

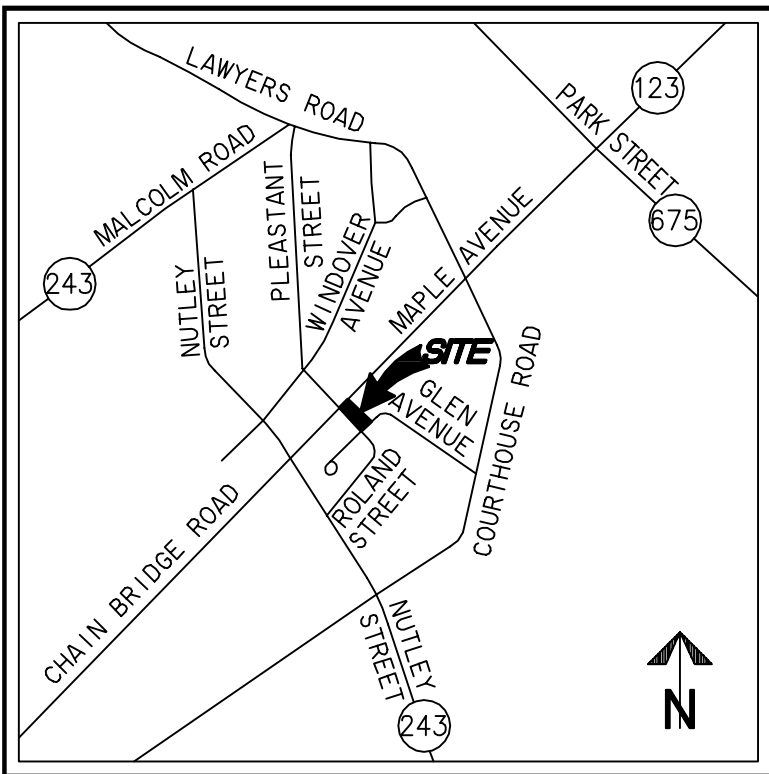
SUNRISE OF VIENNA

374 - 380 MAPLE AVENUE WEST

MAPLE AVENUE COMMERCIAL (MAC) AMENDMENT - CONDITIONAL USE PERMIT

INITIAL SUBMISSION - NOVEMBER 15, 2019

SECOND SUBMISSION - DECEMBER 3, 2019



VICINITY MAP

SCALE: 1"=2000'

DEVELOPMENT TEAM

OWNER

RED INVESTMENT LLC
PO BOX 1208
VIENNA, VA 22183

APPLICANT

SUNRISE DEVELOPMENT, INC.
7902 WESTPARK DR
MCLEAN, VA 22102
703-774-1873
CONTACT: JERRY LIANG

ATTORNEY

WOMBLE BOND DICKINSON (US) LLP
8065 LEESBURG PIKE, 4TH FLOOR
TYSONS CORNER, VA 22182-2738
703-394-2261
CONTACT: SARA MARISKA

ARCHITECT

RUST | ORLING ARCHITECTURE
1215 CAMERON STREET
ALEXANDRIA, VA 22314
703-836-3205
CONTACT: SCOTT FLEMING

CIVIL ENGINEER/LANDSCAPE ARCHITECT

WALTER L. PHILLIPS, INC.
207 PARK AVENUE
FALLS CHURCH, VA 22046
703.532.6163
CONTACT: TRAVIS P. BROWN, P.E.

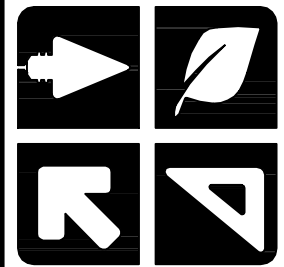
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| P-0202 | EXISTING CONDITIONS PLAN |
| P-0301 | CONCEPT PLAN |
| P-0302 | VEHICLE TURNING MOVEMENTS |
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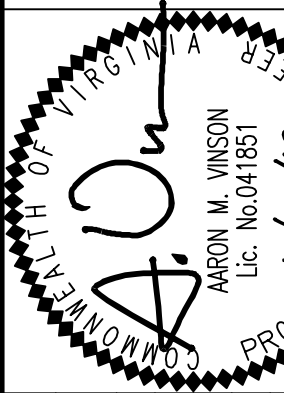
COVER SHEET

SUNRISE OF VIENNA

MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180



WALTER L. PHILLIPS
INCORPORATED
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ARBORISTS
207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 Fax (703) 533-1301
www.WLPINC.com



| NO. | DESCRIPTION | REVISION APPROVED BY | | DATE | APPROVED | DATE |
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SHEET: P-0101

Tree Inventory

| Town of Vienna | | Tree Inventory | | | | | |
|---|---------------------------|----------------------|---------------|--------------------------------------|--------------------|---------------|-------|
| Tree # | Botanical Name | Common Name | Size DBH (in) | Critical Root Zone (CRZ) Radius (ft) | Species Rating (%) | Condition (%) | Notes |
| Tree Survey Information Completed by Walter Phillips, Inc - Arborist Ben Schitter- ISA # MA-5385A # (19-098) 10/25/2019 | | | | | | | |
| 101 | Robinia pseudoacacia | Black locust | 12" | 18' | 55% | 66% | |
| 102 | Acer rubrum | Red maple | 40" | 60' | 70% | 69% | |
| 103 | Robinia pseudoacacia | Black locust | 14" | 21' | 55% | 59% | |
| 104 | Robinia pseudoacacia | Black locust | 11" | 17' | 55% | 59% | |
| 105 | Robinia pseudoacacia | Black locust | 13" | 20' | 55% | 50% | |
| 106 | Robinia pseudoacacia | Black locust | 11" | 17' | 55% | 50% | |
| 107 | Robinia pseudoacacia | Black locust | 8" | 8' | 55% | 50% | |
| 108 | Catalpa speciosa | Northern catalpa | 15" | 23' | 60% | 63% | |
| 109 | Robinia pseudoacacia | Black locust | 6" | 8' | 55% | 33% | |
| 110 | Dead | Dead | 5" | 0' | 0% | 0% | |
| 111 | Robinia pseudoacacia | Black locust | 5" | 8' | 55% | 33% | |
| 112 | Robinia pseudoacacia | Black locust | 6" | 8' | 55% | 41% | |
| 113 | Robinia pseudoacacia | Black locust | 6" | 8' | 55% | 50% | |
| 114 | Robinia pseudoacacia | Black locust | 9" | 14' | 55% | 50% | |
| 115 | Robinia pseudoacacia | Black locust | 9" | 14' | 55% | 41% | |
| 116 | Robinia pseudoacacia | Black locust | 10" | 15' | 55% | 41% | |
| 117 | Robinia pseudoacacia | Black locust | 12" | 18' | 55% | 41% | |
| 118 | Prunus serotina | Black cherry | 12" | 18' | 55% | 59% | |
| 119 | Robinia pseudoacacia | Black locust | 10" | 15' | 55% | 50% | |
| 120 | Robinia pseudoacacia | Black locust | 13" | 20' | 55% | 50% | |
| 121 | Robinia pseudoacacia | Black locust | 6" | 8' | 55% | 50% | |
| 122 | Robinia pseudoacacia | Black locust | 7" | 8' | 55% | 50% | |
| 123 | Robinia pseudoacacia | Black locust | 8" | 8' | 55% | 50% | |
| 124 | Robinia pseudoacacia | Black locust | 8" | 8' | 55% | 41% | |
| 125 | Lonicera japonica | Japanese honeysuckle | 6" | 8' | 0% | 63% | |
| 126 | Robinia pseudoacacia | Black locust | 8" | 8' | 55% | 41% | |
| 127 | Robinia pseudoacacia | Black locust | 8" | 8' | 55% | 41% | |
| 128 | Robinia pseudoacacia | Black locust | 8" | 8' | 55% | 41% | |
| 129 | Robinia pseudoacacia | Black locust | 10" | 15' | 55% | 66% | |
| 130 | Robinia pseudoacacia | Black locust | 12" | 18' | 55% | 63% | |
| 131 | Cupressocyparis leylandii | Leyland cypress | 6" | 8' | 60% | 69% | |
| 132 | Cupressocyparis leylandii | Leyland cypress | 6" | 8' | 60% | 69% | |
| 133 | Cupressocyparis leylandii | Leyland cypress | 6" | 8' | 60% | 69% | |
| 134 | Lagerstroemia indica | Crape Myrtle | 5" | 8' | 78% | 69% | |
| 135 | Morus alba | White mulberry | 12" | 18' | 30% | 66% | |
| 136 | Picea abies | Norway spruce | 20" | 30' | 55% | 63% | |
| 137 | Picea abies | Norway spruce | 15" | 23' | 55% | 59% | |
| 138 | Juniperus virginiana | Eastern redcedar | 14" | 21' | 75% | 66% | |
| 139 | Pinus strobus | Eastern white pine | 33" | 50' | 55% | 63% | |

DBH = Diameter at Breast Height (measured 4.5 feet above ground)

CRZ = Critical Root Zone = 1 foot radius per inch of tree diameter, trees over 30" DBH= 1.5 foot radius per inch of tree diameter

CRZ values for trees with multiple stems were calculated based on methods outlined in the 9th edition of the Guide for Plant Appraisal, published by the International Society of Consulting Arborists (ISCA).

Condition Ratings provided as percentages based on methods outlined in the 9th edition of the Guide for Plant Appraisal, published by the International Society of Consulting Arborists (ISCA).

NOTE: SEE SHEET P-0202 FOR EXISTING TREE LOCATIONS.

NOTES

- THE PROPERTY DELINEATED ON THIS PLAT IS DESIGNATED BY FAIRFAX COUNTY AS TAX MAP REFERENCE NUMBER 0383-02-0147 AND IS ZONED MAC.
- THE PROPERTY IS NOW IN THE NAME OF RED INVESTMENT LLC AS RECORDED IN DEED BOOK 23221 AT PAGE 1929, AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
- TOTAL AREA OF THE PROPERTY IS 36,842 OR 0.8458 (RECORD).
- THERE ARE NO ENVIRONMENTALLY SENSITIVE OR HISTORICAL FEATURES KNOWN TO EXIST ON THIS SITE.
- THIS PLAN IS IN CONFORMANCE WITH THE MAC CODE IN PLACE AT THE TIME OF THE ORIGINAL REZONING APPLICATION SUBMISSION AND IS AN AMENDMENT TO THE MAC PLAN THAT WAS APPROVED FOR THE PROPERTY ON 06/17/2019.

REQUESTED MODIFICATIONS SUMMARY

- REQUEST TO REDUCE LOADING WIDTH REQUIREMENT FROM 15 FT/50 FT BUILDING WIDTH TO 15 FT.

INCENTIVE FEATURES SUMMARY

- INCREASE MAXIMUM IMPERVIOUS AREA FOR THE SITE FROM 80% TO 90% VIA INCENTIVE BONUSES (SEE INCENTIVE INFORMATION ON THIS SHEET).

Zoning Tabulation

| | | |
|---|---------|--------|
| EXISTING/PROPOSED ZONE: MAPLE AVENUE COMMERCIAL (MAC) | | |
| AREA TABULATIONS | SQ. FT. | ACRES |
| TOTAL SITE AREA | 36842 | 0.8458 |
| PROPOSED ROW DEDICATION | 0 | 0.0000 |
| TOTAL POST-DEDICATION SITE AREA | 36842 | 0.8458 |

| ZONING TABULATIONS | MAC ZONING REQUIREMENTS | PROVIDED | |
|-----------------------------|---------------------------------|--------------------|--|
| LOT WIDTH | NONE | 143.08 | |
| BUILDING WIDTH | NONE | 124 FT (MAPLE AVE) | |
| BUILDING HEIGHT | 4 STORIES, 54 FT | 4 STORIES, 54 FT | |
| AVERAGE FRONT GRADE | NONE | 397.75 | |
| YARD REQUIREMENTS | | | |
| FRONT - MAPLE AVENUE WEST | 20 FT | 20.0 FT | |
| FRONT - WADE HAMPTON DR. SW | 15 FT | 15.0 FT | |
| FRONT - GLEN AVENUE SW | 15 FT | 26.6 FT | |
| SIDE (EAST PROPERTY LINE) | 8 FT | 8.2 FT | |
| LOADING SPACE DEPTH | 25 FT | 30 FT | |
| LOADING SPACE WIDTH | 15 FT/50 FT BLDG WIDTH** | 15 FT | |
| LOADING SPACE HEIGHT | 15 FT | 15 FT | |
| IMPERVIOUS AREA (MAXIMUM) | 80% + 10% INCENTIVE BONUS = 90% | 86.07% | |
| OPEN SPACE | 15% OF LOT AREA (5,526 SF) | 25.9% | |

**MODIFICATION REQUESTED FOR LOADING WIDTH REDUCTION TO 15 FT

*AVERAGE FRONT GRADE IS THE AVERAGE OF THE HIGHEST AND LOWEST POST-DEVELOPMENT GRADES ALONG THE MAPLE AVENUE FRONTAGE SETBACK.

| INCENTIVES FEATURES | REQ. |
|---|---------|
| 10% INCREASE TO MAXIMUM IMPERVIOUS AREA | AA, BBB |

| INCENTIVE BONUSES PROPOSED | BONUS |
|--|-------|
| Underground parking to accommodate 51% or more of spaces | AA |
| Inclusion of shower and dressing facilities for employees | B |
| Construction of Principle Structure to earn the Design for Energy Star certification | BB |

Parking Tabulations

| PARKING TABULATION | | |
|-------------------------------------|----------------------------|----|
| PARKING REQUIRED | | |
| ASSISTED LIVING* | 1 SP/ 3 BEDS X 120 BEDS = | 40 |
| | 1 SP/EMPLOYEE X 35 EMP. = | 35 |
| COMMERCIAL** | 1 SP/ 4 SEATS X 20 SEATS = | 5 |
| TOTAL | | 80 |
| | | |
| GARAGE PARKING PROVIDED | 80 | |
| TOTAL PARKING PROVIDED | 80 | |
| PARKING PROVIDED W/ 1.25 MULTIPLIER | 100 | |

**POTENTIAL RESTAURANT

Development Tabulations

| | | |
|---|---------|---------|
| EXISTING/PROPOSED ZONE: MAPLE AVENUE COMMERCIAL (MAC) | | |
| DEVELOPMENT TABULATIONS | | |
| UNITS/BEDS | 85/120 | |
| GARAGE GROSS FLOOR AREA (BELOW GRADE) (SF) | 29000 | |
| GARAGE GROSS FLOOR AREA (ABOVE GRADE) (SF) | 16500 | |
| ASSISTED LIVING GFA (ABOVE GRADE) (SF) | 80000 | |
| COMMERCIAL (POTENTIAL RESTAURANT) (SF) | 950 | |
| TOTAL GSF = | 126,450 | SQ. FT. |

BIKE PARKING TABULATIONS

| | | |
|-------------------------------------|--|-----------|
| BIKE PARKING REQUIRED (18-95.10.F): | | |
| RETAIL/RESTAURANT = | 1 SP/5000 SF X 950 SF = | 1 SPACE |
| | 1 SP/25,000 SF (EMPLOYEES) X 950 SF = | 1 SPACE |
| ASSISTED LIVING = | 1 SP/5,000 SF X = 80,000 SF = | 16 SPACES |
| | 1 SP/25,000 SF (EMPLOYEES) X 80,000 SF = | 4 SPACES |
| TOTAL PARKING REQUIRED = | | 22 SPACES |
| BIKE PARKING PROVIDED: | | |
| SURFACE/STREETSCAPE = | | 8 SPACES |
| GARAGE = | | 14 SPACES |
| TOTAL BIKE PARKING PROVIDED = | | 22 SPACES |

NOTES AND TABULATIONS

Engineers • Surveyors • Planners
Landscape Architects • Arborists

WALTER L. PHILLIPS

INCORPORATED
ESTABLISHED 1945

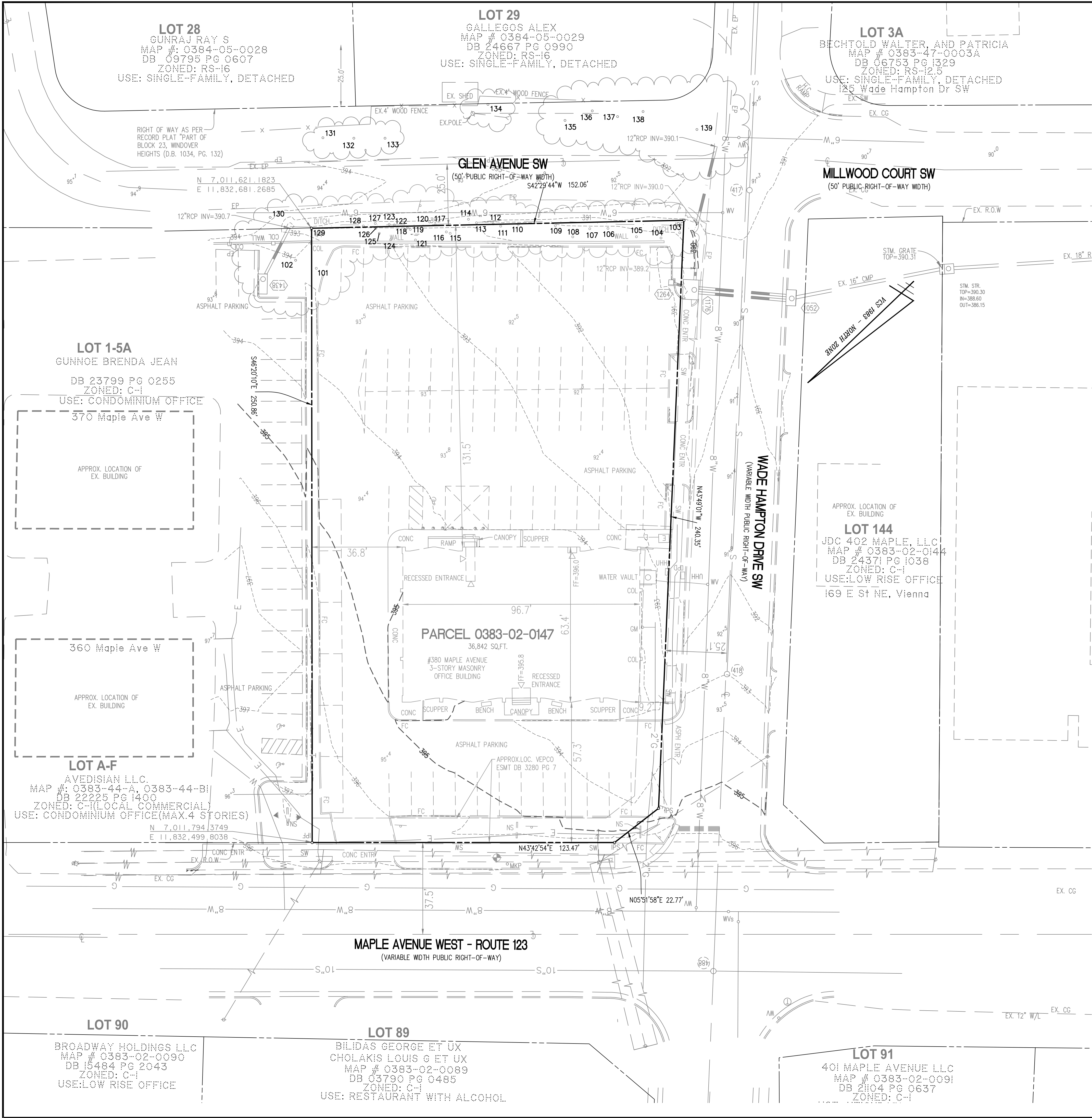
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SUNRISE OF VIENNA

MAC AMENDMENT PLAN

374 - 380 MAPLE AVENUE WEST

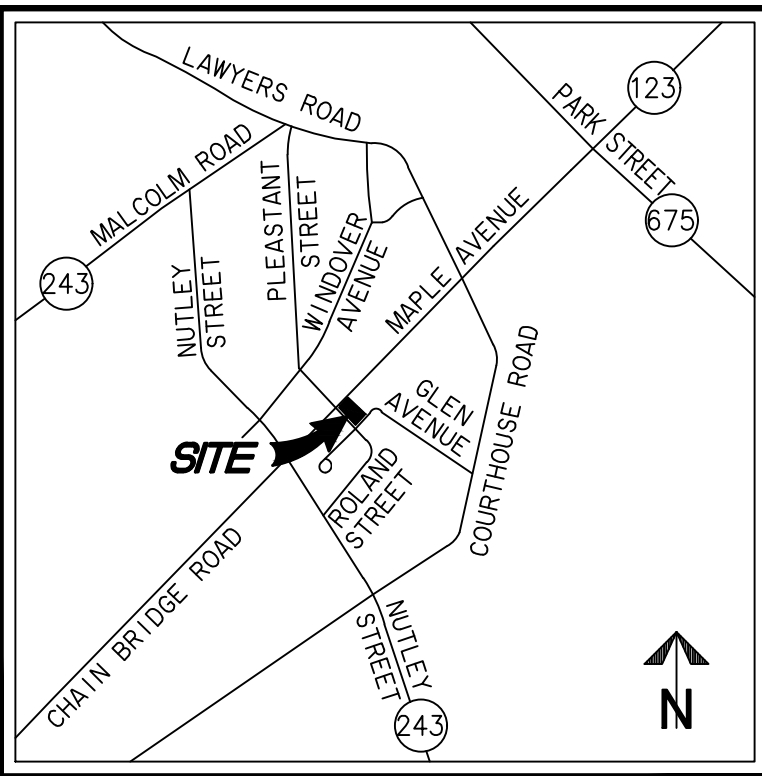
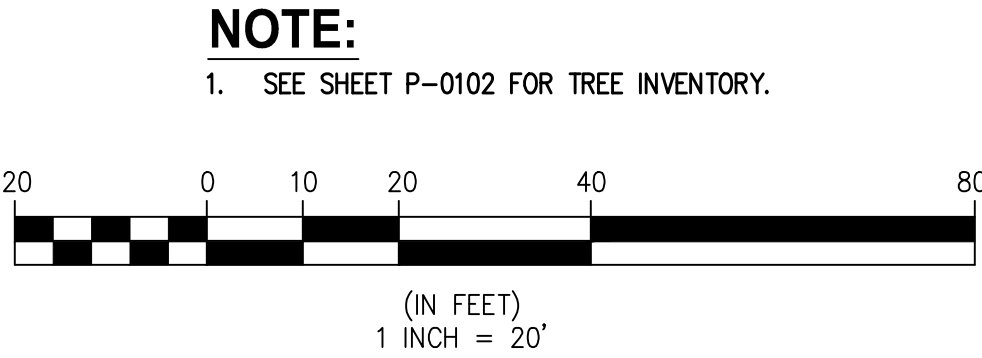
TOWN OF VIENNA, VIRGINIA 22180



LEGEND

APPROX. LOC. APPROXIMATE LOCATION
ASPH. ASPHALT
CMP. CORRUGATED METAL PIPE
COL. COLUMN
CONC. CONCRETE
DB. DEED BOOK
EM. ELECTRIC METER
ENTR. ENTRANCE
EP. EDGE OF PAVEMENT
ESMT. EASEMENT
FC. HEADER CURB
FF. FIRST/FINISH FLOOR ELEVATION
GM. GAS METER
INV. INVERT
IPF. IRON PIN FOUND (PROPERTY CORNER)
IPS. IRON PIN SET (PROPERTY CORNER)
MKP. UTILITY MARKER POST
N/F. NOW OR FORMERLY
PD. TELECOMMUNICATIONS PEDESTAL
PG. PAGE
RCP. REINFORCED CONCRETE PIPE
SD. STORM SEWER STRUCTURE
SMH. SANITARY SEWER STRUCTURE
SN. SIGN
SQ. FT. SQUARE FEET
SW. SIDEWALK
UHH. UTILITY HANDHOLD
WV. WATER VALVE
F. FIRE HYDRANT
D. DOORWAY/ENTRANCE
G. GROUND LIGHT
U. UTILITY POLE
GUY. GUY WIRE
O. OVERHEAD WIRES
E. UNDERGROUND ELECTRIC LINE
G. UNDERGROUND GAS LINE
S. UNDERGROUND SANITARY LINE
T. UNDERGROUND STORM SEWER LINE
W. UNDERGROUND TELECOMMUNICATIONS LINE
T. TREE
L. LIMITS OF TREE CANOPY/VEGETATION
C. CURB AND GUTTER
B. BOLLARD
E. ELECTRIC TRANSFORMER
S. SPOT ELEVATION
S. SIGN
M. TELECOMMUNICATIONS MANHOLE
R. RESERVED FOR DISABLED
G. GROUND LIGHT

- NOTES**
1. THE PROPERTY IS DESIGNATED BY FAIRFAX COUNTY, VIRGINIA, AS TAX ASSESSMENT MAP NUMBER 0383-02-0147, AND IS ZONED C-1 AND RS-16.
 2. THE PROPERTY IS NOW IN THE NAME OF RED INVESTMENT, LLC AND MJW MAPLE AVENUE, LLC, AS RECORDED IN DEED BOOK 23221 AT PAGE 1929 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
 3. THIS PLAT AND THE SURVEY UPON WHICH IT IS BASED SHOWS ONLY THOSE IMPROVEMENTS THAT ARE OBSERVABLE AND CAN BE LOCATED USING NORMAL SURVEY METHODS. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, MISS UTILITY MARKINGS AND EXISTING RECORDS. THERE ARE NO GUARANTEES, EITHER EXPRESS OR IMPLIED, THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, OR THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE UNDERGROUND UTILITIES HAVE NOT BEEN PHYSICALLY LOCATED.
 4. TOTAL AREA OF THE PROPERTY IS 36,842 SQUARE FEET OR 0.8458 ACRES.
 5. THIS PLAT IS BASED ON A FIELD SURVEY BY THIS FIRM, DATED 11/05/2019.
 6. THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR FAIRFAX COUNTY, VIRGINIA, MAP NUMBER 51059C0145E, EFFECTIVE DATE SEPTEMBER 17, 2010, DESIGNATES THE PROPERTY AS BEING IN ZONE X, "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".
 7. EASEMENTS, CONDITIONS, COVENANTS AND RESTRICTIONS SHOWN AND/OR NOTED HEREON ARE PER THE REPORT OF TITLE ISSUED BY NORTHERN VIRGINIA LAND TITLE, INC., NVLT ORDER NUMBER T13-0094, DATED OCTOBER 11, 2019.
 8. THE PROPERTY SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY AND IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983 AS COMPUTED FROM A FIELD RUN HORIZONTAL CONTROL SURVEY. THE COMBINED FACTOR WHICH HAS BEEN APPLIED TO THE FIELD DISTANCES TO DERIVE THE REFERENCED COORDINATES IS 0.99994616. THE FOOT DEFINITION USED FOR CONVERSION OF THE MONUMENT COORDINATES AND IN THE PERFORMANCE OF THIS SURVEY IS THE U.S. SURVEY FOOT. CONTOUR INTERVAL IS ONE FOOT.
 9. THIS SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, DANNY E. POTEET, L.S., FROM AN ACTUAL [X] GROUND OR AIRBORNE SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON NOVEMBER 18, 2019; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.



STORM SEWER AS-BUILTS

| | |
|------------------------|--------|
| SD 1438 | |
| CURB INLET TOP = | 393.61 |
| 12"RCP OUT (SOUTH)= | 391.18 |
| SD 1264 | |
| GRATE INLET TOP = | 390.85 |
| 12"RCP OUT (SD 1176)= | 389.55 |
| SD 1176 | |
| CURB INLET TOP = | 390.82 |
| 12"RCP IN (SD 1264)= | 388.67 |
| 2-12"RCP IN (S.EAST)= | 388.57 |
| 12"RCP OUT (SD 1052)= | 388.37 |
| SD 1052 | |
| CURB INLET TOP = | 390.71 |
| 2-12"RCP IN (SD 1176)= | 387.86 |
| 12"RCP OUT (S.WEST)= | 387.74 |

SANITARY SEWER AS-BUILTS

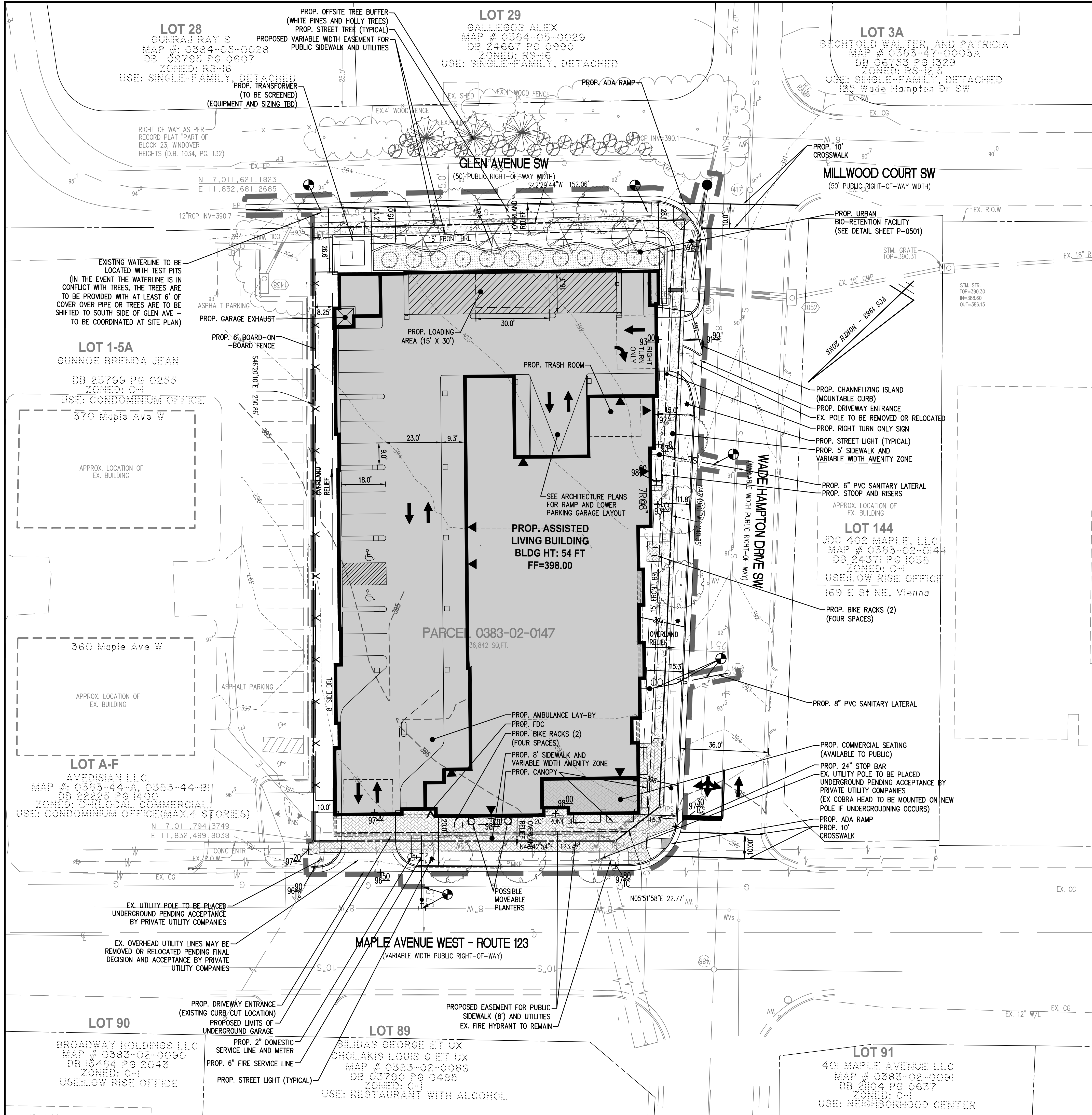
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|----------------------|--------|
| SMH 418 | |
| MANHOLE TOP = | 392.99 |
| 8"INV OUT (SMH 417)= | 384.09 |
| SMH 417 | |
| MANHOLE TOP = | 391.22 |
| 8"INV IN (SMH 418)= | 382.99 |
| 8"INV OUT (S.EAST)= | 382.93 |

PIPE SIZES ARE PER RECORD INFORMATION

EXISTING CONDITIONS PLAN

SUNRISE OF VIENNA
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180

WALTER L. PHILLIPS
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207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 Fax (703) 533-1301
www.WLPINC.com
INCORPORATED ESTABLISHED 1945
SCALE: 1"=20'
DATE: 11/16/2019, 12/03/2019
DRAWN: TFB
CHECKED: AV



| PROPOSED | DESCRIPTION | EXISTING |
|----------|--------------------------------|----------|
| | CURB & GUTTER | |
| | TRANSITION FROM CG-6 TO CG-6R | |
| | SANITARY SEWER | |
| | SANITARY LATERAL | |
| | CLEAN OUT | |
| | STORM SEWER | |
| | WATER MAIN | |
| | FIRE HYDRANT PLUG | |
| | OVERHEAD WIRES | |
| | UTILITY POLE | |
| | UNDERGROUND ELECTRIC | |
| | TELEPHONE | |
| | GAS MAIN | |
| | ELECTRICAL | |
| | TRANSFORMER | |
| | HANDICAP RAMP (CG-12) | |
| | GUARDRAIL FENCE | |
| | TRAFFIC FLOW | |
| | LIGHT | |
| | DOOR | |
| | CONTOURS | |
| | SPOT ELEVATION | |
| | DRAINAGE FLOW DIRECTION | |
| | TOP OF CURB | |
| | BOTTOM OF CURB | |
| | TOP OF WALL | |
| | BOTTOM OF WALL | |
| | HIGH POINT | |
| | TEST PIT | |
| | LIMITS OF CLEARING AND GRADING | |

ZONING TABULATION
EXISTING/PROPOSED ZONE: MAPLE AVENUE COMMERCIAL (MAC)

| ZONING TABULATIONS | MAC ZONING REQUIREMENTS | PROVIDED |
|-----------------------------|---------------------------------|--------------------|
| LOT WIDTH | NONE | 143.08 |
| BUILDING WIDTH | NONE | 124 FT (MAPLE AVE) |
| BUILDING HEIGHT | 4 STORIES, 54 FT | 4 STORIES, 54 FT |
| AVERAGE FRONT GRADE | NONE | 397.75 |
| YARD REQUIREMENTS | | |
| FRONT - MAPLE AVENUE WEST | 20 FT | 20.0 FT |
| FRONT - WADE HAMPTON DR. SW | 15 FT | 15.0 FT |
| FRONT - GLEN AVENUE SW | 15 FT | 26.6 FT |
| SIDE (EAST PROPERTY LINE) | 8 FT | 8.2 FT |
| LOADING SPACE DEPTH | 25 FT | 30 FT |
| LOADING SPACE WIDTH | 15 FT/50 FT BLDG WIDTH** | 15 FT |
| LOADING SPACE HEIGHT | 15 FT | 15 FT |
| IMPERVIOUS AREA (MAXIMUM) | 80% + 10% INCENTIVE BONUS = 90% | 86.07% |
| OPEN SPACE | 15% OF LOT AREA (5,526 SF) | 25.9% |

**MODIFICATION REQUESTED FOR LOADING WIDTH REDUCTION TO 15 FT

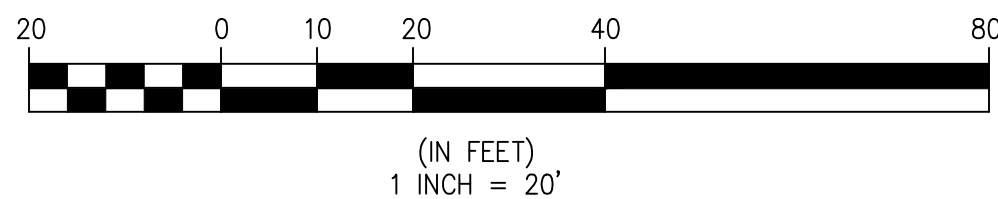
NOTES

- THE PROPERTY IS DESIGNATED BY FAIRFAX COUNTY, VIRGINIA, AS HAVING TAX ASSESSMENT MAP NUMBER 0383-02-0147, ZONED MAC. THIS APPLICATION IS REQUESTING AN AMENDMENT TO THE PREVIOUSLY APPROVED APPLICATION FOR THIS PROPERTY UNDER THE MAC ORDINANCE.
- TOTAL COMPUTED AREA OF THE PROPERTY IS 36,842 SQUARE FEET OR 0.8458 ACRES.
- BASED ON REVIEW OF AVAILABLE RECORDS, THERE ARE NO SIGNIFICANT HISTORICAL OR ENVIRONMENTAL FEATURES ON THIS SITE.
- SEE SHEET P-0201 FOR CONTEXT PLAN DEPICTING EXISTING STRUCTURES WITHIN 200 FT OF THE PROPOSED DEVELOPMENT.

OVERLAND RELIEF NARRATIVE

STORMWATER FROM THE SITE WILL PREDOMINANTLY BE CAPTURED BY THE ROOF DRAINAGE SYSTEMS WHICH WILL FEED AN URBAN BIO-RETENTION PLANTER SYSTEM AND BE ROUTED TO THE EXISTING STORM SEWER IN WADE HAMPTON DRIVE. THE REMAINING STORMWATER WILL DISCHARGE AS NON-CONCENTRATED SHEET FLOW TOWARD MAPLE AVENUE WEST, WADE HAMPTON DRIVE SW AND GLEN AVENUE SW AS DEPICTED ON THIS PLAN (OVERLAND DRAINAGE ARROWS).

OVERLAND RELIEF FOR THE SURROUNDING AREA WILL FOLLOW A PATH TO THE SOUTH OF THE SITE THROUGH PUBLIC ROADS AND ADJACENT PROPERTIES (ROUGHLY FOLLOWING THE ALIGNMENT OF THE EXISTING TOWN OF VIENNA STORM SEWERS) WHERE WATER ULTIMATELY FLOWS TOWARD A TRIBUTARY OF HUNTER'S BRANCH.

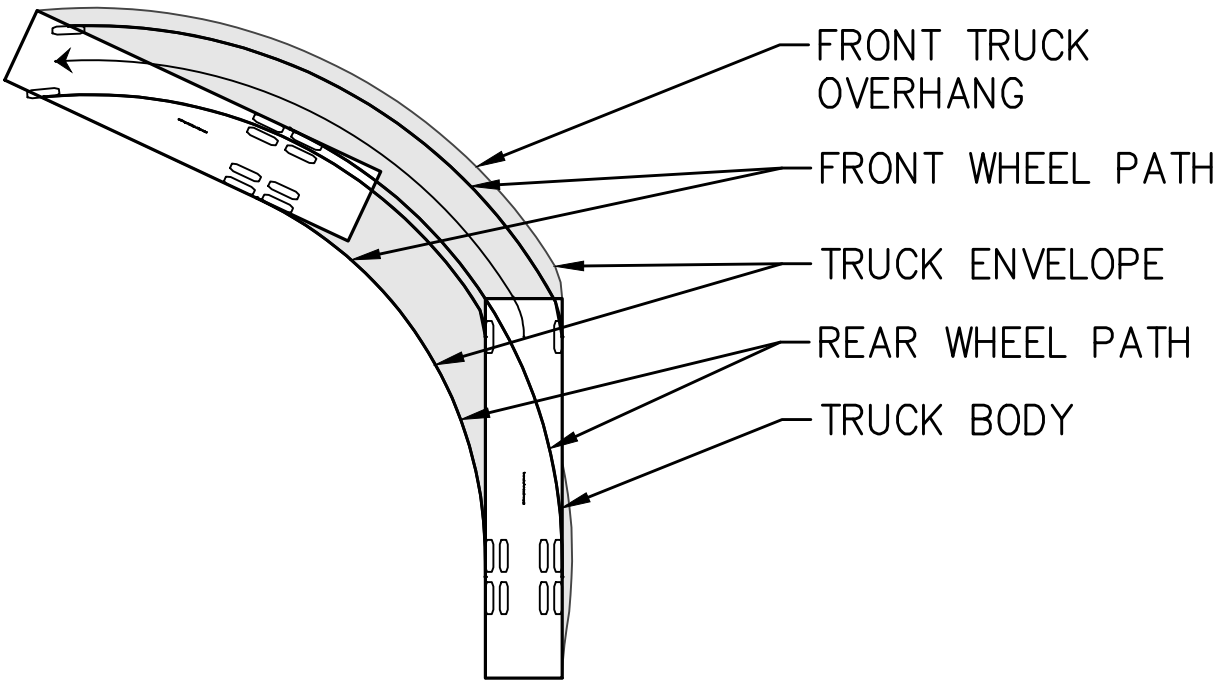
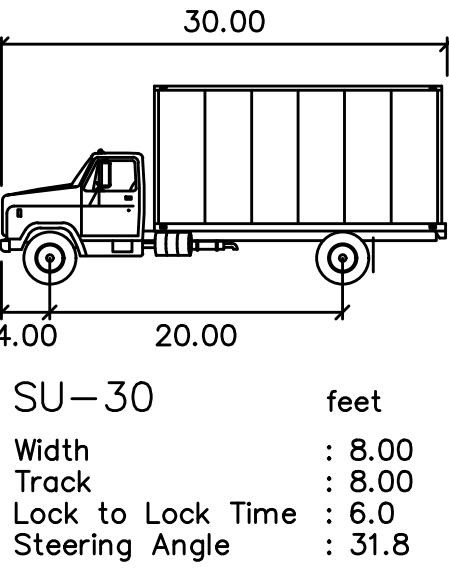
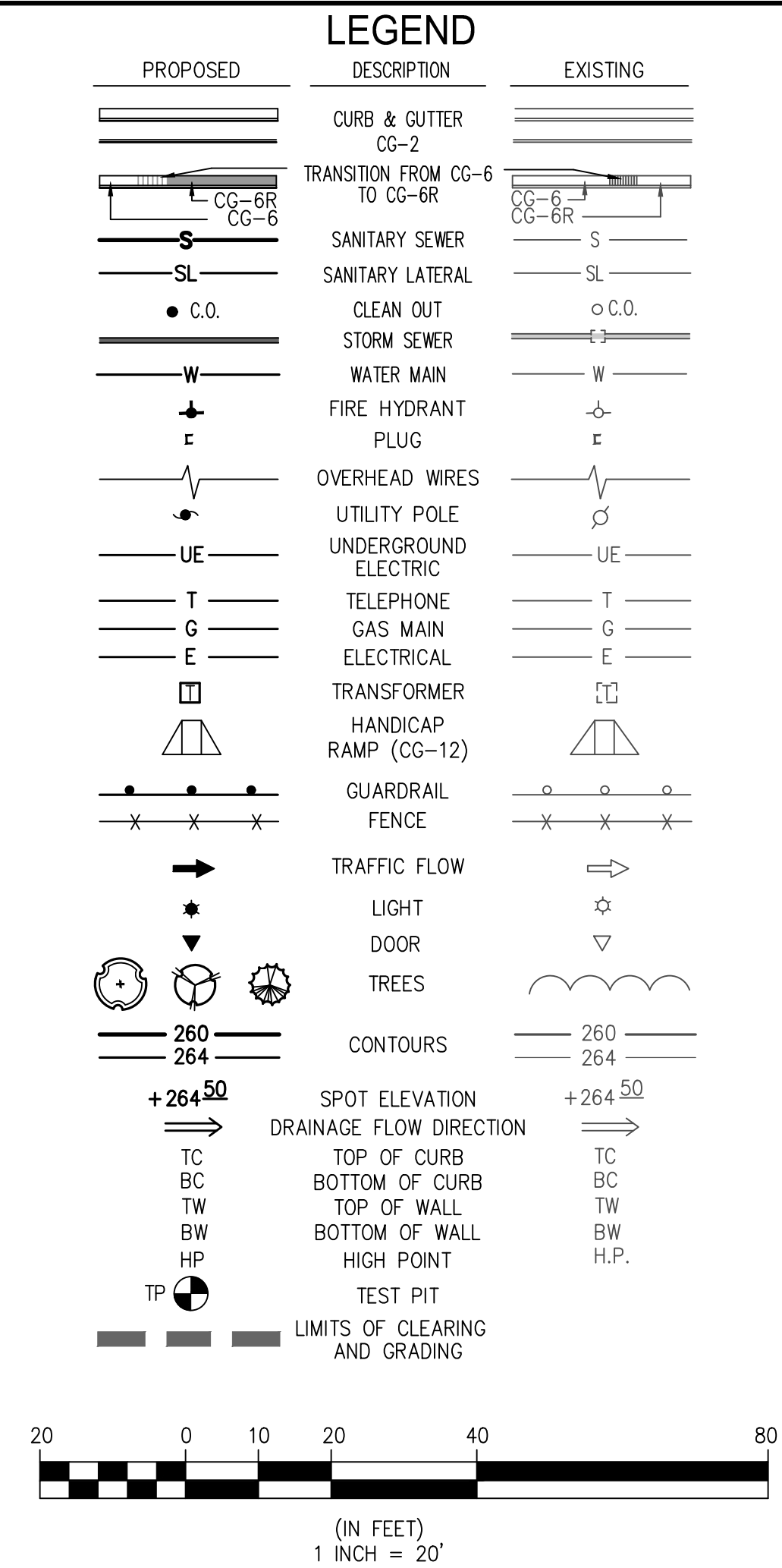
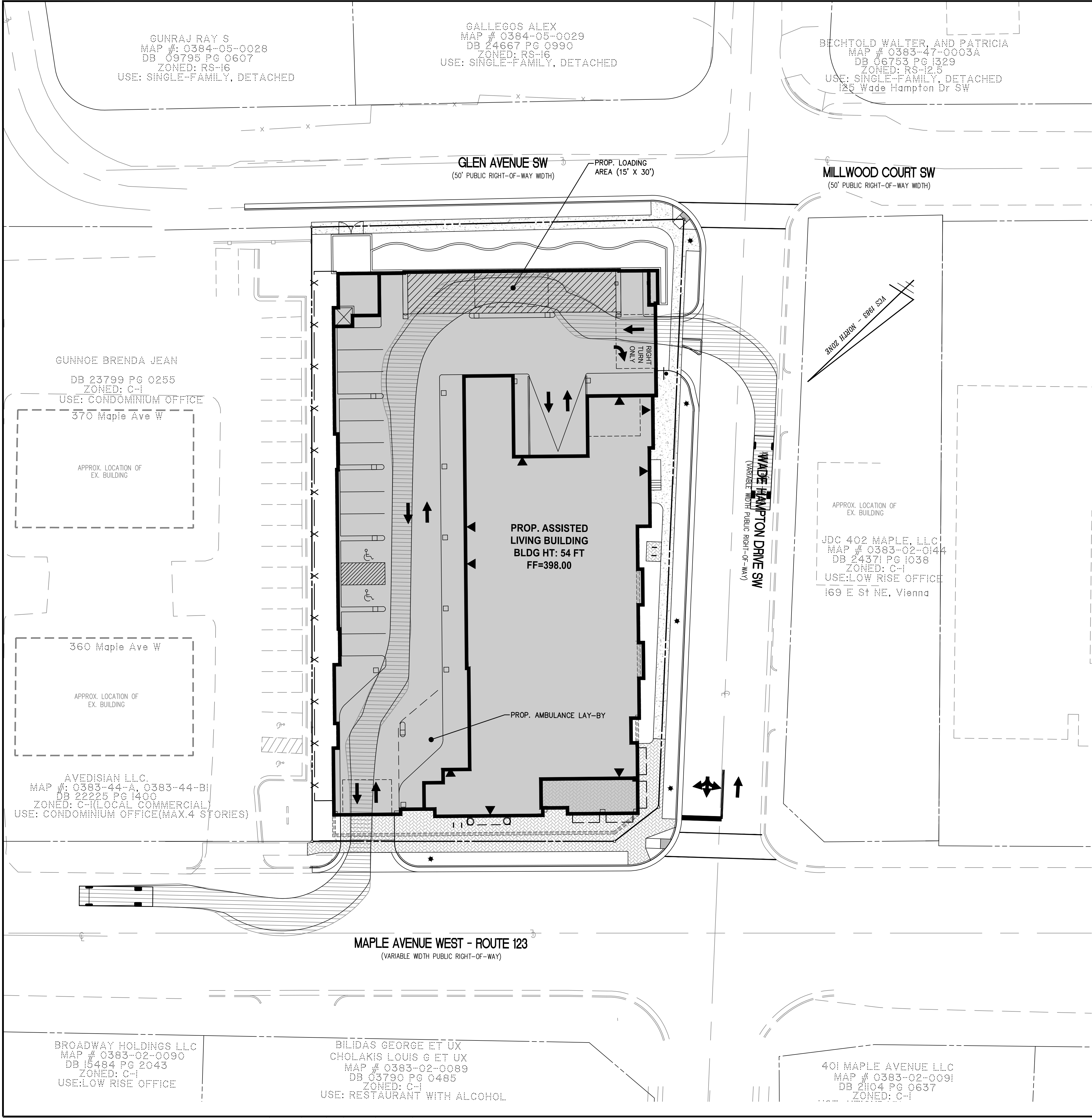


CONCEPT PLAN

SUNRISE OF VIENNA
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180



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VEHICLE LEGEND

VEHICLE TURNING MOVEMENTS

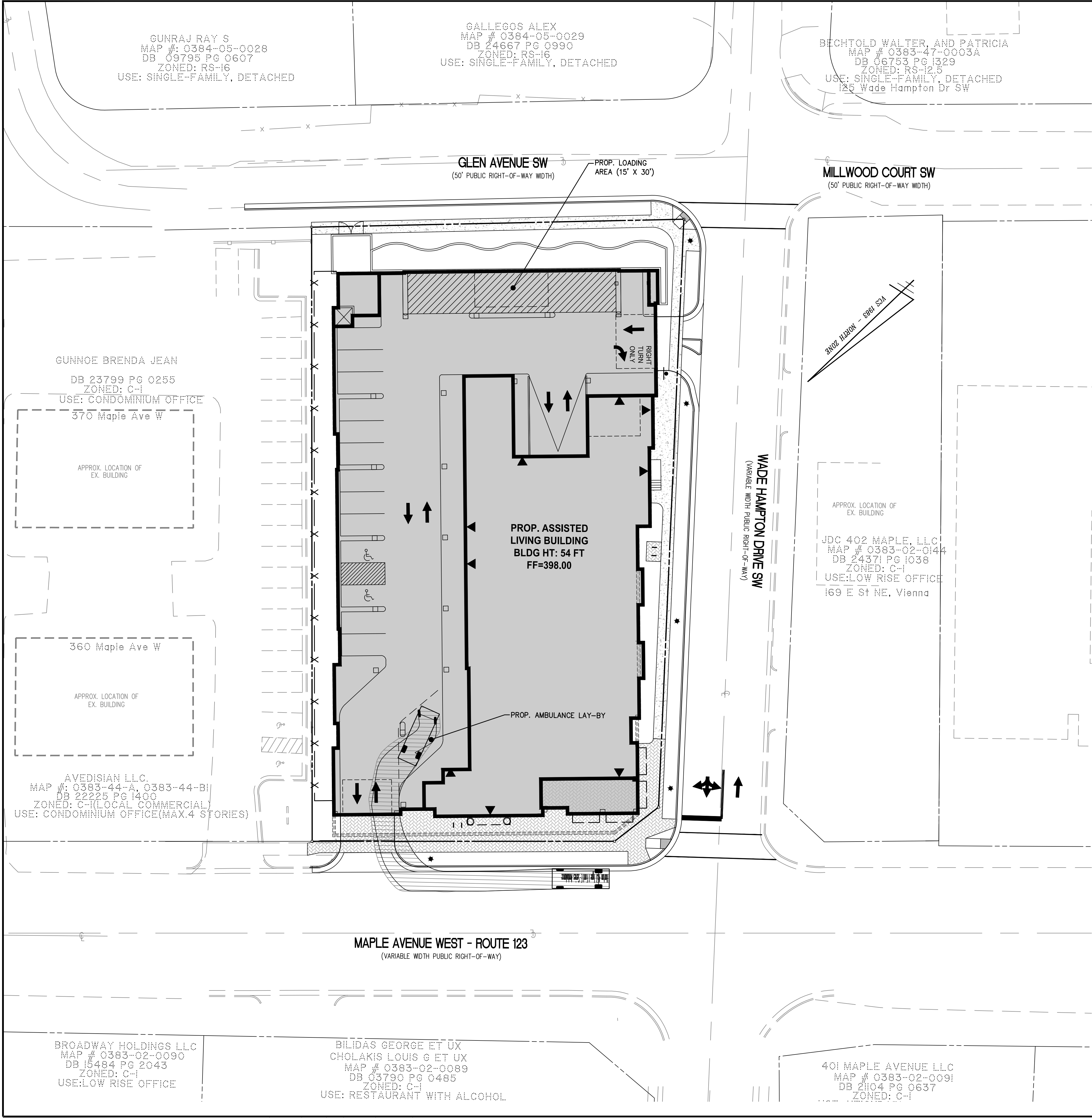
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COMMONWEALTH OF VIRGINIA
ARON N. WILSON
Lic. No. 041851
12/03/19
PROFESSIONAL SEAL

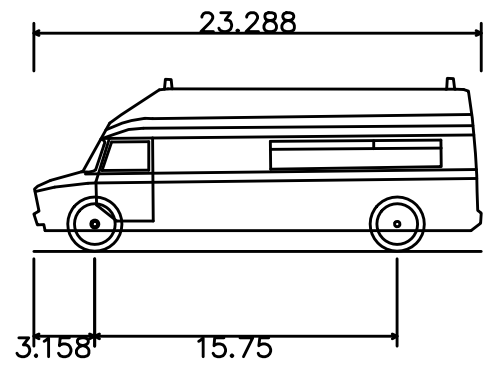


| LEGEND | | |
|----------|--------------------------------|----------|
| PROPOSED | DESCRIPTION | EXISTING |
| | CURB & GUTTER CG-2 | |
| | TRANSITION FROM CG-6 TO CG-6R | |
| | SANITARY SEWER | |
| | SANITARY LATERAL | |
| | CLEAN OUT | |
| | STORM SEWER | |
| | WATER MAIN | |
| | FIRE HYDRANT PLUG | |
| | OVERHEAD WIRES | |
| | UTILITY POLE | |
| | UNDERGROUND ELECTRIC | |
| | TELEPHONE | |
| | GAS MAIN | |
| | ELECTRICAL | |
| | TRANSFORMER | |
| | HANDICAP RAMP (CG-12) | |
| | GUARDRAIL | |
| | FENCE | |
| | TRAFFIC FLOW | |
| | LIGHT | |
| | DOOR | |
| | TREES | |
| | CONTOURS | |
| | SPOT ELEVATION | |
| | DRAINAGE FLOW DIRECTION | |
| | TOP OF CURB | |
| | BOTTOM OF CURB | |
| | TOP OF WALL | |
| | BOTTOM OF WALL | |
| | HIGH POINT | |
| | TEST PIT | |
| | LIMITS OF CLEARING AND GRADING | |

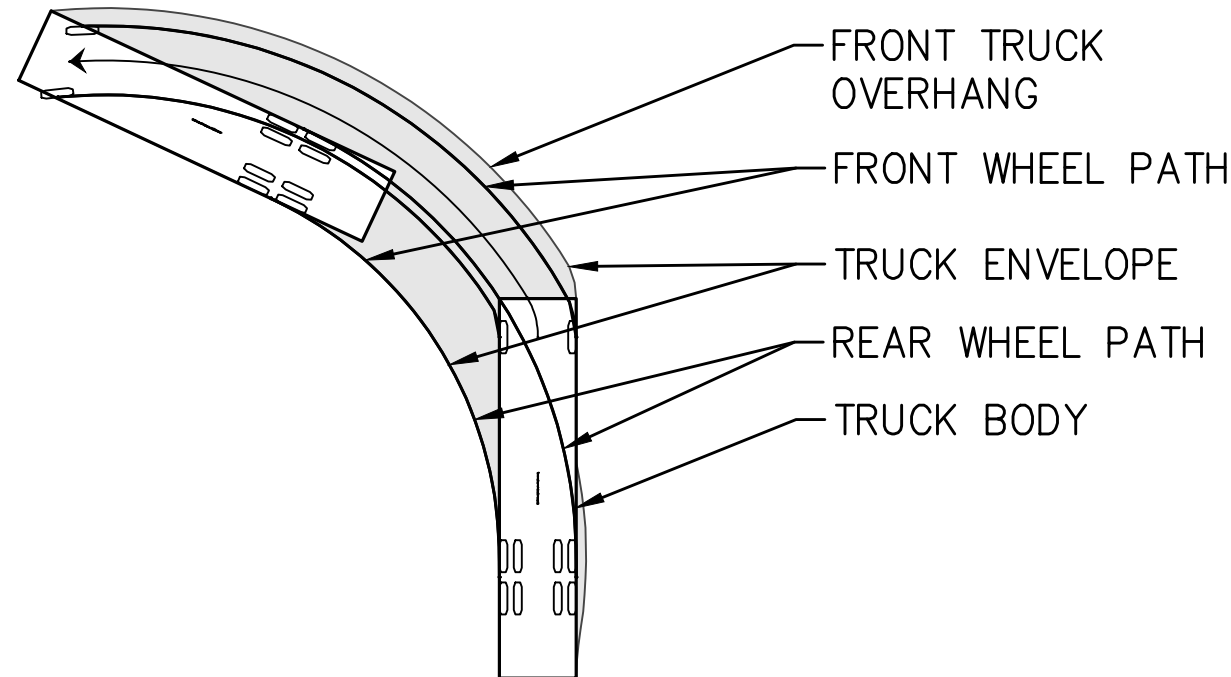
200 0 10 20 40 80

(IN FEET)

1" = 20'



| | |
|---|----------|
| Horton 453 Type I Ford E-Series Ambulance | |
| Overall Length | 23.288ft |
| Overall Width | 8.021ft |
| Overall Body Height | 9.000ft |
| Min Body Ground Clearance | 1.075ft |
| Track Width | 8.021ft |
| Lock-to-lock time | 5.00s |
| Curb to Curb Turning Radius | 27.400ft |



VEHICLE LEGEND

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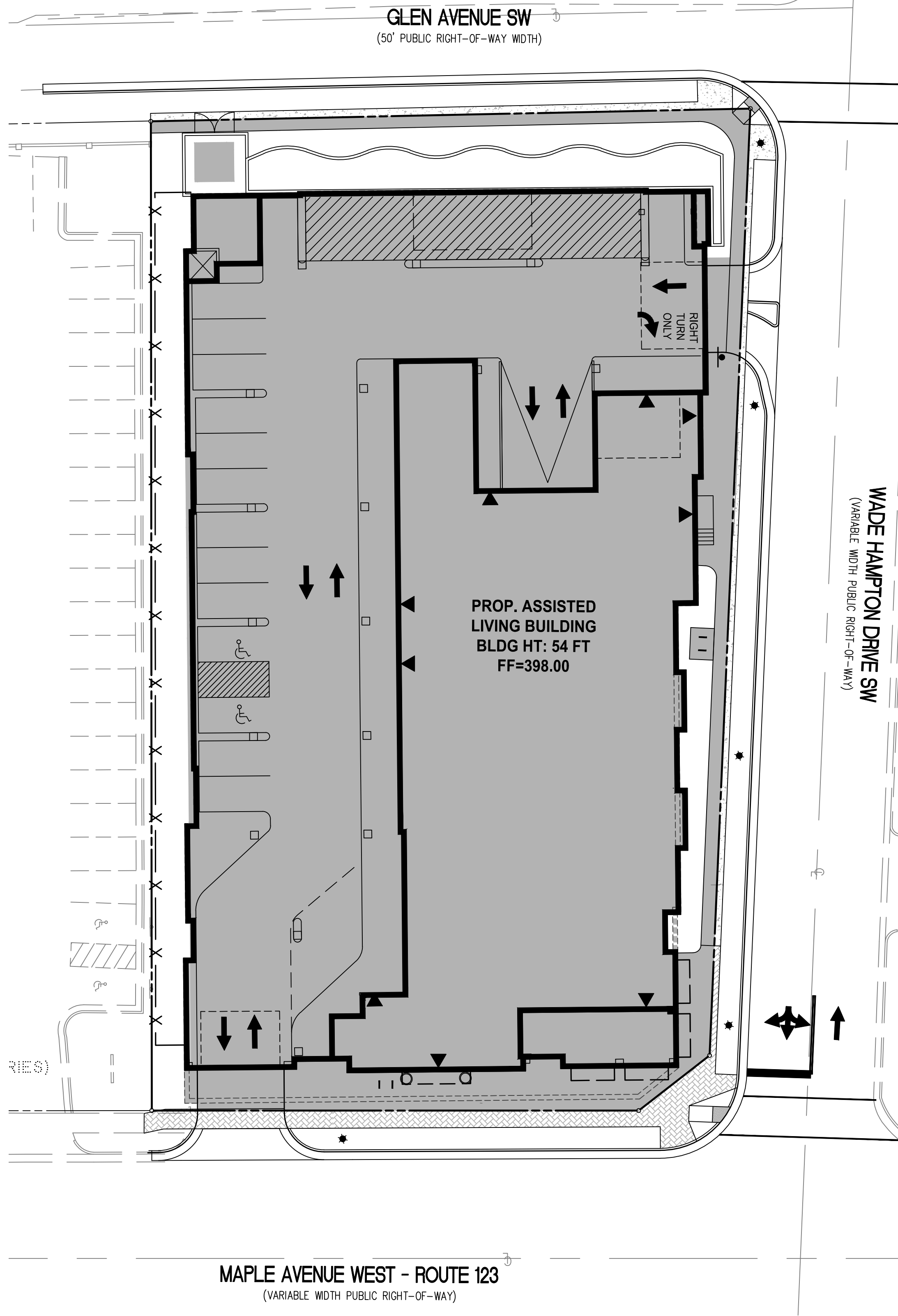
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VEHICLE TURNING MOVEMENTS - AMBULANCE
SUNRISE OF VIENNA
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180

SHEET: P-0302A

File No. FM-18 Tax Map No. 38-3 Job No. 19-098 Cadd Dwg. File: Q:\sdsdkpro\19098\dwg\planning\MAC-WLP\19098P-0302.dwg



IMPERVIOUS AREA DIAGRAM
1" = 20'

IMPERVIOUS AREA COVERAGE

| | | |
|--|------------------|-----------------------|
| LOT AREA: | | 36,842 SF (0.8458 AC) |
| MAX IMPERVIOUS SURFACE | 90% OF LOT AREA* | 33,157 SF MAX. |
| LOT AREA - MAX IMPERVIOUS SURFACE = MIN PERVIOUS SURFACE | | |
| MIN PERVIOUS SURFACE | 10% OF LOT AREA* | 3,685 SF MIN. |

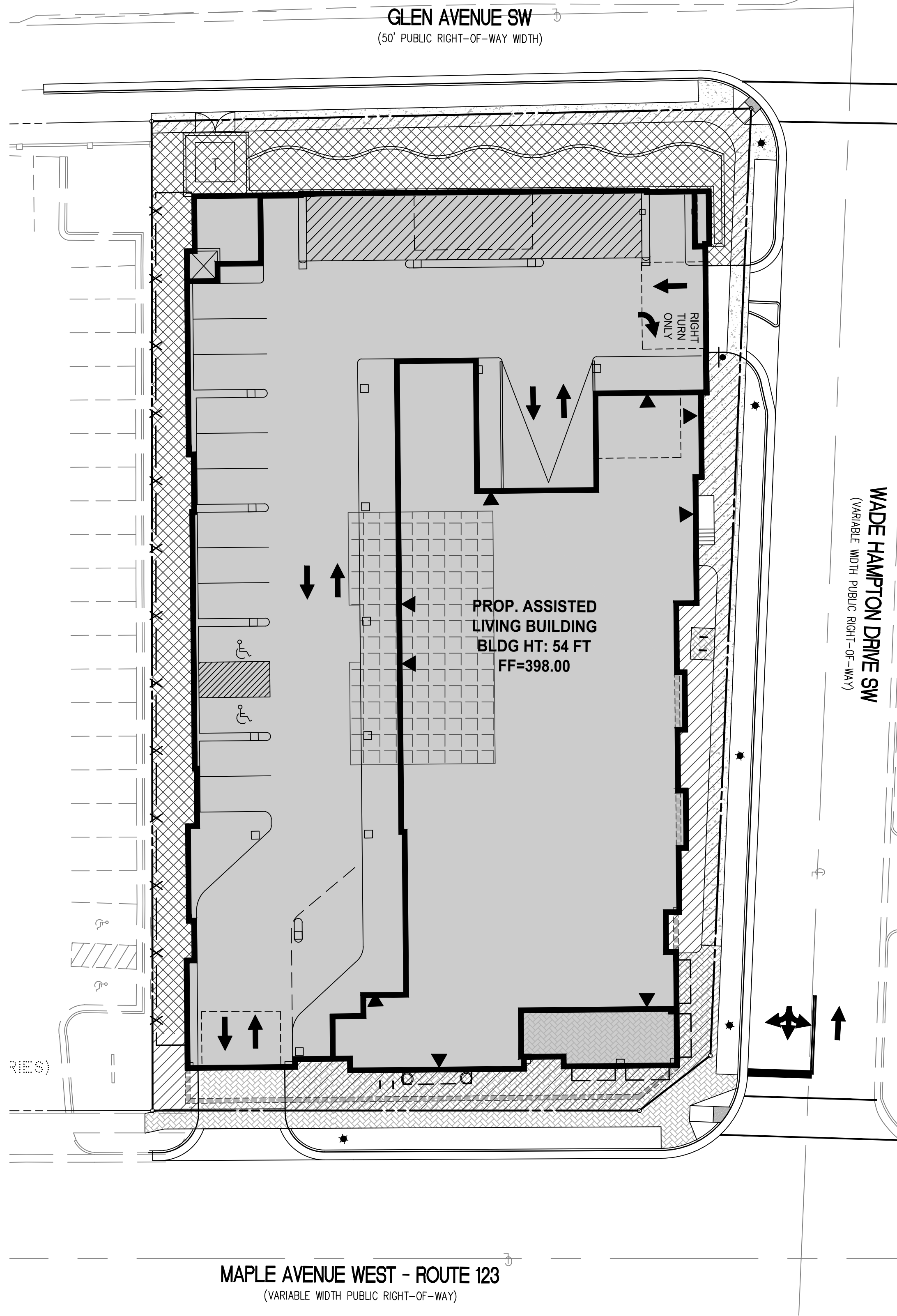
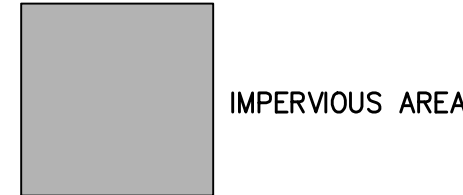
| | | |
|--------------------------|--------------------|------------|
| TOTAL IMPERVIOUS SURFACE | 86.07% OF LOT AREA | ±31,710 SF |
| TOTAL PERVIOUS SURFACE | 13.93% OF LOT AREA | ±5,132 SF |

*INCENTIVES USED TO INCREASE MAX IMPERVIOUS COVER FROM 80% TO 90%

THESE CALCULATIONS ARE FOR APPROVAL OF 90% IMPERVIOUS AREA. FINAL CALCULATIONS WILL BE PROVIDED AT SITE PLAN.

EXISTING IMPERVIOUS AREA = 32,881 SF (89.2%)

LEGEND



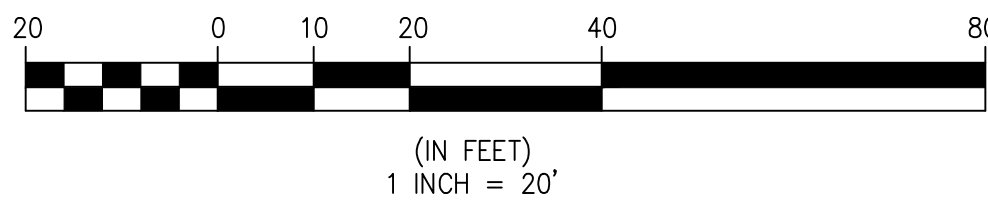
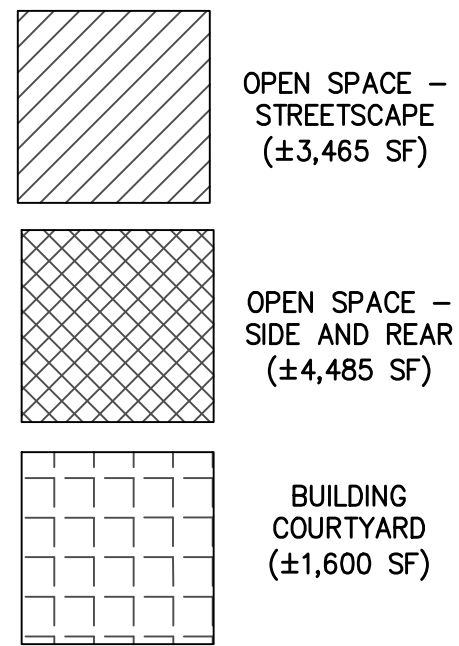
OPEN SPACE DIAGRAM
1" = 20'

OPEN SPACE CALCULATION

| | | |
|-------------------------|--------------------|-----------------------|
| LOT AREA: | | 36,842 SF (0.8458 AC) |
| MIN OPEN SPACE REQUIRED | 15% OF LOT AREA | 5,526 SF MIN. |
| OPEN SPACE PROVIDED | ±25.9% OF LOT AREA | ±9,550 SF |

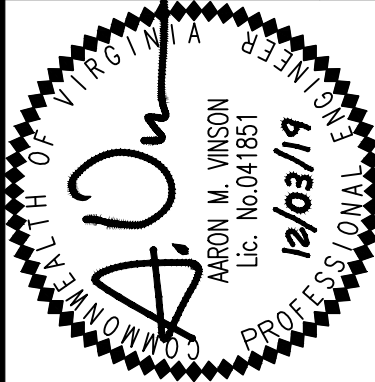
NOTES:

- THIS PLAN IS FOR THE APPROVAL OF 15% OPEN SPACE. FINAL CALCULATIONS WILL BE PROVIDED AT SITE PLAN.



OPEN SPACE AND IMPERVIOUS AREA ANALYSIS

SUNRISE OF VIENNA
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
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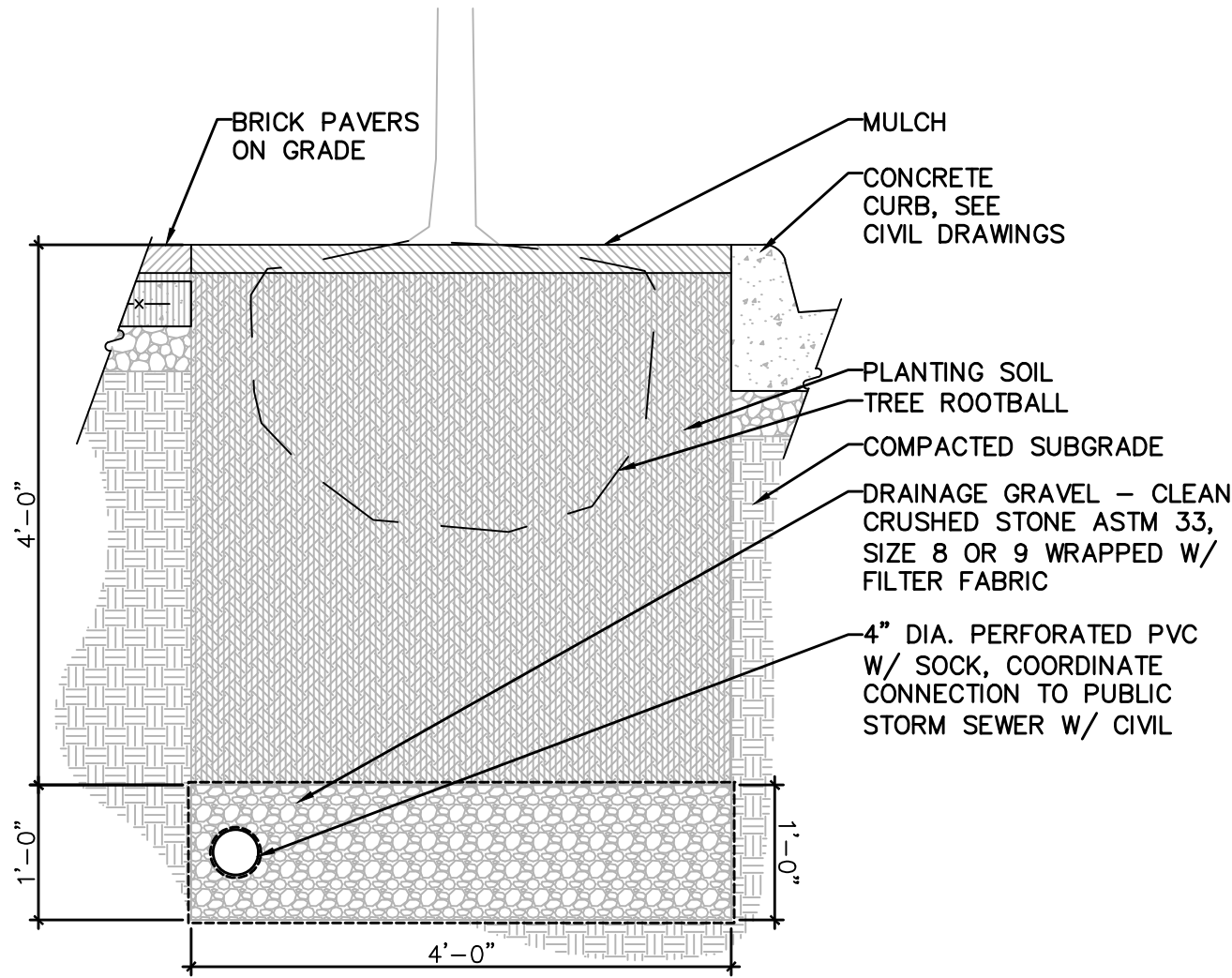
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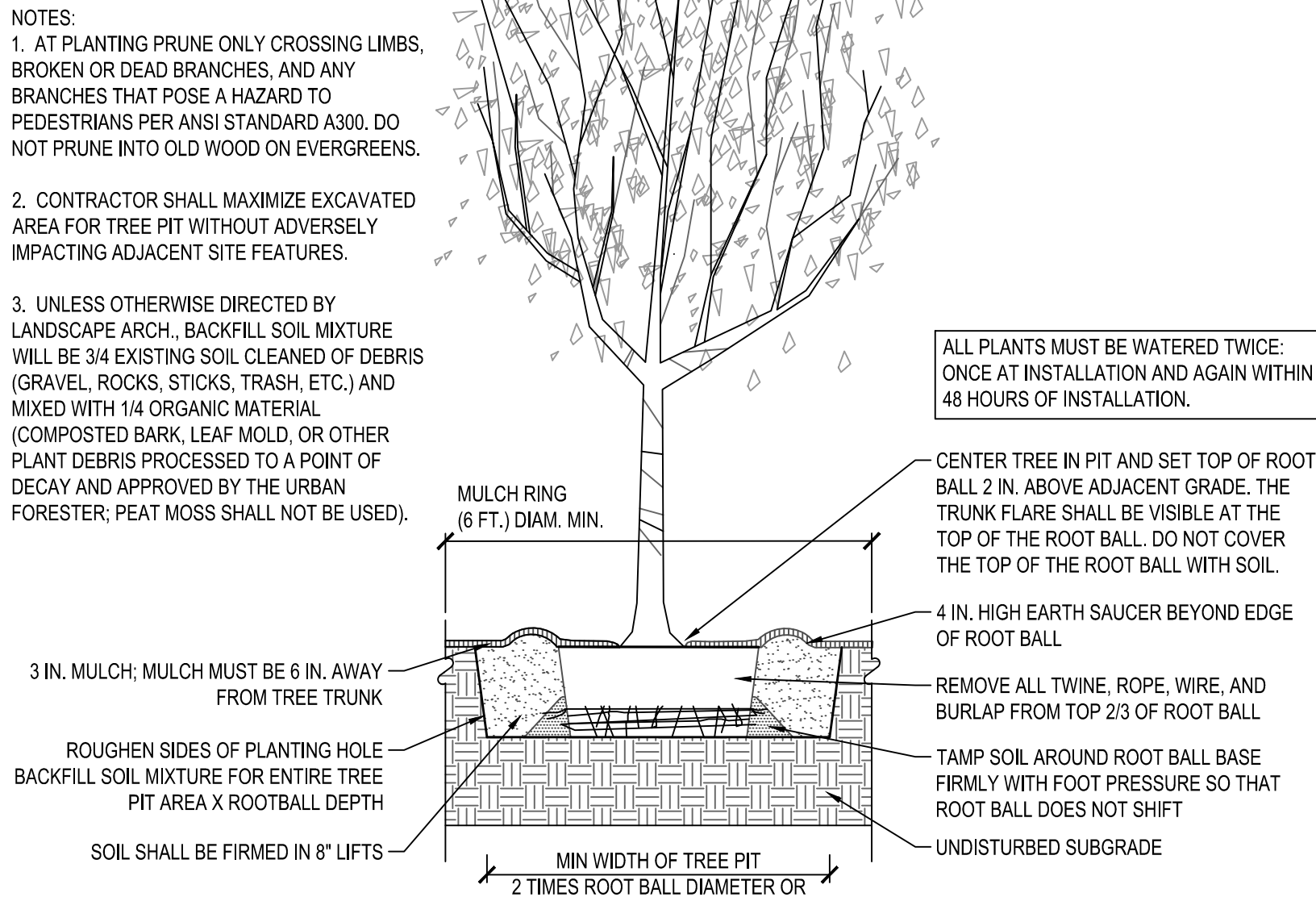
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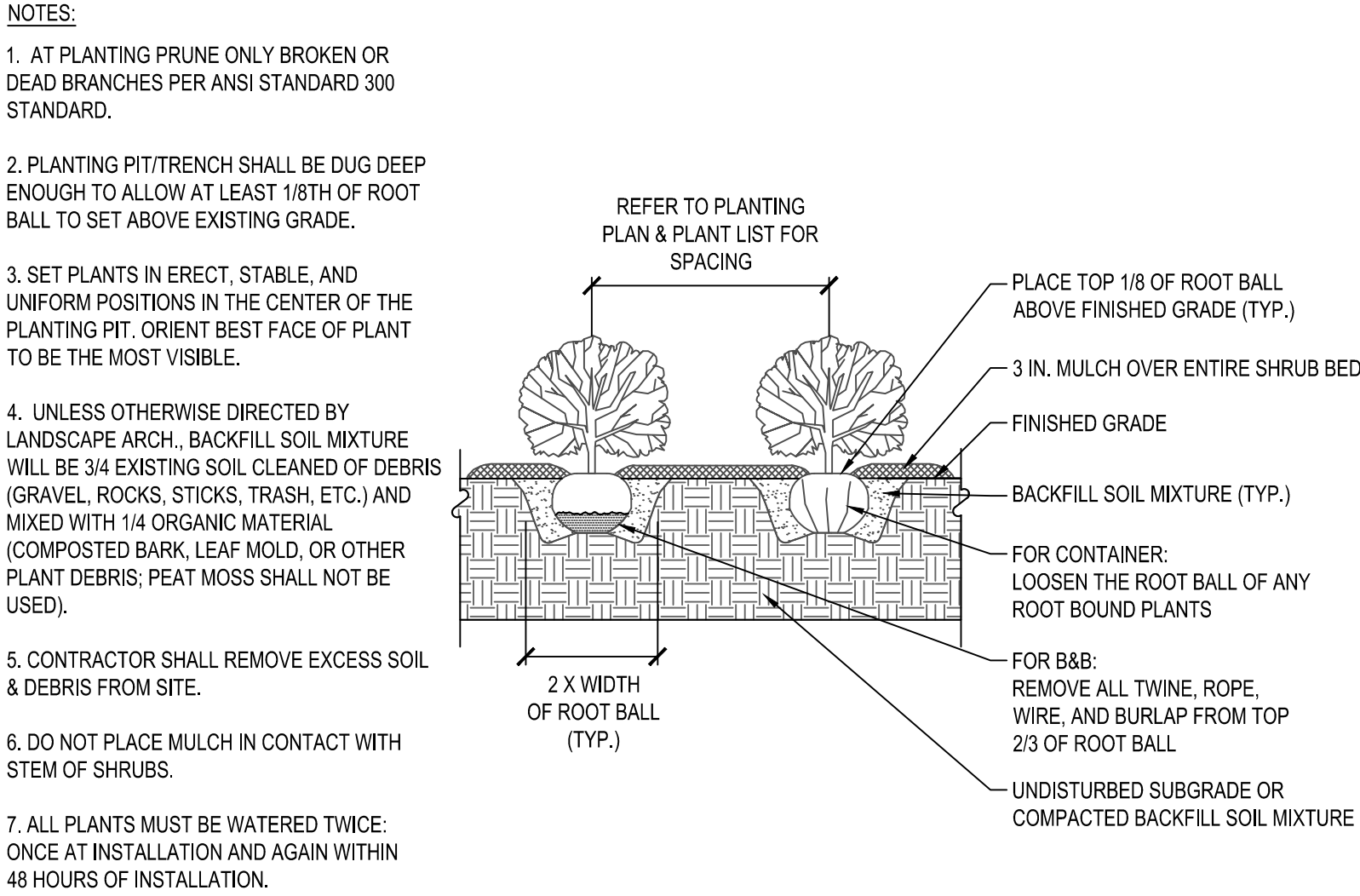




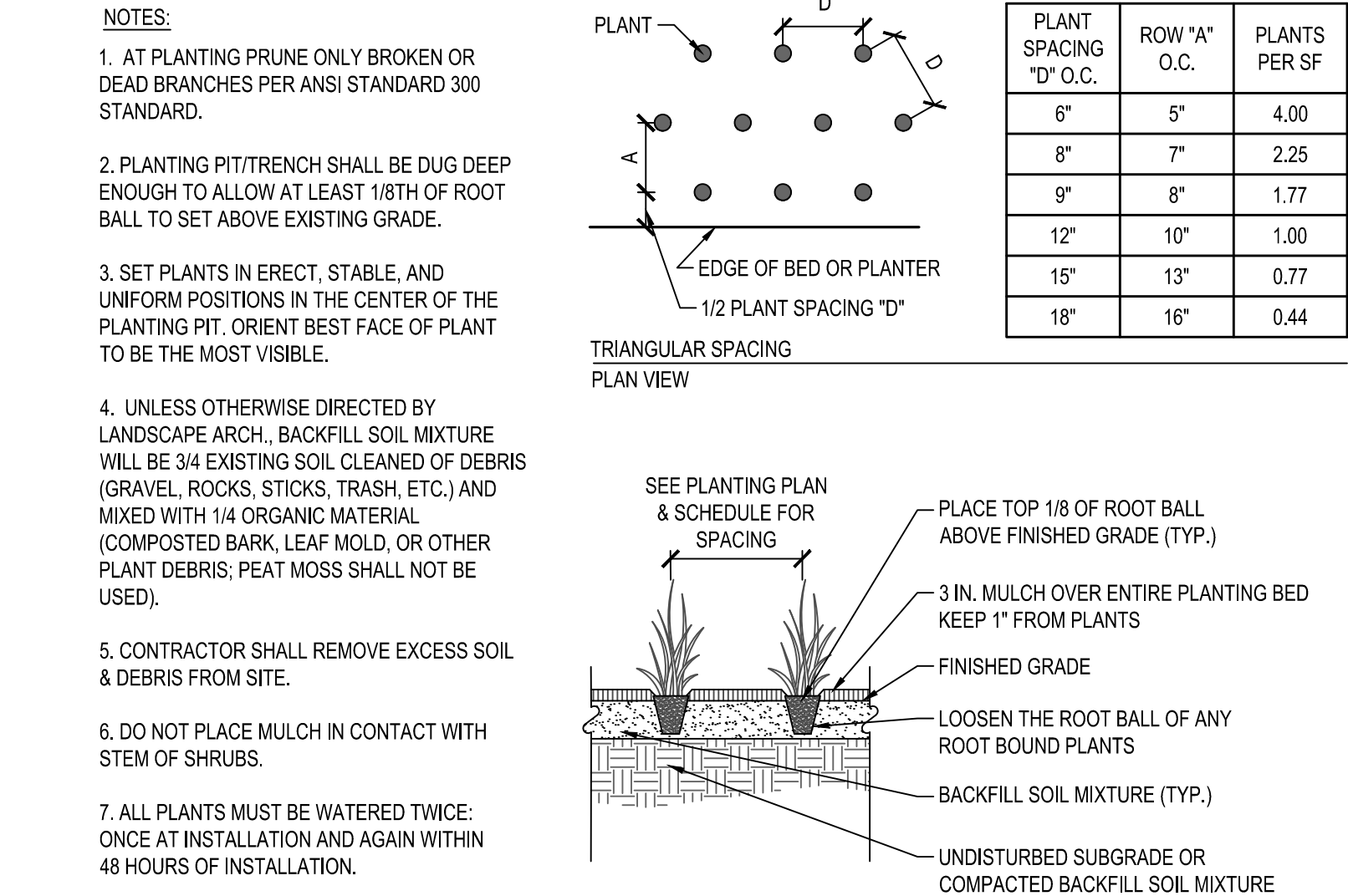
PROPOSED PLANTING BED DETAIL
SCALE: NTS - OR SIMILAR TO BE COORDINATED AT TIME OF SITE PLAN



TREE PLANTING DETAIL
SCALE: NTS



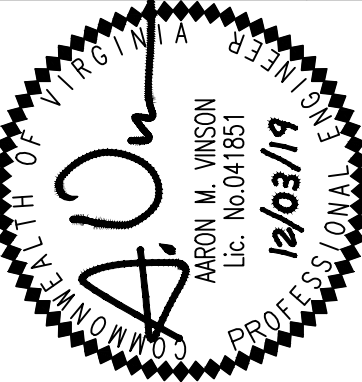
SHRUB PLANTING DETAIL
SCALE: NTS



PERENNIAL/GROUNDCOVER PLANTING DETAIL
SCALE: NTS

CONCEPTUAL LANDSCAPE NOTES AND DETAILS

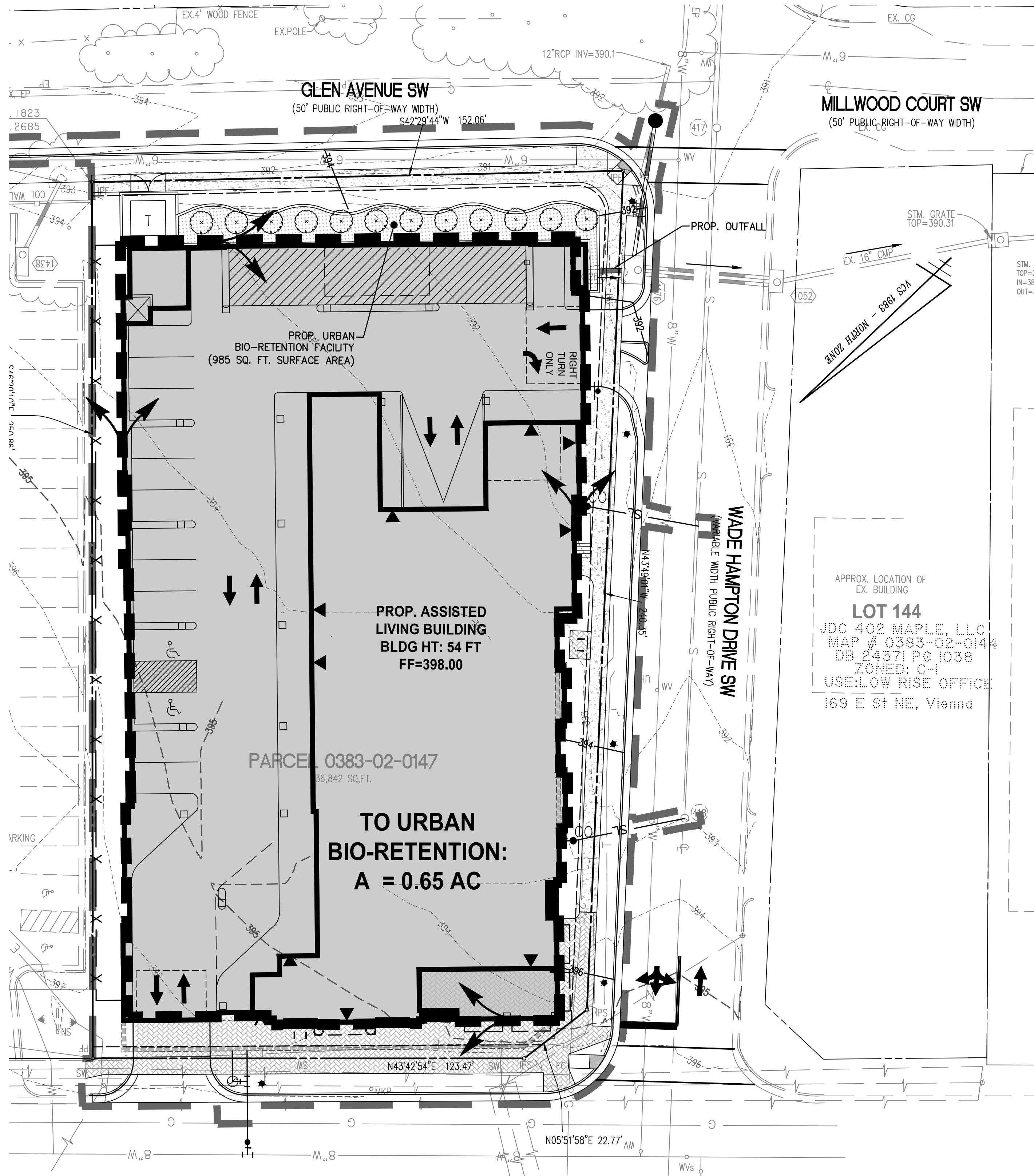
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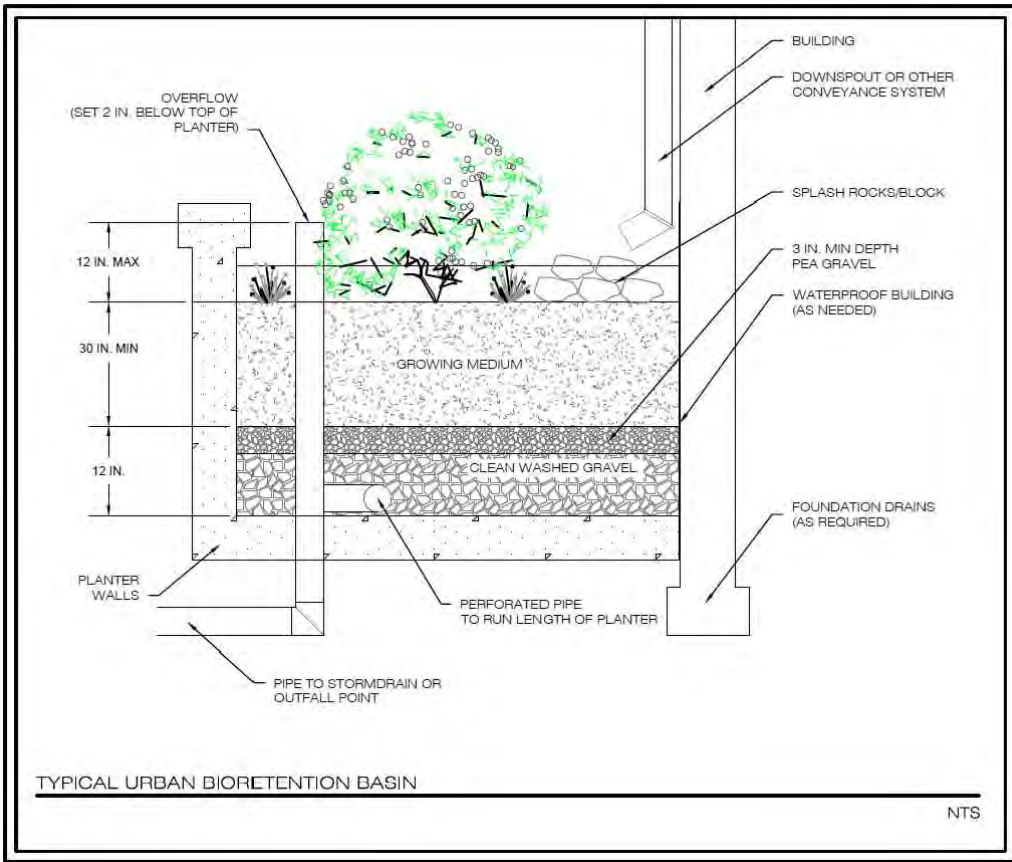
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TYPICAL URBAN BIO-RETENTION PLANTER

N.T.S. - CONFIGURATION SUBJECT TO ADJUSTMENT AT THE TIME OF SITE PLAN



STORMWATER MANAGEMENT AND WATER QUALITY NARRATIVES

EXISTING CONDITIONS: THE TOTAL PARCEL AREA OF THE SITE IS 36,842 SF OR 0.8458 ACRES. THE LIMITS OF DISTURBANCE AREA FOR THE PROJECT IS 44,185 SF OR 1.0143 ACRES. FOR THE PURPOSES OF STORMWATER MANAGEMENT THE SITE AREA WILL BE THE LIMITS OF DISTURBANCE.

CURRENTLY, THE SITE CONSISTS OF ONE (1) COMMERCIAL BUILDING, SURFACE PARKING, LANDSCAPE AREAS, AND UTILITY INFRASTRUCTURE. THERE ARE NO EXISTING STORMWATER MANAGEMENT QUALITY OR QUANTITY CONTROL MEASURES ON SITE. THE SITE DRAINS FROM NORTH TO SOUTH ACROSS THE SITE AS SHEET FLOW OR VIA STORM SEWERS. ALL STORMWATER ENTERS THE MUNICIPAL STORM SEWER SYSTEM VIA CURB INLETS ALONG THE ADJACENT PUBLIC STREETS.

PROPOSED CONDITIONS: THE PROJECT INVOLVES THE CONSTRUCTION OF AN ASSISTED LIVING BUILDING WHICH INCLUDES A GROUND FLOOR RESTURARNT, A GARAGE STRUCTURE (WITH ONE FLOOR BELOW GRADE), SIDEWALKS, UTILITY SERVICES, AND A STORMWATER MANAGEMENT BMP (URBAN BIO-RETENTION).

STORMWATER QUALITY: IN ORDER TO COMPLY WITH CHAPTER 23 OF THE TOWN OF VIENNA CODE OF ORDINANCES (STORMWATER ORDINANCE) FOR STORMWATER QUALITY, A LEVEL 1 URBAN BIO-RETENTION FACILITY (±985 SQ. FT. OF SURFACE AREA) IS PROPOSED. THIS STORMWATER BMP WILL REDUCE PHOSPHORUS LEVELS IN ORDER TO COMPLY WITH APPLICABLE TOWN OF VIENNA AND STATE OF VIRGINIA REQUIREMENTS. SEE VRRM SPREADSHEET ON P-0503.

STORMWATER QUANTITY: THE SITE DRAINS FROM NORTH TO SOUTH AND DISCHARGES AS CONCENTRATED FLOW AT A SINGLE OUTFALL WHERE IT ENTERS AN EXISTING 12" RCP STORM PIPE. SEE OUTFALL INFORMATION ON SHEET P-0502. SEE STORMWATER QUANTITY COMPUTATIONS ON THIS SHEET. STORMWATER FROM THE SITE ULTIMATELY DISCHARGES INTO A TRIBUTARY OF HUNTER'S BRANCH.

CHANNEL PROTECTION: THE SITE STORM OUTFALL AND ALL PIPES PROPOSED WITH THIS DEVELOPMENT WILL BE COMPRISED OF CONCRETE OR OTHER NON-ERODIBLE MATERIALS OR RESTORED CHANNELS DESIGNED TO ACCEPT STORMWATER FROM THE SUBJECT PROPERTY UP TO THE LIMITS OF ANALYSIS. THEREFORE, THE SITE CAN DISCHARGE THE 2-YEAR, 24-HOUR STORM WITHOUT CAUSING EROSION IN THE SYSTEM AND DETENTION IS NOT REQUIRED FOR THE PURPOSES OF CHANNEL PROTECTION.

BASED ON THIS ANALYSIS, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE SITE COMPLIES WITH THE CHANNEL PROTECTION CRITERIA OUTLINED IN THE STATE STORMWATER REGULATIONS (9VAC25-870-66).

FLOOD PROTECTION: THE SITE STORM OUTFALL AND ALL PIPES PROPOSED WITH THIS DEVELOPMENT WILL BE ADEQUATE TO RECEIVE THE 10-YEAR, 24-HOUR STORMWATER DISCHARGE FROM THE SITE AND UPSTREAM DRAINAGE AREA, UP TO THE LIMITS OF ANALYSIS. THEREFORE, DETENTION IS NOT REQUIRED FOR THE PURPOSES OF FLOOD CONTROL.

BASED ON THIS, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE SITE COMPLIES WITH THE FLOOD PROTECTION CRITERIA OUTLINED IN THE STATE STORMWATER REGULATIONS (9VAC25-870-66).

NOTE THAT IMPLEMENTATION OF RUNOFF REDUCTION PRACTICES (URBAN BIO-RETENTION) ON THIS SITE WILL BRING THE POST-DEVELOPMENT FLOW RATE DOWN TO THE PRE-DEVELOPMENT PRE-DEVELOPMENT FLOW RATE.

ADJACENT PROPERTIES: ALL UNCONTROLLED SHEET FLOW FROM THE SITE WILL BE DIRECTED TO EXISTING CURB INLETS WITHIN THE PUBLIC RIGHT-OF-WAY AND INTO THE MUNICIPAL STORM SEWER SYSTEM. THERE WILL NOT BE ANY ADVERSE IMPACT TO ADJACENT PROPERTIES AS A RESULT OF THIS PROJECT AND THE PROPOSED IMPROVEMENTS.

FLOODPLAIN BOUNDARY: THIS SITE IS LOCATED OUTSIDE OF THE 100-YEAR FLOODPLAIN BOUNDARY.

RESOURCE PROTECTION AREAS: THERE ARE NO RESOURCE PROTECTION AREAS KNOWN TO EXIST ON THE SITE AND NO RESOURCE PROTECTION AREAS ARE DEPICTED ON AVAILABLE RECORD MAPS.

THE SITE IS LOCATED IN THE ACCOTINK-HUNTER'S BRANCH/ACCOTINK CREEK WATERSHED.

THE STORMWATER MANAGEMENT PLAN PROVIDED ON THIS PLAN IS SUBJECT TO ADJUSTMENT AT THE TIME OF FINAL ENGINEERING.

SITE FLOW SUMMARY

PRE-DEVELOPMENT

| | | |
|-----------------|---|------------|
| Hydrograph type | = | SCS Runoff |
| Storm frequency | = | 2 yrs |
| Time interval | = | 1 min |
| Drainage area | = | 1.010 ac |
| Basin Slope | = | 0.0 % |
| Tc method | = | User |
| Total precip. | = | 3.17 in |

| | | |
|--------------------|---|------------|
| Peak discharge | = | 3.302 cfs |
| Time to peak | = | 12.12 hrs |
| Hyd. volume | = | 9,889 cuft |
| Curve number | = | 95 |
| Hydraulic length | = | 0 ft |
| Time of conc. (Tc) | = | 5.00 min |
| Distribution | = | Custom |

PRE-DEVELOPMENT

| | | |
|-----------------|---|------------|
| Hydrograph type | = | SCS Runoff |
| Storm frequency | = | 10 yrs |
| Time interval | = | 1 min |
| Drainage area | = | 1.010 ac |
| Basin Slope | = | 0.0 % |
| Tc method | = | User |
| Total precip. | = | 4.87 in |

| | | |
|--------------------|---|-------------|
| Peak discharge | = | 5.249 cfs |
| Time to peak | = | 12.12 hrs |
| Hyd. volume | = | 16,223 cuft |
| Curve number | = | 95 |
| Hydraulic length | = | 0 ft |
| Time of conc. (Tc) | = | 5.00 min |
| Distribution | = | Custom |

POST-DEVELOPMENT 2-YEAR

| | | |
|-----------------|---|------------|
| Hydrograph type | = | SCS Runoff |
| Storm frequency | = | 2 yrs |
| Time interval | = | 1 min |
| Drainage area | = | 1.010 ac |
| Basin Slope | = | 0.0 % |
| Tc method | = | User |
| Total precip. | = | 3.17 in |

| | | |
|--------------------|---|------------|
| Peak discharge | = | 3.049 cfs |
| Time to peak | = | 12.12 hrs |
| Hyd. volume | = | 8,780 cuft |
| Curve number | = | 92 |
| Hydraulic length | = | 0 ft |
| Time of conc. (Tc) | = | 5.00 min |
| Distribution | = | Custom |

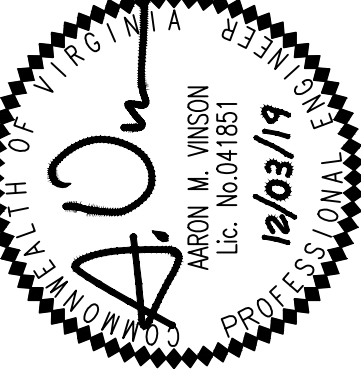
POST-DEVELOPMENT 10-YEAR

| | | |
|-----------------|---|------------|
| Hydrograph type | = | SCS Runoff |
| Storm frequency | = | 10 yrs |
| Time interval | = | 1 min |
| Drainage area | = | 1.010 ac |
| Basin Slope | = | 0.0 % |
| Tc method | = | User |
| Total precip. | = | 4.87 in |

| | | |
|--------------------|---|-------------|
| Peak discharge | = | 5.111 cfs |
| Time to peak | = | 12.12 hrs |
| Hyd. volume | = | 15,389 cuft |
| Curve number | = | 93 |
| Hydraulic length | = | 0 ft |
| Time of conc. (Tc) | = | 5.00 min |
| Distribution | = | Custom |

CONCEPTUAL STORMWATER MANAGEMENT NARRATIVE AND DETAILS

SUNRISE OF VIENNA
MAC AMENDMENT PLAN
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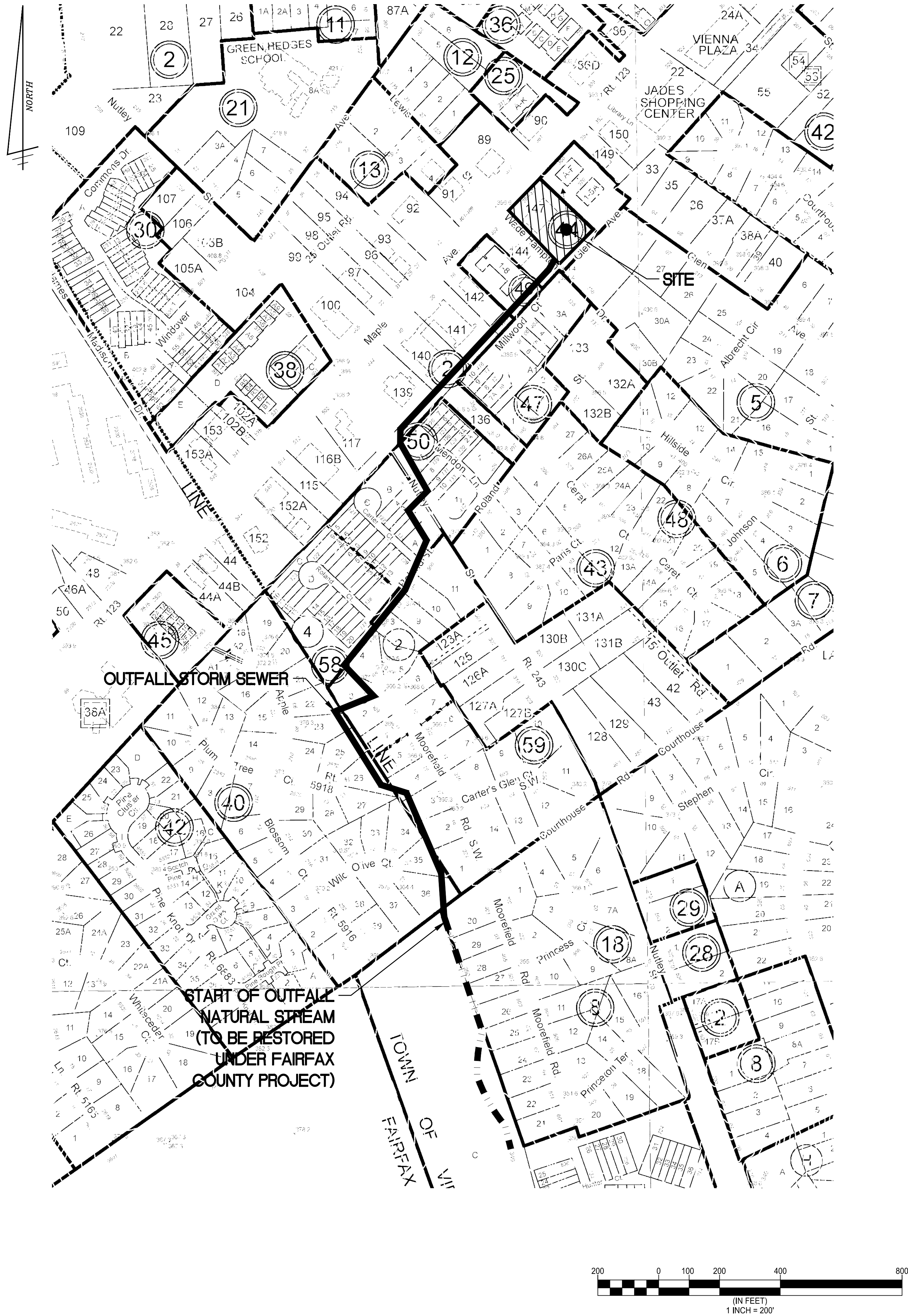


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OUTFALL NARRATIVE

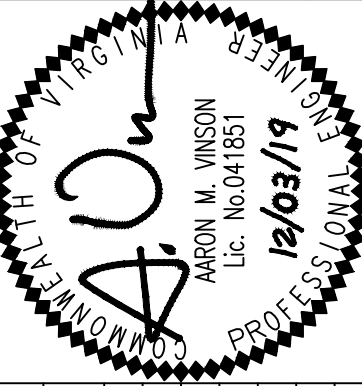
STORMWATER RUNOFF FROM THE SITE WILL BE COLLECTED IN A PROPOSED URBAN BIO-RETENTION BASIN WHICH DISCHARGES DIRECTLY INTO THE MUNICIPAL STORM SEWER SYSTEM. THIS EXISTING SYSTEM LEAVES THE PROPERTY AT THE PROPERTY'S SOUTHERN CORNER AND THEN HEADS THROUGH EXISTING PROPERTIES TO THE SOUTH AND THEN SOUTH ALONG NUTLEY STREET. AFTER CROSSING NUTLEY STREET, THE STORM SEWER TURNS SOUTHWEST DOWN ROLAND STREET. IT THEN CONNECTS TO A LARGER STORM SEWER SYSTEM LOCATED BEHIND HOMES BETWEEN MOOREFIELD ROAD AND BLOSSOM COURT. THE STORM SEWER THEN CROSSES COURTHOUSE ROAD BEFORE OUTLETING INTO A STREAM CHANNEL THAT BEGINS ON THE SOUTH SIDE OF COURTHOUSE ROAD. THIS CHANNEL WAS RESTORED USING NATURAL DESIGN CONCEPTS UNDER THE HUNTERS BRANCH STREAM RESTORATION PLANS PREPARED BY WETLANDS STUDIES AND SOLUTIONS. SHEET 27 OF 32 OF THE FINAL PLANS INDICATES THAT THE RESTORED STREAM HAS A DRAINAGE AREA OF 389.4 ACRES WHICH IS MORE THAN 100 TIMES THE SITE AREA. THEREFORE, THE SITE OUTFALL CONSISTS OF STORM SEWER AND RESTORED CHANNEL AND NOT NATURAL STREAM. THE RESTORATION PLAN ALSO SHOWS OUR SITE IN AREA THAT IS LARGELY IMPERVIOUS. THE PROJECT WILL RESULT IN A DECREASE OF 0.01 ACRES IN IMPERVIOUS AREA. THEREFORE, STORMWATER RUNOFF FROM THE RESTORED CHANNEL'S 389 ACRE DRAINAGE AREA WILL STILL BE CONSISTENT WITH THE DESIGN FOR THE RESTORED CHANNEL WHICH SATISFIES THE VIRGINIA STORMWATER REGULATIONS. SEE NARRATIVE AND CHARTS ON SHEET C-0703 FOR ADDITIONAL INFORMATION.



STORMWATER OUTFALL MAP AND NARRATIVE

SUNRISE OF VIENNA
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CHECKED: AV

Project Name:

Sunrise of Vienna

Date:

11/1/2019

Linear Development Project?

No

CLEAR ALL

data input cells

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) →

1.01

Maximum reduction required:

20%

The site's net increase in impervious cover (acres) is:

0

Post-Development TP Load Reduction for Site (lb/yr):

0.37

Pre-ReDevelopment Land Cover (acres)

| | A Soils | B Soils | C Soils | D Soils | Totals |
|---|---------|---------|---------|---------|--------|
| Forest/Open Space (acres) -- undisturbed forest/open space | | | | | 0.00 |
| Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed | | | | 0.16 | 0.16 |
| Impervious Cover (acres) | | | | 0.85 | 0.85 |
| | | | | | 1.01 |

Post-Development Land Cover (acres)

| | A Soils | B Soils | C Soils | D Soils | Totals |
|--|---------|---------|---------|---------|--------|
| Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land | | | | | 0.00 |
| Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed | | | | 0.17 | 0.17 |
| Impervious Cover (acres) | | | | 0.84 | 0.84 |
| Area Check | OK. | OK. | OK. | OK. | 1.01 |

Constants

| | |
|----------------------------------|------|
| Annual Rainfall (inches) | 43 |
| Target Rainfall Event (inches) | 1.00 |
| Total Phosphorus (TP) EMC (mg/L) | 0.26 |
| Total Nitrogen (TN) EMC (mg/L) | 1.86 |
| Target TP Load (lb/acre/yr) | 0.41 |
| Pj (unitless correction factor) | 0.90 |

Runoff Coefficients (Rv)

| | A Soils | B Soils | C Soils | D Soils |
|-------------------|---------|---------|---------|---------|
| Forest/Open Space | 0.02 | 0.03 | 0.04 | 0.05 |
| Managed Turf | 0.15 | 0.20 | 0.22 | 0.25 |
| Impervious Cover | 0.95 | 0.95 | 0.95 | 0.95 |

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

| Land Cover Summary-Pre | | |
|---------------------------------|--------|-----------------------|
| Pre-ReDevelopment | Listed | Adjusted ¹ |
| Forest/Open Space Cover (acres) | 0.00 | 0.00 |
| Weighted Rv(forest) | 0.00 | 0.00 |
| % Forest | 0% | 0% |
| Managed Turf Cover (acres) | 0.16 | 0.16 |
| Weighted Rv(turf) | 0.25 | 0.25 |
| % Managed Turf | 16% | 16% |
| Impervious Cover (acres) | 0.85 | 0.85 |
| Rv(impervious) | 0.95 | 0.95 |
| % Impervious | 84% | 84% |
| Total Site Area (acres) | 1.01 | 1.01 |
| Site Rv | 0.84 | 0.84 |

Treatment Volume and Nutrient Load

| | | |
|--|--------|--------|
| Pre-ReDevelopment Treatment Volume (acre-ft) | 0.0710 | 0.0710 |
| Pre-ReDevelopment Treatment Volume (cubic feet) | 3,091 | 3,091 |
| Pre-ReDevelopment TP Load (lb/yr) | 1.94 | 1.94 |
| Pre-ReDevelopment TP Load per acre (lb/acre/yr) | 1.91 | 1.91 |
| Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover) | | 0.42 |

¹ Adjusted Land Cover Summary:
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column 1 shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

LAND COVER SUMMARY -- POST DEVELOPMENT

| Land Cover Summary-Post (Final) | | |
|---------------------------------|------|--|
| Post ReDev. & New Impervious | | |
| Forest/Open Space Cover (acres) | 0.00 | |
| Weighted Rv(forest) | 0.00 | |
| % Forest | 0% | |
| Managed Turf Cover (acres) | 0.17 | |
| Weighted Rv (turf) | 0.25 | |
| % Managed Turf | 17% | |
| Impervious Cover (acres) | 0.84 | |
| Rv(impervious) | 0.95 | |
| % Impervious | 83% | |
| Final Site Area (acres) | 1.01 | |
| Final Post Dev Site Rv | 0.83 | |

Treatment Volume and Nutrient Load

| | | |
|--|--------|---|
| Final Post-Development Treatment Volume (acre-ft) | 0.0704 | |
| Final Post-Development Treatment Volume (cubic feet) | 3,067 | |
| Final Post-Development TP Load (lb/yr) | 1.93 | |
| Final Post-Development TP Load per acre (lb/acre/yr) | 1.90 | |
| Max. Reduction Required (Below Pre-ReDevelopment Load) | 20% | |
| TP Load Reduction Required for Redeveloped Area (lb/yr) | 0.37 | |
| TP Load Reduction Required for New Impervious Area (lb/yr) | | 0 |

Post-Development Requirement for Site Area

| | |
|------------------------------------|------|
| TP Load Reduction Required (lb/yr) | 0.37 |
|------------------------------------|------|

Nitrogen Loads (Informational Purposes Only)

| | | | |
|-----------------------------------|-------|--|-------|
| Pre-ReDevelopment TN Load (lb/yr) | 13.89 | Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr) | 13.78 |
|-----------------------------------|-------|--|-------|

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr)

1.93

Post Development Treatment Volume in D.A. A (ft³)

3,067

Stormwater Best Management Practices (RR = Runoff Reduction)

| Practice | Runoff Reduction Credit (%) | Managed Turf Credit Area (acres) | Impervious Cover Credit Area (acres) | Volume from Upstream Practice (ft³) | Runoff Reduction (ft³) | Remaining Runoff Volume (ft³) | Total BMP Treatment Volume (ft³) | Phosphorus Removal Efficiency (%) | Phosphorus Load from Upstream Practices (lb) | Untreated Phosphorus Load to Practice (lb) | Phosphorus Removed By Practice (lb) | Remaining Phosphorus Load (lb) | Downstream Practice to be Employed |
|---|-----------------------------|----------------------------------|--------------------------------------|-------------------------------------|------------------------|-------------------------------|----------------------------------|-----------------------------------|--|--|-------------------------------------|--------------------------------|------------------------------------|
| 6. Bioretention (RR) | | | | | | | | | | | | | |
| 6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9) | 40 | | 0.65 | 0 | 897 | 1,345 | 2,242 | 25 | 0.00 | 1.41 | 0.77 | 0.63 | |

Site Results (Water Quality Compliance)

Area Checks

| | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | AREA CHECK |
|--------------------------------|--------|--------|--------|--------|--------|------------|
| FOREST/OPEN SPACE (ad) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | OK. |
| IMPERVIOUS COVER (ad) | 0.84 | 0.00 | 0.00 | 0.00 | 0.00 | OK. |
| IMPERVIOUS COVER TREATED (ad) | 0.65 | 0.00 | 0.00 | 0.00 | 0.00 | OK. |
| MANAGED TURF AREA (ad) | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | OK. |
| MANAGED TURF AREA TREATED (ad) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | OK. |
| AREA CHECK | OK. | OK. | OK. | OK. | OK. | |

Site Treatment Volume (ft³)

3,067

Runoff Reduction Volume and TP By Drainage Area

| | D.A. A | D.A. B | D.A. C | D.A. D | D.A. E | TOTAL |
|--|--------|--------|--------|--------|--------|-------|
| RUNOFF REDUCTION VOLUME ACHIEVED (ft³) | 897 | 0 | 0 | 0 | 0 | 897 |
| TP LOAD AVAILABLE FOR REMOVAL (lb/yr) | 1.93 | 0.00 | 0.00 | 0.00 | 0.00 | 1.93 |
| TP LOAD REDUCTION ACHIEVED (lb/yr) | 0.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.77 |
| TP LOAD REMAINING (lb/yr) | 1.15 | 0.00 | 0.00 | 0.00 | 0.00 | 1.15 |
| NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) | 6.44 | 0.00 | 0.00 | 0.00 | 0.00 | 6.44 |

Total Phosphorus

| | |
|---|------|
| FINAL POST-DEVELOPMENT TP LOAD (lb/yr) | 1.93 |
| TP LOAD REDUCTION REQUIRED (lb/yr) | 0.37 |
| TP LOAD REDUCTION ACHIEVED (lb/yr) | 0.77 |
| TP LOAD REMAINING (lb/yr): | 1.15 |
| REMAINING TP LOAD REDUCTION REQUIRED (lb/yr): | 0.00 |
| ** TARGET TP REDUCTION EXCEEDED BY 0.4 LB/YEAR ** | |

Total Nitrogen (For Information Purposes)

| | |
|--|-------|
| POST-DEVELOPMENT LOAD (lb/yr) | 13.78 |
| NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) | 6.44 |
| REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) | 7.34 |

Drainage Area A

| | A Soils | B Soils | C Soils | D Soils | Total Area (acres): | |
|--|---------|---------|---------|--------------|---------------------|---------------|
| Forest/Open Space -- undisturbed, protected forest/open space or reforested land | 0.00 | 0.00 | 0.00 | 0.00 | 1.01 | |
| Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed | 0.00 | 0.00 | 0.00 | 0.17 | | |
| Impervious Cover | 0.00 | 0.00 | 0.00 | 0.84 | | |
| CN (D.A. A) | | | | | | |
| 95 | | | | | | |
| RV _{Developed} (watershed-inch) with no Runoff Reduction* | 2.08 | 2.62 | 4.29 | | | |
| RV _{Developed} (watershed-inch) with Runoff Reduction* | 1.84 | 2.37 | 4.05 | | | |
| Adjusted CN* | 92 | 92 | 93 | | | |
| | | | | 1-year storm | 2-year storm | 10-year storm |
| | | | | 2.62 | 3.17 | 4.87 |

VRRM SPREADSHEET

SUNRISE OF VIENNA

MAC AMENDMENT PLAN

374 - 380 MAPLE AVENUE WEST

TOWN OF VIENNA, VIRGINIA 22180

WALTER L. PHILLIPS

INCORPORATED

ESTABLISHED 1945

DATE: 11/16/2019, 12/03/2019

SCALE: 1" = 20'

NO.

DESCRIPTION

DATE

APPROVED

REVISION APPROVED BY

DATE

REV. BY

DATE

NO.

Engineers • Surveyors • Planners

Landscape Architects • Arborists

207 PARK AVENUE

FALLS CHURCH, VIRGINIA 22046

(703) 532-6163 Fax (703) 533-1301

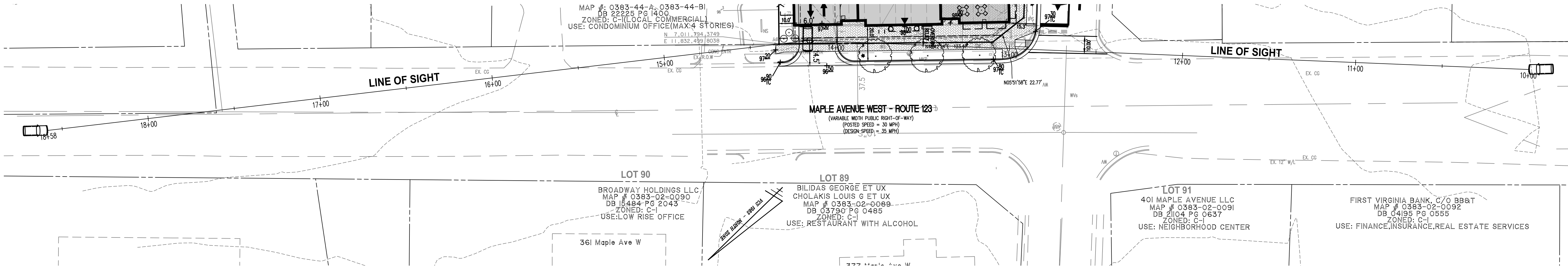
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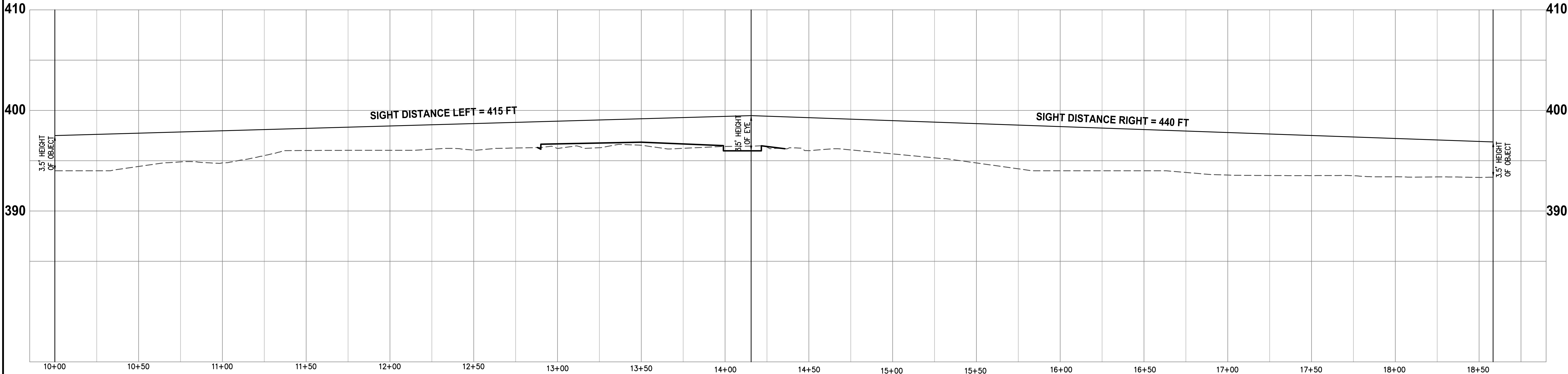
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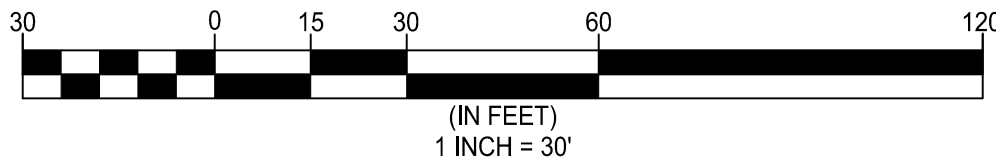
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MAPLE AVENUE WEST PLAN VIEW
SCALE= 1"=30'



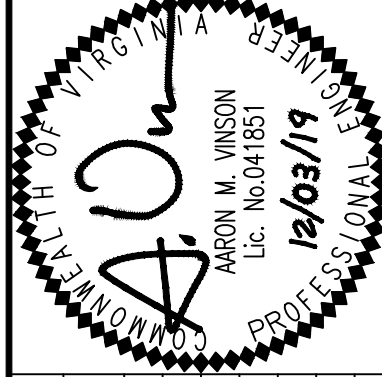
MAPLE AVENUE WEST SIGHT DISTANCE PROFILE
SCALE= HOR: 1"=30'
VERT: 1"=5'



SIGHT DISTANCE PROFILE

SUNRISE OF VIENNA
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180

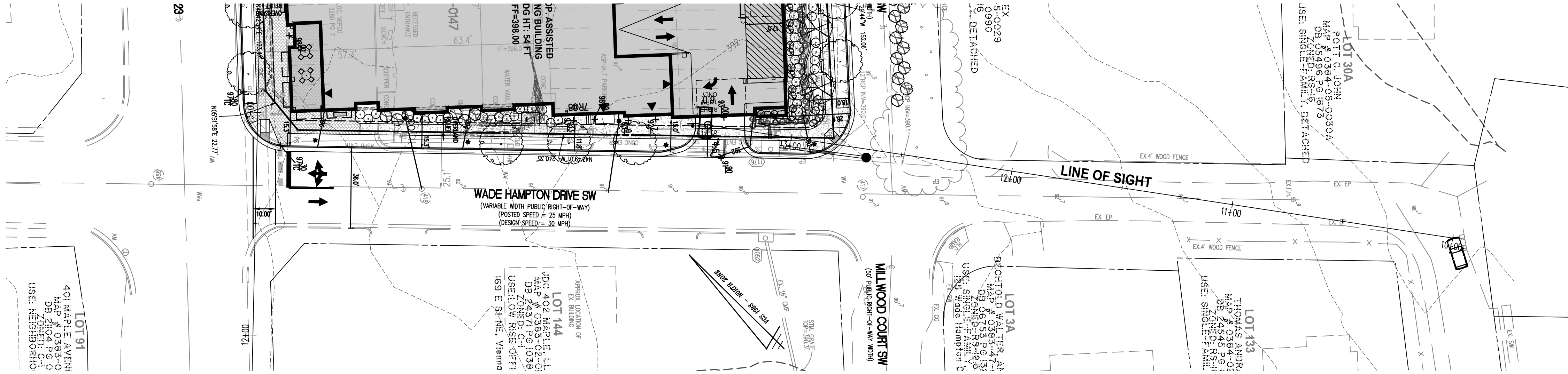
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DATE: 11/16/2019, 12/03/2019
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CHECKED: AV
DRAWN: TTPB



The graph illustrates the sight distance calculation for a road profile. The vertical axis represents height in feet, ranging from 390 to 410. The horizontal axis represents stationing, ranging from 10+00 to 13+50. A solid line represents the '3.5' HEIGHT OF OBJECT' and a dashed line represents the '3.5' HEIGHT OF EYE'. The sight distance is indicated as 335 FT.

| Station | Object Height (ft) | Eye Height (ft) |
|---------|--------------------|-----------------|
| 10+00 | 401.5 | 399.5 |
| 10+50 | 401.0 | 398.5 |
| 11+00 | 400.5 | 397.5 |
| 11+50 | 399.5 | 396.5 |
| 12+00 | 398.5 | 395.5 |
| 12+50 | 397.5 | 394.5 |
| 13+00 | 396.5 | 393.5 |
| 13+50 | 395.5 | 392.5 |

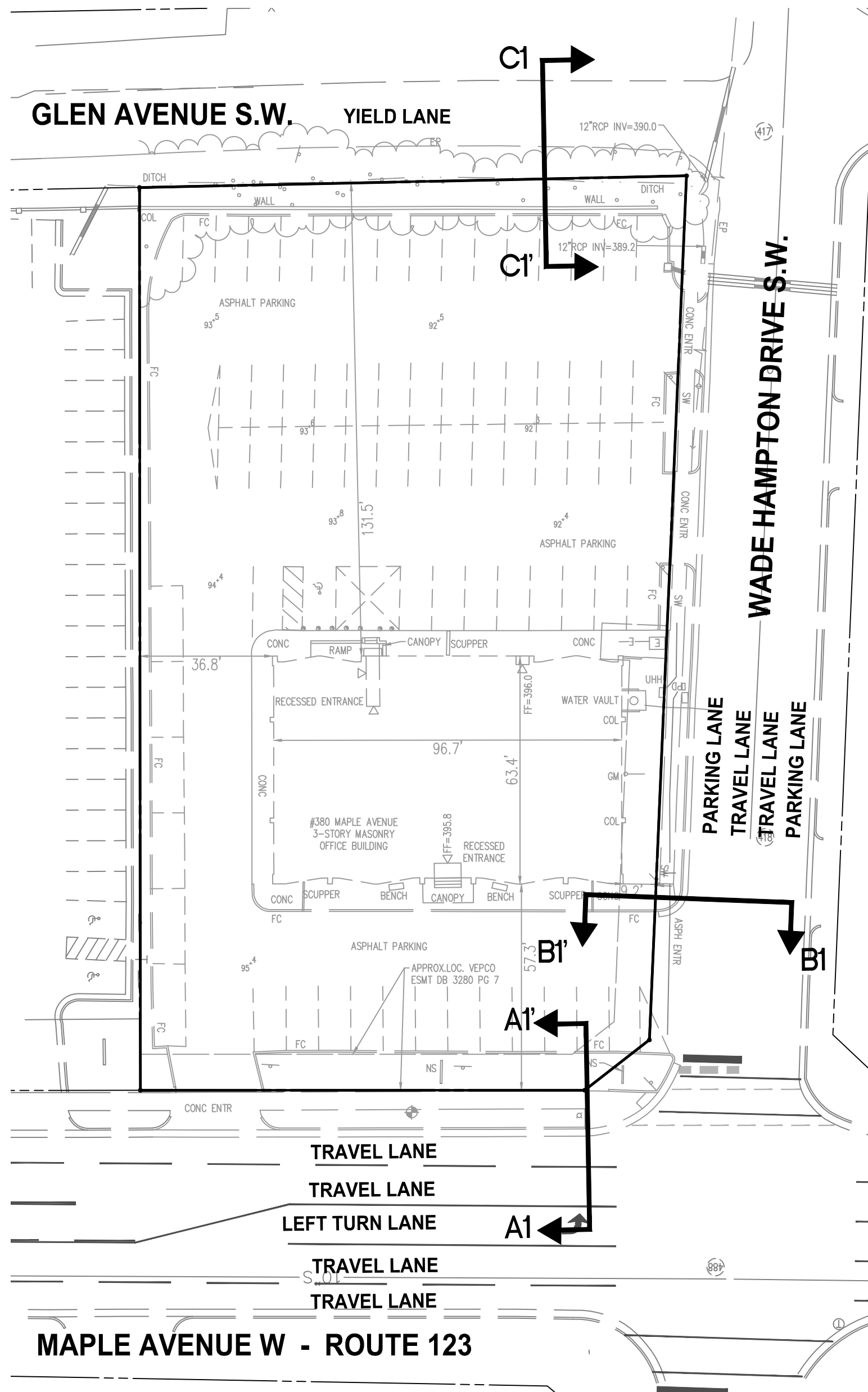
SIGHT DISTANCE PROFILE

SUNRISE OF VIENNA
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180

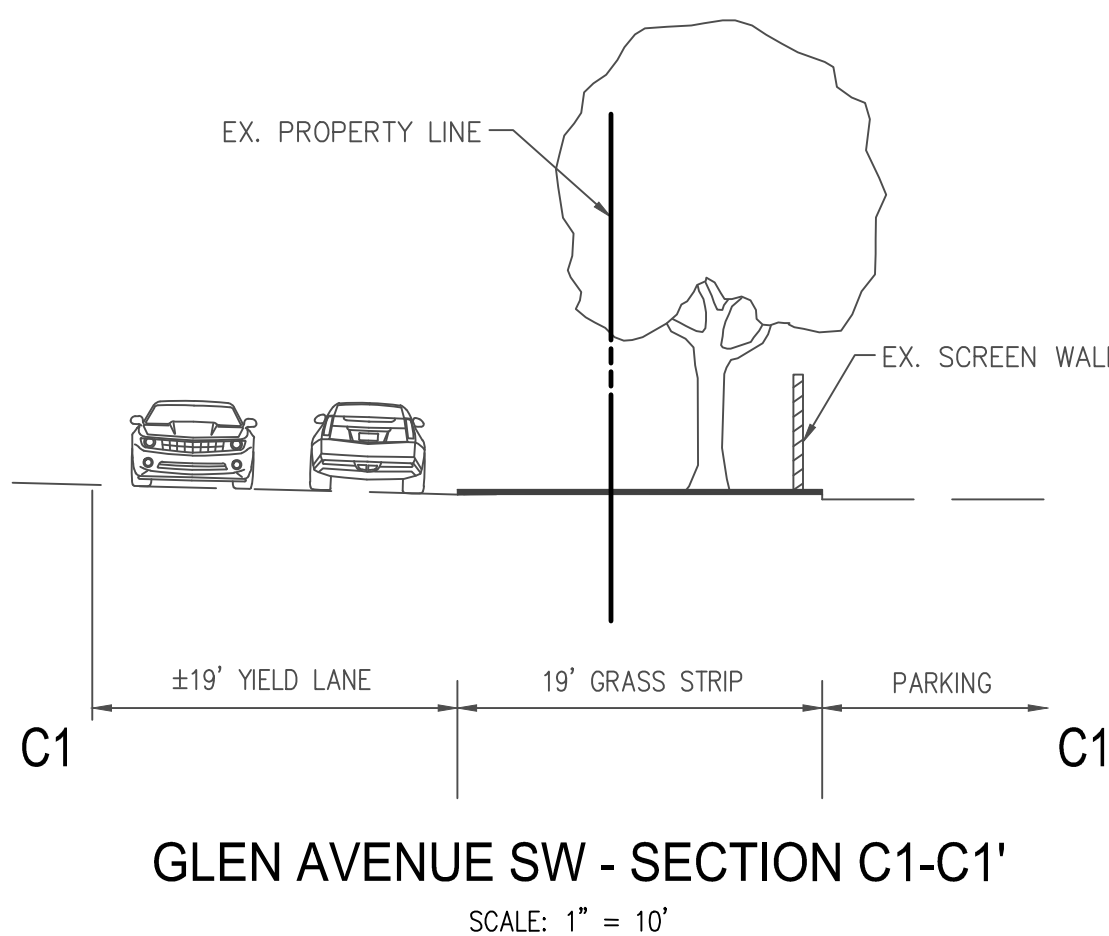
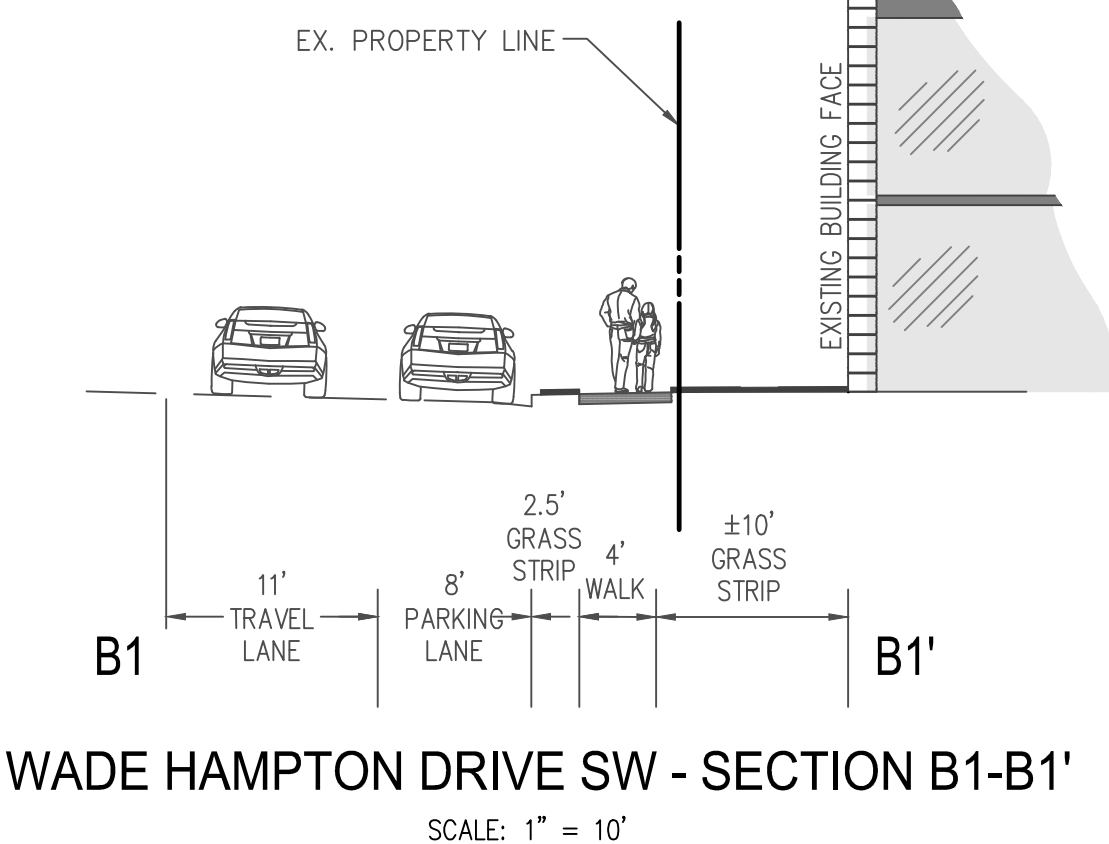
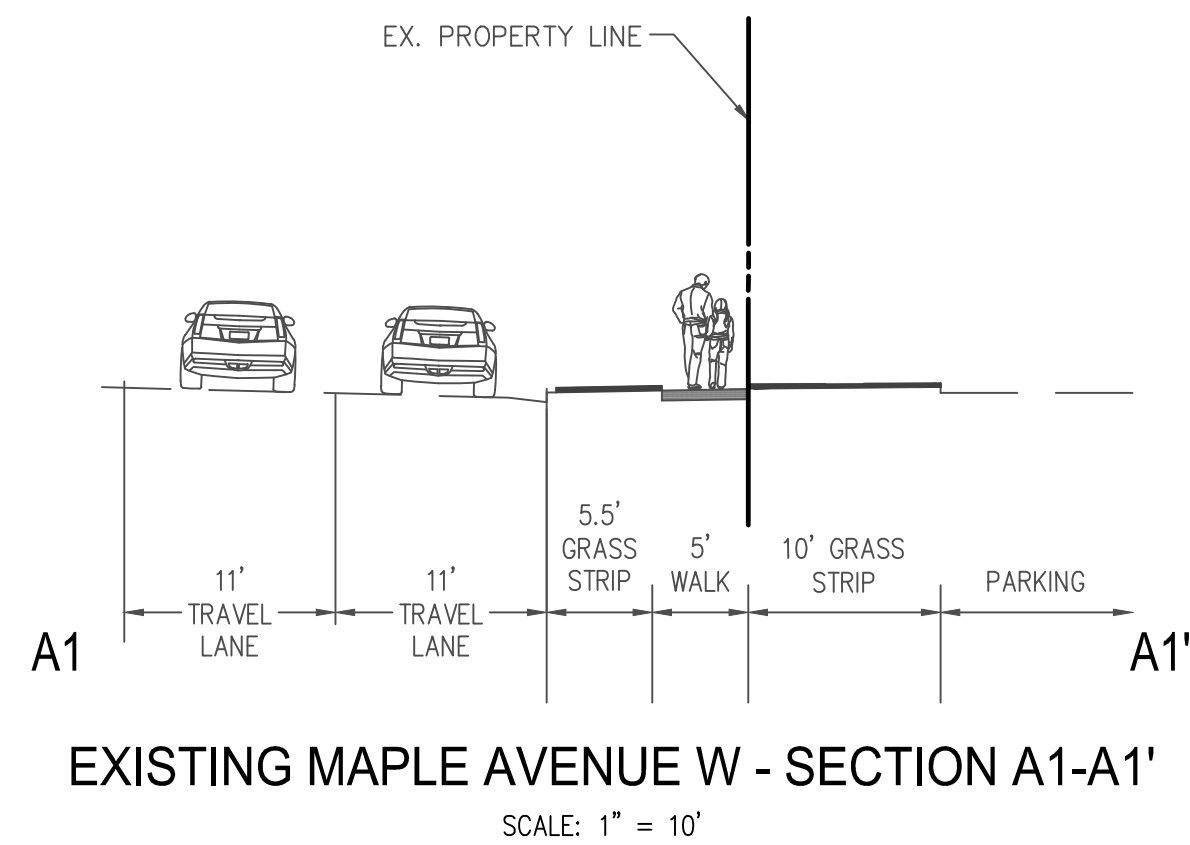
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ESTABLISHED 1946
DATE: 11/15/2019, 12/03/2019
SCALE: 1" = 30' HOR.
1" = 5' VERT.

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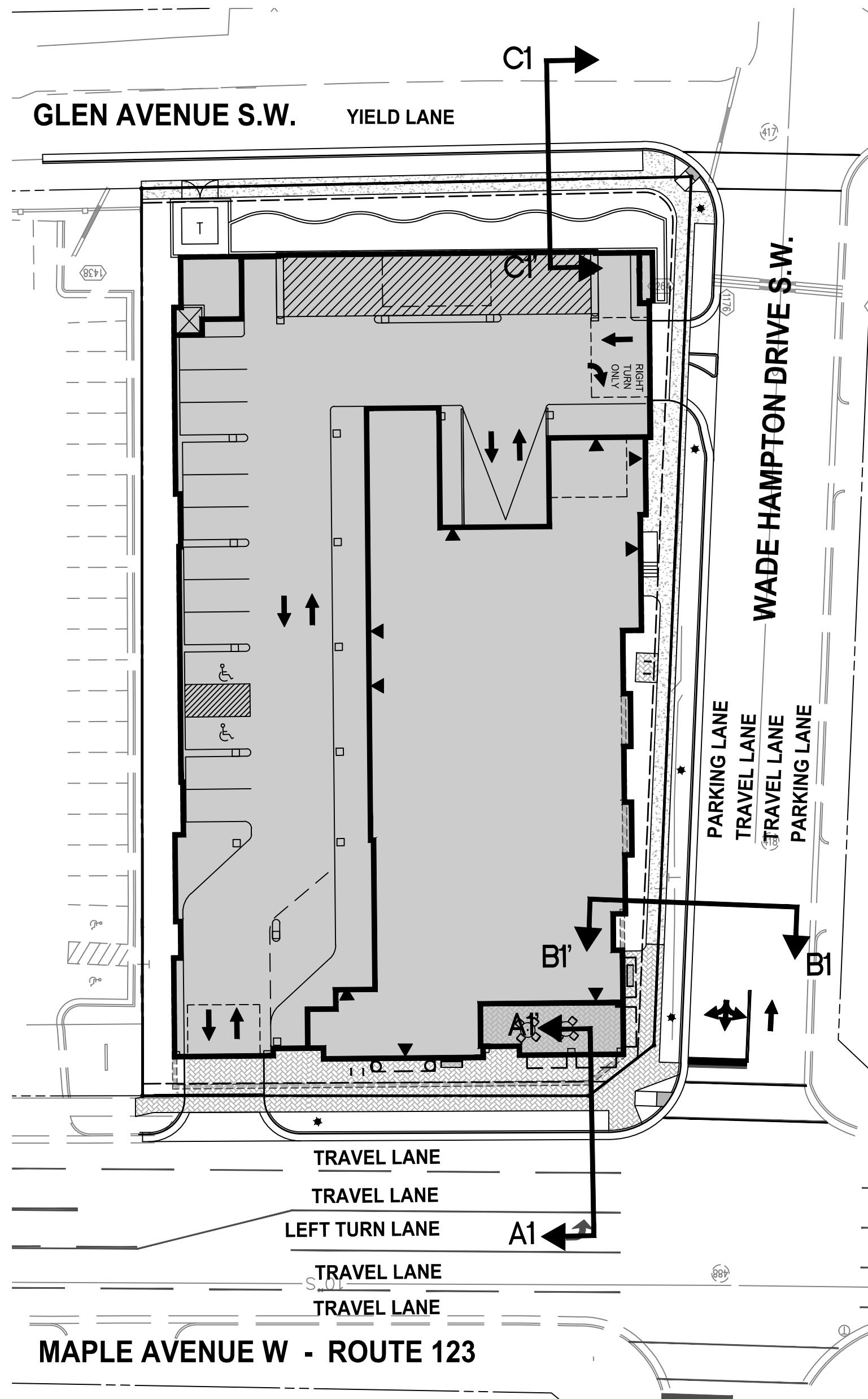
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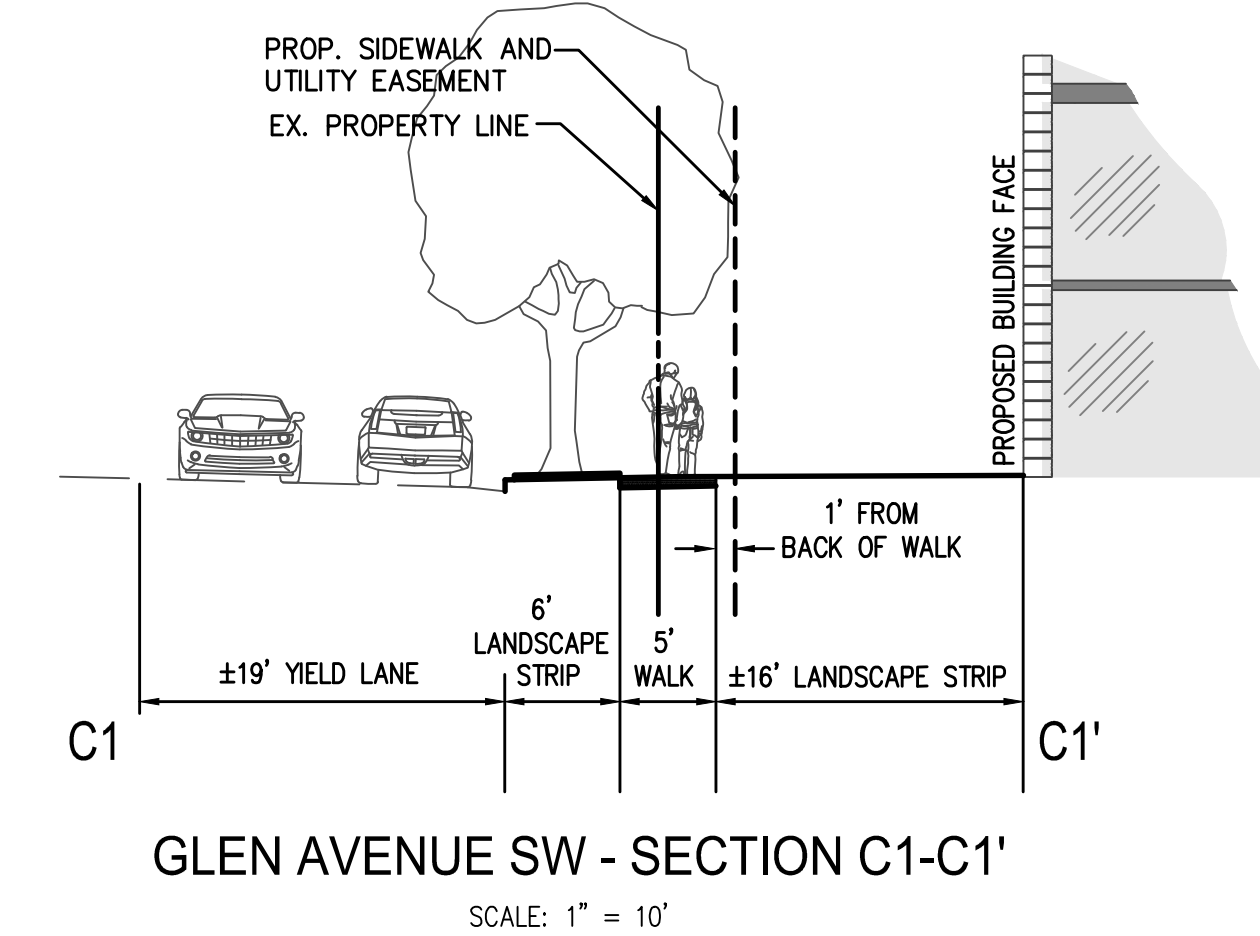
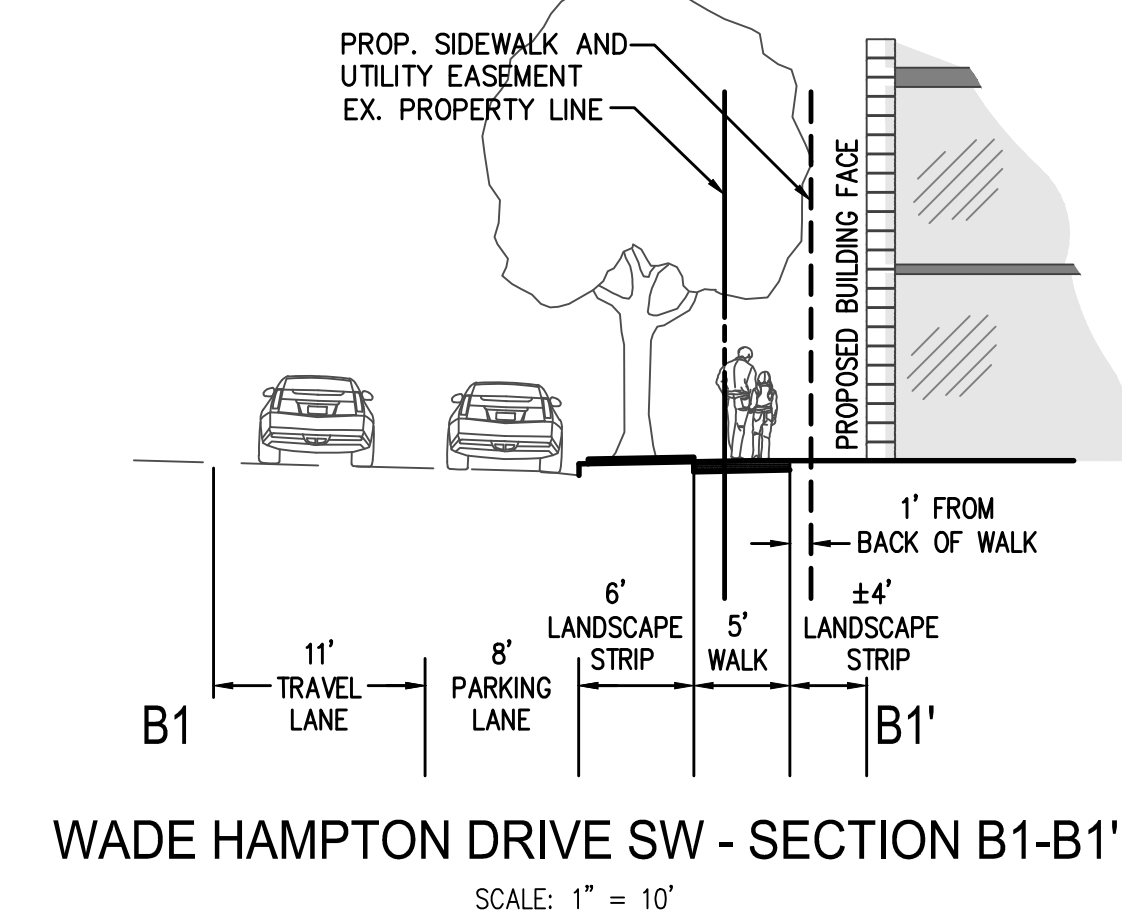
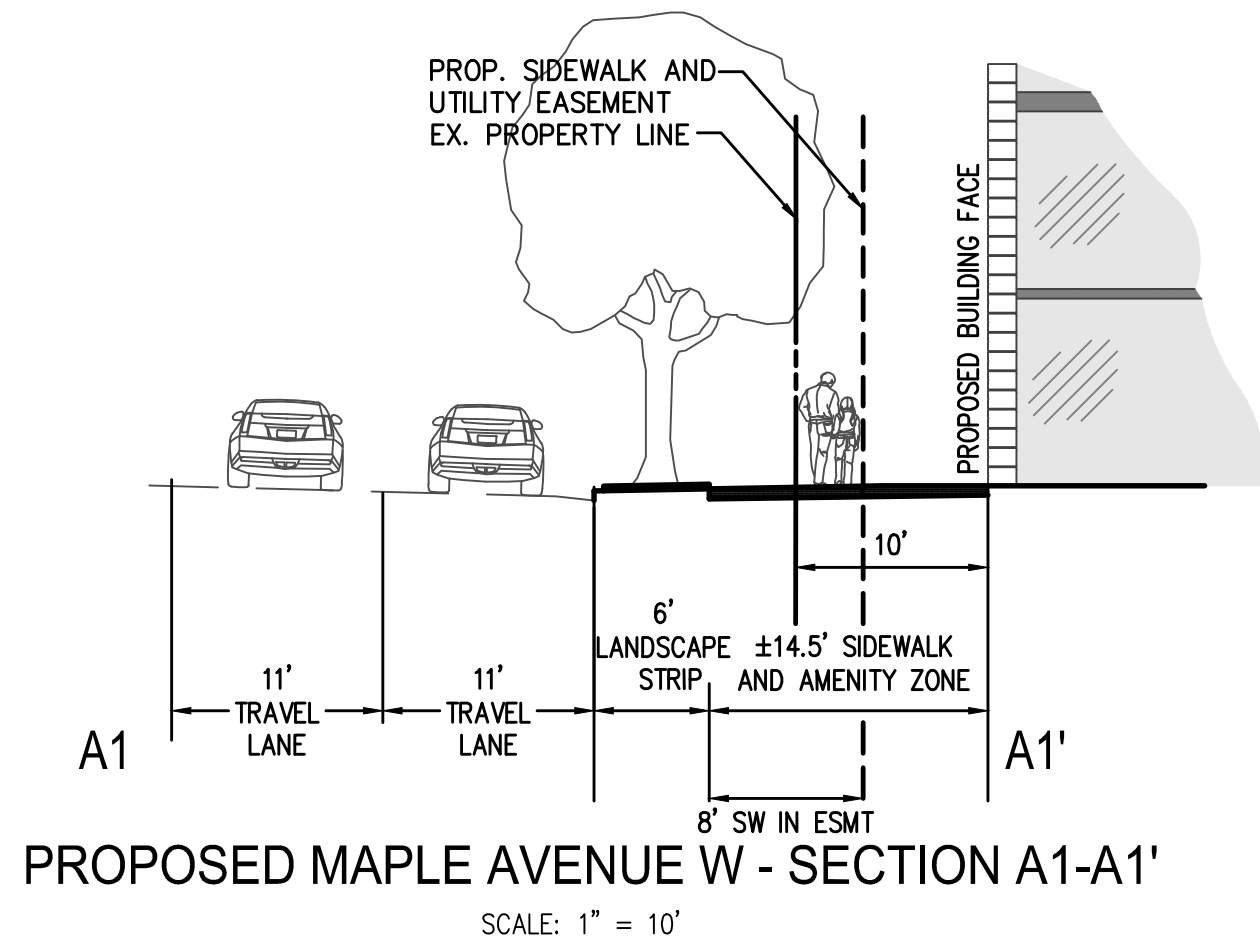
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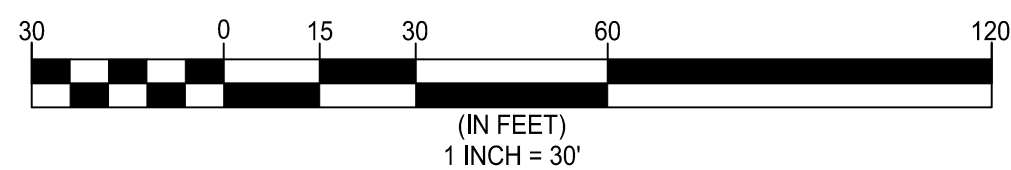
EXISTING CROSS-SECTIONS
SCALE= 1"=10'



PROPOSED PLAN VIEW
SCALE= 1"=30'



PROPOSED CROSS-SECTIONS
SCALE= 1"=10'

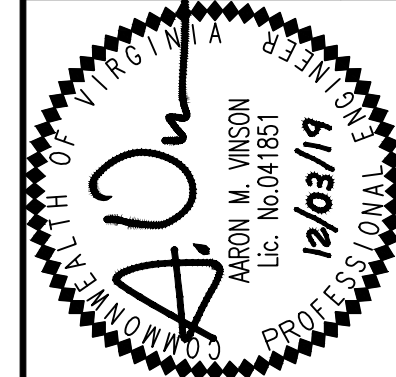


CROSS-SECTION EXHIBIT

SUNRISE OF VIENNA

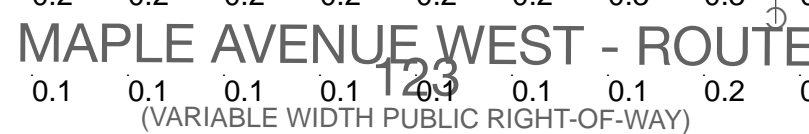
MAC AMENDMENT PLAN
374 - 380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180

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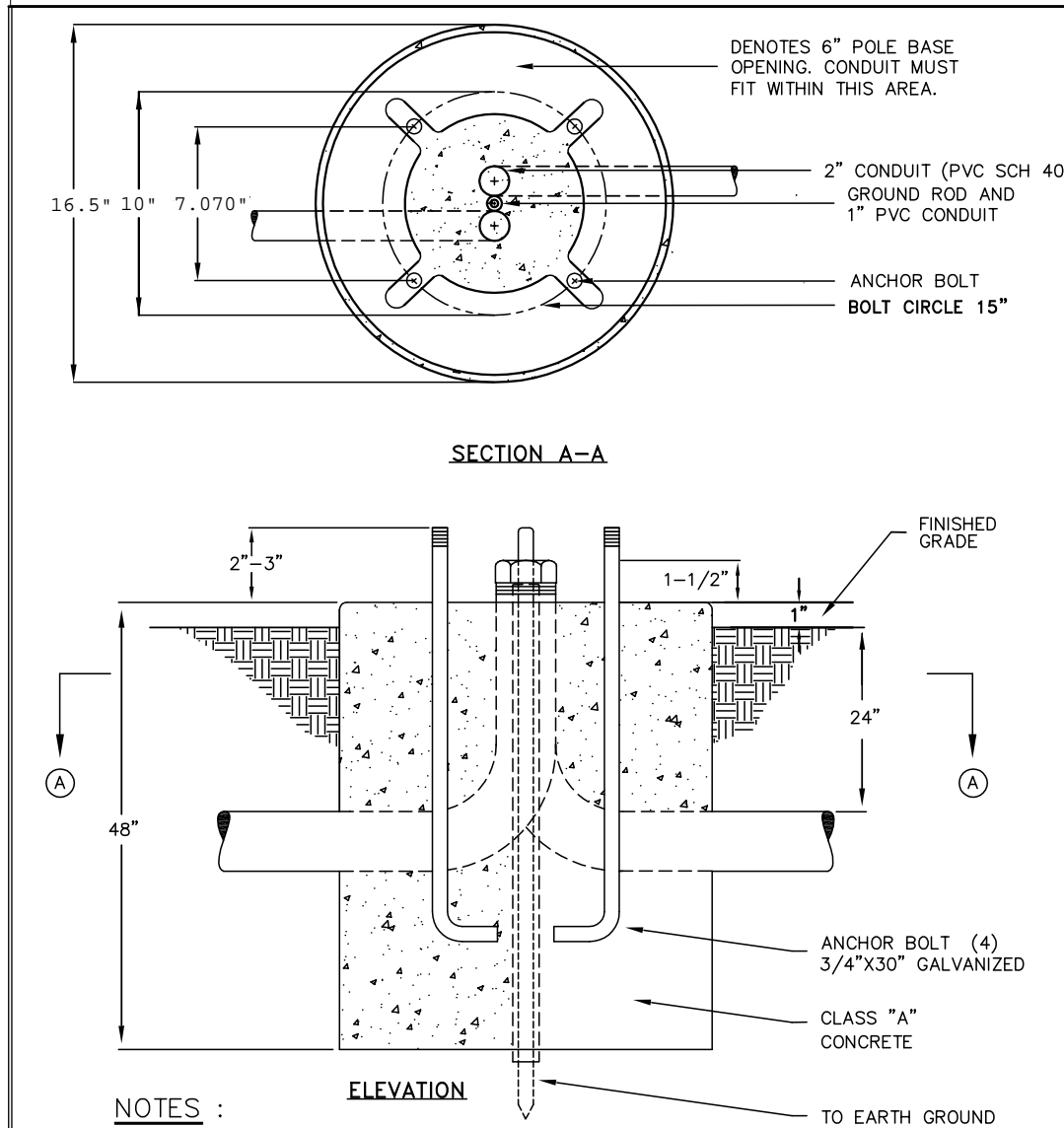


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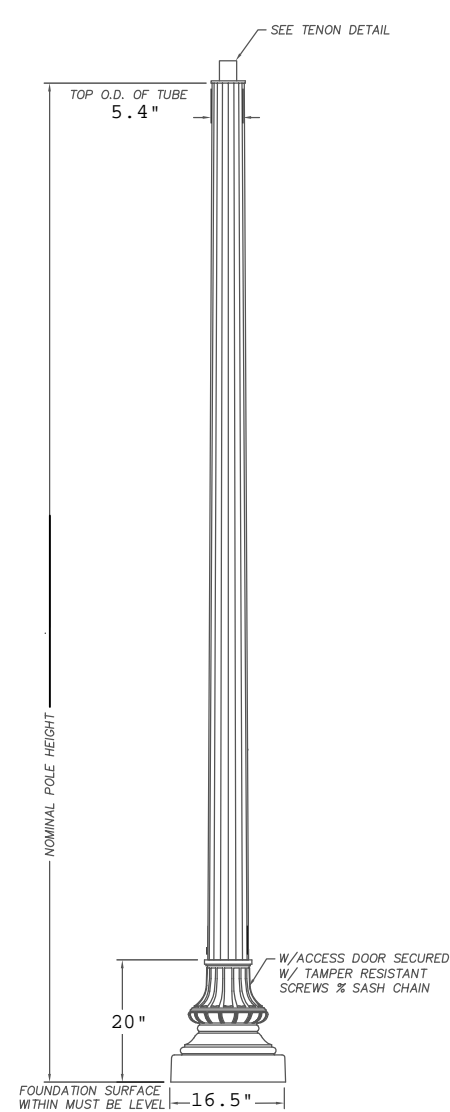
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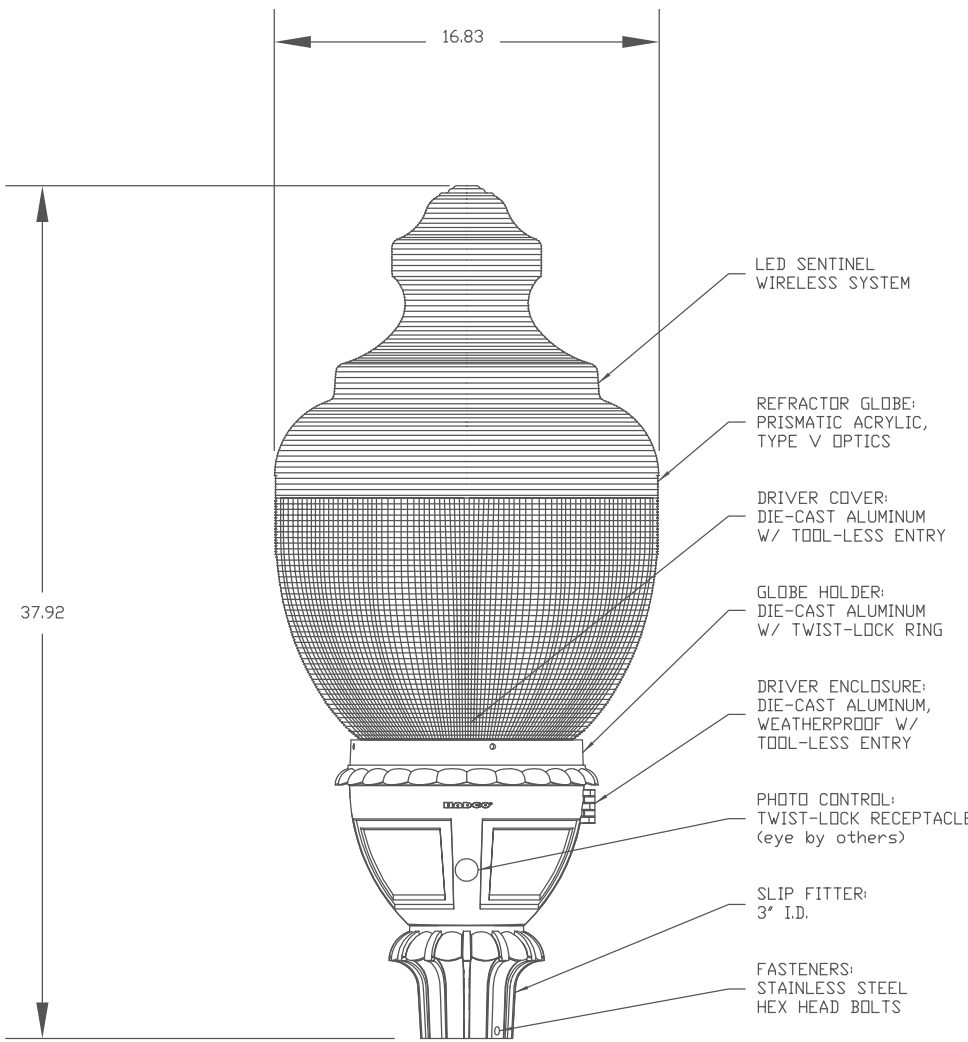
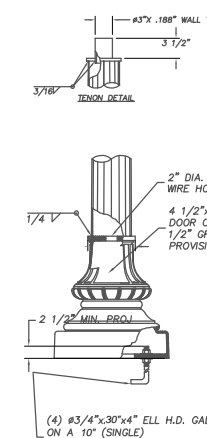
| STATISTICS | | | | | |
|------------------|---------|---------|---------|---------|---------|
| AREA DESCRIPTION | AVERAGE | MAXIMUM | MINIMUM | MAX/MIN | AVG/MIN |
| PARKING GARAGE | 6.6 | 10.2 | 3.3 | 3.1:1 | 2.0:1 |
| MAPLE AVENUE | 0.5 | 2.1 | 0.1 | 21.0:1 | 5.0:1 |
| WADE HAMPTON | 0.6 | 1.4 | 0.3 | 4.7:1 | 2.0:1 |
| CROSSWALK | 0.6 | 1.1 | 0.1 | 11.0:1 | 6.0:1 |
| SIDEWALK | 0.8 | 7.5 | 0.2 | 37.5:1 | 4.0:1 |
| | | | | | |
| | | | | | |



- NOTES :**
1. FOUNDATION TOP SHALL BE FINISHED AND LEVEL.
 2. BOLT PATTERN SHALL BE PARALLEL TO THE CURB.
 3. TOP OF FOUNDATION SHALL BE 1" ABOVE FINISHED GRADE.
 4. ALL CONDUIT RADII ARE 90° 24" SWEEPS.
 5. GROUND RODS SHALL HAVE AT LEAST 8' IN CONTACT WITH THE EARTH.



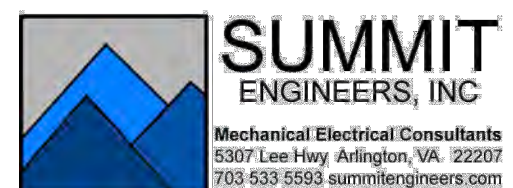
- MATERIAL SPECIFICATIONS**
- FLUTED SHAFT: ASTM 6063-T6
ALUM. TUBING: 6061 or 6063
PLATE: 6061 or 6063
ANCHOR BOLTS: ASTM F1554 GR55
PENDING BASE: CAST ALUM 356-T6
MESH: HOME: 5/16" 304 STAINLESS (18-8)
MESH: HDONE: ASTM A307 HD GALV. TO ASTM A
FINISH: PER SALES ORDER
- DESIGN OPTIONS**
1. DESIGNED IN ACCORDANCE WITH 1994 AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC DEVICES"
 2. ANCHOR BOLTS ANALYZED FOR STEEL STRENGTH OR LENGTH SHORTEN ON THIS DRAWING SHALL BE VERIFIED BY
 3. POLE DESIGNED FOR SINGLE OR TWIN LUMINAIRES W/ 22 SQ FT EACH AND A 1075 GROSS AREA WITH A WEIGHT
 4. ADDITIONAL HARDWARE HEAT TREATED TO 18-8



NOTE:
MODIFIED LESS
ELECTRICAL COMPONENTS



SITE LIGHTING - ELECTRICAL



SUMMIT PROJECT # 2019085.00

SUNRISE OF VIENNA II

374-380 MAPLE AVENUE WEST
TOWN OF VIENNA, VIRGINIA 22180

SCALE: 1" = 20' - 0"

| | |
|-----------------|----------|
| SUBMITTED DATE: | 12.03.19 |
|-----------------|----------|