FINAL PLANS 10/13/2014

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND LAYOUT MAP
2 - 2a	TYPICAL SECTION
3 - 3a	SUMMARY SHEETS
4 - 5	PLAN VIEW SHEETS
6	TRAFFIC CONTROL LAYOUT

	STANDARD PLAN	REV. DATE
201 - 202	RM-01 (2 SHEETS)	09-22-07
203 - 204	EC-01 (2 SHEETS)	01-21-98

401 - 405 CROSS SECTIONS

TOTAL SHEETS = 19

PROJECT DESIGN CRITERIA, STANDARDS, AND SPECIFICATIONS ARE ESTABLISHED BY THE DESOTO PARISH POLICE JURY. DESIGN EXCEPTIONS TO LA DOTD AND AASHTO STANDARDS AND POLICY ARE APPROVED BY THE DESOTO PARISH POLICE JURY.

Steven W. Brown 10/14/14

STEVEN W. BROWN, P.E. — DATE

DESOTO PARISH ADMINSTRATOR/ENGINEER

DESOTO PARISH POLICE JURY

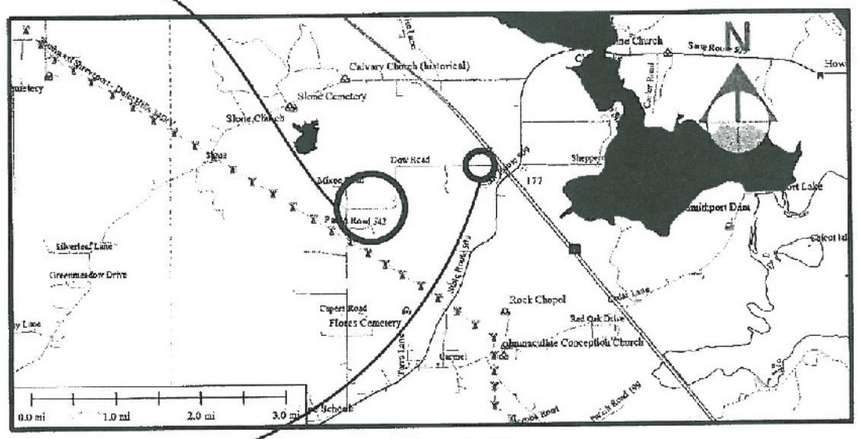
CONSTRUCTION DRAWINGS

FOR

DAW ROAD DRAINAGE IMPROVEMENTS

DESOTO PARISH
LOUISIANA

PROJECT SITE 1



PROJECT SITE 2

LAYOUT MAP

PROJECT LOCATION

VICINITY MAP

POLICE JURY MEMBERS

Charlie Roberts - District 1 A

B. D. Mitchell - District 1 B

Jarrell O. Burch - District 1 C

A. W. McDonald - District 2

Greg Baker - District 3

Richard Fuller - District 4 A

Jeff Heard - District 4 B

Ernel Jones - District 4 C

Thomas Jones - District 4 D

Reggie Roe - District 5

Ricky McPhearson - District 6

Parish Administrator/Engineer
Steven W. Brown, P.E.

Approved by: Steven W. Brown
Steven W. Brown, P.E.

DESIGN SPEED = 30 MPH EXCEPT FOR CURVE NO. 1 WHICH IS 20 MPH

DATE	REVISION	DATE RECOMMENDED	DATE APPROVED

SCHEDULE OF REVISIONS

DATUM USED : ASSUMED
MAGNETIC VAR : N/A
BEARINGS ARE : ASSUMED

TRANSIT BOOKS : N/A
LEVEL BOOKS : N/A

SCALES:
PLAN - 1" = 50'
PROFILE HOR. - 1" = 50'
VERT. - 1" = 50'

TYPE OF CONSTRUCTION:
INSTALL TANK CAR CULVERTS, BASE COURSE, EMBANKMENT

NOTE:
THE 2006 EDITION OF THE LOUISIANA DOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS AMENDED BY THE PROJECT SPECIFICATIONS, SHALL GOVERN ON THIS PROJECT.

LENGTH OF PROJECT

	DESCRIPTION	ALGEBRAIC SUM OF ALL EQUATIONS	GROSS LENGTH	EXCEPTION	BRIDGE LENGTH		ROADWAY LENGTH	
	STATION TO STATION	FEET	FEET	FEET	FEET	MILES	FEET	MILES
SITE 1	21+43.44 - 47+00.00	0	2,556.56	0			2,556.56	0.484
SITE 2	107+38 - 107+73	0	34.00	0			34.00	0.006
	TOTAL LENGTH OF BRIDGES							
	TOTAL LENGTH OF ROADWAY						2,590.56	0.490
	TOTAL MILES							0.490

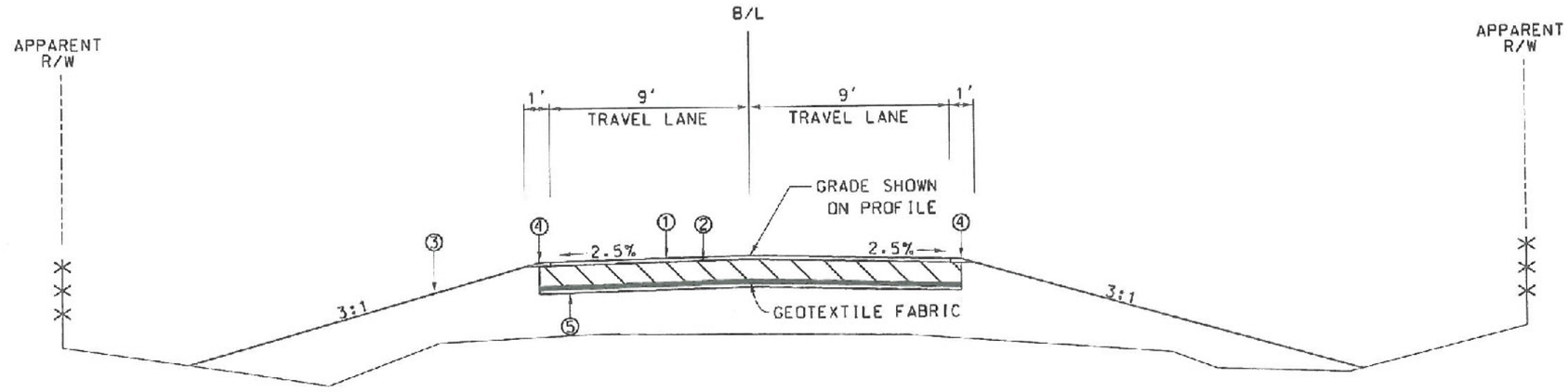
SHEET NUMBER 1
PARISH DESOTO
DESIGNED DRM
DRAWN
CHECKED
DETAILED
CHECKED
DATE 10/02/2014
DATE
NO.
REVISION RECOMMENDED

DAW ROAD DRAINAGE IMPROVEMENTS

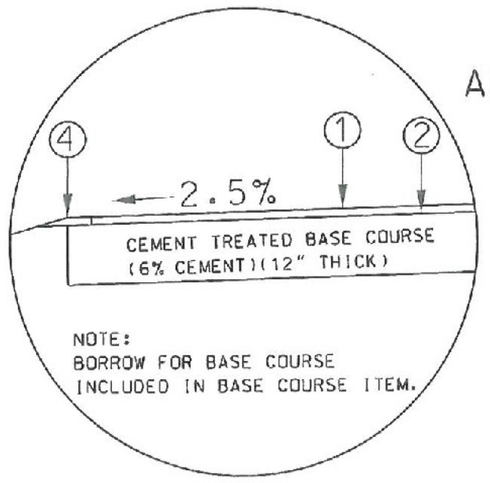
TITLE SHEET

BEAST ENGINEERING LLC

FINAL PLANS



TYPICAL SECTION
APPLIES: STA 21+43.44 TO 47+00.00
(SITE 1)



BASE COURSE OPTION

① ASPHALTIC CONCRETE (2" THICK) BY OTHERS

② BASE COURSE (12" THICK) BY SQ. YD.
(9" THICKNESS OF STONE OR RECYCLED PCC CONCRETE AND 3" SELECT SOIL)

③ EARTHWORK (BORROW-SELECT SOILS) BY CUBIC YARD UNADJUSTED

④ STONE SHOULDER (TO BE DONE BY OTHERS)

⑤ STONE OR RECYCLED BACKFILL. COST INCLUDED IN PIPE INSTALLATION ITEM.

NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE.

TEMPORARY EROSION CONTROL SHALL INCLUDE SILT FENCING

EXISTING CENTERLINE SHALL BE REFERENCED BY CONTRACTOR PRIOR TO EMBANKMENT CONSTRUCTION AND USED AS PROJECT CENTERLINE UNLESS OTHER WAS NOTED ON PLAN VIEW.

10/13/2014

SHEET NUMBER 2

PARISH: DESOTO

DESIGNED CHECKED
DETAILED CHECKED
DATE SHEET

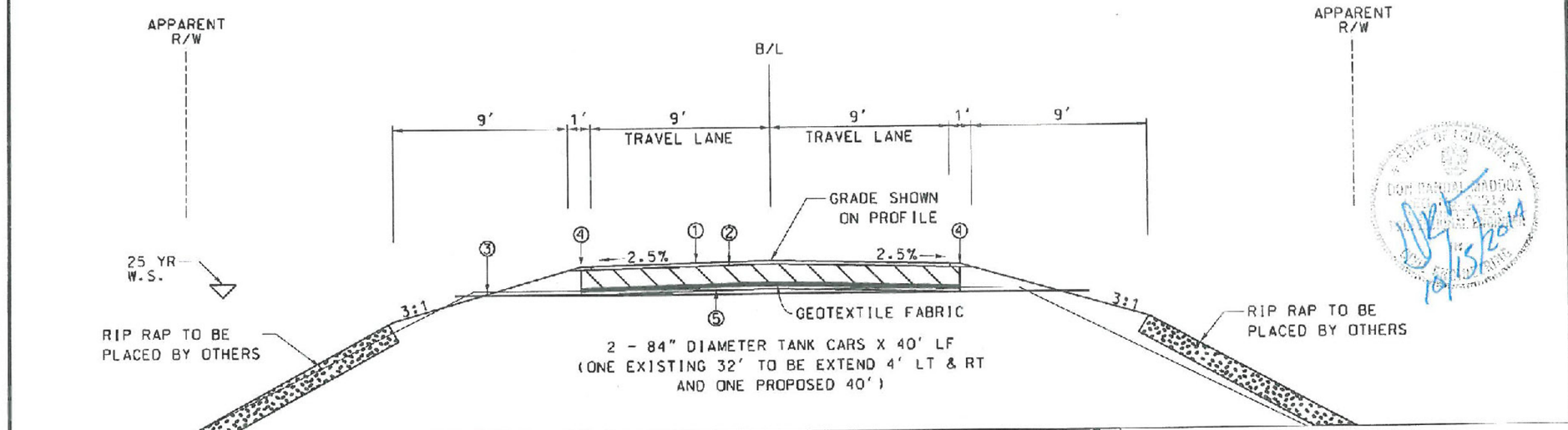
REVISION DESCRIPTION

DAW ROAD DRAINAGE IMPROVEMENTS

TYPICAL SECTION

BEAST ENGINEERING LLC

FINAL PLANS



TYPICAL SECTION
STA 26+54

① ASPHALTIC CONCRETE (2" THICK) BY OTHERS

② BASE COURSE (12" THICK) BY SQ. YD.
(9" THICKNESS STONE OR RECYCLED PCC CONCRETE & 3" SELECT SOIL)

③ EARTHWORK (BORROW-SELECT SOILS) BY CUBIC YARD UNADJUSTED

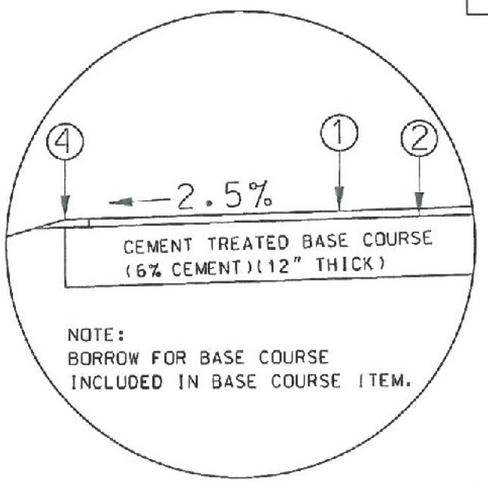
④ STONE SHOULDER (TO BE DONE BY OTHERS)

⑤ STONE OR RECYCLED BACKFILL. COST INCLUDED IN PIPE INSTALLATION ITEM.

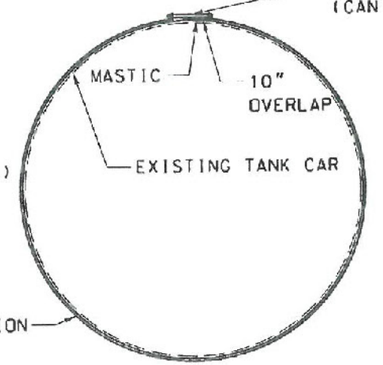
NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE.

TEMPORARY EROSION CONTROL SHALL INCLUDE SILT FENCING



BASE COURSE OPTION

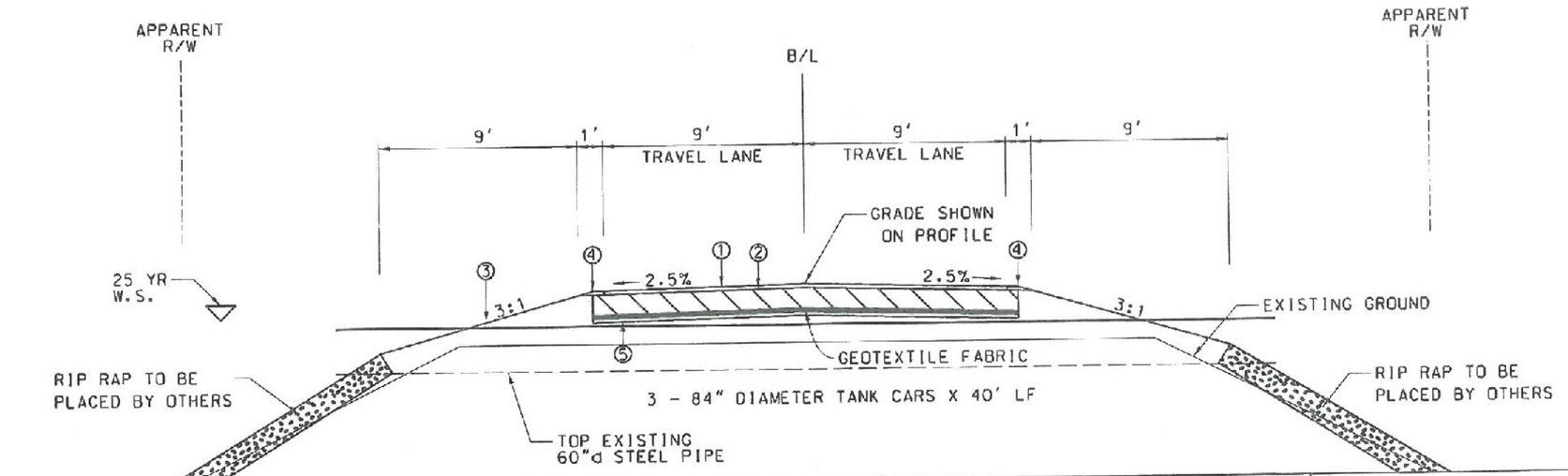


TANK CAR EXTENSION DETAIL

EXTENSION SHALL OVERLAP EXISTING TANK CAR BY ONE FOOT AND HAVE MASTIC SEALANT IN JOINT AND GEOTEXTILE WRAPPED AROUND JOINT. EXTENSION SHALL BE PROVIDED BY PARISH AND ALL OTHER MATERIAL AND LABOR COST REQUIRED TO EXTEND TANK CAR SHALL BE INCLUDED IN INSTALLATION ITEM.

SHEET NUMBER 2a
DESOTO
DESIGNED DRAWN CHECKED DATE SHEET
DAW ROAD DRAINAGE IMPROVEMENTS
TYPICAL SECTION
BEAST ENGINEERING LLC

90% FINAL PLANS



TYPICAL SECTION
STA 36+54

① ASPHALTIC CONCRETE (2" THICK) BY OTHERS

② BASE COURSE (12" THICK) BY SQ. YD.
(9" THICKNESS OF STONE OR RECYCLED PCC CONCRETE AND 3" SELECT SOIL)

③ EARTHWORK (BORROW-SELECT SOILS) BY CUBIC YARD UNADJUSTED

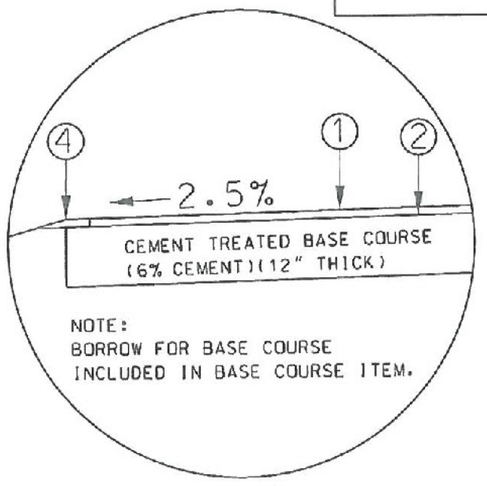
④ STONE SHOULDER (TO BE DONE BY OTHERS)

⑤ STONE OR RECYCLED BACKFILL. COST INCLUDED IN PIPE INSTALLATION ITEM.

NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE.

TEMPORARY EROSION CONTROL SHALL INCLUDE SILT FENCING



BASE COURSE OPTION

SHEET NUMBER 20

DESOTO

DESIGNED CHECKED DETAILED CHECKED DATE SHEET

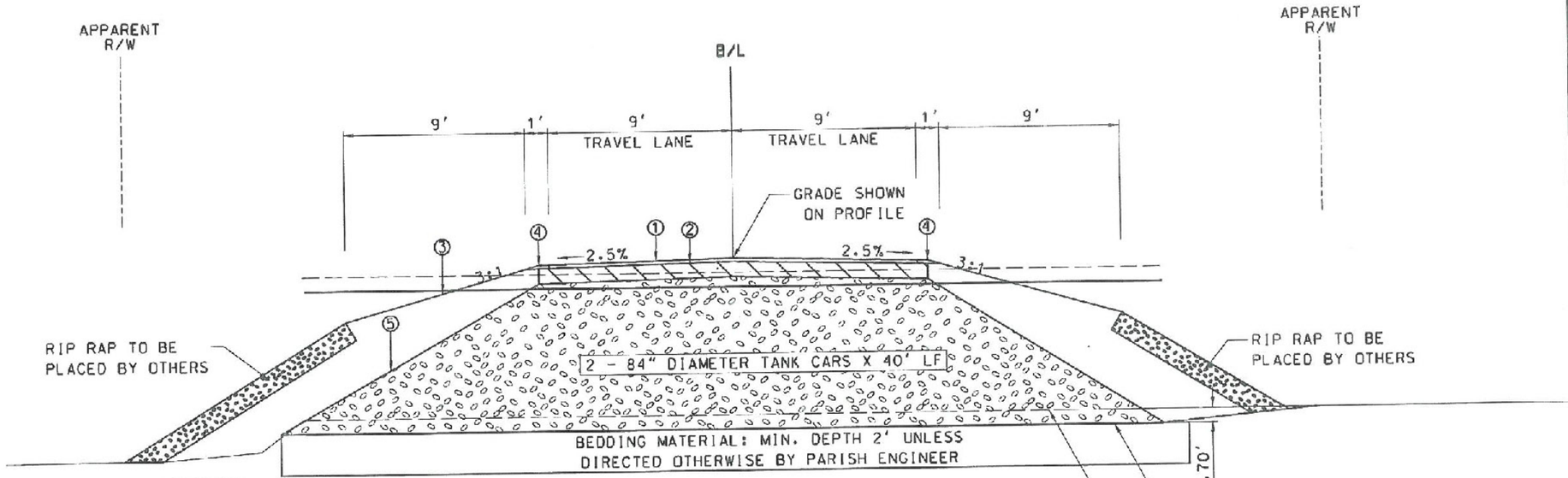
REVISION DESCRIPTION

DAM ROAD DRAINAGE IMPROVEMENTS

TYPICAL SECTION

BEAST ENGINEERING LLC

FINAL PLANS



TYPICAL SECTION
STA 107+56 (SITE 2)

① ASPHALTIC CONCRETE (2" THICK) BY OTHERS

② BASE COURSE (12" THICK) BY SQ. YD.
(9" THICKNESS OF STONE OR RECYCLED PCC CONCRETE AND 3" SELECT SOIL)

③ EARTHWORK (BORROW-SELECT SOILS) BY CUBIC YARD UNADJUSTED

④ STONE SHOULDER (TO BE DONE BY OTHERS)

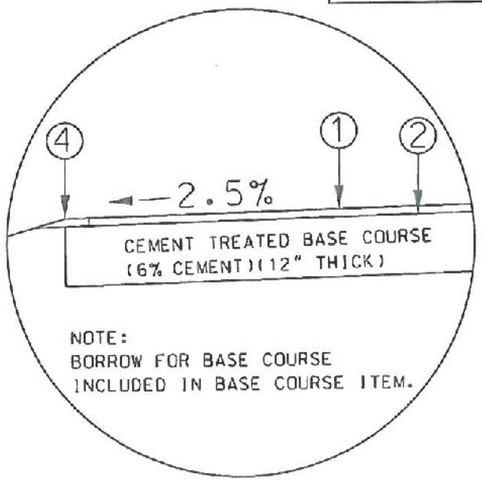
⑤ STONE OR RECYCLED BACKFILL. COST INCLUDED IN PIPE INSTALLATION ITEM.

NOTES:

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE.

TEMPORARY EROSION CONTROL SHALL INCLUDE SILT FENCING

SITE 2 SHALL BE CONSTRUCTED PRIOR TO SITE 1. CONTRACTOR SHALL HAVE 48 HOURS TO COMPLETE SITE 2.



BASE COURSE OPTION

SHEET NUMBER 2c

DESOTO

DESIGNED CHECKED DETAILING CHECKED DATE SHEET BY

REVISION DESCRIPTION NO. DATE

DAM ROAD DRAINAGE IMPROVEMENTS

TYPICAL SECTION

BEAST ENGINEERING LLC

FINAL PLANS

EARTHWORK

SITE		BORROW (SELECT SOILS)
		CUBIC YARD
SITE 1		7,423
SITE 2		64
TOTAL:		7,487

THE RECYCLED CONCRETE OR STONE BASE COURSE OPTION INCLUDES IN ITS COST 3" DEPTH OF BORROW IN THE BASE COURSE ITEM (606 CY VEHICULAR MEASUREMENT).

THE SOIL CEMENT TREATED BASE COURSE OPTION INCLUDES IN ITS COST 12" OF BORROW IN THE BASE COURSE ITEM (2,421 CY VEHICULAR MEASUREMENT).

COST OF EXCAVATION FOR CONSTRUCTION OF BASE COURSE SHALL BE INCLUDED IN BASE COURSE ITEM.

DRAINAGE SUMMARY

SITE	DESCRIPTION	701-03	701-10-01	726-01-00100	701-10-01
		INSTALLATION OF CROSS DRAIN PIPE (84" DIA. MIN.)(TANK CAR FURNISHED BY OTHERS)	RCP EXTENSION (24")	BEDDING MATERIAL	CONCRETE PIPE COLLAR
		LINEAR FOOT	LINEAR FOOT	TON	EACH
26+54.00	ADD 7' DIA. TANK CAR & EXTEND EXISTING 4' LT & RT	48		60	
36+54.00	REMOVE 60" TANK CAR & PLACE 3 7' DIA. TANK CARS	120		150	
39+91.00	EXTEND 24" RCP 12' LT & RT		24		2
107+56.00	REMOVE 2-84" CMP & PLACE 2-7' DIA. TANK CARS	80		90	
TOTAL:		248	24	300	2

BEDDING MATERIAL USAGE WILL BE DETERMINED BY INSPECTOR. GEOTEXTILE FABRIC REQUIRED AND COST INCLUDED IN BEDDING MATERIAL ITEM. QUANTITY SHALL BE FIELD MEASURED IN THE GROUND.

COST OF COUPLING BANDS, ALL MATERIAL, AND LABOR FOR EXTENSION OF EXISTING TANK CAR AT STA 26+54 SHALL BE INCLUDED IN TANK CAR INSTALLATION ITEM. TANK CAR EXTENSION (4' EACH) SHALL BE PROVIDED BY PARISH.

EROSION CONTROL

DESCRIPTION	204-05	739-01
	TEMPORARY SILT FENCING	HYDROSEEDING
	LINEAR FOOT	ACRE
TEMPORARY	500	0.7
TOTAL:	500	0.7

REMOVAL SUMMARY[2]

DESCRIPTION	REMOVAL OF PIPE (CROSS DRAIN)
	LINEAR FOOT
EXISTING TANK CAR CROSS DRAIN[1]	42
EXISTING CULVERTS	80
TOTAL:	122

(1) TANK CAR SHALL BE DELIVERED TO PARISH YARD.
(2) COST OF REMOVAL INCLUDED IN INSTALLATION OF TANK CAR ITEM.

BASE COURSE

STA	STA	LENGTH	301-02-00600 BASE COURSE (12" THICK)	
			WIDTH	QUANTITY
		LINEAR FOOT	LINEAR FOOT	SQUARE YARD
21+43.44	47+00.00	2,556.56	19.00	5,397
40+55.79	41+15.79	60.00	2 AVER.	13
41+15.79	42+78.84	163.05	4.00	72
42+78.84	43+38.84	60.00	2 AVER.	13
107+39.00	107+73.00	34.00	19.00	72
TOTAL:				5,567

BASE COURSE MATERIALS AND CONSTRUCTION SHALL CONFORM TO LA DOTD SPECIFICATIONS FOR CLASS 1 BASE COURSE.

10/13/2014

SHEET NUMBER 3

DESOTO

DAW ROAD DRAINAGE IMPROVEMENTS

QUANTITIES

BEAST ENGINEERING LLC

FINAL PLANS

SUMMARY OF ESTIMATED QUANTITIES

ITEM NUMBER	ITEM NAME	PAY UNIT	QUANTITY
201-01	Clearing and Grubbing	Acre	0.7
203-07	Borrow (Vehicular Measurement)(Select Soils)	Cubic Yard	7,487
204-05	Temporary Silt Fencing	Linear Foot	500
301-02-00600	Base Course (12" Thick)	Square Yard	5,567
701-03	Installation of Cross Drain Pipe(84" Dia. Min.)(Tank Car Furnished By Others)	Linear Foot	248
701-10-1	Reinforced Concrete Pipe (Extension)(24")	Linear Foot	24
701-15	Concrete Pipe Collar	Each	2
713-01	Temporary Signs and Barricades	Lump Sum	Lump Sum
726-01-00100	Bedding Material	Ton	300
739-01	Hydroseeding	Acre	0.7
727-01	Mobilization	Lump Sum	Lump Sum

SHEET NUMBER 3a

PARISH DESOTO

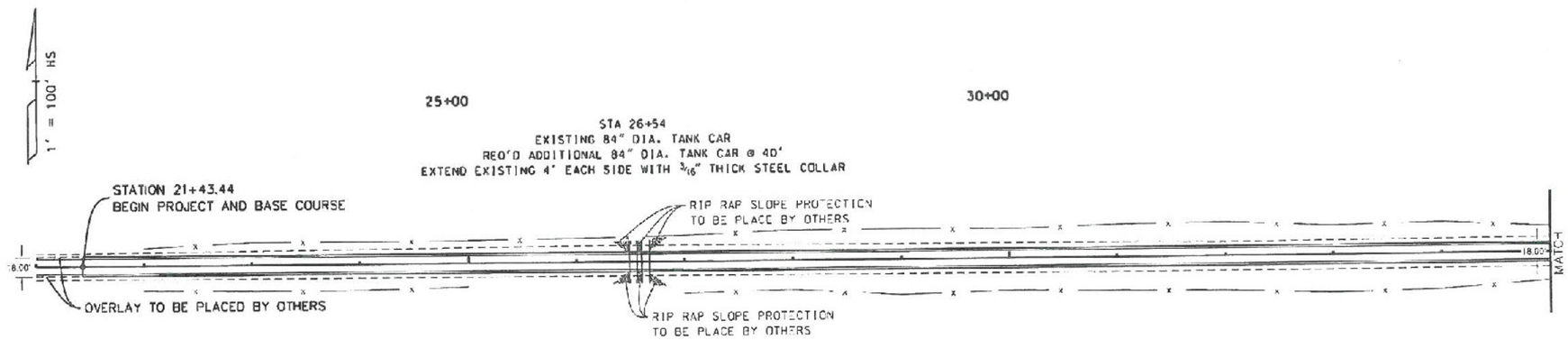
DAW ROAD DRAINAGE IMPROVEMENTS

SUMMARY OF ESTIMATED QUANTITIES

BEAST ENGINEERING LLC

NOTE:
CONTRACTOR SHALL HAVE UNDERGROUND UTILITIES LOCATED PRIOR TO EMBANKMENT AND CULVERT ACTIVITES.

ALL TRUCKING SHALL COME FROM LA 509 AND NOT I-49 INTERCHANGE.

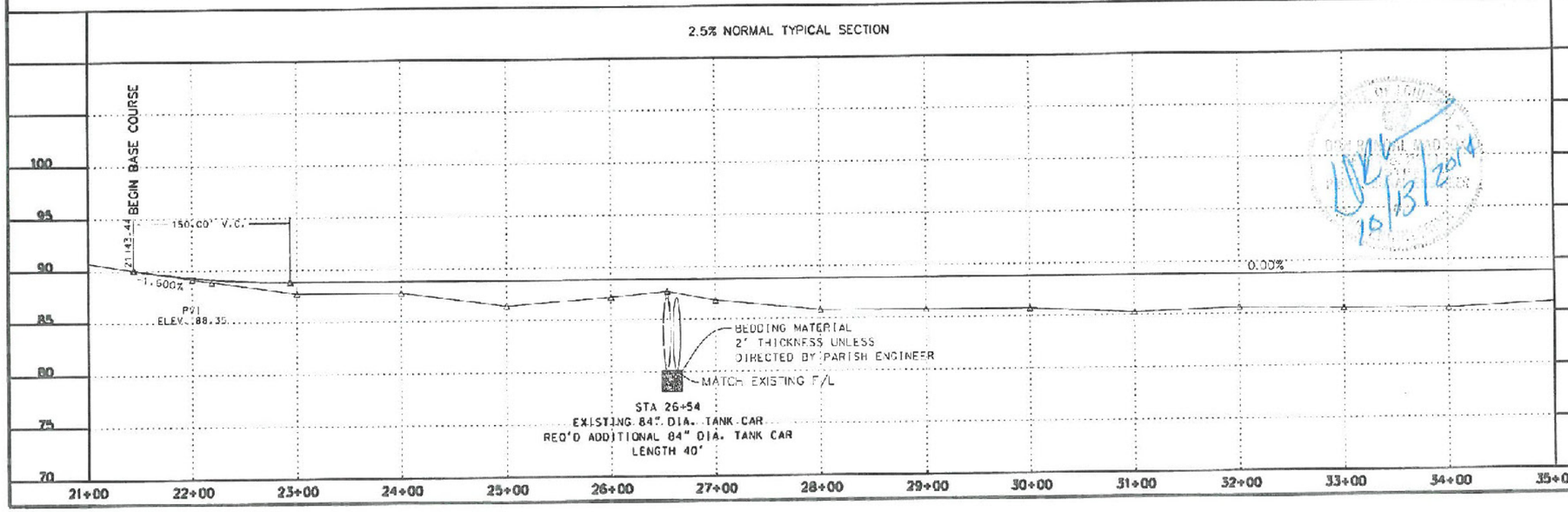


TBM NO. 1
ELEV. 100.00 ASSUMED
SPIKE IN PP NO. 506704
LT C/L

TBM NO. 2
ELEV. 87.77 ASSUMED
SPIKE IN 12" GUM
14'LT C/L

TBM NO. 3
ELEV. 87.19 ASSUMED
SPIKE IN PP NO. 506712
LT C/L

TBM NO. 4
ELEV. 86.91 ASSUMED
SPIKE IN PP NO. 506713
LT C/L



10/13/2014

FINAL PLANS

SHEET NUMBER 4

PARISH DESOTO

DESIGNED
CHECKED
DETAILED
CHECKED
DATE 05/26/2014
SHEET

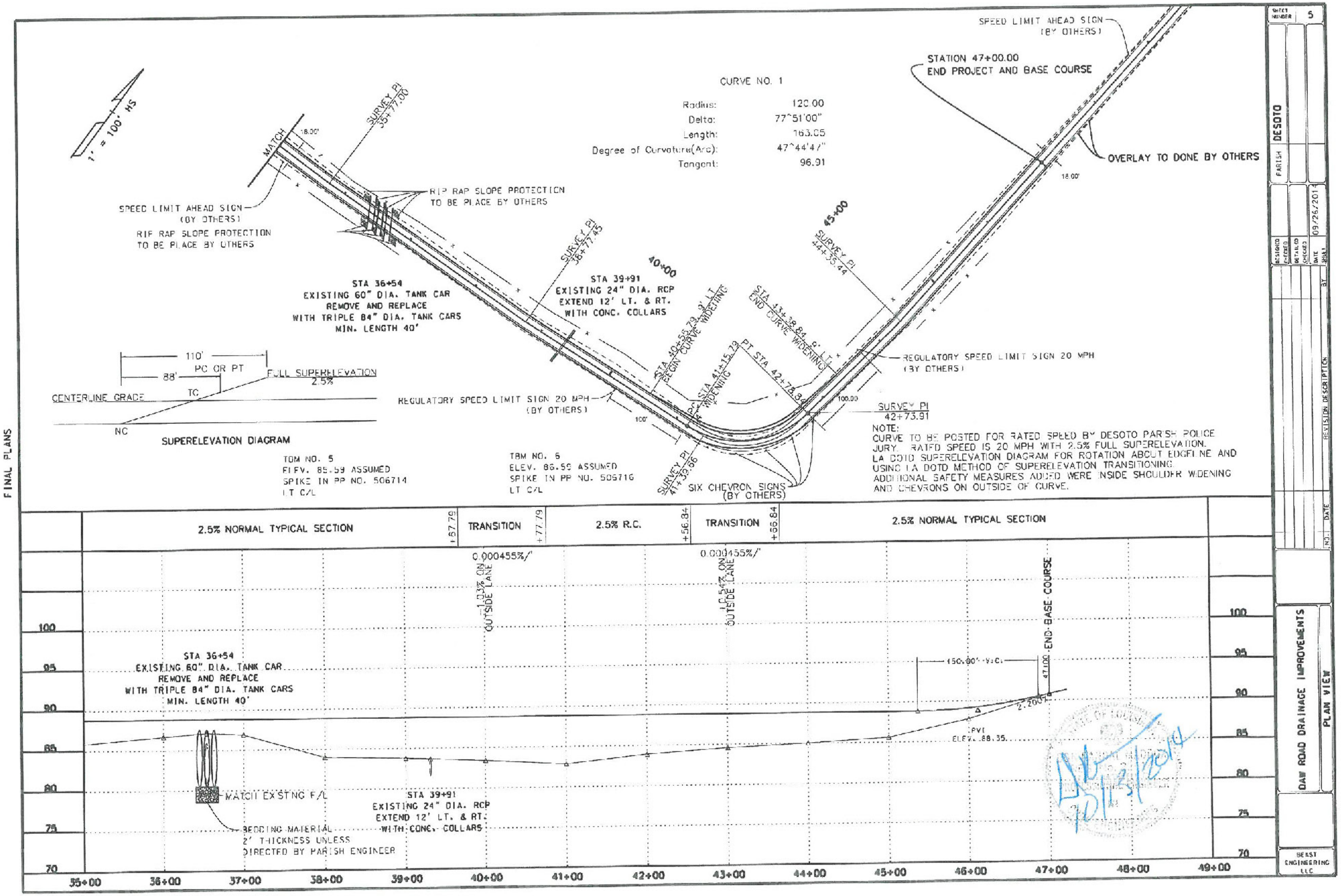
NO. DATE REVISION DESCRIPTION

OAK ROAD DRAINAGE IMPROVEMENTS

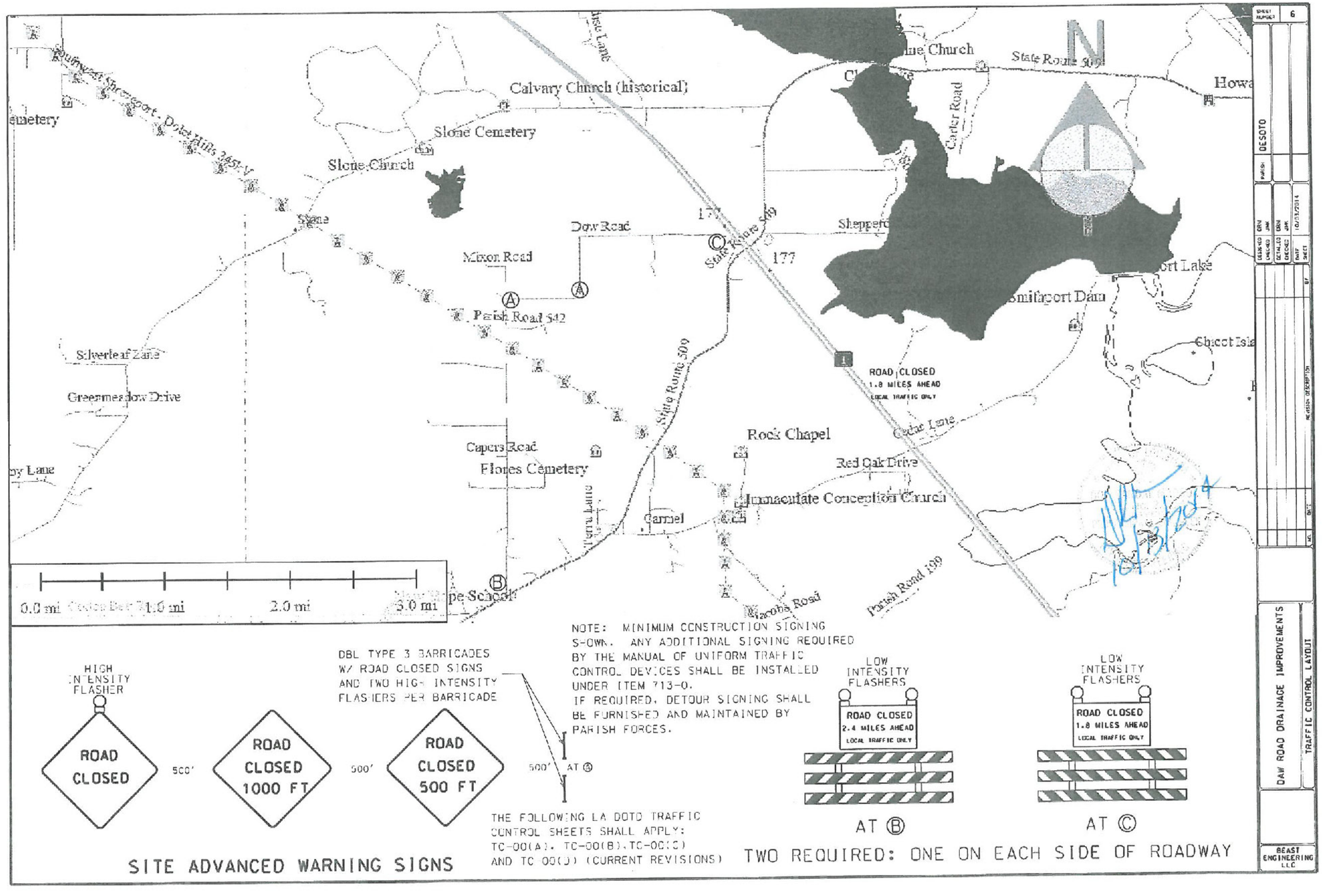
PLAN VIEW

BEAST ENGINEERING LLC

FINAL PLANS


SHEET NUMBER 5
1" = 100' HS
CURVE NO. 1
Radius: 120.00
Delta: 77°51'00"
Length: 163.05
Degree of Curvature(Arc): 47°44'47"
Tangent: 96.91
SPEED LIMIT AHEAD SIGN (BY OTHERS)
STATION 47+00.00
END PROJECT AND BASE COURSE
OVERLAY TO DONE BY OTHERS
MATCH
SURVEY PI 35+77.00
RIP RAP SLOPE PROTECTION TO BE PLACE BY OTHERS
SPEED LIMIT AHEAD SIGN (BY OTHERS)
RIP RAP SLOPE PROTECTION TO BE PLACE BY OTHERS
SURVEY PI 38+77.45
STA 36+54
EXISTING 60" DIA. TANK CAR
REMOVE AND REPLACE
WITH TRIPLE 84" DIA. TANK CARS
MIN. LENGTH 40'
STA 39+91
EXISTING 24" DIA. RCP
EXTEND 12' LT. & RT.
WITH CONC. COLLARS
40+00
45+00
SURVEY PI 44+35.44
STA 43+38.84 6' LT END CURVE WIDENING
STA 40+55.79 9' LT BEGIN CURVE WIDENING
STA 41+15.79 WIDENING
PT STA 42+78.84
REGULATORY SPEED LIMIT SIGN 20 MPH (BY OTHERS)
REGULATORY SPEED LIMIT SIGN 20 MPH (BY OTHERS)
SURVEY PI 42+73.91
SURVEY PI 41+39.66
SIX CHEVRON SIGNS (BY OTHERS)
110'
88'
PC OR PT
FULL SUPERELEVATION 2.5%
CENTERLINE GRADE
TC
NC
SUPERELEVATION DIAGRAM
TBM NO. 5
ELEV. 85.59 ASSUMED
SPIKE IN PP NO. 506714
LT C/L
TBM NO. 6
ELEV. 86.59 ASSUMED
SPIKE IN PP NO. 506716
LT C/L
NOTE:
CURVE TO BE POSTED FOR RATED SPEED BY DESOTO PARISH POLICE JURY. RATED SPEED IS 20 MPH WITH 2.5% FULL SUPERELEVATION.
LA DOTD SUPERELEVATION DIAGRAM FOR ROTATION ABOUT EDGELINE AND USING LA DOTD METHOD OF SUPERELEVATION TRANSITIONING.
ADDITIONAL SAFETY MEASURES ADDED WERE INSIDE SHOULDER WIDENING AND CHEVRONS ON OUTSIDE OF CURVE.
2.5% NORMAL TYPICAL SECTION
+67.79
TRANSITION
+77.79
2.5% R.C.
+56.84
TRANSITION
+66.84
2.5% NORMAL TYPICAL SECTION
0.000455%/'
1.03% ON OUTSIDE LANE
0.000455%/'
1.0.54% ON OUTSIDE LANE
END BASE COURSE
150.00' V.C.
47.00
2.260%
PVI ELEV. 88.35
STA 36+54
EXISTING 60" DIA. TANK CAR
REMOVE AND REPLACE
WITH TRIPLE 84" DIA. TANK CARS
MIN. LENGTH 40'
MATCH EXISTING F/L
STA 39+91
EXISTING 24" DIA. RCP
EXTEND 12' LT. & RT.
WITH CONC. COLLARS
BEDDING MATERIAL
2' THICKNESS UNLESS
DIRECTED BY PARISH ENGINEER
100
95
90
85
80
75
70
35+00
36+00
37+00
38+00
39+00
40+00
41+00
42+00
43+00
44+00
45+00
46+00
47+00
48+00
49+00
PARISH DESOTO
DATE 09/26/201
REVISION DESCRIPTION
DAW ROAD DRAINAGE IMPROVEMENTS
PLAN VIEW
BEAST ENGINEERING LLC

FINAL PLANS



HIGH INTENSITY FLASHER

ROAD CLOSED — 500' — ROAD CLOSED 1000 FT — 500' — ROAD CLOSED 500 FT — 500' AT Ⓐ

DBL TYPE 3 BARRICADES W/ ROAD CLOSED SIGNS AND TWO HIGH INTENSITY FLASHERS PER BARRICADE

NOTE: MINIMUM CONSTRUCTION SIGNING SHOWN. ANY ADDITIONAL SIGNING REQUIRED BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE INSTALLED UNDER ITEM 713-0. IF REQUIRED, DETOUR SIGNING SHALL BE FURNISHED AND MAINTAINED BY PARISH FORCES.

THE FOLLOWING LA DOTD TRAFFIC CONTROL SHEETS SHALL APPLY: TC-00(A), TC-00(B), TC-00(C) AND TC 00(D) (CURRENT REVISIONS)

SITE ADVANCED WARNING SIGNS

LOW INTENSITY FLASHERS

AT Ⓑ

LOW INTENSITY FLASHERS

AT Ⓒ

TWO REQUIRED: ONE ON EACH SIDE OF ROADWAY

SHEET NUMBER 6

DESOTO

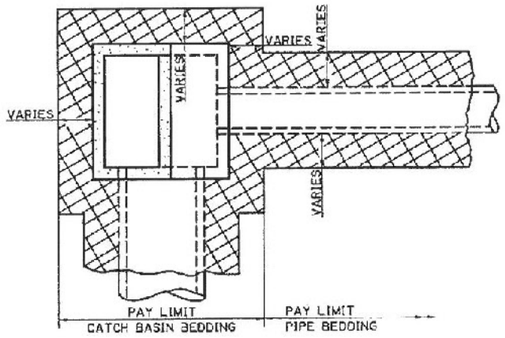
DESIGNED DRN JMK
CHECKED DRN JMK
DETAILED DRN JMK
CHECKED JMK 10/31/2014
PLOT SHEET

DAW ROAD DRAINAGE IMPROVEMENTS

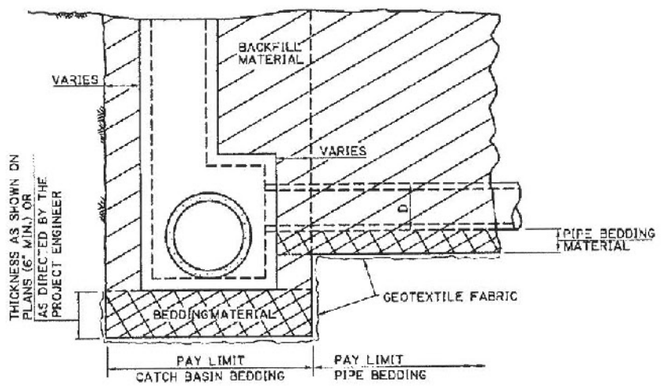
TRAFFIC CONTROL LAYOUT

BEAST ENGINEERING LLC

TYPICAL CATCH BASIN AND STORM SEWER PIPE INSTALLATION WITH BEDDING MATERIAL

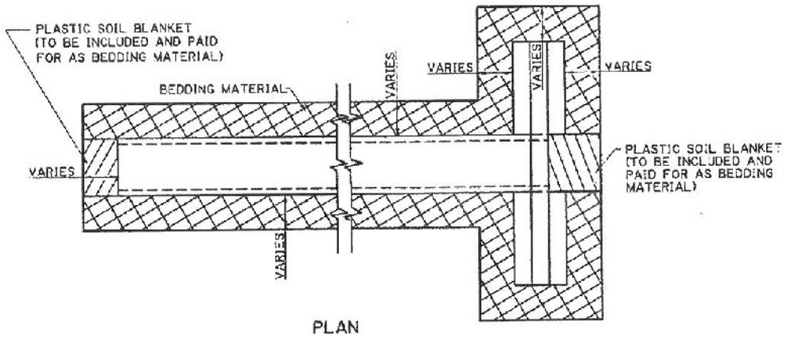


PLAN OF TYPICAL CATCH BASIN
(MANHOLE OR JUNCTION BOX) AND PIPE

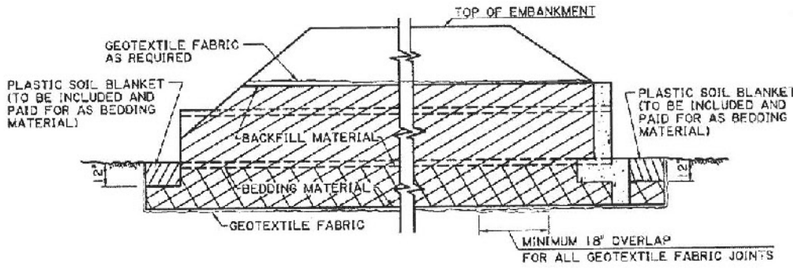


PROFILE OF TYPICAL CATCH BASIN
(MANHOLE OR JUNCTION BOX) AND PIPE

TYPICAL CROSS DRAIN INSTALLATION WITH BEDDING MATERIAL

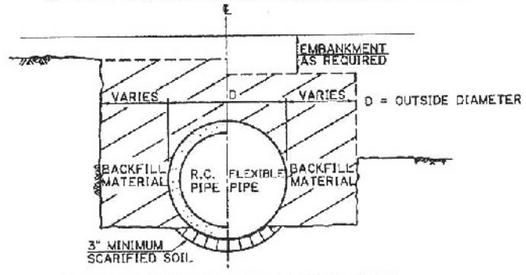


PLAN



PROFILE

TYPICAL PIPE INSTALLATION WITHOUT BEDDING MATERIAL



SECTION THRU TRENCH/EMBANKMENT

HALF-SECTION SHOWING TOP OF PIPE GREATER THAN 12" BELOW ORIGINAL GROUND (TRENCH INSTALLATION)

HALF-SECTION SHOWING TOP OF PIPE ABOVE ORIGINAL GROUND (EMBANKMENT INSTALLATION)

GENERAL NOTES

1. CONSTRUCTION SPECIFICATIONS:
LATEST APPROVED LA DOTD STANDARD SPECIFICATIONS
2. STANDARD DOTD PIPE INSTALLATION, BEDDING, BACKFILL (TYPE "A" OR "B") AND TRENCH WIDTH ARE DEFINED IN SECTIONS 701 AND 726 OF THE LA DOTD STANDARD SPECIFICATIONS.
3. THE NEED AND/OR THE THICKNESS OF BEDDING MATERIAL WILL BE DETERMINED BY THE GEOTECHNICAL SECTION AND WILL BE SHOWN ON THE PLANS. ADDITIONAL BEDDING MATERIAL MAY BE REQUIRED BY THE PROJECT ENGINEER AT NO COST TO THE CONTRACTOR.
4. THE DETAILS ON THIS SHEET DEPICT PAY LIMITS FOR BEDDING MATERIALS. THE BEDDING MATERIAL PAY QUANTITIES ARE TO BE BASED ON THE THEORETICAL NET SECTION WITH NO PIPE DEDUCTIONS.
5. THE BACKFILL IS TO BE MEASURED AND PAID IN ACCORDANCE WITH SECTION 701 OF LA DOTD STANDARD SPECIFICATIONS.
6. BEDDING SHOWN ON THIS STANDARD PLAN CONFORMS TO THE CURRENT AASHTO SPECIFICATIONS.
7. FLEXIBLE PIPE CONSISTS OF ALL CORRUGATED METAL AND PLASTIC PIPE.
8. REINFORCED CONCRETE PIPE AND FLEXIBLE PIPE ARE SHOWN AS TYPICAL STRUCTURES. DETAILS FOR REINFORCED CONCRETE BOX, REINFORCED CONCRETE PIPE ARCH, CORRUGATED METAL PIPE ARCH AND CORRUGATED STRUCTURAL PLATE STRUCTURES ARE SIMILAR.
9. MINIMUM COVER IS 12" FOR ALL PIPE. THERE IS NO MINIMUM COVER REQUIREMENT FOR RCB.

SHEET NUMBER 201

PARISH: DESOTO
FEDERAL PROJECT:
STATE PROJECT:

ORIGINAL DRAWING BY: JDK
DETAILED BY: JDK
CHECKED BY: JDK
DATE: 6-87
SHEET 1 OF 2

8-22-07 REVISION TO COMPLY WITH CURRENT SPECIFICATIONS JDK
1-8-07 ADDED FINAL AND INITIAL BACKFILL JDK
7-11-05 REDRAFTED. REVISED FOR TYPE A & B BACKFILL JDK
DATE REVISION DESCRIPTION BY

APPROVED BY: CHIEF ENGINEER

DATE: 8-22-07

BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES

STANDARD PLAN NO. 3M-01

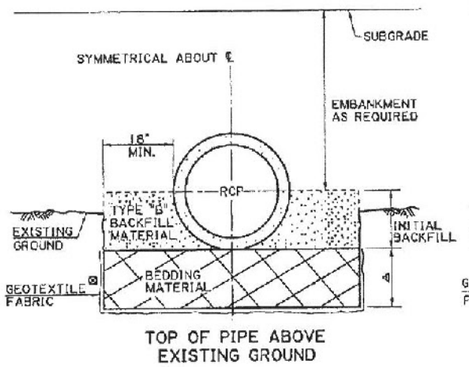
HYDRAULICS SECTION

TYPICAL PIPE INSTALLATION WITH BEDDING MATERIAL

EMBANKMENT INSTALLATION

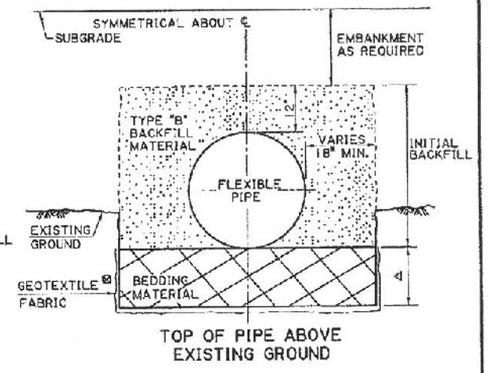
① FOR RIGID PAVEMENTS, FLEXIBLE PAVEMENTS OR OTHER AREAS

REINFORCED CONCRETE PIPE



TOP OF PIPE ABOVE EXISTING GROUND

FLEXIBLE PIPE



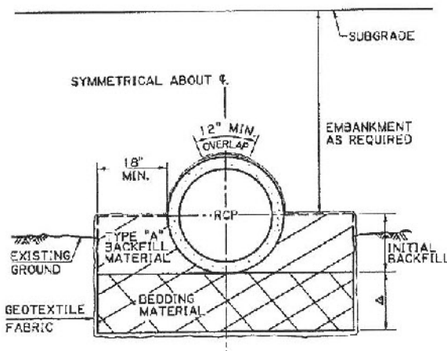
TOP OF PIPE ABOVE EXISTING GROUND

① FOR RIGID PAVEMENTS: APPLIES TO ALL PIPE UNDER RIGID PAVEMENT, EXCEPT AS NOTED FOR FLEXIBLE PAVEMENT NOTE ③ BELOW.
FOR FLEXIBLE PAVEMENTS: APPLIES TO PIPES THAT DO NOT CROSS THE CENTERLINE OF NEW OR EXISTING ROADWAY
FOR OTHER AREAS: APPLIES TO PIPES IN NONPAVED AREAS OR PAVED AREAS THAT SERVE AS DRIVEWAYS OR SHOULDERS

⊠ IF DIRECTED BY THE PROJECT ENGINEER, GEOTEXTILE FABRIC WILL BE INSTALLED AROUND THE TYPE "B" BACKFILL AND PAID UNDER THE PAY ITEM FOR GEOTEXTILE FABRIC, SECTION 711 OR 203 OF LA DOTD STANDARD SPECIFICATIONS OR BY CHANGE ORDER.

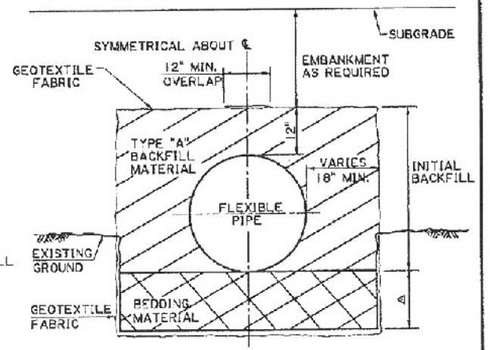
FOR FLEXIBLE PAVEMENTS ② ③

REINFORCED CONCRETE PIPE



TOP OF PIPE ABOVE EXISTING GROUND

FLEXIBLE PIPE



TOP OF PIPE ABOVE EXISTING GROUND

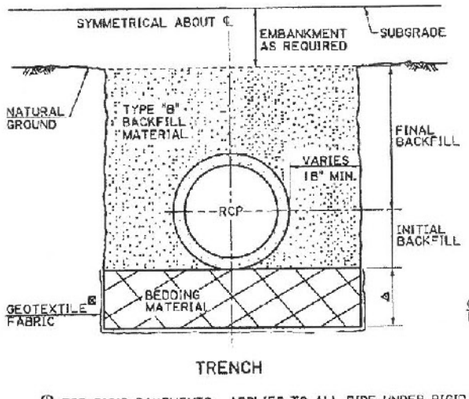
② APPLIES TO PIPE CROSSING THE CENTERLINE OF NEW OR EXISTING ROADWAYS
③ ALSO APPLIES UNDER RIGID PAVEMENTS FOR PIPES CROSSING THE CENTERLINE OF NEW OR EXISTING PAVEMENTS WHEN THE PROJECT IS BID USING A RIGID VS FLEXIBLE ALTERNATE (A + B + C) BID MODEL.

Δ THICKNESS AS SHOWN ON PLANS (6" MIN.) OR AS DIRECTED BY THE PROJECT ENGINEER

TRENCH INSTALLATION

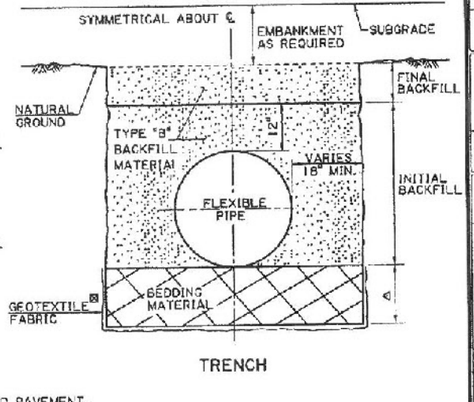
① FOR RIGID PAVEMENTS, FLEXIBLE PAVEMENTS OR OTHER AREAS

REINFORCED CONCRETE PIPE



TRENCH

FLEXIBLE PIPE



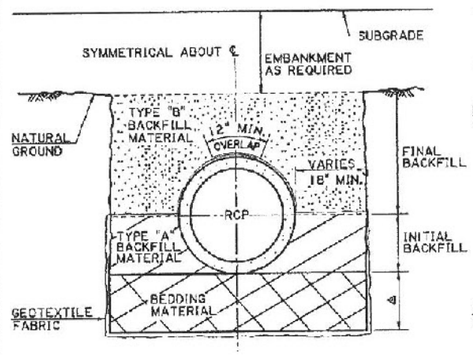
TRENCH

① FOR RIGID PAVEMENTS: APPLIES TO ALL PIPE UNDER RIGID PAVEMENT, EXCEPT AS NOTED FOR FLEXIBLE PAVEMENT NOTE ③ BELOW.
FOR FLEXIBLE PAVEMENTS: APPLIES TO PIPES THAT DO NOT CROSS THE CENTERLINE OF NEW OR EXISTING ROADWAY
FOR OTHER AREAS: APPLIES TO PIPES IN NONPAVED AREAS OR PAVED AREAS THAT SERVE AS DRIVEWAYS OR SHOULDERS

⊠ IF DIRECTED BY THE PROJECT ENGINEER, GEOTEXTILE FABRIC WILL BE INSTALLED AROUND THE TYPE "B" BACKFILL AND PAID UNDER THE PAY ITEM FOR GEOTEXTILE FABRIC, SECTION 711 OR 203 OF LA DOTD STANDARD SPECIFICATIONS OR BY CHANGE ORDER.

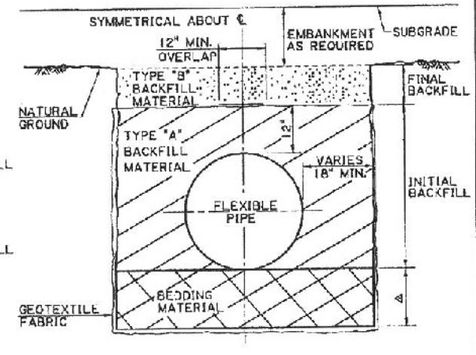
FOR FLEXIBLE PAVEMENTS ② ③

REINFORCED CONCRETE PIPE



TRENCH

FLEXIBLE PIPE



TRENCH

② APPLIES TO PIPE CROSSING THE CENTERLINE OF NEW OR EXISTING ROADWAYS
③ ALSO APPLIES UNDER RIGID PAVEMENTS FOR PIPES CROSSING THE CENTERLINE OF NEW OR EXISTING PAVEMENTS WHEN THE PROJECT IS BID USING A RIGID VS FLEXIBLE ALTERNATE (A + B + C) BID MODEL.

Δ THICKNESS AS SHOWN ON PLANS (6" MIN.) OR AS DIRECTED BY THE PROJECT ENGINEER

SHEET NUMBER 202

DESOTO PARISH | FEDERAL PROJECT | STATE PROJECT

DESIGNED JEK | DETAILED PMA | DATE 6-8-71
CHECKED JEK | CHECKED JCM | SHEET 2 OF 2

BY	DATE	REVISION DESCRIPTION
JEK	6-22-07	REVISION TO COMPLY WITH CURRENT SPECIFICATIONS
JEK	1-8-07	ADDED FINAL AND INITIAL BACKFILL
JEK	7-11-05	REDRAFTED, REVISED FOR TYPE A & B BACKFILL

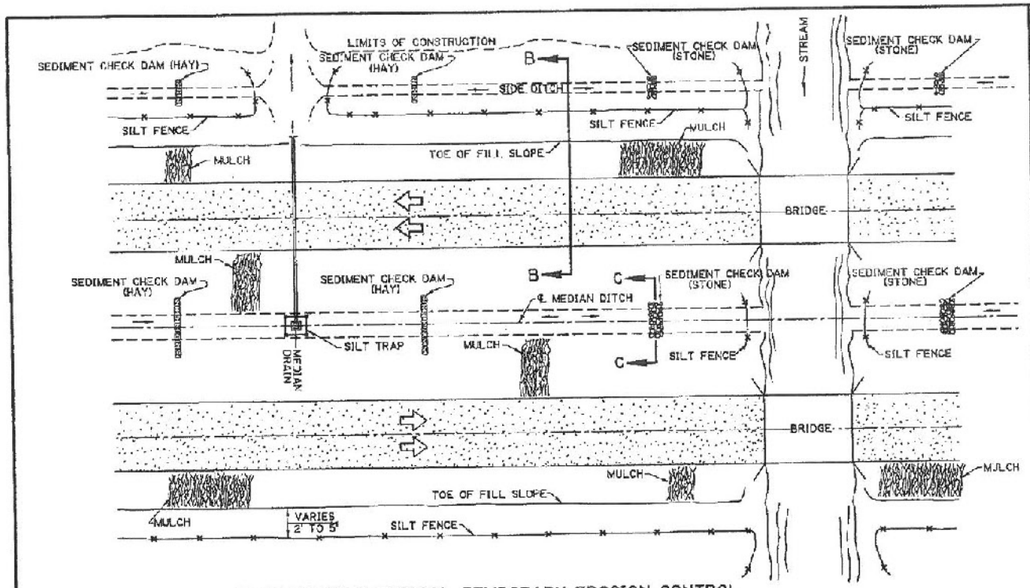
APPROVED BY CHIEF ENGINEER: [signature] DATE: 8-22-07

STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES

STANDARD PLAN BM-01

HYDRAULICS SECTION

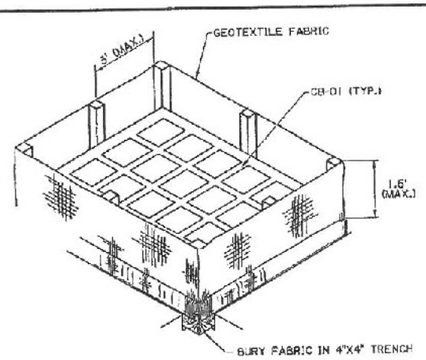


PLAN SHOWING TYPICAL TEMPORARY EROSION CONTROL

MULCHES

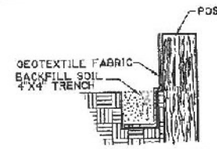
MULCHES ARE THE APPLICATION OF MATS OF MATERIAL PLACED ON THE SOIL SURFACE TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND TO REDUCE THE VELOCITY OF OVERLAND FLOW. MULCHES CAN BE ORGANIC OR SYNTHETIC. MULCHES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW GUIDELINES FOR THE USE OF MULCHES ARE:

1. USE ON CUT AND EMBANKMENT SLOPES WHIGH HAVE NOT BEEN COMPLETED TO PLAN GRADE OR WHERE THE WEATHER OR SOIL CONDITIONS WILL NOT PERMIT COMPLETING THEM WITHIN A REASONABLE TIME
2. USE ON CLEARED, GRUBBED , AND SCALPED AREAS WHERE SOIL EROSION IS LIKELY TO OCCUR
3. USE WITH TEMPORARY SEEDING

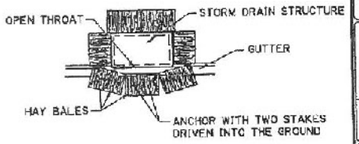


ISOMETRIC VIEW SHOWING GEOTEXTILE FABRIC

(BACKFILL SOIL NOT SHOWN)



SECTION THRU TRENCH SHOWING GEOTEXTILE FABRIC



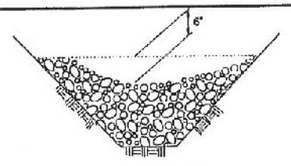
PLAN SHOWING HAY BALES

PAY ITEM: TEMPORARY HAY OR STRAW BALES

TEMPORARY INLET SILT TRAP

THE TEMPORARY DROP INLET SILT TRAP IS TO BE USED FOR SMALL DRAINAGE AREAS (LESS THAN 1 ACRE) WHERE THE STORM DRAIN IS FUNCTIONAL BEFORE THE AREA IS STABILIZED. THE TRAP CAN BE EITHER GEOTEXTILE FABRIC OR HAY BALES.

1. THE GEOTEXTILE FABRIC SHALL CONFORM TO PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS G).
2. WOODEN STAKES SUPPORTING THE FABRIC SHALL BE 2" X 2" OR 2" X 4" WITH A MINIMUM LENGTH OF 3 FEET. THE STAKES SHALL BE SPACED AROUND THE INLET AT A MAXIMUM SPACING OF 3 FEET.
3. THE HEIGHT OF THE FABRIC ABOVE THE INLET SHALL BE LIMITED TO 1.5' AND THE BOTTOM OF THE FABRIC SHALL BE BURIED IN A TRENCH APPROXIMATELY 4" WIDE BY 4" DEEP. THE FABRIC SHALL BE STAPLED TO THE POST WITH ½" STAPLES.
4. THE TRAP SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM. THE SEDIMENT SHOULD BE REMOVED AND EACH STAKE SHOULD BE FIRMLY IN THE GROUND.
5. HAY BALES SHALL BE PLACED SO THAT THE BINDING WIRE OR TWINE IS NOT IN CONTACT WITH THE GROUND.



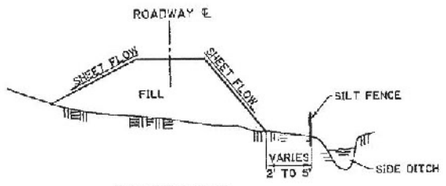
SECTION C-C

TEMPORARY SEDIMENT CHECK DAM (STONE)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (STONE)

NOTES:
A STONE CHECK DAM IS A SMALL TEMPORARY DAM CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH. THE PURPOSE OF THIS MEASURE IS TO REDUCE THE VELOCITY OF CONCENTRATED STORM WATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH. THE STONE CHECK DAM WILL TRAP SMALL AMOUNTS OF SEDIMENTS GENERATED IN THE DITCH ITSELF, HOWEVER IT SHOULD NOT BE USED AS A SEDIMENT TRAPPING DEVICE. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF STONE CHECK DAMS ARE:

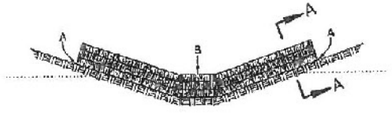
1. USE IN SMALL OPEN CHANNELS WHICH DRAIN 10 ACRES OR LESS
2. DO NOT USE IN A LIVE STREAM
3. USE IN A TEMPORARY DITCH OR SWALE WHICH, BECAUSE OF THEIR SHORT LENGTH OF SERVICE, CANNOT RECEIVE A NON- EROSIBLE LINING
4. USE IN PERMANENT DITCHES OR SWALES WHICH WILL NOT RECEIVE A PERMANENT LINING FOR AN EXTENDED PERIOD OF TIME
5. USE IN TEMPORARY OR PERMANENT DITCHES OR SWALES WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF GRASS LININGS
6. FOR STONE SPECIFICATIONS, SEE PROJECT SPECIFICATIONS FOR RIPRAP, (CLASS 2 LB)



SECTION B-B

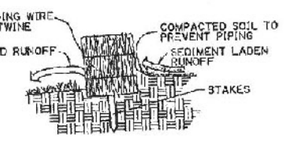
TEMPORARY SILT FENCE APPLICATION

(FOR CONSTRUCTION DETAILS AND SPECIFICATIONS SEE SHEET 2 OF 2.)



POINTS A SHOULD BE HIGHER THAN POINT B.

ELEVATION



SECTION A-A

TEMPORARY SEDIMENT CHECK DAM (HAY)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (HAY)

NOTES:
A HAY BALE BARRIER IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF STRAW OR HAY. THE HAY BALE BARRIER IS ALSO USED AS A CHECK DAM TO REDUCE THE VELOCITY IN SMALL DITCHES OR SWALES. THE HAY BALES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL.
A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A HAY BALE BARRIER ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
2. USE IN MINOR SWALES OR DITCHES WHERE THE MAXIMUM DRAINAGE AREA IS 2 ACRES
3. ONLY USE WHERE THE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS
4. DO NOT USE IN LIVE STREAMS OR IN SWALES OR DITCHES WHERE THERE IS A POSSIBILITY OF A WASHOUT

SHEET NUMBER 203

DESOTO

DESIGNED JCH
CHECKED
DETAILED KAJ
CHECKED JCH
DATE 1-16-04
SHEET 1 OF 2

DATE 10-1-08

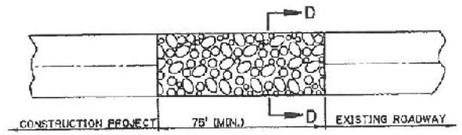
NO.	DATE	REVISION DESCRIPTION	BY
08	10-1-08	REMOVE SPECIFIC PAY ITEM NOS., GENERAL REVISIONS.	MH

APPROVED BY
DESIGN ENGINEER

TEMPORARY EROSION CONTROL DETAILS

STANDARD EC-01

HYDRAULICS SECTION



PLAN

SECTION D-D

TEMPORARY STONE CONSTRUCTION ENTRANCE

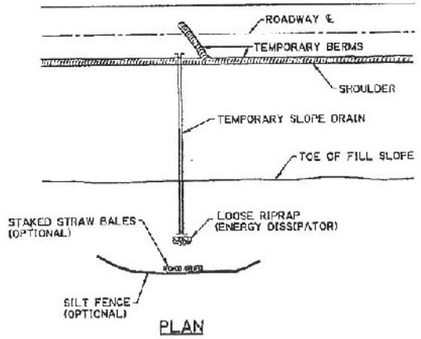
PAY ITEM: TEMPORARY STONE CONSTRUCTION ENTRANCE

NOTES:

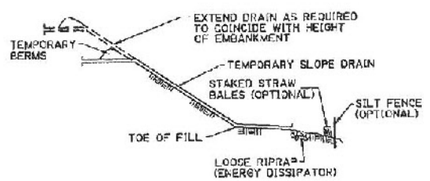
TEMPORARY STONE CONSTRUCTION ENTRANCE AND/OR WASH RACK

A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON THE CONSTRUCTION SITE TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PUBLIC ROADS. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLE ENTERS A PUBLIC ROAD. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A STONE ENTRANCE AND/OR WASH RACKS ARE:

1. THE STONE LAYER MUST BE AT LEAST 6 INCHES THICK.
2. THE STONE SHALL CONFORM TO PROJECT SPECIFICATIONS FOR RIPRAP (CLASS 2 LB).
3. THE LENGTH OF THE PAD MUST BE A LEAST 75 FEET AND IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS.
4. A GEOTEXTILE FABRIC UNDERLINER IS REQUIRED. THE GEOTEXTILE FABRIC SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS 3).
5. IF A WASH RACK IS NECESSARY, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.



PLAN



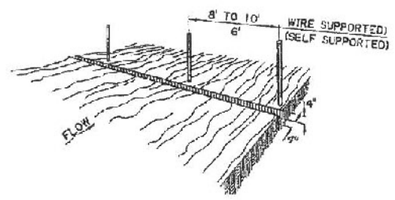
ELEVATION

TEMPORARY SLOPE DRAIN

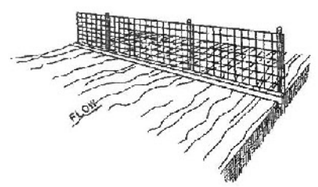
A TEMPORARY SLOPE DRAIN IS A DEVICE USED TO CARRY WATER FROM THE CONSTRUCTION WORK AREA TO A LOWER ELEVATION. SLOPE DRAINS MAY BE PLASTIC SHEET, METAL OR PLASTIC PIPE, STONE GUTTERS, FIBER MATS, OR CONCRETE OR ASPHALT DITCHES. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A TEMPORARY SLOPE DRAIN ARE:

1. THE SPACING OF THE SLOPE DRAINS VARIES WITH THE ROAD GRADE.
   FOR GRADES: 0.0% - 2.0% USE 500' SPACING
   2.1% - 5.0% USE 200' SPACING
   GREATER THAN 5.0% USE 100' SPACING
2. SLOPE DRAIN MATERIAL: SMOOTH PIPE - 8" MINIMUM - 3 MILS THICK MIN.
   CORRUGATED PIPE - 2" MINIMUM
   PLASTIC SHEETING - 4' WIDE MINIMUM
   PLASTIC SHEETING - 3 MILS THICK MIN.
3. PLASTIC SHEETING CAN BE STAKED DOWN OR WEIGHTED WITH ROCKS OR LOGS. THE AREA UNDER THE SHEETING SHOULD BE SHAPED TO PROVIDE AN ADEQUATE CHANNEL.
4. THE OUTLET END SHOULD BE PROTECTED OR HAVE SOME MEANS OF DISSIPATING ENERGY. THE FLOW SHOULD BE DIRECTED THROUGH A SEDIMENT TRAP SUCH AS A SILT FENCE, HAY BALES, OR OTHER APPROVED SEDIMENT CONTROL DEVICES.
5. TO INSURE PROPER OPERATION, TEMPORARY SLOPE DRAINS SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM, FOR CLOGGING OR DISPLACEMENT. EROSION AT THE OUTLET SHOULD BE CHECKED AND THE SILT TRAPS CLEANED IF NECESSARY.

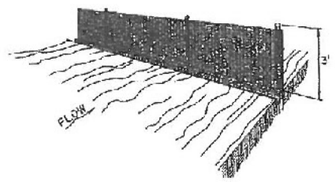
1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



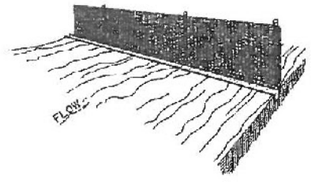
2. STAPLE WIRE FENCING TO THE POSTS.



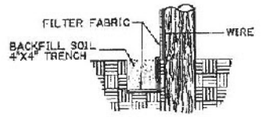
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT EXCAVATED SOIL.



EXTENSION OF FABRIC INTO THE TRENCH.



CONSTRUCTION OF TEMPORARY SILT FENCING

(WIRE SUPPORTED SILT FENCE IS SHOWN. SELF SUPPORTED SILT FENCE WILL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS.)

NOTES:

SILT FENCING IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC SUPPORTED BY POSTS AND STRETCHED ACROSS AN AREA TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT. THE SILT FENCING SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW BASIC GUIDELINES FOR THE USE OF SILT FENCING ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
2. USE WHERE THE MAXIMUM DRAINAGE AREA BEHIND THE SILT FENCE IS ¼ ACRE PER 100 FEET OF SILT FENCE LENGTH
3. USE WHERE THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100 FEET
4. USE THERE THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1
5. DO NOT USE SILT FENCES IN LIVE STREAMS OR IN DITCHES OR SWALES WHERE FLOWS EXCEED ONE CUBIC FOOT PER SECOND

SHEET NUMBER 204

DESOTO

PROJECT | FEDERAL PROJECT | STATE PROJECT

DESIGNED JCM | DETAILED KAJ | CHECKED JCM | DATE 1-14-94 | SHEET 2 OF 2

NO.	REVISION	BY	DATE
1	REMOVE SPECIFIC PAY ITEM NOS., GENERAL REVISIONS	MH	10-1-08

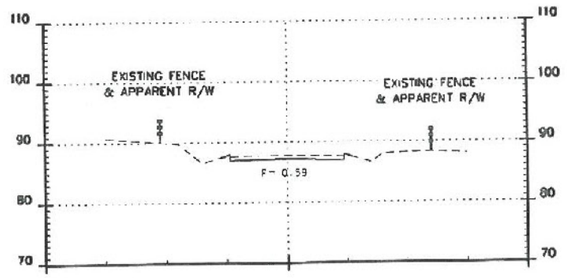
APPROVED BY DEPUTY CHIEF ENGINEER

TEMPORARY EROSION CONTROL DETAILS

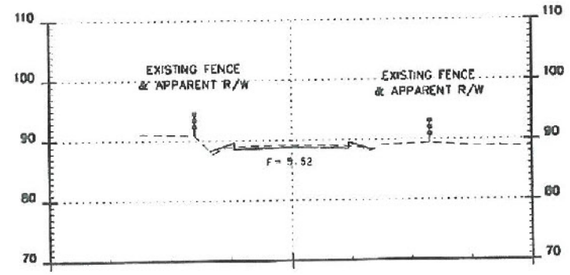
STANDARD NO. EC-01

HYDRAULICS SECTION

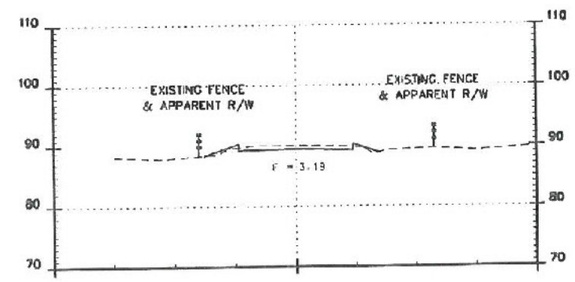
FINAL PLANS



23+00

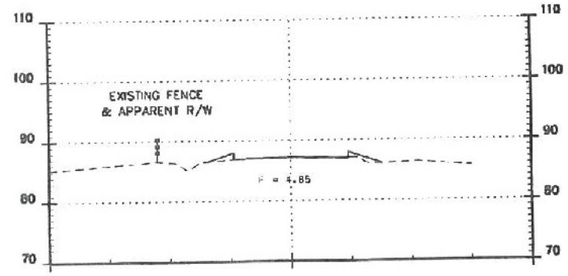


22+00

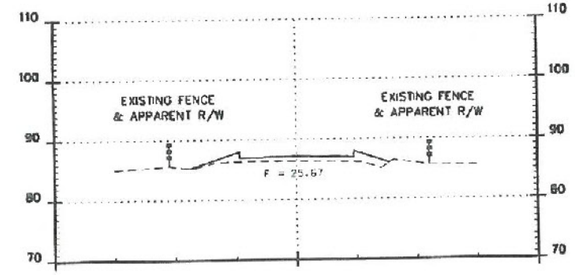


21+43.44

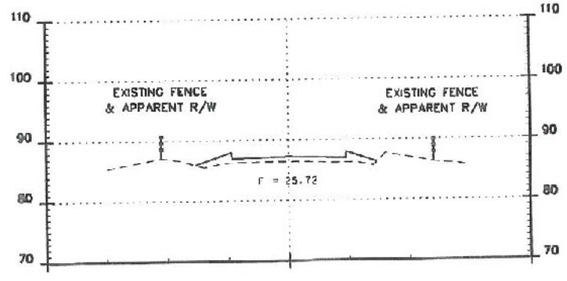
EXISTING 84" TANK CAR @ STA 26+54



26+00



25+00



24+00

10/13/2014

SHEET NUMBER 401

PARISH: DESOTO

DESIGNED
DRAWN
DETAILED
CHECKED

DATE: 09/26/2014

SHEET NO. 61

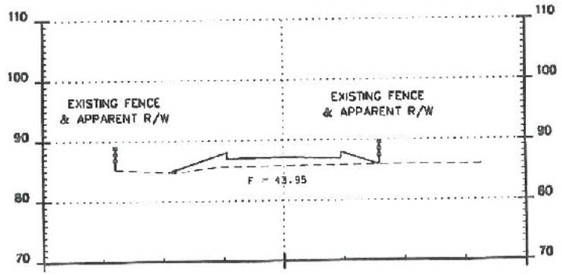
REVISION DESCRIPTION

DATE

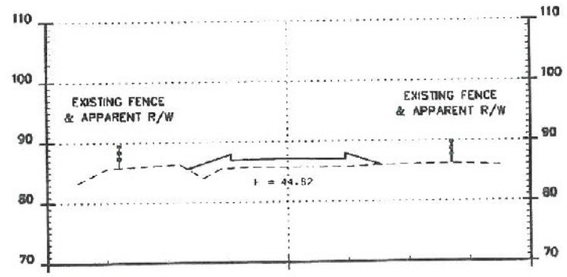
DAW ROAD DRAINAGE IMPROVEMENTS

CROSS SECTIONS

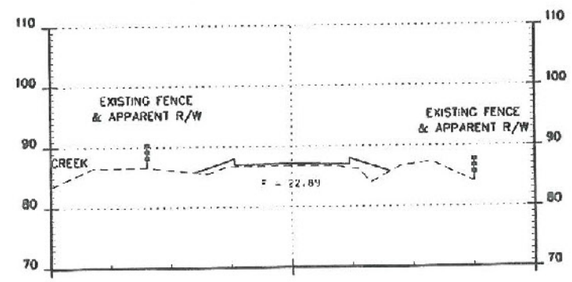
BEAST ENGINEERING LLC



28+00

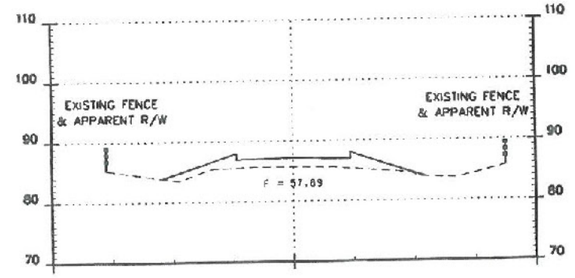


28+00

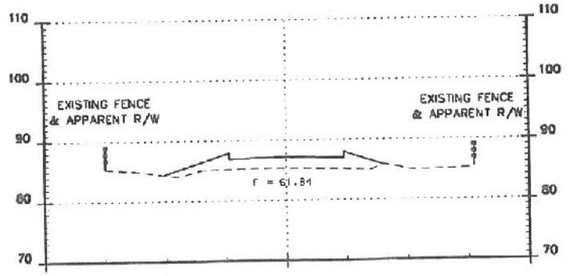


27+00

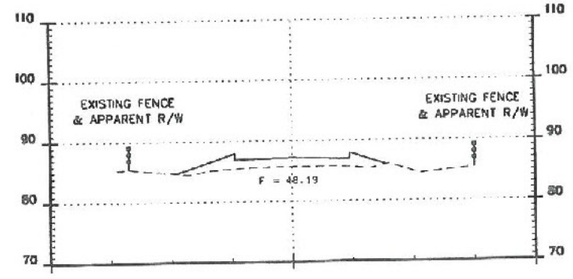
EXISTING 84" TANK CAR @ STA 26+54



32+00



31+00



30+00

FINAL PLANS

SHEET NUMBER 402

DESOTO

PARISH

DESIGNED
DRAWN
CHECKED

DATE 09/26/2014

SCALE

REVISION DESCRIPTION

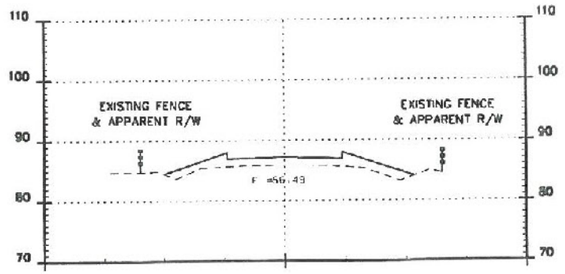
NO. DATE

DAW ROAD DRAINAGE IMPROVEMENTS

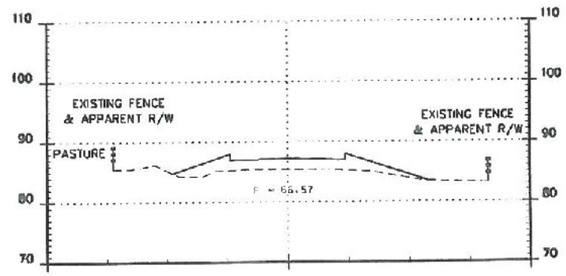
CROSS SECTIONS

BEAST ENGINEERING LLC

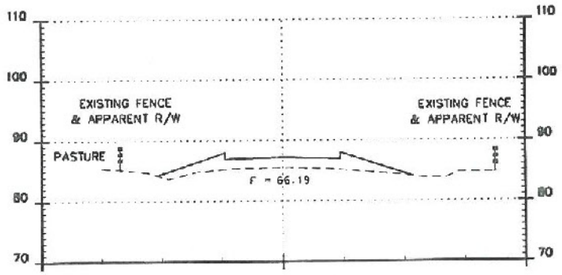
FINAL PLANS



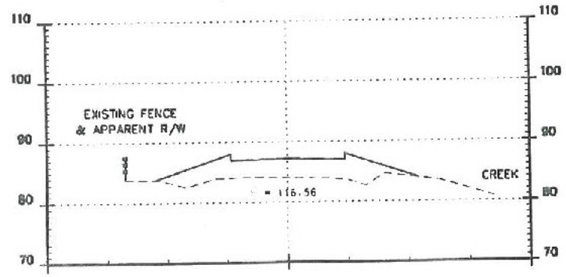
35+00



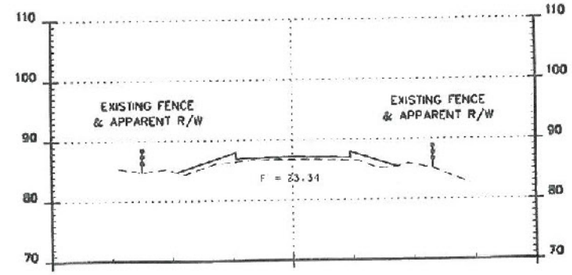
34+00



33+00

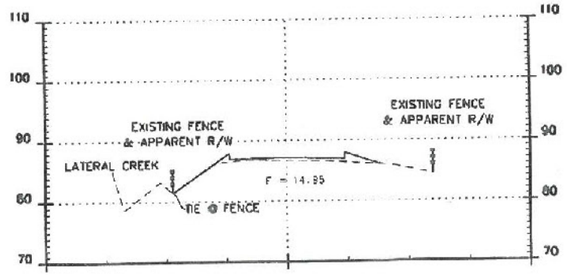


38+00



37+00

EXISTING 60" TANK CAR @ STA 36+54



36+00

10/13/2014

SHEET NUMBER 403

PARISH DESOTO

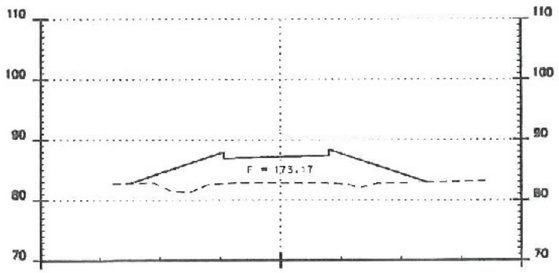
DESIGNED
DRAWN
DETAILED
CHECKED
DATE 09/25/2014

REVISION DESCRIPTION

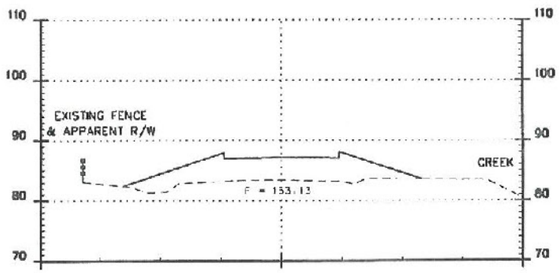
DAW ROAD DRAINAGE IMPROVEMENTS

CROSS SECTIONS

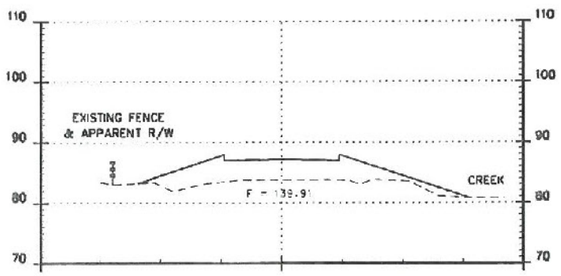
BEASI ENGINEERING LLC



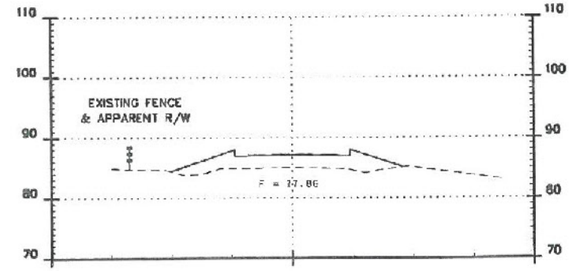
41+00



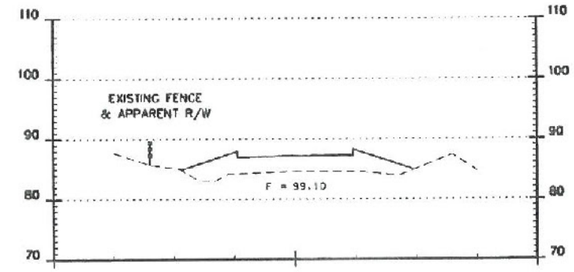
40+00



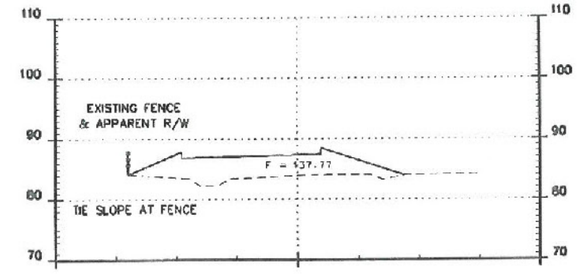
39+00



44+00



43+00



42+00

10/13/2014

FINAL PLANS

SHEET NUMBER 404

DESOTO

PROGRESS

DESIGNED
DRAWN
DETAILED
CHECKED
DATE
BY

09/26/2014

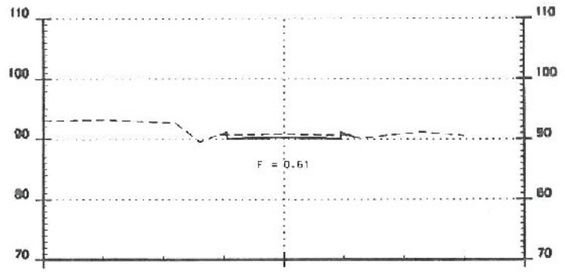
NO. DATE REVISION DESCRIPTION

DAW ROAD DRAINAGE IMPROVEMENTS

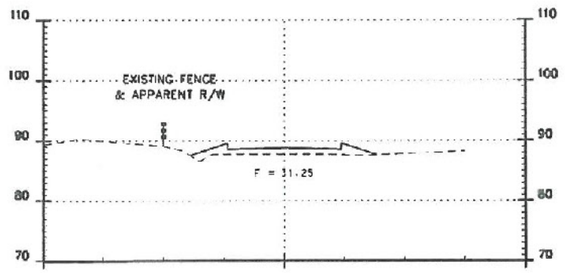
CROSS SECTIONS

BEAST ENGINEERING LLC

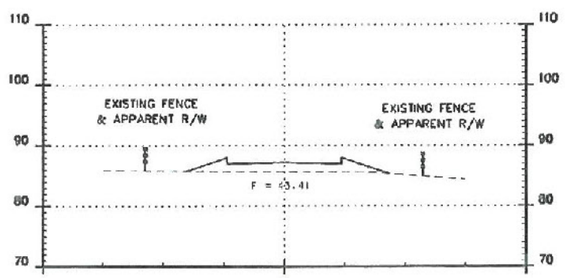
FINAL PLANS



47+00



46+00



45+00

SHEET NUMBER 405

PARISH DESOTO

DESIGNED
DRAWN
CHECKED
DATE 05/26/2014
SHEET

NO. DATE REVISION DESCRIPTION

DAW ROAD DRAINAGE IMPROVEMENTS

CROSS SECTIONS

BEAST ENGINEERING LLC