Palisades Development Summary

Phase	Acres	Total Acreage	No. of Lots	Total no. Lots	Density	Tree Save Area (ac.)	Total Tree Save Area (ac.)	% Tree Save	Common Open Space (ac.)	Total Common Open Space	% Common Open Space
1	27.16	27.16	21	21	0.77	0	0	0.00%	5.97	5.97	21.96%
2A	16.99	44.15	38	59	1.34	0	0	0.00%	1.22	7.19	16.29%
4	20.63	64.78	41	100	1.54	0	0	0.00%	0.26	7.45	11.50%
3	90.30	155.08	191	291	1.88	7.24	7.24	4.67%	11.08	18.53	11.95%
2B	60.39	215.47	105	396	1.84	14.28	21.52	9.99%	23.91	42.44	19.70%
Golf	185.77	401.24	0	396	0.99	44.68	66.2	16.50%	0	42.44	10.58%
Parkway	28.31	429.55	0	396	0.92	5.45	71.65	16.68%	10.09	52.53	12.23%
Swim/Tennis	17.7	447.25	0	396	0.89	0	71.65	16.02%	0	52.53	11.75%
Maintenance	3.03	450.28	0	396	0.88	0	71.65	15.91%	0	52.53	11.67%
Club	7.5	457.78	0	396	0.87	0	71.65	15.65%	0	52.53	11.47%
5A - T3E	24.75	482.53	46	442	0.92	0	71.65	14.85%	2.2	54.73	11.34%
5A - T3I	46.47	529	96	538	1.02	0	71.65	13.54%	2.42	57.15	10.80%
5A - T3E9	23.78	552.78	12	550	0.99	0	71.65	12.96%	6.58	63.73	11.53%
Village Center	9.01	561.79	1	551	0.98	0	71.65	12.75%	0	63.73	11.34%
EQUES	4.95	566.74	1	552	0.97	0	71.65	12.64%	0	63.73	11.25%
TRACT 2 PH 1	49.53	616.27	106	658	1.07	5.65	77.3	12.54%	19.19	82.92	13.46%
TRACT 2 PH 2	48.14	664.41	105	763	1.15	6.37	83.67	12.59%	17.82	100.74	15.16%
TRACT 3 PH 1	35.25	699.66	83	846	1.21	0	83.67	11.96%	2.34	103.08	14.73%
TRACTS 5 & 6	75.25	774.91	134	980	1.26	11.195	94.865	12.24%	5.05	108.14	13.96%
TRACT 3 PH 2	35.22	810.13	76	1056	1.33	3.839	98.704	12.18%	1.95	110.09	13.59%

Streets/Sidewalks/Paths Impervious Area (ac.)

Phase	1A	1B	1C	1D	2	3	4	5	6	7	8A	8B	8C	8D
1			0.65			2.69						3.46		
2A												0.88	1.00	
4												1.64		
3												4.09	4.68	
2B													4.68	
Golf						0.50	0.15			0.14	0.49	2.53	1.11	
Parkway	2.07	5.18	5.01											
Swim/Tennis						0.97						5.35		
Maintenance												0.61		
Club												2.88		
5A - T3E						1.57	0.48					5.23	1.26	
5A - T3I						4.20						12.14		
5A - T3E9				0.07	0.29	0.40						3.03		
Village Center												1.38		
EQUES						0.60								
TRACT 2 PH 1	2.49	1.71												
TRACT 2 PH 2		5.37									1.96	1.39		
TRACT 3 PH 1						0.42						0.72		
TRACTS 5 & 6						0.56	3.48	1.70	2.08			0.72	5.65	3.21
TRACT 3 PH 2											3.42	0.39		

Lots Impervious Area (ac.)

Phase	1A	1B	1C	1D	2	3	4	5	6	7	8A	8B	8C	8D
1												4.09		
2A												3.16	1.28	
4												7.54		
3												12.92	9.58	
2B													10.37	
Golf														
Parkway														
Swim/Tennis												4.16		
Maintenance														
Club														
5A - T3E												10.96	1.89	
5A - T3I												27.30		
5A - T3E9				0.07	0.29							30.73		
Village Center												32.11		
EQUES												32.71		
TRACT 2 PH 1														
TRACT 2 PH 2														
TRACT 3 PH 1												33.85		
TRACTS 5 & 6												35.13	11.02	4.91
TRACT 3 PH 2														

Total Watershed Impervious Area (ac.)

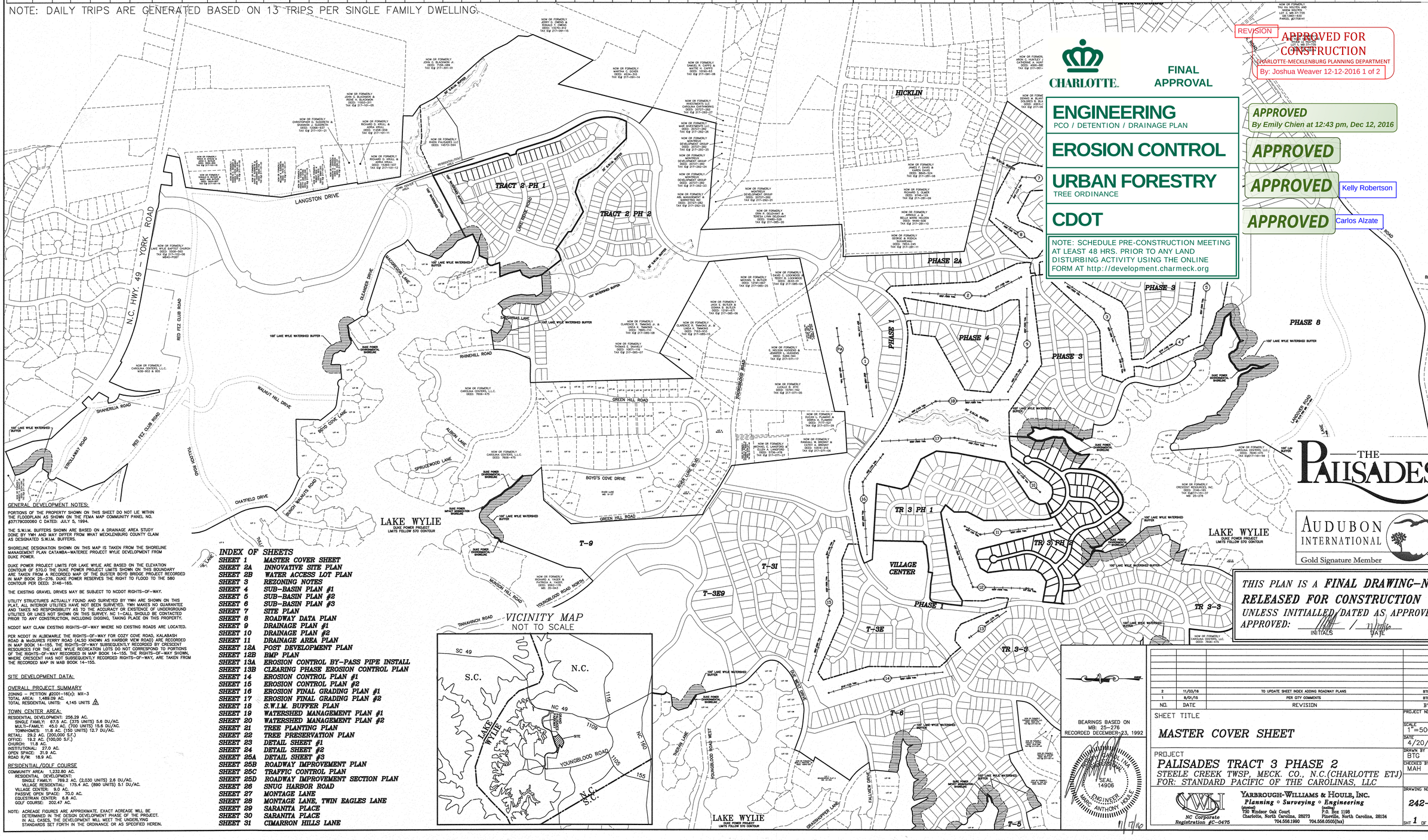
Phase	1A	1B	1C	1D	2	3	4	5	6	7	8A	8B	8C	8D
1			0.65									7.55	0	
2A						2.69	0.00					11.59	2.28	
4												20.77		
3												37.78	16.54	
2B													31.59	
Golf						3.19	0.15			0.14	0.49	40.31	32.70	
Parkway	2.07	5.18	5.66											
Swim/Tennis						4.16						45.66		
Maintenance												49.27		
Club												49.15		
5A - T3E						10.96	1.89							
5A - T3I						27.30								
5A - T3E9				0.07	0.29	30.73								
Village Center						32.11								
EQUES						32.71								
TRACT 2 PH 1			11.13	12.43										
TRACT 2 PH 2				26.24										
TRACT 3 PH 1						33.85						4.54	54.4	
TRACTS 5 & 6						35.13	11.02	4.91	4.81					
TRACT 3 PH 2												14.45	56.44	

Total Watershed Impervious % Per Basin

Phase	1A	1B(119.26)	1C(177.31)	1D	2(60.6)	3(141.1)	4(39.3)	5(22.3)	6(16.5)	7(66.4)	8A(88.34)	8B(233.4)	8C(285.74)	8D
1												3.23%	0.00%	
2A												4.97%	0.80%	
4												8.90%	0.00%	
3												16.19%	5.79%	
2B													11.06%	
Golf												17.27%	11.44%	
Parkway														
Swim/Tennis						2.95%						19.56%		
Maintenance												19.83%		
Club												21.06%		
5A - T3E						7.77%	4.81%							
5A - T3I						19.35%								
5A - T3E9						21.78%				0.00%	0.00%			
Village Center						22.78%								
EQUES						23.18%								
TRACT 2 PH 1				9.33%	7.01%									
TRACT 2 PH 2					14.80%									
TRACT 3 PH 1						23.99%						5.14%	23.31%	
TRACTS 5 & 6						24.90%	28.04%	22.02%	29.15%					
TRACT 3 PH 2											16.36%	24.18%		

Phase	Total Daily Trip Generation
1	273
2A	767
4	1300
3	3783
2B	5148
Golf	5148
Parkway	5148
Swim/Tennis	5148
Maintenance	5148
Club	5148
5A - T3E	5746
5A - T3I	6994
5A - T3E9	7150
Village Center	7163
EQUES	7175
TRACT 2 PH 1	8554
TRACT 2 PH 2	9919
TRACT 3 PH 1	10968
TRACTS 5 & 6	12740
TRACT 3 PH 2	13728

NOTE: DAILY TRIPS ARE GENERATED BASED ON 13 TRIPS PER SINGLE FAMILY DWELLING.



GENERAL DEVELOPMENT NOTES:

PORTIONS OF THE PROPERTY SHOWN ON THIS SHEET DO NOT LIE WITHIN THE FLOODPLAIN AS SHOWN ON THE FEMA MAP COMMUNITY PANEL NO. #3717900060 C DATED: JULY 5, 1994.

THE S.W.I.M. BUFFERS SHOWN ARE BASED ON A DRAINAGE AREA STUDY DONE BY YWH AND MAY DIFFER FROM WHAT MECKLENBURG COUNTY CLAIM AS DESIGNATED S.W.I.M. BUFFERS.

SHORELINE DESIGNATION SHOWN ON THIS MAP IS TAKEN FROM THE SHORELINE MANAGEMENT PLAN CATAWBA-WATEREE PROJECT WYLIE DEVELOPMENT FROM DUKE POWER.

DUKE POWER PROJECT LIMITS FOR LAKE WYLIE ARE BASED ON THE ELEVATION CONTOUR OF 570.0 THE DUKE POWER PROJECT LIMITS SHOWN ON THIS BOUNDARY ARE TAKEN FROM A RECORDED MAP OF THE BUSTER BOYD BRIDGE PROJECT RECORDED IN MAP BOOK 25-276. DUKE POWER RESERVES THE RIGHT TO FLOOD TO THE 580 CONTOUR PER DEED: 3146-165.

THE EXISTING GRAVEL DRIVES MAY BE SUBJECT TO NCDOT RIGHTS-OF-WAY.

UTILITY STRUCTURES ACTUALLY FOUND AND SURVEYED BY YWH ARE SHOWN ON THIS PLAT. ALL INTERIOR UTILITIES HAVE NOT BEEN SURVEYED. YWH MAKES NO GUARANTEE AND TAKES NO RESPONSIBILITY AS TO THE ACCURACY OR EXISTENCE OF UNDERGROUND UTILITIES OR LINES NOT SHOWN ON THIS SURVEY. NC 1-CALL SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION, INCLUDING LOGGING, TAKING PLACE ON THIS PROPERTY.

NCDOT MAY CLAIM EXISTING RIGHTS-OF-WAY WHERE NO EXISTING ROADS ARE LOCATED.

PER NCDOT IN ALBEMARLE THE RIGHTS-OF-WAY FOR COZY COVE ROAD, KALABASH ROAD & McGUIRES FERRY ROAD (ALSO KNOWN AS HARBOR VIEW ROAD) ARE RECORDED IN MAP BOOK 14-155. THE RIGHTS-OF-WAY SUBSEQUENTLY RECORDED BY CRESCENT RESOURCES FOR THE LAKE WYLIE RECREATION LOTS DO NOT CORRESPOND TO PORTIONS OF THE RIGHTS-OF-WAY RECORDED IN MAP BOOK 14-155. THE RIGHTS-OF-WAY SHOWN, WHERE CRESCENT HAS NOT SUBSEQUENTLY RECORDED RIGHTS-OF-WAY, ARE TAKEN FROM THE RECORDED MAP IN MAB BOOK 14-155.

SITE DEVELOPMENT DATA:

OVERALL PROJECT SUMMARY

ZONING – PETITION #2001-16(c): MX-3
TOTAL AREA: 1,489.09 AC.
TOTAL RESIDENTIAL UNITS: 4,145 UNITS ⚠

TOWN CENTER AREA:

RESIDENTIAL DEVELOPMENT: 256.29 AC.
- SINGLE FAMILY: 67.5 AC. (375 UNITS) 5.6 DU/AC.
- MULTI-FAMILY: 45.0 AC. (700 UNITS) 15.5 DU/AC.
- TOWNHOMES: 11.8 AC. (150 UNITS) 12.7 DU/AC.

RETAIL: 29.2 AC. (200,000 S.F.)
OFFICE: 19.2 AC. (100,00 S.F.)
CHURCH: 11.8 AC.
INSTITUTIONAL: 27.0 AC.
OPEN SPACE: 31.9 AC.
ROAD R/W: 18.9 AC.

RESIDENTIAL/GOLF COURSE

COMMUNITY AREA: 1,232.80 AC.
RESIDENTIAL DEVELOPMENT:
- SINGLE FAMILY: 769.2 AC. (2,030 UNITS) 2.6 DU/AC.
- VILLAGE RESIDENTIAL: 175.4 AC. (890 UNITS) 5.1 DU/AC.

VILLAGE CENTER: 9.0 AC.
PASSIVE OPEN SPACE: 70.0 AC.
EQUESTRIAN CENTER: 6.8 AC.
GOLF COURSE: 202.47 AC.

NOTE: ACREAGE FIGURES ARE APPROXIMATE. EXACT ACREAGE WILL BE DETERMINED IN THE DESIGN DEVELOPMENT PHASE OF THE PROJECT. IN ALL CASES, THE DEVELOPMENT WILL MEET THE UNDERLYING STANDARDS SET FORTH IN THE ORDINANCE OR AS SPECIFIED HEREIN.

INDEX OF SHEETS

SHEET 1 MASTER COVER SHEET
SHEET 2A INNOVATIVE SITE PLAN
SHEET 2B WATER ACCESS LOT PLAN
SHEET 3 REZONING NOTES
SHEET 4 SUB-BASIN PLAN #1
SHEET 5 SUB-BASIN PLAN #2
SHEET 6 SUB-BASIN PLAN #3
SHEET 7 SITE PLAN
SHEET 8 ROADWAY DATA PLAN
SHEET 9 DRAINAGE PLAN #1
SHEET 10 DRAINAGE PLAN #2
SHEET 11 DRAINAGE AREA PLAN
SHEET 12A POST DEVELOPMENT PLAN
SHEET 12B BMP PLAN
SHEET 13A EROSION CONTROL BY-PASS PIPE INSTALL
SHEET 13B CLEARING PHASE EROSION CONTROL PLAN
SHEET 14 EROSION CONTROL PLAN #1
SHEET 15 EROSION CONTROL PLAN #2
SHEET 16 EROSION FINAL GRADING PLAN #1
SHEET 17 EROSION FINAL GRADING PLAN #2
SHEET 18 S.W.I.M. BUFFER PLAN
SHEET 19 WATERSHED MANAGEMENT PLAN #1
SHEET 20 WATERSHED MANAGEMENT PLAN #2
SHEET 21 TREE PLANTING PLAN
SHEET 22 TREE PRESERVATION PLAN
SHEET 23 DETAIL SHEET #1
SHEET 24 DETAIL SHEET #2
SHEET 25A DETAIL SHEET #3
SHEET 25B ROADWAY IMPROVEMENT PLAN
SHEET 25C TRAFFIC CONTROL PLAN
SHEET 25D ROADWAY IMPROVEMENT SECTION PLAN
SHEET 26 SNUG HARBOR ROAD
SHEET 27 MONTAGE LANE
SHEET 28 MONTAGE LANE, TWIN EAGLES LANE
SHEET 29 SARANITA PLACE
SHEET 30 SARANITA PLACE
SHEET 31 CIMARRON HILLS LANE

VICINITY MAP
NOT TO SCALE

CHARLOTTE.

FINAL APPROVAL

ENGINEERING
PCO / DETENTION / DRAINAGE PLAN

EROSION CONTROL

URBAN FORESTRY
TREE ORDINANCE

CDOT

NOTE: SCHEDULE PRE-CONSTRUCTION MEETING AT LEAST 48 HRS. PRIOR TO ANY LAND DISTURBING ACTIVITY USING THE ONLINE FORM AT http://development.charmeck.org

REVISION

APPROVED FOR CONSTRUCTION
CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT
By: Joshua Weaver 12-12-2016 1 of 2

APPROVED
By Emily Chien at 12:43 pm, Dec 12, 2016

APPROVED

APPROVED Kelly Robertson

APPROVED Carlos Alzate

THE PALISADES

AUDUBON INTERNATIONAL
Gold Signature Member

THIS PLAN IS A **FINAL DRAWING-NOT RELEASED FOR CONSTRUCTION** UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / 11/17/16
INITIALS DATE

BEARINGS BASED ON MB: 25-276 RECORDED DECEMBER 23, 1992

SEAL 14906 — ANTHONY HOULE — ENGINEER — 11/17/16

NO.	DATE	REVISION	BY
2	11/03/16	TO UPDATE SHEET INDEX ADDING ROADWAY PLANS	BTG
1	8/21/15	PER CITY COMMENTS	BTG

SHEET TITLE
MASTER COVER SHEET

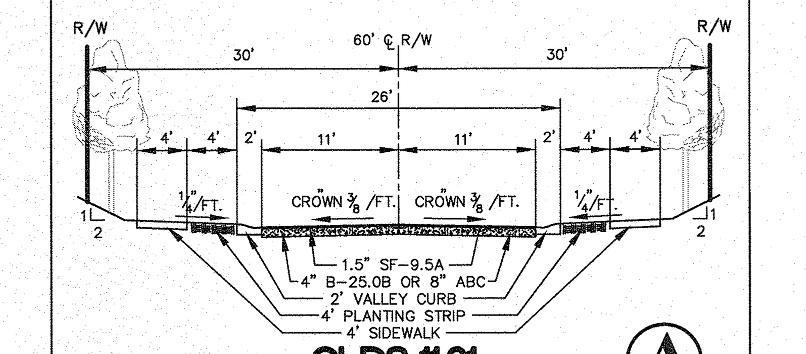
PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=500'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-50
SHT 1 OF 31 SHTS

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
(physical) 720 Windsor Oak Court, Charlotte, North Carolina, 28273, 704.556.1990
(mailing) P.O. Box 1198, Pineville, North Carolina, 28134, 704.556.0505(fax)
NC Corporate Registration #C-0475

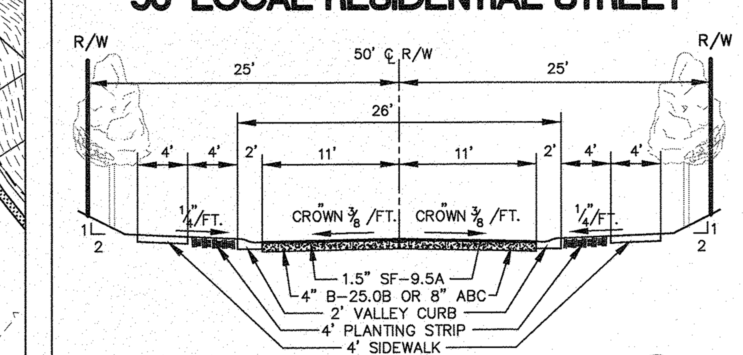
P:\Users\hpc\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CVR PLANS.dwg, 11/3/2016 5:15:17 PM

60' LOCAL RESIDENTIAL STREET



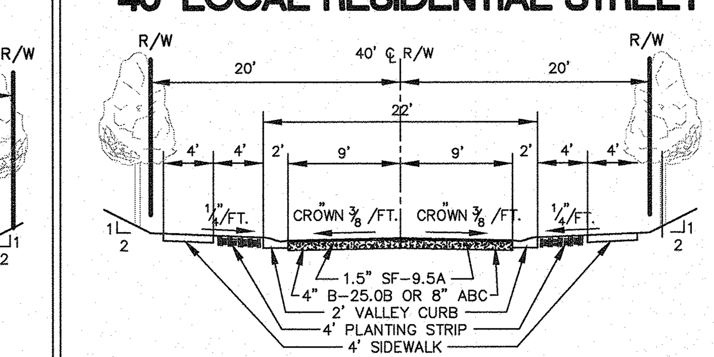
CLDS 11.01 (A)

50' LOCAL RESIDENTIAL STREET



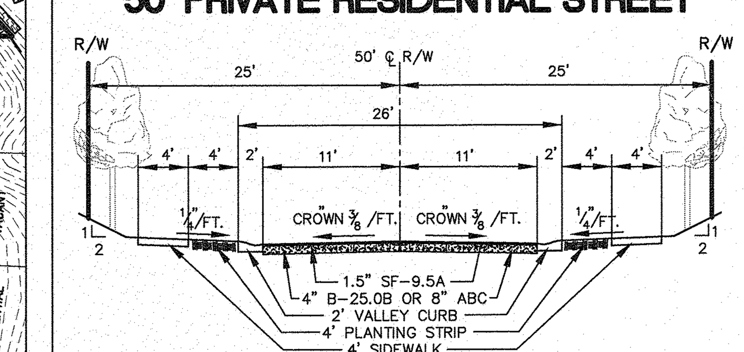
CLDS 11.01 (B)

40' LOCAL RESIDENTIAL STREET



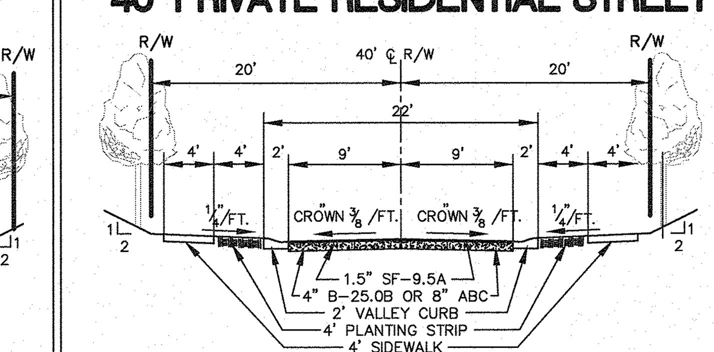
CLDS 11.04 (C)

50' PRIVATE RESIDENTIAL STREET



CLDS 11.01 (D)

40' PRIVATE RESIDENTIAL STREET



CLDS 11.04 (E)

PROJECT INFORMATION
TOTAL SITE AREA: 237.2 AC.
C.O.S.: 16.14 ACRES
LOTS PROPOSED: 700
ZONING: MX-3 PETITION #2001-16(C)

LOT DENSITY:
700 LOTS / 237.2 AC. - 2.95 D.U.A.

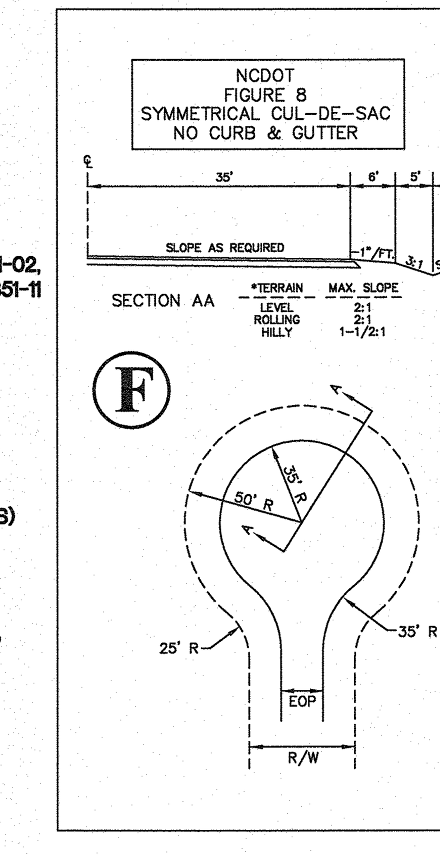
TAX PARCEL #'s
217-191-57, 217-181-55, 217-181-54, 217-181-53, 217-181-52, 217-181-49, 217-172-45, 217-172-46, 217-171-01, 217-351-18, 217-161-08, 217-161-91, 217-171-02, 217-172-48, 217-181-83, 217-161-06, 217-351-11

TYPICAL LOT AND YARD DIMENSIONS

MIN. LOT SIZE	6,000 s.f.
TYP. LOT WIDTH	60'
MIN. LOT WIDTH	50'
TYP. LOT DEPTH	135'
MIN. FRONT SETBACK	20' FROM R/W (PUBLIC AND PRIVATE STREETS)
MIN SIDEYARD AT R/W	10'
MIN REAR SETBACK	20'
MIN SIDE YARD	5'

MIN FRONT SETBECK AT AMENITY: 10' FROM R/W

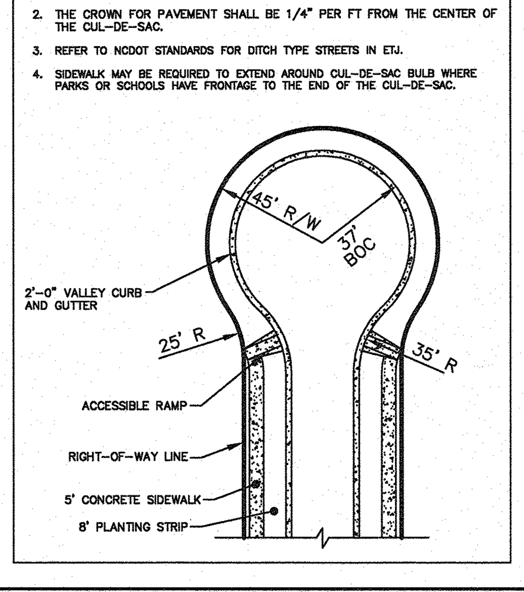
SUMMARY OF INNOVATIVE REQUEST:
1.) LOT SIZES AND SETBACKS
2.) SIDEWALKS
3.) STREETS



CUL-DE-SAC DETAIL

NOTES:

1. ALTERNATIVE CUL-DE-SAC DESIGNS, INCLUDING ISLANDS SHALL BE SUBMITTED TO THE CITY ENGINEER AND CDOT 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.



NO.	DATE	REVISION	BY
1	1/06/14	REVISED 60' LOCAL RESIDENTIAL STREET "A"	BTG

SHEET TITLE
INNOVATIVE SITE PLAN

PROJECT
PALISADES TRACTS 3, 5 & 6
STEELE CREEK TWSP, MECK. CO.,NC (CHARLOTTE ETJ) N.C.
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14906 MARC ANTHONY HOULE 11/17/12

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)
NC Corporate Registration #C-0475

PROJECT NO.	
SCALE	1"=200'
DATE	8/13/13
DRAWN BY	BTG
CHECKED BY	MAH
DRAWING NO.	242-49A
SHT	2A OF 31 SHTS

LAKE ACCESS LOT CALCULATIONS
AREA OF INTERNAL LOTS WITHIN 450' OF LAKE: 1,921,834 SQ. FT.
1,921,834 SQ. FT. X 10% = 192,183 SQ. FT.
192,183 SQ. FT. > 20,000 SQ. FT.
LAKE ACCESS REQUIRED: 4.41 ACRES
LAKE ACCESS PROVIDED: 5.33 ACRES
THIS PLAN IS A FINAL DRAWING-NOT RELEASED FOR CONSTRUCTION
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: INITIALS / DATE
11/17/16
NO. DATE REVISION BY
SHEET TITLE
WATER ACCESS LOT PLAN
PROJECT NO.
SCALE 1"=200'
DATE 8/13/13
DRAWN BY BTG
CHECKED BY MAH
PROJECT
PALISADES TRACTS 3, 5, & 6
STEELE CREEK TWSP, MECK. CO.,NC(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC
YARBROUGH-WILLIAMS & HOULE, INC.
Planning ◦ Surveying ◦ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)
NC Corporate Registration #C-0475
DRAWING NO. 242-49B
SHT 2B OF 31 SHTS
NORTH CAROLINA PROFESSIONAL SEAL 14906 ENGINEER MARC ANTHONY HOULE
11/17/16
WATER ACCESS LOT - 3.77 ACRES
WATER ACCESS LOT - 1.56 ACRES
AMENITY
POND
LAKE WYLIE
NOW OR FORMERLY TIMBERLAKE GOLF CLUB LLC DEED: 22328-793 TAX #: 217-161-02
NOW OR FORMERLY PALISADES EPISCOPAL SCHOOL DEED: 25689-10 TAX #: 217-191-76
NOW OR FORMERLY TIMBERLAKE GOLF CLUB LLC DEED: 14573-586 TAX #: 217-181-81
NOW OR FORMERLY WILLIAM A & LINDA T HODGES MB:38-805 DEED:25224-383
NOW OR FORMERLY D N COLLINS CONSTRUCTION INC. DEED: 20181-861 MB:25-276 MB:17-517
NOW OR FORMERLY PALISADES MASTER ASSOC. DEED: 23037-163 TAX #: 217-163-95
EAGLES LANDING AT THE PALISADES PHASE 5A T3E MAP 15 MB:51-890
FLINTROCK FALLS LANE
GOVERNOR'S CLUB COURT
KALABASH ROAD
HAWKWATCH LANE
ROCKY GAP LANE 40' PUBLIC R/W
CROSSHAVEN DRIVE 50' PUBLIC R/W
COZY COVE ROAD
HARBOR VIEW ROAD
BARKSDALE LANE
RIDER WOOD LANE
SNUG HARBOR ROAD
HIDEAWAY ROAD
NOW OR FORMERLY WILLIAM BENJAMIN PITMAN DEED: 03970-172 TAX #: 217-181-43
NOW OR FORMERLY SCOTT WALDON STALVEY DEED: 12866-219 TAX #: 217-181-37
NOW OR FORMERLY TWO SHANNONS PROPERTIES LLC DEED: 27892-68 TAX #: 217-181-51
NOW OR FORMERLY PHILLIP M VAN HOY DEED: 08002-798 TAX #: 217-181-48
NOW OR FORMERLY KING R TRAUB JR DEED: 27673-948 TAX #: 217-181-66
NOW OR FORMERLY DAVID N ALLEN DEED: 16173-400 TAX #: 217-181-29
NOW OR FORMERLY DAVID N ALLEN DEED: 16173-403 TAX #: 217-181-30
NOW OR FORMERLY VIRGINIA B ALLEN DEED: 03882-687 TAX #: 217-181-31
NOW OR FORMERLY MARK DOUGLAS BROOKS DEED: 09940-175 TAX #: 217-181-32
NOW OR FORMERLY BARBARA GRAY PLUMMER(TRUST) DEED: 27087-192 TAX #: 217-181-35
NOW OR FORMERLY EMOLYN C LAMBERT DEED: 09715-583 TAX #: 217-172-39
NOW OR FORMERLY STEPHEN W ORVILLE DEED: 15203-166 TAX #: 217-172-38
NOW OR FORMERLY LKW PROPERTIES, LLC DEED: 21870-430 TAX #: 217-172-36
NOW OR FORMERLY W CARTER LOFTON, SR. DEED: 04500-439 TAX #: 217-172-14
NOW OR FORMERLY GERALD W CHEEK DEED: 03929-187 TAX #: 217-172-13
NOW OR FORMERLY MARY E LITTLE DEED: 03858-258 TAX #: 217-351-15
100' UNDISTURBED LAKE WYLIE BUFFER
DUKE POWER FUTURE RESIDENTIAL SHORELINE
DUKE POWER ENVIRONMENTAL SHORELINE
DUKE POWER IMPACT MINIMIZATION SHORELINE
DUKE POWER RESIDENTIAL SHORELINE
DUKE POWER 75' FUTURE RESIDENTIAL MARINA SHORELINE
330' DUKE POWER RESIDENTIAL FUTURE SHORELINE

Palisades Master Planned Community Development Notes:

This Petition proposes the development of a master planned community containing a mixture of residential, office, retail, and open space uses. This concept has been developed to further the objectives of the adopted Westside Strategic Plan. It incorporates the development of needed transportation infrastructure to serve the proposed development as well as other existing and future development in the area. It has been designed taking into account the difficult topography common to this part of the county and has incorporated open space elements to protect environmentally sensitive areas. It contains extensive provisions in direct response to concerns about water quality in Lake Wylie and additional restrictions on development that will significantly reduce the impact of the proposed development over what the present standards would permit. It will provide for a variety of residential types and densities, with higher densities focused in the Town Center and lower densities transitioning to the existing community fabric.

1. Development of the site will be controlled by the standards depicted on this site plan and by the standards of the Mecklenburg County Zoning Ordinance. The development depicted on this plan is intended to reflect the arrangement of proposed uses on the site, but the exact configuration, placement, and size of individual site elements may be altered or modified within the limits prescribed by the ordinance during the design development and construction phases. This allowance applies to all site elements, including building areas, open space areas, recreation and golf course areas, and the configuration of streets. This proposal is intended to enable the development of a master planned community composed of retail and service uses, employment and office uses, multifamily housing, single family attached, and single family detached housing interconnected with open space, pedestrian, bicycle, equestrian, and/or vehicular linkages. Due to the size of the proposed development, the timing of the availability of water and sewer service, the significant transportation infrastructure commitments, and the anticipated build out over a number of years, the Petition includes the vesting of the approved plan for the property for five years. The Petitioner acknowledges that upon expiration of the vesting period, the site may be required to comply with additional development standards imposed by the City of Charlotte under its extraterritorial jurisdiction.

2. The site may be developed for any use allowed in the MX–2 as allowed by the ordinance in accordance with the standards of that district and the restrictions of this site plan as noted below. In keeping with an intended equestrian focus for a portion of the site, the only MX–3 use that will be allowed in the requested MX–3 district for the site will be a boarding stable and related uses that will be associated with the equestrian areas and trails within the site. The Petitioner will construct a mixed–use development in general conformity with the schematic plan. The Petitioner will provide pedestrian, bicycle, and/or equestrian connections from within the site to other site elements and uses and to public sidewalks, balancing the need for vehicular as well as pedestrian access. The Petitioner may place retail uses within office buildings on the site as well as within the retail center in order to further the mixed–use nature of the site.

3. Residential densities may vary in different portions of the site in keeping with the various dwelling types. The density of the areas within the site will be controlled by the standards of the MX–3 district. Residential uses may be located within any portion of the site including retail and office areas as a mixed use on the site and within mixed use structures. Retail uses within the Town Center portion of the site may include uses such as supermarket, general merchandise, hardware, business services, banks, civic, dry cleaners, personal services, restaurant, automobile service station, or similar uses designed and intended to serve not only the residents in this mixed–use community, but the residents in the surrounding areas as well. The uses that may locate on an out parcel will be designed as part of the overall development in terms of consistent landscaping, signage, and architectural style. More than one use or type of use may locate on an out parcel so long as the uses are located within the same structure. In view of the fact that a portion of the Town Center site is presently zoned B–2, the Town Center may include up to 4 total retail outparcels, only one of which may be used for a restaurant with drive in service and only one of which may be used for an automobile service station.

   In accordance with all other provisions of this Petition, the Town Center may include up to 200,000 sq. ft. of retail floor area and up to 100,000 sq. ft. of office floor area. However, the development of the Town Center will be limited by the following provision. The initial development of the Town Center will be limited to a total of 100,000 sq. ft. of retail floor area, 30,000 sq. ft. of office floor area, and two single tenant out parcels, only one of which may be used for a restaurant with drive in service and only one of which may be used for an automobile service station. Thereafter, no additional retail or office floor area or out parcels may be developed unless and until a District Plan Amendment is considered and approved that would allow the additional retail and office floor area and any additional out parcels. Such Plan Amendment may be initiated at any time after the approval of this Petition. If such a Plan Amendment is approved, then the additional floor area and out parcels that may be approved for the site may be constructed in accordance with the conditions and standards of this Petition without the need for any further rezoning of the site. This limitation does not apply to the 10,000 sq. ft. of proposed office and/or retail floor area to be located within the Village Center portion of the plan. The area (in acres) will be limited by the provisions of the MX–2 district based on the number of dwelling units approved for the site.

4. Buffer areas and project edges will be developed in accordance with Sect. 12.302 and Sect. 9.805(7)(e) respectively. Required buffers and project edges on the site may be eliminated or reduced if the adjoining parcels are rezoned such that buffers or project edges are no longer required or if the zoning jurisdiction for the property changes so that buffers would not be required by the Ordinance of that jurisdiction. The Petitioner acknowledges the numerous variations of buffers that may be required within and along the boundary of the site depending on the final uses developed on various portions of the site.

5. Stormwater detention facilities, if provided, will be designed to meet the applicable standards of Charlotte/Mecklenburg Stormwater Services. Stormwater detention facilities, if provided, will not be located within zoning buffer or setback areas unless the need for environmental management of stormwater or the topography of the site dictates that such facilities may not be reasonably located elsewhere.

6. Any detached lighting on the site will be limited to 30 feet in height, in the commercial portions of the site. No 'wal pak' lighting will be used and pedestrian lighting limited to 15' in height will be installed in pedestrian areas, except for pedestrian trails in undisturbed or natural areas.

7. Signage will be permitted in accordance with applicable Zoning standards.

8. Parking will be provided which will meet or exceed the standards of the Zoning ordinance.

9. Screening will conform to the applicable standards of Sect. 12.303 of the Zoning ordinance.

10. The Petitioner may designate areas labeled as 'village residential', and such areas denote portions of the site that may be used for single family detached, single family attached, patio, zero lot line, or other types and styles of housing with appropriate buffers if required. The Petitioner reserves the right to relocate such areas within the site, but will not relocate any such area at the outside edge of the overall project unless indicated on the site plan at the time of approval. However, village residential uses may not be located on properties within the site if other properties on at least two sides of the site have already been developed and occupied unless the site was previously indicated on the site plan as available for village residential uses. All village residential development will be "for sale" development and will be limited to a maximum density on any particular site of 8 units per acre. Village residential areas used for attached housing or zero lot line housing will be separated from all existing single–family residential uses by a 100' buffer.

    In addition, the Petitioner may designate areas labeled as 'village center', and such areas denote portions of the site that may be used to accommodate small scale retail, office, and service uses limited to the total floor area noted on the site data table. The Petitioner reserves the right to relocate such areas within the site, but will not relocate any such area at the outside edge of the overall project unless indicated on the site plan at the time of approval. However, village center uses may not be located on properties within the site if other properties on at least two sides of the site have already been developed and occupied unless the site was previously indicated on the site plan as available for village center uses.

    The Petitioner, as part of the development of a site that borders the Catawba River or its impoundments, may be required by the provisions section 7.200.9 of the Subdivision Ordinance to provide 'water access lots'. In complying with this standard, the Petitioner will not install any community docks, launching ramps, or any facilities for the maintenance, storage, launching or retrieval of watercraft. In those areas of the site that will be used for single–family development, individual homeowners will be permitted to apply for individual residential piers in the same fashion that existing lakefront property owners may apply for such permits.

In the single family and village residential portions of the site:

1. Street Trees. Street trees will be required.
   a. Trees will be large maturing shade trees.
   b. Size of trees at planting will be 2" caliper, 8–10 feet tall.
   c. Trees planted within 20 ft. of the edge of pavement will be considered street trees and trees may be planted between the sidewalk or trail.
   d. Spacing will be an average of 40–50 ft apart for large maturing shade trees, and 30–40 feet apart for small maturing shade trees. Where single–family development is directly across the street from multi–family development the spacing will be an average of 40 ft.
   e. Any existing 2" caliper or greater, large maturing shade tree preserved within 20 ft. of the back of curb may be counted towards the street tree requirement if adequately protected during construction. Staff has the ability to grant a modification for other existing trees on a case–by–case basis.
2. Tree Save Requirement. An area or areas of the existing tree canopy equaling ten percent (10%) of the total property area will be saved during development. Existing and future (reserved) road rights–of–way and utility easements, existing ponds and lakes, will be subtracted from the total site area before calculating the percent of site in tree save area.

3. City of Charlotte Tree Ordinance. The portion of the site with non–residential and multi–family uses shall be subject to the provisions of the Charlotte Tree Ordinance, as they existed on the date of the approval of this petition.

11. Within the Town Center portion of the site, the Petitioner reserves the right to increase the authorized number of residential units by converting authorized retail and/or office area to residential units at the rate of one residential unit for each 100 square feet of retail and/or office area so converted. Up to 100 additional residential units may be added under this provision. In addition, all multi–family development will be separated from all existing single–family residential uses by a 100' buffer.

With regard to the proposed school/park joint use site, the Petitioner proposes to dedicate the site for use as a public school/public park site based on the following schedule of events and commitments.

* If (1) the Charlotte–Mecklenburg School board (CMS) votes to fund, either with bonds or other means, the construction and improvement of an elementary school on the site with such a funding decision to be made by April 1, 2007 for abond election (if required) to be conducted in November 2007, or any earlier time, and (2) the Mecklenburg County Board of County Commissioners (Mecklenburg County) votes to fund, either with bonds or other means, the construction and improvement of a public park on the site in conjunction with the construction of a public school with such a funding decision to be made by April 1, 2007 for a bond election (if required) to be conducted in November 2007, or any earlier time, then the Petitioner will dedicate the entire school/park site to CMS and/or Mecklenburg County as instructed by CMS and Mecklenburg County. Such a dedication will be subject to the restriction that the site be used for school and/or park purposes and that construction of the school and park on the site must commence by July 1, 2009.
* By April 1, 2007, if both CMS and Mecklenburg County have not indicated a commitment to fund the development of a public school/public park on the site, with construction to be commenced no later than July 1, 2009, or if, at any time prior to April 1, 2007, either CMS or Mecklenburg County makes a specific decision not to use the site for a joint public school/public park facility, then the Petitioner will be released from any further commitment to dedicate all or any of the proposed site and thereafter will be free to use the site for any other purpose permitted by the approved zoning plan for the site.
* If the November 2007 bonds (if required) are not approved or if, after the approval of the bonds, either CMS or Mecklenburg County makes a decision that would result in either CMS or Mecklenburg County not following through on the funding of either the public school or the public park, construction to commence no later than July 1, 2009, then the Petitioner will be released from any further commitment to dedicate all or any of the proposed site and thereafter will be free to use the site for any other purpose permitted by the approved zoning plan.

Finally, in conjunction with the provisions above, the Petitioner agrees that if the dedication commitment is terminated as outlined under any of the circumstances above, then, prior to the development or sale of the school/park site for any other use, the Petitioner will grant a first right of refusal to Mecklenburg County for the purchase of the site. Thereafter, the Petitioner will be free to use the reserved area for another institutional use or any retail, office, or residential use otherwise permitted in the MX–2 district so long as the total floor area or unit number for any such uses do not exceed the total floor area or unit count established for the Town Center portion of the site and that the area devoted to non–residential uses in the Town Center does not exceed the acreage limit imposed by the standards of the MX–2 district and the conditions of this plan.

12. The Petitioner reserves the right to transfer residential units from the southern portion of the site (below Studman Branch) to the Town Center portion of the site provided that the total number of units does not exceed the cumulative total for the MX–3 district and further provided that the densities of development resulting from any such transfer do not exceed that which is allowed in the MX–3 district.

13. No wall packs will be installed on buildings within the site on any walls that are adjacent to residentially zoned land or public street rights–of–way. All dumpsters on the site will be screened with a solid enclosure with gates. The golf practice range to be located on the site will not be lighted for night practice and all facilities for the maintenance of equipment for the golf course operations will be located at least 100' away from the property line of any existing residential uses.

14. Access to the site will be provided by numerous connections to existing streets and to the newly constructed streets within the site as generally depicted on the site plan. All driveway and street connections are subject to approval by NCDOT, Mecklenburg County, or CDOT depending on the jurisdiction. The number of access points to NC 49 will be limited to five and the configuration of those access points will be consistent with the approved plans for the improvements presently under construction by NCDOT. The Petitioner reserves the right to petition for the abandonment of existing streets and street rights–of–way within the site. However, the Petitioner will assure that access that is presently being provided to other properties in the area by virtue of any of the streets that may be proposed for abandonment will be maintained or improved by streets that the Petitioner will construct as part of this overall project. All new streets will be built to standards approved by the appropriate governmental jurisdiction and existing streets within the site and bordering the site will be improved as required by Mecklenburg County ordinances, subject to the provisions of the innovative development provisions of the Zoning Ordinance. The Petitioner will not connect to or front development onto Rhinehill Rd. unless required by the Charlotte Mecklenburg subdivision administrator to be in compliance with the standards of the Subdivision Ordinance.

In accordance with the recommendations of the Draft Evergreen (Palisades) Traffic Impact Analysis (TIA) prepared by Kubilins Transportation Group, Inc. dated September 1999, the Petitioner will make the following specific transportation improvements.

* As outlined in the TIA, the Petitioner shall participate in the roadway improvements indicated under Scenario 3 for year 2004.

* Scenario 3 is in accordance with the current plans by NCDOT for the widening of NC 49 that will include median openings at Shaherila Road and RiverPointe Drive.

* Subject to applicable engineering approvals, Petitioner agrees to the following to provide adequate access to the development. Signalization (where noted) shall be approved by NCDOT and participated in by the Petitioner:

  o NC 49 and Shaherila Road
    – Signalization of the intersection
    – Eastbound NC 49 right turn lane with 150 feet of storage and applicable bay taper
  o NC 49 and RiverPointe Drive–Grand Palisades Parkway
    – Signalization of the intersection
    – Eastbound NC 49 right turn lane with 180 feet of storage and applicable bay taper
    – Westbound NC 49 dual left turn lanes with a total of 800 feet of storage and applicable bay taper and 45:1 through lane taper
    – Construction of Grand Palisades Parkway in accordance with NCDOT's Traditional Neighborhood Development Street Design Guidelines following the Parkway standard in the area of its intersection with NC 49

In addition to the specific improvements noted above, the Petitioner commits to participate in other improvements as follows:

* The Petitioner will contribute $37,500.00 to NCDOT for improvements to Youngblood Rd. at the time that those improvements are scheduled for construction.
* The Petitioner will provide funding for 50% of the cost of a traffic signal to be installed when warranted by the appropriate transportation authority at the intersection of NC 49 and Shaherila Rd. In addition, the Petitioner will construct a second left turn lane at that intersection at the time that the signal is installed. If no signal is to be installed, then the Petitioner will be relieved of the funding commitment, but will still be required to construct a southbound left turn lane at a location to be determined in the future by the appropriate transportation authority between the Buster Boyd Bridge and NC 160.
* The Petitioner will contribute to NCDOT a total of $35,000.00 toward the cost of traffic signals, when warranted, at the intersections of Youngblood Rd. and Zoar Rd. and Youngblood Rd. and Hamilton Rd. at the time that those traffic signals are scheduled for installation.
* The Petitioner will reserve for dedication to NCDOT, additional right–of–way along the south side of NC 49 so as to provide for a total right–of–way width of 75' from the centerline established by the current widening plan for NC 49, such dedication to occur at such time as NCDOT funds a project to widen NC 49 along the Petitioner's site to a 6 lane (exclusive of turn lanes) highway.
* The Petitioner will construct a collector street to serve the site from NC 49 to Youngblood Rd. The street network for the site beyond that point will provide equal or improved access to all existing properties that adjoin the Petitioner's site that currently have access across the Petitioner's site and will connect to other existing streets in the area consistent with current land development policies and ordinances.

It is recognized that the exact development timetable for the site and the various uses on the site, as well as transportation improvements on and off of the site, are dependent on numerous factors, some of which are beyond the control of the Petitioner. Therefore, transportation improvements will be tied to the development of the site based on trip generation as set forth below. Trip generation will be determined based on the ITE Trip Generation Manual, Edition 6 for all types of trips except residential and the Charlotte–Mecklenburg Residential Trip Generation Table for residential uses.

* Development may occur on the site that would generate up to 15,000 daily trips based on the completion of the infrastructure improvements listed above, regardless of the actual date that the development might occur.
* Additional development may occur on the site after the completion of the improvements listed above that would generate an additional 15,000 daily trips with no additional improvements required to be installed by the Petitioner other than those normally installed on the site as part of the normal development process.
* Prior to any development on the site that would increase daily trip generation over 30,000 daily trips, one of the following conditions must be met:
  o The off site improvements listed on Attachment A which is included with these notes, must be installed by the Petitioner or have been installed by others, or
  o The Petitioner, at the Petitioner's option, may provide an updated traffic analysis that more accurately reflects conditions and proportional impacts for the additional development on the Petitioner's site vis–à–vis the area–wide conditions, other development, transportation plans, and transportation network that exist at that time.

15. The Petitioner will construct a street network with appropriate collector and other streets, all of which will be reviewed as part of the normal subdivision process, and may apply for variations from the standard street standards through the innovative development process, subject to the provisions of the special MCDEP notes below.

16. The Petitioner will, at a minimum, comply with the Lower Lake Wylie Watershed regulations. In accordance with watershed regulations, the Petitioner reserves the right to utilize either or both of the low density and/or the high–density watershed development standards. In that light, the Petitioner reserves the right to utilize individual site or larger area–wide storm water detention and management facilities, ponds, BMP's, extended wetland detention, and related facilities, subject to the provisions of the special MCDEP notes below.

17. A pedestrian, equestrian, and bicycle network to connect the various elements within the site will be developed as the various site elements are constructed. Linkages will be established to connect buildings and uses on the site to this network. In an effort to reduce impervious area in the watershed, the Petitioner may propose the substitution of unpaved pathways in place of paved sidewalks. Subject to approval by NCDOT, the Petitioner will construct a 5' wide sidewalk along the frontage of the site along the south side of NC 49 if sidewalk is not constructed as part of the NCDOT NC 49 project.

    Open space areas depicted on the site plan represent the approximate location and extent of the areas set aside to meet the open space requirement of the district. The exact location and extent of the open space areas will be determined through the detailed design and subsequent administrative review of development plans. The open space areas will be developed with a combination of active and passive recreation areas, trails, pathways, and other amenities consistent with the purpose and provisions of this Petition. Further, the area devoted to open space will not be reduced through the Innovative Review process.

18. The Petitioner, in accordance with the provisions of Section 11.208, "Innovative Development Standards", may propose modifications to the following standards:

    * Street right–of–way widths,
    * Street type and construction standards,
    * Minimum lot size,
    * Setbacks and yards,
    * Off street parking, and
    * Lot width.

Specifically, in an effort to minimize the amount of impervious area within the watershed area, the Petitioner will proposes a network of linkages that may include any combination of sidewalks, trails, bicycle, and equestrian facilities to link various portions of the site. These alternate linkages will be designed to provide necessary connections within the site, even if traditional street–side sidewalks are not installed in certain areas. The Petitioner acknowledges that the innovative process is a separate process that may be pursued after the rezoning has been approved.

19. In view of the location of this site in the Lake Wylie watershed, it is the Petitioner's intent that the site will be served with public water and sewer.

20. Any single family lot that has a rear yard relationship with any existing residential use that is located outside of the Petitioner's site will have a minimum rear yard of at least 35'.

21. The following section contains specific additional standards relating to the development of the site within the Lake Wylie watershed area that have been reviewed and approved by MCDEP on 12/07/01.

1. The Proposed development is within the Critical Area as defined in Mecklenburg County's Lower Lake Wylie Watershed Protection Ordinance.

2. The proposed development shall utilize CMUD pump stations. If pump stations are required in close proximity to the lake, they shall be equipped with the following protection devises: on–site generator with weekly automatic exerciser, audible and visible high water alarms, high water auto dialer, power serge protection and lightening protection and 24–hour storage capacity.

3. The proposed development shall implement the following erosion control measures in addition to those required by current ordinances: inlet protection, double silt fences, two stage sediment basins with outlet weirs sized for a 50–year storm event, single family lot erosion control measures, sediment basins and other sediment reduction devices left in operation until construction activities with the development are completed and stabilizes (basin storage may be reduced based on the remaining disturbed acreage), development and implementation of an erosion control maintenance plan to be strictly enforced by the project developer.

4. Reasonable efforts shall be made to limit the size of developed areas denuded within each sub–basin area at any one time. The project developer shall phase the grading and land disturbing activities within the residential portion of the development in a manner not to exceed fifty (50) acres of denuded area within any sub–basin. The golf course and parkway construction shall be excluded from this requirement. Stabilization shall occur as soon as feasible.

5. The impervious area calculations for determining compliance with the 50% maximum impervious area allowed under the high density option shall be computed utilizing 8 sub–watersheds within the proposed development as approved by MCDEP. BMP's shall be required for all watersheds that exceed 20% impervious cover. However, open space on the property labeled, as "Lake Wylie Baptist Church" on the site plan, will not be used in determining impervious area calculations for any other portion of the site. Impervious area calculations for the Lake Wylie Baptist Church property will be determined solely with respect to the built–upon area and open space located or to be located on the church property.

6. The golf course shall develop a maintenance plan which minimizes the use of herbicides and fertilizers in order to reduce negative impacts to surface waters. The maintenance plan shall be provided to MCDEP prior to operation of the golf course. The maintenance plan shall include the following:

   Buffer Zones:
   a) The proposed golf course within the development shall maintain a 100' undisturbed buffer from the lake in all locations and shall comply with all Watershed and S.W.I.M. Stream Buffer requirements.
   b) No fertilizers or pesticides are to be applied in any of the buffer zones.
   c) The golf course storm drainage shall be designed such that there are no direct discharges of storm water into the lake or SWM/Watershed streams.

   Irrigation Management Plan:
   d) An irrigation plan shall be developed to ensure that irrigation runoff from managed turf grass to surface waters is prevented and to reduce subsurface losses of nutrients and pesticides. This plan shall be based on a water budget, weather conditions and soil moisture data obtained from on–site instrumentation.
   e) Water Quality Management Zones shall be established by the golf course based on turf, plant type and soils, with specific strategies developed for each zone.

   Nutrient Management Plan:
   f) A nutrient management plan must be developed to limit nutrient applications to levels equal to or less than turf grass and vegetation nutrient uptake in order to minimize nutrient transportation via surface runoff, subsurface interflow, or deep percolation.
   g) Slow release fertilizers are to be used predominately to reduce nitrogen loss below the root zone. Occasional spot application of liquid fertilizers shall be allowed.
   h) Fertilizer applications are to be commensurate with turf grass growth requirements based on species and cultivar, climate, soil conditions, and chemical formulation.
   i) Water Quality Management Zones shall be established by the golf course based on soils, turf and plant cover goals, and level of use in order to plan fertilizer and irrigation applications.
   j) Nutrient applications are not to exceed turf and plant uptake requirements during any growing season.
   k) Chemical applications are not to occur on bare soils, except during establishment of turf grass on the golf course.
   l) Fertilizers are to be incorporated into the soil/turf wherever possible to reduce exposure to runoff and enhance adsorption.
   m) Nutrient uptake shall be maximized through the selection of realistic turf grass goals, selection of application rates to meet goals, and the use of soil and tissue tests to direct application rates.
   n) The potential for off–site transport of nutrients must be assessed prior to application and measures must be taken to prevent negative water quality impacts.

   Integrated Pest Management (IPM)
   o) An IPM Plan shall be developed to minimize toxic chemical transport via surface water runoff, subsurface interflow, or deep percolation.
   p) The IPM Plan shall be integrated with irrigation and nutrient management plans.
   q) Action thresholds shall be developed and implemented below which no applications are used in order to reduce pesticide use.
   r) Pest specific products are to be used which are less toxic, less mobile, and less persistent.
   s) Water Quality Management Zones shall be established by the golf course based on soils, turf and plant cover goals, and level of use in order to plan pesticide applications.
   t) Spot specific treatment shall be used wherever possible to avoid broadcast treatments.
   u) Pesticides should be incorporated into the soil/turf wherever possible to reduce exposure to runoff and enhance adsorption.
   v) Application of toxic chemicals shall be prohibited in sensitive zones such as wetlands.
   w) The potential for off–site transport of pesticides shall be assessed prior to application and measures must be taken to prevent negative water quality impacts.

7. The project developer shall perform the ambient and storm water quality monitoring necessary to establish base line measurements in the eight (8) affected coves for the following parameters: temperature, pH, conductivity, secchi depth, total phosphorus, total nitrogen, orthophosphorus, TKN, NH3, NO3, NO2, total suspended solids, turbidity, chlorophyll a, fecal coliform, pesticides, herbicides, and dissolved oxygen. MCDEP must evaluate and approve all monitoring site locations in each sub–basin as well as monitoring protocols. MCDEP will also evaluate hydrologic conditions and channel stability at the site. This base line data will be used in the development of the water quality model discussed in 11 below. Ongoing monitoring will be performed by the developer as discussed in number 11 below to assess and evaluate compliance with water quality targets established by MCDEP.

8. The project developer shall provide to MCDEP measurements of sediment levels in the coves identified for each sub–basin at a maximum of 90 days prior to initiation of land disturbing activities and annually thereafter until no later than one year after construction activities have been completed in each of the sub–basins. MCDEP shall work with the developer in the selection of monitoring site locations and the development of required monitoring protocols.

9. The project developer shall employ an enforcement officer to monitor compliance with erosion control, buffer and watershed protection requirements as well as the requirements specified as part of the rezoning approval. The enforcement officer shall be empowered to take the actions necessary to ensure the prompt correction of all problems detected.

10. The project developer shall require all on–site contractors and sub–contractors to take approved MCDEP training program, i.e., EnviroSense, to include information concerning specific water quality concerns and the measures necessary to prevent water quality problems.

11. The developer shall complete a watershed management plan for the entire project by sub–basin using a water quality model as the primary tool in the development of the plan. The water quality model to be used for the development must be approved by MCDEP and all water quality targets will be set by MCDEP after baseline data has been collected and the model has been run. The goal of the watershed management plan and MCDEP water quality targets will be to ensure compliance with all applicable water quality standards and MCDEP action levels as well as conformance with designated uses established in the North Carolina Administrative Code. In addition, the plan and targets will ensure that all downstream waters are suitable for aquatic life propagation and maintenance of biological integrity and wildlife. The plan will contain designs for the structural and nonstructural best management practices (BMPs) based on best available technology for use within the development to ensure that all water quality goals are achieved and that concentrations of pollutants do not exceed MCDEP water quality targets. Where practical, the developer will also incorporate into the watershed management plan the development principles for reducing impervious cover contained in the Center for Watershed Protection publication (August 1998) entitled "Better Site Design for Changing Development Practices in Your Community". The watershed management plan and water quality targets must be approved by MCDEP prior to the developer receiving any grading permits for the project and all site development must be performed in strict accordance with this plan. MCDEP shall have the authority to approve innovative erosion control and BMP devices proposed by the developer in order to meet established water quality targets. The project developer will establish an organization for the common maintenance of all BMPs. The developer will perform water quality monitoring for the parameters specified in #7 above in each sub–basin at a minimum of twice a year throughout project construction and up to three (3) years following completion for the purpose of determining the effectiveness of the watershed management plan and water quality model at protecting water quality. Water quality monitoring reports will be submitted to MCDEP for review and approval within four (4) weeks following the completion of biannual monitoring activities. If monitoring data indicates that watershed management plans are not effective at achieving established water quality targets and goals, then the watershed management plans will be revised as approved by MCDEP to protect water quality conditions in the coves and ensure compliance with all established water quality targets and goals.

12. The project developer shall be required to utilize a NCDOT approved "ditch type" street section through–out the development in areas where street patterns are connecting to existing "ditch type" streets and roadways within the development without residential or commercial driveway access. Sidewalks shall be required on one side of "ditch type" streets with the other side to be utilized for equestrian and hiking trails. All natural trails at points adjacent to streets will be covered with a stabilizing ground cover to prevent erosion, such as mulch. Any of the foregoing provisions that depart from standard development regulations must be approved under the Innovative Development provisions of the Mecklenburg County Zoning Ordinance. (street cross sections attached)

13. The project developer shall evaluate the downstream offsite drainage system and control the storm water runoff from the site during and after construction to prevent associated damage to downstream properties.

14. A 100 linear foot Watershed Buffer shall be maintained throughout the development in all locations adjacent to the lake's edge. In those areas where the Watershed Ordinance would require a buffer greater than 100 feet, then the larger buffer requirement will control.

15. The project developer shall re–vegetate the 100 linear foot Watershed Buffer in two locations as indicated on a map per MCDEP recommendations.

16. Energy dissipation devices at all storm water outfalls will be sufficient to prevent erosion within the buffer.

17. The developer proposes the use of low–pressure sewer systems at various locations on the project. These systems require smaller lift stations on individual lots. These individual lift stations shall be maintained under a common written agreement with a contractor who can respond to service calls within twenty–four (24) hours. Each lift station shall be equipped with audible and visual alarms and the maintenance provider's name and phone number prominently displayed.

Throughout this Rezoning Petition, the terms "Petitioner", "Petitioners", "Project Developer", will be deemed to include the heirs, devisees, personal representatives, successors in interest and assignees of the owner or owners of the Site who may be involved in its development from time to time.

THE PALISADES®

AUDUBON INTERNATIONAL
Gold Signature Member

THIS PLAN IS A ***FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: MAH (INITIALS) / 5/20/15 (DATE)

NO.	DATE	REVISION	BY

SHEET TITLE
REZONING NOTES

PROJECT NO.
SCALE: N.T.S.
DATE: 4/20/15
DRAWN BY: BTG
CHECKED BY: MAH
DRAWING NO.: 242–49

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

NORTH CAROLINA PROFESSIONAL SEAL 14905 ENGINEER ANTHONY MOORE 5/20/15

YARBROUGH–WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.588.1990 704.588.0606(fax)
NC Corporate Registration #C–0475

SHT 3 OF 31 SHTS

P:\SharePoint\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS\dwg, 5/22/2015 2:35:30 PM

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DISTANCE	CHORD BEARING	DELTA
C1	106.12	2194.29	106.11	S44°36'12"E	02°46'16"
C2	124.88	114.83	118.81	S42°50'05"E	62°18'31"
C3	320.40	656.17	317.23	S02°01'20"W	27°58'39"
C4	272.51	2043.96	272.31	S57°40'01"E	07°38'20"
C5	539.40	2026.57	537.81	S69°06'41"E	15°15'00"
C55	100.28	1085.90	100.25	N88°48'04"E	05°17'29"
C56	77.50	435.85	77.40	N86°19'15"E	10°11'27"
C57	276.02	61.00	273.67	N09°41'07"E	25°55'29"
C58	107.77	50.00	88.09	N75°16'17"E	123°29'33"
C59	119.24	50.00	92.93	N47°01'18"E	136°38'25"
C60	120.23	232.41	118.90	S39°18'10"E	29°38'28"
C61	163.10	194.79	158.38	S48°22'12"E	47°58'32"
C62	125.00	50.00	94.90	S53°52'11"E	143°14'39"
C63	114.29	50.00	90.98	S69°40'38"E	130°57'59"
C64	87.52	110.69	85.26	S60°13'51"E	45°18'04"
C65	34.64	50.00	33.95	N20°28'11"E	39°41'55"
C66	52.70	194.23	52.54	S59°24'08"E	15°32'45"
C67	181.75	378.72	180.01	S53°35'14"E	27°29'48"
C68	150.39	144.13	143.66	N21°01'19"E	59°47'07"
C69	186.51	580.96	187.68	S18°09'39"E	18°30'29"
C70	208.49	420.93	206.36	S13°08'39"E	28°22'43"
C71	136.89	50.00	97.97	N80°07'12"E	156°51'32"
C72	165.99	50.00	99.60	N31°05'43"E	190°12'51"

LINE TABLE		
LINE	LENGTH	BEARING
L1	49.76	S43°58'40"W
L2	8.63	S74°07'54"W
L3	121.77	S47°03'36"E
L4	37.52	S77°50'25"E
L5	29.11	N78°10'56"E
L6	36.96	S11°49'04"E
L7	18.00	S73°59'20"E
L8	17.39	N28°30'48"E
L9	44.26	S84°24'33"E
L10	65.62	S79°53'16"E
L11	66.67	N89°41'30"E
L12	149.06	N89°24'07"E
L13	99.13	N08°14'39"E
L14	47.08	S72°18'40"E
L15	102.69	S77°18'40"E
L16	150.20	N11°39'22"E
L17	102.88	N77°57'59"E
L19	99.86	N78°34'08"E
L21	151.97	N78°59'41"E
L23	78.64	N06°58'23"E
L329	24.43	N36°49'35"E
L330	28.17	N61°12'38"E
L331	18.97	N35°21'36"E
L332	15.40	N05°54'54"E
L333	24.95	N24°08'37"E
L334	20.48	N60°24'09"E
L335	29.75	N32°07'32"E
L336	32.96	N63°03'28"E
L337	46.87	N53°59'09"E
L338	18.41	N41°36'55"E
L339	77.83	N38°25'51"E
L340	67.41	N67°26'51"E
L341	42.86	S85°30'09"E
L342	53.03	S60°24'09"E
L343	84.79	S40°23'09"E
L344	60.06	S52°21'09"E
L345	9.44	S23°28'09"E
L346	134.70	S28°30'09"E
L347	66.77	S44°50'09"E
L348	91.86	S30°35'09"E
L349	186.11	S45°05'09"E
L350	109.50	S04°08'13"E
L351	136.95	S42°04'15"E
L355	99.65	S88°35'12"E
L356	87.05	S30°16'44"W
L357	97.50	S81°14'08"E
L358	127.69	S76°51'10"E
L359	85.78	N47°01'10"E
L360	67.89	S38°11'00"E
L361	82.20	S24°38'00"E
L362	55.83	S18°46'00"E
L363	91.52	S07°31'00"E

LINE TABLE		
LINE	LENGTH	BEARING
L364	66.47	S07°03'00"W
L365	89.34	S09°00'00"E
L366	25.81	S54°37'00"W
L367	45.17	S27°34'00"E
L368	50.85	S42°00'00"E
L369	196.98	N88°21'00"E
L370	66.02	N14°37'00"W
L371	24.90	N04°20'00"E
L372	54.83	N24°07'00"W
L373	28.11	N20°33'00"E
L374	63.25	N29°10'00"E
L375	65.15	N61°28'00"E
L376	35.01	N19°58'00"W
L377	97.77	N13°53'00"W
L378	114.25	N21°38'54"W
L379	104.10	N24°48'28"E
L380	105.90	N87°41'59"E
L381	35.78	N67°40'59"E
L382	37.48	N52°35'59"E
L383	90.19	N65°36'59"E
L384	196.88	N32°33'01"W
L385	86.37	N53°01'01"W
L386	117.75	N34°12'01"W
L387	60.03	N55°33'01"W
L388	48.03	N32°15'01"W
L389	100.51	S24°28'58"E
L390	146.85	S81°17'39"W
L391	46.84	S62°45'55"W
L392	24.88	S83°08'55"W
L393	58.72	N52°25'05"W
L394	34.37	N39°07'05"W
L395	31.70	N65°52'05"W
L396	30.49	N08°23'55"E
L397	26.67	N26°45'55"E
L398	37.34	N42°12'05"W
L399	31.58	N10°52'05"W
L400	29.48	N40°46'55"W
L401	119.94	N78°31'16"W
L402	100.04	S00°33'10"E
L403	13.99'	S27°53'00"W
L404	51.06	N54°20'51"E
L405	88.29	N35°41'37"E
L406	15.74	S78°44'23"E
L407	38.00	S85°42'35"E
L408	25.96	S70°03'35"E
L409	54.62	N86°06'05"E
L410	37.89	N15°04'16"W
L411	37.12	N40°31'35"W
L412	34.78	N54°19'35"W
L413	35.34	N61°00'35"W
L414	26.00	N35°53'35"W
L415	16.64	N03°08'35"W
L416	75.05	N38°10'35"W
L417	32.59	N30°36'35"W
L418	52.64	N22°47'35"W
L419	56.57	N15°27'55"W

LAKE WYLIE
DUKE POWER PROJECT
PER MB: 25-276

NOW OR FORMERLY
ROBERT G. SPRATT JR.
DEED: 3634-990
TAX ID# 217-341-09

NOW OR FORMERLY
RED FEZ CLUB, INC.
DEED: 839-177
TAX ID# 217-232-25A

NOW OR FORMERLY
CAROLINA CENTERS, L.L.C.
DEED: 7606-475

NOW OR FORMERLY
RICHARD A. YAGER &
PATRICIA A. YAGER
DEED: 9562-176
MB: 35-943

NOW OR FORMERLY
JOHN G. BLACKMON Jr. &
IRENE H. BLACKMON
DEED: 11092-311
TAX ID# 217-101-05

NOW OR FORMERLY
RICHARD D. KRULL &
ADRIA KRULL
DEED: 15365-437
TAX ID# 217-101-12

NOW OR FORMERLY
JOHN G. BLACKMON Jr.
DEED: 7158-489
TAX ID# 217-301-01

SUB-BASIN 1A
111.1 A.C.

SUB-BASIN 1B
119.3 A.C.

SUB-BASIN 1C
177.3 A.C.

SUB-BASIN 1D
28.0 A.C.

228.81 A.C.

529.82 A.C.

PHASE 9

YORK ROAD N.C. HWY. 49

RED FEZ CLUB ROAD

GRAND PALISADES PARKWAY

FOREST HOME DRIVE

CHARTER DRIVE

JULLOCH ROAD

SHERWELL ROAD

LANGSTON DRIVE

MADISON MILL ROAD

TRINAMMICH ROAD

LANDMARK TIE

MATCH LINE
SEE SHEET 4 OF 35 FOR DETAIL

MATCH LINE
SEE SHEET 4 OF 35 FOR DETAIL

100' LAKE WYLIE WATERSHED BUFFER

BEARINGS BASED ON
MB: 25-276
RECORDED DECEMBER 23, 1992

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14906 MARC ANTHONY HOULE
5/20/15

THE PALISADES®

AUDUBON INTERNATIONAL
Gold Signature Member

THIS PLAN IS A ***FINAL DESIGN–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: ____ / 5/20/15
INITIALS DATE

NO.	DATE	REVISION	BY

SHEET TITLE
SUB–BASIN PLAN #1

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., NC (CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)

PROJECT NO.
SCALE 1"=300'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-47
SHT 4 OF 31 SHTS

P:\Site\Proj\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\SUB-BASIN PLANS.dwg, 5/22/2015 2:36:30 PM

LINE TABLE		
LINE	LENGTH	BEARING
L214	55.55	S30°44'10"W
L215	94.45	S52°15'27"W
L216	69.22	S67°22'50"W
L217	37.34	S43°55'58"W
L218	30.98	S59°28'58"W
L219	61.31	S50°23'10"E
L220	65.33	N25°06'54"E
L221	74.87	N28°16'54"E
L222	45.91	N03°23'54"E
L223	47.83	N24°37'54"E
L224	131.39	N36°40'54"E
L225	94.38	N21°20'54"E
L226	81.59	N25°25'54"E
L227	212.74	N25°01'54"E
L228	121.65	S85°01'06"E
L229	42.39	S55°17'06"E
L230	60.65	S87°55'06"E
L231	37.06	S88°38'06"E
L232	72.01	S66°13'06"E
L233	64.78	S77°26'06"E
L234	58.73	S21°30'06"E
L235	43.42	N72°58'54"E
L236	96.71	N87°28'54"E
L237	176.95	S73°35'06"E
L238	42.86	N58°30'54"E
L239	44.48	N38°24'54"E
L240	26.12	N68°20'54"E
L241	68.45	N73°11'54"E
L242	62.57	N41°14'54"E
L243	51.99	N81°21'06"W
L244	50.28	S81°16'54"W
L245	51.30	N74°38'06"W
L246	63.88	N54°59'06"W
L247	18.74	N14°17'06"W
L248	75.01	N05°54'06"W
L249	15.19	N21°13'12"W
L250	25.48	S85°57'24"W
L251	30.39	N77°56'36"W
L252	74.64	N60°16'14"W
L253	36.69	S80°39'20"E
L254	53.59	S56°17'20"E
L255	63.09	S35°39'20"E
L256	49.82	N44°56'40"E
L257	23.56	N72°37'40"E
L258	63.37	S86°38'20"E
L259	45.20	N83°08'40"E
L260	36.81	N72°27'40"E
L261	20.34	S59°30'20"E
L262	141.77	S28°49'20"E
L263	49.28	S28°39'20"E
L264	25.57	S45°45'20"E
L265	14.21	N31°30'40"E
L266	89.41	N13°33'20"W
L267	64.19	N14°56'20"W
L268	38.19	N56°46'40"E
L269	48.08	S75°10'20"E
L270	38.89	N83°57'40"E

LINE TABLE		
LINE	LENGTH	BEARING
L271	94.73	S84°50'20"E
L272	63.20	S32°39'20"E
L273	38.82	N11°36'40"E
L274	26.40	N36°37'40"E
L275	66.29	N59°58'40"E
L276	36.23	N75°30'40"E
L277	57.89	N60°59'36"E
L278	82.16	N79°09'04"E
L279	9.64	N81°09'40"E
L280	29.45	S69°01'20"E
L281	32.30	S62°37'20"E
L282	29.42	N83°22'40"E
L283	6.40	N49°52'40"E
L284	29.45	S69°01'20"E
L285	59.13	S28°54'20"E
L286	51.87	N06°47'20"W
L287	23.52	N24°04'40"E
L288	56.09	N53°47'40"E
L289	28.39	N67°05'40"E
L290	74.29	N75°54'20"W
L291	26.07	N85°42'20"W
L292	24.51	S86°55'40"W
L293	116.91	N84°44'20"W
L294	77.54	N73°58'20"W
L295	58.39	N86°02'20"W
L296	13.88	N48°52'20"W
L297	13.92	N80°08'57"W
L298	60.00	N07°49'23"W
L299	33.85	N81°33'40"E
L300	99.99	S35°19'23"E
L301	51.99	S71°33'22"E
L302	60.19	N20°56'29"E
L304	55.83	N44°48'41"E
L305	4.96	N06°41'25"W
L306	16.39	N84°30'49"E
L307	59.91	N05°17'13"W
L308	94.53	N55°25'46"W
L309	30.27	N65°26'46"W
L310	49.01	N57°50'46"W
L311	111.49	N16°32'46"W
L312	40.15	N27°24'14"E
L313	48.24	N40°34'49"E
L314	66.65	N29°12'59"E
L315	87.45	N56°05'29"E
L316	28.44	S79°23'31"E
L317	27.49	N50°52'29"E
L318	12.95	N09°32'29"E

LINE TABLE		
LINE	LENGTH	BEARING
L319	23.58	S67°10'29"W
L320	15.64	N49°48'31"W
L321	41.39	N84°44'31"W
L322	44.77	N68°35'10"W
L323	67.65	N67°08'27"W
L324	50.62	N38°30'28"W
L325	42.38	N03°36'21"W
L326	55.38	N68°17'35"E
L327	27.20	S16°45'51"E
L328	21.49	S43°43'10"E

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DISTANCE	CHORD BEARING	DELTA
C7	138.63	829.00	138.47	S89°23'05"E	09°34'53"
C34	239.90	1053.00	239.38	N75°37'54"E	13°03'12"
C35	379.38	1210.43	377.83	N60°10'10"E	17°57'29"
C36	56.16	4259.99	56.16	N51°14'20"E	00°45'19"
C37	116.70	50.00	91.96	S42°27'04"E	133°43'22"
C38	101.82	50.00	85.12	S09°10'22"W	116°40'46"
C39	66.46	2734.10	66.46	N83°13'18"E	01°23'34"
C40	209.12	539.34	207.81	S46°25'55"E	22°12'56"
C41	191.20	701.75	190.61	S76°51'51"E	15°36'40"
C42	141.85	286.23	140.40	N81°08'40"E	28°23'41"
C43	153.17	480.74	152.52	N57°49'08"E	18°15'18"
C44	254.91	159.63	228.67	N00°59'23"W	91°29'36"
C45	169.56	242.09	166.11	N26°45'18"W	40°07'46"
C46	53.67	50.00	51.13	S30°38'43"E	61°29'55"
C47	193.73	166.75	183.02	N40°07'58"E	66°34'00"
C48	95.77	698.23	95.69	N86°06'32"E	07°51'31"
C49	173.11	238.69	169.34	N62°31'30"E	41°33'12"
C50	249.71	538.49	247.48	N55°00'54"E	26°34'11"
C51	559.53	1462.39	556.12	S32°47'03"E	21°55'20"
C52	199.07	1182.82	198.83	N29°02'29"E	09°38'35"
C53	181.71	759.54	181.28	N16°01'33"E	13°42'26"
C54	242.23	7118.26	242.22	N07°47'37"E	01°56'59"
C78	3.52	480.74	3.52	N45°03'01"E	0°25'11"
C79	29.03	480.74	29.03	N46°57'53"E	3°27'38"

THE PALISADES®

AUDUBON INTERNATIONAL
Gold Signature Member

THIS PLAN IS A ***FINAL DESIGN–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: [signature] / 11/17/16
INITIALS DATE

BEARINGS BASED ON
MB: 25-276
RECORDED DECEMBER 23, 1992

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14906 MARC ANTHONY HOULE 11/17/16

NO.	DATE	REVISION	BY

SHEET TITLE
SUB–BASIN PLAN #2

PROJECT
PALISADES PHASE TRACT 3 PHASE 2
STEELE CREEK TWSP., MECK. CO., NC (CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ∘ Surveying ∘ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)

PROJECT NO.
SCALE 1"=300'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-46
SHT 5 OF 31 SHTS

P:\StanPac\PALIS\...\CONSTRUCTION\TRACT 3 PHASE 2\SUB-BASIN PLANS.dwg, 12/8/2016 11:10:02 AM

SUB-BASIN 4
39.3 A.C.

SUB-BASIN 5
19.0 A.C.

SUB-BASIN 6
19.9 A.C.

SUB-BASIN 7
66.4 A.C.

SUB-BASIN 8A
86.4 A.C.

SUB-BASIN 8B
231.3 A.C.

SUB-BASIN 8C
224.77 A.C.

SUB-BASIN 8D
61.0 A.C.

99.36 A.C.

55.93 A.C.

92.83 A.C.

100.00 A.C.

PHASE 1

PHASE 2A

PHASE 3

PHASE 4

PHASE 8

VILLAGE CENTER

T-3L

T-3H

T-3P

T-3R

T-3K

SEE SHEET 4 OF 35 FOR DETAIL MATCH LINE

LAKE WYLIE
DUKE POWER PROJECT
PER MB: 25-276

HARBOR VIEW ROAD

KAYLASH ROAD

RIVER WOOD LN

Barkedale Ln

HIDEWAY ROAD

LANDOVER ROAD

ROCKABILL LANE

TORCHBEARER LANE

DULROSS ROAD

WILBANKS DRIVE

BANKHEAD ROAD

BESSBROCK ROAD

MCKEE ROAD

BRIARCLIFF

MORNINGSIDE

RED BLACKBOARD LANE

HICKEIN

LINE TABLE		
LINE	LENGTH	BEARING
L31	60.12	N38°46'34"E
L32	20.00	S51°13'26"E
L33	60.12	N38°46'34"E
L34	20.00	S51°13'26"E
L35	54.38	N11°00'35"E
L36	36.32'	N64°09'41"E
L37	30.39'	N81°32'41"E
L38	41.16	S78°59'19"E
L39	30.98	S72°04'41"E
L40	34.39	N36°30'41"E
L41	31.12'	N48°17'41"E
L42	100.29'	N33°10'41"E
L43	45.38	N77°56'19"W
L44	19.73	N61°30'19"W
L45	99.19	S75°48'41"W
L46	47.76	N75°20'19"W
L47	70.97	N42°44'19"W
L48	54.56	N25°30'19"W
L49	13.89	N20°57'41"E
L50	16.55	S76°13'41"W
L51	24.04	N55°43'19"W
L52	25.17	N45°39'19"W
L53	16.61	N38°47'19"W
L54	114.79	N32°46'41"E
L55	84.19	N35°13'39"E
L56	48.78	N16°40'08"E
L57	44.54	N38°38'09"E
L58	10.24	N52°54'14"E
L59	24.69	S12°38'24"E
L60	31.62	S44°15'16"E
L61	45.40	S33°05'16"E
L62	85.56	S14°10'16"E
L63	101.93	S17°48'16"E
L64	24.74	S28°22'16"E
L65	61.35	S62°26'16"E
L66	31.87	S04°32'16"E
L67	73.79	S08°06'16"E
L68	53.20	S02°09'44"W
L69	40.58	N19°58'44"E
L70	10.30	N74°29'44"E
L71	16.16	S66°21'16"E
L72	43.42	S29°05'16"E
L73	54.82	S54°00'16"E
L74	42.56	S48°12'16"E
L75	43.68	S69°28'16"E
L76	48.84	S42°54'16"E
L77	61.04	S70°22'16"E
L78	66.49	S39°50'16"E
L79	48.26	S63°21'16"E
L80	82.22	S82°31'16"E
L81	48.53	S51°38'16"E
L82	82.23	S21°56'16"E
L83	70.37	S39°21'16"E
L84	42.38	S10°43'44"W
L85	69.25	S10°12'16"E
L86	100.66	S30°33'16"E
L87	91.71	N18°49'16"W
L88	22.80	N04°46'16"W
L89	40.79	N21°47'44"E
L90	58.03	N08°30'44"E
L91	27.20	N11°05'16"W
L92	57.01	N41°26'16"W
L93	89.27	N16°30'16"W
L94	49.95	N44°57'44"E
L95	25.50	N65°09'44"E
L96	67.36	N49°31'44"E
L97	50.36	N68°36'44"E
L98	25.59	N89°01'44"E
L99	42.00	S41°08'16"E
L100	14.87	S01°37'44"W
L101	58.00	S41°08'16"E
L102	36.52	S75°44'16"E
L103	31.32	S75°14'16"E
L104	20.12	S46°36'16"E
L105	37.80	S20°37'16"E
L106	8.06	S68°01'16"E
L107	15.00	N16°51'44"E
L108	17.89	N09°42'16"W
L109	134.59	N62°25'44"E
L110	73.06	N58°16'44"E
L111	65.19	N81°17'44"E
L112	25.71	S80°48'16"E
L113	62.99	N85°32'16"E
L114	98.85	N39°14'16"W
L115	140.25	N75°49'16"W
L116	81.23	N81°22'16"W
L117	97.39	N46°27'16"W
L118	48.51	N63°28'16"W
L119	50.24	N79°48'16"W
L120	43.46	N82°47'16"W
L121	67.60	N45°12'16"W
L122	78.48	N13°16'58"W
L123	22.67	N41°50'18"E

LINE TABLE		
LINE	LENGTH	BEARING
L124	20.25	N76°30'42"W
L125	29.23	N15°22'18"E
L126	46.71	N18°25'18"E
L127	84.24	N37°08'18"E
L128	51.72	N24°43'18"E
L129	53.72	N33°25'18"E
L130	100.47	N01°51'42"W
L131	45.99	N03°51'18"E
L132	61.12	N19°02'18"E
L133	68.63	N11°58'42"W
L134	48.68	N19°20'18"E
L135	60.20	N00°00'18"E
L136	49.66	S86°37'18"W
L137	17.75	N48°32'17"W
L138	63.98	N30°32'42"W
L139	30.94	S81°34'18"W
L140	105.57	S26°39'18"W
L141	65.02	S00°03'42"E
L142	48.05	S18°38'42"E
L143	89.73	S17°21'42"E
L144	35.00	S02°54'18"W
L145	28.28	S11°02'18"W
L146	40.26	S02°47'42"E
L147	30.87	S34°19'18"W
L148	47.46	S73°08'18"W
L149	67.46	S56°45'18"W
L150	86.58	S39°04'18"W
L151	77.97	S18°59'18"W
L152	103.88	S05°33'46"E
L153	82.28	N35°34'40"W
L154	71.93	N42°26'40"W
L155	153.69	N32°10'40"W
L156	73.00	N34°46'40"W
L157	43.01	N52°26'40"W
L158	43.03	N17°14'40"W
L159	65.78	N12°39'40"W
L160	39.12	N10°53'20"E
L161	54.55	S34°23'20"W
L162	35.50	N58°44'40"W
L163	80.06	N72°46'40"W
L164	80.46	S81°19'40"E
L165	29.74	S29°05'40"E
L166	35.04	S01°39'20"W
L167	84.65	S11°03'20"W
L168	70.01	S20°45'40"E
L169	156.85	S17°05'40"E
L170	162.42	S41°56'40"E
L171	124.04	S38°39'40"E
L172	41.63	S44°10'40"E
L173	33.02	S25°24'40"E
L174	53.60	S02°20'20"W
L175	87.59	S10°55'40"E
L176	64.17	S26°33'26"W
L177	70.61	S27°38'39"W
L178	68.00	N79°04'40"W
L179	50.34	N38°33'40"W
L180	45.40	S12°20'40"E
L181	91.56	S23°45'15"E
L187	45.00	N68°17'31"E
L188	38.87	N80°36'23"E
L189	20.25	S78°47'29"E
L190	30.61	N29°56'31"E
L191	33.86	N45°06'31"E
L192	43.57	N50°08'31"E
L193	27.85	N26°24'31"E
L194	20.40	N74°20'29"W
L195	36.93	S88°13'32"W
L196	28.98	N49°13'18"E
L197	54.82	N72°41'27"E
L198	41.16	N20°08'18"E
L199	103.05	N30°32'18"E
L200	49.18	N08°17'21"W
L201	33.27	N88°35'23"W
L202	85.84	S58°50'18"W
L203	48.37	S59°49'18"W
L204	29.43	S78°43'18"W
L205	82.80	N62°35'06"W
L206	63.94	N75°51'26"W
L207	51.02	N14°29'34"E
L208	50.92	S51°05'34"W
L209	62.13	S68°19'35"W
L210	121.88	S50°00'13"W
L211	64.94	S49°09'18"W
L212	40.45	S62°31'32"W
L425	34.56	N24°48'16"W
L426	28.07	N00°46'16"W
L427	69.47	N07°56'52"W
L428	29.65	N43°28'35"W

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DISTANCE	CHORD BEARING	DELTA
C8	601.11	1159.54	594.41	N54°50'19"E	29°42'09"
C9	281.50	613.67	278.55	N53°06'12"E	26°17'09"
C10	294.73	525.26	290.88	N82°17'45"E	32°08'58"
C11	208.30	610.10	207.29	N88°35'25"E	19°33'43"
C12	194.80	1450.74	194.65	N74°57'28"E	07°41'37"
C13	91.25	50.00	79.11	S02°33'17"E	104°34'04"
C14	100.49	50.00	84.41	S70°18'55"E	115°09'27"
C15	105.43	50.00	86.96	S73°24'45"E	120°48'31"
C16	311.30	328.74	299.80	S38°57'00"E	54°15'20"
C17	157.88	362.86	156.64	S00°38'32"W	24°55'46"
C18	220.76	150.00	201.37	S29°03'19"E	84°19'29"
C19	311.41	186.05	276.31	S23°22'59"E	95°54'10"
C20	173.53	419.04	172.29	N15°29'50"E	23°43'35"
C21	225.13	473.80	223.02	N40°58'22"E	27°13'28"
C22	260.41	174.20	236.83	S82°35'23"E	85°39'02"
C23	127.69	50.00	95.71	N27°04'49"E	146°19'01"
C24	209.82	483.43	208.18	N17°07'34"E	24°52'05"
C25	190.41	708.56	189.84	N21°50'44"E	15°23'50"
C26	341.29	144.89	267.68	N81°28'31"E	134°57'31"
C27	230.00	321.57	225.13	S10°28'36"E	40°58'50"
C28	57.96	50.00	54.77	S55°33'41"E	66°25'13"
C29	125.13	50.00	94.94	N51°08'59"E	143°23'29"
C30	212.25	336.19	208.74	N14°43'14"E	36°10'21"
C31	109.01	459.18	108.75	N41°25'48"E	13°36'07"
C32	159.63	230.00	156.44	N29°23'17"E	39°45'33"
C33	95.96	388.50	95.71	N77°01'48"E	14°09'05"

THE PALISADES®

AUDUBON INTERNATIONAL
Gold Signature Member

THIS PLAN IS A **FINAL DESIGN–NOT RELEASED FOR CONSTRUCTION**
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / 11/21/16
INITIALS DATE

BEARINGS BASED ON MB: 25-276 RECORDED DECEMBER 23, 1992

SEAL 14906 ENGINEER ANTHONY M. HOULE 11/21/16

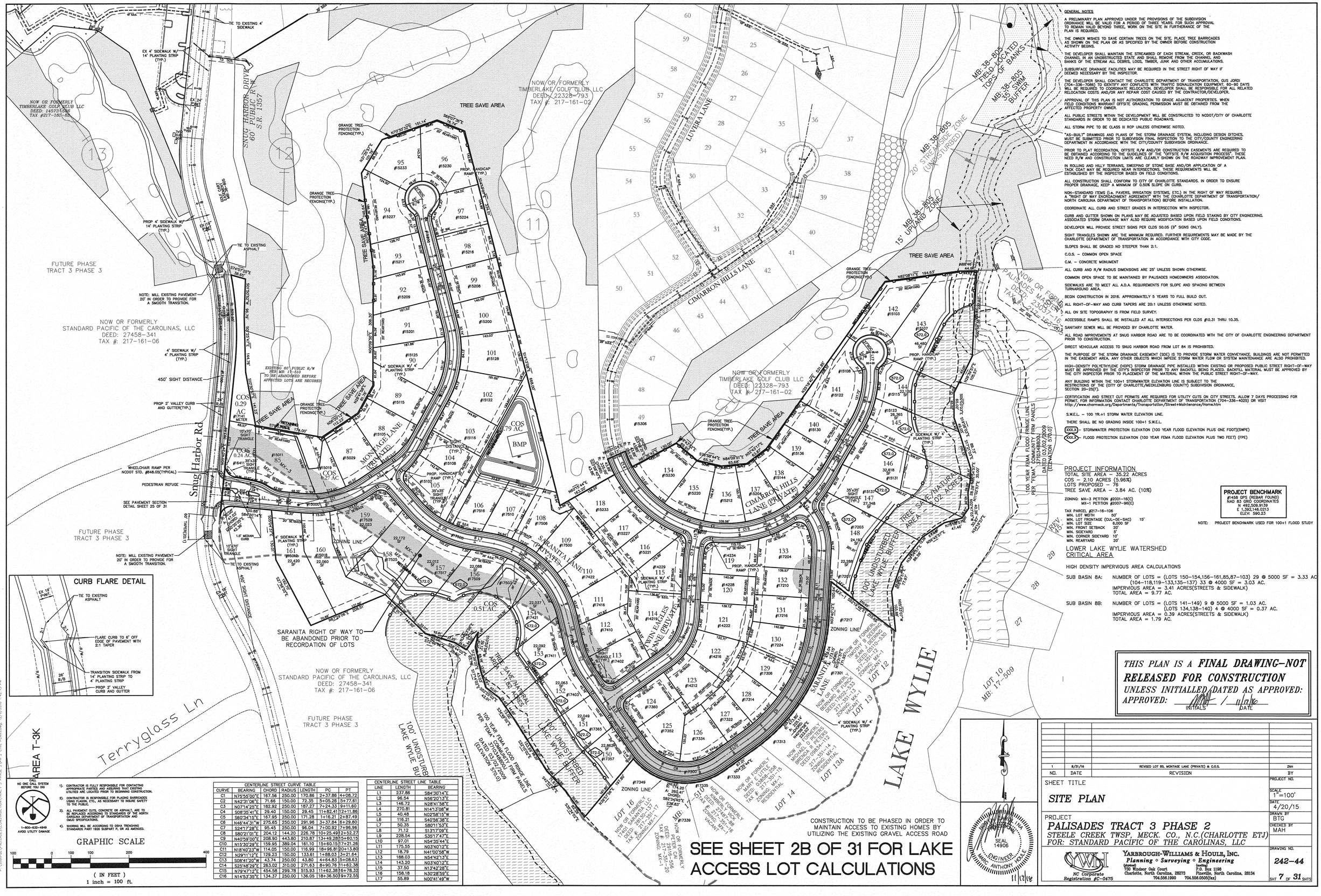
NO.	DATE	REVISION	BY

SHEET TITLE
SUB-BASIN PLAN #3

PROJECT
PALISADES PHASE TRACT 3 PHASE 2
STEELE CREEK TWSP., MECK. CO., NC (CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.566.1990 704.566.0505(fax)

PROJECT NO.
SCALE: 1" = 300'
DATE: 4/20/15
DRAWN BY: BTG
CHECKED BY: MAH
DRAWING NO.: 242-45
SHT 6 OF 31 SHTS



CENTERLINE STREET CURVE TABLE						
CURVE	BEARING	CHORD	RADIUS	LENGTH	PC	PT
C1	N75°55'00"E	167.56	250.00	170.86	2+37.86	4+08.72
C2	N42°31'06"E	71.66	150.00	72.35	5+05.26	5+77.61
C3	N07°14'25"E	182.92	250.00	187.27	7+24.33	9+11.60
C4	S08°35'41"E	29.40	150.00	29.45	11+82.41	12+11.86
C5	S60°34'15"E	167.95	250.00	171.28	1+16.21	2+87.49
C6	N46°44'31"W	275.65	250.00	291.96	3+37.84	6+29.80
C7	S24°17'28"E	95.45	250.00	96.04	7+00.92	7+96.96
C8	S80°21'01"E	204.12	144.20	226.78	10+25.49	12+52.27
C9	N40°59'00"E	208.90	443.80	210.87	13+49.28	15+60.15
C10	N15°30'29"E	159.95	389.04	161.10	15+60.15	17+21.26
C11	N18°40'23"W	114.05	150.00	116.99	18+96.81	20+13.80
C12	N29°11'12"E	129.23	150.00	133.61	1+88.03	3+21.64
C13	S08°41'20"W	43.74	250.00	43.80	4+64.83	5+08.63
C14	S25°48'29"E	263.02	310.00	271.63	8+90.76	11+62.38
C15	N79°47'12"E	454.58	299.78	515.93	11+62.38	16+78.32
C16	N14°53'35"E	134.37	250.00	136.05	18+36.50	19+72.55

CENTERLINE STREET LINE TABLE		
LINE	LENGTH	BEARING
L1	237.86	S84°30'14"E
L2	96.54	N58°20'13"E
L3	146.72	N28°41'58"E
L4	270.81	N14°13'08"W
L5	40.48	N02°58'15"W
L6	116.21	S40°56'38"E
L7	50.35	S80°11'53"E
L8	71.12	S13°17'09"E
L9	228.54	S35°17'47"E
L10	97.01	N54°35'44"E
L11	175.55	N03°40'12"E
L12	18.79	N41°00'58"W
L13	188.03	N54°42'13"E
L14	143.20	N03°40'12"E
L15	37.50	N13°42'28"E
L16	158.18	N30°28'59"E
L17	55.89	N00°41'49"W

GENERAL NOTES

A PRELIMINARY PLAN APPROVED UNDER THE PROVISIONS OF THE SUBDIVISION ORDINANCE WILL BE VALID FOR A PERIOD OF THREE YEARS. FOR SUCH APPROVAL TO REMAIN VALID BEYOND THREE, WORK ON THE SITE IN FURTHERANCE OF THE PLAN IS REQUIRED.

THE OWNER WISHES TO SAVE CERTAIN TREES ON THE SITE. PLACE TREE BARRICADES AS SHOWN ON THE PLAN OR AS SPECIFIED BY THE OWNER BEFORE CONSTRUCTION ACTIVITY BEGINS.

THE DEVELOPER SHALL MAINTAIN THE STREAMBED OF EACH STREAM, CREEK, OR BACKWASH CHANNEL IN AN UNOBSTRUCTED STATE AND SHALL REMOVE FROM THE CHANNEL AND BANKS OF THE STREAM ALL DEBRIS, LOGS, TIMBER, JUNK AND OTHER ACCUMULATIONS.

SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT OF WAY IF DEEMED NECESSARY BY THE INSPECTOR.

THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION, GUS JORDI (704-336-7086) TO IDENTIFY ANY CONFLICTS WITH TRAFFIC SIGNALIZATION EQUIPMENT. 60-90 DAYS WILL BE REQUIRED TO COORDINATE RELOCATION. DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELATED RELOCATION COSTS AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.

APPROVAL OF THIS PLAN IS NOT AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFFSITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNER.

ALL PUBLIC STREETS WITHIN THE DEVELOPMENT WILL BE CONSTRUCTED TO NCDOT/CITY OF CHARLOTTE STANDARDS IN ORDER TO BE DEDICATED PUBLIC ROADWAYS.

ALL STORM PIPE TO BE CLASS III RCP UNLESS OTHERWISE NOTED.

"AS-BUILT" DRAWINGS AND PLANS OF THE STORM DRAINAGE SYSTEM, INCLUDING DESIGN DITCHES, MUST BE SUBMITTED PRIOR TO SUBDIVISION FINAL INSPECTION TO THE CITY/COUNTY ENGINEERING DEPARTMENT IN ACCORDANCE WITH THE CITY/COUNTY SUBDIVISION ORDINANCE.

PRIOR TO PLAT RECORDATION, OFFSITE R/W AND/OR CONSTRUCTION EASEMENTS ARE REQUIRED TO BE OBTAINED ACCORDING TO THE GUIDELINES OF THE "OFFSITE R/W ACQUISITION PROCESS". THESE NEED R/W AND CONSTRUCTION LIMITS ARE CLEARLY SHOWN ON THE ROADWAY IMPROVEMENT PLAN.

IN ROLLING AND HILLY TERRAINS, SWEEPING OF STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE INSPECTOR BASED ON FIELD CONDITIONS.

ALL CONSTRUCTION SHALL CONFORM TO CITY OF CHARLOTTE STANDARDS. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.50% SLOPE ON CURB.

NON-STANDARD ITEMS (i.e. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT OF WAY REQUIRES A "RIGHT OF WAY ENCROACHMENT AGREEMENT" WITH THE (CHARLOTTE DEPARTMENT OF TRANSPORTATION/ NORTH CAROLINA DEPARTMENT OF TRANSPORTATION) BEFORE INSTALLATION.

COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.

CURB AND GUTTER SHOWN ON PLANS MAY BE ADJUSTED BASED UPON FIELD STAKING BY CITY ENGINEERING. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATION BASED UPON FIELD CONDITIONS.

DEVELOPER WILL PROVIDE STREET SIGNS PER CLDS 50.05 (9" SIGNS ONLY).

SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED. FURTHER REQUIREMENTS MAY BE MADE BY THE CHARLOTTE DEPARTMENT OF TRANSPORTATION IN ACCORDANCE WITH CITY CODE.

SLOPES SHALL BE GRADED NO STEEPER THAN 2:1.

C.O.S. – COMMON OPEN SPACE

C.M. – CONCRETE MONUMENT

ALL CURB AND R/W RADIUS DIMENSIONS ARE 25' UNLESS SHOWN OTHERWISE.

COMMON OPEN SPACE TO BE MAINTAINED BY PALISADES HOMEOWNERS ASSOCIATION.

SIDEWALKS ARE TO MEET ALL A.D.A. REQUIREMENTS FOR SLOPE AND SPACING BETWEEN TURNAROUND AREA.

BEGIN CONSTRUCTION IN 2016. APPROXIMATELY 5 YEARS TO FULL BUILD OUT.

ALL RIGHT-OF-WAY AND CURB TAPERS ARE 20:1 UNLESS OTHERWISE NOTED.

ALL ON SITE TOPOGRAPHY IS FROM FIELD SURVEY.

ACCESSIBLE RAMPS SHALL BE INSTALLED AT ALL INTERSECTIONS PER CLDS #10.31 THRU 10.35.

SANITARY SEWER WILL BE PROVIDED BY CHARLOTTE WATER.

ALL ROAD IMPROVEMENTS AT SNUG HARBOR ROAD ARE TO BE COORDINATED WITH THE CITY OF CHARLOTTE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.

DIRECT VEHICULAR ACCESS TO SNUG HARBOR ROAD FROM LOT 84 IS PROHIBITED.

THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE. BUILDINGS ARE NOT PERMITTED IN THE EASEMENT AREA. ANY OTHER OBJECTS WHICH IMPEDE STORM WATER FLOW OR SYSTEM MAINTENANCE ARE ALSO PROHIBITED.

HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINAGE PIPE INSTALLED WITHIN EXISTING OR PROPOSED PUBLIC STREET RIGHT-OF-WAY MUST BE APPROVED BY THE CITYS INSPECTOR PRIOR TO ANY BACKFILL BEING PLACED. BACKFILL MATERIAL MUST BE APPROVED BY THE CITY INSPECTOR PRIOR TO PLACEMENT OF THE MATERIAL WITHIN THE PUBLIC STREET RIGHT-OF-WAY.

ANY BUILDING WITHIN THE 100+1 STORMWATER ELEVATION LINE IS SUBJECT TO THE RESTRICTIONS OF THE (CITY OF CHARLOTTE/MECKLENBURG COUNTY) SUBDIVISION ORDINANCE, SECTION 20-25(f).

CERTIFICATION AND STREET CUT PERMITS ARE REQUIRED FOR UTILITY CUTS ON CITY STREETS. ALLOW 7 DAYS PROCESSING FOR PERMIT. FOR INFORMATION CONTACT CHARLOTTE DEPARTMENT OF TRANSPORTATION (704-336-4025) OR VISIT http://www.charmeck.org/Departments/Transportation/Street+Maintenance/Home.htm

S.W.E.L. – 100 YR.+1 STORM WATER ELEVATION LINE.

THERE SHALL BE NO GRADING INSIDE 100+1 S.W.E.L.

XXX.X – STORMWATER PROTECTION ELEVATION (100 YEAR FLOOD ELEVATION PLUS ONE FOOT)(SWPE)

XXX.X – FLOOD PROTECTION ELEVATION (100 YEAR FEMA FLOOD ELEVATION PLUS TWO FEET) (FPE)

PROJECT INFORMATION

TOTAL SITE AREA – 35.22 ACRES
COS – 2.10 ACRES (5.96%)
LOTS PROPOSED – 76
TREE SAVE AREA – 3.84 AC. (10%)

ZONING: MX-3 PETITION #2001-16(C)
MX-1 PETITION #2007-99(C)

TAX PARCEL #217-16-106
MIN. LOT WIDTH 50'
MIN. LOT FRONTAGE (CUL-DE-SAC) 15'
MIN. LOT SIZE 6,000 SF
MIN. FRONT SETBACK 20'
MIN. SIDEYARD 5'
MIN. CORNER SIDEYARD 10'
MIN. REARYARD 20'

PROJECT BENCHMARK
#458 GPS (REBAR FOUND)
NAD 83 GRID COORDINATES
N 492,506.9139
E 1,392,146.0213
ELEV: 590.23

NOTE: PROJECT BENCHMARK USED FOR 100+1 FLOOD STUDY

LOWER LAKE WYLIE WATERSHED
CRITICAL AREA

HIGH DENSITY IMPERVIOUS AREA CALCULATIONS

SUB BASIN 8A: NUMBER OF LOTS = (LOTS 150–154,156–161,85,87–103) 29 @ 5000 SF = 3.33 AC
(104–118,119–133,135–137) 33 @ 4000 SF = 3.03 AC.
IMPERVIOUS AREA = 3.41 ACRES(STREETS & SIDEWALK)
TOTAL AREA = 9.77 AC.

SUB BASIN 8B: NUMBER OF LOTS = (LOTS 141–149) 9 @ 5000 SF = 1.03 AC.
(LOTS 134,138–140) 4 @ 4000 SF = 0.37 AC.
IMPERVIOUS AREA = 0.39 ACRES(STREETS & SIDEWALK)
TOTAL AREA = 1.79 AC.

THIS PLAN IS A **FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION** UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / _____
INITIALS / DATE

NO.	DATE	REVISION	BY
1	8/31/16	REVISED LOT 85, MONTAGE LANE (PRIVATE) & C.O.S.	ZNH

SHEET TITLE
SITE PLAN

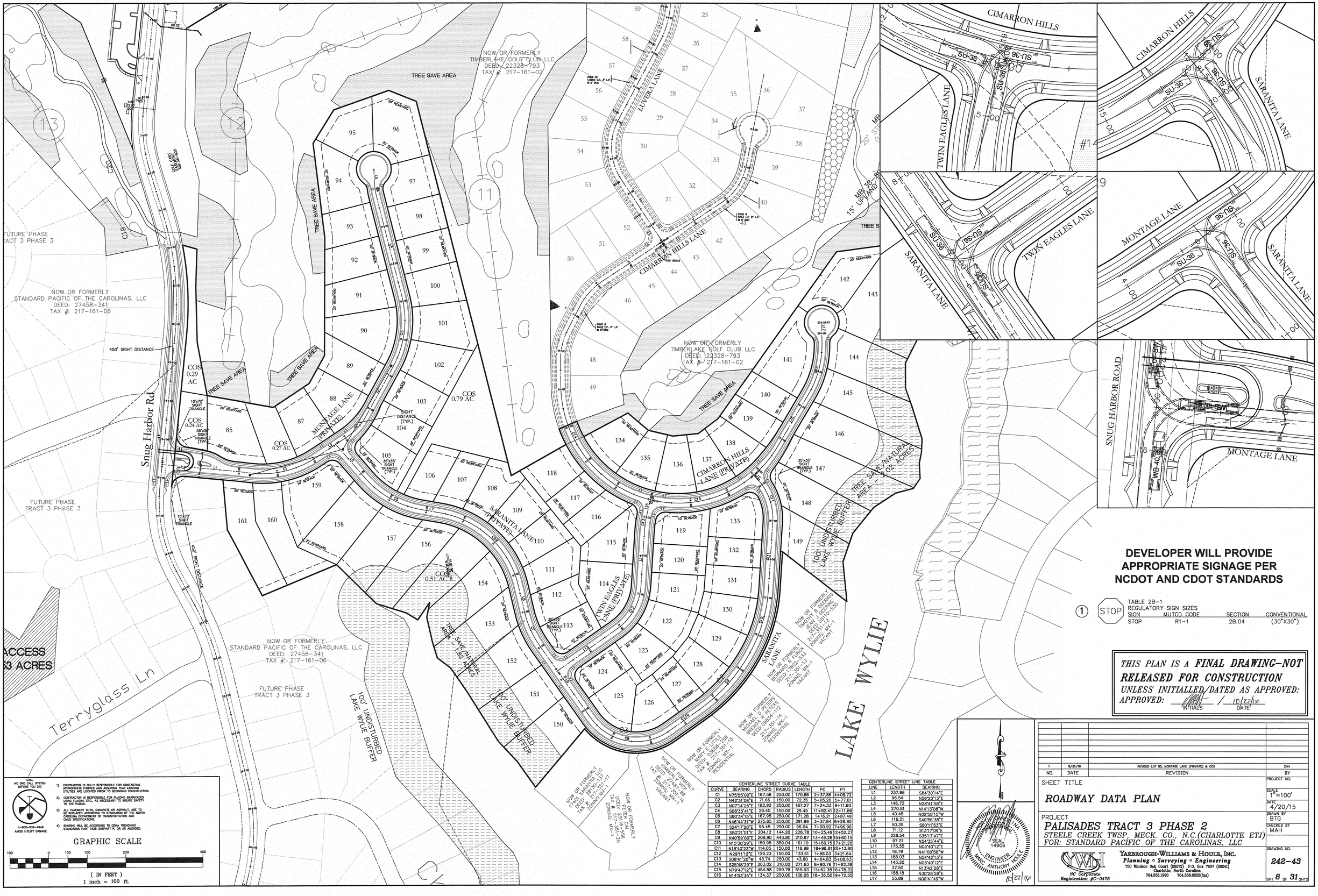
PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=100'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-44
SHT 7 OF 31 SHTS

SEAL 14906 ENGINEER MARC ANTHONY HOULE
11/17/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
NC Corporate Registration #C-0475
(physical) 730 Windsor Oak Court Charlotte, North Carolina, 28273 704.556.1990
(mailing) P.O. Box 1198 Pineville, North Carolina, 28134 704.556.0505(fax)

P:\Staff\mah\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 12/6/2016 1:43:15 PM



CALL NC ONE CALL SYSTEM BEFORE YOU DIG

1-800-632-4949 AVOID UTILITY DAMAGE

1) CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.

2) CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGGIN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.

3) ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.

4) SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

GRAPHIC SCALE

100 0 100 200 400

(IN FEET)

1 inch = 100 ft.

P:\Civil\Rod\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CON PLANS.dwg, ROADWAY, 10/27/2015 9:42:28 AM

DEVELOPER WILL PROVIDE APPROPRIATE SIGNAGE PER NCDOT AND CDOT STANDARDS

1 STOP

TABLE 2B-1
REGULATORY SIGN SIZES

SIGN	MUTCD CODE	SECTION	CONVENTIONAL
STOP	R1-1	2B.04	(30"X30")

*THIS PLAN IS A **FINAL DRAWING-NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / 10/27/15
INITIALS DATE

CENTERLINE STREET CURVE TABLE

CURVE	BEARING	CHORD	RADIUS	LENGTH	PC	PT
C1	N75°55'00"E	167.56	250.00	170.86	2+37.86	4+08.72
C2	N42°31'06"E	71.66	150.00	72.35	5+05.26	5+77.61
C3	N07°14'25"E	182.92	250.00	187.27	7+24.33	9+11.60
C4	S08°35'41"E	29.40	150.00	29.45	11+82.41	12+11.86
C5	S60°34'15"E	167.95	250.00	171.28	1+16.21	2+87.49
C6	N46°44'31"W	275.65	250.00	291.96	3+37.84	6+29.80
C7	S24°17'28"E	95.45	250.00	96.04	7+00.92	7+96.96
C8	S80°21'01"E	204.12	144.20	226.78	10+25.49	2+52.27
C9	N40°59'00"E	208.90	443.80	210.87	13+49.28	15+60.15
C10	N15°30'29"E	159.95	389.04	161.10	15+60.15	17+21.26
C11	N18°40'23"W	114.05	150.00	116.99	18+96.81	20+13.80
C12	N29°11'12"E	129.23	150.00	133.61	1+88.03	3+21.64
C13	S08°41'20"W	43.74	250.00	43.80	4+64.83	5+08.63
C14	S25°48'29"E	263.02	310.00	271.63	8+90.76	11+62.38
C15	N79°47'12"E	454.58	299.78	515.93	11+82.38	16+78.32
C16	N14°53'35"E	134.37	250.00	136.05	18+36.50	19+72.55

CENTERLINE STREET LINE TABLE

LINE	LENGTH	BEARING
L1	237.86	S84°30'14"E
L2	96.54	N56°20'13"E
L3	146.72	N28°41'56"E
L4	270.81	N14°13'08"W
L5	40.46	N02°58'15"W
L6	116.21	S40°56'38"E
L7	50.35	S80°11'53"E
L8	71.12	S13°17'09"E
L9	228.54	S35°17'47"E
L10	97.01	N54°35'44"E
L11	175.55	N03°40'12"E
L12	18.79	N41°00'58"W
L13	188.03	N54°42'13"E
L14	143.20	N03°40'12"E
L15	37.50	N13°42'28"E
L16	158.18	N30°28'59"E
L17	55.89	N00°41'49"W

SEAL 14906 ENGINEER ANTHONY HOULE 10/27/15

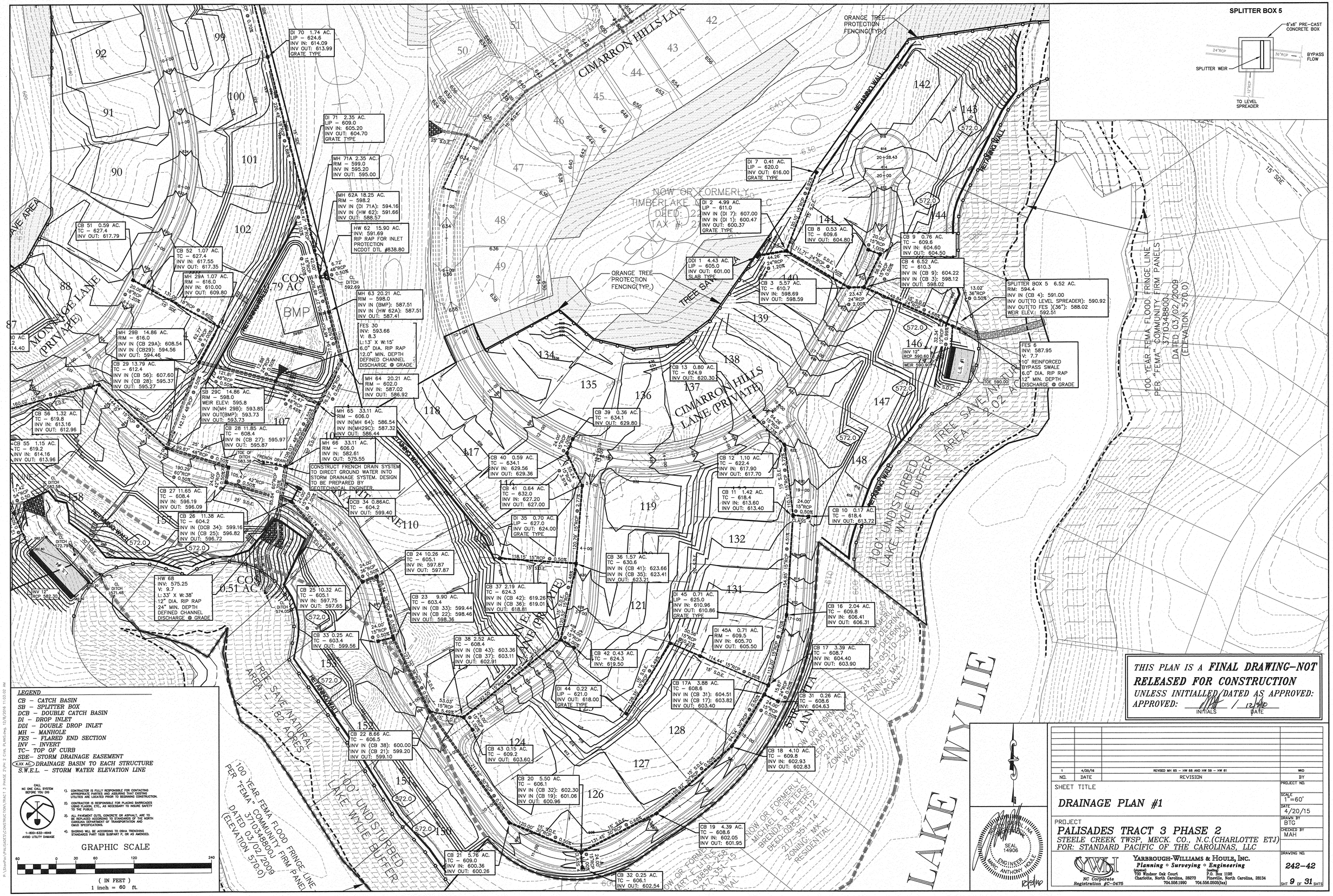
NO.	DATE	REVISION	BY
1	8/31/16	REVISED LOT 85, MONTAGE LANE (PRIVATE) & COS	ZNH

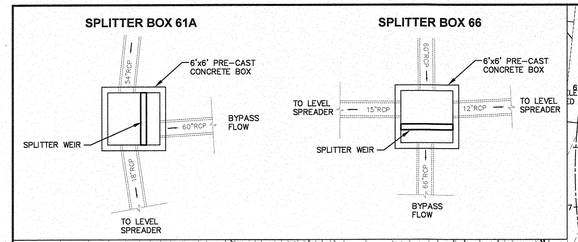
SHEET TITLE
ROADWAY DATA PLAN

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=100'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-43
SHT 8 OF 31 SHTS

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)
NC Corporate Registration #C-0475


SPLITTER BOX 5
6'x6' PRE-CAST CONCRETE BOX
24"RCP
36"RCP
BYPASS FLOW
SPLITTER WEIR
12"RCP
TO LEVEL SPREADER
CIMARRON HILLS LANE
CIMARRON HILLS LANE (PRIVATE)
MONTAGE LANE (PRIVATE)
TREE SAVE AREA
ORANGE TREE PROTECTION FENCING(TYP.)
RETAINING WALL
NOW OR FORMERLY TIMBERLAKE CHURCH DEED: 22 TAX #: 2
COS 0.79 AC BMP
COS 0.51 AC
DI 70 1.74 AC. LIP – 624.6 INV IN: 614.09 INV OUT: 613.99 GRATE TYPE
DI 71 2.35 AC. LIP – 609.0 INV IN: 605.20 INV OUT: 604.70 GRATE TYPE
MH 71A 2.35 AC. RIM – 599.0 INV IN 595.20 INV OUT: 595.00
MH 62A 18.25 AC. RIM – 598.2 INV IN (DI 71A): 594.16 INV IN (HW 62): 591.66 INV OUT: 588.57
HW 62 15.90 AC. INV: 591.69 RIP RAP FOR INLET PROTECTION NCDOT DTL #838.80
DI 7 0.41 AC. LIP – 620.0 INV OUT: 616.00 GRATE TYPE
DI 2 4.99 AC. LIP – 611.0 INV IN (DI 7): 607.00 INV IN (DI 1): 600.47 INV OUT: 600.37 GRATE TYPE
DI 1 4.43 AC. LIP – 605.0 INV OUT: 601.00 SLAB TYPE
CB 51 0.59 AC. TC – 627.4 INV OUT: 617.79
CB 52 1.07 AC. TC – 627.4 INV IN: 617.55 INV OUT: 617.35
MH 29A 1.07 AC. RIM – 616.0 INV IN: 610.00 INV OUT: 609.80
MH 63 20.21 AC. RIM – 598.0 INV IN (BMP): 587.51 INV IN (HW 62A): 587.51 INV OUT: 587.41
FES 30 INV: 593.66 V: 8.3 L:13' X W:15' 6.0" DIA. RIP RAP 12.0" MIN. DEPTH DEFINED CHANNEL DISCHARGE @ GRADE
MH 64 20.21 AC. RIM – 602.0 INV IN: 587.02 INV OUT: 586.92
MH 29B 14.86 AC. RIM – 616.0 INV IN (CB 29A): 608.54 INV IN (CB29): 594.56 INV OUT: 594.46
CB 29 13.79 AC. TC – 612.4 INV IN (CB 56): 607.60 INV IN (CB 28): 595.37 INV OUT: 595.27
SB 29C 14.86 AC. RIM – 598.0 WEIR ELEV: 595.8 INV IN(MH 29B): 593.85 INV OUT(BMP): 593.73 INV OUT: 593.73
CB 56 1.32 AC. TC – 619.8 INV IN: 613.16 INV OUT: 612.96
CB 28 11.85 AC. TC – 608.4 INV IN (CB 27): 595.97 INV OUT: 595.87
MH 65 33.11 AC. RIM – 606.0 INV IN(MH 64): 586.54 INV IN(MH29C): 587.32 INV OUT: 586.44
MH 66 33.11 AC. RIM – 606.0 INV IN: 582.61 INV OUT: 575.55
CONSTRUCT FRENCH DRAIN SYSTEM TO DIRECT GROUND WATER INTO STORM DRAINAGE SYSTEM. DESIGN TO BE PREPARED BY GEOTECHNICAL ENGINEER.
CB 55 1.15 AC. TC – 619.2 INV IN: 614.16 INV OUT: 613.96
CB 27 11.65 AC. TC – 608.4 INV IN: 596.19 INV OUT: 596.09
CB 26 11.38 AC. TC – 604.2 INV IN (DCB 34): 599.16 INV IN (CB 25): 596.82 INV OUT: 596.72
DCB 34 0.86 AC. TC – 604.2 INV OUT: 599.40
HW 68 INV: 575.25 V: 9.7 L: 33' X W: 38' 12" DIA. RIP RAP 24" MIN. DEPTH DEFINED CHANNEL DISCHARGE @ GRADE
CB 39 0.36 AC. TC – 634.1 INV OUT: 629.80
CB 13 0.80 AC. TC – 624.9 INV OUT: 620.30
CB 40 0.59 AC. TC – 634.1 INV IN: 629.56 INV OUT: 629.36
CB 41 0.64 AC. TC – 632.0 INV IN: 627.20 INV OUT: 627.00
DI 35 0.70 AC. LIP – 627.0 INV OUT: 624.00 GRATE TYPE
CB 12 1.10 AC. TC – 622.4 INV IN: 617.90 INV OUT: 617.70
CB 11 1.42 AC. TC – 618.4 INV IN: 613.60 INV OUT: 613.40
CB 10 0.17 AC. TC – 618.4 INV OUT: 613.72
CB 24 10.26 AC. TC – 605.1 INV IN: 597.87 INV OUT: 597.87
CB 36 1.57 AC. TC – 630.6 INV IN (CB 41): 623.66 INV IN (CB 35): 623.41 INV OUT: 623.21
CB 37 2.19 AC. TC – 624.3 INV IN (CB 42): 619.26 INV IN (CB 36): 619.01 INV OUT: 618.81
CB 23 9.90 AC. TC – 603.4 INV IN (CB 33): 599.44 INV IN (CB 22): 598.46 INV OUT: 598.36
CB 25 10.32 AC. TC – 605.1 INV IN: 597.75 INV OUT: 597.65
CB 33 0.25 AC. TC – 603.4 INV OUT: 599.56
CB 38 2.52 AC. TC – 608.4 INV IN (CB 43): 603.36 INV IN (CB 37): 603.11 INV OUT: 602.91
CB 42 0.43 AC. TC – 624.3 INV: 619.50
DI 45 0.71 AC. LIP – 625.0 INV IN: 610.96 INV OUT: 610.86 GRATE TYPE
DI 45A 0.71 AC. RIM – 609.5 INV IN: 605.70 INV OUT: 605.50
CB 16 2.04 AC. TC – 609.8 INV IN: 606.41 INV OUT: 606.31
CB 17 3.39 AC. TC – 608.7 INV IN: 604.40 INV OUT: 603.90
DI 44 0.22 AC. LIP – 621.0 INV OUT: 618.00 GRATE TYPE
CB 17A 3.88 AC. TC – 608.6 INV IN (CB 31): 604.51 INV IN (CB 17): 603.82 INV OUT: 603.40
CB 31 0.26 AC. TC – 608.6 INV: 604.63
CB 22 8.66 AC. TC – 606.5 INV IN (CB 38): 600.00 INV IN (CB 21): 599.20 INV OUT: 599.10
CB 43 0.15 AC. TC – 609.2 INV OUT: 603.60
CB 20 5.50 AC. TC – 606.1 INV IN (CB 32): 602.30 INV IN (CB 19): 601.06 INV OUT: 600.96
CB 18 4.10 AC. TC – 609.8 INV IN: 602.93 INV OUT: 602.83
CB 19 4.39 AC. TC – 608.6 INV IN: 602.05 INV OUT: 601.95
CB 21 5.76 AC. TC – 609.0 INV IN: 600.36 INV OUT: 600.26
CB 32 0.25 AC. TC – 606.1 INV OUT: 602.54
CB 8 0.53 AC. TC – 609.6 INV OUT: 604.80
CB 3 5.57 AC. TC – 610.7 INV IN: 598.69 INV OUT: 598.59
CB 9 0.76 AC. TC – 609.6 INV IN: 604.60 INV OUT: 604.50
CB 4 6.52 AC. TC – 610.3 INV IN (CB 9): 604.22 INV IN (CB 3): 598.12 INV OUT: 598.02
SPLITTER BOX 5 6.52 AC. RIM: 594.4 INV IN (CB 4): 591.00 INV OUT(TO LEVEL SPREADER): 590.92 INV OUT(TO FES)(36"): 588.02 WEIR ELEV.: 592.51
FES 6 INV: 587.95 V: 7.7 10' REINFORCED BYPASS SWALE 6.0" DIA. RIP RAP 12" MIN. DEPTH DISCHARGE @ GRADE
INV 12" RCP 590.60
WEIR 590.90
TOE 590.00
L.S. #1
572.0
100 YEAR FEMA FLOOD FRINGE LINE PER "FEMA" COMMUNITY FIRM PANELS 3710348800J DATED 03/02/2009 (ELEVATION 570.0)
100' UNDISTURBED LAKE WYLIE BUFFER
TREE SAVE AREA NATURAL 1.82 ACRES
LAKE WYLIE
NOW OR FORMERLY MICHAEL D PETERS BRENDA R PETERS DEED:09834-172 217-351-14 ZONING: MX-1 RESIDENTIAL
NOW OR FORMERLY MARY E LITTLE DEED:03898-288 217-351-13 ZONING: MX-1 VACANT
NOW OR FORMERLY HOWARD R FULCHER DEED:17602-253 217-351-13 ZONING: MX-1 VACANT
NOW OR FORMERLY J DEERING DEED:05110-530 217-351-12 ZONING: MX-1 VACANT
LEGEND
CB – CATCH BASIN
SB – SPLITTER BOX
DCB – DOUBLE CATCH BASIN
DI – DROP INLET
DDI – DOUBLE DROP INLET
MH – MANHOLE
FES – FLARED END SECTION
INV – INVERT
TC– TOP OF CURB
SDE– STORM DRAINAGE EASEMENT
X.XX AC. DRAINAGE BASIN TO EACH STRUCTURE
S.W.E.L. – STORM WATER ELEVATION LINE
CALL NC ONE CALL SYSTEM BEFORE YOU DIG
1–800–632–4949 AVOID UTILITY DAMAGE
1). CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2). CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGGIN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3). ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4). SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.
GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.
THIS PLAN IS A FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: ____ / 12/2/15
INITIALS DATE
1 4/29/16 REVISED MH 65 – HW 68 AND HW 59 – HW 61 WKD
NO. DATE REVISION BY
SHEET TITLE
DRAINAGE PLAN #1
PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC
PROJECT NO.
SCALE 1"=60'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242–42
SHT 9 OF 31 SHTS
SEAL 14906 ENGINEER MARC ANTHONY HOULE
YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
(shipping) 730 Windsor Oak Court Charlotte, North Carolina, 28273 704.556.1990
(mailing) P.O. Box 1198 Pineville, North Carolina, 28134 704.556.0505(fax)
NC Corporate Registration #C–0475
P:\Steele\Proj\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 12/8/2016 11:03:02 AM



TAX #: 217-161-02

FUTURE PHASE
TRACT 3 PHASE 3

NOW OR FORMERLY
STANDARD PACIFIC OF THE CAROLINAS, LLC
DEED: 27458-341
TAX #: 217-161-06

GOLF CART EASEMENT MB 38-605

Snug Harbor Rd

RETAINING WALL

MONTAGE LANE (PRIVATE)

CIMARRON HILLS LANE

LUVERA LAN

CB 46 0.72 AC.
TC = 634.2
INV OUT: 630.90

CB 53 0.12 AC.
TC = 638.5
INV :630.40

CB 47 0.96 AC.
TC = 638.5
INV IN :630.20
INV OUT:630.00

DI 69 1.60 AC.
LIP = 619.5
INV IN: 615.60
INV OUT: 615.35
GRATE TYPE

DI 70 1.74 AC.
LIP = 624.6
INV IN: 614.09
INV OUT: 613.99
GRATE TYPE

DI 71 2.35 AC.
LIP = 609.0
INV IN: 605.20
INV OUT: 604.70
GRATE TYPE

MH 71A 2.35 AC.
RIM = 599.0
INV IN 595.20
INV OUT: 595.00

MH 62A 18.25 AC.
RIM = 598.2
INV IN (DI 71A): 594.16
INV IN (HW 62): 591.66
INV OUT: 588.57

HW 62 15.90 AC.
INV: 591.69
RIP RAP FOR INLET PROTECTION
NCDOT DTL #838.80

CB 51 0.59 AC.
TC = 627.4
INV OUT: 617.79

CB 52 1.07 AC.
TC = 627.4
INV IN: 617.55
INV OUT: 617.35

HW 59 23.30 AC.
INV: 588.22
RIP RAP FOR INLET PROTECTION
NCDOT DTL #838.80
CL DITCH 589.61

MH 29A 1.07 AC.
RIM = 616.0
INV IN: 610.00
INV OUT: 609.80

MH 63 20.21 AC.
RIM = 598.0
INV IN (BMP): 587.51
INV IN (HW 62A): 587.51
INV OUT: 587.41

FES 30
INV: 593.66
V: 8.3
L:13' X W:15'
6.0" DIA. RIP RAP
12.0" MIN. DEPTH
DEFINED CHANNEL
DISCHARGE @ GRADE

CB 54 0.80 AC.
TC = 619.2
INV OUT:614.40

CB 29 13.79 AC.
TC = 612.4
INV IN (CB 56): 607.60
INV IN (CB 28): 595.37
INV OUT: 595.27

MH 29B 14.86 AC.
RIM = 616.0
INV IN (CB 29A): 608.54
INV IN (CB29): 594.56
INV OUT: 594.46

MH 64 20.21 AC.
RIM = 602.0
INV IN: 587.02
INV OUT: 586.92

SB 29C 14.86 AC.
RIM = 598.0
WEIR ELEV: 595.8
INV IN(MH 29B): 593.85
INV OUT(BMP): 593.73
INV OUT: 593.73

CB 56 1.32 AC.
TC = 619.8
INV IN: 613.16
INV OUT: 612.96

CB 55 1.15 AC.
TC = 619.2
INV IN: 614.16
INV OUT: 613.96

CB 28 11.85 AC.
TC = 608.4
INV IN (CB 27): 595.97
INV OUT: 595.87

MH 65 33.11 AC.
RIM = 606.0
INV IN(MH 64): 586.54
INV IN(MH29C): 587.32
INV OUT: 586.44

MH 66 33.11 AC.
RIM = 606.0
INV IN: 582.61
INV OUT: 575.55

CONSTRUCT FRENCH DRAIN SYSTEM TO DIRECT GROUND WATER INTO STORM DRAINAGE SYSTEM. DESIGN TO BE PREPARED BY GEOTECHNICAL ENGINEER.

DCB 34 0.86AC.
TC = 604.2
INV OUT: 599.40

CB 27 11.65 AC.
TC = 608.4
INV IN: 596.19
INV OUT: 596.09

CB 26 11.38 AC.
TC = 604.2
INV IN (DCB 34): 599.16
INV IN (CB 25): 596.82
INV OUT: 596.72

CB 25 10.32 AC.
TC = 605.1
INV IN: 597.75
INV OUT: 597.65

SPLITTER BOX 60 23.30 AC.
RIM: 596.0
INV IN: 583.19
INV OUT(TO LEVEL SPREADERS): 582.46
INV OUT(TO HW 61): 583.09
WEIR ELEV.: 583.48

HW 61
INV: 583.00
V: 10.0
L:30.0' X W:34.5'
12" DIA. RIP RAP
24" MIN. DEPTH
DEFINED CHANNEL
DISCHARGE @ GRADE

FILL FOR POSITIVE DRAINAGE

HW 68
INV: 575.25
V: 9.7
L:33' X W:38'
12" DIA. RIP RAP
24" MIN. DEPTH
DEFINED CHANNEL
DISCHARGE @ GRADE

CB 13 0.80 AC.
TC = 624.9
INV OUT: 620.30

DI 2 4.99 AC.
LIP = 611.0
INV IN (DI 7): 607.00
INV IN (DI 1): 600.47
INV OUT: 600.37
GRATE TYPE

DI 7
LIP
INV
GRA

DDI 1 4.43 AC.
LIP = 605.0
INV OUT: 601.00
SLAB TYPE

NOW OR FORMERLY
TIMBERLAKE
DEED: 2
TAX #: 2

COS 0.29 AC

COS 0.27 AC

COS 0.79 AC

COS 0.51 AC

BMP

572.0

LEGEND
CB – CATCH BASIN
SB – SPLITTER BOX
DCB – DOUBLE CATCH BASIN
DI – DROP INLET
DDI – DOUBLE DROP INLET
MH – MANHOLE
FES – FLARED END SECTION
INV – INVERT
TC– TOP OF CURB
SDE– STORM DRAINAGE EASEMENT
(XXX AC) DRAINAGE BASIN TO EACH STRUCTURE
S.W.E.L. – STORM WATER ELEVATION LINE

CALL NC ONE CALL SYSTEM BEFORE YOU DIG
1-800-632-4949 AVOID UTILITY DAMAGE

1). CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2). CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGGIN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3). ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4). SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

THIS PLAN IS A **FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION** UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / 12/6/16
INITIALS DATE

NO.	DATE	REVISION	BY
2	8/31/16	REVISED LOT 85, RETAINING WALL, MONTAGE LANE (PRIVATE) & COS	ZNH
1	4/25/16	REVISED HW 62 – 68 AND HW 59 – HW 61	WKD
NO.	DATE	REVISION	BY

SHEET TITLE
DRAINAGE PLAN #2

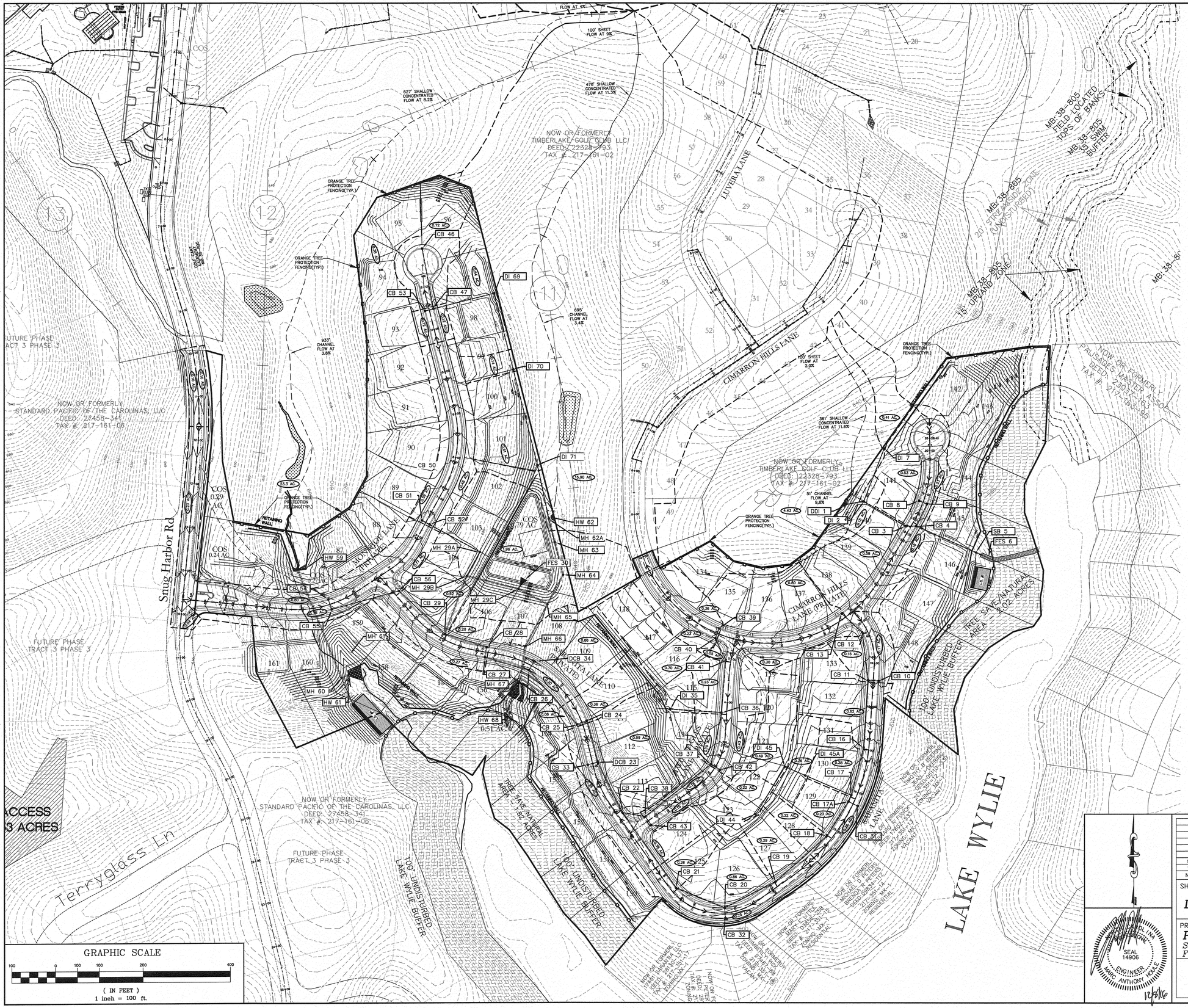
PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=60'
DATE 4/20/15
DRAWN BY BTC
CHECKED BY MAH
DRAWING NO. 242-41
SHT 10 OF 31 SHTS

SEAL 14906 ENGINEER MARC ANTHONY HOULE 12/6/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ◦ Surveying ◦ Engineering
(physical) 730 Windsor Oak Court, Charlotte, North Carolina, 28273, 704.588.1990
(mailing) P.O. Box 1198, Pineville, North Carolina, 28134, 704.556.0505(fax)
NC Corporate Registration #C-0475

P:\StormPack\PALISADES\CONSTRUCTION\TRACT 1 PHASE 3\Ph 2 COVL PLANS.dwg, 12/6/2016 11:03:35 AM



LEGEND

CB – CATCH BASIN
DCB – DOUBLE CATCH BASIN
DI – DROP INLET
DDI – DOUBLE DROP INLET
MH – MANHOLE
SB – SPLITTER BOX
FES – FLARED END SECTION
SDE– STORM DRAINAGE EASEMENT
(XXX.X AC.) DRAINAGE BASIN TO EACH STRUCTURE

*THIS PLAN IS A **FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / 12/8/16
INITIALS DATE

NO.	DATE	REVISION	BY
2	8/31/16	REVISED LOT 85, RETAINING WALL, MONTAGE LANE (PRIVATE) & COS	ZNH
1	3/21/16	REVISED HW 62 – 68 AND HW 59 – HW 61	WKD

SHEET TITLE
DRAINAGE AREA PLAN

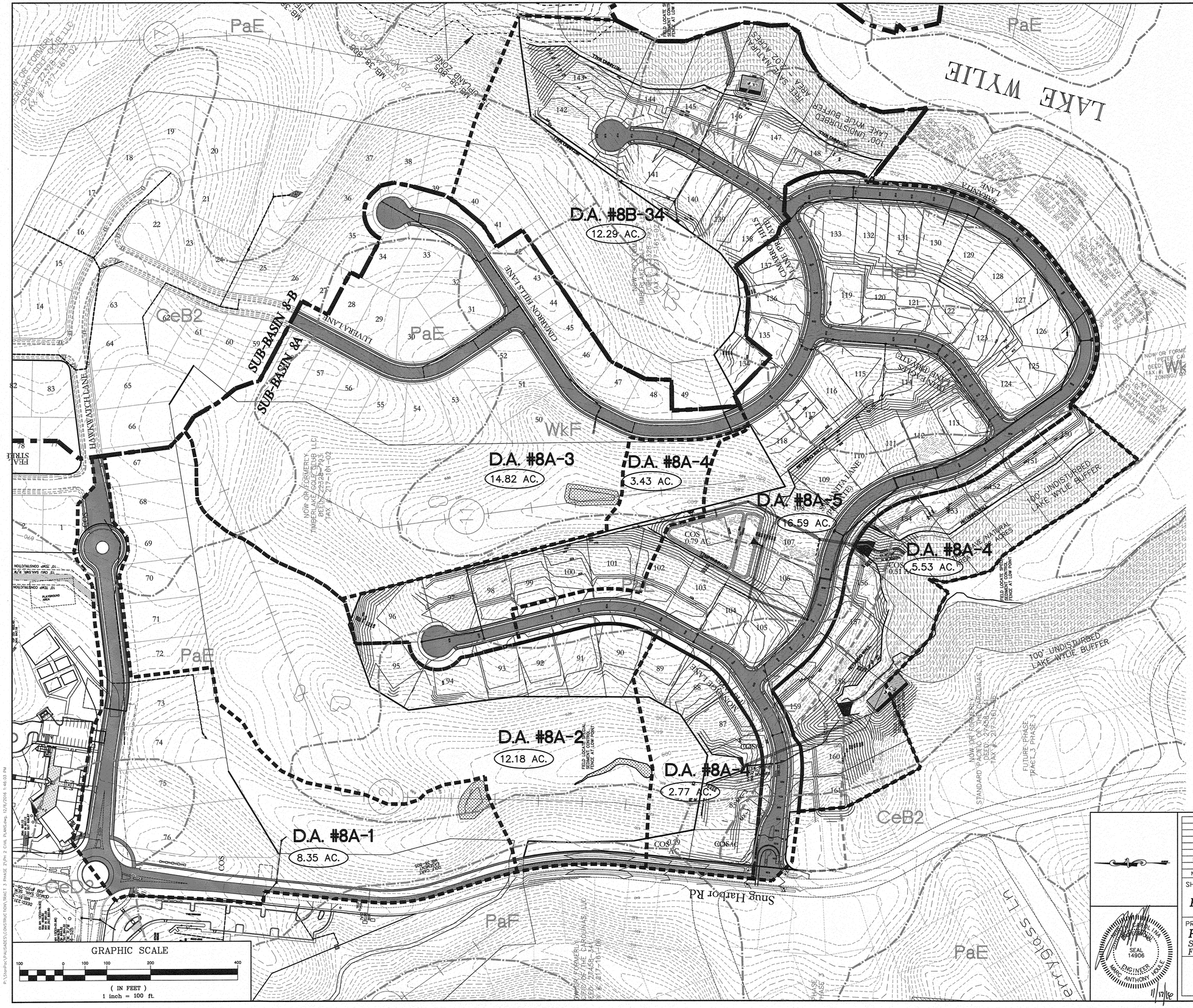
PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=100'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-40
SHT 11 OF 31 SHTS

SEAL 14906 ENGINEER MARC ANTHONY HOULE 12/8/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
(physical) 720 Windsor Oak Court Charlotte, North Carolina, 28273 704.556.1990
(mailing) P.O. Box 1198 Pineville, North Carolina, 28134 704.558.0505(fax)
NC Corporate Registration #C-0475

P:\Standard PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 12/8/2016 8:37:11 PM



LOW DENSITY AREA:

DRAINAGE AREA #8A-1, 2 AND A PORTION OF #8A-4
- DRAINAGE AREA: 23.37 AC (1,018,133 sf)
- IMPERVIOUS
  - BOC: 60,826 sf
  - SIDEWALK: 15,457 sf
  - 20 LOTS • 5000 sf: 100,000 sf
  - 176,283 sf (17.32%)

DRAINAGEA AREA #8A-3 AND PORTION #8A-4
- DRAINAGE AREA: 18.25 AC (795,183 sf)
- IMPERVIOUS
  - BOC: 51,997 sf
  - SIDEWALK: 13,709 sf
  - 6 LOTS • 5000 sf: 30,000 sf
  - 23 LOTS • 4000 sf: 92,000 sf
  - 187,706 sf (23.60%)

DRAINAGEA AREA PORTION OF #8A-4
- DRAINAGE AREA: 5.53 AC (240,911 sf)
- IMPERVIOUS
  - 11 LOTS • 5000 sf: 55,000 sf
  - 55,000 sf (22.83%)

DRAINAGEA AREA #8B-34
- DRAINAGE AREA: 12.29 AC (535,417 sf)
- IMPERVIOUS
  - BOC: 13,868 sf
  - SIDEWALK: 3,352 sf
  - 9 LOTS • 5000 sf: 45,000 sf
  - 7 LOTS • 4000 sf: 28,000 sf
  - 90,220 sf (16.85%)

HIGH DENSITY AREA:

DRAINAGE AREA #8A-5
- DRAINAGE AREA: 16.59 AC (722,834 sf)
- IMPERVIOUS
  - BOC: 107,261 sf
  - SIDEWALK: 32,654 sf
  - 2 LOTS • 5000 sf: 10,000 sf
  - 33 LOTS • 4000 sf: 132,000 sf
  - 281,915 sf (39.00%)

PCCO Summary

Origional Parcel ID Number(s):	217-16-106				
Development Type:	Single Family				
Subject to PCCO? Y/N	No				
If NO, why?:	Grandfathered				
Watershed:	LOWER LAKE WYLIE CRITICAL AREA				
Disturbed Area (ac.):	29.83				
Site Area (ac.)	35.22				
	DA#8A-1,2,4	DA#8A-3,4	DA#8A-5	DA#8A-4	DA #8B-34
Total on-site Drainage Area (ac.):	23.37	18.25	16.59	5.53	12.29
Existing Built-upon-area (SF):	0	0	0	0	0
Existing BUA to be removed (SF):	0	0	0	0	0
Existing BUA to remain (SF):	0	0	0	0	0
Proposed new BUA (SF):	176,283	187,706	281,915	55,000	90,220
Proposed % BUA:	17.32%	23.60%	39.0%	22.83%	16.85%
Density (High/Low)	LOW	LOW	HIGH	LOW	LOW
Total Post-Project BUA for site:	805,124 SF				
Development of Redevelopment?	Development				
Natural Area Required (ac.):	3.52 Ac.(10%)				
Natural Area Provided, total (ac.):	3.52 Ac.(10%)				
Undisturbed Treed Natural Area Preserved(ac)	3.84 ac.				
Total Stream Buffer protected on-site (ac.):	0.24				
Transit Station Area? Y/N	No				
Distressed Business District? Y/N	No				
Mitigation Type (if applicable)	N/A				
Natural Area Mitigation? Y/N	No				
Buffer Mitigation? Y/N	No				
Total Phosphorous Mitigation? Y/N	No				

*THIS PLAN IS A **FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / _____
INITIALS DATE

NO.	DATE	REVISION	BY
2	6/21/16	REVISED LOT 85, RETAINING WALL, MONTAGE LANE (PRIVATE), COS	ZNH
1	3/21/16	REVISED HW 62 – HW 68 AND HW 59 – HW 61	WD

SHEET TITLE
POST DEVELOPMENT PLAN

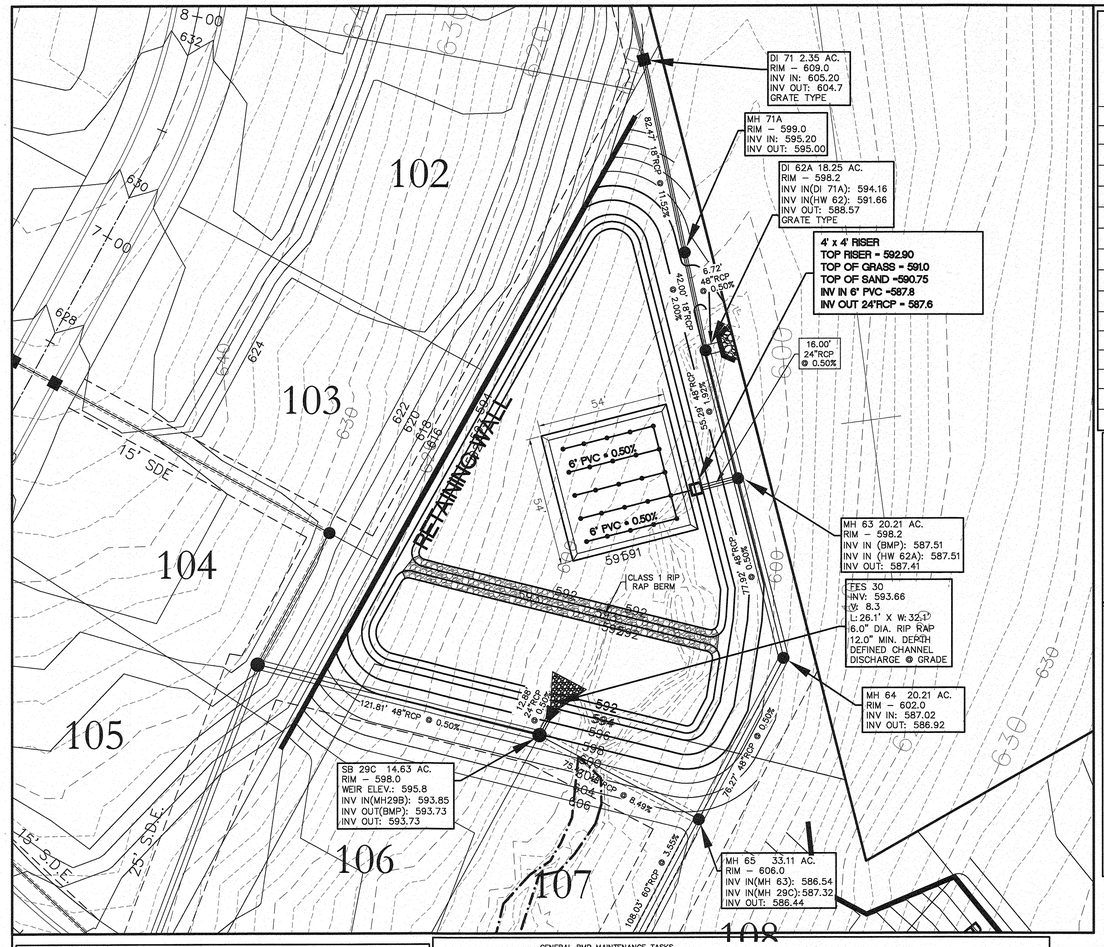
PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=100'
DATE 4/20/15
DRAWN BY BTC
CHECKED BY MAH
DRAWING NO. 242-39A
SHT 12A OF 31 SHTS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14906 MARC ANTHONY HOULE 11/17/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
Corporate Office: 750 Windsor Oak Court, Charlotte, North Carolina, 28273, 704.556.1990
Branch Office: P.O. Box 1198, Pineville, North Carolina, 28134, 704.556.0505(fax)
NC Corporate Registration #C-0475

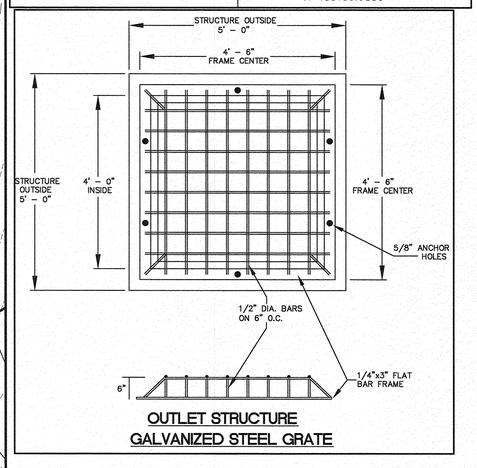
P:\Standard Pacific\PACIFIC\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 12/6/2016 1:45:03 PM



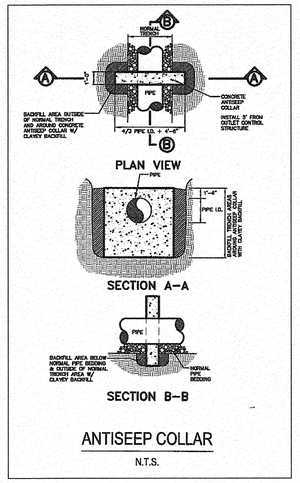
BMP Inset Table

Sand Filter

Project Name:	Palisades Tract 3 Phase 2
Sequence ID:	1
Drainage Area(acres)	16.59
Land Use/Development Type:	Residential
Percent Built Upon Area:	39%
Sediment Chamber Length (ft.)	54'
Sediment Chamber Width (ft.)	54'
Sediment Chamber Height (ft.)	2.5'
Sand Filter Type:	Surface
Media Depth (ft.)	1.5
Media Surface Area (ft2)	2,920
Flow Diverter Present (Y/N)	Yes
Regulated By:	Palisades Water Quality Plan
Treatment Effectiveness:	Optimal
NC State Plane X (easting):	E 1388878.2176
	N 485183.6850

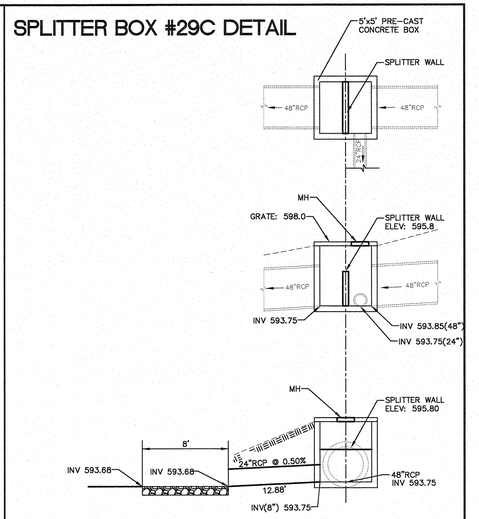


OUTLET STRUCTURE
GALVANIZED STEEL GRATE



ANTISEEP COLLAR
N.T.S.

SPLITTER BOX #29C DETAIL



Sand Filter Operation Maintenance

A maintenance record shall be kept on this BMP. This maintenance record will be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired, or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the removal efficiency of the BMP.

Important maintenance procedures:
- The drainage area will be carefully managed to reduce the sediment load to the sand filter.
- The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.
- Once a year, sand media will be skimmed.
- The sand filter media will be replaced whenever it fails to function properly after maintenance.

The sand filter will be inspected **quarterly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)** . Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How I will remediate the problem:
Entire Bmp	Trash/debris is present.	Remove the trash/debris.
Adjacent pavement(if applicable)	Sediment is present on the pavement surface	Sweep or vacuum the sediment as soon as possible.
Perimeter of sand filter	Areas of bare soil and/or erosive gullies have formed	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long	Maintain vegetation at an appropriate height
Flow diversion structure	The structure is clogged	Unclog the conveyance and dispose of any sediment offsite
	The structure is damaged	Make any necessary repairs or replace if damage is too large for repair.
Forebay or pretreatment area	Sediment has accumulated to a depth of greater than six inches	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and stabilize or dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occured	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.
Filter bed and underdrain collection system	Water is ponding on the surface for more than 24 hours after a storm.	Check to see if the collector system is clogged and flush if necessary. If water still ponds, remove the top few inches of filter bed media and replace. If water still ponds, then consult an expert.
Outlet device	Clogging has occured.	Clean out the outlet device. Dispose of the sediment offsite.
	The outlet device is damaged	Repair or replace the outlet device.
Receiving water	Erosion or other signs of damage have occured at the outlet.	Contact the NC Division of Water Quality 401 Oversight Unit at 919-733-1786.

Excavate the Basin Area and Prepare Subgrade

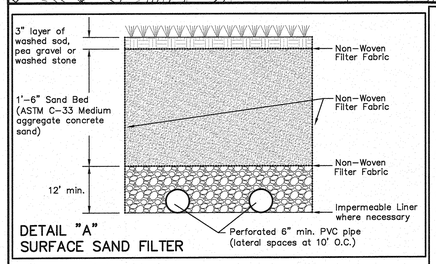
Clear and excavate the area for the Basin while protecting and maintaining subgrade infiltration rates using the following steps:
- Excavate in dry subgrade conditions and avoid excavating immediately after storms without a sufficient drying period.
- Do not allow equipment to cross the Basin area after excavation has begun
- Operate excavation equipment from outside the Basin area of from unexcavated portions of the area using and excavation staging plan.
- Use equipment with tracks rather than tires to minimize soil compaction when equipment on the subgrade surface is unavoidable.
- Dig the final 9 to 12 in. by using the teeth of the excavator bucket to loosen soil and do not smear the subgrade soil surface. Final grading or smoothing of the subgrade should be done by hand if possible.
- Minimize the time between excavation and placement of the aggregate.

The final subgrade slope shall not exceed 0.5%. The slope of the subgrade shall be checked before proceeding.

After verifying the subgrade slope, scarify, rip or trench the soil subgrade surface to maintain the soils predisturbance infiltration rate. These treatments must occur while the soil is dry. To scarify the surface, use backhoe bucket's teeth to rake the surface of the subgrade. To rip the subgrade, use a subsoil ripper to make parallel rips 6 to 9 in. deep spaced 3 ft apart along the length of the basin excavation. In silty or clayey soils, clean coarse sand must be placed over the ripped surface to keep it free-flowing. The sand layer should be adequate to fill the rips.

An alternate to scarification and ripping is trenching. If trenching, then parallel trenches 12 in. wide by 12 in. deep shall be made along the length of the basin excavation. Excavate trenches every 6 ft (measured from center to center of each trench) and fill with 1/2 in. of clean coarse sand and 11-1/2 in of ASTM No. 67 aggregate.

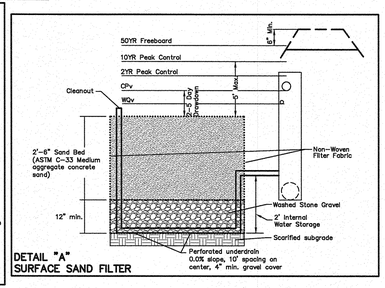
Ripped or trenched (uncompacted) soil subgrade can settle after basin installation and compaction. Therefore, base compaction requires special attention to means and methods in the specifications and during construction inspection to minimize future settlement from ripped or trenched soil subgrades.



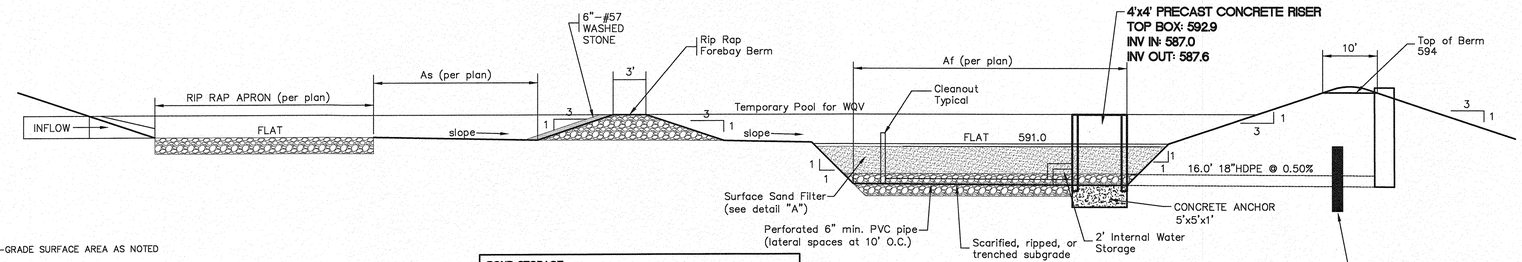
DETAIL "A"
SURFACE SAND FILTER

GENERAL BMP MAINTENANCE TASKS

1. Emergency Maintenance shall be performed immediately after floods and other emergencies. Replanting and repairs to structures may be necessary. Obstructions and debris deposited should be removed immediately.
2. Regularly remove debris and litter.
3. Monitor BMP for sediment removal. Proper disposal of the sediment removed is required.
4. Maintain a healthy ground cover in and around the BMP to promote stability and erosion control.
5. Routinely inspect, exercise and provide preventative maintenance on all mechanical components.
6. Vegetation Maintenance shall include inspection for distressed vegetation, bare spots, and rills. Treatment of these areas and revegetation shall be immediate to prevent spreading.
7. Maintain a permanent pool of water to promote a healthy aquatic environment.
8. Inspect and treat permanent pool for mosquitoes and other insects.
9. Immediately after the wet detention basin is established. The plants on the vegetated shelf and perimeter of the basin should be watered twice weekly if needed, until the plants become established (commonly six weeks).
10. No portion of the wet detention pond should be fertilized after the first initial fertilization that is required to establish the plants on the vegetated shelf.
11. Stable groundcover should be maintained in the drainage area to reduce the sediment load to the wet detention basin.
12. If the basin must be drained for an emergency or to perform maintenance, the flushing of sediment through the emergency drain should be minimized to the maximum extent practical.
13. Once a year, a Professional Engineer should inspect the embankments.
14. Dewatering Pump: Piranha P200– 2 HP, 180 gpm or equal



DETAIL "A"
SURFACE SAND FILTER



NOTE:
– PREPARE SUB–GRADE SURFACE AREA AS NOTED

– THE UNDERDRAIN COLLECTION SYSTEM SHOULD BE EQUIPED WITH 6–INCH MINIMUM PERFORATED SCHEDULE 40 OR STRONGER PVC PIPE OR DOUBLE WALL "HDPE" PIPE. PERFORATIONS SHALL BE PER AASHTO M278 FOR PVC PIPE, AASHTO M252 FOR DOUBLE WALL "HDPE" PIPE, OR BE 3/8–INCH IN DIAMETER SPACED 3 INCHES ON CENTER ALONG 4 LONGITUDINAL ROWS THAT ARE SPACED 90° APART. THE PIPES SHALL HAVE A MINIMUM SLOPE OF 0.50% AND A MAXIMUM SPACING OF 10 FEET ON CENTER.

– CLEANOUTS OF 6–INCH SOLID PVC MUST BE PROVIDED FOR EVERY 50 LINEAR FEET OF UNDERDRAIN, AT ALL BENDS, AND ENDS OF THE SYSTEM FOR MAINTENANCE PURPOSES. THE TOP OF THE CLEANOUTS SHOULD EXTEND 6 INCHES ABOVE THE TOP OF FILTER AND HAVE A WATERTIGHT, VANDAL PROOF CAP. AT LEAST ONE CLEANOUT SHALL BE INSTALLED AS AN EMERGENCY DRAIN THAT IS FLUSH WITH THE TOP OF FILTER AND HAVE A 6–INCH THREADED EXTENSION PIPE. THE FURTHEST CLEANOUT FROM THE OUTLET MUST HAVE THE MINIMUM REQUIRED FILTER DEPTH.

POND STORAGE:

594 – 20,500 sf

Pond	Forebay:	Total:
593 – 12,840 sf	593 – 5,480 sf	18,320 sf
592 – 11,390 sf	592 – 4,460 sf	15,850 sf
591 – 2,916 sf		2,916 sf
		Volume = 26,468 cf

DRAINAGE AREAS TO BE STABILIZED BEFORE FILTRATION CONTROLS AND FILTER MEDIA ARE INSTALLED

CONCRETE ANCHOR
A. BOUYANCY
AREA OF RISER – INSIDE 16'/OUTSIDE 25'
$W_{effected} = V_{filter} + V_{Base\ Footing} = 5.3'\ (25\ SF) + 1'\ (25\ SF) = 157.5\ CF$
$FLOATATION = V_{effected\ X}\ V_{filter} = 157.5\ CF \times 62.40\ LB/CF = 9,828\ LB$S.

B. COUNTER BOUYANCY
$CONC.\ Wt. = V_{Conc.\ Riser} + V_{Conc.\ FootingX}\ Conc.\ Unit\ Wt. = (48 + 25) \times 150\ LB/CF = 10,950\ LBS.$
$SAFETY\ FACTOR = 10,950/9,828 = 1.1$

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

THIS PLAN IS A ***FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / _____
INITIALS DATE

NO.	DATE	REVISION	BY
1	3/21/16	REVISED HW 62 – HW 68	WKD

SHEET TITLE
SAND FILTER BASIN DETAIL

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

SEAL 14906 ENGINEER MARC ANTHONY HOUSE

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ◦ Surveying ◦ Engineering
(physical) 730 Windsor Oak Court Charlotte, North Carolina, 28273
(mailing) P.O. Box 1198 Pineville, North Carolina, 28134
704.556.1990 704.556.0505(fax)
NC Corporate Registration #C-0475

PROJECT NO. 242-39B
SCALE 1"=30'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 12B 31
SHT OF SHTS

P:\Storm\ACV\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 12/8/2016 10:43:28 AM

CONSTRUCTION TO BE PHASED SUCH THAT THE DENUDED AREA WILL NOT EXCEED 20 ACRES AT ANY TIME.
TOTAL SITE AREA 35.22 AC.
TOTAL DENUDED AREA 29.83 AC.

LEGEND OF SYMBOLS

DENUDED LIMIT
DOUBLE SILT FENCE — CLDSM STD. 30.06B (4" MIN. SEPARATION)
CATCH BASIN PROTECTION — CLDSM STD. 30.09
DIVERSION DITCH — CLDSM STD. 30.05
ROCK CHECK DAM — CLDSM STD. 30.10
GRAVEL ENTRANCE — CLDSM STD. 30.11
SILT FENCE — CLDSM STD. 30.06A
TEMP. SEDIMENT TRAP — CLDSM STD. 30.02
SKIMMER SEDIMENT BASIN — CLDSM STD. 30.02A

SITE MUST BE INSPECTED TWICE PER WEEK. ALL "STD." NUMBERS REFER TO THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.

ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE. GRADING ONE ACRE OR MORE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE IN ANY EVENT WITHIN 5 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 5 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY ENGINEERING DEPARTMENT. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING (CMLDS #30.16). A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING THAT WAS NOT PREVIOUSLY APPROVED.

FAILURE TO SCHEDULE AN ON-SITE MEETING WITH THE CITY EROSION CONTROL COORDINATOR 48 HRS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 18 OF THE CITY CODE AND IS SUBJECT TO A FINE.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN.

ANY LAND DISTURBING ACTIVITY MORE THAN 1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NCG010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES. (FOR QUESTIONS CONTACT MOORESVILLE REGIONAL OFFICE WATER QUALITY STAFF AT 704-663-1699).

NO PERSON SHALL REFUSE ENTRY OR ACCESS TO ANY REPRESENTATIVE OF THE COMMISION OR ANY REPRESENTATIVE OF A LOCAL GOVERNMENT WHO REQUESTS ENTRY FOR PURPOSES OF INSPECTION.

DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT-OF-WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.

ADDITIONAL STABILIZATION MAY BE REQUIRED, SUCH AS FIAL MATTING, ETC. TO STABILIZE DITCHES, BERMS, AND/OR EMBANKMENTS.

CRITICAL AREA CHECKLIST

INCLUDES CRITICAL AND PROTECTED AREAS ON MOUNTAIN ISLAND LAKE, LAKE WYLIE, AND ANY 303D LISTED STREAM
NOTES:

- POLYACRYLAMIDES IN BASINS AND SILT-SACKS AT SKIMMER OUTFLOWS MAY BE REQUIRED TO PREVENT TURBIDITY EXCEEDING THE DETERMINED BASELINE TURBIDITY FOR THE RECEIVING WATER COURSE.
- TEMPORARY GROUND COVER MUST BE PROVIDED FOR WITHIN 5 DAYS OF ANY PHASE OF GRADING.
- ALL CRITICAL AREA PLANS WILL CARRY A "PERFORMANCE RESERVATION".
- ALL LOG BOOK ENTRIES WILL BE ELECTRONICALLY SENT TO THE AREA INSPECTOR.
- GRADING SHALL BE LIMITED TO 20 ACRES IN CRITICAL OR PROTECTED AREAS.
- NO LOT GRADING IS TO BE CONDUCTED THAT CREATES FLOW OVER ANY FILL SLOPE.
- A 10' CONSTRUCTION EASEMENT IS TO BE PLACED AT TOE OF ALL SLOPES OR RETAINING WALLS.
- PRE-CONSTRUCTION AND POST-CONSTRUCTION IMPACT SURVEYS INCLUDING DEPTH MEASUREMENTS ARE TO BE CONDUCTED IN ANY RECEIVING LAKE, COVE
- OR POND.
- TURBIDITY MEASUREMENTS WILL BE REQUIRED AT EACH SEDIMENT BASIN OUTFLOW, UPSTREAM AND DOWNSTREAM ON THE RECEIVING STREAM AT EACH
- BASIN EVERY WEEK AND AFTER EVERY ½ INCH OR GREATER STORM EVENT IN CONJUNCTION WITH NPDES LOG.
- HIGH HAZARD SILT FENCE AND PERIMETER BERMS ARE REQUIRED ALONG DENUDED LIMITS WHEN ADJACENT TO A CREEK, WETLAND,LAKE, POND OR BUFFER.
- ALL BASINS AND SPILLWAYS MUST BE SIZED TO TREAT THE 25-YR STORM EVENT.

*THIS PLAN IS A **FINAL DRAWING--NOT RELEASED FOR CONSTRUCTION** UNLESS INITIALLED/DATED AS APPROVED:*
APPROVED: _____ / _____
INITIALS DATE

NO.	DATE	REVISION	BY
3	10/4/16	REVISED STORM TO MATCH DRAINAGE PLAN	ZNH
2	3/21/16	REVISED HW 62 – HW 68 AND HW 59 – -61	WKD
1	10/1/15	PER EROSION CONTROL COMMENTS	WKD

SHEET TITLE
EROSION CONTROL BY-PASS PIPE INSTALL

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=100'
DATE 4/20/15
DRAWN BY BTC
CHECKED BY MAH
DRAWING NO. 242-38
SHT 13A 31 SHTS

SEAL 14906 — ENGINEER — MARC ANTHONY HOULE — 11/17/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
(physical) 750 Windsor Oak Court, Charlotte, North Carolina, 28273
(mailing) P.O. Box 1198, Pineville, North Carolina, 28134
704.556.1990 704.556.0505(fax)
NC Corporate Registration #C-0475

CALL NC ONE CALL SYSTEM BEFORE YOU DIG
1-800-632-4949 AVOID UTILITY DAMAGE

1) CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2) CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGON, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3) ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4) SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

GRAPHIC SCALE
100 0 100 100 200 400
(IN FEET)
1 inch = 100 ft.

P:\Standard\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 10/4/2016 9:17:57 AM

CONSTRUCTION TO BE PHASED SUCH THAT THE DENUDED AREA WILL NOT EXCEED 20 ACRES AT ANY TIME.

TOTAL SITE AREA 35.22 AC.
TOTAL DENUDED AREA 29.83 AC.

LEGEND OF SYMBOLS

DENUDED LIMIT
DOUBLE SILT FENCE (CLDSM STD. 30.06B (4' MIN. SEPARATION))
CATCH BASIN PROTECTION (CLDSM STD. 30.09)
DIVERSION DITCH (CLDSM STD. 35.05)
ROCK CHECK DAM (CLDSM STD. 30.10)
GRAVEL ENTRANCE (CLDSM STD. 35.11)
SILT FENCE (CLDSM STD. 30.06A)
TEMP. SEDIMENT TRAP (CLDSM STD. 30.02)
SKIMMER SEDIMENT BASIN (CLDSM STD. 30.03A)

SITE MUST BE INSPECTED TWICE PER WEEK. ALL "STD." NUMBERS REFER TO THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.

ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE. GRADING ONE ACRE OR MORE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE IN ANY EVENT WITHIN 5 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 15 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY ENGINEERING DEPARTMENT. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ASSOCIATED TERRACING (CMLDS #20.16). A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING THAT WAS NOT PREVIOUSLY APPROVED.

FAILURE TO SCHEDULE AN ON-SITE MEETING WITH THE CITY EROSION CONTROL COORDINATOR 48 HRS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 18 OF THE CITY CODE AND IS SUBJECT TO A FINE.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN.

ANY LAND DISTURBING ACTIVITY MORE THAN 1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NCG010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES. (FOR QUESTIONS CONTACT MOORESVILLE REGIONAL OFFICE WATER QUALITY STAFF AT 704-663-1699).

NO PERSON SHALL REFUSE ENTRY OR ACCESS TO ANY REPRESENTATIVE OF THE COMMISION OR ANY REPRESENTATIVE OF A LOCAL GOVERNMENT WHO REQUESTS ENTRY FOR PURPOSES OF INSPECTION.

DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT-OF-WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.

ADDITIONAL STABILIZATION MAY BE REQUIRED, SUCH AS FAB. MATTING, ETC. TO STABILIZE DITCHES, BERMS, AND/OR EMBANKMENTS.

DENUDED AREA SUMMARY
TOTAL DENUDED AREA: 29.83 ACRES

PHASE 1 CLEARING FOR BASINS – 16.28 ACRES

UPON COMPLETION OF BASIN CONSTRUCTION, STABILIZATION AND INSPECTION THE REMAINING CLEARING WILL BE ALLOWED WITHIN THE 20 AC. LIMIT.

CRITICAL AREA CHECKLIST

INCLUDES CRITICAL AND PROTECTED AREAS ON MOUNTAIN ISLAND LAKE, LAKE WYLIE, AND ANY 303D LISTED STREAM

NOTES:

- POLYACRYLAMIDES IN BASINS AND SILT-SACKS AT SKIMMER OUTFLOWS MAY BE REQUIRED TO PREVENT TURBIDITY EXCEEDING THE DETERMINED BASELINE TURBIDITY FOR THE RECEIVING WATER COURSE.
- TEMPORARY GROUND COVER MUST BE PROVIDED FOR WITHIN 5 DAYS OF ANY PHASE OF GRADING.
- ALL CRITICAL AREA PLANS WILL CARRY A "PERFORMANCE RESERVATION".
- ALL LOG BOOK ENTRIES WILL BE ELECTRONICALLY SENT TO THE AREA INSPECTOR.
- GRADING SHALL BE LIMITED TO 20 ACRES IN CRITICAL OR PROTECTED AREAS.
- NO LOT GRADING IS TO BE CONDUCTED THAT CREATES FLOW OVER ANY FILL SLOPE.
- A 10' CONSTRUCTION EASEMENT IS TO BE PLACED AT TOE OF ALL SLOPES OR RETAINING WALLS.
- PRE-CONSTRUCTION AND POST-CONSTRUCTION IMPACT SURVEYS INCLUDING DEPTH MEASUREMENTS ARE TO BE CINDUCTED IN ANY RECEIVING LAKE, COVE
- OR POND.
- TURBIDITY MEASUREMENTS WILL BE REQUIRED AT EACH SEDIMENT BASIN OUTFLOW, UPSTREAM AND DOWNSTREAM ON THE RECEIVING STREAM AT EACH
- BASIN EVERY WEEK AND AFTER EVERY 1 INCH OR GREATER STORM EVENT IN CONJUNCTION WITH NPDES LOG.
- HIGH HAZARD SILT FENCE AND PERIMETER BERMS ARE REQUIRED ALONG DENUDED LIMITS WHEN ADJACENT TO A CREEK, WETLAND,LAKE, POND OR BUFFER.
- ALL BASINS AND SPILLWAYS MUST BE SIZED TO TREAT THE 25-YR STORM EVENT.

THIS PLAN IS A ***FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION*** *UNLESS INITIALLED/DATED AS APPROVED:*

APPROVED: _____ / 9/20/16
INITIALS / DATE

NOTE:
RETAINING WALLS AND TOE OF SLOPE TO BE LOCATED NO CLOSER THAN 10 FEET FROM TREE SAVE AREA LIMITS

CALL NC ONE CALL SYSTEM BEFORE YOU DIG
1-800-632-4949
AVOID UTILITY DAMAGE

1). CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2). CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGS, ETC, AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3). ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPAIRED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4). SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

GRAPHIC SCALE
100 0 100 100 200 400
(IN FEET)
1 inch = 100 ft.

NO.	DATE	REVISION	BY
3	8/31/16	REVISED RETAINING WALL & SILT FENCE	ZNH
2	3/21/16	REVISED HW 62 – HW 68 AND HW 59 – HW 61	MKD
1	7/23/15	REVISED PER CITY OF CHARLOTTE COMMENTS	MKD

SHEET TITLE
EROSION CONTROL CLEARING PHASE

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=100'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. 242-38B
SHT 13 OF 31 SHTS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14906 ANTHONY HOUSE 9/20/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
730 Windsor Oak Court (28273) P.O. Box 7007 (28241)
Charlotte, North Carolina
704.556.1990 704.556.0505(fax)
NC Corporate Registration #C-0475

P:\Standing\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 COVL PLANS.dwg, EROSION CLEAR, 9/20/2016 9:06:19 AM

CONSTRUCTION TO BE PHASED SUCH THAT THE DENUDED AREA WILL NOT EXCEED 20 ACRES AT ANY TIME.

TOTAL SITE AREA	35.22 AC.
TOTAL DENUDED AREA	29.83 AC.

LEGEND OF SYMBOLS

DENUDED LIMIT

CATCH BASIN PROTECTION — CLDSM 870. 30.08

ROCK CHECK DAM — CLDSM 870. 30.10

SILT FENCE — CLDSM 870. 30.05A

SKIMMER SEDIMENT BASIN — CLDSM 870. 30.05A

DOUBLE ROW HIGH HAZARD SILT FENCE — CLDSM 870. 30.06B (4' MIN. SEPARATION)

DIVERSION DITCH — CLDSM 870. 30.05

GRAVEL ENTRANCE — CLDSM 870. 30.11

TEMP. SEDIMENT TRAP — CLDSM 870. 30.02

SITE MUST BE INSPECTED THICE PER WEEK.ALL "870." NUMBERS REFER TO THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.

ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE. GRADING ONE ACRE OR MORE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE IN ANY EVENT WITHIN 5 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE,BUT IN ANY EVENT WITHIN 15 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY ENGINEERING DEPARTMENT. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING [CMLDS §50.16]. A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING THAT WAS NOT PREVIOUSLY APPROVED.

FAILURE TO SCHEDULE AN ON-SITE MEETING WITH THE CITY EROSION CONTROL COORDINATOR 48 HRS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 18 OF THE CITY CODE AND IS SUBJECT TO A FINE.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN.

ANY LAND DISTURBING ACTIVITY MORE THAN 1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NCG010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES. (FOR QUESTIONS CONTACT MOORESVILLE REGIONAL OFFICE WATER QUALITY STAFF AT 704-663-1699).

NO PERSON SHALL REFUSE ENTRY OR ACCESS TO ANY REPRESENTATIVE OF THE COMMISION OR ANY REPRESENTATIVE OF A LOCAL GOVERNMENT WHO REQUESTS ENTRY FOR PURPOSES OF INSPECTION.

DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT-OF-WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.

ADDITIONAL STABILIZATION MAY BE REQUIRED, SUCH AS EMAL MATTING, ETC. TO STABILIZE DITCHES, BERMS, AN/OR EMBANKMENTS.

DENUDED AREA SUMMARY
TOTAL DENUDED AREA: 29.83 ACRES

PHASE 2 LOT CLEARING. – 19.73 ACRES

SEE SHEET 24 FOR TEMP. DIVERSION DITCH DETAIL AND CHART.

PHASE 2 LOT CLEARING WILL BE MASS GRADED. LOTS TO BE STABILIZED AS SOON AS POSSIBLE.

SKIMMER BASIN #1
W/ POROUS BAFFLES
SKIMMER 2" W/ 1.6" ORIFICE
STORAGE TOP: 600.0
BASIN BOTTOM INV: 597.0
BOTTOM DIM:CONTOUR 597.0'

RISER BASIN #1
W/ SKIMMER AND POROUS BAFFLES
SKIMMER: 2" W/ 1.9" ORIFICE
STORAGE TOP: 596.0
BASIN BOTTOM INVERT: 591.0
BOTTOM DIM : CONTOUR 590.0

RISER BASIN #1 TO BE CLOSED OUT TO COMPLETE CONSTRUCTION OF MONTAGE LANE

TEMP. CONSTRUCTION ENTRANCE– 2"–3" COURSE AGGREGATE, 6" DEEP, 18' WIDE & 100' LONG

STOP PIPE ABOVE RISER BASIN AND DIRECT FLOW INTO RISER BASIN

STOP PIPE ABOVE SKIMMER BASIN AND DIRECT FLOW INTO SKIMMER BASIN

TEMPORARY 18" HDPE

NOTE: INSTALL SILT TRAP SYSTEM IN CATCH BASINS

NOTE: INSTALL SILT TRAP SYSTEM IN CATCH BASINS

RETAINING WALLS WILL BE CONSTRUCTED 10' FROM THE LAKE WYLIE BUFFER. NO BUFFER DISTURBANCE WILL BE ALLOWED DURING CONSTRUCTION.

RETAINING WALLS WILL BE CONSTRUCTED 10' FROM THE LAKE WYLIE BUFFER. NO BUFFER DISTURBANCE WILL BE ALLOWED DURING CONSTRUCTION.

NOTE:
RETAINING WALLS AND TOE OF SLOPE TO BE LOCATED NO CLOSER THAN 10 FEET FROM TREE SAVE AREA LIMITS

CRITICAL AREA CHECKLIST
INCLUDES CRITICAL AND PROTECTED AREAS ON MOUNTAIN ISLAND LAKE, LAKE WYLIE, AND ANY 303D LISTED STREAM

NOTES:
- POLYACRYLAMIDES IN BASINS AND SILT-SACKS AT SKIMMER OUTFLOWS MAY BE REQUIRED TO PREVENT TURBIDITY EXCEEDING THE DETERMINED BASELINE TURBIDITY FOR THE RECEIVING WATER COURSE.
- TEMPORARY GROUND COVER MUST BE PROVIDED FOR WITHIN 5 DAYS OF ANY PHASE OF GRADING.
- ALL CRITICAL AREA PLANS WILL CARRY A "PERFORMANCE RESERVATION".
- ALL LOG BOOK ENTRIES WILL BE ELECTRONICALLY SENT TO THE AREA INSPECTOR.
- GRADING SHALL BE LIMITED TO 20 ACRES IN CRITICAL OR PROTECTED AREAS.
- NO LOT GRADING IS TO BE CONDUCTED THAT CREATES FLOW OVER ANY FILL SLOPE.
- A 10' CONSTRUCTION EASEMENT IS TO BE PLACED AT TOE OF ALL SLOPES OR RETAINING WALLS.
- PRE-CONSTRUCTION AND POST-CONSTRUCTION IMPACT SURVEYS INCLUDING DEPTH MEASUREMENTS ARE TO BE CINDUCTED IN ANY RECEIVING LAKE, COVE OR POND.
- TURBIDITY MEASUREMENTS WILL BE REQUIRED AT EACH SEDIMENT BASIN OUTFLOW, UPSTREAM AND DOWNSTREAM ON THE RECEIVING STREAM AT EACH
- BASIN EVERY WEEK AND AFTER EVERY ½ INCH OR GREATER STORM EVENT IN CONJUNCTION WITH NPDES LOG.
- HIGH HAZARD SILT FENCE AND PERIMETER BERMS ARE REQUIRED ALONG DENUDED LIMITS WHEN ADJACENT TO A CREEK, WETLAND,LAKE, POND OR BUFFER.
- ALL BASINS AND SPILLWAYS MUST BE SIZED TO TREAT THE 25-YR STORM EVENT.
- NO SEDIMENT BASIN BASIN DISCHARGES ARE PERMITTED ACROSS DENUDED AREAS (AREAS MUST BE STABILIZED AND OR ARMORED).

THIS PLAN IS A ***FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION*** *UNLESS INITIALLED/DATED AS APPROVED:*
APPROVED: _____ / 11/7/16
INITIALS DATE

CALL NC ONE CALL SYSTEM BEFORE YOU DIG
1–800–632–4949 AVOID UTILITY DAMAGE

1). CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2). CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGGIN, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3). ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4). SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

NO.	DATE	REVISION	BY
2	3/21/16	REVISED HW 62 – HW 68 AND HW 59 – 61	WKD
1	10/1/15	PER EROSION CONTROL COMMENTS	WKD

SHEET TITLE
EROSION CONTROL PLAN #1

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=60'
DATE 4/20/15
DRAWN BY BTC
CHECKED BY MAH
DRAWING NO. 242-37
SHT 14 OF 31 SHTS

SEAL 14906 ENGINEER MARC ANTHONY HOULE 11/7/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
Address: 750 Windsor Oak Court, Charlotte, North Carolina, 28273, 704.556.1990
Address: P.O. Box 1198, Pineville, North Carolina, 28134, 704.556.0505(fax)
NC Corporate Registration #C-0475

P:\Standard\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\DWG\PLANS\Eng, 10/6/2016 9:18:11 AM

CONSTRUCTION TO BE PHASED SUCH THAT THE DENUDED AREA WILL NOT EXCEED 20 ACRES AT ANY TIME.

TOTAL SITE AREA	35.22 AC.
TOTAL DENUDED AREA	29.83 AC.

LEGEND OF SYMBOLS

- DENUDED LIMIT
- CATCH BASIN PROTECTION — CLDSM STD. 30.09
- ROCK CHECK DAM — CLDSM STD. 30.10
- SILT FENCE — CLDSM STD. 30.08A
- SKIMMER SEDIMENT BASIN — CLDSM STD. 35.03A
- DOUBLE SILT FENCE — CLDSM STD. 30.08B ("A" MIN. SEPARATION)
- DIVERSION DITCH — CLDSM STD. 30.05
- GRAVEL ENTRANCE — CLDSM STD. 30.01
- TEMP. SEDIMENT TRAP — CLDSM STD. 30.02

SITE MUST BE INSPECTED TWICE PER WEEK.ALL "STD." NUMBERS REFER TO THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.

ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE. GRADING ONE ACRE OR MORE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS MUST 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.

ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY ENGINEERING DEPARTMENT. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING (CMGS #50.16). A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING THAT WAS NOT PREVIOUSLY APPROVED.

FAILURE TO SCHEDULE AN ON-SITE MEETING WITH THE CITY EROSION CONTROL INSPECTOR PRIOR TO THE START OF LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 18 OF THE CITY CODE AND IS SUBJECT TO A FINE.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND SHALL BE DONE WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN.

ANY LAND DISTURBING ACTIVITY MORE THAN 1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO. NCG010000). ANY VIOLATION OF THESE CONDITIONS IS SUBJECT TO CIVIL PENALTIES AND MAY REQUIRE ENFORCEMENT ACTION BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES. (FOR QUESTIONS CONTACT MOORESVILLE REGIONAL OFFICE WATER QUALITY STAFF AT 704-663-1699).

NO PERSON SHALL REFUSE ENTRY OR ACCESS TO ANY REPRESENTATIVE OF THE CITY OR ANY REPRESENTATIVE OF A LOCAL GOVERNMENT WHO REQUESTS ENTRY FOR PURPOSES OF INSPECTION.

DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT-OF-WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.

ADDITIONAL STABILIZATION MAY BE REQUIRED, SUCH AS PAM, MATTING, ETC. TO STABILIZE DITCHES, BERMS, AN/OR EMBANKMENTS.

DENUDED AREA SUMMARY
TOTAL DENUDED AREA: 29.83 ACRES

PHASE 2 LOT CLEARING.
– 19.73 ACRES

SEE SHEET 24 FOR TEMP. DIVERSION DITCH DETAIL AND CHART

PHASE 2 LOT CLEARING WILL BE MASS GRADED. LOTS TO BE STABILIZED AS SOON AS POSSIBLE.

CRITICAL AREA CHECKLIST

INCLUDES CRITICAL AND PROTECTED AREAS ON MOUNTAIN ISLAND LAKE, LAKE WYLIE, AND ANY 303D LISTED STREAM

NOTES:
- POLYACRYLAMIDES IN BASINS AND SILT-SACKS AT SKIMMER OUTFLOWS MAY BE REQUIRED TO PREVENT TURBIDITY EXCEEDING THE DETERMINED BASELINE TURBIDITY FOR THE RECEIVING WATER COURSE.
- TEMPORARY GROUND COVER MUST BE PROVIDED FOR WITHIN 5 DAYS OF ANY PHASE OF GRADING.
- ALL CRITICAL AREA PLANS WILL CARRY A "PERFORMANCE RESERVATION".
- ALL LOG BOOK ENTRIES WILL BE ELECTRONICALLY SENT TO THE AREA INSPECTOR.
- GRADING SHALL BE LIMITED TO 20 ACRES IN CRITICAL OR PROTECTED AREAS.
- NO LOT GRADING IS TO BE CONDUCTED THAT CREATES FLOW OVER ANY FILL SLOPE.
- A 10' CONSTRUCTION EASEMENT IS TO BE PLACED AT TOE OF ALL SLOPES OR RETAINING WALLS.
- PRE-CONSTRUCTION AND POST-CONSTRUCTION IMPACT SURVEYS INCLUDING DEPTH MEASUREMENTS ARE TO BE CINDUCTED IN ANY RECEIVING LAKE, COVE OR POND.
- TURBIDITY MEASUREMENTS WILL BE REQUIRED AT EACH SEDIMENT BASIN OUTFLOW, UPSTREAM AND DOWNSTREAM ON THE RECEIVING STREAM AT EACH BASIN EVERY WEEK AND AFTER EVERY ½ INCH OR GREATER STORM EVENT IN CONJUNCTION WITH NPDES LOG.
- HIGH HAZARD SILT FENCE AND PERIMETER BERMS ARE REQUIRED ALONG DENUDED LIMITS WHEN ADJACENT TO A CREEK, WETLAND,LAKE, POND OR BUFFER
- ALL BASINS AND SPILLWAYS MUST BE SIZED TO TREAT THE 25-YR STORM EVENT.
- NO SEDIMENT BASIN BASIN DISCHARGES ARE PERMITTED ACROSS DENUDED AREAS (AREAS MUST BE STABILIZED AND OR ARMORED).

NOTE:
RETAINING WALLS AND TOE OF SLOPE TO BE LOCATED NO CLOSER THAN 10 FEET FROM TREE SAVE AREA LIMITS

LEGEND
- *CB – CATCH BASIN*
- *SB – SPLITTER BOX*
- *DCB – DOUBLE CATCH BASIN*
- *DI – DROP INLET*
- *DDI – DOUBLE DROP INLET*
- *MH – MANHOLE*
- *FES – FLARED END SECTION*
- *INV – INVERT*
- *TC– TOP OF CURB*
- *SDE– STORM DRAINAGE EASEMENT*
- *(XXX AC) DRAINAGE BASIN TO EACH STRUCTURE*
- *S.W.E.L. – STORM WATER ELEVATION LINE*

CALL NC ONE CALL SYSTEM BEFORE YOU DIG
1-800-632-4949
AVOID UTILITY DAMAGE

1) CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO BEGINNING CONSTRUCTION.
2) CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAGS, ETC., AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3) ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CMUD SPECIFICATIONS.
4) SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926 SUBPART P, OR AS AMENDED.

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

SKIMMER BASIN #6
W/ POROUS BAFFLES
SKIMMER 1.5" W/ 0.9" ORIFICE
STORAGE TOP: 630.0
BASIN BOTTOM INV: 626.0
BOTTOM DIM: CONTOUR 626.0

SKIMMER BASIN #2
W/ POROUS BAFFLES
SKIMMER 2.0" W/ 1.7" ORIFICE
STORAGE TOP: 590.0
BASIN BOTTOM INV: 586.0
BOTTOM DIM: CONTOUR 586.0

RISER BASIN #1
W/ SKIMMER AND POROUS BAFFLES
SKIMMER: 2" W/ 1.9" ORIFICE
STORAGE TOP: 596.0
BASIN BOTTOM INVERT: 591.0
BOTTOM DIM : CONTOUR 590.0

SKIMMER BAS
W/ POROUS BAFFL
SKIMMER 2" W/ 1.6
STORAGE TOP: 600
BASIN BOTTOM INV
BOTTOM DIM: CONTO

TREE SAVE AREA
ORANGE TREE PROTECTION FENCING(TYP.)
DENUDED LIMITS
SILT FENCE (TYP.)
FIELD LOCATE SPECIAL SEDIMENT CONTROL FENCE AT LOW POINT
ORANGE PROTECTION FENCING(TYP.)
SLOPE DRAIN (TYP.)
TEMP DIVERSION #6
2.10 AC.
16.85 AC.
10.95 AC.
1.02 AC.
SPILLWAY
STOP PIPE ABOVE RISER BASIN AND DIRECT FLOW INTO RISER BASIN
TEMPORARY 18" HDPE
FOREBAY
BAFFLES
RETAINING WALL
SILT FENCE (TYP.)
TEMP. CONSTRUCTION ENTRANCE– 2"–3" COURSE AGGREGATE, 6" DEEP, 18' WIDE & 100' LONG
RISER BASIN #1 TO BE CLOSED OUT TO COMPLETE CONSTRUCTION OF MONTAGE LANE
ORANGE TREE PROTECTION FENCING(TYP.) CLDSM 40.02 ESTABLISH AND CALL FOR INSPECTION PRIOR TO GRADING
TEMP. CONSTRUCTION ENTRANCE– 2"–3" COURSE AGGREGATE, 6" DEEP, 18' WIDE & 100' LONG
ORANGE PROTECTION FENCING(TYP.) CLDSM 40.02 ESTABLISH AND CALL FOR INSPECTION PRIOR TO GRADING

SNUG HARBOR 60' PUBLIC R/W S.R. 1336
EXISTING 60' PUBLIC R/W PER MB 17-510 TO BE ABANDONED BEFORE AFFECTED LOTS ARE RECORED
GOLF CART EASEMENT MB 38-805
Snug Harbor Rd
MONTAGE LANE (PRIVATE)
SARANTALAN (PRIVATE)
LUVERA LAN
CIMARRON HILLS LANE
NOW OR FORMERLY TIMBERLAKE GOLF CLUB L DEED: 22328-793 TAX #: 217-161-02
TAX #: 217-161-02

*THIS PLAN IS A **FINAL DRAWING–NOT RELEASED FOR CONSTRUCTION***
UNLESS INITIALLED/DATED AS APPROVED:
APPROVED: _____ / _____
INITIALS / DATE

NO.	DATE	REVISION	BY
3	8/31/16	REVISED LOT 85, RETAINING WALL & MONTAGE LANE (PRIVATE)	ZNH
2	3/21/16	REVISED HW 62 – HW 66 AND HW 59 – 61	WKD
1	10/1/15	PER EROSION CONTROL COMMENTS	WKD

SHEET TITLE
EROSION CONTROL PLAN #2

PROJECT
PALISADES TRACT 3 PHASE 2
STEELE CREEK TWSP, MECK. CO., N.C.(CHARLOTTE ETJ)
FOR: STANDARD PACIFIC OF THE CAROLINAS, LLC

PROJECT NO.
SCALE 1"=60'
DATE 4/20/15
DRAWN BY BTG
CHECKED BY MAH
DRAWING NO. *242-36*
SHT 15 OF 31 SHTS

SEAL 14906 — ENGINEER — MARC ANTHONY HOULE — 11/7/16

YARBROUGH-WILLIAMS & HOULE, INC.
Planning ○ Surveying ○ Engineering
(physical) 720 Windsor Oak Court Charlotte, North Carolina, 28273 704.556.1990
(mailing) P.O. Box 1198 Pineville, North Carolina, 28134 704.556.0505(fax)
NC Corporate Registration #C-0475

P:\StormDwg\PALISADES\CONSTRUCTION\TRACT 3 PHASE 2\PH 2 CIVIL PLANS.dwg, 12/6/2016 8:19:30 AM