

2. EXISTING CONDITIONS WERE REPRODUCED FROM SURVEYS PREPARED BY WALTER L. PHILLIPS, INC.
3. VERIFY LOCATION OF EXISTING UTILITIES BEFORE PROCEEDING WITH WORK. NOTIFY OWNER'S REPRESENTATIVE, DC/DPW, 763-7632 OR 767-8522 AND "MISS UTILITY" (860-267-7777) 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATIONS. HAND DIG TEST PITS AT ALL UTILITY CROSSINGS AND DETERMINE EXACT CLEARANCE OF ALL PROPOSED INSTALLATIONS WELL IN ADVANCE OF CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS WITH PLAN ELEVATIONS.
3. WORK AND MATERIALS IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE APPLICABLE DC/DPW STANDARDS AND SPECIFICATIONS. ON-SITE WORK AND MATERIALS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE D.C. PLUMBING CODE.
4. DIMENSIONS ARE TO FACE OF WALL AND CURB, EDGE OF WALK AND PAVEMENT, CENTERLINE OF COLUMN, PIPE AND UTILITY STRUCTURES, UNLESS OTHERWISE NOTED.
5. FRAMES AND COVERS OF EXISTING STRUCTURES TO BE ADJUSTED TO MATCH NEW FINISHED GRADES.
6. OMISSIONS AND/OR ADDITIONS OF UTILITIES FOUND DURING CONSTRUCTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY INFORMATION CONCERNING FOUND UTILITY, NOT SHOWN ON PLANS.
7. TEST PITS ARE REQUIRED AT ALL LOCATIONS(S) WHERE PROPOSED UTILITIES CROSS EXISTING UTILITIES. INVESTIGATION(S) TO IDENTIFY HORIZONTAL LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES. THE ENGINEER IS TO BE NOTIFIED OF THIS INFORMATION.
8. IF A MINIMUM VERTICAL CLEARANCE CAN NOT BE MAINTAINED AT UTILITY CROSSING, THE CONTRACTOR IS TO NOTIFY THE ENGINEER BEFORE PROCEEDING WITH WORK.
9. TRANSITION CURB, GUTTER, PAVING AND SIDEWALK TO MEET EXISTING IN LINE AND ON GRADE OR AS DIRECTED BY ENGINEER.
10. ALL DEBRIS AND EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED OFF-SITE LOCATION.
11. ALL ON-SITE, WATER LINES TO HAVE A MINIMUM COVER OF 4'-0". WATER FITTINGS SHALL BE PROPERLY TIED AND ANCHORED, PER DPW STANDARDS.
12. WHERE PORTIONS OF EXISTING BITUMINOUS OR CONCRETE PAVING ARE TO BE REMOVED, THE EXISTING PAVEMENT SHALL BE SAW-CUT.
13. REMOVE FRAMES AND COVERS OF SENIOR MANHOLE/WAISTS AND/OR WATER MAIN VALVE CASTINGS TO BE ABANDONED AND LEFT TO GRADE.
14. ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE INSTALLED BEFORE THE START OF ANY EXCAVATION AND/OR CONSTRUCTION AS PER STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR THE DISTRICT OF COLUMBIA. IF AN ON-SITE INSPECTION REVEALS FURTHER DRAINAGE CONTROL MEASURES ARE NECESSARY, THE SAME SHALL BE PROVIDED.
15. NOTIFY WASHINGTON GAS AT 202-730-4208, 48 HOURS PRIOR TO ANY EXCAVATION IN THE VICINITY OF TRANSMISSION MAIN, FOR FURTHER INFORMATION OR PROBLEMS, CONTACT MR. CHUCK WATLEY AT WASHINGTON GAS AT 202-730-4205.
16. PROVIDE A MINIMUM OF 5 FEET HORIZONTAL AND 1 FOOT VERTICAL CLEARANCE BETWEEN 12" DIAMETER AND SMALLER DISTRIBUTION EXISTING GAS FACILITIES AND THE PROPOSED FACILITIES.
17. PROVIDE A MINIMUM OF 5 FEET HORIZONTAL AND 2 FEET VERTICAL CLEARANCE BETWEEN 16" DIAMETER OR GREATER TRANSMISSION GAS FACILITIES AND THE PROPOSED FACILITIES.

CONTACT "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO CONSTRUCTION.

CONTACT DEPARTMENT OF PUBLIC WORKS - PUBLIC SPACE MAINTENANCE ADMINISTRATION 48 HOURS PRIOR TO START OF CONSTRUCTION AT (202)645-6030 OR (202) 645-6031.

ALL PROPOSED WORKS TO BE PERFORMED UNDER INSPECTION OF THE DEPARTMENT OF PUBLIC WORKS - WATER AND SEWER AUTHORITY.

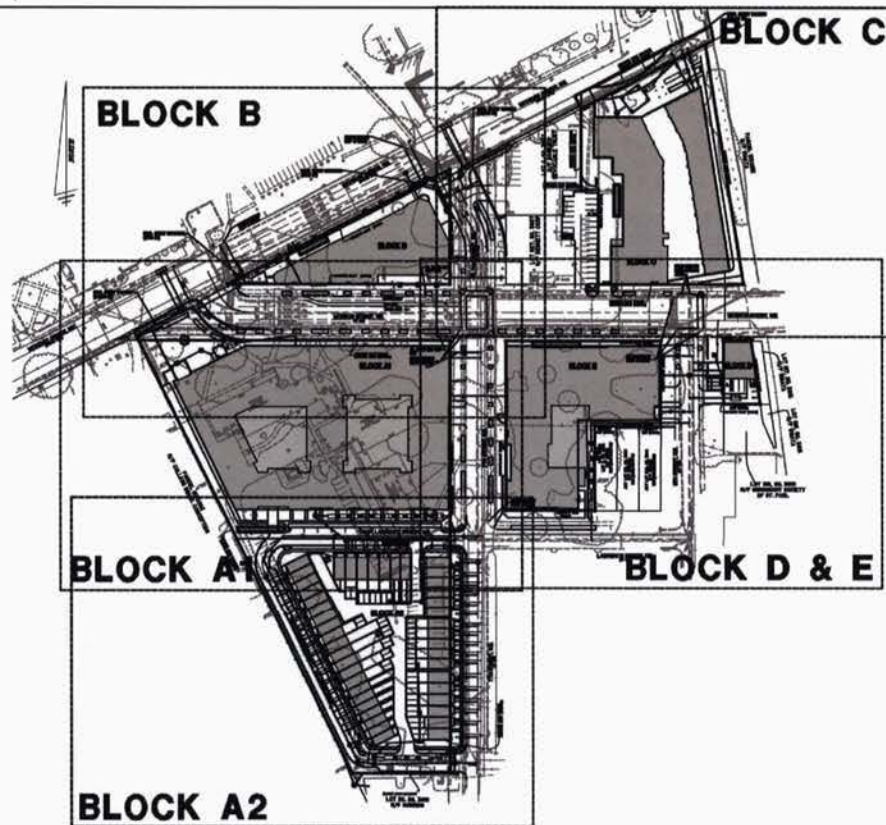
ALL PROPOSED WORK TO BE CONSTRUCTED IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF THE DEPARTMENT OF PUBLIC WORKS - WATER AND SEWER UTILITY AUTHORITY.

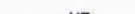
USE MANHOLES ENTRY SEALS WHERE REQUIRED.

NOTE: CONTRACTOR IS TO BE RESPONSIBLE FOR DESIGN OF SHEETING AND SHORING AND SUPPORT OF EXISTING UTILITIES AND ADJACENT STRUCTURES. SHORING, BRACING AND UNDERPINNING, DESIGNED BY STRUCTURAL ENGINEER LICENSED IN DISTRICT OF COLUMBIA SHALL BE PROVIDED AS NECESSARY TO ENSURE THEIR SUPPORT.

ALL EXISTING UTILITY POLES AND OVERHEAD WIRES TO REMAIN UNLESS OTHERWISE STATED.

UNDERGROUND UTILITY LOCATIONS, INCLUDING WATER, STORM DRAINAGE, SANITARY SEWER, ELECTRIC, TELEPHONE AND GAS, WERE TAKEN FROM AVAILABLE CITY UTILITY RECORDS, OWNER RECORDS AND FIELD VERIFIED WHERE POSSIBLE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY AND DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO COMMENCING WORK OR ORDERING PIPE MATERIALS AND STRUCTURES. REPORT ANY DISCREPANCY TO THE PROJECT MANAGER FOR MARKING LOCATIONS OF EXISTING UTILITIES, CONTACT "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO ANY EXCAVATION NOTIFY DEPARTMENT OF PUBLIC WORKS.



PROPOSED		DESCRIPTION	EXISTING	LEGEND		PROPOSED	DESCRIPTION	EXISTING
EP		EDGE OF PAVEMENT	EP.				FIRE HYDRANT	
MH		MANHOLE	MH				PLUG	
WV		WATER VALVE	WV				OVERHEAD WIRES	
WM		WATER METER	WM				UTILITY POLE	
GM		GAS METER	GM				UNDERGROUND ELECTRIC	
TCB		TRAFFIC CONTROL BOX	TCB				TELEPHONE	
LP		LIGHT POLE	LP				GAS MAIN	
LP/S		LIGHT POLE WITH SIGNALS	LP/S				ELECTRICAL TRANSFORMER	
		CURB & GUTTER					HANDICAP RAMP (CG-12)	
		CG-2					GUARDRAIL	
		SEWER					FENCE	
		SANITARY LATERAL					TRAFFIC FLOW	
		CLEAN OUT					LIGHT	
		STORM SEWER					MANHOLE	
		WATER MAIN						
		CURB INLET						

ZONING COMMISSION

District of Columbia

CASE NO.08-24

EXHIBIT NO.19A3

WALTER L. PHILLIPS
INCORPORATED

CML ENGINEERS • LAND SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301 WWW.WLPNC.COM



SCALE: 1" = 200'
DATE: 9/5/08
REV. 5/12/09
DRAWN: MRW

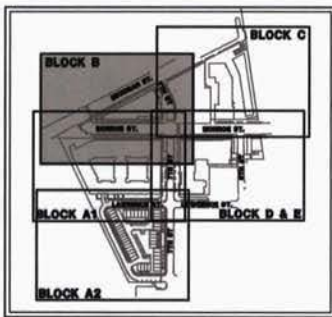
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NO.	DESCRIPTION DATE

SITE PLAN - OVERALL
CATHOLIC UNIVERSITY
OF AMERICA
WASHINGTON, DC

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ON

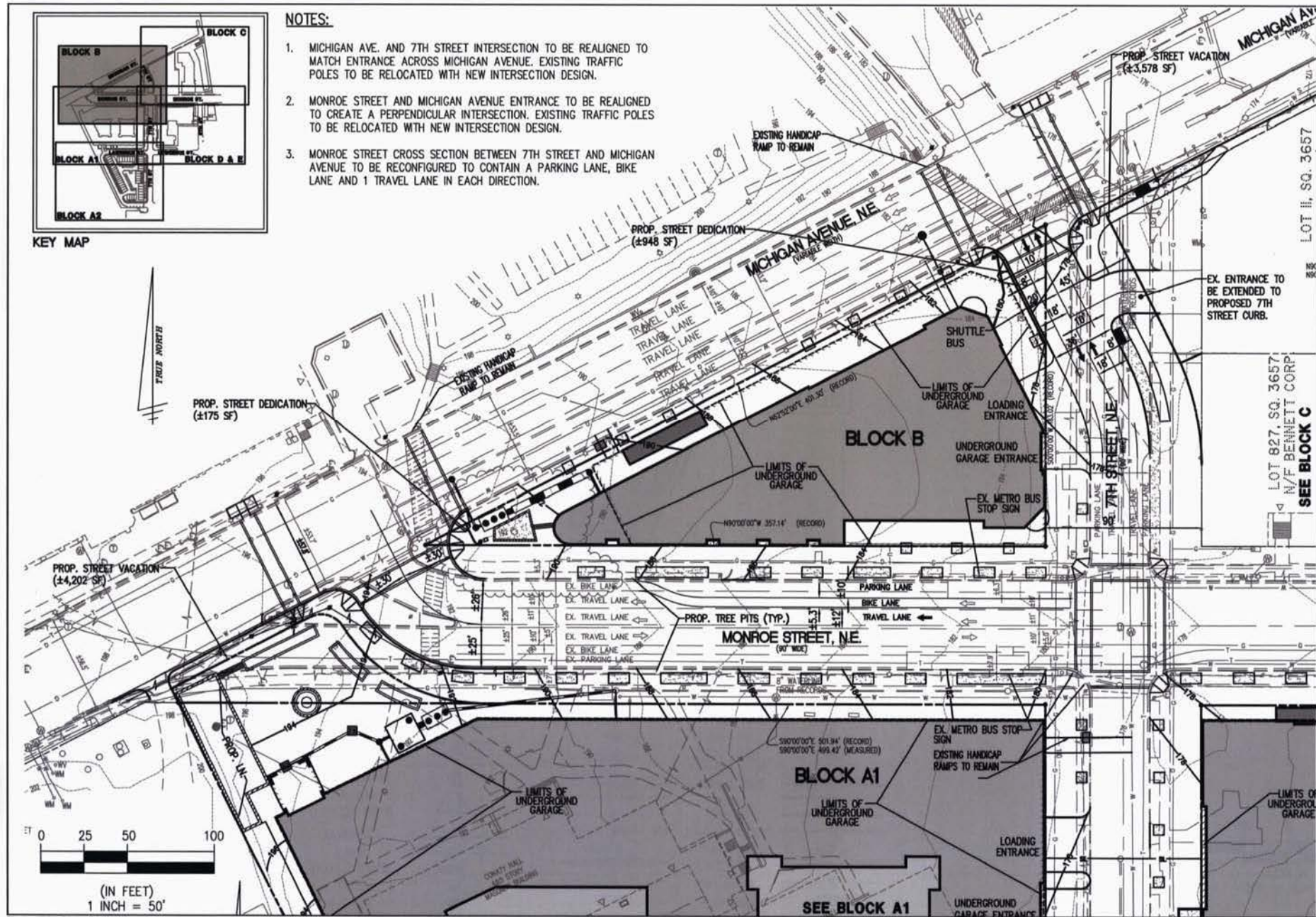
SHEET: C7 OF C31



KEY MAP

NOTES:

1. MICHIGAN AVE. AND 7TH STREET INTERSECTION TO BE REALIGNED TO MATCH ENTRANCE ACROSS MICHIGAN AVENUE. EXISTING TRAFFIC POLES TO BE RELOCATED WITH NEW INTERSECTION DESIGN.
2. MONROE STREET AND MICHIGAN AVENUE ENTRANCE TO BE REALIGNED TO CREATE A PERPENDICULAR INTERSECTION. EXISTING TRAFFIC POLES TO BE RELOCATED WITH NEW INTERSECTION DESIGN.
3. MONROE STREET CROSS SECTION BETWEEN 7TH STREET AND MICHIGAN AVENUE TO BE RECONFIGURED TO CONTAIN A PARKING LANE, BIKE LANE AND 1 TRAVEL LANE IN EACH DIRECTION.



File No. WASH. DC Tax Map No. Job No. 07-076 Cadd Dwg. File: 07076LY01 Xref: 07076BAS

SITE PLAN - BLOCK B

**CATHOLIC UNIVERSITY
OF AMERICA**
WASHINGTON, DC

REVISION	DATE	DESCRIPTION
NO.		

SCALE: 1" = 50'
DATE: 9/5/08
REV. 6/12/09

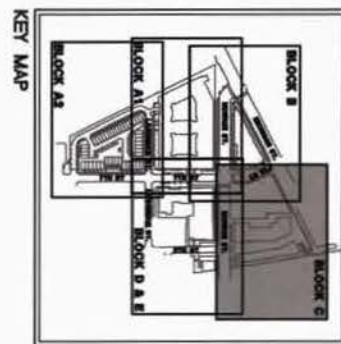
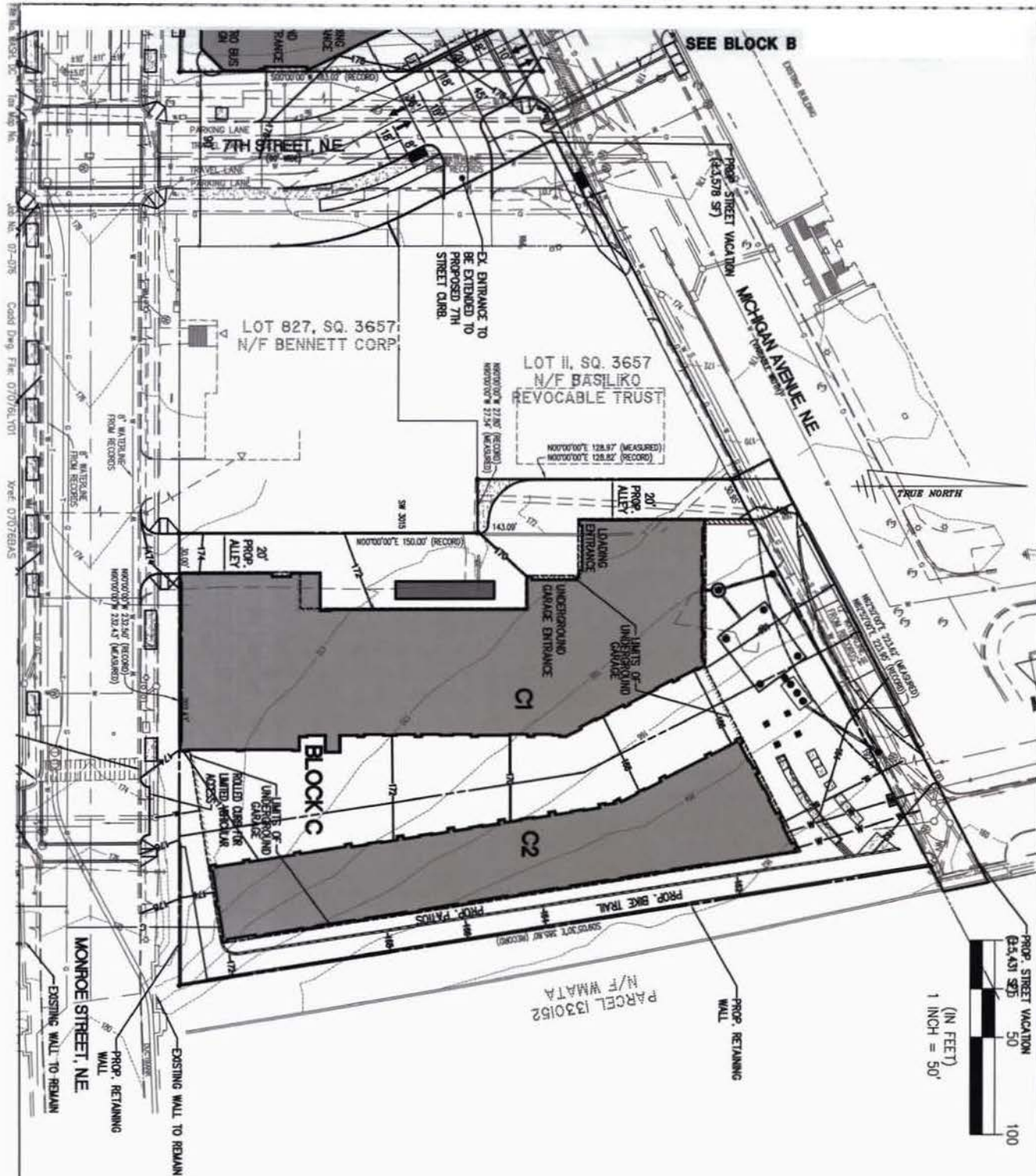


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(703) 532-6963 FAX (703) 533-8301
WWW.WLPINC.COM

LOT 827, SQ. 3657
N/F BENNETT CORP.
SEE BLOCK C

LOT 11, SQ. 3657

SHEET: CB OF C31



SITE PLAN - BLOCK C
CATHOLIC UNIVERSITY
OF AMERICA
WASHINGTON, DC

NO.	REVISION DESCRIPTION	DATE
1	REVISED	9/5/08
2	REVISED	6/12/09

SCALE: 1" = 50'
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 REV: 6/12/09
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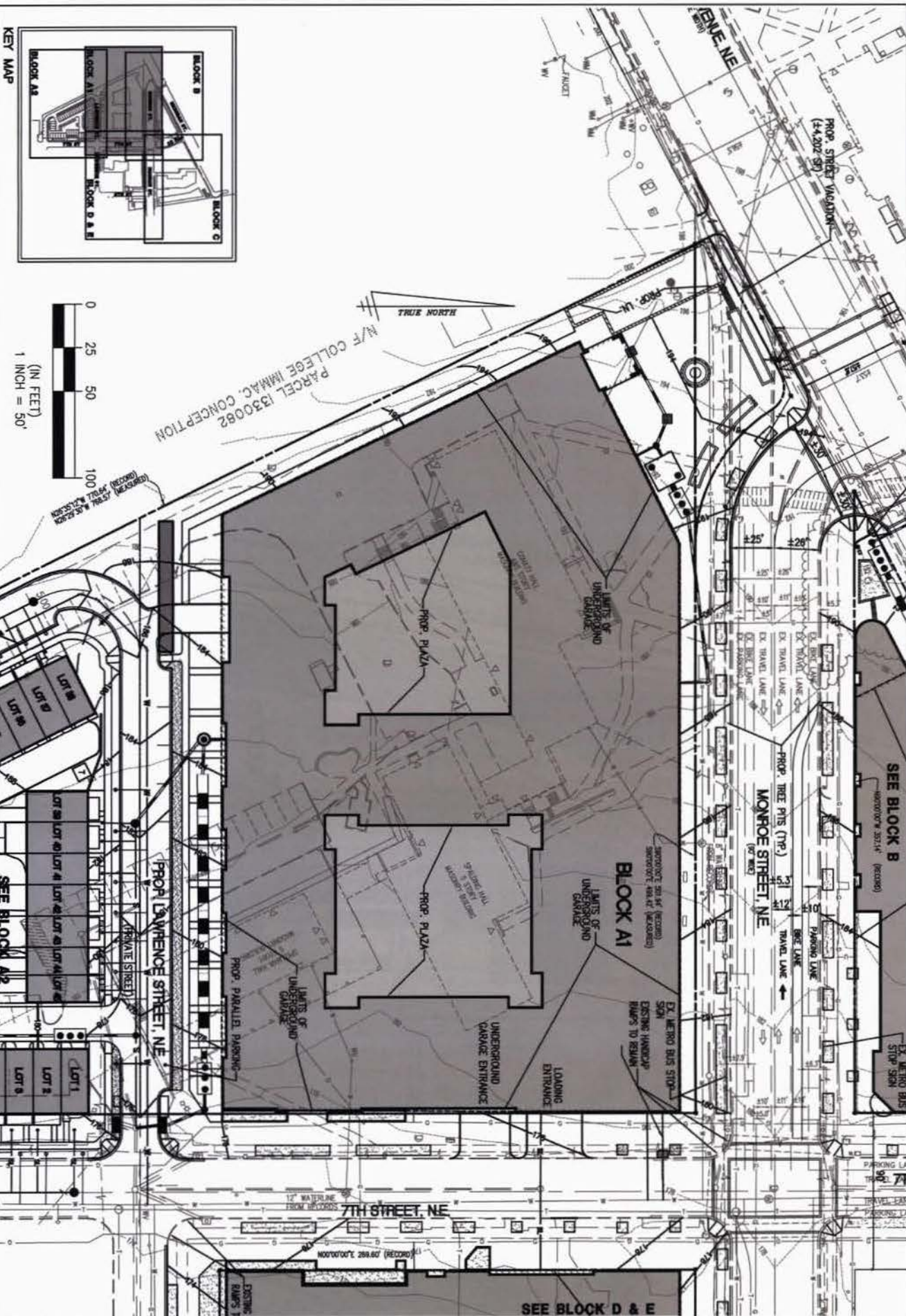


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SHEET 3 OF 3

File No. WASH. DC Tax Map No. Job No. 07-078 Code Desc. File: 07078L.V01 Xref: 07078BAS



SITE PLAN - BLOCK A1

CATHOLIC UNIVERSITY OF AMERICA

WASHINGTON, DC

NO.	REVISION DESCRIPTION	DATE
1	REVISION	DATE

SCALE: 1" = 50'

DATE: 9/5/08

REV: 6/12/09

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WALTER L. PHILLIPS

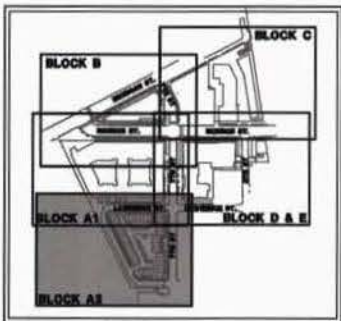
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207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046

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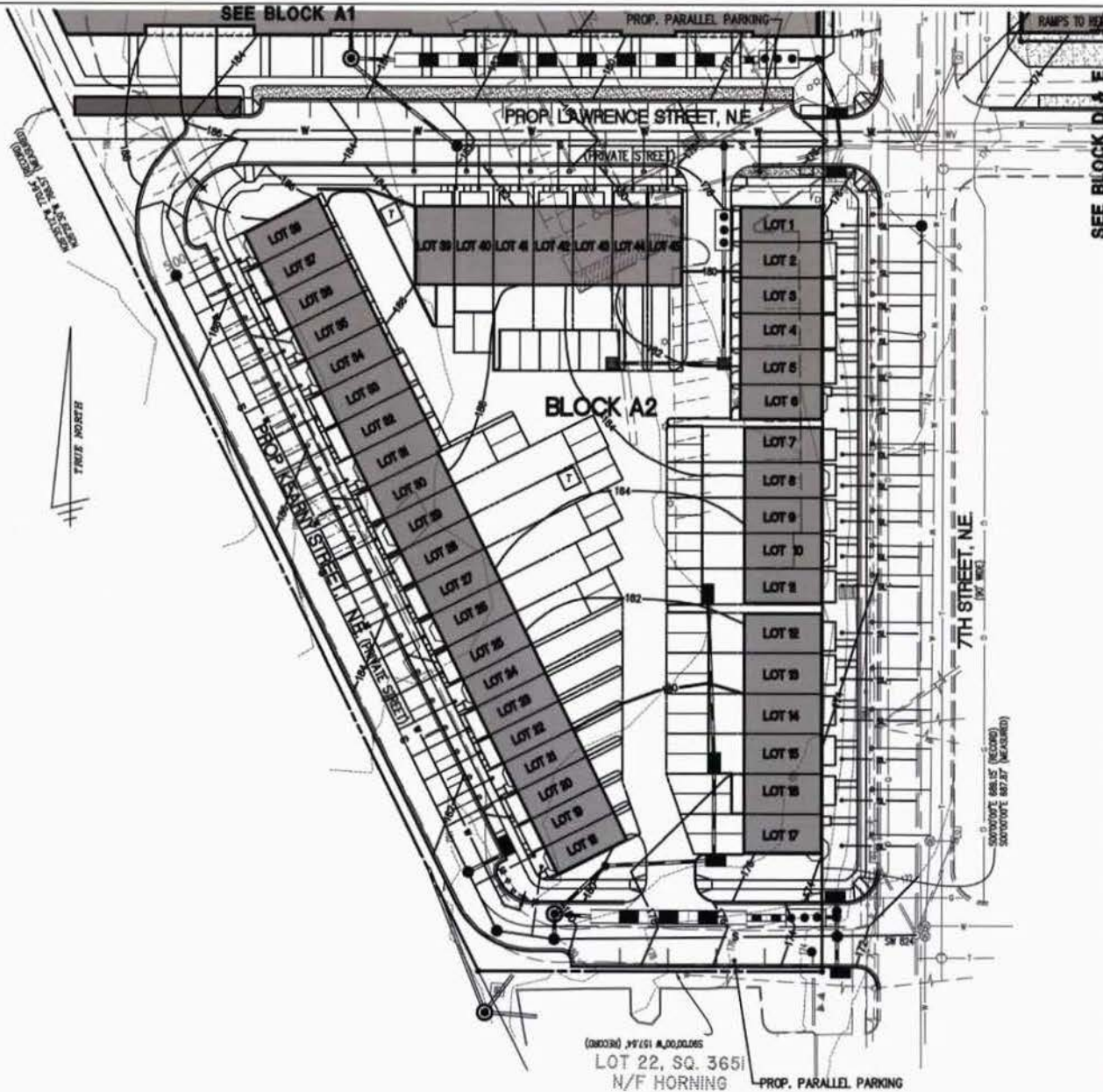


KEY MAP



(IN FEET)
1 INCH = 50'

382
CONCEPTION



SEE BLOCK D & E

SITE PLAN - BLOCK A2
CATHOLIC UNIVERSITY
OF AMERICA
WASHINGTON, DC



SCALE: 1" = 50'
DATE: 9/5/08
REV: 6/12/08

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DATE: 9/5/08
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SCALE: 1" = 50'
DATE: 9/5/08
REV: 6/12/08

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REV: 6/12/08

DATE: 9/5/08
REV: 6/12/08

CONSTRUCTION AND STABILIZATION SEQUENCE:

1. INSTALL SEDIMENT AND EROSION CONTROL MEASURES INCLUDING STABILIZED CONSTRUCTION ENTRANCE, WASH RACK, INLET PROTECTION, SILT FENCE, AS INDICATED ON THE SHEET. SEE SHEET SEDIMENT AND EROSION CONTROL DETAILS.
2. SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR PRIOR TO COMMENCING ANY OTHER LAND DISTURBING ACTIVITIES.
3. REMOVE ITEMS AS INDICATED ON DEMOLITION PLAN.
4. INSTALL SITE IMPROVEMENTS AS INDICATED ON CONSTRUCTION DOCUMENTS FOR THE PROPOSED BUILDING.
5. AT THE COMPLETION OF CONSTRUCTION AND AFTER THE INSPECTOR'S APPROVAL, ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED.

NOTE:

CONTRACTOR TO PROVIDE CHAIN LINK FENCE AT PERIMETER OF THE EXCAVATION AREA.

INSTALL SILT FENCE AT PERIMETER TO REMAIN IN PLACE UNTIL BELOW GRADE EXCAVATION HAS BEEN COMPLETED, UNLESS OTHERWISE APPROVED BY THE INSPECTOR.

DUST CONTROL NOTES:

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIAL, TO BE USED FOR ON-SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES WILL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP WITH DISCHARGE PRESSURE GAUGE.
 - B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
 - C. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI (137.8 K PA) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE, HOSES AND MIST NOZZLES.
 - B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
 - C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND SITE BOUNDARIES.

CONSTRUCTION DATES:

- * EXACT BEGINNING AND END OF CONSTRUCTION IS TO BE ESTABLISHED BY THE OWNER.

TOTAL DISTURBED AREA

AREA = 532,599 SF. = APPROX. 12 AC.

NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF SHEETING AND SHORING AND SUPPORT OF EXISTING UTILITIES AND ADJACENT STRUCTURES. SHORING, BRACING, AND UNDERPINNING DESIGNED BY THE CONTRACTOR'S STRUCTURAL ENGINEER LICENSED IN THE DISTRICT OF COLUMBIA SHALL BE PROVIDED AS NECESSARY TO ENSURE THEIR SUPPORT.

SEDIMENT CONTROL APPROVAL:

PLAN NUMBER:

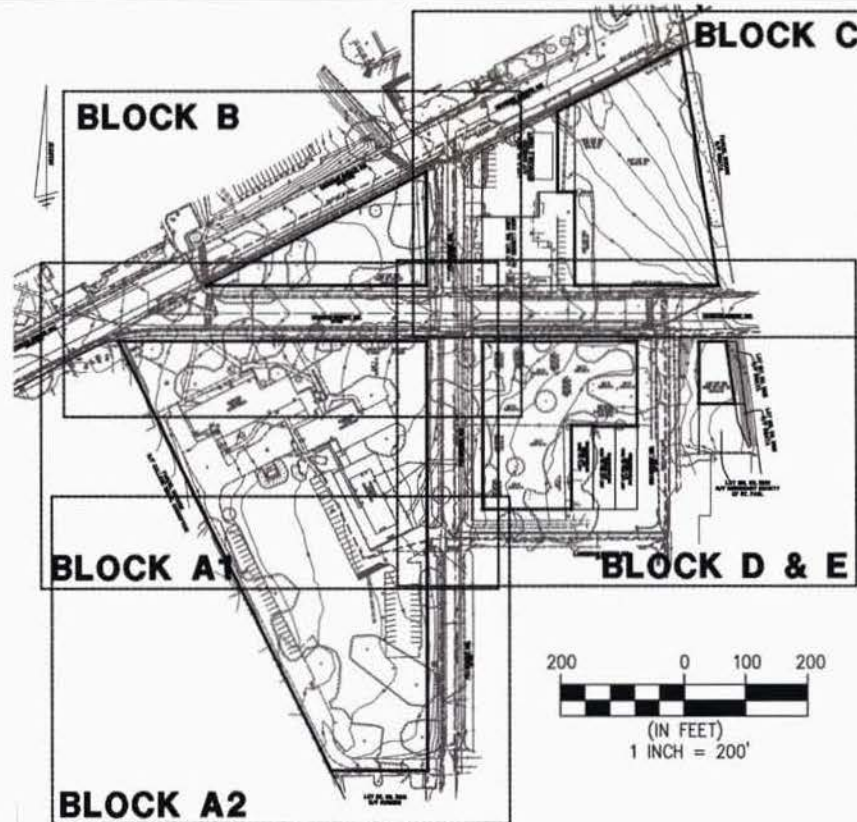
THIS APPROVAL IS FOR GRADING AND SEDIMENT CONTROL ONLY. PERMITEE/ CONTRACTOR IS REQUIRED TO CONSTRUCT DESIGN FEATURE SHOWN HEREON. HE SHALL NOTIFY THIS OFFICE AT NUMBER LISTED BELOW AT LEAST 24 HOURS BEFORE START OF GRADING ACTIVITY, AND WITHIN TWO WEEKS AFTER COMPLETION OF PROJECT FOR FINAL INSPECTION.

DATE

EROSION AND SEDIMENT CONTROL BRANCH

FOR FURTHER INFORMATION, PLEASE CALL:
GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH ADMINISTRATION
WATERSHED PROTECTION DIVISION

51 N. STREET, N.E., 5TH FLOOR
WASHINGTON, D.C. 20002
FAX NO. (202) 535-1364
TEL NO. (202) 535-2240



EROSION AND SEDIMENT CONTROL MEASURES AND SEQUENCE:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
2. PROVIDE TEMPORARY STONE CONSTRUCTION ENTRANCE AND WASH RACK WHERE SHOWN. PROVIDE WATER SOURCE AND HOSE TO CLEAN ALL EQUIPMENT LEAVING SITE.
3. NO DISTURBED AREA WILL BE DENuded FOR MORE THAN 7 CALENDAR DAYS. INSTALL THE NECESSARY TEMPORARY OR PERMANENT VEGETATIVE STABILIZATION MEASURES TO ACHIEVE ADEQUATE EROSION AND SEDIMENT CONTROL.
4. ALL CONSTRUCTION TO BE INSPECTED DAILY BY THE CONTRACTOR, AND ANY DAMAGE SILTATION OR EROSION CONTROL DEVICES OR MEASURES WILL BE REPAIRED AT THE CLOSE OF THE DAY.
5. STABILIZED CONSTRUCTION ENTRANCES TO BE PERIODICALLY SUPPLEMENTED WITH ADDITIONAL STONE AS NEEDED.
6. CONTROLS WILL BE REMOVED AFTER THEIR CONTRIBUTING BASINS HAVE BEEN PERMANENTLY STABILIZED.

SILTATION EROSION CONTROL NOTES:

1. ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE INSTALLED BEFORE THE START OF ANY EXCAVATION AND/OR CONSTRUCTION AS PER STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR THE DISTRICT OF COLUMBIA. IF AN OFF-SITE INSPECTION REVEALS FURTHER EROSION CONTROL MEASURES ARE NECESSARY, THE SAME SHALL BE PROVIDED.
2. ALL DEBRIS IS TO BE REMOVED.
3. ALLEY AND/OR STREET SHALL BE SWEEPED CLEAN AT ALL TIMES DURING EXCAVATION AND CONSTRUCTION.
4. ALL SEDIMENT AND EROSION CONTROL MEASURES TO BE INSPECTED DAILY BY THE CONTRACTOR. ANY DAMAGED DEVICE OF MEASURE WILL BE REPLACED BY THE CLOSE OF DAY OR AS DIRECTED BY THE ARCHITECT.
5. ALL VEHICLES LEAVING THE SITE SHALL EXIT THROUGH THE CONSTRUCTION ENTRANCE ONLY AND SHALL BE WASHED DOWN TO REMOVE MUD FROM TIRES BEFORE ENTERING THE STREET. CONSTRUCTION ENTRANCE TO BE MAINTAINED IN GOOD WORKING CONDITIONS.
6. ALL CATCH BASINS AND AREA DRAINS SHALL BE PROTECTED DURING EXCAVATION AND CONSTRUCTION.
7. IF ANY CATCH BASIN OR DRAIN BECOMES CLOGGED AS A RESULT OF EXCAVATION OR CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS IMMEDIATE CLEANING.
8. ALL DISTURBED AREAS WITHIN THE LIMITS OF DISTURBANCE BOUNDARY NOT SHOWN TO BE PAVED SHALL BE SEEDED OR SODED AS PER DC SPECIFICATIONS WITHIN SEVEN DAYS OF DISTURBANCE.
9. WHEN SEDIMENT TRAP/SEDIMENT TANK HAS REACHED 87% CAPACITY, CLEAN OUT OF SAME IS REQUIRED ANY STOCKPILING, REGARDLESS OF LOCATION ON SITE SHALL BE STABILIZED WITHIN 14 DAYS AND COVERED WITH PLASTIC OF CANVAS, AFTER ITS ESTABLISHMENT AND FOR THE DURATION OF THE PROJECT.
10. AFTER RAZE OR DEMOS THERE IS NEED FOR GROUND COVER TO PREVENT EROSION AND SEDIMENT RUNOFF FROM OCCURRING. SUCH AS SEED, SOO, PAVING, BROCKBRACK OR MULCH, ETC.
11. AT THE COMPLETION OF CONSTRUCTION PROJECT AND AFTER THE DC EROSION AND SEDIMENT CONTROL INSPECTOR APPROVAL, ALL TEMPORARY SILTATION, SEDIMENTATION AND EROSION CONTROL MEASURES AND DEVICES SHALL BE REMOVED AND ALL DENuded AREAS SHALL BE PERMANENTLY STABILIZED.

LEGEND

- | | |
|--|--------------------------------------|
| | IP INLET PROTECTION |
| | SCE STABILIZED CONSTRUCTION ENTRANCE |
| | SF SILT FENCE |
| | SSF SUPER SILT FENCE |
| | TP TREE PROTECTION |
| | SP SUMP AND PUMP |
| | ST SEDIMENT TANK |
| | ST-II SEDIMENT TRAP - TYPE II |

SEDIMENT AND EROSION CONTROL PLAN - OVERALL

CATHOLIC UNIVERSITY
OF AMERICA
WASHINGTON, DC

SCALE: 1" = 200'

DATE: 9/5/08

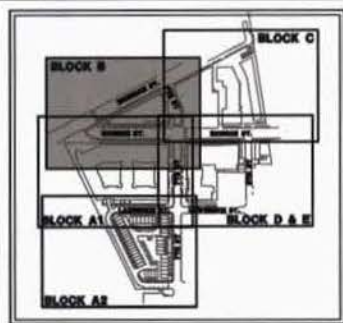
REV. 6/12/09

DRAWN: MWF

WALTER L. PHILLIPS
INCORPORATED

Civil Engineers - Land Surveyors - Planners - Landscape Architects
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 552-6963 FAX (703) 553-1501
WWW.WLPHINC.COM

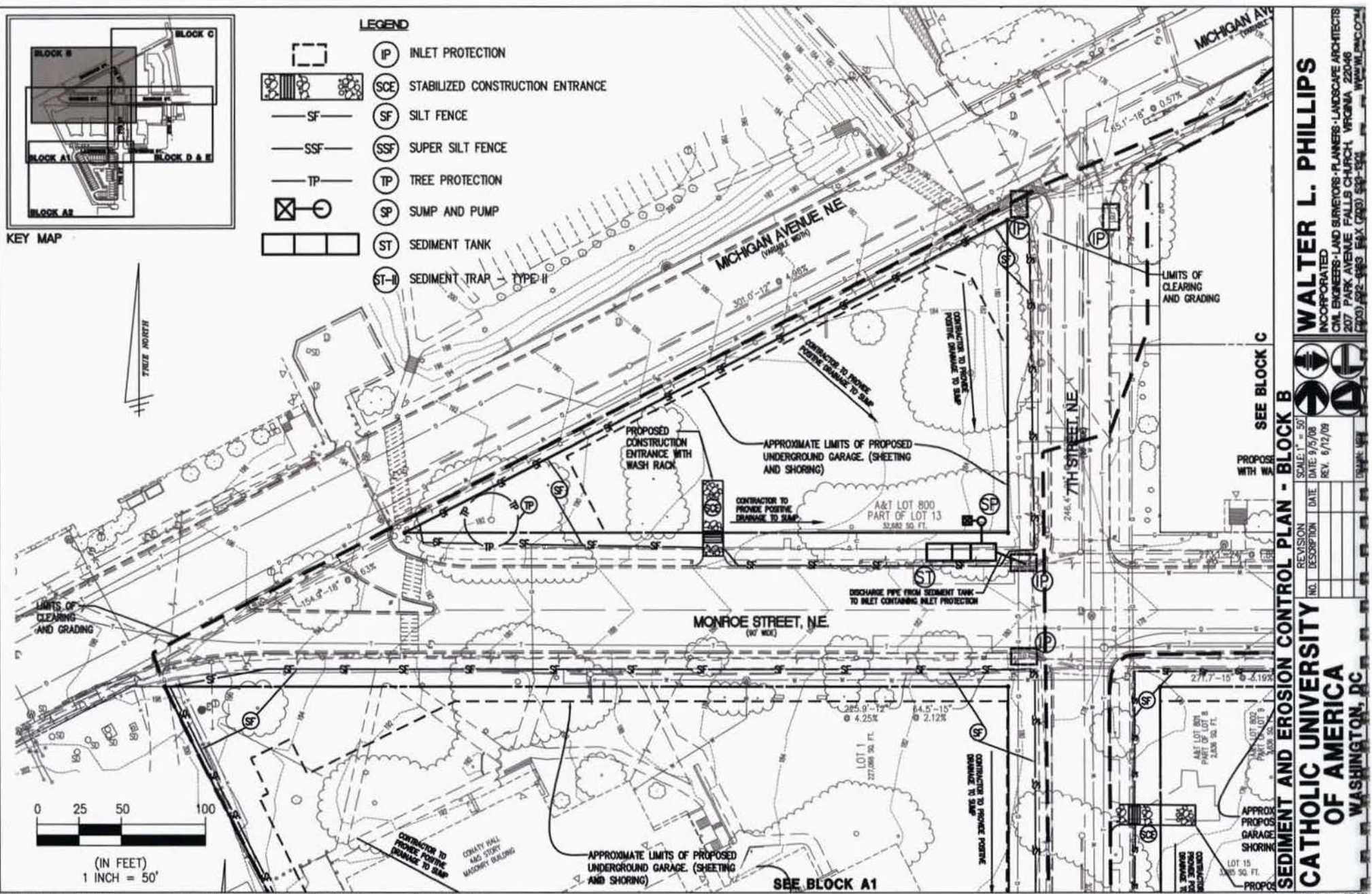
SHEET: C13 OF C31



KEY MAP



- LEGEND**
- IP INLET PROTECTION
 - SCE STABILIZED CONSTRUCTION ENTRANCE
 - SF SILT FENCE
 - SSF SUPER SILT FENCE
 - TP TREE PROTECTION
 - SP SUMP AND PUMP
 - ST SEDIMENT TANK
 - ST-II SEDIMENT TRAP - TYPE II



SEDIMENT AND EROSION CONTROL PLAN - BLOCK B

WALTER L. PHILLIPS
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207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 492-9850 FAX (703) 492-1546 WWW.WLPINC.COM

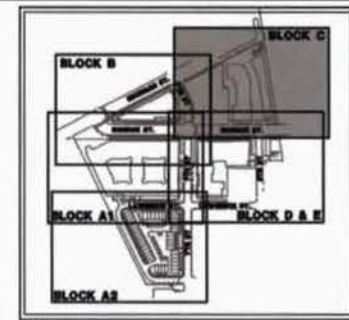
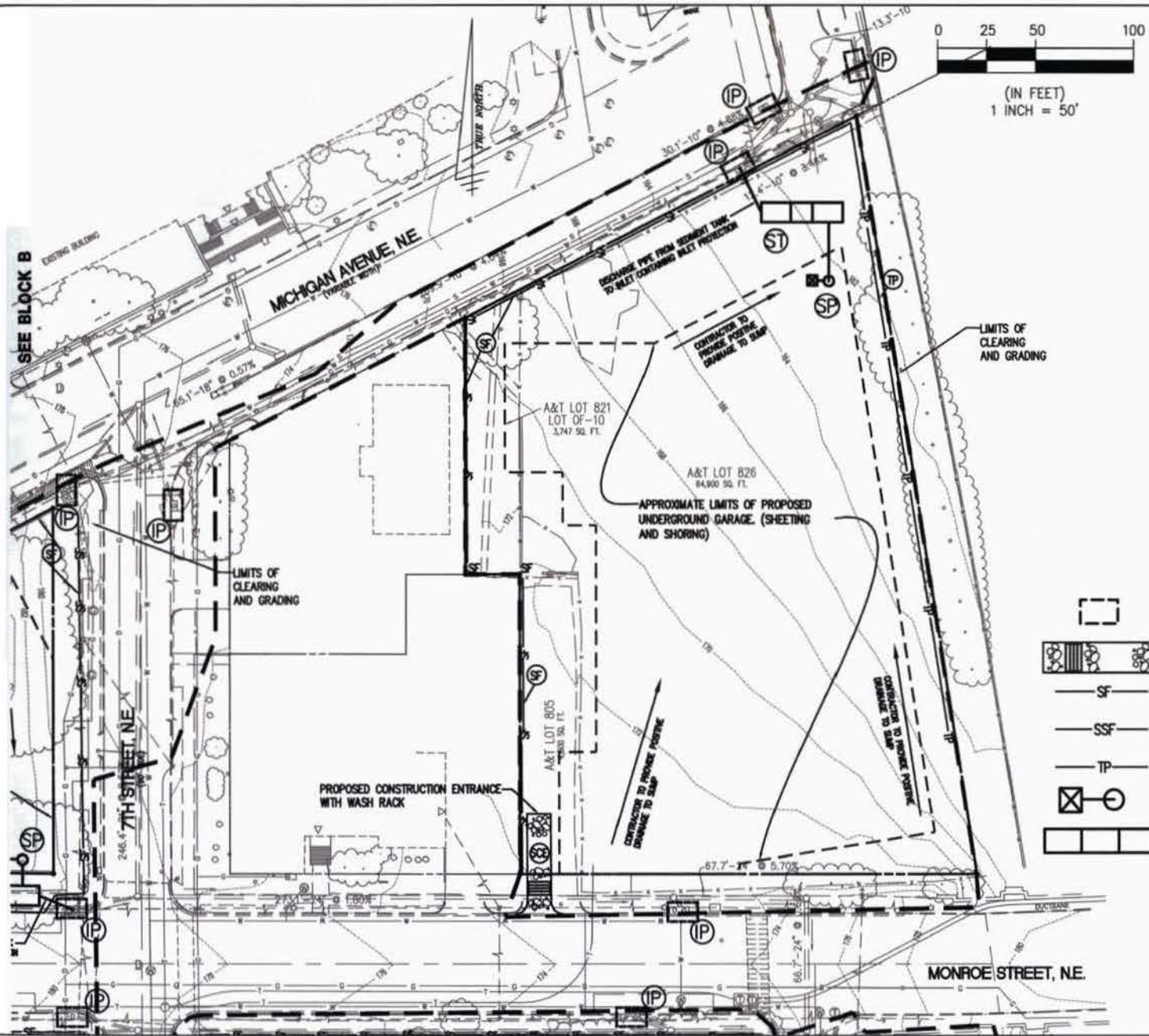
CATHOLIC UNIVERSITY OF AMERICA
WASHINGTON, DC

REVISION	DATE	DESCRIPTION
1	6/12/08	DATE 6/12/08

SCALE: 1" = 50'
DATE: 6/12/08
REV: 6/12/08

SHEET: C14 OF C31

SEE BLOCK B



KEY MAP

LEGEND

- [Symbol] INLET PROTECTION
- [Symbol] STABILIZED CONSTRUCTION ENTRANCE
- [Symbol] SILT FENCE
- [Symbol] SUPER SILT FENCE
- [Symbol] TREE PROTECTION
- [Symbol] SUMP AND PUMP
- [Symbol] SEDIMENT TANK
- [Symbol] SEDIMENT TRAP - TYPE II

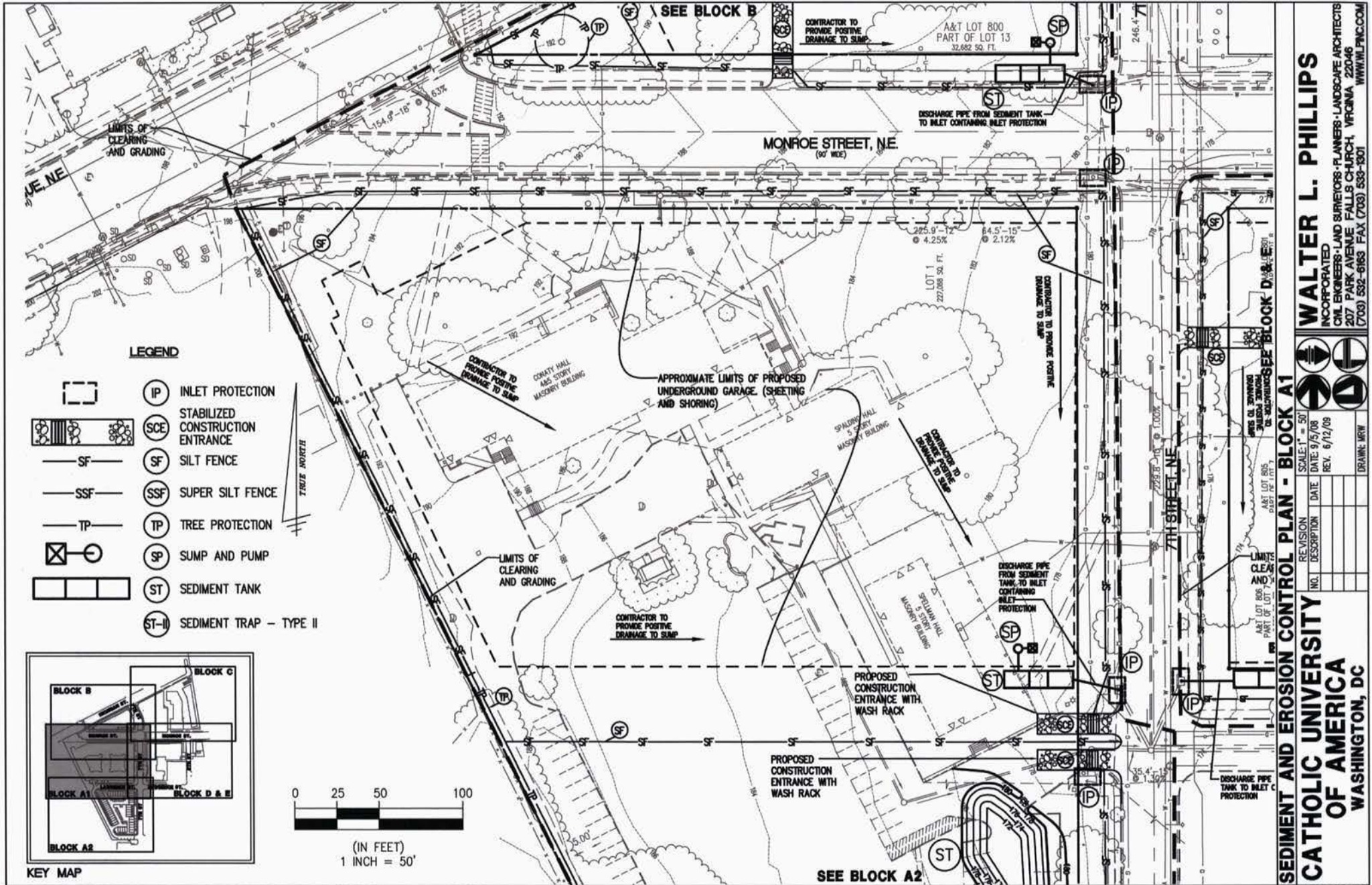
SEE BLOCK D & E

SEDIMENT AND EROSION CONTROL PLAN - BLOCK C

CATHOLIC UNIVERSITY
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WASHINGTON, DC

NO.	REVISION	DATE	DESCRIPTION
1		9/2/08	DATE
2		6/12/09	REV.

WALTER L. PHILLIPS
INCORPORATED
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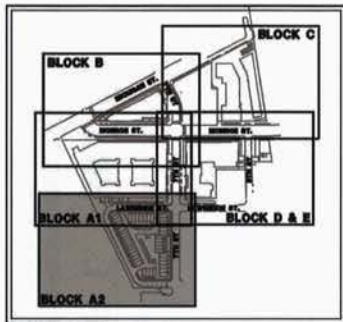
SEDIMENT AND EROSION CONTROL PLAN - BLOCK A1

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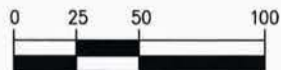
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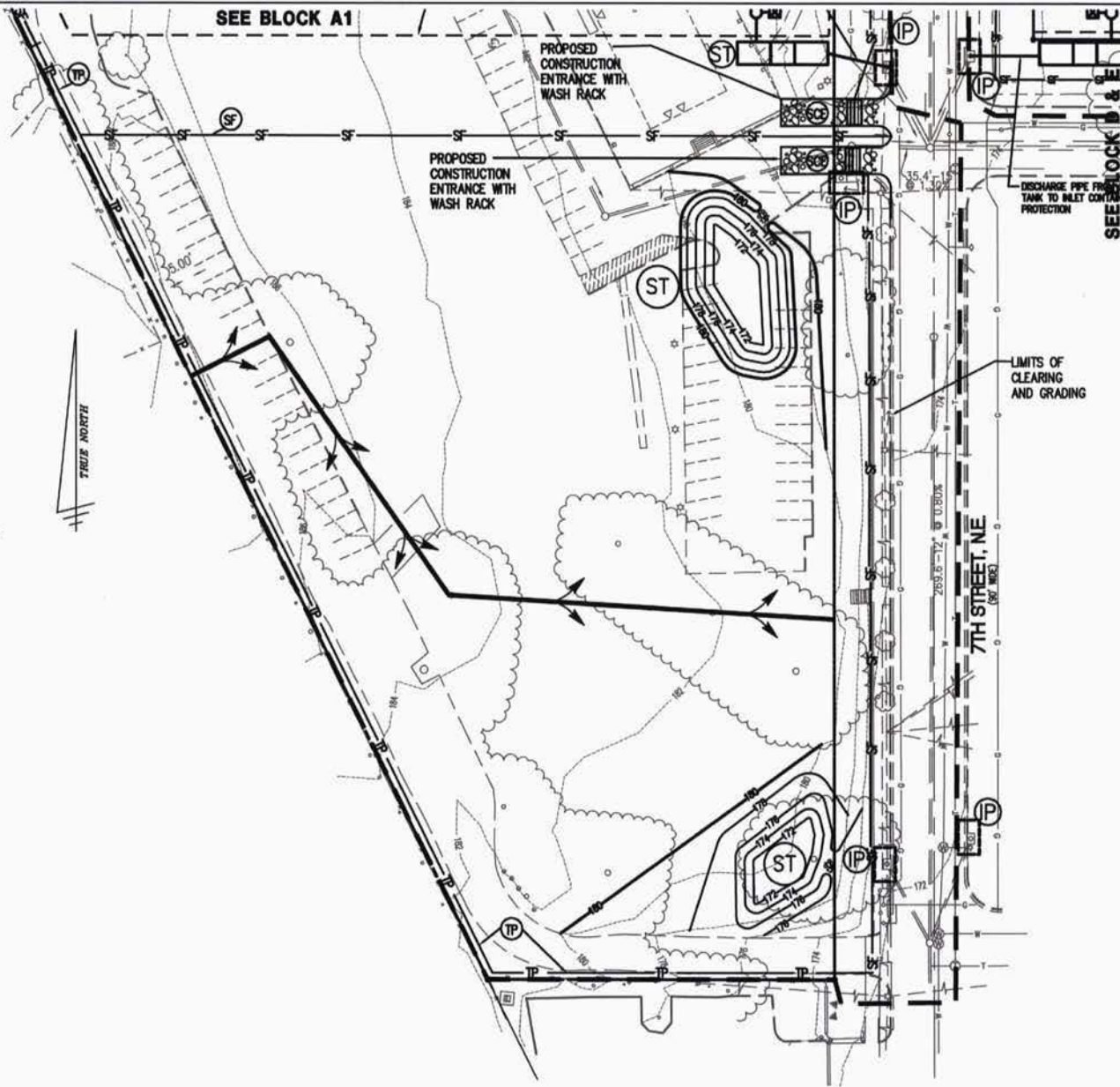
KEY MAP

LEGEND

- | | |
|--|--|
| | (IP) INLET PROTECTION |
| | (SCE) STABILIZED CONSTRUCTION ENTRANCE |
| | (SF) SILT FENCE |
| | (SSF) SUPER SILT FENCE |
| | (TP) TREE PROTECTION |
| | (SP) SUMP AND PUMP |
| | (ST) SEDIMENT TANK |
| | (ST-II) SEDIMENT TRAP - TYPE II |



(IN FEET)
1 INCH = 50'



SEDIMENT AND EROSION CONTROL PLAN - BLOCK A2

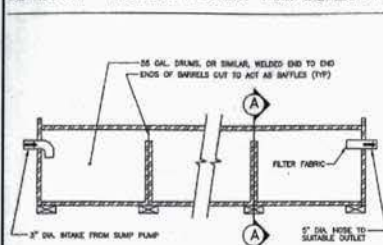
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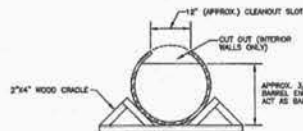


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DETAIL 34 - PORTABLE SEDIMENT TANK (HORIZONTAL)

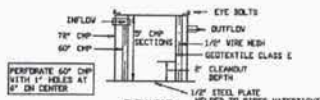


ELEVATION

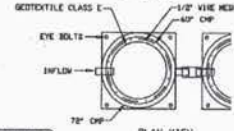


CROSS-SECTION A-A

DETAIL 35 - PORTABLE SEDIMENT TANK (VERTICAL)



ELEVATION

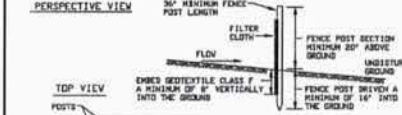
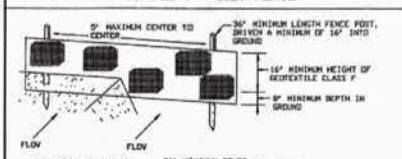


PLAN VIEW

Construction Specifications

1. The following formula should be used in determining the storage volume of the sediment tank: 1 cubic foot of storage for each gallon per minute of pump discharge capacity.
2. An example of a typical sediment tank is shown above. Other container designs can be used if the storage volume is adequate and approval is obtained from the local approving agency.
3. Tanks may be connected in series.

DETAIL 4 - SILT FENCE



JOINING TWO ADJACENT SILT FENCE SECTIONS

Construction Specifications

1. Fence posts shall be a minimum of 36\"/>
 - Tensile Strength 50 lbs/in (min.)
 - Tensile Modulus 80 lbs/in (min.)
 - Flex Rate 0.3 gal/ft²/minute (max.)
 - Filtering Efficiency 75% (min.)
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

 - Tensile Strength 50 lbs/in (min.)
 - Tensile Modulus 80 lbs/in (min.)
 - Flex Rate 0.3 gal/ft²/minute (max.)
 - Filtering Efficiency 75% (min.)

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

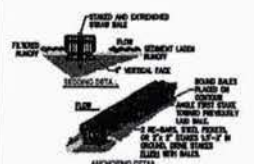


STABILIZED CONSTRUCTION ENTRANCE

(NOT TO SCALE)

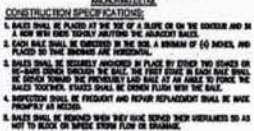
CONSTRUCTION RAMP SPECIFICATION

1. STRIKE - USE 2\"/>
 - 1. STRIKE - USE 2\"/>
 - 2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 10 FEET EXCEPT ON A SLOPE EXCEEDING 1:1 WHERE A 20 FOOT MINIMUM LENGTH HOLDS APPLIES.
 - 3. THICKNESS - NOT LESS THAN 6\"/>
 - 4. WIDTH - 10\"/>
 - 5. FILTER FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STRIKE. FILTER FABRIC WILL BE SECURED ON A SINGLE TIGHT RESIDUAL USE.
 - 6. SURFACE WEAR - ALL SURFACE WEAR PLACING OR UNDOING STRIKE CONSTRUCTION ENTRANCE SHALL BE DONE USING THE EXISTING 1\"/>
 - 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OF MATERIAL ONTO PUBLIC RIGHTS-OF-WAY, BUT NOT INCLUDING EXCESSIVE TOP DRESSING WITH APPROVED TYPE OF CONSTRUCTION GRAVEL. WHEN THE ENTRANCE IS TO BE REMOVED, THE STRIKE SHALL BE REMOVED, ALL SURFACE WEAR, GRAVEL, WHEELS OR TRACKS ON PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - 8. WHEELS - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO EXPOSURE ONTO PUBLIC RIGHTS-OF-WAY. WHEN TRACKING IS REDUCED, IT SHALL BE DONE ON AN AREA STABILIZED WITH FENCE WHICH GRABES INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - 9. POSSIBLE INSPECTION AND REPAIR MAINTENANCE SHALL BE PROMPTED AFTER EACH RAIN.



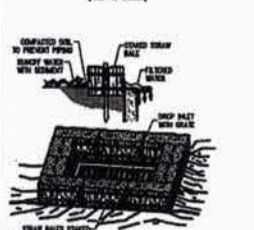
VEHICLE WASH DETAIL

(NOT TO SCALE)



STRAW BALE DIKE

(NOT TO SCALE)



STRAW BALE DROP INLET SEDIMENT FILTER

(NOT TO SCALE)



CONSTRUCTION SPECIFICATIONS

1. THE BACKFILL ARE OPTIONAL.
2. THE BACKFILL SHOULD BE CONSTRUCTED BY PERFORMING A 12\"/>
- 3. A HOLE OF 2\"/>
- 4. THE BACKFILL SHOULD BE 12\"/>
- 5. IF BACKFILL WILL BE PLACED DIRECTLY TO A STORM DRAINAGE SYSTEM, THE BACKFILL SHOULD BE REMOVED WITH FLEXIBLE CLEANING INSTALLATION. IF BACKFILL 12\"/>
- 6. THE BACKFILL SHOULD BE 12\"/>

STANDARDS AND SPECIFICATIONS FOR BRICKBAT GROUND COVER

DEFINITION

TEMPORARY FENCING OVER CONSTRUCTION OF BRICKBAT (1/2\"/>

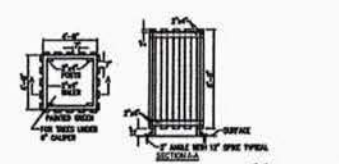
BRICKBAT GROUND COVER

CONSTRUCTION SPECIFICATIONS

1. THE BACKFILL ARE OPTIONAL.
2. THE BACKFILL SHOULD BE CONSTRUCTED BY PERFORMING A 12\"/>
- 3. A HOLE OF 2\"/>
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- 6. THE BACKFILL SHOULD BE 12\"/>

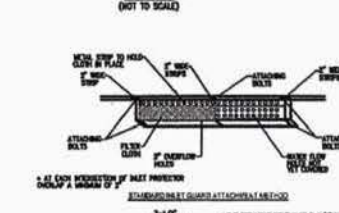
BRICKBAT DETAIL

(NOT TO SCALE)



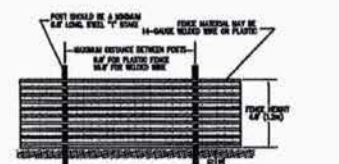
TYPICAL TREE PROTECTION FENCING

(NOT TO SCALE)



CONSTRUCTION SPECIFICATIONS

1. THE BACKFILL ARE OPTIONAL.
2. THE BACKFILL SHOULD BE CONSTRUCTED BY PERFORMING A 12\"/>
- 3. A HOLE OF 2\"/>
- 4. THE BACKFILL SHOULD BE 12\"/>
- 5. IF BACKFILL WILL BE PLACED DIRECTLY TO A STORM DRAINAGE SYSTEM, THE BACKFILL SHOULD BE REMOVED WITH FLEXIBLE CLEANING INSTALLATION. IF BACKFILL 12\"/>
- 6. THE BACKFILL SHOULD BE 12\"/>



TREE PROTECTION FENCE

INSTALLATION DETAIL

(NOT TO SCALE)

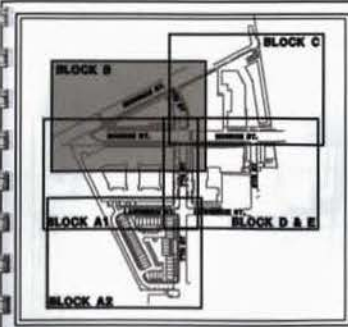
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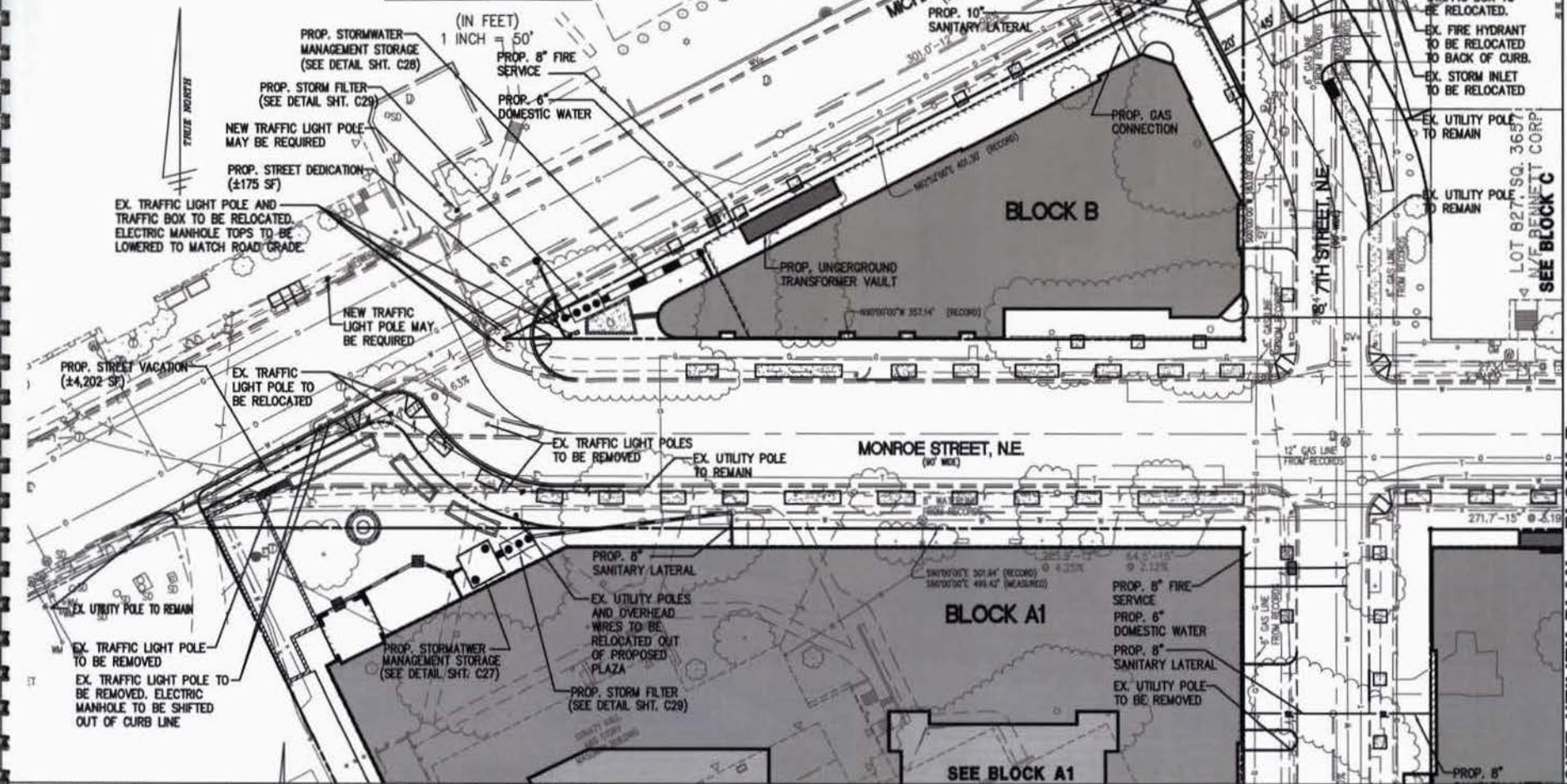
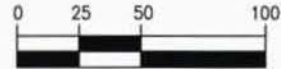
REVISION	NO.	DESCRIPTION	DATE

SEDIMENT AND EROSION DETAILS
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NOTES:

1. ALL PROPOSED DOMESTIC AND FIRE TAPS AND WATERLINES TO MEET PER DC/WASA STANDARDS AND SPECIFICATIONS.
2. ALL PROPOSED SEWER TAPS, MANHOLES, INLETS AND PIPES TO MEET DC/WASA STANDARDS AND SPECIFICATIONS.
3. ALL EXISTING UTILITY POLES AND OVERHEAD WIRES TO REMAIN UNLESS OTHERWISE STATED.
4. THIS IS A COMBINED SEWER AREA.
5. WATER AND SEWER AUTHORITY (WASA) EASEMENTS ARE TO BE PROVIDED WHERE EXISTING UTILITIES ARE LOCATED WITHIN PROPOSED STREET VACATION AREAS.



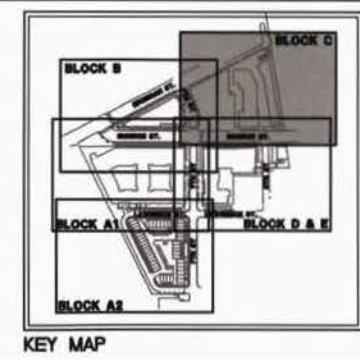
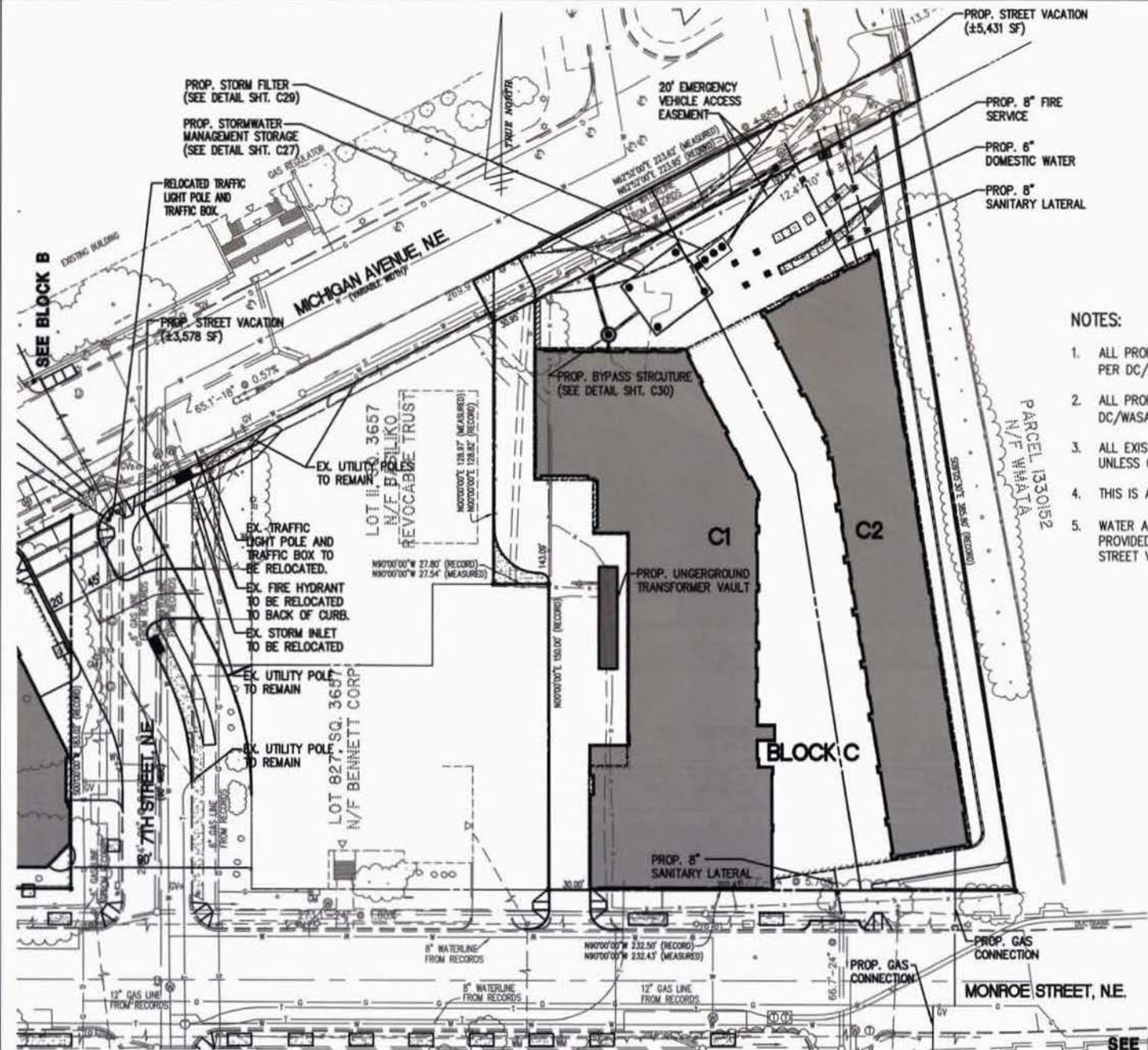
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DATE: 9/5/08
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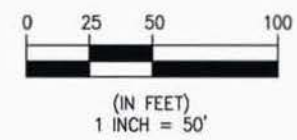
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SITE UTILITY PLAN - BLOCK B
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NOTES:

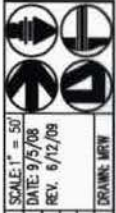
1. ALL PROPOSED DOMESTIC AND FIRE TAPS AND WATERLINES TO MEET PER DC/WASA STANDARDS AND SPECIFICATIONS.
2. ALL PROPOSED SEWER TAPS, MANHOLES, INLETS AND PIPES TO MEET DC/WASA STANDARDS AND SPECIFICATIONS.
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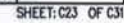
SITE UTILITY PLAN - BLOCK C

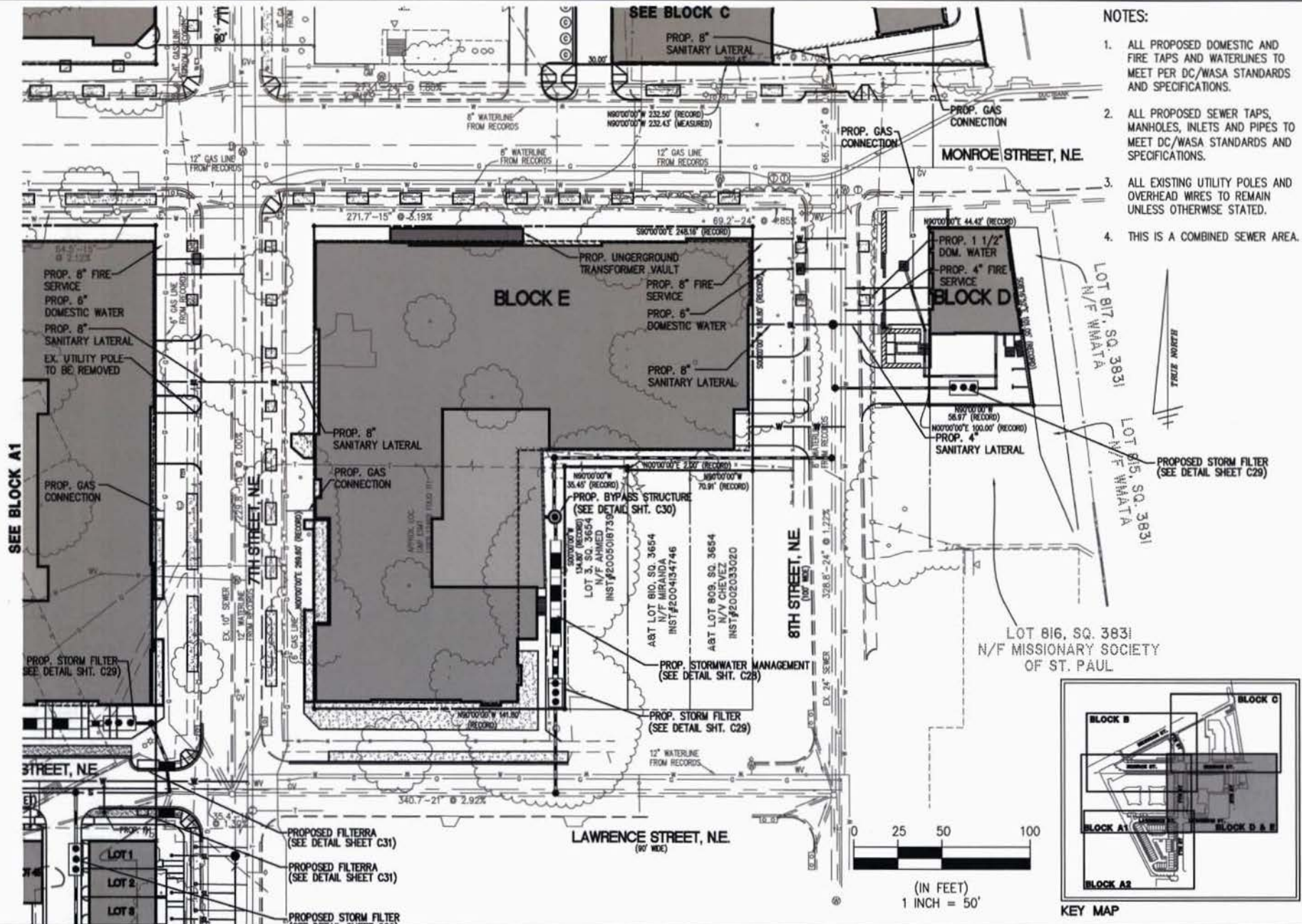
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- NOTES:**
1. ALL PROPOSED DOMESTIC AND FIRE TAPS AND WATERLINES TO MEET PER DC/WASA STANDARDS AND SPECIFICATIONS.
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 4. THIS IS A COMBINED SEWER AREA.

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1	DESCRIPTION	

KEY MAP



22046
2077

DC/WASA GENERAL NOTES:

1. NOTIFY DC/WASA ONE WEEK PRIOR TO START OF CONSTRUCTION, UTILITY INSPECTION SECTION AT 202-787-2377, WATER SERVICES 202-612-3490 OR 3460 AND SEWER SERVICES 202-284-3824 OR 3829.
2. DEVELOPERS, CONTRACTORS AND PLUMBERS MUST SUBMIT FINAL CONSTRUCTION AS-BUILT INFORMATION TO APPROPRIATE DC/WASA INSPECTOR(S) FOR REVIEW AND APPROVAL.
3. ONCE THE WASA INSPECTOR APPROVES THE AS-BUILT, A COPY MUST BE SUBMITTED TO THE DOCUMENTS AND PERMITS OFFICE AT ROOM 203 AND THE WATER AND SEWER DESIGN SECTION AT 5090 OVERLOOK AVENUE, S.W., 5TH FLOOR.
4. UNDER DC/WASA CUSTOMER FEES AND CHARGES, CONTRACTORS, PLUMBERS, OWNERS ARE RESPONSIBLE FOR EXCAVATIONS, BACKFILLING, REPAVING AND RESTORATION OF PUBLIC SPACE FOR STREET AND SIDEWALKS CUTS, FOR NEW UTILITIES, CONNECTIONS, TAPS AND ABANDONMENT OF SERVICES WITHIN PUBLIC SPACE UNDER DC/WASA INSPECTION. DC/WASA IS NOT RESPONSIBLE FOR FINAL RESTORATION OF STREET AND SIDEWALK CUTS PERFORMED.

METER & METER TRANSMITTING DEVICES NOTES:

THE AUTHORITY HAS INSTALLED A FIXED NETWORK AUTOMATIC METER READING SYSTEM. THIS SYSTEM WILL ELIMINATE THE REQUIREMENT TO READ METERS MANUALLY. METERS INSTALLED BY WASA OR PRIVATE OWNERS OF METERS WILL NEED TO MEET THE FOLLOWING SPECIFICATIONS IN ORDER FOR WASA TO READ METERS AUTOMATICALLY:

1. METERS, INSTALLATIONS AND INSPECTIONS MUST COMPLY WITH ALL DCMR CODES AND SPECIFICATIONS.
2. ALL NEW METERS INSTALLED, INCLUDING PRIVATELY OWNED METERS MUST BE "TRUE ABSOLUTE ENCODER" TYPE METERS OR "DIRECT-READ" METERS THAT CONVERT METER READINGS TO DIGITAL PULSES FROM THE METER REGISTERS.
3. ALL METER REGISTERS SHOULD BE ABLE TO CONVERT ALL THE DIALS IN THE METER REGISTER TO DIGITAL PULSES.
4. THE METERS MUST MEASURE WATER IN 100 CUBIC FEET INCREMENTS. ALL NEW METERS MUST HAVE A METER READING TRANSMITTING UNIT ATTACHED TO THE METER REGISTERS, SEALED SO AS TO MAKE IT WATER TIGHT. THE TRANSMITTING UNIT SHOULD BE PROGRAMMABLE TO DCWASA'S FCC APPROVED RADIO FREQUENCY, AND COMPATIBLE WITH HEXAGRAM, INC. HARDWARE AND SOFTWARE.
5. ALL NEW METERS 3" OR GREATER MUST HAVE TEST PLUG IN THE METER.
6. ALL NEW METERING CONFIGURATIONS SHOULD HAVE STRAINER WHERE APPROPRIATE TO MANUFACTURER'S SPECIFICATIONS.

PRELIMINARY GAS DEMAND

BUILDING A-1:	3 ROOFTOP VENTILATION UNITS, 780 CFH EACH	2,340 CFH
	306 GAS RANGES, 40 CFH EACH	12,320 CFH
	RETAIL ALLOWANCE	2,000 CFH
BUILDING A-2:	45 GAS FURNACES, 75 CFH EACH	3,375 CFH
	45 DOMESTIC WATER HEATERS, 40 CFH EACH	1,800 CFH
	45 GAS RANGES, 40 CFH EACH	1,800 CFH
BUILDING B:	2 ROOFTOP VENTILATION UNITS, 530 CFH EACH	1,060 CFH
	140 GAS RANGES, 40 CFH EACH	5,600 CFH
	RETAIL ALLOWANCE	2,000 CFH
BUILDING C:	2 ROOF TOP VENTILATION UNITS, 580 CFH EACH	1,160 CFH
	152 GAS RANGES, 40 CFH EACH	6,080 CFH
	RETAIL ALLOWANCE	2,000 CFH
BUILDING D:	BUILDING HEAT, 100 MBH	100 CFH
	DOMESTIC WATER HEATER, 40 MBH	40 CFH
BUILDING E:	2 ROOFTOP VENTILATION UNITS, 610 CFH EACH	1,220 CFH
	214 GAS RANGES, 40 CFH EACH	8,560 CFH
	RETAIL ALLOWANCE	2,000 CFH
	TOTAL	44,795 CFH

OUTSIDE LOCATIONS:

- A. THE NEW METER LID MUST BE OF A COMPOSITION AND TENSILE STRENGTH SO AS TO PERMIT A RADIO SIGNAL TO PROPAGATE THROUGH THE METER LID AND SECURE THE METER PIT, AGAINST LIGHT VEHICLE TRAFFIC AND PEDESTRIAN FOOT TRAFFIC. LARGE METER INSTALLATIONS MUST HAVE METER LIDS THAT MAY WITHSTAND HEAVY VEHICLE TRAFFIC.
- B. THE RADIO-TRANSMITTING DEVICE MUST BE SECURELY ANCHORED TO THE UNDERSIDE OF THE NEW TRANSMITTER FRIENDLY METER LID, SO AS TO PERMIT A RADIO SIGNAL TO COMMUNICATE WITH A DATA COLLECTION UNIT.
- C. THE RADIO-TRANSMITTING DEVICE MAY ALSO BE INSTALLED THROUGH THE EXISTING CAST IRON METER LID OR A NEW CAST IRON METER LIDS SO AS PERMIT A SIGNAL TO COMMUNICATE WITH A DATA COLLECTION DEVICE AND POSE NO TRIPPING HAZARD.

APPROVED METERS, METER LIDS AND MTU CURRENTLY USED BY DCWASA:

1. HEXAGRAM INC. METER TRANSMITTING UNIT;
2. ABB WATER METERS INC. WITH MTU PERMANENTLY POTTED AT THE FACTORY
- MODEL C3000 2"-8" COMPOUND METERS;
3. ARMORCAST INC.
- METER LID 21 1/2". METER LID MAY NEED TO BE HEAVY DUTY CAST IRON WITH THE RADIO TRANSMITTING DEVICE INSTALLED THROUGH THE EXISTING CAST IRON METER LID TO ALLOW REMOVAL OF THE LARGER SIZE METERS.

**CATHOLIC UNIVERSITY SOUTH CAMPUS REDEVELOPMENT
AUGUST 21, 2008**

BUILDING	UNITS OR FLOOR AREA	WSFU PER UNIT*	TOTAL DOMESTIC WSFU	TOTAL DOMESTIC GPM*	TOTAL DOMESTIC GPD*	COOLING TOWER TONS	COOLING TOWER GPM	COOLING TOWER GPD*	TOTAL SUPPLY OPD	SANITARY DRAINAGE GPD*
A-1	306	10.7	3,300	464	1,531,200	-	-	-	1,531,200	1,531,200
A-1 Retail	63,450 SF	0.0066	418	131	94,320	250	10	7,200	101,520	97,920
A-2 (Townhouses)	45	14.3	644	151	217,440	-	-	-	217,440	217,440
B	140	10.7	1,530	273	393,120	-	-	-	393,120	393,120
B Retail	28,650 SF	0.0068	189	88	63,360	110	4	2,880	66,240	67,680
C	152	10.7	1,630	284	408,960	-	-	-	408,960	408,960
C Retail	27,000 SF	0.0068	179	86	61,920	110	4	2,880	64,800	63,360
D	3,000 SF	27.25	27.25	42	30,240	-	-	-	30,240	30,240
E	214	10.7	2,290	358	515,520	-	-	-	515,520	515,520
E Retail	25,500 SF	0.0066	169	83	59,760	100	4	2,880	62,640	61,200
TOTALS					3,375,840			15,840	3,391,680	3,383,760

FOOTNOTE A: BASED ON TABLE E101B, 2000 IPC APPENDIX E

APARTMENT UNIT:	
1 BATH GROUP	3.6
1/2 BATH GROUP	2.9
DISHWASHER	1.4
KITCHEN SINK	1.4
CLOTHES WASHER	1.4
TOTAL	10.7 WSFU

TOWNHOUSE UNIT:	
2 BATH GROUP	7.2
1/2 BATH GROUP	2.9
DISHWASHER	1.4
KITCHEN SINK	1.4
CLOTHES WASHER	1.4
TOTAL	14.3 WSFU

BUILDING D (3,000 SF RETAIL):

2 WATER CLOSETS (FLUSH VALVE)	20.0
2 LAVATORIES	4.0
1 DRINKING FOUNTAIN	0.25
1 SERVICE SINK	3.0
TOTAL	27.25 WSFU

**GENERAL RETAIL SPACE
(ASSUMING 25% RESTAURANT A-2 AND 5,000 SF AVERAGE RETAIL TENANT).**

1 WATER CLOSET PER 1,914 SF:	0.0052 WSFU/SF
1 LAVATORY PER 2,500 SF:	0.0008 WSFU/SF
1 SERVICE SINK PER 5,000 SF:	0.0006 WSFU/SF
TOTAL	0.0066 WSFU/SF

FOOTNOTE B: BASED ON TABLE E102, 2000 IPC, APPENDIX E**FOOTNOTE C: BASED ON 24 HOUR PEAK DEMAND****FOOTNOTE D: BASED ON 12 HOURS PER DAY COOLING TOWER OPERATION****FOOTNOTE E: TOTAL DOMESTIC GPD + 0.5 X COOLING TOWER GPD****UTILITY NOTES AND CALCULATIONS****CATHOLIC UNIVERSITY OF AMERICA****WASHINGTON, DC**

SCALE: 1" = 50'

DATE: 6/5/08

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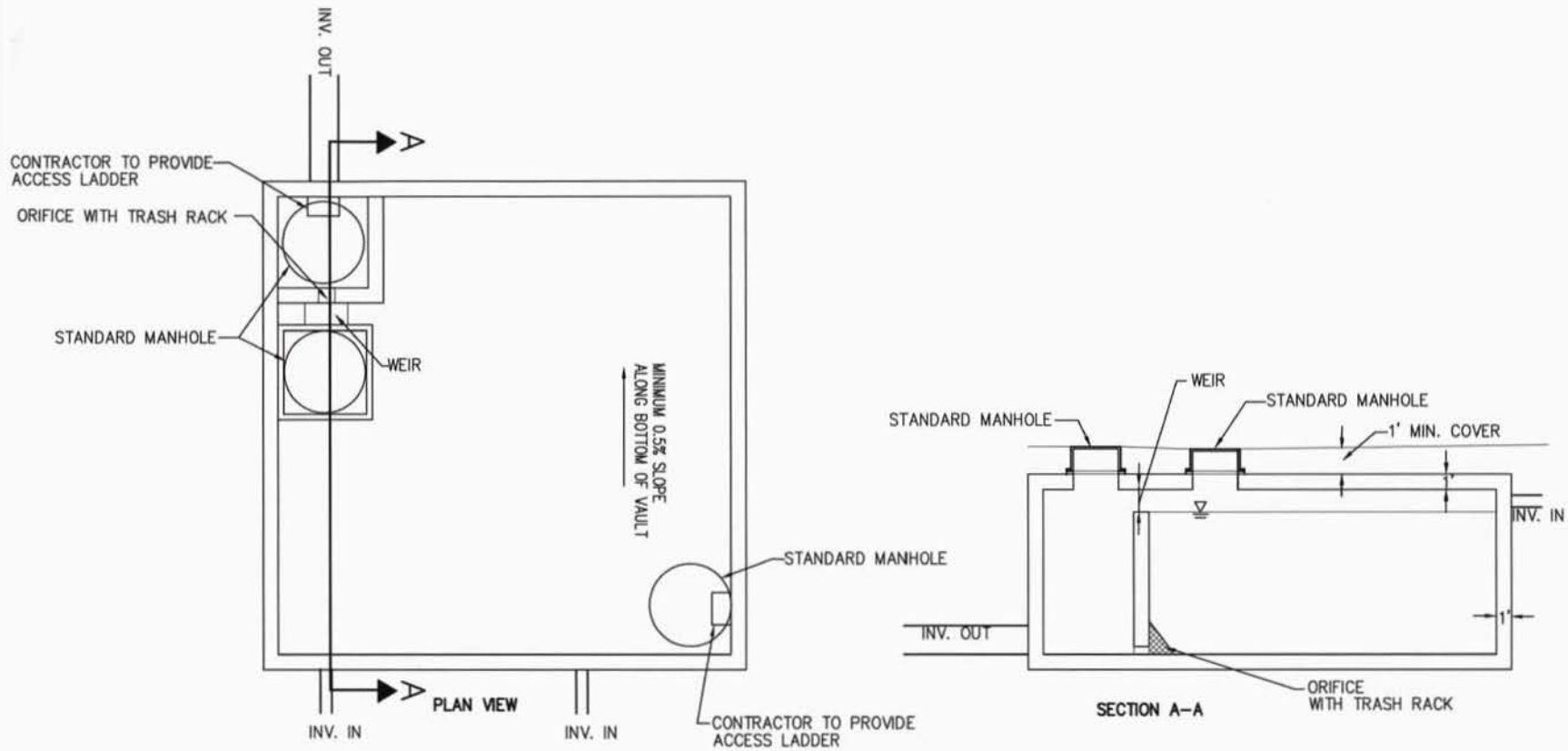
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TYPICAL SWM VAULT DETAIL
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SWM DETAILS
**CATHOLIC UNIVERSITY
OF AMERICA**
WASHINGTON, DC

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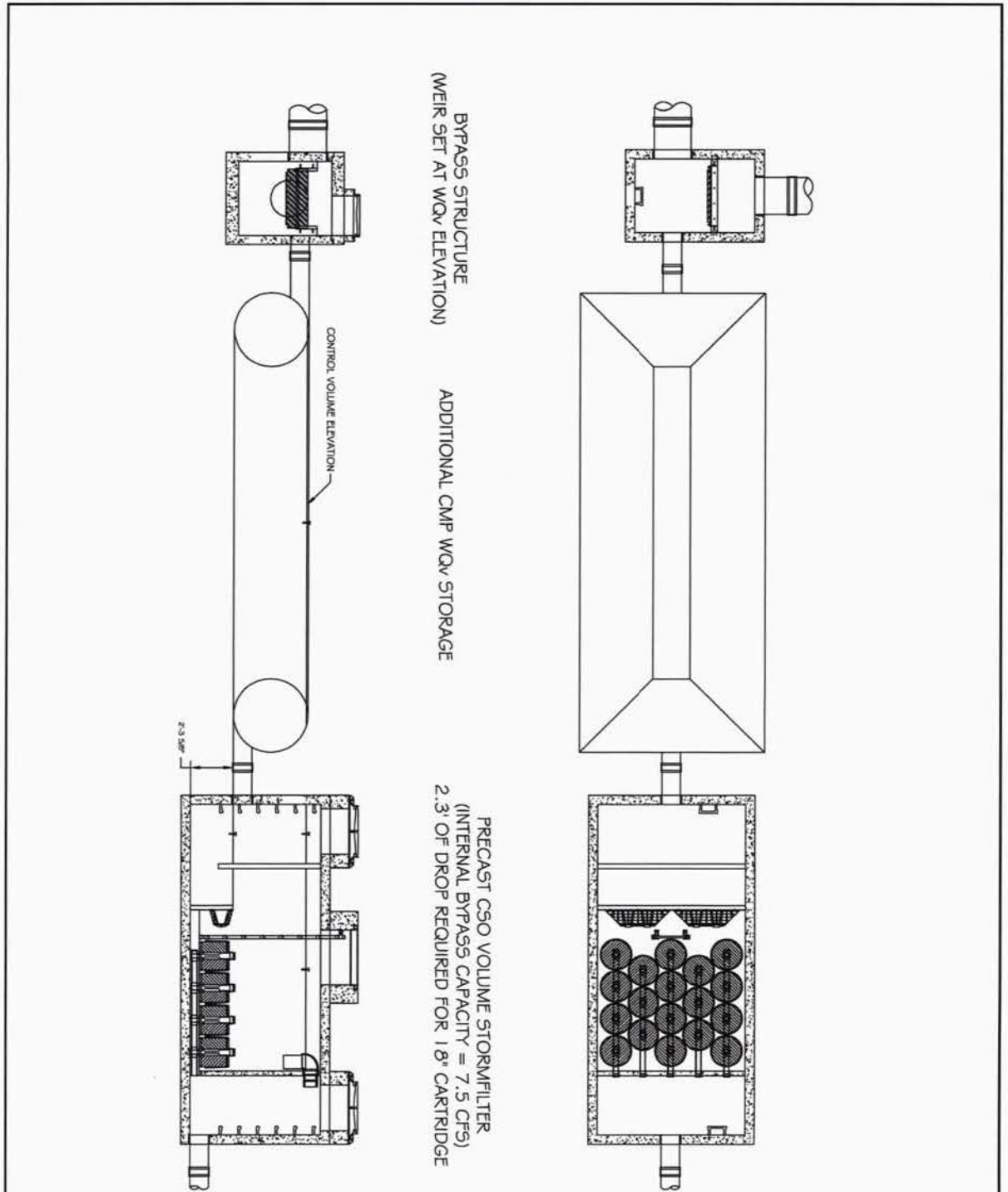
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STORM FILTER DETAILS



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WASHINGTON, D.C. - CSO VOLUME STORMFILTER
EXAMPLE LAYOUT DRAWING
CSO BASIN APPLICATION

DRAWING
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DATE: 11/09/05 SCALE: NONE FILE NAME: VSF818-PC-CSO-DTL DRAWN: MJW CHECKED: ARG

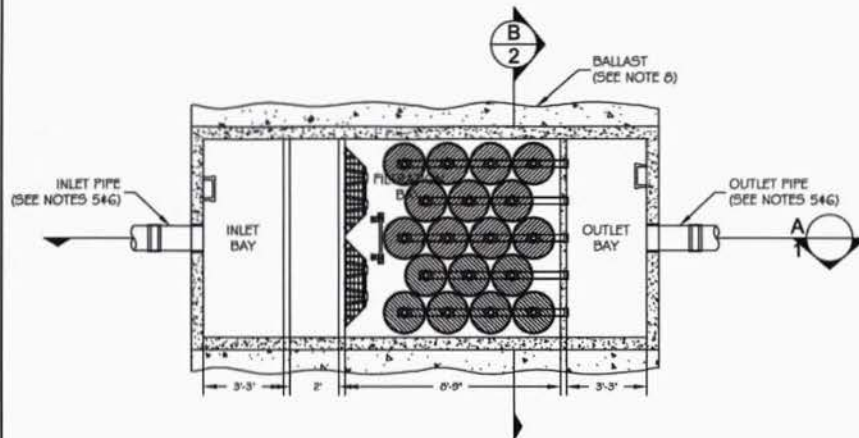
SWM DETAILS
CATHOLIC UNIVERSITY
OF AMERICA
WASHINGTON, DC

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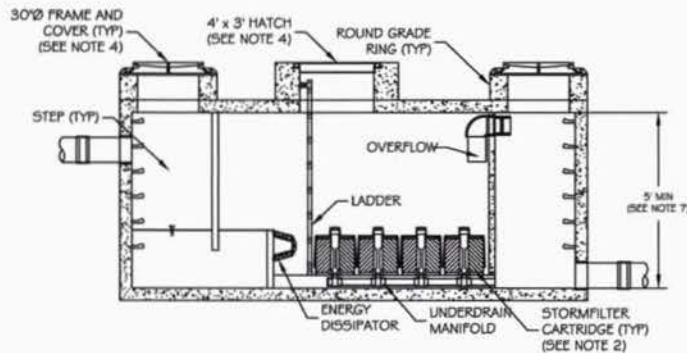


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207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301 WWW.WLPHINC.COM

STORM FILTER DETAILS (CONT.)



VOLUME STORMFILTER - PLAN VIEW



VOLUME STORMFILTER - SECTION VIEW

THE STORMWATER MANAGEMENT
StormFilter®
U.S. PATENT No. 5,322,629;
No. 5,707,587; No. 6,027,639;
No. 6,649,040; No. 5,624,576;
AND OTHER U.S. AND FOREIGN
PATENTS PENDING

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STORMWATER
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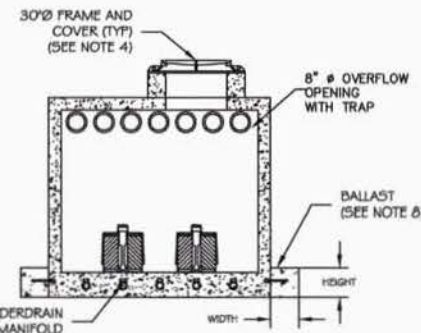
8' x 18' PRECAST VOLUME STORMFILTER
PLAN AND SECTION VIEWS
CSO BASIN APPLICATION

DRAWING
1

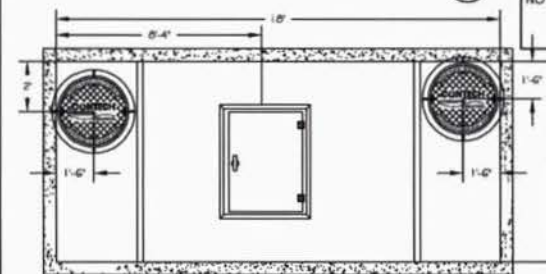
DATE: 11/09/05 SCALE: NONE FILE NAME: VSF818-PC-CBO-DTL DRAWN: MJW CHECKED: ARG

GENERAL NOTES

- 1) VOLUME STORMFILTER BY CONTECH STORMWATER SOLUTIONS; WEST: PORTLAND, OREGON (800) 548-4667; EAST: SCARBOROUGH, ME (877) 907-8676; MID-ATLANTIC: ELK RIDGE, MD (866) 740-3518.
- 2) FILTER CARTRIDGE(S) TO BE SIPHON-ACTUATED AND SELF-CLEANING. STANDARD DETAIL SHOWS MAXIMUM NUMBER OF CARTRIDGES. ACTUAL NUMBER REQUIRED TO BE SPECIFIED ON SITE PLANS OR IN DATA TABLE BELOW.
- 3) PRECAST VAULT TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C476. DETAIL REFLECTS DESIGN INTENT ONLY. ACTUAL DIMENSIONS AND CONFIGURATION OF STRUCTURE WILL BE SHOWN ON PRODUCTION SHOP DRAWING.
- 4) STRUCTURE AND ACCESS COVERS TO MEET AASHTO H-20 LOAD RATING.
- 5) STORMFILTER REQUIRES 2.3 FEET OF DROP FROM INLET TO OUTLET. IF LESS DROP IS AVAILABLE, CONTACT CONTECH STORMWATER SOLUTIONS.
- 6) INLET AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR. PRECAST STORMFILTER VAULT EQUIPPED WITH CAST-IN BOOT CONNECTIONS AT INLET AND OUTLET LOCATIONS FOR WATER-TIGHT CONNECTIONS.
- 7) PROVIDE MINIMUM CLEARANCE FOR MAINTENANCE ACCESS. IF A SHALLOWER SYSTEM IS REQUIRED, CONTACT CONTECH STORMWATER SOLUTIONS FOR OTHER OPTIONS.
- 8) ANTI-FLOTATION BALLAST TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR, IF REQUIRED. BALLAST TO BE SET ALONG ENTIRE LENGTH OF BOTH SIDES OF THE STRUCTURE.
- 9) ALL STORMFILTERS REQUIRE REGULAR MAINTENANCE. REFER TO OPERATION AND MAINTENANCE GUIDELINES FOR MORE INFORMATION.



VOLUME STORMFILTER - SECTION VIEW

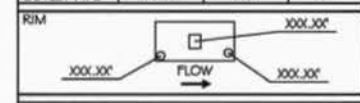


VOLUME STORMFILTER - TOP VIEW

8' x 18' PRECAST VOLUME STORMFILTER DATA

STRUCTURE ID	5F
WATER QUALITY FLOW RATE (cfs)	N/A
WATER QUALITY VOLUME (cu-ft)	VARIES
PEAK FLOW RATE (cfs)	7.5 MAX
RETURN PERIOD OF PEAK FLOW (yrs)	1.5
# OF CARTRIDGES REQUIRED	18 MAX
CARTRIDGE FLOW RATE (1.5 OR 7.5 gpm)	7.5
MEDIA TYPE (CSF, PERLITE, ZPG)	PERLITE

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	XXX'XX"	XXX	XX"
INLET PIPE #2	XXX'XX"	XXX	XX"
OUTLET PIPE	XXX'XX"	XXX	XX"



LADDER	YES/NO
ANTI-FLOTATION BALLAST	WIDTH XX" HEIGHT XX"

NOTES/SPECIAL REQUIREMENTS:

THE STORMWATER MANAGEMENT
StormFilter®
U.S. PATENT No. 5,322,629;
No. 5,707,587; No. 6,027,639;
No. 6,649,040; No. 5,624,576;
AND OTHER U.S. AND FOREIGN
PATENTS PENDING

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8' x 18' PRECAST VOLUME STORMFILTER
TOP AND SECTION VIEWS, NOTES AND DATA
CSO BASIN APPLICATION

DRAWING
2

DATE: 11/09/05 SCALE: NONE FILE NAME: VSF818-PC-CBO-DTL DRAWN: MJW CHECKED: ARG

SWM DETAILS
**CATHOLIC UNIVERSITY
OF AMERICA**
WASHINGTON, DC

SCALE: NOTES

DATE: 9/5/08

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INCORPORATED

CIVIL ENGINEERS-LAND SURVEYORS-PLANNERS-LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 552-6963 FAX (703) 553-1501
WWW.WLPHINC.COM

SCALE: NOTES

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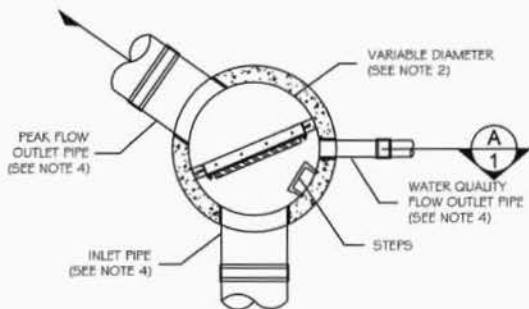
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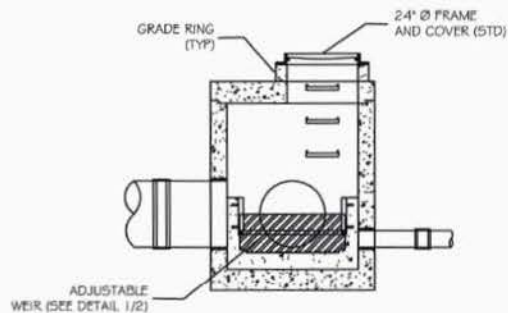
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BYPASS STRUCTURE DETAILS



BYPASS MANHOLE - PLAN VIEW 1
1

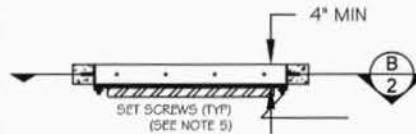


BYPASS MANHOLE - SECTION VIEW (A)
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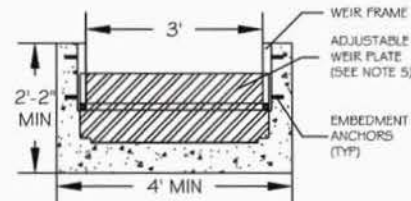
BYPASS STRUCTURE
PLAN AND SECTION VIEWS
STANDARD DETAIL

GENERAL NOTES

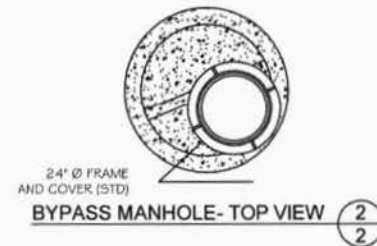
- 1) PRECAST MANHOLE TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478. DETAIL DRAWING REFLECTS DESIGN INTENT ONLY. ACTUAL DIMENSIONS AND CONFIGURATION OF STRUCTURE WILL BE SHOWN ON PRODUCTION SHOP DRAWING.
- 2) STRUCTURE AND ACCESS COVERS TO MEET AASHTO H-20 LOAD RATING.
- 3) INLET AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
- 4) CONTRACTOR TO ADJUST WEIR TO DESIGN ELEVATION SPECIFIED IN DATA TABLE BELOW. DO NOT EXCEED 5.0 FT-LBS TORQUE WHEN TIGHTENING SCREWS ON WEIR FRAME. SEAL WEIR TO FRAME WITH RTV SILICONE SEALANT AFTER FINAL ADJUSTMENT.



WEIR DETAIL - PLAN VIEW 1
2



WEIR DETAIL - SECTION VIEW (B
2)



BYPASS MANHOLE- TOP VIEW 2
2

BYPASS STRUCTURE
TOP VIEW, WEIR DETAIL, DATA AND NOTES
STANDARD DETAIL

STORMGATE MANHOLE DATA				
STRUCTURE ID				XXXX
WATER QUALITY FLOW RATE (cfs)				X.XX
PEAK FLOW RATE, Qpeak (cfs)				X.XX
MANHOLE DIAMETER (48", 60", 72")				XX"
RIM ELEVATION				XXXX.XX'
PIPE DATA:		I.E.	ORIENTATION	MATERIAL DIAMETER
INLET PIPE		XXXX.XX'	XX°	XXXX XX"
WATER QUALITY FLOW OUTLET PIPE		XXXX.XX'	XX°	XXXX XX"
PEAK FLOW OUTLET PIPE		XXXX.XX'	XX°	XXXX XX"
ORIFICE TYPE (PIPE, CAP, PLATE)				XXXXXXXX
ORIFICE DIAMETER (in)				XX"
WEIR CREST ELEVATION				XXXX.XX'
WEIR WALL ELEVATION				XXXX.XX'
HEAD OVER WEIR, H (ft)				X.XX'
WSE at Qpeak				XXXX.XX'
WEIR ORIENTATION				XX°
FLOOR ELEVATION				XXXX.XX'
NOTES/SPECIAL REQUIREMENTS:			PIPE ORIENTATION KEY:	

SWM DETAILS
CATHOLIC UNIVERSITY OF AMERICA
WASHINGTON, DC

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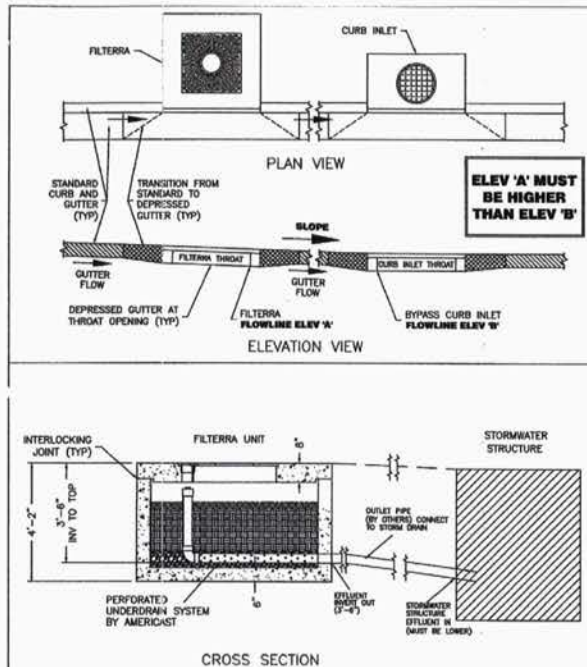
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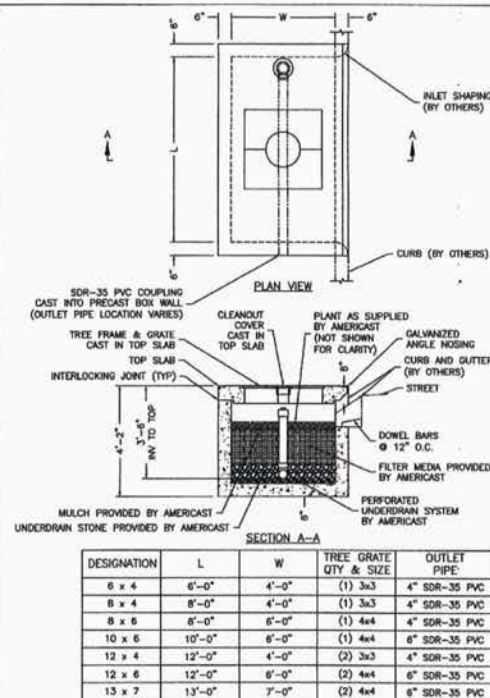
FILTERRA DETAILS



MODIFICATIONS OF DRAWINGS ARE ONLY PERMITTED
BY WRITTEN AUTHORIZATION FROM FILTERRA



DATE: 07-07-06	DWG: FLP-2
FILTERRA® TYPICAL FLOWLINE AND OULET PIPE RELATIONS	



MODIFICATIONS OF DRAWINGS ARE ONLY PERMITTED
BY WRITTEN AUTHORIZATION FROM FILTERRA



DATE: 09-04-07	DWG: FTNW-3
PRECAST FILTERRA® UNIT NARROW WIDTH CONFIGURATION	



FILTERRA NOTES

Construction & Installation

- A. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.
- B. If the Filtera® is stored before installation, the top slab must be placed on the box using the 2x4 wood provided, to prevent any contamination from the site. All internal fittings supplied (if any), must be left in place as per the delivery.
- C. The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base matching the final grade of the curb line in the area of the unit. The unit is to be placed such that the unit and top slab match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1-2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval.
- D. Outlet connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations.
- E. Once the unit is set, the internal wooden forms and protective mesh cover must be left intact. Remove only the temporary wooden shipping blocks between the box and top slab. The top lid should be sealed onto the box section before backfilling, using a non-shrink grout, butyl rubber or similar waterproof seal. The boards on top of the lid and boards sealed in the unit's throat must NOT be removed. The Supplier (Americast or its authorized dealer) will remove these sections at the time of activation. Backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of Filtera® unit shall conform to ASTM Specifications C891 "Standard Practice for Installation of Underground Precast Utility Structures", unless directed otherwise in contract documents.
- F. Curb and gutter construction (where present) shall ensure that the flow-line of the Filtera® units is at a greater elevation than the flow-line of the bypass structure or relief (drop inlet, curb cut or similar). Failure to comply with this guideline may cause failure and/or damage to the Filtera® environmental device.
- G. Each Filtera® unit must receive adequate irrigation to ensure survival of the living system during periods of drier weather. This may be achieved through a piped system, gutter flow or through the tree grate.

Activation

- A. Activation of the Filters[®] unit is performed ONLY by the Supplier. Purchaser is responsible for Filters[®] inlet protection and subsequent clean out cost. This process cannot commence until the project site is fully stabilized and cleaned (full landscaping, grass cover, final paving and street sweeping completed), negating the chance of construction materials contaminating the Filters[®] system. Care shall be taken during construction not to damage the protective throat and top plates.
- B. Activation includes installation of plant(s) and mulch layers as necessary.

Included Maintenance

- A. Each correctly installed Filterra® unit is to be maintained by the Supplier, or a Supplier approved contractor for a minimum period of 1 year. The cost of this service is to be included in the price of each Filterra® unit. Extended maintenance contracts are available at extra cost upon request.
- B. Annual included maintenance consists of a maximum of (2) scheduled visits. The visits are scheduled seasonally; the spring visit aims to clean up after winter loads that may include salts and sands. The fall visit helps the system by removing excessive leaf litter.
- C. Each Included Maintenance visit consists of the following tasks.
1. Filterra® unit inspection
 2. Foreign debris, silt, mulch & trash removal
 3. Filter media evaluation and recharge as necessary
 4. Plant health evaluation and pruning or replacement as necessary
 5. Replacement of mulch
 6. Disposal of all maintenance refuse items
 7. Maintenance records updated and stored (reports available upon request)
- D. The beginning and ending date of Supplier's obligation to maintain the installed system shall be determined by the Supplier at the time the system is activated. Owners must promptly notify the Supplier of any damage to the plant(s), which constitute(s) an integral part of the bioretention technology.



SWM DETAILS

**CATHOLIC UNIVERSITY
OF AMERICA**
WASHINGTON, DC

WALTER L. PHILLIPS

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SCALE: AS NOTED
DATE: 9/5/08
REV. 6/12/09
DRAWN: MRW

REVISION		
NO.	DESCRIPTION	DATE