

PHIFER CREST SUBDIVISION PLAN REVISION

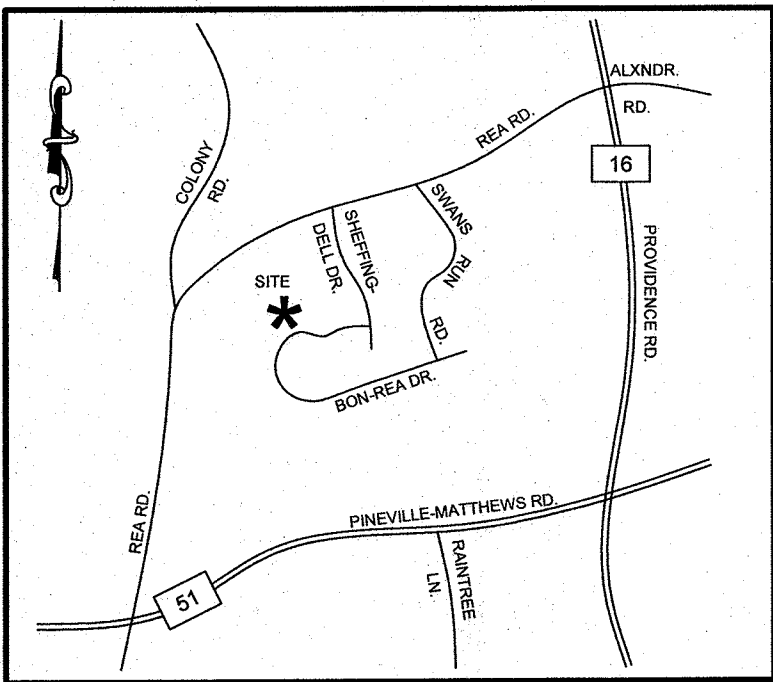
CHARLOTTE, NORTH CAROLINA

PREPARED FOR :

PHIFER CREST, LLC

10801 Johnston Road, Suite 127
Charlotte, NC 28226

August 13, 2014



VICINITY MAP - N.T.S.



R. Joe Harris & Associates, P.L.L.C.

Engineering • Land Surveying • Planning
Management

1698 W. Hwy 160, Suite 130, Fort Mill, SC 29708 (803) 802-1799 Fax: (803) 802-0886



ENGINEERING

PCO / DETENTION / DRAINAGE PLAN

EROSION CONTROL

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

URBAN FORESTRY

TREE ORDINANCE

CDOT

APPROVED

By Brendan Smith (bmsmith@charlottenc.gov) at 11:53 am, Sep 16, 2014

APPROVED

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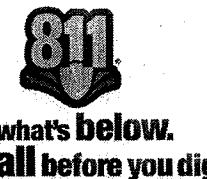
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DA-1	STORM DRAINAGE AREA

Revision

APPROVED FOR
CONSTRUCTION

CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT
By: Joshua Weaver 9-11-2014



Engineer:



R. Joe Harris & Associates, P.L.L.C.

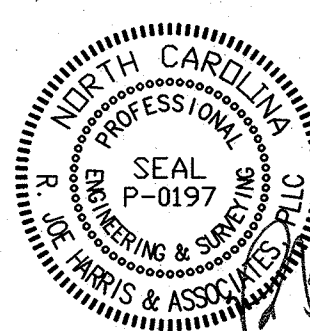
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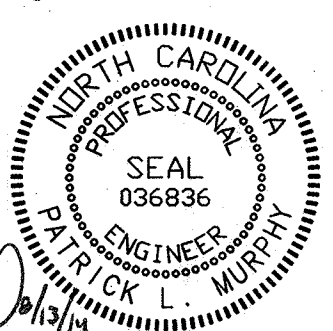
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Corporate Seal



Engineer's Seal



Project Manager

P. Murphy

Department Manager

B. Pridemore

Print/Plot Date

August 13, 2014

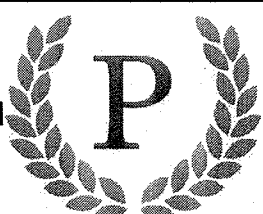
Client

PHIFER CREST, LLC

10801 JOHNSTON ROAD, SUITE 127
CHARLOTTE, NC 28226
P: (980) 406-3818

Project:

PHIFER CREST
SUBDIVISION PLAN REVISION
CHARLOTTE, NC



Phifer Crest

Drawing Title:

COVER SHEET

Project No.

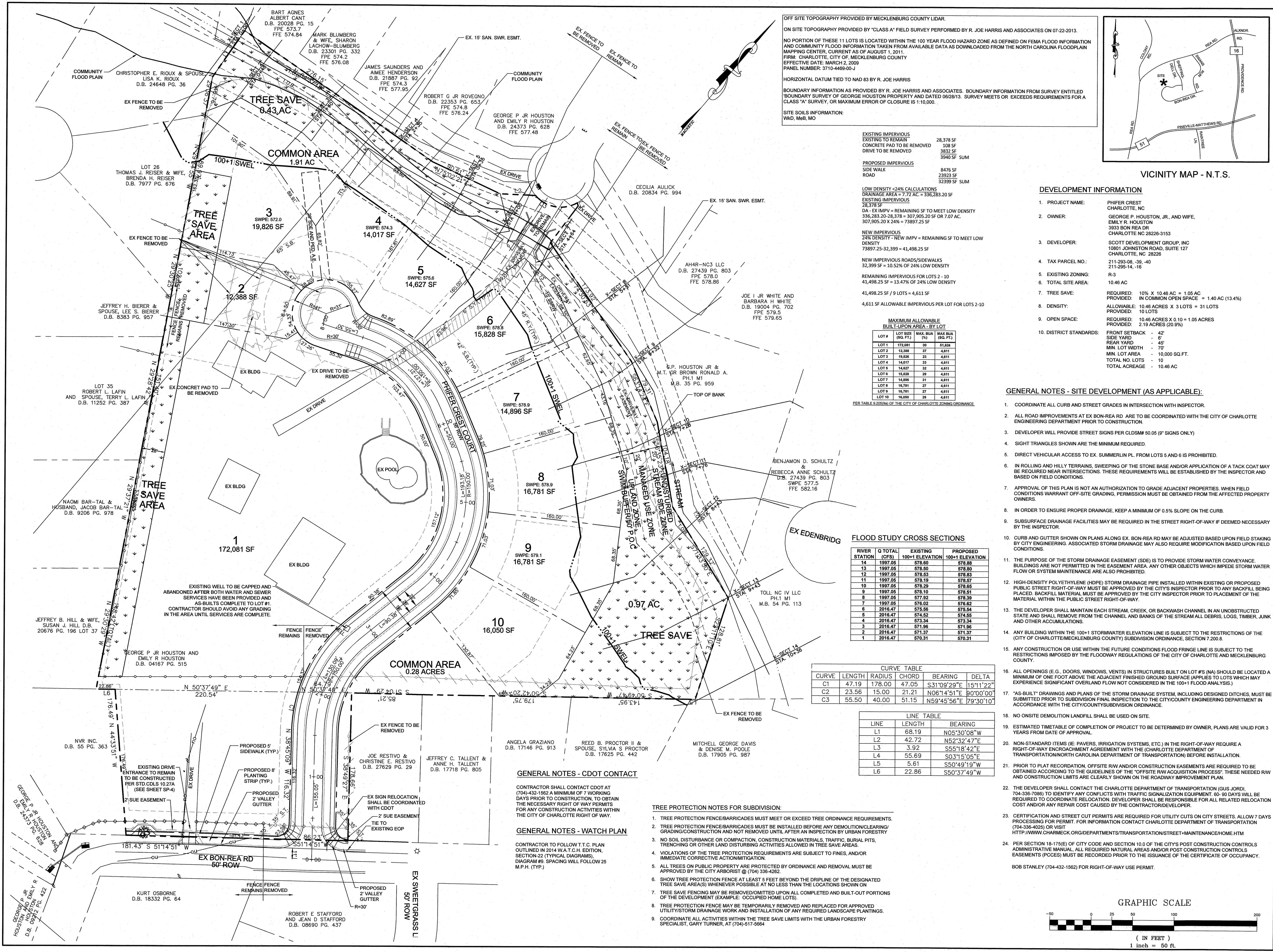
1816

DWG File Name:

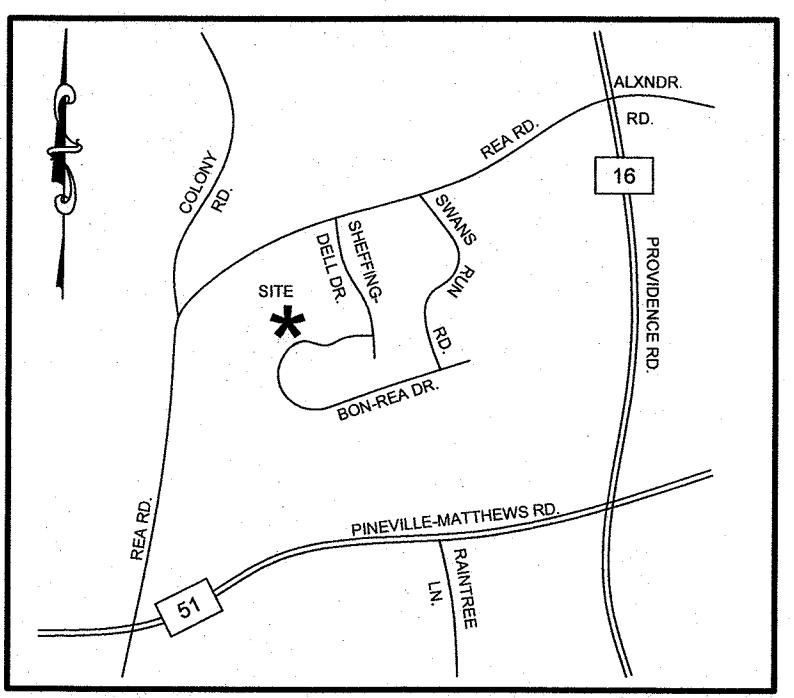
1816_SITE

Drawing No.

COVER



OFF SITE TOPOGRAPHY PROVIDED BY MECKLENBURG COUNTY LIDAR.
ON SITE TOPOGRAPHY PROVIDED BY "CLASS A" FIELD SURVEY PERFORMED BY R. JOE HARRIS AND ASSOCIATES ON 07-22-2013.
NO PORTION OF THESE 11 LOTS IS LOCATED WITHIN THE 100 YEAR FLOOD HAZARD ZONE AS DEFINED ON FEMA FLOOD INFORMATION AND COMMUNITY FLOOD INFORMATION TAKEN FROM AVAILABLE DATA AS DOWNLOADED FROM THE NORTH CAROLINA FLOODPLAIN FIRM. CHARLOTTE, CITY OF MECKLENBURG COUNTY
EFFECTIVE DATE: MARCH 2, 2009
PANEL NUMBER: 3710-4468-00-J
HORIZONTAL DATUM TIED TO NAD 83 BY R. JOE HARRIS
BOUNDARY INFORMATION AS PROVIDED BY R. JOE HARRIS AND ASSOCIATES. BOUNDARY INFORMATION FROM SURVEY ENTITLED "BOUNDARY SURVEY OF GEORGE HOUSTON PROPERTY AND DATED 06/28/13. SURVEY MEETS OR EXCEEDS REQUIREMENTS FOR A CLASS "A" SURVEY, OR MAXIMUM ERROR OF CLOSURE IS 1:10,000.
SITE SOILS INFORMATION:
Wkd, Mb, Mo



VICINITY MAP - N.T.S.

EXISTING IMPERVIOUS	28,378 SF
EXISTING TO REMAIN	108 SF
CONCRETE PAD TO BE REMOVED	3832 SF
DRIVE TO BE REMOVED	3940 SF SUM
PROPOSED IMPERVIOUS	
SIDE WALK	8476 SF
ROAD	23923 SF
	32399 SF SUM
LOW DENSITY <24% CALCULATIONS	
DRAINAGE AREA = 7.72 AC = 336,283.20 SF	
EXISTING IMPERVIOUS	28,378 SF
DA - EX IMPV = REMAINING SF TO MEET LOW DENSITY	336,283.20 - 28,378 = 307,905.20 SF OR 7.07 AC.
307,905.20 X 24% = 73897.25 SF	
NEW IMPERVIOUS	
24% DENSITY - NEW IMPV = REMAINING SF TO MEET LOW DENSITY	73897.25 - 32,399 = 41,498.25 SF
NEW IMPERVIOUS ROADS/SIDEWALKS	32,399 SF = 10.52% OF 24% LOW DENSITY
REMAINING IMPERVIOUS FOR LOTS 2 - 10	41,498.25 SF = 13.47% OF 24% LOW DENSITY
41,498.25 SF / 9 LOTS = 4,611 SF	
4,611 SF ALLOWABLE IMPERVIOUS PER LOT FOR LOTS 2-10	

LOT #	LOT SIZE (SQ. FT.)	MAX. BUA (%)	MAX. BUA (SQ. FT.)
LOT 1	172,081	30	51,624
LOT 2	12,388	37	4,611
LOT 3	19,826	23	4,611
LOT 4	14,017	33	4,611
LOT 5	14,627	32	4,611
LOT 6	14,628	29	4,611
LOT 7	14,896	31	4,611
LOT 8	16,781	27	4,611
LOT 9	16,781	27	4,611
LOT 10	16,050	29	4,611

PER TABLE 9.205(b) OF THE CITY OF CHARLOTTE ZONING ORDINANCE

FLOOD STUDY CROSS SECTIONS

RIVER STATION	Q TOTAL (CFS)	EXISTING 100+1 ELEVATION	PROPOSED 100+1 ELEVATION
14	1997.05	578.80	578.80
13	1997.05	578.50	578.80
12	1997.05	578.53	578.83
11	1997.05	578.19	578.57
10	1997.05	578.29	578.65
9	1997.05	578.10	578.51
8	1997.05	577.92	578.39
7	1997.05	576.02	576.62
6	2016.47	575.56	575.54
5	2016.47	574.52	574.55
4	2016.47	573.34	573.34
3	2016.47	571.96	571.96
2	2016.47	571.37	571.37
1	2016.47	570.31	570.31

CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	47.19	178.00	47.05	S31°09'29"E	15°11'22"
C2	23.56	15.00	21.21	N06°14'51"E	90°00'00"
C3	55.50	40.00	51.15	N59°45'56"E	79°30'10"

LINE	LENGTH	BEARING
L1	68.19	N05°30'08"W
L2	42.72	N52°32'47"E
L3	3.92	S55°18'42"E
L4	55.69	S03°15'05"E
L5	5.61	S50°49'19"W
L6	22.86	S50°37'49"W

GENERAL NOTES - CDOT CONTACT

CONTRACTOR SHALL CONTACT CDOT AT (704) 432-1562 A MINIMUM OF 7 WORKING DAYS PRIOR TO CONSTRUCTION, TO OBTAIN THE NECESSARY RIGHT OF WAY PERMITS FOR ANY CONSTRUCTION ACTIVITIES WITHIN THE CITY OF CHARLOTTE RIGHT OF WAY.

GENERAL NOTES - WATCH PLAN

CONTRACTOR TO FOLLOW T.T.C. PLAN OUTLINED IN 2014 W.A.T.C.H. EDITION, SECTION 22 (TYPICAL DIAGRAMS), DIAGRAM #9. SPACING WILL FOLLOW 25 M.P.H. (TYP.)

TREE PROTECTION NOTES FOR SUBDIVISION:

- TREE PROTECTION FENCE/BARRICADES MUST MEET OR EXCEED TREE ORDINANCE REQUIREMENTS.
- TREE PROTECTION FENCE/BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION AND NOT REMOVED UNTIL AFTER AN INSPECTION BY URBAN FORESTRY
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCING OR OTHER LAND DISTURBING ACTIVITIES ALLOWED IN TREE SAVE AREAS.
- VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND/OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.
- ALL TREES ON PUBLIC PROPERTY ARE PROTECTED BY ORDINANCE AND REMOVAL MUST BE APPROVED BY THE CITY ARBORIST @ (704) 336-4262.
- SHOW TREE PROTECTION FENCE AT LEAST 5 FEET BEYOND THE DRIPLINE OF THE DESIGNATED TREE SAVE AREA(S) WHENEVER POSSIBLE AT NO LESS THAN THE LOCATIONS SHOWN ON
- TREE SAVE FENCING MAY BE REMOVED/OMITTED UPON ALL COMPLETED AND BUILT-OUT PORTIONS OF THE DEVELOPMENT (EXAMPLE: OCCUPIED HOME LOTS).
- TREE PROTECTION FENCE MAY BE TEMPORARILY REMOVED AND REPLACED FOR APPROVED UTILITY/STORM DRAINAGE WORK AND INSTALLATION OF ANY REQUIRED LANDSCAPE PLANTINGS.
- COORDINATE ALL ACTIVITIES WITHIN THE TREE SAVE LIMITS WITH THE URBAN FORESTRY SPECIALIST, GARY TURNER, AT (704) 617-5664

DEVELOPMENT INFORMATION

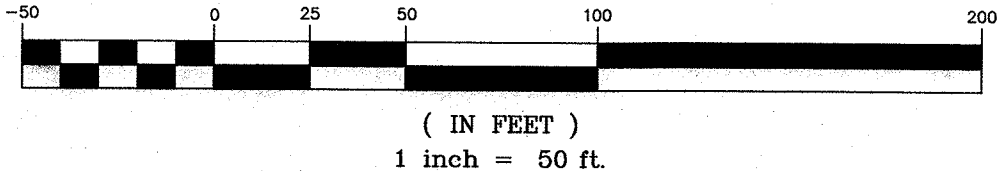
- PROJECT NAME: PHIFER CREST CHARLOTTE, NC
- OWNER: GEORGE P. HOUSTON, JR. AND WIFE, EMILY R. HOUSTON 3933 BON REA DR CHARLOTTE NC 28226-3153
- DEVELOPER: SCOTT DEVELOPMENT GROUP, INC 10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226
- TAX PARCEL NO.: 211-293-08, -39, -40 211-293-14, -16
- EXISTING ZONING: R-3
- TOTAL SITE AREA: 10.46 AC
- TREE SAVE: REQUIRED: 10% X 10.46 AC = 1.05 AC PROVIDED: IN COMMON OPEN SPACE = 1.40 AC (13.4%)
- DENSITY: ALLOWABLE: 10.46 ACRES X 3 LOTS = 31 LOTS PROVIDED: 10 LOTS
- OPEN SPACE: REQUIRED: 10.46 ACRES X 0.10 = 1.05 ACRES PROVIDED: 2.19 ACRES (20.9%)
- DISTRICT STANDARDS: FRONT SETBACK - 42' SIDE YARD - 6' REAR YARD - 45' MIN. LOT WIDTH - 70' MIN. LOT AREA - 10,000 SQ.FT. TOTAL NO. LOTS - 10 TOTAL ACREAGE - 10.46 AC

GENERAL NOTES - SITE DEVELOPMENT (AS APPLICABLE):

- COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.
- ALL ROAD IMPROVEMENTS AT EX. BON-REA RD. ARE TO BE COORDINATED WITH THE CITY OF CHARLOTTE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
- DEVELOPER WILL PROVIDE STREET SIGNS PER CLDSMM 50.05 (0.9' SIGNS ONLY)
- SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED
- DIRECT VEHICULAR ACCESS TO EX. SUMMERLIN PL. FROM LOTS 5 AND 6 IS PROHIBITED.
- IN ROLLING AND HILLY TERRAINS, SWEEPING OF THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE INSPECTOR AND BASED ON FIELD CONDITIONS.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
- IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
- SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.
- CURB AND GUTTER SHOWN ON PLANS ALONG EX. BON-REA RD. MAY BE ADJUSTED BASED UPON FIELD STAKING BY CITY ENGINEERING. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATION BASED UPON FIELD CONDITIONS.
- 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 CITY'S 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.
- THE DEVELOPER SHALL MAINTAIN 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.
- ANY BUILDING WITHIN THE 100+1 STORMWATER ELEVATION LINE IS SUBJECT TO THE RESTRICTIONS OF THE (CITY OF CHARLOTTE/MECKLENBURG COUNTY) SUBDIVISION ORDINANCE, SECTION 7.200.8.
- ANY CONSTRUCTION OR USE WITHIN THE FUTURE CONDITIONS FLOOD FRINGE LINE IS SUBJECT TO THE RESTRICTIONS IMPOSED BY THE FLOODWAY REGULATIONS OF THE CITY OF CHARLOTTE AND MECKLENBURG COUNTY.
- ALL OPENINGS (E.G., DOORS, WINDOWS, VENTS) IN STRUCTURES BUILT ON LOT #S (NA) SHOULD BE LOCATED A MINIMUM OF ONE FOOT ABOVE THE ADJACENT FINISHED GROUND SURFACE (APPLIES TO LOTS WHICH MAY EXPERIENCE SIGNIFICANT OVERLAND FLOW NOT CONSIDERED IN THE 100+1 FLOOD ANALYSIS.)
- "AS-BUILT" DRAWINGS AND PLANS OF THE STORM DRAINAGE SYSTEM, INCLUDING DESIGNED DITCHES, MUST BE SUBMITTED PRIOR TO SUBDIVISION FINAL INSPECTION TO THE CITY/COUNTY ENGINEERING DEPARTMENT IN ACCORDANCE WITH THE CITY/COUNTY SUBDIVISION ORDINANCE.
- NO ONSITE DEMOLITION LANDFILL SHALL BE USED ON SITE.
- ESTIMATED TIMETABLE OF COMPLETION OF PROJECT TO BE DETERMINED BY OWNER, PLANS ARE VALID FOR 3 YEARS FROM DATE OF APPROVAL.
- NON-STANDARD ITEMS (IE. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE CHARLOTTE DEPARTMENT OF TRANSPORTATION/NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, BEFORE INSTALLATION.
- PRIOR TO PLAT RECORDATION, OFFSITE RW AND/OR CONSTRUCTION EASEMENTS ARE REQUIRED TO BE OBTAINED ACCORDING TO THE GUIDELINES OF THE "OFFSITE RW ACQUISITION PROCESS". THESE NEEDED RW AND CONSTRUCTION LIMITS ARE CLEARLY SHOWN ON THE ROADWAY IMPROVEMENT PLAN.
- THE DEVELOPER SHALL CONTACT THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (GUS JORDI, 704-336-7066) 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 COST AND/OR ANY REPAIR COST CAUSED BY THE CONTRACTOR/DEVELOPER.
- 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
- PER SECTION 18-175(E) OF CITY CODE AND SECTION 10.0 OF THE CITY'S POST CONSTRUCTION CONTROLS ADMINISTRATIVE MANUAL, ALL REQUIRED NATURAL AREAS AND/OR POST CONSTRUCTION CONTROLS EASEMENTS (PCCES) MUST BE RECORDED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

BOB STANLEY (704-432-1562) FOR RIGHT-OF-WAY USE PERMIT.

GRAPHIC SCALE



DATE	ISSUED FOR	REV
5/1/14	1st Submittal to City of Charlotte	0
6/27/14	2nd Submittal to City of Charlotte	1
8/13/14	3rd Submittal to City of Charlotte	2

Engineer:

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Management
1088 W. Hwy 160, Suite 130, Fort Mill, S.C. 29708 P: (803) 802-1799 F: (803) 802-0956

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Corporate Seal

Engineer's Seal

Project Manager	Drawn
P. Murphy	P. Murphy
Department Manager	Checked
B. Pridemore	P. Murphy

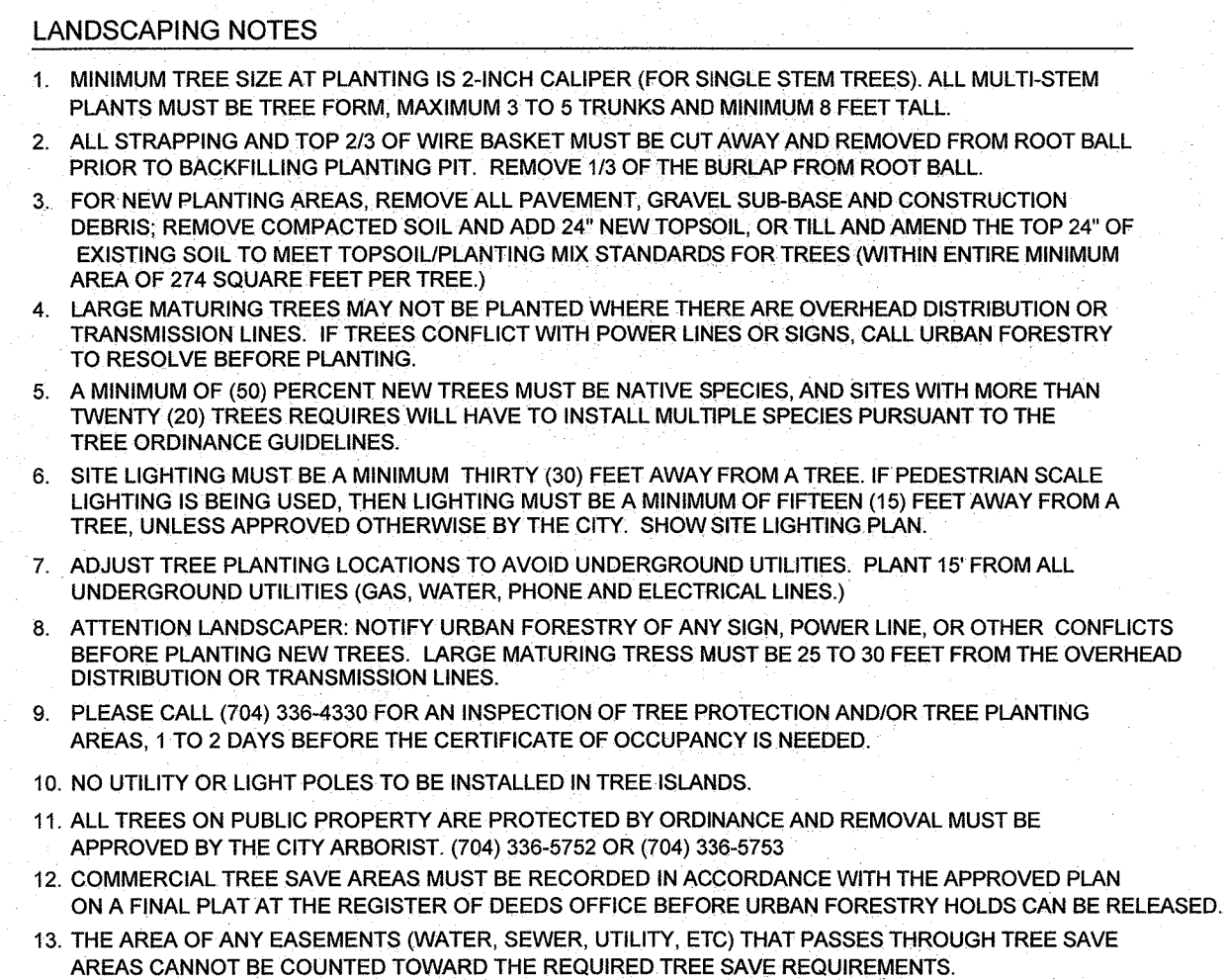
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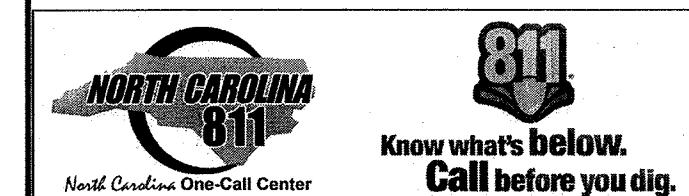
Drawing Title:
PRELIMINARY PLAT

Project No.	Drawing No.
1816	
DWG File Name:	
1816_SITE	

SP-1



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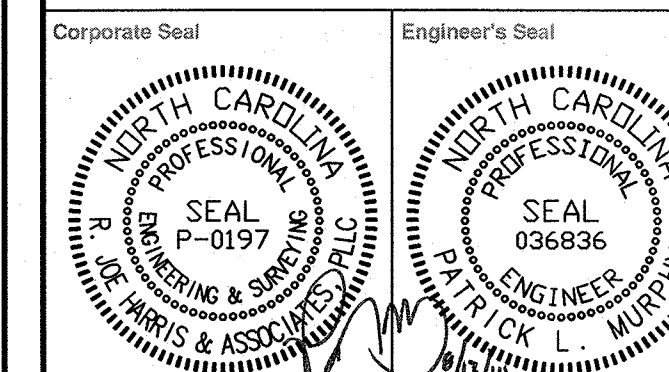
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Project Manager P. Murphy	Drawn P. Murphy
Department Manager B. Pridemore	Checked P. Murphy

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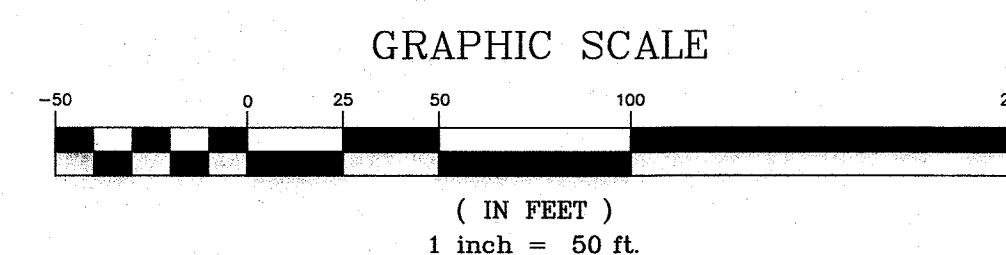
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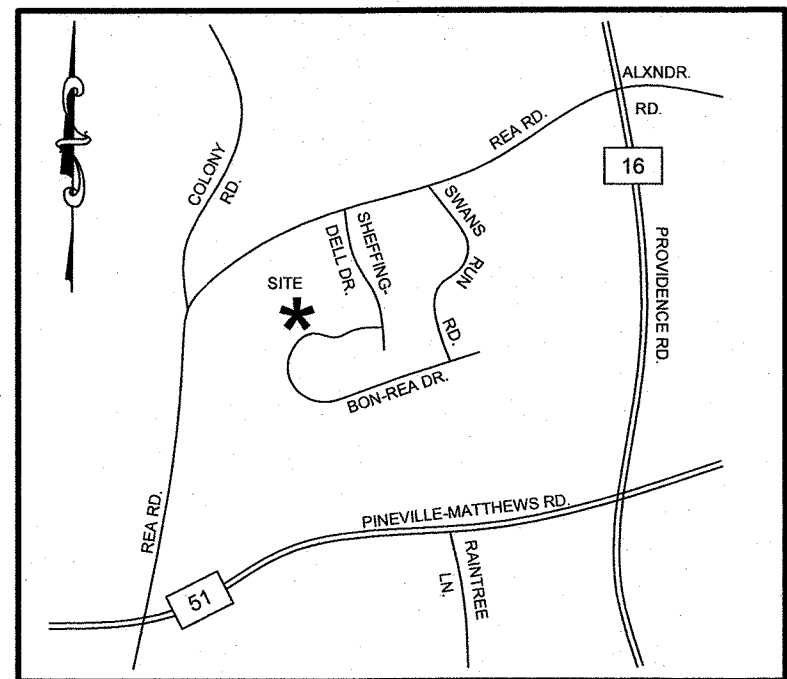
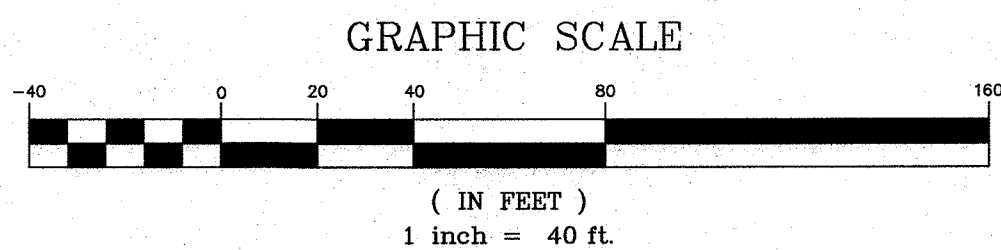
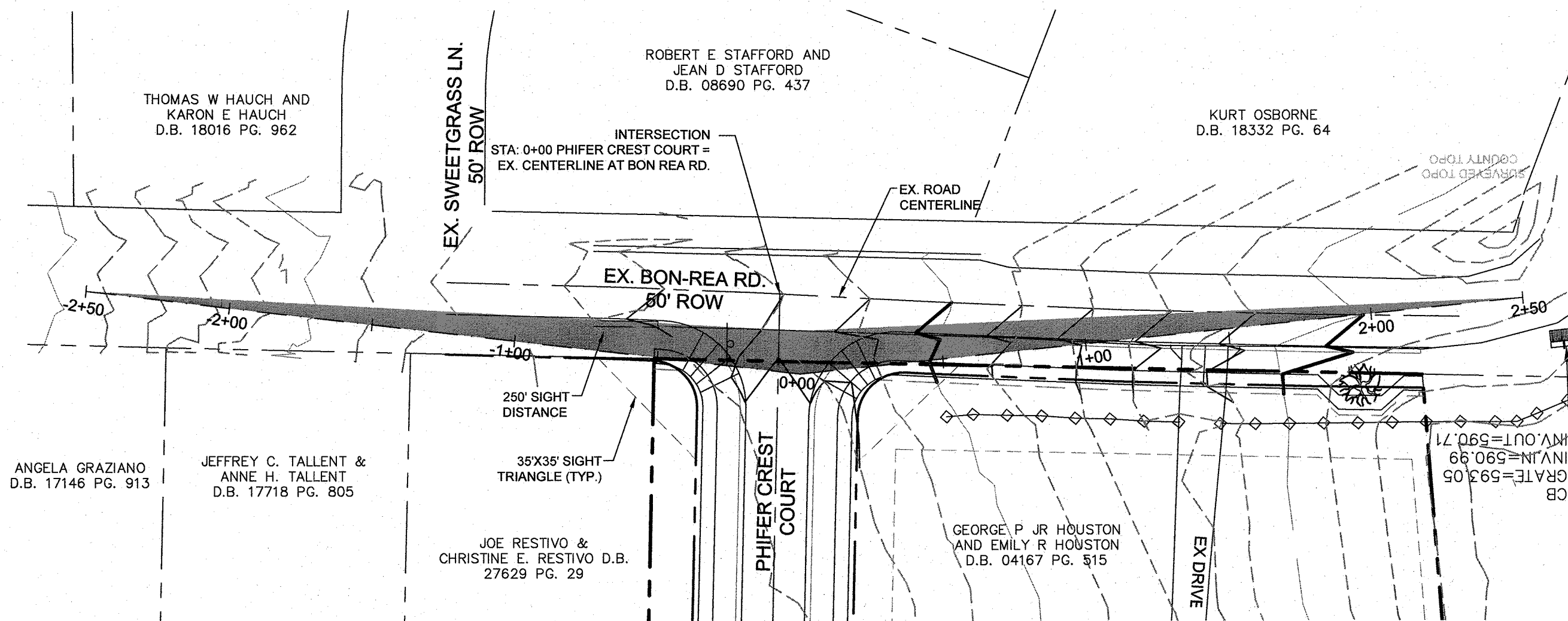
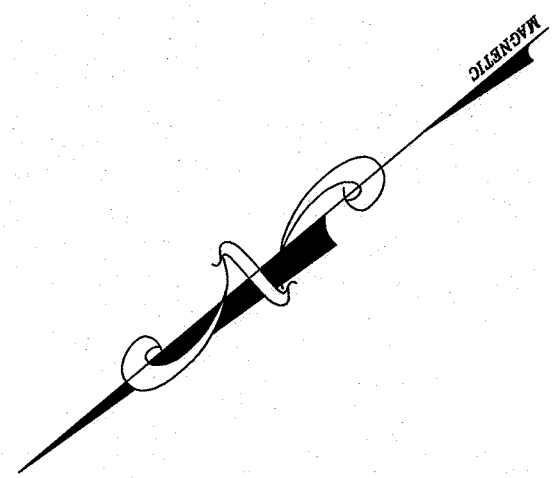


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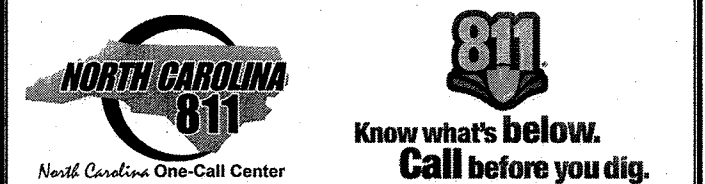
STREET TREE AND PLANTING PLAN

Project No. 1816	Drawing No.
DWG File Name: 1816 SITE	SP-2

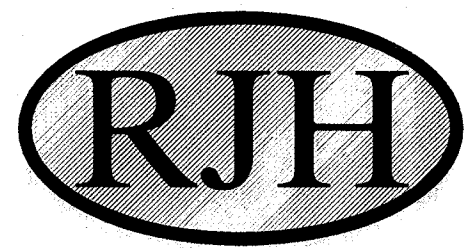




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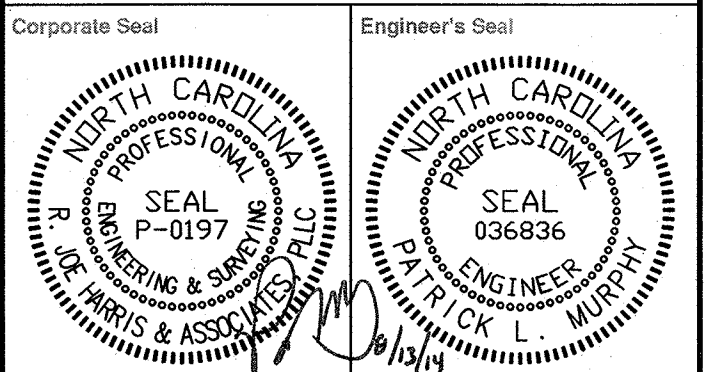
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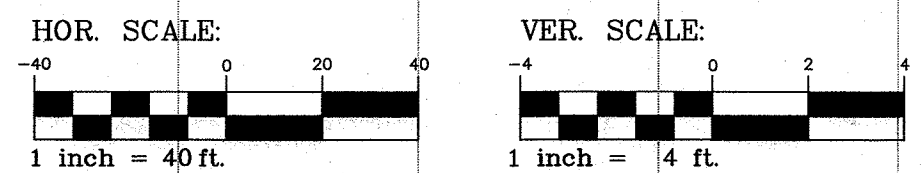
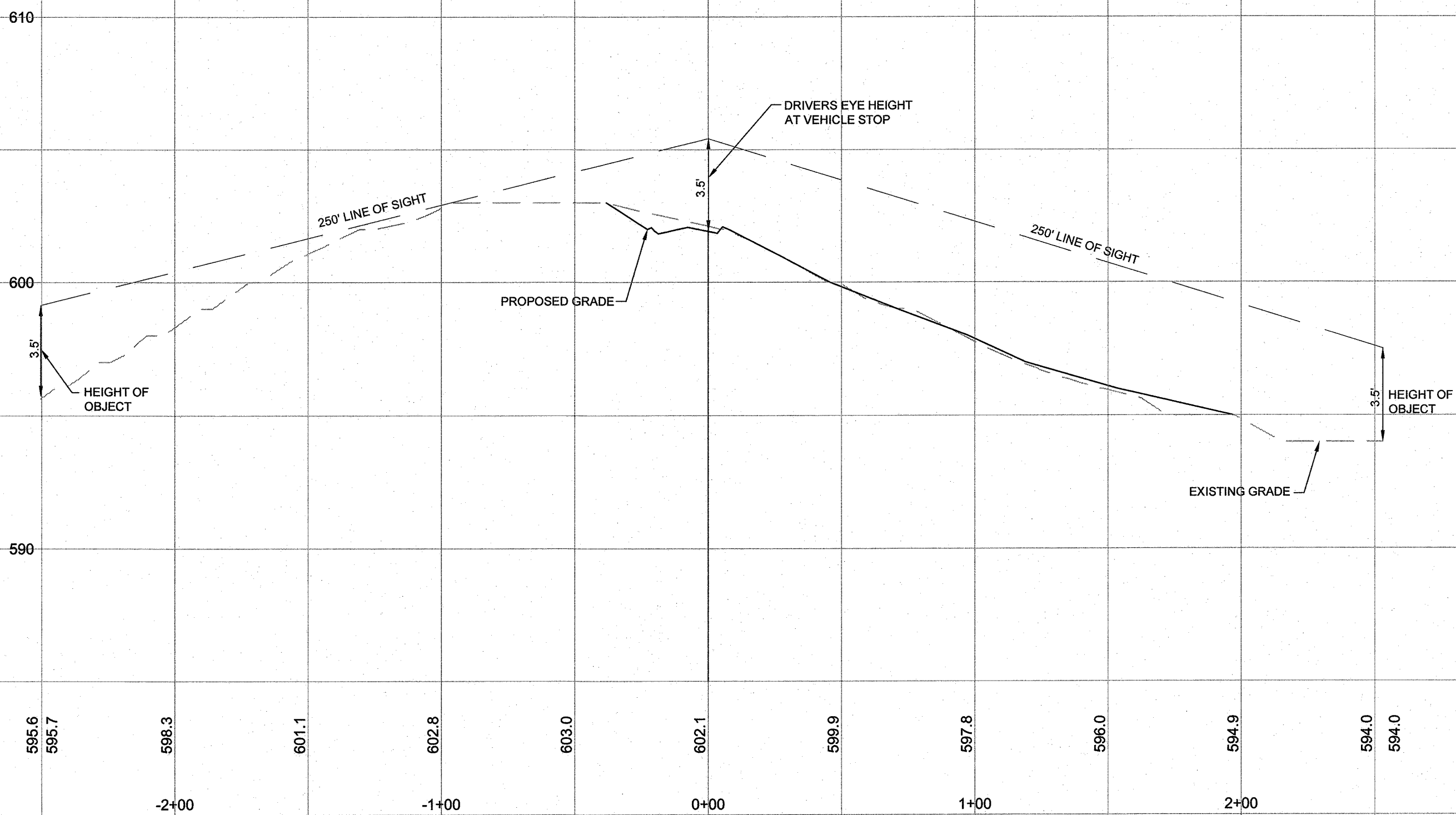
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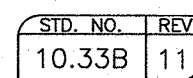
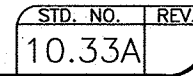
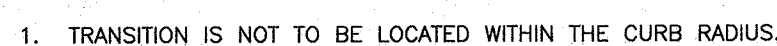
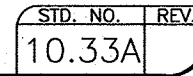
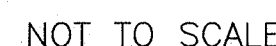
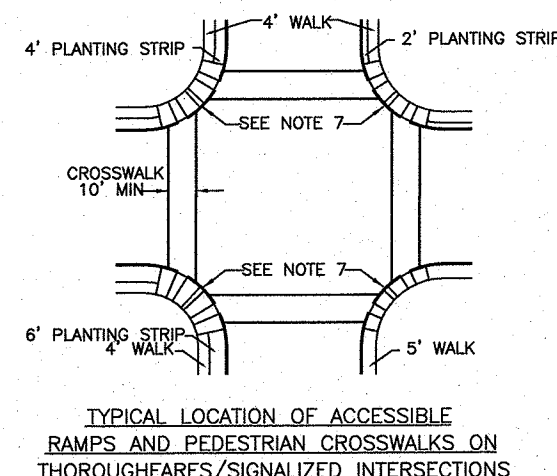
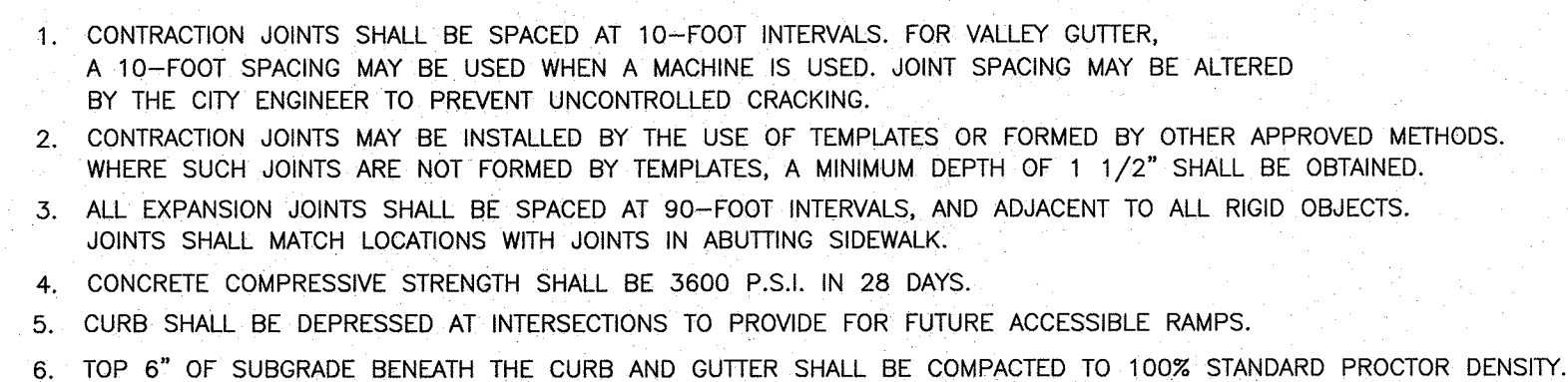
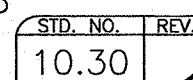
Client
PHIFER CREST, LLC
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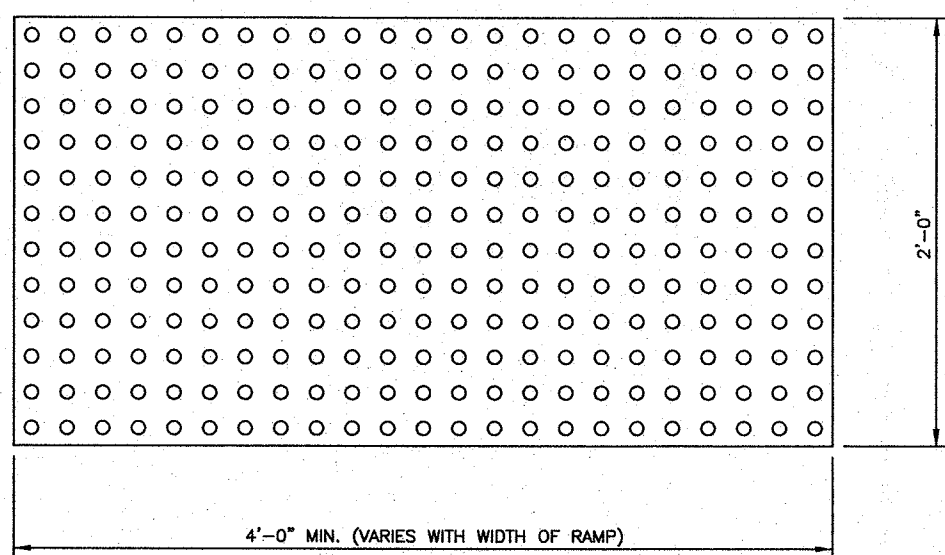
Project:
PHIFER CREST
SUBDIVISION PLAN REVISION
CHARLOTTE, NC
Phifer Crest

Drawing Title:
**SIGHT DISTANCE PLAN
AND PROFILE**

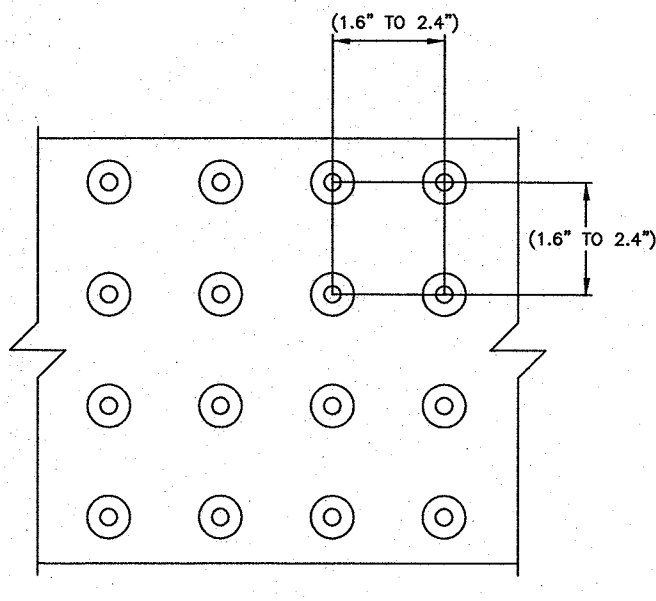
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1816	SP-3
DWG File Name:	
1816_SITE	



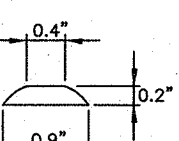




TRUNCATED DOME PLAN VIEW



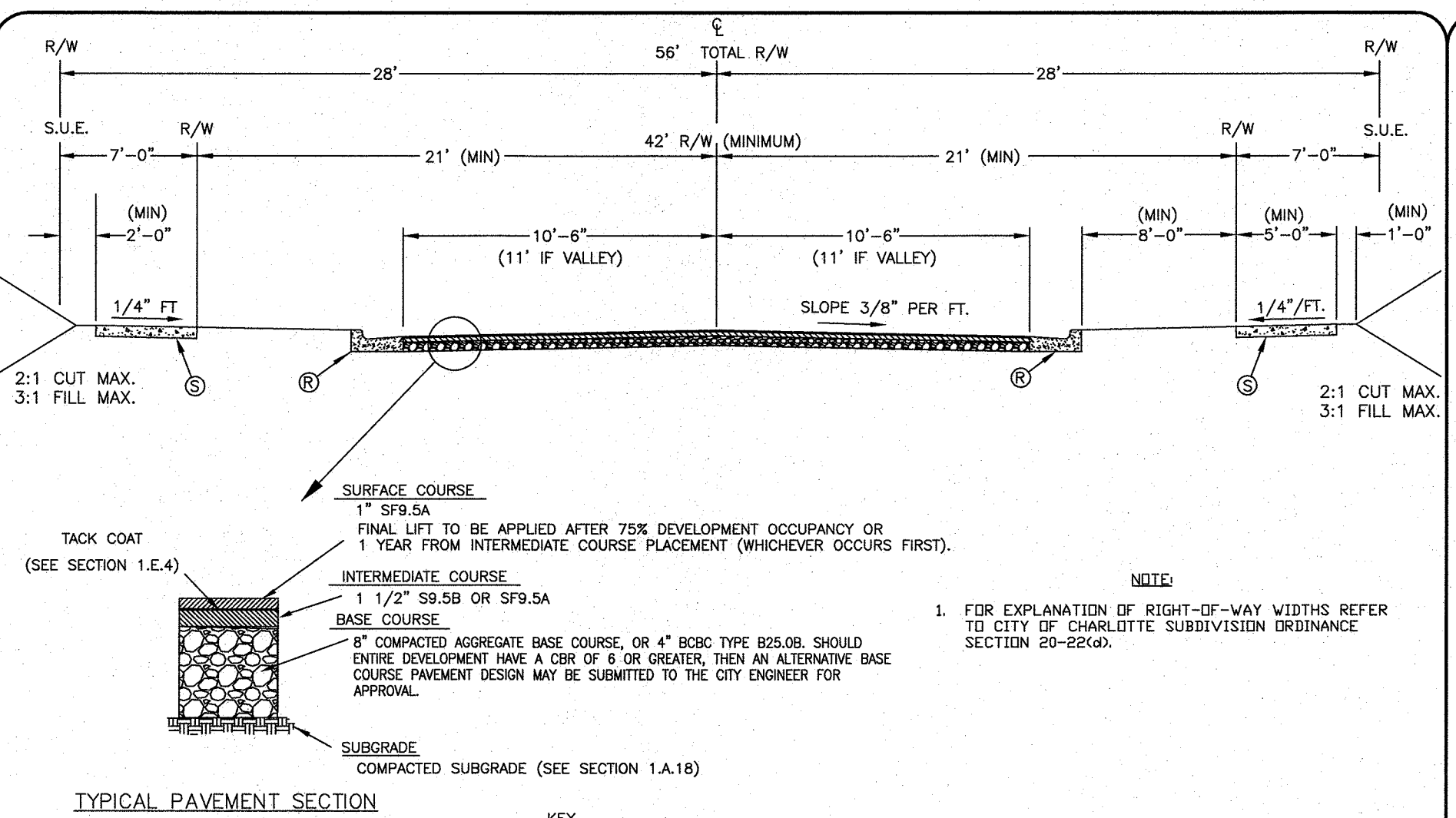
TRUNCATED DOME SPACING



TRUNCATED DOME SECTION

- NOTES:
1. ALL DETECTABLE WARNING DEVICES USED IN NEW CONSTRUCTION SHALL BE OF A RIGID PRECAST OR EMBEDDED PRODUCT APPROVED BY THE CITY ENGINEER. RETRO FIT MATS WILL ONLY BE ALLOWED ON EXISTING RAMPS WITH PRIOR APPROVAL OF THE CITY ENGINEER FOR MATERIAL TYPE AND INSTALLATION (E. RESURFACING).
 2. WIDTH OF DETECTABLE WARNING AREA SHALL BE A MINIMUM OF 4 FEET AND VARY WITH WIDTH OF RAMP.
 3. LENGTH OF DETECTABLE WARNING AREA SHALL BE 2 FEET REGARDLESS OF SECTION WIDTH.
 4. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.
 5. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
 6. DETECTABLE WARNING AREA SHALL BE COLORED BLACK IN ALL LOCATIONS EXCEPT ON TRYON STREET MALL, WHERE FRENCH GRAY IS TO BE USED.
 7. IF PAVERS ARE TO BE USED, PAVERS SHALL BE 6" THICK AND CAST FROM 5000 PSI CONCRETE.
 8. MATS ARE TO BE RIGID WITH TURN DOWN EDGES EMBEDDED IN CONCRETE TO ELIMINATE TRIP HAZARD.

NOT TO SCALE



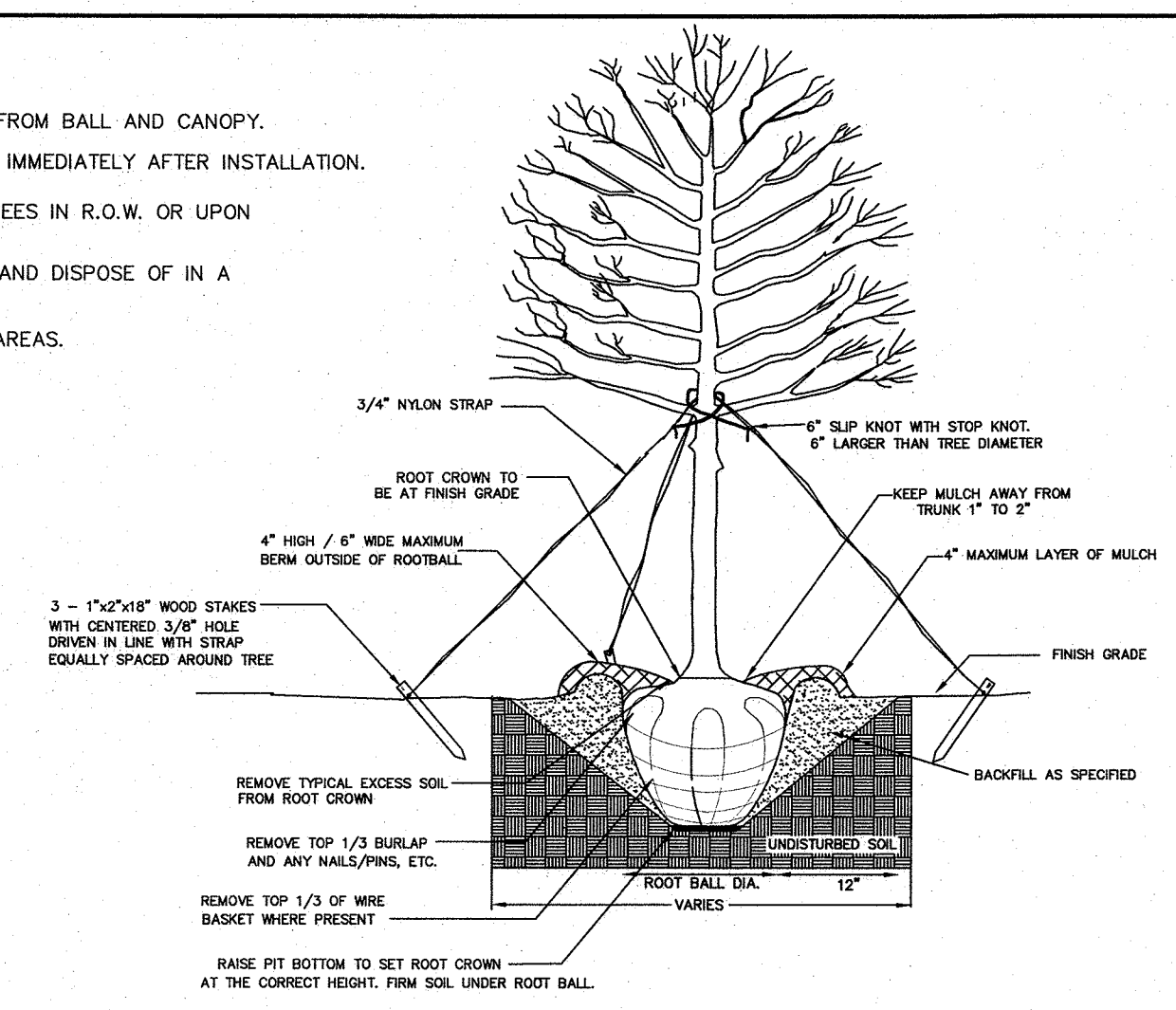
TYPICAL PAVEMENT SECTION

- KEY
- ② 2'-6" STANDARD CURB AND GUTTER OR 2'-0" VALLEY GUTTER
 - ③ 4" CONCRETE SIDEWALK

NOT TO SCALE

NOTES:

1. REMOVE WIRE AND NYLON TWINE FROM BALL AND CANOPY.
2. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.
3. STAKING IS REQUIRED FOR ALL TREES IN R.O.W. OR UPON REQUEST OF ARBORIST.
4. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
5. RESEED UNMULCHED, DISTURBED AREAS.



ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) FOR EXAMPLE:

CALIPER	HEIGHT (RANGE)	MAX. HEIGHT	MIN. ROOT BALL DIA.	MIN. ROOT BALL DEPTH
2"	12'-14'	18'	24"	16"
3"	14'-16'	18'	32"	20"

NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

TRUNCATED DOMES
PLAN AND CROSS-SECTION

REVISED 2/3/06
STD. NO. 10.35B
REV.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

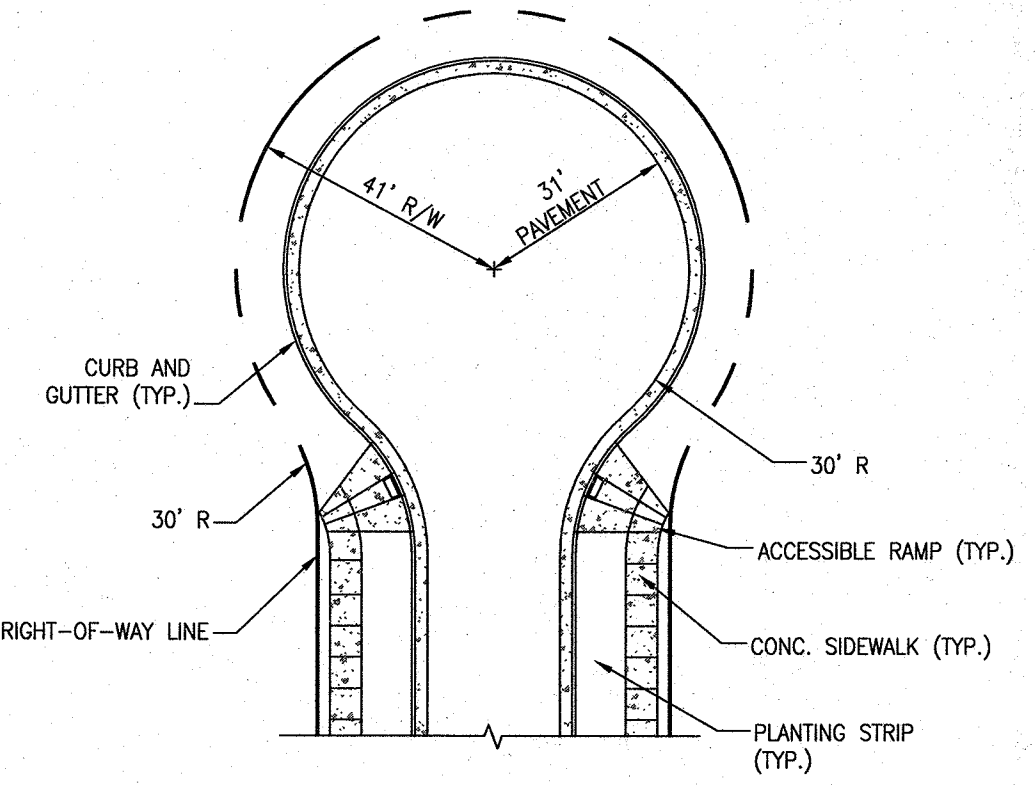
LOCAL RESIDENTIAL MEDIUM STREET
TYPICAL SECTION

STD. NO. U-02
REV. 6

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

TREE PLANTING
(FOR SINGLE AND MULTI-STEM TREES)

STD. NO. 40.01
REV.

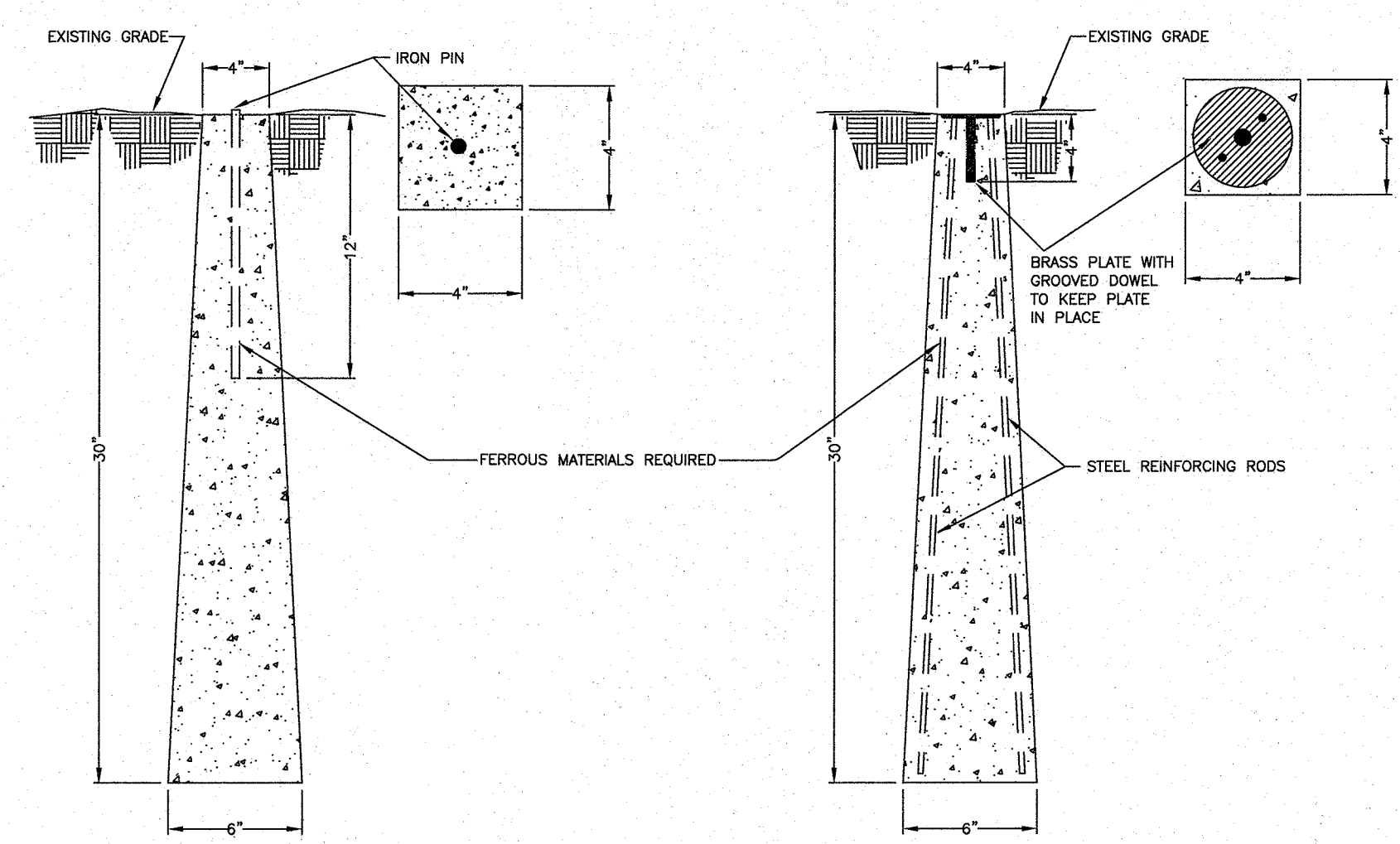


STANDARD CUL-DE-SAC

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.

NOT TO SCALE



NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

CITY OF CHARLOTTE AND ETJ RESIDENTIAL
CUL-DE-SAC DETAIL

STD. NO. 11.16
REV. 6

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

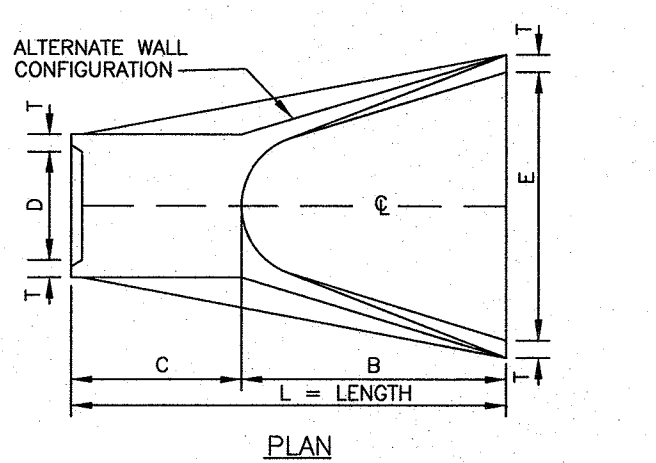
TYPICAL CONCRETE CONTROL MONUMENT

STD. NO. 50.03
REV.

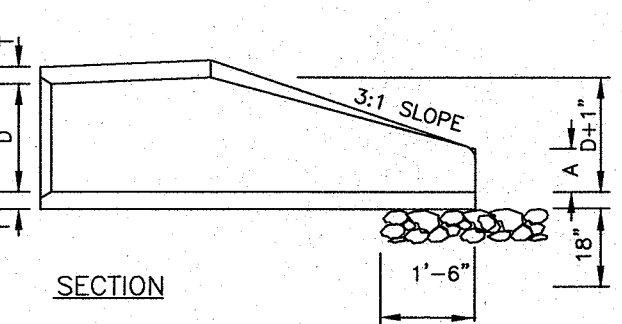
CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

ASPHALT CURB PLACEMENT AT
EXISTING TREES

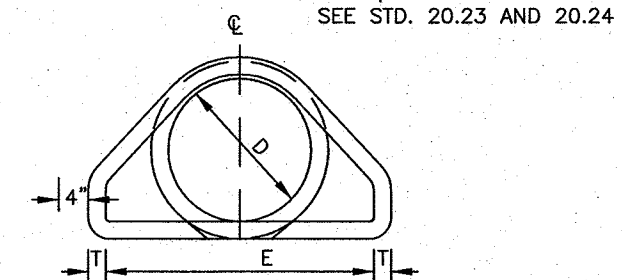
STD. NO. 40.13
REV.



PLAN



SECTION



END VIEW

D	T	A	B	C	E	L	WT.
12"	2'-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	730
15"	2'-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	730
18"	2'-1/2"	8"	2'-3"	3'-10"	3'-0"	6'-1"	1190
24"	3"	10"	3'-8"	2'-6"	4'-0"	6'-2"	1770
30"	3'-1/2"	1'-0"	4'-6"	1'-8"	5'-0"	6'-2"	2380
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	6'-2"	3320
42"	4'-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	6'-2"	3920
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	6'-2"	7470
54"	5'-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	6'-4"	8810
60"	6"	2'-6"	5'-0"	3'-3"	8'-0"	6'-3"	11190
66"	6'-1/2"	3'-0"	6'-0"	2'-3"	8'-6"	6'-3"	12530
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	6'-3"	13680

GENERAL NOTES:

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

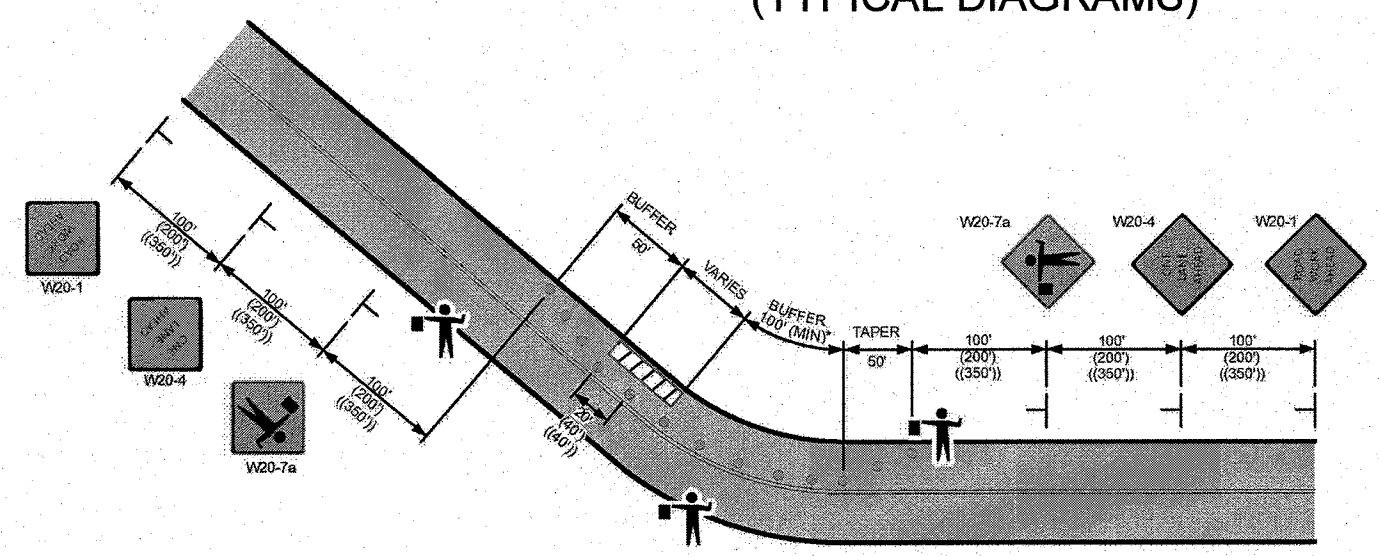
NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

FLARED END SECTION
12" THRU 72" PIPE

STD. NO. 20.22
REV. 1

DIAGRAM 9
2 WAY, ONE LANE TRAFFIC
(FLAGGER CONTROL)



- LEGEND
- CONES/DRUMS
 - TYPE III BARRICADE
 - SIGNS
 - WORK AREA
 - FLAGGER

NOTES:

1. SPACING - 25 YARDS OR LESS (SPACING) - 25 & 35 YARDS (SPACING) - 40 YARDS OR MORE
2. "BUFFER" SHALL EXTEND BACK TO THE BEGINNING OF THE CURVE OR HILL TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE APPROACHING TRAFFIC.
3. ON LOW VOLUME, RESIDENTIAL STREETS WHERE THERE IS ADEQUATE VISIBILITY, A SINGLE FLAGGER POSITIONED AS SHOWN MAY BE ACCEPTABLE.
4. IF WORK IS WITHIN 50' OF AN INTERSECTION SEE DIAGRAM 10 OR 11.
5. IF BIKE LANE IS PRESENT THE PROPER CLOSURE IS REQUIRED USING SIGNS AND CONES REFER TO DIAGRAM 31.

66

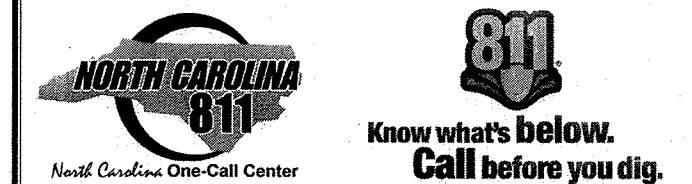
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CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

FLARED END SECTION
12" THRU 72" PIPE

STD. NO. 20.22
REV. 1

DATE	ISSUED FOR	REV
5/1/14	1st Submittal to City of Charlotte	0
6/27/14	2nd Submittal to City of Charlotte	1
08/13/14	3rd Submittal to City of Charlotte	2



Engineer:

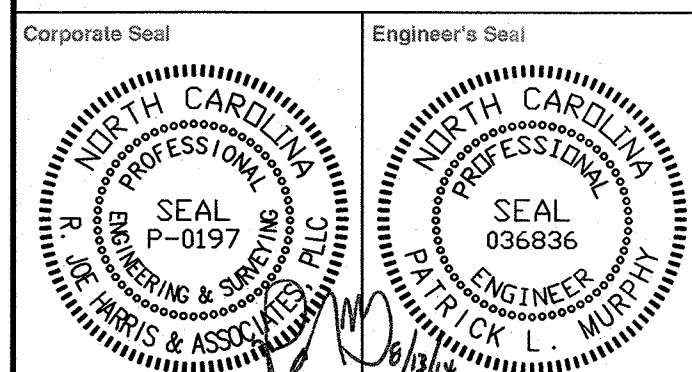


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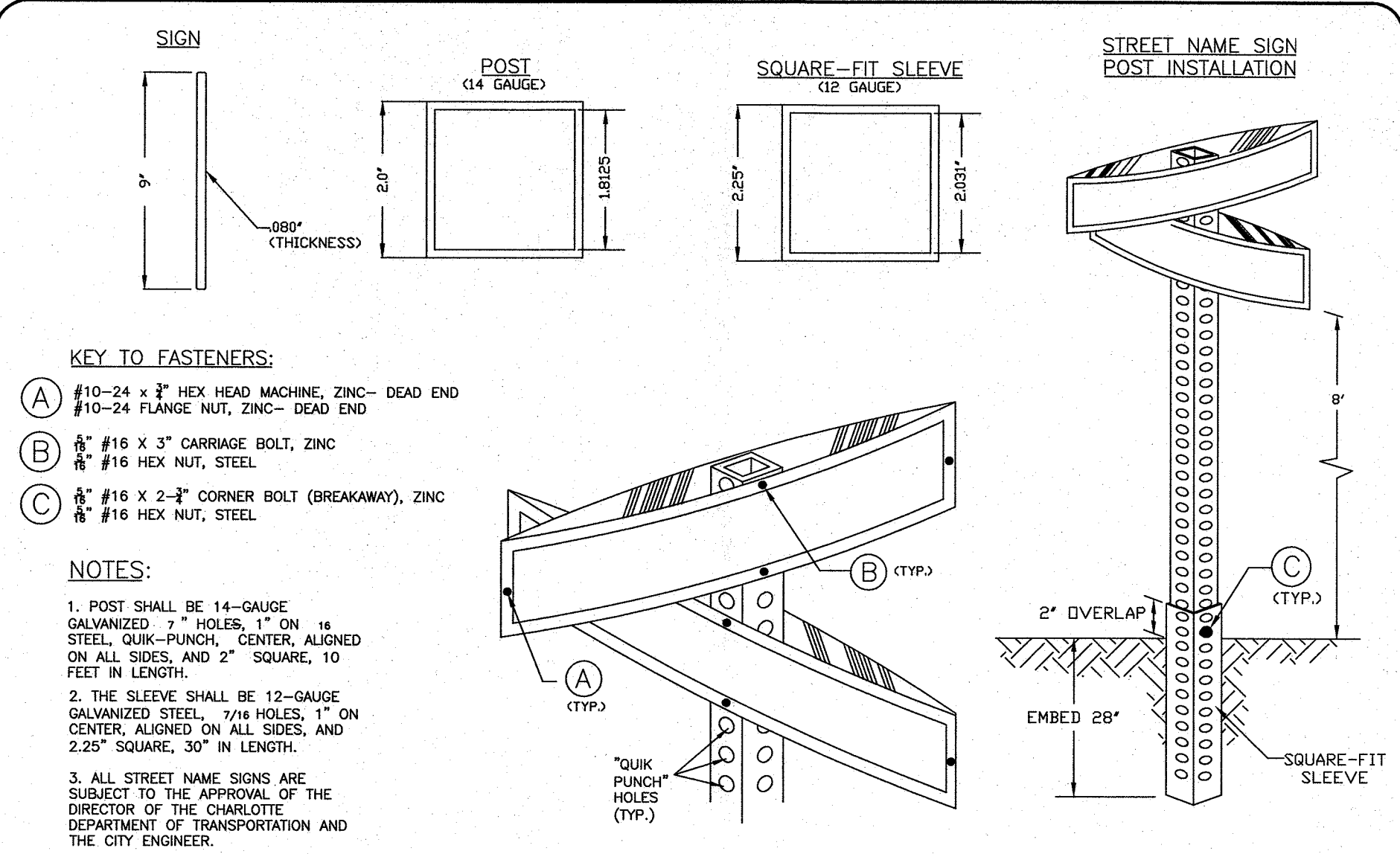
Project Manager P. Murphy	Drawn P. Murphy
Department Manager B. Pridemore	Checked P. Murphy
Print/Plot Date August 13, 2014	

Client
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P: (980) 406-3818

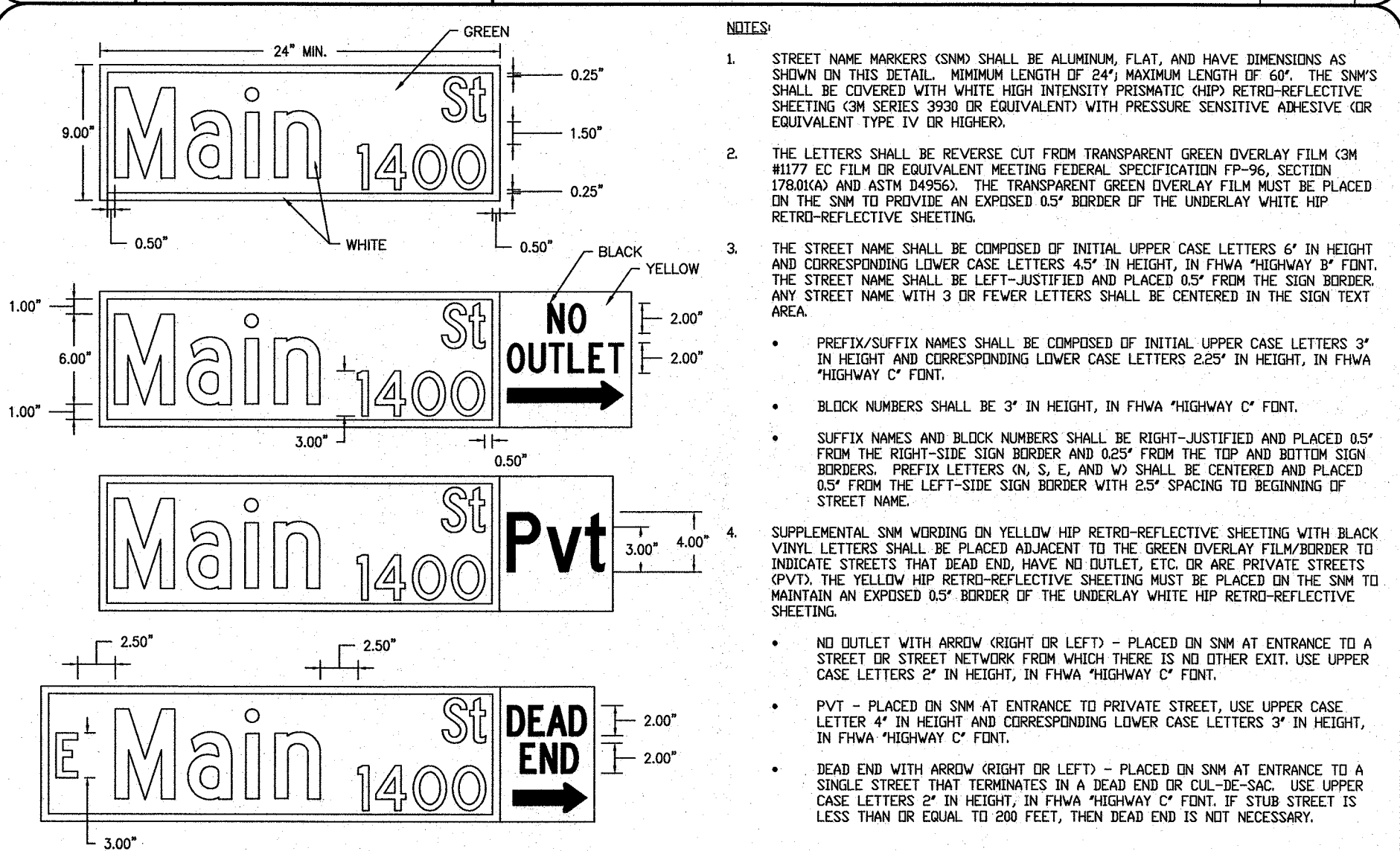
Project:
PHIFER CREST
SUBDIVISION PLAN REVISION
CHARLOTTE, NC

Drawing Title:
**SITE PLAN
DETAILS**

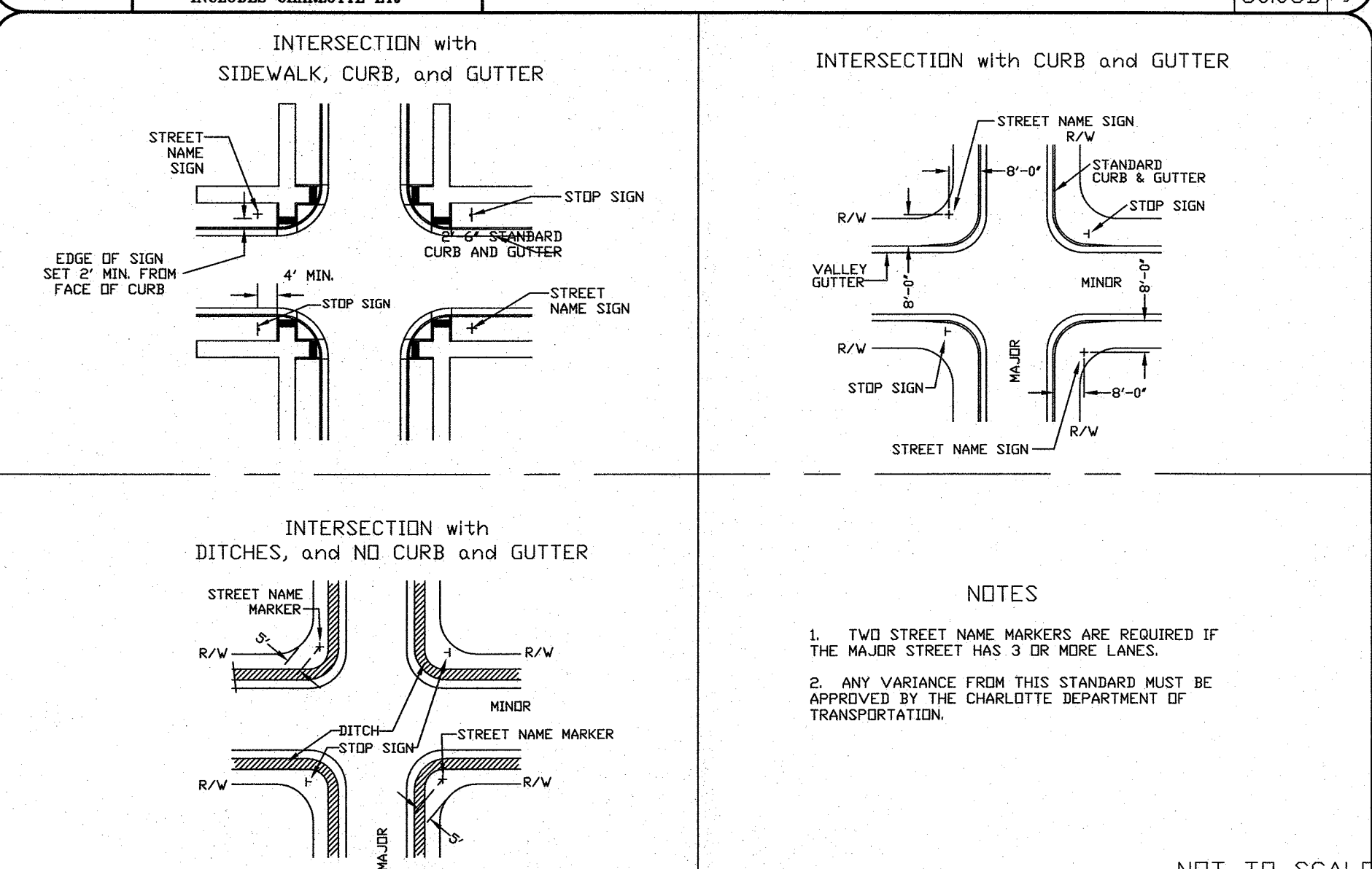
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DWG File Name: 1816 DETAIL	



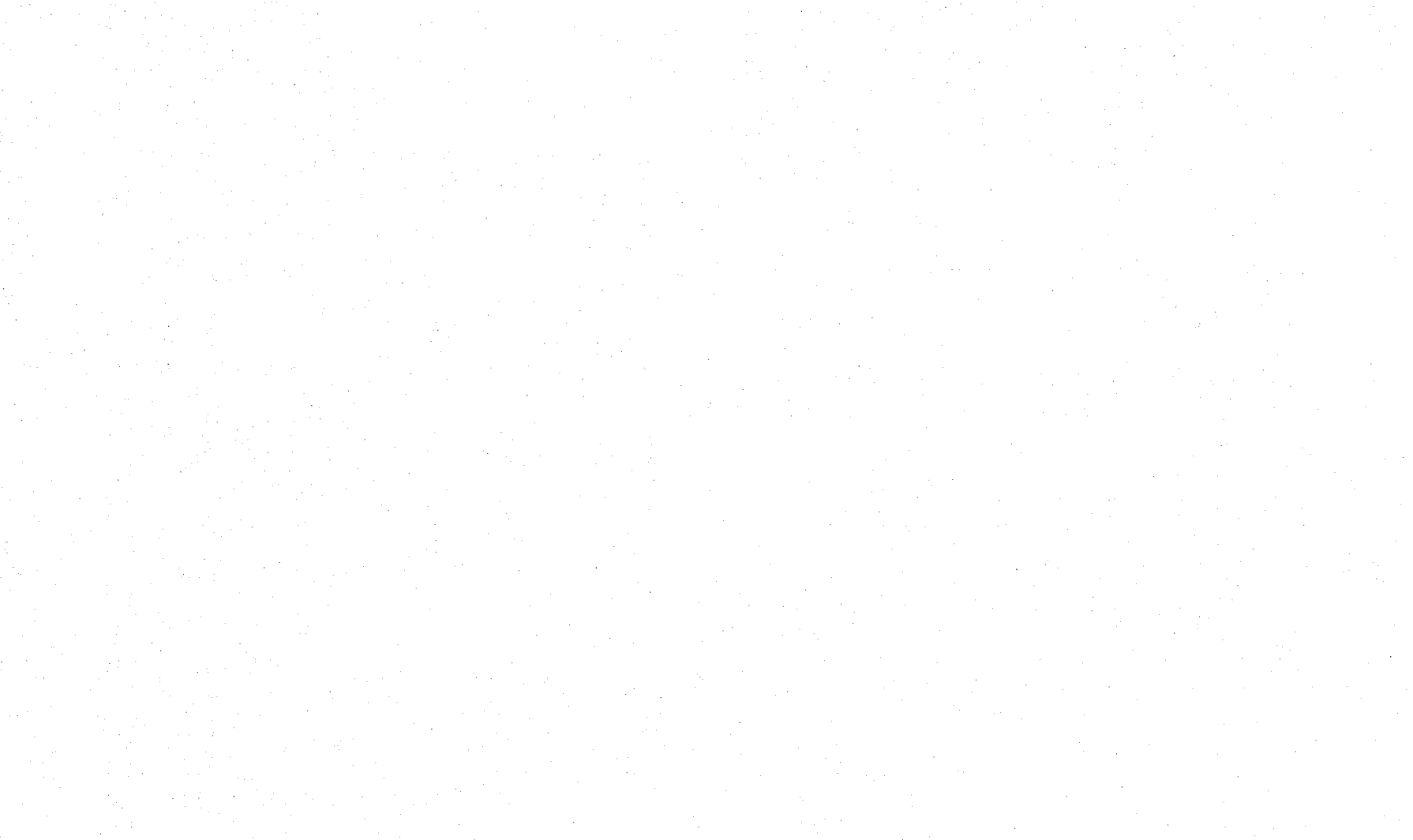
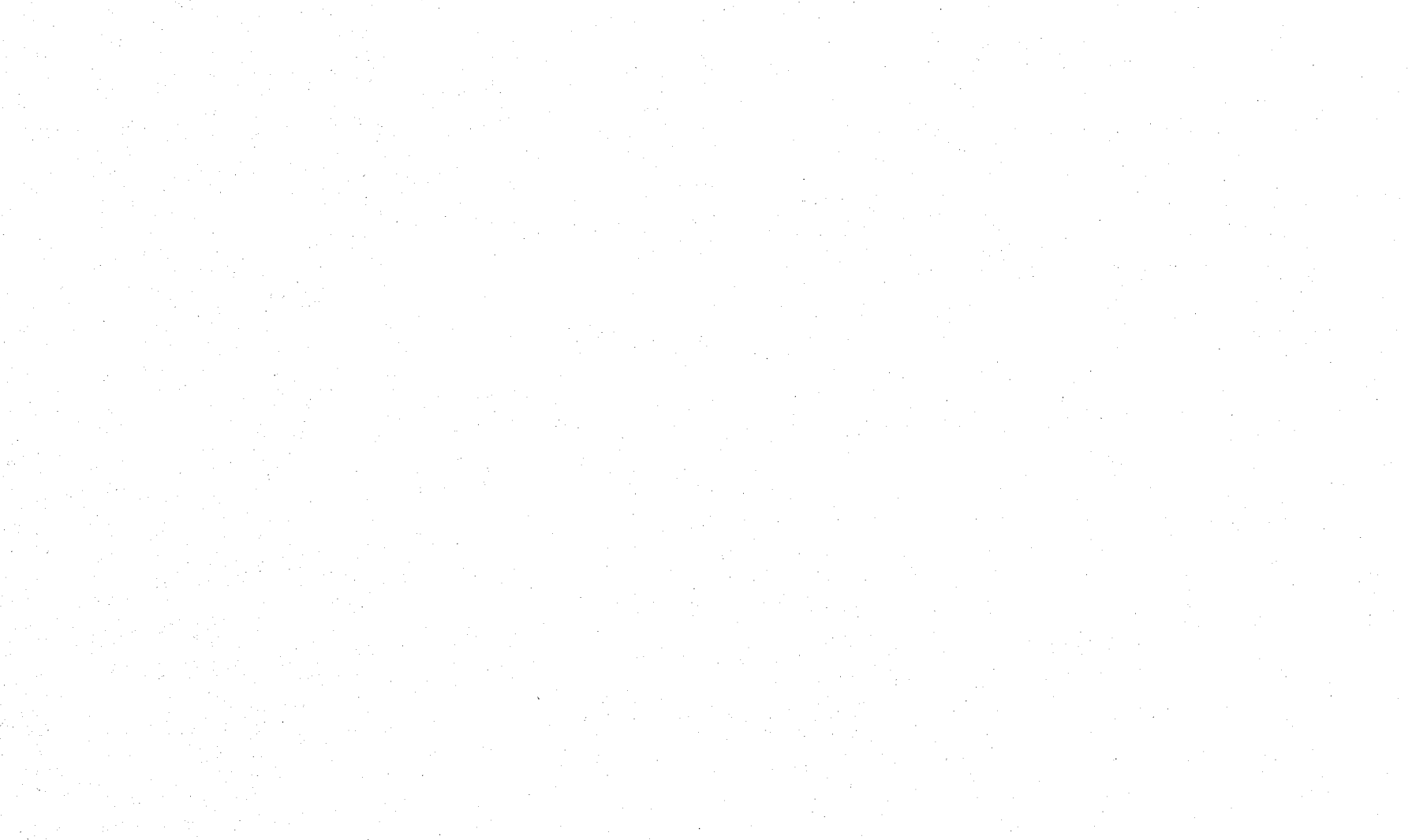
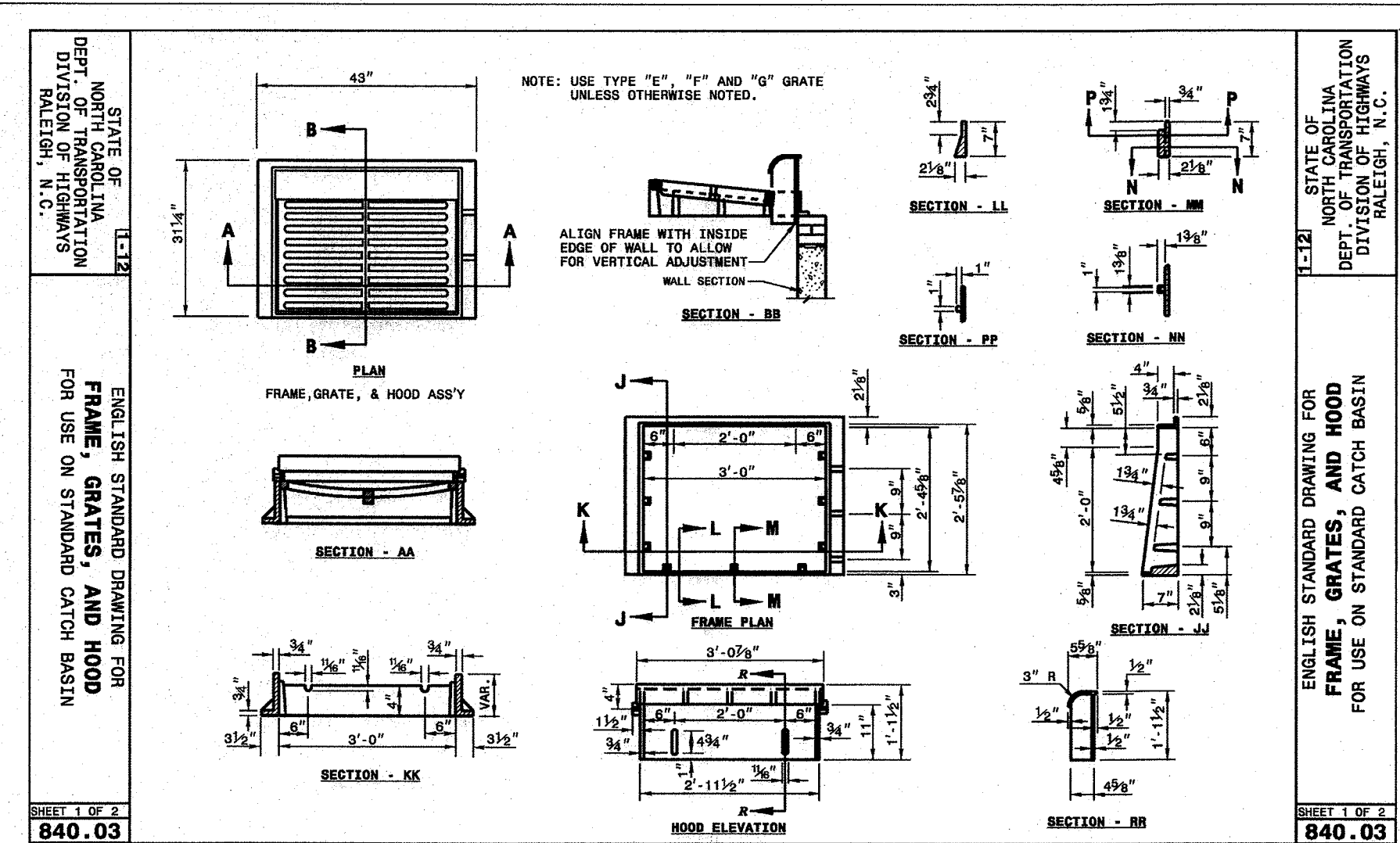
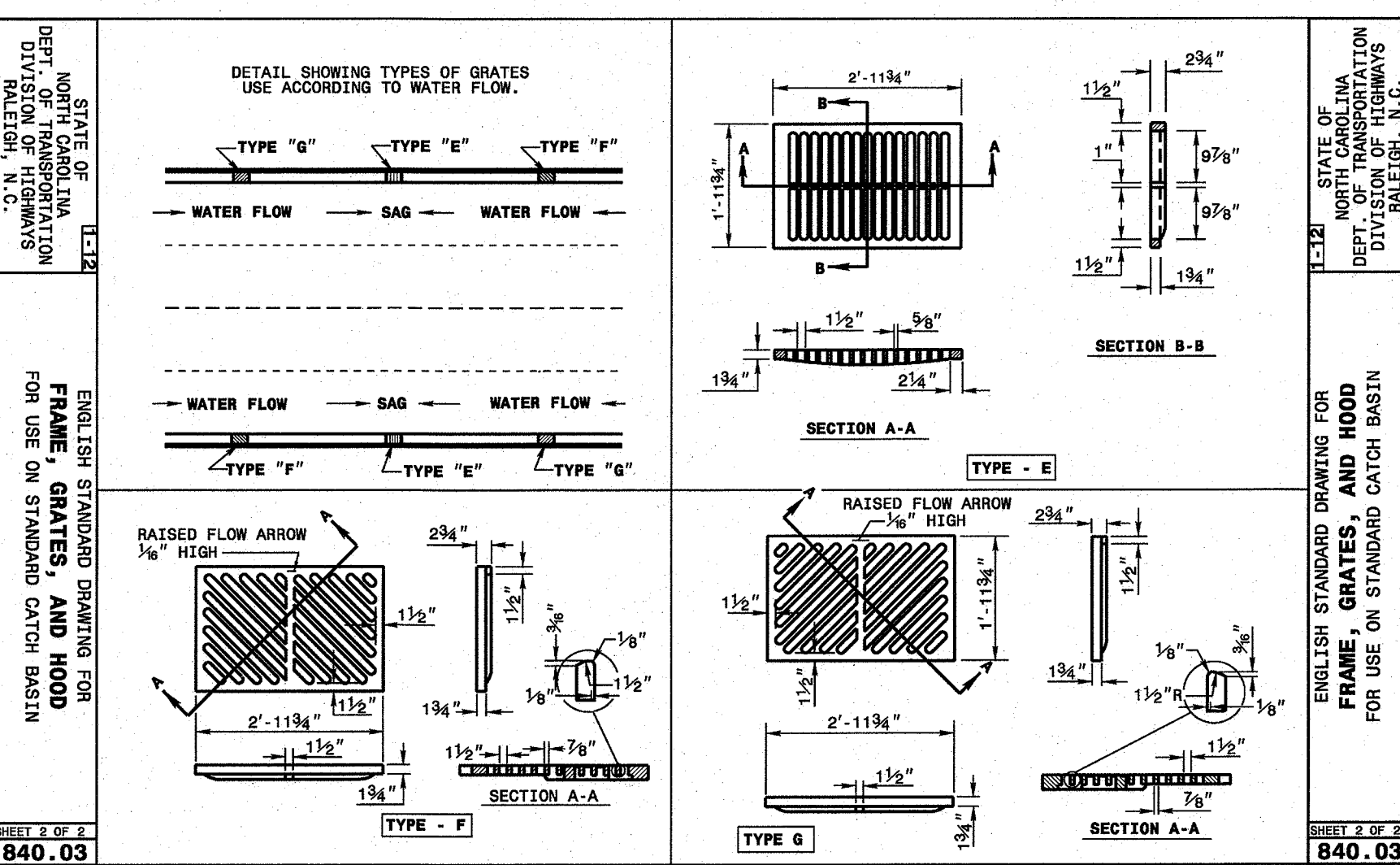
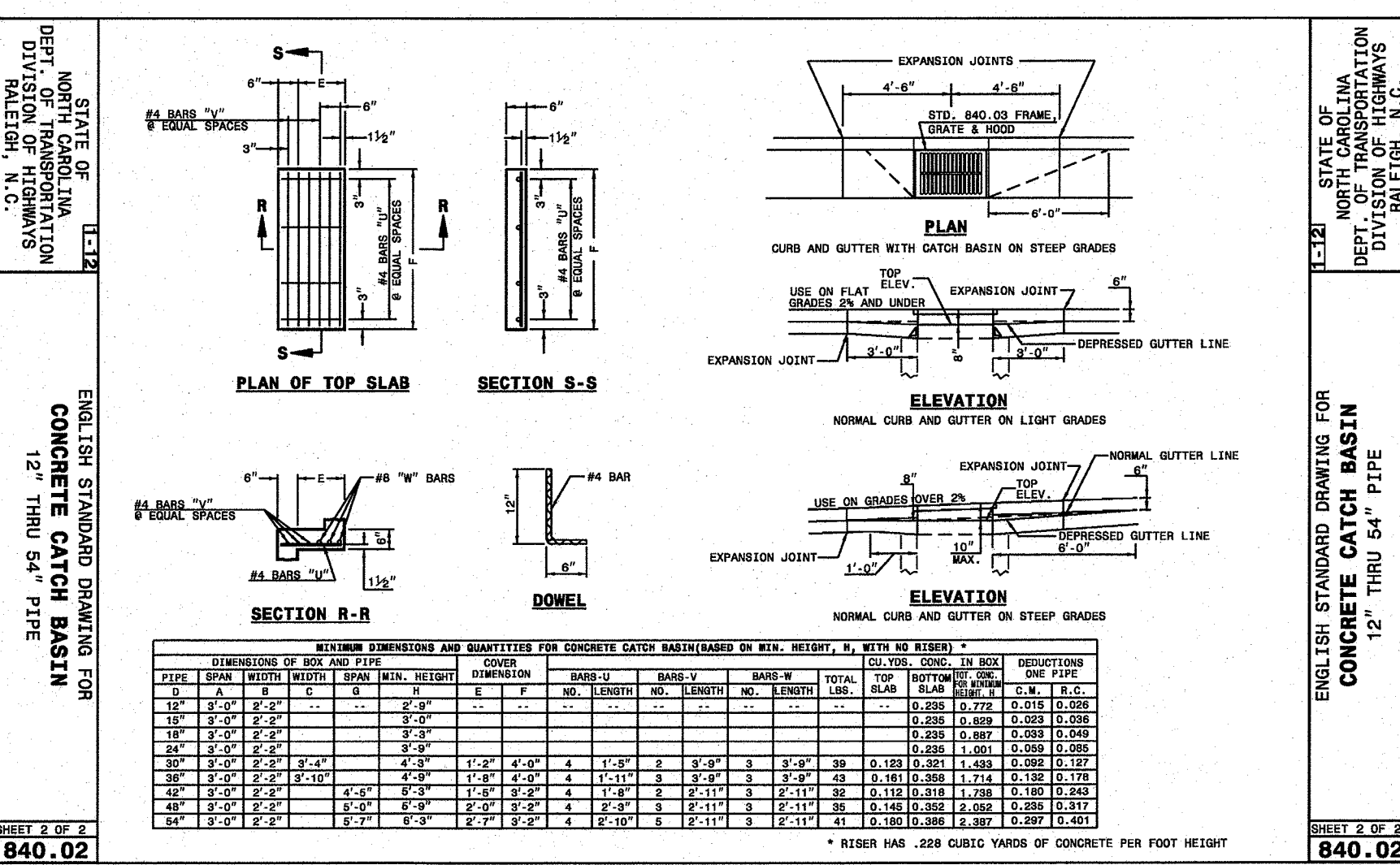
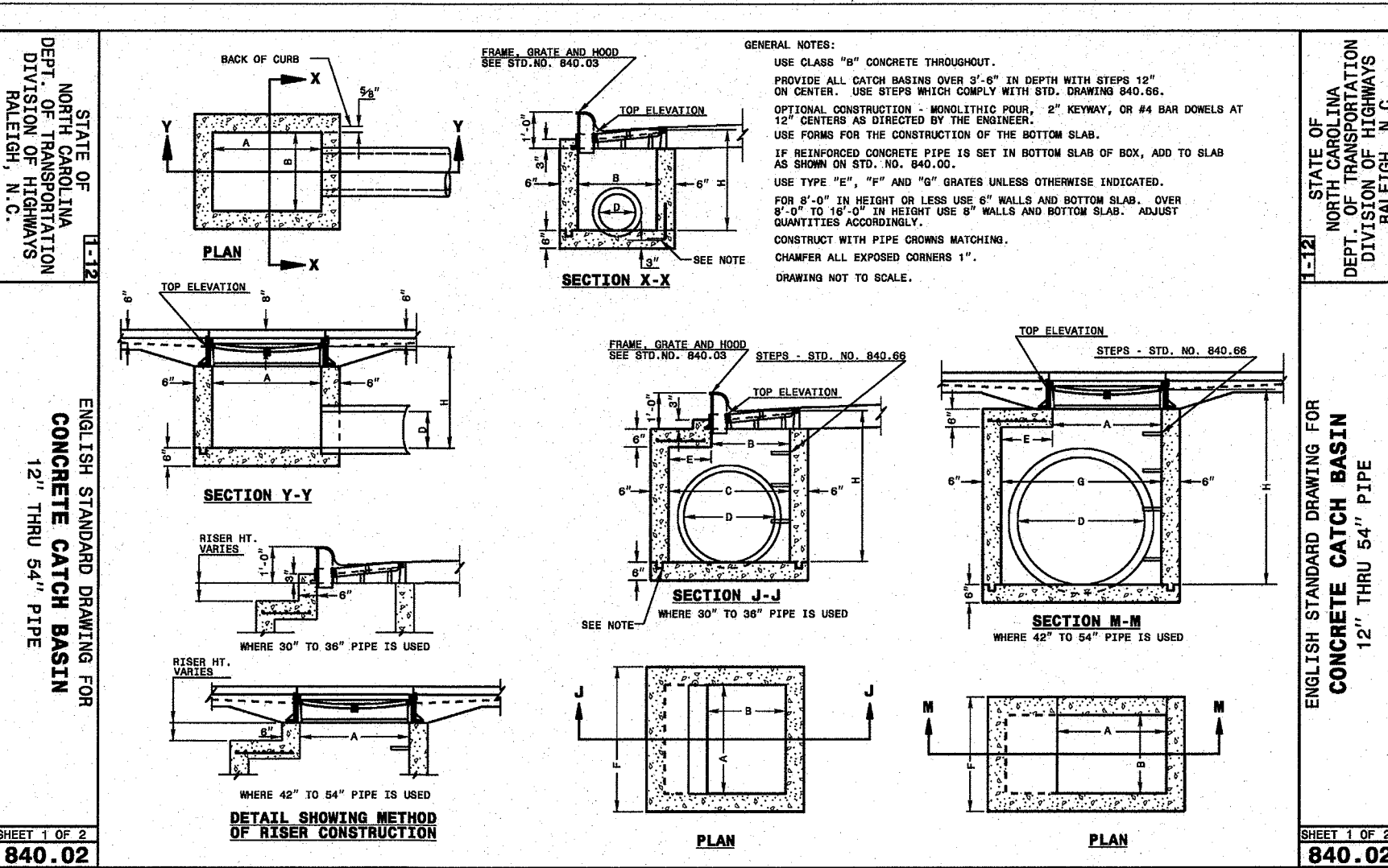
CITY OF CHARLOTTE **LAND DEVELOPMENT STANDARDS** INCLUDES CHARLOTTE ETJ



CITY OF CHARLOTTE **LAND DEVELOPMENT STANDARDS** INCLUDES CHARLOTTE ETJ



CITY OF CHARLOTTE **LAND DEVELOPMENT STANDARDS** INCLUDES CHARLOTTE ETJ



DATE ISSUED FOR REV

5/1/14 1st Submittal to City of Charlotte 0

6/27/14 2nd Submittal to City of Charlotte 1

08/13/14 3rd Submittal to City of Charlotte 2

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Corporate Seal Engineer's Seal

NORTH CAROLINA PROFESSIONAL SEAL
P-0197
R. JOE HARRIS & ASSOCIATES, P.L.L.C.
ENGINEER
PAUL R. HARRIS, P.E.

Project Manager Drawn

P. Murphy P. Murphy

Department Manager Checked

B. Pridemore P. Murphy

Print/Plot Date

August 13, 2014

Client:

PHIFER CREST, LLC

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CHARLOTTE, NC 28226
P: (980) 406-3818

Project:

PHIFER CREST

SUBDIVISION PLAN REVISION
CHARLOTTE, NC

Drawing Title:

**SITE PLAN
DETAILS**

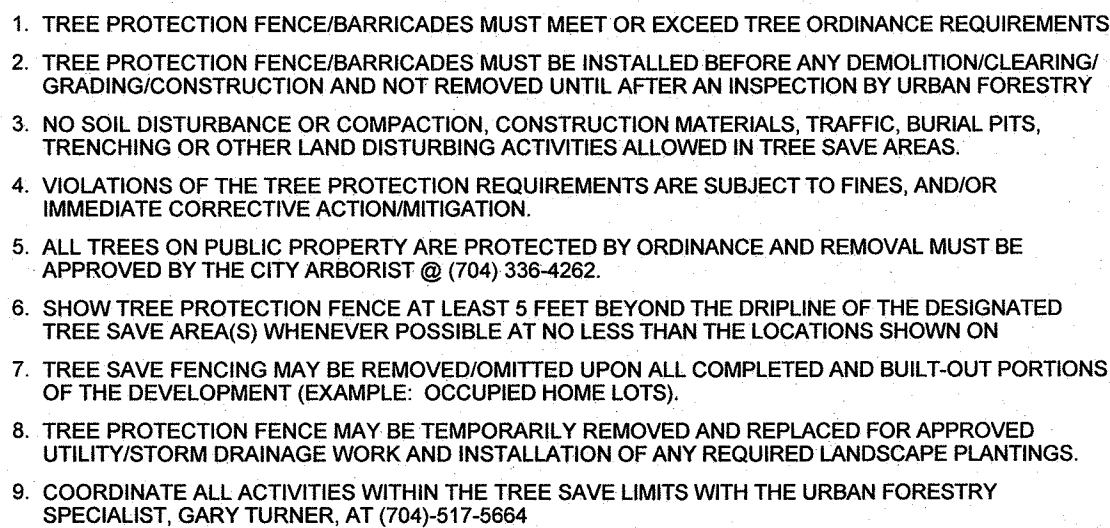
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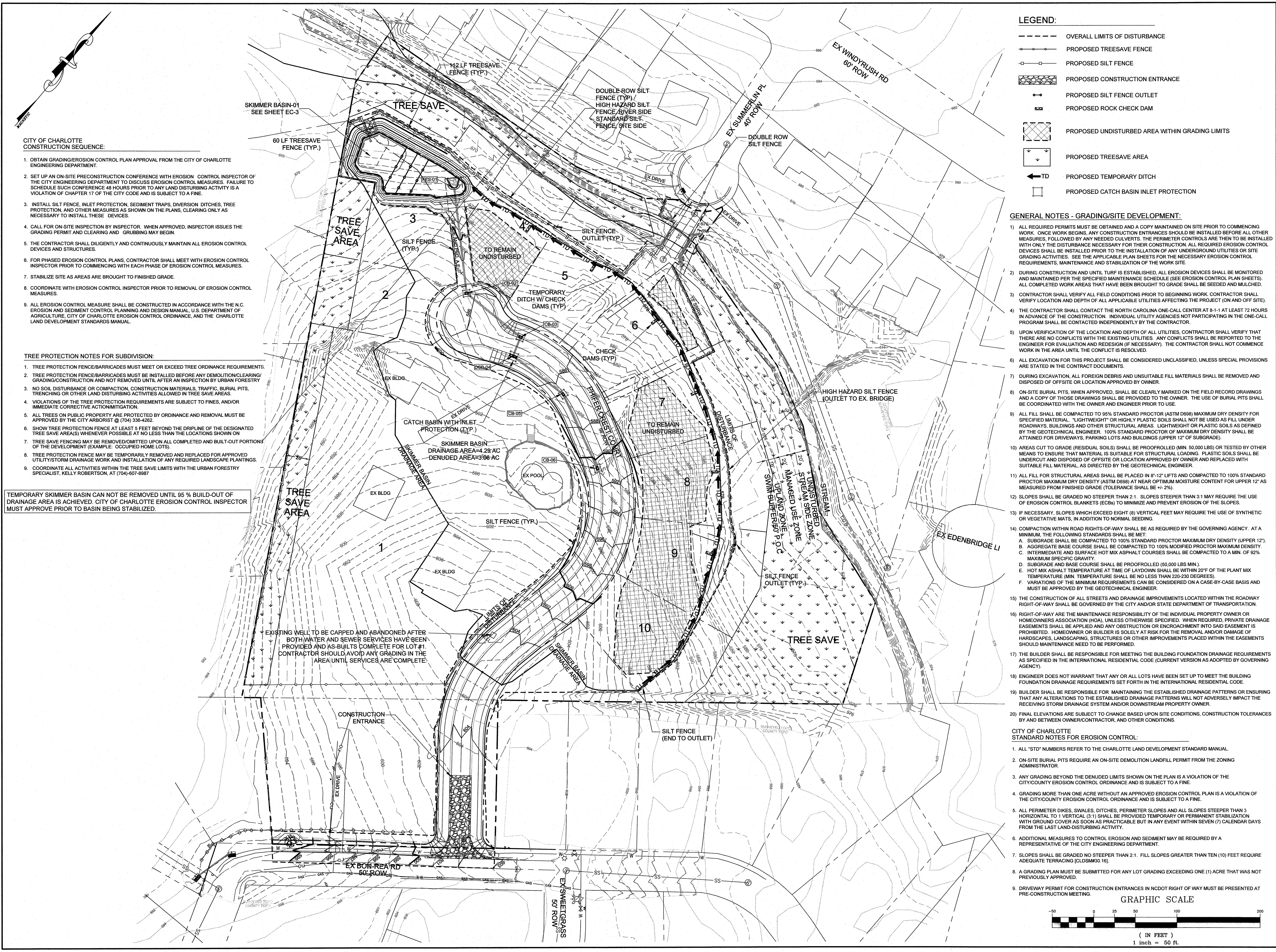
1816_DETAIL

SP-6



(IN FEET)
1 inch = 50 ft.

Project No. 1816	Drawing No.
DWG File Name: 1816 EC	EC-1



LEGEND:

- OVERALL LIMITS OF DISTURBANCE
- PROPOSED TREESAVE FENCE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED SILT FENCE OUTLET
- PROPOSED ROCK CHECK DAM
- PROPOSED UNDISTURBED AREA WITHIN GRADING LIMITS
- PROPOSED TREESAVE AREA
- PROPOSED TEMPORARY DITCH
- PROPOSED CATCH BASIN INLET PROTECTION

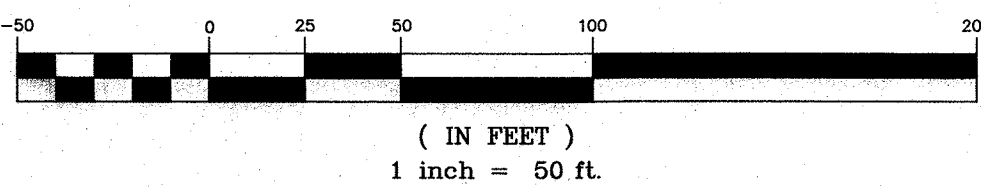
GENERAL NOTES - GRADING/SITE DEVELOPMENT:

- ALL REQUIRED PERMITS MUST BE OBTAINED AND A COPY MAINTAINED ON SITE PRIOR TO COMMENCING WORK. ONCE WORK BEGINS, ANY CONSTRUCTION ENTRANCES SHOULD BE INSTALLED BEFORE ALL OTHER MEASURES, FOLLOWED BY ANY NEEDED CULVERTS. THE PERIMETER CONTROLS ARE THEN TO BE INSTALLED WITH ONLY THE DISTURBANCE NECESSARY FOR THEIR CONSTRUCTION. ALL REQUIRED EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF ANY UNDERGROUND UTILITIES OR SITE GRADING ACTIVITIES. SEE THE APPLICABLE PLAN SHEETS FOR THE NECESSARY EROSION CONTROL REQUIREMENTS, MAINTENANCE AND STABILIZATION OF THE WORK SITE.
- DURING CONSTRUCTION AND UNTIL TURF IS ESTABLISHED, ALL EROSION DEVICES SHALL BE MONITORED AND MAINTAINED PER THE SPECIFIED MAINTENANCE SCHEDULE (SEE EROSION CONTROL PLAN SHEETS). ALL COMPLETED WORK AREAS THAT HAVE BEEN BROUGHT TO GRADE SHALL BE SEEDED AND MULCHED.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL APPLICABLE UTILITIES AFFECTING THE PROJECT (ON AND OFF SITE).
- THE CONTRACTOR SHALL CONTACT THE NORTH CAROLINA ONE-CALL CENTER AT 81-1 AT LEAST 72 HOURS IN ADVANCE OF THE CONSTRUCTION. INDIVIDUAL UTILITY AGENCIES NOT PARTICIPATING IN THE ONE-CALL PROGRAM SHALL BE CONTACTED INDEPENDENTLY BY THE CONTRACTOR.
- UPON VERIFICATION OF THE LOCATION AND DEPTH OF ALL UTILITIES, CONTRACTOR SHALL VERIFY THAT THERE ARE NO CONFLICTS WITH THE EXISTING UTILITIES. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER FOR EVALUATION AND REDESIGN (IF NECESSARY). THE CONTRACTOR SHALL NOT COMMENCE WORK IN THE AREA UNTIL THE CONFLICT IS RESOLVED.
- ALL EXCAVATION FOR THIS PROJECT SHALL BE CONSIDERED UNCLASSIFIED, UNLESS SPECIAL PROVISIONS ARE STATED IN THE CONTRACT DOCUMENTS.
- DURING EXCAVATION, ALL FOREIGN DEBRIS AND UNSUITABLE FILL MATERIALS SHALL BE REMOVED AND DISPOSED OF OFFSITE OR LOCATION APPROVED BY OWNER.
- ON-SITE BURIAL PITS, WHEN APPROVED, SHALL BE CLEARLY MARKED ON THE FIELD RECORD DRAWINGS AND A COPY OF THOSE DRAWINGS SHALL BE PROVIDED TO THE OWNER. THE USE OF BURIAL PITS SHALL BE COORDINATED WITH THE OWNER AND ENGINEER PRIOR TO USE.
- ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY FOR SPECIFIED MATERIAL. "LIGHTWEIGHT" OR HIGHLY PLASTIC SOILS SHALL NOT BE USED AS FILL UNDER ROADWAYS, BUILDINGS AND OTHER STRUCTURAL AREAS. LIGHTWEIGHT OR PLASTIC SOILS AS DEFINED BY THE GEOTECHNICAL ENGINEER. 100% STANDARD PROCTOR OF MAXIMUM DRY DENSITY SHALL BE ATTAINED FOR DRIVEWAYS, PARKING LOTS AND BUILDINGS (UPPER 12" OF SUBGRADE).
- AREAS CUT TO GRADE (RESIDUAL SOILS) SHALL BE PROOFROLLED (MIN 50,000 LBS) OR TESTED BY OTHER MEANS TO ENSURE THAT MATERIAL IS SUITABLE FOR STRUCTURAL LOADING. PLASTIC SOILS SHALL BE UNDERCUT AND DISPOSED OF OFFSITE OR LOCATION APPROVED BY OWNER AND REPLACED WITH SUITABLE FILL MATERIAL, AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- ALL FILL FOR STRUCTURAL AREAS SHALL BE PLACED IN 8"-12" LIFTS AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) AT NEAR OPTIMUM MOISTURE CONTENT FOR UPPER 12" AS MEASURED FROM FINISHED GRADE (TOLERANCE SHALL BE +/- 2%).
- SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. SLOPES STEEPER THAN 3:1 MAY REQUIRE THE USE OF EROSION CONTROL BLANKETS (ECBs) TO MINIMIZE AND PREVENT EROSION OF THE SLOPES.
- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET MAY REQUIRE THE USE OF SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO NORMAL SEEDING.
- COMPACTION WITHIN ROAD RIGHTS-OF-WAY SHALL BE AS REQUIRED BY THE GOVERNING AGENCY. AT A MINIMUM, THE FOLLOWING STANDARDS SHALL BE MET:
 - SURGRADE SHALL BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (UPPER 12").
 - AGGREGATE BASE COURSE SHALL BE COMPACTED TO 100% MODIFIED PROCTOR MAXIMUM DENSITY.
 - INTERMEDIATE AND SURFACE HOT MIX ASPHALT COURSES SHALL BE COMPACTED TO A MIN. OF 92% MAXIMUM SPECIFIC GRAVITY.
 - SURGRADE AND BASE COURSE SHALL BE PROOFROLLED (50,000 LBS MIN.).
 - HOT MIX ASPHALT TEMPERATURE AT TIME OF LAYDOWN SHALL BE WITHIN 20°F OF THE PLANT MIX TEMPERATURE (MIN. TEMPERATURE SHALL BE NO LESS THAN 220-230 DEGREES).
 - VARIATIONS OF THE MINIMUM REQUIREMENTS CAN BE CONSIDERED ON A CASE-BY-CASE BASIS AND MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER.
- THE CONSTRUCTION OF ALL STREETS AND DRAINAGE IMPROVEMENTS LOCATED WITHIN THE ROADWAY RIGHT-OF-WAY SHALL BE GOVERNED BY THE CITY AND/OR STATE DEPARTMENT OF TRANSPORTATION.
- RIGHT-OF-WAY ARE THE MAINTENANCE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER OR HOMEOWNERS ASSOCIATION (HOA), UNLESS OTHERWISE SPECIFIED. WHEN REQUIRED, PRIVATE DRAINAGE EASEMENTS SHALL BE APPLIED AND ANY OBSTRUCTION OR ENCROACHMENT INTO SAID EASEMENT IS PROHIBITED. HOMEOWNER OR BUILDER IS SOLELY AT RISK FOR THE REMOVAL AND/OR DAMAGE OF HARDSCAPES, LANDSCAPING, STRUCTURES OR OTHER IMPROVEMENTS PLACED WITHIN THE EASEMENTS SHOULD MAINTENANCE NEED TO BE PERFORMED.
- THE BUILDER SHALL BE RESPONSIBLE FOR MEETING THE BUILDING FOUNDATION DRAINAGE REQUIREMENTS AS SPECIFIED IN THE INTERNATIONAL RESIDENTIAL CODE (CURRENT VERSION AS ADOPTED BY GOVERNING AGENCY).
- ENGINEER DOES NOT WARRANT THAT ANY OR ALL LOTS HAVE BEEN SET UP TO MEET THE BUILDING FOUNDATION DRAINAGE REQUIREMENTS SET FORTH IN THE INTERNATIONAL RESIDENTIAL CODE.
- BUILDER SHALL BE RESPONSIBLE FOR MAINTAINING THE ESTABLISHED DRAINAGE PATTERNS OR ENSURING THAT ANY ALTERATIONS TO THE ESTABLISHED DRAINAGE PATTERNS WILL NOT ADVERSELY IMPACT THE RECEIVING STORM DRAINAGE SYSTEM AND/OR DOWNSTREAM PROPERTY OWNER.
- FINAL ELEVATIONS ARE SUBJECT TO CHANGE BASED UPON SITE CONDITIONS, CONSTRUCTION TOLERANCES BY AND BETWEEN OWNER/CONTRACTOR, AND OTHER CONDITIONS.

CITY OF CHARLOTTE
STANDARD NOTES FOR EROSION CONTROL:

- ALL "STD" NUMBERS REFER TO THE CHARLOTTE LAND DEVELOPMENT STANDARD 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/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY/COUNTY 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 BUT IN ANY EVENT WITHIN SEVEN (7) 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 TEN (10) FEET REQUIRE ADEQUATE TERRACING [CLDSM30.16].
- A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING EXCEEDING ONE (1) ACRE THAT WAS NOT PREVIOUSLY APPROVED.
- DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NC DOT RIGHT OF WAY MUST BE PRESENTED AT PRE-CONSTRUCTION MEETING.

GRAPHIC SCALE



DATE	ISSUED FOR	REV
5/1/14	1st Submittal to City of Charlotte	0
6/27/14	2nd Submittal to City of Charlotte	1
08/13/14	3rd Submittal to City of Charlotte	2

Engineer:

R. Joe Harris & Associates, P.L.L.C.
Engineering • Land Surveying • Planning Management
1698 W. Hwy 160, Suite 130, Fort Mill, S.C. 29708 P: (803) 802-1799 F: (803) 802-0886

www.rjoharris.com

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Corporate Seal

Engineer's Seal

Project Manager	Drawn
P. Murphy	P. Murphy
Department Manager	Checked
B. Pridmore	P. Murphy
Print/Plot Date	Client
August 13, 2014	PHIFER CREST, LLC
10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	
Project:	DWG File Name:
PHIFER CREST SUBDIVISION PLAN REVISION CHARLOTTE, NC	1816 1816_EC
Drawing Title:	Drawing No.
EROSION CONTROL FINAL PHASE	EC-2

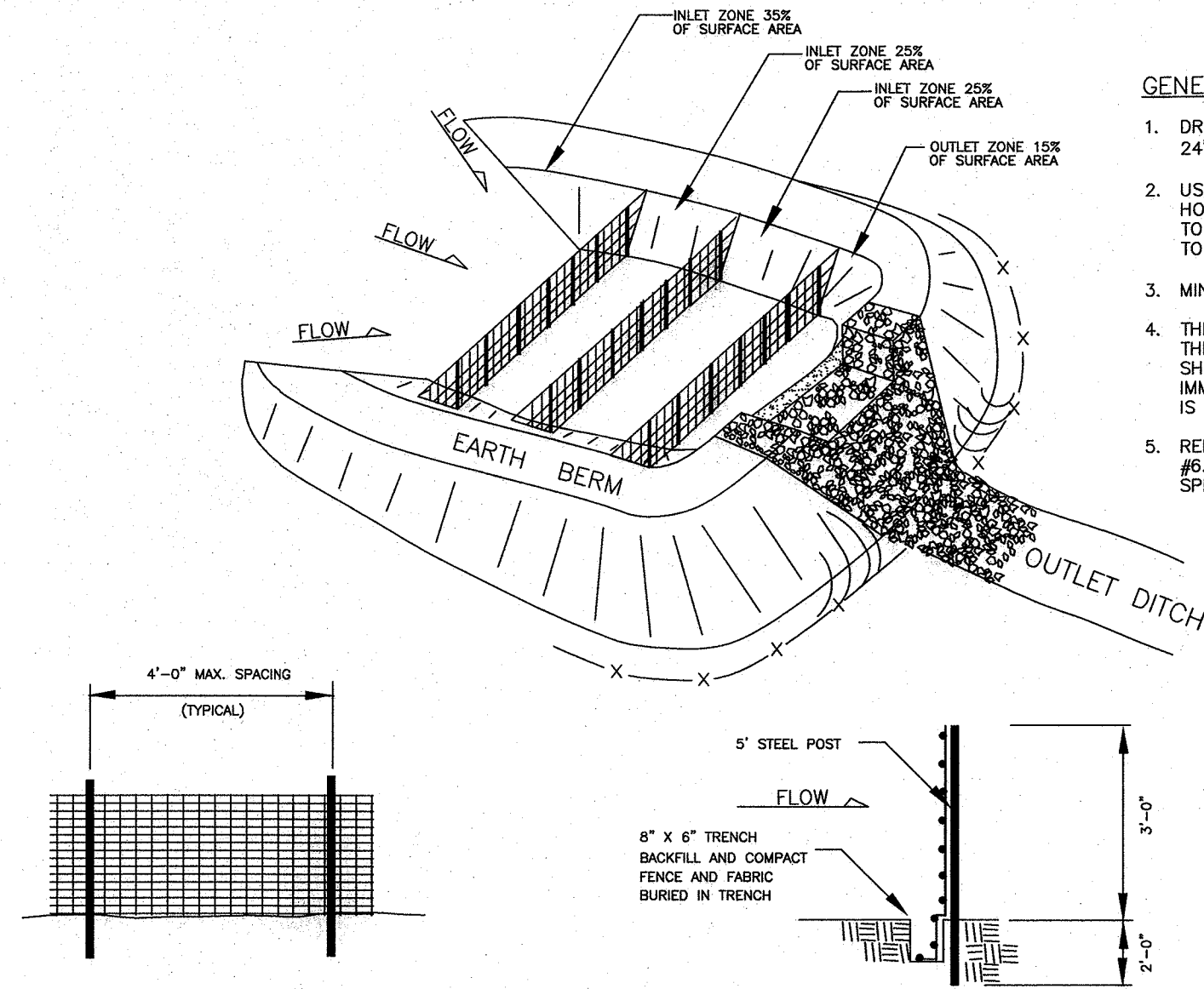
GENERAL NOTES:

- AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MATERIAL. THE BASIN AREA SHALL BE CLEARED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE BEING CONSTRUCTED. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS. ALL SPILLWAYS SHOULD BE LINED AND/OR RIPRAPPED.
- SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO DEPTH SHOWN ON STANDARD. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA IN SUCH A MANNER THAT IT WILL NOT ERODE.
- THE TRAP SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NECESSARY.
- CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER, UNLESS CERTIFIED BY REGISTERED GEOTECHNICAL ENGINEER.
- SEDIMENT BASIN EMBANKMENTS SHOULD BE PROVIDED WITH EROSION CONTROL AND STABILIZATION.
- STORAGE AREA MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.
- THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM.
- WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING. BAFFLES SHALL BE INSTALLED IN ALL BASINS.
- CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT BASINS AT THE LOW POINT IN THE BASIN. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL, CLEANOUT POINT, OF THE BASIN.
- SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT BASINS.
- FOR DESIGN OF SEDIMENT BASINS, REFER TO THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
- FOR SLOPES GREATER THAN 10:1 IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL BE REQUIRED.
- THE BERM ON SEDIMENT BASINS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY THE CITY LAND DEVELOPMENT INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE GROUND HAS BEEN ESTABLISHED.
- WASHED STONE AND WIRE BACKING SHALL BE USED WITH SILT FENCE WHENEVER SILT FENCE IS PLACE AT THE TOE OF A SLOPE >10' VERTICAL OR ALONG ANY CHANNEL OR WATER COURSE WHERE 50' OF BUFFER IS NOT PROVIDED.

NOTE:

- DITCH SHOULD HAVE LONGITUDINAL SLOPE OF 1%.
- SILT FENCE MAY BE REQUIRED BEHIND BERM

NOT TO SCALE



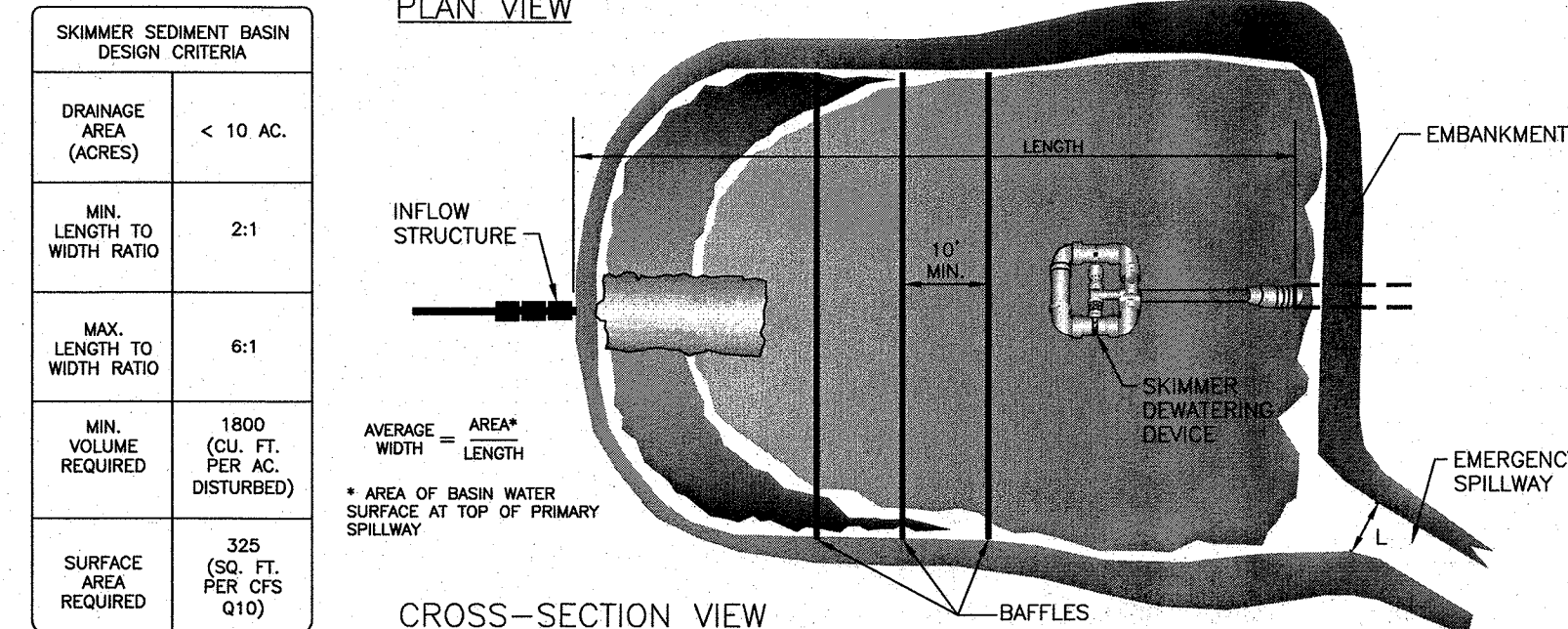
NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

GENERAL NOTES—SEDIMENT BASINS

STD. NO. 30.03B
REV. 3

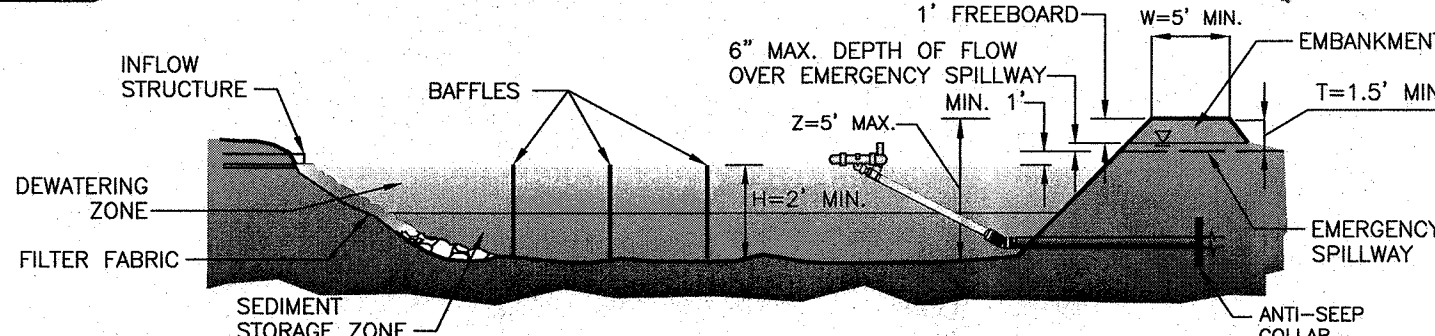
PLAN VIEW



NOTES:

- REFER TO NCSCDPM SECTION #6.64 FOR ADDITIONAL DESIGN SPECIFICATIONS REGARDING SKIMMER SEDIMENT BASINS.
- REFER TO STD. #30.19 FOR BAFFLE SPACING AND INSTALLATION.

CROSS-SECTION VIEW



NOT TO SCALE

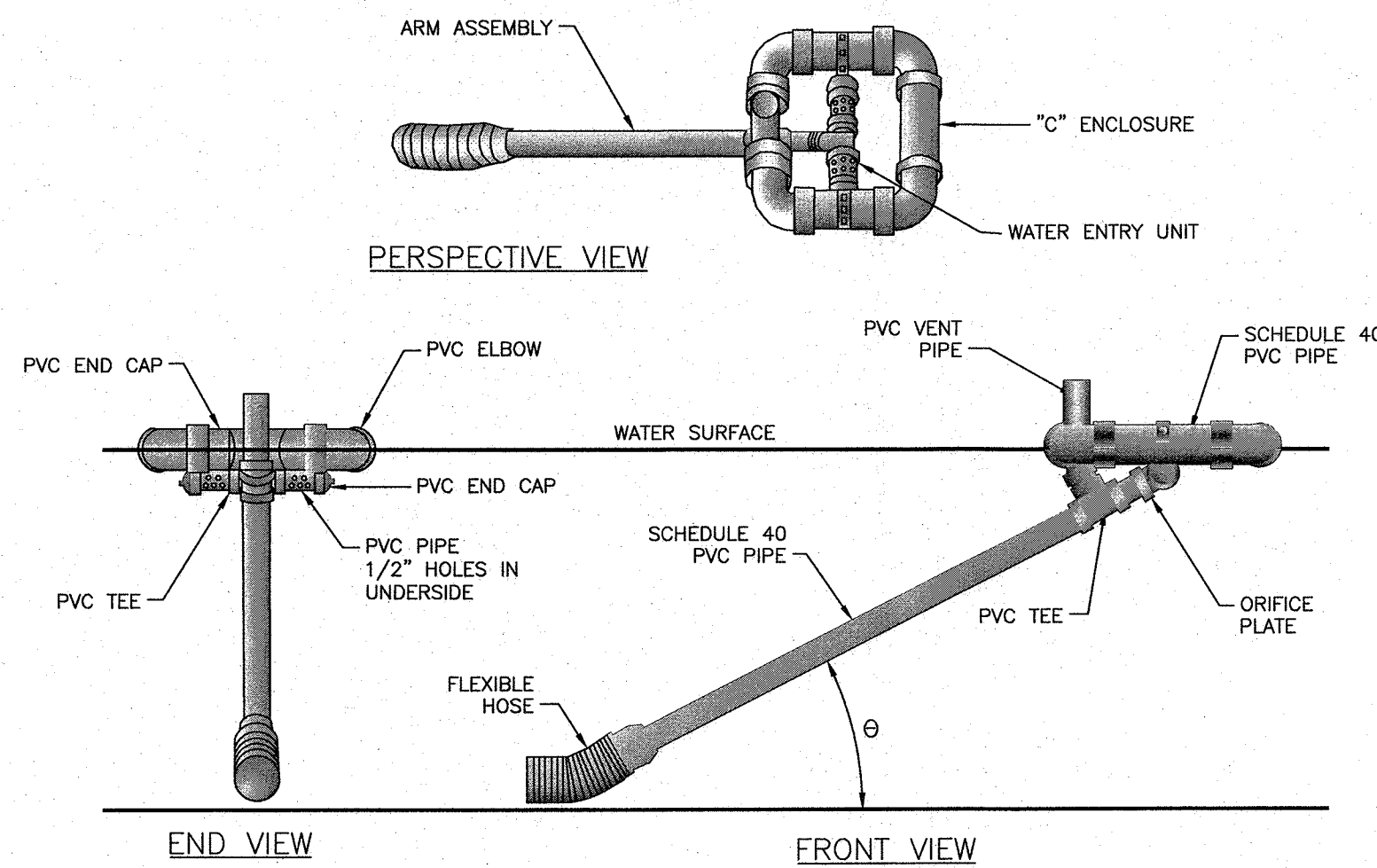
DATA BLOCK

BASIN	DRAINAGE AREA (ACRES)	DENUNED AREA (ACRES)	Q _h	BASIN VOLUME		BASIN SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	SKIMMER PIPE DIAMETER	SKIMMER ORIFICE DIAMETER
				REQUIRED (CUBIC FT.)	PROVIDED (CUBIC FT.)	REQUIRED (SQ. FT.)	PROVIDED (SQ. FT.)								
1	4.29	3.06	18.10	5,508	7,271	5,881	6,078	1	2	4.5	10	1.5	5	1.5	1.25

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

SKIMMER SEDIMENT BASIN

STD. NO. 30.02A
REV. 3



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

NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

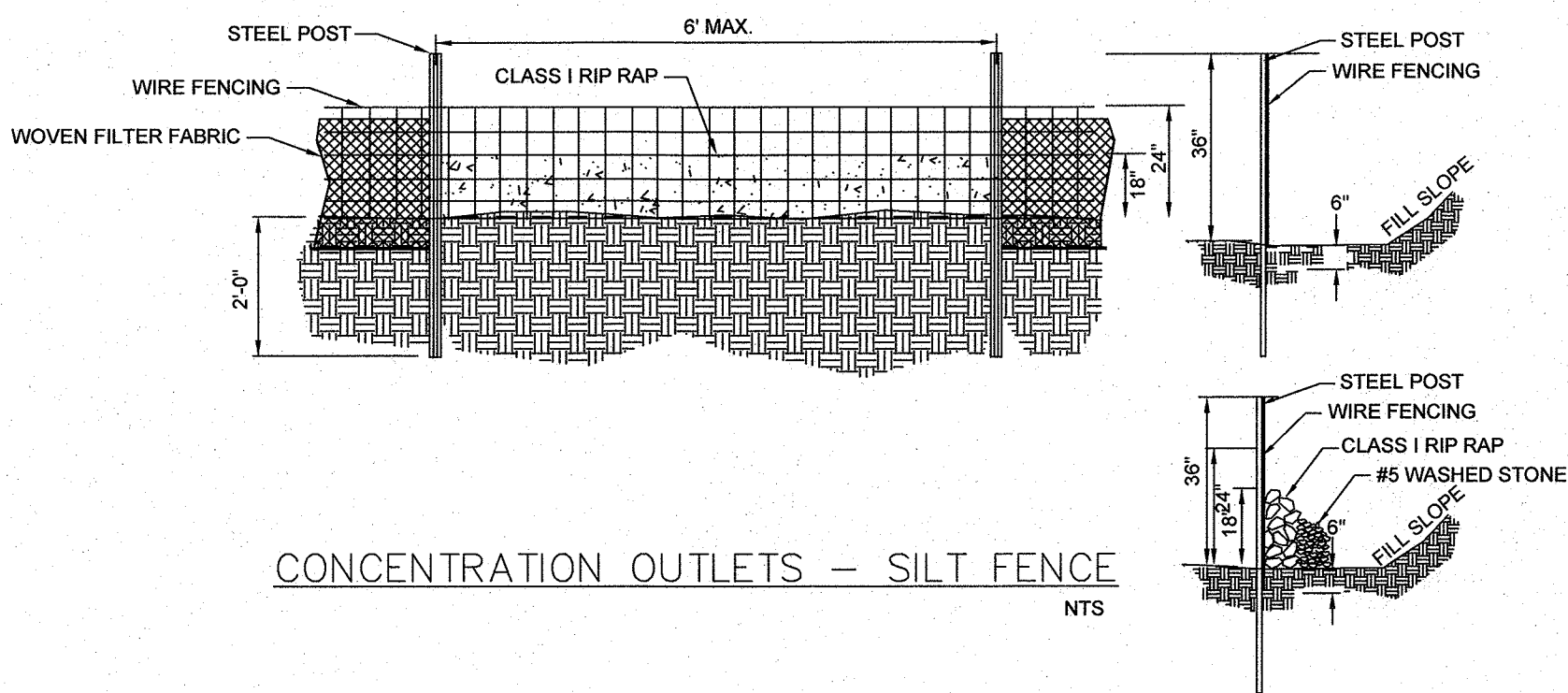
SKIMMER

STD. NO. 30.02B
REV. 1

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

TEMPORARY SILT DITCH

STD. NO. 30.05
REV.



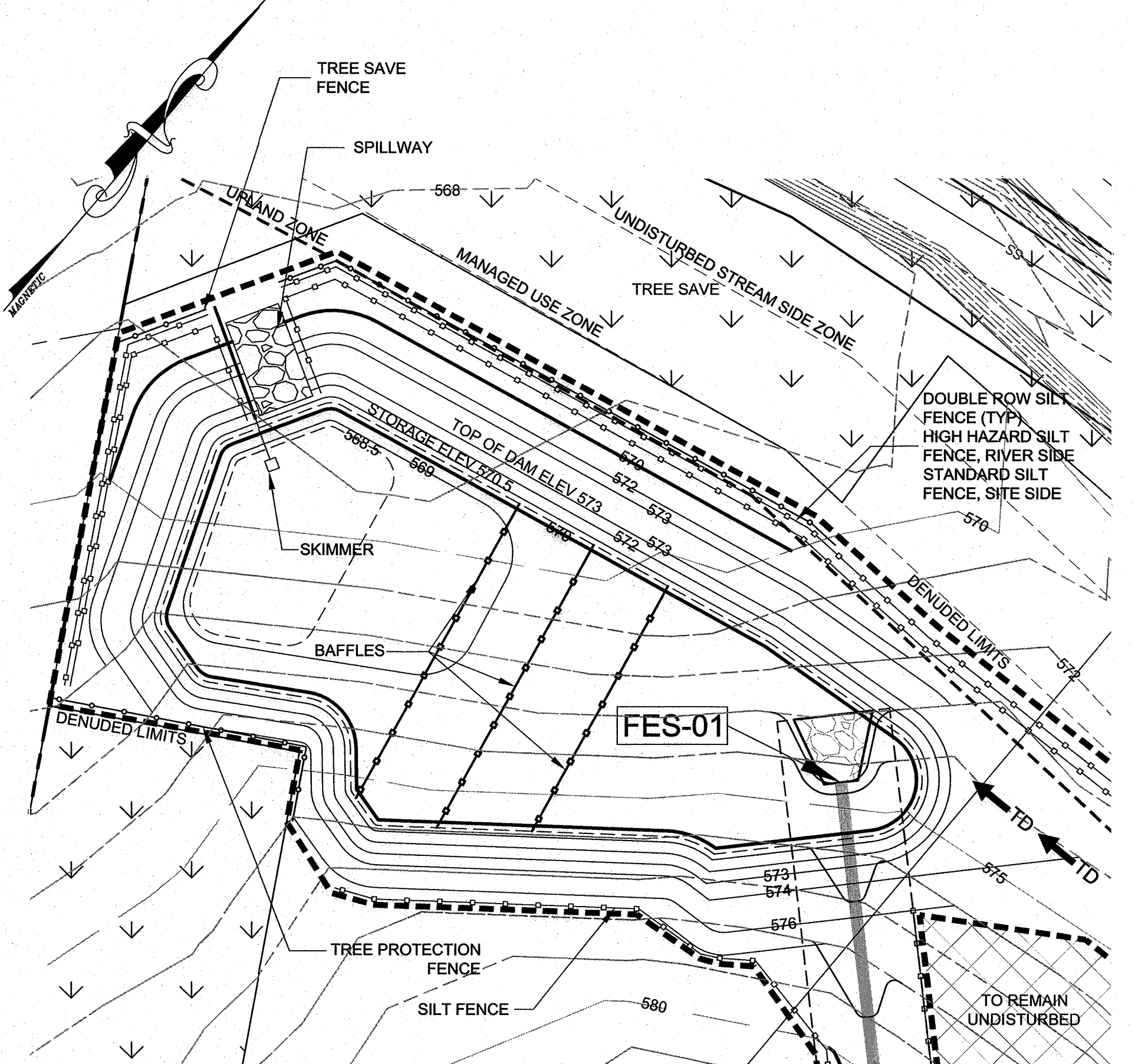
CONCENTRATION OUTLETS – SILT FENCE

NTS

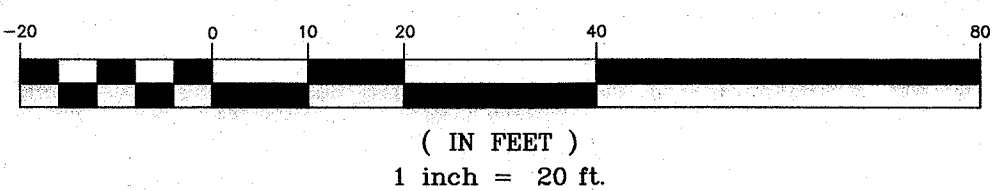
CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

BAFFLE INSTALLATION

STD. NO. 30.19
REV. 1



GRAPHIC SCALE



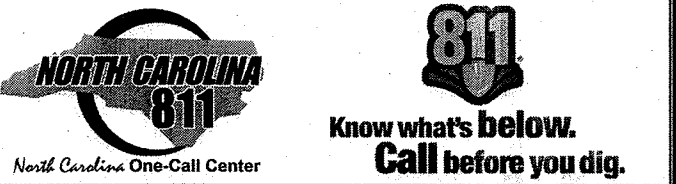
SKIMMER BASIN DATA
DRAINAGE AREA = 4.29 AC.
DENUNED AREA = 3.06 AC.
TOP BERM = 573.00
SPILLWAY = 571.50
BOTTOM BASIN = 568.50
REQ. VOLUME = 5,508 CF
ACT. VOLUME = 7,271 CF
SPILLWAY LENGTH = 10 FT

SKIMMER DATA
SKIMMER SIZE = 1.5"
ORIFICE SIZE = 1.25"
OUTLET PIPE = 2"

LOCATION	ELEV. (FT.)	CONTOUR AREA (S.F.)	INCREMENTAL VOLUME (C.F.)	ACCUM. VOLUME (C.F.)
BOTTOM	568.50	914		
ELEV	569.00	1,879	684	684
ELEV	570.00	5,738	3,634	4,317
STORAGE	570.50	6,078	2,954	7,271
SPILLWAY	571.50			
DAM TOP	573.00			

SKIMMER SEDIMENT BASIN-01

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5/1/14	1st Submittal to City of Charlotte	0
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08/13/14	3rd Submittal to City of Charlotte	2



Engineer:



R. Joe Harris & Associates, P.L.L.C.
Engineering • Land Surveying • Planning Management

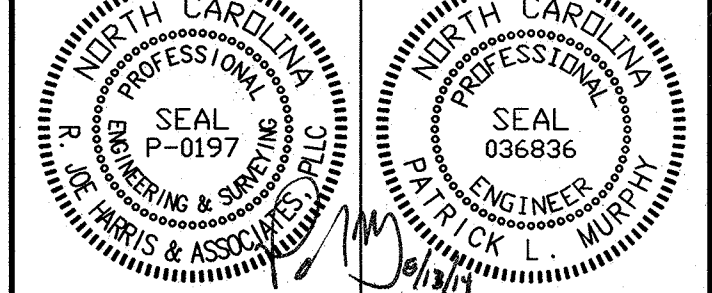
1088 W. Hwy 160, Suite 130, Fort Mill, S.C. 29708 P: (803) 802-1799 F: (803) 802-0886

www.rjoharris.com

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Corporate Seal

Engineer's Seal



Project Manager

Drawn

P. Murphy

Department Manager

Checked

B. Pridemore

P. Murphy

Print/Plot Date

August 13, 2014

Client

PHIFER CREST, LLC

10801 JOHNSTON ROAD, SUITE 127

CHARLOTTE, NC 28226

P: (980) 406-3818

Project:

PHIFER CREST

SUBDIVISION PLAN REVISION

CHARLOTTE, NC



Phifer Crest

Drawing Title:

EROSION CONTROL

DETAILS

Project No.

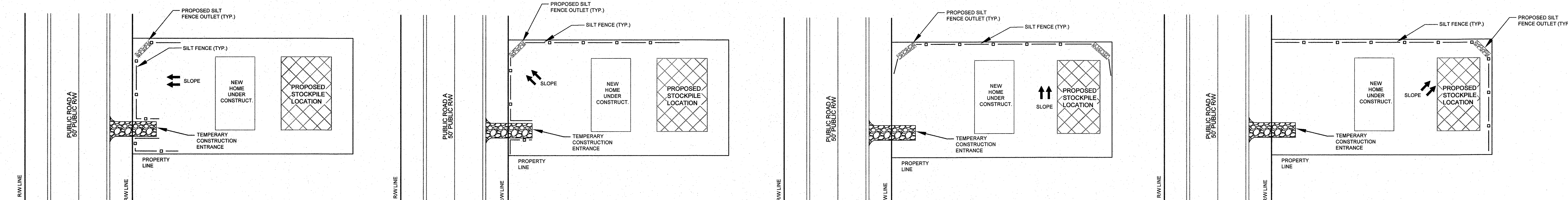
1816

DWG File Name:

1816 EC

Drawing No.

EC-3



NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #1
N.T.S.

NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

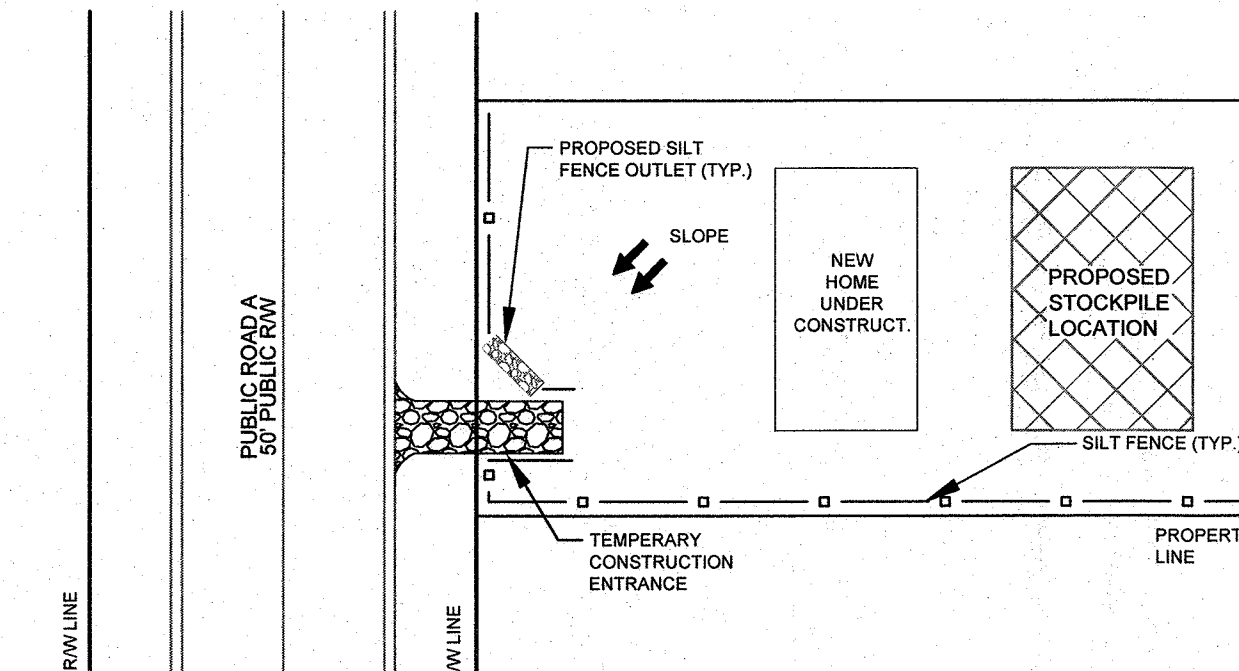
LOT SILT FENCE PLAN #2
N.T.S.

NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #3
N.T.S.

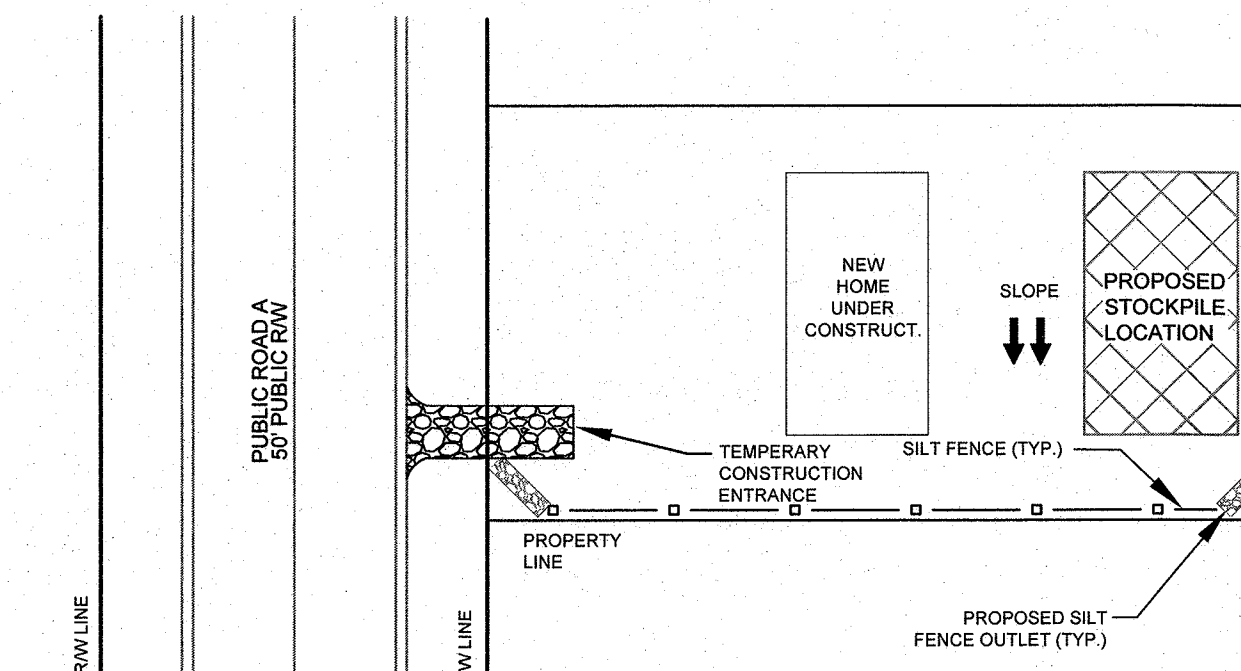
NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #4
N.T.S.



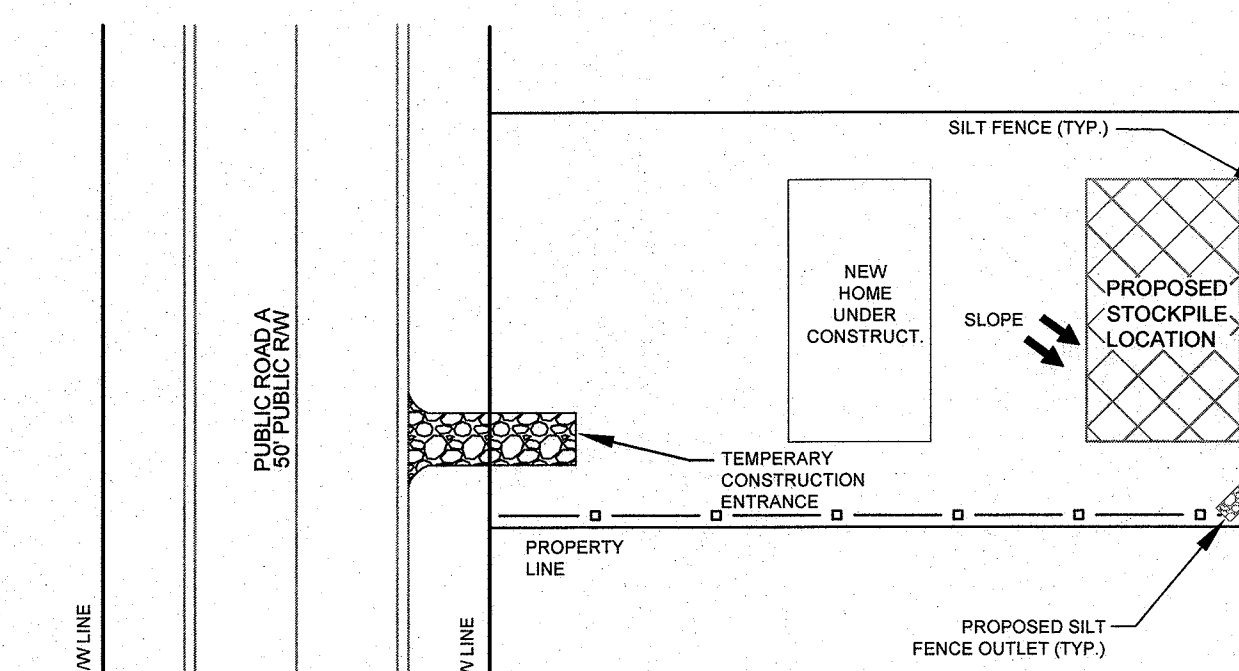
NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #5
N.T.S.



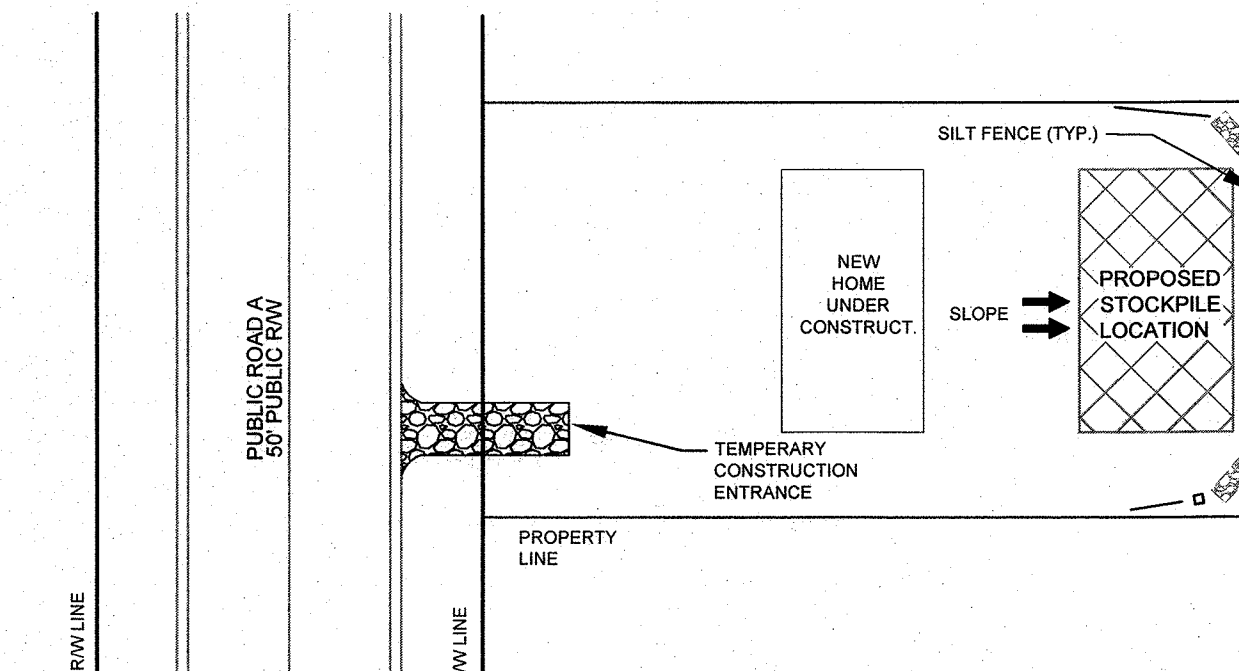
NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #6
N.T.S.



NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #7
N.T.S.

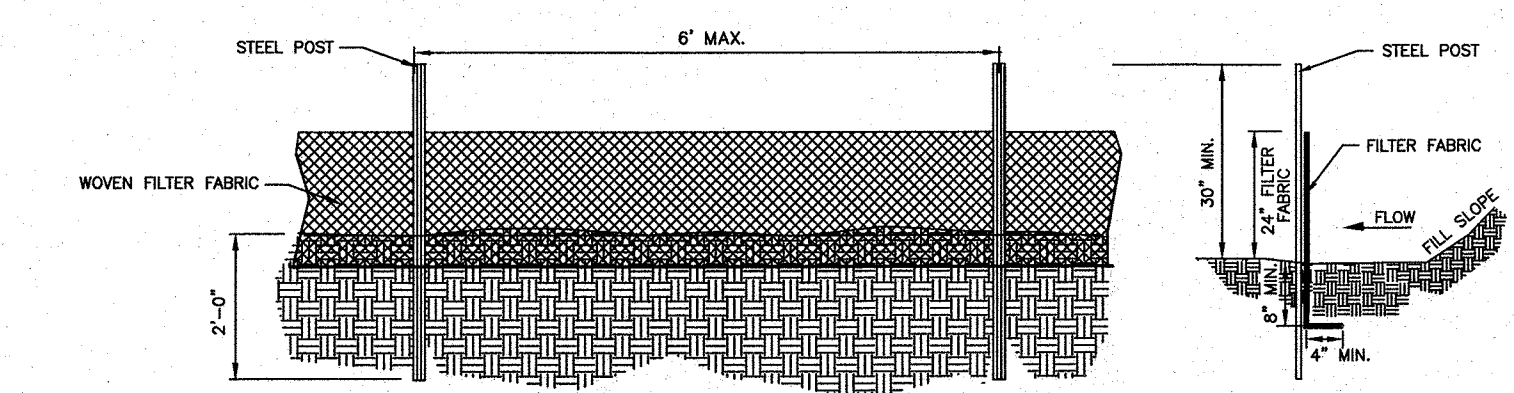


NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER
PRIOR TO CONSTRUCTION AND TO BE
MAINTAINED UNTIL LOT IS GRADED AND TURF
IS ESTABLISHED.

LOT SILT FENCE PLAN #8
N.T.S.

INDIVIDUAL LOT EROSION CONTROL FOR HOME BUILDERS

NOTE:
THIS DETAIL IS NOT RELEVANT TO THIS PHASE OF CONSTRUCTION



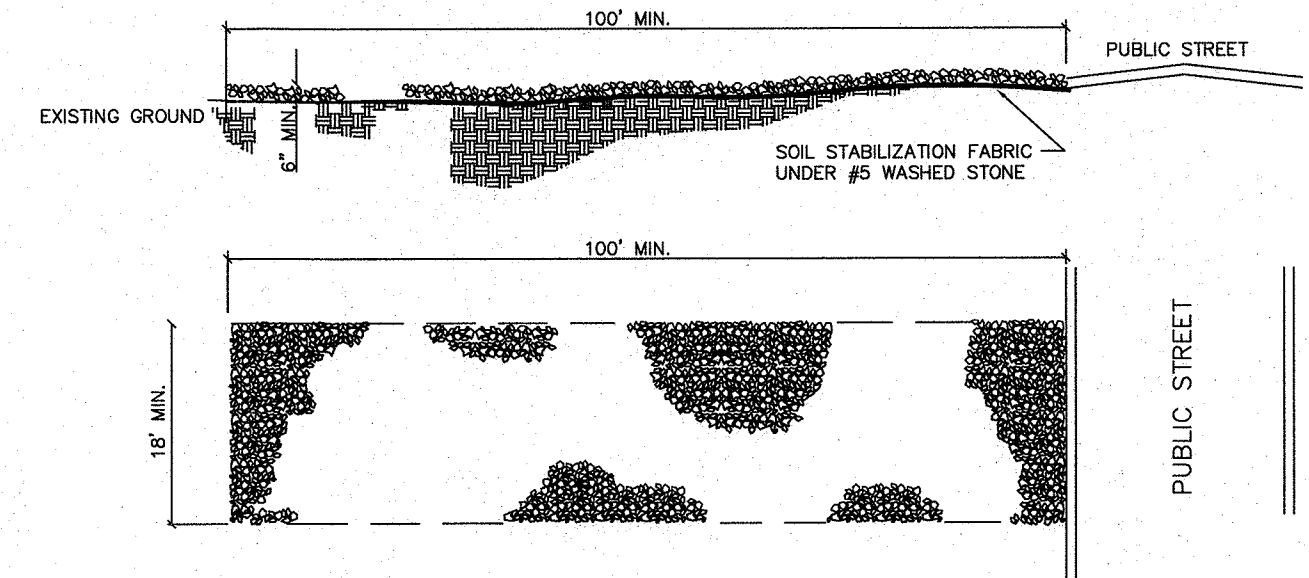
- GENERAL NOTES:
- WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
 - STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 - TURN SILT FENCE UP SLOPE AT ENDS.
 - ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE WHEN GRADING IS ADJACENT TO SWIM BUFFERS, STREAMS OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES). THE COLOR ORANGE IS RESERVED FOR VISUAL IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS.
 - DRAINAGE AREA CAN NOT BE GREATER THAN 1/4 ACRE PER 100 FT. OF FENCE.
 - SLOPE LENGTHS CAN NOT EXCEED CRITERIA SHOWN IN TABLE 6.6.2A NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
 - DO NOT INSTALL SEDIMENT FENCE ACROSS STREAMS, DITCHES, WATERWAYS OR OTHER AREAS OF CONCENTRATED FLOW.

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

NOT TO SCALE

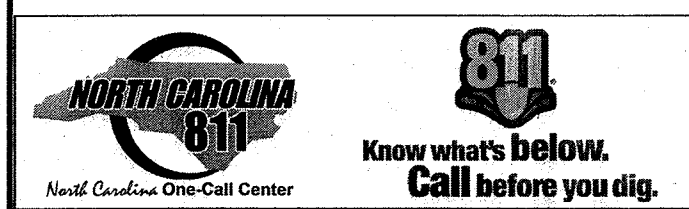
NOTES:

- A STABILIZED ENTRANCE PAD OF #5 WASHED STONE OR RAIL ROAD BALLAST SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
- FILTER FABRIC OR COMPACTED GRUSHER RUN STONE SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
- WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN SEE STD. NO. 30.11B.
- CDOT MAY REQUIRE A STANDARD COMMERCIAL DRIVEWAY (STD. 10.24 & 10.25) TO ACCESS THE CONSTRUCTION SITE IF THE DRIVEWAY IS ON A THOROUGHFARE.



NOT TO SCALE

DATE	ISSUED FOR	REV
5/1/14	1st Submittal to City of Charlotte	0
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08/13/14	3rd Submittal to City of Charlotte	2



Engineer:

RJH

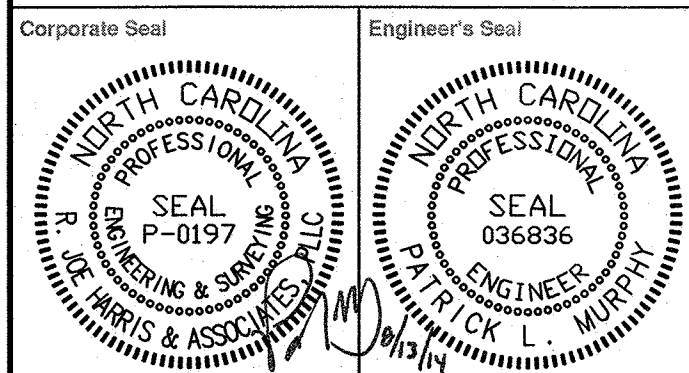
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Project Manager P. Murphy	Drawn P. Murphy
Department Manager B. Pridemore	Checked P. Murphy
Print/Plot Date August 13, 2014	
Client PHIFER CREST, LLC 10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	

Project:

PHIFER CREST

SUBDIVISION PLAN REVISION
CHARLOTTE, NC

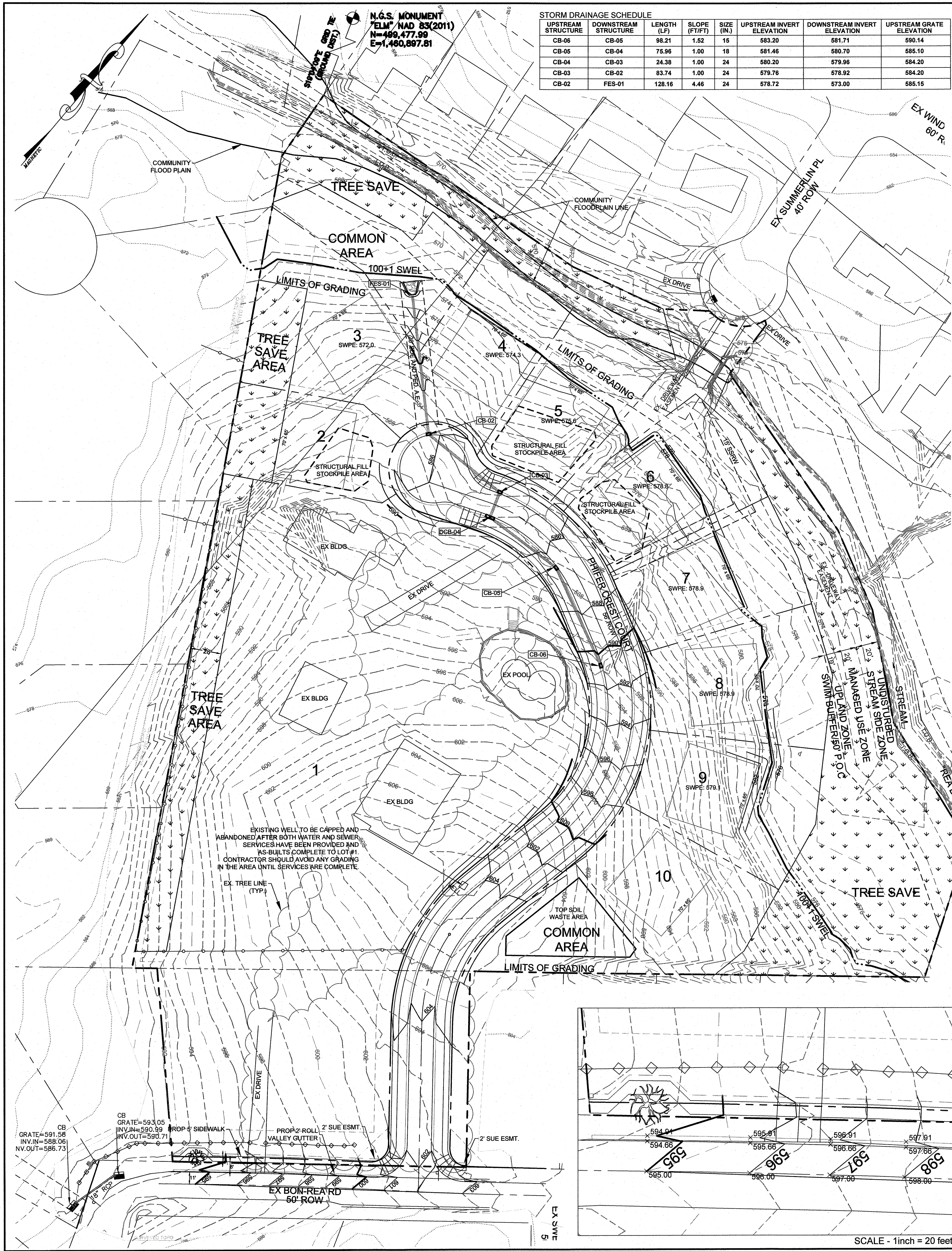
P

Phifer Crest

Drawing Title:

**EROSION CONTROL
DETAILS**

Project No. 1816	Drawing No. EC-5
DWG File Name: 1816_EC	



STORM DRAINAGE SCHEDULE					
UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	LENGTH (LF)	SLOPE (FT/FT)	SIZE (IN.)	UPSTREAM INVERT ELEVATION
CB-06	CB-05	98.21	1.52	15	583.20
CB-05	CB-04	75.96	1.00	18	581.46
CB-04	CB-03	24.38	1.00	24	580.20
CB-03	CB-02	83.74	1.00	24	579.76
CB-02	FES-01	128.16	4.46	24	578.72
					UPSTREAM GRATE ELEVATION
					580.14
					585.10
					579.96
					584.20
					585.15

OFF SITE TOPOGRAPHY PROVIDED BY MECKLENBURG COUNTY LIDAR.

ON SITE TOPOGRAPHY PROVIDED BY "CLASS A" FIELD SURVEY PERFORMED BY R. JOE HARRIS AND ASSOCIATES ON 07-22-2013.

NO PORTION OF THESE 11 LOTS IS LOCATED WITHIN THE 100 YEAR FLOOD HAZARD ZONE AS DEFINED ON FEMA FLOOD INFORMATION AND COMMUNITY FLOOD INFORMATION TAKEN FROM AVAILABLE DATA AS DOWNLOADED FROM THE NORTH CAROLINA FLOODPLAIN MAPPING CENTER, CURRENT AS OF AUGUST 1, 2011.

FIRM: CHARLOTTE, CITY OF, MECKLENBURG COUNTY
EFFECTIVE DATE: MARCH 2, 2009
PANEL NUMBER: 3710-4469-00-J

BOUNDARY INFORMATION AS PROVIDED BY R. JOE HARRIS AND ASSOCIATES. BOUNDARY INFORMATION FROM SURVEY ENTITLED "BOUNDARY SURVEY OF GEORGE HOUSTON PROPERTY AND DATED 08/28/13. SURVEY MEETS OR EXCEEDS REQUIREMENTS FOR A CLASS "A" SURVEY, OR MAXIMUM ERROR OF CLOSURE IS 1:10,000.

HORIZONTAL DATUM TIED TO NAD 83 BY R. JOE HARRIS
VERTICAL DATUM TIED TO NAVD 88 BY R. JOE HARRIS
ALL SURVEYS TIED TO N.G.S. MONUMENT "ELM" N=469,477.99 E=1,460,897.81

SITE SOILS INFORMATION:
VWD, M6B, MO

NATURAL AREA CALCULATIONS

TYPE OF AREA	AREA (ACRES)	CONVERSION FACTOR	NATURAL AREA (EQUIVALENT ACRES)
TREE SAVE AREAS	1.91	-	1.93
SWIM BUFFER (NOT INCLUDING TREE SAVE)	0.49	-	0.49
VEGETATED UTILITY ROWS	0.13	0.25	0.03
PLANTING STRIPS	0.33	0.75	0.25
TOTAL:			2.70 ACRES
REQUIRED:			2.62 ACRES

MAXIMUM ALLOWABLE BUILT-UPON AREA - BY LOT

LOT #	LOT SIZE (SQ. FT.)	MAX. BUA (SQ. FT.)	MAX. BUA (%)
LOT 1	172,591	30	0.02
LOT 2	12,389	37	0.31
LOT 3	18,826	23	0.12
LOT 4	14,017	33	0.24
LOT 5	14,827	32	0.21
LOT 6	15,828	29	0.18
LOT 7	14,896	31	0.21
LOT 8	16,781	27	0.16
LOT 9	15,781	27	0.17
LOT 10	16,090	29	0.18

PER TABLE 9.205(b) OF THE CITY OF CHARLOTTE ZONING ORDINANCE.

FLOOD STUDY CROSS SECTIONS

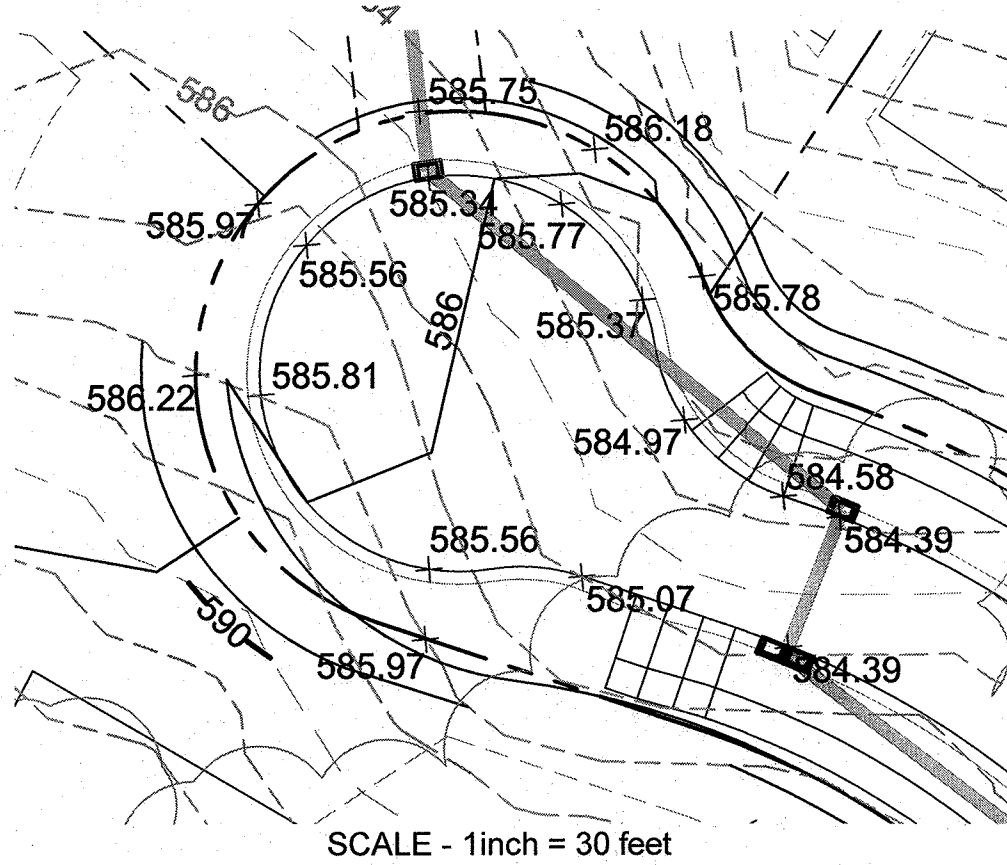
RIVER STATION	Q TOTAL (CFS)	EXISTING 100+1 ELEVATION	PROPOSED 100+1 ELEVATION
14	1997.05	578.50	578.86
13	1997.05	578.50	578.80
12	1997.05	578.53	578.83
11	1997.05	578.19	578.57
10	1997.05	578.29	578.65
9	1997.05	578.10	578.51
8	1997.05	577.92	578.39
7	1997.05	576.02	576.62
6	2016.47	575.66	575.54
5	2016.47	574.52	574.55
4	2016.47	573.34	573.34
3	2016.47	571.96	571.96
2	2016.47	571.37	571.37
1	2016.47	570.31	570.31

NATURAL & TREED AREA SUMMARY

OVERALL SITE AREA	10.46 AC
EXISTING TREED AREA	8.18 AC
BUILT-UPON AREA PERCENTAGE	20.5%
REQUIRED NATURAL AREA (25% OF SITE AREA PER B.U.A.%)	2.62 AC
PROVIDED NATURAL AREA	2.70 AC

PCCO SUMMARY

Original Parcel ID Number(s)	371-220-08-39-40
Development Type	Single Family
Subject to PUD/VIN	Yes
PUD/VIN	City of Charlotte - Central Columbia
Waterfront	No
Waterfront	No
Site Area (ac)	10.46
Tract on site Drainage Area (ac)	10.46
Existing BUA to be removed (SF)	2,119
Existing BUA to remain (SF)	5,517
Proposed New BUA (SF)	14,227.73
Proposed % BUA	25%
Overall (High/Low)	Low
Overall (High/Low)	Low
Development or Redevelopment?	Development
Natural Area Required (ac)	2.62
Natural Area Provided, Total (ac)	2.70
Unsubstantiated Tract Natural Area Preserved (ac)	1.40
Other Areas Subject to Preservation (ac)	1.30
Tract Natural Area Preserved (ac)	2.70
Unsubstantiated Business District VIN	No
Tract Natural Area Preserved VIN	No
Natural Area Mitigation VIN	No
Butter Mitigation VIN	No
Final Proposed Mitigation VIN	No



GENERAL NOTES - GRADING/SITE DEVELOPMENT:

- ALL REQUIRED PERMITS MUST BE OBTAINED AND A COPY MAINTAINED ON SITE PRIOR TO COMMENCING WORK. ONCE WORK BEGINS, ANY CONSTRUCTION ENTRANCES SHOULD BE INSTALLED BEFORE ALL OTHER MEASURES. FOLLOWED BY ANY NEEDED CULVERTS. THE PERMITS ARE THEN TO BE INSTALLED WITH ONLY THE DISTURBANCE NECESSARY FOR THEIR CONSTRUCTION. ALL REQUIRED EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF ANY UNDERGROUND UTILITIES OR SITE GRADING ACTIVITIES. SEE THE APPLICABLE PLAN SHEETS FOR THE NECESSARY EROSION CONTROL REQUIREMENTS, MAINTENANCE AND STABILIZATION OF THE WORK SITE.
- DURING CONSTRUCTION AND UNTIL TURF IS ESTABLISHED, ALL EROSION DEVICES SHALL BE MONITORED AND MAINTAINED PER THE SPECIFIED MAINTENANCE SCHEDULE (SEE EROSION CONTROL PLAN SHEETS). ALL COMPLETED WORK AREAS THAT HAVE BEEN BROUGHT TO GRADE SHALL BE SEEDED AND MULCHED.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL APPLICABLE UTILITIES AFFECTING THE PROJECT (ON AND OFF SITE).
- THE CONTRACTOR SHALL CONTACT THE NORTH CAROLINA ONE-CALL CENTER AT 8-1-1 AT LEAST 72 HOURS IN ADVANCE OF THE CONSTRUCTION. INDIVIDUAL UTILITY AGENCIES NOT PARTICIPATING IN THE ONE-CALL PROGRAM SHALL BE CONTACTED INDEPENDENTLY BY THE CONTRACTOR.
- UPON VERIFICATION OF THE LOCATION AND DEPTH OF ALL UTILITIES, CONTRACTOR SHALL VERIFY THAT THERE ARE NO CONFLICTS WITH THE EXISTING UTILITIES. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER FOR EVALUATION AND REDESIGN (IF NECESSARY). THE CONTRACTOR SHALL NOT COMMENCE WORK IN THE AREA UNTIL THE CONFLICT IS RESOLVED.
- ALL EXCAVATION FOR THIS PROJECT SHALL BE CONSIDERED UNCLASSIFIED, UNLESS SPECIAL PROVISIONS ARE STATED IN THE CONTRACT DOCUMENTS.
- DURING EXCAVATION, ALL FOREIGN DEBRIS AND UNSUITABLE FILL MATERIALS SHALL BE REMOVED AND DISPOSED OF OFFSITE OR LOCATION APPROVED BY OWNER.
- ON-SITE BURIAL PITS, WHEN APPROVED, SHALL BE CLEARLY MARKED ON THE FIELD RECORD DRAWINGS AND A COPY OF THOSE DRAWINGS SHALL BE PROVIDED TO THE OWNER. THE USE OF BURIAL PITS SHALL BE COORDINATED WITH THE OWNER AND ENGINEER PRIOR TO USE.
- ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY FOR SPECIFIED MATERIAL. "LIGHTWEIGHT" OR HIGHLY PLASTIC SOILS SHALL NOT BE USED AS FILL UNDER ROADWAYS, BUILDINGS AND OTHER STRUCTURAL AREAS. LIGHTWEIGHT OR PLASTIC SOILS AS DEFINED BY THE GEOTECHNICAL ENGINEER. 100% STANDARD PROCTOR OF MAXIMUM DRY DENSITY SHALL BE ATTAINED FOR DRIVEWAYS, PARKING LOTS AND BUILDINGS (UPPER 12" OF SUBGRADE).
- AREAS CUT TO GRADE (RESIDUAL SOILS) SHALL BE PROOFROLLED (MIN. 50,000 LBS) OR TESTED BY OTHER MEANS TO ENSURE THAT MATERIAL IS SUITABLE FOR STRUCTURAL LOADING. PLASTIC SOILS SHALL BE UNDERCUT AND DISPOSED OF OFFSITE OR LOCATION APPROVED BY OWNER AND REPLACED WITH SUITABLE FILL MATERIAL, AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- ALL FILL FOR STRUCTURAL AREAS SHALL BE PLACED IN 8"-12" LIFTS AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) AT NEAR OPTIMUM MOISTURE CONTENT FOR UPPER 12" AS MEASURED FROM FINISHED GRADE (TOLERANCE SHALL BE +/- 2%).
- FILL SLOPES SHALL BE GRADED NO STEEPER THAN 3:1. SLOPES STEEPER THAN 3:1 MAY REQUIRE THE USE OF EROSION CONTROL, BLANKETS (ECBs) TO MINIMIZE AND PREVENT EROSION OF THE SLOPES.
- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET MAY REQUIRE THE USE OF SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO NORMAL SEEDING.
- COMPACTION WITHIN ROAD RIGHTS-OF-WAY SHALL BE AS REQUIRED BY THE GOVERNING AGENCY. AT A MINIMUM, THE FOLLOWING STANDARDS SHALL BE MET:
 - A. SUBGRADE SHALL BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (UPPER 12").
 - B. AGGREGATE BASE COURSE SHALL BE COMPACTED TO 100% MODIFIED PROCTOR MAXIMUM DENSITY.
 - C. INTERMEDIATE AND SURFACE HOT MIX ASPHALT COURSES SHALL BE COMPACTED TO A MIN. OF 92% MAXIMUM SPECIFIC GRAVITY.
 - D. SUBGRADE AND BASE COURSE SHALL BE PROOFROLLED (50,000 LBS MIN.).
 - E. HOT MIX ASPHALT TEMPERATURE AT TIME OF LAYDOWN SHALL BE WITHIN 20°F OF THE PLANT MIX TEMPERATURE (MIN. TEMPERATURE SHALL BE NO LESS THAN 220-230 DEGREES).
 - F. VARIATIONS OF THE MINIMUM REQUIREMENTS CAN BE CONSIDERED ON A CASE-BY-CASE BASIS AND MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER.
- THE CONSTRUCTION OF ALL STREETS AND DRAINAGE IMPROVEMENTS LOCATED WITHIN THE ROADWAY RIGHT-OF-WAY SHALL BE GOVERNED BY THE CITY AND/OR STATE DEPARTMENT OF TRANSPORTATION.
- RIGHT-OF-WAY ARE THE MAINTENANCE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER OR HOMEOWNERS ASSOCIATION (HOA), UNLESS OTHERWISE SPECIFIED. WHEN REQUIRED, PRIVATE DRAINAGE EASEMENTS SHALL BE APPLIED AND ANY OBSTRUCTION OR ENCROACHMENT INTO SAID EASEMENT IS PROHIBITED. HOMEOWNER OR BUILDER IS SOLELY AT RISK FOR THE REMOVAL AND/OR DAMAGE OF LANDSCAPES, LANDSCAPING, STRUCTURES OR OTHER IMPROVEMENTS PLACED WITHIN THE EASEMENTS SHOULD MAINTENANCE NEED TO BE PERFORMED.
- THE BUILDER SHALL BE RESPONSIBLE FOR MEETING THE BUILDING FOUNDATION DRAINAGE REQUIREMENTS AS SPECIFIED IN THE INTERNATIONAL RESIDENTIAL CODE (CURRENT VERSION AS ADOPTED BY GOVERNING AGENCY).
- ENGINEER DOES NOT WARRANT THAT ANY OR ALL LOTS HAVE BEEN SET UP TO MEET THE BUILDING FOUNDATION DRAINAGE REQUIREMENTS SET FORTH IN THE INTERNATIONAL RESIDENTIAL CODE.
- BUILDER SHALL BE RESPONSIBLE FOR MAINTAINING THE ESTABLISHED DRAINAGE PATTERNS OR ENSURING THAT ANY ALTERATIONS TO THE ESTABLISHED DRAINAGE PATTERNS WILL NOT ADVERSELY IMPACT THE RECEIVING STORM DRAINAGE SYSTEM AND/OR DOWNSTREAM PROPERTY OWNER.
- FINAL ELEVATIONS ARE SUBJECT TO CHANGE BASED UPON SITE CONDITIONS, CONSTRUCTION TOLERANCES BY AND BETWEEN OWNER/CONTRACTOR, AND OTHER CONDITIONS.

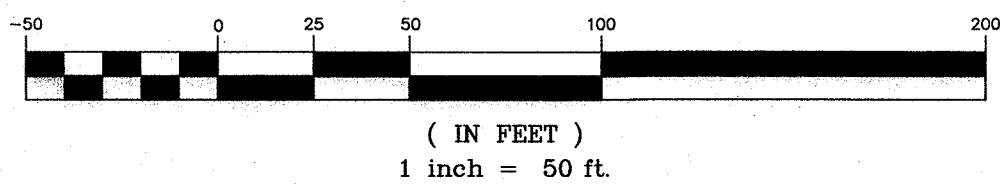
S.W.I.M. BUFFER GENERAL NOTES:

- CONTRACTOR IS TO ENSURE THAT THE STREAMSIDE ZONE OF THE S.W.I.M. BUFFER BE LEFT COMPLETELY UNDISTURBED. BUFFER REGULATIONS REQUIRE THAT NO LAND-DISTURBING ACTIVITY CAN TAKE PLACE WITHIN THE STREAMSIDE ZONE.
- CONTRACTOR IS TO REMOVE TREES IN THE MANAGED USE ZONE ONLY IN THOSE PORTIONS OF THE ZONE THAT ARE NOT INCLUDED IN A TREE SAVE AREA. TREE REMOVAL WAS DESIGNED PER THE CITY OF CHARLOTTE'S CODE OF ORDINANCES IN ORDER TO PRESERVE A TREE DENSITY OF AT LEAST 8 HEALTHY TREES OF AT LEAST 6-INCH CALIPER PER 1,000 SQUARE FEET IN THE MANAGED USE ZONE. TREE REMOVAL IN THE TREE SAVE AREAS OF THE MANAGED USE ZONE IS PROHIBITED.
- BUFFER ZONE REGULATIONS PROHIBIT THE PLACEMENT OF FILL OR DREDGED MATERIAL WITHIN THE LIMITS OF THE STREAMSIDE ZONE AND MANAGED USE ZONE. ADDITIONALLY, STRUCTURES ARE NOT ALLOWED IN PORTIONS OF THE S.W.I.M. BUFFER UNLESS THE FOLLOWING REQUIREMENTS ARE MET:
 - A. THE STRUCTURE MUST BE A NON-COMMERCIAL OUT BUILDING.
 - B. THE GROUND FOOTPRINT OF THE STRUCTURE MUST NOT EXCEED 150 SQUARE FEET.
- GRADING AND OTHER LAND DISTURBING ACTIVITIES AS SPECIFIED ON THE PLANS ARE ALLOWED WITHIN THE LIMITS OF THE UPLAND ZONE OF THE S.W.I.M. BUFFER. WHEN PERFORMING GRADING OR OTHER LAND DISTURBING ACTIVITIES WITHIN THE UPLAND ZONE, THE CONTRACTOR IS TO ENSURE THAT THE WORK IS PERFORMED IN SUCH A MANNER AS TO PREVENT DAMAGE TO THE ROOTS OF REMAINING TREES, GRASSING, SEEDING, AND TEMPORARY EROSION CONTROL MATS MAY BE APPLIED TO THE UPLAND AREA WHENEVER SPECIFIED ON THE PLANS.
- PRIOR TO ANY LAND DISTURBING ACTIVITIES, CONTRACTOR IS TO CLEARLY MARK THE OUTSIDE BOUNDARY OF THE BUFFER ZONE WITH ORANGE FABRIC FENCING, AS SEEN ON THE PLANS. CONTRACTOR TO ENSURE THIS FENCING IS MAINTAINED FOR THE DURATION OF THE PROJECT.
- PRIOR TO ANY LAND DISTURBING ACTIVITIES, CONTRACTOR IS TO CLEARLY MARK THE OUTSIDE BOUNDARY OF THE STREAM BUFFER WITH AN IRON, PIN, OR OTHER ACCEPTABLE PROPERTY CORNER MARKER AT STREET CROSSINGS.

TREE PROTECTION NOTES FOR SUBDIVISION:

- TREE PROTECTION FENCE/BARRICADES MUST MEET OR EXCEED TREE ORDINANCE REQUIREMENTS.
- TREE PROTECTION FENCE/BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION AND NOT REMOVED UNTIL AFTER AN INSPECTION BY URBAN FORESTRY.
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITIES ALLOWED IN TREE SAVE AREAS.
- VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND/OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.
- ALL TREES ON PUBLIC PROPERTY ARE PROTECTED BY ORDINANCE AND REMOVAL MUST BE APPROVED BY THE CITY ARBORIST @ (704) 336-4262.
- SHOW TREE PROTECTION FENCE AT LEAST 5 FEET BEYOND THE DRIPLINE OF THE DESIGNATED TREE SAVE AREA(S) WHENEVER POSSIBLE AT NO LESS THAN THE LOCATIONS SHOWN ON.
- TREE SAVE FENCING MAY BE REMOVED/OMITTED UPON ALL COMPLETED AND BUILT-OUT PORTIONS OF THE DEVELOPMENT (EXAMPLE: OCCUPIED HOME LOTS).
- TREE PROTECTION FENCE MAY BE TEMPORARILY REMOVED AND REPLACED FOR APPROVED UTILITY/STORM DRAINAGE WORK AND INSTALLATION OF ANY REQUIRED LANDSCAPE PLANTINGS.
- COORDINATE ALL ACTIVITIES WITHIN THE TREE SAVE LIMITS WITH THE URBAN FORESTRY SPECIALIST, GARY TURNER AT 704-336-4330

GRAPHIC SCALE



DATE

ISSUED FOR

REV

5/1/14

1st Submittal to City of Charlotte

0

6/27/14



2nd Submittal to City of Charlotte

1

08/13/14


3rd Submittal to City of Charlotte

2



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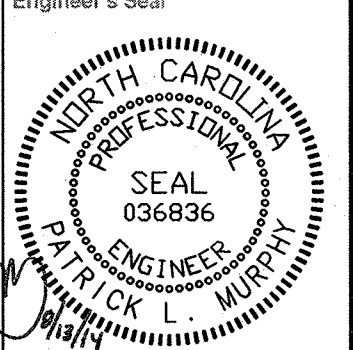
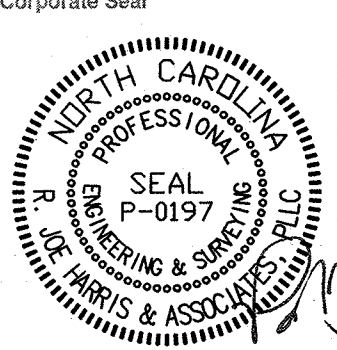
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Corporate Seal

Engineer's Seal



Project Manager

Drawn

P. Murphy

P. Murphy

Department Manager

Checked

B. Pridemore

P. Murphy

Print/Plot Date

August 13, 2014

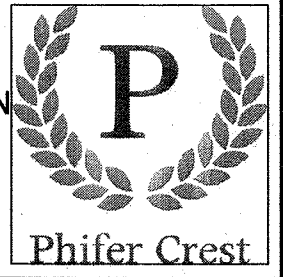
Client

PHIFER CREST, LLC

10801 JOHNSTON ROAD, SUITE 127
CHARLOTTE, NC 28226
P: (980) 406-3818

Project:

PHIFER CREST
SUBDIVISION PLAN REVISION
CHARLOTTE, NC



Drawing Title:

GRADING AND
STORM DRAINAGE PLAN

Project No.

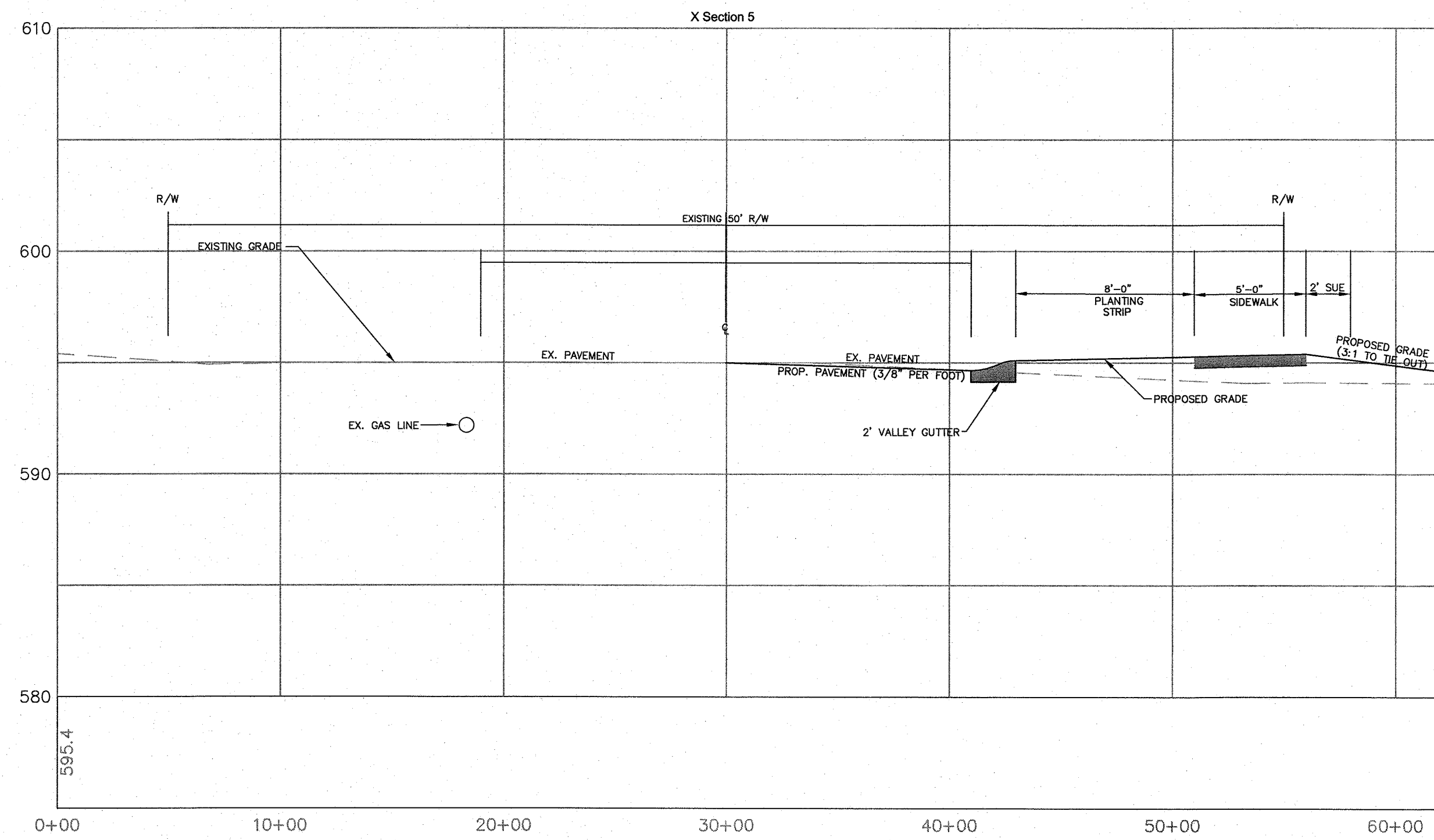
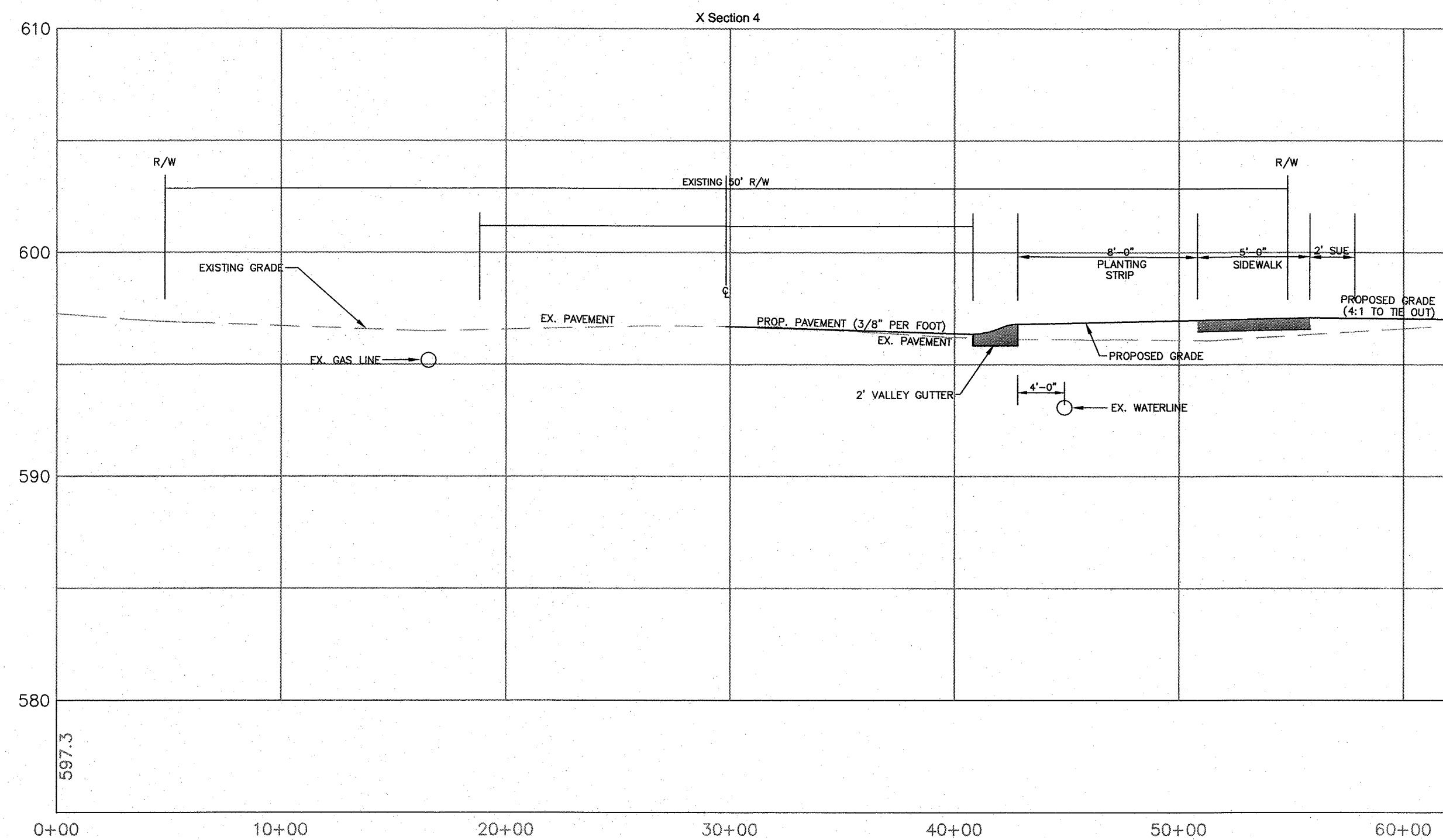
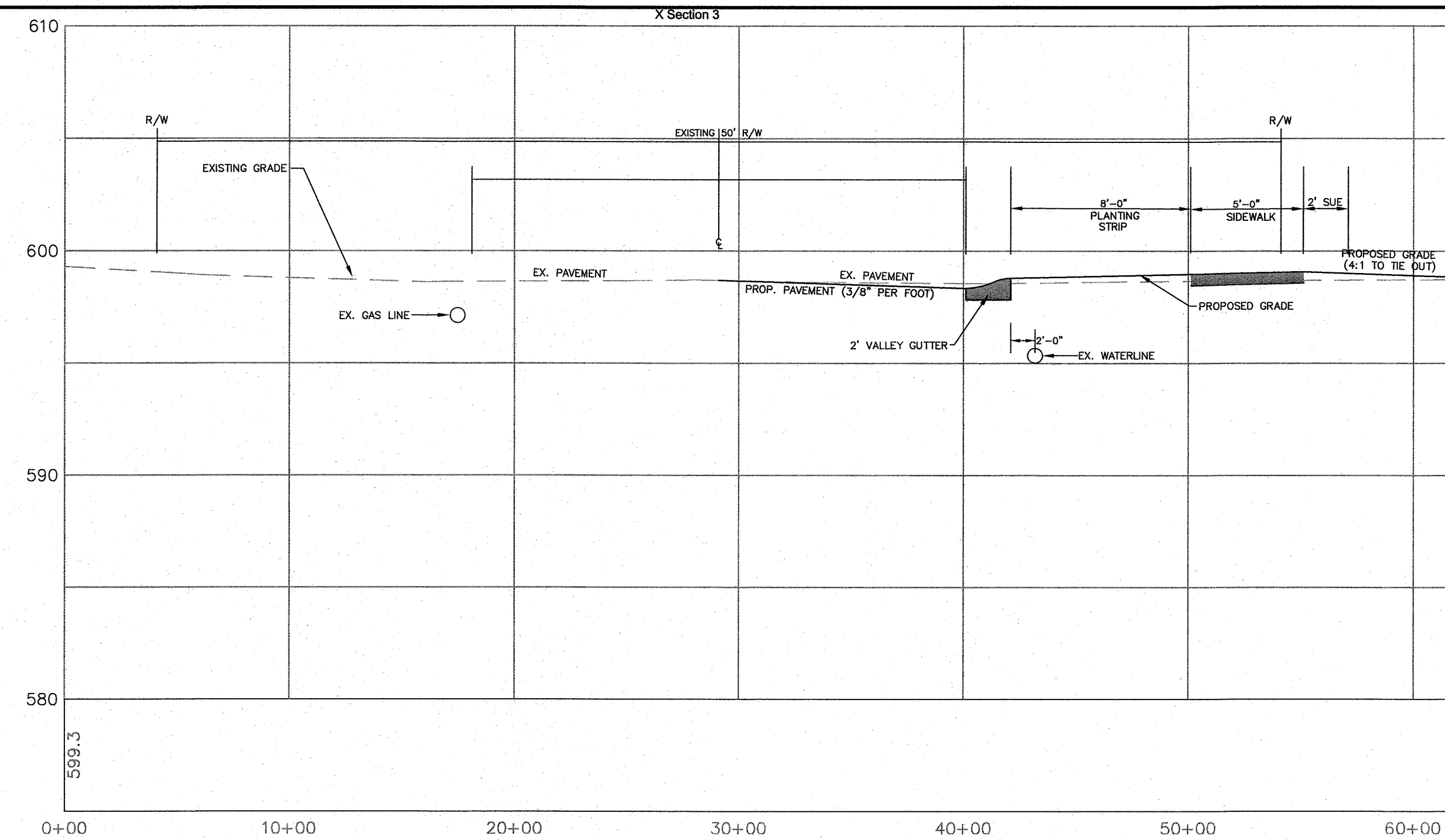
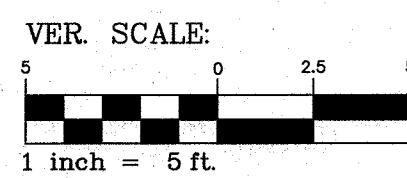
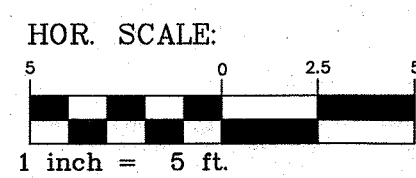
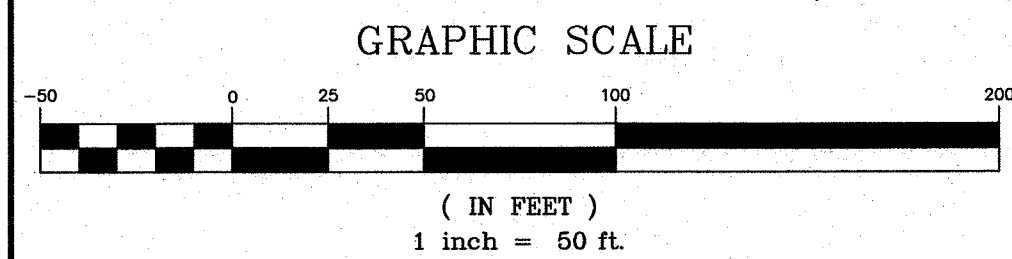
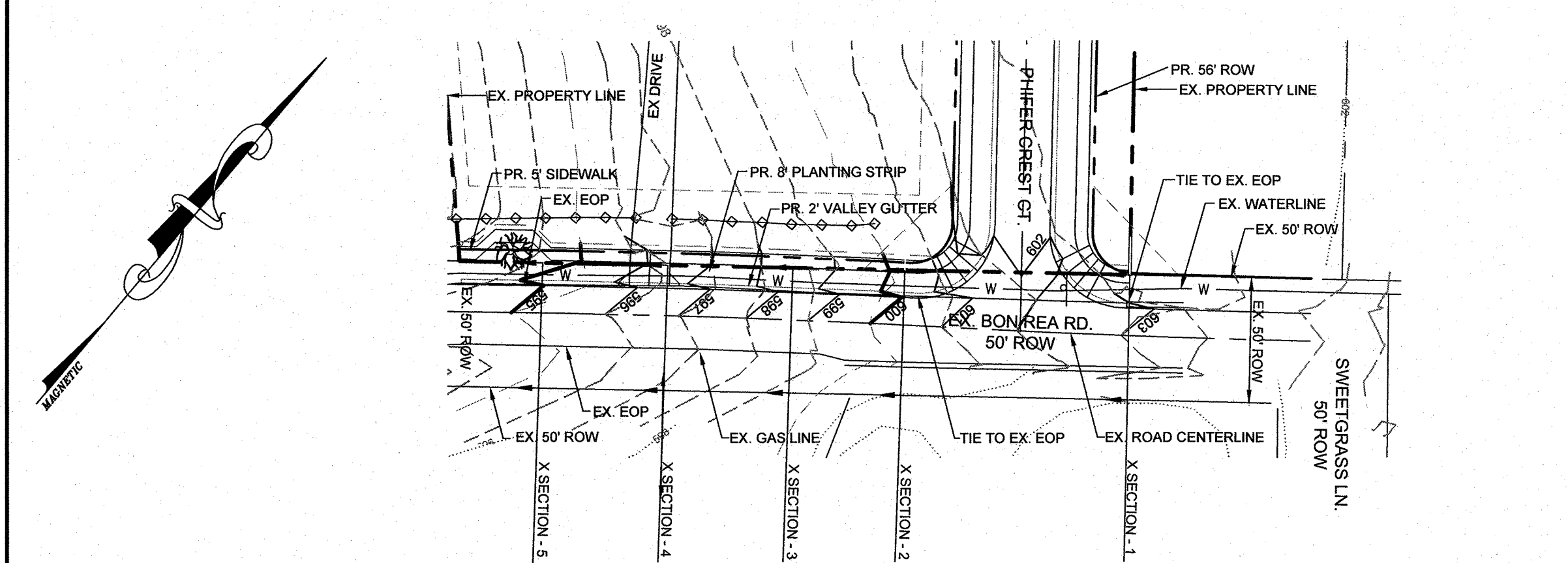
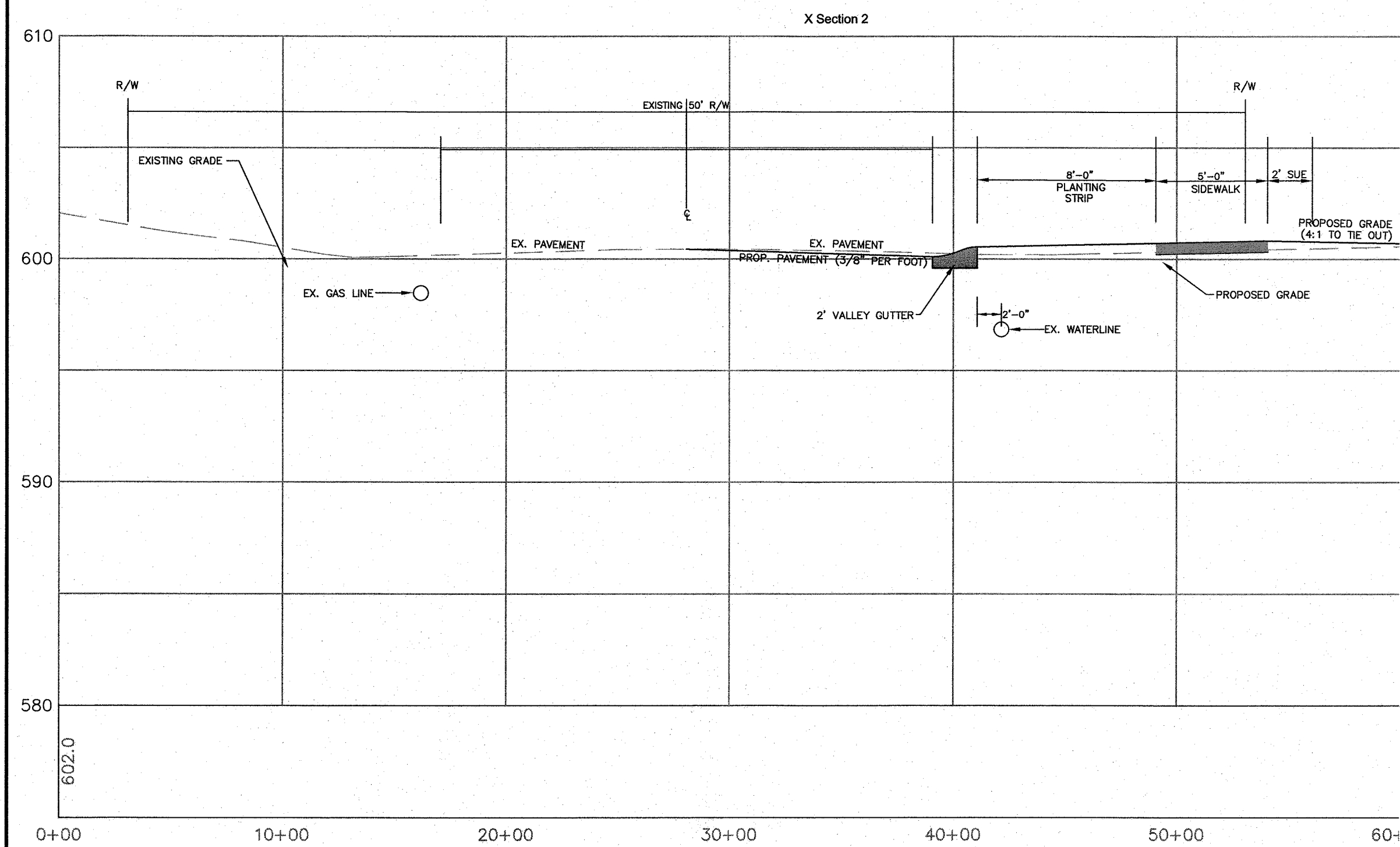
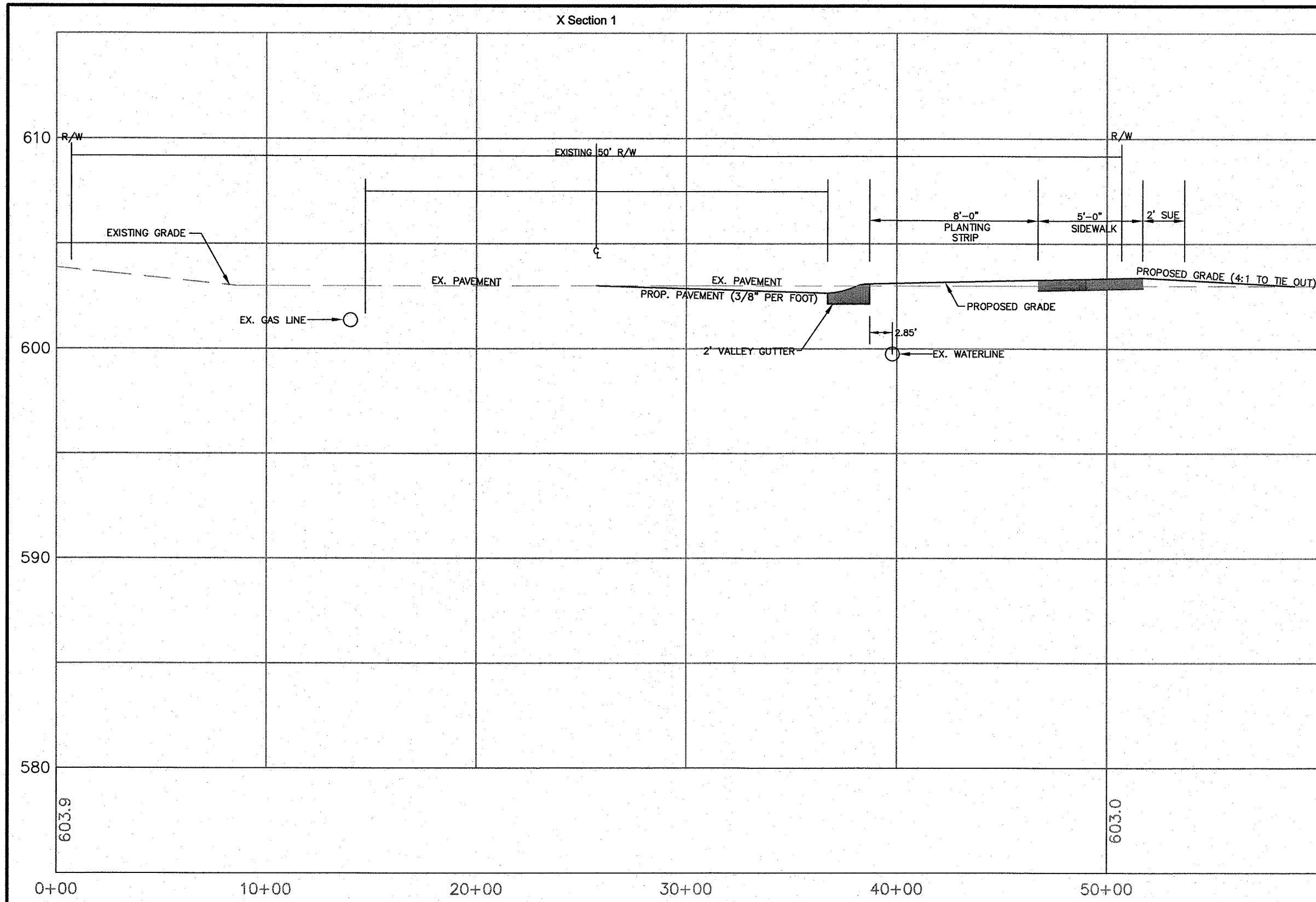
1816

DWG File Name:

1816_GRD

Drawing No.

GP-1



DATE	ISSUED FOR	REV
5/1/14	1st Submittal to City of Charlotte	0
6/27/14	2nd Submittal to City of Charlotte	1
08/13/14	3rd Submittal to City of Charlotte	2

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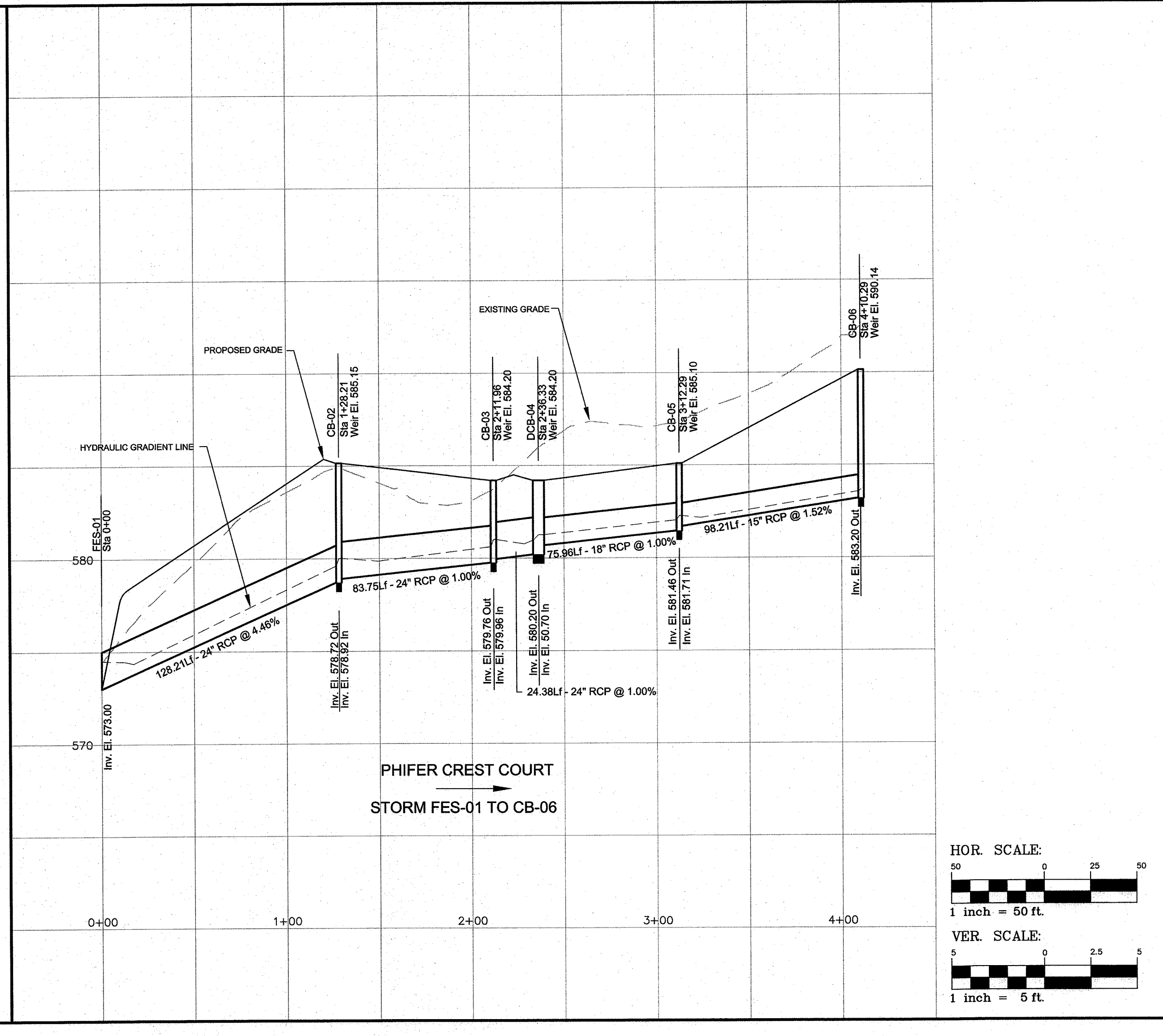
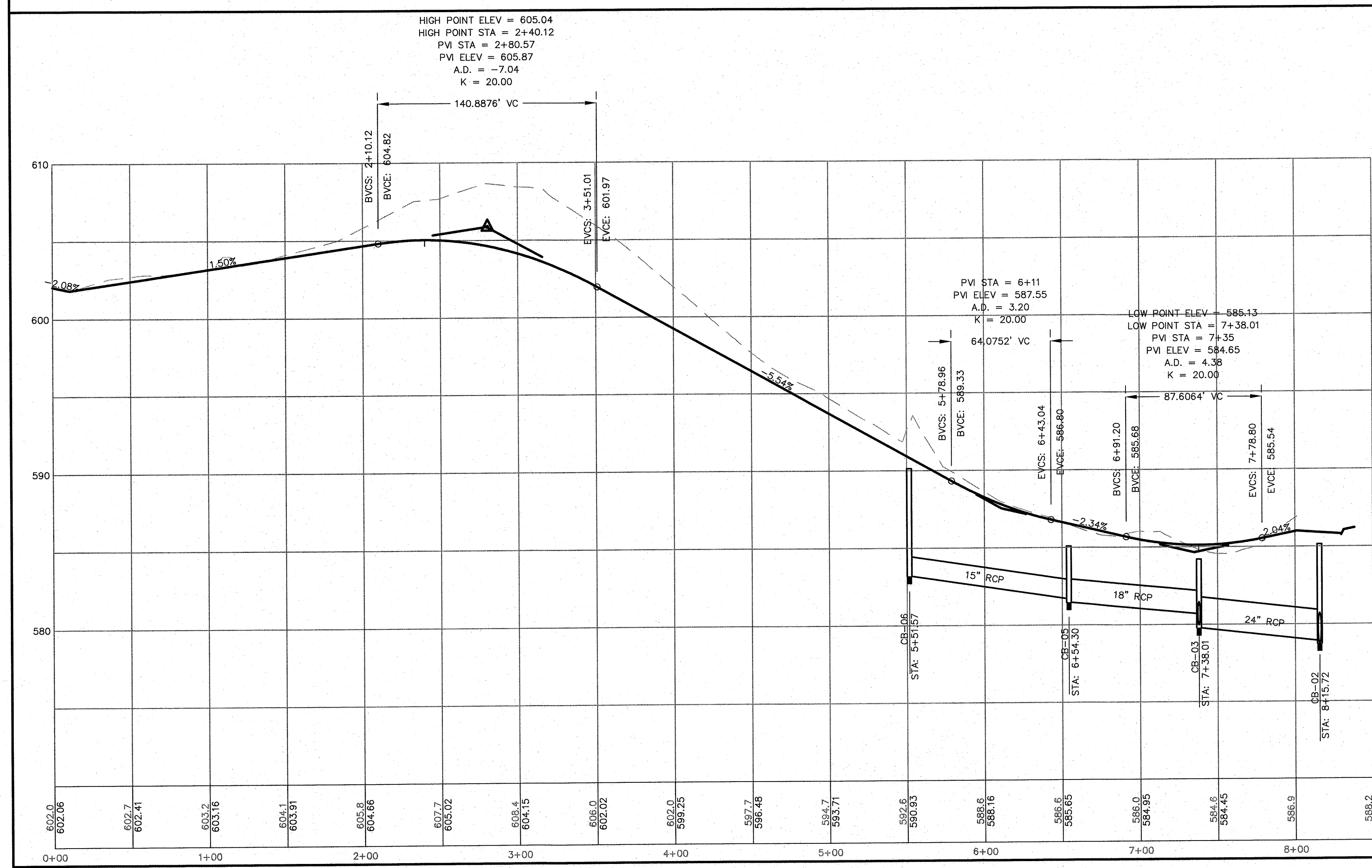
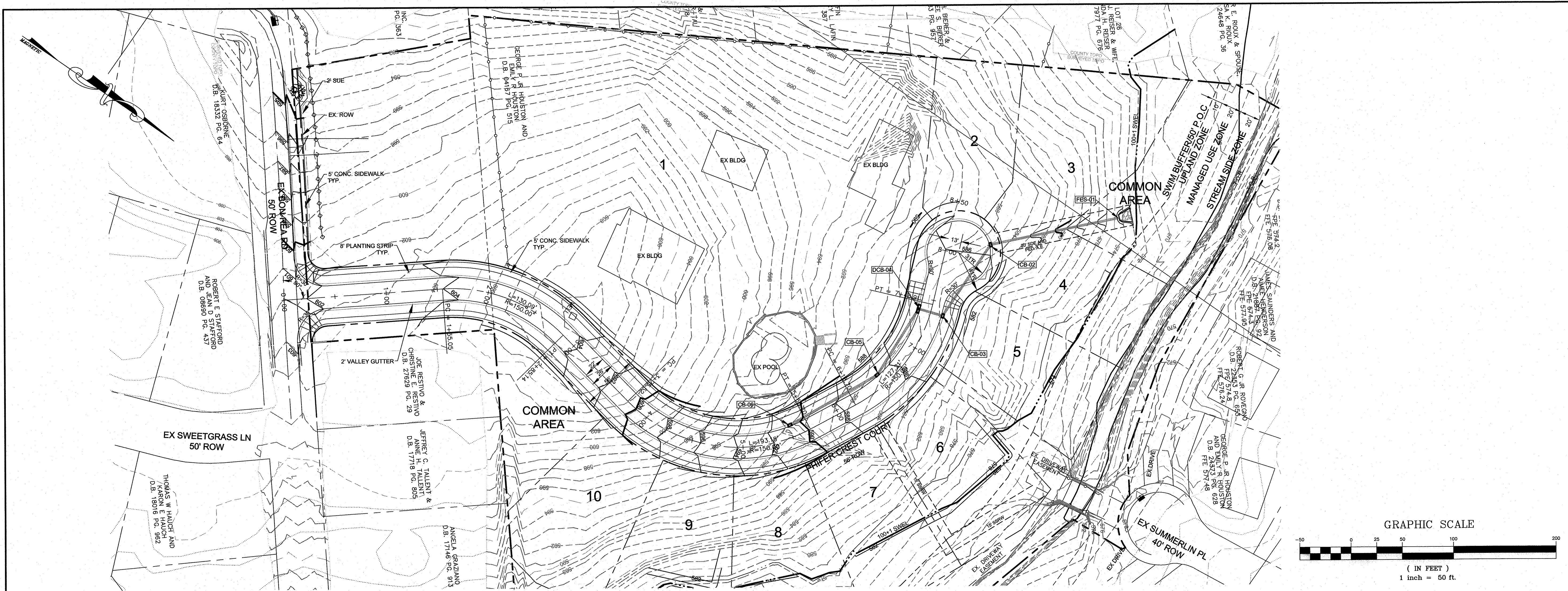
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Engineer's Seal

Project Manager P. Murphy	Drawn P. Murphy
Department Manager B. Pridemore	Checked P. Murphy
Print/Plot Date August 13, 2014	
Client PHIFER CREST, LLC 10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	
Project: PHIFER CREST SUBDIVISION PLAN REVISION CHARLOTTE, NC	
Drawing Title: BON REA RD. CROSS SECTIONS 1 of 2	
Project No. 1816	Drawing No. GP-2
DWG File Name: 1816_GRD	




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08/13/14	3rd Submittal to City of Charlotte	2



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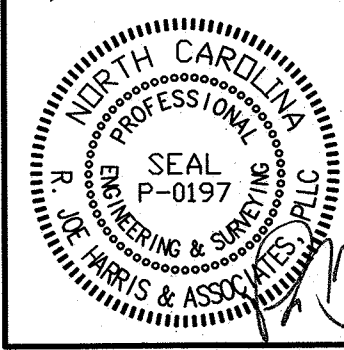
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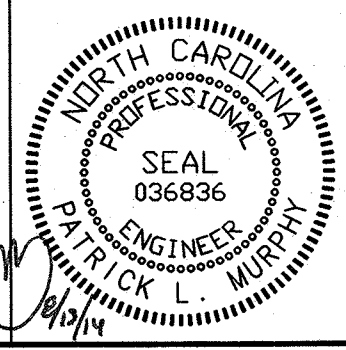
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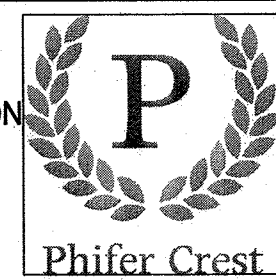
Engineer's Seal



Project Manager	Drawn
P. Murphy	P. Murphy
Department Manager	Checked
B. Pridemore	P. Murphy
Print/Plot Date	August 13, 2014
Client	PHIFER CREST, LLC
10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	

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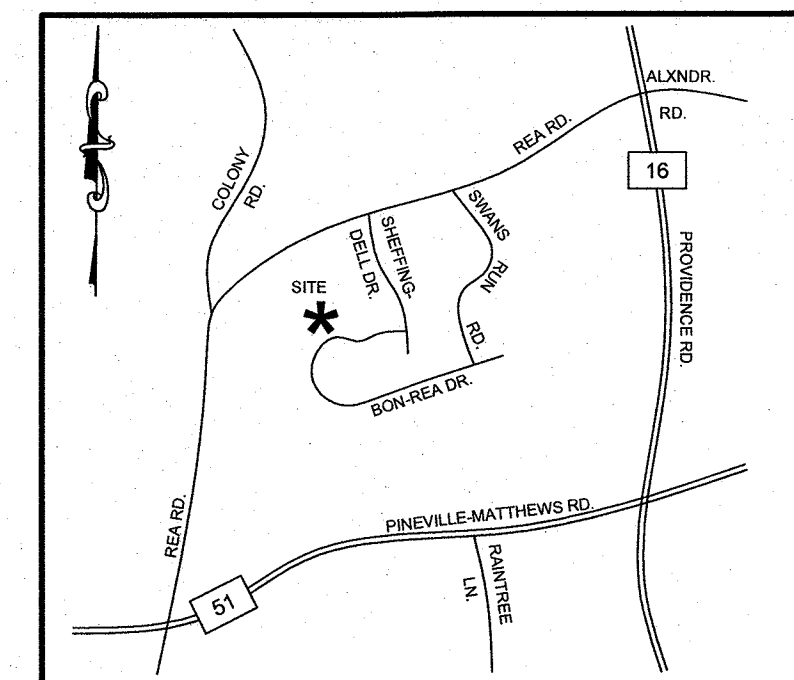
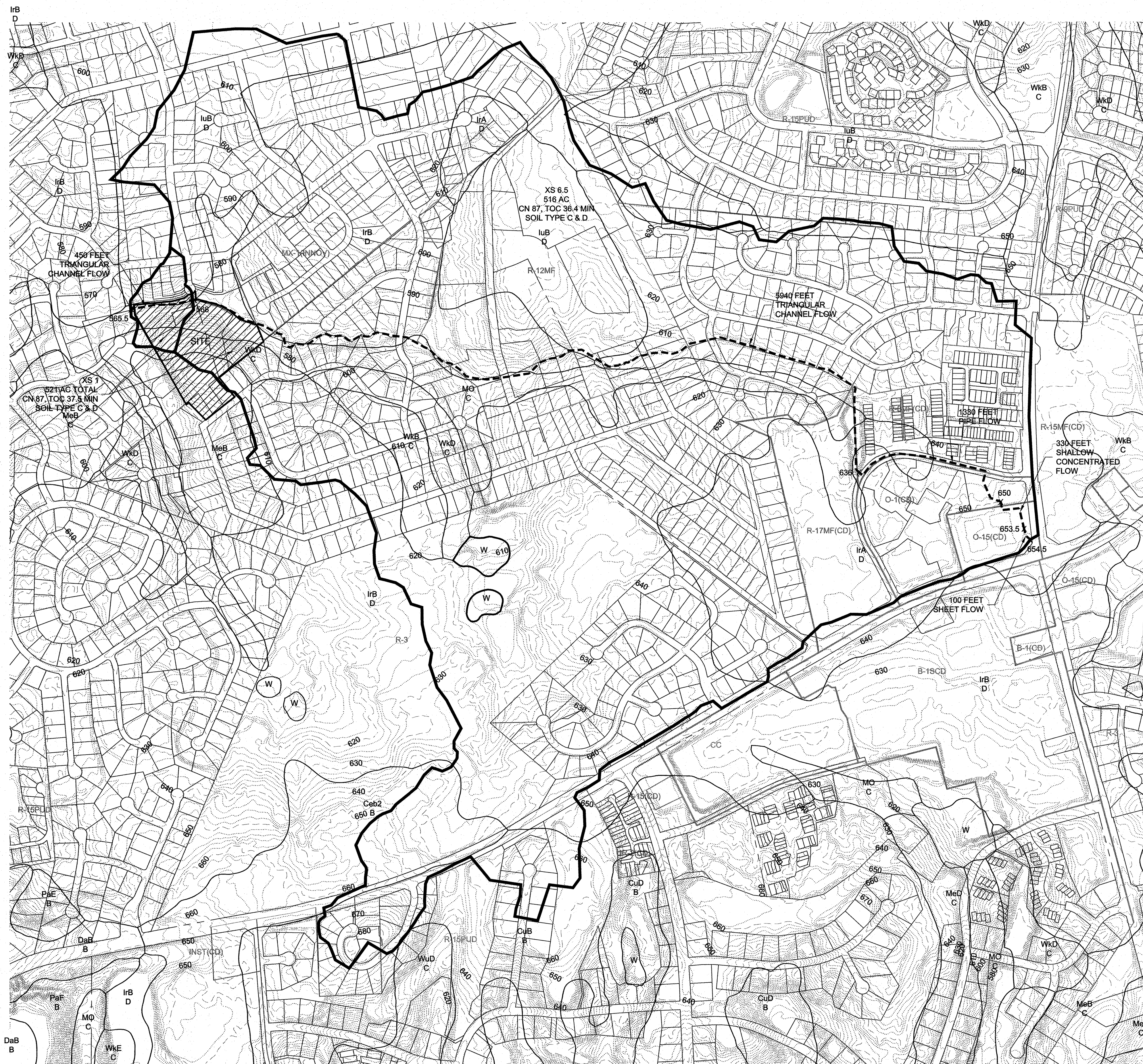
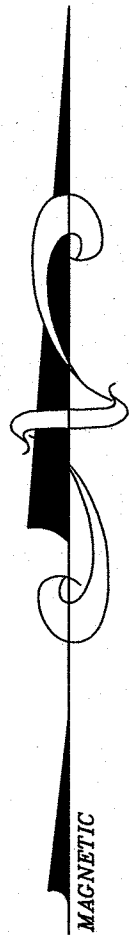
PHIFER CREST
SUBDIVISION PLAN REVISION
CHARLOTTE, NC



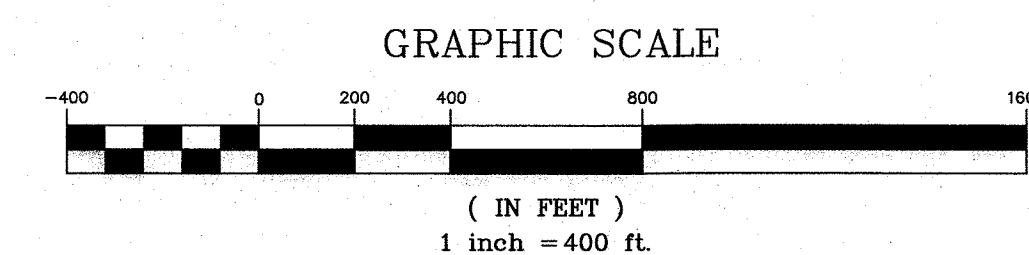
Drawing Title:

ROAD PLAN AND PROFILE
STORM DRAIN PROFILE

Project No.	Drawing No.
1816	RP-1
DWG File Name:	
1816_GRD	



VICINITY MAP - N.T.S.



DATE	ISSUED FOR	REV
8/21/13	FIRST SUBMITAL	0
01/31/14	RESPONSE TO CITY COMMENTS	1
08/13/14	3rd Submittal to City of Charlotte	2



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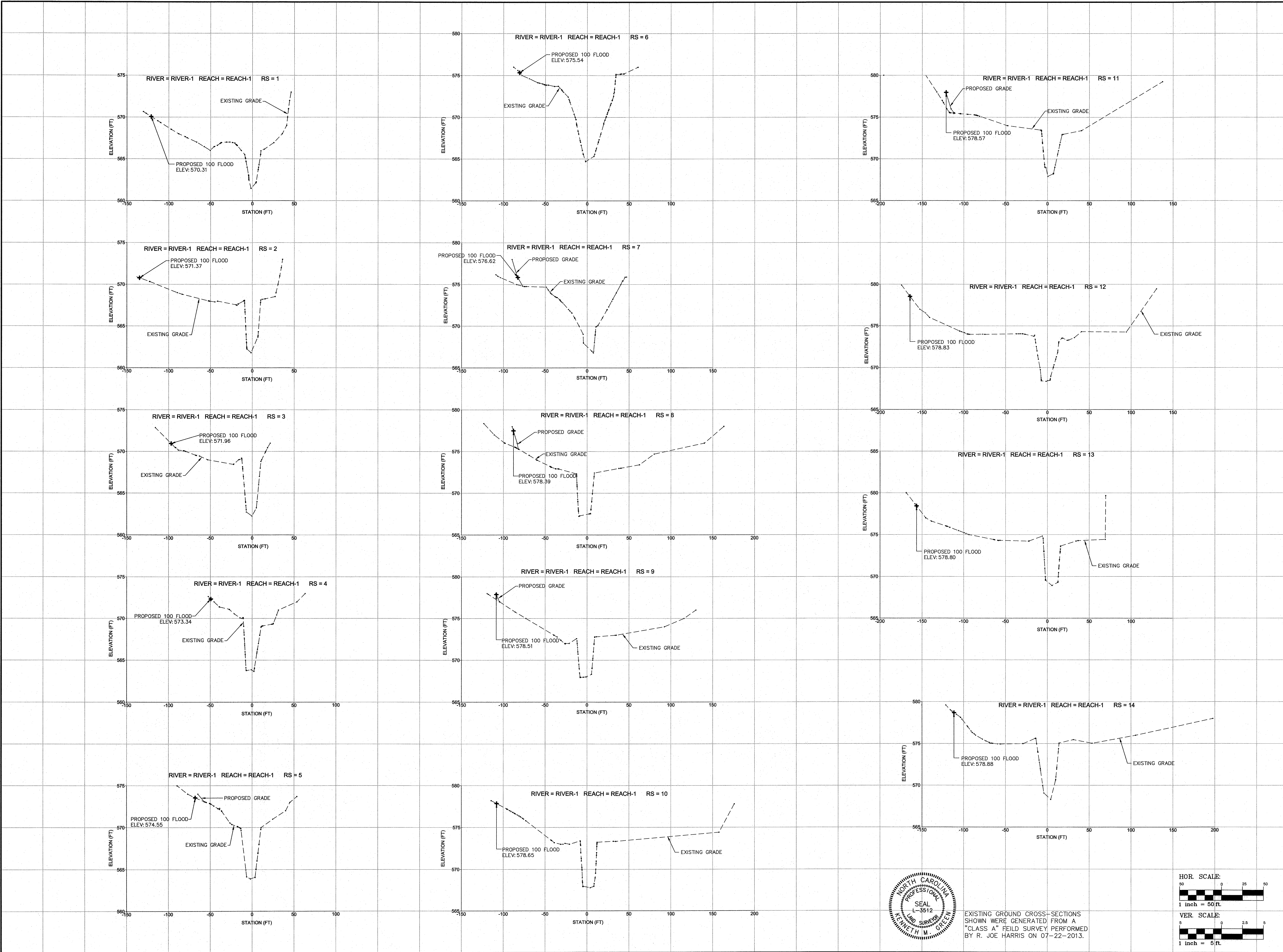
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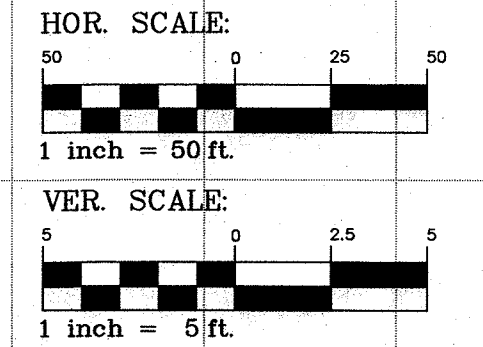
Corporate Seal

Engineer's Seal

Project Manager	Drawn
P. Murphy	J. Woodruff Jr.
Department Manager	Checked
B. Pridemore	P. Murphy
Print/Plot Date	
August 13, 2014	
Client	
PHIFER CREST, LLC 10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	
Project:	
PHIFER CREST CHARLOTTE, NC	
 <p>Phifer Crest</p>	
Drawing Title:	
FLOOD STUDY DRAINAGE AREA	
Project No.	Drawing No.
1816	
DWG File Name:	
1816_FS BASE	FS-1



EXISTING GROUND CROSS-SECTIONS
SHOWN WERE GENERATED FROM A
"CLASS A" FIELD SURVEY PERFORMED
BY R. JOE HARRIS ON 07-22-2013.



DATE	ISSUED FOR	REV
5/1/14	1st Submittal to City of Charlotte	0
6/27/14	2nd Submittal to City of Charlotte	1
08/13/14	3rd Submittal to City of Charlotte	2

Engineer:

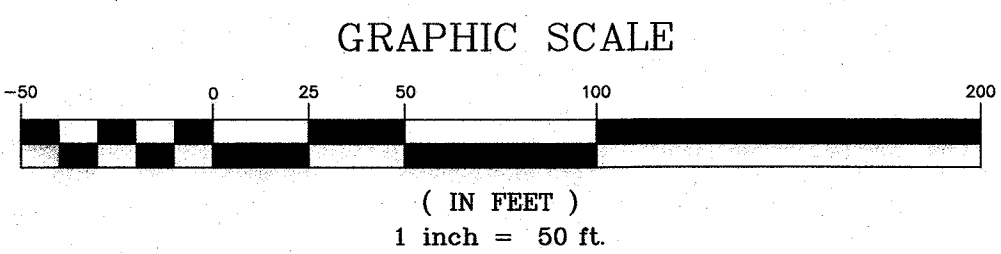
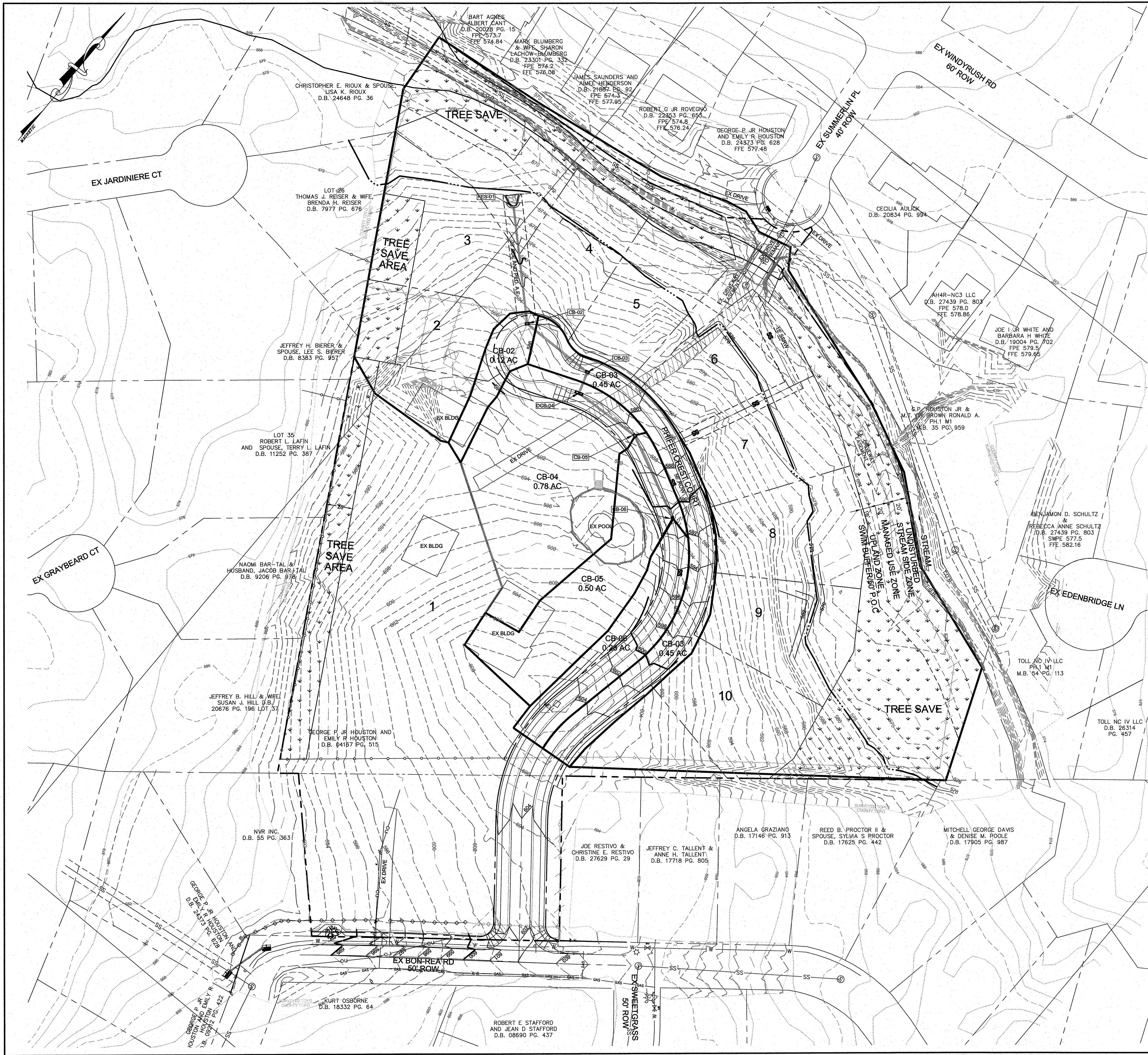
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Corporate Seal	Engineer's Seal

Project Manager	Drawn
P. Murphy	P. Murphy
Department Manager	Checked
B. Pridemore	P. Murphy
Print/Plot Date	
August 13, 2014	
Client	
PHIFER CREST, LLC 10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	
Project:	
PHIFER CREST SUBDIVISION PLAN REVISION CHARLOTTE, NC	
Drawing Title:	
FLOOD STUDY CHANNEL CROSS SECTIONS	
Project No.	Drawing No.
1816	FS-2
DWG File Name:	
1816_GRD	



DATE	ISSUED FOR	REV
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6/27/14	2nd Submittal to City of Charlotte	1
08/13/14	3rd Submittal to City of Charlotte	2



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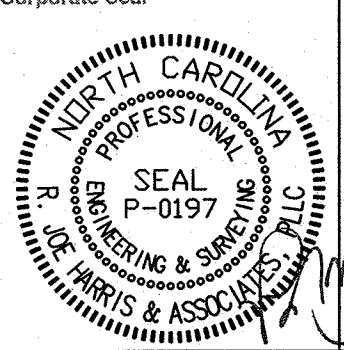


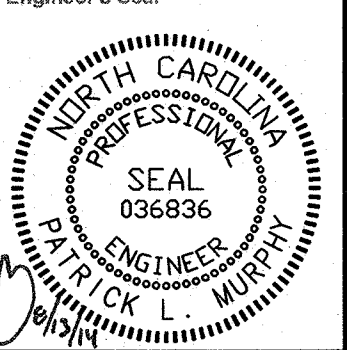
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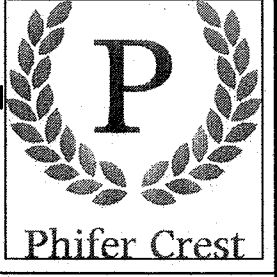




Project Manager	Drawn
P. Murphy	P. Murphy
Department Manager	Checked
B. Pridemore	P. Murphy
Print/Plot Date	
August 13, 2014	
Client	
PHIFER CREST, LLC 10801 JOHNSTON ROAD, SUITE 127 CHARLOTTE, NC 28226 P: (980) 406-3818	

Project:

PHIFER CREST
SUBDIVISION PLAN REVISION
CHARLOTTE, NC



Drawing Title:

STORM DRAIN AREA

Project No.	Drawing No.
1816	
DWG File Name:	
1816_GRD	DA-1