East Parkway Drive

aka

"Hederman Brothers Connector Road"

CIVIL CONSTRUCTION DRAWINGS
FOR
AMFIRST HOLDINGS, INC.

Ridgeland, Mississippi

500 STEED ROAD
RIDGELAND, MS 39157

SYMBOL LEGEND

	POWER POLE
	LIGHT POLE
	FIBER OPTIC MARKER
	TELEPHONE PEDESTAL
	GAS MARKER
	GAS HOOK UP
	GAS METER
	DRAINAGE MANHOLE
	CURB INLET (SS-2)
	GRATE INLET (SS-3)
	CLEAN OUT
	SANITARY SEWER MANHOLE
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	WATER MANHOLE
	IRRIGATION CONTROL VALVE
	WATER FAUCET
	POWER METER
	FLOW ARROW
	FOUND IRON PIN

LINE LEGEND

—OHE— — — — —OHE—	EXISTING OVERHEAD ELECTRIC LINES
—UGE— — — — —UGE—	EXISTING UNDERGROUND ELECTRIC LINES
— G — — — — G — —	EXISTING GAS LINE
— W — — — — W — —	EXISTING WATER LINE
—SS — — — — SS — —	EXISTING SANITARY SEWER LINE
— —FM— — — —FM— —	EXISTING FORCE MAIN
— — T — — — — T — —	EXISTING OVERHEAD TELEPHONE LINE
—UGT — — — — UGT—	EXISTING UNDERGROUND TELEPHONE LINE
—UFO— — — — UFO—	EXISTING UNDERGROUND FIBER OPTIC
— — — — D — — — —	EXISTING DRAINAGE/STORM SEWER LINE
OHE	OVERHEAD ELECTRIC LINES
UGE	UNDERGROUND ELECTRIC LINES
G	GAS LINE
IRR W	IRRIGATION LINE
2" W	2" WATER LINE
2.5" W	2.5" WATER LINE
4" W	4" WATER LINE
6" W	6" WATER LINE
8" W	8" WATER LINE
12" W	12" WATER LINE
6" SS	6" SANITARY SEWER LINE
8" SS	8" SANITARY SEWER LINE
T	OVERHEAD TELEPHONE LINE
UGT	UNDERGROUND TELEPHONE LINE
	DRAINAGE/STORM SEWER LINE
SF	SILT FENCE
	TOP OF DETENTION POND
	STORM WATER QUALITY SWALE
	SUBJECT PROPERTY
	LOT LINE
	RIGHT-OF-WAY
	PROPERTY LINE
20	EXISTING 1' CONTOUR
21	EXISTING 5' CONTOUR
22	PROPOSED 1' CONTOUR
25	PROPOSED 5' CONTOUR

ABBREVIATIONS

EP	EDGE OF PAVEMENT
R.O.W.	RIGHT OF WAY
℄	CENTERLINE
RCP	REINFORCED CONCRETE PIPE
CONC.	CONCRETE
CMP	CORRUGATED METAL PIPE
HDPE	HIGH DENSITY POLYETHYLENE DRAINAGE PIPE
ℙ	SUBJECT PROPERTY LINE
TC	TOP OF CURB
BC	BOTTOM OF CURB
POB	POINT OF BEGINNING
HCR	HANDICAP RAMP
	HANDICAP PARKING/ACCESS
MIN	MINIMUM
TYP	TYPICAL
EXIST	EXISTING
REST	RESTAURANT
INT	INTERSECTION
ME	MATCH EXISTING

NOTE: ALL SYMBOLS, ABBREVIATIONS, OR LINESTYLES DO NOT NECESSARILY APPEAR ON DRAWING(S). USE ONLY AS APPLICABLE.

VICINITY MAP
NTS

SCHEDULE OF DRAWINGS

SHEET	TITLE
C0.0	Cover Sheet
1of1	Survey
C1.0	Demolition Plan
C2.0	General Notes
C3.0	Site Plan
C4.0	Grading and Drainage Plan
C4.1	Spot Elevation Plan
C4.2	Box Culvert Plan
C5.0	Erosion Control Plan
C5.1	Erosion Control Details
C6.0	Utility Plan
C7.0	Construction Details-Site
C7.1	Construction Details-Sanitary Sewer
C7.2	Construction Details-Storm Sewer
301	MDOT Concrete Pipe Collar
305	MDOT Branch Connections
322	MDOT Storm Sewer Structure Type SS-2
323	MDOT Storm Sewer Structure Type SS-3
7008	MDOT Collar Details for Box Structures ICJ-1
7011-7013	Barrel Details for Single Cell Box Culvert IBS-6
7041-7043	Wings with 2:1 Slope for Basic Culvert Drawing Single Cell 15° Skew Details
BCB-1	Box Culvert Bending Detail
TCP-1	Traffic Control Plan-West
TCP-2	Traffic Control Plan-East
TCP-3	Traffic Control Plan- Overall Detour

REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

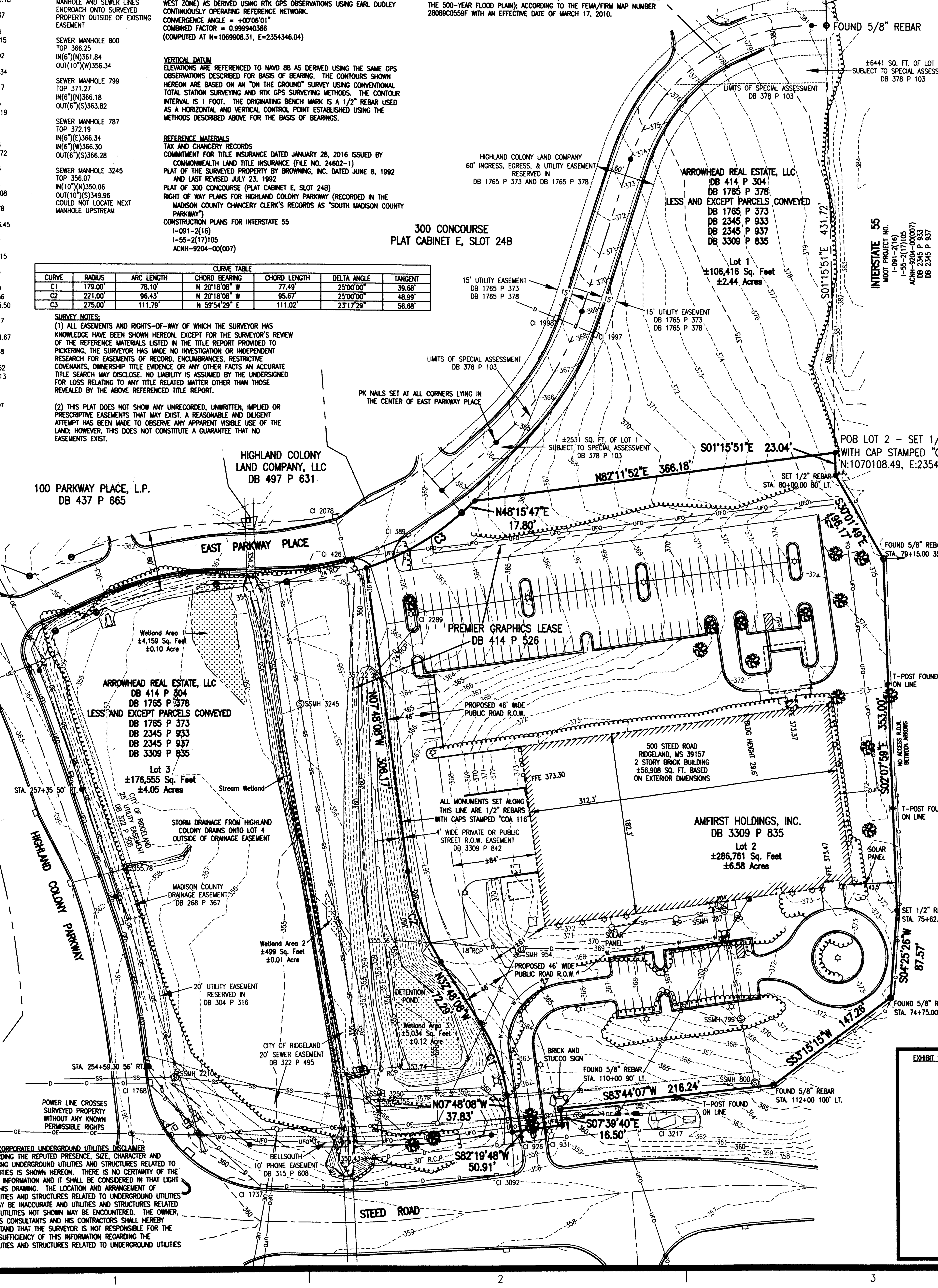
SEAL:

JONATHAN A. JOHNSON
REGISTERED PROFESSIONAL ENGINEER
20252
STATE OF MISSISSIPPI

SHEET NUMBER:

C0.0

DESCRIPTION:
Cover Sheet



POC - FOUND 1" SQUARE IRON BAR AT THE NW CORNER OF SECTION 24, T7N, R1E, MADISON COUNTY, MS N:1070881.67, E:2350696.70

(IN FEET)

BASIS OF BEARINGS
BEARINGS AND DISTANCES ON THIS PLAT ARE BASED ON AND REFERENCED TO THE MISSISSIPPI STATE PLANE COORDINATE SYSTEM GRID NORTH (NAD 83 - WEST ZONE) AS DERIVED USING RTK GPS OBSERVATIONS USING EARL DUDLEY CONTINUOUSLY OPERATING REFERENCE NETWORK.
CONVERGENCE ANGLE = +00°06'01"
COMBINED FACTOR = 0.999940386
(COMPUTED AT N=1069908.31, E=2354346.04)

VERTICAL DATUM
ELEVATIONS ARE REFERENCED TO NAVD 88 AS DERIVED USING THE SAME GPS OBSERVATIONS DESCRIBED FOR BASIS OF BEARING. THE CONTOURS SHOWN HEREON ARE BASED ON AN "ON THE GROUND" SURVEY USING CONVENTIONAL TOTAL STATION SURVEYING AND RTK GPS SURVEYING METHODS. THE CONTOUR INTERVAL IS 1 FOOT. THE ORIGINATING BENCH MARK IS A 1/2" REBAR USED AS A HORIZONTAL AND VERTICAL CONTROL POINT ESTABLISHED USING THE METHODS DESCRIBED ABOVE FOR THE BASIS OF BEARINGS.

REFERENCE MATERIALS
TAX AND CHANCERY RECORDS
COMMITMENT FOR TITLE INSURANCE DATED JANUARY 28, 2016 ISSUED BY COMMONWEALTH LAND TITLE INSURANCE (FILE NO. 24602-1)
PLAT OF THE SURVEYED PROPERTY BY BROWNING, INC. DATED JUNE 8, 1992 AND LAST REVISED JULY 23, 1992
PLAT OF 300 CONCOURSE (PLAT CABINET E, SLOT 24B)
RIGHT OF WAY PLANS FOR HIGHLAND COLONY PARKWAY (RECORDED IN THE MADISON COUNTY CHANCERY CLERK'S RECORDS AS "SOUTH MADISON COUNTY PARKWAY")
CONSTRUCTION PLANS FOR INTERSTATE 55
I-091-2(16)
I-55-2(17)105
ACNH-9204-00(007)

FLOOD NOTE:
THIS IS TO CERTIFY THAT BY GRAPHIC DETERMINATION THE ABOVE PLATTED PROPERTY IS IN A "ZONE X" NO SHADING (AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN); ACCORDING TO THE FEMA/FIRM MAP NUMBER 28089C0559F WITH AN EFFECTIVE DATE OF MARCH 17, 2010.

CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	DELTA ANGLE	TANGENT
C1	179.00'	78.10'	N 20°18'08" W	77.49'	25°00'00"	39.68'
C2	221.00'	96.43'	N 20°18'08" W	95.67'	25°00'00"	48.99'
C3	275.00'	111.79'	N 59°54'29" E	111.02'	23°17'29"	56.68'

SURVEY NOTES:
(1) ALL EASEMENTS AND RIGHTS-OF-WAY OF WHICH THE SURVEYOR HAS KNOWLEDGE HAVE BEEN SHOWN HEREON. EXCEPT FOR THE SURVEYOR'S REVIEW OF THE REFERENCE MATERIALS LISTED IN THE TITLE REPORT PROVIDED TO PICKERING, THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT RESEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS AN ACCURATE TITLE SEARCH MAY DISCLOSE. NO LIABILITY IS ASSUMED BY THE UNDERSIGNED FOR LOSS RELATING TO ANY TITLE RELATED MATTER OTHER THAN THOSE REVEALED BY THE ABOVE REFERENCED TITLE REPORT.

(2) THIS PLAT DOES NOT SHOW ANY UNRECORDED, UNWRITTEN, IMPLIED OR PRESCRIPTIVE EASEMENTS THAT MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USE OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO EASEMENTS EXIST.

POWER LINE CROSSES SURVEYED PROPERTY WITHOUT ANY KNOWN PERMISSIBLE RIGHTS

PICKERING FIRM INCORPORATED UNDERGROUND UTILITIES DISCLAIMER
INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS AND HIS CONTRACTORS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION REGARDING THE UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES SHOWN HEREON.

SYMBOLS AND ABBREVIATIONS

LINE LEGEND

NOTE: SYMBOLS, ABBREVIATIONS, OR LINESTYLES DO NOT NECESSARILY APPEAR IN THIS DRAWING. USE ONLY AS APPLICABLE

MS 1-CALL UTILITY LOCATE REQUEST INFORMATION
TICKET NO. - 14072915211346

UTILITIES NOTIFIED
TELEPAK (C SPIRE FIBER)
COMCAST CABLE COMMUNICATIONS INC.
CENTERPOINT ENERGY
ATMOS ENERGY
CITY OF RIDGELAND
AT&T
ENTERGY MS
INLINE 1

NO UNDERGROUND UTILITIES WERE MARKED FOR THIS SURVEY DESPITE MAKING A MS 1-CALL UTILITY LOCATE REQUEST. THE SURVEYOR RECEIVED NO RESPONSE FROM TELEPAK OR INLINE. USIC (THE COMPANY WHO MARKS FOR COMCAST, AT&T, AND ENTERGY) REFUSED TO MARK ANY OF THOSE LINES DESPITE REPEATED REQUESTS. WILLIAM BRADSHAW PROVIDED SCHEMATIC DRAWINGS OF THOSE UTILITY FACILITIES, BUT THOSE DRAWINGS HAD NO MEASUREMENTS, DIMENSIONS, OR TOPOGRAPHIC FEATURES TO HELP ADEQUATELY LOCATE THE UTILITY LINES. ATMOS AND CENTERPOINT BOTH RESPONDED THAT THEY DID NOT HAVE ANY LINES IN THE AREA. HOWEVER, ON THE DATE OF THE FIELD SURVEY, THE SURVEY CREW FOUND GAS LINE MARKINGS FROM PREVIOUS LOCATE REQUESTS IN THE AREA RELATED TO NEARBY CONSTRUCTION. THE SURVEYOR CANNOT BE SURE WHICH COMPANY OWNS THE GAS LINE OR THE LOCATION OF IT OTHER THAN WHAT WAS MARKED.

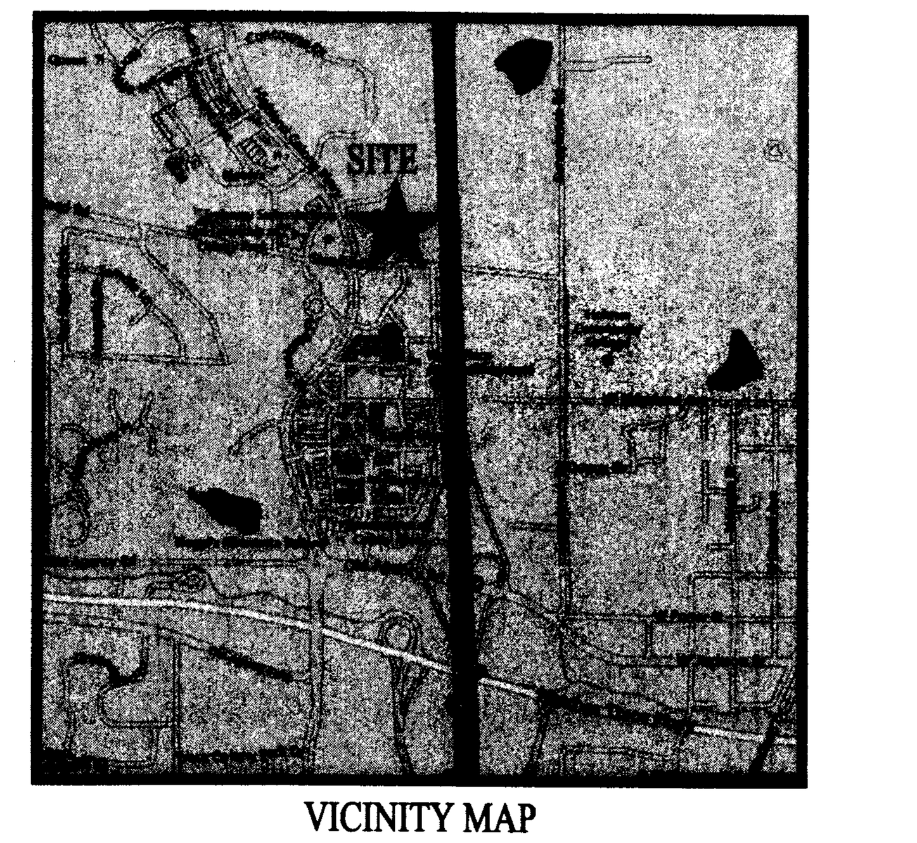
THE GAS LINE SHOWN HEREON IS BASED ON LIMITED MARKINGS FOUND. THERE ARE MORE GAS LINES PRESENT IN THE AREA OF THE SURVEYED PROPERTY BUT THE SURVEYOR CANNOT SHOW THEM WITHOUT THE GAS COMPANY LOCATING THE LINE OR PROVIDING INFORMATION AS TO THE LOCATION OF THE LINE.

THE UNDERGROUND POWER AND FIBER OPTIC CABLE LINES SHOWN HEREON ARE BASED ON SCHEMATIC DRAWINGS PROVIDED TO THE SURVEYOR BY WILLIAM BRADSHAW WITH USIC. THOSE DRAWINGS PROVIDE VERY LITTLE DETAIL AND ARE DIFFICULT TO INTERPRET. THE LINES SHOWN HEREON ARE THE SURVEYOR'S ATTEMPT TO REPLICATE THE UTILITY LINES DEPICTED ON THOSE DRAWINGS. THE LOCATION OF THOSE LINES SHOWN HEREON MAY BE INCORRECT OR INCOMPLETE.

THE LOCATION OF THE WATER LINE SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY A PHONE CONVERSATION WITH CITY OF RIDGELAND OFFICIALS.

ZONING DATA
CURRENT ZONING: MU-1 (MIXED USE DEVELOPMENT)
BUILDING SETBACKS:
FRONT YARD: SUBJECT TO SITE PLAN REVIEW
REAR YARD: SUBJECT TO SITE PLAN REVIEW
SIDE YARD: SUBJECT TO SITE PLAN REVIEW
MAX SITE COVERAGE:
SUBJECT TO SITE PLAN REVIEW
MINIMUM LOT AREA:
NONE
MAXIMUM HEIGHT:
48'

THE ABOVE INFORMATION WAS OBTAINED FROM THE CITY OF RIDGELAND'S WEBSITE.
(HTTP://WWW.RIDGELANDMS.ORG/ORDINANCES-AND-CODES/)
(HTTP://WWW.RIDGELANDMS.ORG/CITY-MAPS/)



VICINITY MAP
(NOT TO SCALE)

ALTA/ACSM CERTIFICATE:
CERTIFIED TO: TRUSTMARK NATIONAL BANK, N.A.
AMFIRST HOLDINGS, INC.
COMMONWEALTH LAND TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA\ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-5, 6B, 7B1, 8, 9, 11B, 18, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JULY 9, 2014.

MICHAEL BLAKE COLLINS, PLS — 3/22/16 DATE
MS LS No. 2955
2001 AIRPORT ROAD, SUITE 201
FLOWOOD, MS 39232
601-956-3663
BCOLLINS@PICKERINGFIRM.COM

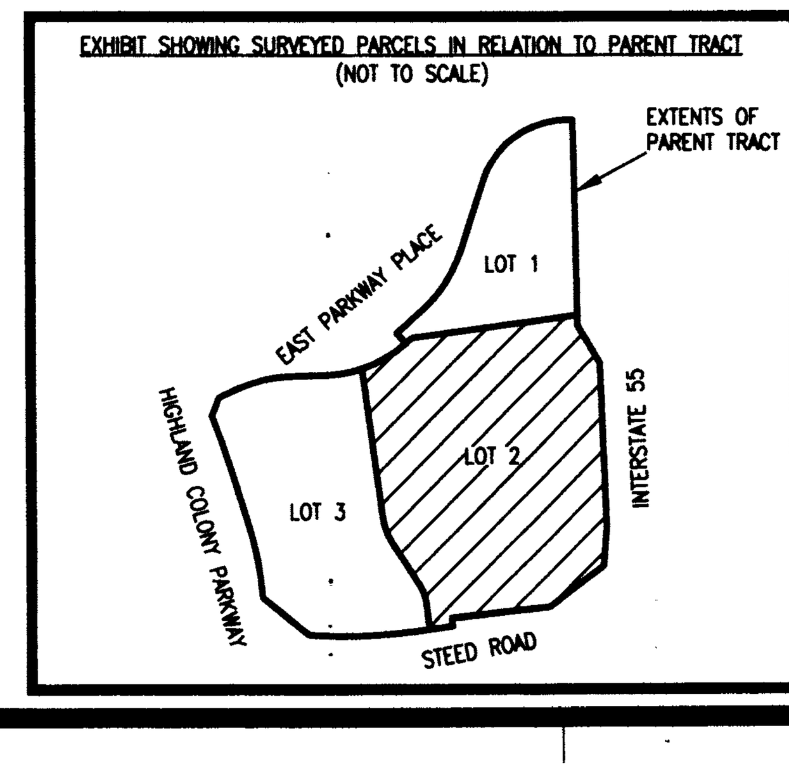
CLASS "B" SURVEY

NOTES REGARDING ALTA TABLE A ITEMS
ITEM 11B - SEE NOTES UNDER MS 1 CALL UTILITY LOCATE REQUEST INFORMATION FOR NOTES REGARDING UTILITIES THAT WERE NOT MARKED AS REQUESTED.
ITEM 18 - ON THE DATE OF THE FIELD SURVEY THERE WAS NO OBSERVED EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL.
ITEM 19 - WETLAND AREAS SHOWN HEREON WERE PROVIDED TO THE SURVEYOR BY ROBERT ANDERSON OF WETLAND CONSULTING SERVICES, INC.

NOTES CORRESPONDING TO COMMONWEALTH LAND TITLE INSURANCE COMPANY
COMMITMENT FOR TITLE INSURANCE DATED JANUARY 28,2016 (FILE No. 24602-1)

13. Easement from Hederman Brothers, Inc. to BellSouth Telecommunications, Inc. dated April 20, 1993, filed of record on April 22, 1993 at 9:00 A.M. and recorded in Book 315 at Page 608.
Affects Lot 2 and is shown and plotted hereon.
14. Easement from W. G. Yates & Sons Construction Company, a Mississippi corporation, to City of Ridgeland, Madison County, Mississippi, dated April 28, 1993, filed of record on September 3, 1993 at 9:00A.M. and recorded in Book 322 at Page 495.
Affects Lot 2 and is shown and plotted hereon. (Note: The sewer line as constructed falls outside the limits of the easement described in the referenced instrument.)
17. Fifteen foot (15') wide utility easement as shown on plat referenced in that Special Warranty Deed from Arrowhead Real Estate, LLC, a Mississippi limited liability company, to Highland Colony Land Company, LLC, a Mississippi limited liability company, dated March 31, 2004, filed of record on April 8, 2004 at 8:00 A.M. and recorded in Book 1765 at Page 373 and that Special Warranty Deed from Highland Colony Land Company, LLC, a Mississippi limited liability company, to Arrowhead Real Estate, LLC , a Mississippi limited liability company, dated March 31 , 2004, filed of record on April 8, 2004 at 8:00A.M. and recorded in Book 1765 at Page 378.
Does not affect Lot 2 but is shown and plotted hereon for reference.
18. Reservation of that sixty foot (60') wide Ingress - Egress and utility easement contained in Special Warranty Deed from Highland Colony Land Company, LLC to Arrowhead Real Estate, LLC, dated March 24, 2004, filed of record on April 8, 2004 at 8:00A.M. and recorded in Book 1765 at Page 378.
Does not affect Lot 2 but is shown and plotted hereon for reference.
19. Release of Damages recorded in Warranty Deed to the State Highway Commission of Mississippi recorded in Book 73 at Page 323, Book 73 at Page 335 and at Book 73 at Page 337.
Lot 2 is a portion of the parent tract from which the ROW was conveyed. As such, it is subject to the release of damages clauses contained therein.
20. Release of Damages recorded in Warranty Deed from Arrowhead Real Estate, LLC , to the Mississippi Transportation Commission dated July 3, 2008, filed of record on August 19, 2008 at 8:50 A.M. and recorded in Book 2345 at Page 933.
Lot 2 is a portion of the parent tract from which the ROW was conveyed. As such, it is subject to the release of damages clause contained therein.
21. Release of Damages recorded in Warranty Deed from Arrowhead Real Estate, LLC, to the Mississippi Transportation Commission dated July 3, 2008, filed of record on August 19, 2008 at 8:50 A.M. and recorded in Book 2345 at Page 937.
Lot 2 is a portion of the parent tract from which the ROW was conveyed. As such, it is subject to the release of damages clause contained therein.
23. Restriction on Access recorded in Warranty Deed executed by Arrowhead Real Estate LLC, to the Mississippi Transportation Commission, dated July 3, 2008, filed of record on August 19, 2008 at 8:50 A.M. and recorded in Book 2345 at Page 937.
Affects Lot 2 and is shown and plotted hereon.

EXHIBIT SHOWING SURVEYED PARCELS IN RELATION TO PARENT TRACT
(NOT TO SCALE)



RECORD DESCRIPTION PER DB 3309 P 835 AND SURVEY DESCRIPTION

LOT 2
THE FOLLOWING DESCRIPTION IS BASED ON THE MISSISSIPPI STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83, GRID VALUES, USING A COMBINED FACTOR OF 0.999940386 AND A CONVERGENCE ANGLE OF +00°06'01".

A PARCEL OF LAND CONTAINING 6.58 ACRES, MORE OR LESS, AND BEING SITUATED IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 1 EAST, RIDGELAND, MADISON COUNTY, MS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A 1" SQUARE IRON BAR AT THE NORTHWEST CORNER OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 1 EAST, MADISON COUNTY, MS, AND THENCE RUN EAST FOR A DISTANCE OF 3,871.64 FEET; THENCE RUN SOUTH FOR A DISTANCE OF 341.57 FEET TO A 5/8" REBAR FOUND AT THE INTERSECTION OF THE NORTH LINE OF THE ARROWHEAD REAL ESTATE PROPERTY AS DESCRIBED IN DEED BOOK 1765 AT PAGE 378 WITH THE WEST RIGHT OF WAY LINE OF INTERSTATE 55 AS DESCRIBED IN DEED BOOK 2345 AT PAGE 933 (MDOT PROJECT NO. ACNH-9204-00(001)); THENCE RUN S 01°15'51" E ALONG SAID WEST RIGHT OF WAY LINE FOR A DISTANCE OF 431.72 FEET TO A SET 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116", SAID POINT BEING THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND.

FROM SAID POINT OF BEGINNING, THENCE RUN S 01°15'51" E ALONG SAID WEST RIGHT OF WAY LINE FOR A DISTANCE OF 23.04 FEET TO A SET 1/2" REBAR; THENCE, CONTINUING ALONG SAID WEST RIGHT OF WAY LINE, RUN S 30°01'49" E FOR A DISTANCE OF 96.17 FEET TO A FOUND 5/8" REBAR; THENCE, CONTINUING ALONG SAID WEST RIGHT OF WAY LINE, RUN S 02°07'59" E FOR A DISTANCE OF 353.00 FEET TO A SET 1/2" REBAR; THENCE, CONTINUING ALONG SAID WEST RIGHT OF WAY LINE, RUN S 04°25'26" W FOR A DISTANCE OF 87.57 FEET TO A FOUND 5/8" REBAR; THENCE, CONTINUING ALONG SAID WEST RIGHT OF WAY LINE, RUN S 53°15'15" W FOR A DISTANCE OF 147.26 FEET TO A FOUND 5/8" REBAR; THENCE, CONTINUING ALONG SAID WEST RIGHT OF WAY LINE, RUN S 83°44'07" W FOR A DISTANCE OF 216.24 FEET TO A FOUND 5/8" REBAR; THENCE, CONTINUING ALONG SAID WEST RIGHT OF WAY LINE, RUN S 07°39'40" E FOR A DISTANCE OF 16.50 FEET TO A 1/2" REBAR SET ON THE NORTH RIGHT OF WAY LINE OF STEED ROAD; THENCE, LEAVING SAID WEST RIGHT OF WAY LINE OF INTERSTATE 55, RUN S 82°19'48" W ALONG THE NORTH RIGHT OF WAY LINE OF STEED ROAD FOR A DISTANCE OF 50.91 FEET TO A SET 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116"; THENCE, LEAVING SAID RIGHT OF WAY LINE, RUN N 07°48'08" W FOR A DISTANCE OF 37.83 FEET TO A SET 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116"; THENCE RUN NORTHWESTERLY ON AND ALONG THE ARC OF A CURVE TO THE LEFT TO A SET 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116", SAID CURVE HAVING A RADIUS OF 179.00 FEET, AN ARC LENGTH OF 78.10 FEET, A CHORD BEARING OF N 20°18'08" W, A CHORD LENGTH OF 77.49 FEET, AND A DELTA ANGLE OF 25°00'00"; THENCE RUN N 32°48'08" W FOR A DISTANCE OF 72.29 FEET TO A SET 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116"; THENCE RUN NORTHWESTERLY ON AND ALONG THE ARC OF A CURVE TO THE RIGHT TO A SET 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116", SAID CURVE HAVING A RADIUS OF 221.00 FEET, AN ARC LENGTH OF 96.43 FEET, A CHORD BEARING OF N 20°18'08" W, A CHORD LENGTH OF 95.67 FEET, AND A DELTA ANGLE OF 25°00'00"; THENCE RUN N 07°48'08" W FOR A DISTANCE OF 306.17 FEET TO A 1/2" REBAR WITH PLASTIC CAP STAMPED "COA 116" SET ON THE SOUTH RIGHT OF WAY LINE OF EAST PARKWAY PLACE; THENCE RUN NORTHEASTERLY ON AND ALONG THE ARC OF A CURVE TO THE LEFT TO A SET 1/2" REBAR, SAID CURVE HAVING A RADIUS OF 275.00 FEET, AN ARC LENGTH OF 111.79 FEET, A CHORD BEARING OF N 59°54'29" E, A CHORD LENGTH OF 111.02 FEET, AND A DELTA ANGLE OF 23°17'29"; THENCE, LEAVING SAID RIGHT OF WAY LINE, RUN N 48°15'47" E FOR A DISTANCE OF 17.80 FEET TO A 1/2" REBAR, THENCE RUN N 82°11'52" E FOR A DISTANCE OF 366.18 FEET BACK TO THE POINT OF BEGINNING, AND CONTAINING 6.58 ACRES, MORE OR LESS.

REVISIONS:

PROJECT #:	24449.02
DATE:	03-22-2016
DRAWN BY:	JB
FIELD BOOK:	PICKERING 27 PAGES 5-13
CHECKED BY:	MBC

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

ALTA/ACSM LAND TITLE SURVEY
LOT 2
AMFIRST HOLDINGS, INC.
NW 1/4 NE 1/4 Section 24, Township 7 North, Range 1 East
City Of Ridgeland, Madison County, Mississippi

SEAL:
MICHAEL BLAKE COLLINS REGISTERED PROFESSIONAL LAND SURVEYOR L.S. 02955 STATE OF MISSISSIPPI

SHEET NUMBER:
1 of 1

DESCRIPTION:

STORM MANHOLE 954
TOP 369.80
IN(18")(E)366.12
OUT(18")(W)357.90
COULD NOT LOCATE UPSTREAM END OF PIPE COMING IN FROM THE EAST

CURB INLET 1768
TOP 360.48
IN(18")(W)355.24
OUT(18")(S) 355.18

CURB INLET 1737
TOP 359.75
IN(18")(N)354.25
OUT(20")(E)354.15

CURB INLET 3092
TOP 358.24
OUT(18")(W)354.34

CURB INLET 3217
TOP 360.50
IN(30")(E)357.25
OUT(30")(W)357.19

CURB INLET 931
TOP 360.25
IN(30")(E)354.78
OUT(30")(W)354.72

CURB INLET 926
TOP 360.14
IN(30")(E)354.29
OUT(30")(W)354.08

CURB INLET 2078
TOP 360.46
OUT(18")(S) 356.45

CURB INLET 389
TOP 361.60
OUT(18")(W)357.15

CURB INLET 426
TOP 360.20
IN(18")(N)356.30
IN(18")(NE)355.56
OUT(18")(SW)355.50

CURB INLET 1997
TOP 368.65
OUT(18")(NW)364.67

CURB INLET 1998
TOP 368.58
INV.(18")(E)361.52
INV.(18")(W)360.13

CURB INLET 2289
TOP 361.82
OUT(24")(SW) 357.97

SEWER MANHOLE 2210
TOP 358.40
IN(12")(E)347.50
OUT(12")(W)347.38

SEWER MANHOLE 3250
TOP 354.49
IN(6")(SE)349.58
IN(10")(E)348.89
IN(10")(N)348.51
OUT(12")(W)348.65
MANHOLE AND SEWER LINES ENCROACH ONTO SURVEYED PROPERTY OUTSIDE OF EXISTING EASEMENT

SEWER MANHOLE 800
TOP 366.25
IN(6")(N)361.84
OUT(10")(W)356.34

SEWER MANHOLE 799
TOP 371.27
IN(6")(N)366.18
OUT(6")(S)363.82

SEWER MANHOLE 787
TOP 372.19
IN(6")(E)366.34
IN(6")(W)366.30
OUT(6")(S)366.28

SEWER MANHOLE 3245
TOP 356.07
IN(10")(N)350.06
OUT(10")(S)349.96
COULD NOT LOCATE NEXT MANHOLE UPSTREAM

HIGHLAND COLONY LAND COMPANY
60' INGRESS, EGRESS, & UTILITY EASEMENT RESERVED IN DB 1765 P 373 AND DB 1765 P 378

15' UTILITY EASEMENT

CI 2078

50 LF CURB & GUTTER (TO BE REMOVED)

CI 389

existing 8'x4' box culvert

EAST PARKWAY PLACE

CI 426

354.21

24" RCP

354.71

88 LF 24" RCP (TO BE REMOVED)

85 LF CURB & GUTTER (TO BE REMOVED)

TREE (TO BE REMOVED)

LIGHT POLE (TO BE REMOVED)

CI 2289

CURB INLET (TO BE REMOVED)

NOTE:
ALL WORK ASSOCIATED WITH REMOVAL OF 24" RCP SHALL BE INCLUDED IN THE LUMP SUM COST FOR "LOT 1 UTILITIES" (ITEM #3 ON PROPOSAL FORM)

20 LF 24" RCP (TO BE REMOVED)

357.22

180 LF CURB & GUTTER (TO BE REMOVED)

Wetland Area 1
±4,159 Sq. Feet
±0.10 Acre

SSMH 3245

FFE=373.47

NO ACCESS R.O.W. BETWEEN ARROWS

LIGHT POLE (TO BE REMOVED)

FFE=373.30

Stream Wetland

500 STEED ROAD
RIDGELAND, MS 39157
2 STORY BRICK BUILDING

REMOVAL OF EX. CONCRETE PAVEMENT UP TO 5' OUTSIDE OF ROAD ROW

INTERSTATE 55
MDOT PROJECT NO.
I-091-2(16)
I-55-2(17)105
ACNH-9204-00(007)
DB 2345 P 933
DB 2345 P 937

HIGHLAND COLONY PARKWAY

25' UTILITY EASEMENT CITY OF RIDGELAND DB 322 P 505

355.78

MADISON COUNTY DRAINAGE EASEMENT DB 268 P 367

SOLAR PANEL

SSMH 787

LIGHT POLE (TO BE REMOVED)

Wetland Area 2
±499 Sq. Feet
±0.01 Acre

355.36

18" RCP

SMH 954

195 LF CURB & GUTTER (TO BE REMOVED)

TREES (TO BE REMOVED IN THIS AREA)

20' UTILITY EASEMENT RESERVED IN DB 304 P 316

DETENTION POND

Wetland Area 3
±5,034 Sq. Feet
±0.12 Acre

SSMH 799

CITY OF RIDGELAND 20' SEWER EASEMENT DB 322 P 495

353.33

14" RCP

353.74

175 LF CURB & GUTTER (TO BE REMOVED)

LIGHT POLE (TO BE REMOVED)

SSMH 2210

SSMH 3250

SSMH 800

NO ACCESS EASEMENT

CI 1768

WING WALLS AND APRON (TO BE REMOVED)

65 LF CURB & GUTTER (TO BE REMOVED)

BRICK AND STUCCO SIGN

CI 3217

BELLSOUTH 10' PHONE EASEMENT DB 315 P 608

350.43

30" R.C.P.

TREES (TO BE REMOVED)

CI 926

CI 931

LIGHT POLE (TO BE REMOVED)

CI 3092

CURB INLET (TO BE REMOVED)

15 LF 20" RCP (TO BE REMOVED)

CI 1737

15 LF 24" RCP (TO BE REMOVED)

200 LF CURB & GUTTER (TO BE REMOVED)

±100 LF 8'x6' BOX CULVERT (TO BE REMOVED)

STEED ROAD

15 LF 21" RCP (TO BE REMOVED)

15 LF 18" CPP (TO BE REMOVED)

existing 8'x6' box culvert

existing sidewalk

NOTE:
ALL DEMOLITION AND/OR UTILITY RELOCATION WORK ASSOCIATED WITH BOX CULVERT CONSTRUCTION SHALL BE INCLUDED IN THE LUMP SUM COST FOR "REMOVAL AND REPLACEMENT OF EX. 10'X6' BOX CULVERT" (ITEM #2 ON PROPOSAL FORM)

NOTE:
A BOUNDARY AND TOPOGRAPHIC SURVEY HAS NOT BEEN PERFORMED BY PFI ON THE PROPERTY SOUTH OF STEED ROAD. THE INFORMATION SHOWN HERE ON THIS EXHIBIT ON THE SOUTH SIDE OF STEED ROAD WAS DERIVED FROM THE CONSTRUCTION PLANS OF THE "100 RENAISSANCE OFFICE BUILDING @ COLONY PARK" DATED JANUARY 31, 2005 BY DUNGAN ENGINEERING, THEREFORE IS APPROXIMATE.

SIDEWALK (TO BE REMOVED) (600 SF, 66 SY)

±20 LF BOX CULVERT TRANSITION (TO BE REMOVED)

NOTE:
THE PIPE QUANTITIES SHOWN TO BE REMOVED ARE APPROXIMATE AND ARE BASED ON APPROXIMATE DEPTH VS. PROPOSED BOX CULVERT EXCAVATION LIMITS. REMOVAL SHALL TAKE PLACE UP TO THE FARTHEST JOINT UPSTREAM WITHIN EXCAVATION LIMITS IF AT ALL POSSIBLE–REFER TO DETAIL ON SHEET C4.2.

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THIS PLAN IN THE PROPOSED CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
2. WHEN PROPOSED CONSTRUCTION CONFLICTS WITH EXISTING UNDERGROUND UTILITIES WHICH ARE TO REMAIN IN SERVICE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROTECTING THESE FACILITIES, RESTORING SUCH LINES WHICH ARE DAMAGED AS A RESULT OF HIS/HER OPERATIONS, OR RELOCATING SUCH LINES IF NEEDED, AT NO ADDITIONAL COST TO THE OWNER OR CITY. REFER TO "MS 1-CALL UTILITY LOCATE REQUEST INFORMATION" NOTES ON SHEET 1 OF 1 ALTA/ACSM LAND TITLE SURVEY BY PFI, DATED 03-22-16 FOR ADDITIONAL EXISTING UTILITY INFORMATION.
3. ALL IMPROVEMENTS, RIGHTS OF WAY, AND EASEMENTS WILL BE PRIVATELY OWNED AND MAINTAINED UNTIL THEY ARE PROPERLY DEDICATED TO THE CITY OF RIDGELAND.
4. THE TRUCK/HAUL ROUTE FOR THIS PROJECT IS FROM STEED ROAD TO THE I-55 FRONTAGE ROADS. NO TRUCKS WILL BE ALLOWED ON HIGHLAND COLONY PARKWAY OR STEED ROAD EAST OF I-55 EAST FRONTAGE ROAD.

LEGEND

REMOVAL OF EXISTING CONCRETE (11,976 SF, 1,331 SY)

REMOVAL OF EXISTING ASPHALT
CONNECTOR ROAD–(7,056 SF, 784 SY)
BOX CULVERT @ STEED–(6,303, 700 SY)
TOTAL– (13,359 SF, 1,484 SY)

NORTH
0 20 40 80
1 INCH = 40 FEET

REVISIONS:

PROJECT #: 24449.02
DATE: 06-06-16
DRAWN BY: JB
DESIGNER: JJ
CHECKED BY: JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:
JONATHAN A. JOHNSON
LICENSED PROFESSIONAL ENGINEER
20262
STATE OF MISSISSIPPI

SHEET NUMBER:
C1.0

DESCRIPTION:
Demolition Plan

TYPICAL CONSTRUCTION NOTES

1. PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING, CLEARING AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER (JEFF GREEN, PE 601-932-7878) AND THE CITY OF RIDGELAND A MINIMUM OF 24 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER (JEFF GREEN, PE 601-932-7878) AND THE CITY OF RIDGELAND 24 HOURS PRIOR TO WORK WITHIN PUBLIC IMPROVEMENT AREAS FOR REQUIRED INSPECTIONS. INSPECTIONS SHALL BE REQUIRED FOR PUBLIC ROADWAY IMPROVEMENTS AND THE PUBLIC STORM DRAINAGE, WATER AND SANITARY SEWER SYSTEMS.
3. SANITARY SEWER AND STORM DRAINAGE SHALL BE INSTALLED, TESTED AND INSPECTED IN ACCORDANCE WITH CURRENT CITY OF RIDGELAND SUBDIVISION REGULATIONS AND THE SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT COPIES OF ALL TESTING AND INSPECTION REPORTS TO THE ENGINEER AND THE CITY. CONTACT CITY FOR INSPECTION PRIOR TO CONNECTION & BACKFILL.
4. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY (INCLUDING ALL UTILITIES – HORIZONTAL AND VERTICAL LOCATIONS) AT THE END OF CONSTRUCTION PRIOR TO RELEASE OF FINAL PAYMENT.
5. VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS PRIOR TO COMMENCEMENT OF WORK.
6. ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.
7. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
8. THE CONTRACTOR SHALL NOTIFY THE CITY OF RIDGELAND AND ALL UTILITY PROVIDERS ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
9. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB OR CENTERLINE AT END OF PAINT STRIPE UNLESS NOTED OTHERWISE. SPOT ELEVATIONS ARE ON FINISHED GRADE UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR SHALL VERIFY EXISTING DATA AND REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.
11. BEFORE COMMENCING ANY ACTIVITY UNDER OR PERTAINING TO THIS CONTRACT, THE CONTRACTOR SHALL OBTAIN ALL BUILDING AND CONSTRUCTION PERMITS INCLUDING BUT NOT LIMITED TO MISSISSIPPI DEPARTMENT OF TRANSPORTATION, MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY, MISSISSIPPI DEPARTMENT OF HEALTH, CITY OF RIDGELAND, ATMOS ENERGY, C SPIRE, CENTERPOINT ENERGY, AT&T, ENTERGY, AS REQUIRED BY PERTINENT REGULATORY AND GOVERNMENTAL AGENCIES, CONTRACTOR SHALL NOTIFY UTILITY COMPANIES MAINTAINING UTILITY LINES OR EASEMENTS WITHIN THE LIMITS OF CONSTRUCTION, OR IN PUBLIC RIGHTS-OF-WAYS ADJACENT TO THE PROJECT. CONTRACTOR SHALL BECOME KNOWLEDGEABLE OF EXISTING UTILITIES AND PROTECT SAME WHERE NECESSARY. THIS SHALL INCLUDE UTILITIES SHOWN AND NOT SHOWN ON PLANS.
12. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITIES AND SHALL REPAIR, REPLACE, OR RELOCATE SAME AT NO ADDITIONAL COST TO THE OWNER.
13. THE CONTRACTOR SHALL ACCURATELY LOCATE AND MARK CONSTRUCTION LIMITS AND PROPERTY LINES, AND SHALL LIMIT ALL CONSTRUCTION ACTIVITIES TO WHICHEVER APPLICABLE.
14. THE CONTRACTOR AT NO TIME SHALL ENCROACH UPON OR CAUSE DISRUPTION TO TRAFFIC FLOW ON ADJACENT PUBLIC RIGHT-OF-WAYS WITHOUT SECURING THE PROPER PERMITS PRIOR TO COMMENCING OPERATIONS. THE CONTRACTOR SHALL ERECT THE PROPER TRAFFIC CONTROL DEVICES ACCORDING TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AND SHALL PROTECT THE PUBLIC FROM HAZARD OR INJURY BY ERECTING BARRICADES WHERE APPROPRIATE, I.E., AROUND EXCAVATIONS OR OPERATING EQUIPMENT.
15. ALL NEWLY CUT AND/OR FILLED AREAS LACKING ADEQUATE VEGETATION SHALL BE SEEDED AND/OR SODDED TO EFFECTIVELY PREVENT SOIL EROSION PER CITY OF RIDGELAND AND STATE REGULATIONS.
16. THE CONTRACTOR MUST HAVE WRITTEN APPROVAL FROM THE CITY OF RIDGELAND AND THE PROJECT ENGINEER BEFORE ANY CHANGE IN DESIGN IS MADE.
17. THE CONTRACTOR SHALL NOT ENTER NOR CAUSE DAMAGE TO ANY ADJACENT PROPERTIES WITHOUT WRITTEN PERMISSION FROM SAID PROPERTY OWNERS.
18. ALL FILL LIFTS SHALL BE COMPACTED PER SPECIFICATIONS AND GEOTECHNICAL ENGINEERING RECOMMENDATIONS.
19. ANY EXISTING UTILITIES REQUIRING RELOCATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
20. CLEAR AND GRUB ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION.
21. THE CONTRACTOR SHALL AT ALL TIMES EMPLOY ADEQUATE EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT DAMAGE TO THE PROPERTY, ADJACENT PROPERTIES, PUBLIC RIGHT-OF-WAYS, AND PUBLIC OR PRIVATE DRAINAGE SYSTEMS.
22. DISTURBED AREAS SHALL BE GRADED TO DRAIN AS INDICATED ON THE PLANS DURING AND UPON COMPLETION OF CONSTRUCTION. NO DRAINAGE SHALL BE DAMMED OR TRAPPED UNLESS SPECIFICALLY DIRECTED BY THE PLANS.
23. ANY FENCING, SIDEWALK, CURB AND GUTTER, OR CURB CUT DAMAGED BY CONSTRUCTION SHALL BE REPLACED AND RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
24. ALL STREETS ADJACENT TO THE SITE SHALL BE KEPT CLEAN DURING CONSTRUCTION.
25. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL AND STATE REQUIREMENTS.
26. ALL SIDEWALKS AND CONCRETE PAVING APRONS SHALL HAVE FLUSH CONNECTIONS AT ALL PAVEMENT INTERSECTIONS.
27. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN WITH THE ARCHITECTURAL DRAWINGS BEFORE ANY WORK BEGINS. IF ANY DISCREPANCY IS FOUND IT IS TO BE REPORTED TO THE ARCHITECT AND ENGINEER AND THE DISCREPANCY IS TO BE RESOLVED BEFORE WORK BEGINS.
28. ALL ASPHALT MILLING SHALL CONFORM TO SECTION 406 – COLD MILLING OF THE MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2004 EDITION.

GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR SHALL NOT ENTER UPON, WORK UPON, NOR CAUSE DAMAGE TO ANY ADJACENT PROPERTIES WITHOUT PRIOR PERMISSION FROM SAID PROPERTY OWNER.
2. NO TREES SHALL BE REMOVED OUTSIDE THE LIMITS OF CONSTRUCTION.
3. ALL STORM DRAINAGE INLETS SHALL BE MDOT STANDARD. CONCRETE BRICK INLETS WILL NOT BE PERMITTED. ALL PIPES ENTERING STORM SEWER STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
4. ALL STORM DRAINAGE PIPES SHALL BE CLASS III RCP UNLESS NOTED OTHERWISE. ALL STORM DRAINAGE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
5. ANY GRADED OR DISTURBED AREAS SHALL HAVE 6 INCHES OF TOPSOIL WITH SEED, MULCH, FERTILIZER, AND WATER APPLIED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER (JEFF GREEN, PE 601-932-7878) AND THE CITY OF RIDGELAND 24 HOURS PRIOR TO ROADWAY AND STORM DRAINAGE WORK WITHIN PUBLIC IMPROVEMENT AREAS FOR REQUIRED INSPECTIONS.
7. STORM DRAINAGE SHALL BE INSTALLED, TESTED AND INSPECTED IN ACCORDANCE WITH CURRENT CITY OF RIDGELAND SUBDIVISION REGULATIONS AND THE SPECIFICATIONS.
8. CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO PROOFROLLING OF SUBGRADE WITH A LOADED TANDEM AXLE DUMP TRUCK OR EQUALLY APPROVED VEHICLE. THIS SHALL BE DONE PRIOR TO INSTALLATION OF CURB AND PAVING IN IMPROVEMENT AREAS.
9. IN ALL AREAS OF CONSTRUCTION, TOPSOIL SHALL BE STRIPPED AS REQUIRED BY THE GEOTECHNICAL ENGINEER AND STORED IN ONE LOCATION PER OWNERS DIRECTION. THIS TOPSOIL WILL BE USED FOR THE FINISH GRADING WORK. PROVIDE EROSION CONTROL AS NECESSARY TO PREVENT TOPSOIL FROM ERODING AND DAMAGING ADJACENT PROPERTIES.
10. CLEAR AND GRUB ALL AREAS OF THE SITE WHERE CUT OR FILL IS TO OCCUR. REMOVE ORGANIC MATTER, FOREIGN MATERIAL, PAVEMENT, TOPSOIL, FENCES, TRASH, BRUSH, BURIED OBSTRUCTIONS SUCH AS TREE STUMPS, ROOTS AND INACTIVE DRAINAGE STRUCTURES. DISPOSE OF ALL MATERIAL REMOVED WHICH IS NOT TO BE REPLACED. BURNING OF MATERIAL ON THE SITE WILL NOT BE PERMITTED UNLESS APPROVED IN WRITING BY THE DESIGNER AND AFTER THE REQUIRED PERMITS HAVE BEEN OBTAINED FROM THE APPLICABLE AUTHORITIES.
11. ALL AREAS SHALL BE COMPACTED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION REPORTS PREPARED BY BURNS COOLEY DENNIS, INC.
12. PROPER DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PROJECT SITE TO PREVENT THE INCREASE OF THE IN-SITU SOILS MOISTURE CONTENT. FLUCTUATIONS MAY NECESSITATE SOIL IMPROVEMENTS PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
13. SITE CONTRACTOR SHALL PROVIDE SUBGRADE FOR BUILDING PAD PER THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PROVIDED BY THE OWNER. THE EXPOSED SURFACE IN PAVEMENT OR BUILDING FLOOR AREAS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER AND MAY REQUIRE SOME IMPROVEMENTS IF THE MOISTURE CONTENTS ARE BEYOND ACCEPTABLE LIMITS.
14. ESTABLISH PERMANENT VEGETATION WITH SEEDING OR SOD ON ALL DISTURBED AREAS.
15. ALL SPOT ELEVATIONS ALONG CURBLINE ARE TOP OF CURB ELEVATION UNLESS NOTED OTHERWISE.
16. ALL ELEVATIONS SHOWN ARE TO FINISHED GRADE INCLUDING SEEDING, SOD, AND PAVEMENT.
17. THE MAXIMUM LONGITUDINAL (DIRECTION OF TRAVEL) SLOPE IS TO BE 5% AND THE MAXIMUM CROSS (PERPENDICULAR TO TRAFFIC) SLOPE IS TO BE 2% FOR ALL WALKWAYS AND HANDICAP PARKING AREAS.
18. PROVIDE TEMPORARY ABOVE GROUND IRRIGATION TO ALL NEWLY SEEDED OR SODDED AREAS THAT ARE LEFT UNDISTURBED FOR MORE THAN 30 DAYS.

SITE WORK AND UTILITY COORDINATION

1. SITE WORK CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH UTILITY COMPANIES.
2. SITE WORK CONTRACTOR IS RESPONSIBLE FOR BACKFILL AND PROPER COMPACTION ON TOP OF AND IN THE VICINITY OF UTILITY LINES.

UTILITY NOTES

1. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY ALL THAT EXIST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION LIMITS.
2. FORTY-EIGHT (48) HOURS BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL MISSISSIPPI ONE CALL AT 1-800-227-6477. THE CONTRACTOR SHALL ALSO ASSUME THE RESPONSIBILITY FOR ANY DAMAGE INCURRED BY ANY UTILITY COMPANY, TO THEIR LINES, WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT, DURING WORK ON THE PROJECT.

SANITARY SEWER NOTES

1. NO TREES, SHRUBS, PERMANENT STRUCTURES, OR OTHER UTILITIES (EXCEPT CROSSINGS) WILL BE ALLOWED WITHIN SANITARY SEWER EASEMENT.
2. ALL SANITARY SEWER MATERIALS AND INSTALLATION IN PUBLIC RIGHT OF WAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF RIDGELAND SUBDIVISION REGULATIONS AND THE SPECIFICATIONS.
3. SANITARY SEWER SERVICE CONNECTIONS SHALL BE POLYVINYL CHLORIDE SDR 26.
4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER (JEFF GREEN, PE 601-932-7878) AND THE CITY OF RIDGELAND 24 HOURS PRIOR TO SANITARY SEWER WORK WITHIN PUBLIC IMPROVEMENT AREAS FOR REQUIRED INSPECTIONS.
5. SANITARY SEWER SHALL BE INSTALLED, TESTED AND INSPECTED IN ACCORDANCE WITH CURRENT CITY OF RIDGELAND SUBDIVISION REGULATIONS AND THE SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT COPIES OF ALL TESTING AND INSPECTION REPORTS TO THE ENGINEER..
6. THERE SHALL BE A MINIMUM OF TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ALL PARALLEL SANITARY SEWER AND WATER MAINS.
7. THERE SHALL BE A MINIMUM OF EIGHTEEN (18) INCHES VERTICAL SEPARATION BETWEEN ALL SANITARY SEWER AND WATER MAINS WITH THE WATER MAIN BEING ABOVE THE SANITARY SEWER LINE.

REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying •
Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

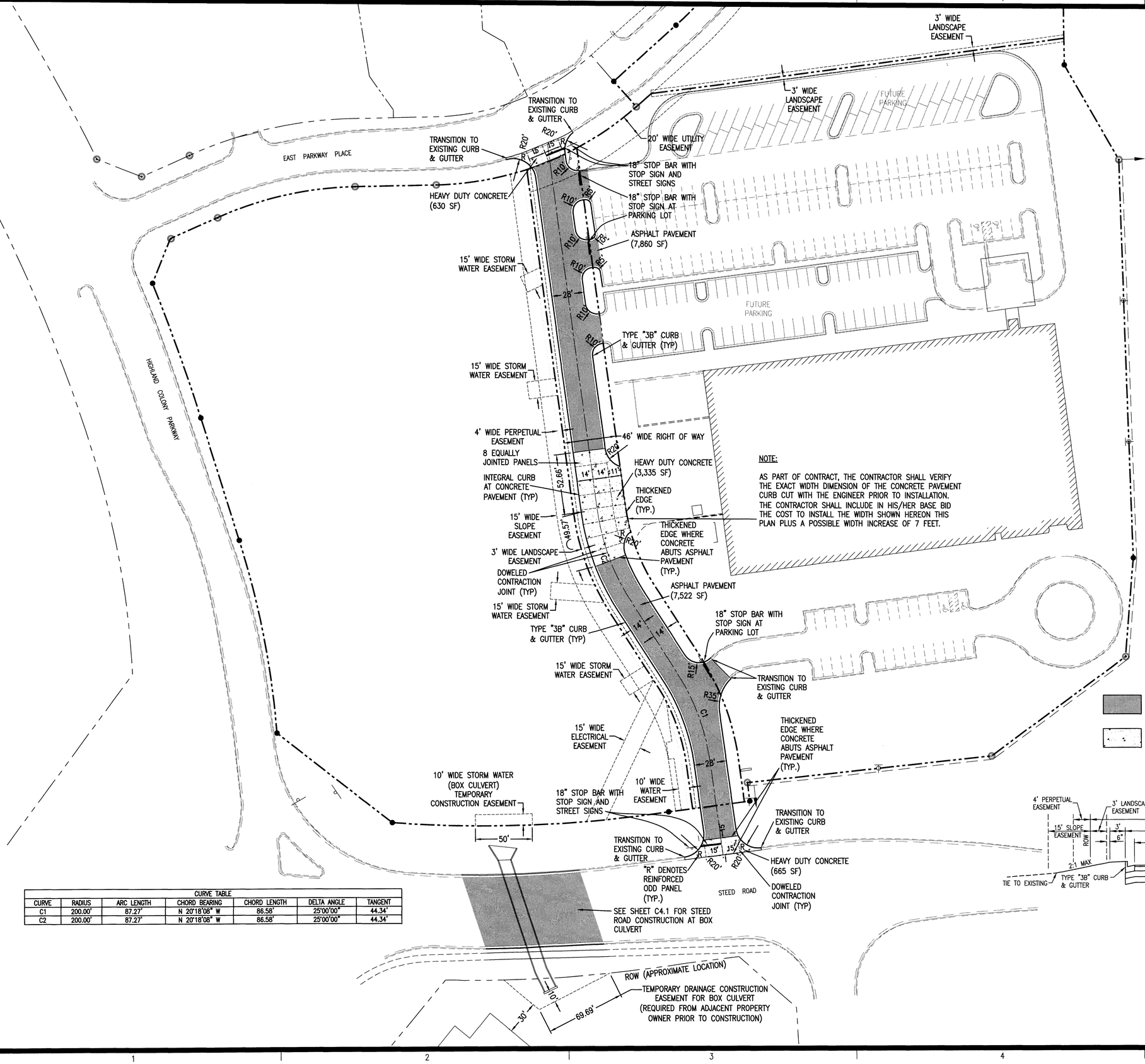
SEAL:

JONATHAN A. JOHNSON
LICENSED PROFESSIONAL ENGINEER
20252
STATE OF MISSISSIPPI

SHEET NUMBER:

C2.0

DESCRIPTION:
General Notes



CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	DELTA ANGLE	TANGENT
C1	200.00'	87.27'	N 20°18'08" W	86.58'	25°00'00"	44.34'
C2	200.00'	87.27'	N 20°18'08" W	86.58'	25°00'00"	44.34'

402. Monuments

402.01 Monuments shall be placed at all corners or changes in alignment along the boundary of the subdivision and at all block corners, angle points, or curves in street right-of-way boundary lines. These monuments shall consist of a four (4) inch by four (4) inch concrete post not less than thirty (3) inches in length and reinforced with a single one-half (1/2) inch steel rod in the center that extends not less than one-fourth (1/4) inch above the top of the concrete.

402.02 Markers shall be placed at all corners or changes in alignment in lot boundaries. The markers shall consist of a reinforcing rod of not less than one-half (1/2) inch in diameter and not less than twenty-four (24) inches in length.

NOTES:

1. THE PAVEMENT DESIGN RECOMMENDATIONS SHOWN HERE ARE BASED ON GEOTECHNICAL REPORT NO. 160151 BY BURNS COOLEY DENNIS, INC., DATED APRIL 4, 2016.
2. REFER TO GEOTECHNICAL REPORT NO. 160151 BY BURNS COOLEY DENNIS, INC., DATED APRIL 4, 2016 FOR UNDERCUT DEPTH AND SUBGRADE PREPARATION INFORMATION.
3. ALL CURB DIMENSIONS SHOWN ARE TO FACE OF CURB.
4. THE CONTRACTOR SHALL ENSURE THAT ALL SLEEVES FOR UNDERGROUND UTILITIES ARE INSTALLED PRIOR TO PAVING.
5. CONCRETE PAVEMENT CONSTRUCTION & JOINT LAYOUT SHALL CONFORM TO THE LATEST ACI 330R-08 "GUIDE FOR THE DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS" AND ACI 224.3R-95 "JOINTS IN CONCRETE CONSTRUCTION".
6. ALL IMPROVEMENTS, RIGHTS OF WAY, AND EASEMENTS WILL BE PRIVATELY OWNED AND MAINTAINED UNTIL THEY ARE PROPERLY DEDICATED TO THE CITY OF RIDGELAND.
7. THE TRUCK/HAUL ROUTE FOR THIS PROJECT IS FROM STEED ROAD TO THE I-55 FRONTAGE ROADS. NO TRUCKS WILL BE ALLOWED ON HIGHLAND COLONY PARKWAY OR STEED ROAD EAST OF I-55 EAST FRONTAGE ROAD.
8. SIGNS SHALL BE POLE MOUNTED AND MATCH EXISTING CITY STANDARD TYPE INSTALLED AT EAST PARKWAY PLACE AND HIGHLAND COLONY INTERSECTION.

REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
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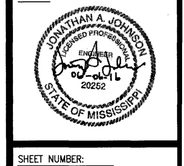
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:



SHEET NUMBER:

C3.0

DESCRIPTION:
Site Plan

NOTE:
PROPOSED STORM DRAINAGE WORK SHALL BE INCLUDED IN THE LUMP SUM COST FOR "LOT 1 UTILITIES" (ITEM #3 ON PROPOSAL FORM)

BRANCH CONNECTION 30" INVERT IN WING WALL INV=354.73

CONNECT 24" RCP TO EXISTING CURB INLET

CI 2078

4 LF 24" RCP @ 1.25%

CI 389

30" RCP (CAPPED FOR FUTURE) INV=355.81

40 LF 30" RCP @ 0.50%

SS-3 INLET
TOP=361.50
INV 30" NE=355.61
INV 30" SW=355.61

existing 8'x4' box culvert

90 LF 30" RCP @ 0.50%

CI 426

EAST PARKWAY PLACE

84 LF 30" RCP @ 0.53%

SS-2 INLET
TOP=362.45
INV 24" SW=358.08

DMH
TOP=360.00
INV 24" N=355.45
INV 30" NE=355.17
INV 30" SW=355.17

12 LF 24" RCP @ 1.08%

CONNECT 24" RCP TO EXISTING 24" RCP
52 LF 18" RCP @ 0.50%

SS-2 INLET
TOP=363.84
INV 18" SE=357.93
INV 24" NE=357.43
INV 30" SW=357.43

12 LF 30" RCP @ 0.50%

30" FES INV=357.33

18" RCP (CAPPED FOR FUTURE) INV=358.19

CUT AND CONNECT EXISTING 24" RCP TO NEW SS-2 INLET

NOTE:
CONTRACTOR TO AVOID ENCROACHING ONTO WETLAND LIMITS DURING CONSTRUCTION

HIGHLAND COLONY PARKWAY

FFE=373.37

FFE=373.30

NOTE:
ALL SS-2 TOPS SHALL BE CAST IN PLACE TYPE.

FFE=373.47

X 355.78

CI 1768

NOTE:
CONTRACTOR TO AVOID ENCROACHING ONTO WETLAND LIMITS DURING CONSTRUCTION

365.36 X 18" RCP (inv. at road ℄ approx. 356.63)

SMH 954

18" FES INV=357.00

SS-2 INLET
TOP=364.55
INV 18" W=358.00

20 LF 18" RCP @ 3.85%

353.33 X 14" RCP X 353.74

SS-2 INLET
TOP=360.00
INV 30" E=354.10
INV 30" W=354.00

CI 3217

350.43 X 30" RCP

CI 3092

18" RCP

20" RCP

CI 1737

15 LF 20" RCP @ 0.50%
CONNECT TO EXISTING 20" RCP

10'x6' BOX CULVERT (SEE SHEET C4.2)

CONNECT EXISTING 30" RCP TO NEW SS-2 INLETS

15 LF 18" RCP @ 0.50%
CONNECT TO EXISTING 18" RCP

SS-2 INLET
TOP=360.00
INV 30" E=354.85
INV 30" W=354.80

STEED ROAD

15 LF 18" CPP @ 0.50%
CONNECT TO EXISTING 18" CPP

18" CPP

21" RCP

15 LF 21" RCP @ 0.50%
CONNECT TO EXISTING 21" RCP

existing 10'x6' box culvert

STORM MANHOLE 954
TOP 369.80
IN(18")(E)366.12
OUT(18")(W)357.90
COULD NOT LOCATE UPSTREAM END OF PIPE COMING IN FROM THE EAST

CURB INLET 1768
TOP 360.48
IN(18")(W)355.24
OUT(18")(S) 355.18

CURB INLET 1737
TOP 359.75
IN(18")(N)354.25
OUT(20")(E)354.15

CURB INLET 3092
TOP 358.24
OUT(18")(W)354.34

CURB INLET 3217
TOP 360.50
IN(30")(E)357.25
OUT(30")(W)357.19

CURB INLET 931 (REMOVED)
TOP 360.25
IN(30")(E)354.78
OUT(30")(W)354.72

CURB INLET 926 (REMOVED)
TOP 360.14
IN(30")(E)354.29
OUT(30")(W)354.08

CURB INLET 2078
TOP 360.46
OUT(18")(S) 356.45

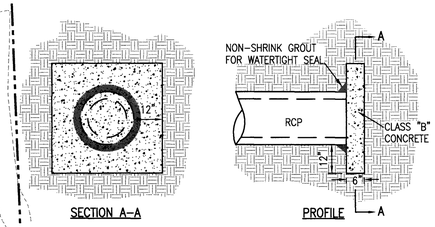
CURB INLET 389
TOP 361.60
OUT(18")(W)357.15

CURB INLET 426
TOP 360.20
IN(18")(N)356.30
IN(18")(NE)355.56
OUT(18")(SW)355.50

CURB INLET 1997
TOP 368.65
OUT(18")(NW)364.67

CURB INLET 1998
TOP 368.58
INV.(18")(E)361.52
INV.(18")(W)360.13

CURB INLET 2289 (REMOVED)
TOP 361.82
OUT(24")(SW) 357.97



REINFORCED CONCRETE PIPE CAP DETAIL
N.T.S.

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THIS PLAN IN THE PROPOSED CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
2. WHEN PROPOSED CONSTRUCTION CONFLICTS WITH EXISTING UNDERGROUND UTILITIES WHICH ARE TO REMAIN IN SERVICE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROTECTING THESE FACILITIES, RESTORING SUCH LINES WHICH ARE DAMAGED AS A RESULT OF HIS/HER OPERATIONS, OR RELOCATING SUCH LINES IF NEEDED, AT NO ADDITIONAL COST TO THE OWNER OR CITY. REFER TO "MS 1-CALL UTILITY LOCATE REQUEST INFORMATION" NOTES ON SHEET 1 OF 1 ALTA/ACSM LAND TITLE SURVEY BY PFI, DATED 03-22-16 FOR ADDITIONAL EXISTING UTILITY INFORMATION.
3. ALL IMPROVEMENTS, RIGHTS OF WAY, AND EASEMENTS WILL BE PRIVATELY OWNED AND MAINTAINED UNTIL THEY ARE PROPERLY DEDICATED TO THE CITY OF RIDGELAND.
4. THE TRUCK/HAUL ROUTE FOR THIS PROJECT IS FROM STEED ROAD TO THE I-55 FRONTAGE ROADS. NO TRUCKS WILL BE ALLOWED ON HIGHLAND COLONY PARKWAY OR STEED ROAD EAST OF I-55 EAST FRONTAGE ROAD.

NORTH
0 20 40 80
1 INCH = 40 FEET

REVISIONS:

1		
2		
3		
4		
5		

PROJECT #: 24449.02
DATE: 06-06-16
DRAWN BY: JB
DESIGNER: JJ
CHECKED BY: JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:
JONATHAN A. JOHNSON
REGISTERED PROFESSIONAL ENGINEER
EXPIRES
6-24-16
20252
STATE OF MISSISSIPPI

SHEET NUMBER:
C4.0

DESCRIPTION:
Grading and Drainage Plan

EAST PARKWAY PLACE

MATCH EXISTING TBC 361.65

MATCH EXISTING TBC 360.23

362.17

362.35

362.75

361.13

MATCH EXISTING PAVEMENT 362.55

362.78

362.66

362.23

362.80

362.46

363.31

362.90

363.20

MATCH EXISTING PAVEMENT 362.27

363.21

363.84

363.26

364.72

MATCH EXISTING TBC 363.70

364.14

365.72

367.17

366.86

367.36

366.79

FFE=37

368.06

367.52

368.29

367.21

368.25

366.86

367.44

NORTH

0 10 20 40

1 INCH = 20 FEET

FFE=373.30

368.06

367.52

368.29

367.21

368.25

366.86

367.44

366

366.54

365.85

365

365.02

MATCH EXISTING TBC 365.05

364.55

364

364.26

MATCH EXISTING TBC 365.06

363.77

363

363.21

362

362.05

361.50

361

360

360.00

360.00

359.58

359.58

MATCH EXISTING TBC 358.10

MATCH EXISTING TBC 358.30

STEED ROAD

NORTH

0 10 20 40

1 INCH = 20 FEET

REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering

Pickering Firm, Inc.

Facility Design • Civil Engineering • Surveying •
Transportation • Natural / Water Resources

2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive

aka

"Hederman Brothers Connector Road"

Ridgeland, Mississippi

Prepared for: AmFirst Holdings, Inc.

SEAL:

JONATHAN A. JOHNSON
REGISTERED PROFESSIONAL
ENGINEER
20252
STATE OF MISSISSIPPI

SHEET NUMBER:

C4.1

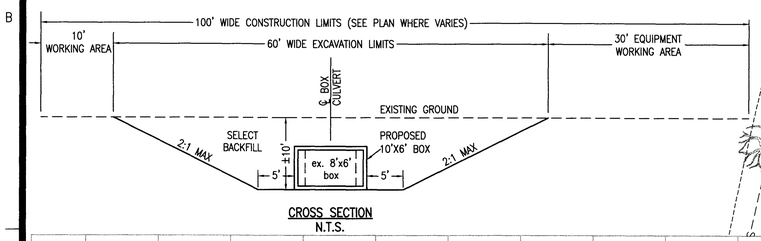
DESCRIPTION:

Spot Elevation Plan

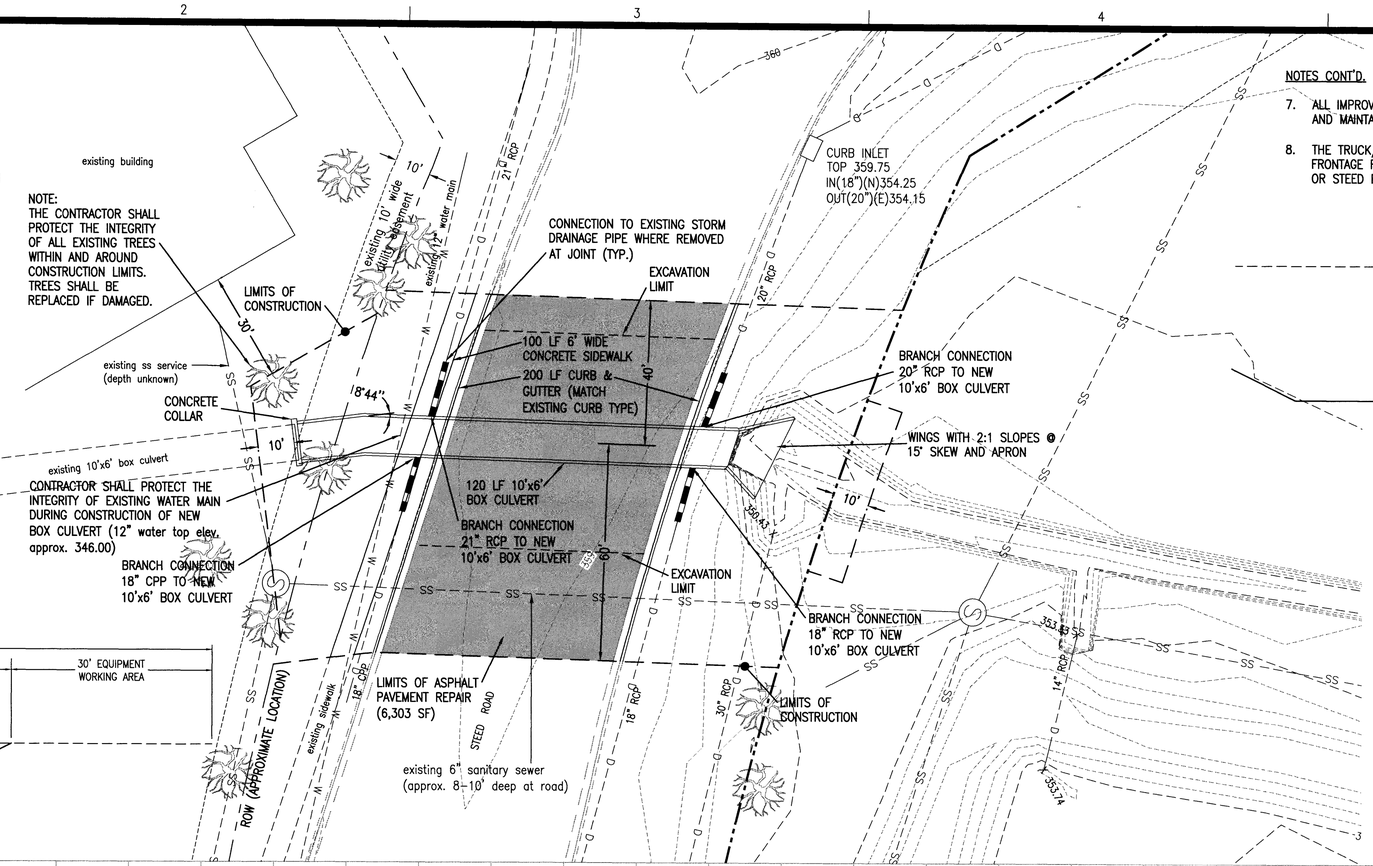
NOTES:

1. WHEN PROPOSED BOX CULVERT CONSTRUCTION CONFLICTS WITH EXISTING UNDERGROUND UTILITIES WHICH ARE TO REMAIN IN SERVICE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROTECTING THESE FACILITIES, RESTORING SUCH LINES WHICH ARE DAMAGED AS A RESULT OF HIS/HER OPERATIONS, OR RELOCATING SUCH LINES IF NEEDED, AT NO ADDITIONAL COST TO THE OWNER OR CITY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THIS PLAN IN THE PROPOSED CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING CONSTRUCTION, CONFORMING TO THE LATEST MUTCD.
4. THE CONTRACTOR SHALL RESTORE ALL PERMANENT TYPE PAVEMENTS, SIDEWALKS, CURB & GUTTER, SOLID SOD, SHRUBBERY, TREES, FENCES, POLES, AND OTHER PROPERTY AND SURFACE STRUCTURES REMOVED OR DISTURBED DURING OR AS A RESULT OF CONSTRUCTION OPERATIONS TO A CONDITION WHICH IS EQUAL IN APPEARANCE AND QUALITY TO THE ORIGINAL CONDITION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, AND COMPLIANCE OF ACCOMMODATING UPSTREAM DRAINAGE RUNOFF THROUGH THE PROJECT CONSTRUCTION AREA. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES CAUSED BY FLOODING AS A RESULT OF HIS/HER CONSTRUCTION OPERATIONS.
6. A BOUNDARY AND TOPOGRAPHIC SURVEY HAS NOT BEEN PERFORMED BY PFI ON THE PROPERTY SOUTH OF STEED ROAD. THE INFORMATION SHOWN HERE ON THIS EXHIBIT ON THE SOUTH SIDE OF STEED ROAD WAS DERIVED FROM THE CONSTRUCTION PLANS OF THE "100 RENAISSANCE OFFICE BUILDING @ COLONY PARK" DATED JANUARY 31, 2005 BY DUNGAN ENGINEERING, THEREFORE IS APPROXIMATE AND MAY BE INACCURATE.

ASPHALT PAVEMENT REPAIR
(SEE TYPICAL SECTION SHEET C3.0)

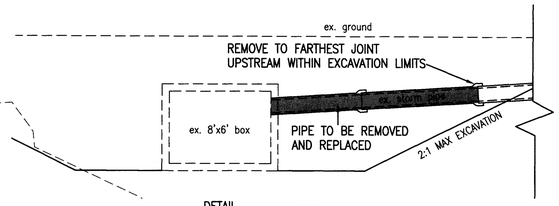


CROSS SECTION
N.T.S.



NOTES CONT'D.

7. ALL IMPROVEMENTS, RIGHTS OF WAY, AND EASEMENTS WILL BE PRIVATELY OWNED AND MAINTAINED UNTIL THEY ARE PROPERLY DEDICATED TO THE CITY OF RIDGELAND.
8. THE TRUCK/HAUL ROUTE FOR THIS PROJECT IS FROM STEED ROAD TO THE I-55 FRONTAGE ROADS. NO TRUCKS WILL BE ALLOWED ON HIGHLAND COLONY PARKWAY OR STEED ROAD EAST OF I-55 EAST FRONTAGE ROAD.

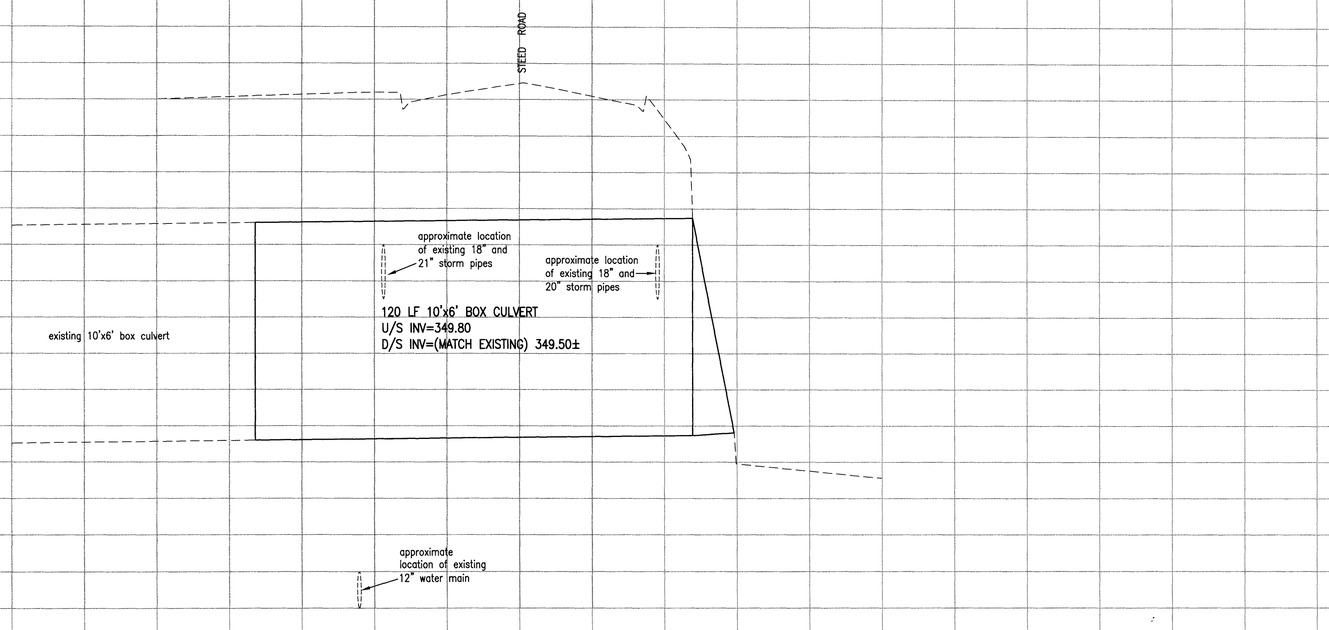


DETAIL
N.T.S.

NOTE:
IF PIPE REMOVAL AT JOINT AS SHOWN IS NOT PRACTICAL DUE TO CERTAIN FIELD CONDITIONS OR IF JOINT IS DAMAGED DURING REMOVAL, A CONCRETE COLLAR SHALL BE USED TO CONNECT NEW PIPE TO OLD PIPE TO ENSURE A PROPER WATERTIGHT SEAL.

NORTH
0 10 20 40
1 INCH = 20 FEET

HORIZONTAL: 1"=20'
VERTICAL: 1"=2'



REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

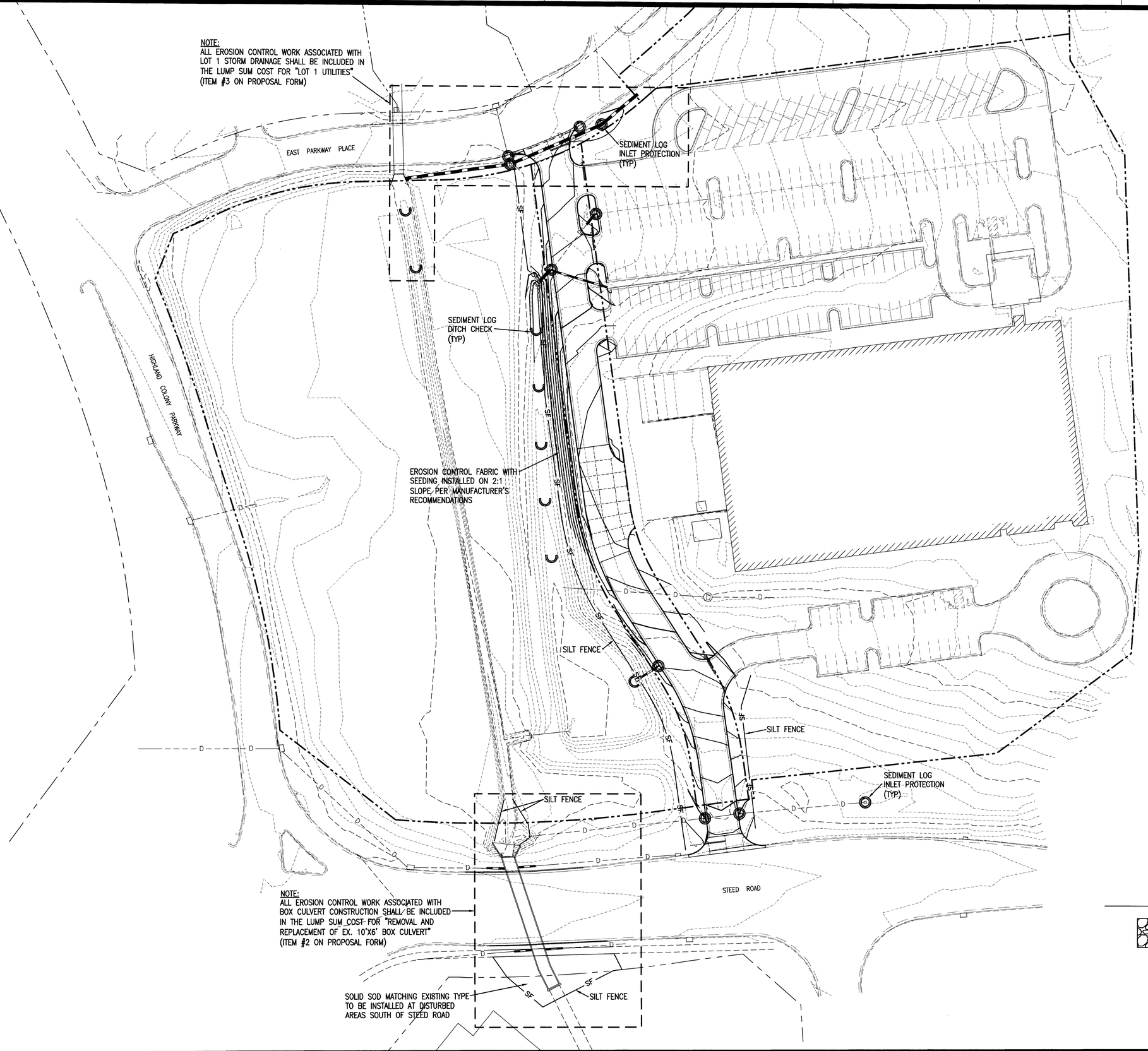
East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:

SHEET NUMBER:

C4.2

DESCRIPTION:
Box Culvert
Plan and Profile



REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying •
Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

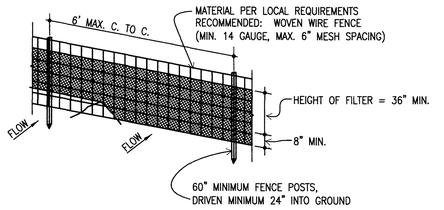
East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

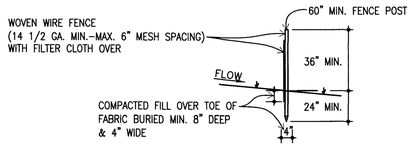
SEAL:

SHEET NUMBER:

C5.0

DESCRIPTION:
Erosion Control Plan





CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

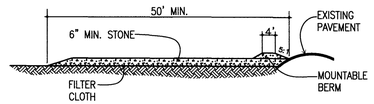
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO SILT FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY (6) INCHES AND FOLDED.
4. LOCATE POSTS DOWNSLOPE OF FABRIC FOR FENCE SUPPORT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

   POSTS: STEEL EITHER "T" OR "U" TYPE
   POSTS: LOCATED MAXIMUM 6' O. C.
   FENCE: PER LOCAL REQUIREMENTS OR WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING
   FILTER CLOTH: FILTER X, MIRAFI 100X, STABI-LINKA T140N OR APPROVED EQUAL.
   PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

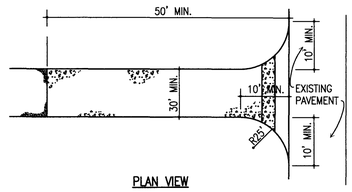
6. INDICATED ON EROSION CONTROL PLANS AS " —SF——SF— "

1 SILT FENCE EROSION PROTECTION

SCALE: NOT TO SCALE



PROFILE



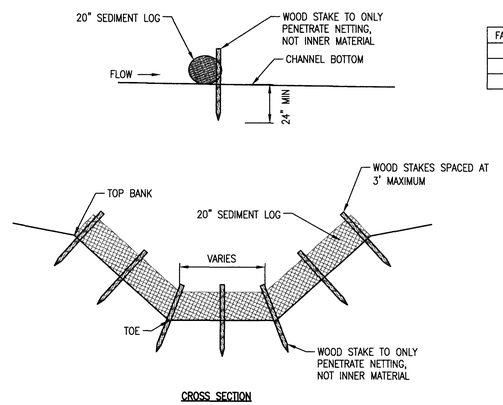
PLAN VIEW

STABILIZED CONSTRUCTION EXIT

1. STONE SIZE – USE #2 STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. DEPTH – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – THIRTY (30) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

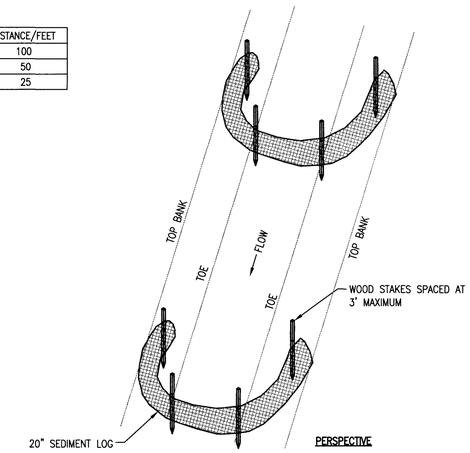
2 TEMPORARY CONSTRUCTION ROAD

SCALE: NOT TO SCALE



CROSS SECTION

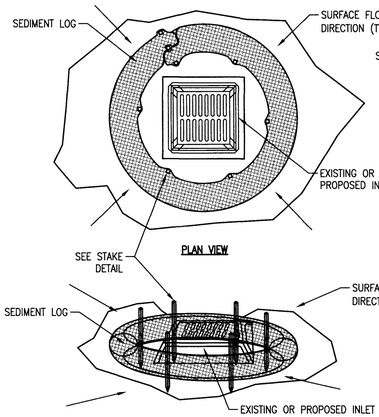
FALL OF DITCH (%)	DISTANCE/FEET
0 – 1	100
1 – 2	50
> – 2	25



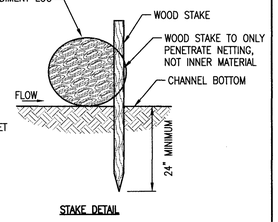
PERSPECTIVE

3 SEDIMENT LOG DITCH CHECK

SCALE: N.T.S.



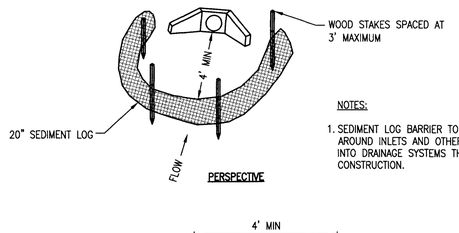
PLAN VIEW



STAKE DETAIL

4 SEDIMENT LOG INLET PROTECTION

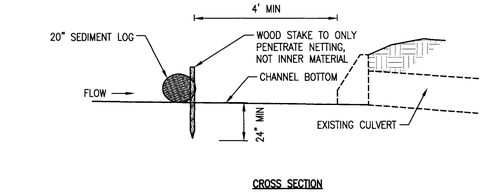
SCALE: NOT TO SCALE



PERSPECTIVE

NOTES:

1. SEDIMENT LOG BARRIER TO BE USED AROUND INLETS AND OTHER OPENINGS INTO DRAINAGE SYSTEMS THROUGHOUT CONSTRUCTION.



CROSS SECTION

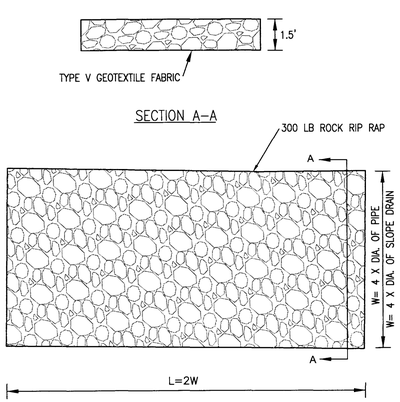
5 SEDIMENT LOG CULVERT SEDIMENT BARRIER

SCALE: N.T.S.

1. ALL NEWLY CUT AND/OR FILLED AREAS LACKING ADEQUATE VEGETATION SHALL BE SEEDED, FERTILIZED, MULCHED AND/OR SODDED AS REQUIRED TO EFFECTIVELY PREVENT SOIL EROSION. ALL SLOPES 3:1 OR STEEPER SHALL BE STABILIZED WITH PERMANENT EROSION CONTROL FABRIC APPROVED BY THE ENGINEER AND SEEDING OR SOLID SOD, STAKED IN PLACE.
2. SILT FENCES AND SEDIMENT LOGS SHALL BE USED AS SHOWN AND AS DIRECTED BY THE ENGINEER TO CONTROL SOIL EROSION.
3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION CONTROL DURING CONSTRUCTION BY THE PLACEMENT OF SILT FENCES AND/OR SEDIMENT LOGS WHERE NECESSARY TO PREVENT DOWNSTREAM SILTATION OF ANY DITCHES, PIPES, DRAINAGE STRUCTURES, OR ADJACENT PROPERTIES. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL EROSION CONTROL AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE STATE OF MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ) OFFICE OF POLLUTION CONTROL (OPC) STORM WATER CONSTRUCTION GENERAL PERMIT FOR ALL EROSION CONTROL DURING CONSTRUCTION ACTIVITIES.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES AND REPORTING ANY MAINTENANCE AS REQUIRED BY THE STATE OF MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ) OFFICE OF POLLUTION CONTROL (OPC) STORM WATER CONSTRUCTION GENERAL PERMIT DURING CONSTRUCTION ACTIVITIES.
6. PROVISIONS SHALL BE MADE TO PROTECT DOWNSTREAM WATERCOURSES (I.E., STORM SEWER SYSTEMS, DITCHES, WETLANDS, ETC.) FROM SEDIMENT RUNOFF DEVELOPED FROM THE CONSTRUCTION PROCESS. PROVISIONS INCLUDE, BUT ARE NOT LIMITED TO, STRUCTURAL CONTROLS SUCH AS SILT FENCING, GEOTEXTILE FABRIC PROTECTION OF STORM SEWERS, SEDIMENT LOGS, DIKES AND SANDBAG BERMS; AND/OR VEGETATION CONTROLS SUCH AS SEEDING OR EXISTING VEGETATIVE BUFFER STRIPS (MINIMUM 25 FEET WIDE).
7. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS.
8. A DROP INLET SEDIMENT TRAP WITH PERIMETER SILT FENCING OR PROPERLY INSTALLED SEDIMENT LOG BARRIERS IS THE RECOMMENDED METHOD OF INLET PROTECTION. SEDIMENT WILL BE REMOVED FROM THE EXCAVATED DROP INLET SEDIMENT TRAP AND RESTORED TO THE ORIGINAL DEPTH WHEN SEDIMENT ACCUMULATION HAS REACHED HALF THE DEPTH OF THE TRAP.
9. CONTRACTOR SHALL PERFORM DAILY STREET CLEANING ON ROADS AND STREETS ADJACENT TO THE PROJECT WHICH ARE USED AS ACCESS ROUTES FOR CONSTRUCTION TRAFFIC IF DIRT AND MUD IS NOT ADEQUATELY REMOVED FROM VEHICLES AT THE STABILIZED CONSTRUCTION EXIT.
10. LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORMWATER CONVEYANCE SYSTEMS. USE A MINIMUM 60 MIL POLYETHYLENE LINER UNDER ABOVE GROUND STORAGE TANKS. USE 2 FOOT HIGH BERMS AROUND FUEL STORAGE AREAS.
11. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL ENVIRONMENTAL LAWS.
12. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF FUELS, MATERIALS AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
13. CONTRACTOR SHALL INSPECT ALL STRUCTURAL CONTROLS WITHIN 24 HOURS AFTER ANY STORM EVENT THAT MEETS OR EXCEEDS 0.5 INCHES OF RAINFALL IN A 24 HOUR PERIOD. DURING PROLONGED RAINFALL EVENTS, CONTRACTOR SHALL INSPECT STRUCTURAL CONTROLS ON A DAILY BASIS. AT A MINIMUM, STRUCTURAL CONTROLS SHOULD BE INSPECTED ONCE EVERY 7 CALENDAR DAYS. A QUALIFIED REPRESENTATIVE OF THE CONTRACTOR, AS APPROVED BY THE OWNER, SHALL PROVIDE THESE INSPECTIONS. SHOULD CONTROLS BECOME INEFFECTIVE, NECESSARY REPAIRS SHALL BE PERFORMED TO RETURN THE INTEGRITY OF THE STRUCTURAL CONTROLS. REMOVE ALL SEDIMENT IF IT ACCUMULATES TO 1/3 THE HEIGHT OF THE SILT FENCE.
14. CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEMS THROUGHOUT THE DURATION OF THE CONTRACT.
15. CONTRACTOR WILL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS AND OTHER POTENTIALLY TOXIC MATERIALS.
16. EQUIPMENT STAGING AREA TO BE DESIGNATED BY CONTRACTOR AND APPROVED BY OWNER PRIOR TO CONSTRUCTION.
17. THE CONTRACTOR SHALL PROVIDE ALL EROSION CONTROL NECESSARY FOR UTILITY CONSTRUCTION, EVEN IF THE UTILITIES ARE OUTSIDE THE LIMITS OF GRADING OPERATIONS.
18. THE CONTRACTOR MUST COMPLETE SITE DEVELOPMENT PERMIT AND INSTALL ALL REQUIRED EROSION CONTROL MEASURES FOR INITIAL INSPECTION PRIOR TO SITE DISTURBANCE.

6 EROSION CONTROL NOTES

SCALE: NOT TO SCALE



7 ROCK RIP-RAP @ OUTLET STRUCTURE

SCALE: N.T.S.

REVISIONS:

1		
2		
3		
4		
5		

PROJECT #: 24449.02
DATE: 06-06-16
DRAWN BY: JB
DESIGNER: JJ
CHECKED BY: JJ

Pickering
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Facility Design • Civil Engineering • Surveying •
Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
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601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:

SHEET NUMBER:

C5.1

DESCRIPTION:
Construction Details–
Erosion Control

NOTE:
SANITARY SEWER AND COMMUNICATIONS WORK SHALL BE INCLUDED IN THE LUMP SUM COST FOR "LOT 1 UTILITIES" (ITEM #3 ON PROPOSAL FORM)

EAST PARKWAY PLACE

2-45 LF 4" COMMUNICATION CONDUITS (4' DEEP)

SSMH
TOP=364.50
INV 8" SW=353.96

108 LF 8" SDR-26
@ 1.35%

SSMH
TOP=362.60
INV 8" NE=352.50
INV 8" SW=352.40

40 LF 4" ELECTRICAL CONDUIT (4' DEEP)

SSMH (CUT-IN)
TOP=364.50
INV 8" E=350.60
INV 10"=350.50±
(FIELD VERIFY EXISTING 10" INV)

132 LF 8" SDR-26
@ 1.36%

EXISTING 10" SANITARY SEWER MAIN

SSMH 3245

HIGHLAND COLONY PARKWAY

SSMH 2210

SSMH 3250

SSMH 787

SSMH 799

SSMH 800

EXISTING 10" SANITARY SEWER MAIN
(inv. at road ℄ approx. 352.00)

STEED ROAD

SEWER MANHOLE 2210
TOP 358.40
IN(12")(E)347.50
OUT(12")(W)347.38

SEWER MANHOLE 3250
TOP 354.49
IN(6")(SE)349.58
IN(10")(E)348.89
IN(10")(N)348.51
OUT(12")(W)348.65
MANHOLE AND SEWER LINES ENCROACH ONTO SURVEYED PROPERTY OUTSIDE OF EXISTING EASEMENT

SEWER MANHOLE 800
TOP 366.25
IN(6")(N)361.84
OUT(10")(W)356.34

SEWER MANHOLE 799
TOP 371.27
IN(6")(N)366.18
OUT(6")(S)363.82

SEWER MANHOLE 787
TOP 372.19
IN(6")(E)366.34
IN(6")(W)366.30
OUT(6")(S)366.28

SEWER MANHOLE 3245
TOP 356.07
IN(10")(N)350.06
OUT(10")(S)349.96
COULD NOT LOCATE NEXT MANHOLE UPSTREAM

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THIS PLAN IN THE PROPOSED CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
2. WHEN PROPOSED CONSTRUCTION CONFLICTS WITH EXISTING UNDERGROUND UTILITIES WHICH ARE TO REMAIN IN SERVICE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROTECTING THESE FACILITIES, RESTORING SUCH LINES WHICH ARE DAMAGED AS A RESULT OF HIS/HER OPERATIONS, OR RELOCATING SUCH LINES IF NEEDED, AT NO ADDITIONAL COST TO THE OWNER OR CITY. REFER TO "MS 1-CALL UTILITY LOCATE REQUEST INFORMATION" NOTES ON SHEET 1 OF 1 ALTA/ACSM LAND TITLE SURVEY BY PFI, DATED 03-22-16 FOR ADDITIONAL EXISTING UTILITY INFORMATION.
3. ALL IMPROVEMENTS, RIGHTS OF WAY, AND EASEMENTS WILL BE PRIVATELY OWNED AND MAINTAINED UNTIL THEY ARE PROPERLY DEDICATED TO THE CITY OF RIDGELAND.
4. THE TRUCK/HAUL ROUTE FOR THIS PROJECT IS FROM STEED ROAD TO THE I-55 FRONTAGE ROADS. NO TRUCKS WILL BE ALLOWED ON HIGHLAND COLONY PARKWAY OR STEED ROAD EAST OF I-55 EAST FRONTAGE ROAD.

NORTH
0 20 40 80
1 INCH = 40 FEET

REVISIONS:

PROJECT #:	24449.02
DATE:	06-06-16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

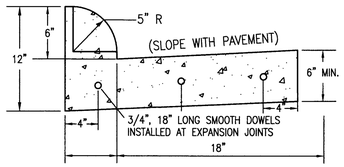
Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying •
Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:
JONATHAN A. JOHNSON
LICENSED PROFESSIONAL ENGINEER
20252
STATE OF MISSISSIPPI

SHEET NUMBER:
C6.0

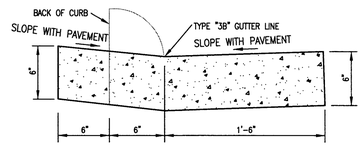
DESCRIPTION:
Utility Plan



NOTE:
CONCRETE SHALL BE 4,000 PSI.

1 MODIFIED TYPE "3B" COMBINATION CURB & GUTTER

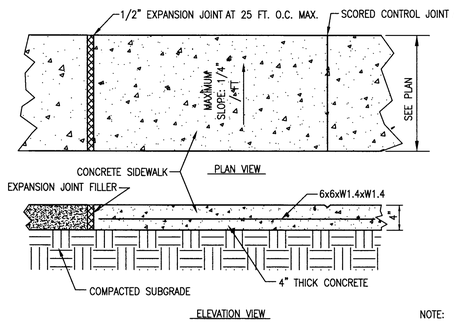
SCALE: NOT TO SCALE



NOTE: CONCRETE SHALL BE 4,000 PSI

2 VALLEY GUTTER

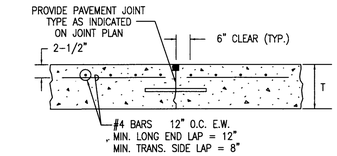
SCALE: NOT TO SCALE



NOTE: CONCRETE SHALL BE 4,000 PSI

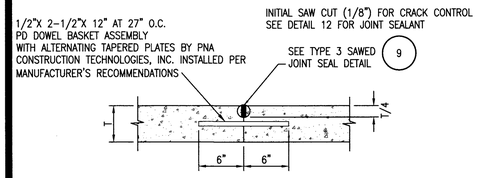
3 CONCRETE SIDEWALK

SCALE: NOT TO SCALE



4 REINFORCED ODD PANELS

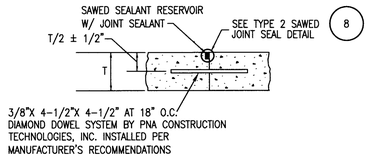
SCALE: NOT TO SCALE



NOTE:
1. CONTRACTION JOINTS TO BE SPACED ACCORDING TO PLANS.

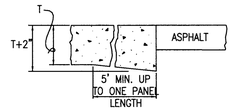
5 DOWELED CONTRACTION JOINT

SCALE: NOT TO SCALE



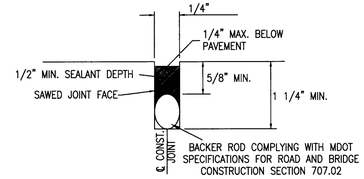
6 DOWELED CONSTRUCTION JOINT

SCALE: NOT TO SCALE



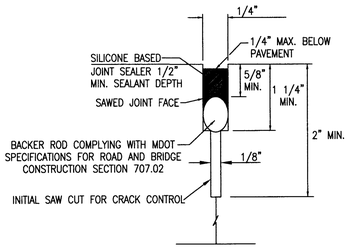
7 THICKENED EDGE

SCALE: NOT TO SCALE



8 SAWED JOINT SEAL - TYPE 2

SCALE: NOT TO SCALE



9 SAWED JOINT SEAL - TYPE 3

SCALE: NOT TO SCALE

REVISIONS:

PROJECT #: 24449.02
DATE: 06-06-16
DRAWN BY: JB
DESIGNER: JJ
CHECKED BY: JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

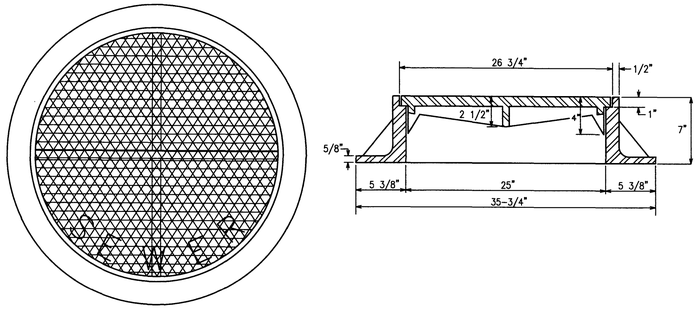
SEAL:

SHEET NUMBER:

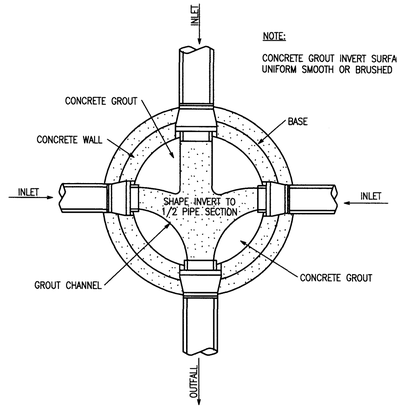
C7.0

DESCRIPTION:
Construction Details–Site

NOTE:
MANHOLE RING & COVER TO BE HEAVY DUTY
DEWS FOUNDRY DF – 25 (7) OR APPROVED EQUAL.

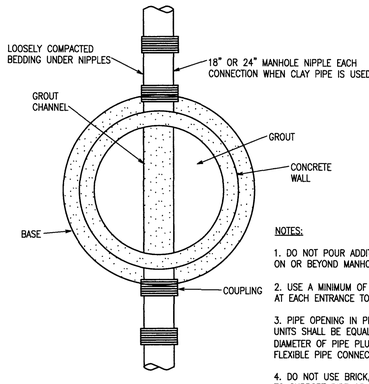


1 MANHOLE CASTING DETAILS
SCALE: NOT TO SCALE



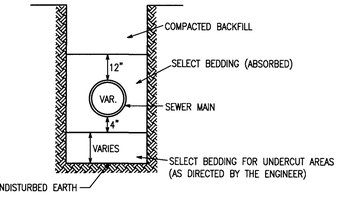
NOTE:
CONCRETE GROUT INVERT SURFACES TO HAVE UNIFORM SMOOTH OR BRUSHED FINISH.

4 MANHOLE FLOW CHANNELS DETAIL
SCALE: NOT TO SCALE



NOTES:
1. DO NOT POUR ADDITIONAL CONCRETE ON OR BEYOND MANHOLE NIPPLE.
2. USE A MINIMUM OF ONE (1) NIPPLE AT EACH ENTRANCE TO MANHOLE.
3. PIPE OPENING IN PRE-CAST CONCRETE UNITS SHALL BE EQUAL TO OUTSIDE DIAMETER OF PIPE PLUS 6" MAXIMUM, IF FLEXIBLE PIPE CONNECTORS ARE NOT USED.
4. DO NOT USE BRICK, BLOCK OR TIMBER TO SUPPORT PIPE OR NIPPLES OUTSIDE OF MANHOLE.

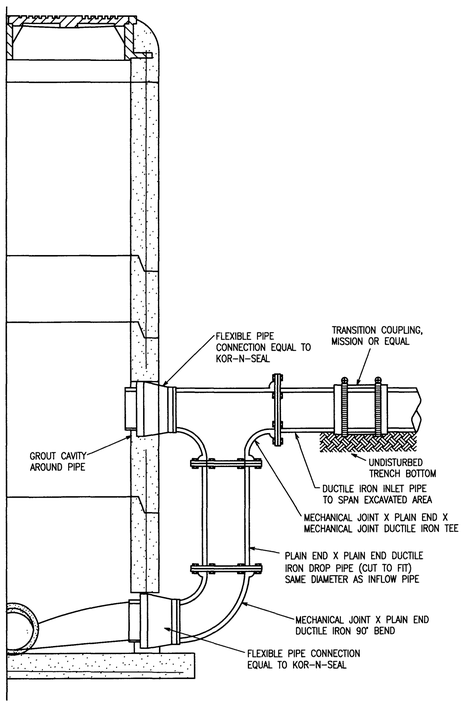
5 TYPICAL PIPE CONNECTION TO MANHOLE
SCALE: NOT TO SCALE



NOTE:
1. NATIVE MATERIAL SHALL BE USED FOR TRENCH BACKFILL UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

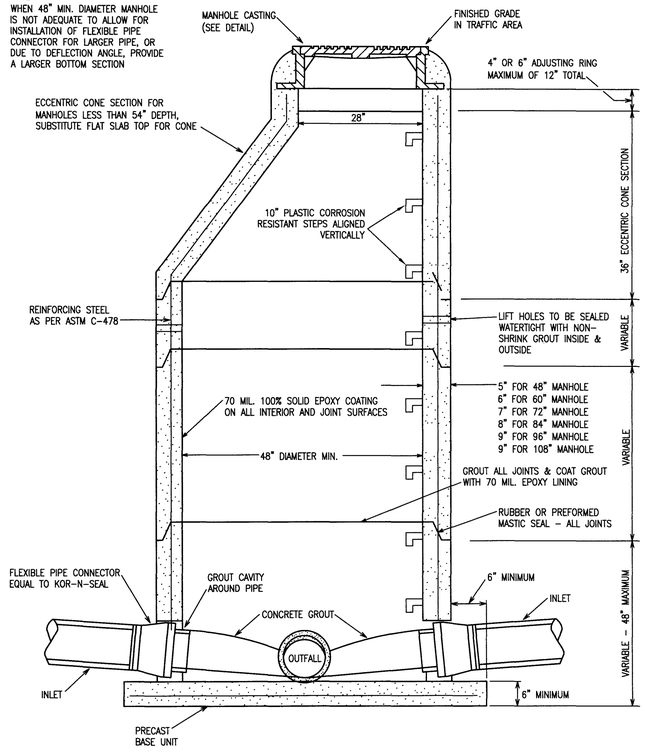
2. SELECT MATERIAL SHALL BE USED FOR TRENCH BACKFILL WHEN NATIVE MATERIAL IS UNSUITABLE AND FOR ALL TRENCHES CONSTRUCTED IN ROADWAYS.

6 BEDDING / BACKFILL GRAVITY SEWER
SCALE: NOT TO SCALE



2 SECTION PRECAST CONCRETE MANHOLE WITH DROP CONNECTION
SCALE: NOT TO SCALE

NOTE:
WHEN 48" MIN. DIAMETER MANHOLE IS NOT ADEQUATE TO ALLOW FOR INSTALLATION OF FLEXIBLE PIPE CONNECTOR FOR LARGER PIPE, OR DUE TO DEFLECTION ANGLE, PROVIDE A LARGER BOTTOM SECTION



3 SECTION PRECAST CONCRETE MANHOLE
SCALE: NOT TO SCALE

REVISIONS:

PROJECT #: 24449.02
DATE: 06-06-16
DRAWN BY: JB
DESIGNER: JJ
CHECKED BY: JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
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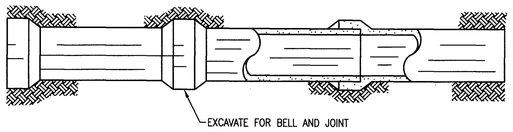
East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

SEAL:
JONATHAN A. JOHNSON
LICENSED PROFESSIONAL ENGINEER
20252
STATE OF MISSISSIPPI

SHEET NUMBER:
C7.1

DESCRIPTION:
Construction Details–
Sanitary Sewer



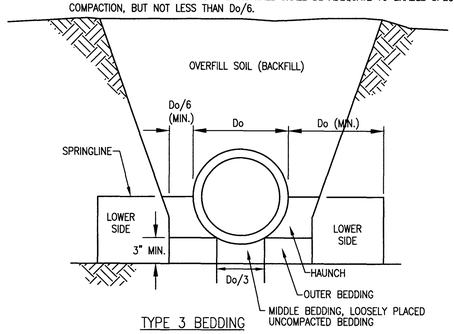
1. ALL ROUND REINFORCED CONCRETE STORM PIPES TO HAVE RUBBER GASKETS AND FILTER FABRIC TYPE V WRAPPED AT ALL JOINTS FOR FULL CIRCUMFERENCE OF PIPE WITH 18"–24" OVERLAP FOR CITY OF FLOWOOD APPROVAL IN FIELD.
2. ALL ARCHED REINFORCED CONCRETE PIPE TO HAVE MASTIC AND FILTER FABRIC WRAPPED AT ALL JOINTS FOR FULL CIRCUMFERENCE OF PIPE WITH 18"–24" OVERLAP FOR CITY OF FLOWOOD APPROVAL IN FIELD.
3. USE POPIT PLUG WITH TAR AND SQUARE TOP FILTER FABRIC TO COVER LIFTING HOLES.

1 STORM SEWER CONSTRUCTION
SCALE: NOT TO SCALE

NOTES:

1. BEDDING AND BACKFILL DETAILS ARE PER THE RECOMMENDATIONS OF THE AMERICAN CONCRETE PIPE ASSOCIATION.
2. HAUNCH, OUTER BEDDING, LOWER SIDE, AND OVERFILL SOIL SHALL BE:

   CATEGORY I (GRAVELLY SAND) COMPACTED TO 85% STANDARD PROCTOR,
   CATEGORY II (SANDY SILT) COMPACTED TO 90% STANDARD PROCTOR, OR
   CATEGORY III (SILTY CLAY) COMPACTED TO 95% STANDARD PROCTOR.
3. SOIL CATEGORIES I, II, AND III ARE AS DEFINED BY THE AMERICAN CONCRETE PIPE ASSOCIATION.
4. RUBBER GASKET JOINTS REQUIRED.
5. CLEARANCE BETWEEN PIPE AND TRENCH WALL SHALL BE ADEQUATE TO ENABLE SPECIFIC COMPACTION, BUT NOT LESS THAN Do/6.

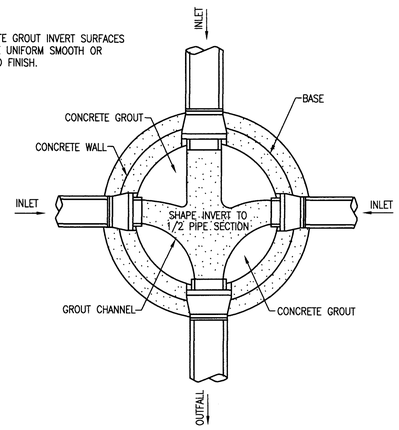


TYPE 3 BEDDING

2 CONCRETE PIPE BEDDING / BACKFILL
SCALE: N.T.S.

NOTE:

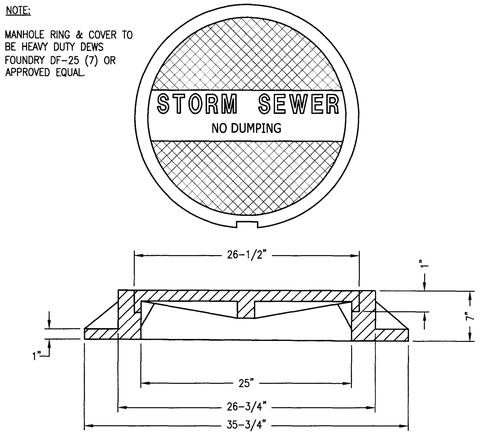
CONCRETE GROUT INVERT SURFACES TO HAVE UNIFORM SMOOTH OR BRUSHED FINISH.



3 MANHOLE FLOW CHANNELS
SCALE: NOT TO SCALE

NOTE:

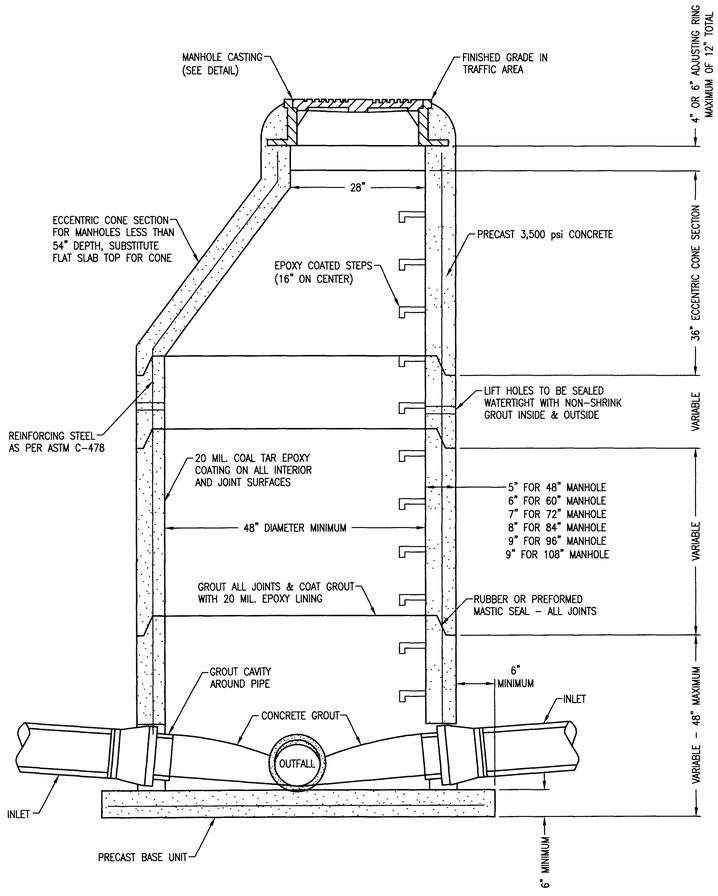
MANHOLE RING & COVER TO BE HEAVY DUTY DEWS FOUNDRY DF-25 (7) OR APPROVED EQUAL.



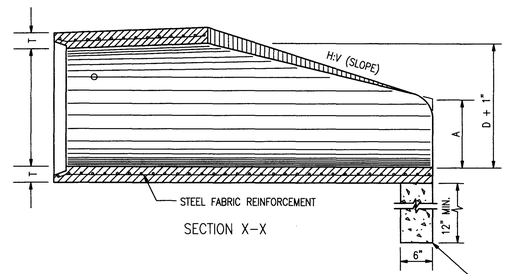
4 MANHOLE CASTING
SCALE: NOT TO SCALE

NOTE:

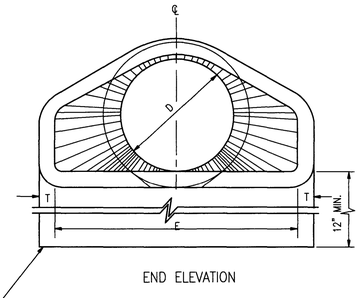
WHEN 48" MINIMUM DIAMETER MANHOLE IS NOT ADEQUATE TO ALLOW FOR INSTALLATION OF FLEXIBLE PIPE CONNECTOR FOR LARGER PIPE, OR DUE TO DEFLECTION ANGLE, PROVIDE A LARGER BOTTOM SECTION



5 DRAINAGE MANHOLE
SCALE: NOT TO SCALE



SECTION X–X

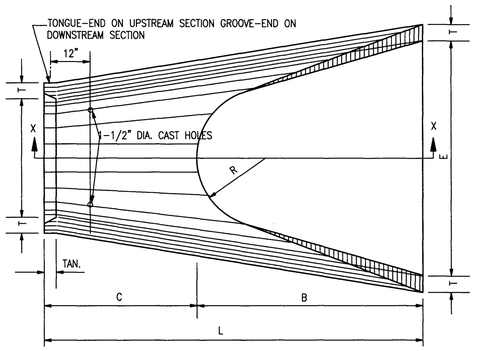


END ELEVATION

BELL AND SPIGOT END OPTION

NOTE: BELL–END ON DOWNSTREAM SECTION SPIGOT–END ON UPSTREAM SECTION.

TOE WALL REQUIRED ON ALL UPSTREAM AND DOWNSTREAM FLARED END SECTIONS.



PLAN OF DOWNSTREAM END

TABLE OF DIMENSIONS							
D	T	H:V	A	B	C	E	L
15"	2 1/4 "	3:1	6"	2'–3"	4'–1"	2'–8"	6'–1"
18"	2 1/2 "	3:1	9"	2'–3"	3'–10"	3'–0"	6'–1"
24"	3"	3:1	10"	3'–8"	2'–6"	4'–0"	6'–2"
30"	3 1/2 "	3:1	1'–0"	4'–6"	1'–8"	5'–0"	6'–2"
36"	4"	3:1	1'–3"	5'–3"	2'–11"	6'–0"	8'–2"
42"	4 1/2 "	3:1	1'–9"	5'–3"	2'–11"	6'–6"	8'–2"
48"	5"	3:1	2'–0"	6'–0"	2'–2"	7'–0"	8'–2"
54"	5 1/2 "	3:1	2'–4"	6'–6"	1'–10"	7'–6"	8'–4"
60"	6"	3:1	2'–10"	6'–6"	1'–10"	8'–0"	8'–4"
66"	6 1/2 "	3:1	3'–4"	6'–6"	1'–10"	8'–6"	8'–4"
72"	7"	3:1	3'–10"	6'–6"	1'–10"	9'–0"	8'–4"

* NOTE: SEE GENERAL NOTE 2.

GENERAL NOTES:

1. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M 170, TABLE 2, WALL B.
2. LENGTH (L) OF A BELL–END OPTION MAY VARY BY A NOMINAL EXTENSION ON THE BELL END.
3. ALL SIZES OF FLARED END SECTIONS FOR CIRCULAR CONCRETE PIPE MAY BE FURNISHED WITH EITHER BELL AND SPIGOT OR TONGUE AND GROOVE ENDS.

6 FLARED END SECTION - CONCRETE PIPE
SCALE: NOT TO SCALE

REVISIONS:

PROJECT #:	24449.02
DATE:	06–06–16
DRAWN BY:	JB
DESIGNER:	JJ
CHECKED BY:	JJ

Pickering
Pickering Firm, Inc.
Facility Design • Civil Engineering • Surveying • Transportation • Natural / Water Resources
2001 Airport Road, Suite 201
Flowood, MS 39232
601.956.3663

East Parkway Drive
aka
"Hederman Brothers Connector Road"
Ridgeland, Mississippi
Prepared for: AmFirst Holdings, Inc.

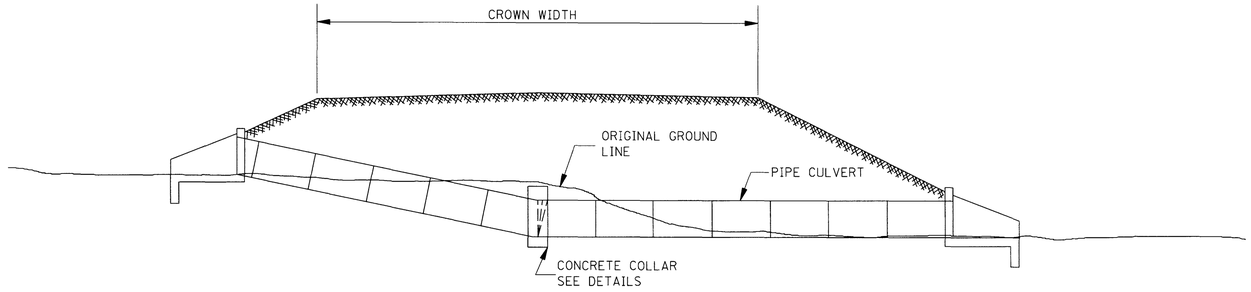
SEAL:

SHEET NUMBER:

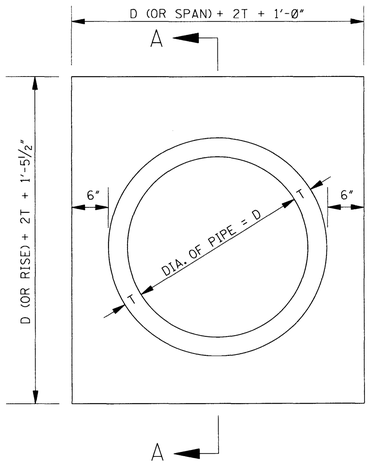
C7.2

DESCRIPTION:
Construction Details–Storm Sewer

STATE	PROJECT NO.
MISS.	

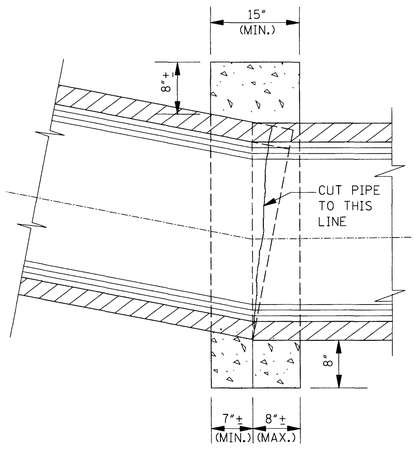


TYPICAL INSTALLATION FOR PIPE CULVERT WITH BROKEN FLOW LINE



ELEVATION OF CONCRETE COLLAR

NOTE: CIRCULAR PIPE IS SHOWN, ARCH PIPE IS SIMILAR.



SECTION A–A

GENERAL NOTE:

1. THE FOLLOWING QUANTITIES SHALL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE:

QUANTITIES FOR
CONCRETE COLLAR FOR PIPE CULVERTS

CIRCULAR PIPE		ARCH PIPE	
DIA. OF PIPE	CLASS "B" CONCRETE (yd^3)	SIZE OF PIPE	CLASS "B" CONCRETE (yd^3)
12"	0.240		
15"	0.260	18 x 11	0.280
18"	0.320	22 x 13	0.310
24"	0.410	29 x 18	0.410
30"	0.510	36 x 23	0.490
36"	0.620	44 x 27	0.600
42"	0.730	51 x 31	0.690
48"	0.850	58 x 36	0.820
54"	0.980	65 x 40	0.920
60"	1.110	73 x 45	1.070
66"	1.248	88 x 54	1.366
72"	1.393		

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

CONCRETE PIPE COLLAR

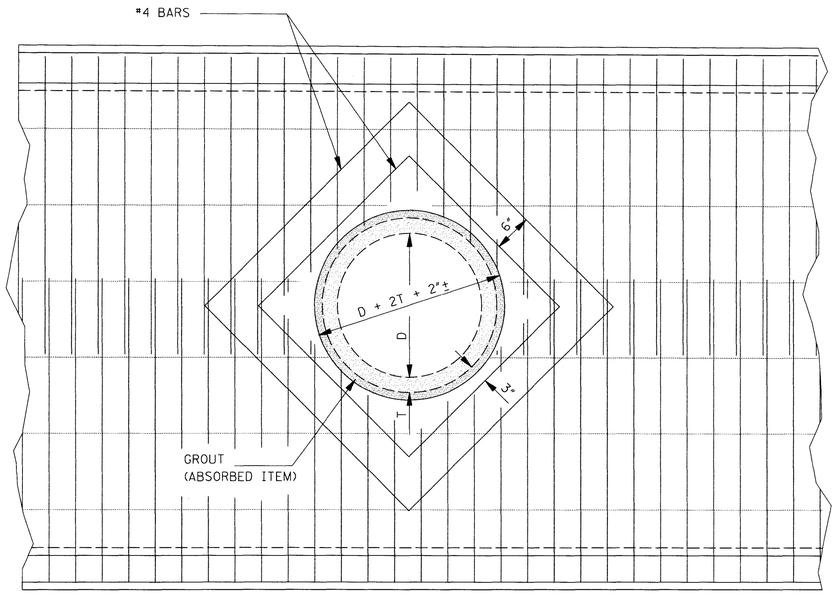
ENGLISH

WORKING NUMBER
PC-1

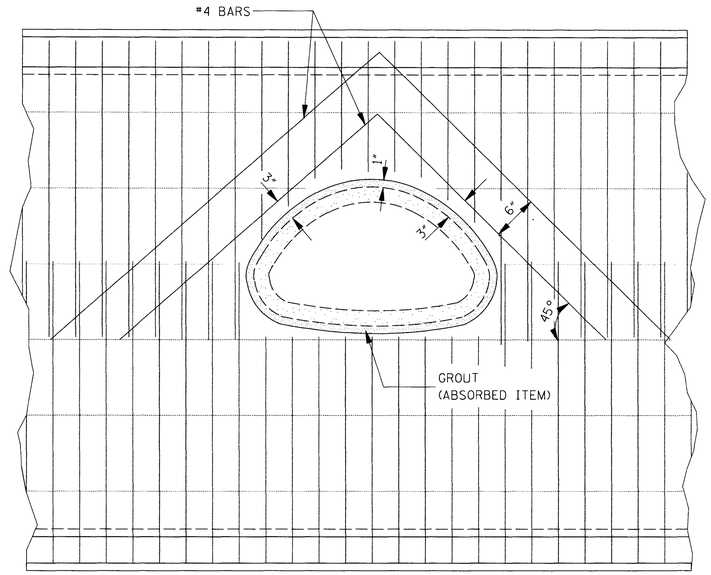
ISSUE DATE: OCTOBER 1, 1998

SHEET NUMBER
301

STATE	PROJECT NO.
MISS.	



ELEVATION SHOWING CIRCULAR PIPE STUBBED INTO BOX CULVERT BARREL OR WING–WALL



ELEVATION SHOWING ARCH PIPE STUBBED INTO BOX CULVERT BARREL OR WING–WALL

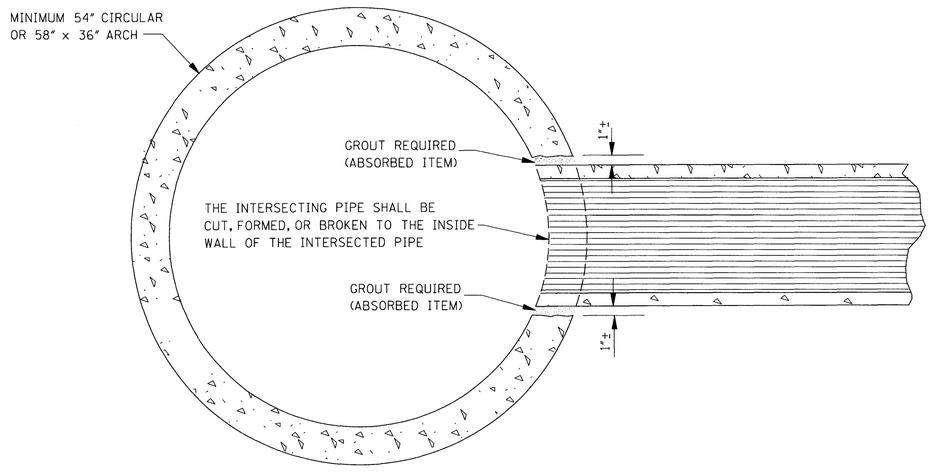
BAR LIST		
PIPE SIZE	#4 BARS	
	NO.	LGTH.
18"	4	2'-6"
	4	3'-6"
24"	4	3'-1"
	4	4'-1"
30"	4	3'-8½"
	4	4'-8½"
22" X 13"	2	3'-10"
	2	4'-9"
	1	5'-4"
29" X 18"	2	4'-6"
	2	5'-5"
	1	6'-3"

NOTE:

1. A 24" DIAMETER PIPE IS THE MAXIMUM SIZE THAT MAY BE STUBBED INTO A 54" DIAMETER PIPE.
2. A 60" DIAMETER PIPE IS THE MINIMUM SIZE THAT A 30" DIAMETER PIPE MAY BE STUBBED INTO.

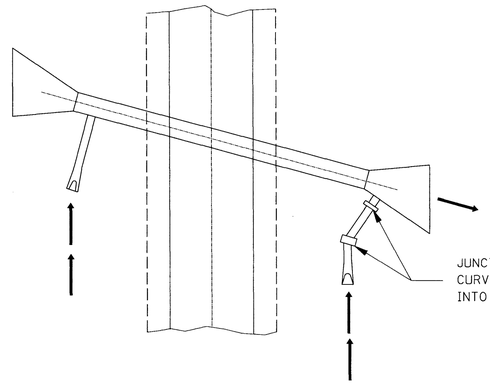
GENERAL NOTES:

1. PAYMENT FOR WORK AND MATERIALS FOR STUBBING A PIPE CULVERT INTO A BOX CULVERT OR CONCRETE PIPE SHALL BE PAID FOR AS A BRANCH CONNECTION OF THE APPROPRIATE SIZE, TYPE AND DESCRIPTION.
2. THE TABLE ON THIS SHEET INDICATES THE NUMBER AND LENGTHS OF ADDITIONAL REINFORCING STEEL BARS REQUIRED FOR BOX CULVERTS CONSTRUCTED. FOR A DOUBLE ROW OF REINFORCEMENT, DOUBLE THE NUMBER OF BARS SHOWN. THE ADDITIONAL REINFORCING STEEL SHALL BE INCLUDED IN THE COST FOR THIS TYPE OF BRANCH CONNECTION. THE QUANTITIES SHOWN IN THE TABLE ARE FOR THE MOST COMMON SIZES OF PIPE.
3. THE REINFORCEMENT OF THE INTERSECTED BOX OR PIPE SHALL BE CUT AS NECESSARY TO ACCOMMODATE THE STUBBED PIPE.
4. THE CONTRACTOR MAY INSERT THE INTERSECTING PIPE INTO THE FORM AT THE PROPER LOCATION IN LIEU OF FORMING BY BLOCKING OUT.



ELEVATION SHOWING PIPE CULVERT STUBBED INTO CONCRETE PIPE CULVERT

NOTE: TYPICAL INSTALLATION FOR MEDIAN STUB TO CROSSING DRAIN WITH MINIMUM COVER.



TYPICAL PLAN OF BRANCH CONNECTION TO BOX CULVERT WING–WALL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

BRANCH CONNECTIONS

ENGLISH

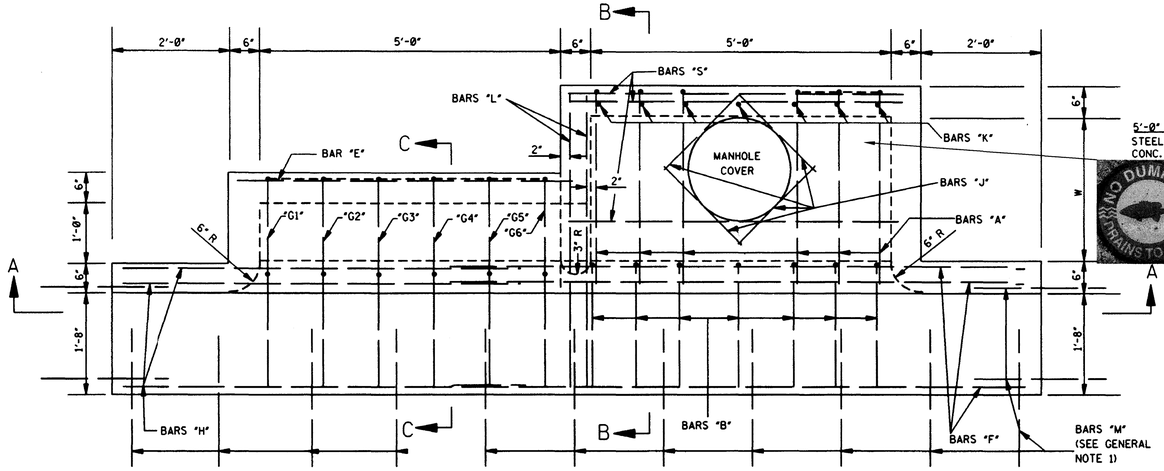
WORKING NUMBER
BC-1

SHEET NUMBER
305

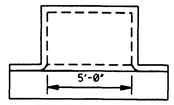
BY | REVISION | DATE

ISSUE DATE: OCTOBER 1, 1998

STATE	PROJECT NO.
MISS.	



PLAN

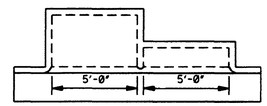


REGULAR INLET

5'-0" INLET
STEEL = 8.68W + 9.35Y + 3.79W' + 7.57H' + 121
CONC. = (WY + 5.5W + 6Y + 14.611)/27

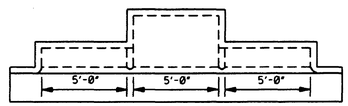
ADD "NO DUMPING DRAINS TO RIVER" SEAL TO INLET TOP

ADD. CONCRETE PER FOOT OF H		ADD. CONCRETE PER FOOT OF W	
W	yd³/ft	H	yd³/ft
2'-6"	0.315	3'-6"	0.315
3'-0"	0.333	4'-0"	0.333
3'-6"	0.352	4'-6"	0.352
4'-0"	0.371	5'-0"	0.370
4'-6"	0.389	5'-6"	0.389
5'-0"	0.408	6'-0"	0.408
5'-6"	0.426	6'-6"	0.426
6'-0"	0.445	7'-0"	0.445
6'-6"	0.463	7'-6"	0.463
7'-0"	0.481	8'-0"	0.482
		8'-6"	0.500



INLET WITH ONE EXTENSION

10'-0" INLET
STEEL = 8.68W + 9.35Y + 3.79W' + 7.57H' + 231
CONC. = (WY + 5.5W + 6Y + 38.641)/27



INLET WITH TWO EXTENSIONS

15'-0" INLET
STEEL = 8.68W + 9.35Y +3.79W' + 7.57H' +341
CONC = (WY + 5.5W + 6Y + 62.671)/27

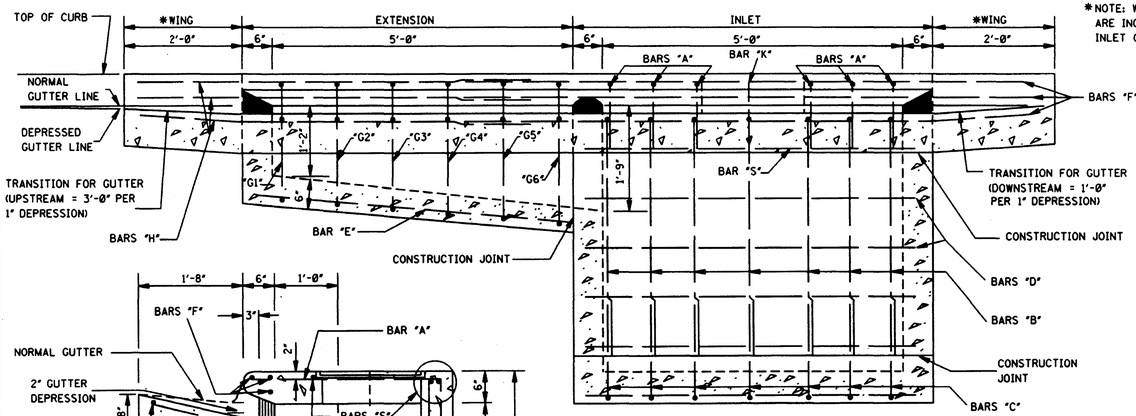
NOTES:
1. W AND H ARE EXPRESSED IN DECIMAL FEET.
2. W' = W ROUNDED TO NEAREST WHOLE FOOT.
3. Y = (H-0.5).
4. H' = (H - 2.08) ROUNDED TO NEAREST WHOLE FOOT.
5. NO DEDUCTIONS ARE MADE FOR PIPE OPENINGS IN FORMULAS.

PLAN OF INLET AND EXTENSIONS

QUANTITIES FOR ONE EXTENSION					
BAR	SIZE	LENGTH	SPACING	NUMBER	†WEIGHT
"E"	#4	5'-8"	AS SHOWN	3	11
"G"	#4	SEE SCHEDULE	0'-11"	6	34
"H"	#6	6'-9"	AS SHOWN	5	51
"L"	#6	4'-9"	AS SHOWN	2	14
TOTAL STEEL FOR ONE EXTENSION = 110 lbs					
TOTAL CONCRETE FOR ONE EXTENSION = 0.89 yd³					

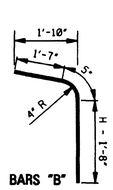
†NOTE: WHERE EXTENSION IS USED WITH CONCRETE PAVEMENT, ADD 27 lbs OF STEEL FOR BARS "M".

BAR "G" SCHEDULE	
BAR "G"	LENGTH
"G1"	7'-10"
"G2"	8'-0"
"G3"	8'-2"
"G4"	8'-5"
"G5"	8'-8"
"G6"	8'-10"

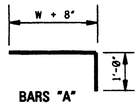


SECTION A–A

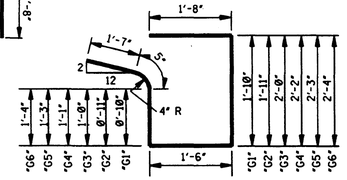
*NOTE: WING QUANTITIES ARE INCLUDED IN INLET QUANTITIES.



BARS "B"

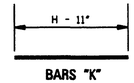


BARS "A"



BARS "G"

BARS "C"



BARS "K"

BAR DETAILS

W=2'-6"	BILL OF REINFORCING STEEL FOR 1-5'-0" INLET																	
H	BAR "A" L = 4'-2" #4 @ 9"		BAR "C" L = 5'-8" #4 @ 9"		BAR "S" L = 5'-8" #4 @ 12"		BAR "D" L = 5'-8" #4 @ 12"±		BAR "F" L=9'-8" #6		BAR "J" L=2'-3" #4		BAR "B" #4 @ 9"			BAR "K" #4 @ 9"±			*TOTAL STEEL	TOTAL CONC.
	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	LGTH.	NO.	lbs	LGTH.	NO.	lbs	lbs	yd³
3'-6"	6	17	7	27	5	19	5	19	5	73	4	6	3'-10"	7	18	2'-7"	7	12	190	1.99
4'-0"	6	17	7	27	5	19	7	26	5	73	4	6	4'-4"	7	20	3'-1"	7	14	202	2.15
4'-6"	6	17	7	27	5	19	7	26	5	73	4	6	4'-10"	7	23	3'-7"	7	17	207	2.31
5'-0"	6	17	7	27	5	19	9	34	5	73	4	6	5'-4"	7	25	4'-1"	7	19	219	2.47
5'-6"	6	17	7	27	5	19	9	34	5	73	4	6	5'-10"	7	27	4'-7"	7	21	224	2.62
6'-0"	6	17	7	27	5	19	11	42	5	73	4	6	6'-4"	7	30	5'-1"	7	24	238	2.78
6'-6"	6	17	7	27	5	19	11	42	5	73	4	6	6'-10"	7	32	5'-7"	7	26	240	2.94
7'-0"	6	17	7	27	5	19	13	49	5	73	4	6	7'-4"	7	34	6'-1"	7	28	253	3.10
7'-6"	6	17	7	27	5	19	13	49	5	73	4	6	7'-10"	7	37	6'-7"	7	31	257	3.25

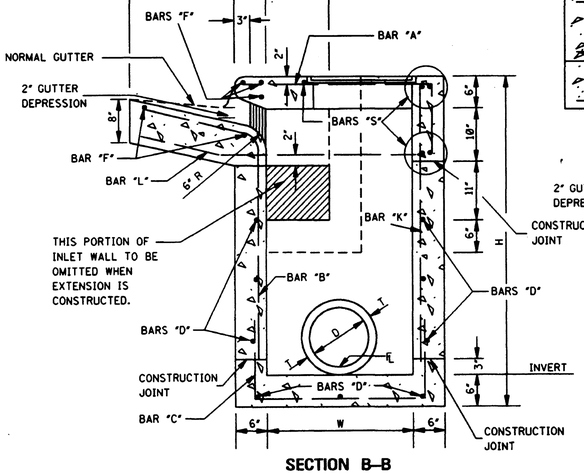
W=3'-0"	BILL OF REINFORCING STEEL FOR 1-5'-0" INLET																	
H	BAR "A" L = 4'-8" #4 @ 9"		BAR "C" L = 6'-2" #4 @ 9"		BAR "S" L = 5'-8" #4 @ 12"		BAR "D" L = 5'-8" #4 @ 12"±		BAR "F" L=9'-8" #6		BAR "J" L=2'-3" #4		BAR "B" #4 @ 9"			BAR "K" #4 @ 9"±			*TOTAL STEEL	TOTAL CONC.
	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	LGTH.	NO.	lbs	LGTH.	NO.	lbs	lbs	yd³
3'-6"	6	19	7	29	5	19	5	19	5	73	4	6	3'-10"	7	18	2'-7"	7	12	194	2.15
4'-0"	6	19	7	29	5	19	7	26	5	73	4	6	4'-4"	7	20	3'-1"	7	14	206	2.32
4'-6"	6	19	7	29	5	19	7	26	5	73	4	6	4'-10"	7	23	3'-7"	7	17	211	2.49
5'-0"	6	19	7	29	5	19	9	34	5	73	4	6	5'-4"	7	25	4'-1"	7	19	223	2.65
5'-6"	6	19	7	29	5	19	9	34	5	73	4	6	5'-10"	7	27	4'-7"	7	21	228	2.82
6'-0"	6	19	7	29	5	19	11	42	5	73	4	6	6'-4"	7	30	5'-1"	7	24	240	2.99
6'-6"	6	19	7	29	5	19	11	42	5	73	4	6	6'-10"	7	32	5'-7"	7	26	245	3.15
7'-0"	6	19	7	29	5	19	13	49	5	73	4	6	7'-4"	7	34	6'-1"	7	28	257	3.32
7'-6"	6	19	7	29	5	19	13	49	5	73	4	6	7'-10"	7	37	6'-7"	7	31	262	3.49

W=3'-6"	BILL OF REINFORCING STEEL FOR 1-5'-0" INLET																	
H	BAR "A" L = 5'-2" #4 @ 9"		BAR "C" L = 6'-8" #4 @ 9"		BAR "S" L = 5'-8" #4 @ 12"		BAR "D" L = 5'-8" #4 @ 12"±		BAR "F" L=9'-8" #6		BAR "J" L=2'-3" #4		BAR "B" #4 @ 9"			BAR "K" #4 @ 9"±			*TOTAL STEEL	TOTAL CONC.
	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	NO.	lbs	LGTH.	NO.	lbs	LGTH.	NO.	lbs	lbs	yd³
3'-6"	6	21	7	31	5	19	6	23	5	73	4	6	3'-10"	7	18	2'-7"	7	12	202	2.31
4'-0"	6	21	7	31	5	19	8	30	5	73	4	6	4'-4"	7	20	3'-1"	7	14	214	2.49
4'-6"	6	21	7	31	5	19	8	30	5	73	4	6	4'-10"	7	23	3'-7"	7	17	219	2.66
5'-0"	6	21	7	31	5	19	10	38	5	73	4	6	5'-4"	7	25	4'-1"	7	19	231	2.84
5'-6"	6	21	7	31	5	19	10	38	5	73	4	6	5'-10"	7	27	4'-7"	7	21	236	3.01
6'-0"	6	21	7	31	5	19	12	45	5	73	4	6	6'-4"	7	30	5'-1"	7	24	248	3.19
6'-6"	6	21	7	31	5	19	12	45	5	73	4	6	6'-10"	7	32	5'-7"	7	26	253	3.37
7'-0"	6	21	7	31	5	19	14	53	5	73	4	6	7'-4"	7	34	6'-1"	7	28	265	3.54
7'-6"	6	21	7	31	5	19	14	53	5	73	4	6	7'-10"	7	37	6'-7"	7	31	270	3.72

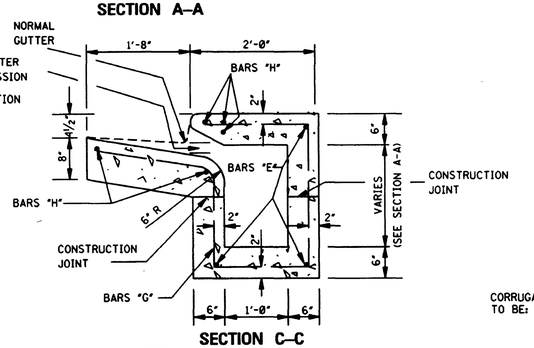
* NOTE: WHERE INLET IS USED WITH CONCRETE PAVEMENT, ADD 73 lbs OF STEEL FOR BARS "M".

GENERAL NOTES:

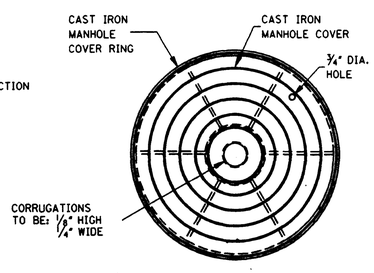
1. WHERE INLET OR INLET WITH EXTENSION(S) IS USED WITH CONCRETE PAVEMENT WITH INTERGRAL CURB, THE PAVEMENT IS TO BE BLOCKED OUT TO THE DIMENSIONS AS SHOWN FOR THE GUTTER PORTION OF THE INLET OR INLET WITH EXTENSION(S). THE PORTION BLOCKED OUT SHALL BE PLACED INTEGRAL WITH THE TOP OF THE INLET OR INLET WITH EXTENSION(S). #8 DEFORMED BARS 30" LONG SHALL BE PLACED ON 18" CENTERS AT THE CENTER OF THE PAVEMENT. THESE BARS SHALL EXTEND INTO THE GUTTER PORTION OF THE INLET OR INLET WITH EXTENSION(S) 15". THE CONSTRUCTION JOINT BETWEEN THE CONCRETE PAVEMENT AND THE INLET OR INLET WITH EXTENSION(S) SHALL BE A KEYED JOINT AS SHOWN. A SMOOTH CONSTRUCTION JOINT WILL NOT BE PERMITTED. QUANTITIES FOR BLOCKED OUT AREA OF PAVEMENT SHALL BE INCLUDED IN QUANTITIES FOR INLET OR INLET WITH EXTENSION(S).
2. THE STANDARD SPECIFICATIONS ADOPTED BY THE MISSISSIPPI DEPARTMENT OF TRANSPORTATION SHALL APPLY TO ALL ITEMS ON THIS SHEET.
3. THE QUANTITIES SHOWN, MINUS VOLUMETRIC DISPLACEMENT OF CONCRETE BY PIPE CULVERTS THROUGH INLET WALLS, WILL BE USED AS THE BASIS OF FINAL PAYMENT UNLESS THIS PLAN IS MODIFIED.
4. FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLE ARE INCREMENTS OF 6". BUT ANY DEPTHS OTHER THAN THESE SHOWN MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS, FALLING WITHIN THE LIMITS OF THE TABLE, MAY BE FOUND BY INTERPOLATION.
5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMMODATE STORM SEWER. NO DEDUCTIONS ARE TO BE MADE IN STEEL QUANTITIES.



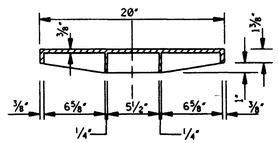
SECTION B–B



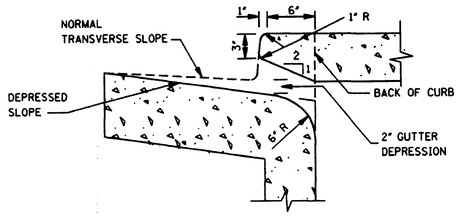
SECTION C–C



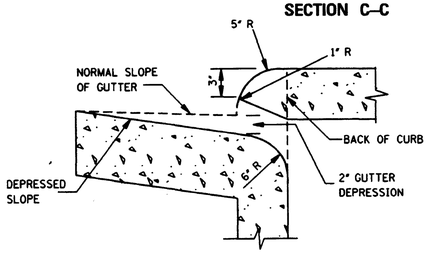
PLAN



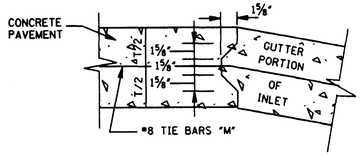
SECTION THRU MANHOLE COVER



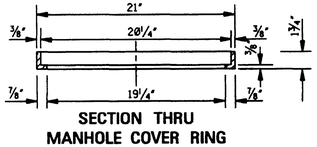
THROAT DETAIL OF BARRIER CURB



THROAT DETAIL OF ROLLED CURB



DETAIL OF KEYED CONSTRUCTION JOINTS
NOTE: FIELD BEND BARS "L" TO CENTER OF GUTTER SECTION



SECTION THRU MANHOLE COVER RING
NOTE: WEIGHT OF RING & COVER = 79 lbs

JONATHAN A. JOHNSON LICENSED PROFESSIONAL ENGINEER 20252 STATE OF MISSISSIPPI

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

STORM SEWER STRUCTURE TYPE SS-2

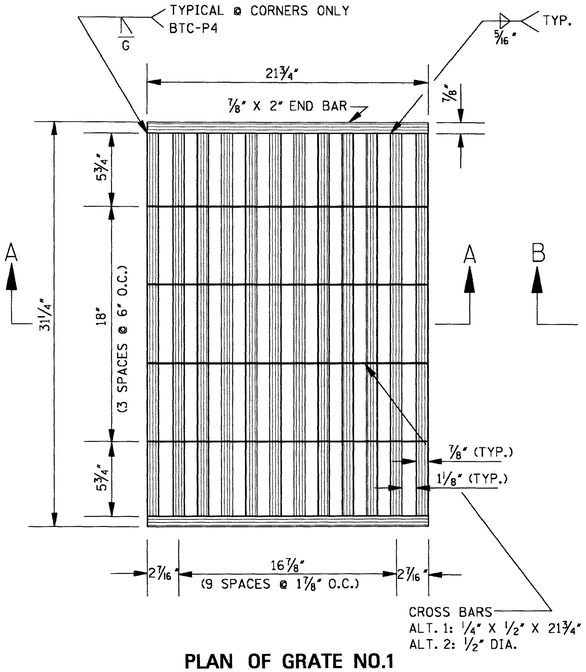
ENGLISH

WORKING NUMBER SS-2

ISSUE DATE: OCTOBER 1, 1998

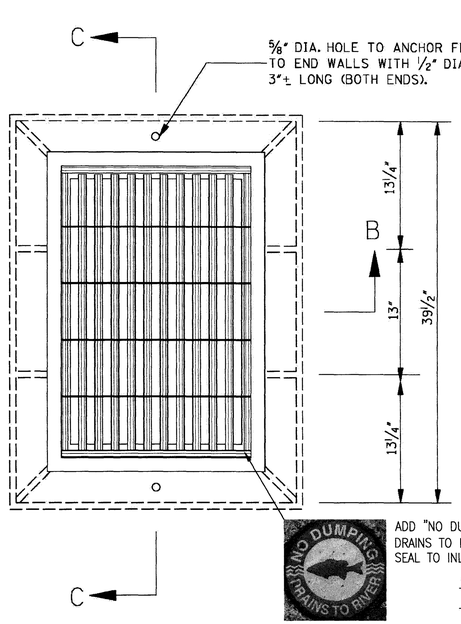
SHEET NUMBER 322

STATE	PROJECT NO.
MISS.	

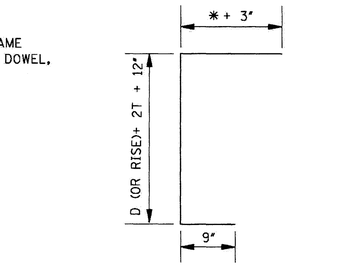


PLAN OF GRATE NO.1

NOTE: FOR OTHER GRATE DETAILS SEE SHEET IG-2.

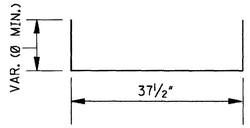


PLAN OF INLET



8 #4 BARS,
0.5[D(OR SPAN)+2D(OR RISE)+6T+38"] LONG

BARS "A"



4 #4 BARS, VAR. LENGTH

BARS "U"

"B", #4 BARS	37 1/2"
"C", 2 #4 BARS	28"
"D", 6 #4 BARS	D (OR SPAN) + 2T + 18"

BARS "B", "C" & "D"

BAR DETAILS

*NOTE:

$$* \left[\frac{D \text{ (OR SPAN)} + 2T - 10"}{2} \right]$$

QUANTITIES

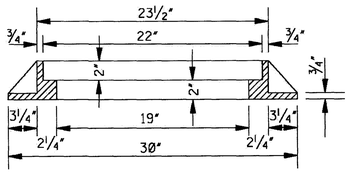
PIPE SIZE	MIN. DEPTH TO F.L.	MIN. DEPTH INLET CONC. (yd^3)	MIN. DEPTH INLET STEEL (lbs)	PIPE OPENING DEDUCTION (yd^3)	T	BARS/SIZES "A" #4 NO. @ LGTH.	"B" #4 NO. @ LGTH.	"C" #4 NO. @ LGTH.	"D" #4 NO. @ LGTH.	"U" #4 NO. @ LGTH.
18"	2.792'	0.869	76	0.053	2 1/2"	8 @ 4'-5 1/2"	12 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 3'-5"	4 @ 3'-9 1/2"
24"	3.334'	1.117	87	0.091	3"	8 @ 5'-4"	14 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 4'-0"	4 @ 3'-9 1/2"
30"	3.875'	1.385	94	0.138	3 1/2"	8 @ 6'-2 1/2"	14 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 4'-7"	4 @ 3'-9 1/2"
36"	4.417'	1.671	105	0.196	4"	8 @ 7'-1"	16 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 5'-2"	4 @ 3'-9 1/2"
42"	4.959'	1.978	116	0.263	4 1/2"	8 @ 7'-11 1/2"	18 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 5'-9"	4 @ 3'-9 1/2"
48"	5.500'	2.305	123	0.340	5"	8 @ 8'-10"	18 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 6'-4"	4 @ 3'-9 1/2"
54"	6.042'	2.650	135	0.427	5 1/2"	8 @ 9'-8 1/2"	20 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 6'-11"	4 @ 3'-9 1/2"
60"	6.583'	3.016	146	0.524	6"	8 @ 10'-7"	22 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 7'-6"	4 @ 3'-9 1/2"
66"	7.125'	3.402	153	0.630	6 1/2"	8 @ 11'-5 1/2"	22 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 8'-1"	4 @ 3'-9 1/2"
72"	7.667'	3.806	164	0.747	7"	8 @ 12'-4"	24 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 8'-8"	4 @ 3'-9 1/2"
22" X 13"	2.417'	0.855	76	0.053	2 1/2"	8 @ 4'-3"	12 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 3'-9"	4 @ 3'-9 1/2"
29" X 18"	2.833'	1.085	83	0.087	3"	8 @ 5'-0 1/4"	12 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 4'-4 1/2"	4 @ 3'-9 1/2"
36" X 23"	3.250'	1.358	94	0.129	3 1/2"	8 @ 5'-10"	14 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 5'-1"	4 @ 3'-9 1/2"
44" X 27"	3.635'	1.631	101	0.185	4"	8 @ 6'-7 1/2"	14 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 5'-10"	4 @ 3'-9 1/2"
51" X 31"	4.068'	1.942	113	0.245	4 1/2"	8 @ 7'-5 1/2"	16 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 6'-6"	4 @ 3'-9 1/2"
58" X 36"	4.500'	2.269	120	0.318	5"	8 @ 8'-3"	16 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 7'-2 1/2"	4 @ 3'-9 1/2"
65" X 40"	4.875'	2.575	130	0.394	5 1/2"	8 @ 9'-0"	18 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 7'-10"	4 @ 3'-9 1/2"
73" X 45"	5.333'	2.966	139	0.489	6"	8 @ 9'-10 1/2"	18 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 8'-7"	4 @ 3'-9 1/2"
88" X 54"	6.167'	3.765	156	0.688	7"	8 @ 11'-6"	20 @ 3'- 1 1/2"	2 @ 2'-4"	6 @ 10'-0"	4 @ 3'-9 1/2"

NOTES: 1. ONE (1) PIPE OPENING HAS BEEN DEDUCTED FROM THE STRUCTURE.

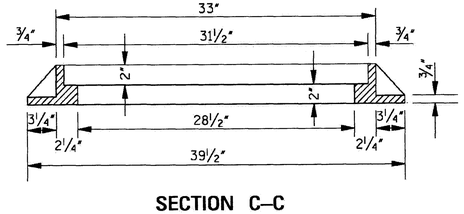
2. FOR EACH ADDITIONAL FOOT OF INLET HEIGHT, ADD 0.184 yd^3 CLASS "B" CONCRETE AND 17 lbs REINFORCING STEEL.

3. 4 BARS "B" AND 2 BARS "C" REQUIRED PER EACH ADDITIONAL FOOT OF INLET HEIGHT.

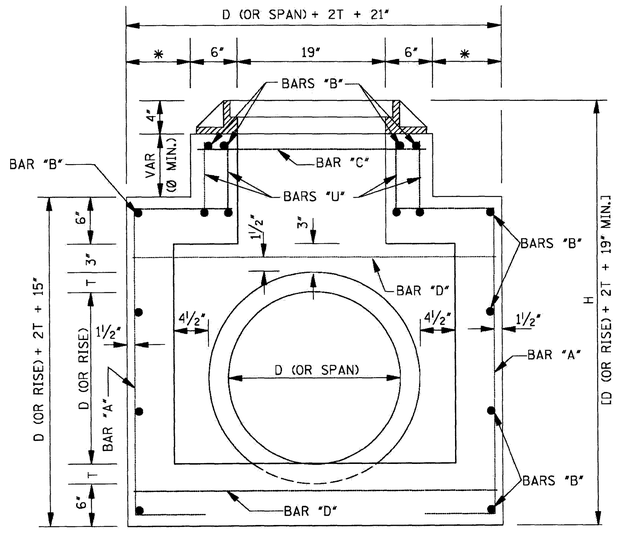
4. WEIGHT OF FRAME CASTING = 244 lbs.
WEIGHT OF GRATE = SEE SHEET IG-2.



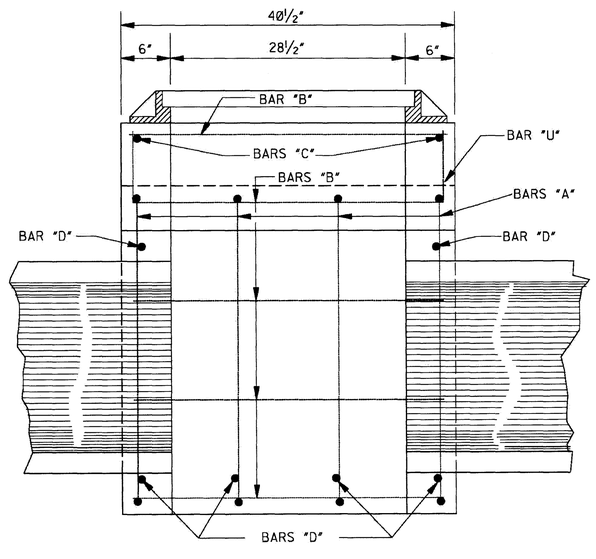
SECTION B–B
(FRAME)



SECTION C–C
(FRAME)



SECTION B–B



SECTION C–C

GENERAL NOTES:

1. QUANTITIES SHOWN WILL BE THE BASIS OF PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
2. CONCRETE SHALL BE CLASS "B" CONCRETE AND REINFORCING STEEL SHALL BE DEFORMED BARS.
3. THE CONTRACTOR HAS THE OPTION TO PROVIDE GRATE NO. 1 OR GRATE NO. 2 AS SHOWN ON SHEET IG-2.
4. FRAME TO BE GRAY IRON CASTING, (AASHTO M 105, CLASS 30).

BY | REVISION | DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

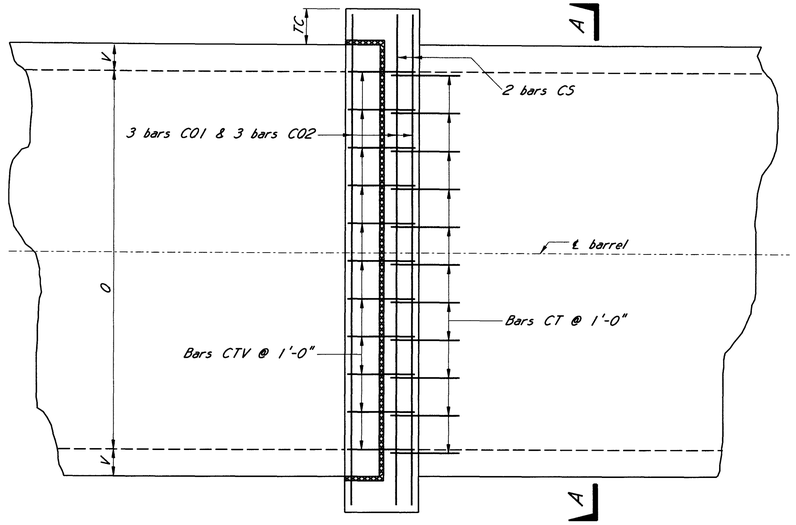
STORM SEWER INLET TYPE SS-3

DEPARTMENT OF TRANSPORTATION MISSISSIPPI ENGLISH

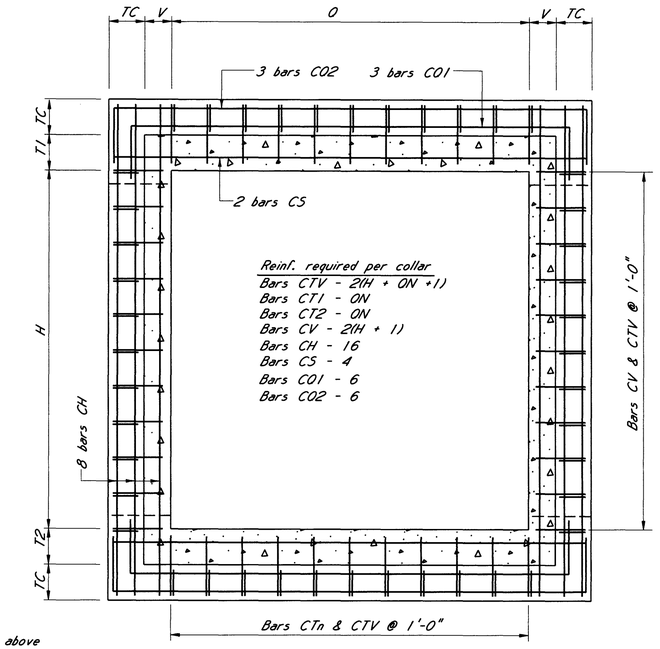
WORKING NUMB
SS-3

SHEET NUMBE
323

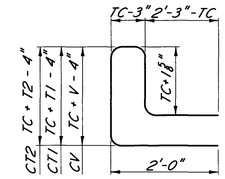
ISSUE DATE: OCTOBER 1, 1998



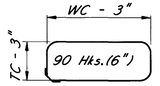
PLAN OF COLLAR



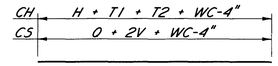
SECTION A-A



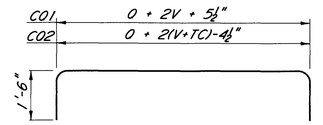
Bars CTn & CV - #5



BARS CTV - #5



BARS CH & CS - #4



BARS COn - #4

BAR BENDING DETAILS

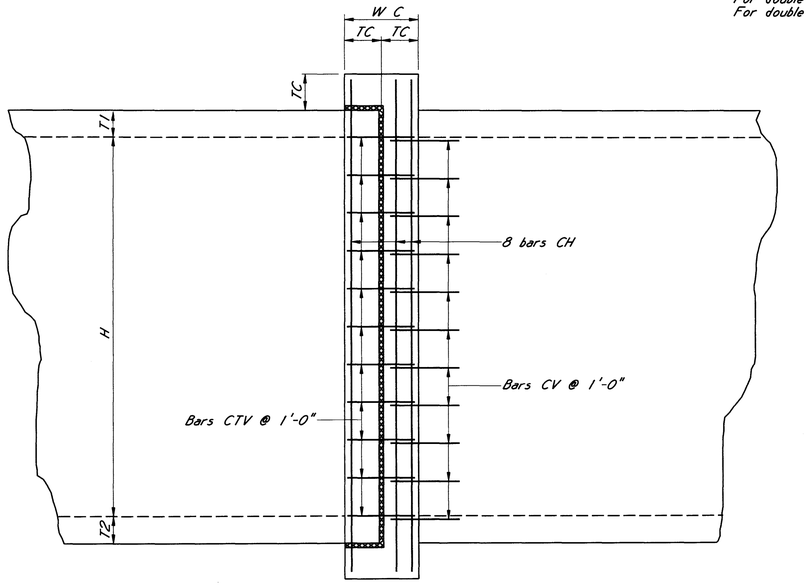
Dimensions are out to out

NOTE: See headwall details for collar quantities.

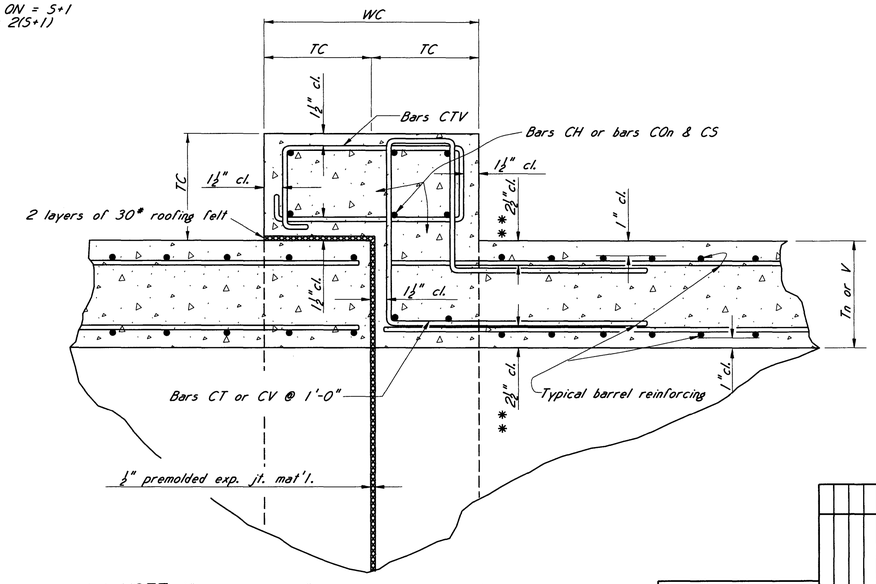
NOTE: For H = 6 Ft.
TC = 9"
WC = 1'-6"

NOTE: For H = 8 Ft. & above
TC = 1'-0"
WC = 2'-0"

NOTE: For single cell box: O = S (clear span), ON = S+1
For double cell box: O = 2(S)+V2, ON = 2(S+1)
For double cell box: V = V1



ELEVATION OF COLLAR



* * NOTE: 2½" cl. based on 1" cl. for typ. barrel reinf., this cl. shall be adjusted for cl. other than 1".

TYPICAL SECTION OF COLLAR

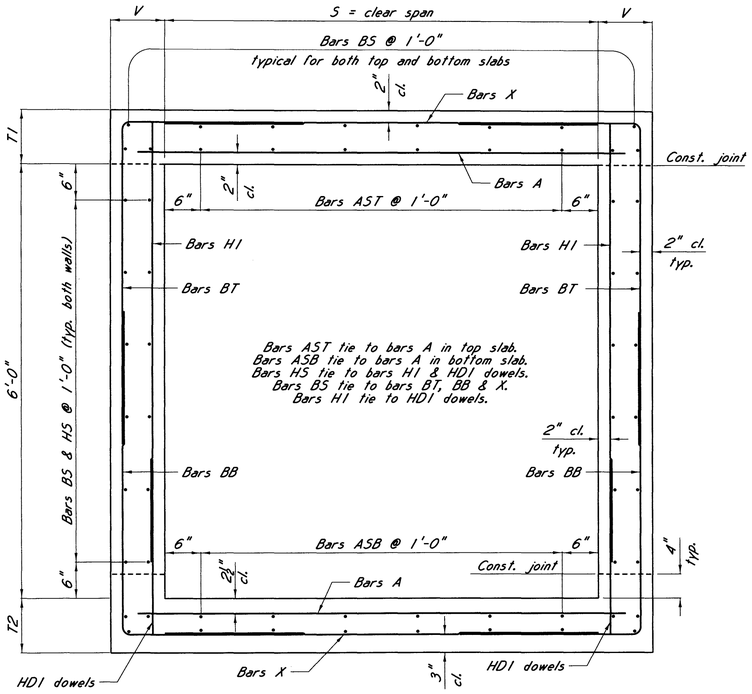
GENERAL NOTES:
This drawing is detailed for a single cell box structure, and double-cell box structures shall be treated similarly as shown.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
COLLAR DETAILS
FOR BOX STRUCTURES
(SINGLE & DOUBLE)

REVISIONS | BY | DATE

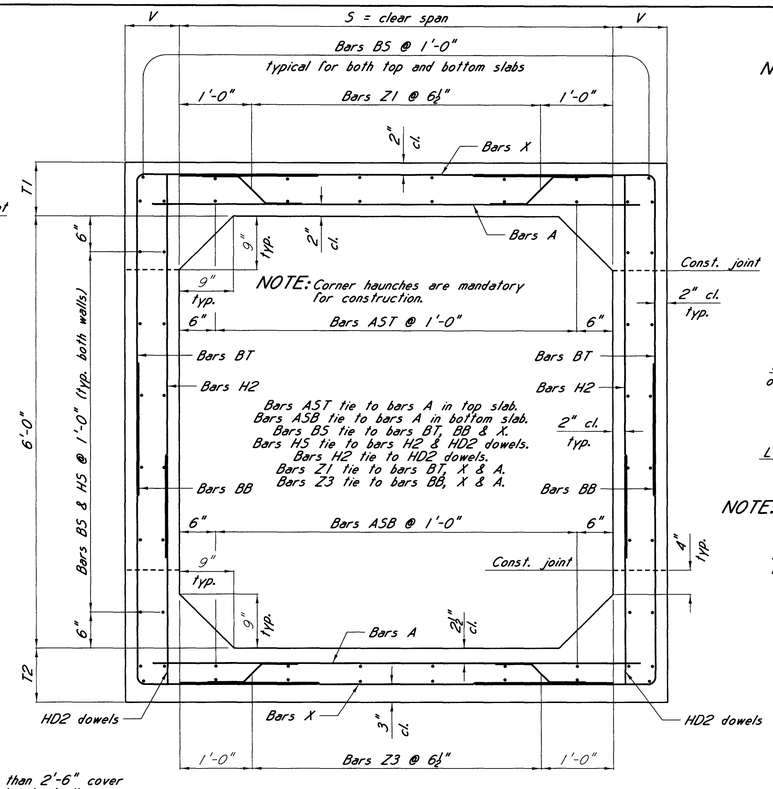
DESIGNER PAUL DEES, P.E. CHECKER PICKERING FIRM, INC.
DETAILER PAUL DEES, P.E. ISSUE DATE 1/1/2015
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.

WORKING NUMBER ICJ-1
SHEET NUMBER 7008



CROSS SECTION "A"

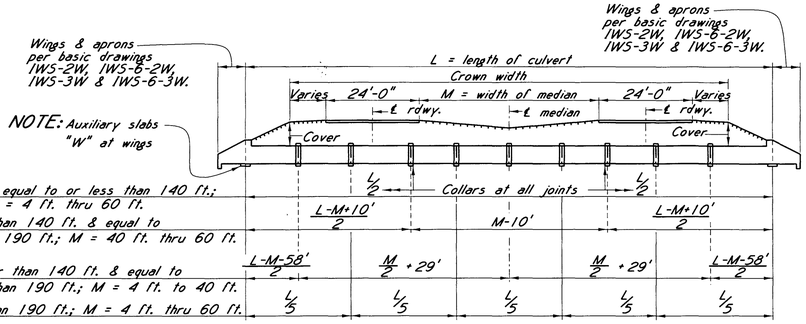
NOTE: Box culverts with less than 2'-6" cover will have to be designed individually.



CROSS SECTION "B"

NOTE: Where cover is 8 ft. or less and a joint occurs within the limits of 5 ft. beyond each edge of pavement, use complete collar at joints per basic drawing ICJ-1 or ICJS-1.

NOTE: See basic drawing IBJL-1 for additional collar locations.

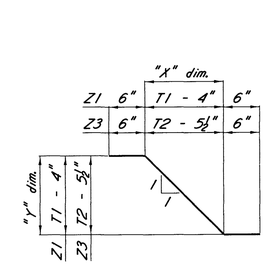


SIDE ELEVATION OF CULVERT

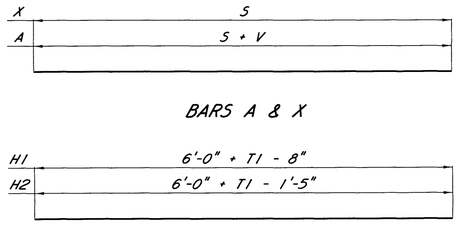
Showing collar locations.
Drawn for L = 150 ft. and M = 60 ft.

NOTE: Joints shall not be located closer than 5 ft. outside of pavement for cover of 8 ft. or less except in the cases where median is less than 10 ft. where cover exceeds 8 ft. joints may be located without regards to pavement edge.

NOTE: For reinforcing required in parapet & wingwalls to be placed prior to barrel construction, see basic drawings IWS-2W, IWS-6-2W, IWS-3W & IWS-6-3W.

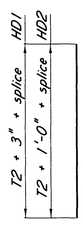


BARS Zn

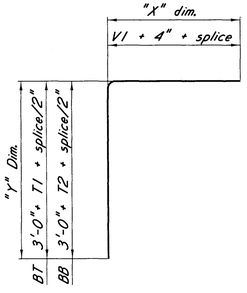


BARS A & X

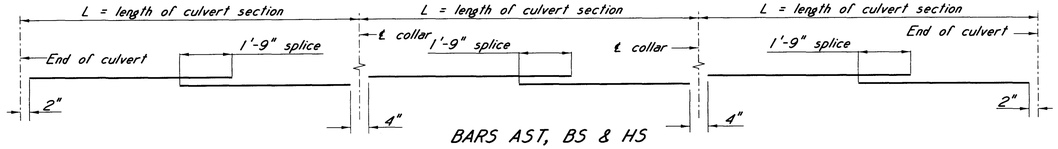
BARS Hn



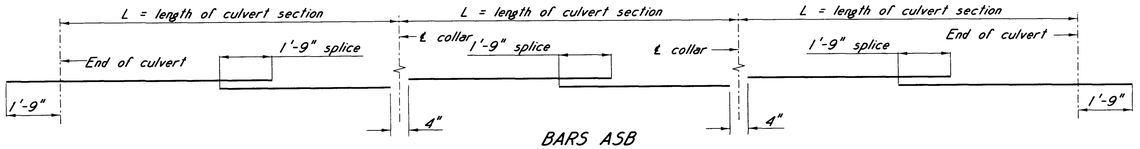
HDn DOWELS



BARS BT & BB



BARS AST, BS & HS



BARS ASB

BAR BENDING DETAILS

Dimensions are out to out

REBAR TABLE	
SIZE	SPLICE (FT.)
#4	1'-5"
#5	1'-9"
#6	2'-1"
#7	2'-8"
#8	3'-5"
#9	4'-4"
#10	5'-6"
#11	6'-9"

NOTE: For bar lengths, number of bars and estimated quantities see sheet no. 7012 & 7013.

GENERAL NOTES:

Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 2004.
Barrel details on this sheet shall be used with cover from 2'-6" to the maximum shown on basic drawing IBS-6.
No change of plans will be permitted expect by written approval of the Director Of Structures, State Bridge Engineer. Minor changes in detail of design or construction procedure may be authorized by the Director Of Structures, State Bridge Engineer provided such changes will not be cause for contract price adjustment.
All concrete shall be class "B".
Expansion joint material shall be bituminous fiber type unless unless otherwise noted.
All exposed edges shall be chamfered ¾".
Bar bending details shall be in accordance with "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315R-94).
Reinforcement order lists and required placing plans shall be furnished in accordance with section 805 of the Mississippi Standard Specifications. Partial submittals are not acceptable.
Horizontal construction joints may be placed only at the locations shown and concrete shall be allowed to set a minimum of 2 hours before continuing pour.
Reinforcing steel shall be placed in accordance with cross sections and shall be adequately supported from the forms.
All bars shall be accurately spaced and securely wired at each intersection before placing concrete.
All dimensions shall be verified in the field prior to fabrication of the reinforcing steel.
Finish concrete per section 804.03.19.6.2 of the specifications.
Reinforcing steel shall be ASTM A615, Grade 60, unless otherwise noted.
Work for which no pay item is provided in the proposal will not be paid for directly and compensation therefor will be included in the prices and payments for bid items.
Concrete in collars shall be allowed to set a minimum of 24 hours before continuing pour.

SPECIAL PROVISIONS REQUIRED:

Concrete bridges and structures . . . . . No. 907-804

DESIGN DATA:

Specifications. . . . . A.A.S.H.T.O., 2010 LRFD
Loading. HL-93
Box bridge concrete. . . . . Class "B" (3,500 p.s.i.)
Equivalent fluid pressure. . . 45 lbs. per cu. ft.

BY
REVISIONS
DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BARREL DETAILS FOR SINGLE CELL BOX CULVERT

HEIGHT 6 FT.

SPANS 6 - 20 FT.

SHT. 1 OF

WORKING NUMBER IBS-6

SHEET NUMBER 7011

DESIGNER PAUL DEES, P.E. CHECKER PICKERING FIRM, INC.
DETAILER PAUL DEES, P.E. ISSUE DATE 1/1/2015

DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.

AREA OF OPENING SQ. FT.	SIZE OF CULVERT FT. x FT. "S"x"H"	BAR LIST FOR BARREL																														EST. QUANTITIES PER LIN. FT. BARREL	
		COVER	T1	T2	V	BARS "A"		BARS "BT"		BARS "BB"		BARS "X"		BARS "Hn"		"HDn" DOWELS		BARS "AST"		BARS "ASB"		BARS "HS"		BARS "B5"			BARS "Z1"			BARS "Z2"			BARS "Z3"			CONC. CU. YD.	REINF. STEEL LBS.
						SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO. (WALLS)	NO. (SLABS)	SIZE	SPACING	NO.	SIZE	SPACING	NO.	SIZE	SPACING	NO.		
36	6x6	5'-0"	9"	9"	9"	#6	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	10	#4	10	#4	12	#4	12	16										0.7500	127.443
		10'-0"	9"	9"	9"	#6	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	10	#4	10	#4	12	#4	12	16										0.7500	127.443
		15'-0"	9"	9"	9"	#6	6"	#4	6"	#4	6"	#4	6"	#4	6"	#4	1'-0"	#4	10	#4	10	#4	12	#4	12	16										0.7500	145.207
		20'-0"	9"	10"	9"	#6	6"	#4	6"	#4	6"	#4	6"	#4	6"	#4	6"	#4	10	#4	10	#4	12	#4	12	16										0.7731	157.009
		25'-0"	9"	10"	9"	#6	6"	#4	6"	#4	6"	#4	6"	#4	6"	#4	1'-0"	#4	10	#4	10	#4	12	#4	12	16										0.8148	145.541
		30'-0"	9"	10"	9"	#7	6"	#4	6"	#4	6"	#4	6"	#4	6"	#4	1'-0"	#4	10	#4	10	#4	12	#4	12	16										0.8148	160.175
48	8x6	5'-0"	9"	10"	9"	#7	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	12	#4	12	#4	12	#4	12	20										0.8904	160.368
		10'-0"	9"	10"	9"	#7	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	8"	#4	12	#4	12	#4	12	#4	12	20										0.8904	160.368
		15'-0"	9"	10½"	9"	#7	6"	#4	6"	#4	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	12	#4	12	#4	12	#4	12	20										0.9051	187.382
		20'-0"	10"	1'-0"	9"	#7	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	12	#4	12	#4	12	#4	12	20										0.9784	213.764
		25'-0"	10"	1'-1½"	9"	#7	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	12	#4	12	#4	12	#4	12	20										1.0054	213.535
		30'-0"	11"	1'-0½"	9"	#8	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	12	#4	12	#4	12	#4	12	20										1.0640	236.363
60	10x6	5'-0"	9"	1½"	9"	#6	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	14	#4	14	#4	12	#4	12	24										1.0610	216.810
		10'-0"	9"	1½"	9"	#7	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	14	#4	14	#4	12	#4	12	24										1.0610	240.116
		15'-0"	10"	1'-0"	9"	#7	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	14	#4	14	#4	12	#4	12	24										1.1142	240.804
		20'-0"	1'-0"	1'-1½"	9"	#8	6"	#5	6"	#5	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	14	#4	14	#4	12	#4	12	24										1.2384	269.329
		25'-0"	1'-0"	1'-2"	10"	#8	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	14	#4	14	#4	12	#4	12	24										1.3483	306.068
		30'-0"	1'-1½"	1'-3"	11"	#8	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	14	#4	14	#4	12	#4	12	24										1.4900	309.490
72	12x6	5'-0"	9½"	1½"	9"	#7	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	16	#4	16	#4	12	#4	12	28										1.2083	301.239
		10'-0"	10½"	1'-1"	9"	#8	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	16	#4	16	#4	12	#4	12	28										1.3125	334.695
		15'-0"	11½"	1'-1½"	9½"	#8	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	16	#4	16	#4	12	#4	12	28										1.3999	336.559
		20'-0"	1'-1½"	1'-3½"	10½"	#8	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	16	#4	16	#4	12	#4	12	28										1.6196	340.898
		25'-0"	1'-2"	1'-4"	1'-0"	#8	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	16	#5	16	#5	12	#5	12	28										1.7824	427.914
		30'-0"	1'-1½"	1'-3½"	1'-0½"	#9	6"	#8	6"	#8	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	16	#5	16	#5	12	#5	12	28	#4	1'-0"	10				#4	1'-0"	10	1.7652	567.064
84	14x6	5'-0"	10"	1'-1"	9½"	#7	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	18	#4	18	#4	12	#4	12	32										1.4581	330.344
		10'-0"	11½"	1'-2"	10"	#8	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	18	#4	18	#4	12	#4	12	32										1.6034	420.390
		15'-0"	1'-1"	1'-2½"	10½"	#9	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	18	#4	18	#4	12	#4	12	32										1.7257	466.537
		20'-0"	1'-3½"	1'-5½"	1'-0"	#9	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	18	#4	18	#4	12	#4	12	32										2.0741	474.640
		25'-0"	1'-1½"	1'-4"	1'-1½"	#9	6"	#8	6"	#8	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	18	#5	18	#5	12	#5	12	32	#4	1'-0"	12				#4	1'-0"	12	2.0212	617.580
		30'-0"	1'-3"	1'-5"	1'-3"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	18	#5	18	#5	12	#5	12	34	#4	1'-0"	12				#4	1'-0"	12	2.2269	785.868
96	16x6	5'-0"	11½"	1'-2½"	1'-0½"	#7	6"	#6	6"	#6	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	20	#4	20	#4	12	#4	12	36										1.9141	364.268
		10'-0"	1'-0½"	1'-3"	1'-0½"	#8	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	20	#4	20	#4	12	#4	12	36										1.9978	459.655
		15'-0"	1'-3½"	1'-5½"	1'-0½"	#9	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	20	#4	20	#4	12	#4	12	36										2.3048	513.776
		20'-0"	1'-2"	1'-3½"	1'-2"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	20	#4	20	#4	12	#4	12	38	#4	1'-0"	10				#4	1'-0"	10	2.2294	780.734
		25'-0"	1'-3½"	1'-5½"	1'-3½"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	20	#5	20	#5	12	#5	12	38	#4	1'-0"	10				#4	1'-0"	10	2.5085	831.647
		30'-0"	1'-5½"	1'-6½"	1'-5½"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	20	#5	20	#5	12	#5	12	38	#4	1'-0"	12				#4	1'-0"	12	2.7917	851.990
108	18x6	5'-0"	1'-0"	1'-2"	11½"	#8	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	22	#4	22	#4	12	#4	12	40										2.0242	488.261
		10'-0"	1'-3"	1'-5"	1'-1½"	#9	6"	#8	6"	#8	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	22	#4	22	#4	12	#4	12	40										2.5000	626.434
		15'-0"	1'-3"	1'-4½"	1'-3"	#9	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	22	#4	22	#4	12	#4	12	42	#4	1'-0"	12				#4	1'-0"	12	2.5903	770.216
		20'-0"	1'-4"	1'-5½"	1'-4"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	22	#4	22	#4	12	#4	12	42	#4	1'-0"	12				#4	1'-0"	12	2.7711	847.827
		25'-0"	1'-6"	1'-6"	1'-6"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	22	#5	22	#5	12	#5	12	42	#4	1'-0"	14				#4	1'-0"	14	3.0417	908.797
		30'-0"	1'-9"	1'-9"	1'-9"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	22	#5	22	#5	12	#5	12	44	#4	1'-0"	14				#4	1'-0"	14	3.6065	936.066
120	20x6	5'-0"	1'-1"	1'-4"	1'-1"	#8	6"	#7	6"	#7	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	24	#4	24	#4	12	#4	12	44										2.4655	526.066
		10'-0"	1'-3"	1'-5"	1'-1½"	#9	6"	#8	6"	#8	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	24	#4	24	#4	12	#4	12	44										2.6975	664.322
		15'-0"	1'-4"	1'-4½"	1'-4"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#4	24	#4	24	#4	12	#4	12	46	#4	1'-0"	14				#4	1'-0"	14	2.9079	897.043
		20'-0"	1'-8"	1'-8"	1'-8"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	24	#5	24	#5	12	#5	12	48	#4	1'-0"	14				#4	1'-0"	14	3.6631	975.784
		25'-0"	1'-9½"	1'-9½"	1'-9½"	#10	6"	#9	6"	#9	6"	#4	6"	#4	1'-0"	#4	1'-0"	#5	24	#5	24	#5	12	#5	12	48	#5	1'-0"	14				#5	1'-0"	14	3.9678	1019.603

NOTE: If Zn, H2 and HD2 reinforcement are required, see CROSS SECTION "B".

REVISIONS | BY | DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BARREL DETAILS FOR SINGLE CELL BOX CULVERT

HEIGHT 6 FT.

SPANS 6 - 20 FT.

SHT. 2 OF 3

WORKING NUMBER IBS-6

SHEET NUMBER 7012

DESIGNER PAUL DEES, P.E. CHECKER PICKERING FIRM, INC.
DETAILER PAUL DEES, P.E. ISSUE DATE 1/1/2015
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.

AREA OF OPENING SQ. FT.	SIZE OF CULVERT FT. x FT. "S"x"H"	BAR LENGTHS FOR BARREL																																	
		Cover	BARS "A"		BARS "BT"				BARS "BB"				BARS "X"		BARS "H1"		BARS "H2"		"HD1" DOWELS		"HD2" DOWELS		BARS "Z1"				BARS "Z2"				BARS "Z3"			
			SIZE	LENGTH	SIZE	"X" DIM.	"Y" DIM.	LENGTH	SIZE	"X" DIM.	"Y" DIM.	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	"X" DIM.	"Y" DIM.	LENGTH	SIZE	"X" DIM.	"Y" DIM.	LENGTH	SIZE	"X" DIM.	"Y" DIM.	LENGTH
36	6x6	5'-0"	#6	6'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-5½"	6'-11½"	#4	6'-0"	#4	6'-1"			#4	2'-5"														
		10'-0"	#6	6'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-5½"	6'-11½"	#4	6'-0"	#4	6'-1"			#4	2'-5"														
		15'-0"	#6	6'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-5½"	6'-11½"	#4	6'-0"	#4	6'-1"			#4	2'-5"														
		20'-0"	#6	6'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-6½"	7'-0½"	#4	6'-0"	#4	6'-1"			#4	2'-6"														
		25'-0"	#6	6'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-6½"	7'-0½"	#4	6'-0"			#4	5'-4"			#4	3'-3"												
		30'-0"	#7	6'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-6½"	7'-0½"	#4	6'-0"			#4	5'-4"			#4	3'-3"												
48	8x6	5'-0"	#7	8'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-6½"	7'-0½"	#4	8'-0"	#4	6'-1"			#4	2'-6"														
		10'-0"	#7	8'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-6½"	7'-0½"	#4	8'-0"	#4	6'-1"			#4	2'-6"														
		15'-0"	#7	8'-9"	#4	2'-6"	4'-5½"	6'-11½"	#4	2'-6"	4'-7"	7'-1"	#4	8'-0"	#4	6'-1"			#4	2'-6½"														
		20'-0"	#7	8'-9"	#5	2'-10"	4'-8½"	7'-6½"	#5	2'-10"	4'-10½"	7'-8½"	#4	8'-0"	#4	6'-2"			#4	2'-8"														
		25'-0"	#7	8'-9"	#5	2'-10"	4'-8½"	7'-6½"	#5	2'-10"	4'-10"	7'-8"	#4	8'-0"			#4	5'-5"			#4	3'-4½"												
		30'-0"	#8	8'-9"	#5	2'-10"	4'-9½"	7'-7½"	#5	2'-10"	4'-11"	7'-9"	#4	8'-0"			#4	5'-6"			#4	3'-5½"												
60	10x6	5'-0"	#6	10'-9"	#5	2'-10"	4'-7½"	7'-5½"	#5	2'-10"	4'-10"	7'-8"	#4	10'-0"	#4	6'-1"			#4	2'-7½"														
		10'-0"	#7	10'-9"	#5	2'-10"	4'-7½"	7'-5½"	#5	2'-10"	4'-10"	7'-8"	#4	10'-0"	#4	6'-1"			#4	2'-7½"														
		15'-0"	#7	10'-9"	#5	2'-10"	4'-8½"	7'-6½"	#5	2'-10"	4'-10½"	7'-8½"	#4	10'-0"	#4	6'-2"			#4	2'-8"														
		20'-0"	#8	10'-9"	#5	2'-10"	4'-10½"	7'-8½"	#5	2'-10"	5'-0"	7'-10"	#4	10'-0"	#4	6'-4"			#4	2'-9½"														
		25'-0"	#8	10'-10"	#6	3'-3"	5'-0½"	8'-3½"	#6	3'-3"	5'-2½"	8'-5½"	#4	10'-0"			#4	5'-7"			#4	3'-7"												
		30'-0"	#8	10'-11"	#6	3'-4"	5'-2"	8'-6"	#6	3'-4"	5'-3½"	8'-7½"	#4	10'-0"			#4	5'-8½"			#4	3'-8"												
72	12x6	5'-0"	#7	12'-9"	#6	3'-2"	4'-10"	8'-0"	#6	3'-2"	5'-0"	8'-2"	#4	12'-0"	#4	6'-1½"			#4	2'-7½"														
		10'-0"	#8	12'-9"	#6	3'-2"	4'-11"	8'-1"	#6	3'-2"	5'-1½"	8'-3½"	#4	12'-0"	#4	6'-2½"			#4	2'-9"														
		15'-0"	#8	12'-9½"	#6	3'-2½"	5'-0"	8'-2½"	#6	3'-2½"	5'-2"	8'-4½"	#4	12'-0"	#4	6'-3½"			#4	2'-9½"														
		20'-0"	#8	12'-10½"	#6	3'-3½"	5'-2"	8'-5½"	#6	3'-3½"	5'-4"	8'-7½"	#4	12'-0"	#4	6'-5½"			#4	2'-11½"														
		25'-0"	#8	13'-0"	#7	4'-0"	5'-6"	9'-6"	#7	4'-0"	5'-8"	9'-8"	#4	12'-0"			#4	5'-9"			#4	3'-9"												
		30'-0"	#9	13'-0½"	#8	4'-9½"	5'-10"	10'-7½"	#8	4'-9½"	6'-0"	10'-9½"	#4	12'-0"			#4	5'-8½"			#4	3'-8½"	#4	9½"	9½"	2'-1⅞"					#4	10"	10"	2'-2⅛"
84	14x6	5'-0"	#7	14'-9½"	#6	3'-2½"	4'-10½"	8'-1"	#6	3'-2½"	5'-1½"	8'-4"	#4	14'-0"	#4	6'-2"			#4	2'-9"														
		10'-0"	#8	14'-10"	#7	3'-10"	5'-3½"	9'-1½"	#7	3'-10"	5'-6"	9'-4"	#4	14'-0"	#4	6'-3½"			#4	2'-10"														
		15'-0"	#9	14'-10½"	#7	3'-10½"	5'-5"	9'-3½"	#7	3'-10½"	5'-6½"	9'-5"	#4	14'-0"	#4	6'-5"			#4	2'-10½"														
		20'-0"	#9	15'-0"	#7	4'-0"	5'-7½"	9'-7½"	#7	4'-0"	5'-9½"	9'-9½"	#4	14'-0"	#4	6'-7½"			#4	3'-1½"														
		25'-0"	#9	15'-1½"	#8	4'-10½"	5'-10"	10'-8½"	#8	4'-10½"	6'-0½"	10'-11"	#4	14'-0"			#4	5'-8½"			#4	3'-9"	#4	9½"	9½"	2'-1⅞"					#4	10½"	10½"	2'-2⅞"
		30'-0"	#10	15'-3"	#9	5'-11"	6'-5"	12'-4"	#9	5'-11"	6'-7"	12'-6"	#4	14'-0"			#4	5'-10"			#4	3'-10"	#4	11"	11"	2'-3⅜"					#4	11½"	11½"	2'-4¼"
96	16x6	5'-0"	#7	17'-0½"	#6	3'-5½"	5'-0"	8'-5½"	#6	3'-5½"	5'-3"	8'-8½"	#4	16'-0"	#4	6'-3½"			#4	2'-10½"														
		10'-0"	#8	17'-0½"	#7	4'-0½"	5'-4½"	9'-5"	#7	4'-0½"	5'-7"	9'-7½"	#4	16'-0"	#4	6'-4½"			#4	2'-11"														
		15'-0"	#9	17'-0½"	#7	4'-0½"	5'-7½"	9'-8"	#7	4'-0½"	5'-9½"	9'-10"	#4	16'-0"	#4	6'-7½"			#4	3'-1½"														
		20'-0"	#10	17'-2"	#9	5'-10"	6'-4"	12'-2"	#9	5'-10"	6'-5½"	12'-3½"	#4	16'-0"			#4	5'-9"			#4	3'-8½"	#4	10"	10"	2'-2⅛"					#4	10"	10"	2'-2⅛"
		25'-0"	#10	17'-3½"	#9	5'-11½"	6'-5½"	12'-5"	#9	5'-11½"	6'-7½"	12'-7"	#4	16'-0"			#4	5'-10½"			#4	3'-10½"	#4	11½"	11½"	2'-4¼"					#4	1'-0"	1'-0"	2'-5"
		30'-0"	#10	17'-5½"	#9	6'-1½"	6'-7½"	12'-9"	#9	6'-1½"	6'-8½"	12'-10"	#4	16'-0"			#4	6'-0½"			#4	3'-11½"	#4	1'-1½"	1'-1½"	2'-7⅛"					#4	1'-1"	1'-1"	2'-6⅜"
108	18x6	5'-0"	#8	18'-11½"	#7	3'-11½"	5'-4"	9'-3½"	#7	3'-11½"	5'-6"	9'-5½"	#4	18'-0"	#4	6'-4"			#4	2'-10"														
		10'-0"	#9	19'-1½"	#8	4'-10½"	5'-11½"	10'-10"	#8	4'-10½"	6'-1½"	11'-0"	#4	18'-0"	#4	6'-7"			#4	3'-1"														
		15'-0"	#9	19'-3"	#9	5'-11"	6'-5"	12'-4"	#9	5'-11"	6'-6½"	12'-5½"	#4	18'-0"			#4	5'-10"			#4	3'-9½"	#4	11"	11"	2'-3⅜"					#4	11"	11"	2'-3⅜"
		20'-0"	#10	19'-4"	#9	6'-0"	6'-6"	12'-6"	#9	6'-0"	6'-7½"	12'-7½"	#4	18'-0"			#4	5'-11"			#4	3'-10½"	#4	1'-0"	1'-0"	2'-5"					#4	1'-0"	1'-0"	2'-5"
		25'-0"	#10	19'-6"	#9	6'-2"	6'-8"	12'-10"	#9	6'-2"	6'-8"	12'-10"	#4	18'-0"			#4	6'-1"			#4	3'-11"	#4	1'-2"	1'-2"	2'-7⅛"					#4	1'-0½"	1'-0½"	2'-5⅛"
		30'-0"	#10	19'-9"	#9	6'-5"	6'-11"	13'-4"	#9	6'-5"	6'-11"	13'-4"	#4	18'-0"			#4	6'-4"			#4	4'-2"	#4	1'-5"	1'-5"	3'-0⅛"					#4	1'-3½"	1'-3½"	2'-9⅛"
120	20x6	5'-0"	#8	21'-1"	#7	4'-1"	5'-5"	9'-6"	#7	4'-1"	5'-8"	9'-9"	#4	20'-0"	#4	6'-5"			#4	3'-0"														
		10'-0"	#9	21'-1½"	#8	4'-10½"	5'-11½"	10'-10"	#8	4'-10½"	6'-1½"	11'-0"	#4	20'-0"	#4	6'-7"			#4	3'-1"														
		15'-0"	#10	21'-4"	#9	6'-0"	6'-6"	12'-6"	#9	6'-0"	6'-6½"	12'-6½"	#4	20'-0"			#4	5'-11"			#4	3'-9½"	#4	1'-0"	1'-0"	2'-5"					#4	11"	11"	2'-3⅜"
		20'-0"	#10	21'-8"	#9	6'-4"	6'-10"	13'-2"	#9	6'-4"	6'-10"	13'-2"	#4	20'-0"			#4	6'-3"			#4	4'-1"	#4	1'-4"	1'-4"	2'-10⅝"					#4	1'-2½"	1'-2½"	2'-8½"
		25'-0"	#10	21'-9½"	#9	6'-5½"	6'-11½"	13'-5"	#9	6'-5½"	6'-11½"	13'-5"	#4	20'-0"			#4	6'-4½"			#4	4'-2½"	#5	1'-5½"	1'-5½"	3'-0⅜"					#5	1'-4"	1'-4"	2'-10⅝"

NOTE: If Z1, H2 and HD2 reinforcement are required, see CROSS SECTION "B".

REVISIONS | BY | DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BARREL DETAILS FOR SINGLE CELL BOX CULVERT

HEIGHT 6 FT.

SPANS 6 - 20 FT.

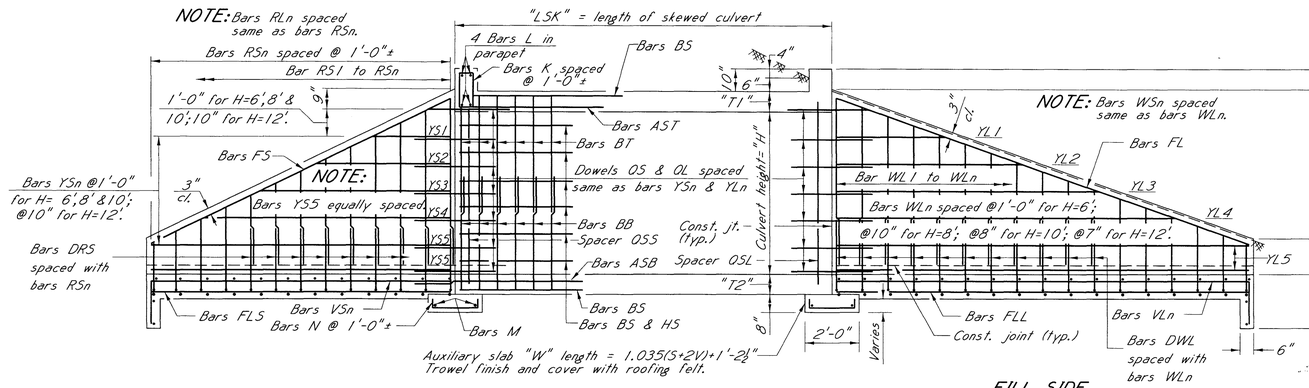
SHT. 3 OF 3

WORKING NUMBER IBS-6

SHEET NUMBER 7013

DESIGNER PAUL DEES, P.E. CHECKER PICKERING FIRM, INC.
DETAILER PAUL DEES, P.E. ISSUE DATE 1/1/2015

DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.



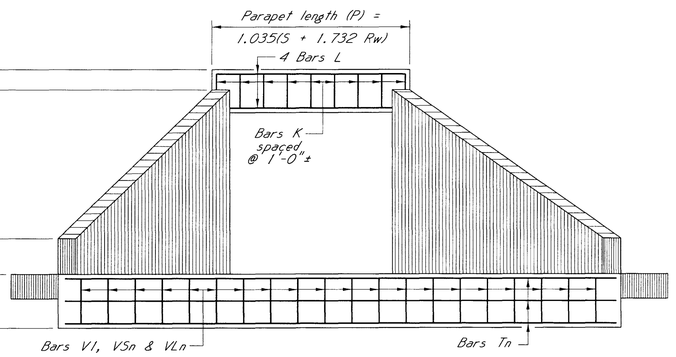
STREAM SIDE

Showing reinforcement in stream side of "LW1" wingwall

FILL SIDE

Showing reinforcement in fill side of "LW2" wingwall

NOTE: Culvert shall be sloped to conform to gradient of stream.



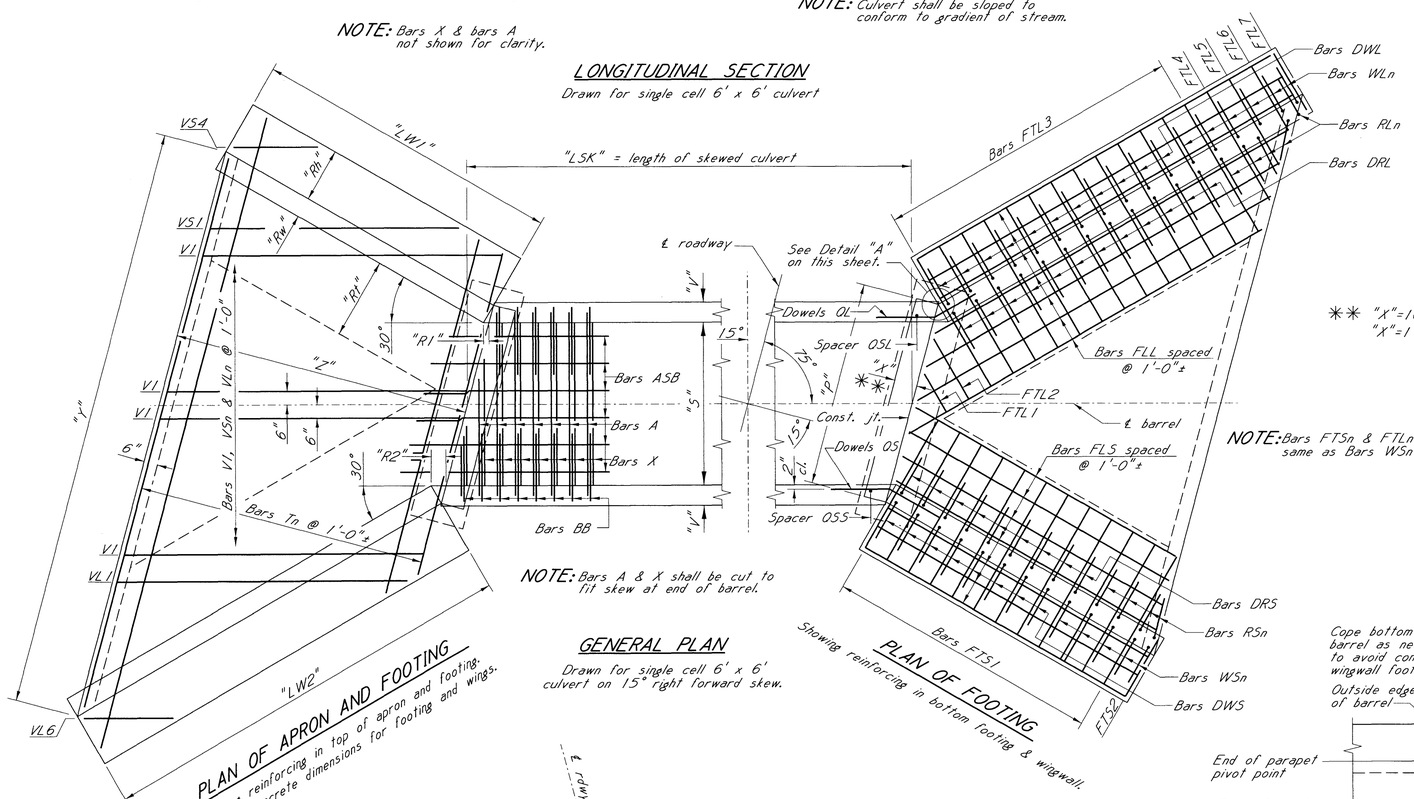
END ELEVATION

Showing reinforcing in pararpet & toe wall

NOTE: Bars X & bars A not shown for clarity.

LONGITUDINAL SECTION

Drawn for single cell 6' x 6' culvert



PLAN OF APRON AND FOOTING

Showing reinforcing in top of apron and footing. Showing concrete dimensions for footing and wings.

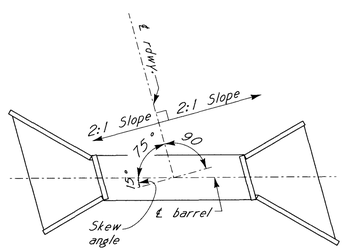
PLAN OF FOOTING

Showing reinforcing in bottom footing & wingwall.

NOTE: Bars A & X shall be cut to fit skew at end of barrel.

GENERAL PLAN

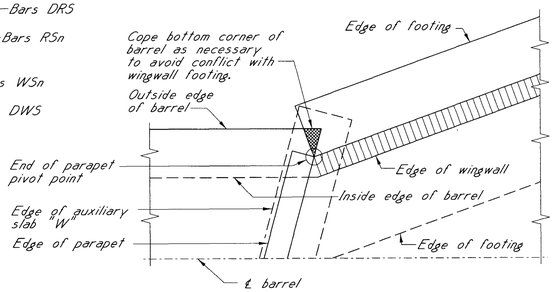
Drawn for single cell 6' x 6' culvert on 15° right forward skew.



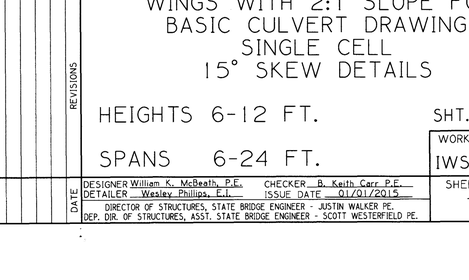
PLAN OF 15° LEFT FORWARD SKEW

** "X"=10" For H= 6', 8' & 10'
"X"=1'-0" For H= 12'

NOTE: Bars FTSn & FTLn spaced same as Bars WSn & WLn.



DETAIL "A"



CROSS SECTION WINGWALL

Showing reinforcing in "LW1" wingwall, footing and apron.

NOTE: For bar bending details and quantities, see drawings IWS-6-2W-15, IWS-8-2W-15, IWS-10-2W-15 & IWS-12-2W-15.

SPECIAL PROVISIONS REQUIRED:
Concrete bridges and structures . . . . . No. 907-804

DESIGN DATA:
Specifications. . . . . A.A.S.H.T.O., LRFD 2012.
Loading. . . . . HL-93.
Concrete. . . . . Class "B" (3,500 p.s.i.)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

WINGS WITH 2:1 SLOPE FOR BASIC CULVERT DRAWING SINGLE CELL 15° SKEW DETAILS

HEIGHTS 6-12 FT.

SPANS 6-24 FT.

SHT. 1 OF 1

WORKING NUMBER IWS-2W-15

SHEET NUMBER 7041

REVISIONS | BY | DATE

DESIGNER William K. McBeath, P.E. CHECKER B. Keith Carr P.E.
DETAILER Wesley Phillips, E.I. ISSUE DATE 01/01/2015
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.

HEADWALL DIMENSIONS																		
CULVERT HEIGHT "H"	"J"	"LW1"	"LW2"	"R1"	"R2"	"Z"	"Rd"	"Rw"	"Rt"	"Rh"	"Y" CLEAR SPAN 6'	8'	10'	12'	14'	16'	18'	20'
6'-0"	5'-6"	11'-4 $\frac{5}{8}$"	15'-6 $\frac{3}{4}$"	0'-2 $\frac{7}{16}$"	0'-6 $\frac{9}{16}$"	11'-0"	0'-11"	0'-9"	3'-0"	2'-0"	21'-6 $\frac{11}{16}$"	23'-6 $\frac{7}{8}$"	25'-7 $\frac{3}{4}$"	27'-8 $\frac{9}{16}$"	29'-9 $\frac{7}{16}$"	31'-10 $\frac{1}{4}$"	33'-11 $\frac{1}{8}$"	36'-0"

NOTE: Total headwall quantities include wingwalls, apron, wingwall footings and parapet.

AREA OF OPENING sq. ft.	SIZE OF CULVERT ft. x ft. "S" x "H"						ESTIMATED QUANTITIES: TOTAL HEADWALL CONC. cu. yd.	TOTAL HEADWALL REINF. STEEL lbs.	1 AUX. SLAB "W" CONC. cu. yd.	1 AUX. SLAB "W" REINF. STEEL lbs.	1 SQUARE COLLAR CONC. cu. yd.	1 SQUARE COLLAR REINF. STEEL lbs.
		Cover	T1	T2	V	W						
36	6x6	5'-0"	9"	9"	9"	1'-4"	10.1172	1390.975	0.4428	27.110	1.3750	514.464
		10'-0"	9"	9"	9"	1'-4"	10.1172	1390.975	0.4428	27.110	1.3750	514.464
		15'-0"	9"	9"	9"	1'-4"	10.1172	1390.975	0.4428	27.110	1.3750	514.464
		20'-0"	9"	10"	9"	1'-4"	10.1459	1390.975	0.4428	27.110	1.3819	515.963
		25'-0"	9"	10"	9"	1'-4"	10.1459	1390.975	0.4428	27.110	1.3819	515.963
		30'-0"	9"	10"	9"	1'-4"	10.1459	1390.975	0.4428	27.110	1.3819	515.963
48	8x6	5'-0"	9"	10"	9"	1'-4"	10.7048	1498.488	0.5451	33.010	1.5486	581.536
		10'-0"	9"	10"	9"	1'-4"	10.7048	1498.488	0.5451	33.010	1.5486	581.536
		15'-0"	9"	10 $\frac{1}{2}$"	9"	1'-4"	10.7223	1498.488	0.5451	33.010	1.5521	582.372
		20'-0"	10"	1'-0"	9"	1'-5"	10.8380	1504.101	0.5451	33.010	1.5694	586.555
		25'-0"	10"	11 $\frac{1}{2}$"	9"	1'-5"	10.8204	1504.101	0.5451	33.010	1.5660	585.718
		30'-0"	11"	1'-0 $\frac{1}{2}$"	9"	1'-6"	10.9186	1509.715	0.5451	33.010	1.5799	589.064
60	10x6	5'-0"	9"	11 $\frac{1}{2}$"	9"	1'-4"	11.3250	1545.832	0.6473	40.470	1.7257	649.879
		10'-0"	9"	11 $\frac{1}{2}$"	9"	1'-4"	11.3250	1545.832	0.6473	40.470	1.7257	649.879
		15'-0"	10"	1'-0"	9"	1'-5"	11.4089	1551.668	0.6473	40.470	1.7361	652.649
		20'-0"	1'-0"	1'-1 $\frac{1}{2}$"	9"	1'-7"	11.5972	1563.341	0.6473	40.470	1.7604	659.113
		25'-0"	1'-0"	1'-2"	10"	1'-7"	11.6203	1563.341	0.6558	40.692	1.7778	663.034
		30'-0"	1'-1 $\frac{1}{2}$"	1'-3"	11"	1'-8 $\frac{1}{2}$"	11.7605	1572.095	0.6644	40.915	1.8090	670.650
72	12x6	5'-0"	9 $\frac{1}{2}$"	11 $\frac{1}{2}$"	9"	1'-4 $\frac{1}{2}$"	11.9243	1595.900	0.7496	46.315	1.8958	716.723
		10'-0"	10 $\frac{1}{2}$"	1'-1"	9"	1'-5 $\frac{1}{2}$"	12.0591	1601.959	0.7496	46.315	1.9132	721.775
		15'-0"	11 $\frac{1}{2}$"	1'-1 $\frac{1}{2}$"	9 $\frac{1}{2}$"	1'-6 $\frac{1}{2}$"	12.1471	1608.018	0.7538	46.426	1.9306	726.305
		20'-0"	1'-1 $\frac{1}{2}$"	1'-3 $\frac{1}{2}$"	10 $\frac{1}{2}$"	1'-8 $\frac{1}{2}$"	12.3734	1620.135	0.7624	46.704	1.9722	737.385
		25'-0"	1'-2"	1'-4"	1'-0"	1'-9"	12.4357	1623.165	0.7751	47.038	2.0000	743.903
		30'-0"	1'-1 $\frac{1}{2}$"	1'-3 $\frac{1}{2}$"	1'-0 $\frac{1}{2}$"	1'-8 $\frac{1}{2}$"	12.3810	1620.135	0.7794	47.150	2.0000	743.382
84	14x6	5'-0"	10"	1'-1"	9 $\frac{1}{2}$"	1'-5"	12.6056	1646.497	0.8561	52.327	2.0833	788.532
		10'-0"	11 $\frac{1}{2}$"	1'-2"	10"	1'-6 $\frac{1}{2}$"	12.7561	1655.919	0.8603	52.438	2.1076	795.517
		15'-0"	1'-1"	1'-2 $\frac{1}{2}$"	10 $\frac{1}{2}$"	1'-8"	12.8797	1665.341	0.8646	52.549	2.1285	801.405
		20'-0"	1'-3 $\frac{1}{2}$"	1'-5 $\frac{1}{2}$"	1'-0"	1'-10 $\frac{1}{2}$"	13.2119	1681.045	0.8774	52.883	2.1875	817.972
		25'-0"	1'-1 $\frac{1}{2}$"	1'-4"	1'-1 $\frac{1}{2}$"	1'-8 $\frac{1}{2}$"	13.0072	1668.482	0.8902	53.273	2.1840	814.788
		30'-0"	1'-3"	1'-5"	1'-3"	1'-10"	13.1682	1677.904	0.9029	53.607	2.2222	824.772
96	16x6	5'-0"	11 $\frac{1}{2}$"	1'-2 $\frac{1}{2}$"	1'-0 $\frac{1}{2}$"	1'-6 $\frac{1}{2}$"	13.3778	1703.709	0.9839	60.454	2.3125	870.900
		10'-0"	1'-0 $\frac{1}{2}$"	1'-3"	1'-0 $\frac{1}{2}$"	1'-7 $\frac{1}{2}$"	13.4727	1710.213	0.9839	60.454	2.3229	874.452
		15'-0"	1'-3 $\frac{1}{2}$"	1'-5 $\frac{1}{2}$"	1'-0 $\frac{1}{2}$"	1'-10 $\frac{1}{2}$"	13.8207	1729.725	0.9839	60.454	2.3611	887.478
		20'-0"	1'-2"	1'-3 $\frac{1}{2}$"	1'-2"	1'-9"	13.6051	1719.969	0.9967	60.788	2.3576	883.686
		25'-0"	1'-3 $\frac{1}{2}$"	1'-5 $\frac{1}{2}$"	1'-3 $\frac{1}{2}$"	1'-10 $\frac{1}{2}$"	13.8386	1729.725	1.0095	61.178	2.4028	896.472
		30'-0"	1'-5 $\frac{1}{2}$"	1'-6 $\frac{1}{2}$"	1'-5 $\frac{1}{2}$"	2'-0 $\frac{1}{2}$"	14.0459	1742.734	1.0265	61.623	2.4514	909.573
108	18x6	5'-0"	1'-0"	1'-2"	11 $\frac{1}{2}$"	1'-7"	13.9587	1754.778	1.0776	67.691	2.4653	934.692
		10'-0"	1'-3"	1'-5"	1'-1 $\frac{1}{2}$"	1'-10"	14.3656	1774.959	1.0947	68.136	2.5347	955.940
		15'-0"	1'-3"	1'-4 $\frac{1}{2}$"	1'-3"	1'-10"	14.3378	1774.959	1.1074	68.470	2.5521	959.167
		20'-0"	1'-4"	1'-5 $\frac{1}{2}$"	1'-4"	1'-11"	14.4793	1781.686	1.1160	68.693	2.5799	967.249
		25'-0"	1'-6"	1'-6"	1'-6"	2'-1"	14.6562	1795.139	1.1330	69.194	2.6250	979.600
		30'-0"	1'-9"	1'-9"	1'-9"	2'-4"	15.1032	1815.320	1.1586	69.862	2.7083	1003.847
120	20x6	5'-0"	1'-1"	1'-4"	1'-1"	1'-8"	14.7628	1809.657	1.1927	73.925	2.6736	1014.127
		10'-0"	1'-3"	1'-5"	1'-1 $\frac{1}{2}$"	1'-10"	14.9684	1823.556	1.1969	74.037	2.7014	1023.773
		15'-0"	1'-4"	1'-4 $\frac{1}{2}$"	1'-4"	1'-11"	15.0059	1830.505	1.2182	74.593	2.7396	1032.627
		20'-0"	1'-8"	1'-8"	1'-8"	2'-3"	15.5738	1858.303	1.2523	75.540	2.8472	1064.989
		25'-0"	1'-9 $\frac{1}{2}$"	1'-9 $\frac{1}{2}$"	1'-9 $\frac{1}{2}$"	2'-4 $\frac{1}{2}$"	15.8114	1868.728	1.2651	75.874	2.8889	1077.634

GENERAL NOTES:

Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 2004.
All concrete shall be Class "B".
Concrete surfaces shall be finished in accordance with Sub-Section 804.03.19.6.2
Expansion joint material shall be bituminous fiber type unless otherwise noted.
All exposed corners shall be chamfered $\frac{3}{4}$".
Reinforcing steel shall be placed 2" clear minimum from the surface of the concrete unless otherwise noted, and all reinforcing shall be adequately supported from the forms.
All bars shall be accurately spaced and securely wired at each intersection before placing concrete.
Bar bending details shall be in accordance with "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315R-94).
Reinforcement order lists and required placing plans shall be furnished in accordance with Section 805 of the Mississippi Standard Specifications. Partial submittals are not acceptable.
Reinforcing steel shall be ASTM A615, Grade 60, unless otherwise noted.
Horizontal construction joints shall be placed only at the locations shown, and the concrete shall be allowed to set a minimum period of two hours before continuing the pour.
Auxiliary slabs "W" and vertical construction joints at the wings shall be placed in all culverts regardless of length.
The quantities shown will be used as a basis for final payment unless this drawing is modified.

DEPARTMENT OF TRANSPORTATION MDOT MISSISSIPPI

REVISIONS | BY | DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

WINGS WITH 2:1 SLOPE FOR BASIC CULVERT DRAWING SINGLE CELL 15° SKEW DETAILS

HEIGHT 6 FT.

SPANS 6-20 FT.

SHT. 1 OF 2

WORKING NUMBER

WS-6-2W-1

DESIGNER William K. McBeath, P.E. CHECKER B. Keith Carr P.E.
DETAILER Wesley Phillips, E.I. ISSUE DATE 01/01/2015
DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.

SHEET NUMBER 7042

HEIGHT = 6 FT.

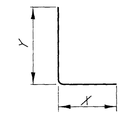
BAR LISTS FOR WINGS, FOOTING, PARAPET, APRON & AUXILIARY SLAB

BAR	SIZE	NO. REQUIRED SPAN 6'	8'	10'	12'	14'	16'	18'	20'	DIM. X	DIM. Y	LENGTH
T1	#4	1	1	1	1	1	1	1	1			1.0355+6'-0 ½"
T2	#4	1	1	1	1	1	1	1	1			1.0355+7'-3 ½"
T3	#4	1	1	1	1	1	1	1	1			1.0355+8'-6"
T4	#4	1	1	1	1	1	1	1	1			1.0355+9'-9"
T5	#4	1	1	1	1	1	1	1	1			1.0355+10'-11 ½"
T6	#4	1	1	1	1	1	1	1	1			1.0355+12'-2 ½"
T7	#4	1	1	1	1	1	1	1	1			1.0355+13'-5"
T8	#4	1	1	1	1	1	1	1	1			1.0355+14'-8"
T9	#4	1	1	1	1	1	1	1	1			1.0355+15'-10 ½"
T10	#4	1	1	1	1	1	1	1	1			1.0355+17'-1 ½"
T11	#4	1	1	1	1	1	1	1	1			1.0355+17'-9 ½"
T12	#4	3	3	3	3	3	3	3	3			1.0355+14'-8"
V1	#4	12	14	16	18	20	22	24	26	11'-0 ½"	1'-8"	12'-8 ½"
VL1	#4	1	1	1	1	1	1	1	1	10'-8 ½"	1'-8"	12'-4 ½"
VL2	#4	1	1	1	1	1	1	1	1	9'-3"	1'-8"	10'-11"
VL3	#4	1	1	1	1	1	1	1	1	7'-9 ½"	1'-8"	9'-5 ½"
VL4	#4	1	1	1	1	1	1	1	1	6'-4"	1'-8"	8'-0"
VL5	#4	1	1	1	1	1	1	1	1	4'-10"	1'-8"	6'-6"
VL6	#4	1	1	1	1	1	1	1	1	3'-3 ½"		3'-3 ½"
VS1	#4	1	1	1	1	1	1	1	1	9'-2"	1'-8"	10'-10"
VS2	#4	1	1	1	1	1	1	1	1	7'-2"	1'-8"	8'-10"
VS3	#4	1	1	1	1	1	1	1	1	5'-2"	1'-8"	6'-10"
VS4	#4	1	1	1	1	1	1	1	1	3'-1 ½"		3'-1 ½"
FTL1	#5	1	1	1	1	1	1	1	1			1'-7 ½"
FTL2	#5	1	1	1	1	1	1	1	1			2'-7"
FTL3	#5	13	13	13	13	13	13	13	13			5'-5"
FTL4	#5	1	1	1	1	1	1	1	1			4'-7 ½"
FTL5	#5	1	1	1	1	1	1	1	1			3'-8"
FTL6	#5	1	1	1	1	1	1	1	1			2'-8 ½"
FTL7	#5	1	1	1	1	1	1	1	1			2'-5"
FLL	#4	7	7	7	7	7	7	7	7			15'-1"
FTS1	#5	12	12	12	12	12	12	12	12			5'-5"
FTS2	#5	1	1	1	1	1	1	1	1			2'-5"
FLS	#4	7	7	7	7	7	7	7	7			11'-0 ½"
WS1	#5	1	1	1	1	1	1	1	1		W+4'-9 ½"	W+4'-9 ½"
WS2	#5	1	1	1	1	1	1	1	1		W+4'-4 ½"	W+4'-4 ½"
WS3	#5	1	1	1	1	1	1	1	1		W+3'-11"	W+3'-11"
WS4	#5	1	1	1	1	1	1	1	1		W+3'-5 ½"	W+3'-5 ½"
WS5	#5	1	1	1	1	1	1	1	1		W+3'-0 ½"	W+3'-0 ½"
WS6	#5	1	1	1	1	1	1	1	1		W+2'-7"	W+2'-7"
WS7	#5	1	1	1	1	1	1	1	1		W+2'-1 ½"	W+2'-1 ½"
WS8	#5	1	1	1	1	1	1	1	1		W+1'-8 ½"	W+1'-8 ½"
WS9	#5	1	1	1	1	1	1	1	1	1'-6"	W+2'-3"	W+3'-9"
WS10	#5	1	1	1	1	1	1	1	1	1'-6"	W+1'-9 ½"	W+3'-3 ½"
WS11	#5	1	1	1	1	1	1	1	1	1'-6"	W+1'-4"	W+2'-10"
WS12	#5	1	1	1	1	1	1	1	1	1'-6"	W+0'-11"	W+2'-5"
WS13	#5	1	1	1	1	1	1	1	1	1'-6"	W+0'-5 ½"	W+1'-11 ½"
DWS	#5	8	8	8	8	8	8	8	8	1'-6"	2'-9"	4'-3"
WL1	#5	1	1	1	1	1	1	1	1		W+4'-10"	W+4'-10"
WL2	#5	1	1	1	1	1	1	1	1		W+4'-6"	W+4'-6"
WL3	#5	1	1	1	1	1	1	1	1		W+4'-2"	W+4'-2"
WL4	#5	1	1	1	1	1	1	1	1		W+3'-10"	W+3'-10"
WL5	#5	1	1	1	1	1	1	1	1		W+3'-6"	W+3'-6"
WL6	#5	1	1	1	1	1	1	1	1		W+3'-2"	W+3'-2"
WL7	#5	1	1	1	1	1	1	1	1		W+2'-10"	W+2'-10"
WL8	#5	1	1	1	1	1	1	1	1		W+2'-6"	W+2'-6"
WL9	#5	1	1	1	1	1	1	1	1		W+2'-2"	W+2'-2"
WL10	#5	1	1	1	1	1	1	1	1		W+1'-10"	W+1'-10"
WL11	#5	1	1	1	1	1	1	1	1		W+1'-5 ½"	W+1'-5 ½"
WL12	#5	1	1	1	1	1	1	1	1	1'-6"	W+2'-1 ½"	W+3'-7 ½"
WL13	#5	1	1	1	1	1	1	1	1	1'-6"	W+1'-9 ½"	W+3'-3 ½"
WL14	#5	1	1	1	1	1	1	1	1	1'-6"	W+1'-5 ½"	W+2'-11 ½"
WL15	#5	1	1	1	1	1	1	1	1	1'-6"	W+1'-1 ½"	W+2'-7 ½"

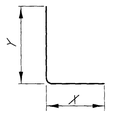
HEIGHT = 6 FT.

BAR LISTS FOR WINGS, FOOTING, PARAPET, APRON & AUXILIARY SLAB

BAR	SIZE	NO. REQUIRED SPAN 6'	8'	10'	12'	14'	16'	18'	20'	DIM. X	DIM. Y	LENGTH
WL16	#5	1	1	1	1	1	1	1	1	1'-6"	W+0'-9 ½"	W+2'-3 ½"
WL17	#5	1	1	1	1	1	1	1	1	1'-6"	W+0'-5 ½"	W+1'-11 ½"
DWL	#5	11	11	11	11	11	11	11	11	1'-6"	2'-9"	4'-3"
RS1	#4	1	1	1	1	1	1	1	1		W+4'-9 ½"	W+4'-9 ½"
RS2	#4	1	1	1	1	1	1	1	1		W+4'-4 ½"	W+4'-4 ½"
RS3	#4	1	1	1	1	1	1	1	1		W+3'-11"	W+3'-11"
RS4	#4	1	1	1	1	1	1	1	1		W+3'-5 ½"	W+3'-5 ½"
RS5	#4	1	1	1	1	1	1	1	1		W+3'-0 ½"	W+3'-0 ½"
RS6	#4	1	1	1	1	1	1	1	1		W+2'-7"	W+2'-7"
RS7	#4	1	1	1	1	1	1	1	1		W+2'-1 ½"	W+2'-1 ½"
RS8	#4	1	1	1	1	1	1	1	1		W+1'-8 ½"	W+1'-8 ½"
RS9	#4	1	1	1	1	1	1	1	1		W+1'-3"	W+1'-3"
RS10	#4	1	1	1	1	1	1	1	1	1'-6"	W+1'-9 ½"	W+3'-3 ½"
RS11	#4	1	1	1	1	1	1	1	1	1'-6"	W+1'-4"	W+2'-10"
RS12	#4	1	1	1	1	1	1	1	1	1'-6"	W+0'-11"	W+2'-5"
RS13	#4	1	1	1	1	1	1	1	1	1'-6"	W+0'-5 ½"	W+1'-11 ½"
DRS	#4	9	9	9	9	9	9	9	9	1'-6"	2'-5"	3'-11"
RL1	#4	1	1	1	1	1	1	1	1		W+4'-10"	W+4'-10"
RL2	#4	1	1	1	1	1	1	1	1		W+4'-6"	W+4'-6"
RL3	#4	1	1	1	1	1	1	1	1		W+4'-2"	W+4'-2"
RL4	#4	1	1	1	1	1	1	1	1		W+3'-10"	W+3'-10"
RL5	#4	1	1	1	1	1	1	1	1		W+3'-6"	W+3'-6"
RL6	#4	1	1	1	1	1	1	1	1		W+3'-2"	W+3'-2"
RL7	#4	1	1	1	1	1	1	1	1		W+2'-10"	W+2'-10"
RL8	#4	1	1	1	1	1	1	1	1		W+2'-6"	W+2'-6"
RL9	#4	1	1	1	1	1	1	1	1		W+2'-2"	W+2'-2"
RL10	#4	1	1	1	1	1	1	1	1		W+1'-10"	W+1'-10"
RL11	#4	1	1	1	1	1	1	1	1		W+1'-5 ½"	W+1'-5 ½"
RL12	#4	1	1	1	1	1	1	1	1		W+1'-1 ½"	W+1'-1 ½"
RL13	#4	1	1	1	1	1	1	1	1	1'-6"	W+1'-9 ½"	W+3'-3 ½"
RL14	#4	1	1	1	1	1	1	1	1	1'-6"	W+1'-5 ½"	W+2'-11 ½"
RL15	#4	1	1	1	1	1	1	1	1	1'-6"	W+1'-1 ½"	W+2'-7 ½"
RL16	#4	1	1	1	1	1	1	1	1	1'-6"	W+0'-9 ½"	W+2'-3 ½"
RL17	#4	1	1	1	1	1	1	1	1	1'-6"	W+0'-5 ½"	W+1'-11 ½"
DRL	#4	12	12	12	12	12	12	12	12	1'-6"	2'-5"	3'-11"
YS1	#4	2	2	2	2	2	2	2	2			2'-10 ½"
YS2	#4	2	2	2	2	2	2	2	2			4'-11 ½"
YS3	#4	2	2	2	2	2	2	2	2			7'-0 ½"
YS4	#4	2	2	2	2	2	2	2	2			9'-1"
YS5	#4	4	6	6	6	6	6	6	6			11'-0 ½"
YL1	#4	2	2	2	2	2	2	2	2			4'-0 ½"
YL2	#4	2	2	2	2	2	2	2	2			6'-10 ½"
YL3	#4	2	2	2	2	2	2	2	2			9'-8 ½"
YL4	#4	2	2	2	2	2	2	2	2			12'-6"
YL5	#4	4	6	6	6	6	6	6	6			15'-2 ½"
FS	#4	2	2	2	2	2	2	2	2			12'-3 ½"
FL	#4	2	2	2	2	2	2	2	2			16'-2"
N	#4	10	12	15	17	19	22	25	27	1'-8"	0'-4"	2'-4"
M	#4	2	2	2	2	2	2	2	2			1.035(S+2V)+10 ½"
K	#4	9	11	13	15	17	19	21	23	0'-6"	T1+6"	2T1+2'-6"
L	#4	4	4	4	4	4	4	4	4			1.0355+1'-0"
OS	#7	7	8	8	8	8	8	8	8	3'-1"	3'-1"	6'-2"
OL	#7	7	8	8	8	8	8	8	8	3'-1"	3'-1"	6'-2"
OSS	#4	1	1	1	1	1	1	1	1			6'-0"+T1
OSL	#4	1	1	1	1	1	1	1	1			6'-0"+T1



BARS DRS/DRL - #4



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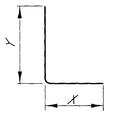
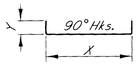
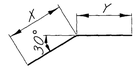


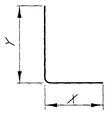
BARS RSn/RLn - #4



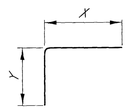
BARS N - #4



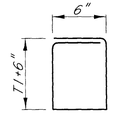
DOWELS OS/OL - #7



BARS WSn/WLn - #5



BARS V1/VLn/VSn - #4



BARS K - #4

BAR BENDING DETAILS

Dimensions are out to out

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

WINGS WITH 2:1 SLOPE FOR BASIC CULVERT DRAWING SINGLE CELL 15° SKEW DETAILS

HEIGHT 6 FT.

SPANS 6-20 FT.

SHT. 2 OF 2

WORKING NUMBER WS-6-2W-15

SHEET NUMBER 7043

DESIGNER William K. McBeath, P.E. CHECKER B. Keith Carr, P.E.

DETAILER Wesley Phillips, E.I. ISSUE DATE 01/01/2015

DIRECTOR OF STRUCTURES, STATE BRIDGE ENGINEER - JUSTIN WALKER PE.

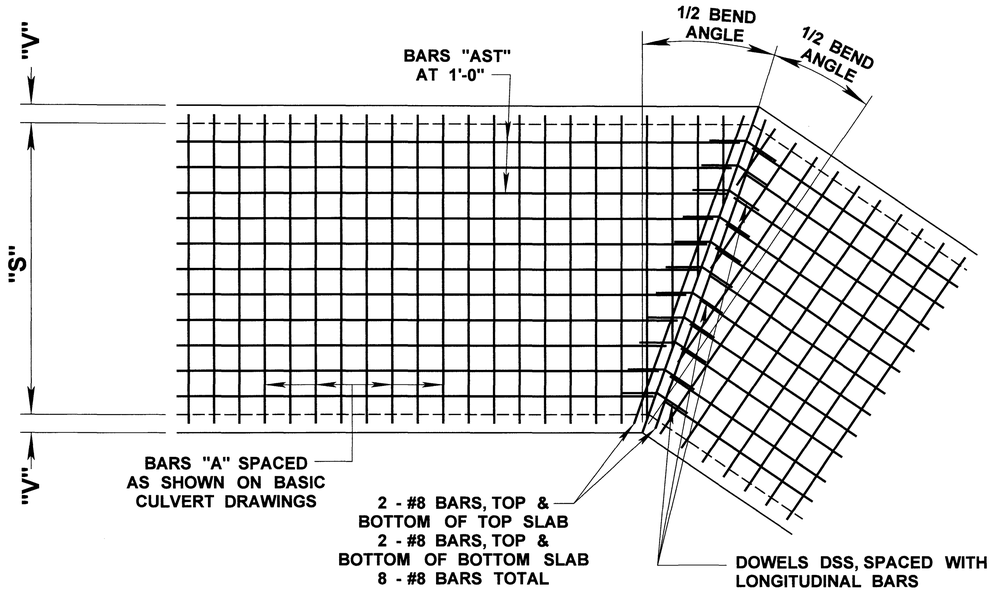
DEP. DIR. OF STRUCTURES, ASST. STATE BRIDGE ENGINEER - SCOTT WESTERFIELD PE.

BY

REVISIONS

DATE

STATE	PROJECT NO.
MISS.	



PLAN OF BARREL

SHOWING CONCRETE DIMENSIONS AND REINFORCING IN TOP SLAB. (BOTTOM SLAB IS SIMILAR)

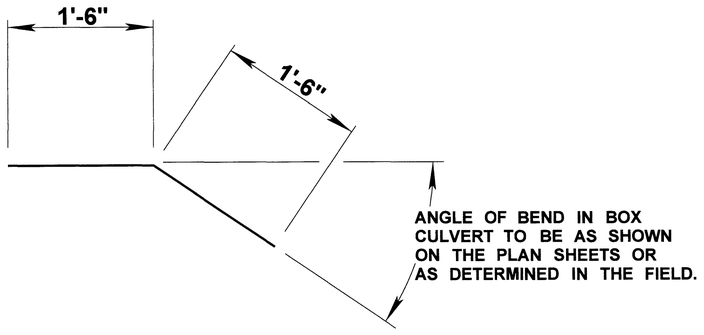
SHEET NO.	STATION	SIZE	ANGLE OF BEND	*NO. OF DOWELS DSS-#4	NO. & LENGTH OF #8 BARS	EST. REINF. STEEL (LBS)

* SINGLE CELL

NO. OF DOWELS DSS = NO. OF BARS AST + BARS ASB + BARS BS

* DOUBLE CELL

NO. OF DOWELS DSS = NO. OF BARS AST + BARS ASB + BARS BS + BARS ES



DETAIL OF DOWELS DSS - #4

GENERAL NOTES

1. THIS DRAWING IS SUPPLEMENTARY TO THE BASIC CULVERT DRAWINGS OF THE M.D.O.T. STANDARD DRAWING SERIES IBS AND IBD.
2. THE ANGLE OF BEND IN THE BOX CULVERT SHALL BE CHECKED IN THE FIELD BEFORE ORDERING REINFORCING STEEL
3. THIS DRAWING IS FOR A SINGLE CELL CULVERT. DOUBLE CELL STRUCTURES ARE SIMILAR.

REVISION | BY | DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

BOX CULVERT BENDING DETAIL

PROJECT NO. :
COUNTY :

WORKING NUMBER BCB-1

FILENAME: /dgns/bxbend.dgn

DESIGN TEAM _____ CHECKED _____ DATE _____

SHEET NUMBER

PLAN
ROADWAY DESIGN DIVISION C.A.D.D. SECTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION