

STEWART

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T 919.380.8750 PROJECT # C17104

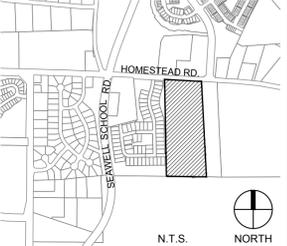
Client:

GLMH-2, LLC
121 S. ESTES DRIVE SUITE 100
CHAPEL HILL, NC 27514

Project:

INDEPENDENT SENIOR HOUSING CHAPEL HILL

Vicinity map:



Seal:



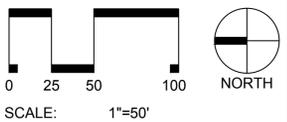
PRELIMINARY - DO NOT USE FOR CONSTRUCTION

Issued for:

SUP SUBMITTAL

No. Date Description

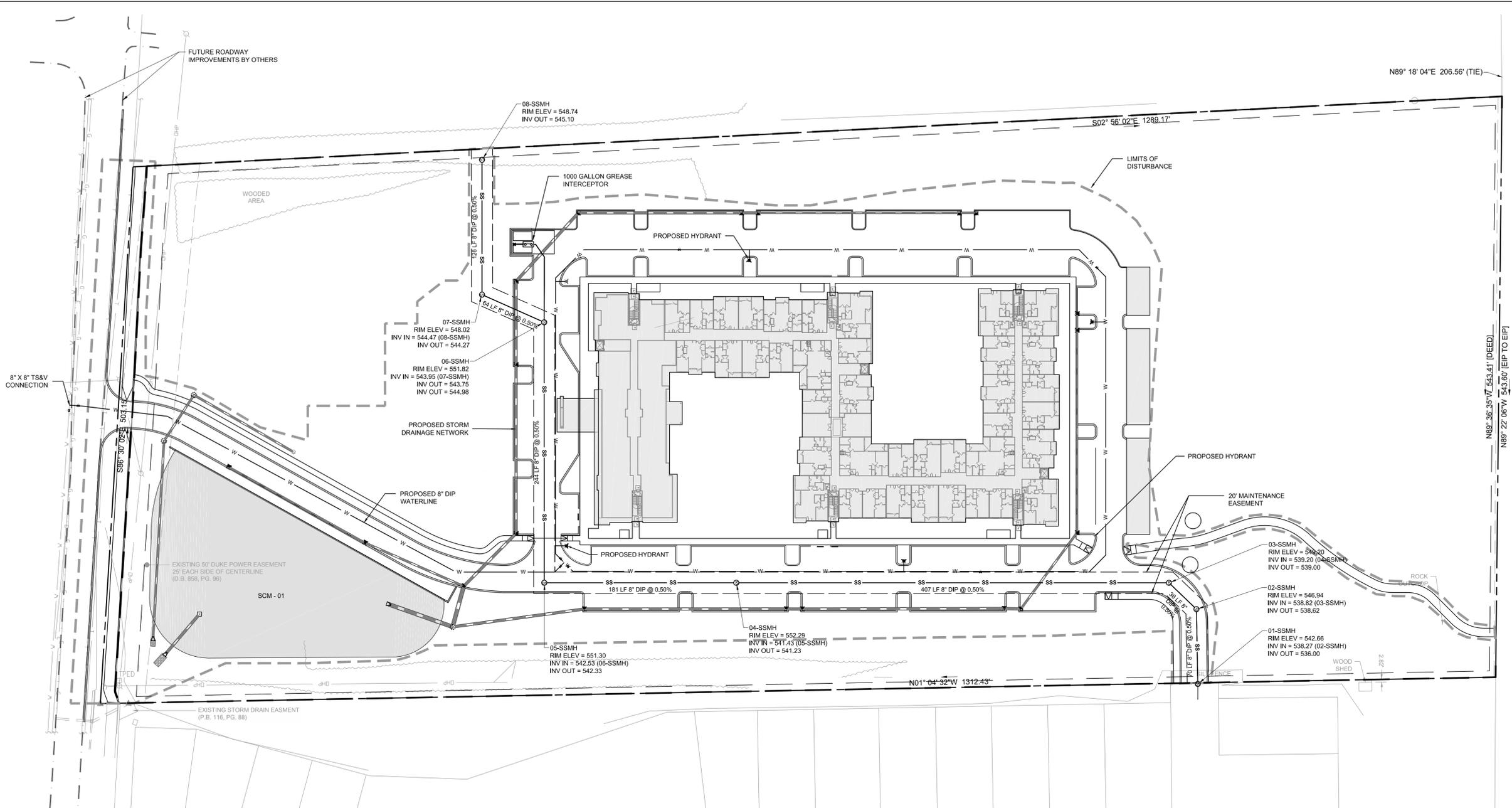
No.	Date	Description



Title:

UTILITIES PLAN

Project number: C17004 Sheet:
Date: 09.27.2017
Drawn by: DCB/RS
Approved by: ACP **C6.00**



UTILITY NOTES:

- REFER TO SHEET C3.00 FOR GENERAL NOTES.
- UNLESS OTHERWISE NOTED, ALL MANHOLES SHALL BE PRE-CAST CONCRETE STRUCTURES.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF UNDERGROUND UTILITIES (WATER, SEWER, STORM, ELECTRICAL, GAS, OR OTHER) FOR THIS PROJECT WITH THE BUILDING PLANS. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE INSTALLATION OF ALL UTILITY SERVICES TO WITHIN FIVE (5) FEET OF THE BUILDING CONNECTION POINT.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE AND UTILITY PROVIDERS DURING CONSTRUCTION TO ENSURE SMOOTH TRANSITION BETWEEN DISCIPLINES.
- THE CONTRACTOR SHALL COORDINATE ALL PEDESTRIAN AND VEHICULAR INTERRUPTIONS WITH OWNER'S REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOT RE-USE ANY FIRE HYDRANT REMOVED AS PART OF THIS PROJECT. ANY FIRE HYDRANT SHOWN TO BE REMOVED OR RELOCATED SHALL BE REPLACED WITH A NEW FIRE HYDRANT MEETING THE LOCAL JURISDICTIONAL REQUIREMENTS AND STANDARDS.
- ALL EXISTING SUB-SURFACE UTILITIES IDENTIFIED ON THE CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON SURVEY INFORMATION GATHERED FROM FIELD INSPECTION AND/OR ANY OTHER APPLICABLE RECORD DRAWINGS WHICH MAY BE AVAILABLE. DEPTHS OF EXISTING UTILITIES SHOWN IN PROFILE VIEWS ARE BASED ON STANDARD ASSUMPTIONS. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION, DEPTH, SIZE AND MATERIAL OF ANY AND ALL SUB-SURFACE CONDITIONS REFERENCED IN THESE PLANS PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
- ELEVATIONS OF UTILITIES ARE GIVEN TO THE EXTENT OF INFORMATION AVAILABLE. WHERE ELEVATIONS ARE NOT GIVEN AT POINTS OF EXISTING UTILITY CROSSINGS, SUCH ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND REPORTED TO THE ENGINEER. WHEN UNKNOWN LINES ARE EXPOSED, THEIR LOCATIONS AND ELEVATIONS SHALL ALSO BE REPORTED TO THE ENGINEER.
- UNDERGROUND UTILITIES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OF PARKING AREA, DRIVES, CURB AND GUTTER OR CONCRETE WALKS / PADS. IF UTILITIES SHOWN ON THIS PLAN CANNOT BE INSTALLED PRIOR TO INSTALLATION OF IMPERVIOUS (ASPHALT / CONCRETE) CONDUIT SHALL BE INSTALLED FOR THE "FUTURE" UTILITY INSTALLATION.
- AS-BUILT DOCUMENTATION REQUIREMENTS: PRIOR TO APPROVAL FROM LOCAL JURISDICTION OR ENGINEER THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS (IN BOTH PAPER AND ELECTRONIC FORMAT (CAD / PDF) PREPARED AND SEALED BY A PROFESSIONAL LAND SURVEYOR SHOWING ALL UTILITY INSTALLATION. HORIZONTAL AND VERTICAL INFORMATION SHALL BE PROVIDED FOR WATER, SEWER, STORM INCLUDING ALL STRUCTURES, VALVES, HYDRANTS, AND OTHER APPURTENANCES.

PROPOSED UTILITY SEPARATION:

- WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT HORIZONTAL SEPARATION IN WHICH CASE:
 - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR
 - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE OF A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP TO THE SEWER.
- CROSSING A WATER MAIN OVER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION, IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- CROSSING A WATER MAIN UNDER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

SEPARATION OF SANITARY SEWERS AND STORM SEWERS:

- A 24" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR BOTH THE SANITARY AND THE STORM LINES SHALL BE CONSTRUCTED OF FERROUS MATERIALS.

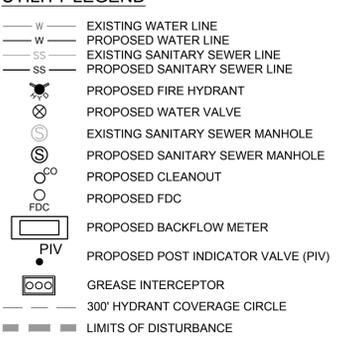
SEWER NOTES:

- SANITARY SEWER CLEANOUTS LOCATED IN PAVEMENT AREAS SHALL BE HEAVY DUTY TRAFFIC BEARING CASTINGS.
- UNLESS OTHERWISE NOTED, ALL SANITARY SEWER MANHOLES ARE 4' DIA.
- MANHOLES LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS SHALL BE SET AT GRADE. MANHOLES LOCATED IN OTHER AREAS (I.E. GRASS OR WOODED AREAS) SHALL HAVE THEIR RIMS RAISED SIX INCHES ABOVE THE SURROUNDING GRADE. MANHOLES SUBJECT TO POSSIBLE WATER INFILTRATION SHALL HAVE WATERTIGHT, BOLTED LIDS.
- MINIMUM REQUIRED SLOPES FOR SEWER SERVICES:
 - 4" SEWER SERVICE - 2.00% SLOPE
 - 6" SEWER SERVICE - 1.00% SLOPE
 - 8" SEWER SERVICE - 0.50% SLOPE
- UNLESS OTHERWISE NOTED, LOCATE SANITARY SERVICE CLEANOUTS AT ALL HORIZONTAL OR VERTICAL CHANGES IN DIRECTION. MAXIMUM SPACING BETWEEN CLEANOUTS SHALL BE 75 FEET.
- SEWER LINES LESS THAN 3 FEET OF COVER SHALL BE CLASS 50 DUCTILE IRON PIPE. SEWER LINES WITH GREATER THAN 3 FEET OF COVER SHALL BE AS NOTED BELOW:
 - 4" SEWER SERVICE - SCH 80
 - 6" SEWER SERVICE - SCH 80
 - 8" SEWER SERVICE - SDR-35
- SEWER LINES UNDER CONSTRUCTION SHALL BE PROTECTED FROM DIRT, DEBRIS OR OTHER CONTAMINANTS ENTERING THE NEW SYSTEM. A MECHANICAL PLUG SHALL BE UTILIZED BOTH IMMEDIATELY UPSTREAM OF THE NEW CONSTRUCTION AND AT THE FIRST MANHOLE DOWNSTREAM IN THE EXISTING SYSTEM. EXISTING STRUCTURES, PIPING AND APPURTENANCES SHALL BE PROTECTED FROM ANY INFLOW OF WATER, DIRT OR DEBRIS DUE TO NEW CONSTRUCTION CONNECTING TO OR IN THE VICINITY OF THE EXISTING SYSTEM. CONTRACTOR TO REMOVE DEBRIS AND PLUG PRIOR TO OCCUPANCY.
- ALL MANHOLES COVERS SHALL BE PAINTED TO LOCAL JURISDICTIONAL REQUIREMENTS.

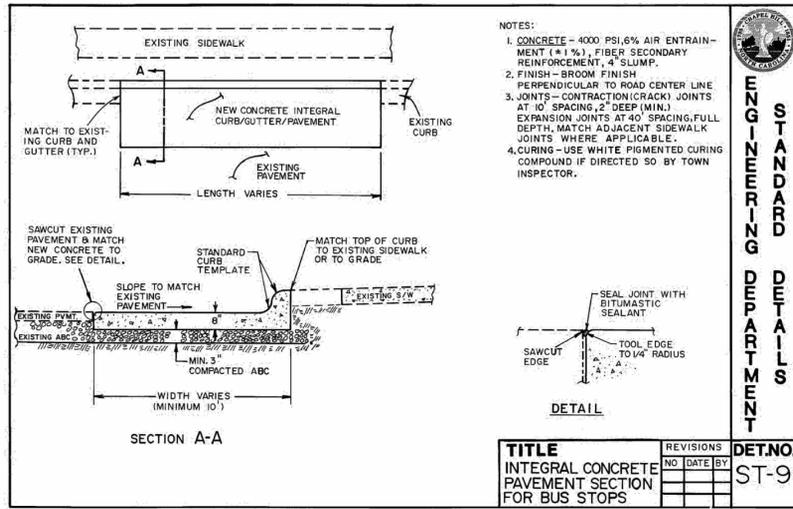
WATER NOTES:

- AS INDICATED, ALL WATER LINES SHALL BE DUCTILE IRON PIPE MEETING THE REQUIREMENTS OF ANSI/AWWA C151 PRESSURE CLASS 350 OR SOFT COPPER TYPE K PIPE PER ASTM B88. IF PVC WATERLINE IS INDICATED ON THE PLANS IT SHALL MEET THE REQUIREMENTS OF AWWA C-900, CLASS 200.
- ALL WATER LINES SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER.
- TESTING NOTES:
 - PRESSURE: LEAKAGE SHALL NOT EXCEED THE MAXIMUM ALLOWABLE LEAKAGE SPECIFIED IN AWWA C 600. MINIMUM TEST PRESSURE SHALL BE 150 PSI FOR DOMESTIC AND 200 PSI FOR FIRE PROTECTION.
 - BACTERIOLOGICAL: TWO SAMPLES FOR BACTERIOLOGICAL SAMPLING SHALL BE COLLECTED AT LEAST 24 HOURS APART. IF CONFIRMATION IS INDICATED, THEN THE DISINFECTION PROCEDURE AND TESTING SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- THE CHLORINE IN HEAVILY CHLORINATED WATER FLUSHED FROM MAINS NEEDS TO BE NEUTRALIZED BEFORE DISCHARGE. CONTRACTORS SHALL NEUTRALIZE HEAVILY CHLORINATED WATER FLUSHED FROM MAINS PRIOR TO DISCHARGE OR TRANSPORT ALL HEAVILY CHLORINATED WATER OFF-SITE FOR PROPER DISPOSAL.
- PAINT VALVE COVERS, FIRE HYDRANTS AND OTHER WATER APPARATUS TO MEET THE LOCAL JURISDICTIONAL REQUIREMENTS.

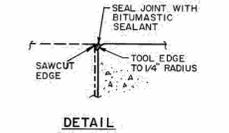
UTILITY LEGEND



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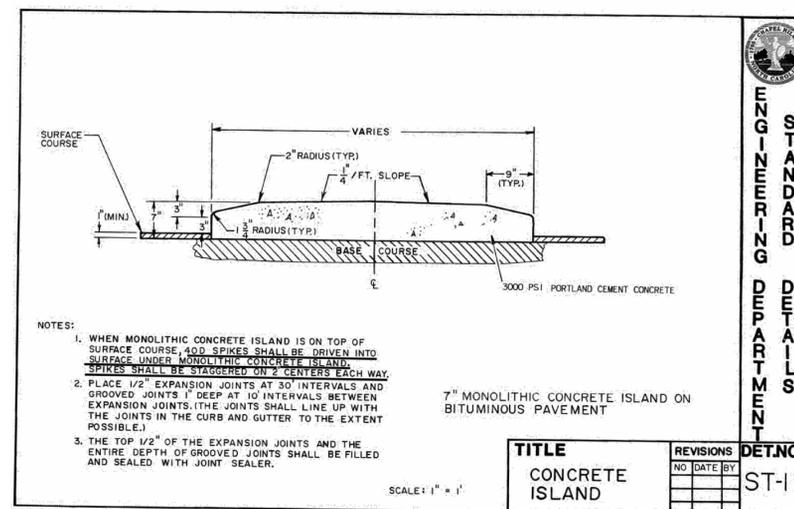


- NOTES:
1. CONCRETE - 4000 PSI, 6% AIR ENTRAINMENT (1:1:2), FIBER SECONDARY REINFORCEMENT, 4' SLUMP.
 2. FINISH - BROOM FINISH PERPENDICULAR TO ROAD CENTER LINE.
 3. JOINTS - CONTRACTION (CRACK) JOINTS AT 10' SPACING, 2" DEEP (MIN.) EXPANSION JOINTS AT 40' SPACING, FULL DEPTH, MATCH ADJACENT SIDEWALK JOINTS WHERE APPLICABLE.
 4. CURING - USE WHITE PIGMENTED CURING COMPOUND IF DIRECTED SO BY TOWN INSPECTOR.



TITLE	INTEGRAL CONCRETE PAVEMENT SECTION FOR BUS STOPS
REVISIONS	
NO.	DATE BY
DET.NO.	ST-9

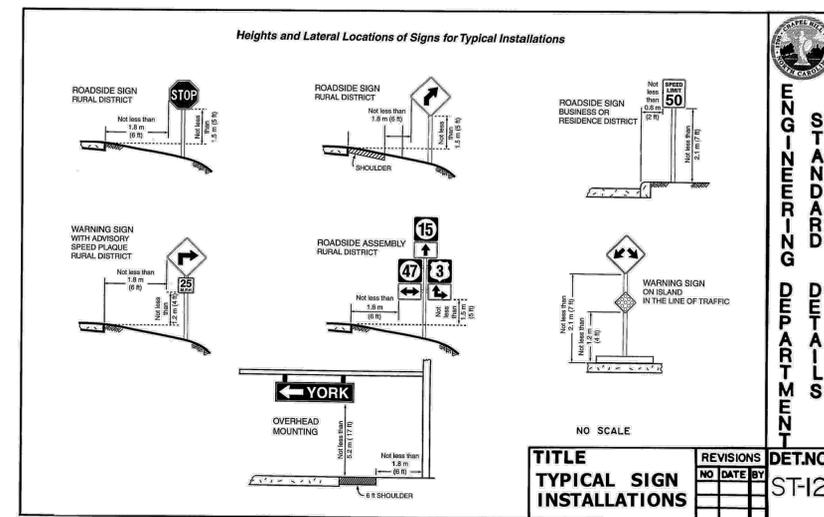
1 INTEGRAL CONCRETE PAVEMENT SECTION FOR BUS STOPS NTS



- NOTES:
1. WHEN MONOLITHIC CONCRETE ISLAND IS ON TOP OF SURFACE COURSE, 40D SPIKES SHALL BE DRIVEN INTO SURFACE UNDER MONOLITHIC CONCRETE ISLAND. SPIKES SHALL BE STAGGERED ON 2 CENTERS EACH WAY.
 2. PLACE 1/2" EXPANSION JOINTS AT 30" INTERVALS AND GROOVED JOINTS 1" DEEP AT 10" INTERVALS BETWEEN EXPANSION JOINTS. (THE JOINTS SHALL LINE UP WITH THE JOINTS IN THE CURB AND GUTTER TO THE EXTENT POSSIBLE.)
 3. THE TOP 1/2" OF THE EXPANSION JOINTS AND THE ENTIRE DEPTH OF GROOVED JOINTS SHALL BE FILLED AND SEALED WITH JOINT SEALER.

TITLE	CONCRETE ISLAND
REVISIONS	
NO.	DATE BY
DET.NO.	ST-11

2 CONCRETE ISLAND DETAIL NTS



TITLE	TYPICAL SIGN INSTALLATIONS
REVISIONS	
NO.	DATE BY
DET.NO.	ST-12

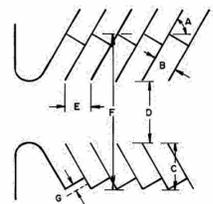
3 TYPICAL SIGN INSTALLATIONS DETAIL NTS

A. STANDARD AUTOMOBILES								
A	B	C	D	D'	E	F	F'	G
0°	8.0'	N/A	12.0'	20.0'	23.0'	28.0'	36.0'	N/A
45°	8.5'	18.0'	13.0'	20.0'	12.0'	49.0'	56.0'	2.0'
60°	8.5'	19.5'	16.0'	20.0'	9.8'	55.0'	59.0'	2.5'
75°	8.5'	19.8'	20.0'	20.0'	8.8'	59.6'	59.8'	3.0'
90°	8.5'	18.5'	25.0'	25.0'	8.5'	62.0'	62.0'	3.0'

B. COMPACT AUTOMOBILES								
A	B	C	D	D'	E	F	F'	G
0°	8.0'	N/A	11.0'	20.0'	19.0'	27.0'	36.0'	N/A
45°	8.0'	15.3'	11.5'	20.0'	11.3'	42.1'	50.6'	1.5'
60°	8.0'	16.3'	13.3'	20.0'	9.2'	45.9'	52.6'	1.8'
75°	8.0'	16.5'	16.0'	20.0'	8.2'	49.0'	53.0'	2.0'
90°	8.0'	15.5'	20.0'	20.0'	8.0'	51.0'	51.0'	2.0'

* ADDITIONAL WIDTH MAY BE REQUIRED WHERE THE AISLE SERVES AS A PRINCIPAL VEHICULAR ACCESS TO ON-SITE USES OR STRUCTURES OR SERVES TWO-WAY TRAFFIC.

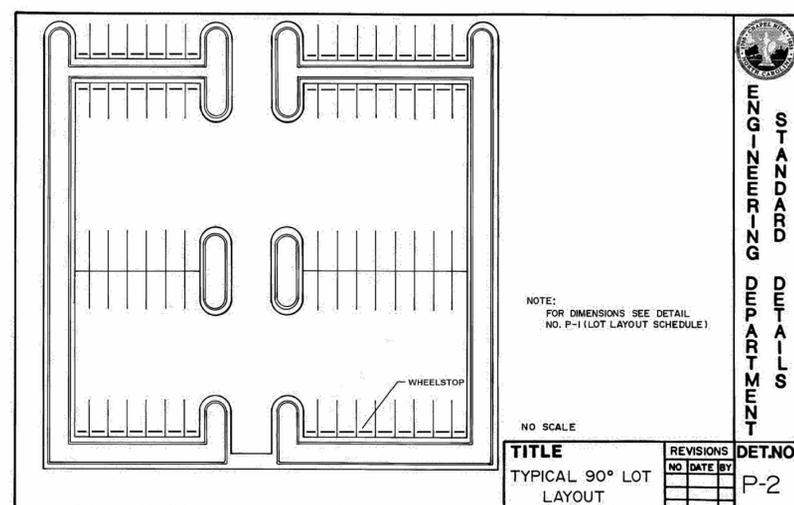
PARKING STALLS ADJUTING SIDEWALK AND PLANTING STRIPS SHALL PROVIDE ADDITIONAL CLEARANCE BETWEEN THE STALL AND THE SIDEWALK OR PLANTING STRIP.



- A) PARKING ANGLE
 B) STALL WIDTH
 C) STALL DEPTH
 D) AISLE WIDTH BETWEEN STALL LINES (ONE-WAY TRAFFIC)
 E) STALL WIDTH PARALLEL TO AISLE
 F) MODULE WIDTH (ONE-WAY TRAFFIC) WITH PARKING ON BOTH SIDES.
 G) VEHICLE OVERHANG
 #) TWO-WAY TRAFFIC
 #) TWO-WAY TRAFFIC

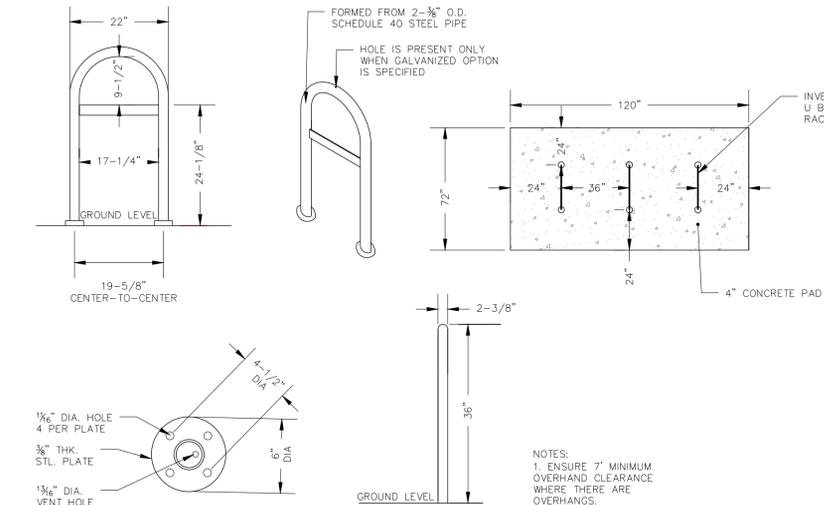
TITLE	LOT LAYOUT SCHEDULE
REVISIONS	
NO.	DATE BY
DET.NO.	P-1

4 PARKING LOT LAYOUT SCHEDULE NTS



TITLE	TYPICAL 90° LOT LAYOUT
REVISIONS	
NO.	DATE BY
DET.NO.	P-2

5 TYPICAL 90° PARKING LOT LAYOUT NTS



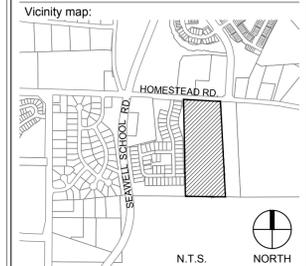
- NOTES:
1. ENSURE 7" MINIMUM OVERHAND CLEARANCE WHERE THERE ARE OVERHANGS.

6 INVERTED U BIKE RACK WITH CROSS BRACE DETAIL NTS



Client:
 GLMH-2, LLC
 121 S. ESTES DRIVE SUITE 100
 CHAPEL HILL, NC 27514

Project:
INDEPENDENT SENIOR HOUSING CHAPEL HILL



PRELIMINARY - DO NOT USE FOR CONSTRUCTION

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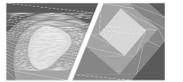
SCALE: N.T.S.

Title:
SITE DETAILS

Project number: C17004 Sheet:
 Date: 09.27.2017
 Drawn by: RS
 Approved by: ACP **C9.01**

ID #	CODE	Common Name	Scientific Name	DBH	Rare or Spec	Multistem Number
1	LIST	Sw eetlum	Liquidambar styraciflua	15	Specimen	
2	JUVI	Eastern Red Cedar	Juniperus virginiana	15	Rare	
3	FRSE	Black Cherry	Prunus serrata	16	Specimen	
4	LIST	Sw eetlum	Liquidambar styraciflua	16	Specimen	
5	RTA	Lobolly Phe	Pinus taeda	19	Specimen	
6	COFL	Dogwood	Cornus florida	9	Specimen	
7	LIST	Sw eetlum	Liquidambar styraciflua	12	Specimen	
8	JUVI	Eastern Red Cedar	Juniperus virginiana	13	Rare	
9	LIST	Sw eetlum	Liquidambar styraciflua	17	Specimen	
10	FRSE	Black Cherry	Prunus serrata	9	NA	
11	JUVI	Eastern Red Cedar	Juniperus virginiana	17	Rare	
12	LIST	Sw eetlum	Liquidambar styraciflua	12	Specimen	
13	RTA	Lobolly Phe	Pinus taeda	18	Specimen	
14	LITU	Tulp Poplar	Liriodendron tulipifera	15	Specimen	
15	PYCA	Callery Pear	Pyrus calleryana	17	NA	
16	PYCA	Callery Pear	Pyrus calleryana	17	NA	
17	JUVI	Eastern Red Cedar	Juniperus virginiana	13	Rare	
18	CECA	Eastern Redbud	Cercis canadensis	8	Specimen	
19	ILOP	American Holly	Ilex opaca	7	Specimen	
20	LITU	Tulp Poplar	Liriodendron tulipifera	15	Specimen	
21	COFL	Dogwood	Cornus florida	6	Specimen	
22	COFL	Dogwood	Cornus florida	7	Specimen	
23	LITU	Tulp Poplar	Liriodendron tulipifera	16	Specimen	
24	COFL	Dogwood	Cornus florida	8	Specimen	
25	MAGR	Southern Magnolia	Magnolia grandiflora	11	NA	
26	MAGR	Southern Magnolia	Magnolia grandiflora	13	Specimen	
27	LIST	Sw eetlum	Liquidambar styraciflua	18	Specimen	
28	RTA	Lobolly Phe	Pinus taeda	18	Specimen	
29	LITU	Tulp Poplar	Liriodendron tulipifera	15	Specimen	
30	LITU	Tulp Poplar	Liriodendron tulipifera	24	Specimen	
31	LITU	Tulp Poplar	Liriodendron tulipifera	22	Specimen	
32	RTA	Lobolly Phe	Pinus taeda	22	Specimen	
33	LITU	Tulp Poplar	Liriodendron tulipifera	20	Specimen	
34	RTA	Lobolly Phe	Pinus taeda	24	Specimen	
35	LIST	Sw eetlum	Liquidambar styraciflua	14	Specimen	
36	RTA	Lobolly Phe	Pinus taeda	24	Specimen	
37	RTA	Lobolly Phe	Pinus taeda	20	Specimen	
38	LIST	Sw eetlum	Liquidambar styraciflua	13	Specimen	
39	LIST	Sw eetlum	Liquidambar styraciflua	17	Specimen	
40	JUVI	Eastern Red Cedar	Juniperus virginiana	14	Rare	
41	JUVI	Eastern Red Cedar	Juniperus virginiana	8	Specimen	
42	ACRU	Red Maple	Acer rubrum	20	Specimen	
43	BBN	River Birch	Betula nigra	19	Specimen	
44	CRAT	Hawthorn	Crataegus species	8	Specimen	
45	LITU	Tulp Poplar	Liriodendron tulipifera	19	Specimen	
46	BBN	River Birch	Betula nigra	19	Specimen	
47	BBN	River Birch	Betula nigra	21	Specimen	
48	COFL	Dogwood	Cornus florida	9	Specimen	
49	MORR	Mulberry	Morus sp	20	NA	
50	PYCA	Callery Pear	Pyrus calleryana	9	Rare	
51	CECA	Eastern Redbud	Cercis canadensis	16	Rare	
52	LITU	Tulp Poplar	Liriodendron tulipifera	19	Specimen	
53	LITU	Tulp Poplar	Liriodendron tulipifera	17	Specimen	
54	JUNI	Black Walnut	Juglans nigra	23	Specimen	
55	LITU	Tulp Poplar	Liriodendron tulipifera	35	Rare	
56	JUNI	Black Walnut	Juglans nigra	12	Specimen	
57	ACRU	Red Maple	Acer rubrum	12	Specimen	
58	QUAL	White Oak	Quercus alba	22	Specimen	
59	QUAL	White Oak	Quercus alba	22	Specimen	
60	LITU	Tulp Poplar	Liriodendron tulipifera	18	Specimen	
61	LITU	Tulp Poplar	Liriodendron tulipifera	21	Specimen	
62	CARYA	Hickory	Carya species	13	Specimen	
63	CARYA	Hickory	Carya species	17	Specimen	
64	ACRU	Red Maple	Acer rubrum	16	Specimen	
65	LITU	Tulp Poplar	Liriodendron tulipifera	18	Specimen	
66	LITU	Tulp Poplar	Liriodendron tulipifera	25	Rare	
67	LIST	Sw eetlum	Liquidambar styraciflua	16	Specimen	
68	CARYA	Hickory	Carya species	17	Specimen	
69	QUVE	Black Oak	Quercus velutina	42	Rare	
70	ULAL	Winged Elm	Ulmus alatus	14	Specimen	
71	JUNI	Black Walnut	Juglans nigra	17	Specimen	
72	CARYA	Hickory	Carya species	13	Specimen	
73	LITU	Tulp Poplar	Liriodendron tulipifera	21	Specimen	
74	LITU	Tulp Poplar	Liriodendron tulipifera	20	Specimen	
75	LITU	Tulp Poplar	Liriodendron tulipifera	27	Rare	
76	LITU	Tulp Poplar	Liriodendron tulipifera	30	Rare	
77	LITU	Tulp Poplar	Liriodendron tulipifera	15	Specimen	
78	LITU	Tulp Poplar	Liriodendron tulipifera	19	Specimen	
79	FRSE	Black Cherry	Prunus serrata	19	Specimen	
80	DVI	Persimmon	Diospyros virginiana	10	Specimen	
81	CALC	Pecan	Carya illinoensis	19	Specimen	
82	LIST	Sw eetlum	Liquidambar styraciflua	12	Specimen	
83	LIST	Sw eetlum	Liquidambar styraciflua	24	Rare	
84	CALC	Pecan	Carya illinoensis	12	Specimen	
85	CALC	Pecan	Carya illinoensis	13	Specimen	
86	LITU	Tulp Poplar	Liriodendron tulipifera	21	Specimen	
87	LITU	Tulp Poplar	Liriodendron tulipifera	12	Specimen	
88	LIST	Sw eetlum	Liquidambar styraciflua	21	Specimen	
89	QUAL	White Oak	Quercus alba	15	Specimen	
90	QUAL	White Oak	Quercus alba	26	Rare	
91	LIST	Sw eetlum	Liquidambar styraciflua	19	Specimen	
92	LIST	Sw eetlum	Liquidambar styraciflua	28	Rare	
93	QUAL	White Oak	Quercus alba	25	Rare	
94	LIST	Sw eetlum	Liquidambar styraciflua	16	Specimen	
95	QUFH	Willow Oak	Quercus phellos	12	Specimen	
96	LIST	Sw eetlum	Liquidambar styraciflua	16	Specimen	
97	QUAL	White Oak	Quercus alba	16	Specimen	
98	FRSE	Black Cherry	Prunus serrata	8	NA	
99	FRSE	Black Cherry	Prunus serrata	6	NA	
100	LIST	Sw eetlum	Liquidambar styraciflua	25	Rare	
101	LIST	Sw eetlum	Liquidambar styraciflua	16	Specimen	
102	QUAL	White Oak	Quercus alba	21	Specimen	
103	QUVE	Black Oak	Quercus velutina	28	Rare	
104	QUAL	White Oak	Quercus alba	22	Specimen	
105	QUAL	White Oak	Quercus alba	20	Specimen	
106	QUAL	White Oak	Quercus alba	15	Specimen	
107	QUAM	Blackjack Oak	Quercus marilandica	23	Specimen	
108	QUAL	White Oak	Quercus alba	17	Specimen	
109	RTA	Lobolly Phe	Pinus taeda	19	Specimen	
110	RTA	Lobolly Phe	Pinus taeda	22	Specimen	
111	QUAL	White Oak	Quercus alba	26	Rare	
112	LIST	Sw eetlum	Liquidambar styraciflua	17	Specimen	
113	QUAL	White Oak	Quercus alba	31	Rare	
114	LITU	Tulp Poplar	Liriodendron tulipifera	22	Specimen	
115	QUAL	White Oak	Quercus alba	17	Specimen	
116	QUAL	White Oak	Quercus alba	16	Specimen	
117	LIST	Sw eetlum	Liquidambar styraciflua	16	Specimen	
118	FRAX	Ash	Fraxinus species	20	Specimen	
119	CATO	Mockernut Hickory	Carya tomentosa	12	Specimen	
120	QUAL	White Oak	Quercus alba	18	Specimen	
121	QUAL	White Oak	Quercus alba	17	Specimen	
122	LITU	Tulp Poplar	Liriodendron tulipifera	21	Specimen	
123	QUAL	White Oak	Quercus alba	25	Rare	
124	CATO	Mockernut Hickory	Carya tomentosa	13	Specimen	
125	QUAL	White Oak	Quercus alba	24	Rare	

ID #	CODE	Common Name	Scientific Name	DBH	Rare or Spec	Multistem Number
126	LIST	Sw eetlum	Liquidambar styraciflua	14	Specimen	
127	FRAX	Ash	Fraxinus species	15	Specimen	
128	NYSY	Blackgum	Nyssa sylvatica	13	Specimen	
129	NYSY	Blackgum	Nyssa sylvatica	12	Specimen	
130	LQOP	American Holly	Ilex opaca	6	Specimen	
131	NYSY	Blackgum	Nyssa sylvatica	27	Rare	
132	LIST	Sw eetlum	Liquidambar styraciflua	15	Specimen	
133	LIST	Sw eetlum	Liquidambar styraciflua	21	Specimen	
134	LITU	Tulp Poplar	Liriodendron tulipifera	19	Specimen	
135	LITU	Tulp Poplar	Liriodendron tulipifera	39	Rare	
136	LIST	Sw eetlum	Liquidambar styraciflua	13	Specimen	
137	QUAM	Blackjack Oak	Quercus marilandica	13	Specimen	
138	OXAR	Sourwood	Oxydendron arboreum	9	Specimen	
139	QUAL	White Oak	Quercus alba	12	Specimen	
140	CATO	Mockernut Hickory	Carya tomentosa	22	Specimen	
141	NYSY	Blackgum	Nyssa sylvatica	16	Specimen	
142	QUVE	Black Oak	Quercus velutina	16	Specimen	
143	QUAL	White Oak	Quercus alba	21	Specimen	
144	QUAL	White Oak	Quercus alba	18	Specimen	
145	LIST	Sw eetlum	Liquidambar styraciflua	15	Specimen	
146	LIST	Sw eetlum	Liquidambar styraciflua	27	Rare	
147	QUAL	White Oak	Quercus alba	19	Specimen	
148	QUAL	White Oak	Quercus alba	13	Specimen	
149	QUAL	White Oak	Quercus alba	23	Specimen	
150	QUAL	White Oak	Quercus alba	18	Specimen	
151	LIST	Sw eetlum	Liquidambar styraciflua	18	Specimen	
152	CATO	Mockernut Hickory	Carya tomentosa	13	Specimen	
153	FRAX	Ash	Fraxinus species	22	Specimen	
154	CATO	Mockernut Hickory	Carya tomentosa	12	Specimen	
155	LIST	Sw eetlum	Liquidambar styraciflua	12	Specimen	
156	CAGL	Pignut Hickory	Carya glabra	16	Specimen	
157	CAGL	Pignut Hickory	Carya glabra	12	Specimen	
158	LIST	Sw eetlum	Liquidambar styraciflua	13	Specimen	
159	QUAL	White Oak	Quercus alba	14	Specimen	
160	QUVE	Black Oak	Quercus velutina	16	Specimen	
161	CATO	Mockernut Hickory	Carya tomentosa	16	Specimen	
162	CAGL	Pignut Hickory	Carya glabra	16	Specimen	
163	QUAL	White Oak	Quercus alba	18	Specimen	
164	QUAL	White Oak	Quercus alba	20	Specimen	
165	CATO	Mockernut Hickory	Carya tomentosa	17	Specimen	
166	LIST	Sw eetlum	Liquidambar styraciflua	15	Specimen	
167	LITU	Tulp Poplar	Liriodendron tulipifera	17	Specimen	
168	QUAL	White Oak	Quercus alba	13	Specimen	
169	LITU	Tulp Poplar	Liriodendron tulipifera	19	Specimen	
170	QUAL	White Oak	Quercus alba	18	Specimen	
171	LITU	Tulp Poplar	Liriodendron tulipifera	15	Specimen	
172	QUAL	White Oak	Quercus alba	22	Specimen	
173	LITU	Tulp Poplar	Liriodendron tulipifera	14	Specimen	
174	FRAX	Ash	Fraxinus species	17	Specimen	
175	LITU	Tulp Poplar	Liriodendron tulipifera	18	Specimen	
176	QUAL	White Oak	Quercus alba	18	Specimen	
177	QUAL	White Oak	Quercus alba	18	Specimen	
178	LITU	Tulp Poplar	Liriodendron tulipifera	17	Specimen	
179	QUAL	White Oak	Quercus alba	15	Specimen	
180	LITU	Tulp Poplar	Liriodendron tulipifera	14	Specimen	
181	LIST	Sw eetlum	Liquidambar styraciflua	22	Specimen	
182	LIST	Sw eetlum	Liquidambar styraciflua	12	Specimen	
183	LITU	Tulp Poplar	Liriodendron tulipifera	30	Rare	
184	LITU	Tulp Poplar	Liriodendron tulipifera	23	Specimen	
185	LITU	Tulp Poplar	Liriodendron tulipifera	22	Specimen	
186	QUAL	White Oak	Quercus alba	19	Specimen	
187	QUAL	White Oak	Quercus alba	23	Specimen	
188	QUAL	White Oak	Quercus alba	16	Specimen	
189	QUAL	White Oak	Quercus alba	20	Specimen	
190	QUAM	Blackjack Oak	Quercus marilandica	20	Specimen	
191	LITU	Tulp Poplar	Liriodendron tulipifera	18	Specimen	
192	LITU	Tulp Poplar	Liriodendron tulipifera	17	Specimen	
193	LITU	Tulp Poplar	Liriodendron tulipifera	19	Specimen	
194	QUAL	White Oak	Quercus alba	14	Specimen	
195	QUAL	White Oak	Quercus alba	24	Rare	
196	QUAL	White Oak	Quercus alba	14	Specimen	
197	QUAL	White Oak	Quercus alba	16	Specimen	
198	QUAL	White Oak	Quercus alba	22	Specimen	
199	QUAL	White Oak	Quercus alba	16	Specimen	
200	LITU	Tulp Poplar	Liriodendron tulipifera	28	Rare	
201	CARYA	Hickory	Carya species	20	Specimen	
202	CATO	Mockernut Hickory	Carya tomentosa	18	Specimen	
203	LITU	Tulp Poplar	Liriodendron tulipifera	37	Rare	
204	CARYA	Hickory	Carya species	15	Specimen	
205	QUAL	White Oak	Quercus alba	21	Specimen	
206	LITU	Tulp Poplar	Liriodendron tulipifera	27	Rare	
207	LITU	Tulp Poplar	Liriodendron tulipifera	26	Rare	
208	LITU	Tulp Poplar	Liriodendron tulipifera	20	Specimen	
209	QUAL	White Oak	Quercus alba	21	Specimen	
210	LITU	Tulp Poplar	Liriodendron tulipifera	39	Rare	
211	LITU	Tulp Poplar	Liriodendron tulipifera	21	Specimen	
212	LITU	Tulp Poplar	Liriodendron tulipifera	13	Specimen	
213	LITU	Tulp Poplar	Liriodendron tulipifera	14	Specimen	
214	LITU	Tulp Poplar	Liriodendron tulipifera	13	Specimen	
215	LITU	Tulp Poplar	Liriodendron tulipifera	16	Specimen	
216	QUAL	White Oak	Quercus alba	16	Specimen	
217	LITU	Tulp Poplar	Liriodendron tulipifera	20	Specimen	
218	LITU	Tulp Poplar	Liriodendron tulipifera	21	Specimen	
219	LITU	Tulp Poplar	Liriodendron tulipifera	20	Specimen	
220	LITU	Tulp Poplar	Liriodendron tulipifera	12	Specimen	
221	LITU	Tulp Poplar	Liriodendron			



STEWART

421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE # C-1051
RALEIGH, NC 27601 www.stewartinc.com
T 919.380.8750 PROJECT # C17104

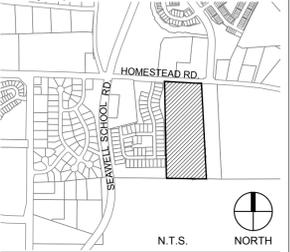
Client:

GLMH-2, LLC
121 S. ESTES DRIVE SUITE 100
CHAPEL HILL, NC 27514

Project:

INDEPENDENT SENIOR HOUSING CHAPEL HILL

Vicinity map:



Seal:



PRELIMINARY - DO NOT
USE FOR CONSTRUCTION

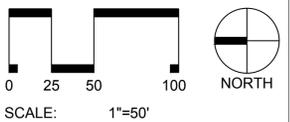
Issued for:

SUP SUBMITTAL

No.	Date	Description

SLOPE LEGEND

-  0% - 10% SLOPES (323,480 SQFT)
-  10% - 15% SLOPES (0 SQFT)
-  15%-25% SLOPES (0 SQFT)
-  25% AND GREATER (61,723 SQFT)

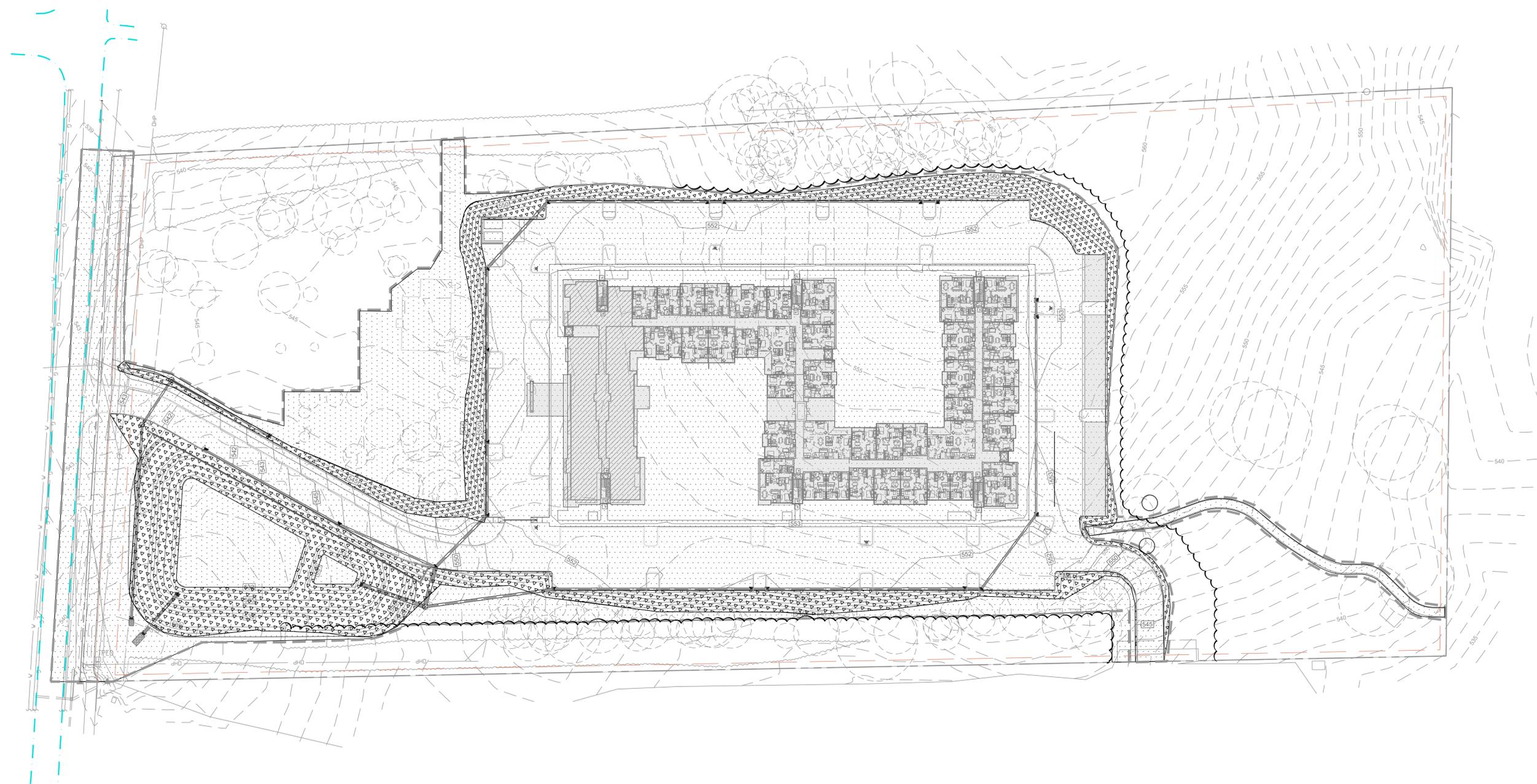


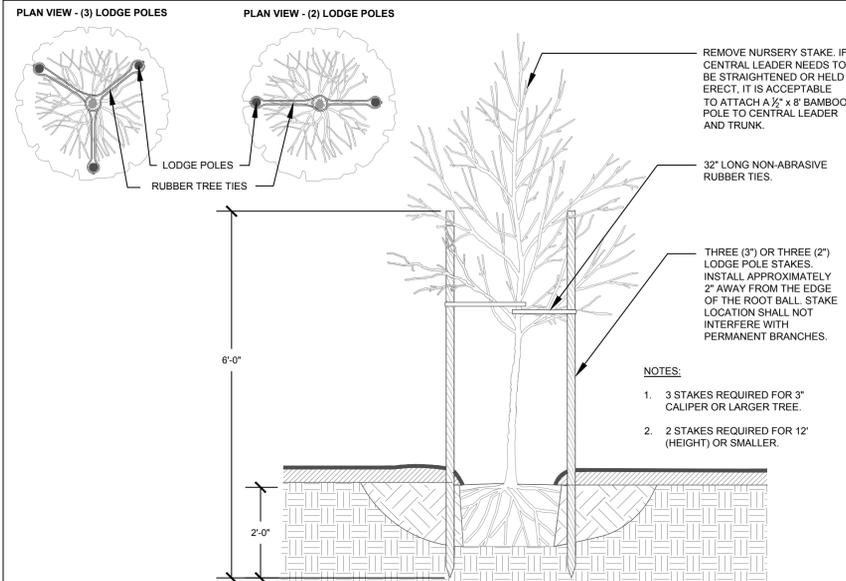
Title:

STEEP SLOPE PLAN

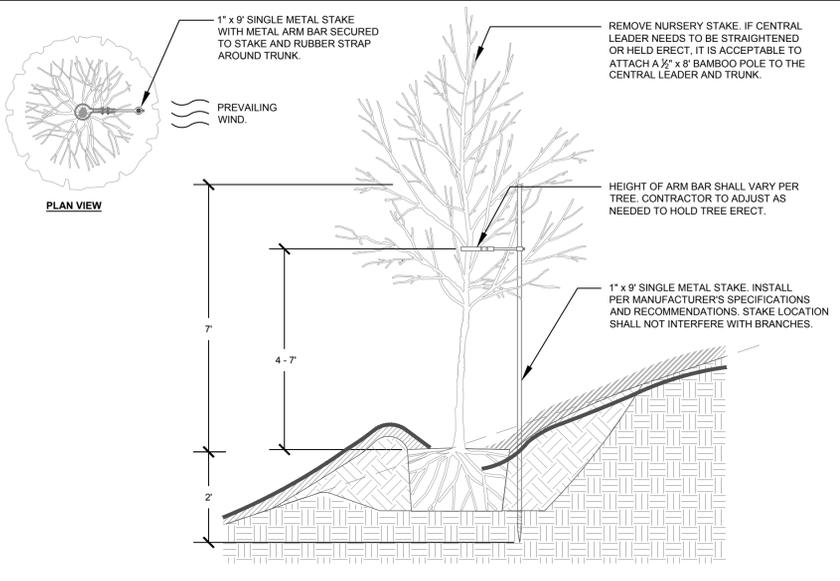
Project number: C17004 Sheet:
Date: 09.27.2017
Drawn by: DG/RS
Approved by: CJM **L1.20**

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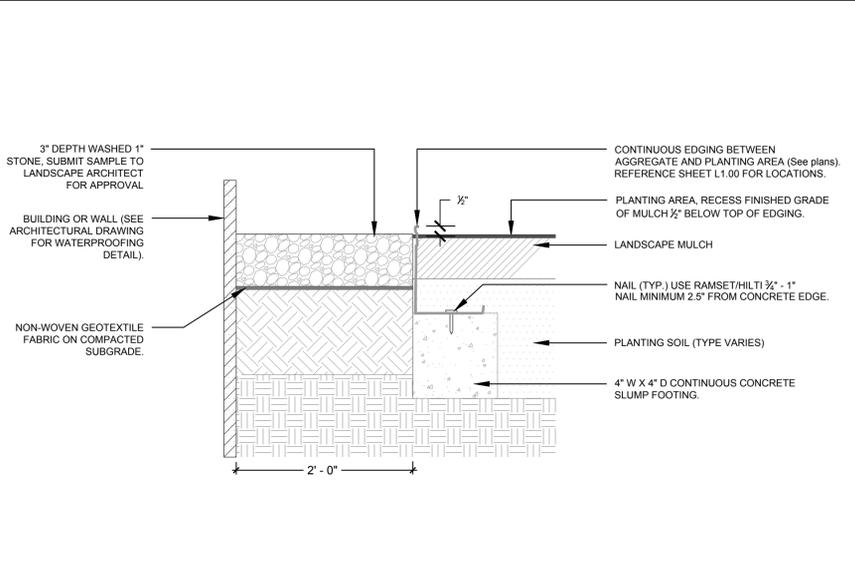




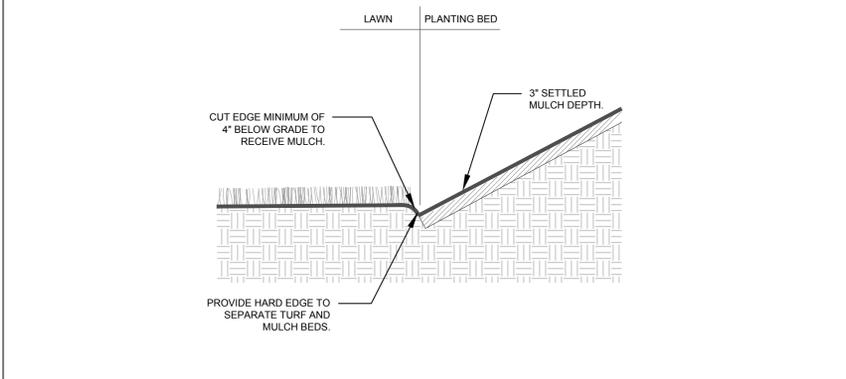
1 TREE STAKING - LODGE POLES SECTION NTS



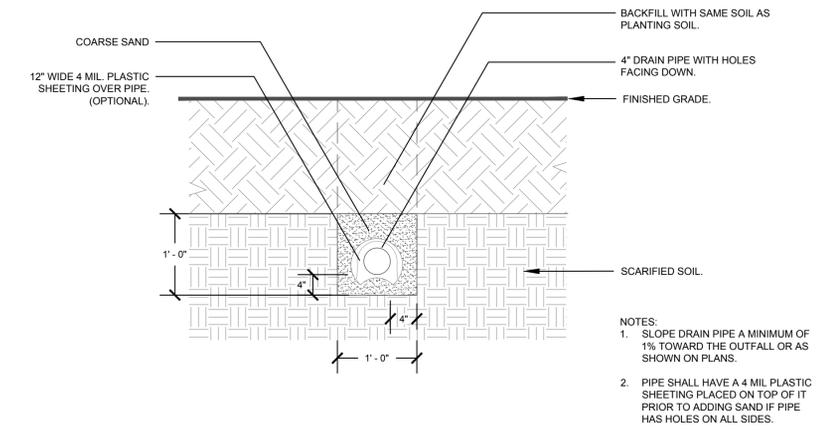
2 TREE STAKING - ON SLOPE SECTION NTS



3 GRAVEL BAND WITH STEEL EDGING SECTION NTS



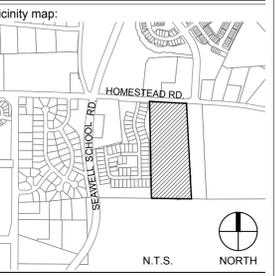
4 LAWN / PLANT BED TRENCH EDGING SECTION NTS



5 PLANTING PIT / BED DRAIN DETAIL SECTION NTS

Client:
 GLMH-2, LLC
 121 S. ESTES DRIVE SUITE 100
 CHAPEL HILL, NC 27514

Project:
INDEPENDENT SENIOR HOUSING CHAPEL HILL



Seal:

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Issued for:
SUP SUBMITTAL

No.	Date	Description

SCALE: N.T.S.

Title:
LANDSCAPE DETAILS

C:\2017\C17104 - Greystar Overture Chapel Hill\DWGS11 - Design\Sheets\C17104-L2.00-Planting & Soils Details.dwg Jan 16, 2018 - 8:32am