REV. 0

LEGEND

- EXISTING TOPOGRAPHIC CONTOUR
- EXISTING TRANSMISSION TOWER
- EXISTING TRANSMISSION POLE
- EXISTING TRANSMISSION LINE
- EXISTING ROAD
- EXISTING RIP RAP
- EXISTING VEGETATION
- EXISTING WETLAND
- EXISTING PIEZOMETER
- EXISTING MONITORING WELL
- EXISTING TREE LINE
- EXISTING RAIL TRACKS
- EXISTING PROPERTY BOUNDARY
- EXISTING ASH MANAGEMENT AREA BOUNDARY
- EXISTING ASH MANAGEMENT AREA BOUNDARY (DASHED WHERE INFERRED)
- CONTACT WATER CONVEYANCE TO TEMPORARY TREATMENT FACILITY
- SILT FENCE
- PROPOSED ROCK CHECK DAM
- DEWATERING PERIMETER CHANNEL / RIM DITCH
- DEWATERING TRENCHES (MAXIMUM 10' DEPTH) AND WINDROWS
- GENERAL DEWATERING FLOW DIRECTION

PROPOSED LANDFILL AREA

STRUCTURAL FILL AREA

GROUT PIPE FROM DAM TO OUTLET STRUCTURE

ROCK CHECK DAM

SILT FENCE

WASTEWATER TREATMENT FACILITY

DEWATERING PUMP

INSTALL SUMP AT EXCAVATION LOW POINT

100 YEAR FLOODPLAIN

SALUDA RIVER

INSTALL RIM DITCH TO FACILITATE SURFACE WATER REMOVAL

REMOVE EXISTING OUTLET STRUCTURE

CONTACT WATER COLLECTION BASIN SUMP

OPTIONAL TEMPORARY ACCESS ROAD FOR ASH REMOVAL

INSTALL RIM DITCH TO FACILITATE SURFACE WATER REMOVAL

CONCEPTUAL ASH MANAGEMENT AREA FOR DRYING AND STACKING AS NEEDED

CONCEPTUAL TEMPORARY ACCESS ROAD

INSTALL RIM DITCH TO FACILITATE SURFACE WATER REMOVAL

INSTALL DITCHES TO ALLOW FREE DRAINAGE TO RIM DITCH

DEWATERING GENERAL NOTES:

1. NO ASH EXCAVATION SHALL BEGIN UNTIL THE SAFETY AND DEWATERING PLANS ARE SUBMITTED BY THE CONTRACTOR, APPROVED BY DUKE ENERGY AND A THOROUGH READINESS REVIEW IS CONDUCTED. ASH EXCAVATION SHALL ONLY OCCUR UNDER CONDITIONS WHERE SAFETY OF CONSTRUCTION PERSONNEL CAN BE ASSURED.
2. DEWATERING PLAN IS CONCEPTUAL AND FIELD CONDITIONS MAY REQUIRE CHANGES TO THE PLAN AS SHOWN. CONTRACTOR TO REMOVE ASH AS NECESSARY TO ATTAIN CLOSURE BY REMOVAL. CLOSURE BY REMOVAL SHALL BE DEFINED AS EXCAVATION UNTIL VISUAL CONFIRMATION THAT ALL ASH AND COMINGLED ASH/SOIL HAS BEEN REMOVED.
3. CONTRACTOR TO EXCAVATE AND MAINTAIN A PERIMETER DITCH AROUND THE EDGE OF THE PRIMARY ASH BASIN. MAXIMUM ALLOWABLE DEPTH OF 10'. PERIMETER DITCH SHALL BE MAINTAINED TO ALLOW FOR DRAINAGE TO THE EXCAVATION LOW POINT. ADDITIONAL DITCHES SHALL BE INSTALLED AS NECESSARY TO FACILITATE DRAINAGE TO PERIMETER RIM DITCH.
4. GENERAL PROGRESSION OF ASH EXCAVATION IS FROM HIGHER ELEVATIONS AND ASH BASIN PERIMETER TOWARDS SUMP AREA AS SHOWN. OTHER METHODS OF ASH REMOVAL MAY BE USED DURING EXCAVATION DUE TO FIELD CONDITIONS.
5. CONSTRUCT PROPERLY REINFORCED ROADS ACROSS PRIMARY ASH BASIN USING BRIDGE LIFTS FROM DRY ASH LOCATED IN STRUCTURAL FILL. ROAD SHALL INCLUDE DITCHES ON BOTH SIDES TO ALLOW FOR DRAINAGE TO THE PERIMETER RIM DITCH AND A CULVERT TO ALLOW CONTINUOUS FLOW IN PERIMETER DITCH.
6. CONTRACTOR TO CONSTRUCT SECTIONS OF DEWATERING DITCHES IN ASH PRIOR TO EXCAVATION AS NEEDED TO FACILITATE DEWATERING OF ASH. GENERAL DIRECTION AND SLOPE OF DITCHES SHALL BE PLACED TO FACILITATE DRAINAGE TO THE EXCAVATION LOW POINT AS SHOWN.
7. CONTRACTOR MAY STAGE MATERIAL FOR ADDITIONAL DRYING/CONDITIONING PRIOR TO LANDFILLING.
8. ASH EXCAVATION SHALL PROCEED IN NOMINAL 10-FT MAXIMUM INCREMENTS OR DEPTHS REQUIRED TO MAINTAIN SAFETY AND STABILITY OF ASH.
9. CONTRACTOR TO REMOVE AND DISPOSE OF PRIMARY OUTLET STRUCTURES UPON COMPLETION OF STORMWATER REMOVAL.
10. ROAD LOCATIONS SHOWN ARE CONCEPTUAL AND FINAL LOCATIONS OF ROADS MAY DIFFER DUE TO FIELD CONDITIONS. CONTRACTOR TO PROVIDE TEMPORARY CULVERTS BENEATH ACCESS ROADS AS NECESSARY TO FACILITATE DRAINAGE.

N

0 150 300

SCALE: 1"=150'

CONCEPTUAL PLANS

TOPOGRAPHY DEPICTED ON THIS DRAWING BASED ON PUBLICLY AVAILABLE 2011 LIDAR, BATHYMETRIC DATA BASED ON DATA COLLECTED BY WSP GROUP ON DECEMBER 11, 2014

TITLE

CONCEPTUAL CLOSURE PLAN – PRIMARY ASH BASIN, SECONDARY ASH BASIN AND STRUCTURAL FILL AREA

PRIMARY ASH BASIN CONCEPTUAL DEWATERING PLAN

FOR

W.S. LEE STEAM STATION

DUKE ENERGY®

SCALE: AS SHOWN	DES:	KRA
DWG TYPE:	DFTR:	MLS
JOB NO: 60432646	CHKD:	ARS
DATE: 12-15-2015	ENGR:	FM
FILENAME:	APPD:	JDP

DWG SIZE	DRAWING NO.	REVISION
ARCH D 24.0"x36.0"	11	0

REV. 0

REV. 0

PROPOSED LANDFILL

PRIMARY ASH BASIN
(ACTIVE)

EXCAVATE ASH MATERIAL
WITHIN STRUCTURAL FILL AREA

LIMIT OF ASH TO BE FIELD
VERIFIED BY CONTRACTOR

LIMIT OF ASH TO BE FIELD
VERIFIED BY CONTRACTOR

LEGEND

- EXISTING TOPOGRAPHIC CONTOUR
- POST EXCAVATION TOPOGRAPHIC CONTOUR
- EXISTING TRANSMISSION TOWER
- EXISTING TRANSMISSION POLE
- EXISTING TRANSMISSION LINE
- EXISTING ROAD
- EXISTING RIP RAP
- EXISTING VEGETATION
- EXISTING WETLAND
- EXISTING MONITORING WELL
- EXISTING PIEZOMETER
- EXISTING TREE LINE
- EXISTING RAIL TRACKS
- EXISTING PROPERTY BOUNDARY
- EXISTING ASH MANAGEMENT AREA BOUNDARY
- EXISTING ASH MANAGEMENT AREA BOUNDARY (INFERRED)
- PROPOSED STORMWATER DITCH

NOTES:

1. NO ASH EXCAVATION SHALL BEGIN UNTIL THE SAFETY AND DEWATERING PLANS ARE SUBMITTED BY THE CONTRACTOR, APPROVED BY DUKE ENERGY AND A THOROUGH READINESS REVIEW IS CONDUCTED. ASH EXCAVATION SHALL ONLY OCCUR UNDER CONDITIONS WHERE SAFETY OF CONSTRUCTION PERSONNEL CAN BE ASSURED.
2. CONTRACTOR TO MAINTAIN PERIMETER EROSION AND SEDIMENT CONTROLS AROUND FORMER STRUCTURAL FILL AREA TO CONTROL RUN-OFF. ADDITIONAL DITCHES SHALL BE INSTALLED AS NECESSARY TO FACILITATE DRAINAGE TO PRIMARY ASH BASIN.
3. CONTRACTOR TO INSTALL TEMPORARY STORMWATER AND DIVERSION CONTROLS AS NECESSARY TO DIRECT WATER TO THE EXCAVATION LOW POINT AND AROUND EXCAVATION AREA. CONTACT WATER TO BE PUMPED TO THE PRIMARY ASH BASIN FOR TRANSFER TO WASTEWATER TREATMENT SYSTEM.
4. GENERAL PROGRESSION OF ASH EXCAVATION IS FROM HIGHER ELEVATIONS AND ASH PERIMETER TOWARDS LOW ELEVATION.
5. CONTRACTOR TO DRY ASH AS NECESSARY FOR PLACEMENT IN THE PROPOSED LANDFILL.
6. CONTRACTOR TO MANAGE CONTACT WATER IN THE STRUCTURAL FILL AREA THROUGHOUT EXCAVATION AND TREAT (AS NECESSARY) TO THE STANDARDS AS DESCRIBED IN THE CLOSURE PLAN, TECHNICAL SPECIFICATIONS AND APPLICABLE NPDES PERMIT LIMITS.
8. EXCAVATION CONTOURS SHOWN ON DRAWING ARE CONCEPTUAL AND FIELD CONDITIONS MAY REQUIRE CHANGES TO THE EXCAVATION PLAN AS SHOWN. CONTRACTOR TO REMOVE ASH AS NECESSARY TO ATTAIN CLOSURE BY REMOVAL. CLOSURE BY REMOVAL SHALL BE DEFINED AS EXCAVATION UNTIL VISUAL CONFIRMATION THAT ALL ASH AND CO-MINGLED ASH/SOIL HAS BEEN REMOVED.
9. STRUCTURAL FILL AREA CAP SOIL MAY BE REMOVED AND STOCKPILED IF FREE OF ASH MATERIAL FOR USE IN LANDFILL CAP SYSTEM. REFER TO EROSION AND SEDIMENT CONTROL DETAILS SHEET FOR TYPICAL STOCKPILING STANDARD.
10. CONTRACTOR SHALL USE FILL TO RAISE LOW AREAS OF STRUCTURAL FILL TO ALLOW STORMWATER TO DRAIN AROUND PERIMETER EMBANKMENT OF LANDFILL ASH SHOWN.
11. THE PROPOSED CONTOURS AND GRADES IN THE FORMER STRUCTURAL FILL AREA DEPICT PROJECTED CLOSURE BY REMOVAL ELEVATIONS AFTER ASH REMOVAL, AND ARE BASED UPON AVAILABLE PRE-DEVELOPMENT TOPOGRAPHIC DATA. FINAL CONTOURS AND GRADES ARE SUBJECT TO CHANGES DUE TO FIELD CONDITIONS.

N

0 100 200
SCALE: 1"=100'

CONCEPTUAL PLANS

TOPOGRAPHY DEPICTED ON THIS DRAWING BASED ON PUBLICLY AVAILABLE 2011 LIDAR, BATHYMETRIC DATA BASED ON DATA COLLECTED BY WSP GROUP ON DECEMBER 11, 2014

TITLE
CONCEPTUAL CLOSURE PLAN – PRIMARY ASH BASIN, SECONDARY ASH BASIN AND STRUCTURAL FILL AREA

STRUCTURAL FILL AREA
EXCAVATION PLAN

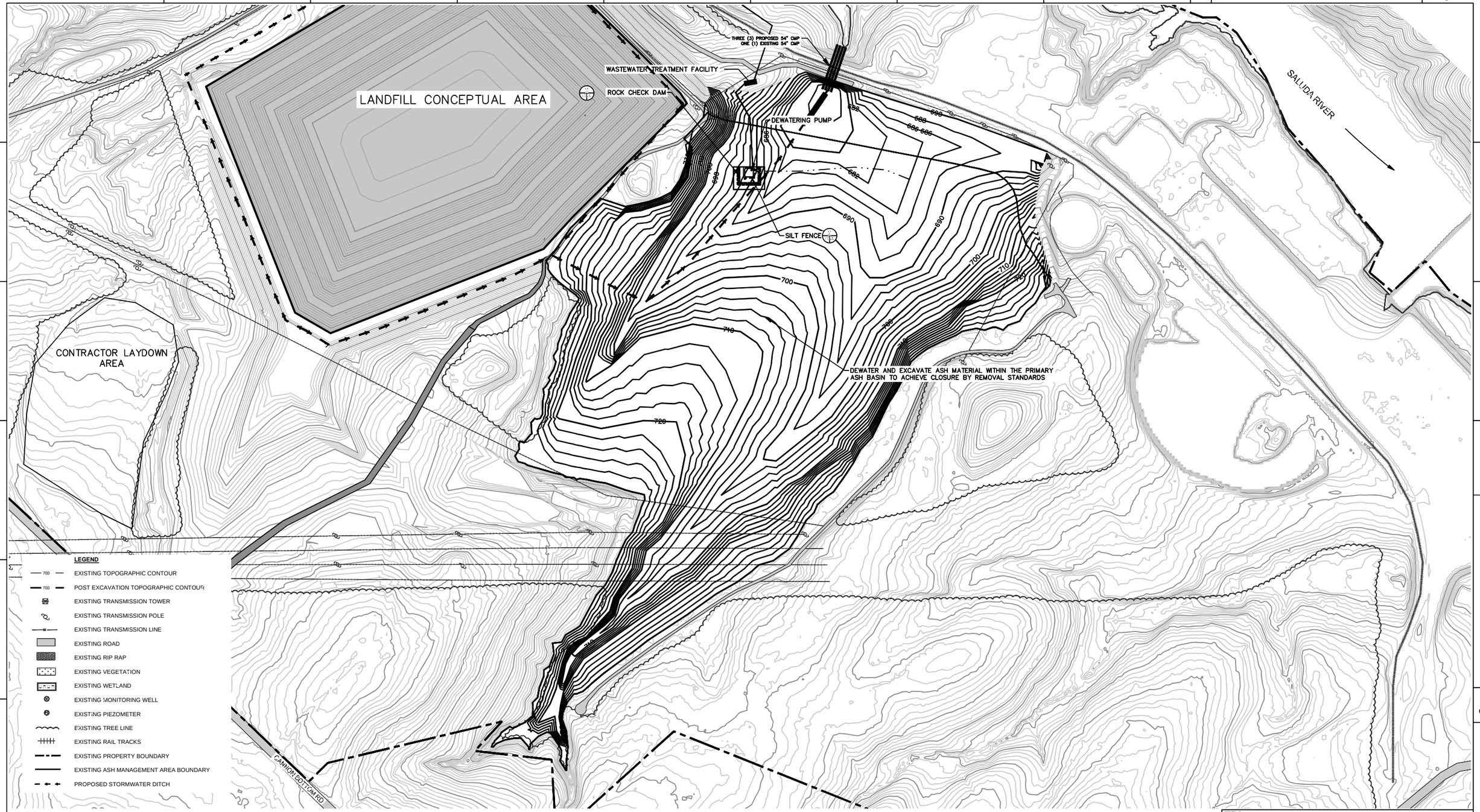
FOR
W.S. LEE STEAM STATION

DUKE ENERGY®

SCALE: AS SHOWN		DES:	KRA
DWG TYPE:		DFTR:	MLS
JOB NO: 60432646		CHKD:	ARS
DATE: 12-15-2015		ENGR:	FM
FILENAME:		APPD:	JDP

DWG SIZE	DRAWING NO.	REVISION
ARCH D 24.0"x36.0"	12	0

REV. 0



NOTES:

1. NO ASH EXCAVATION SHALL BEGIN UNTIL THE SAFETY AND DEWATERING PLANS ARE SUBMITTED BY THE CONTRACTOR, APPROVED BY DUKE ENERGY AND A THOROUGH READINESS REVIEW IS CONDUCTED. ASH EXCAVATION SHALL ONLY OCCUR UNDER CONDITIONS WHERE SAFETY OF CONSTRUCTION PERSONNEL CAN BE ASSURED.
2. EXCAVATION PLAN IS CONCEPTUAL AND FIELD CONDITIONS MAY REQUIRE CHANGES TO THE PLAN AS SHOWN. CONTRACTOR TO REMOVE ASH AS NECESSARY TO ATTAIN CLOSURE BY REMOVAL. CLOSURE BY REMOVAL SHALL BE DEFINED AS EXCAVATION UNTIL VISUAL CONFIRMATION THAT ALL ASH AND COMINGLED ASH/SOIL HAS BEEN REMOVED.
3. CONTRACTOR TO EXCAVATE AND MAINTAIN A PERIMETER DITCH AROUND THE EDGE OF THE ASH BASIN. MAXIMUM ALLOWABLE DEPTH OF 10'. PERIMETER DITCH SHALL BE MAINTAINED TO ALLOW FOR DRAINAGE TO THE EXCAVATION LOW POINT. ADDITIONAL DITCHES SHALL BE INSTALLED AS NECESSARY TO FACILITATE DRAINAGE TO PERIMETER RIM DITCH.
4. CONTRACTOR TO INSTALL TEMPORARY STORMWATER AND DIVERSION CONTROLS AS NECESSARY TO DIRECT WATER TO THE EXCAVATION LOW POINT AND AROUND EXCAVATION AREA.
5. GENERAL PROGRESSION OF ASH EXCAVATION IS FROM HIGHER ELEVATIONS AND ASH BASIN PERIMETER TOWARDS SUMP AREA AS SHOWN. THE SUMP AREA SHALL BE RELOCATED AND RECONSTRUCTED AS EXCAVATION PROCEEDS.
6. ASH LOCATIONS AND THICKNESS WITHIN THE PRIMARY ASH BASIN ARE BASED ON PRE-EXISTING DATA AND FIELD CONDITIONS MAY REQUIRE CHANGES TO THE PLAN AS SHOWN. CONTRACTOR SHALL ASSESS ASH LOCATION AND THICKNESS PRIOR TO REMOVAL.
7. CONTRACTOR TO DRY ASH AS NECESSARY FOR RELOCATION TO THE PROPOSED LANDFILL. RELOCATION MAY BE ACCOMPLISHED BY HAULING, CONVEYORS, OR OTHER APPROPRIATE MEANS OF MATERIAL TRANSFER.
8. CONTRACTOR TO MANAGE CONTACT WATER IN THE ASH BASIN THROUGHOUT CONSTRUCTION AND TREAT (AS NECESSARY) TO THE STANDARDS AS DESCRIBED IN THE CLOSURE PLAN, TECHNICAL SPECIFICATIONS AND APPLICABLE NPDES PERMIT LIMITS.
9. ASH EXCAVATION SHALL PROCEED IN NOMINAL 10-FT MAXIMUM INCREMENTS OR DEPTHS REQUIRED TO MAINTAIN SAFETY AND STABILITY OF ASH.
10. SEPARATE AND STOCKPILE PRIMARY ASH BASIN DIKE MATERIAL THAT DOES NOT CONTAIN ASH FOR FUTURE LANDFILL CAP AND REGRADING AND LANDFILL CAP MATERIAL.
11. THE PROPOSED CONTOURS AND GRADES IN THE FORMER PRIMARY ASH BASIN DEPICT PROJECTED CLOSURE BY REMOVAL ELEVATIONS AFTER ASH REMOVAL, AND ARE BASED UPON AVAILABLE PRE-DEVELOPMENT TOPOGRAPHIC DATA. FINAL CONTOURS AND GRADES ARE SUBJECT TO CHANGES DUE TO FIELD CONDITIONS.

N

CONCEPTUAL PLANS

0 150 300
SCALE: 1"=150'

TOPOGRAPHY DEPICTED ON THIS DRAWING BASED ON PUBLICLY AVAILABLE 2011 LIDAR, BATHYMETRIC DATA BASED ON DATA COLLECTED BY WSP GROUP ON DECEMBER 11, 2014

TITLE
CONCEPTUAL CLOSURE PLAN – PRIMARY ASH BASIN, SECONDARY ASH BASIN AND STRUCTURAL FILL AREA

PRIMARY ASH BASIN EXCAVATION PLAN

FOR
W.S. LEE STEAM STATION

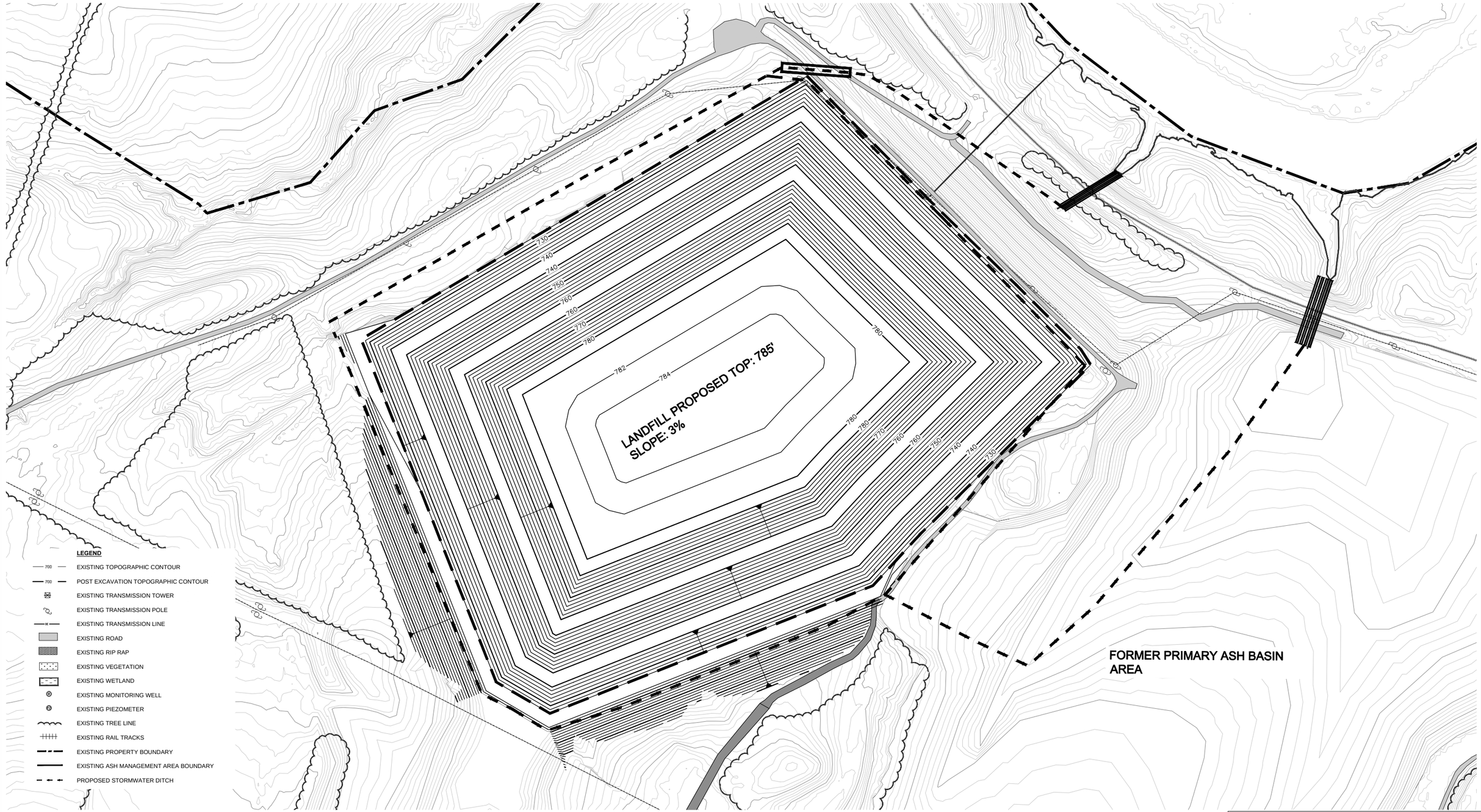
DUKE ENERGY®

SCALE: AS SHOWN	DES:	KRA
DWG TYPE:	DFTR:	MLS
JOB NO: 60432646	CHKD:	ARS
DATE: 12-15-2015	ENGR:	FM
FILENAME:	APPD:	JDP

DWG SIZE	DRAWING NO.	REVISION
ARCH D 24.0"x36.0"	13	0

INCHES 1 2 3
TENTHS 10 20 30

REV. 0



LEGEND

- EXISTING TOPOGRAPHIC CONTOUR
- POST EXCAVATION TOPOGRAPHIC CONTOUR
- EXISTING TRANSMISSION TOWER
- EXISTING TRANSMISSION POLE
- EXISTING TRANSMISSION LINE
- EXISTING ROAD
- EXISTING RIP RAP
- EXISTING VEGETATION
- EXISTING WETLAND
- EXISTING MONITORING WELL
- EXISTING PIEZOMETER
- EXISTING TREE LINE
- EXISTING RAIL TRACKS
- EXISTING PROPERTY BOUNDARY
- EXISTING ASH MANAGEMENT AREA BOUNDARY
- PROPOSED STORMWATER DITCH

N

0 100 200

SCALE: 1"=100'

CONCEPTUAL PLANS

TOPOGRAPHY DEPICTED ON THIS DRAWING BASED ON PUBLICLY AVAILABLE 2011 LIDAR, BATHYMETRIC DATA BASED ON DATA COLLECTED BY WSP GROUP ON DECEMBER 11, 2014

TITLE: CONCEPTUAL CLOSURE PLAN – PRIMARY ASH BASIN, SECONDARY ASH BASIN AND STRUCTURAL FILL AREA

LANDFILL CONCEPTUAL FINAL GRADE PLAN

FOR: W.S. LEE STEAM STATION

DUKE ENERGY®

SCALE: AS SHOWN	DES: KRA
DWG TYPE:	DFTR: MLS
JOB NO: 60432646	CHKD: ARS
DATE: 12-15-2015	ENGR: FM
FILENAME:	APPD: JDP

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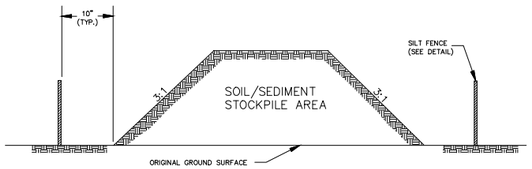
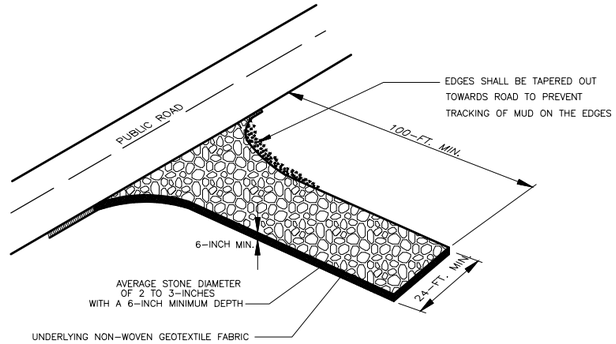
REV. 0



NOTES:

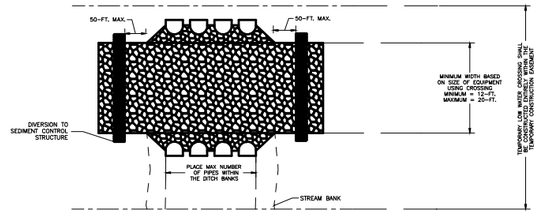
1. SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOP THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN–GRADIENT AREA.
2. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
3. SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
4. THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

1 — TEMPORARY STOCKPILE DETAIL
00 | 15 — NOT TO SCALE
*00

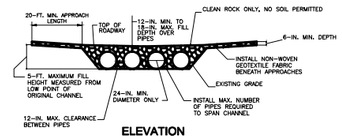


SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2–3 INCHES

4 — CONSTRUCTION ENTRANCE DETAIL
00 | 15 — NOT TO SCALE
*00



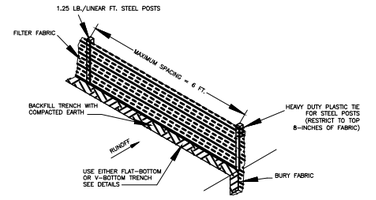
PLAN VIEW



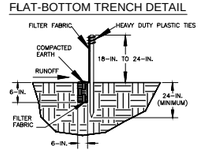
ELEVATION

7 — DITCH CROSSING DETAIL
00 | 15 — NOT TO SCALE
*00

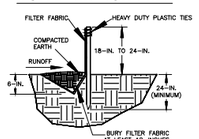
SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

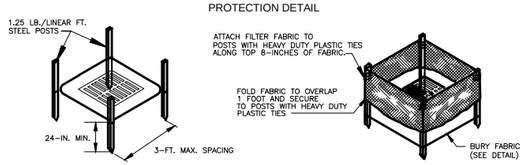


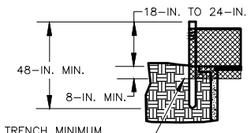
SILT FENCE – GENERAL NOTES

1. DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
2. MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100–FEET.
3. MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
4. SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
   - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1–FOOT MINIMUM OVERLAP;
   - OVERLAP SILT FENCE BY INSTALLING 3–FEET PASSED THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY–DUTY PLASTIC TIES; OR,
   - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
5. ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY–DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8–INCHES OF THE FABRIC.
4. INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
5. INSTALL SILT FENCE CHECKS (TIE–BACKS) EVERY 50–100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

2 — SILT FENCE DETAIL
00 | 15 — NOT TO SCALE
*00

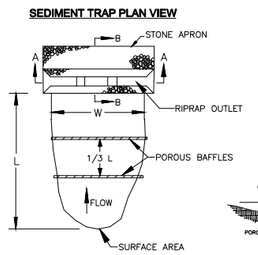
FILTER FABRIC INLET
PROTECTION DETAIL



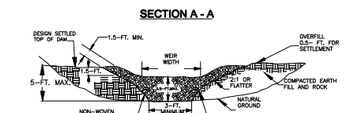


5 — INLET PROTECTION DETAIL
00 | 15 — NOT TO SCALE
*00

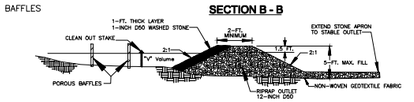
SEDIMENT TRAP PLAN VIEW



SECTION A - A



SECTION B - B



SECTION A DIMENSIONS

TRAP #	RIPRAP OUTLET HEIGHT	RIPRAP BOTTOM WIDTH	RIPRAP TOP WIDTH	SIDE SLOPES	EMBANKMENT HEIGHT

SECTION B DIMENSIONS

TRAP #	RIPRAP BOTTOM LENGTH	RIPRAP TOP LENGTH	SIDE SLOPES	STONE APRON LENGTH	"V" VOLUME

SEDIMENT TRAP – GENERAL NOTES

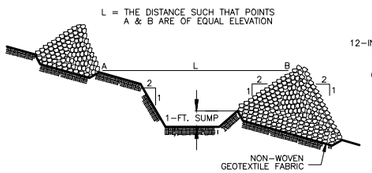
1. SEDIMENT TRAPS SHOULD NOT BE PLACED IN WATERS OF THE STATE OR USGS BLUE–LINE STREAMS (UNLESS APPROVED BY FEDERAL AUTHORITIES).
2. THE ROCK OUTLET STRUCTURE SHALL CONSIST OF 12–INCH D50 RIPRAP. THE UPSTREAM FACE OF THIS OUTLET SHALL CONSIST OF A 1–FOOT THICK LAYER OF 1–INCH D50 WASHED STONE. THE MAXIMUM STEEPNESS OF THE ROCK OUTLET STRUCTURE SHALL BE 2:1.
3. BOTH THE ROCK OUTLET AND THE STONE APRON SHALL HAVE AN UNDERLYING LAYER OF NON–WOVEN GEOTEXTILE FILTER FABRIC.
4. ALL INTERNAL SIDE SLOPES OF THE SEDIMENT TRAP SHOULD BE 3:1 OR FLATTER.
5. A SEDIMENT CLEANOUT STAKE SHOULD BE INSTALLED AND MARKED TO REMOVE SEDIMENT AT 50% OF THE SEDIMENT STORAGE VOLUME.
6. AT LEAST TWO (2) POROUS BAFFLES SHALL BE INSTALLED WITHIN THE SEDIMENT TRAP. THERE SHOULD BE AT LEAST 10 LINEAR FEET BETWEEN EACH BAFFLE AND BETWEEN ANY ROW OF BAFFLES AND ANY OF THE SEDIMENT TRAP'S INLETS/OUTLETS.
7. AFTER CONSTRUCTION OF EACH SEDIMENT TRAP, THE AREA DISTURBED TO CONSTRUCT THE TRAP SHOULD BE PROMPTLY STABILIZED, INCLUDING ALL SIDE SLOPES.
8. THE FOLLOWING SEDIMENT TRAP REQUIREMENTS SHALL BE MAINTAINED:
   - MAXIMUM EMBANKMENT HEIGHT SHALL BE 5–FEET.
   - MAXIMUM RIPRAP OUTLET HEIGHT SHALL BE 3.5–FEET.
   - MINIMUM WIDTH AT BOTTOM OF RIPRAP OUTLET SHALL BE 3–FEET.
   - MINIMUM FLOW LENGTH AT TOP OF RIPRAP OUTLET SHALL BE 2–FEET.

SEDIMENT TRAP – INSPECTION AND MAINTENANCE

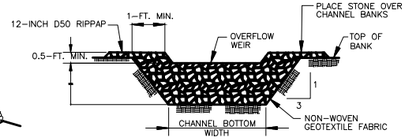
1. THE KEY TO A FUNCTIONAL SEDIMENT TRAP IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
2. ATTENTION TO SEDIMENT ACCUMULATIONS WITHIN THE TRAP IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT DEPOSITION SHOULD BE CONTINUALLY MONITORED IN THE TRAP AND REMOVED WHEN NECESSARY.
3. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 50% OF THE DESIGNED SEDIMENT STORAGE VOLUME AS MARKED BY THE CLEANOUT STAKE.
4. REMOVED SEDIMENT FROM THE TRAP SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS THE DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
5. REGULAR INSPECTIONS OF SEDIMENT TRAPS SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24–HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES ½–INCH OR MORE OF PRECIPITATION.
6. DISTURBED AREAS RESULTING FROM THE REMOVAL OF THE SEDIMENT TRAP SHOULD BE PERMANENTLY STABILIZED AND ADDITIONAL BMPS, SUCH AS SILT FENCE, SHOULD BE UTILIZED TO HANDLE STORMWATER RUNOFF FROM THIS DISTURBED AREA UNTIL FINAL STABILIZATION IS REACHED.

8 — SEDIMENT TRAP DETAIL
00 | 15 — NOT TO SCALE
*00

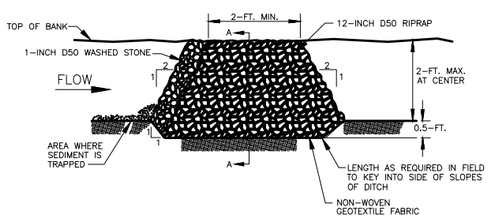
SPACING BETWEEN ROCK CHECK DAMS



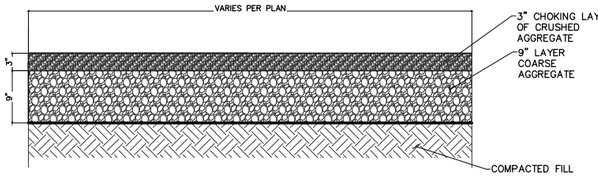
CROSS SECTION A-A
ROCK CHECK DAM



TYPICAL ROCK CHECK DAM PROFILE



3 — ROCK CHECK DAM DETAIL
00 | 15 — NOT TO SCALE
*00



6 — ACCESS/HAUL ROAD SECTION DETAIL
00 | 15 — NOT TO SCALE
*00

TITLE
CONCEPTUAL CLOSURE PLAN – PRIMARY ASH BASIN, SECONDARY ASH BASIN AND STRUCTURAL FILL AREA

EROSION AND SEDIMENT CONTROL DETAILS

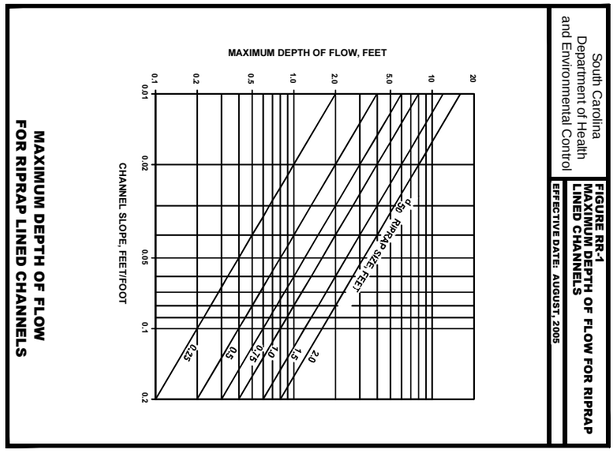
FOR
W.S. LEE STEAM STATION

DUKE ENERGY®

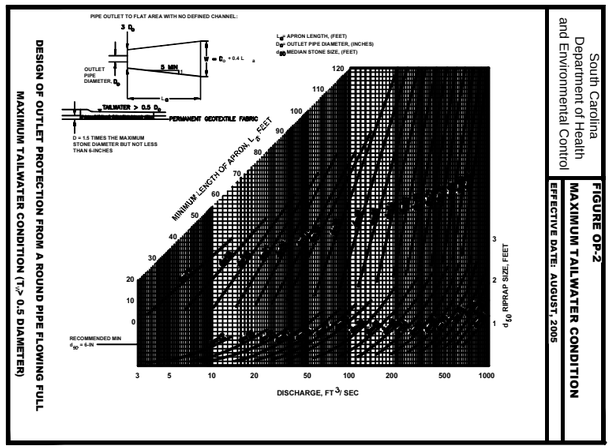
SCALE:		DES:	KRA
DWG TYPE:		DFTR:	MLS
JOB NO: 60432646		CHKD:	ARS
DATE: 12-15-2015		ENGR:	FM
FILENAME:		APPD:	JDP

DWG SIZE	DRAWING NO.	REVISION
ARCH D 24.0"x36.0"	15	0

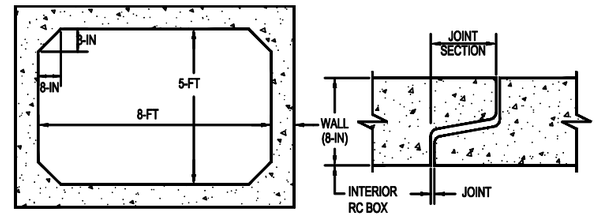
CONCEPTUAL PLANS



9 00 16 *00 **MAXIMUM DEPTH OF FLOW FOR RIPRAP LINED CHANNELS**
NOT TO SCALE

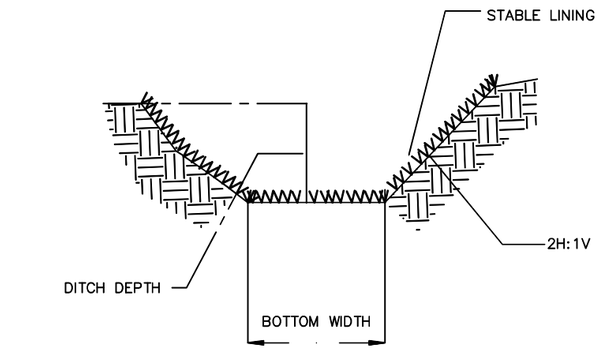


10 00 16 *00 **MAXIMUM TAILWATER CONDITION**
NOT TO SCALE



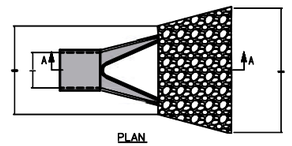
Notes:
1. TYPICAL BOX CULVERT CROSS SECTION.
2. DESIGN WING WALLS AT INVERT INLET AND OUTLET
3. SIZING BASED ON PRELIMINARY CALCULATIONS AND SUBJECT TO CHANGE AS DESIGN PROGRESSES

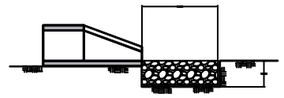
11 00 16 *00 **TYPICAL REINFORCED CONCRETE BOX CULVERT DETAIL**
NOT TO SCALE



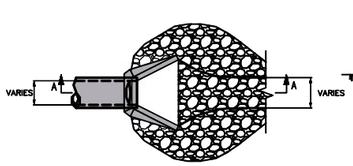
1. SIZING BASED ON PRELIMINARY CALCULATIONS AND SUBJECT TO CHANGE AS DESIGN PROGRESSES

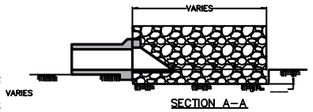
13 00 16 *00 **DITCH CONSTRUCTION DETAIL**
NOT TO SCALE



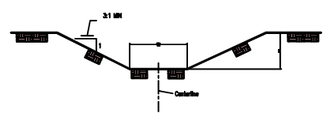


PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL
TYPICAL PIPE 48–IN AND 54–IN OUTLET TO FLAT AREA





PIPE OUTLET TO WELL-DEFINED CHANNEL
TYPICAL PIPE 54–IN OUTLET TO CHANNEL



TYPICAL SECTION

TEMPORARY VEGETATED SWALE PLAN
DURING CONSTRUCTION

12 00 16 *00 **TYPCIAL PIPE OUTLET DETAIL**
NOT TO SCALE

FOR REFERENCE:
THE ABOVE DETAILS ARE FROM:
US DEPARTMENT OF AGRICULTURE DETAILS

CONCEPTUAL PLANS

TITLE
CONCEPTUAL CLOSURE PLAN – PRIMARY ASH BASIN, SECONDARY ASH BASIN AND STRUCTURAL FILL AREA
CONCEPTUAL STORMWATER MANAGEMENT CONTROLS
FOR
W.S. LEE STEAM STATION

DUKE ENERGY®	SCALE:	DES: KRA
	DWG TYPE:	DFTR: MLS
	JOB NO: 60432646	CHKD: ARS
	DATE: 12-15-2015	ENGR: FM
FILENAME:		APPD: JDP

DWG SIZE	DRAWING NO.	REVISION
ARCH D 24.0"x36.0"	16	0

REV. 0