

PROJECT MANAGER SUSAN YANTIS, SPECIAL PROJECTS
SURVEYED BY, DATE J2 ENGINEERS, INC (NOV. 2017)
DESIGN BY J2 ENGINEERS, INC.
SUBSURFACE UTILITY BY, DATE OCT. 2017 – MID-ATLANTIC LOCATING

THIS PROJECT WAS DEVELOPED UTILIZING AUTOCAD AND CARLSON
DESIGN SOFTWARE.
Computer Identification No. 109949



FHWA-534 DATA-24031
PPMS-109949

STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
	PROJECT		PROJECT	
VA.	TAP-5A01()	645	CLFT-029-101 SEE TABULATIONS BELOW FOR SECTION NUMBERS	1

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY
TOWN OF CLIFTON
CLIFTON STREETScape – PHASE 2

THE TOWN OF CLIFTON WILL MAINTAIN ALL NONSTANDARD ITEMS PROPOSED
WITH THIS PROJECT.

THOSE ITEMS INCLUDE:

- EXPOSED AGGREGATE SIDEWALK
- THERMOPLASTIC-STAMPED ASPHALT PAVEMENT
- BRICK PAVER CROSSWALK
- DRAINAGE INLETS AND PIPES
- PLANTINGS
- VALLEY GUTTERS
- FLUSH CURB
- SCUPPERS
- NON-STANDARD COMMERCIAL ENTRANCES

NOTE: THE PROPOSED IMPROVEMENTS WILL NOT MAKE THE EXISTING
CONDITIONS WORSE.

DESCRIPTION REFERENCE
POT STA. 70+94.71 MAIN STREET
POT STA. 90+00.00 CLIFTON ROAD

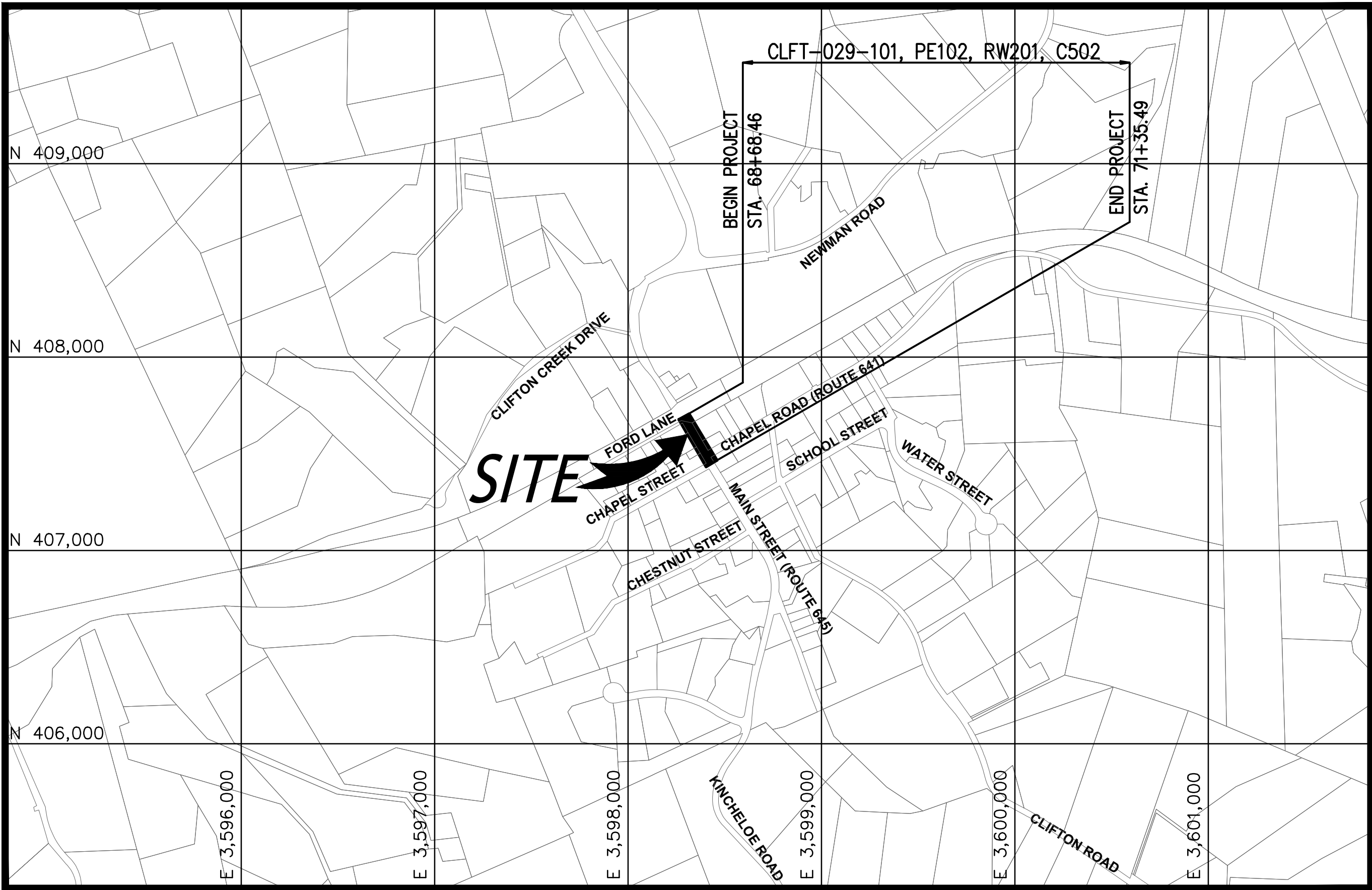
THE COMPLETE ELECTRONIC .TIF VERSION OF THE PLAN
ASSEMBLY AS AWARDED, INCLUDING ALL SUBSEQUENT REVISIONS,
WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION
RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE GENERAL NOTES.

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

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

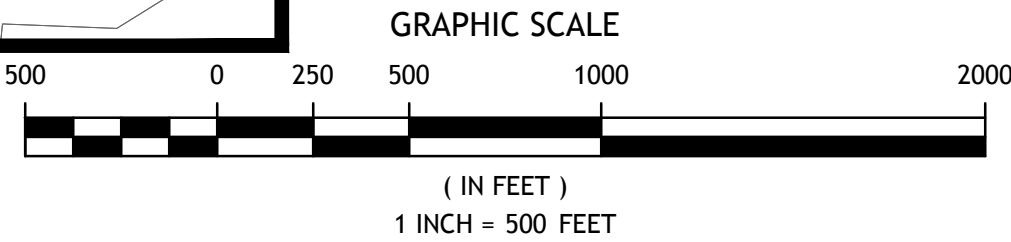
ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND
WIDENED IN ACCORDANCE WITH STANDARD TC-5.11U, EXCEPT
WHERE OTHERWISE NOTED.

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



VDOT WILL MAINTAIN PROPOSED ROADWAY AND PEDESTRIAN IMPROVEMENTS

TOWN OF CLIFTON POPULATION 292 (2016 CENSUS)



STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	LENGTH INCLUDING BRIDGE(S)		LENGTH EXCLUDING BRIDGE(S)		TYPE PROJECT	DESCRIPTION
					FEET	MILES	FEET	MILES		
CLFT-029-101	PE102	TAP-5A01(789)	PENG	109949	267.03	0.0506	267.03	0.0506	ENGINEERING	FROM: FORD LANE TO: APPROXIMATELY 50 FT. EAST OF CHAPEL ROAD
	RW201		ROWA	109949	267.03	0.0506	267.03	0.0506	RIGHT OF WAY	
	C502		1000	109949	267.03	0.0506	267.03	0.0506	CONSTRUCTION	

STATE LINE	---	LEVEE OR EMBANKMENT	=====
COUNTY LINE	----	BRIDGES	==+==
CITY, TOWN OR VILLAGE	-----	CULVERTS	==X==
RIGHT OF WAY LINE	-.-.-.-	DROP INLET	==O==
FENCE LINE	x-x-x-x	POWER POLES	==P==
UNFENCED PROPERTY LINE	x--x--x	TELEPHONE OR TELEGRAPH POLES	==T==
FENCED PROPERTY LINE	x--x--x	TELEPHONE OR TELEGRAPH LINES	==L==
WATER LINE	~~~~~	HEDGE	==H==
SANITARY SEWER LINE	-.-.-.-	TREES	==T==
GAS LINE	-.-.-.-	HEAVY WOODS	==W==
ELECTRIC UNDERGROUND CABLE	-.-.-.-	GROUND ELEVATION	==G==
TRAVELED WAY	=====	GRADE ELEVATION	==G==
GUARD RAIL	=====		
RETAINING WALL	=====		
RAILROADS	=====		
BASE OR SURVEY LINE	=====		

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



TIER 1 PROJECT

LOCALLY ADMINISTERED PROJECTS	
TOWN OF CLIFTON	
NAME OF LOCALITY	
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	MAYOR OF CLIFTON
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	MAYOR OF CLIFTON

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\$TIME\$STAMP\$

PROJECT	SHEET NO.
CLFT-029-101	1

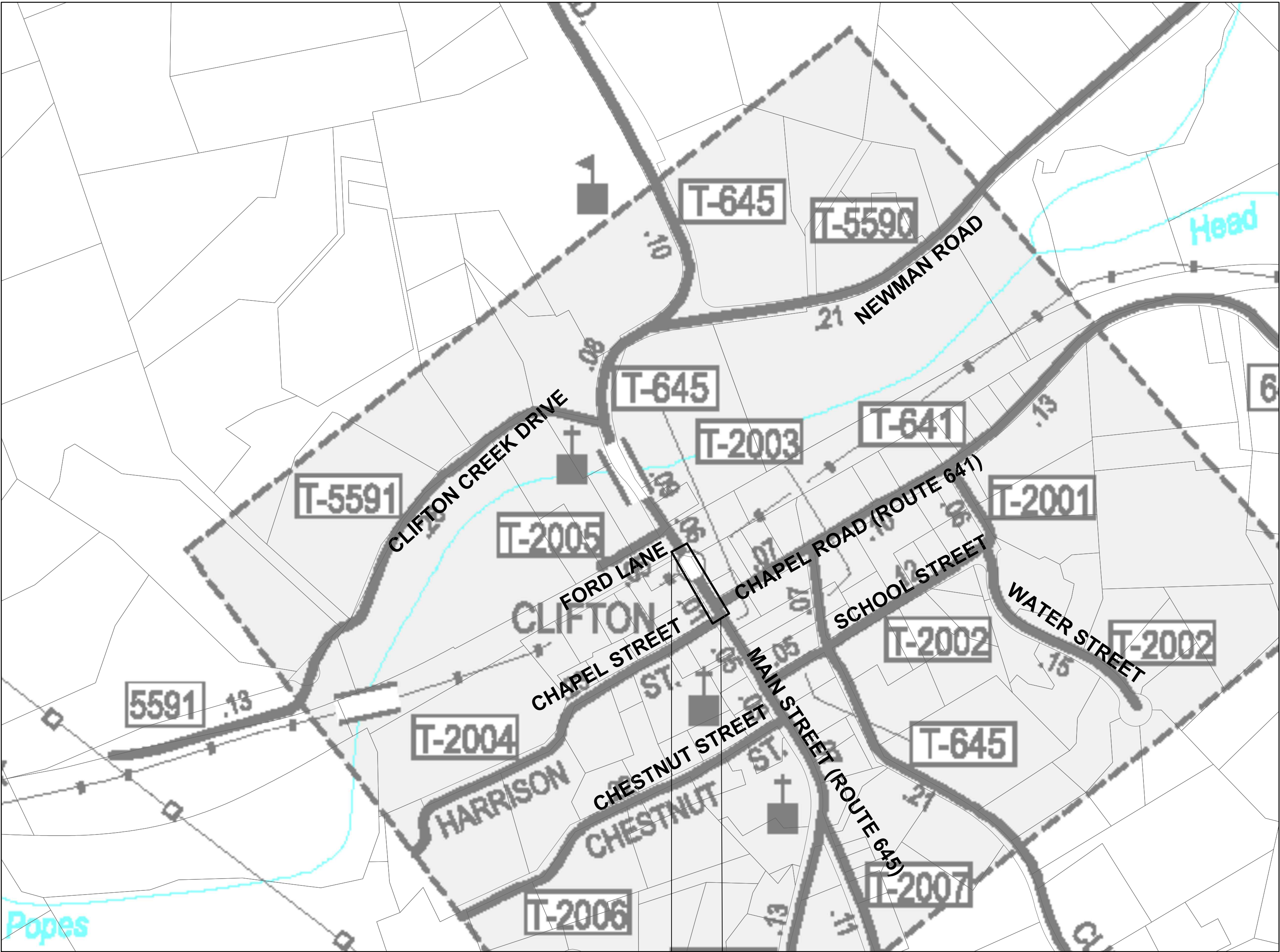
PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

LOCATION MAP

DESIGN FEATURES RELATING TO CONSTRUCTION
OR REGULATION AND CONTROL TO TRAFFIC MAY
BE SUBJECT TO CHANGE AS DEEMED
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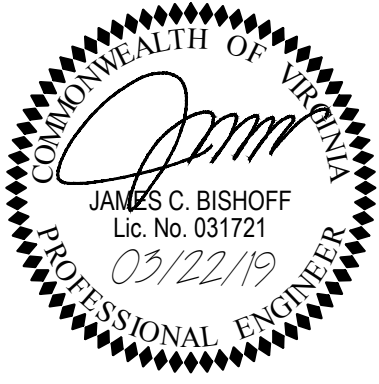
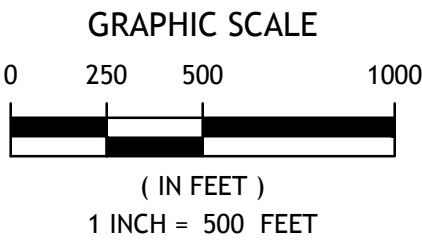
REVISED	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
	VA	TAP-5A01()	645	CLFT-029-101	1A

FAIRFAX COUNTY, VIRGINIA



PROPOSED
PROJECT

VDOT WILL MAINTAIN PROPOSED ROADWAY AND PEDESTRIAN IMPROVEMENTS



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)			
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		1A

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INDEX OF SHEETS

REVISED	STATE	FEDERAL AID	STATE		SHEET NO.
		PROJECT	ROUTE	PROJECT	
	VA	TAP-5A01()	645	CLFT-029-101	1B

SHEET LIST TABLE

Sheet Number	Sheet Title
1	COVER
1A	LOCATION MAP
1B	INDEX OF SHEETS
1C	ROW DATA SHEET
1D	NOT USED
1E	NOT USED
1F	NOT USED
1G	ALIGNMENT DATA
1G(1)	GEOMETRIC LAYOUT & SPOT ELEVATIONS
2	GENERAL NOTES AND DETAILS
2A	TYPICAL SECTIONS
2B	GENERAL NOTES AND DETAILS
2C	MISC. DETAILS
2D	MISC. DETAILS
2E	DEMOLITION PLAN
2F	CG-12 RAMP CALCULATIONS
2G	UNDERDRAIN PLAN
2H	AUTO TURN PLAN
3	GRADING PLAN
3A	ROADWAY PROFILE
3B	SIGHT DISTANCE PLAN AND PROFILE
3C	MATERIAL TYPE PLAN
4	STORM SEWER PROFILES
4A	PRE & POST SITE AREA MAP
4B	SWM ANALYSIS
4C	SWM ANALYSIS
4D	SWM ANALYSIS NARRATIVE
5	EROSION & SEDIMENT CONTROL PLAN
6	EROSION & SEDIMENT CONTROL NARRATIVE & DETAILS
7	PAVEMENT MARKING PLAN
8(1) - 8(2)	LANDSCAPE PLAN
X1 - X8	CROSS SECTION SHEETS



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)			
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		1B

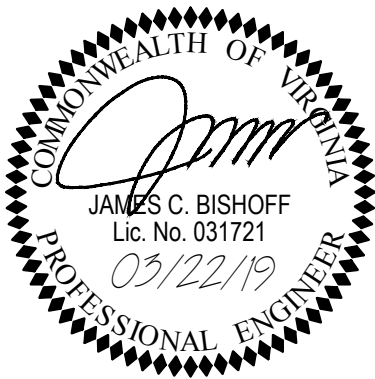
PROJECT MANAGER: SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY: J2 ENGINEERS, INC.
DESIGN SUPERVISED BY: JAMES C. BISHOFF, PE
DESIGNED BY: J2 ENGINEERS, INC.

RIGHT OF WAY DATA SHEET

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	1C

Parcel Information					Area: Areas greater than or equal to 1 acre will be shown in 3 decimal places (x.xxx AC). Areas less than 1 acre will be shown in square feet (xx.xxx SF).															
Number	Landowner Name	Sheet Number	Deed Acreage	Remainder	Fee Take Summary			Permanent Easements					Utility Easements			Temporary			Proffers Yes/NO	
					Total	Prescriptive	Non—Prescr.	Maintenance	(Dr)ainage	(Sl)ope				Public Access	Electric	VDOT	Construction			
001	GOLDEN PHOENIX LIMITED PARTNERSHIP	03	17,624.000 SF	17,624.000 SF				854.370 SF									38.275 SF			NO
002	JANE A. LION	03	5,300.000 SF	5,300.000 SF				459.478 SF									79.513 SF			NO
003	KAREN A. HARRINGTON	03	8,384.000 SF	8,384.000 SF																NO
004	THOMAS PETERSON & JEAN ANN PETERSON	03	16,580.000 SF	16,580.000 SF																NO
005	THOMAS PETERSON & JEAN ANN PETERSON	03	2,117.000 SF	2,117.000 SF																NO
006	CLIFTON CAFE REALTY, LLC	03	20,149.000 SF	20,149.000 SF																NO
007	MCNAMARA ENTERPRISES, INC	03	6,580.000 SF	6,580.000 SF																NO
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009																				
010																				
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REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GRADING PLAN	3

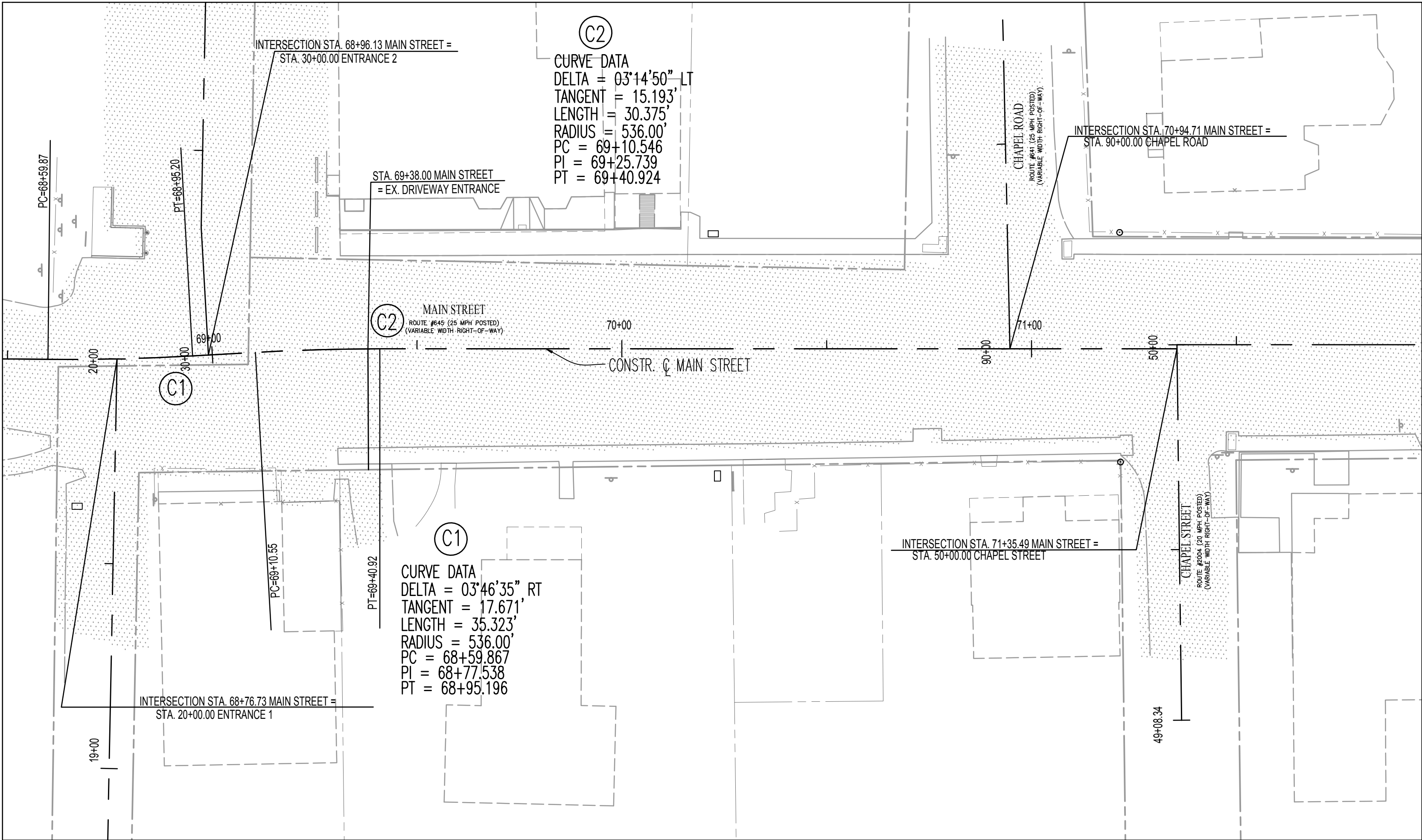
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		1C

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ALIGNMENT DATA

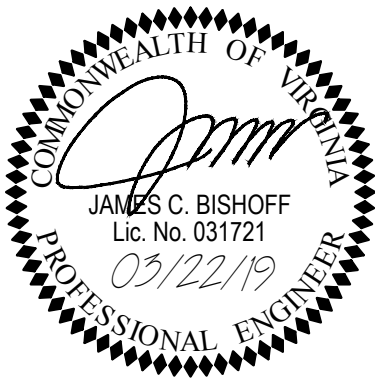
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REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	1G



MAIN STREET – ROUTE 645 CENTERLINE

ID	Station	Northing	Easting	Radius Length	PI Station	PI Northing	PI Easting	Tangent	Arc Length	Chord Length	Chord Bearing	Delta Angle	Bearing	Distance
C1	PC 68+59.867	407685.4078	3598287.535	536.000'	68+77.538	407670.1637	3598296.472	17.671'	35.329'	35.323'	S 32°16'14" E	03°46'35"	S 34°09'32" E	15.349'
	PT 68+95.196	407655.5412	3598306.394											
C2	PC 69+10.546	407642.8398	3598315.013	536.000'	69+25.739	407630.2675	3598323.544	15.193'	30.379'	30.375'	S 32°32'07" E	03°14'50"	S 30°54'42" E	194.565'
	PT 69+40.924	407617.2322	3598331.349											
	71+35.489	407450.303	3598431.3											



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)

GEOMETRIC LAYOUT & SPOT ELEVATIONS 1G(1)

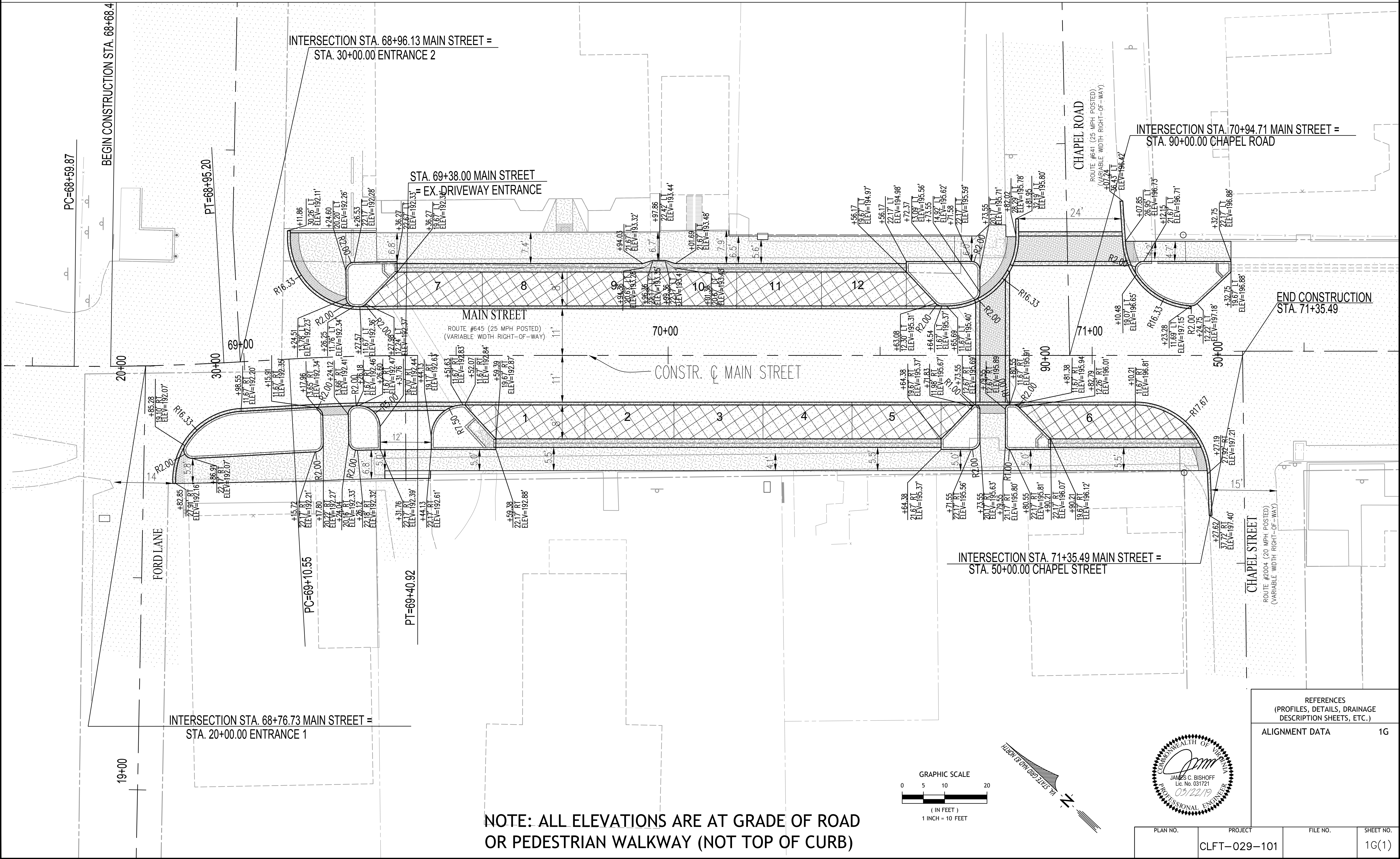
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		1G

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REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	1G(1)

GEOMETRIC LAYOUT & SPOT ELEVATIONS



GENERAL NOTES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP--5A01()	645	CLFT--029--101	2

GRADING GENERAL NOTES:

- G-1 THE GRADE LINE DENOTES TOP OF FINISHED PAVEMENT UNLESS SHOWN OTHERWISE ON TYPICAL SECTIONS OR PLANS.
- G-2 EARTHWORK QUANTITIES ON THIS PROJECT ARE BASED ON ANTICIPATED SETTLEMENT AND MAY REQUIRE ADJUSTING DURING CONSTRUCTION.
- G-6 THE BORROW MATERIAL FOR THIS PROJECT SHALL BE A MINIMUM CBR 20 OR AS APPROVED BY THE MATERIALS ENGINEER.

DRAINAGE GENERAL NOTES:

- 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-7 ALL PIPE ON THIS PROJECT SHALL BE AS NOTED IN PROFILES, SHEET 4. FOR STRENGTH, SHEET THICKNESS, OR CLASS DESIGNATION, AVAILABLE SIZES, HEIGHT OF COVER LIMITATIONS AND OTHER RESTRICTIONS FOR A PARTICULAR PIPE TYPE OR HEIGHT OF COVER, SEE THE APPLICABLE SECTIONS OF THE VDOT ROAD AND BRIDGE STANDARDS PC-1.
- D-14 PROPOSED DROP INLET 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.

PAVEMENT GENERAL NOTES:

- 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 THEORETICAL MAXIMUM DENSITY.

INCIDENTAL GENERAL NOTES:

- I-5 THAT PORTION OF THE RIGHT OF WAY LYING WITHIN THE CLEAR ZONE OR WITHIN A MINIMUM OF 10 FEET(3m), FROM THE EDGE OF PAVEMENT OF SURFACING OR WITHIN THE LIMITS OF THE CONSTRUCTION SLOPES BEYOND 10 FEET(3m), SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH THE APPLICABLE VDOT ROAD AND BRIDGE SPECIFICATIONS, SECTION 301, WHERE SUFFICIENT RIGHT OF WAY OR CONSTRUCTION EASEMENT IS PROVIDED.
- I-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-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 SHEET 7 AND AS DIRECTED BY THE ENGINEER.
- 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 CONSTRUCTION OF THE PROJECT ELECTRONIC FILES WILL BE AVAILABLE TO THE PRIME CONTRACTOR DURING BIDS AND AFTER AWARD OF THE CONTRACT.

VDOT GENERAL NOTES

REVISED 5/23/2017 (UPDATED 1-2-2019)

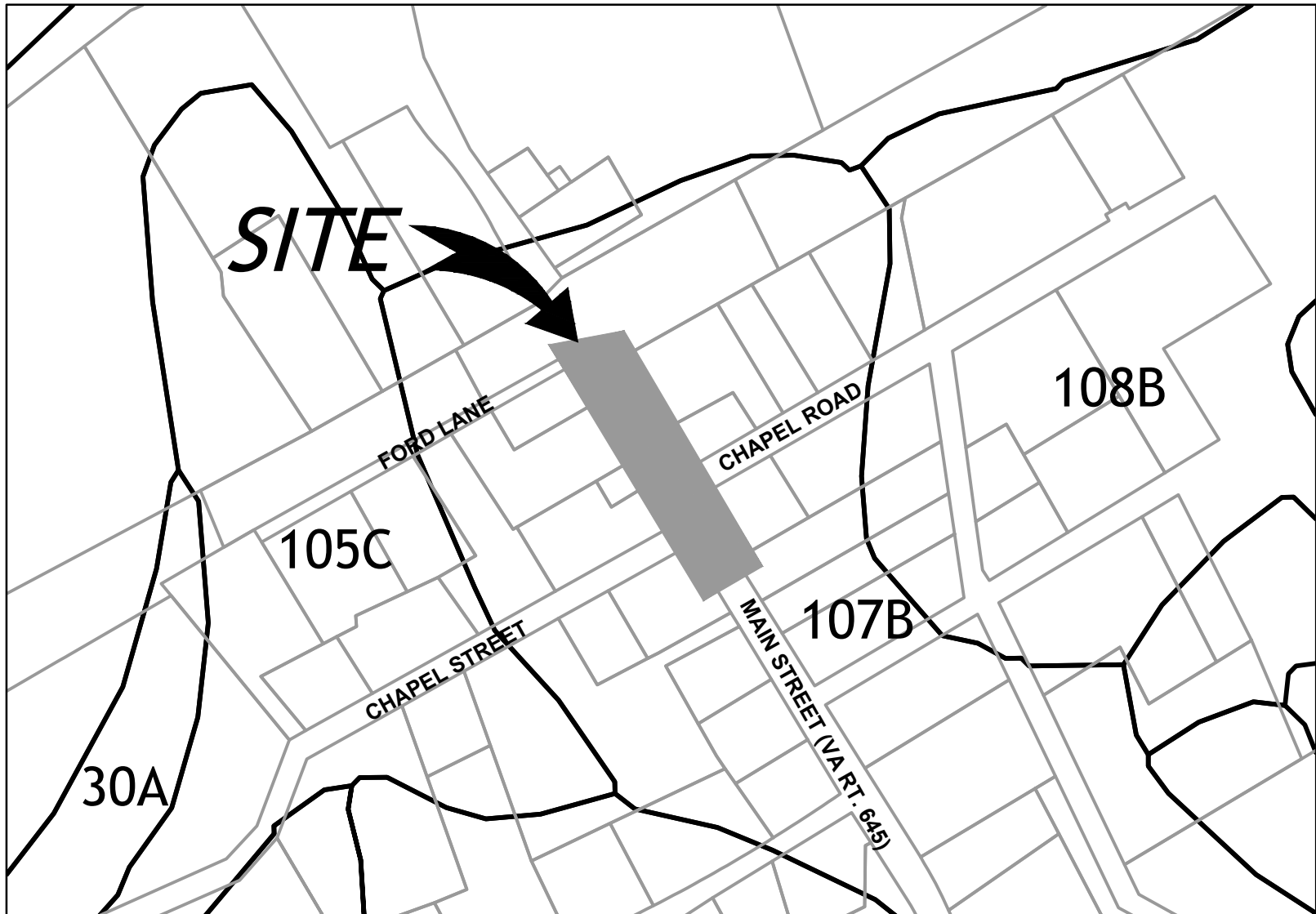
- THESE PLANS WERE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF (SELECT ONE):
 - VDOT SUBDIVISION STREET REQUIREMENTS (SSR 24VAC-30-91 EFFECTIVE JANUARY 1, 2005 AND VDOT ROAD DESIGN MANUAL APPENDIX B)
 - VDOT SECONDARY STREET ACCEPTANCE REQUIREMENTS (SSAR 24VAC-30-92 EFFECTIVE MARCH 9, 2009 AND VDOT ROAD DESIGN MANUAL APPENDIX B1). SCHEMATIC STREET LAYOUT AND COMPUTATIONS OF CONNECTIVITY INDEX ARE PROVIDED WITH THESE PLANS PER 24VAC30-92-60.
 - VDOT SECONDARY STREET ACCEPTANCE REQUIREMENTS (SSAR 24VAC-30-92 EFFECTIVE DECEMBER 31, 2011 AND VDOT ROAD DESIGN MANUAL APPENDIX B1). SCHEMATIC STREET LAYOUT WITH PHASING DIAGRAM FOR STREET ACCEPTANCE ARE PROVIDED WITH THESE PLANS PER 24VAC30-92-60.
- APPENDIX A OF THE VDOT ROAD DESIGN MANUAL AND APPLICABLE PROVISIONS FOR THE ROADWAY CLASSIFICATION IDENTIFIED ON THE COVER SHEET
- METHODS AND MATERIALS USED SHALL CONFORM TO CURRENT COUNTY/TOWN AND VDOT STANDARDS AND SPECIFICATIONS.
- ALL UTILITIES, INCLUDING ALL POLES, ARE TO BE RELOCATED AT THE DEVELOPER'S EXPENSE, PRIOR TO CONSTRUCTION.
- OPEN CUTTING OF PAVED OR SURFACE TREATED ROADS IS NOT PERMITTED. ALL UTILITIES WHICH WILL BE PLACED UNDER EXISTING STREETS ARE TO BE BORED OR JACKED. ANY EXCEPTIONS, DUE TO EXTENUATING CIRCUMSTANCES, ARE TO BE ADDRESSED AT THE PERMIT STAGE.
- ANY TYPE OF REVERSE CURB (SPILL CURB, CG-6R, ETC.) AND TRANSITION TO THESE CURBS SHALL NOT BE USED WITH THE PUBLIC RIGHT OF WAY.
- THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO EXISTING RIGHT OF WAY.
- A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY.
- STANDARD GUARDRAILS AND/OR HANDRAILS SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNATED DURING FIELD REVIEW BY THE COUNTY/TOWN INSPECTOR OR VDOT.
- THE DEVELOPER IS RESPONSIBLE FOR ALL TRAFFIC CONTROL. THE DEVELOPER SHALL SUBMIT A SIGNING, STRIPING AND/OR SIGNALIZATION PLAN TO THE VDOT LAND DEVELOPMENT SECTION A MINIMUM OF THIRTY DAYS PRIOR TO PERMIT APPLICATION. THE DEVELOPER SHALL NOT COMMENCE CONSTRUCTION OF ANY PAVEMENT COURSE WITHOUT AN APPROVED STRIPING PLAN.
- PAVEMENT DESIGN IS BASED ON AN ASSUMED CBR VALUE OF 10 (USE CBR VALUE OF 4 IN LOUDOUN CO). SOIL TESTS OF SUBGRADE MUST BE SUBMITTED FOR ACTUAL DETERMINATION OF REQUIRED THICKNESS OF THE PAVEMENT INCLUDING LAYERS OF ASPHALT AND SUBBASE PRIOR TO SUBBASE PLACEMENT.
- ALL UNTREATED AGGREGATE USED IN BASE OR SUBBASE COURSES SHALL BE 21B, EXCEPT ON ROADS WITH ADT OF 1000 VPD OR LESS, WHERE 21A AGGREGATE MAY BE USED. WHEN 21B AGGREGATE IS USED, UD-4 UNDERDRAINS MUST BE PROVIDED.
- A 4" (MIN.) LAYER OF STONE IS REQUIRED BENEATH CURB AND GUTTER (MAY BE SHOWN ON TYPICAL SECTION IN LIEU OF A NOTE).
- ADDITIONAL DITCH LININGS OR SILTATION AND EROSION CONTROL MEASURES SHALL BE PROVIDED, AT THE DEVELOPER'S EXPENSE, AS DETERMINED NECESSARY BY VDOT AND/OR THE COUNTY/TOWN DURING FIELD REVIEW. ALL COSTS SHALL BE ASSUMED BY THE DEVELOPER.
- THE ENTIRE SURFACE OF THE ROADWAY (OLD AND NEW PORTIONS) SHALL BE OVERLAID AND RE-STRIPED AS REQUIRED BY VDOT PERSONNEL. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1.25" DEPTH; ANY COSTS ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE DEVELOPER.
- DEVELOPER IS RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF ANY TRAFFIC SIGNAL INSTALLATION OR MODIFICATION WHICH WILL BE NECESSARY AS A RESULT OF DEVELOPMENT OF THIS SITE.
- ALL RIGHT OF WAY DEDICATED TO PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
- THE COUNTY/TOWN SHALL OBTAIN A PERMIT FOR ALL SIDEWALKS WITHIN THE RIGHT OF WAY THAT DO NOT QUALIFY FOR VDOT MAINTENANCE.
- TRAFFIC CONTROL DEVICES OR ADVISORY SIGNS, SUCH AS MULTIWAY STOPS, SPEED LIMITS, WATCH FOR CHILDREN, PEDESTRIAN TRAFFIC ETC., SHALL NOT BE INSTALLED UNLESS SPECIFICALLY SHOWN ON THESE PLANS OR A VDOT APPROVED PLAN REVISION. SPEED STUDY CERTIFIED BY PROFESSIONAL ENGINEER SHOULD BE SUBMITTED FOR VDOT APPROVAL PRIOR TO THE STREET ACCEPTANCE FOR ANY ROAD TO BE POSTED OTHER THAN THE STATUTORY SPEED LIMIT. SHOULD UNAPPROVED SIGNS BE NOTED AT THE TIME OF VDOT INSPECTION, THE ROAD ACCEPTANCE PROCESS SHALL BE TERMINATED IMMEDIATELY AND NOT RECOMMENCED UNTIL A DETERMINATION IS MADE REGARDING THE APPROVAL OF ANY ADDITIONAL SIGNS. IMMEDIATE REMOVAL OF SUCH SIGNS SHALL NOT NEGATE THE NEED FOR THE SUBMISSION OF A REVISION.
- LANDSCAPING AND IRRIGATION SYSTEMS SHALL NOT BE INSTALLED WITHIN THE PUBLIC RIGHT OF WAY EXCEPT AS SHOWN ON THESE PLANS OR A VDOT APPROVED REVISION.
- BEGINNING JULY 1, 2009 ALL LAND USE PERMIT APPLICATIONS ARE REQUIRED TO PROVIDE AT LEAST ONE (1) PERSON WHO, AT MINIMUM, IS VERIFIED BY VDOT IN BASIC WORK ZONE TRAFFIC CONTROL FOR ALL PERMITTED ACTIVITIES WITHIN STATE MAINTAINED RIGHT OF WAY WHICH INVOLVES INSTALLING, MAINTAINING, OR REMOVING WORK ZONE TRAFFIC CONTROL DEVICES. THIS PERSON SHALL BE RESPONSIBLE FOR THE PLACEMENT, MAINTENANCE AND REMOVAL OF ALL WORK ZONE TRAFFIC CONTROL DEVICES.

GENERAL SPECIFICATIONS:

- UNLESS OTHERWISE NOTED OR SHOWN HEREON, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE SUPPLIED AND INSTALLED IN STRICT CONFORMANCE WITH THE RULES, SPECIFICATIONS, AND/OR REGULATIONS PROMULGATED BY OR CONTAINED IN:
 - FAIRFAX COUNTY PUBLIC FACILITIES MANUAL
 - FAIRFAX WATER STANDARD DETAILS
 - VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD AND BRIDGE SPECIFICATIONS, AS AMENDED TO DATE.
 - VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, AS PREPARED BY THE VIRGINIA SOIL AND WATER CONSERVATION COMMISSION.
 - VIRGINIA STORMWATER MANAGEMENT HANDBOOK
 - CONTRACT DOCUMENTS
- THE CONTRACTOR SHALL CONFORM TO ALL APPLICABLE OSHA SAFETY REGULATIONS.
- THE CONTRACTOR SHALL HAVE APPROVED AND CURRENT DRAWINGS IN HIS POSSESSION PRIOR TO CONSTRUCTION AND SHALL MAINTAIN AT LEAST ONE COPY OF SAID CURRENT APPROVED PLANS AT THE CONSTRUCTION SITE AT ALL TIMES.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. AN ENTRANCE PERMIT SHALL BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ANY WORK WITHIN DEDICATED RIGHT-OF-WAYS OR FOR ANY TEMPORARY AND/OR PERMANENT ENTRANCE OFF OF A STATE MAINTAINED ROADWAY.
- THE CONTRACTOR SHALL NOTIFY FAIRFAX COUNTY AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION, A MINIMUM OF THREE (3) DAYS PRIOR TO CONSTRUCTION OF ANY IMPROVEMENT SUBJECT TO INSPECTION AND/OR MAINTENANCE BY SAID RESPECTIVE AGENCIES.
- A GRADING PERMIT SHALL BE OBTAINED FROM FAIRFAX COUNTY PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBING ACTIVITIES.
- ALL FILL, SUBBASE AND BASE MATERIAL WITHIN RIGHT-OF-WAYS OR OTHER AREAS SUBJECT TO LOADING, SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY (WITHIN 2% OF OPTIMUM MOISTURE CONTENT) AS DETERMINED BY AASHTO T-99 METHOD A.
- ALL RIGHT-OF-WAY MONUMENTS WHICH ARE DISTURBED BY CONSTRUCTION ARE TO BE REPLACED BY A CERTIFIED LAND SURVEYOR, AT THE CONTRACTOR'S EXPENSE.
- UNLESS OTHERWISE NOTED, PIPE USED FOR STORM SEWER CONSTRUCTION, SHALL BE REINFORCED CONCRETE, CLASS III, WALL "B" (ASTM C 76). REFER TO VDOT STD PB-1 FOR BEDDING DETAILS.
- REFER TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS (CURRENT EDITION) FOR CONSTRUCTION DETAILS NOT INCLUDED HEREIN.
- UNLESS OTHERWISE NOTED HEREIN VDOT STANDARD IS-1 SHALL BE APPLIED TO THE INVERT OF ALL DRAINAGE STRUCTURES.
- ALL STRIPING AND SIGNAGE SHOWN HEREON IS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS CONTAINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS (MUTCD) AND VIRGINIA SUPPLEMENT THERETO AS WELL AS THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM).
- UTILITIES OUTSIDE THE PUBLIC RIGHT-OF-WAY SHALL BE PROVIDED WITH ABOVE GROUND MARKING STAKES, SPACED EVERY 100 FEET.
- CORRUGATED PLASTIC PIPE (SMOOTH-BORED) FOR ROOF DRAINS SHALL BE ASTM F 405 OR AASHTO M 252 FOR 10" AND SMALLER, AND ASTM F 667 OR AASHTO M 294 FOR 12" AND LARGER. REFER TO VDOT STD. PB-1 FOR BEDDING DETAILS FOR CORRUGATED PLASTIC PIPE.
- SIDEWALKS AND TRAILS SHALL BE CONSTRUCTED ON A SUBGRADE COMPACTED TO 100% DENSITY AT OPTIMUM MOISTURE CONTENT (AASHTO T-99).
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- REFER TO ELECTRICAL DRAWINGS FOR ROUTING OF UNDERGROUND WIRING FOR SITE LIGHTING.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS AND SCORING PATTERNS OF WALKWAYS AND PATIO AREAS.
- PROVIDE ALL UTILITY LINES SUCH AS ELECTRIC, TELEPHONE, CATV, OR OTHER SIMILAR LINES UNDERGROUND.
- ALL PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURES.
- BURNING OF CONSTRUCTION OR DEMOLITION MATERIALS IS NOT PERMITTED ON SITE.
- CONTROLLED FILLS:
 - CONTROLLED COMPACTION SHALL OCCUR IN ALL FILL SECTIONS FOR PAVEMENTS, TRENCHES FOR UTILITIES, AND IN ANY AREA DESIGNATED ON THE DRAWINGS.
 - CONTROLLED FILLS MUST BE COMPACTED TO 100% DENSITY AS DETERMINED BY METHIODS AS PER STANDARD PROCTOR AASHTO-T99 OR ASTM-D698. DENSITY MUST BE VERIFIED BY A QUALIFIED SOILS ENGINEER.
 - CONTROLLED FILLS SHALL BE COMPACTED IN EIGHT (8) INCH LIFTS (LOOSE THICKNESS) TO THE SPECIFIED DENSITY BEGINNING FROM THE EXISTING GROUND SURFACE, UNLESS OTHERWISE APPROVED IN WRITING BY A QUALIFIED SOILS ENGINEER.
 - THE SURFACE AREA DIRECTLY BENEATH AREAS TO RECEIVE CONTROLLED FILLS OF LESS THAN FIVE (5) FEET ARE TO BE DENUDED OF ALL VEGETATION AND SCARIFIED AND COMPACTED TO A DEPTH OF SIX (6) INCHES TO THE SAME DENSITY AS THE CONTROLLED FILL TO BE PLACED THEREON.
- THE STRUCTURE TOPS ARE TO BE SET AFTER FINE GRADING IS FINISHED TO AVOID UNNECESSARY ADJUSTING.
- ALL FINISHED GRADING, SEEDING, AND SODDING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER ON THE SITE, PARTICULARLY ADJACENT TO THE BUILDINGS OR STORM INLETS.
- CONTRACTOR IS TO VERIFY THAT ALL UTILITIES, I.E. WATER, SEWER, GAS, ELECTRIC, TELEPHONE, CABLE, ETC. ARE IN PLACE PRIOR TO CONSTRUCTION OF SUB BASE AND/OR PAVING.
- EXISTING MANHOLES FRAMES AND COVERS AND VALVE BOXES AND COVERS TO REMAIN SHALL BE ADJUSTED OR RECONSTRUCTED, AS NECESSARY, TO MATCH FINISHED GRADES.
- CUT AND PATCH WORK IN EXISTING PUBLIC STREETS MUST BE PERFORMED IN ACCORDANCE WITH VDOT AND FAIFAX COUNTY STANDARDS AND SPECIFICATIONS.
- REFER TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS (CURRENT EDITION) FOR CONSTRUCTION DETAILS NOT INCLUDED HEREIN.

TOPOGRAPHIC/CONSTRUCTION COORDINATION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC CONDITIONS INDICATED ON THESE PLANS AND CONTRACT DOCUMENTS PRIOR TO BEGINNING ANY LAND DISTURBANCE WORK ON THE PROJECT. ONCE LAND DISTURBANCE HAS COMMENCED THE CONTRACTOR SHALL HAVE NO CLAIM AS TO EXISTING TOPOGRAPHY NOT MEETING MINIMUM SURVEY STANDARDS AND SHALL ACCEPT ALL EXISTING TOPOGRAPHIC CONDITIONS AS BEING WITHIN UNITED STATES NATIONAL MAP ACCURACY STANDARDS FOR CONSTRUCTION CONTRACT PURPOSED. IF THE CONTRACTOR FINDS A DISCREPANCY IN TOPOGRAPHIC INFORMATION, HE/SHE SHALL NOTIFY J2 ENGINEERS INC. AND THE OWNER PRIOR TO PERFORMING.



SOILS MAP

SCALE : 1" = 200'

SOILS LEGEND			
NUMBER	NAME	CLASS	HYDRIC
105C	WHEATON GLENELG COMPLEX	IVB	NO
107B	WHEATON - MEADOWVILLE COMPLEX	IVB	NO
108B	WHEATON - SUMMERDUCK COMPLEX	IVB	NO

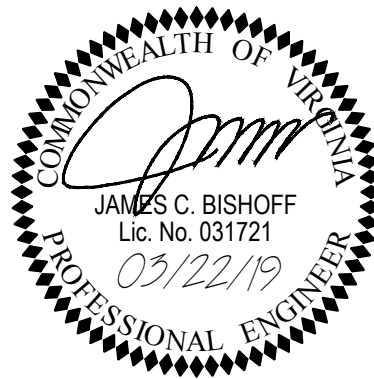
GEOTECHNICAL NOTES

- TYPE 1 SOIL MAP, COMPLETED BY FAIRFAX COUNTY SOIL SCIENTIST, WAS USED FOR THIS SITE AREA
- THESE PLANS WERE NOT PREPARED WITH ANY RECOMMENDATIONS OF A GEOTECHNICAL REPORT.

LEGEND

	EXISTING TREE LINE		PROPOSED STORM DRAIN
	EXISTING WATERLINE VALVE		EXISTING STORM DRAIN
	EXISTING UTILITY POLE		EXISTING CONTOUR
	EXISTING OVERHEAD ELECTRIC		PROPOSED CONTOUR
	EXISTING GAS LINE		EXISTING SANITARY SEWER
	WATER METER CROCK		PROPOSED SANITARY SEWER
	EXISTING WATER LINE		PROPOSED LIMITS OF CLEARING & GRADING
	PROPOSED WATER LINE		FUTURE CURB AND GUTTER
	EXISTING UNDERGROUND ELECTRIC		PROPOSED FIRE HYDRANT
	EXISTING UNDERGROUND COMMUNICATIONS		EXISTING TREE
	EXISTING OVERHEAD POWER		RIPRAP
	PROPOSED CG-12		VEHICLES PER DAY
	MILL - BUILDUP/OVERLAY		
	PROPOSED NEW PAVEMENT		
	PROPOSED CONCRETE - STANDARD FINISH		
	PROPOSED EXPOSED AGGREGATE CONCRETE		
	TAN THERMOPLASTIC ASPHALT PARKING - SLATE PATTERN		

REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)



PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT--029--101		2

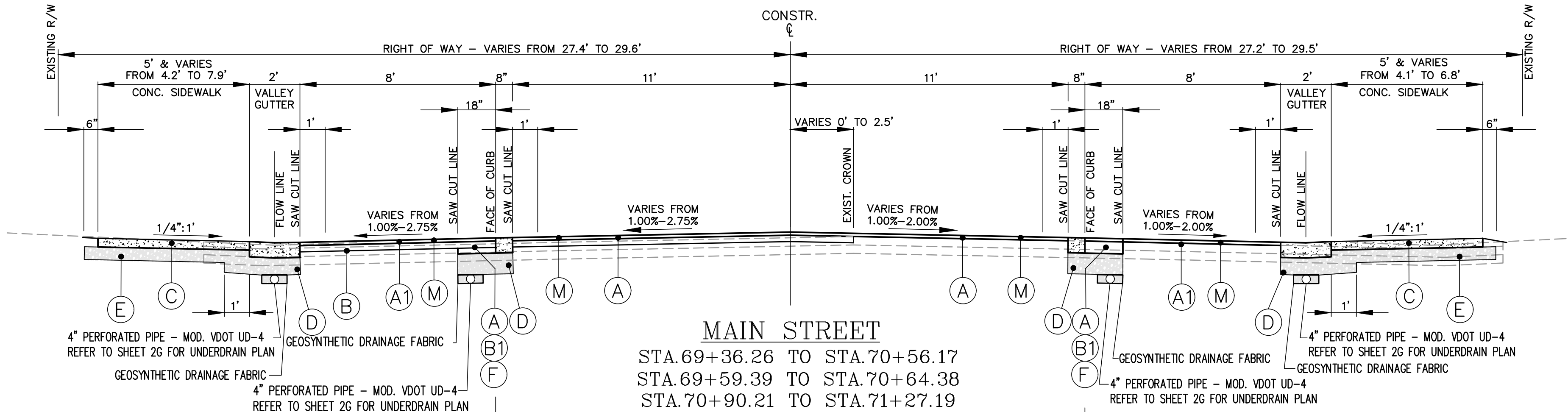
PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
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DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

TYPICAL SECTIONS

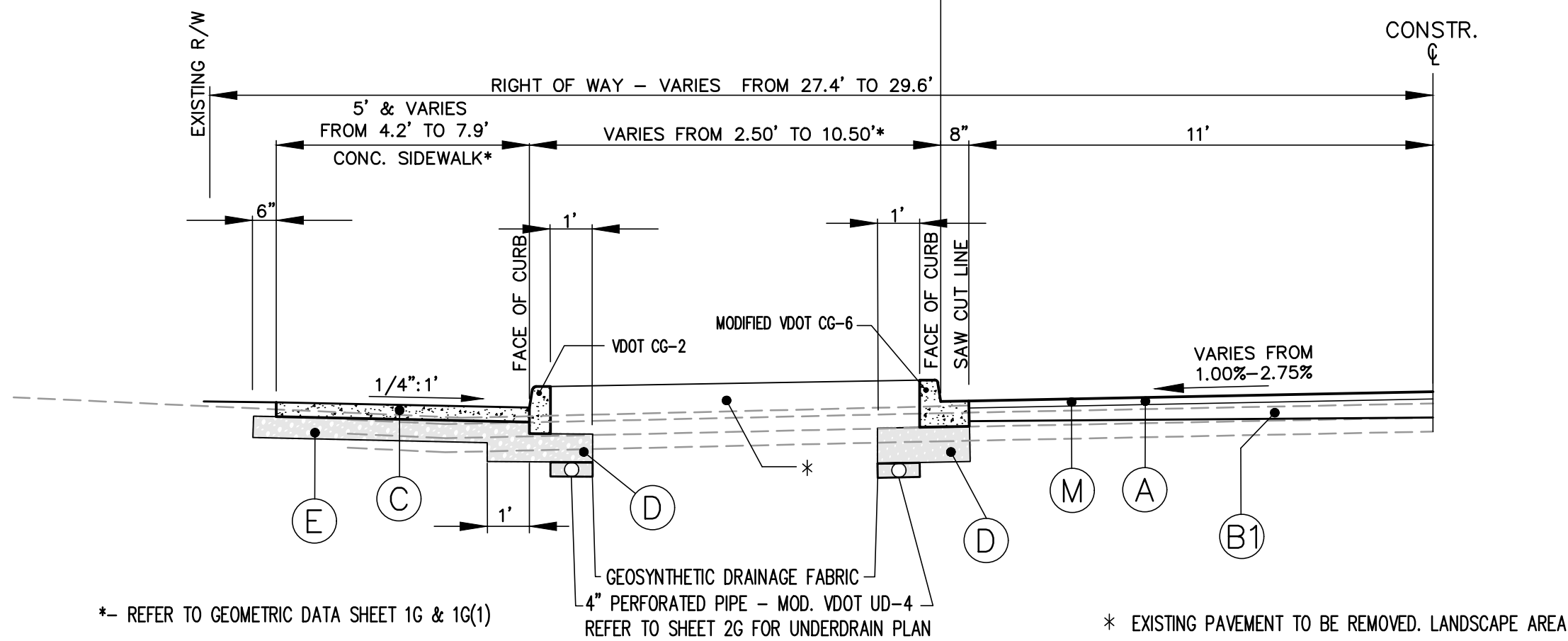
DESIGN FEATURES RELATING TO CONSTRUCTION
OR REGULATION AND CONTROL TO TRAFFIC MAY
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NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	2A

MAIN STREET (VA ROUTE 645)

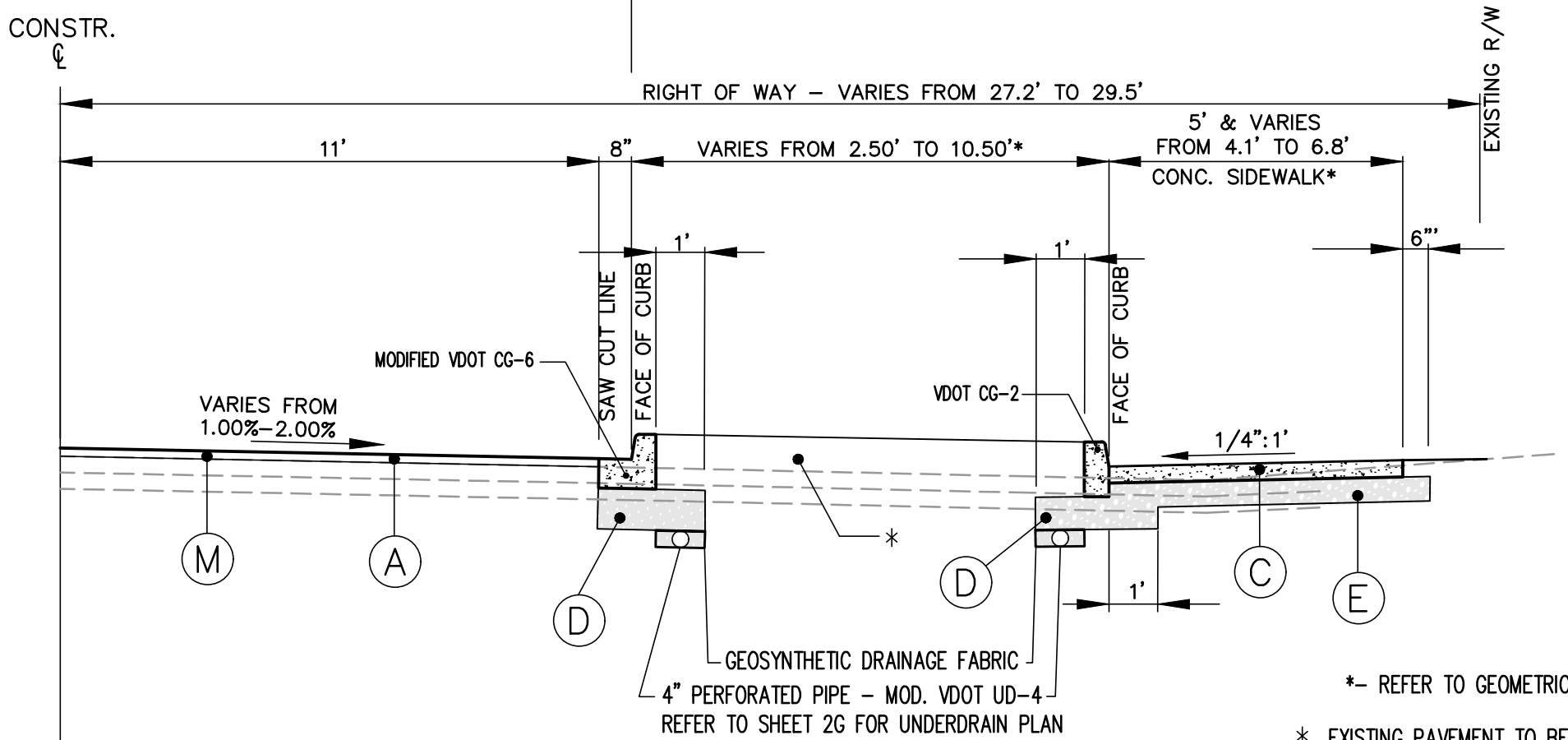


- (A) - 2" ASPHALT CONCRETE SURFACE COURSE TYPE SM-9.5A @ 220 LBS/SQ.YD
- (A1) - 2" ASPHALT CONCRETE TYPE SM-9.5A @ 220 LBS/SQ. YD
TAN THERMOPLASTIC SURFACE "SLATE PATTERN"
- (B) - 2" TO 3" ASPHALT CONCRETE INTERMEDIATE COURSE IM-19.0A @ 110 LBS/SQ.YD PER INCH
- (B1) - 3" ASPHALT CONCRETE INTERMEDIATE COURSE IM-19.0A @ 330 LBS/SQ.YD
- (C) - 4" VDOT TYPE A-3 CONCRETE (EXPOSED AGGREGATE)
7" TO BE PROVIDED AT LOCATIONS SHOWN ON SHEET 3C
- (D) - 6" AGGREGATE BASE MATERIAL - TYPE 1 SIZE 21A
- (E) - 4" AGGREGATE BASE MATERIAL - TYPE 1 SIZE 21A EXTEND 6" ON EACH SIDE OF SURFACE
6" TO BE PROVIDED AT LOCATIONS SHOWN ON SHEET 3C
- (F) - 4" ASPHALT CONCRETE BASE COURSE BM-25.0A
- (M) - 2" MILL (THE ENTIRE PROJECT LIMITS ARE TO BE MILLED)



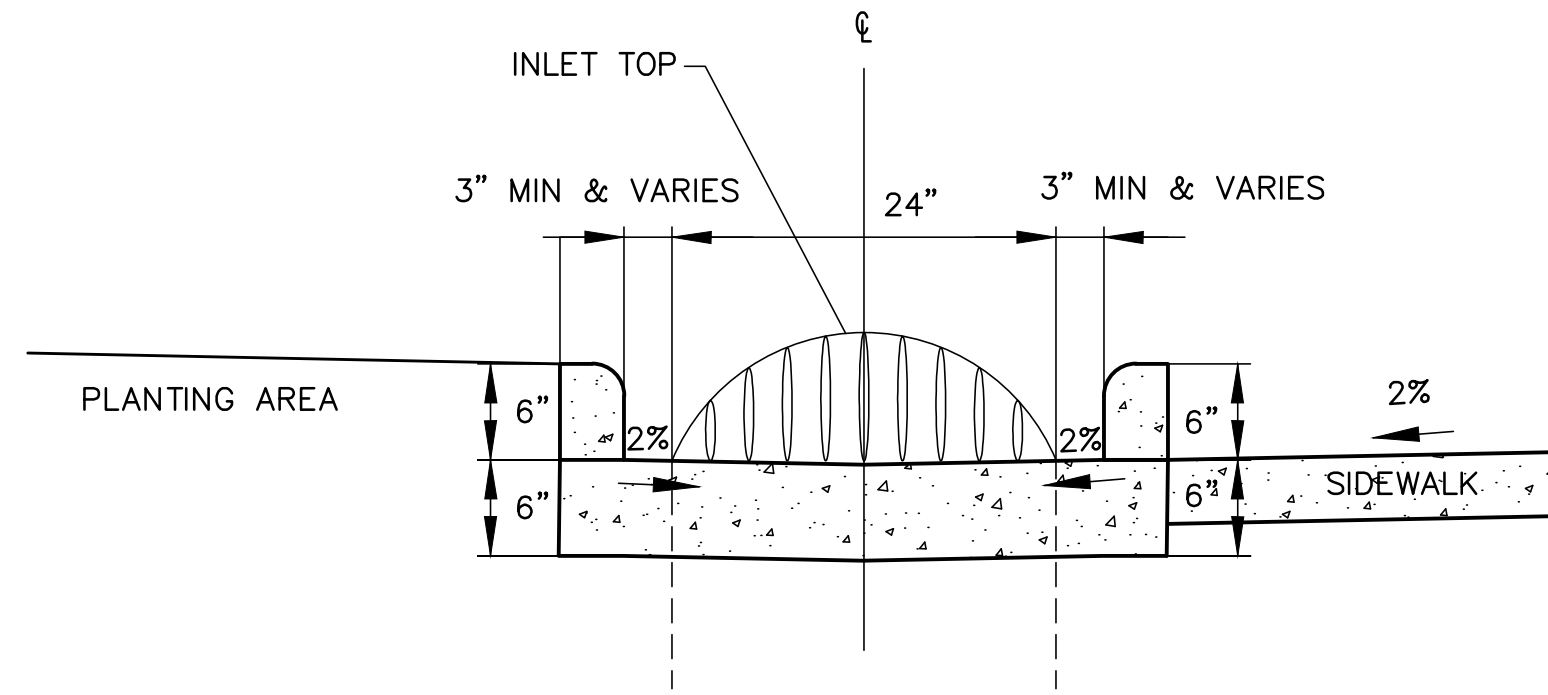
MAIN STREET (LEFT)

STA. 69+24.51 TO STA. 69+36.27
STA. 70+56.17 TO STA. 70+73.55
STA. 71+10.48 TO STA. 71+32.75

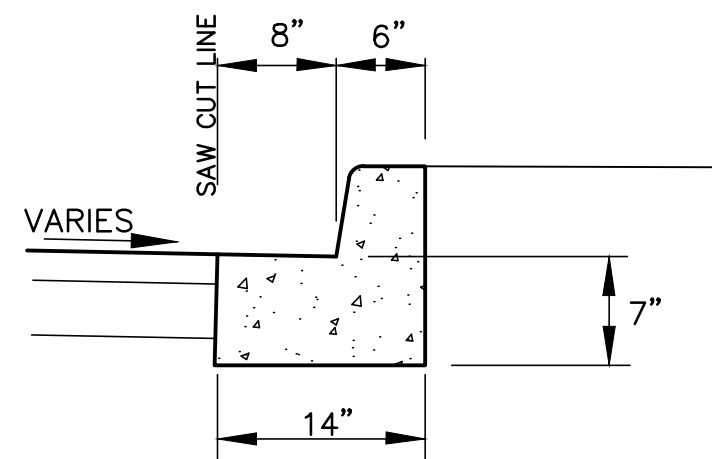


MAIN STREET (RIGHT)

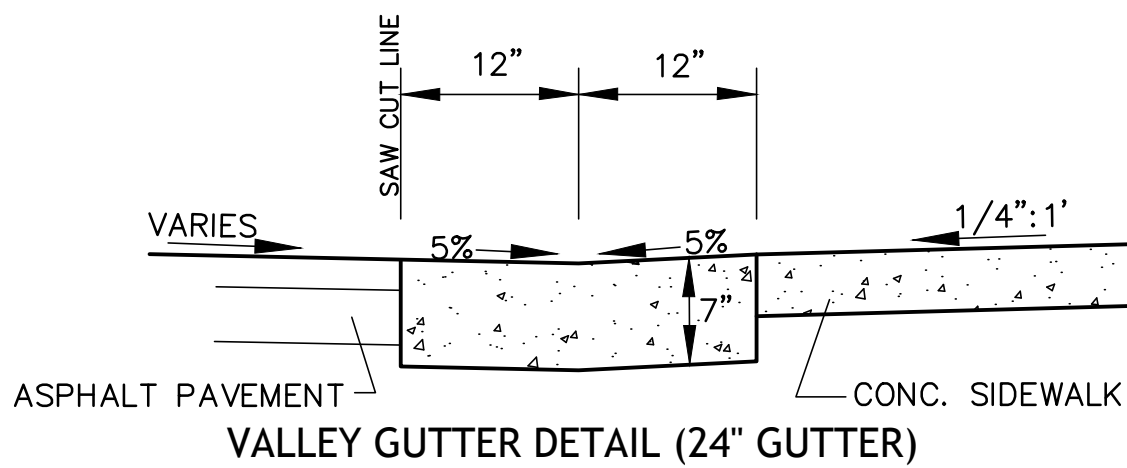
STA. 68+85.28 TO STA. 69+17.96
STA. 69+24.12 TO STA. 69+32.76
STA. 69+48.87 TO STA. 69+59.39
STA. 70+64.38 TO STA. 70+73.55
STA. 70+79.55 TO STA. 70+90.21



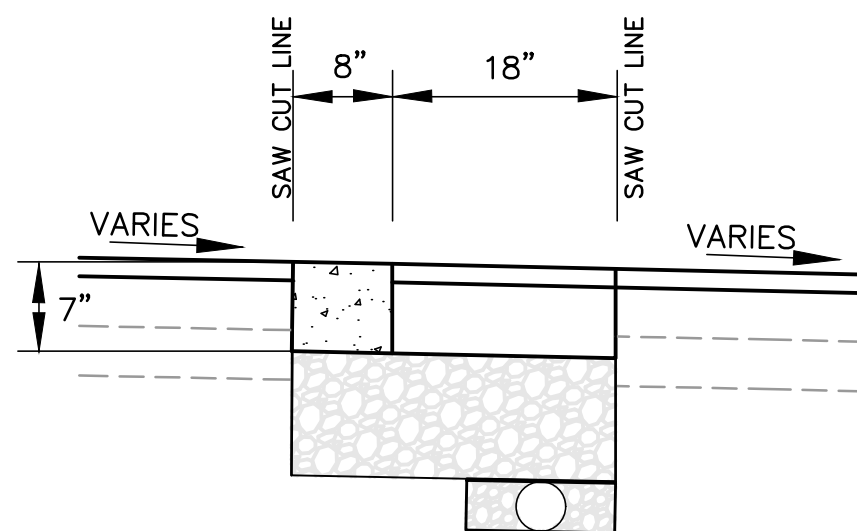
TYPICAL DOME GRATE INLET DETAIL



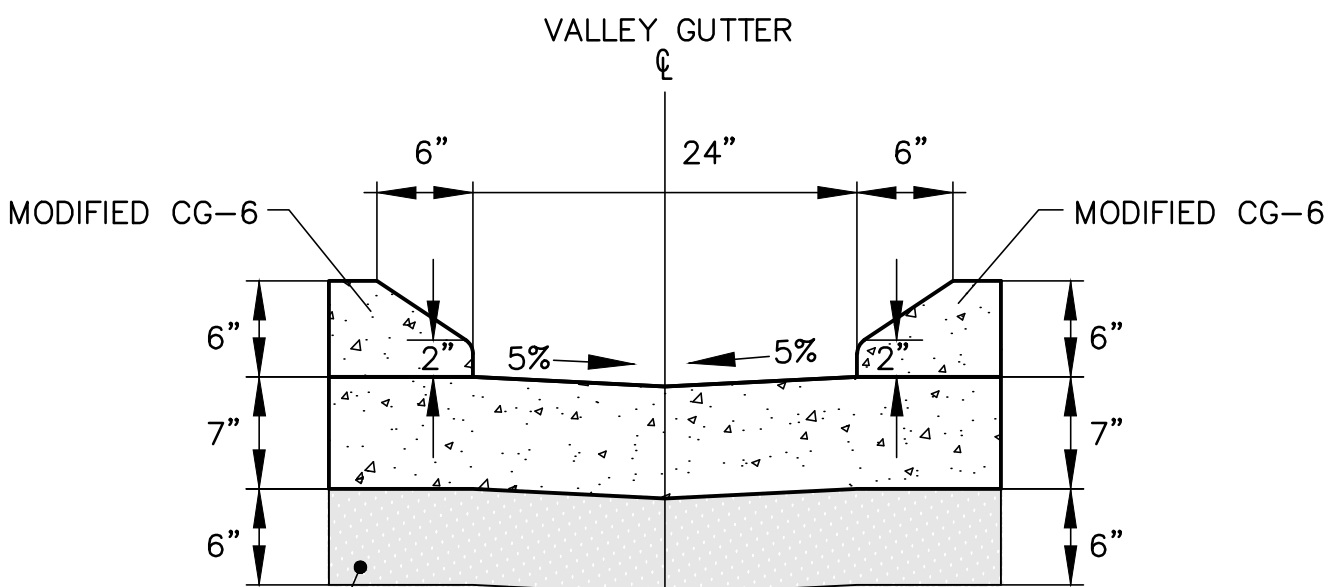
MODIFIED CG-6 (8" GUTTER)



VALLEY GUTTER DETAIL (24" GUTTER)



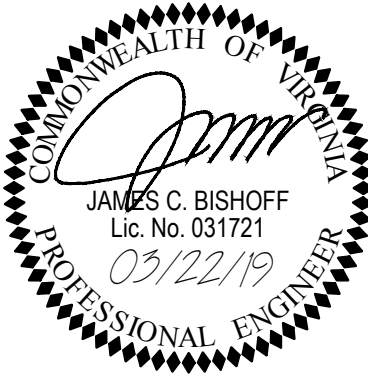
FLUSH CURB DETAIL



SCUPPER DETAIL

STRUCTURE 106 - STA. 69+36, 20' LT
STRUCTURE 107 - STA. 69+55, 18' RT
STRUCTURE 108 - STA. 70+89, 20.5' RT
STRUCTURE 109 - STA. 71+32, 20' LT

NOTE:
PROPOSE MODIFIED CG-6, VALLEY GUTTER, FLUSH
CURB, SCUPPER AND TYPICAL INLET SHALL BE
HES HYDRAULIC CEMENT CONCRETE CLASS A4

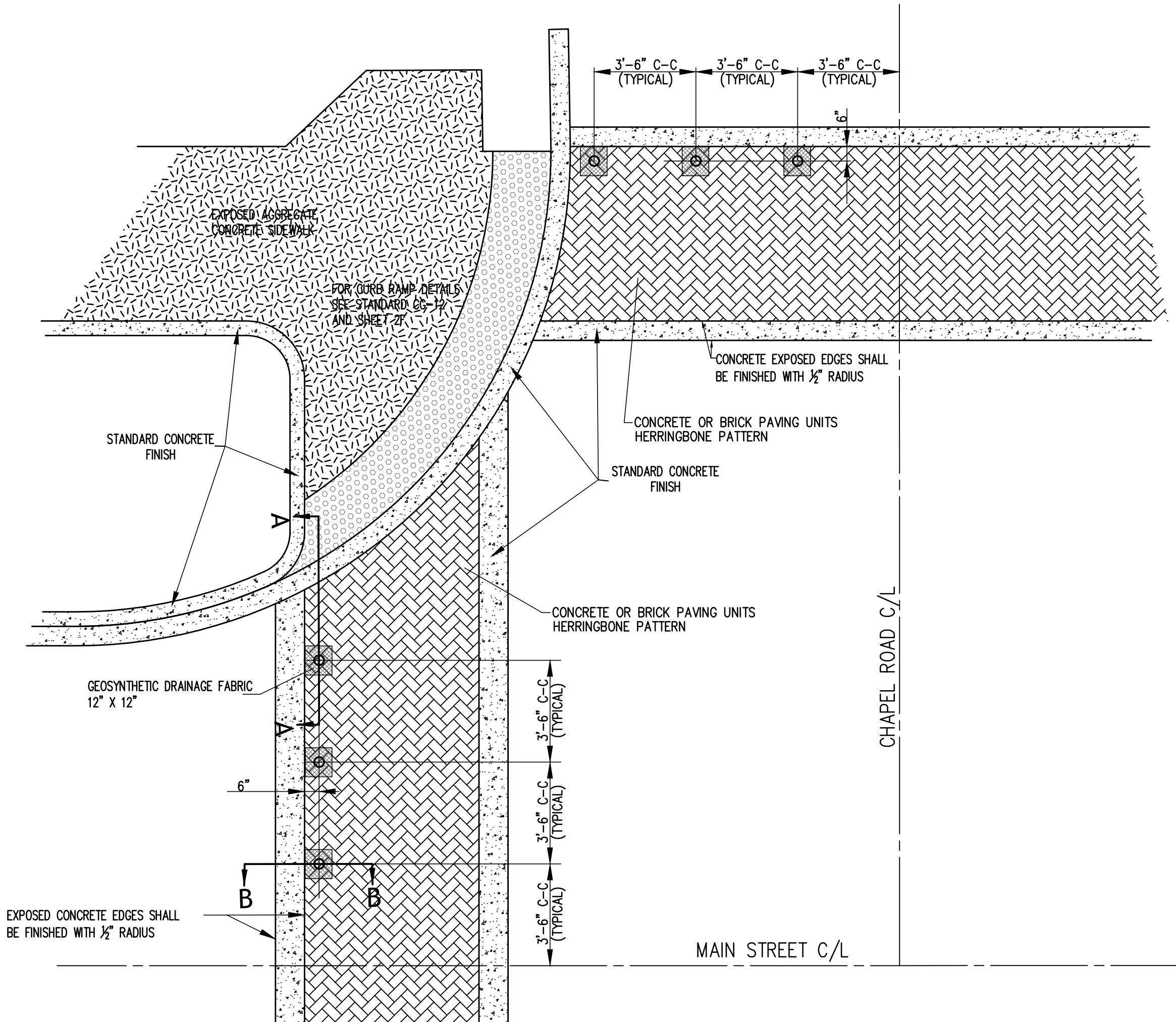


REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)

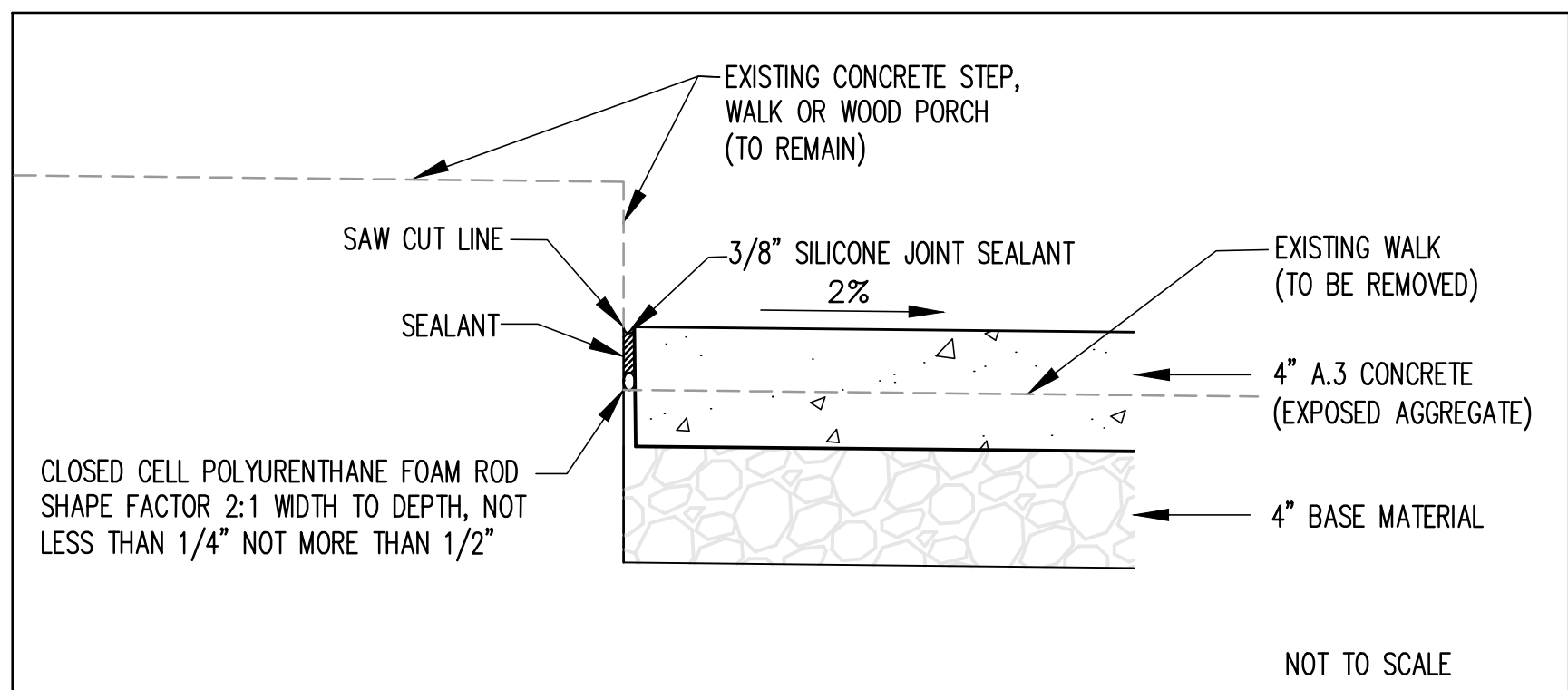
CROSSWALK DETAIL	2B
DEMOLITION PLAN	2F
UNDERDRAIN PLAN	2G
GRADING PLAN	3
MATERIAL TYPE PLAN	3C

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
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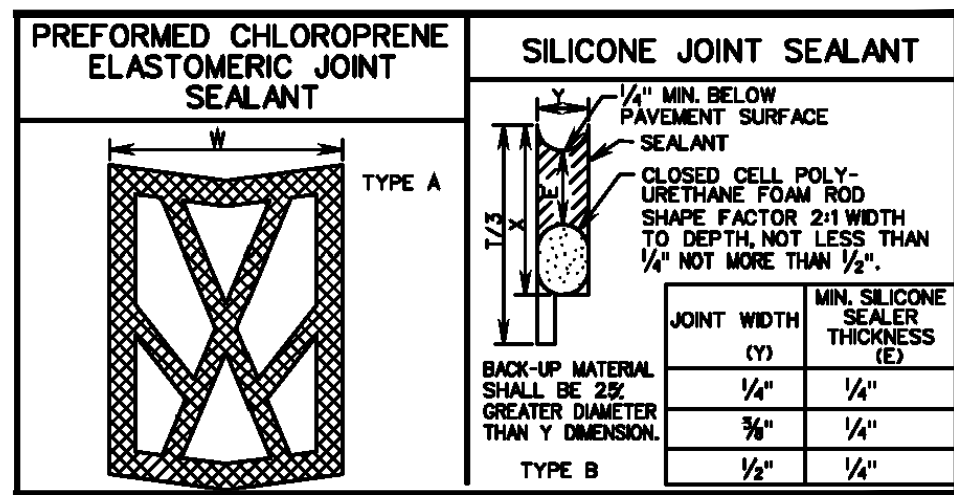
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PLAN DETAIL



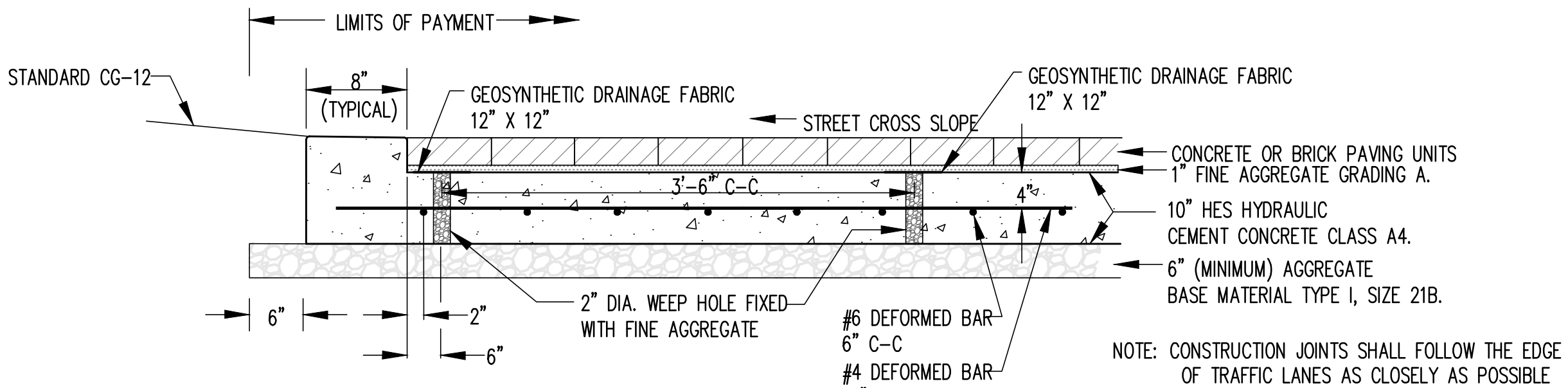
EXPANSION JOINT DETAIL
(ADJACENT TO BUILDING, STEPS AND PORCHES)



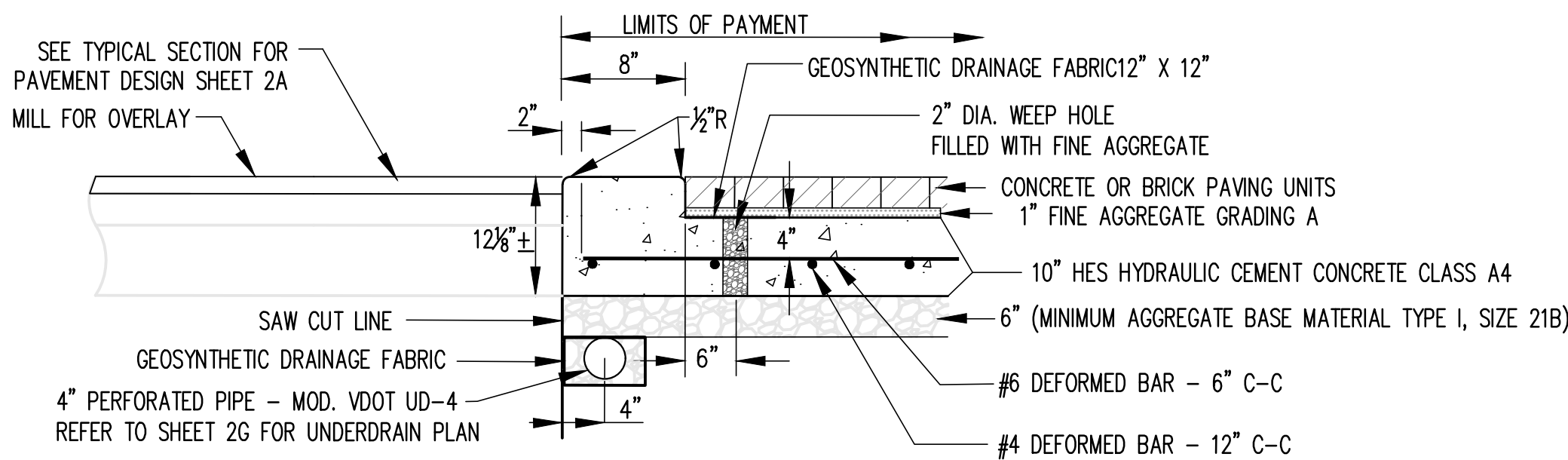
DESIGN FEATURES RELATING TO CONSTRUCTION OR REGULATION AND CONTROL TO TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	2B

CROSSWALK & ELEVATED INTERSECTION DETAILS SOLID CONCRETE PAVING UNITS



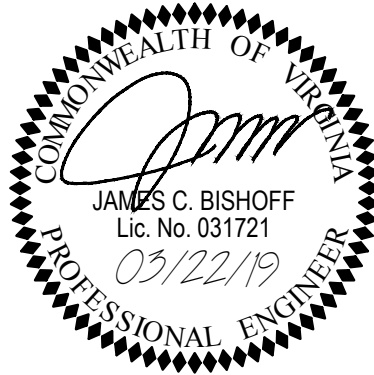
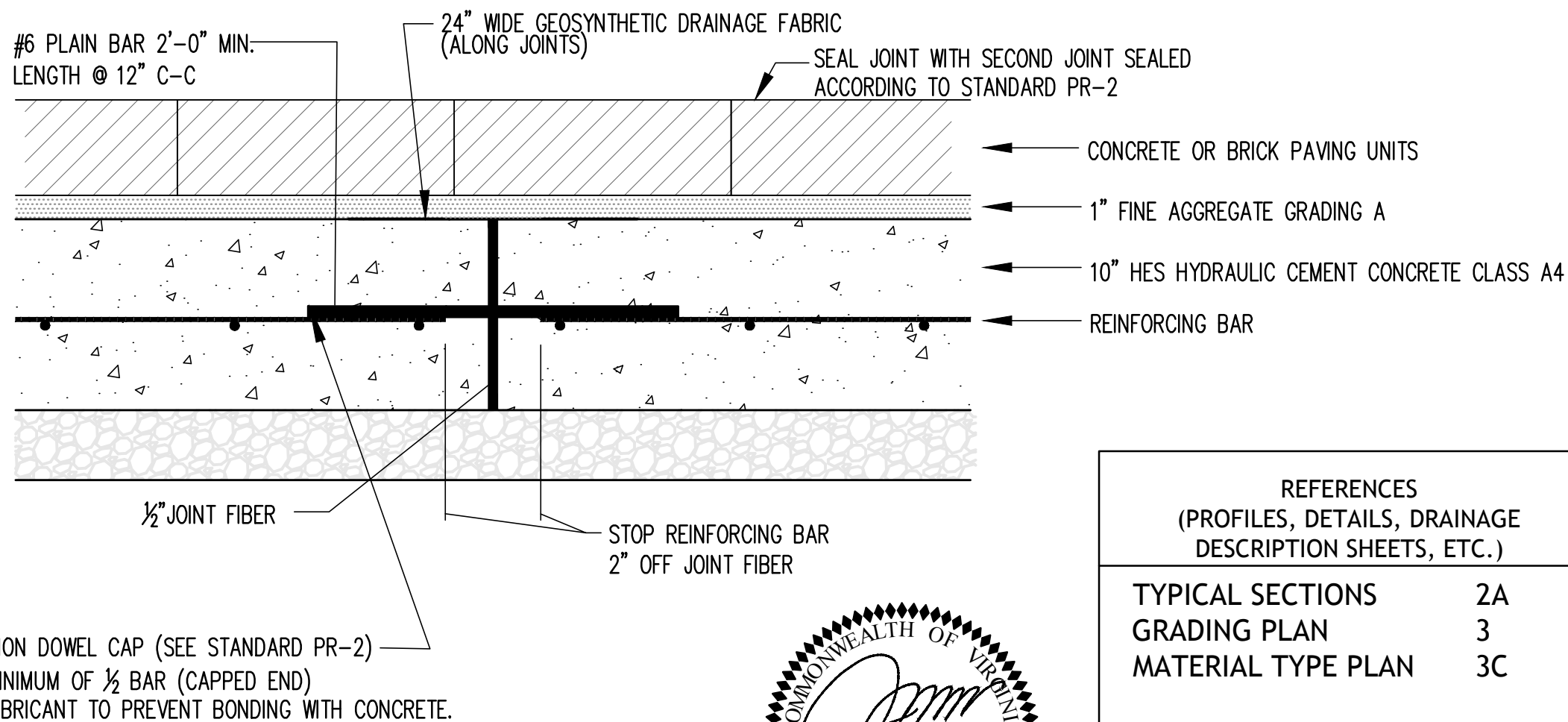
SECTION A-A



SECTION B-B

- EXPANSION JOINTS SHALL BE PARALLEL TO THE STREET CENTERLINE AND LOCATED ALONG THE EDGE OF A TRAFFIC LANE NEAR THE STREET CENTERLINE WHEN POSSIBLE.
- EXISTING PAVEMENT IS TO BE REMOVED BY CUTTING AND EXCAVATING AS NECESSARY FOR THE PLACEMENT OF THE BASE MATERIAL, AND, WILL BE REPLACED BY NEW MATERIALS DIRECTED BY THE ENGINEER.
- ALL PAVING UNITS ARE TO BE LOCKED IN PLACE WITH POLYMERIC SAND.

EXPANSION JOINT DETAIL LOCATED IN CROSSWALK & INTERSECTION APPROACH



REFERENCES
(PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)

TYPICAL SECTIONS	2A
GRADING PLAN	3
MATERIAL TYPE PLAN	3C

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		2B

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
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REVISED	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
	VA	TAP-5A01()	645	CLFT-029-101	2C

MATERIALS

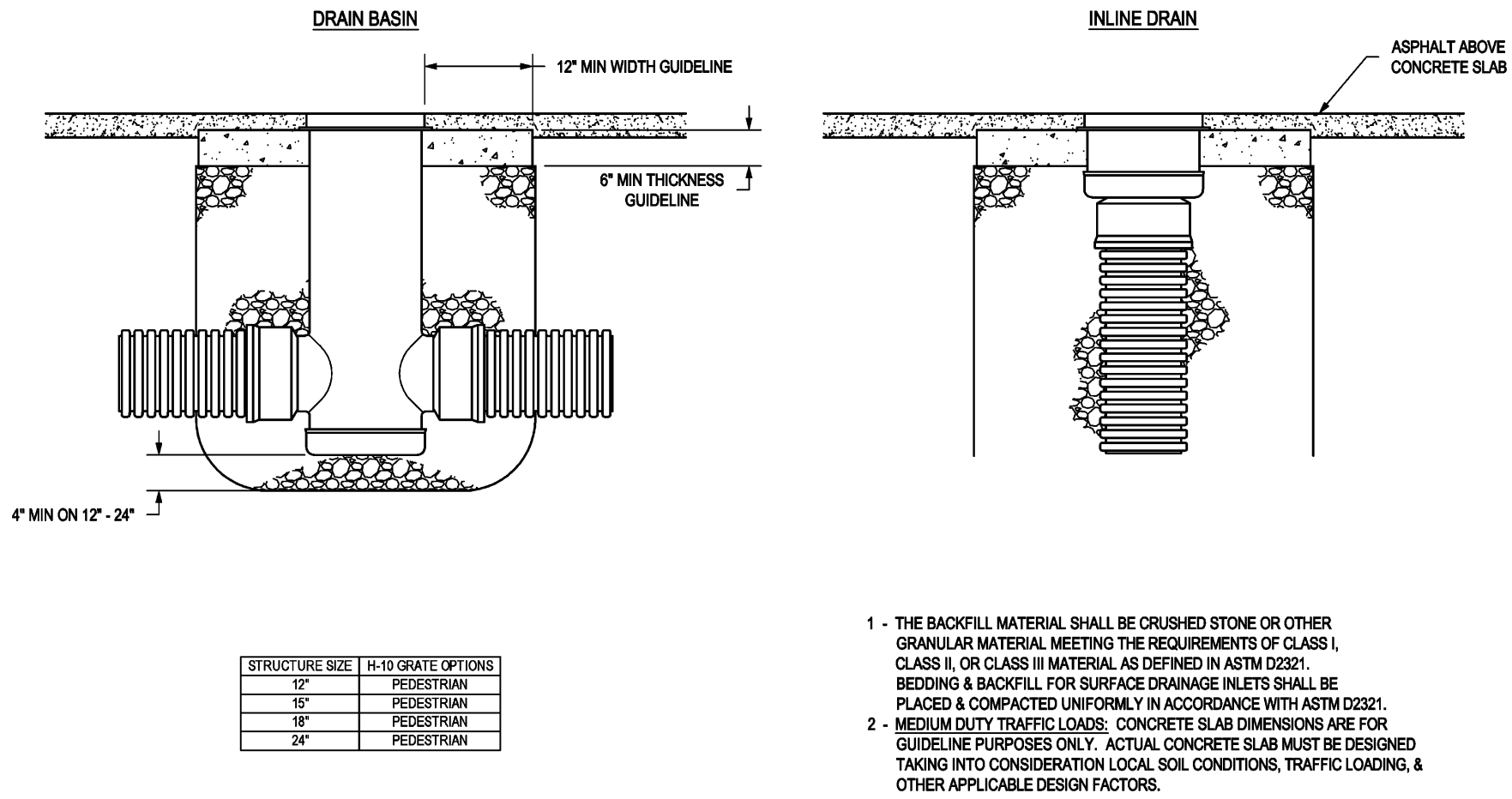
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

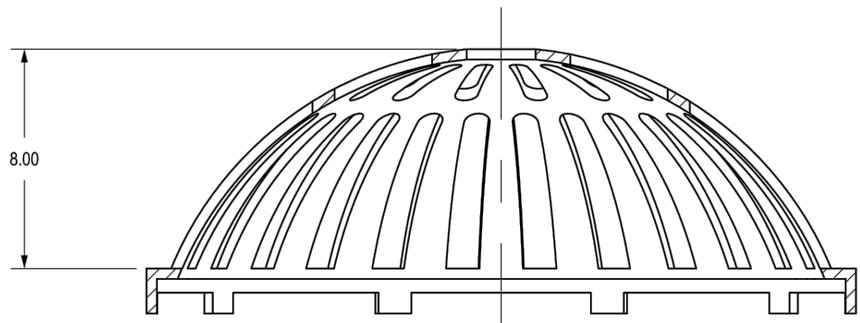
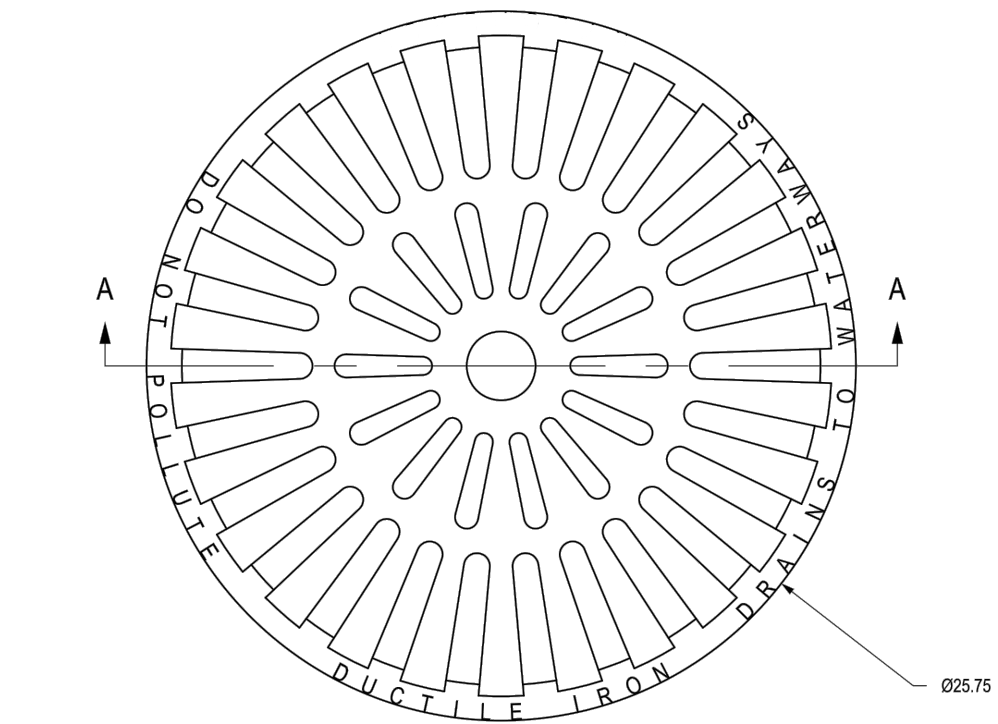
INSTALLATION

The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

ASPHALT INSTALLATION

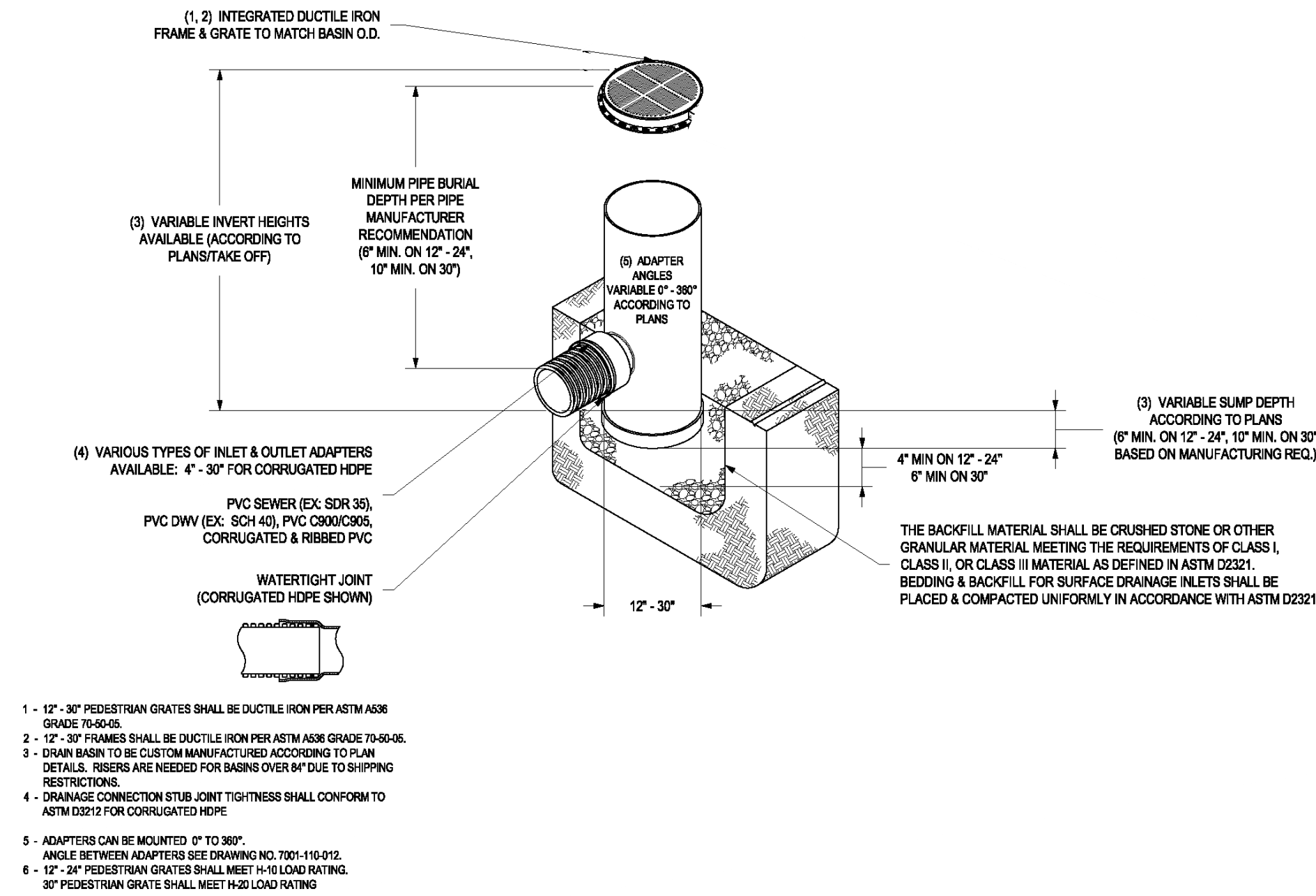


APPROX. WEIGHT = 53.00 LBS



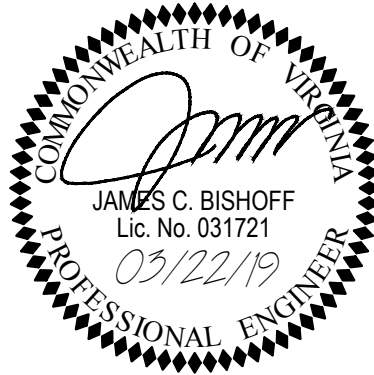
DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

DRAIN BASIN WITH PEDESTRIAN GRATE



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)

GRADING PLAN 3
DRAINAGE COMPUTATIONS, 4,4A
PROFILE.

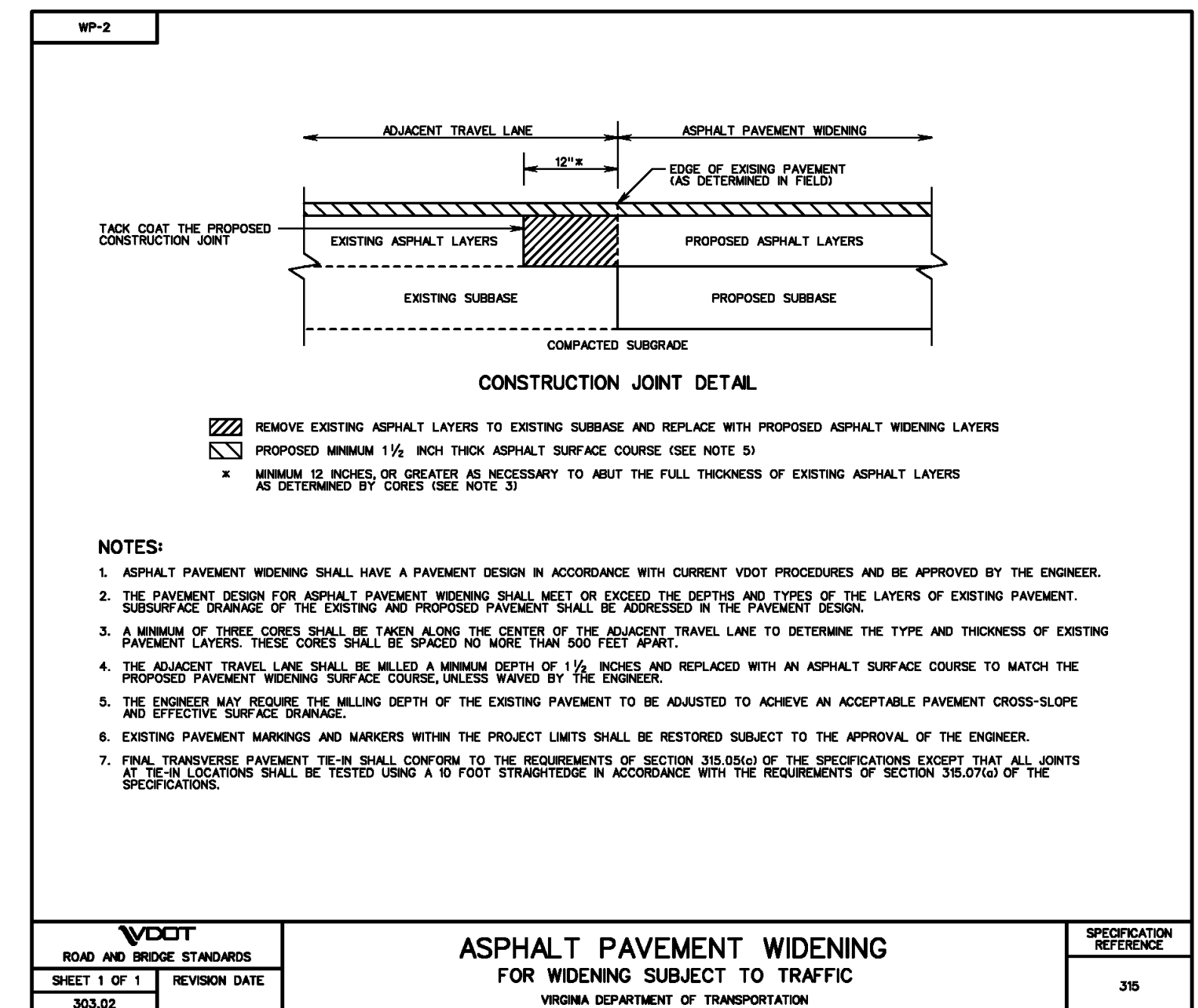
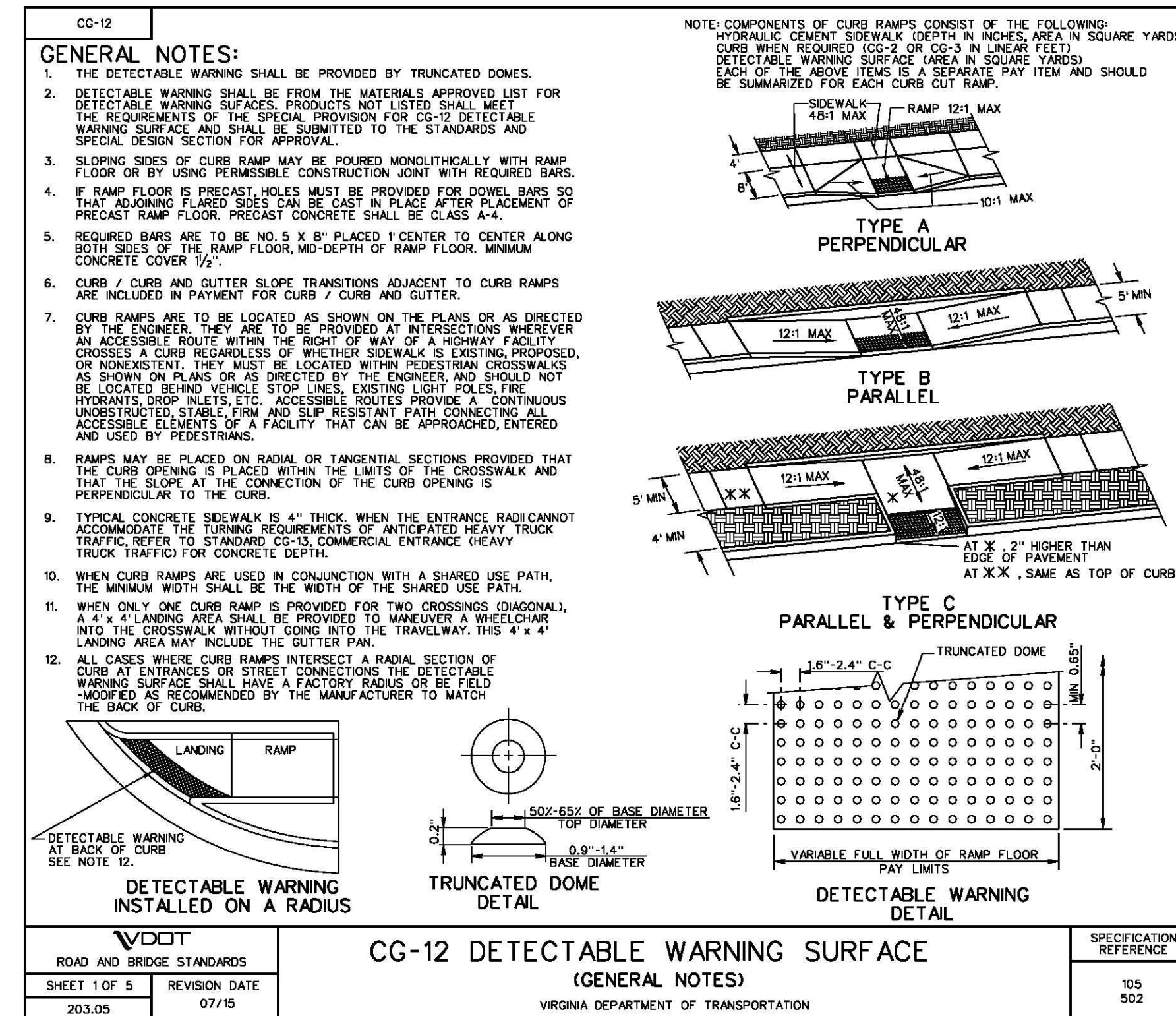
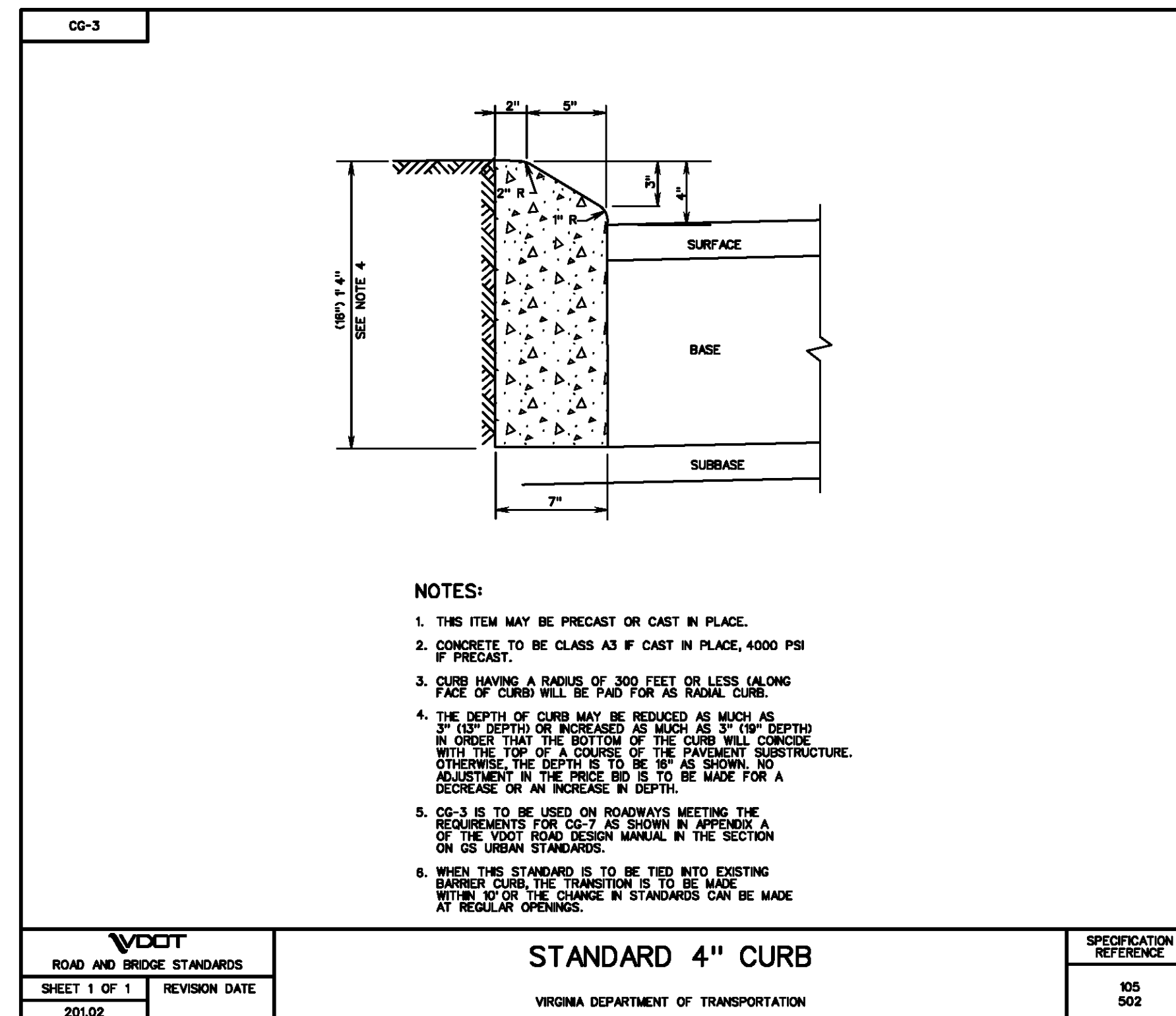
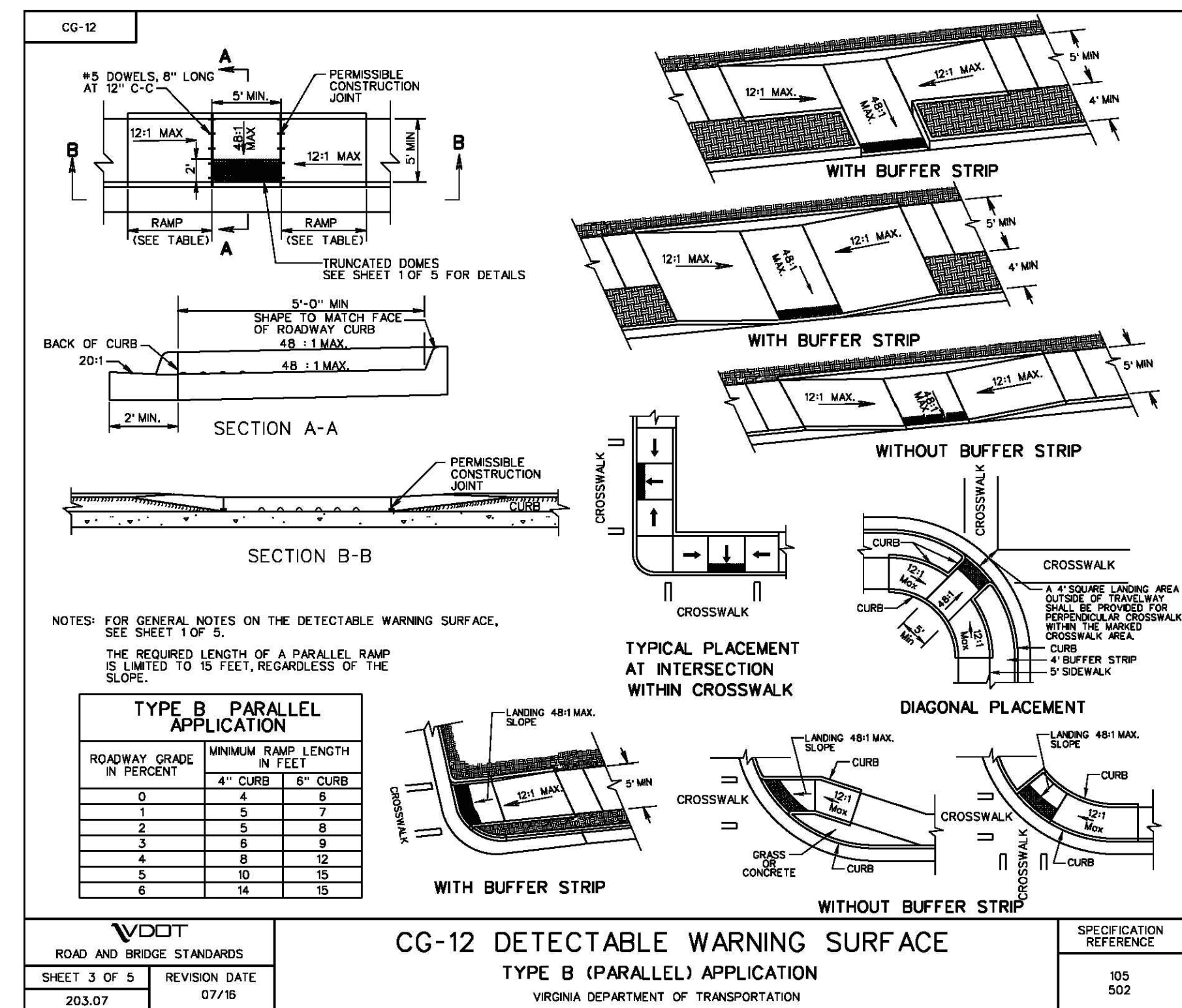
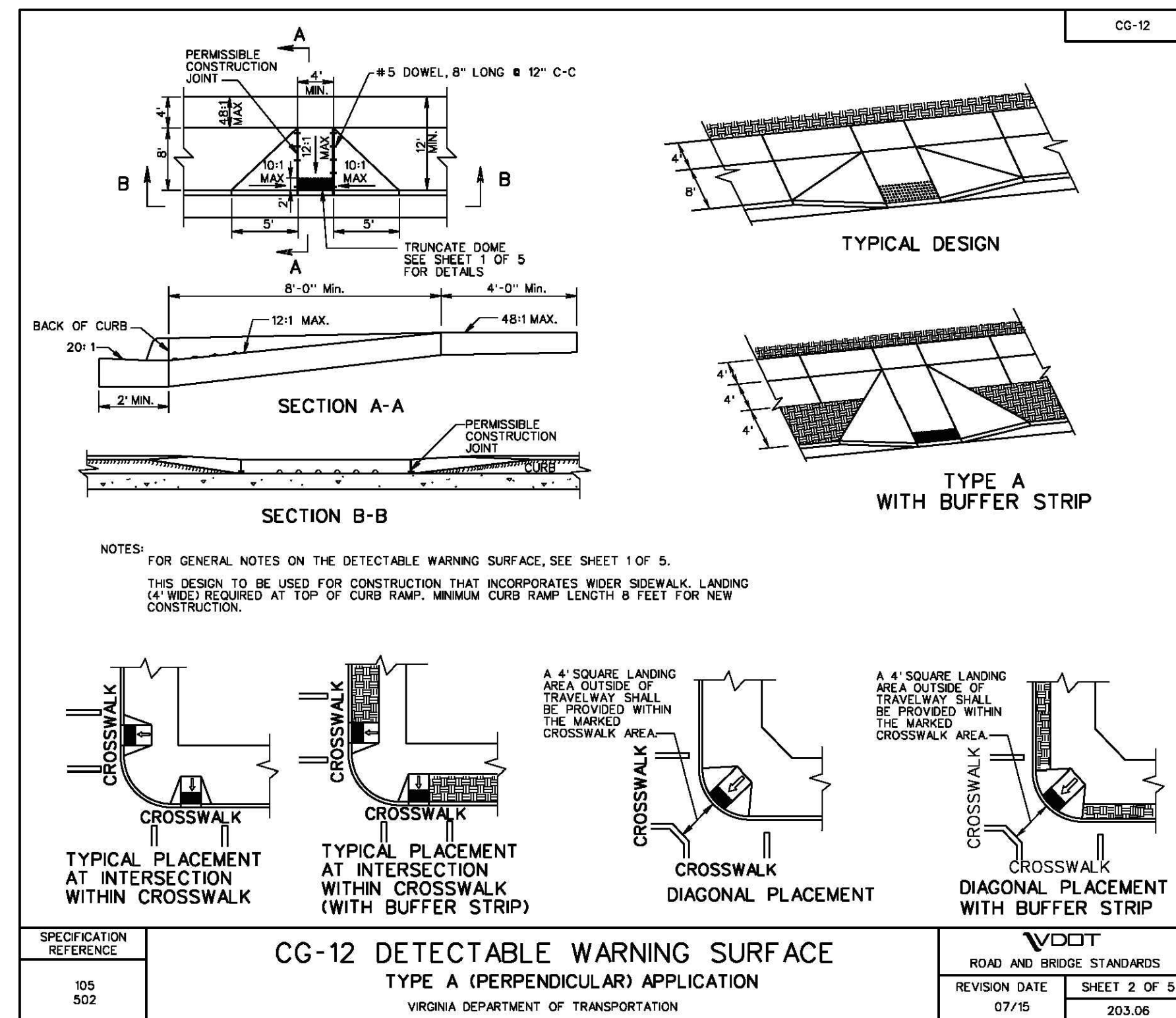
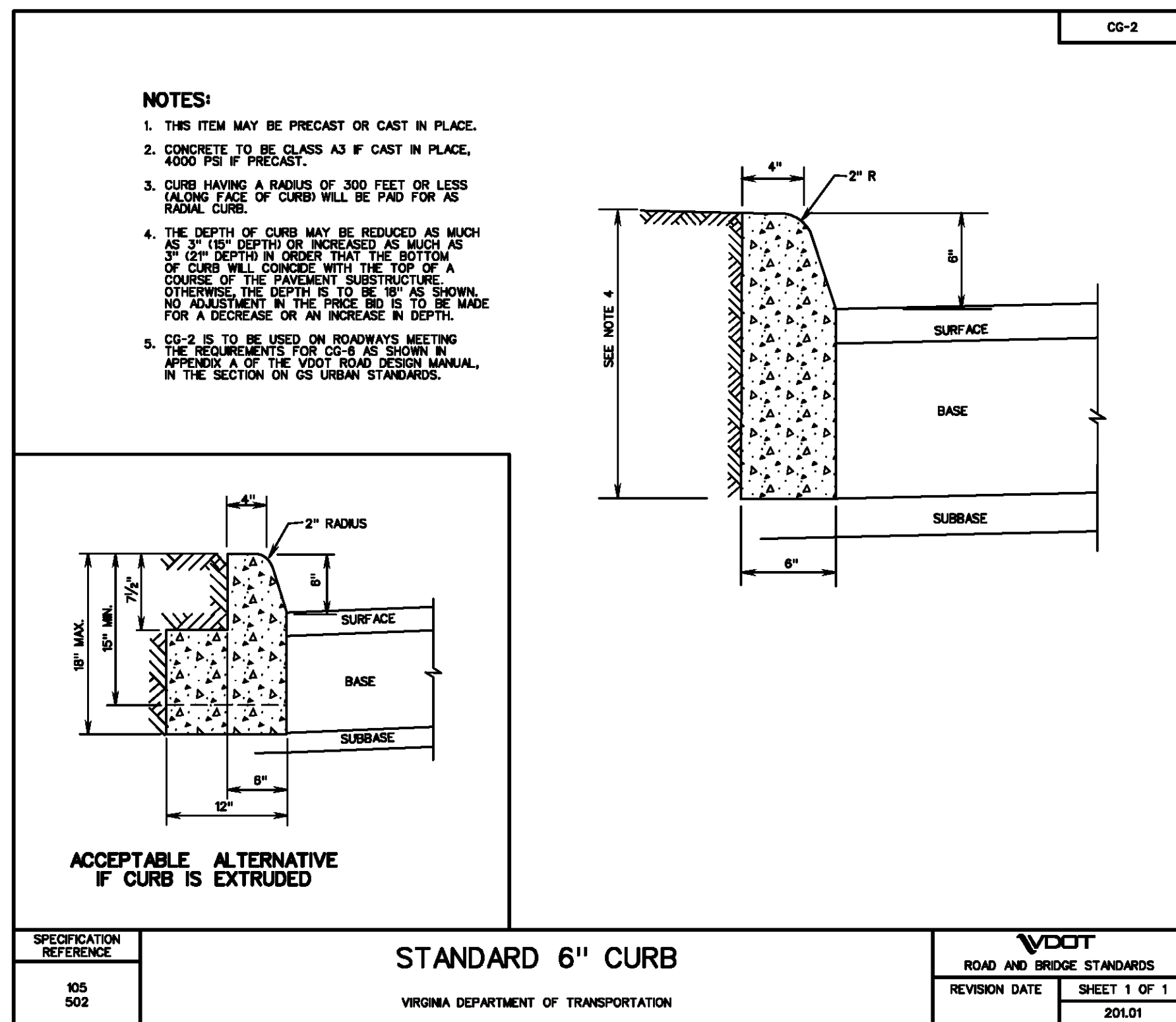


PLAN NO.	PROJECT	FILE NO.	SHEET NO.
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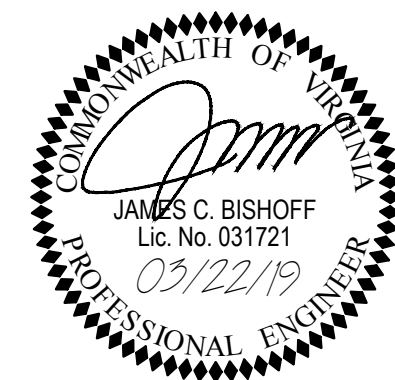
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REVISED	STATE	FEDERAL AID	STATE		SHEET NO.
		PROJECT	ROUTE	PROJECT	
	VA	TAP-5A01()	645	CLFT-029-101	2D



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)



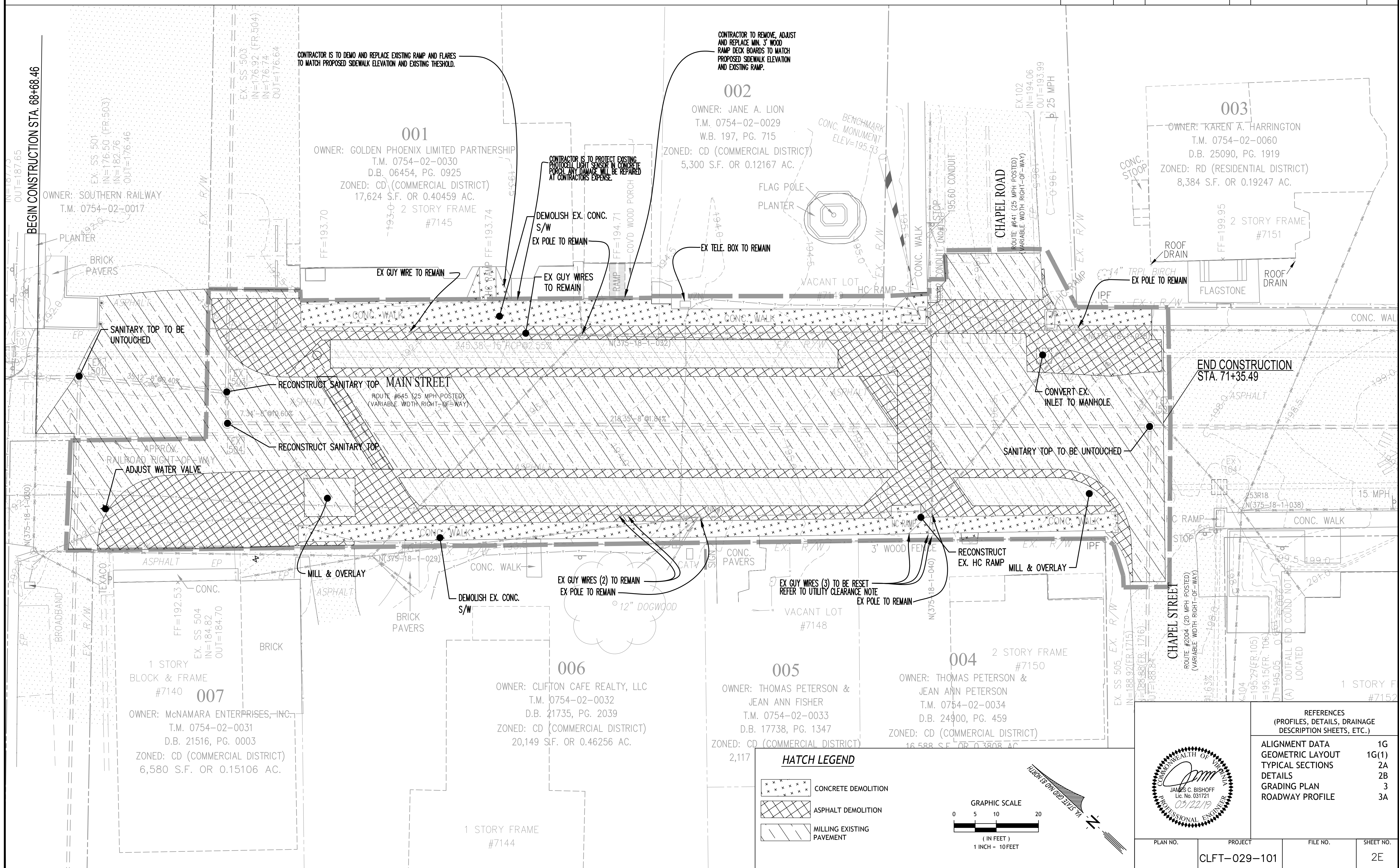
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		2D

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

DEMOLITION PLAN

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

REVISED	STATE	FEDERAL AID	STATE		SHEET NO.
		PROJECT	ROUTE	PROJECT	
	VA	TAP-5A01()	645	CLFT-029-101	2E



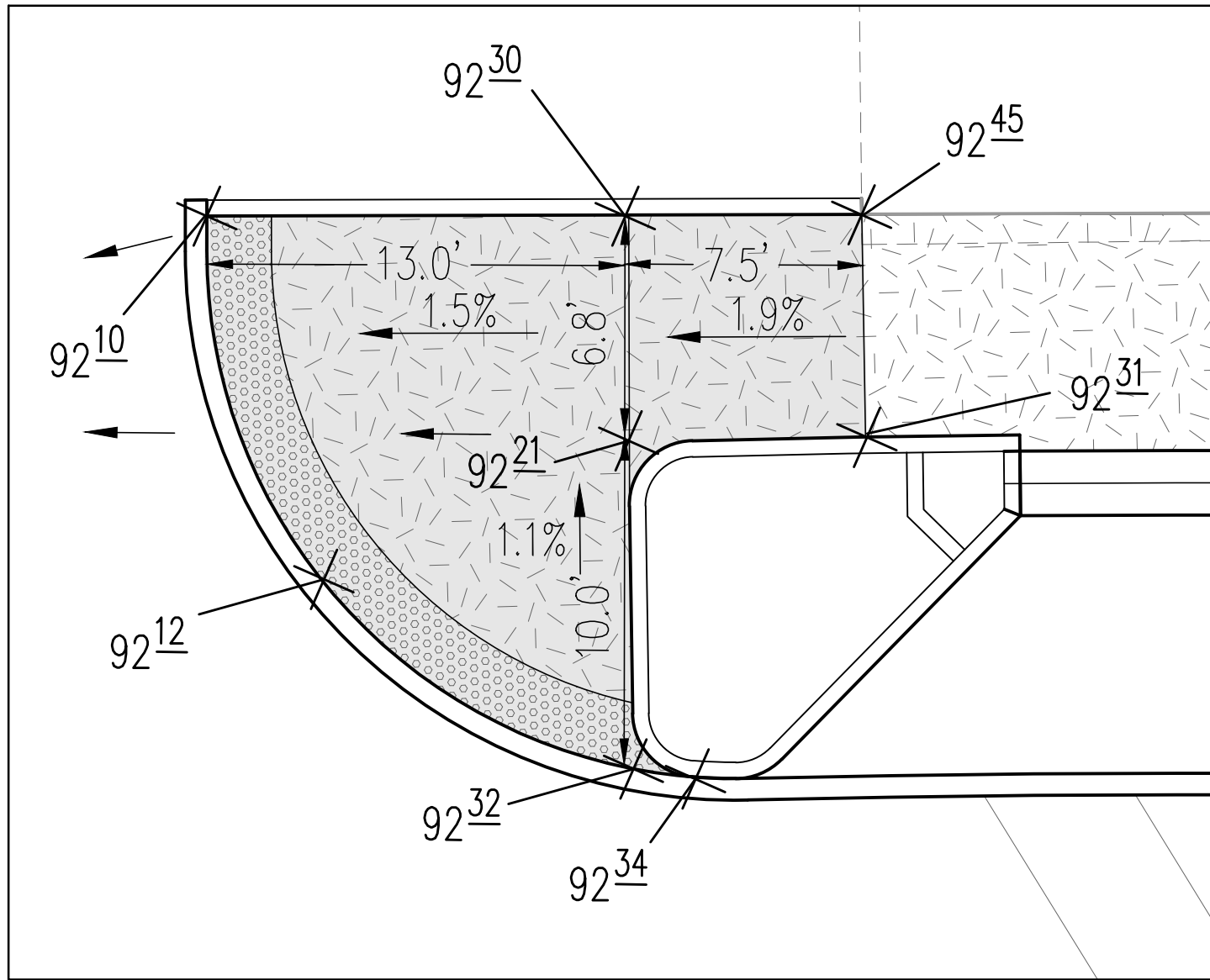
PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

CG-12 RAMP COMPUTATIONS

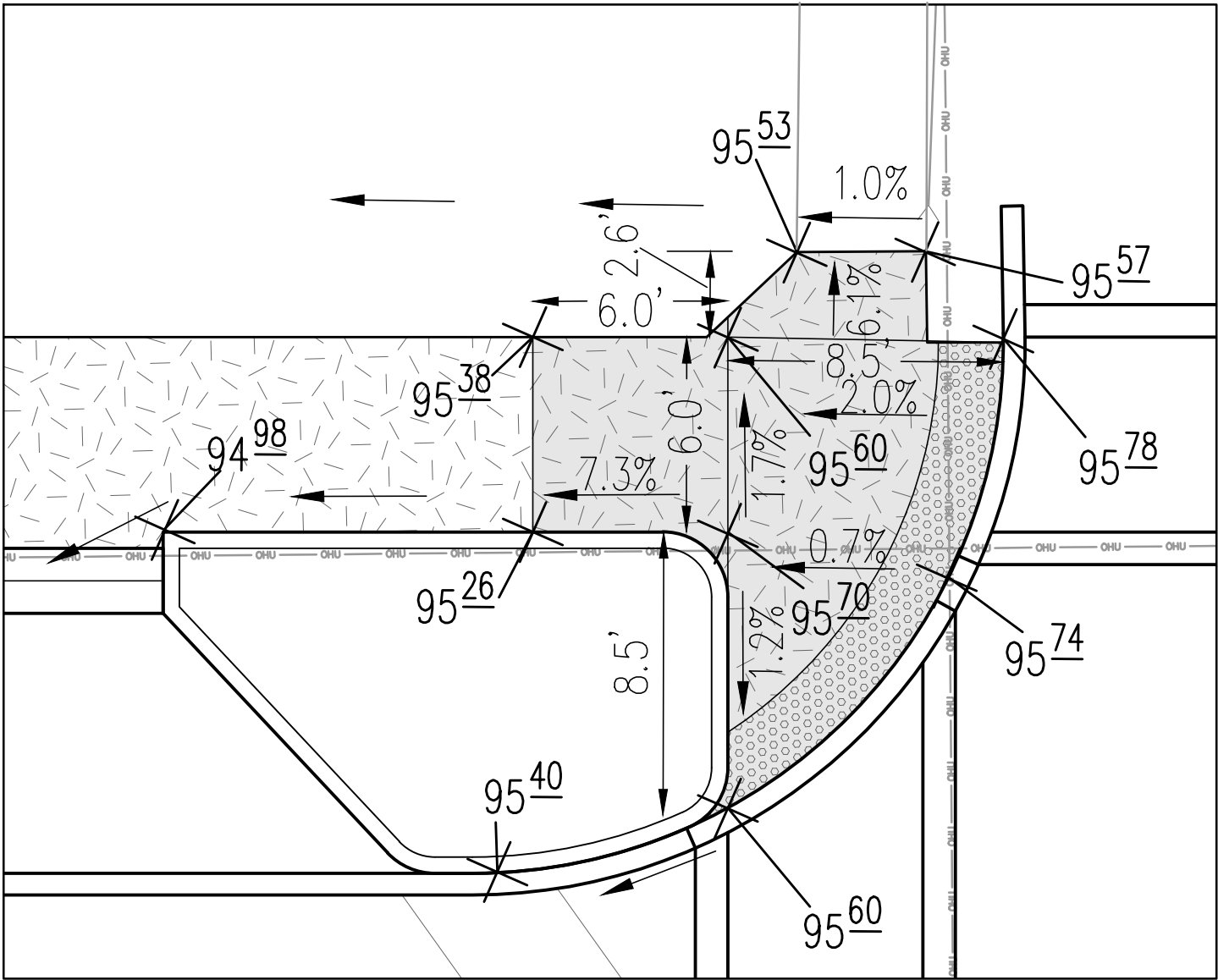
DESIGN FEATURES RELATING TO CONSTRUCTION OR REGULATION AND CONTROL TO TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	2F

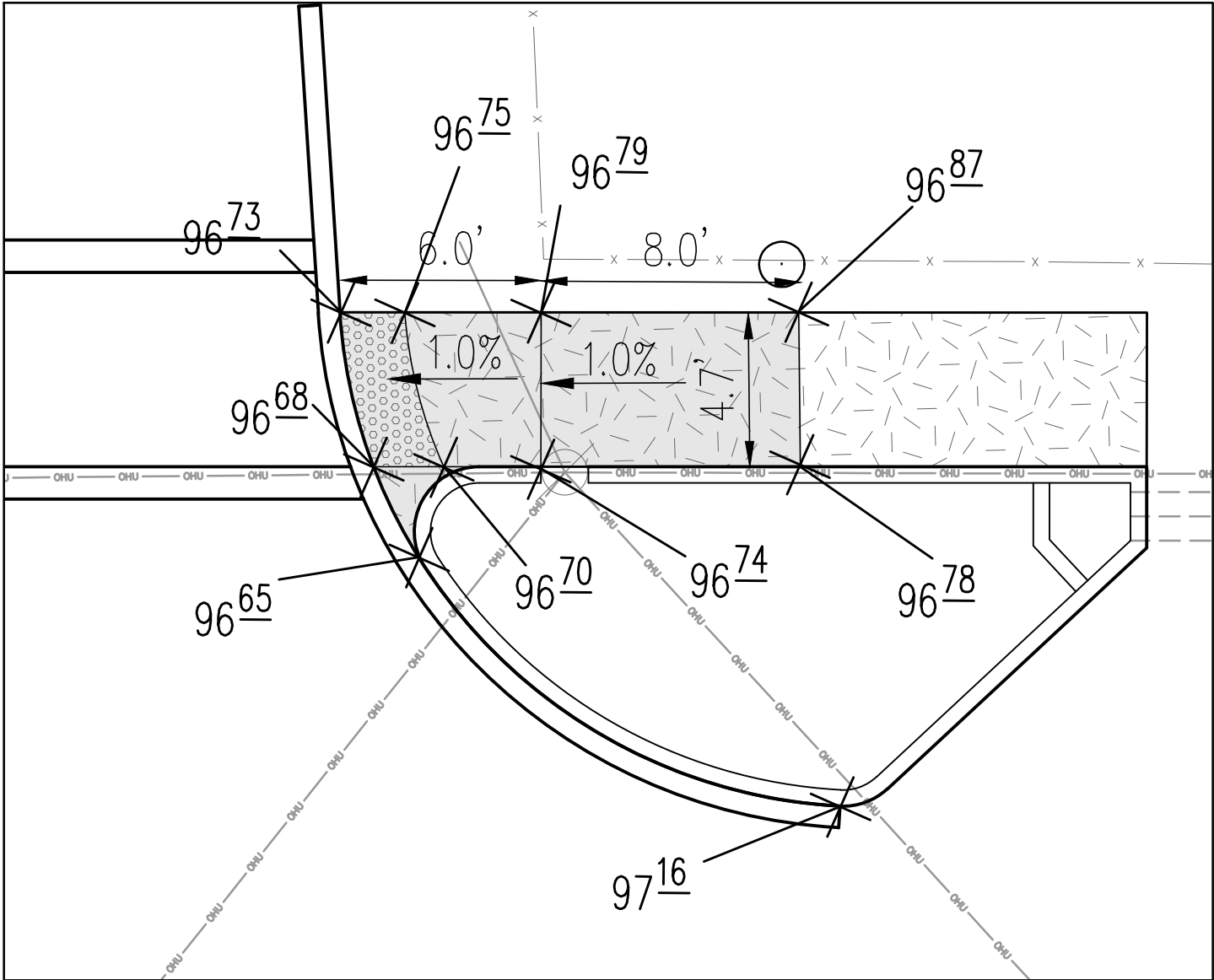
RAMP 1 (CG-12B MODIFIED)



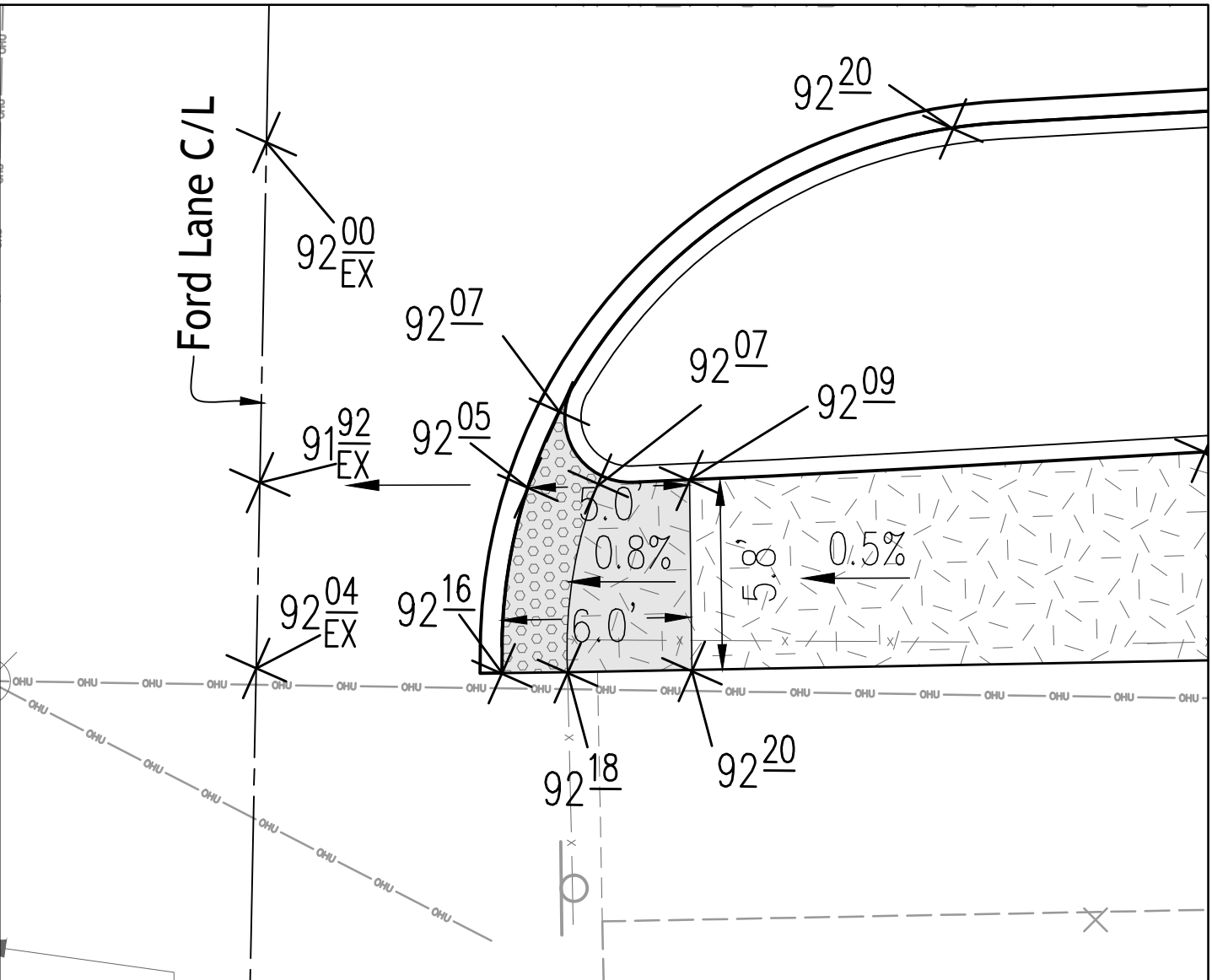
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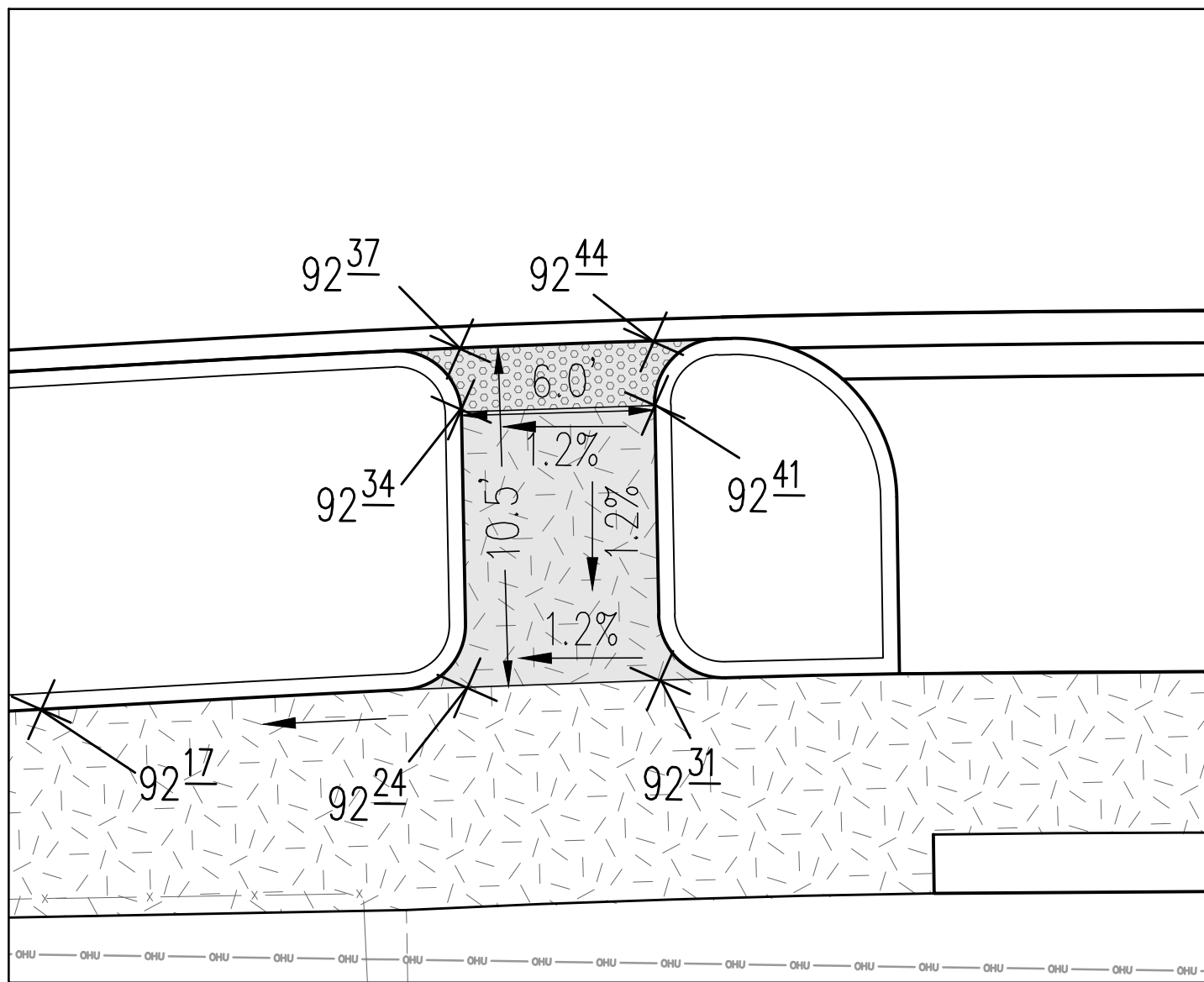
RAMP 3 (CG-12B)



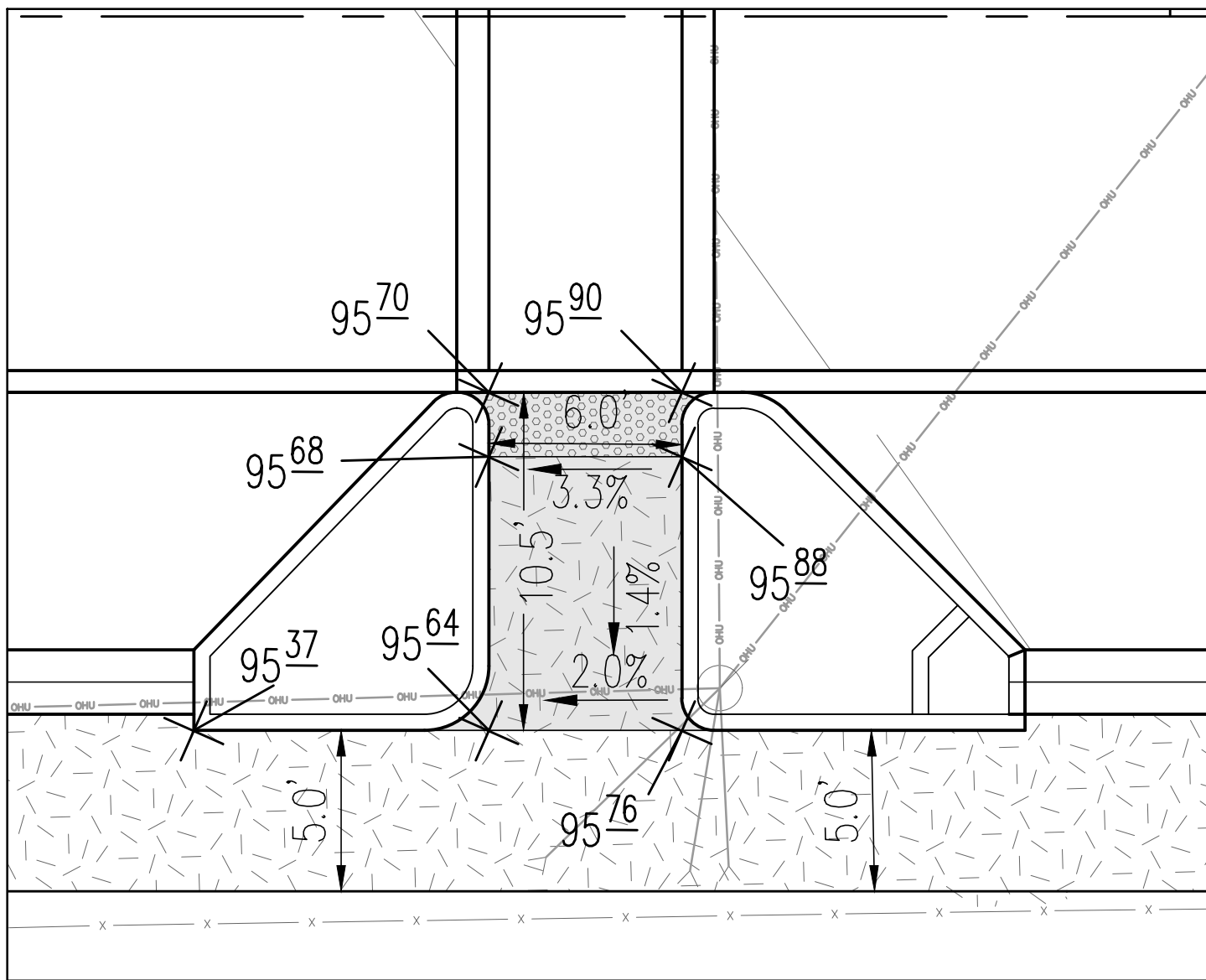
RAMP 4 (CG-12B MODIFIED)



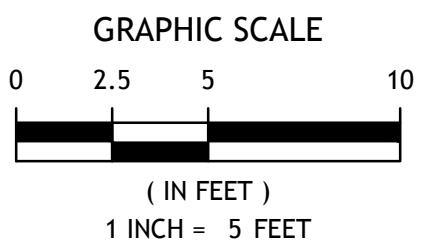
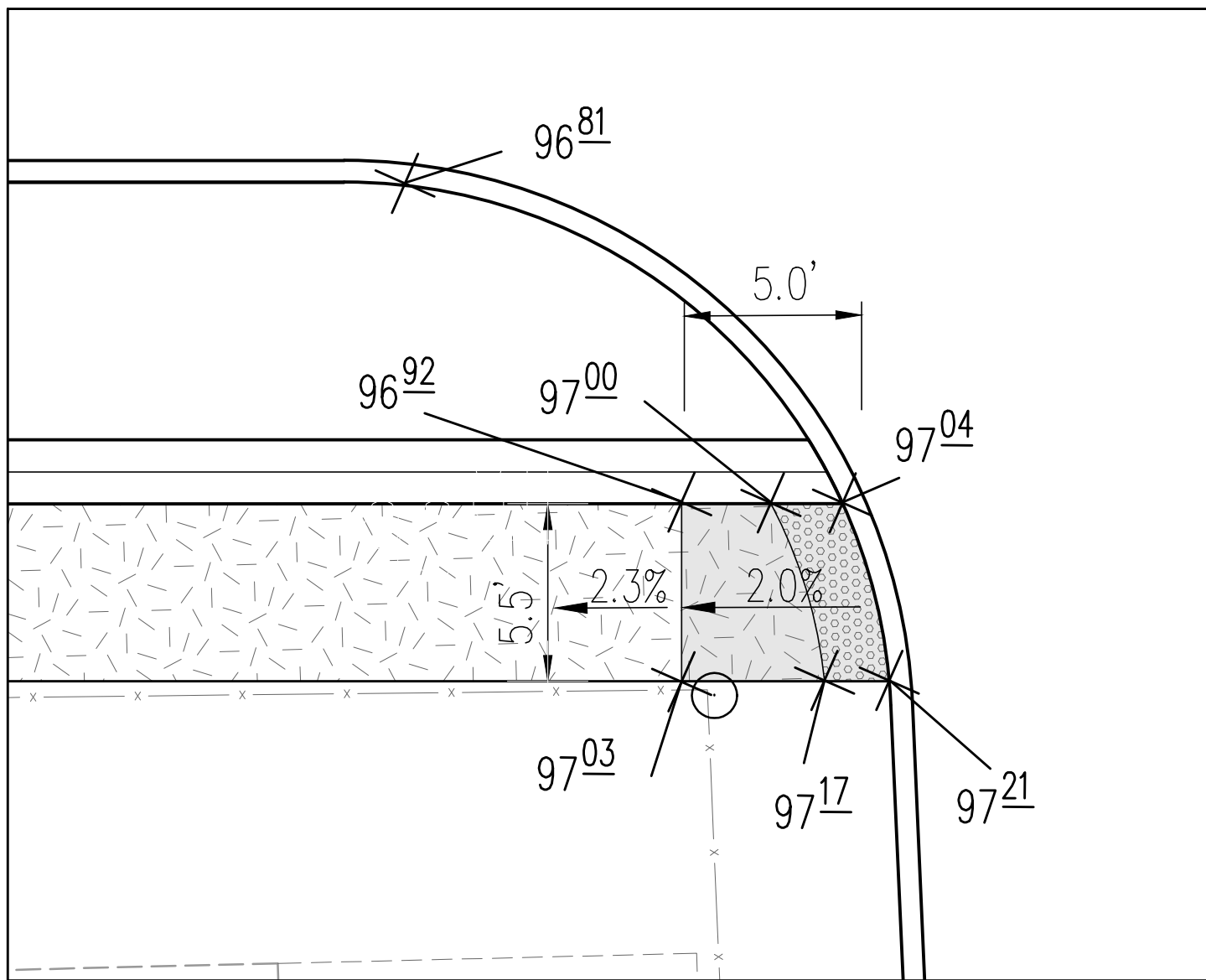
RAMP 5 (CG-12B MODIFIED)



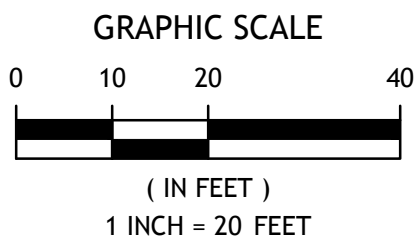
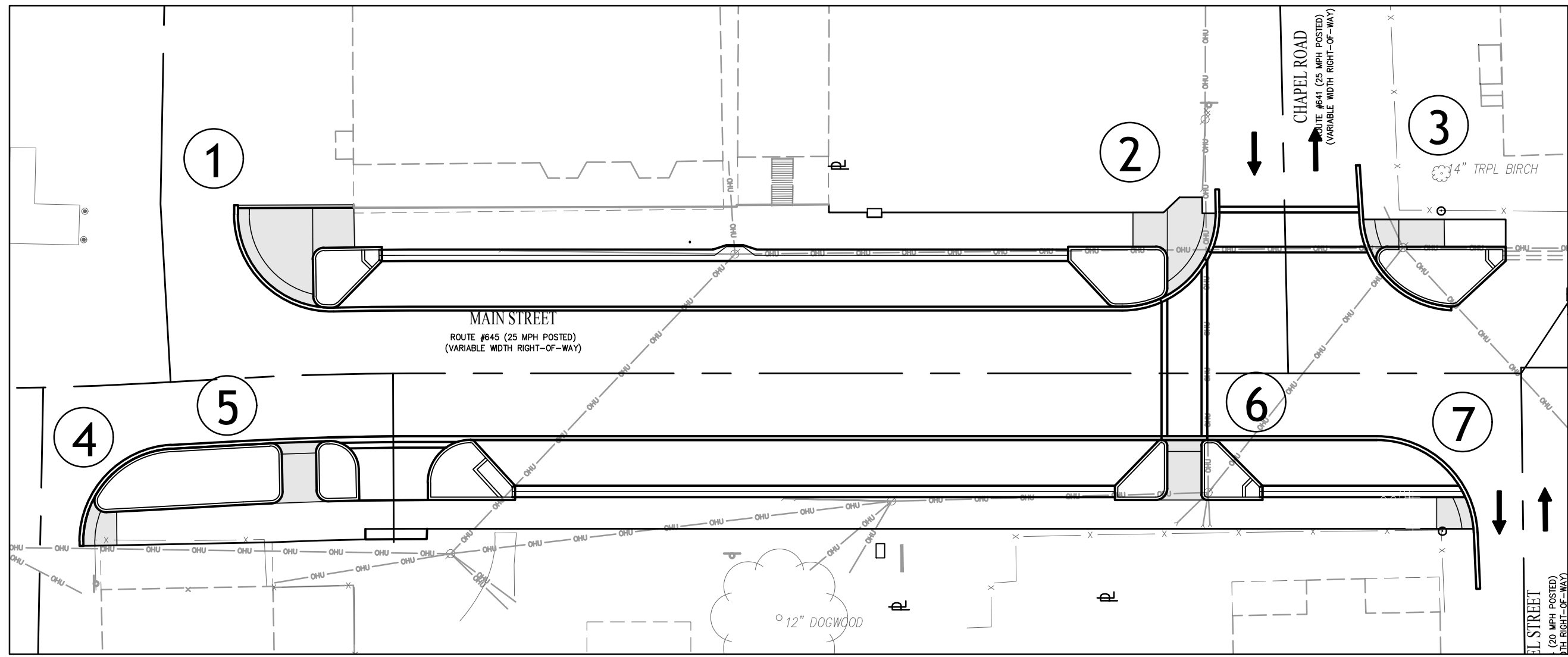
RAMP 6 (CG-12B MODIFIED)



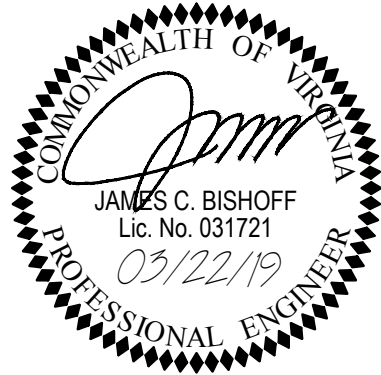
RAMP 7 (CG-12B MODIFIED)



OVERALL PEDESTRIAN RAMP MAP



LIMITS OF CG-12 RAMPS



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)
GEOMETRIC LAYOUT & SPOT ELEVATIONS 1G,1G(1)

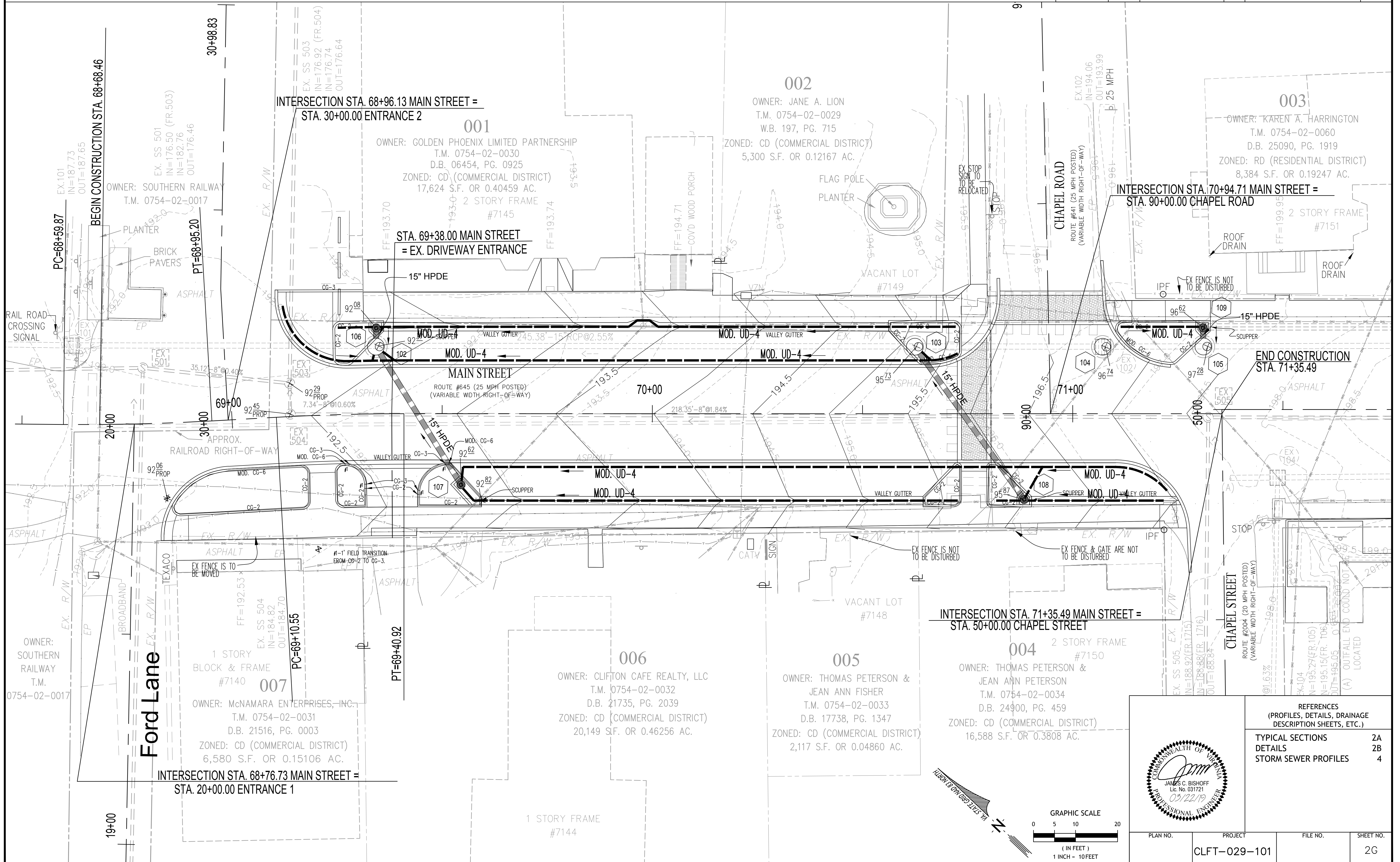
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		2F

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

UNDERDRAIN PLAN

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	2G

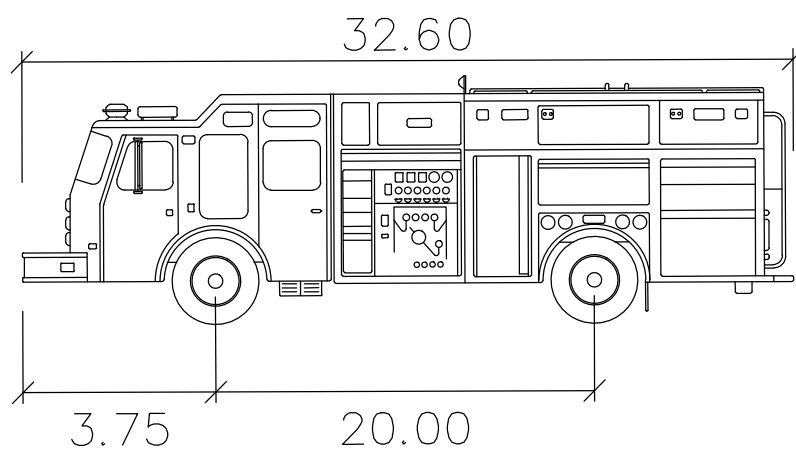
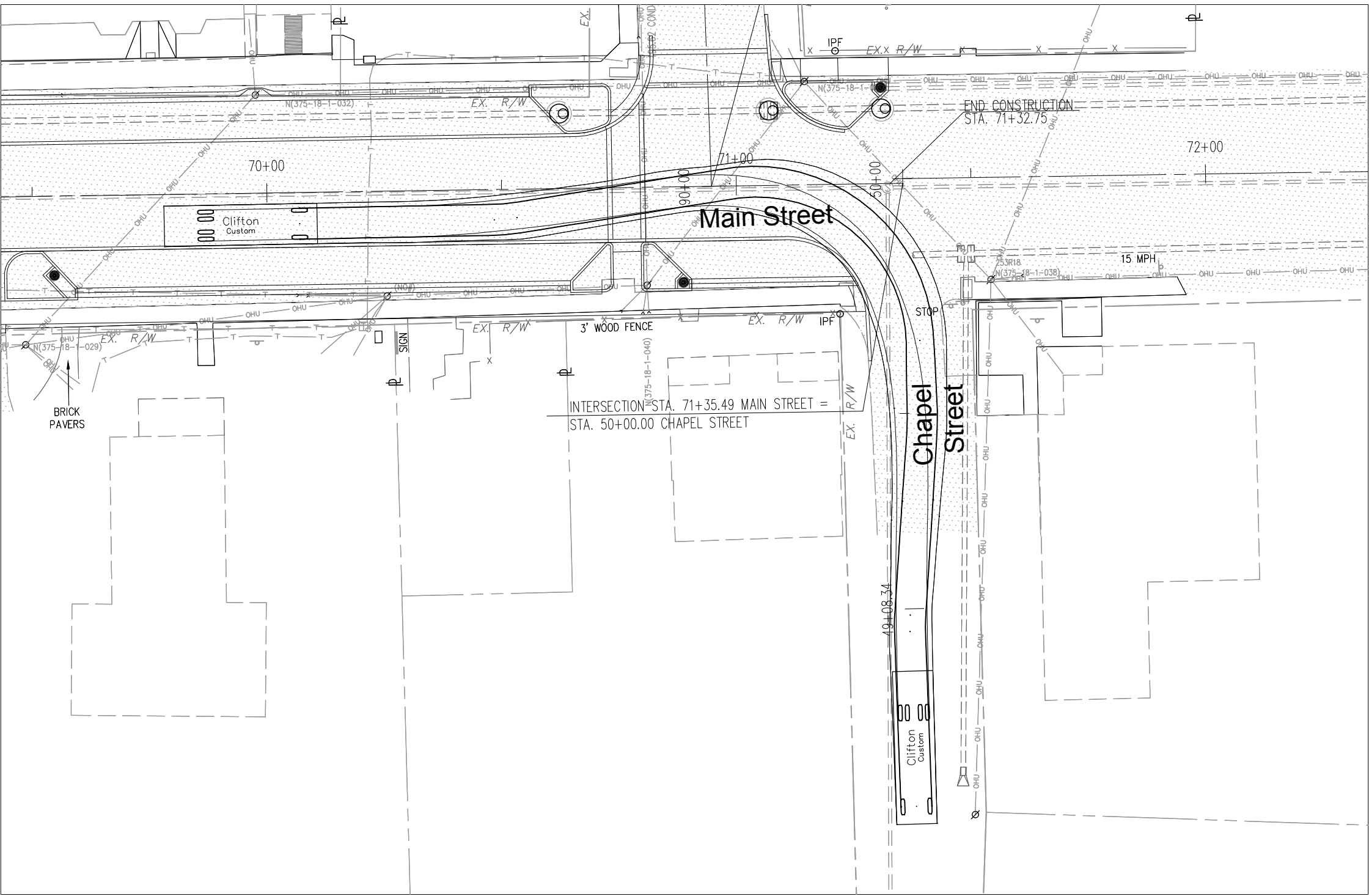
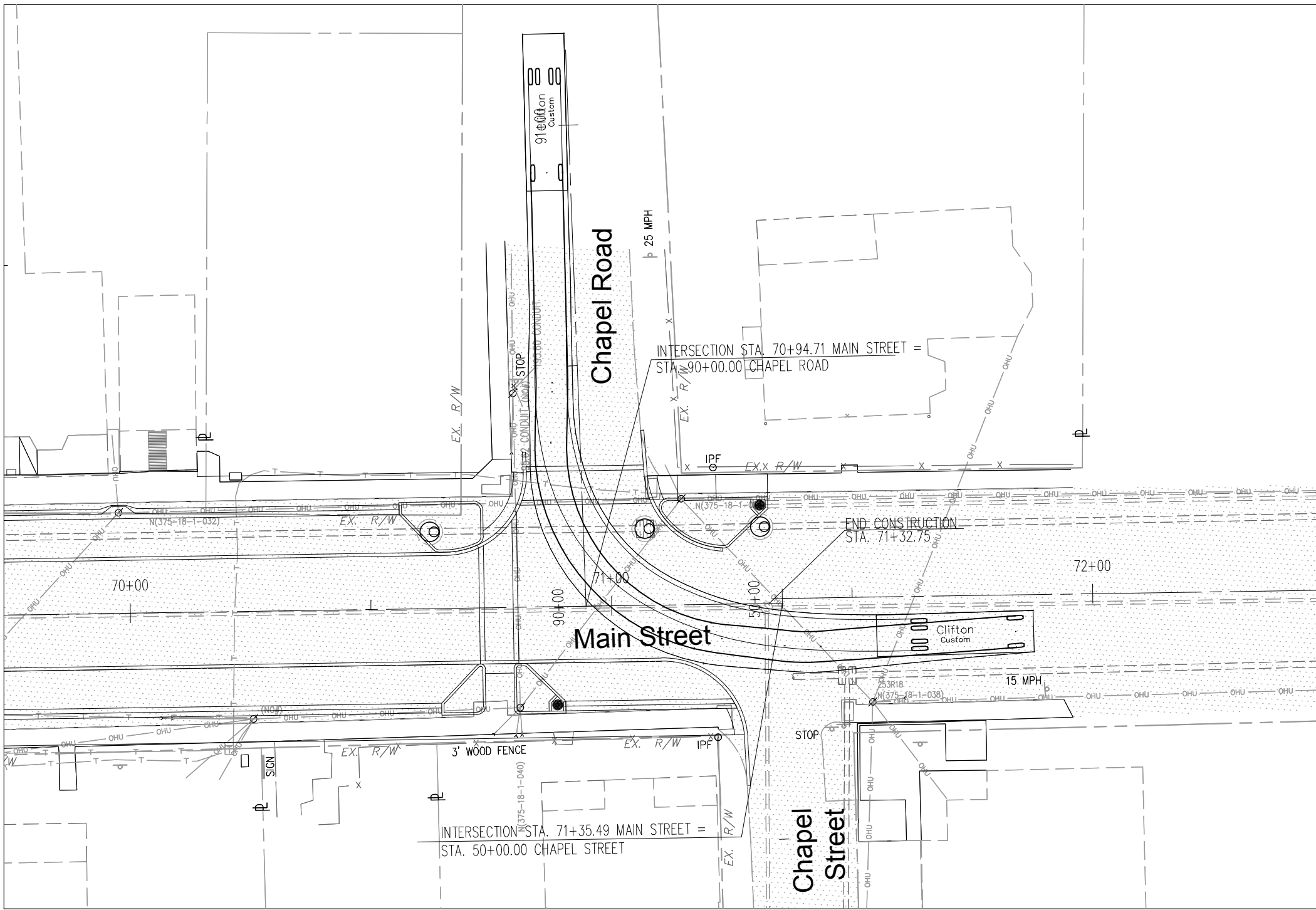
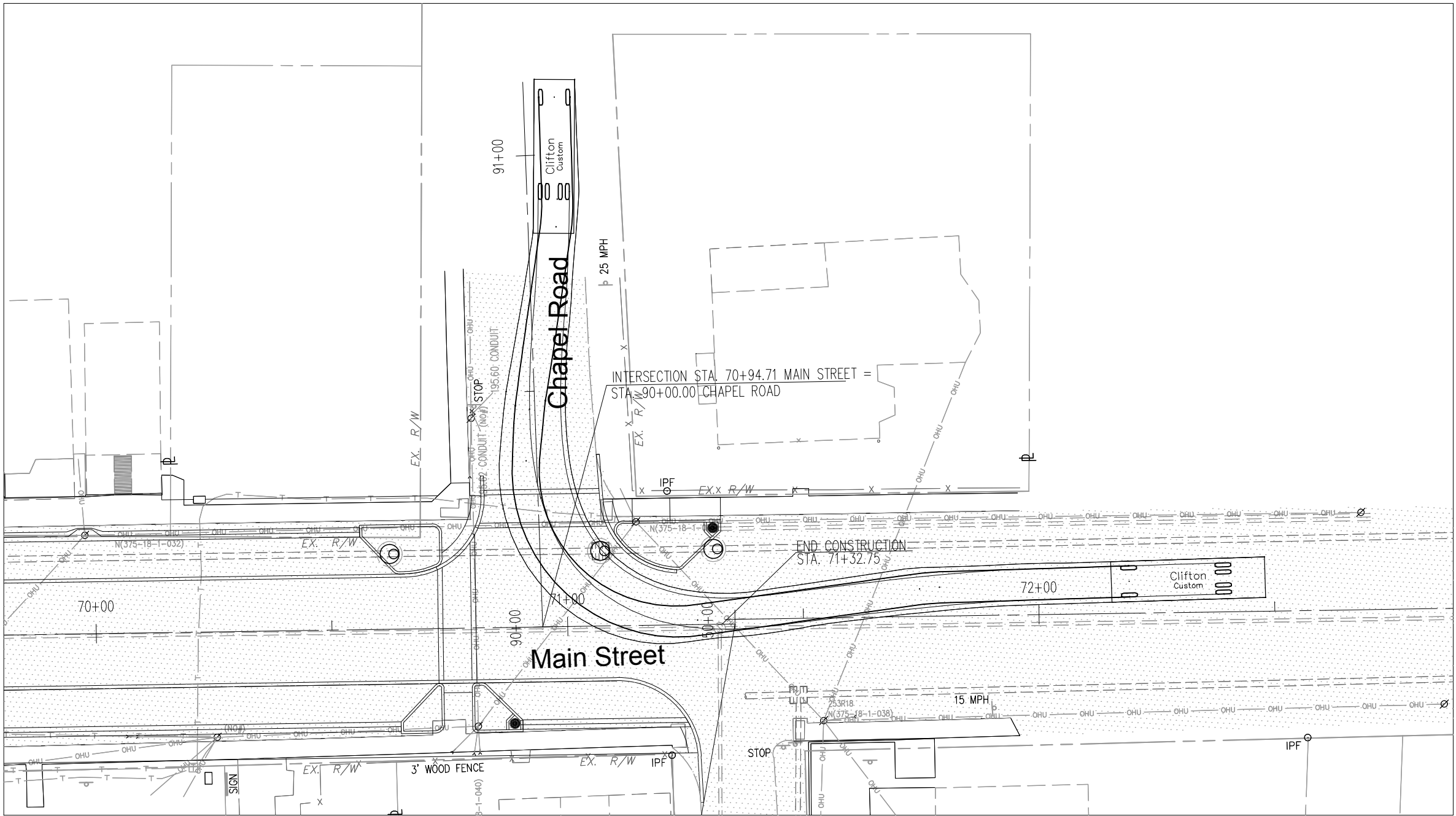
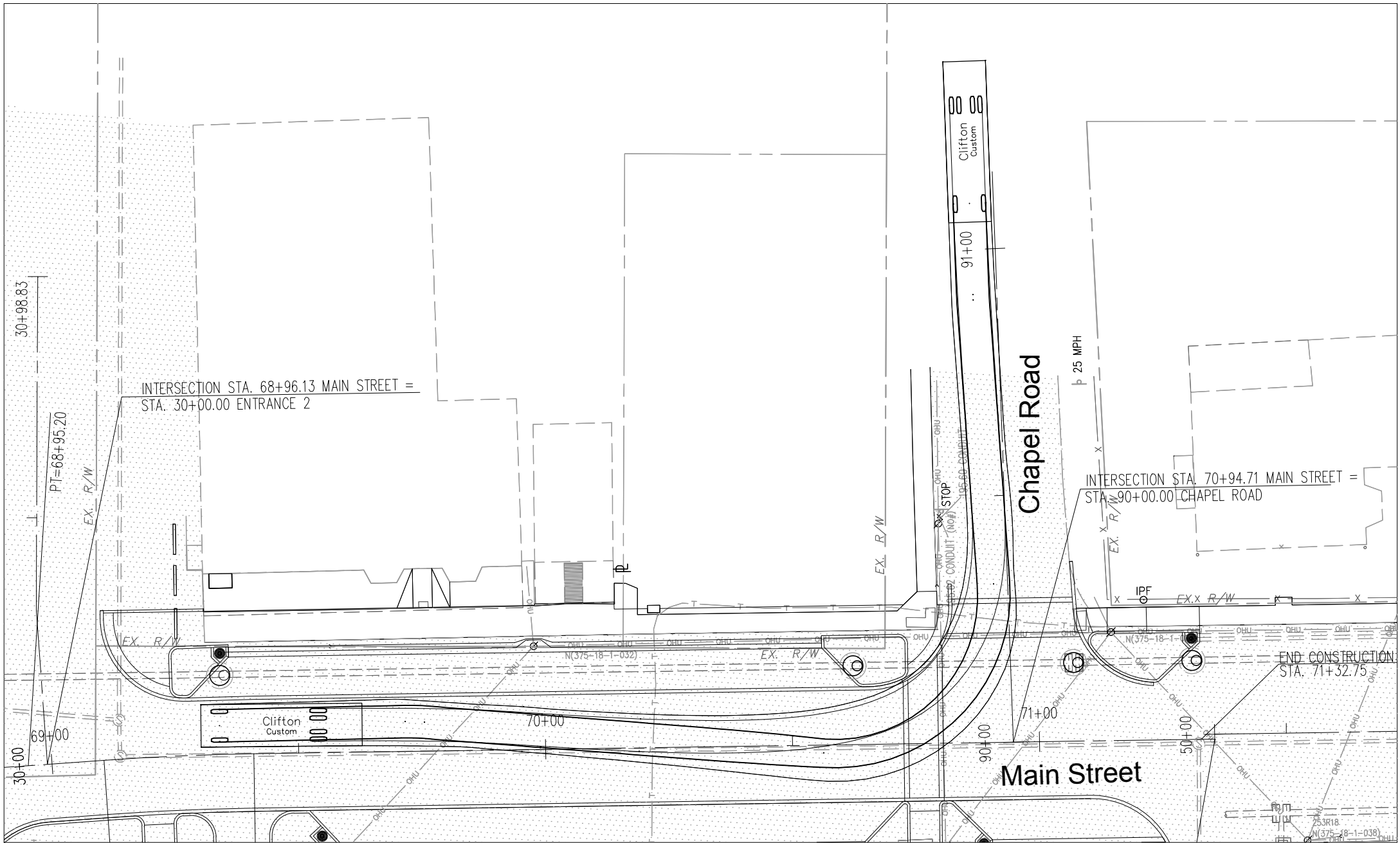


PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

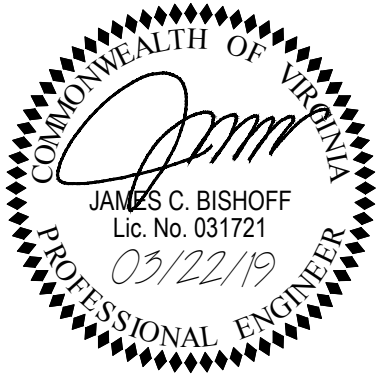
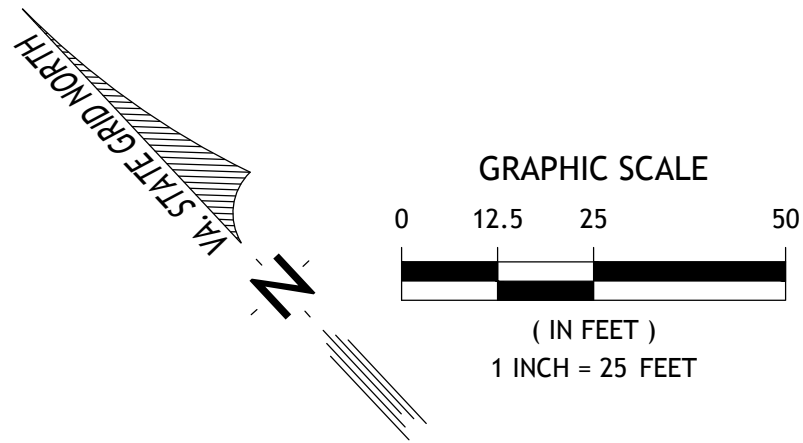
AUTO TURN PLAN

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	2H



Clifton feet
Width : 8.60
Track : 6.60
Lock to Lock Time : 6.0
Steering Angle : 39.7
Design Vehicle Speed = 5 mph



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)

PLAN SHEET

3

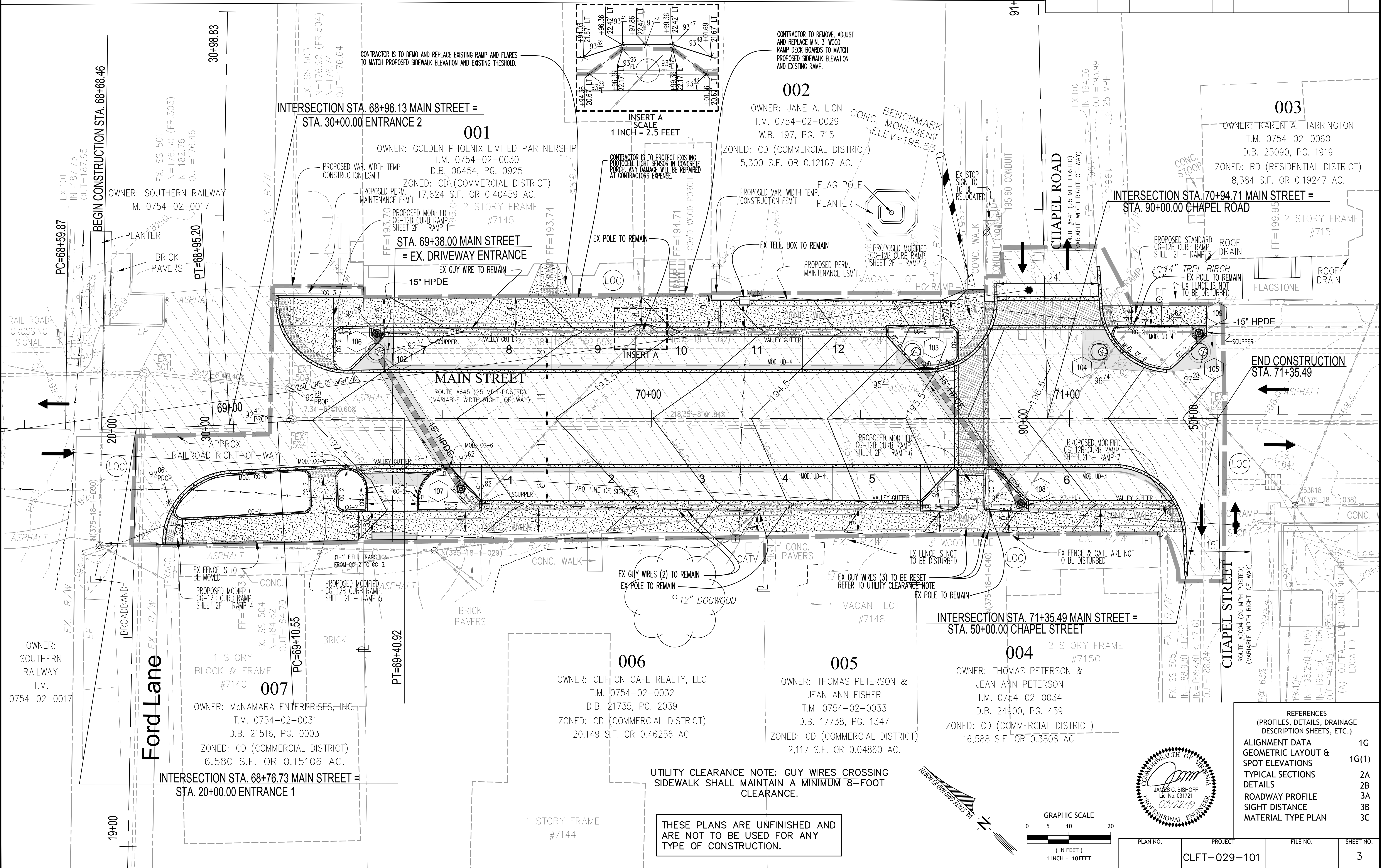
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		2H

PROJECT MANAGER: SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY: J2 ENGINEERS, INC.
DESIGN SUPERVISED BY: JAMES C. BISHOFF, PE
DESIGNED BY: J2 ENGINEERS, INC.

GRADING PLAN

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	3

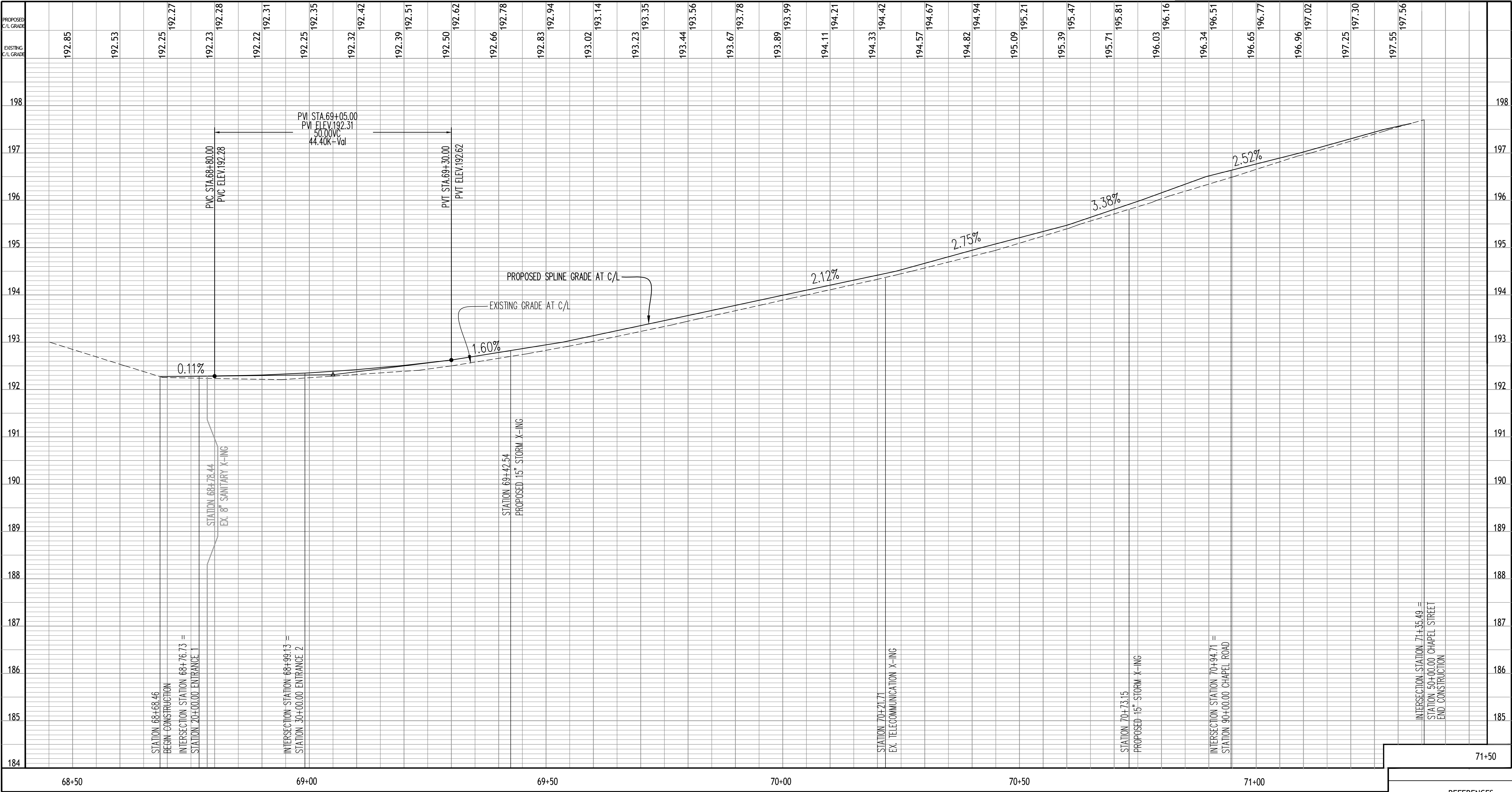


PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	

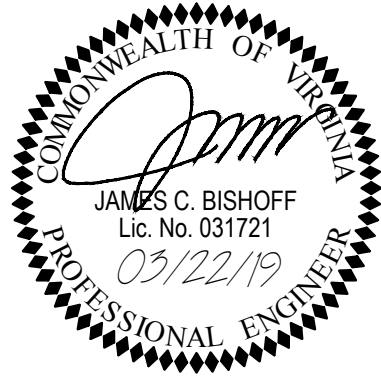
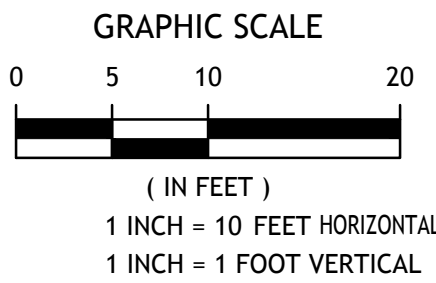
ROADWAY PROFILE



MAIN STREET

DESIGN SPEED - 25 MPH

PROPOSED ROW - VARIES



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GEOMETRIC LAYOUT & SPOT ELEVATIONS	1G(1)
GRADING PLAN	3
SIGHT DISTANCE PLAN	3B

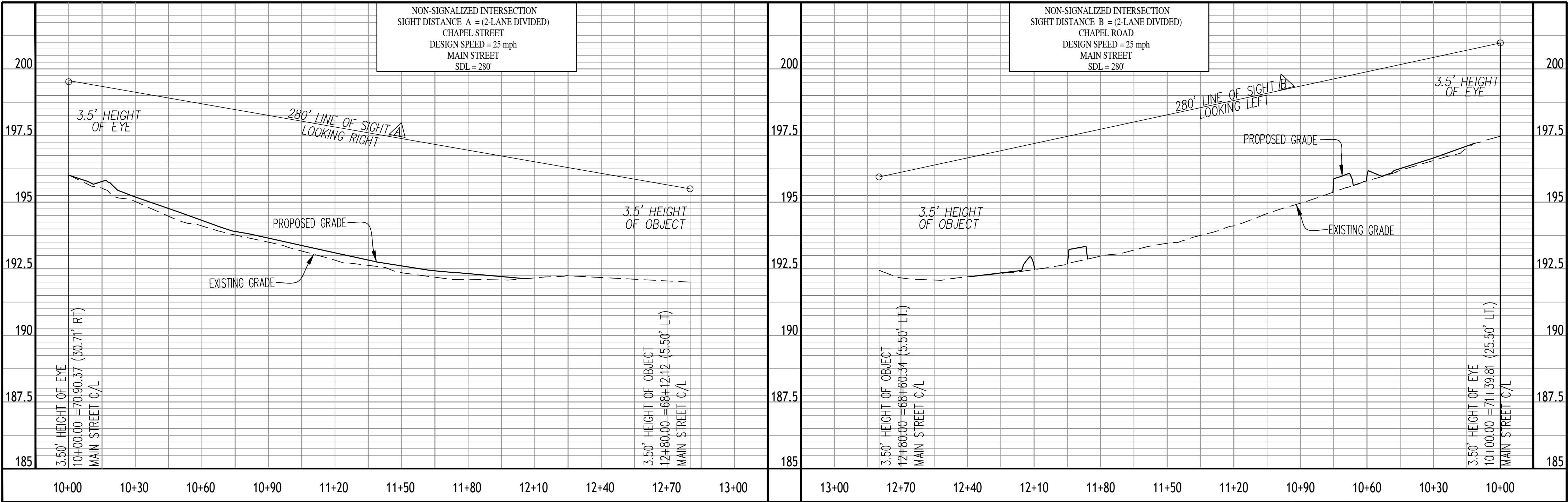
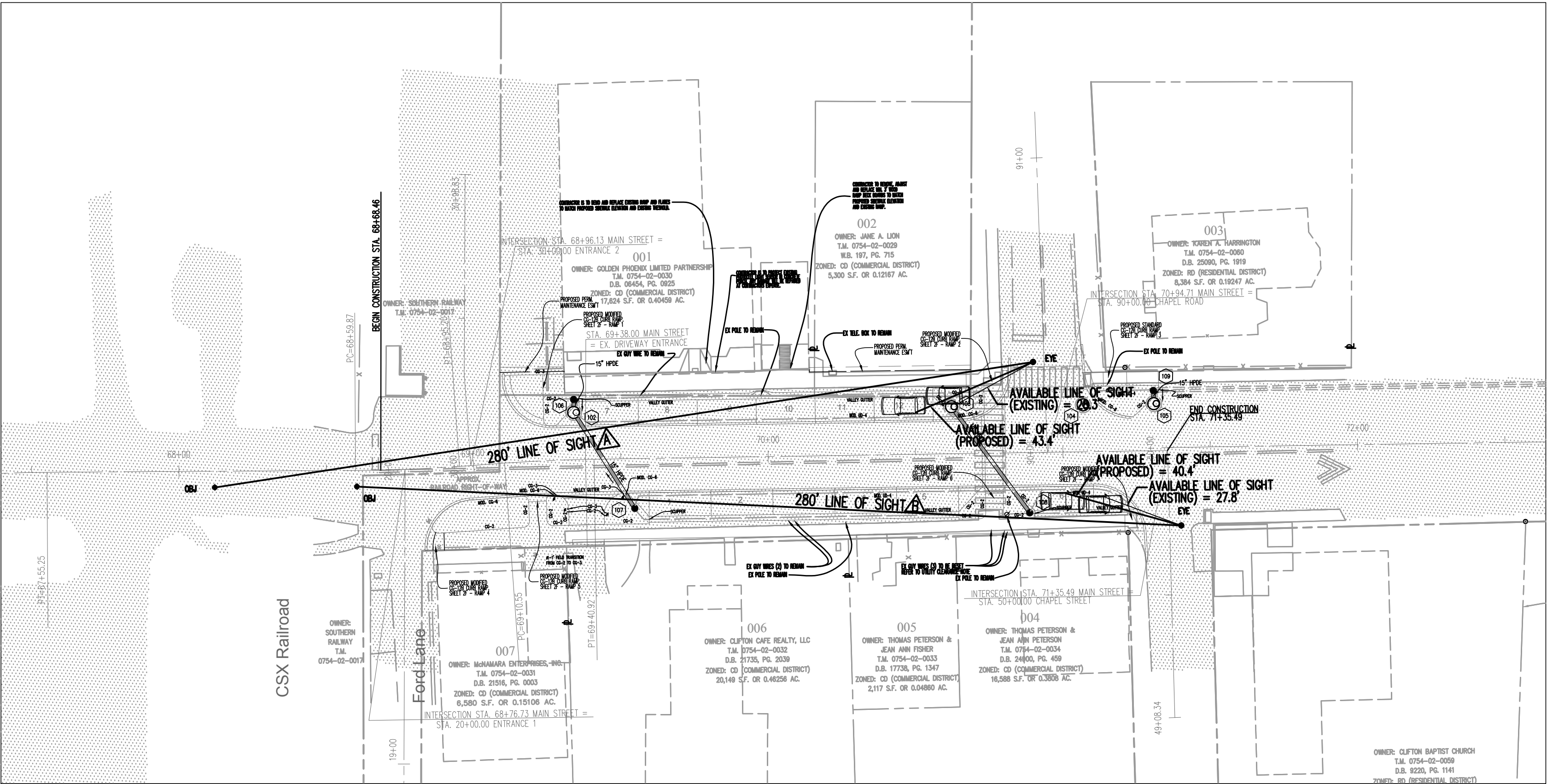
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		3A

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

DESIGN FEATURES RELATING TO CONSTRUCTION
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BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	

SIGHT DISTANCE PLAN AND PROFILE



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GRADING PLAN	3

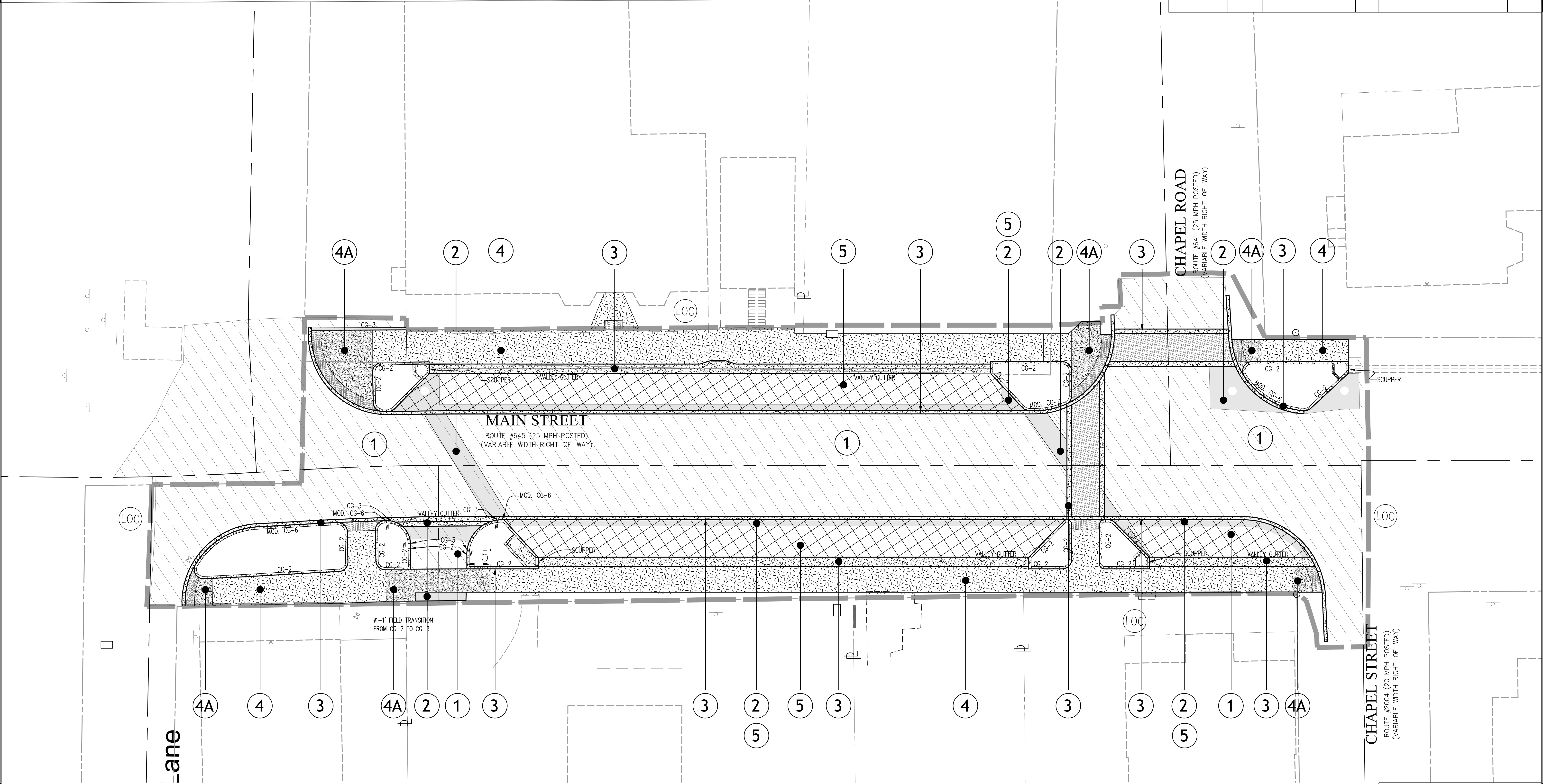
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		3B

PROJECT MANAGER: SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY: J2 ENGINEERS, INC.
DESIGN SUPERVISED BY: JAMES C. BISHOFF, PE
DESIGNED BY: J2 ENGINEERS, INC.

MATERIAL TYPE PLAN

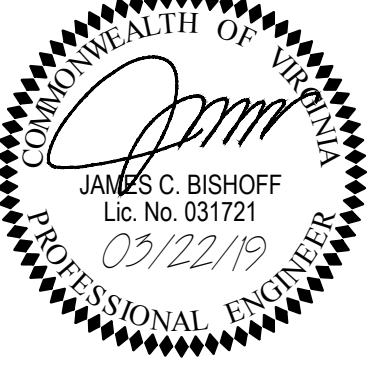
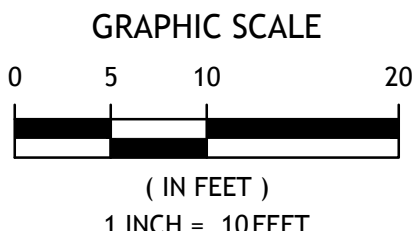
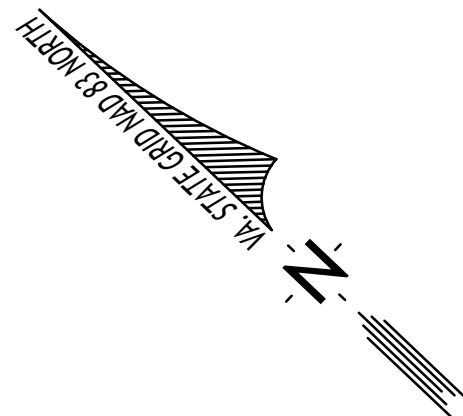
DESIGN FEATURES RELATING TO CONSTRUCTION OR REGULATION AND CONTROL TO TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	3C



LEGEND	
①	MILL - BUILDUP/OVERLAY
②	PROPOSED NEW PAVEMENT
③	PROPOSED CONCRETE - STANDARD FINISH
④	PROPOSED EXPOSED AGGREGATE CONCRETE
④A	PROPOSED 7" EXPOSED AGGREGATE CONCRETE PROPOSED 6" AGGREGATE BASE MATERIAL - TYPE 1 SIZE 21A
⑤	TAN THERMOPLASTIC ASPHALT PARKING - SLATE PATTERN

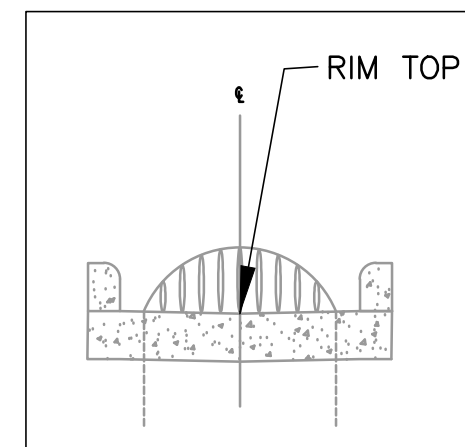
THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION.



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
ALIGNMENT DATA	1G
GEOMETRIC LAYOUT & SPOT ELEVATIONS	1G(1)
TYPICAL SECTIONS	2A
DETAILS	2B
GRADING PLAN	3
ROADWAY PROFILE	3A

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		3C

REVISED	STATE	FEDERAL AID	STATE		SHEET NO.
		PROJECT	ROUTE	PROJECT	
	VA	TAP-5A01()	645	CLFT-029-101	4



LD-229

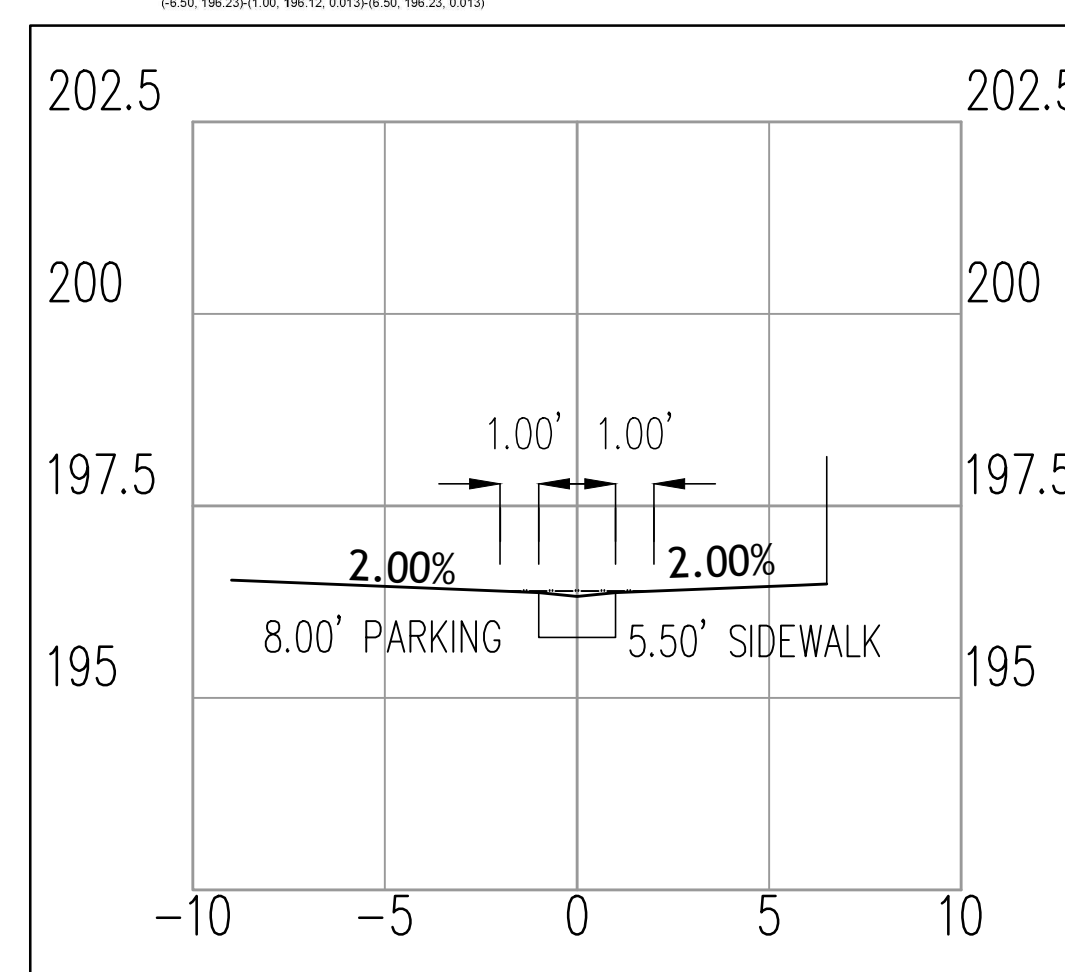
LD-347LD-204

REFER TO SHEET 2A FOR SCUPPER DETAIL

Per VDOT Drainage Manual Chapter 9 - Table 9-1. This is also consistent with the Fairfax County PFM.

COMMONWEALTH OF VIRGINIA
JAMES C. BISCHOFF
Lic. No. 031721
03/22/19
PROFESSIONAL ENGINEER

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		4



**** NOTE: TOWN OF CLIFTON TO MAINTAIN
NON-STANDARD DRAIN BASINS.**

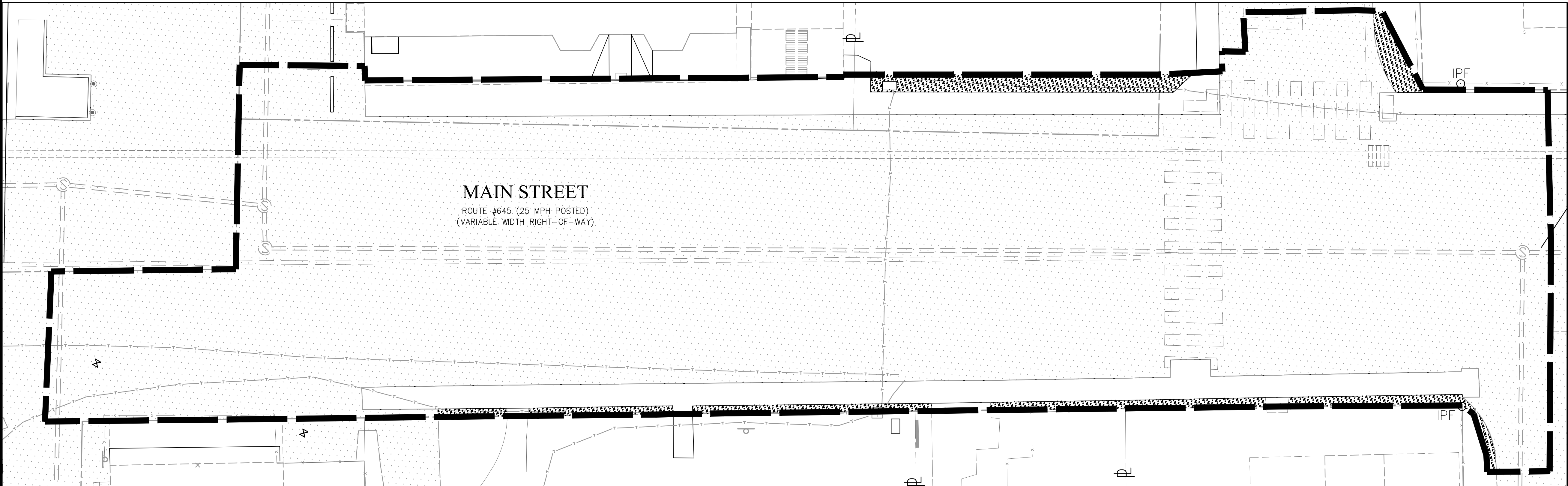
PROJECT MANAGER: SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY: J2 ENGINEERS, INC.
DESIGN SUPERVISED BY: JAMES C. BISHOFF, PE
DESIGNED BY: J2 ENGINEERS, INC.

PRE & POST SITE AREA MAP

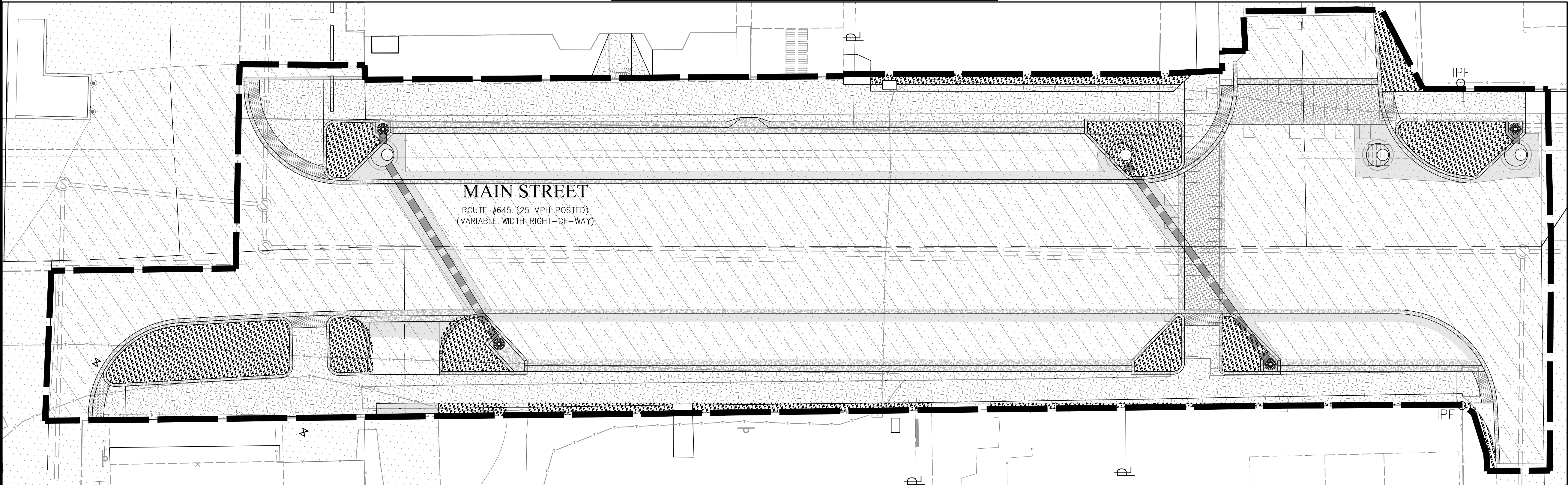
DESIGN FEATURES RELATING TO CONSTRUCTION OR REGULATION AND CONTROL TO TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	4A

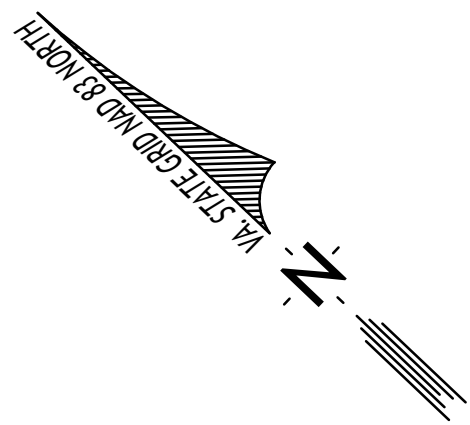
EXISTING SITE AREA MAP



PROPOSED SITE AREA MAP

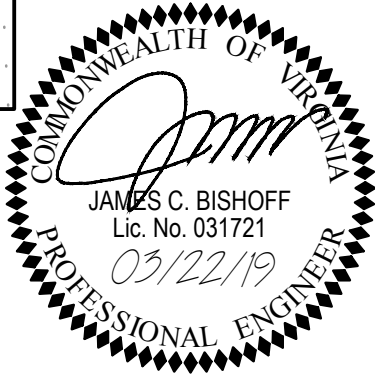


PERVIOUS AREA



GRAPHIC SCALE
0 05 10 20
(IN FEET)
1 INCH = 10 FEET

REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GRADING PLAN	3
STORM COMPUTATIONS	4
E&S PHASE I & II	5



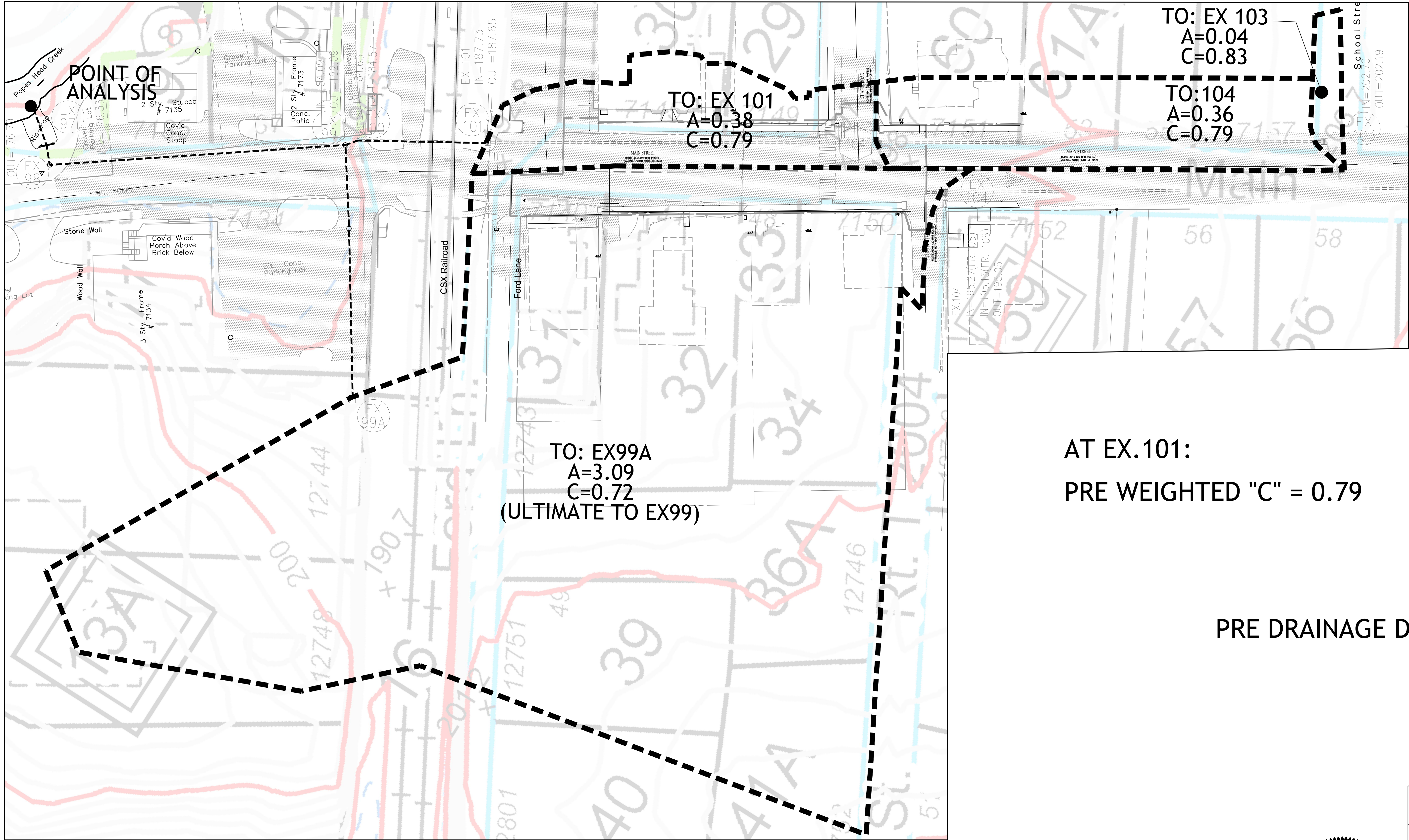
SITE'S CONTRIBUTING DRAINAGE AREA	
PRE-DEVELOPMENT	POST-DEVELOPMENT
IMPERVIOUS AREA = 0.32 AC.	IMPERVIOUS AREA = 0.30 AC.
PERVIOUS AREA = 0.01 AC.	PERVIOUS AREA = 0.03 AC.
SITE CONTRIBUTING DRAINAGE AREA = 0.33 AC	

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		4A

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

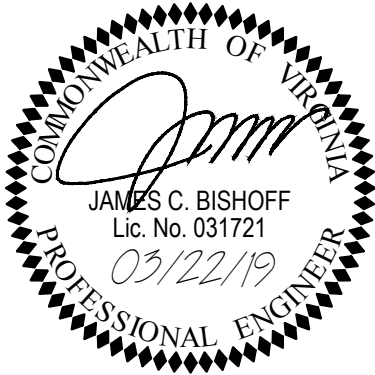
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REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	4B



AT EX.101:
PRE WEIGHTED "C" = 0.79

PRE DRAINAGE DIVIDE PLAN



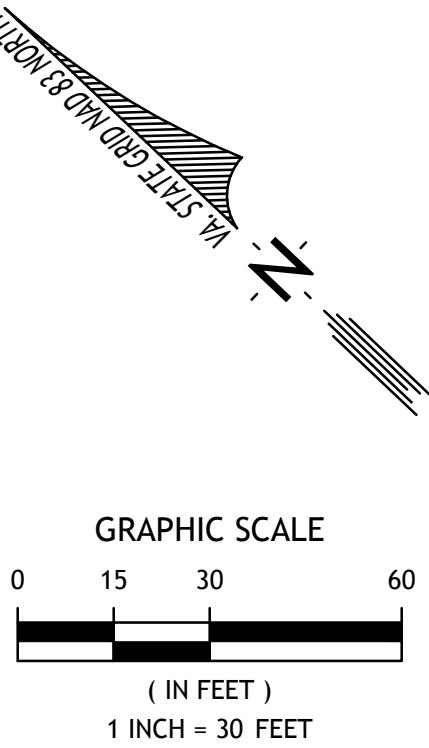
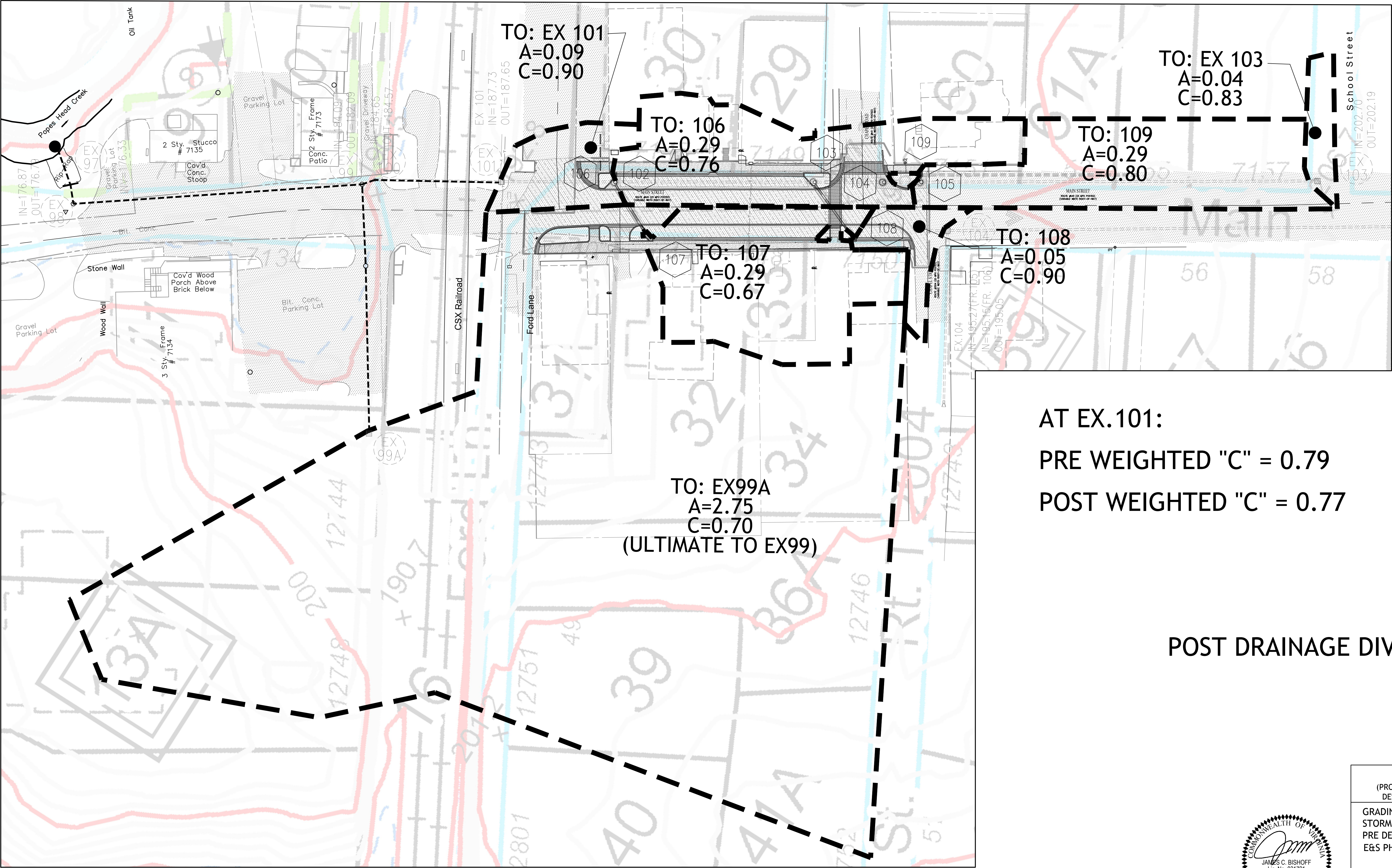
REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GRADING PLAN	3
STORM COMPUTATIONS	4
POST DEVELOPMENT "C"	4C
E&S PHASE I & II	5

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		4B

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
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NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	4C



AT EX.101:
PRE WEIGHTED "C" = 0.79
POST WEIGHTED "C" = 0.77

POST DRAINAGE DIVIDE PLAN



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GRADING PLAN	3
STORM COMPUTATIONS	4
PRE DEVELOPMENT "C"	4B
E&S PHASE I & II	5

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		4C

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

VALLEY GUTTER – 2YR & 10YR WSE

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

REVISED	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
	VA	TAP–5A01()	645	CLFT–029–101	4D

Channel Report

Hydroflow Express Extension for AutoCAD® Civil 3D® 2008 by Autodesk, Inc. Monday, Mar 11 2019

TO STR. 106

User-defined
Invert Elev (ft) = 192.28
Slope (%) = 1.60
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 1.15

(Sta, El, n)-(Sta, El, n)...
(4.35, 192.47)-(10, 192.53), 0.013 @ 0.55, 192.47, 0.013

Highlighted
Depth (ft) = 0.14
Q (cfs) = 1.150
Area (sqft) = 0.66
Velocity (ft/s) = 1.76
Wetted Perim (ft) = 11.45
Crit Depth, Yc (ft) = 0.16
Top Width (ft) = 11.45
EGL (ft) = 0.19

Channel Report

Hydroflow Express Extension for AutoCAD® Civil 3D® 2008 by Autodesk, Inc. Tuesday, Mar 12 2019

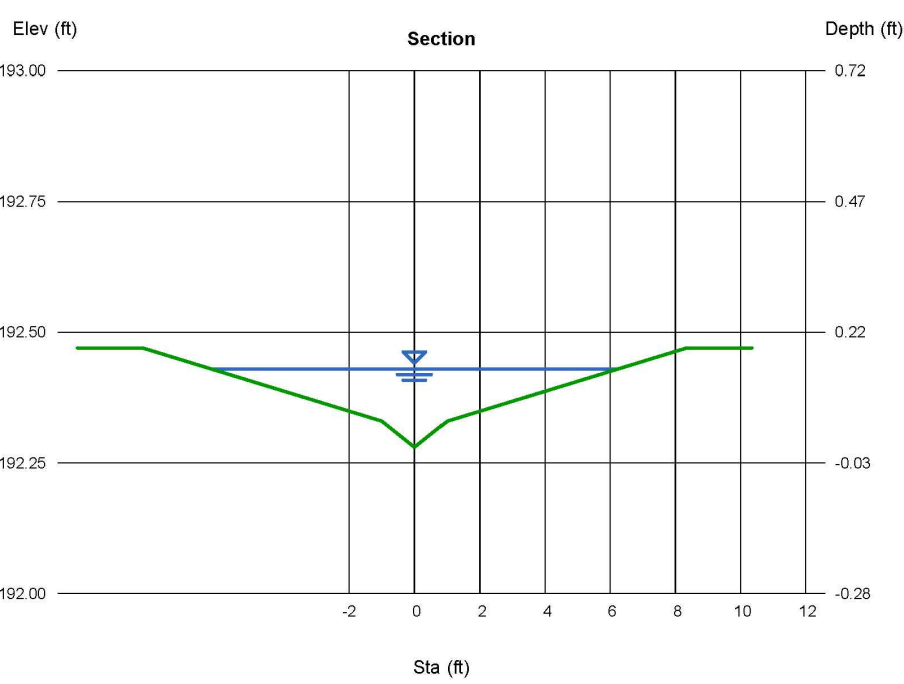
TO STR. 106

User-defined
Invert Elev (ft) = 192.28
Slope (%) = 1.60
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 1.49

(Sta, El, n)-(Sta, El, n)...
(4.35, 192.47)-(10, 192.53), 0.013 @ 0.55, 192.47, 0.013

Highlighted
Depth (ft) = 0.15
Q (cfs) = 1.490
Area (sqft) = 0.77
Velocity (ft/s) = 1.92
Wetted Perim (ft) = 12.50
Crit Depth, Yc (ft) = 0.17
Top Width (ft) = 12.50
EGL (ft) = 0.21



Channel Report

Hydroflow Express Extension for AutoCAD® Civil 3D® 2008 by Autodesk, Inc. Monday, Mar 11 2019

TO STR. 107

User-defined
Invert Elev (ft) = 192.82
Slope (%) = 1.70
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 1.02

(Sta, El, n)-(Sta, El, n)...
(4.65, 192.82)-(10, 192.97), 0.013 @ 0.50, 192.88, 0.013

Highlighted
Depth (ft) = 0.13
Q (cfs) = 1.020
Area (sqft) = 0.53
Velocity (ft/s) = 1.92
Wetted Perim (ft) = 10.01
Crit Depth, Yc (ft) = 0.15
Top Width (ft) = 10.00
EGL (ft) = 0.19

Channel Report

Hydroflow Express Extension for AutoCAD® Civil 3D® 2008 by Autodesk, Inc. Tuesday, Mar 12 2019

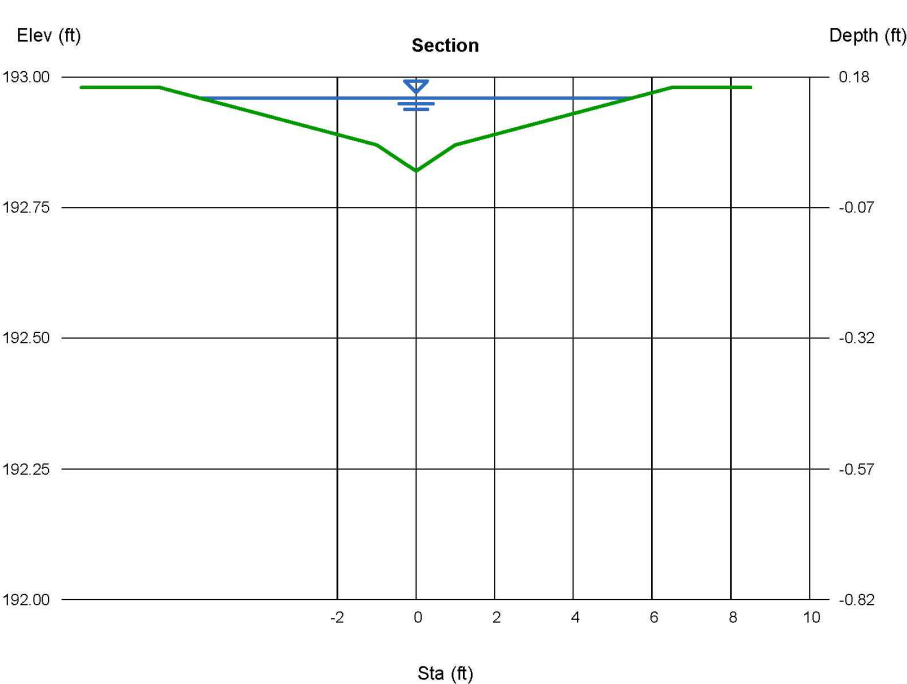
TO STR. 107

User-defined
Invert Elev (ft) = 192.82
Slope (%) = 1.70
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 1.32

(Sta, El, n)-(Sta, El, n)...
(4.65, 192.82)-(10, 192.97), 0.013 @ 0.50, 192.88, 0.013

Highlighted
Depth (ft) = 0.14
Q (cfs) = 1.320
Area (sqft) = 0.64
Velocity (ft/s) = 2.08
Wetted Perim (ft) = 11.01
Crit Depth, Yc (ft) = 0.16
Top Width (ft) = 11.00
EGL (ft) = 0.21



Channel Report

Hydroflow Express Extension for AutoCAD® Civil 3D® 2008 by Autodesk, Inc. Monday, Mar 11 2019

TO STR. 108

User-defined
Invert Elev (ft) = 196.07
Slope (%) = 2.50
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 0.24

(Sta, El, n)-(Sta, El, n)...
(4.65, 196.23)-(10, 196.12), 0.013 @ 0.50, 196.23, 0.013

Highlighted
Depth (ft) = 0.08
Q (cfs) = 0.240
Area (sqft) = 0.16
Velocity (ft/s) = 1.55
Wetted Perim (ft) = 5.00
Crit Depth, Yc (ft) = 0.10
Top Width (ft) = 5.00
EGL (ft) = 0.12

Channel Report

Hydroflow Express Extension for AutoCAD® Civil 3D® 2008 by Autodesk, Inc. Tuesday, Mar 12 2019

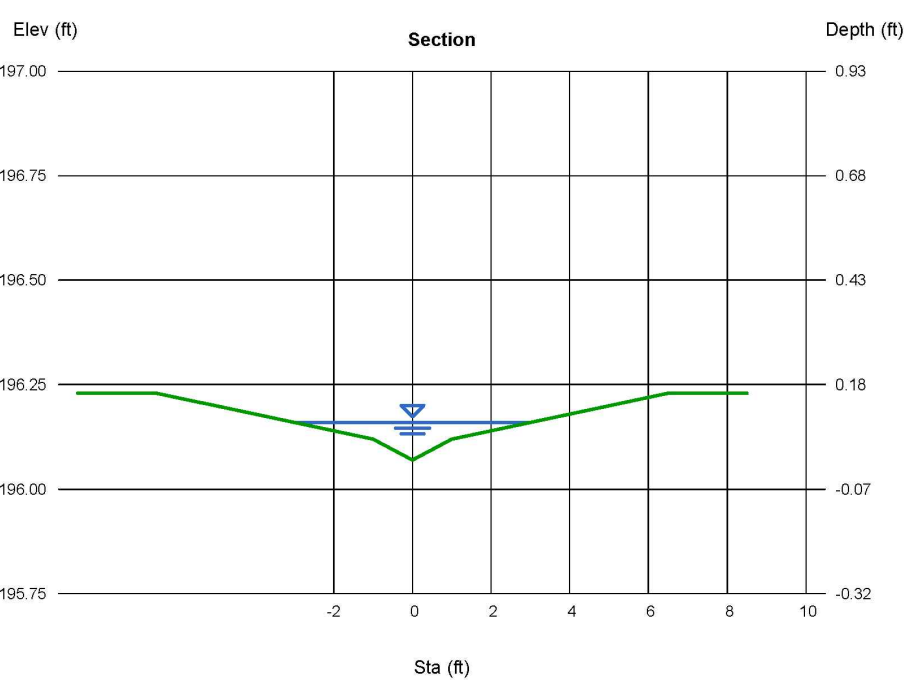
TO STR. 108

User-defined
Invert Elev (ft) = 196.07
Slope (%) = 2.50
N-Value = 0.013

Calculations
Compute by: Known Q
Known Q (cfs) = 0.30

(Sta, El, n)-(Sta, El, n)...
(4.65, 196.23)-(10, 196.12), 0.013 @ 0.50, 196.23, 0.013

Highlighted
Depth (ft) = 0.09
Q (cfs) = 0.300
Area (sqft) = 0.21
Velocity (ft/s) = 1.43
Wetted Perim (ft) = 4.3
Crit Depth, Yc (ft) = 0.10
Top Width (ft) = 6.00
EGL (ft) = 0.12



OUTFALL ANALYSIS STORM SEWER COMPUTATION

STORM SEWER DESIGN COMPUTATIONS

Project: Clifton Improvements													Length FT	Slope %	Dia. IN	Capacity Q C.F.S.	VEL. F.P.S.	Flow Time MIN.
From Point	To Point	Drainage Area	C Factor	C x A Increment	Cumm.	Inlet Time Min.	Rain Fall In/Hr	Runoff Q C.F.S.	Invert Elev. Upper End	Lower End								
EX 103	105	0.04	0.83	0.03	0.03	5.00	6.77	0.22	202.19	194.75	255.69	2.91%	15	11.05	3.58	1.19		
105	104	0.00	0	0.00	0.27	6.19	6.46	1.71	194.75	194.06	23.86	2.91%	15	11.05	6.54	0.06		
104	103	0.00	0	0.00	0.27	6.25	6.44	1.71	193.99	192.85	44.78	2.55%	15	10.34	6.23	0.12		
103	102	0.00	0	0.00	0.31	6.37	6.41	1.99	192.85	189.58	128.20	2.55%	15	10.34	6.51	0.33		
102	EX 101	0.00	0	0.00	0.72	6.70	6.32	4.58	189.58	187.73	72.40	2.55%	15	10.34	8.18	0.15		
EX 101	EX 100	0.09	0.9	0.08	0.81	6.85	6.28	5.06	187.65	184.65	81.59	3.68%	15	12.43	9.61	0.14		
EX 100	EX 99	0.00	0	0.00	0.81	6.99	6.25	5.03	184.57	184.09	5.70	8.50%	15	18.88	13.02	0.01		
EX 99	EX 98	2.75	0.7	1.93	2.73	6.99	6.24	17.05	182.09	176.87	183.30	2.85%	30	69.43	11.70	0.26		
EX 98	EX 97	0.00	0	0.00	2.73	7.26	6.17	16.86	176.79	176.33	11.60	4.00%	30	82.26	13.18	0.01		
* 109	105	0.29	0.8	0.23	0.23	5.00	6.77	1.57	194.88	194.85	4.45	0.50%	15	4.58	3.39	0.02		
* 108	103	0.05	0.9	0.05	0.05	5.00	6.77	0.30	193.17	192.95	44.69	0.50%	15	4.58	4.71	0.16		
* 107	102	0.29	0.67	0.19	0.19	5.00	6.77	1.32	189.87	189.68	38.59	0.50%	15	4.58	3.22	0.20		
* 106	102	0.29	0.76	0.22	0.22	5.00	6.77	1.49	189.70	189.68	4.43	0.50%	15	4.58	3.34	0.02		

SITE'S CONTRIBUTING DRAINAGE AREA

PRE-DEVELOPMENT IMPERVIOUS AREA = 0.32 AC.
PERVIOUS AREA = 0.01 AC.
SITE CONTRIBUTING DRAINAGE AREA = 0.33 AC

POST-DEVELOPMENT IMPERVIOUS AREA = 0.30 AC.
PERVIOUS AREA = 0.03 AC.
SITE CONTRIBUTING DRAINAGE AREA = 0.33 AC

Instructional & Informational Memorandum
IIM-LD-195.10
Sheet 4 of 12

3.0 DETERMINING A REGULATED LAND-DISTURBING ACTIVITY

3.1 VDOT Regulated Land-Disturbing Activities

The SWM and ESC requirements are applicable to all land-disturbing activities where one acre or greater (2,500 square feet or greater in a designated CBPA) of land is disturbed, unless otherwise exempted. ESC requirements apply to all project which disturb greater than or equal to 10,000 square feet (2,500 square feet or greater in a designated CBPA), unless otherwise exempted. See Section 3.3 of this IIM for discussion on the exemption for routine maintenance operations.

The VSMP Regulations and application of this IIM shall apply to all VDOT regulated land-disturbing activities, both construction and maintenance, administered by VDOT and performed either by its internal workforce or contracted to external entities, including those developed/constructed under, the Design/Build (DB) process and the Capital Outlay Program. PPTA/P3 projects are a special case and, while requiring consistency with VDOT standards and specifications, are often considered by DEQ to be "non-VDOT" projects for the purposes of permit issuance and ESC and SWM Plan review and approval. PPTA/P3 entities should consider that projects may be required to meet the local technical and administrative requirements and to secure permits from the applicable VSMP and VESCP Authorities, while at the same time maintaining consistency with the VDOT standards, specifications and contract provisions related to SWM and ESC.

Provisions for VDOT SWM Program administration including plan design, review and approval are further discussed in IIM-LD-242 and Chapter 11 of the VDOT Drainage Manual.

3.2 Non-VDOT Regulated Land-Disturbing Activities

Requirements for non-VDOT projects are referenced in IIM-LD-258.

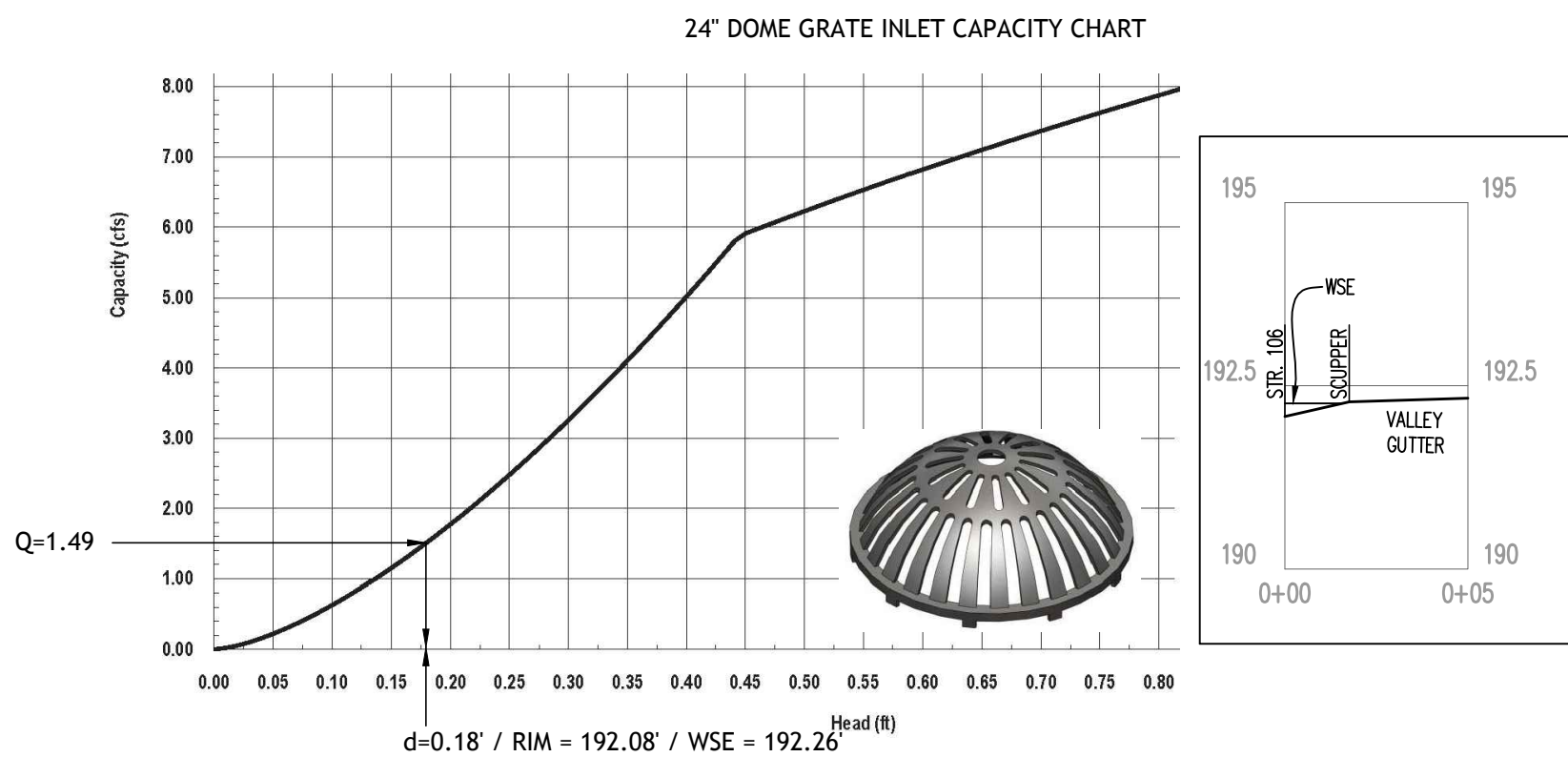
3.3 Routine Maintenance Activities

Routine maintenance activities are exempt from the Virginia Stormwater Management Act, the attending VSMP Regulations, and the VPDES Construction General Permit requirements regardless of the amount of land disturbance. The routine maintenance exemption does not apply to the ESC Program. See Chapter 10 of the VDOT Drainage Manual for more information on ESC Plan requirements.

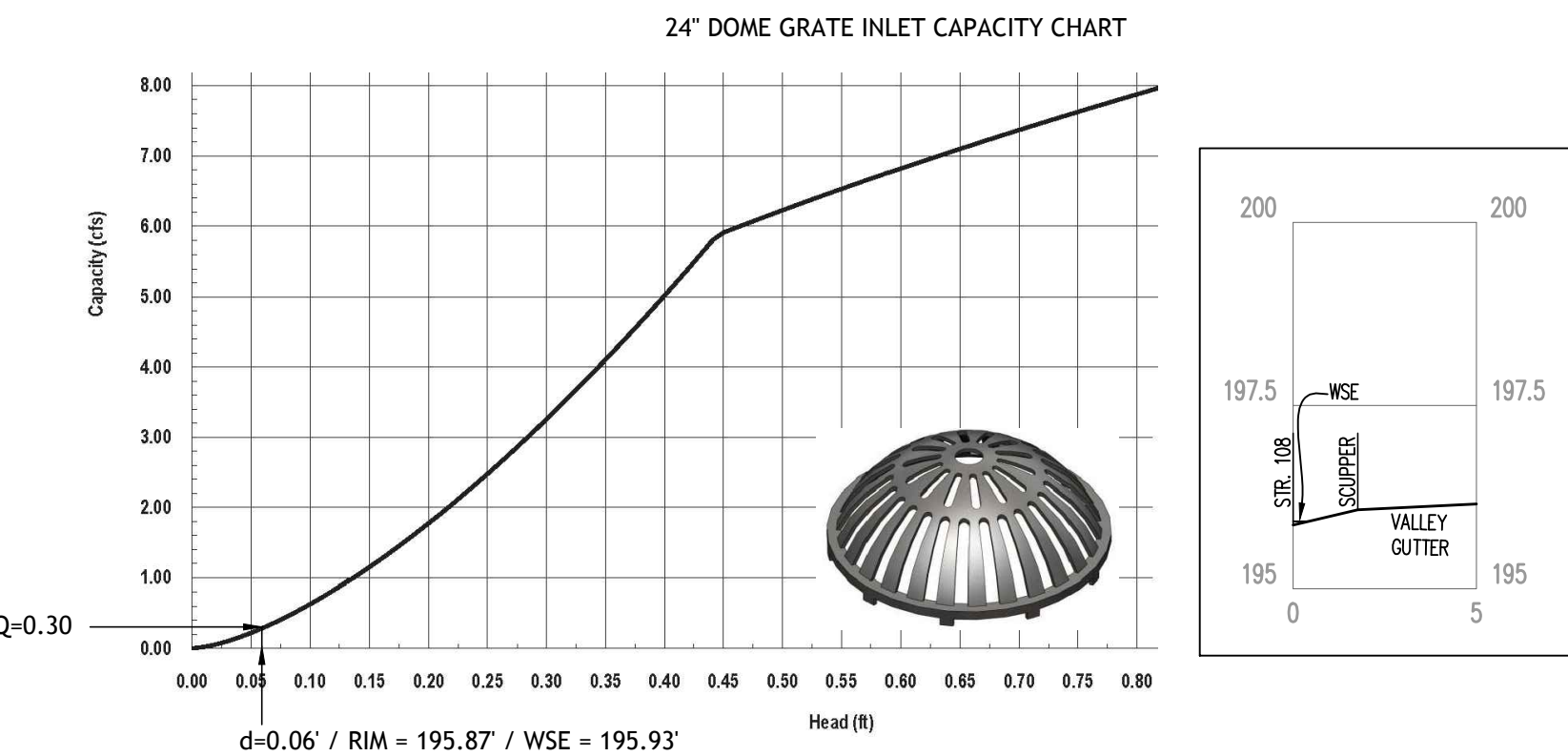
Routine maintenance is defined as those activities performed to maintain the original line and grade, hydraulic capacity or original construction of the project. Such activities include, but are not limited to: ditch cleaning operations, pipe replacement or rehabilitation operations, bridge deck replacement and the normal operational procedures for maintaining the travel surface of unpaved/gravel roadways (i.e.,

STORM INLET – ALLOWABLE PONDING DEPTH (d)

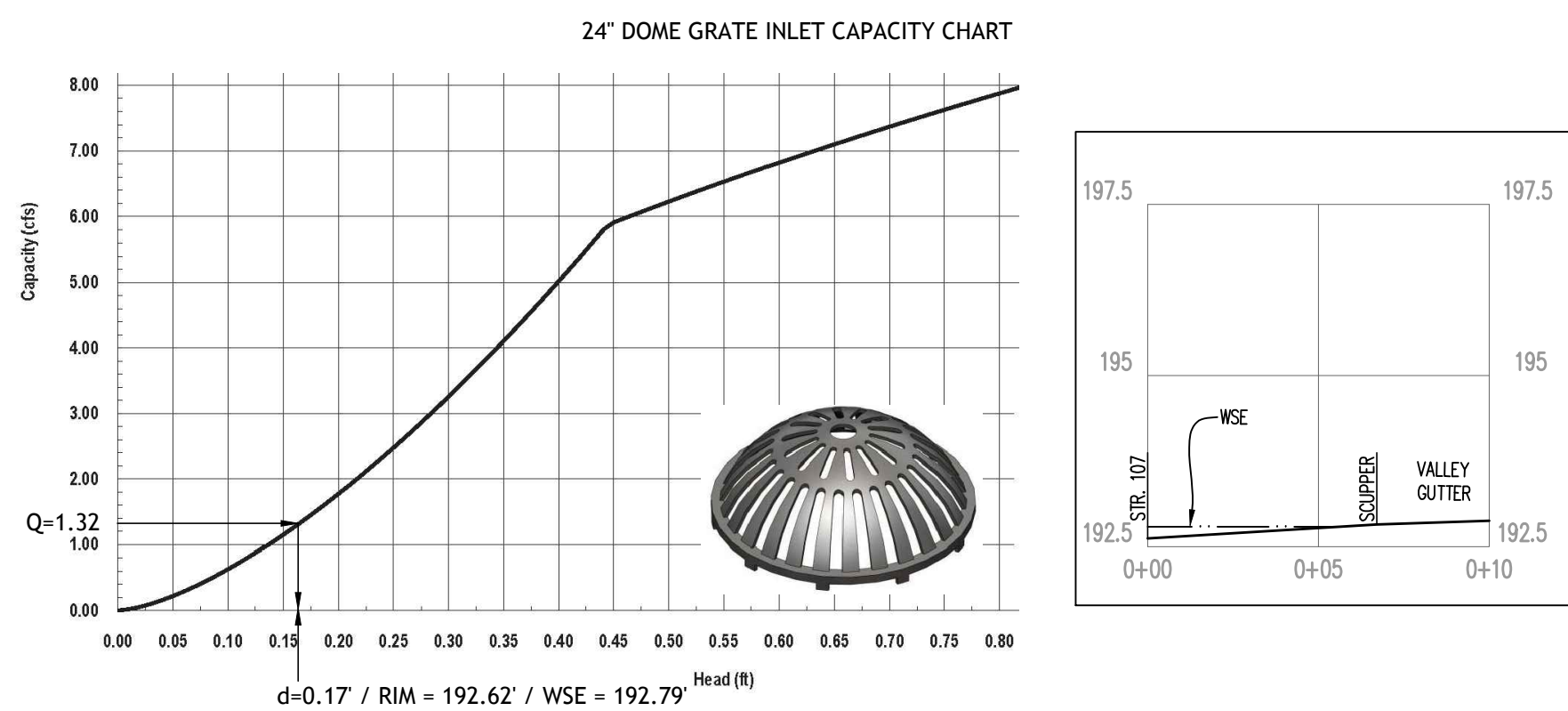
STRUCTURE #106 INLET COMPUTATIONS



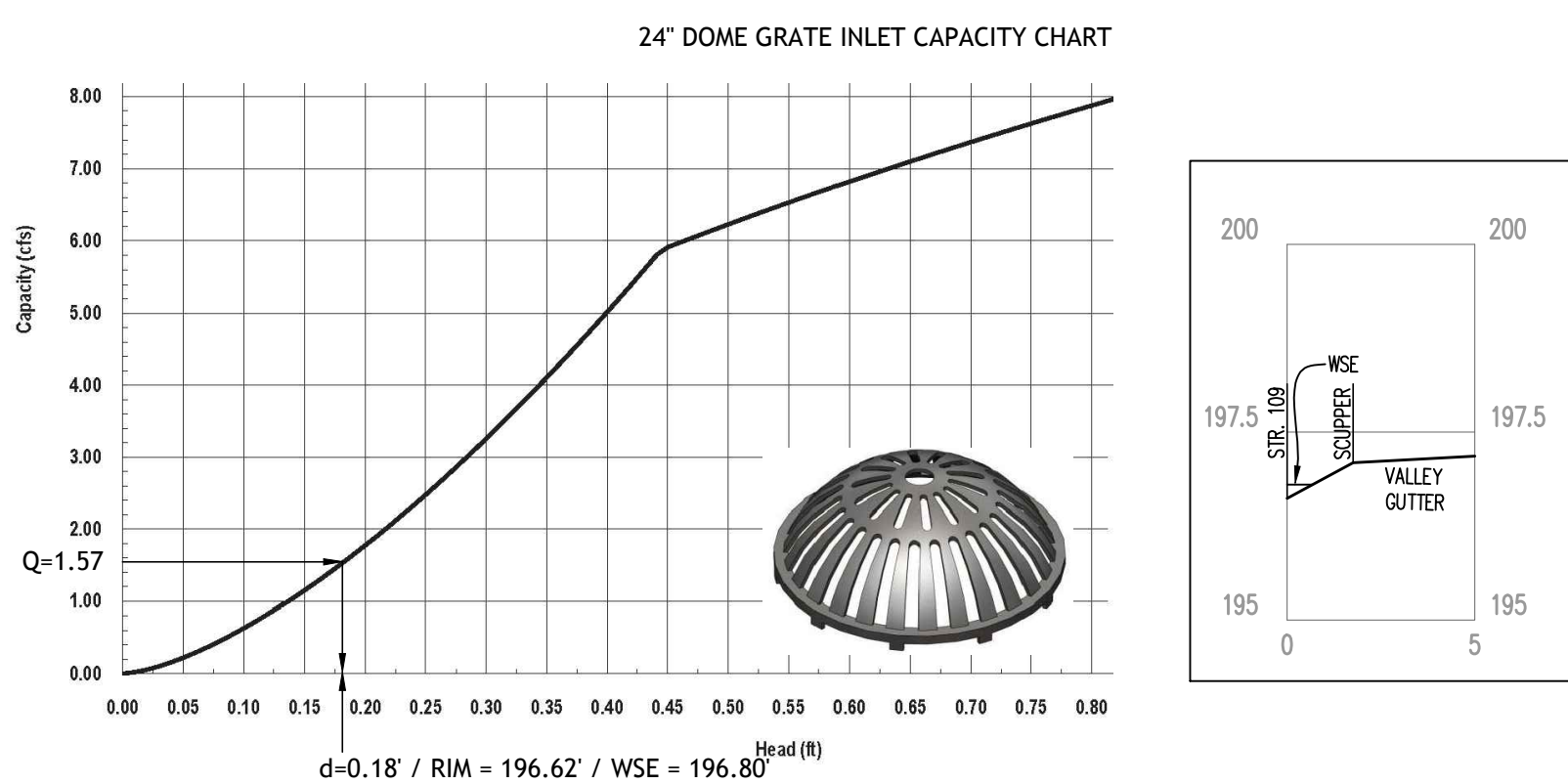
STRUCTURE #108 INLET COMPUTATIONS



STRUCTURE #107 INLET COMPUTATIONS



STRUCTURE #109 INLET COMPUTATIONS



VSMP REGULATION AND SWM NARRATIVE:

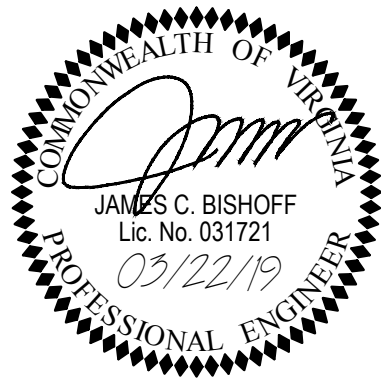
IN ACCORDANCE WITH THE PROVISIONS FOUND IN VDOT'S IIM-LD-195.10 (SECTION 3.1) REVISION 6-21-18, THE SWM REQUIREMENTS ARE NOT APPLICABLE AS THE LAND DISTURBANCE IS LESS THAN ONE ACRE. THIS SECTION HAS BEEN INCLUDED ON THIS SHEET FOR REFERENCE.

PER SECTION 124-1-10.D. OF FAIRFAX COUNTY CODE OF ORDINANCES, NOTHING IN COUNTY CODE CHAPTER 124 CONSTRUES AUTHORIZATION BY THE COUNTY TO REGULATE, OR REQUIRE PRIOR APPROVAL BY COUNTY FOR, A STATE OR FEDERAL PROJECT UNLESS AUTHORIZED BY SEPARATE STATUTE.

THE PROPOSED VDOT REGULATED PROJECT IS A REDEVELOPMENT TO DEFINE PARKING SPACES ALONG THE BUSINESS SECTION OF MAIN STREET IN THE TOWN OF CLIFTON. CURRENTLY, THERE ARE NO DESIGNATED PARKING SPACES AND THE PURPOSE OF THIS PROJECT IS TO PROVIDE THE MAXIMUM NUMBER OF SPACES USING THE EXISTING ROADWAY. THE PROJECT WILL DISTURB APPROXIMATELY 0.33 ACRES AND WILL HAVE A REDUCTION IN IMPERVIOUS AREAS. THIS REDUCTION IN IMPERVIOUS AREA IS DUE TO THE IMPLANTATION OF PLANTED ISLANDS AND REMOVAL OF EXISTING ROADWAY AT THE ENDS OF THE PARKING STALLS.

THE PROJECT UTILIZES THE EXISTING STORM SEWER SYSTEM WHICH RUNS UNDER MAIN STREET.

THEREFORE, SINCE THERE IS NO INCREASE IN RUNOFF VOLUME AND NO CONCENTRATED FLOW IS GENERATED BY THE IMPROVEMENTS, IT IS OUR OPINION THAT AN ADEQUATE OUTFALL EXISTS FOR THE SITE. CONSISTED TO MS19 SECTION B1 THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THIS PROJECT. THE OUTFALL ANALYSIS SHOWS THE SYSTEM OUTFALLS ON POPES HEAD CREEK MAJOR FLOODPLAIN.



REFERENCES (PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)	
GRADING PLAN	3
STORM COMPUTATIONS	4
E&S PHASE I & II	5

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		4D

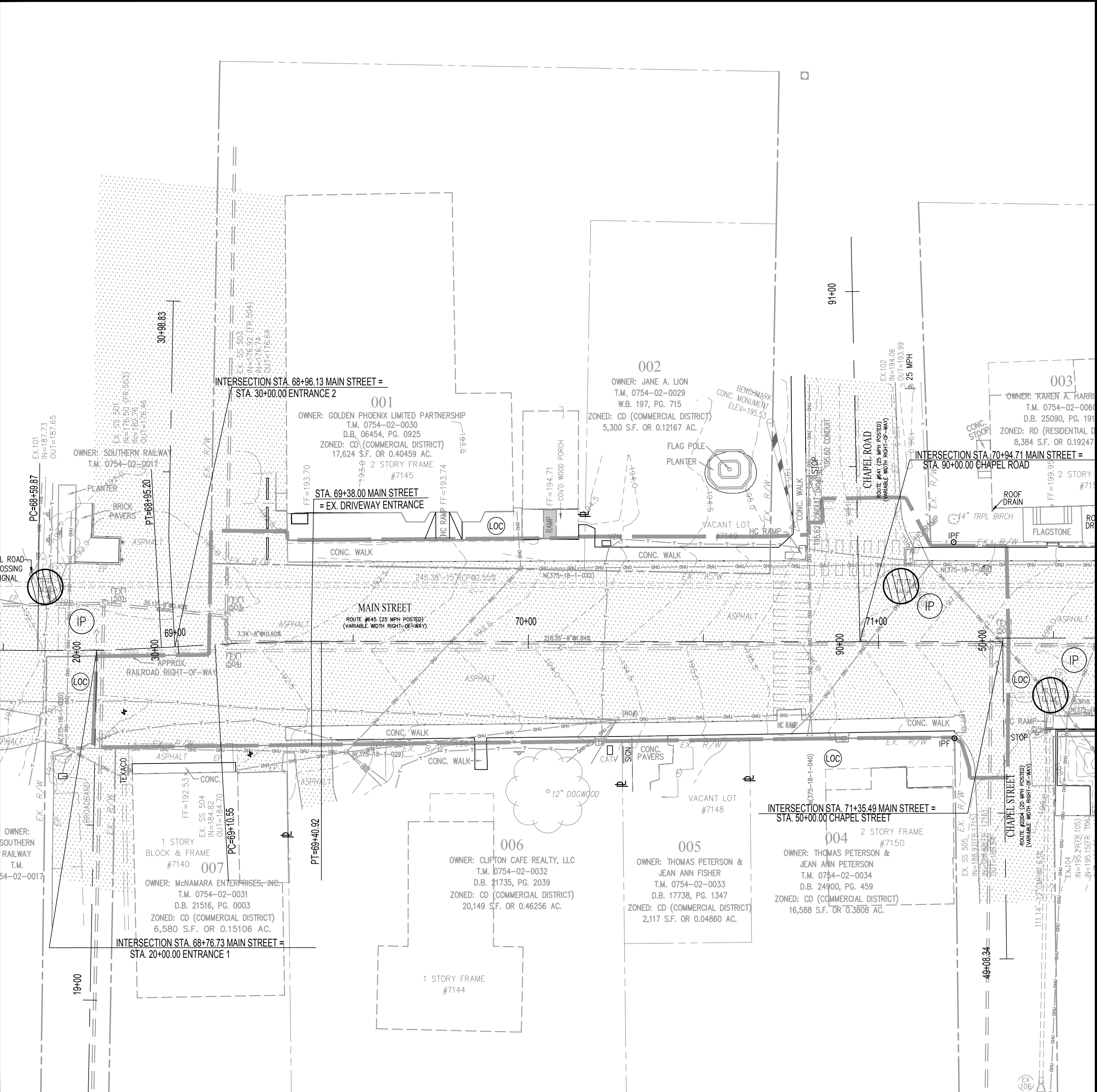
PROJECT MANAGER: SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY: J2 ENGINEERS, INC.
DESIGN SUPERVISED BY: JAMES C. BISHOFF, PE
DESIGNED BY: J2 ENGINEERS, INC.

E&S CONTROL PLAN

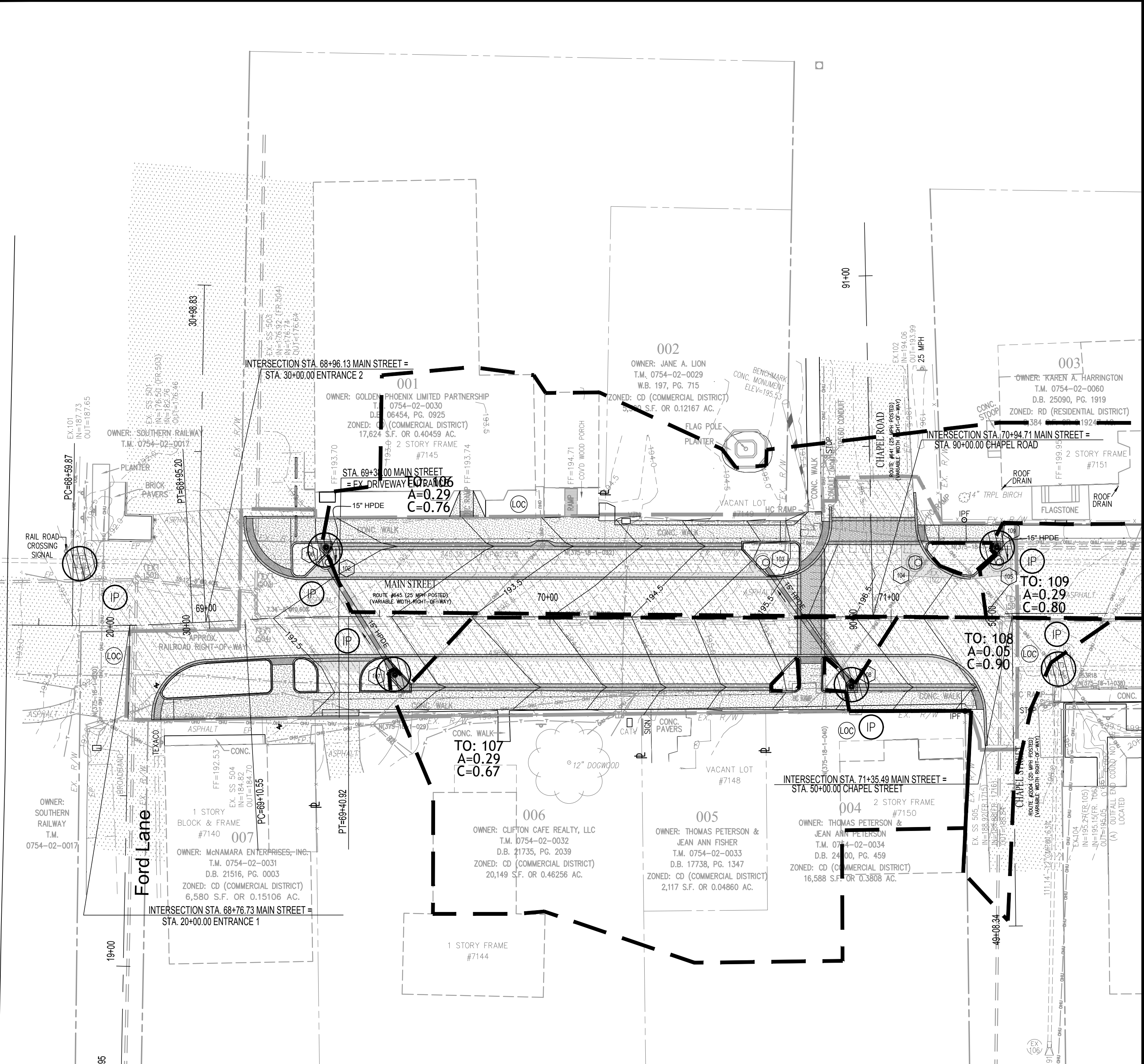
DESIGN FEATURES RELATING TO CONSTRUCTION OR REGULATION AND CONTROL TO TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	5

PHASE 1



PHASE 2

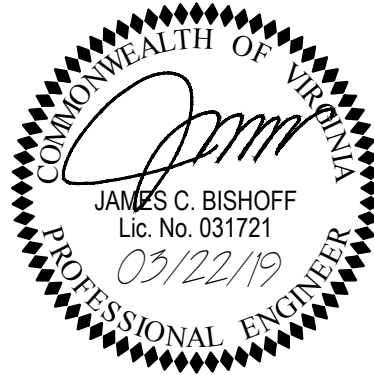


LEGEND

- 250' PROPOSED 1' CONTOUR
- 70' PROPOSED 0.5' CONTOUR
- 70' PROPOSED SPOT
- PROPOSED STORM DRAIN

- NOTES:
- CONTRACTOR TO PROVIDE TEMPORARY SEEDING & MULCHING (TS & MU) OUTSIDE OF THE PAVED AREA WITHIN LIMITS OF CLEARING.
 - FOR DETAILS, NOTES, AND NARRATIVE, SEE SHEET 6.

3.05	SILT FENCE	(SF)	
3.07	STORM DRAIN INLET PROTECTION	(IP)	
3.08	CULVERT INLET PROTECTION	(CIP)	
3.19	RIPRAP	(RR)	
3.38	TREE PRESERVATION AND PROTECTION	(TP)	
	LIMITS OF CLEARING	(LOC)	
	DRAINAGE DIVIDE		



REFERENCES
(PROFILES, DETAILS, DRAINAGE DESCRIPTION SHEETS, ETC.)
NARRATIVE & DETAILS

6

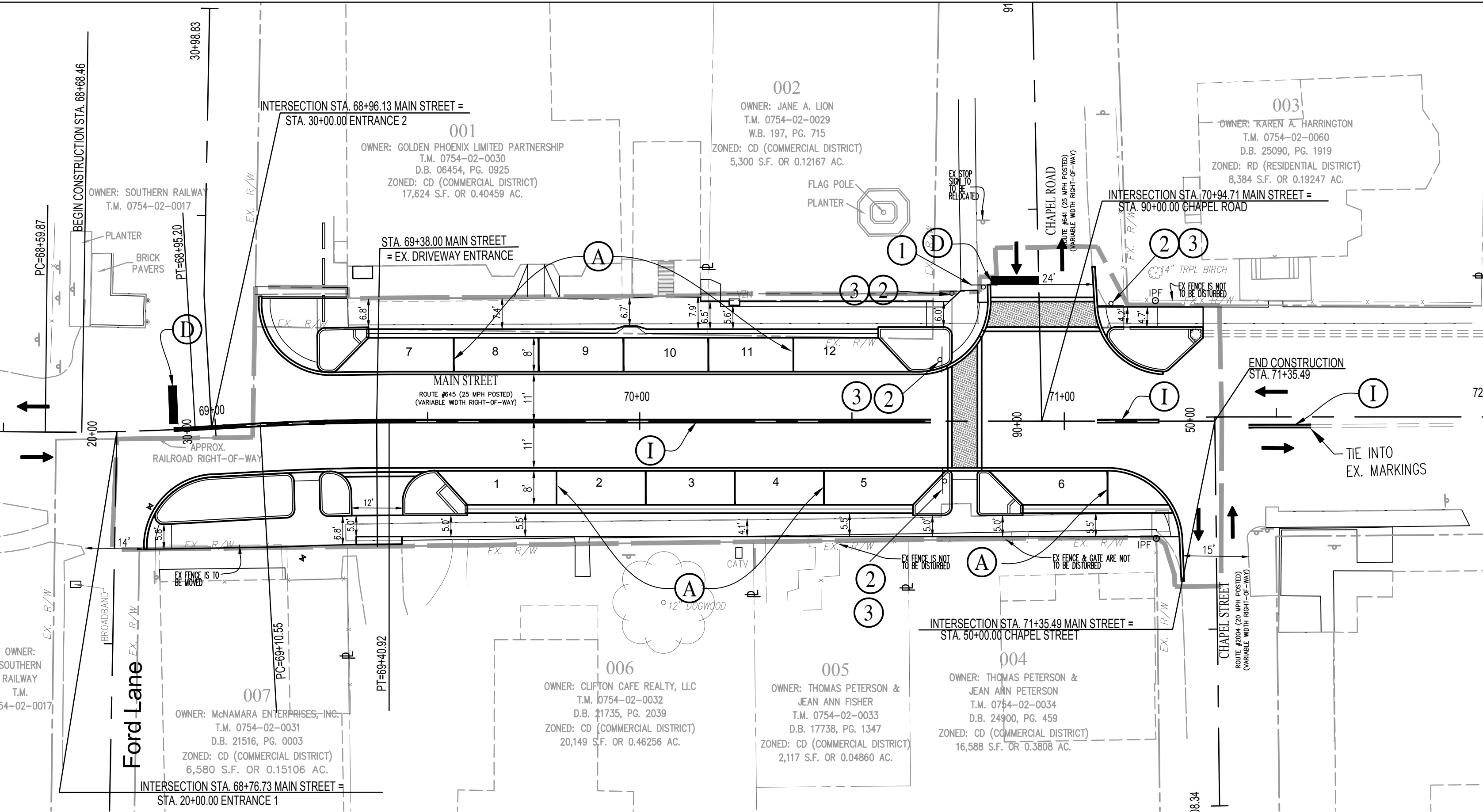
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		5

PROJECT MANAGER: SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY: J2 ENGINEERS, INC.
DESIGN SUPERVISED BY: JAMES C. BISHOFF, PE
DESIGNED BY: J2 ENGINEERS, INC.

PAVEMENT MARKING PLAN

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA	TAP-5A01()	645	CLFT-029-101	7



PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, WHITE, 4" WIDTH.
- (B) TYPE B, CLASS I, WHITE, 4" WIDTH, 10' LONG, 30' SPACE.
- (C) TYPE B, CLASS I, WHITE, 4" WIDTH, 2' LONG, 4' SPACE.
- (D) TYPE B, CLASS I, WHITE, 24" WIDTH.
- (E) TYPE B, CLASS I, WHITE, 24" WIDTH, 20' SPACING, 45 DEGREE ANGLE.
- (F) TYPE B, CLASS I, WHITE, 6" WIDTH.
- (G) TYPE B, CLASS I, WHITE, 8" WIDTH.
- (H) TYPE B, CLASS I, YELLOW, 4" WIDTH.
- (I) TYPE B, CLASS I, YELLOW, 4" WIDTH, DOUBLE LINE, SEPARATED BY A 4" SPACE.
- (J) TYPE B, CLASS I, YELLOW, 24" WIDTH, 20' SPACING, 45 DEGREE ANGLE.

SIGNING AND PAVEMENT MARKING NOTES

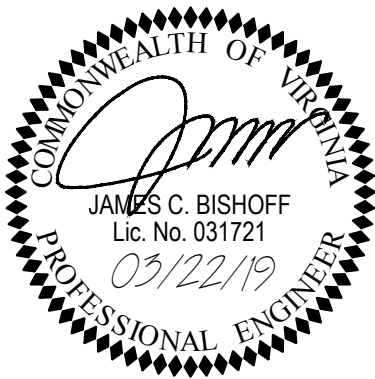
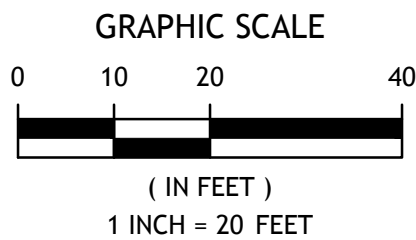
- ALL PROPOSED SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF EACH OF THE FOLLOWING AND ANY REVISION THERETO:
A. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
B. THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
C. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
D. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND RIDGE STANDARDS.
E. TRAFFIC CONTROL DEVICES HANDBOOK (FHWA)
F. STANDARD HIGHWAY SIGNS (FHWA)
G. VIRGINIA STANDARD HIGHWAY SIGNS
- PROPOSED SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO AVOID CONFLICT WITH UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS, AND TO COMPLY WITH STANDARDS REFERENCED IN NOTE 1 ABOVE.
- ANY EXISTING PAVEMENT MARKINGS WHICH WILL CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE COMPLETELY ERADICATED.
- LIMITS SHOWN OF PROPOSED MARKINGS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO INSURE THAT PROPOSED PAVEMENT MARKINGS CONTINUE UNTIL EXISTING PAVEMENT MARKINGS CAN BE MATCHED.
- ALL PAVEMENT MARKINGS SHALL BE TYPE B, CLASS 1, UNLESS OTHERWISE NOTED.

LEGEND:

- PROPOSED SIGN
- PROPOSED SIDEWALK
- PROPOSED CROSSWALK

SIGN LEGEND

1	2	3
R1-1 30"x30"	W1-1-2 30"x30"	W16-7P 24" X 12"



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)

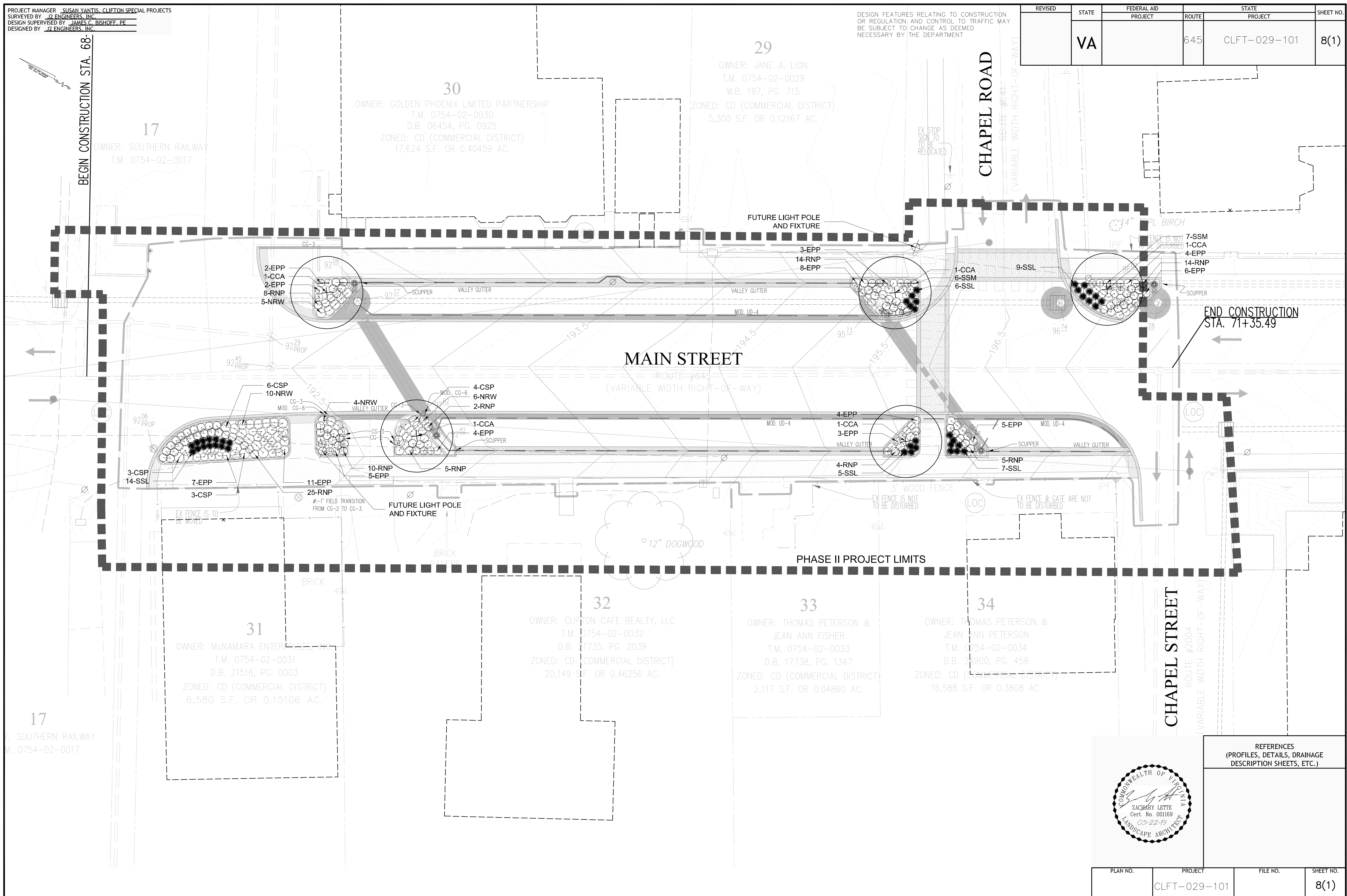
GRADING PLAN 3

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		7

PROJECT MANAGER SUSAN YANTIS, CLIFTON SPECIAL PROJECTS
SURVEYED BY J2 ENGINEERS, INC.
DESIGN SUPERVISED BY JAMES C. BISHOFF, PE
DESIGNED BY J2 ENGINEERS, INC.

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

WAY)	REVISED	STATE	FEDERAL AID	STATE		SHEET NO.
			PROJECT	ROUTE	PROJECT	
	VA		645	CLFT-029-101	8(1)	



PROJECT MANAGER - SUSAN YANTIS - CLIFTON SPECIAL PROJECTS
SURVEYED BY - J2 ENGINEERS, INC.
DESIGN SUPERVISED BY - JAMES C. BISHOFF, PE
DESIGNED BY - J2 ENGINEERS, INC.

GENERAL LANDSCAPE NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING DEPTHS AND AVOIDING CONFLICT WHEN TRENCHING OVER OR ACROSS AREAS WHERE UTILITIES EXIST.
- THE CONTRACTOR IS REQUIRED TO CONTACT 'MISS UTILITY' (1-800-552-7001) 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK ON THE SITE. NO WORK IS TO BEGIN UNTIL ALL UTILITIES ARE MARKED. IF UTILITY LINE/TREE CONFLICTS ARE EVIDENT, PLEASE CONTACT LANDSCAPE ARCHITECT.
- VERIFICATION OF THE ACCURACY OF THE TOTAL QUANTITIES SHOWN IN THE MASTER PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IN THE EVENT OF DISCREPANCY, THE PLANTING PLAN SHALL GOVERN. ANY PLANT SUBSTITUTIONS PROPOSED REQUIRE THE APPROVAL OF THE OWNER OR LANDSCAPE ARCHITECT.
- ALL PLANTS SHALL BE NURSERY GROWN, WELL BRANCHES, TRUE TO TYPE SPECIMEN MATERIAL, FREE OF INSECT INFESTATION, INJURY, DISEASE OR OTHER DEFECTS. PLANTS ARE TO CONFORM TO STANDARDS SET IN AMERICAN STANDARD FOR NURSERY STOCK AND SHALL MEET OR EXCEED MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE.
- THE CONTRACTOR SHALL WARRANT ALL NEW PLANTINGS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. ALL REPLACEMENT PLANTS SHALL CONFORM TO ORIGINAL SPECIFICATIONS. WHEN PLANTING OPSERATIONS MUST BE PERFORMED OUTSIDE THE NORMAL PLANTING SEASON FOR THE LOCALITY, THIS WARRANTY MAY BE RENEGOTIATED WITH THE OWNER PRIOR TO PLANTING.
- PLANTING AND BED PREPARATION ARE TO BE CONDUCTED UNDER FAVORABLE WEATHER CONDITIONS. UNDER NO CIRCUMSTANCES SHALL SOIL BE WORKED, DRIVEN OVER, OR WALKED UPON WHILE IN A WET CONDITION.
- THE CONTRACTOR IS RESPONSIBLE FOR REPORTING TO THE OWNER CONDITIONS ON SITE THAT VARY FROM THE PLANS AND THAT EFFECT INSTALLATION.
- PRUNE ONLY BROKEN OR CROSSING BRANCHES. DO NOT THIN TREE CANOPIES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING AND INSECT CONTROL UNTIL THE DATE OF FINAL INSPECTION. REPLANTING, WHEN RESULTING FROM SITE DISTURBANCE BY OTHERS, SHALL BE AT ADDITIONAL AN CHARGE.
- THE WORK AREA IS TO BE KEPT REASONABLY NEAT AND CLEAN AND ALL DEBRIS HAULED AWAY AND DISPOSED OF LEGALLY, OFF SITE, IN A TIMELY MANNER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL WORK IN A MANNER THAT PROTECTS COMPLETED WORK BY OTHERS, SUCH AS CURBS, UTILITIES, STORM DRAINAGE, FENCES, DRIVEWAY APRONS, DRIVES, VEGETATION, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF SATISFACTORY REPAIR OF ALL DAMAGE IN KIND RESULTING FROM HIS FAILURE TO COMPLY.

LANDSCAPE SPECIFICATIONS:

- PLANT MATERIAL SHALL CONFORM IN SIZE AND GRADE TO AMERICAN STANDARDS FOR NURSERY STOCK. PLANT MATERIALS SHALL BE OF STANDARD QUALITY OF THEIR SPECIES OR VARIETY. PLANTS SHALL BE CAREFULLY LABELED AND SIZES NOTED. RIGHT IS RESERVED TO REJECT PLANTS CONSIDERED AS UNSATISFACTORY. REJECTED PLANTS SHALL BE REMOVED FROM SITE. PLANTS SHOULD NOT BE PRUNED PRIOR TO DELIVERY. HEADING- BACK PLANTS TO MEET SIZES INDICATED IN DRAWING SCHEDULE WILL NOT BE PERMITTED.
- PLANT PIT SOIL MIX
 - POTTING SOIL
 - FERTILIZER
 - $\frac{1}{2}$ TOP SOIL
 - 10-6-4 AT 5 POUNDS PER 100 S.F. OF BED AREA
 - $\frac{1}{4}$ NATIVE SOIL
 - $\frac{1}{4}$ PEAT MOSS*CONTRACTOR SHALL UTILIZE ON-SITE TOPSOIL TO THE EXTEND POSSIBLE. CONTRACTOR TO TEST THE ON-SITE SOIL TO ENSURE NO AMENDMENTS ARE NEEDED. OFF-SITE TOPSOIL WILL NOT BE NEEDED OR ACCEPTED UNLESS AUTHORIZED BY THE OWNER.
- PLANTS AND TREES
 - CONTRACTOR SHALL STAKE THE LOCATION OF EACH TREE AND SHRUB IN ACCORDANCE WITH THE LOCATIONS SHOWN ON THE DRAWING. STAKING AND LAYOUT SHALL BE DONE SUFFICIENTLY IN ADVANCE OF PLANTING OPERATION TO PERMIT THE CONTRACTING OFFICER TO CHECK, REVISE IF DESIRED, AND APPROVE THE LOCATIONS BEFORE DIGGING OPERATIONS BEGIN.
 - EXCAVATE PLANTING BEDS AND POCKETS TO A DEPTH REQUIRED FOR PLANTING. AT LEAST $\frac{2}{3}$ OF BALL BELOW FINISHED GRADE
 - REMOVE THE BURLAP, TWINE, AND WIRE BASKETS FROM THE TOP $\frac{1}{2}$ OF ALL B&B ROOT BALLS. NO PLASTIC TWINE OR BURLAP SHALL BE PERMITTED ON B&B PLANTS. PLANTING PITs SHALL BE THE SAME DEPTH AS ROOT BALLS.

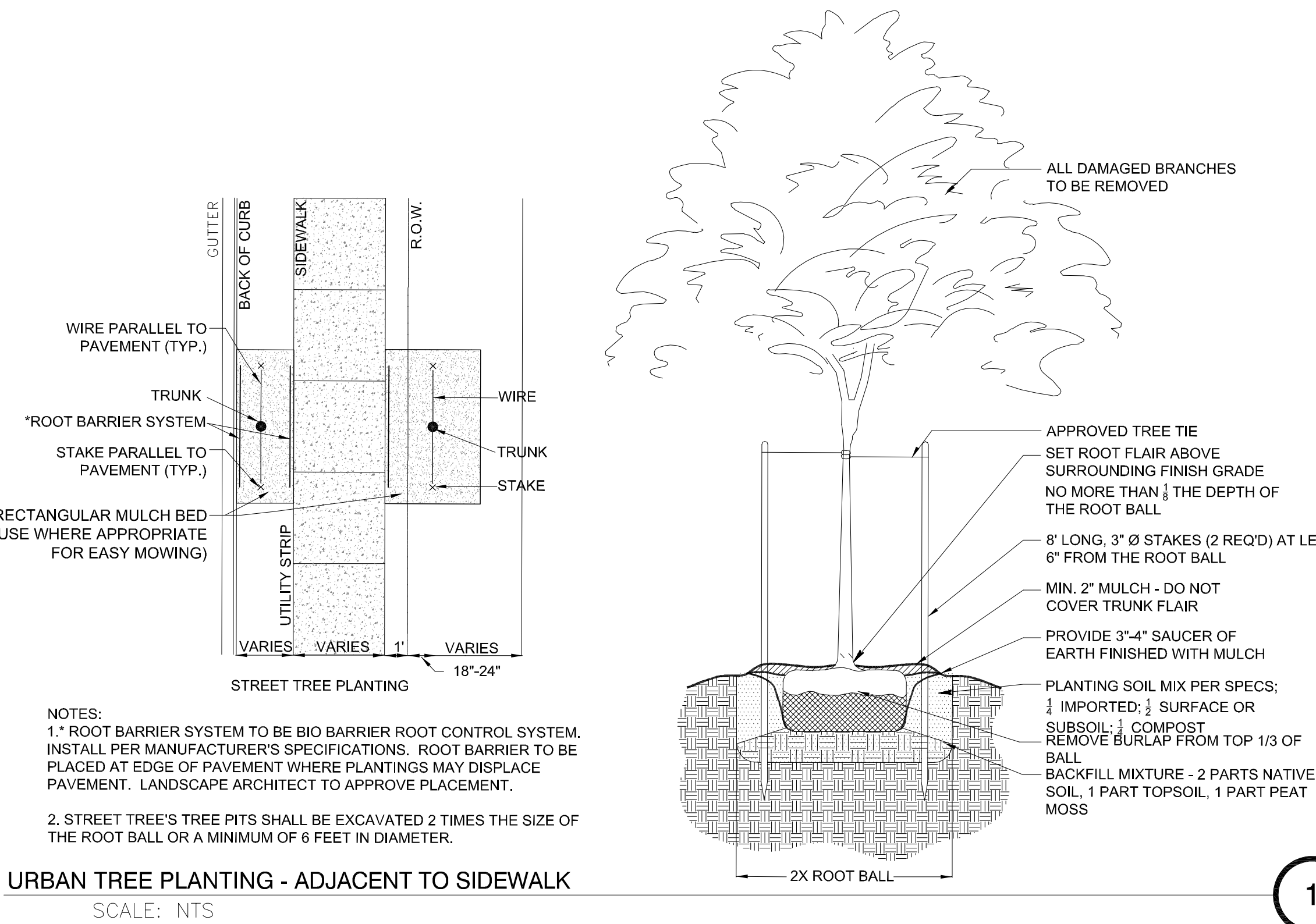
LANDSCAPE SPECIFICATIONS (CONT.):

- ANY ROCK OR OTHER UNDERGROUND OBSTRUCTION SHALL BE REMOVED TO DEPTH NECESSARY TO PERMIT PLANTING ACCORDING TO SPECIFICATION.
 - PLANTS SHALL BE TREATED AT THE TIME OF PLANTING WITH ANTI-DESICCANT AS SPECIFIED IN FULL ACCORDANCE WITH THE DIRECTIONS FURNISHED BY THE MANUFACTURER.
 - IN GENERAL, CONTRACTOR SHALL THOROUGHLY WATER ALL PLANTED AREAS AFTER PLANTING AND IN DRY WEATHER. USE ENOUGH WATER TO THOROUGHLY SOAK ALL TREE PITs BEFORE PLANTING. CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS IN ADVANCE OF START OF WORK TO INSURE THAT AN ADEQUATE SUPPLY OF WATER AND WATERING EQUIPMENT ARE AVAILABLE WHEN REQUIRED.
- GUYING AND STAKING
 - ALL TREES 2 1/2" IN CALIPER OR OVER, SHALL BE STAKED. ALL TREES LESS THAN 2 1/2" CALIPER SHALL BE STAKED BY USING 2 BRACING STAKES EQUALLY SPACED ABOUT THE TREE AT LEAST 12" FROM THE TRUNK AND IN THE CASE OF B&B TREES AT LEAST 6" OUTSIDE THE PERIMETER OF THE ROOT BALL.
 - ALL STREET TREES ARE TO BE STAKED PLACING THE STAKES PARALLEL TO THE SIDEWALK AS NOT TO CONFLICT WITH PEDESTRIAN MOVEMENTS.
 - GUYING SHALL BE DONE PURSUANT TO THE DETAIL SHOWN. WIRE GUYING AND HOSE APPLICATIONS ARE NOT PERMITTED.
- PLANT MAINTENANCE
 - MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE FOR 12 MONTHS AFTER THE LAST PLANT HAS BEEN INSTALLED.
 - ALL PLANTS SHALL BE KEPT IN A GROWING, HEALTHY CONDITION BY WATERING, PRUNING, SHEARING, SPRAYING, TIGHTENING OF GUYS, STRAIGHTENING OF PLANTS WHICH LEAN OR SAG, LIFTING PLANTS WHICH DEVELOP MORE THAN NORMAL SETTLEMENT, WEEDING, AND BY ANY OTHER NECESSARY OPERATION OF MAINTENANCE. KEEP ALL PLANTING AREAS FREE OF WEEDS AND UNDESIRABLE GRASSES.
 - DURING THE MAINTENANCE PERIOD, PLANTS IN AN UNHEALTHY OR BADLY IMPAIRED CONDITION SHALL BE REMOVED AND REPLACED IMMEDIATELY USING SPECIFIED MATERIAL
 - WATERING - ALL PLANTS SHALL BE WATERED IMMEDIATELY AFTER PLANTING UNTIL THE SOIL IS SATURATED. PLANTS SHALL BE WATERED A MINIMUM OF EVERY TWO WEEKS, SHOULD THE SOILs DRY, UNTIL ACCEPTANCE BY THE OWNER, DURING DRY CONDITIONS WATER AS REQUIRED TO MAINTAIN PLANTS IN A WILT FREE CONDITION.
 - ACCEPTANCE AND GUARANTEE
 - ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR WITHOUT SATISFACTORY GROWTH, AS DETERMINED BY THE CONTRACTING OFFICER, SHALL BE REMOVED AND REPLACED BY THE NEXT SPECIFIED PLANTING SEASON. ANY REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED AND REPLANTED IN THE SAME LOCATION FROM WHICH THE DEAD PLANT WAS REMOVED AND SHALL BE REPLACED AT NO ADDITIONAL COST.

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

REVISED	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
	VA		645	CLFT-029-101	8(2)

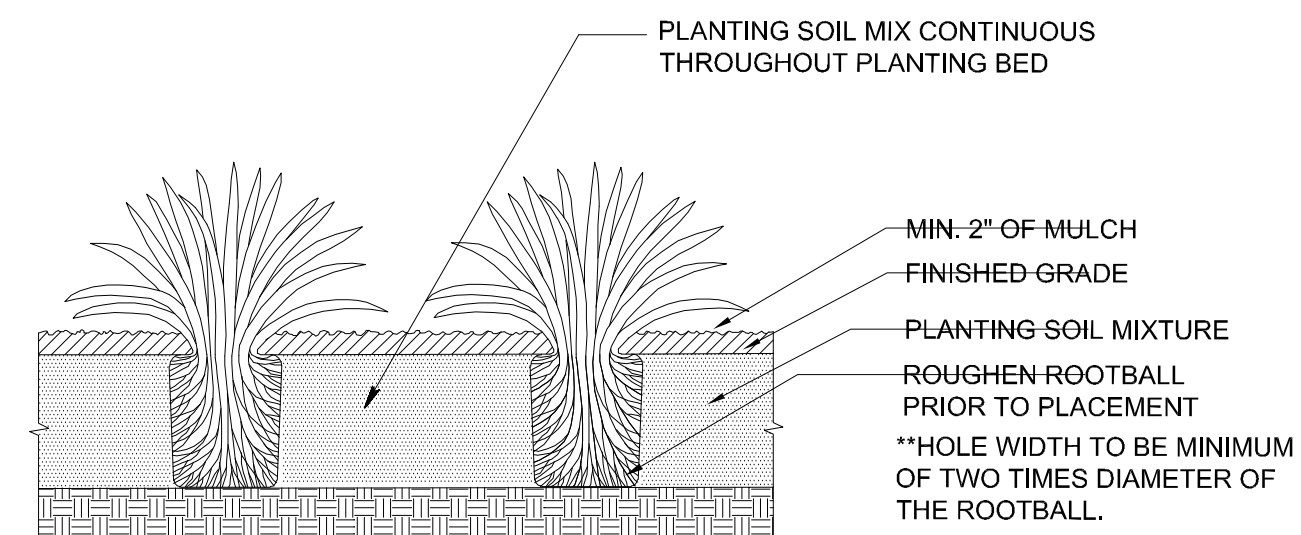
CLIFTON STREETSCAPE PLANTING LIST						
Planting Key	Quantity	Botanical Name	Common Name	Size	Container	Comments
Deciduous Tree						
CCA	5	Carpinus caroliniana	American Hornbeam	2"-2.5" Min. Caliper	B&B	
TOTAL	5					
Shrubs						
CSP	16	Cornus sericea 'Neil Z'	Pucker up Dogwood	24" Min. Ht.	3 Gal.	
NRW	25	Nepeta racemosa 'Walker's low'	Walker's Low Catmint	24" Min. Ht.	3 Gal.	
RNP	87	Rosa 'Novarospop'	Popcorn Drift Rose	24" Min. Ht.	3 Gal.	
SSM	13	Salvia x Sylvestris 'Mainacht'	May Night Salvia	24" Min. Ht.	3 Gal.	
TOTAL	141					
Perennials						
EPP	64	Echinacea purpurea 'Pink Double Delight'	Pink Double Delight Coneflower	6" Pot		
TOTAL	64					
Grass						
SSL	41	Schizachyrium scoparium	Little Bluestem	#1 CONT.		
TOTAL	41					



URBAN TREE PLANTING - ADJACENT TO SIDEWALK

SCALE: NTS

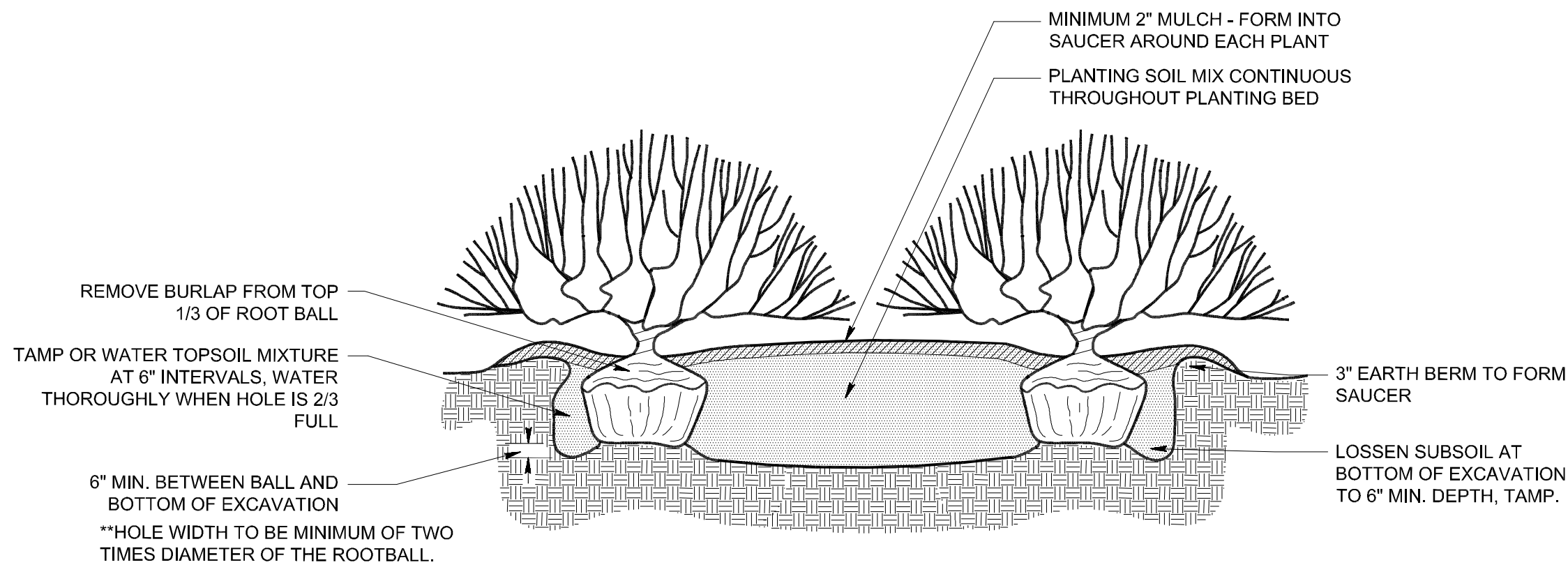
1



PERENNIAL AND GRASS PLANTING

SCALE: NTS

2



SMALL DECIDUOUS SHRUB PLANTING

SCALE: NTS

3



REFERENCES
(PROFILES, DETAILS, DRAINAGE
DESCRIPTION SHEETS, ETC.)

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	CLFT-029-101		8(2)