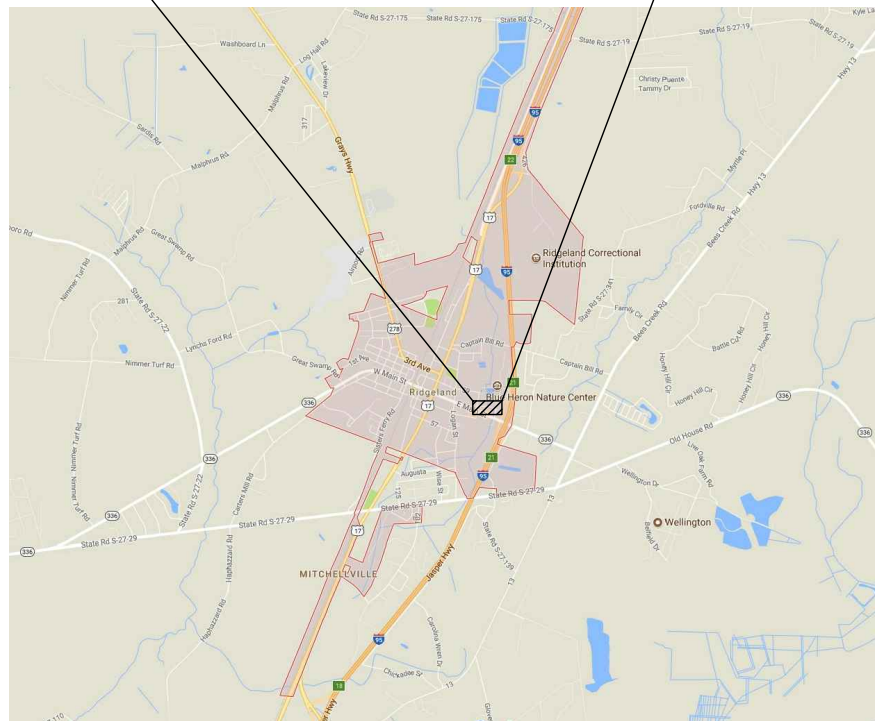
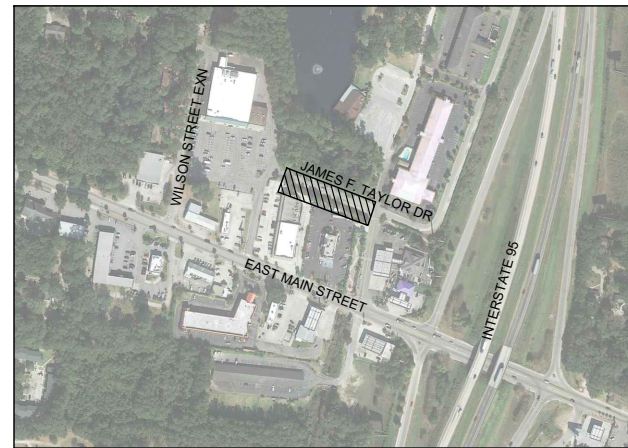


JAMES F. TAYLOR DRIVE DITCH IMPROVEMENTS - PHASE 2

TOWN OF RIDGELAND

RIDGELAND, SOUTH CAROLINA



PROJECT LOCATION



MAYOR
 JOSEPH N. MALPHRUS, JR
MAYOR PRO TEMPORE
 TOMMY RHODES
COUNCIL MEMBERS
 JOSEPHINE BOYLES
 CHRIS DUBOSE
 GRADY WOODS
TOWN ADMINISTRATOR
 DENNIS E. AVERKIN

PREPARED BY



PROJECT NO. 17-1007.011

GENERAL SHEET INDEX	
NUMBER	TITLE
COVER	COVER AND SHEET INDEX
G-1	PHASE 2 - GENERAL NOTES
G-2	EXISTING CONDITIONS AND KEY MAP
G-3	PHASE 1 - EXISTING CONDITION DETAILS

CIVIL SHEET INDEX	
NUMBER	TITLE
C-1	PHASE 2 - PROPOSED IMPROVEMENTS
C-2	PHASE 2 - PROPOSED IMPROVEMENTS
C-3	PHASE 2 - CONSTRUCTION DETAILS
S-1	PHASE 2 - STRUCTURAL DETAILS
S-2	PHASE 2 - STRUCTURAL DETAILS

DATE: MARCH 2019

ISSUE: BID

Signature	Michael R. Kink, P.E.	SC Professional Eng. # 28229	Date				
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TOWN OF RIDGELAND				COVER AND SHEET INDEX			
RIDGELAND, SOUTH CAROLINA				JAMES F. TAYLOR DRIVE			
COVER AND SHEET INDEX				DITCH IMPROVEMENTS - PHASE 2			
DESIGN	DRAWN	SLD	JOB	ISSUE	DATE	ISSUE	BID
MIRK			17-1007.011	MARCH	2019		
NUMBER				DATE			
FOUR WATERS ENGINEERING							
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250							
904-414-2400 C.O.A.# 5166 WWW.4WENG.COM							
DRAWING NUMBER							
COVER							

STEVE DUCHARME LOCATION: E:\17-1007.08 - JAMES TAYLOR DRAINAGE\X\CDS\NEW PHASE1 EXIST.DWG

GENERAL NOTES:

1. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED FROM SURVEY PERFORMED BY TGS LAND SURVEYING JOB NUMBER 10070T-17. HORIZONTAL DATUM BASED ON NAD 83 AND VERTICAL DATUM BASED ON NGVD 29 DATUM. THE SURVEY WAS UPDATED BY FOUR WATERS ENGINEERING AT THE COMPLETION OF PHASE 1 CONSTRUCTION.
2. THE CONTRACTOR SHALL PROTECT ALL BENCHMARKS AND MONUMENTS FROM DAMAGE AND SHALL ESTABLISH OFFSET POINTS AS REQUIRED FOR THIS WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF ALL SCHEDULED IMPROVEMENTS AS SHOWN ON THE CONTRACT DRAWINGS.
3. ALL CONSTRUCTION THAT PERTAINS TO WATER AND SEWER SHALL CONFORM TO THE TOWN OF RIDGELAND STANDARD SPECIFICATIONS FOR WATER AND SEWER SYSTEMS, LATEST EDITION. ALL CONSTRUCTION THAT PERTAINS TO ROADWAY AND DRAINAGE THAT IS NOT SPECIFICALLY NOTED OR DETAILED IN THE CONSTRUCTION DRAWINGS SHALL CONFORM TO THE SCDOT SPECIFICATIONS, LATEST EDITION.
4. AVAILABLE INFORMATION AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN COLLECTED FROM VARIOUS SOURCES. THE RESULT OF SUCH INVESTIGATIONS, AS MAY BE SHOWN ON THE CONTRACT DRAWING, ARE NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY MARK-OUT SERVICE PROVIDER AND VERIFY AREA OF ALL UTILITIES (AS NECESSARY) PRIOR TO COMMENCING WORK.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY EXISTING ABOVEGROUND AND UNDERGROUND UTILITIES, CONDUITS, STRUCTURES, EQUIPMENT, FOUNDATIONS, PIPE, ETC. AS NECESSARY TO COMPLETE THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE OWNER'S OF THE UTILITY 72 HOURS PRIOR TO STARTING WORK AND SHALL BEAR ALL COSTS ASSOCIATED WITH SAME. VARIOUS UTILITIES MAY NEED TO BE RESET BY THE AFFECTED UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE UTILITY COMPANY TO AVOID DELAYS. NO EXTENSION OF TIME WILL BE PROVIDED DUE TO THE LACK OF COORDINATION BY THE CONTRACTOR. THE CONTRACTOR SHALL PERFORM TEST PITS WHERE EXISTING UTILITIES ARE TO BE CROSSED. TEST PIT INFORMATION SHALL BE GIVEN TO THE TOWN ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS MAY BE REQUIRED TO AVOID CONFLICTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS WITHIN SCDOT AND TOWN R.O.W.'S AND EASEMENTS. ALL SURVEY LAYOUT VERIFYING THE EXACT LOCATION OF THE R.O.W.'S SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL COSTS FOR SAME SHALL BE INCLUDED WITHIN THE VARIOUS BID ITEMS.
7. THE CONTRACTOR SHALL TAKE CARE IN MAINTAINING ALL LANDSCAPING AND YARD STRUCTURES WITHIN THE CONSTRUCTION LIMITS AS NECESSARY PER PROJECT. WHEN RELOCATION IS NECESSARY OR WHERE ANY DAMAGE IS DONE TO SAID ITEMS THEY SHALL BE RESTORED BY THE CONTRACTOR, AT HIS EXPENSE, TO THE SATISFACTION OF THE TOWN ENGINEER.
8. ANY CONCRETE DRIVEWAY, WALKWAY, OR CURB WHICH IS NOT SHOWN, DIRECTED, OR MARKED OUT BY THE ENGINEER TO BE REPLACED, BUT IS REMOVED, MISALIGNED OR DAMAGED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR PER DETAILS IN THE CONSTRUCTION DRAWINGS OR (IF NOT INDICATED IN THE CONSTRUCTION DRAWINGS) SCDOT STANDARDS AT NO ADDITIONAL COSTS TO THE TOWN.
9. THE CONTRACTOR SHALL ENSURE THAT POSITIVE DRAINAGE AWAY FROM RESIDENCES AND ALONG ROAD GUTTERS IS MAINTAINED AT ALL LOCATIONS DISTURBED WITH IN THE PROJECT LIMITS.
10. IF IT SHALL BECOME ABSOLUTELY NECESSARY TO PERFORM WORK AT NIGHT, THE TOWN SHALL BE INFORMED IN ADVANCE. GOOD LIGHTING AND ALL OTHER NECESSARY FACILITIES FOR PROPERLY CARRYING OUT AND INSPECTING THE WORK SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL STATE AND LOCAL REGULATIONS GOVERNING HOURS DURING WHICH CONSTRUCTION EQUIPMENT MAY BE OPERATED. NIGHT WORK MAINTENANCE OF TRAFFIC INCLUDING PEDESTRIAN MUST BE SET UP AND MAINTAINED DURING NIGHT WORK AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
11. OPEN TRENCHES SHALL BE KEPT TO A MINIMUM. NO EXCAVATION AREAS ARE TO REMAIN OPEN OVERNIGHT. BITUMINOUS STABILIZED BASE COURSE SHALL BE PLACED IN ALL TRENCH AREAS WITHIN THE ROADWAY AT THE END OF EACH DAYS WORK.
12. IN THE EVENT A SITUATION ARISES IN WHICH MATERIALS NOT SPECIFIED ON THE PLANS ARE TO BE USED FOR EXTRA WORK, THEN THE MATERIALS SHALL CONFORM TO THE TOWN OF RIDGELAND STANDARD SPECIFICATIONS FOR WATER AND SEWER SYSTEMS AND SCDOT SPECIFICATIONS FOR ROADWAY AND DRAINAGE SYSTEMS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL MATERIALS EXCAVATED OF WHATEVER NATURE AT HIS OWN EXPENSE. THE TOWN IS NOT OBLIGATED TO SUPPLY A DISPOSAL SITE. THE CONTRACTOR CANNOT DEPOSIT ANY OF THE EXCESS MATERIALS WITHIN TOWN LIMITS WITHOUT THE EXPRESS PERMISSION OF THE TOWN. MATERIALS MUST BE DISPOSED OF IN ACCORDANCE WITH ALL STATE REGULATIONS REGARDING SAME.
14. ALL STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND DETAILS.
15. PROTECTION OF EXISTING TREES WITHIN THE LIMITS OF DISTURBANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE TOWN ENGINEER SHALL DETERMINE IN THE FIELD WHICH TREES REQUIRE TREE PROTECTION PER PROJECT AS NECESSARY. NO CONSTRUCTION EQUIPMENT OR SUPPLIES SHALL BE STOCKPILED OR STORED WITHIN THE DRIP LINE OF ANY EXISTING TREE TO REMAIN.
16. ALL PROPERTY CORNERS OR MONUMENTS REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY A SOUTH CAROLINA LICENSED LAND SURVEYOR, AT NO ADDITIONAL COST TO THE TOWN.
17. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO MAINTAIN DUST CONTROL AS REQUIRED OR DIRECTED BY THE TOWN ENGINEER. ALL VEHICLES SHALL BE CLEAN AND ALL ROADWAYS SHALL BE MAINTAINED AS DIRECTED BY THE TOWN ENGINEER.
18. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE SCDOT STANDARDS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING PAVEMENT MARKINGS. CONTRACTOR SHALL NOTIFY TOWN ENGINEER AND SCDOT (AS NECESSARY) WHEN TRAFFIC STRIPES AND PAVEMENT MARKINGS HAVE BEEN LAID OUT PRIOR TO PAINTING. THE TOWN ENGINEER AND/OR SCDOT (AS NECESSARY) WILL INSPECT AND APPROVE LAYOUT PRIOR TO CONTRACTOR PAINTING TRAFFIC STRIPES AND PAVEMENT MARKINGS.
19. THE CONTRACTOR SHALL PERFORM ONLY THE AMOUNT OF WORK WHICH CAN BE COMPLETED THE SAME DAY. THE ENTIRE ROADWAY SHALL BE OPENED TO TRAFFIC AFTER WORK HOURS UNLESS APPROVED BY TOWN AND SCDOT (IF SCDOT ROW). SCDOT TEMPORARY PAVEMENT OR APPROVED SURFACE SHALL BE PLACED IN CONSTRUCTION AREAS TO PROVIDE A SMOOTH, SAFE SURFACE FOR VEHICULAR TRAFFIC. THE COST FOR TEMPORARY PAVEMENT SHALL BE INCLUDED IN UNIT PRICE BID FOR VARIOUS CONSTRUCTION ITEMS.
20. IN ADDITION TO ALL GRADING ACTIVITIES, THE CLEARING SITE ITEM SHALL INCLUDE THE REMOVAL OF EXISTING TREES, SHRUBS, CURBING, SIDEWALKS, FENCES, DRIVEWAYS, WALLS, PIPES, INLETS, RESIDENTIAL WALKWAYS, ASPHALT, RIP-RAP, AND OTHER FEATURES WHICH NEED TO BE REMOVED AND/OR RESET IN ORDER TO CONSTRUCT THE PROPOSED IMPROVEMENTS. LAWN SPRINKLER SYSTEMS IF APPLICABLE TO PROJECT SHALL BE REMOVED AND REPLACED WHERE NECESSARY BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND SHALL BE PAID UNDER THE CLEARING SITE ITEM.
21. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION STAKEOUT. OFFSET LINES WITH STAKES SHALL BE SET AT APPROPRIATE INTERVALS TO FACILITATE CONSTRUCTION.
22. CUT SHEETS SHALL BE SUBMITTED FOR APPROVAL TO THE TOWN ENGINEER AND REQUIRE APPROVAL PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ALLOW AT LEAST 7 BUSINESS DAYS FOR ENGINEER CUT SHEET REVIEW FOR EACH SUBMITTAL.
23. ALL EXISTING STRUCTURES AND ALL UNDERGROUND STRUCTURES ARE TO BE REMOVED IN ACCORDANCE WITH STATE REGULATIONS.
24. THE CONTRACTOR SHALL NOTIFY THE TOWN ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE SHOWN HEREIN.
25. THESE GENERAL NOTES SHALL APPLY FOR THE ENTIRE PROJECT.

NOTES FOR MAINTENANCE AND PROTECTION OF TRAFFIC (AS NECESSARY):

1. ALL DEVICES AND PROCEDURES FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH SCDOT. THE CONTRACTOR SHALL PLAN AND CARRY OUT HIS WORK TO PROVIDE FOR THE CONVENIENT AND SAFE PASSAGE OF ALL VEHICULAR AND PEDESTRIAN TRAFFIC ON ADJACENT STREETS.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING MAINTENANCE AND PROTECTION OF TRAFFIC THROUGH THE DURATION OF CONSTRUCTION. NO SEPARATE PAYMENTS WILL BE MADE FOR RELOCATING THE DEVICES AS REQUIRED, OR AS DIRECTED BY THE TOWN ENGINEER, DURING THE COURSE OF CONSTRUCTION.
3. DURING CONSTRUCTION, ALL ROADS SHALL BE PROPERLY MAINTAINED TO ACCOMMODATE EMERGENCY VEHICLES AT ALL TIMES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE LOCAL AND STATE POLICE DEPARTMENTS FOR TRAFFIC OPERATIONS AND PARKING PROHIBITIONS DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY DETOURS NECESSARY WITH THE POLICE, TOWN ENGINEER AND/OR FIRE DEPARTMENTS PRIOR TO CONSTRUCTION. ALL EMERGENCY VEHICLES MUST HAVE ACCESS TO STREETS AT ALL TIMES, ALL RESIDENTS MUST HAVE ACCESS TO THEIR HOMES AT ALL TIMES, AND ALL BUSINESSES MUST HAVE ACCESS TO ALLOW CUSTOMERS TO BUSINESSES AT ALL TIMES THE BUSINESSES IS IN OPERATION OR REQUIRES ACCESS. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE ROADWAY TO A SAFE CONDITION AT THE END OF EACH DAY'S WORK PER SCDOT STANDARDS.
6. ALL TRAFFIC CONTROL SIGNS AND STRIPING SHALL BE INSTALLED IN ACCORDANCE WITH SCDOT. EXACT LOCATION OF STREET SIGNS AND PAVEMENT MARKINGS SHALL BE DETERMINED BY SCDOT SPECIFICATIONS.



STEVE DUCHARNE LOCATION: E:\17-1007.08 - JAMES TAYLOR DRAINAGE\A\CDSS\NEW PHASE1 EXIST.DWG

Signature
Michael R. Klink, P.E.
SC Professional Eng. # 28229
Date

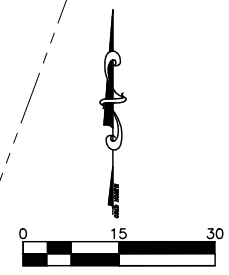
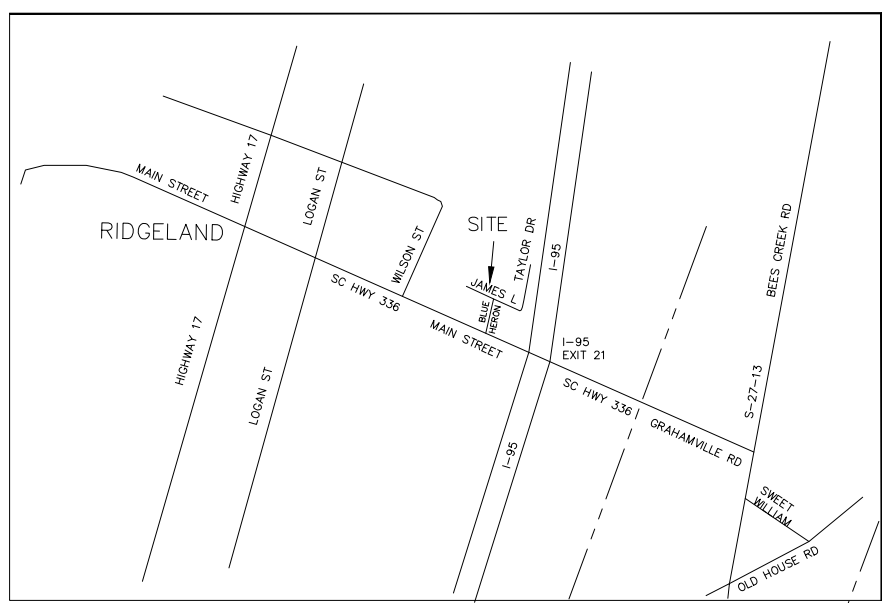
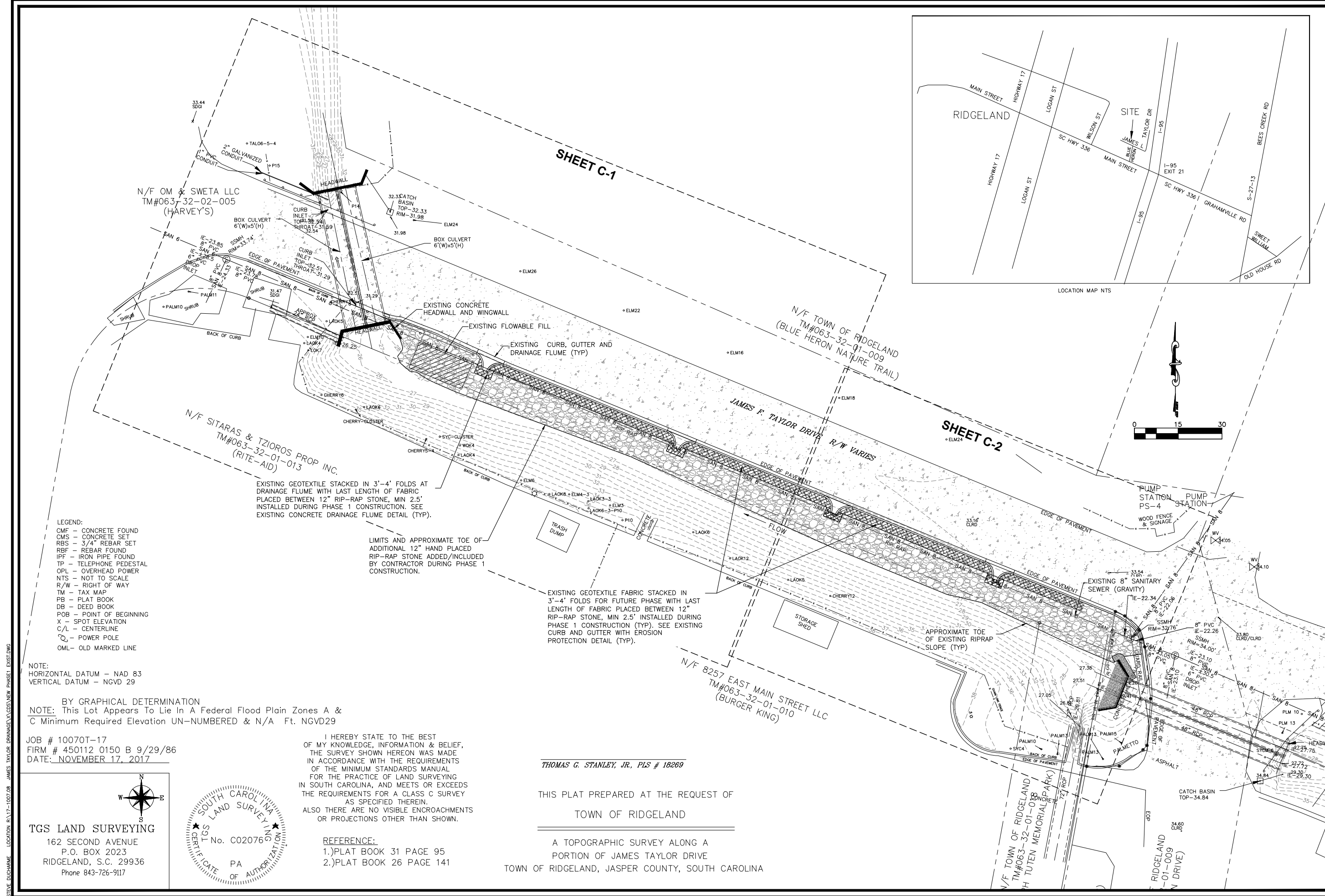
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TOWN OF RIDGELAND
RIDGELAND, SOUTH CAROLINA
PHASE 2
GENERAL NOTES
JAMES F. TAYLOR DRIVE
DITCH IMPROVEMENTS - PHASE 2

DESIGN	DRAWN	SLD	JOB	MARCH	BID
			17-1007.011	2019	

FOUR WATERS ENGINEERING
324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
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DRAWING NUMBER
G-1

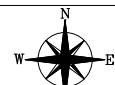


- LEGEND:
- CMF - CONCRETE FOUND
 - CMS - CONCRETE SET
 - RBS - 3/4" REBAR SET
 - RBF - REBAR FOUND
 - IPF - IRON PIPE FOUND
 - TP - TELEPHONE PEDESTAL
 - OPL - OVERHEAD POWER
 - NTS - NOT TO SCALE
 - R/W - RIGHT OF WAY
 - TM - TAX MAP
 - PB - PLAT BOOK
 - DB - DEED BOOK
 - POB - POINT OF BEGINNING
 - X - SPOT ELEVATION
 - C/L - CENTERLINE
 - PO - POWER POLE
 - OML - OLD MARKED LINE

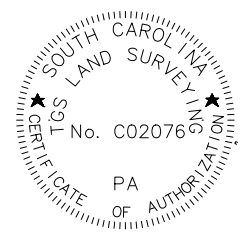
NOTE:
 HORIZONTAL DATUM - NAD 83
 VERTICAL DATUM - NGVD 29

BY GRAPHICAL DETERMINATION
 NOTE: This Lot Appears To Lie In A Federal Flood Plain Zones A & C Minimum Required Elevation UN-NUMBERED & N/A Ft. NGVD29

JOB # 10070T-17
 FIRM # 450112 0150 B 9/29/86
 DATE: NOVEMBER 17, 2017



TGS LAND SURVEYING
 162 SECOND AVENUE
 P.O. BOX 2023
 RIDGELAND, S.C. 29936
 Phone 843-726-9117



I HEREBY STATE TO THE BEST OF MY KNOWLEDGE, INFORMATION & BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS C SURVEY AS SPECIFIED THEREIN. ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN SHOWN.

REFERENCE:
 1.) PLAT BOOK 31 PAGE 95
 2.) PLAT BOOK 26 PAGE 141

THOMAS G. STANLEY, JR., PLS # 18269

THIS PLAT PREPARED AT THE REQUEST OF
 TOWN OF RIDGELAND

A TOPOGRAPHIC SURVEY ALONG A PORTION OF JAMES TAYLOR DRIVE TOWN OF RIDGELAND, JASPER COUNTY, SOUTH CAROLINA

Signature Michael R. Kirk, P.E. SC Professional Eng. # 28229		Date
REV	DATE	DESCRIPTION
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EXISTING CONDITIONS AND KEY MAP

TOWN OF RIDGELAND
 RIDGELAND, SOUTH CAROLINA

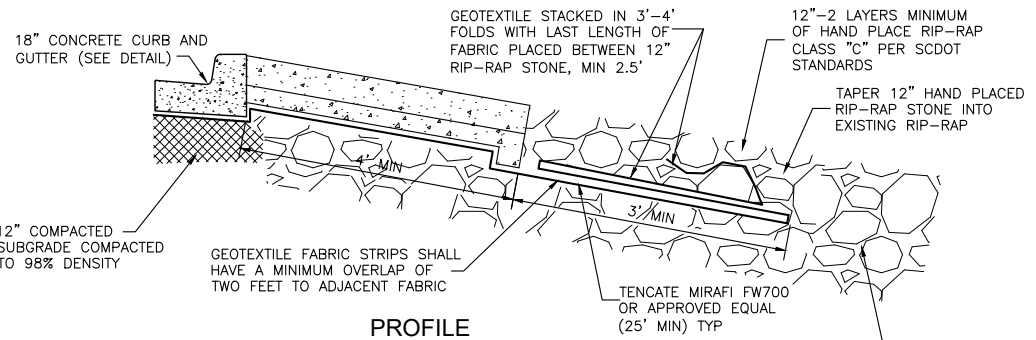
JAMES F. TAYLOR DRIVE
 DITCH IMPROVEMENTS - PHASE 2

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ISSUE	DATE		
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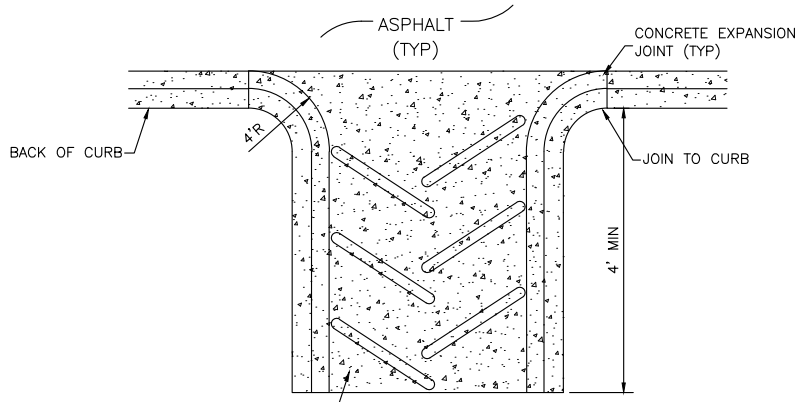
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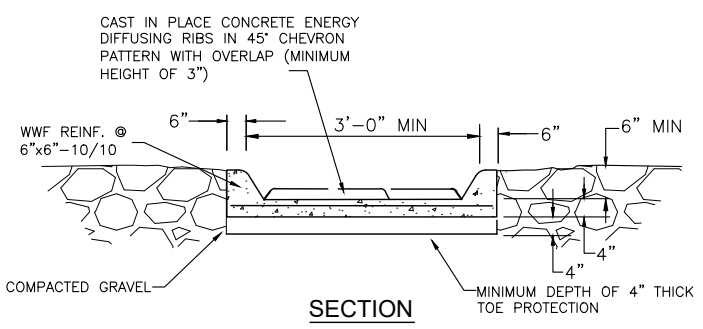
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PROFILE



PLAN



SECTION

EXISTING PHASE 1 CONCRETE DRAINAGE FLUME

12" COMPACTED SUBGRADE COMPACTED TO 98% DENSITY

GEOTEXTILE FABRIC STRIPS SHALL HAVE A MINIMUM OVERLAP OF TWO FEET TO ADJACENT FABRIC

12"-2 LAYERS MINIMUM OF HAND PLACED RIP-RAP CLASS "C" PER SCDOT STANDARDS

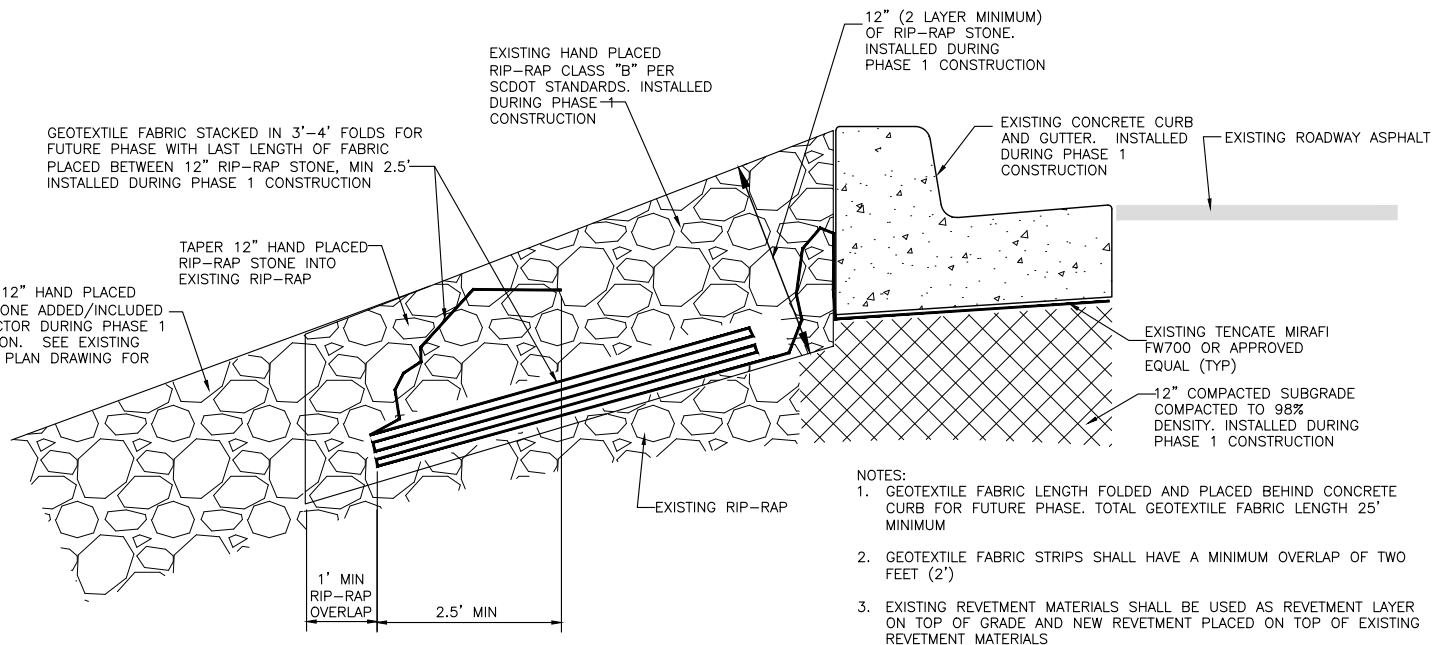
TAPER 12" HAND PLACED RIP-RAP STONE INTO EXISTING RIP-RAP

TENCATE MIRAFI FW700 OR APPROVED EQUAL (25' MIN) TYP

3' MIN

4' MIN

ADDITIONAL 12" HAND PLACED RIP-RAP STONE ADDED/INCLUDED BY CONTRACTOR DURING PHASE 1 CONSTRUCTION. SEE EXISTING CONDITIONS PLAN DRAWING FOR LIMITS



PHASE 1 CURB AND GUTTER WITH EROSION PROTECTION

NOT TO SCALE

- NOTES:
1. GEOTEXTILE FABRIC LENGTH FOLDED AND PLACED BEHIND CONCRETE CURB FOR FUTURE PHASE. TOTAL GEOTEXTILE FABRIC LENGTH 25' MINIMUM
 2. GEOTEXTILE FABRIC STRIPS SHALL HAVE A MINIMUM OVERLAP OF TWO FEET (2')
 3. EXISTING REVETMENT MATERIALS SHALL BE USED AS REVETMENT LAYER ON TOP OF GRADE AND NEW REVETMENT PLACED ON TOP OF EXISTING REVETMENT MATERIALS

STEVE DUCHARME LOCATION R.17-1007.08 JAMES TAYLOR DRAINAGE_V.CDS\NEW PHASE1_EXIST.DWG

Signature
Michael R. Kink, P.E.
SC Professional Eng. # 28229
Date

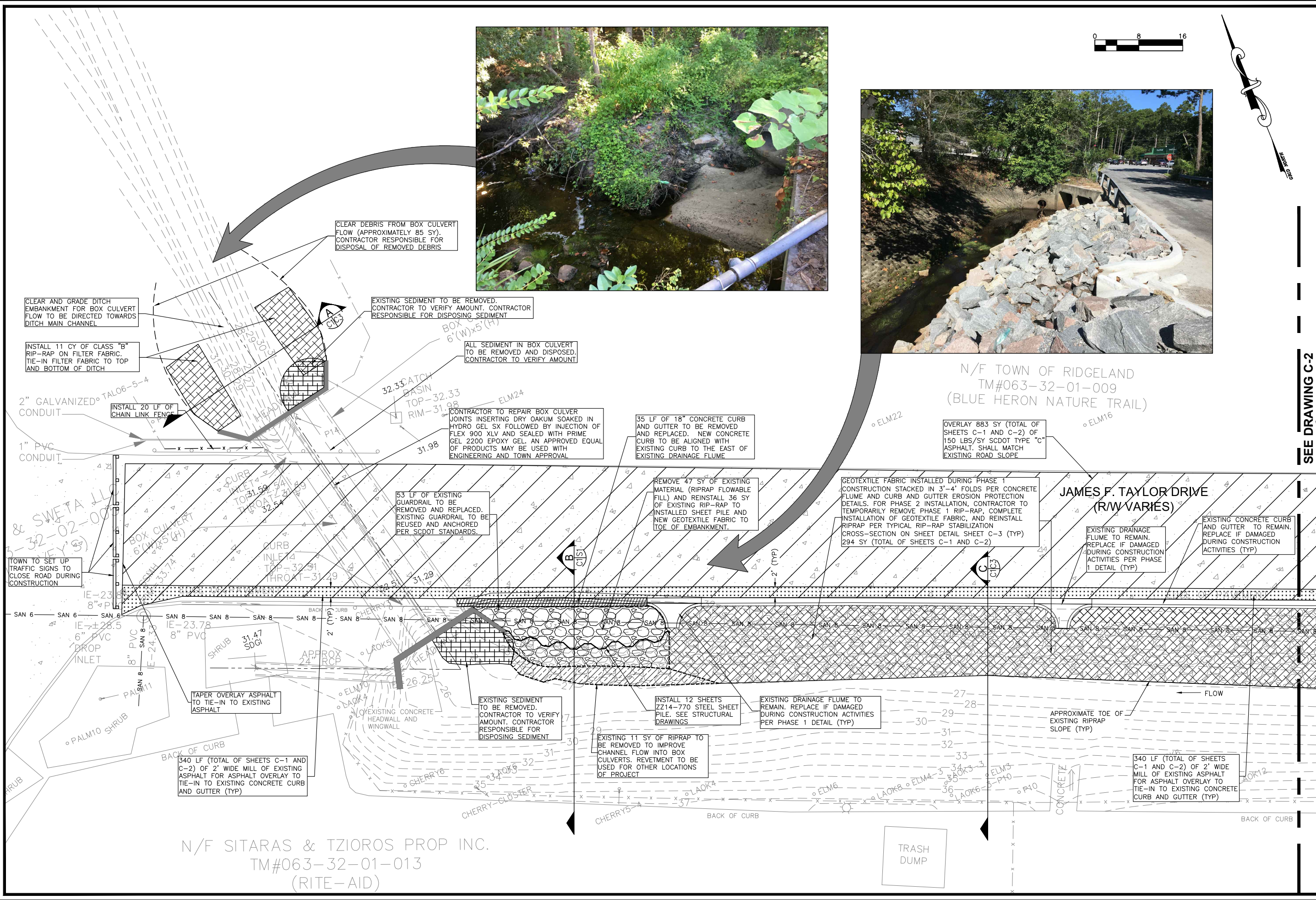
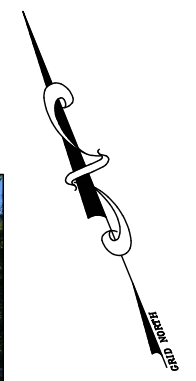
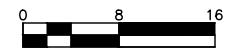
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TOWN OF RIDGELAND
RIDGELAND, SOUTH CAROLINA
PHASE 1
EXISTING CONDITION DETAILS
JAMES F. TAYLOR DRIVE
DITCH IMPROVEMENTS - PHASE 2

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G-3



SEE DRAWING C-2

Signature
Michael R. Kink, P.E.
SC Professional Eng. # 28229
Date

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TOWN OF RIDGELAND
RIDGELAND, SOUTH CAROLINA
PLAN VIEW
PROPOSED PHASE 2 IMPROVEMENTS
JAMES F. TAYLOR DRIVE
DITCH IMPROVEMENTS - PHASE 2

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				17-1007.011		MARCH 2019		

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DRAWING NUMBER
C-1

STEVE DUCHARNE LOCATION E-17-1007.08 JAMES TAYLOR DRAINAGE, V.COS NEW PHASE 1 PROPOSED D.W.G.

N/F SITARAS & TZIOROS PROP INC.
TM#063-32-01-013
(RITE-AID)



N/F TOWN OF RIDGELAND
 TM#063-32-01-009
 (BLUE HERON NATURE TRAIL)

◦ ELM24
 OVERLAY 883 SY (TOTAL OF SHEETS C-1 AND C-2) OF 150 LBS/SY SCDOT TYPE "C" ASPHALT. SHALL MATCH EXISTING ROAD SLOPE.

EXISTING CONCRETE CURB AND GUTTER TO REMAIN. REPLACE IF DAMAGED DURING CONSTRUCTION ACTIVITIES (TYP)

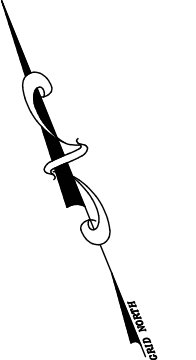
JAMES F. TAYLOR DRIVE
 (R/W VARIES)

EXISTING DRAINAGE FLUME TO REMAIN. REPLACE IF DAMAGED DURING CONSTRUCTION ACTIVITIES PER PHASE 1 DETAIL (TYP)

INSTALL 20 SHEETS Z214-770 STEEL SHEET PILE. SEE STRUCTURAL DRAWINGS

TAPER OVERLAY ASPHALT TO TIE-IN TO EXISTING ASPHALT

TOWN TO SET UP TRAFFIC SIGNS TO CLOSE ROAD DURING CONSTRUCTION



GEOTEXTILE FABRIC INSTALLED DURING PHASE 1 CONSTRUCTION STACKED IN 3'-4' FOLDS PER CONCRETE FLUME AND CURB AND GUTTER EROSION PROTECTION DETAILS. FOR PHASE 2 INSTALLATION, CONTRACTOR TO TEMPORARILY REMOVE PHASE 1 RIP-RAP, COMPLETE INSTALLATION OF GEOTEXTILE FABRIC, AND REINSTALL RIP-RAP PER TYPICAL RIP-RAP STABILIZATION CROSS-SECTION ON DETAIL SHEET C-3 (TYP) 294 SY (TOTAL OF SHEETS C-1 AND C-2)

SEE DRAWING C-1

STORAGE SHED

340 LF (TOTAL OF SHEETS C-1 AND C-2) OF 2' WIDE MILL OF EXISTING ASPHALT FOR ASPHALT OVERLAY TO TIE-IN TO EXISTING CONCRETE CURB AND GUTTER (TYP)

REMOVE AND REINSTALL 77 SY OF EXISTING RIP-RAP TO INSTALL SHEET PILE AND NEW GEOTEXTILE FABRIC TO TOE OF EMBANKMENT.

APPROXIMATE TOE OF EXISTING RIP-RAP SLOPE. TOE TO REMAIN IN SAME GENERAL LOCATION AFTER SHEET PILE AND FILTER FABRIC INSTALLATION (TYP)

INSTALL 10 CY OF CLASS "B" RIP-RAP IN SCOUR DEPRESSION. DISTRIBUTE EVENLY.

EXISTING FLUME TO REMAIN OR BE REBUILT IF DAMAGE OCCURS DURING CONSTRUCTION ACTIVITIES

N/F 8257 EAST MAIN STREET LLC
 TM#063-32-01-010
 (BURGER KING)

N/F TOWN OF RIDGELAND
 TM#063-32-01-018
 (RALPH TUTEN MEMORIAL PARK)

N/F TOWN OF RIDGELAND
 TM#063-32-01-009
 (BLUE HERON DRIVE)

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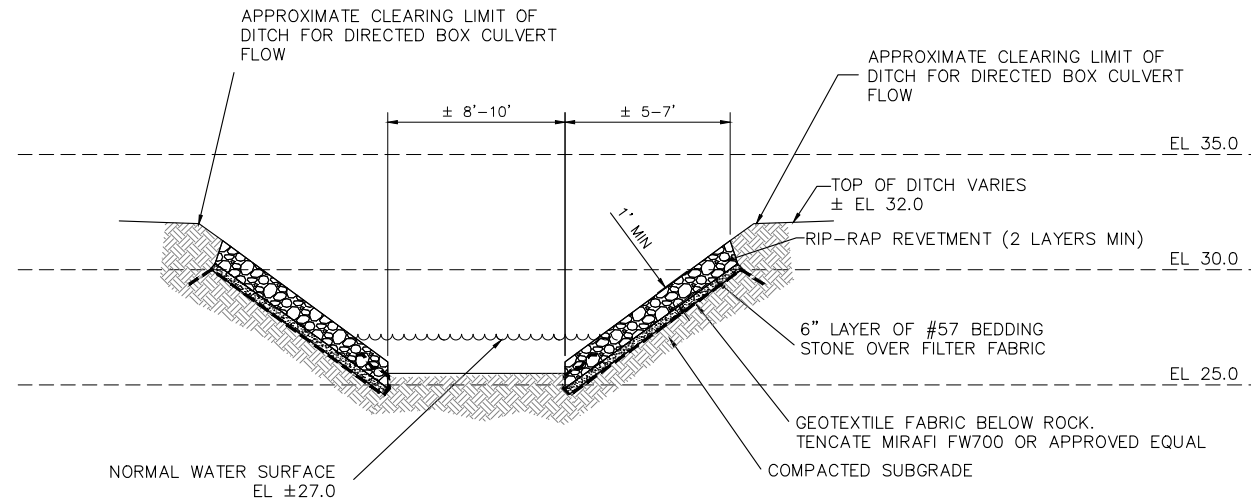
TOWN OF RIDGELAND
 RIDGELAND, SOUTH CAROLINA
PLAN VIEW
PROPOSED PHASE 2 IMPROVEMENTS
 JAMES F. TAYLOR DRIVE
 DITCH IMPROVEMENTS - PHASE 2

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DRAWING NUMBER
C-2

STEVE DUCHARME LOCATION R:\17-1007.08 JAMES TAYLOR DRAINAGE\X\CD\NEW PHASE 1 PROPOSED.DWG

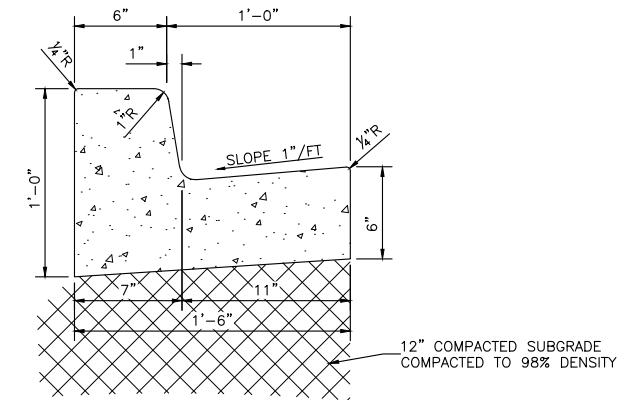
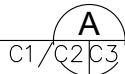


NOTES

1. REVETMENT STONE SHALL BE A MINIMUM OF TWO UNITS THICK AND BE PLACED TO MAXIMIZE CONTACT BETWEEN ADJACENT STONES
2. SMALLER STONES SHALL BE UTILIZED FOR CHINKING TO ACHIEVE UNIFORM INSTALLATION CONFORMITY TO LINES AND GRADES
3. ROCK SIZE SHOWN IS BASED ON A MINIMUM DRY UNIT WEIGHT OF 150 PCF.
4. EXISTING GRADE SHOWN AT TIME OF SURVEY. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION
5. GEOTEXTILE FABRIC SHALL HAVE A MINIMUM OVERLAP OF TWO FEET AND PLACED BETWEEN STONE LAYERS AT TOE.
6. EXISTING REVETMENT MATERIALS SHALL BE USED AS REVETMENT LAYER ON TOP OF GRADE AND NEW REVETMENT PLACED ON TOP OF EXISTING REVETMENT MATERIALS
7. SEE ADDITIONAL REVETMENT NOTES ON SHEET S-2

STABILIZATION CROSS-SECTION

NOT TO SCALE

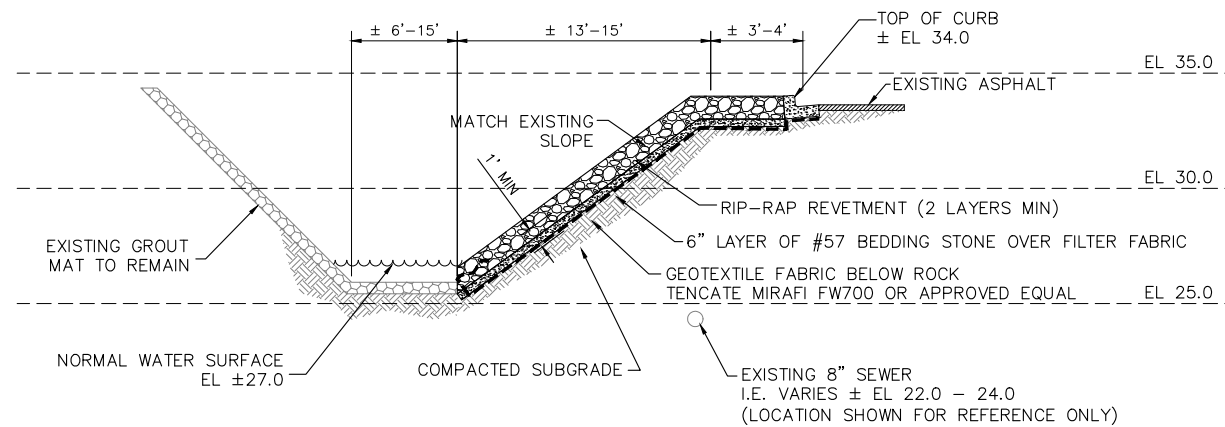


NOTES:

1. ALL CONCRETE SHALL BE 3000 PSI
2. PROVIDE CONTRACTION JOINTS EVERY TEN FEET (10')
3. PROVIDE EXPANSION JOINTS EVERY FIFTY FEET (50') AND AT ALL TANGENT POINTS
4. PROVIDE EXPANSION JOINTS WHERE CURB ABUTS SIDEWALKS OR OTHER STRUCTURES
5. EXPANSION JOINTS SHALL BE 1/2" WITH PRE-MOLDED JOINT FILLER
6. TOOL ALL EXPOSED EDGES & JOINTS TO 1/4" RADIUS
7. PROVIDE LIGHT BROOM FINISH

18" CONCRETE CURB AND GUTTER

NOT TO SCALE



NOTES

1. REVETMENT STONE SHALL BE A MINIMUM OF TWO UNITS THICK AND BE PLACED TO MAXIMIZE CONTACT BETWEEN ADJACENT STONES
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7. SEE ADDITIONAL REVETMENT NOTES ON SHEET S-2

STABILIZATION CROSS-SECTION

NOT TO SCALE



Signature
Michael R. Kink, P.E.
SC Professional Eng. # 28229
Date

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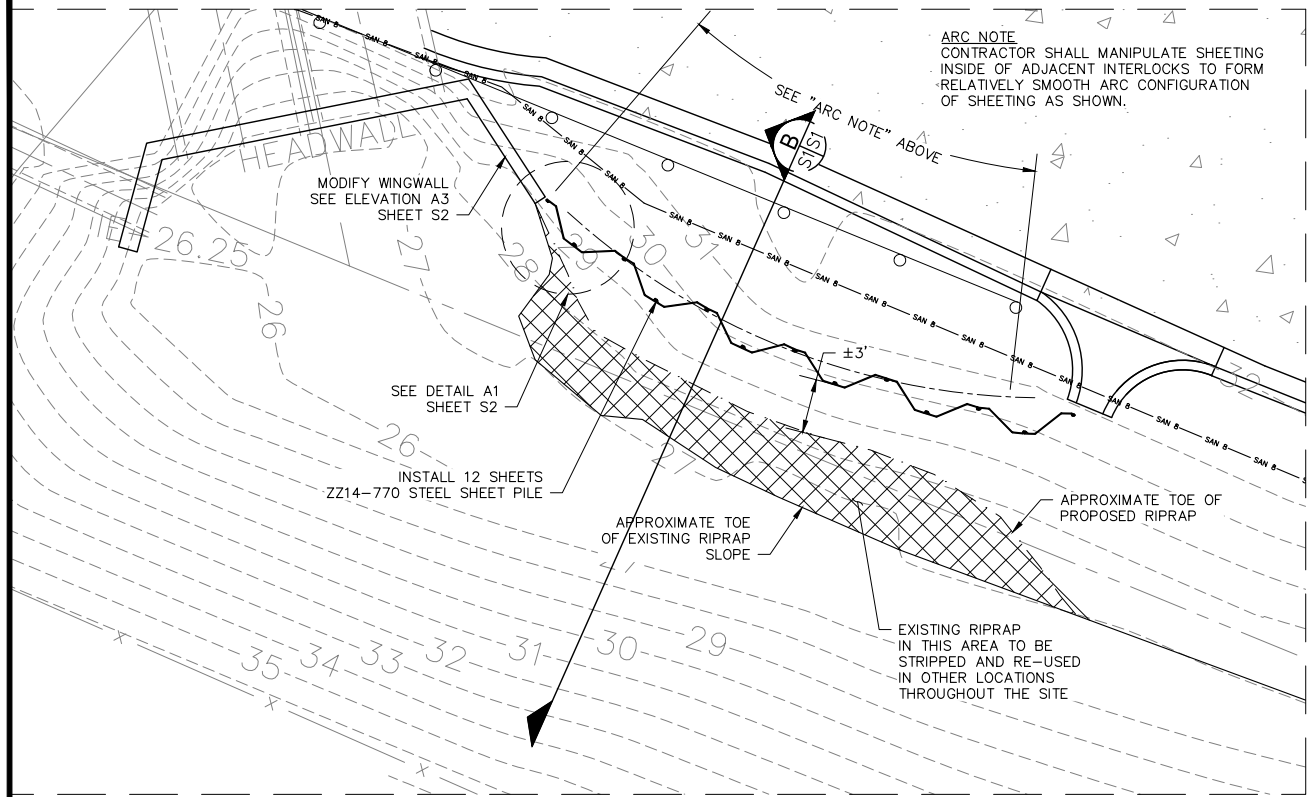
TOWN OF RIDGELAND
RIDGELAND, SOUTH CAROLINA
PHASE 2
CONSTRUCTION DETAILS
JAMES F. TAYLOR DRIVE
DITCH IMPROVEMENTS - PHASE 2

DESIGN	DRAWN	SLD	JOB	NUMBER	DATE	ISSUE	BID
			17-1007.011		MARCH 2019		

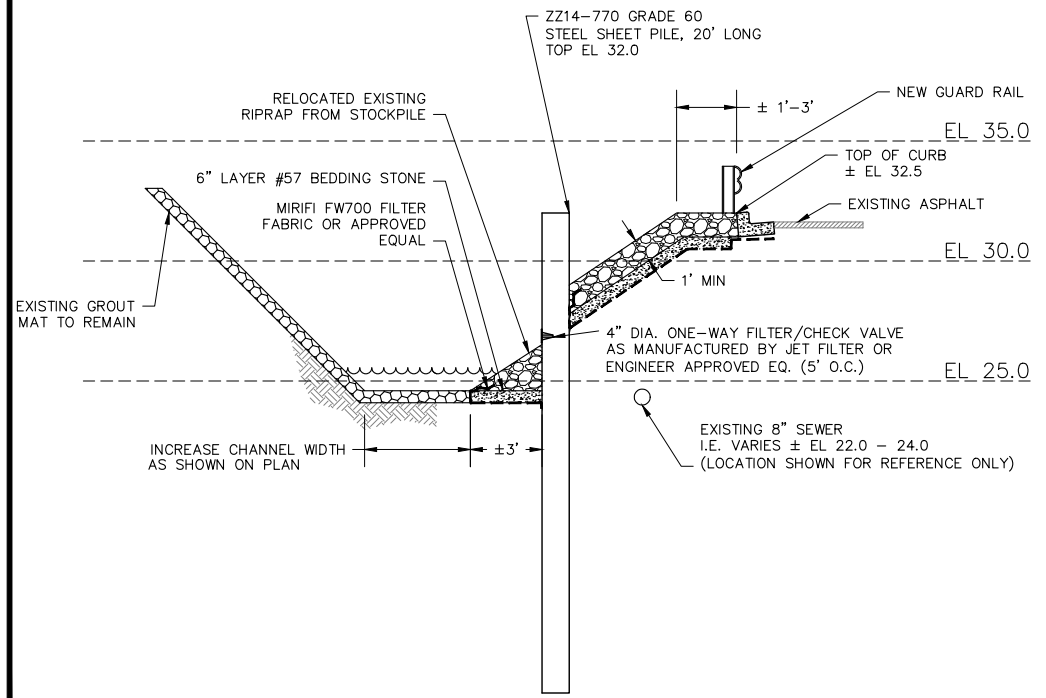
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324 6th AVE N. JACKSONVILLE BEACH, FLORIDA 32250
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DRAWING NUMBER
C-3

STEVE DUCHARME LOCATION E:\17-1007.08 JAMES TAYLOR DRAINAGE\X\CD\NEW PHASE 1 PROPOSED.DWG



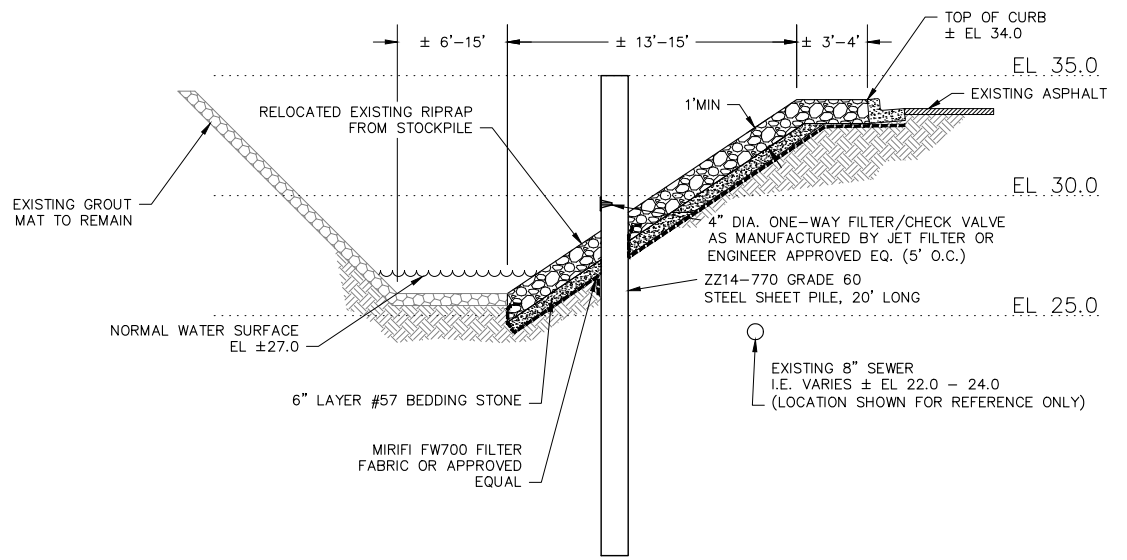
**PARTIAL PLAN A1
PROPOSED IMPROVEMENTS
SCALE 1:5**



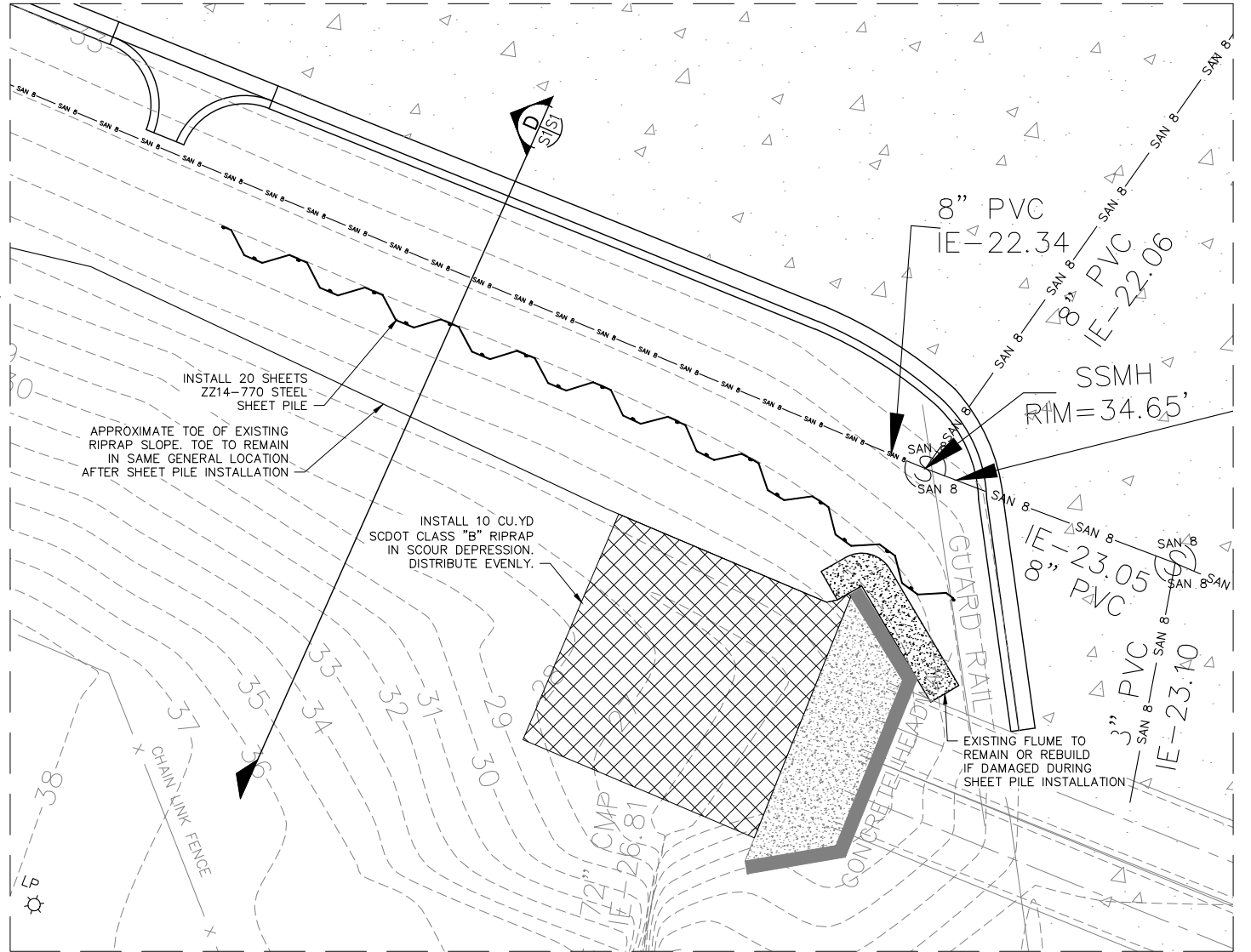
**PROPOSED DOWNSTREAM CROSS SECTION
SCALE 1:4**

NOTES:

1. CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING RIPRAP LOCATED ALONG THE FULL WIDTH OF THE SLOPE ADJACENT TO SHEET PILE WALLS. RIPRAP SHALL BE INSTALLED AFTER WALLS ARE CONSTRUCTED.
2. BEDDING STONE SHALL BE SPREAD UNIFORMLY ON THE FILTER FABRIC IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FABRIC.
3. PLACEMENT OF THE STONE SHALL BEGIN AT THE BOTTOM OF THE AREA TO BE COVERED AND CONTINUE UP SLOPE.
4. ANY DAMAGE DONE TO THE SURFACE OF THE FILTER FABRIC DURING PLACEMENT OF STONE SHALL BE REPAIRED BEFORE PROCEEDING WITH THE WORK.
5. PRIOR TO PLACING FILTER FABRIC CONTRACTOR SHALL ENSURE THAT THE SLOPE IS GRADED, COMPACTED, AND ALL DELETERIOUS MATERIAL HAS BEEN REMOVED.
6. A FINITE AMOUNT OF EXISTING RIPRAP (FROM STOCKPILE) IS AVAILABLE AT THE SITE FOR REUSE. CONTRACTOR SHALL EXERCISE GOOD JUDGEMENT IN DISTRIBUTING THIS RIPRAP OVER THE ENTIRETY OF THE SLOPE AND AT THE TOE OF THE NEW WALL. PLACE LARGER STONES AT THE TOE OF THE WALL.
7. THE 10 CU. YD. OF SCDOT CLASS "B" STONE INDICATED IN PARTIAL PLAN C2 ARE IN ADDITION TO THE STOCKPILE MATERIAL FROM THE EXISTING RETEMENT.



**PROPOSED UPSTREAM CROSS SECTION
SCALE 1:4**



**PARTIAL PLAN C4
PROPOSED IMPROVEMENTS
SCALE 1:5**

DESIGNED BY: WDB	DRWN BY: WDB	CHECKED BY: DBM	DATE: 5/16/18	REV. DATE:
123 Cannon Street Charleston, SC 29403 (843) 974-5621 www.mcsweeneyengineers.com				

REV. NO.	DATE	DRWN CHG. BY	DESCRIPTION
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TOWN OF RIDGELAND
RIDGELAND, SOUTH CAROLINA

**PHASE 2
STRUCTURAL DETAILS**

JAMES F. TAYLOR DRIVE
DITCH IMPROVEMENTS - PHASE 2

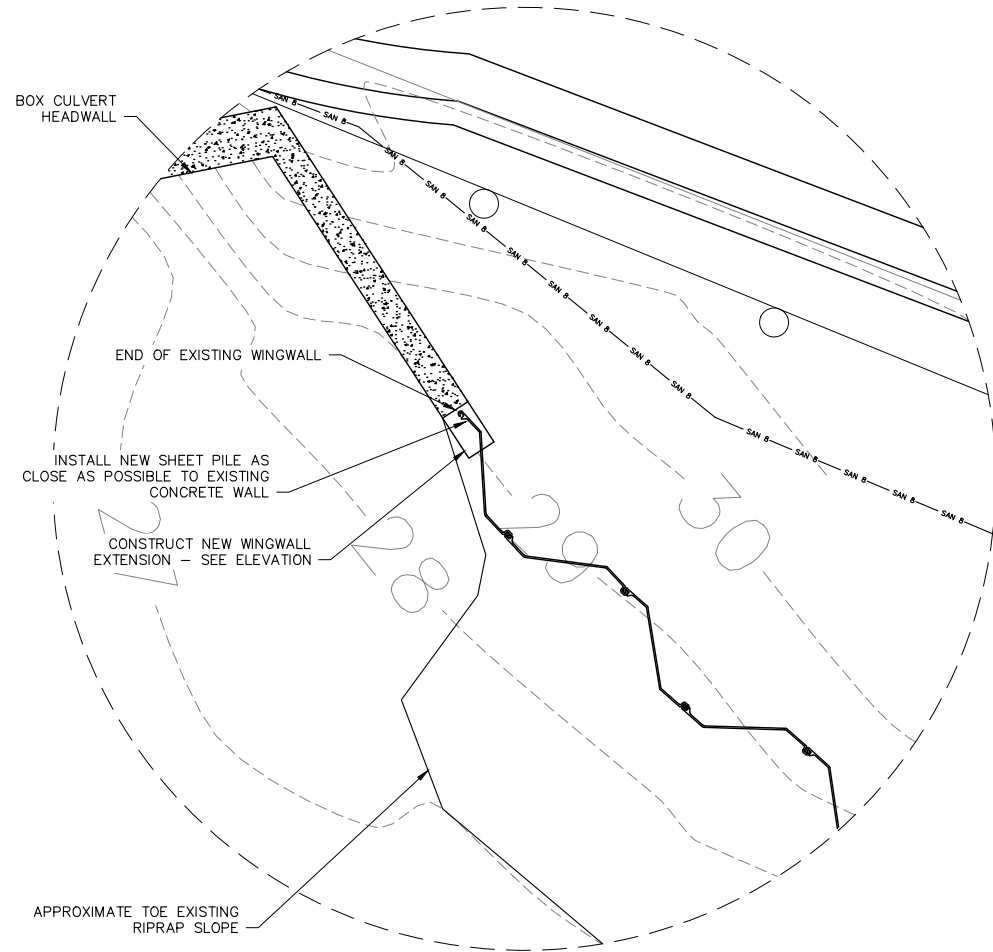
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NUMBER					

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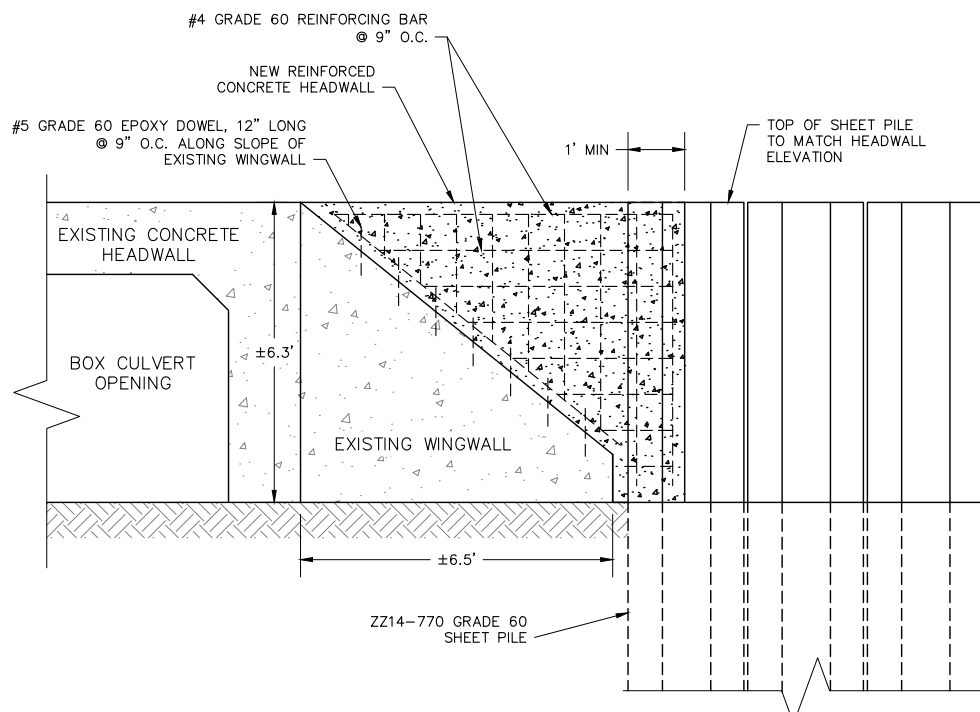
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DRAWING NUMBER
S-1

STEVE DUCHARNE LOCATION R.17-1007.08 JAMES TAYLOR DRAINAGE V.CDS\NEW PHASE 1 STRUCTURALS.DWG



DETAIL A1
SHEETING AT DOWNSTREAM
WINGWALL
SCALE 1:4



ELEVATION A3
WINGWALL MODIFICATION
SCALE 1:4

CONCRETE NOTES:

1. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. MAXIMUM W/C RATIO = 0.40.
2. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
3. CEMENT SHALL BE TYPE II OR AS APPROVED BY THE ENGINEER.
4. CONCRETE SHALL HAVE A MINIMUM SLUMP OF 3" AND MAXIMUM SLUMP OF 5".
5. REINFORCING STEEL SHALL BE #4 AND #5 BARS AND PLACED IN THE LOCATIONS SHOWN ON THESE PLANS.
6. REINFORCING BARS ARE TO BE PLACED AT A MIN. DEPTH OF 3" COVER FROM THE NEAREST FACE OF THE CONCRETE.
7. REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM DESIGNATION A934, GRADE 60.
8. ALL REINFORCING STEEL INTERSECTIONS AND LAPS (IF NECESSARY) SHALL BE WIRED TOGETHER AND INSTALLED IN ACCORDANCE WITH THE GUIDELINES ESTABLISHED IN THE MANUAL OF STANDARD PRACTICE - CONCRETE REINFORCING STEEL INSTITUTE, LATEST EDITION.
9. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL FORMWORK.
10. CHAMFER ALL EXPOSED CONCRETE EDGES SIMILAR TO EXISTING STRUCTURE.

BULKHEAD NOTES:

1. SHEET PILE SHALL BE ZZ14-770 GRADE 60 SUPPLIED BY JD FIELDS AND COMPANY OR ENGINEER APPROVED EQUAL.
2. COMPLETE DESCRIPTIONS OF SHEET PILE DRIVING EQUIPMENT INCLUDING, HAMMERS, EXTRACTORS, PROTECTION CAPS AND OTHER INSTALLATION APPURTENANCES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO COMMENCING WORK.
3. INSTALL PILES PLUMB AND TRUE TO THE ELEVATIONS SPECIFIED. PILES SHALL NOT BE DRIVEN MORE THAN 1/2" PER FOOT OUT OF PLUMB IN THE PLANE OF THE WALL, NOR MORE THAN 1/16" PER FOOT "OUT" OF PLUMB PERPENDICULAR TO THE PLANE OF THE WALL, NOR MORE THAN 1" PER FOOT "IN" OF PLUMB PERPENDICULAR TO THE PLANE OF THE WALL.
4. PILES DRIVEN OUT OF INTERLOCK WITH ADJACENT PILES OR OTHERWISE DAMAGED SHALL BE REMOVED AND REPLACED BY NEW PILES AT THE CONTRACTORS EXPENSE.
5. INSTALL 4" DIAMETER ONE-WAY FILTER/CHECK VALVES AT 5' O.C. AT THE ELEVATIONS SPECIFIED ON THESE PLANS.
6. INSTALL FILTERS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. SHEETING DAMAGED AS THE RESULT OF HANDLING, DRIVING, PLACEMENT OF RIPRAP, OR OTHER CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. WHERE AN OBSTRUCTION IS ENCOUNTERED THAT RESULTS IN UNEXPECTED CHANGE IN PENETRATION OR PILE TIP ELEVATION THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE OBSTRUCTION, EXTRACT, REPOSITION, AND REDRIVE THE SHEET OR SLIGHTLY CHANGE THE ALIGNMENT. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY SHEETING THAT CANNOT BE DRIVEN TO THE SPECIFIED DEPTH.

RIPRAP NOTES:

1. ALL NEW RIPRAP SHALL CONSIST OF GRADED QUARRY STONE AND SHALL CONFORM TO SCDOT CLASS "B" GRADATION REQUIREMENTS.
2. RIPRAP SHALL BE SELECTIVELY PLACED IN AN ORDERLY MANNER TO OBTAIN GOOD INTERLOCKING ACTION BETWEEN INDIVIDUAL UNITS.
3. RIPRAP SHALL NOT BE DROPPED FROM A HEIGHT GREATER THAN 12 INCHES NOR PUSHED DOWN THE SLOPE.
4. STONE PLACEMENT SHALL BEGIN AT THE BOTTOM OF THE SLOPE AND PROCEED UPSLOPE TO PRODUCE A LAYER WITH MAXIMUM INTERLOCKING OF STONES AND MINIMUM VOIDS.
5. LARGE STONES SHALL BE PLACED SO THAT THE LONG AXIS OF THE STONE IS PERPENDICULAR TO THE REVETMENT SLOPE.
6. RIPRAP SHALL BE "SEATED" ON THE EXISTING STONE TO AVOID SLIPPING, ROCKING, AND DISPLACEMENT DURING CONSTRUCTION.
7. CONTRACTOR SHALL "RE-WORK" EXISTING STONES AS NECESSARY IN ORDER TO ACHIEVE MAXIMUM INTERLOCK WITH NEW RIPRAP.
8. CONTRACTOR SHALL SELECT AND USE A MACHINE CAPABLE OF POSITIONING THE STONES TO THEIR FINAL POSITION BEFORE RELEASE, EVEN AT THE TOE.
9. THE SURFACE OF THE COMPLETED REVETMENT SHALL BE UNIFORM IN APPEARANCE AND BE FREE FROM HUMPS OR DEPRESSIONS.
10. CONTRACTOR SHALL ENSURE THAT RIPRAP IS PLACED IN A MANNER THAT DOES NOT DAMAGE THE NEW WALL OR EXISTING CONSTRUCTION.

STEVE DUCHARME LOCATION R.17-1007.08 JAMES TAYLOR DRAINAGE_V.CDS\NEW PHASE 1 STRUCTURALS.DWG

DESIGNED BY: WDB
 DRAWN BY: WDB
 CHECKED BY: DBM
 DATE: 5/16/18
 REV. DATE:

McSweeney Engineers
 123 Cannon Street
 Charleston, SC 29403
 (843) 974-5621
 www.mcsweeneyengineers.com

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MRK	17-1007.011		MARCH	2019		
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DRAWING NUMBER
S-2

TOWN OF RIDGELAND
 RIDGELAND, SOUTH CAROLINA
PHASE 2
STRUCTURAL DETAILS
 JAMES F. TAYLOR DRIVE
 DITCH IMPROVEMENTS - PHASE 2

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Signature _____
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