



ARCHITECT DEVROUAX & PURNELL

LANDSCAPE ARCHITECT PETER LIU ASSOCIATES, INC 1350 CONNECTICUT AVENUE, NW. SUITE 203 WASHINGTON, OC 20036

CIVIL ENGINEER DELON HAMPTON & ASSOC 8403 COLEVILLE ROAD, STE. 600 BILVER SPRING, MD. 20910

BROADCAST CENTER

- WASHINGTON, DC -

ABBREVIATIONS DRAWING INDEX PROJECT TEAM VICI Sop of curb top of stab to rayle control to the PROJECT ADDRESS mountain, five of the control of the LANDSCAPE ENGINEER $\mathsf{n} \bigoplus$

BROADCAST CENTER ONE WASHINGTON DC

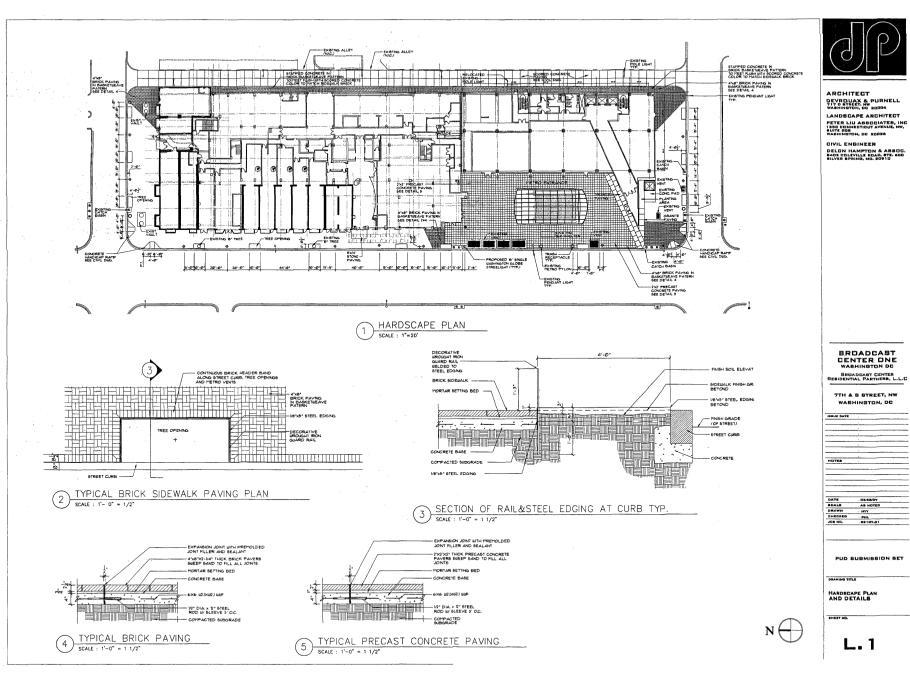
BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

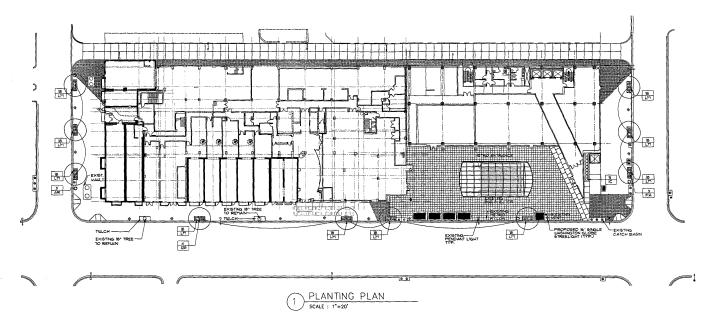
7TH & S STREET, NW

	WASHINGTON, DC
NITY MAP	IGRUE DATE
VICENSTY MAP	
(7/	
1	
- 1 27	
Acoustic Control of the Control of t	
Al discourse	
>4	NOTES
1HQ 112- 1	
7 1 1 1 1 P P P P	
The second secon	
ATTEMPT	DATE , 02/29/07
and the same of th	BOALE AS NOTED
.000064,02.A	DRAWN
L semanores I	DHECKED
 	JOS NG
1	
BROADCAST CENTER ONE SITE	
,, (T)	

COVER SHEET

CS1





PLANTING SCHEDULE

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARK
TREE						
PA	3	Platanue x acertiolia "Bloodgood"	London Plane Tres	3" • 3-1/2" CAL.	B4B	
,GB	4	Quercus shumandit	Shunard Oak	3" + 3-1/2" CAL.	B4B	T
AR	3	Acer rubrum "October Glory"	"October Glory" Red Maple	3" • 3-1/2" CAL.	B4B	
SHRUB						
IC	9	llex Cornute	Chinese Holly	24" + 30" HL	848	
GROUND (COVER					
LM	1860	Liriope muscori "Big Blue"	Big Blue Lily Turt	9 CONT.		T

NOTE: SIZE AND STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LASTEST EDITION OF "LAS STANDARDS FOR NURSERY STOCK" BY THE ATTERICAN ASSOCIATION OF NURSELYMEN, INC. (LAN)

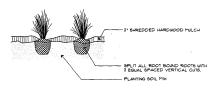


SCALE : NTS

I. SHRUB SHALL BEAR SAME RELATIONSHIP TO GRADE AS IT DID IN NURSERY.

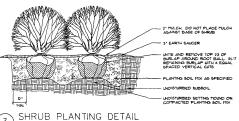
2. FRANE AS NEEDED TO RETAIN NATURAL SHRUB SHAME.

3. FOR CONTAINER GROWN PLANTS, SPLIT THE ROOT BALL WITH 4 EQUAL SPACED VERTICAL CUTS AND BUTTERRY. THE ENTIRE ROOT BALL.

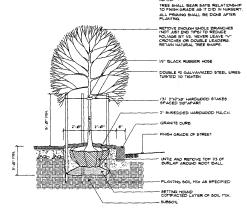


2 GROUND COVER PLANTING DETAIL

SCALE: NTS



_____ (4) S



4 STREET TREE PLANTING DETAIL
SCALE: NTS



ARCHITECT
DEVROUAX & PURNELL
717 D STREET, NW
WASHINSTON, DC 10004
LANDS CAPE ARCHITECT
PETER LIU ASSOCIATES, INC
1350 CONNECTICUT AVENUE, NW.
WASHINSTON, DC 20036

CIVIL ENGINEER
DELDN HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600
SILVER SPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C.

7TH & S STREET, NW WASHINGTON, DC

DAYE DIFASOY
BEALK AS SOTIO
DIANYS HY
OLECKED PML
dids MD. 0117021

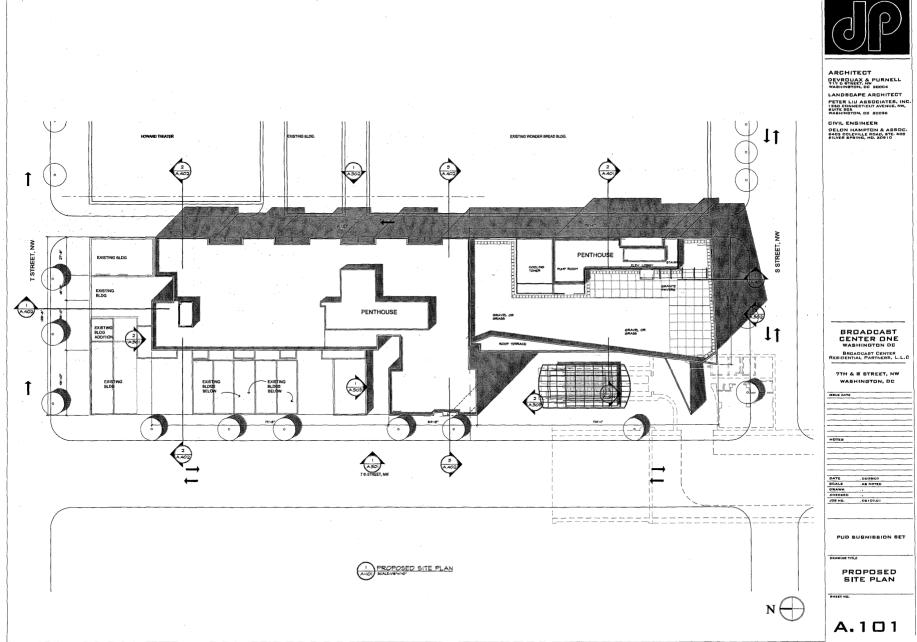
PUD BUBMIBBION BET

DRAWING TITLE

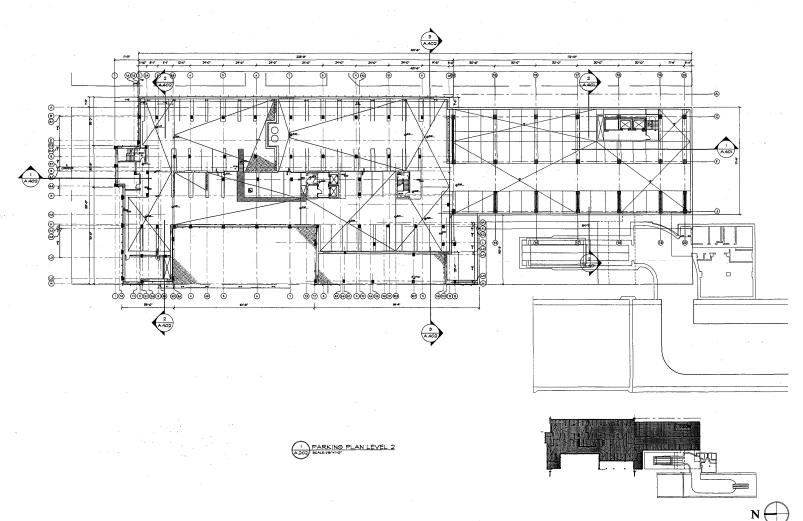
PLANTING PLAN AND DETAILS

SHEET NO.

L.Z









LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
BUITE 205
WABHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600
BILVER BPRING, MO. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

NOTES

DAYE CZZBOT
BGALE AR NOTED
DRAWN

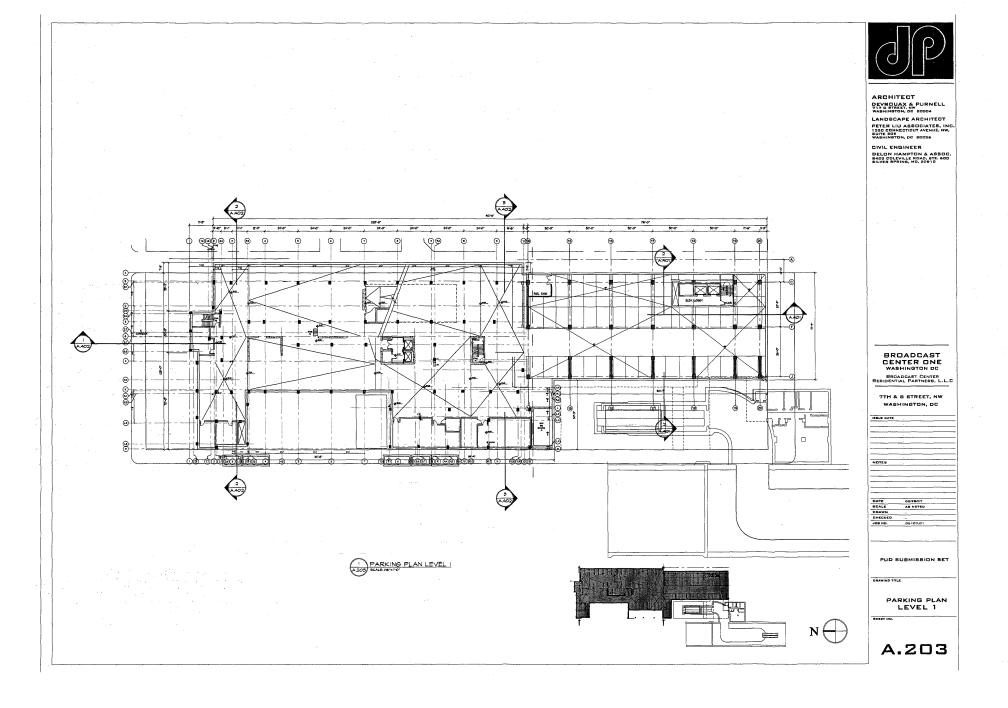
PUD SUBMISSION SET

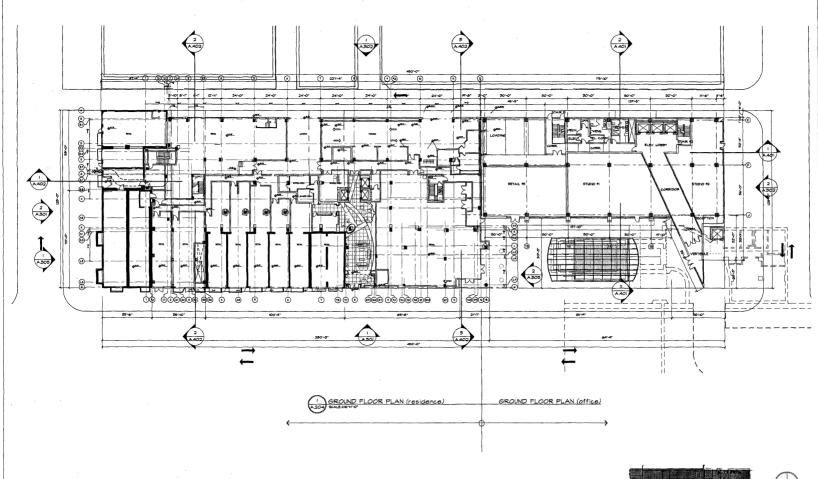
DRAWING TITLE

GHECKED JOB NO.

> PARKING PLAN LEVEL Z

BHEET NO.







LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
BUTE 205
WASHINGTON, DC 20036

DIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, BTE. 600
SILVER SPRING, MO. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

NDTES

DATE 02/28/07

BEALE AB NOTED

DRAWN

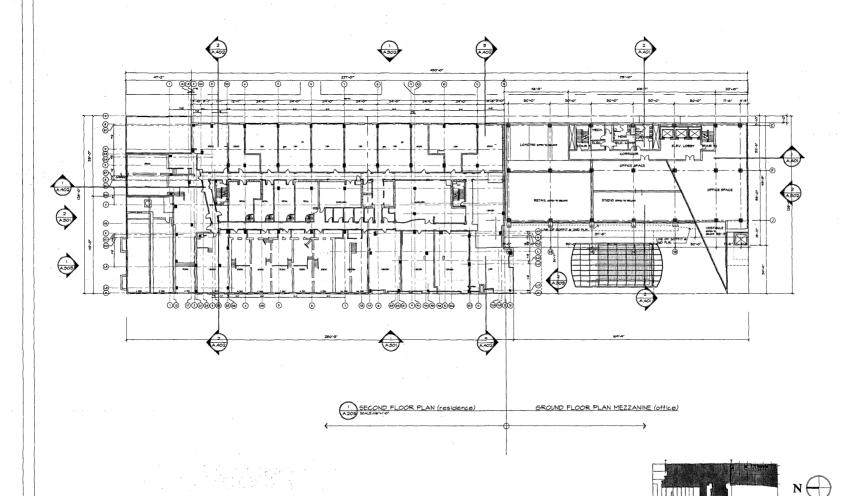
DHECKED ...
JDB ND. ...05107.01

PUD SUBMISSION SET

DRAWING TITLE

GROUND FLOOR PLAN

BHEET NO





LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW.
5UTE 205
WARHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. SCO
SILVER SPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

_	 -	_
	 -	

NOTES

DATE DERBOT

ECALE AB NOTED

DRAWN

CHECKED

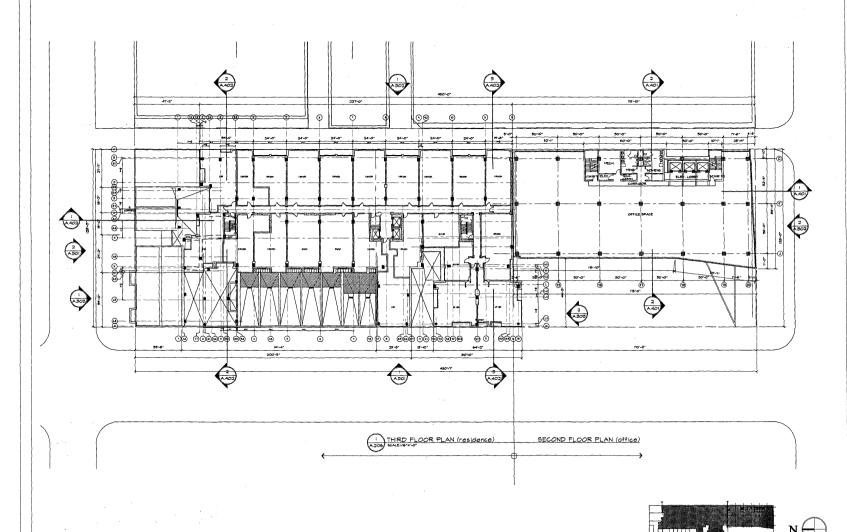
JOB NO. D5107.01

PUD SUBMISSION SET

SECOND FLOOR
PLAN (RESIDENCE)
GROUND FLOOR
MEZZANINE (OFFICE)

SHEET NO

KEYPLAN





LANDSCAPE ARCHITEGT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
BUTE 205
WARKINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & A680C.
8403 COLEVILLE ROAD, 8TE, 600
SILVER SPRING, MD, 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER
RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

ISSUE DATE

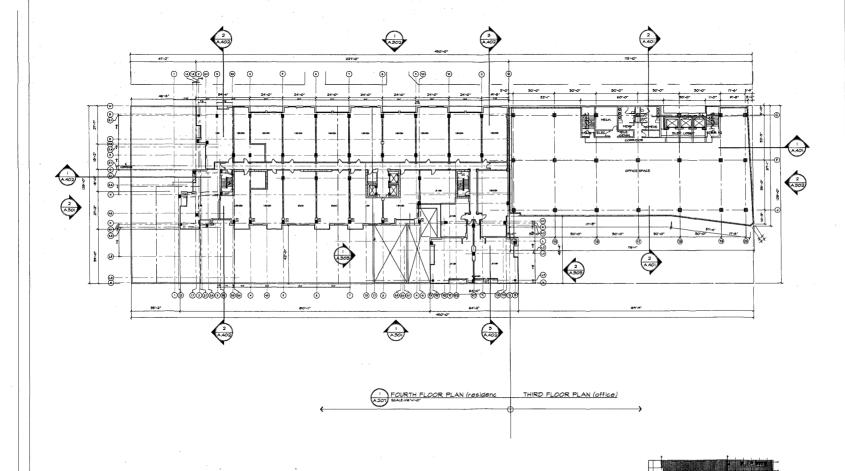
NOTES	
DATE	.09/24/07
BCALE	. AB NOTED
DRAWN	
CHECKED	
JOB NO.	.05107.01

PUD SUBMISSION SET

THIRD FLOOR PLAN
(RESIDENCE)
SECOND FLOOR
PLAN (OFFICE)

HEET ND.

KEYPLAN





LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW.
EUITE 205
WAEHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600
SILVER SPRING, MD, 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

IDBUE DATE	
	-
NOTES	
_	
DATE	, D2/28/07
BCALE	AS HOTED
DRAWN	
CHECKED	
JOB ND.	.05107.01

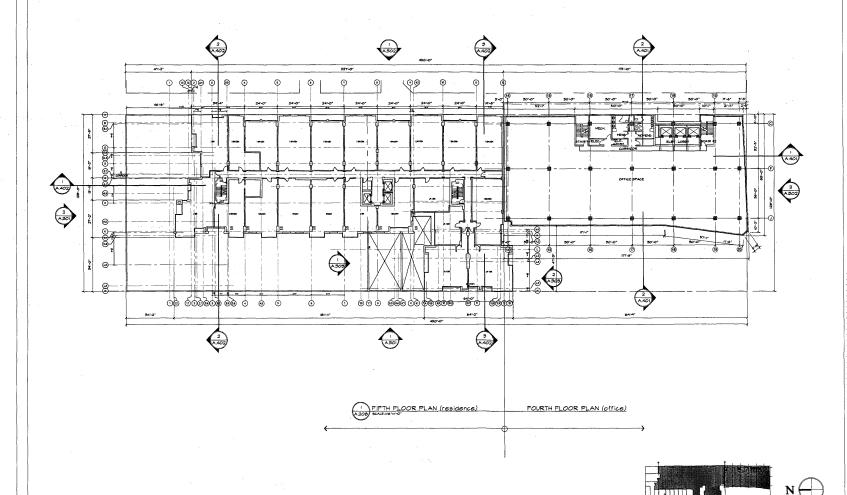
PUD SUBMISSION SET

DRAWING TITLE

FOURTH FLOOR
PLAN (RESIDENCE)
THIRD FLOOR PLAN
(OFFICE)

BHEET NO.

KEYPLAN





LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1380 CONNECTIOUT AVENUE, NW,
SUITE 205
WASHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ABSOC.
8403 COLEVILLE ROAD, STE. 600
GILVER EPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

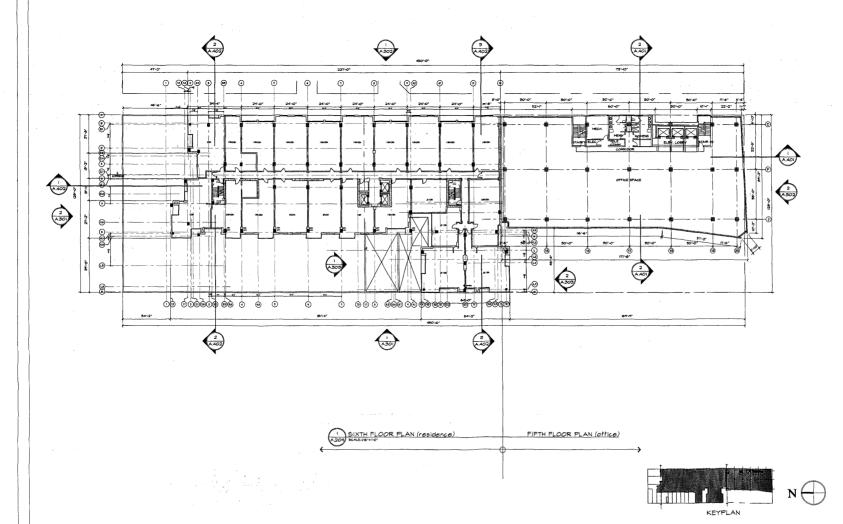
DAYE OLISANOY
DAYE A NOTED
DRAWN

PUP SUBMISSION SET

FIFTH FLOOR PLAN
(RESIDENCE)
FOURTH FLOOR
PLAN (DEFICE)

SHEET NO.

KEYPLAN





LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW.
BUITE 205
WARHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE RDAD, STE. 600
SILVER SPRING, MD. 20910

BROADCAST CENTER ONE

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

IBBUE DATE

NOTES

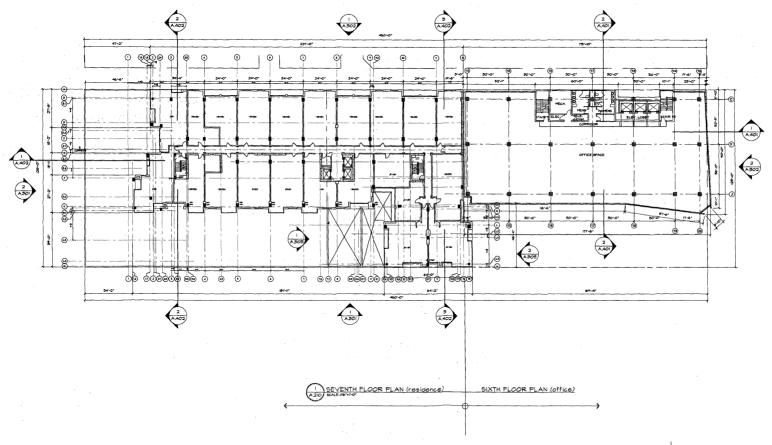
DATE .CE/REUT/
SGALE .AB NOTED
DRAWN .
CHECKED .
JOE NO. .DS107.01

PUD SUBMISSION SET

DRAWING TITL

SIXTH FLOOR PLAN
(RESIDENCE)
FIFTH FLOOR PLAN
(OFFICE)

SHEET NO.





KEYPLAN





ARCHITECT
DEVROUAX & PURNELL
717 D STREET, NO
WASHINSTON, DC 20004

LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW.
SUITE EDS
WASHINGTON, DC 20036

DIVIL ENGINEER

DELON HAMPTON & ABSOC.
8403 COLEVILLE ROAD, STE. 600
8ILVER APPRING. MO. 20910

BROADCAST CENTER DNE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & 5 STREET, NW WASHINGTON, DC

NOTES

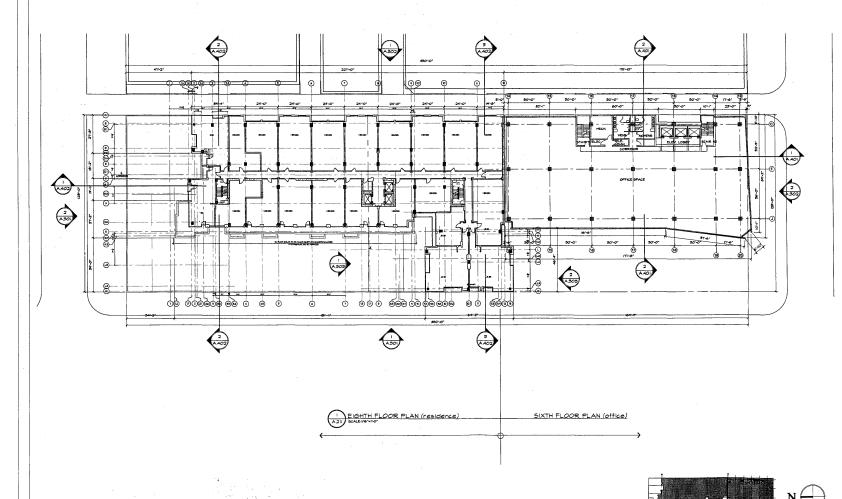
DATE DEZENCY
BEALE AS NOTED
DRAWN ...
EMERKED ...
100 NO. ...
101 NO. ...
102 NO. ...
103 NO. ...
104 NO. ...
105 NO. ...
105 NO. ...
106 NO. ...
107 NO. ...

PUD SUBMISSION SET

DRAWING TITLE

SEVENTH FLOOR
PLAN (RESIDENCE)
SIXTH FLOOR
PLAN (OFFICE)

SHEET NO.





LANDSCAPE ARCHITECT
PETER LIU ABSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW.
SUITE 205
WAEHINGTON, DO 20036

DIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600
81LVER SPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

NOTE

DATE .02/28/07
SIGALE .AS NOTED
DRAWN
CHECKED ...
JDS NO. .05107.01

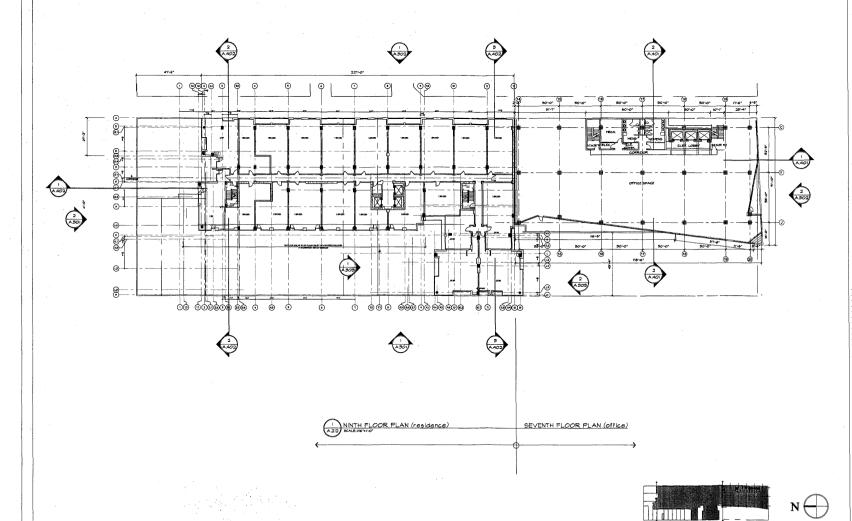
PUD SUBMISSION SET

DRAWING TITLE

EIGHTH FLOOR
PLAN (RESIDENCE)
SIXTH FLOOR PLAN
(OFFICE)

SHEET NO.

KEYPLAN





LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
BUITE 205
WASHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600
SILVER SPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

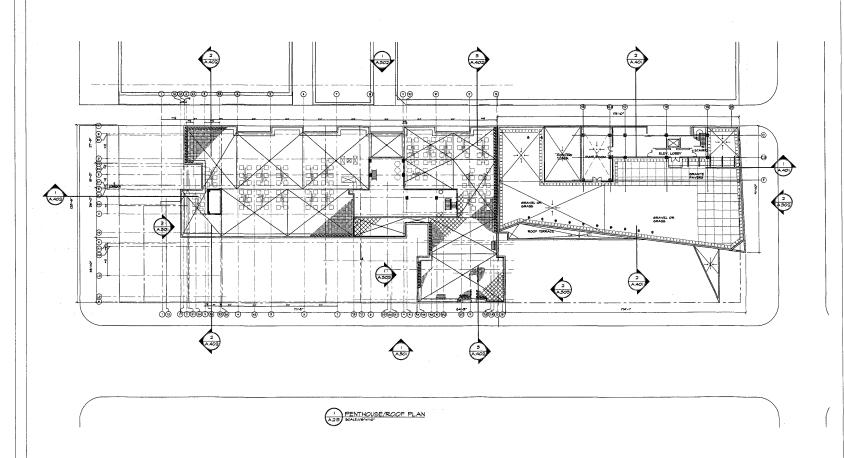
NOTES	
DATE	. D2/88/07
BCALE	AS NOTED
DRAWN	
CHECKED	
JOB NO.	.05107.01

PUD SUBMISSION SET

DRAWING TITLE

KEYPLAN

NINTH FLOOR PLAN (RESIDENCE) SEVENTH FLOOR PLAN (OFFICE)





LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC
1350 CONNECTICUT AVENUE, NW,
SUITE 200
WASHINGTON, DC 20036

DIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, 875. 600
810408 EPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & 6 STREET, NW WASHINGTON, DC

WASHINGTON, DI

INCE DATE

NOTES

DATE OPERIOR

BUALE AR NOTED

DRAWN .

CHECKED .

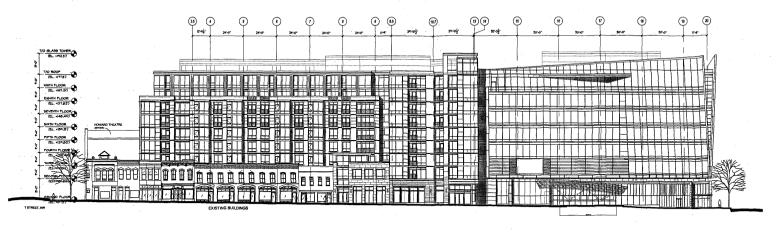
JOS NO. 05107.01

PUD BUBMISSION SET

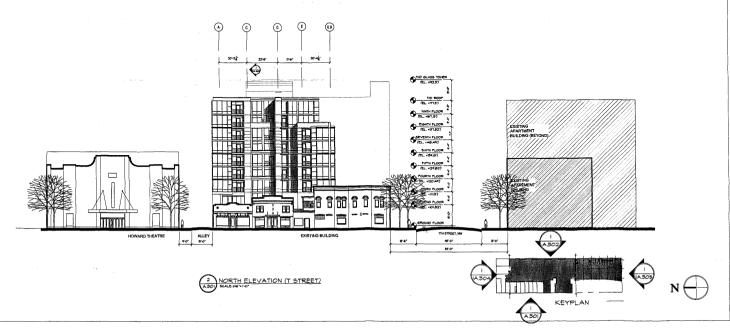
DRAWING TITLE

PENTHOUSE/ ROOFPLAN

BHEET NO.



MEST ELEVATION (1TH STREET)/T STREET/1TH STREET





ARCHITECT
DEVROUAX & PURNELL
717 D STREET, NW
WASHINGTON, OF 20004
LANDSCAPE ARCHITECT

PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW.
8UITE 205
WABHINGTON, OC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
6403 COLEVILLE ROAD, STE. 600
8ILVEN SPRING, MO. 20510

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

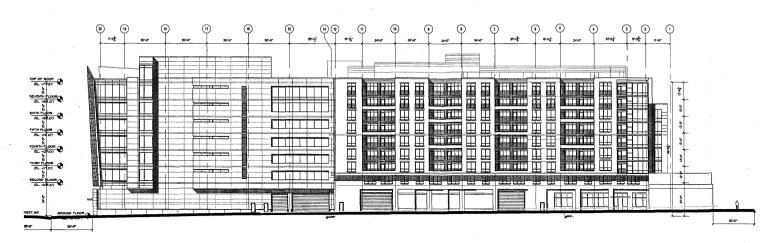
7TH & 5 STREET, NW WASHINGTON, DC

NOTES	-	
		_
DATE	. 02/28/07	
BOALE	AS NOTED	
DRAWN		
CHECKED		

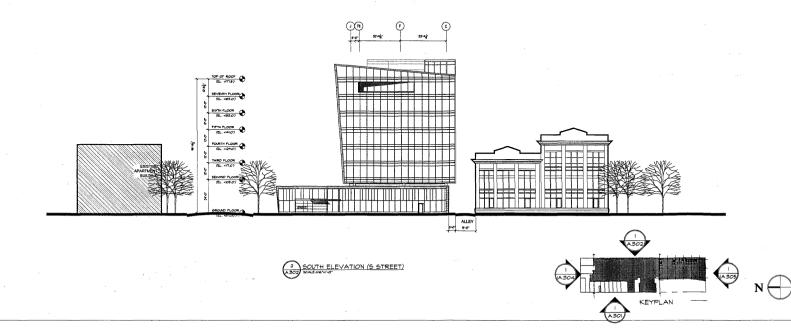
PUD SUBMISSION SET

DRAWING TITLE

WEST ELEVATION
(7TH STREET)
NORTH ELEVATION
(T STREET)



EAST ELEVATION (ALLEY ELEVATION)





ARCHITECT
DEVROIAX & PURNELL
1170 BTREET. NW
WASHINGTON, DE 20004
LANDSCAPE ARCHITECT
PETTE LIU ASSOCIATES, INC.
1301 CONNCTITUT AVENUE, NW,
WASHINGTON, DE 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
2403 COLEVILLE ROAD, STE. 600
SILVER BPRING, MD. 20910

BROADCAST CENTER ONE

BROADCAST CENTER REBIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

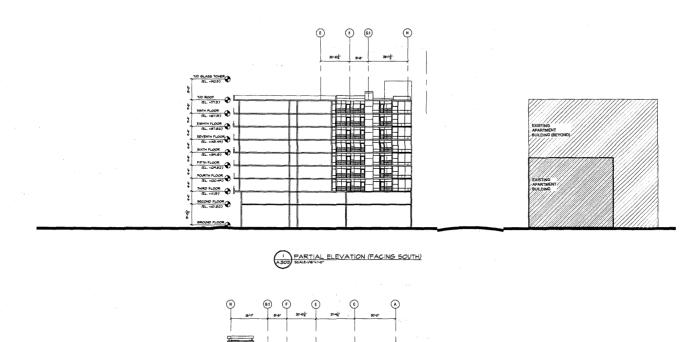
DATE DEFENDS
DAME AS FORED
DEAMN AS FORED
DEAMN DEFENDS
DEAMN OS 157-01

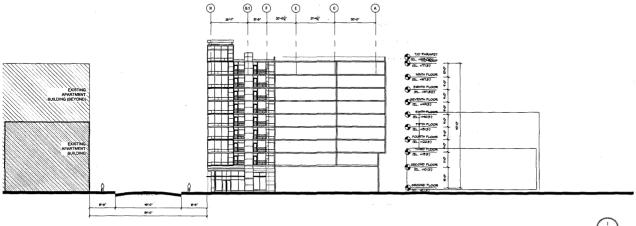
PUD SUBMISSION SET

RAWING TITLE

EAST ELEVATION
(ALLEY ELEVATION)
SOUTH ELEVATION
(S STREET)

BHEET NO.





PARTIAL ELEVATION (FACING NORTH)







ARCHITECT
DEVROUAX & PURNELL
717 D STREET, NW
WASHINGTON, DC 200094

LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
BUTE ZOS
WASHINGTON, DC 20036

CIVIL ENGINEER

DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 400
BILVER BPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

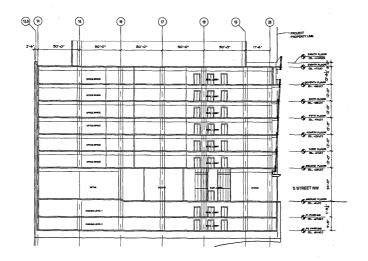
7TH & S STREET, NW WASHINGTON, DC

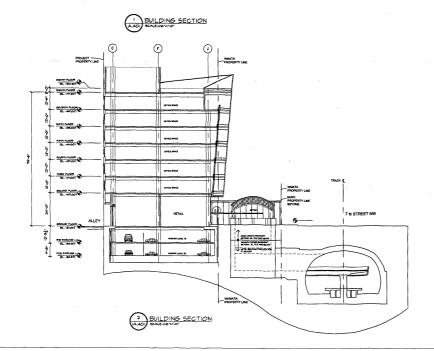
	,	
	,	-
OTES		
PATE	. 02/20/07	
CALE	AS NOTED	
RAWN		
HECKED		

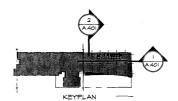
PUD SUBMISSION SET

PARTIAL ELEVATIONS

AMERY NO











LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
SUITE 200
WASHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 500
SILVER SPRING, MD. 20010

BROADCAST CENTER ONE WASHINGTON DC

BRDADCAST CENTER
RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

NOTES

DATE DEZEMOT

BUALE AB NOTED

DRAWN

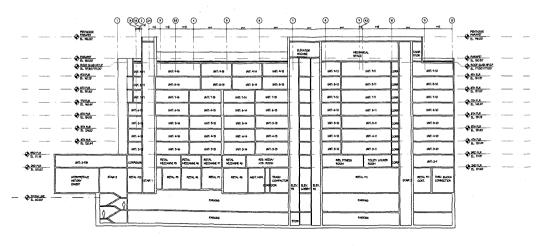
PUD SUBMISSION SET

.05107.01

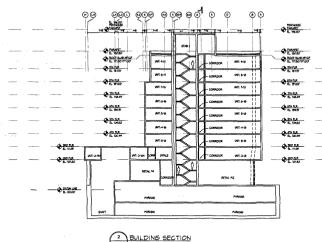
DRAWING TITLE

BUILDING

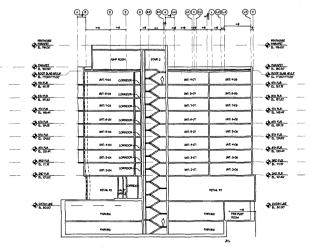
BHEET NO.

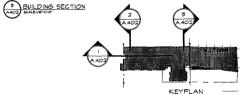


BUILDING SECTION









ABBUTERT DEVROUAX & PURNELL 717 D STREET, NW WASHINGTON, DC 20004

LANDSCAPE ARCHITECT PETER LIU ASSOCIATES, INC. 1350 CONNECTICUT AVENUE, NW. BUITE 205 WASHINGTON, DC 20036

DIVIL ENGINEER DELUN HAMPTON & ASSOC.

> BROADCAST CENTER ONE

BRDADCAST CENTER
RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

PRUE DATE

NOTES

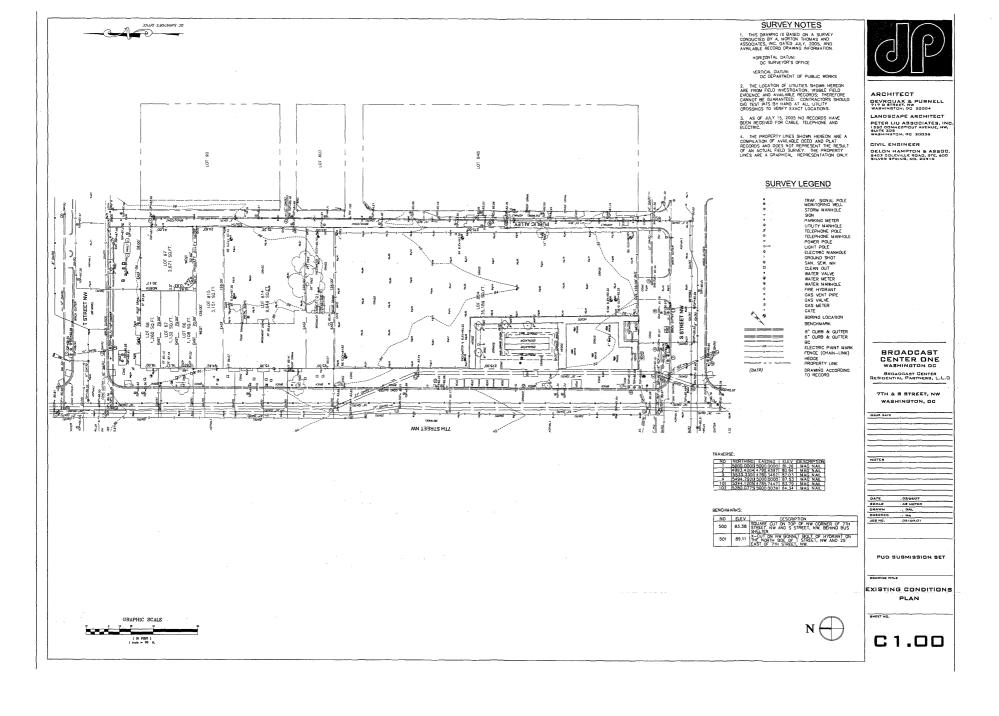
DRAWN CHECKED 05107.01

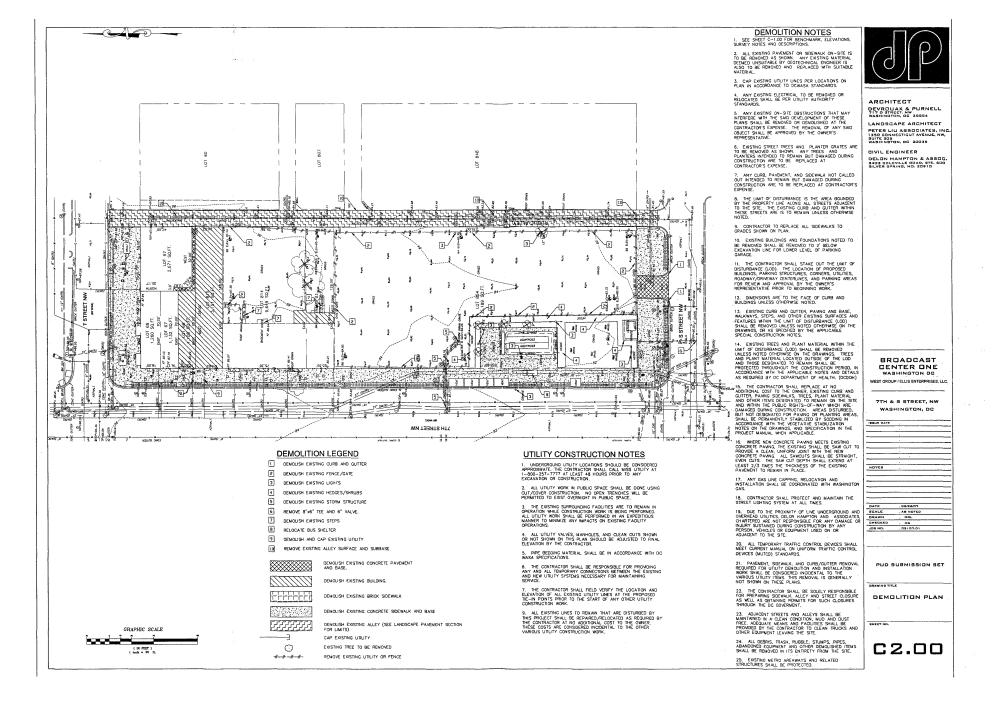
PUD SUBMISSION BET

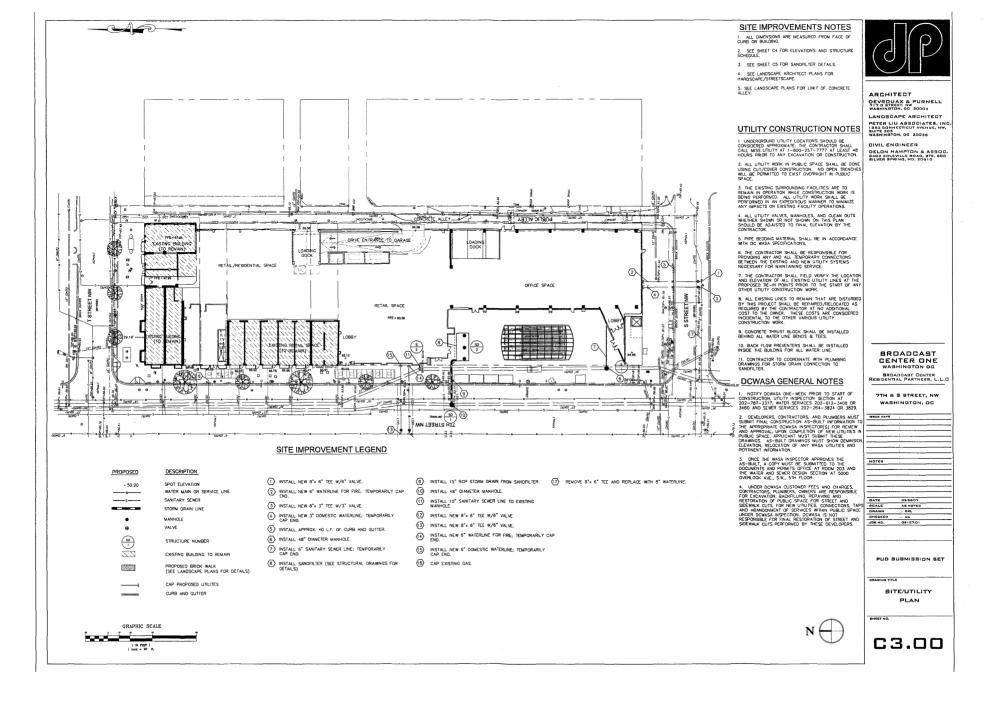
DRAWING TITLE

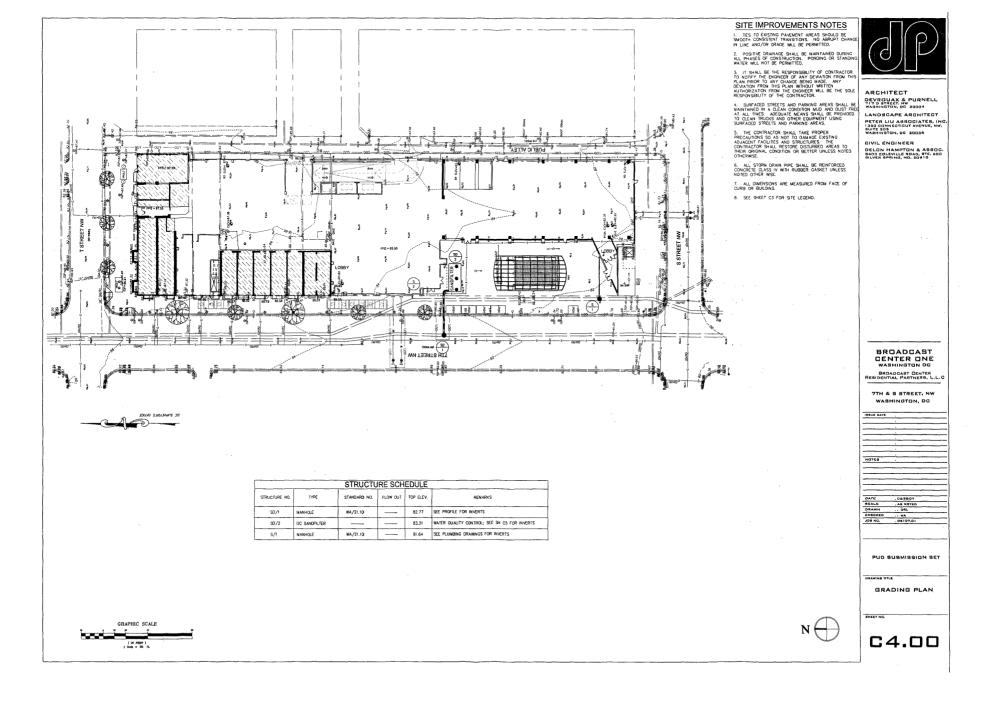
BUILDING SECTIONS

A-402









STATEMENT BY PERSON RESPONSIBLE FOR MAINTENANCE THE UNDERSONED AGREES TO MAINTAIN AND OPERATE THE UNDERSONED AGREES TO MAINTAIN AND OPERATE OF THE OFFICE AGREEMENT AND ASSESSED ASSESS

SIGNATURE I	DE THE	PERSON	RESPONSIBLE	FOR MAINTENANCE
NAME AND T	ITLE	(PLEASE	PRINT)	
AUURESS				
400RE \$\$				

STATEMENT BY PROFESSIONAL ENGINEER REGISTERED IN THE DISTRICT OF COLUMBIA

IN THE DISTRAL DY COLUMNA

IN IS IS TO CREATE THAT THE EMONERANG PARTIES OF THIS STORWARD DISCHARGE ADULTY
HAVE BEEN DESCRIPTIONATION BY HAVE PER OF THE TOTAL THE PROPERTY OF THE THE PROPERTY OF THE PROPERT

SIGNATURE OF ENGINEER

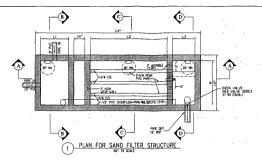
MAND ASSEFA, CIVIL ENGINEERING GROUP NANAGER NAME AND TITLE OPLEASE PRINT)

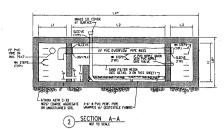
8403 CDLESVILLE RDAD, SUITE 608 SILVER SPRING, NO 20910 ABDRESS

STATEMENT FOR MAINTENANCE OF STORMWATER IN PUBLIC SPACE

IN LIBILAL PERMANENT OF MAINTAIN AND OPERATE THE UNDERSOMED AGREES TO MAINTAIN AND OPERATE CONNECTIONS OF THE UNDERSOME AGREES THE UNDERSOME OF THE UNDERSOMED OF THE

CNATUR	OF.	THE	PERSON	RESPONSIBLE	FOR	MAINTENANCE
WE AND	TIT	LE	PLEASE	PRINT)		
22390			***			

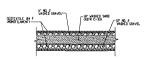




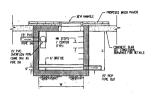
SANDEILTER DIMENSIONS AND INVERTS

J/111	0,			J 11110		•	
(FT)	(FT)	L3 (FT)	(FT)	H (FT)	INV. IN (FT)	INV. DUT (FT)	RENARK
5	15	3	10	6.75	79.47	75.47	CAST-IN-PLACE

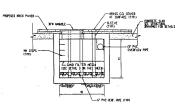
* LENGTH VARIES BASED ON STRUCTURAL ENGINEER'S RECOMMENDATION



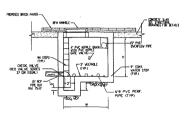
SANDFILTER MEDIA DETAIL



SECTION B-B



SECTION C-C



6 SECTION D-D



ARCHITECT
DEVROUAX & PURNELL
717 0 STREET, NW
WASHINGTON, DC 20004

WASHINGTON, DC 20004-LANDSCAPE ARCHITECT PETER LIU ASSOCIATES, INC 1350 CONNECTICUT AVENUE, NW. SUITE 205 WASHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600

BROADCAST CENTER ONE WASHINGTON DG BROADCAST CENTER RESIDENTIAL PARTHERS, L.L.C.

7TH & S STREET, NW WASHINGTON, DC

INDUE DATE		
NOTES		
DATE	. 02/28/07	
SCALE	, AS NOTED	
DRAWN	,. ORL	
CHECKED	MA	
JD8 NO.	. 05107.01	

PUD SUBMISSION SET

DRAWING TITLE

SANDFILTER DETAILS

C5.00

SANDFILTER STRUCTURE COMPUTATIONS 15 YEAR STORM EVENT

DATA REQUIRED: Storm Frequency = 15 years Storm duration = 24 haurs Time at Concentration = 1c = 5 minutes	Colculate Surface Starage Volume in First and Second Chamber: (VI1 + V21)n Vs - (V2b + V1b)	11. To prevent "short circulting" in the lilter chamber: L1+ L2 > 3 x W
Time of Concentration = To = 5 minutes		
From District of Columbia rainfall intensity-duration-frequency curve: intensity = $1 = 7.56$ inches/hour Rainfall depth = $d = 0.63$ inches	Where: (Y1) = sum of surface where of first and second chambers (12) Yes allongs vitam needed to hold the first flawn runoll (13) Yibs submerged volume of first chamber (13) Yibs submerged volume of first chamber (13)	01 = 0 + inflow pipe diameter + free board = 3.75 ft + 1.00 ft + 2 ft 01 = 6.75 ft
	(VII + VZI)= 486.24 R3-(237.6 R3-144 R3) (VII + VZI)= 104.64 R3	
1, Runoff Coefficient:	9. Determine M. Height Difference Available Setween Top of Filter Layer and Byposs Pipe Outlet Invert:	11. Determine Flow Through Filter and Detention Time After Storage Volume Filts Up:
	(Vit + VZt)* (Al x H) + (Al x H)	
Cw = 0.90 (25.656 ft2) + 0.30 (26.704 ft2) 52.360 ft2		$qf = k \times Af \times I = (k \times Af \times hmax) / (2 \times df) =$
Cw = 0.594	Names: (1) = sum of surface volume of first and second chambers (ft.2) (VII + VII) = sum of surface volume of first and second chambers (ft.2) Are surface area of filter layer(second chamber) = 156 ft.2 his verticed statches between to of filter layer and begas pibe outlet invert	site rec. of = swringe flow innovigh the filter (f1.5/ m) is = swringe flow innovighty (r1/m) = 0.60 (r1/ m for mixed sond Af = surface cress of filter (surface) = 1.32 (r1/2) in hydroxide gradeline (f1.7/1) in hydroxide grade
	$H = \frac{(y_1 + y_2 t)}{(A1 + At)} = \frac{104.64 \text{ ft3}}{(132 \text{ ft2} + 48 \text{ ft2})} = 0.581$	in hydroulic gradient (ft/ft) of a thickness of the sond layer = 18 inches
	(AI + AI) (132 ft2 + 48 ft2) Since H < 0	hmax= [(d+H) - perforated pipe diameter / 2)] = [(3+0.75)-(6in/2) (1 ft / 12 in)] = 3,50 ft
	1	Note: 6" diameter PVC perforated pipes at bottom of the sand filter
2 Peak Discharge:	Use H= 0.75 ft 10. Determine Maximum Storage Deptin:	11. $af = [(0.6 \text{ ft/br} \times 132 \text{ ft/2} \times 350 \text{ ft}) / (2 \times 15 \text{ ft})] =$
•	D= H+d = 0.75+3	4. West shirt a see the search of the search
Q (Peak 15 year) = $CMA=0.594 \times 7.56$ inches/hour x 1.202 scres	When the second	qf = 92.4 ft3/ hr = 0.026 cfs = 0.03 cfs
Q (Peak 15 year) = 5.40 c/s	The maximum storage depth (ft) d= depth of filter tayer = 3 tt H= verifical distance between top of filter layer and byposs pipe outlet invert	To estimate the detention time, use:
4 (com (o) com) — co (o co		Ts = Ys / qf = 486.24 / 92.4 Where:
	0= 3.75 ft	where: qf = overage flow through the filter = 92.4 ft.3/ hr Vs =volume storage needed = 486.24 ft.3 Ts = overage devotering time for sand filter (nr)
		Ts ≈ average dewatering time for sand filter (hr) Ts ≈ 5,28 hrs < 72 hours ok
		is ≃ a,go nrs < 72 hours ok
Average Averag		
Determine Sand Filter Area Af :	11; Design invert Out:	9, Sandfilter Size
Af = 50 + (IA -0.1ac) x (167 ft2/ac)	Difference of design invert in/out = 4.00 ft	L1= 5 ° tt L2=+ 15 tt L3= 3 ° tt
Where: AI = surface area of filter layer (second chamber) (1t2) $Ia = impervious$ area = 0.589 ac	Determine Size of Bypass Pipe:	
la≈ impervious creo ≈ 0.589 ac	$D \approx [(2.16 \times n \times Qp15)/(5)1/2] 0.375 \approx [(2.16 \times 0.011 \times 5.40)/(0.005)0.5]0.375$	15*● Byposs ♥ 0.50%
Af = 50 + $(0.589 \text{ oc} -0.1 \text{ oc}) \times (157 \text{ ft2/oc}) = 131.68 \text{ ft2}$ Use Af = 132 ft2	Where: Where estimated bypes in dismeter (1) De estimated prophesis configural = 0.011 Quits bypes peck flow (cfg) = 5.03 cfs See pipe stopes essure 0.35* 0.05* See pipe stopes essure 0.35* 0.05*	
	0= 1.250 ft = 15.0 in Use 0 = 1.25 ft (15")	
4. Determine Water Quality Valume Needed:	12. Determine submerged weir opening in first chamber:	
Vw = R*io 12	Qp15 = C x Awi x (2ghmox)0.50	
Where:	Therefore:	
where: View water quality volume (ft2) R = runoff depth (0.3 in for pedestrien plazes) la= impediase area (ft2) 12= conversion factor	Awl = Qo12 C x (29hmax)0.50 Where:	
Vw= 0.3 in x 25656.0 ft2	Awl= area of we'r opening in first chamber (ft2) twt= we'r height, assume 1 ft	
12 Vw = 641,40 rt3 ≈ 642 ft3	Where: All or or of vertrocening in first chamber (ft2) half we'r height, assume: ft lief a we'r fersjint, it Qol'3% byness pook flow (cfs) = 5.40 cfs Co 0.80	
VW = 641,40 ft3 > 642 ft3		
 Determine Storage Volume Needed: Vx = Vw - (F x ĭ x Ar) 	13. G= 32.2 ff/sec2 13.2 ff/sec2	
Where:	= [(3.75) - (1/2)] = 3.25 ft	
Meret: Va= storage volume needed to hold the first flush runoff (fl.3) Va= woter quality volume = 642 (fl.3) F= hilbrotion rate for send = 1.18H/hr F= flating time Af = surface area of filter layer (second chamber) = 126 fl.2	Awi = 5.40 c/s 0.6 x (2 x 32.2 ft/sec2 x 3.25 ft) 0.50	
I = filtering time 4f = surface area of filter inver (second chamber) = 126 ff2	Awl = 0.622 (t2 (minimum requirement)	. I volume to the second of t
Vs= 642 ft3- [(1.18 ft/hr) x (1 hr) x (132 ft2)]	Note: Assume 50% of weir opening is clagged; therefore use the following	
Vs= 486.24 ft3	w = 2(Awt/hwt) = 2(0.622 ft2) = 1.244	
	Use !w!= 1,25 ft	
i. Calculate Submerged Storage Valume in Second Chamber:	14. Structure Dimensions (internal only):	
$V2b = Af \times df \times n \ (132 \ f(2) \ (3f) \ (0.6)$	Second Chamber	
Where:	Af = (L2 x W)	
Where: **VDs = submerged visiume of filter chamber (fi.2) dfs depth of filter layer = 3 tt n= composite of profilty for filter medica-0.00 (sond,grows,perforcted pipe) **Afs surface area of filter layer (second chamber) = 12612	AI = (1 x #) Where the control of the proper (second chamber) (#2) AI mingth of the layer (second chamber) (#2) We width of chamber use 10 if the chamber)	
n= composite at parasity for filter media=0.60 (sand,gravel,perforated pipe) Af= surface area of filter layer (second chamber) = 1.25ft2	L2= length of filter layer (second chamber) W= width of chamber use 10 ft	The second second second
V26 = (152 ft2) (3ft) (0.6)	L2= Af / W = 132 ft2/10 R	
v2b = 237.6 ft3	L2= 13.2 ft Use L2= 15.0 ft	
7, Calculate Submerged Storage Volume in First Chamber:	15. First Chamber	
7. Colouiste Submerged Starage Volume in First Chamber: Vib Al x df	·	· ·
	A1 * (L1 x W)	
Where: Whenever with the second of first chamber (H2) die depth of RNR riege = 3.1; and 4 such that 6 RNR riege = 3.1; 4 such as 4	Where: A1 = surface area of first chamber (ft2)	the second secon
Al = surface area of first chamber = 60.0 ft2	mmer: A1 = surface area of first chamber (112) L1= length of first chamber (1) W= width of chamber use 6 11	
Note: At / 3 < At / 2 , for optimum design conditions Vib= (48.0ft2) (3ft)	LI= A1 / W = 48 ft2/ 10 ft	
VID= (48,012) (311)	L1= 4.8 ft Use L1= 5.0 ft	
**** (**** (***	Select Third Chamber L3 = 3 (t	
	1	I .



ARCHITECT
DEVROUAX & PURNELL
717 0 STREET, NW
WASHINGTON, OC 20004

LANDSCAPE ARCHITECT
PETER LIU ASSOCIATES, INC.
1350 CONNECTICUT AVENUE, NW,
QUITE 203
WASHINGTON, DC 20036

CIVIL ENGINEER
DELON HAMPTON & ASSOC.
8403 COLEVILLE ROAD, STE. 600
SILVER SPRING, MD. 20910

BROADCAST CENTER ONE WASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

IGGUE DATE	

NOTES

DATE .03/29/07

BCALE .48 NOTEO

DRAWN . DSL

DHECKEO . MA

JOS NO. .05107/01

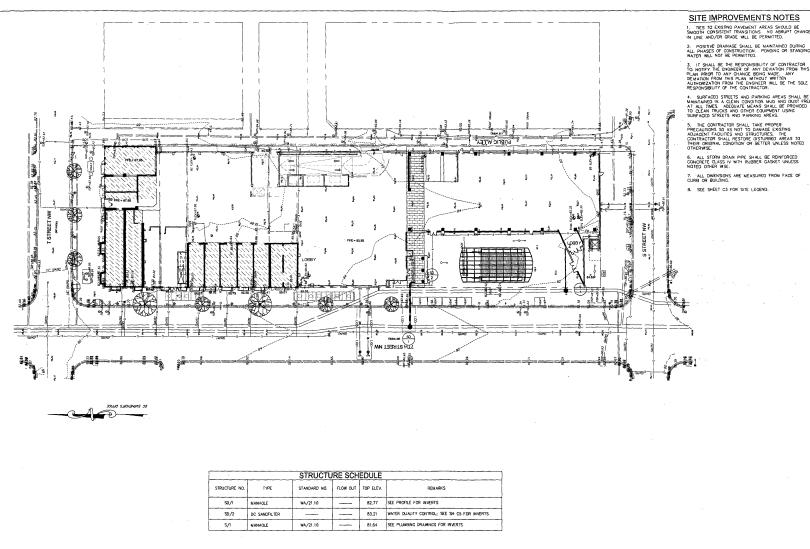
PUD SUBMISSION SET

DRAWING TITLE

SANDFILTER CALCULATIONS

BUTET NO

C5.10





LANDSCAPE ARCHITECT PETER LIU ASSOCIATES, INC. 1350 CONNECTIQUT AVENUE, NW, SUITE 205 WASHINGTON, DC 20036

DELON HAMPTON & ASSOC. 8403 COLEVILLE ROAD, STE. 600 BILVER SPRING, MD. 20910

BROADCAST CENTER ONE NASHINGTON DC

BROADCAST CENTER RESIDENTIAL PARTNERS, L.L.C

7TH & S STREET, NW WASHINGTON, DC

PUD SUBMISSION SET

ESC PLAN

C6.00

