

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

On this 26 day of JULY, 2011, before the Fort Bend Commissioners Court came on to be heard and reviewed the accompanying notice of HSC PIPELINE PARTNERSHIP, LLC

Job Location SEVERAL COUNTY ROADS AND DRAINAGE DITCHES

Dated 07/18/11 BOND NO. 022-034-921 Permit No. 83984

to make use of certain Fort Bend County property subject to, "A Revised Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, date the 3rd day of August, 1987, recorded in Volume _____ of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Article 1436a, Vernon's Texas Civil Statues. Upon Motion of Commissioner Meyers, seconded by Commissioner Patterson, duly put and carried, it is ORDERED, ADJUGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Notes:

- 1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
- 2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection

Mail notices to: Permit Administrator
Fort Bend County Engineering
P.O. Box 1449
Rosenberg, Texas 77471
281-633-7500

- 3. This permit expires one (1) year from date of permit if construction has not commenced.

By [Signature]
County Engineer

By _____
Drainage District Engineer/Manager

Presented to Commissioners Court and approved.
Recorded in Volume 7-26-11
Minutes of Commissioners Court.

Clerk of Commissioners Court
By [Signature]
Deputy

COPY

**PERPETUAL BOND COVERING CABLE, CONDUIT AND/OR POLE LINE
ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROADS**

(AUTHORIZED)

BOND NO 022-034-921

THE STATE OF TEXAS §

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND §

THAT WE, HSC Pipeline Partnership, LLC whose address is the Principal, and, a Corporation existing under and by virtue of the laws of the State of Texas and Liberty Mutual Insurance Company authorized to do an indemnifying business in the State of Texas, and whose principal office is located at 1100 Louisiana Street, Houston, Tx 77002, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought within said State is Texas and whose address is 1100 Louisiana Street, Houston, Tx 77002, hereinafter called the Surety, are held and firmly bound unto, Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, in the full sum of **Fifty Thousand Dollars (\$50,000.00)** current, lawful money of the United States of America, to be paid to said Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves and each of us, our heirs, executors, administrators, successors, assigns, and legal representatives, jointly and severally, by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying, constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along roads, streets and highways in the County of Fort Bend, and the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the Commissioners' Court order adopted on the 1st day of December, A.D. 1980, recorded in Volume 13, of the Commissioners' Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and made a part hereof for all purposes as though fully set out herein.

AND WHEREAS, the principal desires to provide Fort Bend County with a perpetual bond covering all such cable, conduit and/or pole line activity;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line activity (including, but not limited to the laying, constructing, maintaining and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways in the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas, pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain by reason of any failure or default on the part of said principal, then this obligation shall be null and void otherwise to remain in full force and effect.

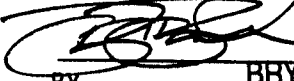
This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 27th day of May, 2011.


HSC Pipeline Partnership, LLC

PRINCIPAL *By Enterprise Products OLP, Inc.*



BY BRYAN F. BULAWA
Senior Vice President and Treasurer

Liberty Mutual Insurance Company,
Surety



Carol E. Hock Attorney-In-Fact,

COUNTY OF FORT BEND

Engineering Department

P.O. BOX 1449
Rosenberg, Texas 77471-1449

Johnny Ortega
Permit Administrator

1124 Blume Road
Phone: (281) 341-7500

PERMIT APPLICATION REVIEW FORM FOR CABLE, CONDUIT, AND POLE LINE ACTIVITY IN FORT BEND COUNTY

PERMIT NO. 033984

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

- (1) Complete Application Form.
- a. Name of road, street, and/or drainage ditch affected.
- b. Vicinity map showing course of direction.
- c. Plans and specifications.

- (2) Bond:
- District Attorney, approval when applicable.
- Perpetual bond currently posted.
No. 022-034-921
Amount \$50,000.00
- Performance bond submitted.
No. _____
Amount _____
- Cashier's Check.
No. _____
Amount _____

- (3) Verbal permission given for emergencies, to start construction before approved in Commissioner's Court.

Precinct Engineer Acknowledgment Date _____

Precinct Commissioner Acknowledgment Date _____

- (4) 
Drainage District Approval when applicable

We have reviewed this project and agree it meets minimum requirements.



Johnny Ortega CFM/ Permit Administrator
(REVISED 5/30/08)

07/14/2011

Date

NOTICE OF PROPOSED CABLE, CONDUIT AND/OR POLE LINE ACTIVITY
IN, UNDER, ACROSS OR ALONG ROADS, STREETS, HIGHWAYS AND DRAINAGE DITCHES
IN FORT BEND COUNTY

APPLICANT'S JOB NO. _____
 PERMIT No. 83984 PCT. No. 1
 BOND No. 022-0344-921

Formal notice is hereby given that **HSC Pipeline Partnership, LLC** proposes to lay, construct, maintain and/or repair cable, conduit and/or pole line, in, under, across, or along roads, streets, highways and drainage ditches in Fort Bend County, as follows:

In, Under, or Across Roads and/or Drainage Ditches

Road or Ditch Name:	Distance and Direction From: Nearest Intersection	Length Of : Crossing	Type Of Construction
			Bored : Jacked : Driven : Cased
:	SEE ATTACHMENT "A"	:	:
:	:	:	:

Along Roads and/or Drainage Ditches

Road or Ditch Name	Distance and Direction From : Nearest Intersection	To :	Distance
:	SEE ATTACHMENT "A"	:	:
:	:	:	:

General Description

A Sixteen Inch (16") Y-Grade Liquids Pipeline from the Yoakum Plant in Lavaca County to Needville Station at Hurta Rd, thereby becoming Twenty Inch (20") Y-Grade Liquids and continuing to Alvin Station in Brazoria County

The location and description of the proposed installation and appurtenances is more fully shown on the attached detail drawings. The laying, construction, maintenance and/or repair of the proposed installation shall be subject to "A Revised Order Regulating the Laying, Construction, Maintenance and/or Repair of Cables, Conduits, and or Pole Lines, In, Under, Across, or Along Roads, Streets, Highways and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by Commissioners Court of Fort Bend County, Texas, dated the 3rd. day of August, 1987, recorded in Volume 639 of the Minutes of the Commissioners Court of Fort Bend County, Texas.

Written notices are required: 1) 48 hours in advance of start of construction and
 2) when construction is complete and ready for final inspection.

Mail to: Administrator/Fort Bend County Engineering
 P.O. Box 1449, Rosenberg, TX 77471.

Violation of requirements shall constitute grounds for job shut down.

COMPANY NAME: **HSC Pipeline Partnership, LLC**

AGENT and/or OWNER



 (Signature)

NAME & TITLE Marc D. Tausend

 (Please Print)

DATE July 11, 2011

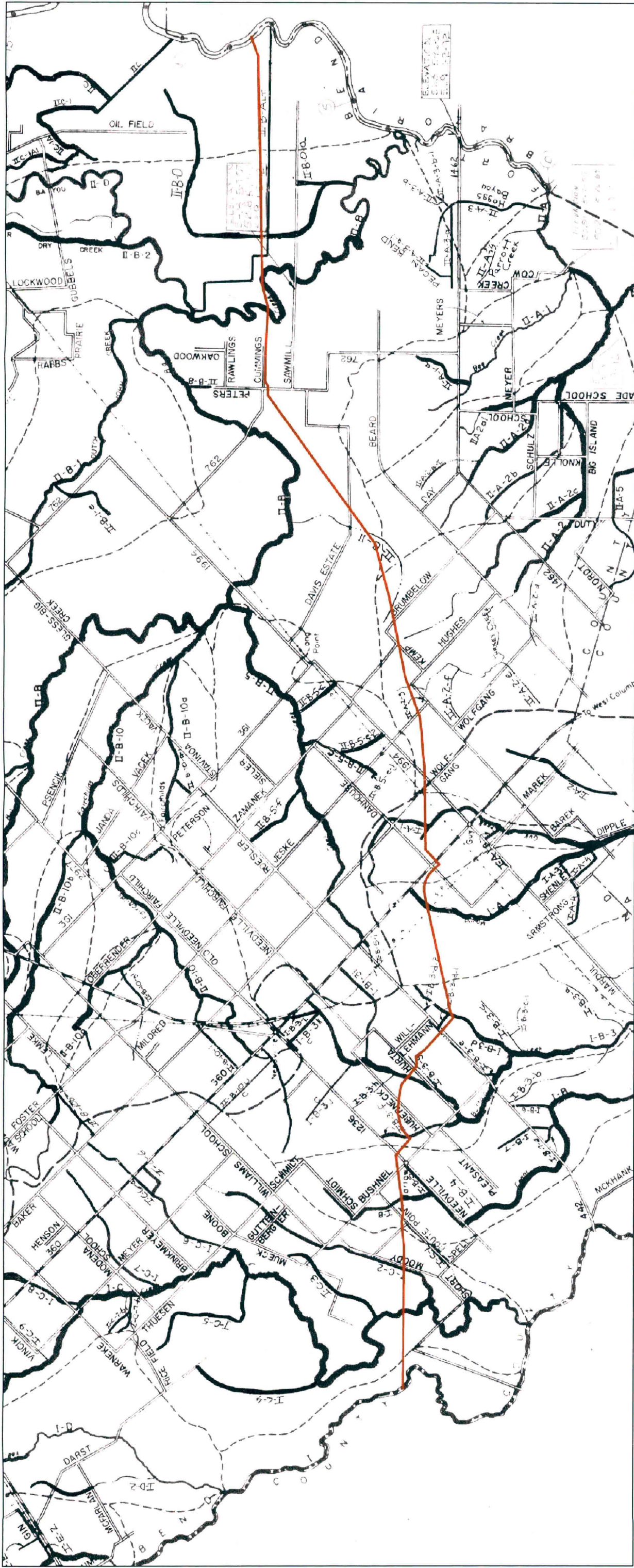
ADDRESS **1100 Louisiana Street**

 (Street / P.O. Box)

Houston Texas 77002
 City State Zip

TELEPHONE NO: **1-800-644-4773**
 (accessible 24 hrs/day, 7 days/week)

Does project Comply with Fort Bend County Outdoor Lighting Ordinance? Yes (<input checked="" type="checkbox"/>) No ()



LEGEND

	Paved Road
	Shell or Gravel Road
	Dirt Road
	Railroad
	County Boundary
	Irrigation Canal
	Major Watershed Boundary
	Lateral Watershed Boundary
	Perennial Stream
	Intermittent Stream
	Stream or Drainage Ditch
	Levee
	Mile Mark

NO	STREAM OR DITCH NAME	PLAN B PROFILE PAGE	CROSS SECTIONS PAGE
IB8	Cottonwood Creek	11	41
IB9	Dry Creek	10	40
IB10	Horse Bayou and Froggs Slough	9	38
IB10a	Robbs Bayou	9	39
ID	Jones Creek	16	60
IE	Flemish Ditch	19	61, 62, 63
IE1	Flemish Ditch	19	64
IF	Fulshear Creek	21	66, 67, 68
IF1	Brookshire Creek	21	68, 69
IF2	Hobby Creek	22	70, 71, 72
IF3	Orchard Creek	22	69, 70
IG	Lower Sleepers Creek	17	58
IJ	Dahall Ditch	20	65
IK	Flatbarn and Oyster Creek	14, 15	48, 54 incl
IK1	Stifford Run	16	55
IL	Bullhead Slough	17	59
IM	Lower Oyster Creek	15	56, 57
IN	Mustang Creek	23	73
IO	Willow Fork of Buffalo Bayou	24	74

INDEX TO PLAN, PROFILE AND CROSS-SECTION SHEETS.

NO	STREAM OR DITCH NAME	PLAN B PROFILE PAGE	CROSS SECTIONS PAGE
IA	Mound Creek	1	25
IB	Cedar Creek	2	26
IB1	Buffalo Creek	2	27
IC	Snake Creek	3	28, 29
ID	Turkey Creek	4	30
ID1	Turkey Creek	4	31
IE		5	32
IAA	Cow Creek	6	33
IA1	Bea Creek	6	34
IA2	Turkey Creek	7	35
IB	Big Creek	8	36, 37
IB1		10	40
IB2	Fairchild Creek	13	46
IB2b		13	47
IB3	Coon Creek	11	42, 43
IB4	Seabourne Creek	12	45
IB5	Deer Creek	12	43, 44

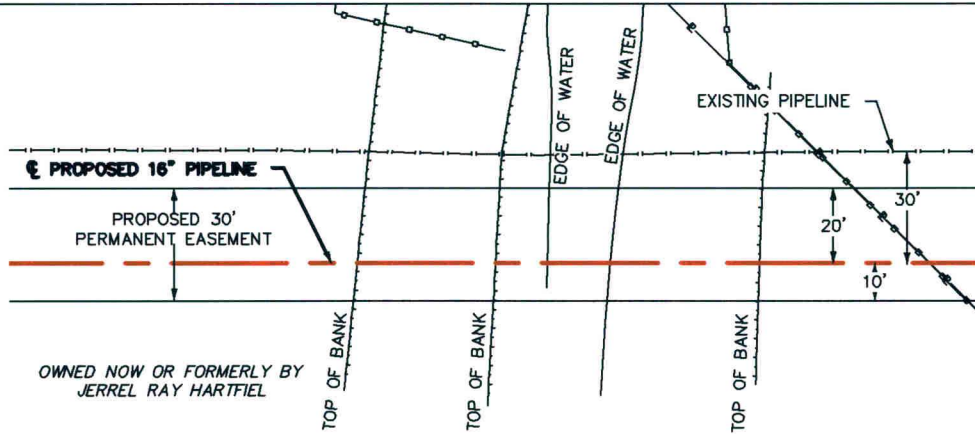
Appendix "A"

Road or Ditch Name	Approximate Distance & Direction From Nearest Intersection	Crossing Details	Type Of Construction		
			Unencased Bore	** Open Trench	Horizontal Directional Drill
Tierra Grande Dr.	5,774 ft. S of intersection with Mueck Rd.	60' R/W within 80' bore	X		
Snake Creek I-C	4,266 ft. E of Tierra Grande Dr. between Wolf Run and Deer Trail Dr.	Min. 10' cover over top of pipe at existing flowline		X	
Moody Rd. Lateral I-C-2 & Moody Rd.	3,637 ft. N of intersection with Spell Rd.	90' R/W within 120' bore, Min. 10' cover at existing flowline	X		
Rouff Point Rd.	3,721 ft. SW of intersection with Bushnell Rd.	70' R/W within 120' bore	X		
Cedar Creek I-B	1,171 ft. E of Rouff Point Rd. from the proposed pipeline crossing 3,721 ft. SW of intersection with Bushnell Rd.	Min. 5' cover over top of pipe at existing flowline		X	
Bushnell Rd.	586 ft. NW of intersection with Needville Four Corners Rd.	70' R/W within 120' bore	X		
Buffalo Creek Lateral I-B-3-F	1,580 ft. NNW of the point where Hubenak Rd crosses Buffalo Creek Lateral I-B-3-F	Min. 5' cover over top of pipe at existing flowline		X	
Hubenak Rd.	3,578 ft. NE of intersection with FM-1236	60' apparent R/W within 80' bore	X		
Buffalo Creek I-B-3	345 ft. NW of Hurta Rd. from the proposed pipeline crossing 3,975 ft. SW of intersection with Will Lehman Rd.	Min. 5' cover over top of pipe at existing flowline		X	
Hurta Rd.	3,975 ft. SW of intersection with Will Lehman Rd.	70' apparent R/W within 80' bore	X		
Buffalo Creek Lateral I-B-3-D	710 ft. SW of J. C. Wicks Rd. from the proposed pipeline crossing 2,133 ft. SE of intersection with FM-442	Min. 10' cover over top of pipe at existing flowline		X	
J. C. Wicks	2,133 ft. SE of intersection with FM-442	40' apparent R/W within 160' bore	X		
Mound Creek I-A	3,650 ft. W of Walcik Rd. from the proposed pipeline crossing 450 ft. SW of intersection with SH-36	Min. 5' cover over top of pipe at existing flowline		X	
Walcik Rd.	450 ft. SW of intersection with SH-36	60' apparent R/W within 80' bore	X		
Guy Creek I-A-1	2,910 ft. W of Padon Rd. from the proposed pipeline crossing 930 ft. NW of intersection with FM-1994	Min. 5' cover over top of pipe at existing flowline		X	
Padon Rd.	930 ft. NW of intersection with FM-1994	55' apparent R/W within 120' bore	X		
Hughes Rd.	3,531 ft. SE of intersection with FM-1994	60' apparent R/W within 160' bore	X		
Kemp Rd.	137 ft. S of intersection with Brumbelow Rd.	65' apparent R/W within 240' bore	X		
Brumbelow Rd.	6,000 ft. NW of intersection with Providence Rd.	80' apparent R/W within 160' bore	X		
Davis Estate Rd.	13,186 ft. E of intersection with Long Point Rd.	65' apparent R/W within 160' bore	X		
Big Creek II-B	7,532 ft. (1 st Crossing) & 10,362 ft. (2 nd Crossing) E of FM-762 on the N side of Sawmill Rd. & due E of Cummins Rd.	Multiple crossings within single 4,863' Horizontal Directional Drill, > 20' cover at all crossings			X
Big Creek Bypass II-B-Alt.	11,562 ft. E of FM-762 on the N side of Sawmill Rd. & due E of Cummins Rd.				X
Waters Lake Bayou II-B-0	14,496 ft. E of FM-762 on the N side of Sawmill Rd.	Min. 14' cover over top of pipe at existing flowline		X	

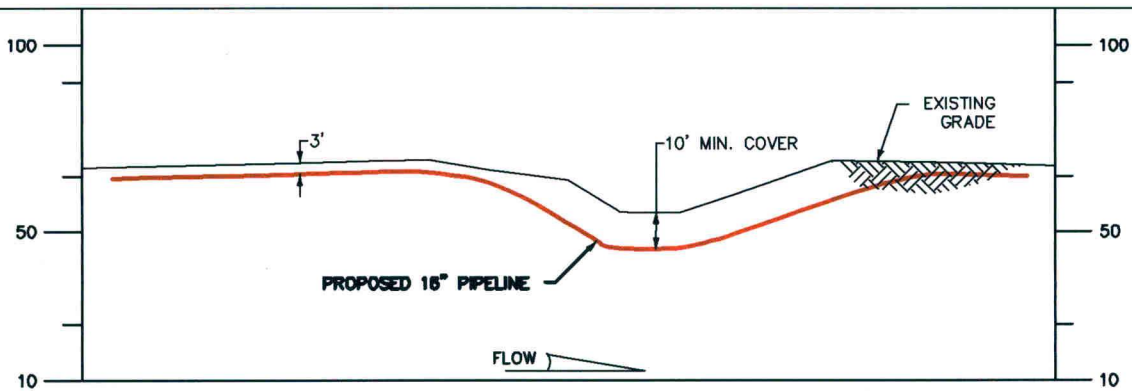
** Upon completion, all crossings shall be restored to their undisturbed original condition, including re-grading to match natural contours and permanent seeding.

FORT BEND COUNTY, TEXAS

R D WOOD SURVEY - ABSTRACT 98



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

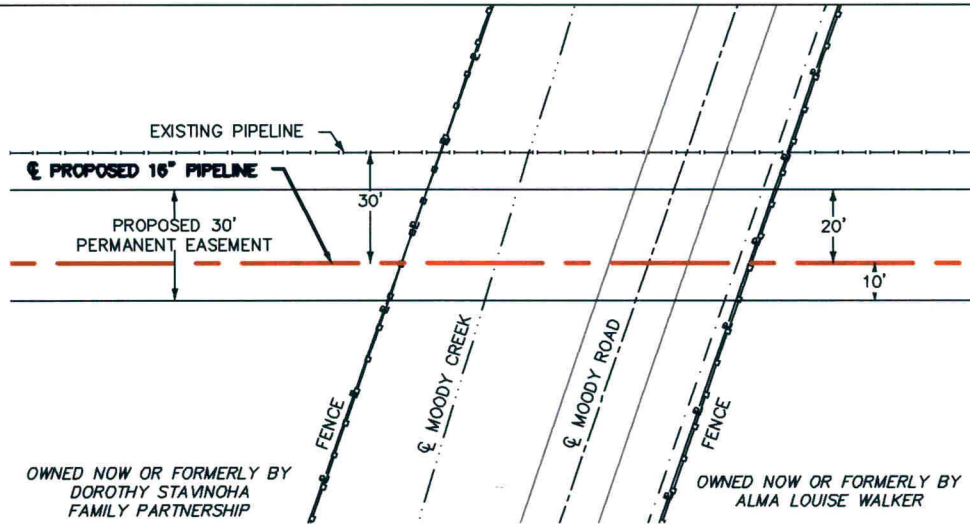
1. CROSSING METHOD: OPEN-CUT
2. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
3. DESIGN CODE/REG: ANSI B31.4/49CFR PART 195
4. PRODUCT CARRIED: Y-GRADE LIQUIDS
5. DESIGN FACTOR: 0.6
6. COATING: 14-16 MILS FBE + 30 MILS ARO
7. CATHODIC PROTECTION: IMPRESSED CURRENT
8. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

A	NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
				ISSUED FOR PERMIT		
				REVISIONS		

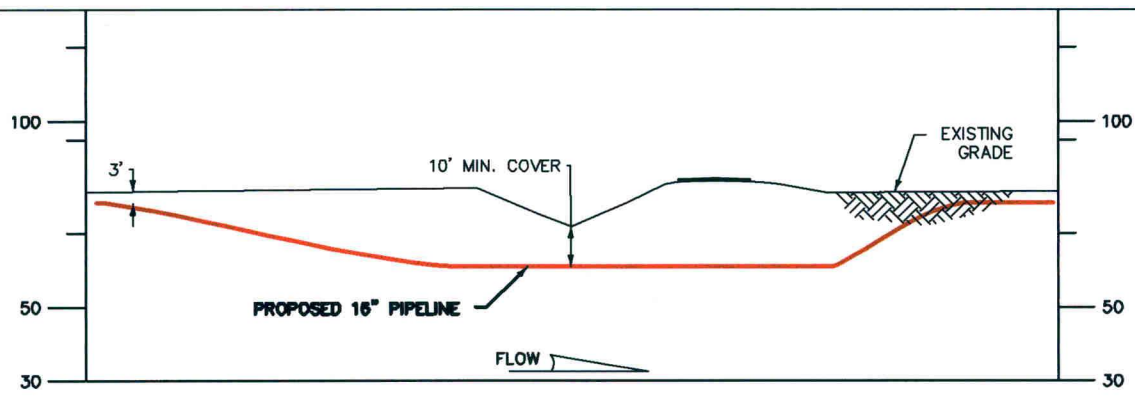
	<p>PREPARED BY</p> <p>Hatch Mott MacDonald</p> <p><small>32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402 T: (601) 264-6193 • F: (601) 264-6630</small></p>	 <p>HSC PIPELINE PARTNERSHIP, LLC</p>	<p>CREEK CROSSING PERMIT</p> <p>Snake Creek I-C</p> <p>YOAKUM TO STRATTON RIDGE</p>								
			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRN. BY HMM</td> <td style="width: 25%;">DATE 06/2011</td> <td style="width: 50%;">DWG. NO.</td> </tr> <tr> <td>CHD. BY</td> <td>SCALE AS NOTED</td> <td rowspan="2" style="font-size: 2em; font-weight: bold;">02720-PD-FBDD-1</td> </tr> <tr> <td>APP. BY</td> <td>SHEET 1 OF 1</td> </tr> </table>	DRN. BY HMM	DATE 06/2011	DWG. NO.	CHD. BY	SCALE AS NOTED	02720-PD-FBDD-1	APP. BY	SHEET 1 OF 1
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CHD. BY	SCALE AS NOTED	02720-PD-FBDD-1									
APP. BY	SHEET 1 OF 1										

FORT BEND COUNTY, TEXAS

P CONRAD SURVEY – ABSTRACT 21



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

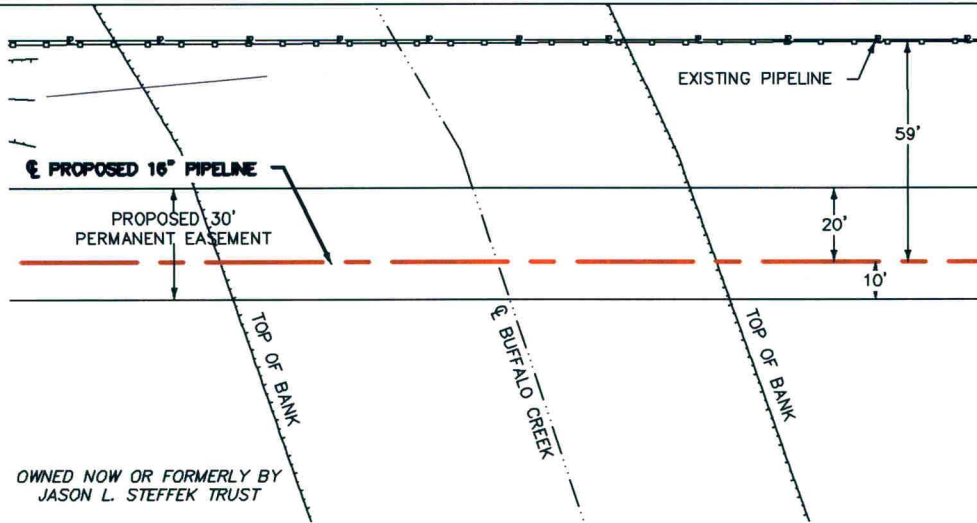
1. CROSSING METHOD: BORE
2. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
3. DESIGN CODE/REG: ANSI B31.4/49CFR PART 195
4. PRODUCT CARRIED: Y-GRADE LIQUIDS
5. DESIGN FACTOR: 0.6
6. COATING: 14-16 MILS FBE + 30 MILS ARO
7. CATHODIC PROTECTION: IMPRESSED CURRENT
8. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					

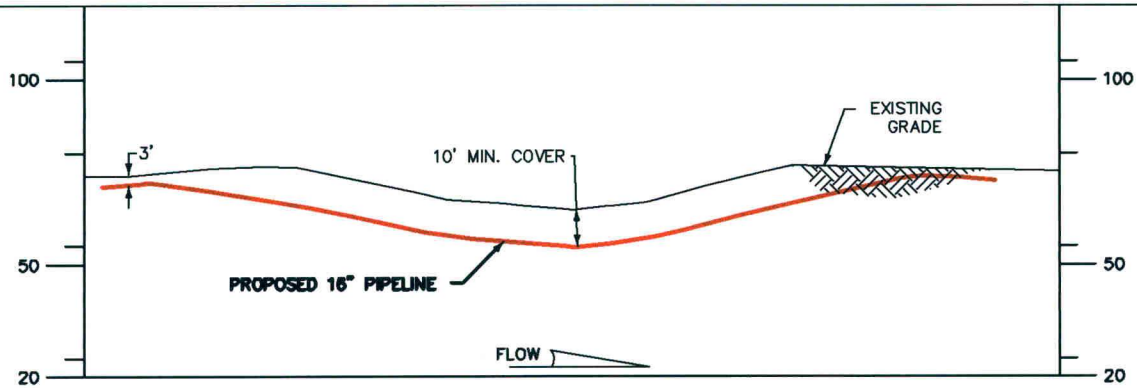
	<p>PREPARED BY</p> <p>Hatch Mott MacDonald</p> <p><small>32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402 T. (601) 264-5193 • F. (601) 264-5530</small></p>	 <p>HSC PIPELINE PARTNERSHIP, LLC</p>	<p>CREEK CROSSING PERMIT</p> <p>MOODY ROAD LATERAL I-C-2</p> <p>YOAKUM TO STRATTON RIDGE</p>										
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CHD. BY	SCALE AS NOTED	02720-PD-FBDD-2											
APP. BY	SHEET 1 OF 1												

FORT BEND COUNTY, TEXAS

R HODGE SURVEY - ABSTRACT 33






PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

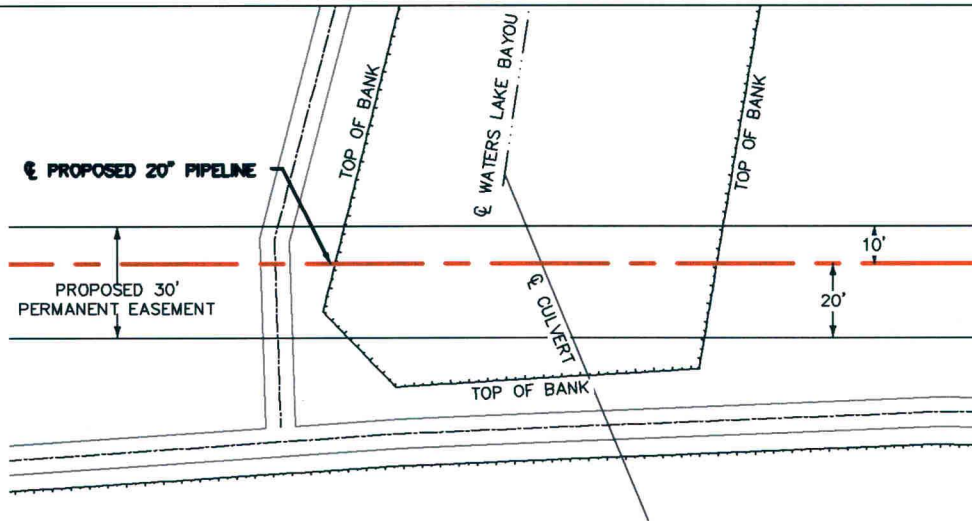
1. CROSSING METHOD: OPEN-CUT
2. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
3. DESIGN CODE/REG: ANSI B31.4/49CFR PART 195
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A	REVISED	HMM	ISSUED FOR PERMIT	DESCRIPTION	PROJ. ID	APPR.
NO	DATE	BY				

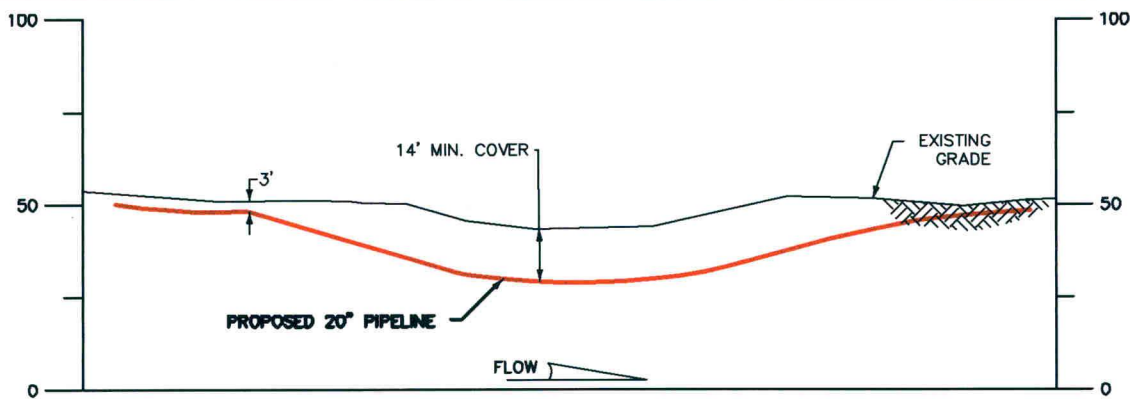
	PREPARED BY  Hatch Mott MacDonald <small>32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402 T. (601) 264-6193 • F. (601) 264-5530</small>	 HSC PIPELINE PARTNERSHIP, LLC	CREEK CROSSING PERMIT BUFFALO CREEK LATERAL I-B-3-D YOAKUM TO STRATTON RIDGE
			REVISIONS
	DRN. BY HMM CHD. BY APP. BY	DATE 06/2011 SCALE AS NOTED SHEET 1 OF 1	DWG. NO. 02720-PD-FBDD-3

FORT BEND COUNTY, TEXAS

J H POLLEY SURVEY – ABSTRACT 70





PLAN
SCALE: 1"=50'



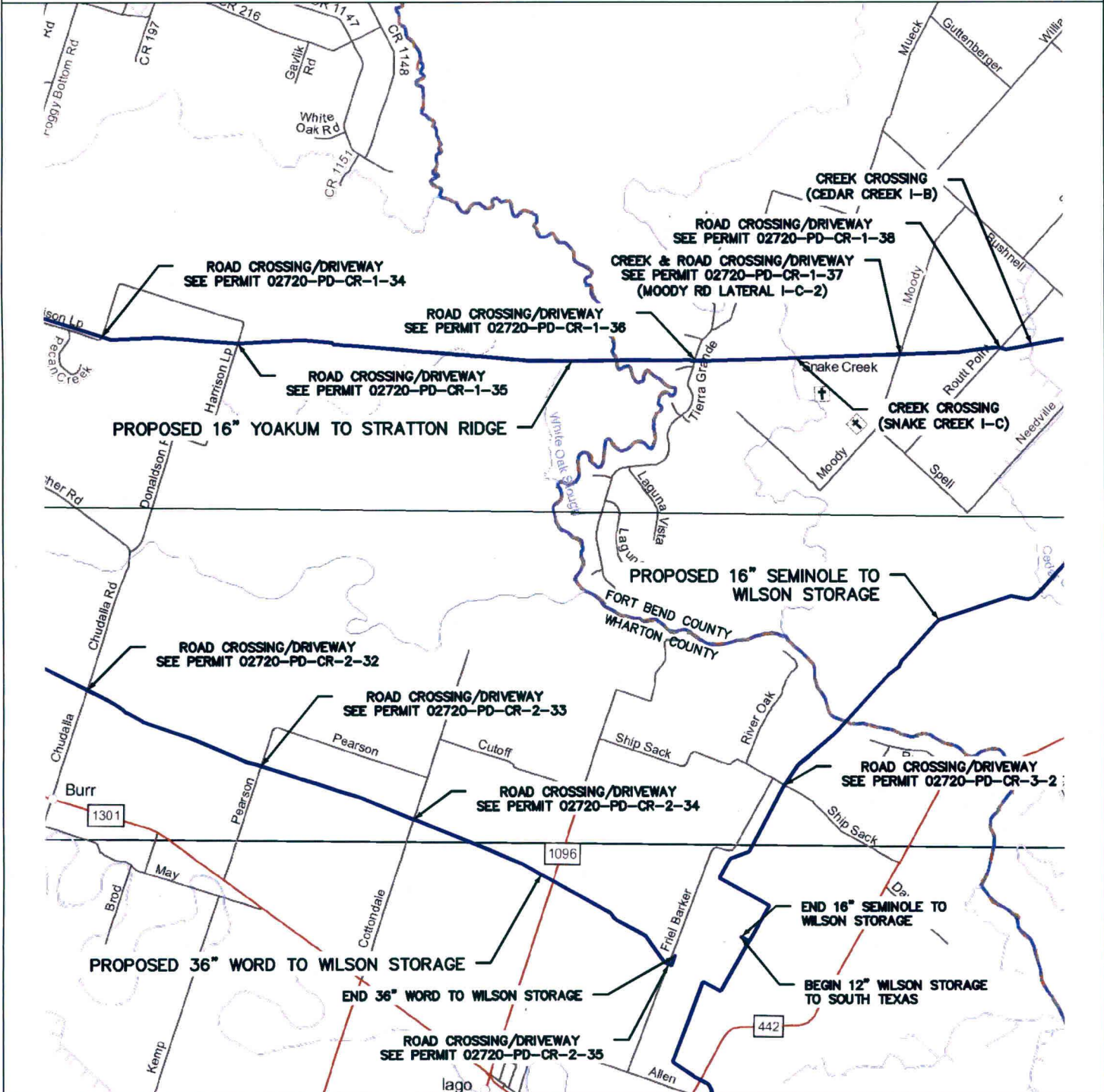
PROFILE
SCALE: 1"=50'

1. CROSSING METHOD: OPEN-CUT
2. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
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NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
ISSUED FOR PERMIT					
REVISIONS					

	<p style="font-size: small;">PREPARED BY</p> <p>Hatch Mott MacDonald</p> <p style="font-size: x-small;">32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402 T. (601) 264-6193 • F. (601) 264-5530</p>	 <p>HSC PIPELINE PARTNERSHIP, LLC</p>	<p>CREEK CROSSING PERMIT</p> <p>WATERS LAKE BAYOU II-B</p> <p>YOAKUM TO STRATTON RIDGE</p>							
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CHD. BY	SCALE AS NOTED	02720-PD-FBDD-4								
APP. BY	SHEET 1 OF 1									

WHARTON COUNTY, TEXAS FORT BEND COUNTY, TEXAS



B	05/11	HMM	ISSUED FOR PERMIT		
A	12/10	HMM	ISSUED FOR REVIEW		
NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.

VICINITY MAP
COUNTY ROAD CROSSING/DRIVEWAY PERMITS
WHARTON/FORT BEND COUNTY, TEXAS

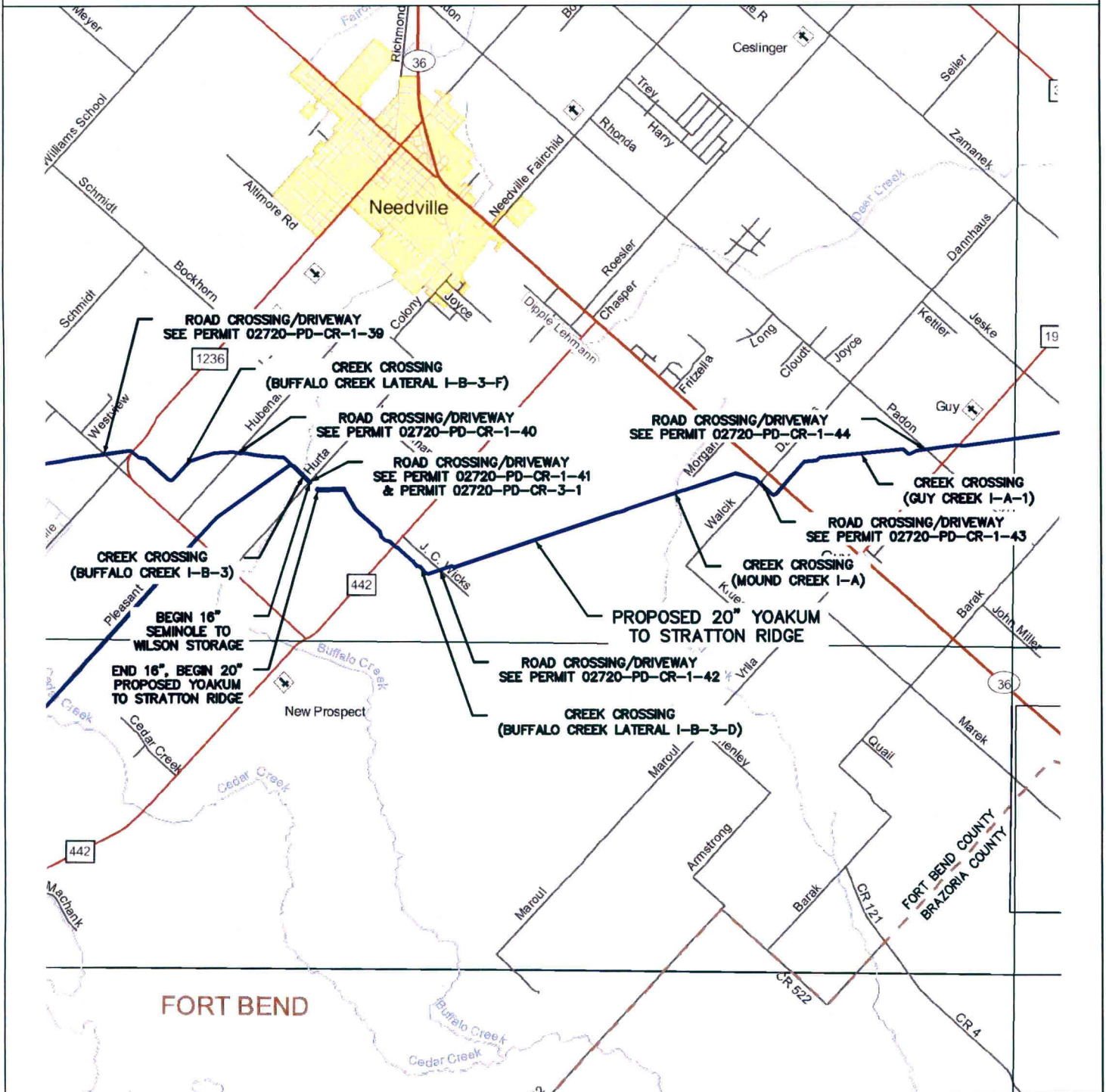


PREPARED BY
**Hatch Mott
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32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402
T: (601) 264-5193 • F: (601) 264-5530

**HSC PIPELINE
PARTNERSHIP, LLC**

DRN. BY	HMM	DATE	12/2010	DWG. NO.	02720-PD-CRVM-9
CHD. BY		SCALE	1"=6000'		
APP. BY		SHEET	1 OF 1		

FORT BEND COUNTY, TEXAS



0' 3000' 6000'

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
B	05/11	HMM	ISSUED FOR PERMIT		
A	12/10	HMM	ISSUED FOR REVIEW		

REVISIONS

VICINITY MAP
COUNTY ROAD CROSSING/DRIVEWAY PERMITS
FORT BEND COUNTY, TEXAS

DRN. BY HMM	DATE 12/2010	DWG. NO.
CHD. BY	SCALE 1"=6000'	02720-PD-CRVM-10
APP. BY	SHEET 1 OF 1	

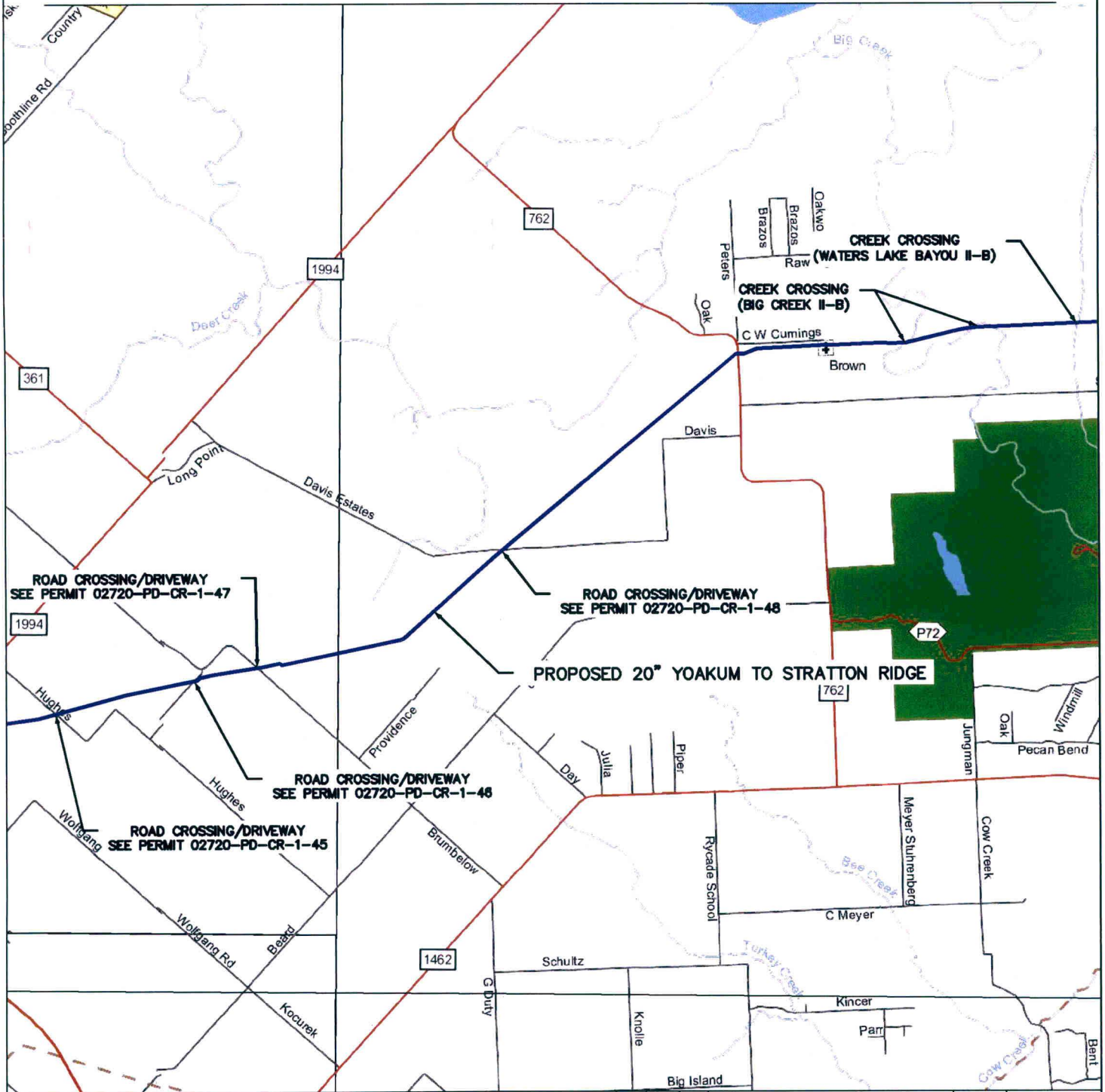


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HSC PIPELINE PARTNERSHIP, LLC

FORT BEND COUNTY, TEXAS



NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
B	05/11	HMM	ISSUED FOR PERMIT		
A	12/10	HMM	ISSUED FOR REVIEW		

REVISIONS



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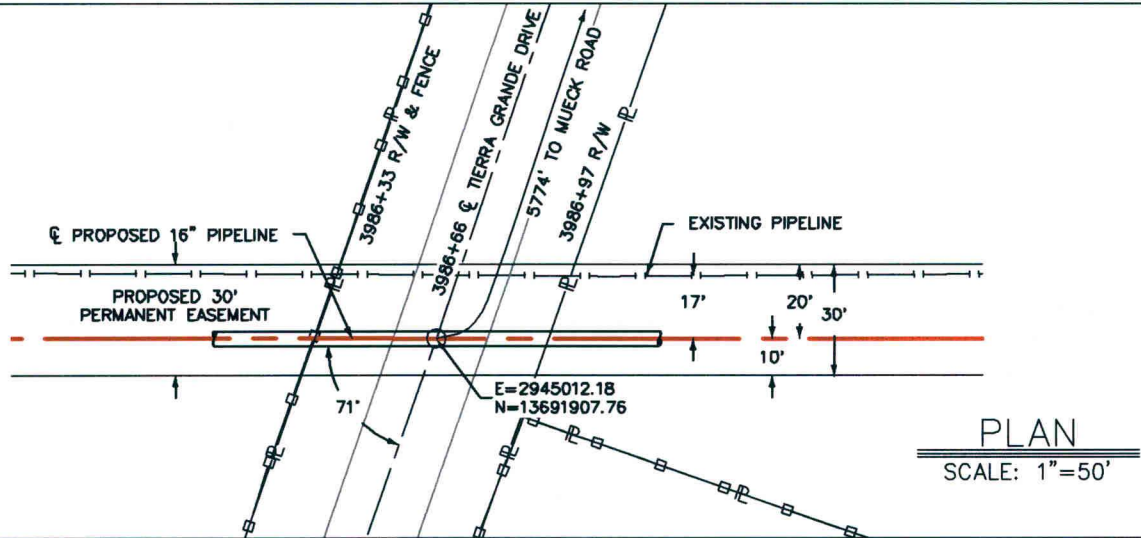
HSC PIPELINE PARTNERSHIP, LLC

VICINITY MAP
 COUNTY ROAD CROSSING/DRIVEWAY PERMITS
 FORT BEND COUNTY, TEXAS

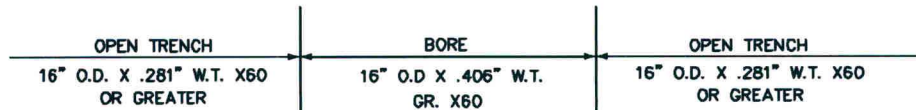
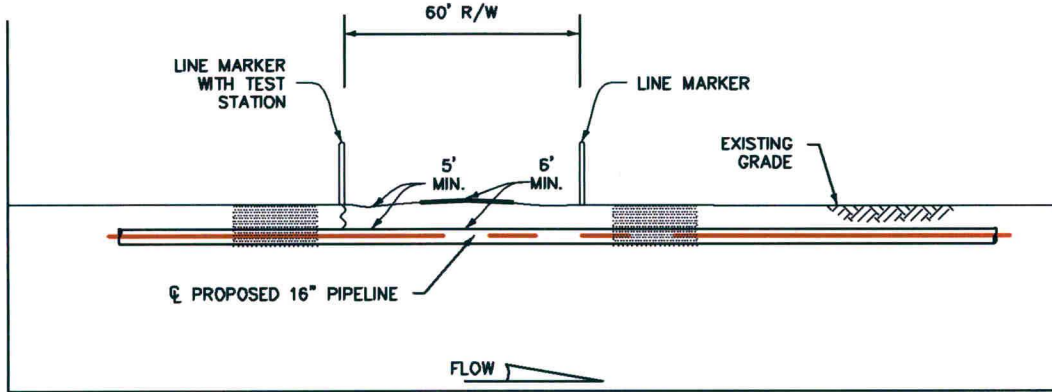
DRN. BY HMM	DATE 12/2010	DWG. NO.
CHD. BY	SCALE 1"=6000'	02720-PD-CRVM-11
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

G HUFF SURVEY - ABSTRACT 34



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

 APPROX. BORE PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
B	05/20	HMM	ISSUED FOR PERMIT		
A	11/20	HMM	ISSUED FOR REVIEW		

PREPARED BY



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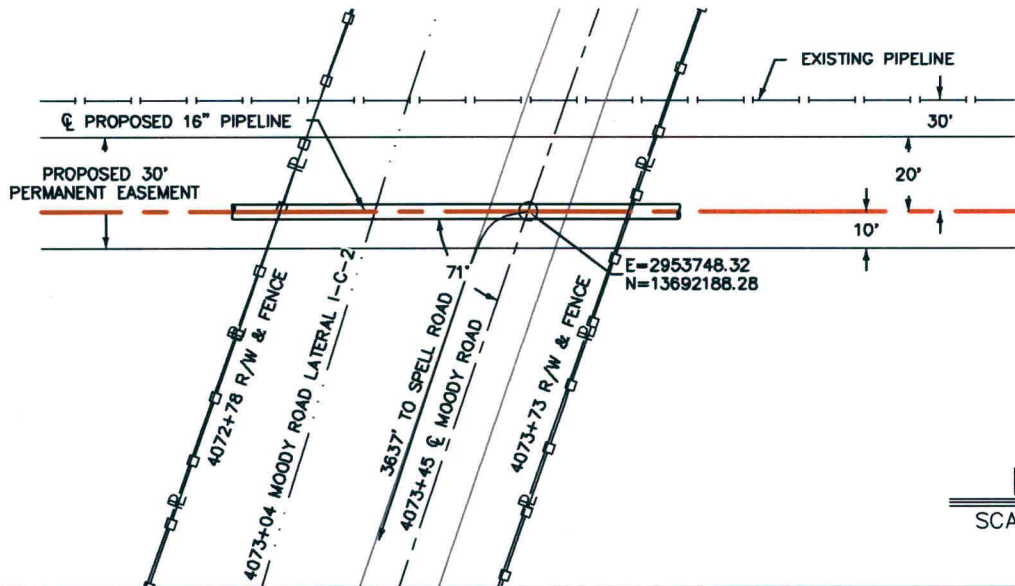


HSC PIPELINE PARTNERSHIP, LLC

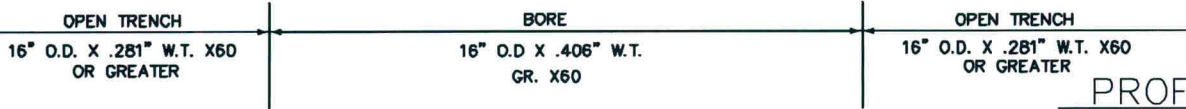
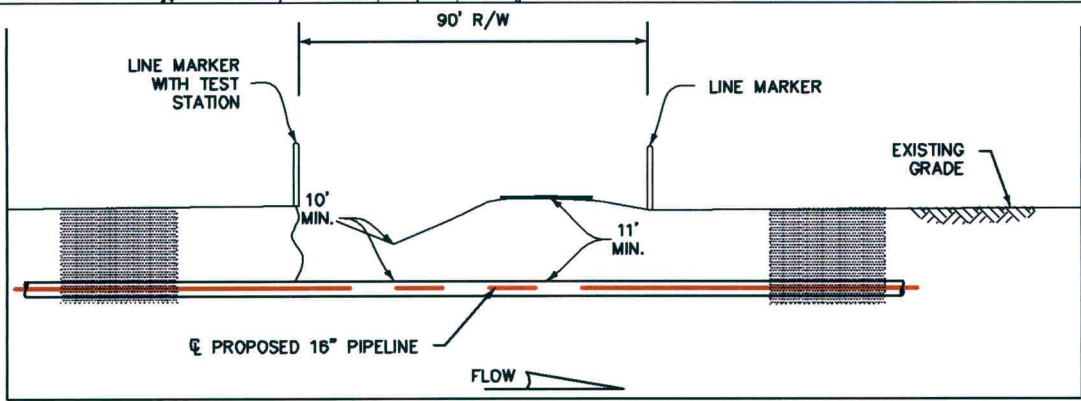
ROAD CROSSING PERMIT
TIERRA GRANDE DRIVE
YOAKUM TO STRATTON RIDGE

DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-36
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS
HRS W GARNETT SURVEY - ABSTRACT 182



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
B	05/25	HMM	ISSUED FOR PERMIT		
A	11/29	HMM	ISSUED FOR REVIEW		



PREPARED BY
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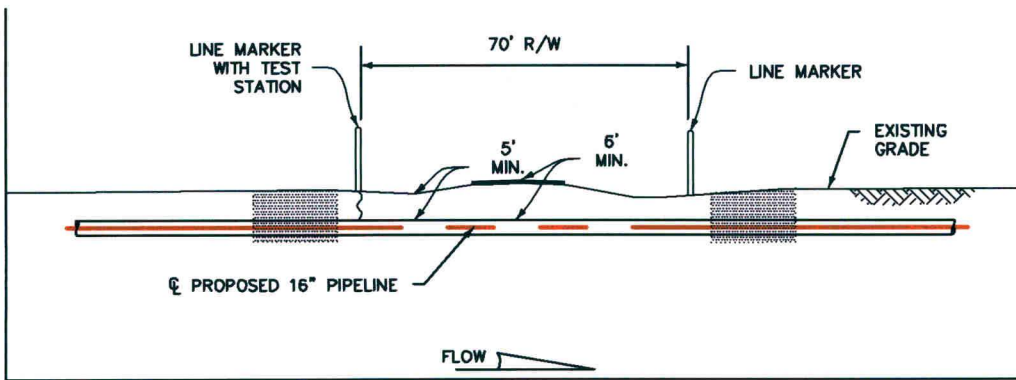
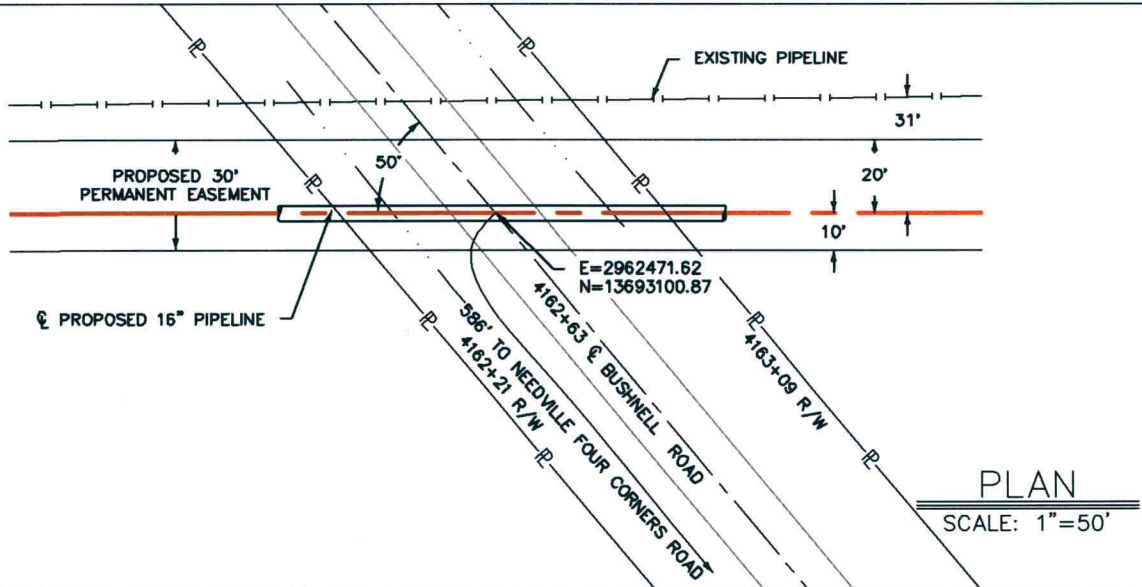
HSC PIPELINE PARTNERSHIP, LLC

ROAD CROSSING PERMIT
MOODY ROAD LATERAL I-C-2 & MOODY ROAD
YOAKUM TO STRATTON RIDGE

DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-37
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

HRS W GARNETT SURVEY - ABSTRACT 182



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
B	08/20	HMM	ISSUED FOR PERMIT		
A	11/21	HMM	ISSUED FOR REVIEW		



PREPARED BY
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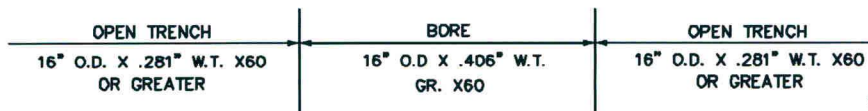
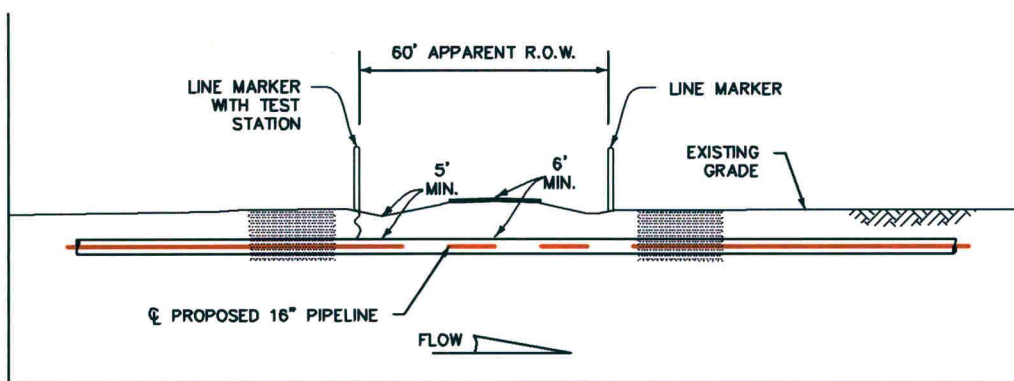
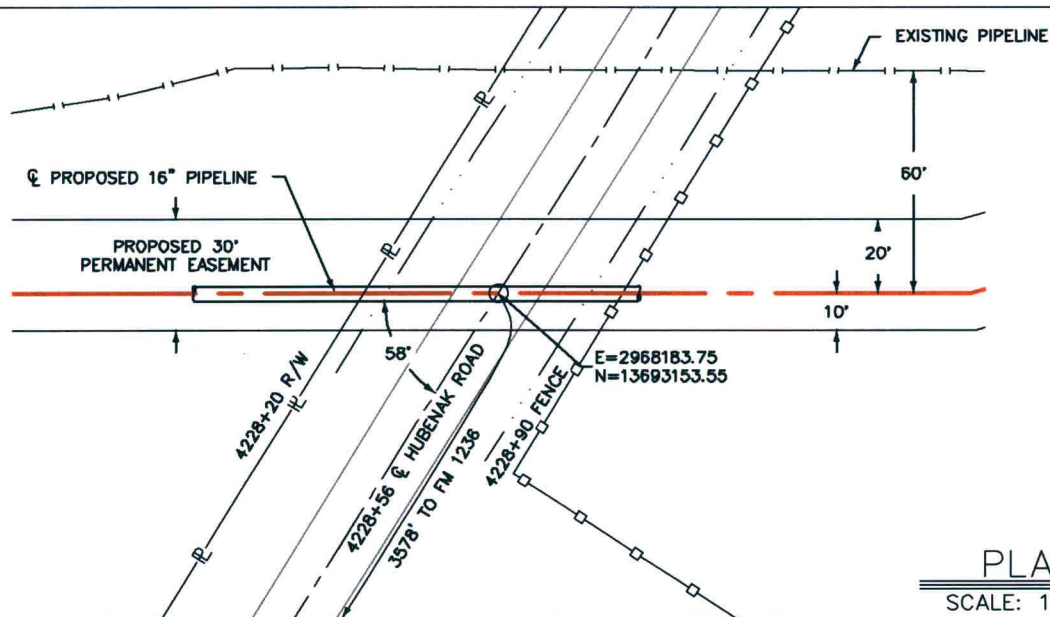
HSC PIPELINE PARTNERSHIP, LLC

ROAD CROSSING PERMIT
BUSHNELL ROAD
YOAKUM TO STRATTON RIDGE

DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-39
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

R HODGE SURVEY – ABSTRACT 33



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE
PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
B	05/20	HMM	ISSUED FOR PERMIT		
A	11/20	HMM	ISSUED FOR REVIEW		

PREPARED BY



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MacDonald**
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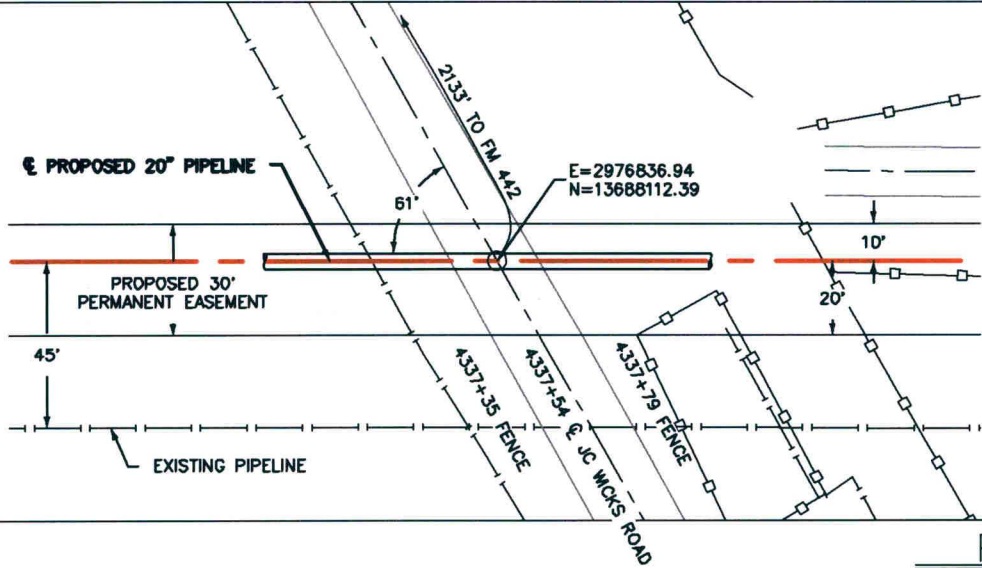
**HSC PIPELINE
PARTNERSHIP, LLC**

ROAD CROSSING PERMIT
HUBENAK ROAD
YOAKUM TO STRATTON RIDGE

DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-40
APP. BY	SHEET 1 OF 1	

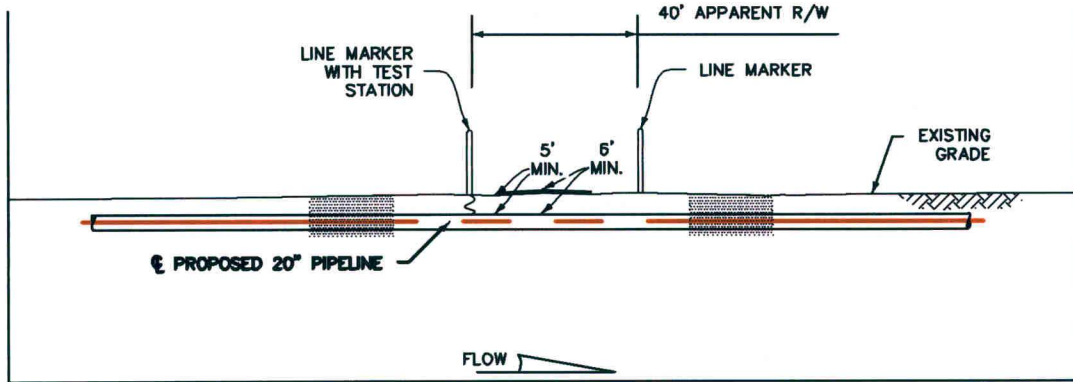
FORT BEND COUNTY, TEXAS

R HODGE SURVEY - ABSTRACT 33



PLAN

SCALE: 1"=50'



PROFILE

SCALE: 1"=50'

- LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
- EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
- EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
- DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
- PRODUCT CARRIED: Y-GRADE LIQUIDS
- DESIGN FACTOR: 0.6
- COATING: 14-16 MILS FBE + 30 MILS ARO
- CATHODIC PROTECTION: IMPRESSED CURRENT
- ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
C	5/27	HMM	REVISED PIPE SIZE		
B	05/20	HMM	ISSUED FOR PERMIT		
A	4/11	HMM	ISSUED FOR REVIEW		

REVISION IS

ROAD CROSSING PERMIT

JC WICKS ROAD

YOAKUM TO STRATTON RIDGE

DRN. BY	HMM	DATE	4/2011	DWG. NO.	02720-PD-CR-1-42
CHD. BY		SCALE	AS NOTED		
APP. BY		SHEET	1 OF 1		



PREPARED BY



Hatch Mott
MacDonald

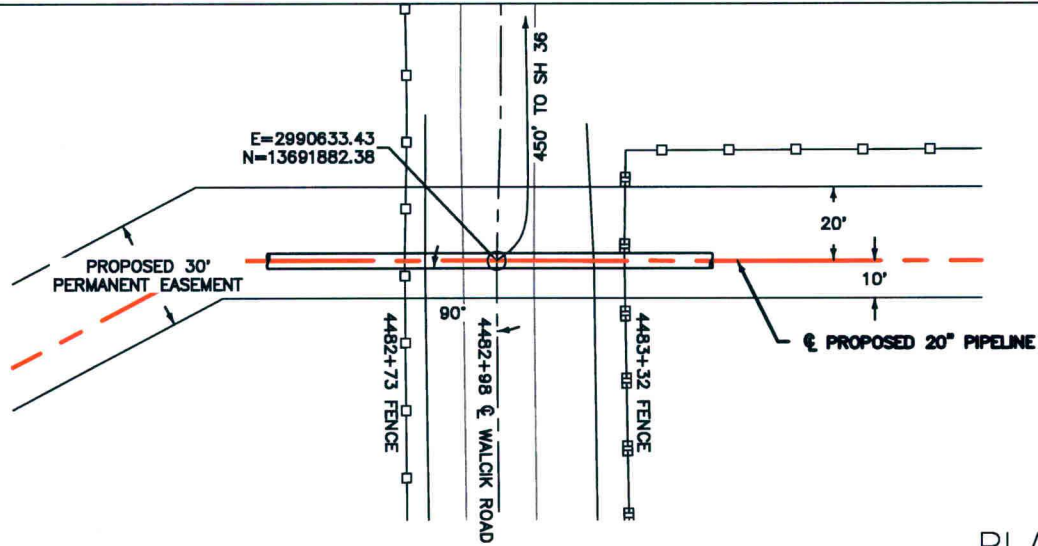
32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402
T: (601) 264-5193 F: (601) 264-5530



HSC PIPELINE
PARTNERSHIP, LLC

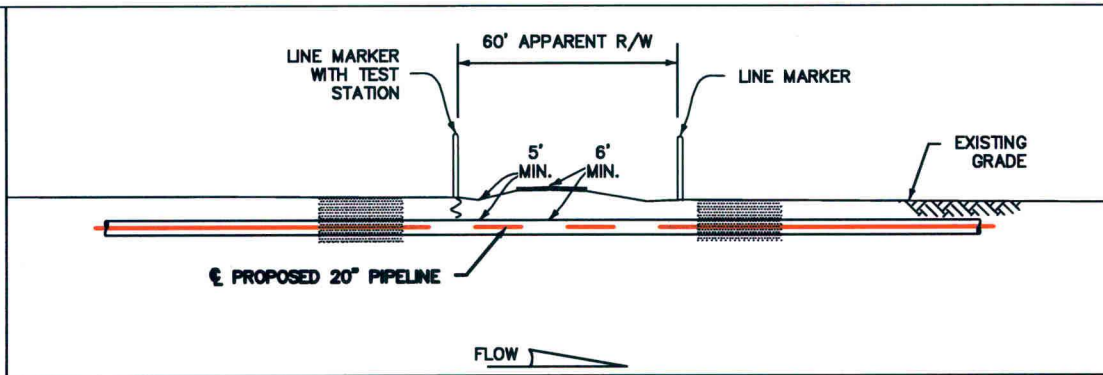
FORT BEND COUNTY, TEXAS

H&TC RR CO SURVEY - ABSTRACT 657



PLAN

SCALE: 1"=50'



PROFILE

SCALE: 1"=50'



1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY A TXDOT ENGINEER OR INSPECTOR.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE
PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
C	05/27	HMM	REVISED PIPE SIZE		
B	05/26	HMM	ISSUED FOR PERMIT		
A	04/20	HMM	ISSUED FOR REVIEW		

PREPARED BY



**Hatch Mott
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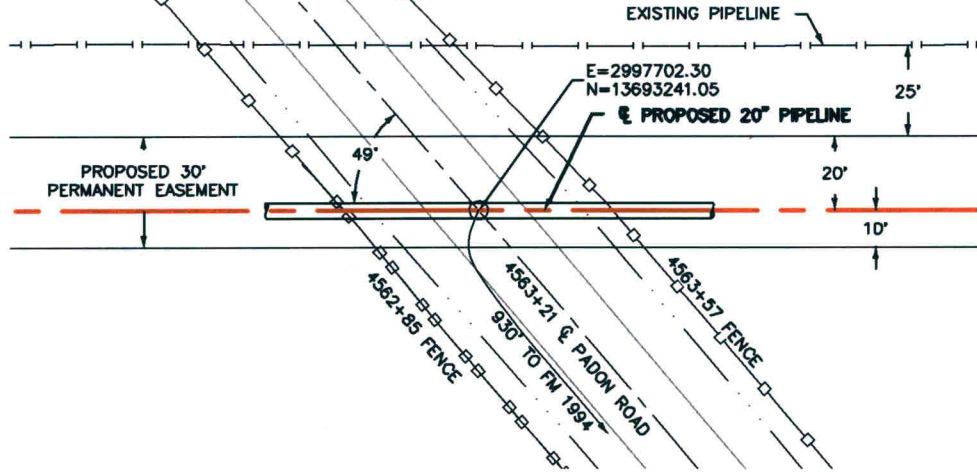
 **HSC PIPELINE
PARTNERSHIP, LLC**

ROAD CROSSING PERMIT
WALCIK ROAD
YOAKUM TO STRATTON RIDGE

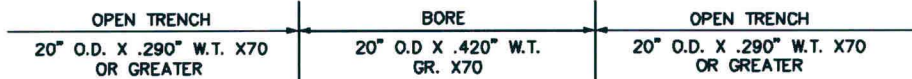
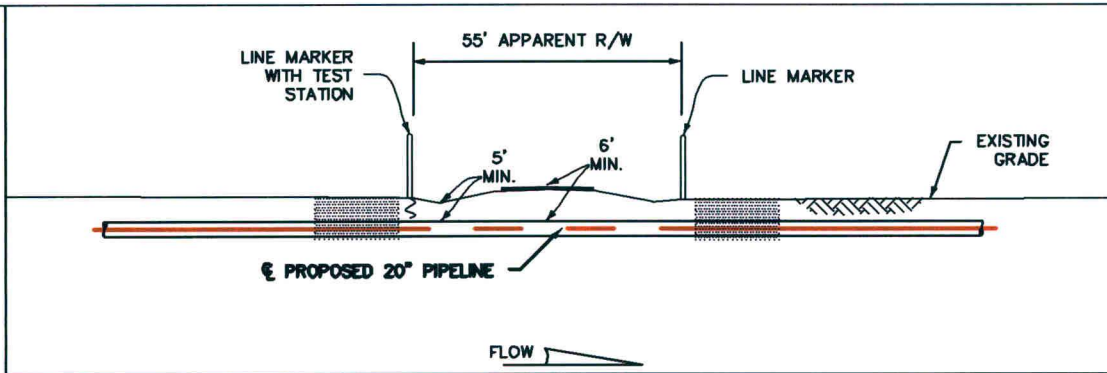
DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-43
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

H&TC RR CO SURVEY - ABSTRACT 471



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
C	05/27	HMM	REVISED PIPE SIZE		
B	05/29	HMM	ISSUED FOR PERMIT		
A	04/20	HMM	ISSUED FOR REVIEW		

PREPARED BY

Hatch Mott MacDonald
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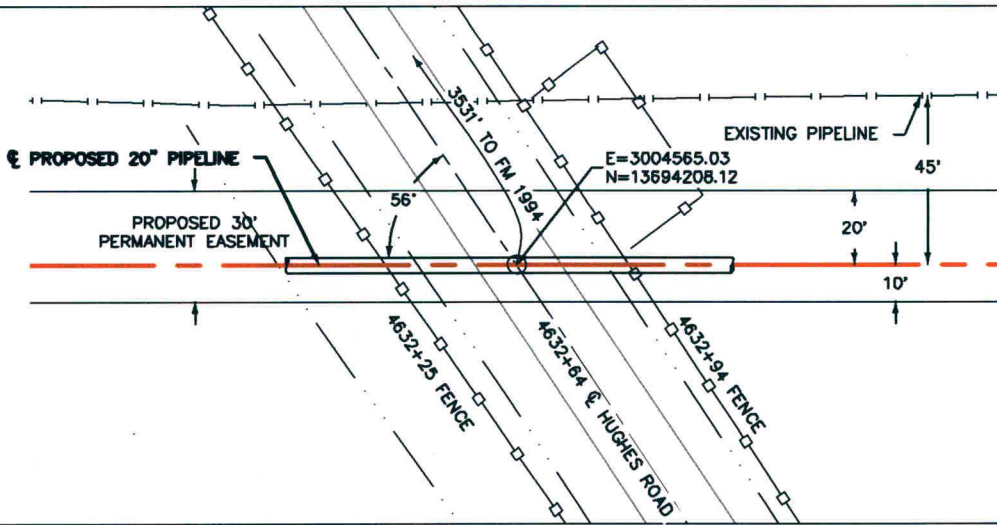
HSC PIPELINE PARTNERSHIP, LLC

ROAD CROSSING PERMIT
PADON ROAD
YOAKUM TO STRATTON RIDGE

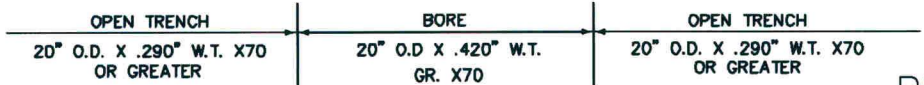
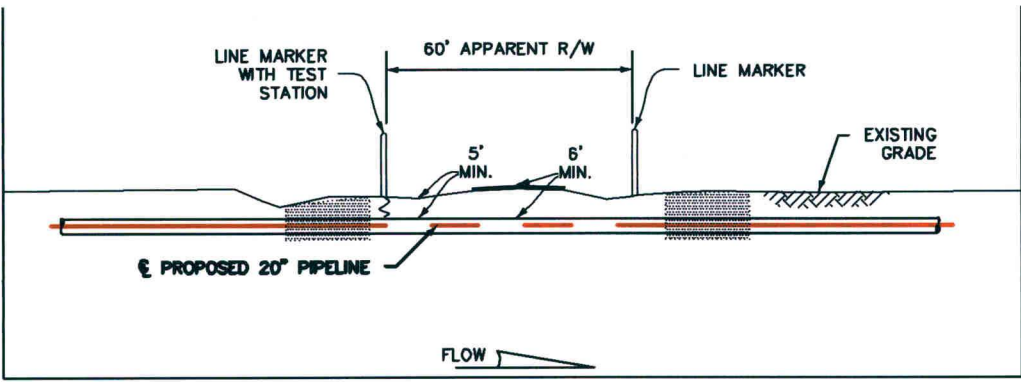
DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-44
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

H&TC RR CO SURVEY - ABSTRACT 237



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE
PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
C	05/27	HMM	REVISED PIPE SIZE		
B	05/26	HMM	ISSUED FOR PERMIT		
A	04/20	HMM	ISSUED FOR REVIEW		



**Hatch Mott
MacDonald**

32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402
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PREPARED BY



**HSC PIPELINE
PARTNERSHIP, LLC**

ROAD CROSSING PERMIT

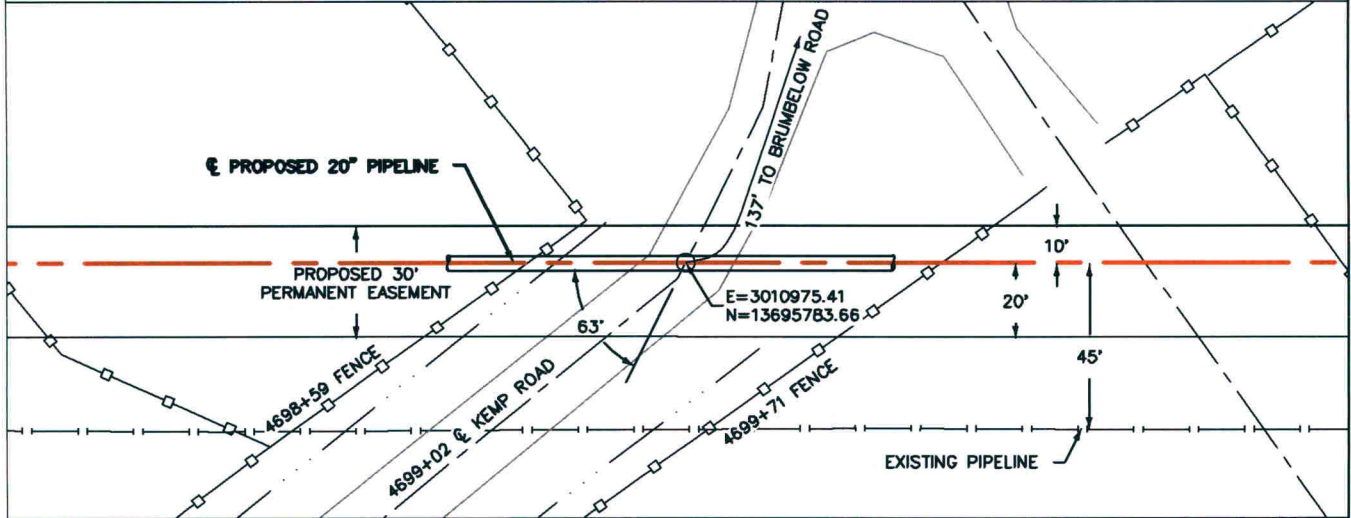
HUGHES ROAD

YOAKUM TO STRATTON RIDGE

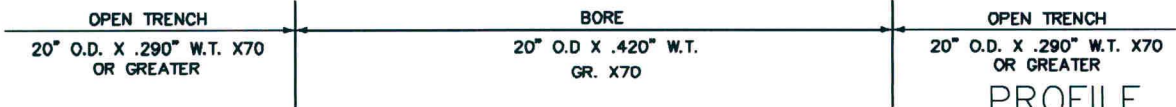
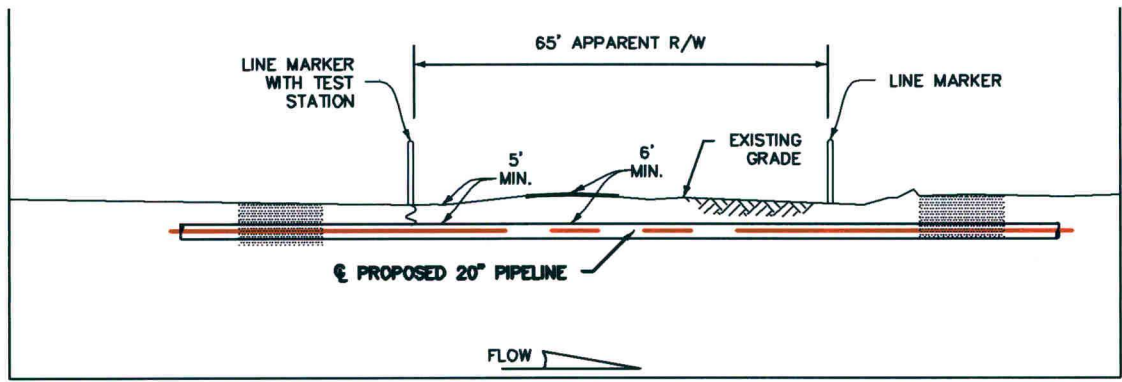
DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-45
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

H&TC RR CO SURVEY - ABSTRACT 713



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

APPROX. BORE
PIT LOCATION

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
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4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
C	05/27	HMM	REVISED PIPE SIZE		
B	05/20	HMM	ISSUED FOR PERMIT		
A	04/20	HMM	ISSUED FOR REVIEW		



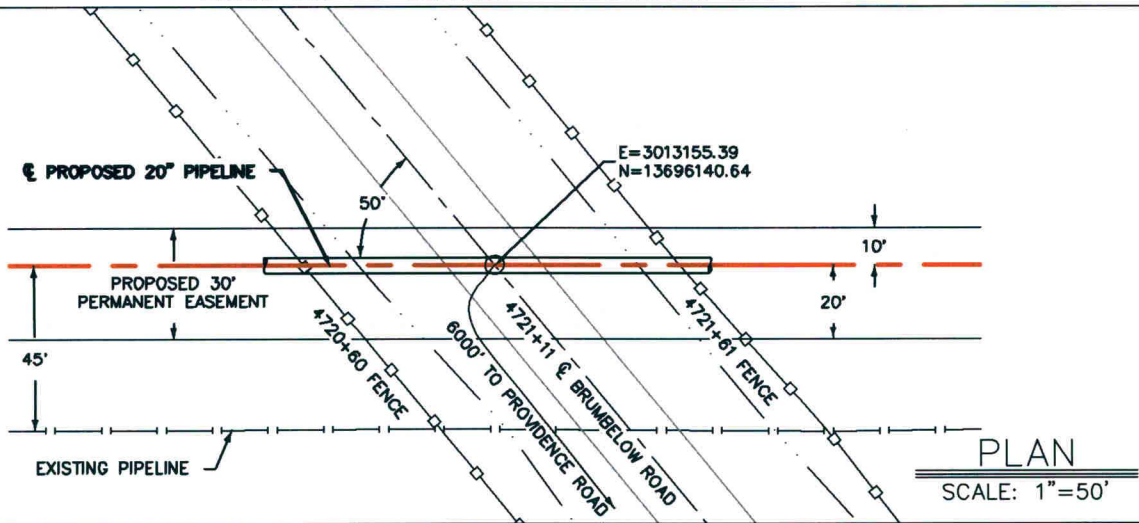
PREPARED BY
Hatch Mott MacDonald
32 Millbranch Rd., Suite 40, Hattiesburg, MS 39402
T: (601) 264-5193 F: (601) 264-5530

HSC PIPELINE PARTNERSHIP, LLC

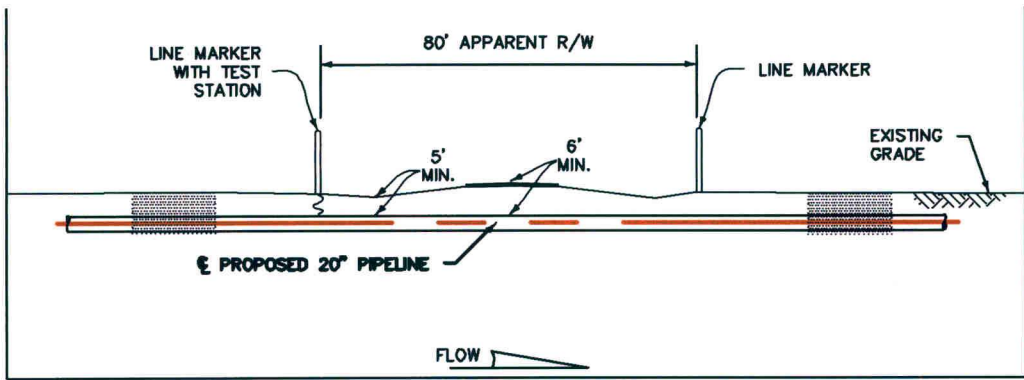
ROAD CROSSING PERMIT
KEMP ROAD
YOAKUM TO STRATTON RIDGE

DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-46
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS
H&TC RR CO SURVEY - ABSTRACT 256



PLAN
 SCALE: 1"=50'



PROFILE
 SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE PIT LOCATION

NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
C	05/27	HMM	REVISED PIPE SIZE		
B	05/26	HMM	ISSUED FOR PERMIT		
A	04/20	HMM	ISSUED FOR REVIEW		

PREPARED BY

Hatch Mott MacDonald
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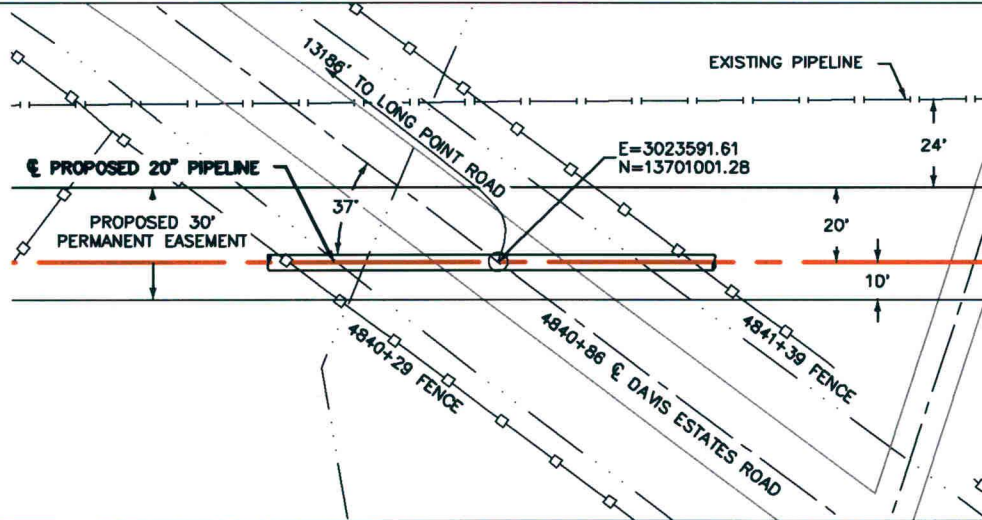
HSC PIPELINE PARTNERSHIP, LLC

ROAD CROSSING PERMIT
 BRUMBELOW ROAD
 YOAKUM TO STRATTON RIDGE

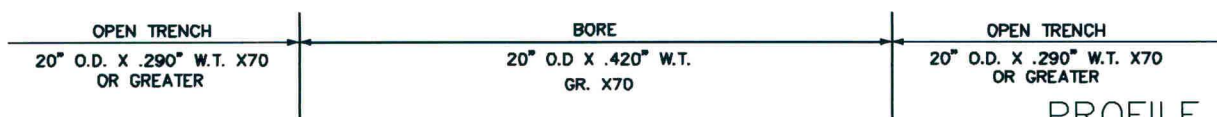
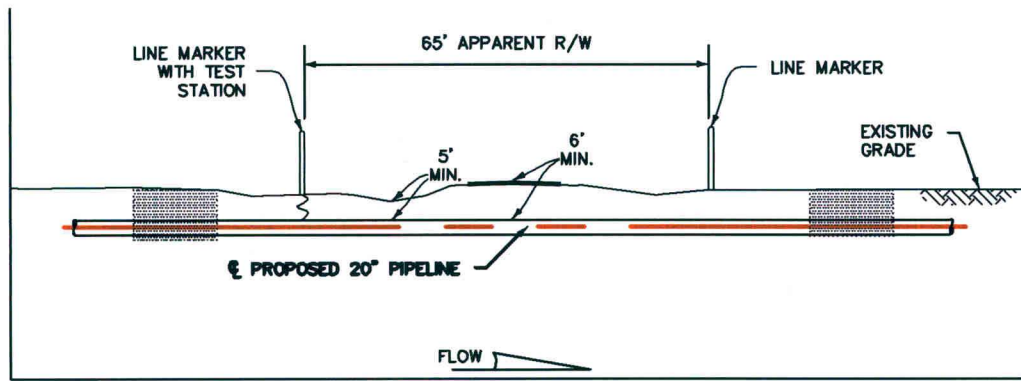
DRN. BY HMM	DATE 4/2011	DWG. NO.
CHD. BY	SCALE AS NOTED	02720-PD-CR-1-47
APP. BY	SHEET 1 OF 1	

FORT BEND COUNTY, TEXAS

J N ELY SURVEY - ABSTRACT 168



PLAN
SCALE: 1"=50'



PROFILE
SCALE: 1"=50'

1. LINE WILL BE INSTALLED BY CONVENTIONAL DRY BORE ONLY UNLESS OTHERWISE APPROVED BY COUNTY ENGINEERING.
2. EDGE OF BORE PIT WILL BE AT A FIVE FOOT (5') MIN. CLEARANCE FROM THE EDGE OF THE ROAD RIGHT OF WAY AND A TWO FOOT (2') MINIMUM CLEARANCE FROM ANY EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION GENERATED FROM PREVIOUS MAPS AND SURVEY, CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN THE AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.
4. DESIGN CODE/REG: ANSI B31.8/49CFR PART 195
5. PRODUCT CARRIED: Y-GRADE LIQUIDS
6. DESIGN FACTOR: 0.6
7. COATING: 14-16 MILS FBE + 30 MILS ARO
8. CATHODIC PROTECTION: IMPRESSED CURRENT
9. ALL COORDINATES ARE GIVEN IN NAD83 TEXAS STATE PLANE, SOUTH CENTRAL ZONE, US FOOT.

APPROX. BORE PIT LOCATION

C	05/27	HMM	REVISED PIPE SIZE		
B	05/29	HMM	ISSUED FOR PERMIT		
A	04/29	HMM	ISSUED FOR REVIEW		
NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.

PREPARED BY

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HSC PIPELINE PARTNERSHIP, LLC

ROAD CROSSING PERMIT
DAVIS ESTATES ROAD
YOAKUM TO STRATTON RIDGE

DRN. BY	HMM	DATE	4/2011	DWG. NO.	02720-PD-CR-1-48
CHD. BY		SCALE	AS NOTED		
APP. BY		SHEET	1 OF 1		

Barlow Calculation

Yoakum to Stratton Ridge – 20" Y-Grade Liquids

CARRIER PIPE

1. Diameter	<u>20"</u>
2. Wall Thickness	<u>0.420"</u>
3. Material Specifications	<u>X70 Steel</u>
4. Minimum Yield Strength	<u>70,000 psi</u>
5. Operating Pressure	<u>1,440 psi</u>

CASING PIPE

1. Diameter	<u>N/A</u>
2. Wall Thickness	<u>N/A</u>
3. Material Specifications	<u>N/A</u>
4. Minimum Yield Strength	<u>N/A</u>
5. Maximum Operating Pressure	<u>N/A</u>

The pipeline material and design must meet the minimum Federal Safety Standards for transportation of liquids by pipeline, Code of Federal Regulations – Part 195 and Design Subpart C.

$$t = \frac{PD}{2SFE}$$

where: P = internal design pressure (psig)

D = nominal outside diameter (in)

S = yield strength (psi)

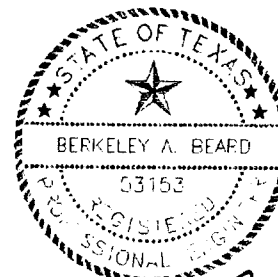
F = design factor (= 0.72 per CFR 195.106)

** reduced to 0.60 at all crossings per owner specification

E = seam joint factor (= 1.0 for electric resistance weld)

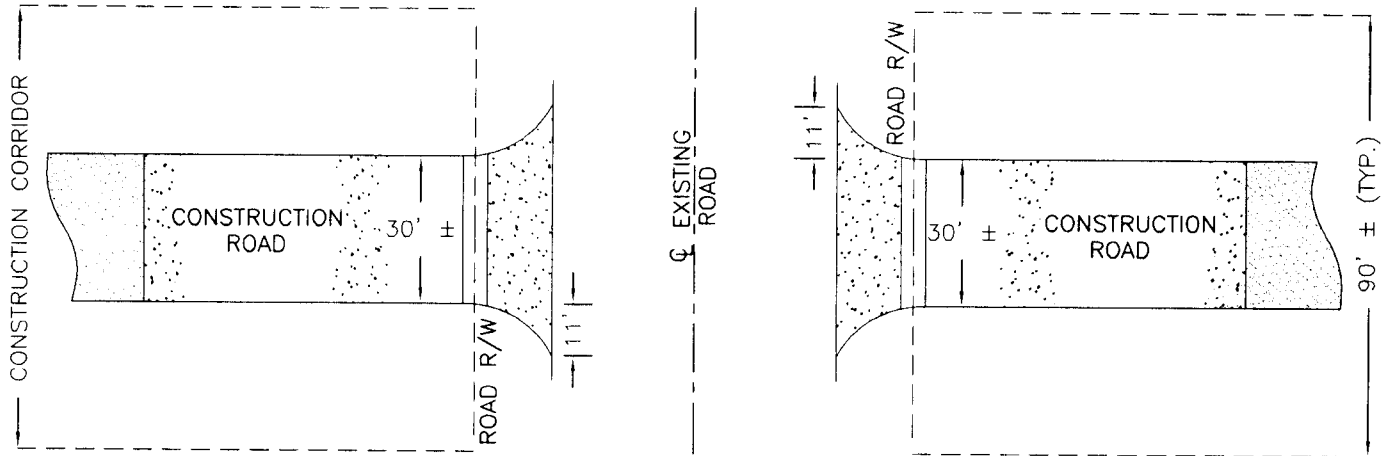
$$t = \frac{1,440 \frac{lb}{in^2} \times 20 \text{ in}}{2 \times 70,000 \frac{lb}{in^2} \times 0.60 \times 1.0} = 0.343 \text{ in}$$

$$t_{\text{calculated}} = 0.343 \text{ in} < t_{\text{actual}} = 0.420 \text{ in}$$

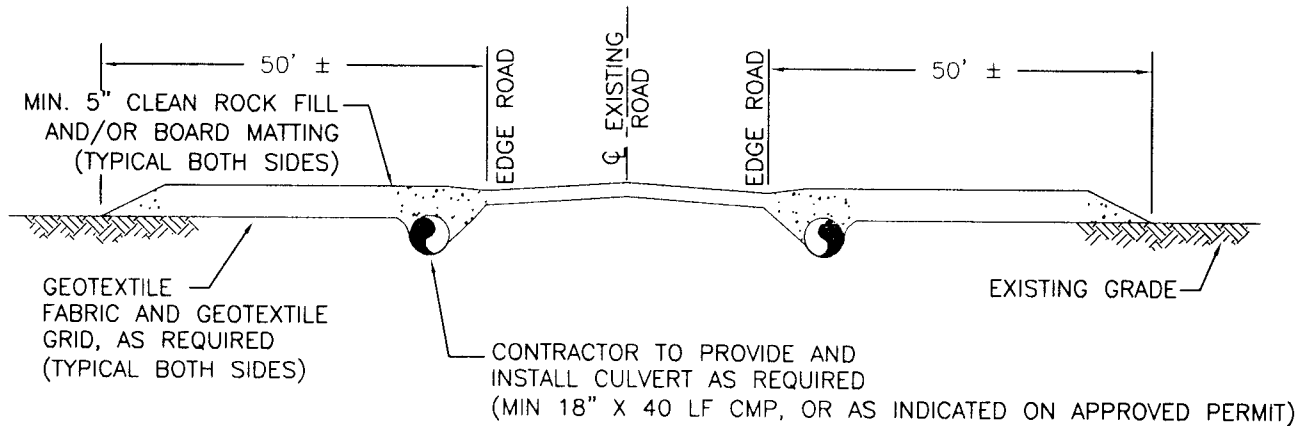


Berkeley A. Beard
6/16/11

TYPICAL INGRESS / EGRESS OF CONSTRUCTION CORRIDOR AT EXISTING ROADS



PLAN



PROFILE

1. ACCESS PADS, AS ILLUSTRATED ABOVE, ARE TO BE INSTALLED ADJACENT TO EXISTING COUNTY, STATE, AND FEDERAL ROADS OR AS DIRECTED BY THE COMPANY INSPECTOR.
2. IF USED IN AGRICULTURAL LAND, ROCK SHALL BE PLACED ON A GEOTEXTILE FABRIC TO FACILITATE ROCK REMOVAL
3. RUBBER TIRES SHALL BE USED TO PROTECT ROAD SURFACE FROM TRACKED EQUIPMENT, AND ROADWAY SHALL BE KEPT CLEAN OF MUD AND DEBRIS AT ALL TIMES.
4. SHOULD THE ROCK PAD BECOME INEFFECTIVE FOR REDUCING THE BUILDUP OF MUD, DIRT AND DEBRIS. THE CONTRACTOR SHALL WASH THE EXISTING ROCK FILL SURFACE OR ADD A ROCK FILL LAYER TO THE ACCESS PAD TO MINIMIZE TRACKING ONTO THE ROAD
5. CONTRACTOR SHALL KEEP ROAD SURFACES IN SAFE DRIVING CONDITION.
6. PRIOR TO PERMANENT SEEDING AND RESTORATION OF NATURAL CONTOURS, CONTRACTOR SHALL REMOVE ALL IMPORTED ROCK FILL, GEOTEXTILE FABRIC AND CULVERTS (IF INSTALLED) UNLESS OTHERWISE DIRECTED BY COMPANY INSPECTOR.

B	5/11	HMM	ISSUED FOR PERMIT		
A	12/10	HMM	ISSUED FOR REVIEW		
NO	DATE	BY	DESCRIPTION	PROJ. ID	APPR.

<p>PREPARED BY</p> <p>Hatch Mott MacDonald</p> <p><small>32 Millbranch Rd. Suite 400, Matthews, NC 28105 1-801-264-0190 • 1-801-264-0533</small></p>	<p>HSC PIPELINE PARTNERSHIP, LLC</p>	<p>YOAKUM TO STRATTON RIDGE TYPICAL DRIVEWAY PERMIT</p>														
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DRAWN BY</td> <td style="width: 20%;">CKP</td> <td style="width: 20%;">DATE</td> <td style="width: 15%;">12/2010</td> <td style="width: 15%;">DWG. NO.</td> </tr> <tr> <td>CHECKED BY</td> <td></td> <td>SCALE</td> <td>N.T.S.</td> <td rowspan="2" style="font-size: 2em; vertical-align: middle;">02720-TYP-CR-0-0</td> </tr> <tr> <td>APPROVED BY</td> <td></td> <td>SHEET</td> <td>1 OF 1</td> </tr> </table>	DRAWN BY	CKP	DATE	12/2010	DWG. NO.	CHECKED BY		SCALE	N.T.S.	02720-TYP-CR-0-0	APPROVED BY		SHEET	1 OF 1
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APPROVED BY		SHEET	1 OF 1													