





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

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
[Permits@fortbendcountytx.gov](mailto:Permits@fortbendcountytx.gov)

- ☒ **Right of Way Permit**  
☐ **Commercial Driveway Permit**

Permit No: 2018-23836

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

**(1) COMPLETE APPLICATION FORM:**

- ☒ a. Name of road, street, and/or drainage ditch affected.  
☒ b. Vicinity map showing course of directions  
☒ c. Plans and specifications

**(2) BOND:**

- ☐ County Attorney, approval when applicable.
- ☐ Perpetual bond currently posted.      Bond No: \_\_\_\_\_ Amount: \_\_\_\_\_
- ☐ Performance bond submitted.      Bond No: \_\_\_\_\_ Amount: \_\_\_\_\_
- ☒ Cashier's Check      Check No: [REDACTED] Amount: \$5,000.00

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

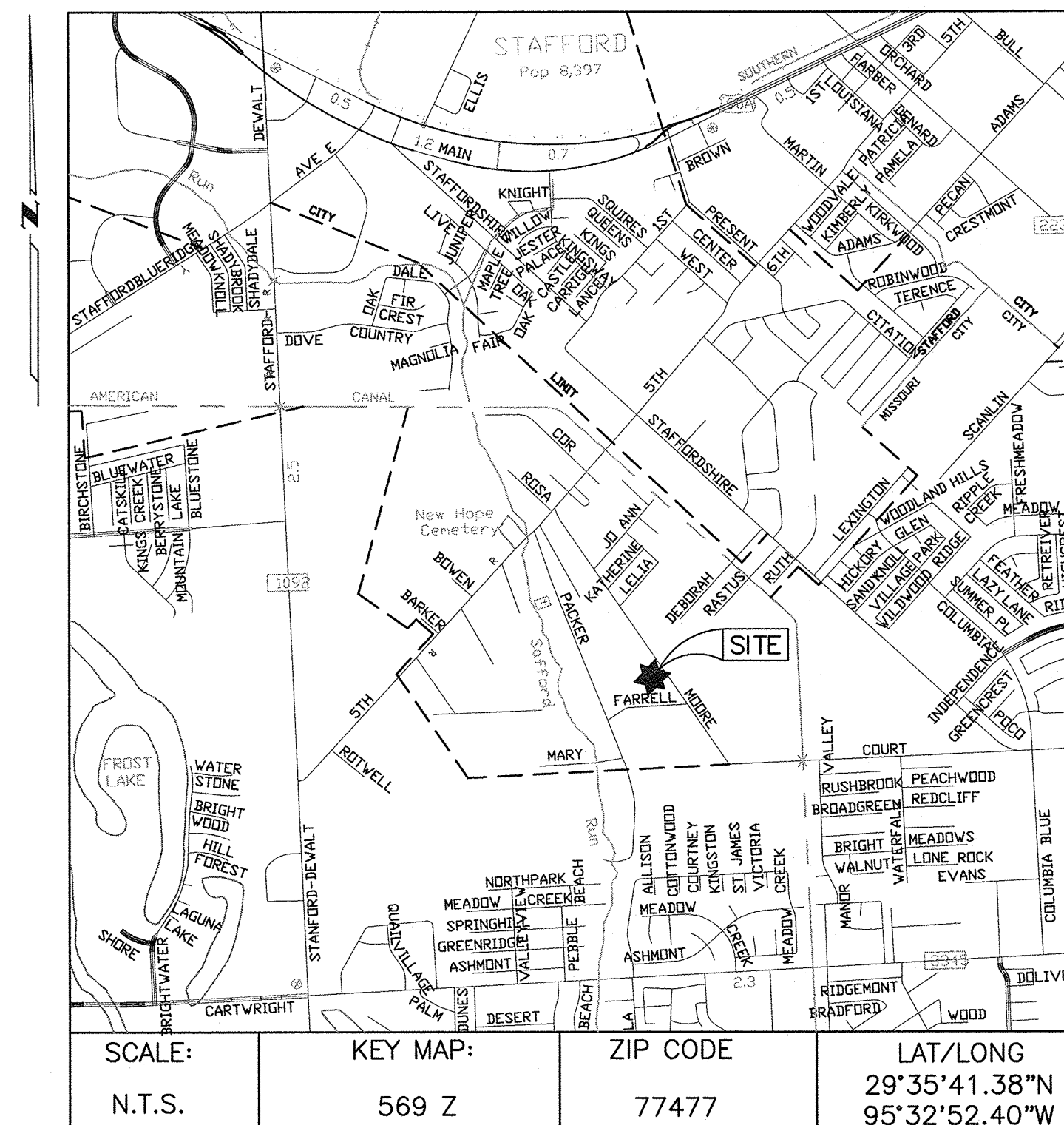
\_\_\_\_\_  
Date

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

  
\_\_\_\_\_  
Permit Administrator

10/15/2018  
\_\_\_\_\_  
Date

ENSION & SANITARY CONNECTION  
FOR JAVIER R. GUTIERREZ  
LOCATED AT:  
1706 MOORE ROAD  
MISSOURI CITY, TEXAS 77477  
(FORT BEND COUNTY)



| <u>INDEX OF DRAWINGS</u> |                            |
|--------------------------|----------------------------|
| SHT. NO.                 | DESCRIPTION                |
| 1                        | COVER SHEET                |
| 2                        | TOPOGRAPHIC SURVEY (C-0)   |
| 3                        | GRADING AND DRAINAGE (C-1) |
| 4                        | TRAFFIC CONTROL PLAN (C-2) |

FORT BEND COUNTY ENGINEER

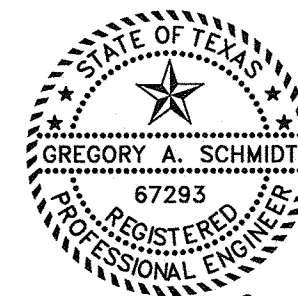
ENGINEER: Richard W. Stoller, P.E., PROE  
FOR RICHARD W. STOLLER, P.E.

DATE: 9/17/18

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT  
COMMENCED IN ONE (1) YEAR FROM DATE OF APPROVAL.

APPROVED: Asaundra J. [Signature]  
[Signature] DEVELOPMENT COORDINATOR

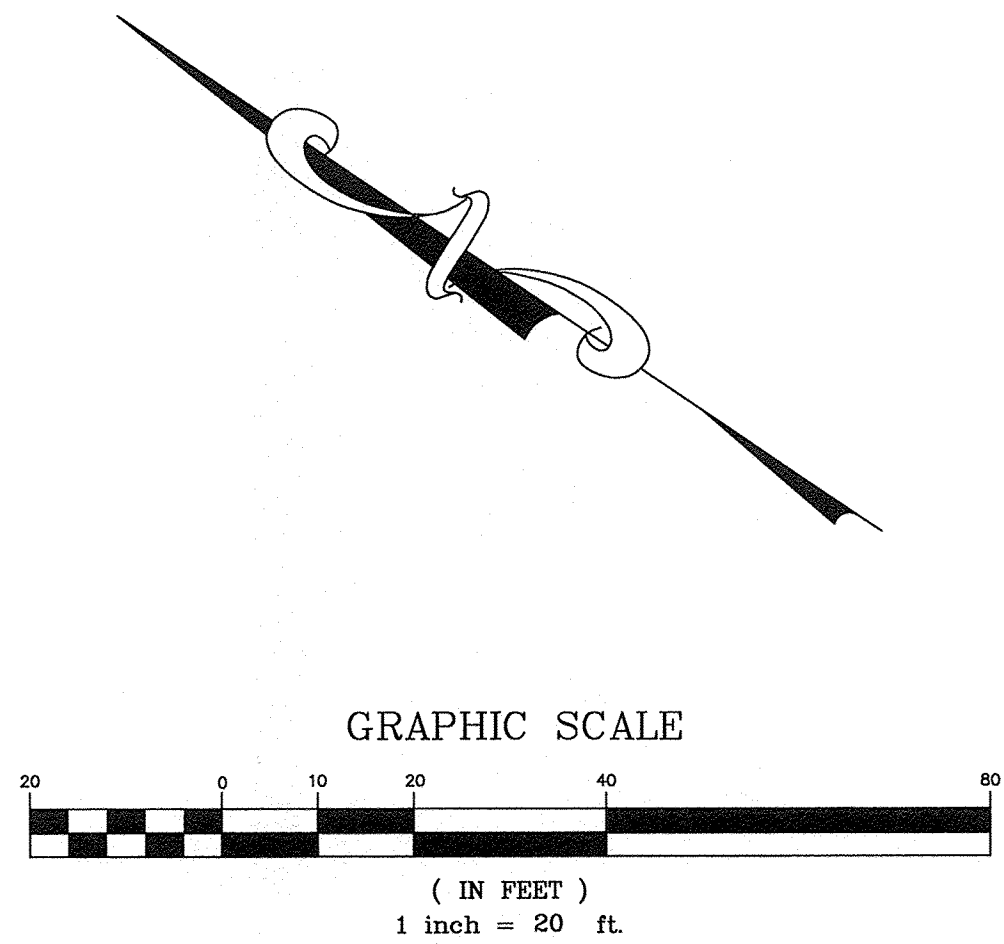
DATE: 9-14-2018



 *James C. Schmidt*  
9/6/18

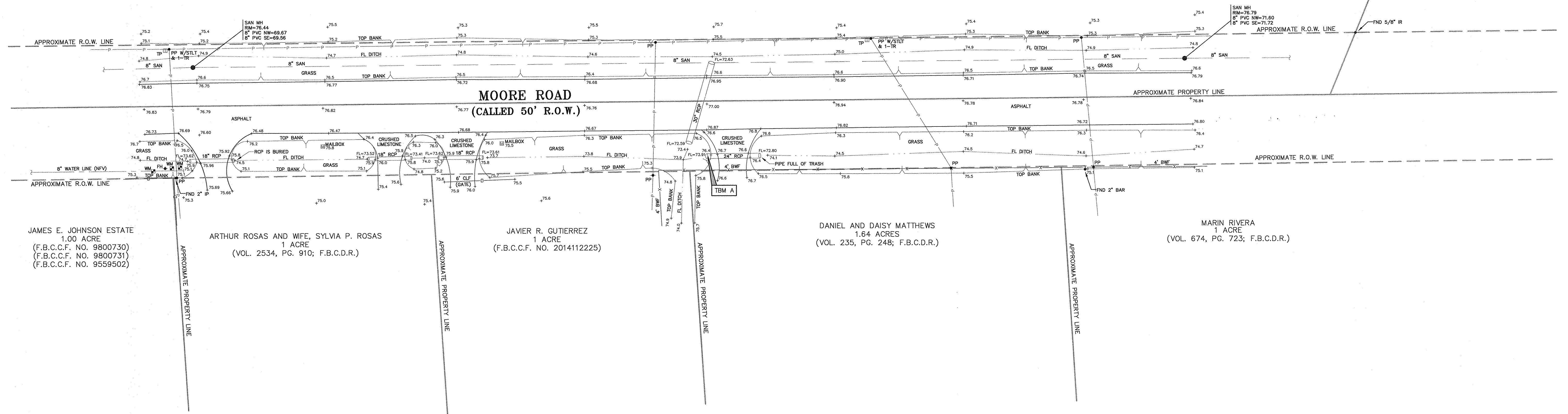


**TEXAS ENGINEERING AND MAPPING CO.**  
12718 CENTURY DRIVE  
STAFFORD, TEXAS 77477  
PHONE: (281) 491-2525 FAX: (281) 491-2535  
SURVEYING FIRM NO. 10119000 / ENGINEERING FIRM NO. F-2906  
[www.team-civil.com](http://www.team-civil.com)  
JOB NO.: 1365-1



DIVINE FARMS, LLC  
CALLED 38.198 ACRES  
(F.B.C.C.F. NO. 2016026544)

CITY OF MISSOURI CITY  
15.58252 ACRES  
(VOL. 1982, PG. 153; F.B.C.D.R.)



JAMES E. JOHNSON ESTATE  
1.00 ACRE  
(F.B.C.C.F. NO. 9800730)  
(F.B.C.C.F. NO. 9800731)  
(F.B.C.C.F. NO. 9559502)

ARTHUR ROSAS AND WIFE, SYLVIA P. ROSAS  
1 ACRE  
(VOL. 2534, PG. 910; F.B.C.D.R.)

JAVIER R. GUTIERREZ  
1 ACRE  
(F.B.C.C.F. NO. 2014112225)

DANIEL AND DAISY MATTHEWS  
1.64 ACRES  
(VOL. 235, PG. 248; F.B.C.D.R.)

MARIN RIVERA  
1 ACRE  
(VOL. 674, PG. 723; F.B.C.D.R.)

- NOTES:
- 1.) THIS IS NOT A BOUNDARY SURVEY.
  - 2.) BOUNDARY AND RIGHT-OF-WAY LINE INFORMATION IS SHOWN APPROXIMATELY HEREON PER RECORDED DEEDS.
  - 3.) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR FORT BEND COUNTY, TEXAS AND INCORPORATED AREAS, COMMUNITY PANEL NO. 48157-C-02BSL, EFFECTIVELY DATED APRIL 2, 2014, THIS PROPERTY LIES IN ZONE "X", AN AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.
  - 4.) THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. ADDITIONAL ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN.
  - 5.) ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN HEREON. THE LOCATIONS OF UTILITIES SHOWN HEREON ARE SHOWN PER RECORD DRAWINGS AND ABOVE GROUND EVIDENCE. SIZES, DEPTHS, AND LOCATIONS MAY VARY. FOR THE LOCATION OF ANY ADDITIONAL UTILITIES THAT MAY EXIST, PLEASE CALL THE "TEXAS ONE CALL" LOCATING SERVICE.
  - 6.) THIS TRACT OF LAND WAS SURVEYED IN THE FIELD ON MARCH 21, 2018. ANY CHANGES MADE AFTER THIS DATE ARE NOT SHOWN HEREON.

PER CONTROL MAP FOR STAFFORD ROAD & STAFFORDSHIRE ROAD, SIGNED ON 12-07-09 BY WAYNE J. MCKITTRICK, R.P.L.S. NO. 4875, ALL ELEVATIONS ARE BASED ON NAVD 1988 VERTICAL DATUM, 2001 ADJUSTMENT.

REFERENCE TBM A:  
BOX CUT ON THE 2ND C-INLET ON THE NORTHEAST SIDE OF STAFFORDSHIRE ROAD SOUTHEAST OF 5TH STREET.  
ELEVATION = 75.63'

REFERENCE TBM B:  
BOX CUT ON THE 3RD C-INLET ON THE NORTHEAST SIDE OF STAFFORDSHIRE ROAD SOUTHEAST OF 5TH STREET.  
ELEVATION = 75.91'

TBM A:  
BOX CUT ON NORTH END OF 24" RCP LOCATED ON THE WEST SIDE OF MOORE ROAD, AS SHOWN.  
ELEVATION = 76.14'

#### LEGEND

CLF - CHAIN LINK FENCE  
F.B.C.C.F. - FORT BEND COUNTY CLERK'S FILE  
F.B.C.D.R. - FORT BEND COUNTY DEED RECORDS  
F.B.C.P.R. - FORT BEND COUNTY PLAT RECORDS  
FH - FIRE HYDRANT  
FND - FOUND  
IP - IRON PIPE  
IR - IRON ROD  
MH - MANHOLE  
-P- - OVERHEAD POWER LINE  
PP - POWER POLE  
RCP - REINFORCED CONCRETE PIPE  
R.O.W. - RIGHT OF WAY  
SQ. FT. - SQUARE FEET  
STLT - STREET LIGHT  
V - VITTH  
WM - WATER METER  
TR - TRANSFORMER  
(NFV) - NOT FIELD VERIFIED



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Surveying Firm No. 10119000 / Engineering Firm No. F-2906

**TOPOGRAPHIC SURVEY**  
OF  
A PORTION OF MOORE ROAD FOR  
WATER LINE EXTENSION IN THE  
WILLIAM NEAL SURVEY, ABSTRACT NO. 64,  
FORT BEND COUNTY, TEXAS

|                |               |               |                 |
|----------------|---------------|---------------|-----------------|
| CREW: RL       | DRAWN BY: KPR | CALC. BY: BSN | CK. BY: BSN     |
| DATE: 03/28/18 | SCALE: 1"=20' | KEY MAP: 569Z | JOB NO.: 1365-1 |



# CONSTRUCTION NOTES:

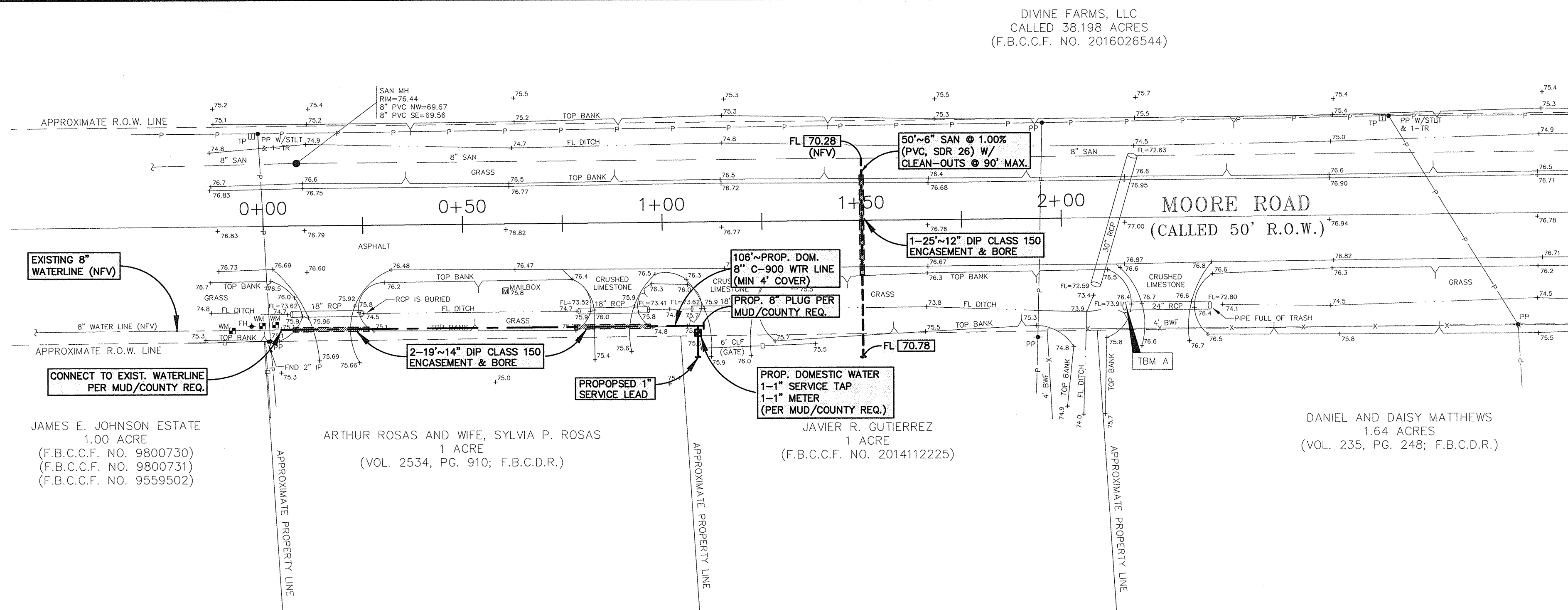
1. WATER LINES SHALL BE PVC (POLY-VINYL CHLORIDE) PIPE CONFORMING TO A.W.W.A. C-900 PVC, CLASS 150 PER FORT BEND COUNTY AND MUD REQUIREMENTS.
2. PVC PIPE BID IN THIS CONTRACT SHALL CONFORM TO THE MOST CURRENT A.W.W.A. AND A.S.T.M. REQUIREMENTS (INCLUDING A.S.T.M. D2412-PIPE STIFFNESS).
3. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS REQUIRED BY THE MUD AND FORT BEND COUNTY.
4. ALL UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN AT THE APPROXIMATE LOCATIONS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD DETERMINE THE EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION. HE SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND MAINTAIN THESE UNDERGROUND UTILITIES.
5. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL POINTS OF CROSSING TO DETERMINE IF CONFLICT EXISTS BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.
6. OWNER TO OBTAIN ALL PERMITS REQUIRED BY FORT BEND COUNTY FOR CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN COUNTY ROAD RIGHT-OF-WAY.
7. CONTRACTOR TO OBTAIN ALL PERMITS BY REGULATION OF FORT BEND COUNTY, TEXAS FOR FLOOD PLAN MANAGEMENT.
8. ALL FILL COMPACTION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH SOIL REPORT SPECIFICATIONS.
9. THE WORK AREA SHALL BE BARRICADED AND ILLUMINATED DURING DARKNESS AND PERIODS OF INACTIVITY, WHEN IN AN AREA OF DIRECT PUBLIC ACCESS.
10. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ALL DRAINAGE SYSTEMS.
12. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN FINISHED ELEVATIONS AS SHOWN.
13. CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY LINES.
14. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY ALL GOVERNING AGENCIES.
15. OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL RELIANT ENERGY H.L.6P. AT 713-207-7777.
16. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS M.U.T.C.D. MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION.
17. CAUTION: UNDERGROUND GAS FACILITIES  
ENTEX MAIN LINES (TO INCLUDE UNIT GAS TRANSMISSION, AND/OR INDUSTRIAL GAS SUPPLY CORPORATION WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 713-223-4567 OR 1-800-669-8344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.  
\* WHEN RELIANT ENERGY ENTEX PIPE LINE MARKINGS ARE NOT VISIBLE, CALL 713-967-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.  
\* WHEN EXCAVATING WITHIN EIGHTEEN (18) INCHES OF THE INDICATED LOCATION OF RELIANT ENERGY ENTEX FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATING PROCEDURES.  
\* WHEN RELIANT ENERGY ENTEX FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
18. AT&T TEXAS/SWBT UTILITIES MAY EXIST IN STREET RIGHT OF WAY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
19. ALL EXISTING POWER POLES, LIGHT STANDARDS, SIGNS, ETC. WHICH AFFECT THE PROPOSED CONSTRUCTION, SHALL BE REMOVED AND/OR RELOCATED AS REQUIRED WHETHER SHOWN ON DRAWINGS OR NOT.
20. THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET APPROPRIATE REQUIREMENTS ESTABLISHED IN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY & HEALTH REGULATIONS, 29 CFR 1926, SUBPART P - EXCAVATIONS, TRENCHING, AND SHORING, AND OSHA PROPOSED STANDARDS ON TRENCHING EXCAVATION PUBLISHED IN VOLUME 52, NO. 72 OF THE FEDERAL REGISTER, APRIL 15, 1987, PAGES 12288-12339. SHOULD THE REFERENCED OSHA STANDARDS BE MODIFIED OR AMENDED, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
21. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
22. GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES SHALL BE OBSERVED.
23. THE CONTRACTOR SHALL NOT MAKE ANY FIELD MODIFICATION WITHOUT THE APPROVAL OF THE ENGINEER, TEXAS ENGINEERING AND MAPPING CO., (281) 491-2525. THE APPROVAL MUST BE OBTAINED PRIOR TO RESUMING ANY CONSTRUCTION IN THE AFFECTED AREA.
24. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY MUD.

## FORT BEND COUNTY ENGINEERING

### FORT BEND COUNTY CONSTRUCTION-GENERAL NOTES

1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION.FORTBENDCOUNTYTX.GOV
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.
4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY "RULES, REGULATIONS AND REQUIREMENTS" RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISION AS CURRENTLY AMENDED.
5. ALL ROAD WIDTHS, CURB RADI AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB.
6. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
7. ALL CONCRETE PAVEMENT SHALL BE 5 1/2 SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
9. 4"x12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
10. AT ALL INTERSECTION LOCATIONS: TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TxDOT PED-12A STANDARD DETAIL SHEET. A.D.A.-HANDICAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
11. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS.
12. ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.
13. GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING, AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
14. ALL R1-1 STOP SIGNS SHALL BE 30"x30" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SIGN FLAT PLATE W/REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 6" MINIMUM AND LOWERCASE LETTERS OF 4.5" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
16. A BLUE DOUBLE REFLECTORIZED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT.
17. THE PROJECT AND ALL PARTS THEREOF SHALL BE SUBJECT TO INSPECTION FROM TIME TO TIME BY INSPECTORS DESIGNATED BY FORT BEND COUNTY. NO SUCH INSPECTIONS SHALL RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER TO INSPECT FAILURE TO INSPECT NOR FAILURE TO DISCOVER OR REJECT ANY OF THE WORK AS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. REQUIREMENTS AND SPECIFICATIONS OF FORT BEND COUNTY OR ANY PROVISION OF THIS PRODUCT SHALL BE CONSTRUED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR TO RELIEVE THE CONTRACTOR OF ANY OF IT OBLIGATIONS HEREUNDER.

NOTE: FORT BEND COUNTY NOTES SUPERSEDE ANY CONFLICTING NOTES.



JAMES E. JOHNSON ESTATE  
1.00 ACRE  
(F.B.C.C.F. NO. 9800730)  
(F.B.C.C.F. NO. 9800731)  
(F.B.C.C.F. NO. 9559502)

ARTHUR ROSAS AND WIFE, SYLVIA P. ROSAS  
1 ACRE  
(VOL. 2534, PG. 910; F.B.C.D.R.)

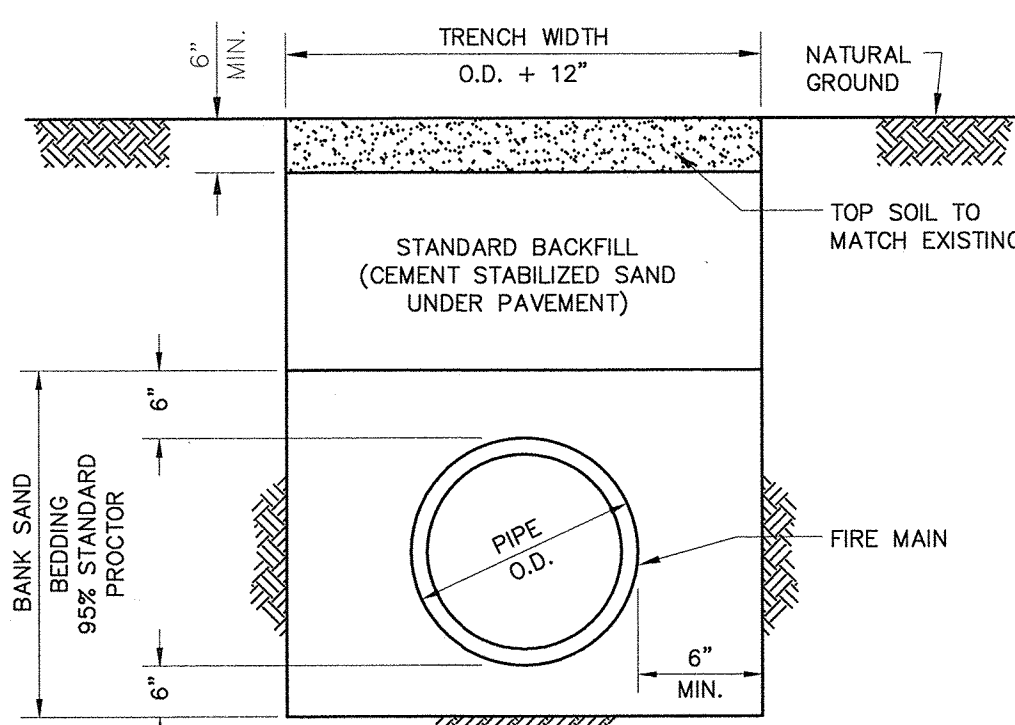
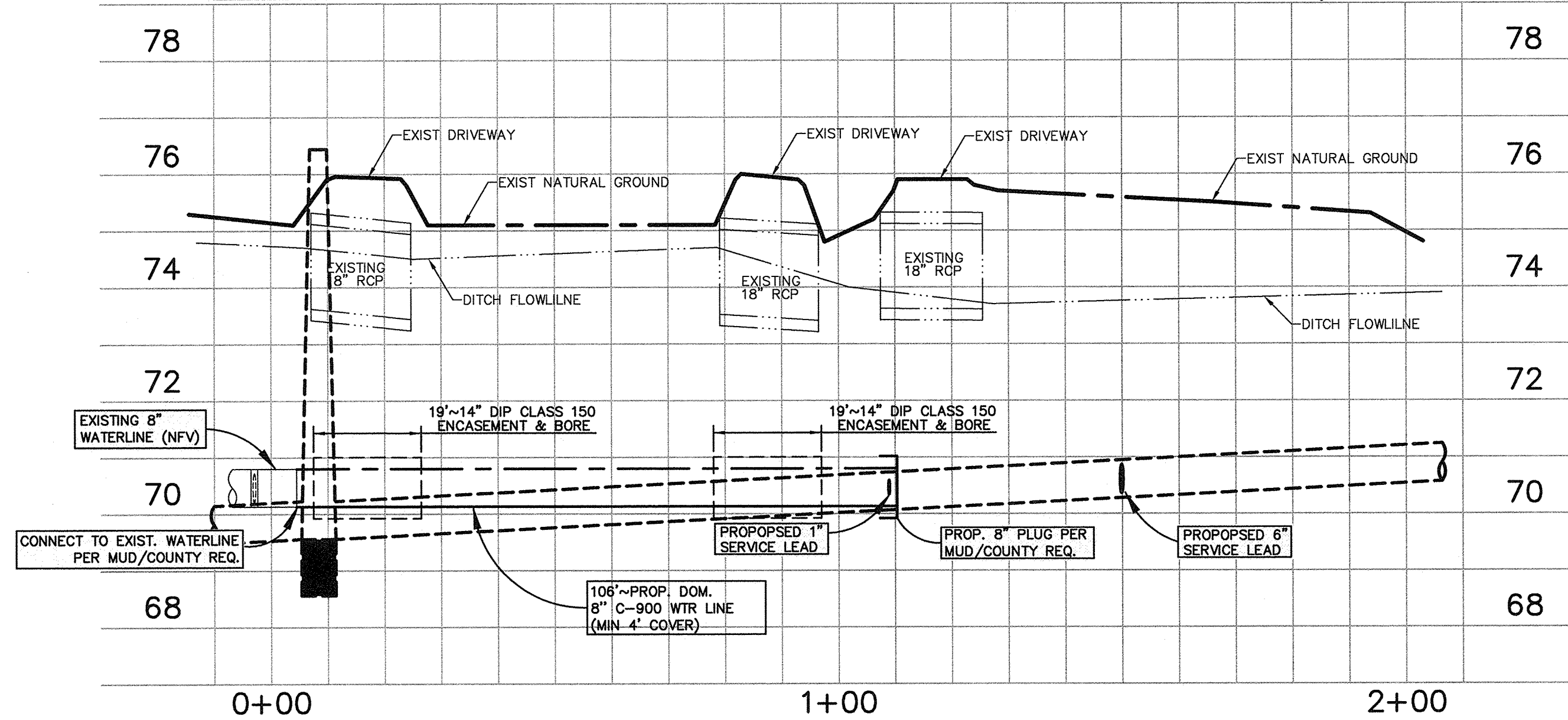
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1 ACRE  
(F.B.C.C.F. NO. 201412225)

DANIEL AND DAISY MATTHEWS  
1.64 ACRES  
(VOL. 235, PG. 248; F.B.C.D.R.)

CONTRACTOR SHOULD LEAVE DITCH AREA  
EQUAL TO OR BETTER THAN BEFORE

CONTRACTOR TO USE EXTREME CAUTION  
DURING CONSTRUCTION SO AS TO NOT  
DISTURB EXISTING UTILITIES.

SCALE: 1"=20' HORZ, 1"=2' VERT

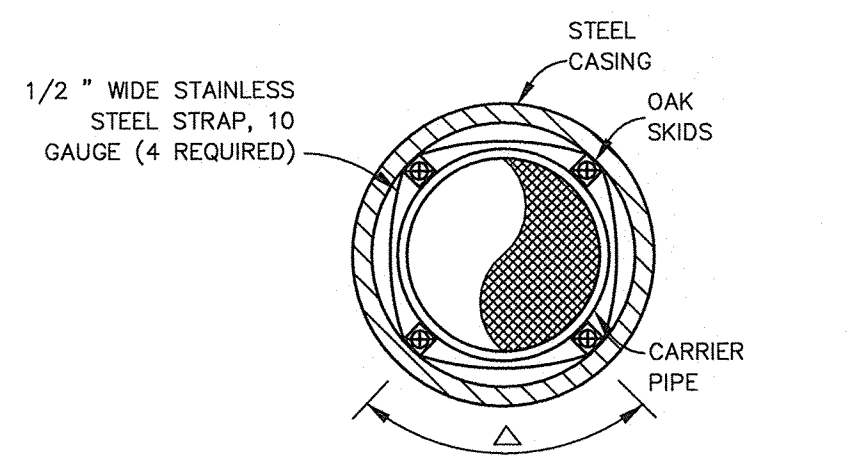


### GENERAL NOTES:

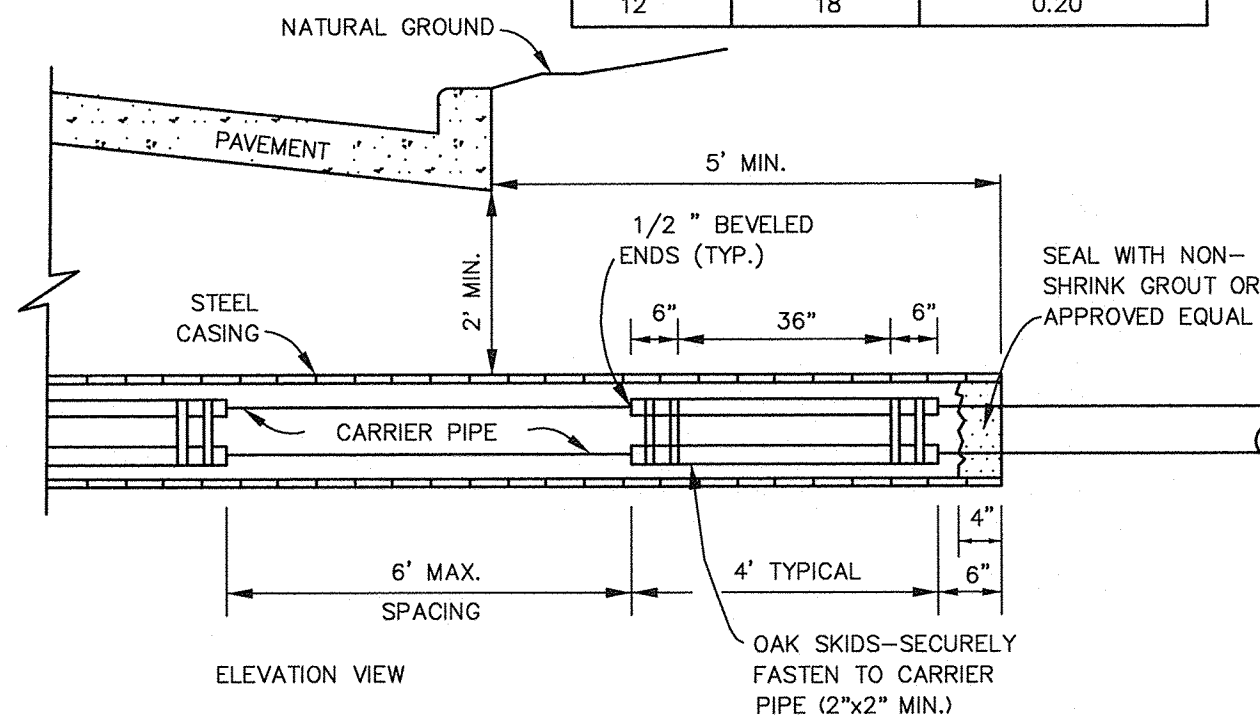
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, PLACED IN LIFTS OF EIGHT (8) INCHES OR LESS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
2. BACKFILL UNDER PAVEMENT AND PUBLIC STREETS SHALL BE CEMENT STABILIZED SAND (1.5 SACKS OF CEMENT PER CUBIC YARD OF SAND), COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. TRENCH SHORING, IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED AS REQUIRED.

### WATER MAIN BEDDING AND BACKFILL

N.T.S.

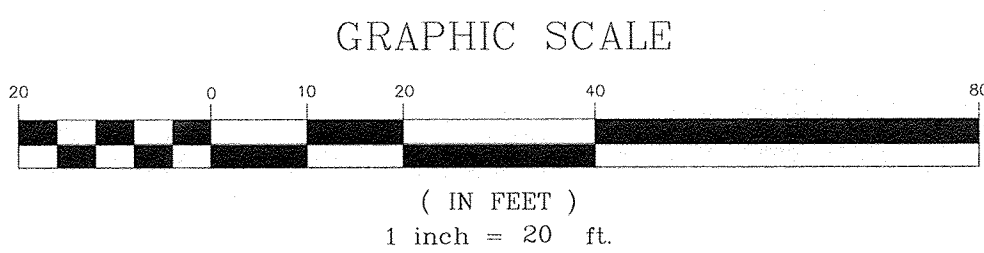


| SCHEDULE OF CASING |                |                           |
|--------------------|----------------|---------------------------|
| CARRIER PIPE       | NOMINAL CASING | MIN. WALL THICKNESS (IN.) |
| 6"                 | 12"            | 0.11                      |
| 8"                 | 14"            | 0.15                      |
| 10"                | 16"            | 0.18                      |
| 12"                | 18"            | 0.20                      |



### ENCASUREMENT & BORE DETAILS

N.T.S.



THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN ONE (1) YEAR FROM DATE OF APPROVAL.

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

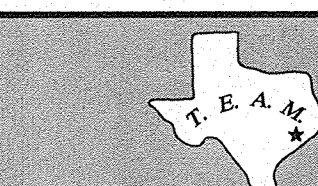
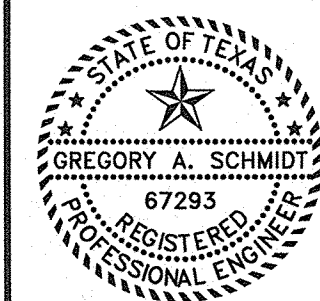
DATE: 9-14-18

**C-1 WATERLINE EXTENSION**  
Scale 1" = 20' JOB: 1365-1  
SEE SHT C-0 FOR TOPOGRAPHIC SURVEY  
SEE SHT C-1 FOR WATERLINE EXTENSION & SANITARY CONNECTION  
SEE SHT C-2 FOR TRAFFIC CONTROL PLAN

**WATERLINE EXTENSION & SANITARY CONNECTION**  
FOR JAVIER R. GUTIERREZ  
MOORE ROAD  
MISSOURI CITY, TEXAS 77477

### LEGEND

- 70.5 EXISTING ELEV.
- 71.20 TOP OF PAVEMENT
- 69.80 TOP OF GRATE ELEV.
- 69.80 TOP OF GRAVEL
- 69.80 FLOW LINE ELEV.
- 69.80 TOP OF WALK ELEV.
- 69.80 FINISHED GRADE ELEV



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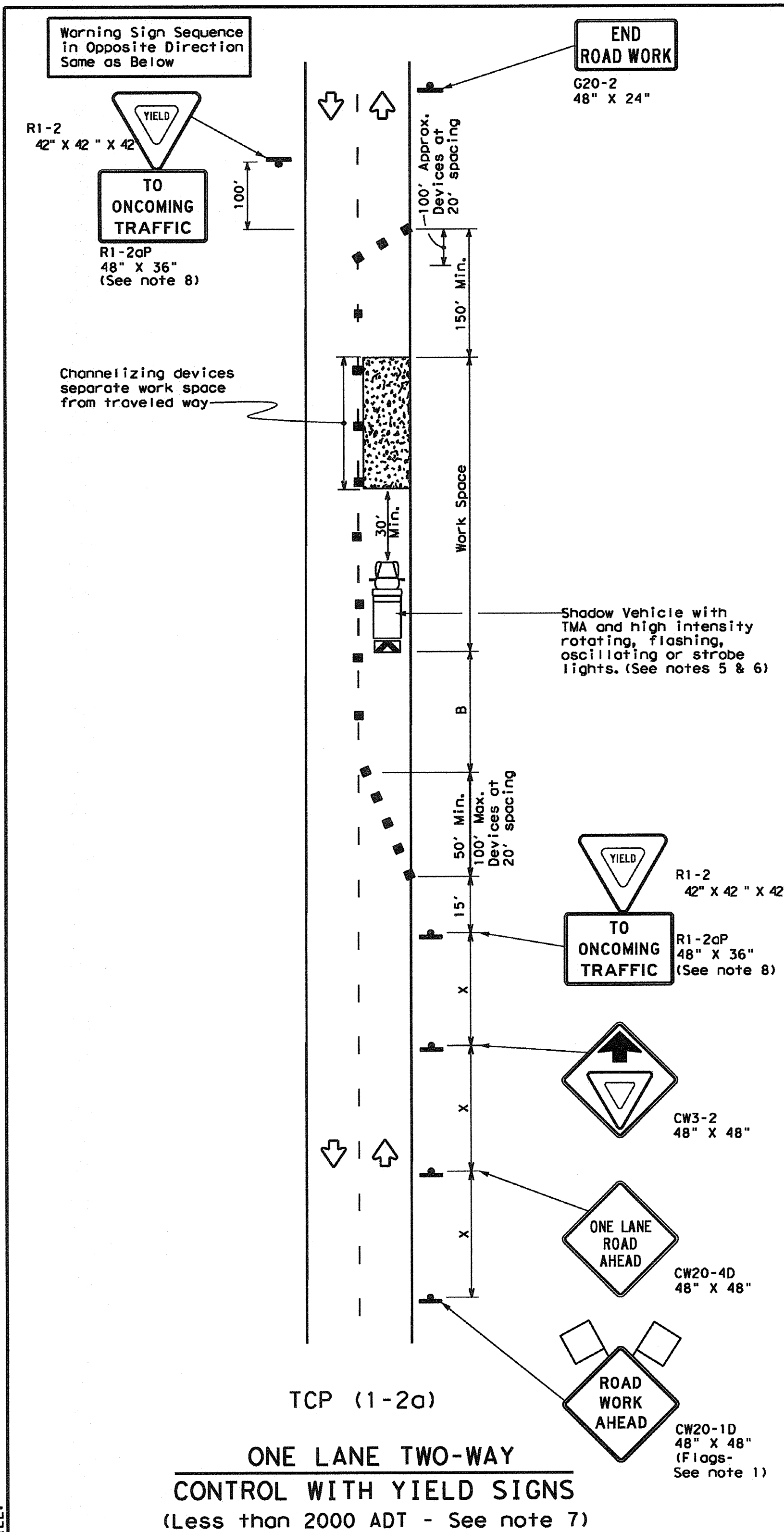
DRAWN BY: CS  
DATE: 04-09-18  
JOB NO: 1365-1  
REVISION DATE: N/A

**C-1**



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DATE: FILE:



| LEGEND |                                      |  |                                         |  |                                |
|--------|--------------------------------------|--|-----------------------------------------|--|--------------------------------|
|        | Type 3 Barricade                     |  | Channelizing Devices                    |  | Truck Mounted Attenuator (TMA) |
|        | Heavy Work Vehicle                   |  | Portable Changeable Message Sign (PCMS) |  | Traffic Flow                   |
|        | Trailer Mounted Flashing Arrow Board |  | Flag                                    |  |                                |
|        | Sign                                 |  |                                         |  |                                |

| Posted Speed<br>* | Formula      | Minimum Desirable<br>Taper Lengths<br>* % |            |            | Suggested Maximum<br>Spacing of<br>Channelizing<br>Devices |                 | Minimum<br>Sign<br>Spacing<br>* X | Suggested<br>Longitudinal<br>Buffer Space<br>"B" | Stopping<br>Sight<br>Distance |
|-------------------|--------------|-------------------------------------------|------------|------------|------------------------------------------------------------|-----------------|-----------------------------------|--------------------------------------------------|-------------------------------|
|                   |              | 10' Offset                                | 11' Offset | 12' Offset | On a<br>Taper                                              | On a<br>Tangent | Distance                          |                                                  |                               |
| 30                | L = WS<br>60 | 150'                                      | 165'       | 180'       | 30'                                                        | 60'             | 120'                              | 90'                                              | 200'                          |
| 35                |              | 205'                                      | 225'       | 245'       | 35'                                                        | 70'             | 160'                              | 120'                                             | 250'                          |
| 40                |              | 265'                                      | 295'       | 320'       | 40'                                                        | 80'             | 240'                              | 155'                                             | 305'                          |
| 45                |              | 450'                                      | 495'       | 540'       | 45'                                                        | 90'             | 320'                              | 195'                                             | 360'                          |
| 50                |              | 500'                                      | 550'       | 600'       | 50'                                                        | 100'            | 400'                              | 240'                                             | 425'                          |
| 55                | L = WS       | 550'                                      | 605'       | 660'       | 55'                                                        | 110'            | 500'                              | 295'                                             | 495'                          |
| 60                |              | 600'                                      | 660'       | 720'       | 60'                                                        | 120'            | 600'                              | 350'                                             | 570'                          |
| 65                |              | 650'                                      | 715'       | 780'       | 65'                                                        | 130'            | 700'                              | 410'                                             | 645'                          |
| 70                |              | 700'                                      | 770'       | 840'       | 70'                                                        | 140'            | 800'                              | 475'                                             | 730'                          |
| 75                |              | 750'                                      | 825'       | 900'       | 75'                                                        | 150'            | 900'                              | 540'                                             | 820'                          |

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

| TYPICAL USAGE |                |                       |                              |                      |
|---------------|----------------|-----------------------|------------------------------|----------------------|
| MOBILE        | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY |
|               | ✓              | ✓                     |                              |                      |

#### GENERAL NOTES

- Flags attached to signs where shown are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
  - The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
  - Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
  - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
  - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
- TCP (1-2a)
- R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
  - R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.
- TCP (1-2b)
- Flaggers should use two-way radios or other methods of communication to control traffic.
  - Length of work space should be based on the ability of flaggers to communicate.
  - If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
  - Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
  - Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation  
Traffic Operations Division

### TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP (1-2)-12

| © TxDOT December 1985 |      | DMT TxDOT | DMT TxDOT | DMT TxDOT | DMT TxDOT |
|-----------------------|------|-----------|-----------|-----------|-----------|
| REVISIONS             |      | CONT      | SECT      | JOB       | HIGHWAY   |
| 4-90                  | 2-12 |           |           |           |           |
| 2-94                  |      |           |           |           |           |
| 1-97                  |      |           |           |           |           |
| 4-98                  |      |           |           |           |           |
| 152                   |      |           |           |           |           |

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN ONE (1) YEAR FROM DATE OF APPROVAL.

APPROVED: DEVELOPMENT COORDINATOR

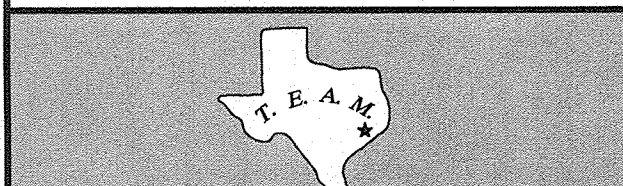
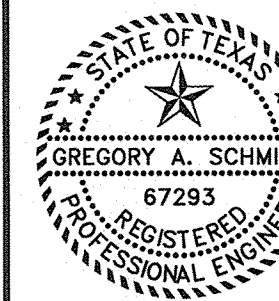
DATE: 9-14-18

C-2 TRAFFIC CONTROL PLAN  
Scale 1" = 20'  
JOB: 1365-1  
SEE SHT C-0 FOR TOPOGRAPHIC SURVEY  
SEE SHT C-1 FOR WATERLINE EXTENSION & SANITARY CONNECTION  
SEE SHT C-2 FOR TRAFFIC CONTROL PLAN

WATERLINE EXTENSION &  
SANITARY CONNECTION  
FOR JAVIER R. GUTIERREZ  
MOORE ROAD  
MISSOURI CITY, TEXAS 77477

#### LEGEND

|       |                      |
|-------|----------------------|
| 70.5  | EXISTING ELEV.       |
| 71.20 | TOP OF PAVEMENT      |
| 69.80 | TOP OF GRATE ELEV.   |
| 69.80 | TOP OF GRAVEL        |
| 69.80 | FLOW LINE ELEV.      |
| 69.80 | TOP OF WALK ELEV.    |
| 69.80 | FINISHED GRADE ELEV. |



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DRAWN BY: CS  
DATE: 04-09-18  
JOB NO: 1365-1  
REVISION DATE: N/A

C-2