CITY OF ALEXANDRIA FIRE STATION #3

2801 CAMERON MILLS ROAD
ALEXANDRIA, VA 22302

OWNER/DEVELOPER: CITY OF ALEXANDRIA
PO BOX 178, ALEXANDRIA, VA 22313

PRELIMINARY SITE PLAN SUBMISSION
9/7/2016

SITE TABULATION

TAX MAP PARCEL	023.03-07-26
ZONING	R-8
WATERSHED	FOUR MILE RUN
EXISTING/PROPOSED USE	FIRE STATION
TOTAL LOT AREA	39,779 SF = 0.913 AC
EXISTING BUILDING GROSS AREA	5,910 GSF
TOTAL EXISTING IMPERVIOUS AREA	= 11,662 SQUARE FEET = 0.27 ACRES
TOTAL PROPOSED IMPERVIOUS AREA	= 23,389 SQUARE FEET = 0.54 ACRES
TOTAL AREA TO BE DISTURBED	= 38,447 SQUARE FEET = 0.88 ACRES
MAX. ALLOWABLE FLOOR AREA RATIO	0.35 MAX
MAX. ALLOWABLE BLDG. HEIGHT	35 FT MAX
YARD SETBACKS REQUIRED:	
FRONT	30 FT
SIDE	25 FT MIN
REAR	25 FT MIN
PROPOSED BUILDING HEIGHT	= 32 FT.± (2 STORIES)
PROPOSED BUILDING FOOTPRINT (FIRST FLOOR) (INCLUDES APPARATUS BAYS (4,114 SF)	=11,448 GSF*
PROPOSED BUILDING FOOTPRINT (SECOND FLOOR)	=3,709 GSF
ALLOWABLE EXCLUSIONS (STAIRWAYS & MECHANICAL)	=1475 SF
PROPOSED BUILDING AREA (MINUS EXCLUSIONS)	=13,757 GSF
FAR (PROPOSED)	13,757 SF/39,779 SF = 0.345
FAR (EXISTING)	5,910 SF/39,779 SF=0.149
TREE CANOPY	25% TREE CANOPY
STREET TREES	CITY OF ALEXANDRIA LANDSCAPE GUIDELINES: FOR SHADE TREES, ONE TREE IS REQUIRED PER EVERY 30 FEET OF R.O.W. FRONTAGE, SPACED AT 30 FEET ON CENTER (548 L.F. - 42 FT. FOR D/W ON PIERPONT ST. & 76 FT. FOR D/W ON CAMERON MILLS RD. = 430 FT. /30 FT. ON CENTER=15 TOTAL) FOR ORNAMENTAL TREES, ONE TREE IS REQUIRED PER EVERY 20 FEET OF R.O.W. FRONTAGE, SPACED AT 20 FEET ON CENTER (548 L.F. - 42 FT. FOR D/W ON PIERPONT ST. & 76 FT. FOR D/W ON CAMERON MILLS RD. = 430 FT./20 FT. ON CENTER=22 TOTAL)
PARKING LOT LANDSCAPING	LANDSCAPE ISLAND ARE REQUIRED AT A RATE OF ONE PER EVERY 10 PARKING SPACES, AND EVERY 100 FEET OF PARKING R.O.W. ISLANDS SHALL BE AT A MINIMUM OF ONE AT THE END OF EVERY R.O.W. OF PARKING. LANDSCAPE ISLANDS MUST BE THE SAME SIZE AS THE ADJACENT PARKING SPACES. LARGE AND MEDIUM SHADE TREES RECOMMENDED. (13 SPACES REQUIRES 2 TREES. 3 TREES PROVIDED)
ADJACENT AREAS ZONE/USE:	R8 / RESIDENTIAL SFD (NORTH,EAST,WEST) R8 / CHURCH (SOUTH)
USE GROUP:	B-FIRE STATION
CONSTRUCTION TYPE:	IIB
EXISTING PARKING SPACES:	5 SPACES
EXISTING HANDICAP SPACES:	NONE
EXISTING LOADING SPACES:	NONE
OPEN SPACE:	NO REQUIREMENT FOR NON-RESIDENTIAL USE
PROPOSED PARKING SPACES:	REQUIRED 10,641 GSF X 1 SPACE/450 GFA = 24 SPACES PROVIDED = 14* (EXLUDES 8 ON-STREET SPACES) * - SPECIAL USE PERMIT REQUIRED FOR PARKING REDUCTION (ALL PROPOSED PARKING SPACES ARE 10'x20' AND EXCEED THE STANDARD OF 9'x18').
TOTAL HANDICAP SPACES:	2 SPACES
VAN ACCESSIBLE HANDICAP SPACES:	1 SPACE
LOADING SPACES:	N/A
ACTUAL BUILDING SETBACKS:	
FRONT	31.0 FT
SOUTH SIDE	30.1 FT
EAST SIDE	94.4 FT
NORTH SIDE	25.0 FT
STREET FRONTAGE:	MONTICELLO BLVD, = 226 FT. PIERPONT = 152 FT. CAMERON MILLS RD. = 170 FT. TOTAL = 548 FT.
OPEN SPACE:	14,603 SF (OPEN AND USABLE SPACE IS AREAS OF TREES, SHRUBS, LAWNS, PATHWAYS AND OTHER NATURAL AND MAN-MADE AMENITIES WHICH FUNCTION FOR THE USE AND ENJOYMENT OF RESIDENTS, VISITORS AND OTHER PERSONS)
EXISTING TRIP GENERATION	15 VPD
PROPOSED TRIP GENERATION	35 VPD
(SEE TRAFFIC STUDY TECHNICAL MEMORANDUM, SHEET C-02)	
AVERAGE SITE ELEVATION	192.0

PROJECT NARRATIVE

THE EXISTING FIRE STATION WAS BUILT IN 1948. THE FACILITY IS 5,910 SQUARE FEET, TWO STORY AND PARTIAL BASEMENT, BRICK MASONRY VENEER WITH WOOD FRAME, AND WOOD FRAMED ROOF LOCATED ON A 39,779 SQUARE FOOT SITE. THE EXISTING STATION CONTAINS TWO (2) BAYS TO HOUSE AN ENGINE, A LADDER TRUCK AND AN EMERGENCY MEDICAL SERVICES (EMS) SUPERVISOR VEHICLE. THIS PROJECT PROPOSES TO DEMOLISH THE EXISTING FACILITY AND CONSTRUCT A NEW FACILITY TO UPDATE TO CURRENT STANDARDS & IMPROVE THE OPERATIONS & FUNCTIONALITY OF THE STATION.

THIS PROJECT PROVIDES FOR THE DESIGN AND CONSTRUCTION OF A NEW FIRE STATION TO REPLACE THE EXISTING FIFTY (50) YEAR OLD STATION WITH A NEW ENERGY EFFICIENT BUILDING WITH A SUSTAINABLE DESIGN CRITERIA AND MODERN TECHNOLOGY. THIS PROJECT WILL ALLOW FOR MODERN APPARATUS TO BE STATIONED AT THIS LOCATION THAT IS NOW CURRENTLY RESTRICTED BY THE EXISTING BUILDING SIZE AND ORIGINAL CONSTRUCTION LIMITATIONS THAT DOES NOT ACCOMMODATE TODAY'S FIRE DEPARTMENT OPERATIONS. THE NEW FIRE STATION MUST INCORPORATE LIVING SPACE FOR 24/7 OPERATIONS. PREVIOUSLY NAMED "FIRE STATION 203" WILL FORMALLY BE NAMED "FIRE STATION 3".

THIS PROJECT WILL BE CONSTRUCTED ON CITY OWNED PROPERTY AND SHALL BE DESIGNED AND BUILT TO ACHIEVE US GREEN BUILDING COUNCIL'S (USGBC) LEED SILVER RATING & THE CITY'S GREEN BUILDING POLICY, AT A MINIMUM, WITH IMPROVED ENERGY EFFICIENT STANDARDS THROUGHOUT THE BUILDING.

THE PROJECT WILL REQUIRE THE FOLLOWING MODIFICATIONS/WAIVERS:
1. A DEVELOPMENT SPECIAL USE PERMIT WITH SITE PLAN
2. A SPECIAL USE PERMIT TO INTENSIFY/EXPAND THE EXISTING NONCOMPLYING FIRE STATION(PER SECTION 12-300 OF THE ZONING ORDINANCE)
3. A SPECIAL USE PERMIT FOR A PARKING REDUCTION (PER SECTION 8-200 OF THE ZONING ORDINANCE)

EXISTING TRIP GENERATION PROJECTION:

TOTAL ESTIMATED TRIPS PER DAY = 35 TRIPS

PROPOSED TRIP GENERATION PROJECTION:

TOTAL ESTIMATED TRIPS PER DAY = 45 TRIPS

RPA NARRATIVE:

THERE ARE NO RESOURCE PROTECTION AREAS (RPAs) LOCATED ON THIS SITE.

ADEQUATE SANITARY SEWER OUTFALL NARRATIVE:

FIRE STATION #3 IS A REDEVELOPMENT PROJECT OF THE ORIGINAL FIRE STATION (PREVIOUS STATION #203). IN ACCORDANCE WITH THE CITY OF ALEXANDRIA MEMORANDUM TO INDUSTRY NO. 02-07, AN ADEQUATE SANITARY SEWER OUTFALL ANALYSIS MUST BE PROVIDED FOR ANY NEW CONSTRUCTION THAT WILL RESULT IN NEW SEWER PEAK FLOWS OF 10,000 GALLONS PER DAY OR MORE. THE NEW FIRE STATION WILL BE CONSIDERED A COMMERCIAL-TYPE BUILDING STRUCTURE.

PER MEMORANDUM TO INDUSTRY NO. 02-07:

ESTIMATED AVERAGE DAY WASTE FLOW FOR A COMMERCIAL-TYPE STRUCTURE IS 200 GALLONS PER DAY PER 1,000 SQUARE FEET OF GROSS FLOOR AREA. THE FIRE STATION WILL ALSO GENERATE ADDITIONAL FLOW WHEN THE EMERGENCY VEHICLES ARE WASHED, WHICH OCCURS INSIDE THE VEHICLE BAYS SEVERAL DAYS PER WEEK. A PEAK FACTOR OF 4 IS APPLIED FOR LATERAL CONNECTIONS TO THE EXISTING 10-INCH MAIN SERVING THE PROJECT SITE. A PEAK FACTOR OF 3 IS APPLIED AT THE EXISTING 10-INCH MAIN.

PROPOSED FACILITY SEWAGE FLOWS:

AVERAGE DAY WASTE FLOW = (14,755 GSF / 1,000) X 200 = 2,951 GALLONS PER DAY

ADDITIONAL FLOW FROM VEHICLE WASH = (45 GAL. PER UNIT X 3 UNITS X 4 TIMES PER WEEK) = 540 GALLONS PER WEEK / 7 = 77 GALLONS PER DAY

TOTAL AVERAGE DAY WASTE FLOW = (2,951 + 77) = 3,208 GALLONS PER DAY
TOTAL "INCREASE" IN AVERAGE DAY WASTE FLOW = 3,028 GPD-1,233 GPD

PEAK FLOW AT THE MAIN = (3 X 1,795) = 5,385 GALLONS PER DAY
PEAK FLOW ADDED AT MAIN = 5,385 GALLONS PER DAY = 3.74 GPM = 0.008 CFS
THEREFORE THE "NEW SANITARY SEWER CONNECTION AND ADEQUATE OUTFALL ANALYSIS" WILL NOT BE REQUIRED.

EXISTING FACILITY SEWAGE FLOWS:

AVERAGE WASTE FLOW=(5910 SF / 1000) X 200 = 1182 GALLONS PER DAY
ADDITIONAL FLOW FROM VEHICLE WASH = (45 GALLONS PER UNIT X 2 UNITS X 4 TIMES PER WEEK) / 7= 51 GALLONS PER DAY.
TOTAL AVERAGE DAY WASTE FLOW = (1182 = 51) = 1233 GALLONS PER DAY.

STORMWATER MANAGEMENT NARRATIVE:

THE REDEVELOPMENT OF THE EXISTING FIRE STATION GENERATES AN INCREASE IN IMPERVIOUS AREA AS FOLLOWS:

SITE DATA:

AREA=0.913 ACRES

PRE-DEVELOPMENT RUNOFF COEFFICIENT
A = 0.913 AC
IMPERVIOUS AREA = 0.269 AC
% IMPERVIOUSNESS = 29.5%

POST-DEVELOPMENT RUNOFF COEFFICIENT
A = .913 AC
IMPERVIOUS AREA = 0.621 AC
% IMPERVIOUSNESS = 68.0%

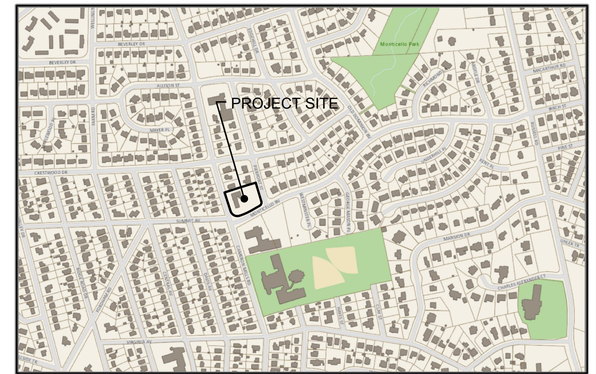
BASED ON THE INCREASED IMPERVIOUS AREA DUE TO THE REDEVELOPMENT, AND IN ACCORDANCE WITH THE CIT OF ALEXANDRIA'S ZONING ORDINANCE ARTICLE XIII, THE SITE IS REQUIRED TO CONTROL THE WATER QUALITY AND QUANTITY OF STORM RUNOFF PRIOR TO LEAVING THE SITE.

WATER QUALITY AND QUANTITY DESIGN WILL INCLUDE TWO FACILITIES TO MEET THE PHOSPHORUS REMOVAL REQUIREMENTS IN ACCORDANCE WITH THE VIRGINIA RUNOFF REDUCTION METHOD, THE DEPARTMENT OF ENVIRONMENTAL QUALITY, AND THE CITY OF ALEXANDRIA AND TO MEET THE WATER QUANTITY REQUIREMENTS.

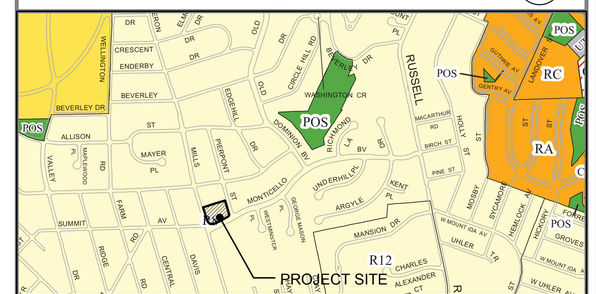
THE FIRST SWM FACILITY IS AN OPEN JOINT PAVEMENT BLOCK DESIGN WHICH IS A FORM OF PERVIOUS PAVEMENT. THIS FACILITY IS LOCATED WITHIN THE OUTDOOR PATIO AREA AND WILL INCLUDE A SUBGRADE GRAVEL RESERVOIR WITH UNDERDRAIN PERFORATED PIPES AND WILL RECEIVE RUNOFF FROM THE NEW ROOF DRAIN SYSTEM. THE OPEN JOINT PAVERS WILL ALLOW DRAINAGE TO FLOW DIRECTLY INTO THE GRAVEL RESERVOIR SYSTEM BELOW. THE ROOF DRAIN SYSTEM WILL ENTER INTO A STORMTECH HDPE ARCH PIPE ISOLATOR ROW TO TREAT THE ROOF RUNOFF DIRECTED TO THE FACILITY IN ORDER TO MEET THE WATER QUALITY REQUIREMENTS. THE SECOND FACILITY IS A BIORETENTION FACILITY DESIGNED TO CAPTURE RUNOFF FROM THE PROPOSED PARKING LOT ON THE EAST SIDE OF THE BUILDING AND A PORTION OF SIDEWALK THAT WILL SHEETFLOW INTO THE FACILITY. THE BIORETENTION FACILITY WILL PRVOIDE ADDITIONAL STORAGE FOR WATER QUANTITY CONTROL AS NECESSARY.

STREET TABULATION TABLE

	New	Upgraded
Crosswalks (number)		
Standard	N/A	1 @ Pierpont Street
High Visibility	N/A	N/A
Curb Ramps	4	2 @ Pierpont St. Crosswalk
Sidewalks (LF)	N/A	175 l.f.
Bicycle Parking (number spaces)		
Public/Visitor	N/A	N/A
Private/Garage	N/A	N/A
Bicycle Paths (LF)	N/A	N/A
Pedestrian Signals	N/A	N/A



VICINITY MAP
SCALE: 1" : 500'



CITY OF ALEXANDRIA ZONING MAP
NOT TO SCALE

OWNER/DEVELOPER:

CITY OF ALEXANDRIA
PO BOX 178
ALEXANDRIA, VA 22313
(703) 746-3209
PROJECT MANAGER:
IRINA JAMISON
IRINA.JAMISON@ALEXANDRIAVA.GOV

ARCHITECT

WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET #100
ANNAPOLIS, MD 21401
(410) 263-6787
CONTACT:JEREMY KLINE
JKLINE@WGM-ARCH.COM

CIVIL ENGINEER

ADTEK
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VA 22020
(703) 691-4040
CONTACT: SHAWN BENJAMINSON
SBENJAMINSON@ADTEKENGINEERS.COM

TRAFFIC ENGINEER

GOROVE/SLADE
15125 WASHINGTON ST., SUITE 316
HAYMARKET, VA 20169
(571) 248-0992
CONTACT: KEVIN SITZMAN, PE
KDS@GOROVESLADE.COM

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APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:

COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
BALTIMORE, MD 21286
410.832.2420

PROJECT:

CITY OF ALEXANDRIA

CAMERON MILLS FIRE STATION NO. 3

2801 CAMERON MILLS RD.
ALEXANDRIA, VA 22302

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REVISIONS:

TITLE:
COVER SHEET

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-01

CITY OF ALEXANDRIA GENERAL NOTES:

SURVEY NOTES:

1. HORIZONTAL DATUM IS NORTH AMERICAN DATUM OF 1983, NAD83
VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88

2. EXISTING UTILITY INFORMATION, AS SHOWN ON THESE PLANS, IS TAKEN FROM RECORD DOCUMENTS AND FROM SURFACE FEATURES IDENTIFIED BY FIELD SURVEY COMPLETED BY LSZPC SURVEYS COMPLETED FEBRUARY 2015; AND CANNOT BE GUARANTEED. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1–800–552–7001 AND 811 A MINIMUM OF 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION. THE CONSTRUCTION WORKERS AND CONTRACTOR(S) ARE ENCOURAGED TO VISIT DOMINION VIRGINIA POWER WEB SITE AT www.dom.com (KEYWORD SAFETY) FOR ADDITIONAL SAFETY INSTRUCTIONS.

3. LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION.

4. THE BOUNDARY INFORMATION FOR THE SUBJECT SITE IS BASED ON A CURRENT FIELD SURVEY PREPARED BY LSZPC SURVEYS COMPLETED FEBRUARY 2015, IN ACCORDANCE WITH THE REQUIREMENTS OF VIRGINIA ASSOCIATION OF LAND SURVEYORS.

CITY STANDARD GENERAL NOTES:

1. THE SITE IS LOCATED IN THE FOUR MILE RUN WATERSHED.

2. CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. THE APPROVED SITE PLAN MUST BE ATTACHED TO THE PERMIT APPLICATION THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

3. ALL PUBLIC AND PRIVATE EASEMENTS OR ALL KNOWN PUBLIC AND PRIVATE EASEMENTS, INCLUDING ALL UTILITY, EGRESS, AND CONSERVATION RESTRICTIONS ARE SHOWN. THE APPLICANT SHALL NOT CONSTRUCT ANY PERMANENT STRUCTURES OVER ANY EXISTING OR PROPOSED PUBLIC AND/OR PRIVATE EASEMENTS UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.

4. PLAT SUBJECT TO RESTRICTIONS OF RECORD.

5. BUILDING HEIGHT SHALL NOT EXCEED THE ALLOWABLE LIMIT BY CITY OF ALEXANDRIA ZONING ORDINANCE OR AS APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.

6. ALL NEW CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC).

7. FLOOR AREA CALCULATIONS WITH ALLOWABLE LIMITS, AS APPROVED BY PLANNING COMMISSION AND CITY COUNCIL, ARE DEMONSTRATED HEREIN.

8. PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. IF CITY'S EXISTING PUBLIC INFRASTRUCTURE, INCLUDING BUT NOT LIMITED, TO STREETS, ALLEYWAYS, DRIVEWAY APRONS, SANITARY AND STORM SEWERS, STREET LIGHTING, TRAFFIC AND PEDESTRIAN SIGNALS, SIDEWALKS, CURB AND GUTTER, AND STORM WATER DROP INLET STRUCTURES ARE DAMAGED BY THE CONTRACTOR OR BY ACTIVITIES RELATING TO THE SITE CONSTRUCTION THEN THE APPLICANT SHALL REPAIR THE SAME TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). A PRE–CONSTRUCTION WALK/SURVEY OF THE SITE SHALL OCCUR WITH CONSTRUCTION AND INSPECTION STAFF TO DOCUMENT EXISTING CONDITIONS PRIOR TO ANY LAND DISTURBING ACTIVITY.

9. ALL IMPROVEMENTS TO THE CITY'S RIGHT–OF–WAY SUCH AS CURB, GUTTER, SIDEWALK, AND DRIVEWAY APRONS, ETC., ARE DESIGNED PER THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.

10. ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT–OF–WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).

11. CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES WITHOUT RECORDED EASEMENT OR NOTARIZED LETTER OF PERMISSION FROM THE ADJACENT PROPERTY OWNERS.

12. ALL REQUIRED STATE AND FEDERAL PERMITS, WHICH COULD INCLUDE PERMITS FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (VDCR), VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ), VIRGINIA DEPARTMENT OF HISTORIC RESOURCES (VDHR), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA), ARMY CORPS OF ENGINEERS AND VIRGINIA MARINE RESOURCES, MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN. THIS INCLUDES THE STATE REQUIREMENT FOR A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES FOR LAND DISTURBING ACTIVITIES GREATER THAN 2,500. INFORMATION REGARDING THE VSMP GENERAL PERMIT CAN BE FOUND ONLINE AT: http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml.

13. PERMITS FROM THE CITY OF ALEXANDRIA OFFICE OF ENVIRONMENTAL QUALITY (OEQ), TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES), AND BUILDING AND FIRE CODE ADMINISTRATION SHALL BE OBTAINED BY THE APPLICANT, AS REQUIRED AND DOCUMENTED HEREIN. THE CONTRACTOR CAN CONTACT ALEXANDRIA FIRE AND CODE ADMINISTRATION DEPARTMENT AT (703) 838–4644 OR (703) 746–4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

14. ANY WORK IN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE CONTRACTOR CAN CONTACT THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES AT (703) 746–4035 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

15. THE PROPERTY ADDRESS MUST BE CLEARLY MARKED IN THE FRONT AND BACK OF THE PROPOSED DEVELOPMENT SITE DURING CONSTRUCTION FOR EMERGENCY RESPONSE PURPOSE IN CONTRASTING COLORS FOR EASY IDENTIFICATION.

16. THE APPLICANT SHALL CONTACT THE CRIME PREVENTION UNIT OF THE ALEXANDRIA POLICE DEPARTMENT AT 703–838–4520 REGARDING SECURITY HARDWARE FOR NEW CONSTRUCTION. THIS SHALL BE COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMIT.

17. ROOF DRAINAGE SYSTEM, SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEM MUST BE INSTALLED SO AS NEITHER TO ADVERSELY IMPACT UPON, NOR CAUSE EROSION DAMAGE TO ADJACENT PROPERTIES OR THE PUBLIC RIGHT OF WAY.

18. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES.

19. IN THE EVENT THE PROPOSED ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT OF WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.

20. PER THE REQUIREMENTS OF SECTION 8–1–12 OF THE CITY CHARTER AND CODE; WHEN THE BUILDING FOOTING HAS BEEN PLACED AND THE WALLS HAVE BEEN RAISED TO THE FIRST JOIST BEARING OR STORY HEIGHT ABOVE GRADE, A PLOT PLAN SHOWING THE EXACT LOCATION OF THE WALLS SHALL BE PREPARED BY A LICENSED, CERTIFIED PUBLIC LAND SURVEYOR OR PROFESSIONAL ENGINEER AND FILED WITH THE BUILDING OFFICIAL FOR APPROVAL BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.

21. A SEPARATE DESIGN IS REQUIRED FOR ALL WALLS 24" AND OVER IN HEIGHT FROM THE GRADE AND SUBJECT TO SEPARATE PERMITS TO BE OBTAINED BY THE OWNERS. GEOTECHNICAL AND STRUCTURAL DESIGN IS TO BE COMPLETED BY OTHERS. THIS FINAL SITE PLAN SHOWS LOCATION, PROPOSED GRADING, AND DESIGN OF ALL THE WALLS.

22. SUBMIT A SURVEY, CONSISTENT WITH THE REQUIREMENTS FOR CERTIFICATE OF OCCUPANCY CHECKLIST, TO THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO REQUESTING AN INSPECTION FOR A CERTIFICATE OF OCCUPANCY.

23. ALL SANITARY LATERALS AND/OR SEWERS NOT SHOWN IN THE EASEMENTS SHALL BE OWNED AND MAINTAINED PRIVATELY.

24. ALL STORM DRAINS NOT SHOWN WITHIN AN EASEMENT OR IN A PUBLIC RIGHT OF WAY SHALL BE OWNED AND MAINTAINED PRIVATELY.

25. ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA AMERICAN WATER (VAW) STANDARDS AND SPECIFICATIONS. NO WORK CAN BE COMPLETED ON EXISTING AND PROPOSED WATER FACILITIES UNTIL ALL EASEMENTS AND AGREEMENTS WITH VAW ARE FINALIZED, EXECUTED AND RECORDED. DEVELOPER OR CONTRACTOR SHALL CONTACT VAW AT 703–706–3889 TO OBTAIN AN APPROVED PROPOSAL AND PAY ALL REQUIRED FEES, PRIOR TO THE START OF CONSTRUCTION, DEMOLITION AND INSPECTION OF WATER FACILITIES, INCLUDING, BUT NOT LIMITED TO, WATER MAINS, FIRE HYDRANTS, DOMESTIC AND FIRE SERVICE LINES. ALL THE PROPOSED WET TAPS ON AN EXISTING WATER MAIN SHALL BE CONSTRUCTED BY VAW.

26. THE SIDEWALKS SHALL REMAIN OPENED DURING CONSTRUCTION OR PEDESTRIAN ACCESS SHALL BE MAINTAINED TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES THROUGHOUT THE CONSTRUCTION OF THE PROJECT.

27. PRIOR TO THE RELEASE OF THE FINAL SITE PLAN, A TRAFFIC CONTROL PLAN FOR CONSTRUCTION DETAILING PROPOSED CONTROLS TO TRAFFIC MOVEMENT, LANE CLOSURES, CONSTRUCTION ENTRANCES, HAUL ROUTES, AND STORAGE AND STAGING SHALL BE PROVIDED FOR INFORMATION PURPOSE; HOWEVER, AN AMENDED TRAFFIC CONTROL PLAN, IF REQUIRED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES SHALL BE SUBMITTED TO THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES ALONG WITH THE BUILDING PERMIT APPLICATION. THE FINAL SITE PLAN SHALL INCLUDE A STATEMENT "FOR INFORMATION ONLY" ON THE TRAFFIC CONTROL PLAN SHEETS.

28. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF, IN ACCORDANCE WITH VIRGINIA USBC 115.0.

DEMOLITION NOTES:

1. A SEPARATE PERMIT IS REQUIRED FOR DEMOLITION; HOWEVER, NO DEMOLITION SHALL BEGIN UNTIL ALL EROSION AND SEDIMENT AND TREE PROTECTION CONTROLS ARE IN PLACE AND ARE APPROVED BY AN EROSION AND SEDIMENT CONTROL INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

2. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE MOST CURRENT APPLICABLE FEDERAL, STATE , AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED, TO ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), VIRGINIA OCCUPATIONAL AND SAFETY HELATH COMPLIANCE PROGRAM (VOSH ENFORCEMENT), VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT, NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), AND NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK WITH REPRESENTATIVE UTILITY COMPANIES AND FOR THE IMPLEMENTATION OF REQUIRED UTILITY–RELATED WORK.

4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY HAZARDOUS MATERIALS DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.

5. DISCONNECTION OF SERVICES AND SYSTEMS SUPPLYING UTILITIES TO BE ABANDONED OR DEMOLISHED SHALL BE COMPLETED PRIOR TO OTHER SITE DEMOLITION IN FULL COMPLIANCE WITH APPLICABLE CODES, REGULATIONS, AND THE REQUIREMENTS OF UTILITY PURVEYORS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY PURVEYORS, PAYMENT OF ASSOCIATED FEES AND PROCUREMENT OF ALL NECESSARY PERMITS.

6. PRIOR TO REMOVAL OF MATERIALS OVER EXISTING UTILITY SYSTEMS, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AND, IF AT VARIANCE WITH CONDITIONS AS REPRESENTED ON THE PLANS, NOTIFY THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTIONS AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.

7. THE CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH APPROVED MATERIALS / CLEAN FILL AS PER THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT).

8. THE CONTRACTOR SHALL PROTECT AND PREVENT DAMAGE TO EXISTING ON–SITE UTILITY DISTRIBUTION FACILITIES ARE TO REMAIN. ACTIVE UTILITY DISTRIBUTION FACILITIES ENCOUNTERED DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE SHUT OFF AT THE SERVICE MAIN WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

9. DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY EXISTING UTILITIES AND/OR UTILITY SYSTEM STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL DOCUMENT THE SAME AND FORWARD THE INFORMATION TO THE RESIDENT ENGINEER / OWNER'S REPRESENTATIVE, AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.

10. THE CONTRACTOR OR APPLICANT SHALL WORK WITH THE CITY STAFF TO REUSE THE EXISTING, LEFTOVER, UNUSED, AND/OR DISCARDED BUILDING MATERIALS AS PART OF THE DEMOLITION PROCESS OR THE CONSTRUCTION DEBRIS MUST BE REMOVED TO AN APPROVED LANDFILL WITH ADEQUATE FREQUENCY IN ACCORDANCE WITH THE VIRGINIA STATE LITTER CONTROL ACT.

ENVIRONMENTAL SITE ASSESSMENT:

1. THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, CONNECTED TIDAL WETLANDS OR ISOLATED WETLANDS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THE SITE. FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF SOIL CONTAMINATION ON THE SITE. GROUNDWATER CONTAINS SOME MTBE CONTAMINATION. DURING DEWATERING THE CONTRACTOR SHALL TREAT THE WATER PRIOR TO DISCHARGE TO THE STORM DRAINAGE SYSTEM, OR DISPOSE OF THROUGH OTHER APPROPRIATE MEANS.

2. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.

3. ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703–838–4400 EXT 267/255.

4. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
* MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
* SATURDAYS FROM 9 AM TO 6 PM.
* NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:
* MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
* SATURDAYS FROM 10 AM TO 4 PM.

ALEXANDRIA ARCHEOLOGY NOTES:

1. THE APPLICANT/DEVELOPER SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703–746–4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

2. THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY.

EMERGENCY VEHICLE EASEMENTS NOTE:

ALL EMERGENCY VEHICLE EASEMENTS ARE SHOWN ON THE PLAN AND SHALL BE RECORDED WITH ALEXANDRIA LAND RECORDS

RODENT ABATEMENT NOTE:

PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT OR LAND DISTURBANCE PERMIT, A RODENT ABATEMENT PLAN SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION THAT WILL OUTLINE STEPS THAT WILL BE TAKEN TO PREVENT THE SPREAD OF RODENTS FROM THE CONSTRUCTION SITE TO THE SURROUNDING COMMUNITY AND SEWERS. THE CONTRACTOR CAN CONTACT ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION DEPARTMENT AT (703) 838–4644 OR (703) 746–4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

NOTES

1. SURVEY INFORMATION PROVIDED BY OTHERS. HORIZONTAL DATUM SHOWN IS REFERENCED TO THE NORTH AMERICAN DATUM (NAD) 1983 - NORTH AS ESTABLISHED FROM A CURRENT GPS SURVEY. VERTICAL DATUM SHOWN IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS ESTABLISHED FROM A CURRENT GPS SURVEY.
2. BOUNDARY AND PHYSICAL IMPROVEMENTS SHONW ARE BASED UPON A FIELD SURVEY DONE BY OTHERS BETWEEN THE DATES OF NOVEMBER 25, 2014 AND FEBRUARY 3, 2015.
3. TITLE REPORT NOT YET FURNISHED.
4. PROPERTY IS OUTSIDE OF OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.
5. THERE IS NO RPA ON THE SITE.
6. THERE ARE NO KNOWN CONTAMINATED SOILS OR ENVIRONMENTAL ISSUES ASSOCIATED WITH THE SITE.
7. DRAFT TRAFFIC STUDY SUBMITTED SEPARATELY.
8. SOILS ON SITE:
   72B KINGSTOWNE-SASSAFRAS NEABSCO COMPLEX 2-7% SLOPES
   92 URBAN LAND
   NOTE: NO MARINE CLAYS EXIST ON THIS SITE PER NRCS SOIL DATA
9. PUBLIC UTILITIES: THE SITE IS SERVED BY PUBLIC WATER AND SANITARY SEWER. WASHINGTON GAS PROVIDES GAS SERVICE TO THE AREA OF SITE
10. COMBINED SEWER AREA: THE SITE NOT LOCATED IN THE COMBINED SEWER AREA
11. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO KNOWN AREAS OF CONTAMINATION WITHIN THE LIMITS OF THE PROJECT

GOROVE / SLADE

15125 Washington Street
Suite 316,
Haymarket, VA 20169
571.248.0992

TECHNICAL MEMORANDUM

To: Timothy Vaughan ADTEK
From: Kevin Viita
Kevin Sitzman, P.E.
Chad Baird
Date: December 15, 2015
Subject: Cameron Mills Fire Station 203– Trip Generation Comparison

COMMONWEALTH OF VIRGINIA
KEVIN D. SITZMAN
Lic. No. 036524
12/15/15
PROFESSIONAL ENGINEER

This memorandum is to determine the potential trip generation of the proposed Cameron Mills Fire Station 203, in Alexandria, Virginia. The city of Alexandria requires a Traffic Impact Study (TIA) for any development that generates more than 50 peak hour trips. This memo shows that the proposed fire station expansion will generate less than the 50 peak hour trip threshold, and a TIA is not necessary.

The existing fire station located at 2801 Cameron Mills Road consists of 2 bays, 7 staff parking spaces, and a building size of 5,910 square feet. The engine bays are oriented to exit onto Cameron Mills Road, with the employee parking spaces accessed from Monticello Boulevard. The existing fire station will be replaced with an expanded fire station, including 18 parking spaces and a building size of 13,861 square feet. The engine bays will be oriented to exit onto Monticello Boulevard. The increase in the size of the fire station is to bring the fire station to modern standards, and does not correspond to an increase in number of station personnel or coverage area.

The Institute of Transportation Engineers (ITE) Trip Generation Manual 9th Edition does not include trip generation rates for fire stations or emergency services locations. Therefore, we conducted turning movement counts (TMCs) at the two existing fire station driveways. With the counts, we calculated the current site's trip generation rate and extrapolated the trips generated by the new fire station from the growth in the fire station's size. The existing peak hour site trips are shown in Figure 1; the resulting site trip generation table is shown in Table 1. The TMC results are included in the technical appendix.

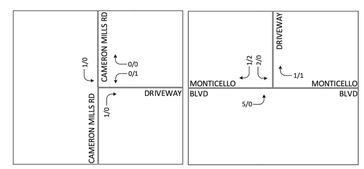

Figure 1: Existing (2015) Peak Hour Site Trips

Table 1: Trip Generation Table – Cameron Mills Fire Station 203

Land Use	ITE Code	Size		------ Weekday ------					
				AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Fire Department – Existing	N/A	5,910	SF	8	3	11	1	3	4
Proposed Trip Generation									
Equipment-Based	N/A	133%		11	4	15	1	4	5
Square Footage-Based	N/A	13,861	SF	19	7	26	2	7	9

Table 1 shows the existing peak hour trip generation created from the existing volumes. The proposed trip generation numbers were created in two ways:

- **Equipment based**: the existing fire station is equipped with a fire engine, a ladder truck, and an ambulance. The proposed station will be equipped with a fire engine, a ladder truck, and ambulance, and a fire supervisor vehicle. This means that the proposed station will have 133% of the fire equipment compared to the existing station; therefore, the trip generation values under the equipment-based trip generation rates were assumed to be 33 percent more than the existing values.
- **Square footage based**: the existing fire station is 5,910 square feet; the proposed fire station is 13,861 square feet. This corresponds with a size increase of 135%. Therefore, the trip generation values under the square footage-based trip generation rates were assumed to be 135% greater than the existing values.

As Table 1 clearly shows, the proposed fire station is expected to stay below the 50 peak hour trip threshold that would require a TIA. It should be noted that, although the fire station will have more equipment and more space, it won't have a larger coverage area, nor significantly more staff. Due to this, it is expected that the actual trips will be less than the proposed trips shown in Table 1. Thus, even when using square footage as a conservatively high basis for the trip generation rate, the proposed fire station will not generate 50 peak hour trips, and its development does not require a TIA to be performed.

APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:

COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
BALTIMORE, MD 21286
410.832.2420

PROJECT:

CITY OF ALEXANDRIA

CAMERON MILLS
FIRE STATION NO. 3

2801 CAMERON MILLS RD.
ALEXANDRIA, VA 22302

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REVISIONS:

TITLE:
GENERAL NOTES-1

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.
C-02

CITY OF ALEXANDRIA STANDARD CONSTRUCTION NOTES:

1. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY ACTION AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.

2. THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDESIGN AND APPROVAL BY REVIEWING AGENCIES SHALL BE OBTAINED, IF REQUIRED.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.

4. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.

5. THE CONTRACTOR SHALL CLEAR THE SITE OF ALL TREES, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED, AND SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED.

6. THE DEVELOPER SHALL PROVIDE OVER-LOT GRADING TO PROVIDE POSITIVE DRAINAGE AND PRECLUDE PONDING OF WATER.

7. ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OF OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY OF ALEXANDRIA.

8. EXISTING SEPTIC FIELDS, IF APPLICABLE, SHALL BE ABANDONED IN ACCORDANCE WITH VIRGINIA HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.

9. ALL ABOVE GROUND UTILITIES SERVING THE SITE SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.

10. PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL VERIFY FROM THE ARCHITECTURAL DRAWINGS ALL DIMENSIONS, DETAILS, AND TREATMENTS FOR THE PROPOSED BUILDINGS, WALKWAYS, AND OTHER PROPOSED CONSTRUCTION WHERE INDICATED ON THE PLANS.

11. THE CONTRACTOR IS TO VERIFY INVERT, SIZE, AND LOCATION OF BUILDING UTILITY CONNECTIONS WITH THE MECHANICAL PLANS PRIOR TO PLACEMENT OF UNDERGROUND UTILITIES.

12. EXISTING BUILDINGS, FENCES AND OTHER EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONSTRUCTION.

13. EXISTING CONSTRUCTION SHALL BE REMOVED TO NEAREST. NEW CONSTRUCTION SHALL BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.

14. ALL PRIVATE BUILDING CONNECTIONS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.

15. TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. MINOR ADJUSTMENTS TO MEET FINISHED GRADE ELEVATIONS, IF REQUIRED, SHALL BE MADE IN THE FIELD WITH THE APPROVAL OF SITE INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

16. THE DESIGN, CONSTRUCTION, FIELD PRACTICES, AND METHODS SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE CITY OF ALEXANDRIA ZONING ORDINANCE AND DESIGN AND CONSTRUCTION STANDARDS MANUAL. FAILURE TO COMPLY WITH THE CODE, APPLICABLE MANUALS, AND PROVISIONS OF THE CONSTRUCTION AND ESCROW AGREEMENTS OR THE PERMITS SHALL BE DEEMED A VIOLATION.

17. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER/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 ALEXANDRIA.

18. CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.

19. THE CONTRACTOR IS REFERRED TO STRUCTURAL, GEOTECHNICAL, MECHANICAL, AND ARCHITECTURAL PLANS FOR FOUNDATION TREATMENT INCLUDING, BUT NOT LIMITED TO, SHEETING AND SHORING FOR BUILDING EXCAVATION, WATERPROOFING FOR FILL AGAINST BUILDINGS, LOCATION OF MECHANICAL EQUIPMENT, AND CONNECTIONS AT THE FACES OF BUILDINGS.

20. SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTER AND/OR PONDING OF WATER ON THE ROADWAY.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB AND SIDEWALKS, IF APPLICABLE.

22. THE CALIFORNIA BEARING RATIO (CBR) VALUES OF IN-SITU MATERIALS SHALL BE DETERMINED BY FIELD AND/OR LABORATORY TESTS FOR ACTUAL DETERMINATION OF REQUIRED THICKNESS OF SURFACE, BASE, SUB-BASE, AND SUB GRADE MATERIALS. THE PAVEMENT SECTION SHALL BE DESIGNED BY A GEOTECHNICAL /LICENSED PROFESSIONAL ENGINEER TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.

23. THE THICKNESS OF SUB-BASE, BASE, AND WEARING COURSE SHALL BE DESIGNED USING "CALIFORNIA METHOD" AS SET FORTH ON PAGE 3-76 OF THE SECOND EDITION OF A BOOK ENTITLED, "DATA BOOK FOR CIVIL ENGINEERS, VOLUME ONE, DESIGN" WRITTEN BY ELWYN E. SEELYE. AN ALTERNATE PAVEMENT SECTION DESIGNED TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING BASED ON CBR AND VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) METHOD (VASWANI METHOD) AND STANDARD MATERIAL SPECIFICATIONS SHALL BE ACCEPTABLE.

24. EMERGENCY VEHICLE EASEMENTS (EVE) AND AMERICAN WITH DISABILITY (ADA) ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH PAVEMENT MARKINGS PER THE CITY OF ALEXANDRIA STANDARD SIGNAGE AND AMERICAN WITH DISABILITIES (ADA) REQUIREMENTS.

25. ALL STRIPING SHALL MEET THE REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS (LATEST EDITION) AND SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.

26. ALL EARTHWORK OPERATIONS ARE TO BE PERFORMED UNDER THE FULL TIME, ON-SITE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER WITH GEOTECHNICAL TESTING IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS.

27. THE CONTRACTORS SHALL NOT CAUSE OR PERMIT VEHICLES TO IDLE FOR MORE THAN 10 MINUTES WHEN PARKED.

28. UNLESS OTHERWISE APPROVED THE CONTRACTOR SHALL PROVIDE THERMOPLASTIC LADDER STYLE / STANDARD PEDESTRIAN CROSS WALKS AT ALL CROSSINGS AT THE PROPOSED DEVELOPMENT, WHICH MUST BE DESIGNED TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE DESIGN OF LADDER STYLE OR STANDARD PEDESTRIAN CROSS WALK SHALL BE EVALUATED ON A CASE BY CASE BASIS AND SHALL COMPLY WITH THE REQUIREMENTS OF POLICY MANUAL SECTION 30.18, PEDESTRIAN CROSSWALKS, JULY 13, 2006. A COPY OF THE POLICY MANUAL CAN BE OBTAINED FROM YON LAMBERT, BICYCLE AND PEDESTRIAN COORDINATOR / TRANSPORTATION PLANNER, TELEPHONE (703) 746-4081.

CITY OF ALEXANDRIA STANDARD UTILITY WORKS NOTES:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS DESCRIBED IN SECTION 4VAC50-30-40 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND ADDITIONAL APPLICABLE PRACTICES FOLLOWED BY THE CITY OF ALEXANDRIA:

A. ALL PRIVATE UTILITIES SHALL BE LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENTS UNLESS THE UTILITY OWNERS HAVE FRANCHISE AGREEMENT WITH THE CITY OF ALEXANDRIA; HOWEVER, NO ELECTRIC TRANSFORMERS AND SWITCH GEARS / CONTROL BOXES SHALL BE PLACED IN THE PUBLIC RIGHT OF WAY.

B. ALL THE EXISTING AND PROPOSED PUBLIC AND PRIVATE UTILITIES AND EASEMENTS SHALL BE SHOWN AND A DESCRIPTIVE NARRATION OF VARIOUS UTILITIES SHALL BE PROVIDED ON THE PLAN.

C. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONNECTION AND/OR CONSTRUCTION.

D. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.

E. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.

F. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

G. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS TO MINIMIZE EROSION AND PROMOTE STABILIZATION.

H. SHOULD UTILITY CONSTRUCTION BE PERFORMED AFTER COMPLETING EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1551) COMPACTION IN ALL TRENCH BACKFILL.

I. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).

J. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

K. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION, AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CITY OF ALEXANDRIA.

L. A REMEDIATION PLAN SHALL BE SUBMITTED DETAILING HOW CONTAMINATED SOILS AND/OR GROUNDWATER WILL BE DEALT WITH, INCLUDING PLANS TO REMEDIATE UTILITY CORRIDORS.

M. UTILITY CORRIDORS IN CONTAMINATED SOIL SHALL BE OVER EXCAVATED BY 2 FEET AND BACKFILLED WITH "CLEAN" SOIL.

N. GRADING CAN BE PERFORMED ON INSTALLATION OF UTILITIES.

O. ALL NEW INSTALLATIONS AND/OR REINSTALLATIONS OF UTILITIES SUCH AS ELECTRICAL LINES, GAS PIPES, COMMUNICATION CABLES, INCLUDING WATER AND SEWER LATERALS ON PRIVATE PROPERTY AND IN THE PUBLIC RIGHT-OF-WAY IN THE CITY OF ALEXANDRIA SHALL BE PROVIDED WITH MINIMUM 3" AND 6" WIDE 5 MIL OVERALL THICKNESS DETECTABLE UNDERGROUND WARNING TAPES (DUWT). THE 3" DUWT SHALL BE INSTALLED AT DEPTH OF 12" TO 18" AND 6" WIDE AT A DEPTH OF 24" SO AS TO MAKE UNDERGROUND INSTALLATIONS EASY TO FIND USING A NON-FERROUS LOCATOR. THE DUWT SHALL BE WITH ALUMINUM BACKING OR SOLID ALUMINUM CORE LAMINATED WITH A PROTECTIVE CLEAR FILM ON BOTH SIDES, SEALING AND PROTECTING THE GRAPHICS FROM UNDERGROUND MOISTURE, ACIDS, ALKALIS, AND OTHER SOIL SUBSTANCES. ALL DUWT TAPES SHALL BE PRINTED IN BLACK INK ON AMERICAN PUBLIC WORK ASSOCIATION (APWA) APPROVED COLORS TO MEET OR EXCEED INDUSTRY STANDARDS.

COLOR	CODES
RED	CAUTION BURIED ELECTRIC POWER LINES, CABLES, CONDUITS, AND LIGHTING CABLES
YELLOW	CAUTION GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	CAUTION COMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES, OR CONDUITS
BLUE	CAUTION POTABLE WATER
PURPLE	CAUTION RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	CAUTION SEWER, DRAIN LINES, AND FORCE MAIN

LEGEND

ITEM	NEW	EXISTING
PROPERTY LINE (OUR PROPERTY)		
PROPERTY LINE (DEPARTING / OFF-SITE)		
PROPERTY CORNER		
SPOT ELEVATIONS	+ 109.72	+109.72
CONTOURS	33	33
BUILDING(S)		
BUILDING ADDITION		
ASPHALT PAVING		
CONCRETE PAVEMENT & WALKS		
CONCRETE C & G (LARGE SCALE)		
CONCRETE C & G (SMALL SCALE)		
CURB TYPE TRANSITION	CSCG-1 CSCG-2	
CONCRETE CURB (LARGE SCALE)		
CONCRETE CURB (SMALL SCALE)		
SANITARY SEWER (& MANHOLE) & STRUCT #	S 5	S 15
SANITARY SEWER CLEAN OUT	S C.O.	S C.O.
STORM SEWER		
STORM SEWER STRUCTURE/DRAIN INLET & STRUCT #	24	15
WATER MAIN	W	W
FIRE HYDRANT (& VALVE)	W	W
GAS MAIN (& VALVE)	G	G
OVERHEAD POWER LINE (& POLE)	OP	OP
OVERHEAD TELEPHONE LINE (& POLE)	OT	OT
POLE GUY WIRE (& ANCHOR)		
UNDERGROUND POWER LINE	UP	UP
UNDERGROUND TELEPHONE LINE	UT	UT
UNDERGROUND FUEL TANK		
STEPS		
FENCE		
TREES/SHRUBS		
WOODED AREA		
SOIL BORING		
CBR TEST PIT		
UTILITY TEST PIT		
SIAMESE CONNECTION		
PARKING SPACE COUNT	12	12
TRAVERSE STATION		
FLY STATION		
CONCRETE MONUMENT		
BENCHMARK		
LIMITS OF CLEARING & GRADING (LCG)		
POWER & MISCELLANEOUS POLE		
SIGN		
METERS: CABLE, ELEC, GAS, TELEPHONE, WATER		

ABBREVIATION LIST

ABDN	ABANDONED
AC	ACRE
AGG	AGGREGATE
ARCH	ARCHITECTURAL
B & B	BALL & BURLAP
BRL	BUILDING RESTRICTION LINE
BIT	BITUMINOUS
BM	BENCH MARK
C&G	CURB AND GUTTER
C&P	CHESAPEAKE AND POTOMAC TELEPHONE
CA	CONCRETE ANCHOR
CAP	CAPACITY
CFS	CUBIC FEET PER SECOND
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
CONC	CONCRETE
CT	CURB TRANSITION
D	DIESEL
DIP	DUCTILE IRON PIPE
DOM	DOMESTIC
DRN	DRAIN
DS	DOMESTIC SERVICE
E	EAST
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EW	ENDWALL
EX	EXISTING
EXP	EXPOSED
FC	FIELD CONNECTION
FDI	FOUNDATION DRAIN INVERT
FND	FOUNDATION
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FIN	FINISHED
FPS	FEET PER SECOND
FS	FIRE SERVICE
FT	FEET
G	NATURAL GAS
GAL	GALLON
GM	GAS METER
GPM	GALLONS PER MINUTE
HC	HANDICAP
INV	INVERT
IPF	IRON PIPE FOUND
L	LENGTH
LAT	LATERAL
MAX	MAXIMUM
MECH	MECHANICAL
MEG	MATCH EXISTING GRADE
MH	MANHOLE
MIN	MINIMUM
MON	MONUMENT
N	NORTH
OC	ON CENTER
OP	OVERHEAD POWER
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R =	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REV	REVISION
RL	REMOVAL LIMITS
ROW	RIGHT OF WAY
S	SOUTH
SAN	SANITARY
SC	SIAMESE CONNECTION
SEW	SEWER
SF	SQUARE FOOT/FEET
SHT	SHEET
SPEC	SPECIFICATION
SPK	SPRINKLER
STA	STATION
STD	STANDARD
STM	STORM
S/W	SIDEWALK
TELE	TELEPHONE
TW	TOP OF WALL
TYP	TYPICAL
UFT	UNDERGROUND FUEL TANK
UE	UNDERGROUND ELECTRIC
UP	UNDERGROUND POWER
UT	UNDERGROUND TELEPHONE
VC	VERTICAL CURVE
VENT	VENT PIPE
W	WATER
W/	WITH
WL	WATER LINE
WM	WATER MAIN

APPROVED

Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:

COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
BALTIMORE, MD 21286
410.832.2420

PROJECT:

CITY OF ALEXANDRIA

CITY OF ALEXANDRIA VIRGINIA

CAMERON MILLS FIRE STATION NO. 3

2801 CAMERON MILLS RD.
ALEXANDRIA, VA 22302

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REVISIONS:

TITLE:

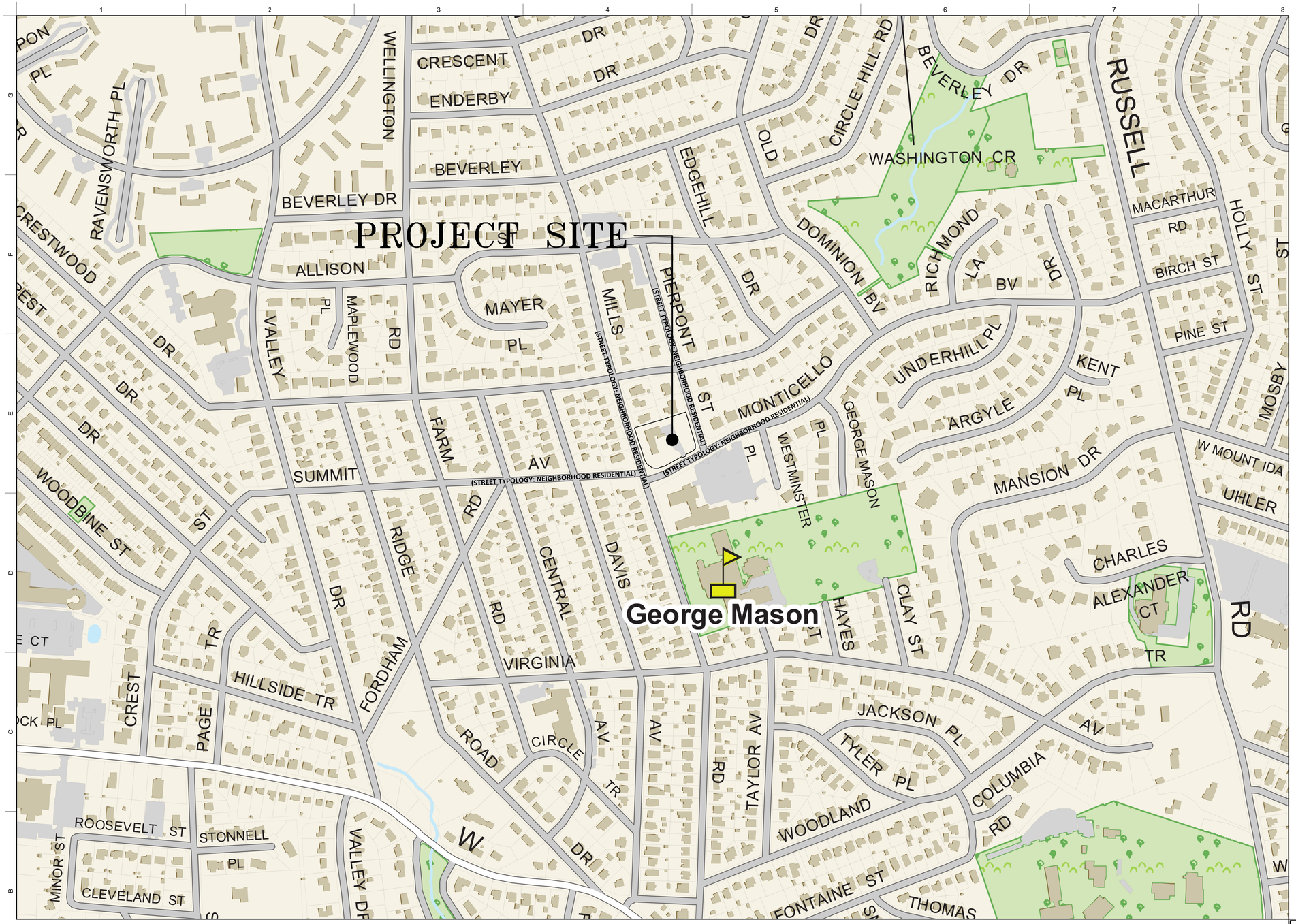
GENERAL NOTES-2

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-03



CONTEXTUAL PLAN

SCALE: 1" : 200'

GRAPHIC SCALE

200 0 200 400

1" = 200'-0"

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Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

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WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

T. 410.263.6787
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SHAWN P. BENJAMINSON
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ANNAPOLIS, MARYLAND 21401

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9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

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6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
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849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
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REVISIONS:

TITLE:

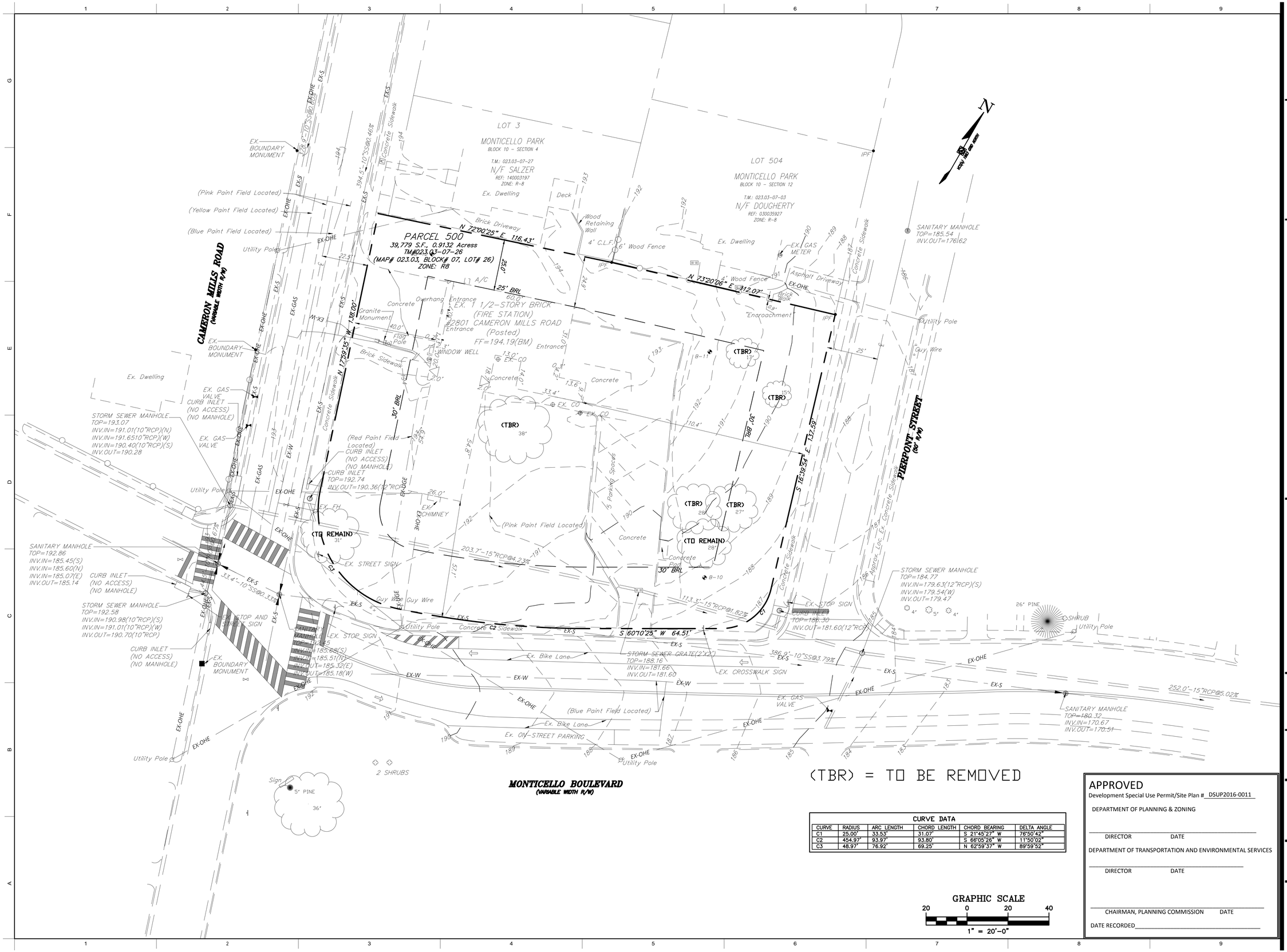
CONTEXTUAL PLAN

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-04



CURVE DATA					
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	33.53'	31.07'	S 21°45'27" W	76°50'42"
C2	454.97'	93.97'	93.80'	S 66°05'26" W	11°50'02"
C3	48.97'	76.92'	69.25'	N 62°59'37" W	89°59'52"

GRAPHIC SCALE

20 0 20 40

1" = 20'-0"

APPROVED

Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE

WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

T. 410.263.6787
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SEAL:

COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
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CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
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6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
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849 FAIRMOUNT AVE.
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PROJECT:

CITY OF ALEXANDRIA

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REVISIONS:

TITLE:

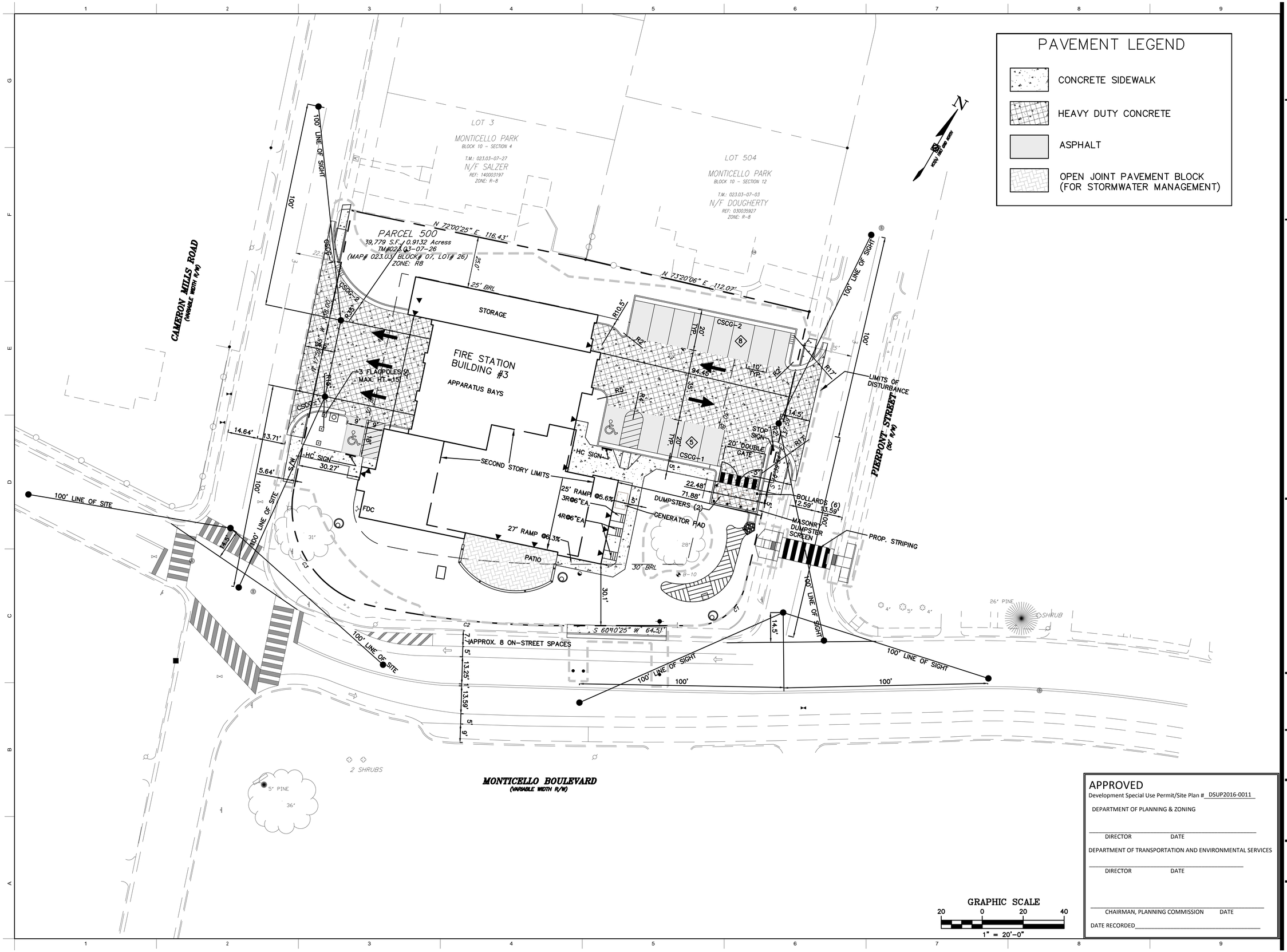
EXISTING CONDITIONS PLAN

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-05



GRAPHIC SCALE

20 0 20 40

1" = 20'-0"

APPROVED

Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

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ONE ANNAPOLIS STREET, #100
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ANNAPOLIS, MARYLAND 21401

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703.691.4040

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DULANEY CENTER, SUITE 102
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REVISIONS:

TITLE:

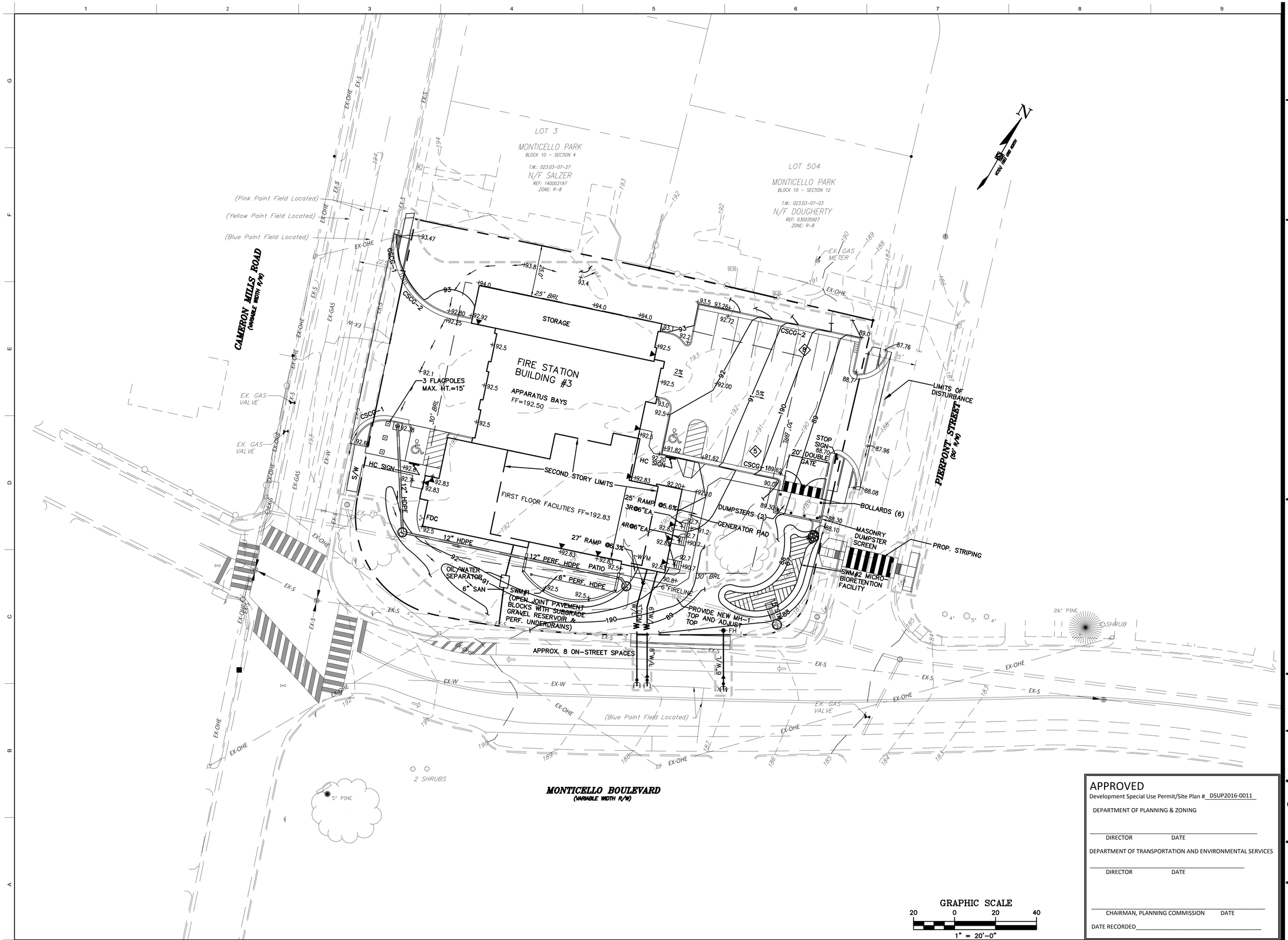
SITE LAYOUT

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-06



APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:

COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
BALTIMORE, MD 21286
410.832.2420

PROJECT:

CITY OF ALEXANDRIA

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REVISIONS:

TITLE:

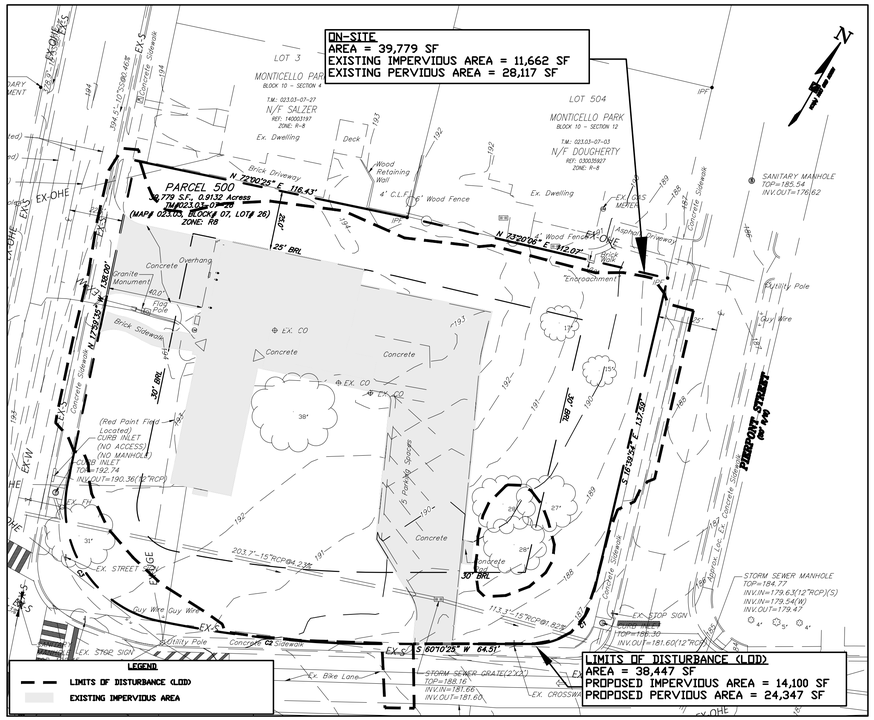
GRADING & UTILITY PLAN

DATE: 09.07.16

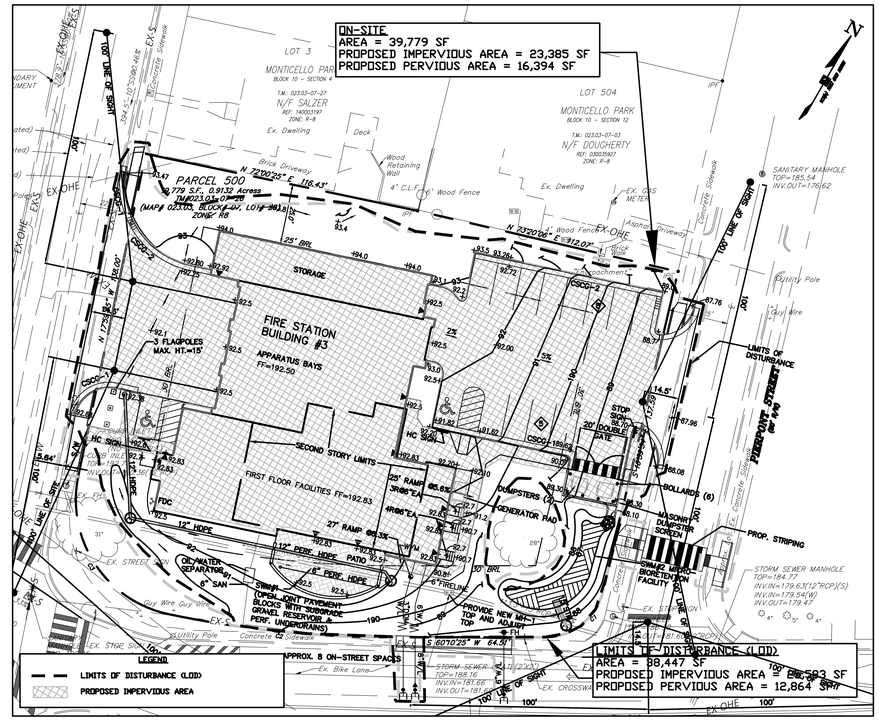
JOB NO.: 201509.01

SHEET NO.

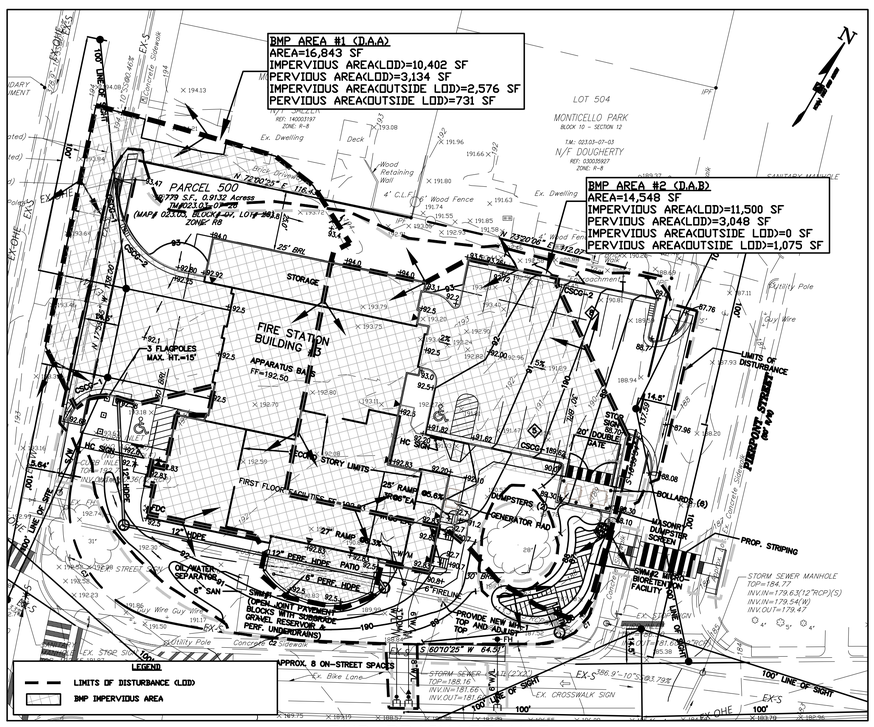
C-07



EXISTING IMPERVIOUS MAP
SCALE: 1"=30'



PROPOSED IMPERVIOUS MAP
SCALE: 1"=30'



BMP DRAINAGE MAP
SCALE: 1"=30'

WINTR-55 CURRENT DATA DESCRIPTION

--- IDENTIFICATION DATA ---

USER: TVAUGHAN DATE: 9/6/2016
PROJECT: ALEXANDRIA FS 3 UNITS: ENGLISH
SUBTITLE: CITY OF ALEXANDRIA FIRE STATION 3 (AKA 203) AREAL UNITS: ACRES

STATE: VIRGINIA
COUNTY: FAIRFAX NOAA_C

--- SUB-AREA DATA ---

NAME	DESCRIPTION	REACH	AREA(AC)	RCN	TC
PRE-SITE	PRE-DEVLOPED SITE	OUTLET	0.91	85	0.1
POST-SITE	POST-DEVELOPED SITE	OUTLET	0.91	91	0.1

TOTAL AREA: 1.82 (AC)

--- STORM DATA --

RAINFALL DEPTH BY RAINFALL RETURN PERIOD

2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	1-YR
3.2	.0	5.2	.0	.0	.0	2.7

STORM DATA SOURCE: USER-PROVIDED CUSTOM STORM DATA
RAINFALL DISTRIBUTION TYPE: TYPE II
DIMENSIONLESS UNIT HYDROGRAPH: (STANDARD)

WATERSHED PEAK TABLE

SUB-AREA OR REACH IDENTIFIER	PEAK FLOW BY RAINFALL RETURN PERIOD 2-YR	10-YR	1-YR
SUBAREAS			
PRE-SITE	2.46	4.90	1.88
POST-SITE	3.10	5.55	2.48

HYDROGRAPH PEAK/PEAK TIME TABLE

SUB-AREA OR REACH	PEAK FLOW AND PEAK TIME (HR) BY RAINFALL RETURN PERIOD 2-YR (HR)	10-YR (HR)	1-YR (HR)
SUBAREAS			
PRE-SITE	2.46 11.93	4.90 11.93	1.88 11.93
POST-SITE	3.10 11.93	5.55 11.93	2.48 11.93

SUB-AREA SUMMARY TABLE

SUB-AREA IDENTIFIER	DRAINAGE AREA (AC)	TIME OF CONCENTRATION (HR)	CURVE NUMBER	RECEIVING REACH	SUB-AREA DESCRIPTION
PRE-SITE	.91	0.100	85	OUTLET	PRE-DEVLOPED SITE
POST-SITE	.91	0.100	91	OUTLET	POST-DEVELOPED SITE

SUB-AREA TIME OF CONCENTRATION DETAILS

SUB-AREA IDENTIFIER/	FLOW LENGTH	SLOPE	MANNINGS'S N	END AREA	WETTED PERIMETER	VELOCITY	TRAVEL TIME (HR)
PRE-SITE							
SHEET	50	0.0400	0.011				0.009
SHALLOW	80	0.0400	0.025				0.005
CHANNEL	60	0.0182	0.013	1.23	3.93	8.333	0.002
TIME OF CONCENTRATION							0.1
POST-SITE							
SHEET	100	0.0500	0.011				0.014
SHALLOW	80	0.0280	0.025				0.007
TIME OF CONCENTRATION							0.1

SUB-AREA LAND USE AND CURVE NUMBER DETAILS

SUB-AREA IDENTIFIER	LAND USE	HYDROLOGIC SOIL GROUP	SUB-AREA AREA (AC)	CURVE NUMBER
PRE-SITE	OPEN SPACE; GRASS COVER > 75% (GOOD)	D	.645	80
	PAVED PARKING LOTS, ROOFS, DRIVEWAYS	D	.268	98
	TOTAL AREA / WEIGHTED CURVE NUMBER		.91 ===	85 ==
POST-SITE	OPEN SPACE; GRASS COVER > 75% (GOOD)	D	.376	80
	PAVED PARKING LOTS, ROOFS, DRIVEWAYS	D	.533	98
	TOTAL AREA / WEIGHTED CURVE NUMBER		.91 ===	91 ==

SEE SHEET C-09 FOR SWM NARRATIVE.

APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

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SHAWN P. BENJAMINSON
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CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
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PROJECT:

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FIRE STATION NO. 3

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REVISIONS:

TITLE:

STORMWATER MANAGEMENT & ADEQUATE OUTFALL

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-08

WATER QUALITY & ADEQUATE OUTFALL NARRATIVE:

WATER QUALITY REQUIREMENTS WILL BE FULFILLED BY 2 ON-SITE SWM FACILITIES LOCATED WITHIN THEIR RESPECTIVE DRAINAGE AREAS. SWM FACILITY #1 IS A LEVEL #1 OPEN JOINT PAVEMENT BLOCK (WITH SUBGRADE GRAVEL RESERVOIR & PERF. UNDERDRAINS). SINCE THE FACILITY BEHAVES PRIMARILY LIKE AN INFILTRATION DEVICE, SWM FACILITY #1 HAS BEEN DESIGNED USING THE VA DEQ STORMWATER DESIGN SPECIFICATIONS No. 8 "INFILTRATION PRACTICES" AND IS CONSIDERED A SMALL SCALE INFILTRATION WITH AN UNDERDRAIN. SWM FACILITY #2 IS A LEVEL #1 MICRO-BIORETENTION BASIN.

PART OF THE DRAINAGE AREA FOR SWM FACILITY #1 EXTENDS OUTSIDE OF THE LIMITS OF DISTURBANCE (LOD) AND THE SITE LIMITS, HOWEVER, SINCE THAT AREA WILL BE TREATED BY SWM FACILITY #1, THAT AREA WAS INCLUDED IN THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) COMPUTATIONS FOR PHOSPHOROUS REMOVAL.

PER THE VRRM SPREADSHEET BELOW, THE TOTAL LOAD (TP) REDUCTION REQUIRED IS 0.54 LB/YEAR. WITH BOTH SWM FACILITIES, THE VRRM WATER QUALITY COMPLIANCE SITE RESULTS SHOW THAT THE TARGET TP REDUCTION EXCEEDED BY 0.23 LB/YEAR.

WATER QUANTITY CONTROL AND ADEQUATE OUTFALL WILL BE CONTROLLED BY THE TWO PROPOSED FACILITIES SWM #1 & SWM #2 REFERENCED ABOVE. THESE FACILITIES ARE CAPTURING A MAJORITY OF THE ONSITE DRAINAGE AND A MAJORITY OF THE ONSITE IMPERVIOUS AREA. A TR-55 HYDROLOGIC ANALYSIS WAS GENERATED FOR THE PRE-DEVELOPED AND THE POST-DEVELOPED SITE CONDITIONS FOR THE 1-YEAR, 2-YEAR, AND 10-YEAR STORMS. THIS ANALYSIS IS LOCATED ON SHEET C-08.

THE INCREASE IN POST-DEVELOPED DRAINAGE IS MINIMUM FOR EACH STORM ANALYZED. THE SUMMARY OF THE INCREASE IS INDICATED BELOW:

(YEAR) STORM EVENT	(C.F.S.) PRE-DEVELOPED	(C.F.S.) POST-DEVELOPED	(C.F.S.) INCREASE
1-YEAR	1.88	2.48	0.60
2-YEAR	2.46	3.10	0.64
10-YEAR	4.90	5.55	0.65

IMPERVIOUS AND WATER TREATMENT TABLE

Project Description

Development or Redevelopment

Drainage Area	Impervious (acres)	Pervious (acres)	Total (acres)
Site Area	0.53	0.38	0.91
On-Site Treated	0.48	0.15	0.63
Off-Site Treated	0.08	0.02	0.1
Total Treated	0.56	0.17	0.73
Any On-Site Disconnected by Vegetated Buffer (25 ft)	0	0	0
Total On-Site Treated or Disconnected	0.56	0.17	0.73

NOTE:

TOTAL SITE IMPERVIOUS AREA	=	0.53 AC.	TOTAL SITE PERVIOUS AREA	=	0.38 AC.
TOTAL TREATED IMPERVIOUS AREA	=	0.56 AC.	TOTAL TREATED PERVIOUS AREA	=	0.17 AC.
UNTREATED IMPERVIOUS AREA	=	-0.03 AC.	UNTREATED PERVIOUS AREA	=	0.21 AC.
TOTAL SITE AREA UNCONTROLLED/UNTREATED	=	0.18 AC.			

Water Treatment on site

	BMP Type	Area Treated by BMP (acres)	Impervious area treated by BMP (acres)	BMP efficiency (%)
BMP #1	OPEN JOINT PAVEMENT BLOCK (WITH SUBGRADE GRAVEL RESERVOIR & PERF. UNDEERDRAINS)	0.38	0.29	25
BMP #2	MICRO-BIORETENTION	0.33	0.26	25

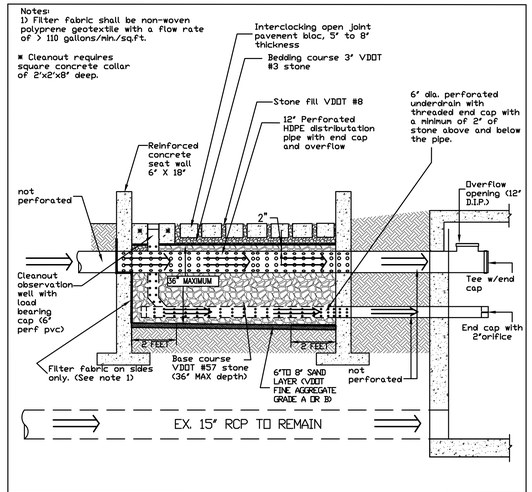
Miscellaneous

Total WQV treated: yes no

Detention on site: yes no

Project is within which watershed? _____

Project discharges to which body of water? _____



PERMEABLE OPEN JOINT PAVEMENT BLOCK WITH GRAVEL RESERVIOUR (NTS)

VIRGINIA RUNOFF REDUCTION METHOD (VRRM) SPREADSHEET

Project Name: FIRE STATION #3
Date: 8/31/2016
Linear Development Project? No

CLEAR ALL (Ctrl+Shift+R)

data input cells | constant values | calculation cells | final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.88

Maximum reduction required:	*10%*
The site's net increase in impervious cover (acres) is:	*0.26*
Post-Development TP Load Reduction for Site (lb/yr):	*0.54*

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.56	0.56
Impervious Cover (acres)				0.32	0.32
					0.88

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					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.30	0.30
Impervious Cover (acres)				0.58	0.58
Area Check	OK.	OK.	OK.	OK.	0.88

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)	0.56	0.30
Weighted Rv(turf)	0.25	0.25
% Managed Turf	64%	48%
Impervious Cover (acres)	0.32	0.32
Rv(impervious)	0.95	0.95
% Impervious	36%	52%
Total Site Area (acres)	**0.88**	**0.62**
Site Rv	**0.50**	**0.61**

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)	0.30
Weighted Rv (turf)	0.25
% Managed Turf	34%
Impervious Cover (acres)	0.58
Rv(impervious)	0.95
% Impervious	66%
Final Site Area (acres)	**0.88**
Final Post Dev Site Rv	**0.71**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.30
Weighted Rv (turf)	0.25
% Managed Turf	48%
ReDev. Impervious Cover (acres)	0.32
Rv(impervious)	0.95
% Impervious	52%
Total ReDev. Site Area (acres)	**0.62**
ReDev Site Rv	**0.61**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	0.26
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0370	0.0316			
Pre-ReDevelopment Treatment Volume (cubic feet)	1,612	1,376			
Pre-ReDevelopment TP Load (lb/yr)	**1.01**	**0.86**			
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.15	1.39			
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)	0.25				
Final Post-Development Treatment Volume (acre-ft)	0.0522		**Post-ReDevelopment Treatment Volume (acre-ft)**	0.0316	**Post-Development Treatment Volume (acre-ft)** 0.0206
Final Post-Development Treatment Volume (cubic feet)	2,272		**Post-ReDevelopment Treatment Volume (cubic feet)**	1,376	**Post-Development Treatment Volume (cubic feet)** 897
Final Post-Development TP Load (lb/yr)	**1.43**		**Post-ReDevelopment Load (TP) (lb/yr)***	**0.86**	**Post-Development TP Load (lb/yr)** **0.56**
Final Post-Development TP Load per acre (lb/acre/yr)	1.62		Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.39	
			Max. Reduction Required (Below Pre-ReDevelopment Load)	**10%**	
			TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.09**	**TP Load Reduction Required for New Impervious Area (lb/yr)** **0.46**

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

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.54**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	7.24	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	10.21

VIRGINIA RUNOFF REDUCTION METHOD WATER QUALITY COMPLIANCE

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 (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.30	0.26	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.30	0.26	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.09	0.07	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.09	0.07	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 2,272

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 (ft^3)	558	384	0	0	0	942
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.70	0.60	0.00	0.00	0.00	1.30
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.44	0.33	0.00	0.00	0.00	0.77
TP LOAD REMAINING (lb/yr)	0.26	0.27	0.00	0.00	0.00	0.54
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.88	2.76	0.00	0.00	0.00	5.64

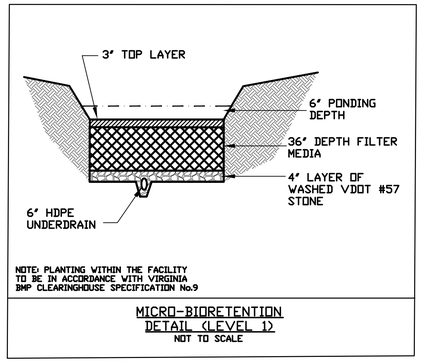
Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	1.43
TP LOAD REDUCTION REQUIRED (lb/yr)	0.54
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.77
TP LOAD REMAINING (lb/yr):	0.66
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **

** TARGET TP REDUCTION EXCEEDED BY 0.23 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	10.21
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	5.64
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	4.57



MICRO-BIORETENTION DETAIL (LEVEL 1)
NOT TO SCALE

SWM#1 OPEN JOINT PAVEMENT BLOCK

AREA (A)=16,843 SF
IMPERVIOUS AREA (IA)=12,986 SF
PERVIOUS AREA (PA)=3,857 SF
RUNOFF COEFFICIENT (Rv)=((IA)x(0.9)+(PA)x(0.3))/(A)
=((12,986)x(0.9)+(3,857)x(0.3))/(16,843)
=0.76

TREATMENT VOLUME REQUIRED (Tv)=[(Rv)x(A)]/12
=[(0.76)x(16,843)]/12
=1,067 CF

TREATMENT VOLUME PROVIDED (Tv)=(953 SF)x(3 FT)x0.40 = 1144 CF

SWM#2 MICRO-BIORETENTION FACILITY

FILTER SURFACE AREA REQUIRED=3%xDRAINAGEAREA
=3%x14,548 SF
=436 SF

SURFACE AREA PROVIDED = 473 SF

NOTES: STORMWATER MANAGEMENT FACILITIES ARE DESIGNED IN ACCORDANCE WITH THE VA DEQ STORMWATER DESIGN SPECIFICATIONS, MARCH 2011. SWM #1 AND SWM #2 ARE LEVEL 1 DESIGNS.

SWM #1 IS CONSIDERED A SMALL-SCALE INFILTRATION PRACTICE FOR DESIGN.

APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

_____
DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

_____
DIRECTOR DATE

_____
CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED_____

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:

COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
BALTIMORE, MD 21286
410.832.2420

PROJECT:

CITY OF ALEXANDRIA

CITY OF ALEXANDRIA VIRGINIA

CAMERON MILLS FIRE STATION NO. 3

2801 CAMERON MILLS RD.
ALEXANDRIA, VA 22302

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REVISIONS:

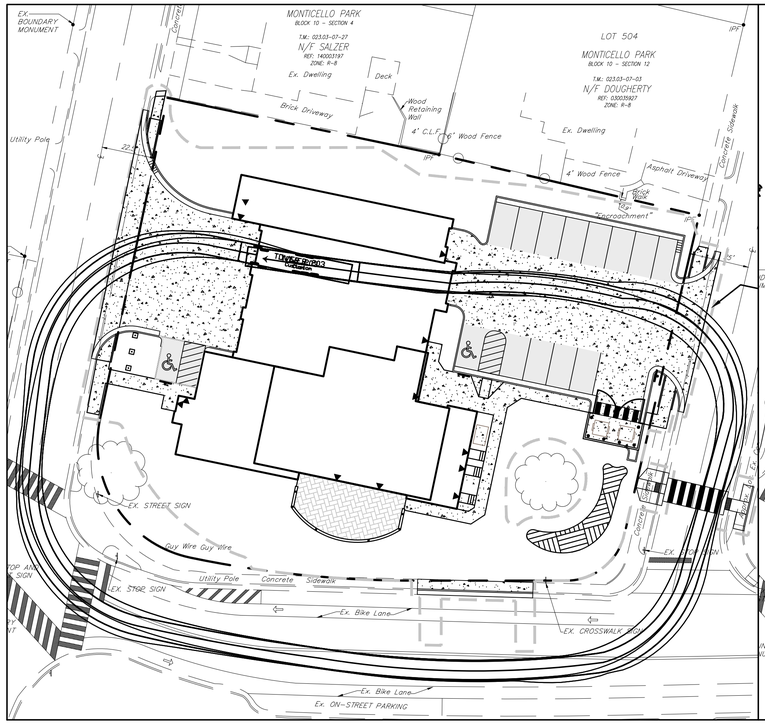
TITLE:
WATER QUALITY DESIGN

DATE: 09.07.16

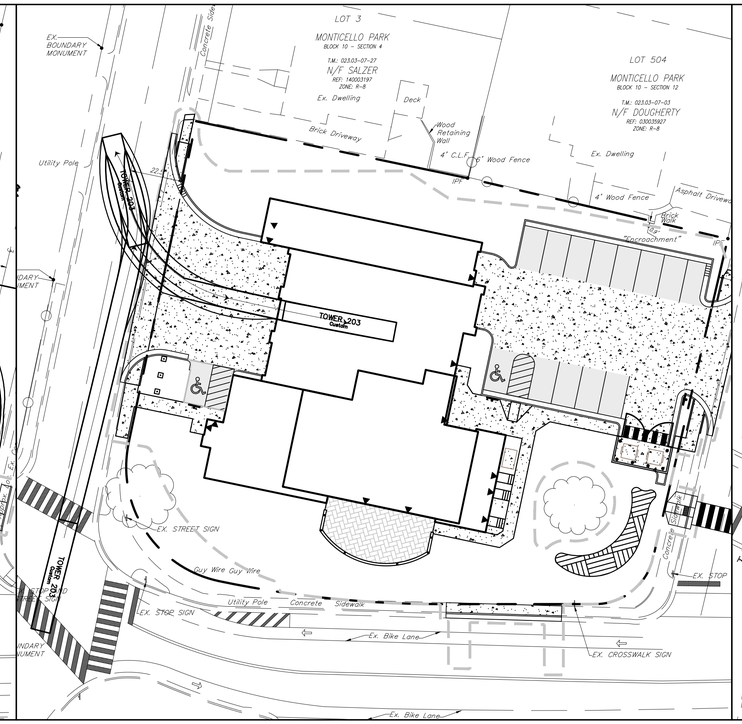
JOB NO.: 201509.01

SHEET NO.

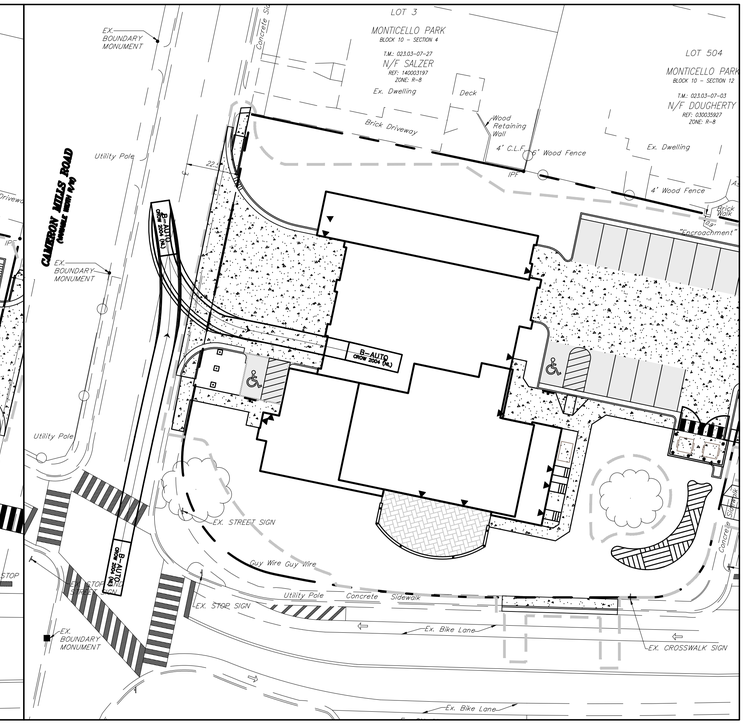
C-09



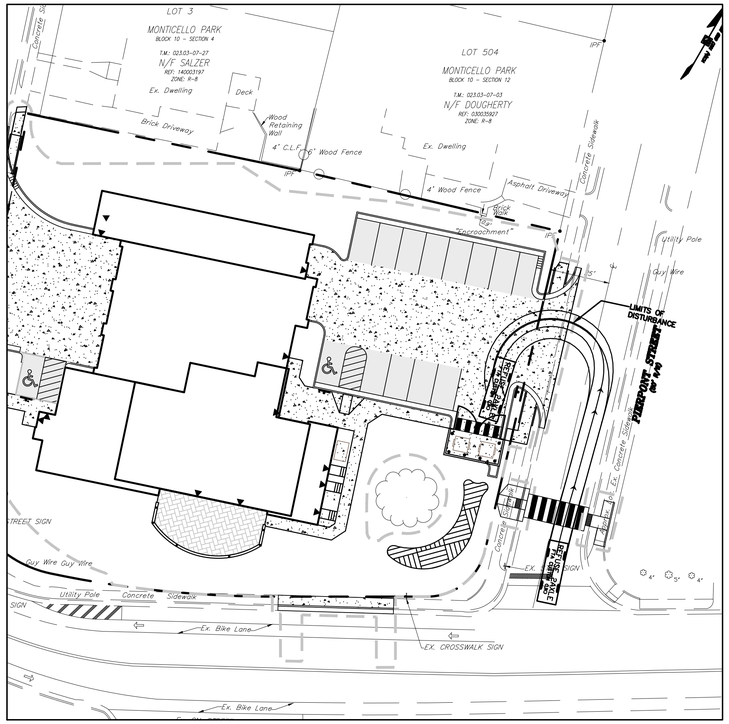
PATH 1, FIRE TRUCK PULL THROUGH FULL CIRCLE



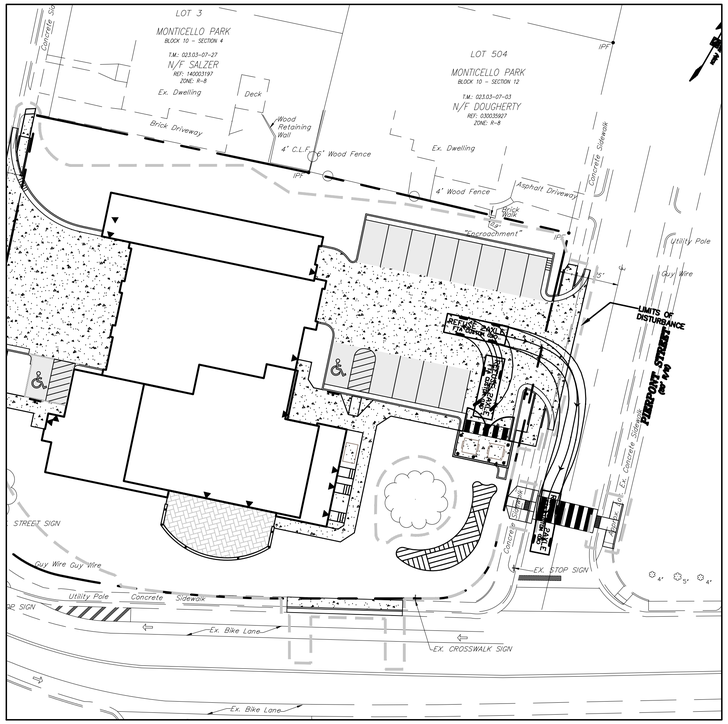
PATH 2, FIRE TRUCK BACK IN



PATH 3, PULL AMBULANCE, BACK IN



PATH 4, TRASH TRUCK, ENTER



PATH 5, TRASH TRUCK, EXIT

Alexandria Fire Department
Fire Apparatus Vehicle Turning Specifications

Radius - Wall to Wall = 54.98 feet + / - 2 feet
Curb to Curb = 51.33 feet + / - 2 feet
Inside turning radius = 37.73 feet + / - 2 feet
Overall Length - 47' - 4 ½"
Overall Width - 98"
Wheel Bases from front axle to both rear axles - 240"
Tandem axle spacing - 56" CL of axle to CL of axle
Gross Weight - As built with no equipment or water gross weight = 66,000#
Angle of Approach - 13 Degrees
Angle of Departure - 11 degrees
Ramp Break Over - Break over angle is 9°

APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:

COMMONWEALTH OF VIRGINIA
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Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

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9990 FAIRFAX BOULEVARD, SUITE 300
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410.992.9970

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PROJECT:

CITY OF ALEXANDRIA

CAMERON MILLS
FIRE STATION NO. 3

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REVISIONS:

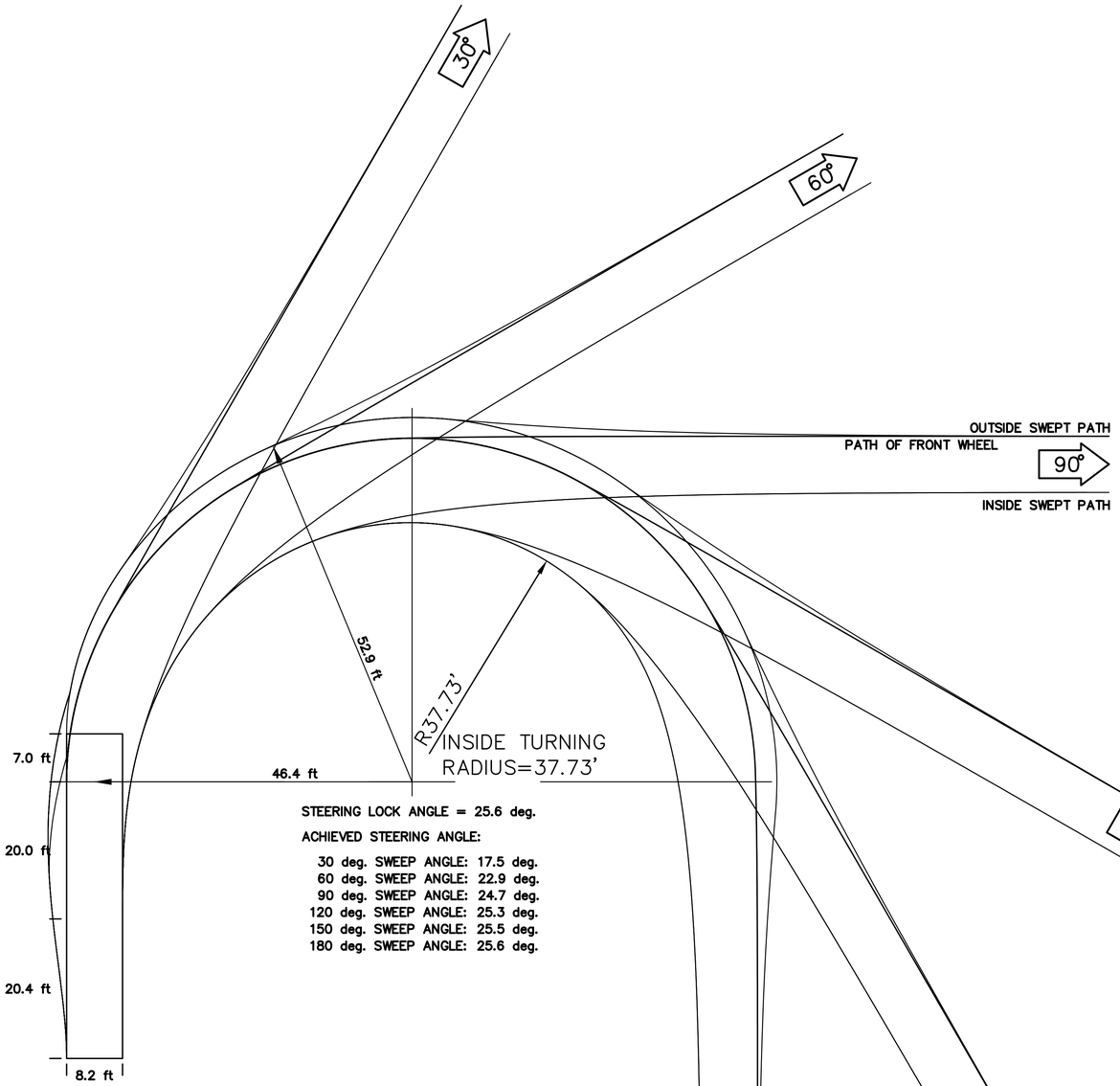
TITLE:
TRUCK TURN TEMPLATES-1

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-10



TOWER 203
Custom
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Copyright (c) 2013, Transoft Solutions
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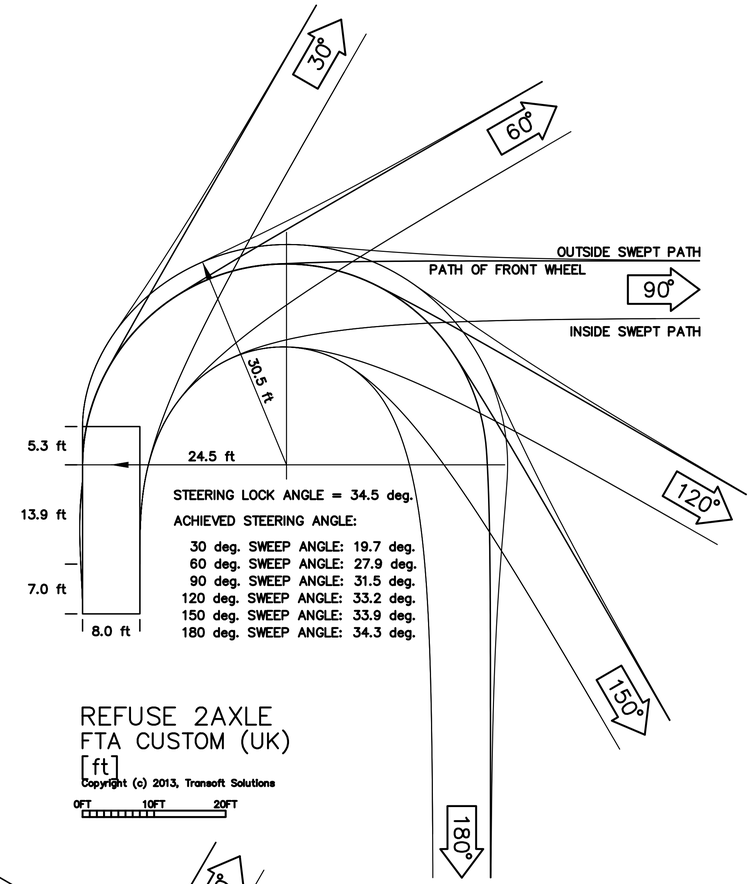

REFUSE 2AXLE
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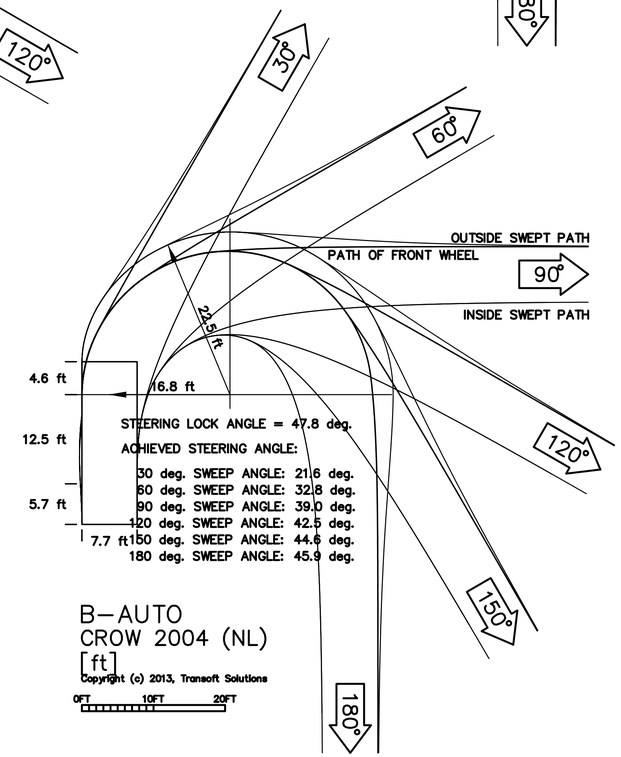

B-AUTO
CROW 2004 (NL)
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GRAPHIC SCALE
10 0 10 20
1" = 10'-0"

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CAMERON MILLS
FIRE STATION NO. 3

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REVISIONS:

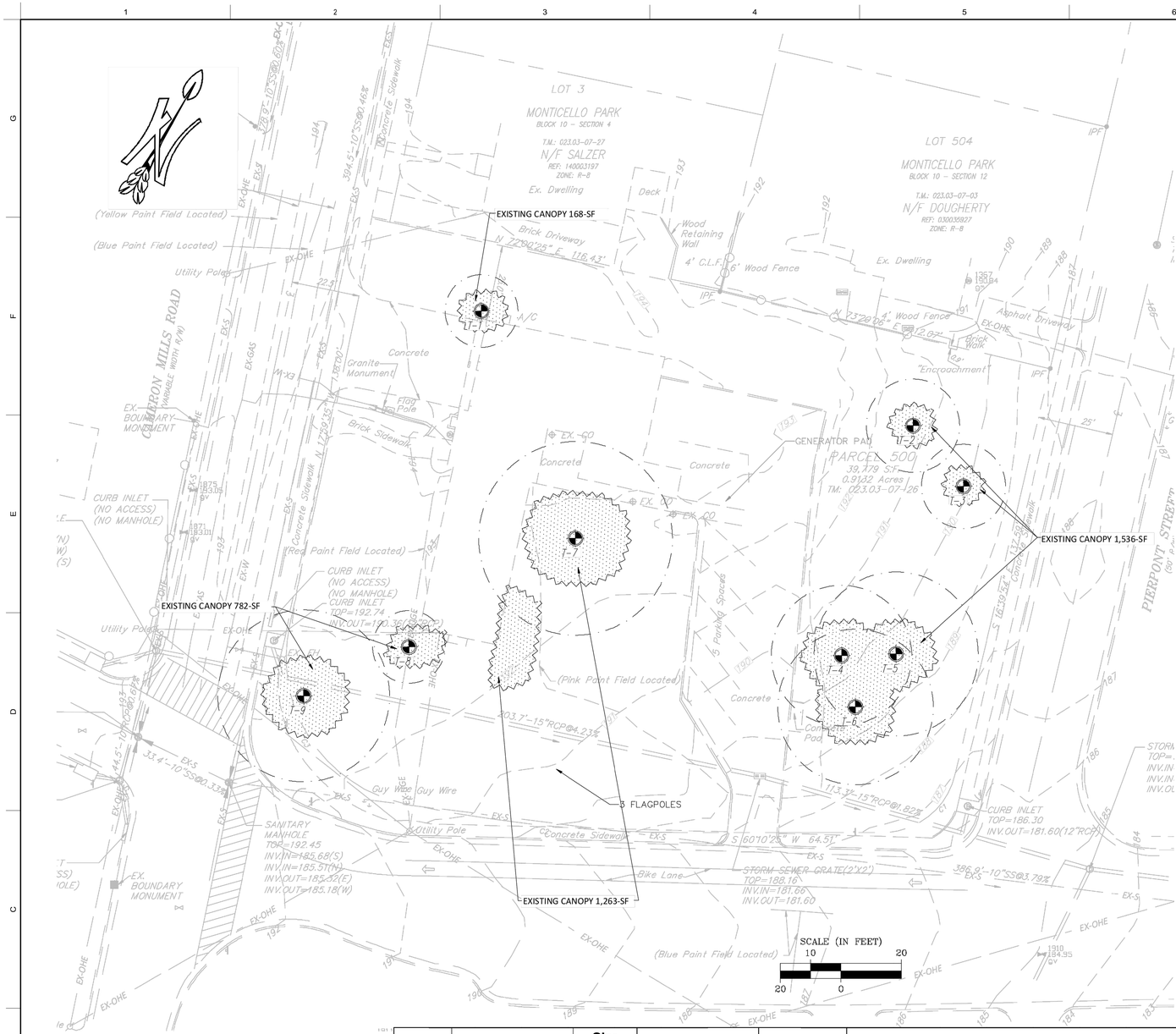
TITLE:
TRUCK TURN
TEMPLATES-2

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-11



LEGEND

- TREELINE
- EXISTING CANOPY (3,749-SF)
- CRITICAL ROOT ZONE (CRZ)
- TREE LOCATION (T-37)

Tree Number	Common Name	Size (inches DBH)	Critical Root Zone (feet)	Condition	Notes & Arborist Recommendations
1	Ornamental Holly	12.0	12.0	Good	Double trunk
2	White Oak	15.4	15.4	Fair/Poor	Prune dead limbs
3	Chestnut Oak	13.9	13.9	Poor	Rot at base, damaged roots. Recommend Removal
4	Pin Oak	23.2	23.2	Poor	Disease at base, one leader, topped, leaning. Recommend Removal
5	White Oak	27.1	27.1	Poor	Leaning, deadwood, dead limbs, improperly pruned. Recommend Removal
6	White Oak	25.7	25.7	Fair	Some dead limbs, apply mulch
7	Pin Oak	32.0	32.0	Fair	Improperly pruned, rot at base, buttressed roots
8	Ornamental Holly	12.0	12.0	Good	Double trunk
9	White Oak	28.4	28.4	Fair	Remove water sprouts, properly prune dead limbs

NOTES:
1. SHARED TREES SHALL NOT BE REMOVED WITHOUT WRITTEN PERMISSION FROM AFFECTED ADJACENT PROPERTY OWNERS.
2. TREES NOTED FOR REMOVAL WITHIN THE SAVE AREAS SHALL BE DONE SO BY HAND WITHOUT THE USE OF HEAVY MACHINERY.
3. OFFSITE TREES WERE ASSESSED FROM THE SUBJECT PROPERTY SO NOT TO TRESPASS ONTO ADJACENT PROPERTY. DBH MEASUREMENTS ARE APPROXIMATE.
4. TREES LOCATED WITHIN OR ON THE LIMITS OF DISTURBANCE, OR RATED AS BEING "POOR" IN CONDITION, ARE RECOMMENDED FOR REMOVAL BY TNT ARBORISTS DUE TO THE LIKELIHOOD OF TREE FAILURE. HOWEVER, AT THE DISCRETION OF THE APPLICANT, SOME OF THESE MAY BE PRESERVED DURING CONSTRUCTION WITH THE APPROVAL OF THE CITY ARBORIST.

CERTIFIED ARBORIST ISA
Avinash M. Sareen
Certified Arborist
Certification # MA-4727A

APPROVED
Development Special Use Permit/Site Plan # DSUP2016-0011
DEPARTMENT OF PLANNING & ZONING
DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
DIRECTOR DATE
CHAIRMAN, PLANNING COMMISSION DATE
DATE RECORDED

WGM ARCHITECTURE
WHEELER GOODMAN MASEK
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401
T. 410.263.6787
WWW.WGM-ARCH.COM

SEAL:
COMMONWEALTH OF VIRGINIA
SHAWN P. BENJAMINSON
Lic. No. 036633
09/07/2016
PROFESSIONAL ENGINEER

CONSULTANTS:

ARCHITECT

WHEELER GOODMAN MASEK
AND ASSOCIATES, INC.
ONE ANNAPOLIS STREET, #100
ANNAPOLIS, MARYLAND 21401

CIVIL ENGINEERS:

ADTEK ENGINEERS
9990 FAIRFAX BOULEVARD, SUITE 300
FAIRFAX, VIRGINIA 22030
703.691.4040

STRUCTURAL ENGINEERS:

COLUMBIA ENGINEERING
6210 OLD DOBBIN LANE
COLUMBIA, MARYLAND 21045
410.992.9970

MECHANICAL/ELECTRICAL ENGINEERS:

GIPE ASSOCIATES, INC.
849 FAIRMOUNT AVE.
DULANEY CENTER, SUITE 102
BALTIMORE, MD 21286
410.832.2420

PROJECT:

CITY OF ALEXANDRIA

CITY OF ALEXANDRIA VIRGINIA

CAMERON MILLS FIRE STATION NO. 3

2801 CAMERON MILLS RD.
ALEXANDRIA, VA 22302

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REVISIONS:

TITLE:
EXISTING VEGETATION MAP

DATE: 09.07.16
JOB NO.: 201509.01

SHEET NO.
C-12

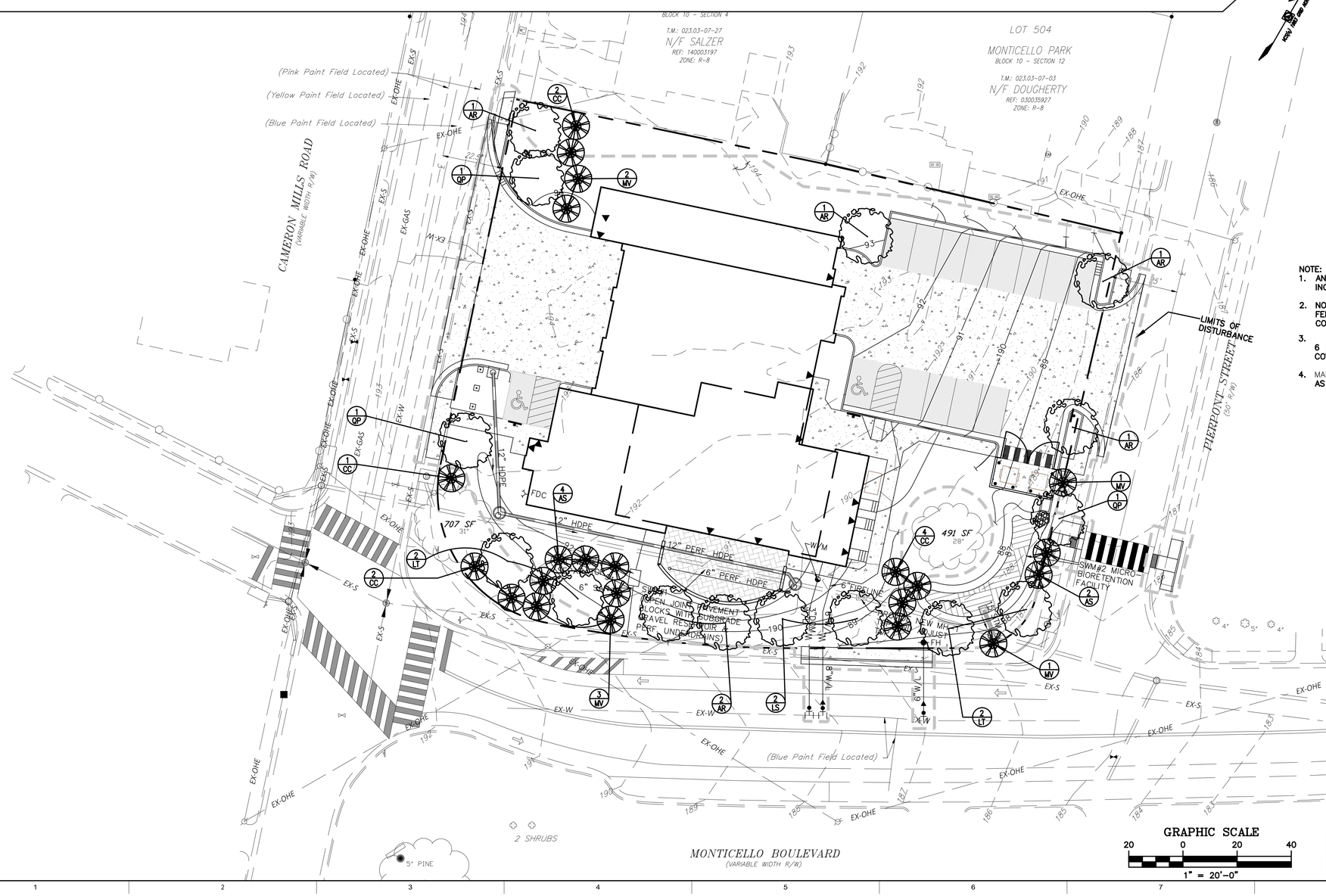
STREET TREES LANDSCAPING						
	REQUIRED	LENGTH (LF)	REQUIRED		PROVIDED	
			SHADE TREES	ORNAMENTAL TREES	SHADE TREES	ORNAMENTAL TREES
WEST (CAMERON MILLS RD)	1 SHADE TREE PER 30 FEET ROW 1 ORNAMENTAL TREE PER 20 FEET ROW	* 92	3	5	3	5
SOUTH (MONTICELLO BLVD)	1 SHADE TREE PER 30 FEET ROW 1 ORNAMENTAL TREE PER 20 FEET ROW	250	8	13	7	14
EAST (PIERPONT ST)	1 SHADE TREE PER 30 FEET ROW 1 ORNAMENTAL TREE PER 20 FEET ROW	* 85	3	4	4	3
	* EXCLUDES DRIVEWAY ENTRANCES					

PARKING LOT LANDSCAPING		
REQUIRED:	1 SHADE TREE PER 10 SPACES ALONG LOT PERIMETER (13 SPACES)	
PROVIDED:	NUMBER OF ISLANDS REQUIRED	NUMBER OF TREES IN ISLANDS PROVIDED
	2	3

TREE CANOPY CALCULATIONS					
	AC	or	SF	%	NO. OF PLANTINGS
TOTAL SITE AREA	0.91	or	39,779		
EXCLUSION AREAS (TOTAL)	0.00	or	0		
NET SITE AREA	0.91	or	39,779		
TOTAL REQUIRED TREE CANOPY	0.23	or	9,945	25%	
PRESERVED TREE CANOPY	0.03	or	1,198	3%	2
PLANTED TREE CANOPY (TOTAL)	0.64	or	28,000	70%	37
TOTAL TREE CANOPY PROVIDED	0.67		29,198	73%	39

PLANT SCHEDULE

SYMBOL	QUANTITY	COMMON NAME		SPACING	SIZE (MIN.)	TYPE	CROWN COVERAGE ALLOWANCE (CCA) (SF EACH)	TOTAL CCA (SF)
	15	SHADE TREES TO BE SELECTED FROM THE FOLLOWING:		30 FT. O.C. OR PER DRAWINGS	2.0"-2.5" CALIPER	B&B		
AR	6	RED MAPLE*	ACER RUBRUM				1250	7500
QP	3	WILLOW OAK*	QUERCUS PHELLOS				1250	3750
LT	4	SCARLET OAK*	QUEREUS COCCINEA				1250	5000
LS	2	SWEET GUM*	LIQUIDAMBAR SRYRACIFLYA*				1250	2500
							SUBTOTAL	18,750
	22	ORNAMENTAL TREES TO BE SELECTED FROM THE FOLLOWING:		20 FT. O.C. OR PER DRAWINGS	8' HEIGHT	B&B		
CC	9	RED BUD*	CERCIS CANADENSIS				500	4500
MV	7	SWEETBAY MAGNOLIA*	MAGNOLIA VIRGINIANA				250	1750
AS	6	KATSURA*	CERIDIPHYLLUM JAPONICUM				500	3000
							SUBTOTAL	9,250
							GRAND TOTAL	28,000
	0	SHRUBS TO BE SELECTED FROM THE FOLLOWING:		5 FT. O.C. OR PER DRAWINGS	18 IN. HT.	B&B		
CA		SUMMERSWEET*	CLETHRA ALUIFOLIA					
VC		HIGHBUSH BLUEBERRY*	VACCINUM CORYMBOSUM					
VD		ARROWWOOD VIBURNUM*	VIBURNUM DENTATUM					
HQ		OAKLEAF HYDRANGEA*	HYDRANGEA QUERCIFOLIA					
IG		DWARF INKBERRY*	ILEX GLABRA "COMPACTA"					



NOTE:

1. ANY PROPOSED SHRUBBERY IS TO HAVE A MAXIMUM HEIGHT OF 36 INCHES WHEN THEY ARE FULLY MATURE.
2. NO SHRUBS HIGHER THAN 3 FEET SHOULD BE PLANTED WITHIN 6 FEET OF WALKWAYS. SHRUBS HIGHER THAN 3 FEET PROVIDE COVER AND CONCEALMENT FOR POTENTIAL CRIMINALS.
3. NO SHRUBS HIGHER THAN 3 FEET SHOULD BE PLANTED WITHIN 6 FEET OF WALKWAYS. SHRUBS HIGHER THAN 3 FEET PROVIDE COVER AND CONCEALMENT FOR POTENTIAL CRIMINALS.
4. MAINTAIN TREE CANOPIES AT LEAST 6-FEET ABOVE GRADE LEVEL AS THEY MATURE TO ALLOW FOR NATURAL SURVEILLANCE.

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DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

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REVISIONS:

TITLE:

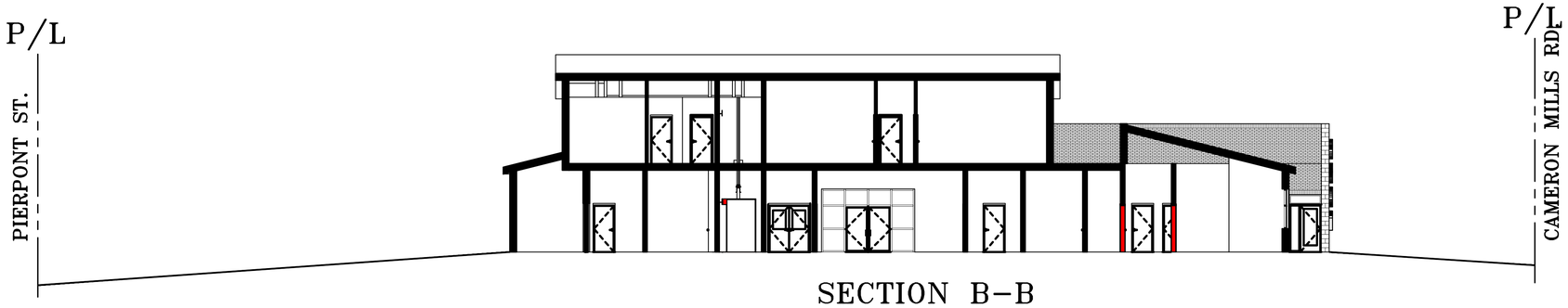
LANDSCAPE PLAN

DATE: 09.07.16

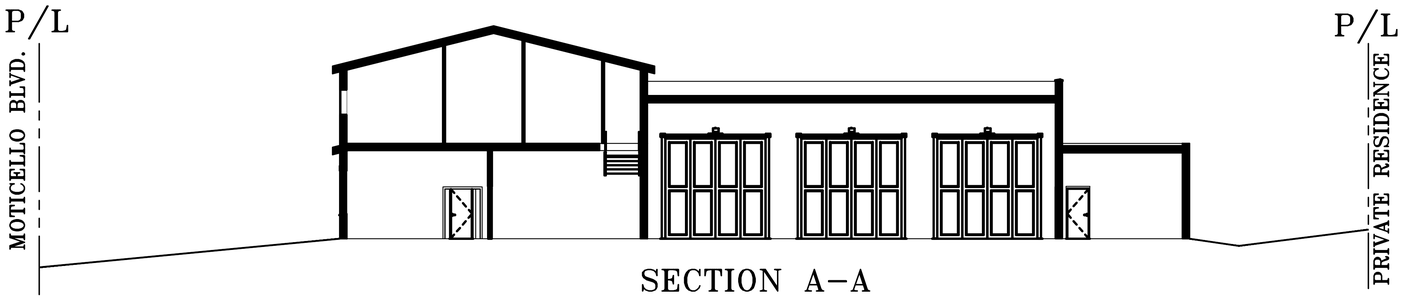
JOB NO.: 201509.01

SHEET NO.

C-13



SECTION B–B

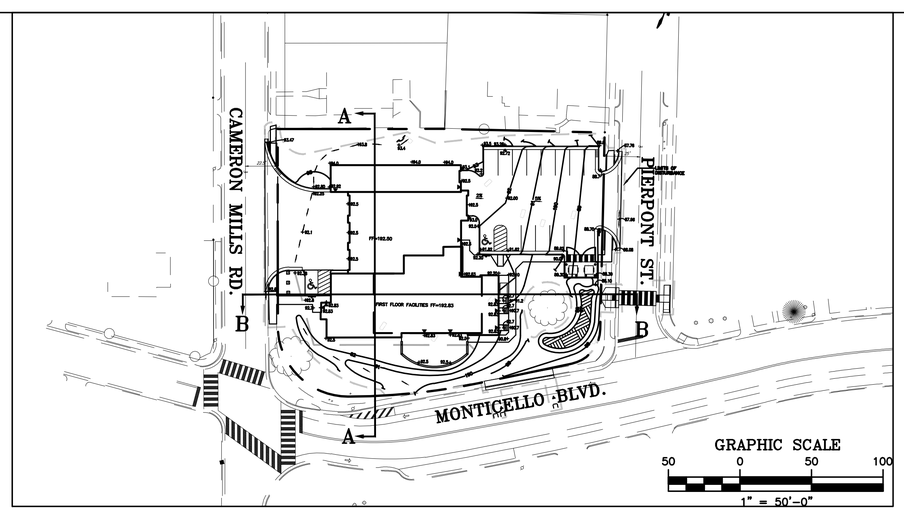


SECTION A–A

GRAPHIC SCALE

10 0 10 20

1" = 10'–0"



GRAPHIC SCALE

50 0 50 100

1" = 50'–0"

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REVISIONS:

TITLE:

SITE SECTIONS PLAN

DATE: 09.07.16

JOB NO.: 201509.01

SHEET NO.

C-14