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27-OCT-2008 13:37

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INDEX TO SHEETS

SHEET NO.	DESCRIPTION
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2	TYPICAL SECTIONS AND DETAILS
3 - 3a	SUMMARY SHEETS
4 - 5	PLAN AND PROFILE SHEETS
6	EXISTING DRAINAGE
7	DESIGN DRAINAGE MAP
8 - 8a	SUMMARY OF DRAINAGE STRUCTURES & DETAIL
9 - 14	TRAFFIC CONTROL & SIGNING DETAIL
15	DETOUR MAP DETAIL

STANDARD PLANS

SHEET NO.	STANDARD PLAN	REVISION DATE
200	DW-04	09-16-82
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TOLAL SHEETS WITHOUT CROSS SECTIONS 25

TOLAL SHEETS WITH CROSS SECTIONS 8

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

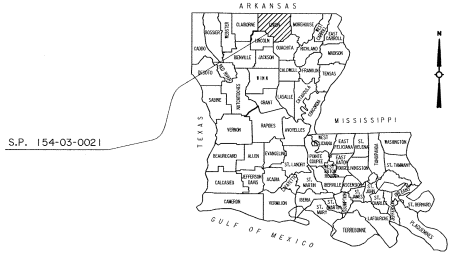
PLANS OF PROPOSED
STATE HIGHWAY

STATE PROJECT NO. 154-03-0021

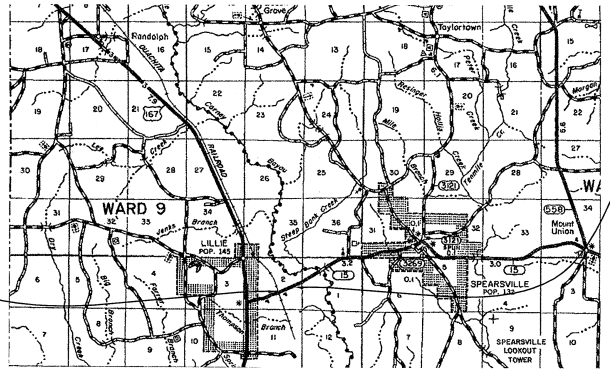
DRAINAGE IMPROVEMENT ON LA 15 AT CRI R/R

UNION PARISH

LA 15



VICINITY MAP



TRAFFIC DATA
2008 A.D.T. = 1100
2018 A.D.T. = 1200
D = 55%
K = 10%
T = 8%

STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

APPROVED
PROGRAM DELIVERY / DESIGN ENGINEER
DATE 10-27-08

APPROVED
DISTRICT ADMINISTRATOR
DATE 10/27/08

APPROVED
D.O.T.D. CHIEF ENGINEER
DATE

DATE	REVISION	DATE	RECOMMENDED	DATE	APPROVED

SCHEDULE OF REVISIONS

TYPE OF CONSTRUCTION :
EARTHWORK, BASE COURSE, DRAINAGE STRUCTURES, ASPHALTIC CONCRETE PAVING, STRIPING

DATUM USED :
MAG. VAR. :
BEARINGS ARE
TRANSIT BOOKS :

LEVEL BOOKS :

SCALES
PLAN : 1" = 50'
PROFILE : HOR. 1" = 50'
VERT. 1" = 5'

LAYOUT MAP
SCALE: 1 INCH = 5280 FEET

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
14+67 - 25+00		1033				1033	.196
TOTAL LENGTH OF BRIDGES							
TOTAL LENGTH OF ROADWAY						1033	.196
TOTAL MILES				.196			

SHEET NUMBER 1
PARISH UNION
FEDERAL PROJECT
STATE PROJECT 154-03-0021
DESIGNED PEC
CHECKED DEP
DETAILED CEC
CHECKED DEP
DATE
SHEET
BY
REVISION DESCRIPTION
NO. DATE

TITLE SHEET

DISTRICT 05 DESIGN

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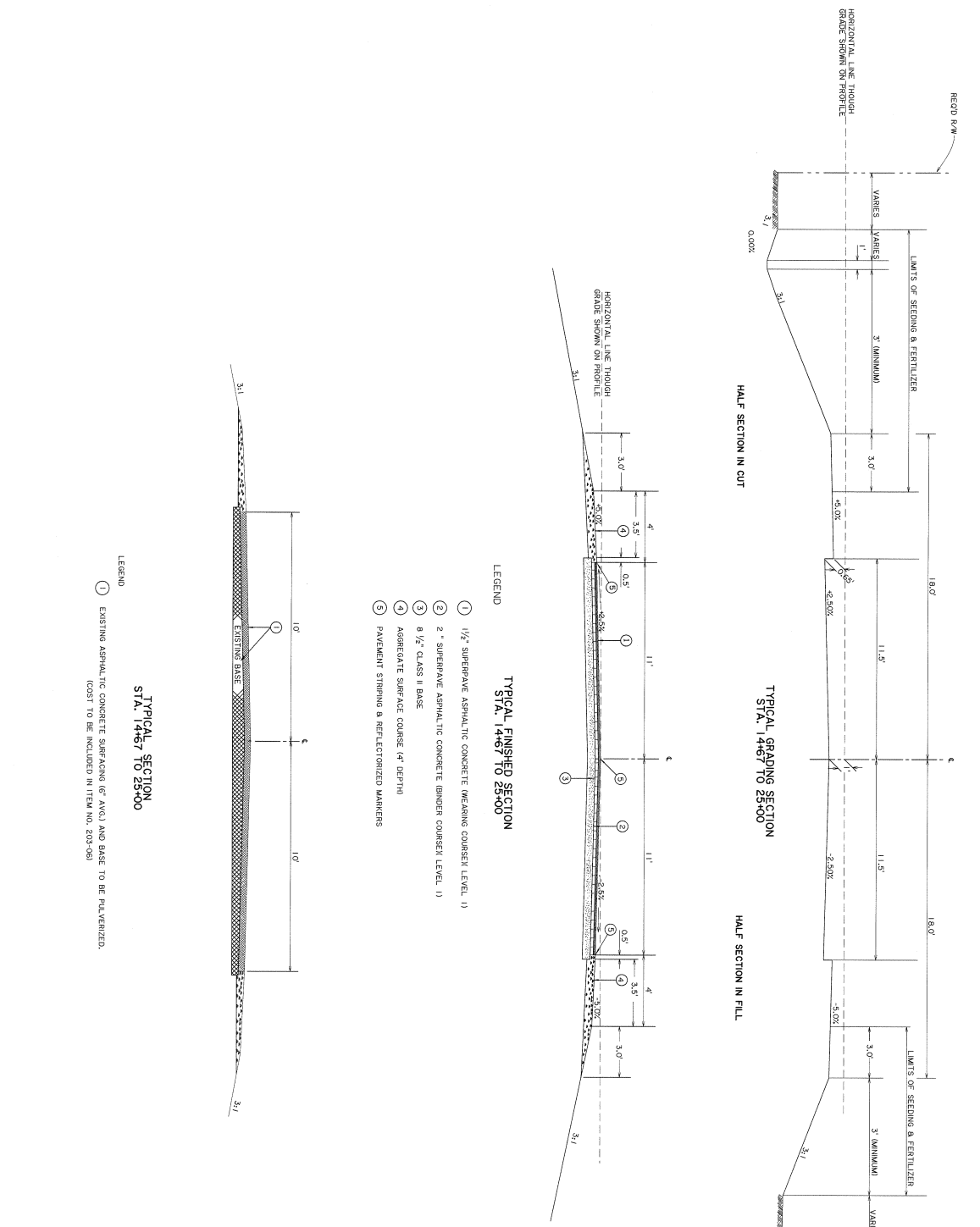

DISTRICT 05 DESIGN	TYPICAL SECTIONS	NO. / DATE / REVISION DESCRIPTION / BY	DESIGNED PEC CHECKED OEP DETAILED CEC CHECKED OEP DATE SHEET	PARISH UNION FEDERAL PROJECT STATE PROJECT 154-03-0021	SHEET NUMBER 2	

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30-JUL-2008 08:02

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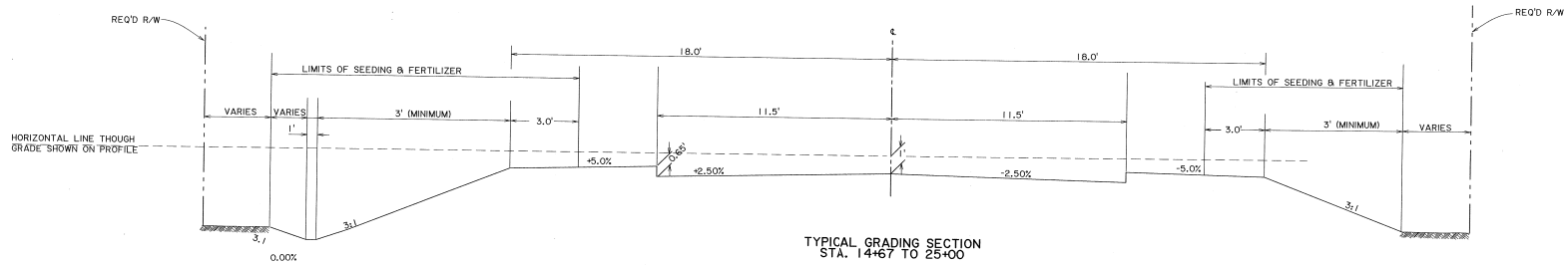
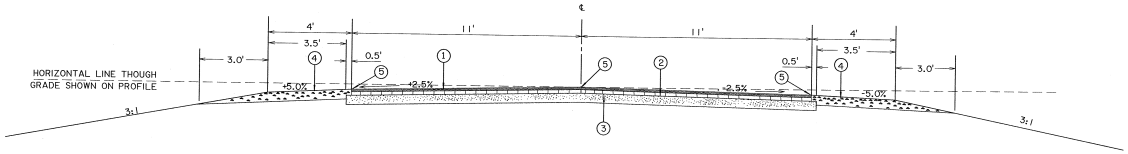


HALF SECTION IN CUT

TYPICAL GRADING SECTION
STA. 14+67 TO 25+00

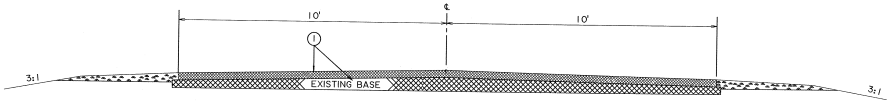
HALF SECTION IN FILL



TYPICAL FINISHED SECTION
STA. 14+67 TO 25+00

LEGEND

1. 1½" SUPERPAVE ASPHALTIC CONCRETE (WEARING COURSE)(LEVEL 1)
2. 2 " SUPERPAVE ASPHALTIC CONCRETE (BINDER COURSE)(LEVEL 1)
3. 8 ½" CLASS II BASE
4. AGGREGATE SURFACE COURSE (4" DEPTH)
5. PAVEMENT STRIPING & REFLECTORIZED MARKERS



TYPICAL SECTION
STA. 14+67 TO 25+00

LEGEND

1. EXISTING ASPHALTIC CONCRETE SURFACING (6" AVE.) AND BASE TO BE PULERIZED. (COST TO BE INCLUDED IN ITEM NO. 203-06)

STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 28916
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NUMBER 2

PARISH: UNION

FEDERAL PROJECT

STATE PROJECT: 154-03-0021

DESIGNED: PEC
CHECKED: DEP
DETAILED: CEC
CHECKED: DEP

NO.	DATE	REVISION DESCRIPTION	BY

DATE
SHEET

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TYPICAL SECTIONS

DISTRICT 05
DESIGN

FOR INFORMATIONAL PURPOSES ONLY

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CLASS II BASE COURSE (8 1/2" THICK)

STATION	STATION	DESCRIPTION	LENGTH	WIDTH	302-02-D
					8 1/2" THICK
			FEET	FEET	SQ. YD.
14+67	23+00	ROADWAY	833	11.5	1064.4
				11.5	1064.4
23+00	25+00	ROADWAY (TRANSITION)	200	11.0	244.4
				11.0	244.4
		TOTAL			2617.6

TEMPORARY SILT FENCING

STATION	STATION	SIDE ℄	LENGTH
			FEET
14+67	25+00	LT.	1033
14+67	25+00	RT.	1033
	TOTAL		2066

SUPERPAVE ASPHALTIC CONCRETE

STATION	STATION	DESCRIPTION	LENGTH (FEET)	WIDTH (FEET)	SQ. YDS.	502-01 WEARING COURSE LEVEL 1 1/2" DEPTH	502-01 BINDER COURSE LEVEL 2" DEPTH	502-01-A DRIVES TURNOUTS AND MISCELLANEOUS
			FEET	FEET		TON	TON	TON
14+67	23+00	ROADWAY	833	22	2036.2	168.0	224.0	
23+00	25+00	ROADWAY (TRANSITION)	200	21	466.7	38.5	51.3	
								18.2
		TOTALS				206.5	275.3	18.2

EXCAVATION AND EMBANKMENT				SEEDING AND FERTILIZING		
STATION	STATION	EXCAVATION	EMBANKMENT	MULCH	SEEDING	FERTILIZER
		CU. YD.	CU. YD.	ACRE	LB.	LB.
14+67	15+00	23.98	10.56	0.06	2.72	60.6
15+00	16+00	131.05	27.43	0.18	8.26	183.6
16+00	17+00	100.75	36.77	0.18	8.26	183.6
17+00	18+00	23.63	183.10	0.18	8.26	183.6
18+00	19+00	19.17	339.98	0.18	8.26	183.6
19+00	20+00	8.75	444.52	0.18	8.26	183.6
20+00	21+00	13.59	476.85	0.18	8.26	183.6
21+00	22+00	37.5	473.81	0.18	8.26	183.6
22+00	23+00	10.41	315.24	0.18	8.26	183.6
23+00	24+00	37.38	48.2	0.18	8.26	183.6
24+00	25+00	92.64	2.65	0.18	8.26	183.6
		498.90	2359.10	1.9	85	1896

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STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

SHEET NUMBER 3

PARISH: UNION
FEDERAL PROJECT
STATE PROJECT: 154-03-0021

DESIGNED: PEC
CHECKED: DEP
DETAILED: CEC
CHECKED: DECP
DATE
SHEET

NO. | DATE | REVISION DESCRIPTION | BY

LOUISIANA 25 YEARS

SUMMARY SHEET

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DISTRICT 05 DESIGN

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY	
201-01	CLEARING AND GRUBBING	LUMP SUM	LUMP	
202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	LUMP	
203-06	EXCAVATION AND EMBANKMENT	LUMP SUM	LUMP	
204-05-A	TEMPORARY SEDIMENT CHECK DAM (HAY)	EACH	30	
204-06	TEMPORARY SILT FENCING	LIN. FT.	2066	
1 302-02-D	CLASS II BASE COURSE (8 1/2" THICK)	SQ. YD.	2617.6	
401-02	AGGREGATE SURFACE COURSE (ADJUSTED VEHICULAR MEASUREMENT)	CU. YD.	142	
402-01	TRAFFIC MAINTENANCE AGGREGATE	CU. YD.	500	
502-01	SUPERPAVE ASPHALTIC CONCRETE (LEVEL 1)	TON	481.8	
502-01-A	SUPERPAVE ASPHALTIC CONCRETE, PAVED DRIVES AND TURNOUTS	TON	18.2	
701-01-M	CROSS DRAIN PIPE (36" RCP/PCP)	LIN. FT.	144	
701-05-G	SIDE DRAIN PIPE (18")	LIN. FT.	82	
701-15	CONCRETE COLLAR	EACH	4	
711-02-D	RIPRAP (55 LB, 12" DEPTH)	CU. YD.	7	
711-04	GEOTEXTILE FABRIC	SQ. YD.	22	
713-01	TEMPORARY SIGNS AND BARRICADES	LUMP SUM	LUMP	
713-03-E	TEMPORARY PAVEMENT MARKINGS (24" WIDTH)	LIN. FT.	22	
713-04-A	TEMPORARY PAVEMENT MARKINGS (BROKEN LINE)(4" WIDTH)(4' LENGTH)	MILE	0.196	
713-04-B	TEMPORARY PAVEMENT MARKINGS (BROKEN LINE)(4" WIDTH)(10' LENGTH)	MILE	0.200	
713-05-A	TEMPORARY PAVEMENT MARKINGS (SOLID LINE)(4" WIDTH)	MILE	0.632	
713-05-D	TEMPORARY PAVEMENT LEGENDS & SYMBOLS (RR CROSSING)	EACH	1	
716-01-A	MULCH (VEGETATIVE)	TONS	3.8	
717-01	SEEDING	POUND	114	
718-01	FERTILIZER	POUND	1900	
722-01	PROJECT SITE LABORATORY	EACH	1	
726-01	BEDDING MATERIAL	CU. YD.	33.3	
727-01	MOBILIZATION	LUMP SUM	LUMP	
729-16-B	OBJECT MARKER (TYPE 2)	EACH	2	
731-02	REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	27	
732-02-A	PLASTIC PAVEMENT STRIPING (SOLID LINE)(4" WIDTH)	MILE	0.8	
732-03-A	PLASTIC PAVEMENT STRIPING (BROKEN LINE)(4" WIDTH)	MILE	0.200	
732-04-D	PLASTIC PAVEMENT LEGENDS & SYMBOLS (RR CROSSING)	EACH	1	
740-01	CONSTRUCTION LAYOUT	LUMP SUM	LUMP	
741-07	RELOCATING WATER VALVE	EACH	3	
741-08	RELOCATING WATER METER	EACH	1	
S-001	DYNAMIC MESSAGE SIGN UNIT	EACH	2	

FOR INFORMATIONAL PURPOSES ONLY

STATE OF LOUISIANA
PAUL E. COLMETTE
REG. No. 19848
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

FOR INFORMATIONAL PURPOSES ONLY

LEGEND - EXISTING TOPOGRAPHY

CONTROL POINT
PHOTO TARGET
PAVEMENT EDGE
SHOULDER EDGE
SLOPE TOE
GUARDRAIL TOP
HIGH BANK
WATER'S EDGE
HIGH WATER MARK
BOX CULVERT
PIPE CULVERT
CATCH BASIN TOP (ROUND)
DROP INLET TOP (ROUND)
DRAINAGE MANHOLE TOP
LEVEE TOP
DITCH CENTERLINE
TREE
WOODS EDGE
MARSH LINE
SWAMP LINE
TREE CLUSTER
HEDGE
BUSH
TREE LINE
FENCE LINE
GATE
CATTLE GUARD
PROPERTY CORNER
RIGHT OF WAY MONUMENT
SECTION CORNER
FENCE CORNER
TELEVISION CABLE
TELEVISION PEDESTAL
POWER POLE
DEADMAN
POWER LINE
POWER JUNCTION BOX
POWER VAULT
TRANSFORMER
COMBINATION POLE
POWER DROP
PIPELINE
PIPELINE VENT
PIPELINE REGULATOR
GAS WELL
OIL WELL

GAS LINE
GAS METER
GAS SERVICE (NO METER)
GAS REGULATOR
GAS RISER
GAS TEST BOX
GAS VALVE
GAS LINE/CASING
GAS VENT
RAILROAD MILEPOST
RAILROAD SIGNAL
RAILROAD SWITCH
RAILROAD TRACK
RR TRAFFIC SIGNAL BOX
SEWER LINE
SEWER MANHOLE TOP
SEWER BLOWOUT VALVE
SEWER CLEANOUT
SEPTIC TANK
SEWER PUMP (PRIVATE)
SEWER TREATMENT (INDIVIDUAL)
FEDERAL AID MARKER
TRAFFIC CONTROLLER BOX
TRAFFIC COUNTER
TRAFFIC SIGNAL
TRAFFIC SIGNAL SUPPORT POLE
LIGHT POLE
LIGHT PEDESTAL
LIGHT POWER VAULT
TRAFFIC SIGN
PARKING METER
TELEPHONE POLE
TELEPHONE LINE
TELEPHONE BOOTH
TELE CROSS CONNECT BOX
TELEPHONE PEDESTAL
TELEPHONE PRESSURE BOX
WATER LINE
WATER LINE/CASING
WATER CLEANOUT
WATER METER
WATER VALVE
WATER VALVE VAULT
WATER WELL
FIRE HYDRANT
BILLBOARD
FUEL PUMP
POST
SIGN POST
STORAGE TANK (ROUND)
GRAVE
MAILBOX
ORNAMENTAL LIGHT
FLAG POLE

STA. 14+67
BEGIN STATE PROJECT
NO. 154-03-0021

P.I. 15+96.09
Δ = 8°50'02"
D = 2°24'45"
T = 183.45
L = 365.81
R = 2374.99'

N72°51'02"E

PC STA. 14+12.64

+76 - 18' LT R/R SIGNAL
+18 - 35', 54' LT. P. POLES
+35 - 45' LT. METER HOUSE
+45 - 30' LT PIPE LINE REGULATOR
PT STA. 17+78.81
+84 - 40' RT. R/R TRAFFIC SIGVAL
+93 - 37' RT. P. POLE
+17 - 37' RT. P. POLE
+80 - 48 RT. & 75' RT. P. POLES
+69 - 40' RT
+46 - 42' RT.
+46 - 42' RT.
WATER VALVE
+85 - 42' RT. WATER METER
+40 - 4" PIPE LINE CROSSING ROADWAY
+40 - 42' RT. PIPE LINE REGULATOR
+08 - 30', 45', 57' RT. P. POLES
+09 - 28', 33' RT. P. POLES

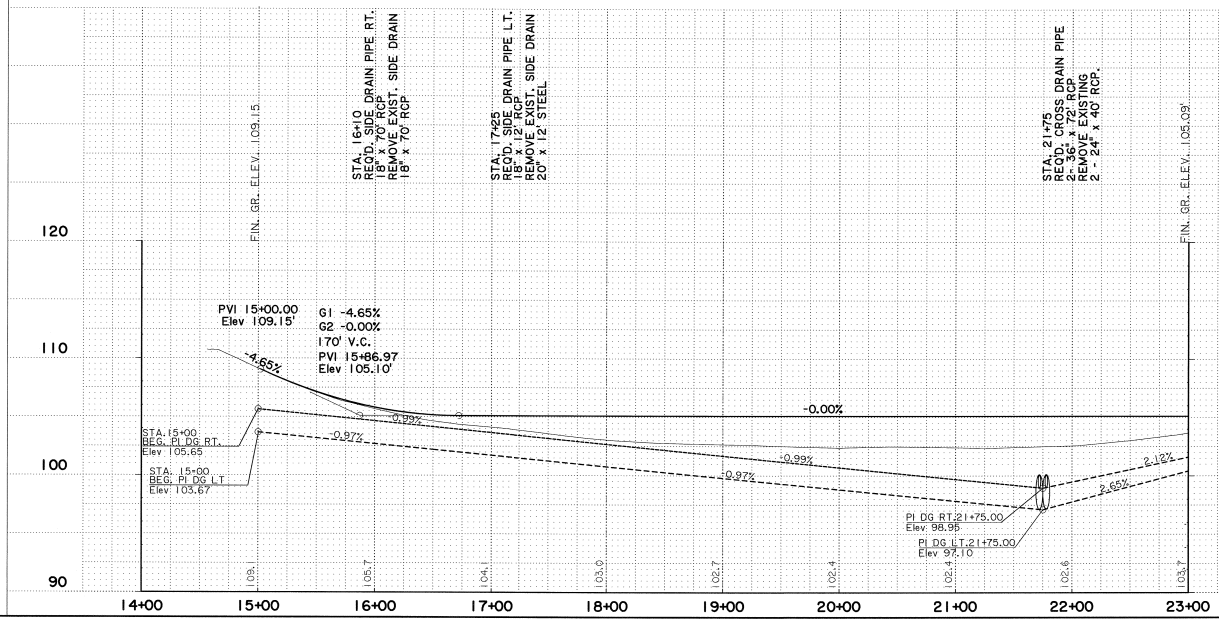
LIMITS OF CONST.
REQ'D R/W
EXISTING R/W
L0 15
N64°01'00"E
℄ STATE PROJECT NO. 154-03-0021
MATCH LINE STA. 22+00
R/PRAP (13' x 15')
Scale 1" = 50'

T.B.M. #1
STA. 15+18
60D NAIL 1' UP IN P.P.
38.5' RT. ℄ 57' SOUTH OF R/R

STA. 16+10
REQ'D. 28' DRIVE
TPYE "B"

STA. 17+25
REQ'D. 10' DRIVE
TPYE "B"

NOTE: REMOVAL OF EXISTING DRAINAGE STRUCTURES TO BE INCLUDED IN ITEM 202-01.
ALL EXISTING DRAINAGE STRUCTURES TO BE REMOVED UNLESS OTHERWISE NOTED.



STATE OF LOUISIANA
PAUL E. COLQUETT
REG. No. 28294
REGISTERED
PROFESSIONAL ENGINEER
IN
ENGINEERING

SHEET NUMBER	4
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED PEC	
CHECKED DEP	
DETAILED CEC	
CHECKED DEP	
DATE	
SHEET	1 OF 2

NO.	DATE	REVISION DESCRIPTION	BY

PLAN AND PROFILE SHEET

DISTRICT 05
DESIGN

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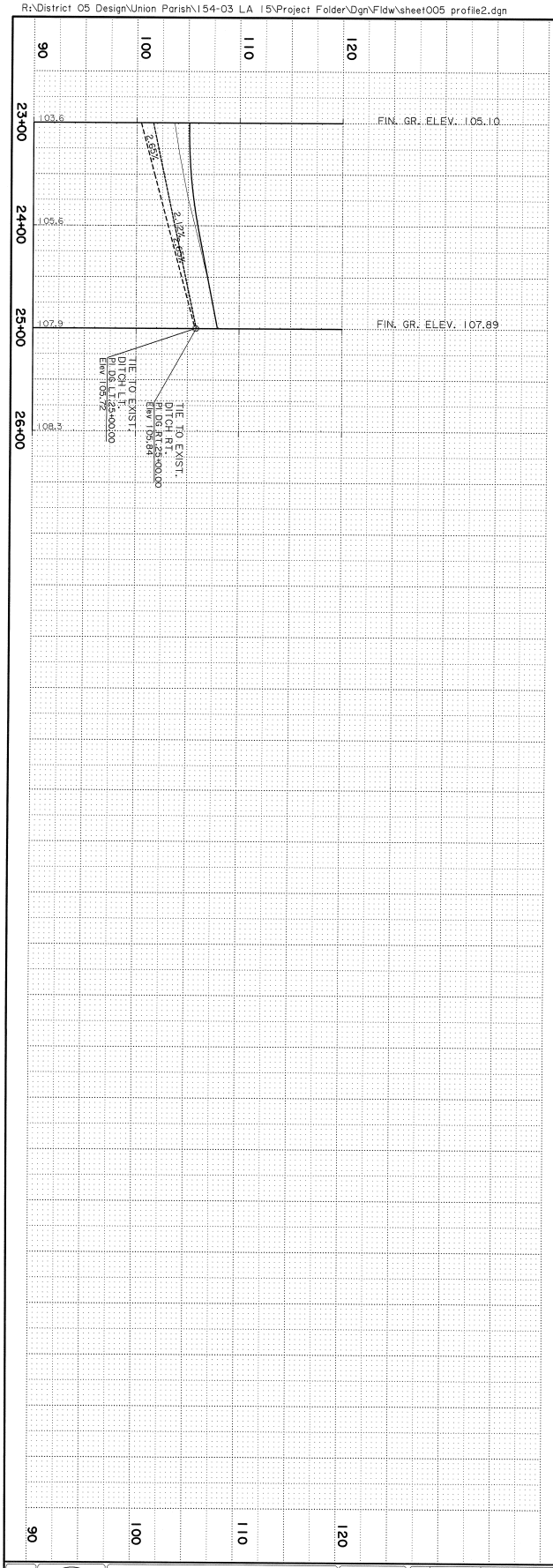

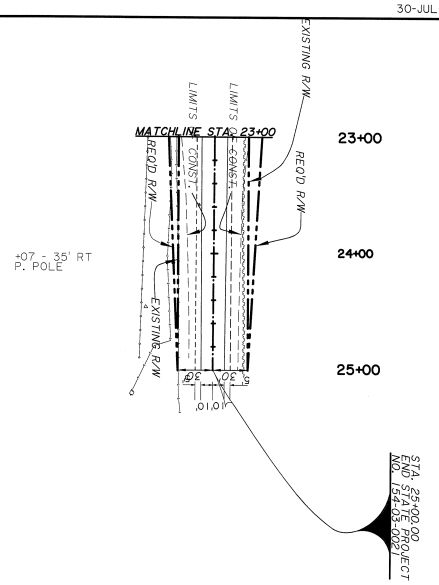

Scale : 1" = 50'

STATE OF LOUISIANA
PAUL E. CONLEY
REGISTERED
PROFESSIONAL ENGINEER

DISTRICT 05 DESIGN	PLAN AND PROFILE SHEET	NO.	DATE	REVISION DESCRIPTION	BY	DESIGNED PEC / CHECKED OEP	PARISH UNION
						DETAILED CEC / CHECKED OEP	FEDERAL PROJECT
						DATE / SHEET SHEET 2 OF 2	STATE PROJECT 154-03-0021

SHEET NUMBER 5

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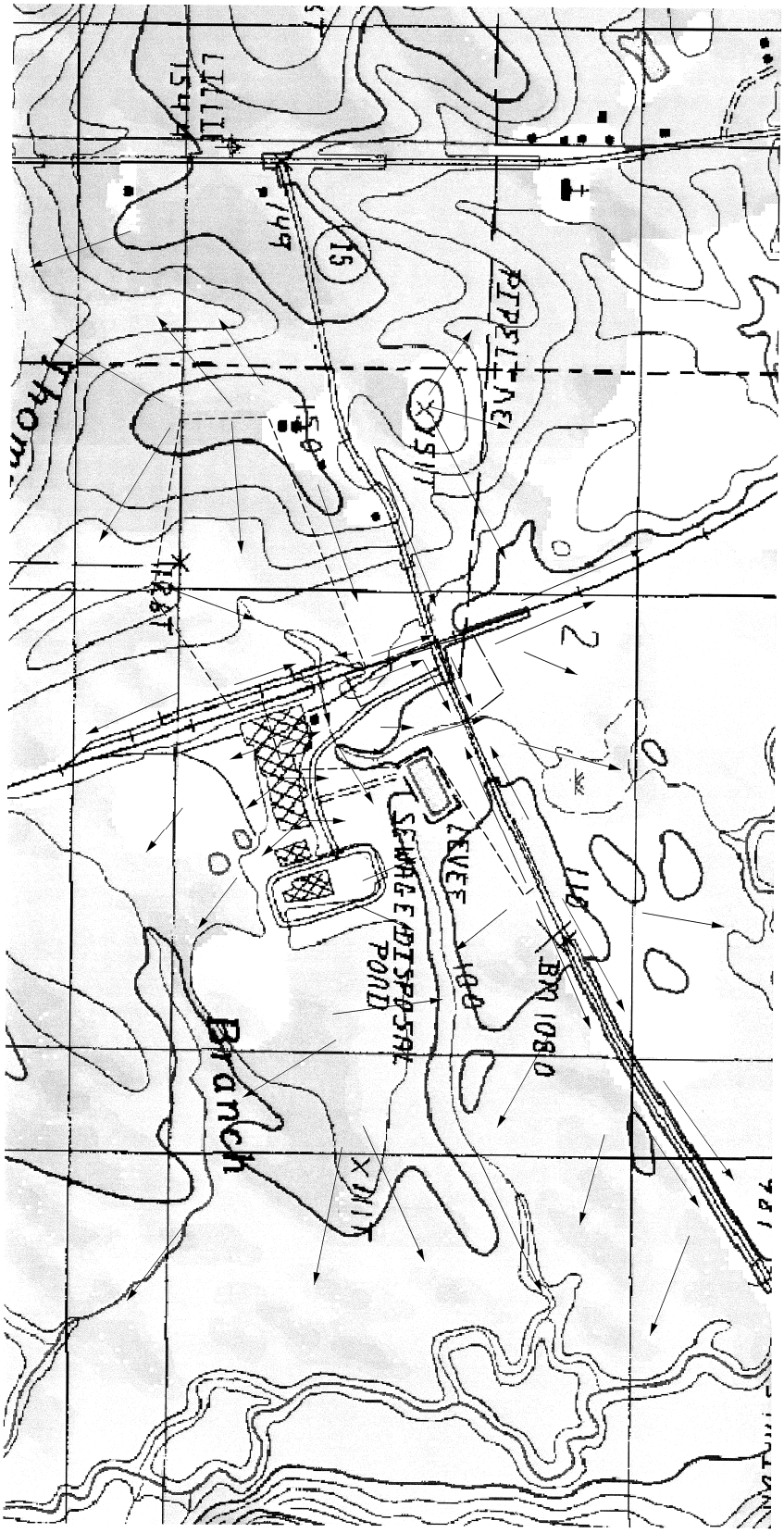

DISTRICT 05 DESIGN	EXISTING DRAINAGE MAP	DESIGNED RCM / CHECKED OEP	PARISH UNION	SHEET NUMBER 6
		DETAILED RCM / CHECKED OEP	FEDERAL PROJECT	
	NO. DATE REVISION DESCRIPTION BY	DATE / SHEET 1 OF 1	STATE PROJECT 154-03-0021	

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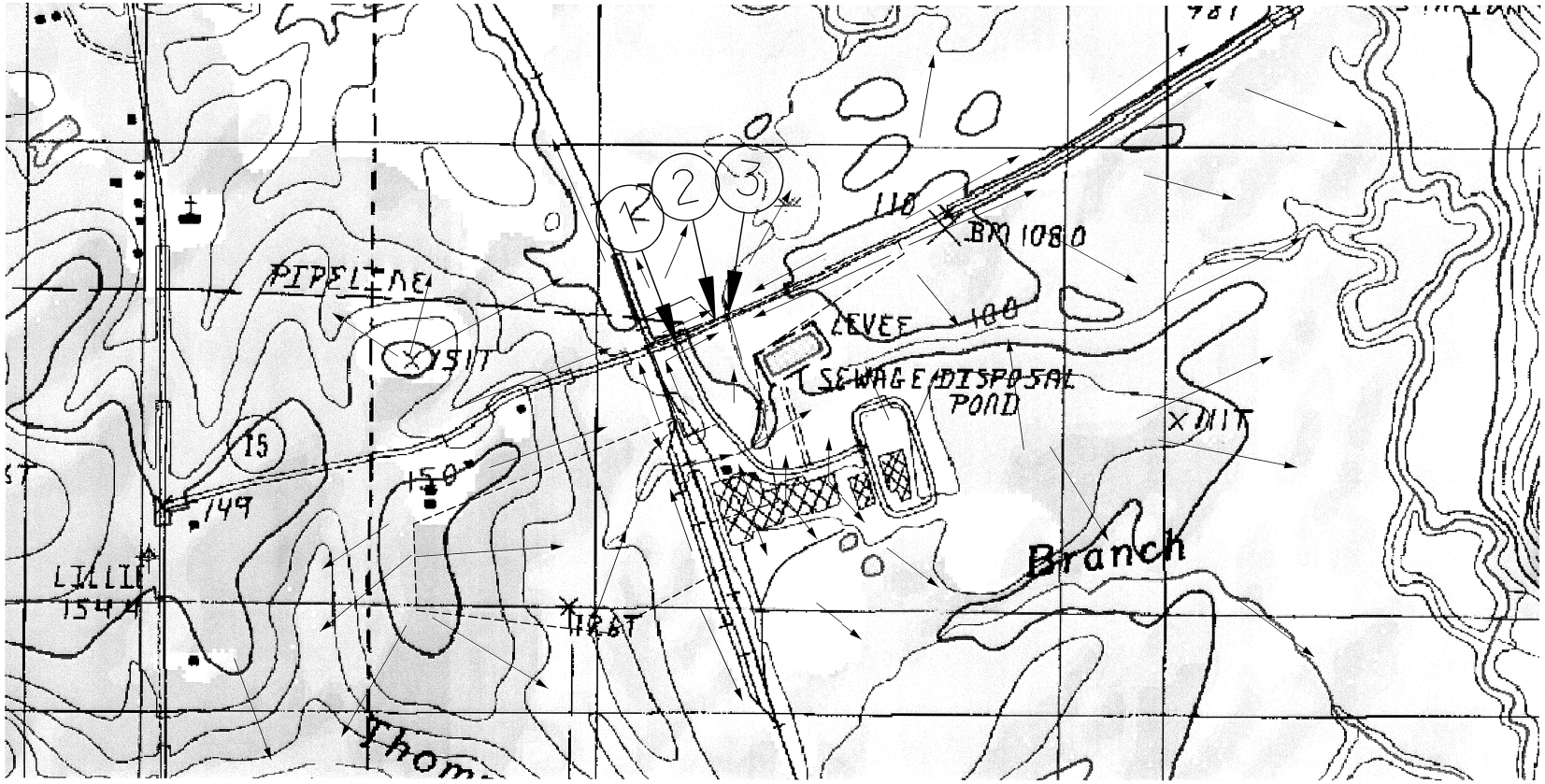


Scale: 1:500

STRUCTURE NO.	STATION	SIDE C/L	STRUCTURE (SIZE & TYPE)	DRAINAGE AREA (ACRES)	S.C.S. SOIL CLASS	S.C.S. CURVE NUMBER	S.C.S. AVERAGE WATERSHED SLOPE (%)	S.C.S. HYDRAULIC LENGTH	DESIGN DISCHARGE (C.F.S.)
1	16+10	RT	18" RCP	1.38	A	54.0	0.99	500	2
2	17+25	LT	18" RCP	1.00	A	53.7	0.97	400	2
3	21+75	Cross	2-36" RCP	44.60	A,B,D	53.8	1.04	2972	28

1. SOIL CONSERVATION SERVICE (S.C.S.) METHOD IS USED FOR WATERSHEDS HAVING DRAINAGE AREAS OF 2000 ACRES AND LESS
2. DESIGN STORM FOR CROSS DRAINS = 25 YEARS
   DESIGN STORM FOR SIDE DRAINS = 25 YEARS
3. 24-HOUR RAINFALL:
   CROSS DRAIN - (25-YEAR RETURN INTERVAL) = 8.0 INCHES
   SIDE DRAIN - (25-YEAR RETURN INTERVAL) = 8.0 INCHES
4. ANNUAL PRECIPITATION = 52 INCHES

STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 28448
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

NO.	DATE	REVISION DESCRIPTION	BY

DESIGNED RCM
CHECKED DEP
DETAILED RCM
CHECKED DEP
DATE
SHEET 1 OF 1

PARISH UNION
FEDERAL PROJECT
STATE PROJECT 154-03-0021

SHEET NUMBER 7

DESIGN DRAINAGE MAP

DISTRICT 05 DESIGN

FOR INFORMATIONAL PURPOSES ONLY

SUMMARY OF DRAINAGE STRUCTURES

STRUCTURE NUMBER	STATION	REMARKS	PLAN	TYPE	CROSS DRAIN PIPE ** (TYPE 2 JTS.) 701-01-M 36"				SIDE DRAIN PIPE * (TYPE 1 JTS.) 701-05-G 18"				701-15 CONCRETE COLLAR	711-02-D RIPRAP (55 LB) (12" DEPTH)	711-04 GEOTEXTILE FABRIC	726-01 BEDDING MATERIAL
					LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	CU. YD.	SQ. YDS.	CU. YD.
		S.P. NO. 154-03-0021														
	16+10	REMOVE EXISTING SIDE DRAIN PIPE - 18" X 70' RCP RT. C/L.		SD					70							
		REQ'D. SIDE DRAIN PIPE - 18" X 70' RT.														
	17+25	REMOVE EXISTING SIDE DRAIN PIPE - 20" X 12' STEEL DRAIN LT. C/L.		SD					12							
		REQ'D.: SIDE DRAIN PIPE - 18" X 12' LT.														
	21+75	EXISTING: 2 - 24" x 38' RCP CROSS DRAIN.		CDP	144								4	7	22	33.3
		REQ'D: REMOVE EXISTIING AND REPLACE WITH 2 - 36" x 72' RCP / PP.														
		TOTALS			144				82				4	7	22	33.3

MATERIAL TYPE ABBREVIATIONS

BCCSP	BITUMINOUS COATED CORRUGATED STEEL PIPE
BCCSPA	BITUMINOUS COATED CORRUGATED STEEL PIPE ARCH
CAP	CORRUGATED ALUMINUM PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CB	CATCH BASIN
CDP	CROSS DRAIN PIPE
CDPA	CROSS DRAIN PIPE ARCH
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CPEPDW	CORRUGATED POLYETHYLENE PIPE DOUBLE WALL (AASHTO M294 - TYPE S)
CSP	CORRUGATED STEEL PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
MH	MANHOLE
PP	PLASTIC PIPE
RCB	PEINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RPVCP	RIBBED POLYVINYL CHLORIDE PIPE (ASTM F794 OR ASTM F949)
SD	SIDE DRAIN PIPE
SDA	SIDE DRAIN PIPE ARCH
SDP	STROM DRAIN PIPE
SDPA	STORM DRAIN PIPE ARCH

* ALLOWABLE MATERIALS INCLUDE: RCP(A), BCCSP(A), CAP(A), CSP(A), RPVCP, AND CPEPDW. MINMUM METAL PIPE THICKNESS REQUIRED TO PROVDE 30-YEAR SERVCE LIFE IS AS SHOWN IN THE SIDE DRAIN TABLE.

PROJECT ENGINEER SHALL CHECK DRANAGE AREA, SIZE OF OPENNG, STATION FLOW LINE, LENGTH AND QUANTITY OF EACH STRUCTURE BEFORE PERMITTING ANY MATERIAL FOR STRUCTURES TO BE ORDERED.

** ALLOWABLE MATERIAL IS RCP OR RPVCP

SIDE DRAIN TABLE ⊙

ROUND PIPE	ARCH PIPE	THICKNESS (Inches)		
DIAMETER	ROUND EQUIVALENT DIAMETER	BCCSP BCCSPA	CAP CAPA	CSP CSPA
18"		X /14	X /14	X /14

THE UPPER NUMBER IS MINIMUM THICKNESS FOR 3" X 1", 5" X 1" OR 6" X 1" CORRUGATIONS AND THE LOWER NUMBER IS MINIMUM THICKNESS FOR 2 1/2" X 1/2" CORRUGATIONS. AN "X" IN EITHER THE UPPER OR LOWER SPACE INDICATES THAT NO THICKNESS IS APPLICABLE IN THAT CORRUGATION STYLE.

NOTE: GAGE ARE FROM STANDARD PLAN SAM-1

STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

SHEET NUMBER 8

PARISH: UNION
FEDERAL PROJECT:
STATE PROJECT: 154-03-0021

DESIGNED PEC
CHECKED RCP
DRAWN PEC
CHECKED RCP
DATE
SHEET

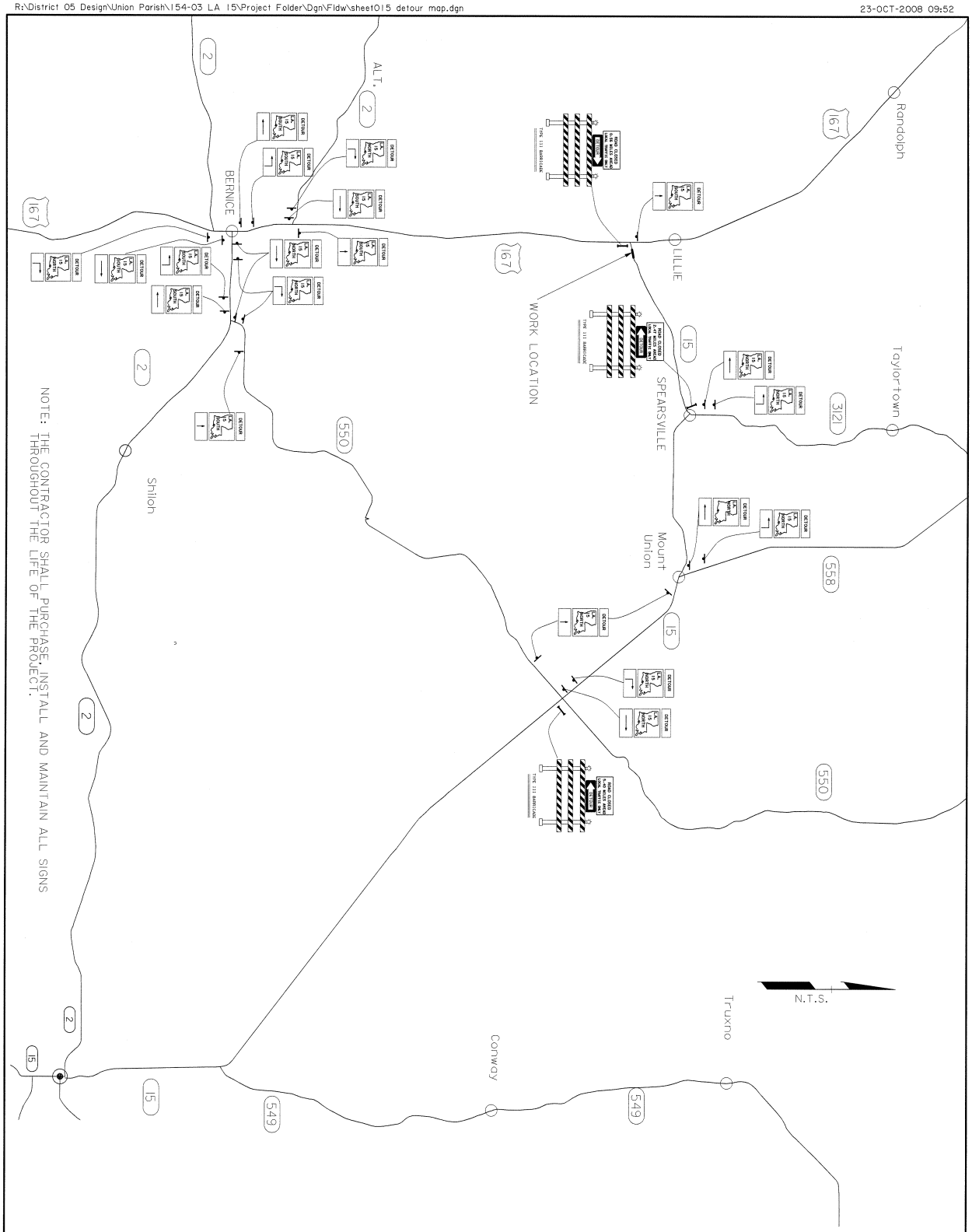
NO.	DATE	REVISION DESCRIPTION	BY

SUMMARY OF DRAINAGE STRUCTURES

DISTRICT 05 DESIGN

FOR INFORMATIONAL PURPOSES ONLY

R:\District 05 Design\Union Parish\154-03 LA 15\Project Folder\Dgn\Fldw\sheet015 detour map.dgn 23-OCT-2008 09:52



NOTE: THE CONTRACTOR SHALL PURCHASE, INSTALL AND MAINTAIN ALL SIGNS THROUGHOUT THE LIFE OF THE PROJECT.

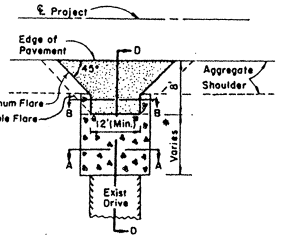
STATE OF LOUISIANA
PAUL E. COLQUETTE
REGISTERED
PROFESSIONAL ENGINEER
NO. 31 [illegible]

DISTRICT 05 DESIGN	DOTD	DETOUR MAP DETAIL		DESIGNED PEC CHECKED OEP DETAILED CEC CHECKED OEP DATE SHEET	PARISH UNION FEDERAL PROJECT STATE PROJECT 154-03-0021	SHEET NUMBER 15

NO.	DATE	REVISION DESCRIPTION	BY

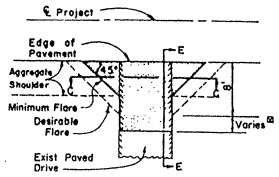
FOR INFORMATIONAL PURPOSES ONLY

STATE PROJECT	PARISH	SHEET NO.
154-03-0021	UNION	200



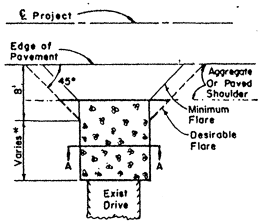
TYPE "A"

PAVED DRIVE ALONG AGGREGATE SHOULDER



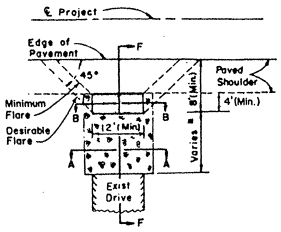
TYPE "B"

PAVED DRIVE ALONG AGGREGATE SHOULDER WHERE EXISTING PAVED DRIVE ADJOINS EDGE OF PAVEMENT



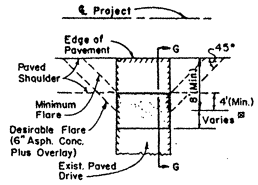
TYPE "C"

AGGREGATE SURFACE COURSE DRIVE (SEE NOTE NO. 2)



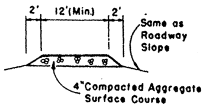
TYPE "D"

PAVED DRIVE ALONG PAVED SHOULDER

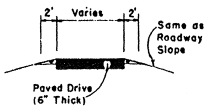


TYPE "E"

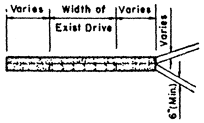
PAVED DRIVE ALONG PAVED SHOULDER WHERE EXISTING PAVED DRIVE ADJOINS EDGE OF PAVEMENT



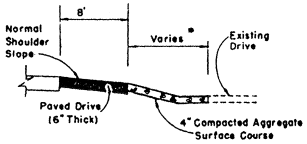
SECTION A-A



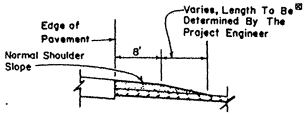
SECTION B-B



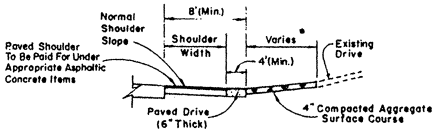
SECTION C-C



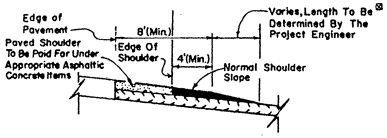
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

NOTES:

1. Asphaltic Concrete For Paved Drives Shall Be Asphaltic Concrete Wearing Course - (Type 1, 2 Or 4) Or At The Option Of The Contractor, Shoulder Mix May Be Used. Also, When Paved Drives Are Placed In Two Lifts, Binder Course May Be Used In The First Lift.

2. Aggregate Surface Course Is To Be Used For Infrequently Used Drives (Type "C") Which Do Not Connect To Residences Or Commercial Establishments.

3. Compaction Of Subgrade And Grading Work For Construction Of The Paved Drives Shall Be Satisfactory To The Project Engineer And Shall Be At No Direct Payment.

4. Drive Widths And Flares May be Reduced To Less Than Minimums Shown, As Necessary To Meet Existing Conditions. Reduce Dimensions As Required To Avoid Earthwork When The Contract Does Not Provide Earthwork Items.

5. * Length To Be Set By Project Engineer To Achieve A Suitable Connection For Existing Drive.

6. ⊠ Asphaltic Concrete Transition To Be Constructed As Directed By The Project Engineer. (To Apply For Existing Surfaced Drive, Or Working Area), The Transition May Be Constructed Using The Same Asphaltic Concrete Material Being Placed At The Time.

DATE	DESCRIPTION	BY
3-16-92	General Revisions	H.J.B.
2-25-82	Labeling Errors	W.T.J.

REVISIONS

STANDARD PLAN NO. DW-04 SHEET 1 OF 1

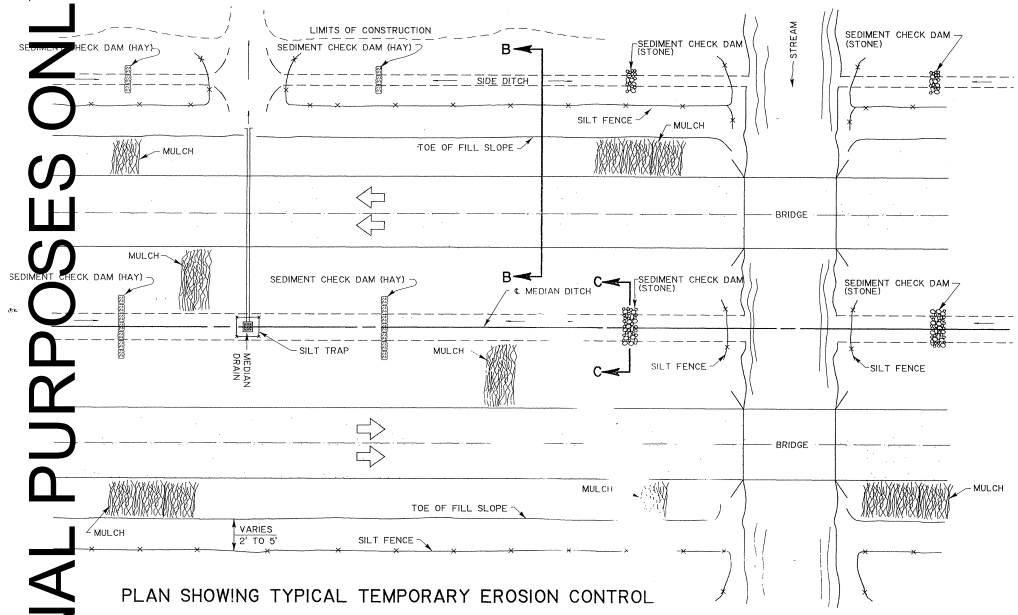
RURAL DRIVES FOR OVERLAY PROJECTS

DATED Feb. 2, 1982

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
OFFICE OF HIGHWAYS

DESIGNED J. MOORE | DETAILED A. LOVE | TRACED A. LOVE
CHECKED | CHECKED J. MOORE | CHECKED
APPROVED Original Signed by Chief Engineer DATE
CHIEF ENGINEER

FOR INFORMATIONAL PURPOSES ONLY

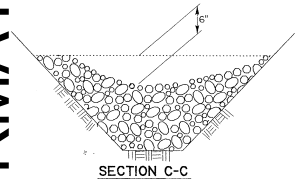


PLAN SHOWING TYPICAL TEMPORARY EROSION CONTROL

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 subsection 1018.19 of the LA DOTD Standard Specifications. A few guidelines for the use of Mulches are:

1. Use on cut and embankment slopes which 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.



SECTION C-C

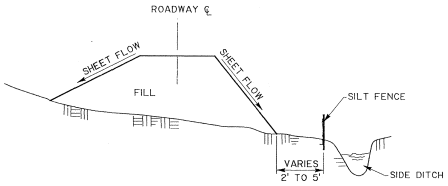
TEMPORARY SEDIMENT CHECK DAM (STONE)

PAY ITEM: 204(05)(B), 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 stormwater 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:

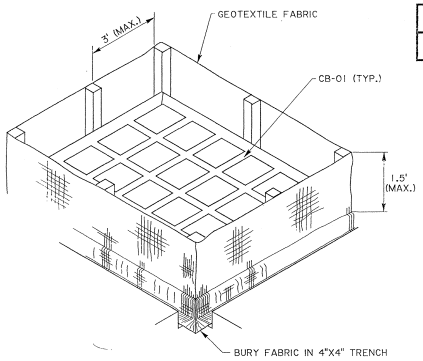
1. Use in small open channels which drain 10 acres or less;
2. Do not use in a live stream;
3. Use in a temporary ditch or swale which, because of their short length of service, cannot receive a non-erodible lining;
4. Use in permanent ditches or swales which will not receive a permanent lining for an 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 subsection 711.02(a)(Class 2LB.) of the LA DOTD Standard Specifications.



SECTION B-B

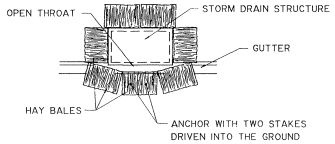
TEMPORARY SILT FENCE APPLICATION

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



ISOMETRIC VIEW SHOWING GEOTEXTILE FABRIC

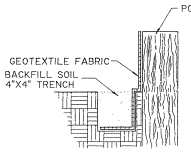
(BACKFILL SOIL NOT SHOWN)



PLAN SHOWING HAY BALES

PAY ITEM: 204(02), TEMPORARY BALED HAY OR STRAW

F.A.P.	STATE PROJECT	PARISH	SHEET NO.
	154-03-0021	UNION	201



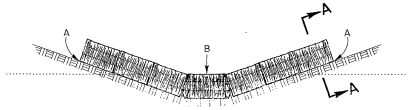
SECTION THRU TRENCH SHOWING GEOTEXTILE FABRIC

NOTES:

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.

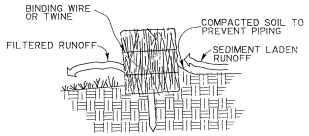
1. The geotextile fabric shall conform to Section 1019 (Type G) of the LA DOTD Standard Specifications.
2. Wooden stakes supporting the fabric shall be 2" x 2" or 2" x 4" with a minimum length of 3 feet. The stakes shall be spaced around the inlet at a maximum spacing of 3 feet.
3. The height of the 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 1/2" staples.
4. The trap should be inspected regularly and after each storm. The sediment should be removed and make sure each stake is firmly in the ground.

TEMPORARY INLET SILT TRAP



POINTS A SHOULD BE HIGHER THAN POINT B.

ELEVATION



SECTION A-A

TEMPORARY SEDIMENT CHECK DAM (HAY)

PAY ITEM: 204(05)(A), 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 LA DOTD Standard Specifications, Section 204. 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.

DATE	DESCRIPTION	BY

REVISIONS

STANDARD PLAN NO. EC-01 — SHEET 1 OF 2

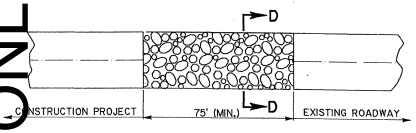
TEMPORARY EROSION CONTROL DETAILS

DATED January 14, 1994

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED JCM	DETAILED KAJ	dgn. cadd/dgn/stdplans
CHECKED	CHECKED JCM	FILENAME ec01.dgn
Approved By Chief Engineer	Original Signed by Chief Engineer	Date

FOR INFORMATIONAL PURPOSES ONLY



PLAN

SECTION D-D

TEMPORARY STONE CONSTRUCTION ENTRANCE

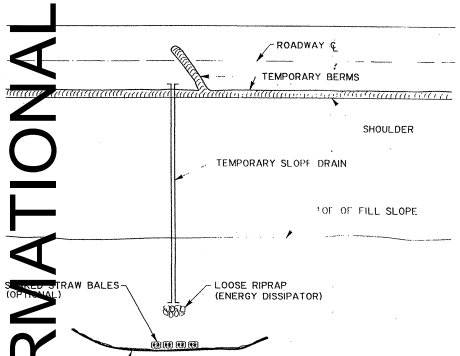
PAY AS "S - ITEM", TEMPORARY STONE CONSTRUCTION ENTRANCE

NOTES:

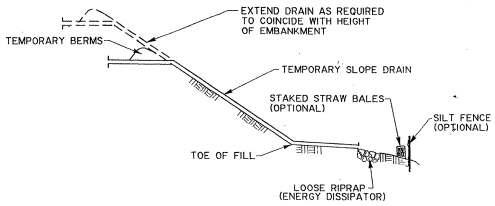
TEMPORARY STONE CONSTRUCTION ENTRANCE AND/OR WASH RACK

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 Construction Entrance and/or Wash Racks are:

1. The stone layer must be at least 6 inches thick;
2. The stone shall conform to Section 711(02)(Class 2LB) of the LA DOTD Standard Specifications;
3. The length of the pad must be at 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 Section 1019 (Type D); of the LA DOTD Standard Specifications;
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

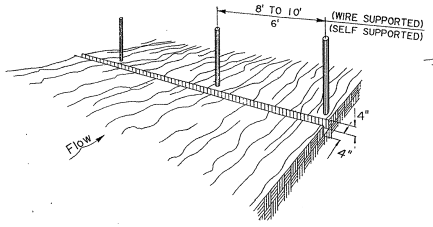
NOTES:

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 sheets, 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:

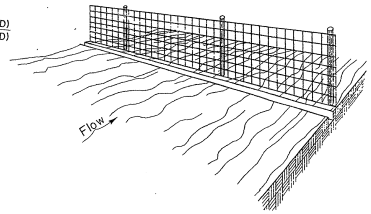
1. The spacing of the slope drains varies with the road grade.
   For Grades: 0.0% - 2.0% use 500' spacing
   2.1% - 5.0% use 200' "
   Greater than 5.0% use 100' "
2. Slope drain materials: Smooth pipe - 8" minimum
   Corrugated pipe - 12" minimum
   Plastic sheeting - 4' wide minimum
   " " - 3 mills 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 or hay bales.
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.

F.A.P.	STATE PROJECT	PARISH	SHEET NO.
	154-03-0021	UNION	202

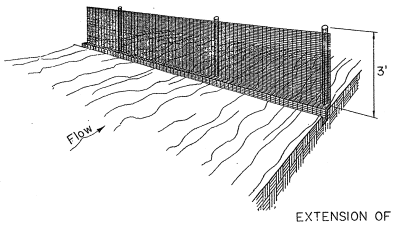
1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



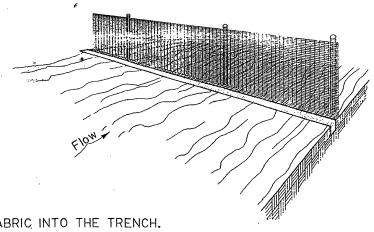
2. STAPLE WIRE FENCING TO THE POSTS.



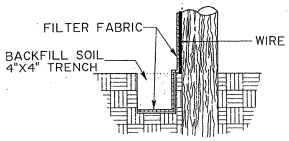
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



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 post and stretched across an area to intercept and detain small amounts of sediment. The silt fencing shall be in accordance with Section 204 of the LA DOTD Standard Specifications. 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 1/4 acre per 100 feet of silt fence length;
3. Use where the maximum slope length behind the barrier is 100 feet;
4. Use where 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.

DATE	DESCRIPTION	BY

REVISIONS

STANDARD PLAN NO. EC-01 SHEET 2 OF 2

CONTROL DETAILS

DATED January 14, 1994

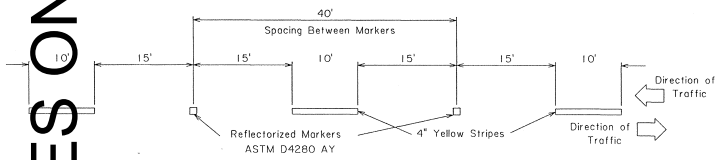
STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED JCM | DETAILED KAJ | DIR. /cadd/dgn/stdplans
CHECKED | CHECKED JCM | FILENAME ec01.dgn

Approved By Chief Engineer Original Signed by Chief Engineer Date

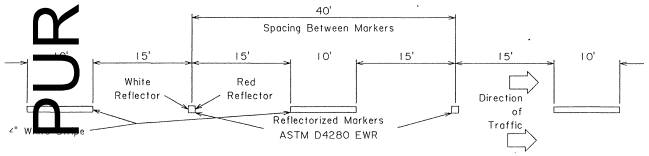
FOR INFORMATIONAL PURPOSES ONLY

	STATE PROJECT	PARISH	SHEET NO.
	154-03-0021	UNION	203



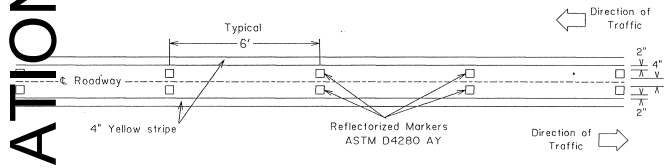
LAYOUT A

To Be Used Along ℄ of Two - Lane Roadway with Two - Way Traffic



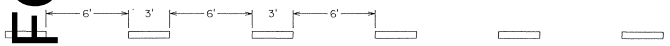
LAYOUT B

To Be Used for Lane Line Between Lanes of Traffic Traveling in the Same Direction



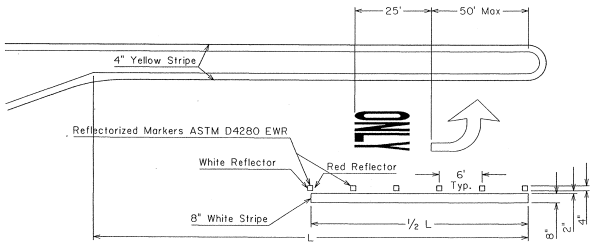
LAYOUT C

To Be Used Along ℄ of Multi-lane Undivided Roadway



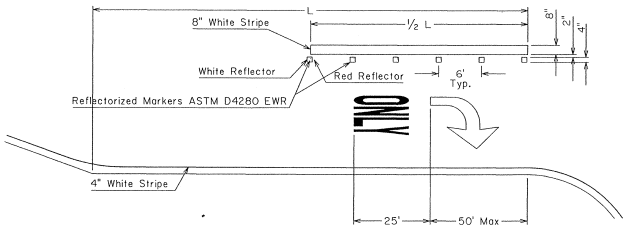
LAYOUT D

To Be Used to Extend a Line Through an Intersection, an Interchange Area, or the Entrance of a Turn Bay, as Determined by the Plans or the District Traffic Operations Engineer.
Color & width shall be the same as that of the extended line.



DETAIL OF TYPICAL LEFT TURN LANE

(Traffic Markers To Be Placed To Avoid Longitudinal Joint As Directed By The Project Engineer)
Arrows and Legend will be of White Thermoplastic Material



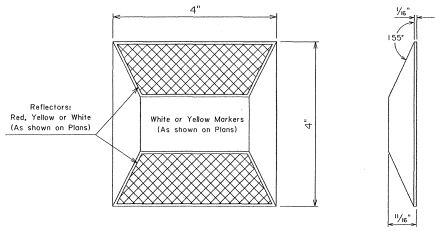
DETAIL OF TYPICAL RIGHT TURN LANE

(Traffic Markers To Be Placed To Avoid Longitudinal Joint As Directed By The Project Engineer)
Arrows and Legend will be of White Thermoplastic Material

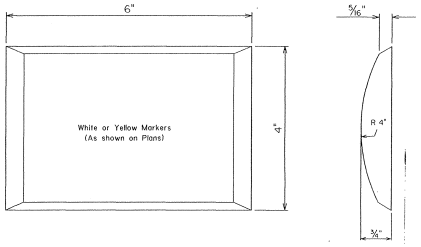
SPECIAL NOTE ON TURN BAY LEGENDS:

Additional arrows and 'ONLY's may be placed in long turn Bays.
A minimum of 125' shall seperate each additional arrow from the previous arrow.
Additional 'ONLY's shall be placed 25' from their respective arrow

TYPICAL REFLECTORIZED MARKER CONFIGURATIONS	TYPICAL USES
ASTM D4280 CLASSIFICATION: EWR WHITE BODY WHITE REFLECTOR FACING ONCOMING TRAFFIC RED REFLECTOR FACING WRONG-WAY TRAFFIC	LANE LINES EDGE LINES & CHANELLIZING
ASTM D4280 CLASSIFICATION: AY YELLOW BODY YELLOW REFLECTORS FACING EACH DIRECTION OF TRAFFIC	CENTERLINES & NO PASSING ZONES



TYPICAL 4" x 4" REFLECTORIZED TRAFFIC MARKER



TYPICAL 4" x 6" NON-REFLECTORIZED TRAFFIC MARKER

NOTE
At Channelized Intersections Traffic Markers are to be placed as directed by the Project Engineer and as approved by the Disrtict Traffic Operations Engineer.

DATE	DESCRIPTION	BY	APPROVED
1-22-95	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

REVISIONS

STANDARD PLAN NO. PM-01 — 1 OF 4

DETAILS OF
RAISED TRAFFIC MARKERS
and PAVEMENT MARKINGS

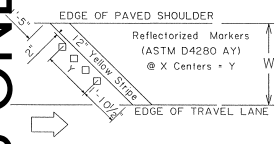
DATED August 14, 1977

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

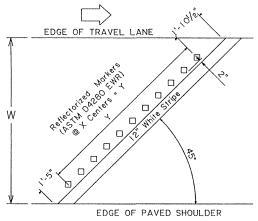
DESIGNED A Caceres — DETAILED P Allain
CHECKED D Beaty — CHECKED T Swanson
APPROVED Original Signed by Chief Engineer — DATE
CHIEF ENGINEER

FOR INFORMATIONAL PURPOSES ONLY

	STATE PROJECT	PARISH	SHEET NO.
	154-03-0021	UNION	204



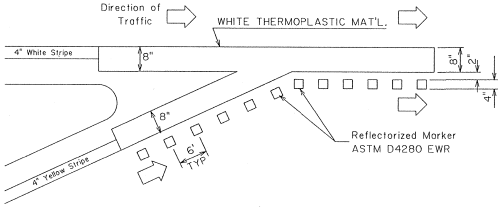
DETAIL OF INSIDE SHOULDER MARKINGS
IN ADVANCE OF AND ON NARROW BRIDGES



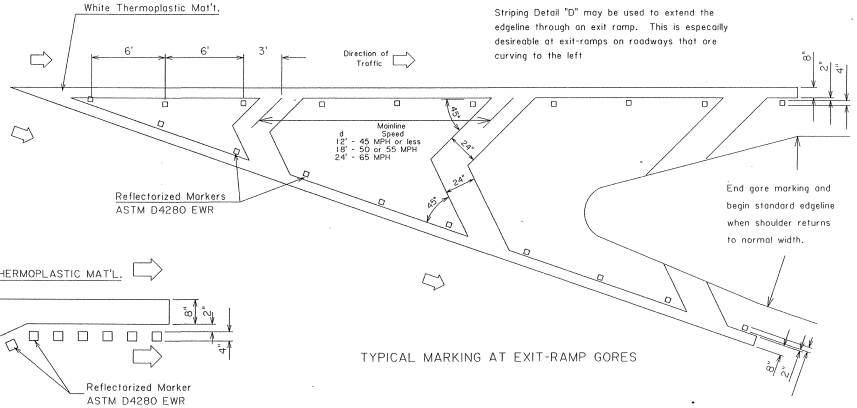
DETAIL OF OUTSIDE SHOULDER MARKINGS
IN ADVANCE OF AND ON NARROW BRIDGES

Shoulder Width W	Number of Markers N	Spacing Width X	Total Width Y
3'	2	11½"	0' 11½"
4'	4	9½"	2' 4½"
5'	5	11⅜"	3' 9½"
6'	6	12½"	5' 2½"
7'	7	13¼"	6' 7½"
8'	9	12"	8' 0"
9'	11	11¼"	9' 5"
10'	14	10"	10' 10"
11'	15	10½"	12' 3"
12'	17	10¼"	13' 8"

SPACING OF MARKINGS
FOR VARIOUS WIDTH SHOULDERS

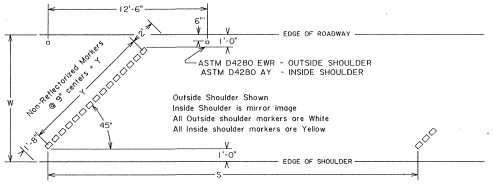


TYPICAL MARKING AT ENTRANCE-RAMP GORES



Striping Detail "D" may be used to extend the edgeline through an exit ramp. This is especailly desireable at exit-ramps on roadways that are curving to the left

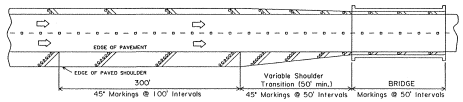
TYPICAL MARKING AT EXIT-RAMP GORES



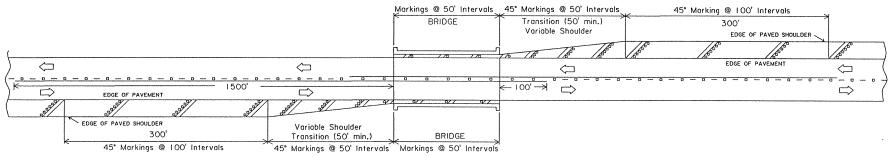
Bridge Length	Required Spacing (S)
500 ft or more	100 ft
200 ft - 500 ft	50 ft
0 ft - 200 ft	No Marking Required

Shoulder Width W	Number of Markers N	Total Width Y
4'	3	1' 6"
6'	7	4' 6"
8'	11	7' 6"
10'	15	10' 6"
12'	18	13' 3"

TYPICAL TRAFFIC MARKER PLACEMENT
ALONG BRIDGE OUTSIDE SHOULDER



MULTILANE DIVIDED
To be used on all bridges where the bridge width is less than the approach width (including paved shoulders)



2 LANE 2 WAY
To be used on all bridges where the bridge width is less than the approach width (including paved shoulders)

MARKING & STRIPING FOR NARROW BRIDGES

DATE	DESCRIPTION	BY	APPROVED
1-5-95	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

REVISIONS

STANDARD PLAN NO. PM-01 2 OF 4

DETAILS OF
RAISED TRAFFIC MARKERS
and PAVEMENT MARKINGS

DATED August 14, 1977

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED A. Caceres DETAILED P. Allain
CHECKED D. Brady CHECKED T. Swanson
APPROVED Original Signed by Chief Engineer DATE
CHIEF ENGINEER

FOR INFORMATIONAL PURPOSES ONLY

	STATE PROJECT	PARISH	SHEET NO.
	154-03-0021	UNION	205

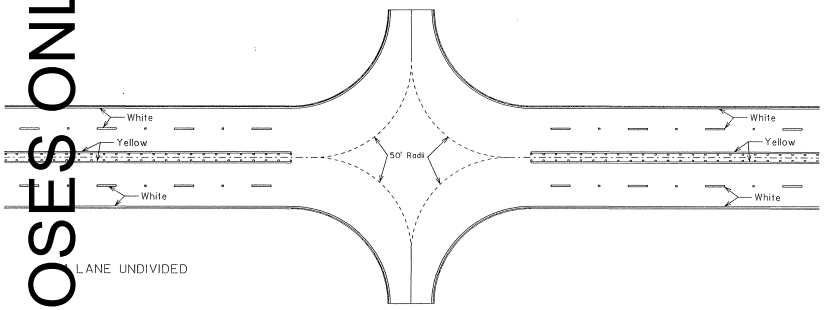
LEGEND:

═══ Indicates Thermoplastic Pavement Striping. Typical Width is 4" Unless Shown Otherwise. For Longitudinal Dimensions and Spacings see Sheet 1 of 4. Colors shall be as Shown on this Sheet.

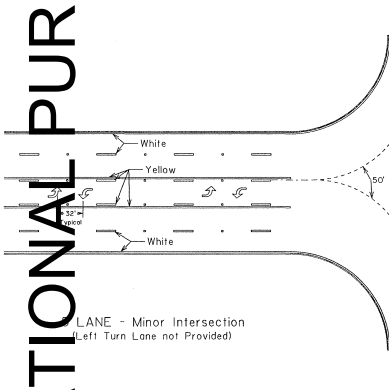
* Reflectorized Markers. See Sheets 1 of 4 and 2 of 4 for Spacings, Colors and Details.

NOTES:

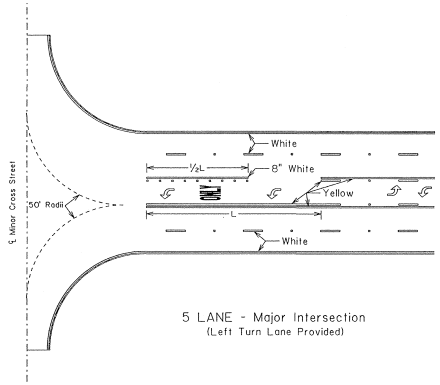
1. At all signalized and stop controlled intersections, a 24" solid white line shall be placed across all approach lanes to indicate the point behind which vehicles are to stop. Stop lines shall be placed 4 feet in advance of a crosswalk. In the absence of a crosswalk, the stop line should be placed at the desired stopping point, typically in line with the stop sign or traffic signal pole. In no case shall the stop line be more than 30 feet, or less than 4 feet from the nearest edge of the intersecting roadway.
2. Word and symbol markings shall be be white. In situations where through lanes become mandatory turn lanes, lane-use arrows shall be used and shall be accompanied by standard signs. Lane-use arrow pavement markings may also be used in two-way left turn lanes and in all right and left turn bays. The word marking "ONLY" may be used to supplement lane use arrows, as shown on sheet 1 of 4.
3. Arrow symbol pairs for two-way left turn lanes shall be placed a minimum of 1 pair per block, with a maximum spacing of 750'
4. No pavement markings or markers shall be placed within an intersection, except for a dotted pattern line used to guide vehicles through the intersection. Edge-lines, center-lines, and lane-lines shall not be stopped for driveway turnouts.
5. Edge-lines shall be required when pavement width is 22' or greater.
6. Edge-lines, center-lines, and lane-lines shall be placed to avoid longitudinal joints as directed by the project engineer.
7. Edge-lines in curb & gutter sections shall be placed so that the edge-line is kept out of the gutter, and is not covered by debris.



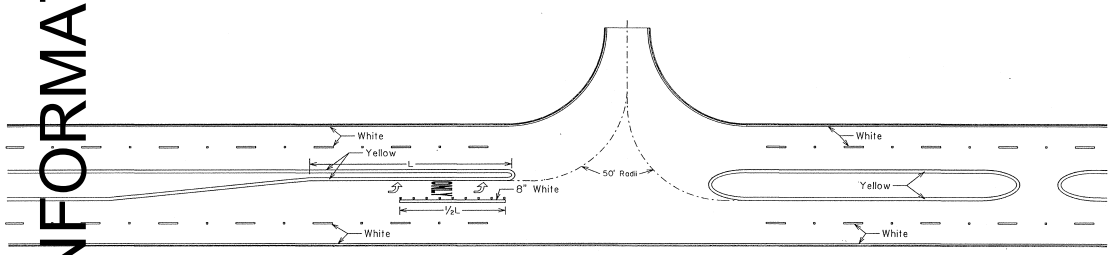
LANE UNDIVIDED



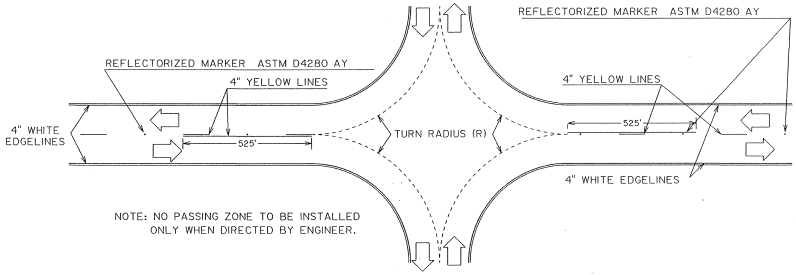
LANE - Minor Intersection
(Left Turn Lane not Provided)



5 LANE - Major Intersection
(Left Turn Lane Provided)



4 LANE DIVIDED



NOTE: NO PASSING ZONE TO BE INSTALLED ONLY WHEN DIRECTED BY ENGINEER.

TYPICAL INTERSECTION
APPROACH OF TWO LANE, TWO WAY HIGHWAY

DATE	DESCRIPTION	BY	APPROVED
1-21-98	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

REVISIONS

STANDARD PLAN NO. PM-01 3 OF 4

DETAILS OF
RAISED TRAFFIC MARKERS
and PAVEMENT MARKINGS

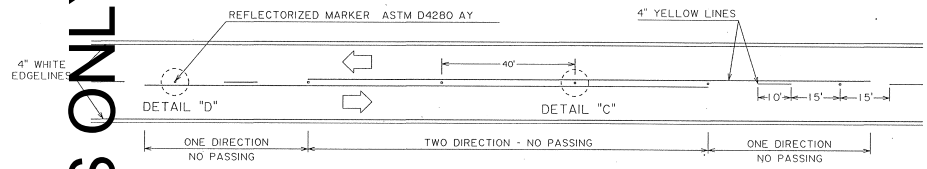
DATED August 14, 1977

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

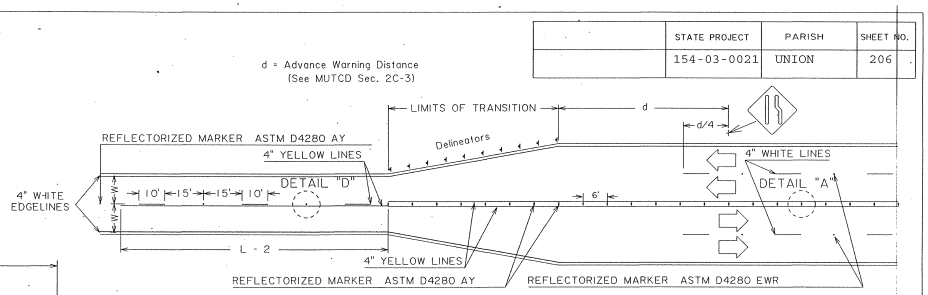
DESIGNED A. Caceres DETAILED P. Allain
CHECKED D. Brady CHECKED T. Swanson
APPROVED Original Signed by Chief Engineer DATE
CHIEF ENGINEER

FOR INFORMATIONAL PURPOSES ONLY

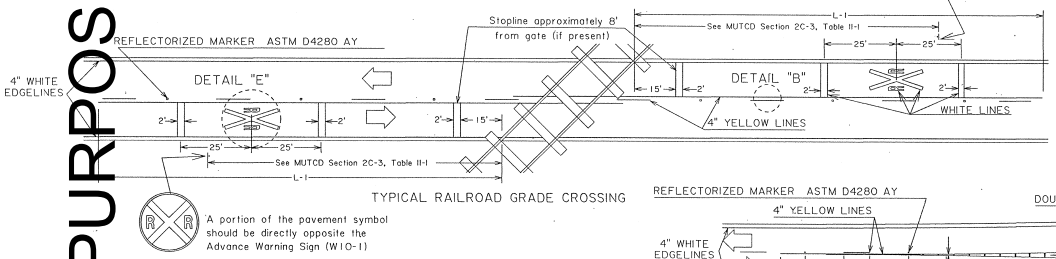
STATE PROJECT	PARISH	SHEET NO.
154-03-0021	UNION	206



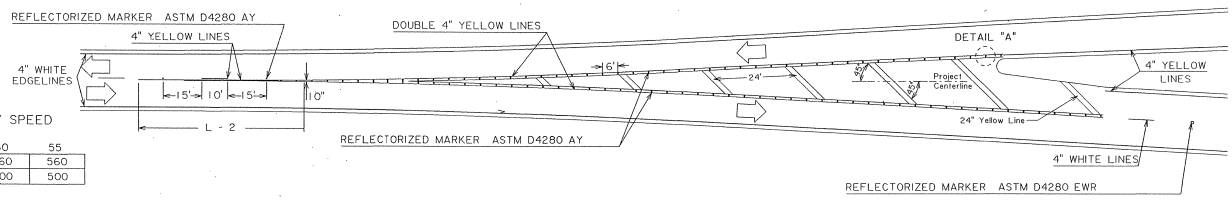
TYPICAL TWO LANE, TWO WAY ROADWAY



TYPICAL TWO LANE TO FOUR LANE UNDIVIDED HIGHWAY



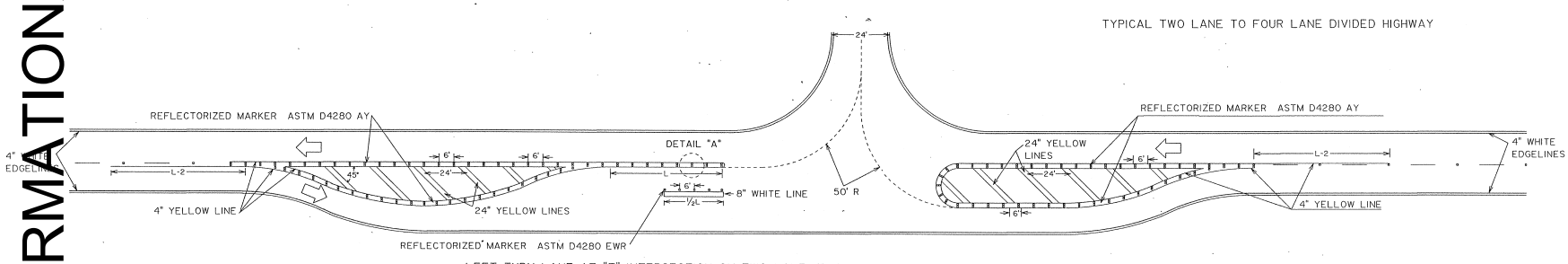
TYPICAL RAILROAD GRADE CROSSING



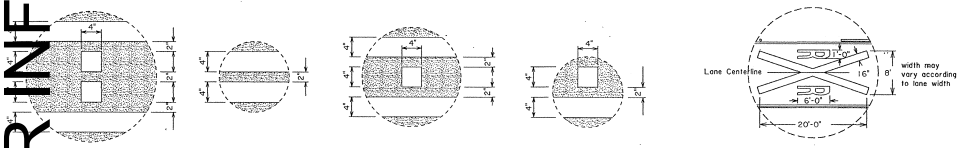
TYPICAL TWO LANE TO FOUR LANE DIVIDED HIGHWAY

"L" DISTANCE (FT) OF NO PASSING ZONES FOR GIVEN HIGHWAY SPEED

HIGHWAY SPEED (MPH)	25	30	35	40	45	50	55
L - 1 (RAILROAD GRADE CROSSING)	285	315	335	360	410	460	560
L - 2 (OBSTRUCTION)	225	250	275	300	350	400	500



LEFT TURN LANE AT "T" INTERSECTION ON TWO LANE, TWO WAY ROADWAY



DETAIL "A" DETAIL "B" DETAIL "C" DETAIL "D" DETAIL "E"

EDGELINE ARE TO BE USED ON ALL PAVEMENTS 22' OR MORE IN WIDTH.

DATE	DESCRIPTION	BY	APPROVED
1-21-98	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

REVISIONS

STANDARD PLAN NO. PM-01 — 4 OF 4

DETAILS OF RAISED TRAFFIC MARKERS and PAVEMENT MARKINGS

DATED August 14, 1977

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED A. Caceres — DETAILED P. Allain
CHECKED D. Baity — CHECKED T. Swanson
APPROVED Original Signed by Chief Engineer — DATE
CHIEF ENGINEER

FOR INFORMATIONAL PURPOSES ONLY

18-JUL-2008 10:23

R:\District 05 Design\Union Parish\154-03_LA 15\Project Folder\Dgn\Flds\sheet009 TC-00.dgn

GENERAL PROVISIONS

- All Temporary Traffic Control Devices used shall be in accordance with the LaDOTD Standard Specifications for Roads and Bridges, the Manual on Uniform Traffic Control Devices (MUTCD), and shall meet the National Cooperative Highway Research Program (NCHRP) 350 for Test Level 3 requirements.
- Materials used for Temporary Traffic Controls shall be in accordance with the LaDOTD Standard Specifications for Roads and Bridges and when applicable the LaDOTD Qualified Products List (QPL).
- No temporary traffic controls shall be erected without the approval of the Project Engineer and until work is about to begin, unless they are covered.
- No lane closures, lane shifts, diversions, or detours shall occur without the authorization of the Project Engineer.
- Responsibility is hereby placed upon the contractor for the installation, maintenance, and operation of all temporary traffic control devices called for in these plans or required by the Project Engineer for the protection of the traveling public as well as all Department and construction personnel.
- The contractor shall also be responsible for the maintenance of all permanent signs and pavement markings left in place as essential to the safe movement and guidance of traffic within the project limits.
- The District Traffic Operations Engineer (DTOE) shall serve as a technical advisor to the Project Engineer for all Traffic Control matters.
- "Road Work Next XX Miles" sign shall be required on all projects equal to or greater than 2 miles and located at the begining of the project unless otherwise noted. The distance on the sign shall be stated to the nearest whole mile. The sign shall be a minimum 36"X60" unless otherwise noted.
- Warning signs used for lane closures or lane shifts in which the roadway shall be returned to full public use within 12 hours or less may be placed on NCHRP350 approved portable sign frames.
- If the spacing on the plans need to be altered, the new spacings need to be approved by the Project Engineer.

SPEED LIMITS

- Speed limits shall be lowered by 10 mph for any construction, maintenance, or utility operation that requires one or more of the following:
  (A) the condition of the original highway is degraded due to milled surfaces or uneven pavements;
  (B) work is in progress in the immediate vicinity of the travel way requiring lane closures, lane width reductions, or low speed diversions; (C) workers present on the shoulder within 2' of the edge of traveled way without barrier protection.
- The reduced speed zone shall only apply to those portions of the project limits affected. The Project Engineer may allow SPEED LIMIT WHEN FLASHING signs to supplement reduced speed zones.
- At the end of the reduced speed zone, a speed limit sign displaying the original speed limit before construction shall be installed.
- If conditions warrant, the District Traffic Operations Engineer may authorize the reduction of the speed limit by more than 10 mph.

PAVEMENT MARKINGS (see QPL)

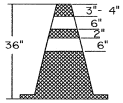
- All pavement markings within the limits of the project that are in conflict with the project signing or the required traffic movements shall be removed from the pavement by blast cleaning or grinding (Existing striping shall not be painted over with black paint or covered with tape).
- If special pavement markings are needed, they shall be reflectorized, removable, and accompanied by the proper signage.
- Temporary Raised Pavement Markers (RPMs) may be added to supplement temporary striping in areas of transition, in tapers, in detours, and in other areas of need as directed by the Project Engineer.
- Materials and placement of temporary pavement markings shall conform to section 713 of the Standard Specifications. If no pay item exists, temporary markings will be considered incidental to traffic control.

SIGNS

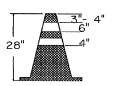
- All signs used for temporary traffic controls shall follow the Department's Traffic Control (TC) details and the MUTCD. Signs shown in the TC illustrations are typical and may vary with each specific condition.
- More appropriate signing for a specific condition may be required or substituted with the approval of the Project Engineer and reviewed by the District Traffic Operations Engineer.
- When projects are separated by less than one mile, they shall be signed as one project.
- At no time shall signs warning against a particular operation be left in place once the operation has been completed or where the obstacle has been removed.
- Signs over 10 sq ft shall be mounted on two post and signs over 20 sq ft shall be mounted on at least three post.
- Signs shall have a minimum of two bolts per post.
- Permanent signs no longer applicable or in conflict shall be removed or covered with a strong, lightweight, opaque material.
- Warning signs used for temporary traffic controls shall meet the following guidelines unless otherwise noted in the plans: (A) size shall be 48" x 48", (B) see the Departments Standard Specifications and the QPL for sheeting information, (C) a minimum of a 2 lb U-Channel post shall be used driven to a minimum depth of 3', (D) sign height shall be a minimum of 5' above the roadway surface unless there is a concern for pedestrians or bicycle traffic in which it shall be a minimum of 7', (E) lateral distance of signs shall be a minimum of 6' from the edge of shoulder or edge of pavement if no shoulder exist and 2' from the back of curb in urban areas.
- Vinyl Roll Up signs will be allowed for short term (less than 12 hours) daytime work provided that they meet all size, color, retroreflectivity requirements, and NCHRP 350.
- Mesh rollup signs shall not be allowed on any project.
- All signs shall be removed or covered when no longer applicable.
- Contractor shall use caution not to damage existing signs which remain in place. Any DOTD signs damaged by work operations shall be replaced.

CHANNELIZING DEVICES

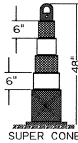
- The following devices may be used: Tubular Markers, Vertical Panels, Cones, Drums, and Super Cones. Drums (at standard spacing) and Super Cones (at 1/2 standard spacing) are the only devices allowed to be used in taper areas on the interstate system during daylight hours. Only drums can be used in tapers during night operations.
- The spacing of channelizing devices in a taper should not exceed a distance in feet equal to 1.0 times the posted speed limit in mph (with a maximum of 50 feet).
- The spacing of channelizing devices in a tangent should not exceed a distance in feet equal to 2.0 times the posted speed limit in mph (with a maximum of 100 feet) unless otherwise noted.
- Retroreflective material pattern used on super cones shall match that used on drums.
- 28" traffic cones are not allowed on: 1) Interstates, 2) Highways with speeds greater than 40 mph. During night time operations: 1) 28" and 36" cones are not allowed, 2) drums are the only device allowed in the taper.



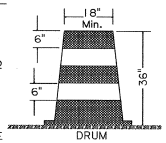
Traffic Cone



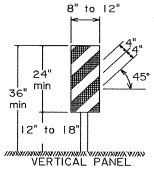
Tubular Marker



SUPER CONE



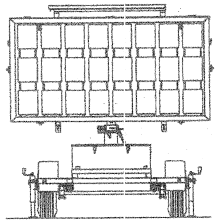
DRUM



VERTICAL PANEL

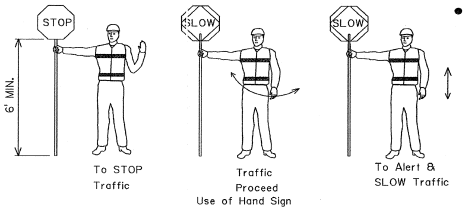
PORTABLE CHANGEABLE MESSAGE SIGNS

- When working within the traveled way, including shoulders and auxiliary lanes, Changeable Message Signs (CMS) shall be used on all Interstate Highways and on all other roadways (where space is available) with an ADT greater than 20,000 and should be delineated with retroreflective TTC devices. CMS will be paid for by each.
- When used in advance of a lane closure or a lane shift, the CMS should be placed on the right hand side of the road a minimum distance of 2 miles in advance of the taper for Interstates and to be determined by the Engineer on other highways.
- If vehicles are queing beyond the 2 mile CMS, an additional CMS should be placed on the right hand side of the road approximately 5 miles in advance of the taper for interstates.
- CMS messages shall be approved by the District Traffic Operations Engineer (DTOE).
- When Portable Changeable Message signs are not being used, they should be removed; if not removed, they should be shielded by guardrail or barriers; or if the previous two options are not feasible, they should be delineated with retroreflective TTC devices.



FLAGGERS

- All flaggers must be qualified. The contractor shall be responsible for training or assuring that all flaggers are qualified to perform flagging duties. A Qualified Flagger is one that has completed courses such as those offered by the American Traffic Safety Services Association (ATSSA), The Associated General Contractors of America (AGC) or other courses approved by the Louisiana DOTD's Work Zone Task Force. The contractor shall be responsible for getting the flagger course approved.
- When utilized, a flagger shall use a minimum 18 inch octagonal shape sign on a minimum 6' stop/slow paddle and wear ANSI Class 2 Lime Green vest during day time operations and ANSI Class 3 Lime Green ensemble during night operations. In all flagging operations, the flagger must be visible from the flagger advance warning sign.



TYPE III BARRICADES

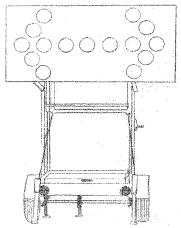
- All barricades shall use Type 3 High Intensity Sheeting on both sides of the barricade.
- All Type III Barricades shall be a minimum of 8 feet in length and must meet NCHRP 350 requirements.
- When signs and lights are to be mounted to a barricade, they must meet NCHRP 350 requirements.

MUTCD Website:
http://mutcd.fhwa.dot.gov/

STATE OF LOUISIANA
CARL E. COURVILLE
REG. No. 29013
REGISTERED PROFESSIONAL ENGINEER IN ENGINEERING
JANUARY 15, 2008

FLASHING ARROW PANELS

- Flashing Arrow Panels shall be used for lane closures on all facilities with 2 or more lanes in a single direction and a speed limit greater than 35 mph.
- When used, flashing arrow panels should be located on the shoulder at the beginning of the taper.
- Where the shoulder width is limited, the flashing arrow panel should be placed within the closed lane as close to the beginning of the taper as practical.
- All Flashing Arrow Panels used on high speed roadways (45 mph and greater) shall be 4' x 8' Type C.
- When Flashing Arrow Panels signs are not being used, they should be removed; if not removed, they should be shielded by guardrail or barriers; or if the previous two options are not feasible, they should be delineated with retroreflective TTC devices.

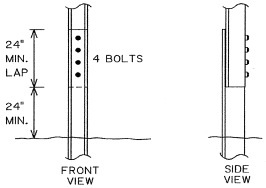


LIGHTING (see QPL)

- When used for overnight closures, lighting shall supplement all barricades that are placed in a closed lane or that extend across a highway. Two Type B High Intensity lights shall be used per lane closed in rural areas. In urban areas two Type A Low Intensity Lights may be used where adequate ambient lighting is available.
- One Type B High Intensity light shall be used to supplement the first sign (or pair of signs) that gives warning about a lane closure during night time operations.
- Type C steady burn lights shall be used on all channelizing devices in the taper as well as the first two devices in the tangent, for night use.

ALLOWABLE LAP SPLICE FOR U-CHANNEL POST

- U-Channel posts may be spliced where long lengths are required. The upper section shall overlap the lower section by at least 24 inches. The bottom edge of the upper section of the splice shall be a minimum of 24 inches above the ground. The spliced sections shall be secured with at least four 5/16 inch diameter hex bolts spaced equally along the splice.



SHEET NUMBER	9
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	E. COURVILLE
CHECKED	J. COWARD
DETAILED	J. COWARD
CHECKED	D. SOWARDS
DATE	01/25/2008
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

TEMPORARY TRAFFIC CONTROL
GENERAL NOTES SHEET

SPECIAL DESIGN | TC-00

TRAFFIC ENGINEERING

FOR INFORMATIONAL PURPOSES ONLY

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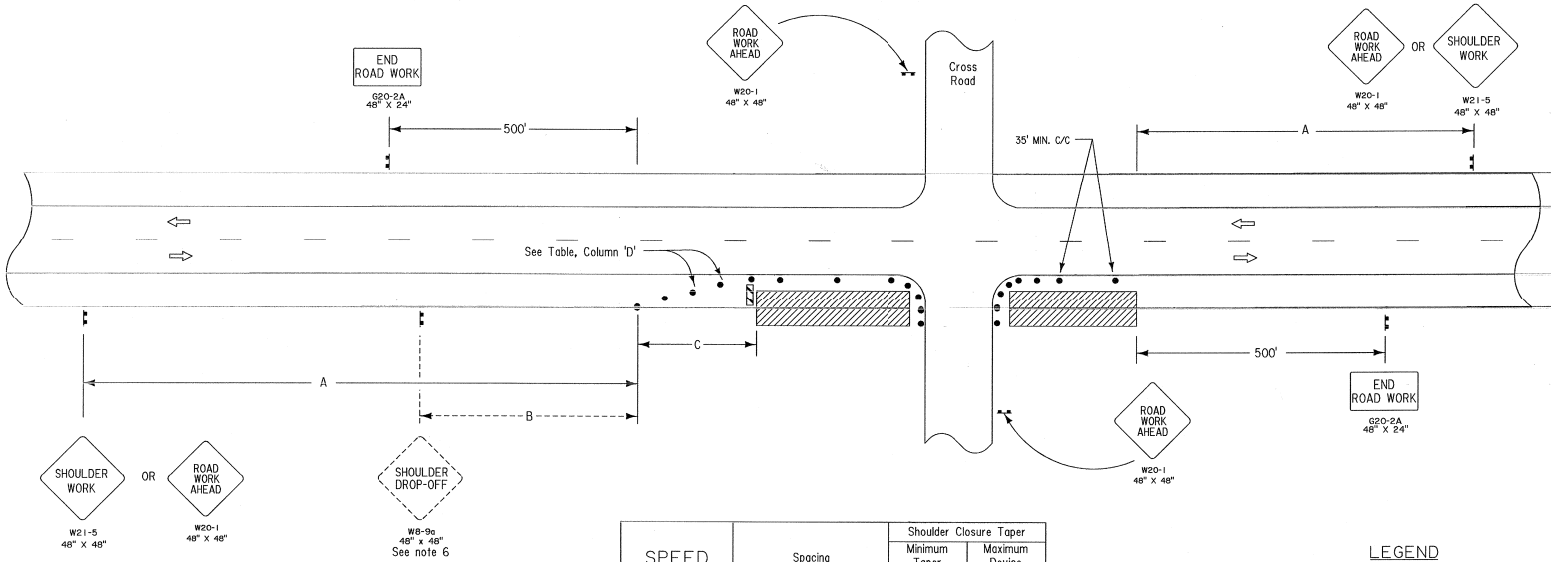

SPEED LIMIT	Spacing		Shoulder Closure Taper	
			Minimum Taper Length	Maximum Device Spacing
	'A'	'B'	'C'	'D'
35 mph	500'	250'	100'	25'
45 mph	1000'	350'	200'	45'
≥55 mph	1500'	500'	250'	50'

If horizontal curve radius is less than 300', devices spacing shall be 25'.

LEGEND

- Traffic Sign
- Channelizing Devices
- Work Area
- Type III Barricades

NOTES

THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

1. THIS LAYOUT REPRESENTS TRAFFIC CONTROLS REQUIRED FOR WORKERS AND EQUIPMENT OPERATING WITHIN THE CLEAR ZONE FOR MORE THAN 1 HOUR. LESS THAN 1 HOUR, SEE FIG. TA-4 OF THE MUTCD. PORTABLE SIGNS MAY BE USED FOR WORK LASTING LESS THAN 3 DAYS.

2. NO SIGNS OR BARRICADES ARE REQUIRED FOR EQUIPMENT OPERATING OR WORK IN PROGRESS OUTSIDE THE CLEAR ZONE.

3. SIGNS AND BARRICADES SHALL BE COVERED OR REMOVED DURING NONWORKING HOURS UNLESS A DROP-OFF OR PHYSICAL OBSTRUCTION REMAINS WITHIN THE CLEAR ZONE.

4. TRAFFIC CONES MAY BE USED AS CHANNELIZING DEVICES ALONG THE WORK AREA DURING DAYLIGHT HOURS ONLY.

5. WORK OR EQUIPMENT CONFINED TO A SPOT LOCATION (LESS THAN 200 FEET) SHALL BE MARKED BY CHANNELIZING DEVICES SPACED AT 25 FEET OR BY A VEHICLE WITH A YELLOW REVOLVING LIGHT OR YELLOW STROBE LIGHT VISIBLE TO ONCOMING TRAFFIC. WORK EXTENDING MORE THAN 200 FEET OF ROADWAY LENGTH SHALL BE MARKED WITH APPROPRIATE DEVICES SPACED AS NOTED IN THE TABLE.

6. SHOULDER DROP-OFFS

   A. WHEN A SHOULDER DROP-OFF GREATER THAN 2" BUT LESS THAN 6" EXISTS, A "SHOULDER DROP-OFF" SIGN WILL FOLLOW THE "SHOULDER WORK" SIGN. WHEN THE DROP-OFF EXCEEDS 6", THE "SHOULDER DROP-OFF" SIGN SHALL BE REPLACED BY A "NO SHOULDER" SIGN.

   B. IF THE SPEED LIMIT IS GREATER THAN 45 MPH AND THE DROPOFF IS 10" OR GREATER WITHIN 2' OF THE TRAVEL LANE DURING NONWORKING HOURS, A PORTABLE BARRIER SHALL BE USED.

7. A TEMPORARY EDGELINE OR CHANNELIZING DEVICE SHALL BE PLACED AT THE PAVEMENT EDGE ADJACENT TO THE DROP-OFF DURING NONWORKING HOURS WHEN THE DROPOFF IS GREATER THAN 2".

8. SPEED LIMIT IN THE ABOVE TABLE REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION. IF WORKERS ARE PRESENT WITHIN 2' OF TRAVEL LANE, SPEED LIMIT MAY NEED TO BE REDUCED.

9. WHEN A WORK AREA HAS BEEN ESTABLISHED ON ONE SIDE OF THE ROADWAY ONLY, THERE SHALL BE NO CONFLICTING OPERATIONS OR PARKING ON THE OPPOSITE SHOULDER WITHIN 500 FEET OF THE WORK AREA.

10. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.

11. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.

12. TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.

STATE OF LOUISIANA
CARL E. COURVILLE
REG. No. 29312
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
JANUARY 15, 2008

SHEET NUMBER	10
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED / CHECKED	E. COURVILLE / J. COLVIN
DETAILED / CHECKED	D. SOWARDS / J. COLVIN
DATE / SHEET	01/25/2008

NO.	DATE	REVISION DESCRIPTION	BY

TRAFFIC CONTROL LAYOUT
FOR WORK LESS THAN 15' FROM THE TRAVELED LANE

SPECIAL DETAIL | TC-01

TRAFFIC ENGINEERING

FOR INFORMATIONAL PURPOSES ONLY

18-JUL-2008 09:59
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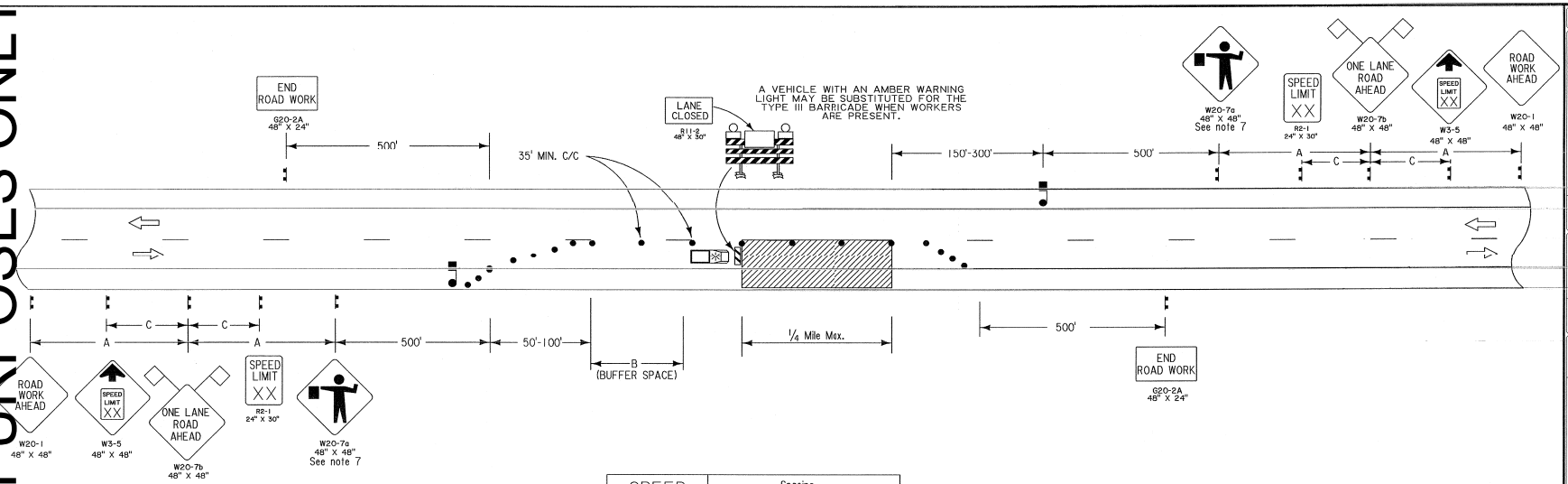


SPEED LIMIT (See note 5)	Spacing		
	"A"	"B"	"C"
35 mph	500'	250'	N/A
45 mph	1000'	360'	500'
55 mph	1500'	495'	800'

SIGN SPACING TO BE ADJUSTED
FOR HORIZONTAL & VERTICAL CURVES.

LEGEND

- Traffic Sign
- Flagger
- Channelizing Devices
- Type III Barricades
- Work Area
- Type B Light

NOTES

THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

1. CONDITIONS REPRESENTED ARE FOR WORK WHICH REQUIRES CLOSING TRAFFIC LANES DURING DAYLIGHT HOURS ONLY. PORTABLE SIGNS MAY BE USED FOR WORK LASTING LESS THAN 3 DAYS.
2. WHEN A WORK AREA HAS BEEN ESTABLISHED ON ONE SIDE OF THE ROADWAY ONLY, THERE SHALL BE NO PARKING ON THE OPPOSITE SHOULDER WITHIN 500 FEET OF THE WORK AREA.
3. CHANNELIZING DEVICES MAY BE PLACED UP TO 2' BEYOND CENTER-LINE ONLY AT SPECIFIC LOCATIONS WHERE ACTUAL WORK ACTIVITY IS TAKING PLACE. A 10' MINIMUM TRAVELED LANE SHOULD BE MAINTAINED WHERE PRACTICAL. CHANNELIZING DEVICES SHALL BE RETURNED TO THE CENTERLINE WHEN THE WORK ACTIVITY HAS PASSED.
4. SPACING OF CHANNELIZING DEVICES IN THE TAPER SHOULD BE NO MORE THAN 20'. A MINIMUM OF 5 CHANNELIZING DEVICES ARE TO BE USED IN THE TAPER.
5. SPEED LIMIT REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION.
6. TO PREVENT VEHICLES FROM ENTERING THE WORK AREA AGAINST THE FLOW OF TRAFFIC, AN ADDITIONAL FLAGGER SHALL BE STATIONED AT EACH INTERSECTION, MAJOR DRIVEWAY, RAILROAD CROSSING OR CROSSING WITHIN THE WORK AREA.
7. VISUAL OR RADIO CONTACT SHALL BE REQUIRED BETWEEN FLAGGERS AT ALL TIMES. THE FLAGGER SHALL BE VISIBLE FROM FLAGGER SIGN.
8. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED BY THE CONTRACTOR.
9. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.
10. TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.
11. NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE.

STATE OF LOUISIANA
CARL E. COURVILLE
REG. No. 29512
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
JANUARY 15, 2008

SHEET NUMBER	11
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	E. COURVILLE
CHECKED	J. COLVIN
DETAILED	D. SOWARDS
CHECKED	J. COLVIN
DATE	01/25/2008
SHEET	

NO.	DATE	REVISION DESCRIPTION	BY

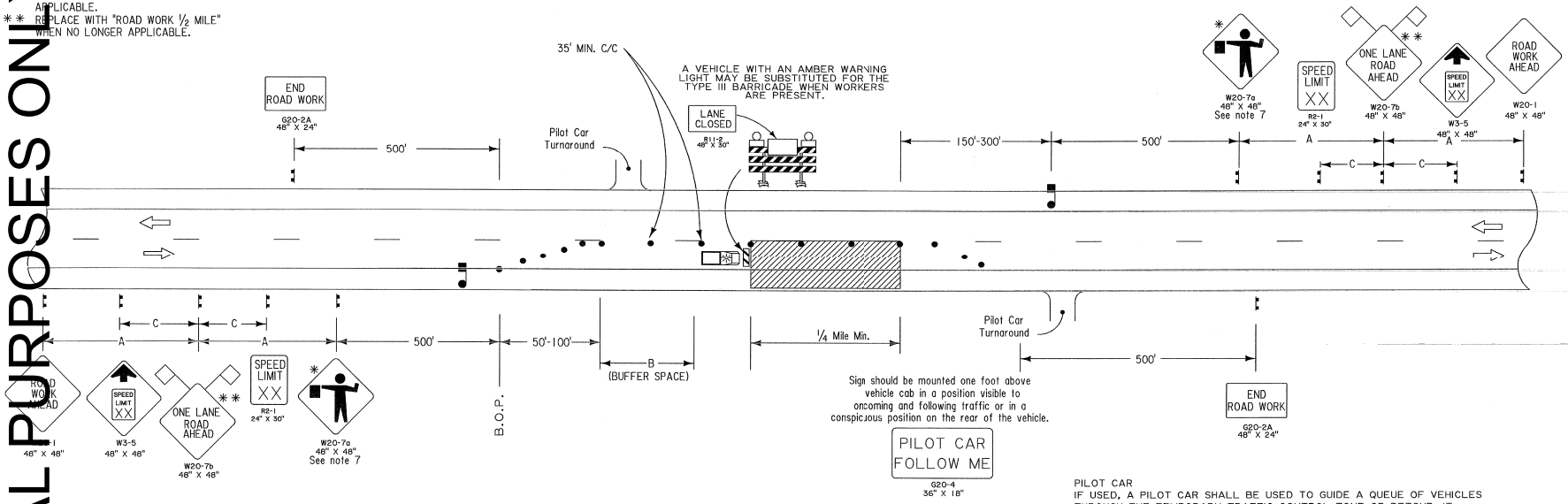
TRAFFIC CONTROL LAYOUT
FOR LANE CLOSURE LESS THAN 1/4 MILE IN LENGTH

SPECIAL DETAIL TC-02

TRAFFIC ENGINEERING

FOR INFORMATIONAL PURPOSES ONLY

* REMOVE OR COVER WHEN NO LONGER APPLICABLE.
** REPLACE WITH "ROAD WORK ½ MILE" WHEN NO LONGER APPLICABLE.



NOTES

1. THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

2. WHEN A WORK AREA HAS BEEN ESTABLISHED ON ONE SIDE OF THE ROADWAY ONLY, THERE SHALL BE NO PARKING ON THE OPPOSITE SHOULDER WITHIN 500 FEET OF THE WORK AREA.

3. CHANNELIZING DEVICES MAY BE PLACED UP TO 2' BEYOND CENTERLINE ONLY AT SPECIFIC LOCATIONS WHERE ACTUAL WORK ACTIVITY IS TAKING PLACE. A 10' MINIMUM TRAVELED LANE SHOULD BE MAINTAINED WHERE PRACTICAL. CHANNELIZING DEVICES SHALL BE RETURNED TO THE CENTERLINE WHEN THE WORK ACTIVITY HAS PASSED.

4. SPACING OF CHANNELIZING DEVICES IN THE TAPER SHOULD BE NO MORE THAN 20'. A MINIMUM OF 5 CHANNELIZING DEVICES ARE TO BE USED IN THE TAPER.

5. SPEED LIMIT REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION.

6. TO PREVENT VEHICLES FROM ENTERING THE WORK AREA AGAINST THE FLOW OF TRAFFIC, AN ADDITIONAL FLAGGER SHALL BE STATIONED AT EACH INTERSECTION, MAJOR DRIVEWAY, RAILROAD CROSSING OR CROSSING WITHIN THE WORK AREA.

7. WITH THE APPROVAL OF THE ENGINEER, THE LENGTH OF THE WORK AREA MAY, FOR A SHORT DURATION, BE CHANGED TO AS MUCH AS ONE-HALF MILE MAXIMUM TO IMPROVE THE SIGHT DISTANCE TO THE FLAGGER. VISUAL OR RADIO CONTACT SHALL BE REQUIRED BETWEEN THE FLAGGERS AT ALL TIMES.

8. FOR PROJECTS IN RURAL AREAS THE DISTANCE BETWEEN FLAGGERS SHALL NOT EXCEED 2.5 MILES FOR A.D.T. (AVERAGE DAILY TRAFFIC) OF LESS THAN 2,500 AND 2.0 MILES FOR A.D.T. FROM 2,500 TO 5,000. DISTANCE BETWEEN FLAGGERS SHALL NOT EXCEED 1.5 MILES FOR A.D.T. GREATER THAN 5,000 VEHICLES.

8. THE CONTRACTOR MAY EXTEND THE LANE CLOSURE AN ADDITIONAL 1.0 MILE UNDER THE FOLLOWING PROVISIONS:

(A) THE LANE CLOSURE EXTENSION IS PERMITTED ONLY DURING NON-PEAK HOURS.

(B) ONCE THE TRAFFIC CONTROL DEVICES HAVE BEEN PLACED TO EXTEND THE LANE CLOSURE, THE TRAFFIC CONTROL DEVICES AT THE BEGINNING OF THE TRAFFIC CONTROL SHALL BE MOVED DOWNSTREAM TO LIMIT THE WORK AREA TO THE DISTANCE DEFINED IN NOTE 7.

9. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.

10. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.

11. VISUAL OR RADIO CONTACT SHALL BE REQUIRED BETWEEN FLAGGERS AT ALL TIMES. THE FLAGGER SHALL BE VISIBLE FROM FLAGGER SIGN.

12. TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.

13. THE CONTRACTOR CAN USE EITHER A PILOT CAR OR CHANNELIZING DEVICES IN THE TANGENT SECTION. IF A PILOT CAR IS REQUIRED THEN THE CONTRACTOR IS NOT REQUIRED TO HAVE CHANNELIZING DEVICES IN THE TANGENT SECTION.

14. NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE.

PILOT CAR
IF USED, A PILOT CAR SHALL BE USED TO GUIDE A QUEUE OF VEHICLES THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE OR DETOUR. IT SHALL BE USED IN RESTRICTED VISIBILITY OPERATIONS SUCH AS LIME OR CEMENT STABILIZATION, CHIP SEALS, OR OPERATIONS IN HILLY OR CURVY TERRAINS WHERE FLAGGERS CAN'T SEE EACH OTHER (REQUIRE A CLEAR LINE-OF-SIGHT). PILOT CARS ARE NOT REQUIRED IN CONFINED OPERATIONS SUCH AS STRIPING OR OTHER LIMITED LANE CLOSURE OPERATIONS LESS THAN 250' (i.e. CROSS DRAIN INSTALLATIONS UNLESS THERE ARE MULTIPLE CROSS DRAINS WITH A CONTINUOUS LANE CLOSURE). THE OPERATION OF THE PILOT VEHICLE SHALL BE COORDINATED WITH FLAGGING OPERATIONS OR OTHER CONTROLS AT EACH END OF THE ONE-LANE SECTION.

SPEED LIMIT (See note 4)	Spacing		
	"A"	"B"	"C"
35 mph	500'	250'	N/A
45 mph	1000'	360'	500'
55 mph	1500'	495'	800'

STATE OF LOUISIANA
CARL E. COURVILLE
REG. No. 29312
REGISTERED PROFESSIONAL ENGINEER IN ENGINEERING
JANUARY 25, 2008

LEGEND

- Traffic Sign
- Flagger
- Channelizing Devices
- Type III Barricades
- Work Area
- Type B Light

SHEET NUMBER	12
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	E. COURVILLE
CHECKED	J. COLVIN
DETAILED	D. SOWARDS
CHECKED	J. COLVIN
DATE	01/25/2008
SHEET	

NO. | DATE | REVISION DESCRIPTION | BY

TRAFFIC CONTROL LAYOUT
FOR LANE CLOSURE GREATER THAN ¼ MILE IN LENGTH (SUITABLE FOR MOVING OPERATIONS)

SPECIAL DETAIL | TC-03

TRAFFIC ENGINEERING

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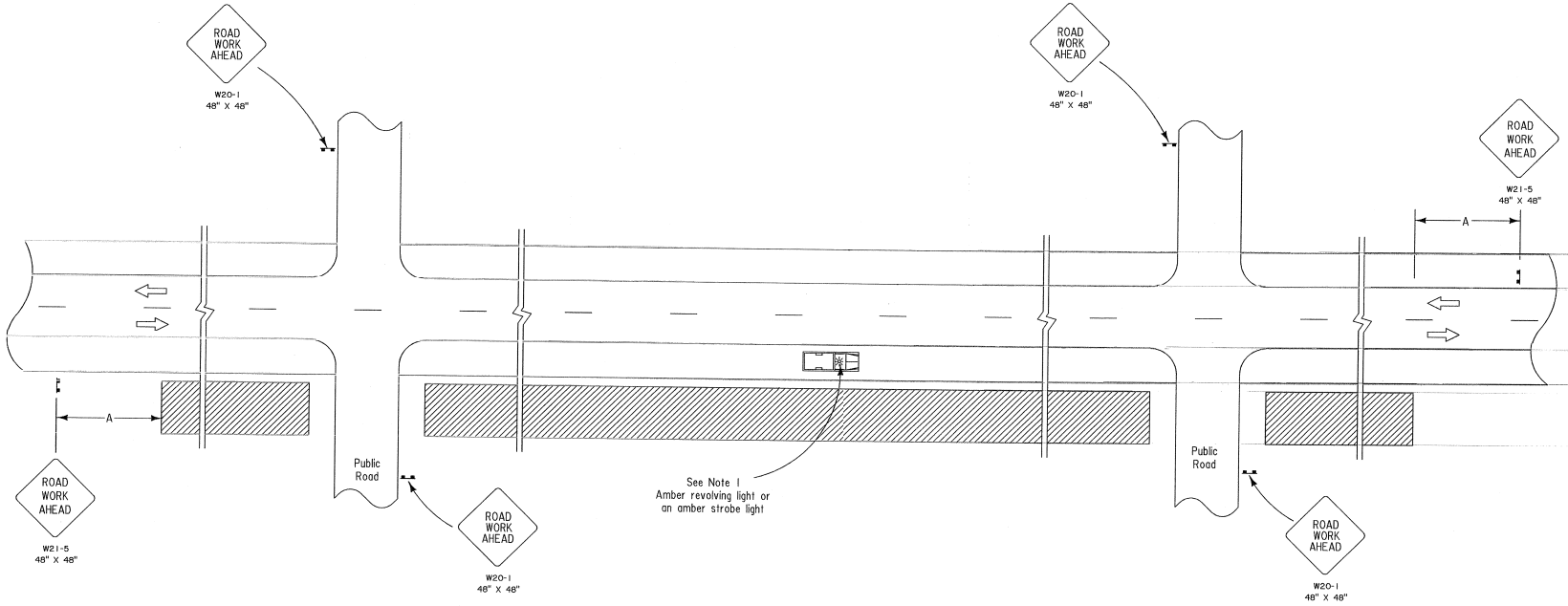


LEGEND

Traffic Sign

Work Area

SPEED LIMIT	Spacing
	'A'
35 mph	500'
45 mph	1000'
55 mph	1500'

NOTES

THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

1. THIS LAYOUT REPRESENTS TRAFFIC CONTROLS REQUIRED FOR WORKERS AND EQUIPMENT OPERATING OUTSIDE OF CLEAR ZONE. IF THE OPERATION RESULTS IN EQUIPMENT OR OTHER VEHICLES BEING PARKED WITHIN THE CLEAR ZONE, BUT NOT WITHIN THE ROADWAY EACH VEHICLE SHALL HAVE AN AMBER LIGHT.
2. WHEN A WORK AREA HAS BEEN ESTABLISHED ON ONE SIDE OF THE ROADWAY ONLY, THERE SHALL BE NO PARKING ON THE OPPOSITE SHOULDER WITHIN 500 FEET OF THE WORK AREA.
3. SPEED LIMIT REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION.
4. AN ADDITIONAL "ROAD WORK AHEAD" SIGN SHALL BE PLACED AT EACH PUBLIC ROAD INTERSECTING THE PROJECT WITHIN THE WORK AREA.
5. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.
6. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.

STATE OF LOUISIANA
CARL E. COURVILLE
Reg. No. 29512
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
January 25, 2008

SHEET NUMBER 13

PARISH: UNION

FEDERAL PROJECT:

STATE PROJECT: 154-03-0021

DESIGNED E. COURVILLE
CHECKED J. COLTIN
DETAILED D. SOWARDS
CHECKED J. COLTIN
DATE 01/25/2008
SHEET

NO.	DATE	REVISION DESCRIPTION	BY

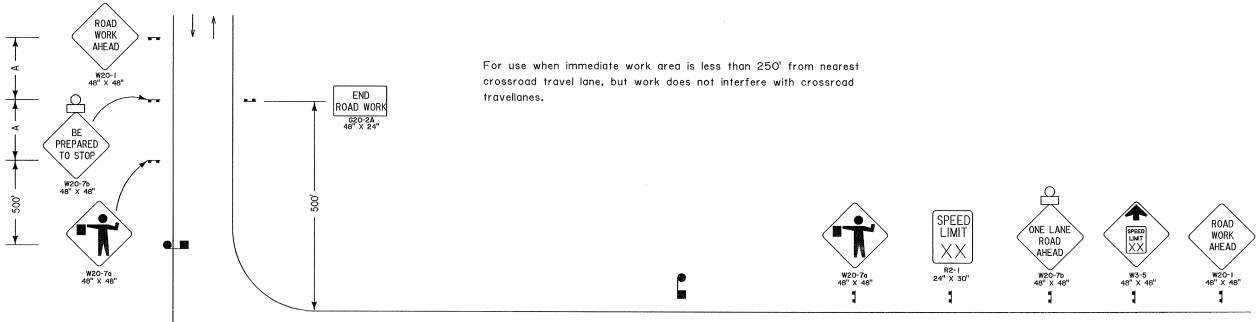
TRAFFIC CONTROL LAYOUT
FOR WORK GREATER THAN 15' FROM THE TRAVELED LANE

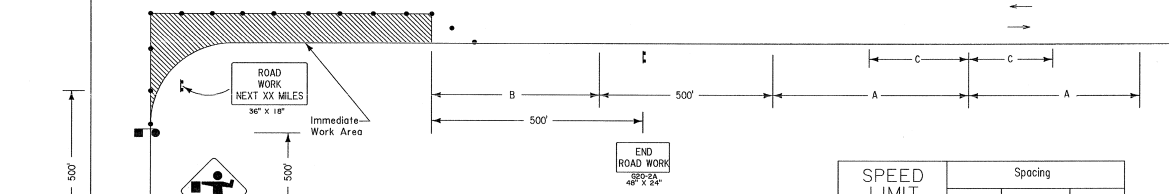
ORIGINAL DETAIL: TC-05

TRAFFIC ENGINEERING

FOR INFORMATIONAL PURPOSES ONLY

For use when immediate work area is less than 250' from nearest crossroad travel lane, but work does not interfere with crossroad travellanes.



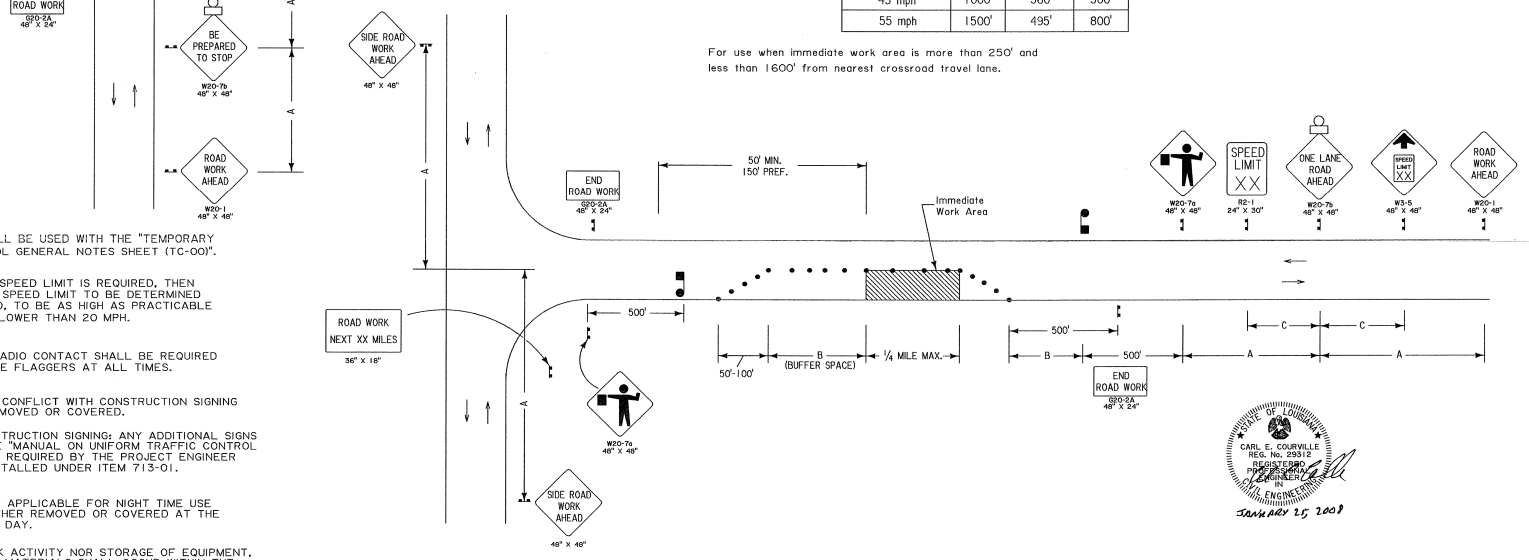


SPEED LIMIT (See note 4)	Spacing		
	"A"	"B"	"C"
35 mph	500'	250'	N/A
45 mph	1000'	360'	500'
55 mph	1500'	495'	800'

LEGEND

- Traffic Sign
- Channelizing Devices
- Type III Barricades
- Work Area
- Flagger
- Type B Light

For use when immediate work area is more than 250' and less than 1600' from nearest crossroad travel lane.



NOTES

THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

1. IF REDUCED SPEED LIMIT IS REQUIRED, THEN APPLICABLE SPEED LIMIT TO BE DETERMINED IN THE FIELD, TO BE AS HIGH AS PRACTICABLE AND NEVER LOWER THAN 20 MPH.
2. VISUAL OR RADIO CONTACT SHALL BE REQUIRED BETWEEN THE FLAGGERS AT ALL TIMES.
3. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.
4. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.
5. ANY SIGN NOT APPLICABLE FOR NIGHT TIME USE SHALL BE EITHER REMOVED OR COVERED AT THE END OF EACH DAY.
6. NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE.

STATE OF LOUISIANA
CARL E. COURVILLE
REG. No. 29312
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
JANUARY 25, 2008

SHEET NUMBER	14
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	E. COURVILLE
CHECKED	J. COLVIN
DETAILED	D. SOWARDS
CHECKED	J. COLVIN
DATE	01/25/2008
SHEET	

NO. | DATE | REVISION DESCRIPTION | BY

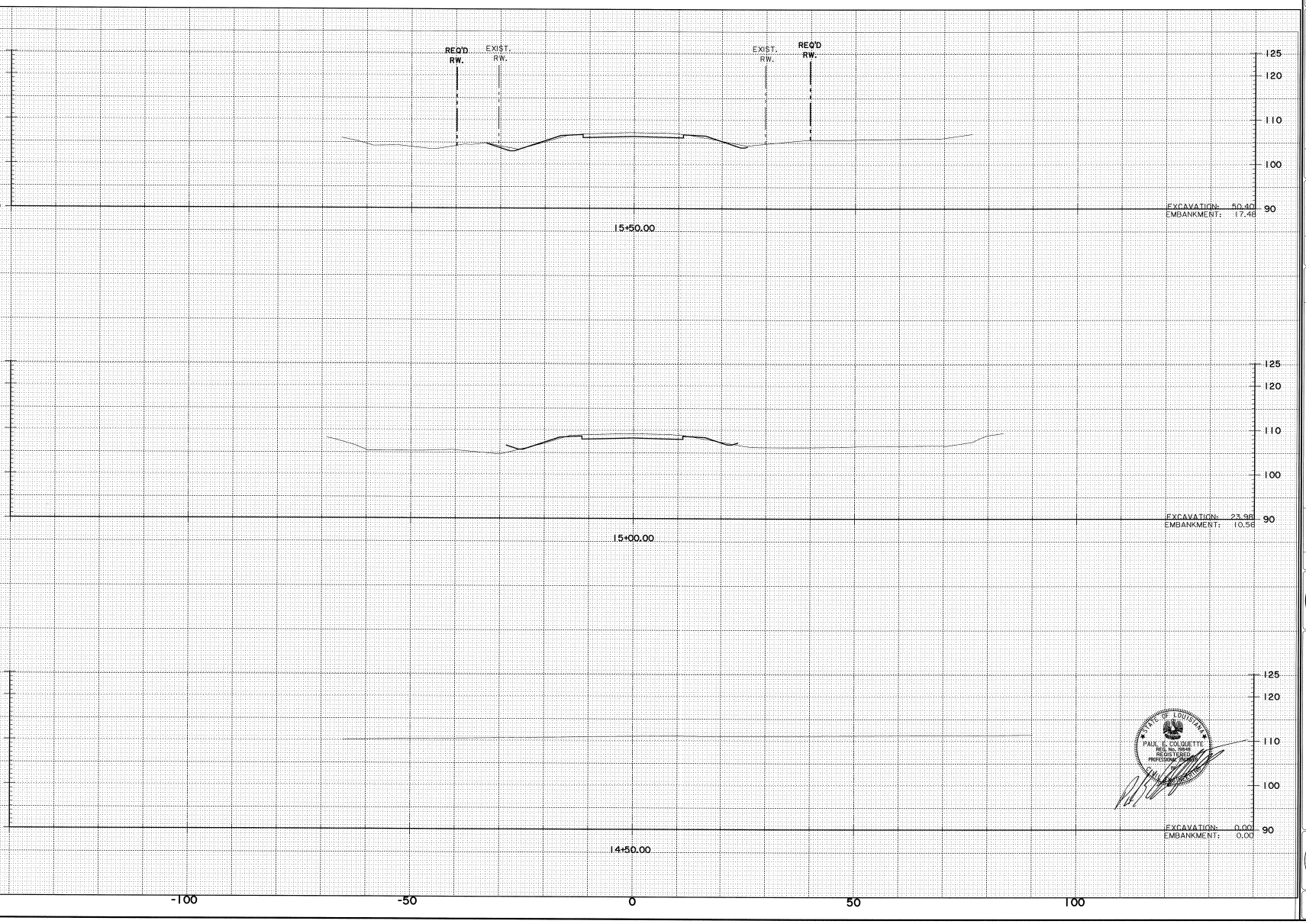
TRAFFIC CONTROL LAYOUT

FOR LANE CLOSURES ON TWO LANE UNDIVIDED HIGHWAYS DURING OVERLAYS AND MOVING OPERATIONS

SPECIAL DETAIL TC-15

TRAFFIC ENGINEERING

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19846
REGISTERED
PROFESSIONAL ENGINEER

SHEET NUMBER	401
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	54-03-0021

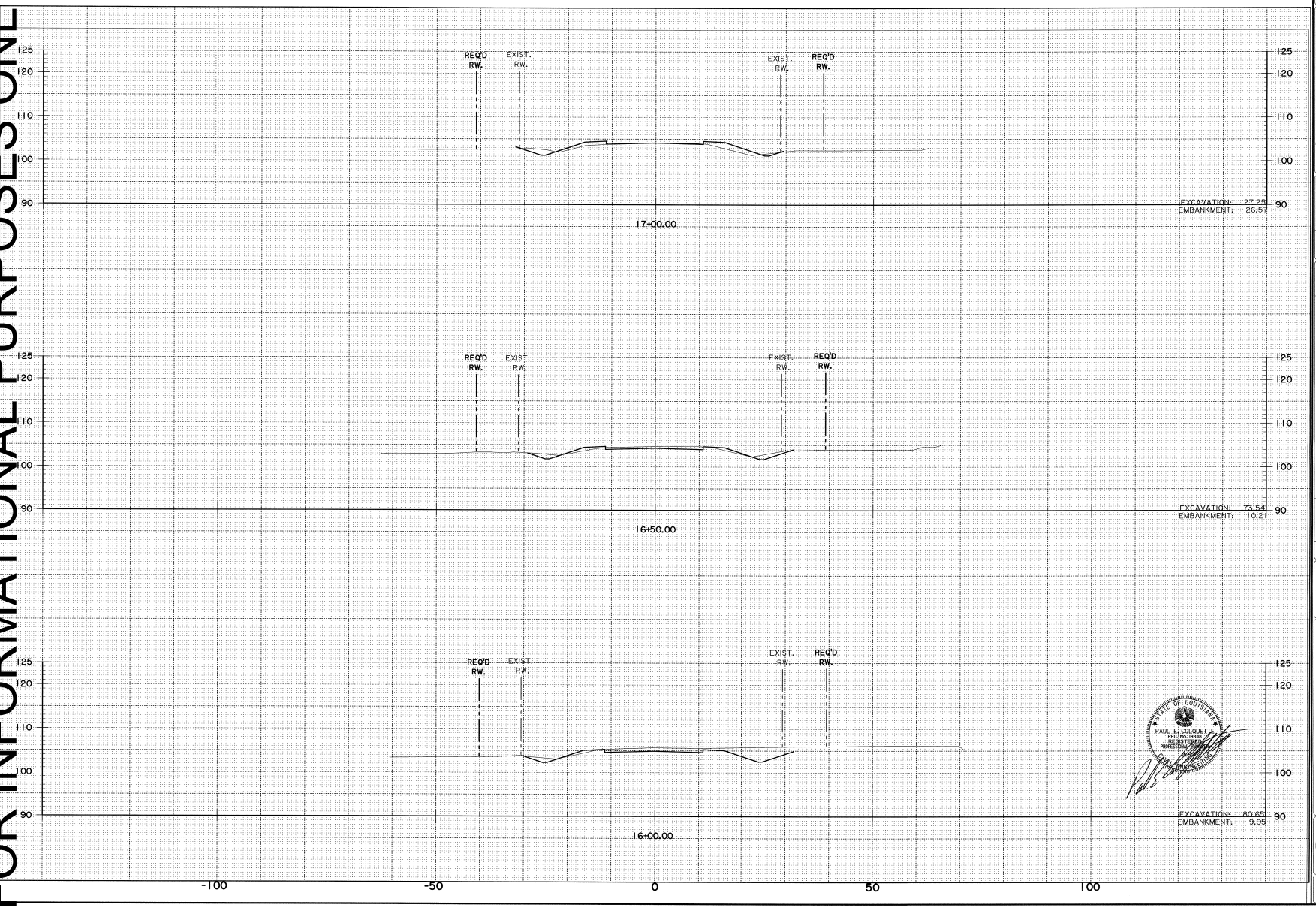
DESIGNED REC
CHECKED DEP
DETAILED DEC
CHECKED DEP
DATE
SHEET SHEET 1 OF 8

NO.	DATE	REVISION DESCRIPTION	BY

CROSS SECTIONS

DISTRICT 05 DESIGN

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

NO.	DATE	REVISION DESCRIPTION	BY

DESIGNED REC
CHECKED GEP
DETAILED DEC
CHECKED GEP
DATE
SHEET SHEET 2 OF 8

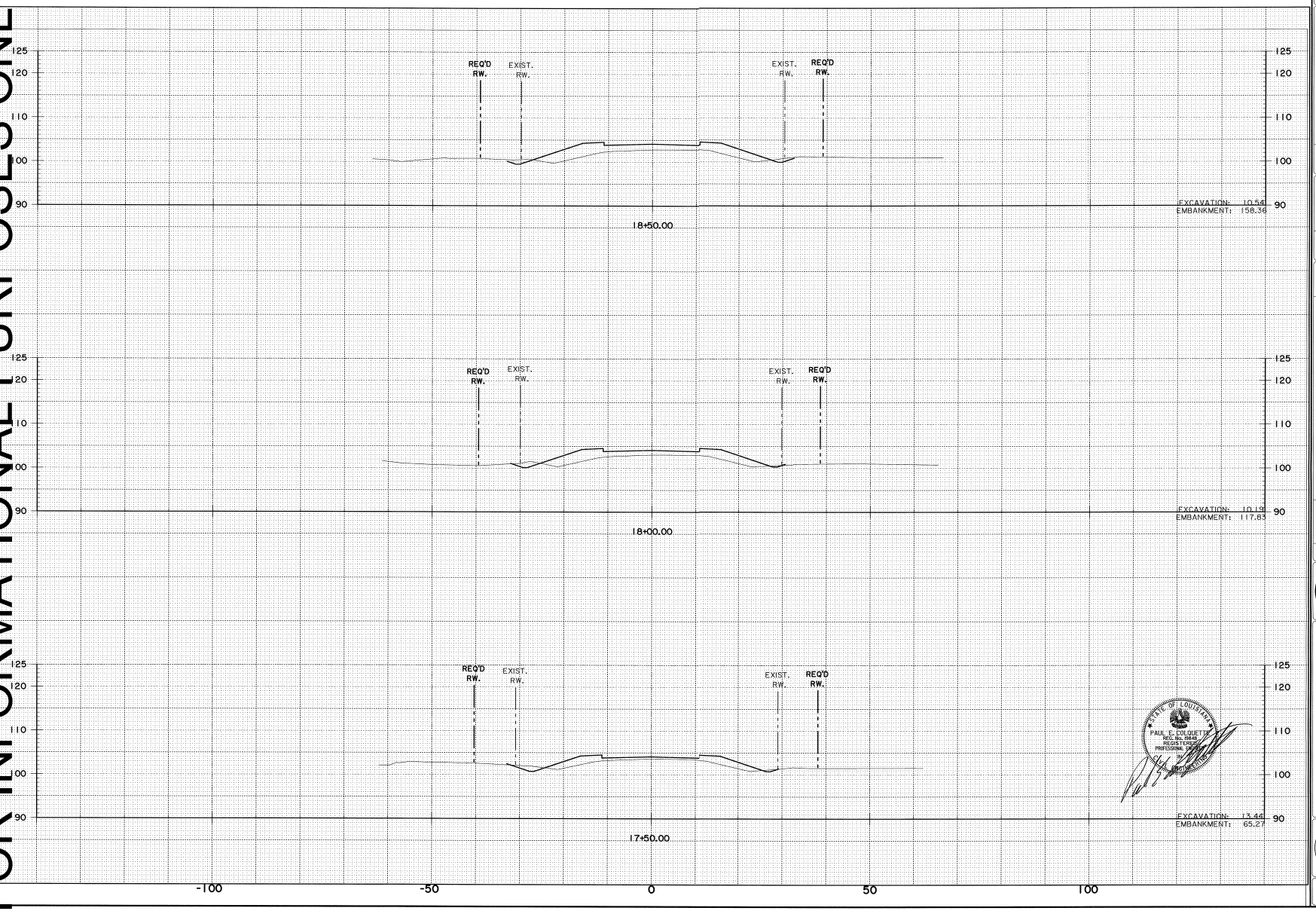
PARISH UNION
FEDERAL PROJECT
STATE PROJECT 154-03-0021

CROSS SECTIONS

DISTRICT 05 DESIGN

SHEET NUMBER 402

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

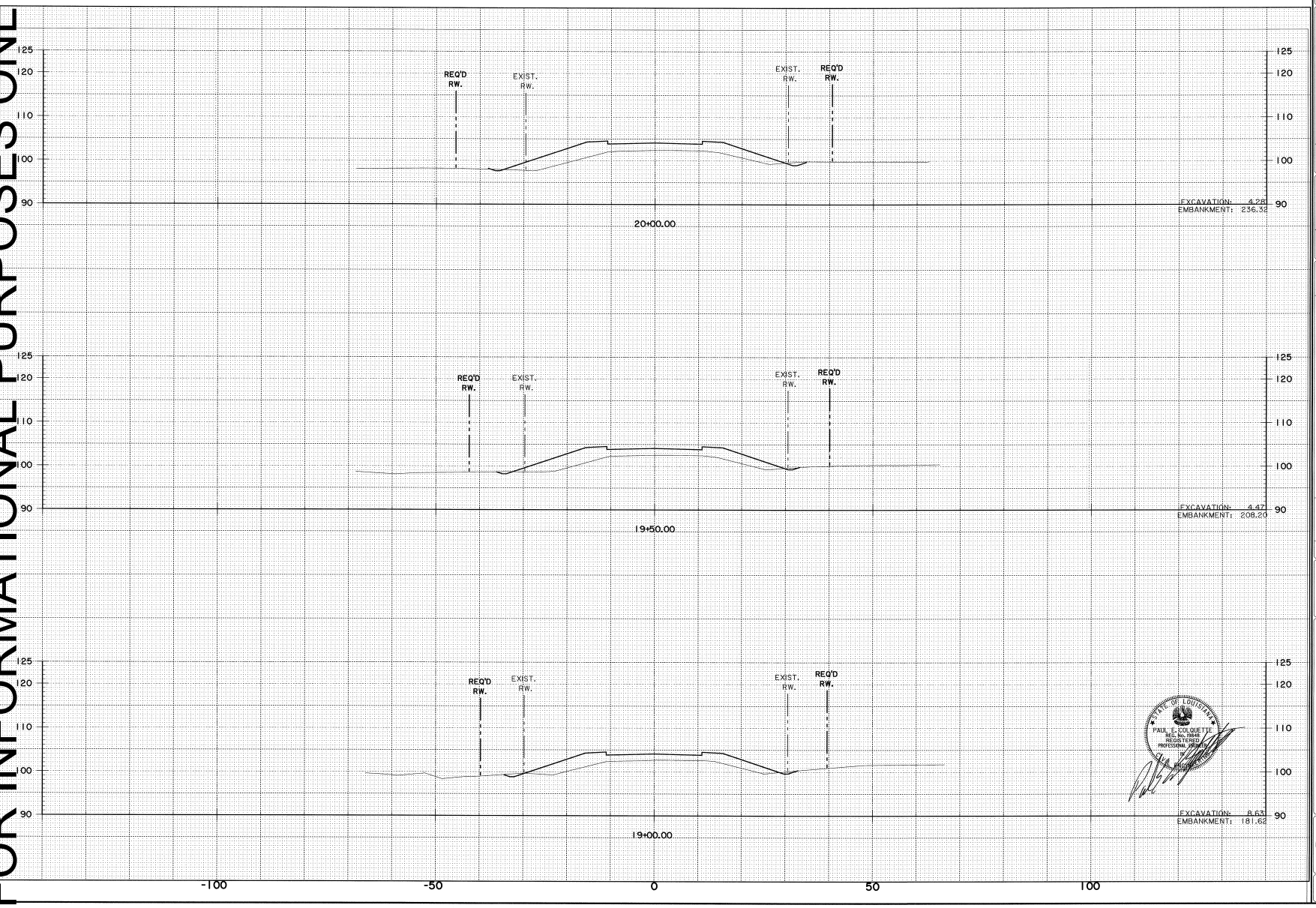
SHEET NUMBER	403
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	REC
CHECKED	GBP
DRAWN	GEC
CHECKED	GBP
DATE	
SHEET	SHEET 3 OF 8

NO.	DATE	REVISION DESCRIPTION	BY

CROSS SECTIONS

DISTRICT 05 DESIGN

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

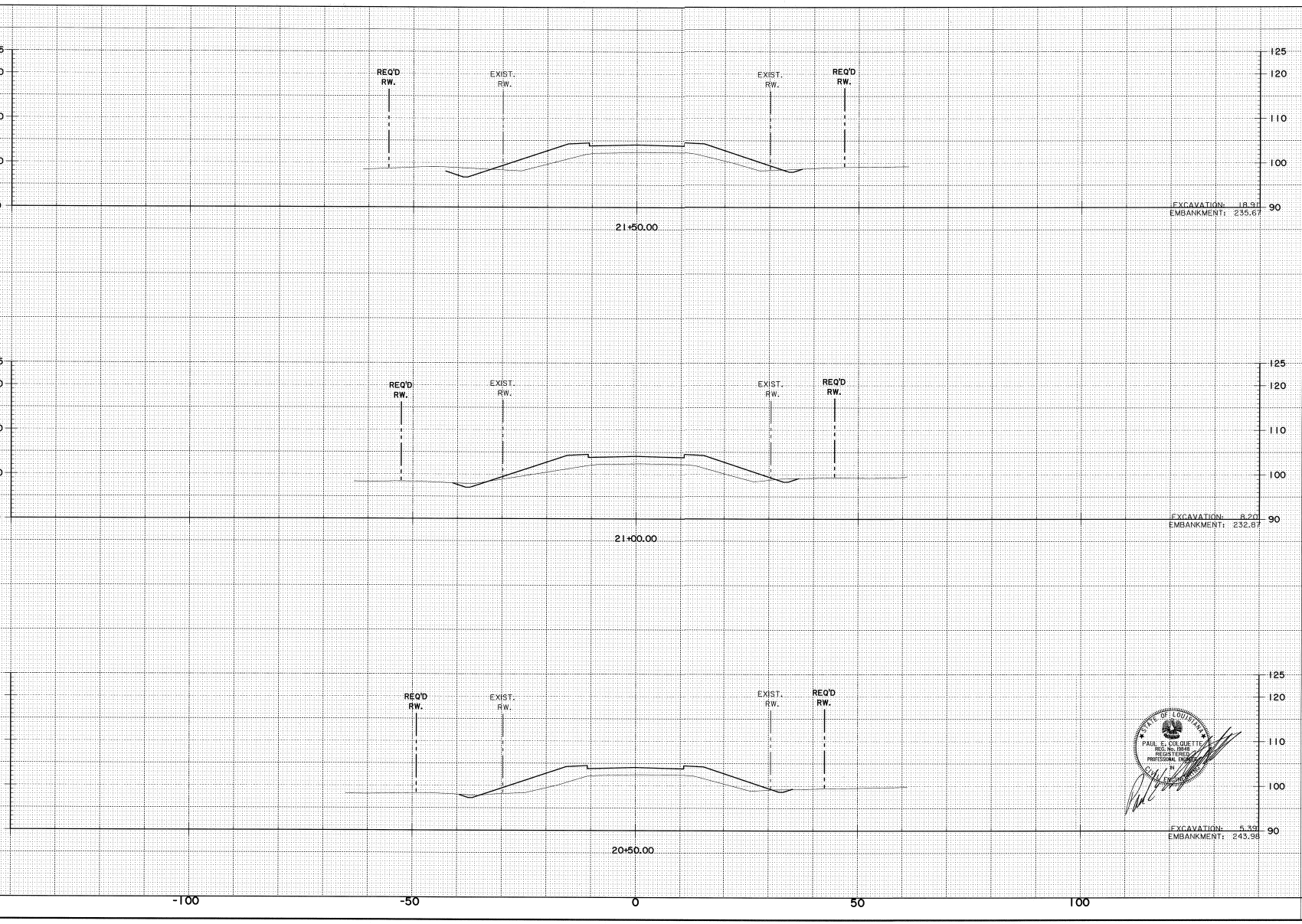
SHEET NUMBER	404
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	PEC
CHECKED	CEP
DETAILED	CEC
CHECKED	CEP
DATE	
SHEET	SHEET 4 OF 8

NO.	DATE	REVISION DESCRIPTION	BY

CROSS SECTIONS

DISTRICT 05
DESIGN

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE, JR.
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEER

NO.	DATE	REVISION DESCRIPTION	BY

DESIGNED: REC
CHECKED: DEP
DETAILED: DG
CHECKED: DEP
DATE:
SHEET: SHEET 5 OF 8

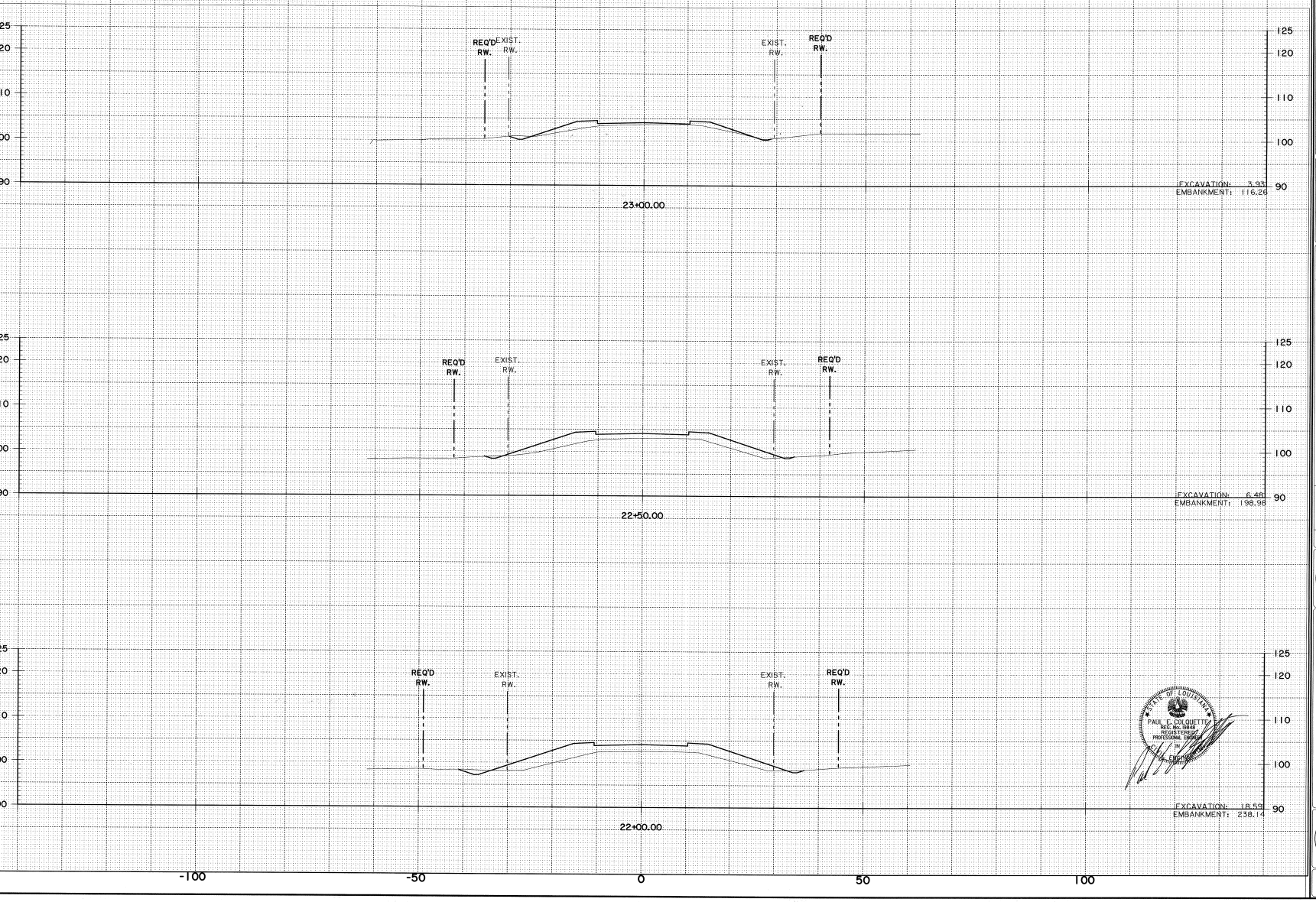
PARISH: UNION
FEDERAL PROJECT:
STATE PROJECT: 154-03-0021

SHEET NUMBER 405

CROSS SECTIONS

DISTRICT 05 DESIGN

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 28148
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

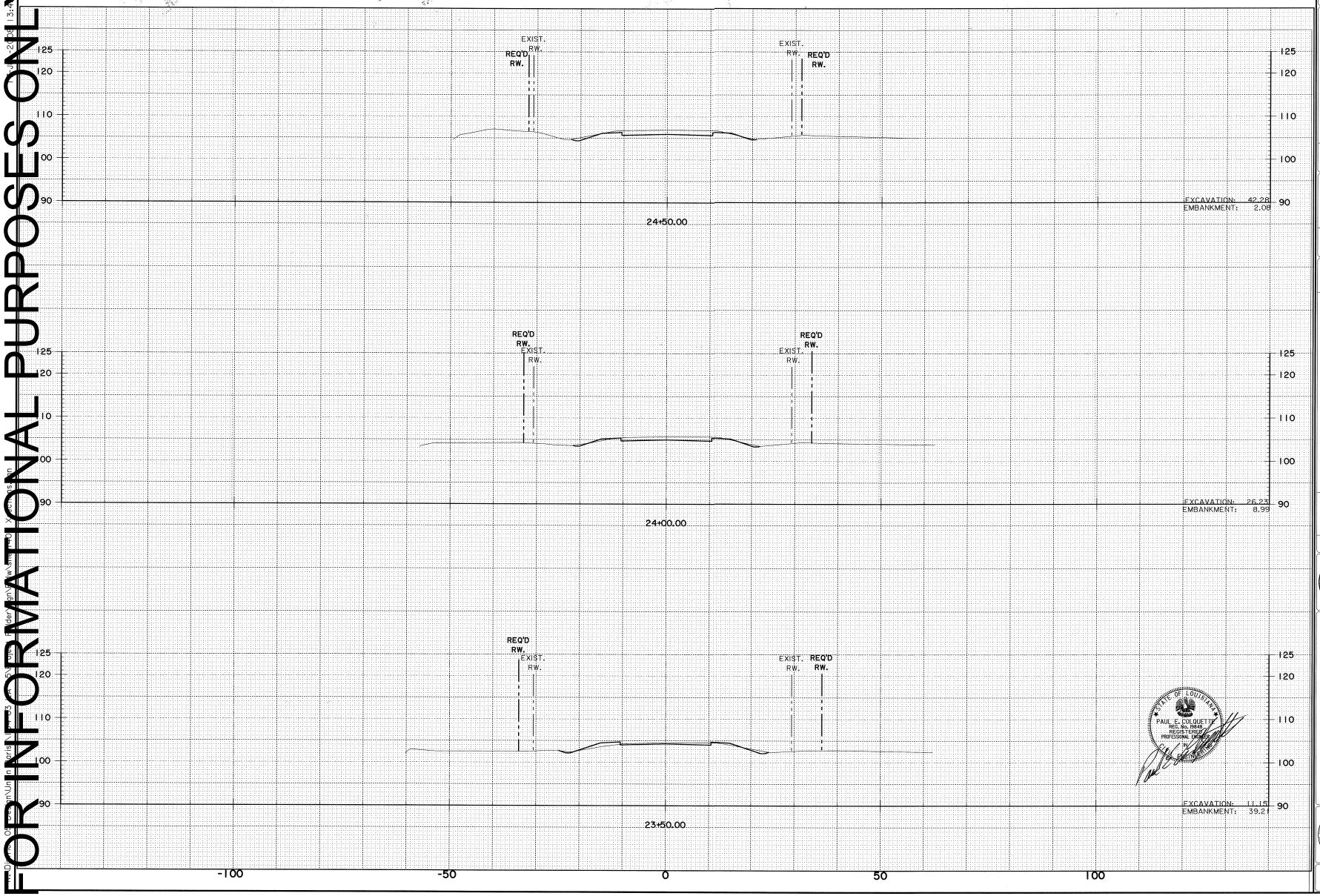
SHEET NUMBER	406
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021
DESIGNED	PEC
CHECKED	JBP
DETAILED	GEC
CHECKED	JBP
SHEET	SHEET 6 OF 8

NO.	DATE	REVISION DESCRIPTION	BY

CROSS SECTIONS

DISTRICT 05
DESIGN

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

SHEET NUMBER	407
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	154-03-0021

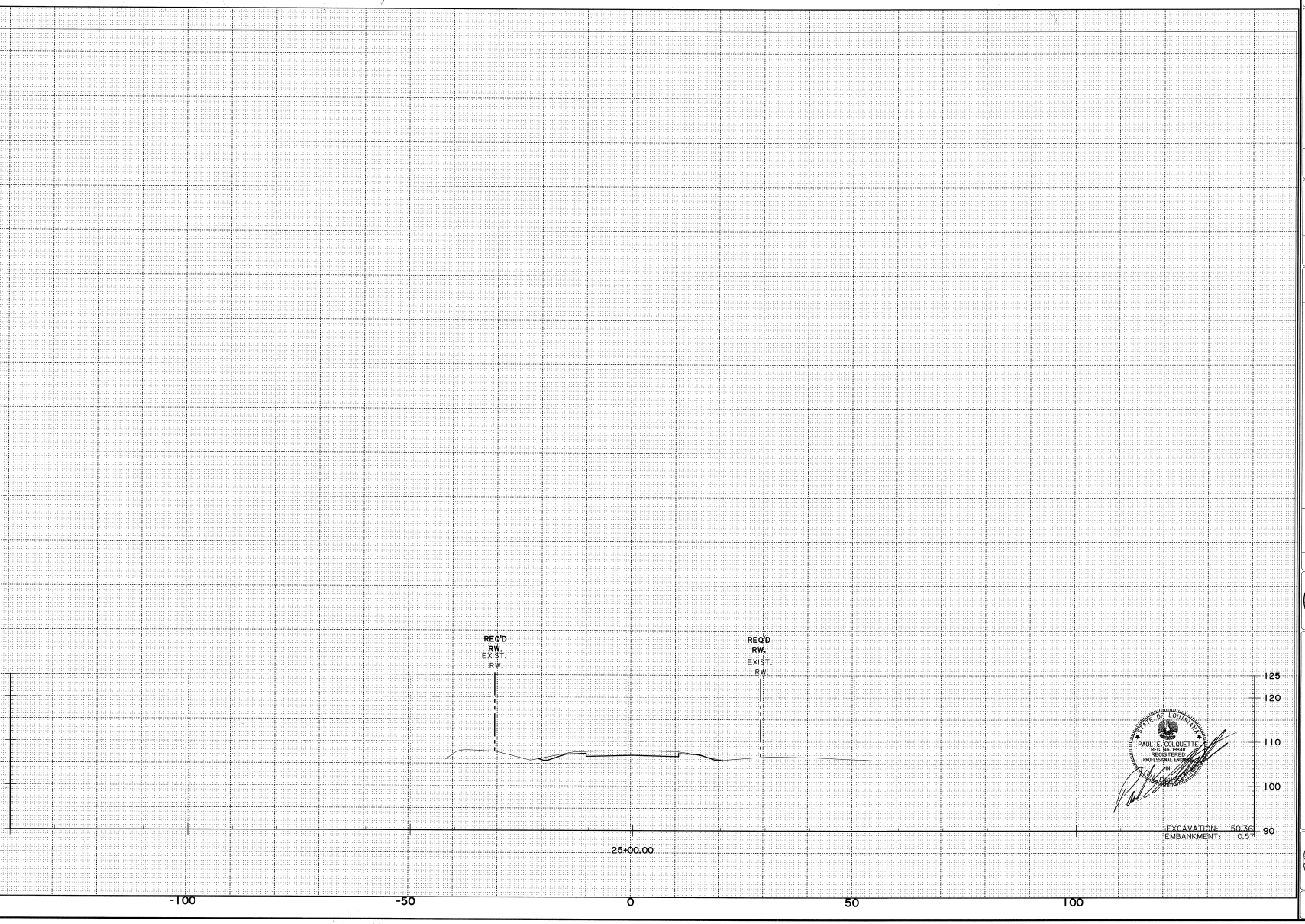
DESIGNED	REC
CHECKED	DEP
DETAILED	CEC
CHECKED	DEP
DATE	
SHEET	SHEET 7 OF 8

NO.	DATE	REVISION DESCRIPTION	BY

CROSS SECTIONS

DISTRICT 05 DESIGN

FOR INFORMATIONAL PURPOSES ONLY



STATE OF LOUISIANA
PAUL E. COLQUETTE
REG. No. 19848
REGISTERED
PROFESSIONAL ENGINEER

SHEET NUMBER	408
PARISH	UNION
FEDERAL PROJECT	
STATE PROJECT	54-03-0021

DESIGNED	DEC
CHECKED	GBP
DETAILED	DEC
CHECKED	GBP
DATE	
SHEET	SHEET 8 OF 8

NO.	DATE	REVISION DESCRIPTION	BY

CROSS SECTIONS

DISTRICT 05
DESIGN

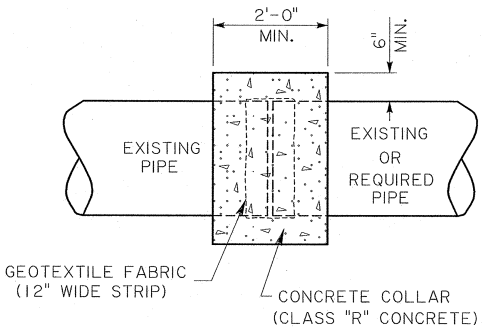
FOR INFORMATIONAL PURPOSES ONLY

15-OCT-2003 13:48

R:\Gang029\dgn\spdetail\misc\collar-01.dgn

CONCRETE COLLAR DETAIL

TO REPAIR EXISTING PIPE JOINT SEPARATION
AND/OR
TO CONNECT DISSIMILAR PIPE TYPES AND/OR JOINTS



NOTES:

1) WRAP PIPE JOINTS WITH GEOTEXTILE FABRIC BEFORE POURING CONCRETE. SEE SECTION 1019.01 OF THE CURRENT LA DOTD STD. SPECS.

2) COST OF COLLARS TO BE AS PER SECTION 701.13 OF THE CURRENT LADOTD STD. SPECS.

NO.	DATE	REVISION DESCRIPTION	BY
3	10-15-03	Combined details and revised Note 2: Cost Of Collars	JET
2	7-10-01	Revised Notes and Added New Sheet	WMR
1	8-26-98	Added Special Detail Name COLLAR-01	JCM

DESIGNED / CHECKED
DETAILED KAJ
CHECKED JCM
DATE 1-15-93
SHEET 1 OF 1

PARISH UNION
FEDERAL PROJECT
STATE PROJECT 154-03-0021

SHEET NUMBER 209

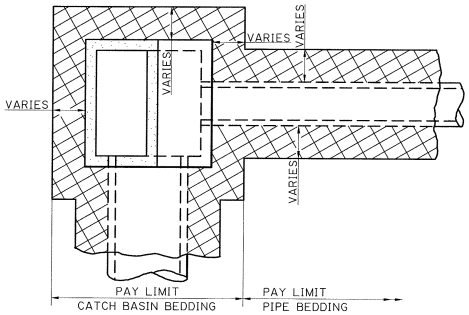
CONCRETE COLLAR DETAIL

SPECIAL DETAIL COLLAR-01

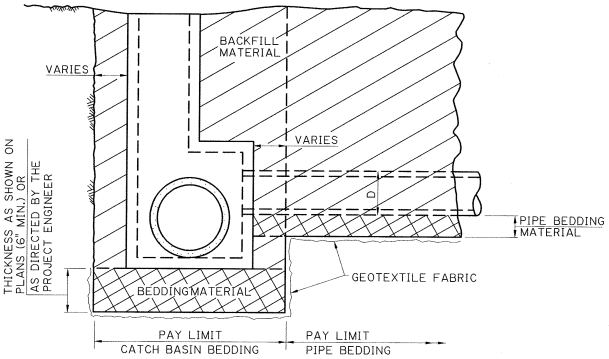
HYDRAULICS SECTION

FOR INFORMATIONAL PURPOSES ONLY

TYPICAL CATCH BASIN AND STORM SEWER PIPE INSTALLATION WITH BEDDING MATERIAL

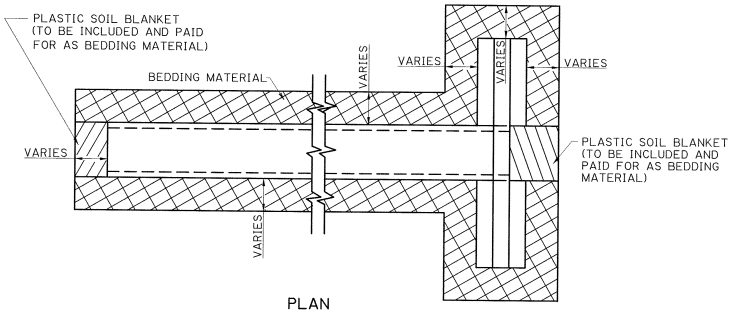


PLAN OF TYPICAL CATCH BASIN (MANHOLE OR JUNCTION BOX) AND PIPE

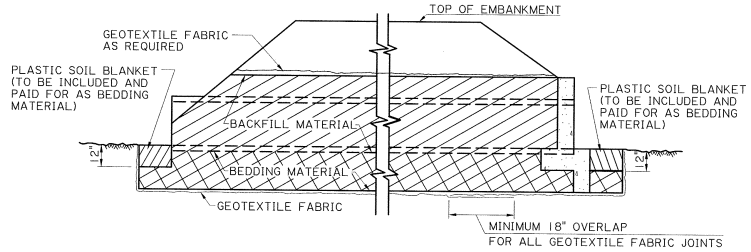


PROFILE OF TYPICAL CATCH BASIN (MANHOLE OR JUNCTION BOX) AND PIPE

TYPICAL CROSS DRAIN INSTALLATION WITH BEDDING MATERIAL

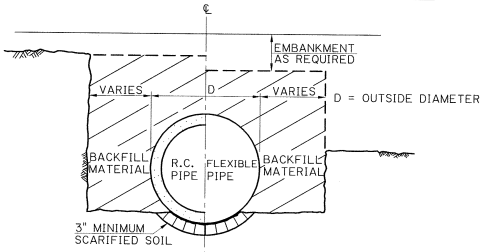


PLAN



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.

DATE	REVISION DESCRIPTION	BY
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

APPROVED BY CHIEF ENGINEER: ORIGINAL SIGNED BY CHIEF ENGINEER DATE: 8-22-07

DESIGNED: JDK
CHECKED: JDK
DETAILED: PAA
CHECKED: JCM
DATE: 6-8-71
SHEET: 1 OF 2

PARISH: UNION
FEDERAL PROJECT NO.
STATE PROJECT: 154-03-0021

SHEET NUMBER: 207

BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES

STANDARD PLAN: BM-01

HYDRAULICS SECTION

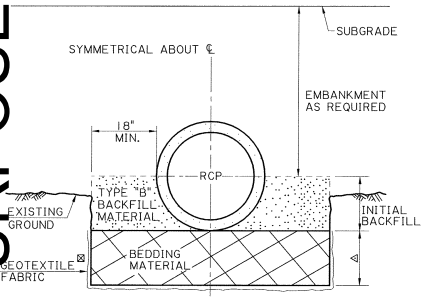
FOR INFORMATIONAL PURPOSES ONLY

TYPICAL PIPE INSTALLATION WITH BEDDING MATERIAL

EMBANKMENT INSTALLATION

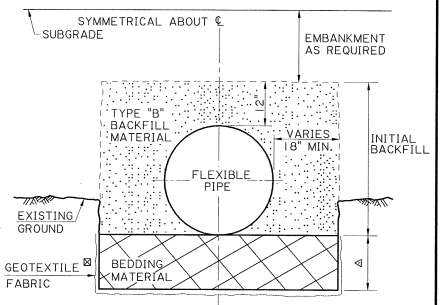
① FOR RIGID PAVEMENTS, FLEXIBLE PAVEMENTS OR OTHER AREAS

REINFORCED CONCRETE PIPE



TOP OF PIPE ABOVE EXISTING GROUND

FLEXIBLE PIPE



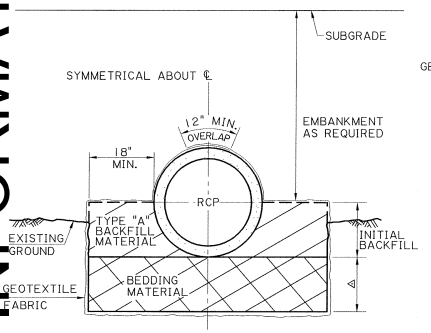
TOP OF PIPE ABOVE EXISTING GROUND

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.

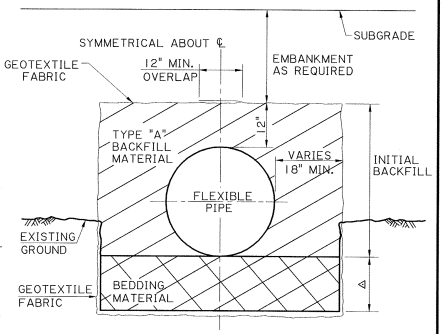
FOR FLEXIBLE PAVEMENTS ② ③

REINFORCED CONCRETE PIPE



TOP OF PIPE ABOVE EXISTING GROUND

FLEXIBLE PIPE



TOP OF PIPE ABOVE EXISTING GROUND

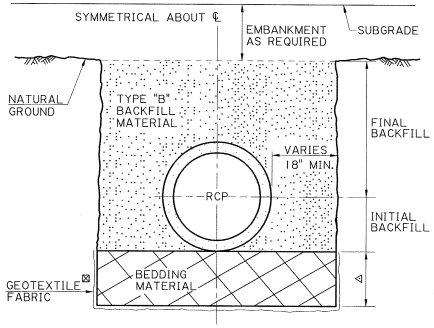
② APPLIES TO PIPE CROSSING THE CENTERLINE OF NEW OR EXISTING ROADWAYS
③ ALSO APPLIES UNDER RIGID PAVEMENTS FOR PIPES CROSSING THE CENTERLINE OF NEW OR EXISTING PAVEMENTS WHEN THE PROJECT IS BID USING A RIGID VS FLEXIBLE ALTERNATE (A + B + C) BID MODEL.

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

TRENCH INSTALLATION

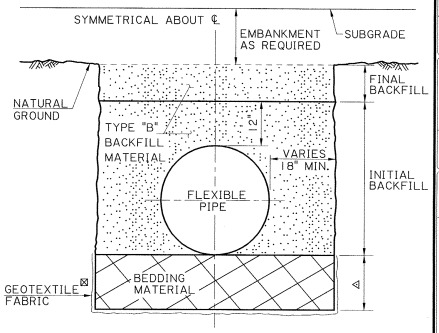
① FOR RIGID PAVEMENTS, FLEXIBLE PAVEMENTS OR OTHER AREAS

REINFORCED CONCRETE PIPE



TRENCH

FLEXIBLE PIPE



TRENCH

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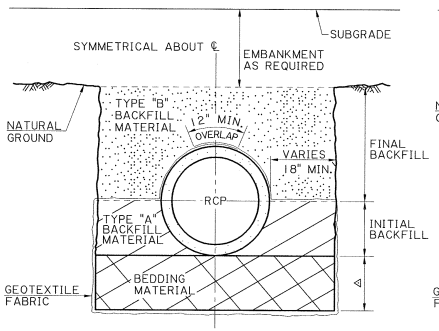
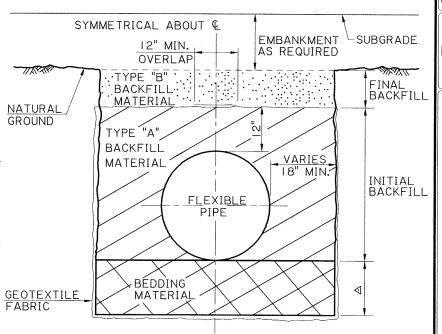
FOR FLEXIBLE PAVEMENTS ② ③

REINFORCED CONCRETE PIPE



TRENCH

FLEXIBLE PIPE



TRENCH

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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.

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

DATE	REVISION DESCRIPTION	BY
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

APPROVED BY CHIEF ENGINEER: ORIGINAL SIGNED BY CHIEF ENGINEER DATE: 8-22-07

DESIGNED / CHECKED / DETAILED PAA / CHECKED JCM / DATE 6-8-71 / SHEET 2 OF 2

PARISH: UNION
FEDERAL PROJECT / STATE PROJECT: 154-03-0021
SHEET NUMBER: 208

BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES

STANDARD PLAN: BM-01

HYDRAULICS SECTION