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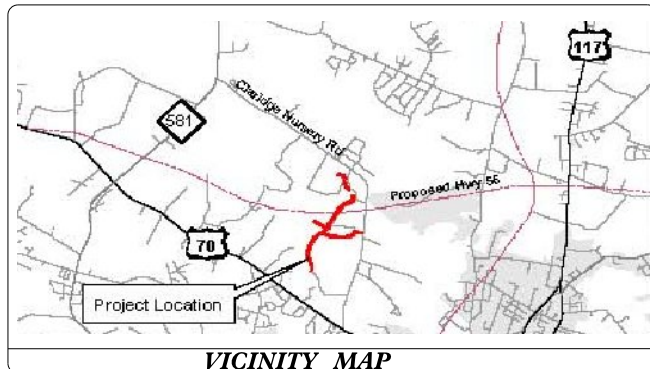
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TIP PROJECT: R-2554WM

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAYNE COUNTY

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

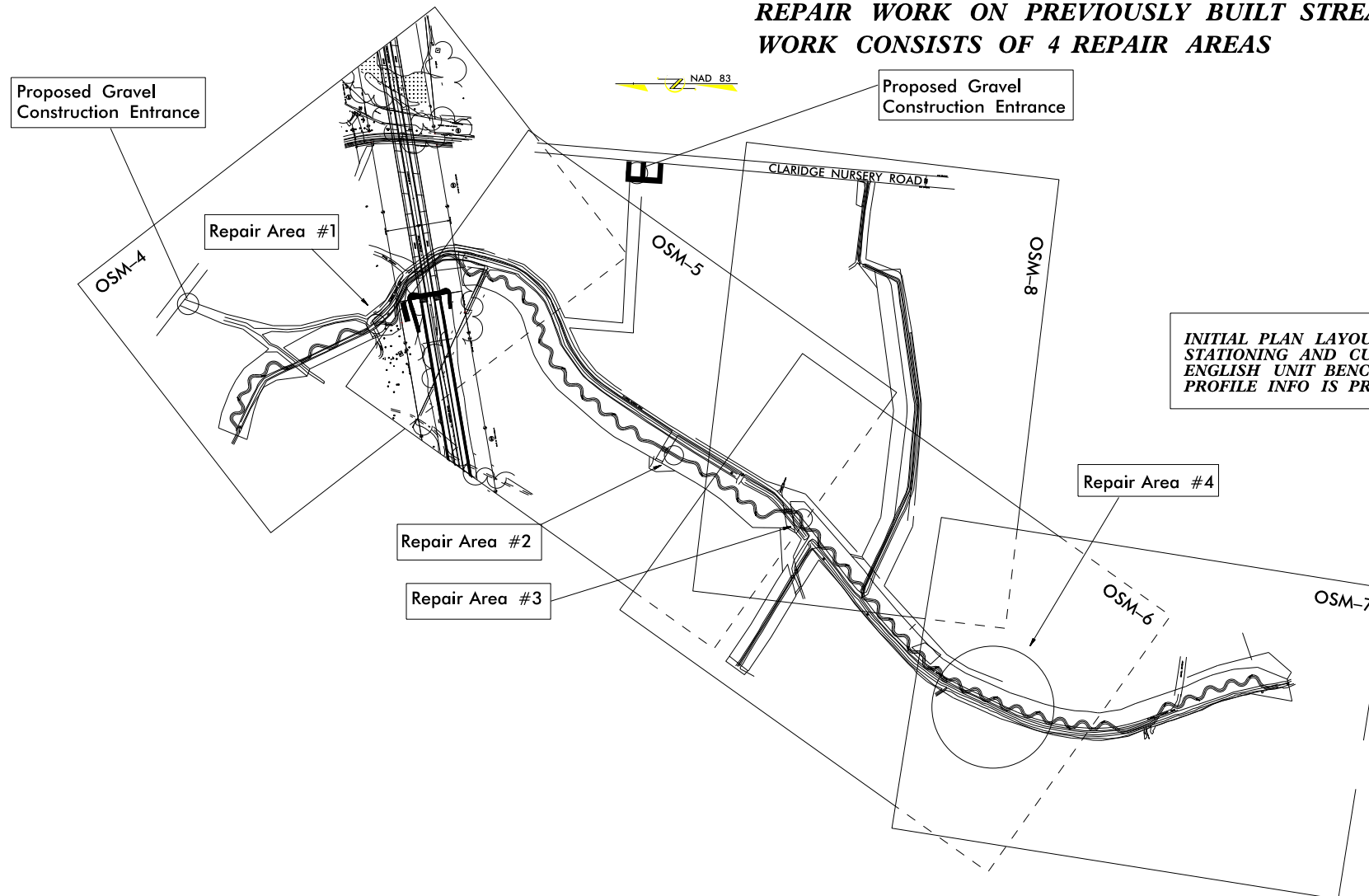


ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN

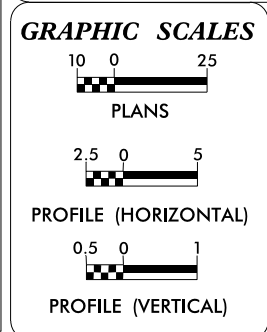
CONST. REV.
R/W REV.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2554WM	OSM-1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
34461.4.53			

**TYPE OF WORK: ON-SITE MITIGATION
REPAIR WORK ON PREVIOUSLY BUILT STREAM PROJECT
WORK CONSISTS OF 4 REPAIR AREAS**



INITIAL PLAN LAYOUT WAS COMPLETED IN METRIC UNITS
STATIONING AND CURVE DATA INFORMATION ARE IN METRIC UNITS
ENGLISH UNIT BENCHMARKS HAVE BEEN SET ON PROJECT
PROFILE INFO IS PROVIDED IN DUAL UNITS



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:

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

PROJECT ENGINEER

HYDRAULICS ENGINEER

P.E.

SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR

P.E.

DATE

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

1. reach name	M1	UT1 **	UT2 **
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.

INDEX OF SHEETS

- OSM-1 TITLE SHEET
- OSM-1A INDEX OF SHEETS
STREAM CONVENTIONAL SYMBOLS
GENERAL NOTES
MORPHOLOGICAL MEASUREMENTS TABLE
- OSM-1B SYMBOLOGY - NCDOT
- OSM-2 TO OSM-2D DETAILS
CURVE DATA

- OSM-3 SUMMARY OF QUANTITIES
CONSTRUCTION SEQUENCE
- OSM-4 TO OSM-6 PLAN VIEW OF REPAIR AREAS
- OSM-9 TO OSM-10 LONGITUDINAL PROFILES

- EC-1 TO EC-4 EROSION CONTROL PLAN



PROJECT REFERENCE NO. <i>R-2554WM</i>	SHEET NO. <i>OSM-1A</i>
PROJECT ENGINEER	
CONST.REV.	
R /W REV.	
PROJECT ENGINEER	

STREAM CONVENTIONAL SYMBOLS SUPERCEDES SHEET 1B

- | | |
|--|---|
| <ul style="list-style-type: none"> LOG VANE LOG WEIR ROOT WAD LOG CROSS VANE TEMPORARY STREAM CROSSING PERMANENT STREAM CROSSING | <ul style="list-style-type: none"> 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

09-MAY-2019 10:24
 SA:\Engineers\Projects\2019\2019 Repair Plans\R2554-repair-2019_OSM1A.dgn
 @11:03 AM
 User: F:\es\R-2554\claridge_baker-projects\Claridge Hurricane Repair 2019\2019 Repair Plans\R2554-repair-2019_OSM1A.dgn

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	⊗
Property Monument	□ EDM
Parcel/Sequence Number	⑫③
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	----- FDM
False Sump	⊕

RAILROADS:

Standard Gauge	-----
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	⊕
Proposed Control of Access	⊕
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	-----
Equality 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	⊕
Storm Sewer	----- S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊕
Power Transformer	⊕
U/G Power Cable Hand Hole	⊕
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	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	⊕
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	⊕
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	⊕
TV Tower	⊕
U/G TV Cable Hand Hole	⊕
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:

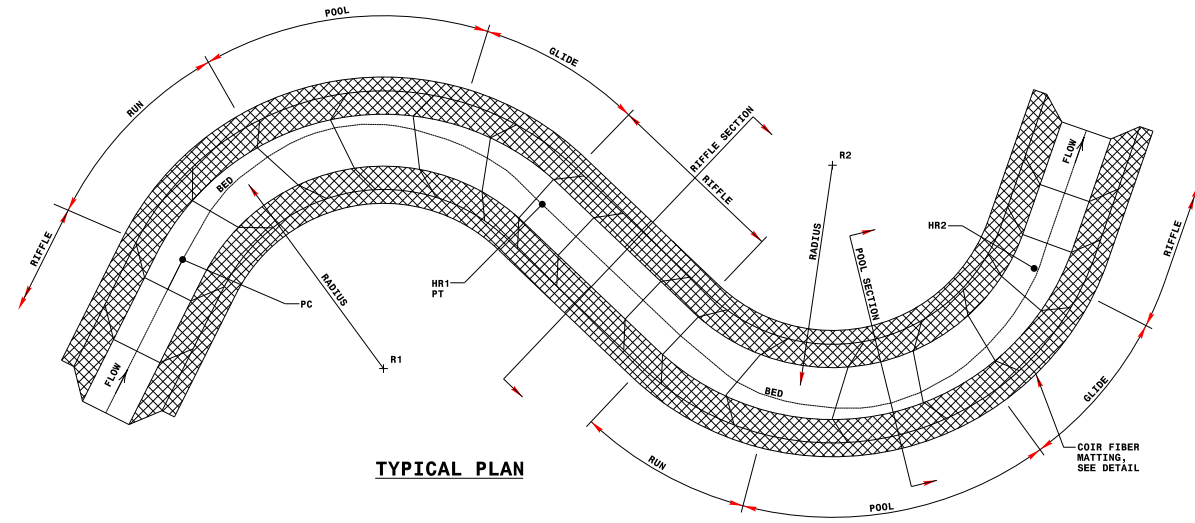
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	----- FSS
Designated SS Forced Main Line (S.U.E.*)	----- FSS

MISCELLANEOUS:

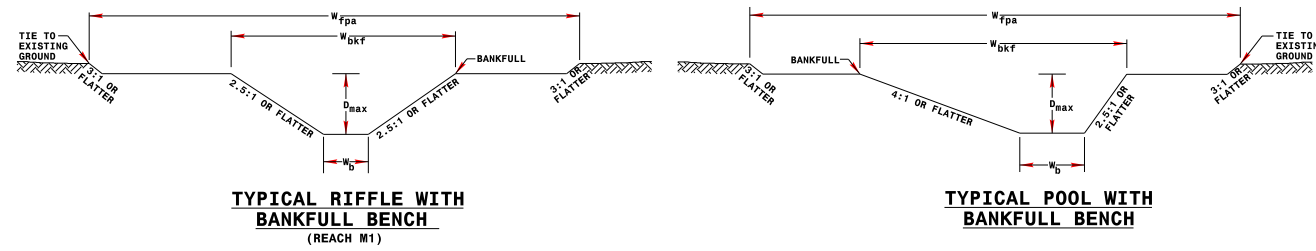
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	----- ZUTL
U/G Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

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

CHANNEL TYPICAL DETAIL
NOT TO SCALE

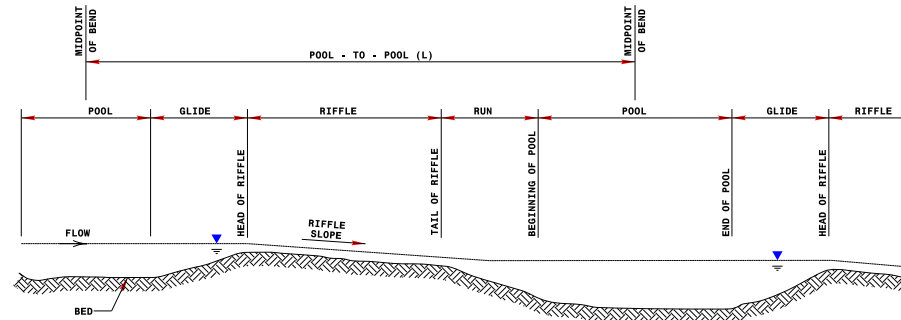


TYPICAL PLAN



TYPICAL RIFFLE WITH BANKFULL BENCH (REACH M1)

TYPICAL POOL WITH BANKFULL BENCH



TYPICAL PROFILE

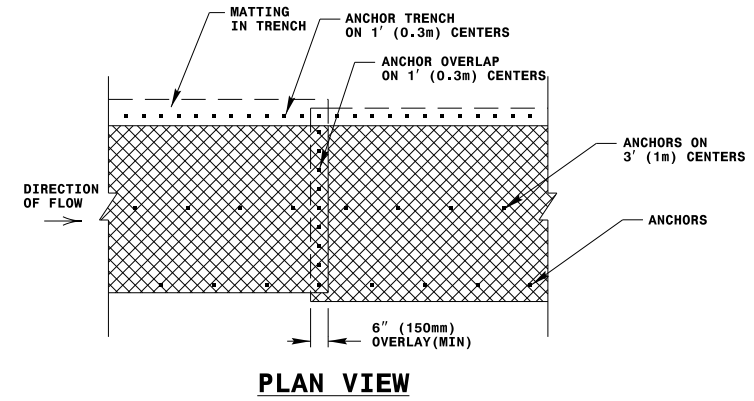
W_{dkf} = BANKFULL WIDTH
D_{max} = MAXIMUM DEPTH
W_b = BOTTOM WIDTH
W_{fpa} = FLOOD PRONE AREA WIDTH

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

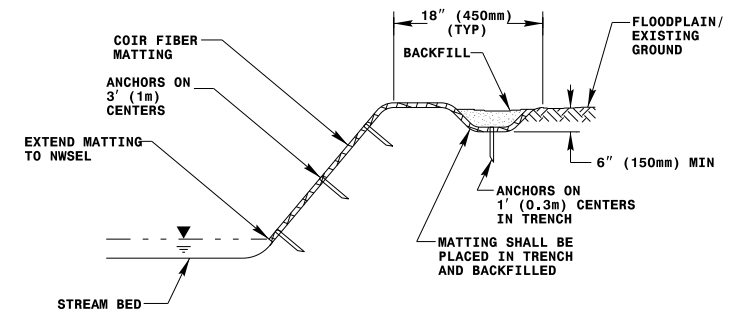
REACH	RIFFLE				POOL				Width/Depth Ratio
	W _{bkf}	D _{max}	W _b	W _{fpa}	W _{bkf}	D _{max}	W _b	W _{fpa}	
M1, Sta. 10+16-36+85.93	13.39	1.61	5.51	62.0	17.39	2.49	2.40	62.0	12
UT1, Sta. 10+00-12+47.19	*								
UT2, Sta. 10+00-17+42.64	*								

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

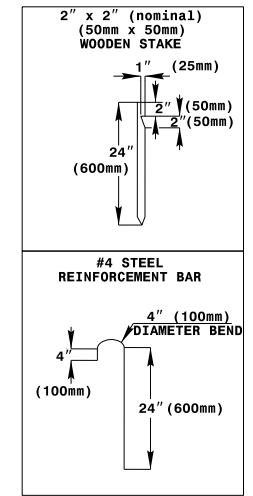
COIR FIBER MATTING DETAIL
NOT TO SCALE



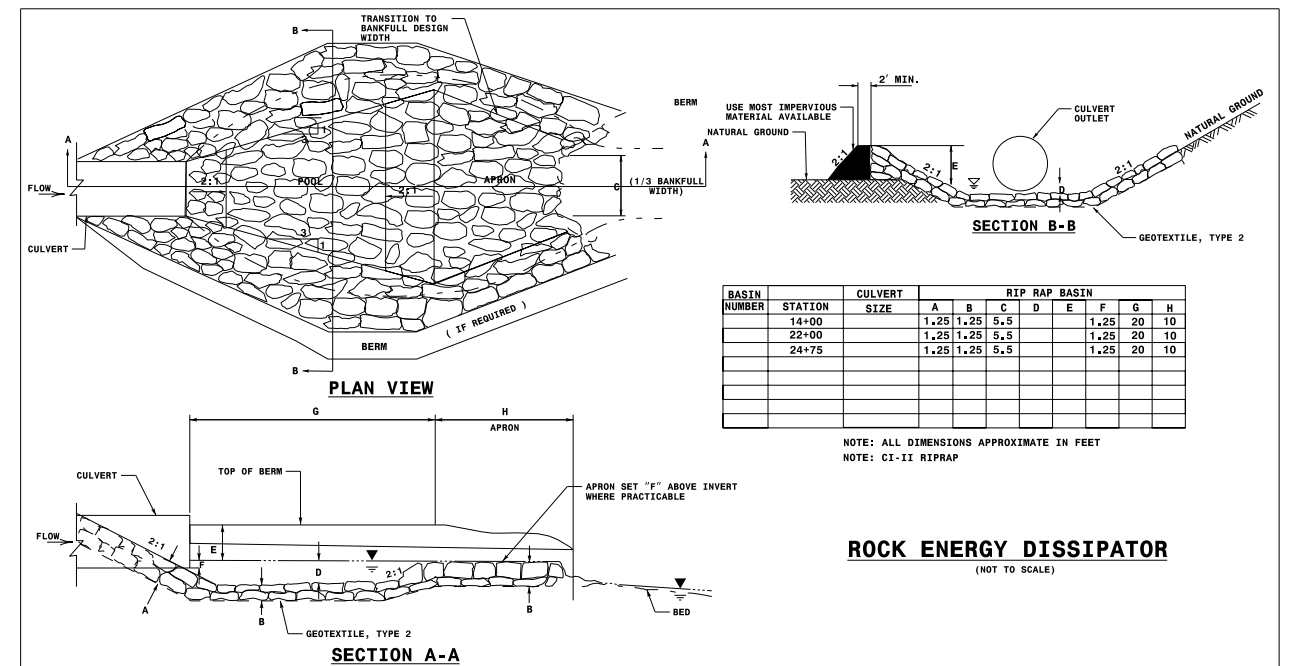
PLAN VIEW



TYPICAL CROSS SECTION



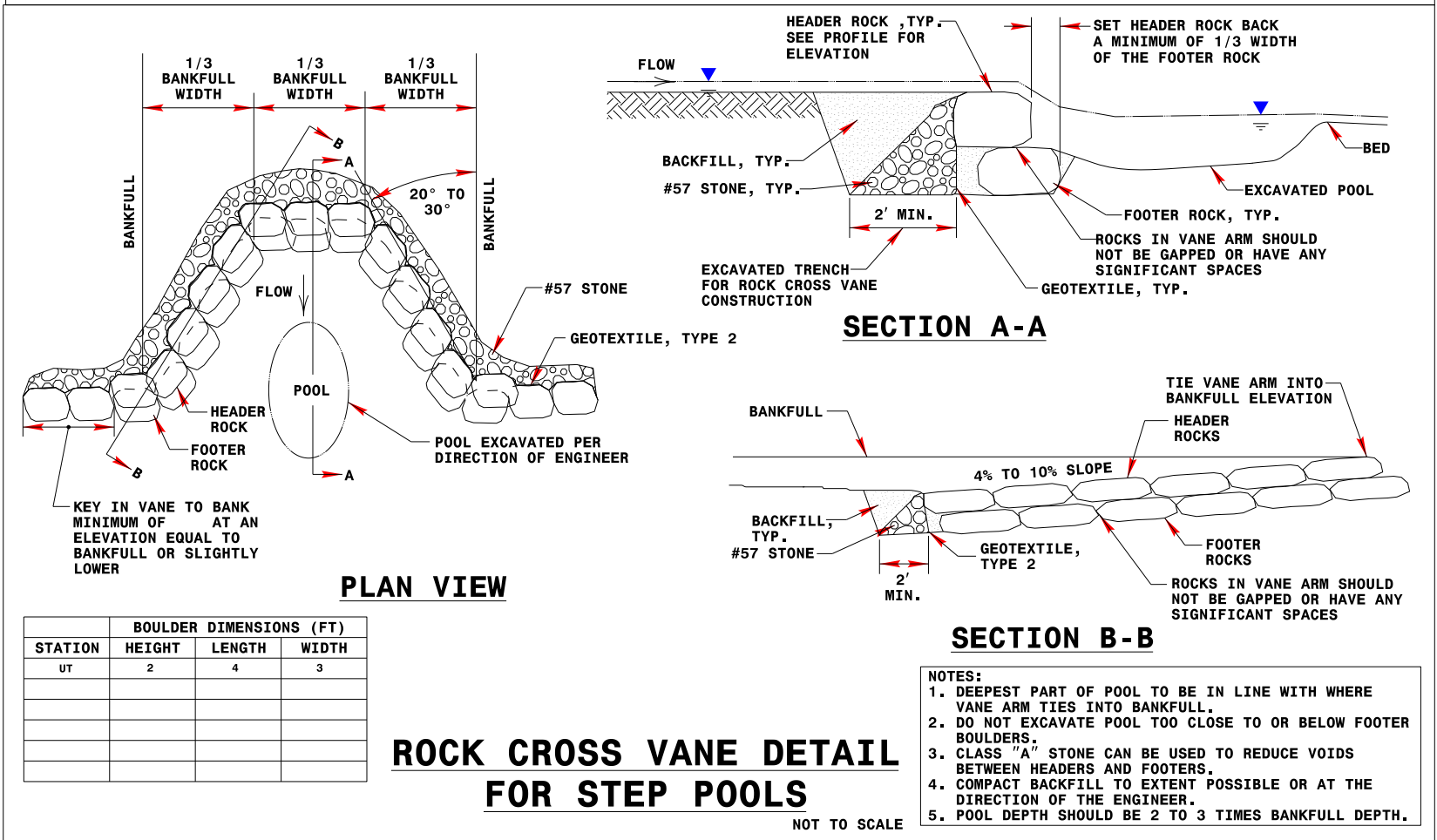
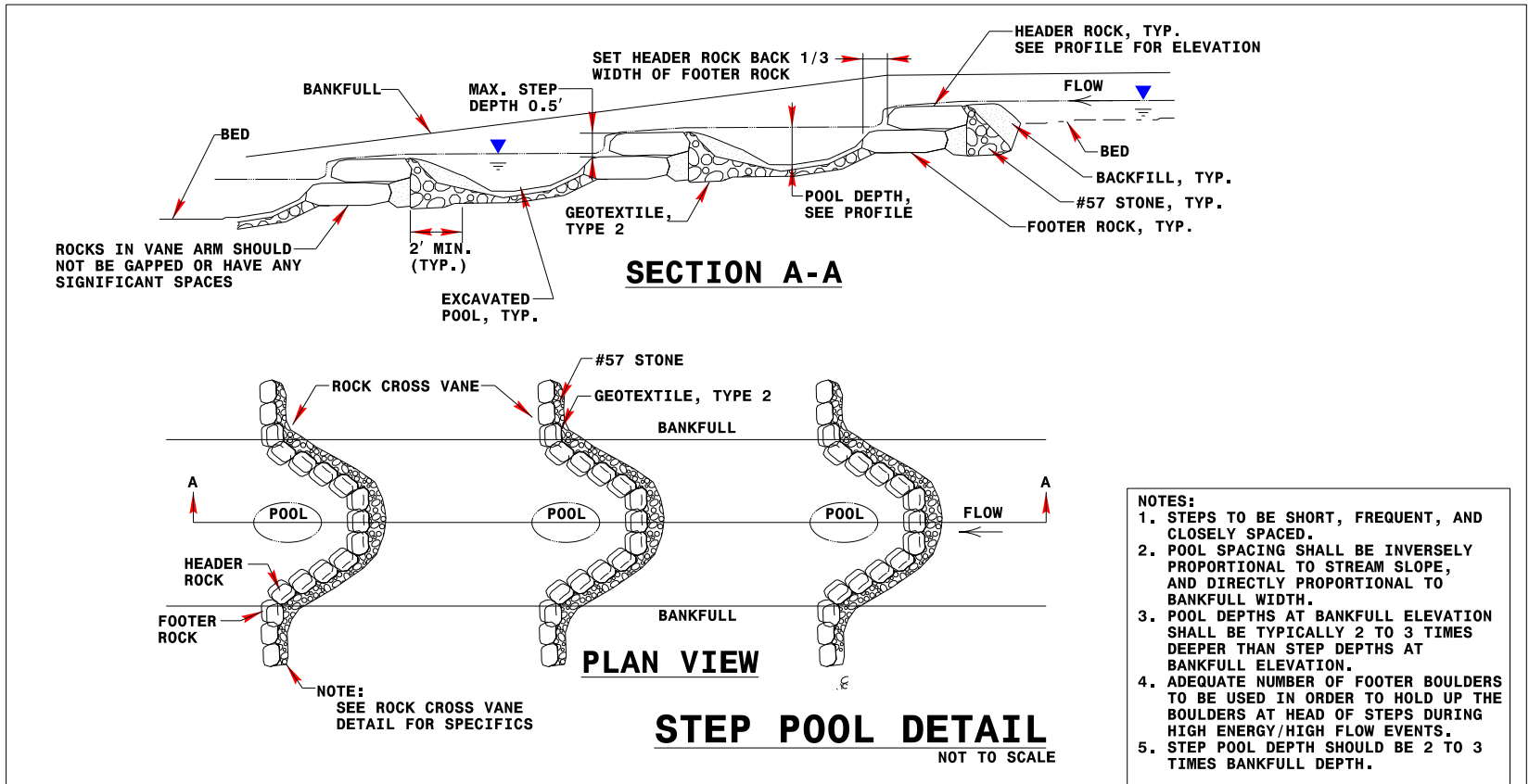
ANCHOR OPTIONS



BASIN NUMBER	STATION	CULVERT SIZE	RIP RAP BASIN							
			A	B	C	D	E	F	G	H
	14+00		1.25	1.25	5.5			1.25	20	10
	22+00		1.25	1.25	5.5			1.25	20	10
	24+75		1.25	1.25	5.5			1.25	20	10

NOTE: ALL DIMENSIONS APPROXIMATE IN FEET
NOTE: CI-II RIPRAP

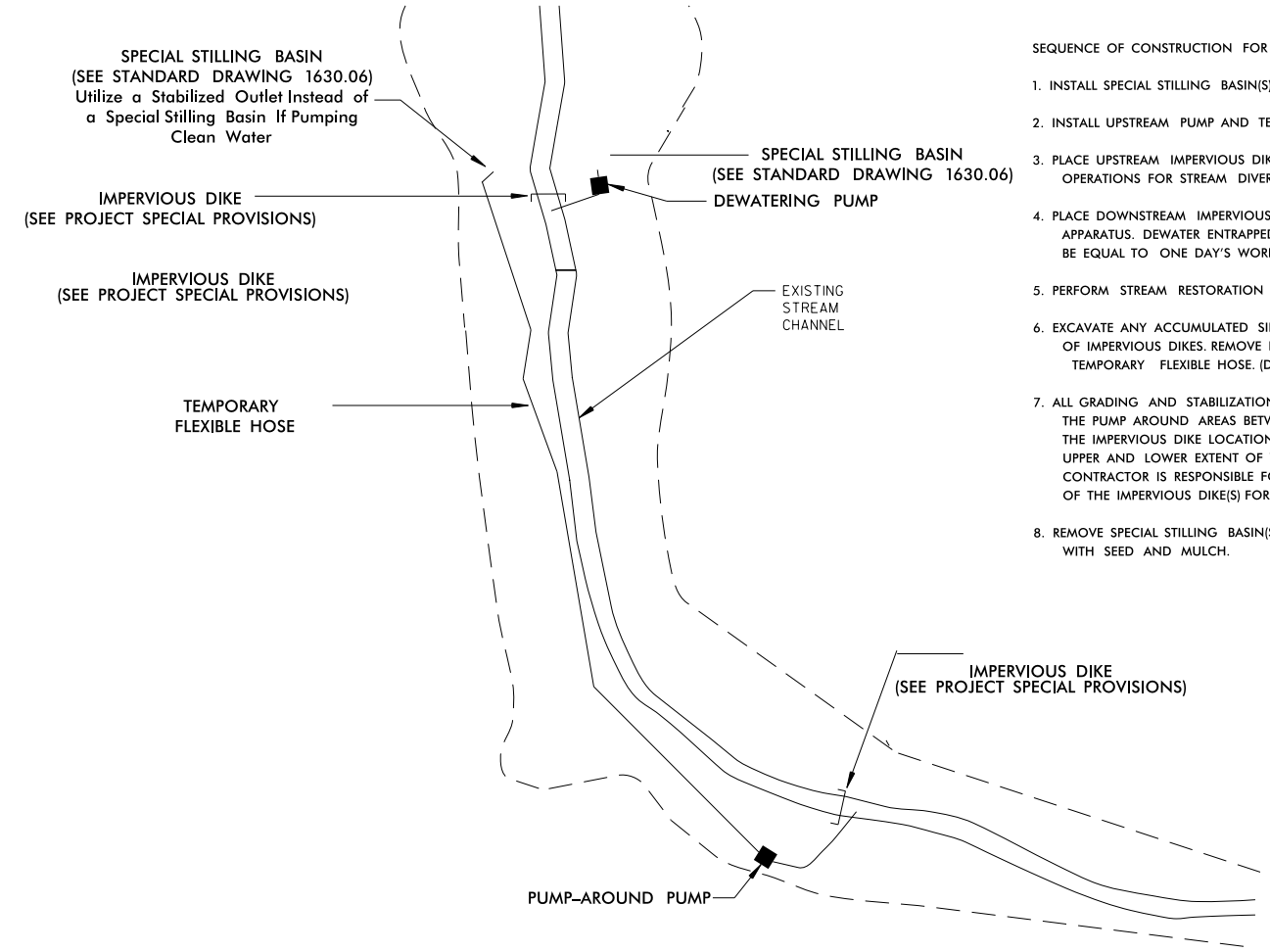
ROCK ENERGY DISSIPATOR
(NOT TO SCALE)



BOULDER DIMENSIONS (FT)			
STATION	HEIGHT	LENGTH	WIDTH
UT	2	4	3

07/09/17

- 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 sufficient size to dewater the work area.



- 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.

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

CONSTRUCTION SEQUENCE

The Contractor is responsible for following the sequence of construction in accordance with 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 4 separate repair areas. Once work begins on a repair area, the Contractor must complete that area before moving work crews and equipment to a different repair area.
3. Before water is turned into repaired channel, each repair area must be a completed work product, i.e. all bank and channel modifications, including all grading, seeding and mulching, and matting, as directed by the Engineer.

The following general provisions will apply to each repair area.

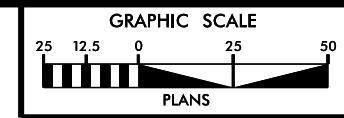
1. Layout location of each repair area, including grade stakes and construction easement limits, if warranted. Engineer must inspect and approve all layout work before construction can begin.
2. Mobilize equipment and materials to site.
3. Set up staging areas, construction entrances, and and safety 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 one 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 haul roads and demobilize equipment from the site.

SUMMARY OF QUANTITIES

ITEM NUMBER	SECT	QUANTITY	UNIT	ITEM DESCRIPTION
0000100000-E	800	1	LS	Mobilization
6133000000-N	SP	1	LS	Construction Surveying for Mitigation
6133000000-N	SP	1	LS	Site Grading for Mitigation
3656000000-E	876	150	SY	Geotextile for Drainage
1121000000-E	520	40	TON	Aggregate Base Course
1077000000-E	SP	40	TON	No. 57 Stone
3642000000-E	876	40	TON	Rip Rap, Class A
3649000000-E	876	40	TON	Rip Rap, Class B
3628000000-E	876	30	TON	Rip Rap, Class I
3635000000-E	876	75	TON	Rip Rap, Class II
3651000000-E	SP	40	TON	Boulders
6006000000-E	1610	20	TON	Stone for Erosion Control, Class A
6009000000-E	1610	20	TON	Stone for Erosion Control, Class-B
6012000000-E	1610	20	TON	Sediment Control Stone
6133000000-N	SP	1	LS	Diversion Pumping
6037000000-E	SP	500	SY	Coir Fiber Mat
6038000000-E	SP	50	SY	Permanent Soil Reinforcement Mat
6036000000-E	1631	250	SY	Matting for Erosion Control
6000000000-E	1605	250	LF	Temporary Silt Fence
6070000000-N	1639	5	EACH	Special Stilling Basins
6030000000-E	1630	25	CY	Silt Excavation
6042000000-E	1632	50	LF	1/4" Hardware Cloth
6015000000-E	1615	2	AC	Temporary Mulching
6018000000-E	1620	200	LB	Seed for Temporary Seeding
6021000000-E	1620	1	TON	Fertilizer for Temporary Seeding
6029000000-E	SP	100	LF	Safety Fence
6084000000-E	1660	1.0	AC	Seeding and Mulching
6135000000-E	SP	2	AC	Native Grass Seeding and Mulching
6090000000-E	1661	200	LB	Seed for Repair Seeding
6093000000-E	1661	1	TON	Fertilizer for Repair Seeding

REVISIONS

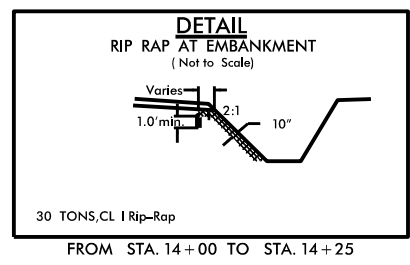
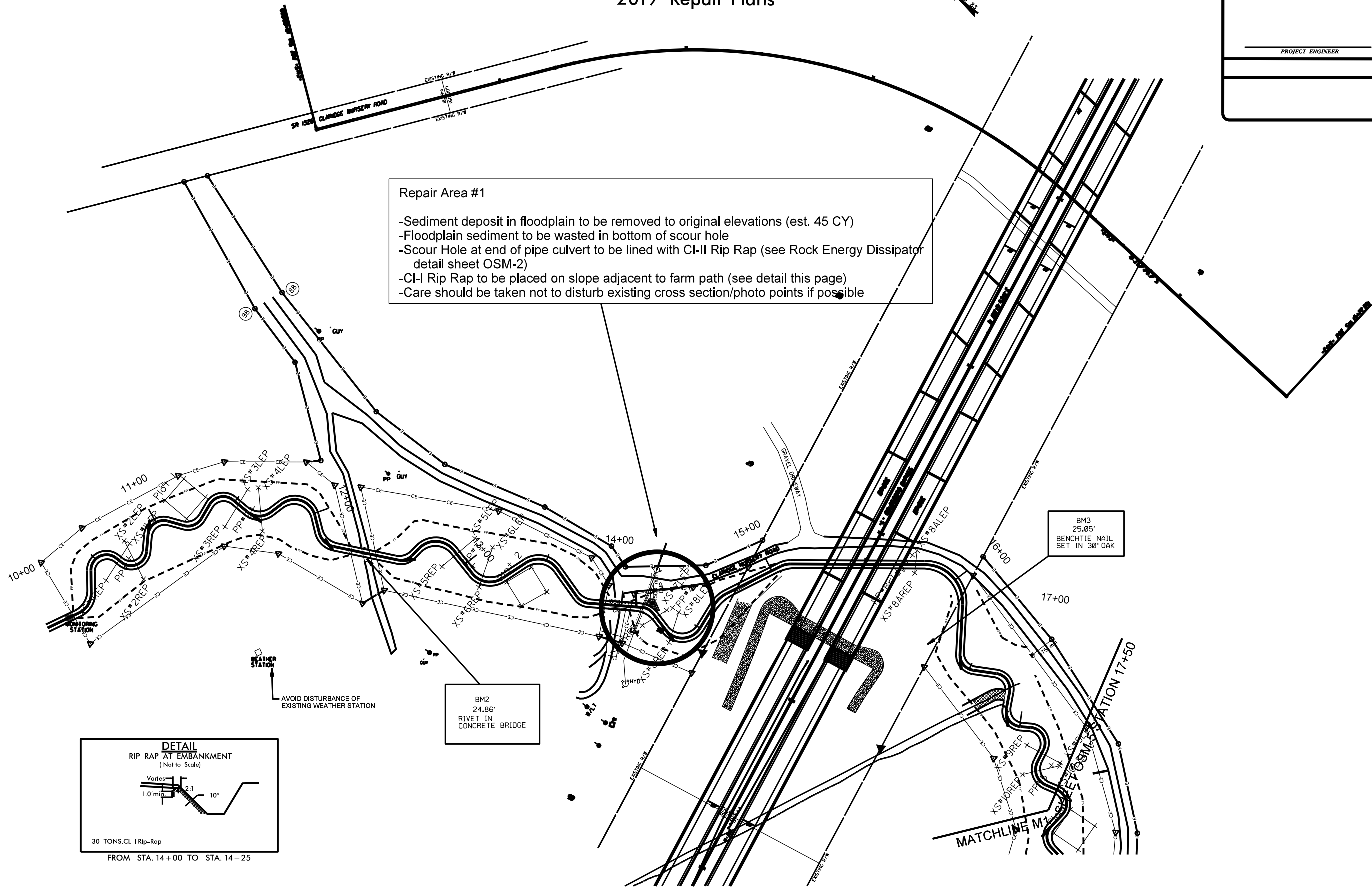
CLARIDGE NURSERY
R-2554WM
2019 Repair Plans



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

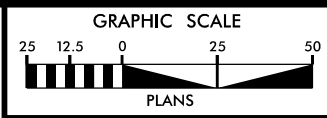
Repair Area #1

- Sediment deposit in floodplain to be removed to original elevations (est. 45 CY)
- Floodplain sediment to be wasted in bottom of scour hole
- Scour Hole at end of pipe culvert to be lined with CI-II Rip Rap (see Rock Energy Dissipator detail sheet OSM-2)
- CI-II Rip Rap to be placed on slope adjacent to farm path (see detail this page)
- Care should be taken not to disturb existing cross section/photo points if possible



REVISIONS

CLARIDGE NURSERY
 R-2554WM
 2019 Repair Plans

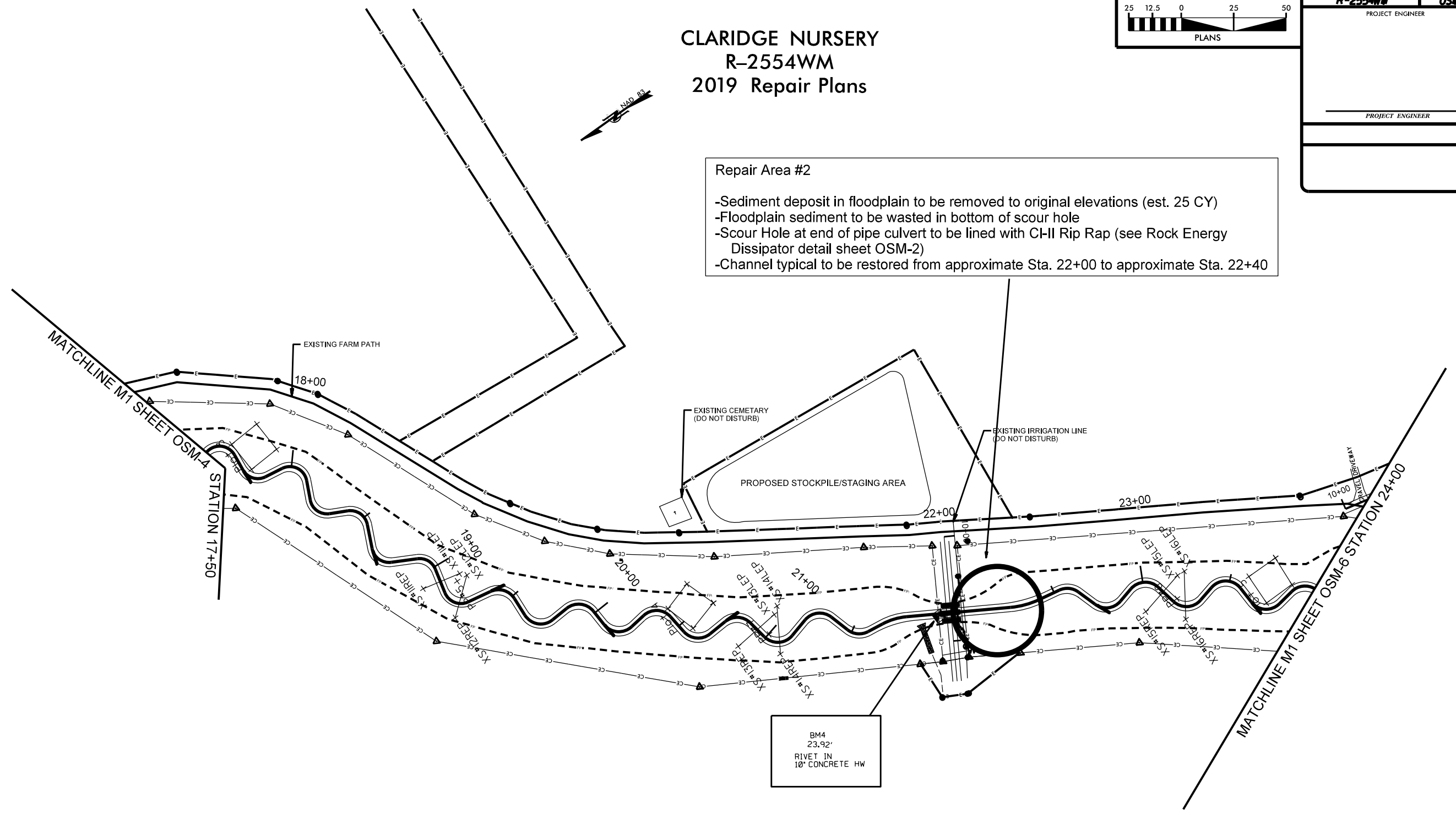


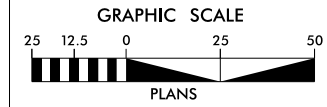
PROJECT REFERENCE NO. R-2554WM	SHEET NO. OSM-5
PROJECT ENGINEER	
PROJECT ENGINEER	

Repair Area #2

- Sediment deposit in floodplain to be removed to original elevations (est. 25 CY)
- Floodplain sediment to be wasted in bottom of scour hole
- Scour Hole at end of pipe culvert to be lined with C-II Rip Rap (see Rock Energy Dissipator detail sheet OSM-2)
- Channel typical to be restored from approximate Sta. 22+00 to approximate Sta. 22+40

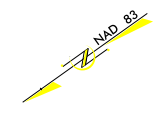
REVISIONS





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

CLARIDGE NURSERY R-2554WM 2019 Repair Plans



Repair Area #3

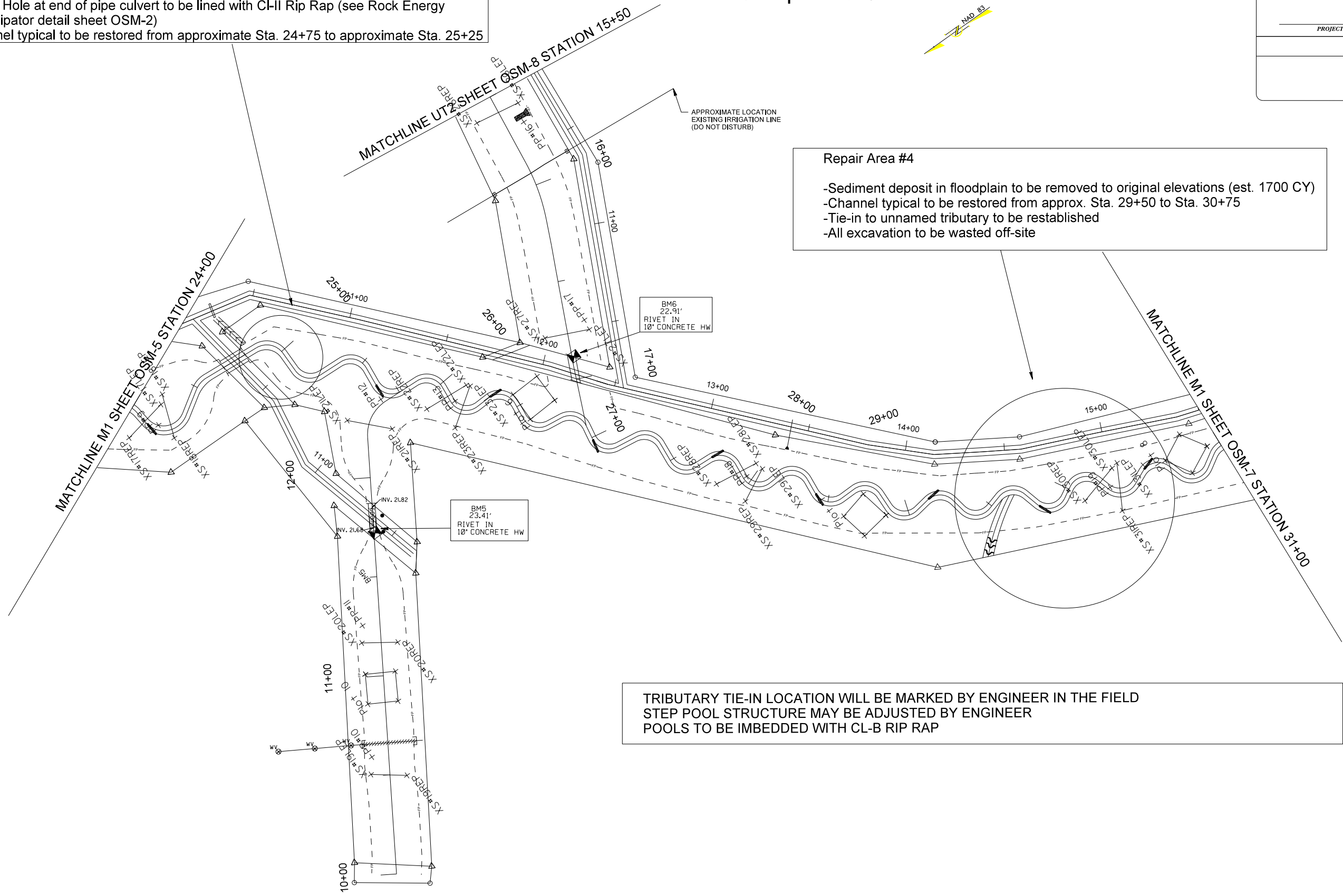
- Sediment deposit in floodplain to be removed to original elevations (est. 45 CY)
- Floodplain sediment to be wasted in bottom of scour hole
- Scour Hole at end of pipe culvert to be lined with CI-II Rip Rap (see Rock Energy Dissipator detail sheet OSM-2)
- Channel typical to be restored from approximate Sta. 24+75 to approximate Sta. 25+25

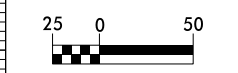
Repair Area #4

- Sediment deposit in floodplain to be removed to original elevations (est. 1700 CY)
- Channel typical to be restored from approx. Sta. 29+50 to Sta. 30+75
- Tie-in to unnamed tributary to be reestablished
- All excavation to be wasted off-site

TRIBUTARY TIE-IN LOCATION WILL BE MARKED BY ENGINEER IN THE FIELD
STEP POOL STRUCTURE MAY BE ADJUSTED BY ENGINEER
POOLS TO BE IMBEDDED WITH CL-B RIP RAP

REVISIONS
 02 JUL 2019 09:17
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PROJECT REFERENCE NO. R-2554MM	SHEET NO. OSM-9
PROJECT ENGINEER	
PROJECT ENGINEER	

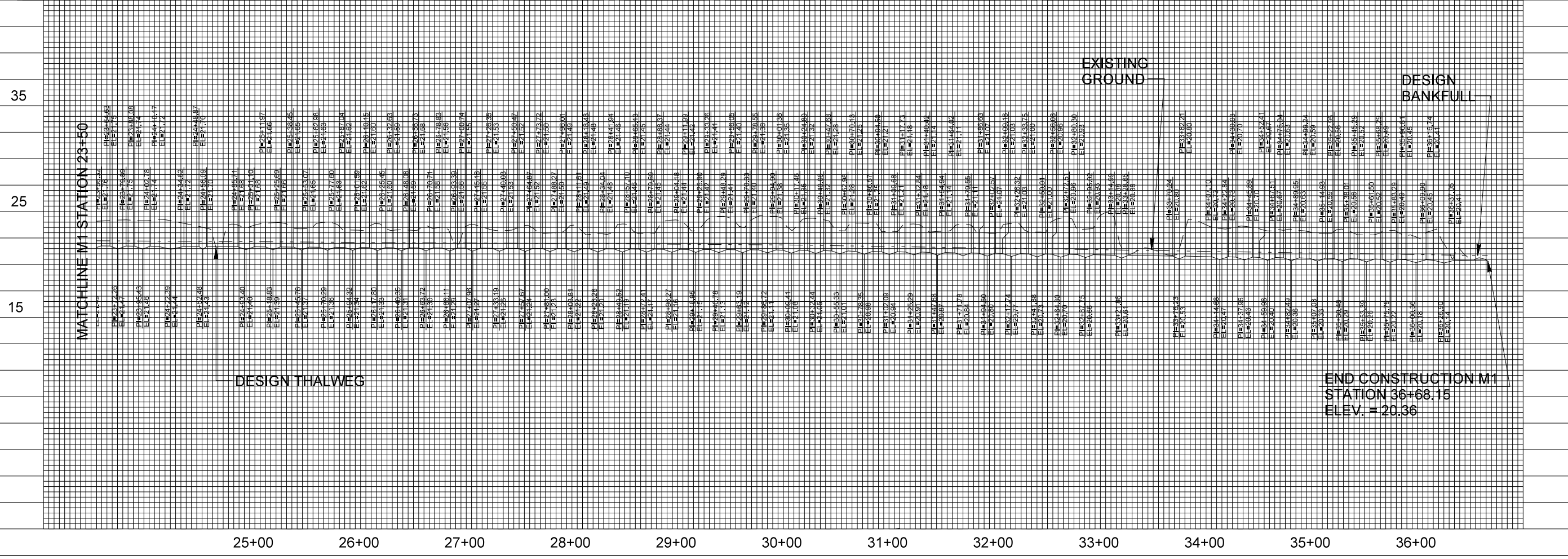
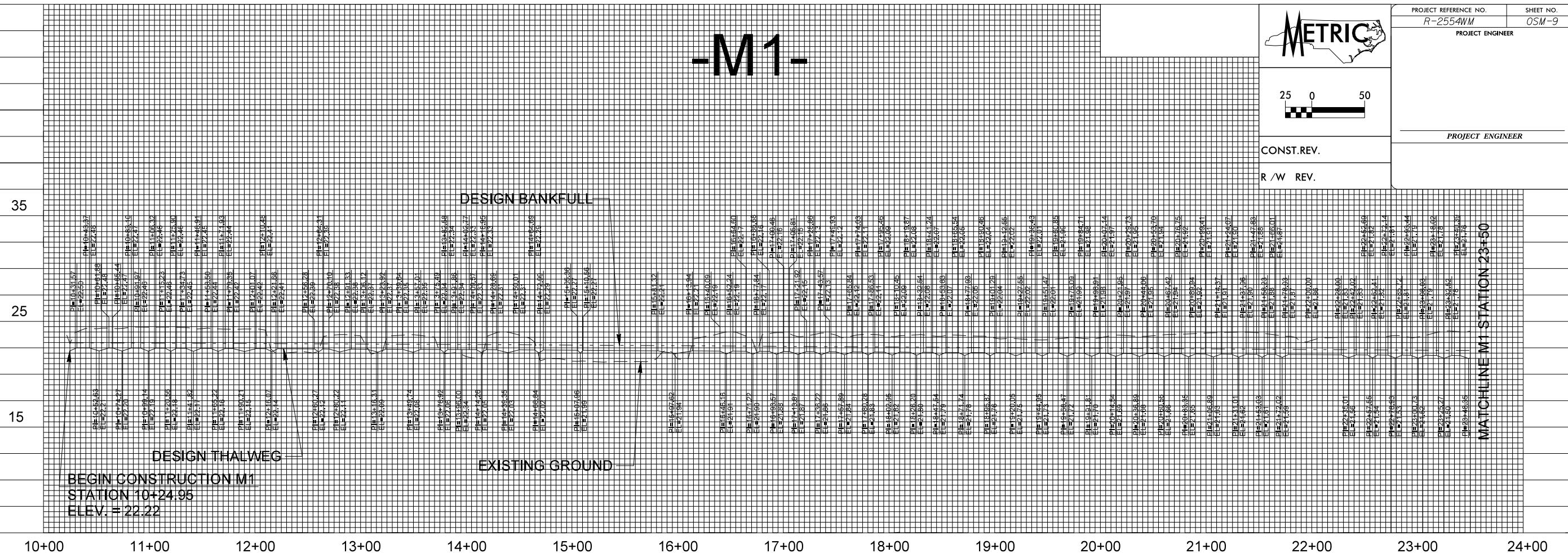
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REVISIONS

06-10-2015 - CHANGED PROJECT REFERENCE NUMBER TO R-2554MM

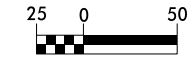
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2/26/03



MATCHLINE M1 STATION 23+50

END CONSTRUCTION M1
STATION 36+68.15
ELEV. = 20.36

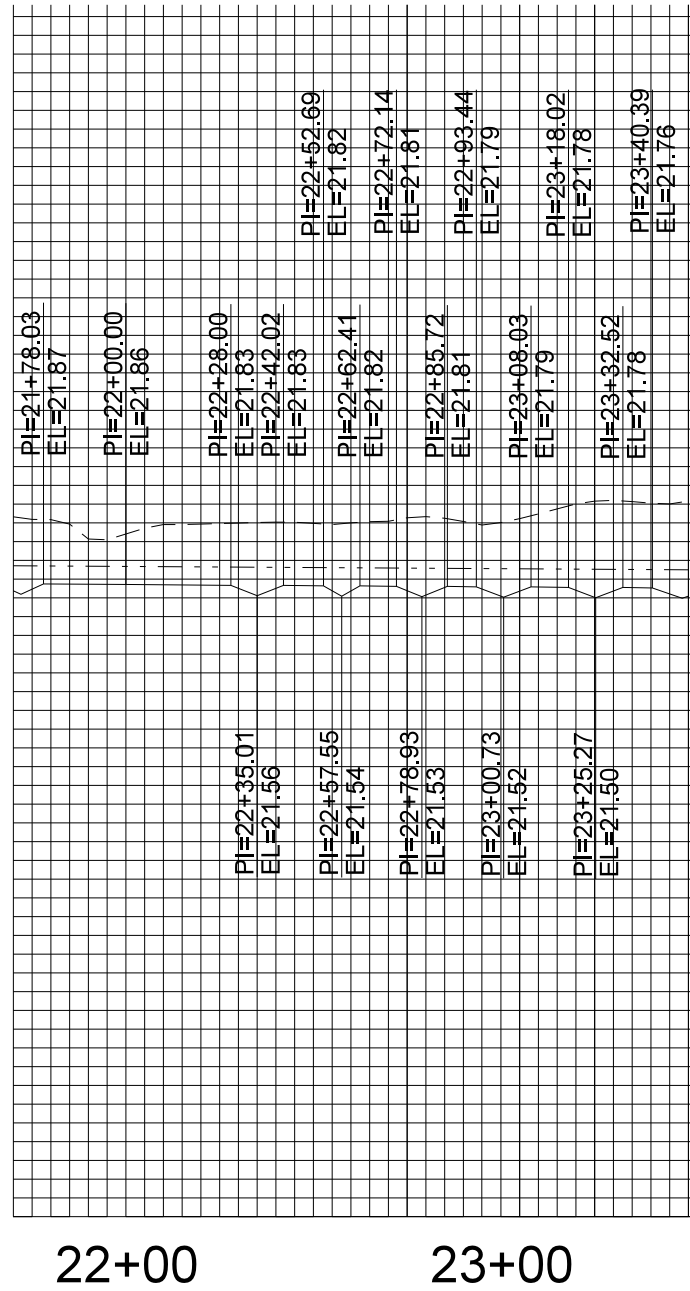


CONST.REV.
R /W REV.

PROJECT ENGINEER

PROFILE INFORMATION FOR REPAIR AREA #2

REPAIR AREA #2



STATION	DESCRIPTION	CHANNEL ELEVATION	FLOODPLAIN ELEVATION
STA. 22+00	OUTLET	21.86M (71.70')	22.35M (73.32')
STA. 22+28	TAIL OF RIFFLE	21.83M (71.60')	22.32M (73.22')
STA. 22+35	POOL	21.56M (70.73')	
STA. 22+42	HEAD OF RIFFLE	21.83M (71.60')	22.32M (73.22')

ELEVATIONS MAY BE ADJUSTED BY ENGINEER

FLOODPLAIN ELEVATIONS ARE 0.49M (1.6') ABOVE CHANNEL RIFFLE ELEVATIONS

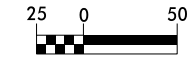
REVISIONS

PROFILE INFORMATION FOR REPAIR AREA #3



PROJECT REFERENCE NO. R-2554MM SHEET NO. OSM-9B

PROJECT ENGINEER

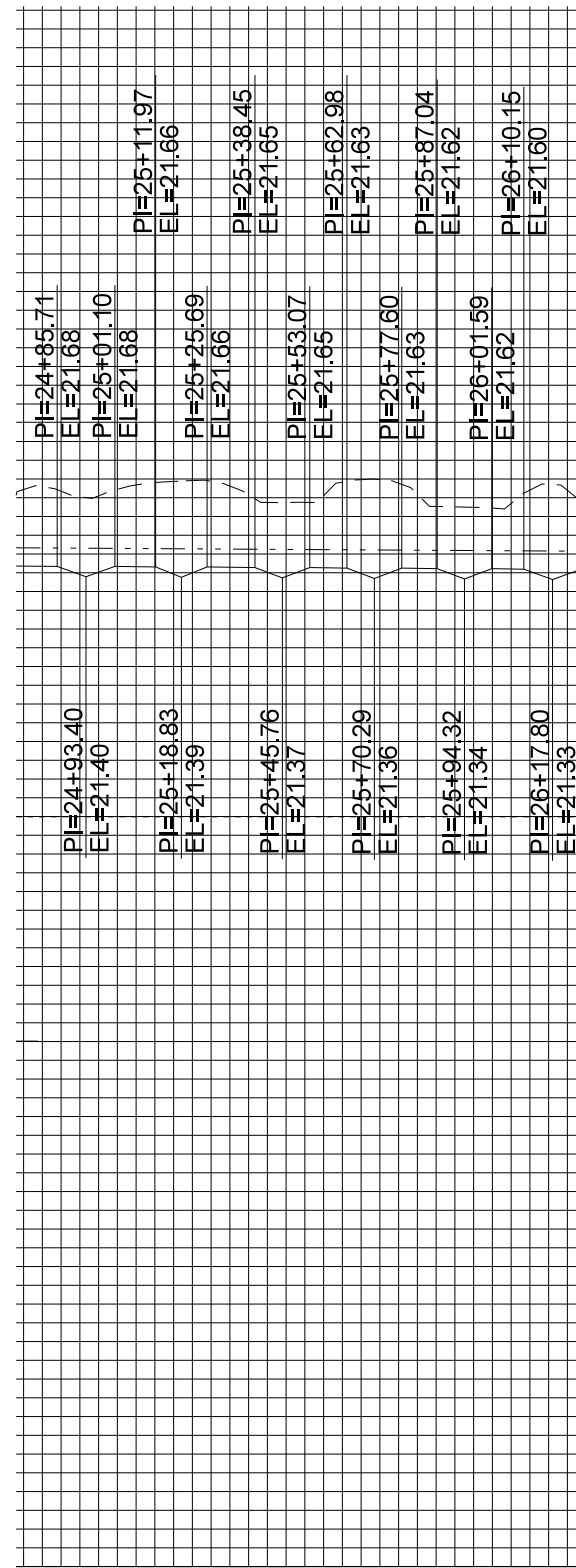


CONST. REV.

R / W REV.

PROJECT ENGINEER

REPAIR AREA #3



25+00

26+00



STATION	DESCRIPTION	CHANNEL ELEVATION	FLOODPLAIN ELEVATION
STA. 24+85	TAIL OF RIFFLE	21.68M (71.12')	22.17M (72.73')
STA. 24+93	POOL	21.40M (70.20')	
STA. 25+01	HEAD OF RIFFLE	21.68M (71.12')	22.17M (72.73')
STA. 25+11	TAIL OF RIFFLE	21.66M (71.06')	22.15M (72.67')
STA. 25+18	POOL	21.39M (70.17')	
STA. 25+25	HEAD OF RIFFLE	21.66M (71.06')	22.15M (72.65')

ELEVATIONS MAY BE ADJUSTED BY ENGINEER

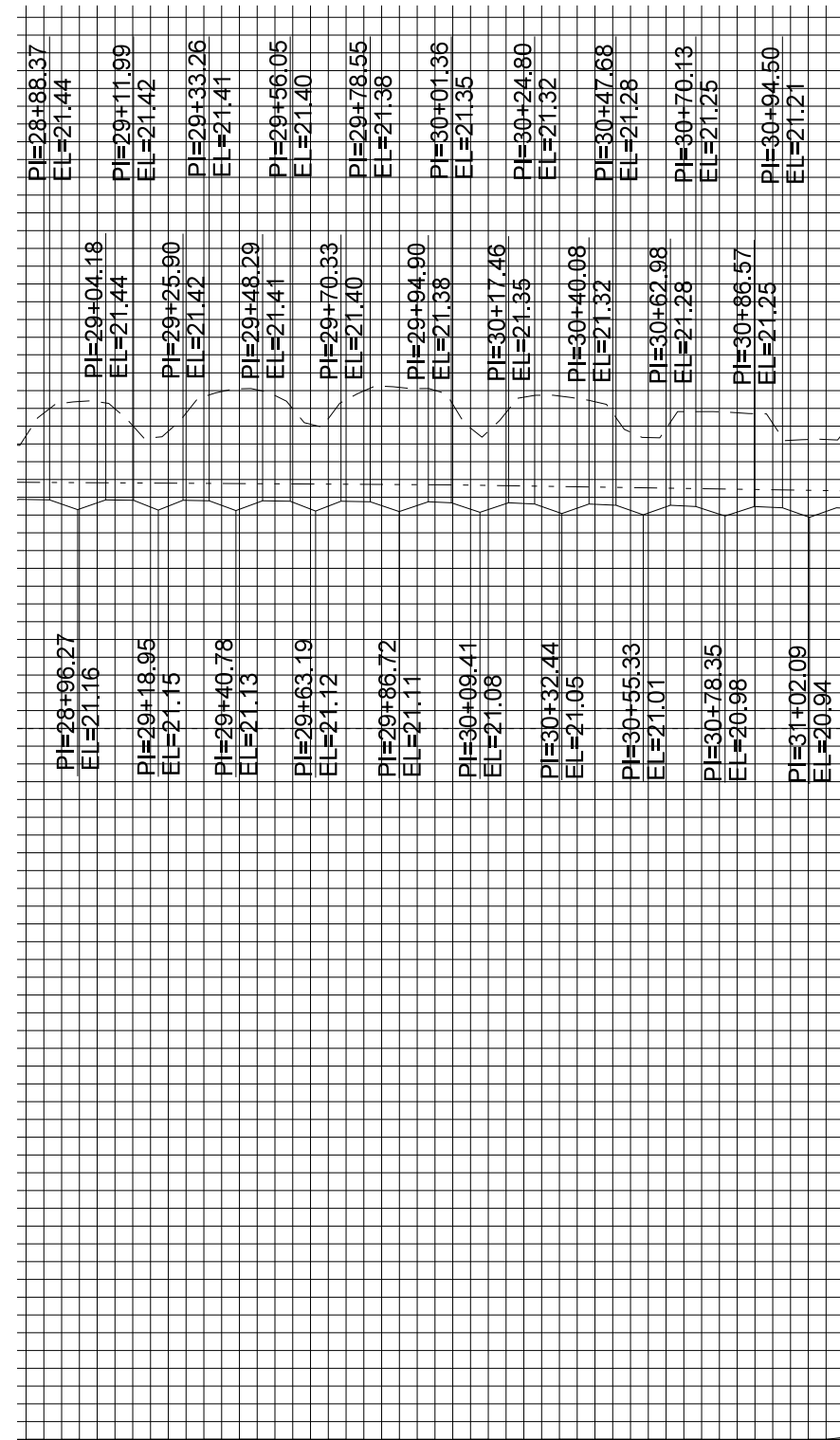
FLOODPLAIN ELEVATIONS ARE 0.49M (1.6') ABOVE CHANNEL RIFFLE ELEVATIONS

REVISIONS

PROFILE INFORMATION FOR REPAIR AREA #4

	PROJECT REFERENCE NO. R-2554MM	SHEET NO. OSM-9C
	PROJECT ENGINEER	
		
CONST. REV.		
R / W REV.		

REPAIR AREA #4



STATION	DESCRIPTION	CHANNEL ELEVATION	FLOODPLAIN ELEVATION
STA. 29+48	HEAD OF RIFFLE	21.41M (70.24')	21.90M (71.85')
STA. 29+56	TAIL OF RIFFLE	21.40M (70.20')	21.89M (71.81')
STA. 29+63	POOL	21.12M (69.29')	
STA. 29+70	HEAD OF RIFFLE	21.40M (70.20')	21.89M (71.81')
STA. 29+78	TAIL OF RIFFLE	21.38M (70.14')	21.87M (71.75')
STA. 29+86	POOL	21.11M (69.25')	
STA. 29+94	HEAD OF RIFFLE	21.38M (70.14')	21.87M (71.75')
STA. 30+01	TAIL OF RIFFLE	21.35M (70.04')	21.84M (71.65')
STA. 30+09	POOL	21.08M (69.16')	
STA. 30+17	HEAD OF RIFFLE	21.35M (70.04')	21.84M (71.65')
STA. 30+24	TAIL OF RIFFLE	21.32M (69.94')	21.81M (71.55')
STA. 30+32	POOL	21.05M (69.06')	
STA. 30+40	HEAD OF RIFFLE	21.32M (69.94')	21.81M (71.55')
STA. 30+47	TAIL OF RIFFLE	21.28M (69.81')	21.77M (71.42')
STA. 30+55	POOL	21.01M (68.93')	
STA. 30+62	HEAD OF RIFFLE	21.28M (69.81')	21.77M (71.42')
STA. 30+70	TAIL OF RIFFLE	21.25M (69.71')	21.74M (71.32')
STA. 30+78	POOL	20.98M (68.83')	

ELEVATIONS MAY BE ADJUSTED BY ENGINEER

FLOODPLAIN ELEVATIONS ARE 0.49M (1.6') ABOVE CHANNEL RIFFLE ELEVATIONS

29+00 30+00

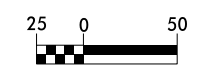
REVISIONS



PROJECT REFERENCE NO.
R-2554MM

SHEET NO.
OSM-10

PROJECT ENGINEER

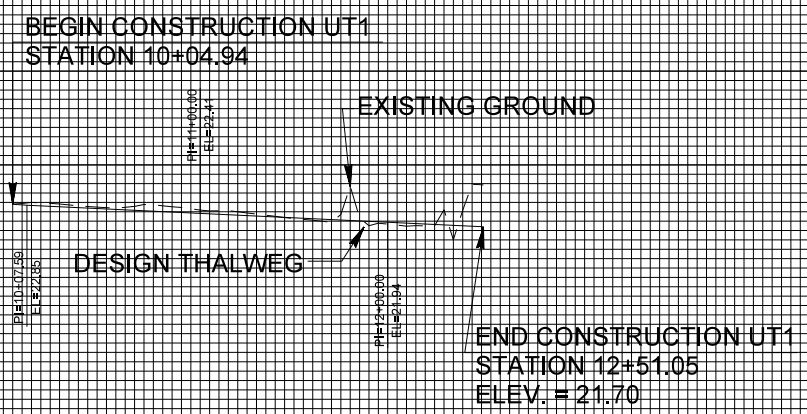


CONST. REV.

R / W REV.

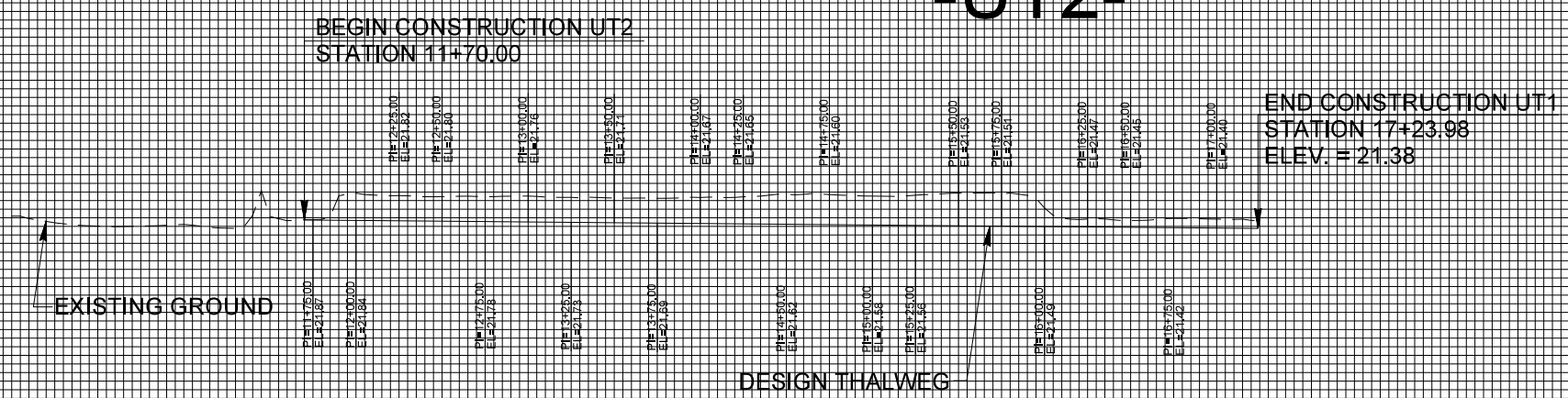
PROJECT ENGINEER

-UT1-



10+00 11+00 12+00

-UT2-



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

REVISIONS
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2/26/03

TIP PROJECT: R-2554WM

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS PLAN FOR PROPOSED EROSION CONTROL



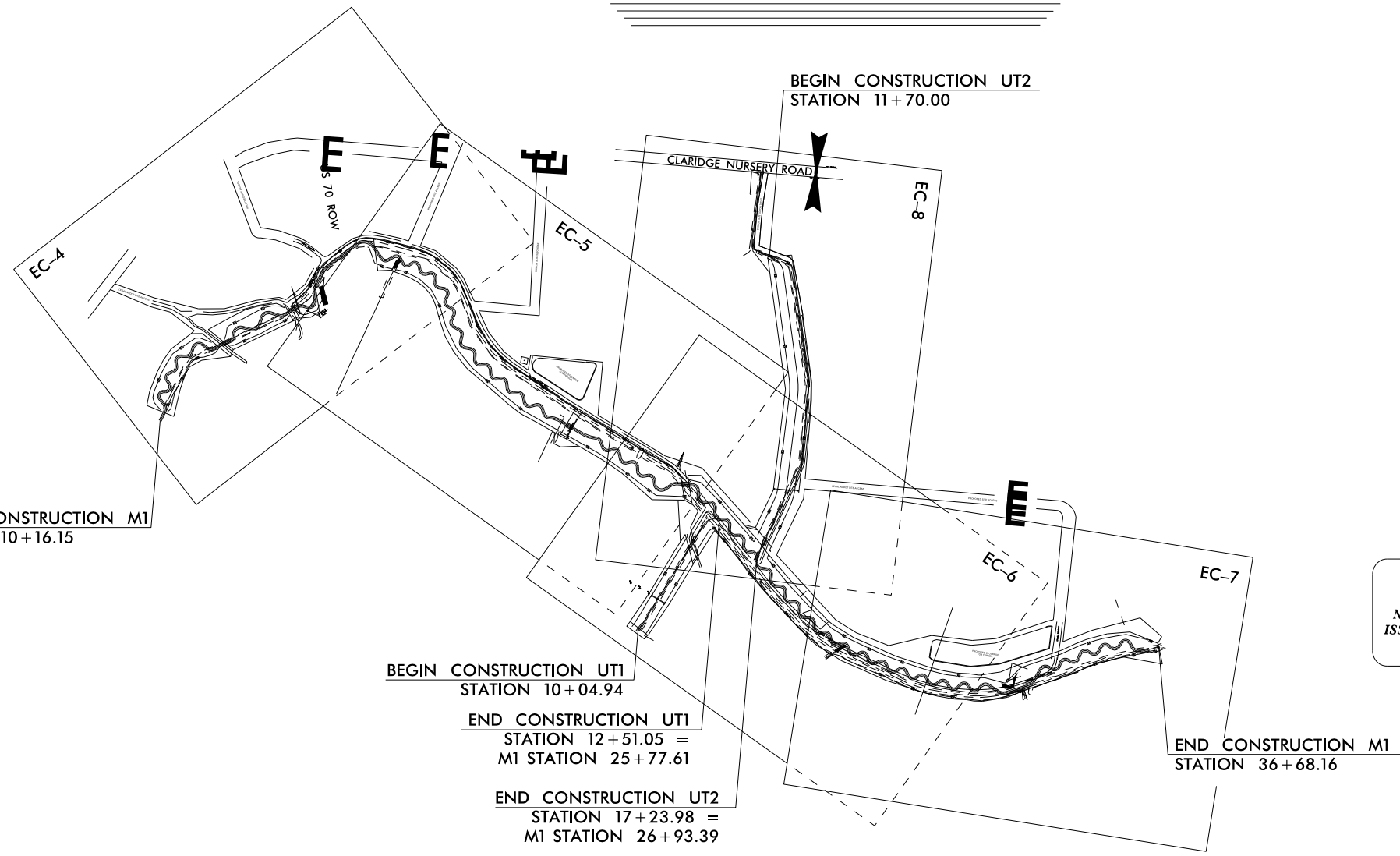
ALL DIMENSIONS IN THESE
PLANS ARE IN METERS
UNLESS OTHERWISE SHOWN

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2554WM	EC-1	5
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34461.4.S3		CONST.	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
876.02	Guide for Rip Rap at Pipe Outlets	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
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	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

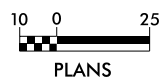
THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.



REVISIONS

08-May-2019 13:17 S:\Engineering\Projects\R-2554\Claridge Nursery\project\Claridge Nursery\erosion control\N2554_Roj_tsh.eci.dgn

GRAPHIC SCALE



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:

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

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 revision 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	1633.02	Temporary Rock Silt Check Type C
1630.02	Silt Basin Type B	1634.01	Temporary Rock Sediment Dam Type A
1630.03	Temporary Silt Ditch	1634.02	Temporary Rock Sediment Dam Type B
1630.04	Stilling Basin	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.05	Temporary Diversion	1635.02	Rock Pipe Inlet Sediment Trap Type B
		1636.01	Rock Silt Screen

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

PROJECT REFERENCE NO. <i>R-2554WM</i>	SHEET NO. <i>EC-1A</i>
PROJECT ENGINEER	
PROJECT ENGINEER	

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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.

REVISIONS

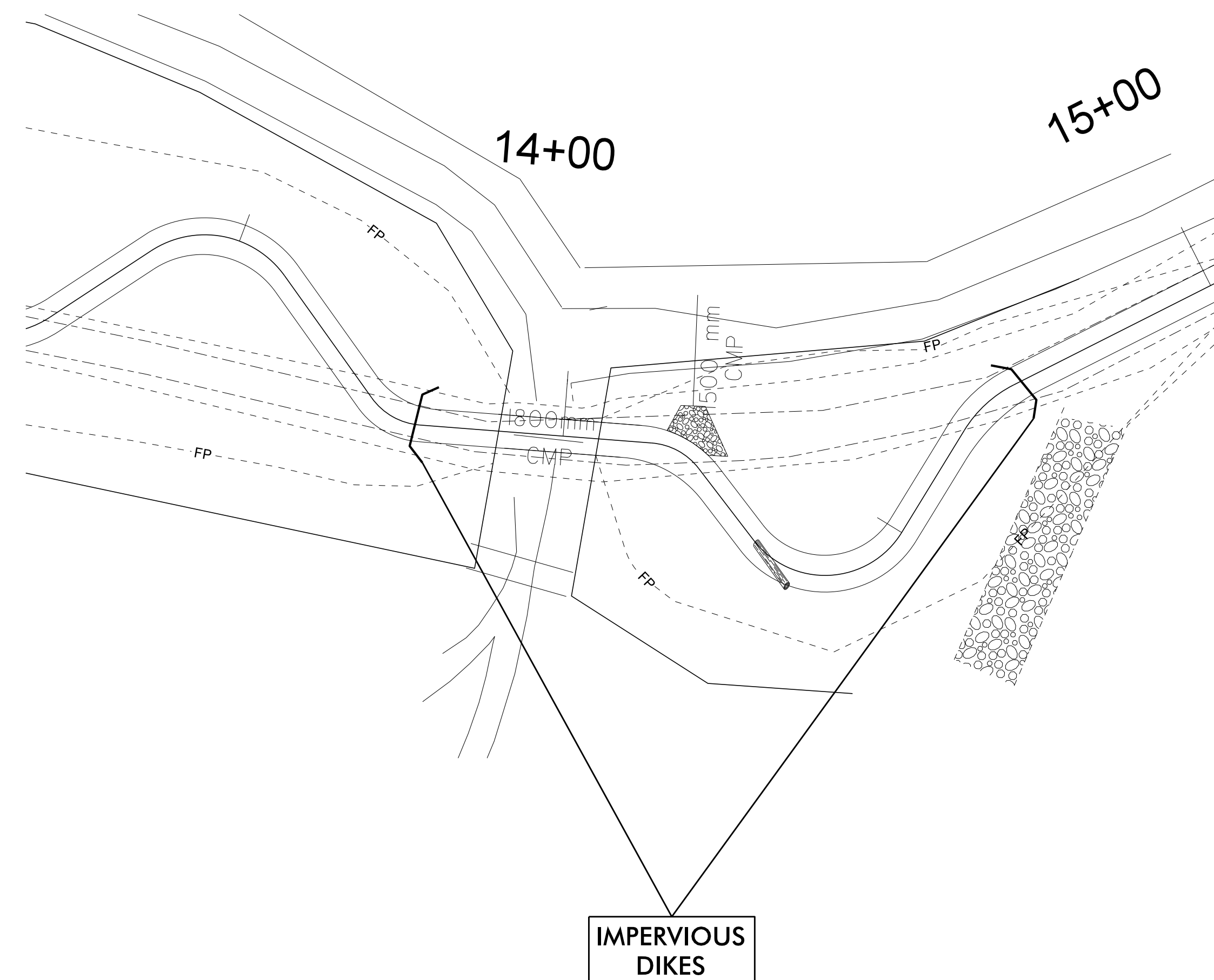
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User: jllott AT PDEA 250440



PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STREAM REPAIR SEQUENCE STA. 14+00 -L-

1. UTILIZE SPECIAL STILLING BASIN(S) TO DEWATER THE WORK SITE. LOCATE THE SPECIAL STILLING BASIN(S) OUTSIDE OF THE FLOODPLAIN IN A VEGETATED AREA.
2. INSTALL IMPERVIOUS DIKES AS SHOWN AND UTILIZE A BYPASS PUMP TO MAINTAIN FLOW AROUND THE WORK AREA.
3. REPAIR FLOODPLAIN AND STREAM PER PLAN WHILE USING APPROVED STOCKPILE AREAS AS DIRECTED.
4. UTILILZE NATIVE SEEDING AND COIR FIBER MATTING AS DIRECTED TO STABILIZE IMPACTED FLOODPLAIN/STREAMBANKS.
5. REMOVE IMPERVIOUS DIKES, SPECIAL STILLING BASIN(S), AND PUMPS FROM THE WORK AREA.
6. STABILIZE ANY SURROUNDING AREAS DISTURBED DURING REPAIR OPERATION.

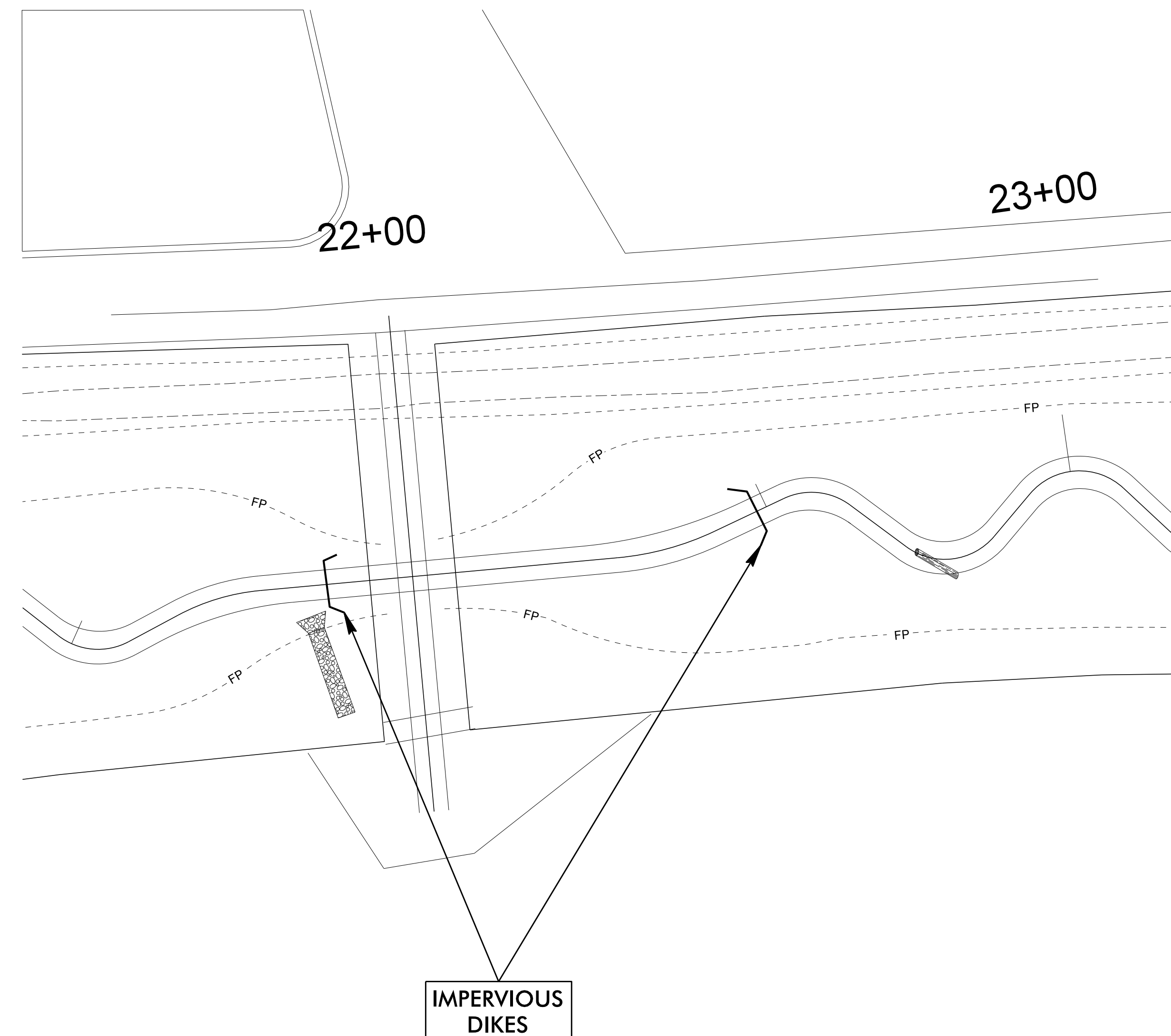




PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-3A
R / W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STREAM REPAIR SEQUENCE STA. 22+00 -L-

1. UTILIZE SPECIAL STILLING BASIN(S) TO DEWATER THE WORK SITE. LOCATE THE SPECIAL STILLING BASIN(S) OUTSIDE OF THE FLOODPLAIN IN A VEGETATED AREA.
2. INSTALL IMPERVIOUS DIKES AS SHOWN AND UTILIZE A BYPASS PUMP TO MAINTAIN FLOW AROUND THE WORK AREA.
3. REPAIR FLOODPLAIN AND STREAM PER PLAN WHILE USING APPROVED STOCKPILE AREAS AS DIRECTED.
4. UTILILZE NATIVE SEEDING AND COIR FIBER MATTING AS DIRECTED TO STABILIZE IMPACTED FLOODPLAIN/STREAMBANKS.
5. REMOVE IMPERVIOUS DIKES, SPECIAL STILLING BASIN(S), AND PUMPS FROM THE WORK AREA.
6. STABILIZE ANY SURROUNDING AREAS DISTURBED DURING REPAIR OPERATION.

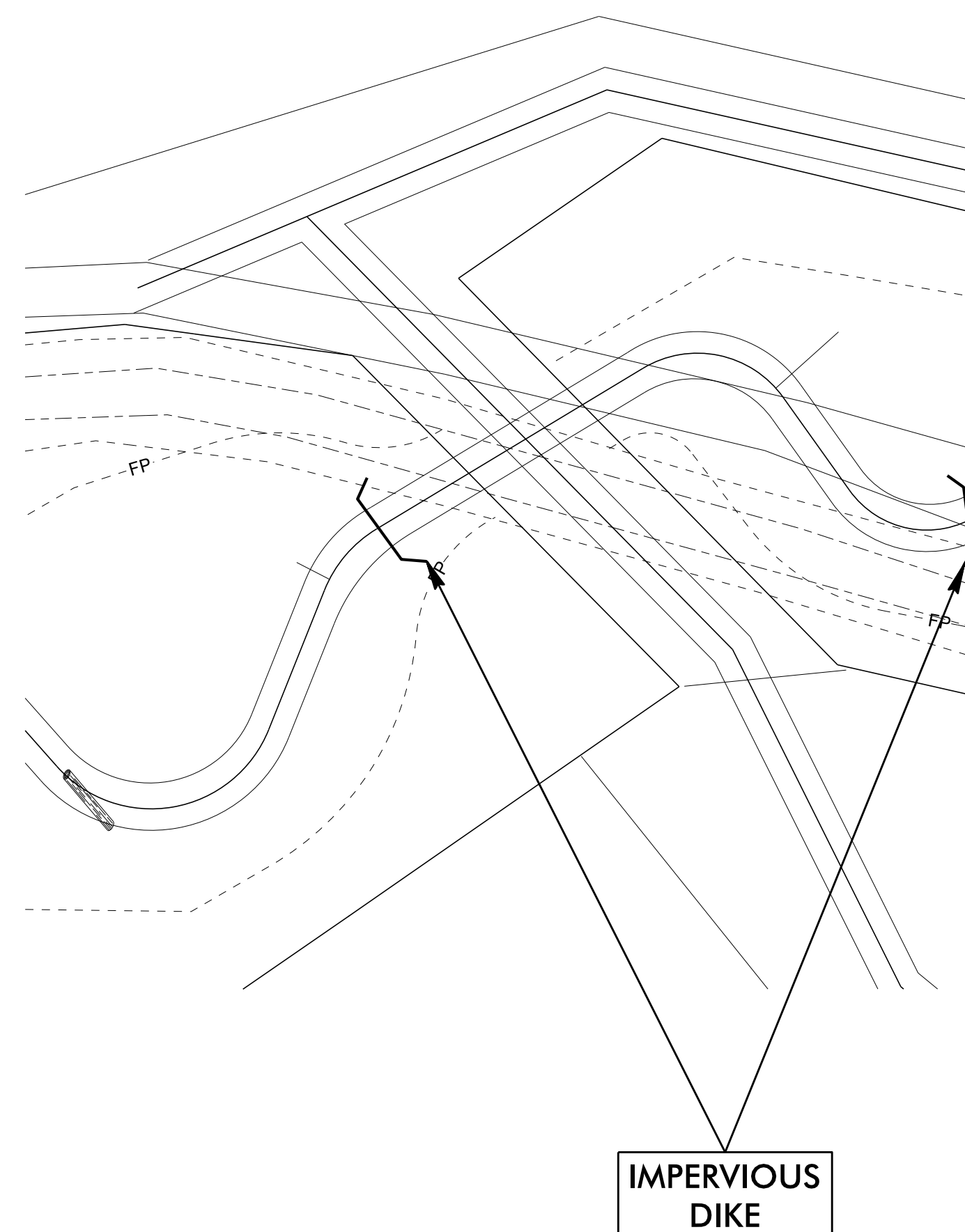




PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-4A
R / W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STREAM REPAIR SEQUENCE STA. 24 + 00 -L-

1. UTILIZE SPECIAL STILLING BASIN(S) TO DEWATER THE WORK SITE. LOCATE THE SPECIAL STILLING BASIN(S) OUTSIDE OF THE FLOODPLAIN IN A VEGETATED AREA.
2. INSTALL IMPERVIOUS DIKES AS SHOWN AND UTILIZE A BYPASS PUMP TO MAINTAIN FLOW AROUND THE WORK AREA.
3. REPAIR FLOODPLAIN AND STREAM PER PLAN WHILE USING APPROVED STOCKPILE AREAS AS DIRECTED.
4. UTILILZE NATIVE SEEDING AND COIR FIBER MATTING AS DIRECTED TO STABILIZE IMPACTED FLOODPLAIN/STREAMBANKS.
5. REMOVE IMPERVIOUS DIKES, SPECIAL STILLING BASIN(S), AND PUMPS FROM THE WORK AREA.
6. STABILIZE ANY SURROUNDING AREAS DISTURBED DURING REPAIR OPERATION.





PROJECT REFERENCE NO.	SHEET NO.
R-2554WM	EC-4B
R / W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STREAM REPAIR SEQUENCE STA. 29 + 00 -L-

1. UTILIZE SPECIAL STILLING BASIN(S) TO DEWATER THE WORK SITE. LOCATE THE SPECIAL STILLING BASIN(S) OUTSIDE OF THE FLOODPLAIN IN A VEGETATED AREA.
2. INSTALL IMPERVIOUS DIKES AS SHOWN AND UTILIZE A BYPASS PUMP TO MAINTAIN FLOW AROUND THE WORK AREA.
3. INSTALL TEMPORARY DIKES. DIKES SHALL BE SPACED SUCH THAT ALL REPAIR WORK AND STABILIZATION CAN BE COMPLETED IN ONE DAY. REPEAT UNTIL THE WORK SITE IS BACK PER PLAN. UTILIZE APPROVED STOCKPILE AREAS AS DIRECTED.
4. UTILILZE NATIVE SEEDING AND COIR FIBER MATTING AS NEEDED WHERE THE FLOODPLAIN/STREAMBANKS ARE IMPACTED.
5. REMOVE IMPERVIOUS DIKES, SPECIAL STILLING BASIN(S), AND PUMPS FROM THE WORK AREA.
6. STABILIZE ANY SURROUNDING AREAS IMPACTED DURING REPAIR OPERATION.

