HEDERMAN BROTHERS PRINTING

NOTE:
-EXISTING TOPOGRAPHIC & BOUNDARY INFORMATION PROVIDED BY CASE & ASSOCIATES.

-EXISTING TOPOGRAPHIC INFORMATION REFERENCED TO NGVD 1929 DATUM

EXISTING 10" SEWER MAIN
EXISTING 10" SEWER MAIN
EXISTING MH TOP=355.0' FL=349.2'
EXISTING 8" SEWER MAIN
EXISTING MH
HORIZ. CONTROL: N:1069451.70 E:2354610.83
EXISTING 8' X 6' BOX CULVERT INVERT U/S=350.1' INVERT D/S=349.6'
T.B.M. ELEV. 357.66 SQUARE CUT IN THE NE CORNER OF H'WALL ON BOX CULV'T. UNDER STEED ROAD. NGVD
S T E E D R O A D
EXISTING BOC
EXISTING PROPERTY LINE
HORIZ. CONTROL: N:1069292.87 E:2353917.21 ELEV.=360.85
EX. 21" RCP
EX. 18" CCP
EX. 18" RCP
EX. 18"
EXISTING STORM MH TOP=360.4' FL=353.7'
EXISTING CURB INLET TOP=359.7' FL=355.3'
EXISTING CURB INLET TOP=358.8' FL=355.3'
EXISTING 12" WATER MAIN
EXISTING FIRE HYDRANT
EXISTING CURB INLET TOP=357.3' FL=353.9'
12" W
60.0'
80.0'
64.23'
50.0'
170+78.26
175.0'
EXISTING PROPERTY LINE
3.91 ACRES±
(0.27 ACRES± ACCESS ROAD R/W)
PROPOSED PROPERTY LINE
PROPOSED ROW
H I G H L A N D C O L O N Y P A R K W A Y
INTERSTATE 55
HORIZ. CONTROL N 1069033.09 E 2354792.13
EX. 15"
EXISTING CURB INLET TOP=356.3' FL=352.2'
ZONING = C3
ZONING = C4
ZONING = C2
T.B.M. ELEV. 352.74 TOP OF NW-ANCHOR BOLT ON 6th LIGHT POST SOUTH OF STEED RD. NGVD
HORIZ. CONTROL N 1068517.57 E 2353694.19
EXISTING CURB INLET TOP=352.0' FL=346.5'

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

LEGEND
- 350 EXISTING CONTOUR
- EXISTING DRAINAGE PIPE
- EXISTING SEWER MANHOLE
- EXISTING SEWER MAIN
- 12" W EXISTING WATER MAIN
- PROPERTY LINE
- EXISTING BOC
- EXISTING CENTERLINE
- EXISTING LIGTH POLE
- PROPERTY PIN
- EXISTING PAVEMENT

NO.	DATE	REVISIONS	BY

drawn by: J. ULMER
checked by: L. MOCK
scale: 1" = 50' HORIZ.
date: JANUARY 31, 2005

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: EXISTING TOPOGRAPHIC MAP

job no. 1586C004
1566c04a.dwg
tab: 1.2 EX TOPO
sheet no. 1.2

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

EXISTING SEWER MAIN

HEDERMAN BROTHERS ENTRANCE

EXISTING 8' X 6' BOX CULVERT INVERT U/S=350.08' INVERT D/S=349.60'

EXISTING PROPERTY LINE

PROPOSED PROPERTY LINE (WIDENING)

S T E E D R O A D

EXISTING 12" WATER MAIN

EXISTING BOC

PROPOSED FUTURE BOC

50.0'

FUTURE ROAD WIDENING

EX. 21" RCP

EX. 18" RCP

EX. 18"

12" W

19+00

STA. 18+36.92,+35.00' R

PROPOSED ROAD RIGHT-OF-WAY

STA. 17+76.92,+35.00' R

170+78.26
175.0'

PROPOSED 10' UTILITY EASEMENT

46'

HEAVY DUTY PAVING AREA

38'

18+00

5'-0" SIDEWALK

87'

66'

29'

6'-6" SIDEWALK

17+00

PROPOSED 3 STORY OFFICE BUILDING F.F.E.=361.75'

EXISTING PROPERTY LINE

64.23'

PROPOSED PROPERTY LINE (WIDENING)

CONCRETE PAVERS

27'

CURVE DATA:
R=160.00'
L=120.95'
TAN=63.53'
DELTA=43°18'39"

STA. 16+55.98,+35.00' R

5'-0" SIDEWALK

50.0'

46'

26.00'

16+00

15+00

14+00

H I G H L A N D C O L O N Y P A R K W A Y

EX. 15'

CURVE DATA:
R=500.00'
L=159.74'
TAN=80.56'
DELTA=18°18'18"

FUTURE ROAD WIDENING

STA. 13+07.33,+35.00' R

13+00

ZONING = C3

10+00

70.0'

11+00

12+00

P R O P O S E D A C C E S S R O A D

STA. 10+67.74,+35.00' R

STA. 10+08.49,+35.00' R

CURVE DATA:
R=160.00'
L=239.58'
TAN=148.66'
DELTA=85°47'33"

ZONING = C2

ZONING = C4

I N T E R S T A T E 5 5

N

LEGEND

- PROPOSED RIGHT-OF-WAY
- PROPOSED UTILITY EASEMENT
- PROPOSED DRAINAGE PIPE
- PROPOSED SS-2 INLET
- PROPOSED B-9 INLET
- PROPOSED 8" PVC SEWER MAIN
- PROPOSED SEWER MANHOLE
- 12" W — PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED ASPHALT PARKING
- PROPOSED HEAVY DUTY PAVEMENT AREA
- EXISTING DRAINAGE PIPE
- EXISTING SEWER MANHOLE
- EXISTING SEWER MAIN
- 12" W — EXISTING WATER MAIN
- PROPOSED CONCRETE PAVERS

drawn by: J. ULMER
checked by: L. MOCK
scale: 1" = 40' HORIZ.
date: JANUARY 31, 2005

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DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: PROPOSED SITE LAYOUT

job no. 1586C004

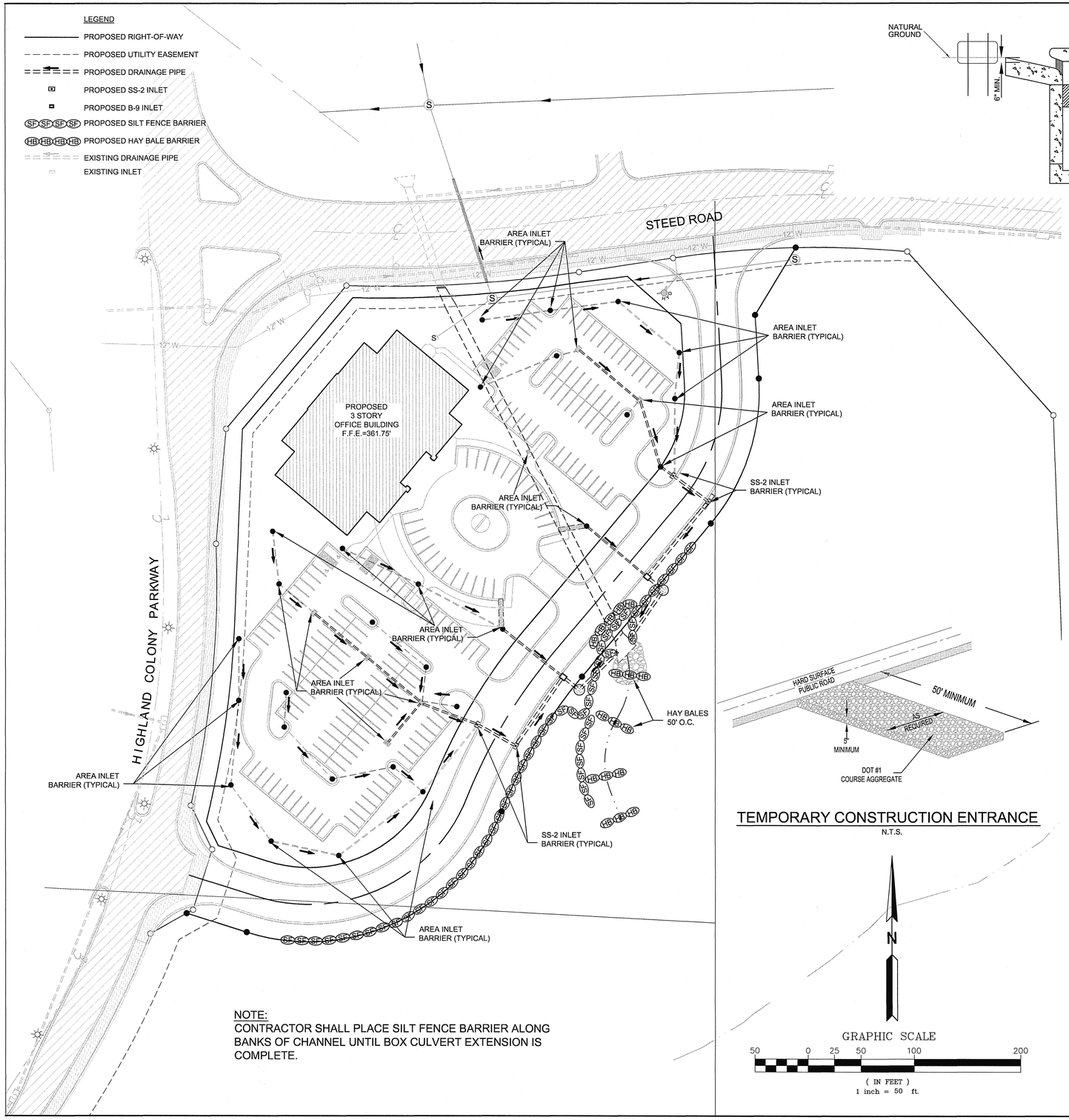
1586c04a.dwg

tab: 1.3 Site Layout

sheet no. 1.3

LEGEND

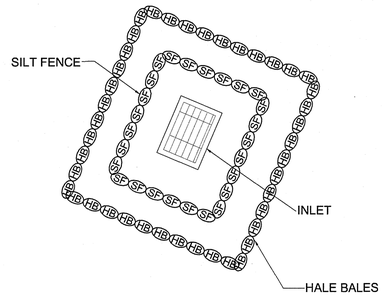
- PROPOSED RIGHT-OF-WAY
- PROPOSED UTILITY EASEMENT
- PROPOSED DRAINAGE PIPE
- PROPOSED SS-2 INLET
- PROPOSED B-9 INLET
- PROPOSED SILT FENCE BARRIER
- PROPOSED HAY BALE BARRIER
- EXISTING DRAINAGE PIPE
- EXISTING INLET



NOTE:
CONTRACTOR SHALL PLACE SILT FENCE BARRIER ALONG BANKS OF CHANNEL UNTIL BOX CULVERT EXTENSION IS COMPLETE.

TEMPORARY SEDIMENT BARRIER FOR SS-2 INLET

N.T.S.

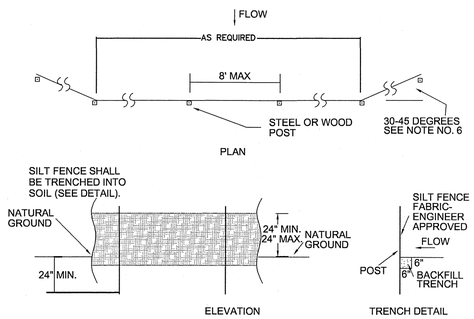


AREA INLET SEDIMENT BARRIER

N.T.S.

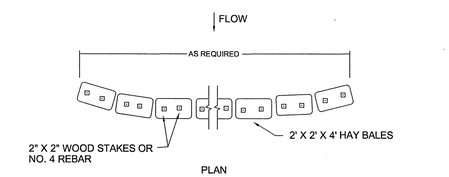
TEMPORARY CONSTRUCTION ENTRANCE

N.T.S.



SILT FENCE SEDIMENT BARRIER

N.T.S.



HAY BALE SEDIMENT BARRIER

N.T.S.

drawn by: J. ULMER
checked by: L. MOCK
scale: 1" = 50' HORIZ.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

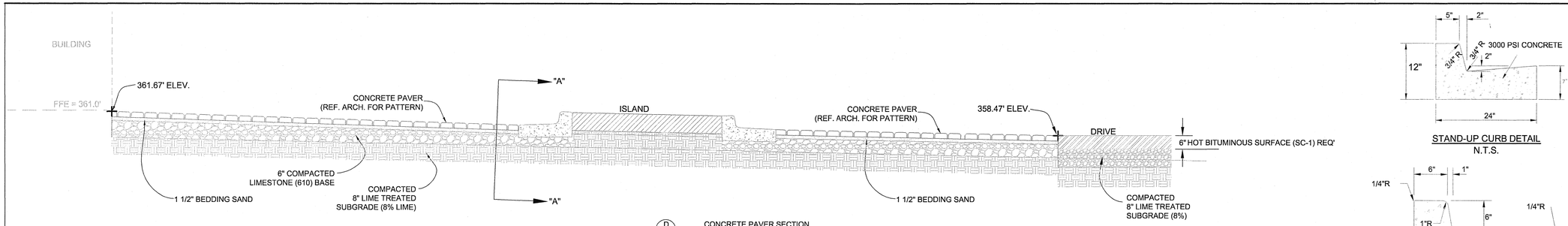
contents: SWPPP

job no. 1586C004

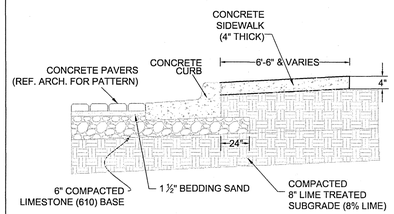
1586c04a.dwg

tab: 1.4 SWPPP

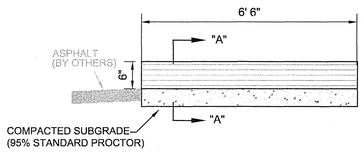
sheet no. 1.4

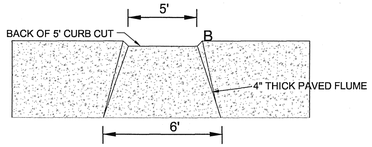


D/1.5 CONCRETE PAVER SECTION
N.T.S.

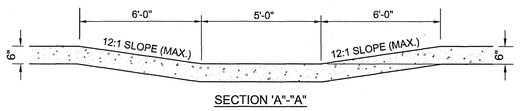


E/1.5 SIDEWALK SECTION
N.T.S.



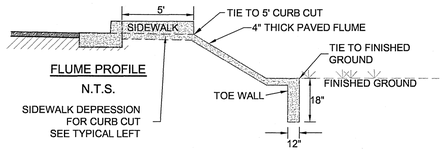


FRONT
CURB CUT TYPICAL SECTION

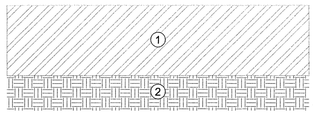


SECTION 'A"-"A"

TYPICAL HANDICAP CURB CUT / FLUME CURB CUT
N.T.S.



FLUME PROFILE
N.T.S.



PARKING AREA SECTION-TYPICAL

1. 6" HOT BITUMINOUS SURFACE COURSE (SC-1) (3 - 2" LIFTS)
2. 8" LIME TREATED SUBGRADE (8%)

PARKING AREA SECTION-HEAVY DUTY

1. 8" HOT BITUMINOUS SURFACE COURSE (SC-1) (4 - 2" LIFTS)
2. 8" LIME TREATED SUBGRADE (8%)

RATES OF APPLICATION USED FOR ESTIMATING QUANTITIES

ITEM	RATE
HOT BITUMINOUS SURFACE COURSE	110 LBS. PER SQ. YD./IN.
PRIME COAT (CRS-2P)	0.35 GAL. /SQ. YD.
AGRICULTURAL LIMESTONE	2.0 TONS / ACRE
COMMERCIAL FERTILIZER (13-13-13)	1.0 TON / ACRE
VEGETATIVE MATERIALS FOR MULCH	2.0 TONS/ ACRE
* AMMONIUM NITRATE	200 LBS. / ACRE

* APPLY AFTER GROWTH OF VEGETATION IS ESTABLISHED.

GENERAL NOTES

1. All topsoil within the construction limits shall be stripped and stockpiled in a designated area. Upon completion of grading, the Contractor shall place a sufficient quantity of topsoil to insure grass growth on the designated area. Any excess topsoil shall remain stockpiled for future use by the owner.

2. Sediment runoff on any area disturbed by the Contractor will be controlled at all times. This shall include the installation of hay bales and silt fences.

3. Contractor shall seed, fertilize, and mulch all areas disturbed by construction activities and insure a complete stand of grass.

4. The location of existing utilities indicated is approximate and those shown are not necessarily all which may exist on site. The Contractor shall verify the location of existing utilities on the project site, whether indicated on the plans or not, and shall promptly repair those which are damaged by his construction operation. Contractor shall notify MS OneCall at least two working days prior to excavating.

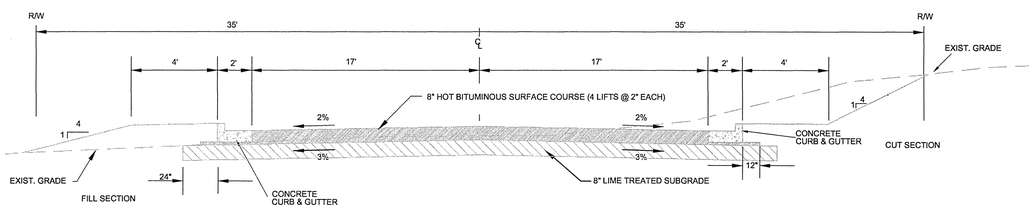
5. Any local, state, or federal permitting required for construction shall be the responsibility of the contractor.

6. Earth fill beneath the buildings, roads, and parking shall be compacted to 95 % of standard proctor. All other fill shall be compacted to 90 % of standard proctor.

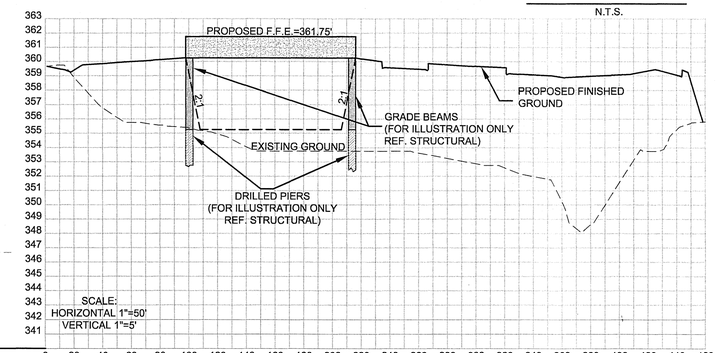
7. Contractor shall save all trees within construction limits in areas of less than one foot of fill.

8. Contractor shall conform to stormwater pollution prevention plan. Monthly reports shall be submitted to Engineer.

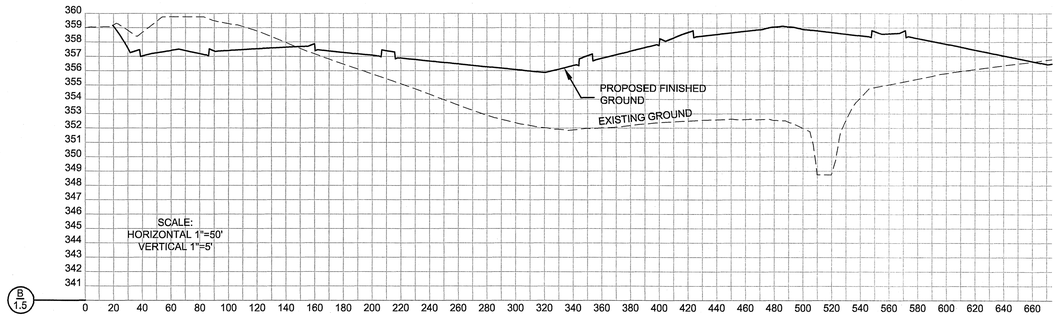
9. Contractor shall provide adequate traffic control (flagman, cones, barricades, etc.) when working within or adjacent to public right-of-way.



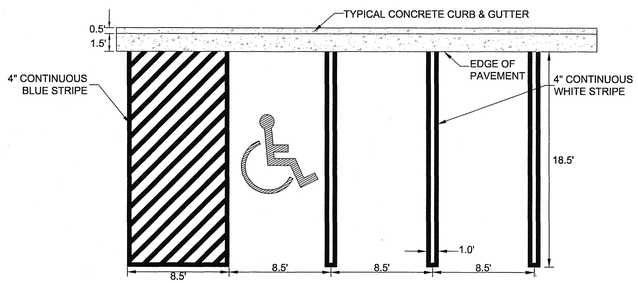
ACCESS ROAD TYPICAL SECTION
N.T.S.



DETAIL OF PITCH-AWAY CURB & GUTTER
N.T.S.



STAND-UP CURB DETAIL
N.T.S.



TYPICAL DOUBLE STRIPE PARKING DETAIL
SCALE 1"=6'

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

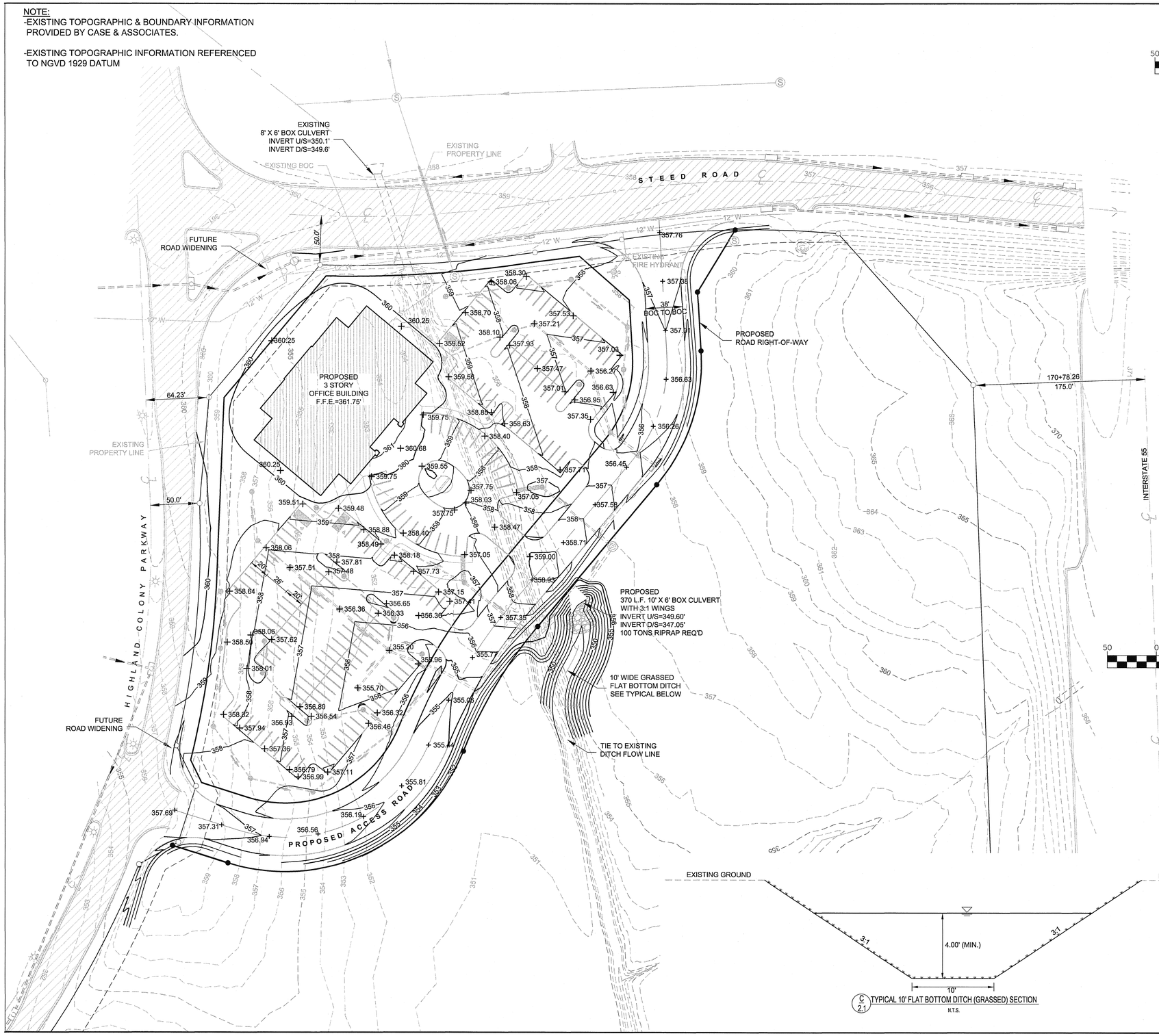
100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

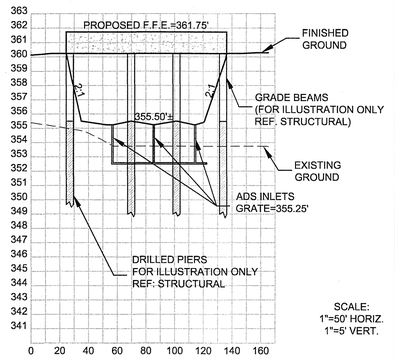
contents: GENERAL NOTES & DETAILS

job no. 1586C004
1586c04a.dwg
tab: 1.5 Details
sheet no. 1.5

NOTE:
-EXISTING TOPOGRAPHIC & BOUNDARY INFORMATION PROVIDED BY CASE & ASSOCIATES.

-EXISTING TOPOGRAPHIC INFORMATION REFERENCED TO NGVD 1929 DATUM





LEGEND

- PROPOSED RIGHT-OF-WAY
- PROPOSED UTILITY EASEMENT
- PROPOSED DRAINAGE PIPE
- PROPOSED SS-2 INLET
- PROPOSED B-9 INLET
- PROPOSED 8" PVC SEWER MAIN
- PROPOSED SEWER MANHOLE
- 12" W PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- PROPOSED FG SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- 350 EXISTING CONTOUR
- EXISTING DRAINAGE PIPE
- EXISTING SEWER MANHOLE
- EXISTING SEWER MAIN
- 12" W EXISTING WATER MAIN

drawn by: J. ULMER
checked by: L. MOCK
scale: 1" = 50' HORIZ.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

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Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

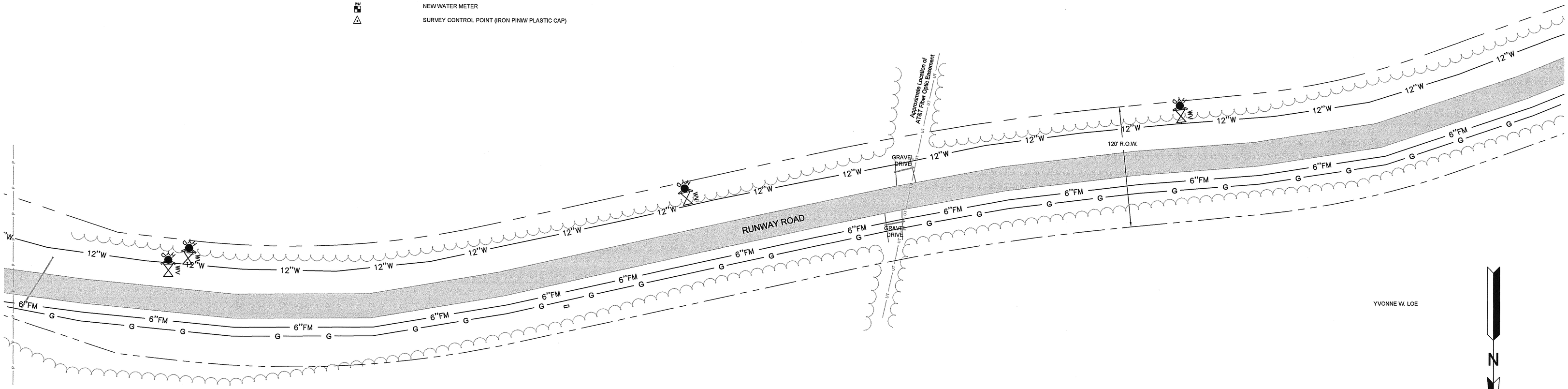
100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: GRADING PLAN

job no. 1586C004
1586c04a.dwg
tab: 2.1 Grading Plan
sheet no. 2.1

LEGEND

12"W	NEW 12" PVC WATER MAIN
10"W	NEW 10" PVC WATER MAIN
2"W	NEW 2" PVC WATER MAIN
G	NEW 4" GAS MAIN
6"FM	NEW 6" PVC SANITARY SEWER FORCE MAIN
8"SS	NEW 8" SANITARY SEWER GRAVITY MAIN
	6' CHAIN LINK FENCE
x x x	EXISTING BARBED WIRE FENCE
	ROAD RIGHT-OF-WAY
UP UP UP	EX. UNDERGROUND POWER LINE
P P P	EXISTING OVERHEAD POWER LINE
	WOOD LINE
	NEW SEWER MANHOLE
	NEW FIRE HYDRANT
	NEW GATE VALVE
	NEW WATER METER
	SURVEY CONTROL POINT (IRON PINW/ PLASTIC CAP)



AS-BUILT

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

drawn by: T.P.R.
checked by: J.L.M.
scale: 1" = 50' HORIZ. 1" = 5' VERT.
date: AUGUST 2002

NO.	DATE	REVISIONS	BY

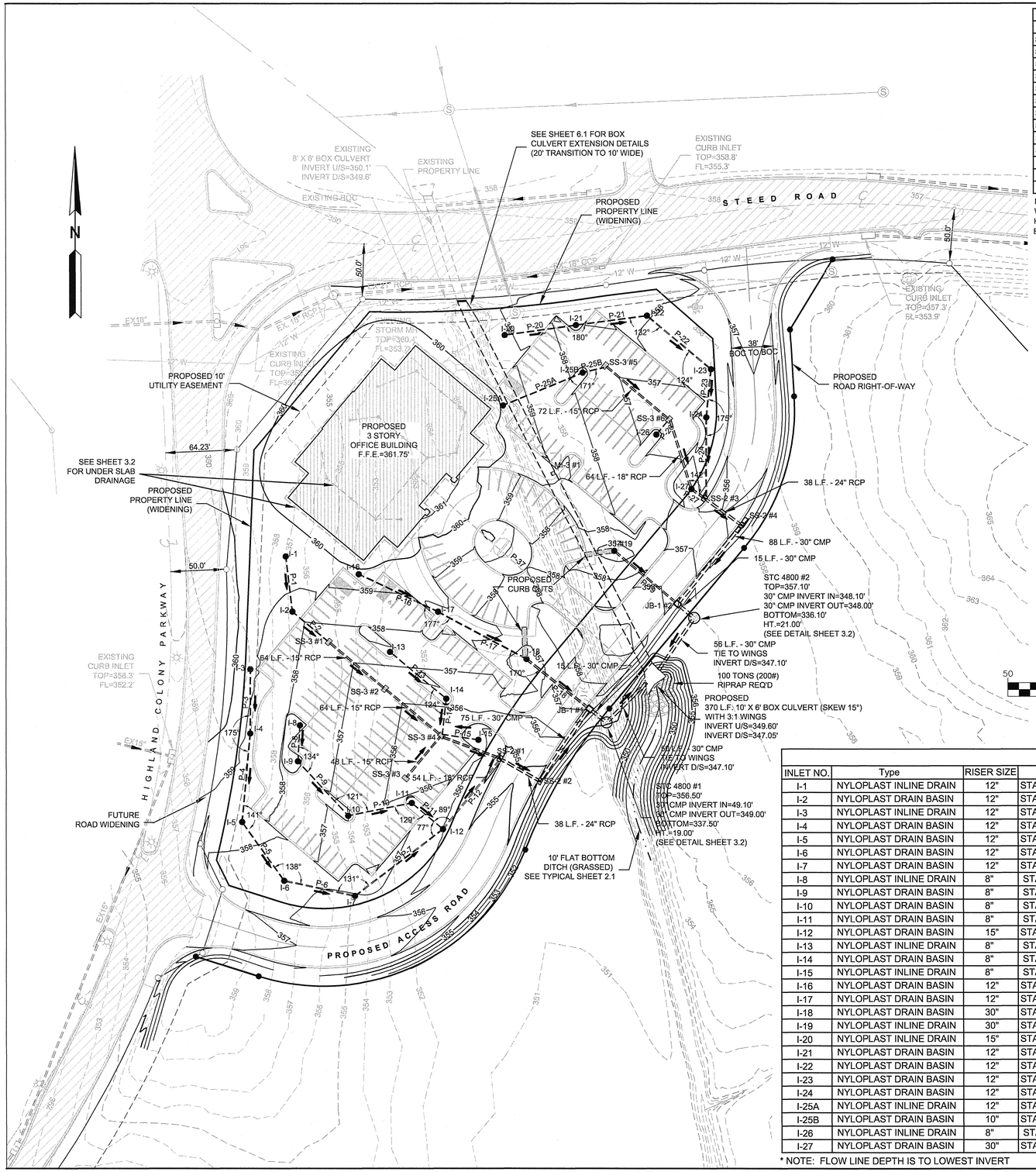
INFRASTRUCTURE IMPROVEMENTS
CITY OF PICAYUNE
CHEVRON AVIATION MAINTENANCE FACILITY
PEARL RIVER COUNTY, MISSISSIPPI

contents: AS-BUILT UTILITY LAYOUT SHEET

job no. 1700C003

sheet no. 2.5

sheet 5 of 11 sheets



INLET SCHEDULE								
INLET	TYPE	WIDTH	LENGTH	TOP / GRATE	INVERT IN	INVERT OUT	BOTTOM	HEIGHT
SS-2 #1	SS-2	3'	5'	354.80'	18 CMP"-350.73', 12"CPP-351.23'	24" RCP-350.63'	349.80'	5.00'
SS-2 #2	SS-2	4'	5'	354.80'	24" RCP-350.32'	30" CMP-350.22'	349.30'	5.50'
SS-2 #3	SS-2	3'	5'	355.92'	10"352.52', 18" CMP-351.85'	24" RCP-351.75'	350.92'	5.00'
SS-2 #4	SS-2	4'	15'	355.92'	24" RCP-349.84'	30" CMP-349.34'	348.42'	7.5'
SS-3 #1	SS-3	3'	5'	357.25'	8" CPP-354.73'	15" RCP-354.63'	353.75'	3.50'
SS-3 #2	SS-3	3'	5'	356.10'	15" RCP-353.58'	15" RCP-353.48'	352.60'	3.50'
SS-3 #3	SS-3	3'	5'	355.45'	-----	18" RCP-352.82'	351.95'	3.50'
SS-3 #4	SS-3	3'	5'	355.00'	6" CPP-352.18', 15" RCP-352.18'	18" RCP-352.08'	351.25'	3.75'
SS-3 #5	SS-3	3'	5'	357.11'	6" CPP-354.59'	15" RCP-354.49'	353.61'	3.50'
SS-3 #6	SS-3	3'	5'	356.17'	6" CPP-353.25', 15" RCP-353.35'	18" RCP-353.25'	352.42'	3.75'
JB-1 #1	JB-1	4'	5'	353.33'	15" RCP-350.75', 30" CMP 349.60'	30" CMP-349.50'	348.58'	4.75'
JB-1 #2	JB-1	4'	5'	352.18'	15" RCP-349.60', 30" CMP 348.35'	30" CMP-348.35'	347.43'	4.75'
MI-3 #1	MI-3	24"	32"	358.90'	NA	NA	NA	3.70'

NOTE:
WIDTH AND DEPTH ARE INSIDE DIMENSIONS.
HEIGHT IS FROM THE TOP OF THE BACK OF CURB TO THE OUTSIDE BOTTOM OF THE INLET.
BOTTOM OF INLET MUST BE AT LEAST 0.60' LOWER THAN LOWEST INVERT AT INLET.

LEGEND

- PROPOSED RIGHT-OF-WAY
- PROPOSED UTILITY EASEMENT
- PROPOSED DRAINAGE PIPE
- PROPOSED SS-2 INLET
- PROPOSED B-9 INLET
- PROPOSED 8" PVC SEWER MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER MAIN
- PROPOSED FIRE HYDRANT
- EXISTING CONTOUR
- EXISTING DRAINAGE PIPE
- EXISTING SEWER MANHOLE
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING LIGHT POLE

PIPE SCHEDULE				
PIPE NO.	SIZE (in.)	LENGTH	INVERT IN (ft.)	INVERT OUT (ft.)
P-1	8" CPP	50	356.75'	355.35'
P-2	8" CPP	42	355.25'	354.73'
P-3	8" CPP	58	355.75'	355.45'
P-4	8" CPP	80	355.35'	355.10'
P-5	8" CPP	65	355.00'	354.35'
P-6	10" CPP	65	354.25'	353.75'
P-7	10" CPP	100	354.00'	352.75'
P-8	6" CPP	32	355.75'	354.80'
P-9	6" CPP	66	354.70'	354.00'
P-10	6" CPP	58	353.90'	353.55'
P-11	6" CPP	36	353.45'	352.75'
P-12	12" CPP	80	352.65'	351.23'
P-13	6" CPP	66	354.60'	353.30'
P-14	6" CPP	34	353.20'	352.18'
P-15	6" CPP	34	352.80'	352.18'
P-16	8" CPP	78	356.48'	355.76'
P-17	10" CPP	90	355.66'	353.10'
P-18	15" RCP	72	353.00'	350.75'
P-19	15" RCP	72	353.00'	349.60'
P-20	8" CPP	64	356.00'	355.35'
P-21	8" CPP	64	355.25'	354.85'
P-22	10" CPP	75	354.75'	354.35'
P-23	10" CPP	44	354.25'	353.85'
P-24	10" CPP	72	353.75'	352.52'
P-25A	8" CPP	78	356.70'	354.85'
P-25B	6" CPP	20	354.75'	354.59'
P-26	6" CPP	15	354.00'	353.35'
P-27	18" CMP	12	352.17'	351.85'

* NOTE: SEE SHEET 3.2 FOR CONNECTION DETAILS

INLET SCHEDULE									
INLET NO.	Type	RISER SIZE	GRATE	GRATE ELEV.	INVERT IN	INVERT OUT / FL	BOTTOM ELEV.	DEPTH TO FLOW LINE	HEIGHT
I-1	NYLOPLAST INLINE DRAIN	12"	STANDARD 12"	359.50'	NA	356.75'	NA	2.75'	NA
I-2	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	358.00'	355.35'	355.25'	354.75'	2.75'	3.25'
I-3	NYLOPLAST INLINE DRAIN	12"	STANDARD 12"	358.50'	NA	355.75'	NA	2.75'	NA
I-4	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	358.35'	355.45'	355.35'	354.85'	3.00'	3.50'
I-5	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	358.25'	355.10'	355.00'	354.50'	3.25'	3.75'
I-6	NYLOPLAST DRAIN BASIN	12"	STANDARD 15"	357.25'	354.35'	354.25'	353.75'	3.00'	3.50'
I-7	NYLOPLAST DRAIN BASIN	12"	STANDARD 15"	356.65'	353.75'	353.65'	353.15'	3.00'	3.50'
I-8	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	357.75'	NA	355.00'	NA	2.75'	NA
I-9	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	357.70'	354.80'	354.70'	354.20'	3.00'	3.50'
I-10	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	356.65'	354.00'	353.90'	353.40'	2.75'	3.25'
I-11	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	356.20'	353.55'	353.45'	352.95'	2.75'	3.25'
I-12	NYLOPLAST DRAIN BASIN	15"	STANDARD 15"	355.65'	352.75'	352.65'	352.15'	3.00'	3.50'
I-13	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	357.35'	NA	354.60'	NA	2.75'	NA
I-14	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	356.20'	353.30'	353.20'	352.70'	3.00'	3.50'
I-15	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.55'	NA	352.80'	NA	2.75'	NA
I-16	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	359.23'	356.58'	356.48'	355.98'	2.75'	3.25'
I-17	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	358.41'	355.76'	355.66'	351.16'	2.75'	3.25'
I-18	NYLOPLAST DRAIN BASIN	30"	STANDARD 30"	356.50'	353.10'	353.00'	352.50'	3.50'	4.00'
I-19	NYLOPLAST INLINE DRAIN	30"	STANDARD 30"	356.50'	NA	353.00'	NA	3.50'	NA
I-20	NYLOPLAST INLINE DRAIN	15"	STANDARD 15"	358.75'	NA	356.00'	NA	2.75'	NA
I-21	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	358.00'	355.35'	355.25'	354.75'	2.75'	3.25'
I-22	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	357.75'	354.85'	354.75'	354.25'	3.00'	3.50'
I-23	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	357.00'	354.35'	354.25'	353.75'	2.75'	3.25'
I-24	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	356.50'	353.85'	353.75'	353.25'	2.75'	3.25'
I-25A	NYLOPLAST INLINE DRAIN	12"	STANDARD 12"	359.45'	NA	356.70'	356.20'	2.75'	3.25'
I-25B	NYLOPLAST DRAIN BASIN	10"	STANDARD 10"	357.75'	354.85'	354.75'	354.25'	3.00'	3.50'
I-26	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	356.75'	NA	354.00'	NA	2.75'	NA
I-27	NYLOPLAST DRAIN BASIN	30"	STANDARD 30"	355.42'	352.27'	352.17'	351.67'	3.25'	3.75'

* NOTE: FLOW LINE DEPTH IS TO LOWEST INVERT

drawn by: J. ULMER
checked by: L. MOCK
scale: 1" = 50' HORIZ.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

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CITY OF RIDGELAND, MISSISSIPPI

contents: DRAINAGE PLAN

job no. 1586C004

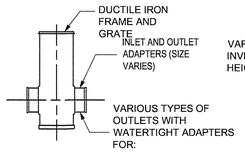
1586c04a.dwg

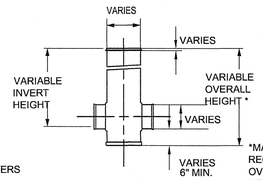
tab: 3.1 Drainage Plan

sheet no. 3.1

RISER SIZE	ADAPTER SIZES	
	MINIMUM	MAXIMUM
8"	4"	8"
10"	4"	10"
12"	4"	12"
15"	4"	15"
18"	4"	18"
24"	4"	24"
30"	4"	30"

TYPICAL DRAIN BASIN



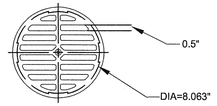


INLET SCHEDULE FOR UNDER SLAB DRAINAGE									
INLET NO.	Type	RISER SIZE	GRATE	GRATE ELEV.	INVERT IN	INVERT OUT / FL	BOTTOM ELEV.	DEPTH TO FLOW LINE	HEIGHT
I-28	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.25'	NA	352.75'	NA	2.50'	NA
I-29	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	355.25'	352.60'	352.50'	352.00'	2.75'	3.25'
I-30	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	355.25'	352.35	352.25'	351.75'	3.00'	3.50'
I-31	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	355.25'	352.10'	352.00'	351.50'	3.25'	3.75'
I-32	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.25'	NA	352.75'	NA	2.50'	NA
I-33	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	355.25'	352.60'	352.50	352.00'	2.75	3.25'
I-34	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.25'	352.35'	352.25'	351.75'	3.00'	3.50'
I-35	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	355.25	351.60	351.50	351.00	3.75	4.25
I-36	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	355.25'	351.85'	351.75'	351.25'	3.50'	4.00'
I-37	NYLOPLAST DRAIN BASIN	12"	STANDARD 12"	355.25	351.35	351.25	350.75	4.00	4.50
I-38	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.25'	NA	352.75'	NA	2.50'	NA
I-39	NYLOPLAST DRAIN BASIN	8"	STANDARD 8"	355.25'	352.60'	352.50'	352.00'	2.75'	3.25'
I-40	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.25'	352.35'	352.25'	351.75'	3.00'	3.50'
I-41	NYLOPLAST DRAIN BASIN	24"	STANDARD 24"	355.25'	352.10'	352.00'	351.50'	3.25'	3.75'
I-42	NYLOPLAST INLINE DRAIN	8"	STANDARD 8"	355.25	NA	352.75	NA	2.5	NA

* NOTE: FLOW LINE DEPTH IS TO LOWEST INVERT

A	B	C
8"	4"	7.50
8"	6"	5.25
10"	4"	8.75
10"	6"	8.75
10"	8"	6.50
12"	4"	10.50
12"	6"	11.50
12"	8"	11.50
12"	10"	11.25
12"	12"	6.00
15"	4"	13.25
15"	6"	12.75
15"	8"	12.25
15"	10"	13.50
15"	12"	12.75
15"	15"	7.00
30"	6"	15.50
30"	15"	17.00
30"	18"	17.75

NYLOPLAST INLINE INLET

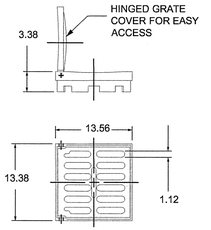


*STANDARD

APPROX. DRAIN AREA = 18.77 SQ. IN.

APPROX. WEIGHT = 3.08 LBS.

NYLOPLAST 6" GRATES/COVERS

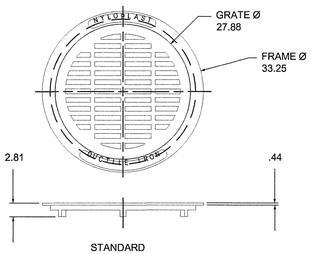


STANDARD

APPROX. DRAIN AREA = 60.62 SQ. IN.

APPROX. WEIGHT WITH FRAME = 40.68 LBS.

NYLOPLAST 12" GRATES/COVERS

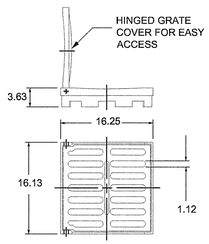


STANDARD

APPROX. DRAIN AREA = 192.00 SQ. IN.

APPROX. WEIGHT WITH FRAME = 189.00 LBS.

NYLOPLAST 30" GRATES/COVERS



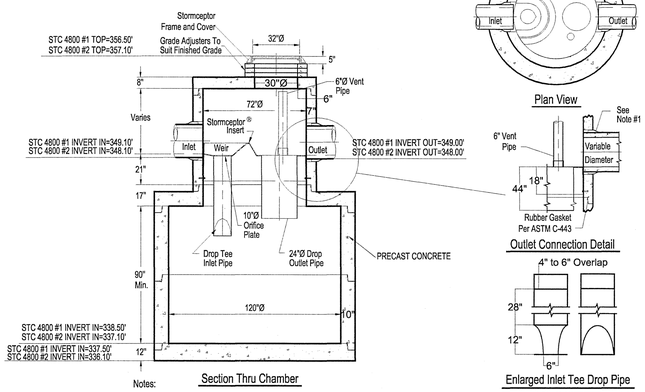
STANDARD

APPROX. DRAIN AREA = 92.70 SQ. IN.

APPROX. WEIGHT WITH FRAME = 59.62 LBS.

NYLOPLAST 15" GRATES/COVERS

STC 4800 Precast Concrete Stormceptor® (4800 U.S. Gallon Capacity)



Section Thru Chamber

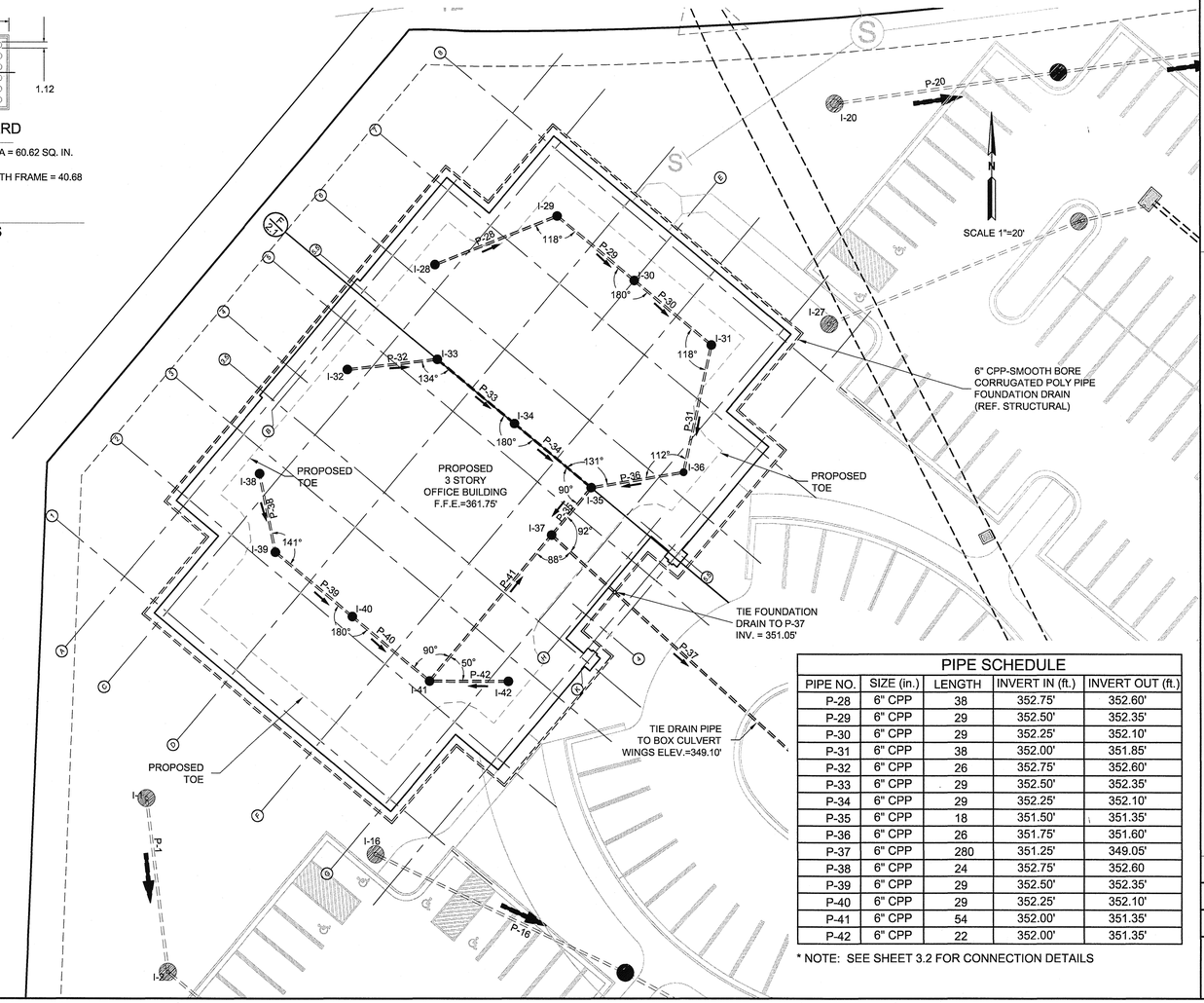
Plan View

Outlet Connection Detail

Enlarged Inlet Tee Drop Pipe

Notes:

1. The use of a Flexible Connection is recommended at The Inlet and Outlet Pipe.
2. The Cover should be positioned over The Outlet Drop Pipe and The Vent Pipe.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Hydro Conduit representative for further details not listed on this sheet.



PIPE SCHEDULE				
PIPE NO.	SIZE (in.)	LENGTH	INVERT IN (ft.)	INVERT OUT (ft.)
P-28	6" CPP	38	352.75'	352.60'
P-29	6" CPP	29	352.50'	352.35'
P-30	6" CPP	29	352.25'	352.10'
P-31	6" CPP	38	352.00'	351.85'
P-32	6" CPP	26	352.75'	352.60'
P-33	6" CPP	29	352.50'	352.35'
P-34	6" CPP	29	352.25'	352.10'
P-35	6" CPP	18	351.50'	351.35'
P-36	6" CPP	26	351.75'	351.60'
P-37	6" CPP	280	351.25'	349.05'
P-38	6" CPP	24	352.75'	352.60
P-39	6" CPP	29	352.50'	352.35'
P-40	6" CPP	29	352.25'	352.10'
P-41	6" CPP	54	352.00'	351.35'
P-42	6" CPP	22	352.00'	351.35'

* NOTE: SEE SHEET 3.2 FOR CONNECTION DETAILS

drawn by: J. ULMER
checked by: L. MOCK
scale: AS NOTED
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

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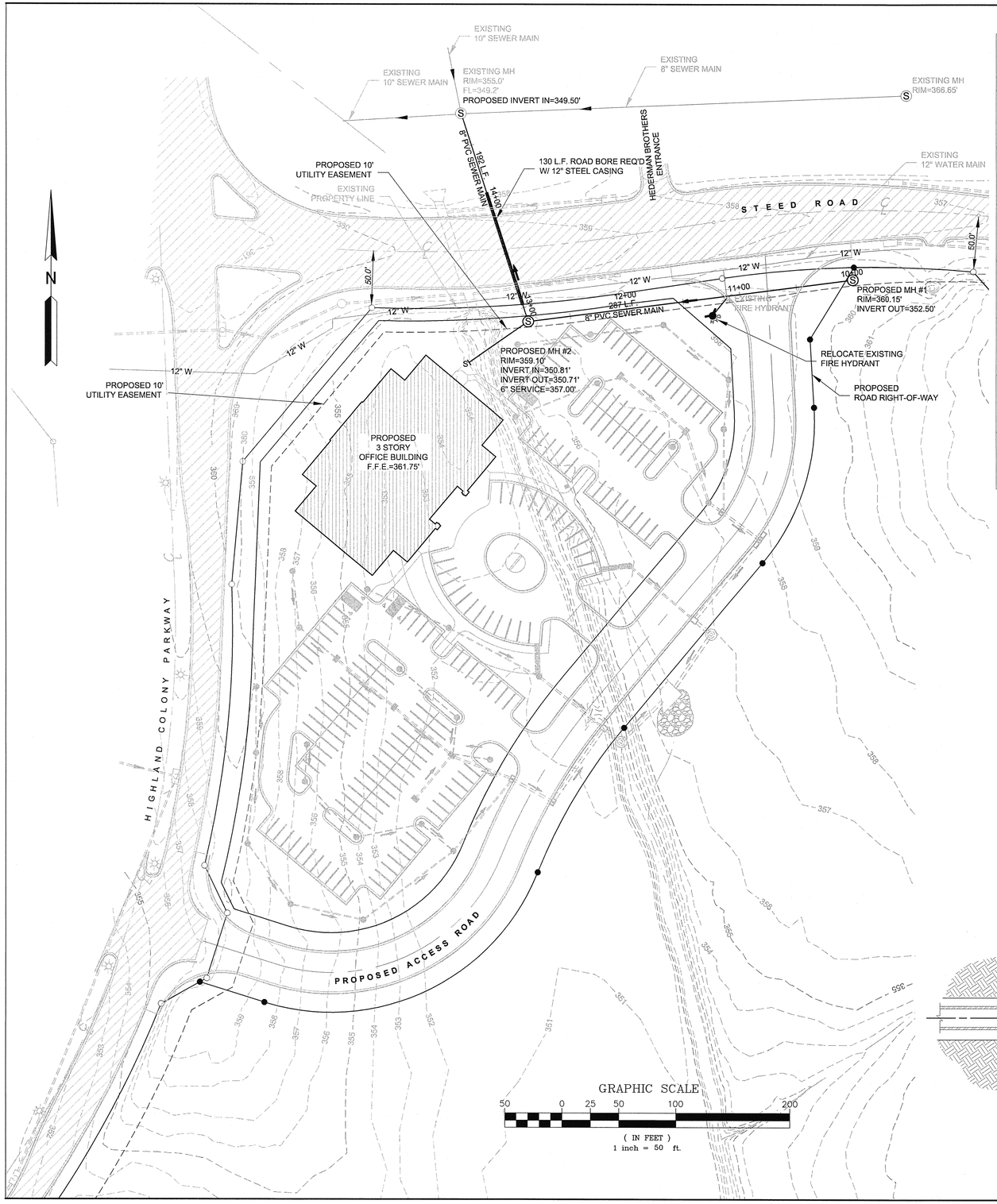
contents: DRAINAGE UNDER SLAB & DRAINAGE DETAILS

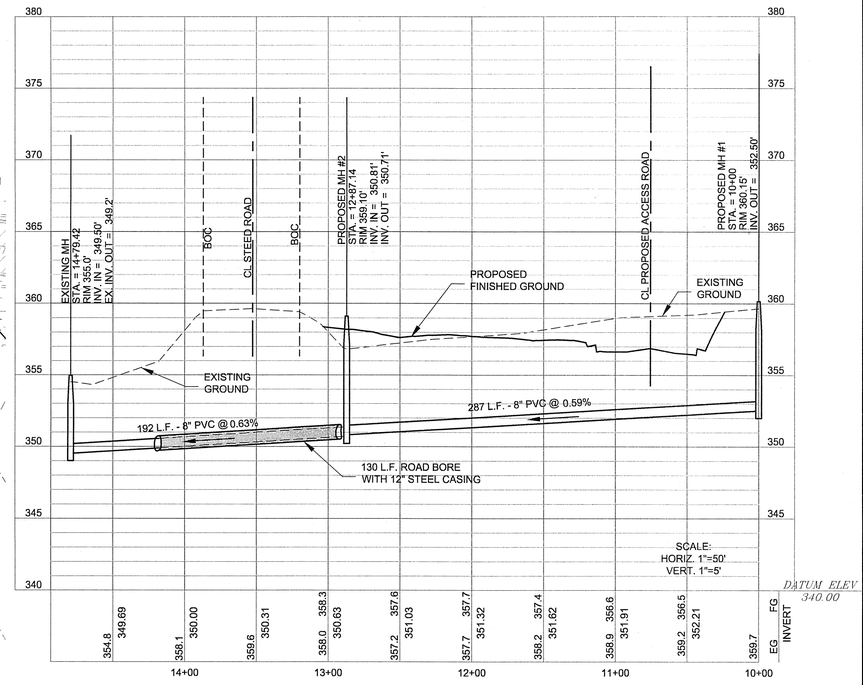
job no. 1586C004

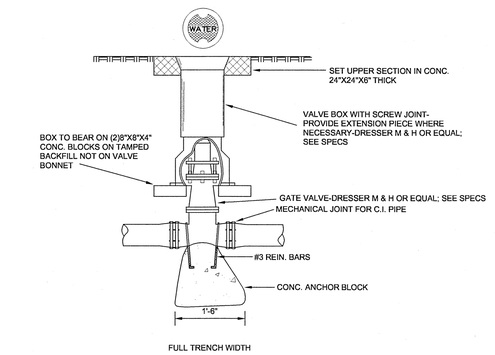
1586c04a.dwg

tab: 3.2 Drainage Details

sheet no. 3.2



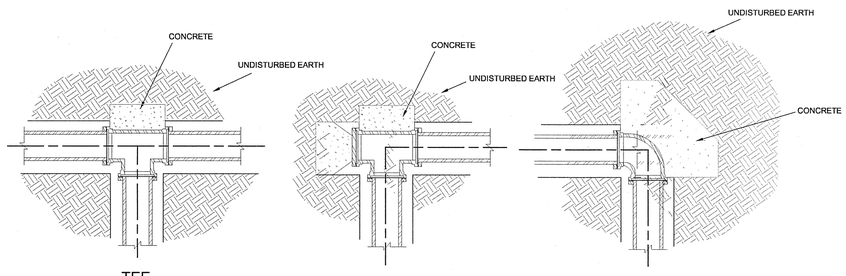




GATE VALVE DETAIL FOR WATER MAINS 2" DIA. & OVER

LEGEND

- PROPOSED RIGHT-OF-WAY
- PROPOSED UTILITY EASEMENT
- PROPOSED DRAINAGE PIPE
- PROPOSED SS-2 INLET
- PROPOSED B-9 INLET
- PROPOSED 8" PVC SEWER MAIN
- PROPOSED SEWER MANHOLE
- 12" W — PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- 350 — EXISTING CONTOUR
- EXISTING DRAINAGE PIPE
- EXISTING SEWER MANHOLE
- EXISTING SEWER MAIN
- 12" W — EXISTING WATER MAIN
- 350 — EXISTING WATER MAIN



TYPICAL BLOCKING DETAILS

NO.	DATE	REVISIONS	BY

drawn by: J. ULMER
checked by: L. MOCK
scale: 1" = 50' HORIZ.
date: JANUARY 31, 2005

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

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contents: UTILITY PLAN & WATER DETAILS

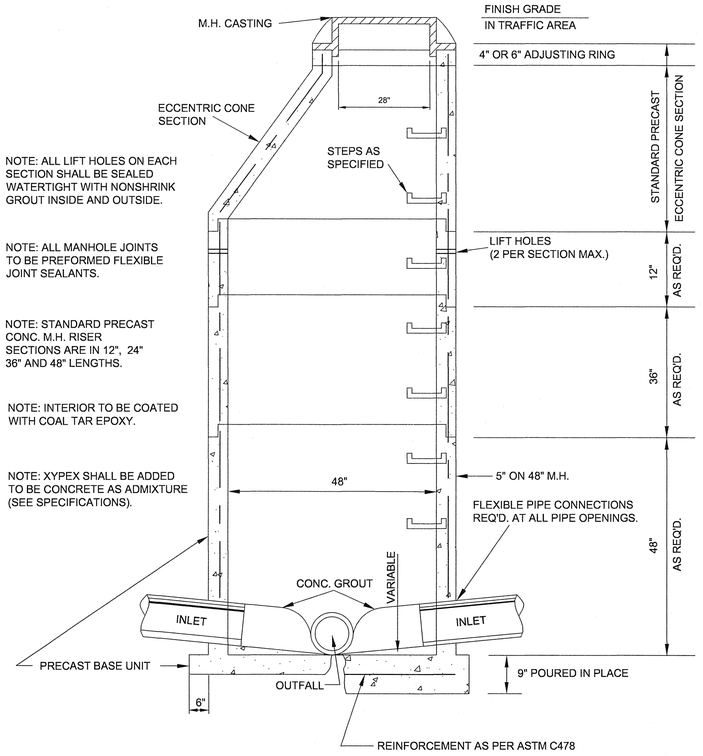
job no. 1586C004

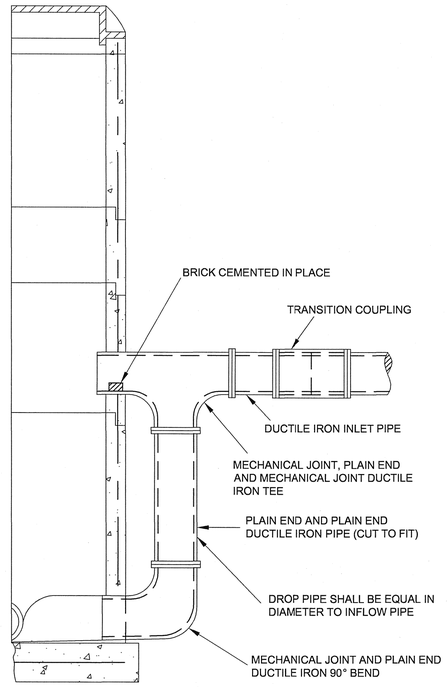
1586c04a.dwg

tab: 4.1 Utility Plan

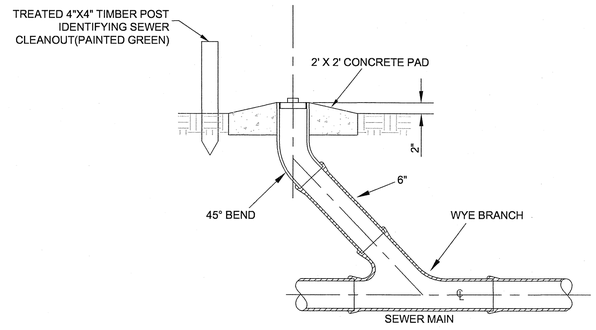
sheet no. **4.1**

PRECAST CONCRETE MANHOLE

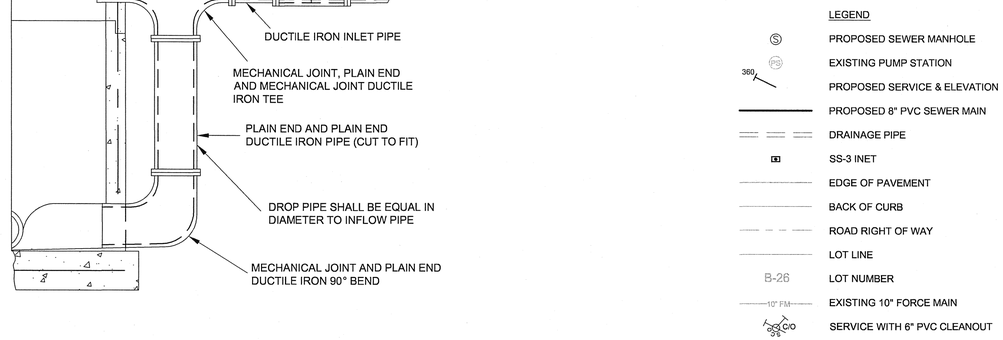




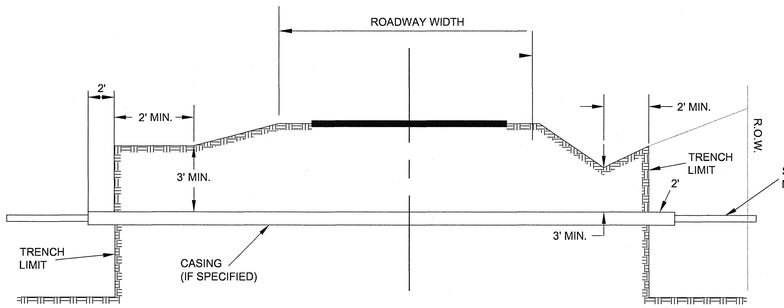
MANHOLE WITH DROP CONNECTION

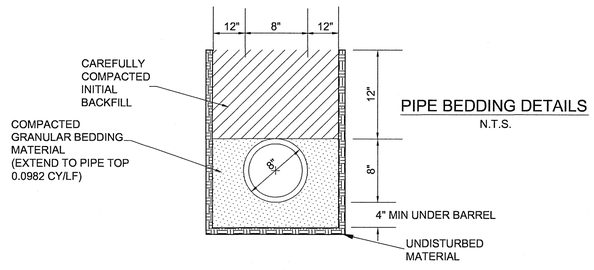


TYPICAL SEWER CLEANOUT DETAIL

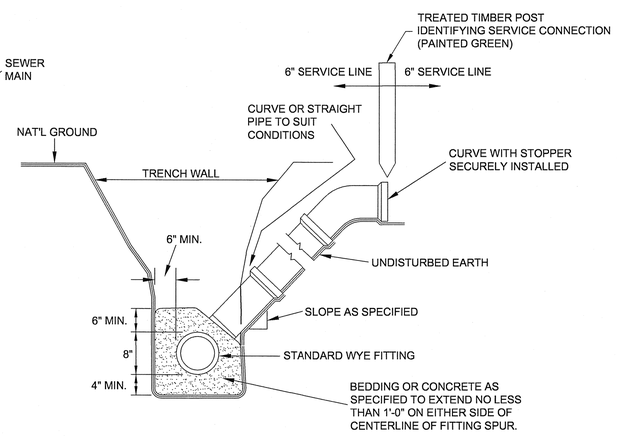


TYPICAL STREET CROSSING





PIPE BEDDING DETAILS
N.T.S.



TYPICAL SERVICE CONNECTION

NOTES

1. THE LOCATION OF EXISTING SEWER MAINS AND SERVICES, AS WELL AS ALL OTHER ABOVE GROUND UTILITIES AND STRUCTURES INDICATED ON THIS PLAN IS APPROXIMATE AND THOSE SHOWN ARE NOT NECESSARILY ALL WHICH MAY EXIST ON THE SITE. THE CONTRACTOR SHALL VERIFY THE EXISTING FACILITIES ON THE PROJECT SITE, WHETHER SPECIFICALLY INDICATED OR NOT, AND SHALL PROMPTLY REPAIR THOSE WHICH ARE DAMAGED BY HIS CONSTRUCTION OPERATIONS. BEFORE COMMENCING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL CONTACT MS ONE-CALL AT 1-800-227-6477. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF ANY UTILITIES SHOWN OR NOT SHOWN ON THESE CONSTRUCTION PLANS.
2. ITEMS TO BE CONSTRUCTED ON THE SEWER LINES (I.E. VALVES, FITTINGS, CLEAN-OUTS, ETC.) ARE SHOWN FOR GENERAL LOCATION ONLY AND MAY BE SLIGHTLY MOVED TO ACCOMMODATE CONSTRUCTION REQUIREMENTS UPON THE ENGINEER'S APPROVAL.
3. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT.
4. CONTRACTOR SHALL PROVIDE A MINIMUM 24 HOUR NOTICE TO THE ENGINEER PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS, SAMPLING, OR TESTING.
5. CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL (FLAGMEN, CONES, BARRICADES, ETC.) WHEN WORKING WITHIN CITY ROAD RIGHTS-OF-WAY.
6. CONTRACTOR SHALL SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND INSURE A COMPLETE STAND OF GRASS.
7. SEWER SERVICES SHALL BE 6" DIAMETER PVC.
8. WATER AND SEWER MAINS AND SERVICES MUST HAVE AT LEAST 10 FEET OF HORIZONTAL SEPARATION AND 18 INCHES OF VERTICAL SEPARATION BETWEEN THEM. WHERE WATER MAINS CROSS SEWER MAINS, THE PIPE SEGMENTS OF BOTH WATER AND SEWER MAINS SHALL BE CENTERED TO PROVIDE MAXIMUM SPACING OF THE JOINTS.
9. CONTRACTOR SHALL PROVIDE A TREATED 4"X4" WOOD POST (PAINTED GREEN) AT THE END OF ALL SEWER SERVICES AND STUB-OUTS. FUTURE STUB-OUTS AND SERVICES SHALL BE CAPPED SUFFICIENTLY AS TO NOT ALLOW INFILTRATION.

drawn by: M. BULL
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

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DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

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CITY OF RIDGELAND, MISSISSIPPI

contents: SEWER DETAILS & GENERAL NOTES

job no. 1586C004
Sewer & Water Details.dwg
tab: Sewer 4.2

sheet no. **4.2**

GENERAL DATA												
SS-2 INLET SIZE	WALL THICKNESS	INSIDE DIMENSION		OUTSIDE DIMENSION		BASE HEIGHT	RISER HEIGHT	WEIGHTS				
	WT	IW	IL	OW	OL	B	R	BOTTOM	BASE/RISER	INLET TOP	EXTENSION	EXTENSION TOP
FEET	INCHES	INCHES		INCHES		3" INCREMENTS		LB	LB/FT	LB	LB	LB
3 X 5	5	36	60	46	70	24-54	18-48	1125	1114	1880	1865	1070

3' x 5' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)												
DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-8	0.30	36.969	0.24	29.575	-	-	-	-	-	-	-	-
0-12	0.60	78.867	0.24	29.575	0.60	78.867	-	-	-	-	-	-
0-16	0.88	110.005	0.24	29.575	0.60	78.867	0.74	95.338	-	-	-	-
0-20	1.18	139.340	0.24	29.575	0.60	78.867	0.74	95.338	1.06	124.672	-	-
0-24	1.44	176.008	0.24	29.575	0.60	78.867	0.74	95.338	1.06	124.672	1.20	146.673

CONCRETE QUANTITIES				
SS-2 INLET SIZE	BOTTOM C.Y.	RISER C.Y./FT	TOP C.Y.	EXTENSION C.Y.
3X5	0.279	0.275	0.464	0.724

NOTES: CONCRETE CUBIC YARDS PER INLET = BOTTOM + (TOTAL RISER HEIGHT (FT) x C.Y./FT) + TOP EXTENSION INCLUDES CURB INLET UNIT + TOP + EXTENSIONS- ANY HOLE OPENINGS EXTENSION BLOCKOUT OPENINGS

BOTTOM/TOP/EXTENSION REINFORCEMENT				
SS-2 INLET SIZE	BOTTOM REINFORCEMENT	BOTTOM LB/STEEL	TOP LB/STEEL	EXTENSION LB/STEEL
3X5	#4 @ 9" EW	38.550	116.496	38.305

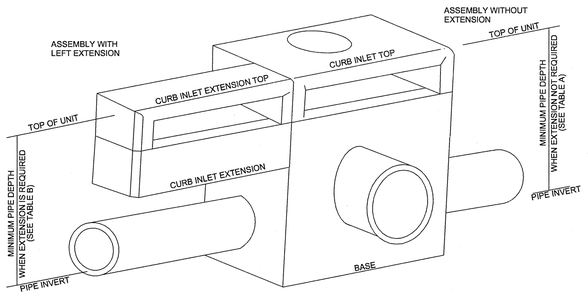
NOTE: *EXTENSION INCLUDES CURB INLET UNIT PLUS TOP

MINIMUM PIPE DEPTH WITHOUT EXTENSION TOP OF CURB UNIT TO PIPE INVERT TABLE A			
ROUND RCP SIZE	DEPTH INCHES	ARCH RCP SIZE	DEPTH INCHES
-	-	-	-
-	-	-	-
12	36	-	-
15	39.5	18x11	32.5
18	42	22x13	34.5
21	44.5	-	-
24	49	29x18	39.5
27	53.5	-	-
30	55	36x23	44.5

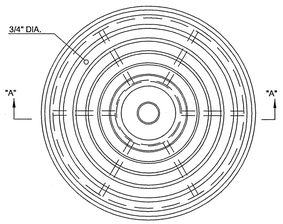
MINIMUM PIPE DEPTH WITH EXTENSION TOP OF CURB UNIT TO PIPE INVERT TABLE B			
ROUND RCP SIZE	DEPTH INCHES	ARCH RCP SIZE	DEPTH INCHES
-	-	-	-
-	-	-	-
12	55	-	-
15	58	18x11	55
18	61	22x13	58
21	64	-	-
24	67	-	-
27	72	-	-
30	-	-	-

NOTE: BLANK SPACES IN TABLES INDICATE PIPE WILL NOT FIT INTO SIDE OF BOX OR PIPE SIZE IS NOT AVAILABLE.

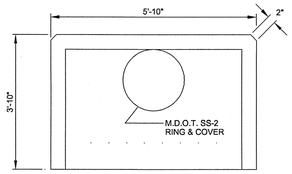
HOLE OPENING									
ROUND RCP	OPENING INCHES			CONCRETE DEDUCTION PER OPENING (C.Y.)	ARCH RCP	OPENING INCHES			CONCRETE DEDUCTION PER OPENING (C.Y.)
SIZE	T	HO	OP		SIZE	T	HO	OP	
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
12	2	20	4	0.017	-	-	-	-	-
15	2.25	24	4.5	0.032	18x11	2.25	25.5x18.5	1.5	0.015
18	2.5	26	4	0.045	22x13	2.5	30x21	1.5	0.045
21	2.75	28	3.5	0.060	-	-	-	-	-
24	3	32	4	0.076	29x18	3	38x27	1.5	0.073
27	3.25	40	6.5	0.095	-	-	-	-	-
30	3.5	40	5	0.116	36x23	3.5	46x33	1.5	0.108

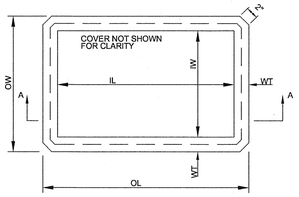


ISOMETRIC VIEW OF PRECAST UNIT

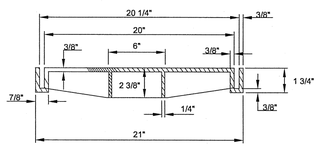


PLAN



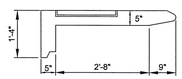


PLAN FOR BASE/RISER INLET/JUNCTION BOX

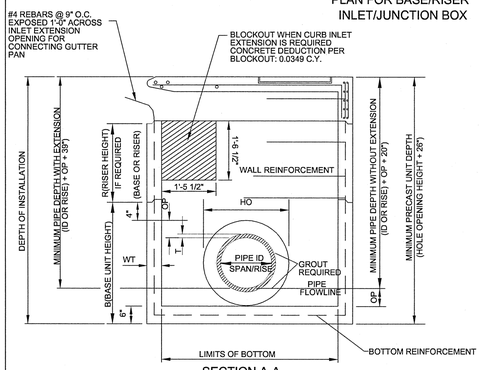


SECTION A-A

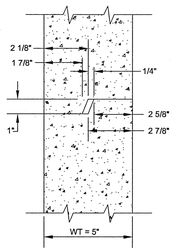
MDOT SS-2 RING AND COVER
79 LBS



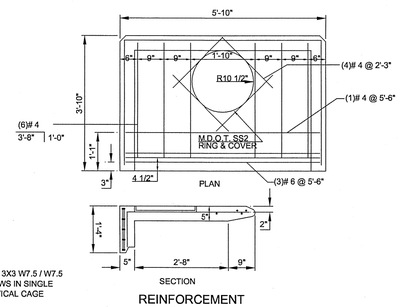
CURB INLET TOP



SECTION A-A

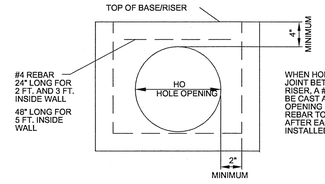


JOINT DETAIL



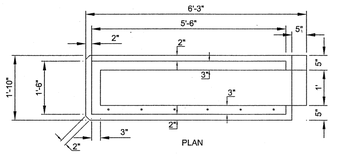
WWF 3X3 W7.5 / W7.5
2 ROWS IN SINGLE
VERTICAL CAGE

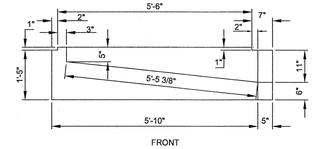
REINFORCEMENT
CURB INLET TOP



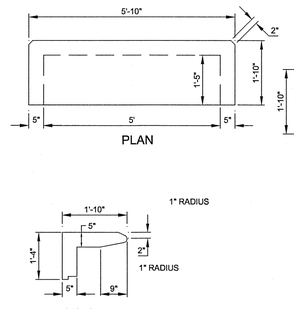
DETAIL FOR HOLE OPENING

WHEN HOLE OPENING IS IN JOINT BETWEEN BASE AND RISER, A #4 REBAR SHALL BE CAST ACROSS HOLE OPENING IN EACH UNIT. REBAR TO BE REMOVED AFTER EACH UNIT HAS BEEN INSTALLED.

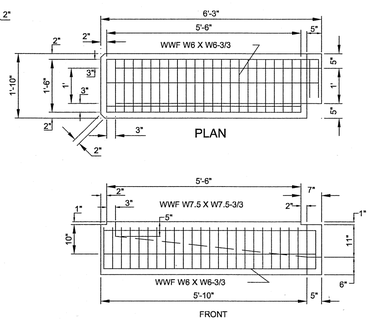




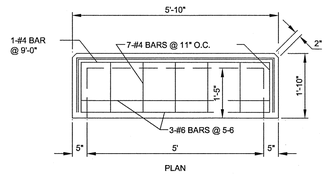
CURB INLET EXTENSION
LEFT/RIGHT

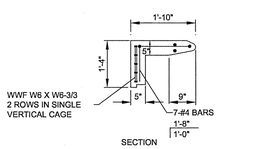


CURB INLET EXTENSION TOP
LEFT/RIGHT



REINFORCEMENT
CURB INLET EXTENSION
LEFT/RIGHT





REINFORCEMENT
CURB INLET EXTENSION TOP
LEFT/RIGHT

GENERAL NOTES:

1. CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 4000 PSI MINUMUM AT 28 DAYS.
2. REINFORCING FOR BOTTOM AND WALLS SHALL BE WELDED WIRE FABRIC, ASTM A-185, AND OF THE AREA AS SHOWN IN TABLE.
3. REINFORCING FOR COVER SHALL BE WITH DEFORMED BARS, ASTM A615/A AND OF THE SIZE AS SHOWN IN TABLE.
4. JOINT TO BE SEALED WITH PREFORMED JOINT COMPOUND, AASHTO SPECIFICATION M-198.
5. 2 1/2" LIFTING HOLES TO BE LOCATED ON EACH SIDE OF BOX SECTIONS FOR HANDLING.
6. GROUT FOR JOINING PIPE TO PRECAST UNITS WILL BE A COMMERCIAL MASONRY GROUT MEETING SPECIFICATIONS.
7. WHEN INTERIOR RISER UNITS ARE REQUIRED, UNITS SHALL BE MARKED TO IDENTIFY EACH UNIT.

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT PRECAST SS-2 INLET DETAIL

job no. 15860004

MDOT Details (Inlets & Box Culvert).dwg

tab: Precast SS-2 (5.1)

sheet no. 5.1

HOLE OPENING									
ROUND RCP		OPENING			ARCH RCP		OPENING		
		INCHES		CONCRETE* DEDUCTION PER OPENING (C.Y.)			INCHES		CONCRETE* DEDUCTION PER OPENING (C.Y.)
SIZE	T	HO	OP		SIZE	T	HO	OP	
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
12	2	20	4	0.017	-	-	-	-	-
15	2.25	24	4.5	0.032	18x11	2.25	25.5x18.5	1.5	0.015
18	2.5	26	4	0.045	22x13	2.5	30x21	1.5	0.045
21	2.75	28	3.5	0.060	-	-	-	-	-
24	3	32	4	0.076	29x18	3	38x27	1.5	0.073
27	3.25	40	6.5	0.095	-	-	-	-	-
30	3.5	40	5	0.116	36x23	3.5	46x33	1.5	0.108

* BASED ON 5" WALL THICKNESS; FOR 3 1/2" WALL, MULTIPLY BY 0.694

MINIMUM PIPE DEPTH TOP OF COVER TO PIPE INVERT			
ROUND RCP SIZE	DEPTH INCHES	ARCH RCP SIZE	DEPTH INCHES
-	-	-	-
-	-	-	-
12	27	-	-
15	30.5	18x11	23.5
18	33	22x13	25.5
21	35.5	-	-
24	40	29x18	30.5
27	44.5	-	-
30	46	36x23	35.5

MAXIMUM PIPE SIZE				
INLET OR JUNCTION BOX	ROUND RCP		ARCH RCP	
	IW SIDE	IL SIDE	IW SIDE	IL SIDE
2X2	12	18	NONE	18X11
2X3	12	24	NONE	22x13
3X5	24	30	22x13	36x23

CONCRETE QUANTITIES			
INLET OR JUNCTION BOX	BOTTOM C.Y.	RISER C.Y./FT	COVER C.Y.
2X2	0.074	0.099	0.123
2X3	0.111	0.181	0.201
3X5	0.279	0.275	0.266

NOTE: CONCRETE CUBIC YARDS PER INLET/JUNCTION BOX = BOTTOM + (TOTAL RISER HEIGHT (FT) x C.Y./FT) + (COVER - GRATE OPENING) - ANY HOLE OPENINGS

GENERAL DATA										
INLET OR JUNCTION BOX SIZE	WALL THICKNESS	INSIDE DIMENSION		OUTSIDE DIMENSION		BASE HEIGHT	RISER HEIGHT	WEIGHTS		
	WT	IW	IL	OW	OL	B	R	BOTTOM	BASE/RISER	COVER
FEET	INCHES	INCHES		INCHES		3" INCREMENTS		LB	LB/FT	LB
2 X 2	3 1/2	24	24	31	31	24-54	18-48	300	401	500
2 X 3	5	24	36	34	46	24-54	18-48	450	735	815
3 X 5	5	36	60	46	70	24-54	18-48	1125	1114	1077

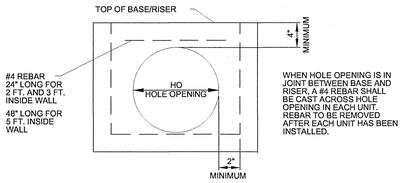
2' x 2' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)												
DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-4	0.07	3.942	-	-	-	-	-	-	-	-	-	-
0-8	0.13	5.882	0.07	3.942	-	-	-	-	-	-	-	-
0-12	0.20	7.786	0.07	3.942	0.13	5.882	-	-	-	-	-	-

2' x 3' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)												
DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-4	0.10	5.840	-	-	-	-	-	-	-	-	-	-
0-8	0.20	9.928	0.10	5.840	-	-	-	-	-	-	-	-
0-12	0.25	5.545	0.10	5.840	0.20	9.928	-	-	-	-	-	-

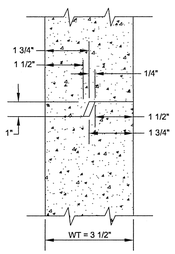
3' x 5' WALL REINFORCEMENT (SQ. IN. PER LIN. FT.)												
DEPTH OF INSTALLATION	BASE		TOP RISER		INTERIOR RISER #1		INTERIOR RISER #2		INTERIOR RISER #3		INTERIOR RISER #4	
FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT	AREA	LB/FT
0-8	0.30	21.039	0.24	17.3284	-	-	-	-	-	-	-	-
0-12	0.74	53.570	0.24	17.3264	0.60	43.316	-	-	-	-	-	-
0-16	0.88	61.526	0.24	17.3264	0.60	43.316	0.74	53.570	-	-	-	-
0-20	1.14	78.146	0.24	17.3264	0.60	43.316	0.74	53.570	1.02	70.013	-	-
0-24	1.44	98.654	0.24	17.3264	0.60	43.316	0.74	53.570	1.02	70.013	1.20	82.035

COVER/BOTTOM REINFORCEMENT				
INLET OR JUNCTION BOX	COVER	LBS/STEEL	BOTTOM	LBS/STEEL
2X2	#4 @ 9" EW	12.247	WWF-W6.0 X W6.0 - 3 X 3	10.559
2X3	#4 @ 9" EW	17.869	WWF-W6.0 X W6.0 - 3 X 3	16.602
3X5	#4 @ 9" EW	36.741	WWF-W6.0 X W6.0 - 3 X 3	37.208

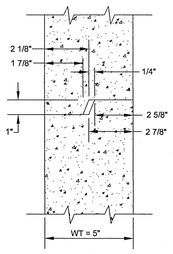
NOTE: REINFORCEMENT STEEL (LBS PER INLET/JUNCTION BOX) = BOTTOM + TOTAL FOR EACH RISER (TOP PLUS ANY INTERIOR RISERS) (BASE HEIGHT + TOTAL HEIGHT OF RISER) + COVER; HOLE AND GRATE OPENINGS NOT DEDUCTED



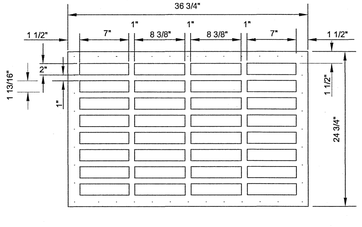
DETAIL FOR HOLE OPENING

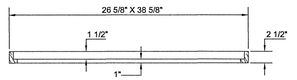


2 X 2
JOINT DETAIL



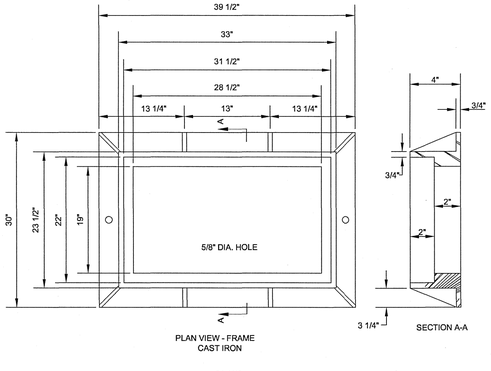
2 X 3 & 3 X 5
JOINT DETAIL





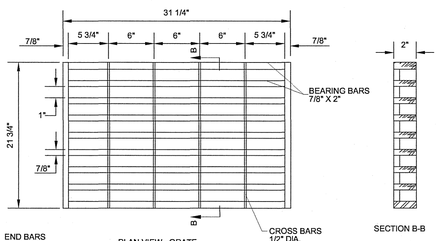
2'X3' FRAME AND GRATE
VULCAN V-4873
HEAVY DUTY LOAD RATING
WEIGHT: 340 LBS
OPEN AREA: 453 SQ. IN.

CONCRETE DEDUCT FOR
GRATE OPENING: 1.32 C.Y.



PLAN VIEW - FRAME
CAST IRON

SECTION A-A

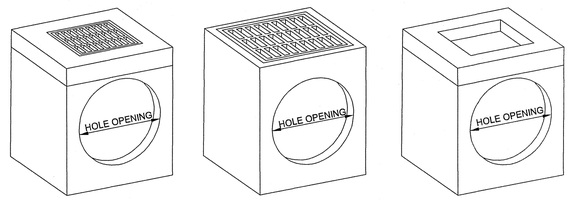


PLAN VIEW - GRATE
ASTM A588 STEEL

SECTION B-B

MDOT SS-3 GRATE
HEAVY DUTY LOAD RATING
FRAME WEIGHT: 244 LBS
GRATE WEIGHT: 200 LBS
OPENING: 324.5 SQ. IN.

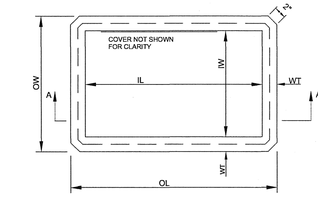
CONCRETE DEDUCT FOR
GRATE OPENING: 0.070 C.Y.



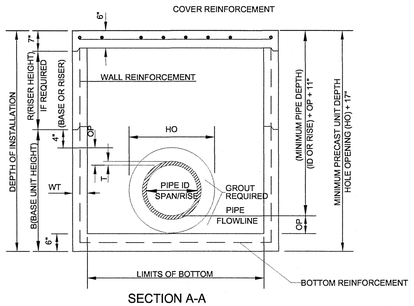
DROP INLET
FRAME AND GRATE
IN COVER
2 X 2, 2 X 3, 3 X 5

DROP INLET
FRAME AND GRATE
IN WALL WITHOUT COVER
2 X 2, 2 X 3

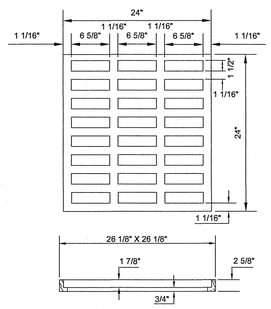
TYPE SS-3 INLET
3 X 5



PLAN FOR BASE/RISER
INLET/JUNCTION BOX



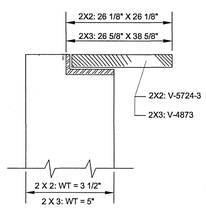
SECTION A-A



2'X2' FRAME AND GRATE
VULCAN V-5724-3
HEAVY DUTY LOAD RATING
WEIGHT: 212 LBS
OPEN AREA: 268 SQ. IN.

CONCRETE DEDUCT FOR
GRATE OPENING: 0.088 C.Y.

GRATE DETAILS



2 X 2 & 2 X 3 DROP INLET
WALL DETAIL WHEN FRAME
AND GRATE IS USED
WITHOUT COVER

GENERAL NOTES:

1. CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 4000 PSI MINUMUM AT 28 DAYS.
2. REINFORCING FOR BOTTOM AND WALLS SHALL BE WELDED WIRE FABRIC, ASTM A-185, AND OF THE AREA AS SHOWN IN TABLE.
3. REINFORCING FOR COVER SHALL BE WITH DEFORMED BARS, ASTM A615/A AND OF THE SIZE AS SHOWN IN TABLE.
4. JOINT TO BE SEALED WITH PREFORMED JOINT COMPOUND, AASHTO SPECIFICATION M-198.
5. 2 1/2" LIFTING HOLES TO BE LOCATED ON EACH SIDE OF BOX SECTIONS FOR HANDLING.
6. GROUT FOR JOINING PIPE TO PRECAST UNITS WILL BE A COMMERCIAL MASONRY GROUT MEETING SPECIFICATIONS.
7. WHEN INTERIOR RISER UNITS ARE REQUIRED, UNITS SHALL BE MARKED TO IDENTIFY EACH UNIT.

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT PRECAST JB-1, DROP INLET, AND SS-3 INLET DETAILS

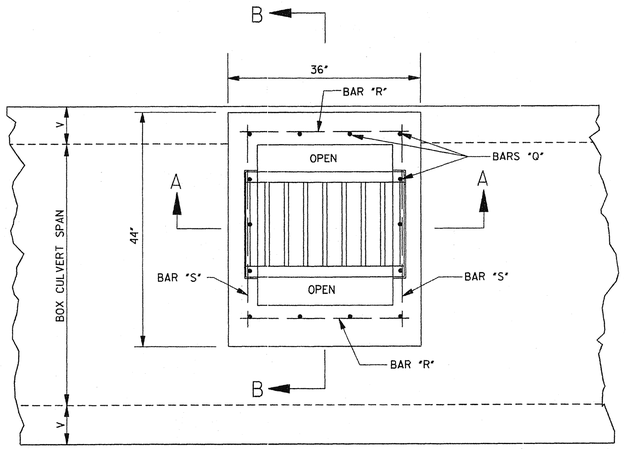
job no. 15860004

MDOT Details (Inlets & Box Culvert).dwg

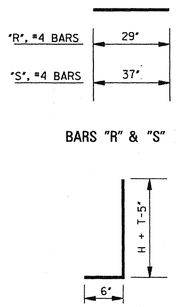
tab: Precast Drop (5.2)

sheet no. 5.2

TYPE I INLET



PLAN

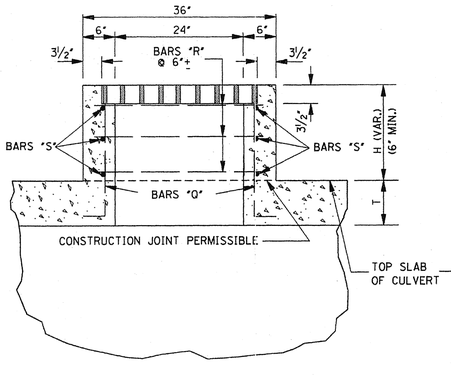


BARS "R" & "S"

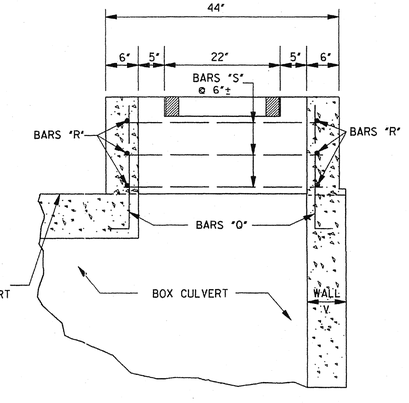
14 #4 BARS @ (H+T+1') LONG

BARS "Q"

BAR DETAILS

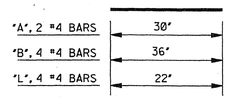


SECTION A–A

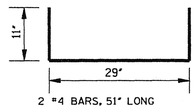


SECTION B–B

TYPE II INLET

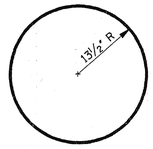


BARS "A", "B" & "L"



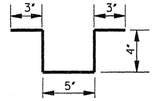
2 #4 BARS, 51" LONG

BARS "C"



1 #4 BAR, 86" LONG

BAR "K"



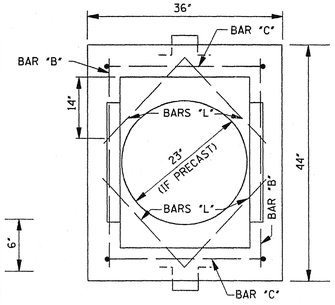
2 #4 BARS, 19" LONG

BARS "H" (HANDLE)
(IF PRECAST)

4 #4 BARS, 10" LONG

BARS "F"

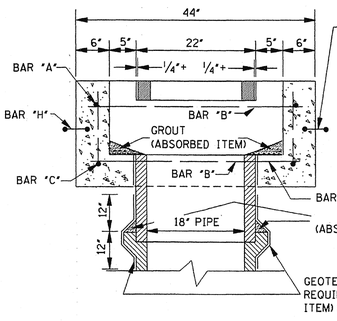
BAR DETAILS

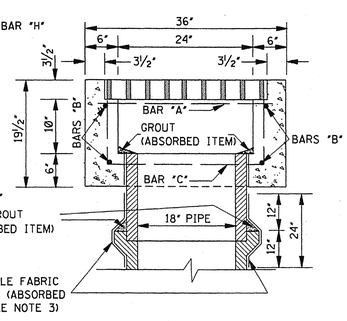


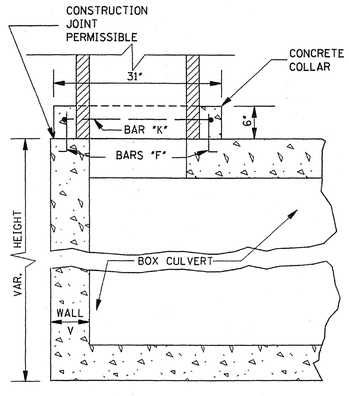
PLAN OF INLET

INLET QUANTITIES				
			EACH ADDED FOOT	
INLET TYPE	CONC. (yd^3)	STEEL (lbs)	CONC. (yd^3)	STEEL (lbs)
I	0.097*	18 *	0.210	24
II	0.448	30		

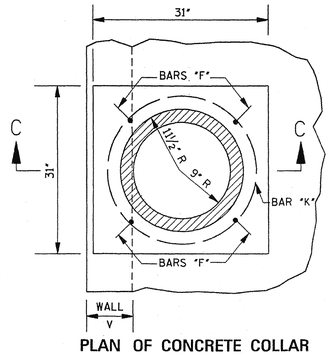
*NOTE: 6" MINIMUM HEIGHT INLET WITH AN ASSUMED BOX CULVERT THICKNESS (T) OF 6".



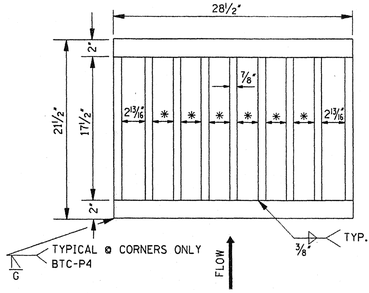




SECTION C–C



PLAN OF CONCRETE COLLAR



PLAN OF GRATE NO.1

*NOTE: TYPCIAL SPACING 2½".

GENERAL NOTES:

1. QUANTITIES SHOWN WILL BE THE BASIS OF PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
2. ANY STACK PIPE WHICH MUST BE CUT OFF WILL BE PAID FOR AT PIPE LENGTH AS THOUGH INSTALLED.
3. EACH STACKED PIPE JOINT SHALL BE WRAPPED WITH GEOTEXTILE FABRIC 24" WIDE, AASHTO M 288 EOS = 100+. THE FABRIC SHALL OVERLAP A MINIMUM OF 12" AT THE WRAP AND SHALL BE SECURED WITH STRING OR WIRE FOR BACKFILLING. THE COST FOR THE MATERIALS AND LABOR SHALL BE ABSORBED.
4. THE CONTRACTOR HAS THE OPTION TO PROVIDE GRATE NO. 1 OR GRATE NO. 2 AS SHOWN ON SHEET IG-1.
5. CONCRETE SHALL BE CLASS "B" CONCRETE AND REINFORCING STEEL SHALL BE DEFORMED BARS.

STATE	PROJECT NO.
MISS.	

BY | REVISIONS | DATE | NO.

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

DUNGAN DE Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT MEDIAN INLET FOR BOX (MI-3) INLET DETAILS

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

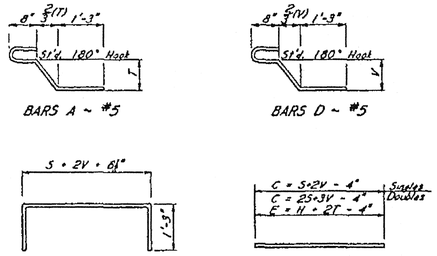
MEDIAN INLETS FOR BOX CULVERTS
(TYPE I AND II)

BY | REVISION | DATE

ISSUE DATE: OCTOBER 1, 1998

WORKING NUMBER: MI-3
SHEET NUMBER: 311

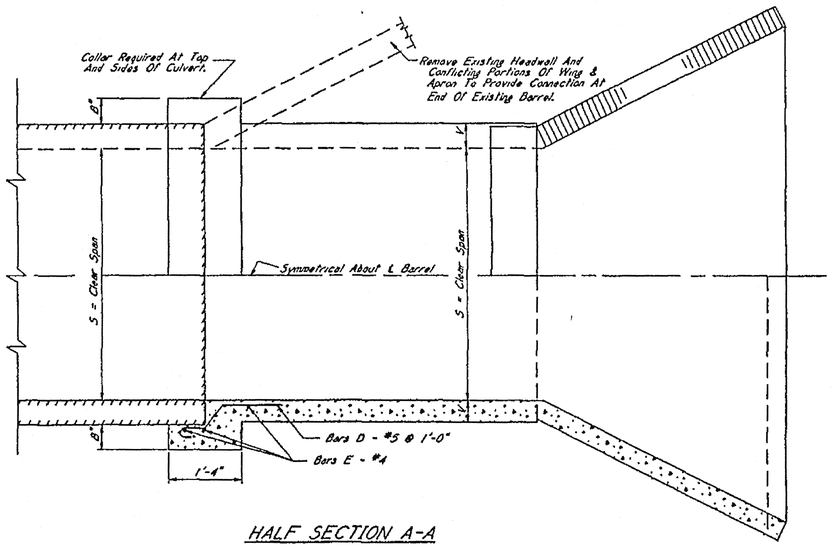
job no. 1586C004
MDOT Details (Inlets & Box Culvert).dwg
tab: MI-3 (5.3)
sheet no. 5.3



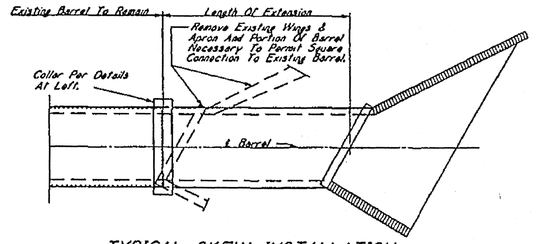
BAR BENDING DETAILS

Dimensions Are Out To Out.

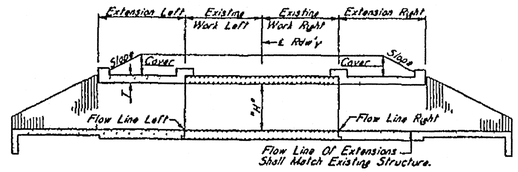
HALF TOP PLAN



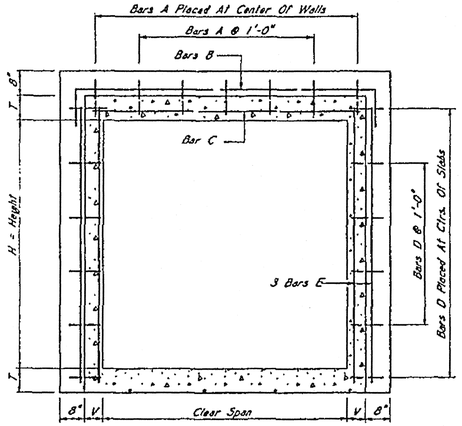
HALF SECTION A-A



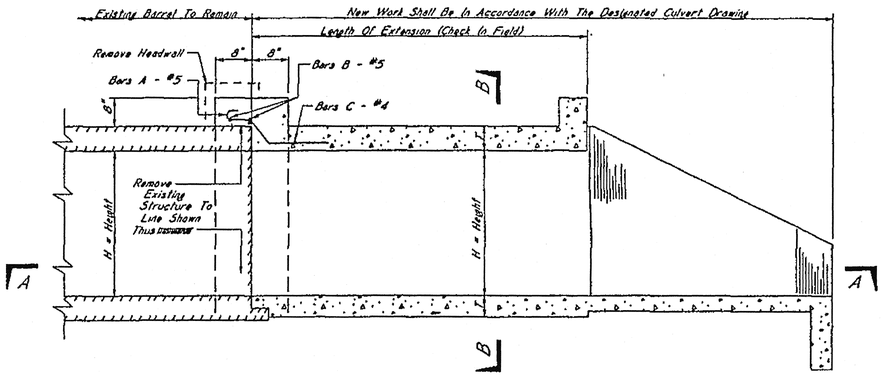
TYPICAL SKEW INSTALLATION



TYPICAL LONGITUDINAL SECTION



SECTION B-B



LONGITUDINAL SECTION

GENERAL NOTES:

This Drawing Is Supplementary To Basic Culvert Drawings Of The 1B5 And 1B0 Series And All Typical Details And General Notes Shown Thereon Shall Apply.
The Length Of Extensions For Each End Of The Culvert Shall Be Checked In The Field By The Project Engineer Before The Reinforcing Steel Is Ordered.
Bar List Of Reinforcing Steel Shall Be Submitted To The Project Engineer Prior To Fabrication. Placing Plan Shall Be Furnished When Extensions Are Skewed.
When The Length Of The Extension Is Less Than 10 Ft, The Vertical Construction Joints At The Junction Of The Barrel And Wings Shown On The Basic Culvert Drawings For Culvert Heights Of 9 Ft And Greater Shall Be Omitted.
This Drawing Is Detailed For A Single Cell Culvert And Double Cell Structure Shall Be Treated Similarly.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
CULVERT DRAWING
EXTENSION DETAILS
FOR LENGTHENING
EXISTING BOX CULVERTS

BY	REVISIONS	DATE

DATE			
DESIGNED NA	CHECKED BJJ	ISSUED TMT	WORKING NUMBER ICX-1
DETAILED ALT	DATE 07-11-97	DATE 08-01-97	SHEET NUMBER 369

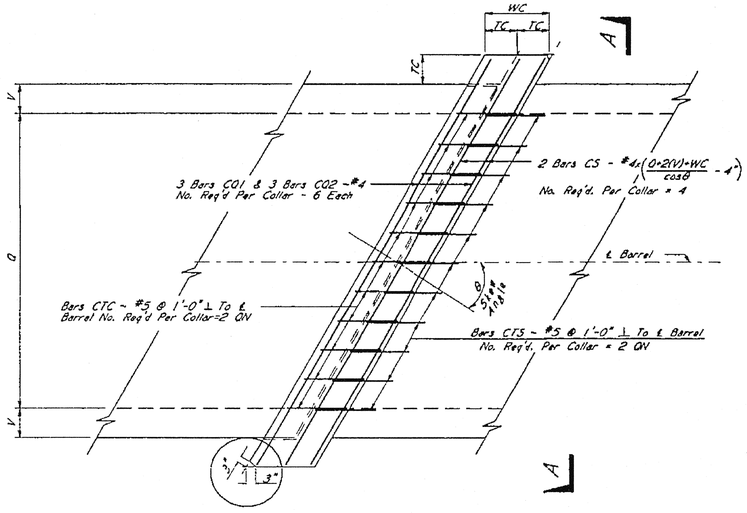
drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

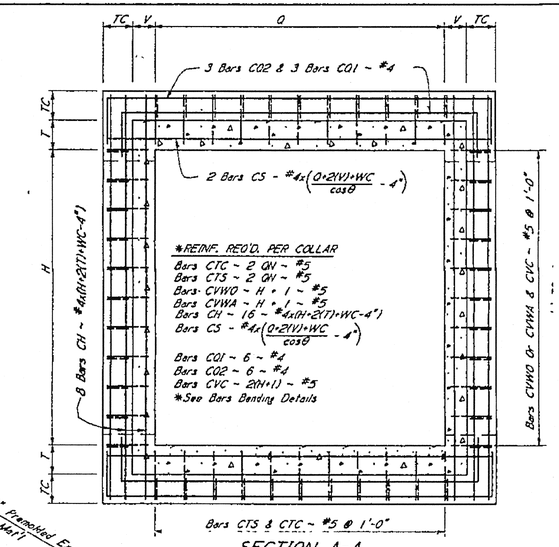
100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT BOX CULVERT EXTENSION DETAILS

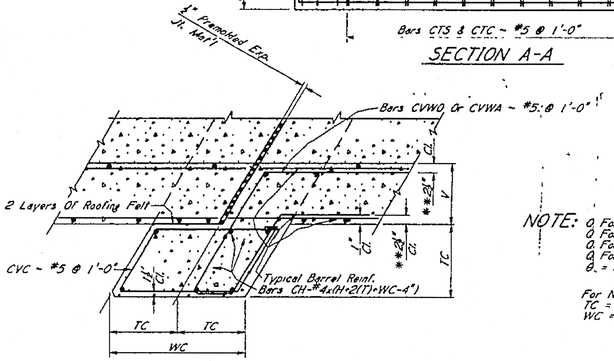
job no. 1586C004
MDOT Details (Inlets & Box Culvert).dwg
tab:Box Extension (6.1)
sheet no. 6.1



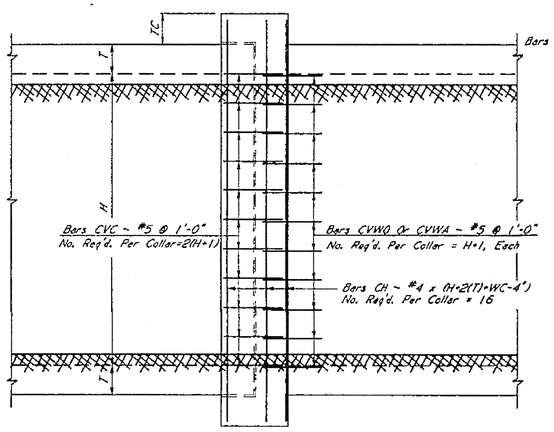
PLAN OF COLLAR



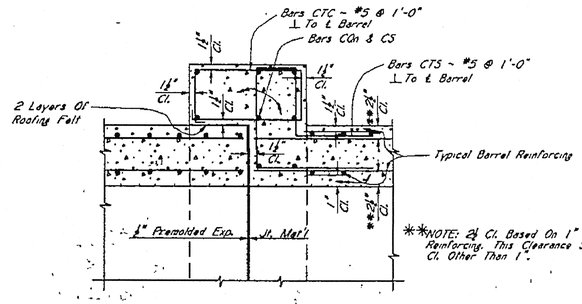
SECTION A-A



TYPICAL SECTION OF COLLAR AT WALL

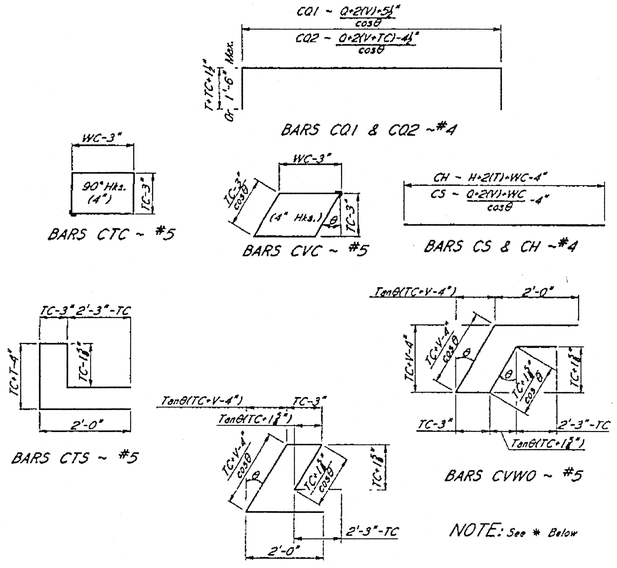


ELEVATION OF COLLAR



**NOTE: 2¼ Cl. Based On 1" Cl. For Typical Barrel Reinforcing. This Clearance Shall Be Adjusted For Cl. Other Than 1".

TYPICAL SECTION OF COLLAR - TOP & BOTTOM



BARS CO1 & CO2 ~ #4

BARS CTC ~ #5

BARS CVC ~ #5

BARS CS & CH ~ #4

BARS CTS ~ #5

BARS CVWO ~ #5

NOTE: See * Below

BARS CVWA ~ #5

BAR BENDING DETAILS

Dimensions Are Out To Out

NOTE: O For Single Cell Box = S (Clear Span), CN = S+1
O For Double Cell Box = 2(S) + V, CN = 2(S+1)
O For Triple Cell Box = 3(S) + 2(V), CN=3(S+1)
O For Quadruple Cell Box = 4(S) + 3(V), CN = 4(S+1)
θ = Skew Angle

For Nominal Height, H = 6 Ft.	For Nominal Height, H = 8 Ft. & Above
TC = 9"	TC = 1'-0"
WC = 1'-6"	WC = 2'-0"

GENERAL NOTES:

This Drawing Shows The Details Necessary To Construct A Complete Collar Around Barrel At Expansion Joints For Single, Double, Triple And Quadruple Cell Box Structures. All Details And Requirements Not Shown Hereon Shall Be As Per Specific Drawings Or Sheets As Listed In The Plan Assembly. This Drawing Is Detailed For A Single Cell Box Structure, And Multi-Cell Box Structures Shall Be Treated Similarly As Shown.

REVISIONS | BY | DATE | NO.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SKEWED COLLAR DETAILS

FOR BOX STRUCTURES

(SINGLE, DOUBLE, TRIPLE & QUADRUPLE)

DATE	DESIGNED	CHECKED	ISSUED	WORKING NUMBER
	NA	BJJ	TMT	ICJS-1
	DETAILED ALT	DATE 07-11-97	DATE 08-01-97	SHEET NUMBER 368

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

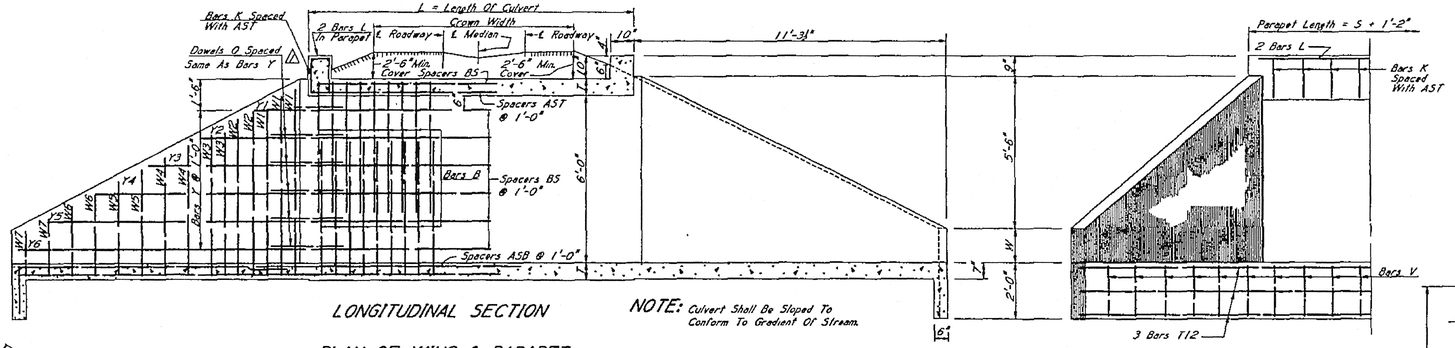
contents: MDOT SKEWED COLLAR DETAILS

job no. 15860004

MDOT Details (Inlets & Box Culvert).dwg

tab:Skewed Collar (6.2)

sheet no. 6.2

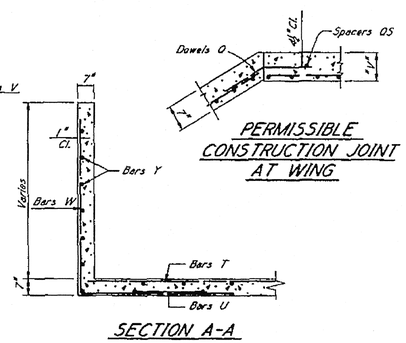


LONGITUDINAL SECTION

PLAN OF WING & PARAPET

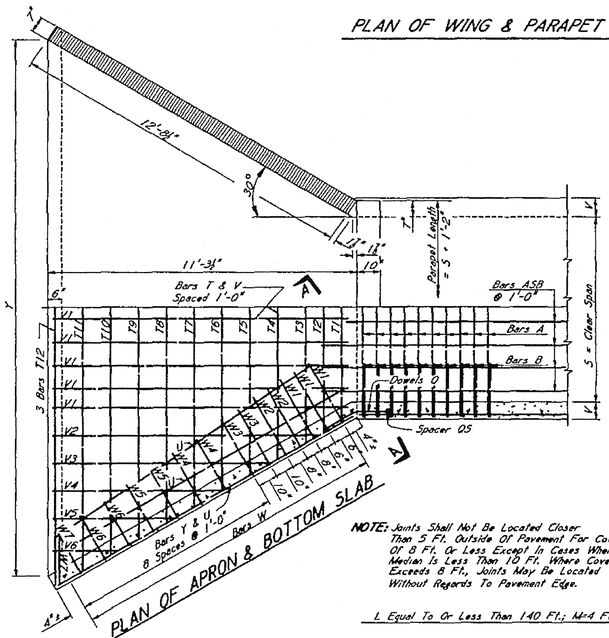
NOTE: Culvert Shall Be Sloped To Conform To Gradient Of Stream.

HALF END ELEVATION



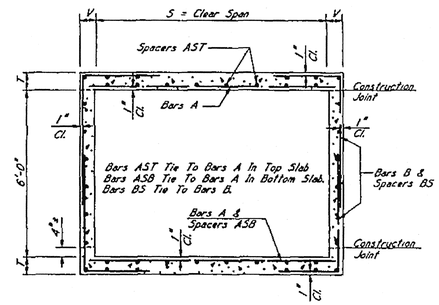
PERMISSIBLE CONSTRUCTION JOINT AT WING

SECTION A-A



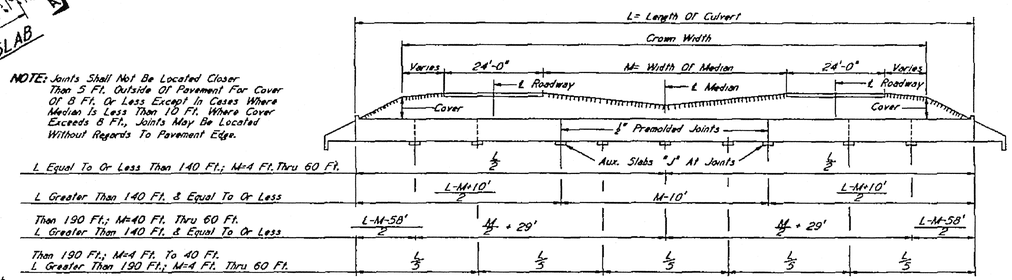
PLAN OF APRON & BOTTOM SLAB

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 Drawing ICJ-1 Or ICJS-1.



CROSS SECTION

NOTE: Joints Shall Not Be Located Closer Than 5 Ft. Outside Of Pavement For Cover Of 8 Ft. Or Less Except In Cases Where Median Is Less Than 10 Ft. Where Cover Exceeds 8 Ft., Joints May Be Located Without Regards To Pavement Edge.



SIDE ELEVATION OF CULVERT

Showing ½" Joints And Auxiliary Slabs "J" Drawn For L = 150 Ft. & M = 60 Ft.

NOTE: See Drawing IBJ-1 For Additional Joint Locations.

CULVERT DIMENSIONS						ESTIMATED QUANTITIES					
						CULVERT (L= 150 FT.)		PER LIN. FT. BARREL		I AUX. SLAB "J"	
CLEAR SPAN	MAX. COVER	T	V	W	Y	CONC. cu. yd.	REINF. STEEL lb.	CONC. cu. yd.	REINF. STEEL lb.	CONC. cu. yd.	REINF. STEEL lb.
6'	14'	7⅞"	7"	1'-2½"	18'-10½"	101.85	14,258	0.5910	86.8	0.35	21
8'	10'	8½"	7½"	1'-3½"	20'-10½"	129.16	18,949	0.7631	117.3	0.46	26
10'	8'	9⅛"	8"	1'-4½"	22'-10½"	160.31	25,194	0.9609	158.1	0.56	32
12'	7'	10⅛"	8½"	1'-5½"	24'-10½"	195.30	31,113	1.1844	196.9	0.66	38
14'	7'	1'-0"	9½"	1'-7"	26'-10½"	245.12	39,315	1.5062	250.3	0.77	44
16'	6'	1'-1"	10"	1'-8"	28'-10½"	288.88	45,780	1.7881	292.9	0.87	49
18'	6'	1'-2"	11"	1'-9"	30'-10½"	344.23	57,285	2.1471	368.7	0.98	55
20'	6'	1'-3"	1'-1"	1'-10"	32'-10½"	403.75	67,670	2.5339	436.2	1.09	61

DESIGN DATA:

Specifications. . . . A.A.S.H.O. 1969
Live Load. . . . . .HS 20-44 Mod. For 2-24,000 lbs Axles
Unit Stresses. . . . fs=20,000 psi , fc= 1,200 psi , n=10.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BASIC CULVERT DRAWING
SINGLE CELL
HEIGHT 6 FT.
SPANS 6-20 FT.

REVISIONS	BY	DATE
Added Box L	BJJ	8/1/97

DESIGNED	NA	CHECKED	BJJ	ISSUED	TMT
DETAILED	ALT	DATE	07-11-97	DATE	08-01-97

WORKING NUMBER IBS-6-2W
SHEET NUMBER 370.1

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

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Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

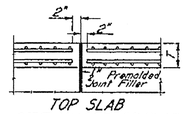
contents: MDOT BASIC CULVERT DETAILS FOR 6' HEIGHT

job no. 1586C004
MDOT Details (Inlets & Box Culvert).dwg
tab:Basic Box (6.3)
sheet no. 6.3

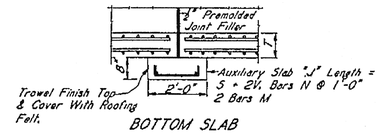
BAR LIST FOR BARREL (L= 150 FT.) PARAPETS & 2 AUXILIARY SLABS "J"

CLEAR SPAN	BARS "A" NO.	SIZE	SPAC.	LGTH.	BARS "B" NO.	SIZE	SPAC.	LGTH.	DOWELS "Q" ~ #4 NO.	LGTH.	SPACERS "QS" ~ #4 NO.	LGTH.	SETS OF BARS "AST" #4@ NO.	LGTH.	SETS OF BARS "ASB" #4@ NO.	LGTH.	SETS OF BARS "BS" #4@ NO.	LGTH.	BARS "K" #4 NO.	LGTH.	BARS "L" #4 NO.	LGTH.	BARS "M" #4 NO.	LGTH.	BARS "N" #4 NO.	LGTH.
6'	600	#5	6"	6'-11"	1200	#4	6"	6'-4"	24	2'-6"	4	5'-7"	6	152'-9"	6	155'-7"	24	152'-9"	12	4'-1"	4	6'-10"	4	6'-10"	16	2'-2"
8'	480	#6	7½"	9'-0"	960	#5	7½"	7'-1"	24	2'-6"	4	5'-7"	8	152'-9"	8	155'-7"	24	152'-9"	16	4'-3"	4	8'-10"	4	8'-11"	20	2'-2"
10'	576	#6	6½"	11'-1"	1152	#5	6½"	7'-8"	24	2'-6"	4	5'-7"	10	152'-9"	10	155'-7"	28	152'-9"	20	4'-5"	4	10'-10"	4	11'-0"	24	2'-2"
12'	654	#6	5½"	13'-2"	1308	#5	5½"	8'-4"	24	2'-6"	4	5'-7"	12	152'-9"	12	155'-7"	28	152'-9"	24	4'-7"	4	12'-10"	4	13'-1"	28	2'-2"
14'	534	#7	6½"	15'-4"	1068	#6	6½"	9'-3"	24	2'-6"	4	5'-7"	14	152'-9"	14	155'-7"	32	152'-9"	28	4'-10"	4	14'-10"	4	15'-3"	32	2'-2"
16'	576	#7	6½"	17'-5"	1152	#6	6½"	9'-10"	24	2'-6"	4	5'-7"	16	152'-9"	16	155'-7"	32	152'-9"	32	5'-0"	4	16'-10"	4	17'-4"	36	2'-2"
18'	480	#8	7½"	19'-8"	1440	#6	5"	10'-7"	24	2'-6"	4	5'-7"	18	152'-9"	18	155'-7"	36	152'-9"	36	5'-2"	4	18'-10"	4	19'-7"	40	2'-2"
20'	402	#9	9"	21'-11"	1200	#7	6"	11'-5"	24	2'-6"	4	5'-7"	20	152'-9"	20	155'-7"	36	152'-9"	40	5'-4"	4	20'-10"	4	21'-10"	44	2'-2"

© NOTE: The Number And Length Of Bars Are Listed For Sets Of Bars Composed Of Sections As Shown In Bar Bendings Details See Elevation Of Culvert For Number Of Sections.

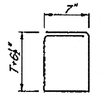


TOP SLAB
SIDE WALLS SIMILAR



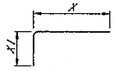
BOTTOM SLAB

DETAILS OF BARREL JOINT & AUXILIARY SLAB "J"

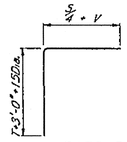


BARS K - #4

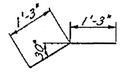
BARS W - #4



BARS V - #4

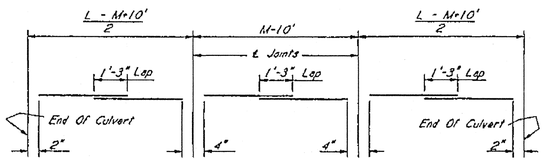


BARS B

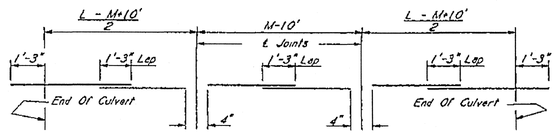


DOWELS Q ~ #4

BARS N - #4



ONE SET OF BARS AST & BS ~ #4



ONE SET OF BARS ASB ~ #4

NOTE: The Diagrams For Bars ASB, AST And BS Are For A Culvert Length Greater Than 140 Ft. And Equal To Or Less Than 190 Ft. With A Median Of 40 Ft. Thru 60 Ft. For Conditions Other Than These, Use Sections As Shown On Elevation Of Culvert.

BAR BENDING DETAILS

Dimensions Are Out To Out.

BAR LISTS FOR WINGS & APRONS

BAR	SIZE	NO. REQUIRED SPAN 6'	8'	10'	12'	14'	16'	18'	20'	DIM. X	DIM. X1	LENGTH
T1	#4	2	2	2	2	2	2	2	2			S+1'-0"
T2	#4	2	2	2	2	2	2	2	2			S+1'-7"
T3	#4	2	2	2	2	2	2	2	2			S+2'-9"
T4	#4	2	2	2	2	2	2	2	2			S+3'-11"
T5	#4	2	2	2	2	2	2	2	2			S+5'-1"
T6	#4	2	2	2	2	2	2	2	2			S+6'-9"
T7	#4	2	2	2	2	2	2	2	2			S+7'-5"
T8	#4	2	2	2	2	2	2	2	2			S+8'-7"
T9	#4	2	2	2	2	2	2	2	2			S+9'-9"
T10	#4	2	2	2	2	2	2	2	2			S+10'-11"
T11	#4	2	2	2	2	2	2	2	2			S+12'-1"
T12	#4	6	6	6	6	6	6	6	6			S+13'-3"
U	#4	12	12	12	12	12	12	12	12			12'-5"
V1	#4	16	20	24	28	32	36	40	44	11'-0"	1'-8"	12'-8"
V2	#4	4	4	4	4	4	4	4	4	9'-1"	1'-8"	10'-8"
V3	#4	4	4	4	4	4	4	4	4	7'-4"	1'-8"	9'-0"
V4	#4	4	4	4	4	4	4	4	4	5'-7"	1'-8"	7'-3"
V5	#4	4	4	4	4	4	4	4	4	3'-10"	1'-8"	5'-6"
V6	#4	4	4	4	4	4	4	4	4	2'-1"	1'-8"	3'-9"
W1	#4	12	12	12	12	12	12	12	12	4'-0"	W+5'-2"	W+9'-2"
W2	#4	8	8	8	8	8	8	8	8	3'-8"	W+4'-7"	W+8'-3"
W3	#4	8	8	8	8	8	8	8	8	3'-4"	W+3'-11"	W+7'-3"
W4	#4	8	8	8	8	8	8	8	8	3'-0"	W+3'-0"	W+6'-0"
W5	#4	8	8	8	8	8	8	8	8	2'-8"	W+2'-2"	W+4'-10"
W6	#4	8	8	8	8	8	8	8	8	2'-4"	W+1'-4"	W+3'-8"
W7	#4	8	8	8	8	8	8	8	8	2'-0"	W+6"	W+2'-6"
Y1	#4	4	4	4	4	4	4	4	4			2'-11"
Y2	#4	4	4	4	4	4	4	4	4			5'-3"
Y3	#4	4	4	4	4	4	4	4	4			7'-7"
Y4	#4	4	4	4	4	4	4	4	4			9'-10"
Y5	#4	4	4	4	4	4	4	4	4			12'-2"
Y6	#4	4	4	4	4	4	4	4	4			12'-5"

GENERAL NOTES:

Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 1990.
All Concrete Shall Be Class "S".
Concrete Surfaces Shall Be Finished In Accordance With Sub-Section 804.03.19.
Expansion Joint Material Shall Be Bituminous Fiber Type Unless Otherwise Noted.
All Exposed Corners Shall Be Chamfered ¾".
Reinforcing Steel Shall Be Placed 1" Clear Minimum From The Surface Of The Concrete And Shall Be Adequately Supported From The Forms.
All Bars Shall Be Accurately Spaced And Securely Wired At Each Intersection Before Placing Concrete.
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.
The Quantities Shown Will Be Used As A Basis For Final Payment Unless This Drawing Is Modified.

REVISIONS | BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BASIC CULVERT DRAWING
SINGLE CELL
HEIGHT 6 FT.
SPANS 6-20 FT.

DATE | DESIGNED NA | CHECKED BJJ | ISSUED TMT
DETAILED ALT. | DATE 07-11-97 | DATE 08-01-97

WORKING NUMBER 1BS-6-2W
SHEET NUMBER 370.2

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO. | DATE | REVISIONS | BY

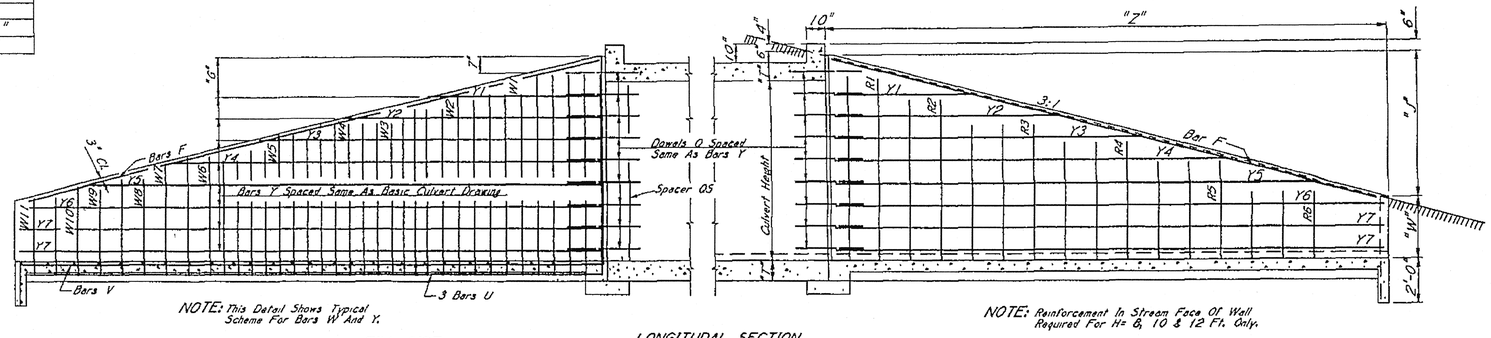
DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT BASIC CULVERT DETAILS FOR 6' HEIGHT

job no. 15860004
MDOT Details (Inlets & Box Culvert).dwg
tab:Basic Box (6.4)
sheet no. 6.4

CULVERT HEIGHT "H"	"G"
6'	1'-9"
8'	1'-9"
10'	1'-11"
12'	2'-0"



NOTE: This Detail Shows Typical Scheme For Bars W And Y.

FILL SIDE

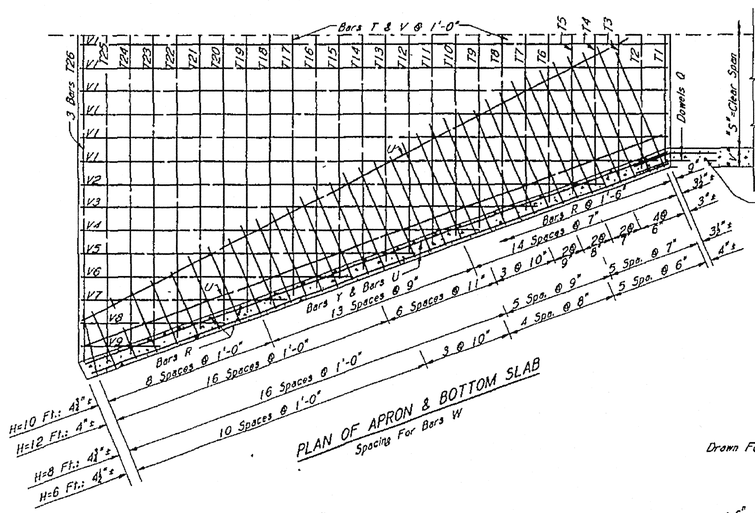
LONGITUDAL SECTION

Showing Bars In Both Faces Of Wall Drawn For Single Cell 10' x 10' Culvert

NOTE: Reinforcement In Stream Face Of Wall Required For H= 8, 10 & 12 Ft. Only.

STREAM SIDE

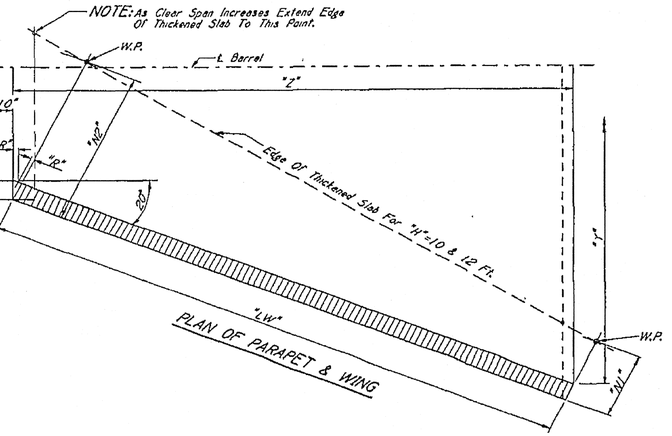
NOTE: This Detail Shows Typical Scheme For Bars T And V.



PLAN OF APRON & BOTTOM SLAB

Spacing For Bars W

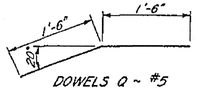
NOTE: As Clear Span Increases Extend Edge Of Thickened Slab To This Point.



PLAN OF PARAPET & WING

GENERAL PLAN

Drawn For Single Cell 10' x 10' Culvert



DOWELS Q ~ #5

BAR BENDING DETAILS

Dimensions Are Out To Out

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
WINGS WITH 3:1 SLOPE
FOR
BASIC CULVERT DRAWING
SINGLE CELL
HEIGHTS 6-12 FT.
SPANS 6-24 FT.

REVISIONS BY

DATE: DESIGNED NA | CHECKED BJJ | ISSUED TMT
DETAILED ALT | DATE 07-11-97 | DATE 08-01-97

WORKING NUMBER IWS-3

SHEET NUMBER 374

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO. | DATE | REVISIONS | BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT WINGS WITH 3:1 SLOPE

job no. 1586C004

MDOT Details (Inlets & Box Culvert).dwg

tab:3:1 Wings (6.5)

sheet no. 6.5

CULVERT DIMENSIONS

CULVERT HEIGHT "H"	"J"	"LW"	"N1"	"N2"	"R"	"Z"	"Y" CLEAR SPAN 6'	7'	8'	9'	10'	12'	14'	16'	18'	20'	22'	24'
10'	8'-4"	26'-7⅛"	2'-11"	6'-6"	1⅛"	25'-3⅛"					28'-3⅛"	30'-3⅛"	32'-3⅛"	34'-3⅛"	36'-3⅛"	38'-3⅛"	40'-3⅛"	
12'	9'-7"	30'-7⅛"	3'-3"	7'-0"	1⅛"	29'-0⅛"						33'-0⅛"	35'-0⅛"	37'-0⅛"	39'-0⅛"	41'-0⅛"	43'-0⅛"	45'-0⅛"

ESTIMATED QUANTITIES~CULVERT (L=150 FT.)

CLEAR SPAN

CULVERT HEIGHT "H"	6' CONC. cu. yd.	6' REINF. STEEL lb.	7' CONC. cu. yd.	7' REINF. STEEL lb.	8' CONC. cu. yd.	8' REINF. STEEL lb.	9' CONC. cu. yd.	9' REINF. STEEL lb.	10' CONC. cu. yd.	10' REINF. STEEL lb.	12' CONC. cu. yd.	12' REINF. STEEL lb.	14' CONC. cu. yd.	14' REINF. STEEL lb.	16' CONC. cu. yd.	16' REINF. STEEL lb.	18' CONC. cu. yd.	18' REINF. STEEL lb.	20' CONC. cu. yd.	20' REINF. STEEL lb.	22' CONC. cu. yd.	22' REINF. STEEL lb.	24' CONC. cu. yd.	24' REINF. STEEL lb.
10'									254.22	33,861	288.33	38,823	326.12	47,936	378.95	58,275	435.83	69,729	502.54	82,504	573.13	97,852		
12'											346.82	47,412	378.50	55,883	420.53	61,540	479.61	72,629	542.69	82,907	621.36	97,045	706.08	110,084

HEIGHT = 12 FT.

BAR LISTS FOR WINGS & APRONS

BAR	SIZE	NO. REQUIRED SPAN 12'	14'	16'	18'	20'	22'	24'	DIM. X	DIM. X1	LENGTH
T1	#4	2	2	2	2	2	2	2			5+1'-6"
T2	#4	2	2	2	2	2	2	2			5+2'-3"
T3	#4	2	2	2	2	2	2	2			5+3'-0"
T4	#4	2	2	2	2	2	2	2			5+3'-9"
T5	#4	2	2	2	2	2	2	2			5+4'-6"
T6	#4	2	2	2	2	2	2	2			5+5'-3"
T7	#4	2	2	2	2	2	2	2			5+6'-0"
T8	#4	2	2	2	2	2	2	2			5+6'-9"
T9	#4	2	2	2	2	2	2	2			5+7'-6"
T10	#4	2	2	2	2	2	2	2			5+8'-3"
T11	#4	2	2	2	2	2	2	2			5+9'-0"
T12	#4	2	2	2	2	2	2	2			5+9'-9"
T13	#4	2	2	2	2	2	2	2			5+10'-6"
T14	#4	2	2	2	2	2	2	2			5+11'-3"
T15	#4	2	2	2	2	2	2	2			5+12'-0"
T16	#4	2	2	2	2	2	2	2			5+12'-9"
T17	#4	2	2	2	2	2	2	2			5+13'-6"
T18	#4	2	2	2	2	2	2	2			5+14'-3"
T19	#4	2	2	2	2	2	2	2			5+15'-0"
T20	#4	2	2	2	2	2	2	2			5+15'-9"
T21	#4	2	2	2	2	2	2	2			5+16'-6"
T22	#4	2	2	2	2	2	2	2			5+17'-2"
T23	#4	2	2	2	2	2	2	2			5+17'-11"
T24	#4	2	2	2	2	2	2	2			5+18'-8"
T25	#4	2	2	2	2	2	2	2			5+19'-5"
T26	#4	2	2	2	2	2	2	2			5+20'-2"
T27	#4	2	2	2	2	2	2	2			5+20'-11"
T28	#4	2	2	2	2	2	2	2			5+21'-8"
T29	#4	6	6	6	6	6	6	6			5+21'-8"
U	#4	12	12	12	12	12	12	12			30'-3"
V1	#4	28	32	36	40	44	48	52	28'-8"	1'-8"	30'-4"
V2	#4	4	4	4	4	4	4	4	26'-7"	1'-8"	28'-3"
V3	#4	4	4	4	4	4	4	4	23'-10"	1'-8"	25'-6"
V4	#4	4	4	4	4	4	4	4	21'-1"	1'-8"	22'-9"
V5	#4	4	4	4	4	4	4	4	18'-4"	1'-8"	20'-0"
V6	#4	4	4	4	4	4	4	4	15'-7"	1'-8"	17'-3"
V7	#4	4	4	4	4	4	4	4	12'-10"	1'-8"	14'-6"
V8	#4	4	4	4	4	4	4	4	10'-1"	1'-8"	11'-9"
V9	#4	4	4	4	4	4	4	4	7'-4"	1'-8"	9'-0"
V10	#4	4	4	4	4	4	4	4	4'-7"	1'-8"	6'-3"
W1	#7	20	20	20	20	20	20	20	6'-5"	W+9'-6"	W+15'-11"
W2	#7	20	20	20	20	20	20	20	6'-0"	W+8'-6"	W+14'-6"
W3	#7	12	12	12	12	12	12	12	5'-8"	W+7'-8"	W+13'-4"
W4	#7	12	12	12	12	12	12	12	5'-4"	W+6'-10"	W+12'-2"
W5	#6	12	12	12	12	12	12	12	5'-0"	W+6'-0"	W+11'-0"
W6	#6	12	12	12	12	12	12	12	4'-8"	W+5'-2"	W+9'-10"
W7	#5	12	12	12	12	12	12	12	4'-3"	W+4'-2"	W+8'-5"
W8	#5	12	12	12	12	12	12	12	3'-11"	W+3'-3"	W+7'-2"
W9	#4	12	12	12	12	12	12	12	3'-7"	W+2'-3"	W+5'-10"
W10	#4	8	8	8	8	8	8	8	3'-4"	W+1'-7"	W+4'-11"
W11	#4	8	8	8	8	8	8	8	3'-1"	W+1'-0"	W+4'-1"
W12	#4	4	4	4	4	4	4	4	3'-0"	W+8"	W+3'-8"
Y1	#4	8	8	8	8	8	8	8			5'-8"
Y2	#4	8	8	8	8	8	8	8			9'-8"
Y3	#4	8	8	8	8	8	8	8			13'-8"
Y4	#4	8	8	8	8	8	8	8			17'-8"
Y5	#4	8	8	8	8	8	8	8			21'-8"
Y6	#4	8	8	8	8	8	8	8			25'-8"
Y7	#4	8	8	8	8	8	8	8			29'-8"
Y8	#4	24	24	24	24	24	24	24			30'-3"

HEIGHT = 10 FT.

BAR LISTS FOR WINGS & APRONS

BAR	SIZE	NO. REQUIRED SPAN 10'	12'	14'	16'	18'	20'	22'	DIM. X	DIM. X1	LENGTH
T1	#4	2	2	2	2	2	2	2			5+1'-2"
T2	#4	2	2	2	2	2	2	2			5+1'-8"
T3	#4	2	2	2	2	2	2	2			5+2'-5"
T4	#4	2	2	2	2	2	2	2			5+3'-2"
T5	#4	2	2	2	2	2	2	2			5+3'-11"
T6	#4	2	2	2	2	2	2	2			5+4'-8"
T7	#4	2	2	2	2	2	2	2			5+5'-5"
T8	#4	2	2	2	2	2	2	2			5+6'-2"
T9	#4	2	2	2	2	2	2	2			5+6'-11"
T10	#4	2	2	2	2	2	2	2			5+7'-8"
T11	#4	2	2	2	2	2	2	2			5+8'-5"
T12	#4	2	2	2	2	2	2	2			5+9'-2"
T13	#4	2	2	2	2	2	2	2			5+9'-9"
T14	#4	2	2	2	2	2	2	2			5+10'-6"
T15	#4	2	2	2	2	2	2	2			5+11'-3"
T16	#4	2	2	2	2	2	2	2			5+12'-0"
T17	#4	2	2	2	2	2	2	2			5+12'-9"
T18	#4	2	2	2	2	2	2	2			5+13'-6"
T19	#4	2	2	2	2	2	2	2			5+14'-3"
T20	#4	2	2	2	2	2	2	2			5+15'-0"
T21	#4	2	2	2	2	2	2	2			5+15'-9"
T22	#4	2	2	2	2	2	2	2			5+16'-6"
T23	#4	2	2	2	2	2	2	2			5+17'-3"
T24	#4	2	2	2	2	2	2	2			5+17'-11"
T25	#4	2	2	2	2	2	2	2			5+18'-7"
T26	#4	2	2	2	2	2	2	2			5+18'-10"
U	#4	12	12	12	12	12	12	12			26'-3"
V1	#4	24	28	32	36	40	44	48	24'-11"	1'-8"	26'-7"
V2	#4	4	4	4	4	4	4	4	22'-7"	1'-8"	24'-3"
V3	#4	4	4	4	4	4	4	4	19'-10"	1'-8"	21'-6"
V4	#4	4	4	4	4	4	4	4	17'-1"	1'-8"	18'-9"
V5	#4	4	4	4	4	4	4	4	14'-4"	1'-8"	16'-0"
V6	#4	4	4	4	4	4	4	4	11'-7"	1'-8"	13'-3"
V7	#4	4	4	4	4	4	4	4	8'-10"	1'-8"	10'-6"
V8	#4	4	4	4	4	4	4	4	6'-1"	1'-8"	7'-9"
V9	#4	4	4	4	4	4	4	4	3'-4"	1'-8"	5'-0"
W1	#6	20	20	20	20	20	20	20	5'-10"	W+8'-1"	W+13'-11"
W2	#6	20	20	20	20	20	20	20	5'-5"	W+7'-2"	W+12'-7"
W3	#5	20	20	20	20	20	20	20	5'-0"	W+6'-3"	W+11'-3"
W4	#5	12	12	12	12	12	12	12	4'-8"	W+5'-7"	W+10'-3"
W5	#5	12	12	12	12	12	12	12	4'-3"	W+4'-11"	W+9'-4"
W6	#4	12	12	12	12	12	12	12	4'-2"	W+4'-1"	W+8'-3"
W7	#4	12	12	12	12	12	12	12	3'-10"	W+3'-5"	W+7'-3"
W8	#4	12	12	12	12	12	12	12	3'-5"	W+2'-7"	W+6'-0"
W9	#4	12	12	12	12	12	12	12	3'-2"	W+2'-0"	W+5'-2"
W10	#4	8	8	8	8	8	8	8	2'-11"	W+1'-4"	W+4'-3"
W11	#4	8	8	8	8	8	8	8	2'-8"	W+8"	W+3'-4"
Y1	#4	8	8	8	8	8	8	8			5'-4"
Y2	#4	8	8	8	8	8	8	8			9'-4"
Y3	#4	8	8	8	8	8	8	8			13'-4"
Y4	#4	8	8	8	8	8	8	8			17'-4"
Y5	#4	8	8	8	8	8	8	8			21'-4"
Y6	#4	8	8	8	8	8	8	8			25'-4"
Y7	#4	16	16	16	16	16	16	16			26'-3"

ADDITIONAL BAR LIST FOR WINGS & APRONS

BAR	SIZE	H = 10 FT. NO.	H = 10 FT. LENGTH	H = 12 FT. NO.	H = 12 FT. LENGTH
F	#4	8	27'-6"	8	31'-8"
O	#5	72	3'-0"	88	3'-0"
OS	#4	4	9'-7"	4	11'-7"
R1	#4	8	W+7'-1"	8	W+8'-4"
R2	#4	8	W+6'-2"	8	W+7'-5"
R3	#4	12	W+4'-9"	12	W+6'-0"
R4	#4	12	W+3'-4"	12	W+4'-7"
R5	#4	12	W+1'-11"	12	W+3'-2"
R6	#4	12	W+6"	12	W+1'-9"
RT	#4			12	W+4"

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
WINGS WITH 3:1 SLOPE
FOR
BASIC CULVERT DRAWING
SINGLE CELL
HEIGHTS 6-12 FT.
SPANS 6-24 FT.

BY | DATE | REVISIONS

DESIGNED	CHECKED	ISSUED	WORKING NUMBER
NA	BJJ	THT	IWS-3
DETAILED	DATE	DATE	SHEET NUMBER
MJC	07-11-97	08-01-97	375.1

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO. | DATE | REVISIONS | BY

DUNGAN ENGINEERING, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT WINGS WITH 3:1 SLOPE

job no. 1586C004
MDOT Details (Inlets & Box Culvert).dwg
tab:3:1 Wings (6.6)
sheet no. 6.6

ESTIMATED QUANTITIES-CULVERT (L=150 FT.)

CULVERT HEIGHT "H"	CLEAR SPAN 6' CONC. cu yd.	6' REINF. STEEL lb.	7' CONC. cu yd.	7' REINF. STEEL lb.	8' CONC. cu yd.	8' REINF. STEEL lb.	9' CONC. cu yd.	9' REINF. STEEL lb.	10' CONC. cu yd.	10' REINF. STEEL lb.	12' CONC. cu yd.	12' REINF. STEEL lb.	14' CONC. cu yd.	14' REINF. STEEL lb.	16' CONC. cu yd.	16' REINF. STEEL lb.	18' CONC. cu yd.	18' REINF. STEEL lb.	20' CONC. cu yd.	20' REINF. STEEL lb.	22' CONC. cu yd.	22' REINF. STEEL lb.	24' CONC. cu yd.	24' REINF. STEEL lb.
6'	107.46	14,893			135.35	19,617			167.07	25,896	202.64	31,851	253.05	40,088	297.38	46,586	353.30	58,125	413.39	68,544				
8'					174.41	26,894			203.83	30,286	241.63	35,276	295.28	42,787	346.61	52,747	401.98	62,531	461.34	73,117				

CULVERT DIMENSIONS

CULVERT HEIGHT "H"	"J"	"LW"	"N1"	"N2"	"R"	"Z"	"Y" CLEAR SPAN 6'	7'	8'	9'	10'	12'	14'	16'	18'	20'	22'	24'
6'	5'-9"	18'-4⅜"			1⅛"	17'-5⅞"	18'-7⅛"		20'-7⅛"		22'-7⅛"	24'-7⅛"	26'-7⅛"	28'-7⅛"	30'-7⅛"	32'-7⅛"		
8'	7'-4"	23'-4⅜"			1⅛"	22'-2⅜"			24'-1⅛"		26'-1⅛"	28'-1⅛"	30'-1⅛"	32'-1⅛"	34'-1⅛"	36'-1⅛"		

⚠ HEIGHT = 8 FT.

BAR LISTS FOR WINGS & APRONS

BAR	SIZE	NO. REQUIRED SPAN 8'	10'	12'	14'	16'	18'	20'	DIM. X	DIM. X1	LENGTH
T1	#4	2	2	2	2	2	2	2			5'-10"
T2	#4	2	2	2	2	2	2	2			5'-1'-5"
T3	#4	2	2	2	2	2	2	2			5'-2'-2"
T4	#4	2	2	2	2	2	2	2			5'-2'-11"
T5	#4	2	2	2	2	2	2	2			5'-3'-8"
T6	#4	2	2	2	2	2	2	2			5'-4'-5"
T7	#4	2	2	2	2	2	2	2			5'-5'-2"
T8	#4	2	2	2	2	2	2	2			5'-5'-11"
T9	#4	2	2	2	2	2	2	2			5'-6'-7"
T10	#4	2	2	2	2	2	2	2			5'-7'-4"
T11	#4	2	2	2	2	2	2	2			5'-8'-1"
T12	#4	2	2	2	2	2	2	2			5'-8'-10"
T13	#4	2	2	2	2	2	2	2			5'-9'-7"
T14	#4	2	2	2	2	2	2	2			5'-10'-4"
T15	#4	2	2	2	2	2	2	2			5'-11'-1"
T16	#4	2	2	2	2	2	2	2			5'-11'-10"
T17	#4	2	2	2	2	2	2	2			5'-12'-7"
T18	#4	2	2	2	2	2	2	2			5'-13'-4"
T19	#4	2	2	2	2	2	2	2			5'-14'-1"
T20	#4	2	2	2	2	2	2	2			5'-14'-10"
T21	#4	2	2	2	2	2	2	2			5'-15'-7"
T22	#4	2	2	2	2	2	2	2			5'-16'-3"
T23	#4	6	6	6	6	6	6	6			5'-16'-6"
U	#4	12	12	12	12	12	12	12			23'-0"
V1	#4	20	24	28	32	36	40	44	21'-11"	1'-8"	23'-7"
V2	#4	4	4	4	4	4	4	4	19'-2"	1'-8"	20'-10"
V3	#4	4	4	4	4	4	4	4	16'-5"	1'-8"	18'-1"
V4	#4	4	4	4	4	4	4	4	13'-8"	1'-8"	15'-4"
V5	#4	4	4	4	4	4	4	4	10'-11"	1'-8"	12'-7"
V6	#4	4	4	4	4	4	4	4	8'-2"	1'-8"	9'-10"
V7	#4	4	4	4	4	4	4	4	5'-5"	1'-8"	7'-1"
W1	#5	24	24	24	24	24	24	24	4'-6"	W=6'-9"	W=11'-3"
W2	#5	20	20	20	20	20	20	20	4'-1"	W=5'-7"	W=9'-8"
W3	#5	12	12	12	12	12	12	12	3'-7"	W=4'-7"	W=8'-2"
W4	#4	12	12	12	12	12	12	12	3'-3"	W=3'-7"	W=6'-10"
W5	#4	12	12	12	12	12	12	12	2'-11"	W=2'-7"	W=5'-6"
W6	#4	12	12	12	12	12	12	12	2'-7"	W=1'-7"	W=4'-2"
W7	#4	8	8	8	8	8	8	8	2'-3"	W=1'-0"	W=3'-3"
W8	#4	8	8	8	8	8	8	8	2'-0"	W=5"	W=2'-5"
Y1	#4	8	8	8	8	8	8	8			4'-10"
Y2	#4	8	8	8	8	8	8	8			8'-0"
Y3	#4	8	8	8	8	8	8	8			11'-2"
Y4	#4	8	8	8	8	8	8	8			14'-4"
Y5	#4	8	8	8	8	8	8	8			17'-6"
Y6	#4	8	8	8	8	8	8	8			20'-8"
Y7	#4	16	16	16	16	16	16	16			23'-0"

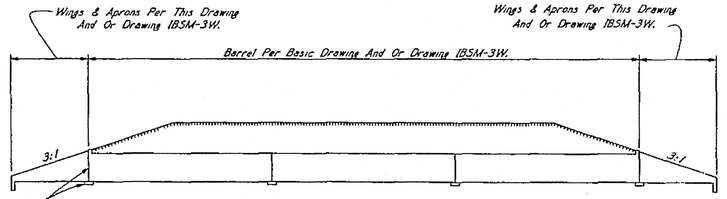
⚠ HEIGHT = 6 FT.

BAR LISTS FOR WINGS & APRONS

BAR	SIZE	NO. REQUIRED SPAN 6'	8'	10'	12'	14'	16'	18'	20'	DIM. X	DIM. X1	LENGTH
T1	#4	2	2	2	2	2	2	2	2			5'-8"
T2	#4	2	2	2	2	2	2	2	2			5'-1'-5"
T3	#4	2	2	2	2	2	2	2	2			5'-2'-2"
T4	#4	2	2	2	2	2	2	2	2			5'-2'-11"
T5	#4	2	2	2	2	2	2	2	2			5'-3'-8"
T6	#4	2	2	2	2	2	2	2	2			5'-4'-5"
T7	#4	2	2	2	2	2	2	2	2			5'-5'-2"
T8	#4	2	2	2	2	2	2	2	2			5'-5'-11"
T9	#4	2	2	2	2	2	2	2	2			5'-6'-8"
T10	#4	2	2	2	2	2	2	2	2			5'-7'-5"
T11	#4	2	2	2	2	2	2	2	2			5'-8'-2"
T12	#4	2	2	2	2	2	2	2	2			5'-8'-11"
T13	#4	2	2	2	2	2	2	2	2			5'-9'-7"
T14	#4	2	2	2	2	2	2	2	2			5'-10'-4"
T15	#4	2	2	2	2	2	2	2	2			5'-11'-1"
T16	#4	2	2	2	2	2	2	2	2			5'-11'-10"
T17	#4	2	2	2	2	2	2	2	2			5'-12'-7"
T18	#4	6	6	6	6	6	6	6	6			5'-13'-0"
U	#4	12	12	12	12	12	12	12	12			18'-0"
V1	#4	16	20	24	28	32	36	40	44	17'-1"	1'-8"	18'-0"
V2	#4	4	4	4	4	4	4	4	4	14'-1"	1'-8"	13'-9"
V3	#4	4	4	4	4	4	4	4	4	11'-4"	1'-8"	13'-0"
V4	#4	4	4	4	4	4	4	4	4	8'-7"	1'-8"	10'-3"
V5	#4	4	4	4	4	4	4	4	4	5'-10"	1'-8"	7'-6"
V6	#4	4	4	4	4	4	4	4	4	3'-1"	1'-8"	4'-9"
W1	#4	20	20	20	20	20	20	20	20	4'-0"	W=5'-4"	W=9'-4"
W2	#4	12	12	12	12	12	12	12	12	3'-8"	W=4'-9"	W=8'-5"
W3	#4	12	12	12	12	12	12	12	12	3'-5"	W=4'-0"	W=7'-5"
W4	#4	12	12	12	12	12	12	12	12	3'-0"	W=3'-2"	W=6'-2"
W5	#4	12	12	12	12	12	12	12	12	2'-8"	W=2'-3"	W=4'-11"
W6	#4	12	12	12	12	12	12	12	12	2'-4"	W=1'-4"	W=3'-8"
W7	#4	12	12	12	12	12	12	12	12	2'-0"	W=5"	W=2'-5"
Y1	#4	4	4	4	4	4	4	4	4			4'-10"
Y2	#4	4	4	4	4	4	4	4	4			8'-1"
Y3	#4	4	4	4	4	4	4	4	4			11'-3"
Y4	#4	4	4	4	4	4	4	4	4			14'-5"
Y5	#4	4	4	4	4	4	4	4	4			17'-7"
Y6	#4	4	4	4	4	4	4	4	4			18'-0"

ADDITIONAL BAR LIST FOR WINGS & APRONS

BAR	SIZE	H = 6 FT. NO.	H = 6 FT. LENGTH	H = 8 FT. NO.	H = 8 FT. LENGTH
F	#4	8	18'-10"	8	24'-2"
O	#5	28	3'-0"	72	3'-0"
O5	#4	4	5'-7"	4	7'-7"
P1	#4			8	W=6'-1"
R2	#4			12	W=4'-8"
R3	#4			12	W=3'-3"
R4	#4			12	W=1'-10"
R5	#4			12	W=5"



SIDE ELEVATION OF CULVERT
See Drawing No. IBJL-1 For Joint Locations

NOTE:
Auxiliary Slabs "W" And Vertical Construction Joints At The Wings Are Required Only Where Called For By The Basic Drawing And Auxiliary Slabs "W" Are Not To Be Used For Culvert Heights Of Less Than 8 Feet.

GENERAL NOTES:

This Drawing Shows The General Details Necessary To Modify A Single Cell Culvert For Wings With 3:1 Slope.
All Governing Dimensions, Reinforcing Details And General Requirements Of Basic Culvert Drawing Shall Apply Except As Specifically Modified By This Drawing And Or Drawing IBSM-3W.
Barrel Details On Basic Culvert Drawing Shall Be Used With Cover From 2'-6" To The Maximum Shown On Basic Culvert Drawing. With Cover Less Than 2'-6" And More Than Maximum Shown On Basic Culvert Drawing, Use Drawing IBSM-3W For Barrel Details.
Quantities Shown On This Sheet Are For Culverts With Basic Culvert Barrels And Wings With 3:1 Slope Per This Drawing. Quantities Shown On Drawings IBSM-3W Are For Culverts With Barrels Per Drawing IBSM-3W And Wings With 3:1 Slope Per This Drawing And Drawing IBSM-3W. Quantities Not Shown On This Sheet And Or Drawing IBSM-3W Are Same As Shown On Basic Culvert Drawings.
Quantities Shown On This Sheet Are For Complete Culvert Of The Length Noted And Include Barrel, Parapets, Wings, Aprons, Cut-Off Walls, Auxiliary Slabs "W" Where Required And Two Auxiliary Slabs "J".
Quantities Shown On This Sheet Will Be Used As A Basis For Final Payment For Culverts Constructed In Accordance With This Drawing And Basic Culvert Drawings.

BY	DATE	REVISIONS
RAJ	2-11-98	Revised MDOT Dimensions

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
WINGS WITH 3:1 SLOPE
FOR
BASIC CULVERT DRAWING
SINGLE CELL
HEIGHTS 6-12 FT.
SPANS 6-24 FT.

WORKING NUMBER IWS-3
SHEET NUMBER 375.2

DESIGNED NA | CHECKED BJJ | ISSUED TMT
DETAILED MJC | DATE 07-11-97 | DATE 08-01-97

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date:

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

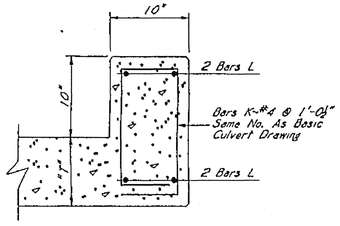
100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

contents: MDOT WINGS WITH 3:1 SLOPE

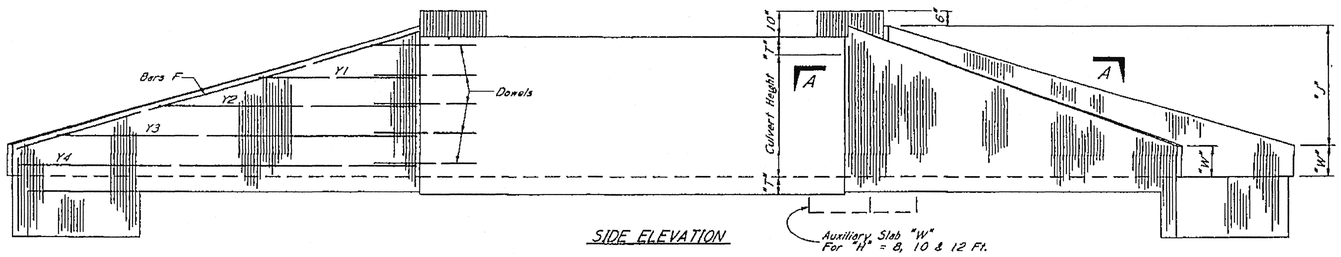
job no. 1586C004
MDOT Details (Inlets & Box Culvert).dwg
tab:3:1 Wings (6.7)
sheet no. 6.7

CULVERT HEIGHT "H"	TABLE OF DIMENSIONS "J"	"LW1"	"LW2"	"N1"	"N2"	"P"	"R1"	"R2"	"U"	"W"	"Z"
										Per Supplementary Drawing	
6'	5'-9"	17'-3 3/8"	21'-0 5/8"			1.035(D)+1.15'	0 3/8"	4 1/2"	7"		17'-3"
8'	7'-4"	22'-1"	26'-10 5/8"			1.035(D)+1.39'	0 3/8"	5 3/8"	8 1/2"		22'-0"
10'	6'-4"	25'-1 1/8"	30'-6 1/8"	2'-11"	6'-6"	1.035(D)+1.64'	0 3/8"	5 7/8"	10"		25'-0"
12'	9'-7"	28'-10 5/8"	35'-1 3/8"	3'-3"	7'-0"	1.035(D)+1.81'	0 3/8"	6 3/8"	11"		28'-9"

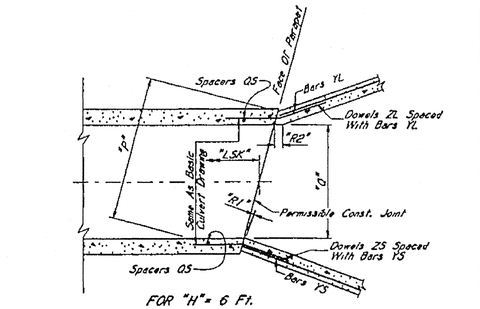
NOTE: Q For Single Cell Culvert = S (Clear Span)
Q For Double Cell Culvert = 2(S) + V



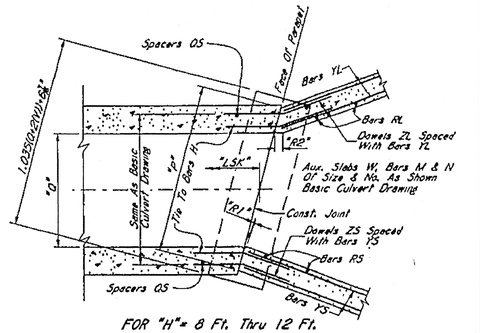
PARAPET DETAIL
Slab Steel Not Shown



SIDE ELEVATION



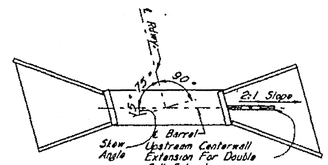
FOR "H" = 6 Ft.



FOR "H" = 8 Ft. Thru 12 Ft.

NOTE: Reinforcement In Stream Face Of Wing Wall Required For "H" = 8, 10 & 12 Ft. Only.

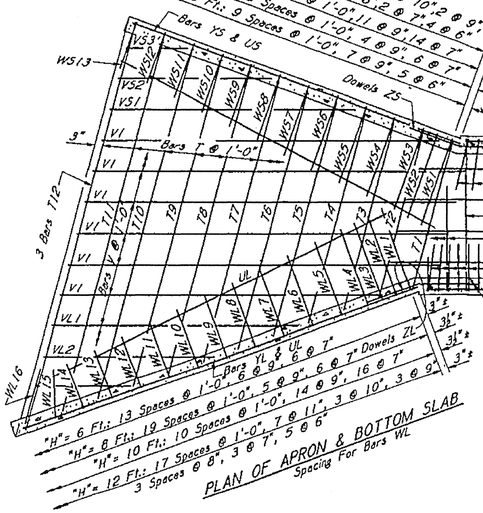
SECTION A-A



PLAN OF 15° LEFT FORWARD SKEW

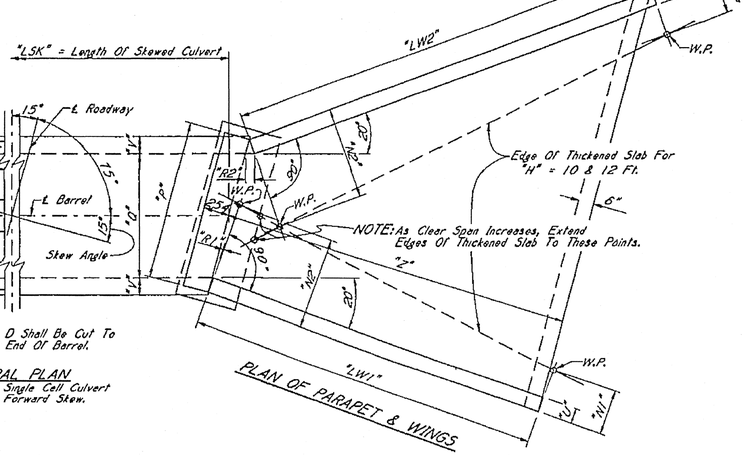
PLAN OF APRON & BOTTOM SLAB
Spacing For Bars WS

"H" = 12 Ft.: 15 @ 1'-0", 6 @ 11", 2 @ 10", 2 @ 9"
H= 10 Ft.: 8 Spaces @ 1'-0", 2 @ 8", 2 @ 7", 4 @ 6"
H= 8 Ft.: 15 Spaces @ 1'-0", 4 @ 9", 14 @ 7"
H= 6 Ft.: 9 Spaces @ 1'-0", 7 @ 9", 5 @ 6"



PLAN OF APRON & BOTTOM SLAB
Spacing For Bars WL

"L.SK" = Length Of Skewed Culvert



NOTE: Bars A, C & D Shall Be Cut To Fit Skew At End Of Barrel.

GENERAL PLAN
Drawn For A Single Cell Culvert On 15° Right Forward Skew.

REVISIONS BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BOX CULVERT DRAWING
15° SKEW DETAILS
WINGS WITH 3:1 SLOPE
SINGLE & DOUBLE CELL CULVERTS

DESIGNED	NA	CHECKED	BJJ	ISSUED	TMT
DETAILED	ALT	DATE	07-11-97	DATE	08-01-97

WORKING NUMBER ISK-15-3W
SHEET NUMBER 397.1

drawn by: J. ULMER
checked by: L. MOCK
scale: N.T.S.
date: JANUARY 31, 2005

NO.	DATE	REVISIONS	BY

DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

100 RENAISSANCE
OFFICE BUILDING @ COLONY PARK
CITY OF RIDGELAND, MISSISSIPPI

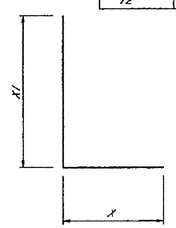
contents: 15° SKEW DETAILS FOR BOX CULVERT WITH 3:1 WINGS

job no. 1586C004
MDOT Details (Inlets & Box Culvert).dwg
tab: 15-d Skew (6.8)
sheet no. 6.8

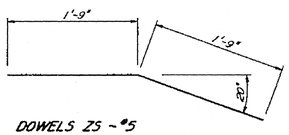
CULVERT HEIGHT "H"	TABLE OF BARS V ~ #4					
	BARS V1		BARS VL1 - VLn		BARS VS1 - VSn	
	NO.	DIM. X	NO.	DIM. X	NO.	DIM. X
6'	Same As Basic Culvert Drawing	17'-6"	6	14'-6" To 2'-2"	5	14'-1" To 2'-0"
8'		22'-5"	8	19'-9" To 2'-5"	6	19'-5" To 4'-3"
10'		25'-6"	9	23'-2" To 3'-4"	7	22'-9" To 4'-7"
12'		29'-5"	11	27'-3" To 2'-6"	9	27'-0" To 2'-9"

CULVERT HEIGHT "H"	TABLE OF BARS R ~ #4		
	BAR	NO.	LENGTH
8'	RS1 To RS13	1 Ea.	W+6'-7" To W+6"
	RL1 To RL16	1 Ea.	W+6'-7" To W+5"
10'	RS1 To RS15	1 Ea.	W+7'-6" To W+7"
	RL1 To RL18	1 Ea.	W+7'-6" To W+7"
12'	RS1 To RS18	1 Ea.	W+8'-10" To W+4"
	RL1 To RL22	1 Ea.	W+8'-10" To W+4"

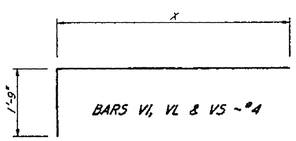
CULVERT HEIGHT "H"	TABLE OF BARS U ~ #4	
	UL, NO. & LENGTH	US, NO. & LENGTH
	LONG WING	SHORT WING
6'	3 @ 20'-8"	3 @ 16'-11"
8'	3 @ 26'-6"	3 @ 21'-9"
10'	3 @ 30'-2"	3 @ 24'-9"
12'	3 @ 34'-9"	3 @ 28'-6"



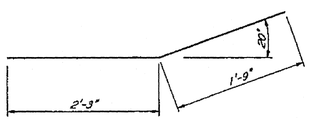
BARS WL & WS



DOWELS ZS ~ #5



BARS VI, VL & VS ~ #4



DOWELS ZL ~ #5

BAR BENDING DETAILS
Dimensions Are Out To Out

NOTE: Vertical Spacers OS And Dowels ZL And ZS Located Per Section A - A.

CULVERT HEIGHT "H"	TABLE OF BARS FL, FS, OS, ZL & ZS									
	BARS FL ~ #4		BARS FS ~ #4		SPACERS OS ~ #4		DOWELS ZL ~ #5		DOWELS ZS ~ #5	
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.
6'	2	21'-5"	2	17'-10"	2	5'-7"	7	4'-0"	7	3'-6"
8'	2	27'-8"	2	22'-11"	2	7'-7"	18	4'-0"	18	3'-6"
10'	2	31'-3"	2	26'-1"	2	9'-7"	18	4'-0"	18	3'-6"
12'	2	36'-0"	2	30'-0"	2	11'-7"	22	4'-0"	22	3'-6"

NOTE: The Number Of Bars Shown In The Tables Is The Number Required For One Complete Headwall Assembly At One End Of Culvert.

CULVERT HEIGHT "H"	TABLE OF BARS Y ~ #4			
	BAR	NO.	YL - LENGTH	YS - LENGTH
			LONG WING	SHORT WING
6'	Y1 To Y5	1 Ea.	5'-7" To 20'-3"	4'-6" To 16'-7"
	Y6	1	20'-8"	16'-11"
8'	Y1 To Y6	2 Ea.	5'-7" To 23'-11"	4'-6" To 19'-7"
	Y7	4	26'-6"	21'-9"
10'	Y1 To Y6	2 Ea.	6'-2" To 29'-1"	5'-0" To 23'-10"
	Y7	4	30'-2"	24'-9"
12'	Y1 To Y7	2 Ea.	6'-6" To 34'-0"	5'-3" To 27'-10"
	Y8	6	34'-9"	28'-6"

Bars K & N Per Basic Culvert Drawing Except Spacing Shall Be 1'-0".

CULVERT HEIGHT "H"	TABLE OF BARS T ~ #4		
	BAR	NO.	LENGTH
6'	T1 To T17	1 Ea	P-4" To P+12'-1"
	T18	3	P+12'-9"
8'	T1 To T21	1 Ea.	P-2" To P+15'-7"
	T22	3	P+16'-4"
10'	T1 To T24	1 Ea.	P-2" To P+18'-3"
	T25	3	P+19'-0"
12'	T1 To T2L	1 Ea.	P To P+21'-3"
	T29	3	P+22'-0"

CULVERT HEIGHT "H"	TABLE OF BARS WL				
	BAR	NO.	SIZE	LONG WING DIM. X	LONG WING DIM. X1
6'	WL1 To WL26	1 Ea.	#4	4'-0" To 2'-0"	K+5'-6" To K
8'	WL1 To WL16	1 Ea.	#5	4'-6" To 3'-3"	K+7'-2" To K+4'-4"
	WL17 To WL31	1 Ea.	#4	3'-2" To 2'-0"	K+4'-1" To K
10'	WL1 To WL11	1 Ea.	#6	5'-10" To 5'-3"	K+8'-1" To K+6'-6"
	WL12 To WL24	1 Ea.	#5	5'-2" To 4'-4"	K+6'-4" To K+4'-1"
	WL25 To WL41	1 Ea.	#4	4'-3" To 2'-8"	K+3'-11" To K
12'	WL1 To WL19	1 Ea.	#7	6'-5" To 5'-3"	K+9'-4" To K+6'-1"
	WL20 To WL26	1 Ea.	#6	5'-2" To 4'-7"	K+5'-10" To K+4'-4"
	WL27 To WL33	1 Ea.	#5	4'-6" To 3'-10"	K+4'-1" To K+2'-5"
	WL34 To WL42	1 Ea.	#4	3'-9" To 3'-0"	K+2'-2" To K

CULVERT HEIGHT "H"	TABLE OF BARS WS				
	BAR	NO.	SIZE	SHORT WING DIM. X	SHORT WING DIM. X1
6'	WS1 To WS22	1 Ea.	#4	4'-0" To 2'-0"	K+5'-6" To K
8'	WS1 To WS14	1 Ea.	#5	4'-6" To 3'-4"	K+7'-2" To K+4'-0"
	WS15 To WS26	1 Ea.	#4	3'-3" To 2'-0"	K+3'-8" To K
10'	WS1 To WS10	1 Ea.	#6	5'-10" To 5'-1"	K+8'-1" To K+6'-1"
	WS11 To WS20	1 Ea.	#5	5'-0" To 4'-3"	K+5'-11" To K+4'-0"
	WS21 To WS34	1 Ea.	#4	4'-2" To 2'-8"	K+3'-9" To K
12'	WS1 To WS15	1 Ea.	#7	6'-5" To 5'-3"	K+9'-4" To K+6'-2"
	WS16 To WS21	1 Ea.	#6	5'-2" To 4'-7"	K+5'-10" To K+4'-3"
	WS22 To WS27	1 Ea.	#5	4'-5" To 3'-10"	K+3'-11" To K+2'-3"
	WS28 To WS34	1 Ea.	#4	3'-9" To 3'-0"	K+1'-11" To K

CULVERT HEIGHT "H"	TABLE OF BARS L & M					
	BARS L			BARS M		
	NO.	SIZE	LENGTH	NO.	SIZE	LENGTH
6'	4	#6	P-4"			NONE
8'-12'	4	#7	P-4"	2	#4	1.035(10+2(V1))+2"

K = W+5" For "H" = 6'
K = W+6" For "H" = 8'
K = W+8 For "H" = 10'
K = W+9" For "H" = 12'

GENERAL NOTES:
This Drawing Shows The General Details Necessary To Modify A Single Or Double Cell Culvert With Wings With 3:1 Slope For A 15° Skew. All Governing Dimensions Reinforcement Details And General Requirements Of Basic Culvert Drawings, Drawings 1WS-3 And 1WD-3 And Or Drawings 1BSM-3W And 1BDM-3W Shall Apply Except As Specifically Modified Hereon A Complete Placing Plan Showing All Governing Dimensions, Bars List And Bending Details Shall Be Submitted To The Project Engineer For Approval Prior To Fabrication Of The Reinforcing Steel.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BOX CULVERT DRAWING
15° SKEW DETAILS
WINGS WITH 3:1 SLOPE
SINGLE & DOUBLE CELL CULVERTS

BJJ	Changed Bar Length
BJJ	Revised

DESIGNED NA | CHECKED BJJ | ISSUED TMT
DETAILED ALT | DATE 07-11-97 | DATE 08-01-97

WORKING NUMBER ISK-15-3W
SHEET NUMBER 397.2

drawn by: J. ULMER
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scale: N.T.S.
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DUNGAN Engineering, PA
Consulting Engineers
1574 Highway 98 East
P.O. Box 150
Columbia, MS 39429
(T) 601-731-2600
(F) 601-736-6501

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