COVER SHEET

CHESAPEAKE ENERGY CENTER
SHORELINE EROSION REPAIRS
PRIORITY AREAS 2 & 3 AND
SOUTH DIKE OF BOTTOM ASH POND

2701 VEPCO STREET
CHESAPEAKE, VIRGINIA

PREPARED FOR

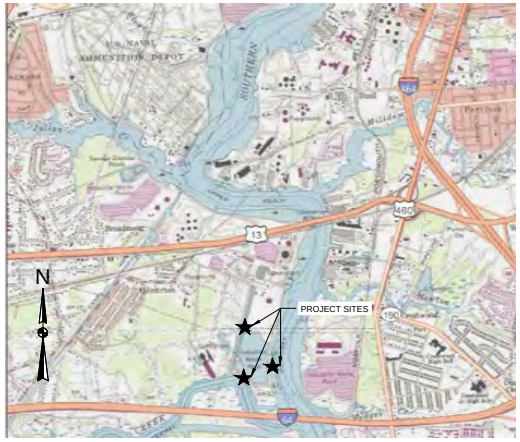
DOMINION RESOURCES SERVICES, INC.

PREPARED BY

SCHNABEL ENGINEERING

PROJECT NO. 13221003.00

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: ELIZABETH RIVER, DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: G-01
NUMBER OF SHEET: 1 OF 20
DATE: 07/16/2014

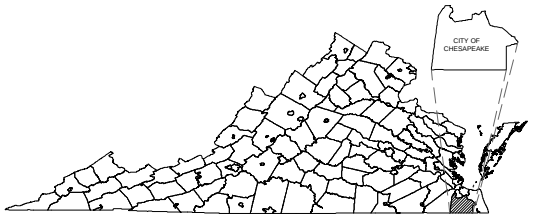


VICINITY MAP

0 4000' 8000'

LOCATION MAP

0 1200' 2400'



KEY MAP

Schnabel ENGINEERING

OVERALL EXISTING SITE PLAN & SHEET INDEX

SHEET INDEX

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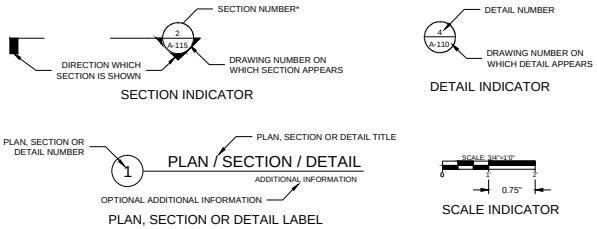
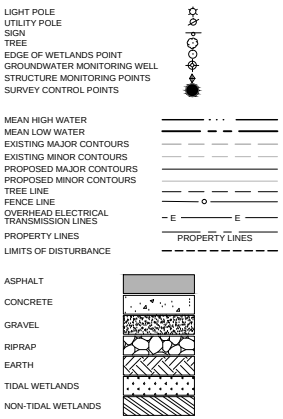
ABBREVIATIONS

BOT	BOTTOM
C.L.	CHAIN LINK
CTR	CENTER
CONC	CONCRETE
DET	DETAIL
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
EL	ELEVATION
EQ	EQUAL
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN	INCHES
LFT	LEFT
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MIN	MINIMUM
MW	GROUNDWATER MONITORING WELL
NTS	NOT TO SCALE
OC	ON CENTER
REF	REFERENCE
REQD	REQUIRED
RT	RIGHT
SHT	SHEET
SMP	SURVEY MONITORING POINT
SPEC	SPECIFICATION
STD	STANDARD
TEMP	TEMPORARY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT

DRAWING SYMBOLS LEGEND



FEATURES LEGEND



SURVEY CONTROL POINTS

NO.	NORTHING	EASTING	ELEVATION
201	163752.0464	2642931.8043	22.12
202	163209.0545	2643456.8590	21.29
203	163232.4690	2644104.0836	22.03
204	164731.3817	2643883.9243	44.60
205	166348.0817	2644451.5378	10.27
206	166920.5808	2644610.7088	19.25
207	167472.5729	2644600.0259	14.82
208	167619.6057	2644224.7044	24.69
209	167640.1725	2643622.5684	15.80
210	167344.3060	2643552.8110	15.00
211	167161.5501	2643737.9156	13.92
212	166960.1477	2643337.7265	12.48
213	166557.3507	2643167.5684	10.85
214	166260.4009	2643579.1908	19.08
215	165580.0991	2643381.9989	19.29
216	164903.5362	2643242.1276	22.40

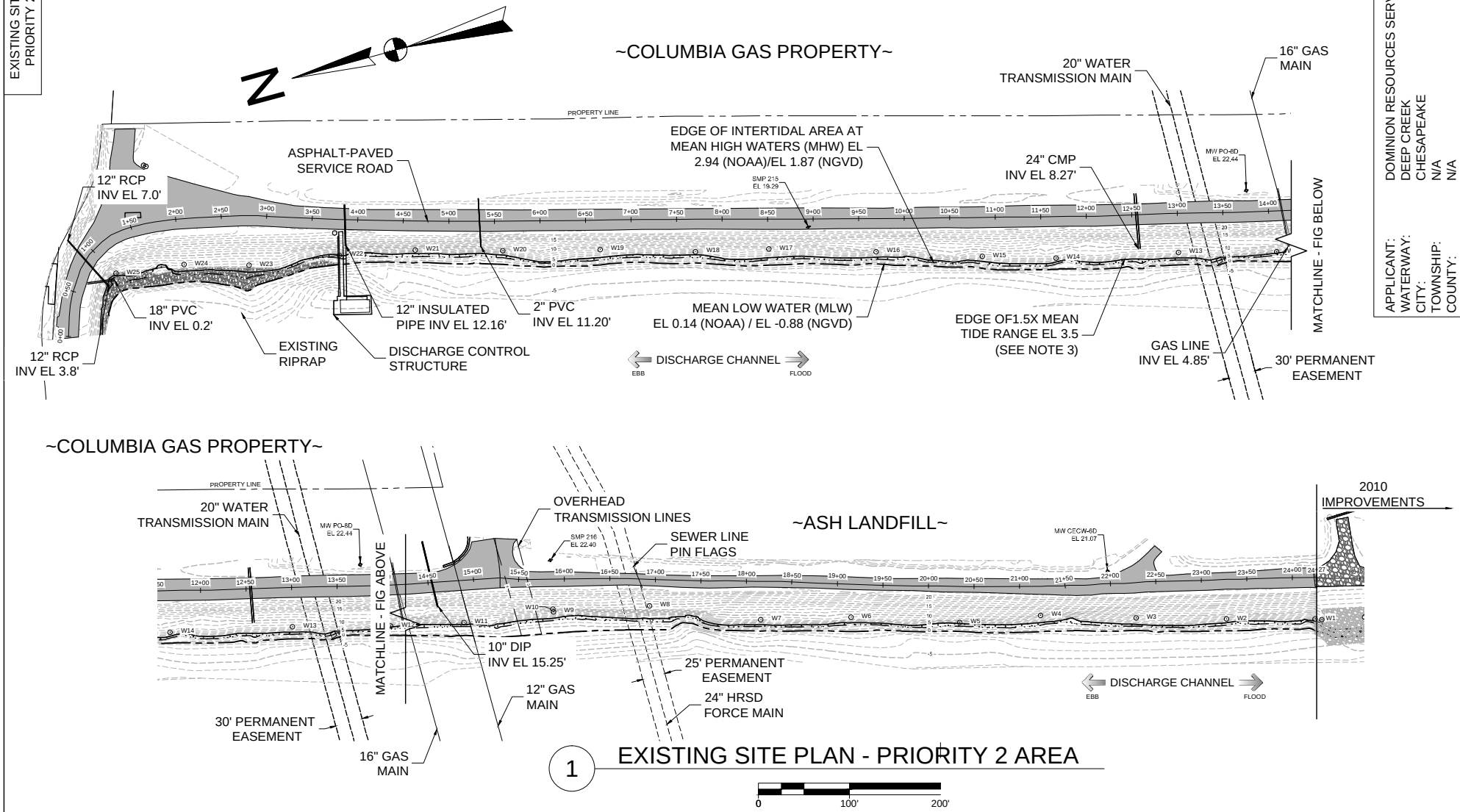
1 OVERALL EXISTING SITE PLAN

0 750' 1500'

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: ELIZABETH RIVER, DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: G-02
NUMBER OF SHEET: 2 OF 20
DATE: 07/16/2014

Schnabel ENGINEERING

EXISTING SITE PLAN - PRIORITY 2 AREA



1 EXISTING SITE PLAN - PRIORITY 2 AREA

0 100' 200'

DOMINION RESOURCES SERVICES, INC.

APPLICANT: DEEP CREEK
WATERWAY: CHESAPEAKE
CITY: N/A
TOWNSHIP: N/A
COUNTY: C-01
DRAWING NUMBER: 3 OF 20
NUMBER OF SHEET: 07/16/2014
DATE:

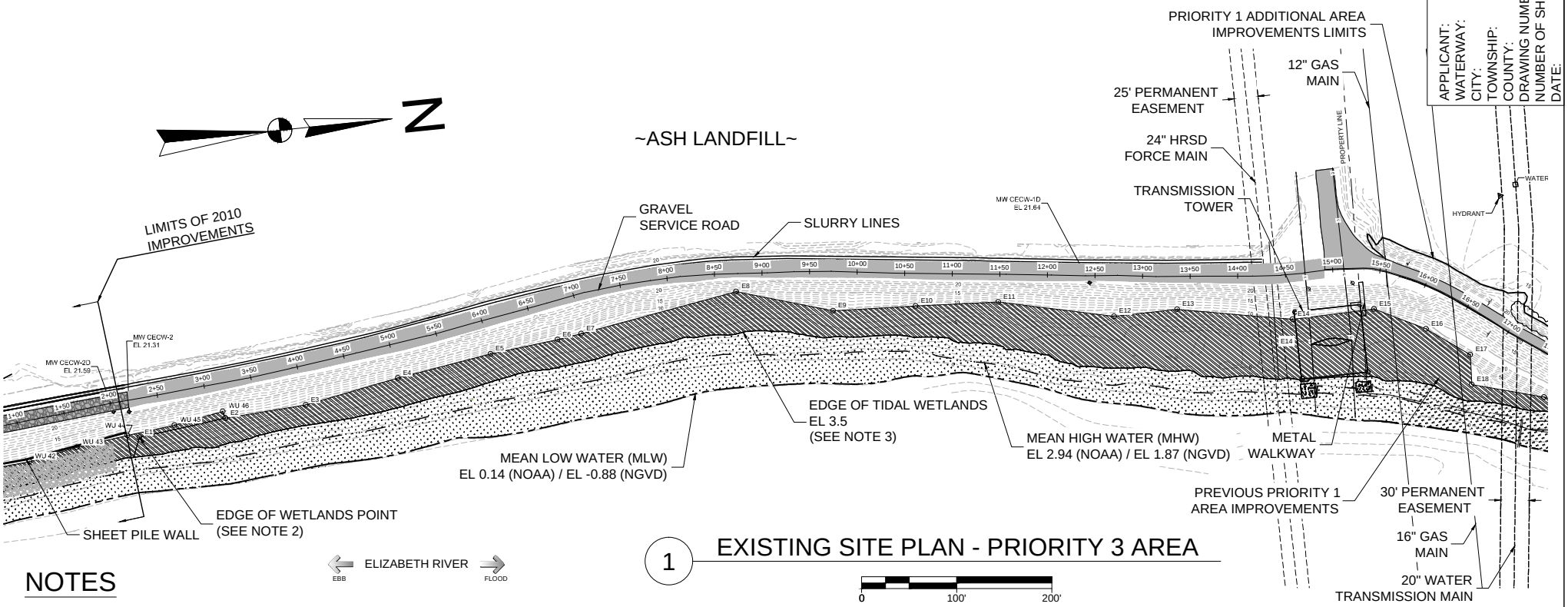
NOTES

1. SURVEY OF TOPOGRAPHY AND SITE FEATURES WAS PERFORMED BY D&M SURVEYORS OF TAPPAHANNOCK, VA IN MAY 2013. HORIZONTAL CONTROL IS NAD 1927 VIRGINIA STATE PLANE SOUTH AND VERTICAL CONTROL IS NGVD 1929.
2. EDGE OF INTERTIDAL AREA SHOWN ON SITE WERE FLAGGED BY MAP ENVIRONMENTAL, INC. OF VIRGINIA BEACH, VA ON SEPTEMBER 27 AND 28, 2011 AND SURVEYED BY D&M SURVEYORS IN OCTOBER 2011. NOTIFICATION OF PRELIMINARY JURISDICTIONAL DETERMINATION WAS ISSUED ON DECEMBER 7, 2011.
3. THE EDGE OF 1.5X MEAN TIDE RANGE WAS ESTABLISHED AT EL 3.5, WHICH IS 1.5 TIMES THE TIDAL RANGE ABOVE THE ELEVATION OF THE MEAN LOW WATER.
4. MEAN HIGH WATER AND MEAN LOW WATER SURFACE ELEVATIONS OBTAINED FROM NOAA (HTTP://NOAA.GOV)
5. UNDERGROUND UTILITIES WERE NOT SURVEYED (TYP).
6. TREE LINES INDICATE AREAS OF RELATIVELY DENSE TREE COVER. WOODY VEGETATION, BRUSH, AND SPARSE TREES ARE PRESENT ALONG THE MAJORITY OF THE CHANNEL SIDE EMBANKMENT SLOPE.

Schnabel ENGINEERING

EXISTING SITE PLAN - PRIORITY 3 AREA

DOMINION RESOURCES SERVICES, INC.
APPLICANT: ELIZABETH RIVER
WATERWAY: CHESAPEAKE
CITY: N/A
TOWNSHIP: N/A
COUNTY: C-02
DRAWING NUMBER: 4 OF 20
NUMBER OF SHEET: 07/16/2014
DATE:



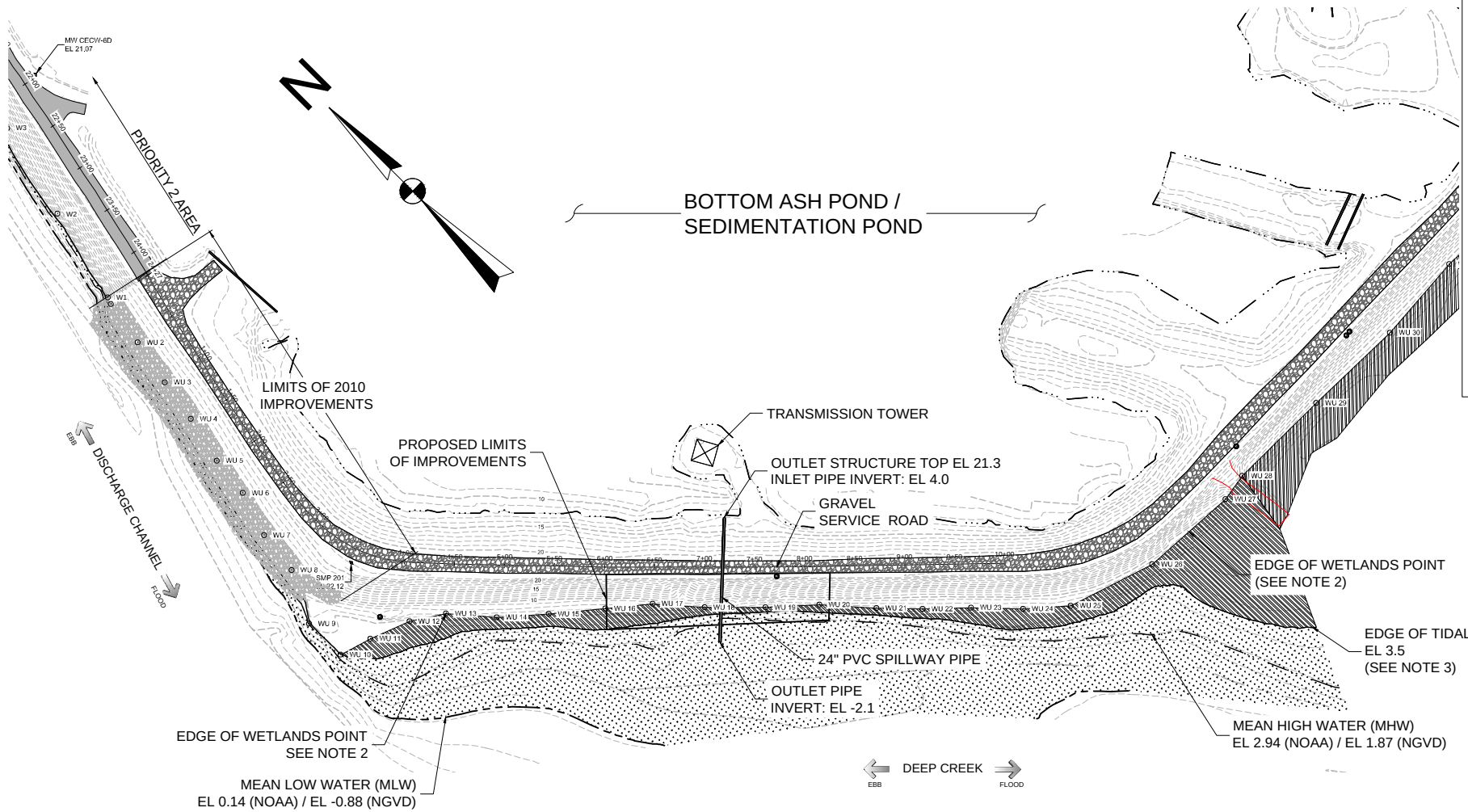
1 EXISTING SITE PLAN - PRIORITY 3 AREA

NOTES

1. SURVEY OF TOPOGRAPHY AND SITE FEATURES WAS PERFORMED BY D&M SURVEYORS OF TAPPAHANNOCK, VA IN MAY 2013. HORIZONTAL CONTROL IS NAD 1927 VIRGINIA STATE PLANE SOUTH AND VERTICAL CONTROL IS NGVD 1929.
2. WETLANDS SHOWN ON SITE WERE FLAGGED BY MAP ENVIRONMENTAL, INC. OF VIRGINIA BEACH, VA ON SEPTEMBER 27 AND 28, 2011 AND SURVEYED BY D&M SURVEYORS IN OCTOBER 2011. NOTIFICATION OF PRELIMINARY JURISDICTIONAL DETERMINATION WAS ISSUED ON DECEMBER 7, 2011.
3. THE EDGE OF TIDAL WETLANDS WAS ESTABLISHED AT EL 3.5 (NGVD), WHICH IS 1.5 TIMES THE TIDAL RANGE ABOVE THE ELEVATION OF THE MEAN LOW WATER.
4. MEAN HIGH WATER AND MEAN LOW WATER SURFACE ELEVATIONS OBTAINED FROM NOAA (HTTP://NOAA.GOV)
5. UNDERGROUND UTILITIES WERE NOT SURVEYED (TYP).
6. TREE LINES INDICATE AREAS OF RELATIVELY DENSE TREE COVER. WOODY VEGETATION, BRUSH, AND SPARSE TREES ARE PRESENT ALONG THE MAJORITY OF THE RIVER SIDE EMBANKMENT SLOPE.

Schnabel ENGINEERING

EXISTING SITE PLAN - SOUTH DIKE AREA



1 EXISTING SITE PLAN - SOUTH DIKE

0 100' 200'

DOMINION RESOURCES SERVICES, INC.

APPLICANT: DEEP CREEK
WATERWAY: CHESAPEAKE
CITY: N/A
TOWNSHIP: N/A
COUNTY: C-03
DRAWING NUMBER: 5 OF 20
NUMBER OF SHEET: 07/16/2014
DATE:

NOTES

1. SURVEY OF TOPOGRAPHY AND SITE FEATURES OF THE SOUTH DIKE AREA WAS PERFORMED BY D&M SURVEYORS OF TAPPAHANNOCK, VA IN AUGUST 2010. HORIZONTAL CONTROL IS NAD 1927 VIRGINIA STATE PLANE SOUTH AND VERTICAL CONTROL IS NGVD 1929.

2. WETLANDS SHOWN ON SOUTH DIKE SITE WERE FLAGGED BY MAP ENVIRONMENTAL, INC. OF VIRGINIA BEACH, VA ON SEPTEMBER 17, 2010 AND SURVEYED BY D&M SURVEYORS IN OCTOBER 2010. NOTIFICATION OF PRELIMINARY JURISDICTIONAL DETERMINATION WAS ISSUED ON OCTOBER 15, 2010.

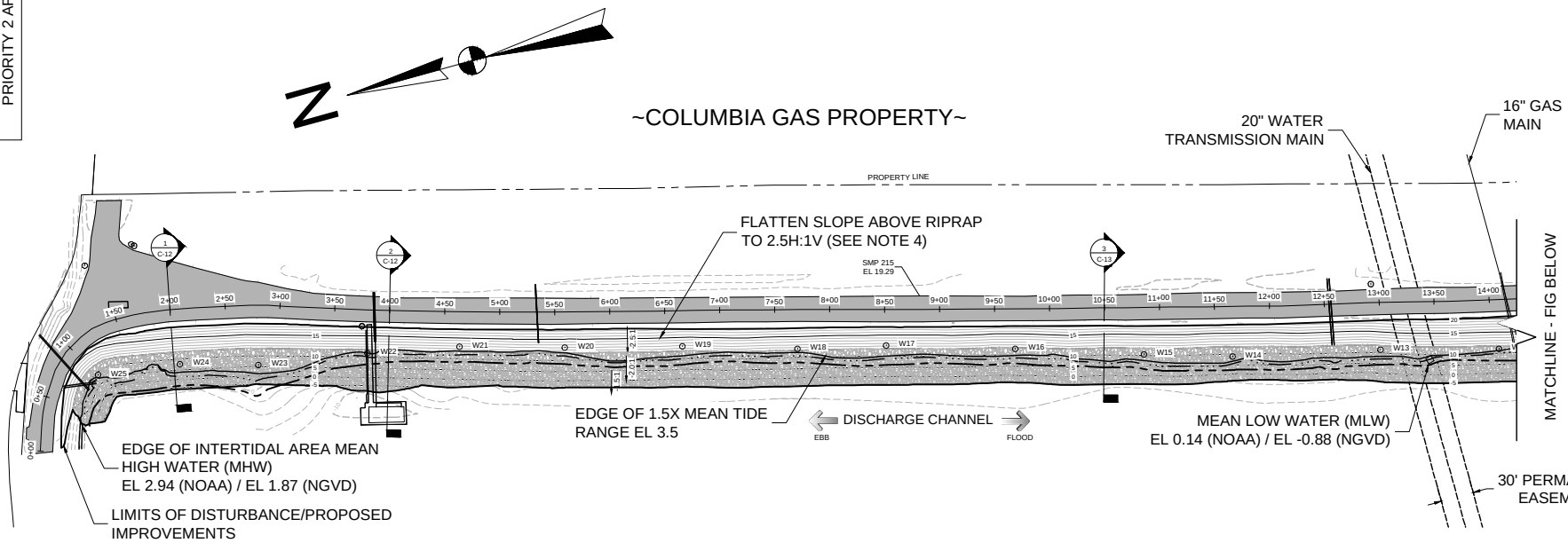
3. THE EDGE OF TIDAL WETLANDS WAS ESTABLISHED AT EL 3.5 (NGVD), WHICH IS 1.5 TIMES THE TIDAL RANGE ABOVE THE ELEVATION OF THE MEAN LOW WATER.

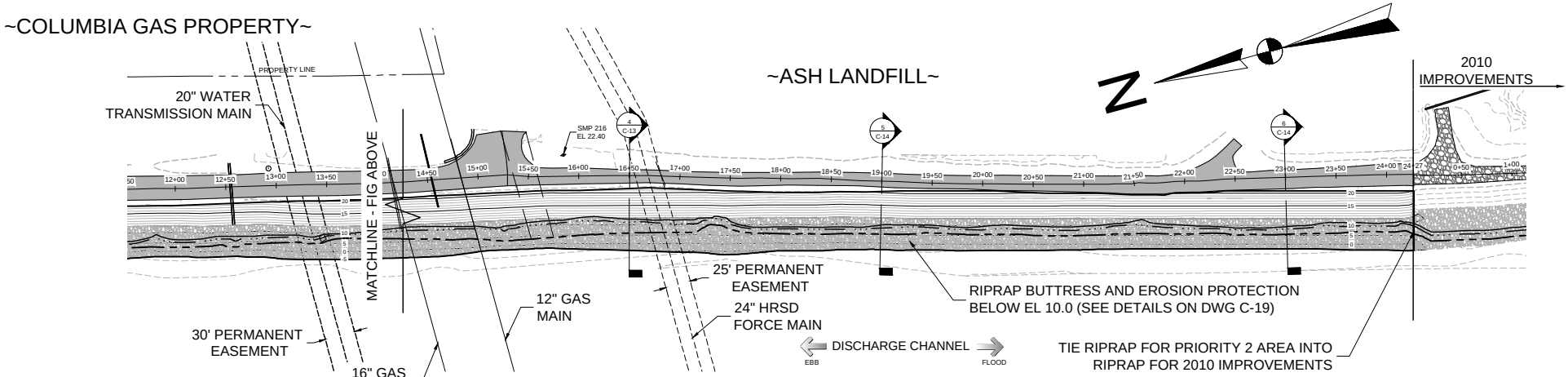
4. MEAN HIGH WATER AND MEAN LOW WATER SURFACE ELEVATIONS OBTAINED FROM NOAA (HTTP://NOAA.GOV)

5. UNDERGROUND UTILITIES WERE NOT SURVEYED (TYP).

Schnabel ENGINEERING

PROPOSED SITE PLAN - PRIORITY 2 AREA





1 PROPOSED SITE PLAN - PRIORITY 2 AREA

0 100' 200'

NOTES

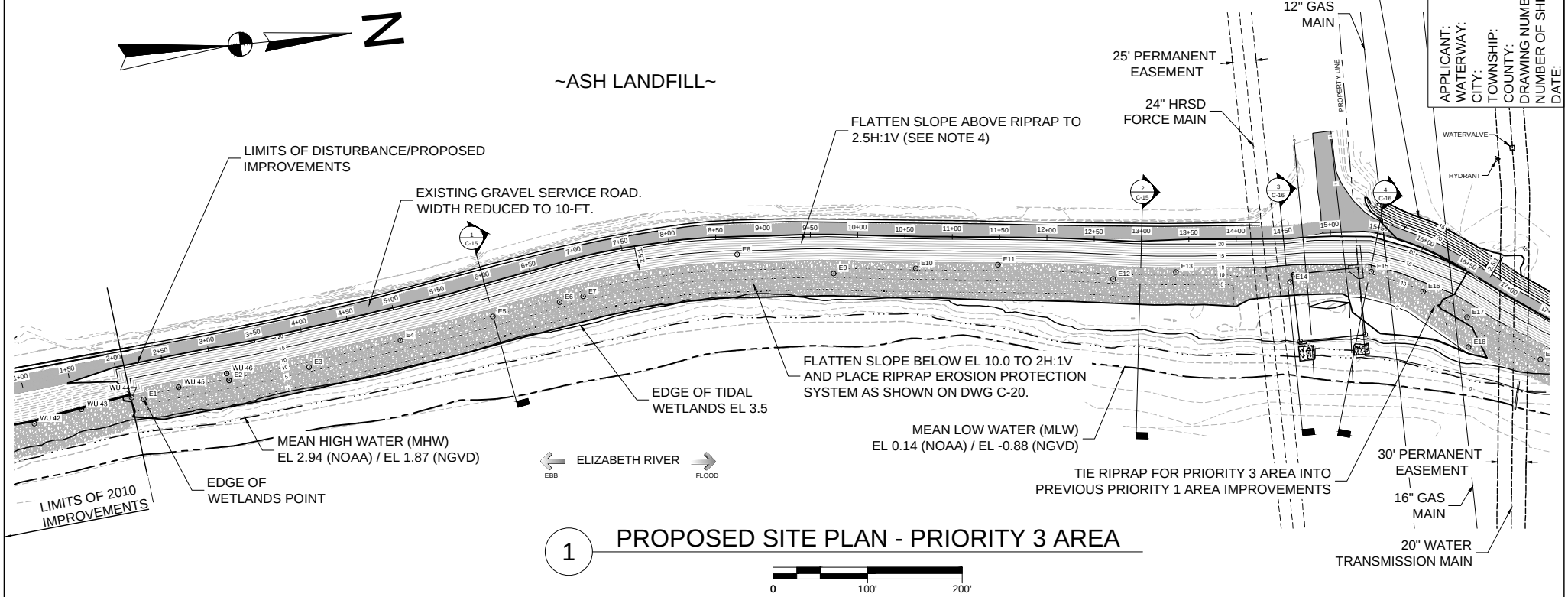
1. NON-VEGETATED INTERTIDAL AREA IMPACTS: 15,910 SF. VEGETATED TIDAL IMPACTS BETWEEN MHW AND 1.5X MEAN TIDE RANGE: 1,600 SF.
2. SUBAQUEOUS IMPACTS BELOW MLW = 36,800 SF.
3. CLEAR AND GRUB EXISTING VEGETATION AND STRIP TOPSOIL FROM SLOPES PRIOR TO RE-GRADING. STOCKPILE TOPSOIL ON-SITE FOR RE-USE ON THE RE-GRADED EMBANKMENT SLOPES. TEMPORARY STOCKPILE(S) SHOULD BE LOCATED IN THE AREA SHOWN ON DWG G-02.
4. GAS LINES TO BE ENCASED IN CONCRETE.

APPLICANT:	DOMINION RESOURCES SERVICES, INC.
WATERWAY:	DEEP CREEK
CITY:	CHESAPEAKE
TOWNSHIP:	N/A
COUNTY:	N/A
DRAWING NUMBER:	C-04
NUMBER OF SHEET:	6 OF 20
DATE:	07/16/2014

Schnabel ENGINEERING

PROPOSED SITE PLAN - PRIORITY 3 AREA

DOMINION RESOURCES SERVICES, INC.
APPLICANT: ELIZABETH RIVER
WATERWAY: CHESAPEAKE
CITY: N/A
TOWNSHIP: N/A
COUNTY: C-05
DRAWING NUMBER: 7 OF 20
NUMBER OF SHEET: 07/16/2014
DATE:



1 PROPOSED SITE PLAN - PRIORITY 3 AREA

NOTES

1. THE ACREAGE OF IMPACTED WETLANDS IS 1.05 ACRES. SEE NOTE 2 FOR A MORE DETAILED BREAKDOWN OF THE WETLANDS IMPACTS.
2. NON-TIDAL WETLANDS IMPACTS: 44,800 SF. TIDAL WETLANDS IMPACTS: 840 SF.
3. SUBAQUEOUS IMPACTS BELOW MLW = 0 SF.
4. CLEAR AND GRUB EXISTING VEGETATION AND STRIP TOPSOIL FROM SLOPES PRIOR TO RE-GRADING. STOCKPILE TOPSOIL ON-SITE FOR RE-USE ON THE RE-GRADED EMBANKMENT SLOPES. TEMPORARY STOCKPILE(S) SHOULD BE LOCATED IN THE AREA SHOWN ON DWG G-02.

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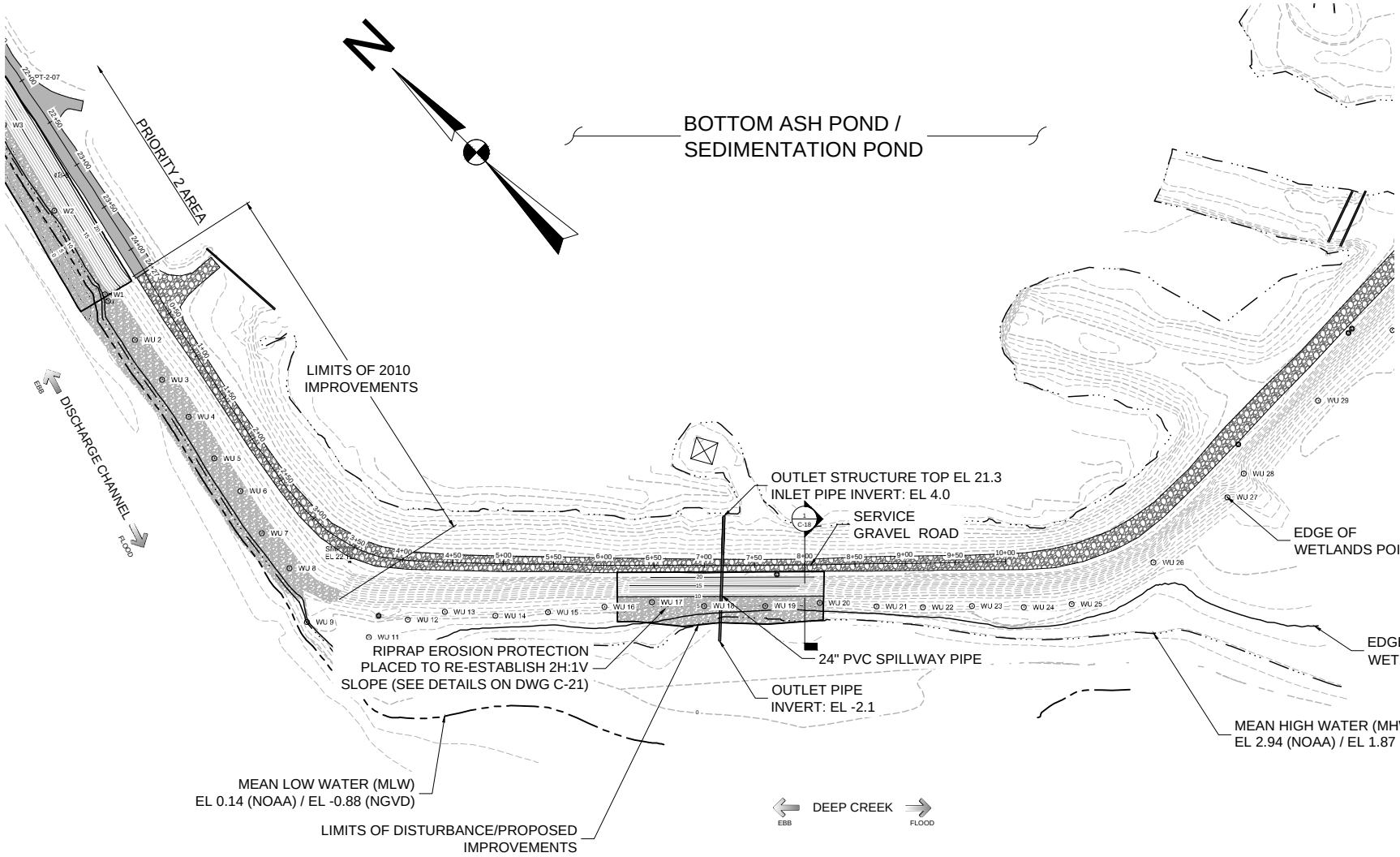
PROPOSED SITE PLAN - SOUTH DIKE AREA



1 PROPOSED SITE PLAN - SOUTH DIKE

0 100' 200'

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-06
NUMBER OF SHEET: 8 OF 20
DATE: 07/16/2014

Schnabel ENGINEERING

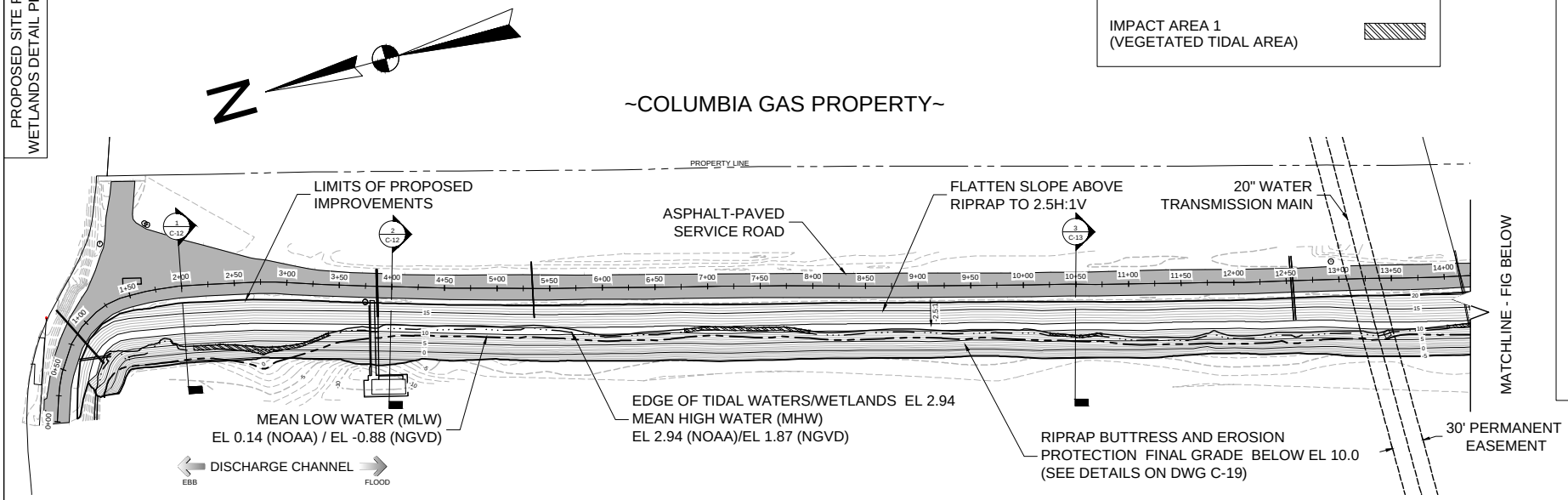
NOTES

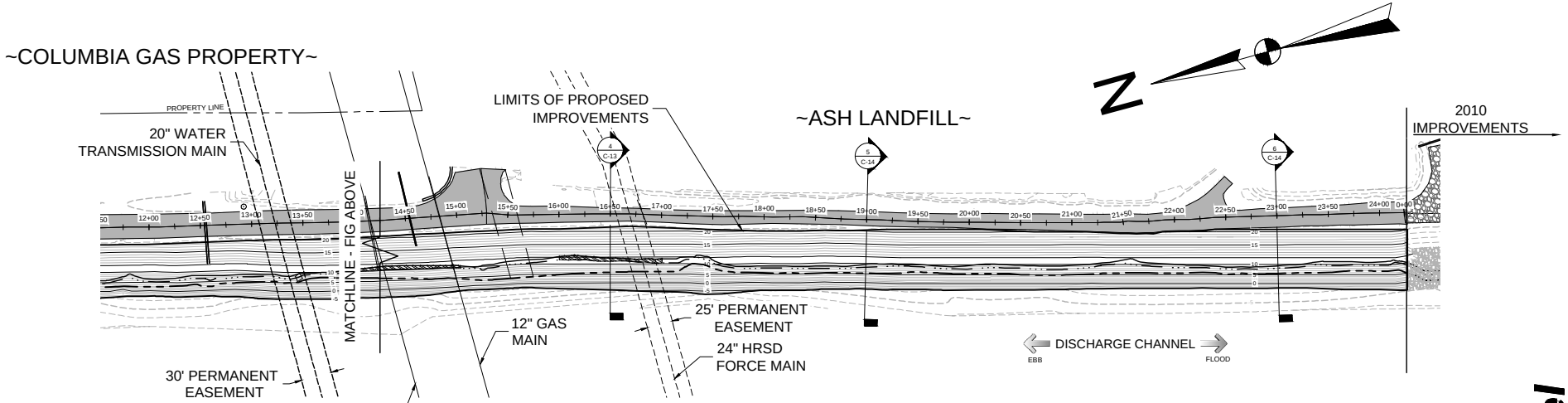
1. THE ACREAGE OF WETLANDS IMPACTED IS 0.09 ACRES. SEE NOTE 2 FOR A MORE DETAILED BREAKDOWN OF THE WETLANDS IMPACTS.
2. NON-TIDAL WETLANDS IMPACTS: 2,050 SF. TIDAL WETLANDS IMPACTS: 1,750 SF.
3. SUBAQUEOUS IMPACTS BELOW MLW = 0 SF.

PROPOSED SITE PLAN - WETLANDS DETAIL PRIORITY 2

LEGEND

IMPACT AREA 1 (VEGETATED TIDAL AREA)





1 PROPOSED SITE PLAN - WETLANDS DETAIL - PRIORITY 2 AREA

0 100' 200'

DOMINION RESOURCES SERVICES, INC.

APPLICANT: DEEP CREEK
WATERWAY: CHESAPEAKE
CITY: N/A
TOWNSHIP: N/A
COUNTY: C-07
DRAWING NUMBER: 9 OF 20
NUMBER OF SHEET: 07/16/2014
DATE:

Schnabel ENGINEERING

NOTES

1. NON-VEGETATED INTERTIDAL IMPACTS: 15,910 SF. VEGETATED TIDAL IMPACTS BETWEEN MHW & 1.5X MEAN TIDE RANGE: 1,600 SF.
2. SUBAQUEOUS IMPACTS BELOW MLW = 36,800 SF.

PROPOSED SITE PLAN - WETLANDS DETAIL PRIORITY 3

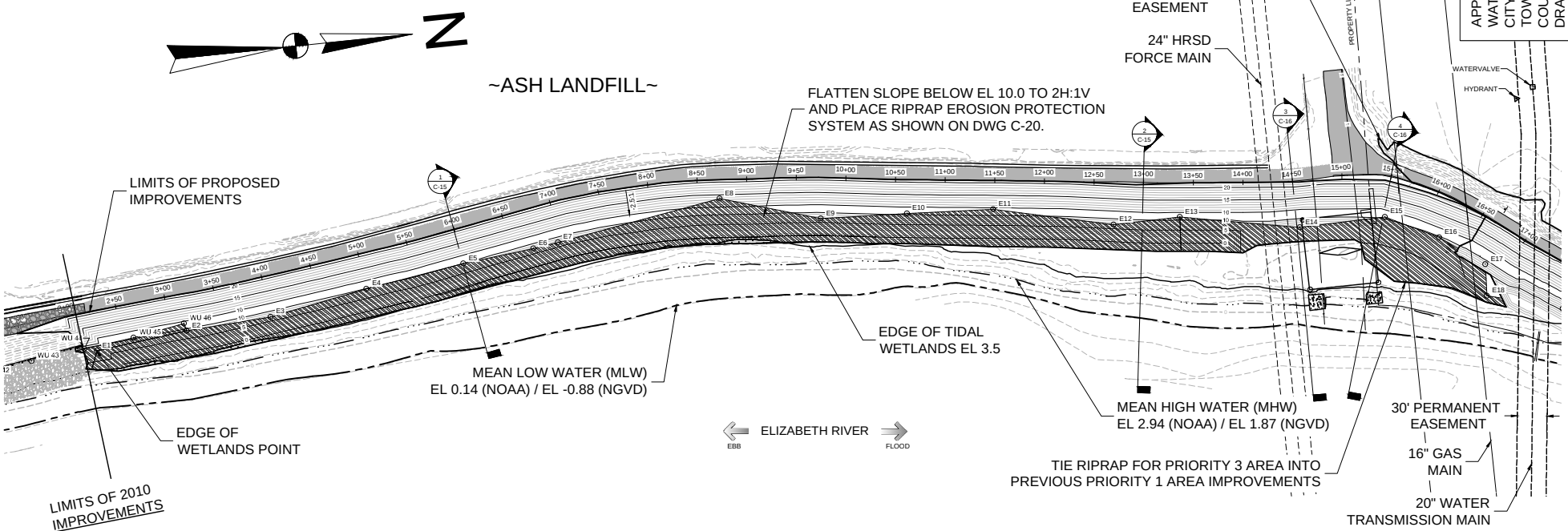
DOMINION RESOURCES SERVICES, INC.
ELIZABETH RIVER
CHESAPEAKE
N/A
N/A
C-08
10 OF 20
07/16/2014

APPLICANT:
WATERWAY:
CITY:
TOWNSHIP:
COUNTY:
DRAWING NUMBER:
NUMBER OF SHEET:
DATE:

LEGEND

IMPACT AREA 1 (NON-TIDAL WETLANDS)

IMPACT AREA 2 (TIDAL WETLANDS)



1 PROPOSED SITE PLAN - WETLANDS DETAIL - PRIORITY 3 AREA

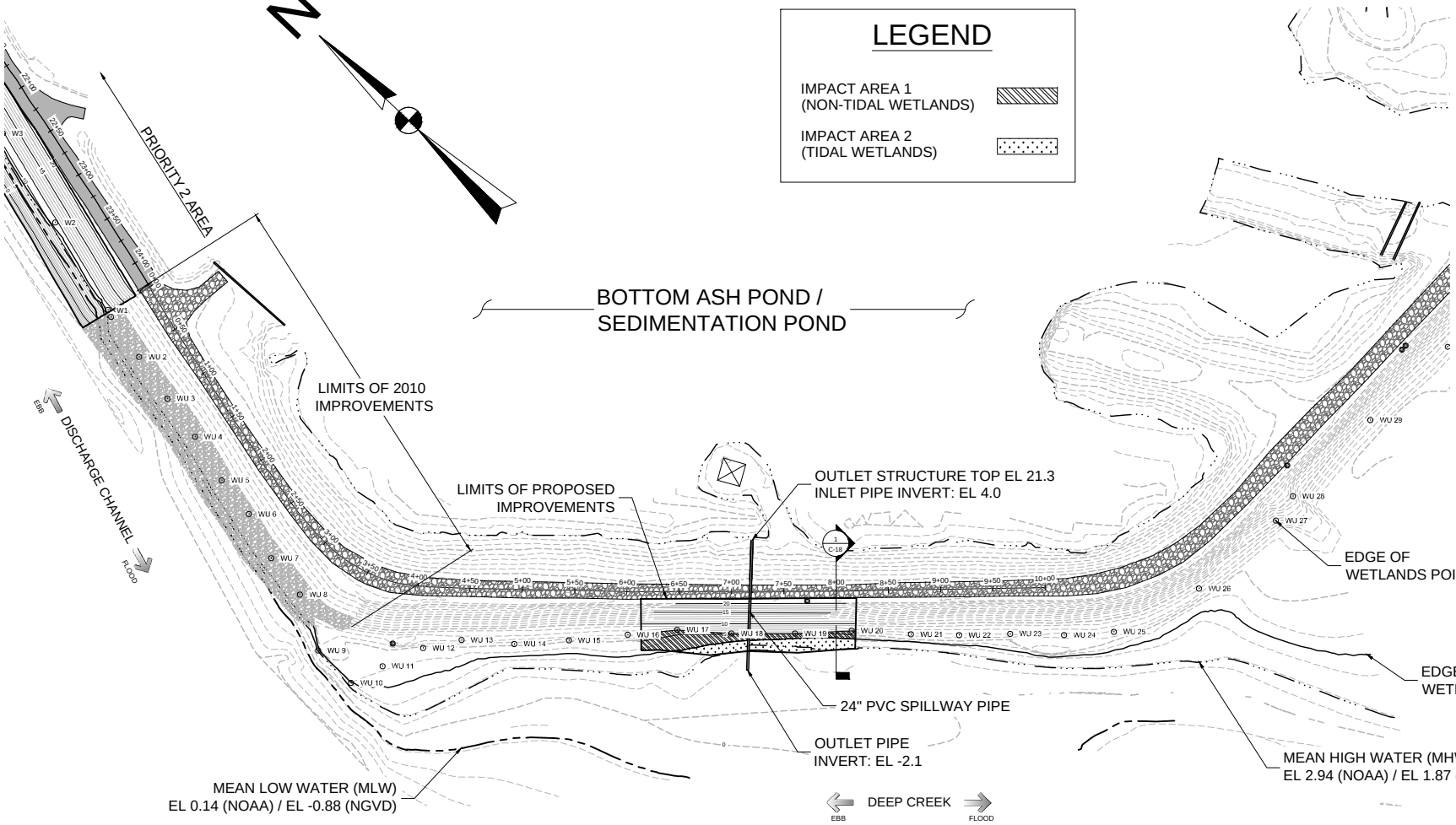
0 100' 200'

NOTES

1. THE ACREAGE OF WETLANDS IMPACTED IS 1.05 ACRES. SEE NOTE 2 FOR A MORE DETAILED BREAKDOWN OF THE WETLANDS IMPACTS.
2. NON-TIDAL WETLANDS IMPACTS: 44,800 SF. TIDAL WETLANDS IMPACTS: 840 SF.
3. SUBAQUEOUS IMPACTS BELOW MLW = 0 SF

Schnabel ENGINEERING

PROPOSED SITE PLAN - WETLANDS DETAIL SOUTH DIKE



1 PROPOSED SITE PLAN - WETLANDS DETAIL - SOUTH DIKE

0 100' 200'

DOMINION RESOURCES SERVICES, INC.

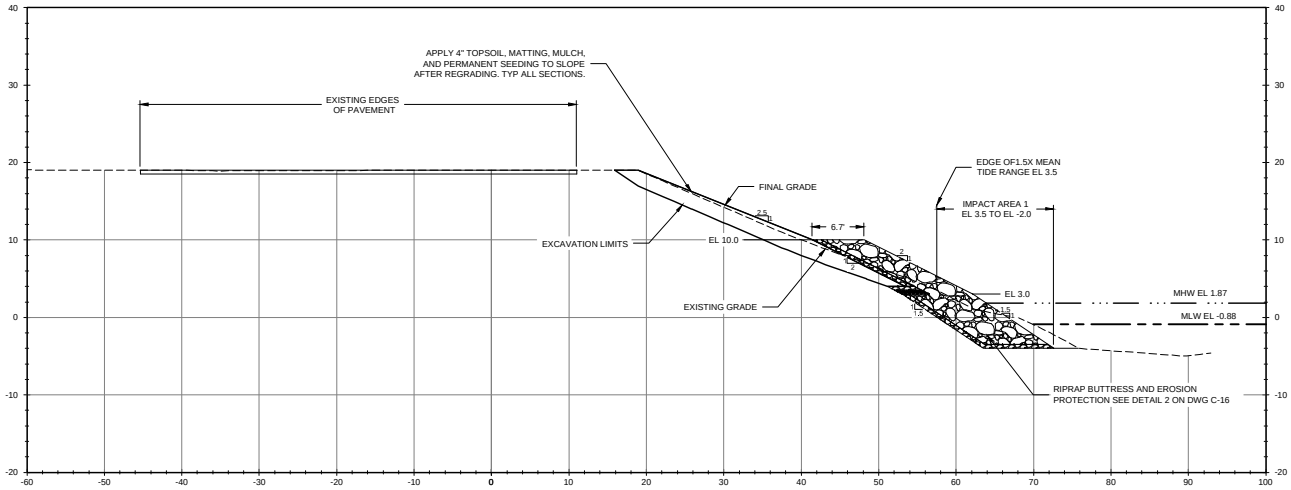
APPLICANT: DEEP CREEK
WATERWAY: CHESAPEAKE
CITY:
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-09
NUMBER OF SHEET: 11 OF 20
DATE: 07/16/2014

Schnabel ENGINEERING

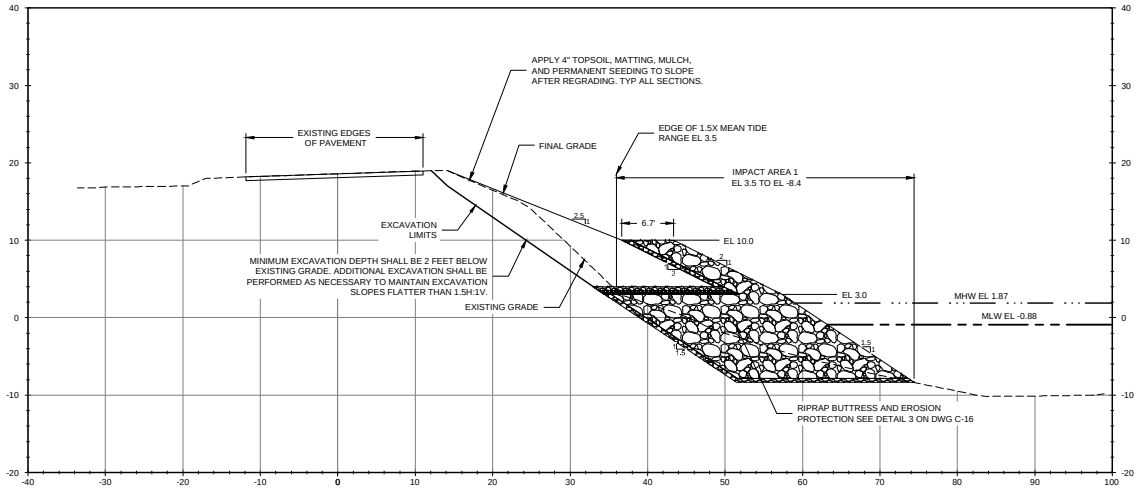
NOTES

1. THE ACREAGE OF WETLANDS IMPACTED IS 0.09 ACRES. SEE NOTE 2 FOR A MORE DETAILED BREAKDOWN OF THE WETLANDS IMPACTS.
2. NON-TIDAL WETLANDS IMPACTS: 2,050 SF. TIDAL WETLANDS IMPACTS: 1,750 SF.
3. SUBAQUEOUS IMPACTS BELOW MLW = 0 SF.

SECTION VIEWS - PRIORITY 2 AREA



1 C-05 SECTION VIEW STA 2+00



2 C-05 SECTION VIEW STA 4+00

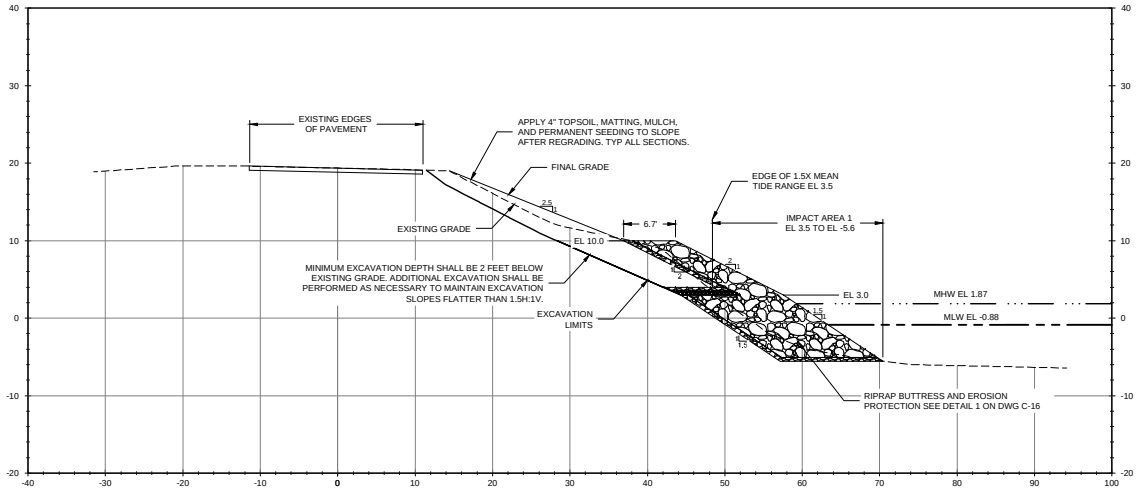
NOTES

1. THE ELEVATION OF THE SURVEYED WETLANDS VARIES ALONG THE LENGTH OF THE SLOPE.

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-10
NUMBER OF SHEET: 12 OF 20
DATE: 07/16/2014

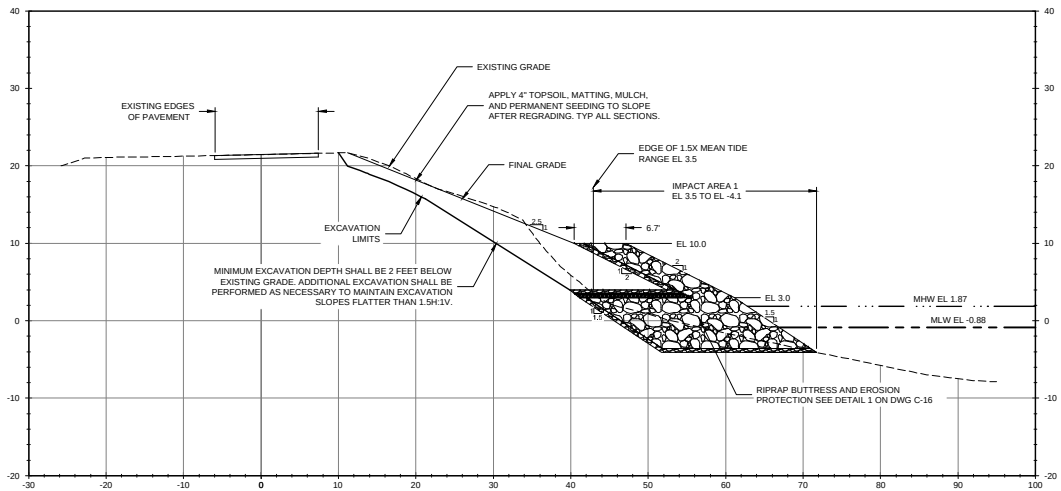
Schnabel ENGINEERING

SECTION VIEWS - PRIORITY 2 AREA



3 C-05 SECTION VIEW STA 10+50

0 10' 20'



4 C-05 SECTION VIEW STA 16+50

0 10' 20'

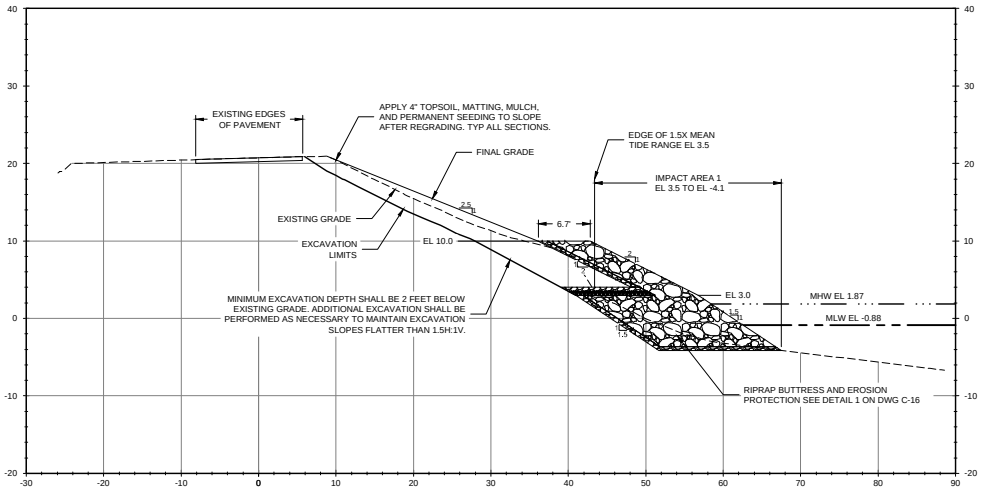
NOTES

1. THE ELEVATION OF THE SURVEYED WETLANDS VARIES ALONG THE LENGTH OF THE SLOPE.

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-11
NUMBER OF SHEET: 13 OF 20
DATE: 07/16/2014

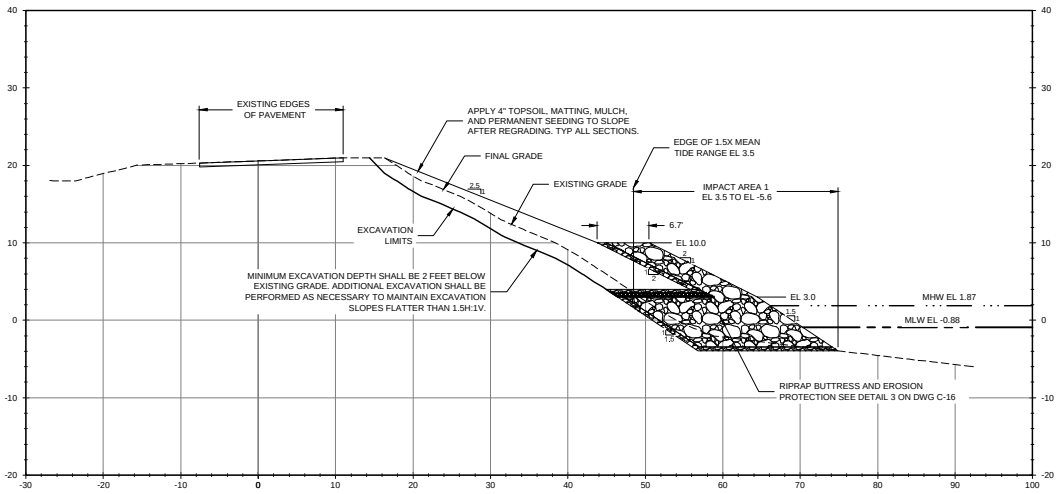
Schnabel ENGINEERING

SECTION VIEWS - PRIORITY 2 AREA



5 C-05 SECTION VIEW STA 19+00

0 10' 20'



6 C-05 SECTION VIEW STA 23+00

0 10' 20'

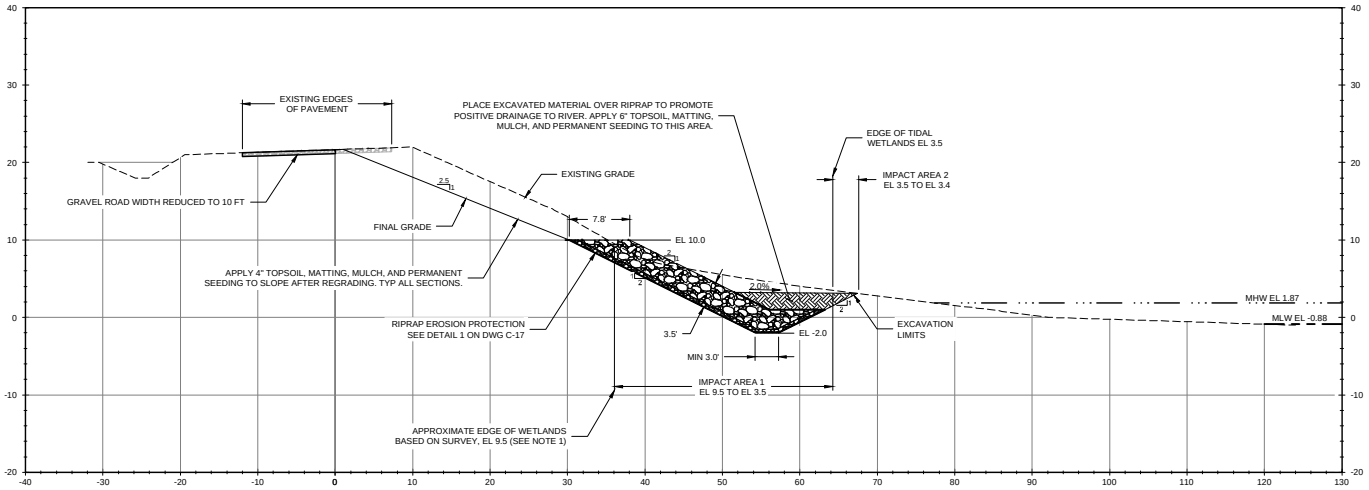
NOTES

1. THE ELEVATION OF THE SURVEYED WETLANDS VARIES ALONG THE LENGTH OF THE SLOPE.

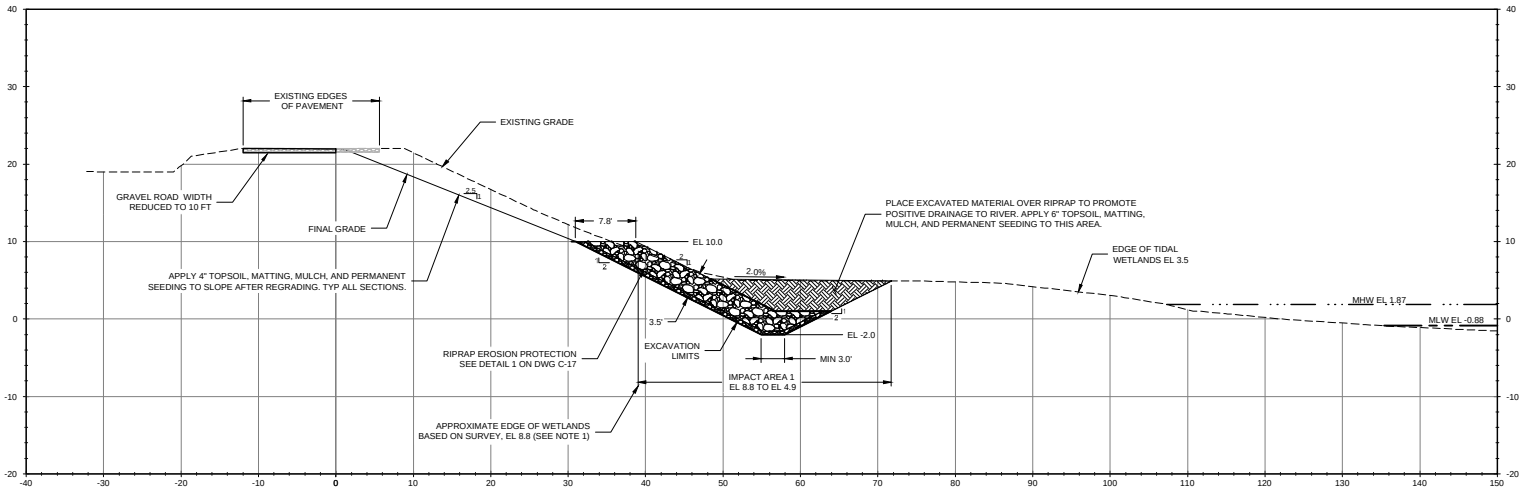
APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-12
NUMBER OF SHEET: 14 OF 20
DATE: 07/16/2014

Schnabel ENGINEERING

SECTION VIEWS - PRIORITY 3 AREA



1 C-06 SECTION VIEW STA 6+00



2 C-06 SECTION VIEW STA 13+00

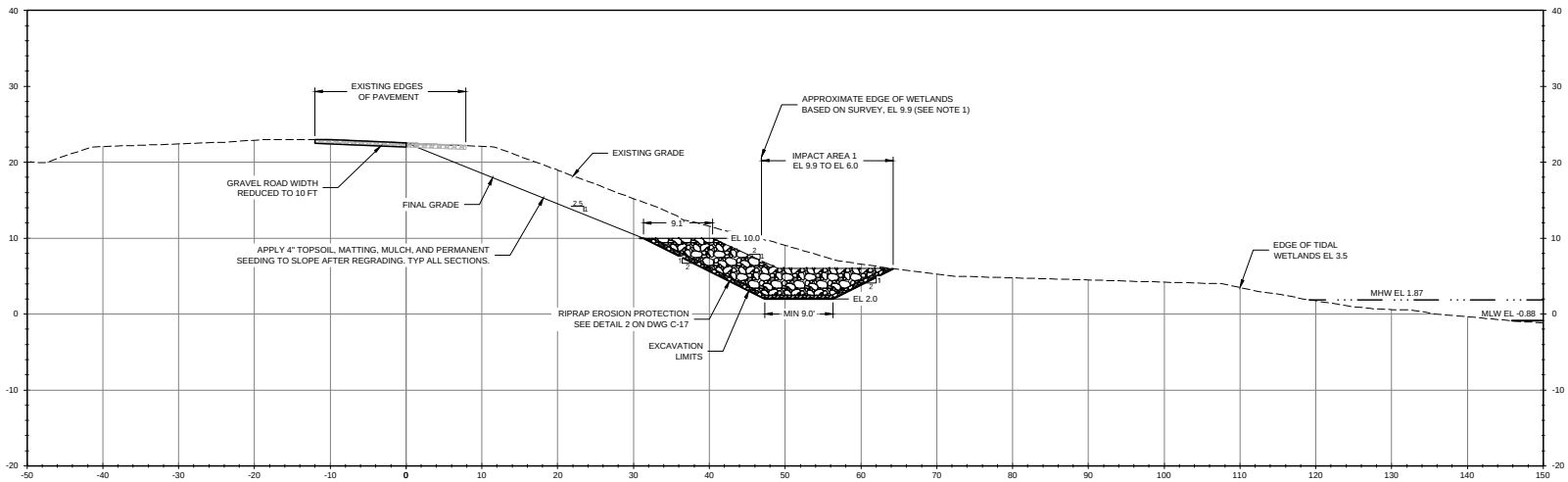
NOTES

1. THE ELEVATION OF THE SURVEYED WETLANDS VARIES ALONG THE LENGTH OF THE SLOPE.
2. MEAN LOW WATER AND MEAN HIGH WATER ELEVATIONS ARE SHOWN IN SECTION VIEW FOR REFERENCE ONLY AND ARE NOT IMPACTED BY THE PROPOSED IMPROVEMENTS.

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: ELIZABETH RIVER
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-13
NUMBER OF SHEET: 15 OF 20
DATE: 07/16/2014

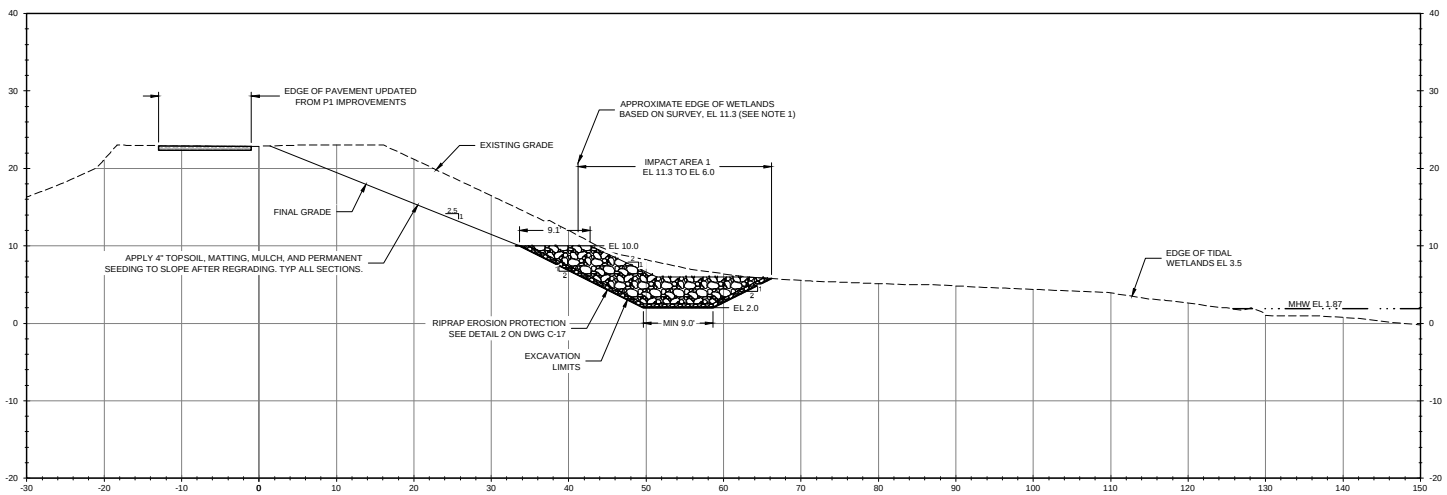
Schnabel ENGINEERING

SECTION VIEWS - PRIORITY 3 AREA



3 C-06 SECTION VIEW STA 14+50

0 10' 20'



4 C-06 SECTION VIEW STA 15+50

0 10' 20'

NOTES

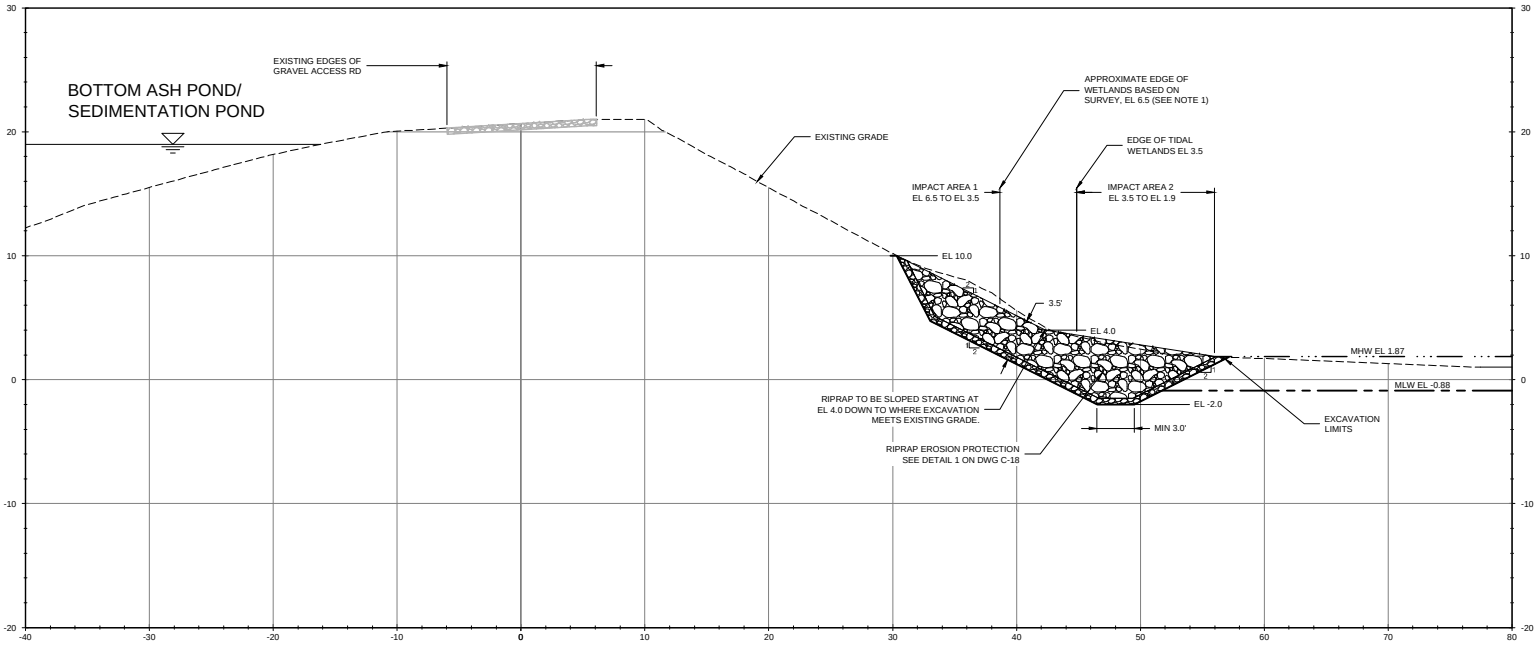
1. THE ELEVATION OF THE SURVEYED WETLANDS VARIES ALONG THE LENGTH OF THE SLOPE.
2. MEAN LOW WATER AND MEAN HIGH WATER ELEVATIONS ARE SHOWN IN SECTION VIEW FOR REFERENCE ONLY AND ARE NOT IMPACTED BY THE PROPOSED IMPROVEMENTS.

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: ELIZABETH RIVER
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-14
NUMBER OF SHEET: 16 OF 20
DATE: 07/16/2014

Schnabel ENGINEERING

SECTION VIEWS - SOUTH DIKE AREA

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-15
NUMBER OF SHEET: 17 OF 20
DATE: 07/16/2014



1 C-08 SECTION VIEW STA 8+00 (TYP)

0 10' 20'

NOTES

1. THE ELEVATION OF THE SURVEYED WETLANDS VARIES ALONG THE LENGTH OF THE SLOPE.

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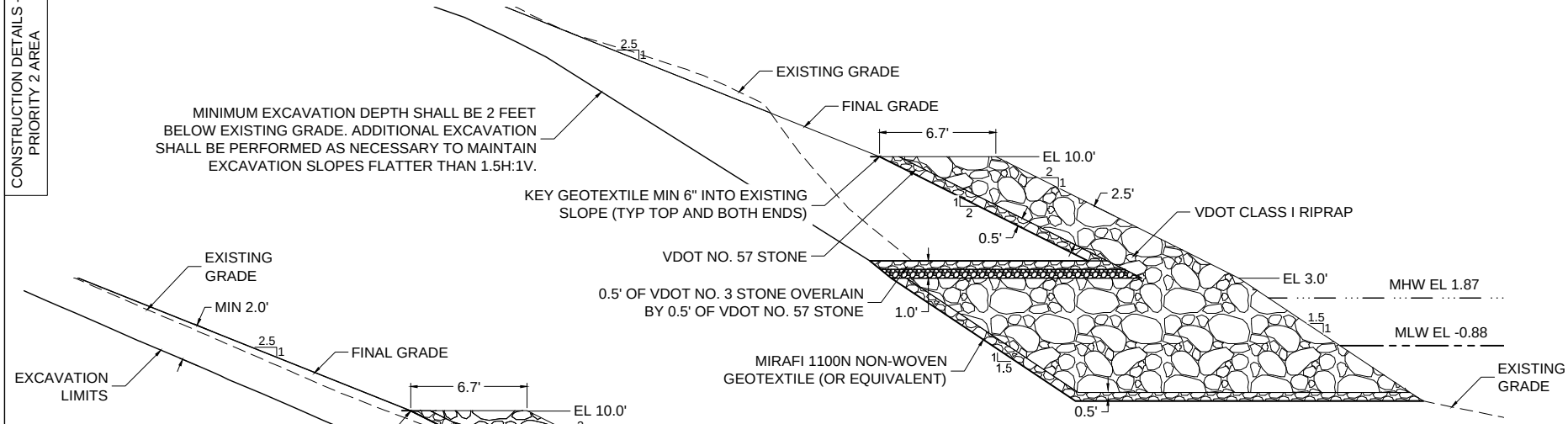
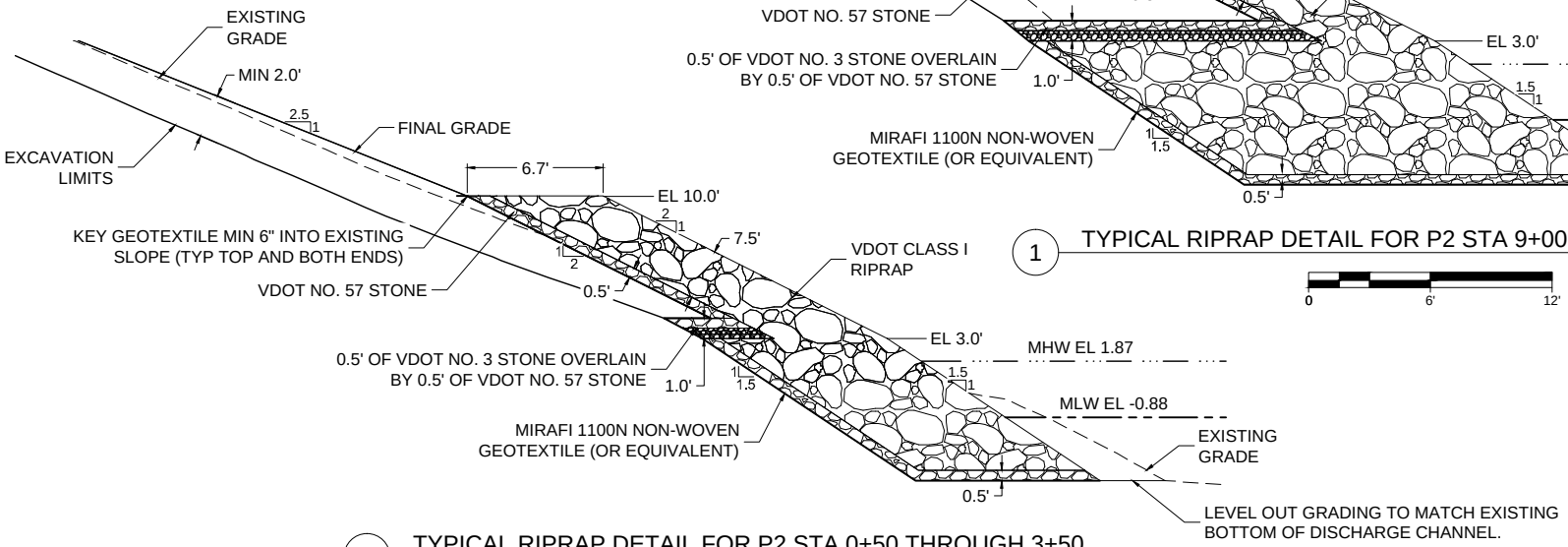
CONSTRUCTION DETAILS - PRIORITY 2 AREA



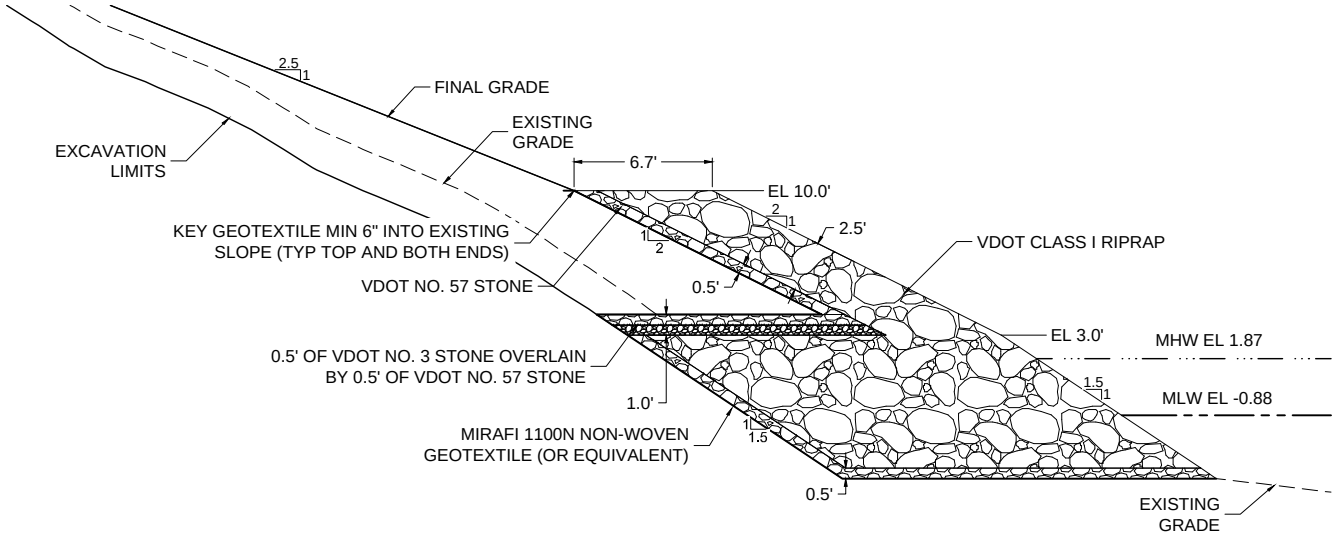
1 TYPICAL RIPRAP DETAIL FOR P2 STA 9+00 THROUGH 19+00

0 6' 12'



2 TYPICAL RIPRAP DETAIL FOR P2 STA 0+50 THROUGH 3+50

0 6' 12'



3 TYPICAL RIPRAP DETAIL FOR P2 STA 3+50 THROUGH 9+00 AND 19+00 THROUGH 24+00

0 6' 12'

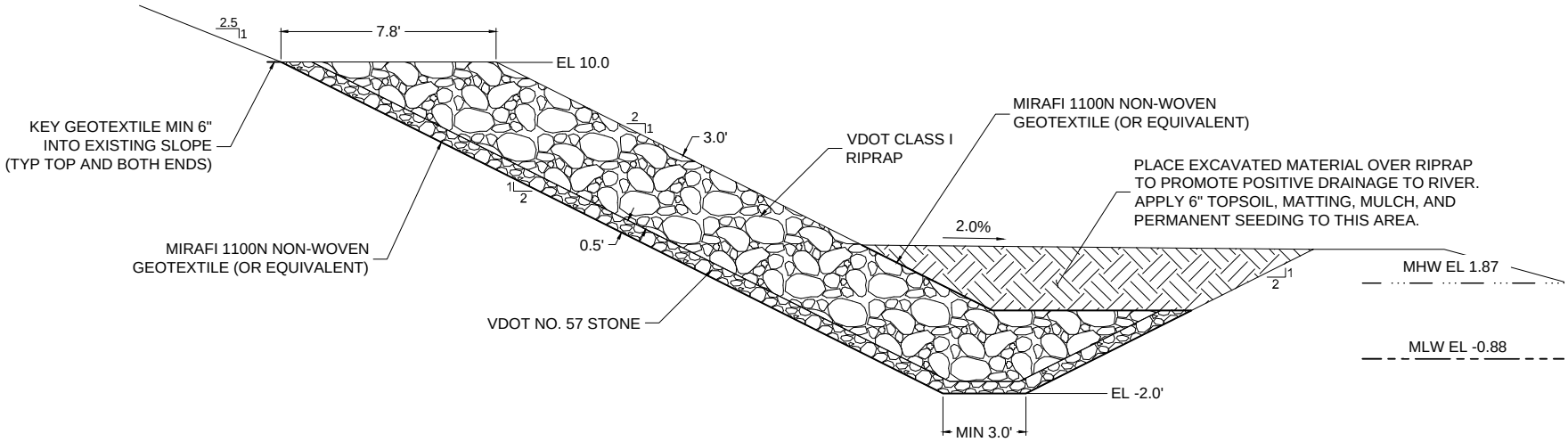
NOTE:

1. MEAN LOW WATER AND MEAN HIGH WATER ELEVATIONS ARE SHOWN IN SECTION VIEW FOR REFERENCE ONLY. IMPACTS BELOW MHW AND MLW WILL VARY ALONG THE LENGTH OF THE SLOPE.

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-16
NUMBER OF SHEET: 18 OF 20
DATE: 07/16/2014

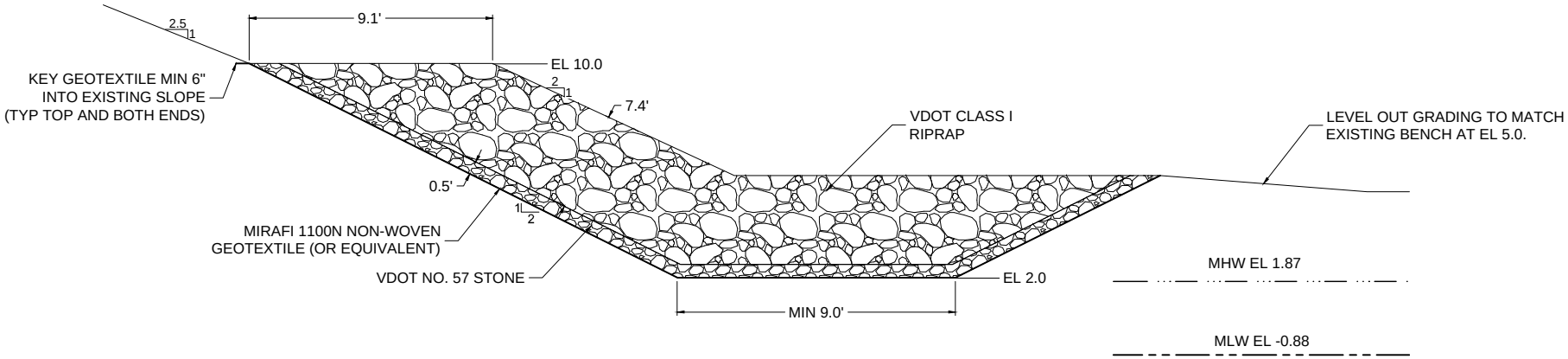
Schnabel ENGINEERING

CONSTRUCTION DETAILS - PRIORITY 3 AREA



1 TYPICAL RIPRAP DETAIL FOR P3 STA 0+00 TO 14+00

0 4' 8'



2 TYPICAL RIPRAP DETAIL FOR P3 STA 14+00 TO 17+00

0 4' 8'

NOTE:

1. MEAN LOW WATER AND MEAN HIGH WATER ELEVATIONS ARE SHOWN IN SECTION VIEW FOR REFERENCE ONLY AND ARE NOT IMPACTED BY THE PROPOSED IMPROVEMENTS.

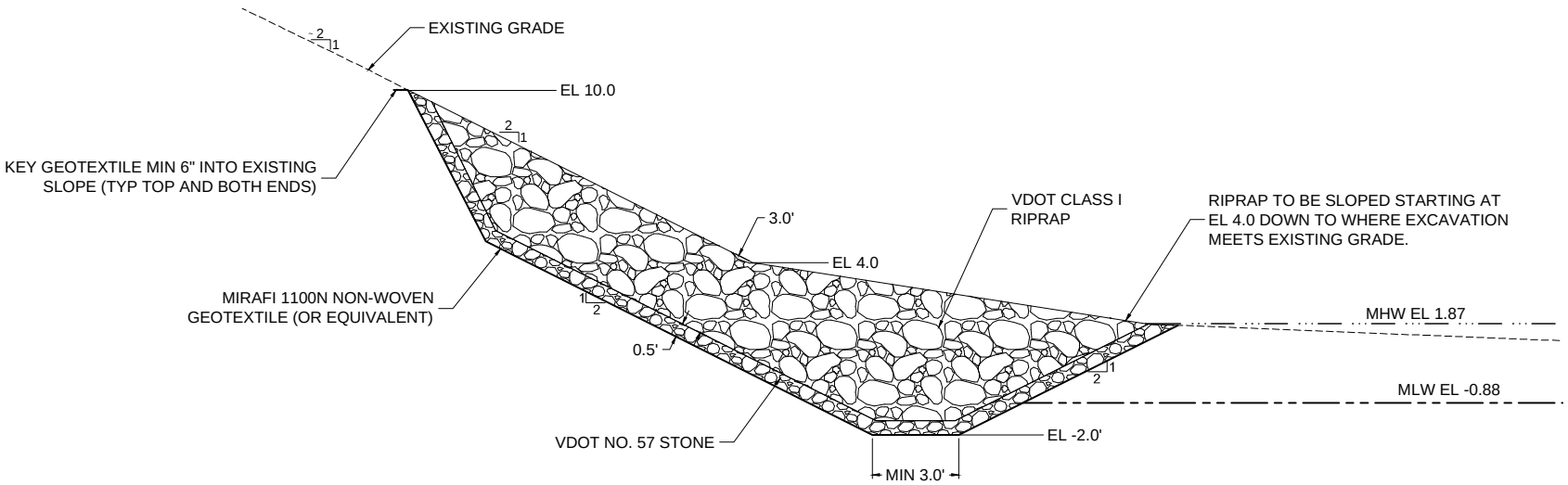
DOMINION RESOURCES SERVICES, INC.

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: ELIZABETH RIVER
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-17
NUMBER OF SHEET: 19 OF 20
DATE: 07/16/2014

Schnabel ENGINEERING

CONSTRUCTION DETAILS - SOUTH DIKE AREA

APPLICANT: DOMINION RESOURCES SERVICES, INC.
WATERWAY: DEEP CREEK
CITY: CHESAPEAKE
TOWNSHIP: N/A
COUNTY: N/A
DRAWING NUMBER: C-18
NUMBER OF SHEET: 20 OF 20
DATE: 07/16/2014



1 TYPICAL RIPRAP DETAIL FOR SOUTH DIKE AREA

0 4' 8'

NOTE:

1. MEAN LOW WATER AND MEAN HIGH WATER ELEVATIONS ARE SHOWN IN SECTION VIEW FOR REFERENCE ONLY. IMPACTS BELOW MHW AND MLW WILL VARY ALONG THE LENGTH OF THE SLOPE.

Schnabel ENGINEERING