9/09/99

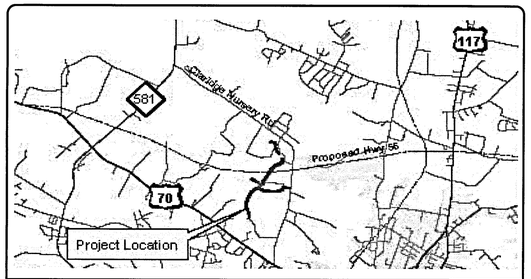
TIP PROJECT: R-2554WM ⚠1

REVISIONS

⚠1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

⚠2 06-10-2015 - CHANGED PROJECT NUMBER TO 34461.4.S3

⚠3 06-10-2015 - CHANGED TO 2012 STANDARD SPECIFICATIONS



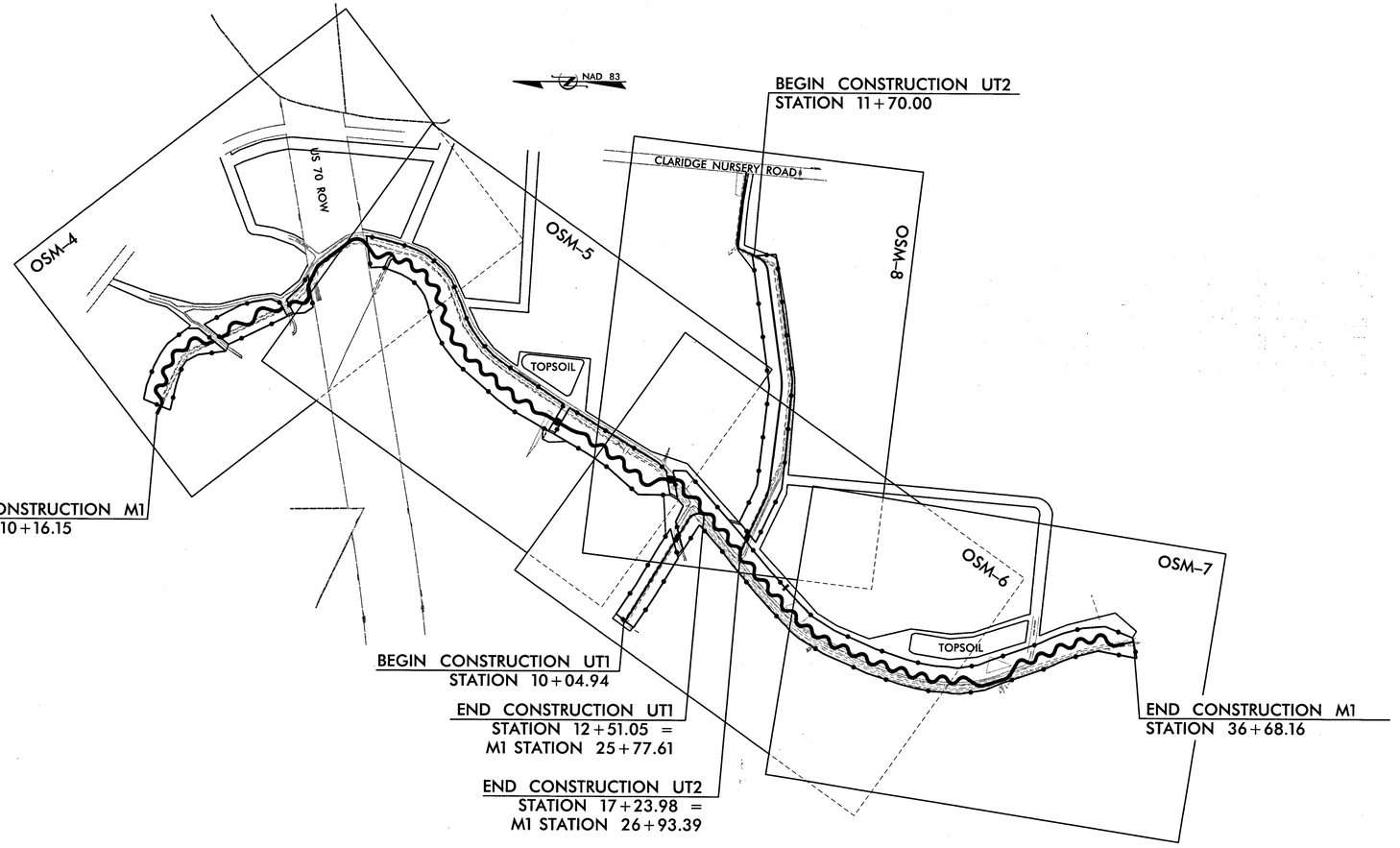
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAYNE COUNTY

LOCATION: *2 MILES SOUTHEAST OF NC HWY 581 OFF OF CLARIDGE NURSERY ROAD (SR 1326)*

TYPE OF WORK: ON-SITE MITIGATION



METRIC

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN

CONST.REV.

R /W REV.

STATE	STATE PROJECT REFERENCE NO.		SHEET NO.	TOTAL SHEETS
N.C.	R-2554WM ⚠1		OSM-1	24
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION		
34461.1.3	NHF-70(30)	P.E.		
34461.2.4		R/W, UTIL		
34461.3.4		CONST.		
34461.4.S3 ⚠2		CONST.		

GRAPHIC SCALES

10 0 25
PLANS

2.5 0 5
PROFILE (HORIZONTAL)

0.5 0 1
PROFILE (VERTICAL)

PROJECT LENGTH

REACH:	M1	UT1	UT2
EXISTING STREAM LENGTH	= 2206m	236m	763m
PROPOSED DESIGN STREAM LENGTH (EXCLUDES CROSSINGS)	= 2399m	230m	540m

Prepared In the Office of:

Baker
Michael Baker Engineering Inc.
8000 Regency Parkway
Suite 600
Cary, NORTH CAROLINA 27518
Phone: 919.463.5488
Fax: 919.463.5490

⚠3

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

NORTH CAROLINA PROFESSIONAL SEAL 039201 ENGINEER JACOB M. BYERS

PROJECT ENGINEER

HYDRAULICS ENGINEER

P.E.

SIGNATURE:

THIS DOCUMENT WAS PREVIOUSLY SEALED AND SIGNED BY WILLIAM SCOTT HUNT, III P.E. ON 04-15-2015. THIS DOCUMENT SIGNATURE WILL ONLY BE RESPONSIBLE FOR REVISIONS No. 1, 2, AND 3 DATED 06-10-2015.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

P.E.

STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR *DATE*

6/9/2015
R:\11408\6\Design\Plans\R2554_Rdy_tsh_OSM1.dgn
mcarey

REVISIONS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY.
2. SUBSURFACE PLANS ARE NOT AVAILABLE; THEREFORE, THE CONTRACTOR WILL BE REQUIRED TO LOCATE UTILITIES, INCLUDING EXISTING IRRIGATION LINES AND PROTECT FROM DAMAGE. IF ANY IRRIGATION LINES OR FITTINGS ARE DAMAGED, THE CONTRACTOR SHALL, AT HIS EXPENSE, REPAIR AND OR REPLACE SUCH LINES OR FITTINGS IN KIND TO THE SATISFACTION OF THE CLARIDGE NURSERY AND NCDOT STAFF.
3. GRADING SHOULD INCLUDE SMOOTH TRANSITIONS.
4. CONTRACTOR WILL BE REQUIRED TO PUMP BASE STREAM FLOW AROUND AREA WHERE CONSTRUCTION WILL OCCUR IN THE ACTIVE STREAM CHANNEL.

MORPHOLOGICAL MEASUREMENTS TABLE

		M1	UT1 **	UT2 **
1.	reach name			
2.	stream type	E/C5	DA5	DA5
3.	drainage area (sq. mi)	1.80	0.13	0.25
4.	bankfull width (ft)	mean: 13.4 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
5.	bankfull mean depth (ft)	mean: 1.1 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
6.	width/depth ratio	mean: 12 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
7.	bankfull cross-sectional area (sq. ft)	mean: 15 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
8.	bankfull mean velocity (ft/sec)	mean: 0.9 range: ---- - ----	mean: 1.9 range: ---- - ----	mean: 0.4 range: ---- - ----
9.	bankfull discharge (cfs)	mean: 11.1 range: ---- - ----	mean: 8.1 range: ---- - ----	mean: 2.4 range: ---- - ----
10.	bankfull max depth (ft)	mean: 1.6 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
11.	width of floodprone area (ft)	mean: 62 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
12.	entrenchment ratio	mean: 4.6 range: -	mean: NA range: -	mean: NA range: ---- - ----
13.	meander length (ft)	mean: 134 range: 107 - 161	mean: NA range: ---- - ----	mean: NA range: ---- - ----
14.	ratio of meander length to bankfull width	mean: 10 range: 8 - 12	mean: NA range: ---- - ----	mean: NA range: ---- - ----
15.	radius of curvature (ft)	mean: 38 range: 27 - 38	mean: NA range: ---- - ----	mean: NA range: ---- - ----
16.	radius of curvature to bankfull width *	mean: 2.8 range: 2.5 - 4.3	mean: NA range: ---- - ----	mean: NA range: ---- - ----
17.	belt width (ft)	mean: 54 range: 40 - 67	mean: NA range: ---- - ----	mean: NA range: ---- - ----
18.	meander width ratio	mean: 4 range: 3 - 5	mean: NA range: ---- - ----	mean: NA range: ---- - ----
19.	sinuosity (stream length/valley length)	mean: 1.25 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
20.	valley slope (ft/ft)	mean: 0.0008 range: ---- - ----	mean: 0.003 range: ---- - ----	mean: 0.003 range: ---- - ----
21.	average slope (ft/ft)	mean: 0.0006 range: ---- - ----	mean: 0.003 range: ---- - ----	mean: 0.003 range: ---- - ----
22.	Pool slope (ft/ft)	mean: 0 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
23.	Ratio of pool slope to average slope	mean: 0 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
24.	maximum pool depth (ft)	mean: 2.5 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
25.	ratio of pool depth to average bankfull depth	mean: 2.2 range: -	mean: NA range: ---- - ----	mean: NA range: ---- - ----
26.	pool width (ft)	mean: 17.4 range: ---- - ----	mean: NA range: ---- - ----	mean: NA range: ---- - ----
27.	ratio of pool width to bankfull width	mean: 1.3 range: -	mean: NA range: ---- - ----	mean: NA range: ---- - ----
28.	pool to pool spacing (ft)	mean: 67 range: 54 - 80	mean: NA range: ---- - ----	mean: NA range: ---- - ----
29.	ratio of pool to pool spacing to bankfull width	mean: 5 range: 4 - 6	mean: NA range: ---- - ----	mean: NA range: ---- - ----
30.	ratio of lowest bank height to bankfull height (or max bankfull depth)	mean: 1.00 range: 1.00 - 1.20	mean: NA range: ---- - ----	mean: NA range: ---- - ----

NA = not applicable

* RADIUS OF CURVATURE RATIO BASED ON OUTSIDE RADIUS OF MEANDER BENDS.

** DESIGNS FOR UT1 AND UT2 WILL USE THE 2007 USACE AND NCDWQ GUIDANCE FOR COASTAL PLAIN HEADWATER STREAMS.

6/10/2015
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mpalen

INDEX OF SHEETS

METRIC

CONST.REV.

R /W REV.

PROJECT REFERENCE NO.	SHEET NO.
⚠ R-2554WM	OSM-1A

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 039207 ENGINEER JACOB M. BYERS

PROJECT ENGINEER

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STREAM CONVENTIONAL SYMBOLS

SUPERCEDES SHEET 1B

LOG VANE

LOG WEIR

ROOT WAD

LOG CROSS VANE

TEMPORARY STREAM CROSSING

PERMANENT STREAM CROSSING

CHANNEL FILL

STREAM PLUG

FLOODPLAIN INTERCEPTOR

--- XXX --- EXISTING MAJOR CONTOUR

---------- EXISTING MINOR CONTOUR

------ FP ------ PROPOSED SLOPE STAKE LINE/CUT LIMITS

TRANSPLANTED VEGETATION

NOTE: ALL ITEMS ABOVE MAY NOT BE USED ON THIS PROJECT

PROJECT REFERENCE NO.	SHEET NO.
⚠R-2554WM	OSM-1B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 23
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing High Quality Wetland Boundary — HQ WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- River Basin Buffer — RBB
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Guage — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — A
- Proposed Control of Access — A
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Curb Cut for Future Wheel Chair Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equaility Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line
- Designated U/G Water Line (S.U.E.*)
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	OSM-2

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039201 ENGINEER JACOB M. BYERS

PROJECT ENGINEER

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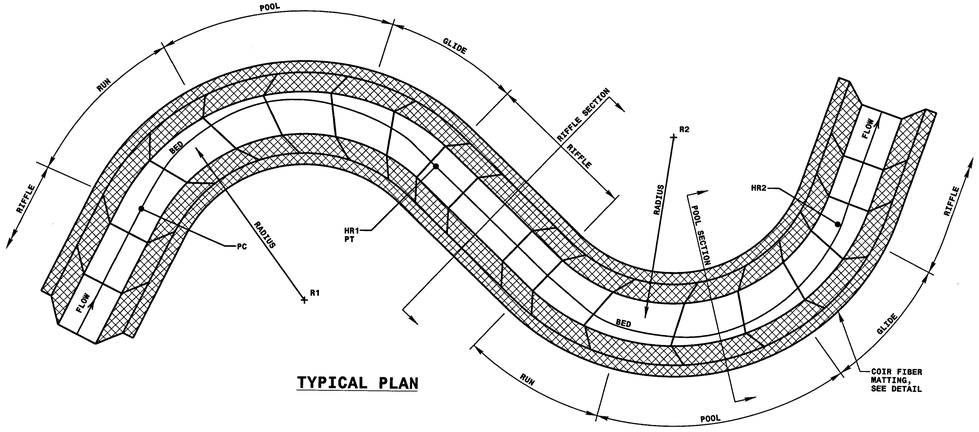
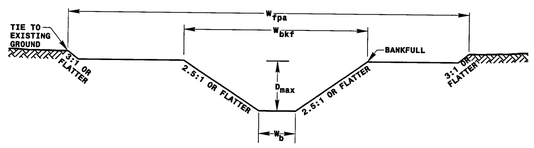
CHANNEL TYPICAL DETAIL

NOT TO SCALE

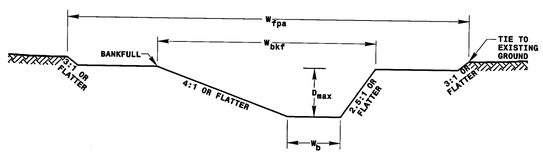


TYPICAL PLAN

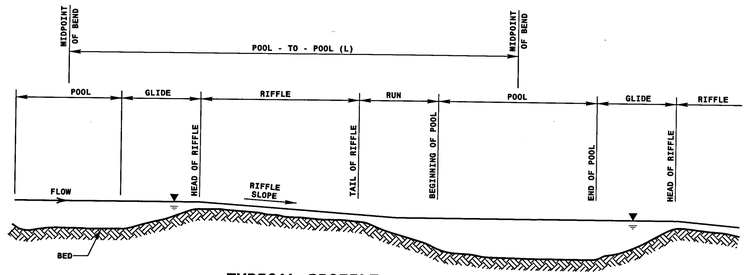


TYPICAL RIFFLE WITH BANKFULL BENCH

(REACH M1)



TYPICAL POOL WITH BANKFULL BENCH



TYPICAL PROFILE

W_{bkf} = BANKFULL WIDTH
D_{max} = MAXIMUM DEPTH
W_b = BOTTOM WIDTH
W_{fpa} = FLOOD PRONE AREA WIDTH

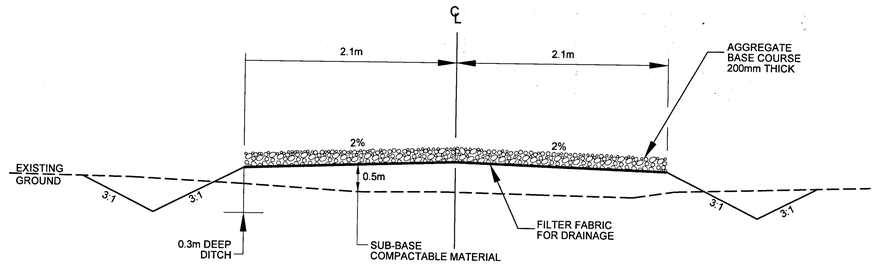
NOTES:
1. THE COORDINATES FOR EACH CENTER OF RADIUS (EX. "R1","R2") ARE INDICATED ON THE PLAN SHEETS.

CROSS-SECTION DIMENSIONS (m)

	RIFFLE				POOL				
REACH	W_{bkf}	D_{max}	W_b	W_{fpa}	W_{bkf}	D_{max}	W_b	W_{fpa}	Width/Depth Ratio
M1, Sta. 10+16-36+85.93	4.08	0.49	1.68	18.90	5.30	0.76	0.73	18.90	12
UT1, Sta. 10+00-12+47.19	*								
UT2, Sta. 10+00-17+42.64	*								

* DESIGNS FOR UT1 AND UT2 DO NOT FOLLOW A TYPICAL TRAPEZOIDAL CHANNEL DESIGN. SEE DETAIL FOR BRAIDED CHANNEL.

RELOCATED FARM PATH

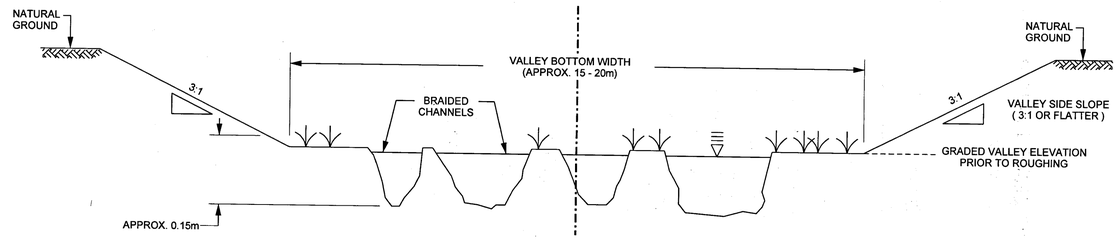


TYPICAL SECTION

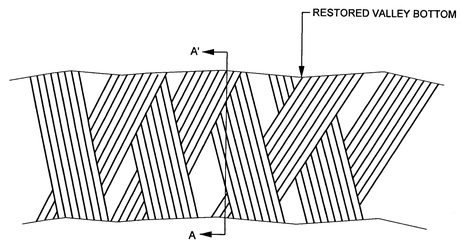
BRAIDED CHANNEL DETAIL

NOT TO SCALE

(APPLIES TO UT1 & UT2)



SECTION A - A'



PLAN VIEW OF MICROTOPOGRAPHIC PATTERN

NOTES:

1. REACHES UT1 AND UT2 WILL BE CONSTRUCTED BY FIRST RESTORING VALLEY TOPOGRAPHY AS SHOWN ON THE TYPICAL DIMENSIONS.
2. THE RESTORED VALLEY BOTTOM WILL THEN BE ROUGHENED AS SPECIFIED IN THE SPECIAL PROVISIONS.
3. BRAIDED CHANNELS WILL BE SHAPED TO FORM SMOOTH TRANSITIONS INTO THE SINGLE THREAD CHANNEL AT THE TIE IN OF M1.
4. UPON COMPLETION OF BRAIDED CHANNEL FEATURES, APPLY MULCH TEMPORARY SEED, AND PERMANENT SEED TO THE CONSTRUCTED VALLEY ACCORDING TO SEDIMENT AND EROSION CONTROL SPECIFICATIONS.

REVISIONS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/10/2015
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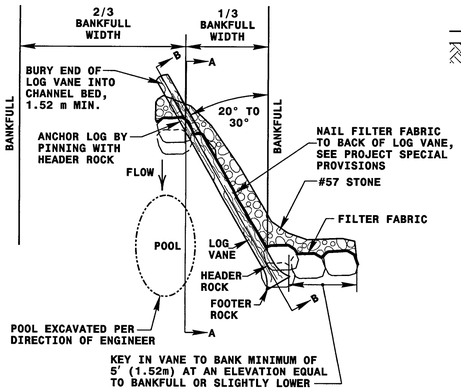
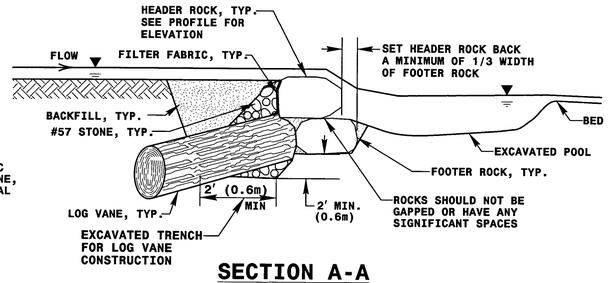
mgreen

LOG VANE DETAIL

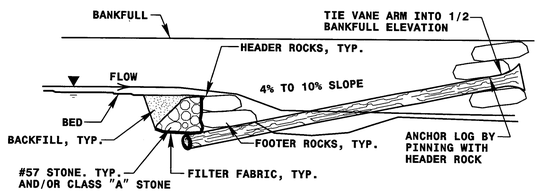
NOT TO SCALE



PLAN VIEW



SECTION A-A



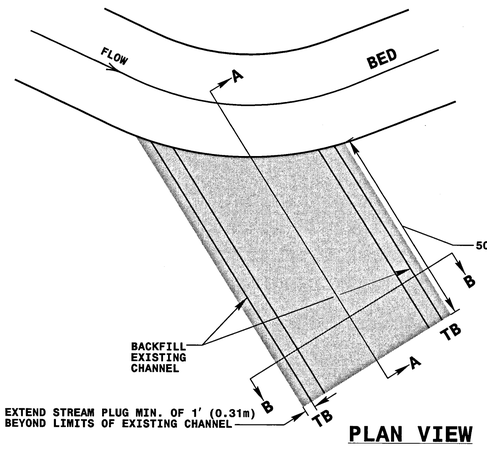
SECTION B-B

BOULDER DIMENSIONS (FT)(M)		
HEIGHT	LENGTH	WIDTH
2' (0.6m)	2' (0.6m)	2' (0.6m)

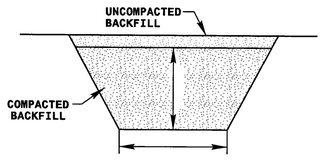
NOTES:
1. DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.
2. DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.
3. CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.
4. COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.
5. POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

STREAM PLUG

NOT TO SCALE

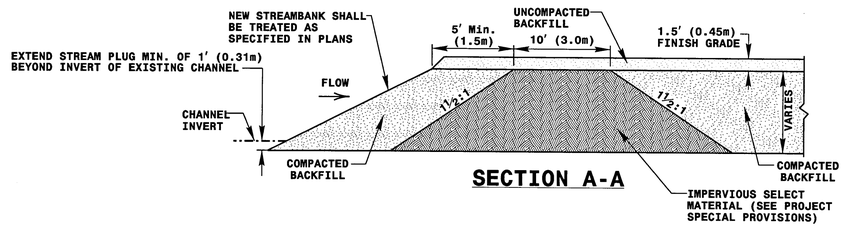


PLAN VIEW



SECTION B-B

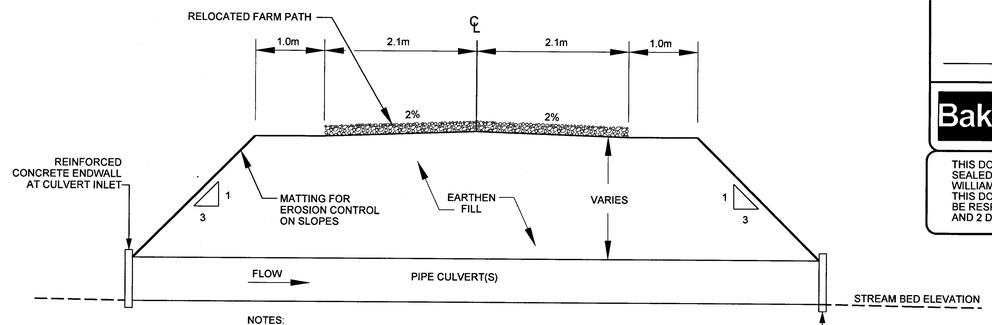
NOTES:
1. STREAM PLUG SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. PLUG SHOULD BE INSTALLED AT THE INTERFACE BETWEEN EXISTING CHANNEL AND PROPOSED CHANNEL.
3. BOTTOM OF PLUG SHOULD BE A MINIMUM OF 1' (0.31m) BELOW THE INVERT OF THE EXISTING CHANNEL.
4. PLUG SHOULD EXTEND A MINIMUM OF 1' (0.31m) BEYOND THE LIMITS OF THE EXISTING STREAM CHANNEL.
5. INSTALL EROSION CONTROL MATTING AND SEED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS IMMEDIATELY AFTER GRADING.
6. COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.



SECTION A-A

⚠ PERMANENT ROAD CULVERT CROSSING

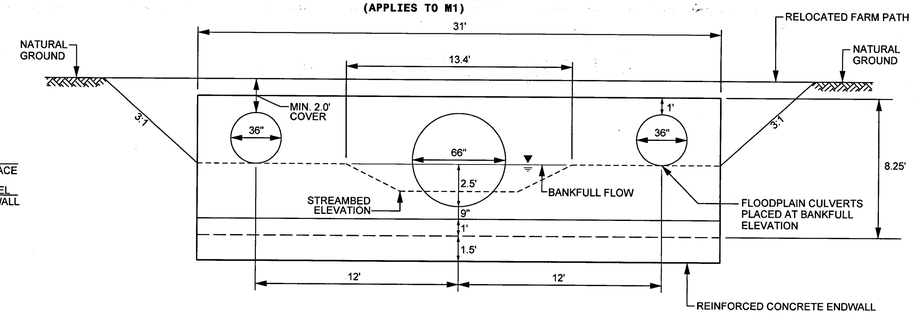
NOT TO SCALE



NOTES:
1. INSTALL PIPE CULVERT IN ACCORDANCE WITH SECTIONS 300, 310, AND 1032.
2. INSTALL MATTING FOR EROSION CONTROL ALONG FILL SLOPES.
3. INSTALL CONCRETE ENDWALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
4. WING WALLS TO BE INCLUDED AND CONSTRUCTED IN ACCORDANCE WITH NCDOT STANDARD 838.34.

CROSS SECTION VIEW

(APPLIES TO M1)



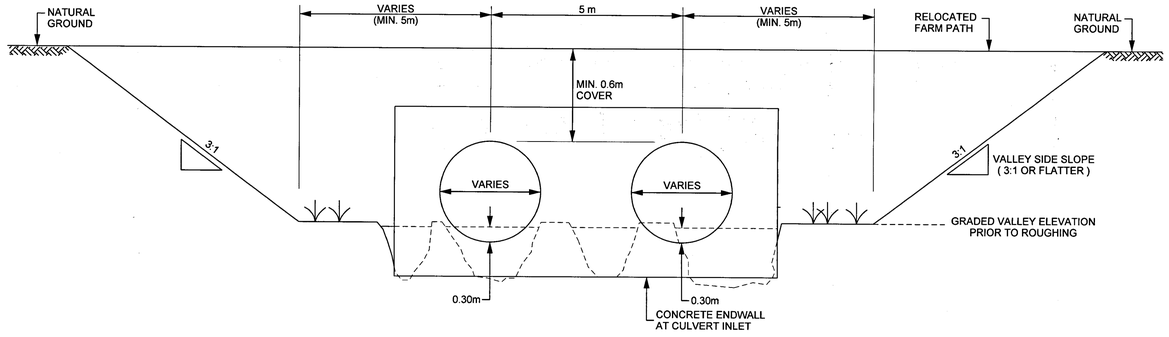
VERTICAL STEEL
#5 @ 9" ON FILL FACE

HORIZONTAL STEEL
#4 @ 12" IN END WALL

NOTES:
1. TYPICAL SECTION APPLIES TO M1 AT APPROXIMATE STATIONS 22+00 AND 24+73.
2. CULVERTS ARE TO BE EVENLY SPACED. PRIMARY CULVERT TO BE BELOW THE BED ELEVATION. FLOODPLAIN CULVERTS SHALL BE PLACED AT THE BANKFULL ELEVATION.
3. MINIMUM OF 0.60 METERS COVER FOR ALL PIPES.
4. SHOP DRAWINGS OF REINFORCED CONCRETE ENDWALL TO BE SUBMITTED TO ENGINEER FOR APPROVAL.

CROSS SECTION VIEW

(APPLIES TO UT1 & UT2)



NOTES:
1. TYPICAL SECTION APPLIES TO UT1 AND UT2 AT APPROXIMATE STATIONS 11+80 (UT1) AND 16+95 (UT2)
2. CULVERTS ARE TO BE EVENLY SPACED AND PLACED 0.30 METERS BELOW THE BED ELEVATION.
3. MINIMUM OF 0.60 METERS COVER FOR ALL PIPES.
4. INSTALL CONCRETE ENDWALLS IN ACCORDANCE WITH SECTION 838.01.

PROJECT REFERENCE NO.	SHEET NO.
⚠1 R-2554WM	OSM-2A

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 039281 ENGINEER JACOB M. BYERS

PROJECT ENGINEER

Baker
Michael Baker Engineering Inc.
8000 Regency Parkway
Suite 600
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Phone: 919.463.5488
Fax: 919.463.5490

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REVISIONS

⚠1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

⚠2 06-10-2015 - UPDATE PERMANENT ROAD CROSSING DETAIL

6/10/2015
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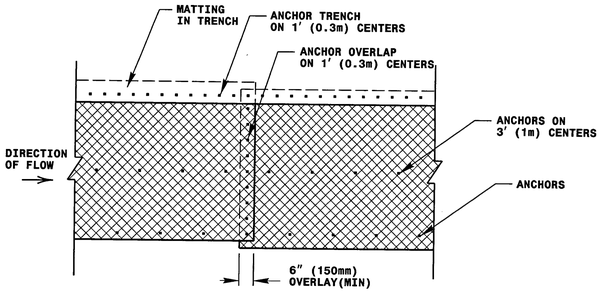
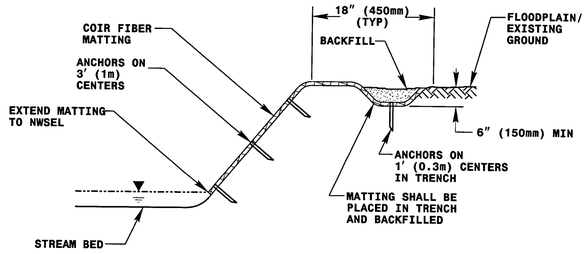
COIR FIBER MATTING DETAIL

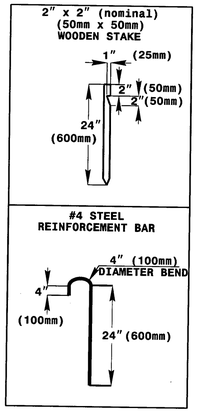
NOT TO SCALE



PLAN VIEW



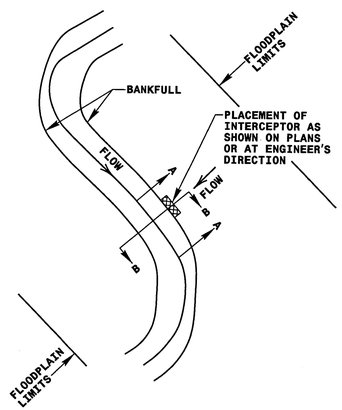
TYPICAL CROSS SECTION



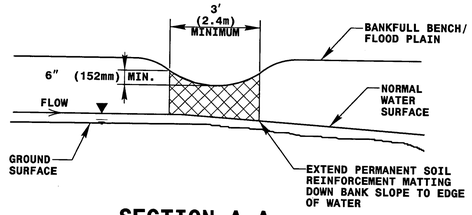
ANCHOR OPTIONS

FLOODPLAIN INTERCEPTOR DETAIL

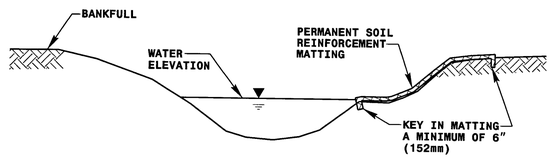
NOT TO SCALE



PLAN VIEW



SECTION A-A



SECTION B-B

REVISIONS

⚠1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/10/2015
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mcarey

PROJECT REFERENCE NO.	SHEET NO.
⚠1 R-2554WM	OSM-2B

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039201 JACOB M. BYERS

PROJECT ENGINEER

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REACH M1 CURVE DATA

M1-1
PI STA = 10+25.77 N = 186,661.9581 E = 698,291.9977
DELTA = 65^ 12' 22" (LT)
DEGREE = 498^ 13' 27"
TANGENT = 7.36
LENGTH = 13.09
RADIUS = 11.50
PC STA = 10+18.41 N = 186,665.2470 E = 698,285.4185
PT STA = 10+31.50 N = 186,666.5515 E = 698,297.7424

M1-2
PI STA = 10+60.69 N = 186,684.7836 E = 698,320.5443
DELTA = 129^ 20' 24" (RT)
DEGREE = 698^ 43' 44"
TANGENT = 17.32
LENGTH = 18.51
RADIUS = 8.20
PC STA = 10+43.37 N = 186,673.9649 E = 698,307.0140
PT STA = 10+61.88 N = 186,667.4611 E = 698,320.3343

M1-3
PI STA = 10+80.68 N = 186,648.6609 E = 698,320.1063
DELTA = 123^ 27' 17" (LT)
DEGREE = 698^ 43' 44"
TANGENT = 15.25
LENGTH = 17.67
RADIUS = 8.20
PC STA = 10+65.44 N = 186,663.9063 E = 698,320.2911
PT STA = 10+83.10 N = 186,656.9112 E = 698,332.9278

M1-4
PI STA = 11+01.79 N = 186,667.0204 E = 698,348.6383
DELTA = 100^ 15' 24" (RT)
DEGREE = 698^ 43' 44"
TANGENT = 9.82
LENGTH = 14.35
RADIUS = 8.20
PC STA = 10+91.97 N = 186,661.7083 E = 698,340.3828
PT STA = 11+06.32 N = 186,657.9510 E = 698,352.3956

M1-5
PI STA = 11+21.47 N = 186,643.9498 E = 698,358.1961
DELTA = 74^ 35' 12" (LT)
DEGREE = 698^ 43' 44"
TANGENT = 6.25
LENGTH = 10.67
RADIUS = 8.20
PC STA = 11+15.23 N = 186,649.7195 E = 698,355.8058
PT STA = 11+25.90 N = 186,644.7207 E = 698,364.3935

M1-6
PI STA = 11+44.35 N = 186,646.9972 E = 698,382.6962
DELTA = 99^ 03' 28" (RT)
DEGREE = 698^ 43' 44"
TANGENT = 9.61
LENGTH = 14.18
RADIUS = 8.20
PC STA = 11+34.73 N = 186,645.8109 E = 698,373.1590
PT STA = 11+48.91 N = 186,637.3921 E = 698,382.3662

M1-7
PI STA = 11+66.45 N = 186,619.8645 E = 698,381.7641
DELTA = 76^ 59' 12" (LT)
DEGREE = 572^ 57' 28"
TANGENT = 7.95
LENGTH = 13.44
RADIUS = 10.00
PC STA = 11+58.50 N = 186,627.8122 E = 698,382.0371
PT STA = 11+71.93 N = 186,617.8087 E = 698,389.4462
CC N = 186,627.4689 E = 698,392.0312

M1-8
PI STA = 11+96.02 N = 186,611.5834 E = 698,412.7102
DELTA = 113^ 09' 50" (RT)
DEGREE = 520^ 52' 15"
TANGENT = 16.67
LENGTH = 21.73
RADIUS = 11.00
PC STA = 11+79.35 N = 186,615.8929 E = 698,396.6059
PT STA = 12+01.07 N = 186,598.4725 E = 698,402.4133

M1-9
PI STA = 12+16.74 N = 186,586.1536 E = 698,392.7383
DELTA = 64^ 04' 21" (LT)
DEGREE = 572^ 57' 28"
TANGENT = 6.26
LENGTH = 11.18
RADIUS = 10.00
PC STA = 12+10.48 N = 186,591.0748 E = 698,396.6033
PT STA = 12+21.66 N = 186,580.5259 E = 698,395.4743

M1-10
PI STA = 12+60.64 N = 186,545.4693 E = 698,412.5177
DELTA = 57^ 19' 21" (LT)
DEGREE = 716^ 11' 50"
TANGENT = 4.37
LENGTH = 8.00
RADIUS = 8.00
PC STA = 12+56.27 N = 186,549.4020 E = 698,410.6057
PT STA = 12+64.27 N = 186,544.9553 E = 698,416.8602

M1-11
PI STA = 12+83.45 N = 186,542.7009 E = 698,435.9075
DELTA = 95^ 40' 35" (RT)
DEGREE = 477^ 27' 53"
TANGENT = 13.49
LENGTH = 20.25
RADIUS = 12.00
PC STA = 12+69.97 N = 186,544.2861 E = 698,422.5144
PT STA = 12+90.21 N = 186,529.5829 E = 698,432.7760

M1-12
PI STA = 13+17.08 N = 186,503.4504 E = 698,426.5377
DELTA = 84^ 31' 14" (LT)
DEGREE = 477^ 27' 53"
TANGENT = 10.90
LENGTH = 17.70
RADIUS = 12.00
PC STA = 13+06.18 N = 186,514.0564 E = 698,429.0695
PT STA = 13+23.88 N = 186,499.9174 E = 698,436.8534

M1-13
PI STA = 13+50.24 N = 186,491.3757 E = 698,461.7936
DELTA = 87^ 47' 30" (RT)
DEGREE = 477^ 27' 53"
TANGENT = 11.55
LENGTH = 18.39
RADIUS = 12.00
PC STA = 13+38.69 N = 186,495.1168 E = 698,450.8703
PT STA = 13+57.08 N = 186,480.3164 E = 698,458.4762
CC N = 186,483.7641 E = 698,446.9821

M1-14
PI STA = 13+79.16 N = 186,459.1661 E = 698,452.1319
DELTA = 50^ 03' 45" (LT)
DEGREE = 716^ 11' 50"
TANGENT = 3.74
LENGTH = 6.99
RADIUS = 8.00
PC STA = 13+75.43 N = 186,462.7444 E = 698,453.2053
PT STA = 13+82.42 N = 186,456.0461 E = 698,454.1865

M1-15
PI STA = 14+14.46 N = 186,429.2857 E = 698,471.8085
DELTA = 48^ 06' 54" (RT)
DEGREE = 716^ 11' 50"
TANGENT = 3.57
LENGTH = 6.72
RADIUS = 8.00
PC STA = 14+10.89 N = 186,432.2685 E = 698,469.8443
PT STA = 14+17.60 N = 186,425.8319 E = 698,470.8992

M1-16
PI STA = 14+44.70 N = 186,399.6255 E = 698,463.9999
DELTA = 111^ 03' 29" (LT)
DEGREE = 520^ 52' 15"
TANGENT = 16.02
LENGTH = 21.32
RADIUS = 11.00
PC STA = 14+28.68 N = 186,415.1201 E = 698,468.0791
PT STA = 14+50.00 N = 186,401.3861 E = 698,479.9253

M1-17
PI STA = 14+68.95 N = 186,403.4675 E = 698,498.7524
DELTA = 31^ 42' 57" (RT)
DEGREE = 381^ 58' 19"
TANGENT = 4.26
LENGTH = 8.30
RADIUS = 15.00
PC STA = 14+64.68 N = 186,402.9993 E = 698,494.5172
PT STA = 14+72.99 N = 186,401.6393 E = 698,502.6012

M1-18
PI STA = 15+08.01 N = 186,386.6147 E = 698,534.2326
DELTA = 27^ 02' 48" (RT)
DEGREE = 520^ 52' 15"
TANGENT = 2.65
LENGTH = 5.19
RADIUS = 11.00
PC STA = 15+05.36 N = 186,387.7498 E = 698,531.8428
PT STA = 15+10.55 N = 186,384.5171 E = 698,535.8448

M1-19
PI STA = 15+02.55 N = 186,311.5729 E = 698,591.9101
DELTA = 92^ 46' 30" (RT)
DEGREE = 286^ 28' 44"
TANGENT = 20.99
LENGTH = 32.38
RADIUS = 20.00
PC STA = 15+81.56 N = 186,328.2174 E = 698,579.1171
PT STA = 16+13.95 N = 186,299.6007 E = 698,574.6658

M1-20
PI STA = 16+47.59 N = 186,280.4121 E = 698,547.0273
DELTA = 84^ 52' 47" (LT)
DEGREE = 698^ 43' 44"
TANGENT = 7.50
LENGTH = 12.15
RADIUS = 8.20
PC STA = 16+40.09 N = 186,284.6883 E = 698,553.1865
PT STA = 16+52.24 N = 186,273.8958 E = 698,550.7367

M1-21
PI STA = 16+73.17 N = 186,255.7102 E = 698,561.0890
DELTA = 92^ 28' 57" (RT)
DEGREE = 698^ 43' 44"
TANGENT = 8.56
LENGTH = 13.24
RADIUS = 8.20
PC STA = 16+64.60 N = 186,263.1521 E = 698,556.8527
PT STA = 16+77.84 N = 186,251.8002 E = 698,553.4706

M1-22
PI STA = 16+95.84 N = 186,243.5820 E = 698,537.4581
DELTA = 96^ 19' 19" (LT)
DEGREE = 698^ 43' 44"
TANGENT = 9.16
LENGTH = 13.79
RADIUS = 8.20
PC STA = 16+86.68 N = 186,247.7639 E = 698,545.6062
PT STA = 17+00.46 N = 186,235.9439 E = 698,542.5118

M1-23
PI STA = 17+18.11 N = 186,221.2293 E = 698,552.2476
DELTA = 112^ 36' 12" (RT)
DEGREE = 698^ 43' 44"
TANGENT = 12.30
LENGTH = 16.12
RADIUS = 8.20
PC STA = 17+05.81 N = 186,231.4841 E = 698,545.4626
PT STA = 17+21.93 N = 186,218.9069 E = 698,540.1727

M1-24
PI STA = 17+38.46 N = 186,215.7844 E = 698,523.9376
DELTA = 93^ 39' 50" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.59
LENGTH = 14.71
RADIUS = 9.00
PC STA = 17+28.87 N = 186,217.5965 E = 698,533.3597
PT STA = 17+43.58 N = 186,206.4974 E = 698,526.3482

M1-25
PI STA = 17+61.74 N = 186,188.9175 E = 698,530.9113
DELTA = 110^ 25' 33" (RT)
DEGREE = 707^ 21' 19"
TANGENT = 11.66
LENGTH = 15.61
RADIUS = 8.10
PC STA = 17+50.08 N = 186,200.2035 E = 698,527.9819
PT STA = 17+65.69 N = 186,190.1110 E = 698,519.3126

M1-26
PI STA = 17+81.82 N = 186,191.7616 E = 698,503.2721
DELTA = 87^ 00' 47" (LT)
DEGREE = 707^ 21' 19"
TANGENT = 7.69
LENGTH = 12.30
RADIUS = 8.10
PC STA = 17+74.13 N = 186,190.9746 E = 698,510.9201
PT STA = 17+86.43 N = 186,184.1650 E = 698,502.0877

M1-27
PI STA = 18+06.21 N = 186,164.6249 E = 698,499.0411
DELTA = 106^ 00' 05" (RT)
DEGREE = 707^ 21' 19"
TANGENT = 10.75
LENGTH = 14.99
RADIUS = 8.10
PC STA = 17+95.46 N = 186,175.2459 E = 698,500.6971
PT STA = 18+10.44 N = 186,169.1445 E = 698,489.2881

M1-28
PI STA = 18+27.82 N = 186,176.4491 E = 698,473.5252
DELTA = 88^ 13' 47" (LT)
DEGREE = 707^ 21' 19"
TANGENT = 7.85
LENGTH = 12.47
RADIUS = 8.10
PC STA = 18+19.96 N = 186,173.1470 E = 698,480.6508
PT STA = 18+32.44 N = 186,169.4289 E = 698,470.0046

M1-29
PI STA = 18+49.11 N = 186,154.5198 E = 698,462.5278
DELTA = 87^ 41' 01" (RT)
DEGREE = 707^ 21' 19"
TANGENT = 7.78
LENGTH = 12.40
RADIUS = 8.10
PC STA = 18+41.33 N = 186,161.4733 E = 698,466.0150
PT STA = 18+53.73 N = 186,157.7230 E = 698,455.4390

M1-30
PI STA = 18+73.26 N = 186,165.7647 E = 698,437.6429
DELTA = 86^ 32' 18" (LT)
DEGREE = 698^ 43' 44"
TANGENT = 7.72
LENGTH = 12.39
RADIUS = 8.20
PC STA = 18+65.54 N = 186,162.5861 E = 698,444.6771
PT STA = 18+77.93 N = 186,158.9353 E = 698,434.0454

M1-31
PI STA = 18+96.82 N = 186,142.2168 E = 698,425.2387
DELTA = 75^ 39' 39" (RT)
DEGREE = 698^ 43' 44"
TANGENT = 6.37
LENGTH = 10.83
RADIUS = 8.20
PC STA = 18+90.45 N = 186,147.8505 E = 698,428.2064
PT STA = 19+01.28 N = 186,143.6967 E = 698,419.0456

M1-32
PI STA = 19+22.05 N = 186,148.5224 E = 698,398.8511
DELTA = 93^ 05' 13" (LT)
DEGREE = 698^ 43' 44"
TANGENT = 8.65
LENGTH = 13.32
RADIUS = 8.20
PC STA = 19+13.39 N = 186,146.5110 E = 698,407.2683
PT STA = 19+26.71 N = 186,140.0092 E = 698,397.2959

M1-33
PI STA = 19+46.40 N = 186,120.6430 E = 698,393.7582
DELTA = 83^ 01' 20" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 7.97
LENGTH = 13.04
RADIUS = 9.00
PC STA = 19+38.43 N = 186,128.4790 E = 698,395.1896
PT STA = 19+51.48 N = 186,121.1119 E = 698,385.8064

M1-34
PI STA = 19+71.03 N = 186,122.2630 E = 698,366.2845
DELTA = 97^ 01' 43" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.18
LENGTH = 15.24
RADIUS = 9.00
PC STA = 19+60.85 N = 186,121.6640 E = 698,376.4446
PT STA = 19+76.10 N = 186,112.1060 E = 698,366.9331

M1-35
PI STA = 19+93.78 N = 186,094.4580 E = 698,368.0602
DELTA = 90^ 25' 43" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.07
LENGTH = 14.20
RADIUS = 9.00
PC STA = 19+84.71 N = 186,103.5071 E = 698,367.4823
PT STA = 19+98.92 N = 186,093.9478 E = 698,359.0070

M1-36
PI STA = 20+16.84 N = 186,092.9393 E = 698,341.1119
DELTA = 94^ 16' 16" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.70
LENGTH = 14.81
RADIUS = 9.00
PC STA = 20+07.14 N = 186,093.4849 E = 698,350.7938
PT STA = 20+21.95 N = 186,083.3249 E = 698,342.3772

M1-37
PI STA = 20+38.93 N = 186,066.4931 E = 698,344.5921
DELTA = 91^ 12' 57" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.19
LENGTH = 14.33
RADIUS = 9.00
PC STA = 20+29.73 N = 186,075.6076 E = 698,343.3927
PT STA = 20+44.06 N = 186,065.4874 E = 698,335.4543

M1-38
PI STA = 20+62.29 N = 186,063.4926 E = 698,317.3313
DELTA = 87^ 19' 26" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 8.59
LENGTH = 13.72
RADIUS = 9.00
PC STA = 20+53.71 N = 186,064.4323 E = 698,325.8689
PT STA = 20+67.42 N = 186,054.9204 E = 698,317.8713

M1-39
PI STA = 20+84.86 N = 186,037.5198 E = 698,318.9677
DELTA = 84^ 00' 18" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 8.10
LENGTH = 13.20
RADIUS = 9.00
PC STA = 20+76.75 N = 186,045.6081 E = 698,318.4581
PT STA = 20+89.95 N = 186,036.1682 E = 698,310.9768

M1-40
PI STA = 21+09.28 N = 186,032.9449 E = 698,291.9195
DELTA = 95^ 15' 11" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.87
LENGTH = 14.96
RADIUS = 9.00
PC STA = 20+99.41 N = 186,034.5901 E = 698,301.6467
PT STA = 21+14.37 N = 186,023.4091 E = 698,294.4484

M1-41
PI STA = 21+32.83 N = 186,005.5687 E = 698,299.1797
DELTA = 88^ 26' 33" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 8.76
LENGTH = 13.89
RADIUS = 9.00
PC STA = 21+24.07 N = 186,014.0347 E = 698,296.9345
PT STA = 21+37.96 N = 186,003.0942 E = 698,290.7779

M1-42
PI STA = 21+53.70 N = 185,998.6489 E = 698,275.6844
DELTA = 66^ 14' 41" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 5.87
LENGTH = 10.41
RADIUS = 9.00
PC STA = 21+47.83 N = 186,000.3079 E = 698,281.3172
PT STA = 21+58.23 N = 185,992.8251 E = 698,274.9337

M1-43
PI STA = 21+72.10 N = 185,979.0677 E = 698,273.1605
DELTA = 22^ 57' 57" (RT)
DEGREE = 190^ 59' 09"
TANGENT = 6.09
LENGTH = 12.02
RADIUS = 30.00
PC STA = 21+66.01 N = 185,985.1120 E = 698,273.9395
PT STA = 21+78.03 N = 185,973.8065 E = 698,270.0848

M1-44
PI STA = 22+35.09 N = 185,924.5548 E = 698,241.2922
DELTA = 20^ 05' 06" (LT)
DEGREE = 143^ 14' 22"
TANGENT = 7.08
LENGTH = 14.02
RADIUS = 40.00
PC STA = 22+28.00 N = 185,930.6702 E = 698,244.8672
PT STA = 22+42.02 N = 185,917.5837 E = 698,240.0346

M1-45
PI STA = 22+58.08 N = 185,901.7787 E = 698,237.1835
DELTA = 61^ 51' 46" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 5.39
LENGTH = 9.72
RADIUS = 9.00
PC STA = 22+52.69 N = 185,907.0861 E = 698,238.1409
PT STA = 22+62.41 N = 185,900.1200 E = 698,232.0518

M1-46
PI STA = 22+80.60 N = 185,894.5250 E = 698,214.7410
DELTA = 86^ 26' 46" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 8.46
LENGTH = 13.58
RADIUS = 9.00
PC STA = 22+72.14 N = 185,897.1263 E = 698,222.7894
PT STA = 22+85.72 N = 185,886.3308 E = 698,216.8384

M1-47
PI STA = 23+02.91 N = 185,869.6822 E = 698,221.0999
DELTA = 92^ 53' 00" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.46
LENGTH = 14.59
RADIUS = 9.00
PC STA = 22+93.44 N = 185,878.8513 E = 698,218.7529
PT STA = 23+08.03 N = 185,867.7994 E = 698,211.8243

M1-48
PI STA = 23+27.40 N = 185,863.9474 E = 698,192.8472
DELTA = 92^ 18' 42" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.37
LENGTH = 14.50
RADIUS = 9.00
PC STA = 23+18.03 N = 185,865.8115 E = 698,202.0305
PT STA = 23+32.53 N = 185,854.8468 E = 698,195.0801

M1-49
PI STA = 23+51.39 N = 185,836.5290 E = 698,199.5745
DELTA = 101^ 21' 56" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.99
LENGTH = 15.92
RADIUS = 9.00
PC STA = 23+40.40 N = 185,847.2016 E = 698,196.9559
PT STA = 23+56.32 N = 185,836.0650 E = 698,188.5952

M1-50
PI STA = 23+74.84 N = 185,835.2830 E = 698,170.0926
DELTA = 97^ 11' 38" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.21
LENGTH = 15.27
RADIUS = 9.00
PC STA = 23+64.63 N = 185,835.7140 E = 698,180.2909
PT STA = 23+79.90 N = 185,825.2190 E = 698,171.7973

M1-51
PI STA = 23+97.67 N = 185,807.6997 E = 698,174.7648
DELTA = 93^ 36' 00" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.58
LENGTH = 14.70
RADIUS = 9.00
PC STA = 23+88.08 N = 185,817.1491 E = 698,173.1642
PT STA = 24+02.79 N = 185,806.6956 E = 698,165.2336

M1-52
PI STA = 24+29.65 N = 185,803.8815 E = 698,138.5224
DELTA = 116^ 41' 47" (LT)
DEGREE = 477^ 27' 53"
TANGENT = 19.47
LENGTH = 24.44
RADIUS = 12.00
PC STA = 24+10.18 N = 185,805.9210 E = 698,157.8816
PT STA = 24+34.62 N = 185,787.5024 E = 698,149.0419

M1-53
PI STA = 24+52.88 N = 185,772.1364 E = 698,158.9106
DELTA = 37^ 06' 12" (RT)
DEGREE = 477^ 27' 53"
TANGENT = 4.03
LENGTH = 7.77
RADIUS = 12.00
PC STA = 24+48.85 N = 185,775.5249 E = 698,156.7344
PT STA = 24+56.63 N = 185,768.1210 E = 698,158.6022

M1-54
PI STA = 24+95.44 N = 185,729.4254 E = 698,155.6295
DELTA = 85^ 36' 26" (RT)
DEGREE = 572^ 57' 28"
TANGENT = 9.26
LENGTH = 14.94
RADIUS = 10.00
PC STA = 24+86.17 N = 185,738.6595 E = 698,156.3389
PT STA = 25+01.12 N = 185,729.4254 E = 698,146.3683

M1-55
PI STA = 25+20.56 N = 185,729.4254 E = 698,126.9251
DELTA = 87^ 17' 33" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 8.58
LENGTH = 13.71
RADIUS = 9.00
PC STA = 25+11.97 N = 185,729.4254 E = 698,135.5095
PT STA = 25+25.69 N = 185,720.8506 E = 698,126.5196

REVISIONS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/10/2015
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PROJECT REFERENCE NO.	SHEET NO.
⚠ R-2554WM	OSM-2C

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 39201 ENGINEER JACOB M. RIVERS

PROJECT ENGINEER

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THIS DOCUMENT WAS PREVIOUSLY SEALED AND SIGNED BY WILLIAM SCOTT HUNT, III P.E. ON 04-15-2015. THIS DOCUMENT SIGNATURE WILL ONLY BE RESPONSIBLE FOR REVISION No. 1 DATED 06-10-2015.

REACH M1 CURVE DATA

M1-56
PI STA = 25+47.95 N = 185,698.6157 E = 698,125.4681
DELTA = 93^ 02' 19" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.49
LENGTH = 14.61
RADIUS = 9.00
PC STA = 25+38.45 N = 185,708.0956 E = 698,125.9164
PT STA = 25+53.07 N = 185,699.5659 E = 698,116.0253

M1-57
PI STA = 25+72.48 N = 185,701.5096 E = 698,096.7102
DELTA = 93^ 07' 29" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.50
LENGTH = 14.63
RADIUS = 9.00
PC STA = 25+62.98 N = 185,700.5579 E = 698,106.1672
PT STA = 25+77.61 N = 185,692.0148 E = 698,096.2755

M1-58
PI STA = 25+96.47 N = 185,673.1737 E = 698,095.4128
DELTA = 92^ 38' 28" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.42
LENGTH = 14.55
RADIUS = 9.00
PC STA = 25+87.04 N = 185,682.5886 E = 698,095.8439
PT STA = 26+01.59 N = 185,674.0382 E = 698,086.0278

M1-59
PI STA = 26+20.40 N = 185,675.7632 E = 698,067.2998
DELTA = 97^ 27' 06" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.25
LENGTH = 15.31
RADIUS = 9.00
PC STA = 26+10.15 N = 185,674.8227 E = 698,077.5104
PT STA = 26+25.45 N = 185,665.5169 E = 698,067.6915

M1-60
PI STA = 26+43.05 N = 185,647.9357 E = 698,068.3635
DELTA = 98^ 21' 27" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.42
LENGTH = 15.45
RADIUS = 9.00
PC STA = 26+32.63 N = 185,658.3468 E = 698,067.9655
PT STA = 26+48.08 N = 185,649.0552 E = 698,058.0050

M1-61
PI STA = 26+65.58 N = 185,650.9354 E = 698,040.6084
DELTA = 89^ 02' 02" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 8.85
LENGTH = 13.99
RADIUS = 9.00
PC STA = 26+56.73 N = 185,649.9845 E = 698,049.4067
PT STA = 26+70.71 N = 185,642.1544 E = 698,039.5093

M1-62
PI STA = 26+88.26 N = 185,624.7425 E = 698,037.3299
DELTA = 92^ 41' 30" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.43
LENGTH = 14.56
RADIUS = 9.00
PC STA = 26+78.83 N = 185,634.1025 E = 698,038.5015
PT STA = 26+93.39 N = 185,626.3524 E = 698,028.0352

M1-63
PI STA = 27+10.05 N = 185,629.1954 E = 698,011.6205
DELTA = 91^ 56' 24" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.31
LENGTH = 14.44
RADIUS = 9.00
PC STA = 27+00.74 N = 185,627.6066 E = 698,020.7939
PT STA = 27+15.18 N = 185,619.9735 E = 698,010.3431

M1-64
PI STA = 27+34.91 N = 185,600.4318 E = 698,007.6363
DELTA = 87^ 08' 00" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 8.56
LENGTH = 13.69
RADIUS = 9.00
PC STA = 27+26.35 N = 185,608.9115 E = 698,008.8108
PT STA = 27+40.03 N = 185,601.1809 E = 697,999.1085

M1-65
PI STA = 27+59.74 N = 185,602.9050 E = 697,979.4788
DELTA = 91^ 41' 05" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.27
LENGTH = 14.40
RADIUS = 9.00
PC STA = 27+50.47 N = 185,602.0941 E = 697,988.7118
PT STA = 27+64.87 N = 185,593.6522 E = 697,978.9396

M1-66
PI STA = 27+83.15 N = 185,575.4081 E = 697,977.8764
DELTA = 92^ 39' 57" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.43
LENGTH = 14.56
RADIUS = 9.00
PC STA = 27+73.72 N = 185,584.8210 E = 697,978.4249
PT STA = 27+88.27 N = 185,576.3939 E = 697,968.4993

M1-67
PI STA = 28+06.61 N = 185,578.3108 E = 697,950.2638
DELTA = 99^ 20' 47" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.60
LENGTH = 15.61
RADIUS = 9.00
PC STA = 27+96.01 N = 185,577.2024 E = 697,960.8081
PT STA = 28+11.61 N = 185,567.7265 E = 697,950.8825

M1-68
PI STA = 28+29.03 N = 185,550.3421 E = 697,951.8986
DELTA = 99^ 02' 16" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.54
LENGTH = 15.56
RADIUS = 9.00
PC STA = 28+18.48 N = 185,560.8688 E = 697,951.2833
PT STA = 28+34.04 N = 185,551.3880 E = 697,941.4059

M1-69
PI STA = 28+52.03 N = 185,553.1721 E = 697,923.5082
DELTA = 96^ 29' 50" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.08
LENGTH = 15.16
RADIUS = 9.00
PC STA = 28+41.94 N = 185,552.1720 E = 697,933.5416
PT STA = 28+57.10 N = 185,543.0900 E = 697,923.6498

M1-70
PI STA = 28+74.56 N = 185,525.6326 E = 697,923.8950
DELTA = 92^ 38' 12" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.42
LENGTH = 14.55
RADIUS = 9.00
PC STA = 28+65.14 N = 185,535.0557 E = 697,923.7626
PT STA = 28+79.69 N = 185,525.9339 E = 697,914.4758

M1-71
PI STA = 28+99.22 N = 185,526.5582 E = 697,894.9568
DELTA = 100^ 36' 27" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.84
LENGTH = 15.80
RADIUS = 9.00
PC STA = 28+88.37 N = 185,526.2116 E = 697,905.7933
PT STA = 29+04.18 N = 185,515.8431 E = 697,896.6109

M1-72
PI STA = 29+20.77 N = 185,499.4452 E = 697,899.1423
DELTA = 88^ 34' 26" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 8.78
LENGTH = 13.91
RADIUS = 9.00
PC STA = 29+11.99 N = 185,508.1212 E = 697,897.8029
PT STA = 29+25.90 N = 185,497.8904 E = 697,890.5023

M1-73
PI STA = 29+43.20 N = 185,494.8267 E = 697,873.4776
DELTA = 95^ 39' 42" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.94
LENGTH = 15.03
RADIUS = 9.00
PC STA = 29+33.27 N = 185,496.5866 E = 697,883.2569
PT STA = 29+48.29 N = 185,485.2688 E = 697,876.1936

M1-74
PI STA = 29+65.20 N = 185,469.0066 E = 697,880.8147
DELTA = 90^ 54' 09" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.14
LENGTH = 14.28
RADIUS = 9.00
PC STA = 29+56.06 N = 185,477.8013 E = 697,878.3156
PT STA = 29+70.33 N = 185,466.6463 E = 697,871.9817

M1-75
PI STA = 29+90.09 N = 185,461.5473 E = 697,852.8994
DELTA = 104^ 04' 29" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 11.53
LENGTH = 16.35
RADIUS = 9.00
PC STA = 29+78.55 N = 185,464.5251 E = 697,864.0434
PT STA = 29+94.90 N = 185,451.4620 E = 697,858.4979

M1-76
PI STA = 30+12.58 N = 185,436.0053 E = 697,867.0782
DELTA = 102^ 29' 29" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 11.21
LENGTH = 16.10
RADIUS = 9.00
PC STA = 30+01.37 N = 185,445.8082 E = 697,861.6365
PT STA = 30+17.46 N = 185,432.8126 E = 697,856.3304

M1-77
PI STA = 30+35.03 N = 185,427.8122 E = 697,839.4968
DELTA = 97^ 16' 00" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.22
LENGTH = 15.28
RADIUS = 9.00
PC STA = 30+24.81 N = 185,430.7225 E = 697,849.2941
PT STA = 30+40.08 N = 185,418.4617 E = 697,843.6229

M1-78
PI STA = 30+57.93 N = 185,402.1361 E = 697,850.8270
DELTA = 97^ 24' 24" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.25
LENGTH = 15.30
RADIUS = 9.00
PC STA = 30+47.68 N = 185,411.5097 E = 697,846.6906
PT STA = 30+62.98 N = 185,399.2426 E = 697,840.9983

M1-79
PI STA = 30+81.79 N = 185,393.9305 E = 697,822.9537
DELTA = 104^ 41' 16" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 11.66
LENGTH = 16.44
RADIUS = 9.00
PC STA = 30+70.13 N = 185,397.2242 E = 697,834.1420
PT STA = 30+86.57 N = 185,383.9429 E = 697,828.9766

M1-80
PI STA = 31+04.61 N = 185,368.4942 E = 697,838.2927
DELTA = 96^ 41' 45" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.12
LENGTH = 15.19
RADIUS = 9.00
PC STA = 30+94.50 N = 185,377.1590 E = 697,833.0675
PT STA = 31+09.69 N = 185,364.3149 E = 697,829.0778

M1-81
PI STA = 31+27.77 N = 185,356.8472 E = 697,812.6121
DELTA = 96^ 14' 07" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.04
LENGTH = 15.12
RADIUS = 9.00
PC STA = 31+17.73 N = 185,360.9928 E = 697,821.7528
PT STA = 31+32.85 N = 185,348.2108 E = 697,817.7260

M1-82
PI STA = 31+49.82 N = 185,333.6087 E = 697,826.3723
DELTA = 92^ 25' 45" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.39
LENGTH = 14.52
RADIUS = 9.00
PC STA = 31+40.43 N = 185,341.6884 E = 697,821.5881
PT STA = 31+54.94 N = 185,329.1712 E = 697,818.0972

M1-83
PI STA = 31+74.54 N = 185,319.9124 E = 697,800.8310
DELTA = 98^ 54' 16" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.52
LENGTH = 15.54
RADIUS = 9.00
PC STA = 31+64.02 N = 185,324.8839 E = 697,810.1021
PT STA = 31+79.55 N = 185,311.5226 E = 697,807.1776

M1-84
PI STA = 31+97.59 N = 185,297.1351 E = 697,818.0614
DELTA = 100^ 14' 10" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.77
LENGTH = 15.75
RADIUS = 9.00
PC STA = 31+86.82 N = 185,305.7250 E = 697,811.5634
PT STA = 32+02.57 N = 185,292.2670 E = 697,808.4535

M1-85
PI STA = 32+21.83 N = 185,283.5594 E = 697,791.2676
DELTA = 109^ 14' 17" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 12.67
LENGTH = 17.16
RADIUS = 9.00
PC STA = 32+09.16 N = 185,289.2873 E = 697,802.5725
PT STA = 32+26.32 N = 185,274.7731 E = 697,800.4005

M1-86
PI STA = 32+45.17 N = 185,261.7011 E = 697,813.9883
DELTA = 103^ 31' 41" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 11.42
LENGTH = 16.26
RADIUS = 9.00
PC STA = 32+33.75 N = 185,269.6201 E = 697,805.7569
PT STA = 32+50.01 N = 185,255.5505 E = 697,804.3635

M1-87
PI STA = 32+67.72 N = 185,246.0160 E = 697,789.4435
DELTA = 104^ 34' 20" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 11.64
LENGTH = 16.43
RADIUS = 9.00
PC STA = 32+56.08 N = 185,252.2833 E = 697,799.2508
PT STA = 32+72.51 N = 185,238.1010 E = 697,797.9767

M1-88
PI STA = 32+88.94 N = 185,226.9238 E = 697,810.0270
DELTA = 81^ 37' 54" (RT)
DEGREE = 572^ 57' 28"
TANGENT = 8.64
LENGTH = 14.25
RADIUS = 10.00
PC STA = 32+80.31 N = 185,232.7971 E = 697,803.6949
PT STA = 32+94.55 N = 185,219.8044 E = 697,805.1377

M1-89
PI STA = 33+22.38 N = 185,196.8675 E = 697,789.3859
DELTA = 52^ 03' 18" (LT)
DEGREE = 381^ 58' 19"
TANGENT = 7.32
LENGTH = 13.63
RADIUS = 15.00
PC STA = 33+15.05 N = 185,202.9057 E = 697,793.5326
PT STA = 33+28.68 N = 185,189.8845 E = 697,791.5978

M1-90
PI STA = 33+76.53 N = 185,144.2722 E = 697,806.0457
DELTA = 42^ 58' 03" (LT)
DEGREE = 358^ 05' 55"
TANGENT = 6.30
LENGTH = 12.00
RADIUS = 16.00
PC STA = 33+70.23 N = 185,150.2755 E = 697,804.1442
PT STA = 33+82.23 N = 185,141.1754 E = 697,811.5290

M1-91
PI STA = 34+17.14 N = 185,124.0089 E = 697,841.9243
DELTA = 90^ 38' 12" (RT)
DEGREE = 572^ 57' 28"
TANGENT = 10.11
LENGTH = 15.82
RADIUS = 10.00
PC STA = 34+07.03 N = 185,128.9815 E = 697,833.1197
PT STA = 34+22.84 N = 185,115.2601 E = 697,836.8542

M1-92
PI STA = 34+40.94 N = 185,099.6005 E = 697,827.7791
DELTA = 100^ 57' 56" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 10.91
LENGTH = 15.86
RADIUS = 9.00
PC STA = 34+30.03 N = 185,109.0410 E = 697,833.2501
PT STA = 34+45.89 N = 185,096.0252 E = 697,838.0879

M1-93
PI STA = 34+62.43 N = 185,090.6045 E = 697,853.7173
DELTA = 96^ 10' 21" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 9.82
LENGTH = 14.92
RADIUS = 9.00
PC STA = 34+75.04 N = 185,074.7405 E = 697,846.2183
PT STA = 34+89.95 N = 185,062.4553 E = 697,851.2271

M1-94
PI STA = 34+84.85 N = 185,065.8666 E = 697,842.0236
DELTA = 94^ 57' 45" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.82
LENGTH = 14.92
RADIUS = 9.00
PC STA = 34+75.04 N = 185,074.7405 E = 697,846.2183
PT STA = 34+89.95 N = 185,062.4553 E = 697,851.2271

M1-95
PI STA = 35+09.95 N = 185,055.5066 E = 697,869.9737
DELTA = 99^ 53' 56" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 10.71
LENGTH = 15.69
RADIUS = 9.00
PC STA = 34+99.24 N = 185,059.2277 E = 697,859.9346
PT STA = 35+14.93 N = 185,046.2566 E = 697,864.5822

M1-96
PI STA = 35+32.93 N = 185,030.7077 E = 697,855.5192
DELTA = 95^ 52' 40" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.97
LENGTH = 15.06
RADIUS = 9.00
PC STA = 35+22.96 N = 185,039.3248 E = 697,860.5418
PT STA = 35+38.02 N = 185,026.5939 E = 697,864.6054

M1-97
PI STA = 35+56.64 N = 185,018.9117 E = 697,881.5731
DELTA = 103^ 10' 31" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 11.35
LENGTH = 16.21
RADIUS = 9.00
PC STA = 35+45.29 N = 185,023.5930 E = 697.871.2334
PT STA = 35+61.50 N = 185,009.9111 E = 697,874.6583

M1-98
PI STA = 35+78.20 N = 184,996.6654 E = 697,864.4820
DELTA = 95^ 31' 12" (LT)
DEGREE = 636^ 37' 11"
TANGENT = 9.91
LENGTH = 15.00
RADIUS = 9.00
PC STA = 35+68.29 N = 185,004.5253 E = 697,870.5205
PT STA = 35+83.29 N = 184,991.4109 E = 697,872.8863

M1-99
PI STA = 36+06.90 N = 184,978.8964 E = 697,892.9030
DELTA = 121^ 33' 25" (RT)
DEGREE = 636^ 37' 11"
TANGENT = 16.09
LENGTH = 19.09
RADIUS = 9.00
PC STA = 35+90.81 N = 184,987.4258 E = 697,879.2604
PT STA = 36+09.91 N = 184,971.7351 E = 697,878.4951

M1-100
PI STA = 36+28.71 N = 184,963.3675 E = 697,861.6601
DELTA = 77^ 09' 00" (LT)
DEGREE = 381^ 58' 19"
TANGENT = 11.96
LENGTH = 20.20
RADIUS = 15.00
PC STA = 36+16.74 N = 184,968.6924 E = 697,872.3734
PT STA = 36+36.94 N = 184,951.7382 E = 697,864.4690

REACH UT1 CURVE DATA

UT1-1
PI STA = 12+32.24 N = 185,713.0530 E = 698,097.2388
DELTA = 60^ 51' 35" (RT)
DEGREE = 286^ 28' 44"
TANGENT = 11.75
LENGTH = 21.24
RADIUS = 20.00
PC STA = 12+20.49 N = 185,719.2370 E = 698,087.2502
PT STA = 12+41.73 N = 185,701.3173 E = 698,096.7014

REACH UT2 CURVE DATA

UT2-1
PI STA = 11+94.60 N = 185,582.0972 E = 698,546.4462
DELTA = 58^ 03' 53" (RT)
DEGREE = 190^ 59' 09"
TANGENT = 16.65
LENGTH = 30.40
RADIUS = 30.00
PC STA = 11+77.95 N = 185,597.2745 E = 698,553.2961
PT STA = 12+08.35 N = 185,579.8823 E = 698,529.9427

UT2-2
PI STA = 14+12.23 N = 185,552.7617 E = 698,327.8718
DELTA = 14^ 40' 21" (RT)
DEGREE = 38^ 11' 50"
TANGENT = 19.31
LENGTH = 38.41
RADIUS = 150.00
PC STA = 13+92.92 N = 185,555.3306 E = 698,347.0120
PT STA = 14+31.33 N = 185,555.1247 E = 698,308.7051

UT2-3
PI STA = 16+03.14 N = 185,576.1464 E = 698,138.1922
DELTA = 17^ 11' 45" (RT)
DEGREE = 57^ 17' 45"
TANGENT = 15.12
LENGTH = 30.01
RADIUS = 100.00
PC STA = 15+88.02 N = 185,574.2964 E = 698,153.1986
PT STA = 16+18.03 N = 185,582.3503 E = 698,124.4037

UT2-4
PI STA = 15+85.61 N = 185,568.5781 E = 698,155.0135
DELTA = 19^ 11' 16" (RT)
DEGREE = 57^ 17' 45"
TANGENT = 16.90
LENGTH = 33.49
RADIUS = 100.00
PC STA = 15+68.71 N = 185,567.0942 E = 698,171.8511
PT STA = 16+02.20 N = 185,575.5135 E = 698,139.5990

REVISIONS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/18/2015
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mpatel

PROJECT REFERENCE NO. R-2554WM
SHEET NO. OSM-2D

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 039201 ENGINEER JACOB M. BYERS

PROJECT ENGINEER

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PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	OSM-3

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REVISIONS

CONSTRUCTION SEQUENCE

The Contractor is responsible for following the sequence of construction in accordance with the plans and provisions, as directed by the Engineer. Construction shall proceed in the following manner unless otherwise directed by the Engineer.

The length of stream that is isolated as a daily work area is left to Contractor's discretion in accordance with the following provisions:

1. All project operations will comply with the provided Sediment and Erosion Control Plan.
2. The project consists of three stream reaches (Reaches M1, UT1, and UT2). Once work begins on a stream reach, the Contractor must complete that site before moving work crews and equipment to a different stream reach.
3. Before water is turned into the new channel, each reach of stream must be a completed work product, i.e. all bank and channel modifications, including excavation, grading, fill, seeding and mulching and matting, as directed by the engineer.

The following general provisions will apply to each stream reach:

1. Layout location of the new stream channel, construction easement limits, and set grade stakes. The Engineer must inspect and approve all layout work before construction may begin.
2. Mobilize equipment and materials to the site.
3. Set up staging areas, construction entrances, and safety fences.
4. Open construction area shall be minimized - the Contractor shall apply temporary seed and mulch to any disturbed areas by the end of each work day and not begin more work than can be completed in a day.
5. The Contractor shall work in the dry. Pump-around operations will be required.
6. Apply mulch, temporary, and permanent seeding as work areas are completed and approved by the Engineer.
7. Repair construction entrances and demobilize equipment from the site.

The following provisions are provided for each stream site:

Reach M1

1. Contractor shall begin by excavating bench limits as indicated on the plans.
2. Install pump-around operations as required to construct new channel and in-stream structures in the dry.
3. Beginning at the upstream end of the reach, begin installing structures and stabilizing banks as indicated on the plans.
4. Contractor shall install the culvert crossings as specified on the plans at approximate stations 22+00 and 24+73.
5. Remove pump-around operations and ensure compliance with the sediment and erosion control plan prior to leaving the site.

Reach UT1

1. Contractor shall begin by excavating grading limits as indicated on the plans.
2. Reconstruct valley topography as indicated on the plans.
3. Contractor shall install the culvert crossing as specified on the plans at approximate station 11+76.
4. Remove equipment and ensure compliance with the sediment and erosion control plan prior to leaving the site.

Reach UT2

1. Contractor shall begin by excavating grading limits as indicated on the plans.
2. Reconstruct valley topography as indicated on the plans.
3. Contractor shall install the culvert crossings as specified on the plans at approximate station 16+95.
4. Remove equipment and ensure compliance with the sediment and erosion control plan prior to leaving the site.

SUMMARY OF QUANTITIES

ITEM NUMBER	SECTION	QUANTITY	UNIT	ITEM DESCRIPTION
0000100000-N	800	1	LS	Mobilization/ Demobilization
6133000000-N	SP	1	LS	Construction Surveying for Mitigation
6133000000-N	SP	1	LS	Site Grading
0995000000-E	340	235	LF	Pipe Removal
0234000000-E	SP	7200	CY	Impervious Select Material
0420000000-E	310	72	LF	RC Pipe Culvert Crossing (66 Inch) - Class III
0396000000-E	310	88	LF	RC Pipe Culvert Crossing (42 Inch) - Class III
0390000000-E	310	240	LF	RC Pipe Culvert Crossing (36 Inch) - Class III
0360000000-E	310	48	LF	RC Pipe Culvert Crossing (12 Inch) - Class III
2209000000-E	838	21	CY	Endwalls
2220000000-E	SP	54	CY	Reinforced Endwalls
3656000000-E	876	7600	SY	Geotextile for Drainage
1121000000-E	520	2980	TON	Aggregate Base Course (ABC Stone)
1077000000-E	876	71	TON	No. 57 Stone
3642000000-E	876	75	TON	Plain Rip Rap, Class A
3649000000-E	876	150	TON	Plain Rip Rap, Class B
3628000000-E	876	36	TON	Plain Rip Rap, Class I
3651000000-E	SP	100	TON	Boulders
6006000000-E	1610	175	TON	Stone for Erosion Control Class A
6009000000-E	1610	282	TON	Stone for Erosion Control Class B
6006000000-E	1610	360	TON	Sediment Control Stone
6133000000-N	SP	1	LS	Diversion Pumping
6132000000-N	SP	30	EACH	Log Vane
6141000000-N	SP	14350	SY	Coir Fiber Mat
6038000000-E	SP	290	SY	Permanent Soil Reinforcement Matting
6036000000-E	1631	150	SY	Matting for Erosion Control
6000000000-E	1605	20350	LF	Temporary Silt Fence
6070000000-N	1639	15	EACH	Special Stilling Basin
6030000000-E	1630	300	CY	Silt Excavation
6042000000-E	1632	345	LF	1/4" Hardware Cloth
6015000000-E	1615	35.5	AC	Temporary Mulching
6018000000-E	1620	3400	LBS	Seed for Temporary Seeding
6021000000-E	1620	17	TON	Fertilizer for Temporary Seeding
6024000000-E	1622	100	LF	Temporary Slope Drains
6029000000-E	SP	200	LF	Safety Fence
6084000000-E	SP	45	AC	Seeding and Mulching
6087000000-E	1660	30	AC	Mowing
6114500000-N	1667	10	MHR	Specialized Hand Mowing
6090000000-E	1661	400	LBS	Seed for Repair Seeding
6093000000-E	1661	1	TON	Fertilizer for Repair Seeding

EARTHWORK SUMMARY FOR MITIGATION

ALL UNITS IN CUBIC YARDS

Line	Station	Station	Mitigaiton Excavation		Mitigation Embankment		Mitigation Borrow	Mitigation Total Waste
			Total Unclass.	Suitable Unclass.	Total Embankment	Embankment + 25%		
Reach UT1	10+05	12+51	8404	8404	13	16	0	8388
UT 1 Farm Road	10+00	11+64	116	116	569	711	595	0
Reach UT2	11+70	17+24	22494	22494	1886	2358	0	20137
UT 2 Farm Road	10+00	11+84	129	129	636	795	666	0
Reach M1	10+00	36+68	126300	126300	25502	31878	0	94423
M1 Farm Road	10+00	20+27	726	726	3547	4434	3708	0
Total			158169	158169	32153	40190	4968	122945
Waste in lieu of borrow							-4968	
Grand Total				158169	32153	40190	0	117977
Say				158500	32500	40500	0	118500

6/8/2015
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mcarey

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "R2554-10" (PID:AI6451) WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 185823.82(m) EASTING: 698741.63(m)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987872
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R2554-10" TO -L- STATION (supplied by roadway) IS

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	OSM-4

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 032201 ENGINEER VICTOR M RIVERS

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REVISIONS

1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/10/2015
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NAD 83

SR 1326 CLARIDGE NURSERY ROAD

EXISTING R/W

EXISTING FARM PATH TO REMAIN

GUY

FUTURE HWY 70 BYPASS

PROPOSED SERVICE ROAD TO BE INSTALLED WITHIN US 70 ROW. SEE FARM PATH DETAIL ON SHEET OSM-2. (FUTURE ROAD OUTSIDE OF ROW TO BE BUILT BY OTHERS.)

PROPOSED SLOPE STAKE LINE

10+00

11+00

12+00

13+00

14+00

15+00

16+00

17+00

EXISTING MONITORING STATIONS TO BE REMOVED BY OTHERS

BEGIN CONSTRUCTION M1
STATION 10+16.15

WEATHER STATION

AVOID DISTURBANCE OF EXISTING WEATHER STATION

EXISTING BRIDGE CROSSING TO REMAIN

EXISTING 375mm CONCRETE PIPE (DO NOT DISTURB)

EXISTING IRRIGATION LINE (DO NOT DISTURB)

NOT SURVEYED

INV. 23.51

INV. 22.33

EXISTING 1800mm CMP TO REMAIN (DO NOT DISTURB)

3000mm x 6000mm CLASS B RIP RAP PIPE OUTLET WITH DITCH

EXISTING ROADWAY DITCH TO REMAIN AND TIE INTO PROPOSED CHANNEL

GRAVEL DRIVEWAY

750mm x 1500mm CLASS "B" RIP RAP APRON

STORM INLET CULVERT (DO NOT DISTURB)

TIE EXISTING DITCH INTO PROPOSED CHANNEL

FLOODPLAIN INTERCEPTOR

PROPOSED SLOPE STAKE LINE

MATCHLINE M1

SHEET OSM-5 STATION 17+50

NOTES:

1. LOG VANE LOCATIONS MAY BE ALTERED BY ENGINEER.
2. CHANNEL PLUG LOCATIONS ARE APPROXIMATE AND MAY BE ALTERED BY ENGINEER.

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
⚠1 R-2554WM	OSM-5

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 038281 ENGINEER JACOB M BYERS

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REVISIONS
⚠1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM
⚠2 06-10-2015 - REVISED CULVERT SPACING AT STA. 22+00

NAD 83

MATCHLINE M1 SHEET OSM-4 STATION 17+50

EXISTING FARM PATH

18+00

19+00

20+00

21+00

22+00

23+00

24+00

MATCHLINE M1 SHEET OSM-6 STATION 24+00

EXISTING CEMETARY (DO NOT DISTURB)

BEGIN RELOCATED FARM PATH NO. 4
STA. 10+00.00
SEE DETAIL SHEET OSM-2

PROPOSED STOCKPILE FOR TOPSOIL

EXISTING 300mm CMP (TO BE REMOVED)

RELOCATED FARM PATH NO. 1
(APPLY AGGREGATE BASE COURSE)
SEE DETAIL SHEET OSM-2

BEGIN RELOCATED FARM PATH NO. 1
STA. 10+00.00
SEE DETAIL SHEET OSM-2

EXISTING 1600mm CMP AND HEADWALL (TO BE REMOVED)

EXISTING MONITORING STATION TO BE REMOVED BY OTHERS

MONITORING STATION

WATER LINE

PROPOSED SLOPE STAKE LINE

APPROXIMATE LOCATION EXISTING ABANDONED IRRIGATION LINE

750mm x 1500mm CLASS "B" RIP-RAP APRON

SHALLOW DITCH

PROPOSED (1) 1650mm RCP AND (2) 900mm RCP WITH REINFORCED CONCRETE ENDWALLS SET 0.30m BELOW GRADE
SEE DETAIL SHEET OSM-2A

EXISTING IRRIGATION LINE (DO NOT DISTURB)

END RELOCATED FARM PATH NO. 4
STA. 10+69.26
SEE DETAIL SHEET OSM-2

NOTES:

1. LOG VANE LOCATIONS MAY BE ALTERED BY ENGINEER.
2. CHANNEL PLUG LOCATIONS ARE APPROXIMATE AND MAY BE ALTERED BY ENGINEER.

6/10/2015
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mpeel

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	OSM-6

PROJECT ENGINEER

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REVISIONS

1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM
2 06-10-2015 - 06-10-2015 - REVISED CULVERT SPACING AT STA. 24+73

6/10/2015
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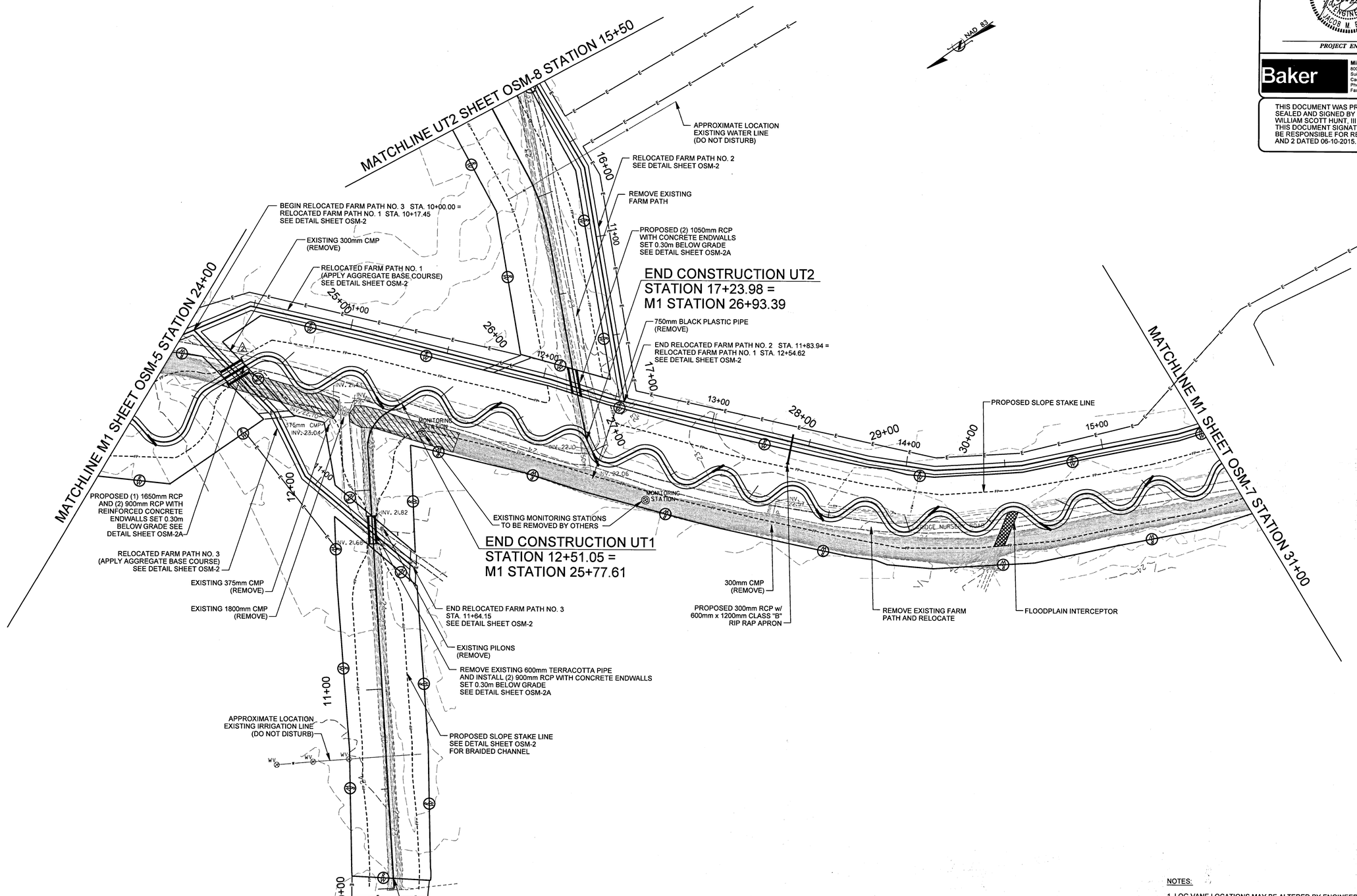
mcarr



NOTES:

1. LOG VANE LOCATIONS MAY BE ALTERED BY ENGINEER.
2. CHANNEL PLUG LOCATIONS ARE APPROXIMATE AND MAY BE ALTERED BY ENGINEER.

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	OSM-7

PROJECT ENGINEER

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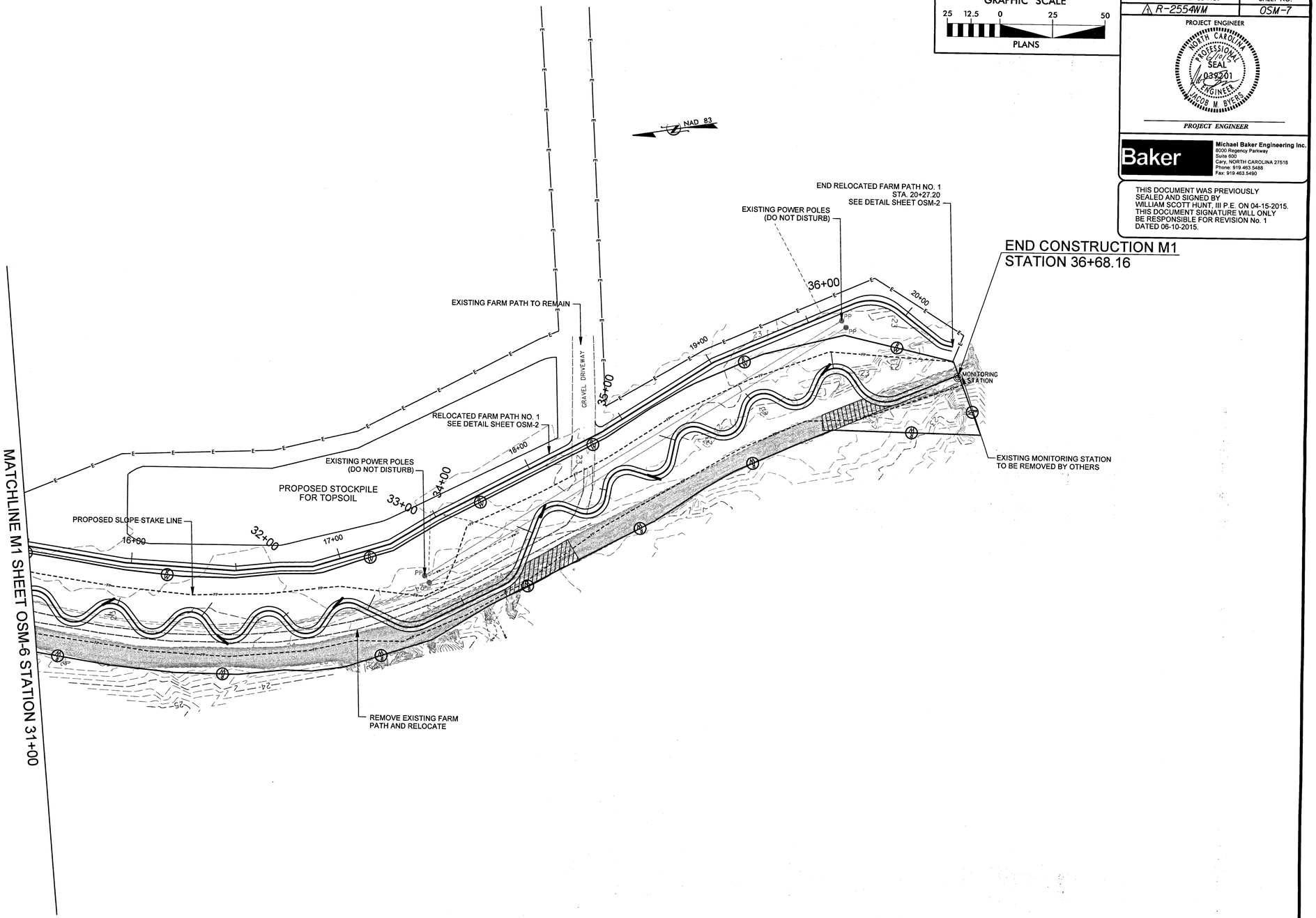
REVISIONS

1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM



NOTES:

1. LOG VANE LOCATIONS MAY BE ALTERED BY ENGINEER.
2. CHANNEL PLUG LOCATIONS ARE APPROXIMATE AND MAY BE ALTERED BY ENGINEER.

6/10/2015
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mgriffin

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
⚠1 R-2554WM	OSM-8

PROJECT ENGINEER

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REVISIONS

⚠1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

NAD 83

MATCHLINE UT2 SHEET OSM-6 STATION 15+50

RELOCATED FARM PATH NO. 2
SEE DETAIL SHEET OSM-2

BEGIN RELOCATED FARM PATH NO. 2
STA. 10+00.00
SEE DETAIL SHEET OSM-2

PINE TREE WOODS LANE

PROPOSED SLOPE STAKE LINE
SEE DETAIL SHEET OSM-2
FOR BRAIDED CHANNEL

BEGIN CONSTRUCTION UT2
STATION 11+70

EXISTING 900mm RCP
(DO NOT DISTURB)

EXISTING 1600mm RCP
(DO NOT DISTURB)

SR 1326 CLARIDGE NURSERY ROAD

EXISTING R/W

18.29m (60.00')

INV. 22.28

INV. 21.99

1600mm RCP

900mm RCP

INV. 22.19

INV. 22.22

10+00 11+00 12+00 13+00 14+00 15+00

NOTES:

1. LOG VANE LOCATIONS MAY BE ALTERED BY ENGINEER.
2. CHANNEL PLUG LOCATIONS ARE APPROXIMATE AND MAY BE ALTERED BY ENGINEER.

6/10/2015
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mdarby

-M1-

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METRIC

25 0 50

CONST.REV.

R /W REV.

PROJECT REFERENCE NO. R-2554WM

SHEET NO. OSM-9

PROJECT ENGINEER

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DESIGN BANKFULL

DESIGN THALWEG

EXISTING GROUND

BEGIN CONSTRUCTION M1
STATION 10+16.17
ELEV. = 22.22

MATCHLINE M1 STATION 23+50

MATCHLINE M1 STATION 23+50

DESIGN THALWEG

EXISTING GROUND

DESIGN BANKFULL

END CONSTRUCTION M1
STATION 36+68.16
ELEV. = 20.36

REVISIONS

1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

2/26/03

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2/26/03

REVISIONS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/10/2015
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METRIC

25 0 50

CONST.REV.

R /W REV.

PROJECT REFERENCE NO.	SHEET NO.
⚠ R-2554WM	OSM-10

PROJECT ENGINEER

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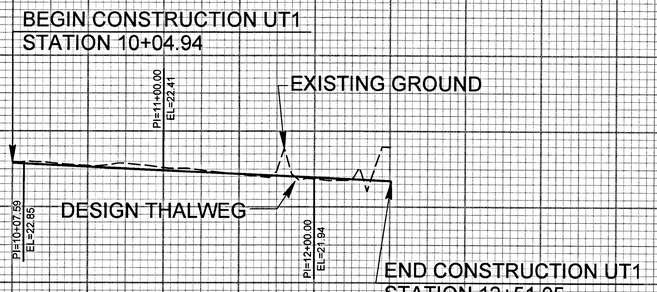
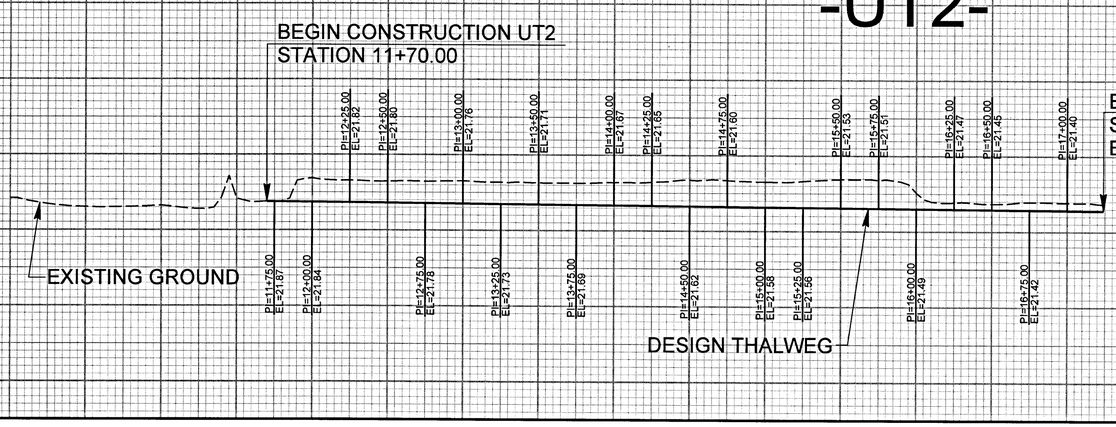
-UT1-



-UT2-



TIP PROJECT: R-2554WM ⚠1

REVISIONS

⚠1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

⚠2 06-10-2015 - CHANGED PROJECT NUMBER TO 34461.4.S3

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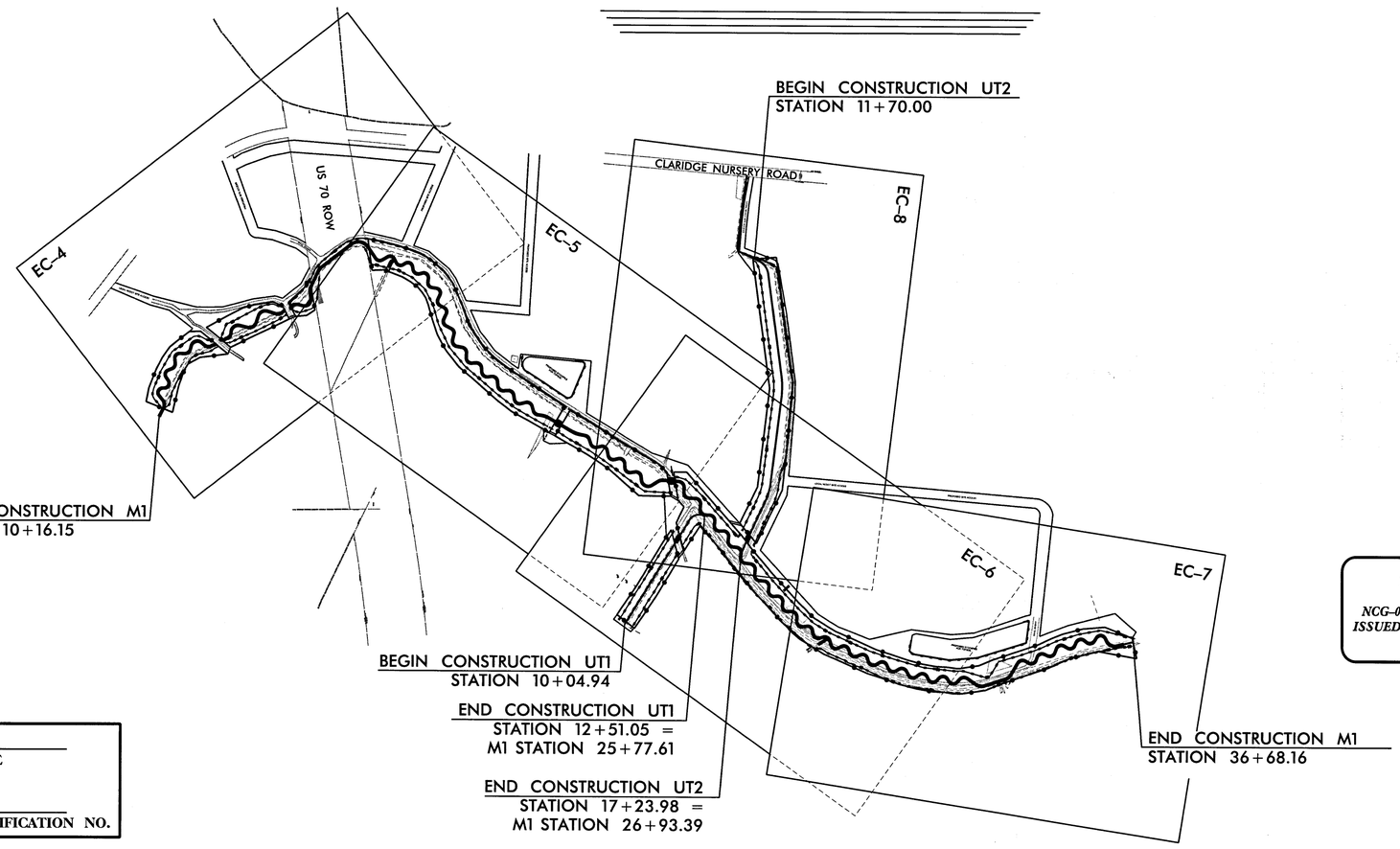
mbarley
6/18/2015

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
EROSION CONTROL



METRIC

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE	STATE PROJECT REFERENCE NO.		SHEET NO.	TOTAL SHEETS
N.C.	R-2554WM ⚠1		EC-1	8
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION		
34461.1.3	NHF-70(30)	P.E.		
34461.2.4		R/W, UTIL		
34461.3.4		CONST.		
34461.4.S3 ⚠2		CONST.		

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
876.02	Guide for Rip Rap at Pipe Outlets	
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Jacob M. Byers
LEVEL III NAME

3179
LEVEL III CERTIFICATION NO.

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GRAPHIC SCALE

10 0 25
PLANS

PROJECT LENGTH

REACH:	M1	UT1	UT2
EXISTING STREAM LENGTH =	2206m	236m	763m
PROPOSED DESIGN STREAM LENGTH (EXCLUDES CROSSINGS) =	2399m	230m	540m

Prepared In the Office of:

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2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033201 JACOB M BYERS

PROJECT ENGINEER

Roadway Standard Drawings

The following roadway metric standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

876.02	Guide for Rip Rap at Pipe Outlets	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1636.01	Rock Silt Screen

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 3 METERS OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 15 METERS IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO.	SHEET NO.
⚠ R-2554WM	EC-1A

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 039207 ENGINEER JACOB M BYERS

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REVISIONS

⚠ 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

6/10/2015
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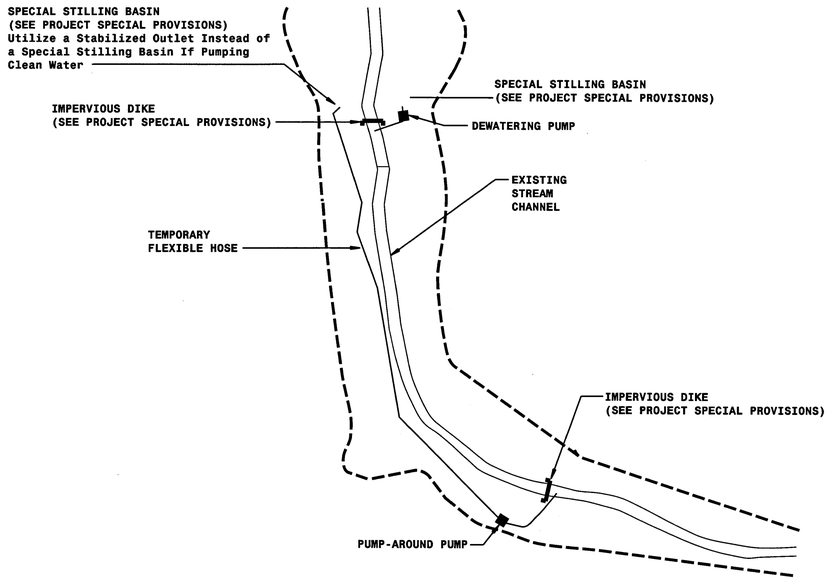
mparau

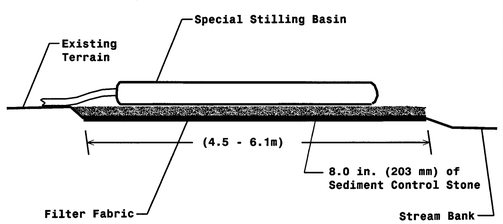
EXAMPLE OF PUMP-AROUND OPERATION

NOT TO SCALE



NOTES:
1) All excavation shall be performed in only dry or isolated sections of channel.
2) Impervious dikes are to be used to isolate work from stream flow when necessary.
3) All graded areas shall be stabilized within 24 hours.
4) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
5) Pumps and hoses shall be of sufficicient size to dewater the work area.

SPECIAL STILLING BASIN WITH ROCK PAD



Not To Scale

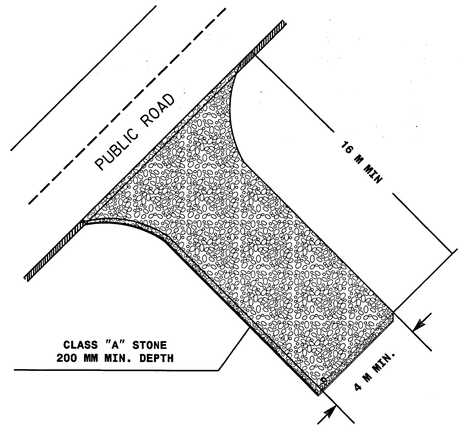
Note: Provide Stabilized Outlet to Streambank

SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. PERFORM STREAM RESTORATION WORK IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. ALL GRADING AND STABILIZATION MUST BE COMPLETED IN ONE DAY WITHIN THE PUMP AROUND AREAS BETWEEN THE IMPERVIOUS DIKES. THE IMPERVIOUS DIKE LOCATIONS AS SHOWN ON THIS SHEET ONLY SHOW THE UPPER AND LOWER EXTENT OF WORK FOR EACH STREAM SEGMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF THE IMPERVIOUS DIKE(S) FOR EACH DAY'S WORK.
8. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTE: FILTER FABRIC TO BE PLACED BENEATH STONE

NOTES:

1. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS SHALL BE PROVIDED.
2. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR UTILIZATION BY ALL CONSTRUCTION VEHICLES.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY.
4. ANY MATERIAL TRACKED ONTO THE ROADWAY MUST BE CLEANED UP IMMEDIATELY.
5. GRAVEL CONSTRUCTION ENTRANCE SHALL BE LOCATED AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.
6. NUMBER AND LOCATION OF CONSTRUCTION ENTRANCES TO BE DETERMINED BY THE ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-2

PROJECT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 039201 ENGINEER WILLIAM M BYERS 6/10/15

PROJECT ENGINEER

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REVISIONS

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6/10/2015
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mgriffin

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
⚠ R-2554WM	EC-3

PROJECT ENGINEER

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NAD 83

SR 1326 CLARIDGE NURSERY ROAD

LEGAL NCDOT SITE ACCESS

PROPOSED SITE ACCESS

PROPOSED SERVICE ROAD WITHIN US 70 ROW

PROPOSED SPECIAL SEDIMENT CONTROL FENCE

PROPOSED ROCK PIPE INLET SEDIMENT TRAP

750mm x 1500mm CLASS "B" RIP RAP APRON

PROPOSED TEMPORARY ROCK SILT CHECK TYPE A

BEGIN CONSTRUCTION M1
STATION 10+16.15

3000mm x 6000mm CLASS B RIP RAP PIPE OUTLET WITH DITCH

GRAVEL DRIVEWAY

NOT SURVEYED

INV. 22.13

INV. 23.51

INV. 22.33

WEATHER STATION

US 70 ROW

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

MATCHLINE M1 SHEET EC-4 STA. 18+00

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GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
⚠1 R-2554WM	EC-4

PROJECT ENGINEER

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NAD 83

PROPOSED SITE ACCESS

MATCHLINE M1 SHEET EC-3 STA. 18+00

EXISTING CEMETARY (DO NOT DISTURB)

PROPOSED STOCKPILE FOR TOPSOIL

750mm x 1500mm CLASS "B" RIP-RAP APRON

CLARIDGE NURSERY ROAD

18+00 19+00 20+00 21+00 22+00 23+00 10+00

WATER LINE

STATION

DRIVEWAY

PROPOSED TEMPORARY SILT FENCE

PROPOSED SPECIAL SEDIMENT CONTROL FENCE

PROPOSED TEMPORARY ROCK SILT CHECK TYPE A

MATCHLINE M1 SHEET EC-5 STATION 24+00

6/10/2015
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mgrieu

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
⚠ R-2554WM	EC-5

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MATCHLINE UT2 SHEET EC-7 STATION 15+50

LEGAL NCDOT SITE ACCESS

NAD 83

PROPOSED SPECIAL SEDIMENT CONTROL FENCE

MATCHLINE M1 SHEET EC-4 STATION 24+00

PROPOSED ROCK PIPE INLET SEDIMENT TRAP

MATCHLINE M1 SHEET EC-6 STATION 31+00

376mm CMP
INV. 23.04

PROPOSED TEMPORARY ROCK SILT CHECK TYPE A

END CONSTRUCTION UT1
STATION 12+51.05 =
M1 STATION 25+77.61

PROPOSED 300mm RCP w/ 600mm x 1200mm CLASS "B" RIP RAP APRON

PROPOSED TEMPORARY SILT FENCE

BEGIN CONSTRUCTION UT1
STATION 10+04.94

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6/10/2015
mcox

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-6

PROJECT ENGINEER

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PROPOSED SITE ACCESS

NAD 83

PROPOSED SPECIAL SEDIMENT CONTROL FENCE

END CONSTRUCTION M1
STATION 36+68.16

PROPOSED TEMPORARY SILT FENCE

PROPOSED STOCKPILE FOR TOPSOIL

GRAVEL DRIVEWAY

CLARIDGE NURSERY ROAD

PROPOSED TEMPORARY ROCK SILT CHECK TYPE A

MATCHLINE M1 SHEET EC-6 STATION 31+00

16+00 17+00 18+00 19+00 20+00 32+00 33+00 34+00 35+00 36+00

6/10/2015
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mbyers

GRAPHIC SCALE
25 12.5 0 25 50
PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-7

PROJECT ENGINEER

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REVISIONS

1 06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554WM

NAD 83

MATCHLINE UT2 SHEET EC-5 STATION 15+50

RELOCATED FARM PATH NO. 2
SEE DETAIL SHEET OSM-2

PROPOSED TEMPORARY SILT FENCE

PROPOSED SPECIAL SEDIMENT CONTROL FENCE

BEGIN CONSTRUCTION UT2
STATION 11+70

PROPOSED TEMPORARY ROCK SILT CHECK TYPE A

SR 1326 CLARIDGE NURSERY ROAD

LEGAL NCDOT SITE ACCESS

INV. 22.28
1600mm RCP

INV. 21.99

INV. 22.19
900mm RCP
INV. 22.22

18.29m (60.00') E/R

PINE TREE WOODS LINE

10+00 11+00 12+00 13+00 14+00 15+00

6/10/2015
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mgrubb