TOWN of LEESBURG, VA

NOTES

A. UTILITIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.

   PRIOR TO DIGGING, NOTIFY THE FOLLOWING:

   A. MISS UTILITY - 811

   B. WATER AND SEWER - DEPARTMENT OF UTILITIES, THE TOWN OF LEESBURG (703) 737-7595

   C. STORM DRAIN AND TRAFFIC SIGNALS - DEPARTMENT OF PUBLIC WORKS, THE TOWN OF LEESBURG (703) 771-2790.

2. TEST PITS SHALL BE ~~SHOWN~~ OBTAINED AT ALL UTILITY CROSSINGS AND AT THE POINT OF CONNECTION TO EXISTING WATER MAINS. AT LEAST 10 DAYS PRIOR TO CONSTRUCTION ACTIVITY THE CONTRACTOR MUST OBTAIN ITS TEST PIT DATA AND COORDINATE WITH THE INSPECTOR. IF THE TEST RESULTS SHOW A POTENTIAL CONFLICT OR NONCOMPLIANCE WITH THE APPROVED PLAN, REVISIONS TO THE PLANS MUST BE SUMMATED FOR APPROVAL. IN SUCH INSTANCES, NO WORK SHALL COMMENCE UNTIL CONFLICTS ARE RESOLVED AND REVISIONS APPROVED.

3. ALL UNDERGROUND UTILITY CONNECTIONS ARE TO BE PLACED FROM THE UTILITY MAIN TO THE RIGHT-OF-WAY FOR EACH LOT AND ALL UNDERGROUND UTILITY MAINS AND CONNECTIONS MUST BE INSTALLED PRIOR TO THE APPLICATION OF ANY STREET SURFACE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETURNING ALL EXISTING FACILITIES AND/OR UTILITIES TO THEIR ORIGINAL CONDITION.

B. GENERAL

1. ~~A GRADING PERMIT IS TO BE OBTAINED FROM LOUDOUN COUNTY DEPARTMENT OF BUILDING AND DEVELOPMENT BEFORE ANY CONSTRUCTION IS STARTED.~~ A GRADING PERMIT IS NOT REQUIRED FOR THIS PROJECT.

2. THE DESIGN METHODS OF CONSTRUCTION AND FIELD PRACTICES SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE TOWN OF LEESBURG DESIGN AND CONSTRUCTION STANDARDS MANUAL AND THE DOCUMENTS REFERENCED THEREIN. ANY DEVELOPER, CONTRACTOR, ENGINEER, OR OWNER INVOLVED IN THE DESIGN AND/OR CONSTRUCTION OF PUBLIC FACILITIES WITHIN LEESBURG'S JURISDICTION, IS EXPECTED TO BE FAMILIAR WITH THE INFORMATION IN THE DESIGN AND CONSTRUCTION STANDARDS MANUAL.

3. ALL ELEVATIONS MUST BE BASED ON USGS SURVEY DATUM AND THE SOURCE INDICATED ON THE PLANS.

4. HORIZONTAL AND VERTICAL CONTROL SURVEYS WERE RUN ON THE GROUND BY THE FOLLOWING FIRM:
   RICE ASSOCIATES
   DATE: 08/2018 METHOD: CONTROL FOR THE PROJECT WAS ESTABLISHED ON THE GROUND BY GPS SURVEY, CONVENTIONAL TRAVERSE WITH A CLOSURE GREATER THAN 1 PART IN 20,000, AND A CONVENTIONAL LEVEL LOOP USING A DIGITAL LEVEL.

5. TOPOGRAPHIC MAPPING SHOWN HEREON WAS PERFORMED BY THE FOLLOWING FIRM:
   RICE ASSOCIATES
   DATE: 08/2018 METHOD: THE TOPOGRAPHIC SURVEY WAS COMPLETED ON THE GROUND USING CONVENTIONAL SURVEY METHODS

6. THE MERIDIAN FOR SURVEY BEARINGS SHOWN HEREON IS VA. STATE GRID NORTH AND WAS ESTABLISHED AS FOLLOWS:
   GPS STATIC OBSERVATIONS

7. COORDINATES OF POINTS OR MONUMENTS, IF SHOWN HEREON, ARE COORDINATES OF THE ESTABLISHED AS FOLLOWS:
   COORDINATES ARE BASED ON THE PROJECT CONTROL ESTABLISHED AS NOTED IN NOTES 4 AND 6.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROCURE ALL APPLICABLE PERMITS, LICENSES, AND CERTIFICATES RELATIVE TO THE TRADES TO COMPLETE THE PROJECT AND FOR THE USE OF SUCH WORK WHEN COMPLETED. COMPLIANCE SHALL BE AT ALL LEVELS: FEDERAL, STATE, COUNTY, AND LOCAL RELATING TO THE PERFORMANCE OF HIS WORK.

C. SOLID WASTE -

1. METHOD OF COLLECTION: N/A
2. IF OTHER THAN CURB-SIDE PICKUP, CONTINUE: N/A
3. NUMBER AND SIZE OF CONTAINERS: N/A
4. TYPE OF CONTAINER: N/A
5. METHODOLOGY USE TO COMPUTE SIZE: N/A
6. FREQUENCY OF COLLECTION: N/A TIMES/WEEK (MINIMUM OF 2 TIMES/WEEK)

D. SANITARY SEWERS -

1. SEWER SHED: N/A
2. GRAVITY SYSTEM: N/A PUMPED: N/A
3. PUMP STATION PROPOSED: N/A
4. OFF-SITE SEWER EXTENSIONS REQUIRED: N/A
5. REQUIRED LENGTH OF OFF-SITE SEWER: N/A
6. ALL SANITARY SEWER AND APPURTENANCE INSTALLATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN'S DESIGN AND CONSTRUCTION STANDARDS MANUAL AND THE DOCUMENTS REFERENCED THEREIN.

E. WATER SYSTEM

1. DOMESTIC WORKING PRESSURE AT HIGHEST FIXTURES: ___ psi
2. ALL WATER MAIN AND APPURTENANCE INSTALLATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN'S DESIGN AND CONSTRUCTION STANDARDS MANUAL AND THE DOCUMENTS REFERENCED THEREIN.
3. WATER MAINS SHALL BE DESIGNED IN CONFORMANCE WITH THE CURRENT EDITION OF THE WATER WORKS REGULATIONS OF THE VIRGINIA STATE BOARD OF HEALTH.
4. NO EXISTING WATER MAIN VALVES ARE TO BE OPENED OR CLOSED PRIOR TO NOTIFICATION OF THE TOWN OF LEESBURG UTILITY DEPARTMENT, 703-737-7075

F. FIRE FLOW -

1. REQUIRED FIRE FLOW = N/A gpm
2. AVAILABLE FIRE FLOW = N/A gpm
3. FULL SPRINKLER SYSTEM: N/A
4. PARTIAL SPRINKLER SYSTEM: N/A
5. BOCA BUILDING CLASS UTILIZED: N/A

G. CURRENT SITE INFORMATION -

1. TAX MAP NUMBER: N/A
2. LOT AND/OR PARCEL NUMBER: N/A
3. ZONING: N/A
4. DATE OF CURRENT ZONING: N/A
5. RESOLUTION NUMBER: N/A
6. REZONING NUMBER: N/A
7. TOTAL AREA: N/A
8. OPEN SPACE AREA: N/A
9. STREET AREA: N/A
10. NUMBER OF LOTS CREATED BY SUBDIVISION: N/A

H. PARKING TABULATIONS -

1. SPACES REQUIRED: N/A
2. SPACES PROVIDED: N/A
3.

NO	TYPE
N/A	REGULAR
N/A	PARALLEL
N/A	HANDICAPPED
N/A	PARALLEL HC

4. HISTORIC DISTRICT PARKING FEE AT $ N/A PER SPACE.
5. N/A SPACES REQUIRED = $ N/A TOTAL

I. STORM SEWER AND CULVERTS

1. ALL STORM SEWER AND CULVERT INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE TOWN'S DESIGN AND CONSTRUCTION STANDARDS MANUAL AND THE DOCUMENTS REFERENCED THEREIN.

J. STORMWATER MANAGEMENT

1. WATERSHED: PL16-Town Branch and PL05-Big Spring Branch
2. DETENTION PROVIDED FOR:
   2 - YEAR PL05-Big Spring Branch
   10 - YEAR PL05-Big Spring Branch
   OTHER PL05- 1 Year STORM EVENT
3. ADEQUATE CHANNEL:
   2 - YEAR PL16-Town Branch
   10 - YEAR PL16-Town Branch
   25 - YEAR
   OTHER

K. BMP REQUIRED

YES
NO X

L. BEST MANAGEMENT PRACTICES (BMP)

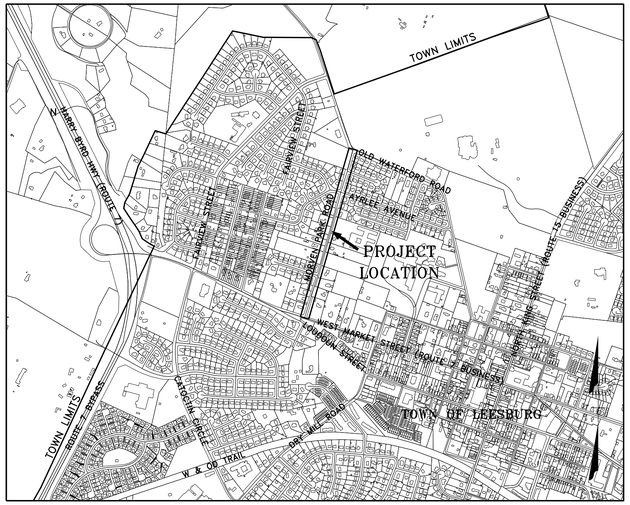
BMP TYPE	TOTAL SITE AREA (AC)	TOTAL PRE-EXIST. IMPERV. AREA (AC)	TOTAL POST IMPERV. AREA (AC)	TOTAL PERV. AREA (AC)	ACRES TREATED (AC)	IMPERV. AREA TREATED (AC)	PERV. AREA TREATED (AC)	LOC. (VA STATE PLANE COORDINATES (83 NAD)) N	E	STRUCT. NO. /SIZE
N/A										

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS.

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

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

CAPITAL IMPROVEMENT PROGRAM



VICINITY MAP
SCALE: 1"=1,000'

STUDIES, REFERRALS AND APPROVALS REQUIRED PRIOR TO PLAN APPROVAL

AGENCY INFORMATION	REQ.	NOT REQ.	TOL ID #	COMMENTS
1. VA MARINE RESOURCE COMMISSION		X		
A. CORPS OF ENGINEERS		X		
B. DEPT. OF ENVIRONMENTAL QUALITY		X		
2. FEMA		X		
3. FAA		X		
4. VDOT		X		
5. VA DEPT. OF HEALTH - WATER		X		
6. VA DEQ- SEWER		X		
7. LOUDOUN COUNTY	X			
A. HEALTH DEPARTMENT		X		
B. FIRE MARSHAL		X		
C. E & S CONTROLS	X			
D. BUILDING PERMITS		X		
8. FLOOD PLAIN STUDY		X		
9. TRAFFIC STUDY		X		
10. SOILS REPORT	X			
11. ON SITE EASEMENTS		X		
A. LEGAL REVIEW I OR II		X		
B. TECHNICAL REVIEW		X		
C. RECORDED		X		
12. OFF SITE EASEMENTS	X			
A. LEGAL REVIEW I OR II	X			
B. TECHNICAL REVIEW	X			
C. RECORDED	X			
13. LETTERS OF PERMISSION		X		
14. BOARD OF ARCH. REVIEW		X		
15. VDOT TRAFFIC STUDY REVIEW		X		
16. BOARD OF ZONING APPEALS		X		

ALL COMMENTS IN RED BY TOWN OF LEESBURG 7/29/2021

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF LEESBURG DESIGN AND CONSTRUCTION STANDARDS MANUAL (DCSM), VDOT'S 2020 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.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, IS FILED AT THE TOWN OF LEESBURG DEPARTMENT OF CAPITAL IMPROVEMENTS. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.

CONTACTS

TOWN OF LEESBURG		(703) 779-4007

UTILITY CONTACTS

GAS	WASHINGTON GAS	(703) 750-1000
ELECTRIC	NORTHERN VIRGINIA ELECTRIC COOPERATIVE (NOVEC)	(703) 392-1579
	DOMINION VIRGINA POWER	(804) 771-3655
TELEPHONE	VERIZON	(703) 886-6490
TELEVISION CABLE	COMCAST	(434) 951-3761
LO. CO. DIT	LOUDOUN COUNTY	(703) 771-5659

SHEET INDEX

SHEET NO.	TITLE
1	TITLE SHEET
1B(1)-1B(2)	CONSTRUCTION ALIGNMENT DATA
1C(1)-1C(3)	TRANSPORTATION MANAGEMENT PLAN
8(1)-8(3)	STORM DRAIN PROFILES
II(1)	UTILITY ~~INDEX OF SHEETS~~, DETAILS AND NOTES
II(2)	UTILITY DETAILS
II(3)	UTILITY DETAILS
II(4)	PLAN AND PROFILE
II(5)	PLAN AND PROFILE
II(6)	PLAN AND PROFILE
II(7)	PLAN AND PROFILE
II(8)	PLAN AND PROFILE
II(9)	WATER SERVICE RECONSTRUCTION PLAN
II(10)	PROFILES
II(11)	UTILITY - SUGGESTED SEQUENCE OF CONSTRUCTION

REVISIONS PRIOR TO APPROVAL

DATE	DESCRIPTION

VARIATIONS OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS OR MODIFICATIONS OF THE ZONING

ID. NO.	TL REF #	CITATION	PLAN SHEET	DATE APPROVED

MODIFICATION OR INTERPRETATION OF DCSM BY THE DIRECTOR OF PLAN REVIEW

ID. NO.	TL REF #	CITATION	PLAN SHEET	DATE APPROVED
1				
2				

TOWN OF LEESBURG APPROVALS

Public Works and Capital Projects
Director Date

Office of Capital Projects
Manager Date

Capital Projects
Land Acquisition Manager Date

Zoning
Zoning Administrator Date

Utilities
Director Date

FINAL PLANS

CAPITAL IMPROVEMENTS PROGRAM

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS – PHASE 1

OWNER: TOWN OF LEESBURG, LOUDOUN COUNTY, VA

ADDRESS: 25 WEST MARKET STREET, LEESBURG, VA – 20176
Ph. # (703)-737-6067

ENGINEER: WHITMAN REQUARDT AND ASSOCIATES, LLP

REVISIONS TO APPROVED DRAWINGS

NO.	DATE	SHEETS REVISED	COMMENTS	NO.	DATE	SHEETS REVISED	COMMENTS

ASSOCIATED PLAN
C.I.P. NUMBER: TLCI-2019-0003
VDOT PROJ. NO. N/A
2021-0004
TOWN NUMBER:

Sheet 1

WRA
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033
ENGINEER:
PROJECT MANAGER: ANNE GEIGER. P.E.

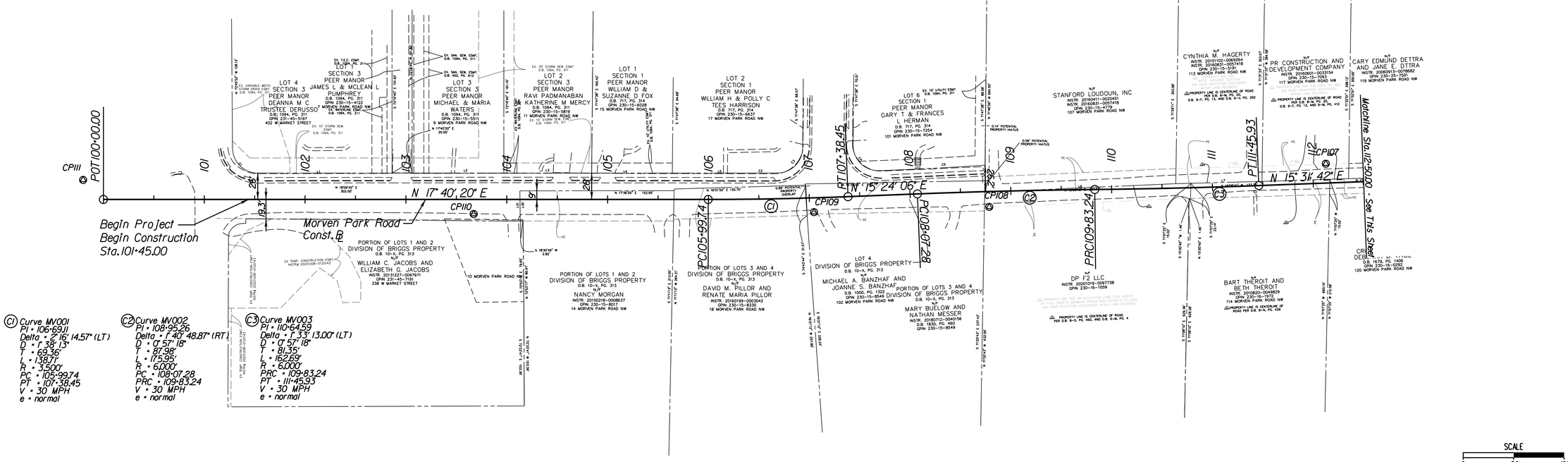
PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS PHASE 1 – WATER MAIN RELOCATION FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW

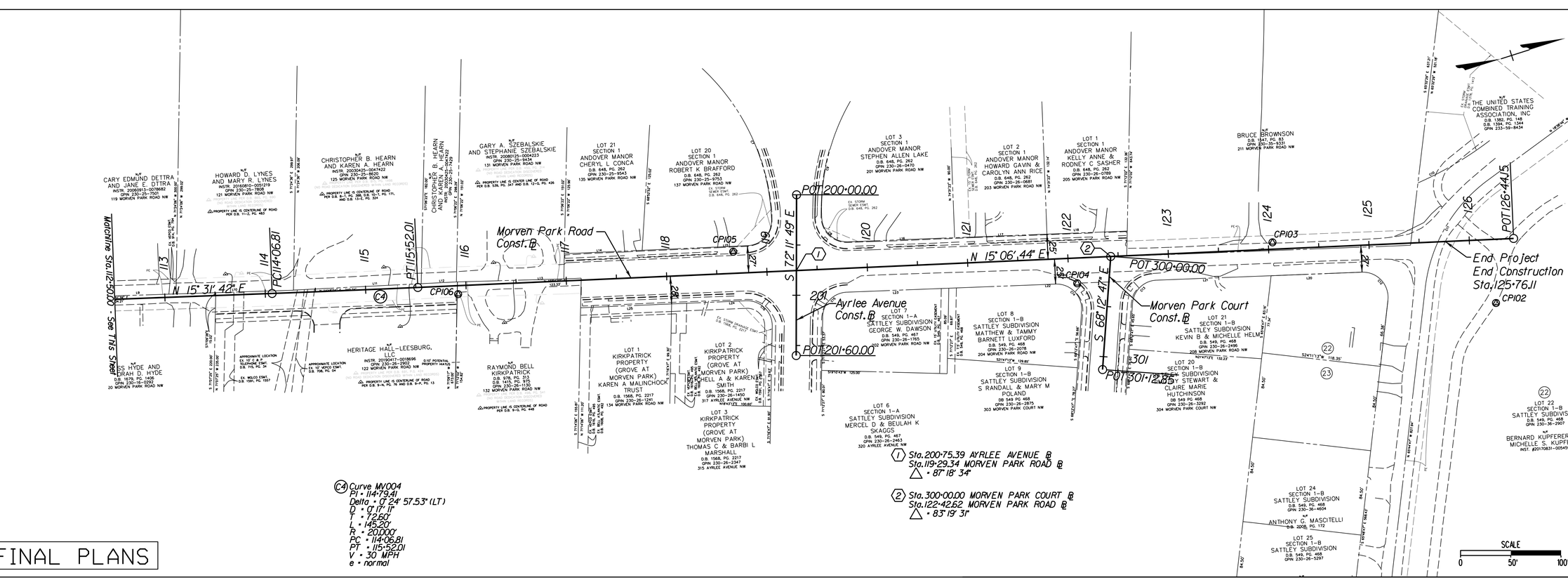
TITLE SHEET

Town of Leesburg
Loudoun County, Virginia

SUBMISSION DATE: June 2021

CONSTRUCTION ALIGNMENT DATA SHEET





FINAL PLANS

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER, P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS PHASE 1 – WATER MAIN RELOCATION FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW

CONSTRUCTION ALIGNMENT DATA SHEET

Town of Leesburg

SUBMISSION DATE: June 2021

ASSOCIATED PLAN: 2021-0004

C.I.P. NUMBER: TLC-2019-0003

VDOT PROJ. NO.: N/A

TOWN NUMBER:

Sheet 1B(1)

Loudoun County, Virginia

CONSTRUCTION ALIGNMENT DATA SHEET

<* 1 DESCRIBE CHAIN MVPBL *Morven Park Road*

Chain MVPBL contains:
MV001 CUR MV001 CUR MV002 CUR MV003 CUR MV004 MV010

Beginning chain MVPBL description
==========

Point MV001 N 7,091,464.2236 E 11,745,540.0544 Sta 100+00.00

Course from MV001 to PC MV001 N 17° 40' 20.45" E Dist 599.7417

Curve Data

Curve MV001
P.I. Station 106+69.11 N 7,092,101.7530 E 11,745,743.1770
Delta = 2° 16' 14.57" (LT)
Degree = 1° 38' 13.28"
Tangent = 69.3641
Length = 138.7100
Radius = 3,500.0000
External = 0.6873
Long Chord = 138.7009
Mid. Ord. = 0.6871
P.C. Station 105+99.74 N 7,092,035.6624 E 11,745,722.1199
P.T. Station 107+38.45 N 7,092,168.6261 E 11,745,761.5990
C.C. N 7,093,098.1686 E 11,742,387.2915
Back = N 17° 40' 20.45" E
Ahead = N 15° 24' 05.88" E
Chord Bear = N 16° 32' 13.16" E

Course from PT MV001 to PC MV002 N 15° 24' 05.88" E Dist 68.8295

Curve Data

Curve MV002
P.I. Station 108+95.26 N 7,092,319.8077 E 11,745,803.2460
Delta = 1° 40' 48.87" (RT)
Degree = 0° 57' 17.75"
Tangent = 87.9836
Length = 175.9546
Radius = 6,000.0000
External = 0.6451
Long Chord = 175.9483
Mid. Ord. = 0.6450
P.C. Station 108+07.28 N 7,092,234.9838 E 11,745,779.8790
P.T. Station 109+83.24 N 7,092,403.9100 E 11,745,829.0901
C.C. N 7,090,641.4823 E 11,751,564.4060
Back = N 15° 24' 05.88" E
Ahead = N 17° 04' 54.75" E
Chord Bear = N 16° 14' 30.31" E

Curve Data

Curve MV003
P.I. Station 110+64.59 N 7,092,481.6731 E 11,745,852.9862
Delta = 1° 33' 13.00" (LT)
Degree = 0° 57' 17.75"
Tangent = 81.3518
Length = 162.6937
Radius = 6,000.0000
External = 0.5515
Long Chord = 162.6887
Mid. Ord. = 0.5514
P.C. Station 109+83.24 N 7,092,403.9100 E 11,745,829.0901
P.T. Station 111+45.93 N 7,092,560.0554 E 11,745,874.7652
C.C. N 7,094,166.3378 E 11,740,093.7742
Back = N 17° 04' 54.75" E
Ahead = N 15° 31' 41.75" E
Chord Bear = N 16° 18' 18.25" E

Course from PT MV003 to PC MV004 N 15° 31' 41.75" E Dist 260.8766

Curve Data

Curve MV004
P.I. Station 114+79.41 N 7,092,881.3622 E 11,745,964.0422
Delta = 0° 24' 57.53" (LT)
Degree = 0° 17' 11.32"
Tangent = 72.6027
Length = 145.2048
Radius = 20,000.0000
External = 0.1318
Long Chord = 145.2045
Mid. Ord. = 0.1318
P.C. Station 114+06.81 N 7,092,811.4096 E 11,745,944.6054
P.T. Station 115+52.01 N 7,092,951.4541 E 11,745,982.9705
C.C. N 7,098,165.6840 E 11,726,674.6354
Back = N 15° 31' 41.75" E
Ahead = N 15° 06' 44.22" E
Chord Bear = N 15° 19' 12.99" E

Course from PT MV004 to MV010 N 15° 06' 44.22" E Dist 1,092.1374

Point MV010 N 7,094,005.8218 E 11,746,267.7033 Sta 126+44.15

==========
Ending chain MVPBL description

<* 1 DESCRIBE CHAIN AYRLEE *Ayrlee Avenue*

Chain AYRLEE contains:
AYRL001 AYRL002

Beginning chain AYRLEE description
==========

Point AYRL001 N 7,093,338.7834 E 11,746,009.5615 Sta 200+00.00

Course from AYRL001 to AYRL002 S 72° 11' 49.39" E Dist 160.0000

Point AYRL002 N 7,093,289.8643 E 11,746,161.8997 Sta 201+60.00

==========
Ending chain AYRLEE description

<* 2 DESCRIBE CHAIN MPCRT *Morven Park Court*

Chain MPCRT contains:
MPCT001 MPCT002

Beginning chain MPCRT description
Description: AYRL001 AYRL002
==========

Point MPCT001 N 7,093,618.1801 E 11,746,163.0204 Sta 300+00.00

Course from MPCT001 to MPCT002 S 68° 12' 46.55" E Dist 112.8541

Point MPCT002 N 7,093,576.2933 E 11,746,267.8132 Sta 301+12.85

==========
Ending chain MPCRT description

FINAL PLANS

WRA
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
CONSTRUCTION ALIGNMENT DATA SHEET
Town of Leesburg
Loudoun County, Virginia

SUBMISSION DATE: June 2021

ASSOCIATED PLAN 2021-0004
C.I.P. NUMBER: TLCI-2019-0003
VDOT PROJ. NO. N/A
TOWN NUMBER:

Sheet 1B(2)

TRANSPORTATION MANAGEMENT PLAN

PROJECT DESCRIPTION

THIS TASK CONSISTS OF THE CONSTRUCTION OF THE WATER MAIN RELOCATION ALONG MORVEN PARK ROAD NW BETWEEN WEST MARKET STREET AND OLD WATERFORD ROAD. THE PROPOSED IMPROVEMENTS INCLUDE: WATER MAIN RELCOATION, WATER SERVICE CONNECTIONS, AS WELL AS CONNECTIONS TO THE EXISTING WATER MAINS AT THE INTERSECTIONS WITH AYRLEE AVENUE AND MORVEN PARK COURT.

WITHIN THE PROJECT LIMITS, MORVEN PARK ROAD NW IS AN URBAN LOCAL ROADWAY WITH A POSTED SPEED LIMIT OF 25 MPH. IN THE PROJECT AREA, MORVEN PARK ROAD NW HAS ONE NORTHBOUND LANE AND ONE SOUTHBOUND LANE. TRAVELERS PRIMARILY INCLUDE RESIDENTS, AND LOCAL TRAFFIC. IMPROVEMENTS WILL OCCUR WITHIN THE EXISTING ROADWAY, PRIMARILY ALONG THE SOUTHBOUND LANE. THE TRANSPORTATION MANAGEMENT PLAN SHALL BE UTILIZED TO MAINTAIN A MINIMUM OF ONE TRAFFIC LANE IN EACH DIRECTION.

ALLOWABLE HOURS FOR CLOSURES

~~THE CONTRACTOR SHOULD MAKE EVERY EFFORT TO MAINTAIN THE EXISTING TRAVEL LANES OPEN TO TRAFFIC AT ALL TIMES. LANE CLOSURES FOR CONSTRUCTION SHALL BE PERMITTED DURING THE FOLLOWING HOURS:~~

MORVEN PARK ROAD NW URBAN LOCAL STREET	
	SINGLE LANE CLOSURES* OR SHOULDER
MONDAY TO THURSDAY	9:00AM TO 3:30PM
	9:00PM TO 5:00AM
FRIDAY	9:00AM TO 2:00PM
FRIDAY TO SATURDAY	10:00PM TO 9:00AM
SATURDAY TO SUNDAY	9:00PM TO 9:00AM
SUNDAY TO MONDAY	10:00PM TO 5:00AM

SEE INSTRUCTIONS TO BIDDERS FORM FOR THIS INFORMATION

~~* SINGLE-LANE CLOSURES ARE ONLY PERMITTED FOR MULTIPLE-LANE ROADWAYS.~~

~~EXCEPT AS NECESSARY TO MAINTAIN TRAFFIC, WORK SHALL NOT BE PERFORMED ON THE FOLLOWING HOLIDAYS WITHOUT THE APPROVAL OF THE TOWN:~~
~~NEW YEAR'S DAY, MARTIN LUTHER KING, JR. DAY, LEE JACKSON DAY, PRESIDENTS DAY, EASTER, MEMORIAL DAY, JUNETEENTH, INDEPENDENCE DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, AND CHRISTMAS DAY. LANE CLOSURES WILL NOT BE PERMITTED FROM NOON THE DAY BEFORE A HOLIDAY UNTIL NOON THE DAY AFTER A HOLIDAY UNLESS OTHERWISE APPROVED BY THE TOWN. WHEN A HOLIDAY FALLS ON A FRIDAY, LANE CLOSURES ARE NOT PERMITTED FROM NOON THURSDAY UNTIL NOON ON MONDAY. WHEN THE HOLIDAY FALLS ON MONDAY, LANE CLOSURES ARE NOT PERMITTED FROM NOON FRIDAY UNTIL NOON ON TUESDAY. ADDITIONAL STATE HOLIDAYS MAY BE ADDED TO THIS LIST AT THE DIRECTION OF THE TOWN.~~

~~ACCESS TO AND FROM ALL ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.~~

~~THE CONTRACTOR SHALL CONSULT WITH THE TOWN FOR ANY PLANNED CLOSURE SCENARIO NOT ANTICIPATED BY THIS TRANSPORTATION MANAGEMENT PLAN.~~

PUBLIC COMMUNICATIONS PLAN

THE CONTRACTOR SHALL SUBMIT A REQUEST FOR ALL LANE CLOSURES TO THE TOWN 10 DAYS IN ADVANCE OF THE CLOSURE. THE TOWN MAY COMMUNICATE WITH THE TOWN COUNCIL, SCHOOLS IN CLOSE PROXIMITY, EMERGENCY SERVICES, VDOT, AND THE TRAFFIC OPERATIONS CENTER, AS DETERMINED APPROPRIATE.

CONTRACTOR SHALL PROVIDE INTERMEDIATE FLAGGERS TO ALLOW ACCESS OUT OF DRIVEWAYS WITHIN WORKZONE.

SEQUENCE OF CONSTRUCTION

~~ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.~~

THE CONTRACTOR SHALL FOLLOW THE VIRGINIA WORK AREA PROTECTION MANUAL (WAPM) TO CONSTRUCT THE WATER MAIN RELOCATION, WATER SERVICE CONNECTIONS, CONNECTIONS AT THE INTERSECTIONS AND PAVEMENT RECONSTRUCTION. INSTALLATION OF SIGNING FOR PROJECT LIMITS SHALL BE IN ACCORDANCE WITH FIGURE TTC-53.0 OF THE VIRGINIA WAPM. CONSTRUCTION MAY NOT BE SIMULTANEOUSLY PERFORMED ON BOTH SIDES OF TRAFFIC.

THIS WORK WILL REQUIRE A LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS (FIGURE TTC-23.1).

GENERAL NOTES

1. THE TMP FOR THIS PROJECT IS CATEGORIZED AS TYPE A, CATEGORY 1.
2. UNLESS OTHERWISE APPROVED OR DIRECTED BY THE TOWN, THE CONTRACTOR SHALL PLAN AND PROSECUTE THE WORK IN ACCORDANCE WITH THE WAPM AND THIS TRANSPORTATION MANAGEMENT PLAN.
3. IF THE CONTRACTOR DEVIATES FROM THE APPROVED TMP/MOT PLAN, THEY ARE REQUIRED TO SUBMIT A NEW TMP/MOT PLAN FOR REVIEW AND APPROVAL. WORK WILL ONLY BE APPROVED UNDER THE APPROVED TMP/MOT PLAN UNTIL THE NEW TMP/MOT PLAN IS APPROVED.
4. THE TMP/MOT, DURING CONSTRUCTION, SHALL BE IN ACCORDANCE WITH THE VDOT ROAD AND BRIDGE SPECIFICATIONS DATED 2020, THE LATEST REVISION TO THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL DATED SEPTEMBER 2019, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION, AND THE 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, REVISION 1 DATED SEPTEMBER 2013.
5. FOR DETAILS OF PERMANENT CONSTRUCTION, REFER TO THE CONSTRUCTION PLANS (SHEETS 11(1)-11(10).
6. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE TOWN FOR APPROVAL. THE CONTRACTOR SHOULD REFER TO VIRGINIA'S WORK AREA PROTECTION MANUAL, SPECIFICALLY THE FOLLOWING STANDARDS:

   TTC-23.2 – LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS

   TTC-26.2 – LANE CLOSURE OPERATION – NEAR SIDE OF AN INTERSECTION

   TTC-27.2 – LANE CLOSURE OPERATION – FAR SIDE OF AN INTERSECTION

   TTC-28.2 – LANE CLOSURE OPERATION – IN AN INTERSECTION

   TTC-35.1 – SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION

   TTC-53.0 – SIGNING FOR PROJECT LIMITS
7. A MINIMUM OF ONE TRAFFIC LANE ~~IN EACH DIRECTION~~ ON MORVEN PARK ROAD SHALL BE OPEN TO TRAFFIC ~~AT ALL TIMES.~~ FOR LOCAL TRAFFIC DURING CONSTRUCTION AND TWO-WAY TRAFFIC (ONE LANE IN EACH DIRECTION) SHALL BE MAINTAINED WHEN CONTRACTOR IS NOT PRESENT.
8. PAVEMENT MARKINGS IN CONFLICT WITH THE LANE CONFIGURATIONS DURING CONSTRUCTION SHALL BE COVERED WITH NON-REFLECTIVE REMOVABLE BLACK TAPE, AND RESTRIPED AS NECESSARY.
9. CONTRACTOR SHALL MAINTAIN SAFE PASSAGE FOR PEDESTRIANS AND BICYCLISTS DURING CONSTRUCTION WHERE EXISTING FACILITIES ARE PRESENT.
10. THE CONTRACTOR SHALL MAINTAIN ALL SIGNAGE WITHIN THE LIMITS OF CONSTRUCTION, SHOWN OR OTHERWISE, UNLESS DIRECTED BY THE TOWN. IF REMOVAL IS ALLOWED, CONTRACTOR SHALL STORE THE SIGNS PER TOWN AND VDOT STANDARDS, AND IF DIRECTED, REPLACE THEM AT THE COMPLETION OF THE PROJECT.
11. CONTRACTOR IS TO ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. ADDITIONAL TEMPORARY MEASURES MAY BE NEEDED TO FACILITATE PROPER POSITIVE DRAINAGE.
12. CONTRACTOR SHALL SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT WATER, SEWER, CABLE, POWER, AND ANY OVERHANGING UTILITY AND ANY UNDERGROUND UTILITY SERVICES ~~WILL NOT BE INTERRUPTED.~~ THE COST OF ANY TEMPORARY CONNECTION, IN PART OR WHOLE, SHALL BE INCIDENTAL TO THE WATER MAIN RELOCATION/CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS UTILITY ADJUSTEMENTS/RELOCATION ACTIVITIES WITH THE OWNER OF THE UTILITY. WILL BE MINIMIZED AND PROPERTY OWNERS ARE TO BE GIVEN AT LEAST 48 HOURS NOTICE.
13. DISPOSAL SITE AND STAGING AREA LOCATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO WORK SHALL BE PERFORMED UNTIL SUCH SITES HAVE BEEN ACCEPTED BY THE TOWN.
14. TEMPORARY LANED WIDTHS SHALL NOT BE LESS THAN 10 FEET.
15. EQUIPMENT AND/OR MATERIALS SHALL NOT BE STORED WITHIN THE ESTABLISHED CLEAR ZONE OF EITHER THE TRAVEL LANES, AND/OR THE DEFLECTION ZONE OF PHYSICAL BARRIERS USED DURING CONSTRUCTION.
16. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR MAINTENANCE OF TRAFFIC ARE TO BE INSTALLED, MAINTAINED AND REMOVED BY THE CONTRACTOR.
17. WITHIN 24 HOURS PRIOR TO CLOSING ANY ROADS, THE CONTRACTOR SHALL NOTIFY THE TOWN OF LEESBURG'S POLICE DISPATTCHERS AND INFORM THEM OF THE CLOSURE, ITS DURATION, AND THE DETOUR ROUTE TO BE USED FOR ACCESS.
18. DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH THE WORK ZONE. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE LUM SUM PRICE FOR MAINTENANCE OF TRAFFIC.
19. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE AFFECTED PROPERTY OWNER SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE OF SUCH ACTIVITIES, AND THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORK DAY.

GENERAL NOTES cont.

20. ANY EXCAVATION WHICH ARE SPECIFICALLY APPROVED BY THE TOWN TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED WITH TRAFFIC BARRIER SERVICE CONCRETE AND IMPACT ATTENUATORS IN ACCORDANCE WITH THE WAPM AND AS APPROVED BY THE TOWN.
21. PERSONAL VEHICLES OF THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED IN THE TRAVELED WAY OF ANY ROADWAY AT ANY TIME, INCLUDING ANY ROADWAY SECTION CLOSED TO TRAFFIC.
22. ALL TRAFFIC LANES AFFECTED BY CONSTRUCTION SHALL BE OPENED TO TRAFFIC AT THE CONCLUSION OF EACH WORK DAY EXCEPT WHERE DETOURS HAVE BEEN ESTABLISHED.
23. NO WORK SHALL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PRIOR APPROVAL OF THE TOWN.

SEQUENCE OF CONSTRUCTION

~~ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.~~

FOR THE DETAILED SUGGESTED SEQUENCE OF CONSTRUCTION SEE PLAN SHEET 11(1).

THE CONTRACTOR SHALL PERFORM/CONSTRUCT THE WATER MAIN RELOCATION AND SHALL NOT BE SIMULTANEOUSLY PERFORMED ON BOTH SIDES OF TRAFFIC.

DAILY WORK AREAS SHALL BE LIMITED TO APPROXIMATELY 200 FEET IN LENGTH OR AS DETERMINED BY THE CONTRACTOR AND APPROVED BY THE TOWN.

CONTRACTOR SHALL MAINTAIN ACCESS TO ENTRANCES AND DRIVEWAYS ANS SAFE PASSAGE FOR PEDESTRIANS/BICYCLISTS DURING CONSTRUCTION WHERE EXISTING FACILITIES ARE PRESENT.

CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN TEMPORARY BYPASS OPERATIONS WHILE CONSTRUCTION IS ONGOING.

DISTURBED PAVEMENT, PAVEMENT MARKINGS, CURB AND GUTTER, SIDEWALK, AND ENTRANCES SHALL BE REPLACED IN-KIND OR AS SHOWN ON THE CONSTRUCTION PLANS.

FINAL PLANS

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
TRANSPORTATION MANAGEMENT PLAN
Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: June 2021

ASSOCIATED PLAN

C.I.P. NUMBER: TLCI-2019-0003

VDOT PROJ. NO. N/A

TOWN NUMBER: ~~2021-0004~~

Sheet 1C(1)

TRANSPORTATION MANAGEMENT PLAN

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transitions, based on the posted speed limit and at least equal to or greater than the values in Table 6I1-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.*[1]

Standard:

4. **Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6F.99.**
5. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
6. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
7. **Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.**[1]
8. **A shadow vehicle with at least one high intensity amber rotating, flashing, or**[1] **oscillating light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A SLOW (W21-V10) sign[2] may be required in this area to give advance warning of the operation ahead by showing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the PTRS*[1] *should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

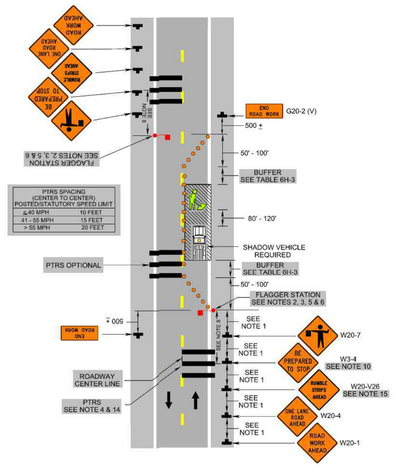
12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:[1]

14. **When used**[2]**, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

Typical Traffic Control
Lane Closure Operation – Near Side of an Intersection
(Figure TTC-26.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **Taper length (L) shall be at the following:**

Taper Length L											
Speed Limit (mph)	Lane Width (Feet)				Remarks	Speed Limit (mph)	Lane Width (Feet)				Remarks
	9	10	11	12			9	10	11	12	
25	95	105	115	125	L=SW/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=SW/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=SW/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=SW/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Shifting Tapers - full lane width shifts on Limited Access Highways shall use a 750' shifting taper for posted speeds less than 65 mph and a 1000' shifting taper for posted speeds equal to or greater than 65 mph. For all other roadways ⅔ L should be used.[2]											
Shoulder Taper = ⅓ L Minimum											

4. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing						
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'
*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.								

Guidance:

5. *If room permits, a shadow vehicle with at least one rotating, oscillating, or amber strobe light should be parked 80'-120' in advance of the first work crew.*

Standard:

6. **If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.**
7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or two high intensity amber flashing or oscillating**[1] **lights mounted on the vehicle and visible for 360**[0] **shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Standard:

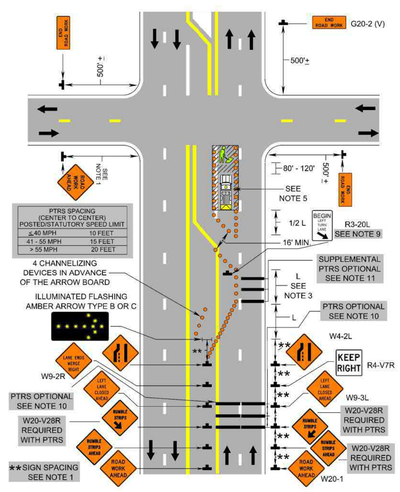
9. **If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.**

Option:[2]

10. PTRS may be used as shown in Figure TTC-17 and in accordances with Section 6F-99.[2]
11. The supplemental PTRS may be eliminated.[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure Operation - Near Side of an Intersection
(Figure TTC-26.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Typical Traffic Control
Lane Closure Operation – Far Side of an Intersection
(Figure TTC-27.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **Taper length (L) shall be at the following:**

Taper Length L											
Speed Limit (mph)	Lane Width (Feet)				Remarks	Speed Limit (mph)	Lane Width (Feet)				Remarks
	9	10	11	12			9	10	11	12	
25	95	105	115	125	L=SW/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=SW/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=SW/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=SW/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Shifting Tapers - full lane width shifts on Limited Access Highways shall use a 750' shifting taper for posted speeds less than 65 mph and a 1000' shifting taper for posted speeds equal to or greater than 65 mph. For all other roadways ⅔ L should be used.[2]											
Shoulder Taper = ⅓ L Minimum											

4. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing						
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'
*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.								

Guidance:

5. *If room permits, a shadow vehicle with at least one amber*[1] *rotating, oscillating, or high intensity flashing*[1] *light should be parked 80'-120' in advance of the first work crew.*

Standard:

6. **If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.**
7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating**[1] **lights mounted on the vehicle and visible for 360**[0] **shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Standard:

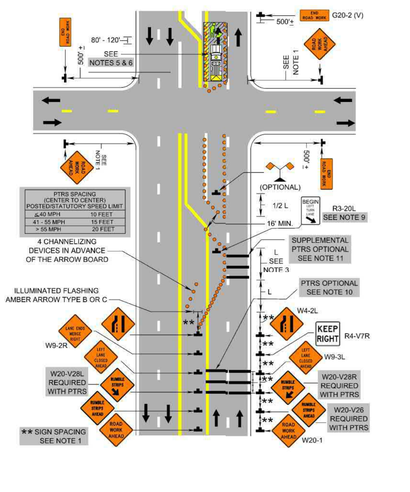
9. **If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.**[1]

Option:[2]

10. PTRS may be used as shown in Figure TTC-17 and in accordances with Section 6F-99.[2]
11. The supplemental PTRS may be eliminated.[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure Operation - Far Side of an Intersection
(Figure TTC-27.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

FINAL PLANS

ENGINEER:

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
TRANSPORTATION MANAGEMENT PLAN
Town of Leesburg
Loudoun County, Virginia

SUBMISSION DATE: June 2021

ASSOCIATED PLAN

C.I.P. NUMBER: ~~2021-0004~~ TLCI-2019-0003

VDOT PROJ. NO. N/A

TOWN NUMBER:

Sheet 1C(2)

TRANSPORTATION MANAGEMENT PLAN

Typical Traffic Control
Lane Closure Operation in an Intersection
(Figure TTC-28.2)
NOTES

Guidance:

1. *The control of traffic through the intersection in order of preference should be:*
   a. Obtain the services of law enforcement personnel.
   b. Detour the effective routes to other roads and streets as approved and directed by the District[1] Traffic Engineer.
   c. Place a state certified flagger on each leg of the intersection controlling a single lane of traffic.
   Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34.
2. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorist should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6I.07.*

Standard:

4. **Channelizing device spacing shall be on 20' centers or less.**
5. **PTRS shall be used as noted in Section 6F.99.[2]**

Guidance:

6. *If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscillating[1] light should be parked 80'-120' in advance of the first work crew.*

Standard:

7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating[1] lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

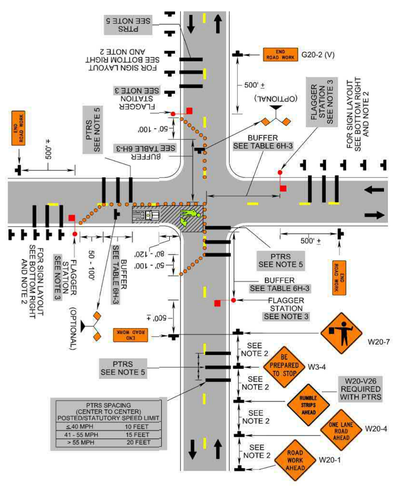
8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Support:

9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure Operation in an Intersection
(Figure TTC-28.2)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)
NOTES

Standard:

1. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**

Guidance:

2. *Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:

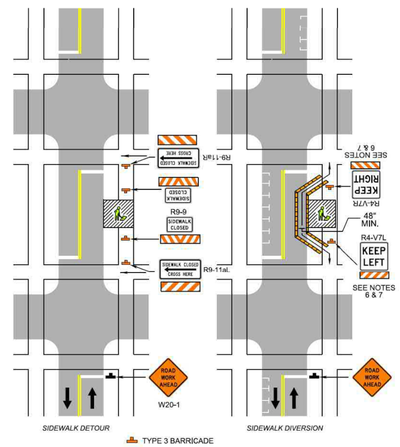
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

Standard:

8. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.[2]**

2: Revision 2 – 9/1/2019

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Signing for Project Limits
(Figure TTC-53.0)
NOTES

Support:

1. This layout depicts signing requirements for notifying motorist when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.

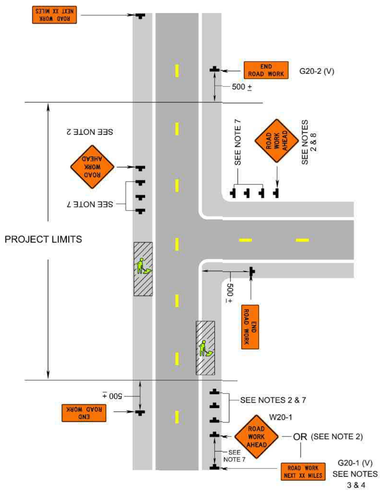
Standard:

2. **The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.**
3. **The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.**
4. **The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

6. *For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the first sign motorist encounter.*
7. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
8. *All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.*

Signing for Project Limits
(Figure TTC-53.0)



FINAL PLANS

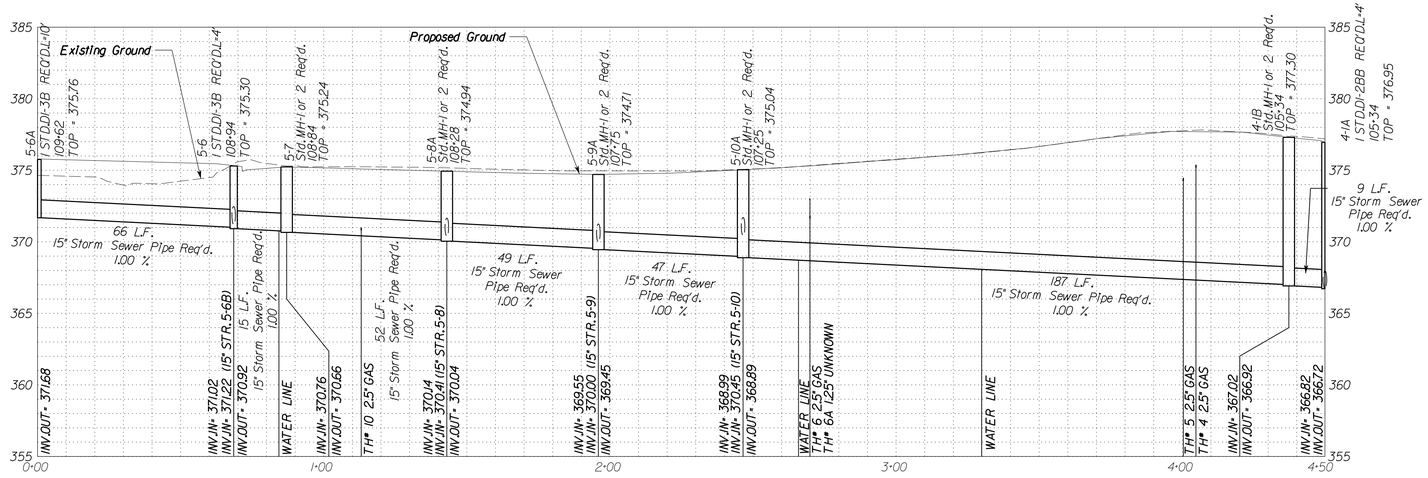
ENGINEER:
WRA
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033
PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
TRANSPORTATION MANAGEMENT PLAN
Town of Leesburg
Loudoun County, Virginia
SUBMISSION DATE: June 2021

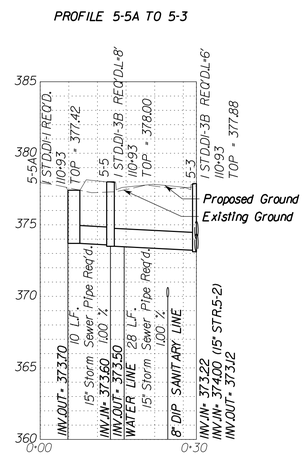
ASSOCIATED PLAN
C.I.P. NUMBER: TLCI-2019-0003
VDOT PROJ. NO. N/A
TOWN NUMBER: 2021-0004

Sheet
1C(3)

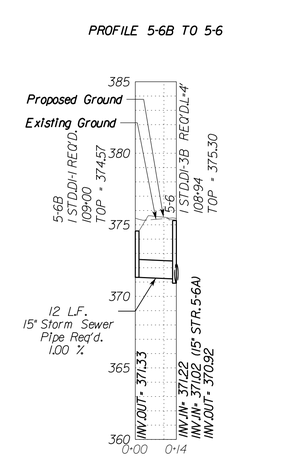
PROFILE 5-6A TO 4-1A



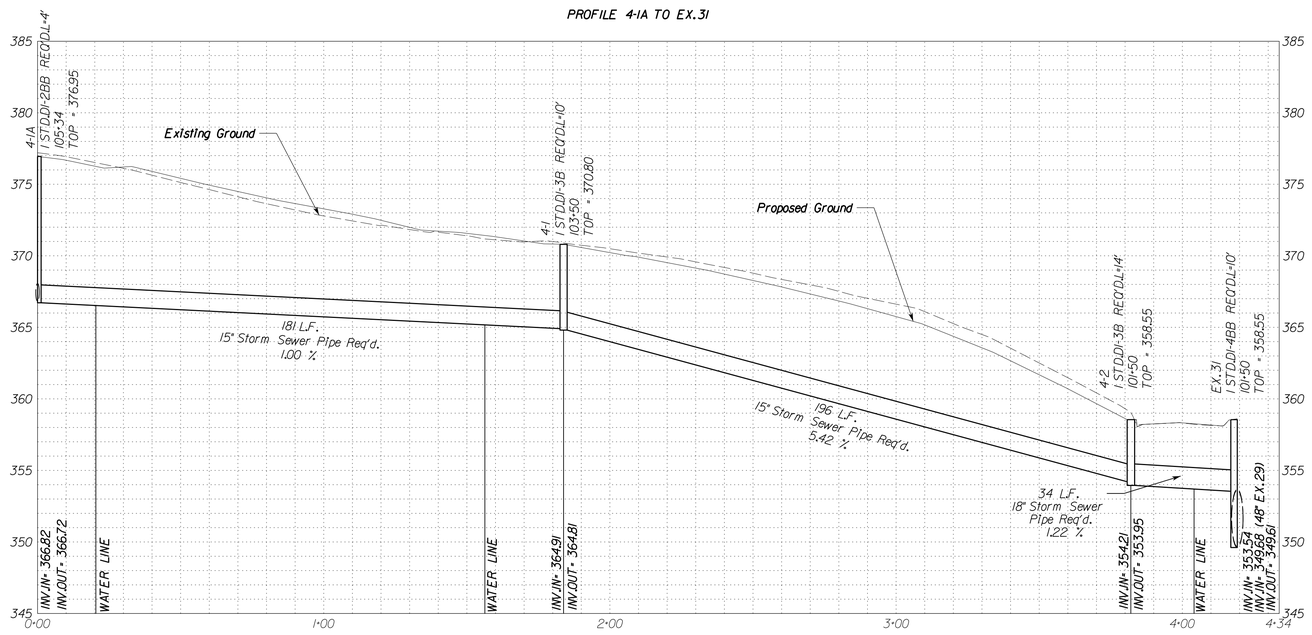
PROFILE 5-5A TO 5-3



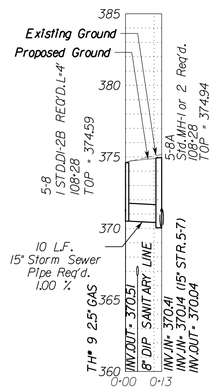
PROFILE 5-6B TO 5-6



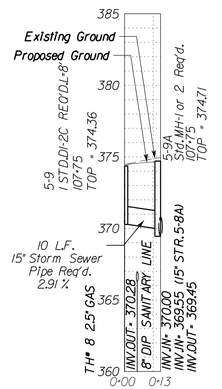
PROFILE 4-1A TO EX.31



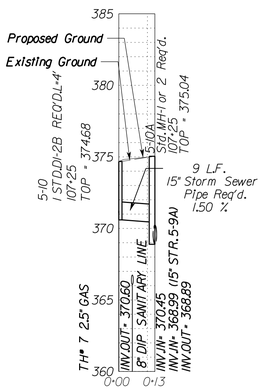
PROFILE 5-8 TO 5-8A



PROFILE 5-9 TO 5-9A



PROFILE 5-10 TO 5-10A



FINAL PLANS

FUTURE PHASE II PLANS -
FOR INFORMATION ONLY

WRA
Whitman, Requardt & Associates, LLP
12765 Flat Cables Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
STORM DRAIN PROFILES

Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: June 2021

ASSOCIATED PLAN

C.I.P. NUMBER: TLCI-2019-0003

VDOT PROJ. NO. N/A

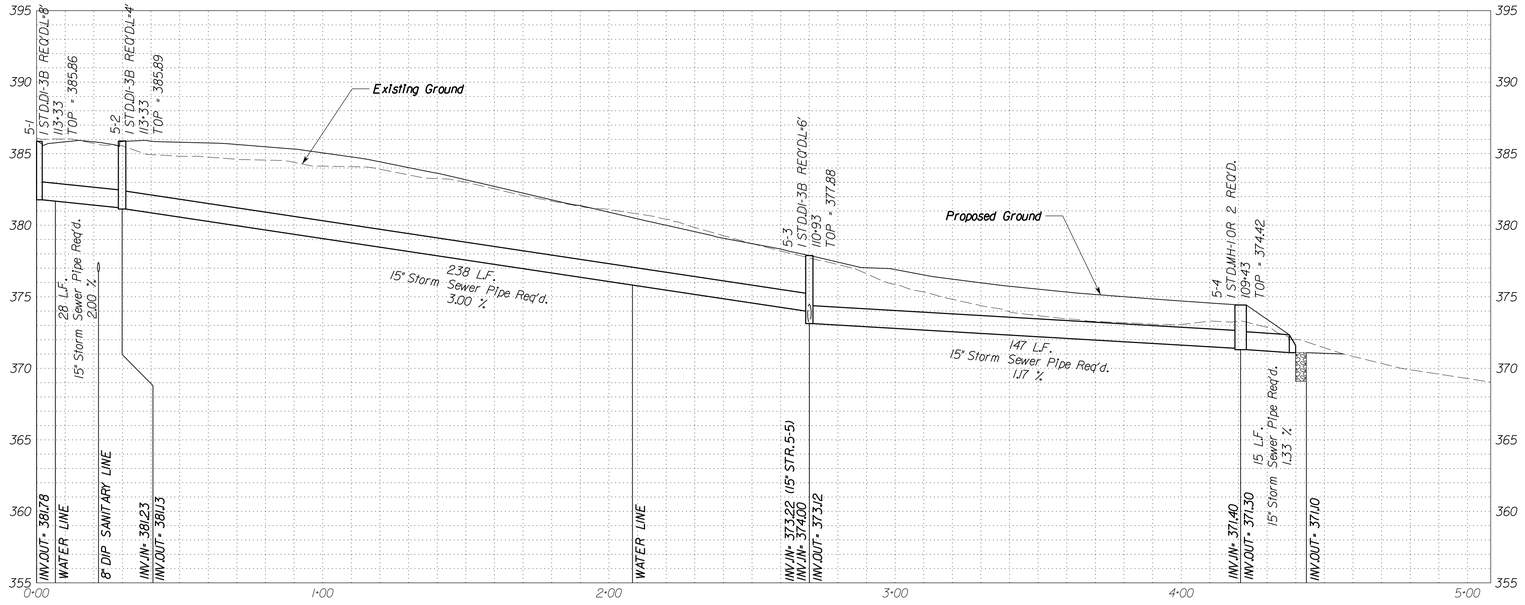
TOWN NUMBER: 2021-0004

Sheet 8(1)

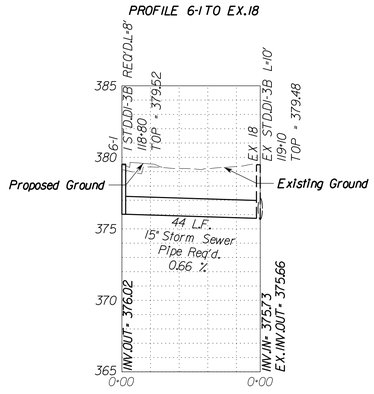
FINAL PLANS

FUTURE PHASE II PLANS - FOR INFORMATION ONLY

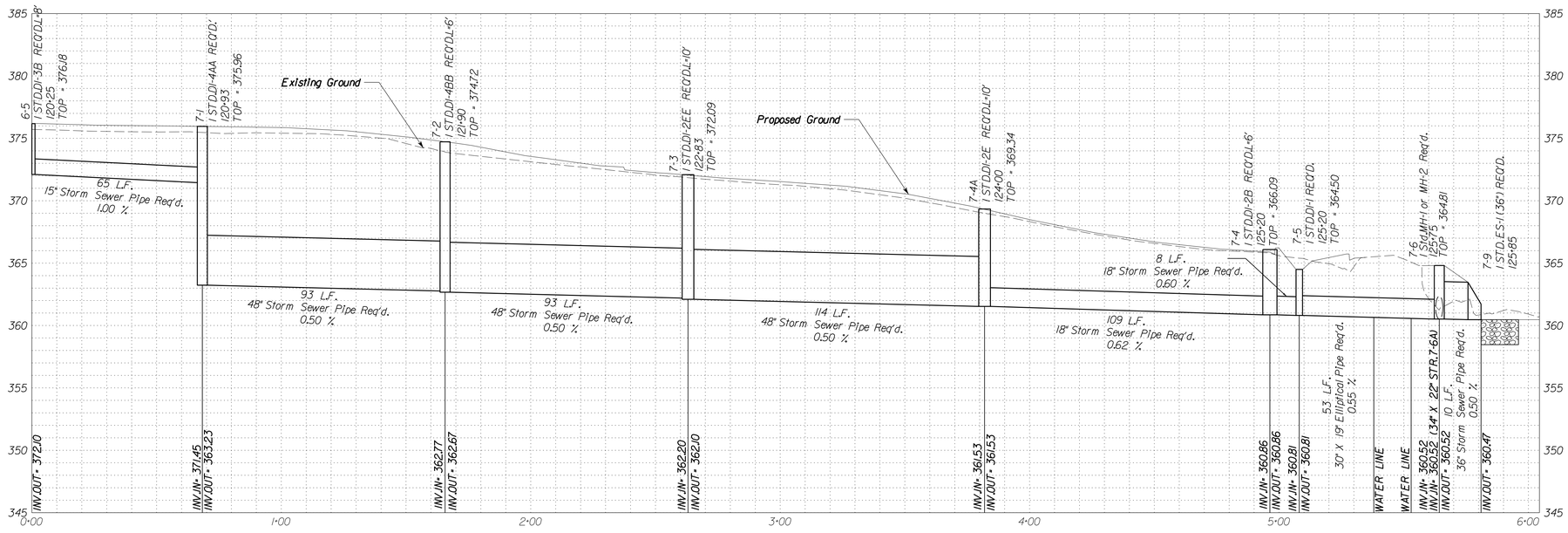
PROFILE 5-1 TO 5-4



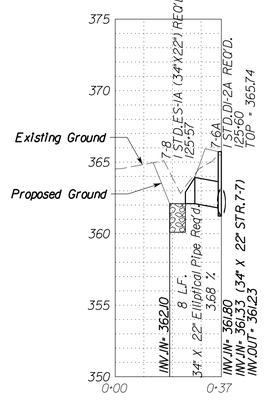
PROFILE 6-1 TO EX.18



PROFILE 6-5 TO 7-9



PROFILE 7-8 TO 7-6A



Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 5000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW

STORM DRAIN PROFILES

Town of Leesburg
Loudoun County, Virginia

SUBMISSION DATE: June 2021

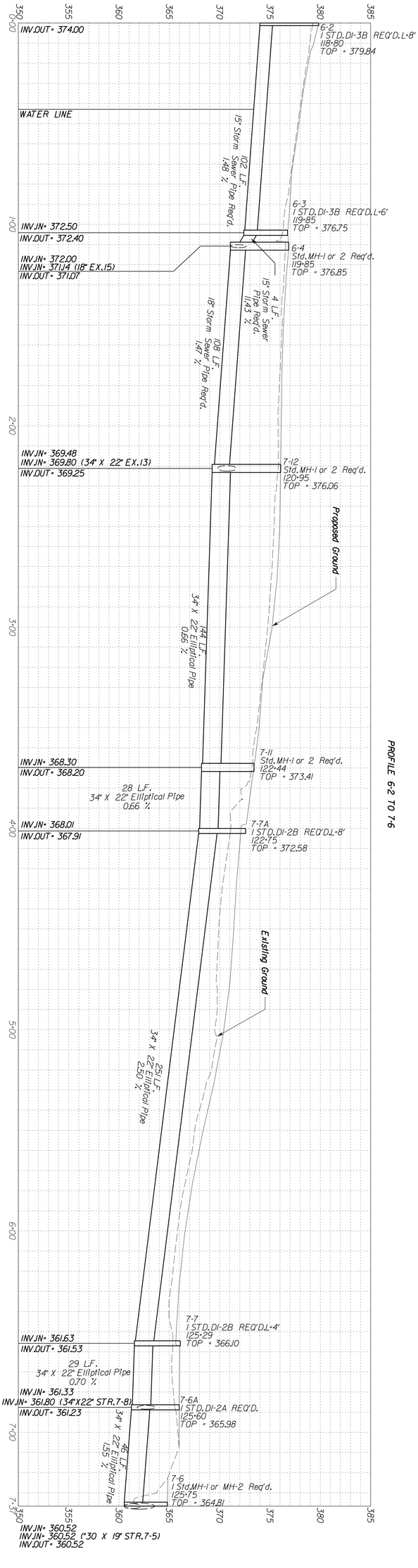
ASSOCIATED PLAN

C.I.P. NUMBER: TLCI-2019-0003

VDOT PROJ. NO. N/A

TOWN NUMBER: 2021-0004

Sheet 8(2)



PROFILE 6-2 TO 7-6

FINAL PLANS

FUTURE PHASE II PLANS -
FOR INFORMATION ONLY

ASSOCIATED PLAN 2021-0004

C.I.P. NUMBER: TLCI-2019-0003

VDOT PROJ. NO. N/A

TOWN NUMBER:

Sheet 8(9)

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW

STORM DRAIN PROFILES

Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: June 2021

ENGINEER:
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033
PROJECT MANAGER: ANNE GEIGER. P.E.

ROADWAY AND DRAINAGE IMPROVEMENTS SHOWN ON THE UTILITY SHEETS ARE TO BE CONSTRUCTED UNDER A SEPARATE CONSTRUCTION CONTRACT AFTER COMPLETION OF THE WATER MAIN REPLACEMENT. SEE SHEETS 8(1) THROUGH 8(3) FOR PROFILES OF FUTURE STORM DRAINAGE PIPES.

GENERAL UTILITY NOTES

1. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE TOWN OF LEESBURG DESIGN & CONSTRUCTION STANDARDS MANUAL (DCSM), VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, AND ANY OTHER APPLICABLE CODE.
2. WATER MAINS CONSTRUCTED USING CLASS 52 DUCTILE IRON PRESSURE PIPE TO BE LINED WITH CEMENT MORTAR AND MUST ADHERE TO THE LATEST VERSION OF ISO 8179 – DUCTILE IRON PIPES, EXTERNAL ZINC COATING. WATER MAINS CONSTRUCTED USING PVC C-900 DR18 SHALL BE PROVIDED WITH WARNING TAPE AND TRACING WIRE.
3. LOCATION, DEPTHS, AND SIZES OF EXISTING UTILITIES SHOWN ON THE PLANS ARE NOT GUARANTEED. FIELD VERIFY THE LOCATION, ELEVATION, TYPE, AND DIMENSIONS/SIZE OF EXISTING UNDERGROUND UTILITIES AND POINTS OF CONNECTION PRIOR TO EXCAVATION, ORDERING OF MATERIALS, AND INSTALLATION OF NEW WORK.
4. COMPLY WITH "MISS UTILITY" REQUIREMENTS PRIOR TO PERFORMING ANY EXCAVATION (DIAL 811).
5. THE UTILITY PLAN AND PROFILE SHEETS, 11(4) THRU 11(12), ARE FOR TOWN OF LEESBURG UTILITY WORK ONLY. ~~REFER TO THE ROADWAY PLANS FOR ROADWAY AND DRAINAGE DESIGN.~~
6. NO VALVES OR OTHER CONTROL DEVICE ON THE EXISTING WATER SYSTEM SHALL BE OPERATED BY THE CONTRACTOR. TOWN OF LEESBURG STAFF SHALL OPERATE ALL EXISTING VALVES.
7. IMMEDIATELY NOTIFY THE TOWN AND THE AFFECTED UTILITY OWNER IF UTILITIES ARE DAMAGED DURING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO THE SATISFACTION OF THE AFFECTED UTILITY OWNER AND COSTS FOR REPAIR WORK SHALL BE BORNE SOLELY BY THE CONTRACTOR.
8. EXISTING MAINS AND SERVICES SHALL REMAIN IN SERVICE UNTIL NEW MAINS AND SERVICES ARE PLACED IN SERVICE AND APPROVED BY THE OWNER. PROPOSED FIRE HYDRANTS SHALL REMAIN COVERED BY MEANS OF SECURELY ATTACHED BURLAP BAGS (OR OTHER OWNER APPROVED METHOD) UNTIL TESTED AND PLACED IN SERVICE.
9. DO NOT INSTALL WATER MAIN JOINTS BENEATH PROPOSED OR EXISTING UTILITIES AND STORM SEWER WHEN CROSSING UNDER THESE STRUCTURES. A MINIMUM CLEARANCE OF 8 TO 10 FEET BEYOND THE OUTSIDE OF THE FOREIGN PIPE OR UTILITY SHALL BE REQUIRED WHEN PLACING JOINTS.
10. INSTALL VALVES WITH OPERATOR STEMS IN THE VERTICAL PLANE THROUGH THE PIPE AXIS AND PERPENDICULAR TO THE PIPE AXIS. LOCATE VALVES AS SHOWN ON THE DRAWINGS. NO VALVES SHALL BE LOCATED UNDER CONCRETE GUTTER.
11. WATER MAIN SHALL BE LAID WITH BELL ENDS FACING THE DIRECTION OF LAYING. WHERE GRADE IS 10 PERCENT OR GREATER, PIPE SHALL BE LAID UPHILL WITH BELL ENDS UPGRADE.
12. ~~EXISTING WATER AND SANITARY SEWER UTILITY APPURTENANCES (I.E. VALVE BOXES, SANITARY MANHOLES, SANITARY CLEANOUTS, ETC.) SHALL BE ADJUSTED TO FINISH GRADE, REGARDLESS OF WHETHER THEY ARE SHOWN ON THE PLANS.~~
13. THRUST PROTECTION SHALL BE PLACED BEFORE BACKFILLING OF THE TRENCH AND INSPECTED BY THE OWNER. TEMPORARY BUTTRESSING FOR TESTING SHALL BE PROVIDED BY THE CONTRACTOR.
14. ITEMS OF MATERIAL, LABOR, SUPPLIES, OR EQUIPMENT THAT ARE NOT SPECIFICALLY LISTED AS A PAY ITEM, BUT WHICH ARE REQUIRED TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS, ARE CONSIDERED SUBSIDIARY OBLIGATIONS OF THE CONTRACTOR. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR SUCH ITEMS.
15. REMOVAL OF EXISTING WATER MAIN, WATER SERVICE LINES, ~~AND SANITARY SEWER LATERALS,~~ WHERE INDICATED OR WHERE REQUIRED DUE TO CONFLICTS WITH PROPOSED WORK, SHALL BE INCIDENTAL TO NEW UTILITY PAY ITEMS.
16. COMPLY WITH THE PROVISIONS AND REQUIREMENTS OF THE OVERHEAD HIGH VOLTAGE LINES SAFETY ACT IN PERFORMING WORK ON THIS PROJECT.
17. EXISTING SITE IMPROVEMENTS, TREES, LANDSCAPING, ETC. ON PRIVATE PROPERTY DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER.
18. THE TOWN OF LEESBURG SHALL HAVE SALVAGE RIGHTS FOR PUBLIC WATER APPURTENANCES BEING REMOVED.
19. MATERIALS USED IN THE CONSTRUCTION OF THE PUBLIC WATER SYSTEM SHALL BE IN COMPLIANCE WITH PUBLIC LAW 111-380, THE REDUCTION OF LEAD IN DRINKING WATER ACT. PRODUCTS SHALL BEAR THE NSF/ANSI STANDARD 61 ANNEX G NSF 61-G CERTIFICATION MARK WHERE SPECIFIED.
20. DEPTHS OF EXISTING UTILITIES SHOWN IN THE PROFILES ARE BASED ON INDUSTRY STANDARD DEPTHS, EXCEPT WHERE TEST HOLES HAVE BEEN PROVIDED. THE CONTRACTOR SHALL VERIFY THE ELEVATION, MATERIAL, AND SIZE OF EXISTING UTILITIES AT WATER CROSSING LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER & TOWN INSPECTOR IF AN EXISTING UTILITY WILL CONFLICT WITH THE NEW WATERLINE.

The Town of Leesburg in Virginia DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2 (WATER AND FIRE REGULATIONS)
General Notes

1. When the designation M.J. appears on a standard, mechanical joints are required.
2. Allowable materials for use in water distribution networks include, but are not limited to the following:

A. Pipe

(1) Ductile iron Pipe Class 52

Pipe and fittings shall be centrifugally cast conforming to ANSI/AWWA, C-15-A21.5 and ANSI/AWWA, C-151/A21.51. Pipe interior shall be cement-lined with bituminous seal coating conforming to ANSI/AWWA, C-104/A21.4. Joints used for ductile iron shall be rubber gasket push-on type conforming to ANSI/AWWA C-110/A21.10. Gaskets shall be plain rubber, of heavy section and high durometer, single molded. The lubricant shall be nontoxic, tasteless, odorless grease that will not support bacteria and shall meet or exceed AWWA standards and/or those of the National Sanitation Foundation. The exterior coating shall be a bituminous coating conforming to ANSI/AWWA, C-151/A21.5.

~~(2) PVC C-900~~ **(NIC)**

~~PVC C-900 pipe may be used and must conform to ANSI/AWWA, C-900 specifications.~~

(3) Copper Pipe Type "K"

Copper pipe 3/4" for home service, and larger lines of 1" and 2" in diameter, shall be type "K" seamless copper tubing meeting or exceeding federal specification WWT-799-A. Fitting for copper pipe shall be flared or compression type with a coupling nut and friction ring in accordance with AWWA C-800. Connections (3/4" and 1") to watermains shall be made by using Ford (F100) Mueller corporation stops meeting AWWA C-900 specifications or approved equal. Couplings for connection to iron pipe shall be Ford, Mueller or approved equal. Compression couplings requiring sleeve adapter kits to make up the difference in pipe diameters are not acceptable.

Not To Scale

REVISIONS NO.	DATE:			MODIFIED GENERAL NOTES	DRAWING GN-1 PAGE 1
1					

GENERAL WATER NOTES

1. NEW WATER LINES SHALL BE DUCTILE IRON PIPE CLASS 52, SEE TOWN OF LEESBURG DCSM STANDARD DRAWING GN-1 FOR ADDITIONAL INFORMATION. FITTINGS SHALL BE MECHANICALLY RESTRAINED JOINT TYPE (MEGA-LUG OR APPROVED EQUAL)
2. WATER MAINS CONSTRUCTED USING CLASS 52 DUCTILE IRON PRESSURE PIPE TO BE LINED WITH CEMENT MORTAR AND MUST ADHERE TO THE LATEST VERSION OF ISO 8179 – DUCTILE IRON PIPES, EXTERNAL ZINC COATING. WATER MIAINS CONSTRUCTED USING PVC C-900 DR18 SHALL BE PROVIDED WITH WARNING TAPE AND TRACING WIRE.
3. ALL WATER VALVES SHALL BE OF GATE TYPE, SEE TOWN OF LEESBURG DCSM STANDARD DRAWING GN-2 FOR ADDITIONAL INFORMATION.
4. DEPTHS OF EXISTING UTILITIES SHOWN IN THE PROFILES ARE BASED ON INDUSTRY STANDARD DEPTHS, EXCEPT WHERE TEST HOLES HAVE BEEN PROVIDED. THE CONTRACTOR SHALL VERIFY THE ELEVATION, MATERIAL, AND SIZE OF EXISTING UTILITIES AT WATER CROSSING LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER & TOWN INSPECTOR IF AN EXISTING UTILITY WILL CONFLICT WITH THE NEW WATERLINE.
5. NO SHUT-OFFS SHALL BE DONE WITHOUT PRIOR APPROVAL OF THE TOWN'S INSPECTOR. ALL EXISTING WATER VALVES SHALL BE OPERATED BY THE TOWN. THE CONTRACTOR SHALL PROVIDE 48-HOUR NOTICE TO THE TOWN FOR OPERATION OF ALL EXISTING VALVES.
6. SANITARY SEWER LATERALS SHOWN IN THE PROFILES ARE BASED ON CCTV INSPECTION RECORDS AND WERE NOT FIELD LOCATED.
7. ALL WATER MAIN PIPING INDICATED TO BE ABANDONED IN PLACE ARE TO BE CAPPED/PLUGGED AT BOTH ENDS WITH A SUITABLE MJ FITTING. DO NOT USE WOOD PLUGS.
8. SEE SHEET 11(11) FOR SUGGESTED SEQUENCE OF CONSTRUCTION.
9. ALL DUCTILE IRON WATER MAIN SHALL BE RESTRAINED AT ALL PIPE JOINTS AND FITTINGS.

The Town of Leesburg in Virginia DESIGN AND CONSTRUCTION STANDARD

B. Meters

1. All service connections shall be metered. Meters shall be purchased from the Town of Leesburg.
2. For specific meter locations and sizes which may be used, refer to Article 2, Section 2-340 and Details WD-10 and WD-11.

C. Meter Crock, Setter, Frame and Cover

1. Meter crock, setter, frame and cover shall be purchased from the Town of Leesburg.

D. Valves

1. Gate valves 2" and larger shall be Kennedy, Mueller, or approved equal, and conform to AWWA specification C-500. Valves shall be iron body nonrising stem resilient wedge type, and capable of withstanding 150 psi working pressure.
2. Butterfly valves shall be class 150B and shall be in conformance with AWWA C-504. Butterfly valves shall have mechanical joint ends in accordance with ANSI / AWWA, C-111 / A21.11.
3. Valves are to be housed in valve boxes and shall have 2" square operating nuts. Valve boxes shall be Mueller 10360 or approved equal.

E. Tracer Wire and Warning Tape

1. All PVC (water and sewer) pipes and laterals shall be provided with a warning tape and tracer wire.
2. The warning tape shall be placed 1' above the crown of pipe.
3. The tracer wire shall be attached to the top of the pipe and exposed at cleanouts. On pipelines without cleanouts, the wire shall be exposed in a special hand hole box.
4. The tracer wire specifications shall be as follows:
   a. Wire size: No. 12, stranded, type THHN, thermoplastic insulated with blue color coded nylon jacket for water and green color coded for sewer.
   b. Wire connectors shall meet the following criteria:
      - Connector, wire, set screw pressure type for use with No. 12 stranded wire size.
      - Connector, wire, C-tap for two-way splicing of tracer wire for use with No. 12 stranded wire size.
      - Connector, wire, split bolts, three-wire type for use with No. 12 stranded wire size.
   c. Wire nuts shall be non-conductive for No. 12 stranded wire size.
   d. Electrical coating shall be Scotchkote 3M electrical coating or equivalent.
   e. Electric tape shall be 3M Super 33+ Scotch brand premium vinyl electrical tape or equivalent.

Not To Scale

REVISIONS NO.	DATE:			GENERAL NOTES	DRAWING GN-2 PAGE 2
1					
2	10/16/07				
3	04/27/10				

The Town of Leesburg in Virginia DESIGN AND CONSTRUCTION STANDARD

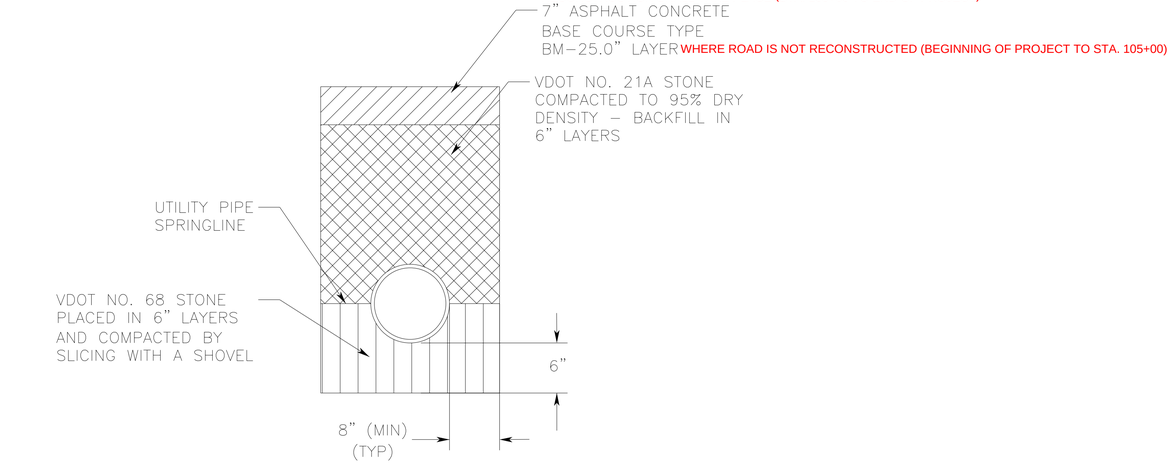
ARTICLE 2-340.2

GENERAL NOTES FOR WATER SERVICE CONNECTIONS

The following is a listing of hardware that is available in the market. The criteria listed below must be used when sizing water meters and service lines.

1. The Town supplies the contractor with the meter crock, lid, copper setter, and water meter. The contractor supplies the corporation stop and the copper pipe, makes the tap, and installs all of the appurtenances. The Town will **install** the water meter once the availability fees are paid.
2. The Town allows taps of 1", 1½" and 2" sizes. One inch service lines may utilize a corporation stop or tapping stainless steel (SS) saddle. Service lines 1½" and 2" will require the installation of a tapped mechanical joint tee when installing a new pipe. The use of SS saddles may be considered when connection is made to an existing pipe. Service connections 3" or larger will require installation of a tee.
3. The Town does not allow the use of 1¼" service lines, meters, etc. The supplies are difficult to locate.
4. Type "K" seamless copper pipe is available in the following lengths:
   a. 1" pipe - 100' or 60' rolls
   b. 1½" pipe - 40' or 60' rolls
   c. 2" pipe - 40' or 60' rolls
   Per the length limitations listed above, the water meters cannot be located any farther from the watermain than the roll lengths indicated for the size copper pipe to be used.
5. Double water meter installation, uses a 1" x ¾" branch with 2 - ¾" copper setters. This is the only arrangement allowed for double meters. If larger pipe or meter is required, double meters cannot be used. Refer to DCSM Drawing WS-23.
6. Pressure reducing valves (PRV's): the PRV's for new service connections will be installed within the building. The PRV's for existing system connections will be located within the meter crock.
7. The maximum meter size for residential units must not exceed 1" unless the conditions dictate. The designer should upsize the line between the house and the meter to compensate for the losses due to down sizing of the meter.
8. There will be no solder joints allowed underground except in a meter vault or crock.
9. Meter Location: All water meters must be located in the 2' utility strip. For areas where there are no utility strips, the meter must be at the property line or the edge of the easement.
10. The banking of water meters for shopping centers, and other locations, may be done provided that the minimum waterline size servicing the meter bank is 4" with a standard blowoff at the terminus contained within a public easement and that the taps for the meters are spaced in accordance with the pipe manufacturer's recommendations.
11. Water meter sizes for use in the Town of Leesburg are ⅝", ¾", 1", 1½", 2", 3", 4", 6", and increasing in even diameter pipe sizes.

REVISIONS NO.	DATE:			WATER SERVICE CONNECTION NOTES	DRAWING WD-10 PAGE 62
1					
2	10/16/07				
3	04/27/10				



PLAN LEGEND

UTILITY PIPE BEDDING & BACKFILL DETAIL
SCALE: N.T.S.

FINAL PLANS

WRA
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033
ENGINEER:
PROJECT MANAGER: ANNE GEIGER. P.E.

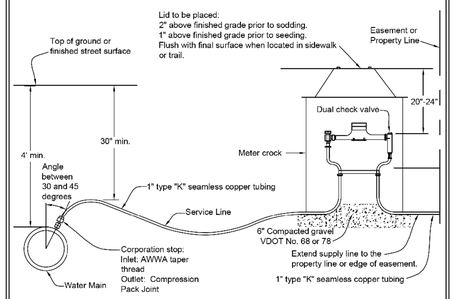
PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
UTILITY INDEX OF SHEETS, DETAILS AND NOTES
Town of Leesburg Loudoun County, Virginia
SUBMISSION DATE: June 2021

ASSOCIATED PLAN: ~~2021-0004~~
C.I.P. NUMBER: TLCI-2019-0003
VDOT PROJ. NO.: N/A
TOWN NUMBER:

Sheet 11(1)

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-122.4D(5)



NOTES:

A. Refer to water details WD-10 and WD-11 of Article 2 for sizing combinations of the service line and meter.
B. This detail is for ⅝", ¾" or 1" Water Meter.
C. See WD-21, 22 and 23 for meter crock, meter setter and frame and cover specifications.
D. See GN-2 for additional requirements.
E. The meter setter and cross bar shall be centered in the crock and equidistant from the inside edge of the crock.
F. Well draining select material or gravel to be placed under meter crock.
G. Top of water meter crock lid shall not be higher than the final grade of surrounding surfaces including brick or concrete sidewalk, curb, asphalt trail or seeded/sodded area.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07

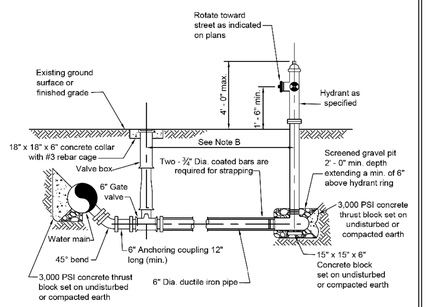
1" WATER SERVICE AND ⅝", ¾", or 1" METER

DRAWING WS-1

PAGE 3

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-122.4L



NOTES:

A. Maximum hydrant barrel height is limited to 8'.
B. Horizontal setback distance from flow line of gutter or edge of pavement shall be 14" minimum and 24" maximum.
C. At contractor's choice, use one of the following arrangements:
   1. Strapping between valve and hydrant if the dimensions are less than or equal to 10'.
   2. Anchoring coupling between valve and hydrant.
   3. Thrust blocks at hydrant.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07

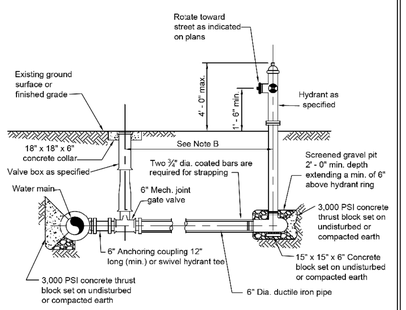
BLOW - OFF FIRE HYDRANT

DRAWING WS-5

PAGE 7

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-260.2 & 2-390.2A



NOTES:

A. Maximum hydrant barrel height is limited to 8'.
B. Horizontal setback distance from flow line of gutter or edge of pavement shall be 14" minimum and 24" maximum.
C. At contractor's choice, use one of the following arrangements:
   1. Strapping between valve and hydrant if the dimensions are less than or equal to 10'.
   2. Anchoring coupling between valve and hydrant.
   3. Thrust blocks at hydrant.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07

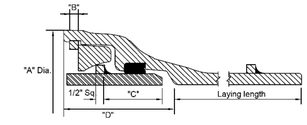
FIRE HYDRANT

DRAWING WS-18

PAGE 20

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-315



Size	A Dia.	B	C	D	Laying length	Defl. angle
6	11.44	3/8	3-1/2	6.51	19' - 11"	4°
8	13.97	3/8	4	7.19	19' - 10"	4°
10	16.44	1/2	4-1/4	7.25	19' - 10"	4°
12	18.75	1/2	4	8.01	19' - 10"	4°
14	20.96	1/2	5-1/4	8.88	19' - 9"	3°
16	23.22	1/2	5-1/4	8.95	19' - 8"	3°
18	25.72	5/8	5-3/8	9.20	19' - 8"	3°
20	27.85	5/8	6	9.88	19' - 7"	3°
24	32.54	5/8	6-1/4	10.58	19' - 6"	3°

Dimensions in inches.

NOTE:

A. Snap-lok or approved equal restrained joint pipe will be acceptable.
B. Use of mega-lug (or approved equal) joint pipes will be accepted in lieu of proprietary restraint joint piping. Refer to Article 2, Section 2-315 for specifics.

Not To Scale

REVISIONS NO.	DATE:
1	
3	04/27/10

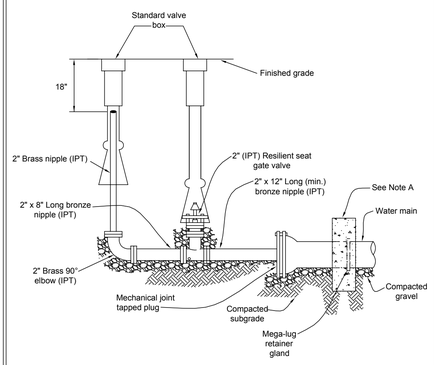
RESTRAINED JOINT

DRAWING WS-20

PAGE 22

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-360.4



NOTES:

A. Use anchor collar as shown or block the plug and entire 2" pipe and bend. See WS-26.
B. All brass pipe shall have iron pipe threads (IPT).
C. Encase the valve boxes in a 2' x 3' - 6" x 6" concrete collar when located in grass.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07

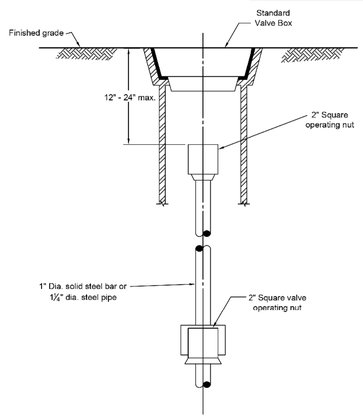
TEMPORARY 2" BLOW OFF

DRAWING WS-25

PAGE 27

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-320.7



NOTE:

A. Valve stem extensions to be used when valve nut is 4' or more from the finished grade.
B. Valve boxes outside paved areas shall be provided with 18" x 18" x 6" concrete collar with #3 rebar cage.

Not To Scale

REVISIONS NO.	DATE:
3	04/27/10

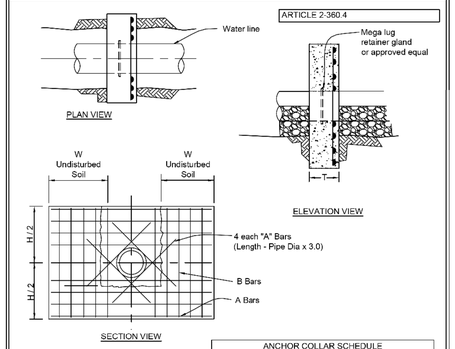
VALVE STEM EXTENSION

DRAWING WS-22

PAGE 24

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-360.4



ANCHOR COLLAR SCHEDULE Line size	W	H	T	BARS
6"	1' - 6"	2' - 0"	1' - 0"	#6 @ 6"
8"	1' - 6"	2' - 0"	1' - 0"	#6 @ 6"
10"	2' - 0"	3' - 0"	1' - 6"	#6 @ 6"
12"	2' - 0"	4' - 0"	1' - 6"	#6 @ 6"
16"	3' - 0"	4' - 6"	2' - 0"	#6 @ 6"

NOTES:

A. Bearing area is based on 150 PSI test pressure and a soil bearing pressure of 2,000 PSF.
B. Increase block dimensions as required on soils with lower bearing values.
C. Concrete strength (f'c) shall be 3000 PSI.
D. Anchor collar design for pipes larger than 16" shall be reviewed on an individual basis by the Town.
E. Wrap the pipe with polyethylene bags to 6" outside the concrete encasement.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07

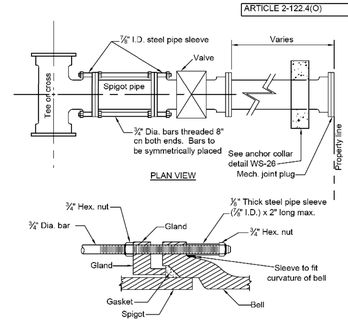
ANCHOR COLLAR

DRAWING WS-26

PAGE 28

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-122.4(O)



SECTION VIEW OF SLEEVE AND BAR ASSEMBLY

Valve size	Number of ¾" dia. bars required	Maximum length of spigot pipe
3"	2	24"
4"	2	24"
6"	2	27"
8"	2	27"
10"	4	27"
12"	6	27"
16"	8	36"
20"	12	36"
24"	16	36"
30"	20	42"

NOTES:

A. Use mechanical joint fittings only.
B. Paint all steel with two coats of bituminous paint.
C. Use butterfly valves for 12" dia. and larger pipe.
D. Use gate valves for 10" dia. and smaller pipe.
E. Rods and nuts, 36,000 PSI yield strength, stainless steel and field coated when cut.
F. Applies to all directions of the tee.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07

LATERAL WATER CONNECTION

DRAWING WS-27

PAGE 29

FINAL PLANS

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
UTILITY DETAILS

Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: June 2021

ASSOCIATED PLAN: 2021-0004

C.I.P. NUMBER: TLCI-2019-0003

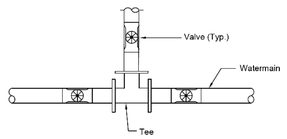
VDOT PROJ. NO.: N/A

TOWN NUMBER:

Sheet 11(2)

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-122.4K



NOTES:

A. See WS-30 and WS-31 for additional details.
B. The tee and valve shall be restrained to the watermain with mega lugs, stainless steel rods, thrust blocks, or proprietary restraining assembly.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07
3	04/27/10

VALVING ARRANGEMENT FOR FIRE AND SERVICE LINES

DRAWING WS-28

PAGE 30

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-310-17

Allowable Leakage per 1000 ft. of Pipeline - gph

Average Test Pressure psi	Nominal Pipe Diameter - in														
	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48	54
450	0.48	0.64	0.95	1.27	1.59	1.91	2.23	2.55	2.87	3.18	3.82	4.78	5.73	6.69	7.64	8.60
400	0.45	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.60	4.50	5.41	6.31	7.21	8.11
350	0.42	0.56	0.84	1.12	1.40	1.69	1.97	2.25	2.53	2.81	3.37	4.21	5.06	5.90	6.74	7.58
300	0.39	0.52	0.78	1.04	1.30	1.56	1.82	2.00	2.34	2.60	3.12	3.90	4.68	5.46	6.24	7.00
275	0.37	0.50	0.75	1.00	1.24	1.49	1.74	1.99	2.24	2.49	2.99	3.73	4.48	5.23	5.98	6.72
250	0.36	0.47	0.71	0.95	1.19	1.42	1.66	1.90	2.14	2.37	2.85	3.56	4.27	4.99	5.70	6.41
225	0.34	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.70	3.38	4.05	4.73	5.41	6.03
200	0.32	0.43	0.64	0.85	1.06	1.28	1.48	1.70	1.91	2.12	2.55	3.19	3.82	4.46	5.09	5.73
175	0.30	0.40	0.59	0.80	0.99	1.19	1.39	1.59	1.79	1.98	2.38	2.98	3.58	4.17	4.77	5.36
150	0.28	0.37	0.55	0.74	0.92	1.10	1.29	1.47	1.66	1.84	2.21	2.76	3.31	3.86	4.41	4.97
125	0.25	0.24	0.50	0.67	0.84	1.01	1.18	1.34	1.51	1.68	2.01	2.52	3.02	3.53	4.03	4.53
100	0.23	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50	1.80	2.25	2.70	3.15	3.60	4.05

If the pressure under test contains sections of various diameters, the allowable leakage will be the sum of the computed leakage for each pipe.

To obtain leakage rates in liters/hour multiply the values in the table by 3.785.

REVISIONS NO.	DATE:
1	

ALLOWABLE LEAKAGE CHART

DRAWING WD-5

PAGE 57

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 2-340.2

Water Meter Arrangements
Commercial and Residential Service Combinations

Service line	Copper setter	Water meter	Supply line
1"	¾ x ¾"	¾" or ⅝"	¾" - 2"
1"	Full ¾"	Full ¾"	¾" - 2"
1"	1"	⅝", ¾", or 1"	¾" - 2"
1½"	2"	⅝", ¾", 1", 1½" or 2"	¾" - 2"
2"	2"	⅝", ¾", 1", 1½" or 2"	¾" - 2"

Notes:
A. Refer to WS-1 and WS-2 for a schematic drawing of the water service and meter connection.
B. Smaller meters can be used with larger setters. The meter will be supplied with adapters to accomodate the larger setter.

Not To Scale

REVISIONS NO.	DATE:
1	
2	10/16/07
3	04/27/10

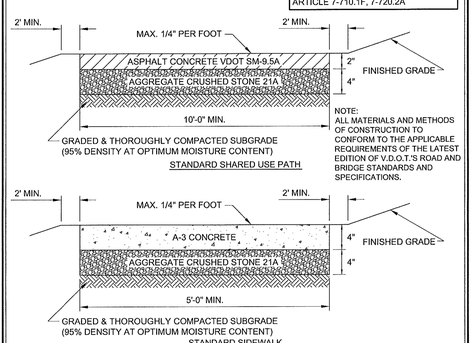
WATER SERVICE COMBINATIONS

DRAWING WD-11

PAGE 63

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 7-710.1F, 7-720.2A



NOTES FOR SHARED USE PATHS

WIDTH:	FOR PEDESTRIAN AND BIKE SHARED USE PATHS OUTSIDE RIGHT-OF-WAY:	
	EASEMENT:	16 FOOT MINIMUM
	PAVEMENT:	10 FOOT MINIMUM
SURFACE:	HARD SURFACED, ASPHALT OR CONCRETE	
GRADE:	PEDESTRIAN	10 PERCENT MAXIMUM
	BIKE	5-8 PERCENT, UP TO 10 PERCENT FOR DISTANCES OF 150 FEET OR LESS.
VERTICAL CLEARANCE:	PEDESTRIAN	8 FEET
	BIKE	10 FEET
DESIGN FEATURES:	APPROPRIATE LIGHTING AND SIGNS; LANDSCAPING, BUFFERING AND DRAINAGE MEASURES, GUARDRAIL, BRIDGE AND TUNNEL STRUCTURES WHERE REQUIRED, AND CONSIDERATIONS FOR SECURITY.	

Not To Scale

REVISIONS NO.	DATE:
1	03/2010

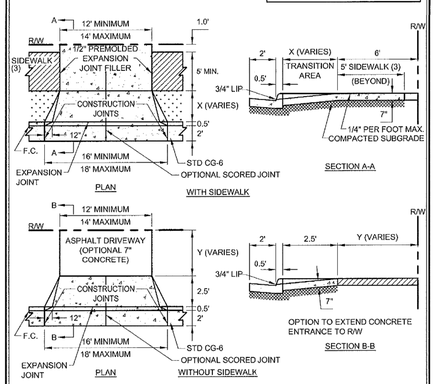
SHARED USE PATH AND SIDEWALK TYPICAL SECTION

DRAWING TS-18

PAGE 100

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ARTICLE 7-362.2A, 7-364.3B



NOTES:
1. GRADING PLANS MUST PROVIDE FOR ADEQUATE VEHICULAR CLEARANCE FOR DRIVEWAY APPROACH, DEPARTURE, AND BREAKOVER TRANSITIONS.
2. DRIVEWAY PROFILES ARE REQUIRED WHERE STEEP DRIVEWAY GRADES EXCEEDING 8% ARE PROPOSED
3. SIDEWALKS WITHIN THE HISTORICAL DISTRICT SHALL BE BRICK CONSTRUCTION.

Not To Scale

REVISIONS NO.	DATE:
1	03/2010

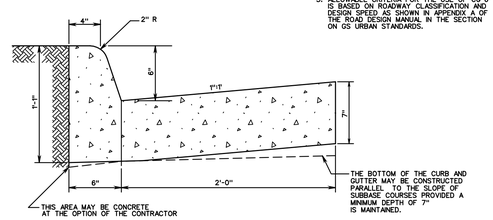
PRIVATE DRIVEWAY ENTRANCE - STREETS WITH CURB AND GUTTER

DRAWING TS-20

PAGE 102

CG-6

NOTES:
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAD FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.



SPECIFICATION REFERENCE
105
502

COMBINATION 6" CURB AND GUTTER

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT ROAD AND BRIDGE STANDARDS

REVISION DATE | SHEET 1 OF 1

201.03

FINAL PLANS

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
UTILITY DETAILS

Town of Leesburg — Loudoun County, Virginia

SUBMISSION DATE: June 2021

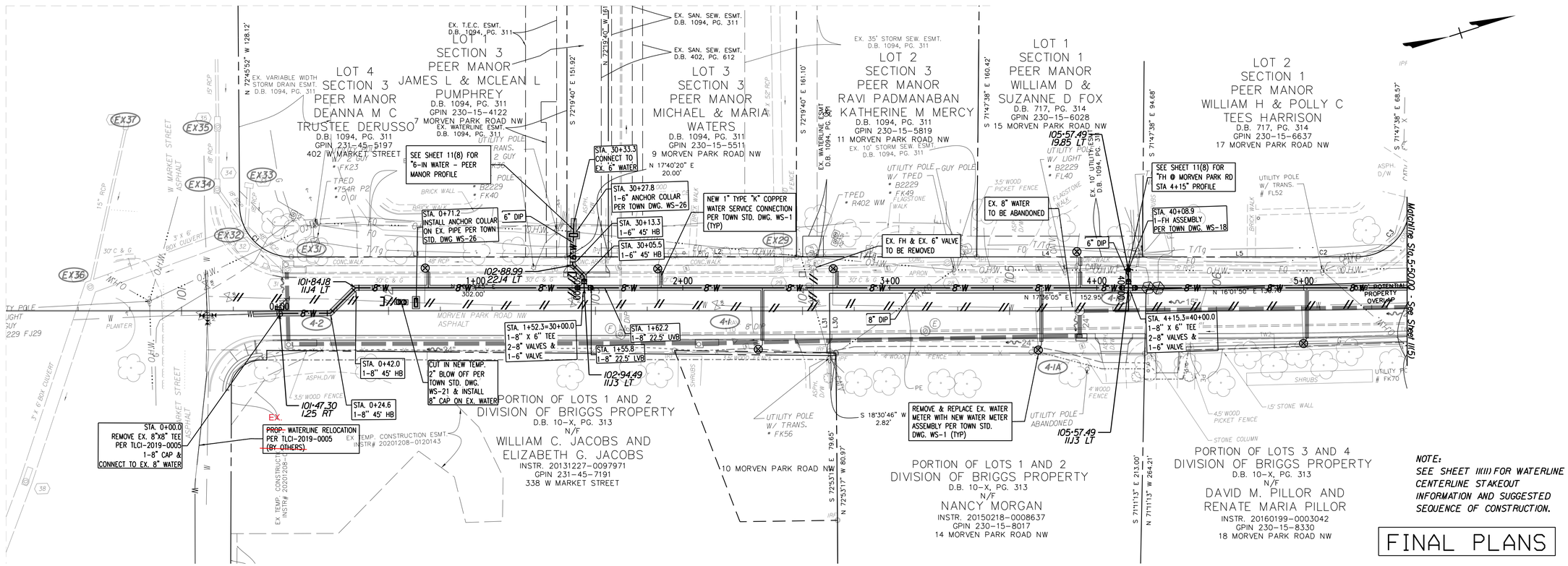
ASSOCIATED PLAN

C.I.P. NUMBER: TLCI-2019-0003 2021-0004

VDOT PROJ. NO.: N/A

TOWN NUMBER:

Sheet 11(3)



Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER, P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW

PLAN AND PROFILE

STA 0+00.00 TO STA 5+50.00

Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: February 2021

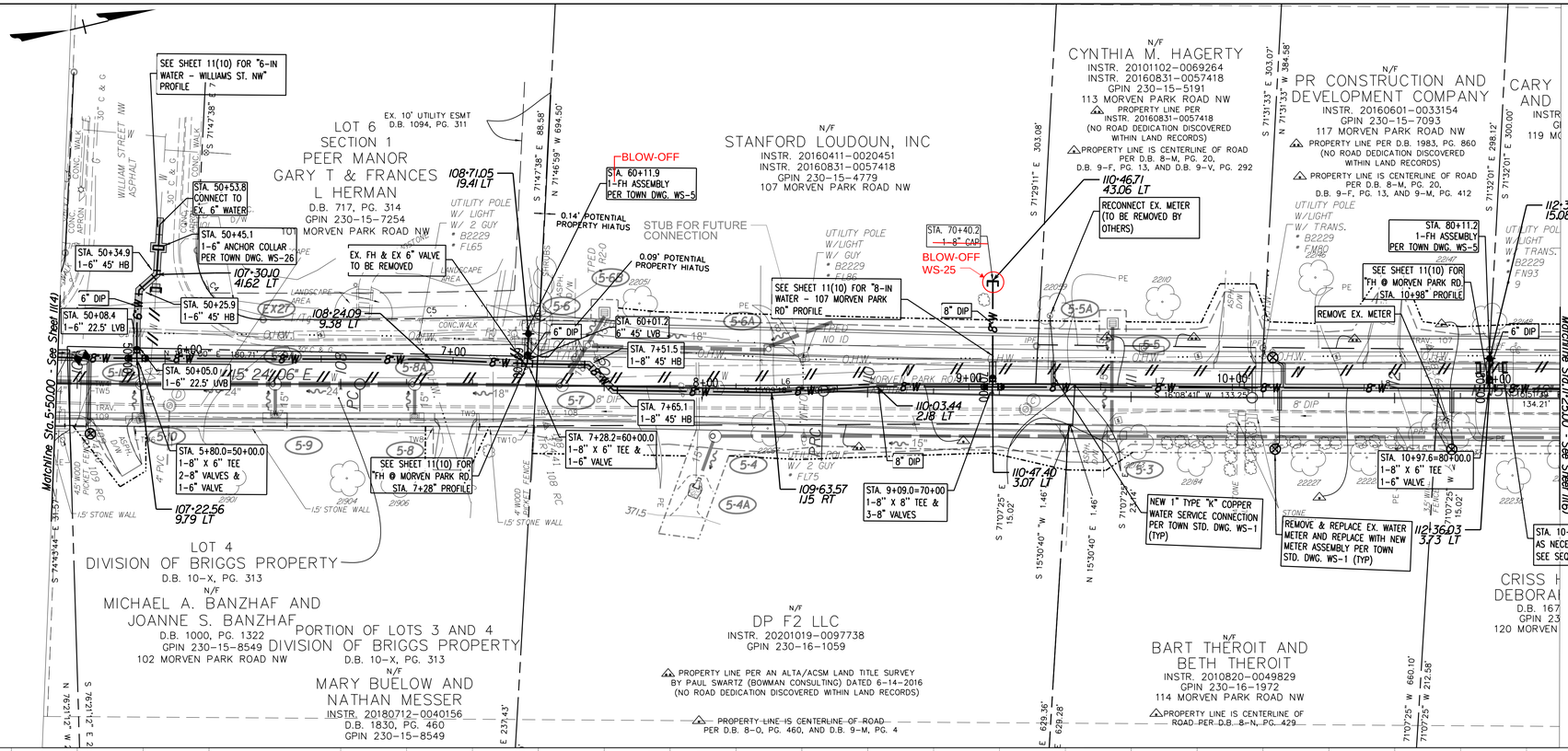
ASSOCIATED PLAN

C.I.P. NUMBER: TLCI-2019-0003 2021-0004

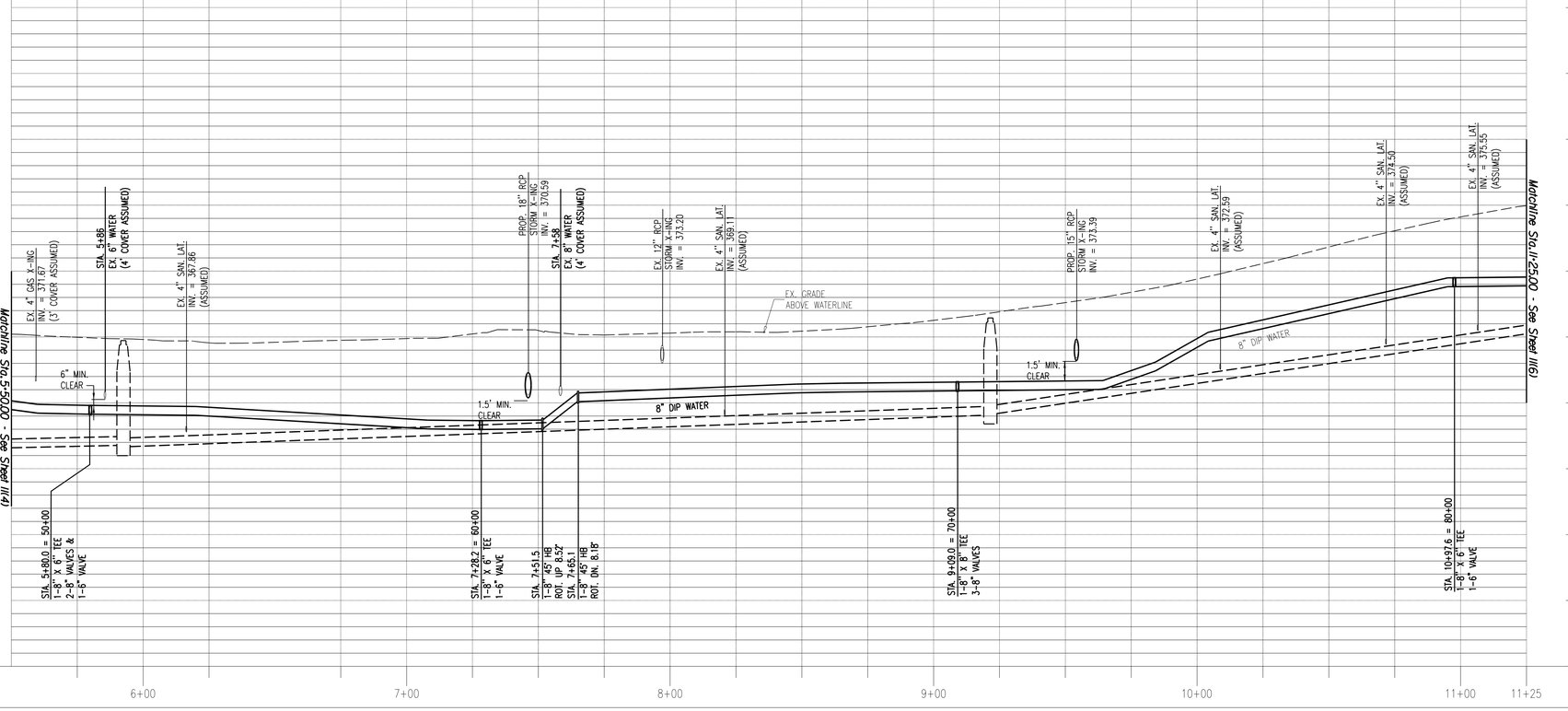
VDOT PROJ. NO. N/A

TOWN NUMBER:

Sheet 11(4)



NOTE:
SEE SHEET 11(11) FOR WATERLINE CENTERLINE STAKEOUT INFORMATION AND SUGGESTED SEQUENCE OF CONSTRUCTION.



HORIZONTAL SCALE
0 25' 50'
SCALE: 1" = 25'

VERTICAL SCALE
0 5' 10'
SCALE: 1" = 5'

ENGINEER:

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

PROJECT MANAGER: ANNE GEIGER, P.E.

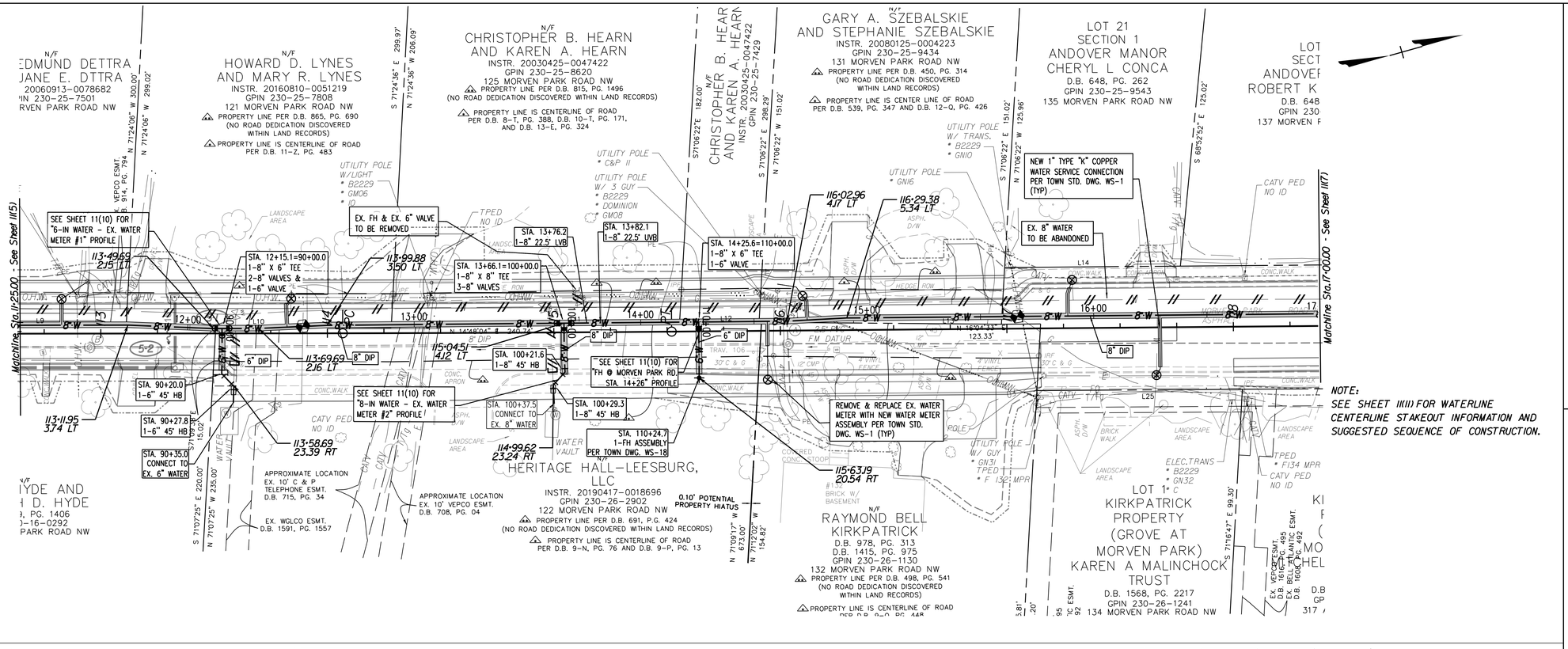
PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
PLAN AND PROFILE
STA 5+50.00 TO STA 11+25.00
Town of Leesburg Loudoun County, Virginia

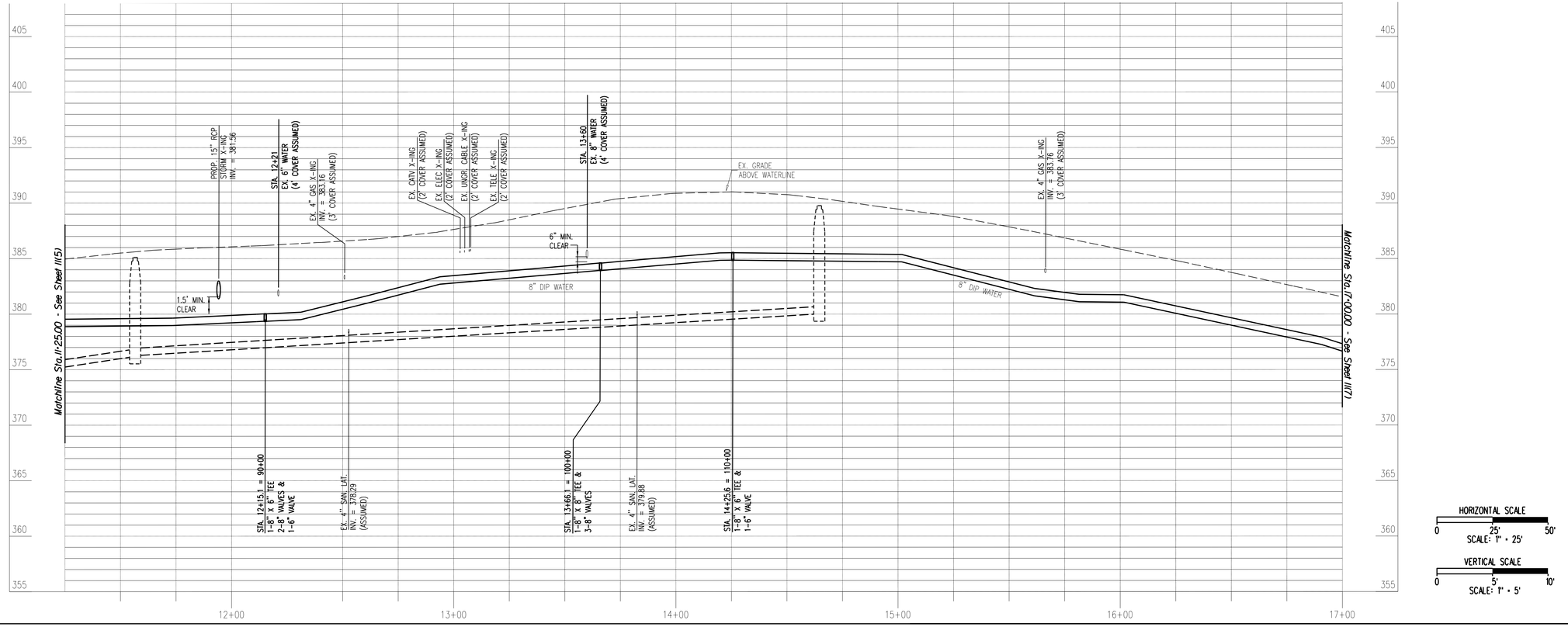
SUBMISSION DATE: February 2021

ASSOCIATED PLAN
C.I.P. NUMBER: TLCI-2019-0003
VDOT PROJ. NO. N/A
2021-0004
TOWN NUMBER:

Sheet 11(5)

FINAL PLANS





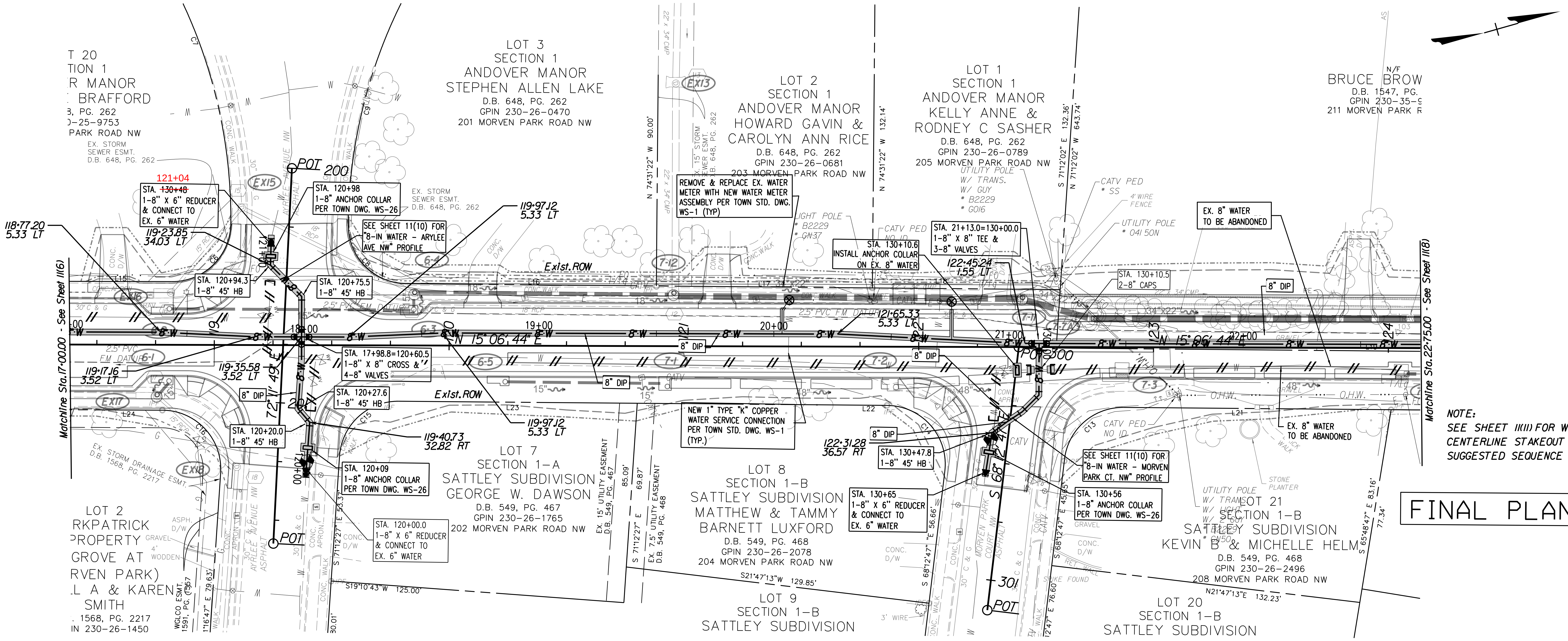
Whitman, Requardt & Associates, LLP
12765 Flat Ledge Circle, Suite 3000, Fairfax, Virginia 22033
ENGINEER:
PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
PLAN AND PROFILE
STA 11+25.00 TO STA 17+00.00
Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: February 2021

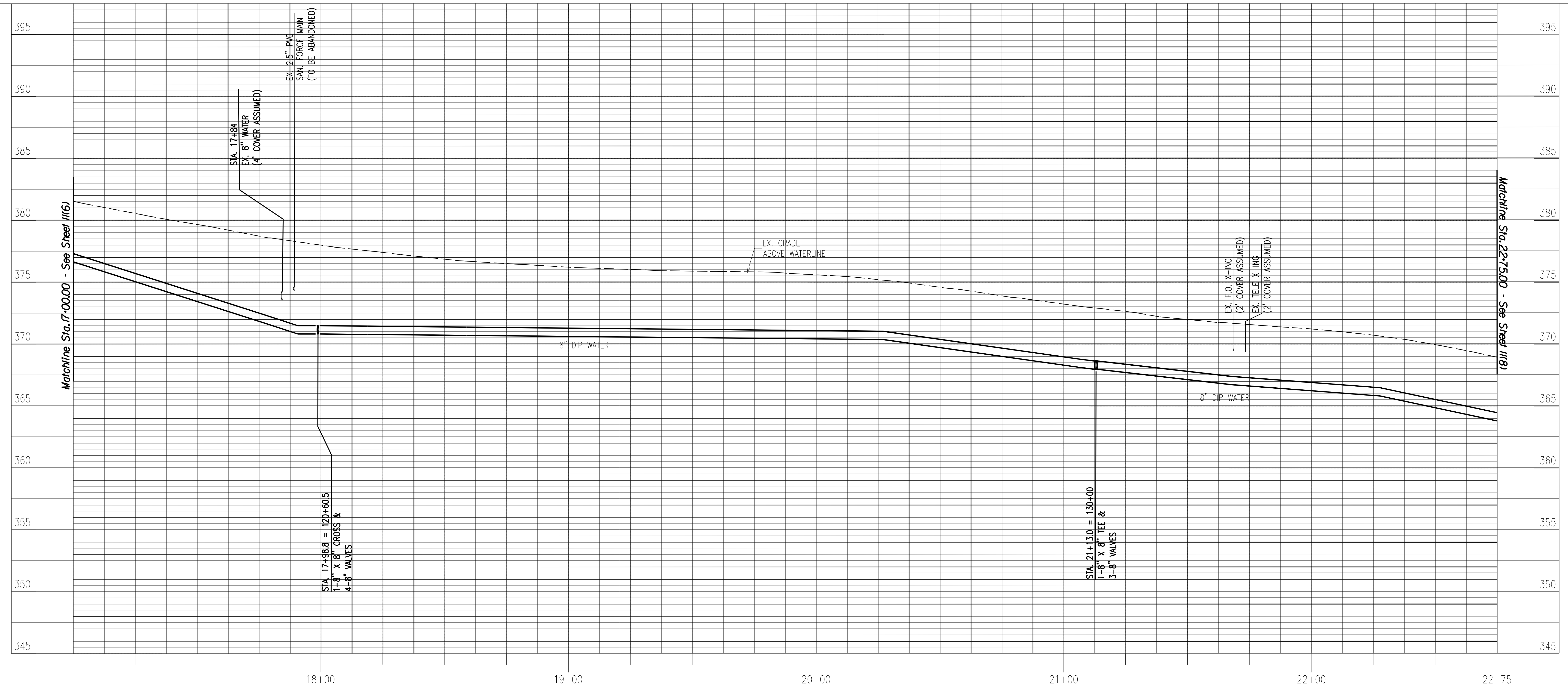
ASSOCIATED PLAN: ~~2021-0004~~
C.I.P. NUMBER: TLCI-2019-0003
VDOT PROJ. NO.: N/A
TOWN NUMBER:

Sheet 11(6)



NOTE:
SEE SHEET 11(11) FOR WATERLINE CENTERLINE STAKEOUT INFORMATION AND SUGGESTED SEQUENCE OF CONSTRUCTION.

FINAL PLANS



HORIZONTAL SCALE
0 25' 50'
SCALE: 1" = 25'

VERTICAL SCALE
0 5' 10'
SCALE: 1" = 5'

ENGINEER:

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

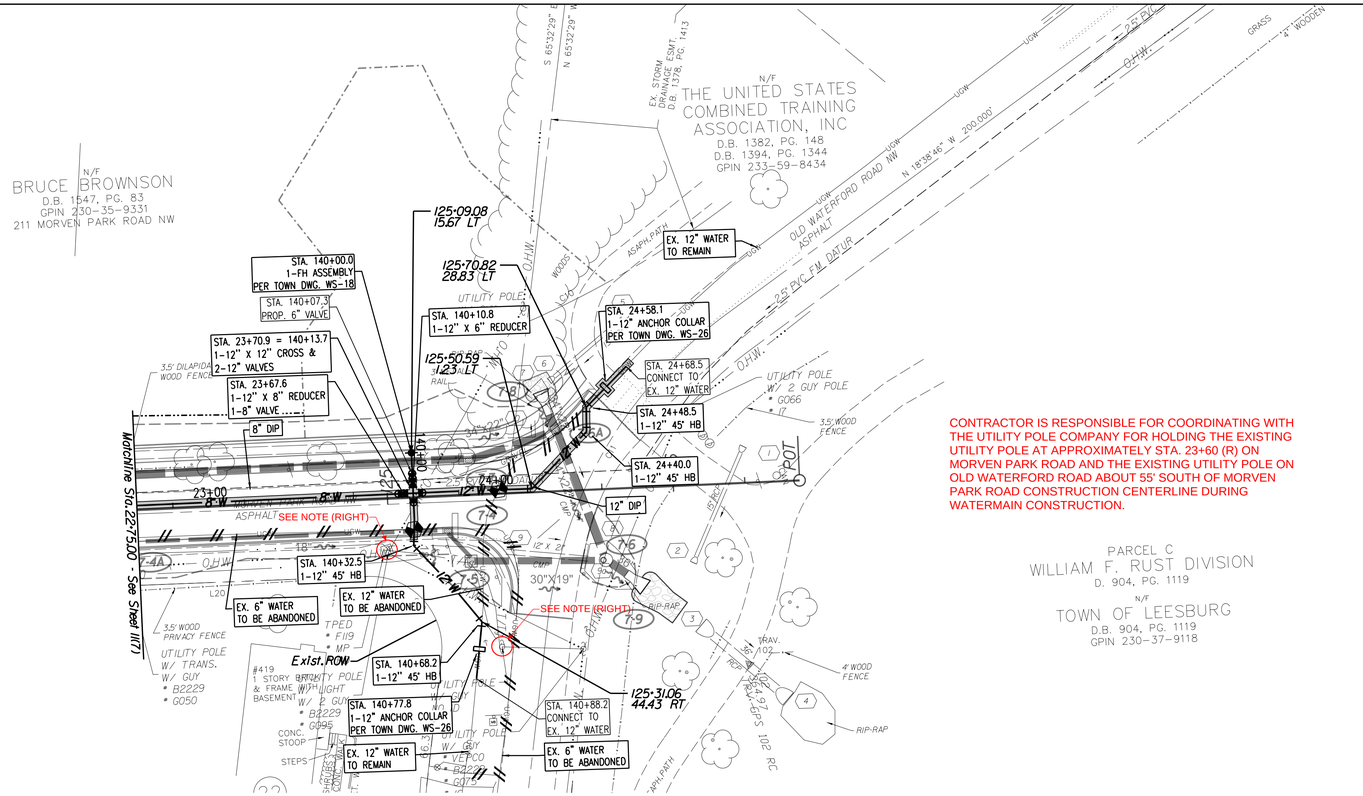
PROJECT MANAGER: ANNE GEIGER, P.E.

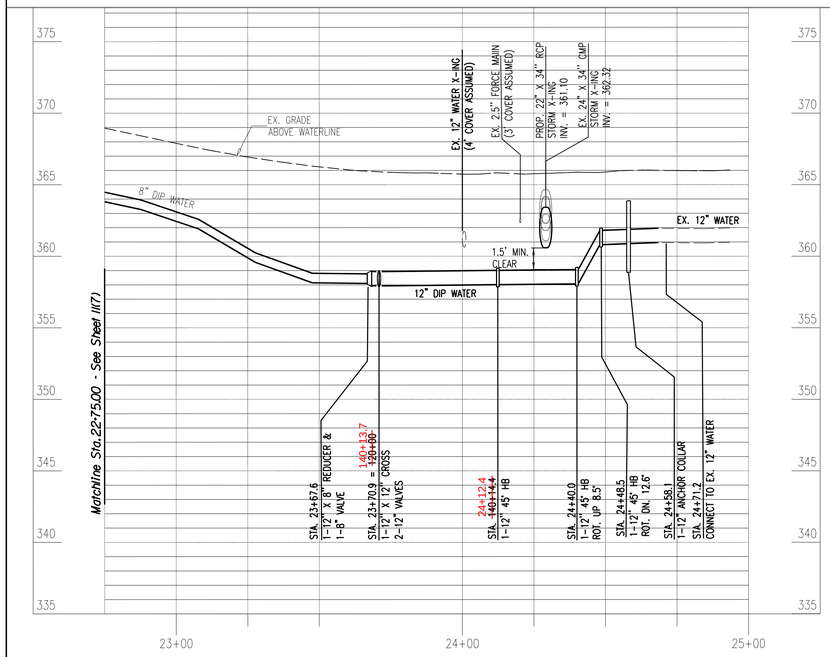
PROJECT NAME:
MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
PLAN AND PROFILE
STA 17+00.00 TO STA 22+75.00
Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: February 2021

ASSOCIATED PLAN
C.I.P. NUMBER: 2021-0004 ~~TLCI-2019-0003~~
VDOT PROJ. NO. N/A
TOWN NUMBER:

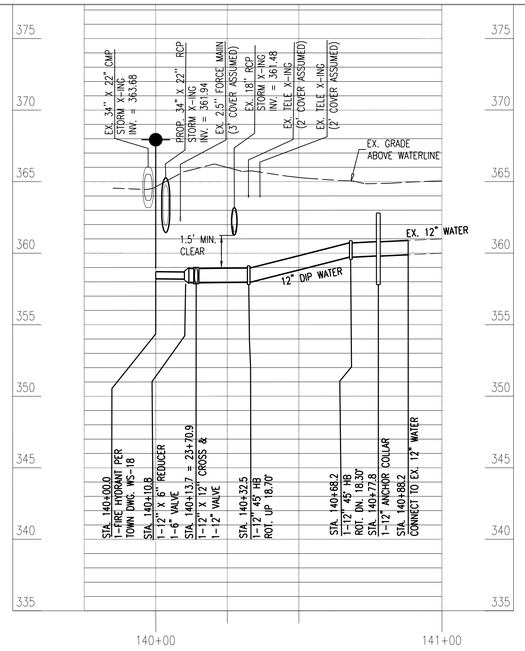
Sheet
11(7)





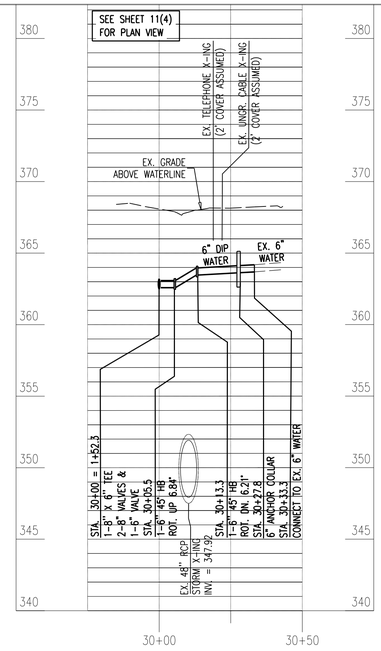
8-IN WATER - MORVEN PARK RD

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



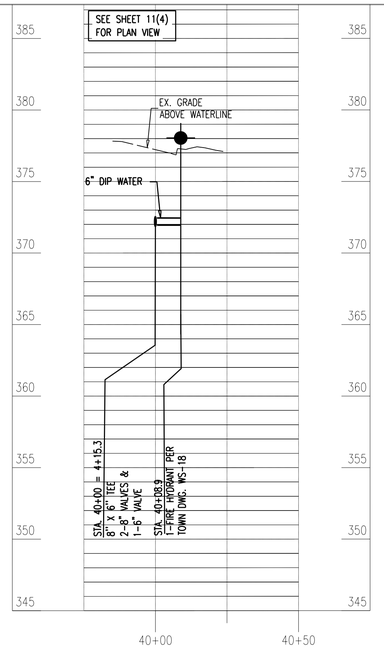
12-IN WATER - OLD WATERFORD RD

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



6-IN WATER - PEER MANOR

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



FH @ MORVEN PARK RD STA. 4+15

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.

NOTES:
1. SEE SHEET II(4) FOR "6-IN WATER - PEER MANOR SECT 3" FOR PLAN VIEW

HORIZONTAL SCALE 0 25' 50' SCALE: 1" = 25'

VERTICAL SCALE 0 5' 10' SCALE: 1" = 5'

Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW

PLAN AND PROFILE

ADJOINING SIDE STREETS

Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: February 2021

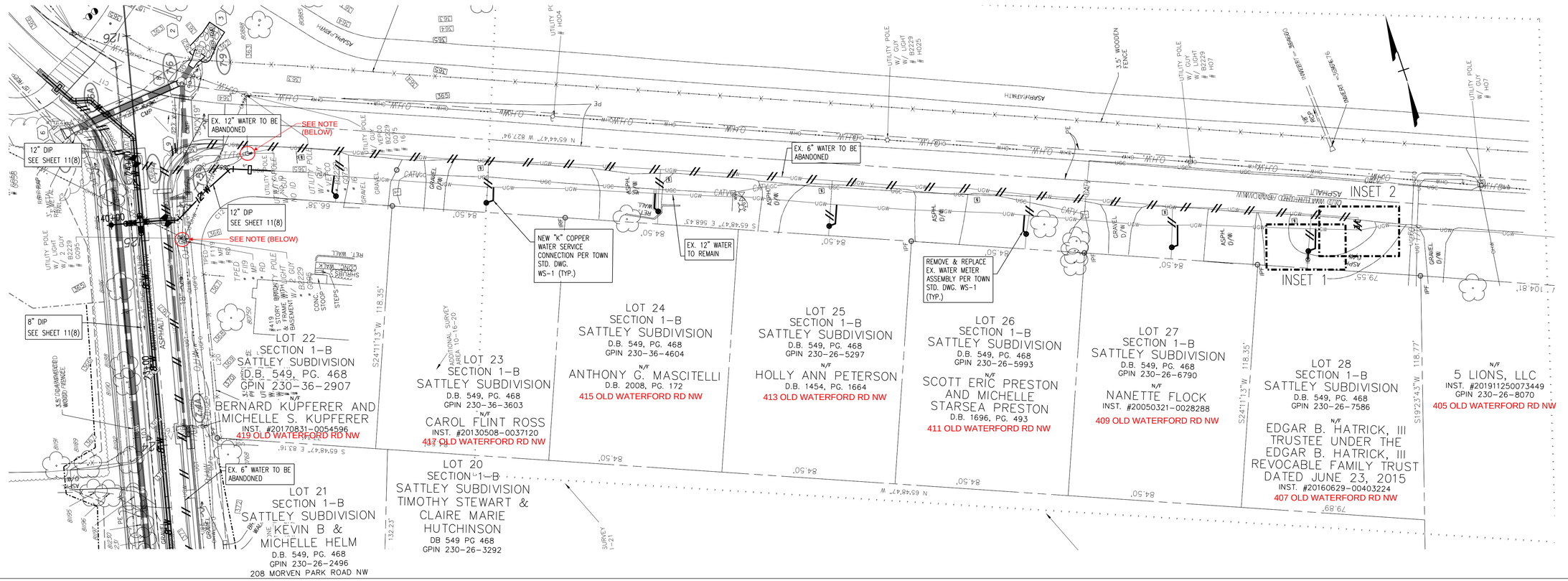
ASSOCIATED PLAN

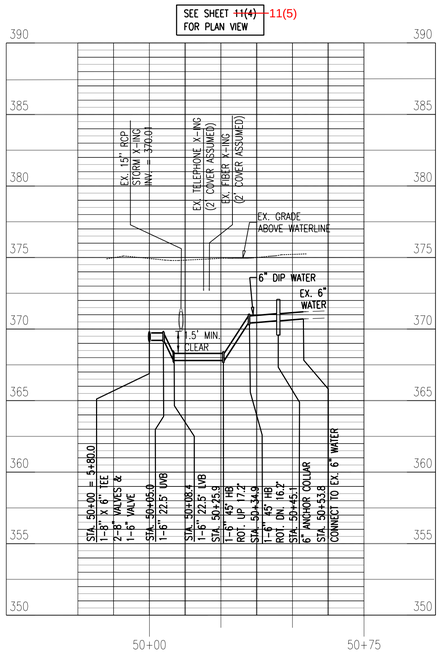
C.I.P. NUMBER: TLCI-2019-0003 2021-0004

VDOT PROJ. NO. N/A

TOWN NUMBER:

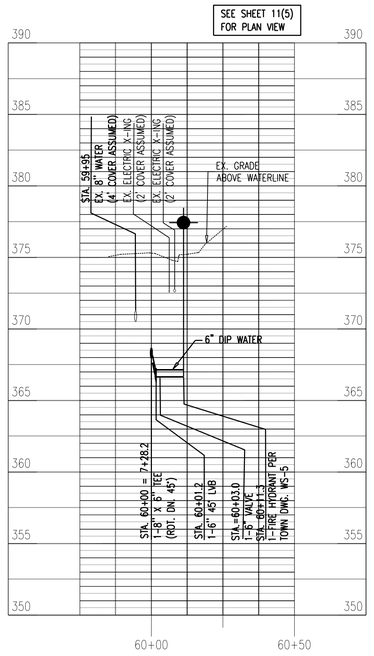
Sheet 11(8)


EX. 12" WATER TO BE ABANDONED
SEE NOTE (BELOW)
12" DIP SEE SHEET 11(8)
12" DIP SEE SHEET 11(8)
SEE NOTE (BELOW)
8" DIP SEE SHEET 11(8)
EX. 6" WATER TO BE ABANDONED
NEW "K" COPPER WATER SERVICE CONNECTION PER TOWN STD. DWG. WS-1 (TYP.)
EX. 12" WATER TO REMAIN
EX. 6" WATER TO BE ABANDONED
REMOVE & REPLACE EX. WATER METER ASSEMBLY PER TOWN STD. DWG. WS-1 (TYP.)
INSET 1
INSET 2
LOT 22 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-36-2907 N/F BERNARD KUPFERER AND MICHELLE S. KUPFERER 419 OLD WATERFORD RD NW
LOT 21 SECTION 1-B SATTLEY SUBDIVISION KEVIN B & MICHELLE HELM D.B. 549, PG. 468 GPIN 230-26-2496 208 MORVEN PARK ROAD NW
LOT 20 SECTION 1-B SATTLEY SUBDIVISION TIMOTHY STEWART & CLAIRE MARIE HUTCHINSON DB 549 PG 468 GPIN 230-26-3292
LOT 23 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-36-3603 N/F CAROL FLINT ROSS INST. #20130508-0037120 417 OLD WATERFORD RD NW
LOT 24 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-36-4604 N/F ANTHONY G. MASCITELLI D.B. 2008, PG. 172 415 OLD WATERFORD RD NW
LOT 25 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-26-5297 N/F HOLLY ANN PETERSON D.B. 1454, PG. 1664 413 OLD WATERFORD RD NW
LOT 26 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-26-5993 N/F SCOTT ERIC PRESTON AND MICHELLE STARSEA PRESTON D.B. 1696, PG. 493 411 OLD WATERFORD RD NW
LOT 27 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-26-6790 N/F NANETTE FLOCK INST. #20050321-0028288 409 OLD WATERFORD RD NW
LOT 28 SECTION 1-B SATTLEY SUBDIVISION D.B. 549, PG. 468 GPIN 230-26-7586 N/F EDGAR B. HATRICK, III TRUSTEE UNDER THE EDGAR B. HATRICK, III REVOCABLE FAMILY TRUST DATED JUNE 23, 2015 INST. #20160629-00403224 407 OLD WATERFORD RD NW
N/F 5 LIONS, LLC INST. #201911250073449 GPIN 230-26-8070 405 OLD WATERFORD RD NW
#419 1 STORY BRICK W/ FRAME GARAGE BASEMENT
#415 1 STORY BRICK W/ FRAME BASEMENT
#413 1 STORY BRICK W/ FRAME BASEMENT
#411 1 STORY BRICK W/ FRAME BASEMENT
#409 1 STORY BRICK W/ FRAME BASEMENT
#407 1 STORY BRICK W/ FRAME BASEMENT
#405 1 STORY BRICK W/ FRAME BASEMENT
3.5' WOODEN FENCE
3.5' DILAPIDATED WOODEN FENCE
ASPHALT
GRAVEL D/W
ASPHALT D/W
CONC. WALK
STEPS
RET. WALL
UTILITY POLE W/ GUY # G095
UTILITY POLE W/ GUY # B2229 G075
UTILITY POLE W/ GUY # B2229 H025
UTILITY POLE W/ GUY # B2229 H07
UTILITY POLE W/ GUY # H07
UTILITY POLE W/ LIGHT # B2229 H004
UTILITY POLE W/ GUY # B2229 H005
UTILITY POLE W/ GUY # B2229 H006
UTILITY POLE W/ GUY # B2229 H008
UTILITY POLE W/ GUY # B2229 H009
UTILITY POLE W/ GUY # B2229 H010
UTILITY POLE W/ GUY # B2229 H011
UTILITY POLE W/ GUY # B2229 H012
UTILITY POLE W/ GUY # B2229



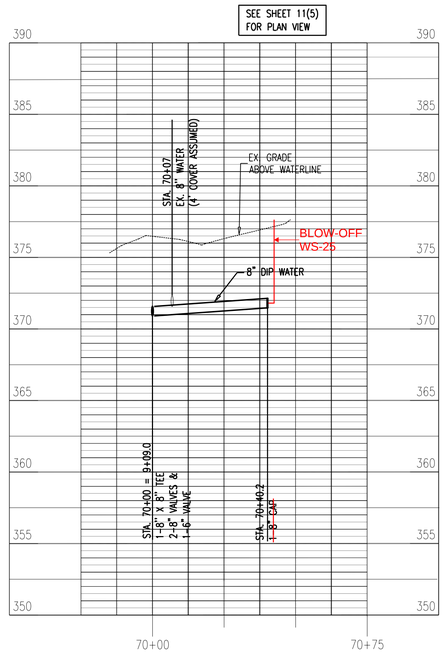
6-IN WATER - WILLIAM ST NW

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



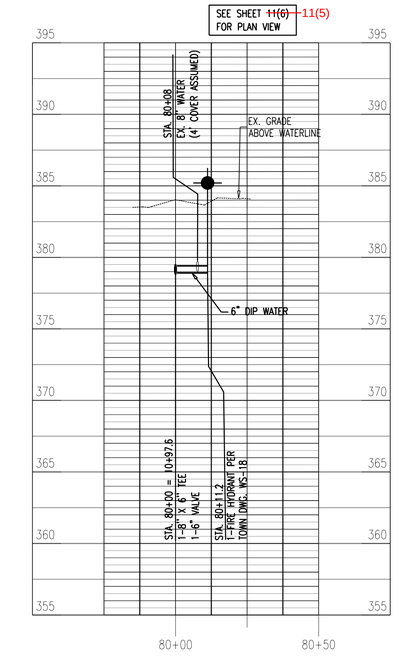
FH @ MORVEN PARK RD STA. 7+28

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



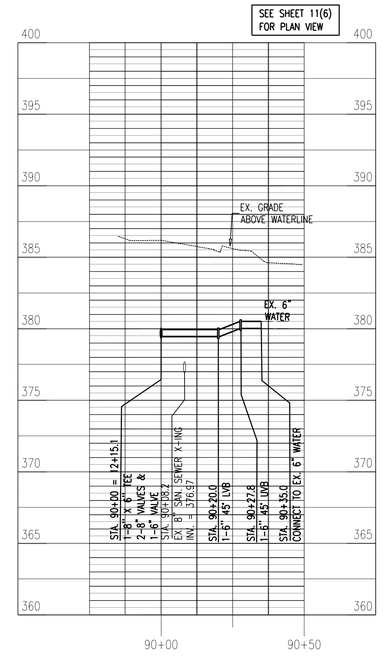
8-IN WATER - 107 MORVEN PARK RD

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



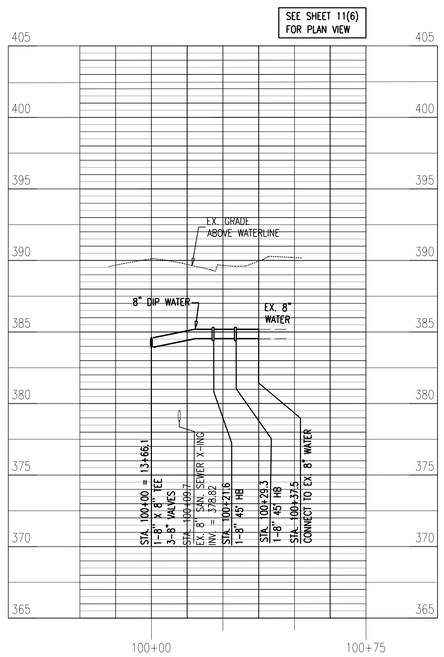
FH @ MORVEN PARK RD STA. 10+98

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



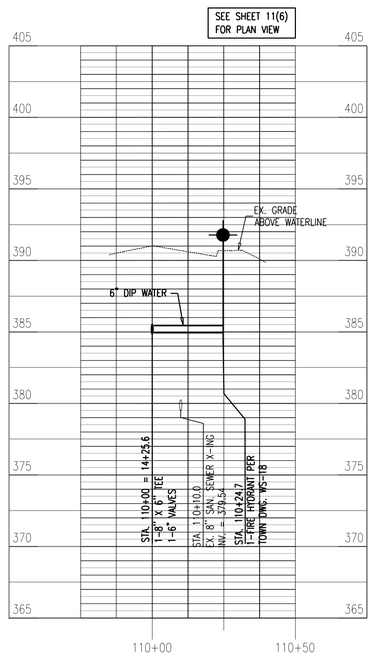
6-IN WATER - EX. WATER METER #1

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



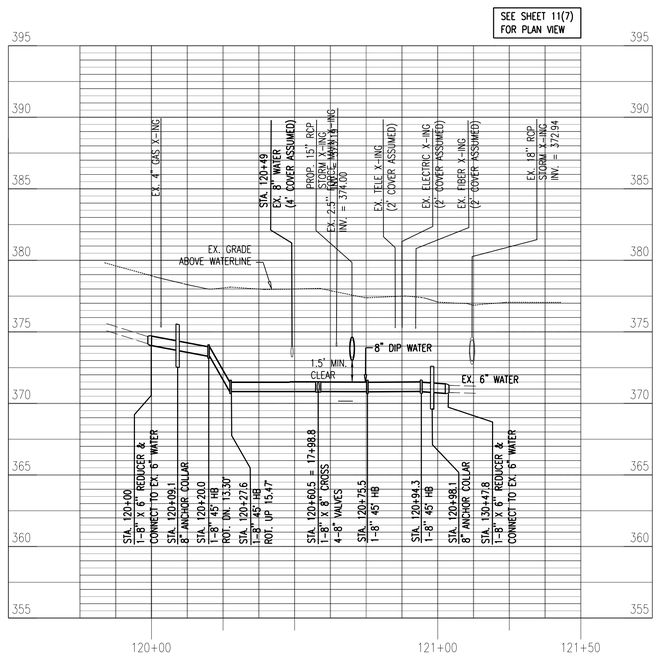
8-IN WATER - EX. WATER METER #2

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



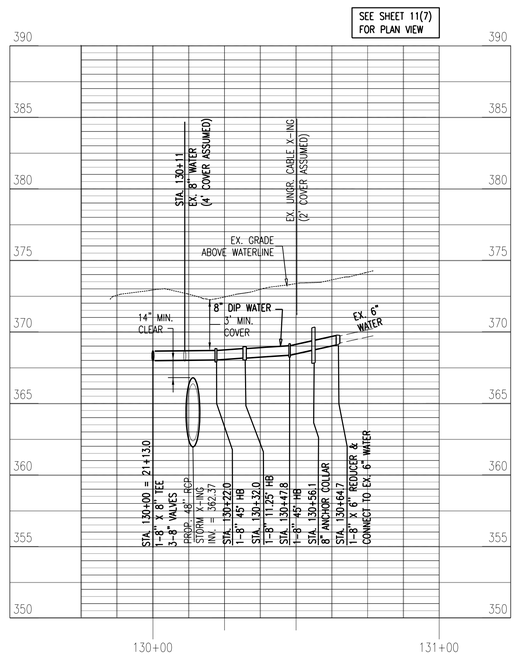
FH @ MORVEN PARK RD STA. 14+26

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



8-IN WATER - AYRLEE AVE NW

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.



8-IN WATER - MORVEN PARK CT NW

SCALE: 1"= 25' HORIZ.
1"= 5' VERT.

HORIZONTAL SCALE
0 25' 50'
SCALE: 1" = 25'

VERTICAL SCALE
0 5' 10'
SCALE: 1" = 5'

FINAL PLANS

WRA
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

ENGINEER:

PROJECT MANAGER: ANNE GEIGER. P.E.

PROJECT NAME: MORVEN PARK ROAD SIDEWALK IMPROVEMENTS
PHASE 1 – WATER MAIN RELOCATION
FROM WEST MARKET STREET TO OLD WATERFORD ROAD NW
PROFILES
Town of Leesburg Loudoun County, Virginia

SUBMISSION DATE: June 2021

ASSOCIATED PLAN
C.I.P. NUMBER: TLCI-2019-0003 2021-0004
VDOT PROJ. NO. N/A
TOWN NUMBER:

Sheet 11(10)

8-IN WATER - MORVEN PARK RD

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
LI	0+00	7,091,604.95	11,745,585.959	24.59		N17° 27' 31.61"E		0+24.588	7,091,627.650	11,745,593.336
L2	0+24.59	7,091,627.650	11,745,593.336	17.38		N27° 19' 34.96"W		0+41.973	7,091,643.095	11,745,585.355
L3	0+41.97	7,091,643.095	11,745,585.355	515.01		N17° 40' 25.04"E		5+56.988	7,092,133.802	11,745,741.711
L4	5+56.99	7,092,133.802	11,745,741.711	134.53		N15° 39' 31.02"E		6+91.522	7,092,263.343	11,745,778.023
L5	6+91.52	7,092,263.343	11,745,778.023	40.00		N17° 47' 46.98"E		7+31.522	7,092,301.429	11,745,790.248
L6	7+31.52	7,092,301.429	11,745,790.248	20.00		N16° 12' 39.03"E		7+51.522	7,092,320.634	11,745,795.831
L7	7+51.52	7,092,320.634	11,745,795.831	13.54		N6° 12' 39.03"E		7+65.065	7,092,327.156	11,745,807.700
L8	7+65.06	7,092,327.156	11,745,807.700	60.00		N16° 12' 39.03"E		8+25.065	7,092,384.770	11,745,824.450
L9	8+25.06	7,092,384.770	11,745,824.450	40.00		N12° 12' 01.36"E		8+65.065	7,092,423.867	11,745,832.904
L10	8+65.06	7,092,423.867	11,745,832.904	308.46		N15° 31' 34.54"E		11+73.523	7,092,721.069	11,745,915.472
L11	11+73.52	7,092,721.069	11,745,915.472	37.77		N17° 57' 40.52"E		12+11.297	7,092,757.002	11,745,927.120
L12	12+11.30	7,092,757.002	11,745,927.120	20.00		N15° 31' 41.75"E		12+31.297	7,092,776.272	11,745,932.475
L13	12+31.30	7,092,776.272	11,745,932.475	30.22		N13° 01' 41.75"E		12+61.522	7,092,805.719	11,745,939.288
L14	12+61.52	7,092,805.719	11,745,939.288	203.05		N15° 06' 44.22"E		14+64.570	7,093,001.745	11,745,992.225
L16	14+64.57	7,093,001.745	11,745,992.225	26.45		N12° 36' 44.22"E		14+91.019	7,093,027.556	11,745,998.000
L17	14+91.02	7,093,027.556	11,745,998.000	247.80		N15° 06' 44.30"E		17+38.822	7,093,266.789	11,746,062.606
L18	17+38.82	7,093,266.789	11,746,062.606	40.00		N17° 42' 13.23"E		17+78.822	7,093,304.895	11,746,074.769
L19	17+78.82	7,093,304.895	11,746,074.769	40.00		N15° 06' 44.22"E		18+18.822	7,093,343.511	11,746,085.198
L20	18+18.82	7,093,343.511	11,746,085.198	40.00		N12° 31' 11.37"E		18+58.822	7,093,382.560	11,746,093.869
L21	18+58.82	7,093,382.560	11,746,093.869	168.21		N15° 06' 44.61"E		20+27.035	7,093,544.955	11,746,137.724
L22	20+27.03	7,093,544.955	11,746,137.724	80.00		N17° 49' 16.01"E		21+07.035	7,093,621.117	11,746,162.208
L23	21+07.03	7,093,621.117	11,746,162.208	285.34		N15° 06' 44.22"E		23+92.379	7,093,896.593	11,746,236.600
L24	23+92.38	7,093,896.593	11,746,236.600	20.00		N16° 01' 12.94"E		24+12.379	7,093,915.816	11,746,242.120
L25	24+12.38	7,093,915.816	11,746,242.120	17.64		N28° 58' 47.06"W		24+30.021	7,093,931.249	11,746,233.572
L26	24+30.02	7,093,931.249	11,746,233.572	10.00		N28° 04' 18.26"W		24+40.021	7,093,940.073	11,746,228.867
L27	24+40.02	7,093,940.073	11,746,228.867	8.49		N73° 04' 18.26"W		24+48.506	7,093,942.543	11,746,220.749
L28	24+48.51	7,093,942.543	11,746,220.749	36.40		N28° 04' 18.26"W		24+84.908	7,093,974.663	11,746,203.619
L29	24+84.91	7,093,974.663	11,746,203.619	8.61		N24° 22' 30.00"W		24+93.518	7,093,982.505	11,746,200.066

6-IN WATER - PEER MANOR

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L30	29+85	7,091,743.638	11,745,633.135	20.50		N72° 19' 34.96"W		30+05.500	7,091,749.862	11,745,613.602
L31	30+05.50	7,091,749.862	11,745,613.602	7.78		S62° 40' 25.04"W		30+13.278	7,091,746.291	11,745,606.692
L32	30+13.28	7,091,746.291	11,745,606.692	20.00		N70° 52' 00.29"W		30+33.278	7,091,752.846	11,745,587.797
L33	30+33.28	7,091,752.846	11,745,587.797	15.05		N70° 30' 23.75"W		30+48.325	7,091,757.868	11,745,573.612

FH @ MORVEN PARK RD STA. 4+15

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L40	39+85	7,091,994.229	11,745,712.981	38.72		N72° 19' 34.96"W		40+23.718	7,092,005.983	11,745,676.090

6-IN WATER - WILLIAM ST NW

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L50	49+85	7,092,151.908	11,745,762.364	27.94		N74° 20' 28.98"W		50+12.937	7,092,159.448	11,745,735.464
L51	50+12.94	7,092,159.448	11,745,735.464	12.94		N71° 03' 07.98"W		50+25.874	7,092,163.649	11,745,723.228
L52	50+25.87	7,092,163.649	11,745,723.228	8.99		N26° 03' 07.98"W		50+34.868	7,092,171.729	11,745,719.278
L53	50+34.87	7,092,171.729	11,745,719.278	20.00		N71° 03' 07.48"W		50+54.868	7,092,178.223	11,745,700.362

FH @ MORVEN PARK RD STA. ~~7+33~~ 7+28

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L60	59+85	7,092,293.691	11,745,803.518	41.29		N72° 12' 13.02"W		60+26.289	7,092,306.311	11,745,764.205

8-IN WATER - 107 MORVEN PARK RD

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L70	69+85	7,092,462.213	11,745,859.125	62.57		N74° 31' 11.50"W		70+47.565	7,092,478.912	11,745,798.830
L71	70+47.57	7,092,478.912	11,745,798.830	20.01		N71° 26' 23.97"W		70+67.577	7,092,485.282	11,745,779.859

FH @ MORVEN PARK RD STA. 10+98

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L80	79+85	7,092,643.895	11,745,909.599	41.20		N74° 28' 25.46"W		80+26.201	7,092,654.923	11,745,869.902

6-IN WATER - EX. WATER METER #1

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L90	89+85	7,092,764.722	11,745,913.697	28.51		S74° 28' 18.25"E		90+13.513	7,092,757.089	11,745,941.169
L91	90+13.51	7,092,757.089	11,745,941.169	6.50		S72° 45' 57.99"E		90+20.013	7,092,755.163	11,745,947.377
L92	90+20.01	7,092,755.163	11,745,947.377	7.78		N62° 14' 02.01"E		90+27.791	7,092,758.787	11,745,954.260
L93	90+27.79	7,092,758.787	11,745,954.260	9.17		S72° 45' 57.99"E		90+36.957	7,092,756.071	11,745,963.015
L94	90+36.96	7,092,756.071	11,745,963.015	12.15		S74° 02' 52.68"E		90+49.104	7,092,752.733	11,745,974.693

8-IN WATER - EX. WATER METER #2

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L100	99+85	7,092,910.625	11,745,952.081	30.06		S74° 53' 15.78"E		100+15.064	7,092,902.787	11,745,981.105
L101	100+15.06	7,092,902.787	11,745,981.105	6.50		S77° 22' 11.53"E		100+21.564	7,092,901.366	11,745,987.447
L102	100+21.56	7,092,901.366	11,745,987.447	7.78		S32° 22' 11.53"E		100+29.342	7,092,894.796	11,745,991.612
L103	100+29.34	7,092,894.796	11,745,991.612	11.60		S77° 18' 35.39"E		100+40.946	7,092,892.247	11,746,002.932
L104	100+40.95	7,092,892.247	11,746,002.932	11.53		S72° 44' 40.62"E		100+52.473	7,092,888.827	11,746,013.941

FH @ MORVEN PARK RD STA. 14+26

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L110	109+85	7,092,968.017	11,745,967.580	54.72		S74° 53' 15.78"E		110+39.722	7,092,953.751	11,746,020.409

8-IN WATER - AYRLEE AVE NW

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L120	119+83.59	7,093,306.463	11,746,150.474	16.41		N71° 46' 39.7"W		119+99.998	7,093,311.594	11,746,134.889
L121	120+00	7,093,311.594	11,746,134.889	20.00		N70° 47' 23.01"W		120+19.998	7,093,318.175	11,746,116.002
L122	120+20	7,093,318.175	11,746,116.002	7.64		S64° 12' 36.99"W		120+27.635	7,093,314.853	11,746,109.126
L123	120+27.63	7,093,314.853	11,746,109.126	20.62		N70° 54' 48.78"W		120+48.257	7,093,321.596	11,746,089.638
L124	120+48.26	7,093,321.596	11,746,089.638	27.20		N74° 53' 15.78"W		120+75.452	7,093,328.686	11,746,063.383
L125	120+75.45	7,093,328.686	11,746,063.383	18.82		S60° 06' 44.22"W		120+94.277	7,093,319.306	11,746,047.062
L126	120+94.28	7,093,319.306	11,746,047.062	11.32		N73° 29' 37.73"W		121+05.593	7,093,322.521	11,746,036.212
L127	121+05.59	7,093,322.521	11,746,036.212	37.45		N61° 28' 44.13"W		121+43.046	7,093,340.404	11,746,003.304

8-IN WATER - MORVEN PARK CT NW

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L130	129+85	7,093,630.820	11,746,149.291	37.01		S74° 53' 15.78"E		130+22.006	7,093,621.172	11,746,185.018
L131	130+22.01	7,093,621.172	11,746,185.018	10.00		S29° 53' 15.78"E		130+32.006	7,093,612.502	11,746,190.001
L132	130+32.01	7,093,612.502	11,746,190.001	7.71		S18° 38' 15.78"E		130+39.717	7,093,605.196	11,746,192.465
L133	130+39.72	7,093,605.196	11,746,192.465	8.03		S21° 05' 35.02"E		130+47.751	7,093,597.700	11,746,195.356
L134	130+47.75	7,093,597.700	11,746,195.356	29.24		S66° 05' 35.02"E		130+76.993	7,093,585.850	11,746,222.089

12-IN WATER - OLD WATERFORD RD

Number	BEGINNING STATION	BEGINNING NORTHING	BEGINNING EASTING	Length	Radius	Line/Chord Direction	DELTA	END STATION	END NORTHING	END EASTING
L140	139+85	7,093,883.427	11,746,202.877	38.29		S74° 53' 15.78"E		140+23.292	7,093,873.443	11,746,239.845
L141	140+23.29	7,093,873.443	11,746,239.845	9.19		S70° 54' 53.77"E		140+32.482	7,093,870.439	11,746,248.529
L142	140+32.48	7,093,870.439	11,746,248.529	20.17		N64° 05' 06.23"E		140+52.655	7,093,879.255	11,746,266.674
L143	140+52.65	7,093,879.255	11,746,266.674	15.56		N68° 05' 06.23"E		140+68.216	7,093,885.063	11,746,281.110
L144	140+68.22	7,093,885.063	11,746,281.110	20.00		S66° 54' 53.77"E		140+88.216	7,093,877.221	11,746,299.509
L145	140+88.22	7,093,877.221	11,746,299.509	20.91		S66° 54' 53.77"E		141+09.127	7,093,869.022	11,746,318.746
L146	141+09.13	7,093,869.022	11,746,318.746	9.11		S62° 02' 33.58"E		141+18.239	7,093,864.750	11,746,326.794

SUGGESTED SEQUENCE OF CONSTRUCTION

GENERAL:

THE CONTRACTOR SHALL COORDINATE WITH THE TOWN OF LEESBURG REGARDING SHUTDOWN SCHEDULES AND REQUESTS FOR TOWN STAFF TO OPERATE (OPEN/CLOSE) WATER SYSTEM VALVES. THE CONTRACTOR SHALL NOT OPERATE ANY EX. WATER SYSTEM VALVES.

WATER SERVICE RECONNECTIONS - OLD WATERFORD ROAD, NW

1. INSTALL ALL NEW WATER SERVICE CONNECTIONS FROM THE EX. 6" WATER MAIN TO THE EX. 12" WATER MAIN FOR ~~#405~~ OLD WATERFORD ROAD THRU #419 OLD WATERFORD ROAD.
2. AFTER 8-INCH & 12-INCH WATER - MORVEN PARK ROAD NW STEP #1, CLOSE EX. 12" WATER MAIN VALVES ALONG OLD WATERFORD RD (LOCATED EAST AND WEST OF THE INTERSECTION OF ~~OLD~~ MORVEN PARK RD AND OLD WATERFORD RD) AND EX. 8" VALVE (NORTH) AT THE INTERSECTION OF MORVEN PARK CT AND MORVEN PARK ~~DR.~~ RD NEAR 8-INCH & 12-INCH MORVEN PARK RD STA. 21+00.
3. INSTALL NEW 8" CAPS AT THE INTERSECTION OF MORVEN PARK RD, AND MORVEN PARK CT. (8-INCH & 12-IN MORVEN PARK ROAD STA. 21+09) AND NEW 6" CAPS IN FRONT OF ~~#405 OLD WATERFORD RD.~~ #407 OLD WATERFORD RD.
4. ABANDON 8" & 6" WATER MAIN BETWEEN THE INTERSECTION OF MORVEN PARK RD AND MORVEN PARK CT. AND ~~#405 OLD WATERFORD RD.~~ #407 OLD WATERFORD RD
5. RESTORE ALL DAMAGED ROADWAY, DRIVEWAY, AND SEED ALL DISTURBED GRASS AREAS.
6. RESTORE PAVEMENT PER PLANS.

SUGGESTED SEQUENCE OF CONSTRUCTION (CONTINUED)

8-INCH & 12-INCH WATER - MORVEN PARK ROAD NW

1. INSTALL NEW 12-INCH ANCHOR COLLAR AT STA. 24+59 AND 8-INCH ANCHOR COLLAR ON EX. 8-INCH WATER NEAR STA. 21+04.
2. INSTALL NEW 8" WATER MAIN AND APPURTENANCES BETWEEN STA. 0+05 AND STA. 23+68 AND INSTALL NEW 12" WATER MAIN AND APPURTENANCES BETWEEN STA. 23+68 TO STA. 24+48, INCLUDING THE NEW FIRE HYDRANTS AT: STA. 4+15 STA. ~~7+33~~, AND STA. 14+26. PROVIDE TEMP. 8" CAPS AT STA. 0+05 AND STA. 24+48 AND CLOSE ALL NEW TEE BRANCH VALVES. 7+28
3. CONTRACTOR TO PROVIDE TEMPORARY CAPS AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 8" & 12" WATER MAIN.
4. AFTER SUCCESSFUL TESTING, CLOSE EX. VALVES, THE NORTHERN EX. 8" VALVE AT THE INTERSECTION OF MORVEN PARK ROAD AND WEST MARKET STREET, EX. 6" VALVE AT STA. 1+46, AND EX. 8" VALVE AT STA. 2+16.
5. DURING 8-HOUR SHUT DOWN, REMOVE EX. TEE AT STA. 0+00 AND CONNECT TO EX. 8" WATER MAIN AND INSTALL NEW 2" BLOW-OFF AT STA. 0+64.
6. OPEN ALL EX. VALVES FROM STEP #5.
7. INSTALL ALL NEW WATER SERVICE CONNECTIONS FROM THE NEW 8" WATER MAIN TO NEW METERS AT #402 WEST MARKET ST. THRU #205 MORVEN PARK RD.
8. AFTER 12-INCH WATER - OLD WATERFORD RD STEP #5, CLOSE EX. 12" WATER MAIN VALVES ALONG OLD WATERFORD RD (LOCATED EAST AND WEST OF THE INTERSECTION OF ~~OLD~~ MORVEN PARK RD AND OLD WATERFORD RD) AND NEW 8" VALVE NORTH OF THE NEW TEE AT STA. 21+13. 24+71
9. DURING 8-HOUR SHUTDOWN, CONNECT TO EX. 12" WATER AT STA. ~~24+51.~~
10. AFTER 12-INCH WATER - OLD WATERFORD RD STEP #7, OPEN ALL VALVES FROM STEP #8.
11. AFTER WATER SERVICE RECONNECTIONS - OLD WATERFORD ROAD STEP #4, 6-INCH WATER - PEER MANOR SECT 3 STEP #9, 6-INCH WATER - WILLIAM ST NW STEP #9, 6-INCH WATER - EX. WATER METER #1 STEP #9, 8-INCH WATER METER #2 STEP #9, 8-INCH WATER - AYRLEE NW STEP #9, AND 8-INCH WATER - MORVEN PARK CT NW STEP #12.
12. ABANDON EX. 8" AND 6" WATER MAIN ALONG MORVEN PARK ROAD.
13. RESTORE ALL DAMAGED ROADWAY, DRIVEWAY, AND SEED ALL DISTURBED GRASS AREAS.
14. RESTORE PAVEMENT AND CURB AND GUTTER PER PLANS.

12-INCH WATER - OLD WATERFORD RD

1. CLOSE EX. 12" WATER MAIN VALVES ALONG OLD WATERFORD RD (LOCATED EAST AND WEST OF THE INTERSECTION OF ~~OLD~~ MORVEN PARK RD AND OLD WATERFORD RD) AND EX. 8" VALVE (NORTH) AT THE INTERSECTION OF MORVEN PARK CT AND MORVEN PARK DR. NEAR 8-INCH & 12-INCH MORVEN PARK RD STA. 21+04.
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 12" WATER PIPE AND ANCHOR COLLAR AT STA. ~~130+78~~. 140+78
3. OPEN ALL VALVES FROM STEP #1. 140+00
4. AFTER 8-INCH & 12-INCH WATER - MORVEN PARK ROAD NW STEP #6, INSTALL NEW 12" WATER MAIN AND APPURTENANCES BETWEEN STA. ~~130+00~~ TO STA. 140+63 ~~130+63~~. NEW 12" VALVE AT STA. ~~130+15~~ AND NEW 6" VALVE AT STA. ~~130+11~~ TO REMAIN CLOSED. 140+14
5. CONTRACTOR TO PROVIDE TEMPORARY CAPS AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 12" AND 6" WATER MAIN.
6. AFTER SUCCESSFUL TESTING AND AFTER 8-INCH & 12-INCH WATER - MORVEN PARK ROAD NW STEP #8, CLOSE 12" WATER MAIN VALVES ALONG OLD WATERFORD RD (LOCATED EAST AND WEST OF THE INTERSECTION OF ~~OLD~~ MORVEN PARK RD AND OLD WATERFORD RD) AND EX. 8" VALVE (NORTH) AT THE INTERSECTION OF MORVEN PARK CT AND MORVEN PARK DR. NEAR STA. 21+04.
7. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 12" WATER AT STA. ~~130+68.~~ 140+68
8. AFTER 8-INCH & 12-INCH WATER - MORVEN PARK ROAD NW STEP #10, OPEN ALL VALVES FROM STEP #6 AND NEW 12" VALVE AT STA. 130+15 AND NEW 6" VALVE AT STA. ~~130+11.~~ 140+11
9. ABANDON EX. 12" WATER MAIN ALONG OLD WATERFORD ROAD.
10. RESTORE ALL DAMAGED ROADWAY, DRIVEWAY, AND SEED ALL DISTURBED GRASS AREAS.
11. RESTORE PAVEMENT AND CURB AND GUTTER PER PLANS.

6-INCH WATER - PEER MANOR

1. CLOSE EX. 6" VALVE NEAR STA. 30+00.
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 6" WATER PIPE AND ANCHOR COLLAR BETWEEN STA. 30+13 AND STA. 30+33.
3. OPEN ALL VALVES FROM STEP #1.
4. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #6.
5. INSTALL NEW 6" WATER MAIN AND APPURTENANCES BETWEEN STA. 30+00 TO STA. 30+08.
6. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 6" WATER MAIN.
7. AFTER SUCCESSFUL TESTING, CLOSE EX. 6" VALVE NEAR STA. 30+00.
8. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 6" WATER AT STA. 30+13.
9. OPEN NEW 6" VALVE AT STA. 30+00, THE EX. 6" VALVE NEAR STA. 30+00 IS TO REMAIN CLOSED.
10. ABANDON EX. 6" WATER AS INDICATED.
11. RESTORE ALL DAMAGED ROADWAY.
12. AFTER 8-INCH WATER MORVEN PARK ROAD NW STEP #13.
13. RESTORE PAVEMENT PER PLANS.

6-INCH WATER - WILLIAM ST NW

1. CLOSE EX. 6" VALVE NEAR STA. 50+00.
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 6" WATER PIPE AND ANCHOR COLLAR BETWEEN STA. 50+35 AND STA. 50+54.
3. OPEN ALL VALVES FROM STEP #1.
4. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #6.
5. INSTALL NEW 6" WATER MAIN AND APPURTENANCES BETWEEN STA. 50+00 TO STA. 50+30.
6. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 6" WATER MAIN.
7. AFTER SUCCESSFUL TESTING, CLOSE EX. 6" VALVE NEAR STA. 50+00.
8. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 6" WATER AT STA. 50+35.
9. OPEN NEW 6" VALVE AT STA. 50+00, THE EX. 6" VALVE NEAR STA. 50+00 IS TO REMAIN CLOSED.
10. ABANDON EX. 6" WATER AS INDICATED.
11. RESTORE ALL DAMAGED ROADWAY.
12. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #13.
13. RESTORE PAVEMENT PER PLANS.

8-INCH WATER - 107 MORVEN PARK RD

1. AFTER 8-INCH & 12-INCH MORVEN PARK RD STEP #12.
2. REMOVE ABANDONED EX. 8" PER PLANS AND INSTALL NEW 8" WATER MAIN BETWEEN STA. 70+00 TO 70+40.
3. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 8" WATER MAIN.
4. AFTER SUCCESSFUL TESTING, ENSURE 8" VALVE AT STA. 70+00 REMAINS CLOSED.
5. RESTORE PAVEMENT PER PLANS.

FH @ MORVEN PARK RD STA. 10+98

1. AFTER 8-INCH & 12-INCH MORVEN PARK RD STEP #12. 6"
2. REMOVE ABANDONED EX. 8" PER PLANS AND INSTALL NEW ~~8"~~ WATER MAIN AND APPURTENANCES BETWEEN STA. 80+00 TO 80+11.
3. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 6" WATER MAIN.
4. AFTER SUCCESSFUL TESTING, ~~OPEN NEW 6" VALVE AT STA. 80+00.~~ INSTALL THE FH BEFORE OPENING THE 6" VALVE AND FLUSH THE FH TO THE SATISFACTION OF THE UTILITIES INSPECTOR
5. RESTORE PAVEMENT PER PLANS.

SUGGESTED SEQUENCE OF CONSTRUCTION (CONTINUED)

6-INCH WATER - EX. WATER METER #1

1. CLOSE EX. 6" VALVE NEAR STA. 90+00.
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 6" WATER PIPE BETWEEN STA. 90+28 AND STA. 90+35.
3. OPEN ALL VALVES FROM STEP #1.
4. AFTER 8-INCH & 12-INCH WATER - MORVEN PARK ROAD NW STEP #6.
5. INSTALL NEW 6" WATER MAIN AND APPURTENANCES BETWEEN STA. 90+00 TO STA. 90+23.
6. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 6" WATER MAIN.
7. AFTER SUCCESSFUL TESTING, CLOSE EX. 6" VALVE NEAR STA. 90+00.
8. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 6" WATER AT STA. 90+28.
9. OPEN NEW 6" VALVE AT STA. 90+00, THE EX. 6" VALVE NEAR STA. 90+00 IS TO REMAIN CLOSED.
10. ABANDON EX. 6" WATER AS INDICATED.
11. RESTORE ALL DAMAGED ROADWAY, SIDEWALK, AND SEED ALL DISTURBED GRASS AREAS.
12. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #13.
13. RESTORE PAVEMENT AND CURB AND GUTTER PER PLANS.

8-INCH WATER - EX. WATER METER #2

1. CLOSE EX. 8" VALVE NEAR STA. 100+00. 8"
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 6" WATER PIPE BETWEEN STA. 100+29 AND STA. 100+38.
3. OPEN ALL VALVES FROM STEP #1.
4. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #6.
5. INSTALL NEW 8" WATER MAIN AND APPURTENANCES BETWEEN STA. 100+00 TO STA. 100+24.
6. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT 6" WATER MAIN.
7. AFTER SUCCESSFUL TESTING, CLOSE EX. 8" VALVE NEAR STA. 100+00.
8. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 8" WATER AT STA. 100+29.
9. OPEN NEW 8" VALVE AT STA. 100+00, THE EX. 8" VALVE NEAR STA. 100+00 IS TO REMAIN CLOSED.
10. ABANDON EX. 8" WATER AS INDICATED.
11. RESTORE ALL DAMAGED ROADWAY, SIDEWALK, AND SEED ALL DISTURBED GRASS AREAS.
12. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #13.
13. RESTORE PAVEMENT AND CURB AND GUTTER PER PLANS.

8-INCH WATER - AYRLEE AVE NW

1. CLOSE EX. 8" VALVES NEAR STA. 120+40 AND STA. 120+69.
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 8" WATER PIPE AND ANCHOR COLLAR BETWEEN STA. ~~100+00~~ AND STA. 120+20 AND STA. 120+94 AND STA. 121+04.
3. OPEN ALL VALVES FROM STEP #1.
4. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #6.
5. INSTALL NEW 8" WATER MAIN AND APPURTENANCES BETWEEN STA. 120+25 TO STA. 120+89.
6. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT ~~6" WATER MAIN.~~ 8" WATER MAIN.
7. AFTER SUCCESSFUL TESTING, CLOSE EX. 8" VALVES NEAR STA. 120+40 AND STA. 120+69.
8. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 8" WATER AT STA. 120+20 AND AT STA. 120+94.
9. OPEN NEW 8" VALVES (2) AT STA. 120+58, THE EX. 8" VALVES NEAR STA. 120+40 AND STA. 120+69 ARE TO REMAIN CLOSED.
10. ABANDON EX. 6" WATER AS INDICATED.
11. RESTORE ALL DAMAGED ROADWAY AND CONCRETE APRON.
12. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #13.
13. RESTORE PAVEMENT PER PLANS.

8-INCH WATER - MORVEN PARK CT NW

1. CLOSE EX. 6" VALVE NEAR STA. 130+18.
2. DURING 8-HOUR SHUTDOWN, INSTALL NEW 8" WATER PIPE AND ANCHOR COLLAR BETWEEN STA. ~~110+51~~ AND STA. 130+68.
3. OPEN ALL VALVES FROM STEP #1.
4. AFTER 8-INCH WATER - MORVEN PARK ROAD STEP #1 AND AFTER THE WATER SERVICE RECONNECTIONS - OLD WATERFORD ROAD STEP #2.
5. CLOSE EX. 8" VALVE NEAR 8-INCH WATER - MORVEN PARK ROAD NW STA. 20+98 AND EX. 6" VALVE ALONG OLD WATERFORD ROAD EAST OF THE INTERSECTION WITH MORVEN PARK RD.
6. ABANDON EX. 6" WATER MAIN ALONG MORVEN PARK ROAD NORTH OF THE INTERSECTION WITH MORVEN PARK CT TO EX. 6" VALVE LOCATED IN OLD WATERFORD RD.
7. AFTER 8-INCH WATER - MORVEN PARK ROAD NW STEP #6.
8. INSTALL NEW 8" WATER MAIN AND APPURTENANCES BETWEEN STA. 130+00 TO STA. 130+46.
9. CONTRACTOR TO PROVIDE TEMPORARY CAP AND PERFORM BACTERIOLOGICAL AND PRESSURE TESTS IN ACCORDANCE WITH TOWN OF LEESBURG STANDARDS ON THE NEWLY BUILT ~~6" WATER MAIN.~~ 8" WATER MAIN.
10. AFTER SUCCESSFUL TESTING, CLOSE EX. 6" VALVE NEAR STA. 130+18.
11. DURING 8-HOUR SHUTDOWN, CONNECT TO NEW 8" WATER AT STA. 130+51.
12. OPEN NEW 8" VALVE AT STA. 130+00, THE EX. 8" VALVE NEAR 8-INCH WATER - MORVEN PARK ROAD NW STA. 20+98 AND EX. 6" VALVE ALONG OLD WATERFORD ROAD EAST OF THE INTERSECTION WITH MORVEN PARK RD ARE TO REMAIN CLOSED.
13. ABANDON