DEVELOPMENT SITE PLANS
FOR
KEYSTONE HOMES
3009 FOREST LAWN DRIVE
TOWN OF WEDDINGTON
UNION COUNTY, NORTH CAROLINA

PROJECT CONSULTANTS

ENGINEER:
COLLIERS ENGINEERING & DESIGN, INC.
5275 PARKWAY PLAZA BOULEVARD, SUITE 100
CHARLOTTE, NC 28217
CONTACT: CASEY WHITEMAN, PE
EMAIL: CASEY.WHITEMAN@COLLIERSENG.COM
(877) 627-3772 MAIN

SURVEYOR:
DEKTA LAND SERVICES
CONTACT: MICHAEL GREEN, JR
EMAIL: CHANDLER@DELTALANDSERVICES.NET
(704) 847-4700

DEVELOPER:
KEYSTONE HOMES
CONTACT: KEITH FENN, PE
EMAIL: KFENN@KEYSTONECUSTOMEHOME.COM
(980) 269-6609
2030 AIRPORT FLEX DRIVE, SUITE R
CHARLOTTE, NC 28208

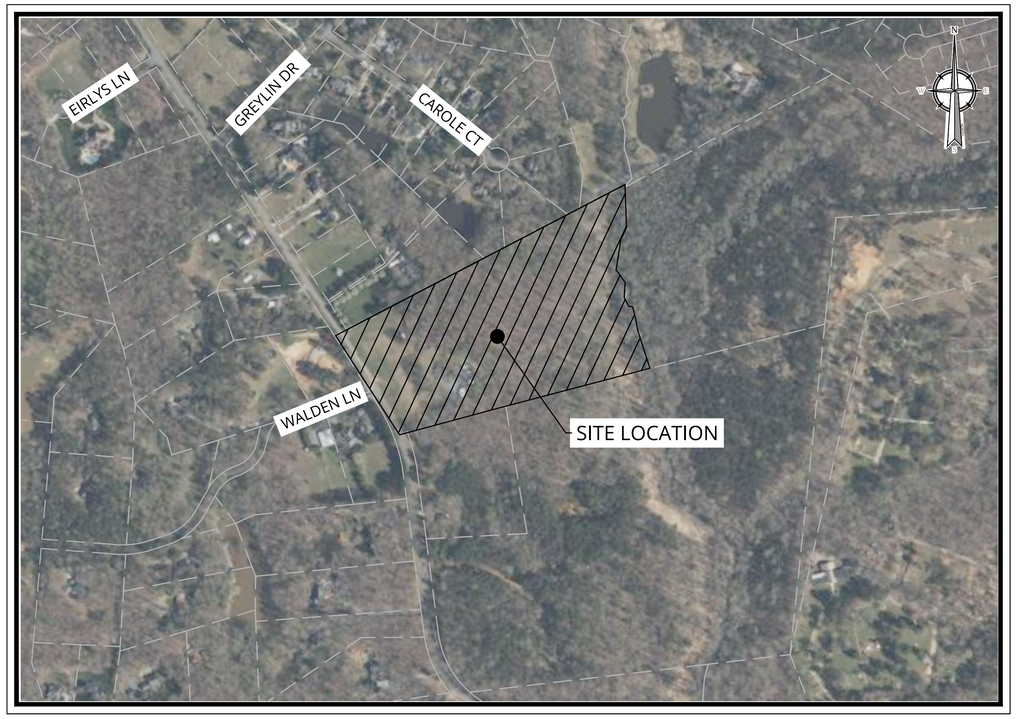
UTILITY COMPANIES

WATER AND SEWER:
UNION COUNTY WATER
(704) 296-4210

GAS SERVICE:
PIEDMONT NATURAL GAS
(800) 752-7504

ELECTRIC SERVICE:
UNION POWER
(704) 289-3145

INDEX OF SHEETS



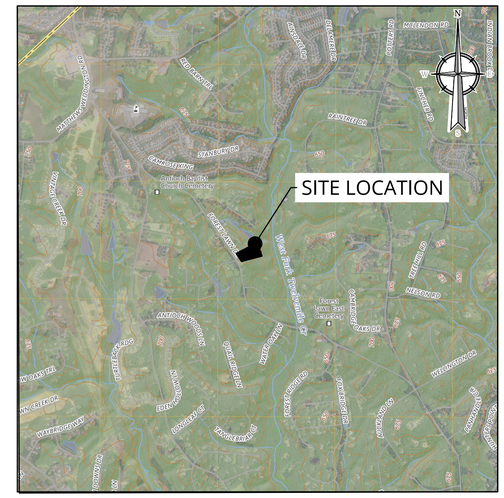
SITE LOCATION MAP

SOURCE: GEOLOCATION

300 0 300

SCALE : 1" = 300'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)



USGS MAP

U.S.G.S 7.5 MIN. TOPOGRAPHIC QUADRANGLE,
NORTH CAROLINA

1000 0 1000

SCALE : 1" = 1000'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
www.colliersengineering.com

Doing Business as MASER CONSULTING

811 Know what's below. Call before you dig.

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.

CHARLOTTE
5275 Parkway Plaza Boulevard,
Suite 100
Charlotte, NC 28217
Phone: 980.245.3161

COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT P.C. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-CVER

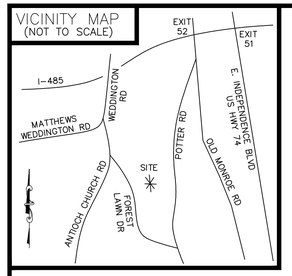
SHEET TITLE:
COVER SHEET

SHEET NUMBER:
C-000

2025\25003536A\Engineering\Site Plans\C-CVER.dwg/C-000-COVER By: NDIOGOU.BA

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

VICINITY MAP
(NOT TO SCALE)



LINETYPE LEGEND

- BOUNDARY LINE
- BOUNDARY TIE LINE
- ADJOINING BOUNDARY LINE (NOT SURVEYED)
- RIGHT-OF-WAY
- OVERHEAD UTILITY LINES — E_x
- BASE FLOOD ELEVATION — XXX
- SANITARY SEWER LINE — SS_x
- 45' ROAD R/W
- WATER LINE — W_x

SYMBOL LEGEND

- FOUND
- SET
- CP
- SSMH
- UP
- GW
- T-PED
- CO
- FO MRKR
- FO UG-BOX
- E-BOX
- WM
- WV
- FH
- CONTROL
- TREE

NOTATION LEGEND

AC	AIR CONDITIONER
BFP	BACK FLOW PREVENTION
CL	CENTERLINE
CO	CLEAN OUT
CP	CALCULATED POINT
DB	DEED BOOK
E-BOX	ELECTRIC BOX
EIP	EXISTING IRON PIPE
EIR	EXISTING IRON REBAR
EOP	EDGE OF PAVEMENT
FH	FIRE HYDRANT
FO	FIBER OPTIC
GW	GUY WIRE
MB	MAP BOOK
MRKR	MARKER
N/F	NOW OR FORMERLY
PG	PAGE
PC	PLAT CABINET
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT-OF-WAY
RWM	RIGHT OF WAY MONUMENT
SIR	SET IRON REBAR
SQ. FT.	SQUARE FOOT
SSMH	SANITARY SEWER MANHOLE
TBM	TEMPORARY BENCHMARK
T-PED	TELECOMMUNICATIONS PEDESTAL
UG	UNDERGROUND
UP	UTILITY POLE
WM	WATER METER
WTR	WATER
WV	WATER VALVE

SURVEYOR NOTES:

1. THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS, RESTRICTIVE COVENANTS AND/OR RIGHT-OF-WAY OF RECORD
2. SUBJECT BOUNDARY INFORMATION BASED ON DEED BOOK 5740, PAGE 122. ADJOINING BOUNDARY INFORMATION BASED ON DEED/MAP BOOK AND PAGES AS SHOWN ON SURVEY, RECORDED IN THE UNION COUNTY REGISTER OF DEEDS.
3. BASIS OF BEARINGS: NC GRID NAD 83/2011, VERTICAL DATUM USED: NAVD88
4. AREA BY COORDINATE METHOD. ALL DISTANCES SHOWN ARE HORIZONTAL AND US FEET.
5. THIS PROPERTY IS LOCATED WITHIN ZONE "X" AND ZONE "AE" ACCORDING TO THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 3710448700J, DATED 10-16-2008.
6. NO NCGS OR USGS MONUMENTS LOCATED WITHIN 2000' OF SUBJECT PARCEL.
7. SUBJECT PROPERTY IS ZONED R-CD(WEDDINGTON) PER UNION COUNTY GIS
8. SETBACKS PER TOWN OF WEDDINGTON UDO

R-CD(CONVENTIONAL)	R-CD(CONSERVATION)
50' SETBACK	40' SETBACK
15' SIDEYARD	12' SIDEYARD***
40' REARYARD	40' REARYARD

*** A SEPARATION OF 30 FEET SHALL BE MAINTAINED BETWEEN THE SIDES OF EACH DWELLING

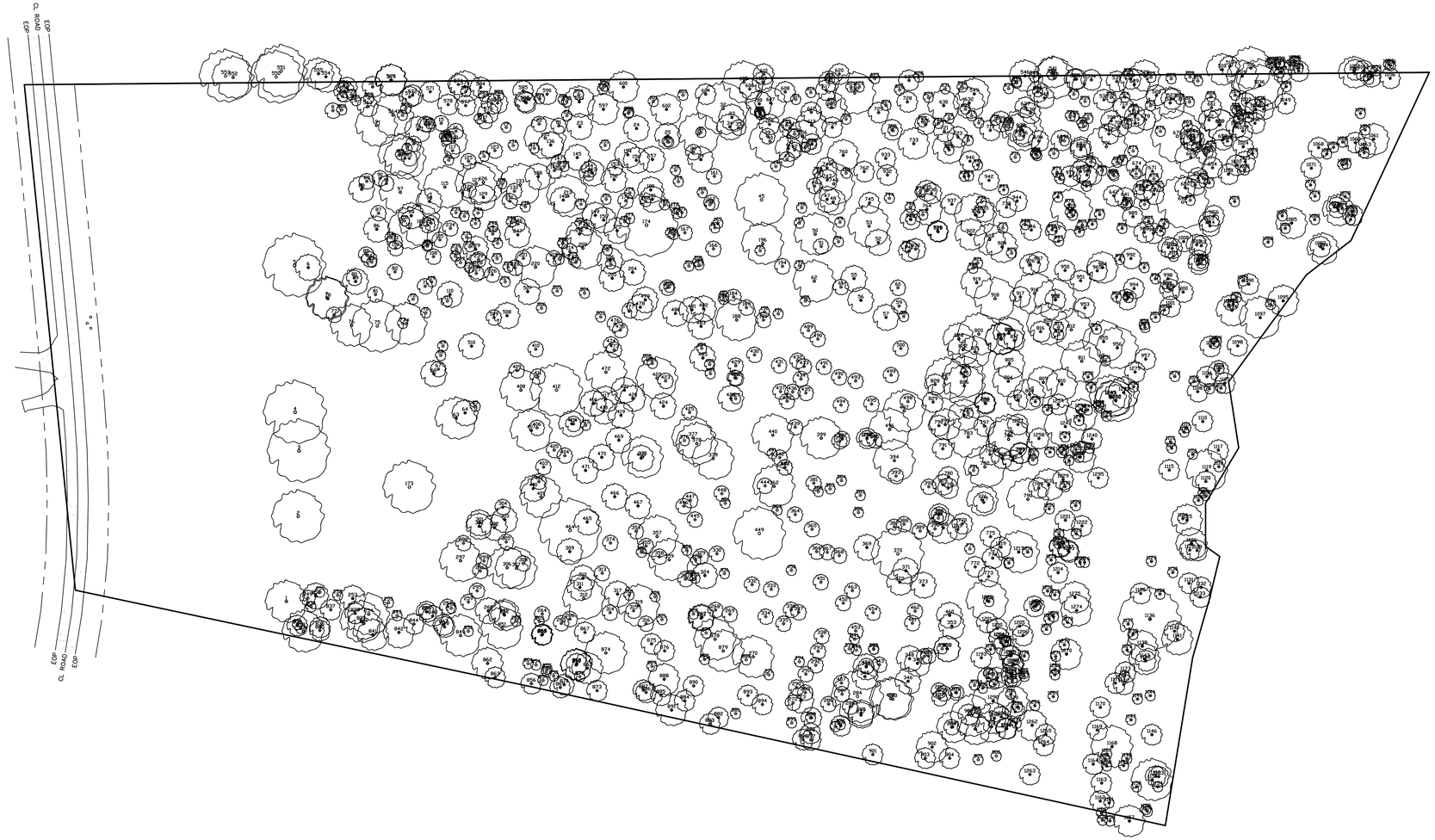
I, T. MICHAEL GREEN, JR., PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DEED DESCRIPTION AND/OR MAP BOOK SEE , PAGE NOTES ; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS FROM INFORMATION AS SHOWN HEREON; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600); THAT THE GLOBAL POSITIONING SYSTEM (GPS) SURVEY AND AND THAT THE ORIGINAL DATA WAS OBTAINED ON MARCH 4TH, 2025; THAT THE SURVEY WAS COMPLETED ON JULY 29TH, 2025; THE FOLLOWING INFORMATION WAS USED TO PERFORM THE GPS SURVEY:
CLASS OF SURVEY: A
POSITIONAL ACCURACY: 0.10 US.FT.
TYPE OF GPS FIELD PROCEDURE: RTK NETWORK
DATE OF SURVEY: AUGUST 1, 2025
DATUM/EPOCH: NAD 83/2011
PUBLISHED/FIXED CONTROL USED: NGS MONUMENT "NGS UNION HM71"
GEOID MODEL: GEOID 18
COMBINED GRID FACTOR: 0.99985350
UNITS: US SURVEY FOOT

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS _____ DAY OF _____, 2025.

NORTH CAROLINA PROFESSIONAL SEAL L-4821 LAND SURVEYOR T. MICHAEL GREEN, JR.

PRELIMINARY
NOT FOR RECORDATION OR SALES

_____
T. MICHAEL GREEN, JR., PLS
LICENSE NUMBER: L-4821



NAD83(2011)
NC GRID

GRAPHIC SCALE
0 60 120 180
(IN FEET)
1 inch = 60 ft.

DELTA LAND SERVICES, INC.
NC FIRM LICENSE #C-735
608 MATTHEWS-MINT HILL ROAD
SUITE G
MATTHEWS, NC 28105
T 704. 847.4700
www.deltalandservices.net

SEAL:
NORTH CAROLINA 1952 DELTA LAND SERVICES, INC. NO. C-735 CERTIFICATE OF AUTHORIZATION

PREPARED FOR:
KEYSTONE CUSTOM HOMES

ADDRESS: 2030 AIRPORT FLEX DRIVE, SUITE R
CHARLOTTE, NC 28208

OWNER(S):
HELMS BRENDA PRESSLEY
HELMS RICHARD WAYNE
DB 5740 PG 122

ADDRESS:
3009 FOREST LAWN DR
MATTHEWS, NC 28104

TREE SURVEY EXHIBIT
PARCEL ID#:07150015
VANCE TOWNSHIP
UNION COUNTY, NORTH CAROLINA

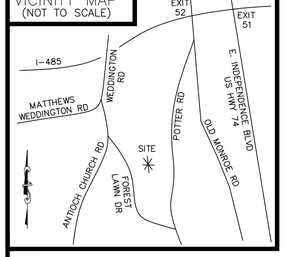
SHEET NUMBER:
SHEET 1 0F 2

PROJECT NAME:
FOREST LAWN

DRAWN BY: CCM	DATE: 08/01/2025
CHECKED BY: TMG	SCALE : 1" = 60'

REVISION NO:	DATE:

DRAWING TITLE:
3009 FOREST LAWN DRIVE
TREE SURVEY EXH.DWG



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GEOID MODEL: GEOID 18
COMBINED GRID FACTOR: 0.99985350
UNITS: US SURVEY FOOT

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS ____ DAY OF ____________________, 2025.

PRELIMINARY
NOT FOR RECORDATION OR SALES

T. MICHAEL GREEN, JR., PLS
LICENSE NUMBER: L-4821

SEAL L-4821 T. MICHAEL GREEN, JR.

DELTA LAND SERVICES, INC.
NC FIRM LICENSE #C-735
608 MATTHEWS-MINT HILL ROAD
SUITE G
MATTHEWS, NC 28105
T 704.847.4700
www.deltalandservices.net

SEAL:
DELTA LAND SERVICES, INC. NO. C-735

3009 Forest Lawn Dr – Tree Survey Report

Point #	Tree Description																								
1	23" OAK	101	24" OAK	201	6" OAK	301	20" BLACK CHERRY	401	30" OAK	501	8" OAK	601	6" OAK	701	6" OAK	801	8" OAK	901	10" OAK	1001	12" SWEET GUM	1101	12" SWEET GUM	1201	12" TULIP POPLAR
2	35" OAK	102	30" SPLIT OAK	202	6" OAK	302	20" OAK	402	15" HICKORY	502	8" OAK	602	18" BEECH	702	6" CEDAR	802	12" OAK	902	16" OAK	1002	6" OAK	1102	11" OAK	1202	6" OAK
3	43" OAK	103	10" OAK	203	12" OAK	303	20" OAK	403	15" HICKORY	503	8" OAK	603	6" OAK	703	6" OAK	803	12" OAK	903	9" OAK	1003	6" OAK	1103	6" OAK	1203	24" OAK
4	46" OAK	104	10" OAK	204	16" OAK	304	14" HICKORY	404	15" HICKORY	504	8" PINE	604	14" OAK	704	6" OAK	804	18" MAPLE	904	9" OAK	1004	6" OAK	1104	12" OAK	1204	10" OAK
5	50" SPLIT OAK	105	10" PINE	205	16" OAK	305	14" PINE	405	15" HICKORY	505	8" OAK	605	24" OAK	705	8" OAK	805	18" MAPLE	905	8" OAK	1005	8" OAK	1105	12" OAK	1205	10" OAK
6	19"OAK	106	8" OAK	206	16" OAK	306	24" HICKORY	406	15" HICKORY	506	8" OAK	606	12" BEECH	706	23" SPLIT MAPLE	806	18" MAPLE	906	8" OAK	1006	12" HICKORY	1106	6" BEECH	1206	14" SPLIT OAK
7	28" OAK	107	6" OAK	207	6" OAK	307	24" HICKORY	407	24" OAK	507	16" OAK	607	20" OAK	707	12" OAK	807	18" MAPLE	907	22" OAK	1007	10" OAK	1107	6" OAK	1207	6" OAK
8	15" PINE	108	12" PINE	208	6" OAK	308	10" OAK	408	22" BLACK CHERRY	508	16" OAK	608	12" OAK	708	12" OAK	808	18" MAPLE	908	9" OAK	1008	12" OAK	1108	12" OAK	1208	8" OAK
9	22" OAK	109	8" OAK	209	24" OAK	309	20" OAK	409	14" PINE	509	10" OAK	609	10" BEECH	709	12" OAK	809	18" MAPLE	909	6" BEECH	1009	14" PINE	1109	7" OAK	1209	6" OAK
10	12" PINE	110	16" OAK	210	16" OAK	310	20" OAK	410	14" OAK	510	21" OAK	610	10" OAK	710	6" OAK	810	18" MAPLE	910	18" HICKORY	1010	15" OAK	1110	12" OAK	1210	8" OAK
11	12" PINE	111	7" OAK	211	10" OAK	311	20" OAK	411	14" OAK	511	20" OAK	611	6" BEECH	711	12" PINE	811	24" MAPLE	911	8" OAK	1011	8" BEECH	1111	6" OAK	1211	8" OAK
12	8" OAK	112	10" OAK	212	6" OAK	312	30" OAK	412	32" SPLIT HICKORY	512	8" PINE	612	15" OAK	712	6" CEDAR	812	24" MAPLE	912	8" OAK	1012	12" OAK	1112	8" OAK	1212	7" OAK
13	17" PINE	113	10" OAK	213	24" SPLIT SWEETGUM	313	15" OAK	413	16" SWEETGUM	513	6" CEDAR	613	20" OAK	713	14" PINE	813	6" OAK	913	16" PINE	1013	12" OAK	1113	8" OAK	1213	7" OAK
14	14" PINE	114	8" OAK	214	12" OAK	314	15" OAK	414	10" OAK	514	6" CEDAR	614	6" BEECH	714	6" OAK	814	6" OAK	914	16" PINE	1014	15" OAK	1114	8" SWEET GUM	1214	10" OAK
15	14" SWEET GUM	115	22" OAK	215	8" OAK	315	15" OAK	415	8" OAK	515	16" OAK	615	16" OAK	715	6" OAK	815	22" OAK	915	24" MAPLE	1015	10" OAK	1115	14" OAK	1215	8" OAK
16	14" PINE	116	6" OAK	216	8" PINE	316	9" OAK	416	20" OAK	516	30" OAK	616	6" BEECH	716	8" OAK	816	10" OAK	916	24" MAPLE	1016	9"" HICKORY	1116	8" OAK	1216	8" OAK
17	9" OAK	117	10" PINE	217	8" SWEETGUM	317	20" SPLIT OAK	417	20" OAK	517	12" PINE	617	12" OAK	717	10" OAK	817	10" OAK	917	15" OAK	1017	6" OAK	1117	12" OAK	1217	22" SPLIT OAK
18	7" OAK	118	16" OAK	218	6" OAK	318	6" SWEETGUM	418	20" OAK	518	16" PINE	618	15" OAK	718	6" OAK	818	16" MAPLE	918	24" BEECH	1018	12" BEECH	1118	8" HICKORY	1218	8" BLACK CHERRY
19	8" SWEETGUM	119	6" OAK	219	12" PINE	319	22" HICKORY	419	16" OAK	519	6" OAK	619	6" OAK	719	6" HICKORY	819	16" HICKORY	919	18" OAK	1019	8" OAK	1119	28" SPLIT BEECH	1219	12" BLACK CHERRY
20	12" OAK	120	6" OAK	220	24" SPLIT HICKORY	320	8" OAK	420	16" OAK	520	6" OAK	620	12" OAK	720	8" OAK	820	26" SPLIT HICKORY	920	8" OAK	1020	8" OAK	1120	15" OAK	1220	6" BEECH
21	14" SPLIT OAK	121	8" OAK	221	10" OAK	321	8" OAK	421	16" OAK	521	8" OAK	621	6" OAK	721	10" OAK	821	18" MAPLE	921	8" OAK	1021	12" OAK	1121	6" BEECH	1221	10" TULIP POPLAR
22	8" OAK	122	8" OAK	222	12" HICKORY	322	8" OAK	422	30" OAK	522	8" OAK	622	22" SWEET GUM	722	8" BLACK CHERRY	822	18" MAPLE	922	18" OAK	1022	10" OAK	1122	6" BEECH	1222	14" TULIP POPLAR
23	18" OAK	123	10" OAK	223	6" OAK	323	20" OAK	423	14" OAK	523	10" SWEET GUM	623	8" OAK	723	10" OAK	823	18" MAPLE	923	18" OAK	1023	8" BLACK CHERRY	1123	8" OAK	1223	6" OAK
24	16" OAK	124	8" OAK	224	6" OAK	324	16" PINE	424	20" OAK	524	18" OAK	624	8" BLACK CHERRY	724	6" BEECH	824	6" MAPLE	924	18" OAK	1024	10" OAK	1124	8" OAK	1224	8" OAK
25	21" OAK	125	12" HICKORY	225	6" OAK	325	8"OAK	425	10" HICKORY	525	6" OAK	625	6" BLACK CHERRY	725	8" OAK	825	20" OAK	925	6" OAK	1025	8" SWEET GUM	1125	20" TULIP POPLAR	1225	8" OAK
26	7" SWEETGUM	126	24" SWEETGUM	226	10" OAK	326	8"OAK	426	20" OAK	526	12" PINE	626	8" OAK	726	15" POPLAR	826	20" OAK	926	12" OAK	1026	15" PINE	1126	20" SPLIT HICKORY	1226	10" OAK
27	7" SWEETGUM	127	24" OAK	227	10" OAK	327	12" PINE	427	8" OAK	527	6" OAK	627	15" BEECH	727	6" OAK	827	20" OAK	927	12" OAK	1027	12" OAK	1127	10" BIRCH	1227	12" OAK
28	9" OAK	128	12" OAK	228	16" OAK	328	8" OAK	428	15" OAK	528	16" PINE	628	8" OAK	728	10" BLACK CHERRY	828	12" OAK	928	12" OAK	1028	8" OAK	1128	12" OAK	1228	6" MAPLE
29	18" HICKORY	129	16" OAK	229	16" OAK	329	12" OAK	429	15" OAK	529	20" SPLIT HICKORY	629	6" BEECH	729	10" BEECH	829	12" BEECH	929	12" OAK	1029	6" OAK	1129	8" OAK	1229	12" OAK
30	7" BEECH	130	6" OAK	230	6" OAK	330	15" OAK	430	15" OAK	530	10" PINE	630	20" SWEET GUM	730	6" BLACK CHERRY	830	8" BLACK CHERRY	930	12" OAK	1030	6" OAK	1130	6" HICKORY	1230	6" BEECH
31	22" HICKORY	131	12" OAK	231	6" MAPLE	331	8" OAK	431	15" OAK	531	6" OAK	631	6" MAPLE	731	8" OAK	831	8" OAK	931	12" OAK	1031	10" BLACK CHERRY	1131	9" OAK	1231	18" OAK
32	36" SPLIT OAK	132	12" OAK	232	6" MAPLE	332	12" OAK	432	15" OAK	532	6" OAK	632	18" SWEET GUM	732	10" OAK	832	15" SPLIT OAK	932	12" OAK	1032	11" OAK	1132	12" CEDAR	1232	8" OAK
33	16" OAK	133	24" OAK	233	8" PINE	333	12" OAK	433	10" OAK	533	12" PINE	633	8" BEECH	733	18" BEECH	833	6" BEECH	933	12" OAK	1033	9" PINE	1133	15" OAK	1233	8" OAK
34	20" SPLIT BEECH	134	7" TULIP POPLAR	234	12" HICKORY	334	12" OAK	434	10" OAK	534	12" PINE	634	6" OAK	734	8" OAK	834	24" SPLIT OAK	934	6" OAK	1034	9" OAK	1134	8" MAPLE	1234	8" OAK
35	12" OAK	135	24" SPLIT OAK	235	8" PINE	335	10" HICKORY	435	10" OAK	535	12" PINE	635	6" OAK	735	15" SWEET GUM	835	10" OAK	935	12" OAK	1035	6" OAK	1135	11" SWEET GUM	1235	6" OAK
36	6" BEECH	136	20" TULIP POPLAR	236	8" PINE	336	10" HICKORY	436	10" OAK	536	15" PINE	636	10" BLACK CHERRY	736	22" SWEET GUM	836	10" PINE	936	12" OAK	1036	42" SPLIT SWEET GUM	1136	65" SPLIT OAK	1236	6" OAK
37	8" OAK	137	8" OAK	237	8" OAK	337	10" PINE	437	10" OAK	537	10" OAK	637	12" OAK	737	6" BEECH	837	10" OAK	937	12" BEECH	1037	8" PINE	1137	6" OAK	1237	16" OAK
38	18" OAK	138	16" SPLIT OAK	238	8" OAK	338	10" PINE	438	10" OAK	538	6" SWEET GUM	638	9" PINE	738	15" HICKORY	838	10" SPLIT BLACK CHERRY	938	6" OAK	1038	8" OAK	1138	6" OAK	1238	10" OAK
39	12" OAK	139	6" OAK	239	12" OAK	339	6" OAK	439	10" HICKORY	539	8" OAK	639	20" OAK	739	12" OAK	839	22" OAK	939	6" BEECH	1039	8" SWEET GUM	1139	20" SPLIT OAK	1239	6" BEECH
40	26" OAK	140	20" OAK	240	12" OAK	340	6" OAK	440	30" OAK	540	24" SWEET GUM	640	8" BLACK CHERRY	740	15" POPLAR	840	20" HICKORY	940	10" OAK	1040	6" OAK	1140	9" SPLIT OAK	1240	10" OAK
41	16" SPLIT OAK	141	8" OAK	241	8" MAPLE	341	6" OAK	441	6" OAK	541	20" SWEET GUM	641	12" SWEET GUM	741	8" BLACK CHERRY	841	16" SPLIT OAK	941	8" OAK	1041	6" MAPLE	1141	16" OAK	1241	24" OAK
42	15" OAK	142	8" OAK	242	8" PINE	342	6" OAK	442	10" OAK	542	6" OAK	642	10" HICKORY	742	8" BLACK CHERRY	842	16" OAK	942	10" OAK	1042	12" OAK	1142	9" OAK	1242	8" SPLIT BEECH
43	12" OAK	143	16" OAK	243	8" OAK	343	10" OAK	443	10" OAK	543	12" OAK	643	8" BLACK CHERRY	743	6" BLACK CHERRY	843	6" OAK	943	8" BLACK CHERRY	1043	10" PINE	1143	20" SPLIT HICKORY	1243	8" OAK
44	8" OAK	144	12" OAK	244	6" OAK	344	16" OAK	444	10" OAK	544	8" OAK	644	11" PINE	744	6" PINE	844	10" OAK	944	12" BEECH	1044	8" PINE	1144	6" OAK	1244	6" BEECH
45	40" BEECH	145	16" OAK	245	8" PINE	345	16" OAK	445	10" OAK	545	6" MAPLE	645	7" BLACK CHERRY	745	12" SWEET GUM	845	10" OAK	945	6" OAK	1045	6" SWEET GUM	1145	6" OAK	1245	18" TULIP POPLAR
46	10" OAK	146	8" OAK	246	12" OAK	346	20" HICKORY	446	10" HICKORY	546	20" OAK	646	7" PINE	746	24" OAK	846	10" BEECH	946	15" OAK	1046	8" OAK	1146	10" SPLIT OAK	1246	8" OAK
47	16" OAK	147	12" SWEET GUM	247	16" OAK	347	16" PINE	447	10" PINE	547	6" OAK	647	10" OAK	747	10" OAK	847	10" OAK	947	6" OAK	1047	6" SWEET GUM	1147	8" SWEET GUM	1247	6" BEECH
48	16" OAK	148	12" OAK	248	8" MAPLE	348	16" OAK	448	14" HICKORY	548	8" SWEET GUM	648	32" OAK	748	6" BLACK CHERRY	848	10" PINE	948	6" OAK	1048	8" OAK	1148	8" SWEET GUM	1248	6" HICKORY
49	6" SWEETGUM	149	16" OAK	249	9" PINE	349	12" OAK	449	42" BEECH	549	20" BEECH	649	6" SWEET GUM	749	15" OAK	849	28" HICKORY	949	15" OAK	1049	12" OAK	1149	6" SWEET GUM	1249	28" SPLIT OAK
50	22" OAK	150	16" OAK	250	16" OAK	350	12" BIRCH	450	8" OAK	550	36" SPLIT CEDAR	650	15" OAK	750	15" OAK	850	8" OAK	950	15" BEECH	1050	10" OAK	1150	6" SWEET GUM	1250	30" SPLIT OAK
51	14" OAK	151	8" OAK	251	6" OAK	351	8" SWEETGUM	451	12" OAK	551	40" SPLIT CEDAR	651	15" CEDAR	751	6" BEECH	851	24" MAPLE	951	12" BEECH	1051	18" BLACK CHERRY	1151	24" TULIP POPLAR	1251	8" BEECH
52	20" HICKORY	152	16" OAK	252	6" OAK	352	20" PINE	452	12" OAK	552	30" SPLIT CEDAR	652	15" OAK	752	8" OAK	852	20" MAPLE	952	12" OAK	1052	12" OAK	1152	12" HICKORY	1252	6" SWEET GUM
53	24" TULIP POPLAR	153	10" OAK	253	18" OAK	353	20" OAK	453	12" OAK	553	42" SPLIT CEDAR	653	7" OAK	753	8" OAK	853	14" OAK	953	14" OAK	1053	8" PINE	1153	12" HICKORY	1253	6" OAK
54	8" SPLIT SWEETGUM	154	16" OAK	254	30" OAK	354	10" BLACK CHERRY	454	12" OAK	554	16" SPLIT CEDAR	654	10" OAK	754	15" OAK	854	8" OAK	954	8" OAK	1054	12" PINE	1154	6" SWEET GUM	1254	12" OAK
55	20" OAK	155	8" OAK	255	6" OAK	355	14" OAK	455	8" HICKORY	555	18" SPLIT CEDAR	655	10" OAK	755	6" OAK	855	8" OAK	955	24" OAK	1055	8" HICKORY	1155	6" OAK	1255	8" BLACK CHERRY
56	20" OAK	156	16" OAK	256	10" OAK	356	8" BLACK CHERRY	456	15" OAK	556	8" OAK	656	8" OAK	756	18" OAK	856	12" PINE	956	24" OAK	1056	10" SWEET GUM	1156	6" OAK	1256	8" BLACK CHERRY
57	20" OAK	157	16" OAK	257	10" OAK	357	26" OAK	457	15" HICKORY	557	10" PINE	657	6" BEECH	757	6" OAK	857	8" OAK	957	10" OAK	1057	6" OAK	1157	18" OAK	1257	14" OAK
58	8" CEDAR	158	8" OAK	258	6" MAPLE	358	12" OAK	458	24" OAK	558	10" PINE	658	12" PINE	758	8" OAK	858	8" OAK	958	6" OAK	1058	6" BEECH	1158	8" TULIP POPLAR	1258	14" OAK
59	10" OAK	159	6" OAK	259	12" PINE	359	24" OAK	459	16" PINE	559	8" PINE	659	18" OAK	759	12" BEECH	859	8" OAK	959	6" OAK	1059	8" OAK	1159	8" HICKORY	1259	12" HICKORY
60	12" SWEET GUM	160	6" HICKORY	260	20" OAK	360	8" OAK	460	16" OAK	560	8" OAK	660	8" CEDAR	760	18" OAK	860	20" PINE	960	6" OAK	1060	6" BLACK CHERRY	1160	8" HICKORY	1260	16" OAK
61	12" SWEET GUM	161	10" BEECH	261	20" OAK	361	8" OAK	461	12" OAK	561	6" PINE	661	10" OAK	761	8" BEECH	861	20" OAK	961	9" OAK	1061	20" SPLIT BLACK CHERRY	1161	6" OAK	1261	12" OAK
62	24" OAK	162	12" OAK	262	6" HICKORY	362	24" OAK	462	12" OAK	562	6" PINE	662	10" OAK	762	15" BLACK CHERRY	862	20" OAK	962	6" OAK	1062	12" TULIP POPLAR	1162	15" OAK	1262	21" OAK
63	24" TULIP POPLAR	163	6" OAK	263	6" HICKORY	363	8" OAK	463	12" OAK	563	12" PINE	663	6" OAK	763	6" BEECH	863	14" OAK	963	8" OAK	1063	12" BLACK CHERRY	1163	12" OAK	1263	15" HICKORY
64	20" TULIP POPLAR	164	6" OAK	264	12" HICKORY	364	12" OAK	464	50" SPLIT OAK	564	22" SPLIT HICKORY	664	12" OA	764	18" POPLAR	864	6" OAK	964	20" OAK SPLIT	1064	8" BEECH	1164	12" TULIP POPLAR	1264	6" HICKORY
65	8" TULIP POPLAR	165	8" OAK	265	12" OAK	365	12" OAK	465	20" OAK	565	8" PINE	665	12" OAK	765	6" OAK	865	14" OAK	965	12" HICKORY	1065	8" SWEET GUM	1165	6" OAK	1265	6" HICKORY
66	16" PINE	166	15" BLACK CHERRY	266	14" PINE	366	12" OAK	466	20" OAK	566	6" OAK	666	12" OAK	766	12" BLACK CHERRY	866	14" OAK	966	8" BLACK CHERRY	1066	6" SWEET GUM	1166	6" OAK	1266	6" OAK
67	10" OAK	167	15" OAK	267	20" HICKORY	367	14" BEECH	467	20" OAK	567	20" OAK	667	10" OAK	767	6" OAK	867	14" OAK	967	6" OAK	1067	6" SWEET GUM	1167	8" OAK	1267	6" OAK
68	8" OAK	168	8" OAK	268	12" SWEET GUM	368	12" OAK	468	20" OAK	568	6" PINE	668	8" OA	768	20"OAK	868	14" PINE	968	8" HICKORY	1068	12" SWEET GUM	1168	28" SPLIT OAK	1268	6" OAK
69	8" PINE	169	8" OAK	269	15" OAK	369	16" OAK	469	20" HICKORY	569	9" MAPLE	669	16" SPLIT OAK	769	8" HICKORY	869	14" OAK	969	6" BLACK CHERRY	1069	6" BEECH	1169	10" OAK	1269	6" OAK
70	6" OAK	170	8" OAK	270	22"OAK	370	32" OAK	470	16" HICKORY	570	20" OAK	670	36" SPLIT MAPLE	770	15" HICKORY	870	14" OAK	970	6" OAK	1070	6" BEECH	1170	10" OAK	1270	16" OAK
71	10" OAK	171	8" OAK	271	6" OAK	371	20" OAK	471	16" PINE	571	9" OAK	671	10" OAK	771	8" HICKORY	871	18" PINE	971	6" OAK	1071	10" OAK	1171	15" OAK	1271	8" OAK
72	6" OAK	172	8" OAK	272	14" OAK	372	20" OAK	472	24" SPLIT OAK	572	9" OAK	672	8" PINE	772	15" OAK	872	6"OAK	972	8" BLACK CHERRY	1072	8" OAK	1172	10" OAK	1272	8" OAK
73	6" SWEETGUM	173	40" OAK	273	20"OAK	373	20" OAK	473	15" OAK	573	12" OAK	673	6" OAK	773	10" OAK	873	12" OAK	973	24" TULIP POPLAR	1073	8" OAK	1173	10" OAK	1273	8" OAK
74	30" OAK	174	43" SPLIT HICKORY	274	8" OAK	374	12" BEECH	474	15" OAK	574	10" OAK	674	12" OAK	774	10" OAK	874	24" HICKORY	974	8" BLACK CHERRY	1074	6" OAK	1174	6" SWEET GUM	1274	16" OAK
75	40" OAK	175	16" OAK	275	8" OAK	375	22"OAK	475	15" OAK	575	18" OAK	675	8" OAK	775	10" OAK	875	14" OAK	975	20" TULIP POPLAR	1075	12" OAK	1175	6" BLACK CHERRY	1275	16" OAK
76	24" OAK	176	8" OAK	276	8" PINE	376	6" SWEETGUM	476	15" OAK	576	8" MAPLE	676	8" CEDAR	776	20" OAK	876	14" OAK	976	8" OAK	1076	18" OAK	1176	10" OAK	1276	8" OAK
77	12" OAK	177	6" OAK	277	20" HICKORY	377	22"OAK	477	15" OAK	577	10" PINE	677	8" OAK	777	15" HICKORY	877	8" OAK	977	6" OAK	1077	8" OAK	1177	8" OAK	1277	8" OAK
78	24" OAK	178	12" OAK	278	14" OAK	378	22"OAK	478	18" HICKORY	578	10" PINE	678	12" PINE	778	15" HICKORY	878	22" OAK	978	8" OAK	1078	6" OAK	1178	12" OAK	1278	8" OAK
79	16" OAK	179	8" OAK	279	14" OAK	379	22"OAK	479	18" HICKORY	579	12" OAK	679	12" PINE	779	15" HICKORY	879	22" OAK	979	10" OAK	1079	6" BEECH	1179	16" SWEET GUM	1279	12" OAK
80	10" OAK	180	16" OAK	280	14" OAK	380	10" OAK	480	18" HICKORY	580	12" PINE	680	8" OAK	780	15" HICKORY	880	6" OAK	980	12" OAK	1080	6" CEDAR	1180	8" BLACK CHERRY	1280	8" BLACK CHERRY
81	10" OAK	181	16" OAK	281	12" OAK	381	10" OAK	481	18" HICKORY	581	12" HICKORY	681	8" OAK	781	6" OAK	881	8" OAK	981	10" OAK	1081	12" SWEET GUM	1181	8" BLACK CHERRY	1281	18" OAK
82	10" OAK	182	6" SWEETGUM	282	10" OAK	382	6" OAK	482	18" HICKORY	582	6" OAK	682	6" OAK	782	22" OAK	882	12" OAK	982	8" OAK	1082	8" SWEET GUM	1182	6" MAPLE	1282	18" OAK
83	8" OAK	183	8" SWEETGUM	283	26" OAK	383	6" OAK	483	18" HICKORY	583	8" OAK	683	6" OAK	783	22" OAK	883	12" OAK	983	6" BLACK CHERRY	1083	12" OAK	1183	14" PINE	1283	18" OAK
84	14" OAK	184	16" OAK	284	38" OAK	384	6" OAK	484	8" OAK	584	10" OAK	684	8" OAK	784	10" OAK	884	12" OAK	984	6" HICKORY	1084	20" OAK	1184	8" SWEET GUM	1284	6" OAK
85	14" SWEET GUM	185	6" OAK	285	20" OAK	385	6" PINE	485	20" OAK	585	10" OAK	685	18" OAK	785	10" OAK	885	12" HICKORY	985	12" OAK	1085	18" TULIP POPLAR	1185	10" PINE	1285	6" OAK
86	18" SPLIT OAK	186	8" OAK	286	9" CEDAR	386	6" OAK	486	8" OAK	586	10" OAK	686	6: OAK	786	22" HICKORY	886	12" HICKORY	986	6" BEECH	1086	8" OAK	1186	8" TULIP POPLAR	1286	12" OAK
87	12" OAK	187	12" OAK	287	12" PINE	387	14" OAK	487	8" OAK	587	10" OAK	687	12" OAK	787	10" OAK	887	12" HICKORY	987	6" OAK	1087	8" OAK	1187	6" BLACK CHERRY	1287	12" OAK
88	20" OAK	188	24" TULIP POPLAR	288	12" OAK	388	14" OAK	488	15" HICKORY	588	12" OAK	688	12" OAK	788	10" OAK	888	18" HICKORY	988	10" BLACK CHERRY	1088	8" OAK	1188	14" PINE	1288	12" PINE
89	12" OAK	189	10" OAK	289	12" OAK	389	14" OAK	489	15" HICKORY	589	6" OAK	689	12" OAK	789	10" OAK	889	6" OAK	989	10" TULIP POPLAR	1089	8" OAK	1189	10" BEECH	1289	12" PINE
90	12" OAK	190	6" OAK	290	12" PINE	390	14" OAK	490	15" HICKORY	590	14" OAK	690	6" OAK	790	30" MAPLE	890	12" HICKORY	990	6" BEECH	1090	12" OAK	1190	8" TULIP POPLAR	1290	22" OAK
91	12" OAK	191	6" OAK	291	12" PINE	391	14" OAK	491	15" HICKORY	591	8" OAK	691	6" OAK	791	12" OAK	891	16" OAK	991	6" OAK	1091	8" OAK	1191	8" BLACK CHERRY	1291	10" OAK
92	24" SPLIT OAK	192	6" OAK	292	12" PINE	392	14" OAK	492	15" HICKORY	592	6" OAK	692	6" OAK	792	12" OAK	892	6" OAK	992	12" OAK	1092	8" OAK	1192	6" OAK	1292	10" OAK
93	6" OAK	193	6" OAK	293	12" OAK	393	12 BEECH	493	15" OAK	593	16" SWEET GUM	693	8" OAK	793	20" OAK	893	12" OAK	993	8" BEECH	1093	6" OAK	1193	12" HICKORY	1293	10" OAK
94	30" SPLIT OAK	194	14" SPLIT MAPLE	294	8" OAK	394	22"OAK	494	15" OAK	594	8" OAK	694	10" OAK	794	20" OAK	894	12" PINE	994	10" TULIP POPLAR	1094	16" OAK	1194	6" BEECH	1294	10" OAK
95	12" OAK	195	8" SWEETGUM	295	14" HICKORY	395	12" HICKORY	495	15" OAK	595	8" OAK	695	22" POPLAR	795	8" OAK	895	6" OAK	995	8" OAK	1095	16" OAK	1195	12" OAK	1295	10" OAK
96	6" SWEETGUM	196	24" OAK	296	14" HICKORY	396	12" HICKORY	496	22" OAK	596	6" OAK	696	12" OAK	796	12" OAK	896	15" PINE	996	8" OAK	1096	6" OAK	1196	12" OAK		
97	22" SPLIT OAK	197	6" OAK	297	24" OAK	397	12" HICKORY	497	22" OAK	597	18" OAK	697	6" OAK	797	12" OAK	897	15" PINE	997	8" OAK	1097	24" TULIP POPLAR	1197	8" OAK		
98	16" OAK	198	8" OAK	298	14" OAK	398	12" HICKORY	498	15" OAK	598	8" OAK	698	6" ELM	798	24" OAK	898	12" OAK	998	12" OAK	1098	10" SWEET GUM	1198	6" BEECH		
99	21" SPLIT OAK	199	8" PINE	299	14" OAK	399	22"OAK	499	15" OAK	599	6" OAK	699	14" OAK	799	15" OAK	899	12" OAK	999	10" OAK	1099	8" OAK	1199	6" OAK		
100	7" OAK	200	8" SPLIT MAPLE	300	20" BLACK CHERRY	400	20" OAK	500	15" OAK	600	20" OAK	700	6" BLACK CHERRY	800	8" OAK	900	10" PINE	1000	12" OAK	1100	8" OAK	1200	14" BLACK CHERRY		

PREPARED FOR:
KEYSTONE CUSTOM HOMES

ADDRESS: 2030 AIRPORT FLEX DRIVE, SUITE R
CHARLOTTE, NC 28208

OWNER(S):
HELMS BRENDA PRESSLEY
HELMS RICHARD WAYNE
DB 5740 PG 122

ADDRESS:
3009 FOREST LAWN DR
MATTHEWS, NC 28104

TREE SURVEY EXHIBIT
PARCEL ID#:07150015
VANCE TOWNSHIP
UNION COUNTY, NORTH CAROLINA

SHEET NUMBER:
SHEET 2 OF 2

PROJECT NAME:
FOREST LAWN

DRAWN BY: CCM	DATE: 08/01/2025
CHECKED BY: TMG	SCALE : 1" = 60'
REVISION NO:	DATE:

DRAWING TITLE:
3009 FOREST LAWN DRIVE
TREE SURVEY EXH.DWG

GENERAL NOTES:

1. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
2. EXISTING PROPERTY AND TOPOGRAPHIC INFORMATION IS BASED ON SURVEY INFORMATION PROVIDED BY THE CLIENT AND DATED 04/02/2025. CONTRACTOR TO VERIFY AS-BUILT CONDITIONS PRIOR TO CONSTRUCTION AND CONTACT THE ENGINEER ON RECORD IF ANY DISCREPANCIES OCCUR.
3. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES (INCLUDING THOSE LABELED PER RECORD DATA) PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
4. 72 HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE NC UTILITY PROTECTION SERVICES, AND ALL OTHER AGENCIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF NC UNDERGROUND PROTECTION, INC.
5. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
6. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNERS REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
7. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
8. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
9. ANY WORK PERFORMED IN THE LOCAL OR STATE RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
10. THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE TOWN OF WEDDINGTON, UNION COUNTY, AND NCDEQ FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS. GENERAL CONTRACTOR TO CONTACT OWNERS ENVIRONMENTAL DEPARTMENT FOR ANY ADDITIONAL OWNER RELATED REQUIREMENTS.
11. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES REQUIRED BY THE TOWN OF WEDDINGTON, UNION COUNTY & NCDEQ.
12. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE AT FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH THE TOWN OF WEDDINGTON, UNION COUNTY REQUIREMENTS AND NCDEQ EROSION CONTROL MANUAL.
13. ITEM NUMBERS REFER TO THE NC DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF UNION COUNTY.
14. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.
15. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.
16. BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION .
17. ADJUST/RECONSTRUCT ALL EXISTING CASTINGS, CLEANOUTS, ETC. WITHIN PROJECT AREA TO FINAL GRADE AS REQUIRED .
18. CONTRACTOR TO REMOVE & REPLACE PAVEMENT AS SPECIFIED.
19. ALL STANDARD PARKING PLACES ARE SIZED AS REQUIRED BY THE THE TOWN OF WEDDINGTON.
20. SITE SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE NC MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
21. ALL STOP BARS, CROSS WALKS, AND REGULATORY PAVEMENT MARKINGS MUST BE THERMO.

GENERAL LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING NEWLY CONSTRUCTED AND EXISTING UTILITIES. HE SHALL NOTIFY THE OWNERS OF PUBLIC UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ALL UTILITIES SHALL BE PROTECTED FROM DAMAGE DURING PLANTING OPERATIONS.
2. GENERAL CONTRACTOR SHALL ERECT TREE PROTECTION FENCING. FENCING SHALL BE INSPECTED BY THE LANDSCAPE ARCHITECT OR ENGINEER PRIOR TO BEGINNING. CONTRACTOR SHALL MAINTAIN FENCING THROUGHOUT THE DURATION OF PROJECT.
3. PLANT MATERIAL SHALL MEET OR EXCEED SPECIFICATIONS AND SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK BOOK. THE CONTRACTOR SHALL GUARANTEE THAT THE MATERIAL INSTALLED ON SITE IS IN FACT THE MATERIAL THAT WAS SPECIFIED BY THE LANDSCAPE ARCHITECT OR ENGINEER. ANY CHANGES IN SPECIES SPECIFIED SHALL BE SUBMITTED IN WRITING TO, AND APPROVED/REJECTED BY THE LANDSCAPE ARCHITECT OR ENGINEER.
4. IN THE EVENT ANY ERROR(S) ARE FOUND ON THESE DRAWINGS OR OUT IN THE FIELD THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH WORK. SHOULD THE CONTRACTOR FAIL TO CONTACT THE LANDSCAPE ARCHITECT OR ENGINEER, HE/SHE WILL BE RESPONSIBLE FOR THE COST OF ANY CORRECTION TO BE MADE.
5. ALL WORK SHALL BE PERFORMED BY FULLY QUALIFIED PLANTSMEN. USE GOOD HORTICULTURAL PRACTICES TO KEEP ALL PLANTS AND PLANT MATERIAL INSTALLED IN A LIVING, HEALTHY CONDITION UP TO THE DATE FOR TERMINATION OF THE CONTRACTOR'S RESPONSIBILITY FOR CARE.
6. THE PLANTS DELIVERED TO THE PROJECT SITE SHALL BE PLANTED AS SOON AS SITE CONDITIONS PERMIT. TAKE CARE IN SCHEDULING PLANT DELIVERIES AND THE SIZE OF DELIVERIES SO THAT LONG PERIODS OF STORAGE ARE AVOIDED. ADEQUATELY PROTECT PLANTS PLACED IN TEMPORARY STORAGE FROM THE SUN AND WIND. WATER PLANTS SO AS TO MAINTAIN THEIR APPEARANCE AND HEALTH. PLANTS THAT HAVE NOT BEEN PROPERLY MAINTAINED DURING TEMPORARY STORAGE MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR ENGINEER.
7. THE OPTIMUM TIME FOR PLANTING IS FROM OCTOBER 1ST TO APRIL 1ST. SCHEDULING FOR PLANTING AT OTHER TIMES MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT OR ENGINEER.
8. THE CONTRACTOR SHALL SUBMIT CUT SHEETS TO THE LANDSCAPE ARCHITECT OR ENGINEER REGARDING ALL PLANTING MATERIALS, SEEDING, SOD, STEEL EDGING, WEED CONTROL MATTING, FERTILIZERS, LIMES, CHEMICALS TO BE APPLIED ON SITE AND ANY OTHER ITEM(S) RELATED TO THE LANDSCAPE OF THE SITE FOR APPROVAL PRIOR TO INSTALLATION ON SITE.
9. ALL CONTRACTORS APPLYING CHEMICALS ON SITES SHALL SUBMIT COPIES OF CERTIFICATION(S) AND LICENSES TO THE LANDSCAPE ARCHITECT OR ENGINEER.
10. PLANTING BEDS AND PLANT LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT OR ENGINEER PRIOR TO INSTALLATION. GIVE LANDSCAPE ARCHITECT OR ENGINEER 24 HOURS NOTICE PRIOR TO INSPECTION.
11. PLANTING BED SHALL BE CLEARED OF ROCK, GRASS AND WEEDS PRIOR TO INSTALLATION OF PLANTS.
12. FERTILIZE ALL PLANT MATERIAL AT INSTALLATION WITH PETER'S SLOW RELEASE 20-20-20 OR EQUIVALENT APPROVED BY LANDSCAPE ARCHITECT OR ENGINEER. APPLY PER MANUFACTURERS RECOMMENDATIONS OR APPLY 15 POUNDS PER 1,000 SQUARE FEET APPLY FERTILIZER BEFORE MULCHING.
13. ALL DISTURBED AREAS NOT OTHERWISE SEEDED OR PLANTED SHALL BE SODDED AS DIRECTED BY THE LANDSCAPE ARCHITECT, OR ENGINEER.
14. PLANTING BEDS SHALL HAVE A 4-INCH SHREDDED HARDWOOD BARK MULCH IN ENTIRE BED, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
15. ALL PLANTED AREAS SHALL BE TREATED WITH A WATER SOLUBLE HERBICIDE FOR THE NON-SELECTIVE CONTROL OF ANNUAL AND PERENNIAL WEEDS PRIOR TO PLANTING.
16. APPLY TWO POUNDS ACTUAL NITROGEN (IN SLOW RELEASE FORM) PER 1,000 SQUARE FEET TO ALL SHRUB AND TREE PLANTINGS BEFORE LAYING MULCH.
17. THE CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL AND LAWNS UNTIL THE PROJECT IS ACCEPTED BY THE LANDSCAPE ARCHITECT OR ENGINEER, UNLESS OTHERWISE SPECIFIED.
18. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE CALENDAR YEAR FROM THE DATE THE PROJECT IS ACCEPTED.
19. ALL TREES SHALL BE FIRST QUALITY REPRESENTATIVES OF THEIR SPECIES AND SHALL MEET ALL REQUIREMENTS OTHERWISE STIPULATED. THE LANDSCAPE ARCHITECT OR ENGINEER RESERVES THE RIGHT TO REJECT PLANTED MATERIAL IN THE FIELD, AT THE GROWING SITE, OR ON THE JOB SITE.
20. THE CONTRACTOR SHALL TEST ALL PITS FOR DRAINAGE ANY TREE PIT THAT HOLDS WATER FOR MORE THAN 24 HOURS SHALL BE INSTALLED WITH TREE PIT DRAINAGE. DRAINAGE OF ALL PLANTING PITS AND BEDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
21. ALL TREES AND SHRUBS SHALL BE INSTALLED ACCORDING TO THE DETAILS LOCATED IN THIS PLAN SET.
22. DISPOSE OF ALL SURPLUS MATERIAL AS DIRECTED BY THE OWNER.
23. NO CHANGES TO ANY ASPECT OF THIS DEVELOPMENT PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, ARCHITECTURAL DESIGN, LIGHTING, OR UTILITIES SHALL BE MADE WITHOUT THE APPROVAL OF UNION COUNTY.
24. THE APPLICANT HEREBY OFFERS AND CONSENTS TO INCLUSION OF ALL IMPROVEMENTS AND COMMITMENTS SHOWN ON THIS DEVELOPMENT PLAN.
25. SIGN PERMITTING IS A SEPARATE APPROVAL PROCESS AND HAS NOT BEEN REVIEWED OR APPROVED WITH THIS DEVELOPMENT PLAN.

DEMOLITION NOTES:

1. ALL EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES FOUNDATION SLABS, AND WALLS AND FOOTINGS. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACKFILLED WITH SATISFACTORY MATERIALS AND COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATION.
2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD BY THE CONTRACTOR.
3. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
4. TREE PROTECTION FENCING SHALL BE IN ACCORDANCE WITH THE TOWN OF WEDDINGTON STANDARDS - OR - IN ACCORDANCE WITH THE DETAILED DRAWINGS. DO NOT OPERATE OR STORE EQUIPMENT, NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF THE TREES SHOWN TO REMAIN.
5. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
6. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AT THE CONTRACTOR'S EXPENSE.
7. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY.
8. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED.
9. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND FUNCTION PROPERLY PRIOR TO INITIATING DEMOLITION ACTIVITIES .
10. ASBESTOS OR HAZARDOUS MATERIALS ARE NOT EXPECTED OR ANTICIPATED. IF FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
11. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL, AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
12. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
13. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH NC DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
15. PROVIDE NEAT, STRAIGHT, FULL DEPTH, SAW CUTS OF EXISTING PAVEMENT WHERE INDICATED ALONG LIMITS OF PAVEMENT DEMOLITION.
16. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY, AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE AVAILABLE. ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA, PHASE II, WETLAND AND STREAM DELINEATION, AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
17. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS, ETC. WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE IF THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF THE REPORT OF GEOTECHNICAL INVESTIGATION. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE LANDSCAPING.
18. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

PLANTING NOTES

1. THE QUANTITIES INDICATED ON THE PLANT MATERIALS SCHEDULE ARE PROVIDED FOR THE BENEFIT OF THE LANDSCAPE CONTRACTOR BUT SHOULD NOT BE ASSUMED TO BE CORRECT. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE QUANTITIES INDICATED. ANY DISCREPANCIES NOTED SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION. IN THE EVENT OF A DISCREPANCY, THE DRAWINGS SHALL GOVERN.
2. NO SUBSTITUTIONS AS TO SIZE, TYPE, SPACING, QUANTITY OR QUALITY OF PLANT MATERIAL SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT OR ENGINEER. CHANGES IN PLANT MATERIAL MAY REQUIRE RE-APPROVAL BY LOCAL AUTHORITIES. CONTRACTOR IS NOT TO SEEK RE-APPROVAL WITHOUT EXPRESS WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT OR ENGINEER.
3. ALL PLANTS MUST BE NURSERY GROWN, HEALTHY, VIGOROUS, AND FREE FROM ALL PESTS AND DISEASE, BALL AND BURLAP (B&B) OR CONTAINER GROWN AS SPECIFIED IN THE MATERIALS SCHEDULE. ALL PLANT SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z-60, LATEST EDITION FOR SIZE AND QUALITY.
4. ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED, AND MEET THE MINIMUM REQUIREMENTS. TREES WITH A "Y" SHAPE ARE NOT ACCEPTABLE. REFER TO THE WRITTEN SPECIFICATIONS.
5. ALL PLANTS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT OR ENGINEER, AND OR OWNERS REPRESENTATIVE AT ANY TIME PRIOR TO FINAL ACCEPTANCE.
6. ALL TREES 2-INCH CALIPER AND LARGER SHALL BE STAKED AND GUYED AS SPECIFIED. STAKE AND GUY MATERIALS SHALL BE REMOVED BY THE LANDSCAPE CONTRACTOR 12 MONTHS AFTER FINAL ACCEPTANCE.
7. THE DIMENSIONS FOR HEIGHT, SPREAD, AND CALIPER AS SPECIFIED IN THE PLANT MATERIALS SCHEDULE ARE THE MINIMUM DESIRED FOR EACH PLANT. EACH PLANT SHALL BE UNIFORM AND CONSISTENT AS IT PERTAINS TO THE SPECIFICATIONS AND THE INDIVIDUAL SPECIES. ANY PLANT MATERIAL WHICH FAILS THESE SPECIFICATIONS WILL BE REJECTED. THE CONTRACTOR SHALL PROVIDE ACCEPTABLE MATERIAL AT NO ADDITIONAL COST TO THE OWNER. CALIPER SIZE IS NOT TO BE REDUCED. TREES THAT FAIL MINIMUM CALIPER SIZE AS MEASURED IN THE FIELD WILL BE REJECTED AND REPLACEMENTS SHALL BE MADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CALIPER MEASUREMENTS SHALL BE MADE IN ACCORDANCE WITH ANSI STANDARDS.
8. PRIOR TO COMMENCEMENT OF INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND SHALL AVOID DAMAGING UTILITIES DURING INSTALLATION. ANY UTILITIES DAMAGED DURING INSTALLATION SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY. ALL REPAIRS SHALL BE AT NO COST TO THE OWNER. NO TREES SHALL BE PLANTED WITHIN 10' OF SITE UTILITY LINES. FIELD ADJUST AS NECESSARY AFTER LANDSCAPE ARCHITECT'S OR ENGINEER'S APPROVAL.
9. THE LANDSCAPE CONTRACTOR SHALL FIELD STAKE ALL PLANT LOCATIONS PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT OR ENGINEER SHALL APPROVE ALL STAKED LOCATIONS PRIOR TO INSTALLATION. PLANTS INSTALLED PRIOR TO APPROVAL BY THE LANDSCAPE ARCHITECT OR ENGINEER ARE SUBJECT TO REJECTION AND/ OR REPLACEMENT AT NO ADDITIONAL COST TO THE OWNER.
10. PRE-EMERGENT HERBICIDES, TREFLAN OR EPTAM, SHALL BE APPLIED TO ALL PLANTING BEDS. APPLY AT MANUFACTURERS RECOMMENDATIONS. HERBICIDES SHALL BE INCORPORATED INTO THE SOIL MIXES.
11. APPLY ROOT STIMULATOR, CONTAINING MYCORRHIZAE, TO ALL PLANTS PRIOR TO BACK FILLING. APPLY AT MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUBMIT SAMPLES OF ROOT STIMULATOR TO THE LANDSCAPE ARCHITECT OR ENGINEER FOR APPROVAL PRIOR TO USE.
12. SEEDING: EVENLY APPLY THE TEMPORARY/PERMANENT SEED MIXTURES USING HYDROSEEDING, BROADCAST, OR DRILL SEEDING METHODS THAT PLANT SEED LESS THAN ¼-INCH BELOW THE GROUND SURFACE: APPLY LEGUME SEED INOCULANTS SPECIFICALLY MADE FOR THE LEGUME SEED TYPE BEING APPLIED AT FIVE TIMES THE MANUFACTURER'S RECOMMENDED RATE. USE NO SEED OR INOCULANT THAT HAS BEEN IMPROPERLY STORED, EXPIRED, OR SEED OLDER THAN 9 MONTHS FROM THE SEED TEST DATE. IF HYDROSEEDING METHODS ARE USED SEED, INOCULANTS, FERTILIZERS, AND POLYMER TACKIFIER/SOIL STABILIZER MAY BE APPLIED IN ONE APPLICATION, PROVIDED THAT SEED AND INOCULANTS ARE NOT HELD IN A SLURRY WITH FERTILIZERS FOR MORE THAN ONE HOUR.
13. ALL DISTURBED AREAS THAT DO NOT RECEIVE MULCH OR OTHER SPECIFIED IMPROVEMENTS ARE TO BE FINE GRADED TO TRANSITION SMOOTHLY INTO ADJACENT GRADES AND RECEIVE THE FOLLOWING PERMANENT SEED MIX IF NO OTHER PERMANENT SEED MIX IS PROVIDED: PERMANENT SEED MIX SHALL MATCH THE EXISTING LAWN TYPE AND CONSIST OF A MINIMUM 4 NAMED VARIETIES OF EACH SEED TYPE. SUBMIT THE SEED MIX TO THE LANDSCAPE ARCHITECT OR ENGINEER FOR APPROVAL PRIOR TO SEEDING.
14. THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANTINGS FOR A PERIOD OF ONE (1) YEAR BEGINNING UPON THE WRITTEN DATE OF SUBSTANTIAL COMPLETION OF THE PROJECT. ANY PLANTS SUBJECT TO REPLACEMENT SHALL BE MADE AT THE END OF THE WARRANTY PERIOD OR AT TIME AS DETERMINED BY THE OWNERS REPRESENTATIVE. ALL PLANTS MUST BE ALIVE AND HEALTHY FOR REVIEW AND APPROVAL BY LOCAL AUTHORITIES AS APPROPRIATE FOR OCCUPANCY PERMIT.
15. THE LANDSCAPE CONTRACTOR SHALL UTILIZE ON-SITE TOPSOIL AS AVAILABLE FROM THE CONTRACTOR. ALL IMPORTED TOPSOIL SHALL BE APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO PLACEMENT.
16. EXISTING GRASS TO BE REMOVED, IF PRESENT, AND TOPSOIL TO BE SPREAD SMOOTH AND HAND-RAKED TO REMOVE ALL ROCKS AND DEBRIS LARGER THAN 1-INCH IN DIAMETER PRIOR TO LAYING SOD OR SEEDING.
17. ALL TREE, SHRUB AND GROUND COVER BEDS (EXISTING AND NEW) TO BE MULCHED WITH A MINIMUM OF 3 INCHES OF AGED, SHREDDED HARDWOOD BARK.
18. THE TYPICAL PLANTING SOIL BACKFILL MIX FOR BEDS AND PLANT BACKFILL SHALL CONSIST OF THE FOLLOWING: 2/3 SITE SOIL 1/3 SOIL AMENDMENTS (BY VOLUME AS FOLLOWS): 2 PARTS HUMUS AND OR PEAT, 1 PART COARSE RIVER SAND, 1 PART STERILIZED COMPOSTED COW MANURE COMMERCIAL FERTILIZER, AND LIME AS RECOMMENDED BY THE SOILS TEST REPORT. COMPLETELY BLEND BACKFILL SOIL MIX PRIOR TO PLACEMENT.

LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING UTILITY SLEEVING, PRIOR TO INSTALLATION OF PAVED SURFACES.
4. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN IN ACCORDANCE WITH THE SPECIFICATIONS.
5. SITE WORK CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH TO ALL SURFACES. SITE WORK CONCRETE SHALL BE CLASS A (3,600 PSI @ 28 DAYS) UNLESS OTHERWISE NOTED.
6. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
7. SITE DIMENSIONS SHOWN ARE TO THE FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
9. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH UNION COUNTY. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS AREA, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, AND LANDSCAPING.

GRADING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINAL GRADES, TOP OF GROUND LEVEL, TOP OF PAVEMENT, OR GRATE ELEVATION AT THE DRAWDOWN POINT, UNLESS INDICATED OTHERWISE.
2. OWNER SHALL CONSULT WITH A PROFESSIONAL GEOTECHNICAL ENGINEER AND OBTAIN A GEOTECHNICAL SOIL REPORT PRIOR TO ANY LAND DISTURBANCE ACTIVITY. OWNER SHALL PROVIDE THE GEOTECHNICAL REPORT TO THE CONTRACTOR, AND SHALL CONSULT WITH THE ENGINEER ON RECORD IF OWNER PROVIDED GEOTECHNICAL REPORT WARRANTS A DESIGN CHANGE.
3. EARTHWORK SHALL INCLUDE CLEARING AND GRUBBING, STRIPPING AND STOCKPILING TOPSOIL, MASS GRADING, EXCAVATION, FILLING, UNDER CUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
4. CONTRACTOR TO REFILL UNDERCUT AREAS WITH SUITABLE MATERIAL AND COMPACT AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO A DEPTH INDICATED ON THE LANDSCAPE PLANS (6-IN MINIMUM).
6. PAVEMENT SLOPES ACROSS ACCESSIBLE PARKING STALLS AND ADJOINING ACCESS AISLES SHALL BE MAXIMUM 2.00% AND SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.
7. ALL SLOPES IN NON-PAVED AREAS SHALL BE 2:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
8. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN, UNLESS NOTED OTHERWISE.
9. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE DESIGNATED, AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING THE SITE EARTHWORK BY IMPORTING OR EXPORTING AS NECESSARY TO ACHIEVE DESIGN GRADES AND SPECIFICATIONS.

STORM DRAINAGE NOTES

1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
3. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
4. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, CONTRACTOR IS TO COORDINATE WITH ARCHITECTURAL AND PLUMBING DRAWINGS.
5. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
6. ALL STORM STRUCTURES ARE PER THE TOWN OF WEDDINGTON STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
7. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 3.5' SHALL BE PROVIDED WITH STEPS MEETING THE REQUIREMENTS OF NCDOT SPECIFICATION.
8. ALL STORM PIPES AND STRUCTURES SHALL BE INSTALLED PER THE TOWN OF WEDDINGTON STANDARDS AND SPECIFICATIONS.
9. STORM SEWER IS TO BE BEDDED WITH CLEAN GRANULAR MATERIAL-AGGREGATES PER UNION COUNTY STANDARDS AND SPECIFICATIONS.

NCDOT TRAFFIC CONTROL NOTES

TRAFFIC CONTROL NOTES

1. CONTRACTOR WILL BE REQUIRED TO PROVIDE PROPERTY OWNERS AND TENANTS ACCESS TO THEIR PROPERTY THROUGHOUT THE PROJECT LIMITS, INCLUDING REASONABLE INGRESS AND EGRESS FOR BUSINESSES.
2. ADJACENT LANES TO CONSTRUCTION ZONES MAY REMAIN OPEN IF LATERAL CLEARANCE BETWEEN EDGE OF TRAVEL LANE AND EQUIPMENT IS EQUAL TO OR GREAT THAN 5' (INCLUDING WIDTH OF DRUM).
3. CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON BOTH SIDES OF THE ROAD SIMULTANEOUSLY WITHIN THE SAME AREA EXCEPT WHERE THE ROADWAY IS DIVIDED BY A RAISED MEDIAN.
4. ONLY DRUMS WILL BE USED DURING LANE CLOSURES, NO CONES WILL BE ALLOWED.

TRAFFIC CONTROL TIME RESTRICTIONS

1. DURING THE HOURS OF 6:00 AM - 9:00 AM AND 4:00 PM - 6:00 PM MONDAY THROUGH FRIDAY CONSTRUCTION OR MAINTENANCE WORK WHICH INVOLVES CLOSURE OF A TRAVEL LANE WILL NOT BE ALLOWED ON THROUGHFARE STREETS EXCEPT FOR EMERGENCY SITUATIONS OR WITH APPROVAL FROM NCDOT.

UTILITY NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE PROPER UTILITY COMPANIES & GOVERNMENT AGENCIES PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE ACTIVITIES OCCURRING.
2. CONTRACTOR SHALL OBTAIN & PAY FOR, PRIOR TO THE BEGINNING OF ANY WORK, ALL PERMITS AND LICENSES NECESSARY TO ACCOMPLISH WORK. PERMITS CAN INCLUDE, BUT ARE NOT LIMITED TO THE UNION COUNTY, NCDOT ENCROACHMENT PERMIT, GRADING PERMIT, AND/OR UTILITY COMPANY'S PERMIT FOR THE WORK TO BE PERFORMED ON THEIR RESPECTIVE FACILITIES.
3. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE THEMSELF WITH THE JOB SITE AND LOCATION OF ALL EXISTING FACILITIES AND UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.
5. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR WILL BE UNILATERALLY RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING FACILITIES OR UNDERGROUND UTILITIES THAT ARE SHOWN OR NOT SHOWN ON THESE PLANS, AND IF DAMAGED, THEY SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AND/OR UTILITY COMPANY AT NO COST TO THE OWNER.
7. ALL 4'' AND 6'' SANITARY SEWER SHALL BE SCH-40 PVC OR APPROVED EQUAL INSTALLED AT A MINIMUM SLOPE OF ONE PERCENT (1.00%) UNLESS OTHERWISE NOTED. SANITARY SERVICE SHALL BE INSTALLED AT A MINIMUM DEPTH OF THREE FEET (3') UNLESS OTHERWISE NOTED. A MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED AT ALL WATERLINE & STORM SEWER CROSSINGS. SANITARY SERVICE JOINTS ALL CONFORM TO ASTM D-3212.
8. THE CONTRACTOR SHALL RE-SET ALL MANHOLE COVERS, CATCH BASIN GRATES, VALVE BOXES, PEDESTALS, CLEANOUTS, AND ANY OTHER UTILITY ACCESS COVERS TO FINISHED PAVEMENT SURFACE, FINISHED GRADES OR SIDEWALK GRADE, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROTECT UNDERGROUND UTILITIES AND THEIR APPURTENANCES TO REMAIN ON SITE FROM DAMAGE DURING CONSTRUCTION OPERATIONS.
9. DISTANCES SHOWN FOR BOTH SANITARY SEWER AND STORM SEWER PIPES ARE MEASURED FROM CENTER OF STRUCTURE; CONTRACTOR RESPONSIBLE FOR ACTUAL FIELD CUT LENGTH.
10. ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
11. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL IMPROVEMENTS. INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE HORIZONTAL AND VERTICAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.
12. MECHANICAL/ELECTRICAL CONTRACTORS SHALL BRING ALL UTILITIES 5' OUTSIDE BUILDING WALL. COORDINATE WITH ARCHITECT AND MEP ENGINEER.
13. WHEN WATER MAIN IS ABOVE SEWER, BUT WITH LESS THAN 18" CLEARANCE, OR WHEN THE SEWER IS ABOVE THE WATER MAIN, BOTH WATER MAIN AND SEWER LINE SHALL BE CONSTRUCTED OF FERROUS MATERIALS WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MIN. LATERAL DISTANCE, MEASURED AT RIGHT ANGLES TO THE SEWER, OF 10' EACH SIDE OF THE CROSSING WITH FULL SECTIONS CENTERED AT THE POINT OF CROSSING.
14. ALL UTILITIES SHALL BE INSTALLED BY A NC LICENSED UTILITY CONTRACTOR, APPROVED BY THE ENGINEER.

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REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING
PLAN

FOR

KEYSTONE CUSTOM
HOMES
WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-CVER

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
C-001

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Site Plan\C-CVER.dwg\C-001-GENERAL NOTES By: NDIOGOU.BA

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25035\AE\Engineering\Site Plans\C-DEMO.dwg\C-100 EXISTING CONDITIONS By: NOYOGOLBA

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CONDITIONAL ZONING PLAN

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PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
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AS SHOWN	09/25/25	NWB	CW

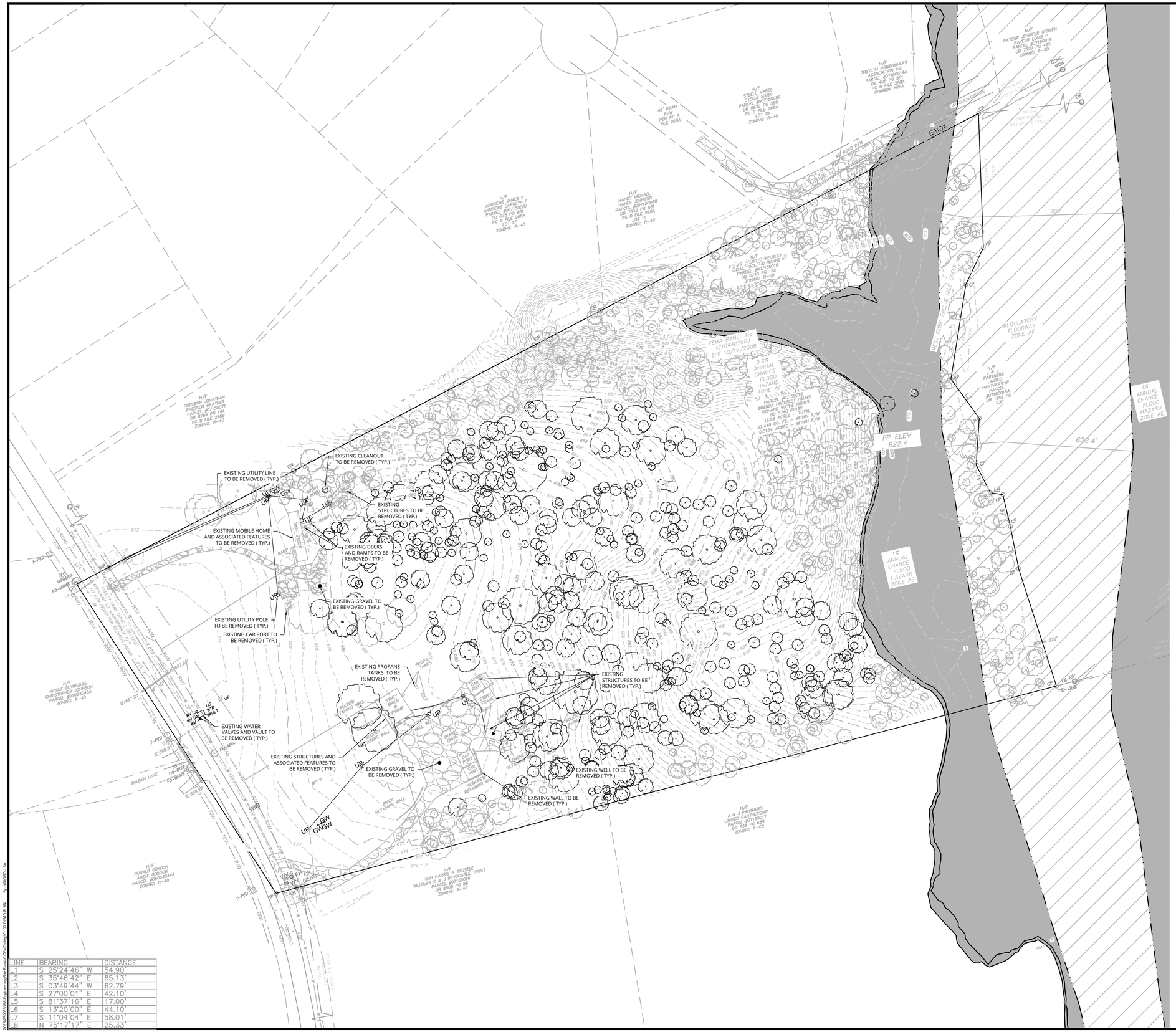
PROJECT NUMBER:	DRAWING NAME:
25003536A	C-DEMO

SHEET TITLE:

EXISTING CONDITIONS PLAN

SHEET NUMBER:

C-100



LINE	BEARING	DISTANCE
L1	S 25°24'46" W	54.90'
L2	S 35°46'42" E	65.13'
L3	S 03°49'44" W	62.79'
L4	S 27°00'01" E	42.10'
L5	S 81°37'16" E	17.00'
L6	S 13°20'00" E	44.10'
L7	S 11°04'04" E	58.01'
L8	N 75°17'17" E	25.33'

NOTES

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LEGEND

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12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	V
	DEPRESSED CURB AND ADA RAMP	HC
	FLOODWAY LIMITIS	

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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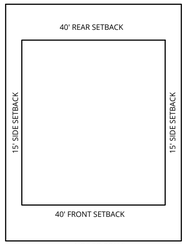
PROJECT NUMBER:	DRAWING NAME:
25003536A	C-DEMO

SHEET TITLE:

DEMOLITION PLAN

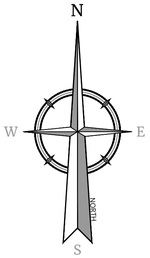
SHEET NUMBER:

C-101



NOT TO SCALE

TYPICAL LOT SETBACKS



KEYSTONE CUSTOM HOMES, WEDDINGTON		
SITE DATA		
	REQUIRED /EXISTING	PROPOSED
SITE ADDRESS	3009 FOREST LAWN DR, MATTHEWS, NC, 28104	
PARCEL (PIN)	07150015	
ZONING	RESIDENTIAL CONSERVATION DISTRICT (R-CD)	
PROPOSED USE	SINGLE FAMILY CONSERVATION DEVELOPMENT	
GROSS SITE AREA	16.66 AC	
TOTAL # OF LOTS	12	
MIN LOT SIZE	18,000 SF	
AVERAGE LOT SIZE	20,402 SF	
MIN LOT WIDTH	100 FT	
MAXIMUM BUILDING HEIGHT	35 FT	
CUL DE SAC ROAD A	156 FT	
CONSERVATION SPACE	MIN. 8.27 AC (50 %)	8.53 AC (51.6%)
MINIMUM FRONT SETBACK	40 FT	40 FT
REAR SETBACK	40 FT	40 FT
MINIMUM SIDE YARD	15 FT	15 FT

NOTES

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LEGEND

EXISTING		PROPOSED
	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	
	RIGHT OF WAY LINE	12+00 13+00
	SETBACKS	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC
	FLOODWAY LIMITIS	

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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PROJECT NUMBER: 25003536A	DRAWING NAME: C-LAYT		

SHEET TITLE:

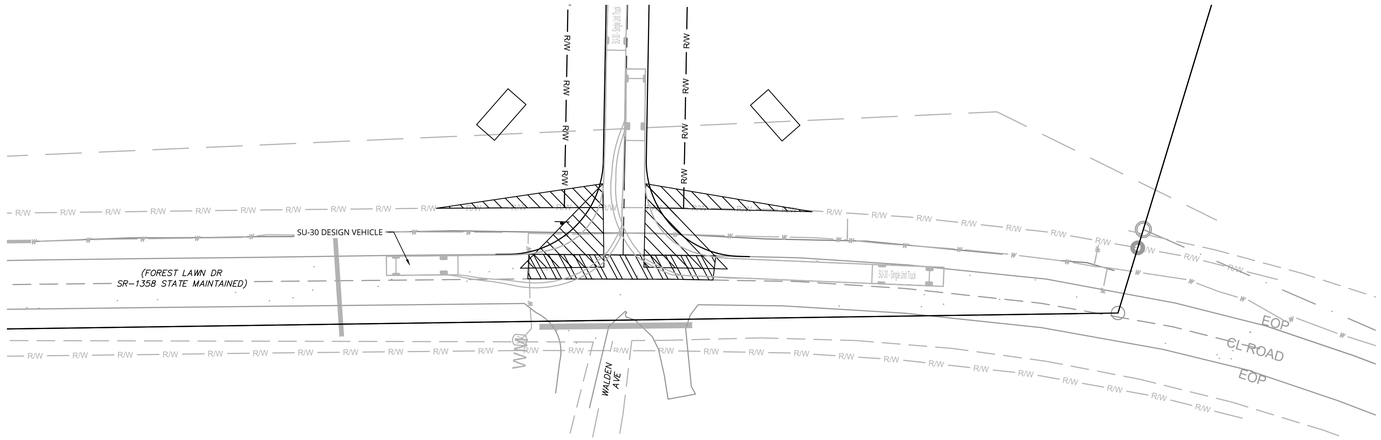
LAYOUT PLAN

SHEET NUMBER:

C-200

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

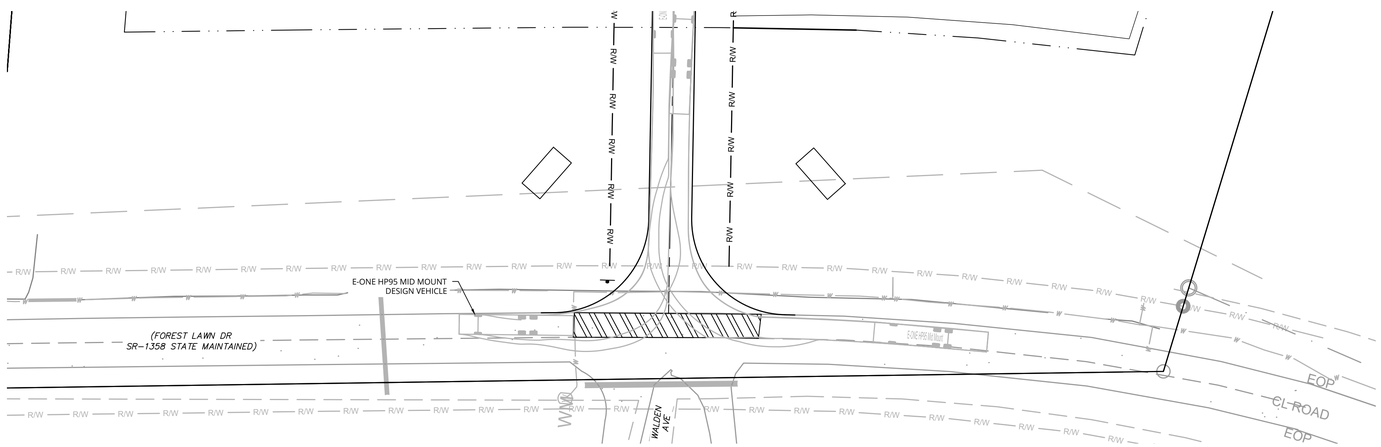
2025\25003536A\Engineering\Site Plans\C-LAYT.dwg\C-200- SITE LAYOUT By: NDIOGOU.BA



SU-30 DESIGN VEHICLE TURNING TEMPLATE

30 0 30 60

SCALE : 1" = 30'



E-ONE HP95 MID MOUNT DESIGN VEHICLE TURNING TEMPLATE

30 0 30 60

SCALE : 1" = 30'

GENERAL NOTES

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LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	P
	DEPRESSED CURB AND ADA RAMP	HC P V
	FLOODWAY LIMITIS	

30 0 30 60

SCALE : 1" = 30'

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CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

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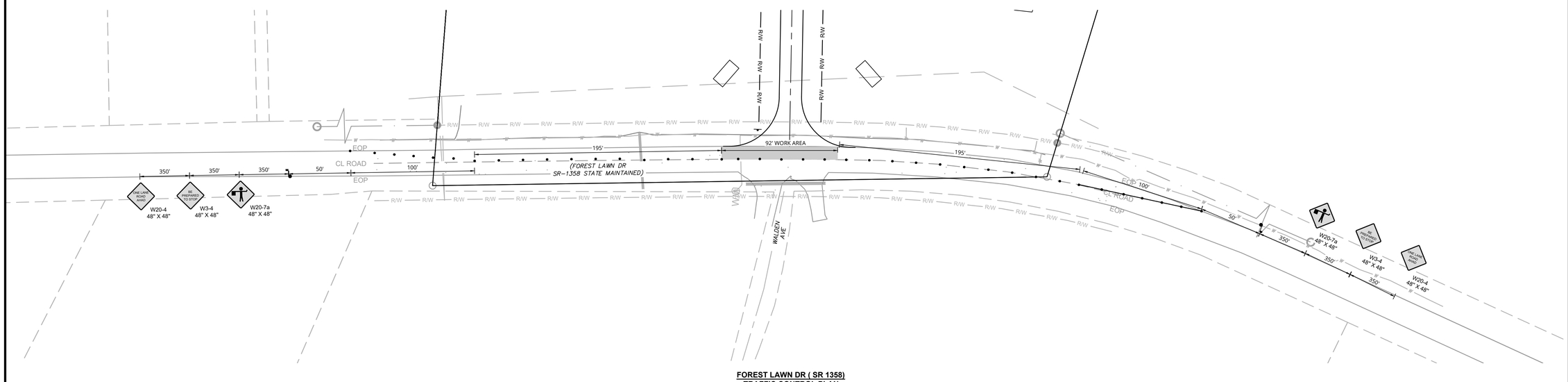
AS SHOWN	09/25/25	NWB	CW
PROJECT NUMBER: 25003536A	DRAWING NAME: C-LAYT		

SHEET TITLE:
VEHICLE TURNING PLAN

SHEET NUMBER:
C-201



FOREST LAWN DR (SR 1358)
TRAFFIC CONTROL PLAN
SPEED LIMIT 45 MPH

40 0 40 80
SCALE : 1" = 40'

GENERAL NOTES
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	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC
	FLOODWAY LIMITIS	

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N.C. #: C-4746

CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

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PROJECT NUMBER:	DRAWING NAME:
25003536A	C-LAYT

SHEET TITLE:
TRAFFIC CONTROL PLAN

SHEET NUMBER:
C-202

NOTES

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FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	TYPE '9' INLET	
	TYPE 'C', 'D', 'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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CONDITIONAL ZONING PLAN

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3009 FOREST LAWN DRIVE

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

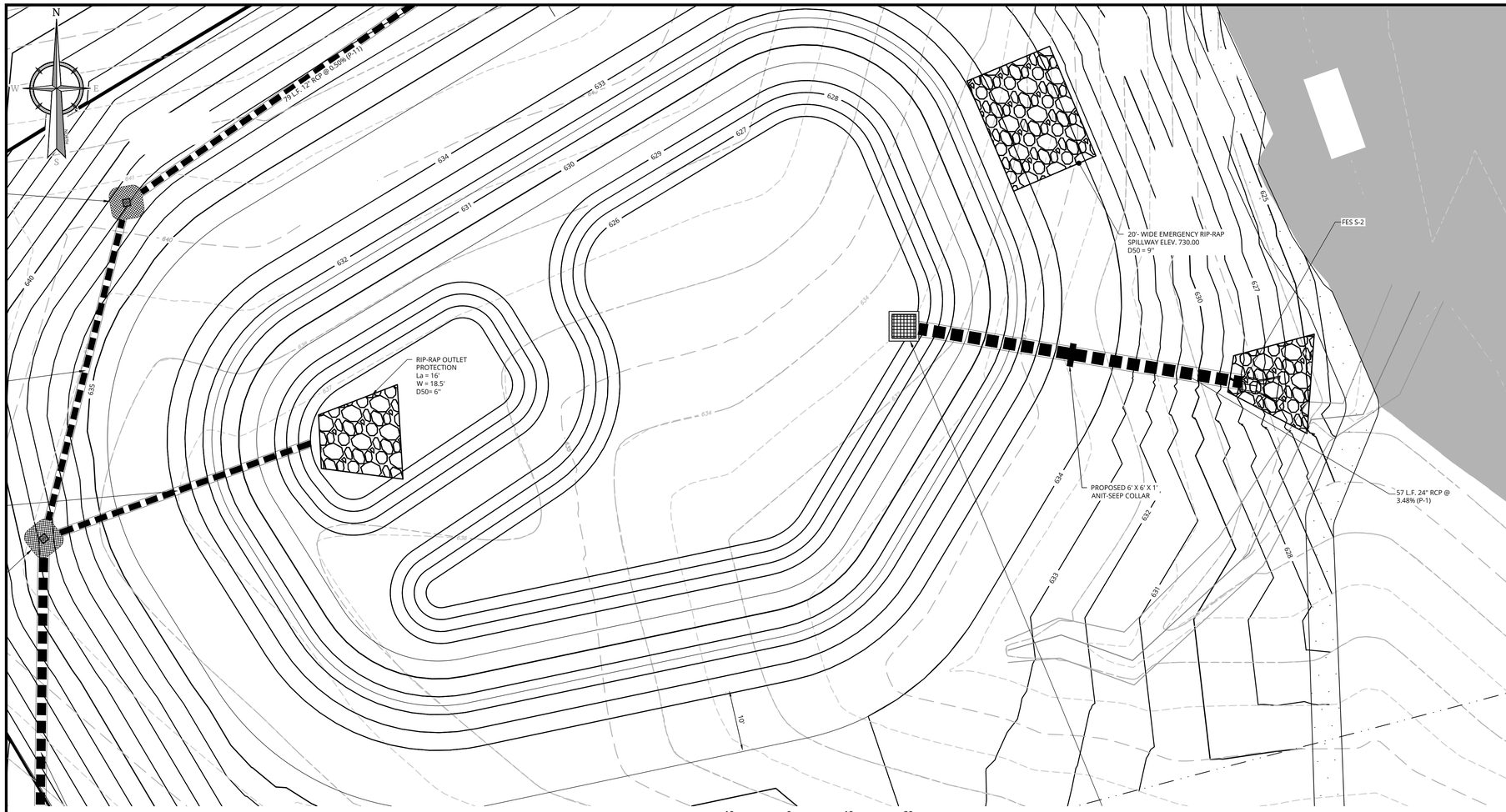
PROJECT NUMBER:	DRAWING NAME:
25003536A	C-GRAD3

SHEET TITLE:

GRADING & DRAINAGE PLAN

SHEET NUMBER:

C-300



GENERAL NOTES

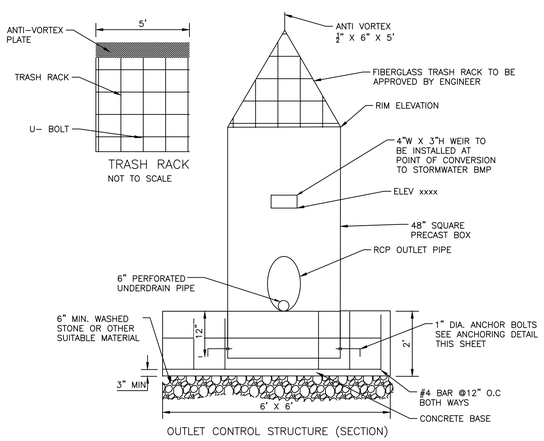
1. CONTRACTOR TO POST A CONSPICUOUS SIGN STATING WHO IS RESPONSIBLE FOR THE REQUIRED MAINTENANCE AND ANNUAL INSPECTION OF THE STORMWATER MANAGEMENT FACILITY.
2. SAND FILTER DETENTION PONDS USED AS SEDIMENT BASINS DURING THE CONSTRUCTION PERIOD TO BE FULLY CLEANED OUT PRIOR TO USE AS A STORM WATER MANAGEMENT FACILITY
3. CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY PERFORMED BY A NC LICENSED SURVEYOR UPON COMPLETION OF STORMWATER MANAGEMENT FACILITY. SURVEY TO BE PROVIDED TO & REVIEWED BY CIVIL ENGINEER IN ORDER TO PROVIDE CERTIFICATION OF THE STORMWATER MANAGEMENT FACILITY. CIVIL ENGINEER WILL SUBMIT PROJECT CERTIFICATION TO THE TOWN UPON FINDING PROJECT IS IN CONFORMANCE WITH THE DESIGN PLANS. CONTRACTOR WILL NOT BE ABLE TO RECEIVE FINAL CERTIFICATE OF OCCUPANCY FOR THE BUILDING UNTIL THE STORMWATER MANAGEMENT FACILITY IS CERTIFIED.
4. ALL DISTURBED AREA SHALL RECEIVE PERMANENT SEEDING/GRASSING.
5. SET-UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF WEDDINGTON WATER QUALITY INSPECTOR AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION ON ANY BMPS.
6. DRAINAGE AREA MUST BE STABILIZED BEFORE FILTRATION CONTROLS AND FILTER MEDIA AREAS ARE INSTALLED.
7. COMPACTION SHOULD BE MINIMIZED DURING EXCAVATION AND PLACEMENT OF SOIL MIXTURE.
8. SOIL MIXTURE IS TO BE PLACED IN 12-INCH LIFTS AND WATERED UNTIL WATER FLOWS OUT OF UNDERDRAIN BEFORE PLACING THE NEXT LAYER.

INSPECTION NOTES

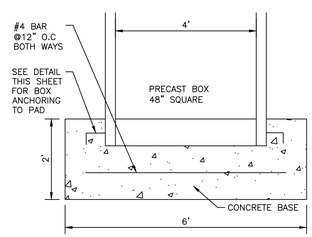
1. INSPECTIONS SHALL BE CONDUCTED AS PRESCRIBED BY THE MAINTENANCE COVENANT. ADDITIONAL INSPECTIONS MAY BE CONDUCTED BY THE TOWN OF WEDDINGTON LAND USE AND ENVIRONMENTAL SERVICES AGENCY ON ANY REASONABLE BASIS, INCLUDING BUT NOT LIMITED TO: ROUTINE INSPECTIONS; RANDOM INSPECTIONS; INSPECTIONS BASED UPON COMPLAINTS OR OTHER NOTICE OF POSSIBLE VIOLATIONS; INSPECTIONS OF DRAINAGE BASINS OR AREAS IDENTIFIED AS HIGHER THAN TYPICAL SOURCES OF SEDIMENT OR OTHER CONTAMINANTS OR POLLUTANTS; INSPECTIONS OF BUSINESSES OR INDUSTRIES OF A TYPE ASSOCIATED WITH HIGHER THAN USUAL DISCHARGERS OF CONTAMINANTS OR POLLUTANTS OR WITH DISCHARGES OF A TYPE WHICH ARE MORE LIKELY THAN THE TYPICAL DISCHARGE TO CAUSE VIOLATIONS OF STATE OR FEDERAL WATER QUALITY STANDARDS OR THE NPDES STORM WATER PERMIT; AND JOINT INSPECTIONS WITH OTHER AGENCIES INSPECTING UNDER ENVIRONMENTAL AND SAFETY LAWS. INSPECTIONS MAY INCLUDE, BUT ARE NOT LIMITED TO: REVIEWING MAINTENANCE AND REPAIR RECORDS; SAMPLING DISCHARGES, SURFACE WATER, GROUNDWATER, AND MATERIAL OR WATER IN BMPS; EVALUATING THE CONDITION OF BMPS AND STORM WATER MANAGEMENT PRACTICES.
2. RIGHT-OF-ENTRY FOR INSPECTION. WHEN ANY NEW BMP IS INSTALLED ON PRIVATE PROPERTY, THE PROPERTY OWNER SHALL GRANT TO THE MECKLENBURG COUNTY LAND USE AND ENVIRONMENTAL SERVICES AGENCY THE RIGHT TO ENTER THE PROPERTY AT REASONABLE TIMES AND IN A REASONABLE MANNER FOR THE PURPOSE OF INSPECTION. THIS INCLUDES THE RIGHT TO ENTER A PROPERTY WHEN THE MECKLENBURG COUNTY LAND USE AND ENVIRONMENTAL SERVICES AGENCY HAS A REASONABLE BASIS TO BELIEVE THAT A VIOLATION OF THIS REGULATION IS OCCURRING OR HAS OCCURRED, AND TO ENTER WHEN NECESSARY FOR ABATEMENT OF A PUBLIC NUISANCE OR CORRECTION OF A VIOLATION OF THIS REGULATION.

BMP CONSTRUCTION SEQUENCE

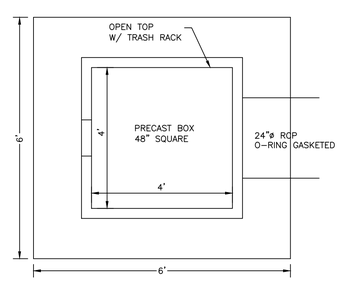
1. CONTRACTOR TO CALL WATER QUALITY INSPECTOR TO SET UP A BMP PRE-CONSTRUCTION MEETING PRIOR TO STARTING ANY WORK ON BMP'S. THIS MEETING SHOULD TAKE PLACE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION ON ANY BMP AND SHALL INCLUDE THE DESIGN ENGINEER TO ENSURE ENGINEER INSPECTIONS ARE PERFORMED AT KEY BMP INSTALLATION PHASES.
2. THE DESIGN ENGINEER MUST VERIFY AND CERTIFY THE DRAINAGE IS PROPERLY STABILIZED; MEASURES ARE IN PLACE TO PREVENT SEDIMENTATION INTO THE BMP, THE STORM DRAINS INLETS AND PAVEMENT HAVE BEEN PROPERLY CLEANED PRIOR TO THE COMMENCEMENT OF BMP CONSTRUCTION.
3. SEASONAL HIGH WATER NOT ENCOUNTERED DURING GEOTECHNICAL INVESTIGATION. BORINGS EXTEND TO 15' BELOW EXISTING SURFACE, THEREFORE 2.0' OF SEPARATION BETWEEN BOTTOM OF SAND FILTER AND SHWT IS MAINTAINED.
4. ADDITIONAL MEASURES, TO ENSURE PROPER CONSTRUCTION AND OPERATION OF THE BMP, MAY BE REQUIRED BY THE WATER QUALITY INSPECTOR.

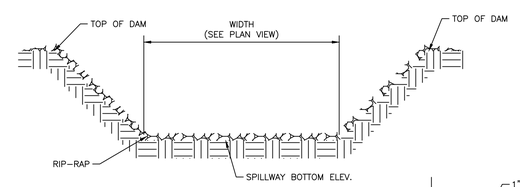


OUTLET CONTROL STRUCTURE (SECTION)
NOT TO SCALE

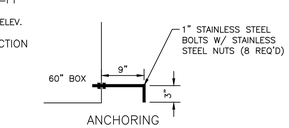


OUTLET CONTROL CONCRETE BASE
NOT TO SCALE





EMERGENCY SPILLWAY CROSS-SECTION
NOT TO SCALE



ANCHORING
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REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design,
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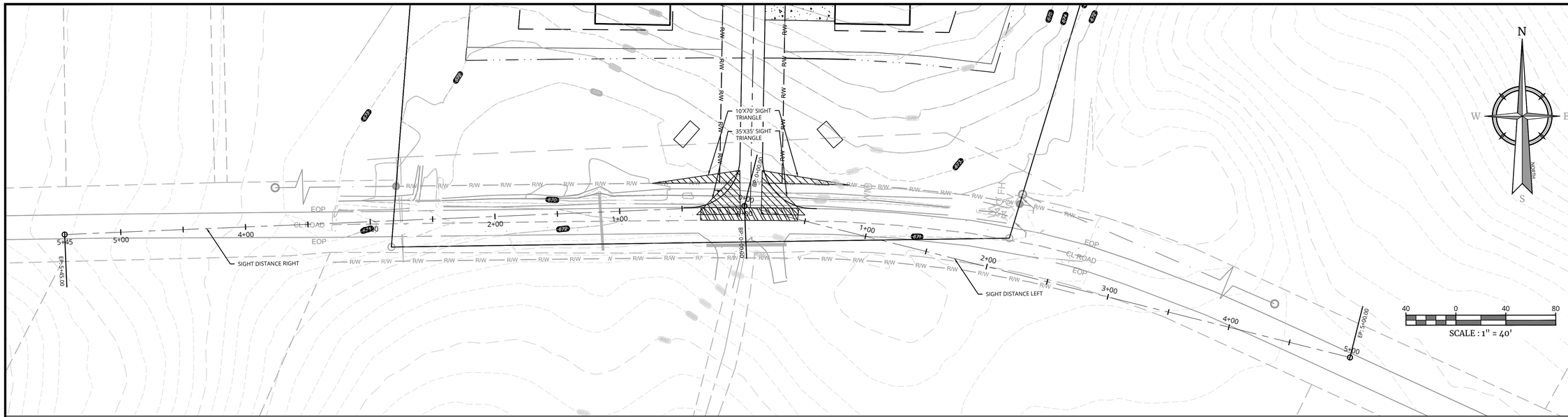
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

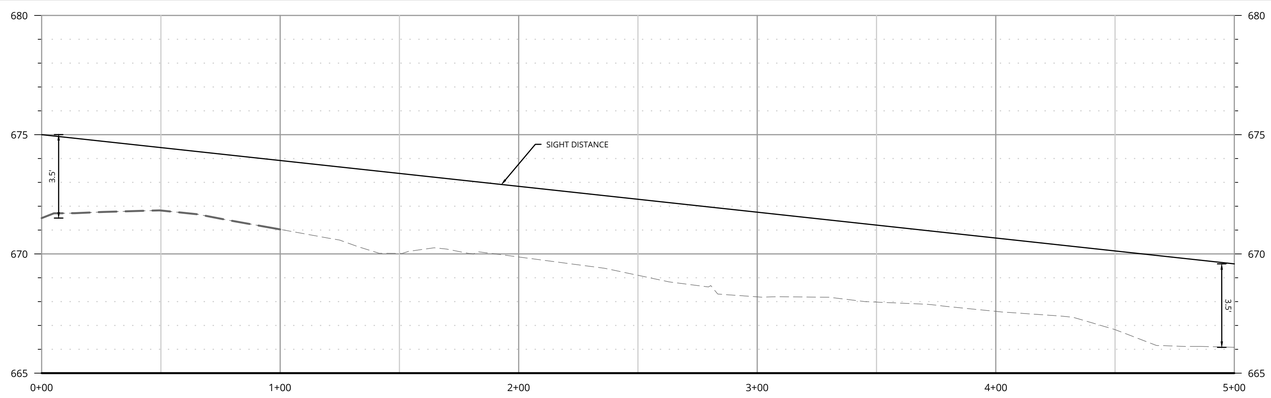
PROJECT NUMBER:	DRAWING NAME:
25003536A	C-GRAD3

SHEET TITLE:
STORMWATER MANAGEMENT PLAN

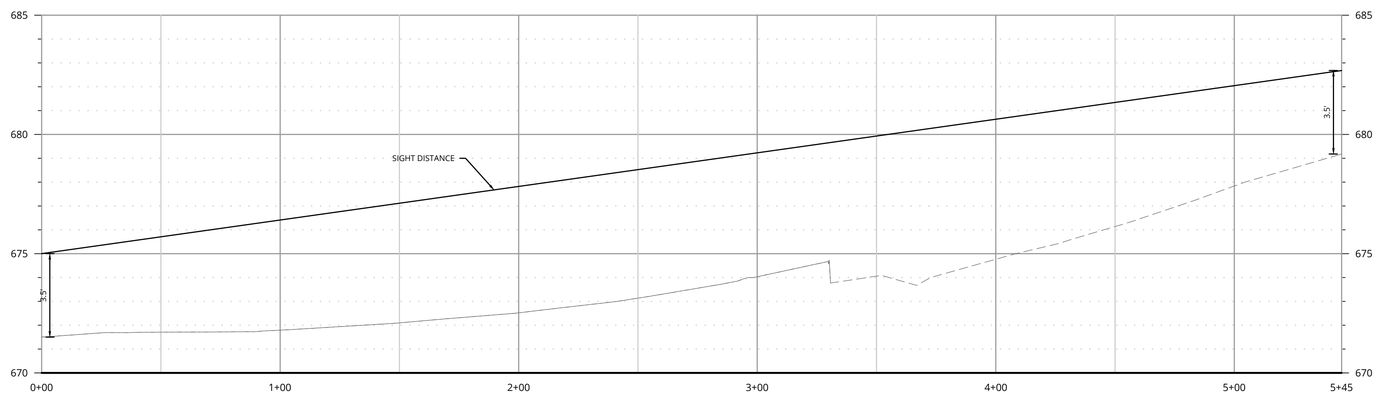
SHEET NUMBER:
C-301

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.





PROFILE OF SIGHT DISTANCE LEFT
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



PROFILE OF SIGHT DISTANCE RIGHT
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'

SCALE : 1" = 3'

VERTICAL

SCALE : 1" = 30'
HORIZONTAL

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NORTH CAROLINA PROFESSIONAL ENGINEER
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COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

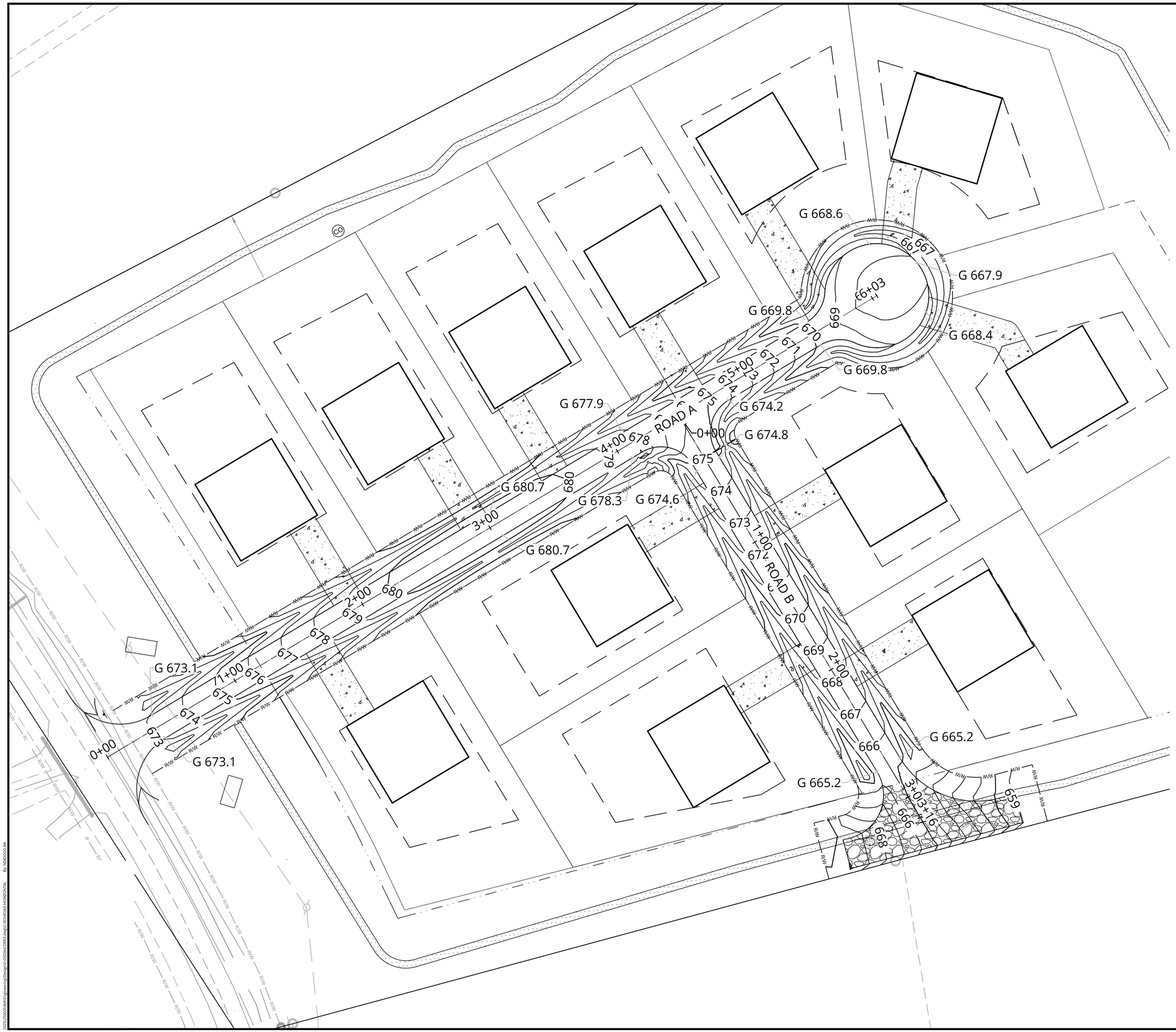
PROJECT NUMBER:	DRAWING NAME:
25003536A	C-XSEC

SHEET TITLE:
SIGHT DISTANCE PLAN

SHEET NUMBER:
C-302

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Site Plans\C-XSEC.dwg\C-302-CROSS SECTIONS By: NDOGOLBA



SCALE : 1" = 60'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

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WEDDINGTON
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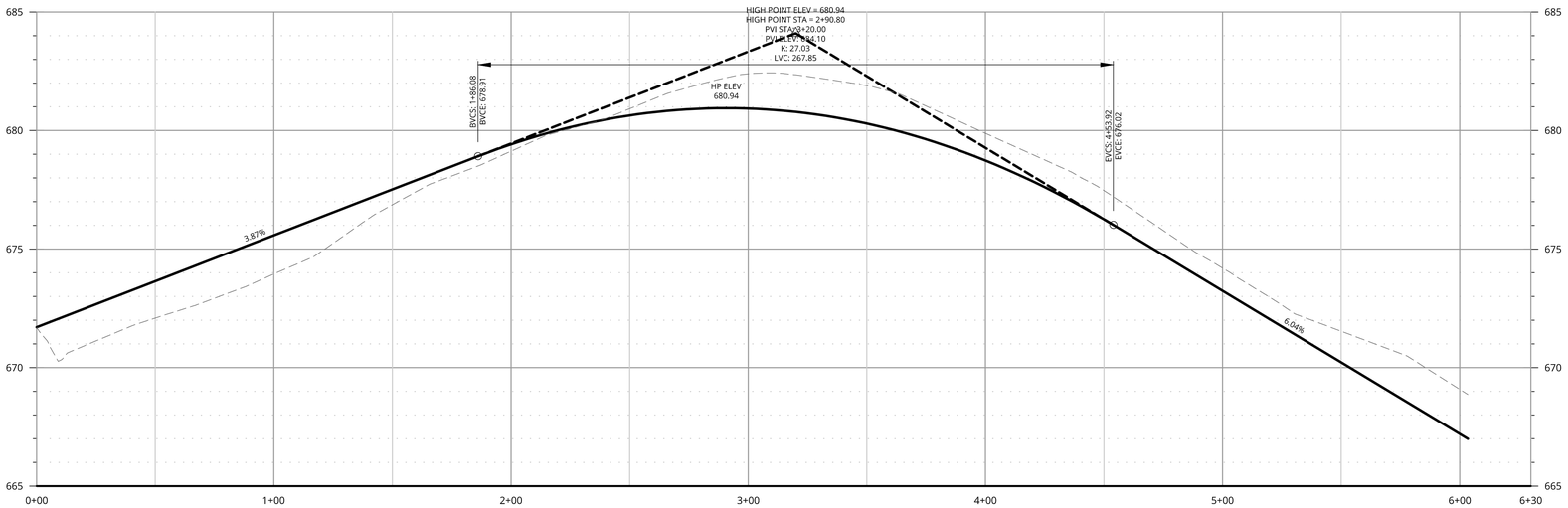
AS SHOWN	09/25/25	NWB	CW
PROJECT NUMBER: 25003536A		DRAWING NAME: C-DSGN-CORR3	

SHEET TITLE:
ROAD ELEVATIONS HORIZONTAL

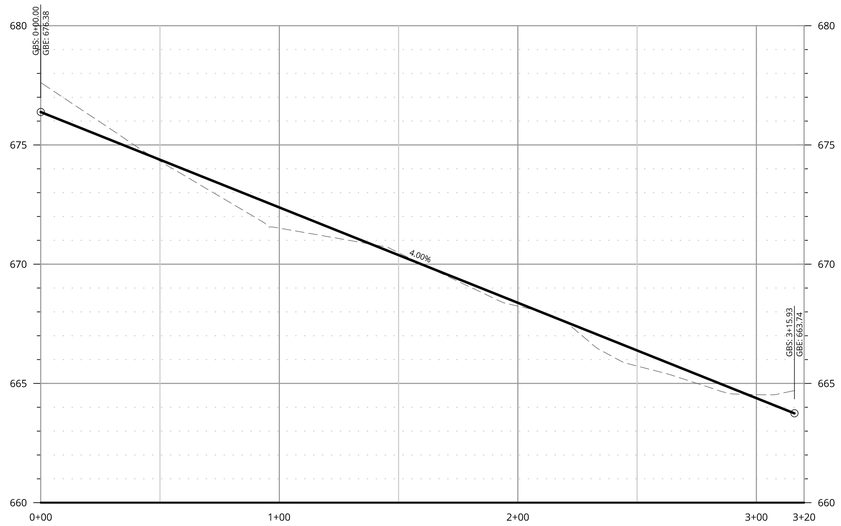
SHEET NUMBER:
C-303

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Design\C-DSGN-CORR3.dwg\C-303-ROAD HORIZONTAL By: NIBOGOLBA



PROFILE OF ROAD A
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



PROFILE OF ROAD B
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'

3 0 3 6
SCALE : 1" = 3'
VERTICAL

30 0 30 60
SCALE : 1" = 30'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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-	-	-	-

Casey R. Whiteman
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LICENSE NUMBER: 059701
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N.C. #: C-4746

CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-DSGN-CORR3

SHEET TITLE:
ROAD PROFILES

SHEET NUMBER:
C-304

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Design\C-DSGN-CORR3.dwg\C-304 - ROAD VERTICAL By: NDIKOGOLI.BA

VICINITY MAP

NOT TO SCALE

KEYSTONE CUSTOM HOMES, WEDDINGTON	
SITE DATA	
SITE ADDRESS	3009 FOREST LAWN DR, MATTHEWS, NC, 28104
PARCEL (PIN)	07150015
SF WATER DEMAND (GDP) = 12 X 400	4,800
IRRIGATION DEMAND (GDP) = 12 X 200	2,400
IRRIGATION COMMON OPEN SPACE (GDP) = 1" PER WEEK / 7 DAYS	90
TOTAL ESTIMATED DEMAND	7,290
SEWER DEMAND (GPD) = 12X280 GPD	3,360
DOMESTIC METER	12
WASTE WATER QUALITY	DOMESTIC
WWTP	TWELVE MILE CREEK

NOTE: METERS TO BE INSTALLED INDIVIDUALLY

NOTES

1. SEE SHEET C-001 FOR GENERAL NOTES.
2. CONTRACTOR SHALL REFER TO OTHERS PLANS WITHIN THIS PLAN SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THE SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
3. CONTRACTOR TO VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
4. CONTRACTOR SHALL CONTACT NC 811 A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL UTILITY COMPANIES AND COMPLY TO THE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS.

LEGEND

EXISTING		PROPOSED
12+00 TL BL PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	TYPE '9' INLET	
	TYPE 'C', 'D', 'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
CATV	CABLE TV CONDUIT	CATV
W	WATER MAIN	W
G	GAS MAIN	G
T	TELEPHONE CONDUIT	T
E	ELECTRIC CONDUIT	E
	SANITARY PIPE	
	STORM PIPE	

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

UTILITIES SKETCH PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	04/07/2025	NWB	CW
PROJECT NUMBER:		DRAWING NAME: C-UTIL	

SHEET TITLE:

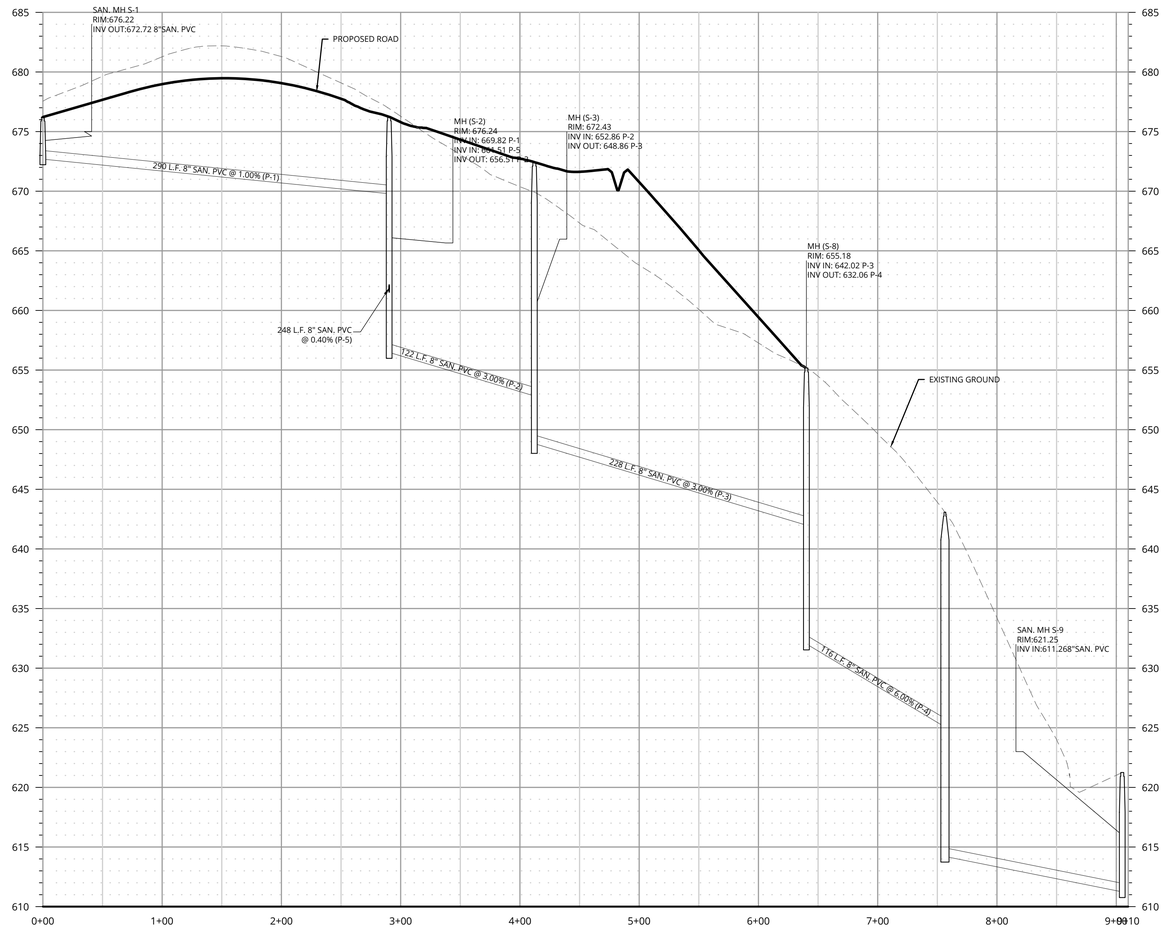
UTILITIES SKETCH PLAN

SHEET NUMBER:

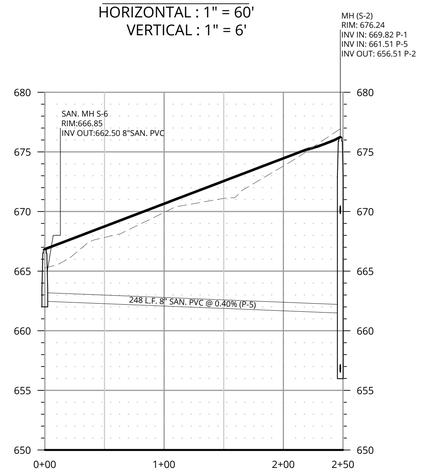
C-400

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025250035\6\Engineering\Site Plans\C_UTIL.dwg\C-400 UTILITIES By: NDIOGOU.BA



PROFILE OF SEWER A
HORIZONTAL : 1" = 60'
VERTICAL : 1" = 6'



PROFILE OF SEWER B
HORIZONTAL : 1" = 60'
VERTICAL : 1" = 6'

6 0 6 12
SCALE : 1" = 6'
VERTICAL

60 0 60 120
SCALE : 1" = 60'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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REV	DATE	DRAWN BY	DESCRIPTION
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Casey R. Whiteman
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LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

UTILITIES SKETCH PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	04/07/2025	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
....	C-UTIL

SHEET TITLE:
UTILITIES PROFILE

SHEET NUMBER:
C-401

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

N

W E

S

EROSION CONTROL DATA	
TOTAL PROPERTY AREA	16.66 AC
DISTURBED AREA	8.43 AC

FILL SLOPE NOTES

ALL FILL SLOPES WILL HAVE SILT FENCE AT THE TOE OF THE SLOPE

EXISTING SITE SOIL TYPES

SOIL SYMBOL: ChA - CHEWACLA SILT LOAM

SOIL SYMBOL: GsE - GOLDSTON-BADIN COMPLEX

SOIL SYMBOL: ScA - SECRET-CID COMPLEX

SOIL SYMBOL: TaD - STARRUS GRAVELLY SILTY CLAY LOAM

SOIL SYMBOL: TbB2- TARRUS GRAVELLY SILTY CLAY LOAM

SOIL SYMBOL: TbC2- TARRUS GRAVELLY SILTY CLAY LOAM

REFERENCE: USDA NATIONAL RESOURCES CONSERVATION WEB SOIL SURVEY

OWNER'S MAINTENANCE

MAINTENANCE OF ALL EROSION CONTROL MEASURES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE OWNER.

CONSTRUCTION SEQUENCE:

PHASE I

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE TOWN OF WEDDINGTON ENGINEERING DEPARTMENT.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF THE TOWN ENGINEERING DEPARTMENT TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 17 OF THE TOWN CODE AND IS SUBJECT TO FINE.
3. INSTALL SILT FENCE, INLET PROTECTION, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS. CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES THE GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
5. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.

PHASE II

6. INSTALL UTILITIES AND STORMWATER CONVEYANCE FACILITIES AS APPROPRIATE WHILE GRADING ACTIVITIES OCCUR. AS STORMWATER CONVEYANCE FACILITIES ARE INSTALLED, INSTALL INLET PROTECTION AS SHOWN ON THE PLANS.COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
7. BEGIN TO BRING SITE UP TO FINISHED GRADE OR SUBGRADE AS APPROPRIATE. AREAS TO BE STABILIZED AS THEY REACH FINISHED GRADE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENVIRONMENTAL ENGINEERING DEPARTMENT.
10. INSTALL THE CURB AND GUTTER, SIDEWALK, ASPHALT CONCRETE PADS AND BUILDING FOUNDATIONS AS SITE IS BROUGHT TO SUBGRADE.
11. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N. C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, AND THE TOWN OF WEDDINGTON LAND DEVELOPMENT STANDARDS MANUAL

EROSION CONTROL NOTES

1. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
2. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE TOWN'S EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
3. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE TOWN'S EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
4. 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.
5. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE TOWN OF WEDDINGTON ENGINEERING DIVISION.

NOTES

1. SEE SHEET C-001 FOR GENERAL NOTES.
2. CONTRACTOR SHALL REFER TO OTHERS PLANS WITHIN THIS PLAN SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THE SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
3. CONTRACTOR TO VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
4. CONTRACTOR SHALL CONTACT NC 811 A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION.

EROSION LEGEND

LOD	LIMITS OF DISTURBANCE
X X	SILT FENCE
	TEMPORARY INLET PROTECTION
DC	DUST CONTROL
	TEMPORARY GRAVEL CONST. ENTRANCE/ EXIT
TS	TEMPORARY SEEDING
PS	PERMANENT SEEDING

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION
-	-	-	-

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, NC 28217
Phone: 980.245.3161
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT P.C. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW
PROJECT NUMBER: 25003536A		DRAWING NAME: C-SESC	

SHEET TITLE:

SOIL EROSION & SEDIMENT CONTROL PLAN PHASE I

SHEET NUMBER:

C-500

2025/25003536A/Engineering/Site Plans/C-SESC.dwg/C-500-SESC PLAN1 By:NDIXON10BA

EROSION CONTROL DATA	
TOTAL PROPERTY AREA	16.66 AC
DISTURBED AREA	8.43 AC

FILL SLOPE NOTES

ALL FILL SLOPES WILL HAVE SILT FENCE AT THE TOE OF THE SLOPE

EXISTING SITE SOIL TYPES

SOIL SYMBOL: ChA - CHEWACLA SILT LOAM

SOIL SYMBOL: GsE - GOLDSTON-BADIN COMPLEX

SOIL SYMBOL: ScA - SECRET-CID COMPLEX

SOIL SYMBOL: TaD - STARRUS GRAVELLY SILTY CLAY LOAM

SOIL SYMBOL: TbB2- TARRUS GRAVELLY SILTY CLAY LOAM

SOIL SYMBOL: TbC2- TARRUS GRAVELLY SILTY CLAY LOAM

REFERENCE: USDA NATIONAL RESOURCES CONSERVATION WEB SOIL SURVEY

OWNER'S MAINTENANCE

MAINTENANCE OF ALL EROSION CONTROL MEASURES, WHETHER TEMPORARY OR PERMANENT, SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE OWNER.

CONSTRUCTION SEQUENCE:

PHASE I

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE TOWN OF WEDDINGTON ENGINEERING DEPARTMENT.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF THE TOWN ENGINEERING DEPARTMENT TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 17 OF THE TOWN CODE AND IS SUBJECT TO FINE.
3. INSTALL SILT FENCE, INLET PROTECTION, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES THE GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
5. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.

PHASE II

6. INSTALL UTILITIES AND STORMWATER CONVEYANCE FACILITIES AS APPROPRIATE WHILE GRADING ACTIVITIES OCCUR. AS STORMWATER CONVEYANCE FACILITIES ARE INSTALLED, INSTALL INLET PROTECTION AS SHOWN ON THE PLANS.COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
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8. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE ENVIRONMENTAL ENGINEERING DEPARTMENT.
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NOTES

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EROSION LEGEND

LOD	LIMITS OF DISTURBANCE
X X	SILT FENCE
	TEMPORARY INLET PROTECTION
DC	DUST CONTROL
	TEMPORARY GRAVEL CONST. ENTRANCE/ EXIT
TS	TEMPORARY SEEDING
PS	PERMANENT SEEDING

60 0 60 120

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CONDITIONAL ZONING PLAN

FOR

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-SESC

SHEET TITLE:

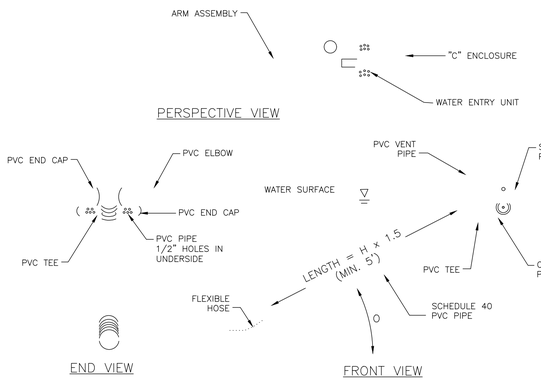
SOIL EROSION & SEDIMENT CONTROL PLAN PHASE II

SHEET NUMBER:

C-502

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

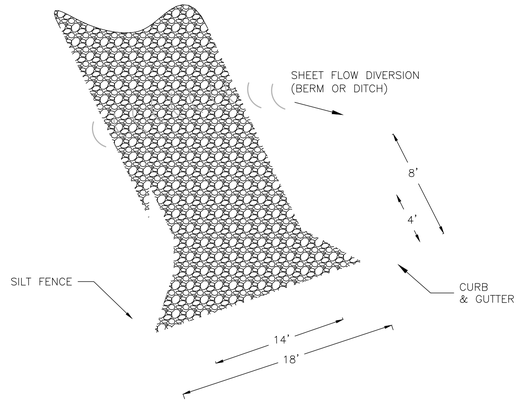
2025/25035SAE/Engineering/Site Plans/C-SESC.dwg/C-502-SESC PLAN II By: NDIVGOLBA



SCHEMATIC OF SKIMMER TAKEN FROM PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL MANUAL, MARCH 2000.

"H" REFERS TO THE HEIGHT FROM INVERT OF FLEXIBLE HOSE ON SKIMMER TO THE INVERT OF THE PRIMARY SPILLWAY.

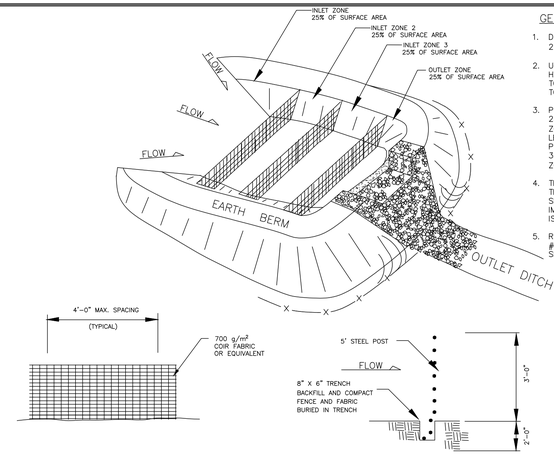
SKIMMER
NOT TO SCALE



NOTES:

1. PROVIDE 6" MINIMUM STONE DEPTH
2. USE #5 WASHED STONE AND RAILROAD BALLAST MIX
3. INSTALL SOIL STABILIZATION FABRIC OR 4" COMPACTED ABC STONE UNDER ENTRANCE
4. ANY AGGREGATE TRACKED INTO THE ROADWAY MUST BE SWEPT BACK ONSITE ON A NIGHTLY BASIS
5. MINIMUM LENGTH OF ENTRANCE = 25'

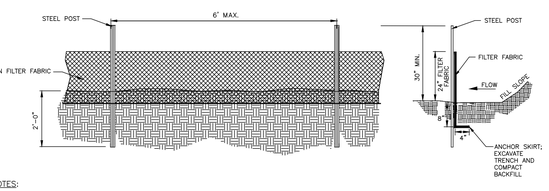
CONSTRUCTION ENTRANCE
SINGLE FAMILY LOT
NOT TO SCALE



GENERAL NOTES:

1. DRIVE 5' STEEL POST AT LEAST 24" INTO SOLID GROUND.
2. USE STAPLES 1' APART HORIZONTALLY AND VERTICALLY TO ATTACH THE FILTER FABRIC TO THE WIRE FENCE.
3. PROVIDE 4 TREATMENT ZONES, 25% OF SURFACE AREA IN EACH ZONE (3 BAFFLES). FOR BASINS LESS THAN 40 FEET LONG, PROVIDE 3 TREATMENT ZONES, 33% OF SURFACE AREA EACH ZONE (2 BAFFLES)
4. THE FLOOR OF THE BASIN IN THE OUTLET ZONE AND BERMS SHOULD BE SEEDED IMMEDIATELY AFTER THE BASIN IS CONSTRUCTED.
5. REFER TO NCESCPDM SECTION #6.65 FOR ADDITIONAL SPECIFICATIONS.

BAFFLE INSTALLATION
NOT TO SCALE



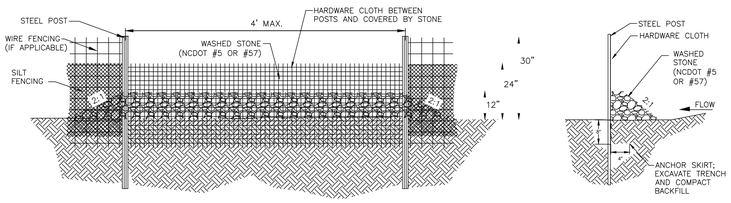
GENERAL NOTES:

1. WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
2. STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
3. TURN SILT FENCE UP SLOPE AT ENDS.
4. ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE WHEN GRADING IS ADJACENT TO SWIM BUFFERS, STREAMS OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES). THE COLOR ORANGE IS RESERVED FOR VISUAL IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS.
5. DRAINAGE AREA CAN NOT BE GREATER THAN 1/4 ACRE PER 100 FT OF FENCE.
6. SLOPE LENGTHS CAN NOT EXCEED CRITERIA SHOWN IN TABLE 6.62A NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
7. DO NOT INSTALL SEDIMENT FENCE ACROSS STREAMS, DITCHES, WATERWAYS OR OTHER AREAS OF CONCENTRATED FLOW.

MAINTENANCE NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROX. HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

TEMPORARY SILT FENCE
NOT TO SCALE



GENERAL NOTES:

1. SEDIMENT FILTER OUTLET HARDWARE CLOTH SHALL BE 24" HIGH AND STONE SHALL BE A MINIMUM OF 12" HIGH.
2. HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEYED IN A MINIMUM OF 12 INCHES IN LENGTH AND BACKFILLED PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. #30.09 (19 GAUGE, 1/4" SPACING).
3. POSTS SHALL BE NO MORE THAN 4 FEET APART.
4. SITE OUTLETS AT LOW AREAS IN CONJUNCTION WITH AND ALONG LONG RUNS OF SILT FENCE AT INTERVALS NO CLOSER THAN 100 FEET. DRAINAGE AREA TO OUTLETS SHALL NOT EXCEED 1/4 ACRE.
5. EQUIVALENT ALTERNATIVES MAY BE USED WITH PRIOR CITY APPROVAL.

MAINTENANCE NOTES:

1. FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

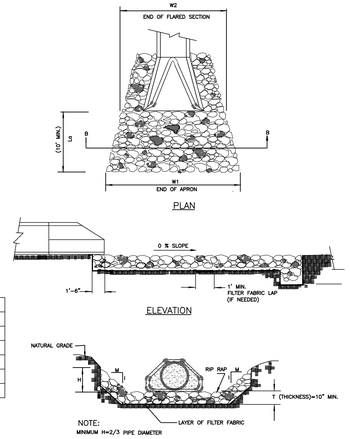
SILT FENCE OUTLET
NOT TO SCALE

NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. REFER TO THE CHARLOTTE MECKLENBURG STORM WATER DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
10. ANY DISTURBED AREA FROM END OF APRON TO RECIEVING CHANNEL MUST BE STABILIZED.

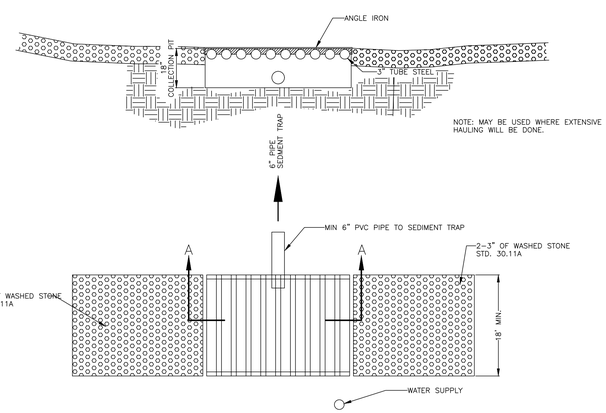
OUTLET	La	W1	W2	*T	H

* d50 (see fig 8.06 a&b "NC SEDIMENT AND EROSION CONTROL MANUAL"
dmax = 1.5 x d50
T = 1.5 X dmax.
T(min.)=10"

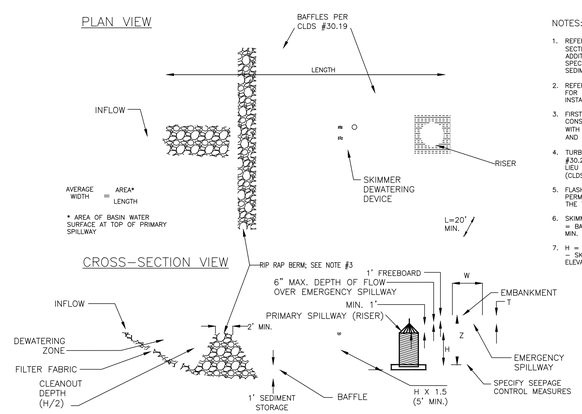


BAFFLE INSTALLATION
NOT TO SCALE

RIPRAP APRON AT PIPE OUTFALLS
OTHER THAN AT SWIM



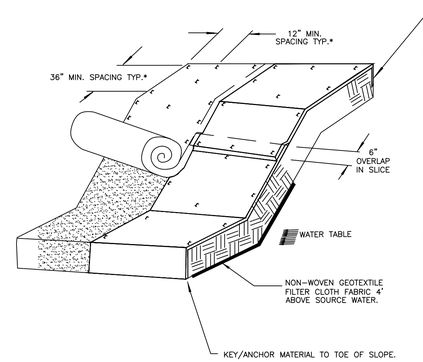
CONSTRUCTION ENTRANCE
TIRE WASH
NOT TO SCALE



NOTES:

1. REFER TO NCESCPDM SECTION #6.61 FOR ADDITIONAL DESIGN SPECIFICATIONS REGARDING SEDIMENT BASINS.
2. REFER TO STD. #30.19 FOR BAFFLE SPACING AND INSTALLATION.
3. FIRST BAFFLE IS TO BE CONSTRUCTED OF RIP-RAP, WITH A MIN. HEIGHT OF 3', AND MIN. TOPWIDTH OF 2'.
4. TURBIDITY CURTAIN (CLDS #30.23) MAY BE USED IN LIEU OF POROUS BAFFLES (CLDS #30.19).
5. FLASHBOARD RISER NOT PERMITTED FOR USE IN THE TOWN OF WEDDINGTON
6. SKIMMER INVERT ELEVATION = BASIN BOTTOM + 1' MIN.
7. H = SPILLWAY ELEVATION - SKIMMER INVERT ELEVATION

SEDIMENT BASIN
NOT TO SCALE



GENERAL NOTES:

1. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL DO NOT STRETCH.
2. * DIMENSIONS SHOWN ARE MINIMUM. MANUFACTURED PRODUCTS MAY HAVE ADDITIONA REQUIREMENTS THAT MUST BE MET.
3. SLOPE SURFACE SHALL BE FRE OF ROCKS, SOIL CLODS, STICKS GRASS. MAT/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
4. THE DETAIL SHOWN IS FOR SLO MATTING. FOR CHANNEL OR P OUTFALL MATTING SPECIFICATION PLEASE REFER TO NCESCPDM STANDARD #6.17 AND MANUFACTURER'S GUIDELINES.
5. ALL MATTING SHALL BE 100% BIODEGRADABLE WITH ORGANIC NETTING. PLASTIC OR NON-BIODEGRADABLE NETTING W NOT BE ALLOWED. PLEASE NOT TURF REINFORCED MATTING (TR IS PERMITTED WHERE DESIGN CRITERIA WARRANTS ITS USE.

EMBANKMENT MATTING
NOT TO SCALE

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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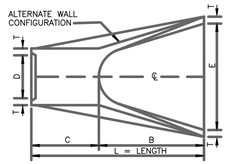
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER: 25003536A
DRAWING NAME: C-SESC

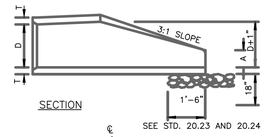
SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER:
C-503

2025\25003536A\Engineering\Site Plans\C-SESC.dwg\C-503 SOIL EROSION DETAILS By: NDIXOGDLBA

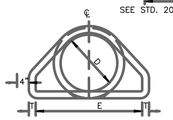


PLAN



SECTION

SEE STD. 20.23 AND 20.24



END VIEW

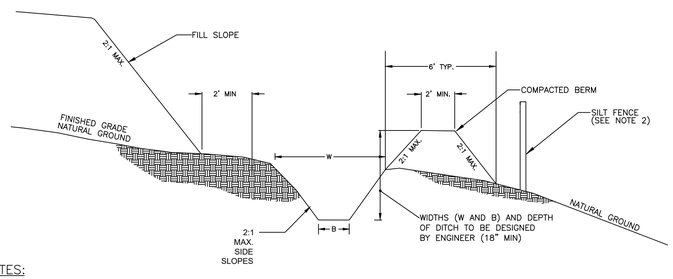
TABLE OF DIMENSIONS							
D	T	A	B	C	E	L	WT.
12"	2-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	730
15"	2-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	730
18"	2-1/2"	9"	2'-3"	3'-10"	3'-0"	6'-1"	1190
24"	3"	10"	3'-8"	2'-6"	4'-0"	6'-2"	1770
30"	3-1/2"	1'-0"	4'-6"	1'-8"	5'-0"	6'-2"	2380
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	8'-2"	5320
42"	4-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	8'-2"	5920
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	8'-2"	7470
54"	5-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	8'-4"	8810
60"	6"	2'-6"	5'-0"	3'-3"	8'-0"	8'-3"	11180
66"	6-1/2"	3'-0"	6'-0"	2'-3"	8'-6"	8'-3"	12530
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	8'-3"	13980

GENERAL NOTES:

1. SEE FORMER NCDOT STANDARD STANDARD 310.01 FOR DETAILS.
2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M170, TABLE 2, WALL B.
3. ALL CONCRETE TO BE 3600 P.S.I COMPRESSIVE STRENGTH.
4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
7. NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

FLARED END SECTION 12" THRU 72" PIPE

NOT TO SCALE



NOTES:

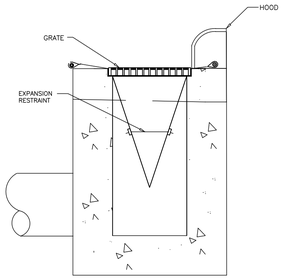
1. DITCH SHOULD HAVE LONGITUDINAL SLOPE OF 1%.
2. SILT FENCE MAY BE REQUIRED BEHIND BERM
3. DITCHES SHOULD BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION REQUIREMENTS OF THE NCG010000 PERMIT.
4. WHERE DESIGN VELOCITIES EXCEED 2 FT/SEC, A CHANNEL LINER IS NECESSARY TO PREVENT DITCH EROSION.

TEMPORARY SILT DITCH

NOT TO SCALE

NOTES:

1. INLET MAINTENANCE SHALL BE DOCUMENTED IN PROJECT LOG BOOK.
2. FILTER TYPES SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO INSTALLATION.
3. FILTER BAGS MAY BE REMOVED WHEN SITE IS STABILIZED AT THE DIRECTION OF THE ENGINEER.
4. FILTER BAGS SHALL BE REMOVED PRIOR TO STREET ACCEPTANCE AND/OR CLOSE OUT OF GRADING PERMIT.
5. FILTER BAGS SHALL BE CLEANED OR REPLACED ON A REGULAR BASIS (NOT BE MORE THAN HALF FULL AT ANY TIME).
6. FILTER BAGS MAY BE INSTALLED IN EXISTING CITY OR NCDOT ROADS AS LONG AS STORM DRAINAGE IS NOT IMPEDED.



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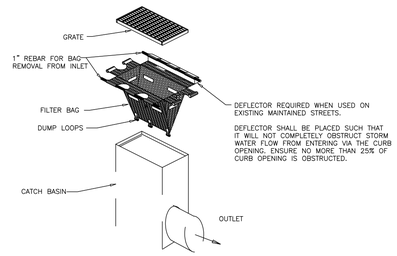


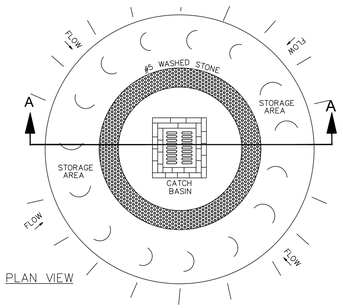
INSTALLATION

CATCH BASIN INLET PROTECTION

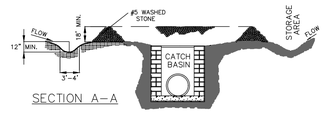
NOT TO SCALE

GENERAL NOTES:

1. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
2. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. THE STRUCTURE SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT AFTER EACH STORM EVENT AND REPAIRS MADE AS NECESSARY.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
5. THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE BASIN HAS BEEN PROPERLY STABILIZED.
6. ON LARGER DRAINAGE AREAS RIP RAP MAY BE REQUIRED UNDER THE WASHED STONE.



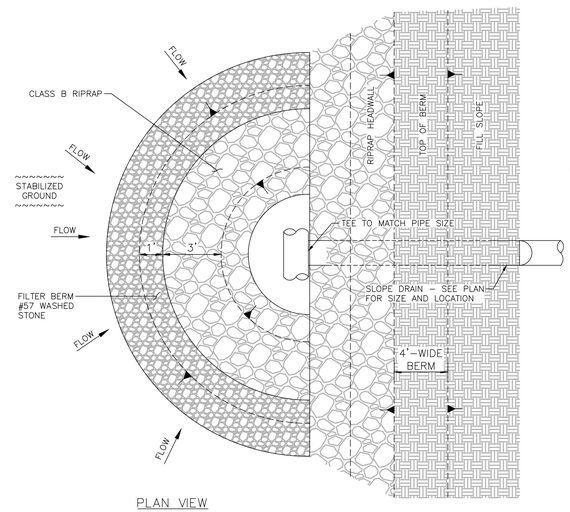
PLAN VIEW



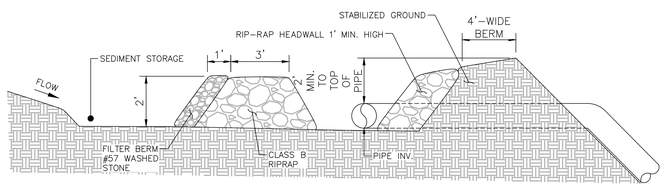
SECTION A–A

STONE INLET PROTECTION

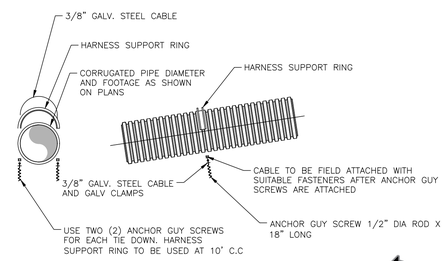
NOT TO SCALE



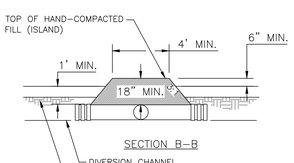
PLAN VIEW



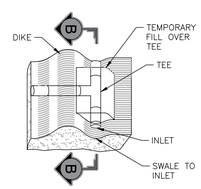
SECTION VIEW



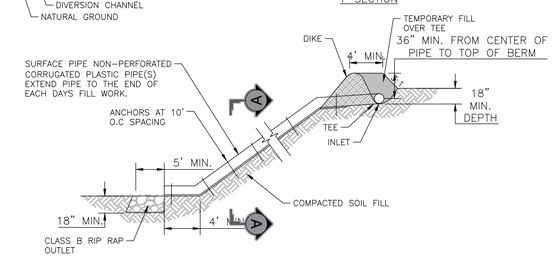
SECTION A–A



SECTION B–B



PLAN VIEW
T–SECTION



NOTES:

1. PLACE SLOPE DRAINS ON UNDISTURBED SOIL OR WELL COMPACTED FILL AT LOCATIONS INDICATED ON EROSION CONTROL PLAN.
2. SLIGHTLY SLOPE SECTION OF PIPE UNDER THE DIVERSION DIKE TOWARD OUTLET.
3. ENSURE THAT ALL SLOPE DRAIN CONNECTIONS ARE WATERTIGHT.
4. INSPECT AFTER EVERY RAINFALL AND MAKE NECESSARY REPAIRS.
5. REFERENCE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, SECTION 6.32.
6. SEE PLANS FOR PIPE SIZES.

TEMPORARY SLOPE DRAIN

NOT TO SCALE

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
www.colliersengineering.com

Doing Business as MASER CONSULTING

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, NC 28217
Phone: 980.245.3161
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT C.DONG BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER:
C-504

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1

Project Name				**Land Quality or Local Program Project/Permit #**	
Approving Authority		**Date of Plan Approval**		**Expiration Date, if applicable**	
NCG010000 Certificate of Coverage Number				**Date of COC Issuance**	

Coverage under the NCG010000 permit must be renewed annually, if issued after April 1, 2019 until Notice of Termination is filed and approved.

PART 1A: Rainfall Data

	Rain Amount (inches) Daily Rainfall Required. If no rain, indicate with a "zero"
M	
T	
W	
Th	
F	
Sat (Inspection Optional)	
Sun (Inspection Optional)	

PART 1B: Phase(s) of the Plan

Check ALL applicable box(es) that apply to completed & current phases	**X**
Initial installation of erosion and sediment control measures	
Clearing and grubbing of existing ground cover	
Completion of any grading that requires ground cover	
Completion of all land-disturbing activity, construction or development	
Permanent ground cover sufficient to restrain erosion has been established	

Are there any site or project conditions that limit completion of inspection? If yes, explain conditions and areas of site that were inaccessible.	

DEMLR Monitoring Form Rev. 07012020

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PART 2: STORMWATER PLANS AND CONTROLS: For each question below, mark the corresponding box as Yes, No or N/A. For all items marked "No", note in Part 3A the Reference letter and provide the Corrective Action and location of the deficiency, the original date noted, and the date it was noted as being corrected. NOTE: Reference letters may be used multiple times.

Reference	**Part 2A: Storm Water Plans and Related Documents**	**Yes**	**No**	**N/A**
A	Is the approval letter or certificate, COC and a copy of the NPDES Construction General Permit (CGP) on site? (Readily available electronic copy of CGP is acceptable)			
B	Is the approved plan on site and current?			
Reference	**Part 2B: Stormwater Pollutant Controls**	**Yes**	**No**	**N/A**
C	Are erosion and sediment controls that are shown on the approved plan installed and operating properly with no repairs needed?			
D	Are stormwater controls that are shown on the approved plan installed and operating properly with no repairs needed?			
E	Vehicle Tracking: Are construction entrances operating properly with no repairs needed?			
F	Soil Stabilization: Are areas of the site where construction activities have ceased been properly stabilized within the required timeframes?			
G	Are earthen stockpiles stabilized or otherwise protected from sediment loss, and located at least 50 feet away or downhill from drain inlets and surface waters?			
Reference	**Part 2C: Non-Storm Water Pollutant Controls**	**Yes**	**No**	**N/A**
H	Concrete, stucco, paint, etc. washouts: Are washouts installed, properly located, posted and operating with no repairs needed?			
I	Solid & hazardous wastes: Are trash, debris, and hazardous materials properly managed?			
J	Sanitary waste: Are portable toilets properly located and operating with no visible repairs needed?			
K	Equipment and stored fluids: Are fuels, lubricants, hydraulic fluids, etc. contained so as not to enter surface and ground waters?			

Report oil spills and the release of hazardous substances to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. https://deq.nc.gov/contact/regional-offices

For any items listed in the section below, a full description of sedimentation is required in Part 3A. This includes, but may not be limited to: location, estimated amount of sediment that has left the site and/or entered waters, apparent causes of the sediment loss, and what corrective actions need to be taken to prevent this from recurring.

Reference	**Part 2D: Sedimentation**	**Yes**	**No**	**N/A**
L	Are sediment or other pollutants noted beyond the approved or permitted limits of disturbance?			
M	Are BMPs detected as releasing sediment or other pollutants into receiving waters?			

Report visible sedimentation into streams or wetlands to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. https://deq.nc.gov/contact/regional-offices

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PART 3A: EROSION AND SEDIMENTATION CONTROL MEASURES: Measures must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT EQUAL TO OR GREATER THAN 1.0 INCH PER 24 HOUR PERIOD. Add rows as needed.

Erosion and Sedimentation Control Measures Inspected			**Inspection Date**	**Describe Actions Needed** Corrective actions should be performed as soon as possible and before the next storm event	**Date Previous Action(s) Observed as Corrected**
Measure ID or Location and Description	Reference(s)	Operating Properly? (Y/N)			

Report unanticipated bypasses, or non-compliance conditions that may endanger health or the environment, to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. https://deq.nc.gov/contact/regional-offices

PART 3B: STORMWATER DISCHARGE OUTFALLS (SDOs): SDOs must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT EQUAL TO OR GREATER THAN 1.0 INCH PER 24 HOUR PERIOD. Add rows as needed.

Stormwater Discharge Outfalls Inspected					**Inspection Date**	**Describe Actions Needed** Corrective actions should be performed as soon as possible and before the next storm event	**Date Previous Action(s) Observed as Corrected**
Stormwater Discharge Outfall ID or Location	Any Visible Sedimentation in Streams, Wetlands or Outside Site Limits? (Y/N)	Any Increase in Stream Turbidity from Discharge? (Y/N)	Any Visible Erosion below SDO? (Y/N)	Any visible oil sheen, floating or suspended solids or discoloration? (Y/N)			

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PART 3C: GROUND STABILIZATION: Must be recorded, at a minimum, after each phase. Add rows as needed.

Site area description and location where construction activities have temporarily or permanently ceased	Time Limit for Ground Cover (see table below)	Have stabilization measures been installed? (Y/N)	Temporary or Permanent Stabilization (T/P)	Is Ground Cover Sufficient to Restrain Erosion? (Y/N)	Original Inspection Date	**Describe Actions Needed** Corrective actions should be performed as soon as possible and before the next storm event	Date Previous Action(s) Observed as Corrected

GROUND STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Variations
Perimeter dikes, swales and slopes	7 Days	None
High Quality Water (HQW) Zones	7 Days	None
Slopes Steeper than 3:1	7 Days	7 days for perimeter dikes, swales, and HWQ zones 14 days for slopes 10 ft or less in length and not steeper than 2:1 10 days for Falls Lake Watershed
Slopes 3:1 to 4:1	14 Days	7 days for perimeter dikes, swales, and HWQ zones 7 days for slopes greater than 50 ft in length 10 days for Falls Lake Watershed
All other areas with slopes flatter than 4:1	14 Days	7 days for perimeter dikes, swales, slopes and HWQ zones 10 days for Falls Lake Watershed

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PART 3D: NEW OR REVISED MEASURES: Erosion and sedimentation control measures omitted or installed, at a minimum since the last inspection, shall be documented here or by initialing and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan. Alterations and relocations of measures should also be documented if they significantly deviate from the approved plan. The approved measures should also be documented. List dimensions of measures such as Sediment Basins and Dissipator Pads. Add rows as needed. Corrective actions should be included in Part 3A.

Measure ID or Location and Description	Proposed Dimensions (ft.)	Actual Dimensions (ft.)	Significant Deviation* from Plan? (Y/N)	Date measure observed as installed, altered, relocated or removed	Installed (I) Altered (A) Relocated (R) Removed (X)

*Significant deviation means any omission, alteration or relocation of an erosion or sedimentation control measure that prevents it from performing as intended.

PART 4: Signature of Inspector

Financially Responsible Party (FRP) / Permittee		**County**
INSPECTOR	Name	Employer
Inspector Type (Mark X)	Address	
FRP/Permittee		
Agent/Designee	Phone Number	Email Address

By this signature, I certify in accordance with the NCG010000 permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge.

Financially Responsible Party / Permittee or Agent / Designee	Date & Time of Inspection

---

Date:

Page:

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE

Species	**Rate**
Indian Woodoats	1.5-2.5 lbs/acre*
Virginia Wild Rye	4-6 lbs/acre*

*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.

Seeding Dates

Mountains - July 15- Aug 15

Piedmont - Aug 15 - Oct 15

Maintenance:

Indian Woodoats and Virginia Wild Rye are both sun and shade tolerant.

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE

Species	**Rate**
Hard Fescue	15 lbs/acre
Switchgrass	2.5-3.5 lbs/acre*
Indian Grass	5-7 lbs/acre*
Big Bluestem	5-7 lbs/acre*
Indian Woodoats	1.5-2.5 lbs/acre*
Virginia Wild Rye	4-6 lbs/acre*

*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.

Seeding Dates

Mountains - Hard Fescue- Aug 1 - June 1

Mountains- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 15

Piedmont and Coastal- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 1

Coastal- Indian Woodoats and Virginia Wild Rye- Sept 1 - Nov 1

Maintenance:

Hard Fescue is not recommended for slopes > 5%. Prefers shade.

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE

Species	**Rate**
Centipede	5 lbs/acre
Indian Woodoats	1.5-2.5 lbs/acre*
Virginia Wild Rye	4-6 lbs/acre*

*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.

Seeding Dates

Coastal or Eastern Piedmont for Centipede- Sept. 1 - May 1

Coastal and Piedmont for Indian Woodoats and Virginia Wild Rye- Feb 15 - April 1

Mountains for Indian Woodoats and Virginia Wild Rye- March 1 - May 15

Maintenance:

Significant maintenance may be required to obtain desired cover once centipede is planted. Acceptable for sodding.

SEED BED PREPARATION:

LIMING- Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1 ½ tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

FERTILIZER- Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

SURFACE ROUGHENING- If recent tillage operations have resulted in a loose surface additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loosen uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.

NOTES:

1. Permanent seeding, sodding or other means of stabilization are required when all construction work is completed according to the NPDES timeframe's table.
2. A North Carolina Department of Agriculture soils test (or equal) is highly recommended to be obtained for all areas to be seeded, sprigged, sodded or planted.
3. Use a seeding mix that will produce fast growing nurse crops and includes non-invasive species that will eventually provide a permanent groundcover. Soil blankets may be used in lieu of nurse crops. Mat, tack or crimp mulch, as needed to stabilize seeded areas until root establishment. Mulch must be applied uniformly over the soil with a cover density of at least 80%.
4. Ground cover shall be maintained until permanent vegetation is established and stable against accelerated erosion.

NORTH CAROLINA Environmental Quality

EFFECTIVE DATE: 11/12/2020

PERMANENT SEEDING RECOMMENDATIONS

Date:

Page:

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

Seeding Mixture

Species	**Rate (lb/acre)**
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding Dates

Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1

Piedmont—Jan. 1 - May 1

Coastal Plain—Dec. 1 - Apr. 15

Mulch

Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance

Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

Seeding Mixture

Species	**Rate (lb/acre)**
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding Dates

Mountains—May 15 - Aug. 15

Piedmont—May 1 - Aug. 15

Coastal Plain—Apr. 15 - Aug. 15

Mulch

Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance

Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

Seeding Mixture

Species	**Rate (lb/acre)**
Rye (grain)	120

Seeding Dates

Mountains—Aug. 15 - Dec. 15

Coastal Plain and Piedmont—Aug. 15 - Dec. 31

Mulch

Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance

Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

SEED BED PREPARATION:

LIMING- Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1 ½ tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

FERTILIZER- Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

SURFACE ROUGHENING- If recent tillage operations have resulted in a loose surface additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loosen uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.

NORTH CAROLINA Environmental Quality

EFFECTIVE DATE: 11/12/2020

TEMPORARY SEEDING RECOMMENDATIONS

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
X-XXXX	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

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

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

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 but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

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.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

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.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

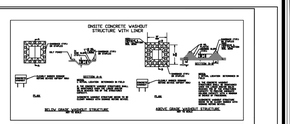
PORTABLE TOILETS

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. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

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.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

NORTH CAROLINA Environmental Quality



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

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.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

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. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

Water Resources
Environmental Quality

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
S. JAY ZIMMERMAN
Director

North Carolina DWR List of Approved PAMS/Flocculants

Updated 4/01/2017

Company	**Product**	**Maximum Recommended Concentration**
Applied Polymer System	APS 712	59.3 ppm
Applied Polymer System	APS 730	5.6 ppm
Applied Polymer System	APS 740	5.2 ppm
Applied Polymer System	APS 703d	**
Applied Polymer System	APS 703d#3	**
Applied Polymer System	APS 706b	**
Applied Polymer System	APS 705	27.7 ppm
Aquamark, Inc	AQ100	Land surface application only at 39.7 ppm
Aquamark, Inc	AQ109	Land surface application only at 0.180g/l
Ashland Hercules Water Tech	Ashland Charge Pac 55	10 mg/L
Ashland Hercules Water Tech	Ashland Zalta MC 9500	10 mg/L
Cape Fear Consulting	PAX-CFC39A	5 ppm
Cape Fear Consulting	CFC-4330	4.5 ppm
Carolina Hydrologics	HYDROLOC PAM	Land surface application only at 3.0 mg/l
Carolina Hydrologics	Floc Roll/Line/Flat	50 mg/L
Chemical Solutions, Inc.	CS-1234 and/or CS-1234D	500 mg/L per 18% solids *(see below)*
Chemical Solutions, Inc	MK7154DP	10 mg/L
Green Techniques	Soil Defender	Land surface application only at 0.008%
HaloSource, Inc.	GelFloc	2.56 mg/L
HaloSource, Inc.	LBP-2101	500 mg/L
Hanes Geo Components	TerraGuard Granular PAM	3.25mg/L
Innovative Turf Solutions	EnviroPam	200 mg/L
Innovative Turf Solutions	Erosion Guard Powder, Erosion Guard Logs/Erosion Guard Flats	200 mg/L
Innovative Turf Solutions	FLOC	650 mg/L
Leaner Meaner Greener, Inc	L.M.G. Dust Magnet 281 Solution	0.05%
Leaner Meaner Greener, Inc	L.M.G. Dust Magnet 163 powder	0.5 mg/L
Leaner Meaner Greener, Inc	DBP-2100	28.125 mg/L
Nalco	Nalco 8187	100 ppm
NTU	GeoScrub 10, 13, 20, 23, 34	10 mg/L
NTU	GeoScrub Bubbles	1 mg/L
Paschal Associates Sales	PFR P251	25 ppm
Southeastern Laboratories	SEL FLOC 6026	7.5 ppm
Storm Klear	3% Liqui-Floc	9.4 mg/L
Terra Novo	EarthGuard	.000625 mL/L

All these products should be used per the manufacturer's instruction and with Best Management Practices.

Additional information for specific products:

- For use and toxicity guidance regarding CS-1234 and/or CS-1234D, please contact Cindy Moore with the DWR Aquatic Toxicology Branch at (919) 743-8442 or at cindy.a.moore@ncdenr.gov

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REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL DETAILS

SHEET NUMBER:
C-505

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

N
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NOTES

1. SEE SHEET C-001 FOR GENERAL NOTES.
2. CONTRACTOR SHALL REFER TO OTHERS PLANS WITHIN THIS PLAN SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THE SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
3. CONTRACTOR TO VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
4. CONTRACTOR SHALL CONTACT NC 811 A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL UTILITY COMPANIES AND COMPLY TO THE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS.
6. SITE TO BE FULLY PERMANENTLY STABILIZED, WITH NO AREAS LEFT AS BARE SOILS.

HERITAGE TREE REMOVAL

HERITAGE TREES INSIDE BUILDABLE AREA= 123 TREES
HERITAGE TREES INSIDE BUILDABLE AREA REMOVED = 107 TREES
HERITAGE TREES INSIDE BUILDABLE AREA REMAINING = 16 TREES

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

60 0 60 120
SCALE : 1" = 60'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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-	-	-	-

Casey R. Whiteman
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CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, NC 28217
Phone: 980.245.3161
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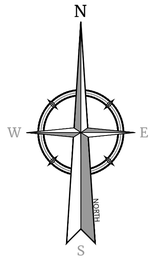
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW
PROJECT NUMBER: 25003536A	DRAWING NAME: C-LAND		

SHEET TITLE:
TREE REMOVAL PLAN

SHEET NUMBER:
C-600

2025\25003536A\Engineering\Site Plans\C_LAND.dwg\C-600-TREE REMOVAL By: NDOGOU.BA

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



NOTES

1. SEE SHEET C-001 FOR GENERAL NOTES.
2. CONTRACTOR SHALL REFER TO OTHERS PLANS WITHIN THIS PLAN SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THE SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
3. CONTRACTOR TO VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
4. CONTRACTOR SHALL CONTACT NC 811 A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION.
5. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL UTILITY COMPANIES AND COMPLY TO THE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS.
6. SITE TO BE FULLY PERMANENTLY STABILIZED, WITH NO AREAS LEFT AS BARE SOILS.

TREE PLANTING PLAN:

BUFFER TREES REQUIRED = 39 TREES
BUFFER TREES PROVIDED = 39 TREES
LOT TREES REQUIRED = 48 TREES
LOT TREES PROVIDED = 48 TREES
STREET TREES REQUIRED = 24 TREES
STREET TREES PROVIDED = 24 TREES
TOTAL HERITAGE TREES= 192 TREES
TOTAL HERITAGE TREES REMOVED = 111 TREES
TOTAL HERITAGE TREES REMAINING = 81 TREES

HERITAGE TREES INSIDE BUILDABLE AREA= 123 TREES
HERITAGE TREES INSIDE BUILDABLE AREA REMOVED = 107 TREES
HERITAGE TREES INSIDE BUILDABLE AREA REMAINING = 16 TREES

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
-	-	-	-

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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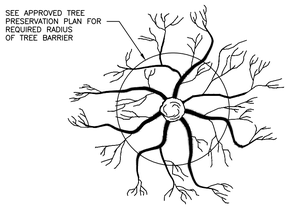
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-LAND

SHEET TITLE:
PLANTING PLAN

SHEET NUMBER:
C-601

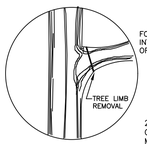
2025\25003536A\Engineering\Site Plans\C-LAND.dwg\C-600-PLANTING PLAN By: NDIGOLI.BA

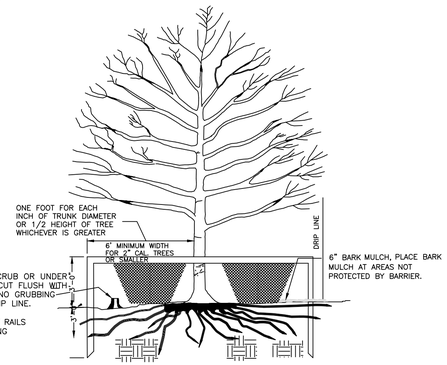


PLAN VIEW OF ROOT ZONE

NOTES:

1. REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.
2. LANDSCAPING PLANS SHALL SHOW THE LOCATIONS OF ALL PROTECTION FENCES.
3. REFER TO THE TOWN OF WEDDINGTON LANDSCAPE CONSTRUCTION STANDARDS SECTION 01000 FOR GENERAL SPECIFICATION REGARDING TREE PROTECTION.
4. INSTALL TREE PROTECTION SIGNAGE ON ALL FENCE BOUNDARIES PER CHARLOTTE TREE MANUAL (CTM) AND LANDSCAPE CONSTRUCTION STANDARDS. SIGN TEMPLATE PROVIDED IN CTM.
5. REFER TO CTM FOR CRITICAL ROOT ZONE PROTECTION STANDARDS.

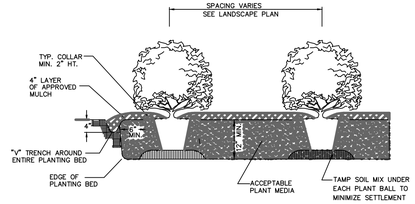




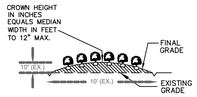
TREE PROTECTION DETAIL

NOTES:

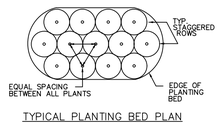
1. **SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.**
2. **INSTALL CONTAINERIZED PLANTS AT FINISHED GRADE**
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
5. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



TYPICAL PLANTING BED DETAIL

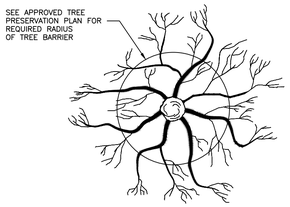


TYPICAL BED CROWNING



TYPICAL PLANTING BED PLAN

SHRUB PLANTING BED



PLAN VIEW OF ROOT ZONE

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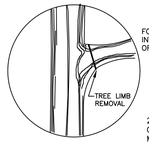

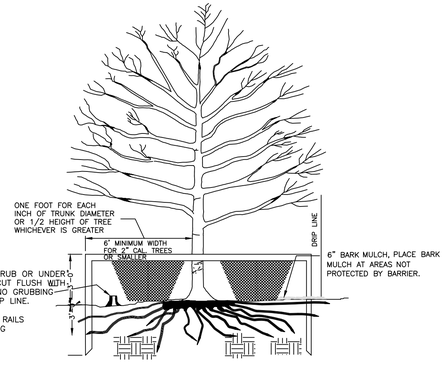

TREE PROTECTION DETAIL

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811 Know what's below. Call before you dig.

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REV	DATE	DRAWN BY	DESCRIPTION
-	-	-	-

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-LAND

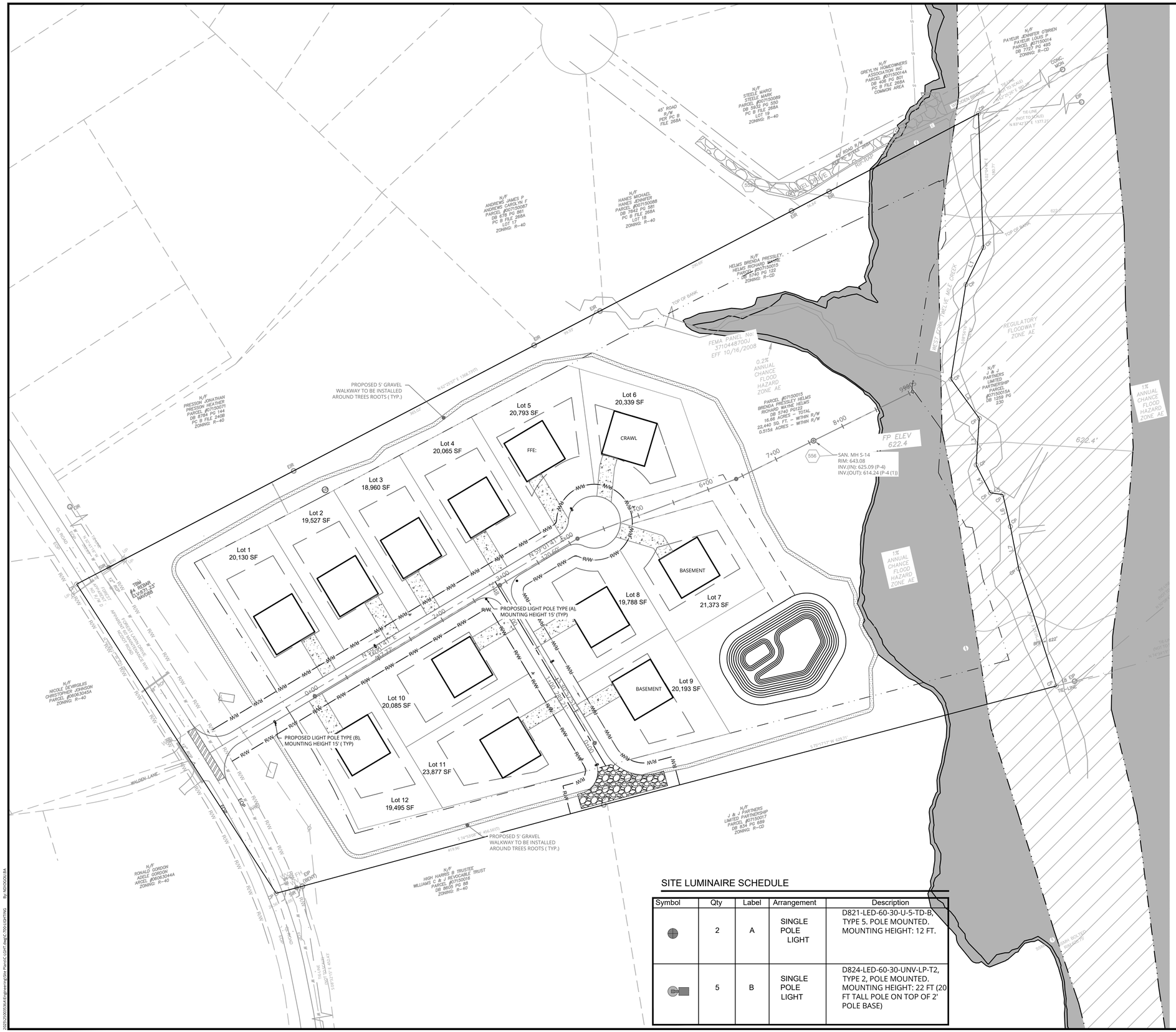
SHEET TITLE:

PLANTING DETAILS

SHEET NUMBER:

C-602

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



SITE LUMINAIRE SCHEDULE

Symbol	Qty	Label	Arrangement	Description
	2	A	SINGLE POLE LIGHT	D821-LED-60-30-U-5-TD-B, TYPE 5. POLE MOUNTED. MOUNTING HEIGHT: 12 FT.
	5	B	SINGLE POLE LIGHT	D824-LED-60-30-UNV-LP-T2, TYPE 2, POLE MOUNTED. MOUNTING HEIGHT: 22 FT (20 FT TALL POLE ON TOP OF 2' POLE BASE)

NOTES

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LEGEND

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12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC
	FLOODWAY LIMITIS	

60 0 60 120

SCALE : 1" = 60'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

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FOR

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3009 FOREST LAWN DRIVE

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER:	DRAWING NAME:
25003536A	C-LGHT

SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

C-700

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Site Plans\C-LGHT.dwg\C-700-LIGHTING By: NDIOGOU.BA

DECO® | LIGHTING

D821-LED

Architectural Diamond LED Luminaire

Client:
Project Name:
Order #:
Type:
Qty:

Performance Data

CRI
72+ Standard; 90+ Optional

CCT
3000K, 3500K, 4000K, 5000K

Projected Lifetime
223,000 Hours (L80);
102,000 Hours (L90)

Dimming
0-10V dimming standard
100% down to 10%

Operating Temperature
-40°C to +55°C Ambient

ETL Listed
Suitable for dry, damp, wet locations

Warranty
5 year Standard
10 year Optional

DLC Listed | ETL Listed | 10 Yr Warranty Available | Buy American Act Compliant

Description

The D821 series features a heavy-cast aluminum housing designed with modern aesthetics in mind. The architectural luminaire provides brilliant illumination to walkways and other outdoor spaces, improving the visibility, safety, and overall look of any outdoor area. Powered by DECO's energy-saving LED technology, this high-powered outdoor luminaire is Dark Sky compliant when ordered at 3000K and paired with state-of-the-art optics to restrict light trespass, glare and light pollution for neighborhood-friendly outdoor lighting.

Features

- Delivers up to 130 lumens per watt
- DLC Listed (Premium for select models) for utility rebates
- Effective Projected Area (EPA): 1.08 ft²
- Housing is heavy cast aluminum with heavy wall cast aluminum supports & heavy gauge spun aluminum cover.
- Incorporates precision-designed optical lenses to avoid light trespass
- Cast aluminum mounting bracket is designed to fit a 2-3/8" or 2" OD tenon/pole; other tenon sizes available
- Clear impact resistant acrylic lens.

Ordering Information

D821-L 60 30 U 5 TD B

1 FIXTURE SERIES: D821-L Architectural Diamond LED Luminaire

2 WATTAGE/LUMENS:

40	40W/5100*
60	60W/7650*
80	80W/10200**
120	120W/14500**
150	150W/19000**

3 CCT:

30	3000K
35	3500K
40	4000K
50	5000K†

4 VOLTAGE:

U	120-277V‡
K	347-480V

5 DISTRIBUTION:

2	Type II
3	Type III
5	Type V*

6 MOUNTING:

TB	Post Top 2 3/8" Tenon
TD	Post Top 2" Tenon*
TC	Custom Tenon#

7 FINISH:

Z	Bronze*
B	Black
W	White
C	Custom#

8 OPTIONS:

T	Photocell*
H	Light Shield / House Side Shield
T	T-Pin Photocell Recep
M	Motion Sensor w/ Dimming (FSP-211)*
9	90+ CRI

9 WARRANTY‡:

-	5 Year Warranty
10	10 Year Warranty
10L	10 Year Warranty including labor

†Standard for fixture
* Contact factory for custom finish
†Delivered Lumens (3000K Type V Distribution)
* Standard Color Temp.
** See more info on Page 3 (FSP-211 motion sensor)

‡Specify size desired or consult factory
Please specify voltage when ordering Photocell option
*DLC Listed Wattage - see table on Page 2 for more info
‡5 year standard unless specified

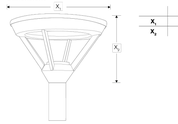
29717 Wall Ave.
Commerce Ca 90040
www.getdeco.com
info@getdeco.com
t: (800) 613-DECO
f: (310)388-6855

Deco Lighting practices a program of continuous product development, and as a result product specifications change frequently. We reserve the right to change product specifications without notice. Contact Deco for the latest product information.

Rev Date: 07/11/22

D821-L Architectural Diamond LED Luminaire — Digitize your light.

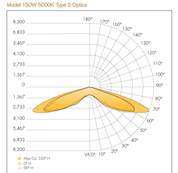
Dimensions



	Inches
X_1	20.00
X_2	13.00

Photometrics

Model 150W 5000K Type 5 Optics



Lumen Output

DELIVERED LUMEN OUTPUT

	5000K	4000K	3500K	3000K
Standard	100%	98%	95%	93%
90+ CRI	78%	75%	73%	67%

Use above multipliers relative to the 5000K delivered lumen output to calculate lumen output for various CCT options and 90+ CRI if desired

DLC Listed

	120-277V ONLY	
	80W*	120W*
	All Optics	All Optics
4000K	X	X
5000K	X	X

*DLC Premium
‡DLC Standard

Lumen Chart (5000K)

SYMMETRIC DISTRIBUTION - 5000K LUMEN OUTPUT

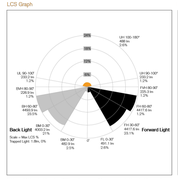
MODEL NUMBER	SYSTEM WATTAGE	TYPE 2	B-U-G RATING	40° FLOOD	B-U-G RATING	50° FLOOD	B-U-G RATING	70° FLOOD	B-U-G RATING
D824-LED-20-50-UNV-LP	18W	2687	2 | 1 | 1	2628	2 | 1 | 1	2628	2 | 1 | 1	2650	2 | 1 | 1
D824-LED-30-50-UNV-LP	22W	4048	2 | 1 | 1	3958	3 | 1 | 1	3958	3 | 1 | 1	3992	2 | 1 | 1
D824-LED-40-50-UNV-LP	35W	5354	3 | 1 | 1	5235	3 | 1 | 1	5235	3 | 1 | 1	5280	3 | 1 | 1
D824-LED-60-50-UNV-LP	56W	8245	3 | 1 | 2	8064	3 | 1 | 1	8064	3 | 1 | 1	8133	3 | 1 | 1
D824-LED-80-50-UNV-LP	75W	10123	3 | 1 | 2	9729	4 | 1 | 1	9775	4 | 1 | 1	9612	3 | 1 | 1
D824-LED-120-50-UNV-LP	113W	15086	4 | 1 | 2	13220	4 | 1 | 1	13283	4 | 1 | 1	13061	4 | 1 | 1
D824-LED-150-50-UNV-LP	149W	18739	4 | 1 | 2	16704	5 | 1 | 1	16784	5 | 1 | 2	16504	4 | 1 | 1

ASYMMETRIC DISTRIBUTION - 5000K LUMEN OUTPUT

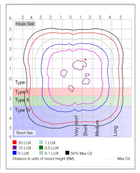
MODEL NUMBER	SYSTEM WATTAGE	TYPE 2	BUG RATING	TYPE 3	BUG RATING	TYPE 4	BUG RATING	TYPE 5A	BUG RATING
D824-LED-20-50-UNV-LP	18W	2682	1 | 1 | 1	2722	1 | 1 | 1	2610	1 | 1 | 1	2736	1 | 1 | 1
D824-LED-30-50-UNV-LP	22W	4041	1 | 1 | 2	4100	1 | 1 | 1	3932	1 | 1 | 1	4121	1 | 1 | 1
D824-LED-40-50-UNV-LP	35W	5344	1 | 1 | 2	5422	1 | 1 | 1	5200	1 | 1 | 1	5451	1 | 1 | 1
D824-LED-60-50-UNV-LP	56W	8232	2 | 1 | 2	8352	2 | 1 | 2	8009	1 | 1 | 2	8395	2 | 1 | 1
D824-LED-80-50-UNV-LP	75W	9723	2 | 1 | 3	10041	2 | 1 | 2	9650	2 | 1 | 2	10064	2 | 1 | 1
D824-LED-120-50-UNV-LP	113W	13212	3 | 1 | 3	15383	3 | 1 | 3	13113	2 | 1 | 2	15046	3 | 1 | 2
D824-LED-150-50-UNV-LP	149W	16695	3 | 1 | 4	17334	3 | 1 | 3	16595	3 | 1 | 3	17505	3 | 1 | 2

*To scale to other color temperatures, multiply 5000K values by 0.68 for 4000K, 0.95 for 3500K, or 0.93 for 3000K

LCS Graph



Isolux Plot



Zonal Lumen Summary

Zone	Lumens	%Luminaire
0-30	974.4	5.1%
0-40	2,218.2	11.6%
0-60	9,009.9	47.2%
60-90	9,363.7	49%
70-100	3,515.1	18.4%
90-120	622.0	3.3%
0-90	18,373.6	96.2%
90-180	721.6	3.8%
0-180	19,095.2	100%

29717 Wall Ave.
Commerce Ca 90040
www.getdeco.com
info@getdeco.com
t: (800) 613-DECO
f: (310)388-6855

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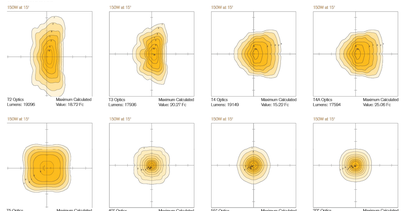
GLADETINO **D824-LED** Low Profile Gladetino Luminaire — Digitize your light.

Photometrics



DECO® | LIGHTING

GLADETINO D824-LED

Low Profile Gladetino Luminaire

Client:
Project Name:
Order #:
Type:
Qty:

Performance Data

CRI
70+, 95 Optional

CCT
3000K, 3500K, 4000K, 5000K, Amber

Projected Lifetime
286,000 Hours (L70)
181,000 Hours (L80)

Dimming
0-10V Dimming Standard, 10% to 100%

Operating Temperature
-40°C to +55°C Ambient

IP Rating
IP65

Warranty
5 year Standard
10 year Optional

ETL Listed | DSKY Dark Sky Compliant | DLC Listed | 10 Yr Warranty Available

Description

Style combined with elegance. The Gladetino luminaire provides an aesthetically pleasing addition to any roadway or parking lot with its smooth, defined curves and highly functional optics that provide maximum lumen output while ensuring beam uniformity. The combination of form and function blend together to make Gladetino the premier outdoor lighting fixture. Dark Sky compliant when ordered at 3000K color temperature.

Features

- Die cast aluminum housing and front frame, integral heat sinking and driver compartment.
- Powder coat finish over a chromatic conversion coating.
- 8 mounting brackets available, including the new adjustable wall mount
- Weight: 15lbs; EPA: 0.60ft²
- Available with rotated optics for horizontal throw (View pg 2)
- 0-10V Dimming Standard on all models
- DLC Listed for Utility Rebates (Please view DLC matrix on pg 6)
- ETL Listed for Wet Locations
- Dark Sky compliant when ordered at 3000K color temperature
- 3G Vibration Tested for Roadways
- Photocell receptacle included standard and shorting cap[1]

Ordering Information

D824-LED 60 30 UNV LP PM BL

1 FIXTURE SERIES: D824-LED Gladetino Area Luminaire

2 WATTAGE/LUMENS:

20	20W/3120*
30	30W/3900**
40	40W/5200**
60	60W/7800**
80	80W/10400**
100	100W/14130#
120	120W/15880#
150	150W/17900#

3 CCT:

30	3000K
35	3500K
40	4000K
50	5000K†

4 VOLTAGE:

UNV	120-277V
347	347V#
480	480V#

5 BODY TYPE: LP Low Profile

6 OPTICS:

T2	Type II
T3	Type III
T4	Type IV
T4A	Front Row
T5	Type V
40	40° Narrow Flood
55	55° Medium Flood
70	70° Wide Flood

7 MOUNTING:

PM	Pole Mount
WB	Wall Bracket
RPMA	Round Pole Mount Adapter#
LYM	Heavy Duty Large Yoke Mount
YM	Yoke Mount
SF	Slip Fitter
PMA	Pole Mounting Arm Adapter 2%
AWM	Adjustable Wall Mount

8 FINISH:

BZ	Bronze*
BL	Black
WH	White
SL	Silver
CU	Custom#

9 OPTIONS:

PC	Photocell (Twist Lock)
MS	Motion Sensor (with Dimming)[2,3]
9	95 CRI
H	Glare Shield / House Side Shield
TIP	NEMA T-Pin Receptacle#
TR	NEMA T-Pin Receptacle & Photocell#
D	Stand-Alone Scheduled Dimming
R	Rotated Right Optics#
L	Rotated Left Optics#

10 WARRANTY[1,2]:

-	5 Year Warranty
10	10 Year Warranty
10L	10 Year Warranty including labor

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Rev Date: 05/06/18 #3

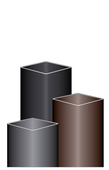
DECO® | LIGHTING

DPS

Steel Square Pole

Job Information

Type:	
Catalog #:	
Project:	
Comments:	
Prepared by:	



Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to ASSHTO M314 90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain eight (8) Hex Nuts, four (4) Lock Washers, and eight (8) Flat Washers (all components Galvanized Steel). A paper bolt circle template will be provided.

Ordering Information

Example: (DPS-4-10-11-TN287-DM390-BZ-GLV-C12)

DPS

Series	Bolt Sq.	Height[1]	Gauge	Mounting	Drill Mount	Finish	Finish Options	Option
DPS	4 4" 5 5" 6 6"	10 10' 12 12' 14 14' 15 15' 16 16' 18 18' 20 20' 22 22' 25 25' 30 30' 35 35' 40 40' 45 45' 50 50'	7 7 11 11	TN238 2 3/8" x 8" Tenon TN275 2 7/8" x 8" Tenon OT Other Tenon 18"...	DM1 Drill Mount BB-[illegible] DM2160 Drill Mount BB-HB DM290 Drill Mount DM390 Drill Mount DM490 Drill Mount DM5120 Drill Mount	BZ Bronze BL Black BW White SL Silver GR Green CU Custom Paint (Consult Factory)	GLV Galvanized	C12 Threaded 12" Coupling[2] C32 Threaded 12" Coupling[2] CW Threaded 1" Coupling[2] DF1 Duplex DF1 Receptacle (WR) with Cover DF2 Duplex DF2 Receptacle (WR) with Cover GFI Duplex GFI Receptacle (WR) with In-Use Cover[2] LAB Less Anchor Bolts PAB Pre-shipped Anchor Bolts VDA Vibration Damper

[1] All heights are not available for every size, please see Engineering Data on page 2
[2]Specify coupling location
[3]Specify Height and Orientation

DECO digital®

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Rev Date: 03/19/19 #2

Digitize your light.

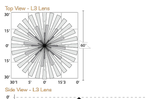
D821-L Architectural Diamond LED Luminaire — Digitize your light.

Projected LED Maintenance

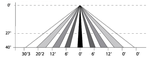
Operating Hours	0	25,000	50,000	100,000	150,000
	25°C (77°F) Ambient Outdoor Temp				
Lumen Maintenance Factor	1	0.97	0.95	0.90	0.86
	55°C (131°F) Ambient Outdoor Temp				
	1	0.94	0.89	0.80	0.71

Bi-Level & Daylight Harvest PIR Sensor

Top View - L3 Lens



Side View - L3 Lens



- Slim, low-profile sensor is designed for installation inside the bottom of a light fixture.
- Provides multi-level control based on motion and/or daylight contribution.
- 30' range sensitivity detection.
- Works with ballasts or LED drivers.
- Adjustable light levels and stand-by times.
- Constructed out of fire retardant polycarbonate material that is UV and impact resistant.

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GLADETINO **D824-LED** Low Profile Gladetino Luminaire — Digitize your light.

DLC Listed

	120-277V ONLY				120-277V, 347V, AND 480V		
	20W	30W	40W	60W	80W	100W	150W
	All Optics	All Optics	All Optics	All Optics	All Optics	All Optics	All Optics
3000K	X	X	X	X	X	X	X
3500K	X	X	X	X	X	X	X
4000K	X	X	X	X	X	X	X
5000K	X	X	X	X	X	X	X

95 CRI Lumen Output

DELIVERED LUMEN OUTPUT

	5000K	4000K	3500K	3000K	AMBER
Standard	100%	98%	95%	93%	70%
95 CRI	78%	75%	73%	67%	--

Use above multipliers relative to the 5000K delivered lumen output of the desired optic distribution below to calculate 95 CRI light output.

Projected LED Maintenance

Operating Hours	0	25,000	50,000	75,000	100,000
	25°C (77°F) Ambient Outdoor Temp				
Lumen Maintenance Factor	1	0.97	0.94	0.91	0.88
	55°C (131°F) Ambient Outdoor Temp				
	1	0.91	0.84	0.78	0.72

Rotated Optics

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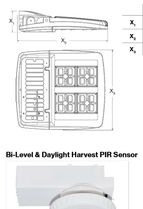
GLADETINO **D824-LED** Low Profile Gladetino Luminaire — Digitize your light.

[1] Standard for fixture
[2] Contact factory for custom finish
[3]Delivered Lumens (5000K Type III distribution) - See full lumen chart on Page 5 for other optics and CCT
* 3000K Color Temperature
** 3000K Color Temperature standard. Contact factory for higher mounting.
# 480V option only available on models 60W and higher.
† DLC Listed Wattages (View DLC Matrix on Page 6 for models currently listed)
‡Must be ordered in conjunction with the Pole Mount Bracket
R View illustration of rotated optics on Page 6
[1] MS option not available in conjunction with TR or TIP
[2] If D4 or photocell not selected than shorting cap is required
[3] 5 year standard unless specified

Dimensions



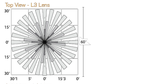
	Inches
X_1	3.5
X_2	15
X_3	13.38

Length with Mounts:

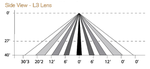
Pole Mount (PM)	19.3"
Wall Bracket (WB)	15.81*
Large Yoke (LYM)	18"
Yoke (YM)	20.81*
Slip Fitter (SF)	20.49#
Adjustable Wall Mount (AWM)	19.75*
Pole Mount Arm (PMA)	19.1*

Bi-Level & Daylight Harvest PIR Sensor

Top View - L3 Lens



Side View - L3 Lens



- Slim, low-profile sensor is designed for installation inside the bottom of a light fixture.
- Provides multi-level control based on motion and/or daylight contribution.
- 30' range sensitivity detection.
- Works with ballasts or LED drivers.
- Adjustable light levels and stand-by time.
- Constructed out of fire retardant polycarbonate material that is UV and impact resistant.

Photocell

*Twist-lock photocell only when ordered without motion sensor. When paired with a motion sensor, the FSP-211 sensor (FSP-201 for 347V or 480V) is used for both motion sensing and photo sensing capabilities.

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Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES
WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, NC 28217
Phone: 980.245.3161
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT P.C. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

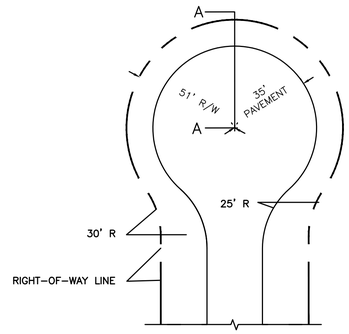
PROJECT NUMBER:	DRAWING NAME:
25003536A	C-LGHT

SHEET TITLE:
LIGHTING DETAILS

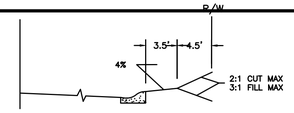
SHEET NUMBER:
C-701

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Site Plans\C-LGHT.dwg\C-701 LIGHTING DETAILS By: NDIDOU,SIA



STANDARD CUL-DE-SAC



SECTION A-A

APPLICABLE WHEN NO SIDEWALK PRESENT.
PLEASE NOTE: DRIVEWAY STANDARD
MAX. SLOPES AND BREAKOVERS APPLY

NOTES:

1. ALTERNATIVE CUL-DE-SAC DESIGNS, INCLUDING ISLANDS SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.
2. THE CROWN FOR PAVEMENT SHALL BE 1/4" PER FT FROM THE CENTER OF THE CUL-DE-SAC.
3. REFER TO NCDOT STANDARDS FOR DITCH TYPE STREETS IN ETJ.
4. SIDEWALK MAY BE REQUIRED TO EXTEND AROUND CUL-DE-SAC BULB WHERE PARKS OR SCHOOLS HAVE FRONTAGE TO THE END OF THE CUL-DE-SAC.

NOTE: THIS DETAIL IS NOT FOR USE IN ETJ, OR ON NCDOT-MAINTAINED STREETS. REFER TO NCDOT SUBDIVISION ROADS MINIMUM CONSTRUCTION STANDARDS MANUAL.

CUL-DE-SAC DETAIL
NOT TO SCALE

NOTES:

1. DETAILS SHOWN SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARDS.
2. DITCH TYPE STREET REQUIRES APPROVAL OF CITY.
3. MINIMUM CURB RADIUS ON INTERIOR DRIVES AND PARKING AREAS IS 10'
4. THIS DETAIL IS NOT TO BE USED TO MEET INTERNAL/EXTERNAL CONNECTIVITY REQUIREMENTS OF THE SUBDIVISION ORDINANCE AND ZONING ORDINANCE.

GUIDELINES FOR PRIVATE STREET DESIGN:

1. INTERNAL STREET ALIGNMENT:
   MAXIMUM GRADE: 10%
   MINIMUM VERTICAL CURVE "K" VALUES: 10/20 (CREST/SAG)
   MINIMUM HORIZONTAL CURVE CENTERLINE RADIUS: 50 FT.
2. INTERSECTION WITH PUBLIC STREET:
   SAME AS FOR PUBLIC STREET. SEE GENERAL NOTES, SECTION I.B.2.

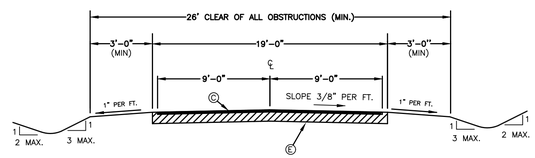
   NOTE: VARIATIONS ON THESE GUIDELINES WILL BE REVIEWED ON A CASE BY CASE BASIS BY CITY STAFF.

PAVEMENT SCHEDULE

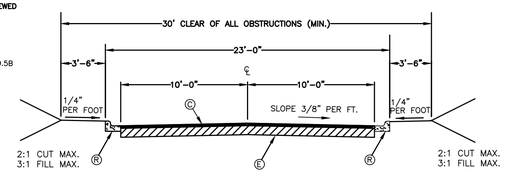
Ⓒ 1.5" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5B

Ⓔ 6" COMPACTED AGGREGATE BASE COURSE OR 4" BITUMINOUS CONCRETE BASE COURSE, TYPE B25.0C

Ⓡ CURB AND GUTTER (REFERENCE 10.17A AND B)

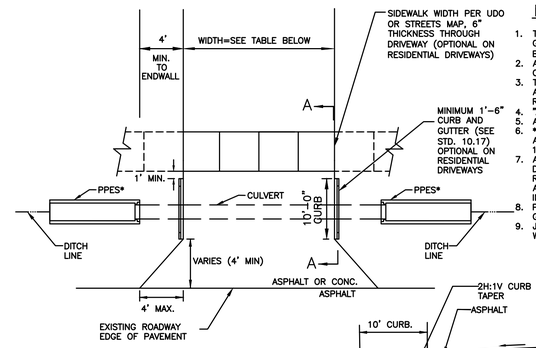


DITCH TYPE



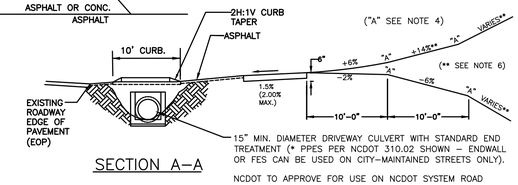
CURB AND GUTTER

PRIVATE STREET TYPICAL SECTIONS
NOT TO SCALE



DRIVEWAY APRON WIDTH		
DRIVEWAY TYPE	MINIMUM	MAXIMUM
RESIDENTIAL:		
LOCAL/COLLECTOR	10'	24'
ARTERIAL *	15'	24'
ONE-WAY COMMERCIAL	20'	30'
TWO-WAY COMMERCIAL	26'	50'

* MUST PROVIDE ON-SITE TURNAROUND



SECTION A-A

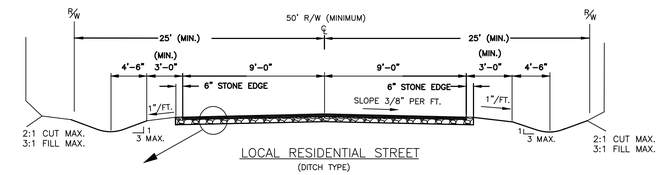
15" MIN. DIAMETER DRIVEWAY CULVERT WITH STANDARD END TREATMENT (* PPES PER NCDOT 310.02 SHOWN – ENDWALL OR FES CAN BE USED ON CITY-MAINTAINED STREETS ONLY).

NCDOT TO APPROVE FOR USE ON NCDOT SYSTEM ROAD

NOTES:

1. TO BE USED ON ROADS WITHOUT CURB AND GUTTER AND WHERE CURB AND GUTTER IS NOT BEING INSTALLED. (MUST MEET BOTH CRITERIA)
2. ALL CONCRETE TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.
3. THIS STANDARD IS TYPICALLY FOR COMMERCIAL APPLICATION – IT IS AN OPTION FOR RESIDENTIAL DRIVEWAY CONSTRUCTION.
4. "A" BREAKOVER SHALL BE 8% OR LESS.
5. ALL CONCRETE TO BE 3600 P.S.I.
6. ** PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
8. PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING WHAT ARE SHOWN.
9. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.

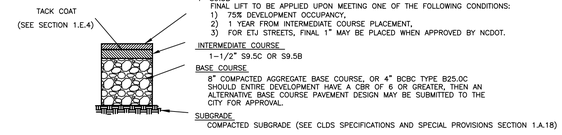
TYPE IV DRIVEWAY
NOT TO SCALE



LOCAL RESIDENTIAL STREET
(DITCH TYPE)

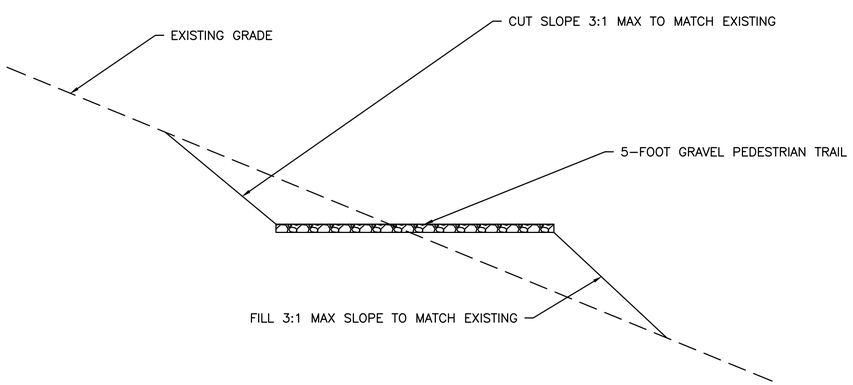
NOTES:

1. APPROVAL BY THE CITY IS REQUIRED PRIOR TO USING DITCH TYPE SECTION.



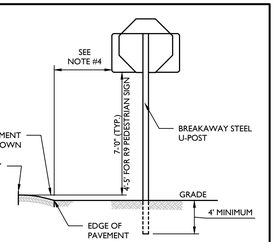
TYPICAL PAVEMENT SECTION

LOCAL RESIDENTIAL
TYPICAL DITCH TYPE STREET SECTION
NOT TO SCALE



CUT SLOPES TO BE AVOIDED NEAR EXISTING HERITAGE TREES

5-FOOT PEDESTRIAN TRAIL DETAIL
NOT TO SCALE

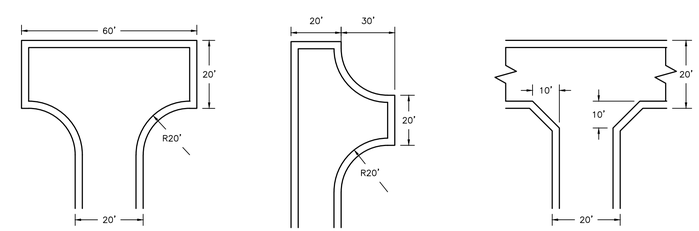


NOTES:

1. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION, AS STATED IN THE CURRENT MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS.
2. ALL POSTS SHALL BE EMBEDDED 4' MINIMUM.
3. ALL POSTS TO BE BREAKAWAY STEEL U-POSTS IN CONFORMANCE WITH CURRENT ASTM SPECIFICATION A123 AND STANDARDS.
4. IN AREAS WITHOUT CURBING, THE OUTER EDGE OF SIGN TO BE 2'-0" MINIMUM TO 12'-0" MAXIMUM FROM EDGE OF CURB, AS DIRECTED.

SINGLE POST SIGN MOUNTING DETAIL

NOT TO SCALE



STANDARD HAMMERHEAD | ROTATED HAMMERHEAD | STANDARD INTERSECTION

NOTES:

1. SEE DETAILS 11.19A-B FOR ALLEY DESIGN STANDARDS.
2. HAMMERHEAD DETAILS APPLY ONLY FOR TWO-WAY ALLEYS. ONE-WAY ALLEYS MUST CONNECT TO A PUBLIC STREET OR ANOTHER ALLEY.
3. FOR INTERSECTIONS WITH A LEAST ONE (1) ONE-WAY ALLEY, THE BACK-OF-CURB TO BACK-OF-CURB WIDTH CAN BE 16 FEET ON THE APPROPRIATE LEG(S) INSTEAD OF THE 20 FEET SHOWN.
4. OTHER INTERSECTION DESIGNS WILL BE APPROVED BY CDOT ON A CASE-BY-CASE BASIS.
5. THIS DETAIL DOES NOT ACCOMMODATE COMMERCIAL VEHICLES OR CHARLOTTE FIRE DEPARTMENT DESIGN FIRE TRUCK.
6. ADEQUATE STOPPING SIGHT DISTANCE (SSD) SHALL BE PROVIDED AT EACH INTERSECTION. MINIMUM SSD SHALL BE 50 FEET ASSUMING AN OPERATIONAL SPEED OF 10 MPH.

RESIDENTIAL ALLEY HAMMERHEADS AND INTERSECTIONS

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LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

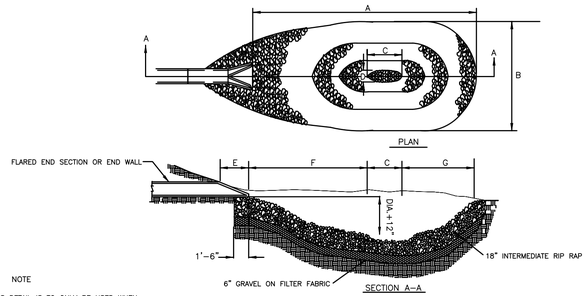
PROJECT NUMBER: 25003536A
DRAWING NAME: C-DTLS

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
C-800

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Site Plans\C-DTLS.dwg\C-800-SITE DETAILS By: NDIKOOLI.BA



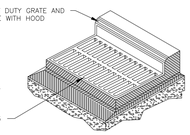
NOTE

1. THIS DETAIL IS TO ONLY BE USED WHEN OUTFALL HAS A CONTINUOUS FLOW OF WATER AND WITH PRIOR APPROVAL OF THE CITY ENGINEER.

PIPE SIZE	A	B	C	D	E	F	G	WT. RIP RAP IN TONS
15"	10'	7'	1 1/2'	1'	1'	4 1/2'	3'	6
18"	12'	8'	2'	1'	1'	5'	4'	8
21"	15'	9'	2 1/2'	1 1/2'	1'	7'	4 1/2'	12
24"	17'	10'	2 1/2'	1 1/2'	1'	8'	5 1/2'	15
30"	20'	13'	3'	2'	2'	9'	6'	22
36"	24'	16'	3 1/2'	2'	2'	9 1/2'	7'	33

NOT TO SCALE

RIP RAP PLUNGE POOL

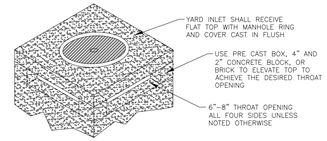


CURB INLET TOP

CATCH BASIN SCHEDULE SYMBOL-(C)
RIM=TOP OF GRATE DIRECTLY UNDER HOOD OPENING

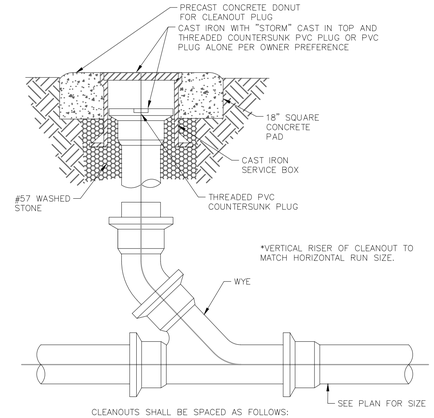
NOTES:

1. MIN. 3,000 PSI CONCRETE REQUIRED THROUGHOUT



YARD INLET TOP

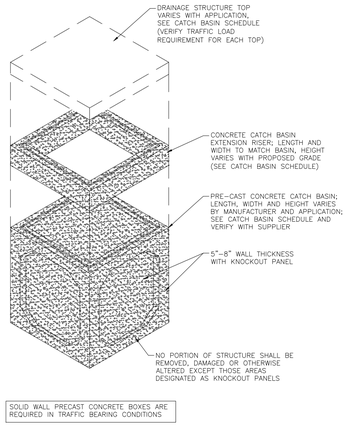
CATCH BASIN SCHEDULE SYMBOL-(Y1)
RIM=BOTTOM OF THROAT OPENING



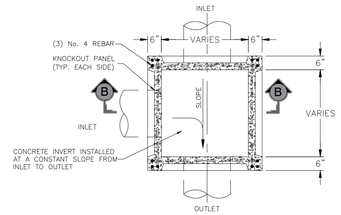
CLEANOUTS SHALL BE SPACED AS FOLLOWS:
4" DIAMETER SEWERS: 75' O.C. MAX
6" DIAMETER SEWERS: 100' O.C. MAX
12" DIAMETER SEWERS: 100' O.C. MAX

CLEANOUT

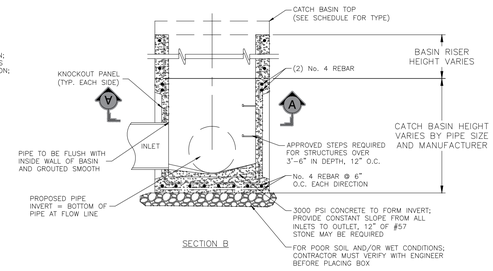
NOTE:
MIN. 3000 PSI CONCRETE REQUIRED THROUGHOUT.



SOLID WALL PRECAST CONCRETE BOXES ARE REQUIRED IN TRAFFIC BEARING CONDITIONS



SECTION A (PLAN)



SECTION B

DRAINAGE STRUCTURE

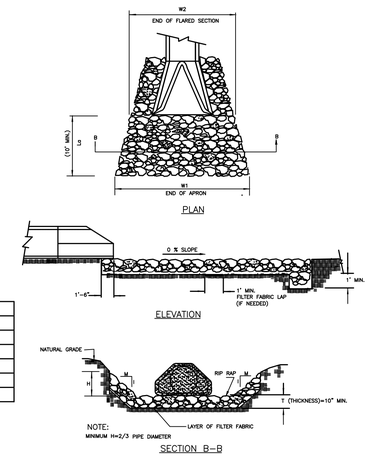
NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. REFER TO THE CHARLOTTE MECKLENBURG STORM WATER DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
10. ANY DISTURBED AREA FROM END OF APRON TO RECIEVING CHANNEL MUST BE STABILIZED.

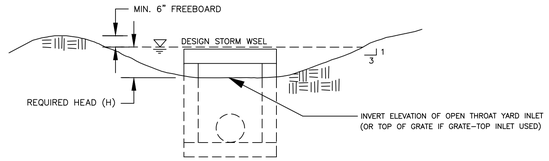
USE USDA NOMOGRAPH FROM NC SEDIMENT AND EROSION CONTROL MANUAL OR CHARLOTTE MECKLENBURG STORM WATER DESIGN MANUAL FOR DESIGN DATA.

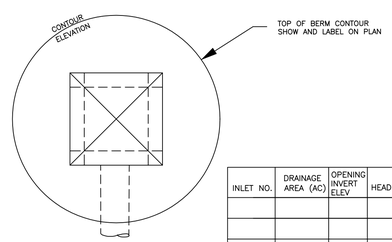
OUTLET	Lo	W1	W2	*T	H

* d50 (see fig 8.06 o&b "NC SEDIMENT AND EROSION CONTROL MANUAL"
dmax = 1.5 x d50
T = 1.5 X dmax.
T(min.)= 10"



RIPRAP APRON AT PIPE OUTFALLS
OTHER THAN AT SWIM

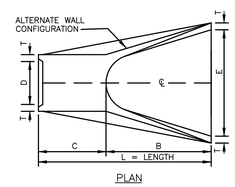




INLET NO.	DRAINAGE AREA (AC)	OPENING INVERT ELEV.	HEAD H (FT)	TOP OF BERM ELEV.	FREE-BOARD (FT)	COMMENT

NOT TO SCALE

GRADING AT YARD/DROP INLET



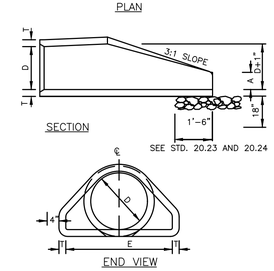


TABLE OF DIMENSIONS							
D	T	A	B	C	E	L	WT.
12"	2-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	730
15"	2-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	730
18"	2-1/2"	9"	2'-3"	3'-10"	3'-0"	6'-1"	1190
24"	3"	10"	3'-8"	2'-6"	4'-0"	6'-2"	1770
30"	3-1/2"	1'-0"	4'-6"	1'-8"	5'-0"	6'-2"	2380
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	8'-2"	5320
42"	4-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	8'-2"	5920
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	8'-2"	7470
54"	5-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	8'-4"	8810
60"	6"	2'-6"	5'-0"	3'-3"	8'-0"	8'-3"	11180
66"	6-1/2"	3'-0"	6'-0"	2'-3"	8'-6"	8'-3"	12530
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	8'-3"	13980

GENERAL NOTES:

1. SEE FORMER NCDOT STANDARD 310.01 FOR DETAILS.
2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M170, TABLE 2, WALL B.
3. ALL CONCRETE TO BE 3600 P.S.I COMPRESSIVE STRENGTH.
4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
7. NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

FLARED END SECTION
12" THRU 72" PIPE
NOT TO SCALE

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN

FOR

KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, NC 28217
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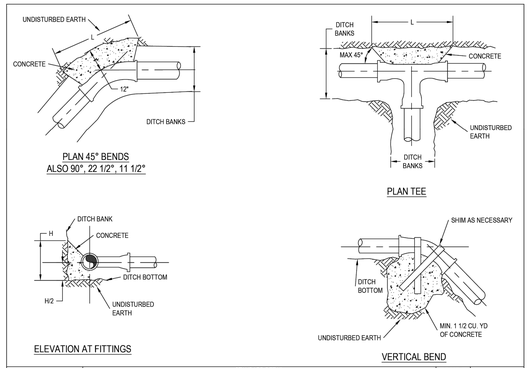
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW
PROJECT NUMBER: 25003536A	DRAWING NAME: C-DTLS		

SHEET TITLE:
STORM DRAINAGE DETAILS

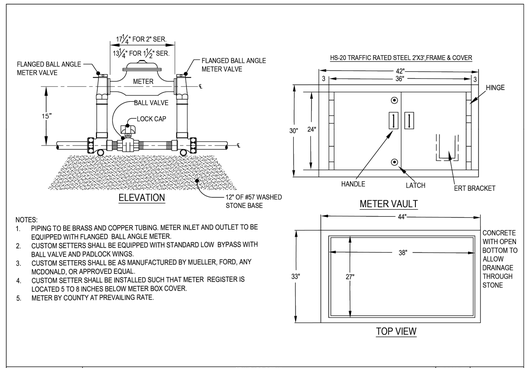
SHEET NUMBER:
C-801

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025/25003536A\Engineering\Site Plans\C-DTLS.dwg\C-801-STORM DRAIN DETAILS By: NJOYCOLE.BA



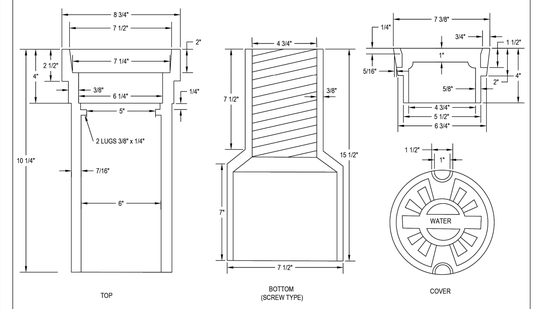
UNION COUNTY WATER | STANDARD DETAIL | THRUST BLOCK | SCALE: N.T.S. | DATE: 11-17-06 | 16



NOTES:
1. PIPING TO BE BRASS AND COPPER TUBING. METER INLET AND OUTLET TO BE EQUIPPED WITH FLANGED BALL ANGLE METER.
2. CUSTOM SETTERS SHALL BE EQUIPPED WITH STANDARD LOW BYPASS WITH BALL VALVE AND PADLOCK WINGS.
3. CUSTOM SETTERS SHALL BE AS MANUFACTURED BY MUELLER, FORD, ANY MCDONALD, OR APPROVED EQUAL.
4. CUSTOM SETTER SHALL BE INSTALLED SUCH THAT METER REGISTER IS LOCATED 5 TO 8 INCHES BELOW METER BOX COVER.
5. METER BY COUNTY AT PREVAILING RATE.

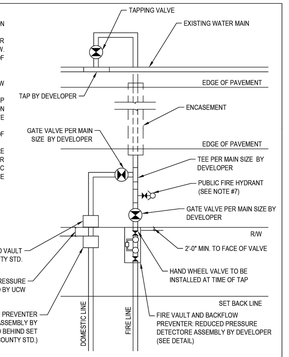
UNION COUNTY WATER | STANDARD DETAIL | STANDARD 1.5" AND 2" METER INSTALLATION & VAULT | SCALE: N.T.S. | DATE: 06-13-14 | 29

NOTES:
1. 2" GATE VALVES SHALL BE AWWA C515 COMPLIANT
2. 2" GATE VALVES SHALL BE NSF 61 COMPLIANT
3. 3" OR LARGER GATE VALVES SHALL BE AWWA C500 AND C509 COMPLIANT



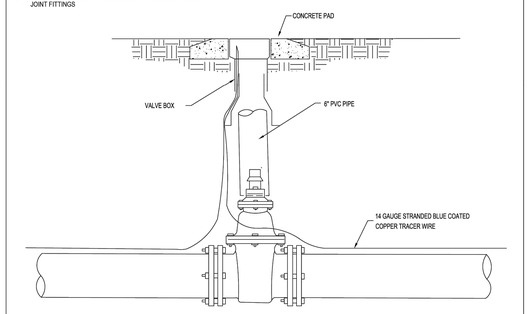
UNION COUNTY WATER | STANDARD DETAIL | VALVE BOX | SCALE: N.T.S. | DATE: 09-13-24 | 1

NOTES:
1. INSTALLATION, MATERIALS AND DEVICES SHALL CONFORM TO UNION COUNTY WATER'S SPECIFICATION AND REQUIREMENTS
2. ALL PIPE TO BE RESTRAINT JOINT DIP FROM TAP TO BACKFLOW AND/OR FIRE VAULT.THE 1-1/2 & 2 INCH PIPE SHALL BE BRASS TO THE BACKFLOW. ALTERNATE (3 INCH VALVE AND 3" RESTRAINT JOINT DIP IN LIEU OF BRASS)
3. FEES MUST BE PAID PRIOR TO INSTALLATION.
4. NO PVC PIPE SHALL BE USED WITHIN 5 FEET EACH END OF A BACKFLOW PREVENTER.
5. METERS 3 INCH & LARGER: CONTRACTOR INSTALLS APPROPRIATE DIP LINE THROUGH, SUPPLIES VAULT, METER SET AND BYPASS. UNION COUNTY WILL INSTALL METER. CONTRACTOR TO INSTALL APPROPRIATE SIZE RPZ.
6. FIRE DEPARTMENT CONNECTION (FDC) MUST BE WITHIN 100 FT MAX OF PUBLIC HYDRANT PER FIRE CODE.
7. FIRE HYDRANT NOT REQUIRED IF THERE IS AN EXISTING PUBLIC FIRE HYDRANT WITHIN 500 LF OF THE REDUCED PRESSURE DETECTOR ASSEMBLY. FOR ROADWAY WITH MORE THAN 2 LANES EXISTING PUBLIC FIRE HYDRANT MUST BE ON THE SAME SIDE OF THE ROAD WAY AS THE REDUCED PRESSURE DETECTOR ASSEMBLY.



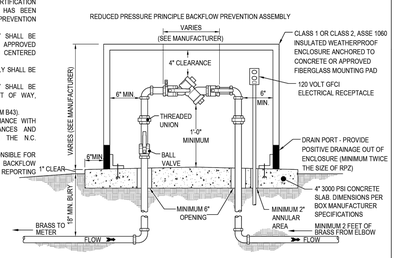
UNION COUNTY WATER | STANDARD DETAIL | WATER CONNECTION | SCALE: N.T.S. | DATE: 02-19-14 | 22

NOTES:
1. A 27" DIAMETER CONCRETE PAD SHALL BE PLACED AROUND EACH VALVE BOX
2. MINIMUM 18" SEPARATION BETWEEN GV AND MECHANICAL JOINT FITTINGS



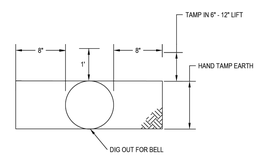
UNION COUNTY WATER | STANDARD DETAIL | VALVE BOX INSTALLATION | SCALE: N.T.S. | DATE: 09-13-24 | 1A

NOTES
1. RPZ SHALL BE INSTALLED FOR CUSTOMER APPLICATIONS APPROVED BY UNION COUNTY WATER.
2. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY SHALL COMPLY WITH ASSE 1013 & AWWA C511 (FEBCO 825Y, WILKINS MODEL 975XL, HERSEY MODEL FRPII OR EQUAL).
3. OWNER SHALL PROVIDE WRITTEN CERTIFICATION TO THE COUNTY THAT THE RPZ HAS BEEN TESTED BY A CERTIFIED BACKFLOW PREVENTION TECHNICIAN AFTER INSTALLATION.
4. BACKFLOW PREVENTION ASSEMBLY SHALL BE CENTERED ON CONCRETE OR APPROVED FIBERGLASS MOUNTING PAD AND CENTERED WITHIN ENCLOSURE.
5. REDUCER PRESSURE ZONE ASSEMBLY SHALL BE ABOVE GROUND ONLY.
6. BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED OUTSIDE OF THE RIGHT OF WAY, MAXIMUM OF 5 FEET.
7. PIPE MATERIAL SHALL BE BRASS (ASTM B43).
8. INSTALLATION SHALL BE IN COMPLIANCE WITH ALL APPLICABLE COUNTY ORDINANCES AND SPECIFICATIONS IN ADDITION TO THE N.C. PLUMBING CODE.
9. PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE AND OPERATION OF BACKFLOW ASSEMBLY AND COMPLIANCE WITH REPORTING AND TESTING REQUIREMENTS.



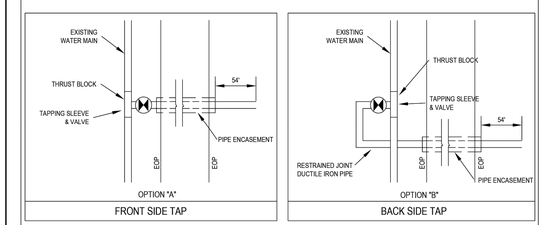
UNION COUNTY WATER | STANDARD DETAIL | REDUCED PRESSURE ZONE ASSEMBLY (¾" - 2") | SCALE: N.T.S. | DATE: 02-19-14 | 24A

NOTES
1. 2" PVC SDR 21
2. 6"-8" PVC SDR 18
3. 12" OR LARGER DIP
4. CAREFULLY COMACTED BACK FILL 1 FT ABOVE PIPE
5. NO STONES LARGER THAN # 67 SONE SHALL BE USED IN SELECT BACKFILL
6. 14 GA. STANDARD BLUE COATED COPPER TRACER WIRE STALL BE INSTALLED VALVE TO VALVE
7. PIPE 8-IN AND LESSER MINIMUM RESTRAINED JOINT DIP LENGTH 54 LF.
8. PIPE 12-IN AND LARGER MINIMUM LENGTH OF RESTRAINT JOINT DIP 54 LF FINAL LENGTH TO BE DETERMINED BY ENGINEER.



WATER MAIN MINIMUM COVER IS 3.0' AND MAXIMUM COVER IS 6.0' UNLESS PRIOR APPROVAL IS GRANTED BY UCW

UNION COUNTY WATER | STANDARD DETAIL | WATER TRENCH | SCALE: N.T.S. | DATE: 09-13-24 | 8B



NOTES:
1. OPTION "A" OR "B" WILL BE REQUIRED, DEPENDING ON THE AMOUNT OF SPACE AVAILABLE, TO BE FIELD VERIFIED.
2. RESTRAINED JOINT DUCTILE IRON PIPE REQUIRED FROM VALVE TO 54 LF BEYOND CASING.

UNION COUNTY WATER | STANDARD DETAIL | TAPPING SLEEVE | SCALE: N.T.S. | DATE: 09-13-24 | 18

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REV	DATE	DRAWN BY	DESCRIPTION

Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER: 25003536A
DRAWING NAME: C-DTLS

SHEET TITLE: WATER DETAILS

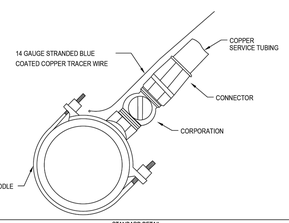
SHEET NUMBER: C-802

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

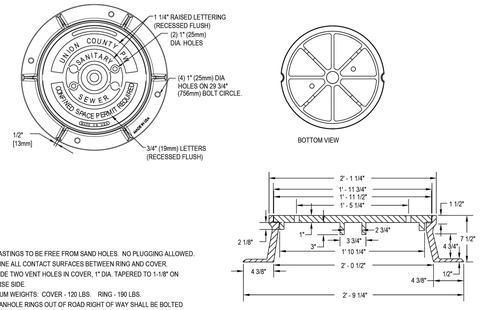
2025\25003536A\Engineering\Site Plans\C-DTLS.dwg\C-802-WATER DETAILS By: NDIOGUEBA

NOTE:
1. ROMAC 101N SHALL REPLACE MUELLER FOR PIPE DIAMETER UP TO 8"
2. SMITH BLAIR 317, FORD FC 202 OR ROMAC 202N SHALL REPLACE MUELLER FOR PIPE DIA. 12" AND UP
3. SERVICE SADDLES SHALL HAVE TWO FLAT STRAPS (PER UCW SPECIFICATION SECTION 5, 5.01, B)
4. EXISTING SERVICES BEING CONNECTED TO NEW LINES SHALL BE ONE CONTINUOUS ROLL OF COPPER
5. MINIMUM 18-INCH SEPARATION BETWEEN SERVICE CONNECTION AND MECHANICAL JOINT FITTINGS

APPROVED SERVICE HARDWARE			
	MUELLER		FORD
	2" PVC	H-13420	S70
SADDLE	UP TO 8"	SEE NOTE	FC 101
BALL CORPORATION		B-25008	FB1000G
YOKE		H-5020	Y 502
ANGLE BALL VALVE		B-24273	BA94-323WG
CHECK VALVE		H-14247-A	H-H591-323
CONNECTORS	COPPER	STYLE 110	GRIP JOINT
EXPANSION CONNECTION			EC 23



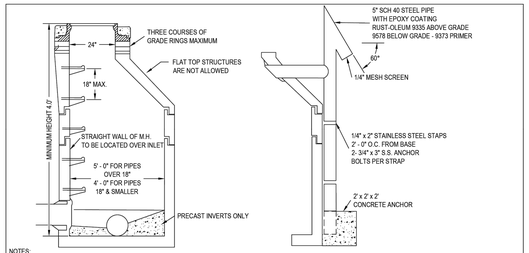
STANDARD DETAIL
SERVICE CONNECTION
SCALE: N.T.S.
DATE: 09-13-24
5



(U.S. FOUNDRY - 669, VULCAN - 1384 OR EQUAL)

NOTES:
1. ALL CASTINGS TO BE FREE FROM SAND HOLES. NO PLUGGING ALLOWED.
2. MACHINE ALL CONTACT SURFACES BETWEEN RING AND COVER.
3. PROVIDE TWO VENT HOLES IN COVER, 1" DIA. TAPERED TO 1-1/8" ON REVERSE SIDE.
4. MINIMUM WEIGHTS: COVER - 120 LBS. RING - 190 LBS.
5. ALL MANHOLE RINGS OUT OF ROAD RIGHT OF WAY SHALL BE BOLTED INTO MANHOLE WITH 5/8" DIAMETER KWIK BOLT STUD ANCHOR SYSTEM. HILTI BRAND OR APPROVED EQUAL.

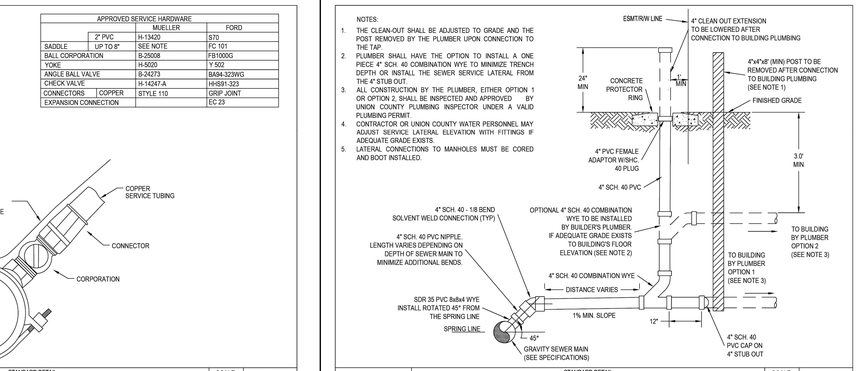
STANDARD DETAIL
RING AND COVER
SCALE: N.T.S.
DATE: 09-09-11
9



NOTES:
1. 1 ROLL OF MASTIC AND A 6" EXTERNAL JOINT/SEAM WRAP INSTALLED ON EACH MANHOLE SECTION
2. MANHOLE VACUUM TESTING - AFTER EACH MANHOLE IS INSTALLED AND ALL PIPES ARE CONNECTED, BUT BEFORE BACKFILLING, THE MANHOLE SHALL BE VACUUM TESTED. ALL PIPES ENTERING THE MANHOLE SHALL BE PLUGGED AND BRACED. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PERFORM THE TESTING. A VACUUM OF 10 INCHES OF MERCURY SHALL BE CREATED ON THE INSIDE OF THE MANHOLE. AT THE VACUUM OF 10 INCHES OF MERCURY, THE PUMP SHALL BE STOPPED AND THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 INCHES. FAILURE OF THE TEST SHALL BE ANY AMOUNT OF TIME LESS THAN THE FOLLOWING:
   4 FT. DIAMETER MANHOLE = 60 SECONDS — 7 FT. DIAMETER MANHOLE = 105 SECONDS
   5 FT. DIAMETER MANHOLE = 75 SECONDS — 8 FT. DIAMETER MANHOLE = 120 SECONDS
   6 FT. DIAMETER MANHOLE = 90 SECONDS — 10 FT. DIAMETER MANHOLE = 150 SECONDS
   UPON TEST FAILURE, THE CONTRACTOR SHALL REPAIR ALL LEAKS AND RETEST THE MANHOLE UNTIL THE TEST HAS PASSED.
3. 0.20' INSIDE DROP REQUIRED
4. INSTALL MANHOLE RIM AT 0.10' ABOVE GRADE IN LANDSCAPED AREAS AND WHILE ADJACENT TO RIGHTS-OF-WAY
5. INSTALL MANHOLE RIM AT 2.0' ABOVE GRADE IN SEWER EASEMENTS THAT ARE NOT LANDSCAPED.

STANDARD DETAIL
MANHOLE
SCALE: N.T.S.
DATE: 09-13-24
10

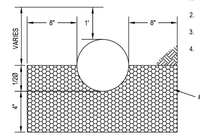
NOTES:
1. THE CLEAN-OUT SHALL BE ADJUSTED TO GRADE AND THE POST REMOVED BY THE PLUMBER UPON CONNECTION TO THE TAP.
2. PLUMBER SHALL HAVE THE OPTION TO INSTALL A ONE PIECE 4" SCH. 40 COMBINATION WYE TO MINIMIZE TRENCH DEPTH OR INSTALL THE SEWER SERVICE LATERAL FROM THE 4" STUB OUT.
3. ALL CONSTRUCTION BY THE PLUMBER, EITHER OPTION 1 OR OPTION 2, SHALL BE INSPECTED AND APPROVED BY UNION COUNTY PLUMBING INSPECTOR UNDER A VALID PLUMBING PERMIT.
4. CONTRACTOR OR UNION COUNTY WATER PERSONNEL MAY ADJUST SERVICE LATERAL ELEVATION WITH FITTINGS IF ADEQUATE GRADE EXISTS.
5. LATERAL CONNECTIONS TO MANHOLES MUST BE CORED AND BOOT INSTALLED.



STANDARD DETAIL
SEWER LATERAL
SCALE: N.T.S.
DATE: 02-19-14
11

NOTES
1. CAREFULLY COMACTED BACK FILL 1 FT ABOVE PIPE
2. NO STONES LARGER THAN # 67 SONE SHALL BE USED IN SELECT BACKFILL
3. 14 GA. STANDARD BLUE COATED COPPER TRACER WIRE STALL BE INSTALLED MANHOLE TO MANHOLE
4. MINIMUM PIPE SLOPE IS 0.50%

GRAVITY SEWER - BEDDING DETAIL

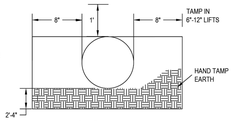


CLASS C

GRAVITY SEWER MINIMUM COVER IS 3.0' AND MAXIMUM COVER IS 14.0' UNLESS PRIOR APPROVAL IS GRANTED BY UCW

REQUIRED MATERIAL FOR DEPTH OF BURY:
1. COVER GREATER LESS THAN 3.0 FT OR GREATER THAN 18.0 FT USE DUCTILE IRON PIPE
2. COVER GREATER THAN 3.0 FT BUT LESS THAN 10.0 FT USE SDR-35
3. COVER GREATER THAN 10.0 FT BUT LESS THAN 18.0 FT USE SDR-26
4. SDR-35 AND SDR-26 REQUIRED CELL CLASS 12454

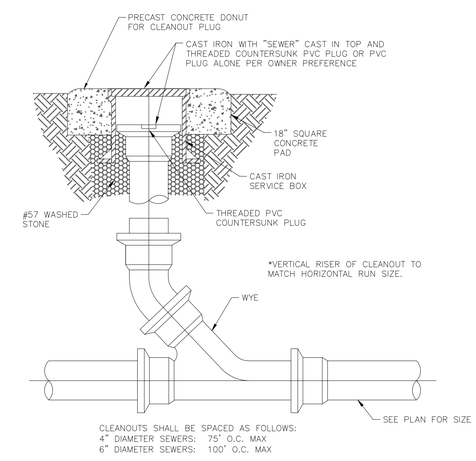
NOTES
1. CAREFULLY COMACTED BACK FILL 1 FT ABOVE PIPE
2. 14 GA. STANDARD BLUE COATED COPPER TRACER WIRE STALL BE INSTALLED VALVE BOX TO VALVE BOX
4. PIPE 8-IN AND LESSER MINIMUM RESTRAINED JOINT DIP LENGTH 54 LF.
5. PIPE 12-IN AND LARGER LENGTH TO BE DETERMINED BY ENGINEER. MINIMUM LENGTH OF RESTRAINT JOINT DIP 54 LF FINAL



FORCE MAIN

FORCE MAIN MINIMUM COVER IS 3.0' AND MAXIMUM COVER IS 5.0' UNLESS PRIOR APPROVAL IS GRANTED BY UCW

STANDARD DETAIL
SEWER BEDDING
SCALE: N.T.S.
DATE: 09-13-24
8A



CLEANOUTS SHALL BE SPACED AS FOLLOWS:
4" DIAMETER SEWERS: 75' O.C. MAX
6" DIAMETER SEWERS: 100' O.C. MAX

SANITARY SEWER CLEANOUT DETAIL

REV	DATE	DRAWN BY	DESCRIPTION

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
www.colliersengineering.com

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Casey R. Whiteman
NORTH CAROLINA PROFESSIONAL ENGINEER
LICENSE NUMBER: 059701
COLLIERS ENGINEERING & DESIGN CT, P.C.
N.C. #: C-4746

CONDITIONAL ZONING PLAN
FOR
KEYSTONE CUSTOM HOMES WEDDINGTON

PIN 07150015
3009 FOREST LAWN DRIVE

WEDDINGTON
UNION COUNTY
NORTH CAROLINA

Colliers Engineering & Design, Architecture, Landscape Architecture, Surveying, CT P.C.
CHARLOTTE
5275 Parkway Plaza Boulevard, Suite 100
Charlotte, NC 28217
Phone: 980.245.3161
COLLIERS ENGINEERING & DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, SURVEYING, CT P.C. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	09/25/25	NWB	CW

PROJECT NUMBER: 25003536A
DRAWING NAME: C-DTLS

SHEET TITLE:
SANITARY SEWER DETAILS

SHEET NUMBER:
C-803

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2025\25003536A\Engineering\Site Plans\C-DTLS.dwg\C-803-SANITARY SEWER DETAILS By: NDIDOGU,BA

Project Name:	Keystone Custom Homes- Weddington	By:	NWB
Project No.:	25003536A	Date:	9/24/2025
Description:		Checked By:	CW
		Date:	9/24/2025

NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL
6.61.1 SEDIMENT TRAP DESIGN (SEE DIAGRAM BELOW)

Input
Calculation
Check

GOVERNING REVIEW AGENCY	NCDEQ		
TOTAL DRAINAGE AREA	1.84	Okay	Sediment Trap
		Okay	Skimmer TRAP
		Okay	Sediment TRAP
RAINFALL INTENSITIES (in/hr)	5.89	2-yr	*Taken from Table 2-2 Rainfall Intensities - Charlotte, North Carolina (Ch. 2, Charlotte-Mecklenburg Stormwater Design Manual) or NOAA Website https://hdsc.nws.noaa.gov/hdsc/pfds/*
	7.54	10-yr	
BARREL PIPE DIA. (in)	18.00		

RATIONAL RUNOFF COEFFICIENT

Description of surface	C-value (Table 8.03b)	Area (acres)		% of Area
Impervious Area	0.95	0.00		0.00
Wooded Area	0.15	0.00		0.00
Grassed Area (Lawns w/ slopes > 7%)	0.20	0.00		0.00
Disturbed area (Bare Soils)	0.60	1.84		1.00
		Composite Runoff Coefficient		0.60

2yr./10-yr. RATIONAL RUNOFF

TRAP	Area (acres)	Composite C	Time of Concentration, Tc (min)	Intensity, I (in/hr)	Flow, Q (cfs)
Sediment TRAP A (10-yr Rational Runoff)	1.84	0.60	5.0	7.54	8.32
Sediment TRAP A (2-yr Rational Runoff)	1.84	0.60	5.0	5.89	6.50
				Total 10 yr Flow to Sediment TRAP (cfs)	8.32

REQUIRED SURFACE AREA

TRAP	Drainage Area (acres)	Area Required (sf/cfs)	Total Area Required (sf)	
Sediment TRAP A (10-yr Rational Runoff)	1.84	435	3,621.01	
				Total REQUIRED Sediment TRAP Area (sf) 3,621

REQUIRED VOLUME

TRAP	Disturbed Area (acres)	Volume Required (ft/acre)	Total Volume Required (cubic feet)	
Sediment TRAP A	1.84	1,800	3,312.00	
				Total REQUIRED Sediment TRAP Volume (cubic feet) 3,312

Project Name:	Keystone Custom Homes- Weddington	By:	NWB
Project No.:	25003536A	Date:	9/24/2025
Description:		Checked By:	CW
		Date:	9/24/2025

NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL
6.61.1 SEDIMENT TRAP DESIGN (SEE DIAGRAM BELOW)

Input
Calculation
Check

PROVIDED VOLUME

Stage	Elevation	Area	Inc. Vol.	Acc Vol.	
0.00	672.00	2,376	0	0	Bottom of 12" Sediment Storage
1.00	673.00	2,931	2649	2,649	
2.00	674.00	3,543	3232	5,881	
3.00	675.00	4,211	3872	9,753	Emergency Spillway
Total PROVIDED Sediment TRAP Volume (cubic feet)				9,753	OKAY
Total PROVIDED Sediment TRAP Area (square feet)				4,211	OKAY

5275 Parkway Plaza Boulevard, Suite 100
Charlotte, North Carolina 28217
Main: 877 627 3772

Colliers Engineering & Design

September 25, 2025

Town of Weddington
1924 Weddington Rd.
Weddington, NC 28104

Subject: Keystone Custom Homes - Weddington
Planning Board Meeting
CED Project 25003536A

Dear Mr. Gordos,

The following are responses to the comments provided by members of the Planning Board following the 9-22 Planning Board meeting. We look forward to discussing these responses with you and the planning board during the recess meeting next Monday.

Comments from Chris Faulk:

1. Provide for water quality for site, looks like from your grading much of it can't get back to BMP
   Response: Storm drain will be permanently installed as part of this construction to collect the runoff that currently drains west to Forest Lawn. Ditches have been shown on the plans showing routing to the storm drain. Storm drains are shown on C-300 and C301.

2. Temporary turn-around needs to be paved for fire code or at least noted that will meet fire code and verify they would allow 10% as a road grade
   Response: Per a discussion with Fire Marshal Jon Williams at the Union County Fire Department, the maximum slope requirement is 10% and paving is not required as long as it is an all weather surface.

3. I believe your EC plan will need a basin in the front, silt fence won't work for drainage area
   Response: A temporary sediment trap has been shown on C-500 of this submittal. Per the NCDEQ Design Manual this temporary BMP is acceptable for contributing areas less than 5 acres.

4. Your notes don't make sense, no curb and no sheet 001
   Response: These sheets have now been submitted, and plans updated accordingly.

5. Will utility allow a 10% ground slope in the easement
   Response: Union County Water specifications Section 2.05 does not specify a max slope ground above the pipe. To reduce disturbance of existing vegetation as well as installation slopes, drop manholes are added where necessary. The sewer has been designed per Union County requirements and the profile is shown within the submitted plans.

6. Grading from BMP back up to the lots doesn't look like it is a minimum 3:1

Response: No proposed grading exceeds the minimum requirement of 3:1. Proposed contours are shown at 1-foot intervals for existing and proposed. Previous plans showed 2-foot contours for existing and 1-foot for proposed.

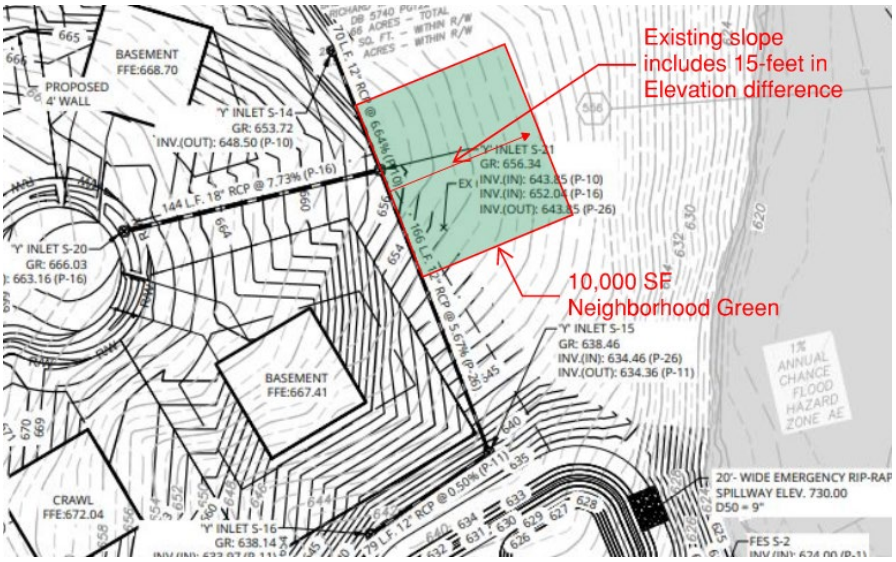
7. The steep slopes created on your grading plan seem to contradict our ordinance with wanting them not to be on lots.
   Response: The grading plans have been revised to show potential retaining walls for on lot grading. Slopes in the concerned backyard have been reduced.

8. Walking Path-elaborate on the vision, material, construction, show on all plans. Show us why we should consider not having a neighborhood green and replace it with a trail.
   Response: We believe that the best amenity for the neighborhood is a pedestrian path. This path exceeds the minimum requirements by creating a ½ mile loop for the twelve home sites. Grading constraints and steep slopes in comment 7 prevent adding a neighborhood green.

Additional comments received

9. The tree survey information on the same scale as the other drawings (1" equals 60") so I can overlay it on the other drawings such as the grading plan, layout plan, etc.
   Response: The full tree survey has been submitted with the latest documents. It is added to the set of plans.

10. The Community Green. Keystone didn't show it because "*it would remove too many trees.*" I would still like to see how they planned to do it. The PB/Council can then determine the viability of it.
    Response: The community green was considered at the end of the cul-de-sac but there are steep slopes in this area. A flat neighborhood green would add fill back to the floodplain.



11. I think Keystone is viewing the walking path as an alternative to the Community Green. Consequently, I would like more information on the walking path and its viability.
    Response: As discussed in the previous comment the topography makes the neighborhood green difficult to grade in at the end of the cul-de-sac. We believe that the best amenity for the neighborhood is a pedestrian path considering only 12 homes.

12. The applicant needs to provide the following items: per appendix B ref. Numbers B31, B35, B36, B45, B47, B55, B56, B57
    Response: Reference the following sheets of the new set: For B31 reference sheet C-300 and C-301, for B35 sheet C-300 and C-301, for B36 sheet C-300 and C-301, for B47 reference sheet C-700 and C-701, for B55 reference C-600, for B56 C-300 and C-600, for B57 reference tree survey by Delta Land Services.