

Williamson County
 Form Wilco-U-35 – 100% County – On System-Buy America
 Rev. 12/2014
 Page 1

STANDARD UTILITY AGREEMENT

County: Williamson
 Project No.: TBD
 Highway Project Letting Date: 05/2022

Highway: FM3349
 From: US79
 To: CR404

This Agreement by and between Williamson County, ("**County**"), and Flint Hills Resources Corpus Christi, LLC, ("**Utility**"), acting by and through its duly authorized representative, shall be effective on the date of approval and execution by and on behalf of the **County**.

WHEREAS, the **County** has deemed it necessary to make certain highway improvements as designated by the **County** and within the limits of the highway as indicated above;

WHEREAS, the proposed highway improvements will necessitate the adjustment, removal, and/or relocation of certain facilities of **Utility** as indicated in the following statement of work: Two segments of FHR's 16-in Texas Pipeline are in conflict with proposed Williamson County construction of the FM3349 widening and future Southeast Loop Project. While only one segment is in Williamson County Phase 1 Construction, in order to minimize impacts to FHR, both replacements are proposed to occur concurrently. Conflicts with the new roadway right of way and final construction are from proposed FM3349 STA 420+00 to 517+50. 10,788-feet of existing 16-in steel pipeline in 25-foot wide private easement are impacted by the planned construction as well as an existing gate valve and easement. At the north end, 320-feet of the existing pipeline under the Mustang Creek Tributary/Unnamed Creek/Floodplain near FM3349 STA 516+00 will be grouted and capped for abandonment and approximately 1560-feet of new 16-in steel pipe will be installed by Horizontal Direction Drill (HDD). At the south end, 40-feet of existing pipe under Boggy Creek and 165-feet in an identified archaeological site will be capped and grouted for abandonment and approximately 1,450-feet of new 16-in steel pipe will be installed by HDD. The road crossing for CR132 will be grouted and capped for abandonment and approximately 90-feet of new 16-in steel pipe will be installed by HDD. The road crossing for FM3349 will be grouted and capped for abandonment and approximately 125-feet of new 16-in will be installed by HDD. The remaining portions of 16-in pipeline in the existing private easement parallel to FM3349 will be removed in a manner that minimizes environmental and commercial impacts. The replacement pipe will be installed in new 25-foot wide private easement adjacent to the proposed FM3349 ROW or adjacent to other utility easements. Also, a new valve easement for above ground facilities will be acquired. While the 16-in replacement pipe will be purchased new to meet Buy America requirements, the existing block valve in conflict will be removed from service, refurbished, and reinstalled in the new block valve easement. A 50-foot wide temporary construction workspace (TWS) abuts the proposed permanent easement and additional temporary workspaces (ATWS) are proposed for tie-ins and to allow for safe installation of the pipeline. ATWS that is not adjacent to the construction corridor but in line with the proposed drill is used to string and weld the pipe for installation through the bore path. The TWS and ATWS are utilized during construction, then restored to near pre-construction conditions and allowed to revegetate. The proposed permanent easement will remain cleared and maintained for future maintenance and inspection; and more specifically shown in **Utility's** plans, specifications and estimated costs, which are attached hereto as Attachment "A".

WHEREAS, the **County** will participate in the costs of the adjustment, removal, and/or relocation of certain facilities to the extent as may be eligible for **County** participation.

WHEREAS, the **County**, upon receipt of evidence it deems sufficient, acknowledges **Utility's** interest in certain lands and/or facilities that entitle it to reimbursement for the adjustment, removal, and relocation of certain of its facilities located upon the lands as indicated in the statement of work above.

NOW, THEREFORE, BE IT AGREED:

The **County** will pay to **Utility** the costs incurred in adjustment, removal, and/or relocation of **Utility's** facilities up to the amount said costs may be eligible for **County** participation.

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All conduct under this agreement, including but not limited to the adjustment, removal and relocation of the facility, the development and reimbursement of costs, any environmental requirements, and retention of records will be in accordance with all applicable federal and state laws, rules and regulations, including, without limitation, the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act, 42 U.S.C. §§ 4601, et seq., the National Environmental Policy Act, 42 U.S.C. §§ 4231, et seq., the Buy America provisions of 23 U.S.C. § 313 and 23 CFR 635.410, the Utility Relocations, Adjustments, and Reimbursement provisions of 23 CFR 645 Subpart A, and with the Utility Accommodation provision of 23 CFR 645, Subpart B. **Utility** shall supply, upon request by the **County**, proof of compliance with the aforementioned laws, rules and regulations prior to the commencement of construction.

The **Utility** agrees to develop relocation or adjustment costs by accumulating actual direct and related indirect costs in accordance with a work order accounting procedure prescribed by the **County**, or may, with the **County's** approval, accumulate actual direct and related indirect costs in accordance with an established accounting procedure developed by **Utility**. Bills for work hereunder will be submitted to the **County** not later than 90 days after completion of the work.

When requested, the **County** will make intermediate payments at not less than monthly intervals to **Utility** when properly billed and such payments will not exceed 80 percent (80%) of the eligible cost as shown in each such billing. In addition, the **County** will make a payment, before audit, which will bring the total percentage paid to the **Utility** up to the 90% eligible cost. Intermediate payments shall not be construed as final payment for any items included in the intermediate payment.

Upon execution of this agreement by both parties hereto, the **County** will, by written notice, authorize the **Utility** to perform such work diligently, and to conclude said adjustment, removal, or relocation by the stated completion date. The completion date shall be extended for delays caused by events outside **Utility's** control, including an event of Force Majeure, which shall include a strike, war or act of war (whether an actual declaration of war is

made or not), insurrection, riot, act of public enemy, accident, fire, flood or other act of God, sabotage, or other events, interference by the **County** or any other party with **Utility's** ability to proceed with the relocation, or any other event in which **Utility** has exercised all due care in the prevention thereof so that the causes or other events are beyond the control and without the fault or negligence of **Utility**.

The **County** will, upon satisfactory completion of the relocation or adjustment and upon receipt of final billing prepared in an approved form and manner, make payment in the amount of 90 percent (90%) of the eligible costs as shown in the final billing prior to audit and after such audit shall make an additional final payment totaling the reimbursement amount found eligible for **County** reimbursement.

Unless an item below is stricken and initialed by the **County and Utility**, this agreement in its entirety consists of the following:

1. Standard Utility Agreement;
2. Plans, Specifications, and Estimated Costs (Attachment "A");
3. Utility's Schedule of Work and Estimated Date of Completion (Attachment "B");
4. Eligibility Ratio (Attachment "C");
5. Betterment Calculation and Estimates (Attachment "D");
6. Proof of Property Interest – ROW-U-1A(Wilco) (Attachment "E");
7. Copy of Approved TxDOT Online Installation Permit (Attachment "F"; and
8. Inclusion in Highway Construction Contract (if applicable) (Attachment "I").

All attachments are included herein as if fully set forth. In the event it is determined that a substantial change from the statement of work contained in this agreement is required, reimbursement therefore shall be limited to costs covered by a modification or amendment of this agreement or a written change or extra work order approved by the **County and Utility**.

This agreement is subject to cancellation by the **County** at any time up to the date that work under this agreement has been authorized and that such cancellation will not create any liability on the part of the **County**.

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The State and/or County Auditor may conduct an audit or investigation of any entity receiving funds from the **County** directly under this contract or indirectly through a subcontract under this contract. Acceptance of funds directly under this contract or indirectly through a subcontract under this contract acts as acceptance of the authority of the State Auditor, under the direction of the Legislative Audit Committee, to conduct an audit or investigation in connection with those funds. An entity that is the subject of an audit or investigation must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit.

The **Utility** by execution of this agreement does not waive any of the rights which **Utility** may have within the limits of the law.

It is expressly understood that the **Utility** conducts the adjustment, removal, or relocation at its own risk, and that the **County** makes no warranties or representations regarding the existence or location of utilities currently within its right of way.

The signatories to this agreement warrant that each has the authority to enter into this agreement on behalf of the party represented.

UTILITY

Utility: Flint Hills Resources Corpus Christi, LLC
Name of Utility

By: 
Authorized Signature

Phil Gaarder
Print or Type Name

Title: Executive Vice President - Operations

Date: 5/4/22

WILLIAMSON COUNTY

By: _____
Authorized Signature

Print or Type Name

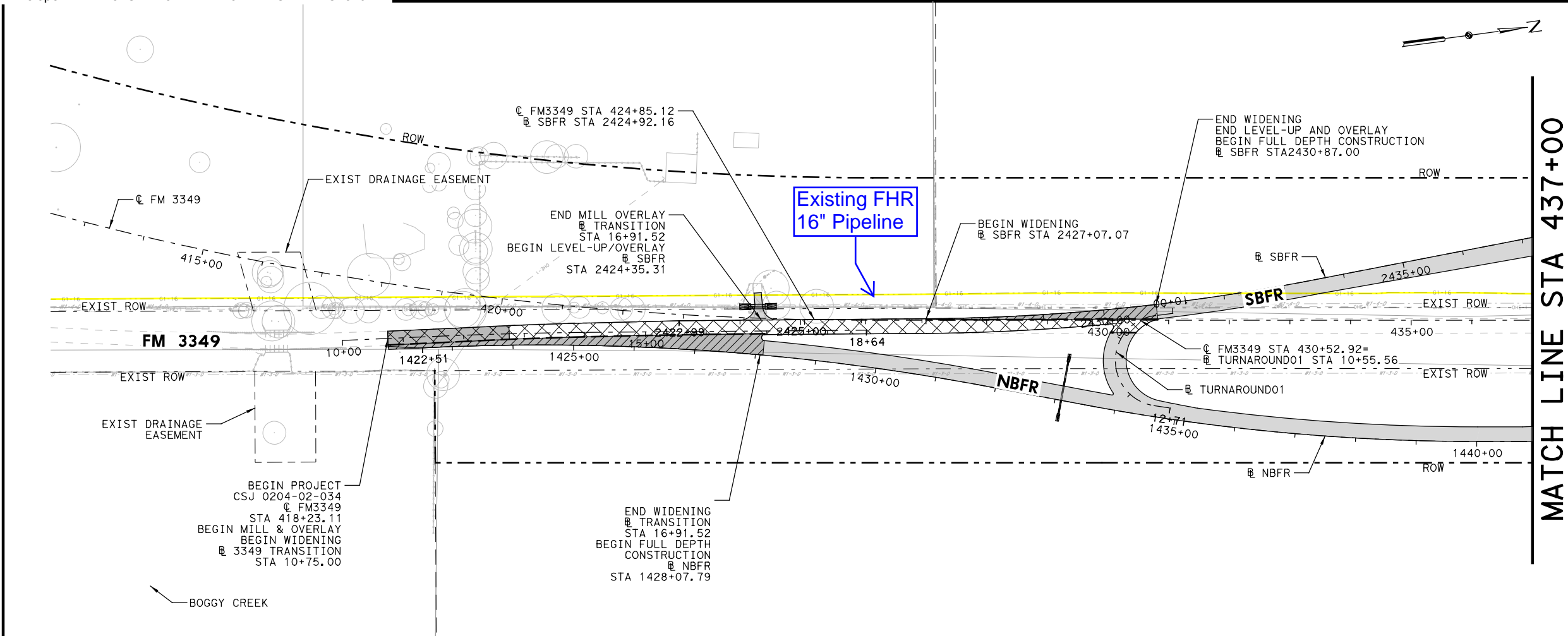
Title: _____

Date: _____

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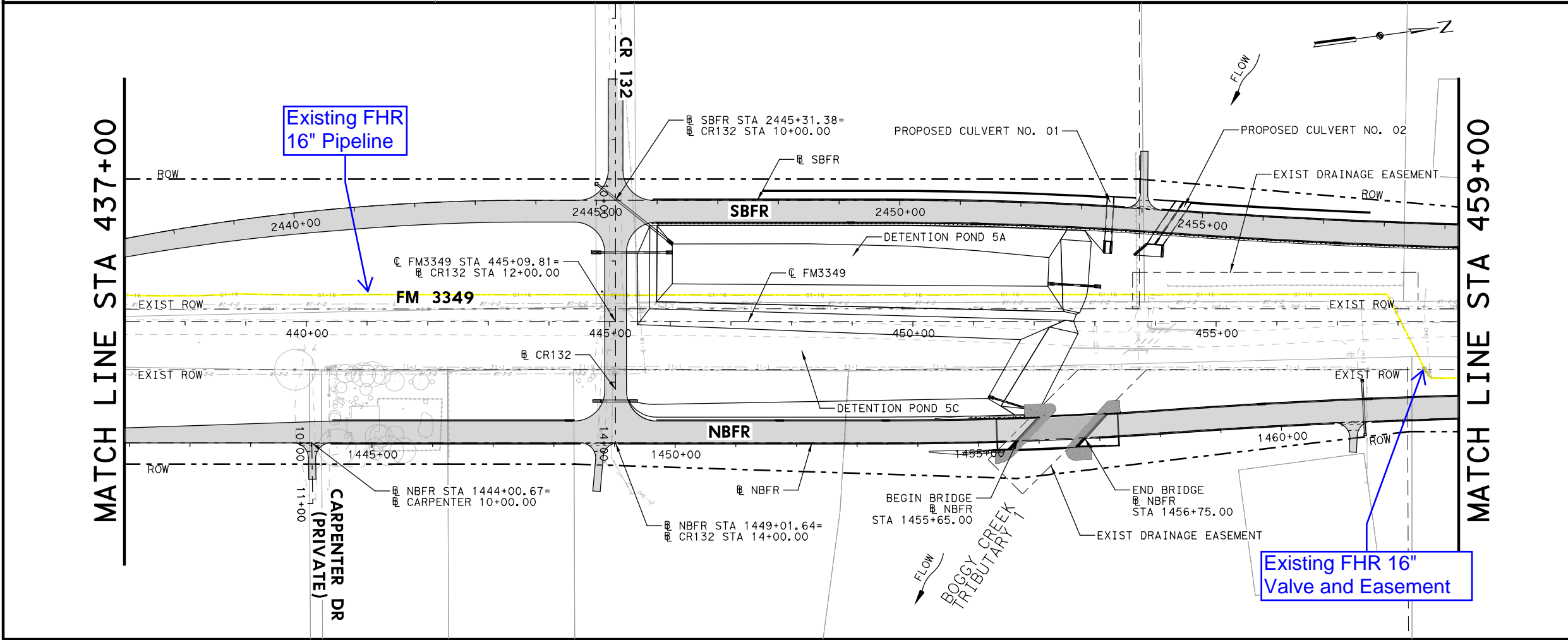
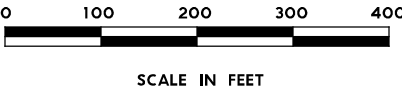
Attachment A
Plans, Specifications, and Estimated Costs

60% SUBMITTAL



| LEGEND | |
|--------|-------------------------|
| | FULL DEPTH CONSTRUCTION |
| | LEVEL-UP AND OVERLAY |
| | MILL AND OVERLAY |
| | WIDENING |
| | EXISTING ROW |
| | ROW |

- NOTES:
1. BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.
 2. COORDINATES FOR THIS PROJECT ARE SURFACE VALUES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00012352 VERTICAL DATUM: NAD83, NORTH AMERICA DATUM OF 1983.
 3. SEE SURVEY CONTROL SHEETS FOR CONTROL POINTS.






PRELIMINARY-FOR INFORMATION ONLY

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.

Supervised By: FELIPE S. TUdTUD

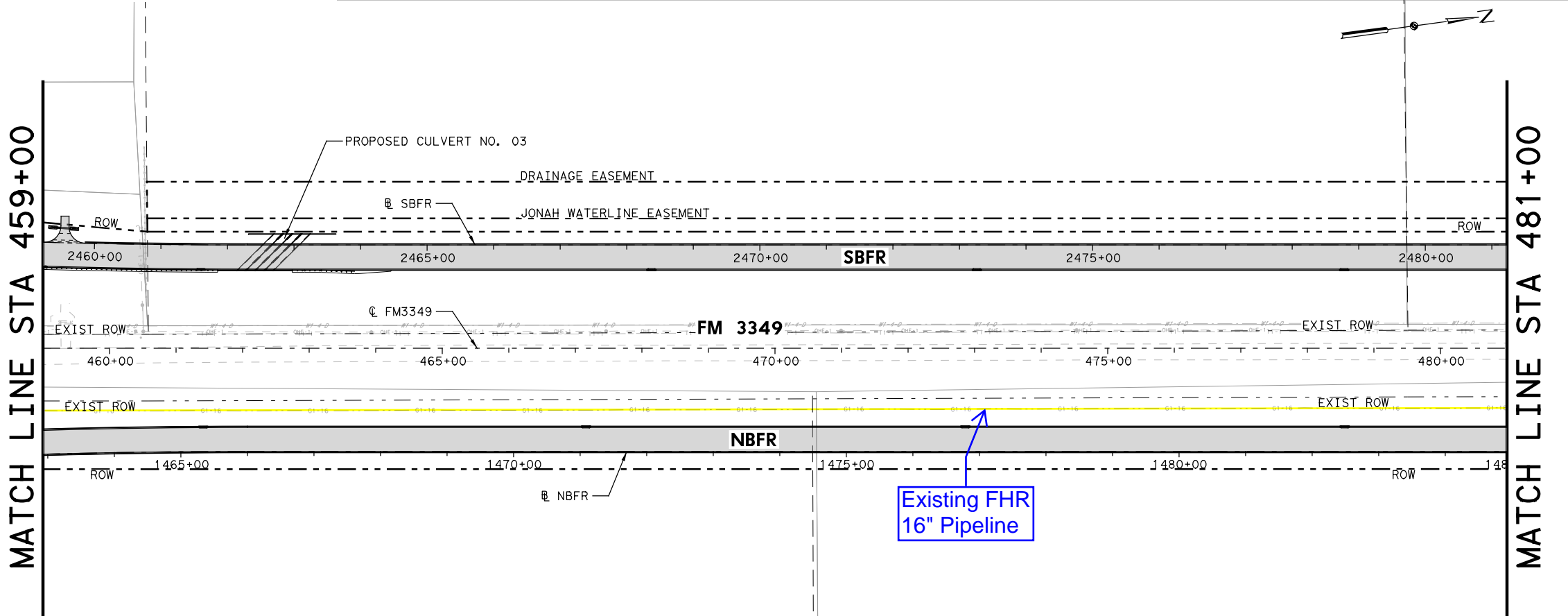
P.E. Serial No. 104836

Date: 11/13/2020

| NO. | DATE | REVISION | APPROVED |
|--|------|----------|----------|
|   HDR Engineering, Inc. 710 Hesters Crossing, Suite 150 Round Rock, Texas 78681 Texas Registered Engineering Firm F-754 | | | |
|  Texas Department of Transportation | | | |

| FM 3349 | | | | |
|---------------------|-------------------|-------------------------|------------|-------------|
| PROJECT LAYOUT | | | | |
| BEGIN TO STA 459+00 | | | | |
| SCALE: 1"=200' | | | | |
| SHEET 1 OF 4 | | | | |
| DESIGN | FED. RD. DIV. NO. | FEDERAL AID PROJECT NO. | | HIGHWAY NO. |
| KS | 6 | \$FPN\$ | | FM 3349 |
| GRAPHICS | STATE | DISTRICT | COUNTY | SHEET NO. |
| LG | TEXAS | AUS | WILLIAMSON | 4 |
| CHECK | CONTROL | SECTION | JOB | |
| CHECK | 0204 | 02 | 034 | |

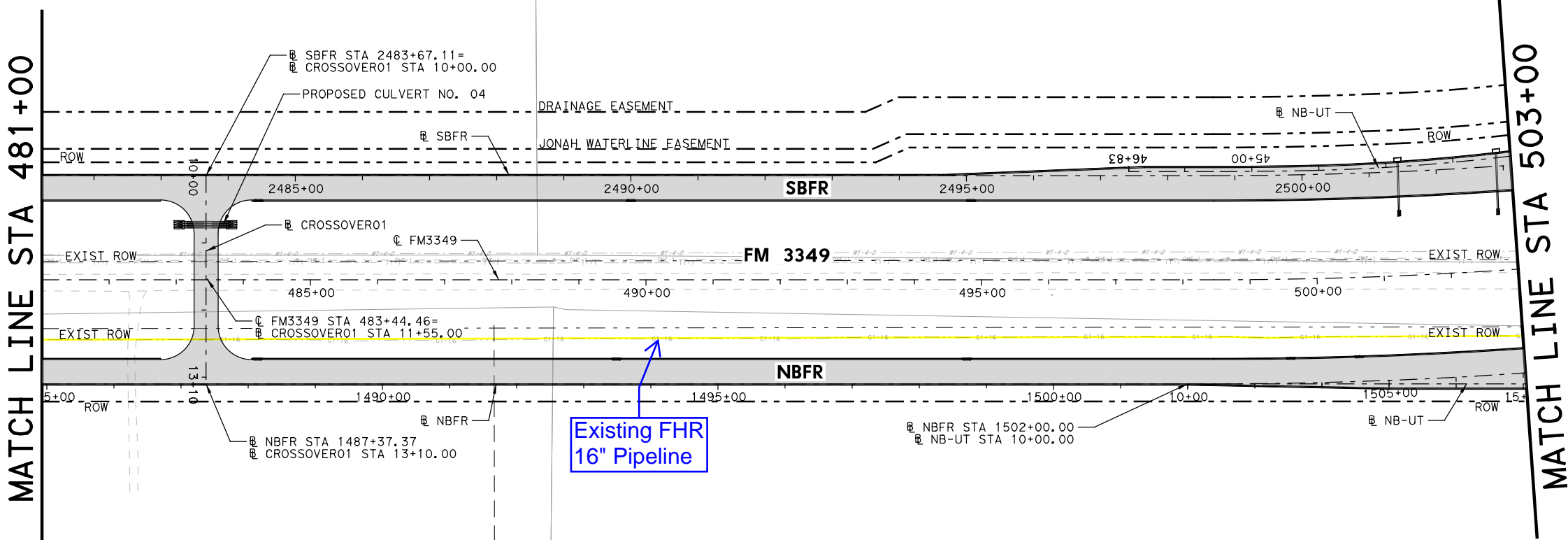
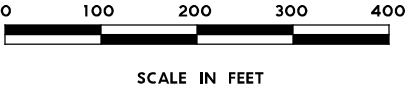
60% SUBMITTAL



LEGEND

| | |
|--------------------------|-------------------------|
| [Solid Gray Box] | FULL DEPTH CONSTRUCTION |
| [Cross-hatched Box] | LEVEL-UP AND OVERLAY |
| [Diagonal Hatched Box] | MILL AND OVERLAY |
| [Horizontal Hatched Box] | WIDENING |
| [Dashed Line] | EXISTING ROW |
| [Long Dashed Line] | ROW |

- NOTES:
1. BEARING BASIS: NAD83, TEXAS STATE PLANE, CENTRAL ZONE, US FOOT.
 2. COORDINATES FOR THIS PROJECT ARE SURFACE VALUES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00012352 VERTICAL DATUM: NAD83, NORTH AMERICA DATUM OF 1983.
 3. SEE SURVEY CONTROL SHEETS FOR CONTROL POINTS.



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P.E. Serial No. 104836

Date: 11/13/2020

| NO. | DATE | REVISION | APPROVED |
|-----|------|----------|----------|
|-----|------|----------|----------|



HDR HDR Engineering, Inc.
710 Hesters Crossing, Suite 150
Round Rock, Texas 78681
Texas Registered Engineering Firm F-754



FM 3349

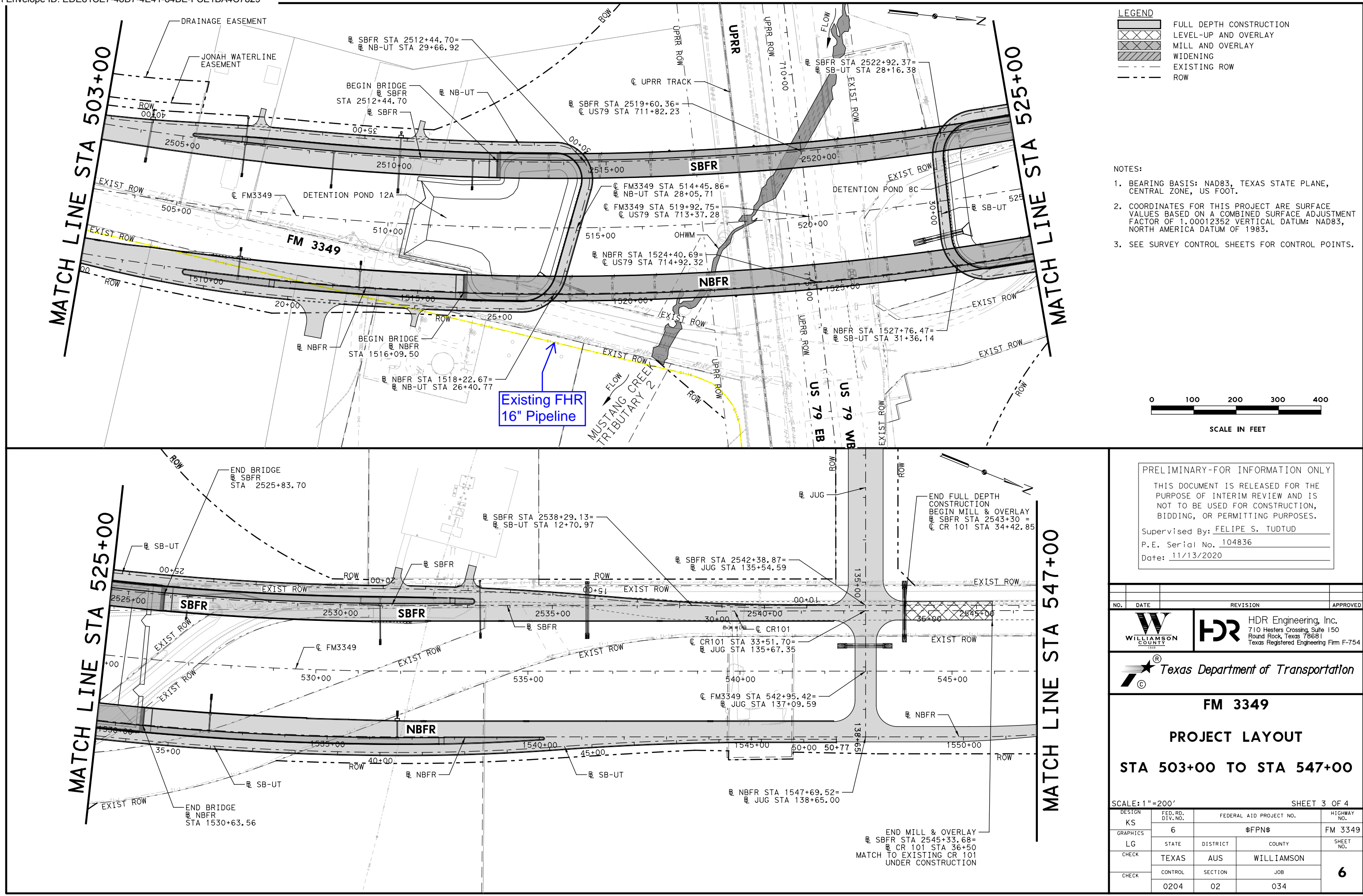
PROJECT LAYOUT

STA 459+00 TO STA 503+00




| | | | | |
|----------------|-------------------|-------------------------|------------|-------------|
| SCALE: 1"=200' | | SHEET 2 OF 4 | | |
| DESIGN | FED. RD. DIV. NO. | FEDERAL AID PROJECT NO. | | HIGHWAY NO. |
| KS | 6 | \$FPN\$ | | FM 3349 |
| GRAPHICS | STATE | DISTRICT | COUNTY | SHEET NO. |
| LG | TEXAS | AUS | WILLIAMSON | 5 |
| CHECK | CONTROL | SECTION | JOB | |
| | 0204 | 02 | 034 | |

60% SUBMITTAL

PLOT DRIVER: TXDOT_PDF_BW.plt
PENTABLE: 10254515.tbl
USER: LGONEZGONDATE: 11/13/2020
TIME: 4:53:33 PM
SCALE: 1:200
FILE: \



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THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.
Supervised By: FELIPE S. TUOTUD
P.E. Serial No. 104836
Date: 11/13/2020

| NO. | DATE | REVISION | APPROVED |
|---|------|----------|----------|
| <div><div>HDR Engineering, Inc. 710 Hesters Crossing, Suite 150 Round Rock, Texas 78681 Texas Registered Engineering Firm F-754</div></div> | | | |
|  | | | |

| | | | | |
|--------------------------|-------------------|-------------------------|------------|-------------|
| FM 3349 | | | | |
| PROJECT LAYOUT | | | | |
| STA 503+00 TO STA 547+00 | | | | |
| SCALE: 1"=200' | | SHEET 3 OF 4 | | |
| DESIGN | FED. RD. DIV. NO. | FEDERAL AID PROJECT NO. | | HIGHWAY NO. |
| KS | 6 | \$FPN\$ | | FM 3349 |
| GRAPHICS | STATE | DISTRICT | COUNTY | SHEET NO. |
| LG | TEXAS | AUS | WILLIAMSON | 6 |
| CHECK | CONTROL | SECTION | JOB | |
| | 0204 | 02 | 034 | |

TRACT NO. & OWNERSHIP

LENGTH

PLAN VIEW

STATIONING

PROFILE

DF/MOP

MATERIAL

BUOYANCY AND EROSION CONTROL

WETLANDS/WATERWAYS

CONSTRUCTION METHOD

AC/CP MITIGATION

MIN DEPTH OF COVER

SOIL SEGREGATION

REFERENCE DRAWINGS

LEGEND

NOTES & LEGEND

16" TPL (AUSTIN TO WACO) PIPELINE RELOCATION 4+10 TO 52+00 ALIGNMENT SHEET

WILLIAMSON COUNTY, TEXAS

DRAWN BY: BMCD

CHECKED BY: CCF

APPROVED BY: EUL

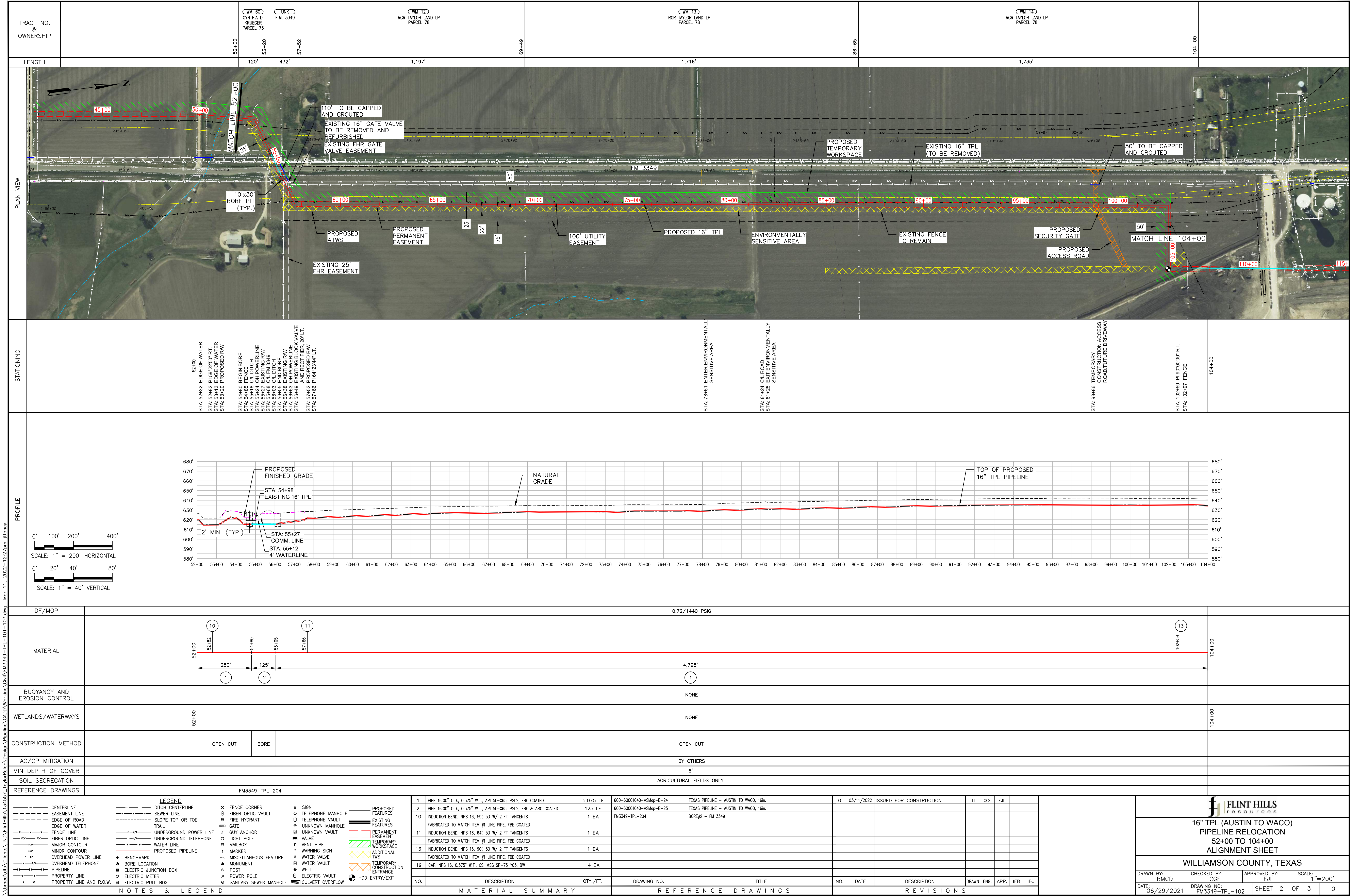
SCALE: 1"=200'


DATE: 06/29/2021

DRAWING NO: FM3349-TPL-101

SHEET 1 OF 3

0



| | | | |
|---|-------------------------------|-----------------------|-------------------|
|  FLINT HILLS resources | | | |
| 16" TPL (AUSTIN TO WACO) PIPELINE RELOCATION 104+00 TO 122+59 ALIGNMENT SHEET | | | |
| WILLIAMSON COUNTY, TEXAS | | | |
| DRAWN BY: 5MCD | CHECKED BY: CGF | APPROVED BY: EUL | SCALE: 1"=200' |
| DATE: 06/29/2021 | DRAWING NO: FM3349-TPL-103 | SHEET 3 OF 3 | 0 |

Flint Hills Resources Corpus Christi, LLC

CCSJ: 3486-01-008

Utility ID#: [REDACTED]

UNNUMBER: [REDACTED]

The cost estimate items must be sufficiently detailed to provide TxDOT with a reasonable basis for analysis. Items should include appropriate units and unit price for each (See Utility Manual, Chapter 6 Section 2). Applies to All "EA" items

| Line Item / Item Description | Unit | Quantity | \$/Unit | Total |
|--|--------|----------|--------------|------------------------|
| INTERNAL MATERIALS - documented with Certified Ledger at Payment | | | | |
| * 16" Pipe and Coating FBE Coated | LF | 9760 | \$91.06 | \$ 888,745.60 |
| * 16" Pipe and Coating ARO Coated | LF | 3720 | \$104.56 | \$ 388,963.20 |
| * 16" Induction Bends | EA | 18 | \$3,683.76 | \$ 66,307.68 |
| * 16" 600# Weld Neck Raised Face Flanges | EA | 6 | \$884.58 | \$ 5,307.48 |
| * 16" Welded End caps | EA | 18 | \$690.71 | \$ 12,432.78 |
| ** 16" Stopple | EA | 5 | \$32,178.49 | \$ 160,892.45 |
| * 2" Thread-o-rings | EA | 13 | \$1,951.85 | \$ 25,374.05 |
| * 16" Pipe Bare | LF | 80 | \$85.49 | \$ 6,839.20 |
| ** 2" Elbow | EA | 4 | \$34.33 | \$ 137.32 |
| ** 16" Gasket ANSI 600 | EA | 6 | \$97.31 | \$ 583.89 |
| ** 1" Threaded Nipple | EA | 2 | \$151.47 | \$ 302.94 |
| ** 2" Threaded Nipple | EA | 12 | \$168.44 | \$ 2,021.23 |
| ** 1" Hex Head 3000# Plug | EA | 2 | \$115.11 | \$ 230.23 |
| ** 2" Hex Head 3000# Plug | EA | 4 | \$151.47 | \$ 605.89 |
| ** Stud Bolt 1 1/2"x10" CL 600 | EA | 88 | \$42.42 | \$ 3,732.56 |
| ** 16"x1" Threadolet | EA | 2 | \$6.10 | \$ 12.20 |
| ** 16"x2" Threadolet | EA | 4 | \$11.00 | \$ 44.00 |
| ** 1" Ball Valve 3000# | EA | 2 | \$91.39 | \$ 182.78 |
| ** 2" Ball Valve 3000# | EA | 4 | \$283.16 | \$ 1,132.63 |
| Vendor Documentation for valve site piping components | EA | 1 | \$1,040.00 | \$ 1,040.00 |
| Freight | EA | 1 | \$38,145 | \$ 38,145.01 |
| Warehousing Costs (%) | % | | 1.00% | \$ 16,030.33 |
| SUBTOTAL | | | | \$ 1,619,063.44 |
| EXTERNALLY ACQUIRED MATERIALS/SUBCONTRACTS - documented with Invoices and/or Checks | | | | |
| ** Laminated Mat Rental & Delivery | LS | 1 | \$96,414.12 | \$ 96,414.12 |
| ** Road Access Materials | LS | 1 | \$15,125.00 | \$ 15,125.00 |
| ** Fencing & Gaps Materials | LS | 1 | \$550.00 | \$ 550.00 |
| ** Silt Fencing & Materials | LS | 1 | \$2,420.00 | \$ 2,420.00 |
| ** Sandblasting Materials (Bores) | LS | 1 | \$3,877.50 | \$ 3,877.50 |
| ** HDDs | LF | 3430 | \$117.50 | \$ 403,025.00 |
| ** Cathodic Protection | LS | 1 | \$77,000.00 | \$ 77,000.00 |
| ** Sandblasting Materials (Line Pipe) | LS | 1 | \$5,027.00 | \$ 5,027.00 |
| ** Hydrotesting Subcontractor | LS | 1 | \$6,110.50 | \$ 6,110.50 |
| ** Hydrotesting Above ground fabrication misc. materials | LS | 1 | \$4,840.00 | \$ 4,840.00 |
| ** 16" 600# Valve Refurbishment | EA | 1 | \$25,000.00 | \$ 25,000.00 |
| ** Pigging Equipment (foam, poly & Brush Pigs) | LS | 1 | \$11,047.30 | \$ 11,047.30 |
| ** Hydrotesting Water, Frac Tanks and Trucking | LS | 1 | \$126,927.79 | \$ 126,927.79 |
| ** Seeding (ROW Restoration-Proposed PL) | LS | 1 | \$2,783.00 | \$ 2,783.00 |
| ** Fencing for Stopple Excavations (EA End) | LS | 1 | \$605.00 | \$ 605.00 |
| Sandblasting & Painting Materials for Fabrication Assoc. w/ Stopples | LS | 1 | \$2,601.50 | \$ 2,601.50 |
| ** Delta Prime Grouting Abandoned Segments | LS | 1 | \$23,425.60 | \$ 23,425.60 |
| ** Seeding (ROW Restoration- Demo Segment) | LS | 1 | \$2,783.00 | \$ 2,783.00 |
| ** Sanitation (12 Port-O-Cans w/ 6 Wash Stations) | MONTHS | 4 | \$3,363.80 | \$ 13,455.20 |
| ** Trench Box Rental with Delivery & Pickup | LS | 1 | \$46,052.58 | \$ 46,052.58 |
| ** Temporary Pig Traps materials | LS | 1 | \$24,200.00 | \$ 24,200.00 |
| ** Clearing & Mulching | LS | 1 | \$9,075.00 | \$ 9,075.00 |

| | | | | | |
|--|--|--------|---|-------------|---------------|
| ** | Concrete. Rebar & Lumber for Valve Site | LS | 1 | \$3,025.00 | \$ 3,025.00 |
| DocuSign Envelope ID: EDE81CE7-48D7-4E41-84BE-FCE1BA4C7829 | LS-Line Supports for Valve Site | LS | 1 | \$6,050.00 | \$ 6,050.00 |
| ** | Facility Rock for Valve Site | LS | 1 | \$1,470.15 | \$ 1,470.15 |
| ** | Geofabric for Valve Site | LS | 1 | \$726.00 | \$ 726.00 |
| ** | Security Fencing for Valve Site | LS | 1 | \$14,520.00 | \$ 14,520.00 |
| ** | Sandblasting & Painting/Coating Materials for Valve Site | | | | |
| ** | Fabrication | LS | 1 | \$2,420.00 | \$ 2,420.00 |
| ** | Erect-a-step for Valve Site | LS | 1 | \$6,655.00 | \$ 6,655.00 |
| ** | Access Road for RCR Taylor Pullback including Culvert and Gate | LS | 1 | \$20,000.00 | \$ 20,000.00 |
| ** | Office Trailer | MONTHS | 3 | \$5,499.27 | \$ 16,497.80 |
| | | | | SUBTOTAL | \$ 973,709.04 |

MATERIALS SUBTOTAL \$ 2,592,772.48

* Indicated items are being tracked for **BUY AMERICA COMPLIANCE** and will be documented using **Form 1818** and all supporting documentation prior to installation.

** Indicated items are **NOT** being tracked for **BUY AMERICA COMPLIANCE** and will **NOT** be documented using **Form 1818** and all supporting documentation prior to installation.

| Line Item / Item Description | Unit | Quantity | \$/Unit | Total |
|---|------|----------|----------|---------------|
| Internal Labor Costs - documented with Certified Ledger at payment. | | | | |
| ROW | HR | 100 | \$90.00 | \$ 9,000.00 |
| Environmental | HR | 50 | \$90.00 | \$ 4,500.00 |
| Legal | HR | 50 | \$150.00 | \$ 7,500.00 |
| Construction Management (Site Inspectors) | HR | 3118 | \$130.00 | \$ 405,340.00 |
| Project Management | HR | 1386 | \$130.00 | \$ 180,180.00 |
| Project Controls | HR | 275 | \$115.00 | \$ 31,625.00 |
| Operations | HR | 200 | \$100.00 | \$ 20,000.00 |
| OVERHEAD (4%) | | | 4.00% | \$ 25,965.80 |
| | | | SUBTOTAL | \$ 675,110.80 |
| External Labor Costs - documented with Invoices and / or checks | | | | |
| Superintendent | HR | 476 | \$60.05 | \$ 28,583.80 |
| General Foreman | HR | 476 | \$47.94 | \$ 22,819.44 |
| Safety Tech | HR | 476 | \$49.67 | \$ 23,642.92 |
| QC | HR | 476 | \$58.32 | \$ 27,760.32 |
| Foreman | HR | 1012 | \$46.01 | \$ 46,562.12 |
| Rig Welder | HR | 1356 | \$59.84 | \$ 81,143.04 |
| Heavy Equipment Operator | HR | 3080 | \$43.71 | \$ 134,626.80 |
| Administrative Clerk | HR | 476 | \$39.10 | \$ 18,611.60 |
| Craftsman 1 - (NCCER) | HR | 2350 | \$44.28 | \$ 104,058.00 |
| Craftsman 2 | HR | 88 | \$42.56 | \$ 3,745.28 |
| Craftsman 3 | HR | 1804 | \$40.25 | \$ 72,611.00 |
| Craftsman 5 | HR | 986 | \$35.64 | \$ 35,141.04 |
| Welder Helper / Skilled Helper | HR | 1056 | \$34.49 | \$ 36,421.44 |
| Laborer- Spotter | HR | 2684 | \$31.03 | \$ 83,284.52 |
| Superintendent (OT) | HR | 119 | \$83.66 | \$ 9,955.54 |
| General Foreman (OT) | HR | 119 | \$65.72 | \$ 7,820.68 |
| Safety Tech (OT) | HR | 119 | \$68.28 | \$ 8,125.32 |
| QC (OT) | HR | 119 | \$81.10 | \$ 9,650.90 |
| Foreman (OT) | HR | 253 | \$61.57 | \$ 15,577.21 |
| Rig Welder (OT) | HR | 339 | \$82.06 | \$ 27,818.34 |
| Heavy Equipment Operator (OT) | HR | 770 | \$58.15 | \$ 44,775.50 |
| Administrative Clerk (OT) | HR | 119 | \$51.32 | \$ 6,107.08 |
| Craftsman 1 - (NCCER) (OT) | HR | 588 | \$59.00 | \$ 34,692.00 |
| Craftsman 2 (OT) | HR | 22 | \$56.45 | \$ 1,241.90 |
| Craftsman 3 (OT) | HR | 451 | \$53.03 | \$ 23,916.53 |
| Craftsman 5 (OT) | HR | 247 | \$46.20 | \$ 11,411.40 |
| Welder Helper / Skilled Helper (OT) | HR | 264 | \$44.49 | \$ 11,745.36 |
| Laborer- Spotter (OT) | HR | 671 | \$39.36 | \$ 26,410.56 |
| Superintendent (Per Diem) | DAYS | 60 | \$105.00 | \$ 6,300.00 |

| | | | | |
|---|------|-----|-------------|-----------------|
| General Foreman (Per Diem) | DAYS | 60 | \$105.00 | \$ 6,300.00 |
| Safety Tech (Per Diem) | DAYS | 60 | \$105.00 | \$ 6,300.00 |
| QC (Per Diem) | DAYS | 60 | \$105.00 | \$ 6,300.00 |
| Foreman (Per Diem) | DAYS | 127 | \$100.00 | \$ 12,700.00 |
| Rig Welder (Per Diem) | DAYS | 170 | \$100.00 | \$ 17,000.00 |
| Heavy Equipment Operator (Per Diem) | DAYS | 385 | \$100.00 | \$ 38,500.00 |
| Administrative Clerk (Per Diem) | DAYS | 60 | \$100.00 | \$ 6,000.00 |
| Craftsman 1 - (NCCER) (Per Diem) | DAYS | 294 | \$100.00 | \$ 29,400.00 |
| Craftsman 2 (Per Diem) | DAYS | 11 | \$100.00 | \$ 1,100.00 |
| Craftsman 3 (Per Diem) | DAYS | 226 | \$100.00 | \$ 22,600.00 |
| Craftsman 5 (Per Diem) | DAYS | 124 | \$100.00 | \$ 12,400.00 |
| Welder Helper / Skilled Helper (Per Diem) | DAYS | 132 | \$100.00 | \$ 13,200.00 |
| Laborer- Spotter (Per Diem) | DAYS | 336 | \$100.00 | \$ 33,600.00 |
| Pipeline Construction Services - Non Destructive Testing (NDT) | DAYS | 55 | \$1,900.00 | \$ 104,500.00 |
| Pipeline Construction Services - vac trucks for drain up, nitrogen pig launch, pigging | EA | 6 | \$10,000.00 | \$ 60,000.00 |
| Pipeline Stopple Services to set stopple train, hot-tap, mob/demob, temporary bypass | DAYS | 5 | \$24,157.98 | \$ 120,789.90 |
| Pipeline Stopple Services to set single stopple train, hot-tap, mob/demob, temporary bypass | DAYS | 2 | \$21,975.45 | \$ 43,950.90 |
| SUBTOTAL | | | | \$ 1,499,200.44 |

| | | | | |
|---|----|------|----------|---------------|
| External Equipment Costs - documented with Invoices and / or checks | | | | |
| Vacuum Lift | HR | 14 | \$94.00 | \$ 1,316.00 |
| CAT 320 | HR | 1017 | \$94.00 | \$ 95,598.00 |
| Backhoe Rubber Tire | HR | 198 | \$40.00 | \$ 7,920.00 |
| CAT D-6 Dozer | HR | 198 | \$96.00 | \$ 19,008.00 |
| CAT 561 or Equal Sideboom Combination | HR | 53 | \$103.00 | \$ 5,459.00 |
| MOTORGRADER 14H | HR | 198 | \$110.00 | \$ 21,780.00 |
| Compactor 84" Sheeps Foot Drum Roler | HR | 40 | \$64.00 | \$ 2,560.00 |
| Compactor 84" Smooth Drum Roler | HR | 40 | \$80.00 | \$ 3,200.00 |
| 90 HP TRACTOR | HR | 73 | \$35.00 | \$ 2,555.00 |
| Sandblasting and Painting Rig | HR | 146 | \$94.00 | \$ 13,724.00 |
| 375 cfm | HR | 47 | \$43.00 | \$ 2,021.00 |
| Sky Track All Terrain Fork Lift 12,000# | HR | 66 | \$38.00 | \$ 2,508.00 |
| Ditch Witch FX30 Hydrovac Rig | HR | 66 | \$125.00 | \$ 8,250.00 |
| 1 Ton Crewcab (Gang Truck) w/ Tools | HR | 1452 | \$42.00 | \$ 60,984.00 |
| Pick-up (Foreman) | HR | 7364 | \$37.00 | \$ 272,468.00 |
| Water Truck | HR | 25 | \$41.00 | \$ 1,025.00 |
| Welding Rig (w/electrodes, oxygen, acetylene) | HR | 1694 | \$37.00 | \$ 62,678.00 |
| Diesel Tandem (w/ Triple Axle Lowboy) | HR | 577 | \$95.00 | \$ 54,815.00 |
| Utility Trailer (Tandem Axle) | HR | 77 | \$6.50 | \$ 500.50 |
| D-6 Tack Rig or Equal (w/ Machines & Air) | HR | 53 | \$85.00 | \$ 4,505.00 |
| Test Trailer (w/ all Instruments) | HR | 5 | \$100.00 | \$ 500.00 |
| Mini Excavator | HR | 33 | \$48.00 | \$ 1,584.00 |
| Vermeer T655 Trencher | HR | 27 | \$360.00 | \$ 9,720.00 |
| Sky Track All Terrain Fork Lift 8,000# | HR | 66 | \$32.00 | \$ 2,112.00 |
| SUBTOTAL | | | | \$ 656,790.50 |

LABOR AND EQUIPMENT SUBTOTAL \$ 2,831,101.74

| Line Item / Item Description | Unit | Quantity | \$/Unit | Total |
|--|------|----------|----------|---------------|
| EXTERNAL ENGINEERING - Cost documented with INVOICES and / or CHECKS | | | | |
| Burns & McDonnell Front End Labor prior to U-Agreement Approval - Engineering, Permitting, Environmental Investigations, Procurement, Estimating and Construction Planning | HR | 2334 | \$163.31 | \$ 381,165.54 |

Burns & McDonnell Environmental Consulting and Investigations

| | HR | 250 | \$162.15 | \$ | 40,537.50 |
|--|----|-----|----------|----|-----------|
|--|----|-----|----------|----|-----------|

| | | | | | |
|---|----|-----|----------|----|-----------|
| Burns & McDonnell Labor from U-Agreement Approval to Construction Kickoff - Project Management, Permitting, Procurement, Estimating and Construction Planning (estimated 6 weeks from Apr 1 - May 13, 2022) | HR | 537 | \$177.95 | \$ | 95,559.15 |
|---|----|-----|----------|----|-----------|

| | | | | | |
|---|----|------|----------|----|------------|
| Burns & McDonnell Support during Construction | HR | 1105 | \$177.55 | \$ | 196,192.75 |
|---|----|------|----------|----|------------|

| | | | | | |
|---|----|-----|----------|----|-----------|
| Burns & McDonnell SWPPP Inspections during Construction | HR | 276 | \$159.88 | \$ | 44,126.88 |
|---|----|-----|----------|----|-----------|

| | | | | | |
|---|-------|----|----------|----|-----------|
| Expenses (travel to site for pre-construction, construction & SQ support) | TRIPS | 80 | \$204.13 | \$ | 16,330.40 |
|---|-------|----|----------|----|-----------|

| | | | | | |
|----------|--|--|--|----|------------|
| SUBTOTAL | | | | \$ | 773,912.22 |
|----------|--|--|--|----|------------|

EXTERNAL SERVICES

| | | | | | |
|-----------------------------|----|---|-------------|----|--------|
| Geotechnical Investigations | EA | 2 | \$21,130.00 | \$ | 42,260 |
|-----------------------------|----|---|-------------|----|--------|

| | | | | | |
|--|----|---|----------|----|-----|
| Permitting and Environmental Mitigation Expenses (Floodplain permit, SWPPP Permit) | EA | 2 | \$250.00 | \$ | 500 |
|--|----|---|----------|----|-----|

| | | | | | |
|--|-----|----|------------|----|--------|
| Topographical Survey Services (Pre-Construction) | DAY | 14 | \$1,960.00 | \$ | 27,440 |
|--|-----|----|------------|----|--------|

| | | | | | |
|--|-----|----|------------|----|--------|
| Topographical Survey Services (Construction Staking and As-Builts) | DAY | 50 | \$1,960.00 | \$ | 98,000 |
|--|-----|----|------------|----|--------|

| | | | | | |
|---|-----|----|------------|----|--------|
| Supplier Quality Subcontractor to Oversee Coating | DAY | 14 | \$1,900.00 | \$ | 26,600 |
|---|-----|----|------------|----|--------|

| | | | | | |
|----------|--|--|--|----|------------|
| SUBTOTAL | | | | \$ | 194,800.00 |
|----------|--|--|--|----|------------|

| | | | | | |
|--|--|--|--|----|------------|
| Engineering / Administration / Inspection SUBTOTAL | | | | \$ | 968,712.22 |
|--|--|--|--|----|------------|

REPLACEMENT EASEMENT COMPENSATION - following Quit Claim / Eligibility % Applied

| | | | | | |
|--------------|--------|------|--------|----|---|
| ROW Easement | SQ. FT | 0.00 | \$0.00 | \$ | - |
|--------------|--------|------|--------|----|---|

| | | | | | |
|----------------------|--------|------|--------|----|---|
| Temporary Work Space | SQ. FT | 0.00 | \$0.00 | \$ | - |
|----------------------|--------|------|--------|----|---|

| | | | | | |
|----------------|----|---|--------|----|---|
| County Permits | EA | 0 | \$0.00 | \$ | - |
|----------------|----|---|--------|----|---|

| | | | | | |
|----------|--|--|--|----|---|
| SUBTOTAL | | | | \$ | - |
|----------|--|--|--|----|---|

| | | | | | |
|--------------------------------|--|--|--|----|---|
| EASEMENT COMPENSATION SUBTOTAL | | | | \$ | - |
|--------------------------------|--|--|--|----|---|

SUMMARY:

| | | |
|-------------------------------|----|--------------|
| GROSS REIMBURSABLE TO UTILITY | \$ | 6,392,586.44 |
|-------------------------------|----|--------------|

| | | |
|------------------------------------|----|---|
| SALVAGE and or Depreciation CREDIT | \$ | - |
|------------------------------------|----|---|

| | | | | |
|-------------------|--------|-----------------|----|------------|
| ELIGIBILITY RATIO | 98.43% | Ratio Deduction | \$ | 100,363.61 |
|-------------------|--------|-----------------|----|------------|

| | | | | |
|------------------|-------|-----------------|----|---|
| BETTERMENT RATIO | 0.00% | Ratio Deduction | \$ | - |
|------------------|-------|-----------------|----|---|

| | | |
|------------------------------|----|--------------|
| NET REIMBURSEMENT TO UTILITY | \$ | 6,292,222.84 |
|------------------------------|----|--------------|

Bill of Materials

| Description | Unit | Quantity | Sheet | Totals |
|----------------------------------|------|----------|----------------|--------|
| 16" Pipe and FBE Coating | FT | 3720 | FM3349-TPL-101 | |
| | FT | 5600 | FM3349-TPL-102 | 9760 |
| | FT | 440 | FM3349-TPL-103 | |
| 16" Pipe and FBE + ARO Coating | FT | 1760 | FM3349-TPL-101 | |
| | FT | 200 | FM3349-TPL-102 | 3720 |
| | FT | 1760 | FM3349-TPL-103 | |
| 16" Pipe and Painting | FT | 80 | FM3349-TPL-101 | 80 |
| 16" Induction Bend | EA | 11 | FM3349-TPL-101 | |
| | EA | 3 | FM3349-TPL-102 | 18 |
| | EA | 4 | FM3349-TPL-103 | |
| 16" Weld Neck Flange | EA | 6 | FM3349-TPL-101 | 6 |
| 16" Welded End Caps | EA | 8 | FM3349-TPL-101 | |
| | EA | 4 | FM3349-TPL-102 | 18 |
| | EA | 6 | FM3349-TPL-103 | |
| 16" Stopple | EA | 3 | FM3349-TPL-101 | |
| | EA | 0 | FM3349-TPL-102 | 5 |
| | EA | 2 | FM3349-TPL-103 | |
| 2" Thread-o-rings | EA | 4 | FM3349-TPL-101 | |
| | EA | 0 | FM3349-TPL-102 | 10 |
| | EA | 6 | FM3349-TPL-103 | |
| Small bore vent and drain piping | LS | 1 | FM3349-TPL-101 | 1 |



EPC Basis of Estimate

FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT

Contractor Project No 134557

Prepared by



Contractor
9400 Ward Parkway
Kansas City, MO 64114

| | | | | |
|-----|------------|-----------------------------|------|------|
| | | | | |
| 1 | 04/19/2022 | Issued to Williamson County | CGF | EJL |
| 0 | 10/27/2021 | Issued to TXDOT | EJL | EJL |
| REV | DATE | DESCRIPTION | ORIG | APPR |

BASIS OF ESTIMATE
FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT

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**BASIS OF ESTIMATE
FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT**

1. OVERVIEW

This Basis of Estimate outlines the assumptions, expectations, allowances, and quantities that were utilized in building up the Williamson County cost estimate for the Taylor TPL1 Pipeline Relocation Project.

Changes to the information included in any of the referenced documents have the potential to impact the cost and/or schedule of the project.

The build-up of the cost estimate is based on information supplied by Williamson County and FHR, engineering efforts to date, as well as site visits and project meetings.

Unless specifically noted the assumptions, exceptions and allowances apply to all subprojects that make up the entire project.

2. BASIS DOCUMENTATION

2.1 Approved Engineering Documentation

A substantial amount of the engineering work has been developed to date for this project. Many documents have been reviewed and approved by FHR and Williamson County. Approval denotes that Williamson County agrees that these documents fulfil their requirements for this project and subsequently fulfil the scope of services to Williamson County. The engineering documents and drawings that were utilized in the development of the EPC estimate are referenced in **Appendix A and B**. These documents were instrumental in developing the estimate and are included as reference in the basis of the estimate.

2.2 Procured and Subcontracted Items

Some of the engineering documents referenced in **Appendix A** have been utilized to solicit bids for pipe, services, materials, and other items. Bid tabs and vendor quotes were reviewed with FHR. The quotes received to date have a validity period as specifically noted. Where the design has changed after the receipt of the quote, adjustments have been made by FHR and Burns & McDonnell to amend the cost based on current scope and quantities.

Significant delays in award of changes to the scope will result in a change to the cost and or schedule.

Following is a list of major procurement packages and subcontractor packages that have been quoted for the estimate:

- P-1000 Line Pipe
- P-1100 Gate Valve - refurbish
- P-1200 Induction Bends
- C-70 Pipeline Construction
- C-73 Stopple Services

This may be adjusted as needed after funding the project, in order to meet the current needs and market pricing for the project.

3. ESTIMATE ASSUMPTIONS, CLARIFICATIONS AND EXCEPTIONS

3.1 General

1. The costs are based on execution of the project according to FHR, TXDOT/Williamson County industry standards and specifications except as noted. FHR standards utilized for the design and construction are included in **Appendix B**.
2. The cost estimate is based on the entire scope being executed as a single construction project.
3. The planned TXDOT drawings and other existing documentation provided during the Detail Design by TXDOT were not independently verified by BMCD or FHR in the preparation of the EPC estimate. BMCD assumed the data to be valid and relied on this for the development of the engineering and cost.

BASIS OF ESTIMATE**FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT**

4. Estimate includes all FHR, Contractor and Subcontractor overhead, site supervision, quality and safety oversight, progress controls and project management necessary to complete the project.
5. Taxes have been excluded from the estimate.
6. TXDOT and Williamson County costs have been excluded in the estimate.
7. The estimate includes FHR and Contractors costs to date through 4/1/22 as well as estimate costs through the completion of the work.
8. Construction costs are based on a T&M Cost estimate provided by Storm Field Services based on scope at time of submittal.

3.2 Engineering

1. The necessary level of design required to complete this estimate includes HDD design, tie-in configurations, and open cut trench locations.
2. Engineering costs include the necessary support during the procurement and construction phase of the project.
3. Workspaces and easements shown on drawings will be obtained for construction. If rights-of-way cannot be obtained as shown, additional engineering of tie-ins and drill geometry may be warranted.

3.3 Procurement and Materials

1. Pricing for materials is based on supplier quotes received in February. The quantities on the quotes have been updated based on current design.
2. Quantities include an industry standard overage for waste based on the current design.
3. Freight for the materials is included in the estimate.
4. Source inspection for bends and coating is included in the estimate to verify the quality prior to shipping to site.
5. Material costs include only permanent materials to be installed.
6. All materials meet the TXDOT Buy America requirement.
7. The existing block valve at FM3349 will be removed and refurbished for re-use in the replacement pipeline. The refurbishment of the valve will be reimbursed by Williamson County but will not have any "Buy America" requirements.
8. A fee for warehousing has been included due to the unknown schedule. This will prevent triple handling of the pipe if the ROW or contractor are not ready to receive the pipe at the time of delivery.
9. It is assumed that a TXDOT or Williamson County representative will inspect pipe at the warehouse before shipping to site to avoid double handling of materials.

3.4 ROW and Easements

1. ROW easement and temporary work space costs are not included in the current estimate as that has been in the scope of Williamson County to purchase the required work spaces and easements. If any additional easements or temporary work spaces are required they would have to be purchased by Williamson County.

3.5 Survey

1. Survey costs include all necessary pre-construction, construction, and post construction surveys.
2. Survey costs include both survey and picking up construction/quality information to include in as-built drawings for TxDOT submittal and FHR documentation.

3.6 Site Conditions

1. Geotechnical surveys were performed to confirm the horizontal directional drill designs.
2. The Geotechnical report was utilized for the purpose of the design and construction pricing is referenced below.

BASIS OF ESTIMATE**FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT**

3. if site conditions differ from the geotechnical reports, the cost and schedule could be impacted.

3.11 Removal and Abandonment of Existing Pipe

1. Vacuum trucks have been included for the initial cutting of the existing pipeline to remove residual pipe. It is assumed CC.
2. Pipe will be abandoned or removed based on the drawings.
3. Abandoned in place piping will be grouted and capped.
4. Removed piping will be disposed offsite.

3.12 QA/QC

1. All piping is assumed to be 100% NDT. Rates have been built up based on minimal days on site to shot as many welds as possible.
2. DOT OQ training and oversight is assumed to be required for all necessary covered tasks. Costs for this have been included with the C70 pricing.

3.13 Environmental

1. SWPPP is under development. It is assumed standard TX erosion requirements will be needed.

3.14 Permits

1. The following permits are assumed to be needed for this work and are included in the estimate and schedule:
 - a. Floodplain Development Permit City of Taylor
 - b. NPDES Storm Water Permit and SWPPP for Construction Activities
2. It is assumed this project is exempt from the following permits:
 - a. Clean Water Act (CWA) Section 404 Authorization
 - b. TCEQ hydrostatic test water discharge permit exempt due to the pipeline material being new.

3.15 Subcontracts

1. Subcontract work costs are based on T&M bids received for the HDD and pipeline work. The stopple, vacuum truck, NDT and environmental services are based on current MSA in place.

3.16 Schedule

1. The estimate is based on the following construction milestone schedules:
 - a. U-Agreement approval on or before December 10, 2021
 - b. Mobilization January 14, 2022

Significant changes to this schedule have impacted the project cost. The Rev 1 estimate is based on the following construction milestone schedules:

- c. U-Agreement approval on or before April 26, 2022
 - d. Mobilization June 1, 2022
2. The work is based on construction 6 days per week.
3. Estimate construction duration is 95 calendar days (18 weeks). This is subject to weather and any potential changes or stoppages during construction.
4. Some weather and productivity float are included in the schedule. A significant weather event will result in a change to the cost and schedule.
5. The tie-in schedule is subject to the operations and marketing needs. This could result in stand-by days prior to tie in.

BASIS OF ESTIMATE
FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT

3.17 Construction

1. Work is based on one (1) mobilization and demobilization for construction and decommissioning and abandonment of existing pipeline.
2. Traffic Plans and implementation where impact to roads is expected has been included. It is assumed neither TXDOT nor Williamson County will charge for traffic permits for TXDOT and County roads. The FM3349 and CR132 road crossings are designed to be bored.
3. FHR standards will be utilized for the design and construction of the new and existing pipelines. This list is included in **Appendix B**.
4. Pipeline work is assumed to be done prior to other utility relocations. If other utilities are working concurrently, this could cause delays or additional costs in the pipeline construction work.

3.18 Tie-in and Commissioning

1. Cost for nitrogen purge to displace the liquids has been included in the estimate for all pipeline segments.
2. It is assumed that the tie-ins can be performed in a single 36-hour shut down period. The block valve installation will be performed after the replacement line is operational following the valve refurbishment.

3.19 FHR Support

1. Costs have been included for FHR project, environmental, legal, RO, procurement and construction management support and operations. The costs are based on estimated man-hours for the effort.
2. 4% overhead has been included in the FHR personnel rates.

**BASIS OF ESTIMATE
FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT**

APPENDICES TO THE EPC BASIS OF ESTIMATE

BASIS OF ESTIMATE
FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT

APPENDIX A – APPROVED ENGINEERING DRAWING LIST

| Drawing Number | Title | Rev | Date |
|-----------------------|-----------------|------------|-------------|
| FM3349-TPL-101 | ALIGNMENT SHEET | 0 | 03/11/2022 |
| FM3349-TPL-102 | ALIGNMENT SHEET | 0 | 03/11/2022 |
| FM3349-TPL-103 | ALIGNMENT SHEET | 0 | 03/11/2022 |

BASIS OF ESTIMATE
FHR TAYLOR TPL1 PIPELINE RELOCATION PROJECT

APPENDIX B – FHR SPECIFICATION LIST

| Doc Number | Title | Rev | Date |
|----------------------------|--|------------|-------------|
| CS1506.220 | Horizontal Directional Drilling | 2.1 | 9/12/2019 |
| ES1505.121 | Alignment Sheet Template Management | 1 | 9/27/2018 |
| ES1505.200 | Plant Applied Pipe Coatings – Underground | 3.2 | 9/11/2019 |
| ES1505.202 | Field Applied Underground Pipeline Coatings | 3.1 | 8/23/2019 |
| ES1505.310 | Mapping As-Built Delivery | 1 | 7/1/2019 |
| ES1505.400 | Design Basis Pipeline | 3.1 | 6/25/2019 |
| ES1505.414 | Induction Bends | 3.1 | 6/25/2019 |
| ES1505.440 | Valves | 6 | 1/31/2020 |
| ES1505.463 | Backfill of Pipelines | 3.1 | 8/23/2019 |
| ES1505.464 | Horizontal Directional Drilling | 7 | 12/6/2019 |
| STD220.120 | Excavation | 9.2 | 8/26/2019 |
| STD220.100 | EHS Work Permit Standard | 13 | 10/12/2019 |
| TG1601.190 | MOP Establishment and Pressure Testing of Pipelines | 7.1 | 9/21/2019 |
| PGM610.100 | Operator Qualification Program | 24.1 | 6/15/2020 |
| TXDOT-ALL-FHR-CNS-LST-0001 | DOT OQ Covered Task List | 0 | 8/5/2020 |
| 21.14.370 | TWE Report No. 21.14.370 | 0 | 12/13/2021 |
| TCP (2-1)-18 | TXDOT Traffic Control Plan - Conventional Road Shoulder Work | 2-18 | 2/1/2018 |



Flint Hills Resources Engineering Standard

Backfill of Pipelines

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1.0 SCOPE

1.1 General

This Backfill of Pipelines Engineering Standard contains specifications for Backfill criteria of steel pipelines. This Engineering Standard is for use on new pipeline and station projects, or pipeline repair projects, to ensure Backfill is adequate and completed to the Company's expectations to prevent future issues and help achieve project implementation. This Standard is intended for Backfill under normally dry conditions. This Standard does not specifically apply to areas of swamp, shallow water table, or underwater.

This document and its requirements are contingent upon any differing or additional requirements that may have been put in place by the controlling agency or ROW/easement agreements.

This Standard should not supersede any laws, regulations, or statutes, nor relieve any personnel responsible for work covered by this Standard from knowing and complying with applicable laws, regulations, or statutes.

1.2 Responsibility

The Project Manager shall be responsible for the design of Backfill processes. The Inspector shall be responsible for overseeing the Backfilling operation of pipelines and maintaining communication with Contractors.

2.0 DEFINITIONS

Also, refer to FHR [Frequently Used Acronyms List](#) on FHR employee website.

Note: Defined terms are capitalized when used within this document, except for the words shall, must, will, and should.

Backfill - (v.) The act of filling an open trench/hole back to original or specified elevation. (n.) Material used to fill an open trench/hole back to original or specified elevation.

Company - Refers to Flint Hills Resources, LC (FHR).

Contractor - Refers to personnel hired by the Company to perform Backfill operations.

Debris - Material that can damage or shield cathodic protection and is not approved Backfill material, this could include construction materials (i.e. tarps, silt fencing, trash, etc.).

Double Ditch - A process of excavating the pipeline trench in which it is excavated in two passes. The first pass should be excavated at a depth in which the strata changes between the topsoil and subsequent stratas. The second pass is excavated to full depth. The first (topsoil) and second (all other stratas) pass spoils should be kept segregated and not intermingled.

Erosion Control Blankets - Natural materials that are biodegradable that are used to protect disturbed slope and channel areas from wind and water erosion.

FHR - Refers to assets operated by Flint Hills Resources, LC or under the responsibility of the FHR Pipelines & Terminals business unit.

Flowable Fill - A flowable mixture which contains cement, sand, fly ash, and water. The mix is designed, batched and its flowability adjusted by the Ready Mix Supplier.

Holiday - A defect or discontinuity in a protective coating that exposes the underlying surface to the environment.

Impact Loading - Loading directly onto the pipe and/or appurtenances with high impact (i.e. force). High Impact Loading can damage the pipe coating or pipe itself.

Lift - A layer of Backfill spoil to be applied to the trench and is compacted per specification before a subsequent Lift is applied. Lift thicknesses are to be set by the Company and depend on soil types and moisture content of the Backfill spoil.

Padding - Material (i.e. mechanical, rock, sand, clay, etc.) to protect the pipe and pipe coating from Debris, rocks, and rocky trench environments.

Pipe Zone - The Pipe Zone shall include the full width of trench from the bottom of the pipe to a horizontal level 12 in. above the top of the pipe. Where multiple pipes are placed in the same trench, the Pipe Zone shall extend from the bottom of the lowest pipe to a horizontal level 12 in. above the top of the highest or topmost pipe.

Proctor (Compaction Test) - A laboratory method of experimentally determining the optimal moisture content at which a given soil type will become most dense and achieve its maximum dry density.

Relative Compaction - The ratio, expressed as a percentage, of the in-place dry density to the laboratory maximum dry density.

Right-of-Way (ROW) - The strip of land rented by the Company to install and operate the pipeline within.

Roads

Primary Roads - Generally major roads and highways with relatively large volumes of traffic and have a well-defined traveled roadway (traffic lane) and shoulders with a granular pavement and/or concrete surface.

Secondary Roads - Generally, roads with moderate traffic. Usually the traveled roadway will be defined but may not have apparent shoulders. The road surface may contain granular material, earth or a combination of both.

Unimproved Roads – Generally, minor roads with minimal traffic. Roads will normally be identified as small roadways, trails, or tracks with no embankment or adjacent ditches and constructed/situated in natural earth material. The surface may have a light application of granular material.

Shall/Must/Will - Used in the Engineering Specifications/Standards to designate a mandatory design requirement.

Should - Used in the Engineering Specifications/Standards to designate a discretionary design requirement.

Soil Cap - Sometimes called a Crown, is the uppermost layer of Backfill material all of which is above the elevation of adjacent areas.

Subsidence - An undesirable condition when the sinking of soil into the pipeline trench as uncompacted soil consolidates after primary Backfill has been completed.

Trench Zone - The portion of the trench from the top of the Pipe Zone to the existing surface of adjacent areas.

Trim Backfill - Final topsoil is sloped, elevated, compacted, and graded the same as the undisturbed, adjacent ground.

3.0 DESIGN PROCEDURE SUMMARY

Consideration to trench design, pipe supports, Padding, and pipe floating conditions shall be analyzed prior to Backfilling operations.

Consideration to ROW agreements and costs may determine if a Crown/Soil Cap or a Trim Backfill method is utilized.

4.0 DESIGN

4.1 General Overview and Design

4.1.1 Overview

Generally, there are two main pipeline Backfill approaches:

The first is more traditional and generally more cost effective. It involves a method where the excavation spoils are placed back into the pipeline trench with little attention paid to compaction or soil density. A Crown, or Soil Cap is installed above the elevation of adjacent ground elevations to act as a cushion that will settle into the trench over time as the excavation spoils compact naturally. This cushion helps mitigate future Subsidence.

The second involves a method where the excavation spoils are placed back into the pipeline trench with much attention paid to compaction and soil density. Attempts are made to ensure the spoils being Backfilled are nearly equal in density to that of the adjacent ground. In this method, the Crown, or Soil Cap is not installed as the future Subsidence issues are mitigated through compaction. The compaction requirements in Section 4.5 are applicable to this method. This method is referred to as Trim Backfill.

Easement restrictions, cost, soil conditions, elevation and profile, and other ROW expressions can define which of these methods are to be employed. It is typically not feasible from a quality, or cost perspective to alternate between methods along the length of a pipe lay.

Comment: *Re-vegetation of the ROW is also an important part of mitigation of future Subsidence issues and should be considered in design.*

4.1.2 General Design

4.1.2.1 Warning Tape

During pipeline design, the Project Manager should consider installing warning tape marked “Danger – Underground Utility” above the pipe, to mitigate asset damage. Generally, this will be installed 2 ft. above the top of the pipe. Consideration should be given to farming or other activities when determining warning tape depth.

4.1.2.2 Debris

Both before the pipe has been lowered into the trench, and before Backfilling, the trench shall be inspected to ensure that it does not contain skids, brush, stumps, trees, rocks, welding rods, metal shavings, or other Debris. Furthermore, such Debris shall not be Backfilled into the trench in either the Pipe Zone or Trench Zone.

No Debris that will shield or modify cathodic protection shall be Backfilled into the trench, unless approved by the Corrosion Capability and Area Operations Manager/Supervisor.

4.1.2.3 Backfill Material

The Backfill material is suitable if the rock size in the Backfill is 1-1/2 in. or smaller and the surrounding earth content for Backfill is deemed adequate per environmental review and/or geotechnical survey.

4.2 Padding Procedure

- 4.2.1** Should the rock sizes be larger or the earth content lacking, there are mitigation options available for consideration. Options such as mechanical Padding, sand Padding, approved rockshield, or select Backfill can be considered. Other materials shall be reviewed and approved by the Corrosion Capability. Extra trench depth may be necessary to accommodate some of the methods above.

Comment: Typically, select Backfill material used for Padding is 3/8 in. or smaller. Then, the larger 1-1/2 in. native Backfill rocks can be put in on top of that Padding layer.

- 4.2.2** Neither rock greater than 1-1/2 in., nor frozen material shall be Backfilled directly onto the pipe. Where such materials are encountered, Contractor shall install sufficient earth or sand to form a layer under, around, and a minimum of 12 in. thick (prior to compaction) above the pipe.
- 4.2.3** It is the Company's recommended practice to maximize the use of native Backfill material. Therefore, after analysis is done on the removed soil, and the cost evaluated, the Project Manager and Inspector shall determine if a mechanical Padding machine(s) should be utilized.
- 4.2.4** When solid rock or rocky conditions are present, the pipe shall be lowered onto burlap sandbags of sufficient size to maintain at least 6 in. of clearance between the pipe and trench bottom. The pipeline shall at all times be uniformly supported throughout its length. The spacing should be captured in the design of the pipeline installation and then followed by the Contractor. Contractor shall supply hoisting equipment of adequate size to safely reposition the pipe and/or burlap sandbags as necessary to achieve proper alignment in the trench.

Comment: Burlap is the Company's preferred sandbag. The bag material should not interfere with the cathodic protection system and should not be a plastic-type of material.

- 4.2.5** A thorough inspection shall be carried out prior to the placing of any Padding to ensure that adequate bottom (6 in.) and side clearance (middle of trench) has been achieved. Additional burlap sandbags may be necessary as determined by the Company Inspector, particularly at side bends or sags and over bends to prevent contact with rock. When the pipe is satisfactorily supported, the Padding material may be placed directly onto the pipe and allowed to pour under the pipe to complete the bottom and top Padding in one operation. Although, it is preferred to avoid placing material directly on the pipe when possible. Contractor shall pay particular attention to the under Padding, probing and compacting, as necessary, to achieve a firm under Padding totally free from voids. The finished surface of Padding shall be at least 8 in. above the pipe and shall be level across the trench.
- 4.2.6** The Contractor shall not use earth from the ROW for Padding except from the spoil bank. Under no circumstances shall topsoil be used for Padding. Imported Padding materials will only be acquired from Company approved sources, as approved by the Project Manager and Environmental Capability.
- 4.2.7** Surplus Padding material shall be placed in the trench or removed to an approved disposal site and shall not be left on the ROW, unless special provisions have been made with the landowner. Contractor shall avoid loss of topsoil and only a minimal amount of sand residue will be permitted, such that a change in soil texture does not occur.

4.3 Backfilling Procedure

4.3.1 General Backfill Operations (Applicable to Soil Cap/Crown and Trim Backfill Methods)

- 4.3.1.1** Prior to lowering-in of the pipe, the pipe shall be tested per FHR_ [PRC1601.198](#), Field-Applied External Pipeline Coating Inspection, in regard to identifying Holidays.
- 4.3.1.2** All Backfilling operations shall be done in a manner that will prevent damage to the protective coating. Coating used for repairs requires approval by Company prior to application. Refer to FHR_ [ES1505.202](#), Field-Applied Coatings, for approved coating materials.
- 4.3.1.3** Impact Loading of the pipeline, appurtenances, and structures must be avoided during the placement of Backfill.

- 4.3.1.4** Flowable Fill and concrete can be applied directly to the pipeline, provided the pipeline is first coated with a layer of fusion bond epoxy coating and an abrasion resistant overcoat. Refer to FHR [ES1505.200](#), Plant-Applied Pipe Coatings and FHR [ES1505.202](#), Field-Applied Pipe Coatings for proper coatings that should be used.

If used as a footer, Flowable Fill and concrete should be poured first, and burlap sandbags placed on top of the concrete footer prior to installing the pipeline.

Comment: Flowable Fill can be used as a stable base when heavy equipment or concrete will be installed above ground (station, etc.) and the soil cannot support the infrastructure.

- 4.3.1.5** The Contractor shall perform all Backfilling across drainage ditches, irrigation ditches, terraces, drainage districts, railroads, public highways, private drives, trails or roads, rivers and other streams, or any other special crossings, in accordance with the jurisdictional agency or applicable permit specifications.
- 4.3.1.6** Excavated spoils from one area of the trench shall not be Backfilled in another area of the trench.
- 4.3.1.7** Backfilling shall be completed as quickly as reasonably possible after lowering-in of the pipe. Contractor shall Backfill the trench sufficiently to prevent the pipe from floating should the trench become flooded. Contractor shall ensure that the pipe remains in the bottom of the trench. Company may perform surveys after Backfilling and/or cleanup as it deems necessary to ensure the pipe has the specified cover.

4.3.2 Soil Cap/Crown Method (Mainline)

Crown/Soil Cap Method is usually more cost effective and mitigates Subsidence by placing a layer above ground level for future settling into the trench. It is the Company's preferred method of Backfilling pipelines.

- 4.3.2.1** Typically, Crowns are sloped to a 10% grade. Consideration to soil type, depth and width of trench should be considered as well.
- 4.3.2.2** Even though it is not constrained to compaction requirements, it is the Company's preference that some compaction is done on the top surface prior to the Soil Cap/Crown installation.

4.3.3 Trim Backfill Method (Mainline)

Trim Backfill is typically costlier and labor intensive. Also, consideration should be given to ongoing maintenance costs and associated risk of Subsidence related issues. This method attempts to mitigate future Subsidence by Backfill being installed at or above adjacent ground densities and requires compaction and testing at the time of Backfill. Typically, a Trim Backfill method should only be used if the ROW agreement dictates such.

Considerations that are critical to understand when selecting to do a Trim Backfill Method may include, but are not limited to, the following:

- Soil types
- Moisture content
- Ease of compaction
- Typical time for area to revegetate

These considerations may lead the project to include the following methods/equipment to ensure proper compaction. Other methods may also be available.

- Additional Padding machines
- Compaction after specified Lift heights
- Soil borings and associated lab test samples
- Specialized compaction equipment
- Backfill testing for Relative Compaction

The Project Manager should perform an economic and risk based evaluation to determine the methods used for the project.

After Backfilling, the ROW grade shall be contoured to the profile of the undisturbed, adjacent ground.

4.4 Location Specific Backfilling Operations

4.4.1 Cultivated Land

- 4.4.1.1** Across cultivated lands, the top 12 in. of trench shall be left free of any rock. Rocks greater than 1-1/2 in. shall be removed. When the Double Ditch Method is used, the second pass spoils, in their entirety (without rocks greater than 1-1/2 in.), must be Backfilled first, and then the first pass spoils (topsoil) will be used to complete the Backfill. If the Backfill cannot be completed using the first pass spoils, (topsoil) similar material must be imported. Compaction shall be done per Section 4.5, unless predetermined otherwise.

4.4.2 Foundations

- 4.4.2.1** Where concrete foundations are installed (e.g. tie-ins and mainline valve assemblies, etc.), Contractor shall ensure that all Backfill material consists of native soils or other approved material which are free of topsoil, vegetation, Debris and other objectionable materials. The uppermost 3 ft. shall be uniformly placed and compacted in Lifts (6 in.) with each Lift compacted to a minimum of 95 percent of Standard Proctor density, which is outlined in Section 4.5. A top layer of gravel is typically added to surround the foundation.

4.4.3 Swamps and Marshes

- 4.4.3.1** Refer to FHR [ES1505.468](#), Swamp and Marsh Construction, for Backfilling criteria and equipment applicable to these types of locations.

4.4.4 Station Yards, Mainline Valves, and Other Fenced Enclosures

- 4.4.4.1** If native soil is inadequate to support equipment, and upon the Company's request, imported material shall be installed to prevent Backfill settlement adjacent to piping or equipment assets; such as mainline valves, concrete pads, etc.
- 4.4.4.2** As a best practice for new construction, the Backfill within pump and meter stations, mainline valve assembly sites, and any other fenced enclosures shall be uniformly placed and compacted in 6 in. Lifts with each Lift compacted to a minimum of 95 percent of Standard Proctor density.
- For existing sites and maintenance activities, use good construction practices for backfill around equipment. Consider impacts due to potential settling over time.

The finished grade shall establish drainage away from the facilities. See Section 4.3 in FHR [ES1505.460](#), Site Preparation, Earthwork, Grading, Roads, and Pavement.

4.4.4.3 Typically, a final top layer of gravel is added in these locations.

4.4.4.4 Backfilling underground valves and associated appurtenances in environments susceptible to frost heave shall use material and criteria as defined in FHR [ES1505.461](#), Frost Heave Mitigation for Buried Valves.

4.4.5 Roads

4.4.5.1 Primary Roads

- For open-cut crossings of Primary Roads, the excavated trench across the road between the outside edges of the shoulders shall be Backfilled with granular material as specified by the controlling entity in which the road is located. If the controlling entity does not specify required Backfill requirements, Table 4-1 and 4-2 should be used.

TABLE 4-1: Material Size Requirements Deeper than 12 in. Below Road Surface

The Backfill material up to 12 in. below the finished road surface of the road shall be pit run gravel with the following gradation limits:

| Sieve Size | % Passing by Weight |
|------------|---------------------|
| 4-inch | 100 |
| 1-inch | 60-100 |
| 1/4-inch | 25-100 |
| 1/8-inch | 25-75 |
| 0.02-inch | 15-50 |
| 0.003-inch | 0-8 |

The Backfill material for the 12 in. immediately below the finished road surface shall be hard, durable crushed rock or crushed gravel with the following gradation limits:

| Sieve Size | % Passing by Weight |
|------------|---------------------|
| 1-inch | 100 |
| 1/4-inch | 75-100 |
| 1/8-inch | 40-70 |
| 0.02-inch | 15-45 |
| 0.003-inch | 0-8 |

- The Backfill material shall be placed in layers not less than 6 in. thick with each layer thoroughly compacted using a power driven vibration type tamping machine approved by the Company. The degree of compaction shall meet the requirements of the governing authority or, if unspecified, be consistent with adjacent ground. Contractor shall add water to the Backfill material per Proctor. Care shall be taken to not add too much water as it could float the line pipe.
- The surface of all open-cut paved highways shall be replaced with a new paving material having the same specifications as that originally removed, unless otherwise requested by the controlling agency. The pavement shall not be cut beyond the required trench width or to governing authority's specifications, and the adjacent roadway and shoulders shall be cleaned of all mud and Debris prior to repaving. All surface courses shall be thoroughly compacted and properly blended in with the adjacent roadway to form a uniform surface condition free from bumps or depressions.

4.4.5.2 Secondary Roads

- For open-cut crossings of Secondary Roads, the existing material from the excavated trench across the entire road width may be reused for Backfill up to 12 in. below the finished road surface. Existing material may be rejected due to high moisture or rock content, in which case, the Contractor shall install suitable Backfill material as specified for Primary Roads. Compaction requirements across the roadway and shoulders shall be the same as those specified for Primary Roads. Surfacing, where required, shall be of a material equal to the existing road surface and shall be installed in a smooth uniform condition free from bumps or depressions. Other specifications may supersede and apply if governed by a jurisdictional agency.

- Unless otherwise noted, crossings of private driveways, roadways and access roads shall be constructed to Secondary Road requirements.

4.4.5.3 Unimproved Roads

- Unless otherwise specified, natural Backfill material shall be used for crossings of Unimproved Roads. The Backfill requirements at these crossings shall be free of rocks greater than 1-1/2 in. Compaction shall ensure that the trench area is compatible with the adjacent roadway's soil density and free from bumps or depressions. Typically, granular topping equal to existing road conditions is installed as a final layer.

4.4.5.4 Pipeline Crossing (Within Company Easement)

- In case the need arises to cross a newly Backfilled pipeline trench, a temporary ramp should be employed.

Comment: *The temporary ramp configuration and constructed material type is subject to approval by the Chief Company Inspector and/or Project Manager. Weight limits of the ramp must be considered.*

4.5 Compaction

The following Compaction requirements are to be used in the following cases:

- Under foundations
- Road crossings - if not specified by the jurisdictional agency

The testing of compaction shall be conducted as described below:

Determine the density of soil in place by the sand cone method, ASTM D1556 or equivalent (e.g. soil density gauge).

Determine laboratory moisture-density relations of soils by ASTM D1557.

Sample Backfill materials by ASTM D75.

When tests indicate that the compaction is less than the specified Relative Compaction, rework and retest those areas until the specified Relative Compaction has been obtained.

4.5.1 Compaction Requirements

Relative Compaction in pipe trenches shall be a minimum as follows:

Pipe Zone – 90% Relative Compaction.

Backfill above Pipe Zone not beneath paving – 90% Relative Compaction.

Backfill above Pipe Zone in paved areas – 95% Relative Compaction.

In rural areas not subject to traffic, if Contractor can prove the adjacent ground conditions are less than 90% Relative Compaction, a request can be made to the Company Project Manager to reduce the Relative Compaction to match that of the adjacent ground conditions. Under no circumstances shall it be brought to less than 85% Relative Compaction.

4.5.2 Equipment and Methods for Compaction

| Completed Cover Requirement for Use (in.) | Weight Limit (lbs.) | Acceptable Equipment/Method Use |
|---|---------------------|--|
| 8-24 | 300 | Hand-held plate tampers |
| 24+ | n/a | Skid Steer, Excavator ¹ , or another proven compaction method |

Notes:

1) Sheep's foot type compaction wheels with a minimum 22 in. width are preferred since plate wheel type compaction wheels can get soil inside the wheel and cause the machine to bog down. Plate Wheel type compaction wheels can be used in sandy soils. High-energy impact rollers should not be used.

4.6 Final Site Clean-Up

4.6.1 Disposal of Excess Material

- 4.6.1.1** No material shall be taken off site until it has been inspected by a Company Representative.
- 4.6.1.2** Dispose of excess material offsite, including disposal of all excavated or surface rocks and lumps greater than 3 in.
- 4.6.1.3** In open terrain and when landowner agreement allows, excess material may be disposed of within the Right-of-Way by spreading, provided that rocks or lumps greater than 3 in. are removed. Consideration may need to be given to costs associated with re-seeding and watering.

4.6.2 Final Clean-Up and Top Dress

- 4.6.2.1** Make surfaces free of all cleared vegetation, rubbish, and other construction wastes.

- 4.6.2.2** In some cases, re-seeding and vegetation requirements will be dictated by the Right-of-Way agreement with the landowner. In other cases, vegetation should be seeded or installed such that erosion along the ROW is minimized.

4.6.3 Slope Protection

- 4.6.3.1** Where there is a concern of steep slopes or where rainfall would create an erosion problem or as determined by the FHR Representative, slope protection will be required.

- 4.6.3.2** Hydromulch wood fiber mulch blend is the Company's preferred slope protection for Backfilling. It shall be kept watered until established, vegetative conditions exist free of seedlings.

***Comment:** Erosion Control Blankets may be considered but is not preferred as metal stakes would have to be removed in the future and erosion could occur underneath without visual identification.*

- 4.6.3.3** Refer to FHR [G210.010](#), Pipeline Project Best Management Practices for requirements on managing erosion control.

5.0 PROCUREMENT

Procurement of select, non-native Backfill material shall be approved by the Environmental Capability, prior to purchase.

6.0 REFERENCES

6.1 Related FHR Engineering Specifications/Standards

- [ES1505.200](#), Plant-Applied Pipe Coatings
- [ES1505.202](#), Field-Applied Pipe Coatings
- [ES1505.460](#), Site Preparation, Earthwork, Grading, Roads, and Pavement
- [ES1505.461](#), Frost Heave Mitigation for Buried Valves
- [ES1505.468](#), Swamp and Marsh Construction

6.2 Related FHR Approved Documents and/or Forms

- [G210.020](#), Pipeline Project Best Management Practices
- [PRC1601.198](#), Field-Applied External Pipeline Coating Inspection
- [STD220.120](#), Excavation Standard
- [STD220.100](#), EH&S Work Permit Standard
- [PGM610.100](#), FHR Operator Qualification Program

6.3 Related Regulatory and/or Industry References

6.3.1 Regulatory

- Jurisdictional Agencies

6.3.2 Industry

- ASTM D75, Standard Practice for Sampling Aggregates
- ASTM D1556, Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
- ASTM D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))

6.4 Other References

- Not Applicable

7.0 SUMMARY OF CHANGES

| <i>Issue</i> | Date | Rev/Exc By | Description |
|--------------|-------------|--|---|
| 1.0 | 07/27/16 | Clayton Zercher, Cody Fager, and Steve Ostrom | Initial release. |
| 2.0 | 12/05/16 | Clayton Zercher, Cody Fager, and Steve Ostrom | See Version 2.0 Version Log |
| 3.0 | 3/6/19 | Patty Pellin, Lisa Winter, Steve Ostrom, Tom Moore, Curt Heidecker, Nayyar Roohi, Anthony Anzures, Kieth Walton. | <p>The following are the substantive changes in this version.</p> <p>Global changes:</p> <ul style="list-style-type: none"> -Changed KPL references of KPL/Koch Pipeline Co. to Flint Hills Resources, LC and added FHR to Definitions. <p>Section changes:</p> <ul style="list-style-type: none"> 1.1 - Deleted flowing liquids. 4.2.3 - Minor revision. 4.4.2 - Added new beginning statement, added second paragraph. 6.2 - Added PGM610.100, KPL Operator Qualification Program. 6.3.2 - Deleted reference to ES1505.010. |
| 3.1 | 8/23/19 | Kim Gerold, Lisa Winter | <p>The following are the substantive changes in this version.</p> <p>Global changes:</p> <p>Section changes:</p> <ul style="list-style-type: none"> - Added O&M category to header |



8.0 FIGURES/APPENDICES

8.1 Figures

Not Applicable

8.2 Appendices

Not Applicable

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Attachment B

Utility's Schedule of Work and Estimated Date of Completion

Estimated Start Date: 6/1/2022

Estimated Completion Date: 9/19/2022

Attachment C

Eligibility Ratio

- ☐ On State and local projects, Texas Transportation Code section 203.092 provides that utility reimbursement for facility relocation is dependent upon whether the utility possesses a valid property interest. See Attachment “H” for proof of property interest, which is established at 100% eligible.
- ☒ Eligibility Ratio Calculation attached

| ELIGIBILITY RATIO CALCULATOR | | | |
|--|--|-------|--|
| Calculation for Overhead Installation | | by | |
| Number of Eligible Poles | | | |
| Number of existing Poles in conflict that are both outside of existing ROW and inside of proposed ROW. EASEMENT | | | |
| Number of existing Poles in conflict that are inside of the existing ROW. PERMIT | | | |
| TOTAL number of Poles in Conflict | | 0 | |
| ELIGIBILITY IF CALCULATED BY POLES | | n/a | |
| Calculation for Underground or Overhead | | by | |
| Length of Existing Facility | | | |
| Length of existing facility in conflict that is both outside of the existing ROW and inside of proposed ROW . EASEMENT | | 10104 | |
| Length of the existing facility in conflict inside of the existing ROW. PERMIT | | 161 | |
| TOTAL length of the existing facility within proposed TxDOT ROW. | | 10265 | |
| ELIGIBILITY IF CALCULATED BY LENGTH | | 98.4% | |
| ACCEPTED ELIGIBILITY RATIO 98.43% | | | |

Attachment D

Betterment Calculation and Estimates

☒ Betterment does not exist in this agreement.

☐ Betterment Calculation attached.

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Attachment E

Proof of Property Interest

K KOCH

KOCH REFINING COMPANY

P.O. Box 2256 Wichita, Kansas 67201

RIGHT OF WAY GRANT

STATE OF TEXASCOUNTY OF Williamson

WM-6

} ss.

ACCT. NO. 3000

17276

KNOW ALL MEN BY THESE PRESENTS:

THAT for and in consideration of One Dollar (\$1.00) to us in hand paid, receipt of which is hereby acknowledged, and the further consideration of O.V.C. per rod line, to be paid when such grant shall be used and occupied, the undersigned as Grantor (whether one or more), do hereby grant and convey unto KOCH REFINING COMPANY, as Grantee, its successors and assigns, a right of way for the purpose of constructing, reconstructing, renewing, operating, maintaining, inspecting, repairing, ~~changing the size of and relaying a pipeline~~ and ~~additional pipelines~~ along a route or routes selected by Grantee for the transportation of oil, gas, petroleum or any of its products, together with such valves, fittings, meters and other equipment and appurtenances as may be necessary or convenient for such operations, with the right of ingress and egress to and from the same on, over and through certain land situated in Williamson County, State of Texas, to wit:

A 123.80 acre tract of land, being 109.46 acres out of the John Kuyendall Survey, A-378 and 14.34 acres out of the R.S. Neighbours Survey A-483, Williamson County, Texas and being more fully described by metes and bounds in that certain Deed from Katie Bryan Steves, et al, to Walter Vorwerk, et al, dated December 20, 1947 and recorded in Vol. 347, Page 145, records of Williamson County, Texas.

See Exhibit "A" attached hereto and made a part of this easement.

TO HAVE AND TO HOLD unto the said Grantee, its successors and assigns, with ingress and egress to and from the same, for the purpose of constructing, operating, inspecting, repairing and maintaining the same, ~~and the relaying, changing the size of, or removing of such at will, in whole or in part.~~ It is further provided that whenever this right of way shall cease to be used for said purposes, the same shall revert to Grantor, its heirs, successors or assigns, ~~upon notice to that effect being given to said Grantee.~~ It is further agreed that said Grantee, its successors or assigns, ~~may at any time lay an additional line of pipe on lands described above upon the payment of a like consideration per rod line and agree to the same benefits and conditions as herein provided.~~ The said grantor to fully use and enjoy the said premises, except for the purpose hereinabove granted to the said Grantee which hereby agrees to bury all pipe to a sufficient depth so as to not interfere with ordinary cultivation of soil and to pay any damages which may arise to crops or fences from the construction, maintenance and operation of said pipelines.

Grantor represents and warrants that he is the owner in fee simple of the land above described subject only to outstanding mortgages, if any now of record in said County and specifically covenants to indemnify Grantee against claims of tenants in possession of the above described lands for damages thereto previously paid to Grantor by Grantee.

Grantor agrees to not build, create or construct nor permit to be built, created or constructed, any obstruction, building, improvement or other structure over or under said pipeline ~~unless~~ after such pipeline ~~exists~~ have been constructed by grantee. EXCEPT AS SET OUT IN EXHIBIT A.

All covenants and agreements herein contained shall be deemed to be covenant running with the land and shall extend to and be binding on the respective heirs, legal representatives, successors and assigns of the parties hereto.

It is hereby understood that party securing this grant in behalf of Grantee is without authority to make any covenant or agreement not herein expressed.

WITNESS the execution hereof this 4-26-89 day of April A.D. 19 89

Name Walter Vorwerk
Walter Vorwerk Name A married person
dealing in his sole and separate property

Address Route 3, Box 12
Taylor, Texas Address 76574

CONSENT AND AGREEMENT OF TENANT

In consideration of the sum of \$1.00 in hand paid, the undersigned tenant in possession of the real estate described in the foregoing Pipeline Easement consents to and joins in same, to the extent of his interest in the real estate described therein.

TENANT NONE

DATE

STATE OF TEXAS
COUNTY OF Williamson } ss.

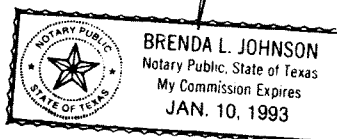
1003.716

Before me, the undersigned, a Notary Public in and for said County and State, on this 26th day of April 1989, personally appeared Walter Vorwerk and Walter Vorwerk to me known to be the identical persons who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein set forth.

Witness my hand and official seal the day and year above set forth.

Brenda L. Johnson
Notary Public

My commission Expires 1-10-93



OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS

EXHIBIT "A"

1. Easement for one line only.
2. There will be no above ground appurtenances on this property.
3. Pipeline will be buried a depth of 48" from top of pipe to ground level.
4. Grantee agrees to double ditch trench line across this easement.
5. Centerline of pipeline to be located 15' off south and east property lines.
6. It is hereby agreed that Grantor for the purpose of ingress and egress shall be permitted to construct a road or roads, paved parking lot and an entrance to said road or roads or driveways of concrete or other materials, across said pipeline easement on this property.
7. It is further agreed that Grantor shall be permitted to lay water, electric, natural gas or other utility pipelines across said easement on this property.
8. In the event at any time, Grantee damages said road or roads, driveways or entrance to said roads or driveways, Grantee will promptly repair said damage.

SIGNED FOR IDENTIFICATION:

Walter Vorwerk
Walter Vorwerk

4-26-89
(date)

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me; and was duly RECORDED in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me. on



JUN 27 1989

James H. Bogdanow
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

FILED FOR RECORD
WILLIAMSON COUNTY, TEX.
JUN 26 PM 1:05
James H. Bogdanow
COUNTY CLERK

FILED FOR RECORD
WILLIAMSON COUNTY, TX.

1999 JUN 26 PM 1:05

James H. Boylston
COUNTY CLERK

53

*See
p. 110.*

INDEXED

17276

RETURN TO:
KOCH REFINING COMPANY
P. O. Drawer 1210
Round Rock, Texas 78680

VOL 1850 PAGE 074

35390

PIPELINE EASEMENT KOCH REFINING COMPANY

THE STATE OF TEXAS §

COUNTY OF WILLIAMSON §

KNOW ALL MEN BY THESE PRESENTS: THAT Morris Wayne Krueger and Michael Ray Krueger of Williamson County, Texas, hereinafter at times referred to as "Grantor", for and in consideration of the sum of Ten and No/100 (\$10.00) Dollars, and other good and valuable consideration to us cash in hand paid by Koch Refining Company, hereinafter at times referred to as "Grantee", the receipt and sufficiency of which are hereby duly acknowledged and for which no lien either express or implied is herein or hereby retained or shall exist, have GRANTED and CONVEYED and by these presents to GRANT and CONVEY unto the said Koch Refining Company, a private corporation, the right, privilege and easement to lay, construct, maintain, repair, operate and remove one Sixteen (16") inch steel pipeline for the purpose of transporting oil, gas and other petroleum products which can be transported through said pipeline over, under, across and through a strip of land ~~thirteen (13)~~ (25) feet wide which lands are situated in Williamson County, Texas, to-wit:

80.0 acres, more or less, part of the John Kuykendall Survey, Abstract No. 378, Williamson County, Texas, being the same land described as Fourth tract in that certain Deed of Gift from Marvin Krueger and wife, Lucia Nell Krueger to Morris Wayne Krueger and Michael Ray Krueger, dated December 29, 1976, recorded in Vol. 656, Page 142 of the Deed Records of Williamson County, Texas.

TO HAVE AND TO HOLD unto the Grantee herein, its successors and assigns, forever, the rights, privilege and easement upon, under, across and through said tract of land, subject to, however, the following rights, obligations, restrictions and conditions, to-wit:

1. During the construction of the pipeline there is a temporary construction of the pipeline there is a temporary construction easement 75 feet in width. In connection with the repair or removal of the original pipeline Grantee may utilize an additional strip or strips of land not to exceed in the aggregate, a total of 20 feet as a temporary easement.

2. Said pipeline shall be buried to and maintained at a depth which will provide a cover of at least ~~36~~ 40 inches below the surface of the ground.

3. Grantee will double-ditch the trench for said pipeline and shall keep the topsoil separate and agrees to replace said topsoil excavated along the easement path to its original location and position when the initial pipeline is installed and upon its subsequent repair or removal, and Grantee agrees to level the surface of the ground to the same condition as found prior to installation and removal of said pipeline. In addition, upon the completion of the pipeline, and upon any subsequent repair or removal at same, Grantee further agrees to chisel the pipeline right-of-way to remove heavy machinery tracks and packing.

4. This easement is made expressly subject to any prior easements granted on and over said property or any part thereof.

COSTIF

OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS

5. Grantee agrees to pay for any and all damages to Grantors growing crops, grasses, trees, shrubbery, fences, drainage structures, terraces or any other structures and livestock on Grantor's premises caused by operations or activities of Grantee in connection with the installation, construction, maintenance, repair, operation and removal of said pipeline; provided, however, that Grantee shall have the right from time to time to cut or clear trees, brush and other obstructions on the right-of-way which might interfere with the operation and maintenance of said pipeline.

6. Grantee agrees to provide Grantors and their tenants an access way over the pipeline right-of-way during the installation, repair and removal of same so that Grantors and their tenants may move farming machinery from one side of the easement to the other.

7. Grantee shall have no right to cross other lands of Grantors adjacent to the easement area for the purpose of having ingress to or egress from the easement strip of land. It is understood that adequate locks shall be provided by Grantee for any gate installed on a property line over the easement and keys to same shall be furnished to Grantors and their tenants, or surface lessees. Grantee shall not install any interior fences or gates along the easement path.

8. Grantors will not construct or permit any permanent buildings or structures to be constructed on the easement strip which interferes with Grantee's operation of said pipeline, but Grantors without limiting or restricting the rights reserved unto Grantors in Paragraph 9 below, specifically reserve the right to build and maintain and to permit others to build and maintain fences, roads, telephone lines, power lines and pipelines across said easement, but nothing shall be located or placed longitudinally immediately above the pipeline right-of-way.

9. Grantors, their heirs and assigns, reserve the right to use and fully enjoy the premises on which the easement is a burden and located, except as to the rights granted unto Grantee herein.

10. Cessation of use of said pipeline located on the right-of-way herein granted for any continuous period at two years shall be conclusively deemed to be an abandonment of the easement and of any and all rights granted hereunder, and thereupon all rights of Grantee under this instrument shall ipso facto terminate and revert to Grantors, their heirs and assigns.

11. Grantee shall not acquire any right to construct any buildings, structures, relief valves or other appurtenances, pumping stations or telephone lines on or above the easement right-of-way.

12. The right of Grantee may be assigned in whole or in part.

~~13. It is understood that Grantee shall deal separately with and shall be liable to the surface lessee or agricultural tenant for any damages which may be sustained by said surface lessee or agricultural tenant and it is understood that the consideration paid for this easement shall be the property of Grantors.~~

RG
MWR
MRK

14. This instrument and the covenants and agreements herein contained shall inure to the benefit of and be binding and obligatory upon the heirs, executors, administrators, successors and assigns of Grantors and Grantee.

15. GRANTOR AGREES TO ATTACH AND MAKE A PART OF THIS AGREEMENT A PLAT AND CENTERLINE DESCRIPTION

RG
MWR
MRK

VOL 1850 PAGE 076

3

IN WITNESS WHEREOF THESE PRESENTS HAVE BEEN EXECUTED THIS THE
21st day of July, A.D. 1989.

Morris Wayne Krueger
MORRIS WAYNE KRUEGER

Michael Ray Krueger
MICHAEL RAY KRUEGER

THE STATE OF TEXAS

COUNTY OF Dallam

This instrument was acknowledged before me on July 21st,
1989 by Morris Wayne Krueger.



J. O. Whitehead, Jr.
Notary Public,
for the State of Texas
My Commission Expires
March 13, 1991

J. O. Whitehead, Jr.
Notary Public

Print Name: L. D. WHITEHEAD JR.

My Commission Expires:

March 13, 1991

THE STATE OF TEXAS

COUNTY OF Dallam

This instrument was acknowledged before me on July 21st,
1989 by Michael Ray Krueger.



J. O. Whitehead, Jr.
Notary Public,
for the State of Texas
My Commission Expires
March 13, 1991

J. O. Whitehead, Jr.
Notary Public

Print Name: L. D. WHITEHEAD JR.

My Commission Expires:

March 13, 1991

VOL 1850 PAGE 077

EXHIBIT A

WILLIAMSON COUNTY, TEXAS
TRACT WM-6A

DESCRIPTION

BEING a seventy-five (75) foot wide construction easement reverting to a twenty-five (25) foot wide permanent easement upon completion of construction of a 16" dia. steel pipeline across that certain tract of land out of the John Kuykendal Survey, Abstract No. 378, Williamson County, Texas and being described as 80 acres of land in a deed to Morris Wayne Krueger and Michael Ray Krueger of record in Volume 656, Page 142, Deed Records of Williamson County, Texas, said seventy-five (75) foot wide construction easement and said twenty-five (25) foot wide permanent easement being for the purpose of constructing and maintaining a petroleum products pipeline over, under and across the above described tract of land, said seventy-five foot (75) foot wide construction easement and said twenty-five (25) foot wide permanent easement being more particularly described by metes and bounds as follows:

Construction Easement

A strip of land seventy-five (75) feet in width across the entire east side of the above described 80 acre tract, the east line of said 80 acre tract also being the west line of F.M. 3349.

Permanent Easement

A strip of land twenty-five (25) feet in width across the entire east side of said 80 acre tract, the east line of said 80 acre tract also being the west line of F.M. 3349.


Stan Coalter, RPS No. 1481 07-25-89 Date

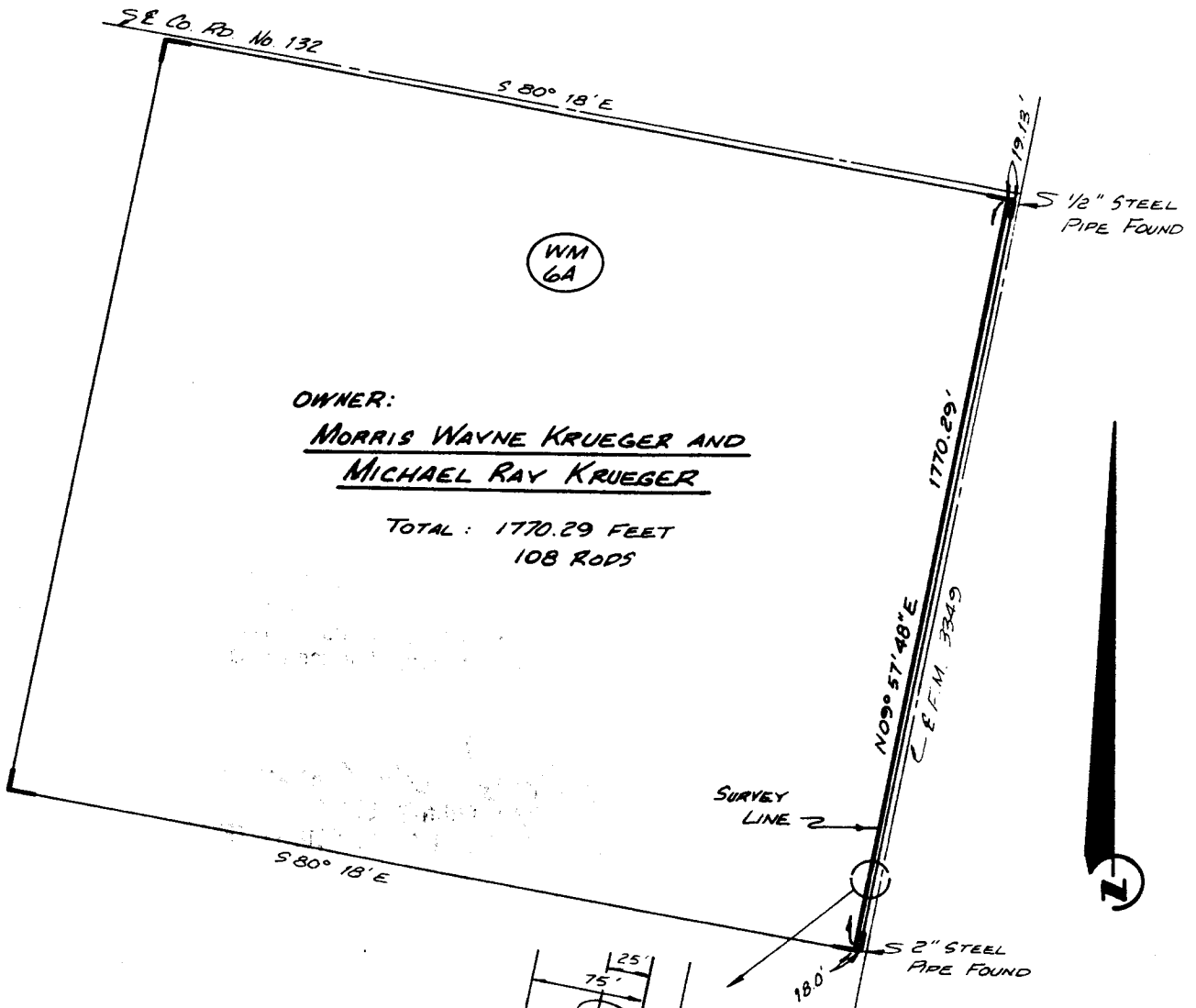


NOTE: See EXHIBIT B attached hereto and made a part hereof for a further description of said easement.

BEING A PART OF THE

JOHN KUYKENDAL SURVEY, ABSTRACT 378

WILLIAMSON COUNTY, TEXAS

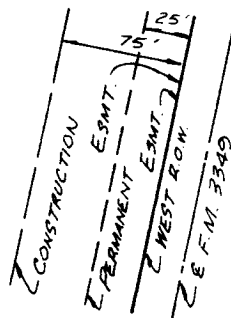


Surveyor's Certification

I, Stan Coalter, Texas Registered Public Surveyor No. 1481, do hereby certify that the above plat was surveyed on the ground under my supervision and is true and correct to the best of my knowledge.

Stan Coalter

Stan Coalter, Registered Public Surveyor No. 1481



EASEMENT SCHEMATIC
NO SCALE

| No. | Revision | Date | By |
|-----|----------|------|----|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Surveyed By: *K.V.*

Date Surveyed: *07-25-89*

Approved By: *J.S.C.*

K KOCH
Koch Refining Company
A Subsidiary of Koch Industries, Inc.

ENER-TRANS Inc.
PIPELINE FIELD SERVICES

Scale: *1" = 400'*

Drawn: *J. MARTIN*

Job No.: *3003*

Field Book No.:

Page No.:

Sheet *2* Of *2*

FILED & RECORDED
WILLIAMSON COUNTY, TEXAS

VOL 1850 PAGE 079

1989 DEC 14 AM 10:19

James D. Boylston
COUNTY CLERK

Rock Refining

Attn: Sharon Hoffmann

35390

INDEXED

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me; and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me, on

DEC 15 1989



James D. Boylston
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

VOL 1850 PAGE 063

PIPELINE EASEMENT KOCH REFINING COMPANY

THE STATE OF TEXAS §

35387

COUNTY OF WILLIAMSON §

KNOW ALL MEN BY THESE PRESENTS: THAT Marvin Krueger and wife, Lucia Nell Krueger of Williamson County, Texas, hereinafter at times referred to as "Grantor", for and in consideration of the sum of Ten and No/100 (\$10.00) Dollars, and other good and valuable consideration to us cash in hand paid by Koch Refining Company, hereinafter at times referred to as "Grantee", the receipt and sufficiency of which are hereby duly acknowledged and for which no lien either express or implied is herein or hereby retained or shall exist, have GRANTED and CONVEYED and by these presents to GRANT and CONVEY unto the said Koch Refining Company, a private corporation, the right, privilege and easement to lay, construct, maintain, repair, operate and remove one Sixteen (16") inch steel pipeline for the purpose of transporting oil, ^{LNK} gas and other petroleum products which can be transported through said ^{MK} pipeline over, under, across and through a strip of land ~~thirty five (35)~~ ^(25') feet wide which lands are situated in Williamson County, Texas, to-wit:

RC

60.87 acres, more or less, out of the T. B. Lee Survey, Abstract No. 401 and the J. J. Stubblefield Survey, Abstract No. 562, being the same land described in that certain Deed of Gift from Eddie Krueger and wife, Emma Krueger to Marvin Krueger, dated December 11, 1973, recorded in Vol. 579, Page 406 of the Deed Records of Williamson County, Texas.

TO HAVE AND TO HOLD unto the Grantee herein, its successors and assigns, forever, the rights, privilege and easement upon, under, across and through said tract of land, subject to, however, the following rights, obligations, restrictions and conditions, to-wit:

1. During the construction of the pipeline there is a temporary construction of the pipeline there is a temporary construction easement 75 feet in width. In connection with the repair or removal of the original pipeline Grantee may utilize an additional strip or strips of land not to exceed in the aggregate, a total of 20 feet as a temporary easement.

2 Said pipeline shall be buried to and maintained at a depth which will provide a cover of at least ~~36~~ ⁴⁰ inches below the surface of the ground. LNK
MK
RC

3. Grantee will double-ditch the trench for said pipeline and shall keep the topsoil separate and agrees to replace said topsoil excavated along the easement path to its original location and position when the initial pipeline is installed and upon its subsequent repair or removal, and Grantee agrees to level the surface of the ground to the same condition as found prior to installation and removal of said pipeline. In addition, upon the completion of the pipeline, and upon any subsequent repair or removal at same, Grantee further agrees to chisel the pipeline right-of-way to remove heavy machinery tracks and packing.

4. This easement is made expressly subject to any prior easements granted on and over said property or any part thereof.

006.TIF

OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS

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5. Grantee agrees to pay for any and all damages to Grantors growing crops, grasses, trees, shrubbery, fences, drainage structures, terraces or any other structures and livestock on Grantor's premises caused by operations or activities of Grantee in connection with the installation, construction, maintenance, repair, operation and removal of said pipeline; provided, however, that Grantee shall have the right from time to time to cut or clear trees, brush and other obstructions on the right-of-way which might interfere with the operation and maintenance of said pipeline.

6. Grantee agrees to provide Grantors and their tenants an access way over the pipeline right-of-way during the installation, repair and removal of same so that Grantors and their tenants may move farming machinery from one side of the easement to the other.

7. Grantee shall have no right to cross other lands of Grantors adjacent to the easement area for the purpose of having ingress to or egress from the easement strip of land. It is understood that adequate locks shall be provided by Grantee for any gate installed on a property line over the easement and keys to same shall be furnished to Grantors and their tenants, or surface lessees. Grantee shall not install any interior fences or gates along the easement path.

8. Grantors will not construct or permit any permanent buildings or structures to be constructed on the easement strip which interferes with Grantee's operation of said pipeline, but Grantors without limiting or restricting the rights reserved unto Grantors in Paragraph 9 below, specifically reserve the right to build and maintain and to permit others to build and maintain fences, roads, telephone lines, power lines and pipelines across said easement, but nothing shall be located or placed longitudinally immediately above the pipeline right-of-way.

9. Grantors, their heirs and assigns, reserve the right to use and fully enjoy the premises on which the easement is a burden and located, except as to the rights granted unto Grantee herein.

10. Cessation of use of said pipeline located on the right-of-way herein granted for any continuous period at two years shall be conclusively deemed to be an abandonment of the easement and of any and all rights granted hereunder, and thereupon all rights of Grantee under this instrument shall ipso facto terminate and revert to Grantors, their heirs and assigns.

11. Grantee shall not acquire any right to construct any buildings, structures, relief valves or other appurtenances, pumping stations or telephone lines on or above the easement right-of-way.

12. The right of Grantee may be assigned in whole or in part.

~~13. It is understood that Grantee shall deal separately with and shall be liable to the surface lessee or agricultural tenant for any damages which may be sustained by said surface lessee or agricultural tenant and it is understood that the consideration paid for this easement shall be the property of Grantors.~~

14. This instrument and the covenants and agreements herein contained shall inure to the benefit of and be binding and

15. GRANTEE AGREES TO ATTACH AND MAKE A PART OF THIS AGREEMENT A PLAT AND CENTERLINE DESCRIPTION.

LNK
MK
RCLNK
MK
RC

VOL 1850 PAGE 065

3

obligatory upon the heirs, executors, administrators, successors
and assigns of Grantors and Grantee.

21st IN WITNESS WHEREOF THESE PRESENTS HAVE BEEN EXECUTED THIS THE
day of July, A.D. 1989.

Marvin Krueger
MARVIN KRUEGER

Lucia Nell Krueger
LUCIA NELL KRUEGER

THE STATE OF TEXAS

COUNTY OF Williamson

This instrument was acknowledged before me on July 21st,
1989 by Marvin Krueger.



J. D. Whitehead, Jr.
Notary Public,
for the State of Texas
My Commission Expires
March 13, 1991

J. D. Whitehead, Jr.
Notary Public
Print Name: J. D. Whitehead Jr.

My Commission Expires:

March 13, 1991

THE STATE OF TEXAS

COUNTY OF Williamson

This instrument was acknowledged before me on July 21st,
1989 by Lucia Nell Krueger.



J. D. Whitehead, Jr.
Notary Public,
for the State of Texas
My Commission Expires
March 13, 1991

J. D. Whitehead, Jr.
Notary Public
Print Name: J. D. Whitehead Jr.

My Commission Expires:

March 13, 1991

VOL 1850 PAGE 066

EXHIBIT A

WILLIAMSON COUNTY, TEXAS
TRACT WM-6B

DESCRIPTION

BEING a seventy-five (75) foot wide construction easement reverting to a twenty-five (25) foot wide permanent easement upon completion of construction of a 16" dia. steel pipeline across that certain tract of land out of the Thomas B. Lee Survey, Abstract No. 740, Williamson County, Texas and being described as 60.87 acres of land in two deeds conveying one-half (1/2) interest apiece to Marvin Krueger of record in Volume 579, Page 406 and in Volume 581, Page 175, Deed Records of Williamson County, Texas, said seventy-five (75) foot wide construction easement and said twenty-five (25) foot wide permanent easement being more particularly described by metes and bounds as follows:

Construction Easement

A strip of land seventy-five (75) feet in width across the entire east side of the above described 60.87 acre tract, the east line of said 60.87 acre tract also being the west line of F.M. 3349.

Permanent Easement

A strip of land twenty-five (25) feet in width across the entire east side of said 60.87 acre tract, the east line of said 60.87 acre tract also being the west line of F.M. 3349.

Stan Coalter 07-25-89
Stan Coalter, RPS No. 1481 Date

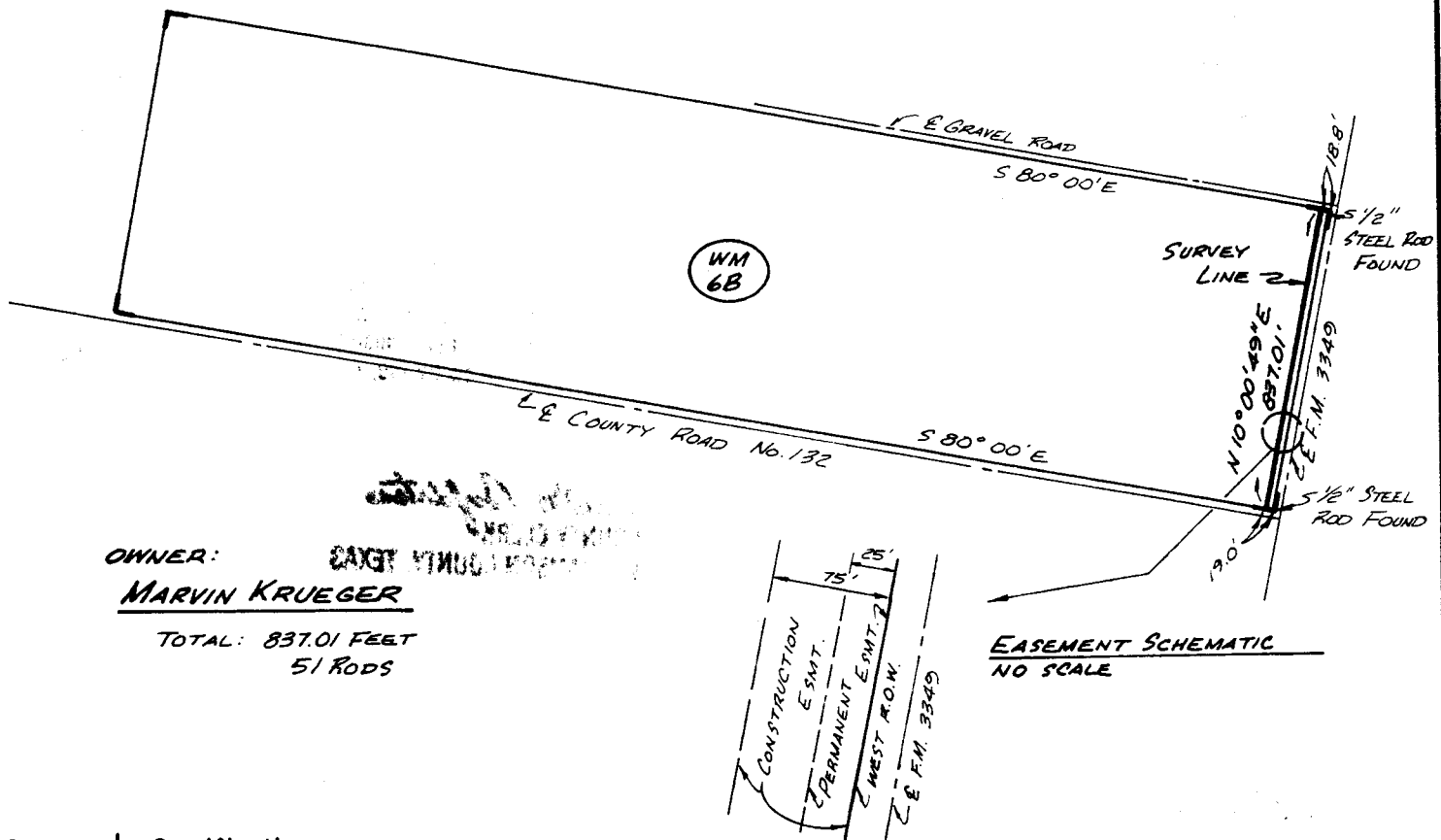


NOTE: See EXHIBIT B attached hereto and made a part hereof for a further description of said easement.

EXHIBIT B

BEING A PORTION OF THE
THOMAS B. LEE SURVEY, ABSTRACT No. 740
 WILLIAMSON COUNTY, TEXAS

VOL 1850 PAGE 067



OWNER: **MARVIN KRUEGER**

TOTAL: 837.01 FEET
 51 RODS

EASEMENT SCHEMATIC
 NO SCALE

Surveyor's Certification

I, Stan Coalter, Texas Registered Public Surveyor No. 1481, do hereby certify that the above plat was surveyed on the ground under my supervision and is true and correct to the best of my knowledge.

Stan Coalter
 Stan Coalter, Registered Public Surveyor No. 1481

| | | | | | | |
|-------------------------|----------|------|----|---|-----------------|-----------|
| | | | | K KOCH KOCH REFINING COMPANY A Subsidiary of Koch Industries, Inc. | Scale: | 1"=500' |
| | | | | | Drawn: | J. MARTIN |
| No. | Revision | Date | By | BNER-TRANS Inc. PIPELINE FIELD SERVICES | Job No.: | 3003 |
| Surveyed By: VK. | | | | | Field Book No.: | |
| Date Surveyed: 07-25-89 | | | | | Page No.: | |
| Approved By: J.S.C. | | | | | Sheet 2 Of 2 | |

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FILED FOR RECORD
WILLIAMSON COUNTY, TX

1989 DEC 14 AM 10:18

James H. Popelton
COUNTY CLERK

INDEXED

35387

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me, and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me, on

DEC 15 1989



James H. Popelton
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

Attn: Sharon Hoffman
Rock Robinson
P.O. Drawer 1210
RR 78630
11.10 Rd ch

VOL 1850 PAGE 072
K KOCH

KOCH REFINING COMPANY

P.O. Box 2256 Wichita, Kansas 67201

RIGHT OF WAY GRANT

STATE OF

Texas

COUNTY OF

WILLIAMSON

} ss.

ACCT. NO.

TR # WM-6C

35389

KNOW ALL MEN BY THESE PRESENTS:

THAT for and in consideration of One Dollar (\$1.00) to us in hand paid, receipt of which is hereby acknowledged, and the further consideration of AIO AND OVC per red line, to be paid when such grant shall be used and occupied, the undersigned as Grantor (whether one or more), do hereby grant and convey unto KOCH REFINING COMPANY, as Grantee, its successors and assigns, e right of way for the purpose of constructing, reconstructing, renewing, operating, maintaining, inspecting, repairing, changing the size of end releying a pipeline and additional pipelines along a route or routes selected by Grantee for the transportation of oil, gas, petroleum or any of its products, together with such valves, fittings, meters and other equipment end appurtences as may be necessary or convenient for such operations, with the right of ingress end egress to and from the same on, over and through certain land situated in WILLIAMSON County, State of TEXAS, to wit:

69.35 ACRES, more or less, pt. of The T. B. Lee Survey, A-401 and the J. L. Stubblefield Survey, A-652, WILLIAMSON Co. TR described in 5th TR. 75 ACRES in Deed dated 12-18-45, from Henry A. Kraeger et ux to Fred F. Kraeger et ux, recorded in Vol. 331, p. 278; Less and except 56.5 Acres, more or less, described in Deed dated 11-21-85, from Fred F. Kraeger et ux to Larry John Matl, recorded Vol. 1376, p. 612, Deed Records. OF WILLIAMSON Co. TR. Tags.
Construction Right of Way easement shall be 75 ft wide Reduced to 20 ft. permanent easement being 10 ft either side of center of pipeline. Said 20 ft. being most eastern 20 ft of this tract.

TO HAVE AND TO HOLD unto the said Grantee, its successors and assigns, with ingress and egress to and from the same, for the purpose of constructing, operating, inspecting, repairing end maintaining the same, and the relocating, changing the size of, or removing of such at will, in whole or in part. It is further provided that whenever this right of way shall cease to be used for said purposes, the same shall revert to Grantor, its heirs, successors or assigns, upon notice to that effect being given to said Grantee. It is further agreed that said Grantee, its successors or assigns, may at any time lay an additional line or lines of pipe on lands described above upon the payment of a like consideration per red line and subject to the same benefits and conditions as herein provided. The said grantor to fully use and enjoy the said premises, except for the purpose hereinabove granted to the said Grantee which hereby agrees to bury all pipe to a sufficient depth so as to not interfere with ordinary cultivation of soil end to pay any damages which may arise to crops or fences from the construction, maintenance end operation of said pipelines.

Grantor represents and warrants that he is the owner in fee simple of the land above described subject only to outstanding mortgages, if any now of record in said County and specifically covenants to indemnify Grantee against claims of tenants in possession of the above described lands for damages thereto previously paid to Grantor by Grantee.

Grantor agrees to not build, create or construct nor permit to be built, created or constructed, any obstruction, building, improvement or other structure over or under said pipeline or lines after said pipeline or lines have been constructed by grantee.

All covenants end agreements herein contained shall be deemed to be convenient running with the land and shall extend to and be binding on the respective heirs, legal representatives, successors and assigns of the parties hereto.

It is hereby understood that party securing this grant in behalf of Grantee is without authority to make any covenant or agreement not herein expressed.

WITNESS the execution hereof this 15th day of July A.D. 19 89

Fred F. Kraeger Address _____
Name _____
Donorothy Kraeger Address _____
Name _____
Address _____

CONSENT AND AGREEMENT OF TENANT

In consideration of the sum of \$1.00 in hand paid, the undersigned tenant in possession of the real estate described in the foregoing Pipeline Easement consents to end joins in same, to the extent of his interest in the real estate described therein.

TENANT _____ DATE _____

TENANT _____ DATE _____

STATE OF TexasCOUNTY OF Williamson

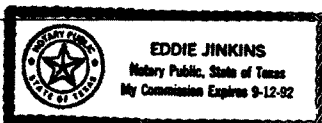
} ss.

Before me, the undersigned, a Notary Public in and for said County and State, on this 15th day of July 1989, personally appeared Fred F. Kraeger and wife Donorothy Kraeger to me known to be the identical persons who executed the within end foregoing instrument, end ecknowledged to me that they executed the same as their free end voluntary act and deed for the uses and purposes therein set forth.

Witness my hand and official seal the day and year above set forth.

Eddie Jinks
Notary Public

My commission Expires _____



1007.TIF
OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS

35389

INDEXED

① 5.00 p.d.c.
Kodak Reprints

attn: Sharon Williamson

FILED FOR RECORD
WILLIAMSON COUNTY, TX
1989 DEC 14 AM 10:18

COUNTY CLERK

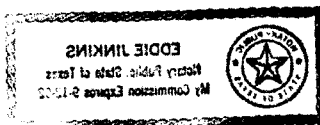
James H. Bogle

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me, and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me, on

DEC 15 1989



James H. Bogle
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS



VOL 1804 PAGE 95

KOCH REFINING COMPANY

P.O. Box 2256 Wichita, Kansas 67201

STATE OF _____ Texas

COUNTY OF Williamson

ACCT. NO. 3000 (TRACT NO. WM-40M)

21359

KNOW ALL MEN BY THESE PRESENTS:

THAT for and in consideration of One Dollar (\$1.00) to us in hand paid, receipt of which is hereby acknowledged, and the ~~consideration of~~ OVC ~~parties~~, to be paid when such grant shall be used and occupied, the undersigned as Grantor (whether one or more), do hereby grant and convey unto KOCH REFINING COMPANY, as Grantee, its successors and assigns, a right of way for the purpose of constructing, reconstructing, renewing, operating, maintaining, inspecting, repairing, changing the size of and relaying a pipeline and ~~additional pipelines~~ along a route ~~or routes~~ selected by Grantee for the transportation of oil, gas, petroleum or any of its products, together with such valves, fittings, meters and other equipment and appurtenances as may be necessary or convenient for such operations, with the right of ingress and egress to and from the same on, over and through certain land situated in Williamson County, State of Texas, to wit:

A 195.435 acre tract of land, of which 0.875 acres are in the gravel road on the East side, out of the Watkins Nobles Survey A-484, Williamson County, Texas and being more fully described by metes & bounds in that certain deed from Frank M. Bunnell, et al, to Nellie Yahey Morriss, dated June 3, 1937, recorded in Vol. 287, Page 170, and being further described in that certain conveyance from Nellie Yahey Morriss, a widow, to Harriet Morriss Blankenship, dated October 19, 1958, recorded in Vol. 425, Page 684, records of Williamson County, Texas.

Right of Way shall be 50 feet in width during construction and revert to a permanent width of 25 feet upon completion of construction, as per attached plat

TO HAVE AND TO HOLD unto the said Grantee, its successors and assigns, with ingress and egress to and from the same, for the purpose of constructing, operating, inspecting, repairing and maintaining the same, and the reallocating, changing the size of, or removing of such well, in whole or in part. It is further provided that whenever this right of way shall cease to be used for said purposes, the same shall revert to Grantor, its heirs, successors or assigns, upon notice to that effect being given to said Grantee. ~~It is further agreed that said Grantee, its successors or assigns, may at any time lay an additional line or lines of pipe on lands described above upon the payment of a title consideration per foot line and subject to the same benefits and conditions as herein provided.~~ The said grantor to fully use and enjoy the said premises, except for the purpose hereinabove granted to the said Grantee which hereby agrees to bury all pipe to a sufficient depth so as to not interfere with ordinary cultivation of soil and to pay any damages which may arise to crops or fences from the construction, maintenance and operation of said pipelines.

Grantor represents and warrants that he is the owner in fee simple of the land above described subject only to outstanding mortgages, if any now of record in said County and specifically covenants to indemnify Grantee against claims of tenants in possession of the above described lands for damages thereto previously paid to Grantor by Grantee.

Grantor agrees to not build, create or construct nor permit to be built, created or constructed, any obstruction, building, improvement or other structure over or under said pipeline or lines after such pipeline or lines have been constructed by grantee.

All covenants and agreements herein contained shall be deemed to be covenant running with the land and shall extend to and be binding on the respective heirs, legal representatives, successors and assigns of the parties hereto.

It is hereby understood that party securing this grant in behalf of Grantee is without authority to make any covenant or agreement not herein expressed.

WITNESS the execution hereof this 15th day of December A.D. 19 88

Harriet Morriss Blankschip 1832 Eastman Ave., Bethlehem, Pa. 18018

| | |
|------|---------|
| Name | Address |
|------|---------|

| | | | | |
|--|------|--|---------|--|
| | Name | | Address | |
|--|------|--|---------|--|

CONSENT AND AGREEMENT OF TENANT

In consideration of the sum of \$1.00 in hand paid, the undersigned tenant in possession of the real estate described in the foregoing Pipeline Easement consents to and joins in same, to the extent of his interest in the real estate described therein.

TENANT _____ DATE _____

| TENANT | DATE |
|--------|------|
| | |

STATE OF PA

COUNTY OF Lehigh } SS: 1000.TIF

Before me, Robert F. Nonnemaker - A NOTARY PUBLIC, on this day personally
appeared Harriet Morris Blankenship, known to me (or proved to me on the
oath of _____) to be the person whose name is

subscribed as a witness to the foregoing instrument, and after baing duly sworn by ma, stated under oath that ha saw Harriet Morris Blackship, the person who executed the foregoing instrument, subscribe the same (or, that _____, the person who executed the foregoing instrument
acknowldgad in his prasance that he had axacutad tha same for tha purposes and considaration therein expressed), and that he had signed the same as witness at the request of the said Harriet M. Blackship
Given under my hand and official seal this 15th day of December, 19 99

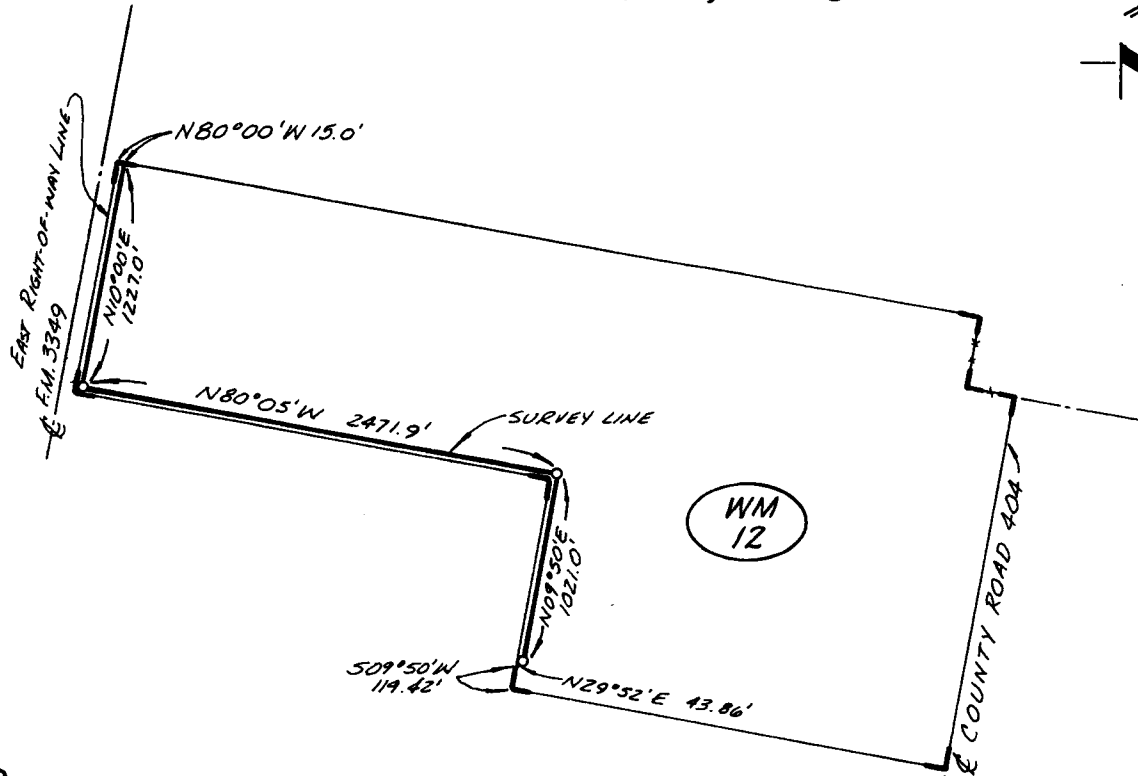
My commission expires: **NOTARIAL SEAL**
ROBERT F. NONNEMAKER, NOTARY PUBLIC
BETHLEHEM, LEHIGH COUNTY
MY COMMISSION EXPIRES MARCH 20, 1990

NOTARY PUBLIC

**OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS**

PS-2555

WATKINS NOBLES SURVEY
A-484
WILLIAMSON COUNTY, TEXAS



OWNER:
NELLIE YKEY MORRIS

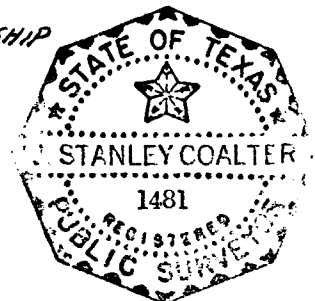
TOTALS:
4763.76 FEET
289 RODS

X Harriet Morris Blankenship
APPROVED & SIGNED BY
HARRIET MORRIS BLANKENSHIP
DATE 7-12-89

SURVEYOR'S CERTIFICATION:

I, Stan Coalter, Texas Registered Public Surveyor No. 1481, do hereby certify that the above plot was surveyed on the ground under my supervision and is true and correct to the best of my knowledge.

Stan Coalter
STAN COALTER, R.P.S. 1481



| 2 | LINE CHANGE | 6/9/89 | CP |
|----------------|------------------|---------|----|
| 1 | CHANGE TRACT NO. | 2/18/89 | CP |
| NO. | REVISION | DATE | BY |
| SURVEYED BY: | | V.K. | |
| DATE SURVEYED: | | 1/22/89 | |
| APPROVED BY: | | J.L. | |



KOCH
REFINING COMPANY
Subsidiary of Koch Industries Inc.

ENER-TRANS, INC.
OKLAHOMA CITY, OKLAHOMA

| | |
|---------------|------------|
| SCALE: | 1" = 1000' |
| DRAWN: | CP |
| JOB NO: | AFE-03003 |
| FIELD BK. NO. | |
| PAGE NO. | |
| SHEET | 2 OF 2 |

VOL 1804 PAGE 960

EXHIBIT A

WILLIAMSON COUNTY, TEXAS
TRACT WM-12

FIELD NOTES

BEING a 50 foot wide construction easement reverting to a 25 foot wide permanent easement upon completion of construction for a 16" dia. steel pipeline across that certain 195.435 acre tract of land out of the Watkins Nobles Survey, Abstract No. 484, Williamson County, Texas, described in a Deed to Nellie Yakey Morris recorded in Volume 287 at Page 170, Deed Records of Williamson County, said 50 foot wide construction easement and said 25 foot wide permanent easement being for the purpose of constructing, operating and maintaining a petroleum products pipeline over, under and across the above described tract of land, said 50 foot wide construction easement extending 15 feet to the left, (westerly), and 35 feet to the right, (easterly), of the following described lines, said 25 foot wide permanent easement extending 15 feet to the left, (westerly), and 10 feet to the right, (easterly), of the following described lines, to wit:

BEGINNING at a point in the southerly line of said 195.435 acre tract, from which the southerly ell corner in the southerly line of said tract bears S 09° 50' W a distance of 119.42 feet;

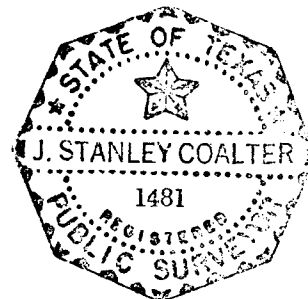
THENCE N 29° 52' E a distance of 43.86 feet to an angle point;

THENCE N 09° 50' E a distance of 1021.0 feet to an angle point;

THENCE N 80° 05' W a distance of 2471.9 feet to an angle point;

THENCE N 10° 00' E a distance of 1227.0 feet, parallel with and 15 feet east of the easterly right-of-way line of Farm-Market Road No. 3349, to the Point of Termination of said easement in the northerly line of said 195.435 acre tract, from which the existing northwest corner thereof in the easterly line of said FM-3349 bears N 80° 00' W a distance of 15.0 feet.


Stan Coalter, RPS, LSLs
6-9-89



NOTE: See EXHIBIT B attached hereto and made a part hereof for a further description of said easement.

FILED FOR RECORD
WILLIAMSON COUNTY, TX.

1989 AUG -2 AM 10: 29

James H. Boydston
COUNTY CLERK

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me; and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me, on



AUG 3 1989

James H. Boydston
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

①
7.00 pd. ck.

21359
INDEXED

RETURN TO:
KOCH REFINING COMPANY
P. O. Drawer 1210
Round Rock, Texas 78680

RICHARD S. SLOCOMB PIPELINE EASEMENT KOCH REFINING COMPANY

THE STATE OF TEXAS,

17272

COUNTY OF WILLIAMSON.

KNOW ALL MEN BY THESE PRESENTS: THAT I, Richard S. Slocomb, Individually and as Independent Executor of the Estate of Jane T. Slocomb, Deceased Bexar County, Texas, hereinafter at times referred to as "Grantor", for and in consideration of the sum of Ten and No/100 (\$10.00) Dollars, and other good and valuable consideration to us cash in hand paid by Koch Refining Company, hereinafter at times referred to as "Grantee", the receipt and sufficiency of which are hereby duly acknowledged and for which no lien either express or implied is herein or hereby retained or shall exist, have GRANTED and CONVEYED and by these presents do GRANT and CONVEY unto the said Koch Refining Company, a private corporation, the right, privilege and easement to lay, construct, maintain, repair, operate and remove one Sixteen (16") inch steel pipeline for the purpose of transporting oil, gas and other petroleum products which can be transported through said pipeline over, under, across and through a strip of land Twenty-Five (25') feet wide which lands are situated in Williamson County, Texas, the center line of which is described as follows, to-wit:

Being more particularly described in field notes prepared by J. Stanley Coalter, Registered Public Surveyor No. 1481 of the State of Texas, a copy of which said field notes marked Exhibit "A" and designated as Tract WM-49L is attached hereto and made a part hereof for all purposes as fully as though copied herein at this place at length and as set out on said Exhibit the description covers and this easement includes a 50 foot wide construction easement which reverts to a 25 foot wide permanent easement upon completion of the construction of said pipeline.

TO HAVE AND TO HOLD unto the Grantee herein, its successors and assigns, forever, the rights, privilege and easement upon, under, across and through said tract of land, subject to, however, the following rights, obligations, restrictions and conditions, to-wit:

1010.716

1. As set out on Exhibit "A" during the construction of the pipeline there is a temporary construction easement 50 feet in width. In connection with the repair or removal of the original pipeline Grantee may utilize an additional strip or strips of land not to exceed in the aggregate, a total of 20 feet as a temporary easement which shall be located as follows in relation to the permanent easement: Located to the East of the permanent 25 foot wide easement which makes not to exceed 45 feet which can be used in connection with the repair or removal of said pipeline.

OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS

2. Said pipeline shall be buried to and maintained at a depth which will provide a cover of at least 36 inches below the surface of the ground.
3. Grantee will double-ditch the trench for said pipeline and shall keep the topsoil separate and agrees to replace said topsoil excavated along the easement path to its original location and position when the initial pipeline is installed and upon its subsequent repair or removal, and Grantee agrees to level the surface of the ground to the same condition as found prior to installation and removal of said pipeline. In addition, upon the completion of the pipeline and upon any subsequent repair or removal of same, Grantee further agrees to chisel the pipeline right-of-way to remove heavy machinery tracks and packing.
4. This easement is made expressly subject to any prior easements granted on and over said property or any part thereof.
5. Grantee agrees to pay for any and all damages to Grantor's growing crops, grasses, trees, shrubbery, fences, drainage structures, terraces or any other structures and livestock on Grantor's premises caused by operations or activities of Grantee in connection with the installation, construction, maintenance, repair, operation and removal of said pipeline; provided, however, that Grantee shall have the right from time to time to cut or clear trees, brush and other obstructions on the right-of-way which might interfere with the operation and maintenance of said pipeline.
6. Grantee agrees to provide Grantor and his tenants an access way over the pipeline right-of-way during the installation, repair and removal of same so that Grantor and his tenants may move farming machinery from one side of the easement to the other.
7. Grantee shall have no right to cross other lands of Grantor adjacent to the easement area for the purpose of having ingress to or egress from the easement strip of land. It is understood that adequate locks shall be provided by Grantee for any gate installed on a property line over the easement and keys to same shall be furnished to Grantor and his tenants, or surface lessees. Grantee shall not install any interior fences or gates along the easement path.
8. Grantor will not construct or permit any permanent buildings or structures to be constructed on the easement strip which interferes with Grantee's operation of said pipeline, but Grantor without limiting or restricting the rights reserved unto Grantor in Paragraph 9 below, specifically reserve the right to build and maintain and to permit others to build and maintain fences, roads, telephone lines, power lines and pipelines across said easement, but nothing shall be located or placed longitudinally immediately above the pipeline right-of-way.
9. Grantor, his heirs and assigns, reserve the right to use and fully enjoy the premises on which the easement is a burden and located, except as to the rights granted unto Grantee herein.
10. Cessation of use of said pipeline located on the right-of-way herein granted for any continuous period of two years shall be conclusively deemed to be an abandonment of the easement and of any and all rights granted hereunder, and thereupon all rights of Grantee under this instrument shall ipso facto terminate and revert to Grantor, his heirs and assigns.

11. Grantee shall not acquire any right to construct any buildings, structures, relief valves or other appurtenances, pumping stations or telephone lines on or above the easement right-of-way.

12. The right of Grantee may be assigned in whole or in part.

13. It is understood that Grantee shall deal separately with and shall be liable to the surface lessee or agricultural tenant for any damages which may be sustained by said surface lessee or agricultural tenant and it is understood that the consideration paid for this easement shall be the property of Grantor.

14. This instrument and the covenants and agreements herein contained shall inure to the benefit of and be binding and obligatory upon the heirs, executors, administrators, successors and assigns of Grantor and Grantee.

IN WITNESS WHEREOF THESE PRESENTS HAVE BEEN EXECUTED THIS
THE 13th DAY OF FEBRUARY, A.D. 1989

Richard S. Slocomb

RICHARD S. SLOCOMB, INDIVIDUALLY
AND AS INDEPENDENT EXECUTOR OF THE
ESTATE OF JANE T. SLOCOMB, DECEASED

THE STATE OF TEXAS,
COUNTY OF BEXAR.

This instrument was acknowledged before me on the 13 day
of February, A.D. 1989 by Richard S. Slocomb, Individually and as
Independent Executor of the Estate of Jane T. Slocomb, Deceased.

Laura A. Flores

Notary Public in and for the State of Texas

Printed Name: LAURA A. FLORES

My Commission Expires: 4/7/90

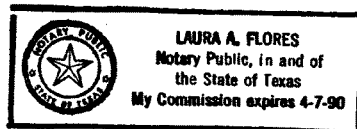
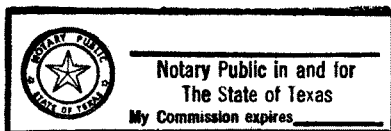
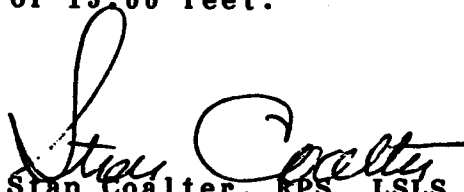


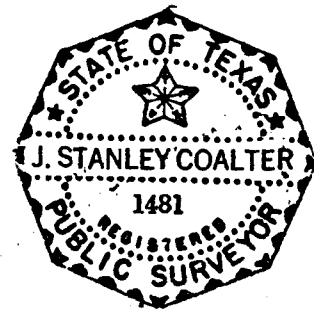
EXHIBIT A**WILLIAMSON COUNTY, TEXAS
TRACT WM-49L****FIELD NOTES**

BEING a 50 foot wide construction easement reverting to a 25 foot wide permanent easement upon completion of construction for a 16" dia. steel pipeline across that certain 185.994 acre tract of land out of the Watkins Nobles Survey, Abstract No. 484, Williamson County, Texas, described in a deed to Alice Yakey Thompson recorded in Volume 287, Page 165, Deed Records of Williamson County, said 50 foot wide construction easement and said 25 foot wide permanent easement being for the purpose of constructing and maintaining a petroleum products pipeline over, under and across the above described tract of land, said 50 foot wide construction easement extending 15 feet to the left, (westerly), and 35 feet to the right, (easterly), of the following described line, said 25 foot wide permanent easement extending 15 feet to the left, (westerly), and 10 feet to the right, (easterly), of the following described line, to wit:

BEGINNING at a point on the south line of said 185.994 acre tract, from which the existing southwest corner thereof on the east right-of-way line of FM-3349 bears N 80° 00' W a distance of 15.00 feet;

THENCE N 10° 00' E a distance of 1717.19 feet to the Point of Termination of said easement on the north line of said 185.994 acre tract, from which the existing northwest corner thereof on the east right-of-way line of FM-3349 bears N 80° 00' W a distance of 15.00 feet.


Stan Coalter, RPS, LSLs
1-23-89

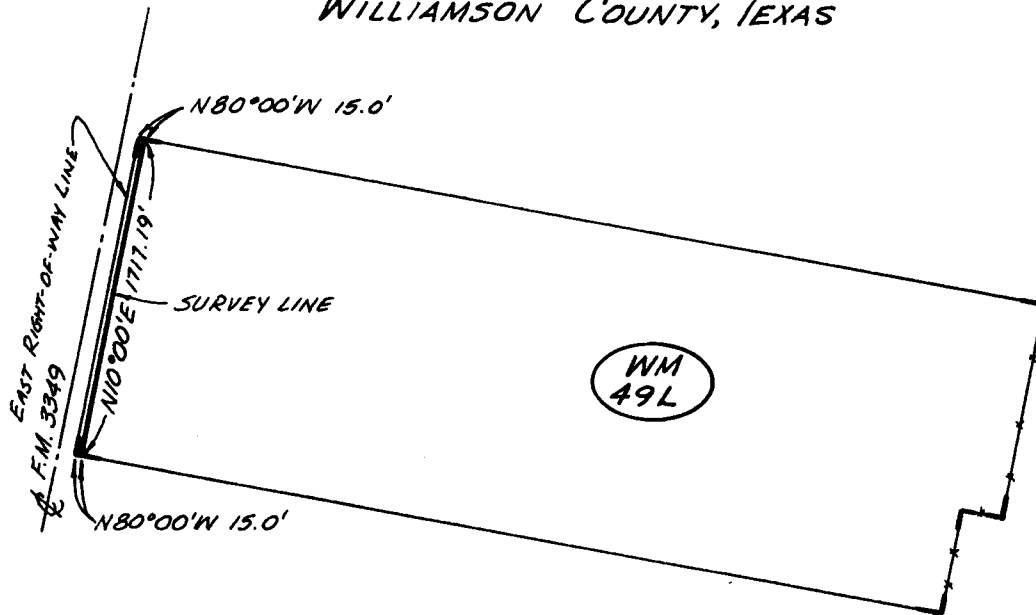


NOTE: See EXHIBIT B attached hereto and made a part hereof for a further description of said easement.

EXHIBIT "B"

VOL 1792 PAGE 131

WATKINS NOBLES SURVEY
A - 484
WILLIAMSON COUNTY, TEXAS



OWNER:

ALICE YAKY THOMPSON

TOTALS:

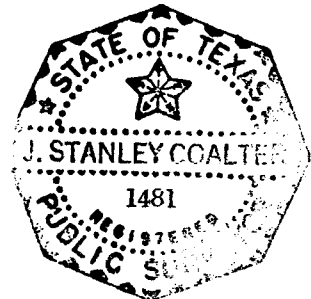
1717.19 FEET


104 RODS

SURVEYOR'S CERTIFICATION:

I, Stan Coalter, Texas Registered Public Surveyor No. 1481, do hereby certify that the above plot was surveyed on the ground under my supervision and is true and correct to the best of my knowledge.

Stan Coalter
STAN COALTER, R.P.S. 1481



| | | | | |
|----------------|----------|---------|---|---|
| NO. | REVISION | DATE BY |  KOCH Refining Company Subsidiary of Koch Industries Inc. ENER-TRANS, INC. OKLAHOMA CITY, OKLAHOMA | SCALE: 1"=1000' |
| SURVEYED BY: | | | | DRAWN: <i>DS</i> |
| DATE SURVEYED: | | | | JOB NO: AFE-03003 |
| APPROVED BY: | | | | FIELD BK. NO. PAGE NO. SHEET 1 OF 1 |

VOL 1792 PAGE 132

FILED FOR RECORD
WILLIAMSON COUNTY, TX.

1989 JUN 26 PM 1:05

James H. Boylston
COUNTY CLERK

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me; and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me. on

JUN 27 1989



James H. Boylston
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

53

INDEXED

RETURN TO:
KOCH REFINING COMPANY
P. O. Drawer 1210
Round Rock, Texas 78680

17272

1/00 - pds

Koch Refining Company

P.O. Box 2256 Wichita, Kansas 67201

STATE OF Texas

COUNTY OF Williamson

SS

ACCT. NO. #3000 (Tract No. WM-14)

KNOW ALL MEN BY THESE PRESENTS:

17271

THAT for and in consideration of One Dollar (\$1.00) to us in hand paid, receipt of which is hereby acknowledged, and ~~the value of~~
~~consideration of other valuable considerations~~ ~~to be paid~~ when such grant shall be used and occupied, the undersigned as Grantor
 (whether one or more), do hereby grant and convey unto KOCH REFINING COMPANY, as Grantee, its successors and assigns, a right of way for
 the purpose of constructing, reconstructing, renewing, operating, maintaining, inspecting, repairing, changing the size of and relaying a pipeline
 and ~~additional pipelines~~ along a route ~~to be~~ selected by Grantee for the transportation of oil, gas, petroleum or any of its products, together with
 such valves, fittings, meters and other equipment and appurtenances as may be necessary or convenient for such operations, with the right of
 ingress and egress to and from the same on, over and through certain land situated in Williamson County,
 State of Texas, to wit:

A 182.1194 acre tract of land out of the Watkins Nobles Survey A-484, Williamson
 County, Texas, being the same property described in a deed from Winifred Yakey
 et vir, to Kate Yakey Adams, dated June 3, 1937 & recorded in Vol. 287, Page
 179 LESS & EXCEPT a 3.8806 acre tract previously conveyed to the State of Texas
 for road purposes, said 182.1194 acre tract more fully described in a Partition
 Deed from Sol Bunnell, et ux, to Nancy Bunnell Bentley, dated January 2, 1979,
 recorded in Vol. 751, Page 502, records of Williamson County, Texas.

Right of Way shall be ⁵⁰ ~~25~~ feet in width during construction and revert to a permanent width of 25
~~50~~ feet upon completion of construction.

TO HAVE AND TO HOLD unto the said Grantee, its successors and assigns, with ingress and egress to and from the same, for the purpose
 of constructing, operating, inspecting, repairing and maintaining the same, and the relocating, changing the size of, or removing of such at will, in
 whole or in part. It is further provided that whenever this right of way shall cease to be used for said purposes, the same shall revert to Grantor,
 its heirs, successors or assigns, upon notice to that effect being given to said Grantee. ~~It is further agreed that said Grantee, its successors or assigns,~~
~~may at any time lay an additional line or lines of pipe on lands described above upon the payment of a like consideration per foot line and subject~~
~~to the same benefits and conditions as herein provided.~~ The said grantor to fully use and enjoy the said premises, except for the purpose hereinabove
 granted to the said Grantee which hereby agrees to bury all pipe to a sufficient depth so as to not interfere with ordinary cultivation of soil and to
 pay any damages which may arise to crops or fences from the construction, maintenance and operation of said pipelines.

Grantor represents and warrants that he is the owner in fee simple of the land above described subject only to outstanding mortgages, if any
 now of record in said County and specifically covenants to indemnify Grantee against claims of tenants in possession of the above described lands
 for damages thereto previously paid to Grantor by Grantee.

Grantor agrees to not build, create or construct nor permit to be built, created or constructed, any obstruction, building, improvement or
 other structure over or under said pipeline or lines after such pipeline or lines have been constructed by grantee.

All covenants and agreements herein contained shall be deemed to be covenant running with the land and shall extend to and be binding on
 the respective heirs, legal representatives, successors and assigns of the parties hereto.

It is hereby understood that party securing this grant in behalf of Grantee is without authority to make any covenant or agreement not herein
 expressed.

WITNESS the execution hereof this 12th day of December A.D. 19 88
Nancy Bunnell Bentley 2305 Forest Trail
 Nancy Bunnell Bentley, Address
 Temple, Texas ~~76501~~ 76502 2305
 Name Address
 Name Address

CONSENT AND AGREEMENT OF TENANT

In consideration of the sum of \$1.00 in hand paid, the undersigned tenant in possession of the real estate described in the foregoing Pipeline
 Easement consents to and joins in same, to the extent of his interest in the real estate described therein.

TENANT DATE
 TENANT DATE

STATE OF Texas
 COUNTY OF Bell } SS:

1012.TIF

Before me, Mary Ann Snyder, on this day personally
 appeared Cathy Schreiber, known to me (or proved to me on the
 oath of _____) to be the person whose name is
 subscribed as a witness to the foregoing instrument, and after being duly sworn by me, stated under oath that he saw
Nancy Bunnell Bentley, the person who executed the foregoing instrument, subscribe the
 same (or, that _____, the person who executed the foregoing instrument
 acknowledged in his presence that he had executed the same for the purposes and consideration therein expressed), and that
 he had signed the same as witness at the request of the said Nancy Bunnell Bentley
 Given under my hand and official seal this 12th day of December, 19 88

My commission expires: 7-20-90

NOTARY PUBLIC

OFFICIAL RECORDS
WILLIAMSON COUNTY, TEXAS

PS-2555

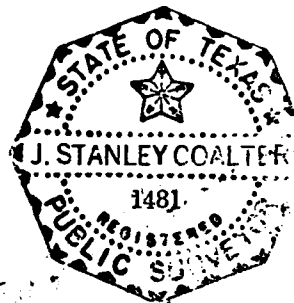
EXHIBIT A**WILLIAMSON COUNTY, TEXAS
TRACT WM-49K****FIELD NOTES**

BEING a 50 foot wide construction easement reverting to a 25 foot wide permanent easement upon completion of construction for a 16" dia. steel pipeline across that certain 186 acre tract of land out of the Watkins Nobles Survey, Abstract No. 484, Williamson County, Texas, described in a deed to Nancy Bunnell Bentley recorded in Volume 751, Page 502, Deed Records of Williamson County, said 50 foot wide construction easement and said 25 foot wide permanent easement being for the purpose of constructing and maintaining a petroleum products pipeline over, under and across the above described tract of land, said 50 foot wide construction easement extending 15 feet to the left, (westerly), and 35 feet to the right, (easterly), of the following described line, said 25 foot wide permanent easement extending 15 feet to the left, (westerly), and 10 feet to the right, (easterly), of the following described line, to wit:

BEGINNING at a point on the south line of said 186 acre tract, from which the existing southwest corner thereof on the east right-of-way line of FM-3349 bears N 80° 00' W a distance of 15.00 feet;

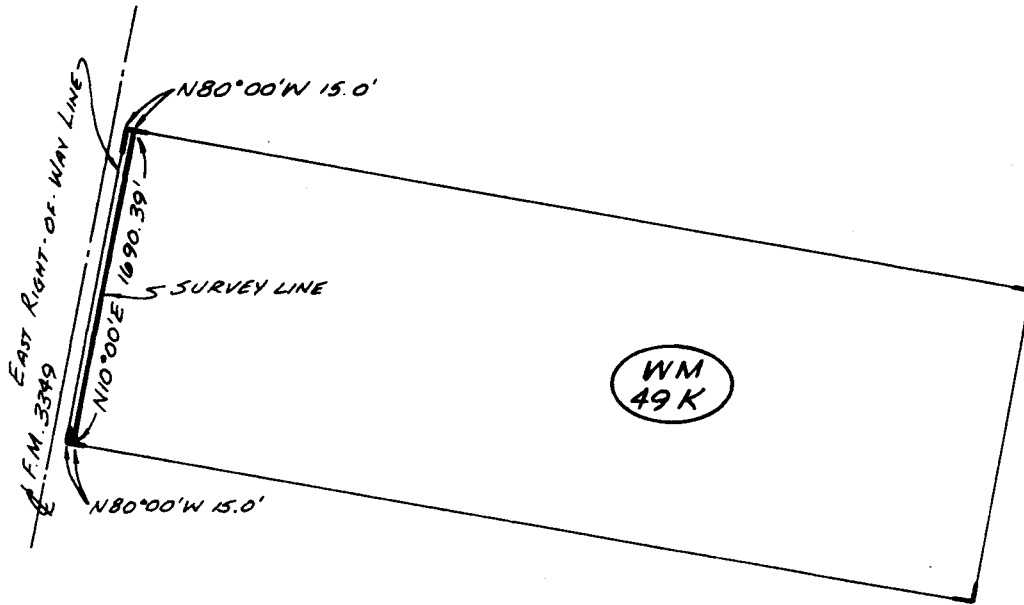
THENCE N 10° 00' E a distance of 1690.39 feet to the Point of Termination of said easement on the north line of said 186 acre tract, from which the existing northwest corner thereof on the east right-of-way line of FM-3349 bears N 80° 00' W a distance of 15.00 feet.

Stan Coalter
Stan Coalter, RPS, LSLs
1-23-89



NOTE: See EXHIBIT B attached hereto and made a part hereof for a further description of said easement.

WATKINS NOBLES SURVEY
A-484
WILLIAMSON COUNTY, TEXAS



OWNER:

NANCY BUNNELL BENTLEY

TOTALS:

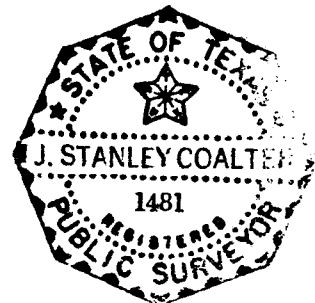
1690.39 FEET



102 RODS

SURVEYOR'S CERTIFICATION:

I, Stan Coalter, Texas Registered Public Surveyor No. 1481, do hereby certify that the above plat was surveyed on the ground under my supervision and is true and correct to the best of my knowledge.

Stan Coalter
STAN COALTER, R.P.S. 1481



| | | | | | |
|--|----------|------|----|---|--|
| NO. | REVISION | DATE | BY |  KOCH Refining Company Subsidiary of Koch Industries Inc. | SCALE: 1"=1000' |
| SURVEYED BY: | | | | | DRAWN:  |
| DATE SURVEYED: | | | | | JOB NO: AFE-03003 |
| APPROVED BY: | | | | | FIELD BK. NO. PAGE NO. |
| ENER-TRANS, INC. OKLAHOMA CITY, OKLAHOMA | | | | SHEET 1 OF 1 | |

VOL 1792 PAGE 126

FILED FOR RECORD
WILLIAMSON COUNTY, TX.

1989 JUN 26 PM 1:05

James H. Boylston
COUNTY CLERK

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me; and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me, on

JUN 27 1989



James H. Boylston
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

53

709 p.d. 00.

RETURN TO:

KOCH REFINING COMPANY
P. O. Drawer 1210
Round Rock, Texas 78680

17271
INDEXED

SOL BUNNELL, ET UX PIPELINE EASEMENT KOCH REFINING COMPANY

THE STATE OF TEXAS,

17270

COUNTY OF WILLIAMSON.

KNOW ALL MEN BY THESE PRESENTS: THAT we, Sol Bunnell and wife, Margaret Bunnell of Williamson County, Texas, hereinafter at times referred to as "Grantors", for and in consideration of the sum of Ten and No/100 (\$10.00) Dollars, and other good and valuable consideration to us cash in hand paid by Koch Refining Company, hereinafter at times referred to as "Grantee", the receipt and sufficiency of which are hereby duly acknowledged and for which no lien either express or implied is herein or hereby retained or shall exist, have GRANTED and CONVEYED and by these presents do GRANT and CONVEY unto the said Koch Refining Company, a private corporation, the right, privilege and easement to lay, construct, maintain, repair, operate and remove one Sixteen (16") inch steel pipeline for the purpose of transporting oil, gas and other petroleum products which can be transported through said pipeline over, under, across and through a strip of land Twenty-Five (25') feet wide which lands are situated in Williamson County, Texas, the center line of which is described as follows, to-wit:

Being more particularly described in field notes prepared by J. Stanley Coalter, Registered Public Surveyor No. 1481 of the State of Texas, a copy of which said field notes marked Exhibit "A" and designated as Tract WM-491 is attached hereto and made a part hereof for all purposes as fully as though copied herein at this place at length and as set out on said Exhibit the description covers and this easement includes a 75 foot wide construction easement which reverts to a 25 foot wide permanent easement upon completion of the construction of said pipeline.

TO HAVE AND TO HOLD unto the Grantee herein, its successors and assigns, forever, the rights, privilege and easement upon, under, across and through said tract of land, subject to, however, the following rights, obligations, restrictions and conditions, to-wit:

1013.71F

1. As set out on Exhibit "A" during the construction of the pipeline there is a temporary construction easement 75 feet in width. In connection with the repair or removal of the original pipeline Grantee may utilize an additional strip or strips of land not to exceed in the aggregate, a total of 20 feet as a temporary easement which shall be located as follows in relation to the permanent easement: Located East of that part of the easement adjacent to the West line of said tract and South of that part adjacent to the North line of said tract.

2. Said pipeline shall be buried to and maintained at a depth which will provide a cover of at least 36 inches below the surface of the ground.

3. Grantee will double-ditch the trench for said pipeline and shall keep the topsoil separate and agrees to replace said topsoil excavated along the easement path to its original location and position when the initial pipeline is installed and upon its subsequent repair or removal, and Grantee agrees to level the surface of the ground to the same condition as found prior to installation and removal of said pipeline. In addition, upon the completion of the pipeline, and upon any subsequent repair or removal of same, Grantee further agrees to chisel the pipeline right-of-way to remove heavy machinery tracks and packing.

4. This easement is made expressly subject to any prior easements granted on and over said property or any part thereof.

5. Grantee agrees to pay for any and all damages to Grantors growing crops, grasses, trees, shrubbery, fences, drainage structures, terraces or any other structures and livestock on Grantors premises caused by operations or activities of Grantee in connection with the installation, construction, maintenance, repair, operation and removal of said pipeline; provided, however, that Grantee shall have the right from time to time to cut or clear trees, brush and other obstructions on the right-of-way which might interfere with the operation and maintenance of said pipeline.

6. Grantee agrees to provide Grantors and their tenants an access way over the pipeline right-of-way during the installation, repair and removal of same so that Grantors and their tenants may move farming machinery from one side of the easement to the other.

7. Grantee shall have no right to cross other lands of Grantors adjacent to the easement area for the purpose of having ingress to or egress from the easement strip of land. It is understood that adequate locks shall be provided by Grantee for any gate installed on a property line over the easement and keys to same shall be furnished to Grantors and their tenants, or surface lessees. Grantee shall not install any interior fences or gates along the easement path.

8. Grantors will not construct or permit any permanent buildings or structures to be constructed on the easement strip which interferes with Grantee's operation of said pipeline, but Grantors without limiting or restricting the rights reserved unto Grantors in Paragraph 9 below, specifically reserve the right to build and maintain and to permit others to build and maintain fences, roads, telephone lines, power lines and pipelines across said easement, but nothing shall be located or placed longitudinally immediately above the pipeline right-of-way.

9. Grantors, their heirs and assigns, reserve the right to use and fully enjoy the premises on which the easement is a burden and located, except as to the rights granted unto Grantee herein.

10. Cessation of use of said pipeline located on the right-of-way herein granted for any continuous period of two years shall be conclusively deemed to be an abandonment of the easement and of any and all rights granted hereunder, and thereupon all rights of Grantee under this instrument shall ipso facto terminate and revert to Grantors, their heirs and assigns.

11. Grantee shall not acquire any right to construct any buildings, structures, relief valves or other appurtenances, pumping stations or telephone lines on or above the easement right-of-way.

12. The right of Grantee may be assigned in whole or in part.

13. It is understood that Grantee shall deal separately with and shall be liable to the surface lessee or agricultural tenant for any damages which may be sustained by said surface lessee or agricultural tenant and it is understood that the consideration paid for this easement shall be the property of Grantors.

14. This instrument and the covenants and agreements herein contained shall inure to the benefit of and be binding and obligatory upon the heirs, executors, administrators, successors and assigns of Grantors and Grantee.

IN WITNESS WHEREOF THESE PRESENTS HAVE BEEN EXECUTED THIS
THE 24TH DAY OF FEBRUARY, A.D. 1989.

Sol Bunnell
SOL BUNNELL

Margaret Bunnell
MARGARET BUNNELL

THE STATE OF TEXAS,
COUNTY OF WILLIAMSON.

This instrument was acknowledged before me on the 24th day
of February, A.D. 1989 by Sol Bunnell.

Kelly Hilton
Notary Public in and for the State of Texas
Printed Name: Kelly Hilton
My Commission Expires: 7-12-89

THE STATE OF TEXAS,
COUNTY OF WILLIAMSON.

This instrument was acknowledged before me on the 24th day
of February, A.D. 1989 by Margaret Bunnell.

Kelly Hilton
Notary Public in and for the State of Texas
Printed Name: Kelly Hilton
My Commission Expires: 7-12-89

EXHIBIT A

WILLIAMSON COUNTY, TEXAS
TRACT WM-~~484~~ 15

FIELD NOTES

BEING a 75 foot wide construction easement reverting to a 25 foot wide permanent easement upon completion of construction for a 16" dia. steel pipeline across that certain 199.922 acre tract of land out of the Watkins Nobles Survey, Abstract No. 484, the James C. Eaves Survey, Abstract No. 213, and the J.J. Stubblefield Survey, Abstract No. 562, Williamson County, Texas, described in a deed to Sol Bunnell recorded in Volume 751, Page 498, Deed Records of Williamson County, said 75 foot wide construction easement and said 25 foot wide permanent easement being for the purpose of constructing and maintaining a petroleum products pipeline over, under and across the above described tract of land, said 75 foot wide construction easement extending 15 feet to the left, (westerly), and 60 feet to the right, (easterly), of the following described line, said 25 foot wide permanent easement extending 15 feet to the left, (westerly), and 10 feet to the right, (easterly), of the following described line, to wit:

BEGINNING at a point on the south line of said 199.922 acre tract, from which the existing southwest corner thereof on the east right-of-way line of FM-3349 bears N 80° 00' W a distance of 15.00 feet;

THENCE N 10° 00' E a distance of 1326.86 feet to an angle point;

THENCE N 27° 27' 15" E a distance of 40.00 feet to an angle point;

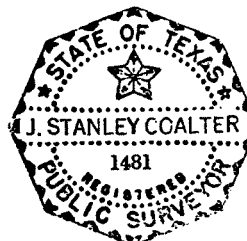
THENCE N 44° 54' 30" E a distance of 40.00 feet to an angle point;

THENCE N 62° 21' 45" E a distance of 40.00 feet to an angle point;

THENCE N 79° 49' E a distance of 2263.48 feet to an angle point;

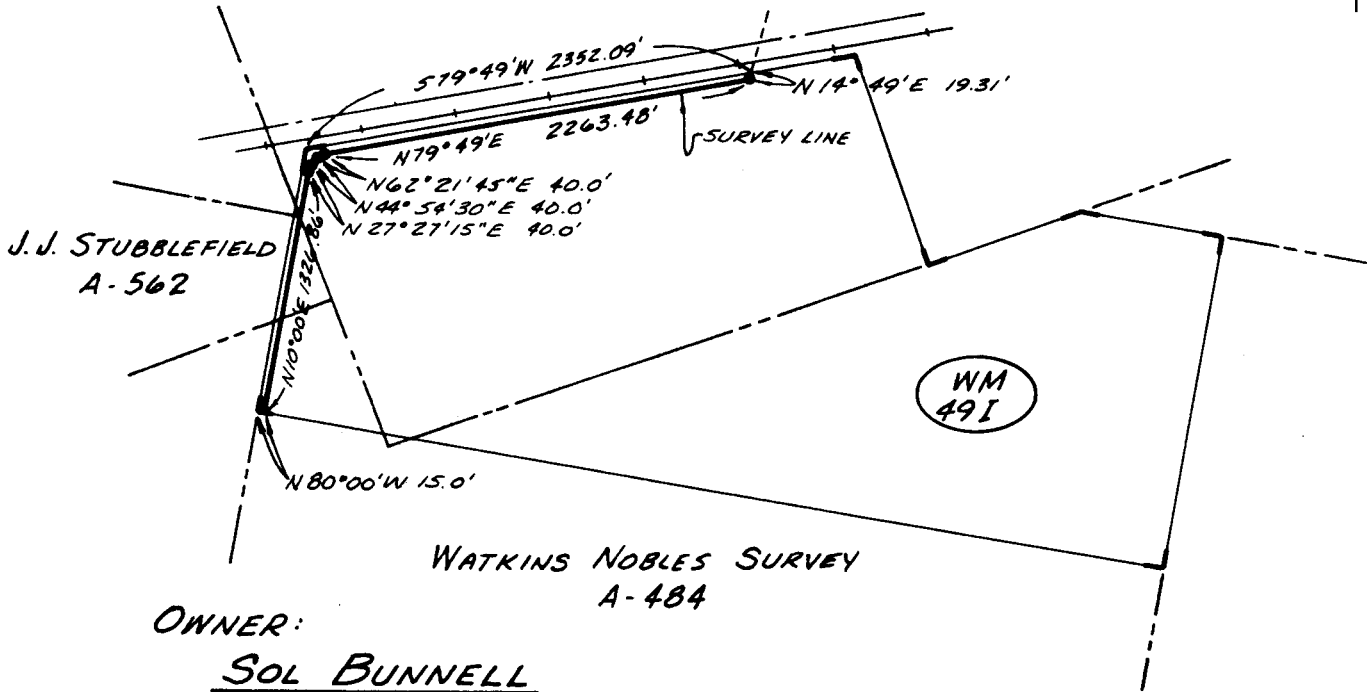
THENCE N 14° 49' E a distance of 19.31 feet to the Point of Termination of said easement on the north line of said 199.922 acre tract, from which a 3/4" dia. iron rod found at the existing northwest corner of said 199.922 acre tract, (said point being at the intersection of the south line of the Missouri Pacific Railroad right-of-way and the east line of the FM 3349 right-of-way), bears S 79° 49' W a distance of 2352.09 feet.

Stan Coalter
Stan Coalter, RPS, LSLS
1-23-89



NOTE: See EXHIBIT B attached hereto and made a part hereof for a further description of said easement.

JAMES C. EAVES SURVEY
A-213
WILLIAMSON COUNTY, TEXAS



OWNER:

SOL BUNNELL

TOTALS:

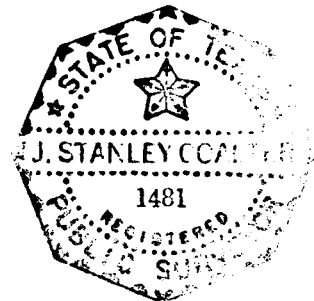
3729.65 FEET

226 RODS

SURVEYOR'S CERTIFICATION:

I, Stan Coalter, Texas Registered Public Surveyor No. 1481, do hereby certify that the above plat was surveyed on the ground under my supervision and is true and correct to the best of my knowledge.

Stan Coalter
STAN COALTER, R.P.S. 1481



| NO. | REVISION | DATE | BY |
|-----|----------|------|----|
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| | | | |
| | | | |



KOCH
REFINING COMPANY
Subsidiary of Koch Industries Inc.

ENER-TRANS, INC.
OKLAHOMA CITY, OKLAHOMA

SCALE: 1" = 1000'
DRAWN: *CS*
JOB NO: AFE-03003
FIELD BK. NO.
PAGE NO.
SHEET / OF /

VOL 1792 PAGE 122

FILED FOR RECORD
WILLIAMSON COUNTY, TX.

1989 JUN 26 PM 1:04

James H. Boydston
COUNTY CLERK

STATE OF TEXAS COUNTY OF WILLIAMSON
I hereby certify that this Instrument was FILED
on the date and at the time stamped hereon
by me; and was duly RECORDED, in the Volume
and Page of the named RECORDS of Williamson
County, Texas, as stamped hereon by me, on

JUN 27 1989



James H. Boydston
COUNTY CLERK
WILLIAMSON COUNTY, TEXAS

55

1/00, Pd. ab.

RETURN TO:
KOCH REFINING COMPANY
P. O. Drawer 1210
Round Rock, Texas 78680

17270

INDEXED

Form Wilco-U-35 – 100% County – On System-Buy America
Rev. 5/2011
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Attachment F

Copy of Approved TxDOT Online Installation Permit

UIR Permit Number: AUS20210901105649