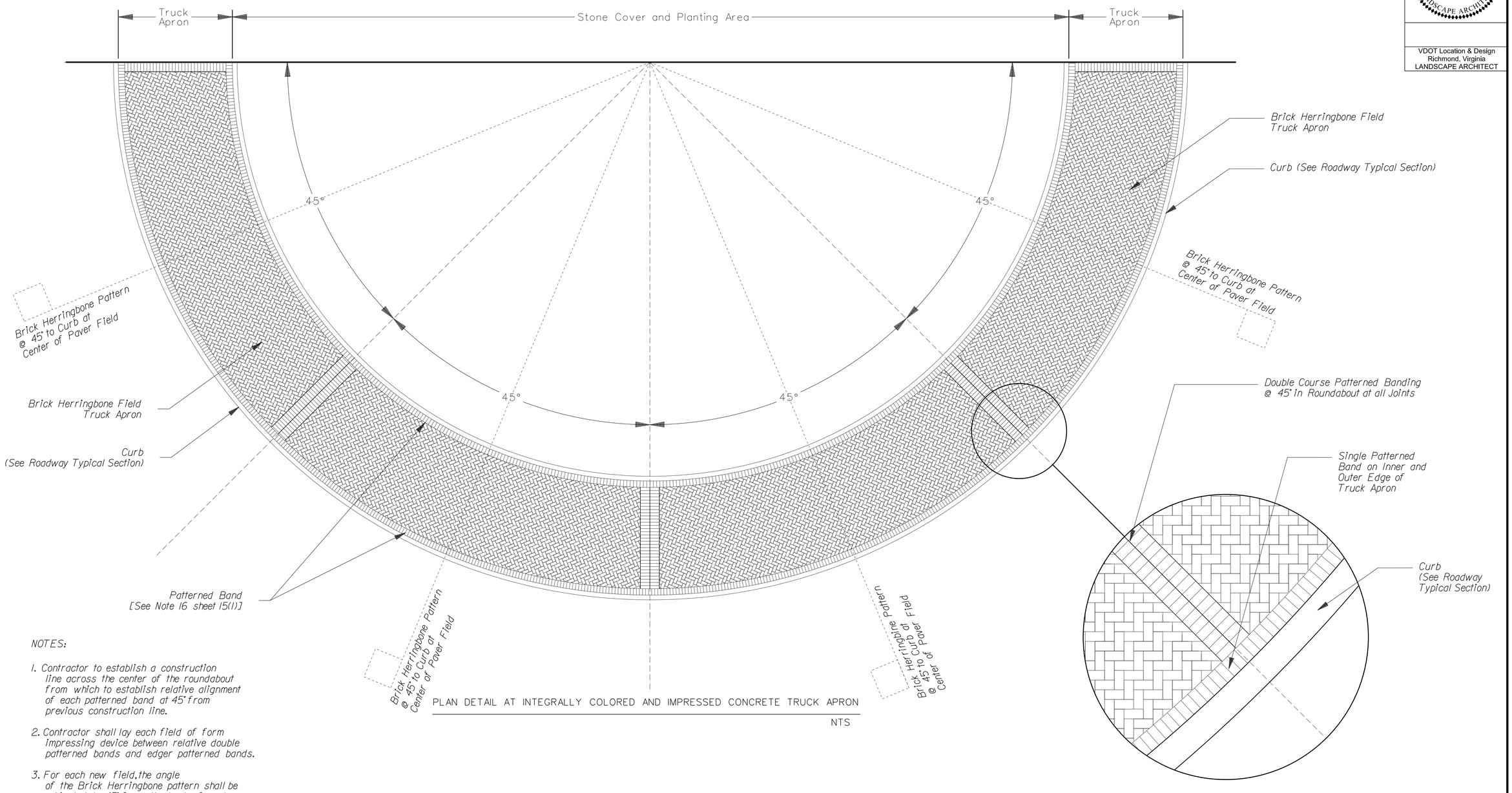
INTEGRALLY COLORED AND IMPRESSED CONCRETE PLAN VIEW DETAILS

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

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
6/25/19	VA.	612	0612-047-631, C-501	15(2B)

COMMONWEALTH OF VIRGINIA
WINFRED DALE HUFF, JR.
Lic. No. 000681
LANDSCAPE ARCHITECT

VDOT Location & Design
Richmond, Virginia
LANDSCAPE ARCHITECT



PLAN DETAIL AT INTEGRALLY COLORED AND IMPRESSED CONCRETE TRUCK APRON

NTS

NOTES:

1. Contractor to establish a construction line across the center of the roundabout from which to establish relative alignment of each patterned band at 45° from previous construction line.

2. Contractor shall lay each field of form impressing device between relative double patterned bands and edger patterned bands.

3. For each new field, the angle of the Brick Herringbone pattern shall be adjusted to 45° from the back of curb at the center point of the impressed field.

PROJECT	SHEET NO.
0612-047-631	15(2B)

PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY DALE HUFF, CLA (540) 643-2514 or (540) 577-8233
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

LANDSCAPE PLAN VIEW

COMMONWEALTH OF VIRGINIA
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Lic. No. 000681
LANDSCAPE ARCHITECT

VDOT Location and Design
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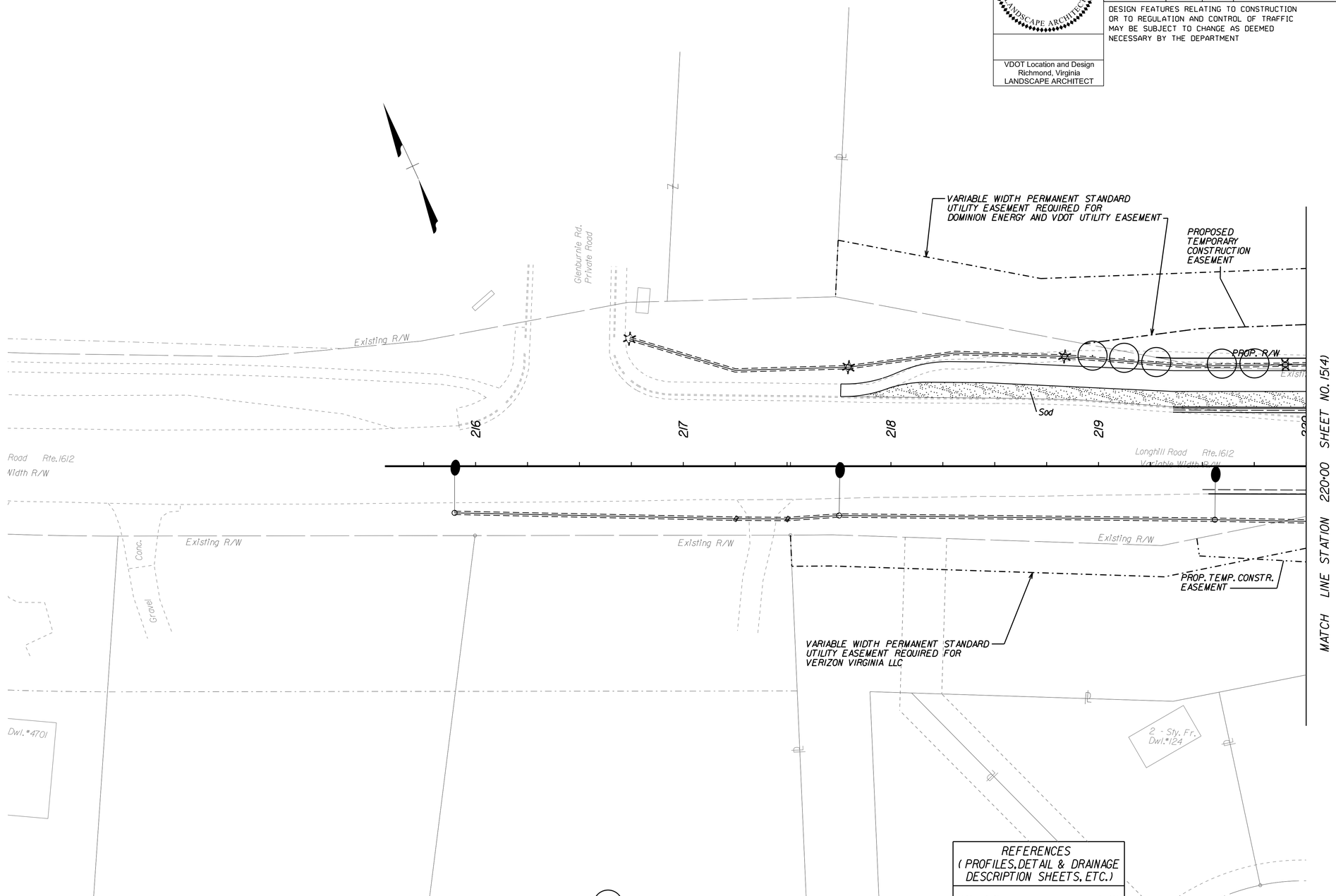
LANDSCAPE ARCHITECT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	15(3)

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



A = 5 EA Upright English Oak

M = 160 SY Sod

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Plant Summary	15(1)
Landscape Details	15(2)

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	15(3)

PROJECT MANAGER KEN MCKINNA, PE (757) 956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY DALE HUFF, CLA (540) 643-2514 or (540) 577-8231
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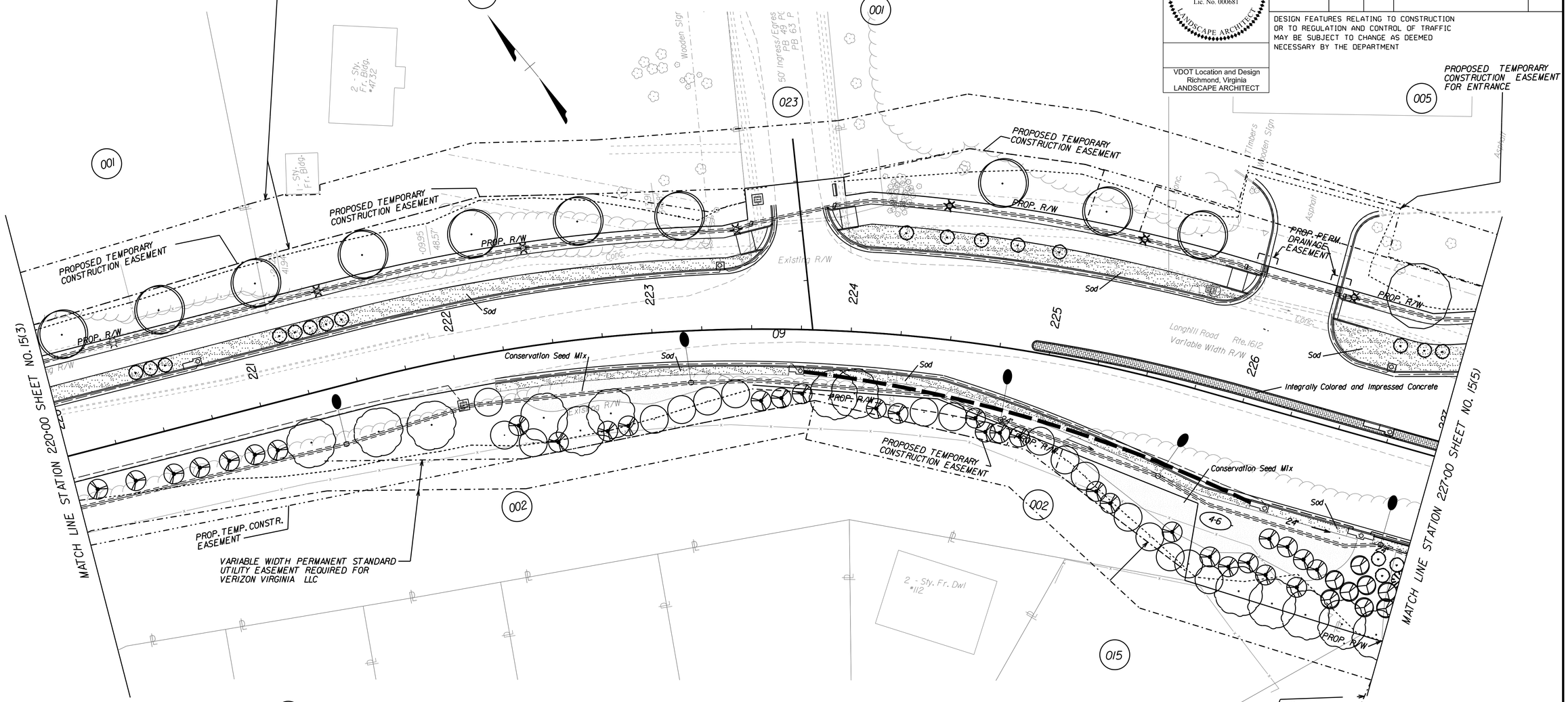
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	15(4)

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

LANDSCAPE PLAN VIEW



A = 17 EA Upright English Oak

B = 10 EA Swamp White Oak

C = 1 EA Willow Oak

D = 32 EA American Holly

G = 19 EA Tuscarora Crepe Myrtle

H = 8 EA Savannah Foster's Hybrid Holly

I = 13 EA American Beech

M = 770 SY Sod

R = 0.1 AC Conservation Seed Mix

S = 110 SY Integrally Colored and Impressed Concrete

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Plant Summary	15(1)
Landscape Details	15(2)
Concrete Median Detail	15(2A)

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	15(4)

PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
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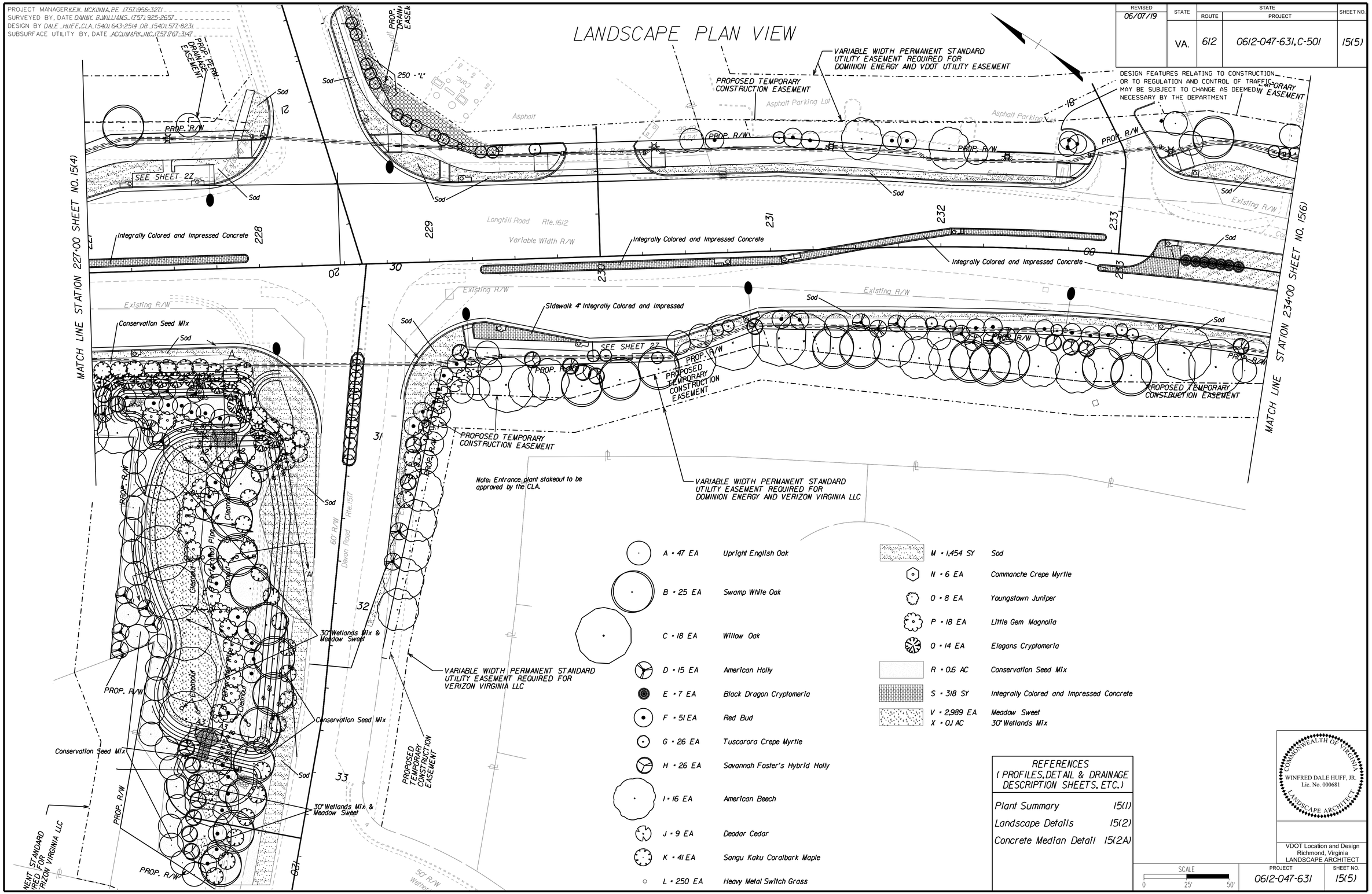
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/19	VA.	612	0612-047-631, C-501	15(5)

LANDSCAPE PLAN VIEW



REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Plant Summary	15(1)
Landscape Details	15(2)
Concrete Median Detail	15(2A)

COMMONWEALTH OF VIRGINIA
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Lic. No. 000681
LANDSCAPE ARCHITECT

VDOT Location and Design
Richmond, Virginia
LANDSCAPE ARCHITECT

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	15(5)

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PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY B.WILLIAMS (757) 925-2657
DESIGN BY DALE HUFF, CLA (540) 643-2514 OR (540) 577-8231
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

LANDSCAPE PLAN VIEW

COMMONWEALTH OF VIRGINIA
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VDOT Location and Design
Richmond, Virginia
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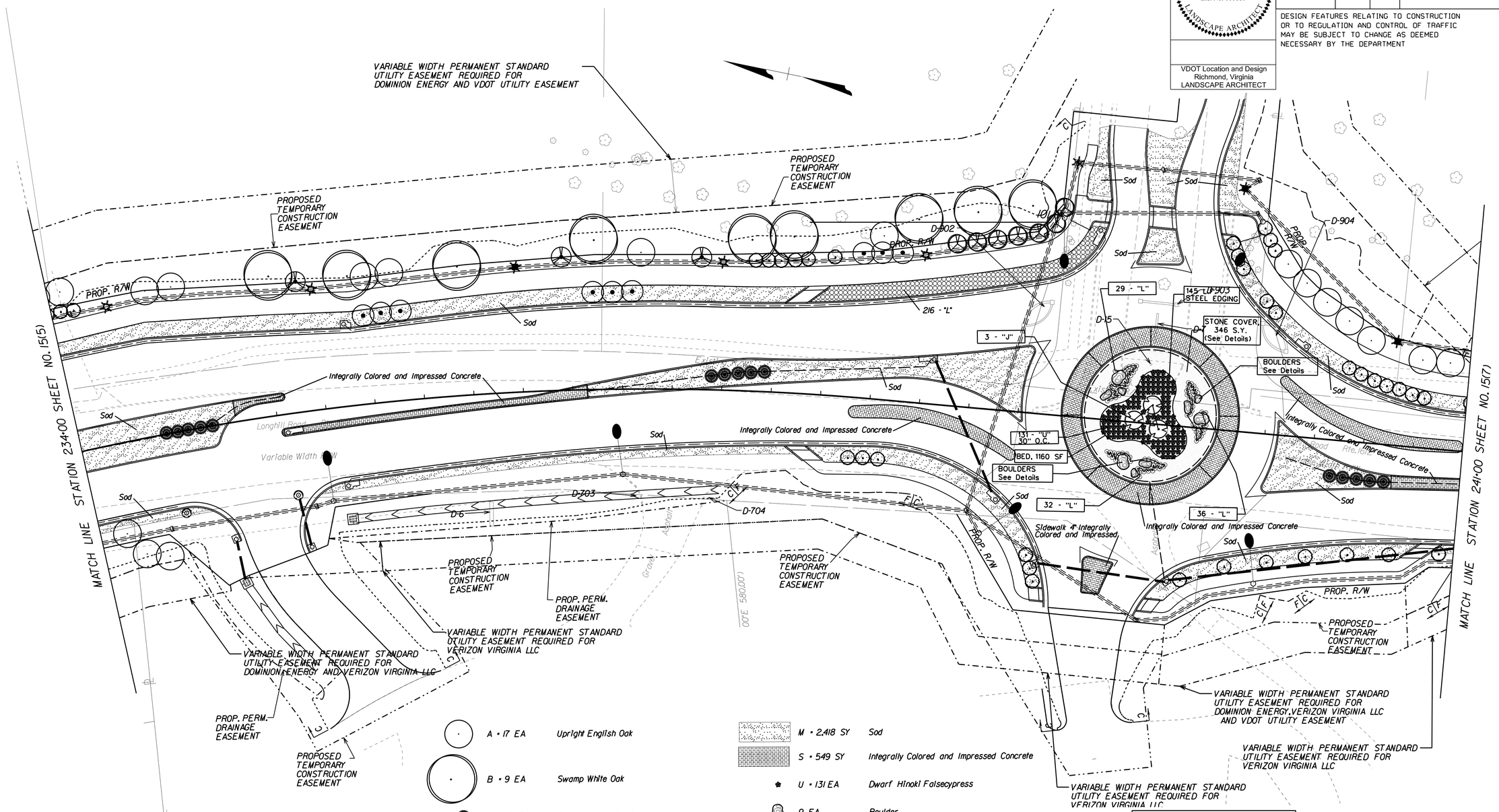
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/19	VA.	612	0612-047-631, C-501	15(6)

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



A - 17 EA	Upright English Oak	M - 2,418 SY	Sod
B - 9 EA	Swamp White Oak	S - 549 SY	Integrally Colored and Impressed Concrete
E - 15 EA	Black Dragon Cryptomeria	U - 131 EA	Dwarf Hinoki Falsecypress
F - 9 EA	Red Bud	9 EA	Boulder
G - 36 EA	Tuscarora Crepe Myrtle	346 SY	Stone
H - 10 EA	Savannah Foster's Hybrid Holly	145 LF	Steel Edging
J - 3 EA	Deodar Cedar	1,160 SF	Bed
L - 313 EA	Heavy Metal Switch Grass		

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Plant Summary	15(1)
Landscape Details	15(2)
Hardscape and Planting Details	15(2A)
Integrally Colored & Impressed Concrete Details	15(2B)

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	15(6)

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Plotted By: WAP04107$

PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY DALE HUFF, CLA (540) 643-2514 OR (540) 577-8231
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

LANDSCAPE PLAN VIEW

COMMONWEALTH OF VIRGINIA
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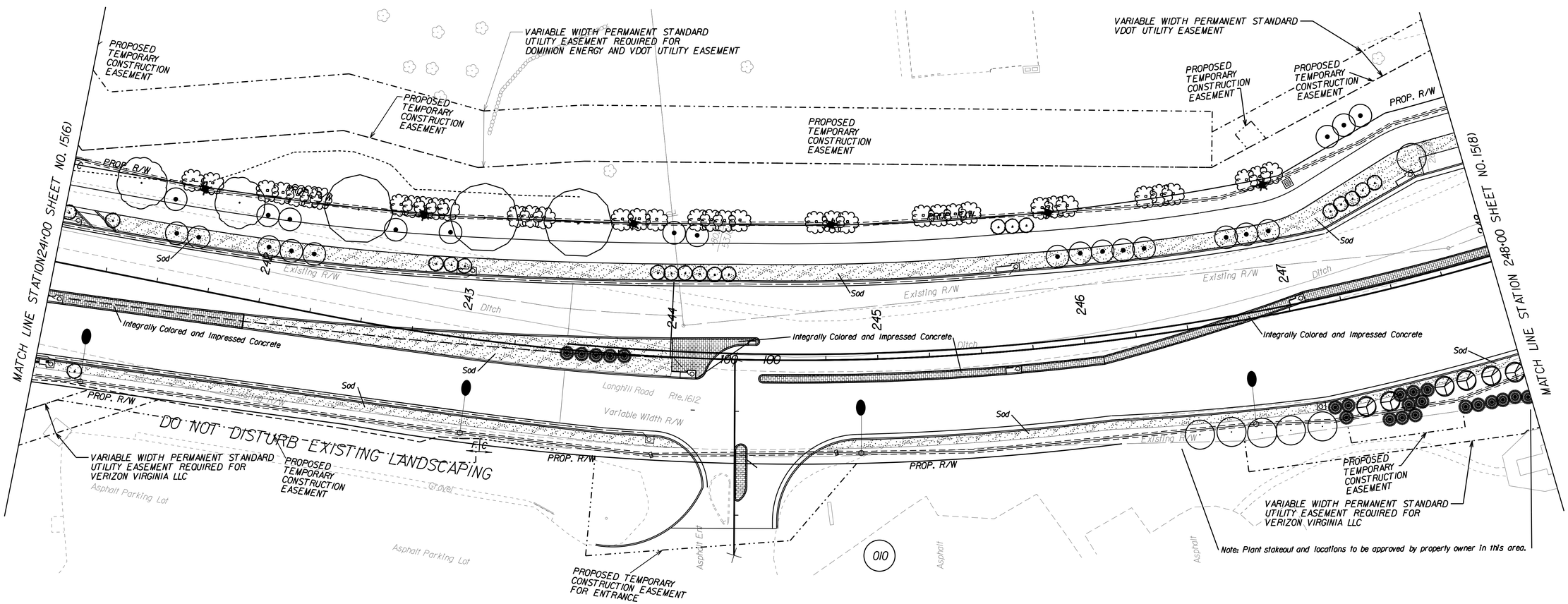
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	612	0612-047-631, C-501	15(7)

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



A = 6 EA	Upright English Oak	H = 6 EA	Savannah Foster's Hybrid Holly
C = 3 EA	Willow Oak	I = 2 EA	American Beech
E = 22 EA	Black Dragon Cryptomeria	M = 1,143 SY	Sod
F = 23 EA	Red Bud	P = 38 EA	Little Gem Magnolia
G = 20 EA	Tuscarora Crepe Myrtle	S = 272 SY	Integrally Colored and Impressed Concrete

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

Plant Summary	15(1)
Landscape Details	15(2)
Concrete Median Detail	15(2A)

SCALE	PROJECT	SHEET NO.
0 25' 50'	0612-047-631	15(7)

PROJECT MANAGER KEN MCKINNA, PE (757)956-3271
SURVEYED BY, DATE DANNY B. WILLIAMS (757) 925-2657
DESIGN BY DALE HUFF, CLA (540) 643-2514 OB (540) 577-8231
SUBSURFACE UTILITY BY, DATE ACCUMARK, INC. (757)767-3147

LANDSCAPE PLAN VIEW

A = 46 EA	Upright English Oak	
B = 24 EA	Swamp White Oak	
C = 5 EA	Willow Oak	
D = 46 EA	American Holly	
E = 24 EA	Black Dragon Cryptomeria	
F = 23 EA	Red Bud	
G = 25 EA	Tuscarora Crepe Myrtle	
H = 22 EA	Savannah Foster's Hybrid Holly	
J = 15 EA	Deodar Cedar	
M = 878 SY	Sod	
P = 24 EA	Little Gem Magnolia	
R = 0.7 AC	Conservation Seed Mix	
S = 274 SY	Integrally Colored and Impressed Concrete	
V = 4,067 EA	Meadow Sweet	
X = 0.2 AC	30" Wetlands Mix	
W = 10 EA	Willow	

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

Plant Summary	15(1)
Landscape Details	15(2)
Concrete Median Detail	15(2A)

COMMONWEALTH OF VIRGINIA
WINFRED DALE HUFF, JR
Lic. No. 000681
LANDSCAPE ARCHITECT

VDOT Location and Design
Richmond, Virginia
LANDSCAPE ARCHITECT

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
06/07/19	VA.	612	0612-047-631, C-501	15(8)

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

SCALE 0 25' 50'

PROJECT	SHEET NO.
0612-047-631	15(8)