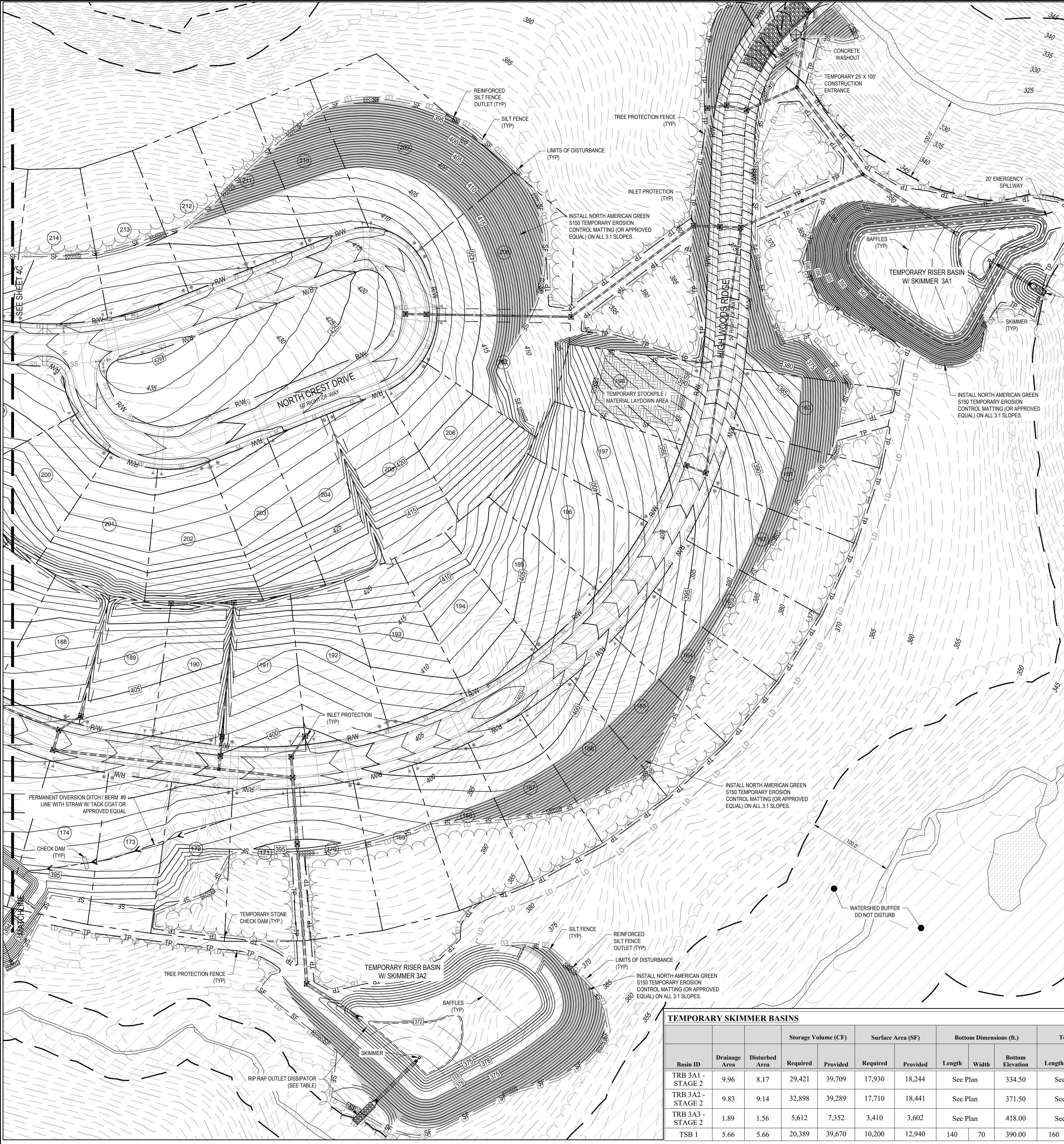


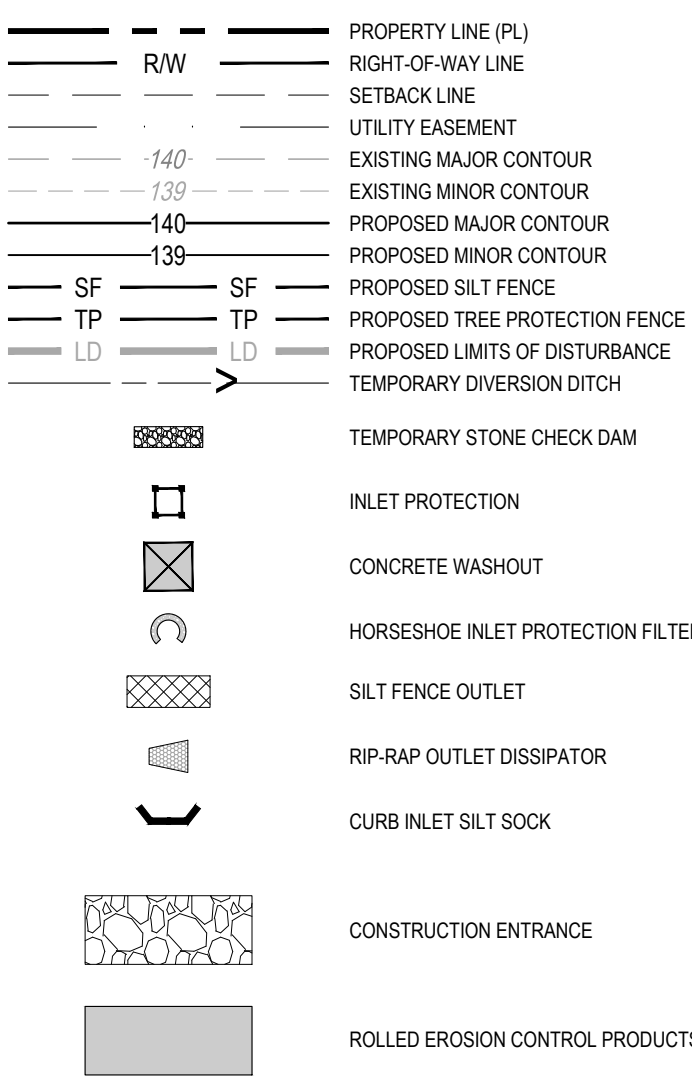
P:\330 (Erebedd Capital)\330-03 (Legacy Phase 3)\Design\Plans\Construction Plans\330-03-4D EROSION CONTROL PLAN - EAST STAGE 2.dwg, PLOTTED: 10/22/2019 2:27 PM BY: JHUDSON



GENERAL CONSTRUCTION NOTES

- EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES. PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL CONTACT NORTH CAROLINA ONE CALL AT 1-800-632-4949. THE CONTRACTOR SHALL CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
- ALL WATER UTILITY CONSTRUCTION SHALL CONFORM TO THE CHATHAM COUNTY STANDARDS AND SPECIFICATIONS.
- ALL SANITARY SEWER UTILITY CONSTRUCTION SHALL CONFORM TO LATEST AQUA OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- THE SUBJECT PROPERTY IS LOCATED IN A FLOOD HAZARD AREA PER FEMA FIRM PANEL 9773, MAP NUMBER 3710977300J, DATED 02/02/07, & FEMA FIRM PANEL 9782, MAP NUMBER 3710978200J, DATED 02/02/07.
- AQUA PERSONNEL SHALL BE NOTIFIED 48 HOURS BEFORE CONSTRUCTION IS TO BEGIN. ANY TESTING IS SCHEDULED, OR BEFORE ANY PIPE IS COVERED.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF 3' OF COVER AS MEASURED FROM FINISHED GRADE AT THE LOCATION WHERE INSTALLED.
- ALL WATER MAINS SHALL BE OVER THE SEWER MAIN AND SERVICES WITH A MINIMUM OF 18" SEPARATION.
- ALL WATER MAINS AND FORCE MAINS CROSSING UNDER STORM DRAINAGE PIPING SHALL BE CONSTRUCTED WITH ONE (1) JOINT OF DUCTILE IRON PIPE CENTERED ON THE STORM PIPE CROSSING.
- INSTREAM WORK SHALL BE PROHIBITED FROM MARCH 15 THROUGH JUNE 30 TO MINIMIZE IMPACTS TO SPAWNING FISH. TOPOGRAPHIC INFORMATION PROVIDED BY CE GROUP, INC. RALEIGH, NC. PROFILE DATA FROM FIELD SURVEY BACKGROUND TOPOGRAPHY FROM AERIAL MAPPING.
- DISTURBANCE IS LIMITED TO NO MORE THAN 15 AC OF GRADUAL SLOPED LAND AT ANY ONE TIME (0 - 14.9% SLOPE).
- DISTURBANCE IS LIMITED TO NO MORE THAN 10 AC OF MODERATELY SLOPED LAND AT ANY ONE TIME (15 - 24.9% SLOPE).
- WHERE GRAVITY SEWER LINES ARE DIP DUE TO VERTICAL SEPARATION REQUIREMENTS, THE DIP GRAVITY SEWER LINE SEGMENTS SHALL BE HYDROSTATICALLY TESTED WITH WATER TO ENSURE JOINT TIGHTNESS.

LEGEND



NCDEMR SELF-INSPECTION PROGRAM

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED.

RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TAKE EFFECT OCTOBER 1, 2010.

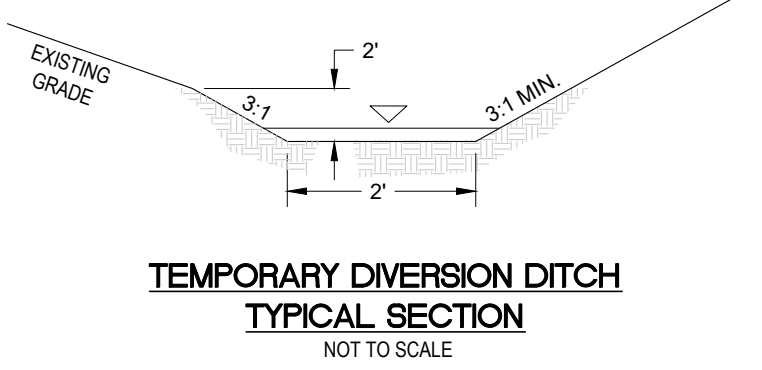
THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FROM THE LAND QUALITY WEB SITE, <http://portal.ncdemr.org/web/1/erosion>

EROSION CONTROL SEQUENCE - STAGE 2

- ONCE APPROVAL FOR PHASE 1 IS OBTAINED BEGIN CLEARING AND GRUBBING OF REMAINING DISTURBED AREAS AS SHOWN ON APPROVED PLAN.
- BEGIN EARTH MOVING OPERATIONS. INSTALL RETAINING WALLS IN CUT AREAS IMMEDIATELY AS MATERIAL IS BEING REMOVED. INSTALL RETAINING WALLS IN FILL AREAS AS SITE COMES TO FINAL GRADE. TSB 1 AND TSB 2 ARE TO BE REMOVED AND EVENTUALLY FILLED TO FINAL GRADE. CHATHAM COUNTY IS TO BE NOTIFIED PRIOR TO REMOVAL OF TEMPORARY SKIMMER BASINS 1 & 2.
- BEGIN INSTALLATION OF NEW STORM DRAINAGE NETWORKS AND SITE UTILITIES AS SITE IS BEING BROUGHT UP TO FINAL GRADE.
- ONCE THE PIPES FOR STORM SYSTEM A AND B ARE COMPLETE, INSTALL STAGE 2 TEMPORARY DIVERSION BERMS/ DITCHES AND OTHER TEMPORARY MEASURES. INSTALL CHECK DAMS IN EACH AND STABILIZE WITH PERMANENT MATTING IMMEDIATELY.
- COMPLETE THE INSTALLATION OF THE STORM DRAINAGE NETWORK AS THE SITE COMES TO FINAL GRADE. PLACE INLET PROTECTION AND HORSESHOE INLET PROTECTION AROUND STORM DRAINAGE STRUCTURES ONCE THEY ARE COMPLETED.
- BRING SITE TO FINAL GRADE AND BEGIN EXCAVATION OF ROADWAYS.
- CONSTRUCT CURB AND GUTTER AND STONE BASE TO PREP FOR PAVING. INSTALL SIDEWALKS. SEED/SOD AND INSTALL LANDSCAPING ALONG WITH ANY OTHER PERMANENT GROUND COVER.
- SEED AND MULCH ALL DENuded AREAS WITHIN 15 WORKING DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. EROSION CONTROL MATTING IS TO BE INSTALLED ON SLOPES 3:1 OR GREATER IMMEDIATELY AFTER SEEDING.
- PAVE ROADS.
- REQUEST FINAL APPROVAL BY ENVIRONMENTAL INSPECTOR. IF THE INSPECTOR IS SATISFIED WITH UPSTREAM PERMANENT GROUND COVER, BEGIN REMOVING TEMPORARY EROSION CONTROL MEASURES.
- AFTER STABILIZATION HAS OCCURRED REMOVE SEDIMENT FROM RISER BASIN/WATER QUALITY POND AND CONVERT TO PERMANENT STRUCTURE. ALL WATER IS TO BE PUMPED TO SALT BAG BEFORE DISCHARGING FROM SITE (SEE DETAIL SHEET 9C).

*CONTRACTOR TO REESTABLISH TEMPORARY DIVERSION SWALES AT THE END OF EACH DAY TO ENSURE DRAINAGE TO THE APPROPRIATE STRUCTURE.



EROSION CONTROL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
- SUFFICIENT EROSION CONTROL PRACTICES MUST BE INSTALLED AND MAINTAINED TO RETAIN SEDIMENT WITHIN THE BOUNDARIES OF THE SITE. GROUND COVER STABILIZATION SHALL BE IN ACCORDANCE WITH NPDES PERMIT AND STABILIZATION CHART ABOVE. TEMPORARY GROUND COVER WILL BE INSTALLED ON ALL EXPOSED SLOPES BY 14 DAYS. PERMANENT GROUND COVER WILL BE INSTALLED ON EXPOSED SLOPES WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- MAINTENANCE: ALL EROSION AND SEDIMENT CONTROL PRACTICES TO BE INSPECTED WEEKLY AND AFTER EVERY RUNOFF PRODUCING RAINFALL EVENT. NEEDED REPAIRS WILL BE MADE IMMEDIATELY.
- MAXIMUM GRADED SLOPE SHALL NOT EXCEED THREE (3) TO ONE (1).
- THIS PHASE IS NOT LOCATED WITHIN 100 YEAR FLOOD PLAN ACCORDING TO FEMA MAP NUMBER 3710977300J, DATED 02/02/2007.
- SEE SHEET 9A, 9B, & 9C FOR EROSION CONTROL DETAILS.

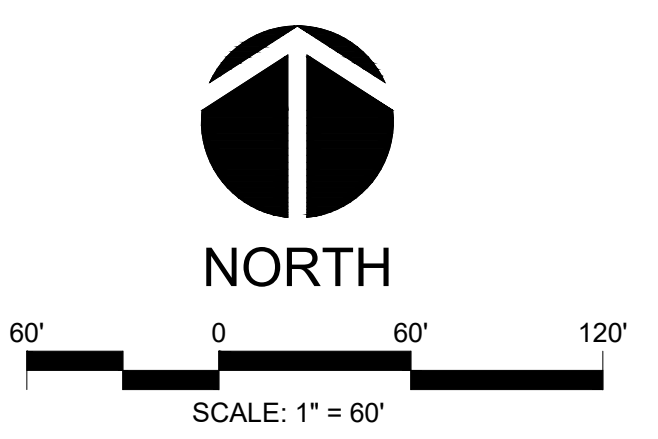
LIMITS OF DISTURBANCE
(1,316,408 SF = 30.22 AC.)

TEMPORARY SKIMMER BASINS

Basin ID	Drainage Area	Disturbed Area	Storage Volume (CF)		Surface Area (SF)		Bottom Dimensions (ft.)			Top Dimensions (ft.)			Emergency Spillway (ft.)		Skimmer Sizing		Baffle Locations		
			Required	Provided	Required	Provided	Length	Width	Bottom Elevation	Length	Width	Elevation	Length	Elevation	Head (in.)	Orifice Dia. (in.)	(Distance from Invert of Weir, ft.)		
TRB 3A1 - STAGE 2	9.96	8.17	29,421	39,709	17,930	18,244	See Plan		334.50	See Plan		341.50	20	340.00	4.00	3.25	15	30	45
TRB 3A2 - STAGE 2	9.83	9.14	32,898	39,289	17,710	18,441	See Plan		371.50	See Plan		378.00	25	376.50	4.00	3.23	20	40	60
TRB 3A3 - STAGE 2	1.89	1.56	5,612	7,352	3,410	3,602	See Plan		418.00	See Plan		422.50	8	421.00	2.00	1.67	7	14	21
TSB 1	5.66	5.66	20,389	39,670	10,200	12,940	140	70	390.00	160	90	395.00	25	393.50	4.00	3.24	15	30	45

RIPRAP OUTLET DISSIPATOR TABLE - PHASE 3

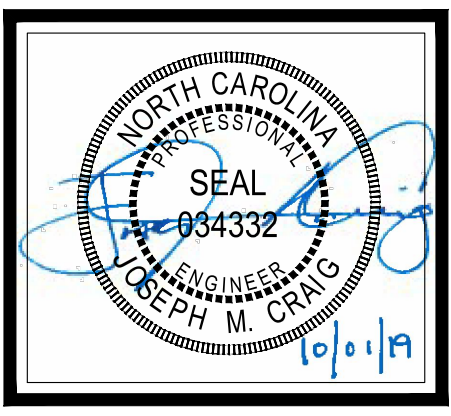
OUTLET ID	PIPE DIA. (IN)	Q ₂₅ DISCHARGE (CFS)	APRON LENGTH (FT)	APRON WIDTH (FT)	APRON THICKNESS (IN)	d ₅₀ ROCK SIZE (IN)	RIPRAP CLASS
3A1 OUTLET	30	45.37	15	7.5	18	8	B
3A2 OUTLET	36	55.66	30	9	31.5	14	2
3A3 OUTLET	15	7.79	5	3.75	9	4	A
FES A	48	31.23	40	12	31.5	14	2
FES B	30	42.98	25	7.5	31.5	14	2
FES C	18	5.21	9	4.5	18	8	B



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CHATHAM COUNTY, NCDEQ PWSS, AND NCDOT STANDARDS AND PROJECT-SPECIFIC SPECIFICATIONS DATED MAY 14TH.

NO.	DATE	REVISIONS
1	09/09/2019	EROSION CONTROL & STORMWATER REVISIONS
2	09/09/2019	WATERLINE REVISIONS
3	08/28/2019	WATERLINE REVISIONS
4	08/09/2019	NCDEQ PWSS COMMENTS
5	10/01/2019	NCDEQ PWSS COMMENTS

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RALEIGH, NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
www.cegroupinc.com
License # C-1739



THE LEGACY - PHASE 3
CONSTRUCTION PLANS
EROSION CONTROL PLAN - EAST
STAGE 2
COVERED BRIDGE TRAIL
CHATHAM COUNTY, NORTH CAROLINA

Date: 05/14/2019
Scale: 1" = 60'
Drawn: BWM
Checked: JMC
Project No: 330-03
Computer Dwg. Name: 330-03-4D EROSION CONTROL PLAN - EAST STAGE 2
Sheet No: **4D**

P:330 (Embedd Capital)330-03 (Legacy Phase 3)Design\Plans\Construction\Plans\330-03 5A GRADING PLAN - WEST.dwg PLOTTED: 10/2/2019 2:28 PM BY: JHUDSON



LEGEND

— PL	PROPERTY LINE (PL)
— RW	RIGHT-OF-WAY LINE
—	SETBACK LINE
—	UTILITY EASEMENT
— 140	EXISTING MAJOR CONTOUR
— 139	EXISTING MINOR CONTOUR
— 140	PROPOSED MAJOR CONTOUR
— 139	PROPOSED MINOR CONTOUR
— SS	PROPOSED STORM DRAINAGE PIPE
— SS	PROPOSED GRAVITY SEWER
— W	PROPOSED WATER LINE
— TP	PROPOSED TREE PROTECTION FENCE
— LD	PROPOSED LIMITS OF DISTURBANCE
—	PROPOSED RETAINING WALL
▲	FLARED END SECTION
●	STORM MANHOLE
■	YARD INLET
■	CATCH BASIN
→	FLOW ARROW
○ 100.0'	PROPOSED SPOT ELEVATION
○ TW=100.0'	PROPOSED GRADE AT TOP OF WALL
○ BW=100.0'	PROPOSED GRADE AT BOTTOM OF WALL

GENERAL GRADING NOTES

- REFER TO THE OVERALL SITE LAYOUT FOR RELATED NOTES.
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- THE CONTRACTOR SHALL NOTE THAT THE PLANS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, GRADE CHANGE, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- ALL FILL TO BE COMPACTED TO 98% DRY DENSITY (STANDARD PROCTOR) UNDER PAVEMENT AND BUILDING PADS OR AS SPECIFIED IN PROJECT GEOTECHNICAL REPORT BY OTHERS.
- THE PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS. REFER TO PAVEMENT AND SIDEWALK DETAILS TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL FLOW BY GRAVITY AWAY FROM BUILDINGS AND ACROSS NEW PAVEMENT AND/OR LANDSCAPE AREAS TO NEW OR EXISTING STORM DRAIN INLETS, SWALES, DITCHES OR OVERLAND SHEET FLOW.
- GRADE BUILDING PADS(S) TO A LEVEL BELOW FINISHED FLOOR ELEVATION EQUAL TO THE FLOOR SLAB THICKNESS TO AN ACCURACY OF 1/10TH OF A FOOT.
- TO MINIMIZE DAMAGE TO EXISTING TREES NEAR THE EXTERIOR EDGE OF BUFFERS AND STREETScape, THE CONTRACTOR SHALL CUT MINIMUM 2" TRENCHES ALONG THE LIMITS OF DISTURBANCE SO AS TO CUT, RATHER THAN TEAR, ROOTS.
- ALL STORM DRAINAGE PIPING SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED.
- SEE SHEET 13 FOR DRAINAGE STRUCTURE DETAILS.

CB B7 OPENING ELEV = 407.17 INV IN = 402.45 (CB B8) INV IN = 402.45 (CB B7) INV OUT = 401.70 (CB B6) 200 LF 18" RCP @ 1.82% Slope	CB B8 OPENING ELEV = 417.14 INV IN = 412.60 (CB B9) INV OUT = 412.40 (CB B7) 271 LF 18" RCP @ 3.68% Slope	CB B9 OPENING ELEV = 414.79 INV IN = 412.85 (CB B8) 25 LF 15" RCP @ 1.02% Slope	CB B17 OPENING ELEV = 407.17 INV IN = 402.90 (DI B18) INV OUT = 402.70 (CB B7) 25 LF 18" RCP @ 1.02% Slope	DI B18 OPENING ELEV = 405.69 INV OUT = 403.75 (CB B7) 24 LF 15" RCP @ 3.60% Slope	FES C INV = 419.50 (CB C1)	CB C1 OPENING ELEV = 429.19 INV IN = 424.50 (CB C2) INV IN = 424.65 (CB C3)	CB C2 OPENING ELEV = 432.88 INV OUT = 428.60 (CB C1) 162 LF 18" RCP @ 2.23% Slope	CB C3 OPENING ELEV = 429.19 INV OUT = 424.90 (CB C1) 25 LF 18" RCP @ 1.02% Slope
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NO.	REVISIONS	DATE
5	NCDEQ PWSS COMMENTS	10/01/2019
4	NCDEQ PWSS COMMENTS	09/09/2019
3	WATERLINE REVISIONS	08/28/2019
2	WATERLINE REVISIONS	09/09/2019
1	PROVISION CONTROL & STORMWATER REVISIONS	09/02/2019

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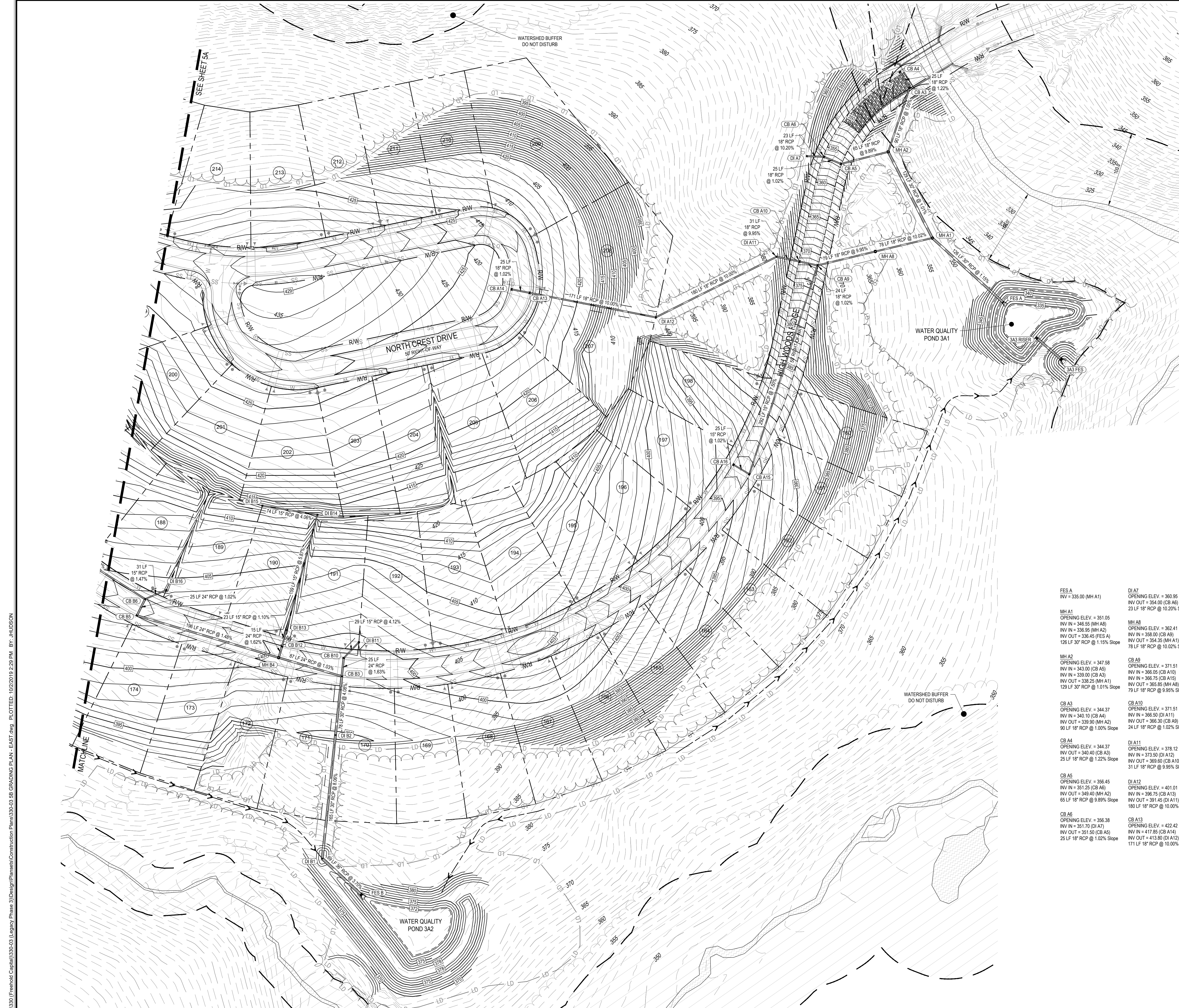
THE LEGACY - PHASE 3
CONSTRUCTION PLANS
GRADING & DRAINAGE PLAN - WEST
COVERED BRIDGE TRAIL
CHATHAM COUNTY, NORTH CAROLINA

Date: 05/14/2019
Scale: 1" = 60'
Drawn: BWM
Checked: JMC
Project No: 330-03
Computer Dwg. Name: 330-03 5A GRADING PLAN - WEST
Sheet No:

SCALE: 1" = 60'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CHATHAM COUNTY, NCDEQ PWSS, AND NCDOT STANDARDS AND PROJECT-SPECIFIC SPECIFICATIONS DATED MAY 14TH.

5A



LEGEND

	PROPERTY LINE (PL)
	RIGHT-OF-WAY LINE
	SETBACK LINE
	UTILITY EASEMENT
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED STORM DRAINAGE PIPE
	PROPOSED GRAVITY SEWER
	PROPOSED WATER LINE
	PROPOSED TREE PROTECTION FENCE
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED RETAINING WALL
	FLARED END SECTION
	STORM MANHOLE
	YARD INLET
	CATCH BASIN
	FLOW ARROW
	PROPOSED SPOT ELEVATION
	PROPOSED GRADE AT TOP OF WALL
	PROPOSED GRADE AT BOTTOM OF WALL

- GENERAL GRADING NOTES**
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<p>FES A INV = 335.00 (MH A1)</p> <p>MH A1 OPENING ELEV = 351.05 INV IN = 346.55 (MH A8) INV IN = 336.95 (MH A2) INV IN = 336.45 (FES A) INV OUT = 336.45 (MH A1) 78 LF 18" RCP @ 1.15% Slope</p> <p>MH A2 OPENING ELEV = 347.58 INV IN = 343.00 (CB A5) INV IN = 339.00 (CB A3) INV OUT = 339.25 (MH A1) 129 LF 30" RCP @ 1.01% Slope</p> <p>CB A3 OPENING ELEV = 344.37 INV IN = 340.10 (CB A4) INV OUT = 339.50 (MH A2) 90 LF 18" RCP @ 1.00% Slope</p> <p>CB A4 OPENING ELEV = 344.37 INV IN = 340.40 (CB A3) 25 LF 18" RCP @ 1.22% Slope</p> <p>CB A5 OPENING ELEV = 356.45 INV IN = 351.25 (CB A6) 66 LF 18" RCP @ 9.95% Slope</p> <p>CB A6 OPENING ELEV = 356.38 INV IN = 351.70 (DI A7) INV IN = 351.50 (CB A5) 25 LF 18" RCP @ 1.02% Slope</p>	<p>DI A7 OPENING ELEV = 360.95 INV OUT = 354.00 (CB A6) 23 LF 18" RCP @ 10.20% Slope</p> <p>MH A8 OPENING ELEV = 362.41 INV IN = 358.00 (CB A9) INV OUT = 358.65 (CB A8) 78 LF 18" RCP @ 10.02% Slope</p> <p>CB A9 OPENING ELEV = 371.51 INV IN = 366.05 (CB A10) INV IN = 366.75 (CB A15) INV OUT = 365.85 (MH A8) 79 LF 18" RCP @ 9.95% Slope</p> <p>CB A10 OPENING ELEV = 371.51 INV IN = 366.50 (DI A11) INV OUT = 366.30 (CB A9) 24 LF 18" RCP @ 1.02% Slope</p> <p>DI A11 OPENING ELEV = 378.12 INV IN = 373.50 (DI A12) INV OUT = 369.60 (CB A10) 31 LF 18" RCP @ 9.95% Slope</p> <p>DI A12 OPENING ELEV = 401.01 INV IN = 396.75 (CB A13) INV OUT = 391.45 (DI A11) 180 LF 18" RCP @ 10.00% Slope</p> <p>CB A13 OPENING ELEV = 422.42 INV IN = 417.85 (CB A14) INV OUT = 413.80 (DI A12) 171 LF 18" RCP @ 10.00% Slope</p>	<p>CB A14 OPENING ELEV = 422.42 INV OUT = 418.10 (CB A13) 25 LF 18" RCP @ 1.02% Slope</p> <p>CB A15 OPENING ELEV = 383.39 INV IN = 388.85 (CB A16) INV OUT = 384.35 (CB A8) 292 LF 15" RCP @ 7.50% Slope</p> <p>CB A16 OPENING ELEV = 393.39 INV IN = 389.10 (CB A15) 25 LF 15" RCP @ 1.02% Slope</p> <p>CB A18 OPENING ELEV = 398.31 INV IN = 392.95 (MH B4) INV IN = 393.40 (CB B10) INV OUT = 392.75 (DI B2) 78 LF 30" RCP @ 4.06% Slope</p> <p>CB B5 OPENING ELEV = 403.08 INV IN = 397.80 (CB B6) INV IN = 398.05 (CB B7) INV OUT = 398.80 (DI B16) INV OUT = 398.05 (CB B5) 25 LF 24" RCP @ 1.02% Slope</p>	<p>FES B INV = 373.00 (DI B1)</p> <p>DI B1 OPENING ELEV = 379.58 INV IN = 376.05 (DI B2) INV OUT = 375.55 (FES B) 69 LF 30" RCP @ 3.70% Slope</p> <p>DI B2 OPENING ELEV = 394.78 INV IN = 389.55 (CB B3) INV OUT = 389.35 (DI B1) 165 LF 30" RCP @ 8.06% Slope</p> <p>CB B3 OPENING ELEV = 398.31 INV IN = 392.95 (MH B4) INV IN = 393.40 (CB B10) INV OUT = 392.75 (DI B2) 78 LF 30" RCP @ 4.06% Slope</p> <p>MH B4 OPENING ELEV = 399.70 INV IN = 394.70 (CB B5) INV IN = 394.35 (CB B12) INV OUT = 393.85 (CB B3) 87 LF 24" RCP @ 1.03% Slope</p> <p>CB B6 OPENING ELEV = 403.08 INV IN = 397.80 (CB B7) INV IN = 398.05 (CB B7) INV OUT = 398.80 (DI B16) INV OUT = 398.05 (CB B5) 25 LF 24" RCP @ 1.02% Slope</p>	<p>CB B10 OPENING ELEV = 398.31 INV IN = 394.05 (DI B11) INV IN = 393.80 (CB B3) 25 LF 24" RCP @ 1.63% Slope</p> <p>DI B11 OPENING ELEV = 399.50 INV IN = 395.25 (CB B10) 29 LF 15" RCP @ 4.12% Slope</p> <p>CB B12 OPENING ELEV = 399.48 INV IN = 394.80 (DI B13) INV OUT = 394.60 (MH B4) 15 LF 24" RCP @ 1.62% Slope</p> <p>DI B13 OPENING ELEV = 399.50 INV IN = 395.25 (DI B10) INV OUT = 395.05 (CB B12) 23 LF 15" RCP @ 1.19% Slope</p> <p>DI B14 OPENING ELEV = 409.00 INV IN = 404.75 (DI B15) INV OUT = 404.55 (DI B13) 159 LF 15" RCP @ 5.97% Slope</p> <p>DI B15 OPENING ELEV = 412.00 INV IN = 407.75 (DI B14) 74 LF 15" RCP @ 4.06% Slope</p> <p>DI B16 OPENING ELEV = 403.50 INV IN = 399.25 (CB B6) 31 LF 15" RCP @ 1.47% Slope</p>
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NORTH

60' 0 60' 120'

SCALE: 1" = 60'

STOP!
BEFORE YOU DIG CALL
THE NC ONE CALL CENTER
1-800-632-4949
IT'S THE LAW!

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CHATHAM COUNTY, NCDEQ PWSS, AND NCDOT STANDARDS AND PROJECT-SPECIFIC SPECIFICATIONS DATED MAY 14TH.

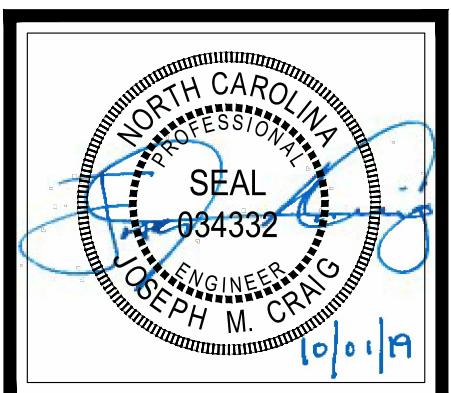
NO.	REVISIONS	DATE
5	NCDEQ PWSS COMMENTS	10/01/2019
4	NCDEQ PWSS COMMENTS	09/09/2019
3	WATERLINE REVISIONS	08/28/2019
2	WATERLINE REVISIONS	09/09/2019
1	PROVISION CONTROL & STORMWATER REVISIONS	09/02/2019

CE GROUP

301 GLENWOOD AVE. 220
RALEIGH, NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

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**THE LEGACY - PHASE 3
CONSTRUCTION PLANS
GRADING & DRAINAGE PLAN - EAST**

COVERED BRIDGE TRAIL
CHATHAM COUNTY, NORTH CAROLINA

Date: 05/14/2019

Scale: 1" = 60'

Drawn: BWM

Checked: JMC

Project No: 330-03

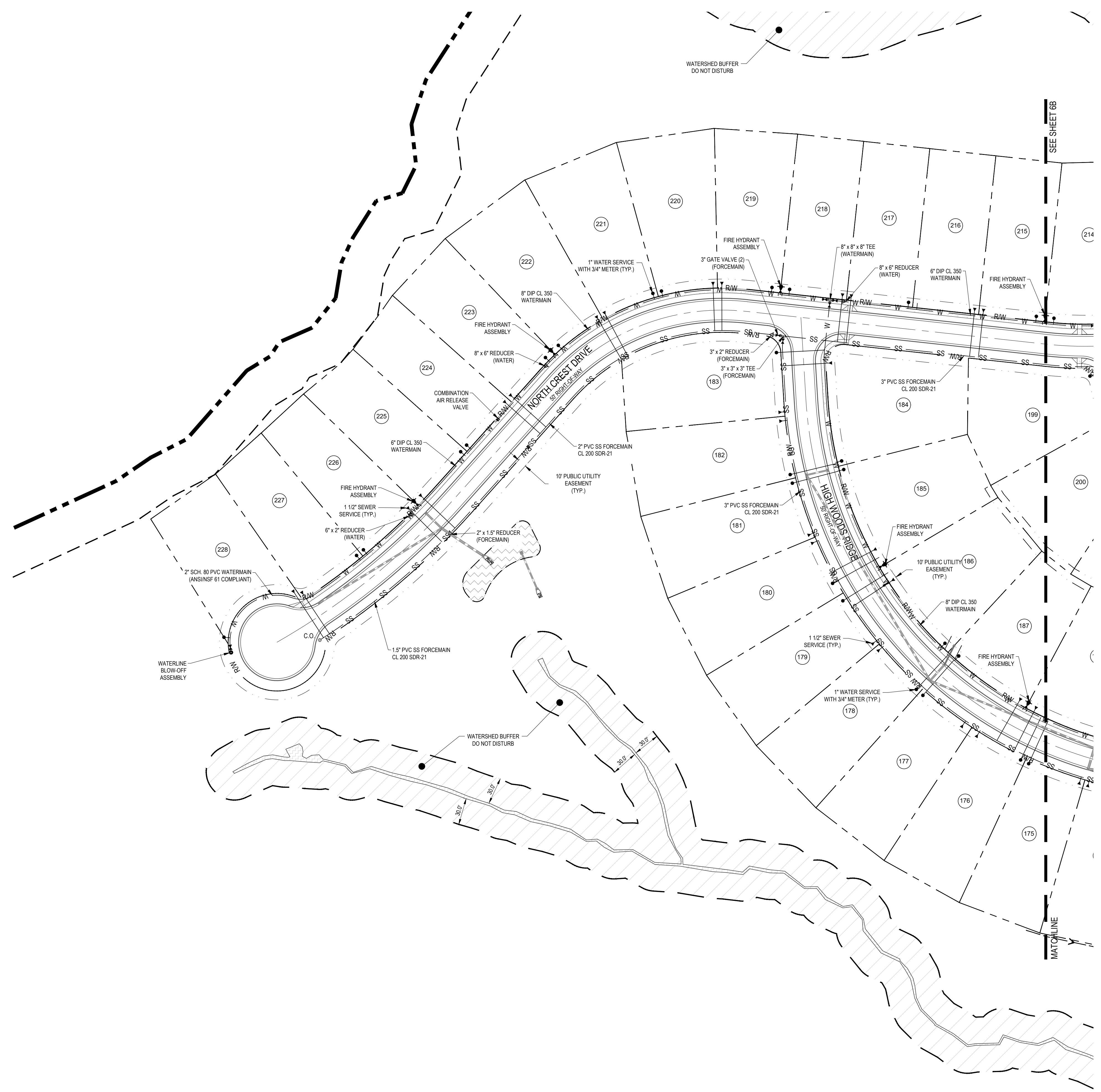
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Sheet No:

5B

P: 330 (Eremold Capital) 330-03 Legacy Phase 3 Design Plan Construction Plans 330-03 5B GRADING PLAN - EAST.dwg, PLOTTED: 10/2/2019 2:28 PM, BY: JHUDSON

P:\330 (Erinbell Capbell)\330-03 Legacy Phase 3\Design\Plans\Construction Plans\330-03 6A UTILITY PLAN - WEST.dwg PLOTTED: 10/2/2019 2:30 PM BY: HUDSON



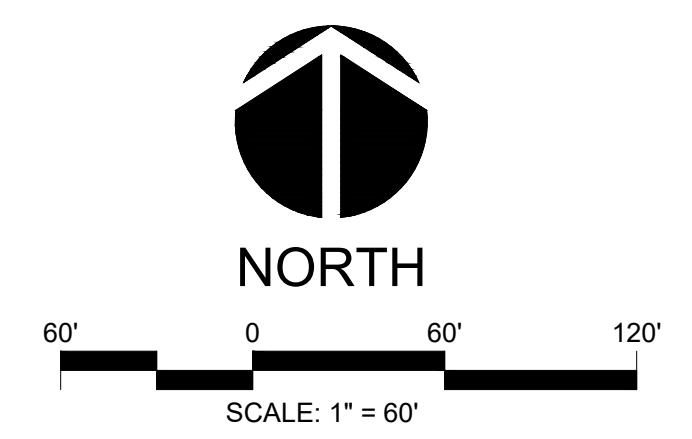
LEGEND	
---	PROPERTY LINE (PL)
---	RIGHT-OF-WAY LINE
---	SETBACK LINE
---	UTILITY EASEMENT
SS	PROPOSED GRAVITY SEWER
W	PROPOSED WATER LINE
---	PROPOSED STORM DRAINAGE PIPE
G	PROPOSED GAS LINE
OHE	PROPOSED OVERHEAD ELECTRIC LINE
UGE	PROPOSED UNDERGROUND ELECTRIC LINE
FO	PROPOSED FIBER OPTIC LINE
FM	PROPOSED SEWER FORCE MAIN
⊙	PROPOSED SS MANHOLE
⊙ C.O.	PROPOSED SS CLEANOUT
⊙	PROPOSED WATER METER
⊙	PROPOSED GATE VALVE
⊙	PROPOSED FIRE HYDRANT ASSEMBLY
⊙	PROPOSED WATERLINE REDUCER
⊙	PROPOSED WATERLINE BLOW-OFF ASSEMBLY
⊙	PROPOSED REDUCER
⊙	PROPOSED SEWER FORCE MAIN BLOW-OFF ASSEMBLY
⊙	PROPOSED AIR RELEASE VALVE

GENERAL UTILITY NOTES

- EXISTING UTILITIES ARE SHOWN FROM THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE AND OTHER UTILITIES PRIOR TO BEGINNING ANY DEMOLITION OR CONSTRUCTION. NOTIFY UTILITY LOCATING COMPANY (ONE CALL @ 1-800-632-4949) OR INDIVIDUAL UTILITY OWNERS FOR UNDERGROUND LOCATIONS AT LEAST 48 HOURS IN ADVANCE.
- ANY LOT WHICH CONNECTS TO THE GRAVITY SANITARY SEWER VIA A GRAVITY SERVICE CONNECTION WILL REQUIRE A SEWER BACKWATER VALVE IF THE FINISHED FLOOR ELEVATION IS LOWER THAN THE UPSTREAM MANHOLE RIM ELEVATION.
- REFER TO ROADWAY PLAN / PROFILES FOR DETAILED UTILITY INFORMATION.
- ALL LOTS ON THIS OVERALL UTILITY PLAN SHALL HAVE A WILKENS 70 SERIES WATER PRESSURE REDUCING VALVE MODEL 70SS INSTALLED BEYOND THE METER ON EACH LOT.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CHATHAM COUNTY PUBLIC UTILITIES AND WATER DIVISION STANDARDS AND REGULATIONS.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN AND/OR PROFILE BY CHATHAM COUNTY AND THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF THE PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO CHATHAM COUNTY AND/OR THE UTILITY COMPANY.
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- CONTRACTOR TO COORDINATE UTILITY PLAN WITH PLUMBING PLANS, BY OTHERS, FOR EXACT LOCATION OF WATER AND SEWER CONNECTIONS INTO THE BUILDING(S).
- CONTRACTOR TO COORDINATE UTILITY PLAN WITH ELECTRICAL PLANS, BY OTHERS, FOR ELECTRICAL AND TELECOMMUNICATIONS ROUTING AND CONNECTION INFORMATION.
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- ALL BENDS ON WATERLINES SHALL HAVE THRUST BLOCKING PER CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION DETAILS AND SPECIFICATIONS.

GENERAL CONSTRUCTION NOTES

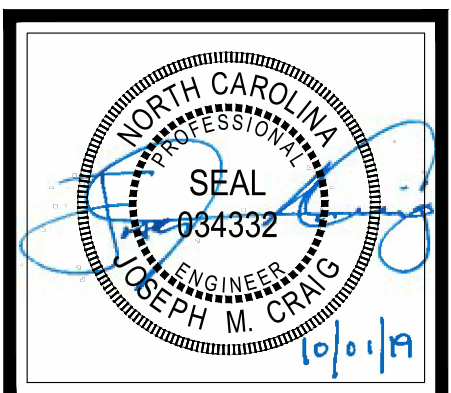
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- TOPOGRAPHIC INFORMATION PROVIDED BY CE GROUP, INC. RALEIGH, NC. PROFILE DATA FROM FIELD SURVEY BACKGROUND TOPOGRAPHY FROM AERIAL MAPPING.



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CHATHAM COUNTY, NCDEQ PWSS, AND NCDOT STANDARDS AND PROJECT-SPECIFIC SPECIFICATIONS DATED MAY 14TH.

NO.	REVISIONS	DATE
5	NCDEQ PWSS COMMENTS	10/01/2019
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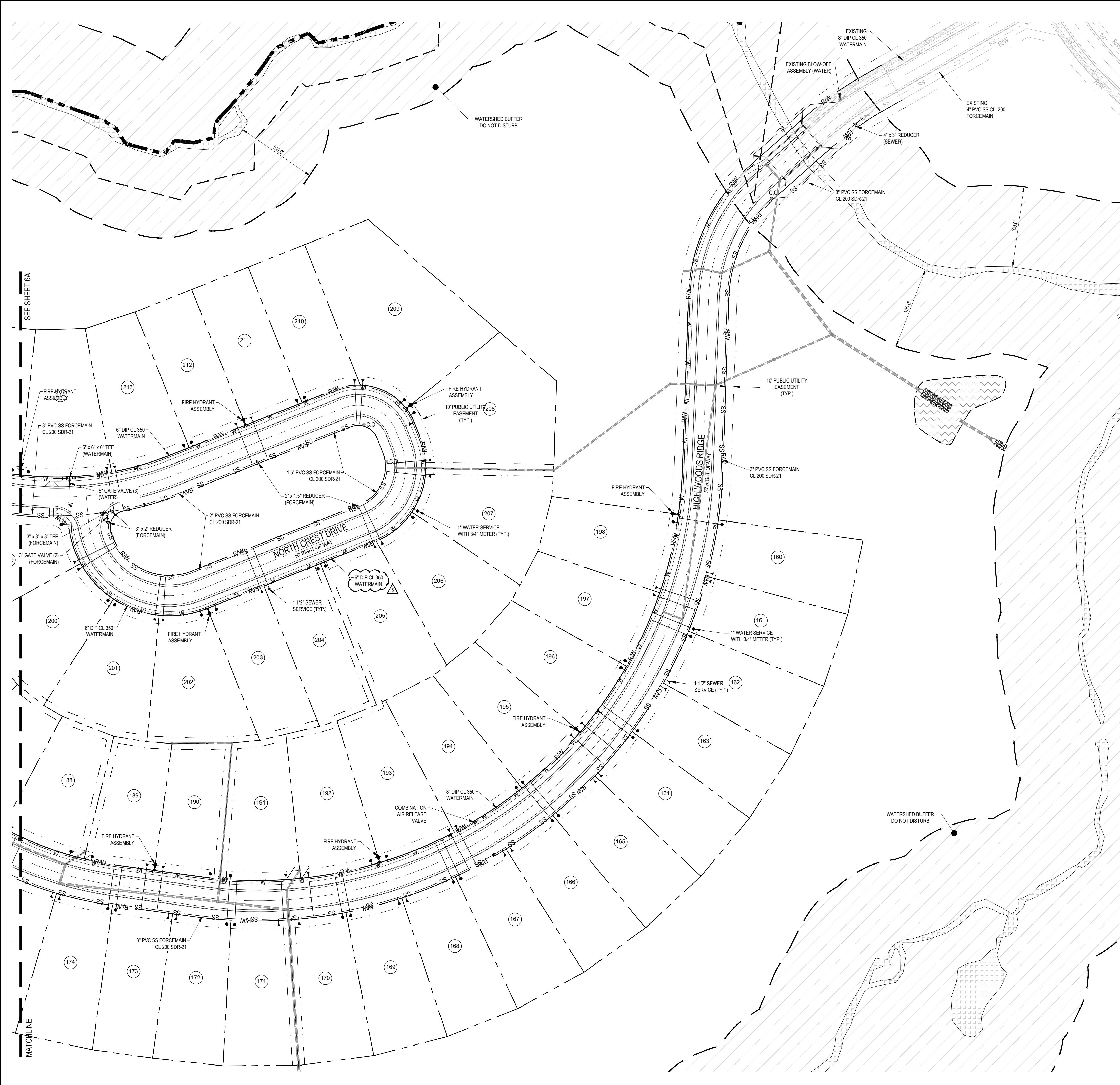
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 License # C-1739



THE LEGACY - PHASE 3
 CONSTRUCTION PLANS
 UTILITY PLAN - WEST
 COVERED BRIDGE TRAIL
 CHATHAM COUNTY, NORTH CAROLINA

Date:	05/14/2019
Scale:	1" = 60'
Drawn:	BWM
Checked:	JMC
Project No.:	330-03
Computer Dwg. Name:	330-03 6A UTILITY PLAN - WEST

Sheet No:
6A



LEGEND

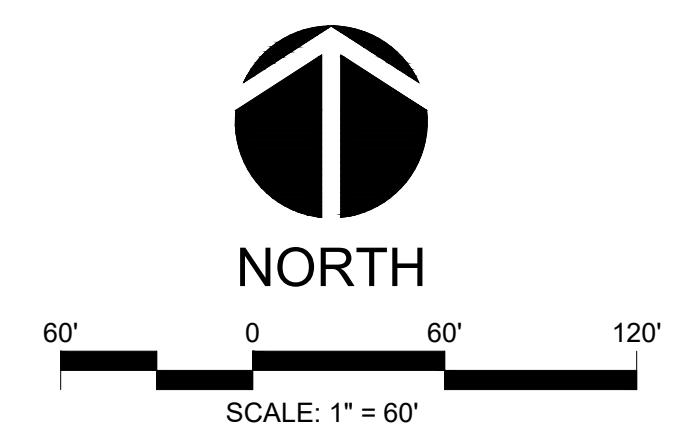
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---	RIGHT-OF-WAY LINE
---	SETBACK LINE
---	UTILITY EASEMENT
---	PROPOSED GRAVITY SEWER
---	PROPOSED WATER LINE
---	PROPOSED STORM DRAINAGE PIPE
---	PROPOSED GAS LINE
---	PROPOSED OVERHEAD ELECTRIC LINE
---	PROPOSED UNDERGROUND ELECTRIC LINE
---	PROPOSED FIBER OPTIC LINE
---	PROPOSED SEWER FORCE MAIN
⊙	PROPOSED SS MANHOLE
⊕	PROPOSED SS CLEANOUT
⊖	PROPOSED WATER METER
⊘	PROPOSED GATE VALVE
⊙	PROPOSED FIRE HYDRANT ASSEMBLY
⊙	PROPOSED WATERLINE REDUCER
⊙	PROPOSED WATERLINE BLOW-OFF ASSEMBLY
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P:\330 (Erin) \Capehart\330-03 (Legacy Phase 3) \Design\Plans\Construction\Plan\330-03 EB UTILITY PLAN - EAST.dwg PLOTTED: 10/22/2019 2:30 PM BY: JHUDSON

NO.	REVISIONS	DATE
5	NCDEQ PWSS COMMENTS	10/01/2019
4	NCDEQ PWSS COMMENTS	09/09/2019
3	WATERLINE REVISIONS	08/28/2019
2	WATERLINE REVISIONS	09/09/2019
1	PROVISION CONTROL # 1 STORMWATER REVISIONS	09/02/2019

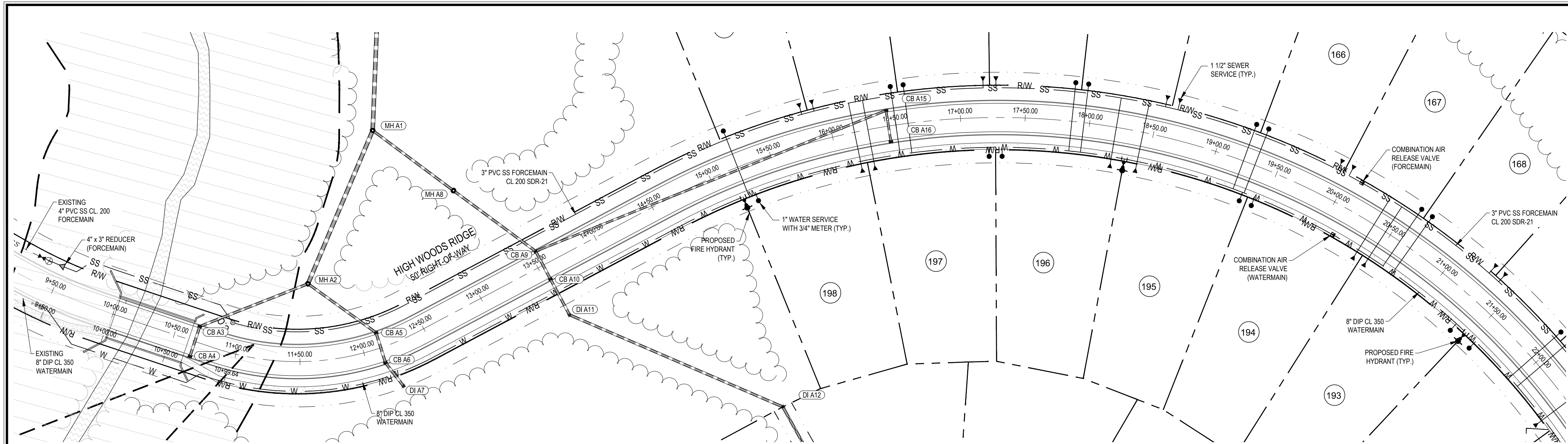
CE GROUP
 301 GLENWOOD AVE. 220
 RALEIGH, NC 27603
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 FAX: 919-322-0032
 www.cegroupinc.com
 License # C-1739



THE LEGACY - PHASE 3
CONSTRUCTION PLANS
UTILITY PLAN - EAST
 COVERED BRIDGE TRAIL
 CHATHAM COUNTY, NORTH CAROLINA

Date: 05/14/2019
 Scale: 1" = 60'
 Drawn: BWM
 Checked: JMC
 Project No: 330-03
 Computer Dwg. Name: 330-03 EB UTILITY PLAN - EAST

Sheet No:
6B



HIGH WOODS RIDGE PLAN & PROFILE (STA. 9+50.00 - 22+00)

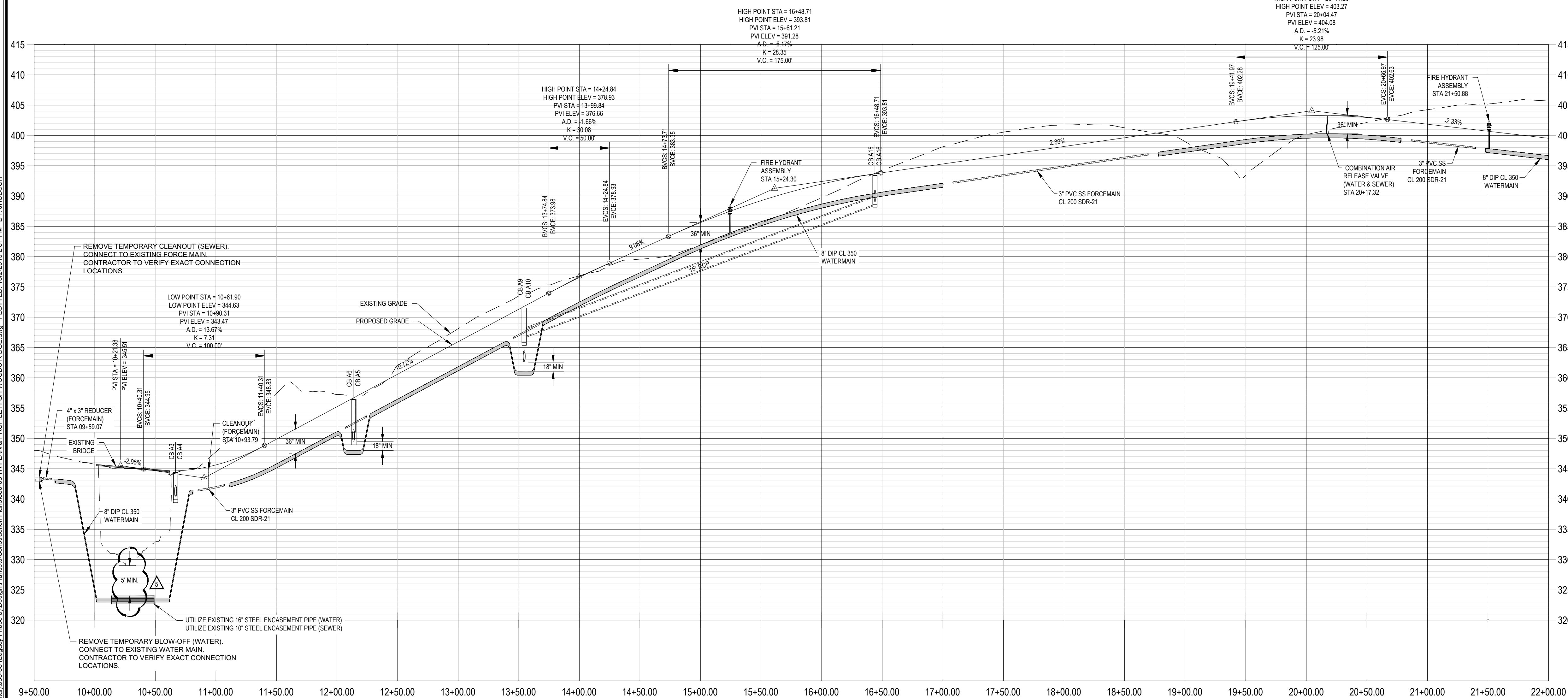
SCALE: 1"=50' H, 1"=10' V

LEGEND

---	PROPERTY LINE (PL)
---	RIGHT-OF-WAY LINE
---	SETBACK LINE
---	UTILITY EASEMENT
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	PROPOSED STORM DRAINAGE PIPE
---	PROPOSED GRAVITY SEWER
---	PROPOSED WATER LINE
---	PROPOSED TREE PROTECTION FENCE
---	PROPOSED LIMITS OF DISTURBANCE
---	PROPOSED RETAINING WALL
---	FLARED END SECTION
●	STORM MANHOLE
■	YARD INLET
■	CATCH BASIN
→	FLOW ARROW
○	PROPOSED SPOT ELEVATION
○	PROPOSED GRADE AT TOP OF WALL
○	PROPOSED GRADE AT BOTTOM OF WALL

GENERAL GRADING NOTES

- REFER TO THE OVERALL SITE LAYOUT FOR RELATED NOTES.
- BOUNDARY & TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY PREPARED BY THE CE GROUP, INC.
- FINISHED WALK AND CURB ELEVATIONS SHALL BE 6" ABOVE FINISHED PAVEMENT GRADE UNLESS NOTED DIFFERENTLY ON THE PLANS.
- THE CONTRACTOR SHALL NOTE THAT THE PLANS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, GRADE CHANGE, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- ALL FILL TO BE COMPACTED TO 96% DRY DENSITY (STANDARD PROCTOR) UNDER PAVEMENT AND BUILDING PADS OR AS SPECIFIED IN PROJECT GEOTECHNICAL REPORT BY OTHERS.
- THE PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS. REFER TO PAVEMENT AND SIDEWALK DETAILS TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL FLOW BY GRAVITY AWAY FROM BUILDINGS AND ACROSS NEW PAVEMENT AND/OR LANDSCAPE AREAS TO NEW OR EXISTING STORM DRAIN INLETS, SWALES, DITCHES OR OVERLAND SHEET FLOW.
- GRADE BUILDING PAD(S) TO A LEVEL BELOW FINISHED FLOOR ELEVATION EQUAL TO THE FLOOR SLAB THICKNESS TO AN ACCURACY OF 1/10TH OF A FOOT.
- TO MINIMIZE DAMAGE TO EXISTING TREES NEAR THE EXTERIOR EDGE OF BUFFERS AND STREETScape, THE CONTRACTOR SHALL CUT MINIMUM 2" TRENCHES ALONG THE LIMITS OF DISTURBANCE SO AS TO CUT, RATHER THAN TEAR, ROOTS.
- ALL STORM DRAINAGE PIPING SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED.
- SEE SHEET 13 FOR DRAINAGE STRUCTURE DETAILS.



NORTH

SCALE: 1" = 50'

STOP!
BEFORE YOU DIG CALL
THE NC ONE CALL CENTER
1-800-632-4949
IT'S THE LAW!

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CHATHAM COUNTY, NCDEQ PWSS, AND NCDOT STANDARDS AND PROJECT-SPECIFIC SPECIFICATIONS DATED MAY 14TH.

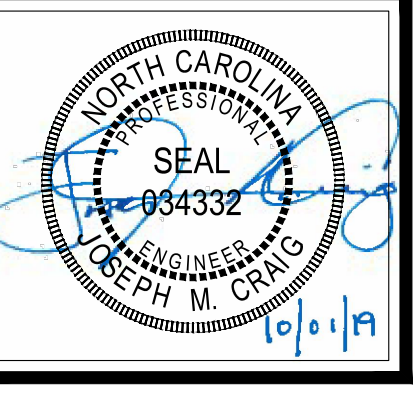
NO.	REVISIONS	DATE
1	PROVISION CONTROL & STORMWATER REVISIONS	09/02/2019
2	WATERLINE REVISIONS	08/28/2019
3	WATERLINE REVISIONS	08/28/2019
4	NCDEQ PWSS COMMENTS	09/09/2019
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CE GROUP

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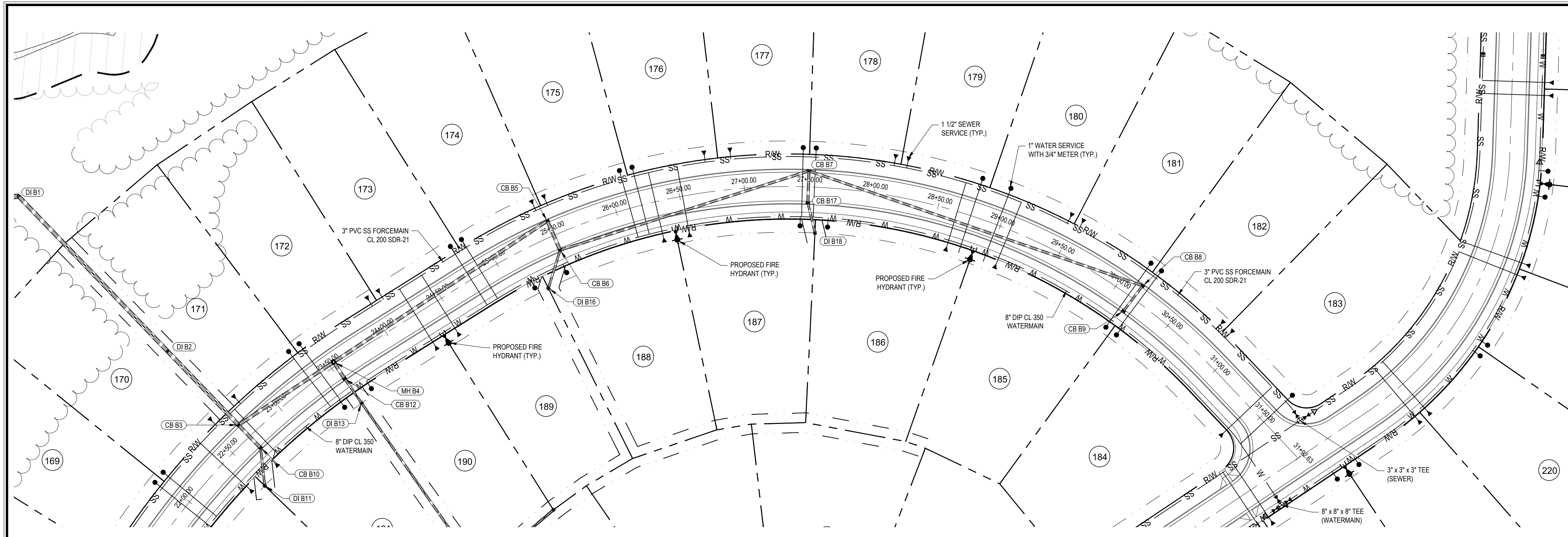


THE LEGACY - PHASE 3
CONSTRUCTION PLANS
PLAN & PROFILE - HIGH WOODS RIDGE
STA. 9+50.00 - STA. 22+00
COVERED BRIDGE TRAIL
CHATHAM COUNTY, NORTH CAROLINA

Date: 05/14/2019
Scale: 1" = 50'
Drawn: BWM
Checked: JMC
Project No: 330-03
Computer Dwg. Name: 330-03 7A PLAN & PROFILE HIGH WOODS RIDGE

Sheet No: **7A**

P: 330 (Erewhold Capital) 330-03 (Legacy Phase 3) Design/Planets/Construction Plans/330-03 7A PLAN & PROFILE HIGH WOODS RIDGE.dwg PLOTTED: 10/22/2019 2:31 PM BY: JHUDSON



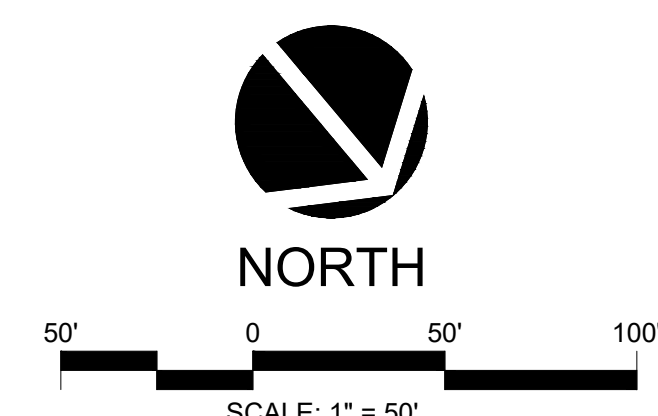
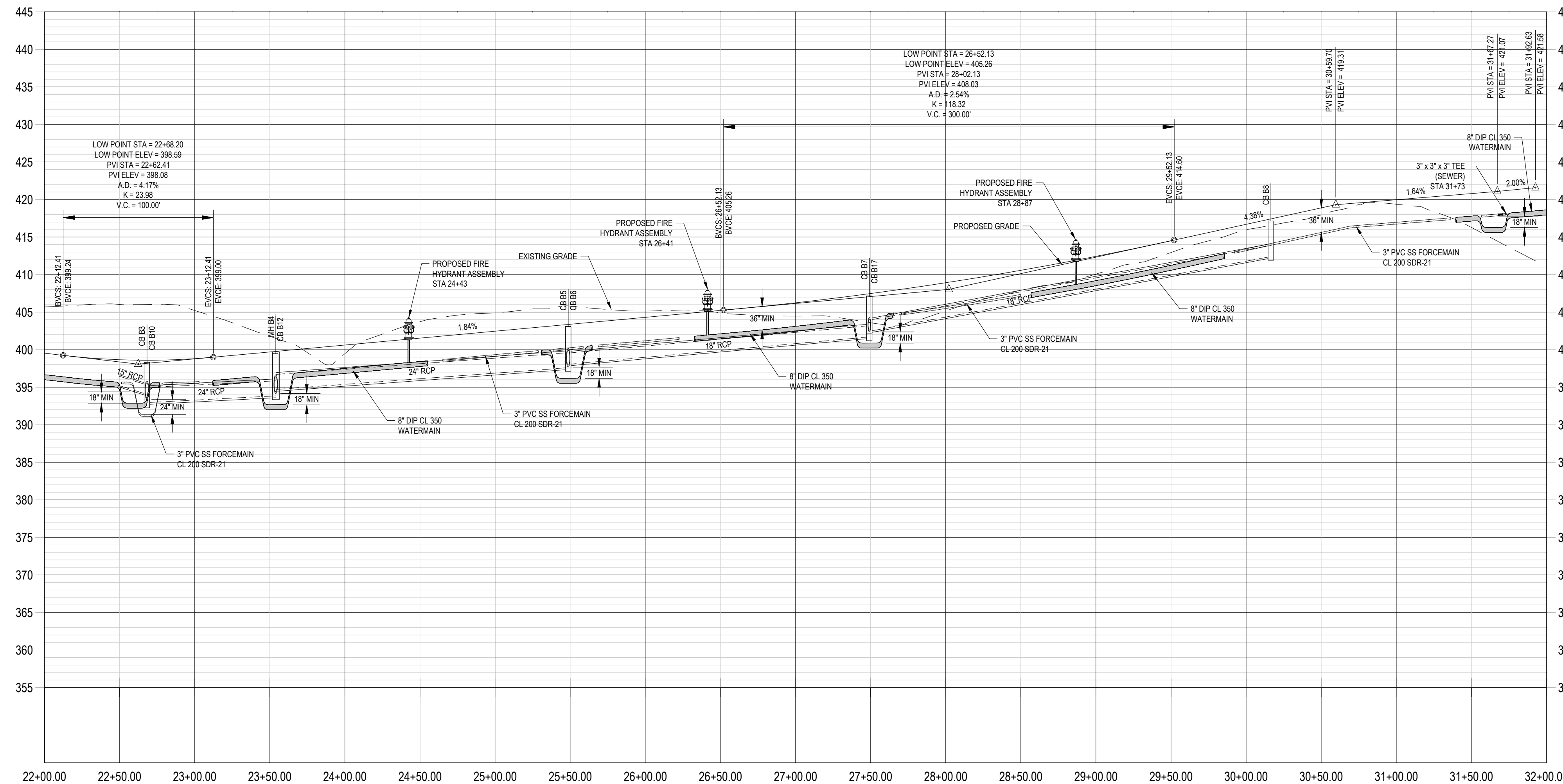
HIGH WOODS RIDGE PLAN & PROFILE (STA. 22+00 - 31+98.75)

SCALE: 1"=50' H, 1"=10' V

LEGEND	
	PROPERTY LINE (PL)
	RIGHT-OF-WAY LINE
	SETBACK LINE
	UTILITY EASEMENT
	EXISTING MAJOR CONTOUR
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	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED STORM DRAINAGE PIPE
	PROPOSED GRAVITY SEWER
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	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED RETAINING WALL
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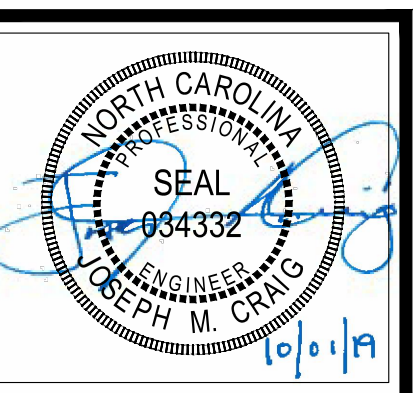
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NO.	DATE	REVISIONS
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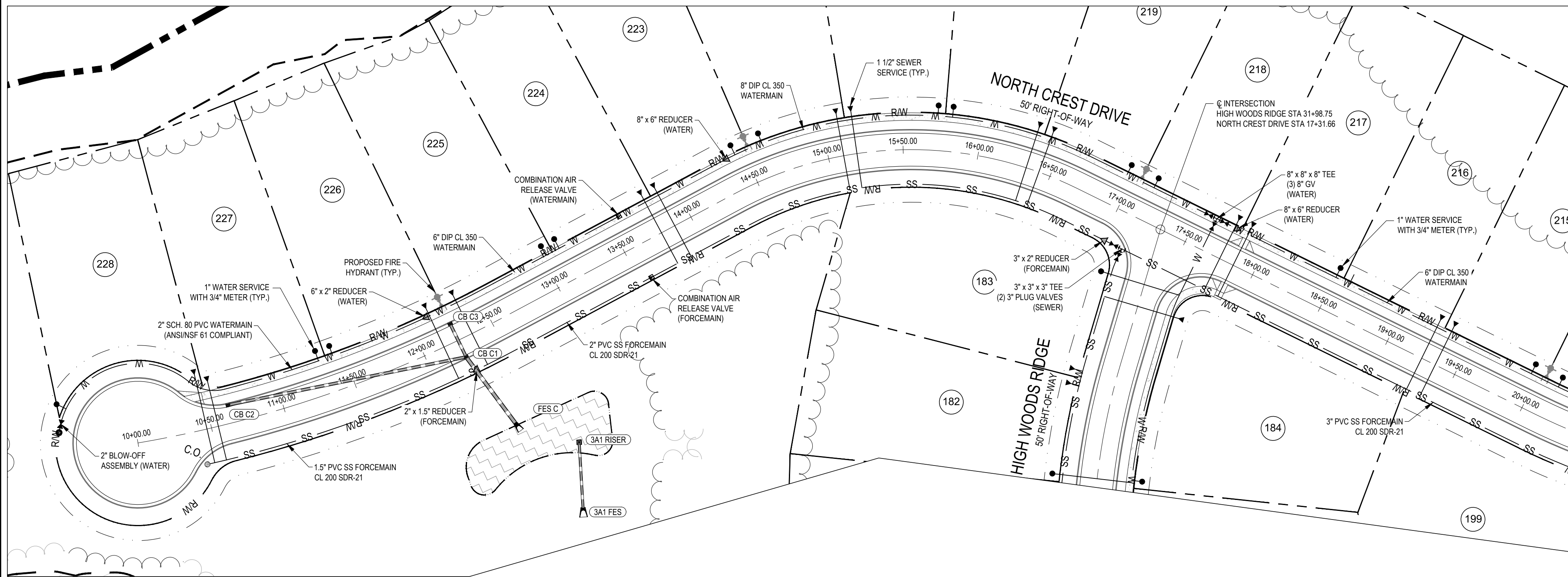


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Sheet No:
7B

P:\330 (Erinbald Capital)\330-03 Legacy Phase 3\Design\Plans\Construction Plans\330-03 7B PLAN & PROFILE - HIGH WOODS RIDGE.dwg PLOTTED: 10/22/2019 2:32 PM BY: JHUDSON



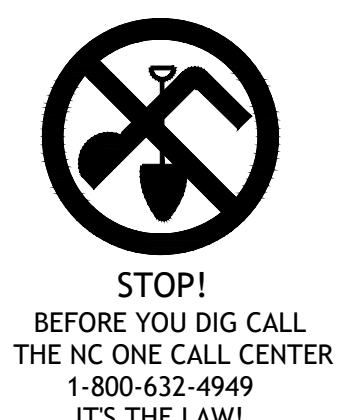
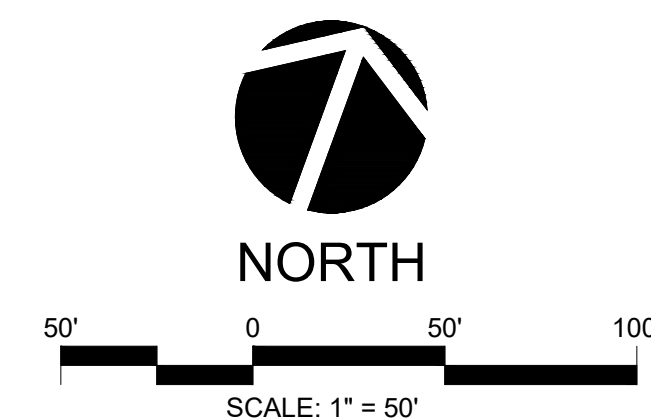
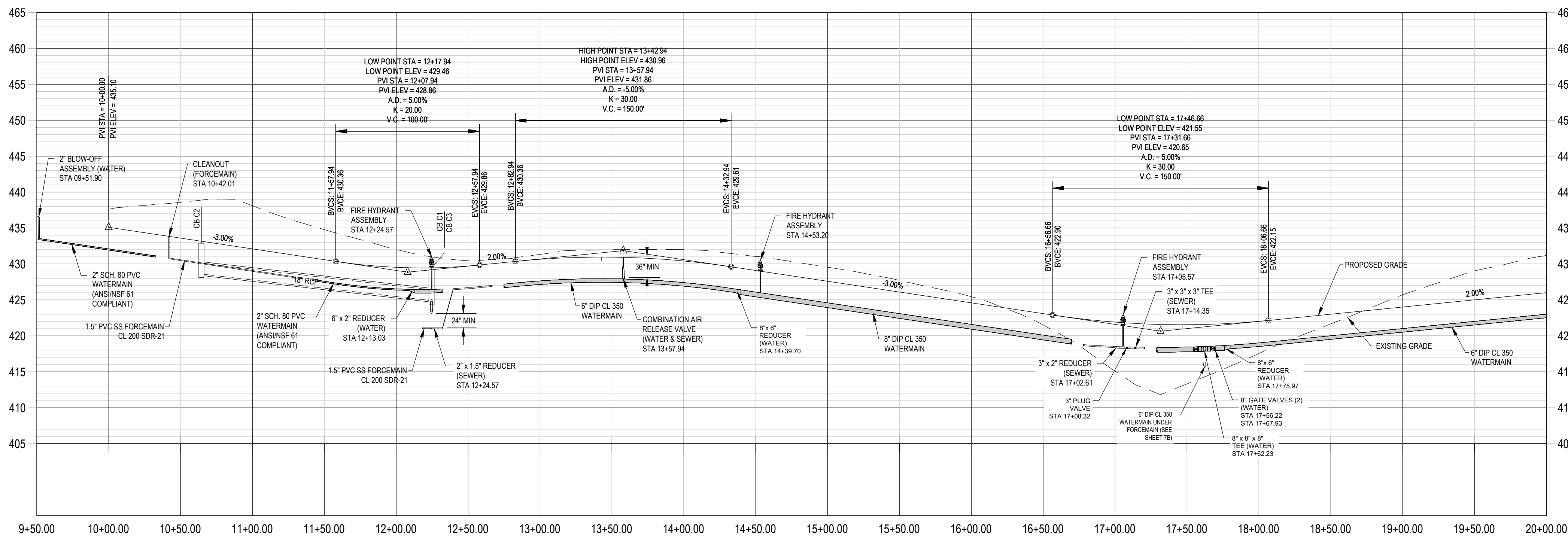
NORTH CREST DRIVE PLAN & PROFILE (STA. 10+00 - 20+00)

SCALE: 1"=50' H, 1"=10' V

LEGEND	
	PROPERTY LINE (PL)
	RIGHT-OF-WAY LINE
	SETBACK LINE
	UTILITY EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED STORM DRAINAGE PIPE
	PROPOSED GRAVITY SEWER
	PROPOSED WATER LINE
	PROPOSED TREE PROTECTION FENCE
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED RETAINING WALL
	FLARED END SECTION
	STORM MANHOLE
	YARD INLET
	CATCH BASIN
	FLOW ARROW
	PROPOSED SPOT ELEVATION
	PROPOSED GRADE AT TOP OF WALL
	PROPOSED GRADE AT BOTTOM OF WALL

GENERAL GRADING NOTES

- REFER TO THE OVERALL SITE LAYOUT FOR RELATED NOTES.
- BOUNDARY & TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY PREPARED BY THE CE GROUP, INC.
- FINISHED WALK AND CURB ELEVATIONS SHALL BE 6" ABOVE FINISHED PAVEMENT GRADE UNLESS NOTED DIFFERENTLY ON THE PLANS.
- THE CONTRACTOR SHALL NOTE THAT THE PLANS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, GRADE CHANGE, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- ALL FILL TO BE COMPACTED TO 98% DRY DENSITY (STANDARD PROCTOR) UNDER PAVEMENT AND BUILDING PADS OR AS SPECIFIED IN PROJECT GEOTECHNICAL REPORT BY OTHERS.
- THE PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS. REFER TO PAVEMENT AND SIDEWALK DETAILS TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL FLOW BY GRAVITY AWAY FROM BUILDINGS AND ACROSS NEW PAVEMENT AND/OR LANDSCAPE AREAS TO NEW OR EXISTING STORM DRAIN INLETS, SWALES, DITCHES OR OVERLAND SHEET FLOW.
- GRADE BUILDING (PADS) TO A LEVEL BELOW FINISHED FLOOR ELEVATION EQUAL TO THE FLOOR SLAB THICKNESS TO AN ACCURACY OF 1/10TH OF A FOOT.
- TO MINIMIZE DAMAGE TO EXISTING TREES NEAR THE EXTERIOR EDGE OF BUFFERS AND STREETSCAPE, THE CONTRACTOR SHALL CUT MINIMUM 2" TRENCHES ALONG THE LIMITS OF DISTURBANCE SO AS TO CUT, RATHER THAN TEAR, ROOTS.
- ALL STORM DRAINAGE PIPING SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED.
- SEE SHEET 13 FOR DRAINAGE STRUCTURE DETAILS.

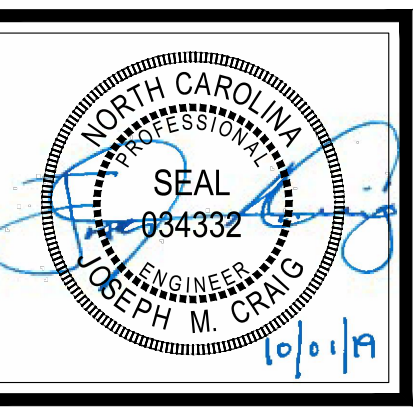


ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CHATHAM COUNTY, NCDEQ PWSS, AND NCDOT STANDARDS AND PROJECT-SPECIFIC SPECIFICATIONS DATED MAY 14TH.

P: 330 (Erembald, Capital) 330-03 (Legacy Phase 3) Design/Planets/Construction Plans/330-03 7C PLAN & PROFILE NORTH CREST DRIVE PLOTTED: 10/22/2019 2:33 PM BY: JHUDSON

NO.	DATE	REVISIONS
1	09/02/2019	STORMWATER REVISIONS
2	09/09/2019	WATERLINE REVISIONS
3	08/28/2019	WATERLINE REVISIONS
4	09/09/2019	NCDEQ PWSS COMMENTS
5	10/01/2019	NCDEQ PWSS COMMENTS

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THE LEGACY - PHASE 3
 CONSTRUCTION PLANS
 PLAN & PROFILE - NORTH CREST DRIVE
 STA. 10+00 - STA. 20+00
 COVERED BRIDGE RAIL
 CHATHAM COUNTY, NORTH CAROLINA

Date:	05/14/2019
Scale:	1" = 50'
Drawn:	BWM
Checked:	JMC
Project No.:	330-03
Computer Dwg. Name:	330-03 7C PLAN & PROFILE NORTH CREST

Sheet No:
7C