



Construction Drawings For: Traffic Signal Design Langston Blvd & N Cleveland St (TS#143) Project Number: TR07

ALL TRAFFIC SIGNALS ARE OWNED, MAINTAINED AND OPERATED BY ARLINGTON COUNTY. TRAFFIC SIGNAL DESIGN SHALL BE IN ACCORDANCE WITH LATEST ARLINGTON COUNTY TRAFFIC SIGNAL STANDARDS AND SPECIFICATIONS.

OWNER DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900, Arlington, VA 22201
Phone: 703.228.5000 Fax: 703.228.3719 www.arlingtonva.us

ENGINEER
Arlington County Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900, Arlington VA 22201
Phone: 703.228.5000 Fax: 703.228.3719
www.arlingtonva.us

Location Map Scale: 1" = 500' Vicinity

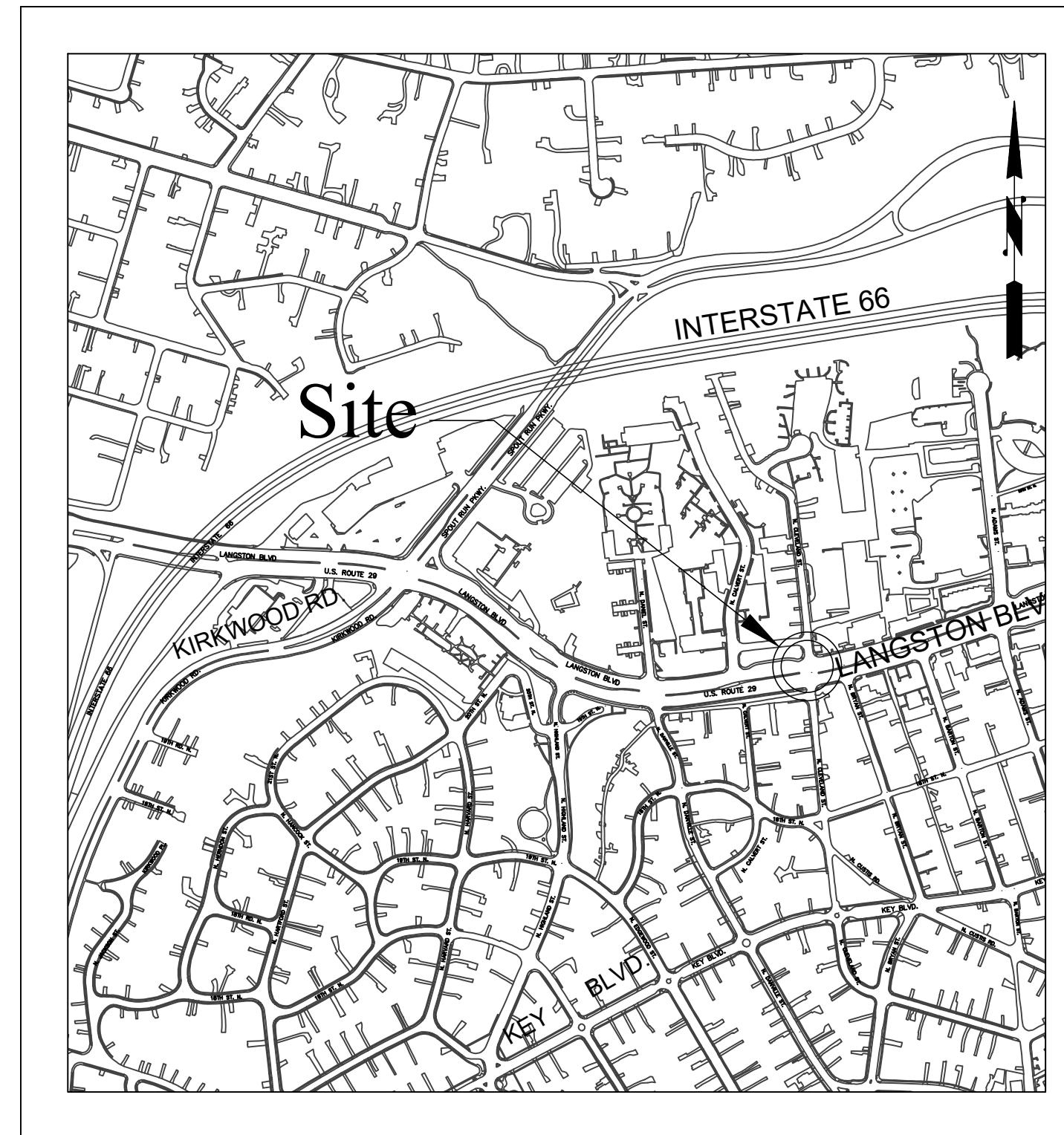


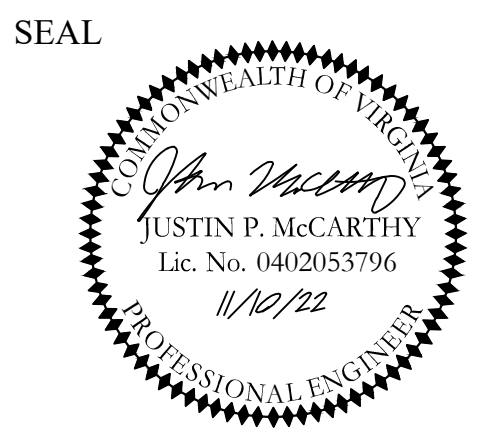
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DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.5000
Fax: 703.228.3719



APPROVALS	DATE
<i>Justin P. McCarthy</i> TRAFFIC ENGINEERING MANAGER	01/04/2023
<i>Dan Nabors</i> TE&O BUREAU CHIEF	1/06/2023
<i>Henry</i> TRANSPORTATION DIRECTOR	01/06/2023

REVISIONS	DATE

Signal Notes

A. POLES AND FOUNDATIONS

- MAST ARM LENGTH IS TO BE AS SHOWN ON PLAN AND ALL MAST ARMS ARE TO BE FIELD DRILLED ONLY.
- MAST ARM POLES SHALL BE DESIGNED TO THE PROPER HEIGHT TO ACCOMMODATE A STREET LIGHT LUMINAIRE AND INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS.
- MAST ARM POLE FOUNDATIONS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS. ALL POLES SHALL HAVE A MINIMUM 6-BOLT PATTERN.
- AT THE COUNTY'S REQUEST, THE CONTRACTOR SHALL DIG TEST PITS TO VERIFY THAT SIGNAL POLE FOUNDATIONS WILL NOT CONFLICT WITH UNDERGROUND UTILITIES AND THAT FOUNDATIONS WILL FIT WITHIN THE EXISTING RIGHT-OF-WAY.
- SIGNAL POLES AND MAST ARMS SHALL BE NON-ORNAMENTAL. COBRA LIGHTING SHALL BE LED.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING POLE FOUNDATION DESIGNS FOR ANY MAST ARM POLES. THE CONTRACTOR SHALL SUBMIT REQUIRED STRUCTURAL DRAWINGS AND CALCULATIONS FOR REVIEW PRIOR TO STARTING FORM WORK FOR THE FOUNDATIONS.

B. CONTROLLER AND FOUNDATION

- NEW CONTROLLER CABINETS SHALL INCLUDE BATTERY BACKUP PER ARLINGTON COUNTY REQUIREMENTS.
- CONTROLLER SHALL BE Q-FREE SIGNAL CONTROLLER PER SPECIFICATIONS AND INSTALLED AND SET AS FOLLOWS:
 - TO REST IN PHASE 2 & 6 GREEN INTERVAL
 - TO START/RESTART IN PHASE 2 & 6 YELLOW CHANGE INTERVAL
- THE CONTROLLER CABINET AND FOUNDATION SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY TRAFFIC SIGNAL & STREETLIGHT SPECIFICATIONS 66-01, 66-02, AND 70-01.
- THE COUNTY WILL PROVIDE SIGNAL TIMINGS TO THE CONTRACTOR FOR THE CONTROLLER WHEN THE INTERSECTION IS TOTALLY PREPARED FOR OPERATION. THE CONTRACTOR SHALL NOTIFY THE COUNTY IN WRITING 10 DAYS IN ADVANCE OF REQUIRING FINAL TIMINGS.

C. TRAFFIC SIGNAL HEADS

- ALL NEW VEHICULAR SIGNAL SECTIONS SHALL BE 12 INCHES IN DIAMETER CAST ALUMINUM WITH LED DISPLAYS.
- PEDESTRIAN SIGNAL HEAD SECTIONS SHALL BE CAST ALUMINUM WITH LED DISPLAYS (COUNTDOWN).
- ALL SIGNAL HEADS SHALL BE YELLOW IN COLOR.
- ALL SIGNAL HEADS SHALL BE INSTALLED WITH RETROREFLECTIVE BACKPLATES PER VDOT STANDARDS AND SPECIFICATIONS.

D. DETECTORS

- ALL NEW PEDESTRIAN PUSH BUTTON STATIONS SHALL CONFORM TO ARLINGTON COUNTY'S SPECIFICATIONS FOR ACCESSIBLE SIGNAL DESIGN AND SHALL USE POLARA VIBRO-TACTILE/AUDIO PUSH BUTTON ASSEMBLIES UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL PROVIDE EXTENDER BRACKETS IF NEEDED TO MAKE PUSHBUTTONS ACCESSIBLE BY WHEELCHAIR. THE PUSHBUTTON ASSEMBLY SHALL CONTAIN A MOUNTING BRACKET TO ALLOW THE R10-3E SIGN TO BE MOUNTED DIRECTLY TO THE PUSHBUTTON.
- NEW OVERHEAD VIDEO DETECTION SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY REQUIREMENTS.
- EMERGENCY VEHICLE PRE-EMPTION (EVP) EQUIPMENT (GTT MODEL M711 OR M721), OR APPROVED SUBSTITUTE, SHALL BE INSTALLED COMPLETE WITH DISCRIMINATOR CARDS, WIRING, ETC. IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS.
- EVP TO BE MOUNTED ON VEHICLE HEAD MOUNTING BRACKET OR AS APPROVED BY THE ENGINEER IN THE FIELD. EVP SHALL INCLUDE CONFIRMATION LIGHTS.

E. CONDUIT, CONDUCTORS, AND ELECTRICAL

- ALL JUNCTION BOXES SHALL HAVE THE WORDS "ARLINGTON COUNTY TRANSPORTATION" CAST IN THE LID. ALL JUNCTION BOXES SHALL BE INSTALLED PER STANDARDS 61-02, 61-03, AND 61-04.
- ALL PROPOSED JUNCTION BOX COVERS SHALL BE ADA COMPLIANT WITHIN THE PROPOSED IMPROVEMENTS AND IN ALL EXISTING PEDESTRIAN FACILITIES TO THE NEXT LOGICAL TERMINI.
- METER PEDESTAL SHALL BE INSTALLED PER COUNTY STANDARDS. UNDERGROUND SERVICE SHALL BE OBTAINED FROM THE NEAREST UTILITY POLE OR SERVICE POINT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL AND COORDINATING WITH POWER SERVICE COMPANY FOR CONNECTION.
- CONDUIT SYSTEM SHALL BE ADDED TO CONNECT EXISTING COMMUNICATION CABLE PLANT TO THE NEW CONTROLLER CABINET LOCATION AS DIRECTED BY THE COUNTY ENGINEER.
- ALL CONDUIT ENTERING INTO JUNCTION BOXES SHALL NOT EXTEND OVER 3" MAXIMUM NOR 2" MINIMUM INSIDE THE JUNCTION BOXES, AND SHALL BE FITTED WITH BELL ENDS OR BUSHING.
- ALL JUNCTION BOXES SHALL HAVE A GROUND ROD INSTALLED. ALL JUNCTION BOXES SHALL BE PROPERLY CONNECTED TO THE INTERSECTION GROUNDING SYSTEM. METAL LIDS SHALL BE BONDED TO THE GROUNDING SYSTEM.
- CONTRACTOR IS TO VERIFY DEPTHS OF UTILITIES AT PROPOSED CONDUIT CROSSINGS PRIOR TO EXCAVATING CONDUIT TRENCHES OR BORING.
- ALL CONDUITS BENEATH ROADWAYS SHALL BE DIRECTIONAL DRILLED UNLESS DIRECTED OTHERWISE BY THE COUNTY CONSTRUCTION MANAGER. WHERE DIRECTED ON THE PLANS OR BY THE CONSTRUCTION MANAGER, THE CONTRACTOR SHALL INSTALL SPARE CONDUITS WITH PULL TAPE AND TRACER WIRE FOR ROAD CROSSINGS.
- ALL EXISTING CONDUIT AND CABLES ARE BASED ON RECORD DRAWINGS OR WERE ESTIMATED. CONTRACTOR SHALL VERIFY CONDUIT FILL CAPACITY IN EXISTING CONDUITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY IF CONDUIT CAPACITY IS NOT AVAILABLE IN EXISTING CONDUIT FOR NEW CABLES.
- NEW CCTV CAMERAS SHALL BE INSTALLED IN ACCORDANCE WITH ARLINGTON COUNTY REQUIREMENTS. CONTRACTOR SHALL CONFIRM MOUNTING LOCATION OF CCTV CAMERA WITH COUNTY PRIOR TO INSTALLATION.

F. CONDUIT, CONDUCTORS, AND ELECTRICAL (CONT.)

- CONTRACTOR TO VERIFY THE CONDUIT AND % FILL. IF THERE IS NOT ENOUGH CAPACITY IN CONDUIT, THEN THE CONTRACTOR SHALL INSTALL NEW CONDUIT.
 - ALL PROPOSED CONDUIT SHALL HAVE #6 AWG (EGC) & TRACER WIRE FOR GROUNDING SYSTEM.
 - REMOVE ALL EXISTING UNUSED RISERS, JUNCTION BOXES, AND CABLES.
- F. SIGNS**
- ALL MAST ARM SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH ARLINGTON COUNTY STANDARDS. SIGNS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE.
 - STREET NAME SIGNS SHALL HAVE A WHITE LEGEND ON GREEN BACKGROUND. CONTRACTOR SHALL SUBMIT SIGN DETAILS TO COUNTY TO REVIEW. THE DIMENSIONS PROVIDED ON PLANS ARE ESTIMATED.

G. DEMOLITION/SALVAGE

- ALL EXISTING SIGNAL EQUIPMENT IS TO BE REMOVED & RETURNED TO ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES LOCATED AT 4300 29TH ST S., ARLINGTON, VA 22206.
 - ALL EXISTING SIGNAL POLE FOUNDATIONS SHALL BE DEMOLISHED IN ACCORDANCE WITH ARLINGTON COUNTY SPECIFICATIONS. ANY REQUIRED RESTORATION RESULTING FROM THE REMOVAL OF EXISTING SIGNAL INFRASTRUCTURE SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMEDY AND SHALL BE INCIDENTAL TO THE WORK.
- H. COMMUNICATIONS**
- EXISTING COUNTY FIBER JUNCTION BOXES AND CONDUITS CONTAIN LIVE FIBER OPTIC CABLES. THE CONTRACTOR SHALL NOT CUT OR DAMAGE THE COUNTY'S EXISTING FIBER CABLES.
 - ALL FIBER OPTIC CABLE INSTALLATION, REMOVAL, SPLICING, AND TESTING SHALL BE PERFORMED BY THE COUNTY AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MAY CONTRACT DIRECTLY WITH THE COUNTY'S FIBER CONTRACTORS. UPON REQUEST 703-228-7726, THE COUNTY WILL PROVIDE THE CONTACT INFORMATION FOR CURRENT QUALIFIED COUNTY FIBER CONTRACTORS.
 - CONTACT ARLINGTON COUNTY DTS FOR FIBER OPTIC CABLE REMOVAL OR INSTALLATION AT LEAST 10 BUSINESS DAYS IN ADVANCE.
 - CONTRACTOR SHALL FURNISH FIBER PATCH PANEL FOR INSTALLATION BY THE COUNTY. FIBER PIGTAIL SHALL BE APPROPRIATE LENGTH TO ALLOW FOR 50 FEET OF SLACK IN EACH INTERMEDIATE JUNCTION BOX. CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PATCH PANEL (INDICATING THE TAIL LENGTH) FOR COUNTY REVIEW PRIOR TO ORDERING.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF PROPOSED JUNCTION BOXES AND CONDUITS INCLUDING ALL APPURTENANCES SUCH AS GROUND RODS, TRACER WIRE, PULL TAPE, ETC.
 - ALL NEW CONDUITS SHALL HAVE PULL TAPE INSTALLED BETWEEN JUNCTION BOXES AND TRACER WIRE INSTALLED WITHIN OR BESIDE AT LEAST ONE OF THE CONDUITS. TRACER WIRE SHALL BE CONNECTED TO THE GROUND RODS INSTALLED IN THE ADJACENT JUNCTION BOXES.
 - DO NOT SPLICE TRACER WIRE.

I. INSPECTIONS

- THE CONTRACTOR SHALL CONTACT THE COUNTY FOR INSPECTIONS AT A MINIMUM FOR THE FOLLOWING CHECK-IN POINTS:
 - PRIOR TO EXCAVATION
 - PRIOR TO POURING CONCRETE FOR FOUNDATIONS, INSTALLING JUNCTION BOXES, OR BACKFILLING TRENCHES
 - PRIOR TO ERECTING MAST ARM POLES
 - PRIOR TO SIGNAL ACTIVATION OR SWITCHOVER
- THE COUNTY SHALL VERIFY POLE LOCATIONS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRAFFIC ENGINEERING AND OPERATIONS (TEO) CONSTRUCTION MANAGEMENT TEAM TO SCHEDULE INSPECTION. STAKEOUT IS THE RESPONSIBILITY OF THE CONTRACTOR UNLESS DIRECTED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT THE COUNTY CONSTRUCTION MANAGER WITHIN 7 BUSINESS DAYS OF SIGNAL ACTIVATION. ALL POWER AND COMMUNICATIONS SHALL BE IN OPERATION AT THE TIME OF ACTIVATION UNLESS APPROVED BY THE COUNTY CONSTRUCTION MANAGER.
- PRIOR TO STARTING CONSTRUCTION ACTIVITIES RELATING TO TRAFFIC SIGNALS OR STREETLIGHTS (INCLUDING ORDERING MATERIALS), THE CONTRACTOR SHALL CONTACT THE COUNTY TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE SIGNAL CONTRACTOR (SUB OR PRIME) TO DISCUSS SEQUENCING, EXPECTED CONSTRUCTION PROGRESS, AS WELL AS INSPECTION REQUIREMENTS.
- THE CONTRACTOR IS REQUIRED TO SUBMIT SHOP DRAWINGS OF ALL SIGNAL EQUIPMENT FOR COUNTY APPROVAL. SUBMITTALS SHALL BE REVIEWED BY THE ENGINEER OF RECORD (OR DESIGNEE) PRIOR TO COUNTY REVIEW.

J. JUNCTION BOXES

- ALL MANHOLE AND BOX COVERS SHALL BE ADA COMPLIANT WITHIN THE PROPOSED CONDITIONS AND IN EXISTING PEDESTRIAN FACILITIES TO THE NEXT LOGICAL TERMINI.

STREET CLASSIFICATION

LANGSTON BOULEVARD - OTHER PRINCIPAL ARTERIAL
N CLEVELAND STREET - NEIGHBORHOOD MINOR

POSTED SPEED / DESIGN SPEED

LANGSTON BOULEVARD - 35 MPH / 40 MPH
N CLEVELAND STREET - 25 MPH / 25 MPH

Traffic Signal Design

Cover Sheet
Langston Blvd & N Cleveland St
ID #143
(TR07)

Project Name and Location

Designed: JPM
Drawn: JPM
Checked: JSN
Miss Utility Transmittal #:

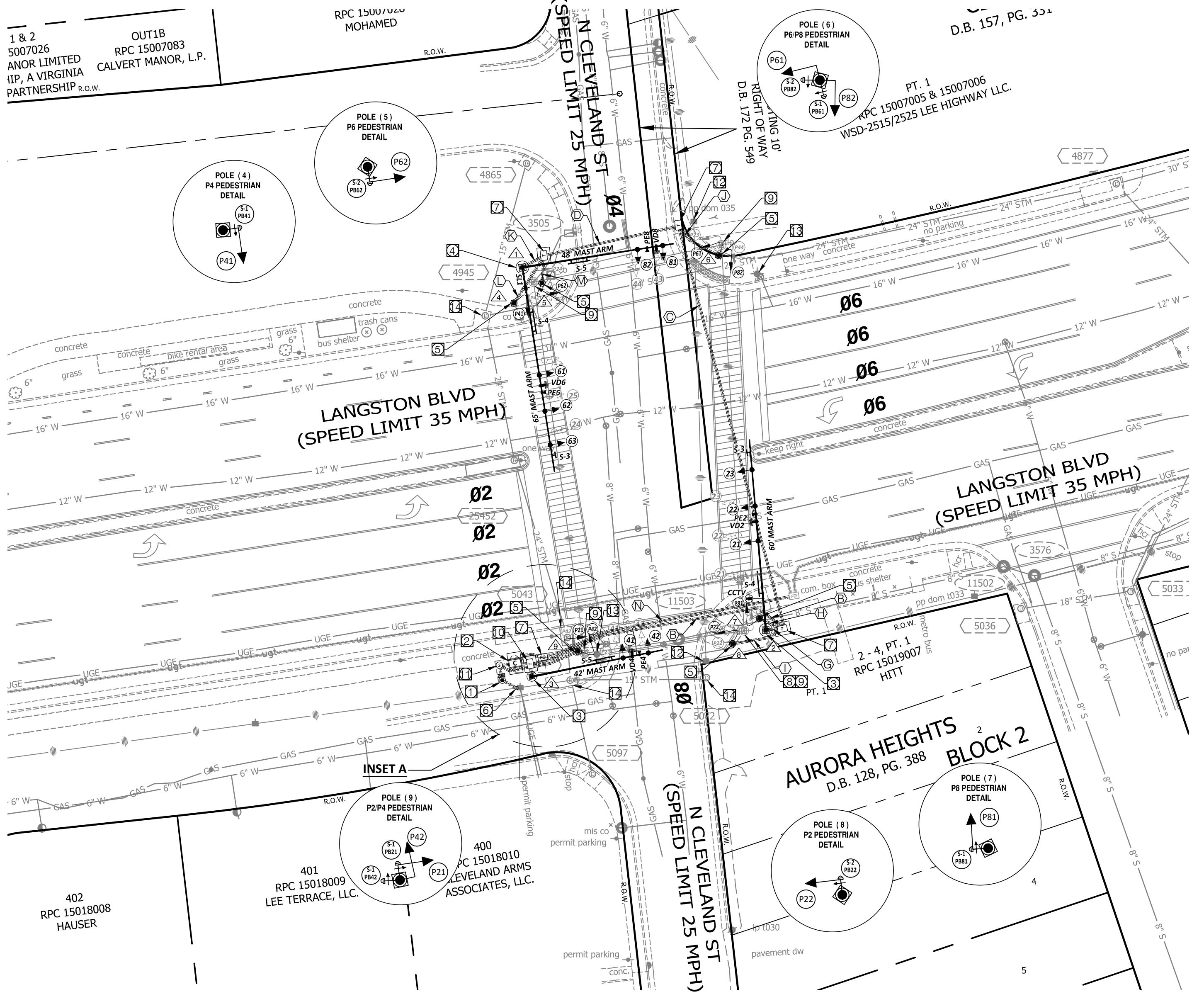
Filename: 143_SIG Lee Highway & N Cleveland St.dwg
Plotted: November 10, 2022
Plotted by: jmcCarthy

Scale: N.T.S.

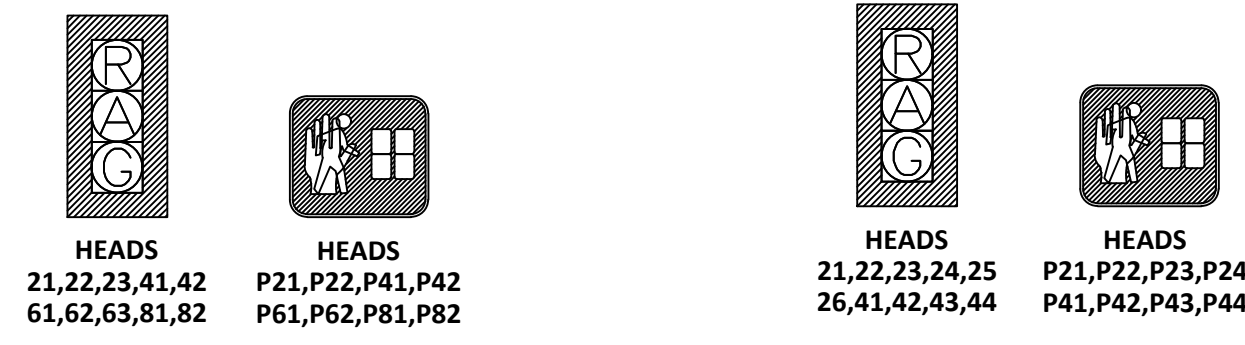
Sheet
TS-1

TRAFFIC SIGNAL PLAN DETAIL

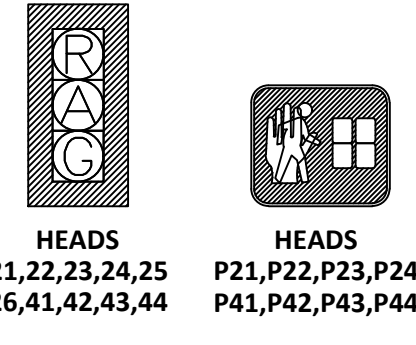
(SCALE: 1"=25')



PROPOSED SIGNALS
PROPOSED SIGNAL HEADS SHALL HAVE A HIGH VISIBILITY BACKPLATE INSTALLED



EXISTING SIGNALS (TO REMOVE)



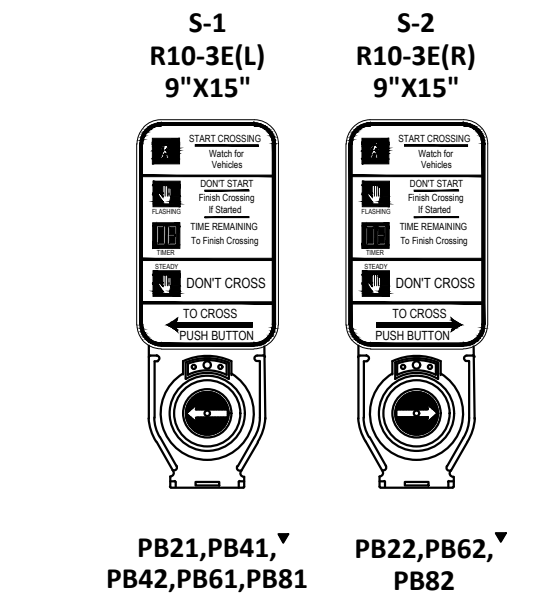
PROPOSED SIGNS



CONDUIT & CABLE

- A** 4-3" CONDUIT (TRENCHING)
4-14/7c SIGNAL HEADS 21,22,23,41,42,61,62,63,81,82
8-14/7c PEDESTRIAN SIGNALS P21,P22,P41,P42,P61,P62,P81,P82
8-14/3c PEDESTRIAN PUSH BUTTONS PB21,PB22,PB41,PB42,PB61,PB62,PB81,PB82
- B** 4-PROP. LEAD-IN CABLE FOR VIDEO DETECTION VD2,VD4,VD6,VD8
1-PROP. LEAD-IN CABLE FOR CCTV CAMERA
4-PROP. LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PE4,PE6,PE8
- C** 1-3" CONDUIT (DIRECT BORING)
3-14/7c PROP. VEH. SIGNAL HEADS 21,22,23,61,62,63,81,82
6-14/7c PROP. PED SIGNALS P22,P41,P61,P62,P81,P82
6-14/3c PROP. PED PUSH BUTTONS PB22,PB41,PB61,PB62,PB81,PB82
- D** 1-3" CONDUIT (DIRECT BORING)
3-PROP. LEAD-IN CABLE FOR VIDEO DETECTION VD2,VD6,VD8
1-PROP. LEAD-IN CABLE FOR CCTV CAMERA
3-PROP. LEAD-IN CABLE FOR OPTICOM GTT EVP PE2,PE6,PE8
1-12/2c CABLE FOR LUMINAIRE SL1
- E** 1-3" CONDUIT (DIRECT BORING)
2-14/7c PROP. VEH. SIGNAL HEADS 61,62,63,81,82
4-14/7c PROP. PED SIGNALS P41,P61,P82
4-14/3c PROP. PED PUSH BUTTONS PB41,PB61,P82
- F** 1-3" CONDUIT (DIRECT BORING)
1-PROP. LEAD-IN CABLE FOR VIDEO DETECTION VD6,VD8
2-PROP. LEAD-IN CABLE FOR OPTICOM GTT EVP PE6,PE8
1-12/2c CABLE FOR LUMINAIRE SL1
- G** 1-3" CONDUIT (TRENCHING)
2-14/7c PROP. VEH. SIGNAL HEADS 21,22,23
- H** 1-3" CONDUIT (TRENCHING)
1-PROP. LEAD-IN CABLE FOR VIDEO DETECTION VD2
1-PROP. LEAD-IN CABLE FOR CCTV CAMERA
1-PROP. LEAD-IN CABLE FOR OPTICOM GTT EVP PE2
- I** 1-2" CONDUIT (TRENCHING)
1-14/7c PROP. PED SIGNALS P81
1-14/3c PROP. PED PUSH BUTTONS PB81
- J** 1-2" CONDUIT (TRENCHING)
1-14/7c PROP. PED SIGNALS P22
1-14/3c PROP. PED PUSH BUTTONS PB22
- K** 1-3" CONDUIT (TRENCHING)
2-14/7c PROP. PED SIGNALS P61,P82
2-14/3c PROP. PED PUSH BUTTONS PB61,P82
- L** 1-2" CONDUIT (TRENCHING)
1-14/7c PROP. PED SIGNALS P41
1-14/3c PROP. PED PUSH BUTTONS PB41
- M** 1-2" CONDUIT (TRENCHING)
1-14/7c PROP. PED SIGNALS P62
1-14/3c PROP. PED PUSH BUTTONS PB62
- N** PROPOSED FIBER OPTIC CABLE & CONDUIT (See Communication Plan)
- O** PROPOSED FIBER OPTIC CABLE & CONDUIT (See Communication Plan)
- P** 1-2" CONDUIT (TRENCHING)
1-6/4c ELECTRICAL SERVICE CABLE
- R** 1-2" CONDUIT (TRENCHING)
1-12/2c CABLE FOR LUMINAIRE SL1
- S** 1-2" CONDUIT (TRENCHING)
1-6/4c ELECTRICAL SERVICE CABLE
1-12/2c CABLE FOR LUMINAIRE SL1

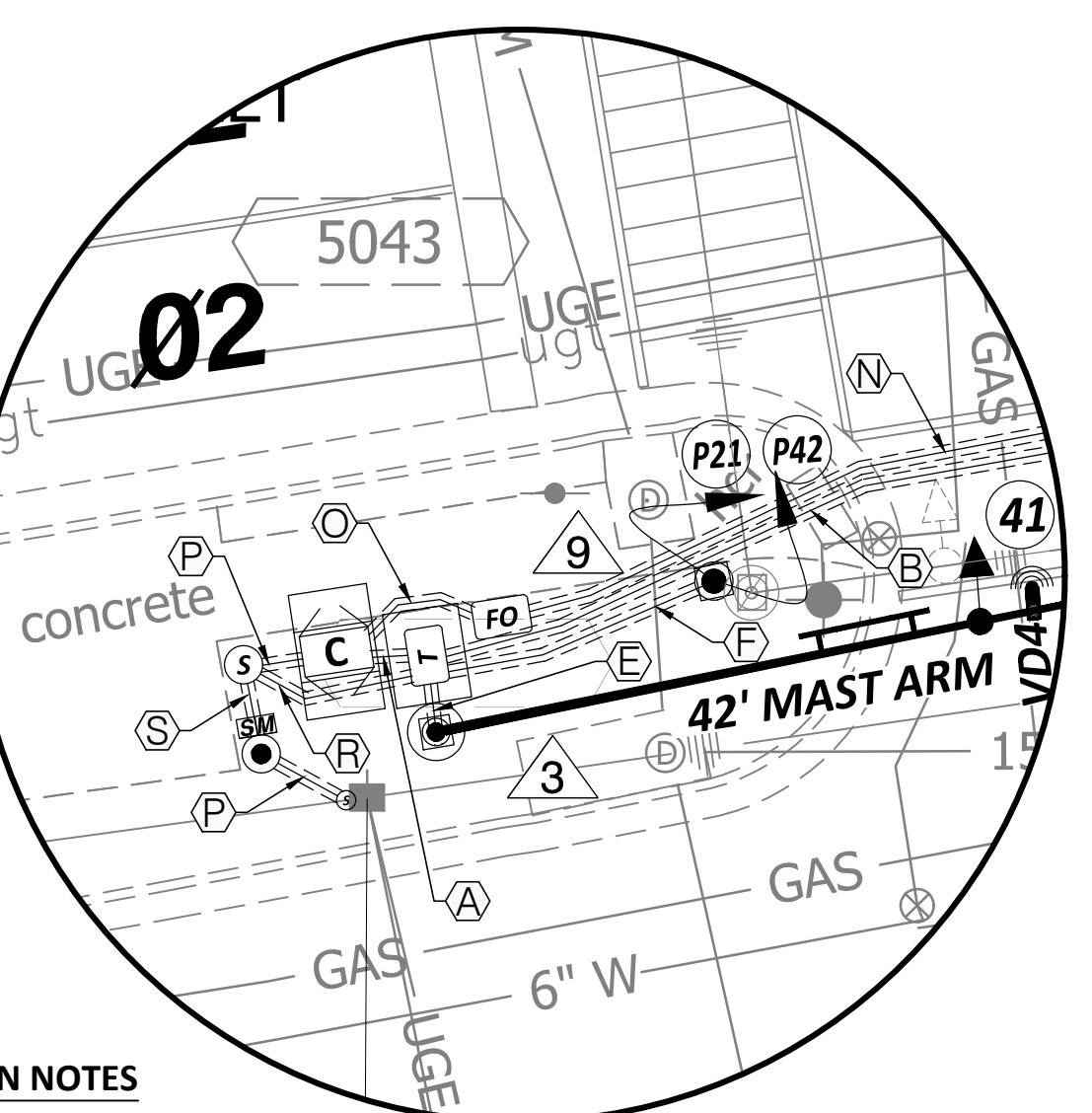
PROPOSED ACCESSIBLE PEDESTRIAN PUSHBUTTON



PUSHBUTTON	WALK INDICATION/MESSAGE
PB42 PB82	"LANGSTON BOULEVARD, WALK SIGN IS ON TO CROSS LANGSTON BOULEVARD."
PB21 PB61	"CLEVELAND STREET, WALK SIGN IS ON TO CROSS CLEVELAND STREET."
PB22, PB41 PB62, PB81	PERCUSSIVE TONE PER SECTION 4E.11 OF THE MUTCD.

* ACCESSIBLE PUSHBUTTON SYSTEM SHALL BE POLARA SYSTEM CONFORMING TO ARLINGTON COUNTY SPECIFICATIONS AND SHALL INCLUDE A POLARA CENTRAL CONTROL UNIT.

INSET A (SCALE: 1"=10')



DEMOLITION & CONSTRUCTION NOTES

1. INSTALL SERVICE METER PEDESTAL PER ARLINGTON COUNTY STANDARD 80-01.
2. INSTALL TRAFFIC SIGNAL CABINET, 12" CABINET BASE RISER, FOUNDATION, UPS, AND ASSOCIATED EQUIPMENT.
3. INSTALL NON-ORNAMENTAL TRAFFIC SIGNAL MAST ARM POLE & FOUNDATION, WITH SIGNALS, SIGNS, POLE IDENTIFICATION STICKER, AND EQUIPMENT AS SHOWN.
4. INSTALL NON-ORNAMENTAL TRAFFIC SIGNAL DUAL MAST ARM POLE & FOUNDATION, WITH SIGNALS, SIGNS, POLE IDENTIFICATION STICKER, AND EQUIPMENT AS SHOWN.
5. INSTALL 12" PEDESTAL POLE & FOUNDATION WITH PEDESTRIAN SIGNAL HEAD(S), PUSHBUTTON(S), POLE IDENTIFICATION STICKER, AND EQUIPMENT AS SHOWN.
6. INSTALL ARLINGTON STANDARD JUNCTION BOX PER STD 61-04.
7. INSTALL ARLINGTON STANDARD JUNCTION BOX PER STD 61-04 TYPE-3.
8. REMOVE EXISTING TRAFFIC SIGNAL CABINET AND EQUIPMENT. SALVAGED EQUIPMENT TO BE RETURNED TO ARLINGTON COUNTY PROPERTY YARD.
9. REMOVE EXISTING STRAIN POLE, SPAN WIRE, SIGNAL HEADS, AND ASSOCIATED WIRING. SALVAGED EQUIPMENT TO BE RETURNED TO ARLINGTON COUNTY PROPERTY YARD. DEMOLISH EXISTING FOUNDATION.
10. INSTALL ARLINGTON STANDARD JUNCTION BOX PER STD 61-04 TYPE-4.
11. INSTALL ARLINGTON STANDARD JUNCTION BOX PER STD 61-02.
12. EXISTING UTILITY POLE TO REMAIN UNDISTURBED DURING CONSTRUCTION.
13. EXISTING HYDRANT TO REMAIN UNDISTURBED DURING CONSTRUCTION.
14. EXISTING DRAINAGE STRUCTURE TO REMAIN UNDISTURBED DURING CONSTRUCTION.

INITIAL TIMING CHART

PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
PHASE ON	X	X	X	X	X	X	X	X
PHASE OFF	X	X	X	X	X	X	X	X

COLOR SEQUENCE CHART

PHASE	2	4	6	8	2+6	4+8	FLASH
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	A
41,42	G				G		A
61,62,63		G				G	A
81,82			G				G
P2	WALK				WALK		BLANK
P4	WALK				WALK		BLANK
P6	WALK				WALK		BLANK
P8	WALK				WALK		BLANK

NOTE: BLANK SPACES REPRESENT A RED DISPLAY. WALK INDICATION DISPLAYED AFTER PEDESTRIAN CALL IS SERVICED; OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED.

POLE SIGNAL MOUNTING

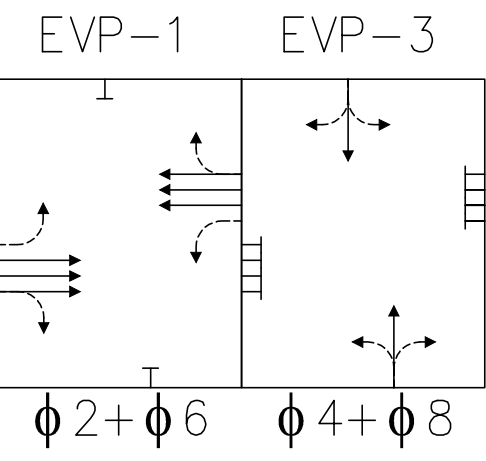
No.	POLE IDENTIFICATION	STANDARD			LUM. LED (1)	POLE SIGNAL MOUNTING				STREET NAME SIGN
		TYPE (POLE HEIGHT)	SIG. M.A. ORIENT.	SIG. M.A.		LUM. M.A. ORIENT.	LUM. M.A.	VEHICLE & PED. HEADS	PED. PUSH BUTTONS	
184-MA-01-NW	DUAL MAST ARM POLE (30')	180°	65'	180°	145W	61,62,63	-	S-3	VD6,PE6	S-4
184-MA-01-SE	MAST ARM POLE (22')	180°	48'	180°	-	81,82	-	S-3	VD8,PE8	S-5
184-MA-01-SW	MAST ARM POLE (22')	180°	60'	-	-	21,22,23	-	S-3	VD2,PE2,CCTV	S-4
184-PP-01-NW	PEDESTAL POLE (12')	-	-	-	-	41,42	PB41	S-1	VD4,PE4	S-5
184-PP-02-NW	PEDESTAL POLE (12')	-	-	-	-	-	PB2	S-2	-	-
184-PP-01-NE	PEDESTAL POLE (12')	-	-	-	-	P61,P82	PB61,PB82	S-1,S-2	-	-
184-PP-01-SE	PEDESTAL POLE (12')	-	-	-	-	P81	PB81	S-1	-	-
184-PP-02-SE	PEDESTAL POLE (12')	-	-	-	-	P22	PB22	S-2	-	-
184-PP-01-SW	PEDESTAL POLE (12')	-	-	-	-	P21,P42	PB21,PB42	S-1,S-1	-	-

EV PREEMPTION

FUNCTION	EXP-1	EXP-3
INTERVAL 1 - DWELL GREEN	120	120
INTERVAL 1 - DWELL YELLOW	0.0*	0.0*
INTERVAL 1 - DWELL RED	0.0*	0.0*
INTERVAL 1 - EXIT GREEN	1.0	1.0
INTERVAL 5 - YELLOW	0.0	0.0
INTERVAL 5 - RED	0.0	0.0
DELAY TIME	1.0	1.0
PED CLEAR BEFORE PRE	0.0	0.0
YELLOW CLEAR BEFORE PRE	0.0*	0.0*
RED CLEAR BEFORE PRE	0.0*	0.0*
DWELL MIN	12.0	11.5
ENABLE BACKUP PROTECTION	Y	Y
PED CLEAR THROUGH YELLOW	Y	Y
EXIT PHASE/TYPE	IN STEP 2 + 8	

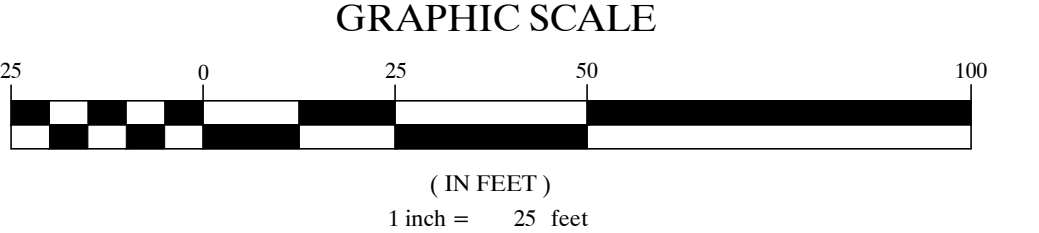
* TIME DEFAULTS TO TIME USED FOR PHASE DURING NORMAL OPERATION

PREEMPTION PHASING DIAGRAM



LEGEND

- ATC Controller Cabinet
- ATC Compact Controller Cabinet
- NEMA Type-P Controller Cabinet & UPS
- Signal Junction Box (61-02)
- Signal Junction Box (61-04)
- Signal Junction Box (61-04) & Collar in Grass
- Comm. Junction Box
- Service Junction Box
- Mast Arm Pole & Foundation
- Pedestrian Pedestal Pole & Foundation
- Carlyle Lighting Pole & Foundation
- Dual Carlyle Light Pole & Foundation
- Cobra Pole & Foundation
- Service Meter
- Battery Backup (UPS)
- Vehicle Signal Head (LED)
- Pedestrian Push Button
- FLIR Video Detection
- Emergency Vehicle Preemption
- CCTV Vehicle Camera
- Overhead Light (LED)
- Conduit Run



ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.5000
Fax: 703.228.3719

SEAL

APPROVALS

NAME	DATE
Justin P. McCarthy	01/04/2023
Justin P. McCarthy	1/06/2023
Justin P. McCarthy	01/06/2023

REVISIONS

NO.	DATE

Traffic Signal Design

Traffic Signal Plan
Langston Blvd & N Cleveland St
ID #143 (TR07)

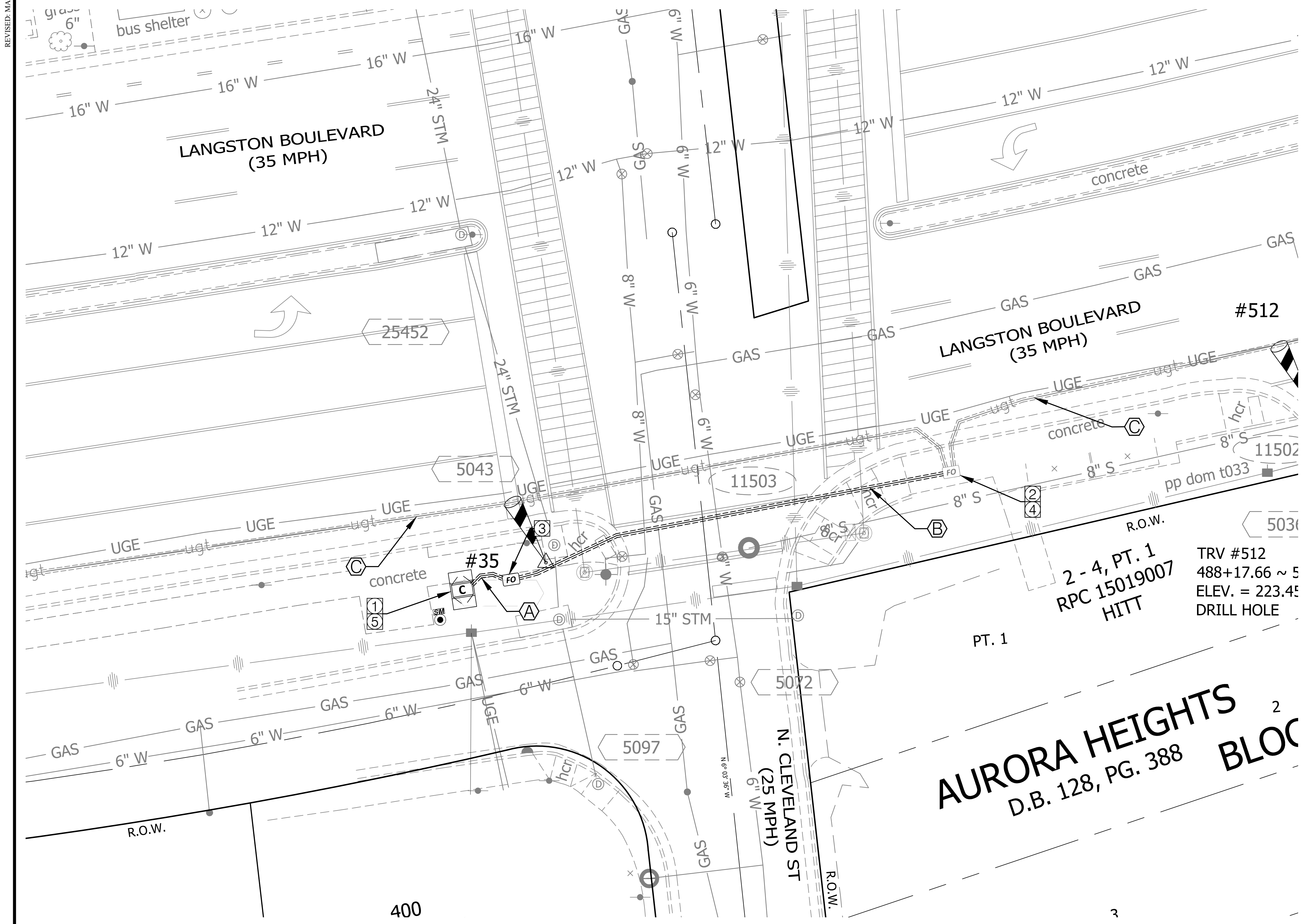
Designed: JPM
Drawn: JPM
Checked: JSN
Miss Utility Transmittal #:

Filename: 143_SIG Lee Highway & N Cleveland St.Dwg
Plotted: November 10, 2022
Plotted by: jmcCarthy

Scale: 1" = 25'

Sheet **TS-2**

COMMUNICATION PLAN DETAIL
(SCALE: 1"=10')



- CONSTRUCTION NOTES**
1. INSTALL 2-2" CONDUIT FROM THE PROPOSED FIBER OPTIC JUNCTION BOX TO THE PROPOSED TRAFFIC SIGNAL CABINET.
 2. INSTALL 2-2" CONDUIT FROM THE PROPOSED FIBER OPTIC JUNCTION BOX TO THE EXISTING FIBER OPTIC JUNCTION BOX. PROPOSED 12 STRAND FIBER OPTIC CABLE TO BE SPLICED AT THE EXISTING FIBER OPTIC JUNCTION BOX AND RUN TO THE PROPOSED TRAFFIC SIGNAL CABINET.
 3. PROPOSED 24" x 36" x 36" FIBER COMMUNICATION JUNCTION BOX.
 4. EXISTING FIBER COMMUNICATION JUNCTION BOX TO REMAIN.
 5. CONTACT ARLINGTON COUNTY DEPARTMENT OF TECHNOLOGY SERVICES (DTS) TO INSTALL NEW PATCH PANEL TO SPICE POINT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THIS WORK.

- CONDUIT AND CABLE RUNS**
- A 2-2" CONDUIT (TRENCHING)
1- 12 STRAND FIBER OPTIC CABLE (PROPOSED)
 - B 2-2" CONDUIT (DIRECT BORING)
1- 12 STRAND FIBER OPTIC CABLE (PROPOSED)
 - C EXISTING CONDUIT
EXISTING FIBER OPTIC CABLE

- CONDUIT & CABLE NOTES :**
1. ALL PROPOSED CONDUITS SHOULD BE HDPE SCHEDULE 40.
 2. ALL PROPOSED CONDUIT SHOULD HAVE #6 AWG (EGC) FOR GROUNDING SYSTEM AND SHALL HAVE TRACER WIRE.
 3. PROPOSED COMMUNICATION CONDUITS SHALL EACH HAVE A PULL STRING AND ONE #14 AWG TRACER WIRE PLACED BETWEEN HANDHOLES AND CABINET
 4. ALL FIBER HANDHOLES SHALL HAVE 50 FEET COIL OF FIBER CABLE

LEGEND

	EXISTING	PROPOSED
ATC Controller Cabinet	[Symbol]	[Symbol]
ATC Compact Controller Cabinet	[Symbol]	[Symbol]
NEMA Type-P Controller Cabinet & UPS	[Symbol]	[Symbol]
Signal Junction Box (61-02)	[Symbol]	[Symbol]
Signal Junction Box (61-04)	[Symbol]	[Symbol]
Signal Junction Box (61-04) & Collar in Grass	[Symbol]	[Symbol]
Comm. Junction Box	[Symbol]	[Symbol]
Service Junction Box	[Symbol]	[Symbol]
Mast Arm Pole & Foundation	[Symbol]	[Symbol]
Pedestrian Pedestal Pole & Foundation	[Symbol]	[Symbol]
Carlyle Lighting Pole & Foundation	[Symbol]	[Symbol]
Dual Carlyle Light Pole & Foundation	[Symbol]	[Symbol]
Cobra Pole & Foundation	[Symbol]	[Symbol]
Service Meter	[Symbol]	[Symbol]
Battery Backup (UPS)	[Symbol]	[Symbol]
Vehicle Signal Head (LED)	[Symbol]	[Symbol]
Pedestrian Push Button	[Symbol]	[Symbol]
FLIR Video Detection	[Symbol]	[Symbol]
Emergency Vehicle Preemption	[Symbol]	[Symbol]
CCTV Vehicle Camera	[Symbol]	[Symbol]
Overhead Light (LED)	[Symbol]	[Symbol]
Conduit Run	[Symbol]	[Symbol]

- FIBER COMMUNICATION NOTES :**
1. THE CONTRACTOR SHALL MAINTAIN EXISTING FIBER COMMUNICATION THROUGH CONSTRUCTION.
 2. ALL FIBER OPTIC CABLE DISCONNECTION, SPLICING, AND TESTING SHALL BE PERFORMED BY ARLINGTON COUNTY DTS FIBER CONTRACTOR. CONTACT ARLINGTON COUNTY DTS AT 703-228-7726 AT LEAST 10 BUSINESS DAYS IN ADVANCE OF WORK.
 3. ALL COMMUNICATION WORK SHALL FOLLOW COUNTY STANDARDS AND BE PERFORMED BY A QUALIFIED CONTRACTOR.
 4. REMOVE ALL UNUSED COMMUNICATION CABLE

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.5000
Fax: 703.228.3719

SEAL

APPROVALS

NAME	DATE
Justin P. McCarthy	01/04/2023
Justin P. McCarthy	01/04/2023
Justin P. McCarthy	01/06/2023
Justin P. McCarthy	01/06/2023

REVISIONS

NO.	DATE	DESCRIPTION

Project Name and Location

Traffic Signal Design

Traffic Communication Plan
Langston Blvd & N Cleveland St
ID #143 (TR07)

Designed: JPM
Drawn: JPM
Checked: JSN
Miss Utility Transmittal #:

Filename: 143_SIG Lee Highway & N Cleveland St.dwg
Plotted: November 10, 2022
Plotted by: jmccarthy

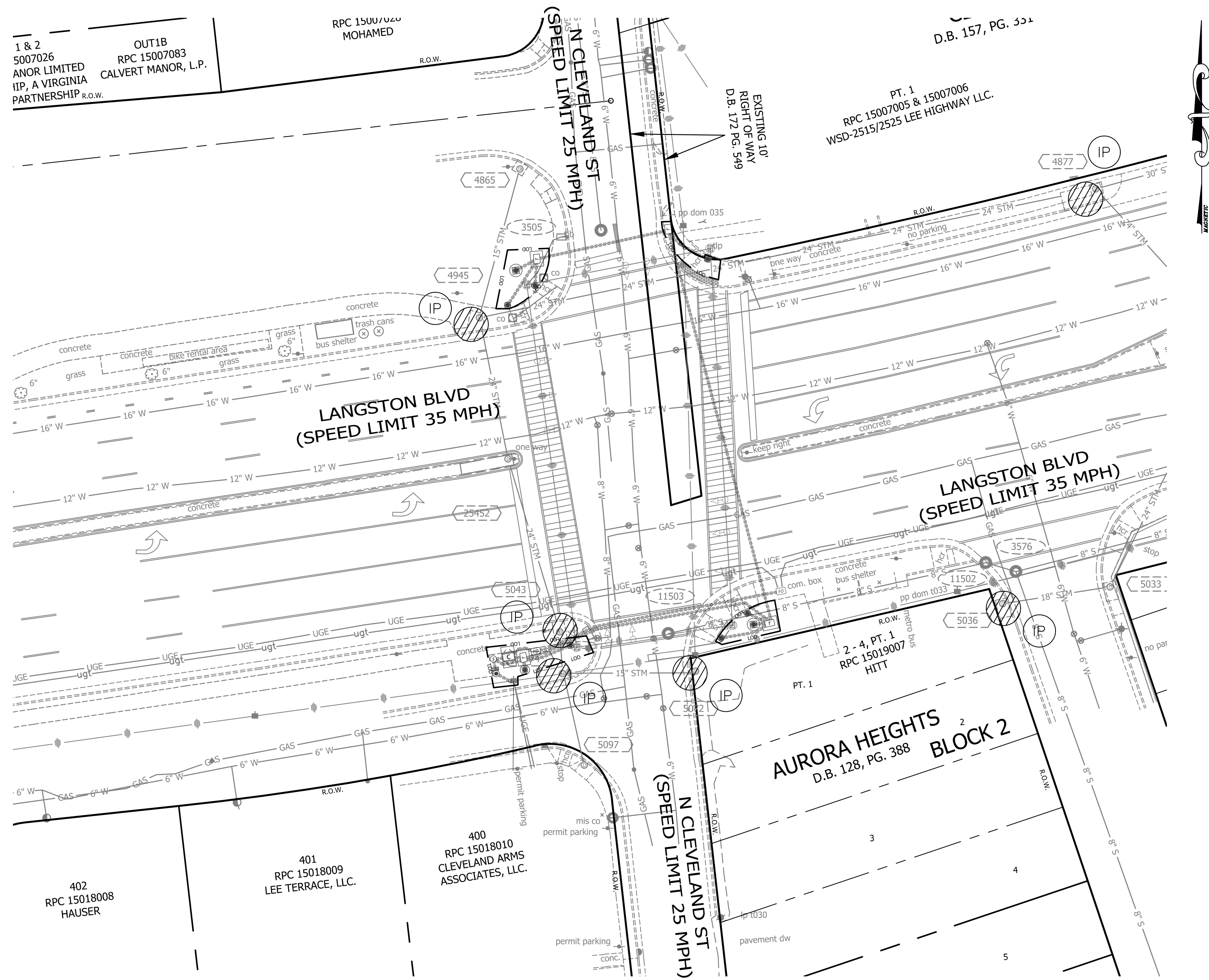
Scale: 1" = 10'

Sheet
TS-3

REVISED: MARCH 06, 2020
Path: O:\Dan Traffic\Lee Highway\N Cleveland St Drawings

LIMITS OF DISTURBANCE & EROSION AND SEDIMENT CONTROL

(SCALE: 1"=25')



PROJECT DESCRIPTION:

LANGSTON BOULEVARD AND N CLEVELAND STREET INTERSECTION IMPROVEMENT PROJECT CONSISTS OF UPGRADING THE EXISTING SIGNAL SYSTEM. THE TOTAL DISTURBED AREA IS 830.00 SF (0.02 acre). THIS PROJECT WILL NOT IMPACT THE EXISTING STORM DRAINAGE CHARACTERISTICS/SYSTEM AND WILL NOT BE REQUIRED TO ADDRESS SWM VSPM REQUIREMENTS.

EROSION & SEDIMENT CONTROL:

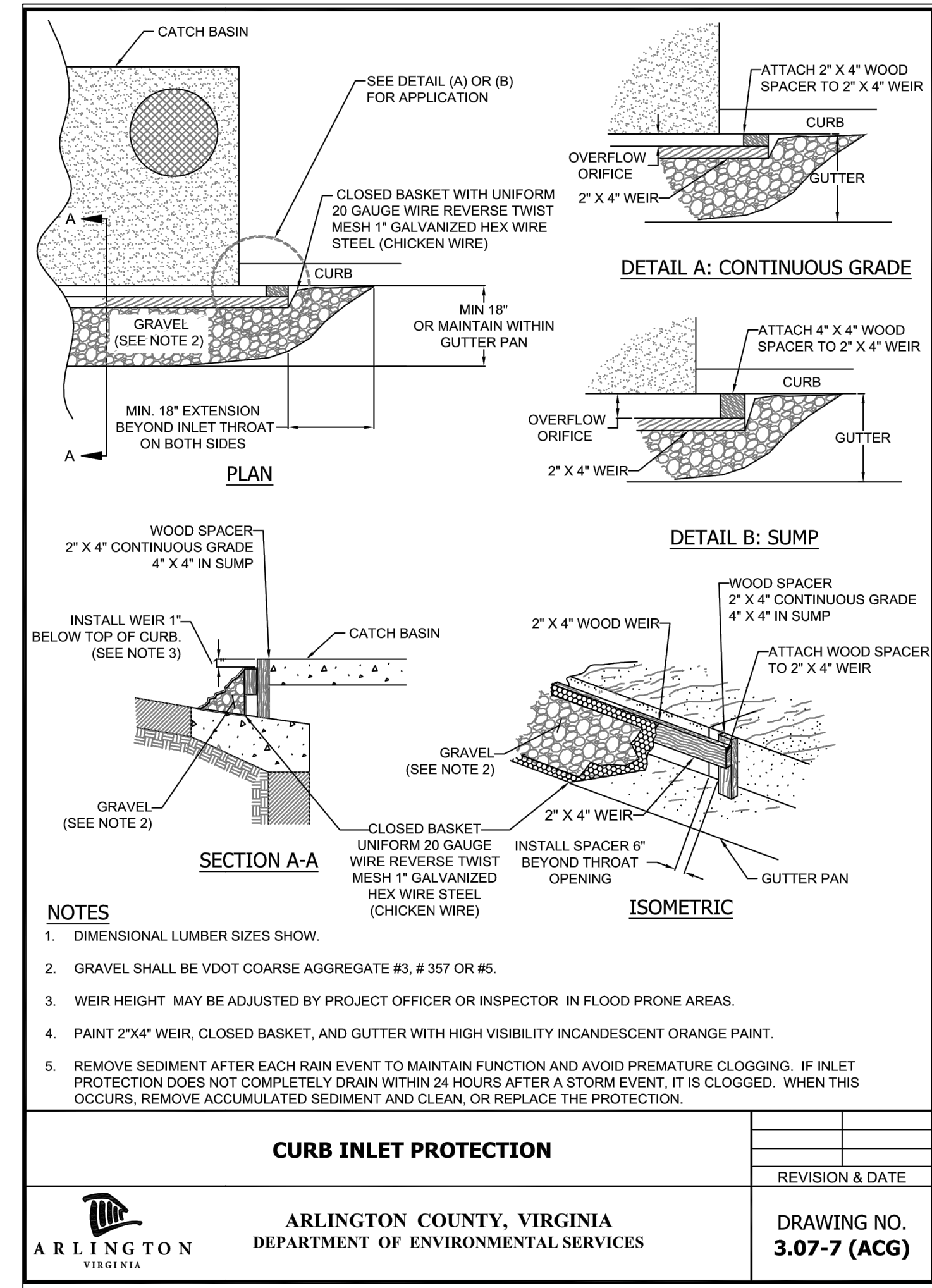
- STEP 1:
- INSTALL INLET PROTECTION AT ALL EXISTING STORM DRAIN INLETS THAT MAY BE IMPACTED BY RUNOFF FROM THE SITE.
 - PROVIDE A FILTER BOX FOR ALL LOCATIONS WHERE EXCAVATION TRENCHES WILL REQUIRE EJECTION PUMPING FOR RUN OFF ACCUMULATION.
- STEP 2:
- FOLLOWING COMPLETION OF EROSION CONTROL INSTALLATION AS DESCRIBED IN STEP 1 OF THE SEDIMENT CONTROL PROGRAM, AND AFTER APPROVAL BY THE COUNTY INSPECTOR, CLEAR AND GRUB THE REMAINDER OF THE SITE.
 - IMMEDIATELY FOLLOWING CLEARING OF THE SITE SUPPORTING STRUCTURES SHALL BE INSTALLED. CAUTION CARE MUST BE TAKEN .
 - BEGIN GRADING SITE AS REQUIRED AND IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PROGRAM.
 - DEMOLITION OF EXISTING PAVEMENT, NOT TO REMAIN, AND ANY EXCESS SOIL MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH VDOT REGULATIONS.
 - INSTALL CURB AND GUTTER, AND APPLY THE BASE STONE FOR THE STREETS WITHIN 5 DAYS AFTER REACHING FINAL SUBGRADE.
 - AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND SHALL BE PERMANENTLY STABILIZED WITH VEGETATION UPON THE APPROVAL OF THE COUNTY INSPECTOR.

EROSION & SEDIMENT CONTROL PROGRAM:

- EROSION CONTROL PLAN IS INTENDED TO PERIMETER CONTROL MEASURES WHICH INCLUDES INLET PROTECTION (IP).
- NO DISTURBED AREA WILL REMAIN DENUEED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY ARLINGTON COUNTY.
- WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION
- ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREON, SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE EXTENT OF HEAVY EQUIPMENT WORK. CONTRACTOR SHALL STRIVE TO BRING AREAS TO GRADE (ROUGH OR FINISH) AND TO STABILIZE, BY TEMPORARY OR PERMANENT VEGETATION, THESE DISTURBED AREAS PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE LEFT ROUGHENED TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - CUT SLOPE, AS NECESSARY, SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS ABOVE THE SLOPE AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
 - IN NEW PAVEMENT AREAS, PLACE THE AGGREGATE BASE STONE ON THE FINISH SUBGRADE AT THE EARLIEST POSSIBLE TIME.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.



NOTES

- DIMENSIONAL LUMBER SIZES SHOW.
- GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, #357 OR #5.
- WEIR HEIGHT MAY BE ADJUSTED BY PROJECT OFFICER OR INSPECTOR IN FLOOD PRONE AREAS.
- PAINT 2"x4" WEIR, CLOSED BASKET, AND GUTTER WITH HIGH VISIBILITY INCANDESCENT ORANGE PAINT.
- REMOVE SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE THE PROTECTION.

CURB INLET PROTECTION	
ARLINGTON COUNTY, VIRGINIA DEPARTMENT OF ENVIRONMENTAL SERVICES	DRAWING NO. 3.07-7 (ACG)

TOTAL DISTURBED AREA

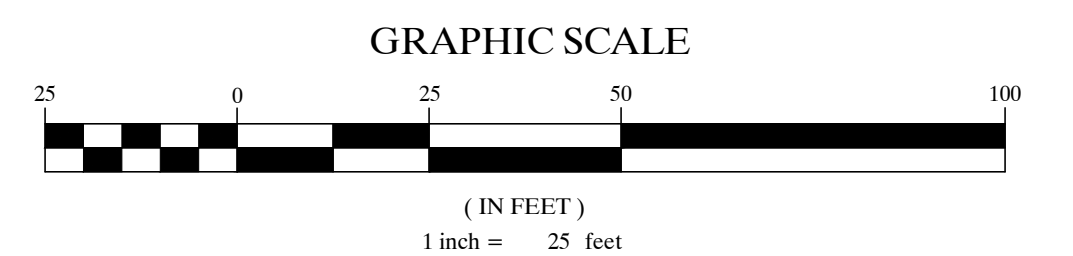
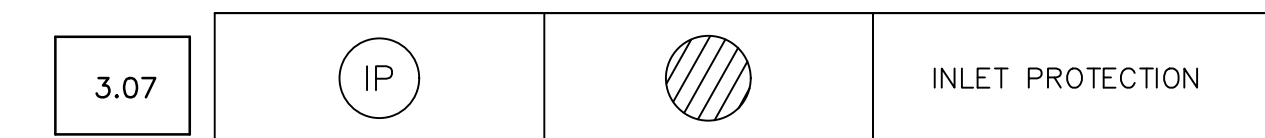
TOTAL DISTURBED AREA	830 SF
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NET CHANGES IN IMPERVIOUS

	PERVIOUS	IMPERVIOUS
PRE	634 SF	196 SF
POST	634 SF	196 SF
NET	0 SF	0 SF

PROPOSED IMPROVEMENTS WILL NOT INCREASE THE IMPERVIOUS AREA AND WILL RESULT IN A NET ZERO CHANGE IN AREA. THE EXISTING SEWER SYSTEM WILL NOT BE IMPACTED BY THE PROPOSED SIGNAL UPGRADE.

EROSION & SEDIMENT CONTROL LEGEND



ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

Transportation Engineering and Operations Bureau
2100 Clarendon Boulevard, Suite 900
Arlington, VA 22201
Phone: 703.228.5000
Fax: 703.228.3719

SEAL

APPROVALS	DATE
<i>Justin P. McCarthy</i> TRAFFIC ENGINEERING MANAGER	01/04/2023
<i>Dan Nabors</i> TE&O BUREAU CHIEF	1/06/2023
<i>Henry</i> TRANSPORTATION DIRECTOR	01/06/2023

REVISIONS	DATE

Project Name and Location
Traffic Signal Design
Erosion & Sediment Control Notes and Plan
Langston Blvd & N Cleveland St
ID #143 (TR07)

Designed: JPM
Drawn: JPM
Checked: JSN
Miss Utility Transmittal #:
Filename: 143_SIG Lee Highway & N Cleveland St.dwg
Plotted: November 10, 2022
Plotted by: jmcCarthy

Scale: **1" = 25'**

Sheet **TS-4**