ESTIMATE OF QUANTITES & COST

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	SUB-TOTAL
EXCAVATION		CU. YDS.			
EMBANKMENT		CU. YDS.			
STORM INLETS VDOT STD. DI-1		EACH			
STORM INLETS VDOT STD. DI-2		EACH			
STORM INLETS VDOT STD. DI-3		EACH			
STORM INLETS VDOT STD. DI-5		EACH			
STORM INLETS VDOT STD. DI-7		EACH			
STORM MANHOLE MH-1		EACH			
STORM MANHOLE MH-2		EACH			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" CONCRETE PIPE CLASS __		LIN. FT.			
" PLASTIC PIPE (HDPE, ETC.)		LIN. FT.			
" PLASTIC PIPE (HDPE, ETC.)		LIN. FT.			
" PLASTIC PIPE (HDPE, ETC.)		LIN. FT.			
" PLASTIC PIPE (HDPE, ETC.)		LIN. FT.			
BOX CULVERTS		LUMP SUM			
PAVED DITCH PG-2		LIN. FT.			
PAVED DITCH PG-5		LIN. FT.			
SODDED SWALE		SQ. YDS.			
SPLASH APRON		EACH			
RIP RAP		SQ. FT.			
" CONCRETE END SECTION		EACH			
" CONCRETE END SECTION		EACH			
" CONCRETE END SECTION		EACH			
" CONCRETE ENDWALL		EACH			
" CONCRETE ENDWALL		EACH			
" CONCRETE ENDWALL		EACH			
DRIVEWAY ENTRANCE TYPE __		EACH			
SIDEWALK (4' WIDE)		LIN. FT.			
SIDEWALK (5' WIDE)		LIN. FT.			
HANDICAP RAMPS VDOT STD. CG-12		EACH			
CONC. MEDIANS VDOT STD. MS-1/MS-1A		LIN. FT.			
HEADER CURB VDOT STD. CG-2		LIN. FT.			
CURB & GUTTER VDOT STD. CG-6		LIN. FT.			
" BITUMINOUS ASPH. (SURFACE) TYPE ___		SQ. YDS.			
" BITUMINOUS ASPH. (BASE) TYPE ___		SQ. YDS.			
" INTERMEDIATE COURSE TYPE ___		SQ. YDS.			
" AGGREGATE BASE TYPE ___		SQ. YDS.			
ASPHALT TRAIL (___' WIDE) w/4" AGGR. BASE		SQ. YDS.			
ASPHALT MILLING		SQ. YDS.			
PAVEMENT RESTORATION (UTILITY CUT)		EACH			
STREET SIGNS		EACH			
TRAFFIC BARRICADE		EACH			
SCREENING		LIN. FT.			
WATER LINE 6" or smaller w/TRACER WIRE		LIN. FT.			
WATER LINE 8" w/TRACER WIRE		LIN. FT.			
WATER LINE 10" w/TRACER WIRE		LIN. FT.			
WATER LINE 12" w/TRACER WIRE		LIN. FT.			
FIRE HYDRANTS		EACH			
WET TAP		EACH			
POLYETHYLENE WRAP		LIN. FT.			
SANITARY SEWER MAINS (8" Min.) w/TRACER WIRE		LIN. FT.			
SANITARY SEWER MANHOLES		EACH			
CORE-BORE CONNECTION TO EX. MANHOLE		EACH			
POLYETHYLENE WRAP		LIN. FT.			
STREET LIGHTS		EACH			
TRAFFIC SIGNAL (PER INTERSECTION)		LUMP SUM			
LOT CORNER PINS AS SHOWN ON PLAT		EACH			
MONUMENTS AS SHOWN ON PLAT		EACH			
IMPROVEMENT COST TOTAL					
IMPROVEMENT BOND					
15% ADMINISTRATIVE COST					
ESTIMATED TOTAL					

I HEREBY CERTIFY THAT THE FOREGOING IS MY BEST ESTIMATE OF THE QUANTITIES OF IMPROVEMENTS IN THIS SUBDIVISION / SITE PLAN.

SIGNATURE DATE

USE APPROVED COSTS FROM DCSM APPENDIX B

GENERAL NOTES

All construction within existing and/or proposed R/W is to conform to the latest VDOT Standards and Specifications, the current editions of the City of Manassas Design and Construction Standards Manual (DCSM), Manual of Uniform Traffic Control Devices (MUTCD) and the Virginia Work Area Protection Manual (VWAPM), unless otherwise noted.

The contractor or developer is required to notify the City of Manassas Engineering Department in writing three (3) days prior to the beginning of the construction and specifically request inspection before beginning:

A. Installation of approved erosion and sediment control devices.
B. Clearing and Grading.
C. Subgrade excavation.
D. Installing storm sewers or culverts.
E. Setting curb and gutter forms.
F. Placing curb and gutter.
G. Placing other concrete.
H. Placing gravel base.
I. Placing any bituminous surfacing.
J. Installing water mains.
K. Installing sanitary sewer.

An approved set of plans and all applicable permits must be available at the construction site. Also, a representative of the developer must be available at all times.

Construction debris shall be containerized in accordance with the Virginia Litter Control Act; no less than one litter receptacle shall be provided at the construction site.

Methods and materials used in the construction of the improvements herein shall conform to the current edition of the City of Manassas Design and Construction Standards Manual (DCSM) and Virginia Department of Transportation Standards and Specifications.

The developer shall be responsible for costs incurred for the relocation of or damage to any public roads and utilities due to construction.

Measures to control erosion and siltation must be provided and installed according to Article 4 of the City of Manassas DCSM and/or the current edition of the Virginia Erosion and Sediment Control Handbook. The approval of these plans in no way relieves the developer or agent of the responsibilities contained in the siltation and erosion control policy.

The contractor or developer is required to schedule a preconstruction meeting with the Engineering Department prior to any land disturbing activities.

Before burning, blasting, transportation or storage of explosives in the City of Manassas a permit shall be obtained from the Public Safety Office.

Public Safety must be notified immediately (703) 257-8233 in the event that unusual items such as tanks, cylinders, unidentified containers, etc, which could contain potentially hazardous materials are discovered or observed. All activities must cease an not be resumed until authorization to proceed is given by the Public Safety Office.

Prior to any land disturbing activities, all necessary permits shall be obtained from the City of Manassas Planning and Development Office (703) 257-8278.

A permit will be required for all advertising signs. This permit can be obtained from the City of Manassas Planning and Development Office.

All unstable material shall be removed from the construction limits of the roadway before placing embankment.

All streets shall be compacted to a density of not less than 95% of maximum density determined in conformity with VTM-1 method. The subdivider shall use mechanical means to achieve the required compaction.

Contractors shall notify operators who maintain underground utility lines in the area of proposed excavating or blasting at least two (2) working days, but not more than ten (10) working days, prior to commencement of excavation or demolition. Names and telephone numbers of the operators underground utility lines in the City of Manassas appear below. These numbers shall also be used to serve in an emergency condition.

Washington Gas:	(703) 750-1000 or (800) 752-7520
Columbia Gas/NiSource	(800) 543-8911
Virginia Power/Dominion Energy:	(757) 857-2112
Northern Virginia Electric Cooperative (NOVEC):	(703) 335-0500
City of Manassas Utilities Department:	(703) 257-8219 or (703) 257-8351
Continental Telephone of Virginia:	(434) 348-8005
Verizon:	(877) 728-6101
Comcast:	(800) 391-3000

The developer shall provide to the City of Manassas, third party geotechnical testing results.

All storm sewer systems shall be reinforced concrete pipe. All concrete pipe to be placed within the dedicated right-of-way shall conform to ASTM Specification C76-65T class IV.

All City of Manassas standard pavement designs are based on a minimum CBR value of 10.

A smooth grade shall be maintained from centerline of existing road to proposed curb and gutter to preclude the forming of false gutters and/or the ponding of any water on the roadway.

A spring shall be capped and piped to the nearest storm sewer manhole or curb inlet. The pipe shall be a minimum 6" diameter and conform to VDOT Section 501.

Wells shall be abandoned per State Health Department regulations.

The developer shall grade slopes no steeper than 3:1 unless otherwise noted.

The approval of these plans shall in no way relieve the developer or his agent of any legal responsibilities which may be required by the Code of Virginia or any ordinance enacted by the City of Manassas.

Standard street signs shall be installed at each intersection by the City of Manassas and are to be paid for by the developer.

All underground utilities must be placed from the utility main to the right-of-way line for each lot and all underground utility mains and connections must be installed and tested in-place prior to the application of any bituminous materials or base stone.

All underground utility pipe and conduit will have tracer wire installed with all non-metallic pipe.

The developer shall be responsible for determining the location of all existing underground utilities (horizontal/vertical prior to beginning any construction. The contractor shall inform the City of Manassas Engineering Department of any conflicts not per the approved plans. Call Miss Utility before you dig at 881 or 1-(800)-552-7001.

It is the intention of these plans that all areas shall be graded in detail so as to provide positive surface drainage and to prevent the ponding of water.

The contractor shall provide adequate means of cleaning trucks and/or other equipment of mud prior to entering public streets, and it is the contractor's responsibility to clean streets, allay dust, and to take whatever measures are necessary to insure that the road is maintained in a clean, mud and dust free conditions at all times.

The developer and/or contractor shall be responsible for supplying all utility companies (Gas, Electric, Telephone, Etc.) with copies of plans that have been approved by the City of Manassas and advising them that all grading shall conform to the approved planes and further that the Utility Companies shall be responsible for honoring these plans and the finished grades in the installation of their utility lines.

Wall signs, monument signs, accessory buildings greater than 200 sq. feet, fences over six (6) feet, structural pad, dumpster enclosures, retaining walls two (2) feet above final grade elevation, light pole bases and associated electrical conduits for the lighting plan will require separate building permits.

All utility tie in work shall be coordinated with the City Inspector.

Owners, Engineers or Developers and its staff or contractors shall comply with all Federal, State and Local Laws and Regulations applicable to the project within these approved plan(s) to furnish services in compliance with all applicable Federal, State and Local Laws and Regulations to include Wetlands, Fish & Wildlife Habitat Status or Studies prior to any land disturbance, tree removal or execution of the site development of this approved plan, permit(s) or easement(s).

For Waivers: See Sheet(s) ____ of ____.

Anticipated Sewage Flows:

Anticipated Fire Flows:

SANITARY SEWER

All sanitary sewer that is below 12' or less in depth shall be PVC SDR-26 conforming to ASTM Specification 3034-[7-17].

All sanitary sewer that is deeper than 12 feet shall be PVC C-900 or 905 conforming to AWWA Specification or Ductile Iron Pipe Conforming to ASTM Specification A21.51 or latest revision.

Aerial sewer shall be ductile iron mechanical joint pipe conforming to ASTM Specification A21.51 or latest revision.

An Exfiltration or Infiltration Test shall be conducted on all new sanitary sewer lines which are 8 inches or larger and a vacuum test shall be conducted to the top of the casting on all manholes. These tests shall be witnessed by the City Site Inspector and must be approved by the City Public Works Department.

At all points of sewer main connection or abandonment to existing manholes, manholes shall be replaced at the developers expense, unless otherwise directed by the city engineer.

All Ductile Iron Pipe sanitary sewer shall be polyethylene encased per current DIPRA standards. Minimum 8mm or approved equal.

WATER

All water mains shall have a minimum cover of 3.5'. Cover shall be maintained unless otherwise designated by Public Works Department.

All water main construction shall be either push-on-joint or mechanical joint lined ductile iron pipe conforming to ASTM Specification A21.51 or latest revision.

Containment backflow prevention shall be installed downstream of the meter and upstream of all plumbing splits at all pubic, commercial and industrial facilities and at all properties where lawn sprinkler systems are planned.

All new water mains shall be polyethylene encased per current DIPRA standards. Minimum 8mm or approved equal.

All new water mains shall be a minimum of 8" in diameter.

All new water services shall be a minimum of 1" in diameter to the meter.

SURVEYING AND MAPPING INFORMATION

Elevation datum USC & GS Mean Sea Level as established from the following bench marks

OR is not USC & GS MSL but is

and the relation of this datum to MSL (If accurately known) is

Horizontal and vertical control surveys were run on the ground by the following firm: in the year of

Topographic mapping shown hereon was performed by the following firm: in the year of using (field instrument surveys)(aerial photogrammetry with ground control)

(Using other methods as described as)

The meridan for survey bearings shown hereon is (TRUE)(MAGNETIC) (VA. N. ZONE P.C.S.) (OTHER) and was established as follows:

Coordinates of points or monuments, if shown hereon, are coordinates of the VA. North Zone Plane Coordinate System established as follows:

Topographic mapping is certified by (Signed):

(Name) (Registration No.)

Label two (2) property corners on the site plan with VA. State Coordinates (VCS 1983).

Stormwater Information

City Stormwater per required: Yes ☐ No ☐ VPDES permit coverage required: Yes ☐ No ☐

SWM Facilities Designed Using: (Check all that apply)

Technical Criteria:
Time Limits: ☐ VPDES Permit No. (If time limits):
Grandfathered: ☐ DEQ Memo 14-2014: ☐
New Development: ☐ Redevelopment: ☐
New+Redevelopment (i.e. Redevelopment with a net increase in impervious area) ☐

High Density Polyethylene (HDPE) pipe used on this project: Yes ☐ No ☐
Water Quality Option: None ☐
Off-Site Facility ☐ Comprehensive SWM Plan ☐
Proposed On-Site Facility ☐ Existing Onsite Facility ☐
Non-Point Source Nutient Credits ☐
Amount of Credits:

SWM Facilities (Proposed Only)

Facility ID No.	Facility Type	Purpose (Quality/ Quantity	Total Area Treated (Acres)	Impervious Area Treated (Acres)	Latitude (Decimal Degree)	Longitude (Decimal Degree)	Watershed	Receiving Waters	Maintenance Agreement Y/N	VAHU6 Code	Length/ Area of Facility	Rough Size (CF)

Disturbed Area (DA) within Watershed(s)

Watershed 1: DA= (Acres) Watershed 2: DA= (Acres) Total Disturbed Area= (Acres)

REVISED: December 29, 2023

PLAN SHEET INDEX

Sheet	Title
1	

VICINITY MAP

SCALE: 1" = 2,000'

Zoning Requirements

Zoning:
Average Lot Area: (Sq. Ft.)
Minimum Lot Area: (Sq. Ft.)
Minimum Lot Width: (Ft.)
Maximum Building Height: (Ft.)
Number of Floors: (Commercial/Industrial Only)
Minimum Yard Requirements:
Front: (Ft.) Side: (Ft.) Rear: (Ft.)
Maximum Density: (D.U./Ac.)
Open Space Required: % (Sq. Ft.)
Front: Side: Rear:

Site Plan (SP) Tabulations

Use:
Proposed Building Height: (Ft.)
Proposed Number of Floors: (Commercial/Industrial Only)
Total Handicapped Parking Required:
Total Handicapped Parking Provided:
Total Handicapped Van Spaces Required:
Total Handicapped Van Spaces Provided:
Total Parking Spaces Required:
Total Parking Spaces Provided:
Loading Spaces Required:
Loading Spaces Provided:
Tree Canopy Required: % (Sq. Ft.)
Tree Canopy Provided: % (Sq. Ft.)

Responsible Land Disturber (RLD) means an individual holding a certificate of competence issued by DCR who will be in charge of and responsible for carrying out the land-disturbing activity in accordance with the approved plan.
The RLD may be the owner, applicant, permittee, designer, superintendent, project manager, contractor, or any other project or development team member. The RLD must be designated as a prerequisite for obtaining City permit and prior to any land disturbing activities. Reference Virginia Erosion and Sediment Control Handbook (VESCH).
Additional SWPPP Inspections are required.

MISS UTILITY 811 or 1-800-552-7001

E&S Bond Amount:
Performance Bond Amount:

Cash Contributions / Profferred Amounts

Transportation :
Schools :
Parks / Recreation :
Public Safety :
Other :

Wetlands Permits Certification

I hereby certify that all Wetlands/Stream Impact permits required by law will be obtained prior to commencing with land disturbing activities.

Signature:

Owner/Developer:
Name Title

Note: Permits must be presented to the City inspector prior to land disturbance.

Revisions

No.	Date	Description
1		

Previous City Approvals Relevant To This Development

DATES

PLAN NAME : PLAN # APPROVED
PLAN NAME : PLAN # APPROVED
SUP : PLAN # APPROVED
REZONING : RZ # APPROVED
REZONING : RZ # APPROVED

☐ YES/NO PROFFERED/CONDITIONED PLAN

Official Approved Plan
The City of Manassas

The following endorsement hereby represent that this plan has been reviewed by all of the appropriate departments and agencies, using the City of Manassas Code of Ordinances and the City DCSM; and based upon the affirmative recommendation of those departments and agencies has been found to be consistent with the regulations, ordinances, conditions and provisions related to the development and use of this parcel and may be Approved as the Official Plan.

City of Manassas Date

Printed Name Title

Floodplain Study # Aeronotical Study #

Site Plan # Subdivision #

ANY DEVIATION OR CHANGE IN THESE PLANS MUST BE APPROVED BY THE CITY OF MANASSAS PRIOR TO CONSTRUCTION.

ENGINEER'S SEAL & SIGNATURE

CITY OF MANASSAS
STANDARD PLAN COVER SHEET

SUBDIVISION NAME OR SITE PLAN NAME

PARCEL ADDRESS

OWNER — ADDRESS, INCLUDE ZIP CODE AND TELEPHONE NO.

DEVELOPER — ADDRESS, INCLUDE ZIP CODE AND TELEPHONE NO.

CERTIFIED ENGINEER, ARCHITECT OR SURVEYOR — ADDRESS, INCLUDE ZIP CODE AND TELEPHONE NO.

TAX MAP SECTION NUMBER: DOUBLE CIRCLE NUMBER: PARCEL NUMBER: BASE ZONING: OVERLAY ZONING:

TOTAL SITE AREA: TOTAL DISTURBED AREA: TOTAL NO. DWELLING UNITS: TOTAL SQ. FT. OF STRUCTURES:

SHEET OF SHEETS

SUBDIVISION / SITE PLAN NAME AND NUMBER: