NOTES

1) THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE. PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENT ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNER, NO LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

2) ALL DISTANCES WERE MEASURED WITH E.D.M. EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.

3) THE LOCATION AND/OR EXISTENCE OF UTILITY LINES & SERVICE LINES TO & AROUND PROPERTY SURVEYED ARE UNKNOWN AND ARE NOT SHOWN.

4) PARCEL NUMBERS SHOWN AS THUS ( ) REFERS TO DAVIDSON COUNTY TAX MAP 091-12-0.

5) THIS SURVEY PREPARED FROM CURRENT DEED OF RECORD AND DOES NOT REPRESENT A TITLE SEARCH OR A GUARANTEE OF TITLE, AND IS SUBJECT TO ANY STATE OF FACTS A CURRENT AND ACCURATE TITLE SEARCH WILL REVEAL.

6) SURVEYOR'S LIABILITY FOR THIS DOCUMENT SHALL BE LIMITED TO THE ORIGINAL PURCHASER AND DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITIES WITHOUT AN EXPRESSED RE-CERTIFICATION BY THE SURVEYOR WHOSE SIGNATURE APPEARS UPON THIS SURVEY.

7) THE WORD "CERTIFY" OR "CERTIFICATE" AS SHOWN AND USED HEREON MEANS EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.

8) MINIMUM BUILDING SETBACKS LINE ARE TO BE DETERMINED BY CURRENT METRO ZONING REGULATIONS.

9) BY MEANS OF GRAPHIC PLOTTING UPON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 470040 0212 F, DATED: 04-20-01, IT HAS BEEN DETERMINED THAT THE PARCEL DESCRIBED HEREON DOES NOT LIE WITHIN A FLOOD HAZARD AREA. FLOOD ZONE: X

PLAT REFERENCE

CLIFTON PLAN
PLAT BOOK 21, PAGE 35
R.O.D.C., TN

DEED REFERENCE

PARCEL 197 = INSTRUMENT # 200504150041992
PARCEL 198 = INSTRUMENT # 200603290035728
R.O.D.C., TN

LEGEND

IRON ROD NEW — IRND
IRON ROD OLD — IROD
MANHOLE — Ⓢ
PROPERTY LINE

DIG SAFELY
TENNESSEE ONE CALL
1-800-351-1111
1-615-366-1987
CALL US FIRST
IT'S THE LAW!

COMPLETE SURVEYING SERVICES
1101 WAVERUNNER COURT EAST
NASHVILLE, TENNESSEE 37217
(615) 485-5209 (615) 399-8212
FAX (615) 399-8208

MARK D. DEVENDORF
TENNESSEE NO. 1743

SURVEYOR'S CERTIFICATE

I hereby certify that to the best of my knowledge and belief the hereon shown boundary survey represents a Category 1 survey having an unadjusted ratio of precision of 1: 10,000 and is true and correct.

Name: _____ Date: _____
MARK D. DEVENDORF, R.L.S. TN. # 1743

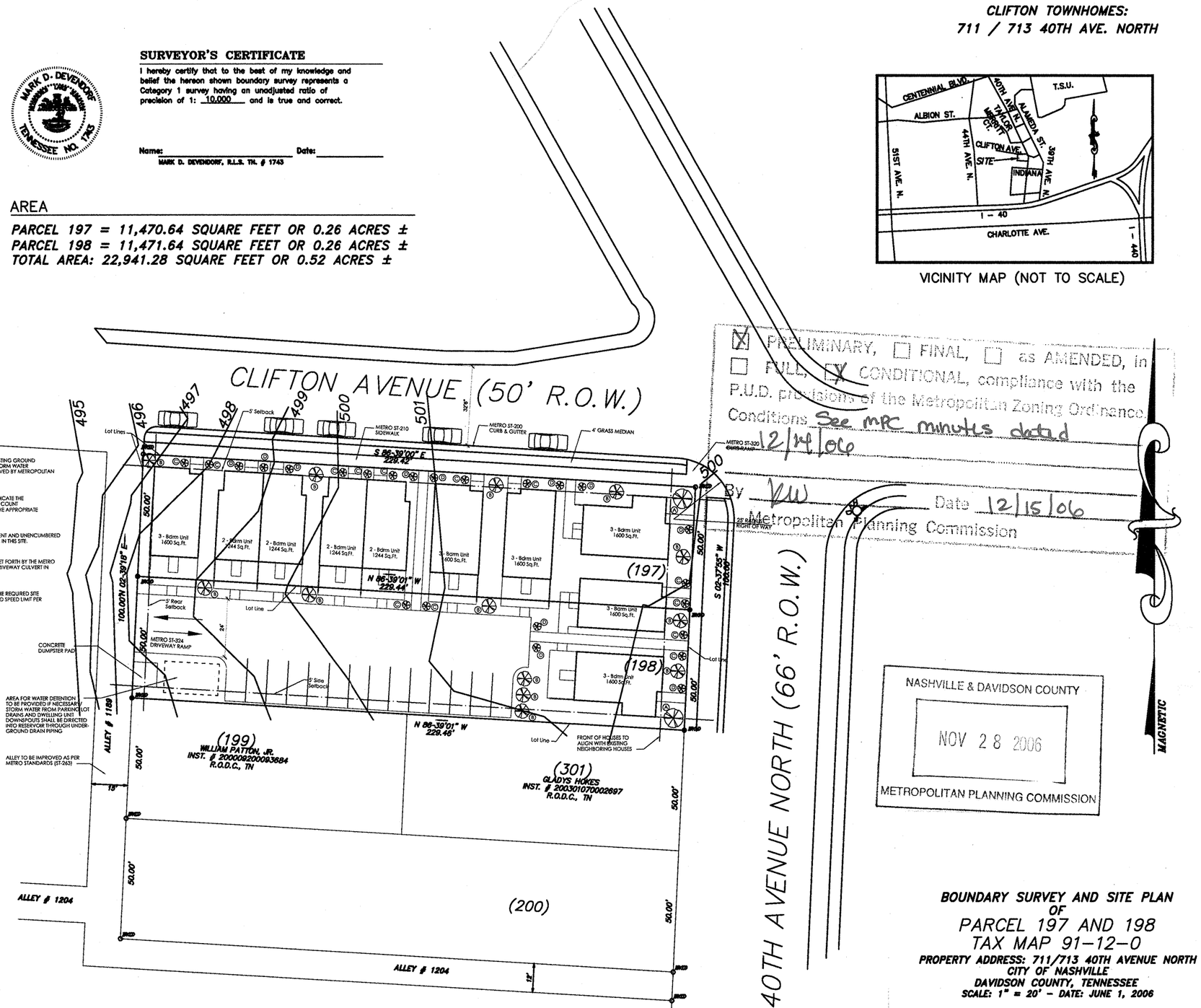
AREA

PARCEL 197 = 11,470.64 SQUARE FEET OR 0.26 ACRES ±
PARCEL 198 = 11,471.64 SQUARE FEET OR 0.26 ACRES ±
TOTAL AREA: 22,941.28 SQUARE FEET OR 0.52 ACRES ±

CLIFTON TOWNHOMES:
711 / 713 40TH AVE. NORTH

VICINITY MAP (NOT TO SCALE)

☒ PRELIMINARY, ☐ FINAL, ☐ as AMENDED, in ☐ FULL, ☒ CONDITIONAL, compliance with the P.U.D. provisions of the Metropolitan Zoning Ordinance.
Conditions See MPC minutes dated 12/14/06
By KW Date 12/15/06
Secretary, Metropolitan Planning Commission



78-840 NOTE:
ANY EXCAVATION, FILL, OR DISTURBANCE OF THE EXISTING GROUND ELEVATION MUST BE DONE IN ACCORDANCE WITH STORM WATER MANAGEMENT ORDINANCE NO. 78/840 AND APPROVED BY METROPOLITAN DEPARTMENT OF WATER SERVICES.

PRELIMINARY NOTE:
THIS DRAWING IS FOR ILLUSTRATION PURPOSES TO INDICATE THE BASIC PREMISE OF THE DEVELOPMENT. THE FINAL LOT COUNT AND DETAILS OF THE PLAN SHALL BE GOVERNED BY THE APPROPRIATE REGULATIONS AT THE TIME OF FINAL APPLICATION.

ACCESS NOTE:
METRO WATER SERVICES SHALL BE PROVIDED SUFFICIENT AND UNENCUMBERED ACCESS IN ORDER TO MAINTAIN AND REPAIR UTILITIES IN THIS SITE.

C/D NOTE:
SIZE DRIVEWAY CULVERTS PER THE DESIGN CRITERIA SET FORTH BY THE METRO STORMWATER MANAGEMENT MANUAL. (MINIMUM DRIVEWAY CULVERT IN METRO ROW IS 15" CMP)

SITE DISTANCE NOTE:
PROJECT ACCESS ONTO 40TH SHALL COMPLY WITH THE REQUIRED SITE DISTANCE AT THE PROJECT ENTRANCE FOR THE POSTED SPEED LIMIT PER AASHTO STANDARDS.

PREUMINARY PLANT SCHEDULE.	
Ⓐ	CRAPE MYRTLE.
Ⓑ	JAPANESE MAPLE.
Ⓒ	COMPACT HOLLY.
Ⓓ	NANDINA.

PARKING SCHEDULE.	
OFF-STREET	14
ON-STREET	8
TOTAL	22

NASHVILLE & DAVIDSON COUNTY
NOV 28 2006
METROPOLITAN PLANNING COMMISSION

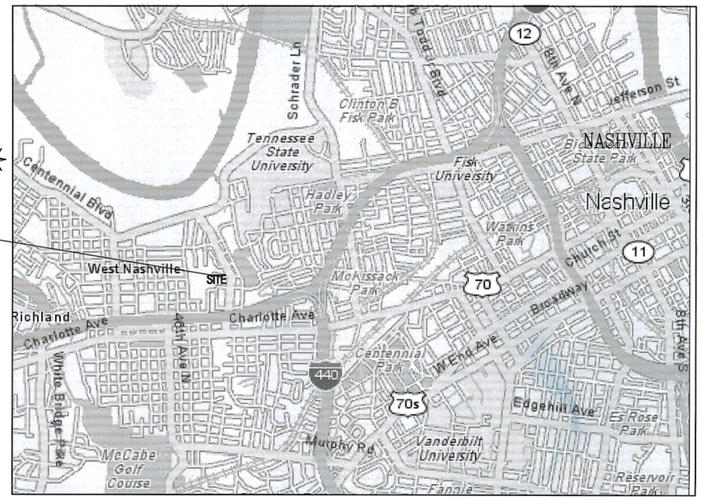
BOUNDARY SURVEY AND SITE PLAN
OF
PARCEL 197 AND 198
TAX MAP 91-12-0
PROPERTY ADDRESS: 711/713 40TH AVENUE NORTH
CITY OF NASHVILLE
DAVIDSON COUNTY, TENNESSEE
SCALE: 1" = 20' - DATE: JUNE 1, 2006

20 0 10 20 40
GRAPHIC SCALE - 1" = 20'

2006SP-135U-08

MULTI-FAMILY SITE DEVELOPMENT
Parcel ID:07900009700
711 & 713 40th AVE. NORTH
NASHVILLE, TN 37209
JUNE 1, 2007

PROJECT LOCATION



VICINITY MAP
NOT TO SCALE

NOTES

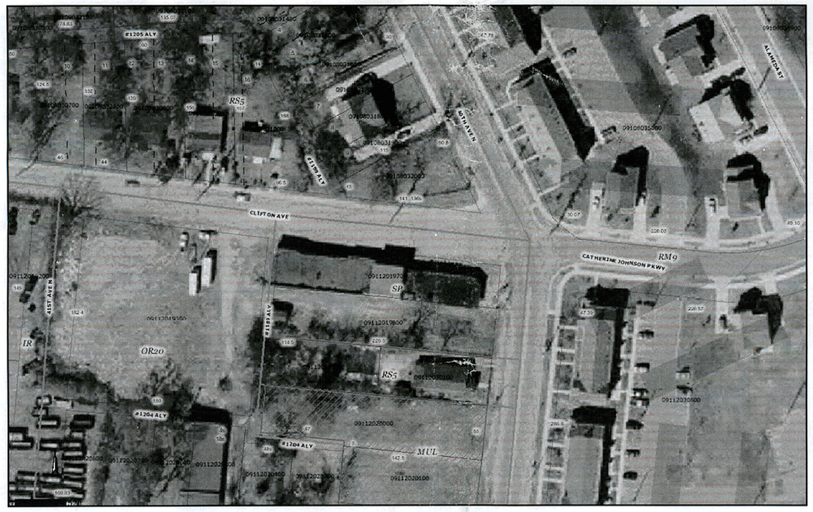
1. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS.
2. PROOF-ROLLING OF ALL STREET SUBGRADES IS REQUIRED IN PRESENCE OF THE PUBLIC WORKS' INSPECTOR. THIS REQUEST IS TO BE MADE 24 HOURS IN ADVANCE.
3. STOP SIGNS TO BE 30"X30".
4. STREET SIGNS TO HAVE SIX-INCH WHITE LETTERS ON A NINE INCH GREEN ALUMINUM BLADE.
5. ALL SIGNS TO HAVE 3M REFLECTIVE COATING.

GUIDE TO NEW CONSTRUCTION: COMMERICAL AND RESIDENTIAL SUBDIVISION

STANDARD PLAN NOTES

1. All water and sewer construction shall be in accordance with specifications and standard details of Metro Water Services.
2. The contractor is responsible for reimbursing Metro Water Services the cost of inspection.
3. The contractor is to provide and maintain the construction identification sign for private development approved.
4. After completion of the sanitary sewer, the developer is responsible for the televising of the lines prior to final acceptance. The videotapping must be coordinated with the Metro Water Services Inspection Section. All costs will be borne by the developer.
5. All connections to existing manholes shall be by coring and resilient connector method.
6. Reduced Pressure Backflow Prevention Devices (RPBP) or dual check valves will be required on all test and fill lines (jumper) needed for water main construction and must be approved by Metro Water Services.
7. All water meter registers shall be a minimum of 24" not to exceed a maximum of 28" below finished grade.
8. Upon completion of construction of water and/or sewer, the engineer shall provide the department with a complete set of as-built plans on moist erasable mylars in reverse and in digital (*.dwg) format. Sewer plans shall be sealed by a licensed professional engineer or a registered land surveyor and shall include actual field angles between lines, all actual service lines and tee locations, the distance of the end of the service lines to property corners and lines and/or station and offset from sewer centerline to end of service line, the depth to the top of the end of the service line, and shall reflect all alignment and grade changes. Water line plans shall be sealed by a licensed professional engineer or a registered land surveyor and shall include offset distance from the roadway centerline, or property line right-of-way, line depth location of hydrants, valves, reducers, tees and pressure reducing devices where applicable. All drawings must be completed and submitted prior to acceptance of the sewers or water mains into the public system and any connections being made.

PURPOSE OF THESE PLANS IS TO SITE LAYOUT, GRADING, UTILITY, DRAINAGE AND STORMWATER TREATMENT DOCUMENTS FOR CONSTRUCTION OF A 10 UNIT MULTI-FAMILTY DEVELOPMENT LOCATED ON PARCE 09112019700 LOCATED AT 711 & 713 40TH AVENUE NORTH.



INDEX OF SHEETS

1.0	TITLE SHEET
C1.0	OVERALL SITE PLAN OF PROPOSED IMPOVEMENTS FOR ORDINANCE No. BL2006-1253
C2.0	DEMOLITION PLAN, SITE LAYOUT & UTILITY PLAN
C3.0	GRADING, DRAINAGE AND EROSION CONTROL/SEDIMENT CONTROL PLAN
C4.0	SANITARY SEWER PLANS, PROFILE & DETAILS
C5.0	EXISTING AND PROPOSED DRAINAGE CONDITIONS
C6.0	WATER QUALITY LAYOUT
C7.0	EXISTING & PROPOSED HYDROGRAPHS
C8.0	WATER QUALITY DETAILS
LS9.0	LANDSCAPE PLAN

SPECIFIC PLAN APPROVAL
☐ PRELIMINARY, ☒ FINAL, ☐ as AMENDED, in
☐ FULL, ☒ CONDITIONAL, compliance with the SP provisions of the Metropolitan Zoning Ordinance.
Conditions See minutes
By B. Sexton MPC Date 8/9/07
Metropolitan Planning Commission

NASHVILLE & DAVIDSON COUNTY
JUL 16 2007
METROPOLITAN PLANNING DEPARTMENT

DEVELOPER
VIRGIL GORDON
SOUTHEAST REAL ESTATE
2719 JEFFERSON STREET
NASHVILLE, TENNESSEE 37209

ENGINEER
WILLIAM S. PAYNE III
SES, LLC
1816 CAYCE SPRING ROAD
THOMPSON'S STATION, TN 37179
PHONE 533-9955 FAX 791-5609
E-MAIL BILLYPAYNE@COMCAST.NET

METRO NASHVILLE & DAVIDSON COUNTY, TENNESSEE

REVISIONS:

1	ISSUE FOR REVIEW	06/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: WSP | CADD: WSP | CREW CHIEF (S): WSP
PROJECT NUMBER: 0601-0001TBL | COMPUTER FILE: Approval\Plans.PRD
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES, L.L.C.
4504 Harding Avenue
Nashville, TN 37204-4121
615-933-4055 Office
payneengineering@comcast.net

PROJECT DATA
SES PROJECT # 0601-001-000
DATE: SEPTEMBER 27, 2006
DESIGNED BY: B. Payne
DRAWN BY: B. PAYNE
CHECKED BY: L. COOP
APPROVED BY: T. GORDON
PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. of RECORD: Jon F. Cuff
REG. NO: 101812
SURVR of RECORD:
REG. NO:

OWNER/DEVELOPER
DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

ENGINEERS STAMP
JON F. CUFF
AGRICULTURE
No. 101812
STATE OF TENNESSEE
DATE:

DRAWING TITLE

DRAWING
1.0
SHEET
OF
10

SITE INFORMATION

Development:		PROJECT # ____	
CLIFTON AVENUE TOWN HOMES 711 & 713 40 TH AVENUE, NASHVILLE, TN 37209			
Tax Map: 91-12-0		Parcel ID:	197 & 198
City: Nashville	County: Davidson	State:	Tennessee
Civil District:		Existing Zone:	SP zoning ORDINANCE NO. BL2006-1253

Bulk Regulations

Max. FAR	Max ISR	Street Setback - Front	Side Yard	Rear Yard
5.00	1.00	Average of Street - Property Line	None	None

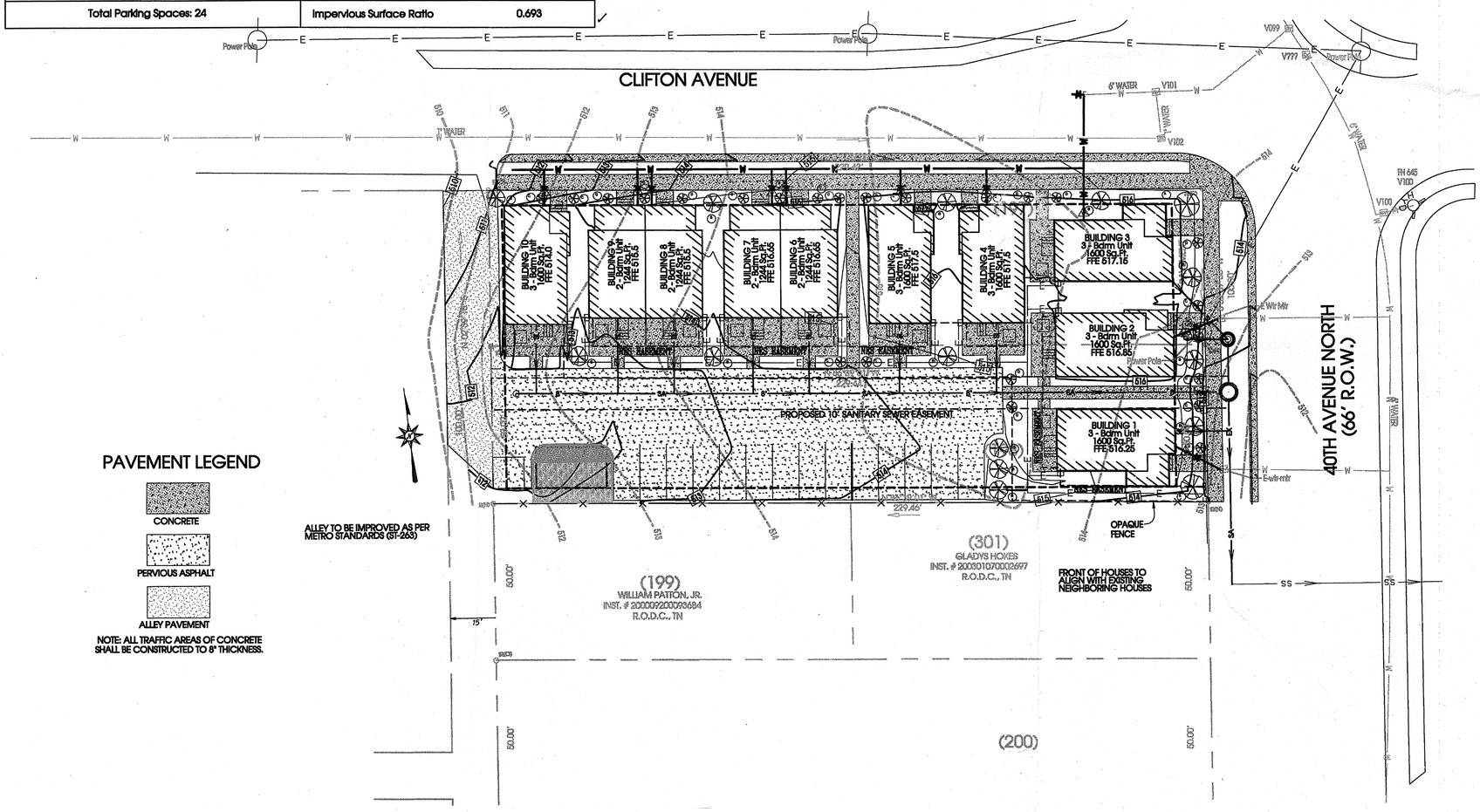
Owner: SOUTHEAST REAL ESTATE DEVELOPMENT, LLC 2719 JEFFERSON ST STE E NASHVILLE, TN 37208 CONTACT: VIRGIL GORDON II PHONE: 615-321-4456	Applicant: SOUTHEAST REAL ESTATE DEVELOPMENT, LLC 2719 JEFFERSON ST STE E NASHVILLE, TN 37208 CONTACT: MARCUS BUCKNER PHONE: 615-582-5728
Total Building Ground Cover: 10 UNITS TOTAL SITE FOOT PRINT AREA OF 7275.47 Sq. Ft. SEE SHEET C 4.0 FOR INDIVUAL FOOT PRINT AREAS	FEMA Map 47037 C 0212 F, Zone X effective date April 20, 2001.

Acreage of site:	0.52 ACRES	Square Footage of Site:	22,941.28 SQ. FT.
Side Walks & Parking:	8,638.78 SQ. FT.	Acreage In Open Spaces:	7,027.03 SQ. FT.
14 Parking Spaces Onsite	10 Off Street Spaces	Floor Area Ratio	10844/22941=0.473
Total Parking Spaces: 24		Impervious Surface Ratio	0.693

Metropolitan Planning Department - Online Mapping: Parcel Report800
2nd Ave S
Nashville, TN 37210
www.nashville.gov/mpc

Parcel ID:09112019700
Property Address:713 40TH AVE N
NASHVILLE, TN 37209
Owner Information:
SOUTHEAST REAL ESTATE DEVELOPMENT, LLC
2719 JEFFERSON ST STE E
NASHVILLE, TN 37208
Date Acquired: 5/15/2006
Document: DB-20060517 0057886
General Information:Census Tract: 13600007
Council District: 21
Land Use: 053, NIGHTCLUB/LOUNGE

Property Information:Description: PT BLK 14 CLIFTON SUB
Acreage: .27
Dimensions: 50X230
Document: DB-00002343 0000199
Zoning:
Zoning: SP, SPECIFIC PLAN
Date Effective: 1/19/2007
Case Number: 2006SP-135U-08
Bill Number: BL2006-1253
Overlays:
Overlay District: OV-UZO, URBAN ZONING OVERLAY
Date Effective: 12/2/2000
Case Number: 2000Z-094U-00
Bill Number: BL2000-476



PAVEMENT LEGEND

CONCRETE

PERVIOUS ASPHALT

ALLEY PAVEMENT

NOTE: ALL TRAFFIC AREAS OF CONCRETE SHALL BE CONSTRUCTED TO 8" THICKNESS.

OVERALL LAYOUT

GRAPHIC SCALE 1"=20'

0 20 40 60

REVISIONS:

1	ISSUE FOR REVIEW	05/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: WSP | CADD: WSP | CREW CHIEF (S): WSP
PROJECT NUMBER: 0601-0001T&L | COMPUTER FILE: Approval Plans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES L.L.C.
4824 Murphy Avenue
Nashville, TN 37204-4721
615-385-1885 Office
pgeorge@southernengineerscal.net

PROJECT DATA

SES PROJECT # 0601-SES-002
DATE: SEPTEMBER 27, 2006
DESIGNED BY: PRIDLEY 2
DRAWN BY: B. RAVEN
CHECKED BY: T. COOPER
APPROVED BY: T. GORDON

PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. of RECORD: JOB F. GOFF, P.E.
REG. NO: 101852
SURVR of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

OVER ALL SITE PLAN
OF PROPOSED IMPROVEMENTS
FOR ORDINANCE NO. BL2006-1253
NASHVILLE, TENNESSEE

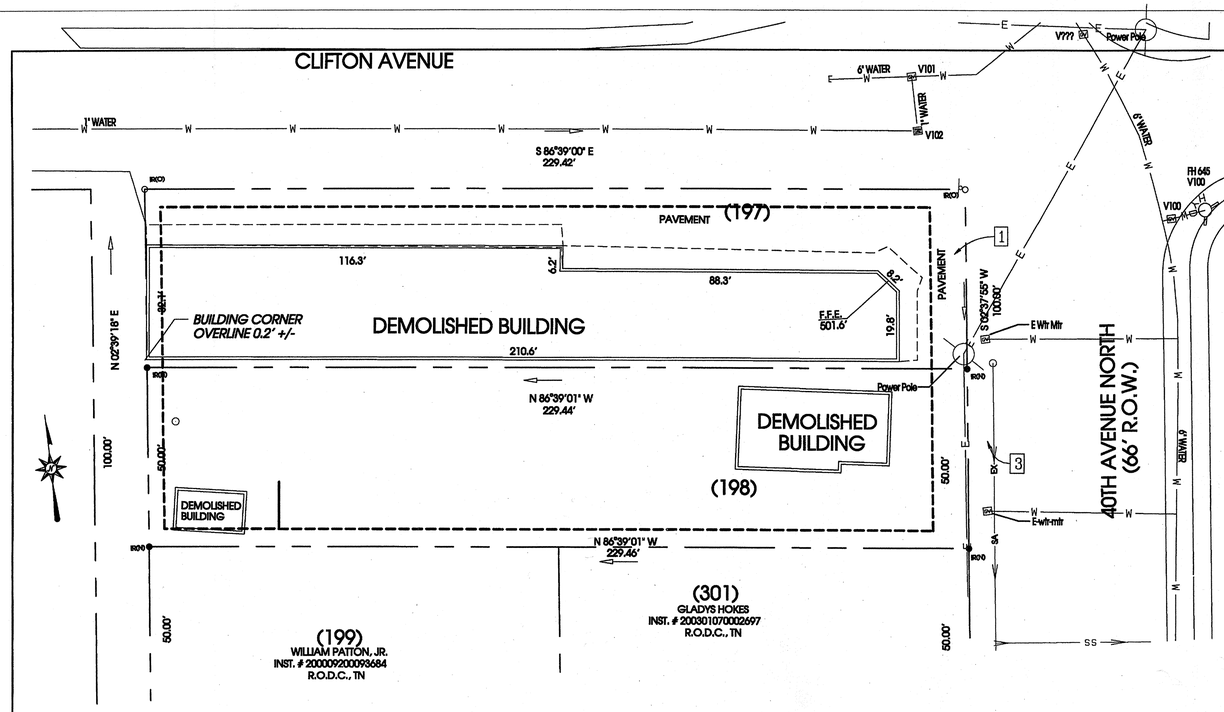
ENGINEERS STAMP

JOHN F. GOFF
REGISTERED ENGINEER
AGRICULTURE
NUMBER
101852
STATE OF TENNESSEE

DATE:

DRAWING TITLE

DRAWING
C 1.0
SHEET
OF
10

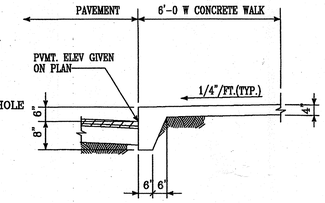


DEMOLITION PLAN

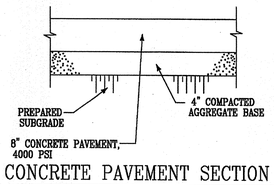
GRAPHIC SCALE 1"=20'
0 20 40 60

DEMOLITION PLANS NOTES:

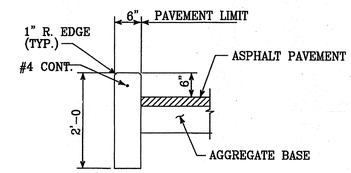
1. COORDINATE RELOCATION OF EXISTING STOP SIGN & STREET SIGNS AS SHOWN IN THE LAYOUT & UTILITY PLAN
2. EXISTING WATER SERVICES TO BE RELOCATED, CORDINATE ALL INSTALLATION DATES AND TIME WITH METRO WATER & CUSTOMERS OF ALL SERVICE LINES DISTURBED.
3. REMOVE CONCRETE FROM AROUND TOP OF EXISTING MANHOLE AND ADJUST TOP OF MAN HOLE TO ELEVATION OF 513.3



TYPICAL SIDEWALK SECTION
NO SCALE

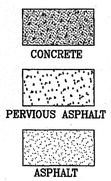


CONCRETE PAVEMENT SECTION
NO SCALE

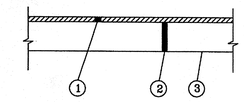


CONCRETE CURB AT ASPHALT PAVEMENT DETAIL
NO SCALE

PAVEMENT LEGEND



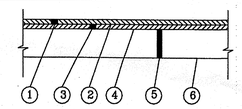
NOTE: ALL TRAFFIC AREAS OF CONCRETE SHALL BE CONSTRUCTED TO 8" THICKNESS.



1. 2" PERVIOUS ASPHALT MIX
2. 12" OF PERVIOUS PAVEMENT STONE TDOT #67 STONE
3. PREPARED SUBGRADE - TDOT SECT 207

LIGHT DUTY PERVIOUS PAVEMENT SECTION
NO SCALE

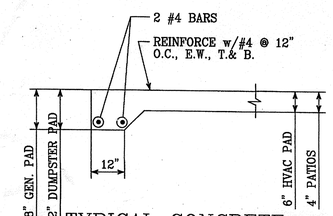
NOTE: THICKNESSES SHOWN ARE MINIMUM COMPACTED THICKNESS, NOT AVERAGE.



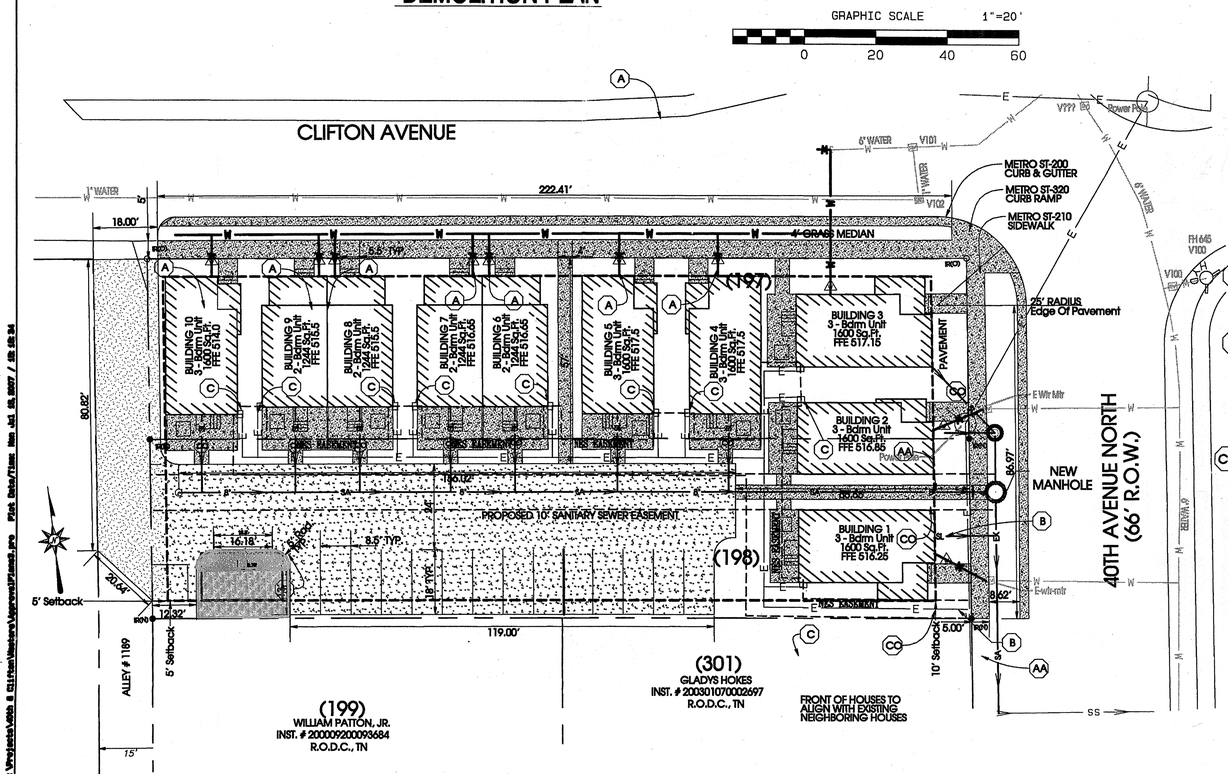
1. 1 1/2 " HOT MIX ASPHALTIC CONCRETE SURFACE COURSE - TDOT SECT 411, GRADING E PER TDOT SECT 903.11
2. Tack Coat (SS-1)
3. 2" HOT MIX BITUMINOUS BINDER COURSE - TDOT SECT 307, GRADING B PER TDOT SECT 903.06
4. PRIME COAT (0.35 GAL./SQ.YD.) RT-2, RT-3, RC-250 OR MC-250
5. 8" MINERAL AGGREGATE BASE COURSE - TDOT SECT 303, CLASS A, GRADING D PER TDOT SECT 903.05
6. PREPARED SUBGRADE - TDOT SECT 207

ALLEY PAVEMENT SECTION
NO SCALE

NOTE: THICKNESSES SHOWN ARE MINIMUM COMPACTED THICKNESS, NOT AVERAGE.



TYPICAL CONCRETE PAD DETAIL
NO SCALE

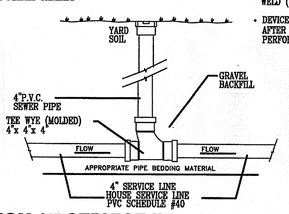


LAYOUT & UTILITIES PLAN

GRAPHIC SCALE 1"=20'
0 20 40 60

NOTES

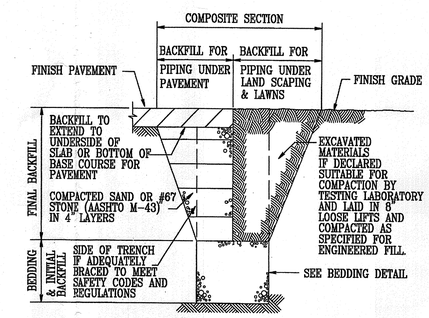
- (A) Install Residentual water service per Metro Public Works specifications
- (B) 4' Sanitary sewer. I.e. at 5' from building = 3' below finished floor. See sheet C 4.0 for plan & profile. (Symbol not shown at all locations.)
- (AA) Install Residentual water service too existing Metro Water Service.
- (C) Install under ground electric service per Nashville Electric Service specifications.
- (CC) 6"THREADED PLUG WITH 2"SQUARE DRIVER / 6"CLEAN OUT ADAPTER WITH FEMALE THREADS — TOP VIEW



GENERAL NOTES:
- ALL FITTINGS AND LINES TO BE PVC, SOLVENT WELD (SDR-35)
- DEVICE SHOULD BE INSTALLED AFTER FINAL GRADE HAS BEEN PERFORMED.

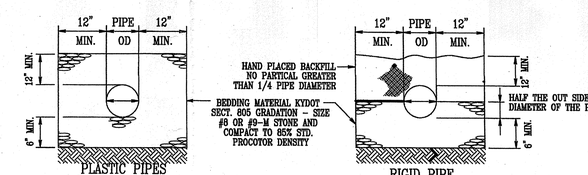
SECTION (4" SERVICE IN PRIVATE PROPERTY)

NOTE TO UTILITY CONTRACTOR
IT IS IMPERATIVE THAT THE CONTRACTOR OBTAINS A COPY OF THE APPROVED WATER AND/OR SEWER PLANS FROM THE DESIGN ENGINEER FOR THE PROJECT. UNAPPROVED COPIES ARE NOT ACCEPTABLE. THE APPROVED COPY MUST BE KEPT ON SITE DURING THE CONSTRUCTION PERIOD.



NOTE: MAXIMUM TRENCH SIDE SLOPE IS 1.5H:1V. ALL SLOPES STEEPER WILL REQUIRE SHORING TRENCH AT DEPTHS GREATER THAN 36".

PIPE BACKFILL OUTSIDE BLDG DETAIL
NO SCALE



PLASTIC PIPES
PVC, HDPE & PE

RIGID PIPE
RCP, CMP, DI & CI

BEDDING DETAILS FOR PLASTIC & RIGID PIPE
NO SCALE

REVISIONS:		
1	ISSUE FOR REVIEW	06/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: MSP | CADD: MSP | CREW CHIEF (S): MSP
PROJECT NUMBER: 0601-0001TN | COMPUTER FILE: Approval Plans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES LLC
4524 Harding Avenue
Nashville, TN 37209-1721
615-353-4025 Office
pgreen@southernengineerinc.com

PROJECT DATA
SES PROJECT #: 06-07-SES-002
DATE: SEPTEMBER 07, 2006
DRAWN BY: D. R. GREEN
CHECKED BY: B. PAYNE
APPROVED BY: T. GORDON
PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. of RECORD: JON F. GOFF, P.E.
REG. NO: 101818
SURV. of RECORD: REG. NO:

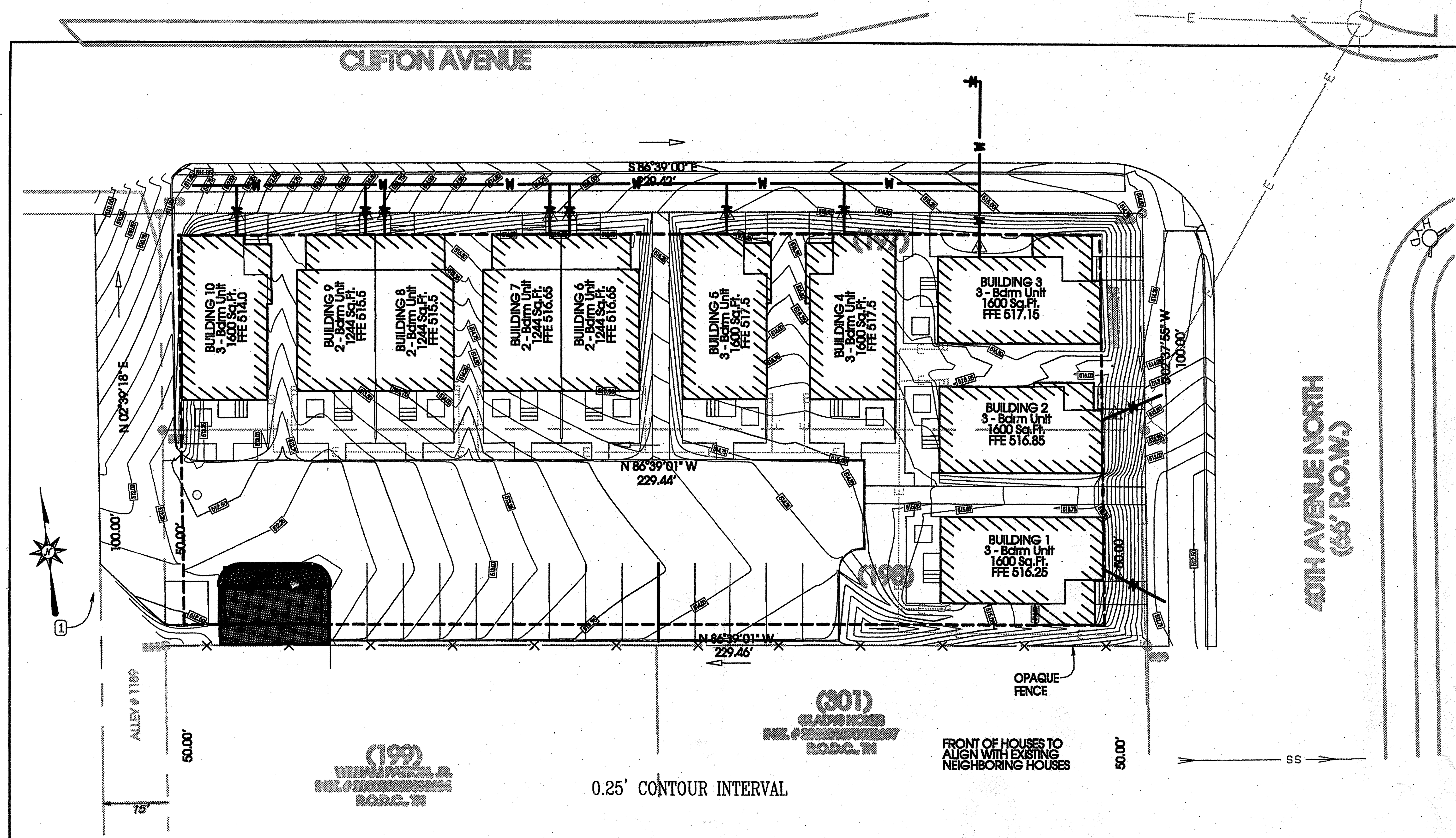
OWNER/DEVELOPER
DEVELOPMENT OF
Parcel ID:091120197 00
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

DEMOLITION PLAN, SITE LAYOUT & UTILITIES PLAN
NASHVILLE, TENNESSEE

ENGINEERS STAMP
JON F. GOFF
Registered Professional Engineer
AGRICULTURE
CIVIL
MECHANICAL
STATE OF TENNESSEE
DATE

DRAWING TITLE

DRAWING
C 2.0
SHEET
OF
10

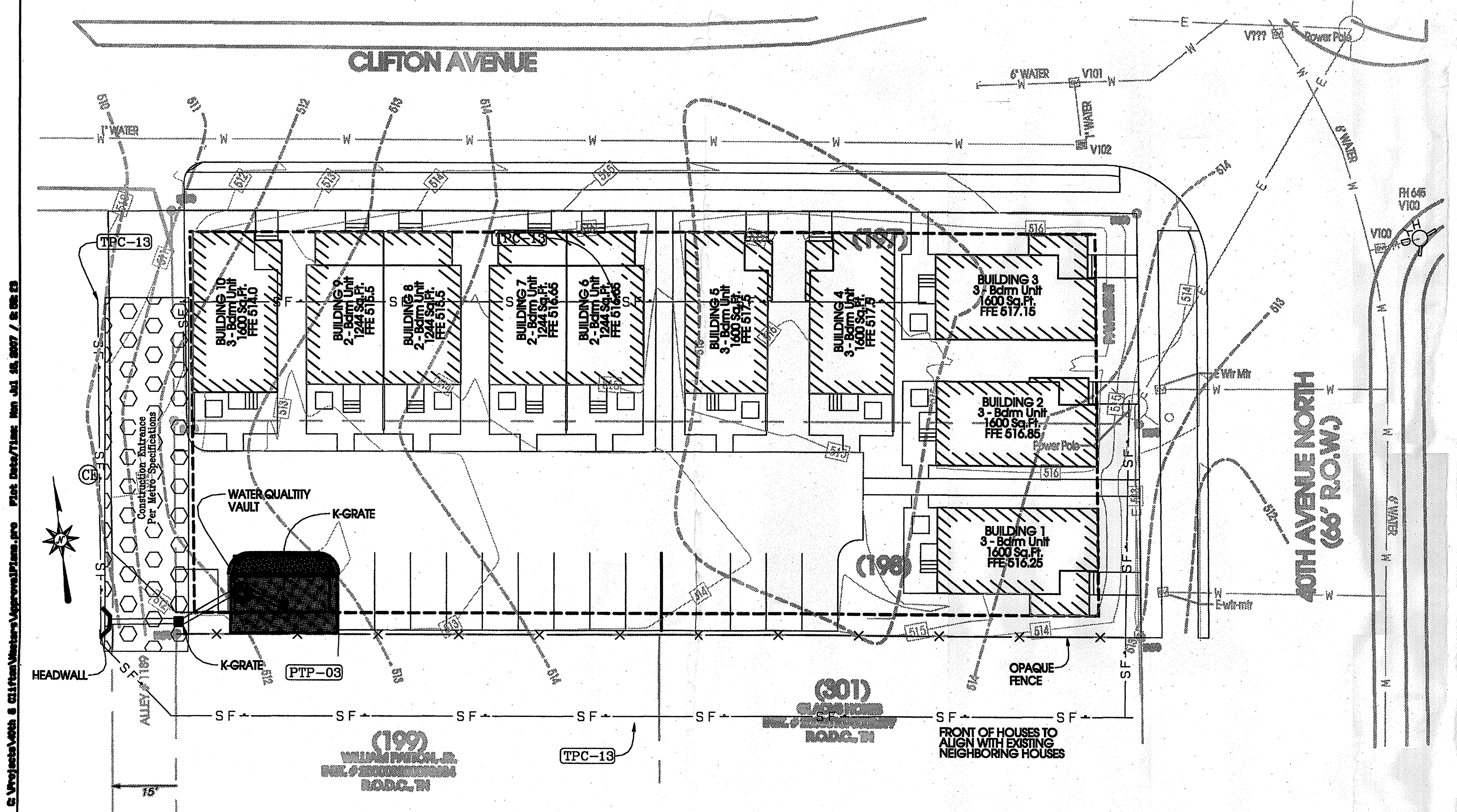


DETAILED GRADING & DRAINAGE PLAN

GRAPHIC SCALE 1"=20'

0 20 40 60

GRADING PLANS NOTES: (1) INSTALL SEGMENTAL RETAINING WALL PER MANUFACTURES RECOMENDATION.



EROSION PREVENTION & SEDIMENT CONTROL

GRAPHIC SCALE 1"=20'

0 20 40 60

GRADING NOTES

General Requirements

1. LITTER AND CONSTRUCTIONDEBRIS SHALL BE PICKED-UP PRIOR TO ANTICIPATED STORM EVENTS (AS FORECASTED BY LOCAL WEATHER REPORTS). AFTER USE, SILT FENCES SHALL BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
2. Placement and spreading of fill material will be started at the lowest point and brought up in layers with a maximum height of 6". Material shall be compacted as required by the Geotechnical Engineer or codes. Owner will provide monitoring services.
3. On-site dust control shall be kept within acceptable limits by sprinkling or other acceptable methods.
4. Placement and maintenance of erosion control devices shall be in accordance with Metropolitan Nashville /TDEC regulations.
5. All erosion control devices and temporary stabilization measures shall be inspected twice per week. Repair/ replace damaged devices as necessary. Restore temporary stabilization measures where necessary. Remove sediment from control devices when sediment levels exceed 1/2;} the barrier.

Final Grading For Each Phase

Remove silt fence and any other temporary sediment. Areas that have been stripped, cut slopes, fill slopes shall be permanently stabilized by mulching and seeding. Permanent stabilization with perennial vegatation (using native herbaceous and woody plants where practicle) or other permanent stable non-eroding surfaces shall replace temporary stabilization methods within 48 hours. These methods may include temporary/permanent seeding. fescue (K-31 @ 3#/1000 SF), mulching, geotextile fabrics, sod stabilization and other appropriate methods.

The proposed construction schedule is less than 6 months.

I, William S. Payne III, as the "certified" erosion control specialist have reviewed and approved the plan for sufficient on-site temporary erosion and sediment control provisions.

William S. Payne III Date

AS BUILT CERTIFICATIONS ARE REQUIRED FOR WATER QUALTITY STRUCTURES PRIOR TO ISSUANCE OF THE U&O PERMIT. THIS IS IN ACCORDANCE WITH METRO STORMWATER MANUAL, VOLUME 1, 3.9 AS BUILT CERTIFICATION.

CERTIFICATION OF AS-BUILT FOR WATER QUALITY STRUCTURES MUST INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION:

MANUFACTURE AND MODEL NUMBER OF UNIT DIMENSIONS
ATTACHED SHOP DRAWINGS OF INSTALLED UNIT
DATE OF FIELD INSPECTION BY ENGINEER (BEFORE BACKFILLING STRUCTURE)
ENGINEER STAMP AND DATE.

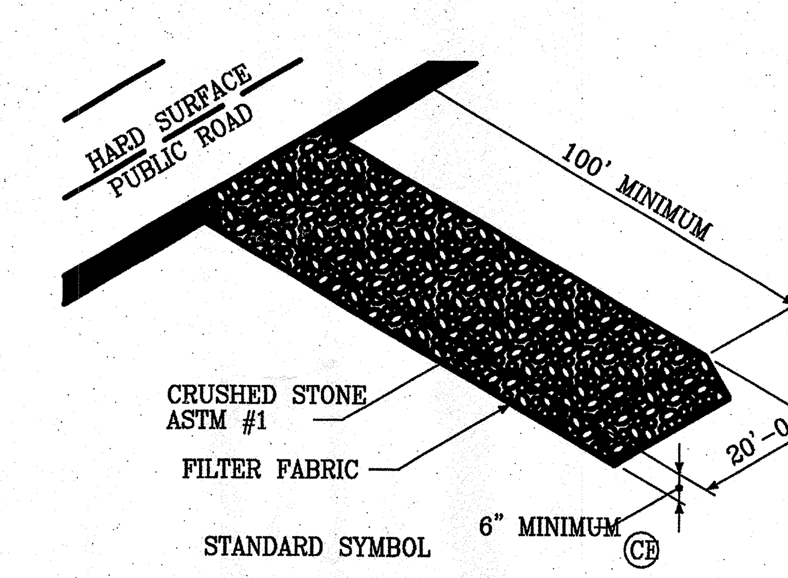
Contractor to provide an area for concrete wash down and equipment refueling in accordance with Metro CP-10 and CP-13, respectively. Contractor to coordinate exact location with NPDES department during pre-construction meeting.
METRO STORM WATER COVERAGE

I William S. Payne III do hereby certify that this project contains less than one (1) acre and does not reauire a Notice of coverage

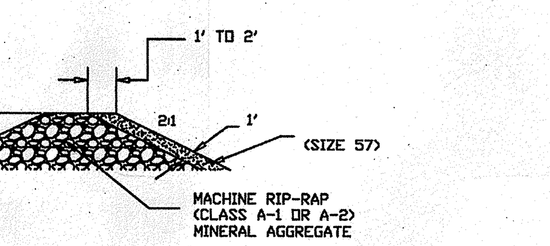
William S. payne III Date

EROSION CONTROL NOTES:

1. THE APPROVE EROSION PREVENTION AND SEDIMENT CONTROL (ESPC) PLAN SHALL BE IMPLEMENTED PRIOR TO ANY LAND-DISTURBING ACTIVITY ON THE CONSTRUCTION SITE. ANY MODIFICATIONS TO THE APPROVED EPSC PLAN MUST BE REVIEWED AND APPROVED BY MSD'S PRIVATE DEVELOPMENT REVIEW OFFICE. EPSC BMP'S SHALL BE INSTALLED PER THE PLAN AND MSD STANDARDS.
2. DETENTION BASINS, IF APPLICABLE, SHALL BE CONSTRUCTED FIRST AND SHALL PERFORM AS SEDIMENT BASINS DURING CONSTRUCTION UNTIL THE CONTRIBUTING DRAINAGE AREAS ARE SEEDED AND STABILIZED.
3. ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD & SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.
4. SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWALES AND CATCH BASINS. STOCKPILES SHALL BE SEEDED, MULCHED AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.
5. ALL STREAM CROSSINGS MUST UTILIZE LOW-WATER CROSSING STRUCTURES PER MSD STANDARD DRAWING ER-02.
6. WHERE CONSTRUCTION OR LAND DISTURBANCE ACTIVITY WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, TEMPORARY SITE STABILIZATION MEASURES SHALL BE REQUIRED AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED.
7. SEDIMENT-LADEN GROUNDWATER ENCOUNTERED DURING TRENCHING, BORING OR OTHER EXCAVATION ACTIVITIES SHALL BE PUMPED TO A SEDIMENT TRAPPING DEVICE PROIR TO BEING DESHARGED INTO A STREAM, POND, SWALE OR CATCH BASIN.
8. MAINTENANCE: EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
9. SEDIMENT CONTROL STRUCTURES WILL REMAIN IN PLACE UNTIL SITE IS PERMANENTLY STABILIZED.
10. AFTER SITE IS PERMANENTLY STABILIZED AND BEFORE EROSION CONTROL MEASURES ARE REMOVED, THE CONTRACTOR SHALL CLEAN DEBRIS AND SILT FROM ALL STORM SEWERS, STORM STRUCTURES, PAVEMENTS AND GUTTERS IN AREA OF WORK.
11. ALL WASTE MATERIAL SHALL BE REMOVED FROM THE SITE. CONTRACTOR WILL BE RESPONSIBLE FOR PREVENTING EROSION & MONITERING THE RUNOFF FROM THE WASTE MATERIAL UNTIL GRASS COVER IS STABILIZED, UNLESS HAULED TO A SITE WITH A CURRENT GRADING PERMIT WITH THE PERMIT'S HOLDERS WRITEN CONSENT,
12. CONTINUOUS INSPECTION, DOCUMENTATION AND MAINTENANCE OF THE SEDIMENT CONTROL PLAN IS MANDATORY. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING QUALITIFIED PERSONEL TO BE ONSITE INSURING EROSION CONTROLL PLAN IS EFFECTIVE DURING ALL PHASES INVOLVING GRADING AND EXCAVATION.
13. ANY SEDIMENT CONTROL DEVICES DISTURBED DURING UTILITY CONSTRUCTION MUST BE RESTORED IMMEDIATELY.
14. THIS GRADING SITE WILL NOT REQUIRE A KENTUCKY NPDES PERMIT SINCE ONLY 0.8497 ACRES WILL BE DISTURBED.

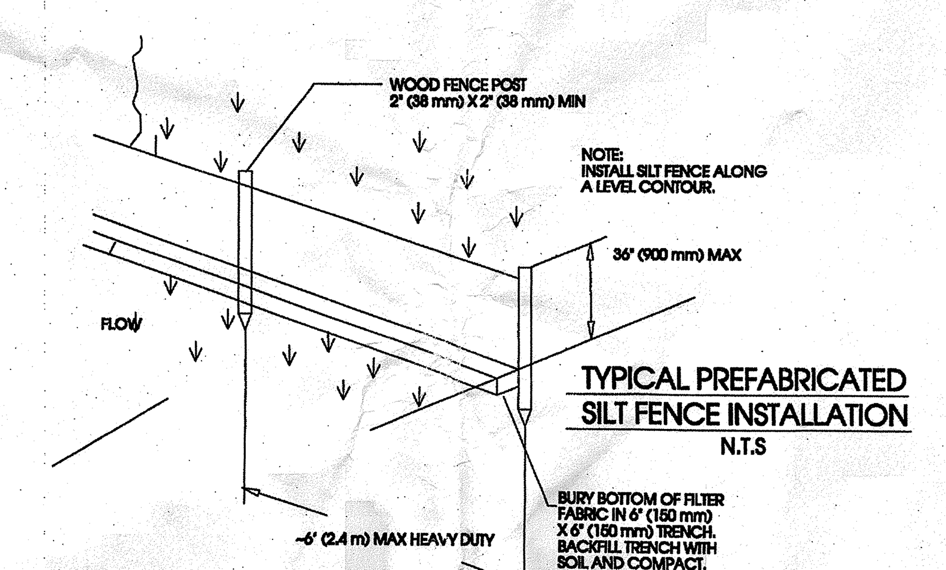


CONSTRUCTION EXIT DETAIL
NO SCALE

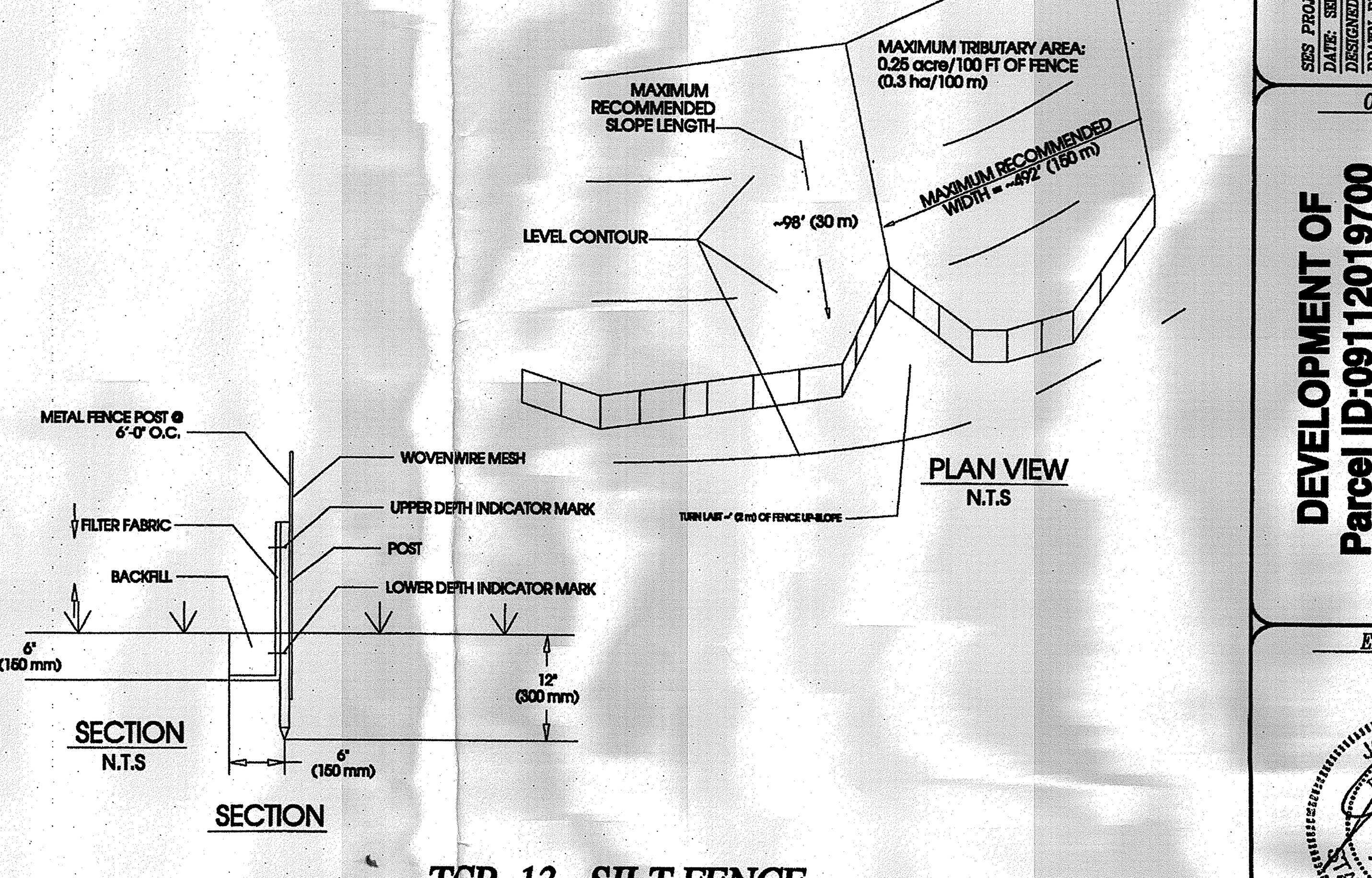


EROTIONAL CONTROL PLAN LEGEND:

TCP-4 -CHECK DAMN
N.T.S



TYPICAL PREFABRICATED SILT FENCE INSTALLATION
N.T.S



TCP-13 -SILT FENCE
N.T.S

REVISIONS:	
1 ISSUE FOR REVIEW	06/01/07
2 REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: WSP | CADD: WSP | CREW CHIEF (S): WSP
PROJECT NUMBER: 0601-0001T&L | COMPUTER FILE: ApprovalPlans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES L.L.C.
4509 Wyoming Avenue
Nashville, TN 37209-4721
615-533-4935 Office
payneengineering@comcast.net

PROJECT DATA

SES PROJECT #: 0407-SER-002
DATE: SEPTEMBER 27, 2006
DESIGNED BY: PRJCLNT 2
DRAWN BY: B. PAYNE
CHECKED BY: J. GOFF
APPROVED BY: V. GORDON
PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. of RECORD: JON F. GOFF, P.E.
REG. NO: 101812
SRVYR of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

GRADING & DRAINAGE PLANS & EROSION SEDIMENT CONTROL PLANS
NASHVILLE, TENNESSEE

ENGINEERS STAMP

JON F. GOFF Registered Engineer AGRICULTURE COMMERCE No. 101812 STATE OF TENNESSEE

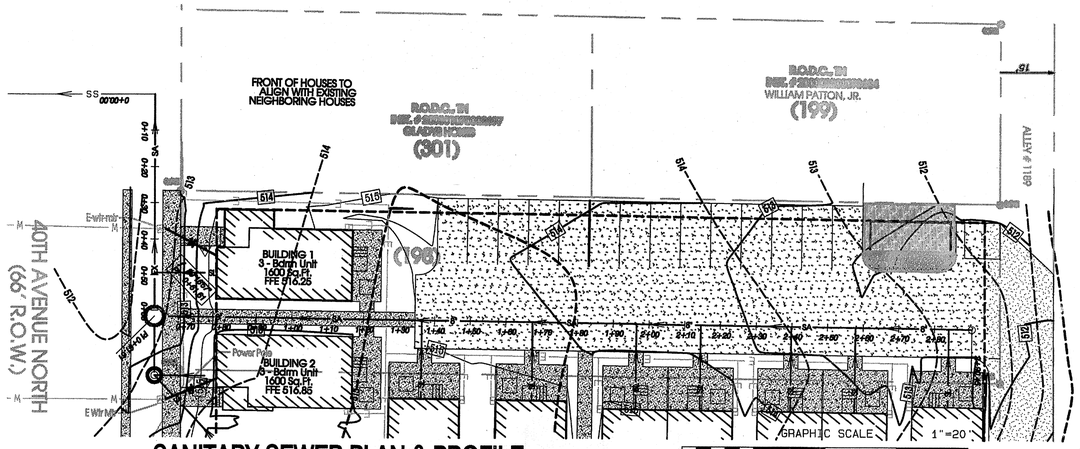
DATE:

DRAWING TITLE

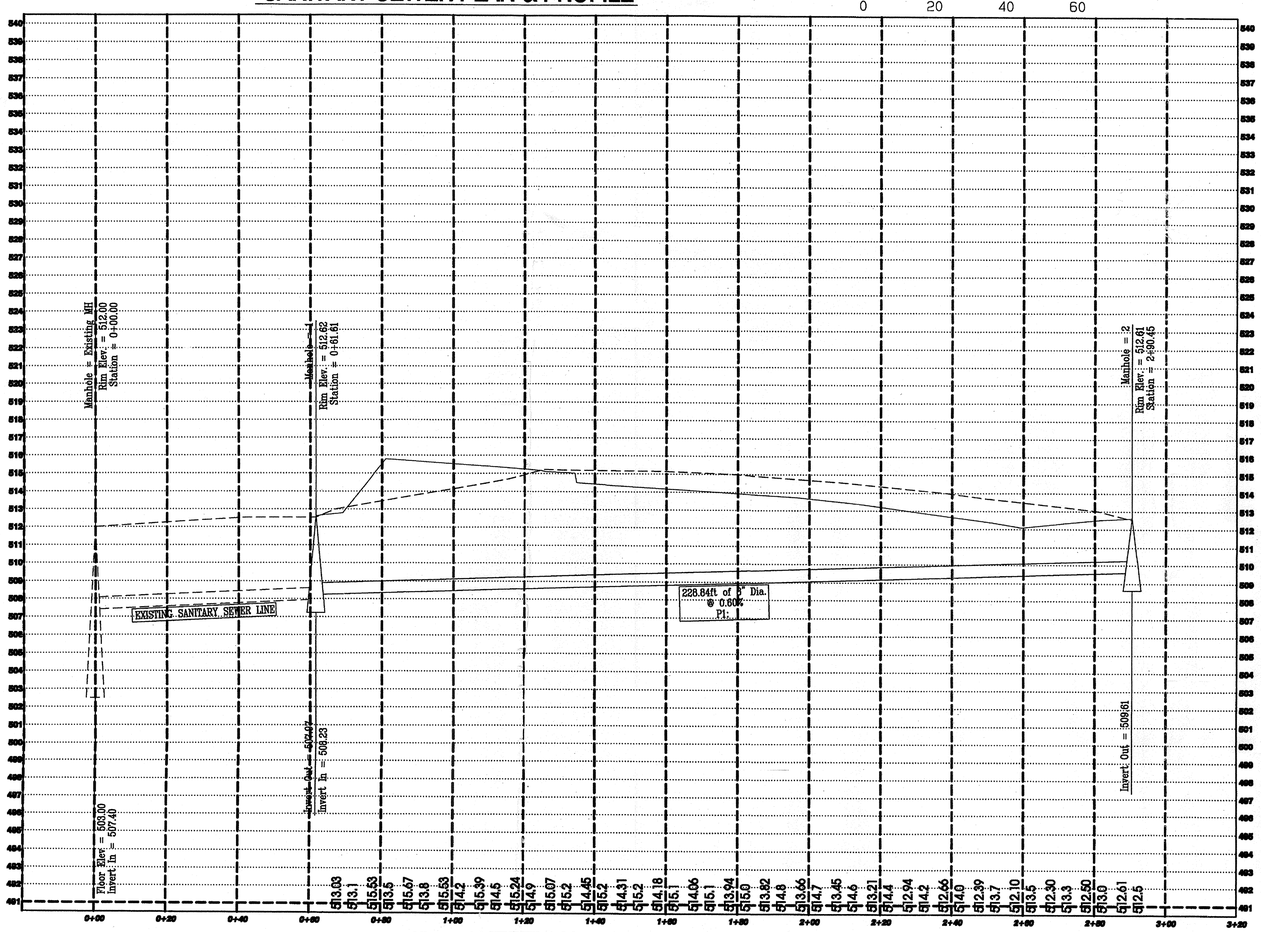
DRAWING
C 3.0
SHEET
OF
10

Project Desc.: Path: C:\Projects\40th & Clifton\Waters\ApprovalPlans.pro Plot Date/Time: Mon Jul 16, 2007 / 8:58:23

STORM SEWER DATA						
FROM		TO		PIPE DATA		
NODE NAME (PT#)	OUTLET ELEV	NODE NAME (PT#)	INLET ELEV	%GRADE	SIZE	LENGTH
Existing MH736	507.400	MH 1	507.970	0.925	(Existing Pipe)	61.610
MH 1	508.230	MH 2	509.610	0.603	8" Dia.	228.844



SANITARY SEWER PLAN & PROFILE



1" = 5' VERTICAL
1" = 20' HORIZONTAL

REVISIONS:

1	ISSUE FOR REVIEW	06/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: MSP | CADD: MSP | CREW CHIEF (S): MSP
PROJECT NUMBER: 0601-0001T&L | COMPUTER FILE: Approval Plans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES L.L.C.
4524 Harding Avenue
Nashville, TN 37204-4121
615-385-1155 Office
jrgreen@southernengineerinccoast.net

PROJECT DATA

SES PROJECT #: 0401-SES-005
DATE: SEPTEMBER, 27, 2006
DESIGNED BY: PROJMT 2
DRAWN BY: B. PAYNE
CHECKED BY: L. GOFF
APPROVED BY: T. GORDON

PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. of RECORD: JON F. GOFF, P.E.
REG. NO: 106888
SURVEY of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

SANITARY SEWER PLAN & PROFILE & METRO DETAILS
NASHVILLE, TENNESSEE

ENGINEERS STAMP

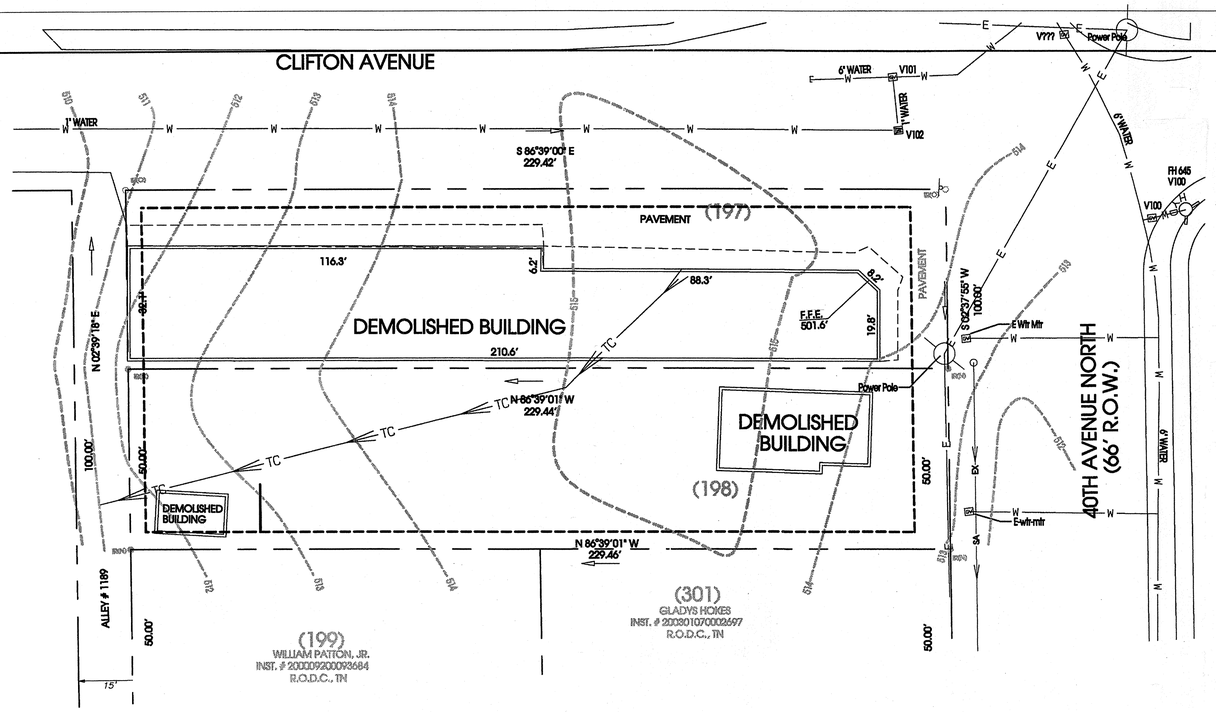
JON F. GOFF
STATE OF TENNESSEE
AGRICULTURE
106888
REGISTERED
PROFESSIONAL
ENGINEER
JON F. GOFF
SOUTHERN ENGINEERING SERVICES L.L.C.

DATE:

DRAWING TITLE

DRAWING
C 4.0
SHEET
OF
10

Project Base: | Path: Q:\Projects\40th & 41st Ave\Approval\Plans.prp | Plot Date/Time: Mon Jul 16, 2007 / 14:09:04



EXISTING DRAINAGE CONDITIONS

GRAPHIC SCALE 1"=20'
0 20 40 60

Object Name	Perimeter Length (ft)	Enclosed Area (Sq. Ft.)
Existing Building	481.58	6104.54
Existing S/W	498.45	1392.27
Existing Building	131.96	957.14
Existing Pavement	550.27	3507.58

Total perimeter length = 1662.26 ft
Total enclosed area = 11961.53 Sq. Ft.

Sub-Area Time of Concentration Details

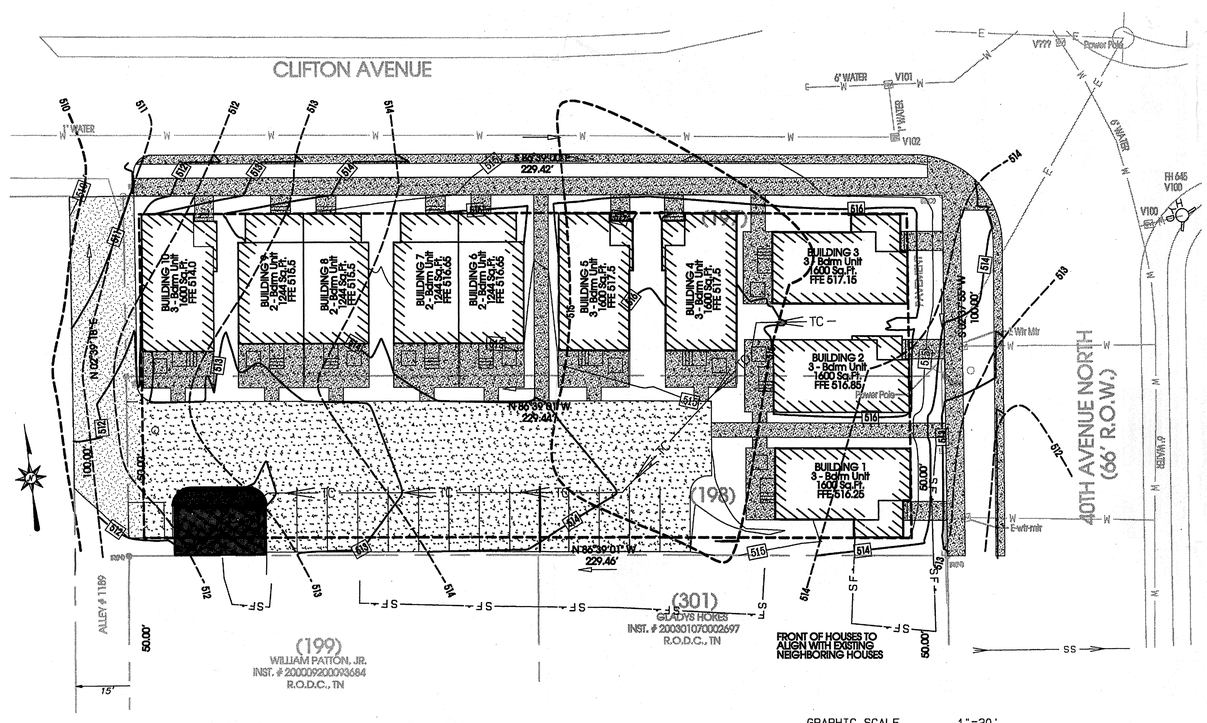
Sub-Area Identifier/ (ft)	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Existing							
SHEET	100	0.0120	0.011				0.023
SHALLOW	77	0.0392	0.050				0.007
Time of Concentration							0.100
proposed							
SHEET	100	0.0260	0.240				0.202
SHALLOW	113	0.0169	0.050				0.015
Time of Concentration							0.217

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Existing	Open space; grass cover < 50% (poor)	C	.265	86
	Paved parking lots, roofs, driveways	C	.274	98
Total Area / Weighted Curve Number			.54	92
proposed	Open space; grass cover > 75% (good)	C	.125	74
	Paved parking lots, roofs, driveways	C	.414	98
Total Area / Weighted Curve Number			.54	92

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	2-Yr (cfs) (hr)	5-Yr (cfs) (hr)	10-Yr (cfs) (hr)	25-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)	1-Yr (cfs) (hr)
SUBAREAS							
Existing	2.16	2.83	3.20	3.77	4.27	4.55	1.75
	11.93	11.93	11.93	11.93	11.93	11.93	11.93
proposed	1.84	2.39	2.69	3.18	3.60	3.84	1.47
	2.01	12.02	12.01	12.01	12.01	12.01	12.01



PROPOSED DRAINAGE CONDITIONS

GRAPHIC SCALE 1"=20'
0 20 40 60

Object Name	Perimeter Length (ft)	Enclosed Area (Sq. Ft.)
BUILDING 1	126.247	822.30
BUILDING 2	118.247	766.31
BUILDING 3	126.247	822.30
BUILDING 4	118.248	766.31
BUILDING 5	118.248	766.31
BUILDING 6 & 7	145.080	1282.82
BUILDING 8 & 9	145.080	1282.82
BUILDING 10	118.224	766.31

Total enclosed area = 7275.47 Sq. Ft.

Object Name	Perimeter Length (ft)	Enclosed Area (Sq. Ft.)
PATIO 6 & 7	112.516	468.69
PATIO 5	67.582	212.91
PATIO 4	67.582	212.91
PATIO 2	62.115	172.39
PATIO 1	62.115	172.39
PATIO 3	76.083	200.33
PATIO 10	67.582	212.91
PATIO 8 & 9	112.516	468.69

Total enclosed area = 2121.20 Sq. Ft.

Object Name	Perimeter Length (ft)	Enclosed Area (Sq. Ft.)
PARKING LOT	566.275	7737.38
CAMPUS S/W 1	139.155	262.31
CAMPUS S/W 2	122.000	227.99

Total enclosed area = 8227.68 Sq. Ft.

Object Name	Perimeter Length (ft)	Enclosed Area (Sq. Ft.)
SIDEWALK UNIT 2	34.349	62.88
SIDEWALK UNIT 3	34.287	62.71
SIDEWALK UNIT 1	34.820	64.12
SIDEWALK UNIT 9	21.000	27.50
SIDEWALK UNIT 8	21.094	27.76
SIDEWALK UNIT 6	21.000	27.50
SIDEWALK UNIT 4	24.583	37.04
SIDEWALK UNIT 5	24.583	37.04
SIDEWALK UNIT 7	21.000	27.50
SIDEWALK UNIT 10	24.583	37.04

Total enclosed area = 411.10 Sq. Ft.

REVISIONS:

1	ISSUE FOR REVIEW	05/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: WSP | CAD: WSP | CREW CHIEF (S): WSP
PROJECT NUMBER: 0601-0001TS | COMPUTER FILE: Approval Plans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES L.L.C.
4524 Harding Avenue
Nashville, TN 37204-4721
615-383-4135 Office
pgreenglass@southernengineerinc.net

PROJECT DATA

SSS PROJECT # MNT-SSS-002
LATITUDE: 36° 12' 0.0"
LONGITUDE: 86° 47' 0.0"
DESIGNED BY: PRICLE S
DRAWN BY: B. PAYNE
CHECKED BY: L. GOFF
APPROVED BY: T. GORDON
PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. of RECORD: JOE F. GOFF, P.E.
REG. NO: 101812
SURVEYOR of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

EXISTING & PROPOSED DRAINAGE CONDITIONS

NASHVILLE, TENNESSEE

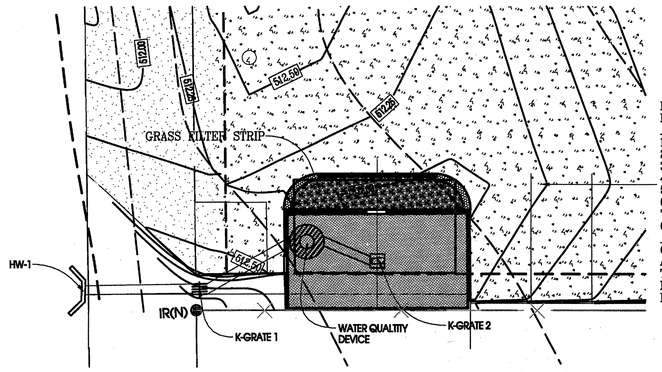
ENGINEERS STAMP

JOE F. GOFF
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
No. 101812

DATE:

DRAWING TITLE

DRAWING
C 5.0
SHEET
OF
10



PARKINGLOT DRAINAGE PARAMETERS
INPUT PARAMETERS

1. Channel Slope (ft/ft) 0.0055
2. Channel Bottom Width (ft) 0.10
3. Left Side Slope (Horizontal to 1) 50.00
4. Right Side Slope (Horizontal to 1) 50.00
5. Manning's Coefficient 0.011
6. Discharge (cfs) 1.77
7. Depth of Flow (ft) 0.14

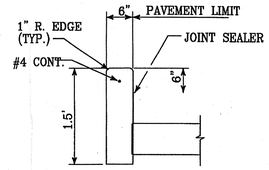
OUTPUT RESULTS

Cross Section Area (Sqft) 0.99
Average Velocity (ft/sec) 1.78
Top Width (ft) 14.10
Hydraulic Radius (ft) 0.07
Froude Number 1.18

PLAN VIEW OF STORMWATER TREATMENT

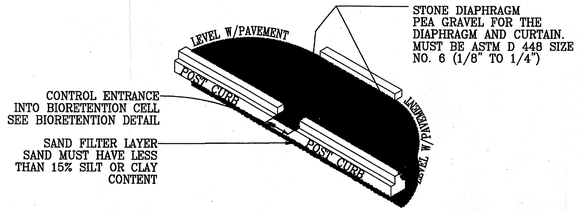
GRAPHIC SCALE 1"=10'

0 10 20 30



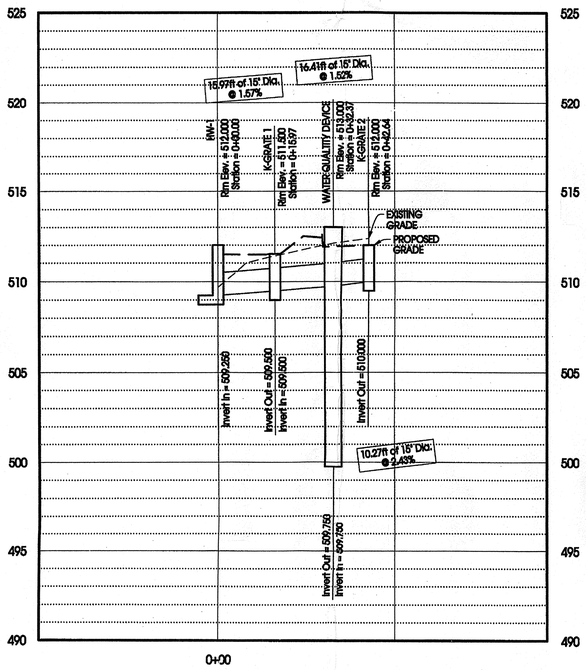
CONCRETE POST CURB FOR STORMWATER AREA

NO SCALE



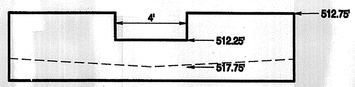
GRASS FILTER STRIP DETAIL

PLAN VIEW



HYDROLOGIC REPORT FOR 40th & Clifton
SUMMARY OF PEAK FLOW RATES

FREQ (yr)	PRE-DEVELOPED FLOW (c.f.s.)	POST-DEVELOP FLOW (c.f.s.)	ELEVATION (ft.)	POND STORAGE (cu.ft.)	ROUTED OUTFLOW (c.f.s)
2	1.99	1.77	512.51	0.9	1.77
5	2.68	2.39	512.57	1.0	2.39
10	3.24	2.89	512.62	1.0	2.89
25	3.79	3.38	512.66	1.1	3.38
50	4.41	3.93	512.70	1.1	3.93
100	4.59	4.10	512.72	1.2	4.10



EMERGENCY OVERFLOW

NO SCALE

ASBUILT CERTIFICATION

After the bioretention area has been constructed, the developer must have an asbuilt certification of the bioretention area conducted by a registered Professional Engineer. The as-built certification verifies that the BMP was installed as designed and approved.

My Signature below verfies that all the following has been inspected and determined to be fuctioning as specified and designed.
1. Pretreatment, such as a grass filter strip, for coarser sediments must be provided to prevent premaiure clogging of the system.
2. Surrounding drainage areas must be stabilized to prevent sediment from clogging the filter media.
3. Correct ponding depths and infiltration rates must be maintained to prevent killing vegetation.

Professional Engineer Licenses # Date

REVISIONS:

1	ISSUE FOR REVIEW	05/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: WSP | CADD: WSP | CREW CHIEF (S): WSP
PROJECT NUMBER: 0501-0001TS | COMPUTER FILE: ApprovalPlans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES LLC.
4524 Harding Avenue
Nashville, TN 37204-1121
615-383-1100 Office
pg@southernengineerservicesllc.net

PROJECT DATA

SES PROJECT #: NAT-SES-102
DATE: SEPTEMBER, 27, 2006
DESIGNED BY: PARCEL 2
DRAWN BY: B. PAYNE
CHECKED BY: T. COX
APPROVED BY: V. GORDON
PROJECT MANAGER: WILLIAM S. PAYNE III
ENGR. OF RECORD: JOB V. COFF, P.E.
REG. NO: 101812
SURVEY of RECORD: REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

STORWATER PIPE & TREATMENT LAYOUT

NASHVILLE, TENNESSEE

ENGINEERS STAMP

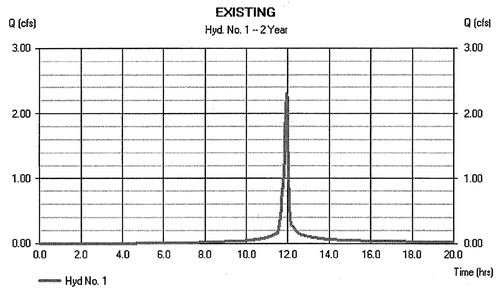
DATE:

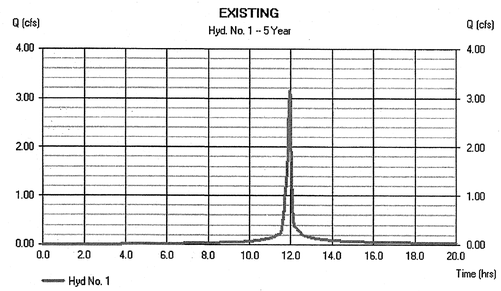
DRAWING TITLE

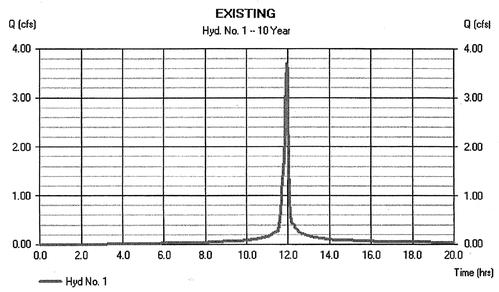
DRAWING
C 6.0
SHEET
OF
10

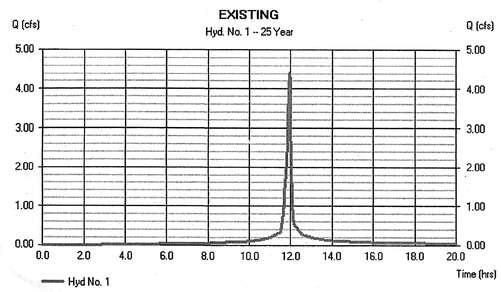
Project Name: | Path: G:\Projects\40th & Clifton\Masters\Approval\Plans.pro | Plot Date/Time: Mon Jul 09,2007 / 10:04:08

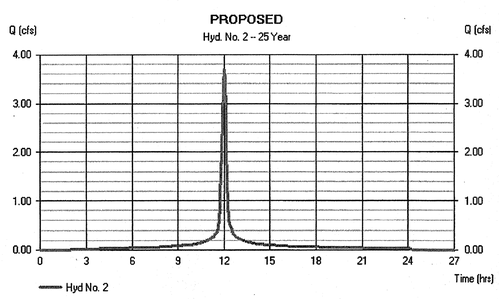
EXISTING CONDITIONS

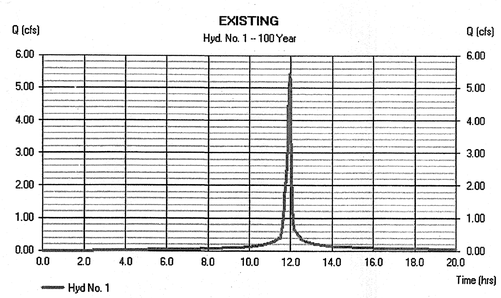




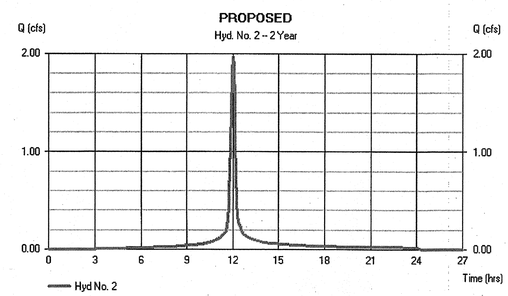


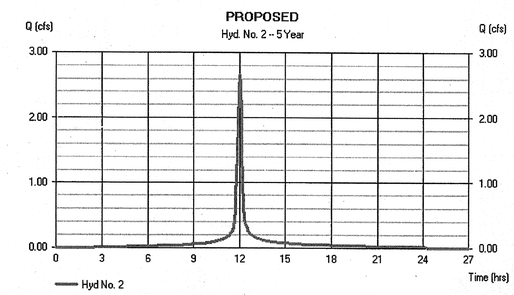


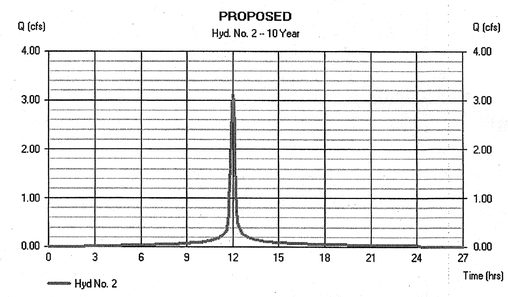


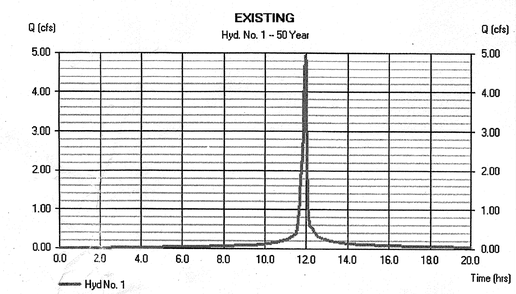


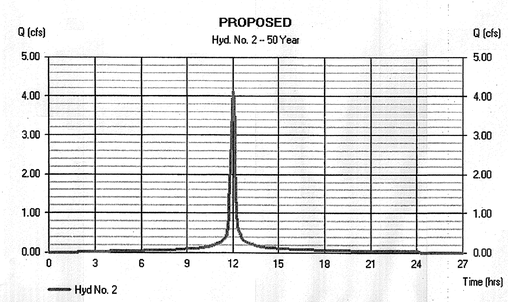
PROPOSED CONDITIONS

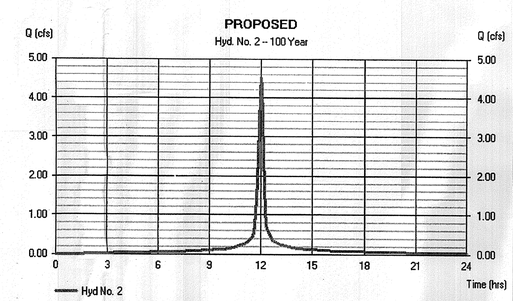












REVISIONS:

1	ISSUE FOR REVIEW	06/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07
LAST FIELD WORK:
MANAGER: NSP
CADD: NSP
CREW CHIEF (S): NSP
PROJECT NUMBER: 0601-0001TS
COMPUTER FILE: Approval1Plans.PRO
SURVEY DATA FILE: SURVEY-1
SCALE: 1 = 50
SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES, L.L.C.
4214 Harding Pike
Nashville, TN 37205
615-353-4055 Office
pgroseng@earthlink.net

PROJECT DATA

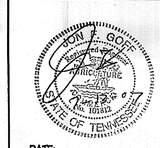
SES PROJECT #:0601-SES-003
DATE: SEPTEMBER 27, 2006
DESIGNED BY: D. FAUL
DRAWN BY: D. FAUL
CHECKED BY: I. GOFF
APPROVED BY: Y. GORDON
PROJECT MANAGER: WILLIAM S. RUNGE III
ENGR. of RECORD: DON T. GOFF, P.E.
REG. NO: 101842
SURVEY of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:09112019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

EXISTING & PROPOSED HYDROGRAPHS
NASHVILLE, TENNESSEE

ENGINEERS STAMP



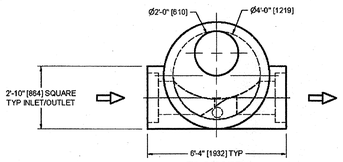
DATE:

DRAWING TITLE

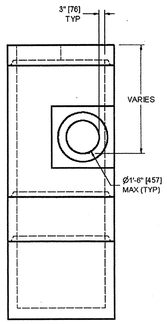
DRAWING
C7.0
SHEET
OF
10

Project Dwgs.: Path: G:\Projects\4006 & 4010\Jim\Meters\Approval\Plans.prp Plot Date/Time: Mon Jul 16 09:07 / 08:09:00

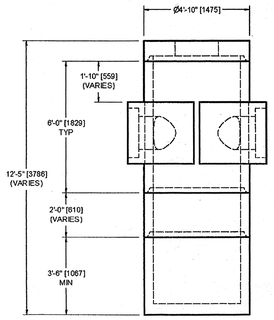
THE VORTSENTRY SECTION SHALL BE STENCILED WITH THE CONTECH STORMWATER SOLUTIONS NAME AND LOGO. PIPE OPENINGS SHALL BE STENCILED "INLET" OR "OUTLET" AS APPROPRIATE



PLAN VIEW



LEFT SIDE VIEW

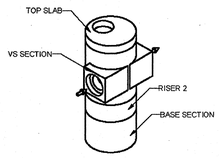


ELEVATION VIEW

ALTERNATE UNITS [ ] ARE IN MILLIMETERS UNLESS NOTED OTHERWISE

NOTES:

1. STORMWATER TREATMENT SYSTEM (SWTS) SHALL BE DESIGNED TO MEET PERFORMANCE GOALS BASED ON FULL SCALE LABORATORY PERFORMANCE DATA
2. SWTS SHALL BE DESIGNED TO RETAIN FLOATABLES AND TRAPPED SEDIMENT AT FLOW RATES UP TO AND INCLUDING PEAK TREATMENT CAPACITY
3. SWTS INVERTS IN AND OUT SHALL BE AT THE SAME ELEVATION
4. SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER
5. SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS
6. PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION
7. PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF INTERNAL COMPONENTS
8. (1) MANHOLE FRAME AND COVER SUPPLIED WITH SYSTEM, NOT INSTALLED
9. PURCHASER TO PREPARE EXCAVATION AND PROVIDE LIFTING EQUIPMENT
10. VORTSENTRY BY CONTECH STORMWATER SOLUTIONS; PORTLAND, OR (800) 548-4667; SCARBOROUGH, ME (877) 907-8676; LINTHICUM, MD (866) 740-3318



ASSEMBLY VIEW

STD

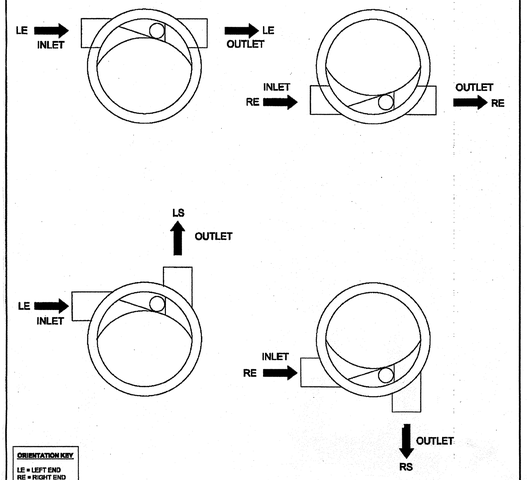
STANDARD DETAIL
STORMWATER TREATMENT SYSTEM
VORTSENTRY® VS40 US PATENT No. 6,991,114

CONTECH® STORMWATER SOLUTIONS™
contechstormwater.com

SCALE: NONE	
DRAWN: JBS	
CHECKED: NDG	
FILE NAME: STDVS40	
DATE: 9/25/06	

FOR INFORMATIONAL PURPOSES ONLY - NOT INTENDED FOR CONSTRUCTION

This CADD file is for the purpose of specifying stormwater treatment equipment to be furnished by CONTECH Stormwater Solutions and may only be transferred to other documents exactly as provided by CONTECH Stormwater Solutions. Title block information, **excluding** the CONTECH Stormwater Solutions logo and the VortSentry Stormwater Treatment System designation and patent number, may be deleted if necessary. Revisions to any part of this CADD file without prior coordination with CONTECH Stormwater Solutions shall be considered unauthorized use of proprietary information.



ORIENTATION KEY

LE = LEFT END
RE = RIGHT END
LS = LEFT SIDE
RS = RIGHT SIDE

This CADD file is for the purpose of specifying stormwater treatment equipment to be furnished by CONTECH Stormwater Solutions and may only be transferred to other documents exactly as provided by CONTECH Stormwater Solutions. Title block information, excluding the CONTECH Stormwater Solutions logo and the stormwater treatment system product designation and patent number, may be deleted if necessary. Revisions to any part of this CADD file without prior coordination with CONTECH Stormwater Solutions shall be considered unauthorized use of proprietary information.

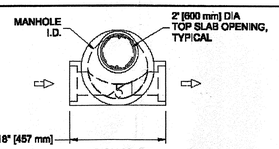
CONTECH® STORMWATER SOLUTIONS™
contechstormwater.com

TYPICAL VORTSENTRY® SYSTEM ORIENTATIONS

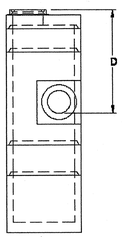
DATE: 4/21/06	SCALE: NONE	FILE NAME: TYP VS ORIENTATION	DRAWN: JBS	CHECKED: NDG

THE VORTSENTRY SECTION SHALL BE STENCILED WITH THE CONTECH STORMWATER SOLUTIONS NAME AND LOGO. PIPE OPENINGS SHALL BE STENCILED "INLET" OR "OUTLET" AS APPROPRIATE

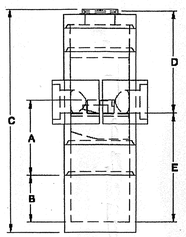
This CADD file is for the purpose of specifying stormwater treatment equipment to be furnished by CONTECH Stormwater Solutions and may only be transferred to other documents exactly as provided by CONTECH Stormwater Solutions. Title block information, excluding the CONTECH Stormwater Solutions logo and the VortSentry Stormwater Treatment System designation and patent number, may be deleted if necessary. Revisions to any part of this CADD file without prior coordination with CONTECH Stormwater Solutions shall be considered unauthorized use of proprietary information.



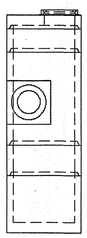
PLAN VIEW



LEFT SIDE VIEW
(ALUMINUM COMPONENTS OMITTED FOR CLARITY)



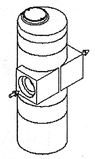
ELEVATION VIEW



RIGHT SIDE VIEW
(ALUMINUM COMPONENTS OMITTED FOR CLARITY)

NOTES:

1. STORMWATER TREATMENT SYSTEM (SWTS) SHALL BE DESIGNED TO MEET PERFORMANCE GOALS BASED ON FULL SCALE LABORATORY PERFORMANCE DATA
2. SWTS SHALL BE DESIGNED TO RETAIN FLOATABLES AND TRAPPED SEDIMENT AT FLOW RATES UP TO AND INCLUDING PEAK TREATMENT CAPACITY
3. SWTS INVERTS IN AND OUT SHALL BE AT THE SAME ELEVATION
4. SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER
5. SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS
6. PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION
7. PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF INTERNAL COMPONENTS
8. MANHOLE FRAMES AND COVERS SUPPLIED WITH SYSTEM, NOT INSTALLED
9. PURCHASER TO PREPARE EXCAVATION AND PROVIDE LIFTING EQUIPMENT
10. VORTSENTRY BY CONTECH STORMWATER SOLUTIONS; PORTLAND, OR (800) 548-4667; SCARBOROUGH, ME (877) 907-8676; LINTHICUM, MD (866) 740-3318



ASSEMBLED VIEW

VortSentry Model (VS)	Manhole Diameter (ID)		Total Treatment Depth A		Storage - Base Riser Height B		Typical Total Outside Height C		Typical Distance Rim to Invert D		Typical Depth Below Invert (inside) E		Approximate Minimum Distance Rim to Invert		Recommended Maximum Pipe Diameter (ID)	
	ft	mm	ft	mm	ft	mm	ft	m	ft	m	ft	mm	ft	m	in	mm
VS30	3	900	3.38	1029	3	900	10.08	3.07	3.79	1.15	5.79	660	2.33	0.71	12	300
VS40	4	1200	4.50	1372	3	900	12.75	3.89	5.25	1.60	7.00	890	3.09	0.94	18	450
VS50	5	1500	5.63	1715	3	900	13.67	4.17	5.04	1.54	7.96	890	3.34	1.02	18	450
VS60	6	1800	6.75	2057	3	900	15.75	4.80	6.16	1.88	8.92	1060	4.00	1.22	24	600
VS70	7	2100	7.88	2400	3	900	19.00	5.79	8.45	2.58	9.71	1240	4.82	1.41	30	750
VS80	8	2400	9.00	2743	3	900	19.50	5.94	8.54	2.60	10.12	1240	5.21	1.59	30	750

SP

TYPICAL DETAIL WITH SIZING TABLE
STORMWATER TREATMENT SYSTEM
VORTSENTRY US PATENT No. 6,991,114

CONTECH® STORMWATER SOLUTIONS™
contechstormwater.com

SCALE: NONE	
DRAWN: JBS	
CHECKED: NDG	
FILE NAME: TYPTSLVS	
DATE: 11/3/06	

FOR INFORMATIONAL PURPOSES ONLY - NOT INTENDED FOR CONSTRUCTION

REVISIONS:

1	ISSUE FOR REVIEW	05/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 | LAST FIELD WORK:
MANAGER: WSP | CADD: WSP | CREW CHIEF (S): WSP
PROJECT NUMBER: 0601-0001TS | COMPUTER FILE: Approval Plans.PRO
SURVEY DATA FILE : SURVEY-1 | SCALE: 1" = 50' | SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES L.L.C.
4824 Waterloo Avenue
Nashville, TN 37204-4721
615-300-7455 Office
jeg@southernengineeringservices.net

PROJECT DATA

SSS PROJECT # 04TP-SSD-002
DATE: SEPTEMBER 27, 2006
DESIGNED BY: PRICLIF S
DRAWN BY: B. HAYES
REVIEWED BY: S. HAYES
APPROVED BY: T. GORDON

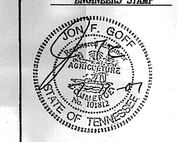
PROJECT MANAGER: WILLIAM S. HAYES III
ENGR. of RECORD: JON F. GOFF, P.E.
REG. NO: 101822
SURVR of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:091120197 00
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

STORWATER QUALITY
DEVICE – DETAIL SHEET

ENGINEERS STAMP

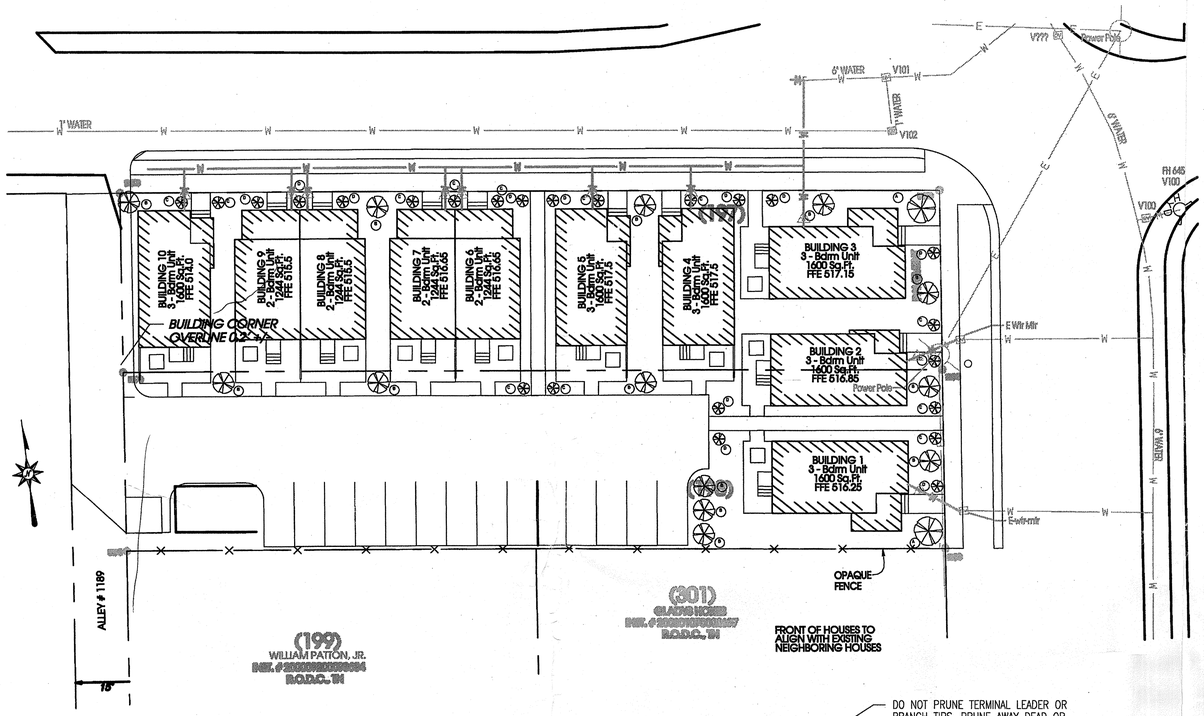


DATE:

DRAWING TITLE

DRAWING
C8.0
SHEET
OF
10

Project Data: Path: G:\Projects\Kbb & Ell\Kobi\Vaulers\Approval\Plans.prp Plot Date/Time: Mon Jul 09, 2007 / 08:08:59



PLANT LIST							
TREE KEY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS	QUAN.
	LIA	Lagerstroemia Indica	Crapemyrtle	2" CAL.	B&B	REFER TO DETAILS	2
	ARM	Acer rubrum	Red maple	2" CAL.	B&B	REFER TO DETAILS	13
SHRUB KEY							
	ICA	Ilex crenata 'Compacta'	Compacta Japanese Holly		B&B	REFER TO DETAILS	13
	NDA	Nandina domestica	Heavenly Bamboo		B&B	REFER TO DETAILS	10

TREE DENSITY WORKSHEET (ORDINANCE 94-1104)

DATE JULY 15, 2007
MAP 91-12 PARCEL 197 & 198
APPLICATION NUMBER
PROJECT NAME Clifton Avenue Town Homes
ADDRESS 711 & 713 40th Avenue North, Nashville, TN 37209

1. ACREAGE (AREA OF BUILDING SITE)		0.54 Ac.
2. MINUS BUILDING COVERAGE AREA	-	0.17 Ac.
3. EQUALS ADJUSTED ACREAGE	=	0.37 Ac.
4. MULTIPLIED BY REQUIRED DENSITY UNITS PER ACRE	x	14
5. EQUALS REQUIRED TREE DENSITY UNITS FOR PROJECT	=	5.0

PROTECTED TREES (EXISTING TREES 6" DBH OR LARGER) NO PROTECTED TREES > 6" DBH
DBH (DIAMETER AT BREAST HEIGHT) EXAMPLE: 3 TREES 6" DBH X 0.2 = 6 DENSITY UNITS

DBH		UNITS	DBH		UNITS	DBH		UNITS	DBH		UNITS
6	x	0.2	20	x	3.3	34	x	9.5	48	x	25.1
8	x	0.4	22	x	3.9	36	x	10.7	50	x	27.3
10	x	0.6	24	x	4.7	38	x	11.9	52	x	29.5
12	x	0.8	26	x	5.6	40	x	17.4	54	x	31.8
14	x	1.1	28	x	6.5	42	x	19.2	56	x	34.2
16	x	1.4	30	x	7.4	44	x	21.1	58	x	36.7
18	x	1.8	32	x	8.4	46	x	23.1	60	x	39.3

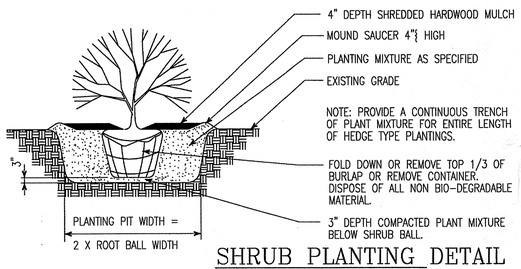
REPLACEMENT TREE SCHEDULE
UNITS REPRESENT BASAL AREA CAL REPRESENTS CALIPER INCHES AT PLANTING

CAL		UNITS	CAL		UNITS	CAL		UNITS	CAL		UNITS
15	2 x	0.5 7.5	5	x	0.9	8	x	1.3	11	x	1.9
3	x	0.6	6	x	1.0	9	x	1.5	12	x	2.1
4	x	0.7	7	x	1.2	10	x	1.7	13	x	2.3

DENSITY UNITS PROVIDED ON ABOVE SCHEDULES.

TOTAL DENSITY UNITS FOR PROTECTED TREES		0.0
TOTAL DENSITY UNITS FOR NEW TREES	+	7.5
TOTAL DENSITY UNITS PROVIDED	=	7.5

NOTE: THE TOTAL DENSITY UNITS PROVIDED MUST EQUAL OR EXCEED THE REQUIREMENTS OF #5 ABOVE. ALL PROTECTED AND REPLACEMENT TREES MUST BE SHOWN ON SITE PLAN.

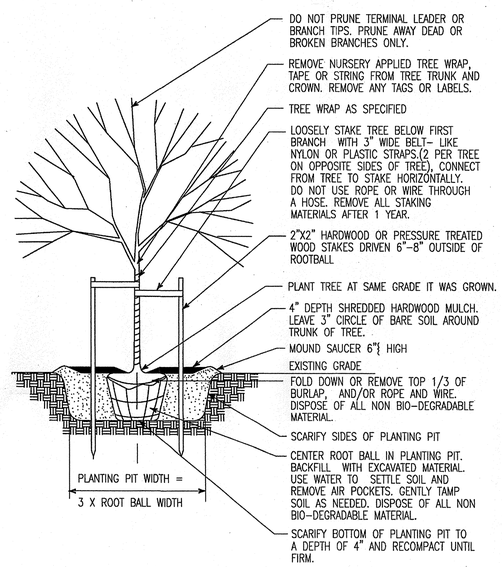


SHRUB PLANTING DETAIL

NOT TO SCALE

NOTES

1. TREES WILL BE REMOVED FROM THIS SITE.
2. TREE PROTECTION PLAN TO BE ISSUED WITH GRADING PERMIT.
3. THIS PROPERTY IS NOT A PLANNED UNIT DEVELOPMENT (P.U.D.).
4. OPAQUE FENCE WILL BE PROVIDED ALONG SOUTH BOUNDARY.
5. HOSE BIBBS WILL BE LOCATED WITHIN 200 FEET OF LANDSCAPE AREAS. HOSE BIBBS ON HOUSES MAY BE USED FOR THIS PURPOSE.



DECIDUOUS AND EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE AREAS TO BE LANDSCAPED AND SURROUNDING SITE CONDITIONS PRIOR TO SUBMITTING BID FOR WORK SHOWN ON THIS DRAWING, DESCRIBED HEREIN, AND AS SPECIFIED.
2. CONTRACTOR SHALL MAKE MINOR FIELD ADJUSTMENTS IN PLANT LOCATIONS AS NECESSARY TO COORDINATE WITH UNDERGROUND UTILITIES. REFER TO SITE CONSTRUCTION DRAWINGS FOR UNDERGROUND UTILITY LOCATIONS.
3. CONTRACTOR SHALL STAKE NEW TREE LOCATIONS AND BED LINES FOR APPROVAL BY ENGINEER PRIOR TO INSTALLATION.
4. REFER TO LANDSCAPE SPECIFICATIONS FOR PLANTING MATERIALS, PLANTING OPERATIONS, AND WARRANTIES. SUBSTITUTIONS IN PLANT MATERIAL SIZE OR VARIETY SHALL BE APPROVED BY ENGINEER.
5. DEEP CUT ALL SHRUB BED LINES. SEE BED LINE EDGING DETAIL, THIS SHEET.
6. MULCH ALL PLANTING BEDS AND BELOW INDIVIDUAL NEW TREES WITH 4" MINIMUM DEPTH SEASONED, DARK BROWN SHREDDED HARDWOOD MULCH. SUBMIT SAMPLE TO OWNER FOR APPROVAL.
7. SEED ALL TOP SOIL AREAS DISTURBED DURING CONSTRUCTION OPERATIONS AND AS INDICATED ON PLAN. REFER TO SPECIFICATIONS FOR SEED MIXTURES AND SEEDING OPERATIONS.
8. PLANT QUANTITES INDICATED IN PLANT LIST ARE FOR GENERAL REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PLANT QUATITIES AS INDICATED ON LANDSCAPE PLAN, THIS DRAWING. ANNUAL FLOWER PLANTINGS BY THE OWNER.

REVISIONS:

1	ISSUE FOR REVIEW	06/01/07
2	REVISED PER METRO COMMENTS	07/10/07

DATE OF DRAWING: JUNE 1/07 LAST FIELD WORK:
MANAGER: WSP CADD: WSP CREW CHIEF (S): WSP
PROJECT NUMBER: 0801-00011GL COMPUTER FILE: ApprovalPlans.PRO
SURVEY DATA FILE : SURVEY-1 SCALE: 1" = 50' SHEET 1 OF 1

SOUTHERN ENGINEERING SERVICES LLC.
4824 Nolenville Avenue
Nashville, TN 37204-4721
615-385-2000 Fax 615-385-2004
paynengineer@gsscomcast.net

PROJECT DATA

SES PROJECT #: 0407-SER-002
DATE: SEPTEMBER 27, 2006
DESIGNED BY: PARCHER 2
DRAWN BY: B. YOUNG
CHECKED BY: J. CORTY
APPROVED BY: V. GORDON
PROJECT MANAGER: WILLIAM S. PATNE III
ENGR. of RECORD: JOE F. CORT, P.E.
REG. NO: 101512
SURV. of RECORD:
REG. NO:

OWNER/DEVELOPER

DEVELOPMENT OF
Parcel ID:091120019700
711 & 713 40TH AVE. NORTH
NASHVILLE, TN 37209

LANDSCAPE PLAN

ENGINEERS STAMP

JOE F. CORT
AGRICULTURE
No. 101512
STATE OF TENNESSEE

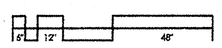
DATE:

DRAWING TITLE

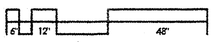
DRAWING
LS9.0
SHEET
OF
10

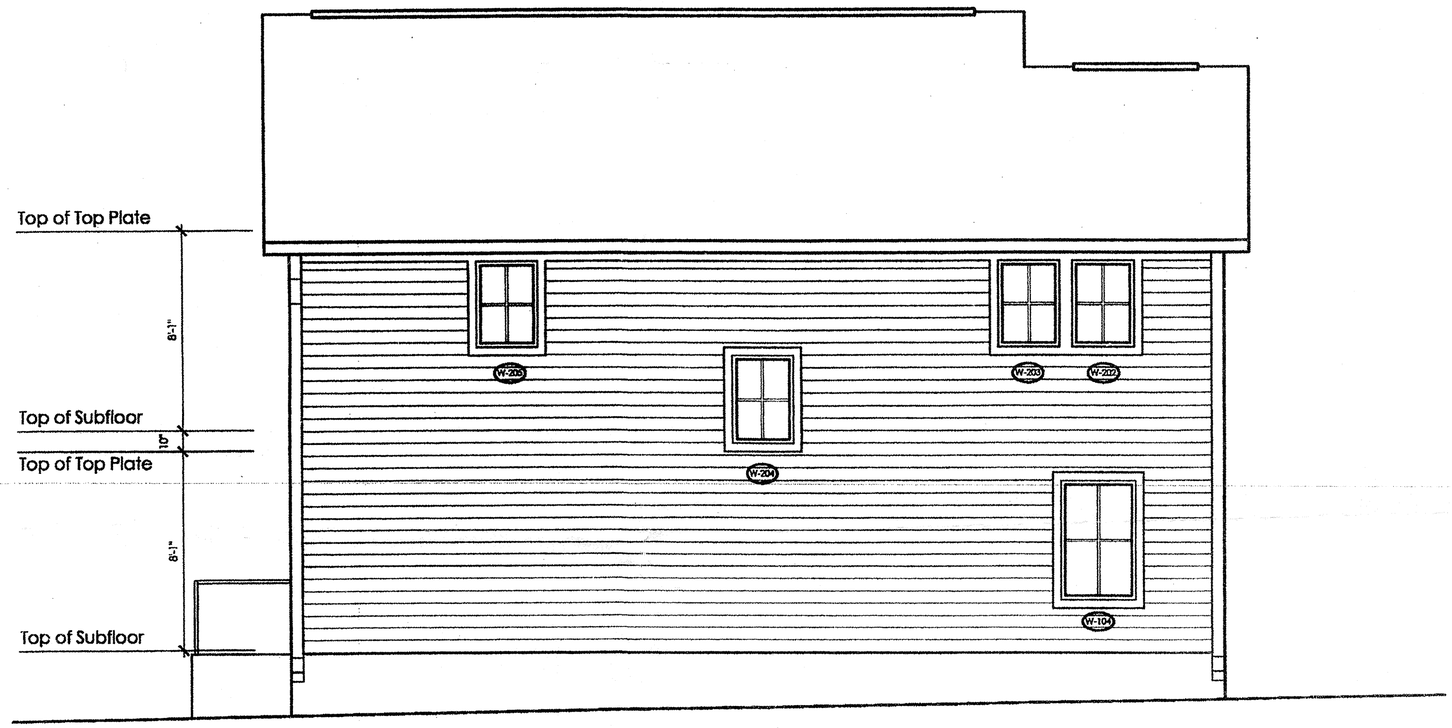
NASHVILLE & DAVIDSON COUNTY
SEP 4 2007
METROPOLITAN PLANNING DEPARTMENT

FRONT ELEVATION

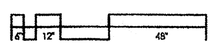
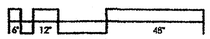


REAR ELEVATION





SIDE "A" ELEVATION



SIDE "B" ELEVATION