SUP-20-0001 (Baymark Pipeline, LLC.) & SUP-20-0002 (South Texas NGL Pipeline, LLC.)

Requests

1. Hold a public hearing and make a recommendation to City Council for Special Use Permit Application, **SUP-20-0001 (Baymark Pipeline, LLC.)**, to construct, operate and maintain a 12.75-inch pipeline with one, shared, above ground valve station.

2. Hold a public hearing and make a recommendation to City Council for Special Use Permit Application, **SUP-20-0002 (South Texas NGL Pipelines, LLC.)**, to construct, operate and maintain an 8-inch pipeline with one, shared, above ground valve station.

A Special Use Permit (SUP) is required for the pipelines and pump station (valve station) as a result of the Oil & Gas Ordinances in Chapter 42 and the Unified Development Code in Chapter 125 of the League City Code of Ordinances. Once an SUP is granted for a pipeline, an applicant must apply for and receive a Pipeline Permit from the City to begin construction.

Applicant Jeffrey L. Waldo of Enterprise Products Operating, LLC.

Owners Baymark Pipeline, LLC. and South Texas NGL Pipelines, LLC. (both subsidiaries of Enterprise Products)

Location Generally having an alignment between the north side of Clear Creek just west of Landing Boulevard and the western city limits of League City within an existing CenterPoint Energy high power electrical corridor.

City Council *Public Hearing and First Reading* – January 12, 2021; *Second Reading* – January 26, 2021

Citizen Response
538 - Notices Mailed to Property Owners within 500 feet
0 – Letters of Support Received
0 – Letters of Opposition Received
3 – Inquiries

Attachments
1. Aerial Map
2. Zoning Map
3. Pipeline Alignments
4. Valve Site and Screening Exhibit
5. Transportation Route
6. Engineer Letter on Casement
7. Property Owner Letters nearest to Valve Station

The Commission should consider the following in its deliberation for the Special Use Permit requests, which shall be utilized to substantiate its findings. To determine the extent to which the proposed use would be compatible with surrounding properties, the surrounding land uses and the performance impacts should be considered.

Background

October 4, 2019 – Staff met with representatives for the project to discuss potential SUP applications for two proposed pipelines along the electrical corridor in western League City.

November 19, 2019 – The Applicant held a neighborhood meeting to discuss the potential SUP applications with the surrounding property owners within 500 feet of the project alignment.

April 28, 2020 – Applications for Special Use Permits were submitted for both pipelines and a shared

valve station.

November 22, 2020 – Notice of public hearings were published in the newspaper. Planning staff sent out public hearing notices to the surrounding property owners and installed public hearing signs along the proposed alignment route.

December 14, 2020 – The Planning and Zoning Commission is scheduled to conduct a public hearing and make a recommendation to City Council.

January 12, 2021 – City Council is scheduled to conduct a public hearing and take action on the first reading of the SUP requests.

January 26, 2021 – Subject to approval of the first reading, City Council to consider the requests on the second reading.

Project Description

The proposed pipelines are 8-inches and 12.75-inches in diameter and approximately 2 feet from each other. The pipelines will also share a valve station site.

The pipelines will run parallel to and approximately 3 feet west of an existing Enterprise Pipeline that was approved by the City Council in May of 2012. They will be located within a 30-foot wide pipeline easement in an existing 200-foot wide CenterPoint Energy High Power Electrical corridor. The valve station site will be the only location where the pipelines are above the ground. See Attachment #3.

The overall length of the alignment in League City is approximately 39,367 feet or 7.45 miles. Approximately 23,328 feet (59.3%) of the pipelines are to be constructed using the "cut and cover" construction method with the remaining 16,039 feet (40.7%) utilizing the Horizontal Directional Drilling (HDD) method. There are eight (8) HDD boring locations within League City, used to cross features such as Clear Creek, Magnolia Creek and nine rights-of-way. The pipelines will be no less than 4 feet below ground with average depths of the HDD borings being approximately 45 feet below grade.

Easement Agreement

At this time, the Applicant has provided approved easement agreements for all except the easement agreement with League City. The proposed agreement with the City is separately and simultaneously being coordinated by staff and will be considered by City Council at the same time as the pipeline SUP requests.

Valve Station

Valves for the pipelines will be located in a shared, 45-foot-wide by 70-foot-long, screened valve station enclosure in a north/south configuration. The proposed site will be located approximately 900 feet north of West Main Street (Farm to Market Road 518) and just south of an existing Enterprise Pipeline valve station. Below is information provided by the Applicant regarding the valve station site.

- The valve site is required by the U.S. Department of Transportation (DOT) / Texas Railroad Commission (Texas RRC) as a block valve for Clear Creek. There will be similar valve on the north side of Clear Creek in Webster.
- The valve site is intended to be monitored and automated so that it can be shut down from our Pipeline Control Center in Houston in the event of an emergency. This automation requires the installation of power and the power control center "bus stop" that is shown in the drawings. It has been agreed to install the power connection underground from CenterPoint.
- Under normal conditions, no noise will result of the valve station. Operation of the valve site will be for emergencies, maintenance, and required function testing.
  - Emergency and maintenance operation of the valves will be very rare. The pipelines are required to function test the valves twice per calendar year at intervals not exceeding 7 ½ months. Valves of this size will operate from open to close in the range of 90 seconds or less. The valve actuators are not noisy devices and will operate for a very short time on a very limited basis.
  - The phase converter along with a transformer is a device to convert standard 120 / 240-volt single phase power to 480-volt three phase power to feed the valve actuators. This set up allows connection to the most common power supply without installing additional power lines. This device is also a relatively quiet device and only operates for the time that the valve is in operation

(minimal frequency and duration).

- The standard installation includes an area light as shown on the drawings. The bus stop has a standard fluorescent light with a switch in the cabinets that can be utilized for maintenance purposes. The bus stop was raised slightly to meet Base Flood Elevation requirements.

Access

Access to construct the pipelines will be from several pre-established locations on Texas Department of Transportation (TxDOT) roadways such as I-45, Farm to Market Road 518 and Farm to Market Road 517 as well as some municipal roadways such as Bay Area Boulevard, League City Parkway, and McFarland Road. The intent is to maximize TxDOT roadways for access while minimizing the local roadways to limit the surrounding neighborhoods to the truck traffic and noise related to construction of the pipelines. The Applicant has coordinated with the Engineering Department to minimize any transportation related issues.

Departures from Requirements

As mentioned previously, the applications have three departure requests from the Ordinances that are listed below:

1. Requirement: All pipelines under city rights-of-way shall be cased.

   Request: The Applicant proposes to increase the wall thickness of the pipe underneath the rights-of-way in lieu of casement. See Attachment #6. The attached letter indicates that there is a greater potential of maintenance issues and pipe corrosion by casing the pipe.

   While pipelines have cathodic protection, the area between the pipe and the casement has been of constant concern expressed by past applicants due to inaccessibility. To date, all previous pipeline applications have requested and received permission for this departure.

2. Requirement: Valve stations (defined as pump stations) shall have a 50-foot wide landscaped buffer yard installed in accordance to the City ordinance.

   Request: The Applicant proposes to install chain link fencing with fence slats inserted into the fencing around the valve station site. See Attachment #4. It is indicated that CenterPoint does not allow landscaping in their easements. The pipeline company also prefers to have a chain link fence so that the site may accessed quickly with large equipment in case of an emergency. The Applicant has reached out to the two closest residential property owners to the west in which it was agreed green slats would be installed in the fencing for greater screening. See Attachment #7.

   CenterPoint's landscaping prohibition is known from previous public and private projects in the past. Due to the proposed screening and juxtaposition with other nearby features for the valve site a condition has been proposed to maximize screening from the residences to the west.

3. Requirement: Pump stations cannot be located within 600 feet of any off-site building or structure, public/private park, school or daycare.

   Request: It is proposed to locate the pipelines within the CenterPoint Electrical corridor. The corridor has a maximum width of approximately 250 to 275 feet in width. The proposed alignment is the best, most logical and efficient location to place the pipelines in its relation to its overall route and adjacency to other pipelines.

   The CenterPoint corridor is the widest location on the western side of League City to locate these pipelines as evidenced by the existence of several other pipelines within this corridor. Other open space areas on this side of League City are features such as creeks or for drainage ditches of lesser width.

Safety Measures

According to the DOT, pipelines are considered safer as a result of better materials and testing methods used to verify integrity of a pipeline. The Applicant has indicated that the pipelines have been designed to be installed, tested, operated and maintained to meet the regulatory standards established by the Pipeline and Hazardous Materials Safety Administration (PHMS) of the DOT, TxDOT and the Texas RRC.

Enterprise Products have a specific Emergency Response Procedures Plan/Manual for the pipelines. This document has been reviewed by the Emergency Management Coordinator, Ryan Edghill, in which he had no objections to the plan/manual.

Public Benefit vs. Imposed Hardship

Based upon the information provided, the Commission will have to determine "the gain to public health, safety, welfare, due to denial of this application as compared to the hardship imposed upon the owner as a result of denial of the application."

Section 3.14.10.f. of the Unified Development Code outlines three items of consideration that the Planning and Zoning Commission and City Council shall decide when hearing a pipeline SUP request:

1. Whether the operations of the proposed pipelines are reasonable under the circumstances and conditions prevailing in the area considering the particular location and the character of the improvements located there.

The proposed pipelines are proposed to locate in an existing 200-foot-wide CenterPoint Energy corridor easement where several other pipelines exist.

2. Whether there are other alternative pipeline alignment locations.

Proposing the pipelines in a location near adjacent pipelines within an energy corridor is preferred as opposed to alternate alignments that could be located closer to multiple structures and neighborhoods.

3. Where the operations are consistent with the health, safety and welfare of the public when and if conducted in accordance with the pipeline operation permit conditions to be imposed.

The Operators are required to meet all state and federal regulations. Additionally, pipelines must meet Chapter 42, Article V: entitled Pipelines and Pump Stations of the League City Code of Ordinances.

Recommendation and Potential Conditions

Staff recommends approval of the Special Use Permit requests, subject to the following conditions:

1. Prior to the issuance of the SUPs, the City of League City must grant approval for the agreement of the proposed easement alignment.
2. Power poles installed to service the valve site shall be of a height and located where the valve station enclosure will screen the poles from view of the residences to the west.
3. The Contractor must provide at least 24 hours' notice to the Oil & Gas Coordinator prior to crossing any 24-inch or 42-inch public water mains in support of Water Production's request to be on-site during these crossings.

Recommended Motion

Motion for approval of SUPs – SUP-20-0001 (Baymark Pipeline) and SUP-20-0002 (South Texas NGL), subject to the proposed conditions.

For additional information, you may contact Mark Linenschmidt, Senior Planner at 281-554-1078 or at mark.linenschmidt@leaguecity.com.

Exhibit #3

OWNERSHIP

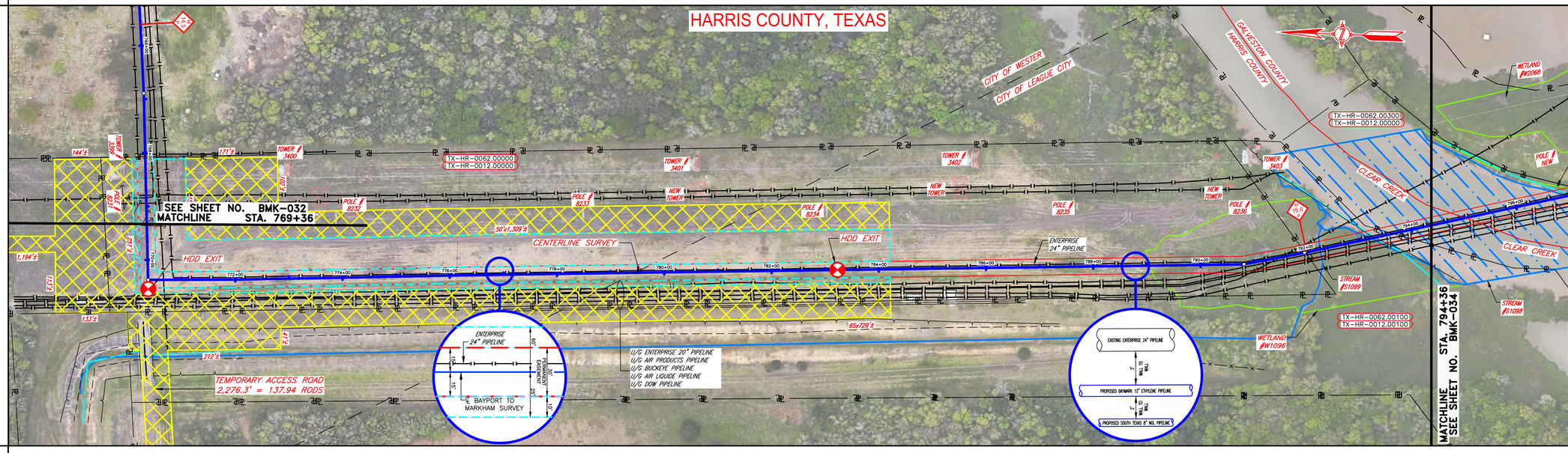
769+36	TX–HR–0062.00000 HARRIS COUNTY 30' WIDE PERMANENT EASEMENT	791+97	TX–HR–0062.00100 HARRIS COUNTY FLOOD CONTROL DISTRICT 30' WIDE PERMANENT EASEMENT	793+65	TX–GV–0062.00030 CLEAR CREEK, R/W 30' WIDE PERMANENT EASEMENT	794+36

TRACT NUMBER
OWNER NAME
RODS

STATIONING

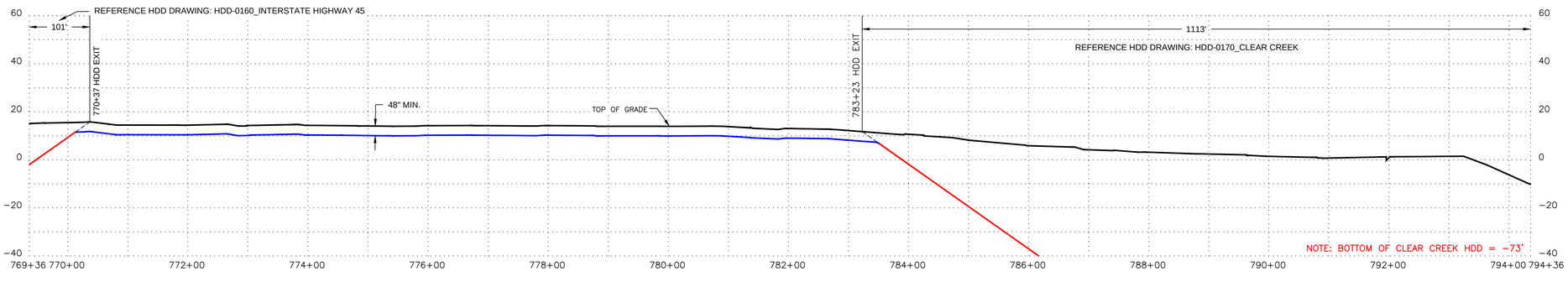
769+36	GUY ANCHOR WIRE
769+89	HDD EXIT, TEST LEAD
770+37	P.I. < 88°53'56" LT.
770+66	U/G ENTERPRISE 16" PIPELINE (15.5° CCW.)
773+01	TRANSMISSION TOWER NO. 03400 192' LT.
773+58	TRANSMISSION TOWER 135' LT. (NEW)
773+99	ABANDONEDPOWER POLE NO. 8232 110' LT.
778+61	ABANDONED POWER POLE NO. 8233 107' LT.
779+46	EXIT CITY OF WEBSTER, ENTER CITY OF LEAGUE CITY
780+65	TRANSMISSION TOWER NO. 03401 190' LT.
780+79	TRANSMISSION TOWER 133' LT. (NEW)
783+13	ABANDONED POWER POLE NO. 8234
783+21	HDD EXIT, TEST LEAD
784+50	FENCE CORNER 47° RT.
784+80	FENCE CORNER 47° RT.
785+19	FENCE CORNER 40° RT.
785+44	FENCE CORNER 41° RT.
785+67	TRANSMISSION TOWER 130' LT. (NEW)
785+90	TRANSMISSION TOWER NO. 03402 188' LT.
787+76	ABANDONED POWER POLE NO. 8235 111' LT.
789+04	PEM WETLAND W1096
790+81	P.I. < 10°01'19" LT.
791+28	ABANDONED POWER POLE NO. 8236 90' LT.
791+46	TRANSMISSION TOWER NO. 03403 192' LT.
791+50	U/G SHELL PIPELINE (IN HDD)
791+96	P.I. < 1°22'50" LT.
791+97	PROPERTY LINE
792+25	STREAM S1099
793+24	PEM WETLAND W1096, STREAM S1098
793+30	TOP OF SLOPE
793+31	EDGE OF WATER
793+65	PROPERTY LINE

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING	101' (2) (7) (4) (8)	770+66	1286' (1)	LEAGUE CITY LIMIT LINE	(7) 1113' (2)
COVER	VARIES		48" MINIMUM		VARIES
WETLANDS / WATER BODIES					789+04 W1096 791+25 S1099 793+24 S1098 794+36
CONSTRUCTION TECHNIQUES	HDD BUNDLE				HDD BUNDLE
ESA					

769+36 | 770+37 | 779+46 | 783+23 | 794+36

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
2. THE PIPELINE SHALL HAVE A MINIMUM OF 48" OF COVER, OR OTHERWISE NOTED IN THE COVER BAND.
3. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES AND EQUIPMENT OPERATION OR TRANSPORTATION TO THE ROW, DESIGNATED WORKSPACE, PUBLIC ROADS, AND DESIGNATED ACCESS ROADS.
4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX–MG–XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG U/G UTILITY LINE
- OHE — OHE O/H POWER LINE
- X — X FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS SANITARY SEWER
- S — S STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
3. FOR A COMPLETE LIST OF WATERWAYS AND WETLAND CROSSING TECHNIQUES REFER TO THE WATERS TABLE.
4. CLEARING CONDUCTED BETWEEN MARCH 1 AND AUGUST 30 MUST BE COORDINATED WITH ENVIRONMENTAL INSPECTOR FOR COMPLIANCE TO MIGRATORY BIRD ACT.
5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	1,286'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	1,214'
4	12.75" OD X 0.375" WT, SEGMENTAL BEND, WPHY60	1
7	TEST LEAD TYPE 1 - IR FREE	2
8	TEST LEAD TYPE 2 - IR FREE - FOREIGN LINE CROSSING	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 769+36 TO STA. 794+36
HARRIS COUNTY, TEXAS

DWG. NO. BMK-033 REV. 1

Exhibit #3

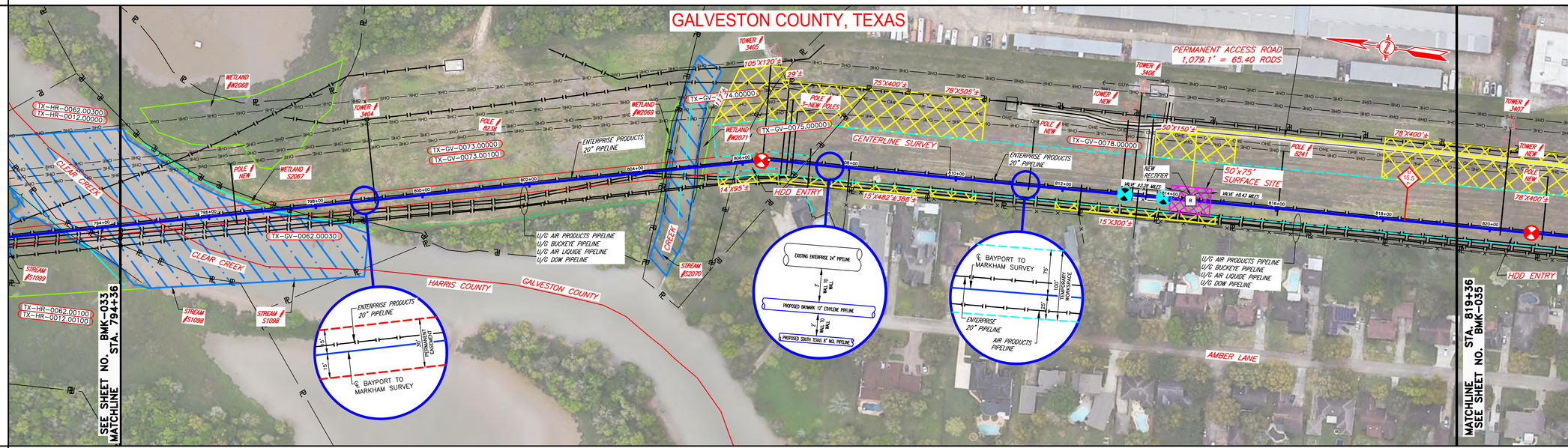
OWNERSHIP

TRACT NUMBER / OWNER NAME / RODS	794+36		797+45		804+56		804+56		805+90		807+17		819+36
	TX-GV-0062.00030		TX-GV-0073.00000		TX-GV-0073.00100		TX-GV-0074.00000		TX-GV-0075.00000		TX-GV-0078.00000		
	CLEAR CREEK		CITY OF LEAGUE CITY, TEXAS		CITY OF LEAGUE CITY, TEXAS		HAROLD A. SCHULZ AND ALISA FORDE SCHULZ		LISA CHASON		CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC		
	30' WIDE PERMANENT EASEMENT		30' WIDE PERMANENT EASEMENT		30' WIDE PERMANENT EASEMENT		30' WIDE PERMANENT EASEMENT		30' WIDE PERMANENT EASEMENT		WIDTH OF PIPE PERMANENT EASEMENT		

STATIONING

795+03 C/L CLEAR CREEK, GALVESTON/HARRIS COUNTY LINE
796+50 POWER POLE 94' LT. (NEW)
797+02 PEM WETLAND W2067, STREAM S1098
797+20 EDGE OF WATER
797+39 PEM WETLAND W2067
797+45 TOP OF SLOPE, PROPERTY LINE
799+11 TRANSMISSION TOWER NO. 3404, 185' LT.
804+50 PEM WETLAND W2069
804+56 PROPERTY LINE
804+57 TOP OF SLOPE
804+63 STREAM S2070, PEM WETLAND W2069
804+67 TOE OF SLOPE
804+89 C/L CREEK
805+11 STREAM S2070, PEM WETLAND W2071
805+13 TOE OF SLOPE
805+27 TOP OF SLOPE
805+90 PEM WETLAND W2071
806+36 PROPERTY LINE
806+38 HDD ENTRY, TEST LEAD
806+49 TRANSMISSION TOWER NO. 3405, 190' LT. P.I. < 11°27'09" RT.
806+74 POWER POLE, 136' LT. (NEW)
806+84 POWER POLE, 116' LT. (NEW)
806+94 POWER POLE, 95' LT. (NEW)
807+17 PROPERTY LINE
807+26 FENCE CORNER, 44' RT.
808+01 FENCE CORNER, 44' RT.
811+37 POWER POLE 110' LT. (NEW)
812+35 FENCE CORNER 45' RT.
813+10 TRANSMISSION TOWER 138' LT., (NEW) FENCE
813+26 TRANSMISSION TOWER NO. 3406, 190' LT.
813+30 FENCE CORNER, 45' RT.
813+41 CENTERPOINT METER STATION, 45' LT.
813+56 FENCE
813+76 EXIT PROPOSED SITE
814+01 C/L VALVE
814+39 ENTER PROPOSED SITE
814+76 POWER POLE NO. 8241, 107' LT.
816+04

PLAN



PROFILE

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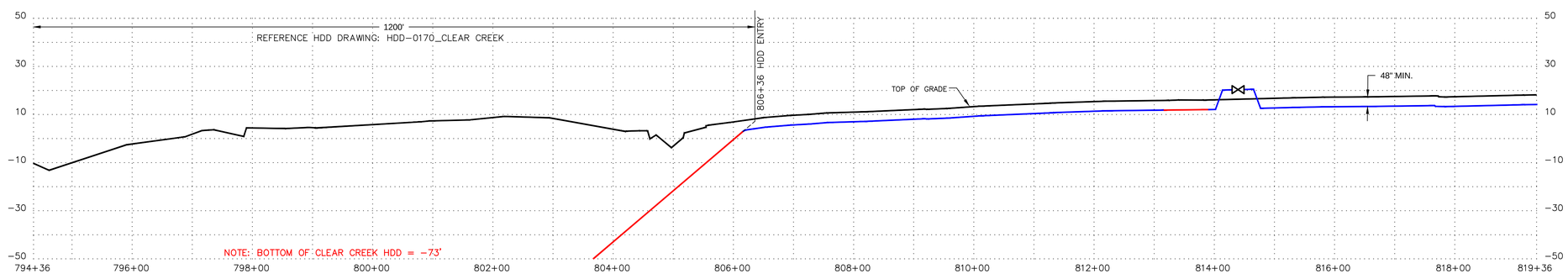

PIPE DETAIL

	794+36		806+36	813+16	813+89	814+39	814+40	819+36
MATERIAL / COATING	1200' (2)		680' (1)	73' (2)		6 7 13 R	547' (1)	
COVER	VARIES		48" MINIMUM	VARIES		48" MINIMUM		

ENVIRONMENTAL CONDITIONS

	794+36		797+02	797+39	804+50	804+63	806+11	806+27	819+36
WETLANDS / WATER BODIES	S1098		W2067		W2069	S2070	W2071		
CONSTRUCTION TECHNIQUES	HDD BUNDLE					BORE			
ESA									

811 Know what's below. Call before you dig.

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- OHE — OHE — O/H POWER LINE
- X — X — FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- POR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS — SANITARY SEWER
- S — S — STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
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- POWER POLE

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- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
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- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

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- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

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4	12.75" OD X 0.375" WT, SEGMENTAL BEND, WPHY60	1
6	VALVE	1
7	TEST LEAD TYPE 1 - IR FREE	2
13	NEW RECTIFIER	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND
2	06/15/2020	EUSA	ADD DISTANCE FOR NEARBY VALVES

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSite USA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'	
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412	
APP'D	DATE	JOB NO. 156.6977.0001	

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 794+36 TO STA. 819+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-034 REV. 2

Exhibit #3

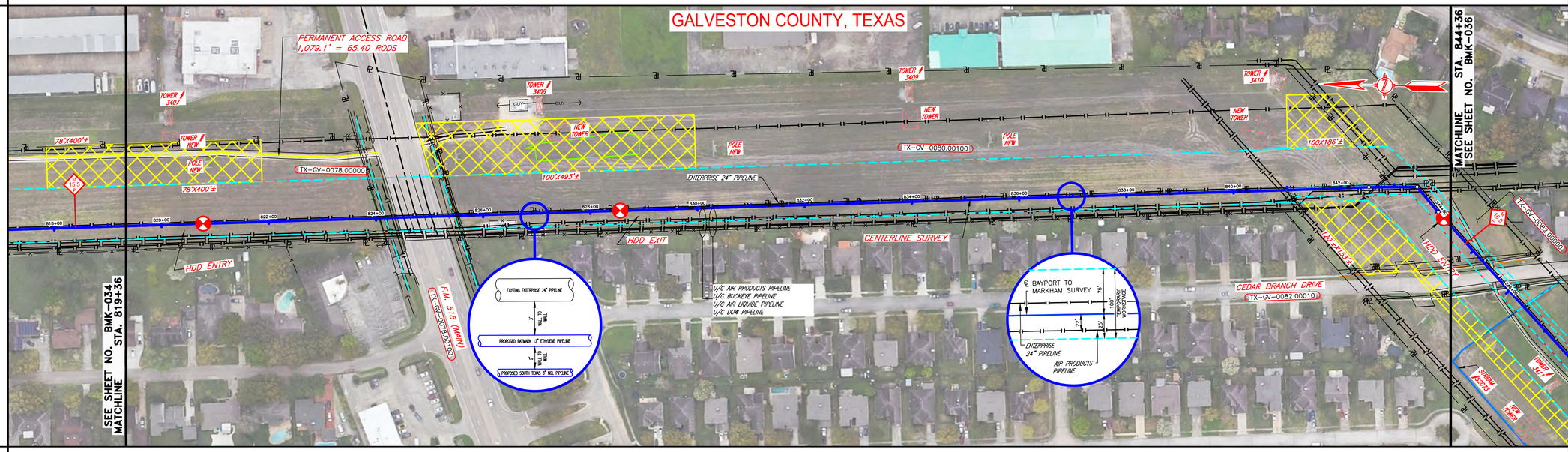
OWNERSHIP

TRACT NUMBER		TX–GV–0078.00000	TX–GV–0078.00100	TX–GV–0080.00100	TX–GV–0082.00000
OWNER NAME		CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	F.M. 518	CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	CEDAR LANDING HOMEOWNERS ASSOCIATION, INC.
RODS	819+36	WIDTH OF PIPE PERMANENT EASEMENT 824+06	WIDTH OF PIPE PERMANENT EASEMENT 825+55	WIDTH OF PIPE PERMANENT EASEMENT 840+98	30' WIDE PERMANENT EASEMENT 844+36

STATIONING

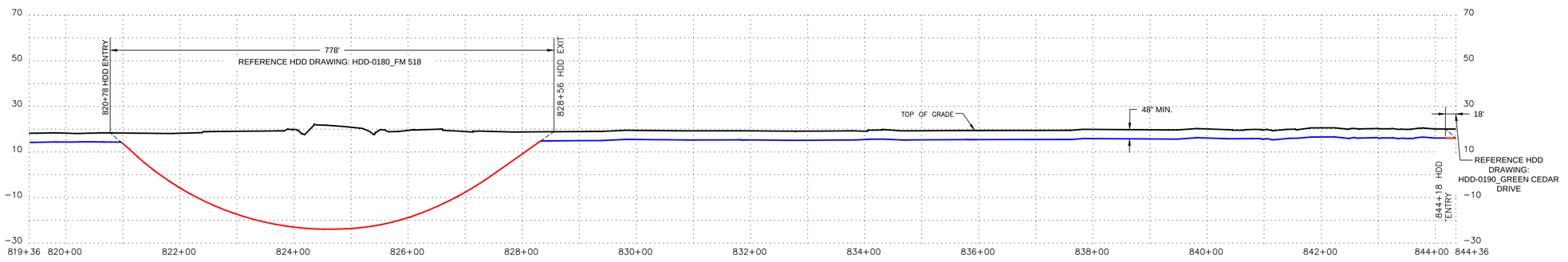
820+20 TRANSMISSION TOWER NO. 3407 136° LT.; TRANSMISSION TOWER 136° LT.; (NEW)
820+50 HDD ENTRY, TEST LEAD
820+99 POWER POLE 107' LT. (NEW)
822+31 FENCE CORNER 47' RT.
823+67 POWER POLE 155' LT.
824+05 U/G SANITARY SEWER (UNK. COV.)
824+06 PROPERTY LINE
U/G COMMUNICATION CABLE (UNK. COV.)
824+07 TOP OF SLOPE
824+08 OVERHEAD ELECTRIC
824+11 OVERHEAD ELECTRIC
824+14 TOE OF SLOPE
824+15 C/L DITCH
824+17 TOE OF SLOPE
824+19 TOE OF SLOPE
824+30 U/G WATER SUPPLY PIPELINE
824+35 TOP OF SLOPE
824+40 EDGE OF ROAD
824+52 EDGE OF ROAD (ASPHALT) COUNTY ROAD 518 WEST
824+63 C/L ROAD
824+76 EDGE OF ROAD
824+90 EDGE OF ROAD
825+03 EDGE OF COUNTY ROAD 518 EAST (ASPHALT)
825+20 POWER POLE 114' LT.
825+26 EDGE OF ROAD
825+35 ANGLE POINT 45° LT.
825+37 TOP OF SLOPE
825+44 TOE OF SLOPE
825+45 EDGE OF CULVERT 2' 6" LT.; U/G COMMUNICATION CABLE (UNK. COV.)
825+46 C/L CULVERT
825+47 TOE OF SLOPE
825+49 TOE OF SLOPE
825+52 U/G CENTERPOINT 4" PIPELINE (3.6° COV.)
825+55 PROPERTY LINE
826+11 FENCE CORNER 12' RT.
826+60 TRANSMISSION TOWER NO. 3408 188° LT.
827+11 TRANSMISSION TOWER 133' LT. (NEW)
827+44 HDD EXIT, TEST LEAD
828+96 TRANSMISSION TOWER NO. 3409 189° LT.; TRANSMISSION TOWER 134° LT.; (NEW)
834+02 CORNER TRANSMISSION TOWER 76° LT. (NEW)
840+45 U/G EXXONMOBIL 8" PIPELINE (2.0° COV.)
840+87 CORNER TRANSMISSION TOWER NO. 3410 84° LT.
840+93 U/G EXXONMOBIL 6" PIPELINE (11.2° COV.)
840+97 PROPERTY LINE
840+98 OVERHEAD ELECTRIC
841+55 OVERHEAD ELECTRIC
842+46 OVERHEAD ELECTRIC
842+52 P.I. < 1°50'01" RT.
842+63 U/G AIR LIQUIDE PIPELINE (6.7° COV.)
842+68 U/G DOW PIPELINE (6.8° COV.)
843+41 P.I. < 50°02'21" RT.
843+46 U/G BUCKEYE PIPELINE (4.7° COV.)
843+53 U/G AIR PRODUCTS PIPELINE (4.7° COV.)
844+03 P.I. < 1°57'56" LT.
844+18 HDD ENTRY, TEST LEAD

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

	819+36	820+78	828+56	840+85	840+95	842+64	842+68	843+34	844+18	844+36
MATERIAL / COATING	142' (1) (7) TS–1	778' (2)	(7) TS–1	1562' (1)	(8) TS–2	(8) TS–2	(8) TS–2	(8) TS–2	(4) (7) TS–1	18' (2)
COVER	48" MINIMUM	VARIES	824+40 84" MIN. 825+26 VARIES	48" MINIMUM						VARIES
WETLANDS / WATER BODIES										
CONSTRUCTION TECHNIQUES		HDD BUNDLE								HDD BUNDLE
ESA										

811 Know what's below. Call before you dig.

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
2. THE PIPELINE SHALL HAVE A MINIMUM OF 48" OF COVER, OR OTHERWISE NOTED IN THE COVER BAND.
3. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES AND EQUIPMENT OPERATION OR TRANSPORTATION TO THE ROW, DESIGNATED WORKSPACE, PUBLIC ROADS, AND DESIGNATED ACCESS ROADS.
4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX–MG–XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG U/G UTILITY LINE
- OHE — OHE O/H POWER LINE
- X — X FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS SANITARY SEWER
- S — S STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
3. FOR A COMPLETE LIST OF WATERWAYS AND WETLAND CROSSING TECHNIQUES REFER TO THE WATERS TABLE.
4. CLEARING CONDUCTED BETWEEN MARCH 1 AND AUGUST 30 MUST BE COORDINATED WITH ENVIRONMENTAL INSPECTOR FOR COMPLIANCE TO MIGRATORY BIRD ACT.
5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	1704'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	796'
4	12.75" OD X 0.375" WT, SEGMENTAL BEND, WPHY60	1
7	TEST LEAD TYPE 1 - IR FREE	3
8	TEST LEAD TYPE 2 - IR FREE - FOREIGN LINE CROSSING	4

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'	
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412	
APP'D	DATE	JOB NO. 156.6977.0001	

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 819+36 TO STA. 844+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-035 REV. 1

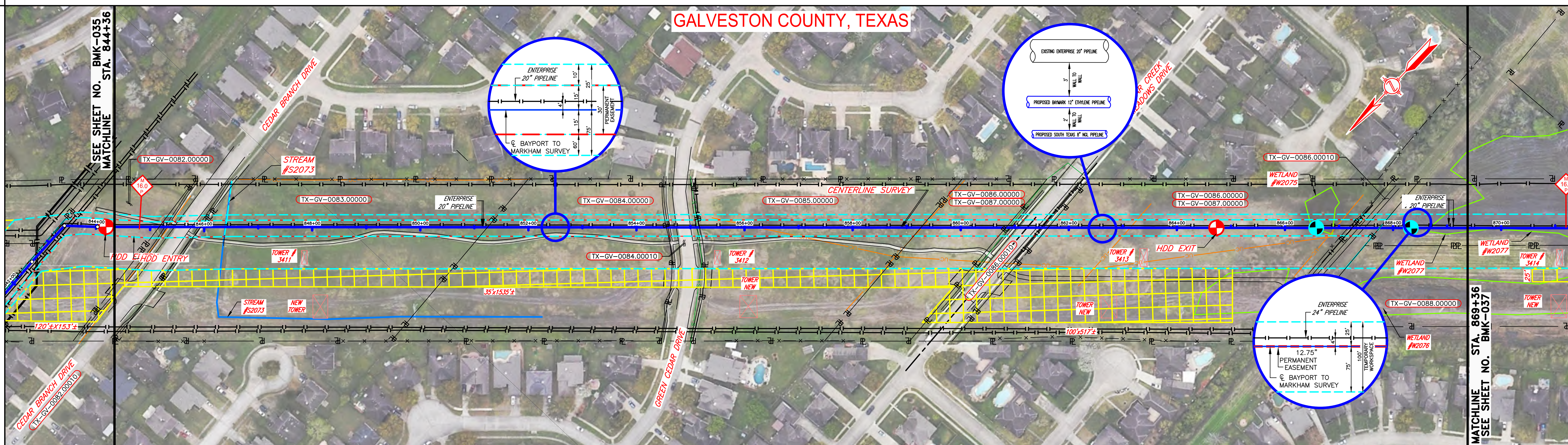
Exhibit #3

OWNERSHIP

TRACT NUMBER / OWNER NAME / RODS											
TRACT NUMBER	TX-GV-0082.00000	TX-GV-0082.00010	TX-GV-0083.00000	TX-GV-0084.00000	TX-GV-0084.00010	TX-GV-0085.00000	TX-GV-0086.00000 / TX-GV-0087.00000	TX-GV-0086.00010	TX-GV-0086.00000 / TX-GV-0087.00000	TX-GV-0086.00010	TX-GV-0088.00000
OWNER NAME	CEDAR LANDING HOMEOWNERS ASSOCIATION, INC.	CEDAR BRANCH DR.	CEDAR LANDING HOMEOWNERS ASSOCIATION, INC.	CEDAR LANDING HOMEOWNERS ASSOCIATION, INC.	GREEN CEDAR DRIVE	CEDAR LANDING HOMEOWNERS ASSOCIATION, INC.	CLEAR CREEK MEADOWS COMMUNITY ASSOCIATION, INC	CLEAR CREEK MEADOWS DRIVE	CEDAR LANDING HOMEOWNERS ASSOCIATION, INC.	CLEAR CREEK MEADOW DRIVE	CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC
RODS	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	WIDTH OF PIPE PERMANENT EASEMENT
STATIONS	844+36 – 845+13	845+13 – 845+91	845+91 – 851+23	851+23 – 854+56	854+56 – 855+17	855+17 – 859+26	859+26 – 860+83	860+83 – 861+61	861+61 – 867+24	867+24 – 867+75	867+75 – 869+36

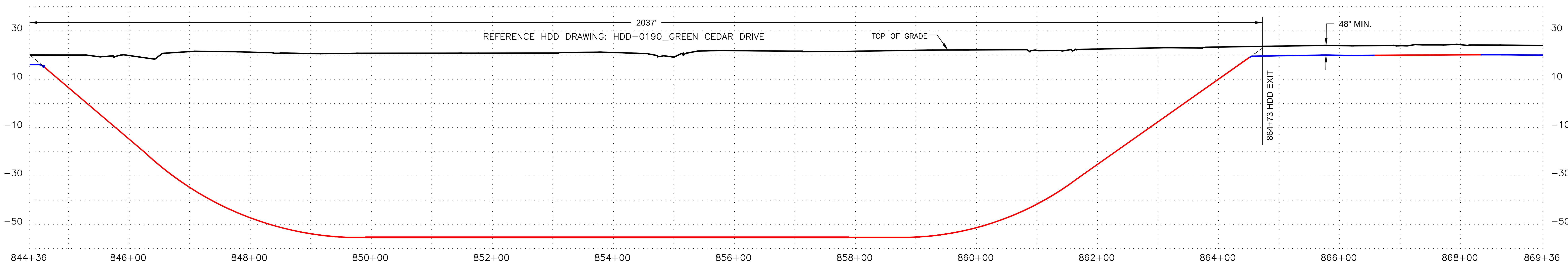
STATIONING

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING: 2037' (2); (7) (12) PCR; 185' (1); 463' (11); 175' (2); 103' (1)

COVER								
84" MIN. / VARIES (845+38, 845+74)	VARIES	84" MIN. (854+74, 855+00)	VARIES	84" MIN. (861+04, 861+41)	VARIES	48" MINIMUM	VARIES	48" MIN.

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES	846+39 S2073; 866+51 W2075 866+89; 868+68 W2077
CONSTRUCTION TECHNIQUES	HDD BUNDLE; BORE
ESA	

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
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4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

SURVEYED CENTERLINE; PERMANENT EASEMENT; TEMPORARY EASEMENT; ADDITIONAL TEMPORARY WORKSPACE; SITE; TX-MG-XXX.XXXXX TRACT NUMBER; PROPERTY LINE; CITY LIMITS; U/G UTILITY LINE; O/H POWER LINE; FENCE; TS-X TEST STATION; HEAVY WALL PIPE; VALVE; SEGMENTABLE BEND; HDD ENTRY/ EXIT; MAG BED; PCR DECOUPLER; AC MITIGATOR CABLE; MILEPOST (M XX P); MONUMENT; COUNTY LINE; SS SANITARY SEWER; S STORM SEWER; RAILROAD; FOREIGN PIPELINE; P.I.; CL ROAD; BORE ENTRY/ EXIT; TREE LINE; POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
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5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

ENVIRONMENTAL SENSITIVE AREA (ESA); SURVEYED WATERWAYS; EEM & ESS WETLANDS (AVOIDANCE AREA); PEM WETLANDS; PFO & PSS WETLANDS; FLOODPLAIN; POND; STREAMS; OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	288'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	2212'
7	TEST LEAD TYPE 1 - IR FREE	1
11	MITIGATION CABLE X 2	926'
11	PCR	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID (04/20/2020)

SCALE IN FEET: 100' 0' 100' 200'

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC — EnSiteUSA

DRAWN	EUSA	DATE	02/01/2020	SCALE	1 = 100'
CHK'D	EUSA	DATE	02/01/2020	A.F.E.	A42412
APP'D		DATE		JOB NO.	156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 844+36 TO STA. 869+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-036 REV. 1

Exhibit #3

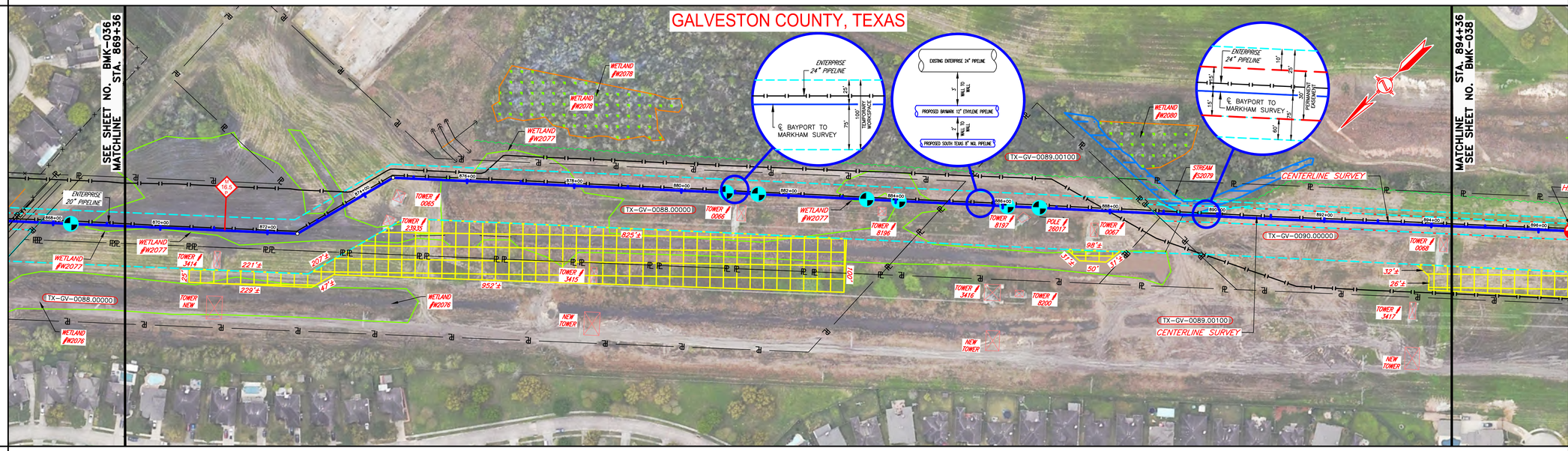
OWNERSHIP

TRACT NUMBER / OWNER NAME / RODS	869+36		884+93		888+83		894+36
		TX–GV–0088.00000		TX–GV–0089.00100		TX–GV–0090.00000	
		CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC		CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC		MAGNOLIA CREEK HOMEOWNERS ASSOCIATION, INC	
		WIDTH OF PIPE PERMANENT EASEMENT		WIDTH OF PIPE PERMANENT EASEMENT		30' WIDE PERMANENT EASEMENT	

STATIONING

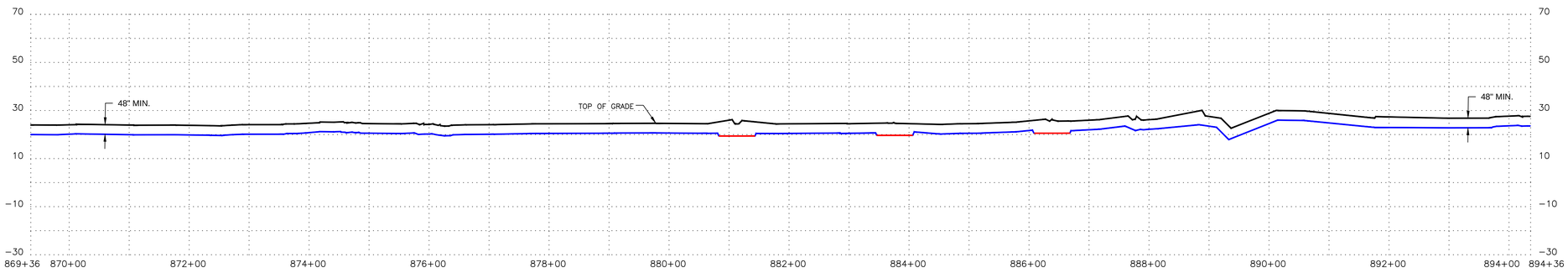
871+09 TRANSMISSION TOWER NO. 3414 40' RT.
871+21 TRANSMISSION TOWER 124' RT.
872+56 P.I. < 32°53'13" LT.
873+56 PEM WETLAND W2077
874+17 CORNER TRANSMISSION TOWER NO. 2335 52' RT., OVERHEAD ELECTRIC
874+57 CORNER TRANSMISSION TOWER NO. 0065 21' RT.
874+62 P.I. > 32°55'12" RT.
874+70 OVERHEAD ELECTRIC
875+50 POWER POLE 60' LT.
875+52 PEM WETLAND W2077
875+73 GUY ANCHOR 35' LT.
875+84 OVERHEAD ELECTRIC
876+91 GUY ANCHOR 42' LT.
876+04 OVERHEAD ELECTRIC
876+04 GUY ANCHOR 54' LT.
876+18 OVERHEAD ELECTRIC
878+10 PEM WETLAND W2077
878+38 TRANSMISSION TOWER NO. 2415 150' RT.
878+59 TRANSMISSION TOWER 234' RT. (NEW)
881+13 TRANSMISSION TOWER NO. 0066 22' RT.
883+13 PEM WETLAND W2077
883+59 PEM WETLAND W2077
883+76 TRANSMISSION TOWER NO. 8196 13' RT.
883+94 PEM WETLAND W2077
884+73 PEM WETLAND W2077
884+93 PROPERTY LINE
885+73 TRANSMISSION TOWER NO. 3416 147' RT.
886+23 CORNER TRANSMISSION TOWER NO. 8200 136' RT.
886+38 CORNER TRANSMISSION TOWER NO. 8197 9' RT.
887+16 GUY ANCHOR 13' RT
887+65 TRANSMISSION TOWER NO. 0067 2' RT.
887+80 POWER POLE 47' LT.
887+97 U/G DENBURY GREEN 24" PIPELINE (5.5' COV.)
888+53 OVERHEAD ELECTRIC
888+83 PROPERTY LINE
889+28 STREAM S2079
889+33 EDGE OF WATER
889+37 END OF CULVERT 2' RT.
889+44 EDGE OF WATER
889+60 STREAM S2079
893+62 TRANSMISSION TOWER 230' RT.
893+78 TRANSMISSION TOWER NO. 3417 (NEW) 45' RT.
894+24 TRANSMISSION TOWER NO. 0068 23' RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING	869+36	872+57 (4)	874+64 (4)	875+73 (1)	880+83	881+43 (2)	863+73 (7)	863+46 (11)	884+06 (1)	886+08	886+68 (2)	867+97 (8)	894+36
		1147'		12" PCR		60'	2500'	202'	12" PCR	60'	202'	60'	768'
COVER		48" MINIMUM				VARIES	48" MINIMUM			VARIES	48" MINIMUM	VARIES	48" MINIMUM

ENVIRONMENTAL CONDITIONS

	869+36	873+56	875+52	878+10	883+13	883+59	883+94	884+73	889+28	889+60
WETLANDS / WATER BODIES	W2077		W2077		W2077		W2077		S2079	
CONSTRUCTION TECHNIQUES					BORE		BORE		BORE	
ESA										

GENERAL NOTES / LEGEND

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- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
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- PROPERTY LINE
- CITY LIMITS
- UG — UG U/G UTILITY LINE
- OHE — OHE O/H POWER LINE
- X — X FENCE
- TS# TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS SANITARY SEWER
- S — S STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

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5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
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- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	2,320'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	180'
4	12.75" OD X 0.375" WT, SEGMENTAL BEND, WPHY60	2
7	TEST LEAD TYPE 1 - IR FREE	1
8	TEST LEAD TYPE 2 - IR FREE - FOREIGN LINE CROSSING	1
11	MITIGATION CABLE X 2	5,000'
12	PCR	2

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC

EnSite USA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'	
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412	
APP'D	DATE	JOB NO. 156.6977.0001	

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 869+36 TO STA. 894+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-037 REV. 1

Exhibit #3

OWNERSHIP

TRACT NUMBER
OWNER NAME
RODS

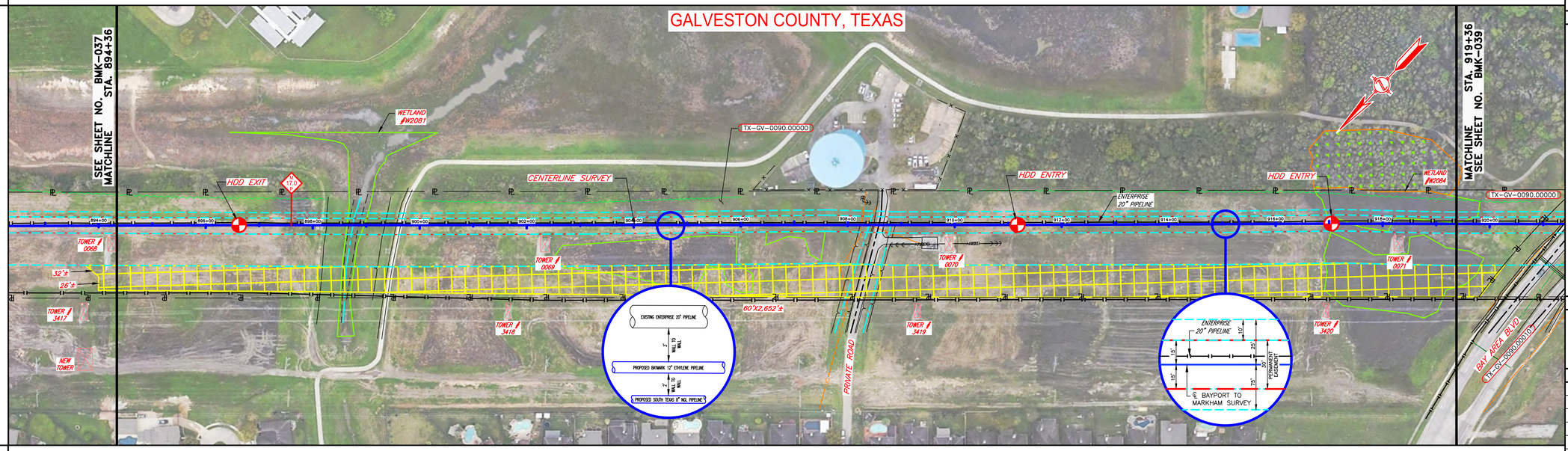
894+36 — TX-GV-0090.00000 — MAGNOLIA CREEK HOMEOWNERS ASSOCIATION, INC — 919+36

30' WIDE PERMANENT EASEMENT

STATIONING

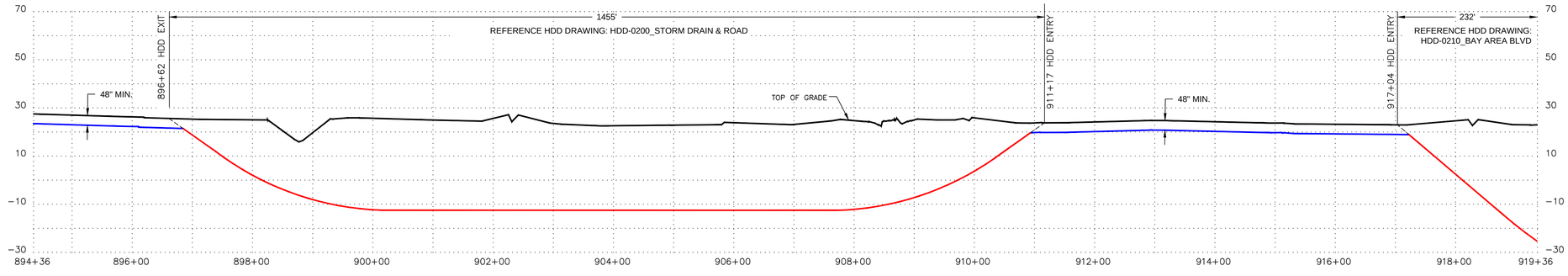
896+62	HDD EXIT, TEST LEAD
898+26	TOP OF SLOPE
898+64	PEM WETLAND W2081
898+67	TOE OF SLOPE
898+75	C/L DRAIN
898+95	TOE OF SLOPE
898+95	PEM WETLAND W2081
899+34	TOP OF SLOPE
899+56	EDGE OF SIDEWALK
899+65	EDGE OF SIDEWALK
901+65	TRANSMISSION TOWER NO. 3418, 144' RT.
902+34	TRANSMISSION TOWER NO. 0069, 19' RT.
906+24	FENCE CORNER, 64' LT
908+20	OVERHEAD ELECTRIC
908+26	U/G COMMUNICATION CABLE, (UNK. COV.)
908+27	POWER POLE 42' LT
908+39	U/G COMMUNICATION CABLE, (UNK. COV.)
908+41	C/L ANCHOR, 40' LT
908+42	EDGE OF ROAD
908+50	C/L PRIVATE ROAD (PAVED)
908+59	EDGE OF ROAD
908+77	EDGE OF 24" CULVERT, 19' RT.
908+81	GUY ANCHOR, 24' RT.
908+92	GUY ANCHOR, 37' RT.
909+02	GUY ANCHOR, 37' RT.
909+24	TRANSMISSION TOWER NO. 3419
909+39	FENCE CORNER, 22' RT.
909+65	FENCE CORNER, 45' LT
909+68	FENCE CORNER, 23' RT.
909+89	TRANSMISSION TOWER NO. 0070, 22' RT.
910+67	HDD ENTRY, TEST LEAD
910+71	GUY ANCHOR, 35' RT.
910+80	GUY ANCHOR, 35' RT.
911+17	HDD ENTRY, TEST LEAD
916+97	TRANSMISSION TOWER NO. 3420, 150' RT.
917+04	HDD ENTRY, TEST LEAD
917+39	PEM WETLAND W2086
918+17	PEM WETLAND W2086
918+29	TRANSMISSION TOWER NO. 0071, 21' RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING	226' (1) AC / 226' (11) AC / 7 FS-1	1455' (2)	7 FS-1	587' (1) AC / 587' (11) AC / 12 PCR	7 FS-1 / 232' (2)
COVER	48" MINIMUM	VARIES		48" MINIMUM	VARIES

894+36 — 896+62 — 911+17 — 914+67 — 917+04 — 919+36

811 Know what's below. Call before you dig.

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES	896+64 W2081 898+95		917+39 W2086 918+17
CONSTRUCTION TECHNIQUES	HDD BUNDLE		HDD BUNDLE
ESA			

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
2. THE PIPELINE SHALL HAVE A MINIMUM OF 48" OF COVER, OR OTHERWISE NOTED IN THE COVER BAND.
3. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES AND EQUIPMENT OPERATION OR TRANSPORTATION TO THE ROW, DESIGNATED WORKSPACE, PUBLIC ROADS, AND DESIGNATED ACCESS ROADS.
4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX-MG-XXX.XXXXX — TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG — U/G UTILITY LINE
- OHE — OHE — O/H POWER LINE
- X — X — FENCE
- TS-X — TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR — DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST (XX)
- MONUMENT
- COUNTY LINE
- SS — SS — SANITARY SEWER
- S — S — STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
3. FOR A COMPLETE LIST OF WATERWAYS AND WETLAND CROSSING TECHNIQUES REFER TO THE WATERS TABLE.
4. CLEARING CONDUCTED BETWEEN MARCH 1 AND AUGUST 30 MUST BE COORDINATED WITH ENVIRONMENTAL INSPECTOR FOR COMPLIANCE TO MIGRATORY BIRD ACT.
5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	813'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	1687'
7	TEST LEAD TYPE 1 - IR FREE	3
11	MITIGATION CABLE X 2	1626'
12	PCR	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 894+36 TO STA. 919+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-038 REV. 1

Exhibit #3

OWNERSHIP

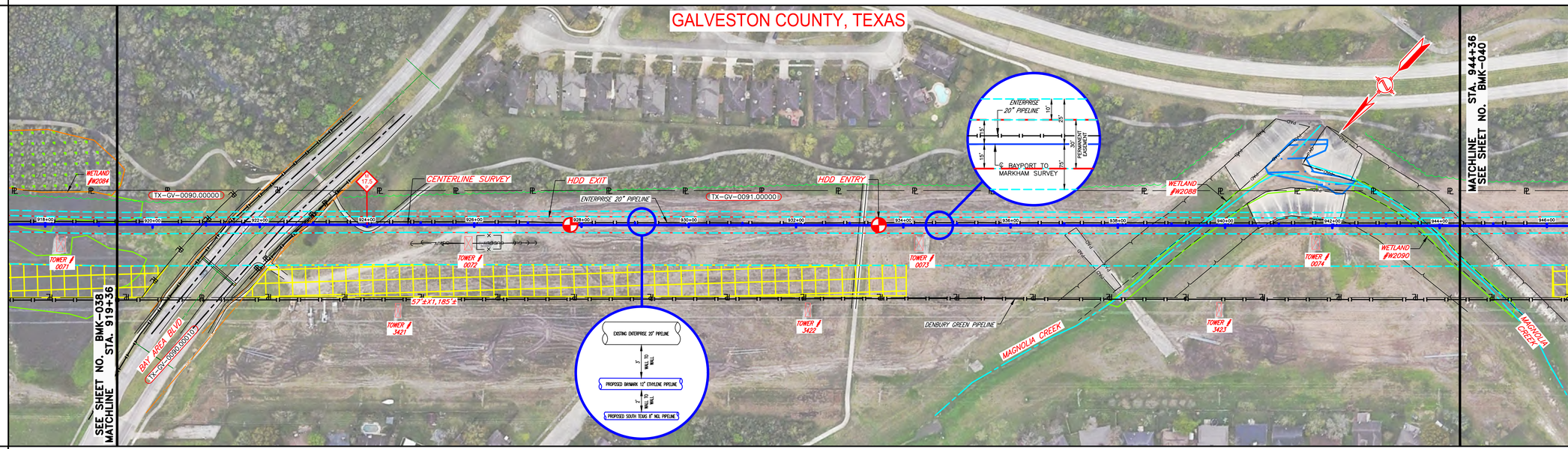
TRACT NUMBER
OWNER NAME
RODS

919+36	TX–GV–0090.00000	920+92	TX–GV–0090.00010	922+76	TX–GV–0091.00000	944+36
	MAGNOLIA CREEK HOMEOWNERS ASSOCIATION, INC 30' WIDE PERMANENT EASEMENT		BAY AREA BOULEVARD, R/W 30' WIDE PERMANENT EASEMENT		2009 XIF, LLC 30' WIDE PERMANENT EASEMENT	

STATIONING

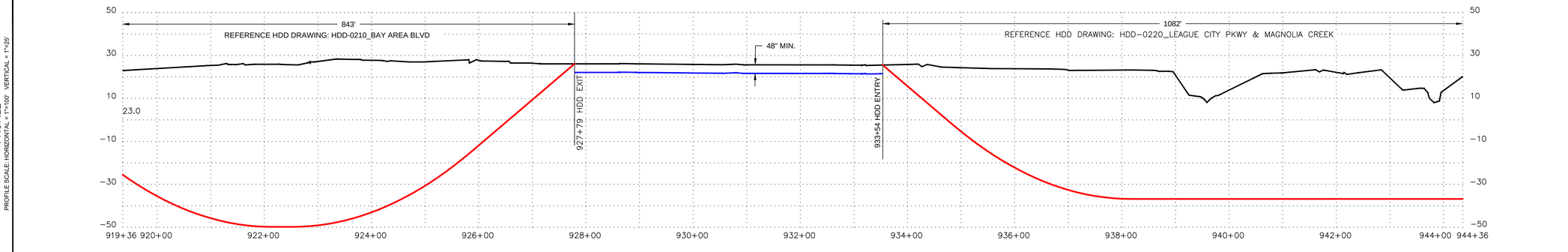
920+92	PROPERTY LINE
920+95	CONCRETE HEADWALL 57' RT.
921+34	EDGE OF SIDEWALK
921+35	U/G COMMUNICATION CABLE (UNK. COV.)
921+38	EDGE OF SIDEWALK
921+39	U/G WASTE WATER LINE (UNK. COV.)
921+47	C/L BAY AREA BLVD. NORTH
921+65	EDGE OF ROAD (CONCRETE)
921+81	EDGE OF ROAD
922+12	U/G STORM SEWER LINE (UNK. COV.)
922+30	EDGE OF ROAD
922+46	C/L BAY AREA BLVD. SOUTH
922+64	EDGE OF ROAD (CONCRETE)
922+76	PROPERTY LINE
922+81	U/G CENTERPOINT PIPELINE (2.9' COV.)
922+83	EDGE OF SIDEWALK
922+86	U/G COMMUNICATION CABLE (UNK. COV.)
922+90	U/G COMMUNICATION CABLE (UNK. COV.)
922+93	EDGE OF SIDEWALK
923+74	EDGE OF SIDEWALK
924+13	EDGE OF SIDEWALK
924+28	EDGE OF SIDEWALK
924+58	TRANSMISSION TOWER NO. 3421
924+81	GUY ANCHOR 36' RT.
925+01	GUY ANCHOR 33' RT.
925+39	GUY ANCHOR 36' RT.
925+89	TRANSMISSION TOWER NO. 0072 23' RT.
926+05	FENCE CORNER 21' RT.
926+50	FENCE CORNER 20' RT.
926+77	GUY ANCHOR 35' RT.
927+02	GUY ANCHOR 35' RT.
927+16	GUY ANCHOR 35' RT.
927+79	HDD EXIT, TEST LEAD
932+22	TRANSMISSION TOWER NO. 3422 145' RT.
933+17	EDGE OF SIDEWALK
933+25	EDGE OF SIDEWALK
933+54	HDD ENTRY, TEST LEAD
934+29	TRANSMISSION TOWER NO. 0073 18' RT.
937+22	CORNER CONCRETE SPILLWAY 4' RT.
938+60	TOP OF SLOPE
939+48	TOE OF SLOPE
939+49	PEM WETLAND W2088
939+50	EDGE OF WATER
939+59	C/L MAGNOLIA CREEK
939+80	PEM WETLAND W2088 &
939+89	TRANSMISSION TOWER NO. 3423 143' RT.
940+41	CORNER CONCRETE SPILLWAY 42' LT.
940+60	EDGE OF PAD
940+84	TOP OF SLOPE
941+16	EDGE OF PAD
941+69	TRANSMISSION TOWER NO. 0074 18' RT.
942+14	CORNER CONCRETE SPILLWAY 9' LT.
942+25	CORNER CONCRETE SPILLWAY 60 LT.
942+41	TOP OF SLOPE
943+51	TOE OF SLOPE
943+57	PEM WETLAND W2090
943+77	C/L MAGNOLIA CREEK
943+81	TOE OF SLOPE W2090 &
943+83	PEM WETLAND W2090 &
944+36	EDGE OF WATER

PLAN



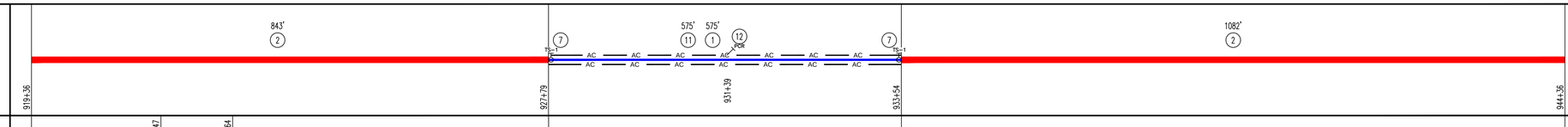
PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING



COVER						
	VARIES	921+47	84" MIN.	922+64	VARIES	48" MINIMUM	VARIES

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES							W2088 930+49 939+69 W2090 943+57 943+83
CONSTRUCTION TECHNIQUES		HDD BUNDLE					HDD BUNDLE
ESA							

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- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX–MG–XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG U/G UTILITY LINE
- OHE — OHE O/H POWER LINE
- X — X FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS SANITARY SEWER
- S — S STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

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- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	575'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	1,925'
7	TEST LEAD TYPE 1 - IR FREE	2
11	MITIGATION CABLE X 2	1,150'
12	PCR	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN	EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D	EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D		DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 919+36 TO STA. 944+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-039 REV. 1

Exhibit #3

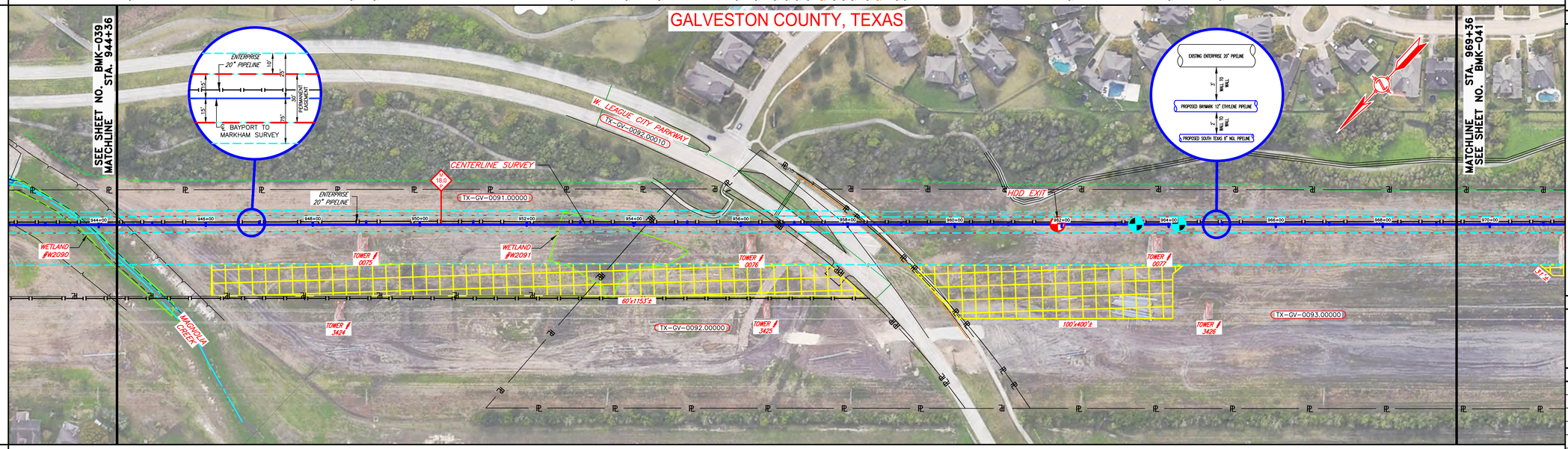
OWNERSHIP

TRACT NUMBER / OWNER NAME / RODS	944+36		954+26	956+67	958+35		969+36
	TX–GV–0091.00000	2009 XIF, LLC		TX–GV–0092.00000	TX–GV–0092.00010	TX–GV–0093.00000	
		30' WIDE PERMANENT EASEMENT		CITY OF LEAGUE CITY 30' WIDE PERMANENT EASEMENT	W. LEAGUE CITY PARKWAY 30' WIDE PERMANENT EASEMENT	CITY OF LEAGUE CITY 30' WIDE PERMANENT EASEMENT	

STATIONING

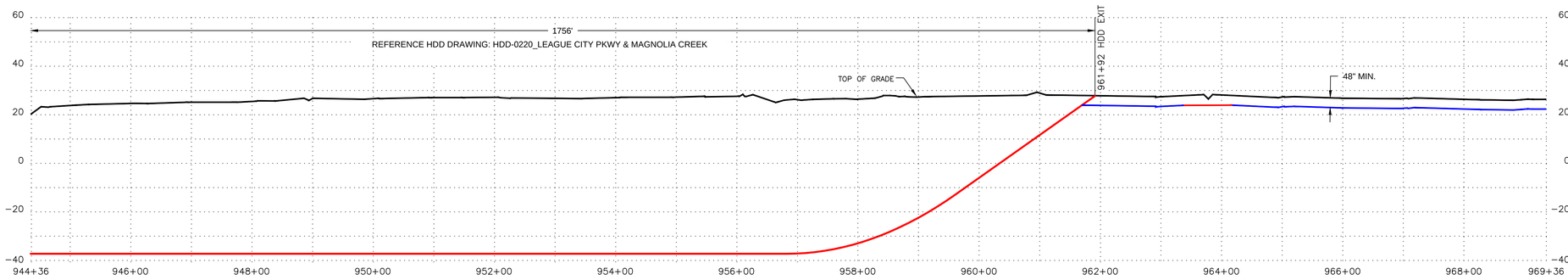
944+51 TOP OF SLOPE
948+50 TRANSMISSION TOWER NO. 3424, 144' RT.
948+93 TRANSMISSION TOWER NO. 0075, 22' RT.
952+62 PEM WETLAND W2091
953+64 PEM WETLAND W2091
954+26 PROPERTY LINE
956+19 TRANSMISSION TOWER NO. 0076, 20' RT.
956+46 TRANSMISSION TOWER NO. 3425, 145' RT.
956+67 PROPERTY LINE
956+84 EDGE OF ROAD
957+06 C/L W. LEAGUE CITY PARKWAY
957+26 EDGE OF ROAD
957+41 U/G STORM SEWER LINE, (UNK. COV.)
957+60 EDGE OF ROAD
957+76 C/L W. LEAGUE CITY PARKWAY
957+97 EDGE OF ROAD
958+35 PROPERTY LINE
958+35 U/G COMMUNICATION CABLE, (UNK. COV.)
958+40 EDGE OF SIDEWALK
958+52 EDGE OF SIDEWALK
961+92 HDD EXIT, TEST LEAD
963+79 TRANSMISSION TOWER NO. 0077, 21' RT.
964+74 TRANSMISSION TOWER NO. 3426, 144' RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

	944+36		956+84	957+97		961+92	963+38	964+18		969+36
MATERIAL / COATING	1756' (2)					146' (1)	80' (2)	744' (11)	518' (1)	
COVER	VARIES		84" MIN.		VARIES	48" MINIMUM	VARIES	48" MINIMUM		

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES		952+62 W2091 953+64								
CONSTRUCTION TECHNIQUES	HDD BUNDLE						BORE			
ESA										

GENERAL NOTES / LEGEND

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SURVEYED CENTERLINE
PERMANENT EASEMENT
TEMPORARY EASEMENT
ADDITIONAL TEMPORARY WORKSPACE
SITE
TX–MG–XXX.XXXXX TRACT NUMBER
PROPERTY LINE
CITY LIMITS
UG — UG U/G UTILITY LINE
OHE — OHE O/H POWER LINE
X — X FENCE
TS-X TEST STATION
HEAVY WALL PIPE
VALVE
SEGMENTABLE BEND
HDD ENTRY/ EXIT
MAG BED
PCR DECOUPLER
AC — AC MITIGATOR CABLE
MILEPOST XX+XX
MONUMENT
COUNTY LINE
SS — SS SANITARY SEWER
S — S STORM SEWER
RAILROAD
FOREIGN PIPELINE
P.I.
CL ROAD
BORE ENTRY/ EXIT
TREE LINE
POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

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ENVIRONMENTAL SENSITIVE AREA (ESA)
SURVEYED WATERWAYS
EEM & ESS WETLANDS (AVOIDANCE AREA)
PEM WETLANDS
PFO & PSS WETLANDS
FLOODPLAIN
POND
STREAMS
OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
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BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	664'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	1,836'
7	TEST LEAD TYPE 1 - IR FREE	1
11	MITIGATION CABLE X 2	1,488'
12	PCR	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'	
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412	
APP'D	DATE	JOB NO. 156.6977.0001	

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 944+36 TO STA. 969+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-040 REV. 1

Exhibit #3

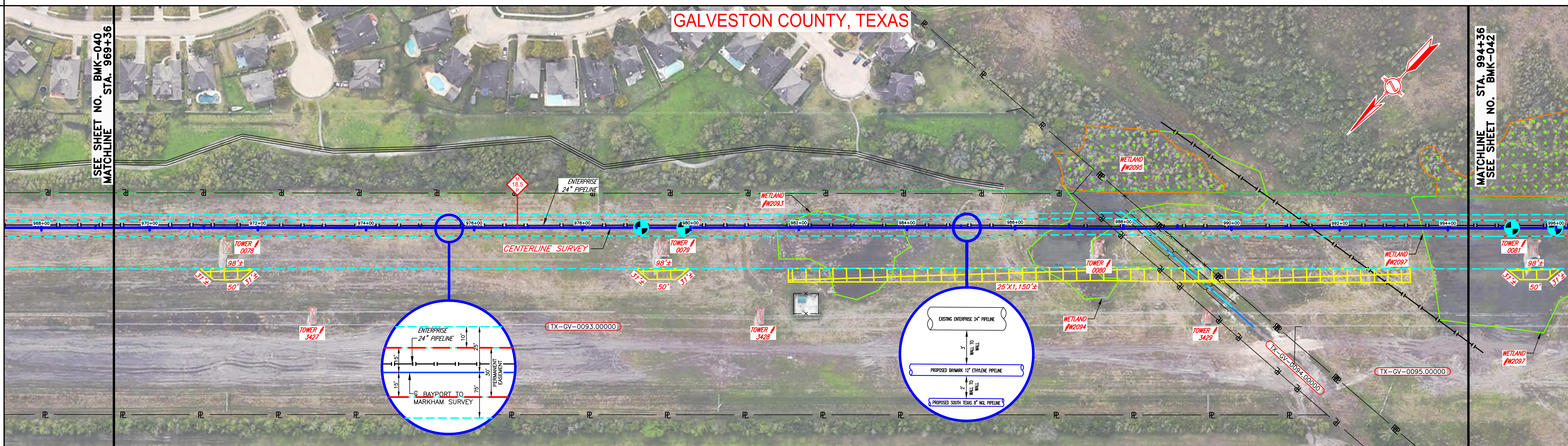
OWNERSHIP

TRACT NUMBER / OWNER NAME / RODS	969+36		987+77		988+70		994+36
		TX-GV-0093.00000 CITY OF LEAGUE CITY		TX-GV-0094.00000 KW INTRESTS, LP 30' WIDE PERMANENT EASEMENT		TX-GV-0095.00000 MARTRON LLC 30' WIDE PERMANENT EASEMENT	

STATIONING

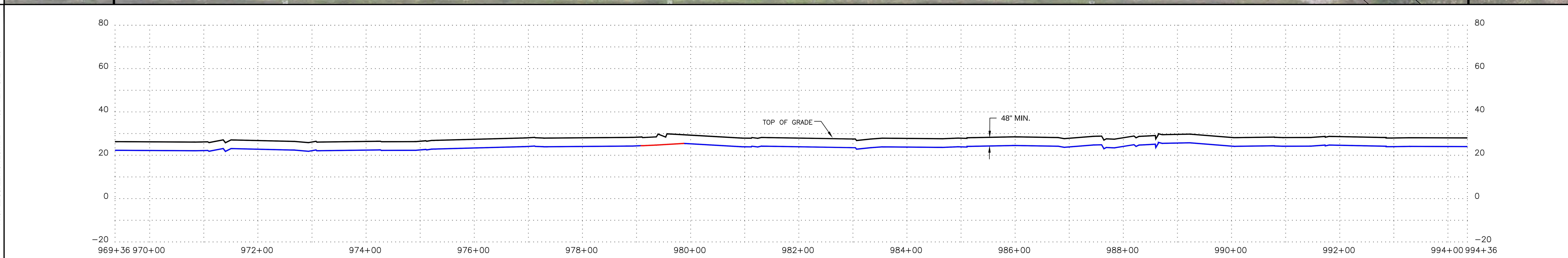
Station	Description
971+43	TRANSMISSION TOWER NO. 0078, 21' RT.
973+01	TRANSMISSION TOWER NO. 3427, 145' RT.
979+48	TRANSMISSION TOWER NO. 0079, 21' RT.
981+28	TRANSMISSION TOWER NO. 3428, 146' RT.
981+61	PEM WETLAND W2093
983+92	PEM WETLAND W2093
986+79	PEM WETLAND W2094
987+54	TRANSMISSION TOWER NO. 0080, 26' RT.
987+77	PROPERTY LINE
987+82	PEM WETLAND W2094
988+22	TOP OF SLOPE
988+33	C/L DITCH
988+34	STREAM S2096
988+42	TOP OF SLOPE
988+69	GATE
988+70	PROPERTY LINE
989+59	TRANSMISSION TOWER NO. 3429, 148' RT.
991+48	U/G DENBURY GREEN 24" PIPELINE, (5.0' COV.)
993+52	PEM WETLAND W2097

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING: 969+36; (12) PCR, (1) 972' at 973+92; (11) 1469'; AC mitigation cable; 979+08 to 979+88 (2) 80'; (12) PCR at 981+92; 984+05; (1) 1448'; (8) TS-2 at 991+49; 994+36

COVER: 48" MINIMUM — VARIES (979+08 to 979+88) — 48" MINIMUM

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES: 981+61 W2093 983+92; 986+79 W2094 987+82; 988+34 S2096; 993+52 W2097

CONSTRUCTION TECHNIQUES: BORE (979+08 to 979+88)

ESA

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
2. THE PIPELINE SHALL HAVE A MINIMUM OF 48" OF COVER, OR OTHERWISE NOTED IN THE COVER BAND.
3. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES AND EQUIPMENT OPERATION OR TRANSPORTATION TO THE ROW, DESIGNATED WORKSPACE, PUBLIC ROADS, AND DESIGNATED ACCESS ROADS.
4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

SURVEYED CENTERLINE; PERMANENT EASEMENT; TEMPORARY EASEMENT; ADDITIONAL TEMPORARY WORKSPACE; SITE; TX-MG-XXX.XXXXX TRACT NUMBER; PROPERTY LINE; CITY LIMITS; U/G UTILITY LINE; O/H POWER LINE; FENCE; TS-X TEST STATION; HEAVY WALL PIPE; VALVE; SEGMENTABLE BEND; HDD ENTRY/ EXIT; MAG BED; PCR DECOUPLER; AC MITIGATOR CABLE; MILEPOST; MONUMENT; COUNTY LINE; SANITARY SEWER; STORM SEWER; RAILROAD; FOREIGN PIPELINE; P.I.; CL ROAD; BORE ENTRY/ EXIT; TREE LINE; POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
3. FOR A COMPLETE LIST OF WATERWAYS AND WETLAND CROSSING TECHNIQUES REFER TO THE WATERS TABLE.
4. CLEARING CONDUCTED BETWEEN MARCH 1 AND AUGUST 30 MUST BE COORDINATED WITH ENVIRONMENTAL INSPECTOR FOR COMPLIANCE TO MIGRATORY BIRD ACT.
5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

ENVIRONMENTAL SENSITIVE AREA (ESA); SURVEYED WATERWAYS; EEM & ESS WETLANDS (AVOIDANCE AREA); PEM WETLANDS; PFO & PSS WETLANDS; FLOODPLAIN; POND; STREAMS; OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	2,420'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	80'
8	TEST LEAD TYPE 2 - IR FREE - FOREIGN LINE CROSSING	1
11	MITIGATION CABLE X 2	2,938'
12	PCR	2

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID (04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC — EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 969+36 TO STA. 994+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-041 REV. 1

Exhibit #3

OWNERSHIP

TRACT NUMBER OWNER NAME RODS	994+36		1019+36
		TX-GV-0095.00000 MARTRON LLC 30' WIDE PERMANENT EASEMENT	

STATIONING

995+58 TRANSMISSION TOWER NO. 0081
21' RT.

996+78 PEM WETLAND W2097

997+52 TRANSMISSION TOWER NO. 3430
145' RT.

999+41 HDD EXIT, TEST LEAD

1003+63 TRANSMISSION TOWER NO. 0082
18' RT.
1004+00 TOE OF SLOPE
1004+25 STREAM S2099
1004+29 TOP OF SLOPE
1004+50 TOE OF SLOPE
1004+66 C/L AMERICAN CANAL
1005+00 STREAM S2099
1005+15 TOP OF SLOPE
1005+15 TOE OF SLOPE
1006+02 EDGE OF ROAD
1006+05 TRANSMISSION TOWER NO. 3431
1006+16 C/L PRIVATE ROAD (DIRT)
1006+32 EDGE OF ROAD

1011+38 TRANSMISSION TOWER NO. 0083
16' RT.

1013+17 HDD ENTRY, TEST LEAD

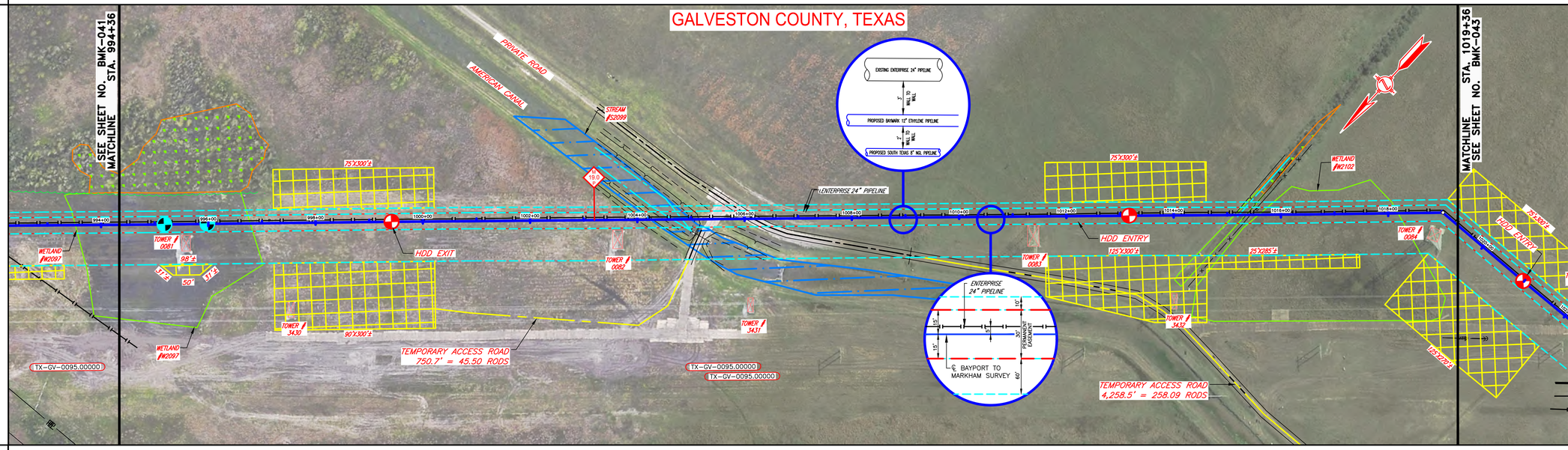
1014+01 TRANSMISSION TOWER NO. 3432
146' RT.

1015+13 PEM WETLAND W2101
1015+21 C/L CREEK
1015+34 PEM WETLAND W2101
1015+35 TOP OF SLOPE
1015+42 GATE
1015+57 PEM WETLAND W2102

1018+19 PEM WETLAND W2102

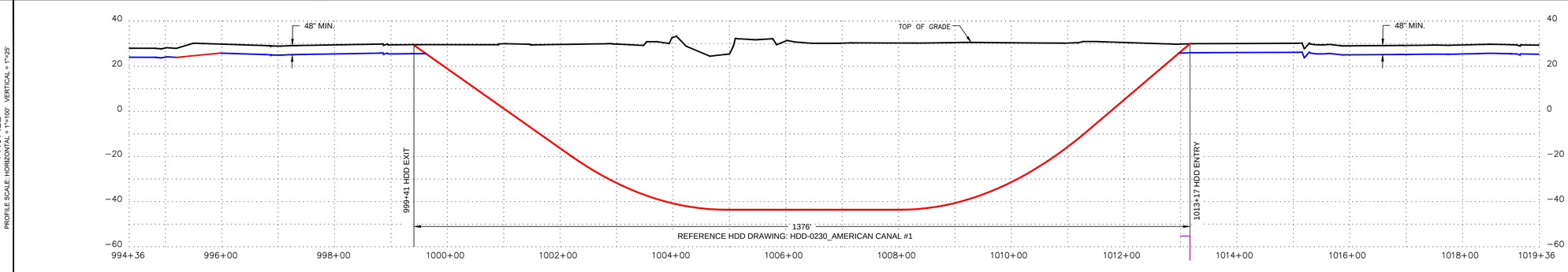
1018+81 TRANSMISSION TOWER NO. 0084
26' RT.
1019+02 P.I. < 41°13'36" RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING	82' (1)	80' (2)	343' (1)	(7)	1376' (2)	(7)	619' (11)	619' (1)	(12 PCR)	(4)
	995+18	995+98		999+41		1013+17			1016+17	1019+02
COVER	48" MIN.	VARIES	48" MINIMUM		VARIES	1006+02	84" MIN.	1006+32	VARIES	48" MINIMUM
WETLANDS / WATER BODIES	W2097	996+78			1004+25 S2099 1005+00		1015+13 W2101	1015+34	1015+57 W2102	1018+19
CONSTRUCTION TECHNIQUES		BORE			HDD BUNDLE					
ESA										

AC AC AC AC AC AC AC AC AC AC AC AC

811 Know what's below. Call before you dig.

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
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- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX-MG-XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG U/G UTILITY LINE
- OHE — OHE O/H POWER LINE
- X — X FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS SANITARY SEWER
- S — S STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

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7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	1,044'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	1,456'
4	12.75" OD X 0.375" WT, SEGMENTAL BEND, WPHY60	1
7	TEST LEAD TYPE 1 - IR FREE	2
11	MITIGATION CABLE X 2	1,238'
12	PCR	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(04/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 994+36 TO STA. 1019+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-042 REV. 1

Exhibit #3

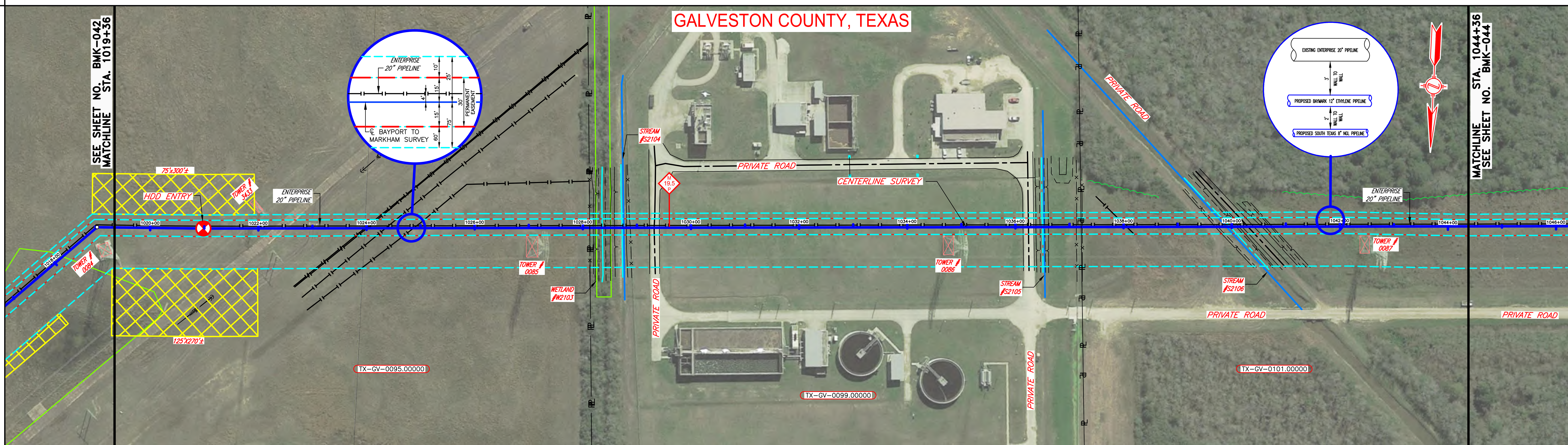
OWNERSHIP

TRACT NUMBER / OWNER NAME / RODS	TX-GV-0095.00000	TX-GV-0099.00000	TX-GV-0101.00000
	MARTRON LLC	CITY OF LEAGUE CITY	WESLEY WEST CATTLE, L.P., ET AL
	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT	30' WIDE PERMANENT EASEMENT
Stations	1019+36 – 1028+13	1028+13 – 1037+22	1037+22 – 1044+36

STATIONING

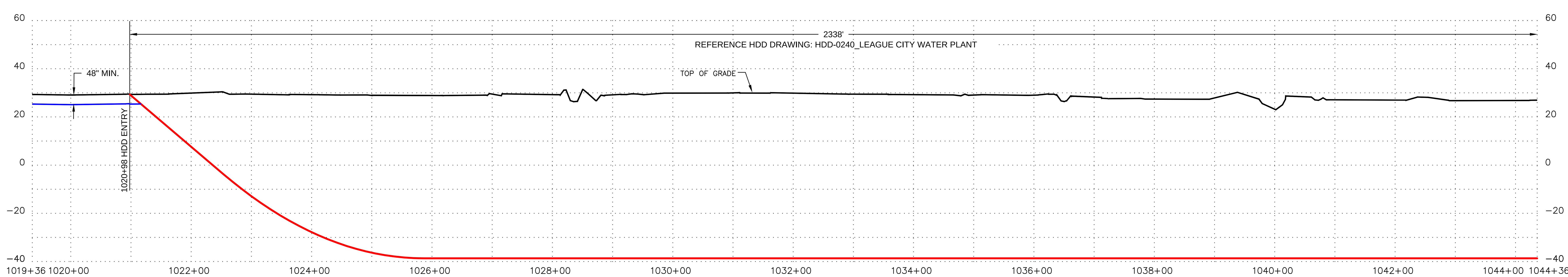
- 1020+98 HDD ENTRY, TEST LEAD
- 1021+54 OVERHEAD ELECTRIC
- 1022+01 TRANSMISSION TOWER NO. 03433 28' LT.
- 1022+63 OVERHEAD ELECTRIC
- 1023+90 GUY ANCHOR 103' LT.
- 1023+97 U/G EXXONMOBIL PIPELINE (5.0' COV.)
- 1024+00 U/G EXXONMOBIL PIPELINE (5.0' COV.)
- 1024+35 U/G KINDER MORGAN PIPELINE (5.0' COV.)
- 1024+87 U/G DENBURY GREEN 24" PIPELINE (5.0' COV.)
- 1026+95 TRANSMISSION TOWER NO. 00085 15' RT.
- 1028+13 PROPERTY LINE & GATE
- 1028+19 TOP OF SLOPE
- 1028+23 TOE OF SLOPE
- 1028+25 PEM WETLAND W2103
- 1028+30 TOE OF SLOPE
- 1028+36 C/L DITCH
- 1028+42 TOE OF SLOPE
- 1028+51 TOP OF SLOPE & PEM WETLAND W2103
- 1028+59 TOP OF SLOPE
- 1028+70 C/L BAR DITCH
- 1028+76 STREAM S2104
- 1028+81 TOP OF SLOPE
- 1028+88 FENCE
- 1029+23 EDGE OF ROAD
- 1029+32 C/L ROAD (PAVED)
- 1029+42 EDGE OF ROAD
- 1034+76 TRANSMISSION TOWER NO. 00086 18' RT.
- 1036+14 EDGE OF ROAD
- 1036+24 C/L ROAD (PAVED)
- 1036+34 EDGE OF ROAD
- 1036+38 TOP OF SLOPE
- 1036+46 TOE OF SLOPE
- 1036+50 C/L DITCH
- 1036+53 STREAM S2105
- 1036+54 TOE OF SLOPE
- 1036+61 TOP OF SLOPE
- 1037+13 FENCE
- 1037+22 PROPERTY LINE
- 1037+24 GATE
- 1038+06 U/G DENBURY GREEN 24" PIPELINE (UNK. COV.)
- 1039+68 TOP OF SLOPE
- 1039+74 TOE OF SLOPE
- 1039+89 STREAM S2106
- 1040+07 C/L SLOUGH
- 1040+12 TOE OF SLOPE
- 1040+18 TOP OF SLOPE
- 1040+40 EDGE OF ROAD
- 1040+46 C/L ROAD (GRAVEL)
- 1040+53 EDGE OF ROAD
- 1040+60 TOP OF SLOPE
- 1040+70 TOE OF SLOPE
- 1040+74 TOE OF SLOPE / TOP OF SLOPE
- 1042+46 TRANSMISSION TOWER NO. 0087 19' RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING: 1019+36 – 1020+98: 162' (11) (1) (7), AC; 1020+98 – 1044+36: 2338' (2)

COVER	48" MINIMUM	VARIES	1029+23 84" MIN. 1029+42	VARIES	1036+14 84" MIN. 1036+34	VARIES	1040+18 84" MIN. 1040+40	VARIES

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES	1028+25 W2103 1028+51; 1028+76 S2104; 1036+53 S2105; 1039+89 S2106
CONSTRUCTION TECHNIQUES	HDD BUNDLE
ESA	

GENERAL NOTES / LEGEND

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Legend: SURVEYED CENTERLINE; PERMANENT EASEMENT; TEMPORARY EASEMENT; ADDITIONAL TEMPORARY WORKSPACE; SITE; TRACT NUMBER (TX-MG-XXX.XXXXX); PROPERTY LINE; COUNTY LINE; CITY LIMITS; U/G UTILITY LINE; O/H POWER LINE; FENCE; TEST STATION; HEAVY WALL PIPE; VALVE; SEGMENTABLE BEND; HDD ENTRY/ EXIT; MAG BED; DECOUPLER; AC MITIGATOR CABLE; MILEPOST; MONUMENT; SANITARY SEWER; STORM SEWER; RAILROAD; FOREIGN PIPELINE; P.I.; CL ROAD; BORE ENTRY/ EXIT; TREE LINE; POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

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CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	162'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	2,338'
7	TEST LEAD TYPE 1 - IR FREE	1
11	MITIGATION CABLE X 2	324'

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID (04/20/2020)

SCALE IN FEET: 100' 0' 100' 200'

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC — EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 1019+36 TO STA. 1044+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-043 REV. 1

Exhibit #3

OWNERSHIP

TRACT NUMBER
OWNER NAME
RODS

1044+36 — TX-GV-0101.00000 — 1069+36

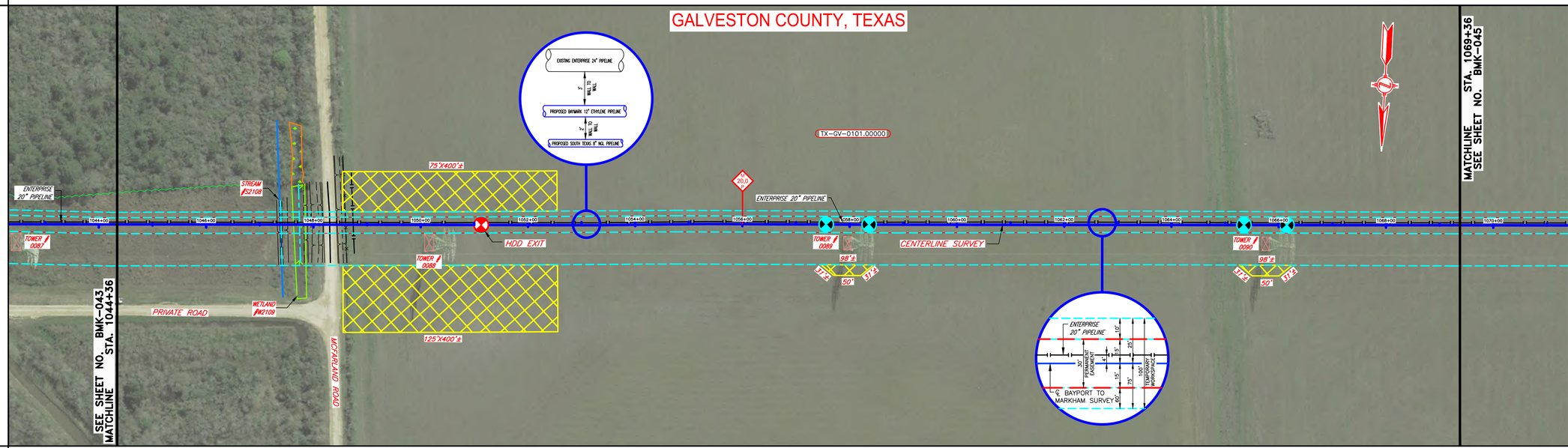
WESLEY WEST CATTLE, L.P., ET AL

30' WIDE PERMANENT EASEMENT

STATIONING

1047+33 TOP OF SLOPE
1047+38 TOE OF SLOPE
1047+39 STREAM S2108
1047+40 C/L PITCH, END OF 32" CULVERT, 24' RT.
1047+42 TOE OF SLOPE
1047+52 TOP OF SLOPE
1047+63 PSS WETLAND W2109
1047+74 TOE OF SLOPE
1047+82 TOP OF SLOPE
1047+85 PSS WETLAND W2109
1047+88 TOP OF SLOPE
1047+96 END OF 12" CULVERT 25' RT.
1048+09 TOE OF SLOPE
1048+11 TOE OF SLOPE
1048+19 TOP OF SLOPE
1048+30 C/L MCFARLAND ROAD, GRAVEL)
1048+43 EDGE OF ROAD
1048+45 TOP OF SLOPE
1048+53 TOE OF SLOPE
1048+60 TOP OF SLOPE & FENCE
1048+74 U/G KINDER MORGAN 20" PIPELINE (10.9 COV.)
1050+16 TRANSMISSION TOWER NO. 0088 17° RT.
1051+13 HDD EXIT, TEST LEAD
1057+96 TRANSMISSION TOWER NO. 0089, 22° RT.
1065+75 TRANSMISSION TOWER NO. 0090, 23° RT.

PLAN



PROFILE

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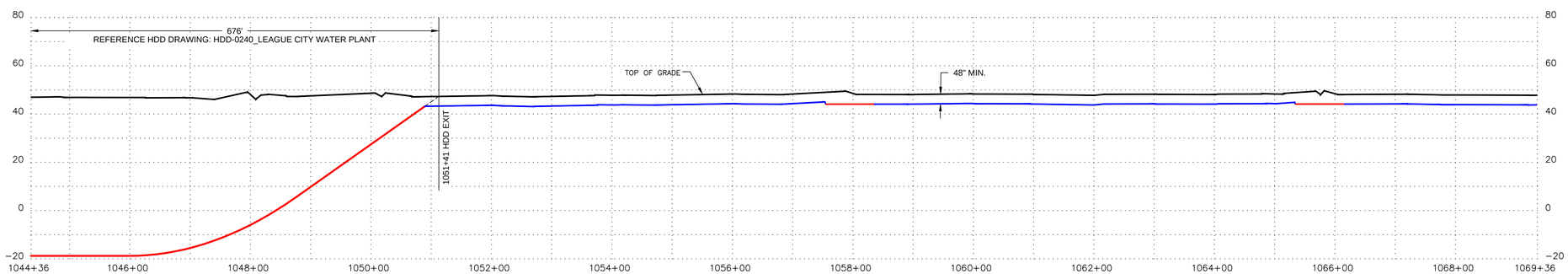

PIPE DETAIL

	1044+36	1051+13	1057+56	1058+36	1063+13	1065+35	1066+15	1069+36
MATERIAL / COATING	677' (2)	7° (7) 643' (1) (12) PCR		80' (2)	1823' (11) 699' (1) (12) PCR		80' (2)	321' (1)
COVER		48" MINIMUM		VARIES	48" MINIMUM		VARIES	48" MINIMUM
WETLANDS / WATER BODIES	1047+39 S2108	1047+63 W2109	1047+85					
CONSTRUCTION TECHNIQUES			BORE				BORE	
ESA								

Know what's below. Call before you dig.

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- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX-MG-XXX.XXXXX TRACT NUMBER
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- CITY LIMITS
- UG — UG — U/G UTILITY LINE
- OHE — OHE — O/H POWER LINE
- X — X — FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- SS — SS — SANITARY SEWER
- S — S — STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE
- COUNTY LINE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
3. FOR A COMPLETE LIST OF WATERWAYS AND WETLAND CROSSING TECHNIQUES REFER TO THE WATERS TABLE.
4. CLEARING CONDUCTED BETWEEN MARCH 1 AND AUGUST 30 MUST BE COORDINATED WITH ENVIRONMENTAL INSPECTOR FOR COMPLIANCE TO MIGRATORY BIRD ACT.
5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	1,663'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	837'
7	TEST LEAD TYPE 1 - IR FREE	1
11	MITIGATION CABLE X 2	3,646'
12	PCR	2

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(05/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN	EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D	EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D		DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 1044+36 TO STA. 1069+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-044 REV. 1

Exhibit #3

OWNERSHIP

TRACT NUMBER
OWNER NAME
RODS

1069+36

TX-GV-0101.00000

WESLEY WEST CATTLE, L.P., ET AL

30' WIDE
PERMANENT EASEMENT

1094+36

STATIONING

1073+55 TRANSMISSION TOWER NO. 0091 23° RT.

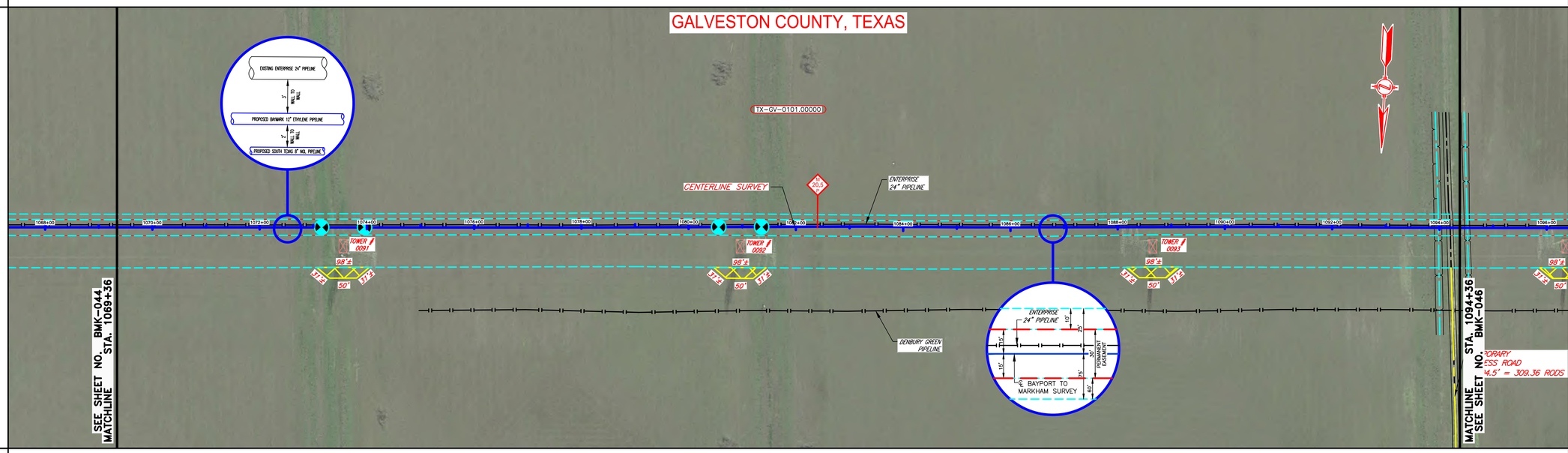
1080+96 TRANSMISSION TOWER NO. 0092 23° RT.

1088+65 TRANSMISSION TOWER NO. 0093 24° RT.

1093+90 TOP OF SLOPE
1093+98 C/L DRY DITCH
1094+04 TOP OF SLOPE
1094+13 EDGE OF ROAD
1094+20 C/L ROAD
1094+25 EDGE OF ROAD

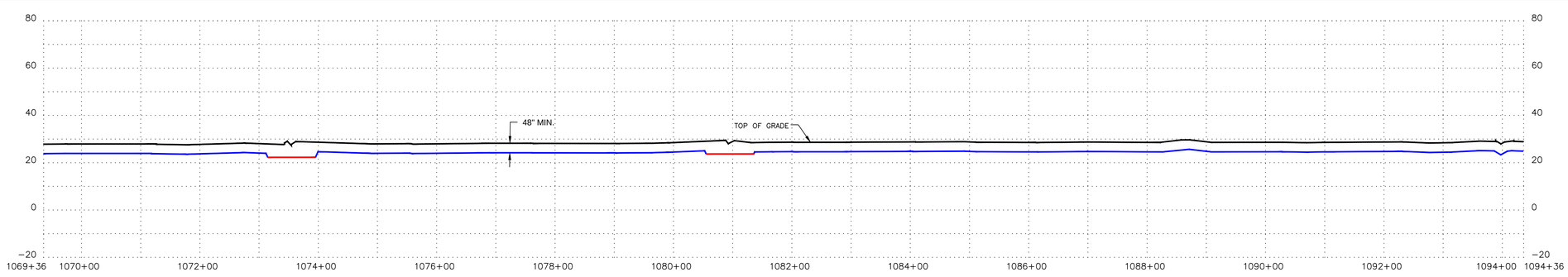
PLAN

GALVESTON COUNTY, TEXAS



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

	1069+36	1071+13	1073+15	1073+95	1079+13	1080+56	1081+36	1087+13	1094+36
MATERIAL / COATING		379' (1) 12 PCR		80' (2)	660' (1) 12 PCR		80' (2)	2,500' (11)	1300' (12 PCR) (1)
COVER		48" MINIMUM		VARIES	48" MINIMUM		VARIES	48" MINIMUM	

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES									
CONSTRUCTION TECHNIQUES				BORE			BORE		
ESA									

811 Know what's below. Call before you dig.

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
2. THE PIPELINE SHALL HAVE A MINIMUM OF 48" OF COVER, OR OTHERWISE NOTED IN THE COVER BAND.
3. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES AND EQUIPMENT OPERATION OR TRANSPORTATION TO THE ROW, DESIGNATED WORKSPACE, PUBLIC ROADS, AND DESIGNATED ACCESS ROADS.
4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX-MG-XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG — U/G UTILITY LINE
- OHE — OHE — O/H POWER LINE
- X — X — FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS — SANITARY SEWER
- S — S — STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
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- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	2,340'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	160'
11	MITIGATION CABLE X 2	5,000'
12	PCR	3

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(05/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 1069+36 TO STA. 1094+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-045 REV. 1

Exhibit #3

OWNERSHIP

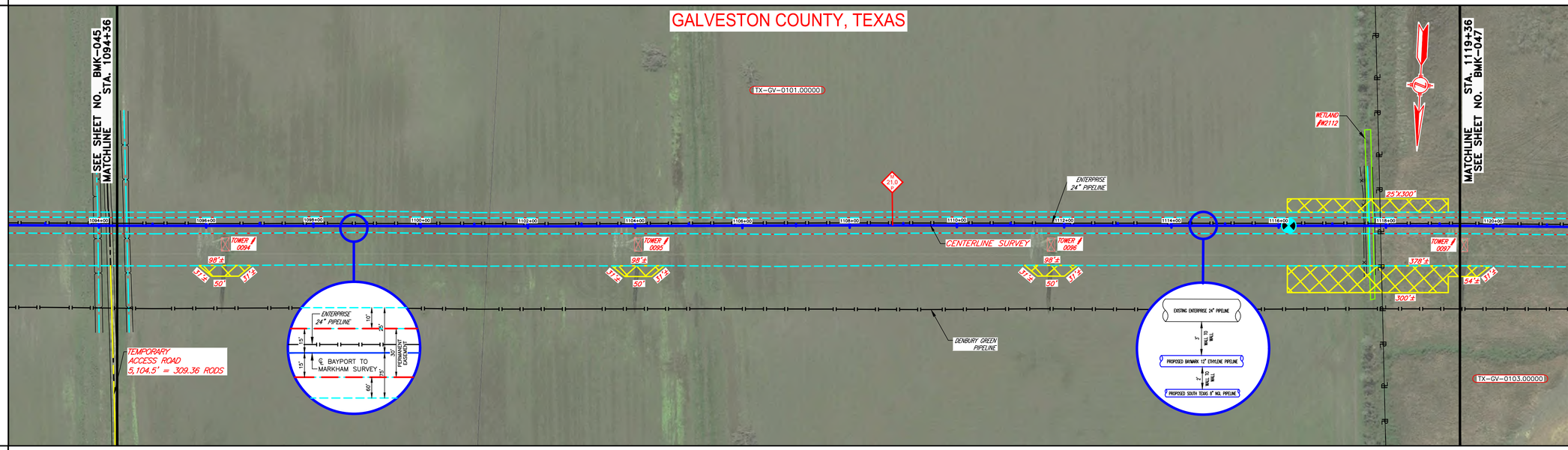
TRACT NUMBER
OWNER NAME
RODS

1094+36	TX–GV–0101.00000	1117+90	TX–GV–0103.00000	1119+36
	WESLEY WEST CATTLE, L.P., ET AL 30' WIDE PERMANENT EASEMENT		THE ESTATE OF GEORGE A. BOFYSIL, JR 30' WIDE PERMANENT EASEMENT	

STATIONING

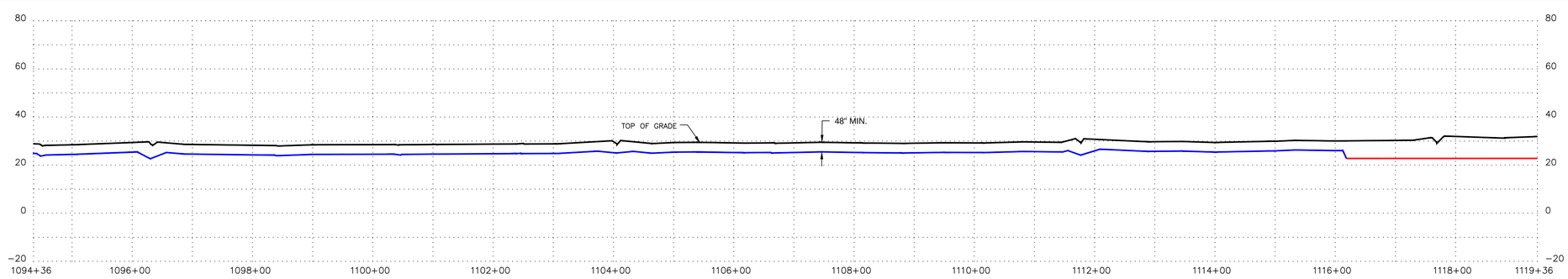
- 1094+47 TOP OF SLOPE
- 1094+52 C/L DRY DITCH
- 1094+57 TOP OF SLOPE
- 1096+36 TRANSMISSION TOWER NO. 0094 23° RT.
- 1104+05 TRANSMISSION TOWER NO. 0095 22° RT.
- 1111+75 TRANSMISSION TOWER NO. 0096 24° RT.
- 1117+58 FENCE
- 1117+61 TOP OF SLOPE
- 1117+66 PEM WETLAND W2112
- 1117+69 C/L DITCH
- 1117+76 PEM WETLAND W2112
- 1117+79 TOP OF SLOPE
- 1117+90 PROPERTY LINE

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING	12" PCR; AC; 2183' (1); 2204' (11); 317' (2)
COVER	48" MINIMUM; VARIES
ENVIRONMENTAL CONDITIONS: WETLANDS / WATER BODIES	1117+66 W2112 1117+76
CONSTRUCTION TECHNIQUES	BORE
ESA	

1094+36 · 1095+13 · 1103+13 · 1111+13 · 1116+19 · 1116+40 · 1119+36

Know what's below. Call before you dig.

GENERAL NOTES / LEGEND

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- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX–MG–XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG — U/G UTILITY LINE
- OHE — OHE — O/H POWER LINE
- X — X — FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST XX
- MONUMENT
- COUNTY LINE
- SS — SS — SANITARY SEWER
- S — S — STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

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2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
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7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	2,183'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	317'
11	MITIGATION CABLE X 2	4,408'
12	PCR	4

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(05/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC

EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 1094+36 TO STA. 1119+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-046 REV. 1

Exhibit #3

OWNERSHIP

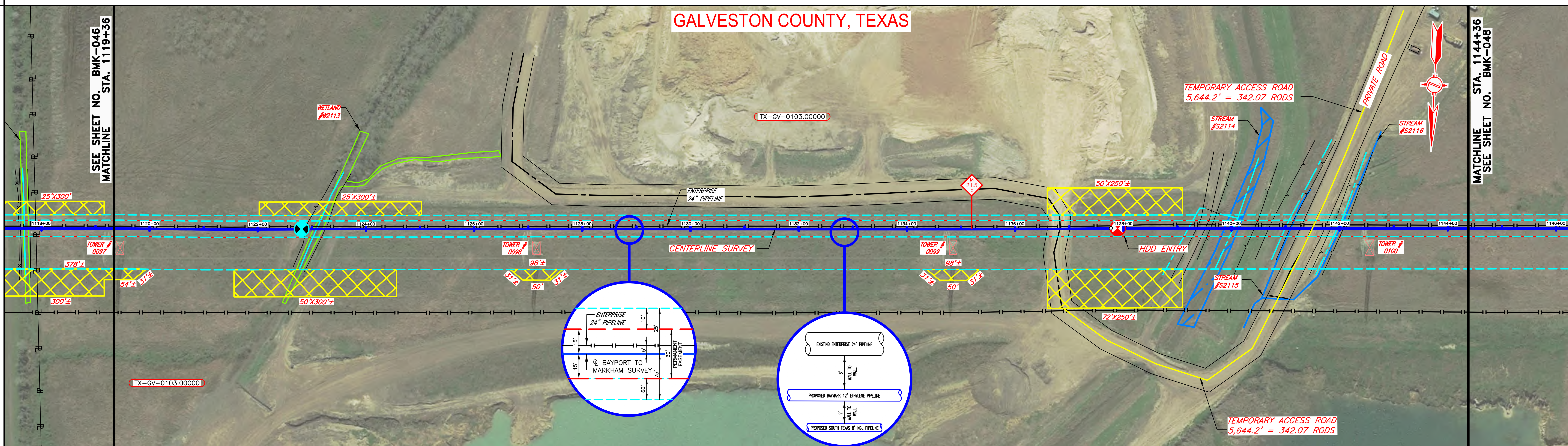
TRACT NUMBER / OWNER NAME / RODS	
TRACT NUMBER	TX-GV-0103.00000
OWNER NAME	THE ESTATE OF GEORGE A. BOFYSIL, JR
RODS	30' WIDE PERMANENT EASEMENT

1119+36 — 1144+36

STATIONING

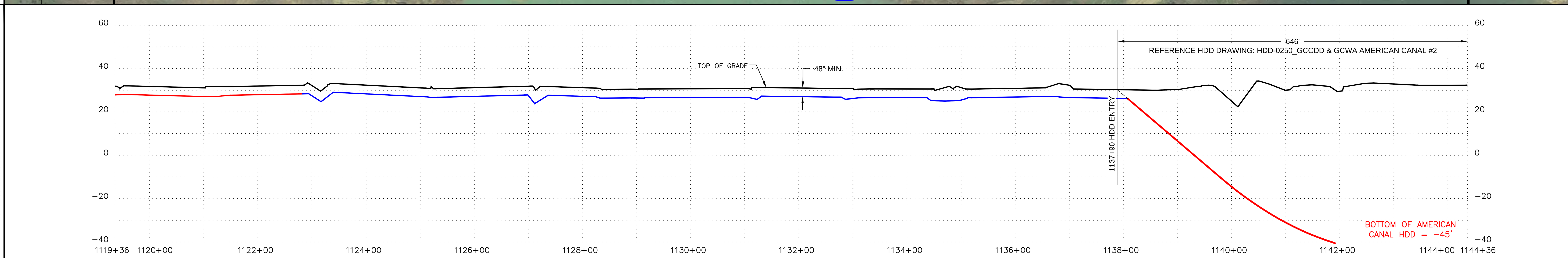
- 1119+45 TRANSMISSION TOWER NO. 0097 24' RT.
- 1122+90 TOP OF SLOPE
- 1123+03 PEM WETLAND W2113
- 1123+09 C/L BAR DITCH
- 1123+20 PEM WETLAND W2113
- 1123+25 TOP OF SLOPE
- 1127+15 TRANSMISSION TOWER NO. 0098 23' RT.
- 1134+85 TRANSMISSION TOWER NO. 0099 22' RT.
- 1136+60 EDGE OF ROAD
- 1136+83 C/L PRIVATE ROAD (DIRT)
- 1137+01 EDGE OF ROAD
- 1137+77 P.I. < 01°02'12" RT.
- 1137+90 HDD ENTRY, TEST LEAD
- 1139+20 C/L DITCH
- 1139+36 EDGE OF ROAD
- 1139+51 EDGE OF ROAD, EDGE OF 36" CULVERT 37' LT.
- 1139+61 TOP OF SLOPE
- 1139+80 END OF 36" CULVERT 26' LT.
- 1139+87 STREAM S2114
- 1140+03 C/L DITCH
- 1140+13 STREAM S2114
- 1140+42 TOP OF SLOPE
- 1140+69 TOP OF SLOPE
- 1140+99 C/L DITCH
- 1141+08 TOP OF SLOPE
- 1141+09 STREAM S2115
- 1141+27 EDGE OF ROAD
- 1141+49 C/L ROAD (DIRT)
- 1141+50 C/L ACCESS ROAD
- 1141+72 EDGE OF ROAD
- 1141+84 TOP OF SLOPE
- 1141+96 C/L DITCH
- 1142+01 STREAM S2116
- 1142+07 TOP OF SLOPE
- 1142+55 TRANSMISSION TOWER NO. 0100 21' RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

	1119+36 – 1122+81	1122+81 – 1137+90	1137+90 – 1144+36
MATERIAL / COATING	345' (2)	1509' (1)	(7) 646' (2)
COVER	VARIES	48" MINIMUM	VARIES

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES	1123+03 W2113 1123+20	1139+87 S2114 1140+13; 1141+09 S2115; 1142+01 S2116
CONSTRUCTION TECHNIQUES	BORE	HDD BUNDLE
ESA		

811 Know what's below. Call before you dig.

GENERAL NOTES / LEGEND

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SURVEYED CENTERLINE
PERMANENT EASEMENT
TEMPORARY EASEMENT
ADDITIONAL TEMPORARY WORKSPACE
SITE
TX-MG-XXX.XXXXX TRACT NUMBER
PROPERTY LINE
CITY LIMITS
U/G UTILITY LINE
O/H POWER LINE
FENCE
TS-X TEST STATION
HEAVY WALL PIPE
VALVE
SEGMENTABLE BEND
HDD ENTRY/ EXIT
MAG BED
PCR DECOUPLER
AC AC MITIGATOR CABLE
MILEPOST (M XX P)
MONUMENT
COUNTY LINE
SS SANITARY SEWER
S STORM SEWER
RAILROAD
FOREIGN PIPELINE
P.I.
CL ROAD
BORE ENTRY/ EXIT
TREE LINE
Ⓟ POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
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ENVIRONMENTAL SENSITIVE AREA (ESA)
SURVEYED WATERWAYS
EEM & ESS WETLANDS (AVOIDANCE AREA)
PEM WETLANDS
PFO & PSS WETLANDS
FLOODPLAIN
POND
STREAMS
OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR ALL TEST STATIONS: EXOTHERMIC WIRE INSTALLATION SPEC. VISCOTAQ, DWG. 13-2073-53, 13-2073-53A, 13-2073-57
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES
- FOR COPPER MITIGATION CABLE: 4.3.3HVAC MITIGATION SPECIFICATION, DWG 4.3.6 AC MITIGATOR CABLE INSTALLATION

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	1,509'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	991'
7	TEST LEAD TYPE 1 - IR FREE	7

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(05/20/2020)

100' 0' 100' 200'
SCALE IN FEET

BAYMARK PIPELINE LLC — EnSite USA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412
APP'D	DATE	JOB NO. 156.6977.0001

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 1119+36 TO STA. 1144+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-047 REV. 1

Exhibit #3

OWNERSHIP

TRACT NUMBER
OWNER NAME
RODS

1144+36

TX–GV–0103.00000

THE ESTATE OF GEORGE A. BOFYSIL, JR

30' WIDE
PERMANENT EASEMENT

1149+12

TX–GV–0107.00000

THE ESTATE OF GEORGE A. BOFYSIL, JR

30' WIDE
PERMANENT EASEMENT

1169+36

STATIONING

1147+65 TOP OF SLOPE
1147+75 C/L DITCH
1147+90 TOP OF SLOPE
1148+16 EDGE OF WATER
1148+20 STREAM #S2117
1148+25 C/L CREEK
1148+37 EDGE OF WATER
1148+41 STREAM #S2117
1148+54 TOP OF SLOPE
1148+67 TOP OF SLOPE
1148+78 STREAM #S2118
1148+79 C/L DITCH
1148+79 TOP OF SLOPE
1148+89 PROPERTY LINE
1149+15 FENCE
1149+25 FRIENDSWOOD

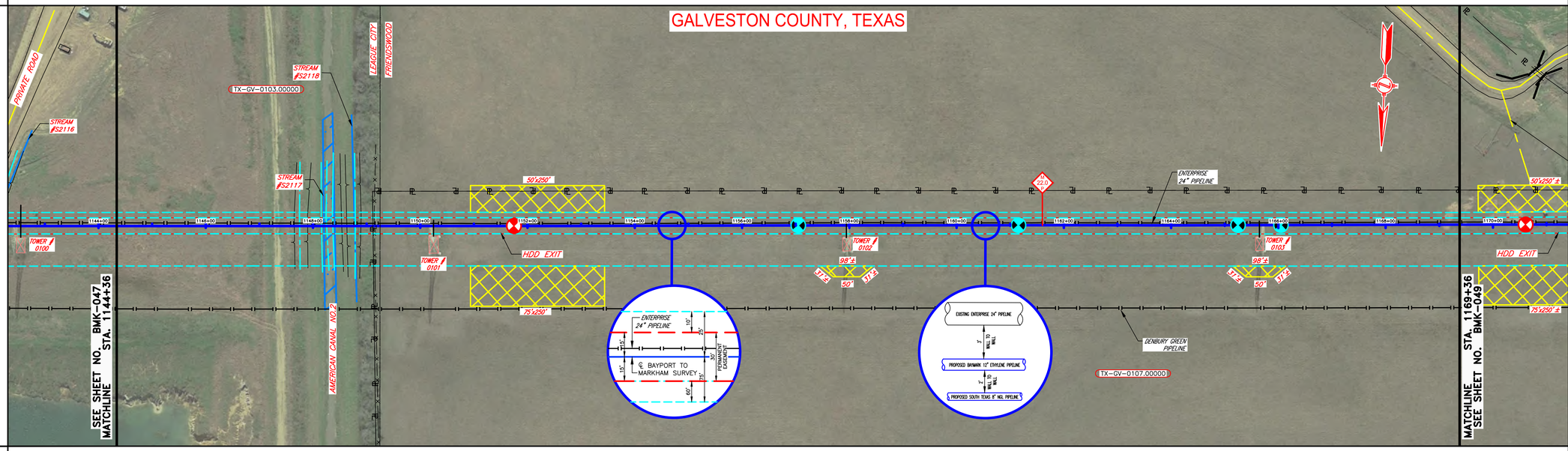
1150+25 TRANSMISSION TOWER NO. 0101
19° RT.

1151+75 HDD EXIT, TEST LEAD

1157+95 TRANSMISSION TOWER NO. 0102
22° RT.

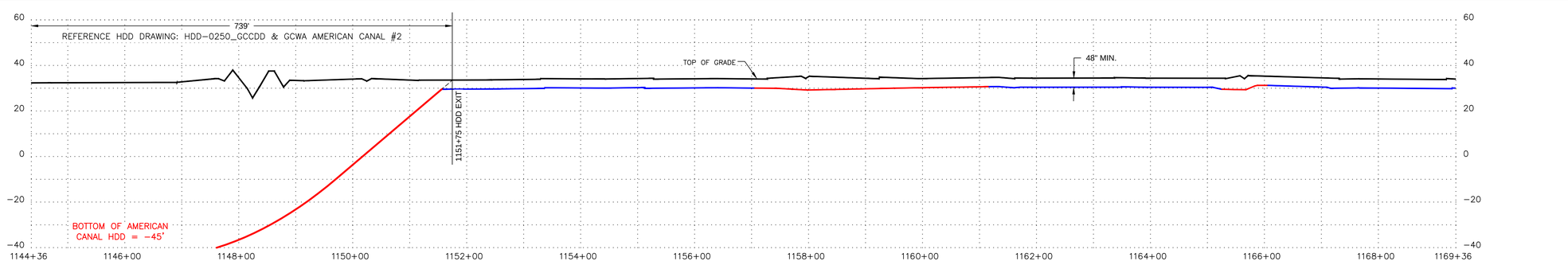
1165+65 TRANSMISSION TOWER NO. 0103
21° RT.

PLAN



PROFILE

PROFILE SCALE: HORIZONTAL = 1"=100' VERTICAL = 1"=25'



PIPE DETAIL

MATERIAL / COATING

739' (2) | LEAGUE CITY LIMIT LINE | (7) 37.5° | 530' (1) | 411' (2) | 409' (1) | 80' (2) | 331' (1)

1144+36 | 1149+12 | 1151+75 | 1157+05 | 1161+15 | 1165+25 | 1166+05 | 1169+36

COVER	VARIES		48" MINIMUM	VARIES	48" MINIMUM	VARIES	48" MINIMUM

ENVIRONMENTAL CONDITIONS

WETLANDS / WATER BODIES	1149+20 S2117	1149+71 1149+78 S2118					
CONSTRUCTION TECHNIQUES	HDD BUNDLE			BORE		BORE	
ESA							

GENERAL NOTES / LEGEND

1. FOREIGN UTILITY LOCATIONS ARE APPROXIMATE AND MUST BE VERIFIED BY CONTRACTOR.
2. THE PIPELINE SHALL HAVE A MINIMUM OF 48" OF COVER, OR OTHERWISE NOTED IN THE COVER BAND.
3. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES AND EQUIPMENT OPERATION OR TRANSPORTATION TO THE ROW, DESIGNATED WORKSPACE, PUBLIC ROADS, AND DESIGNATED ACCESS ROADS.
4. BENDS LESS THAN OR EQUAL TO 17 DEGREES SHALL BE FIELD BENDS.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE STATE "ONE CALL" SYSTEM PRIOR TO ANY EXCAVATION.

- SURVEYED CENTERLINE
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- ADDITIONAL TEMPORARY WORKSPACE
- SITE
- TX–MG–XXX.XXXXX TRACT NUMBER
- PROPERTY LINE
- CITY LIMITS
- UG — UG — U/G UTILITY LINE
- OHE — OHE — O/H POWER LINE
- X — X — FENCE
- TS-X TEST STATION
- HEAVY WALL PIPE
- VALVE
- SEGMENTABLE BEND
- HDD ENTRY/ EXIT
- MAG BED
- PCR DECOUPLER
- AC — AC MITIGATOR CABLE
- MILEPOST
- MONUMENT
- COUNTY LINE
- SS — SS — SANITARY SEWER
- S — S — STORM SEWER
- RAILROAD
- FOREIGN PIPELINE
- P.I.
- CL ROAD
- BORE ENTRY/ EXIT
- TREE LINE
- POWER POLE

ENVIRONMENTAL NOTES/ LEGEND

1. ALL VEHICLES AND EQUIPMENT MUST BE CLEANED PRIOR TO ENTERING PROJECT RIGHT-OF-WAY.
2. REFER TO REVEGETATION PLAN FOR SEED MIXES AND APPLICATION REQUIREMENTS UNLESS OTHERWISE SPECIFIED ON THE ALIGNMENT SHEETS.
3. FOR A COMPLETE LIST OF WATERWAYS AND WETLAND CROSSING TECHNIQUES REFER TO THE WATERS TABLE.
4. CLEARING CONDUCTED BETWEEN MARCH 1 AND AUGUST 30 MUST BE COORDINATED WITH ENVIRONMENTAL INSPECTOR FOR COMPLIANCE TO MIGRATORY BIRD ACT.
5. CONTRACTOR SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT REQUIREMENTS AND ENVIRONMENTAL MANAGEMENT PLANS.
6. NO DREDGE OR FILL ACTIVITIES (NO GROUND DISTURBANCE) PERMITTED WITHIN ENVIRONMENTALLY SENSITIVE AREAS (ESA) UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.
7. NO MECHANICAL CLEARING SHALL OCCUR WITHIN ESA BOUNDARIES UNLESS OTHERWISE NOTED. REFER TO ESA PLANS AND ENVIRONMENTAL NOTES.

- ENVIRONMENTAL SENSITIVE AREA (ESA)
- SURVEYED WATERWAYS
- EEM & ESS WETLANDS (AVOIDANCE AREA)
- PEM WETLANDS
- PFO & PSS WETLANDS
- FLOODPLAIN
- POND
- STREAMS
- OYSTER

CP FEATURE DATA

- FOR ALL TEST STATIONS: SEE ENTERPRISE ENGINEERING STD.7000 - CORROSION PREVENTION FOR THE CONSTRUCTION OF NEW PIPELINES, STORAGE TANKS AND FACILITIES
- FOR COPPER MITIGATION CABLE: SEE ENTERPRISE ENGINEERING STD.7011 - ALTERNATING CURRENT INTERFERENCE AND MITIGATION ON PIPELINES AND FACILITIES

BILL OF MATERIALS

ITEM	DESCRIPTION	QTY.
1	12.75" OD X 0.328" WT, X-60, API 5L, PSL2, ERW, PEB, TRL	1,270'
2	12.75" OD X 0.472" WT, X-60, API 5L, PSL2, ERW, PEB, DRL	1,230'
7	TEST LEAD TYPE 1 - IR FREE	1

REVISIONS

NO.	DATE	BY	DESCRIPTION
0	04/20/2020	EUSA	ISSUE FOR BID
1	05/20/2020	EUSA	ADD PIPE TO PROFILE BAND

ISSUE FOR BID
(05/20/2020)

100' 0' 100' 200'
SCALE IN FEET

811 Know what's below. Call before you dig.

BAYMARK PIPELINE LLC

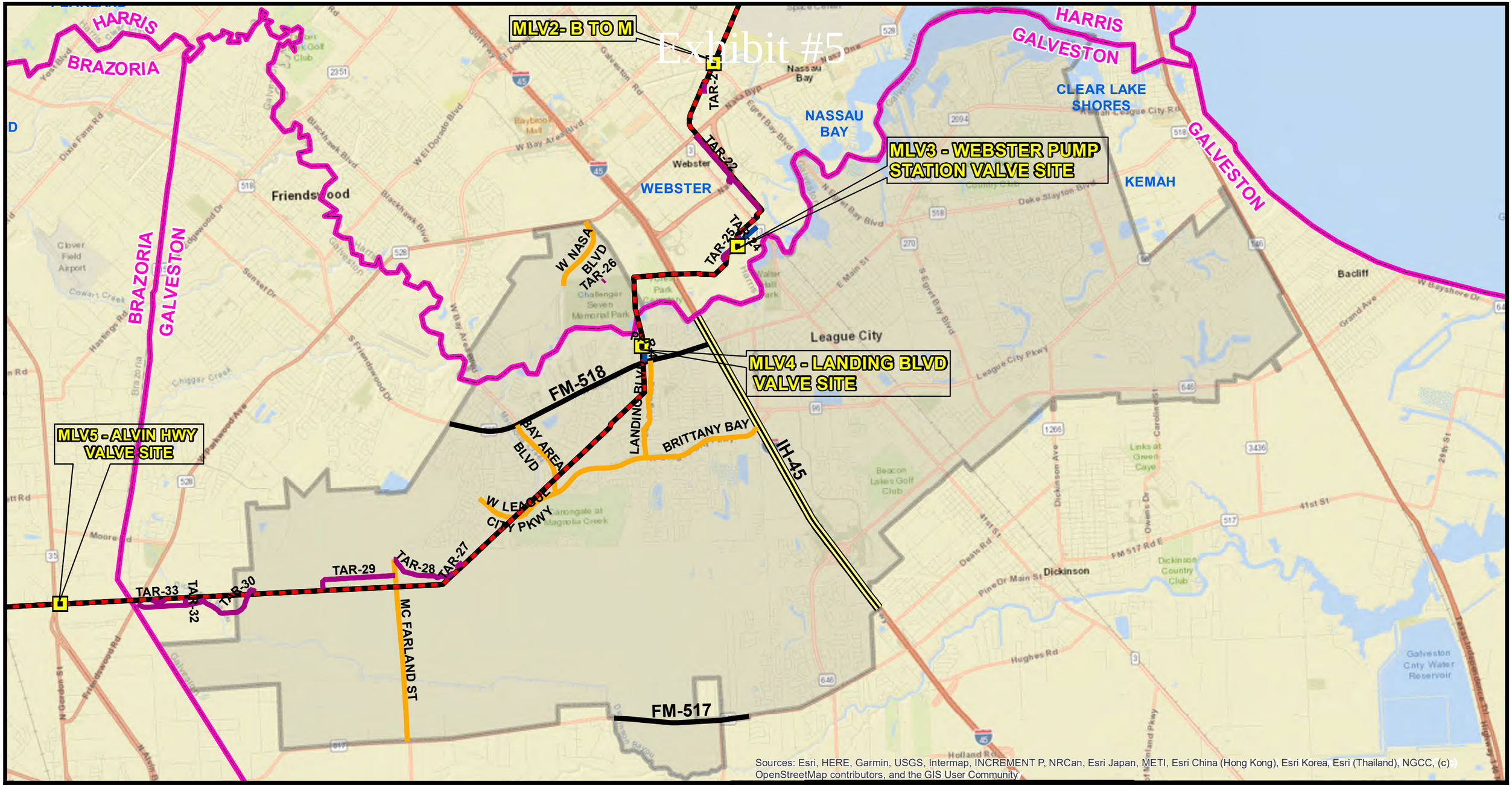
EnSiteUSA

DRAWN EUSA	DATE 02/01/2020	SCALE 1 = 100'	
CHK'D EUSA	DATE 02/01/2020	A.F.E. A42412	
APP'D	DATE	JOB NO. 156.6977.0001	

PROPOSED BAYMARK 12" PIPELINE
BAYPORT TO MARKHAM
STA. 1144+36 TO STA. 1169+36
GALVESTON COUNTY, TEXAS

DWG. NO. BMK-048 REV. 1

Exhibit #5



- Proposed Route
- AccessRoads_Permanent
- AccessRoads_Temporary
- CityRoads_League City
- Haul Roads_Farm to Market
- Haul Roads_US Highway
- Surface Site
- City Boundary
- County Boundary

N

BAYMARK PIPELINE LLC
SOUTH TEXAS NGL PIPELINES, LLC

LEAGUE CITY HAUL ROADS
GALVESTON COUNTY, TEXAS

ISSUED FOR REVIEW

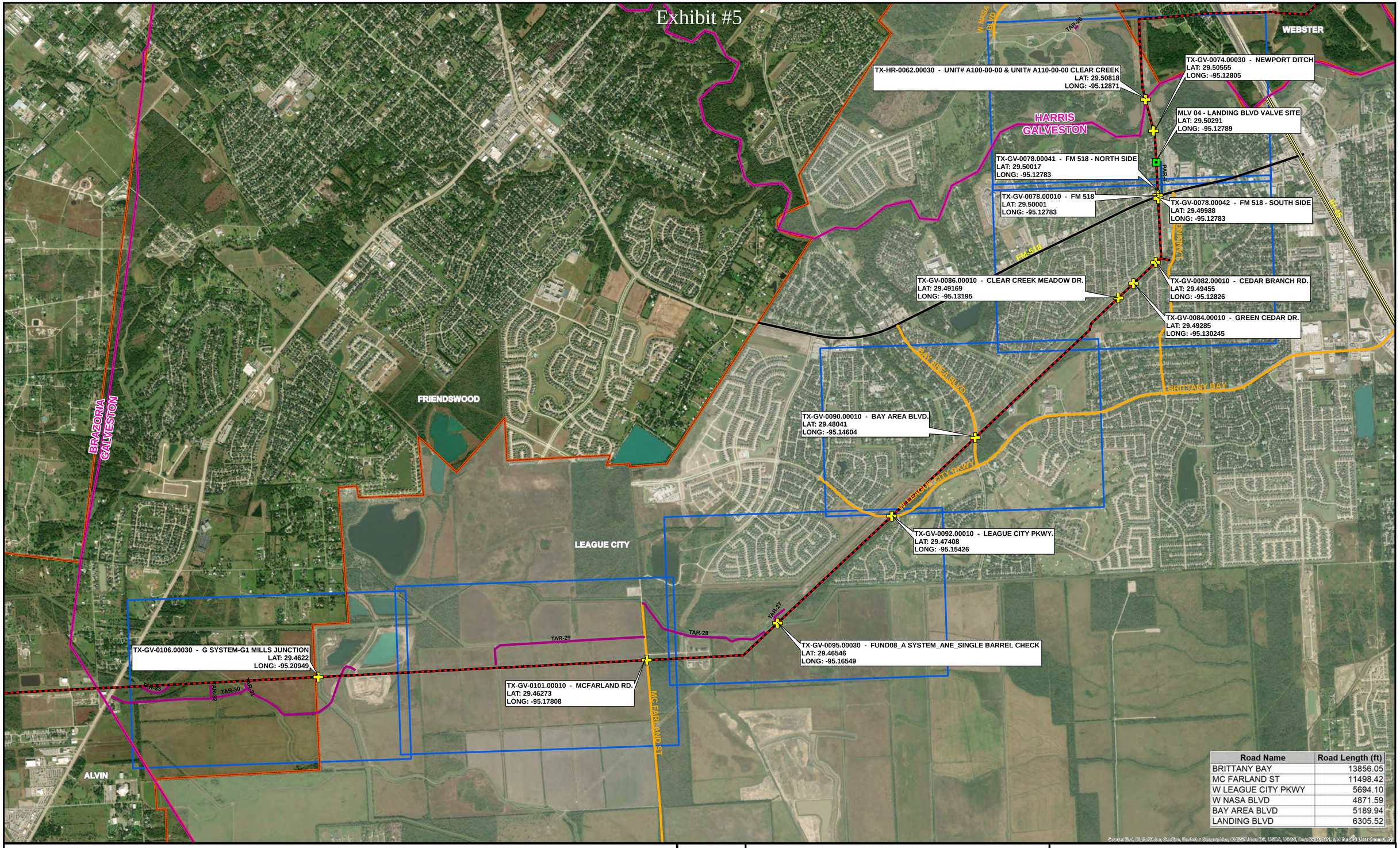
1 "=5,750 feet

NAD83 TX S CENTRAL

0 2,875 5,750 11,500 Feet

Date: 5/21/2020

Exhibit #5



Road Name	Road Length (ft)
BRITTANY BAY	13856.05
MC FARLAND ST	11498.42
W LEAGUE CITY PKWY	5694.10
W NASA BLVD	4871.59
BAY AREA BLVD	5189.94
LANDING BLVD	6305.52

Proposed Route
AccessRoads_Permanent
AccessRoads_Temporary
Haul Roads_League City
Haul Roads_Farm to Market
Haul Roads_US Highway
Surface Site
Permits
County Boundary
City Boundary

N

BAYMARK PIPELINE LLC
&
SOUTH TEXAS NGL PIPELINES, LLC

LEAGUE CITY PERMIT VICINITY MAP

ISSUED FOR REVIEW

0 1,250 2,500 5,000 Feet

1 " = 1,250 feet

NAD83 TX S CENTRAL

Date: 6/17/2020

September 16, 2020 REV3
Original Issue Date: May 14, 2020

RE: Proposed Uncased League City Road Pipeline Crossing – Bayport to Markham Pipeline

To Whom It May Concern,

This letter is to provide specific technical and engineering information with respect to the proposed uncased League City road crossings by the 12-inch diameter Bayport to Markham Pipeline to be constructed by Baymark Pipeline LLC (Enterprise). The information provided herein is intended to provide a design basis discussion for a variance request to allow uncased crossings of the League City Roads.

Mechanical Design

The Bayport to Markham 12-inch Pipeline, including the crossing referenced above, is designed to both 49 CFR Part 195 and ASME B31.4. The depth of cover at the League City road crossings will be consistent with Section 42-383 (d) of the City's Pipeline Ordinance and shall be buried a minimum of seven feet (7') below the lowest point of the road pavement.

The pipe to be used for the uncrossed casing is API-5L-X60 PSL2 with a minimum specified yield strength (SMYS) of 60,000 psi. The wall thickness is specified as 0.472 inches for bored crossings. The pipe will be externally coated with 14 - 22 mils of fusion bonded epoxy (FBE) and additional 30-40 mils of abrasion resistant overcoat (ARO). In addition, the pipe will be hydrostatically tested, and all field welds will be radiographically tested and coated before installation.

The design Maximum Operating Pressure (MOP) of the pipeline is 2,160 psig. Using the internal design pressure per 49 CFR Part 195.106;

$P = (2\ St/D) \times E \times F$, where

P = Internal design pressure in psi gage (psig).

S = Yield strength in pounds per square inch.

t = Nominal wall thickness of the pipe in inches.

D = Nominal outside diameter of the pipe in inches.

E = Seam joint factor determined in accordance with paragraph (e) of this section.

F = A design factor of 0.72, except that a design factor of 0.60 is used for pipe, including risers, on a platform located offshore or on a platform in inland navigable waters, and 0.54 is used for pipe that has been subjected to cold expansion to meet the specified minimum yield strength

and is subsequently heated, other than by welding or stress relieving as a part of welding, to a temperature higher than 900 °F (482 °C) for any period of time or over 600°F (316°C) for more than 1 hour.

From the formula P = (2 *St/D*) x *E* x *F*, the specific values for this pipeline are:

P =Internal design pressure in psig
S= 60,000 lb/in²
t = 0.472 in
D = 12.750 in
E = 1.00
F = 0.72

From the design formula, using the project specific values above, P = 3,198.5 psig. This is 1,038.5 psi higher than the pipeline design MOP of 2,160 psig. Although a pipe wall thickness of 0.3188 inches would satisfy the design requirements for an MOP of 2,160 psig, a wall thickness of 0.472 inches is being used in the crossing design, which represents a wall thickness 48% greater than that required to satisfy the internal design pressure formula.

The pressure required to produce 100% SMYS in the 12-inch diameter, X60, 0.472" wall thickness pipe is 4,442.36 psig. The MOP of the pipeline is 2,160 psig. Therefore, the pipeline operating at MOP will experience a hoop stress of 48.6% of its Specified Minimum Yield Strength (SMYS). Included in this submittal is a calculation summary sheet for the API 1102 loading calculations for steel pipelines crossing roads.

An excerpt from PHMSA Interpretation #PI-75-036 states that "The minimum Federal safety standards for transportation by pipeline are 49 CFR Part 192, Transportation of Natural and Other Gas by Pipeline, and 49 CFR Part 195, Transportation of Liquids by Pipeline. Neither of these regulations require that casings be used. However, Section 195.256, crossing of railroads and highways, of the liquid regulations requires such crossings to be installed so as to adequately withstand the dynamic forces exerted by anticipated traffic loads." The Bayport to Markham pipeline crossings are designed accordingly and in compliance with all applicable Part 195 regulations.

Corrosion Control

External and internal corrosion control measures are also designed into the pipeline system. A basic overview of these measures is as follows:

1. The Bayport to Markham pipeline will be protected externally by fusion bonded epoxy coating and impressed current cathodic protection systems. The cathodic protection system locations will be determined once the pipeline is physically installed and will be in compliance with Title 49 CFR Part 195, Subpart H – Corrosion Control.

2. Rectifiers will be monitored\checked every 60 days to ensure proper operations of rectifier units.

3. Test Stations will be placed approximately every mile to monitor effectiveness of cathodic protection system.

4. The internal corrosion will be monitored via internal corrosion points at sales\delivery points on the line.

An additional reason for requesting an uncased crossing is the potential for external pipeline corrosion that can result from cathodic protection shielding.

When cased pipeline crossings were widely accepted as sound industry practice, they were designed for two specific purposes. First, to protect the carrier pipe from increased external load forces typically encountered at road crossings; and second, in the event that the pipeline does develop a leak under a road or railroad, the casing and casing vents would vent the released product away from the road or rail bed. Additionally, it was thought that a section of cased pipeline would be easier to replace than uncased pipe. However, this is not necessarily accurate.

Some inherent problems associated with cased crossings include:

1. Pipeline casings are designed to be electrically isolated from the carrier pipe and as such do not receive cathodic protection (CP) current from the pipeline's CP system. Consequently, by being isolated from the carrier pipe and cathodic protection system, the casing will naturally corrode or may corrode very rapidly by stray current interference received from the pipeline cathodic protection system. In either case, the casing can no longer provide the load bearing protection or vent the released product away from the road bed as it was originally designed to do.

2. If a leak in the casing occurs, ground water and sediment are allowed into the casing annulus creating a corrosive environment around the carrier pipe. This situation can result in aggressive corrosion since the amount of water and sediment is ever-changing with season weather patterns\rain fall and soil moisture content (also see item 3 below). Water can also enter the casing at the casing carrier pipe end seals. Although there have been technological advancements in end seal products, due to soil expansion and contraction, and pipeline settlement and vibrations, the seal is often breached thus allowing water and sediment to enter the casing.

3. Unfortunately, the casings that were historically designed to protect the pipeline actually shield the cathodic protection current from the carrier pipe thus leaving it to corrode freely when water and or sediment enters the casing annulus in one of the above described manners.

4. Industry case histories have also identified additional forms of accelerated corrosion at or near the carrier pipe to casing end seals. Most commonly referred to as oxygen concentration\differential aeration cells or ion concentration cells. This rapid form of corrosion occurs due to variations in concentrations of oxygen or soil moisture content (ion concentration) inside the casing versus what is directly adjacent and outside the casing. In this scenario, a direct result of having a casing in place.

5. In the event that a casing becomes electrically shorted to the carrier pipe, most normally due to soil expansion, contraction or pipeline settlement that allows the casing to touch\contact the carrier pipe, the uncoated casing acts as a large current drain to the pipeline's cathodic protection system. This current drain can rob valuable current that was intended to protect the carrier pipe. Such an event, if undetected, can leave the carrier pipe unprotected thus allowing it to corrode and possibly leak.

The overall point is that not only can the addition of a casing hinder or prevent the protection of the carrier pipe from corrosion by common prevention techniques (i.e. cathodic protection), but it can actually create a corrosive environment, via shielding, electrical short circuits and\or various corrosion concentration cells.

Based on the information found in the various professional reviews of encased steel pipelines, Baymark Pipeline LLC is averse to installing casing whenever a practical and justified alternative is present. It is the opinion of Baymark that the proposed uncased crossing with a minimum of sixty inches (60") lower than the lowest part of the drainage or bar ditch and a minimum of seven feet (7') below the lowest point of the road pavement and installed with pipe meeting the pipeline specifications described in this letter will allow for safe operation of the proposed pipeline.

It is my opinion that the design of the pipeline is consistent with both the letter and intent of the governing codes 49 CFR 195 and ASME B31.4, and that the design provides a voluntary level of safety that exceeds that which is required by these codes.

Sincerely,

DR. Alcorn P.E.

9/16/20

Daniel R. Alcorn, P.E.
NC NorthStar Energy Services, Inc.
Texas PE #79234
Firm Registration No. F-14939

Enclosures\References:

1. API Calculations
2. PHMSA Interpretation #PI-75-036

September 16, 2020, REV3
Original Issue Date: May 14, 2020

RE: Proposed Uncased League City Road Pipeline Crossing – Webster to Braskem Pipeline

To Whom It May Concern,

This letter is to provide specific technical and engineering information with respect to the proposed uncased League City road crossings by the 8-inch diameter Webster to Braskem Pipeline to be constructed by South Texas NGL Pipeline, LLC (Enterprise). The information provided herein is intended to provide a design basis discussion for a variance request to allow uncased crossings of the League City Roads.

Mechanical Design

The Webster to Braskem 8-inch Pipeline, including the crossing referenced above, is designed to both 49 CFR Part 195 and ASME B31.4. The depth of cover at the League City road crossings will be consistent with Section 42-383 (d) of the City's Pipeline Ordinance and shall be buried a minimum of seven feet (7') below the lowest point of the road pavement.

The pipe to be used for the uncrossed casing is API-5L-X60 PSL2 with a minimum specified yield strength (SMYS) of 60,000 psi. The wall thickness is specified as 0.322 inches for bored crossings. The pipe will be externally coated with 14 - 22 mils of fusion bonded epoxy (FBE) and additional 30-40 mils of abrasion resistant overcoat (ARO). In addition, the pipe will be hydrostatically tested, and all field welds will be radiographically tested and coated before installation.

The design Maximum Operating Pressure (MOP) of the pipeline is 2,220 psig. Using the internal design pressure per 49 CFR Part 195.106;

$P = (2\,St/D) \times E \times F$, where

P = Internal design pressure in psi gage (psig).

S = Yield strength in pounds per square inch.

t = Nominal wall thickness of the pipe in inches.

D = Nominal outside diameter of the pipe in inches.

E = Seam joint factor determined in accordance with paragraph (e) of this section.

F = A design factor of 0.72, except that a design factor of 0.60 is used for pipe, including risers, on a platform located offshore or on a platform in inland navigable waters, and 0.54 is used for pipe that has been subjected to cold expansion to meet the specified minimum yield strength

and is subsequently heated, other than by welding or stress relieving as a part of welding, to a temperature higher than 900 °F (482 °C) for any period of time or over 600°F (316°C) for more than 1 hour.

From the formula P = (2 *St/D)* x *E* x *F,* the specific values for this pipeline are:

P =Internal design pressure in psig
S= 60,000 lb/in²
t = 0.322 in
D = 8.625 in
E = 1.00
F = 0.72

From the design formula, using the project specific values above, P = 3,225.6 psig. This is 1,005.6 psi higher than the pipeline design MOP of 2,220 psig. Although a pipe wall thickness of 0.2216 inches would satisfy the design requirements for an MOP of 2,220 psig, a wall thickness of 0.322 inches is being used in the crossing design, which represents a wall thickness 45% greater than that required to satisfy the internal design pressure formula.

The pressure required to produce 100% SMYS in the 8-inch diameter, X60, 0.322" wall thickness pipe is 4,480.0 psig. The MOP of the pipeline is 2,220 psig. Therefore, the pipeline operating at MOP will experience a hoop stress of 49.6% of its Specified Minimum Yield Strength (SMYS). Included in this submittal is a calculation summary sheet for the API 1102 loading calculations for steel pipelines crossing roads.

An excerpt from PHMSA Interpretation #PI-75-036 states that "The minimum Federal safety standards for transportation by pipeline are 49 CFR Part 192, Transportation of Natural and Other Gas by Pipeline, and 49 CFR Part 195, Transportation of Liquids by Pipeline. Neither of these regulations require that casings be used. However, Section 195.256, crossing of railroads and highways, of the liquid regulations requires such crossings to be installed so as to adequately withstand the dynamic forces exerted by anticipated traffic loads." The Bayport to Markham pipeline crossings are designed accordingly and in compliance with all applicable Part 195 regulations.

Corrosion Control

External and internal corrosion control measures are also designed into the pipeline system. A basic overview of these measures is as follows:

1. The Webster to Braskem pipeline will be protected externally by fusion bonded epoxy coating and impressed current cathodic protection systems. The cathodic protection system locations will be determined once the pipeline is physically installed and will be in compliance with Title 49 CFR Part 195, Subpart H – Corrosion Control.

2. Rectifiers will be monitored\checked every 60 days to ensure proper operations of rectifier units.

3. Test Stations will be placed approximately every mile to monitor effectiveness of cathodic protection system.

4. The internal corrosion will be monitored via internal corrosion points at sales\delivery points on the line.

An additional reason for requesting an uncased crossing is the potential for external pipeline corrosion that can result from cathodic protection shielding.

When cased pipeline crossings were widely accepted as sound industry practice, they were designed for two specific purposes. First, to protect the carrier pipe from increased external load forces typically encountered at road crossings; and second, in the event that the pipeline does develop a leak under a road or railroad, the casing and casing vents would vent the released product away from the road or rail bed. Additionally, it was thought that a section of cased pipeline would be easier to replace than uncased pipe. However, this is not necessarily accurate.

Some inherent problems associated with cased crossings include:

1. Pipeline casings are designed to be electrically isolated from the carrier pipe and as such do not receive cathodic protection (CP) current from the pipeline's CP system. Consequently, by being isolated from the carrier pipe and cathodic protection system, the casing will naturally corrode or may corrode very rapidly by stray current interference received from the pipeline cathodic protection system. In either case, the casing can no longer provide the load bearing protection or vent the released product away from the road bed as it was originally designed to do.

2. If a leak in the casing occurs, ground water and sediment are allowed into the casing annulus creating a corrosive environment around the carrier pipe. This situation can result in aggressive corrosion since the amount of water and sediment is ever-changing with season weather patterns\rain fall and soil moisture content (also see item 3 below). Water can also enter the casing at the casing carrier pipe end seals. Although there have been technological advancements in end seal products, due to soil expansion and contraction, and pipeline settlement and vibrations, the seal is often breached thus allowing water and sediment to enter the casing.

3. Unfortunately, the casings that were historically designed to protect the pipeline actually shield the cathodic protection current from the carrier pipe thus leaving it to corrode freely when water and or sediment enters the casing annulus in one of the above described manners.

4. Industry case histories have also identified additional forms of accelerated corrosion at or near the carrier pipe to casing end seals. Most commonly referred to as oxygen concentration\differential aeration cells or ion concentration cells. This rapid form of corrosion occurs due to variations in concentrations of oxygen or soil moisture content (ion concentration) inside the casing versus what is directly adjacent and outside the casing. In this scenario, a direct result of having a casing in place.

5. In the event that a casing becomes electrically shorted to the carrier pipe, most normally due to soil expansion, contraction or pipeline settlement that allows the casing to touch\contact the carrier pipe, the uncoated casing acts as a large current drain to the pipeline's cathodic protection system. This current drain can rob valuable current that was intended to protect the carrier pipe. Such an event, if undetected, can leave the carrier pipe unprotected thus allowing it to corrode and possibly leak.

The overall point is that not only can the addition of a casing hinder or prevent the protection of the carrier pipe from corrosion by common prevention techniques (i.e. cathodic protection), but it can actually create a corrosive environment, via shielding, electrical short circuits and\or various corrosion concentration cells.

Based on the information found in the various professional reviews of encased steel pipelines, South Texas NGL Pipelines, LLC is averse to installing casing whenever a practical and justified alternative is present. It is the opinion of South Texas NGL Pipelines, LLC that the proposed uncased crossing with a minimum of sixty inches (60") lower than the lowest part of the drainage or bar ditch and a minimum of seven feet (7') below the lowest point of the road pavement and installed with pipe meeting the pipeline specifications described in this letter will allow for safe operation of the proposed pipeline.

It is my opinion that the design of the pipeline is consistent with both the letter and intent of the governing codes 49 CFR 195 and ASME B31.4, and that the design provides a voluntary level of safety that exceeds that which is required by these codes.

Sincerely,

9-16-20

Daniel R. Alcorn, P.E.
NC NorthStar Energy Services, Inc.
Texas PE #79234
Firm Registration No. F-14939

Enclosures\References:

1. API Calculations
2. PHMSA Interpretation #PI-75-036

Fw: Baymark Pipeline/South Texas NGL Pipelines fence slats

Ethan Rogers <ethan.rogers@percheronllc.com>
Tue 9/15/2020 4:49 PM

To: Popp, Chelsea <cmpopp@eprod.com>; Patty Riddels <patty.riddels@percheronllc.com>
Cc: Lee Harughty <lee.harughty@percheronllc.com>

Chelsea/Pay ,

Please see the email below from the owner of 310 Amber Lane (Mr. Joe Camarata) in League city, this email should be sufficient to address Mr. Linenschmidt's concerns and be included in the SUP.

Thanks,

Ethan Rogers

Project Manager | Percheron
3121 Nichols Ave
Bay City, TX 77414
Cell: (479) 774-1278
Office: (979) 943-2221
ethan.rogers@percheronllc.com

From: Joseph Camarata <josephcamarata@gmail.com>
Sent: Tuesday, September 15, 2020 4:29 PM
To: Ethan Rogers <ethan.rogers@percheronllc.com>; Joseph Camarata <josephcamarata@gmail.com>
Subject: Re: Baymark Pipeline/South Texas NGL Pipelines fence slats

Mr. Rogers
I want to thank both companies for being considerate to the Amber Lane neighborhood and especially my residence in the installation of the green fence slat material on both pipeline enclosures exposed to my backyard. I am in agreement of the material selection and would like the option for the material to be installed vertically as shown in the picture sent or at a 45 degree angle.
Please advise if you have any questions, If not please consider this discussion complete on this issue.
Thank you in advance

Joe Camarata
310 Amber Lane
League City, TX 77573

On Tue, Sep 15, 2020 at 3:44 PM Ethan Rogers <ethan.rogers@percheronllc.com> wrote:

> Mr. Joseph,

Thank you talking the me t o speak with me today. Per our conversaon, **HSC Pipeline Partnership** (*owner of the exisng valve sit e located behind your house*) and **Baymark Pipeline LLC/South Texas NGL Pipelines, LLC** (*who will be construcng one ne w valve site in the same area*) have all agree to install green chain link fence slats in new site as well as the exisng. The y will look something like the picture below, and this will take place during the construcon of the Ba ymark/South Texas site in the next few months. I will also be your point of contact during the construcon phase, so don't hesit ate to reach out with any issues.

Thanks,

Ethan Rogers

PERCHERON

Project Manager | Percheron
3121 Nichols Ave
Bay City, TX 77414
Cell: (479) 774-1278
Office: (979) 943-2221
ethan.rogers@percheronllc.com

Fw: Pump station/pipeline awareness

Ethan Rogers <ethan.rogers@percheronllc.com>
Wed 9/23/2020 8:09 AM

To: Patty Riddels <patty.riddels@percheronllc.com>; Popp, Chelsea <cmpopp@eprod.com>
Cc: Lee Harughty <lee.harughty@percheronllc.com>

Patty, Below is the email chain for the landowner at 300 Amber Lane.

Thanks,

Ethan Rogers

PERCHERON

Project Manager | Percheron
3121 Nichols Ave
Bay City, TX 77414
Cell: (479) 774-1278
Office: (979) 943-2221
ethan.rogers@percheronllc.com

From: Mike Rapley <mrapley@comcast.net>
Sent: Tuesday, September 22, 2020 4:46 PM
To: Ethan Rogers <ethan.rogers@percheronllc.com>
Subject: Re: Pump station/pipeline awareness

Thank you Ethan. Appreciate your feedback.
Mike

Sent from my iPhone

> On Sep 22, 2020, at 4:13 PM, Ethan Rogers <ethan.rogers@percheronllc.com> wrote:
>
> Mike,
>
> Thank you for your email, I would like to start by clarifying that what will be installed is not a Pump Station but will be a Valve site (much smaller that Pump Station). To address the visibility concern, both companies have agreed to install chain Link fence slats (green) in the new fence that will surround the site as well as the existing Enterprise site. You and I have

also discussed options to improve your personal fence to reduce the visibility of the site from your residence.
The valve site was placed in this location because the fee landowner (CenterPoint) requested that we keep new sites as close to existing valves as possible, while keeping the sites as far away from any CenterPoint assets (Towers) as possible. Placing this on the south side of the of the existing site meets both these requests. The current site location is already acquired from CenterPoint. You will not be at any additional risk with the site in this location, you could argue that there is less risk because the valve could be closed in case of an emergency. This valve site is required by DOT / Texas Railroad Commission as a block valve for Clear Creek, there will be similar valve on the north side of Clear Creek in Webster.

I will be your point of contact during construction for these projects, once we have solid start date, I will keep you updated on the scheduling and progress.

Please let me know if you have any additional questions or concerns, and I will be happy to discuss.

Thanks,

Ethan Rogers

<Outlook-2iffsiwy.png>

Project Manager | Percheron
3121 Nichols Ave
Bay City, TX 77414
Cell: (479) 774-1278
Office: (979) 943-2221
ethan.rogers@percheronllc.com

From: Mike Rapley <mrapley@comcast.net>
Sent: Tuesday, September 22, 2020 10:06 AM
To: Ethan Rogers <ethan.rogers@percheronllc.com>
Subject: Pump station/pipeline awareness

Evening Ethan,
Apologies on the delay as our family has a lot on their plate at the moment. Per our discussions earlier as well as the recommendation from Mark LInenschmidt (Senior planner for League City) this email serves as acknowledgment you reaching out to us regarding the pipeline (and specifically the pump station) scheduled to be installed directly behind our home on 300 Amber Lane. We have been having discussions about associated risk, strategies to minimize visibility of the pump station, and overall schedule. One question we do have still is why this station has to be installed directly behind our home vs installing it either behind the empty lot (2 lots to the north of 300 Amber Lane) or closer to 518.

Additionally, it would be useful for any associated risks of having the pump station behind the house documented via email. Thank you for reaching out to us and look forward to continued conversations.

Respectfully,
Mike Rapley