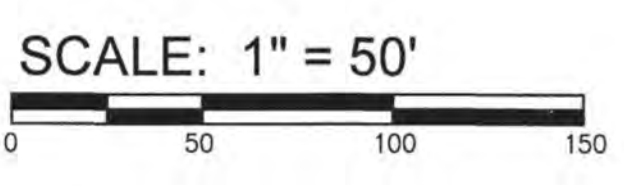


**PARCEL ADDRESS:** 1025 ASHES DRIVE  
**PARCEL ID#:** R05100-003-065-000  
**MAP ID#:** 315819.50.1064.000  
**PARCEL OWNER:** HUDSON WILMINGTON DEVELOPMENT LLC  
**PARCEL AREA:** 8.85 ACRES (385,325 SF)  
**ZONING:** O&I-1 OFFICE AND INSTITUTIONAL  
**SOIL TYPES:** Ls, To, Mu  
**CAMA LAND USE:** WATERSHED RESOURCE PROTECTION AREA  
**WETLANDS:** NONE EXIST ON SITE  
**NO CAMA AEC OR SETBACKS WITHIN SITE AREA**  
**HISTORICAL SITE:** NONE  
**CEMETERY:** NONE  
**FORESTED AREA:** SEE SURVEY  
**ENDANGERED SPECIES/HABITAT:** NONE REPORTED

**INVENTORY SITE PLAN**  
**RENAISSANCE APARTMENTS**  
 1025 ASHES DRIVE  
 WILMINGTON, N. C.

**OWNER/DEVELOPER**  
 HUDSON WILMINGTON DEVELOPMENT LLC  
 WILLIAM SCHOETTELKOTTE, MANAGER  
 1051 MILITARY CUTOFF RD., SUITE 200  
 WILMINGTON, NC 28405  
 910-880-0063

**NORRIS & TUNSTALL**  
 CONSULTING ENGINEERS P.C.  
 2603 IRON GATE DR, SUITE 102  
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 PHONE (910) 343-9653  
 1429 ASH-LITTLE RIVER RD, NW  
 ASH, NC 28420  
 PHONE (910) 287-5900



SYMBOL	DATE	DESCRIPTION	BY
REVISIONS			
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**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
**APPROVED STORMWATER MANAGEMENT PLAN**  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

**Approved Construction Plan**  
 Date: 7/16/20  
 # 2019065  
 SWP #: 2020023  
 PO, ES, BM, MB, CW

NCDENR PWSS WATER PERMIT #:	_____
WATER CAPACITY:	_____ GPD
DWQ SEWER PERMIT #:	_____
SEWER CAPACITY:	_____ GPD
SEWER SHED # AND PLANT:	_____
SEWER TO FLOW THROUGH NEI:	YES or NO (CIRCLE ONE)

Licence #C-3641  
**19021**  
 DES. JUST  
 OKD. JPN  
 DRWN. NKS  
 DATE 02/07/20

**11**



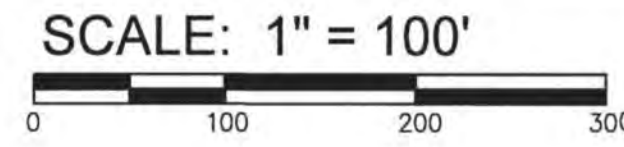
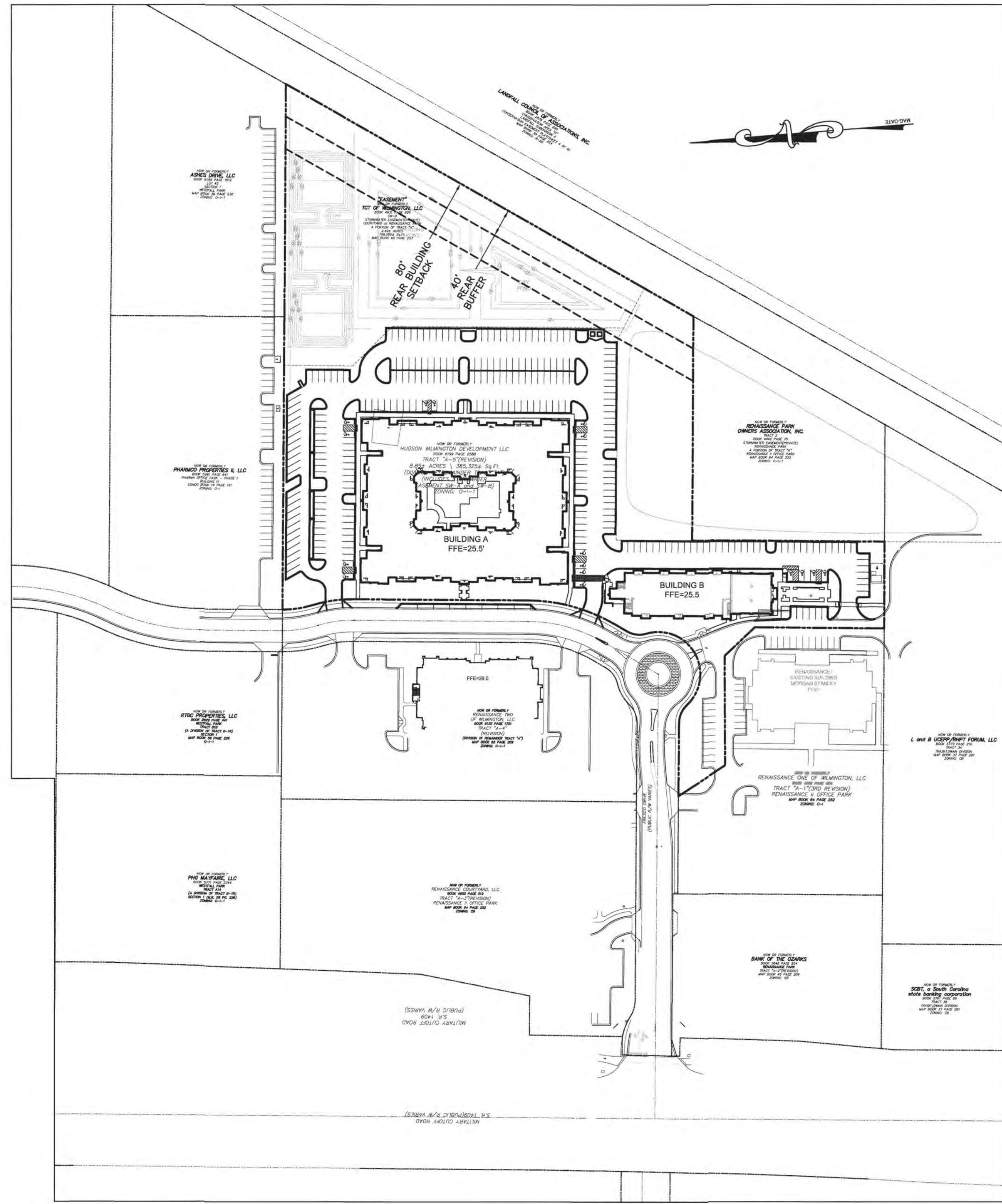
LOCATION MAP NTS

LEGEND

- PROPERTY LINE
- - - - - DISTURBED AREA LIMITS
- PROPOSED CONTOUR
- - - - - TEMPORARY SILT FENCE
- PROPOSED STORMDRAIN PIPE
- PROPOSED WATERLINE
- SS --- PROPOSED SANITARY SEWER
- 41.35 --- PROPOSED SPOT ELEVATION FLOW LINE
- 41.85 --- PROPOSED SPOT ELEVATION TOP OF CURB
- 41.85 --- PROPOSED SPOT ELEVATION FINISH GRADE
- FLARED END SECTION WITH RIP-RAP ENERGY DISSIPATOR
- DROP INLET WITH INLET PROTECTION (DI)
- CURB INLET WITH INLET PROTECTION (CI)
- JUNCTION BOX WITH INLET PROTECTION (JB)
- PROPOSED FIRE HYDRANT
- 49 --- EXISTING CONTOUR
- 13" PINE --- EXISTING TREE TO BE SAVED
- 13" PINE --- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING
- ASPHALT
- CONCRETE

UNIT MIX SUMMARY

Unit Types	1BR/1BA	1BR/1BA	1BR/1BA	1BR/1BA	1BR/1BA	1BR/1BA	2BR/2BA	2BR/2BA	2BR/2BA	2BR/2BA	Non-Rentable Units	Totals:	
Unit Key	A1	A2	A3	A3-ACC	A4	A5	B1	B1-ACC	B2	B3			
HUD NSF:	710	714	781	778	747	724	1,027	1,027	1,137	1,027			
HUD GSF:	765	774	842	842	807	791	1,101	1,101	1,210	1,102			
<b>Units in Building A</b>													
Level 4	12	8	4	0	0	0	16	0	4	0	0	44	
Level 3	12	8	4	0	0	0	16	0	4	0	0	44	
Level 2	12	8	4	0	0	0	16	0	4	0	0	44	
Level 1	12	8	0	4	0	1	5	4	4	0	0	38	
Totals:	48	32	12	4	0	1	53	4	16	0	0	170	
Total NSF:	34,980	22,848	9,372	3,112	0	724	54,431	4,108	18,192	0	0	146,867	
Total GSF:	36,720	24,768	10,104	3,368	0	791	58,353	4,404	19,360	0	0	157,868	
<b>Units Building B</b>													
Level 4	0	0	0	0	1	0	4	0	0	2	0	7	
Level 3	0	0	0	0	1	0	4	0	0	2	0	7	
Level 2	0	0	0	0	1	0	4	0	0	2	0	7	
Level 1	0	0	0	0	1	0	2	2	0	2	0	7	
Totals:	0	0	0	0	4	0	14	2	0	8	0	28	
Total NSF:	0	0	0	0	2,988	0	14,378	2,054	0	8,216	0	27,636	
Total GSF:	0	0	0	0	3,228	0	15,414	2,202	0	8,816	0	29,660	
Total Unit NSF Areas:												174,503	
Total Unit GSF Areas:												187,528	
Total Residential Units:	48	32	12	4	4	1	67	6	16	8	0	198	
Residential Unit % Mix:	24.24%	16.16%	6.06%	2.02%	2.02%	0.51%	33.84%	3.03%	8.08%	4.04%	0.00%	100.00%	
<b>Mobility &amp; Audio Visual Accessibility Units</b>													
Mobility	Total Units	% of Total	Actual Num	Units Assigned	AV	Total Units	% of Total	Actual Num	Units Assigned				
Unit Type													
1 BR	101		4	A114, A116, A140, A142	1 BR	101		2	A107, A147				
2 BR	97		6	A111, A117, A137, A143, B101, B107	2 BR	97		2	A130, B102				
	198	10	10			198	4	4					
<b>Building Gross Floor Areas</b>													
	1st Flr.	2nd Flr.	3rd Flr.	4th Flr.	Total								
Building A	53,714	53,738	53,738	53,738	214,929								
Building B	9,849	9,849	9,849	9,849	39,397								
Retail	2,530					254,325							
<b>Amenity Floor Areas</b>													
	NSF*	GSF**											
Leasing Office	2054	2,197.00											
Clubroom	1019	1,096.00											
Exercise	1022	1,096.00											
Pool Lounge	1020	1,096.00											
Mall	678	726.00											
Trash	378	438.00											
*Pool/Pool Deck	N/A	4,891.00											
Totals	6,171	11,540											



**SITE DATA TABLE**

PARCEL TR A-5  
 PARCEL ID#: R05100-003-065-000  
 PARCEL OWNER: HUDSON WILMINGTON DEVELOPMENT LLC  
 MAP ID#: 315819.50.1084.000  
 ADDRESS: 1025 ASHES DRIVE  
 PARCEL AREA: 8.85 ACRES (385,325 SF)  
 ZONING: O&I-1 (CDMU) OFFICE AND INSTITUTIONAL  
 WATERSHED RESOURCE PROTECTION AREA

**Q&I REQUIREMENTS**  
 MAXIMUM LOT COVERAGE: 40%  
 MINIMUM FRONT SETBACK: 20'  
 MINIMUM REAR SETBACK: 80' BUILDING A / 20' BUILDING B  
 MINIMUM INTERIOR SIDE SETBACK: 10'  
 MAXIMUM HEIGHT: 45' (APPROVED TO 48')  
 BUFFER BUILDING A: 40'  
 PROPOSED LOT COVERAGE: 17.35%

**PROPOSED SETBACKS BLDG. A**  
 FRONT SETBACK: 20'  
 REAR SETBACK: 216'  
 SIDE NORTH: 110'  
 SIDE SOUTH: 178'  
 BUILDING HEIGHT: 46'-10"

**PROPOSED SETBACKS BLDG. B**  
 FRONT SETBACK: 20'  
 REAR SETBACK: 43'  
 SIDE NORTH: 475'  
 SIDE SOUTH: 158'  
 BUILDING HEIGHT: 46'-10"/16' (1 STORY)

**BUILDING DATA:**

BUILDING	FOOTPRINT	GSE	HEIGHT
BUILDING A	53,700 SF	158,408 SF	46'-10" (4 STORY)
BUILDING B	13,187 SF	29,668 SF	46'-10" (4 STORY)/16' (1 STORY)
TOTAL	66,887 SF	188,076 SF	

**UNITS:**

BUILDING	1 BR	2 BR	TOTAL
BUILDING A	97	73	170
BUILDING B	4	24	28
TOTAL	101	97	198

RETAIL SPACE: 2,530 SF  
 BUILDING CONSTRUCTION TYPE: 5A

**PARKING:**  
 PARKING REQUIREMENT RESIDENTIAL (O&I-1)  
 MAXIMUM: 2.5/UNIT (198 UNITS)=495 SPACES  
 MINIMUM: 1 BR 1.5/UNIT=151 SPACES  
 2 BR 2/UNIT=194 SPACES  
 TOTAL=345 SPACES

PARKING REQUIREMENT RESIDENTIAL (CDMU)  
 1 PER DWELLING UNIT (198 UNITS)=198 SPACES

PARKING REQUIREMENT (O&I-1)  
 RETAIL: 1 PER 200 SF GFA MAX.  
 1 PER 400 SF GFA MIN.  
 RETAIL 2,530 SF: MAX. 13, MIN. 6

TOTAL PARKING REQUIRED (O&I-1): MAX. 508, MIN. 351  
 TOTAL PARKING PROVIDED (CDMU):  
 RESIDENTIAL 198  
 RETAIL MAX. 13, MIN. 6

PARKING PROVIDED: 303 TOTAL (287 REGULAR, 16 HC)  
 ACCESSIBLE PARKING REQUIRED:  
 ACCESSIBLE PARKING PROVIDED: 16

BICYCLE PARKING: 5 BICYCLE PARKING FOR THE FIRST 25 CAR PARKING SPACES. EACH ADDITIONAL ONE HUNDRED (100) AUTOMOBILE PARKING SPACES ABOVE THE TWENTY-FIVE (25) MINIMUM SHALL REQUIRE PROVISIONS FOR PARKING AN ADDITIONAL FIVE (5) BICYCLES UP TO A BICYCLE PARKING SYSTEM THAT CAN ACCOMMODATE A MAXIMUM OF TWENTY (20) BICYCLES.

TOTAL BICYCLE PARKING PROVIDED: 20

LANDSCAPING: SEE PLANS BY MIHALY LAND DESIGN  
 -FOUNDATION PLANTINGS: FACE OF BUILDING X (12%)  
 -LANDSCAPING REQ'D INTERIOR O&I: % SHADING BASED ON PARKING LOT IMPERVIOUS AREA  
 -STREET YARD: 25' MULTIPLIER (560 X 18 - 48 = 10,572 SF REQUIRED)  
 -STREET TREES MUST BE LOCATED A MINIMUM OF 15' FROM STREET LIGHTS

TRASH SERVICE: DUMPSTER  
 DISTURBED AREA LIMITS: 5.54 ACRES

**WATER/SEWER DEMANDS**  
 MULTIFAMILY= 198 UNITS X 240 GPD/UNIT=47,520 GPD  
 RETAIL= 2,530 SF/100 SF/PERSON X 25 GPD/PERSON=632.5 GPD

TREE REMOVAL TABLE

REGULATED PINES

15"	(1)
16"	(1)
21"	(1)
24"	(1) LOBLOLLY

Impervious Area

Existing:	10880 SF	
Existing To be Removed:	540 SF	
Existing To Remain:	10340 SF	-- All TO SW8 980549
New:		
Asphalt, C&G:	102599 SF	
Sidewalk:	8677 SF	
Building:	77784 SF	
Future:	3000 SF	
TOTAL:	192060	

Total Impervious (New & Existing to Remain): 202400 SF (202,400 sf/385,325 sf) x 100 = 0.525 (52.5%)

NEW Impervious TO Stormwater Permit SW8 020822

Asphalt, C&G:	87179 SF	
Sidewalk:	6225 SF	
Building:	67984 SF	
Future:	1500 SF	
TOTAL:	162888	

NEW Impervious TO Stormwater Permit SW8 980549

Asphalt, C&G:	15420 SF	
Sidewalk:	2452 SF	
Building:	9800 SF	
Future:	1500 SF	
TOTAL:	29172	

New Impervious Off-Site  
 Asphalt, C&G (Includes Driveways): 2482 SF -- To SW8 020822

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

NCDENR PWSS WATER PERMIT # \_\_\_\_\_  
 WATER CAPACITY: \_\_\_\_\_ GPD  
 DWQ SEWER PERMIT # \_\_\_\_\_  
 SEWER CAPACITY: \_\_\_\_\_ GPD  
 SEWER SHED # AND PLANT: \_\_\_\_\_  
 SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

Approved Construction Plan  
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CITY OF WILMINGTON  
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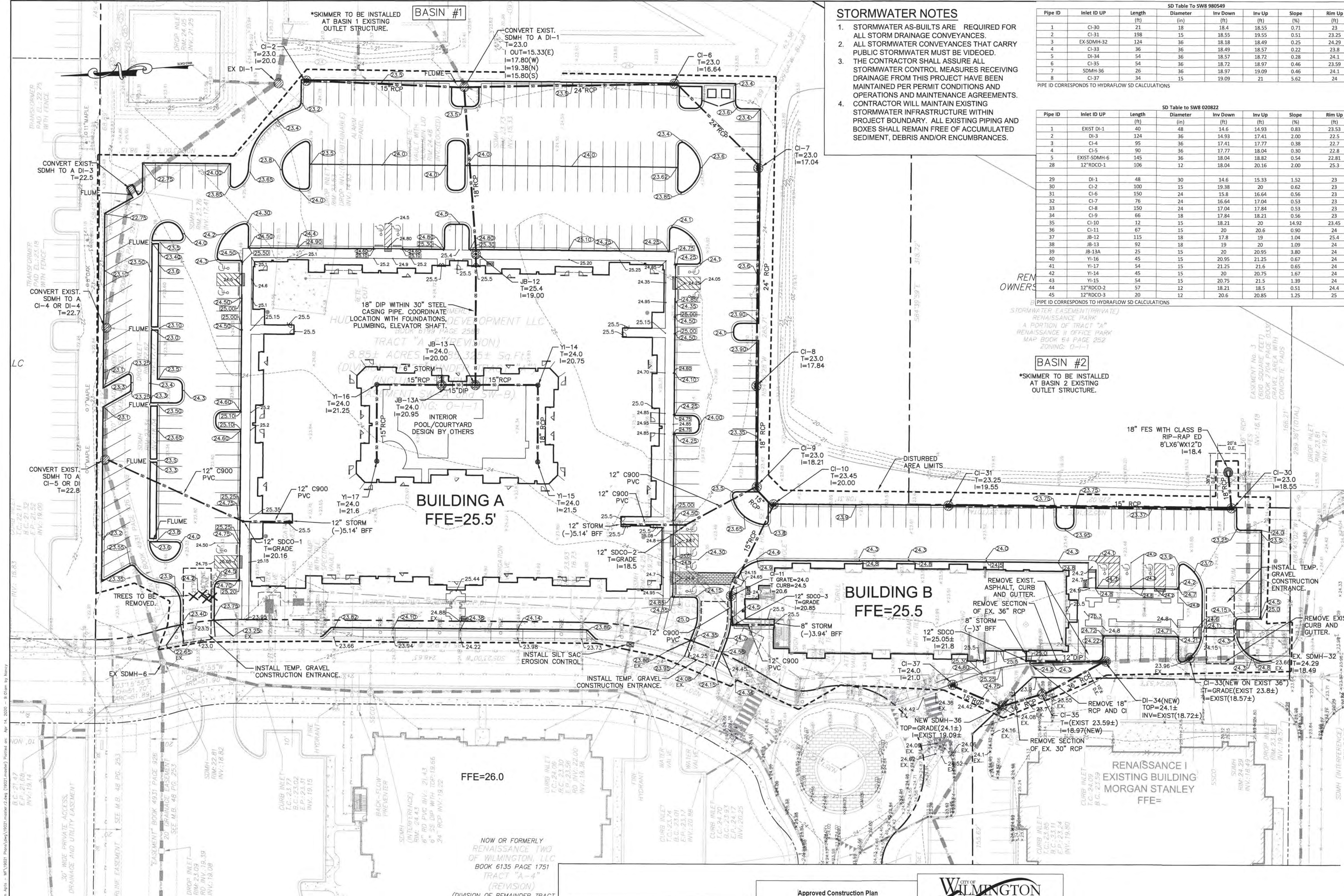
OVERALL SITE PLAN  
 RENAISSANCE APARTMENTS  
 1025 ASHES DRIVE  
 WILMINGTON, N. C.

OWNER/DEVELOPER:  
 HUDSON WILMINGTON DEVELOPMENT, LLC  
 WILLIAM SCHOETTELKOTTE, MANAGER  
 1051 MILITARY CUTOFF RD., SUITE 200  
 WILMINGTON, NC 28405  
 910 860-0063

NORRIS & TUNSTALL  
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 2602 IRON GATE DR., SUITE 102  
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 PHONE (910) 343-9663  
 1429 ASH-LITTLE RIVER RD., NW  
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 PHONE (910) 287-5900

Licence #C-3641  
 19021  
 DES. JST  
 OKD. JPN  
 DRWN. NKS  
 DATE 4/14/20

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- ### STORMWATER NOTES
1. STORMWATER AS-BUILTS ARE REQUIRED FOR ALL STORM DRAINAGE CONVEYANCES.
  2. ALL STORMWATER CONVEYANCES THAT CARRY PUBLIC STORMWATER MUST BE VIDEOED.
  3. THE CONTRACTOR SHALL ASSURE ALL STORMWATER CONTROL MEASURES RECEIVING DRAINAGE FROM THIS PROJECT HAVE BEEN MAINTAINED PER PERMIT CONDITIONS AND OPERATIONS AND MAINTENANCE AGREEMENTS.
  4. CONTRACTOR WILL MAINTAIN EXISTING STORMWATER INFRASTRUCTURE WITHIN PROJECT BOUNDARY. ALL EXISTING PIPING AND BOXES SHALL REMAIN FREE OF ACCUMULATED SEDIMENT, DEBRIS AND/OR ENCUMBRANCES.

SD Table To SW8 980549

Pipe ID	Inlet ID UP	Length (ft)	Diameter (in)	Inv Down (ft)	Inv Up (ft)	Slope (%)	Rim Up (ft)
1	CI-30	21	18	18.4	18.55	0.71	23
2	CI-31	198	15	18.55	19.55	0.51	23.25
3	EX-SDMH-32	124	36	18.18	18.49	0.25	24.29
4	CI-33	95	36	18.57	18.77	0.28	24.1
5	DI-34	54	36	18.72	18.97	0.46	23.59
6	CI-35	54	36	18.72	18.97	0.46	24.1
7	SDMH-36	26	36	18.97	19.09	0.46	24.1
8	CI-37	34	15	19.09	21	5.62	24

PIPE ID CORRESPONDS TO HYDRAFLOW SD CALCULATIONS

SD Table to SW8 020822

Pipe ID	Inlet ID UP	Length (ft)	Diameter (in)	Inv Down (ft)	Inv Up (ft)	Slope (%)	Rim Up (ft)
1	EXIST DI-1	40	48	14.6	14.93	0.83	23.53
2	DI-3	124	36	14.93	17.41	2.00	22.5
3	CI-4	95	36	17.41	17.77	0.38	22.7
4	CI-5	90	36	17.77	18.04	0.30	22.8
5	EXIST-SDMH-6	145	36	18.04	18.82	0.54	22.81
28	12"RDCCO-1	106	12	18.04	20.16	2.00	25.3
29	DI-1	48	30	14.6	15.33	1.52	23
30	CI-2	100	15	19.38	20	0.62	23
31	CI-6	150	24	15.8	16.64	0.56	23
32	CI-7	76	24	16.64	17.04	0.53	23
33	CI-8	150	24	17.04	17.84	0.53	23
34	CI-9	66	18	17.84	18.21	0.56	23
35	CI-10	12	15	18.21	20	14.92	23.45
36	CI-11	67	15	20	20.6	0.90	24
37	JB-12	115	18	17.8	19	1.04	25.4
38	JB-13	92	18	19	20	1.09	24
39	JB-13A	25	15	20	20.95	3.80	24
40	YI-16	45	15	20.95	21.25	0.67	24
41	YI-17	54	15	21.25	21.6	0.65	24
42	YI-14	45	15	20	20.75	1.67	24
43	YI-15	54	15	20.75	21.5	1.39	24
44	12"RDCCO-2	57	12	18.21	18.5	0.51	24.4
45	12"RDCCO-3	20	12	20.6	20.85	1.25	25

PIPE ID CORRESPONDS TO HYDRAFLOW SD CALCULATIONS



**OWNER/DEVELOPER**  
HUDSON WILMINGTON DEVELOPMENT, LLC  
WILLIAM SCHOETTELKOTTE, MANAGER  
1051 MILITARY CUTOFF RD., SUITE 200  
WILMINGTON, NC 28405  
910 880-0063

**NORRIS & TUNSTALL**  
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**19021**  
DES. JST  
CKD. JPN  
DRWN. NKS  
DATE 4/14/20

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NCDENR PWSS WATER PERMIT # \_\_\_\_\_ GPD  
WATER CAPACITY: \_\_\_\_\_ GPD  
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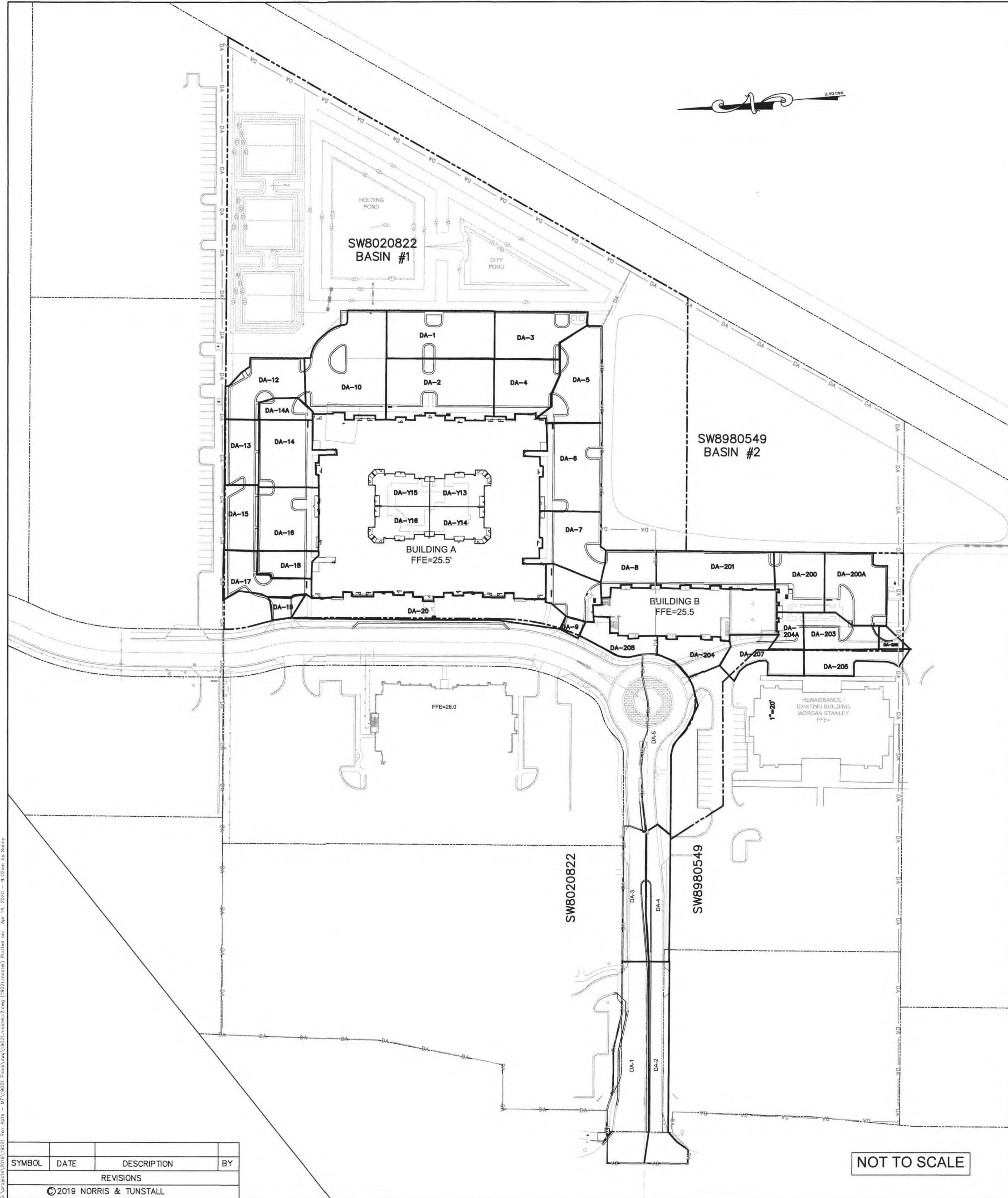
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**CITY OF WILMINGTON**  
NORTH CAROLINA  
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APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
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For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

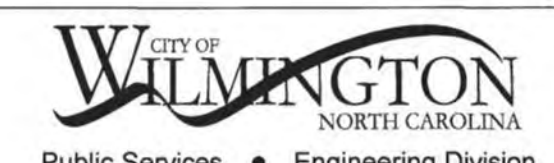
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NCDENR PWSS WATER PERMIT # \_\_\_\_\_  
 WATER CAPACITY: \_\_\_\_\_ GPD  
 DWQ SEWER PERMIT # \_\_\_\_\_  
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APPROVED STORMWATER MANAGEMENT PLAN  
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DRAINAGE AREA PLAN  
 RENAISSANCE APARTMENTS  
 1025 ASHES DRIVE  
 WILMINGTON, N. C.

OWNER/DEVELOPER  
 HUDSON WILMINGTON DEVELOPMENT, LLC  
 WILLIAM SCHOETTELKOTTE, MANAGER  
 1051 MILITARY CUTOFF RD., SUITE 200  
 WILMINGTON, NC 28405  
 910.880.0063

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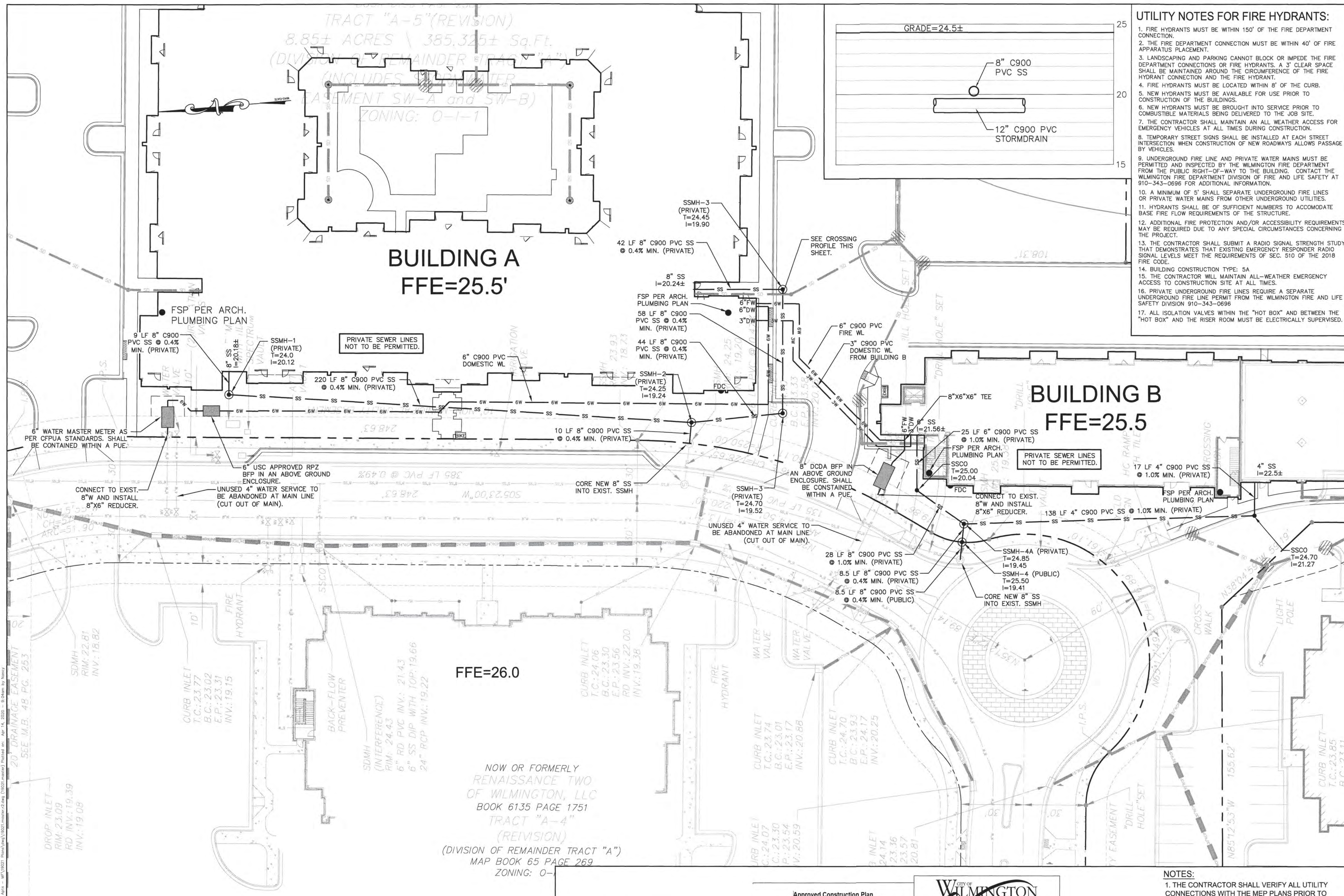


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SYMBOL	DATE	DESCRIPTION	BY
REVISIONS			
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- UTILITY NOTES FOR FIRE HYDRANTS:**
1. FIRE HYDRANTS MUST BE WITHIN 150' OF THE FIRE DEPARTMENT CONNECTION.
  2. THE FIRE DEPARTMENT CONNECTION MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
  3. LANDSCAPING AND PARKING CANNOT BLOCK OR IMPEDE THE FIRE DEPARTMENT CONNECTIONS OR FIRE HYDRANTS. A 3' CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANT CONNECTION AND THE FIRE HYDRANT.
  4. FIRE HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
  5. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS.
  6. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
  7. THE CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  8. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.
  9. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
  10. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
  11. HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMMODATE BASE FIRE FLOW REQUIREMENTS OF THE STRUCTURE.
  12. ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
  13. THE CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SEC. 510 OF THE 2018 FIRE CODE.
  14. BUILDING CONSTRUCTION TYPE: 5A
  15. THE CONTRACTOR WILL MAINTAIN ALL-WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.
  16. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910-343-0696
  17. ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM MUST BE ELECTRICALLY SUPERVISED.

**UTILITY PLAN**  
**RENAISSANCE APARTMENTS**  
 1025 ASHES DRIVE  
 WILMINGTON, N. C.

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 WILMINGTON, NC 28405  
 910 880-0063

**NORRIS & TUNSTALL**  
 CONSULTING ENGINEERS P.C.  
 2602 IRON GATE DR., SUITE 102  
 WILMINGTON, NC 28412  
 PHONE (910) 345-9653

Licence #C-3641

**19021**

DES.	JUST
CDR.	JPN
DRWN.	NKS
DATE	4/14/20

SYMBOL	DATE	DESCRIPTION	BY
REVISIONS			
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NCDENR PWSS WATER PERMIT #:  
 WATER CAPACITY: \_\_\_\_\_ GPD  
 DWQ SEWER PERMIT #:  
 SEWER CAPACITY: \_\_\_\_\_ GPD  
 SEWER SHED # AND PLANT:  
 SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

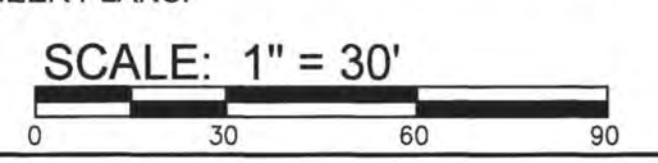
**Approved Construction Plan**  
 Date: 7/16/20  
 # 2019065  
 SWP #: 2020023  
 PO, ES, BM, MB, CW

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

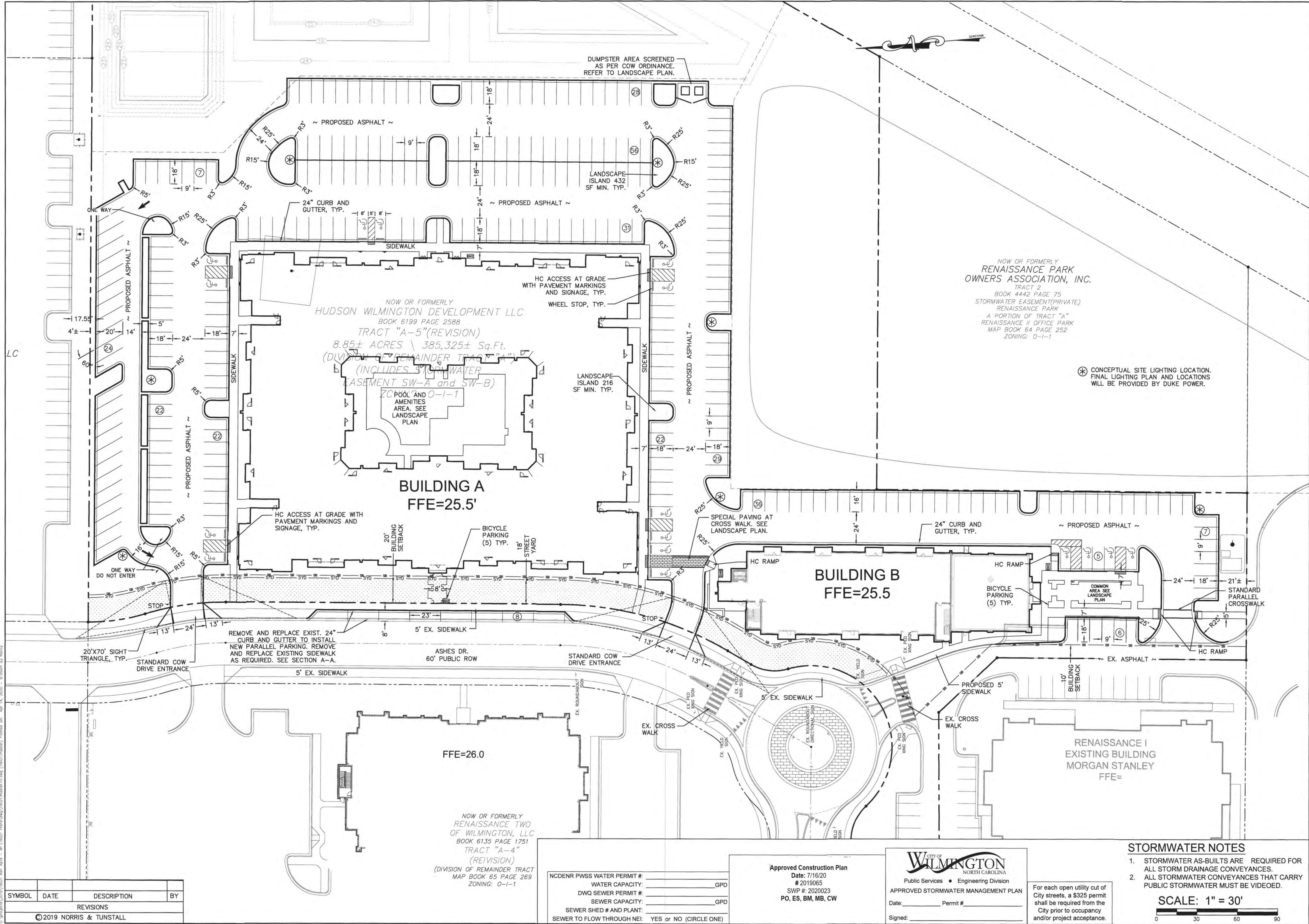
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**NOTES:**

1. THE CONTRACTOR SHALL VERIFY ALL UTILITY CONNECTIONS WITH THE MEP PLANS PRIOR TO BEGINNING CONSTRUCTION.
2. UTILITY SERVICES SHOWN BASED ON PLUMBING ENGINEER PLANS.



**C2.1**



LAYOUT PLAN  
 RENAISSANCE APARTMENTS  
 1025 ASHES DRIVE  
 WILMINGTON, N. C.

OWNER/DEVELOPER  
 HUDSON WILMINGTON  
 DEVELOPMENT, LLC  
 WILLIAM SCHOETTELKOTTE,  
 MANAGER  
 1051 MILITARY CUTOFF RD.,  
 SUITE 200  
 WILMINGTON, NC 28405  
 910 880-0063

**NORRIS & TUNSTALL**  
 CONSULTING ENGINEERS P.C.  
 2602 IRON GATE DR., SUITE 102 1429 ASHLITTLE RIVER RD., NW  
 ATLANTA, GA 30342  
 PHONE: (404) 345-9633 PHONE: (910) 387-5900

Licence #C-3641  
**19021**  
 DES. JST  
 C.D. JPN  
 DRWN. NKS  
 DATE 4/14/20

**C3.1**

NOW OR FORMERLY  
 RENAISSANCE PARK  
 OWNERS ASSOCIATION, INC.  
 TRACT 2  
 BOOK 4442 PAGE 75  
 STORMWATER EASEMENT (PRIVATE)  
 RENAISSANCE PARK  
 A PORTION OF TRACT "A"  
 RENAISSANCE II OFFICE PARK  
 MAP BOOK 64 PAGE 252  
 ZONING: O-1-1

⊗ CONCEPTUAL SITE LIGHTING LOCATION.  
 FINAL LIGHTING PLAN AND LOCATIONS  
 WILL BE PROVIDED BY DUKE POWER.

C:\projects\2019\19021\_Ren\_Apts - MTA\19021\_Ren\_Apts\19021\_Ren\_Apts\19021\_mstr.dwg, 4/14/2020 9:05:00 AM  
 © 2019 NORRIS & TUNSTALL

SYMBOL	DATE	DESCRIPTION	BY
REVISIONS			

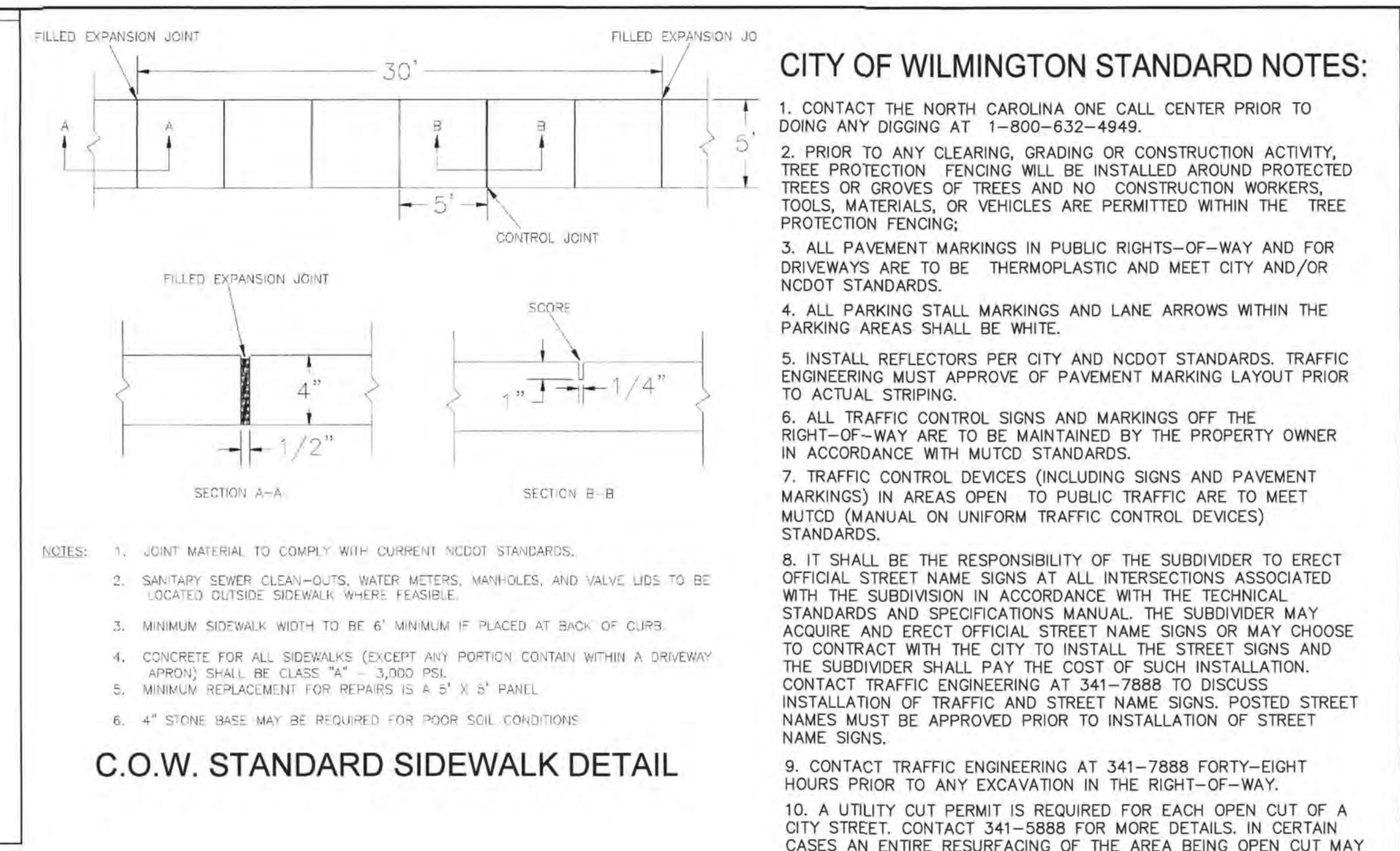
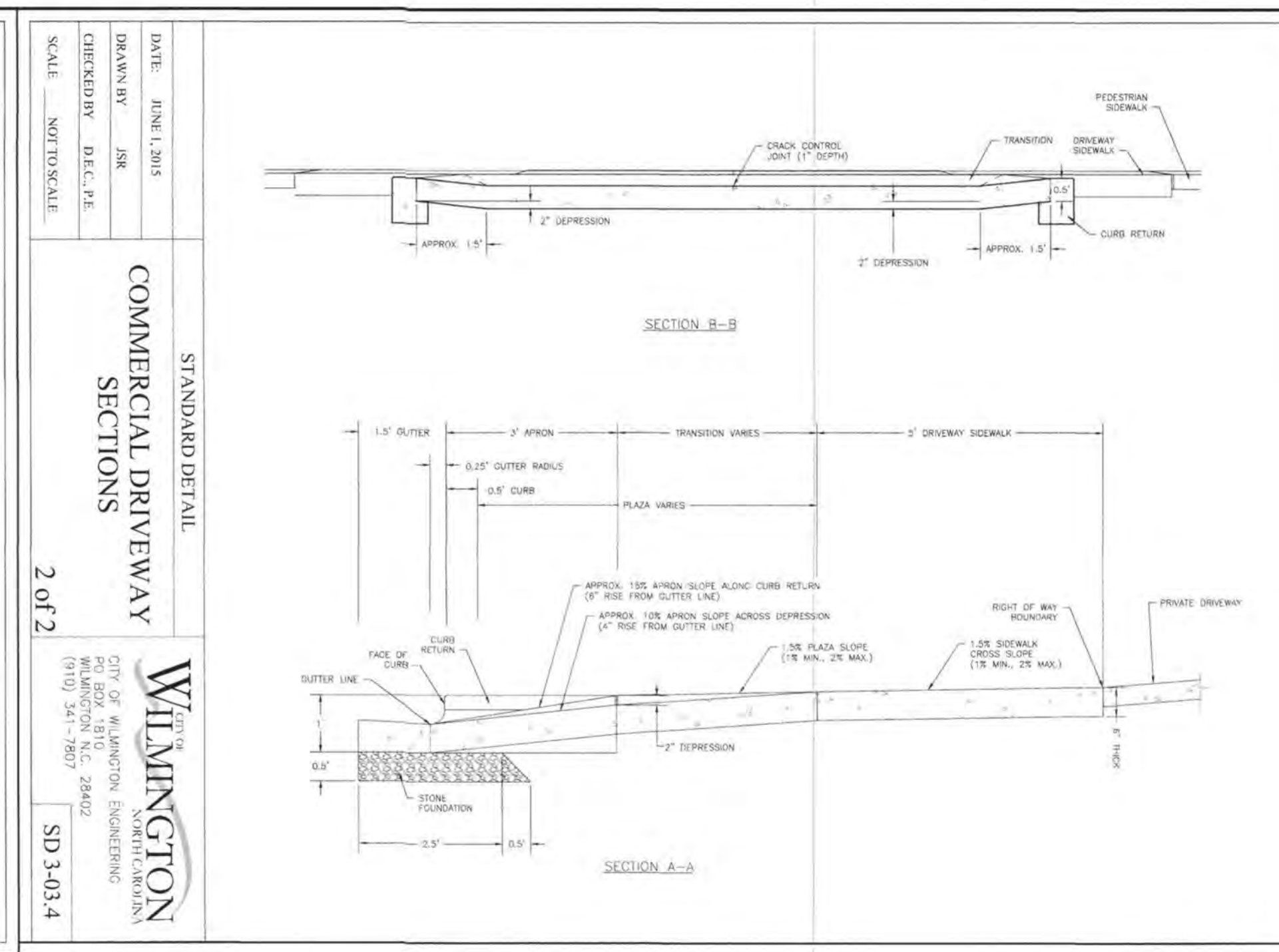
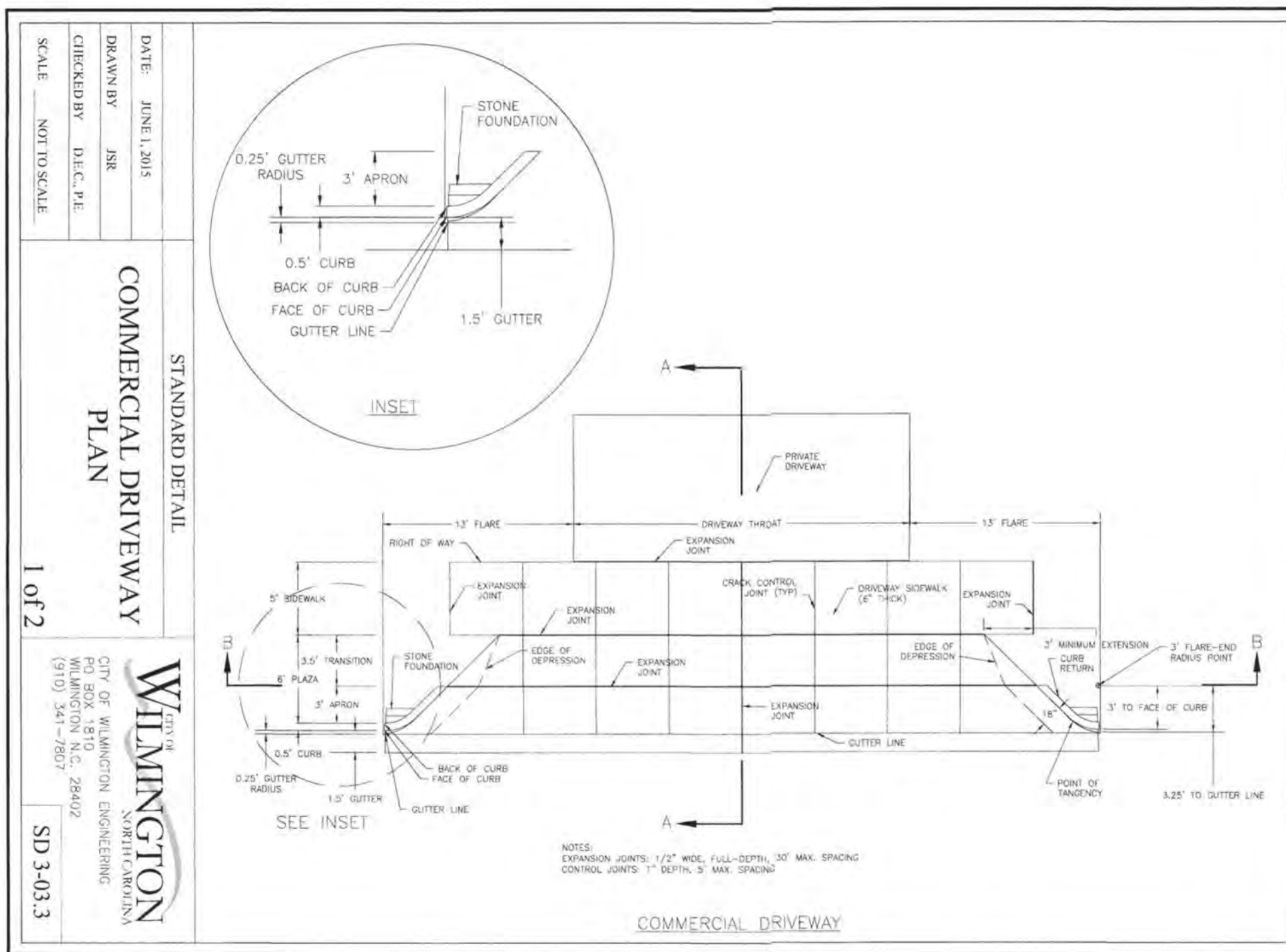
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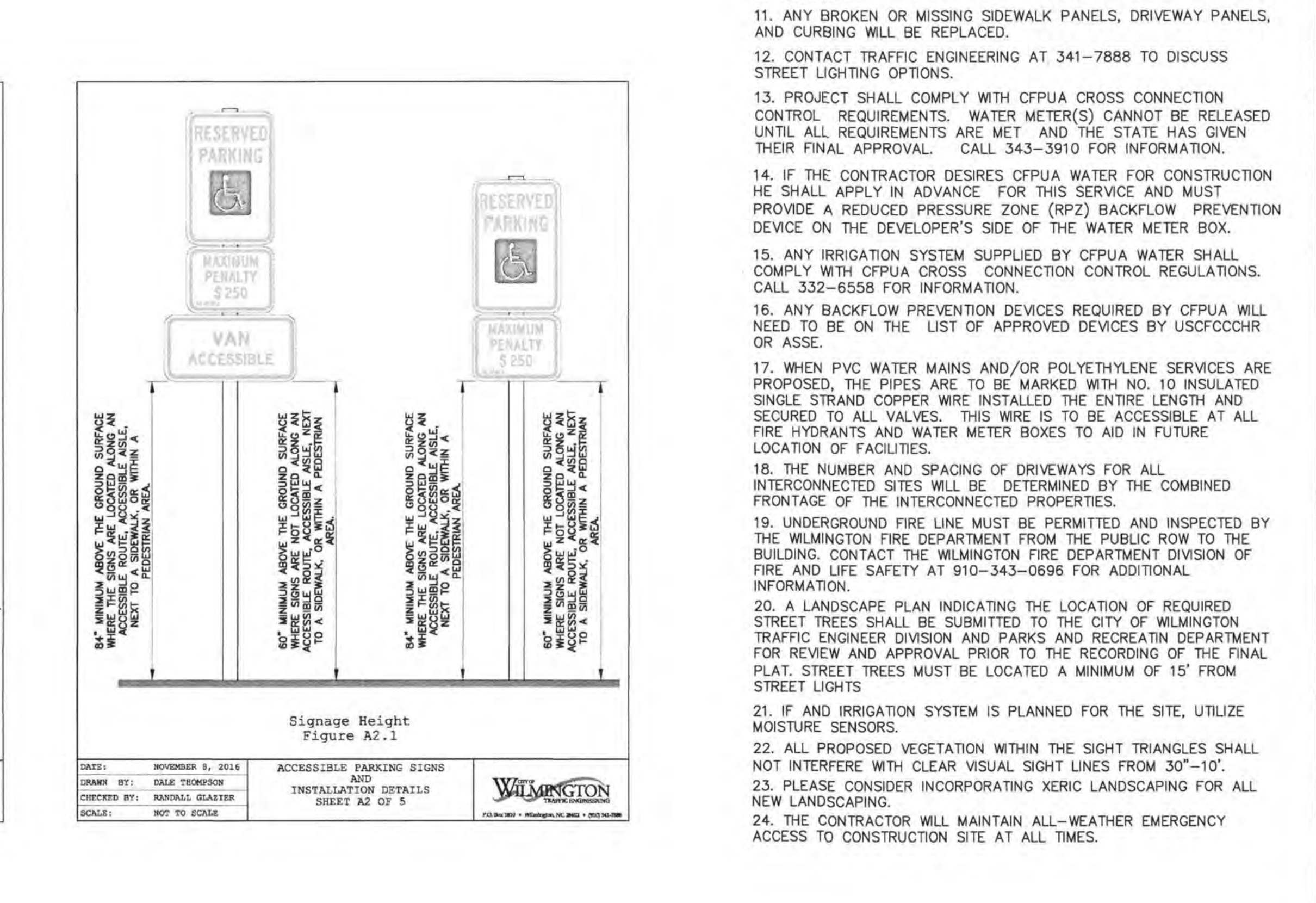
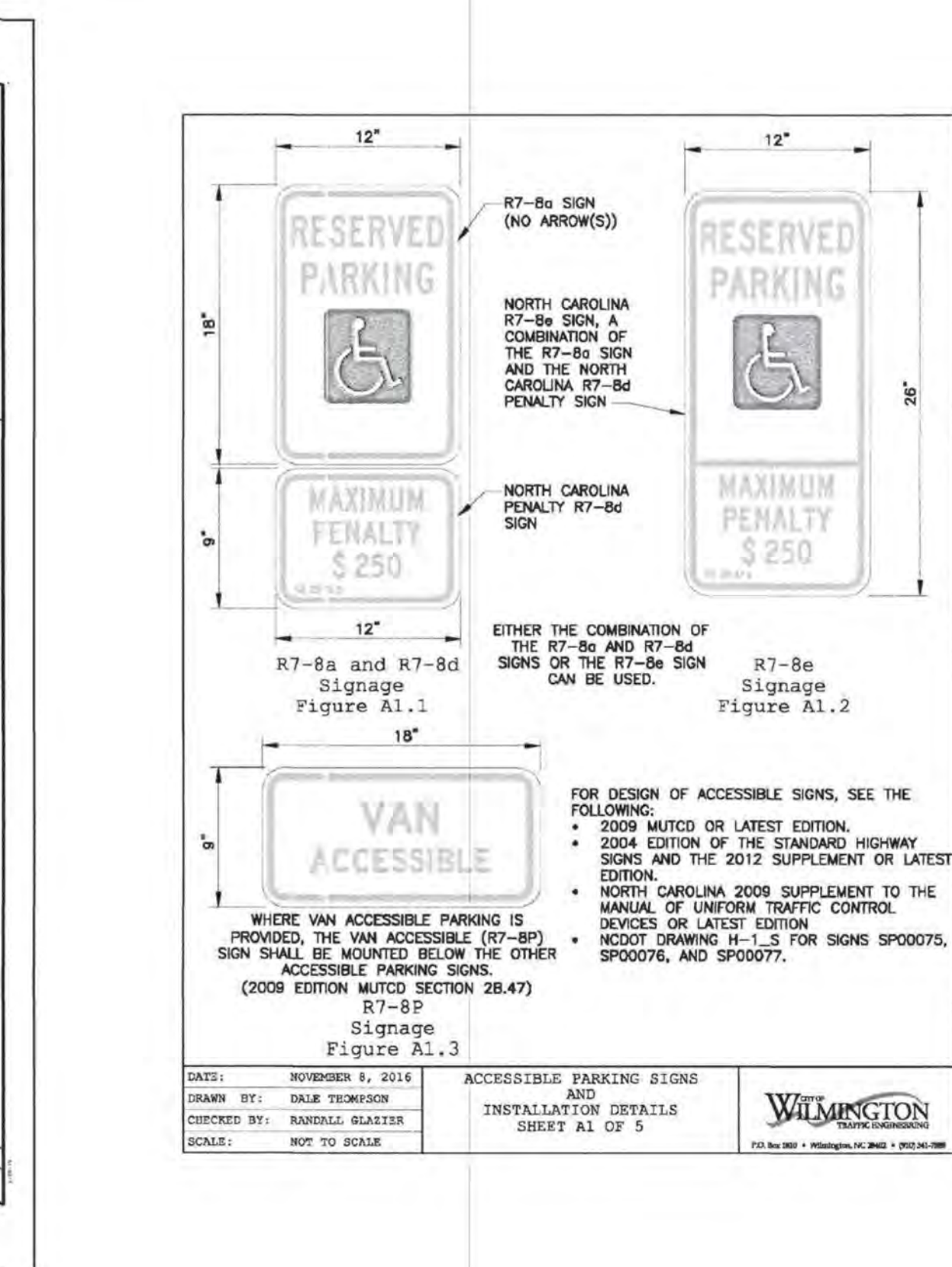
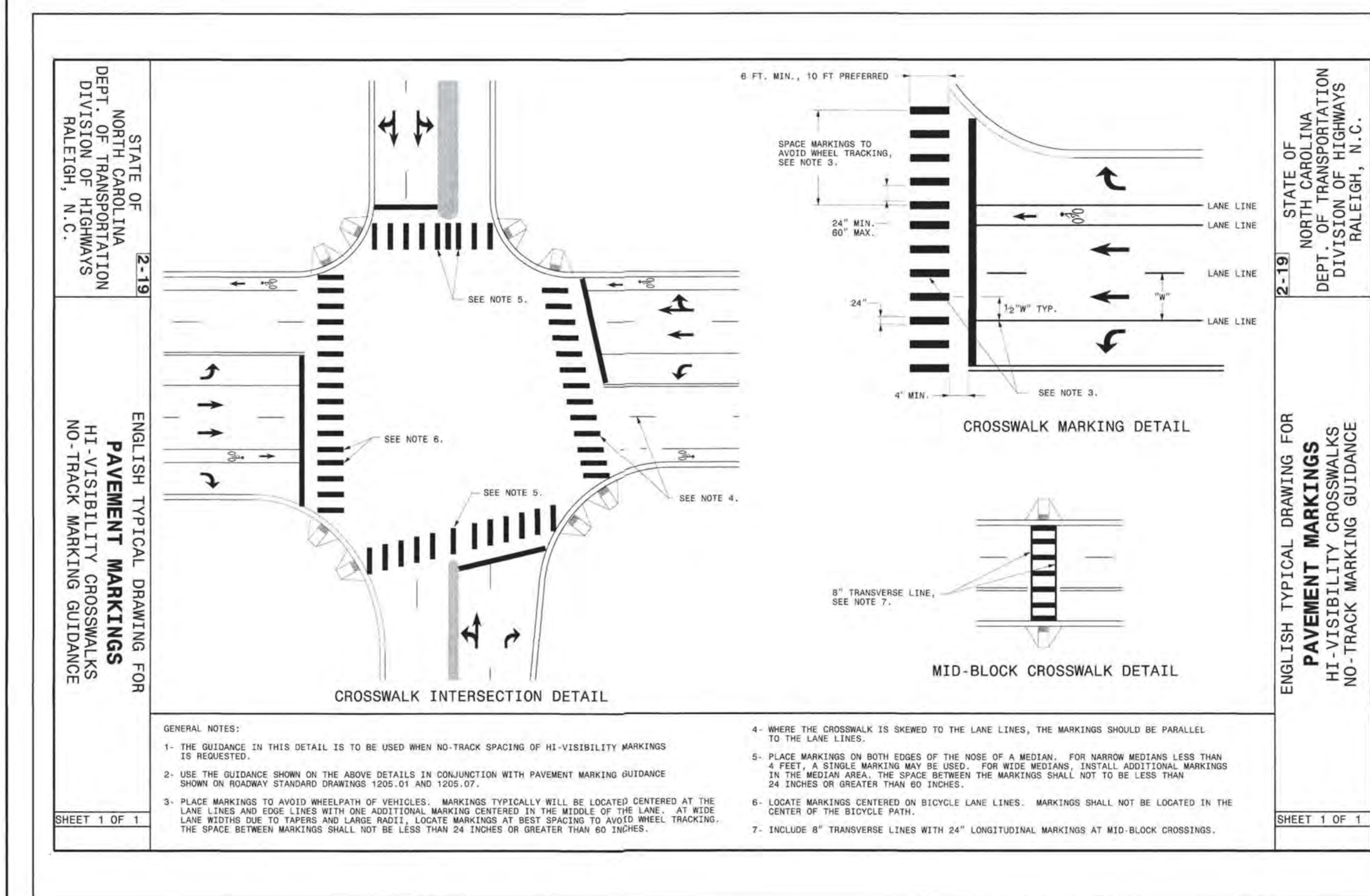
**WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
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 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

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 City streets, a \$325 permit  
 shall be required from the  
 City prior to occupancy  
 and/or project acceptance.

**STORMWATER NOTES**  
 1. STORMWATER AS-BUILTS ARE REQUIRED FOR ALL STORM DRAINAGE CONVEYANCES.  
 2. ALL STORMWATER CONVEYANCES THAT CARRY PUBLIC STORMWATER MUST BE VIDEOED.  
 SCALE: 1" = 30'  
 0 30 60 90



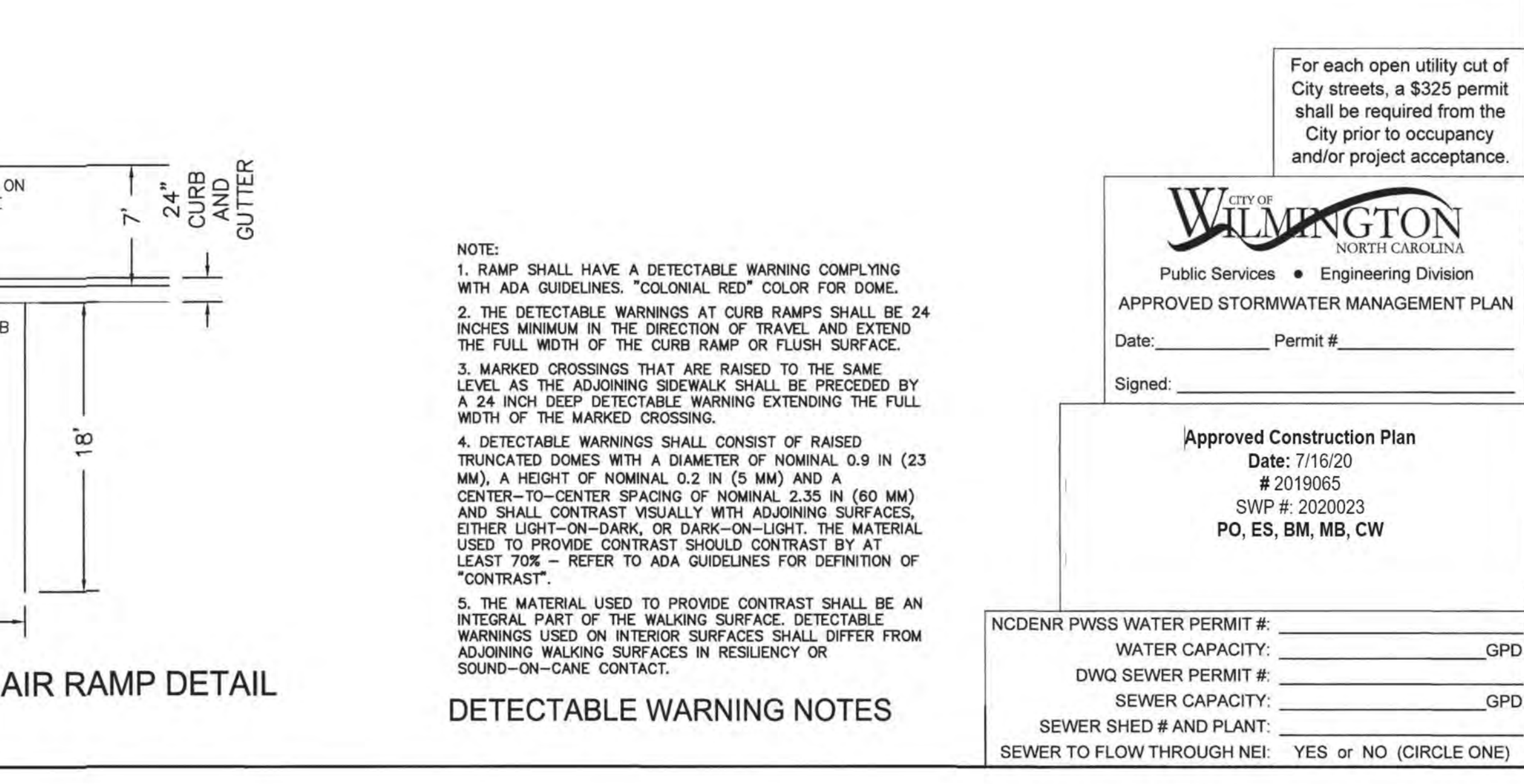
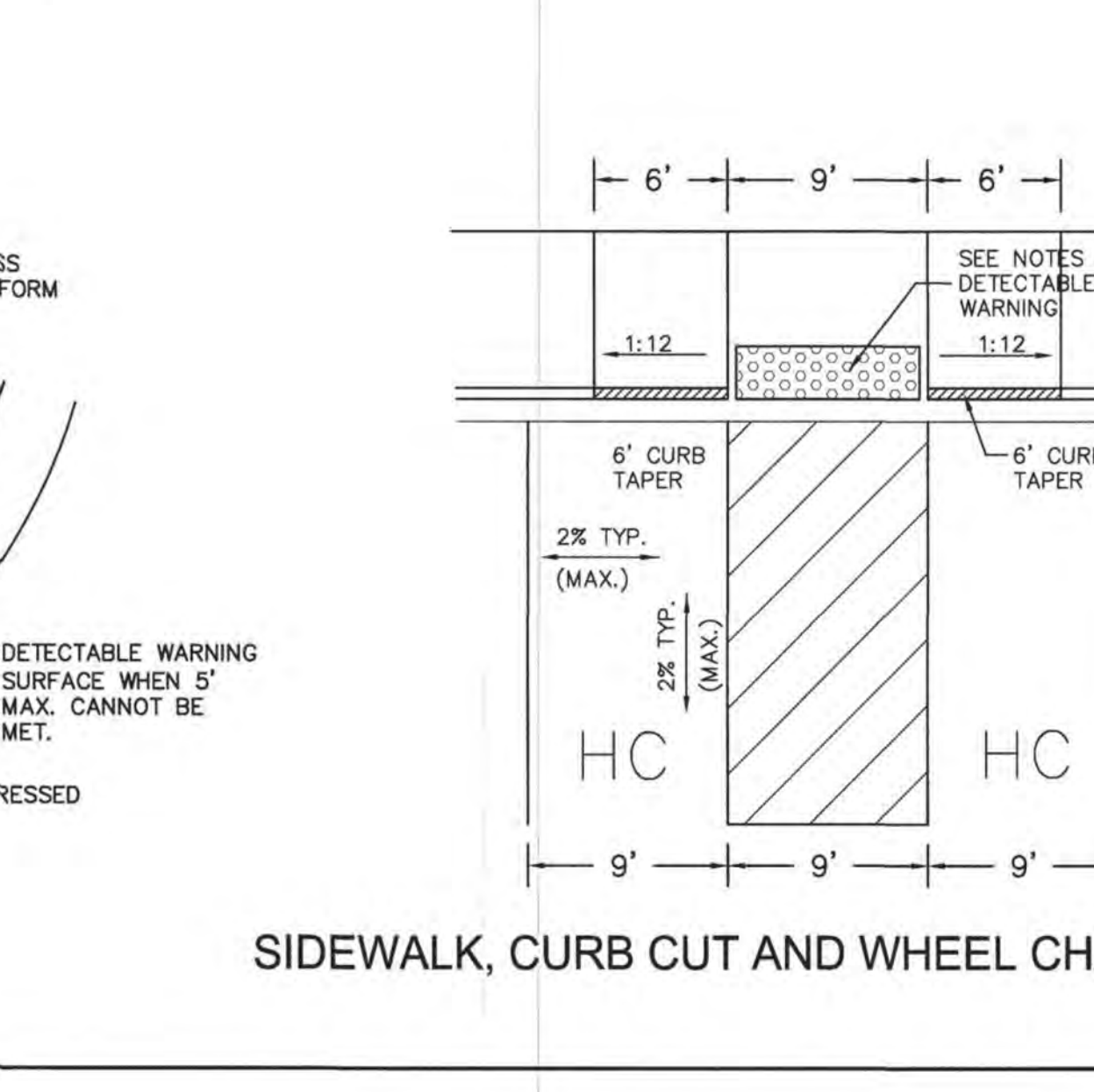
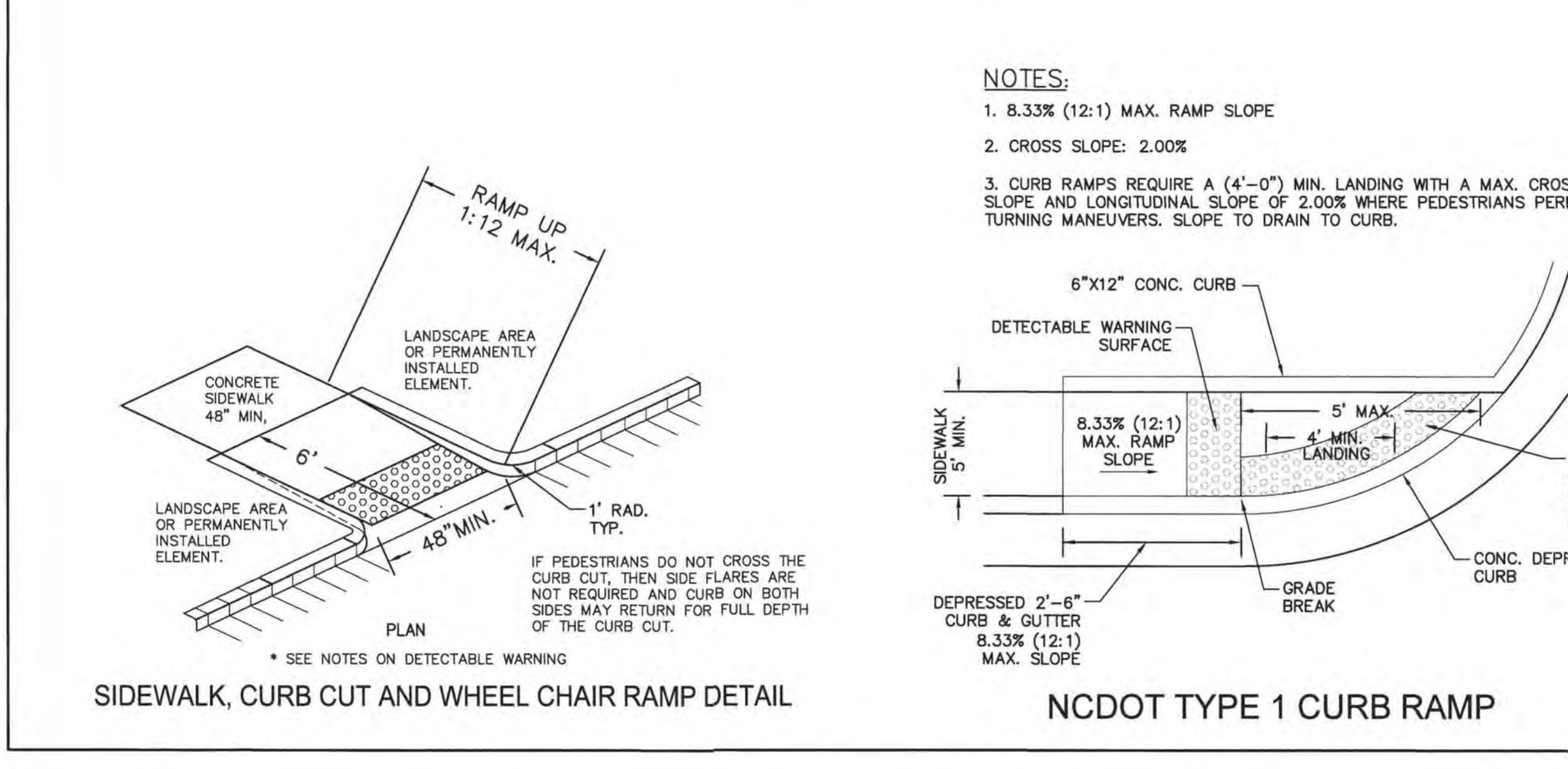
**NOTES AND DETAILS**  
RENAISSANCE APARTMENTS  
1025 ASHES DRIVE  
WILMINGTON, N. C.



**OWNER/DEVELOPER**  
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DEVELOPMENT, LLC  
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WILMINGTON, NC 28412  
PHONE: (910) 343-9653

1429 ASH-LITTLE RIVER RD. NW  
ASH, NC 28420  
PHONE: (910) 287-5900



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WILMINGTON  
CITY OF WILMINGTON  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

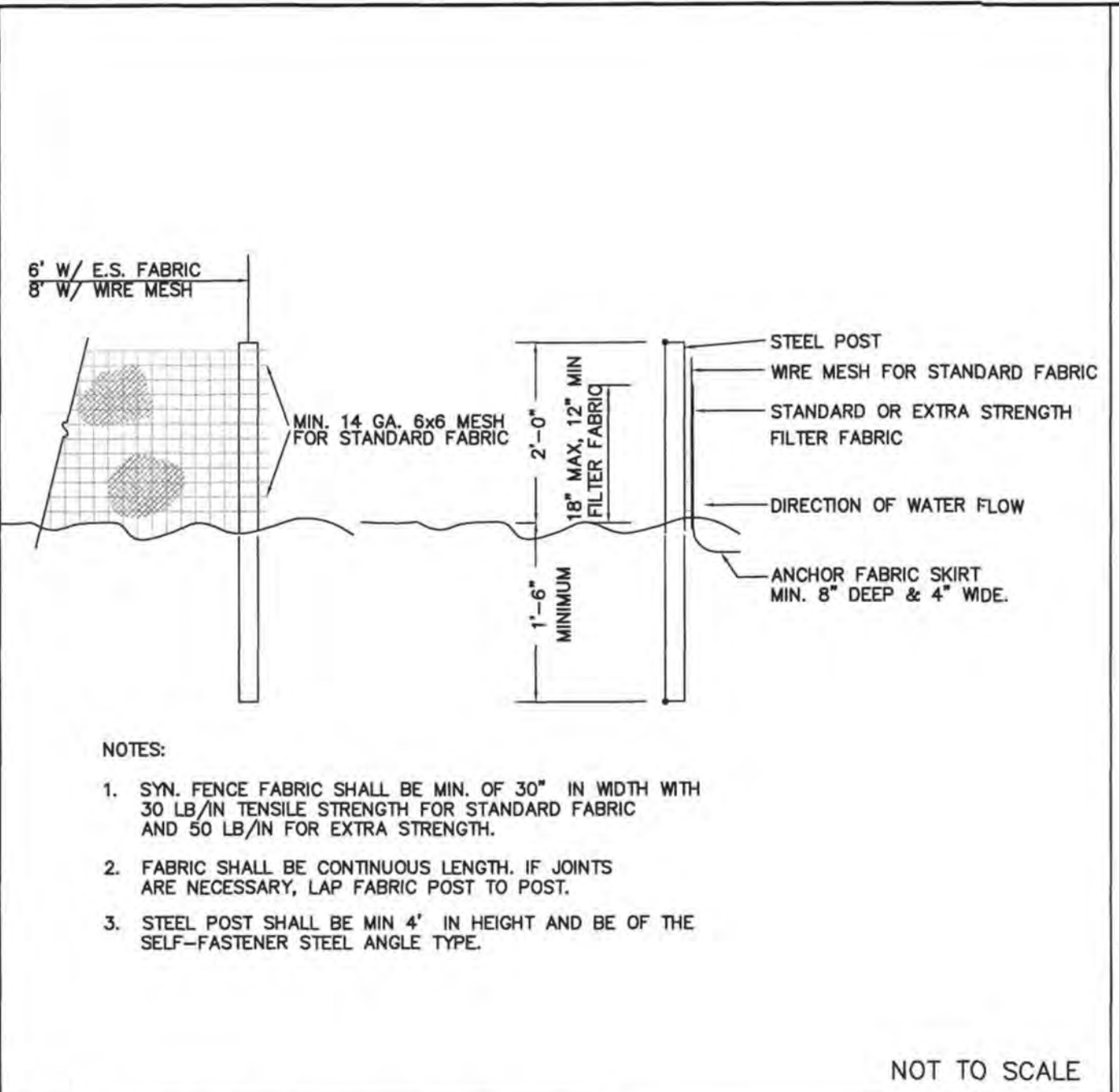
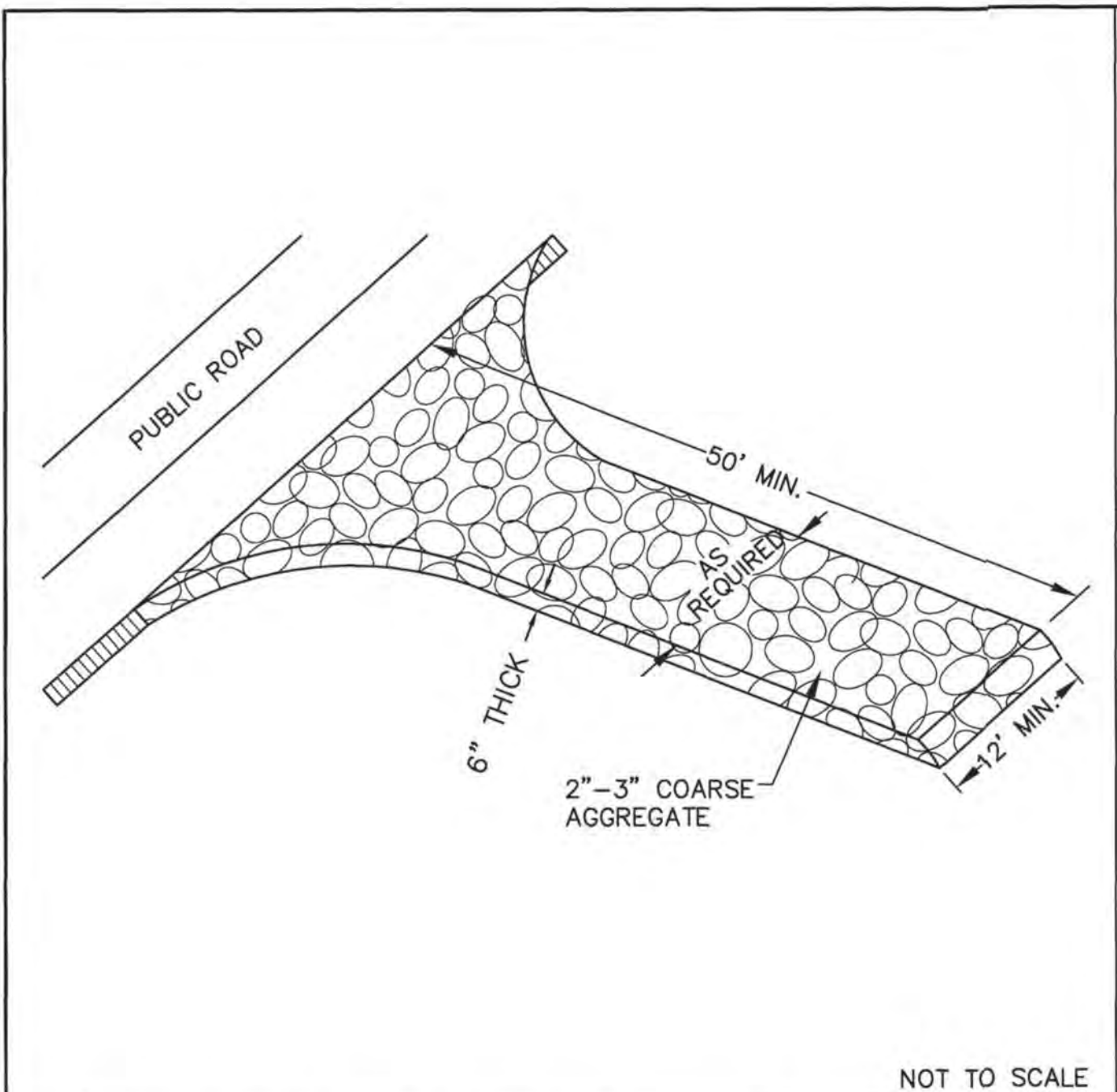
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SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

19021  
DES. JST  
CHKD. TJC  
DRWN. NKS  
DATE: 4/14/20

C4.1

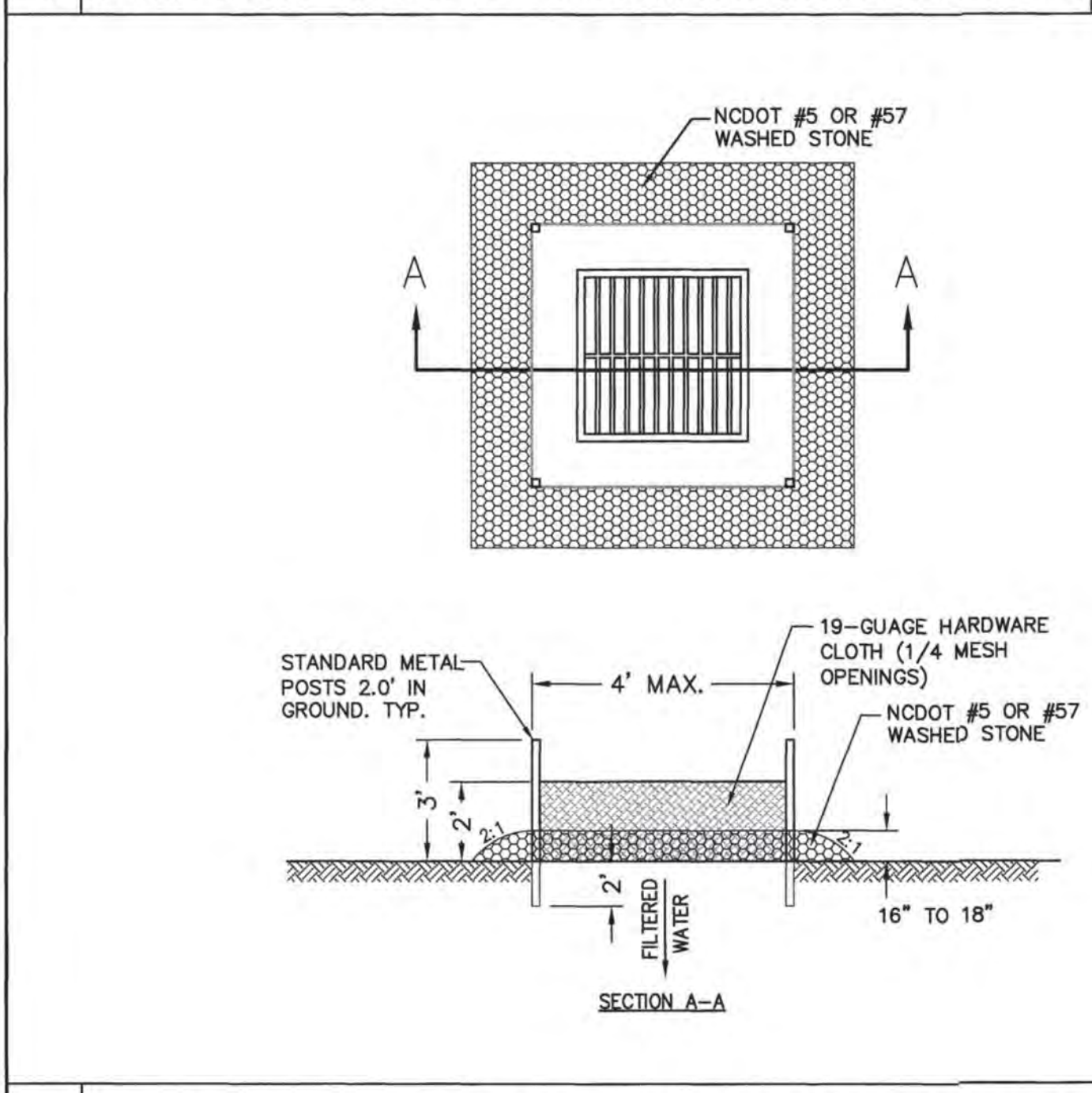


NOTES:

1. SYN. FENCE FABRIC SHALL BE MIN. OF 30" IN WIDTH WITH 30 LB/IN TENSILE STRENGTH FOR STANDARD FABRIC AND 50 LB/IN FOR EXTRA STRENGTH.
2. FABRIC SHALL BE CONTINUOUS LENGTH. IF JOINTS ARE NECESSARY, LAP FABRIC POST TO POST.
3. STEEL POST SHALL BE MIN 4' IN HEIGHT AND BE OF THE SELF-FASTENER STEEL ANGLE TYPE.

1 TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE

2 TEMPORARY SILT FENCE



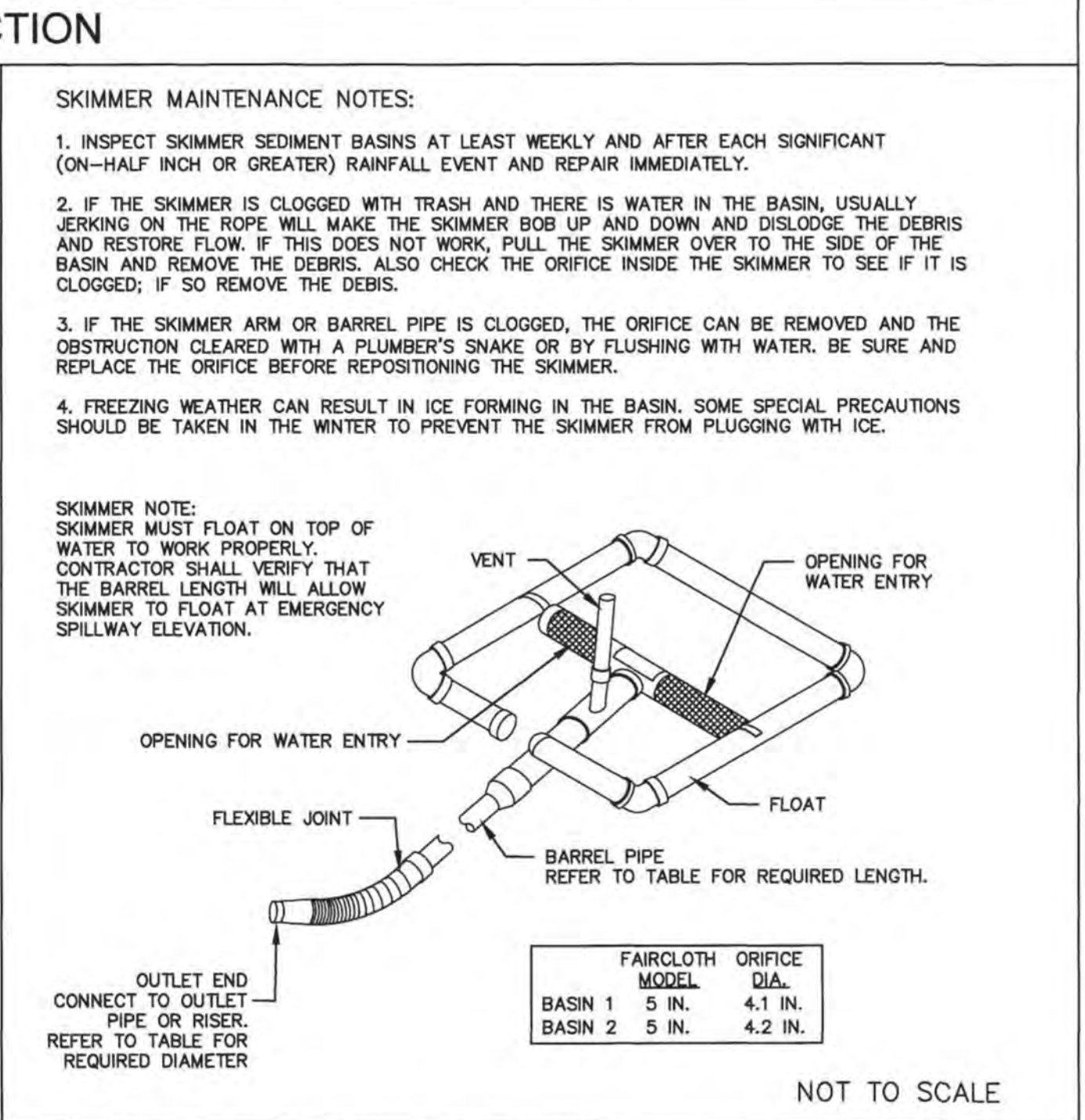
CONSTRUCTION SEQUENCE:

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 3" STEEL POST 2' INTO THE GROUND SURROUNDING THE INLET. SPACE POST EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4' APART.
3. SURROUND THE POST WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POST AT THE TOP, MIDDLE AND BOTTOM. PLACING A 2' FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16" TO 18" AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUND COVER.

MAINTENANCE:

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REMOVE SEDIMENT WHEN ACCUMULATION REACHES HALF THE DEPTH OF ROCK. REPLACE STONE WHEN IT NO LONGER DRAINS AS DESIGNED.

3 HARDWARE CLOTH AND GRAVEL INLET PROTECTION



SKIMMER MAINTENANCE NOTES:

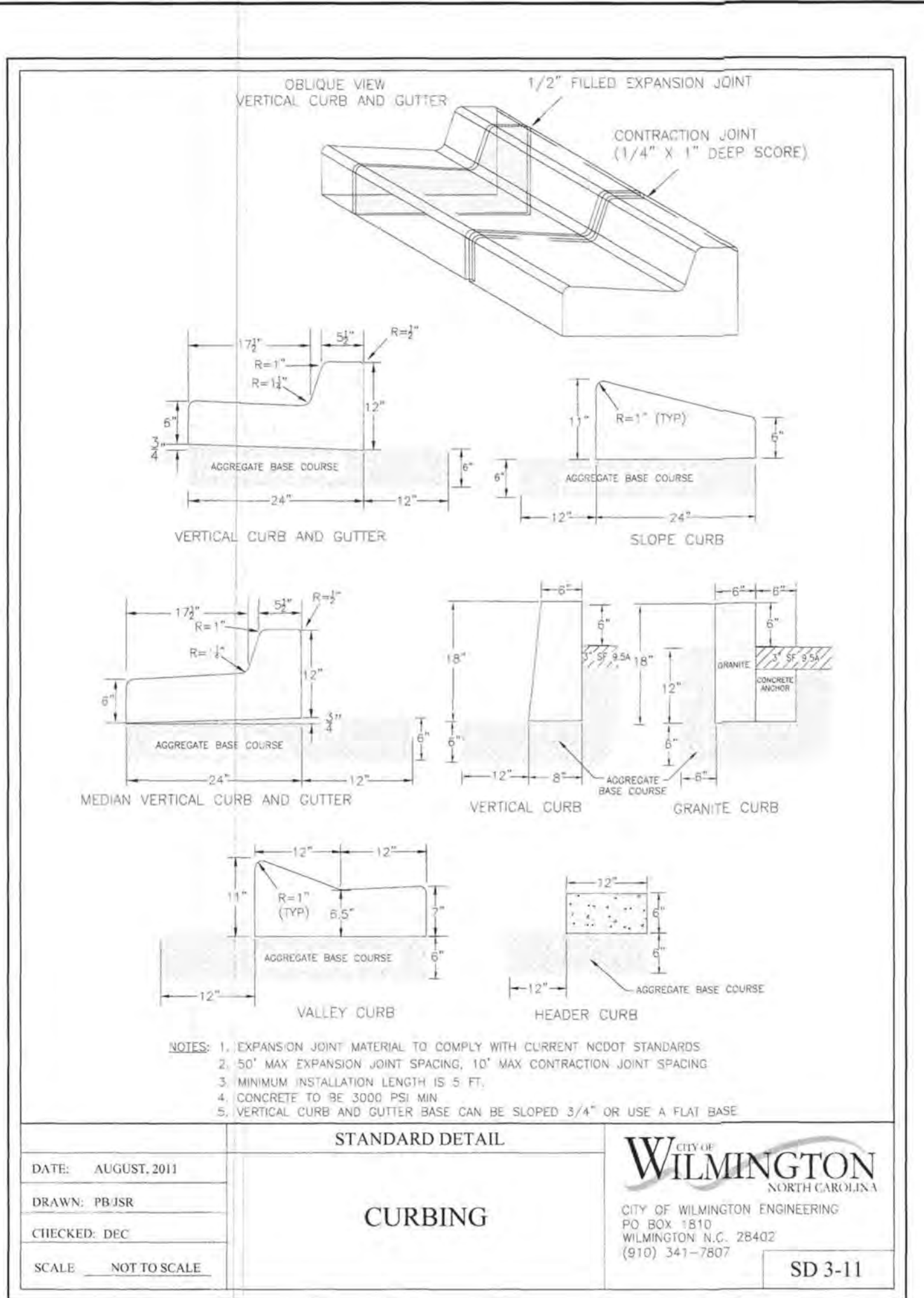
1. INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ON-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY.
2. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
3. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
4. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

SKIMMER NOTE:

SKIMMER MUST FLOAT ON TOP OF WATER TO WORK PROPERLY. CONTRACTOR SHALL VERIFY THAT THE BARREL LENGTH WILL ALLOW SKIMMER TO FLOAT AT EMERGENCY SPILLWAY ELEVATION.

4 ENERGY DISSIPATOR DETAIL

5 STANDARD SKIMMER DETAIL



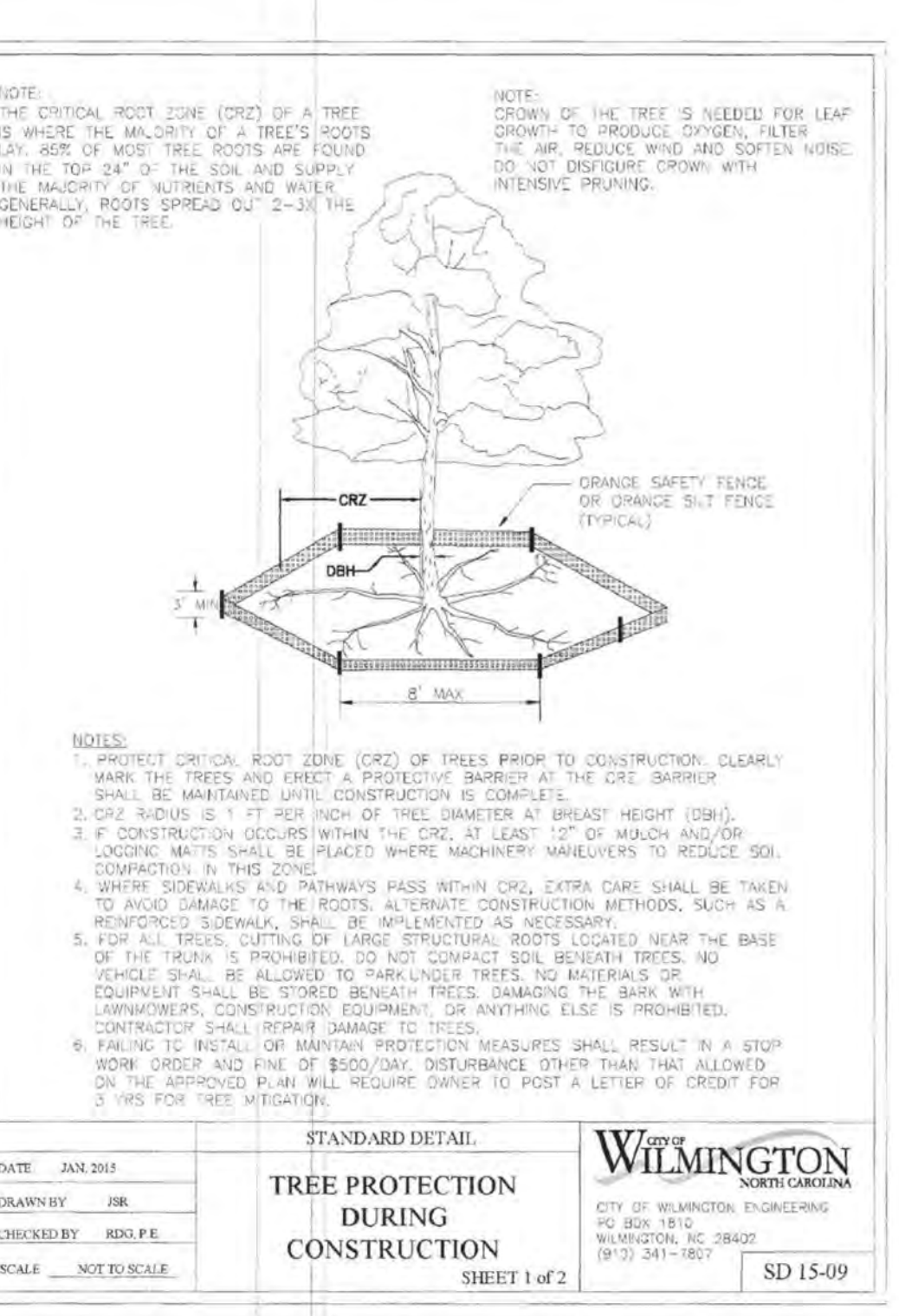
NOTES:

1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING.
3. MINIMUM INSTALLATION LENGTH IS 5 FT.
4. CONCRETE TO BE 3000 PSI MIN.
5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE.

DATE: AUGUST, 2011  
DRAWN: PB-JSR  
CHECKED: DEC  
SCALE: NOT TO SCALE

WILMINGTON  
CITY OF WILMINGTON ENGINEERING  
PO BOX 1810  
WILMINGTON, N.C. 28402  
(910) 341-1907

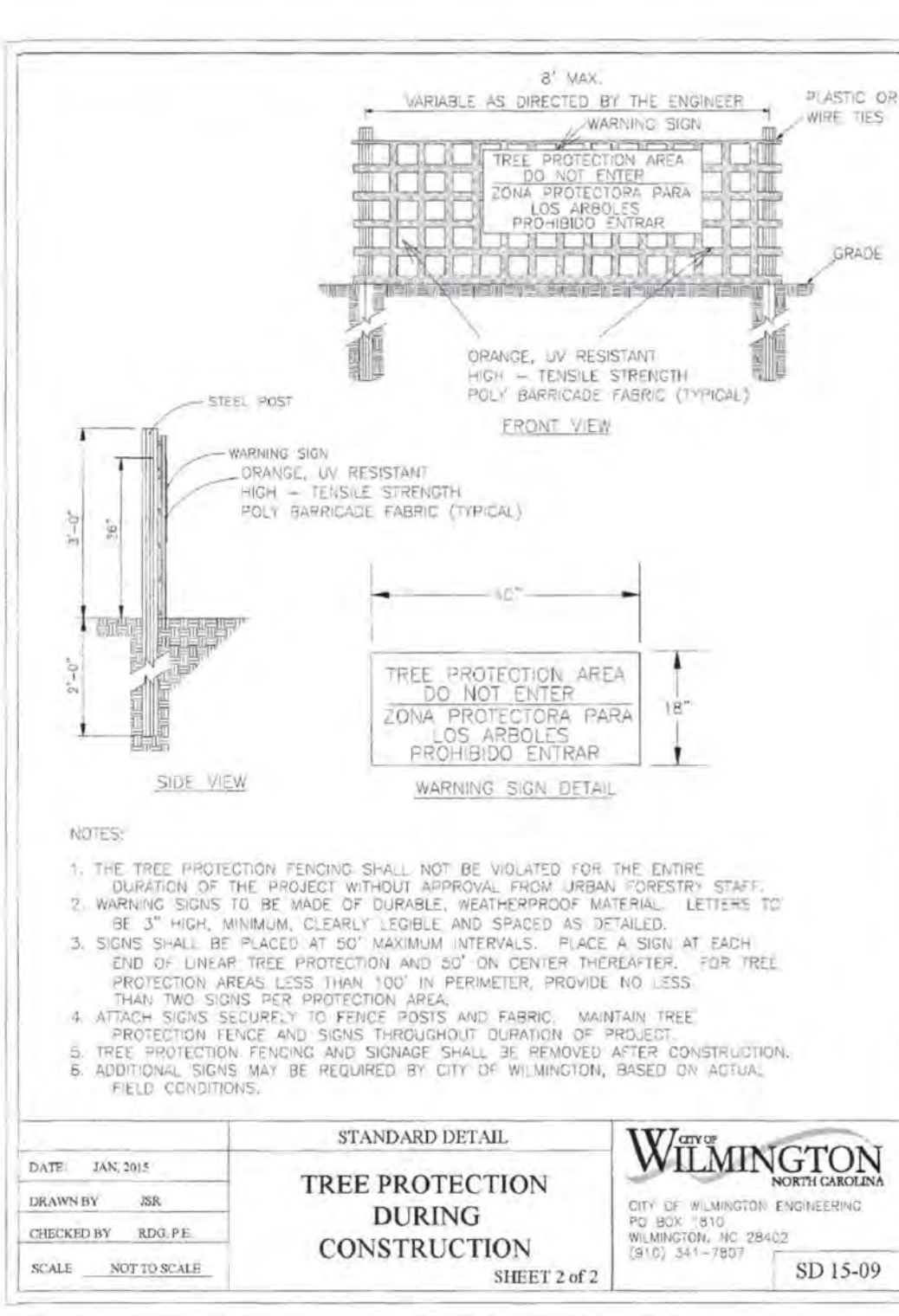
SD 3-11



DATE: JAN 2011  
DRAWN BY: JMR  
CHECKED BY: RDD/PE  
SCALE: NOT TO SCALE

WILMINGTON  
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PO BOX 1810  
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SD 15-09



DATE: JAN 2011  
DRAWN BY: JMR  
CHECKED BY: RDD/PE  
SCALE: NOT TO SCALE

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SD 15-09

### EROSION CONTROL NOTES AND MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF-INCH RAINFALL.
2. ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
3. SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND WATTLES, BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
5. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING, STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED, IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE, THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF-FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.
6. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED AND KEPT CLEAN WEEKLY.
7. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
8. LAND QUALITY REQUIREMENTS: ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED, ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN, TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 15 WORKING DAYS.
9. WATER QUALITY REQUIREMENTS: ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, ALL SLOPES STEEPER THAN 3' HORIZONTAL TO 1' VERTICAL (3:1) AND ALL HIGH QUALITY WATER (HOW) ZONES SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN SEVEN (7) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
10. FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECT SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.
11. BASIN OUTLET STRUCTURES AND SKIMMERS SHALL WITHDRAW WATER FROM THE SURFACE.
12. CONCRETE WASHOUTS SHOULD BE INSPECTED DAILY AND AFTER HEAVY RAINS. DAMAGES SHOULD BE REPAIRED PROMPTLY. IF FILLED TO OVER 75% CAPACITY WITH RAIN WATER IT SHOULD BE VACUUMED OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS. BEFORE HEAVY RAINS THE CONTAINERS LIQUID LEVEL SHOULD BE LOWERED OR THE CONTAINER COVERED TO AVOID AN OVER FLOW DURING RAIN. WHEN SOLIDS HAVE HARDENED THEY SHOULD BE REMOVED AND RECYCLED.

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APPROVED STORMWATER MANAGEMENT PLAN  
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Signed: \_\_\_\_\_

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19021  
DES. JUST  
CKD. TJC  
DRWN. NKS  
DATE 02/04/20

C4.2



GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

- EQUIPMENT AND VEHICLE MAINTENANCE
1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.

SECTION E: GROUND STABILIZATION

Table with 3 columns: Site Area Description, Stabilize within this many calendar days after ceasing land disturbance, and Timeframe variations.

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable...

GROUND STABILIZATION SPECIFICATION

- Temporary Stabilization
Permanent Stabilization
1. Temporary grass seed covered with straw or other mulches and tackifiers.
2. Hydroseeding.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- 1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.

PAINT AND OTHER LIQUID WASTE

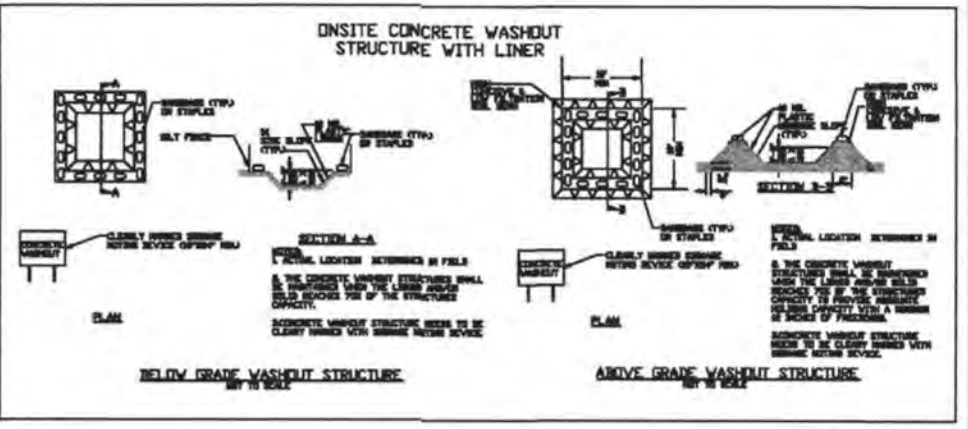
- 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.

PORTABLE TOILETS

- 1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high traffic areas.

EARTHEN STOCKPILE MANAGEMENT

- 1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.



CONCRETE WASHOUTS

- 1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle/strengthen, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.

HERBICIDES, PESTICIDES AND RODENTICIDES

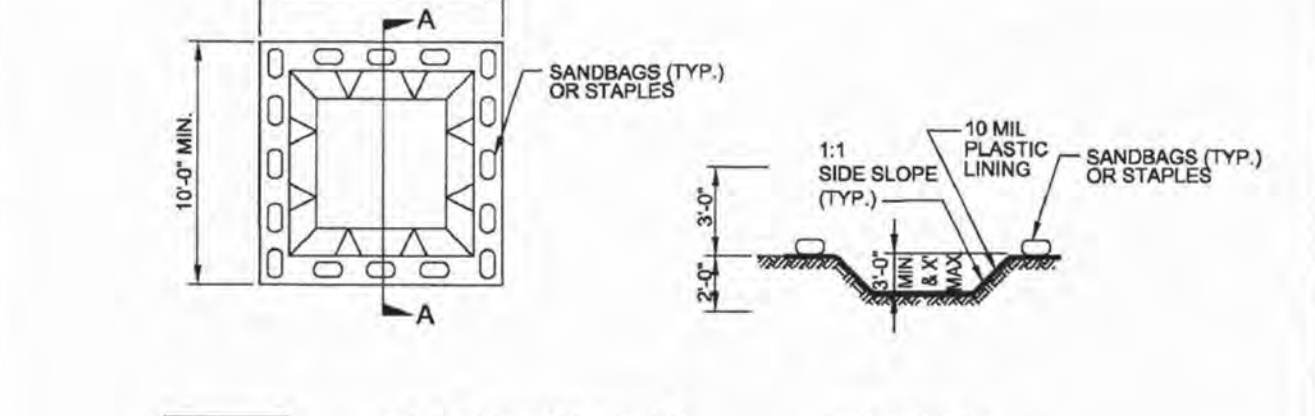
- 1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.

HAZARDOUS AND TOXIC WASTE

- 1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.

WITH LINER, NO GRAVEL APPROACH

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



SECTION A-A

SECTION B-B

SECTION A-A

SECTION B-B

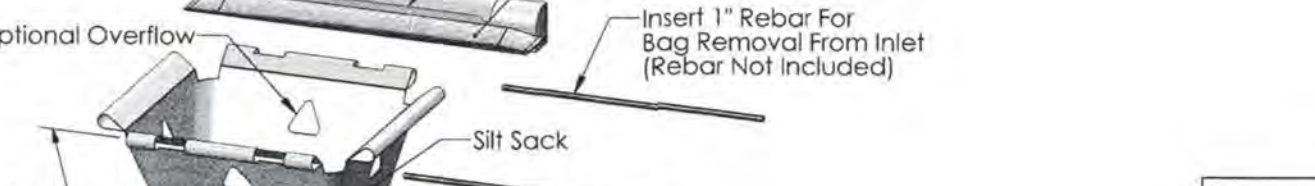
SECTION A-A

SECTION B-B



SILT SACK NOTES
1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE OPENING SIZE OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET.

SILT SACK NOTES



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# 2019065
SWP #: 2020023
PO, ES, BM, MB, CW

NC DENR PWSS WATER PERMIT #: \_\_\_\_\_
WATER CAPACITY: \_\_\_\_\_ GPD
DWQ SEWER PERMIT #: \_\_\_\_\_
SEWER CAPACITY: \_\_\_\_\_ GPD
SEWER SHED # AND PLANT: \_\_\_\_\_
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

PERMANENT SEEDING RECOMMENDATIONS FOR FALL AND EARLY SPRING

Table with 3 columns: SPECIES, RATE (lb/acre), (lb/1000 sq ft)

SEEDING NOTES

- 1. FROM SEPT. 1 THRU MAR. 1, USE UNSCARIFIED SERICEA SEED.
2. ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO 30 lbs/acre.

PERMANENT SEEDING RECOMMENDATIONS FOR LATE SPRING AND EARLY SUMMER

Table with 3 columns: SPECIES, RATE (lb/acre), (lb/1000 sq ft)

SEEDING NOTES

- 1. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA.
2. USE COMMON BERMOUDAGRASS ONLY ON ISOLATED SITES WHERE IT CANNOT BECOME A PEST. BERMOUDAGRASS MAY BE REPLACED WITH 5 lbs/acre CENTIPEDEGRASS.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

Table with 3 columns: SPECIES, RATE (lb/acre), (lb/1000 sq ft)

SEEDING NOTES

- 1. MOUNTAINS - AUG. 15 - DEC. 15
2. COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 15

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

Table with 3 columns: SPECIES, RATE (lb/acre), (lb/1000 sq ft)

SEEDING NOTES

- 1. IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 lb/acre.

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

Table with 3 columns: SPECIES, RATE (lb/acre), (lb/1000 sq ft)

SEEDING NOTES

- 1. OMIT ANNUAL LESPEDEZZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXCEED BEYOND JUNE.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below.

Table with 3 columns: Inspect, Frequency, Inspection records must include.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

The approved E&S plan as well as any approved deviation shall be kept on the site.

Table with 2 columns: Item to Document, Documentation Requirements.

2. Additional Documentation

- (a) This general permit as well as the certificate of coverage, after it is received.
(b) Records of inspections made during the previous 30 days.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
(b) Oil spills:
• They are 25 gallons or more,
• They are less than 25 gallons but cannot be cleaned up within 24 hours,

2. Reporting Timeframes and Other Requirements

- (a) Occurrence Reporting Timeframes (After Discovery) and Other Requirements
• Within 24 hours, an oral or electronic notification.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19

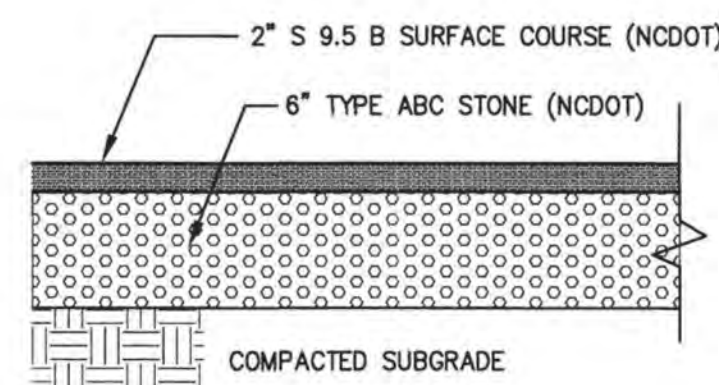
NOTES AND DETAILS
RENAISSANCE APARTMENTS
1025 ASHES DRIVE
WILMINGTON, N. C.

OWNER/DEVELOPER
HILSON WILMINGTON
DEVELOPMENT LLC
WILLIAM SCHEITTELKOTTE,
MANAGER
1051 MILITARY CUTOFF RD.,
SUITE 200
WILMINGTON, NC 28405
910-680-0063

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
2602 IRON GATE DR., SUITE 102
WILMINGTON, NC 28412
PHONE: (910) 343-9653
PHONE: (910) 287-5900

Licence #C-3641
19021
DES. JUST
CKO. TJC
DRWN.KNS
DATE 02/04/20

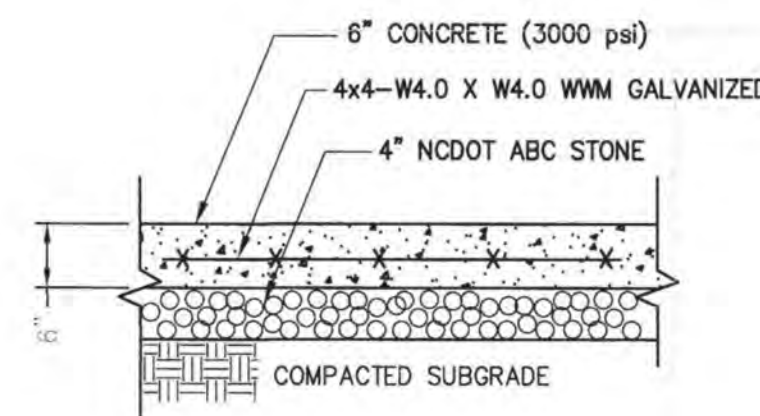
C4.3



NOTES:  
 1. PAVEMENT SECTIONS SHALL BE DETERMINED WITH CONSULTATION FROM THE GEOTECHNICAL ENGINEER AND ONLY PER THEIR RECOMMENDATIONS. PAVEMENT DETAIL SECTIONS SHOWN ARE MINIMUMS AND MAY BE STRENGTHENED PER GEOTECHNICAL ENGINEERS RECOMMENDATIONS.  
 2. REFERENCE GEOTECHNICAL REPORT FOR UNDERCUTTING IN AREAS OF PROPOSED PARKING AND DRIVE AREAS. CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE REQUIRED SUBGRADE UNDERCUTTING AND REPLACEMENT.

NOT TO SCALE

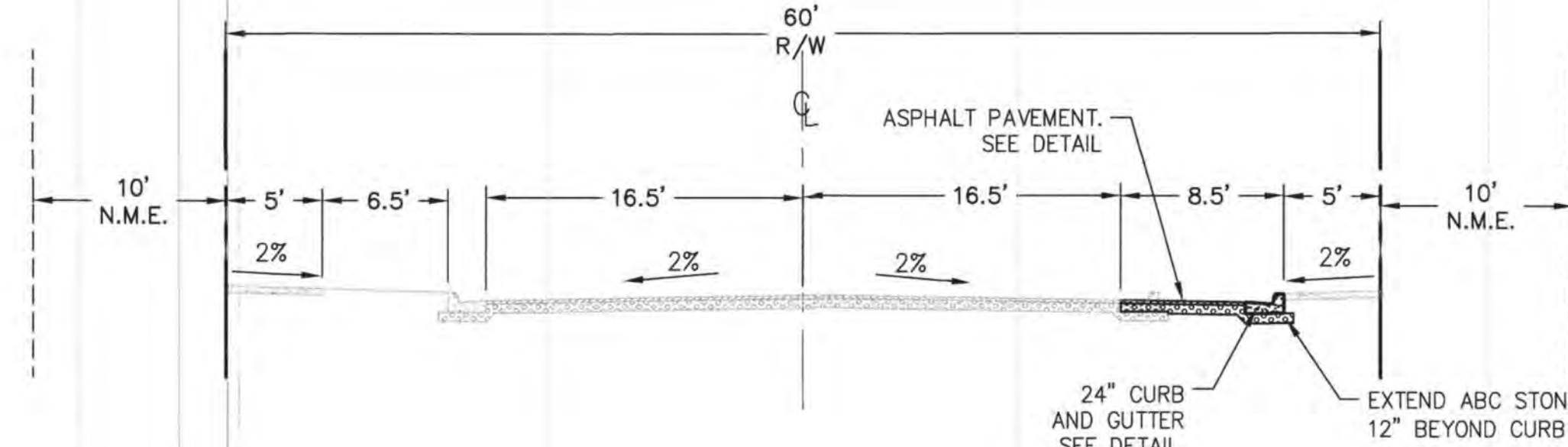
1 ASPHALT PAVEMENT SECTION



NOTES:  
 1. CONTROL JOINTS SHALL BE EVERY 15 FT. (MAX.) AND EXPANSION JOINTS SHALL BE EVERY 50 FT. (MAX).  
 2. REFERENCE GEOTECHNICAL REPORT FOR UNDERCUTTING IN AREAS OF PROPOSED PARKING AND DRIVE AREAS. CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE REQUIRED SUBGRADE UNDERCUTTING AND REPLACEMENT.

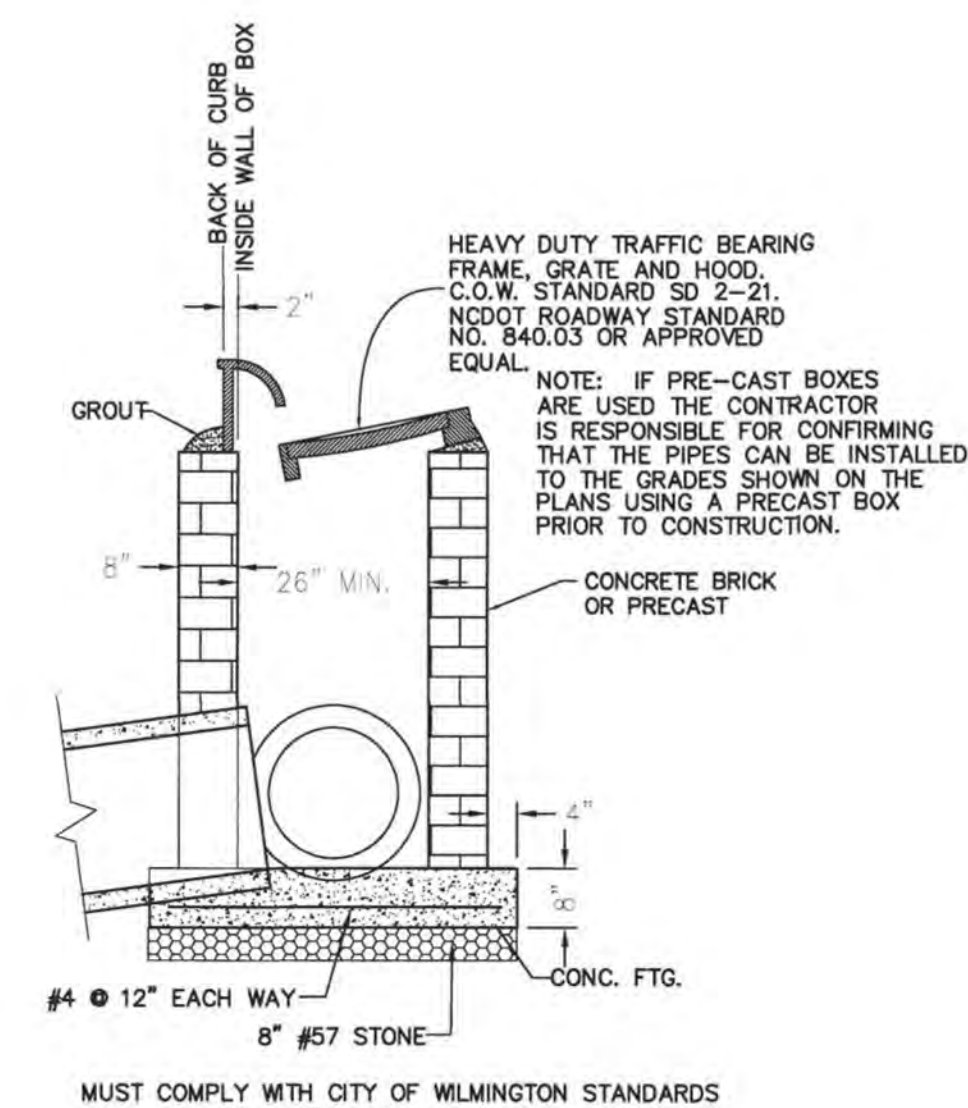
NOT TO SCALE

2 CONCRETE PAVEMENT SECTION



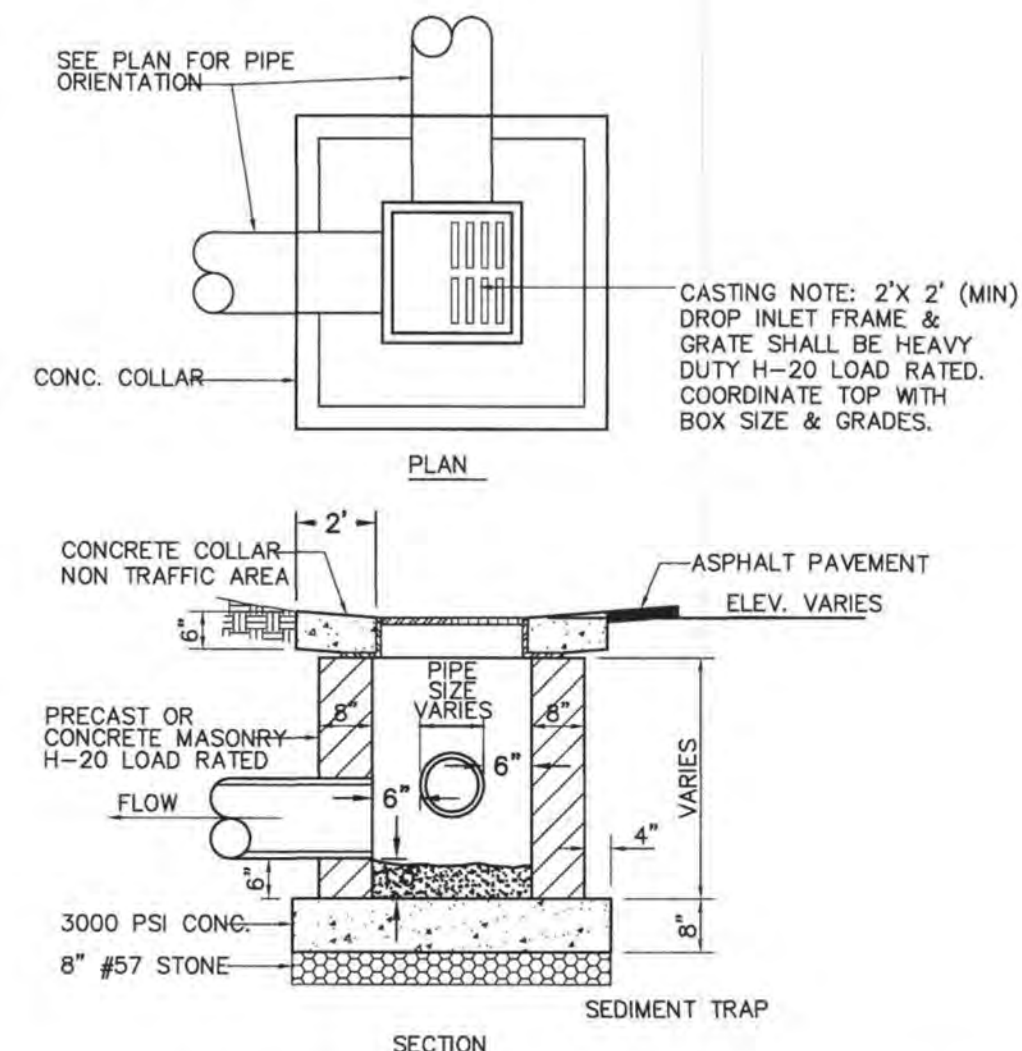
NOT TO SCALE

3 EXISTING ASHES DR. WITH ADDITIONAL PARALLEL PARKING SECTION A-A



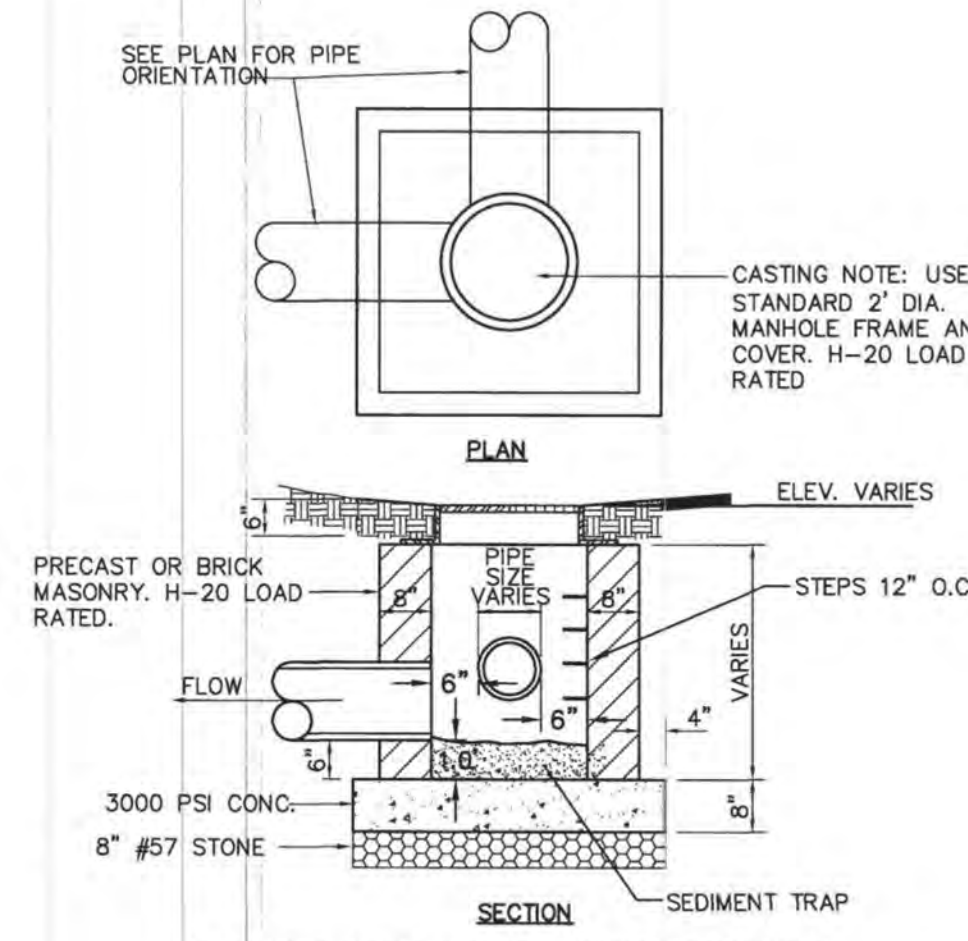
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4 TYPICAL CATCH BASIN



NOT TO SCALE

5 TYPICAL DROP INLET



NOT TO SCALE

6 TYPICAL JUNCTION BOX

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

**Approved Construction Plan**  
 Date: 7/16/20  
 # 2019065  
 SWP #: 2020023  
 PO, ES, BM, MB, CW

NCDENR PWSS WATER PERMIT #: \_\_\_\_\_  
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 SEWER SHED # AND PLANT: \_\_\_\_\_  
 SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

**SITE WORK NOTES:**

1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS.
2. CONTRACTOR SHALL COORDINATE WORK WITHIN NCDOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.
3. CLEARING AND GRUBBING: REMOVE ALL TREES AS REQUIRED UNLESS OTHERWISE NOTED TO REMAIN, STUMPS, ROOTS, SHRUBBERY, ASPHALT, CONCRETE, STRUCTURES, BURIED UTILITIES, STORAGE TANKS, ETC. WITHIN LIMITS OF CONSTRUCTION.
4. STRIPPING: BEFORE EXCAVATING OR FILLING, REMOVE ALL TOPSOIL, WOOD, LEAVES, AND ANY OTHER UNSUITABLE MATERIAL.
5. MUCKING: REMOVE ANY SOFT, ORGANIC SILT MATERIALS AND EXISTING BURIED CONSTRUCTION DEBRIS AS REQUIRED AND FILL TO SUBGRADE ELEVATIONS WITH A CLEAN SELECT-FILL COMPACTED AS SPECIFIED.
6. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR EXCAVATED SPOIL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.
7. BORROW MATERIAL: THE CONTRACTOR SHALL FURNISH BORROW MATERIAL REQUIRED FROM OFF SITE AND OBTAIN ALL REQUIRED PERMITS ASSOCIATED WITH BORROW OPERATIONS.
8. FILL AND COMPACTION: AFTER STRIPPING THOSE AREAS DESIGNATED TO RECEIVE FILL SHOULD BE PROOFROLLED. THE TOP 8" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. ANY AREA WHICH PUMPS OR RUTS EXCESSIVELY SHOULD BE UNDERCUT AND REPLACED WITH A CLEAN, SILTY OR CLAYEY SAND HAVING A UNIFIED SOIL CLASSIFICATION OF SP, SM, OR SC. FILL MATERIAL 6" OUTSIDE OF BUILDING AREAS SHALL THEN BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED IN 6 INCH LAYERS TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IN AREAS WHERE NO STRUCTURAL FILL IS TO BE PLACED THE UPPER 12 INCHES OF IN-PLACE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IF THE MATERIAL IS TOO DRY TO COMPACT TO THE REQUIRED DENSITY EACH LAYER SHALL BE WETTED IN ACCORDANCE WITH COMPACTION REQUIREMENTS. IF THE MATERIAL IS TOO WET TO SECURE PROPER COMPACTION, IT SHALL BE HARROWED REPEATEDLY OR OTHERWISE AERATED WITH SUITABLE EQUIPMENT UNTIL OPTIMUM MOISTURE CONTENT IS OBTAINED. FILL SHALL BE PLACED IN SUCH A MANNER THAT THE SURFACE WILL DRAIN READILY AT ALL TIMES. SEE STRUCTURAL NOTES AND SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
9. LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.
11. EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY MICHAEL UNDERWOOD AND ASSOCIATES, P.A.
12. THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.
14. ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.
15. WATER AND SEWER SERVICES SHALL BE INSTALLED TO MEET LOCAL AND STATE PLUMBING CODES. METER AND TAPS SHALL MEET ALL LOCAL REQUIREMENTS.
16. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.
17. SEE SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
18. CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY. PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.
19. REINF. CONC. PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAM NECK". INSTALL PER MANUFACTURER'S REQUIREMENTS.
20. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON-BLEEDING.
21. REFER TO THE PLUMBING DRAWINGS FOR LOCATION AND INVERTS OF NEW WASTE, WATER AND ROOF DRAIN LINES.

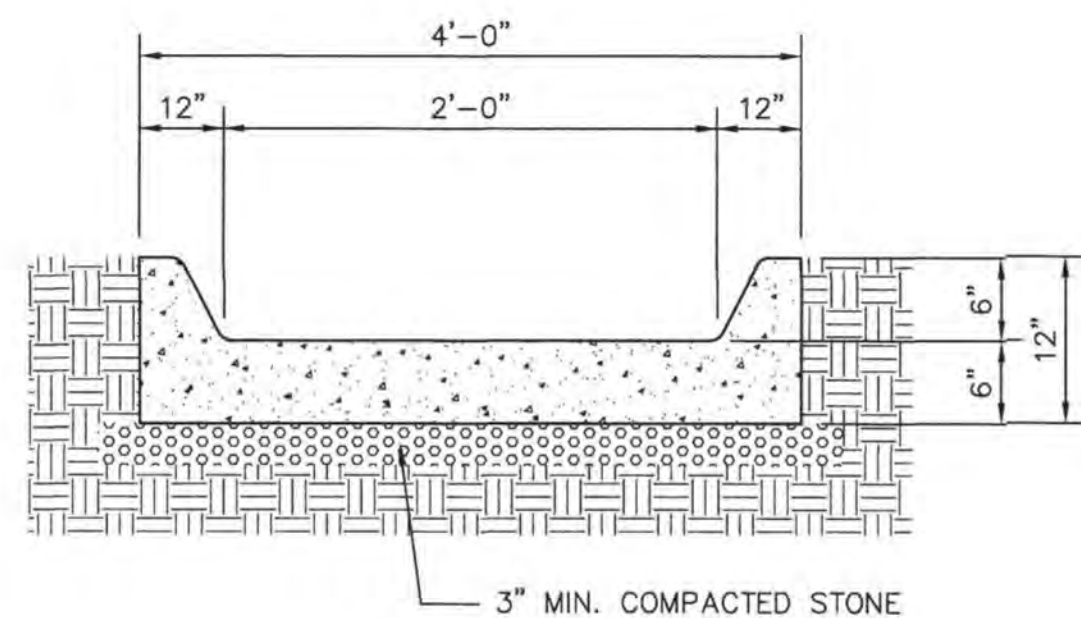
**OWNER/DEVELOPER**  
 HUDSON WILMINGTON  
 DEVELOPMENT, LLC  
 WILLIAM SCHOETTELKOTTE,  
 MANAGER  
 1051 MILITARY CUTOFF RD.,  
 SUITE 200  
 WILMINGTON, NC 28405  
 PHONE: (910) 860-0063

**NORRIS & TUNSTALL**  
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 2602 IRON GATE DR., SUITE 102  
 WILMINGTON, NC 28412  
 PHONE: (910) 343-9653

License #C-3641  
**19021**  
 DES. JST  
 CKD. TJC  
 DRWN. JKS  
 DATE 4/14/20

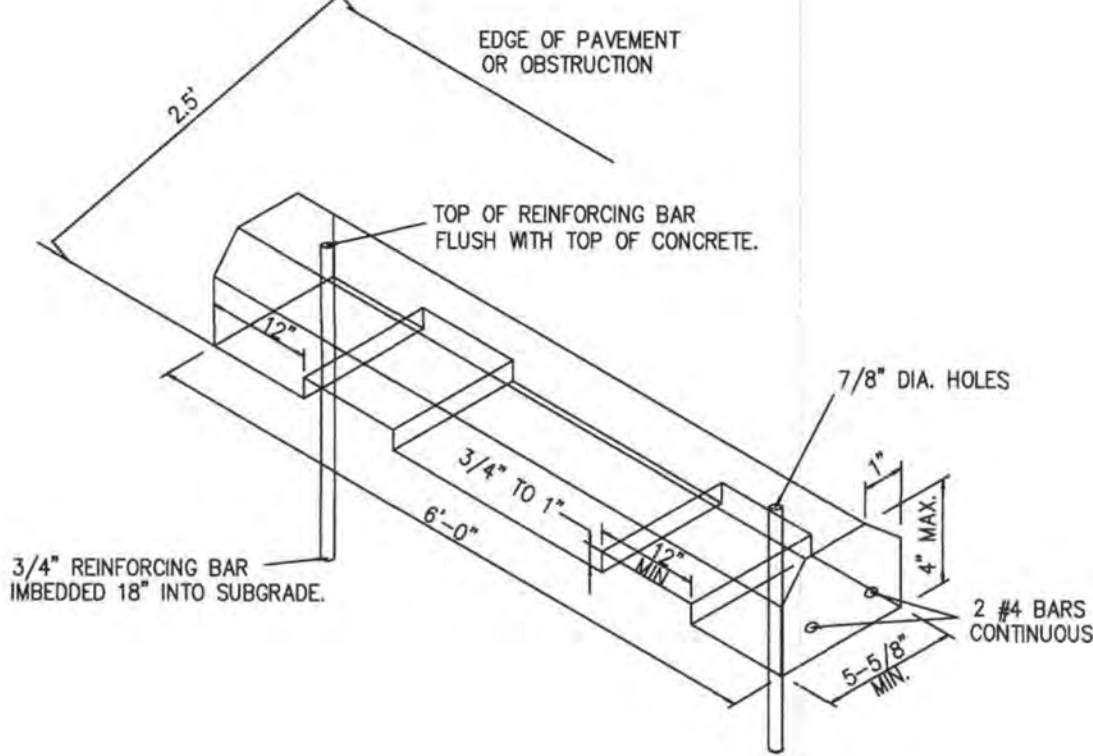


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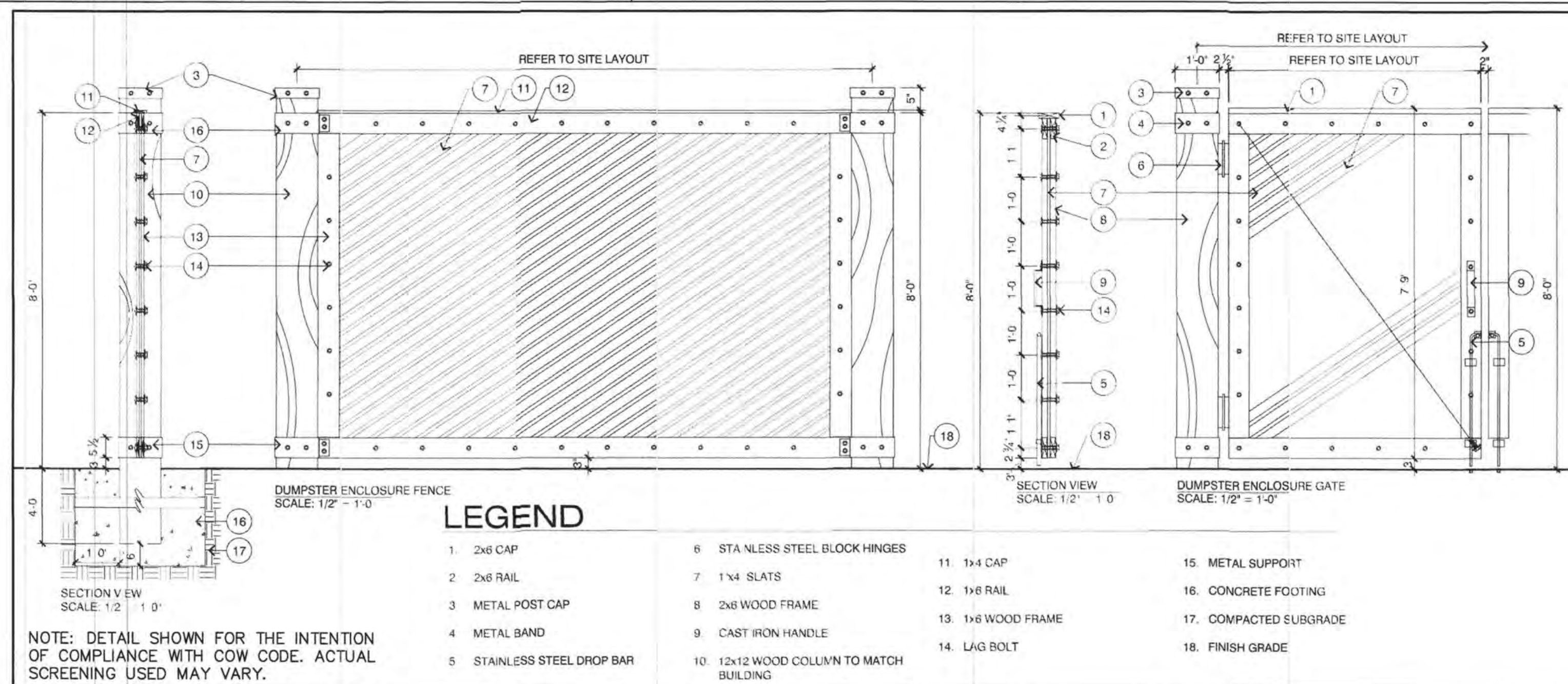
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7 CONCRETE FLUME SECTION



NOT TO SCALE

8 CONCRETE WHEEL STOPS



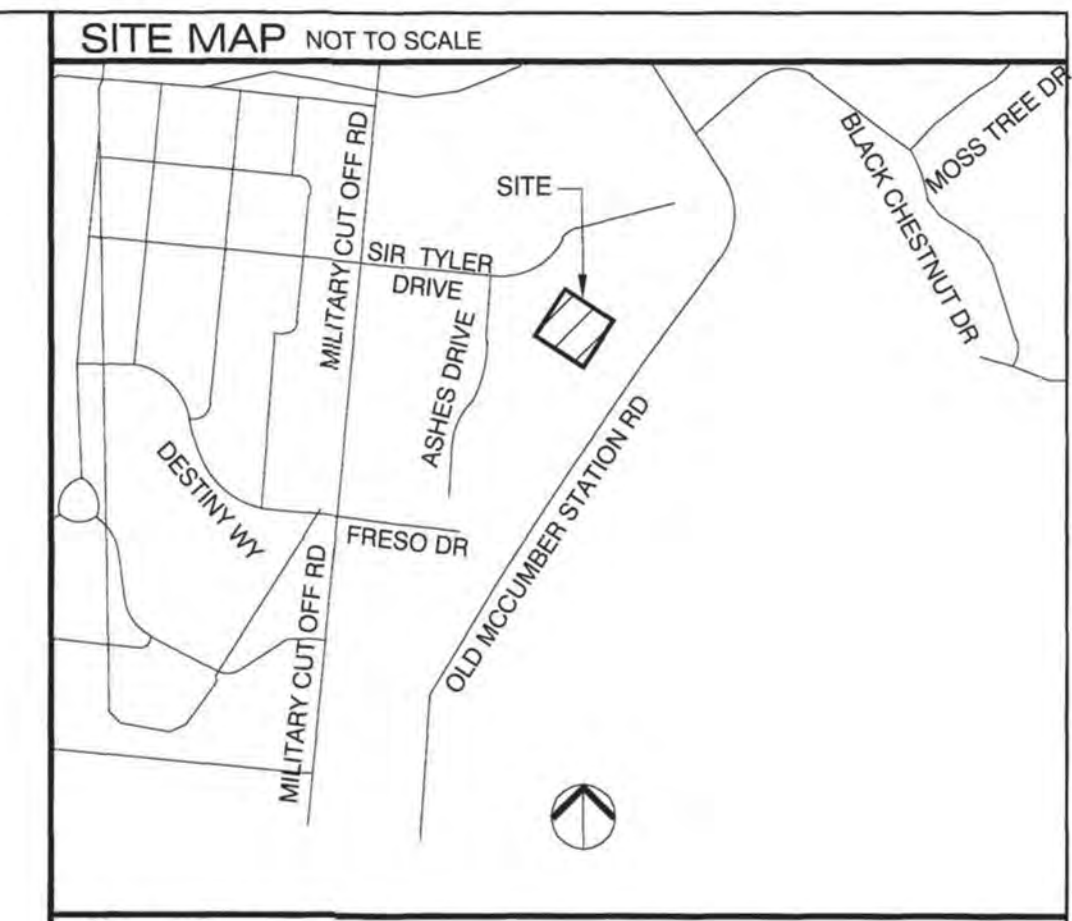
NOTE: DETAIL SHOWN FOR THE INTENTION OF COMPLIANCE WITH COW CODE. ACTUAL SCREENING USED MAY VARY.

**LEGEND**

1. 2x6 CAP	6. STAINLESS STEEL BLOCK HINGES	11. 1x4 CAP
2. 2x6 RAIL	7. 1x4 SLATS	12. 1x6 RAIL
3. METAL POST CAP	8. 2x6 WOOD FRAME	13. 1x6 WOOD FRAME
4. METAL BAND	9. CAST IRON HANDLE	14. LAG BOLT
5. STAINLESS STEEL DROP BAR	10. 12x12 WOOD COLUMN TO MATCH BUILDING	15. METAL SUPPORT
		16. CONCRETE FOOTING
		17. COMPACTED SUBGRADE
		18. FINISH GRADE

9 TYPICAL DUMPSTER SCREENING DETAIL

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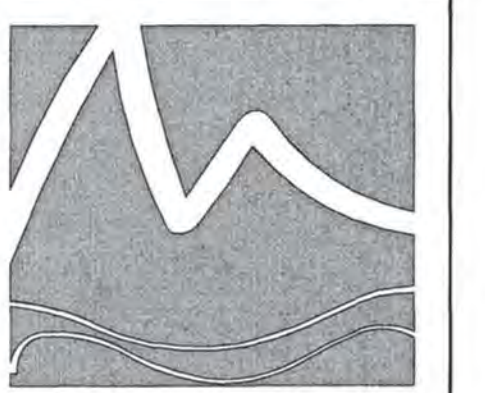


**SITE DATA**

PARCEL ID	R05100-003-065-000
CURRENT OWNER:	HUDSON WILMINGTON DEVELOPMENT LLC
TOTAL SITE AREA	8.80 AC (383,328 SF)
EXISTING ZONING	O&I-1
PROPOSED ZONING	CDMU-MIXED USE
EXISTING LAND USE	VACANT
PROPOSED LAND USE	198 APARTMENTS
PROPOSED BUILDING HEIGHT	2,530 SF COMMERCIAL 46'-11"

**LANDSCAPE CALCULATIONS**

	REQUIRED	PROVIDED
<b>PARKING LOT CANOPY COVERAGE</b> (100,447 SF X 20%)	20,089 SF, 28 TREES	37 LARGE TREES, (707 SF X 37 = 37,159 SF)
<b>STREET YARD PLANTING</b> PRIMARY STREET/YARD ASHES DRIVE	9,558 SF (531 LF X 18) TREES REQUIRED: 16 (1,600 SF) SHRUBS REQUIRED: 96 (6,900 SF)	13,711 SF 13 PROPOSED CANOPY TREES 9 UNDERSTORY TREES 385 PROPOSED SHRUBS
<b>FOUNDATION PLANTING</b> 12% FACADE AREA (ADJ. TO PARKING/DRIVE AISLE)		
BUILDING A		
NORTH	1,306 SF (232 LF X 46'-11" HT X 12)	1,307 SF
SOUTH	1,306 SF (232 LF X 46'-11" HT X 12)	1,306 SF
WEST	1,661 SF (295 LF X 46'-11" HT X 12)	1,661 SF
EAST	1,661 SF (295 LF X 46'-11" HT X 12)	1,628 SF
BUILDING B		
NORTH	383 SF (68 LF X 46'-11" HT X 12)	499 SF
SOUTH	383 SF (68 LF X 46'-11" HT X 12)	543 SF
WEST	1,300 SF (231 LF X 46'-11" HT X 12)	1,381 SF
EAST	1,300 SF (231 LF X 46'-11" HT X 12)	1,332 SF
<b>TREE REQUIREMENTS PER DISTURBED ACRE</b> 15 TREES PER DISTURBED ACRE MUST BE RETAINED OR PLANTED ON SITE.	REQUIRED: 5.42 ACRES DISTURBED X 15 TREES = 81 TREES REQUIRED	PROVIDED: 90 TREES PLANTED - REFER TO PLANTING LEGEND TOTAL: 90 TREES PROVIDED



**MIHALY**  
LAND DESIGN  
PLANNING + LANDSCAPE ARCHITECTURE  
330 MILITARY CUTOFF RD., Suite # A3  
Wilmington, NC 28405 910.392.4355

**Revisions**  
2020-03-19: REVISED PER COW COMMENTS

**CLIENT**  
**HUDSON WILMINGTON DEVELOPMENT, LLC**  
1051 MILITARY CUTOFF ROAD, SUITE 200  
WILMINGTON, NC

**PROJECT**  
**RENAISSANCE APARTMENTS**  
ASHES DRIVE  
WILMINGTON, NC  
LANDSCAPE PACKAGE

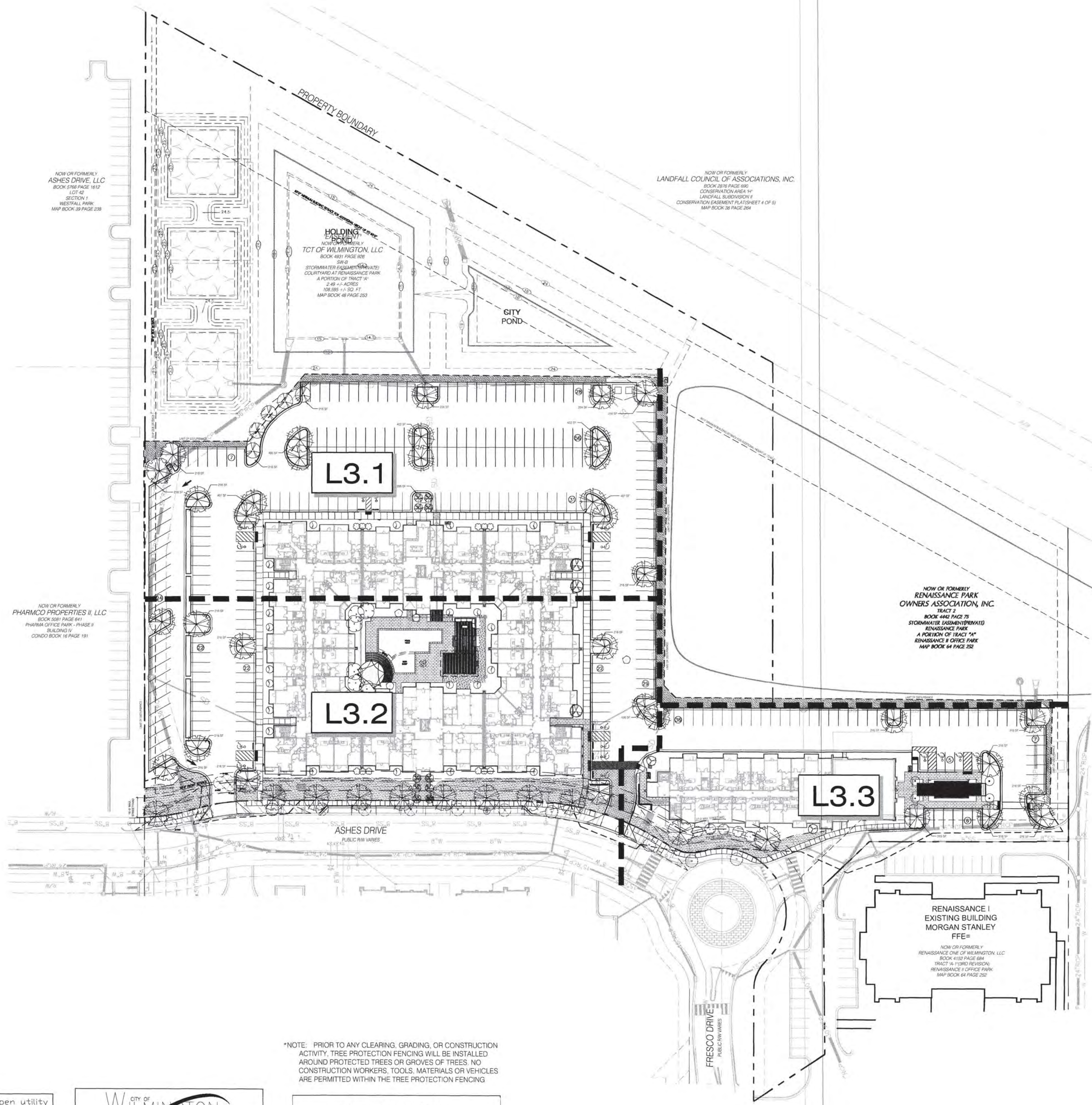
**PERMIT DRAWINGS**

Date: 2020-02-28  
Phase:  
Job Number: 400-20

Designed by: MLD  
Drawn by: MAS  
Checked by: JWM

Sheet Title:  
OVERALL PLANTING PLAN

Sheet Number:  
**L3.0**  
of 4 sheets

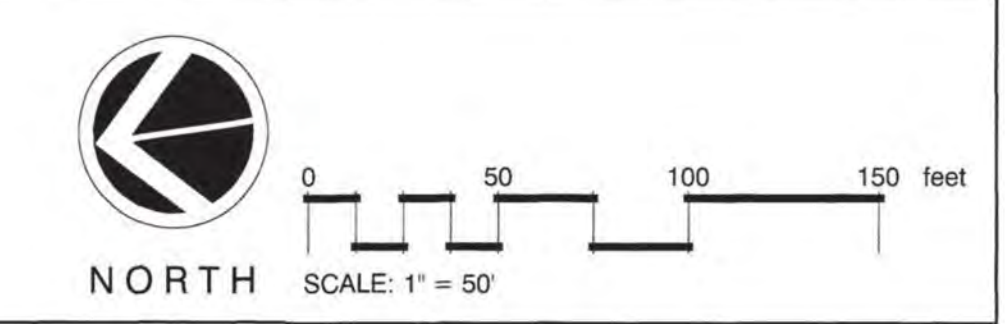
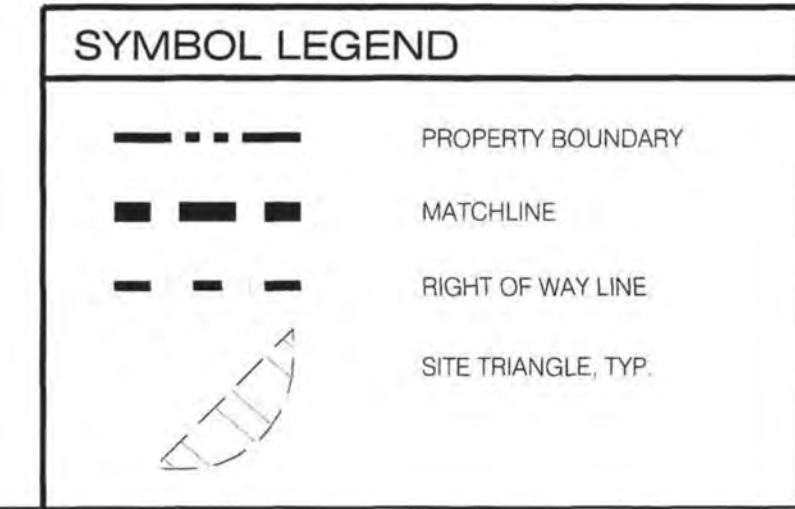


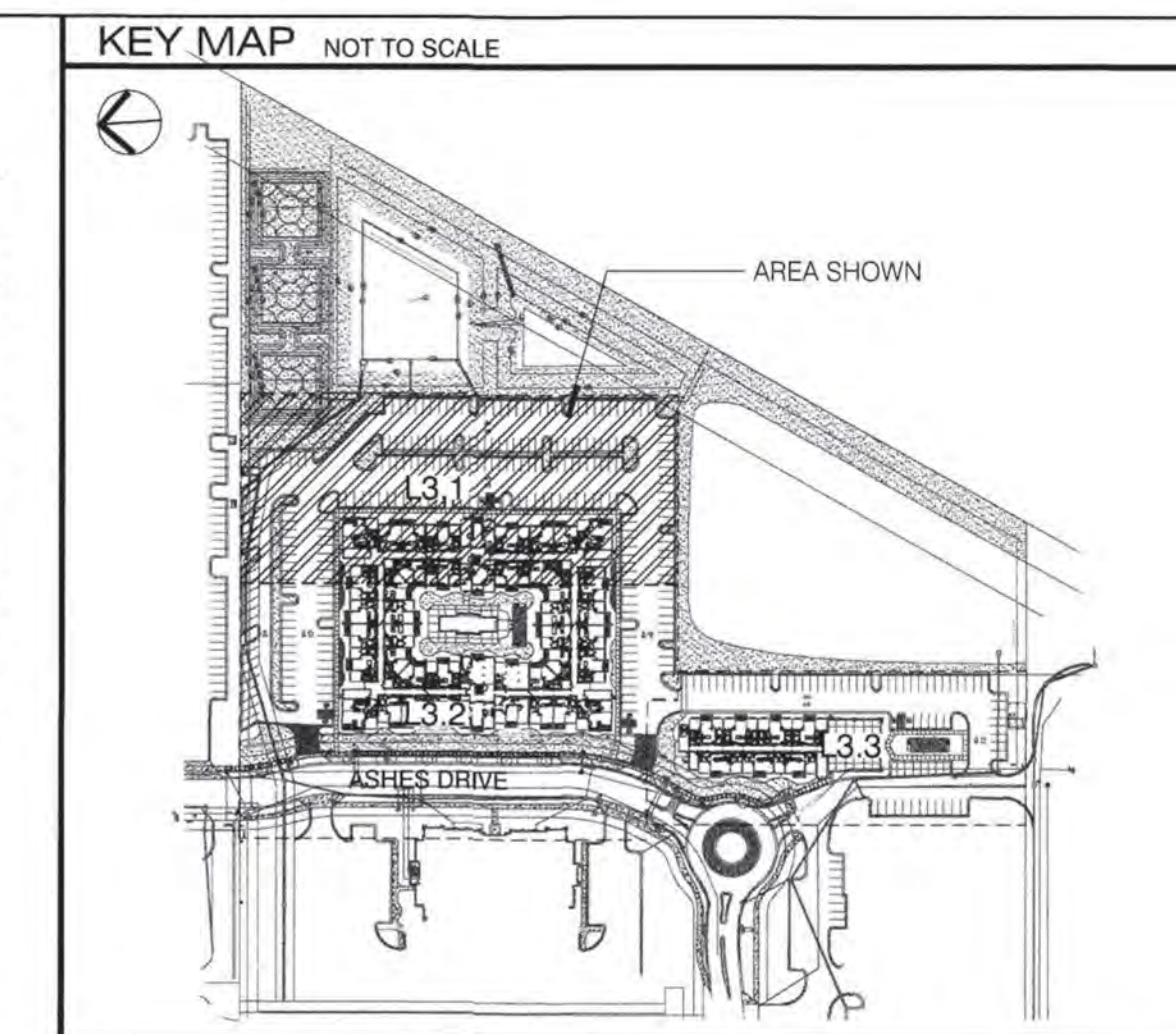
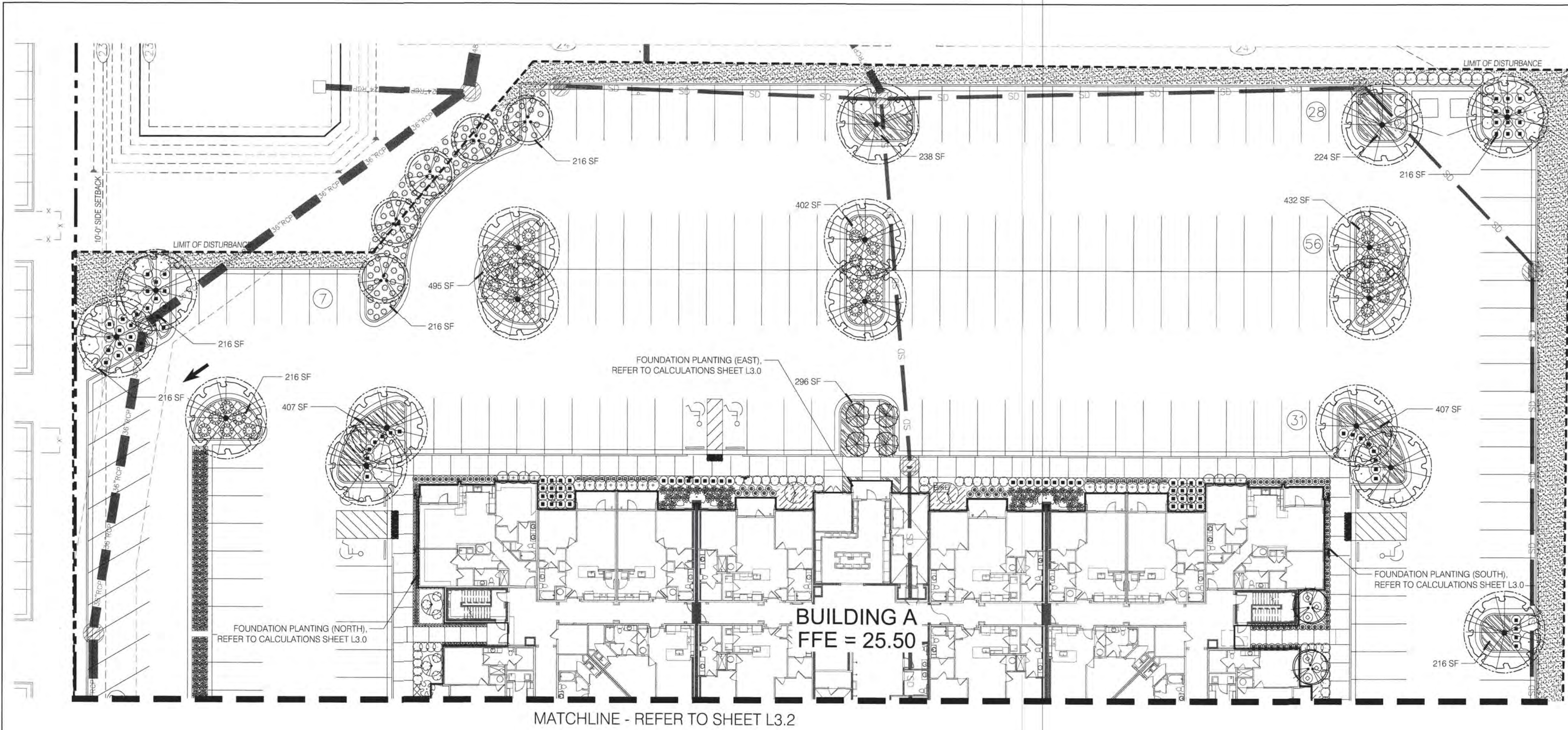
\*NOTE: PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

**Approved Construction Plan**  
Date: 7/16/20  
# 2019065  
SWP #: 2020023  
PO, ES, BM, MB, CW

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services Engineering Division  
**APPROVED STORMWATER MANAGEMENT PLAN**  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_





**MIHALY**  
LAND DESIGN  
PLANNING + LANDSCAPE ARCHITECTURE  
330 MILITARY CUTOFF RD., SUITE A3  
WILMINGTON, NC 28405 910.392.4355

Revisions  
2020-03-19: REVISED PER COV COMMENTS

CLIENT  
**HUDSON WILMINGTON DEVELOPMENT, LLC**  
1051 MILITARY CUTOFF ROAD, SUITE 200  
WILMINGTON, NC

PROJECT  
**RENAISSANCE APARTMENTS**  
ASHES DRIVE  
WILMINGTON, NC  
LANDSCAPE PACKAGE

PERMIT  
DRAWINGS

Date: 2020-02-28  
Phase:  
Job Number: 400-20  
Designed by: MLD  
Drawn by: MAS  
Checked by: JWM  
Sheet Title:  
PLANTING PLAN

Sheet Number:  
**L3.1**  
of 4 sheets

**PLANT\_SCHEDULE\_L3.1**

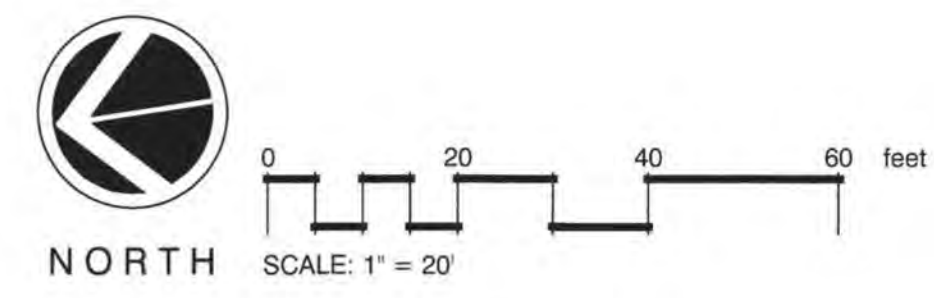
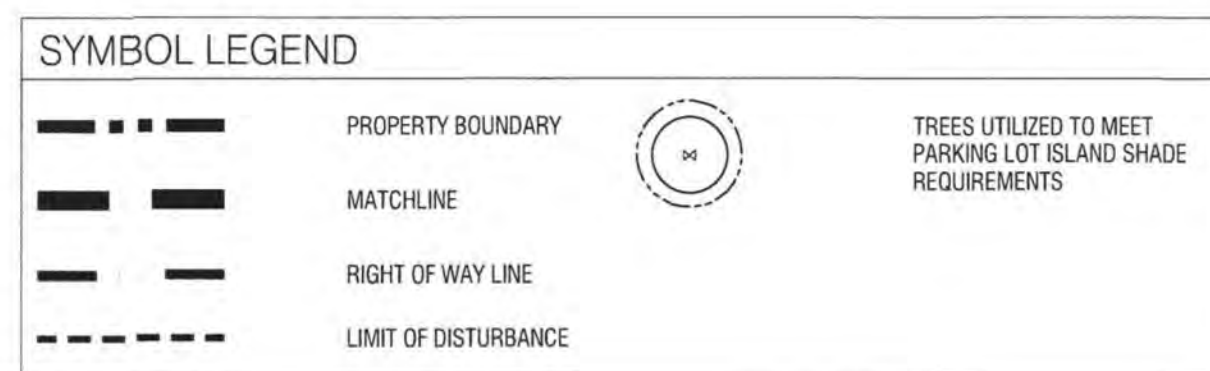
TREES	BOTANICAL / COMMON NAME	CONT	CAL	RANGE	MIN. REQ. SIZE	QTY
	Betula nigra / River Birch "Duraheat"	B & B	3" CAL		2-2.5" CAL.	5
	Lagerstroemia l. "Muskogee" / Muskogee Crape Myrtle SINGLE STEM	B&B	3" CAL		2-2.5" CAL.	4
	Quercus virginiana / Southern Live Oak	B & B	4" CAL		2-2.5" CAL.	17
	Vitex agnus-castus "Shoal Creek" / Chaste Tree	25 GAL		7-8' HT		2
SHRUBS	BOTANICAL / COMMON NAME	SIZE	RANGE	MIN. REQ. SIZE	QTY	
	Aspidistra elatior / Cast Iron Plant	1 gal	15-18" HT	12" HT	118	
	Buxus m. "Wintergreen" / 7 gal. Boxwood	7 gal	18-24" HT	12" HT	37	
	Dryopteris erythrosora / Autumn Fern	3 gal	15-18" HT	12" HT	15	
	Fatsia japonica / Japanese Fatsia	7 gal	24-30" HT	12" HT	1	
	Gardenia jasminoides "Radicans" / Gardenia	3 gal	12-18" HT	12" HT	28	
	Hydrangea m. "Nikko Blue" / Nikko Blue Hydrangea	3 gal	18-24" HT	12" HT	6	
	Hydrangea paniculata "Little Lime" / Little Lime Hydrangea	3 gal	18-24" HT	12" HT	6	
	Ilex vomitoria / Tree Form Yaupon Holly	B&B	7-8' HT		6	
	Ilex vomitoria "Nana" / Dwarf Yaupon	3 gal	15-18" HT	12" HT	105	
	Ligustrum j. "Recurvifolium" / Wax leaf Ligustrum	7 gal	36" HT	3' HT	36" HT MIN.	16
	Ligustrum japonicum / Tree Form Ligustrum	B&B	8' HT		6	
	Muhlenbergia capillaris / Pink Muhly	3 gal	18-24" HT	12" HT	102	

	Nandina domestica "Harbour Dwarf" / Dwarf Heavenly Bamboo	3 gal	12-18" HT	12" HT		90
	Panicum virgatum / Switch Grass	3 gal	24-30" HT	12" HT		121
	Podocarpus macrophyllus maki / Strubby Yew	7 gal	3-4' HT	12" HT		24
	Sabal minor / Dwarf Palmetto	3 gal	18-24" HT	12" HT		29
	Viburnum odoratissimum / Sweet Viburnum	15 gal	36"-48" HT	12" HT		24
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Liriope gigantea / Giant Liriope	1 GAL	12-18" HT	24" o.c.	272	
	Ruellia brittoniana / Mexican Petunia	3 gal	15-24" HT	24" o.c.	46	
	Trachelospermum a. "Asiatic" / Asiatic Jasmine	1 qt	6-12" HT	12" o.c.	1,206	
SOD/SEED	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Zoysia japonica "Crowne" / Korean Grass	sod				

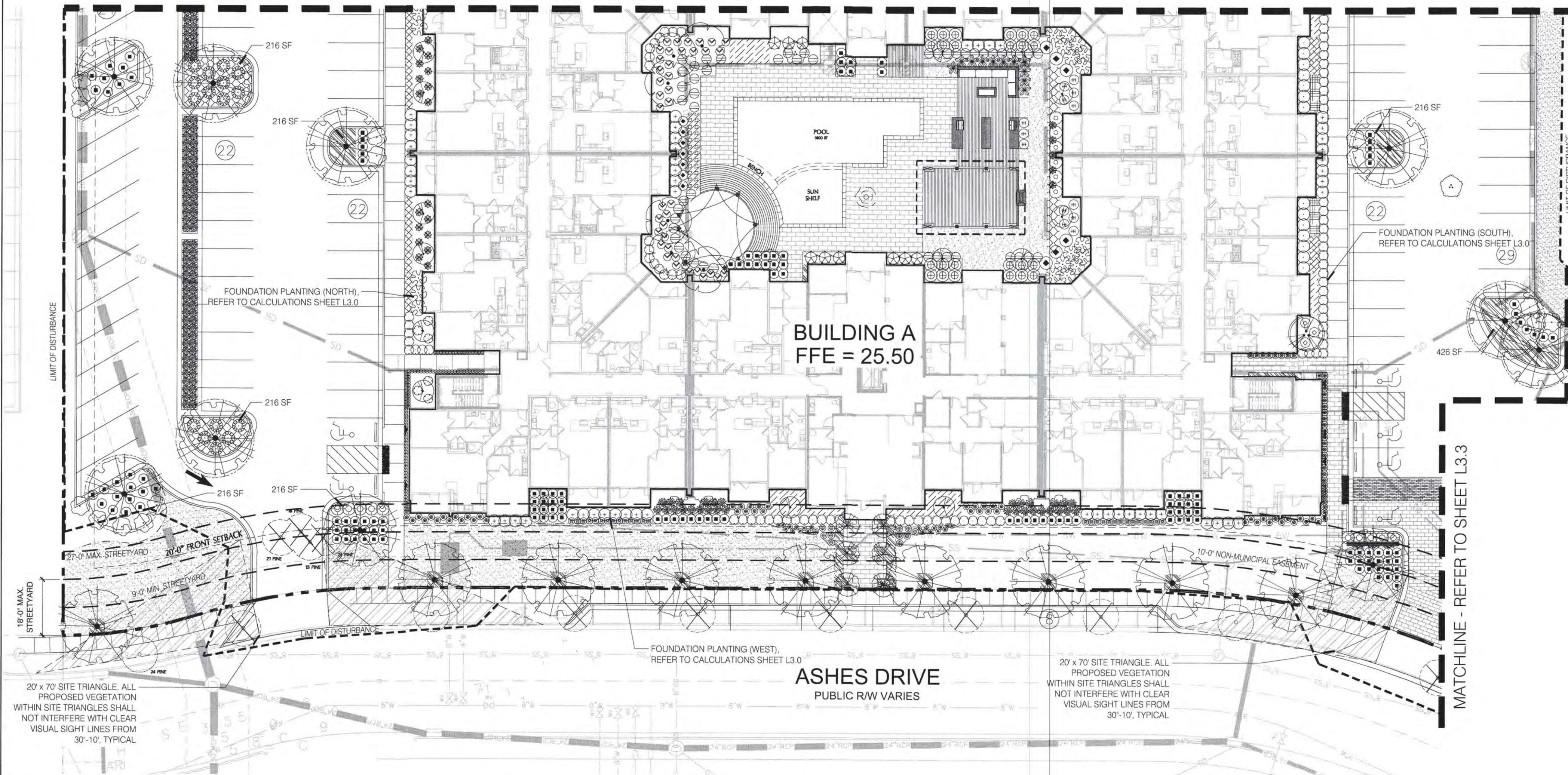
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NORTH CAROLINA  
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APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

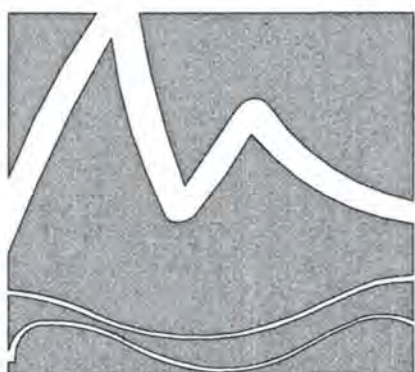
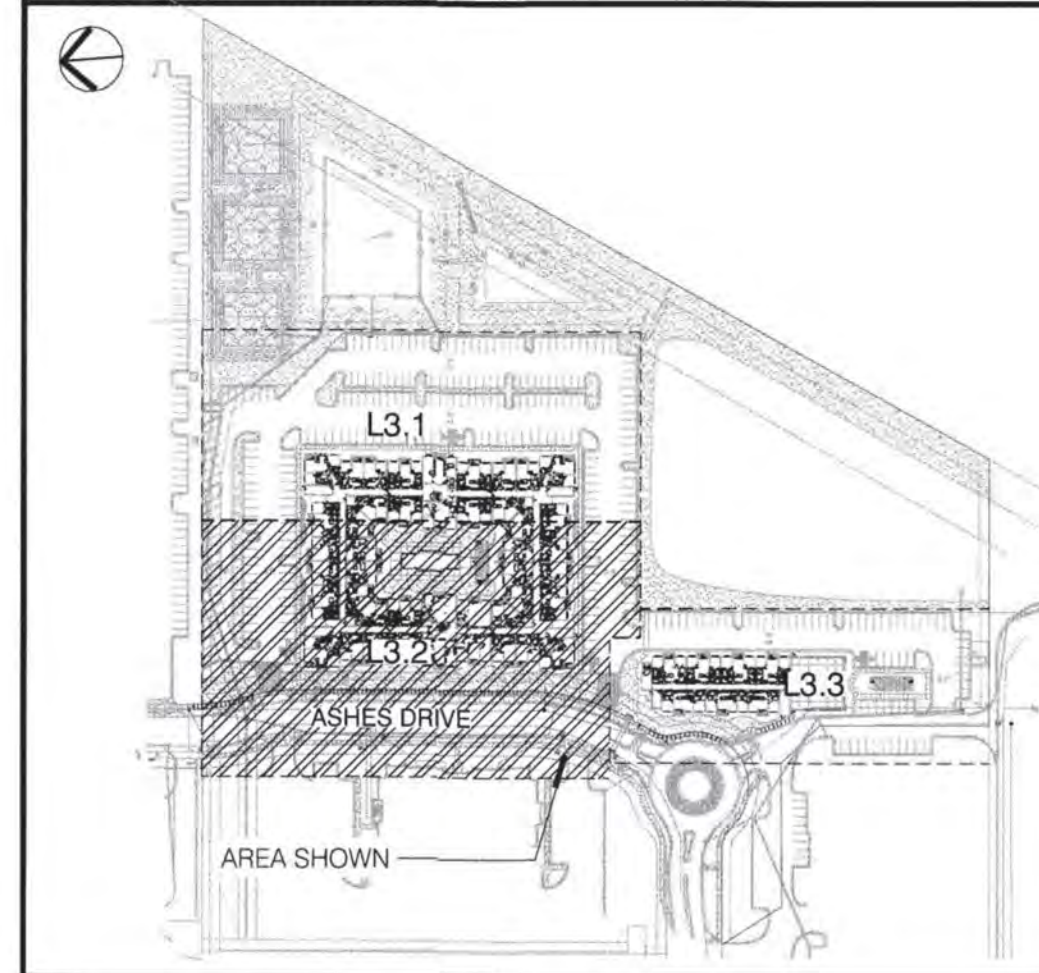
**Approved Construction Plan**  
Date: 7/16/20  
# 2019065  
SWP #: 2020023  
PO, ES, BM, MB, CW



MATCHLINE - REFER TO SHEET L3.1



KEY MAP NOT TO SCALE



**MIHALY**  
LAND DESIGN  
PLANNING + LANDSCAPE ARCHITECTURE  
330 MILITARY CUTOFF RD., SUITE A3  
WILMINGTON, NC 28405 910.392.4355



Revisions

**PLANT SCHEDULE L3.2**

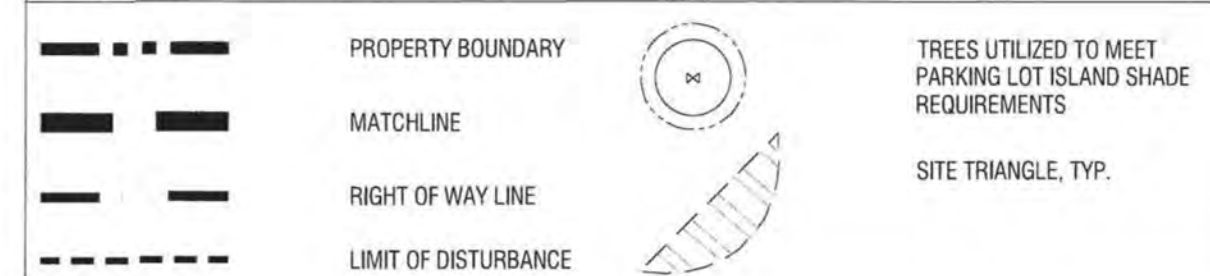
TREES	BOTANICAL / COMMON NAME	CONT	CAL	RANGE	MIN. REQ. SIZE	QTY
	Betula capitata / Pindo Palm 5' CLEAR TRUNK	B & B		8-10' HT		6
	Lagerstroemia l. 'Muskegee' / Muskegee Crape Myrtle SINGLE STEM	B&B	3" CAL		2-2.5' CAL.	6
	Lagerstroemia l. 'Pink Velour' / Pink Velour Crape Myrtle	25 GAL	1-1.5" CAL	6-7' HT.		4
	Quercus virginiana / Southern Live Oak	B & B	4" CAL		2-2.5' CAL.	19
	Vitex agrus-castus / Shoal Creek / Chaste Tree	25 GAL		7-8' HT		1
SHRUBS	BOTANICAL / COMMON NAME	SIZE	RANGE	MIN. REQ. SIZE	QTY	
	Aspidistra elatior / Cast Iron Plant	1 gal	15-18" HT	12" HT	91	
	Buddleja davidii / Blue Chip / Dwarf Butterfly Bush	3 gal	12-18" HT	12" HT	12	
	Buxus m. 'Wintergreen' / 7 gal. Bowwood	7 gal	18-24" HT	12" HT	83	
	Colocasia esculenta / Blue Hawaii / Elephant Ears	1 gal	15-18" HT		6	
	Dryopteris erythrosora / Autumn Fern	3 gal	15-18" HT	12" HT	17	
	Fatsia japonica / Japanese Fatsia	7 gal	24-30" HT	12" HT	19	
	Gardenia j. 'Frostproof' / Frostproof Gardenia	3 gal	18-24" HT	12" HT	6	
	Gardenia jasminoides 'Radicans' / Gardenia	3 gal	12-18" HT	12" HT	28	
	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily	1 gal	12-15" HT		20	
	Hydrangea m. 'Nikko Blue' / Nikko Blue Hydrangea	3 gal	18-24" HT	12" HT	6	
	Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea	3 gal	18-24" HT	12" HT	3	
	Ilex vomitoria / Tree Form Yaupon Holly	B&B		7-8' HT	6	

	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal	15-18" HT	12" HT		150
	Ligularia tassilaginea 'Gigantea' / Giant Leopard Plant	3 gal	15-24" HT			23
	Ligustrum l. 'Recurvifolium' / Wax leaf Ligustrum	7 gal	30" HT	3' HT		14
	Ligustrum japonicum / Tree Form Ligustrum	B&B		8' HT		16
	Mahonia e. 'Soft Caress' / Mahonia Soft Caress	3 gal	18-24" HT	12" HT		13
	Miscanthus s. 'Adagio' / Adagio Eulalia Grass	3 gal	18-24" HT	12" HT		48
	Miscanthus s. 'Gracillimus' / Maiden Grass	3 gal	18-24" HT	12" HT		10
	Muhlenbergia capillaris / Pink Muhly	3 gal	18-24" HT	12" HT		118
	Musa acuminata / Banana IN IPE PLANTERS	7 gal	24-30" HT			11
	Nandina domestica 'Harbour Dwarf' / Dwarf Heavenly Bamboo	3 gal	12-18" HT	12" HT		79
	Pittosporum tobira 'Wheeler's Dwarf' / Dwarf Pittosporum	3 gal	12-15" HT	12" HT		40
	Podocarpus macrophyllus makii / Shrubby Yew	7 gal	3-4' HT	12" HT		52
	Rhaplophyes x 'Montic' / MB Indian Hawthorn	7 gal	24-30" HT	12" HT		24
	Rhaplophyl/um hystrix / Needle Palm	7 gal	24-30" HT	12" HT		9
	Rosa Climbing Roses 'Constance Spiry' / Constance Spiry Climbing Rose	3 gal	24-30" HT			3
	Rosa x 'Knockout' TM / Rose	3 gal	18-24" HT	12" HT		7
	Sabal minor / Dwarf Palmetto	3 gal	18-24" HT	12" HT		16
	Viburnum odoratissimum / Sweet Viburnum	15 gal	30"-48" HT	12" HT		15
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Echinacea purpurea / Purple Coneflower	1 gal	12-15" HT		18" o.c.	34
	Liriope gigantea / Giant Liriope	1 GAL	12-18" HT		24" o.c.	171

	Ophiopogon japonicus / Mondo Grass	1 GAL	6-12" HT		9" o.c.	288
	Perennial & Annual Color	--				99 sf
	Ruellia brittoniana / Mexican Petunia	3 gal	15-24" HT		24" o.c.	106
	Salvia pachyphylla / Blue Sage	1 gal	6-12" HT		18" o.c.	34
	Trachelospermum a. 'Asiatic' / Asiatic Jasmine	1 qt	6-12" HT		12" o.c.	716
SOD/SEED	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Zoysia japonica 'Crown' / Korean Grass	sod				

20' x 70' SITE TRIANGLE. ALL PROPOSED VEGETATION WITHIN SITE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10', TYPICAL.

**SYMBOL LEGEND**



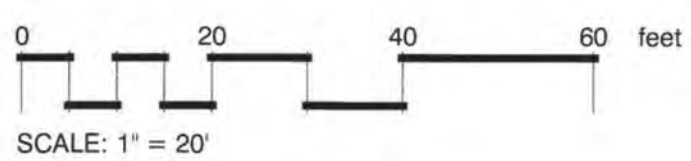
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**  
Date: 7/16/20  
# 2019065  
SWP #: 2020023  
PO, ES, BM, MB, CW



NORTH



**CLIENT**  
**HUDSON WILMINGTON DEVELOPMENT, LLC**  
1051 MILITARY CUTOFF ROAD, SUITE 200  
WILMINGTON, NC

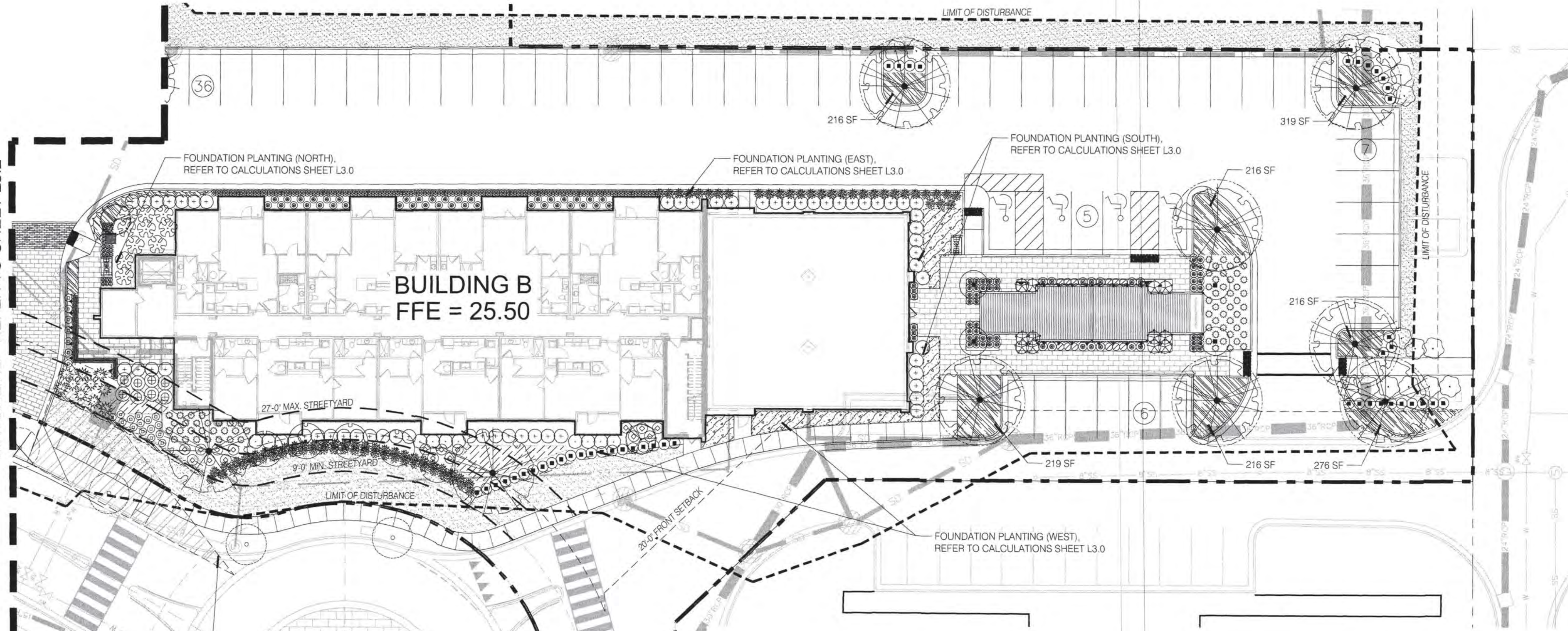
**PROJECT**  
**RENAISSANCE APARTMENTS**  
ASHES DRIVE  
WILMINGTON, NC  
LANDSCAPE PACKAGE

**PERMIT DRAWINGS**

Date: 2020-02-28  
Phase:  
Job Number: 400-20  
Designed by: MLD  
Drawn by: MAS  
Checked by: JWM  
Sheet Title: PLANTING PLAN

Sheet Number:  
**L3.2**  
of 4 sheets

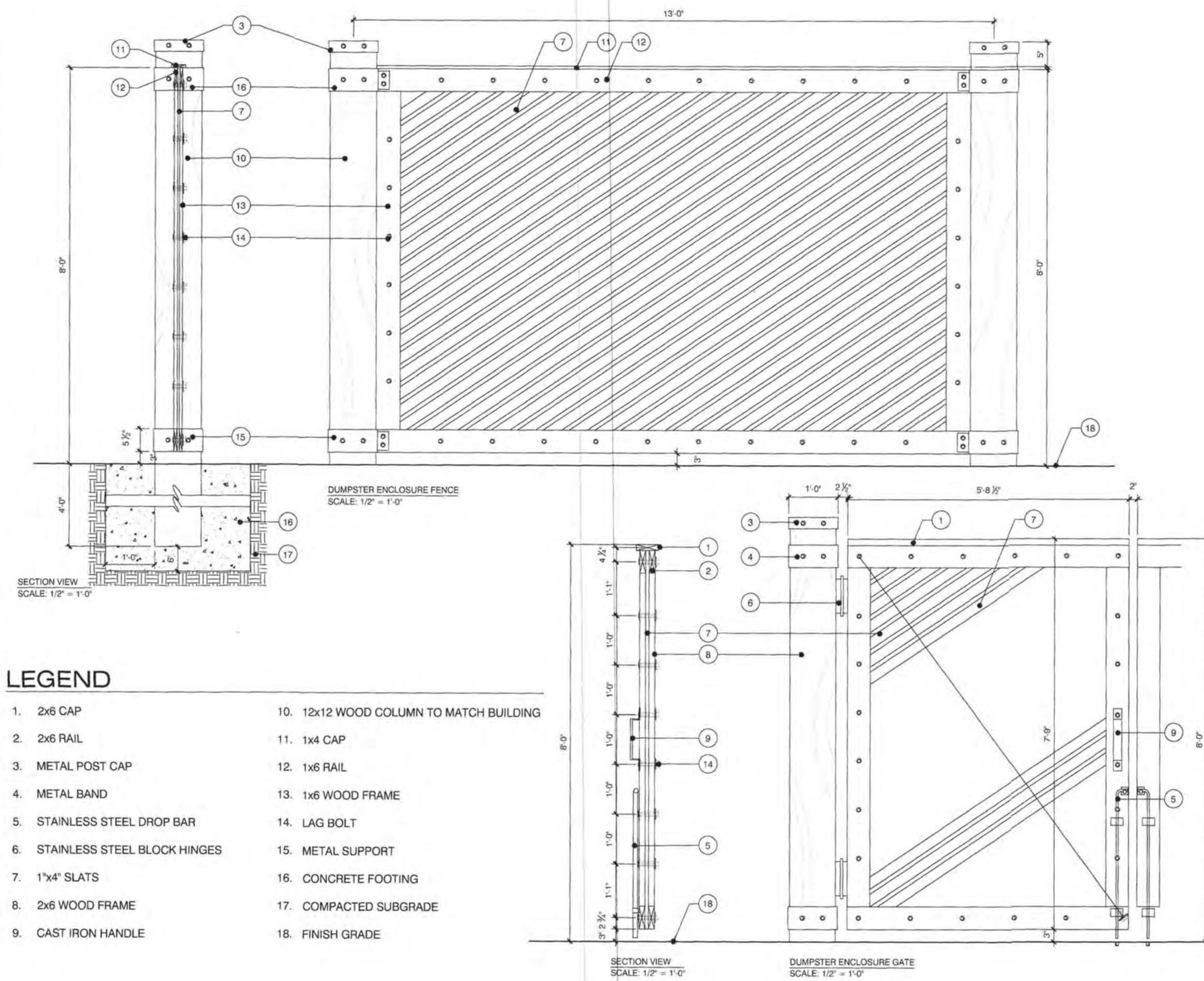
MATCHLINE - REFER TO SHEET L3.2



20' x 70' SITE TRIANGLE. ALL PROPOSED VEGETATION WITHIN SITE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10' TYPICAL

FRESCO DRIVE  
PUBLIC R/W VARIES

DUMPSTER ENCLOSURE



LEGEND

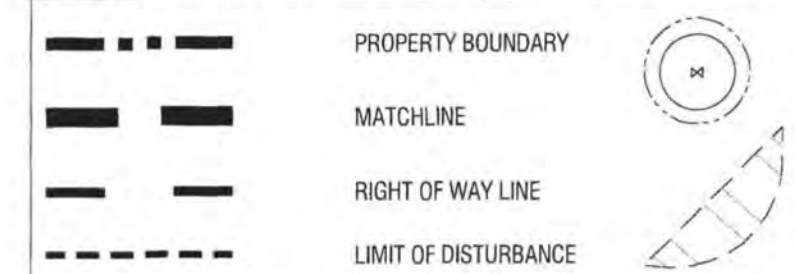
- |                                 |   |
|---------------------------------|---|
| 1. 2x6 CAP                      | 10. 12x12 WOOD COLUMN TO MATCH BUILDING |
| 2. 2x6 RAIL                     | 11. 1x4 CAP                             |
| 3. METAL POST CAP               | 12. 1x6 RAIL                            |
| 4. METAL BAND                   | 13. 1x8 WOOD FRAME                      |
| 5. STAINLESS STEEL DROP BAR     | 14. LAG BOLT                            |
| 6. STAINLESS STEEL BLOCK HINGES | 15. METAL SUPPORT                       |
| 7. 1"x4" SLATS                  | 16. CONCRETE FOOTING                    |
| 8. 2x6 WOOD FRAME               | 17. COMPACTED SUBGRADE                  |
| 9. CAST IRON HANDLE             | 18. FINISH GRADE                        |

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

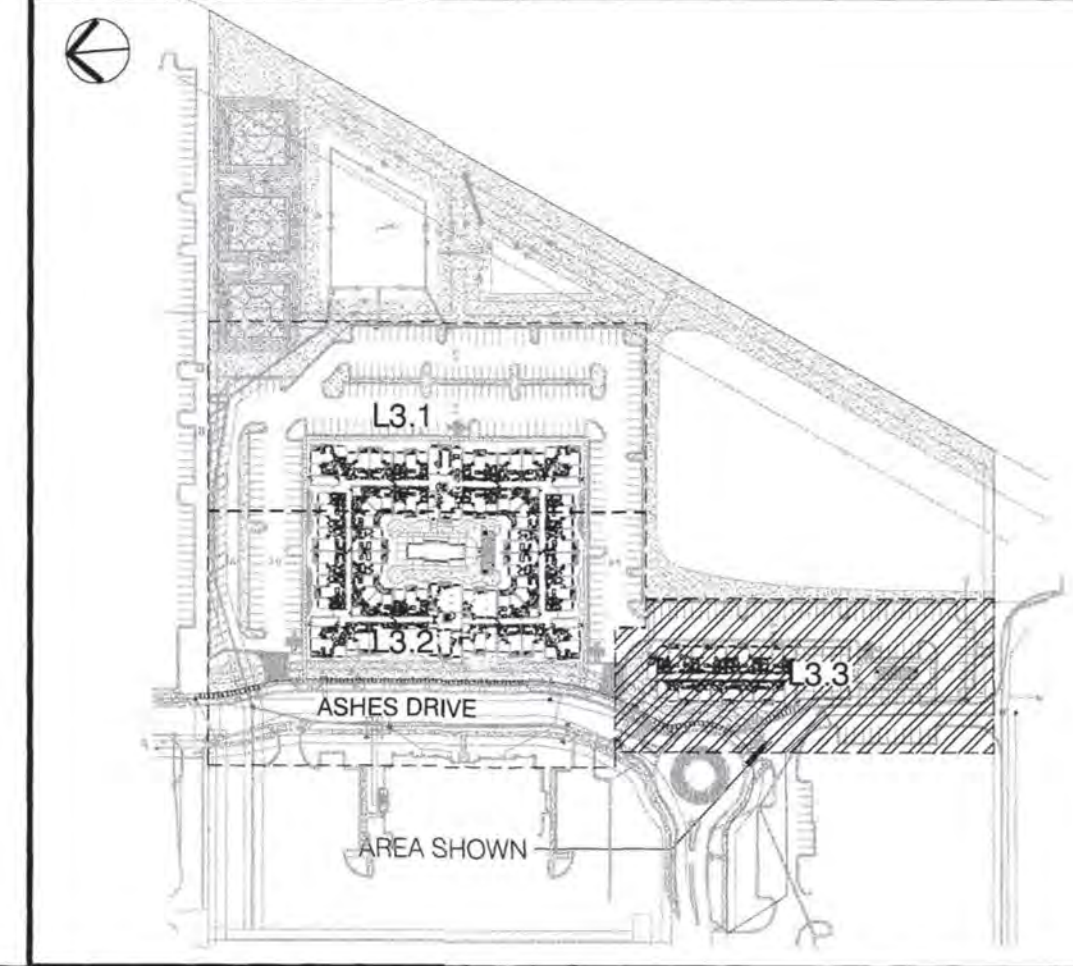
Approved Construction Plan  
Date: 7/16/20  
# 2019065  
SWP # 2020023  
PO, ES, BM, MB, CW

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

SYMBOL LEGEND

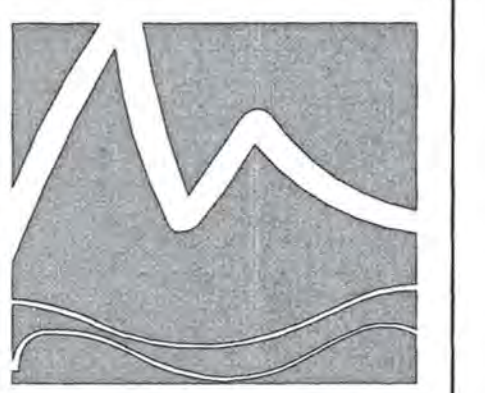


KEY MAP NOT TO SCALE



PLANT SCHEDULE L3.3

TREES	BOTANICAL / COMMON NAME	CONT	CAL	RANGE	MIN. REQ. SIZE	QTY
	Acer palmatum / Green Leaf Japanese Maple	15 gal	1.5' CAL	5-6' HT		2
	Ilex cassine / Dahoon Holly	8 & 8		8-10' HT		4
	Ilex x a. 'Eagleston' / Eagleston Holly	8&8		8-10' HT		5
	Quercus virginiana / Southern Live Oak	8 & 8	4' CAL		2-2.5' CAL	9
SHRUBS	BOTANICAL / COMMON NAME	SIZE	RANGE	MIN. REQ. SIZE	QTY	
	Aspidistra elatior / Cast Iron Plant	1 gal	15-18" HT	12" HT	256	
	Dryopteris erythrosora / Autumn Fern	3 gal	15-18" HT	12" HT	27	
	Fatsia japonica / Japanese Fatsia	7 gal	24-30" HT	12" HT	10	
	Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea	3 gal	18-24" HT	12" HT	17	
	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal	15-18" HT	12" HT	45	
	Ligustrum j. 'Recurvifolium' / Wax leaf ligustrum	7 gal	36" HT	3' HT	12	
	Limonium carolinianum / Carolina Sea Lavender BHI NATIVE	3 gal	12-18" HT	12" HT	14	
	Muhlenbergia capillaris / Pink Muhly	3 gal	18-24" HT	12" HT	85	
	Nandina domestica 'Harbour Dwarf' / Dwarf Heavenly Bamboo	3 gal	12-18" HT	12" HT	89	
	Panicum virgatum / Switch Grass	3 gal	24-30" HT	12" HT	68	
	Podocarpus macrophyllus maki / Shrubby Yew	7 gal	3-4' HT	12" HT	58	
	Rhapidolepis x 'Montic' / MB Indian Hawthorn	7 gal	24-30" HT	12" HT	8	
	Rhapidothymum hystrix / Needle Palm	7 gal	24-36" HT	12" HT	12	
	Rosa x 'Meigalpio' / Red Drift Rose	3 gal	12-15" HT	12" HT	22	
	Rosmarinus officinalis / Rosemary	3 gal	18-24" HT	12" HT	12	
	Sabal minor / Dwarf Palmetto	3 gal	18-24" HT	12" HT	10	
	Trachelospermum jasminoides 'Confederate' / Confederate Jasmine ESPALIER	3 gal	18-24" HT	12" HT	22	
	Viburnum odoratissimum / Sweet Viburnum	15 gal	36"-48" HT	12" HT	16	
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Equisetum arvense / Field Horsetail	1 gal	6" HT.	6" o.c.	2,082	
	Liriope gigantea / Giant Liriope	1 GAL	12-18" HT	24" o.c.	318	
	Ruellia brittoniana / Mexican Petunia	3 gal	15-24" HT	24" o.c.	67	
SOD/SEED	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Zoysia japonica 'Crown' / Korean Grass	sod				



**MIHALY**  
LAND DESIGN  
PLANNING • LANDSCAPE ARCHITECTURE  
330 MILITARY CUTOFF RD., SUITE A3  
WILMINGTON, NC 28405 910.392.4355

Revisions

CLIENT  
**HUDSON WILMINGTON DEVELOPMENT, LLC**  
1051 MILITARY CUTOFF ROAD, SUITE 200  
WILMINGTON, NC

PROJECT  
**RENAISSANCE APARTMENTS**  
ASHES DRIVE  
WILMINGTON, NC  
LANDSCAPE PACKAGE

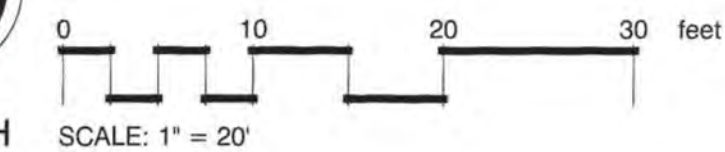
PERMIT DRAWINGS

Date: 2020-02-28  
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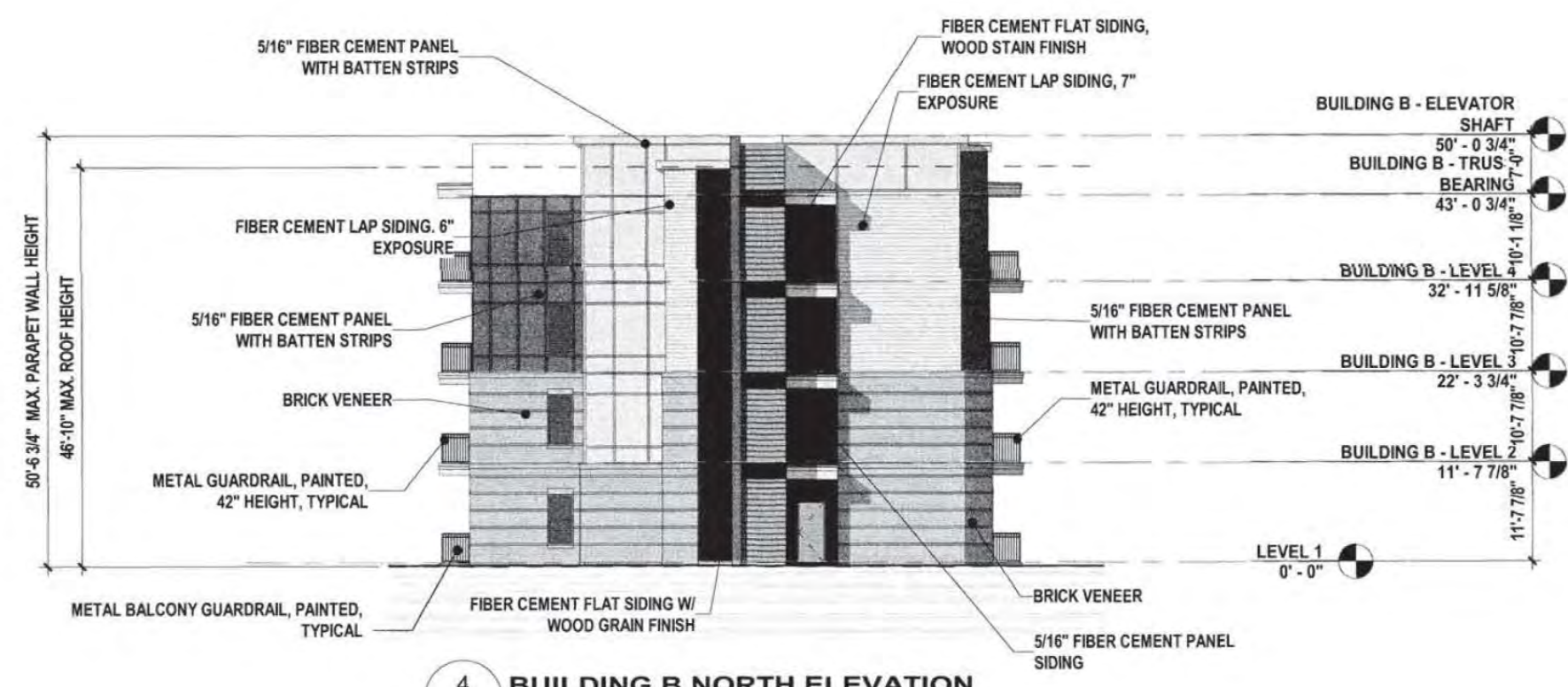
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**L3.3**  
of 4 sheets



NORTH



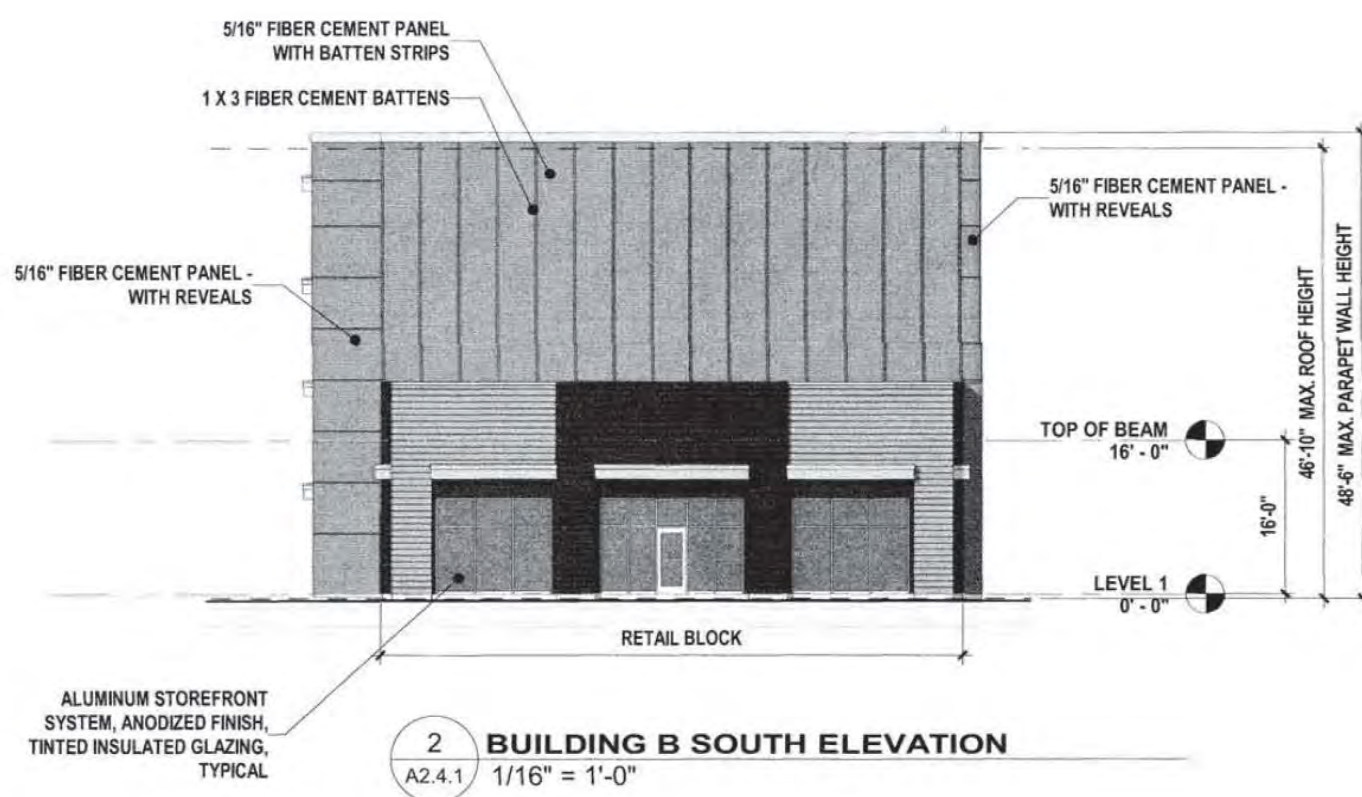
19021



**4 BUILDING B NORTH ELEVATION**  
A2.4.1 1/16" = 1'-0"



**3 BUILDING B EAST ELEVATION**  
A2.4.1 1/16" = 1'-0"

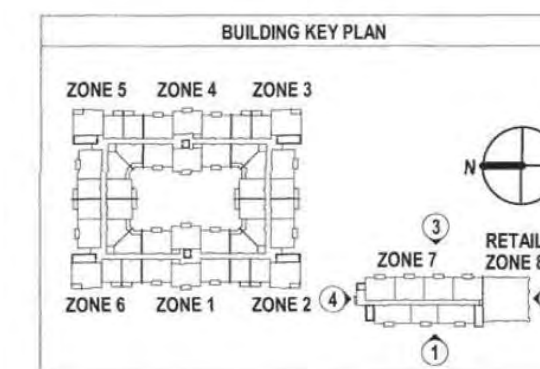


**2 BUILDING B SOUTH ELEVATION**  
A2.4.1 1/16" = 1'-0"



**1 BUILDING B WEST ELEVATION**  
A2.4.1 1/16" = 1'-0"

Approved Construction Plan  
Date: 7/16/20  
# 2019065  
SWP #: 2020023  
PO, ES, BM, MB, CW



**KEY PLAN - ALL B ELEVATION**  
1" = 200'-0"

corcoran  
ota

CO Architecture | Planning | Design

5871 Glenridge Drive NE Suite 200  
Atlanta, Georgia 30328  
ph 404.324.4200  
fax 404.324.4219

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**RENAISSANCE**  
Residential Apartments

Hudson Wilmington LLC  
Wilmington | North Carolina

Print Record

03-28-2019	Special Use Permit Set
05-30-2019	HUD Pre-Application
08-08-2019	Design Development Review Set
09-04-2019	Pricing Set

**REVISION RECORD**

Date	Description	#

Project No.: 1901  
Project Date: March 28, 2019

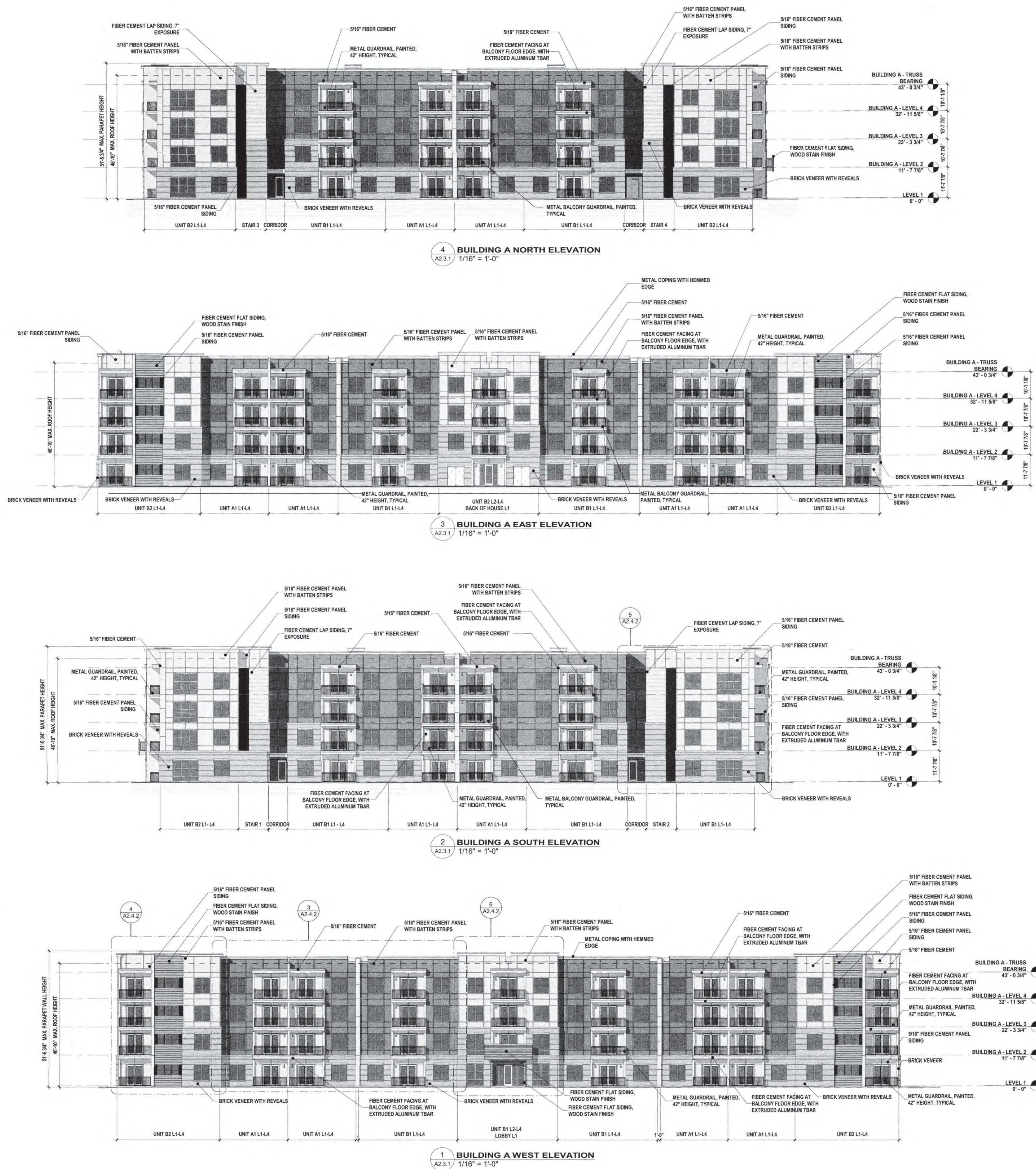
Sheet Title:  
**BUILDING B EXTERIOR ELEVATIONS**

Sheet No.

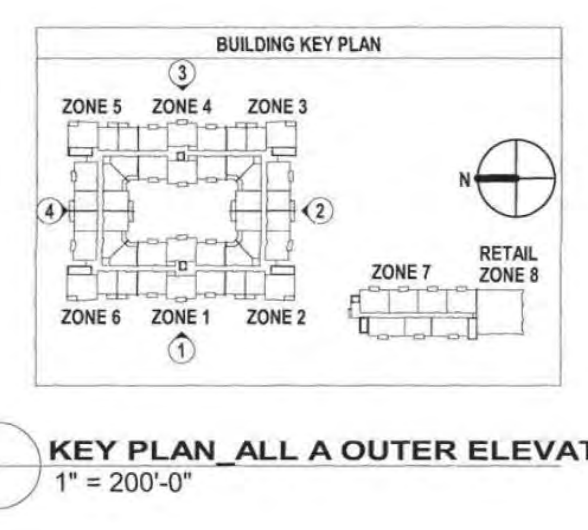
**A2.4.1**

19021

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Approved Construction Plan  
Date: 7/16/20  
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Sheet Title:  
**BUILDING A EXTERIOR ELEVATIONS**

Sheet No.  
**A2.3.1**  
19021

Not Released for Construction  Released for Construction