

**Invitation to Bid
City of Perry
Duncan Avenue Drainage Improvements
Bid No. 2019-16**

PART 1: GENERAL

1.1 Competitive Cost Sealed Bids

Sealed Bids for construction of the **Duncan Avenue Drainage Improvements** will be received until **2:00 pm, February 5, 2019** at 1211 Washington Street, Perry, GA 31069. Bids will then be publicly opened and read aloud at said office. Any bid received after **2:00 pm, February 5, 2019** will not be considered by the Owner. Following the closing time for the receipt of bids no bid may be withdrawn for a period of sixty (60) days.

1.2 Scope of Work

Contractor shall complete all Work as specified below and in accordance with the City of Perry Standards. The Work is generally described as the installation of a concrete headwall on the north side of Duncan Avenue around the existing concrete headwalls. More specifically, the work includes the following:

- Provide all traffic control required by the MUTCD.
- Provide all erosion control measures to reduce sediment from entering the adjacent properties and the stream.
- Install a 6" insertion valve on the existing water main. Install necessary main blocking and deadmen to avoid damage to existing water main.
- Remove the existing water main across the stream.
- Remove and dispose of any undesirable material at an appropriate site.
- Install a concrete headwall, wingwalls, and apron in accordance with GDOT Construction Standard Details with 3,000 psi concrete. Design basis is for a double 4' x 4' box culvert headwall and wings for a 60 degree skew.
- Install a PVC C900 6" water main approximately 3 feet off of edge of pavement over the existing concrete pipes and behind the parapet.
- Install rip rap at the face of the slope to prevent erosion from high flows in the stream.
- Install silt fence along the toe of the disturbed areas.
- Plant and establish Bermuda grass on all disturbed areas.

1.3 Contractor Requirements

The contractor is responsible for furnishing all labor, equipment, materials and products and performing all project coordination necessary to improve stormwater drainage along Duncan Avenue. The stormwater drainage improvement construction includes, but is not limited to relocation of a water main, installation of concrete structures, piping, finished grading, soil erosion and sediment control measures, and all other necessary appurtenances for a complete installation. Contractor will be required to coordinate all work with the City of Perry and other utility owner who have facilities within the project corridor.

The contractor will be required to coordinate with the City of Perry any road closures and disruptions to the water main service.

The Contractor shall notify the City of Perry 24 hours before water main is to be disrupted, concrete is poured, and water main is tested.

The time allotted for final completion of work is 60 consecutive calendar days. All Work shall be completed in accordance with the plans and specifications. The Work will be awarded in one Contract.

1.4 *Plans, Specifications and Contract Documents*

The Instructions to Bidders, Bid Forms, Details, and Specifications may be obtained from the City of Perry's website or at the City of Perry engineering office:

City of Perry
1211 Washington Street
Perry, GA 31069
(478) 988-2733

Any questions regarding this bid or to schedule a site visit contact to Chad McMurrian via 229-567-1624 or email at chad.mcmurrian@perry-ga.gov.

1.5 *Contractor License*

The Bidder shall affix to the outside of its Bid envelope, its Georgia Utility Contractor License Number, not the license number of a Utility manager or a subcontractor's Georgia Utility Contractor License Number. No bid will be opened unless the Contractor's Utility License Number is affixed to the envelope.

1.6 *Easements & Rights-of-Way*

Owner has or will acquire all necessary easements and rights-of-way for permanent installations preceding the issuance of the Notice to Proceed.

The owner will obtain permission to enter the adjacent properties prior to the beginning of work.

1.7 *Permits*

Owner has or will acquire all necessary Federal, State and local permits preceding the issuance of the Notice to Proceed.

1.8 *E-Verify Requirements*

All bidders shall provide their signed E-Verify affidavit with their bid. Bids will not be considered without the Contractor affidavit. The successful bidder is responsible for obtaining a signed E-verify affidavit from their Subcontractors and Sub-subcontractors

1.9 *Bid Due Date*

All bids must be received in the Department of Administration – Purchasing no later than 2:00 PM on or before February 5, 2019.

1.10 *Submission of Bid*

Bid documents must be clearly marked on outside **Duncan Avenue Drainage Improvements #2019-16**. No fax transmissions or emails will be accepted. Bid is to be submitted to:

Department of Administration – Purchasing
1211 Washington Street
P O Box 2030
Perry GA 31069

1.11 *Reservation of Rights*

The Owner reserves the right to reject any or all Bids, to waive informalities and to re-advertise.

**BID FORM
CITY OF PERRY
DUNCAN AVENUE DRAINAGE IMPROVEMENTS
BID NO 2019-16**

BID RECIPIENT

This Bid is submitted to:

CITY OF PERRY
Department of Administration - Purchasing
1211 Washington Street
P O Box 2030
Perry, Georgia 31069

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

BIDDER'S ACKNOWLEDGEMENTS

Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

BIDDER'S REPRESENTATIONS

In submitting this Bid, Bidder represents that:

- Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addenda No.

Addenda Date

- Bidder has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, and performance of the work.

**BID FORM
CITY OF PERRY
DUNCAN AVENUE DRAINAGE IMPROVEMENTS
BID NO 2019-16**

ATTACHMENTS TO THIS BID

The following documents are attached to and made a condition of this Bid:

- Contractor's Affidavit

BID SUBMITTAL

This Bid submitted by:

Company Name

Company Address

Authorized Agent Signature

Authorized Agent (printed):

Contact Number

Fax Number

Email Address

**BID FORM
CITY OF PERRY
DUNCAN AVENUE DRAINAGE IMPROVEMENTS
BID NO 2019-16**

Proposal Line Item Summary					
Item #	Description	Unit	Quantity	Cost	Total
1	Traffic Control	LS	1.00		
2	Erosion Control	LS	1.00		
3	Grading Complete	LS	1.00		
4	Concrete Headwall, Wingwalls, and Apron including Reinf Steel	CY	22.00		
5	6" Insertion Valve	EA	1.00		
6	6" C900 Water Main	LF	150.00		
7	Rip Rap	TN	18.00		
8	Temporary Silt Fence Type A	LF	200.00		
				Total	

Contractor Name

Phone #

Contractor Signature

Date

**CITY OF PERRY
DUNCAN AVENUE DRAINAGE IMPROVEMENTS
BID NO 2019-16**

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of City of Perry has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20____ in _____ (city), _____ (state)

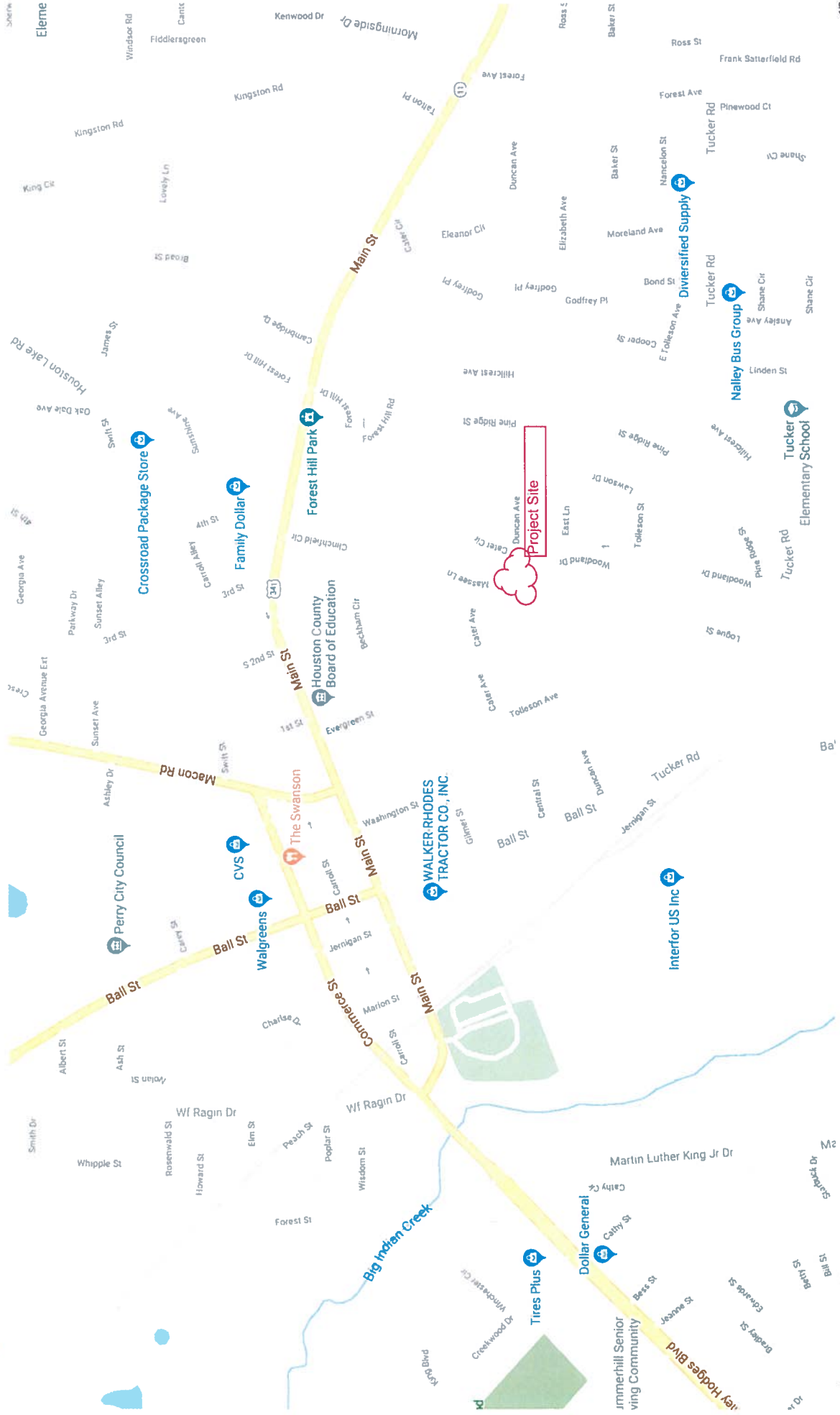
Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE _____ DAY _____ OF,
20____

NOTARY PUBLIC

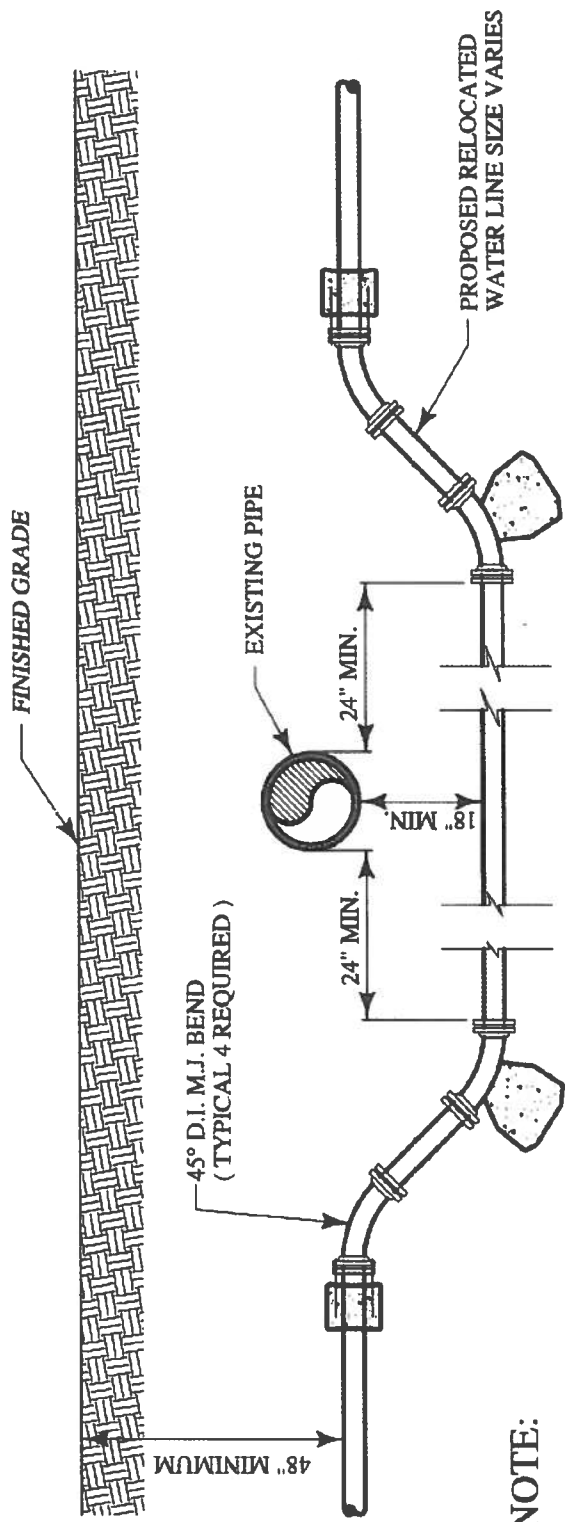
My Commission Expires: _____



Duncan Avenue
Drainage Improvements

Legend
PIEDMONT NATIONAL WILDLIFE REFUGE





NOTE:

- 1 ALL FITTINGS SHALL BE PROPERLY BLOCKED OR TIE-RODDED AS REQUIRED TO INSURE SUFFICIENT ANCHORAGE OF THE PIPING.
- 2 PROVIDE SUFFICIENT BACKFILL AND COMPACTION OVER WATER LINE TO ASSURE PROTECTION OF THE PIPE.

WATER LINE CONFLICT DETAIL

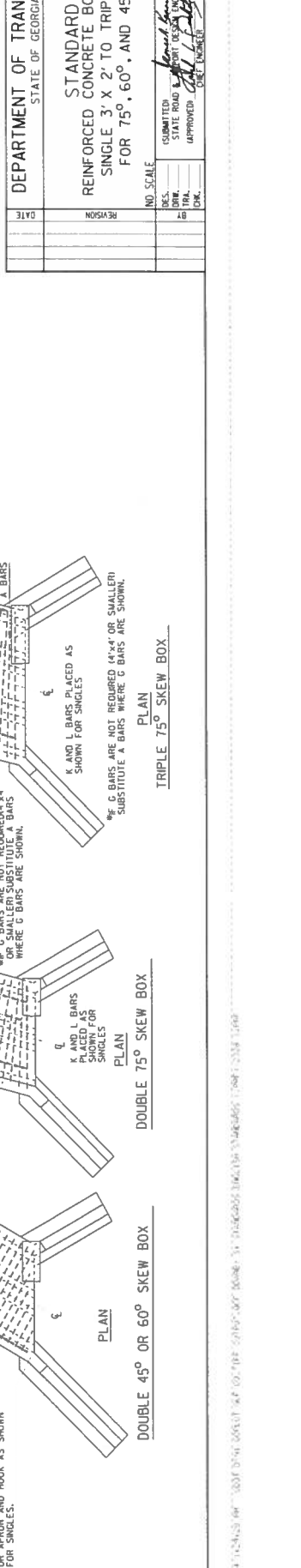
N.T.S.

DIMENSIONS - WINGS AND PARAPETS
SAME FOR ALL DEPTHS OF FILL

CLEAR SPAN HEIGHT	WING A		WING B		WING C		WING D		WING E		WING F		WING G		PARAPET	L - 1/2 DIA.	K - 1/2 DIA.	CLEAR SPAN HEIGHT
	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW				
4'	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	4'
5'	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	5'
6'	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	6'

DIMENSIONS - WINGWALLS AND PARAPETS
SAME FOR ALL DEPTHS OF FILL

CLEAR SPAN HEIGHT	SINGLES		DOUBLES		TRIPLES		FOR ALL SKEWS	
	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW	175° SKEW	60° SKEW
4'	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"
5'	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"
6'	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"	1-3"



DESIGN DATA
LOADING-TYPICAL HS 20-44 AND/OR MILITARY LOADING

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
REINFORCED CONCRETE BOX CULVERTS
SINGLE 3' X 2' TO TRIPLE 6' X 6'
FOR 75°, 60°, AND 45° SKEWS

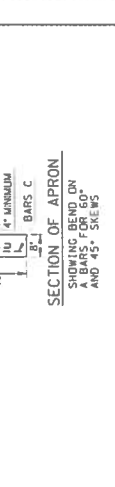
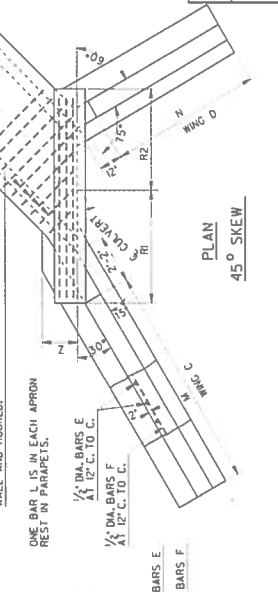
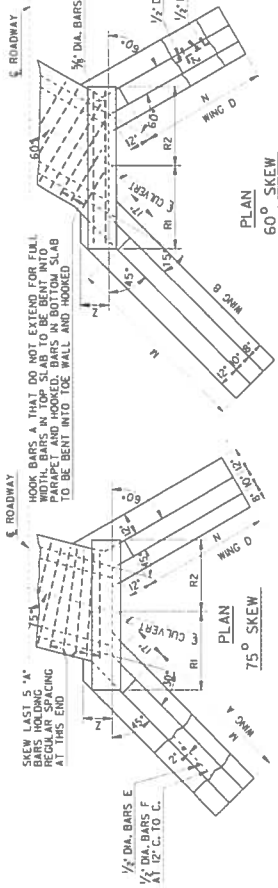
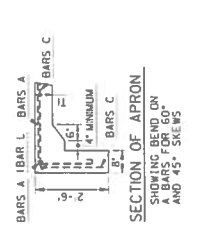
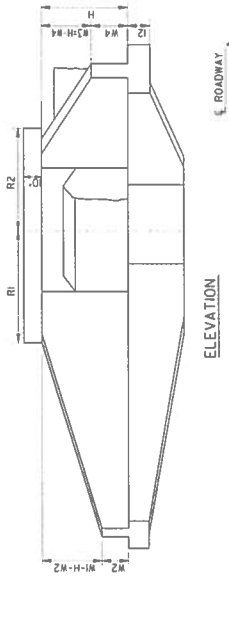
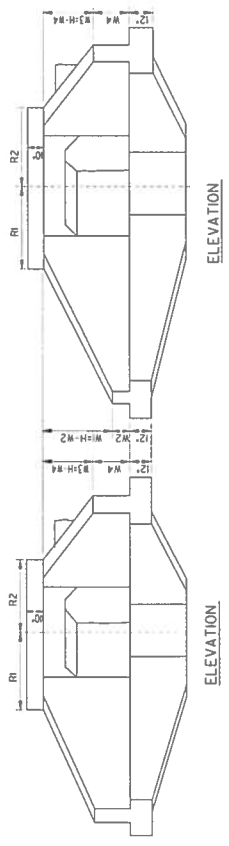
REV. 8 REGR. NOV. 2000

NO. SCALE
DATE
REVISION
APPROVED
DESIGNED BY
CHECKED BY
DRAWN BY

NUMBER
2328
SHEET 1 OF 3

STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GA.			

CLEAR SPAN	DIMENSIONS - WINGS AND PARAPETS												CLEAR HEIGHT										
	WING C						WING D																
	E BARS 1/2" DIA. AT 12" C. TO C.						F BARS 1/2" DIA. AT 12" C. TO C.																
4'	4	4	4	4	4	4	4	4	4	4	4	4	8	2	2	2	2	2	5'				
4'	8'-3"	8'-0"	7'-6"	7'-3"	6'-7"	6'-1"	4'-9"	4'-9"	4'-9"	4'-9"	4'-9"	4'-9"	5'-8"	5'-2"	4'-3"	4'-3"	4'-3"	9'-1"	9'-8"	6'-2"	3'-8"	2'-3"	4'
2'	5'-3"	5'-0"	4'-6"	4'-0"	3'-5"	3'-0"	4	4	4	4	4	4	4	4	4	4	4	6	6	6	6	6	2'
3'	5'-9"	5'-6"	5'-0"	4'-7"	4'-1"	3'-7"	3'-5"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	2'-6"
3'	6'-3"	6'-0"	5'-6"	5'-1"	4'-7"	4'-2"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	3'
2'-6"	5'-9"	5'-6"	5'-0"	4'-7"	4'-1"	3'-7"	3'-5"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	2'-6"
4'	6'-3"	6'-0"	5'-6"	5'-1"	4'-7"	4'-2"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	3'
4'	7'-3"	7'-0"	6'-6"	6'-1"	5'-7"	5'-2"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	4'
2'-6"	5'-9"	5'-6"	5'-0"	4'-7"	4'-1"	3'-7"	3'-5"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	2'-6"
3'	6'-3"	6'-0"	5'-6"	5'-1"	4'-7"	4'-2"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	3'
4'	7'-3"	7'-0"	6'-6"	6'-1"	5'-7"	5'-2"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	4'
5'	8'-3"	8'-0"	7'-6"	7'-3"	6'-7"	6'-1"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	5'
6'	9'-4"	9'-1"	8'-7"	8'-2"	7'-7"	7'-1"	3'-6"	2	2	2	2	2	4	4	4	4	4	6	6	6	6	6	6'



GENERAL NOTES

1. SPECIFICATIONS: GEORGIA STANDARD.
2. THIS PLAN IS NOT COMPLETE IN ITSELF-FOR GENERAL NOTES, DETAILS AND DIMENSIONS NOT SHOWN SEE GEORGIA STANDARD NO. 2321 FOR SINGLE CULVERTS AND GEORGIA STANDARD NO. 2325 FOR DOUBLE AND TRIPLE CULVERTS.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
REINFORCED CONCRETE BOX CULVERTS
SINGLE 3' X 2' TO TRIPLE 6' X 6'
FOR 75°, 60°, AND 45° SKEWS

NO SCALE
REV. & REOR. NOV. 2000

DESIGNED BY: [Signature]
STATE ROAD DISTRICT: [Blank]
APPROVED: [Signature]
CHECK ENGINEER

NUMBER: 2328
SHEET 2 OF 3

STATE PROJECT NUMBER SHEET TOTAL NO. OF SHEETS

GA.

STANDARD NO. 2328

Table for Standard No. 2328 showing design details for Double and Triple spans with various clear heights and reinforcement specifications.

DESIGN 1

DESIGN 2

STANDARD NO. 2329

Table for Standard No. 2329 showing design details for Double and Triple spans with various clear heights and reinforcement specifications.

DESIGN 1

DESIGN 2

STANDARD NO. 2330

Table for Standard No. 2330 showing design details for Double and Triple spans with various clear heights and reinforcement specifications.

DESIGN 1

DESIGN 2

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA STANDARD REINFORCED CONCRETE BOX CULVERTS WITH WINGWALLS & PARAPETS QUANTITIES SINGLE 3'X2', TO TRIPLE 10'X12' FOR 75', 60' AND 45' SKEWS

TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED AT ANY OTHER LOCATION THAN AT THE FACE OF THE JOINTS WITH NO LONGITUDINAL REINFORCING STEEL PASSING THROUGH THE JOINTS.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED IN THE INSIDE SHOULDER BREAK POINTS LONGITUDINAL BARREL REINFORCING STEEL SHALL NOT BE CONTINUOUS THROUGH WHEN TRANSVERSE CONSTRUCTION JOINTS OCCUR WITHIN IS FEET FROM THE BARREL ENDS THE JOINTS ARE MORE THAN 15 PAVEMENT THE LONGITUDINAL BARREL REINFORCING SHALL BE CONTINUOUS THROUGH SUCH JOINTS. THE MINIMUM LENGTH OF LAP SPICE FOR LONGITUDINAL REINFORCING SHALL BE 24 INCHES.

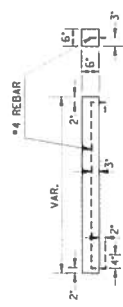
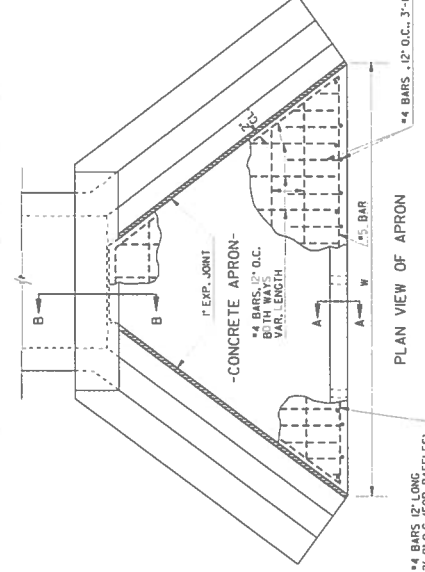
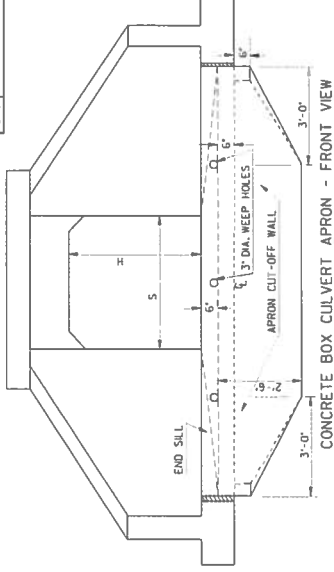
TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED AT ANY OTHER LOCATION THAN AT THE FACE OF THE JOINTS WITH NO LONGITUDINAL REINFORCING STEEL PASSING THROUGH THE JOINTS.

REINFORCED CONCRETE BOX CULVERTS WITH WINGWALLS & PARAPETS QUANTITIES SINGLE 3'X2', TO TRIPLE 10'X12' FOR 75', 60' AND 45' SKEWS

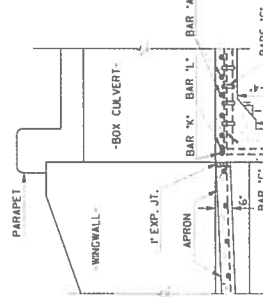
ADDITONAL REQUIREMENT NOTE table with columns for R.A.M., DATE, and REVISION.

MAXIMUM FILL HEIGHT FROM TOP OF CULVERT TO BOTTOM OF BASE WITHIN TRAVELWAY SHALL BE 1/2 INCHES. BOX CULVERT REQUIREMENTS: MAXIMUM POUR LENGTH SHALL NOT EXCEED 30 FEET ALONG THE LENGTH OF THE CULVERT.

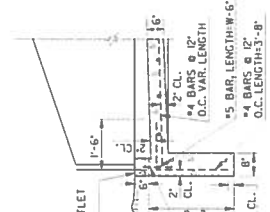
STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GA.			



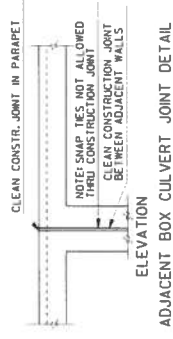
NOTE: BAFFLES SHALL BE CONSTRUCTED FROM CLASS "A" CONCRETE AND MAY BE PRECAST OR POURED IN PLACE. BAFFLES WILL BE USED ON APRONS AT OUTLETS OF PIPES AND BOX CULVERTS. DIMENSIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



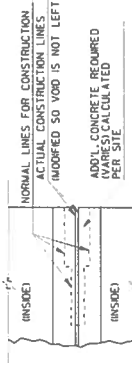
SECTION B-B (TYPICAL)
 (SEE GENERAL NOTE NO. 4)
 NOTE: SEE BOX CULVERT STANDARDS FOR DETAILS NOT SHOWN. SHOWN BEING INTO CULVERT TO WALL APPLIES TO SKEWS.



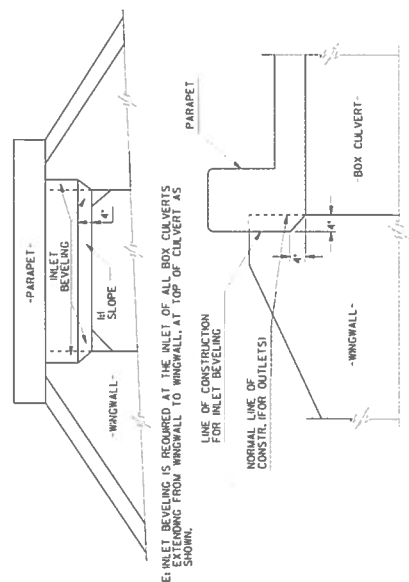
SECTION A-A
 #4 BARS 12" LONG, 2'-0" O.C. (REQD. ONLY WITH BAFFLE)
 #5 BARS 6" LONG, 2'-0" O.C. (REQD. ONLY WITH BAFFLE)
 #4 BARS 12" O.C. LENGTH 3'-8"



NOTE: FOR DETAILS BELOW, NORMAL THICKNESSES OF ADJACENT BOX CULVERTS ARE ABUTTING, AND THE WALL THICKNESSES NORMALLY VARY DUE TO INCREASING FILL HEIGHTS. THE MAXIMUM WALL THICKNESS FOR THE FULL LENGTH OF THE CULVERT WITH A CLEAN CONSTRUCTION JOINT BETWEEN THE TWO WALLS, AS SHOWN, REINFORCING STEEL IS INSIDE OF CULVERT WALL. QUANTITY OF CONCRETE IS INCREASED DUE TO THIS CONSTRUCTION AND IS TO BE CALCULATED FOR INDIVIDUAL SITE. STEEL QUANTITIES ARE UNCHANGED.



ABUTTING JOINT - TYPICAL PLAN VIEW
 (APPLICABLE WHERE NORMAL REQD. THICKNESSES OF ABUTTING WALLS WOULD VARY)



NOTE: INLET BEVELING IS REQUIRED AT THE INLET OF ALL BOX CULVERTS EXTENDING FROM WINGWALL TO WINGWALL, AT TOP OF CULVERT AS SHOWN.

DEPARTMENT OF TRANSPORTATION		STATE OF GEORGIA	
STANDARD CONCRETE BOX CULVERT APRONS, BAFFLES, AND INLET BEVELING DETAIL & ADJACENT BOX CULVERTS JOINT DETAIL			
NO. SCALE	JULY, 1981	NUMBER	2332
REV. SUBMITTED	STATE ROAD & AIRPORT DESIGN ENGINEER	DATE	JULY, 1981
BY	APPROVED	DATE	
REASON		DATE	
NO. QUANTITIES		DATE	
ADJUSTING IT. 1/2" PL. MAX. V.		DATE	
PROGRAM		DATE	
C.L.P.		DATE	

APRON QUANTITIES FOR CONCRETE BOX CULVERTS

S	H	SINGLE - 90°		SINGLE - 75°		SINGLE - 60°		SINGLE - 45°		DOUBLE - 90°		DOUBLE - 75°		DOUBLE - 60°		DOUBLE - 45°		TRIPLE 90°		TRIPLE 75°		TRIPLE 60°		TRIPLE 45°			
		CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)	CUVDS. W. (FT.)	LEBS. (LBS.)
4	4'	13,483	1,700	13,483	1,700	13,483	1,700	13,483	1,700	26,966	3,400	26,966	3,400	26,966	3,400	26,966	3,400	26,966	3,400	26,966	3,400	26,966	3,400	26,966	3,400	26,966	3,400
5	5'	15,983	2,025	15,983	2,025	15,983	2,025	15,983	2,025	31,966	4,050	31,966	4,050	31,966	4,050	31,966	4,050	31,966	4,050	31,966	4,050	31,966	4,050	31,966	4,050	31,966	4,050
6	6'	17,783	2,290	17,783	2,290	17,783	2,290	17,783	2,290	35,566	4,575	35,566	4,575	35,566	4,575	35,566	4,575	35,566	4,575	35,566	4,575	35,566	4,575	35,566	4,575	35,566	4,575
7	7'	19,333	2,515	19,333	2,515	19,333	2,515	19,333	2,515	38,666	5,030	38,666	5,030	38,666	5,030	38,666	5,030	38,666	5,030	38,666	5,030	38,666	5,030	38,666	5,030	38,666	5,030
8	8'	20,733	2,700	20,733	2,700	20,733	2,700	20,733	2,700	41,466	5,400	41,466	5,400	41,466	5,400	41,466	5,400	41,466	5,400	41,466	5,400	41,466	5,400	41,466	5,400	41,466	5,400
9	9'	22,033	2,855	22,033	2,855	22,033	2,855	22,033	2,855	43,866	5,715	43,866	5,715	43,866	5,715	43,866	5,715	43,866	5,715	43,866	5,715	43,866	5,715	43,866	5,715	43,866	5,715
10	10'	23,233	2,980	23,233	2,980	23,233	2,980	23,233	2,980	45,866	6,000	45,866	6,000	45,866	6,000	45,866	6,000	45,866	6,000	45,866	6,000	45,866	6,000	45,866	6,000	45,866	6,000

NOTE: THE QUANTITIES SHOWN ABOVE ARE FOR OUTLET END APRONS WITH BAFFLES IF APRONS ARE NEEDED AT INLETS (NOT USUAL). REDUCE THE ABOVE QUANTITIES FOR NO. BAFFLES AS FOLLOWS:
CONCRETE: REDUCE QUANTITY BY W x 0.334 LBS./CUYD FT.
STEEL: REDUCE QUANTITY BY W x 0.334 LBS./CUYD FT.

S = CLEAR SPAN OF BOX CULVERT ON FT.
H = CLEAR HEIGHT (INSET OF BOX CULVERT ON FT.)

- GENERAL NOTES:
1. SPECIFICATIONS: GEORGIA STANDARD CURBMENT EDITION, AND SUPPLEMENTS THERE TO.
- CONCRETE APRONS AND BAFFLES ARE REQUIRED AT ALL OUTLETS OF ALL BOX CULVERTS. APRON IS TO BE CONSTRUCTED TO BE 2" ABOVE THE TOP OF THE CURBMENT. THE APRON SHALL BE CONSTRUCTED TO PREVENT EROSION AND MAKE THE APRON SUFFICIENT TO CONSTRUCT. IF PLANS SPECIFY, APRONS AND BAFFLES ARE USED AT INLETS ONLY.
- DETAILS, REVISIONS, APPROPRIATE TO BE IN STANDARD AND SPECIAL DESIGN BOX CULVERTS, UNLESS OTHERWISE NOTED.
- WHERE CONCRETE APRONS ARE REQUIRED, THE TOEWALL OF THE BOX CULVERT MAY BE REDUCED AS SHOWN IN SECTION B-B OR MAY BE AS SHOWN ON APPLICABLE SECTION B-B. TOEWALLS ARE NOT TO BE CONSTRUCTED AS SHOWN IN SECTION B-B, BUT SEE BOX CULVERT STANDARD TOEWALL.
- ALL CONCRETE SHALL BE CLASS A CONCRETE.

NOTE: SEE SEPARATE STANDARD DETAILS AND/OR SPECIAL DESIGNS AS APPLICABLE FOR CONCRETE APRONS, BAFFLES, AND INLET BEVELING DETAILS, PARAPETS, ETC.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE BOX CULVERT APRONS,
BAFFLES, AND INLET BEVELING DETAIL &
ADJACENT BOX CULVERTS JOINT DETAIL

NO SCALE

REV. DATE (SUBMITTED) NUMBER
BY (APPROVED) STATE ROAD & IMPROVEMENT ENGR. 2332
DATE (APPROVED) STATE HIGHWAY ENGINEER SHEET 2 OF 2

DATE 6-30-99
REVISION
BY
DATE
BY
DATE
BY
DATE