

**CASTLE DRIVE LANDFILL
TCEQ PERMIT NO. MSW-1062A
DALLAS COUNTY, TEXAS**

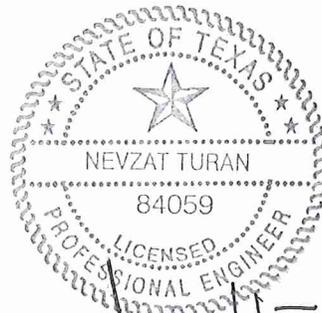
**PERMIT MODIFICATION
ATTACHMENT 14
LANDFILL GAS MANAGEMENT PLAN**

Prepared for



GARLAND
TEXAS MADE HERE

April 2016



[Handwritten signature]

04-06-2016

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0647-001-36-121



April 6, 2016
Project No. 0647-001-36-121

Elizabeth Lara, Engineering Specialist
MC 124
Municipal Solid Waste Permits Section
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Re: Permit Modification – Attachment 14
LFG Trench Vent Installation and GCCS Upgrades
City of Garland Castle Drive Landfill – Permit No. MSW-1062A
Dallas County, Texas
RN100221225/CN600328694

Dear Ms. Lara:

On behalf of the City of Garland's Castle Drive Landfill, the purpose of the permit modification is to modify the site's existing Attachment 14 – Landfill Gas Management Plan (LFGMP) to incorporate into the site's LFGMP the details of a passive trench vent installed in August 2015 and Landfill Gas Collection and Control (GCCS) repairs and upgrades completed in January 2016. Castle Drive Landfill is a closed Type I MSW Landfill which has been in post closure since 2011. The purpose of the passive trench vent installation was to mitigate landfill gas (LFG) migration in the vicinity of perimeter gas monitoring probe PP-7 as part of the site's initial LFG Remediation Plan (submitted on August 28, 2015, and accepted by TCEQ October 29, 2015). The purpose of the GCCS upgrades were to make repair to multiple GCCS components and increase available system vacuum to improve landfill gas collection capacity and reduce the potential for offsite landfill gas migration. This permit modification is being submitted with public notice in accordance with Title 30 of Texas Administrative Code (30 TAC)§305.70(k)(3).

The following summarizes the changes made to the existing Attachment 14 – Landfill Gas Management Plan in the attached permit modification:

- The Attachment 14 cover page has been revised to reflect the current revision date.
- Section 6 has been revised to describe the installed passive trench vent and GCCS upgrades at the site.
- Appendix H has been revised to update existing Attachment H2 – Site Plan, as well as to include the addition of Attachment H8 – Passive Trench Vent Details, Attachment H9 – Piping Details, and Attachment H10 – Condensate Sump Details.

As shown on Attachments H2, the trench vent was installed adjacent perimeter probe PP-7 to remediate LFG migration at the site. The trench vent was installed between the limits of waste and the perimeter road and completed as shown in the Attachment H8 - Passive Trench Vent Details drawing. The existing GCCS configuration and changes made during the 2015/2016 upgrades are detailed on Attachments H2, H9 and H10. These upgrades included the installation of condensate sump CS-8 and numerous piping and valves.

One original and one copy of the permit modification are provided for your use and distribution. A copy of this permit modification has been provided to the appropriate regional office. A copy of this submittal was also placed in the site operating record. The TCEQ Form 20650 has been included in Appendix C of this permit modification. In accordance with 30 TAC§330.59(h)(1), a \$150.00 application fee has been submitted to the TCEQ, as documented on page 8 of Form 20650. In accordance with Title 30 TAC §305.70(k)(3), this permit modification is being submitted with public notice. The adjacent landowner maps and list are provided in Appendix D.

During the course of your review, if you need additional information or have any questions, please call.

Sincerely,

Weaver Consultants Group, LLC



Nevzat Turan, P.E.

Senior Engineer - Principal

Attachments: Permit Modification

cc: TCEQ Region 4 Office
Lonnie R. Banks, City of Garland
Neel Dotson, City of Garland
ChiChi Folorunso, City of Garland

CONTENTS

PERMIT MODIFICATION NARRATIVE

APPENDIX A

Attachment 14 (Redline Strikeout Version)

APPENDIX B

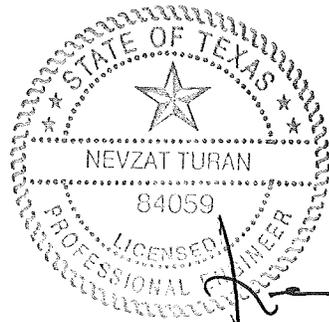
Attachment 14 (Clean Pages Version)

APPENDIX C

TCEQ - 20650 Form

APPENDIX D

Adjacent Landowner's Map and List



04-06-2016

PERMIT MODIFICATION NARRATIVE

Permit Modification Justification

The City understands the importance of maintaining effective environmental controls at the landfill. The primary purpose of this permit modification is to incorporate details of a passive trench vent installed near perimeter landfill gas monitoring probe PP-7 in August 2015 and gas collection and control system repairs and upgrades completed in January 2016 as part of the facility's landfill gas remediation plan. As such, please process this permit modification request with public notice per 30 TAC §305.70(k)(3).

SDP Replacement Pages

The redline strikeout version of the Attachment 14 - Landfill Gas Remediation Plan is included in Appendix A. A clean version of applicable replacement pages is included in Appendix B.

TCEQ Form 20650

The TCEQ Form 20650 is provided as Appendix C. In accordance with §330.59(h)(1), a payment of \$150 has been made online through the TCEQ ePay system as noted on page 1 of the TCEQ Form 20650. Additionally, this application will be posted on the internet at <https://www.garlandtx.gov/gov/eg/ews/facilities/default.asp> consistent with Title 30 TAC §330.57(i)(1).

Landowners Notification

In accordance with 30 TAC §305.70(k)(3), this permit modification is submitted with public notice. Accordingly, the surrounding landowner's map, along with a list of the property owners' names and addresses is included in Appendix D.

APPENDIX A
ATTACHMENT 14
(REDLINE STRIKEOUT VERSION)

**CITY OF GARLAND CASTLE DRIVE LANDFILL
DALLAS COUNTY, TEXAS
MSW PERMIT NO. 1062A**

PERMIT MODIFICATION

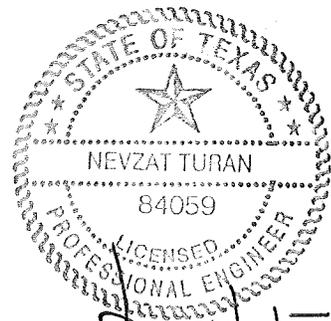
**ATTACHMENT 14
LANDFILL GAS MANAGEMENT PLAN**

Prepared for

City of Garland

April 1994
Revised April 1998
Revised May 2002
Revised January 2010
Revised October 2011

Revised April 2016

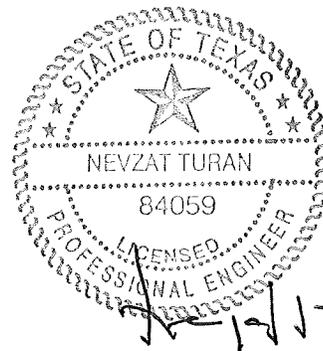


04-06-2016

Prepared by
Weaver Boos Consultants, LLC-Southwest
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

Project No: 0647-01-36-121

| | | |
|-------------------|---|--------------|
| 5.0 | CONTINGENCY PLAN | 14-19 |
| 5.1 | Contingency Plan Guidelines | 14-19 |
| 5.2 | On-Site Structures Monitoring | 14-21 |
| 5.2.1 | Immediate Action | 14-21 |
| 5.2.2 | Action Within 7-days | 14-21 |
| 5.2.3 | Action Within 60-days | 14-21 |
| | 5.2.3.1 Prepare a Remediation Plan | 14-21 |
| | 5.2.3.2 Implementation of the Plan | 14-22 |
| 5.3 | Property Boundary Monitoring | 14-22 |
| 5.3.1 | Immediate Action | 14-22 |
| 5.3.2 | Action Within 7-days | 14-22 |
| 5.3.3 | Action Within 60-days | 14-23 |
| | 5.3.3.1 Prepare a Remediation Plan | 14-23 |
| | 5.3.3.2 Implementation of the Plan | 14-23 |
| 5.4 | Underground Utility Trench Vent Monitoring | 14-23 |
| 5.4.1 | Immediate Action | 14-23 |
| 5.4.2 | Action Within 7-days | 14-24 |
| 5.4.3 | Action Within 60-days | 14-24 |
| | 5.4.3.1 Prepare a Remediation Plan | 14-24 |
| | 5.4.3.2 Implementation of the Plan | 14-24 |
| 5.5 | Remediation Plan Status/Monitoring | 14-24 |
| | | |
| 6.0 | LFG CONTROL SYSTEM INSTALLATION AND MONITORING | 14-25 |
| 6.1 | Passive Gas Control System | 14-25 |
| 6.1.1 | Monitoring | 14-26 |
| 6.2 | Active Gas Control System | 14-26 |
| 6.2.1 | Gas Collection System | 14-26 |
| 6.2.2 | Gas Utilization/Control System | 14-27 |
| | | |
| 7.0 | SAFETY | 14-28 |
| | | |
| APPENDIX A | | |
| | January 1994 Subsurface Methane Gas Survey Results | |
| | | |
| APPENDIX B | | |
| | Perimeter Gas Probe Monitoring Field Data Form | |
| | | |
| APPENDIX C | | |
| | Perimeter Gas Probe Details | |
| | | |
| APPENDIX D | | |
| | Example Boring Log | |
| | | |
| APPENDIX E | | |
| | Example Perimeter Gas Probe Construction | |
| | | |
| APPENDIX F | | |
| | Sierra Monitor Instruction Manual | |



04-06-2016

APPENDIX G

Portable Gas Indicator Instruction Manual

APPENDIX H

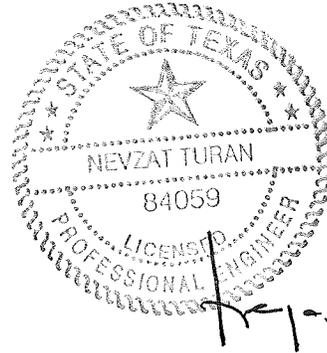
Gas Control System Details and Locations [Added Attachments H4 through H7 H8]

APPENDIX I

Perimeter Probe Design Depths

APPENDIX J

First Quarter Monitor Probe Report



04-06-2016

[Handwritten signature]

6.0 LFG CONTROL SYSTEM INSTALLATION AND MONITORING

The objective of the active gas control system installation is to prevent the migration of landfill gas.

The results of Landfill Gas Monitoring, described in Section 4.0, will be presented to TCEQ for review. If a LFG control system is required at the landfill to control/prevent off-site gas migration, the City of Garland will pursue one of two alternatives.

- Passive Gas Control System
- Active Gas Control System

An active gas system is currently in place for the landfill due to potential beneficial use of the landfill gas. However, the City may adopt a passive gas control system in the future if changes in the economics of an active system, applicable regulations, and/or site conditions occur.

6.1 Passive Gas Control System

Passive vents can release some of the pressure of landfill gas within the waste and soil, thus reducing the amount of localized gas migration. The passive system is relatively economical to design, install and operate. Typical passive gas control system consist of gas “vents”. The vents are simple in design and require low maintenance. The design of a typical passive gas control vent is shown in **Appendix H**.

The proposed passive gas control system at the City of Garland Castle Drive Landfill will consist of gas vents installed in the refuse or in the existing ground outside the limits of waste. The passive vents will initially free vent into the atmosphere, thereby reducing subsurface pressure and control local lateral migration. The design and the spacing of the vent wells will be such that in the future, if necessary, the system could be converted into an “Active Gas Control system”.

The locations of the passive vents will be determined using any one of the following three methods:

A. Surface monitoring and observations:

Observations of the surface conditions at the site can aid in determining the best location(s) for passive vents. Venting cracks, stressed vegetation, and odors are all indicative of gas migration through the soil cover. In addition, monitoring of the surface may be conducted to locate less visible emission sources.

Three passive gas vents have been installed south of landfill gas permanent probe PP-9 in August 2009 to reduce the potential for off-site landfill gas migration. Attachment H2 and H3 depict the location of the three passive vents.

[2011 Installation] The 2011 installation, as shown in Attachment H4, includes the installation of seventeen passive vents in the vicinity of PP-6 and conversion of the three existing vents near PP-9 to active soil vapor extraction wells.

2015 Installation: The 2015 installation, as shown in Attachments H2 and H8, includes the installation of a passive trench vent between probe PP-7 and the limits of waste.

B. Subsurface pressure:

If feasible, subsurface soil pressure measurements taken within the permit limits to determine areas of “high” pressure. Gas vents can then be installed to release the pressure.

C. Location:

Passive vents will be installed in close proximity to the area of concern. One or more vents can be installed next to the permanent probe, bar-hole probe, or facility structure that contained methane above the designated limits. Additional probes will be installed until the area of concern is mitigated.

The actual vent/well design and the location may be based on a combination of the above methods.

6.1.1 Monitoring

The passive gas system performance monitoring will be performed on a quarterly basis and would be increased to a monthly basis, if necessary. Monitoring method will be as per the details given in Section 4.0 above.

6.2 Active Gas Control System

The active gas control system is more complex to design, operate, and maintain than a typical passive system. The active gas control system consists of a collection system and a utilization/control system. The design of the system components depends on the site specific conditions.

The main components of the proposed active gas collection system at the City of Garland Castle Drive Landfill are:

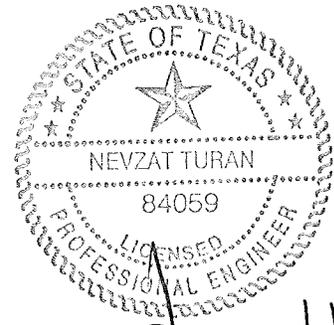
- **Gas Collection System**
- **Gas Utilization/Control System**

6.2.1 Gas Collection System

The main components of the gas collection system will be the vertical gas wells, multiple gas collection headers with appropriate fittings and supports and the moisture/condensate removal and collection system. The locations of the vertical wells shall be determined in a manner similar to the passive gas control vent system.

The facility’s landfill gas collection system is shown on the site plan in Attachment H2. Repairs and upgrades were made to the landfill gas collection system in December 2015 and January 2016. These repairs/upgrades included are illustrated on Attachments H2, H9, H10, and include the installation of condensate sump CS-8 and numerous landfill gas collection piping and valves. The purpose of these upgrades is to make repair to damaged system components and increase available system vacuum to improve landfill gas collection capacity and reduce the potential for offsite landfill gas migration.

APPENDIX H
PASSIVE GAS CONTROL SYSTEM VENT DETAILS
AND LOCATIONS

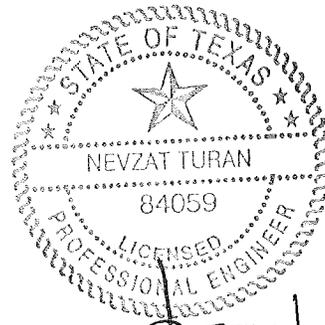


[Handwritten signature]

04-06-2016

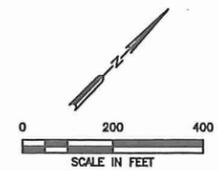
ATTACHMENT H2

SITE PLAN



[Handwritten signature]

04-06-2016



LEGEND

| | |
|-------------|---|
| --- | PERMIT BOUNDARY |
| ... | LIMITS OF WASTE |
| 500 | EXISTING CONTOUR |
| N 7030000 | STATE PLANE GRID COORDINATE |
| --- | EXISTING FENCE |
| ○ PP-5 | LANDFILL GAS MONITORING PERMANENT PROBE |
| ⊕ MW-10 | EXISTING GROUNDWATER MONITORING WELL |
| ● EW-75 | EXISTING LFG EXTRACTION WELL |
| ⊕ EW-36 | EXISTING LIQUID/LFG EXTRACTION WELL |
| ⊕ PV-1 | EXISTING PASSIVE VENT |
| --- | EXISTING LFG COLLECTION PIPING |
| ◆ CS-01 | EXISTING CONDENSATE SUMP |
| ⋈ | EXISTING LFG ISOLATION VALVE |
| --- | EXISTING AIR SUPPLY PIPING |
| --- | EXISTING CONDENSATE FORCEMAIN |
| --- | EXISTING WATER LINE |
| --- | EXISTING LFG TRENCH |
| --- | EXISTING SANITARY SEWER LINE |
| --- | EXISTING LEACHATE COLLECTION TRENCH |
| --- | 2015/2016 INSTALLED LFG COLLECTION PIPING |
| ◆ | 2015/2016 INSTALLED CONDENSATE SUMP |
| ⋈ | 2015/2016 INSTALLED LFG ISOLATION VALVE |
| --- | 2015/2016 INSTALLED AIR SUPPLY PIPING |
| --- | 2015/2016 INSTALLED CONDENSATE FORCEMAIN |
| --- | 2015/2016 ABANDONED LFG COLLECTION PIPING |
| --- | 2015/2016 REPAIRED LFG COLLECTION PIPING |
| TPV-1 TPV-2 | INSTALLED TRENCH VENT (SEE NOTES 2 AND 3) |

- NOTES:**
- EXISTING CONTOURS COMPILED FROM AERIAL PHOTOGRAPHY, FLOWN 04-14-2013 AND 8-01-2007 BY DALLAS AERIAL SURVEYS, INC. DALLAS, TEXAS. COORDINATE SYSTEM BASED ON STATE PLANE NAD 83, TEXAS NORTH CENTRAL.
 - TRENCH VENT INSTALLED AUGUST 22, 2015.
 - REFER TO ATTACHMENT H8 FOR TRENCH VENT DETAILS.
 - 2015/2016 INSTALLED GCCS COMPONENTS COMPLETED IN JANUARY 2016.
 - REFER TO ATTACHMENTS H9 AND H10 FOR LFG PIPING AND CONDENSATE SUMP DETAILS.

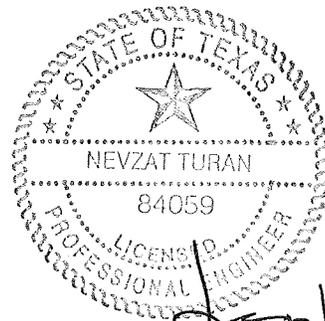
STATE OF TEXAS
 NEVZAT TURAN
 84059
 LICENSED PROFESSIONAL ENGINEER
 04-06-2016
 [Signature]

| | | | | |
|--|--|--|---|--|
| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 SITE PLAN | |
| | DATE: 04/2016 FILE: 0647-01-11 CAD: ATT H2-SITE PLAN.DWG | | DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | |
| REVISIONS | | CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS | | |
| NO. DATE DESCRIPTION | | WWW.WCGRP.COM ATTACHMENT H2 | | |
| 1 03/2016 UPDATED TO INCLUDE 2015/2016 GCCS UPGRADES AND TRENCH VENT INSTALLATION. | | WEAVER CONSULTANTS GROUP TBPE REGISTRATION NO. F-3727 | | |

O:\0647\01\2016 LFG MOD\ATT H2-PV LAYOUT.dwg, r.morris, 1:2

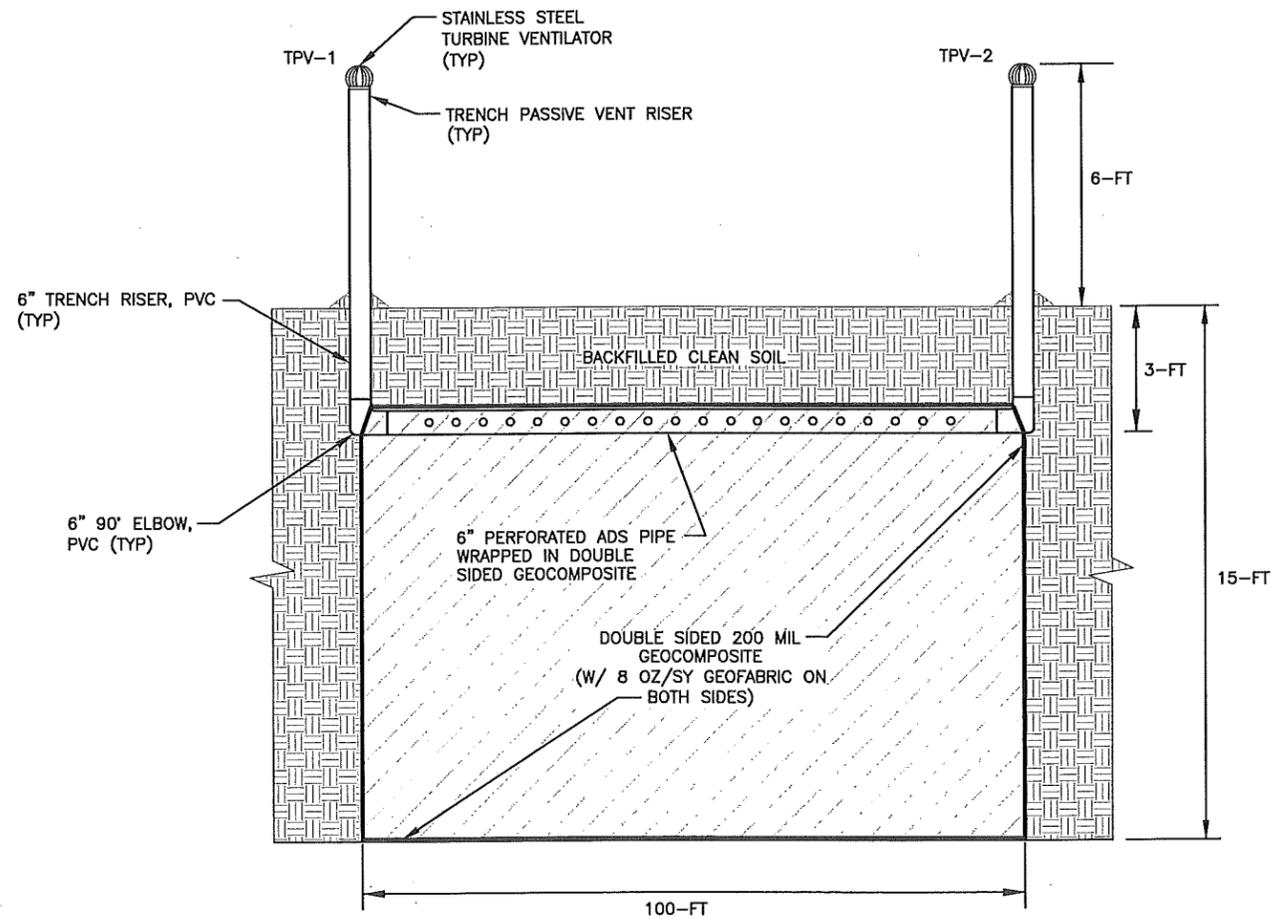
ATTACHMENT H8

PASSIVE TRENCH VENT DETAILS

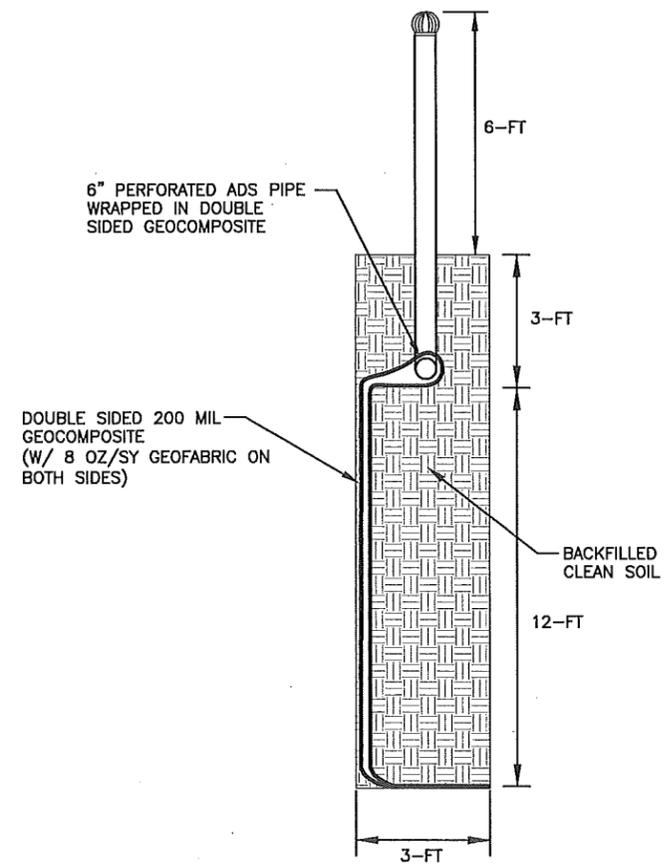


[Handwritten signature]

04-06-2016



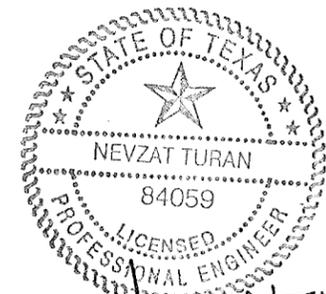
NOT TO SCALE



NOT TO SCALE

NOTES:

1. THESE DETAILS ONLY APPLICABLE TO PASSIVE TRENCH VENT INSTALLATION ADJACENT TO PROBE PP-7 AS SHOWN ON ATTACHMENT H2.
2. NO MSW WAS ENCOUNTERED DURING THE INSTALLATION OF THIS TRENCH.

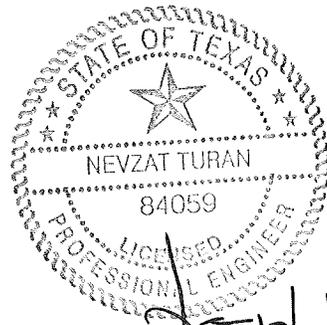


Handwritten signature and date:
04-06-2016

| | | | | |
|--|--|---|--|--|
| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 PASSIVE TRENCH VENT DETAILS | |
| | DATE: 04/2016 FILE: 0647-01-11 CAD: ATT H8-TRENCH VENT DETAILS.DWG | | DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | |
| REVISIONS | | CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS | | |
| NO. DATE DESCRIPTION | | WWW.WCGRP.COM ATTACHMENT H8 | | |
| 1 03/2016 FIGURE ADDED TO ILLUSTRATE 2015 TRENCH VENT DETAILS. | | Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | |

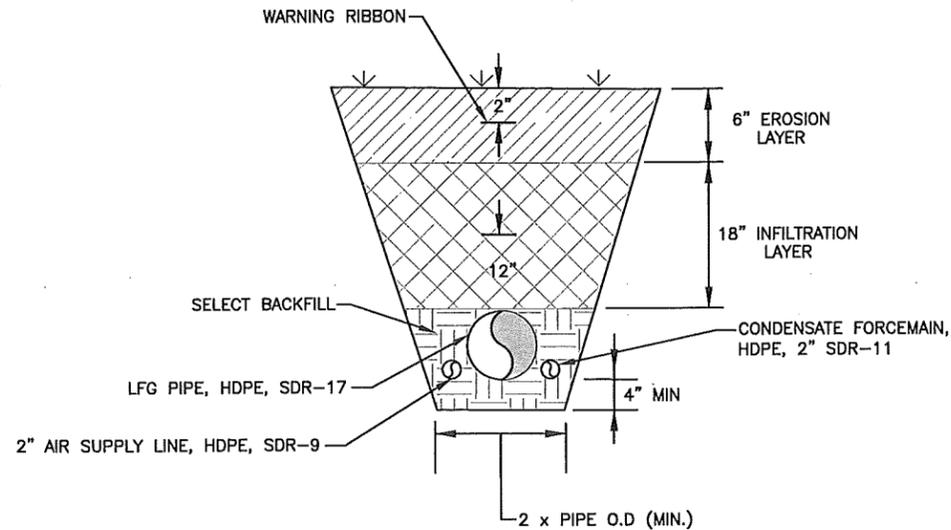
ATTACHMENT H9

PIPING DETAILS

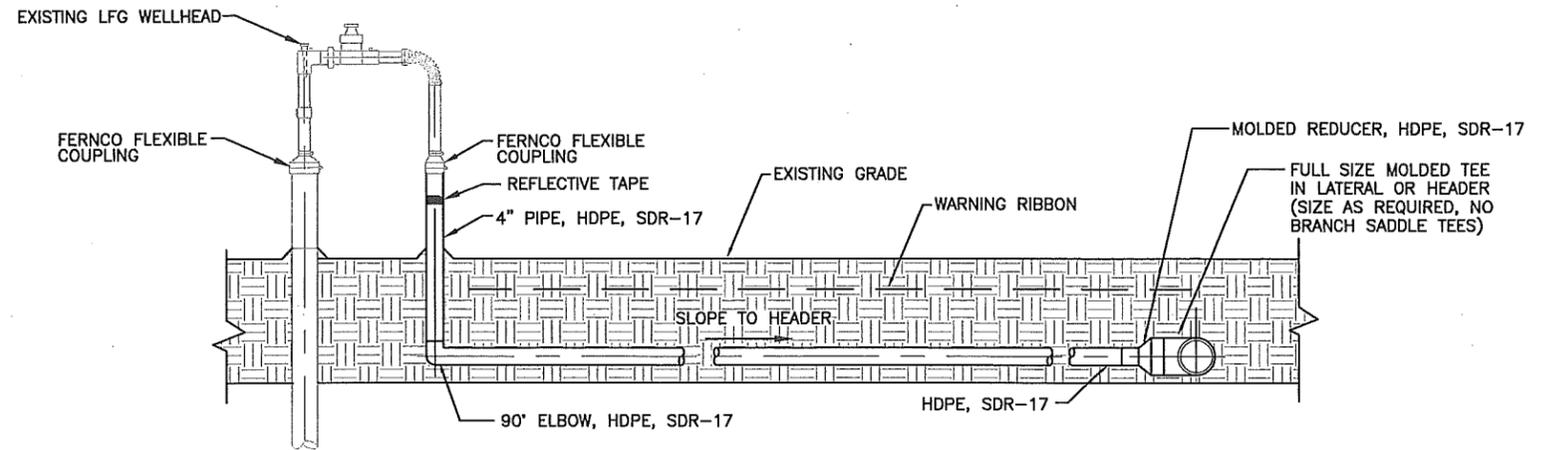


[Handwritten Signature]

04-06-2016

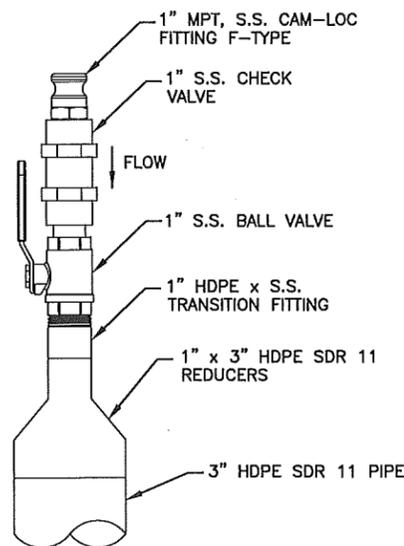


TYPICAL PIPE TRENCH DETAIL

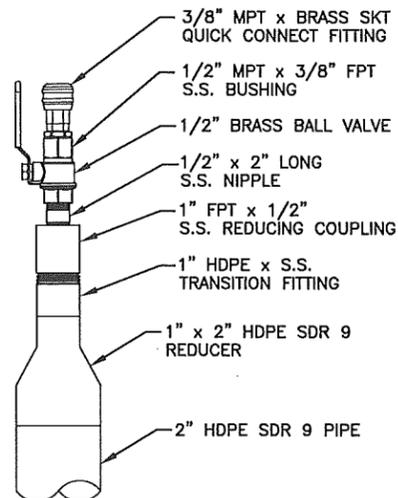


TYPICAL LFG WELLHEAD TO LATERAL DETAIL

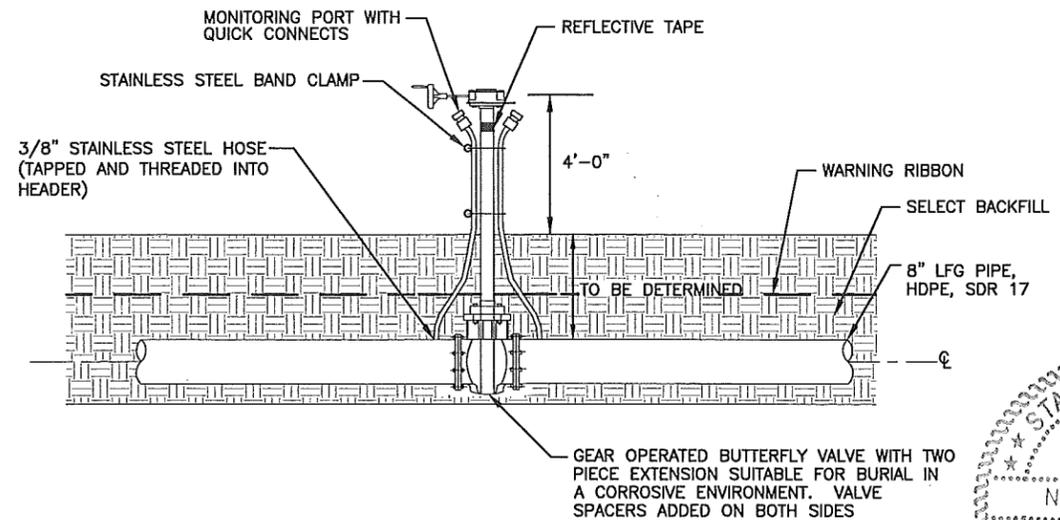
NOTE:
 1. THESE ILLUSTRATED PIPING DETAILS ARE ONLY APPLICABLE TO 2015/2016 GAS COLLECTION AND CONTROL SYSTEM UPGRADES AND REPAIRS.



TYPICAL DISCHARGE VAULT KIT DETAIL



TYPICAL AIR VAULT KIT DETAIL



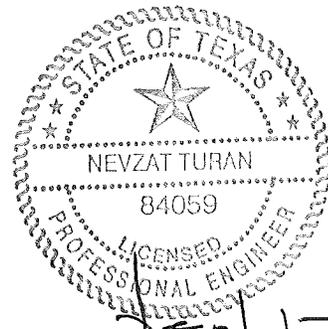
TYPICAL LFG ISOLATION VALVE DETAIL



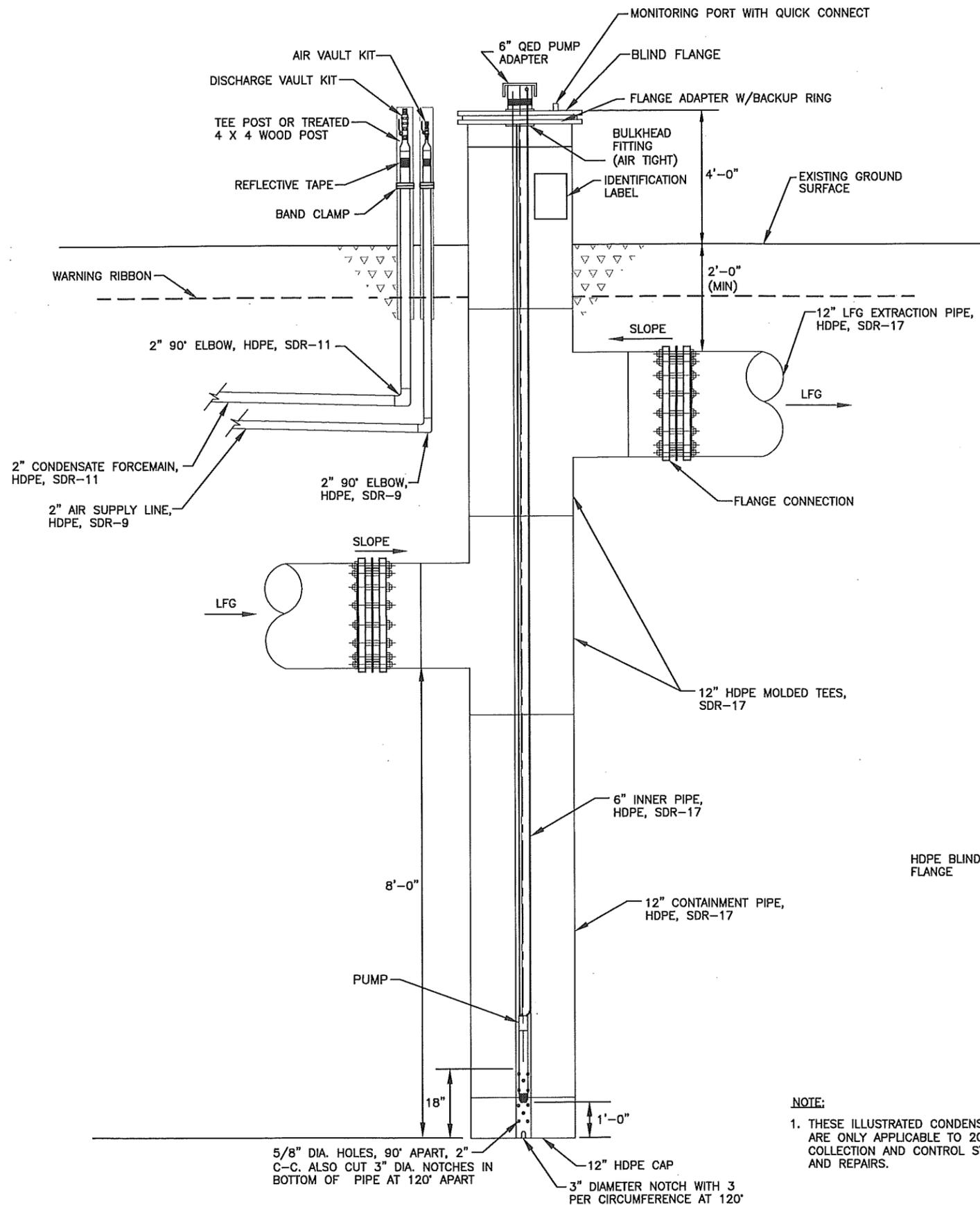
04-06-2016

| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 PIPING DETAILS | | | | | | | |
|--|---------|---|--|--|--|-----|------|-------------|---|---------|--|
| DATE: 04/2016 FILE: 0647-01-36 CAD: ATT H9-PIPING DETAILS.DWG | | DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | | REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/2016</td> <td>FIGURE ADDED TO ILLUSTRATE PIPING DETAILS.</td> </tr> </tbody> </table> | | NO. | DATE | DESCRIPTION | 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE PIPING DETAILS. |
| NO. | DATE | DESCRIPTION | | | | | | | | | |
| 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE PIPING DETAILS. | | | | | | | | | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | WWW.WCGRP.COM | | CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS ATTACHMENT H9 | | | | | | | |

ATTACHMENT H10
CONDENSATE SUMP DETAILS

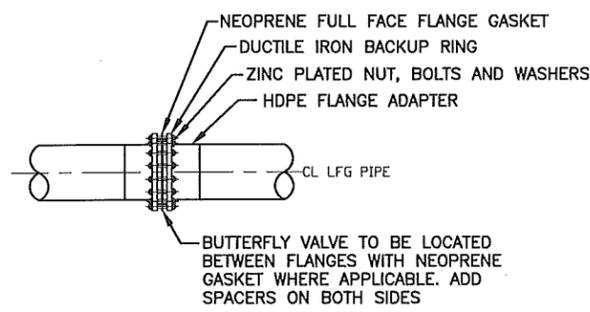


Nevzat Turan
04-06-2016

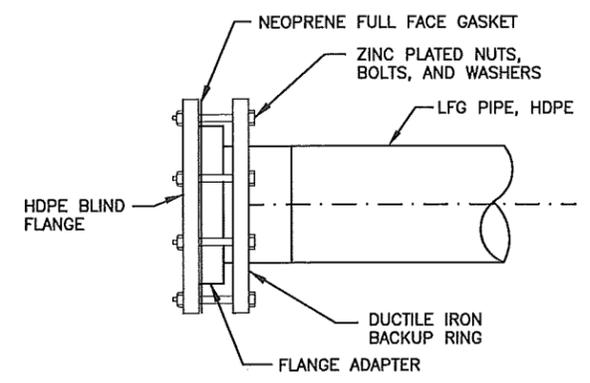


TYPICAL CONDENSATE SUMP

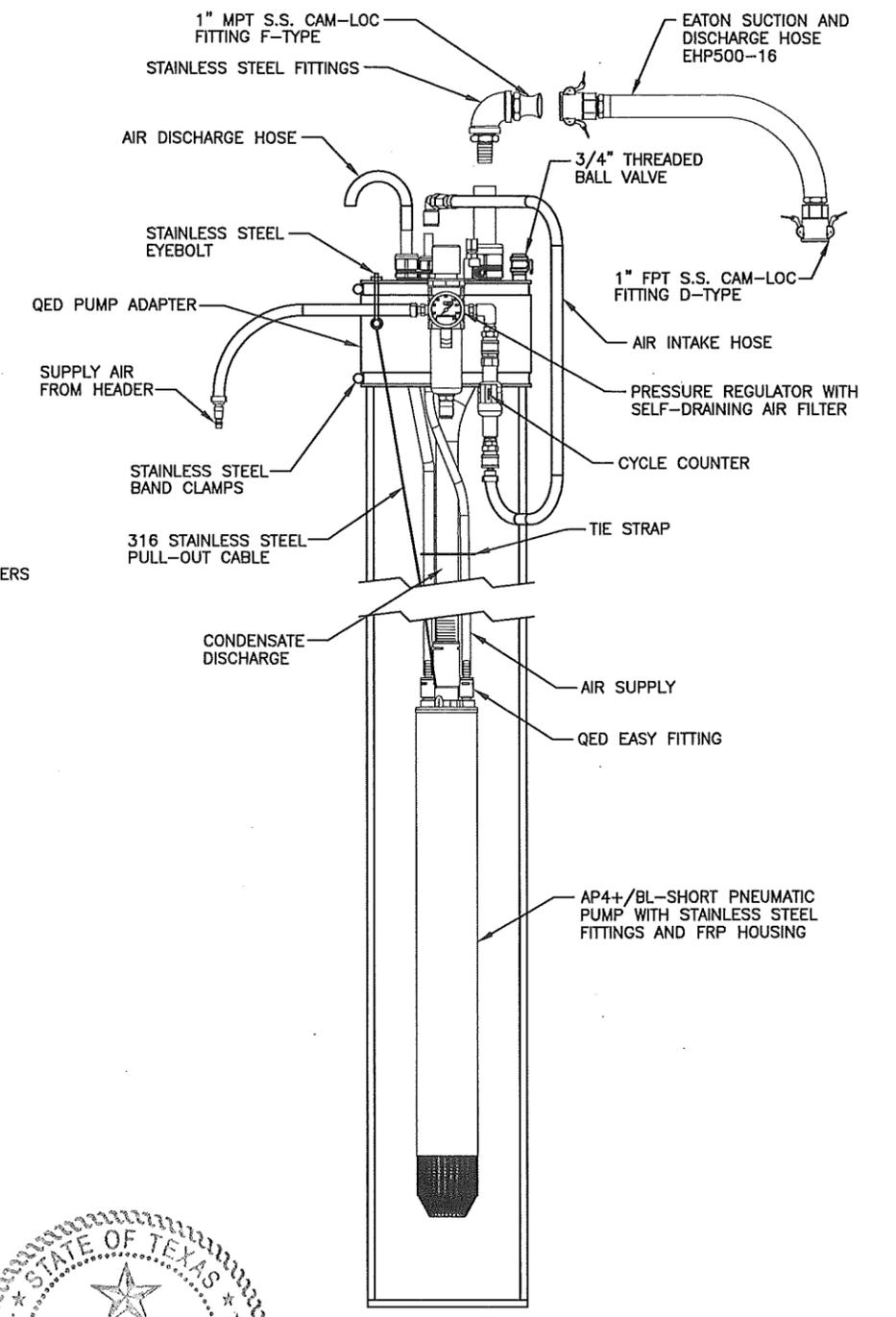
NOTE:
 1. THESE ILLUSTRATED CONDENSATE SUMP DETAILS ARE ONLY APPLICABLE TO 2015/2016 GAS COLLECTION AND CONTROL SYSTEM UPGRADES AND REPAIRS.



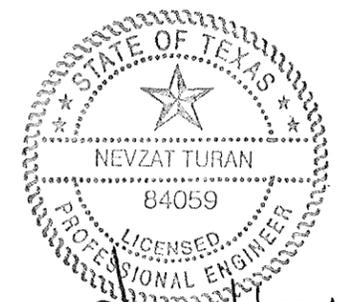
TYPICAL FLANGE CONNECTION



TYPICAL BLIND FLANGE



PUMP DETAIL



04-06-2016

| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 CONDENSATE SUMP DETAILS CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS | | | | | | |
|--|--|--|---|------|-------------|---|---------|--|--|
| | DATE: 04/2016 FILE: 0647-01-36 CAD: ATT H10-SUMP DETAILS.DWG | | | | | | | | |
| DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/2016</td> <td>FIGURE ADDED TO ILLUSTRATE SUMP DETAILS.</td> </tr> </tbody> </table> | | NO. | DATE | DESCRIPTION | 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE SUMP DETAILS. | www.wcgrp.com ATTACHMENT H10 |
| NO. | DATE | DESCRIPTION | | | | | | | |
| 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE SUMP DETAILS. | | | | | | | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | | | | | | | | |

O:\0647\01\2016 LFG MOD\ATT H10-PIPING DETAILS.dwg, r.morris, 1:2

APPENDIX B
ATTACHMENT 14
(CLEAN PAGES VERSION)

**CITY OF GARLAND CASTLE DRIVE LANDFILL
DALLAS COUNTY, TEXAS
MSW PERMIT NO. 1062A**

PERMIT MODIFICATION

**ATTACHMENT 14
LANDFILL GAS MANAGEMENT PLAN**

Prepared for

City of Garland

April 1994

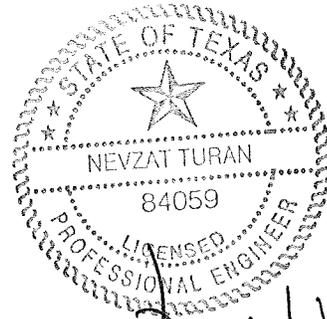
Revised April 1998

Revised May 2002

Revised January 2010

Revised October 2011

Revised April 2016



Nevzat Turan
04-06-2016

Prepared by

Weaver Boos Consultants, LLC-Southwest

TBPE Registration No. F-3727

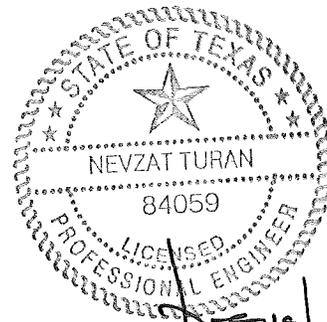
6420 Southwest Boulevard, Suite 206

Fort Worth, Texas 76109

817-735-9770

Project No. 0647-01-36-121

| | | |
|-------------------|---|--------------|
| 5.0 | CONTINGENCY PLAN | 14-19 |
| 5.1 | Contingency Plan Guidelines | 14-19 |
| 5.2 | On-Site Structures Monitoring | 14-21 |
| 5.2.1 | Immediate Action | 14-21 |
| 5.2.2 | Action Within 7-days | 14-21 |
| 5.2.3 | Action Within 60-days | 14-21 |
| | 5.2.3.1 Prepare a Remediation Plan | 14-21 |
| | 5.2.3.2 Implementation of the Plan | 14-22 |
| 5.3 | Property Boundary Monitoring | 14-22 |
| 5.3.1 | Immediate Action | 14-22 |
| 5.3.2 | Action Within 7-days | 14-22 |
| 5.3.3 | Action Within 60-days | 14-23 |
| | 5.3.3.1 Prepare a Remediation Plan | 14-23 |
| | 5.3.3.2 Implementation of the Plan | 14-23 |
| 5.4 | Underground Utility Trench Vent Monitoring | 14-23 |
| 5.4.1 | Immediate Action | 14-23 |
| 5.4.2 | Action Within 7-days | 14-24 |
| 5.4.3 | Action Within 60-days | 14-24 |
| | 5.4.3.1 Prepare a Remediation Plan | 14-24 |
| | 5.4.3.2 Implementation of the Plan | 14-24 |
| 5.5 | Remediation Plan Status/Monitoring | 14-24 |
| | | |
| 6.0 | LFG CONTROL SYSTEM INSTALLATION AND MONITORING | 14-25 |
| 6.1 | Passive Gas Control System | 14-25 |
| 6.1.1 | Monitoring | 14-26 |
| 6.2 | Active Gas Control System | 14-26 |
| 6.2.1 | Gas Collection System | 14-26 |
| 6.2.2 | Gas Utilization/Control System | 14-27 |
| | | |
| 7.0 | SAFETY | 14-28 |
| | | |
| APPENDIX A | | |
| | January 1994 Subsurface Methane Gas Survey Results | |
| | | |
| APPENDIX B | | |
| | Perimeter Gas Probe Monitoring Field Data Form | |
| | | |
| APPENDIX C | | |
| | Perimeter Gas Probe Details | |
| | | |
| APPENDIX D | | |
| | Example Boring Log | |
| | | |
| APPENDIX E | | |
| | Example Perimeter Gas Probe Construction | |
| | | |
| APPENDIX F | | |
| | Sierra Monitor Instruction Manual | |



04-06-2016

APPENDIX G

Portable Gas Indicator Instruction Manual

APPENDIX H

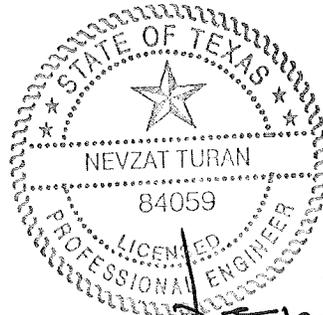
Gas Control System Details and Locations [Added Attachment H8)

APPENDIX I

Perimeter Probe Design Depths

APPENDIX J

First Quarter Monitor Probe Report



[Handwritten signature]
04-06-2016

6.0 LFG CONTROL SYSTEM INSTALLATION AND MONITORING

The objective of the active gas control system installation is to prevent the migration of landfill gas.

The results of Landfill Gas Monitoring, described in Section 4.0, will be presented to TCEQ for review. If a LFG control system is required at the landfill to control/prevent off-site gas migration, the City of Garland will pursue one of two alternatives.

- Passive Gas Control System
- Active Gas Control System

An active gas system is currently in place for the landfill due to potential beneficial use of the landfill gas. However, the City may adopt a passive gas control system in the future if changes in the economics of an active system, applicable regulations, and/or site conditions occur.

6.1 Passive Gas Control System

Passive vents can release some of the pressure of landfill gas within the waste and soil, thus reducing the amount of localized gas migration. The passive system is relatively economical to design, install and operate. Typical passive gas control system consist of gas “vents”. The vents are simple in design and require low maintenance. The design of a typical passive gas control vent is shown in **Appendix H**.

The proposed passive gas control system at the City of Garland Castle Drive Landfill will consist of gas vents installed in the refuse or in the existing ground outside the limits of waste. The passive vents will initially free vent into the atmosphere, thereby reducing subsurface pressure and control local lateral migration. The design and the spacing of the vent wells will be such that in the future, if necessary, the system could be converted into an “Active Gas Control system”.

The locations of the passive vents will be determined using any one of the following three methods:

A. Surface monitoring and observations:

Observations of the surface conditions at the site can aid in determining the best location(s) for passive vents. Venting cracks, stressed vegetation, and odors are all indicative of gas migration through the soil cover. In addition, monitoring of the surface may be conducted to locate less visible emission sources.

Three passive gas vents have been installed south of landfill gas permanent probe PP-9 in August 2009 to reduce the potential for off-site landfill gas migration. Attachment H2 and H3 depict the location of the three passive vents.

[2011 Installation] The 2011 installation, as shown in Attachment H4, includes the installation of seventeen passive vents in the vicinity of PP-6 and conversion of the three existing vents near PP-9 to active soil vapor extraction wells.

2015 Installation: The 2015 installation, as shown in Attachments H2 and H8, includes the installation of a passive trench vent between probe PP-7 and the limits of waste.

B. Subsurface pressure:

If feasible, subsurface soil pressure measurements taken within the permit limits to determine areas of “high” pressure. Gas vents can then be installed to release the pressure.

C. Location:

Passive vents will be installed in close proximity to the area of concern. One or more vents can be installed next to the permanent probe, bar-hole probe, or facility structure that contained methane above the designated limits. Additional probes will be installed until the area of concern is mitigated.

The actual vent/well design and the location may be based on a combination of the above methods.

6.1.1 Monitoring

The passive gas system performance monitoring will be performed on a quarterly basis and would be increased to a monthly basis, if necessary. Monitoring method will be as per the details given in Section 4.0 above.

6.2 Active Gas Control System

The active gas control system is more complex to design, operate, and maintain than a typical passive system. The active gas control system consists of a collection system and a utilization/control system. The design of the system components depends on the site specific conditions.

The main components of the proposed active gas collection system at the City of Garland Castle Drive Landfill are:

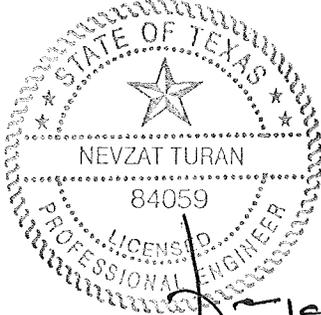
- **Gas Collection System**
- **Gas Utilization/Control System**

6.2.1 Gas Collection System

The main components of the gas collection system will be the vertical gas wells, multiple gas collection headers with appropriate fittings and supports and the moisture/condensate removal and collection system. The locations of the vertical wells shall be determined in a manner similar to the passive gas control vent system.

The facility’s landfill gas collection system is shown on the site plan in Attachment H2. Repairs and upgrades were made to the landfill gas collection system in December 2015 and January 2016. These repairs/upgrades included are illustrated on Attachments H2, H9, H10, and include the installation of condensate sump CS-8 and numerous landfill gas collection piping and valves. The purpose of these upgrades is to make repair to damaged system components and increase available system vacuum to improve landfill gas collection capacity and reduce the potential for offsite landfill gas migration.

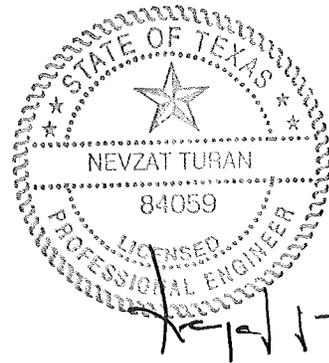
APPENDIX H
GAS CONTROL SYSTEM DETAILS
AND LOCATIONS



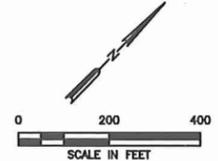
[Handwritten signature]

04-06-2016

ATTACHMENT H2
SITE PLAN



04-06-2016



LEGEND

- PERMIT BOUNDARY
- LIMITS OF WASTE
- 500 --- EXISTING CONTOUR
- N 7030000 --- STATE PLANE GRID COORDINATE
- EXISTING FENCE
- PP-5 LANDFILL GAS MONITORING PERMANENT PROBE
- ⊕ MW-10 EXISTING GROUNDWATER MONITORING WELL
- EW-75 EXISTING LFG EXTRACTION WELL
- ⊕ EW-36 EXISTING LIQUID/LFG EXTRACTION WELL
- ⊕ PV-1 EXISTING PASSIVE VENT
- EXISTING LFG COLLECTION PIPING
- ◆ CS-01 EXISTING CONDENSATE SUMP
- ⊕ EXISTING LFG ISOLATION VALVE
- EXISTING AIR SUPPLY PIPING
- EXISTING CONDENSATE FORCEMAIN
- EXISTING WATER LINE
- EXISTING LFG TRENCH
- EXISTING SANITARY SEWER LINE
- EXISTING LEACHATE COLLECTION TRENCH
- 2015/2016 INSTALLED LFG COLLECTION PIPING
- ◆ 2015/2016 INSTALLED CONDENSATE SUMP
- ⊕ 2015/2016 INSTALLED LFG ISOLATION VALVE
- 2015/2016 INSTALLED AIR SUPPLY PIPING
- 2015/2016 INSTALLED CONDENSATE FORCEMAIN
- 2015/2016 ABANDONED LFG COLLECTION PIPING
- 2015/2016 REPAIRED LFG COLLECTION PIPING
- TPV-1 TPV-2 INSTALLED TRENCH VENT (SEE NOTES 2 AND 3)

NOTES:

1. EXISTING CONTOURS COMPILED FROM AERIAL PHOTOGRAPHY, FLOWN 04-14-2013 AND 8-01-2007 BY DALLAS AERIAL SURVEYS, INC. DALLAS, TEXAS. COORDINATE SYSTEM BASED ON STATE PLANE NAD 83, TEXAS NORTH CENTRAL.
2. TRENCH VENT INSTALLED AUGUST 22, 2015.
3. REFER TO ATTACHMENT H8 FOR TRENCH VENT DETAILS.
4. 2015/2016 INSTALLED GCCS COMPONENTS COMPLETED IN JANUARY 2016.
5. REFER TO ATTACHMENTS H9 AND H10 FOR LFG PIPING AND CONDENSATE SUMP DETAILS.

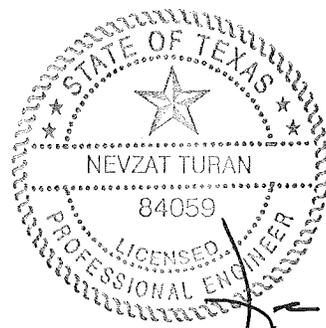


04-06-2016
[Handwritten signature]

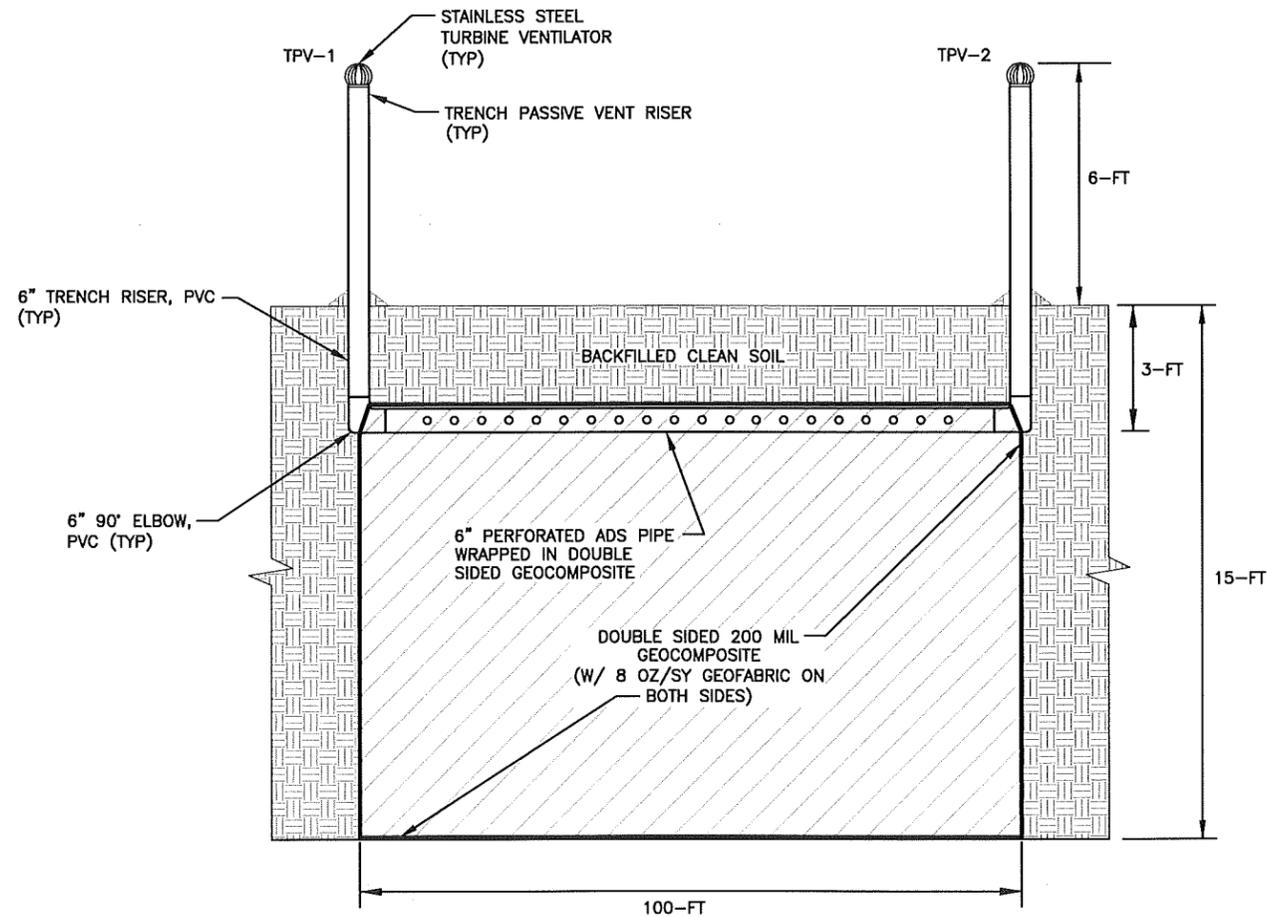
| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | PREPARED FOR CITY OF GARLAND | ATTACHMENT 14 SITE PLAN | | | | | | | | | |
|--|---|---|-----------|--|--|-----|------|-------------|---|---------|--|
| DATE: 04/2016 FILE: 0647-01-11 CAD: ATT H2-SITE PLAN.DWG | DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">03/2016</td> <td>UPDATED TO INCLUDE 2015/2016 GCCS UPGRADES AND TRENCH VENT INSTALLATION.</td> </tr> </tbody> </table> | REVISIONS | | | NO. | DATE | DESCRIPTION | 1 | 03/2016 | UPDATED TO INCLUDE 2015/2016 GCCS UPGRADES AND TRENCH VENT INSTALLATION. |
| REVISIONS | | | | | | | | | | | |
| NO. | DATE | DESCRIPTION | | | | | | | | | |
| 1 | 03/2016 | UPDATED TO INCLUDE 2015/2016 GCCS UPGRADES AND TRENCH VENT INSTALLATION. | | | | | | | | | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | WWW.WCGRP.COM | ATTACHMENT H2 | | | | | | | | | |

O:\0647\01\2016 LFG MOD\ATT H2-PV LAYOUT.dwg, r.morris, 1:2

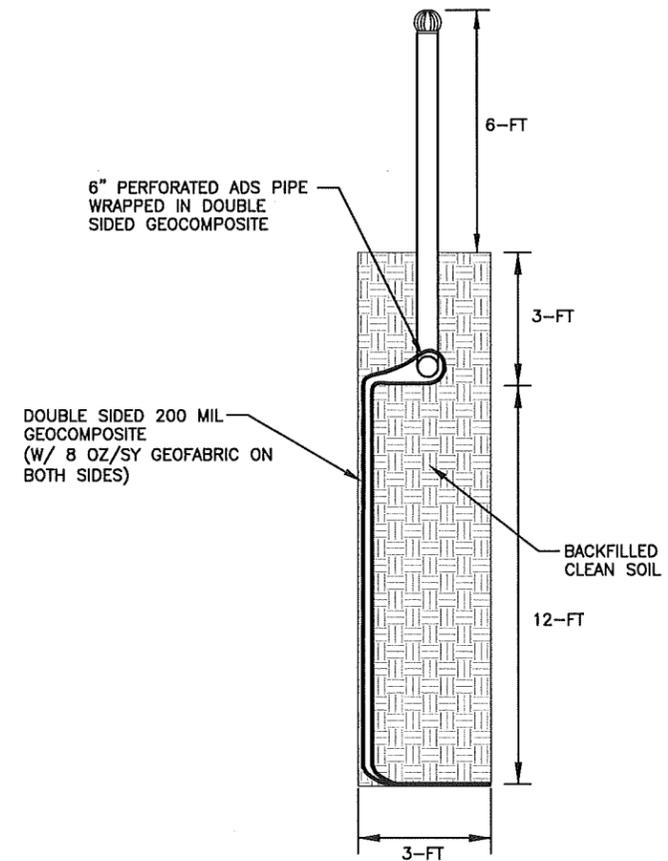
ATTACHMENT H8
PASSIVE TRENCH VENT DETAILS



[Handwritten Signature]
04-06-2016



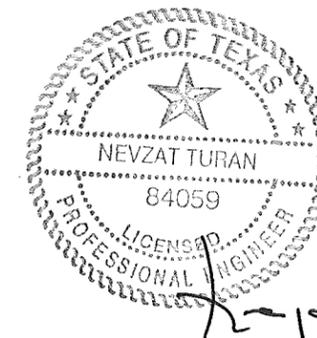
NOT TO SCALE



NOT TO SCALE

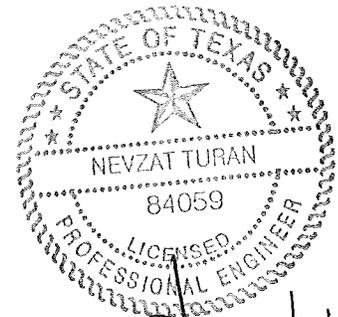
NOTES:

1. THESE DETAILS ONLY APPLICABLE TO PASSIVE TRENCH VENT INSTALLATION ADJACENT TO PROBE PP-7 AS SHOWN ON ATTACHMENT H2.
2. NO MSW WAS ENCOUNTERED DURING THE INSTALLATION OF THIS TRENCH.

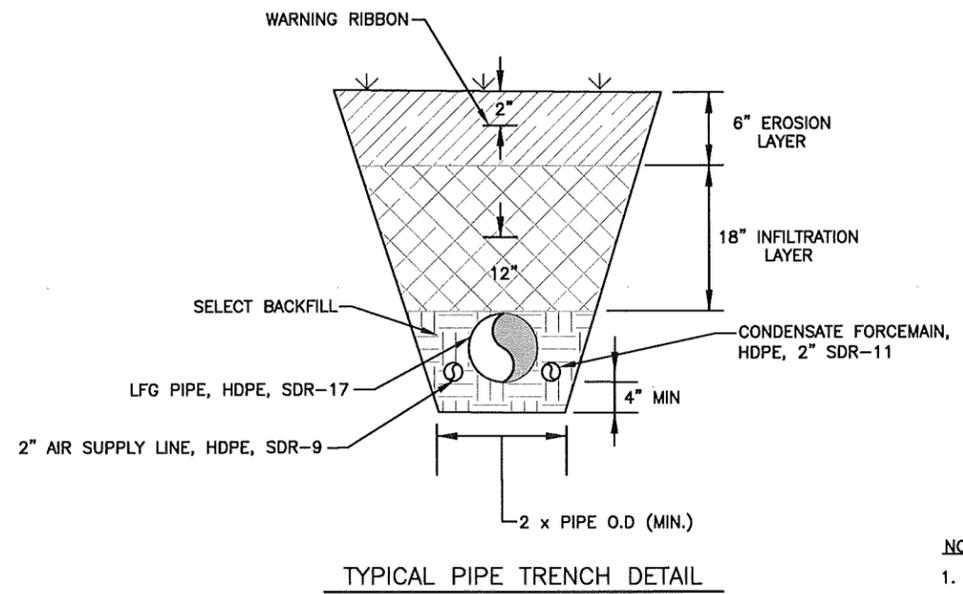


| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 PASSIVE TRENCH VENT DETAILS | | | | | | | |
|--|---------|--|--|--|--|-----|------|-------------|---|---------|--|
| DATE: 04/2016 FILE: 0647-01-11 CAD: ATT H8-TRENCH VENT DETAILS.DWG | | DRAWN BY: RDW DESIGN BY: AE REVIEWED BY: NT | | REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/2016</td> <td>FIGURE ADDED TO ILLUSTRATE 2015 TRENCH VENT DETAILS.</td> </tr> </tbody> </table> | | NO. | DATE | DESCRIPTION | 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE 2015 TRENCH VENT DETAILS. |
| NO. | DATE | DESCRIPTION | | | | | | | | | |
| 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE 2015 TRENCH VENT DETAILS. | | | | | | | | | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | WWW.WCGRP.COM | | CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS ATTACHMENT H8 | | | | | | | |

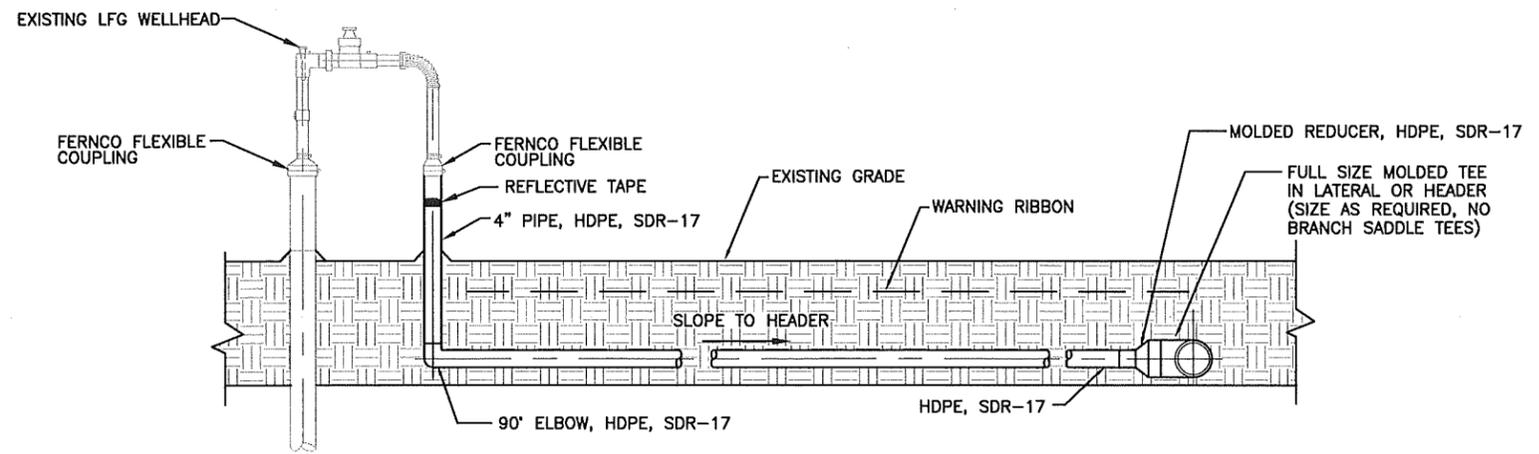
**ATTACHMENT H9
PIPING DETAILS**



[Handwritten signature]
04-06-2016

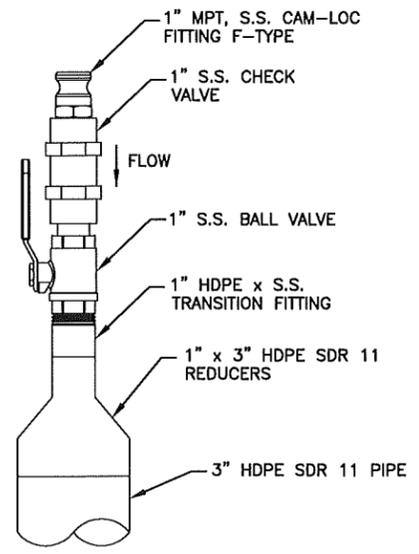


TYPICAL PIPE TRENCH DETAIL

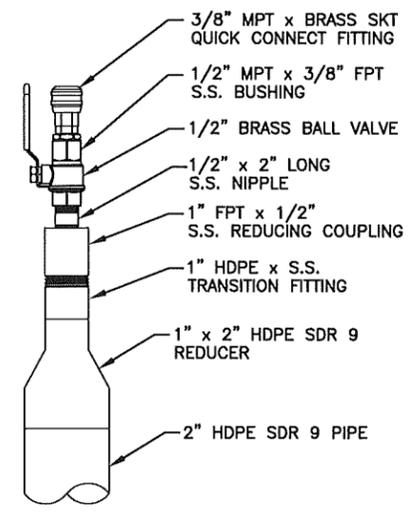


TYPICAL LFG WELLHEAD TO LATERAL DETAIL

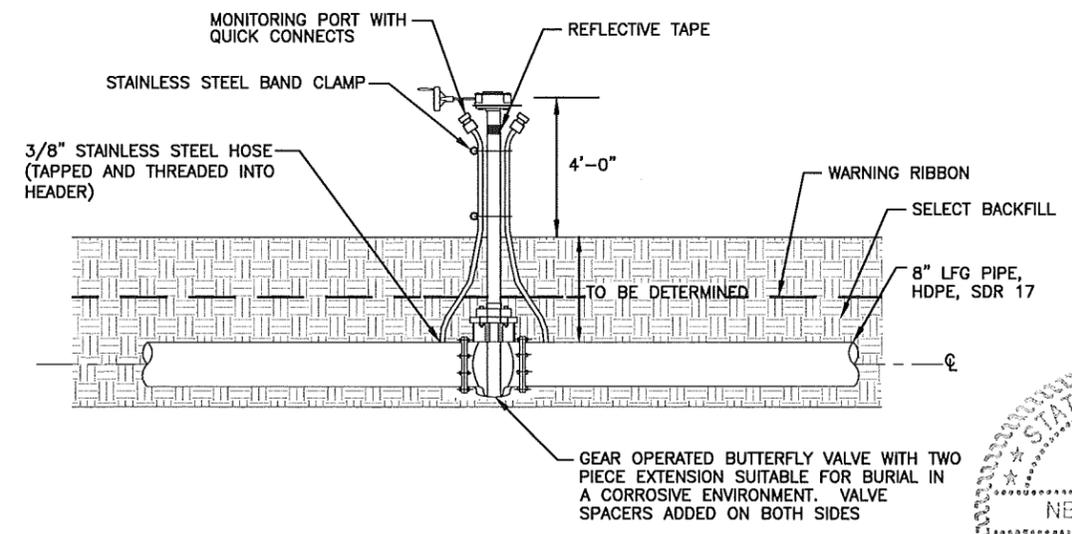
NOTE:
 1. THESE ILLUSTRATED PIPING DETAILS ARE ONLY APPLICABLE TO 2015/2016 GAS COLLECTION AND CONTROL SYSTEM UPGRADES AND REPAIRS.



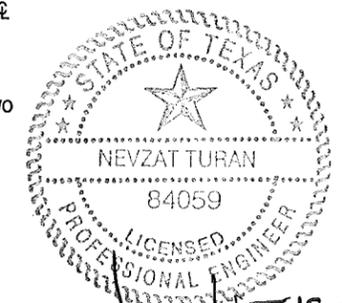
TYPICAL DISCHARGE VAULT KIT DETAIL



TYPICAL AIR VAULT KIT DETAIL



TYPICAL LFG ISOLATION VALVE DETAIL

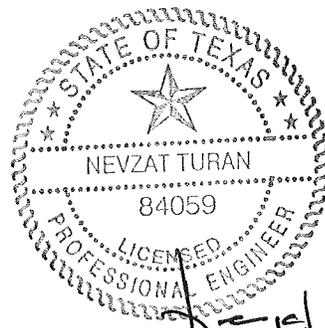


Nevzat Turan
 04-06-2016

| | | | | | |
|--|--|---|--|---|--|
| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 PIPING DETAILS | |
| DATE: 04/2016 FILE: 0647-01-36 CAD: ATT H9-PIPING DETAILS.DWG | | DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | | REVISIONS NO. DATE DESCRIPTION 1 03/2016 FIGURE ADDED TO ILLUSTRATE PIPING DETAILS. | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | WWW.WCGRP.COM | | CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS ATTACHMENT H9 | |

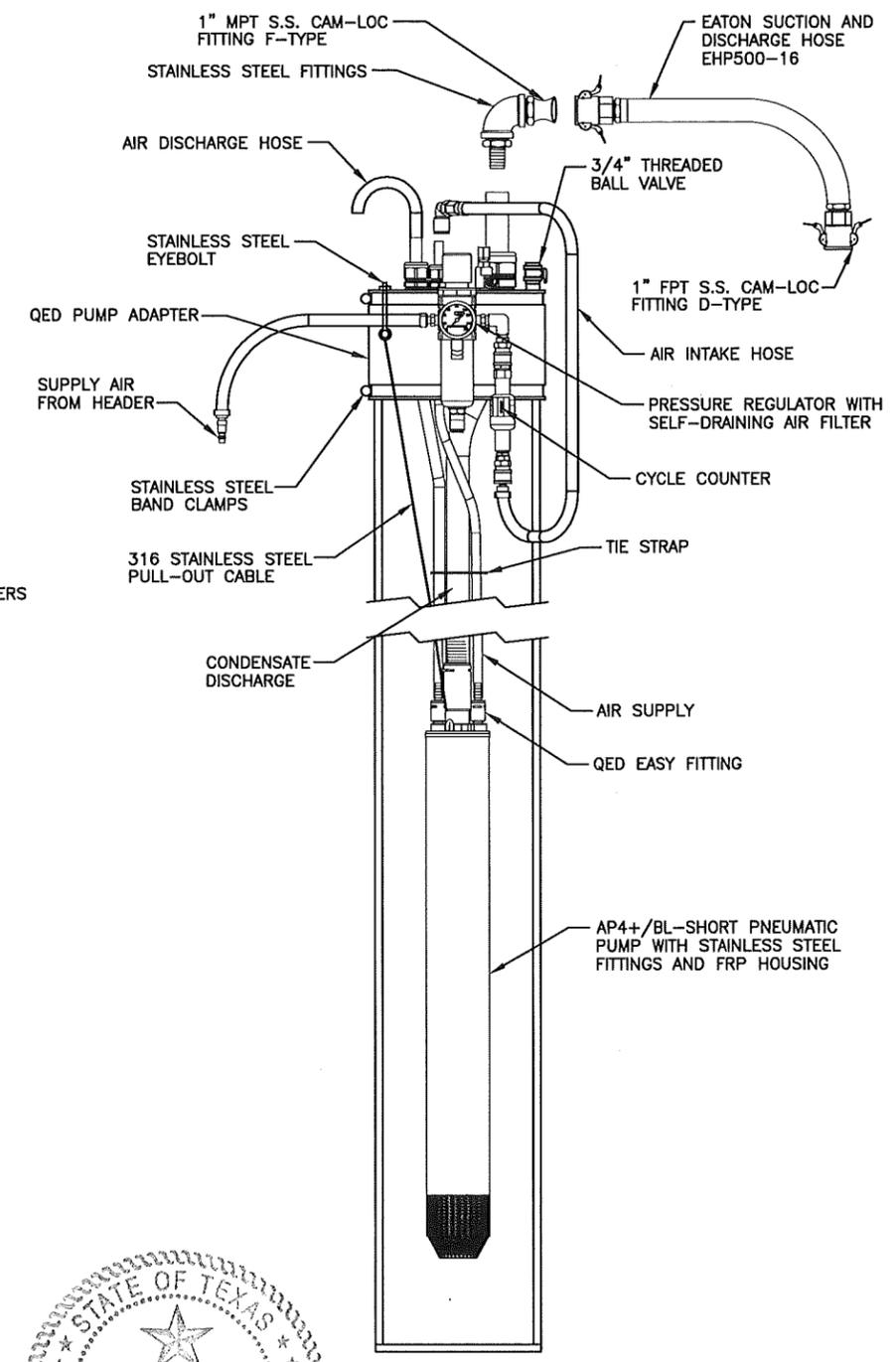
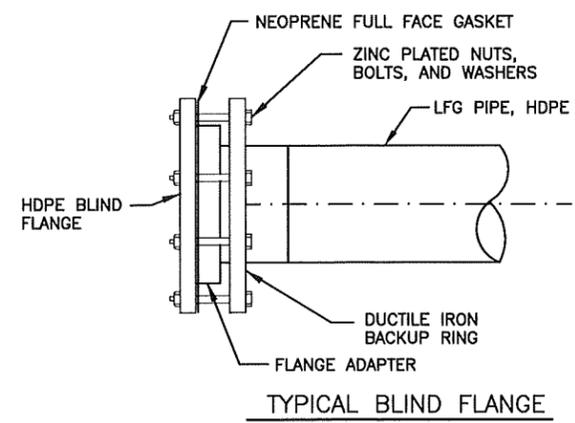
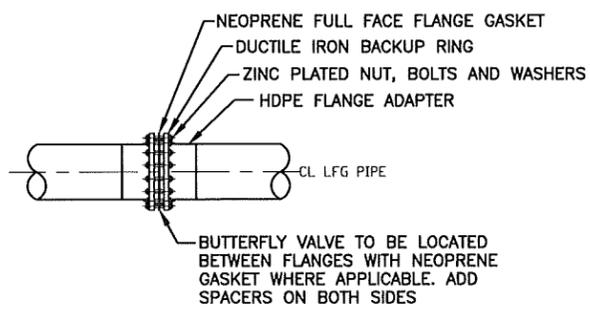
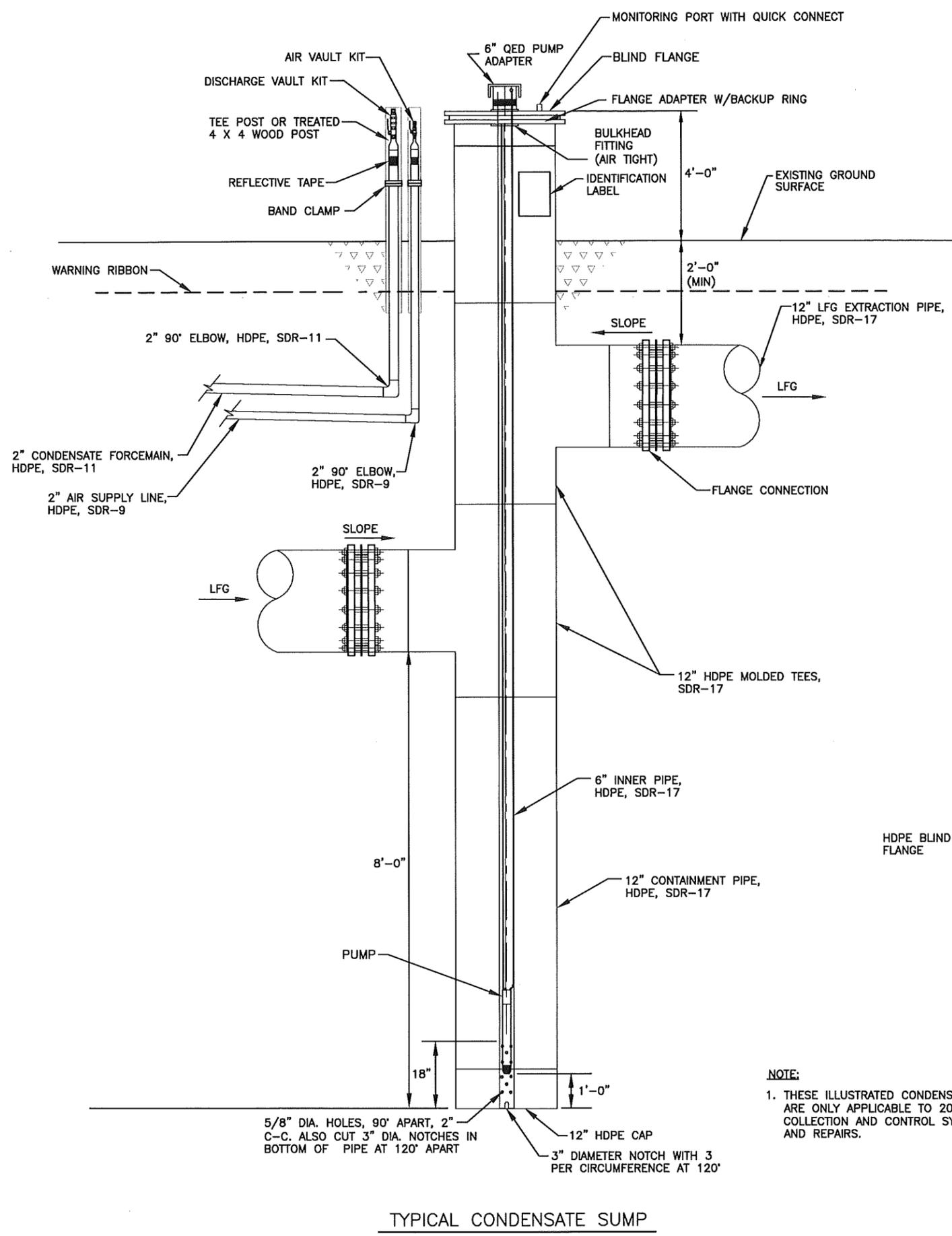
c:\0647\01\2016 LFG MOD\ATT H9-PIPING DETAILS.dwg, r.morris, 1:2

ATTACHMENT H10
CONDENSATE SUMP DETAILS



04-06-2016

O:\0647\01\2016 LFG MOD\ATT H10-PIPING DETAILS.dwg, r.morris, 1:2



NOTE:
 1. THESE ILLUSTRATED CONDENSATE SUMP DETAILS ARE ONLY APPLICABLE TO 2015/2016 GAS COLLECTION AND CONTROL SYSTEM UPGRADES AND REPAIRS.



Handwritten signature and date:
 04-06-2016

| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | | PREPARED FOR CITY OF GARLAND | | ATTACHMENT 14 CONDENSATE SUMP DETAILS | | | | | | | |
|--|---------|---|--|--|--|-----|------|-------------|---|---------|--|
| DATE: 04/2016 FILE: 0647-01-36 CAD: ATT H10-SUMP DETAILS.DWG | | DRAWN BY: RDM DESIGN BY: AE REVIEWED BY: NT | | REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/2016</td> <td>FIGURE ADDED TO ILLUSTRATE SUMP DETAILS.</td> </tr> </tbody> </table> | | NO. | DATE | DESCRIPTION | 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE SUMP DETAILS. |
| NO. | DATE | DESCRIPTION | | | | | | | | | |
| 1 | 03/2016 | FIGURE ADDED TO ILLUSTRATE SUMP DETAILS. | | | | | | | | | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | | | CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS WWW.WCGRP.COM | | | | | | | |
| | | | | ATTACHMENT H10 | | | | | | | |

APPENDIX C
TCEQ - 20650 FORM

Facility Name: Castle Drive Landfill
Permittee/Registrant Name: City of Garland
MSW Authorization #: 1062A
Initial Submittal Date: April 6, 2016
Revision Date:



Texas Commission on Environmental Quality

Permit/Registration Modification and Temporary Authorization Application Form for an MSW Facility

1. Reason for Submittal

Initial Submittal Notice of Deficiency (NOD) Response

2. Authorization Type

Permit Registration

3. Application Type

Modification with Public Notice Modification without Public Notice
 Temporary Authorization (TA) Modification for Name Change/Transfer

4. Application Fees

Pay by Check Online Payment
If paid online, e-Pay Confirmation Number: 582EA000197754

5. Application URL

Is the application submitted for a permit/registration modification with public notice?
 Yes No

If the answer is "Yes", enter the URL address of a publicly accessible internet web site where the application and all revisions to that application will be posted in the space provided: [http:// https://www.garlandtx.gov/gov/eg/ews/facilities/default.asp](http://https://www.garlandtx.gov/gov/eg/ews/facilities/default.asp)

6. Confidential Documents

Does the application contain confidential documents?
 Yes No

If "Yes", cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked "CONFIDENTIAL."

Facility Name: Castle Drive Landfill
MSW Authorization #: 1062A

Initial Submittal Date: April 6, 2016
Revision Date:

7. General Facility Information

Facility Name: Castle Drive Landfill
MSW Authorization No.: 1062A
Regulated Entity Reference No.: 100221225
Physical or Street Address (if available): 3637 Castle Drive
City: Garland County: Dallas State: Texas Zip Code: 75040
(Area code) Telephone Number: (972) 205-3424
Latitude: Longitude:

8. Facility Type(s)

Type I Type IV Type V
 Type I AE Type IV AE Type VI

9. Description of the Revisions to the Facility

Provide a brief description of all revisions to the permit/registration conditions and supporting documents referred by the permit/registration, and a reference to the specific provisions under which the modification/temporary authorization application is being made. Also, provide an explanation of why the modification/temporary authorization is requested:

The purpose of this permit modification is to incorporate the details of a passive trench vent installed near perimeter landfill gas monitoring probe PP-7 as part of the facility's landfill gas remediation plan into the permit's Attachment 14 - Landfill Gas Management Plan in accordance with 30 TAC §305.70(k)(3).

10. Facility Contact Information

Site Operator (Permittee/Registrant) Name: City of Garland

Customer Reference No. (if issued)*: CN 600328694

Mailing Address: PO BOX 469002

City: Garland County: Dalla State: TExas Zip Code: 75046

(Area Code) Telephone Number: (972) 205-3424

E-mail Address:

TX Secretary of State (SOS) Filing Number:

*If the Site Operator (Permittee/Registrant) does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Site Operator (Permittee/Registrant) as the Customer.

Operator Name¹:

Customer Reference No. (if issued)*: CN

Mailing Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

E-mail Address:

Charter Number:

¹If the Operator is the same as Site Operator/Permittee type "Same as "Site Operator (Permittee/Registrant)".

*If the Operator does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Operator as the customer.

Consultant Name (if applicable): Weaver Consultants Group

Texas Board of Professional Engineers Firm Registration Number: F-3727

Mailing Address: 6420 Southwest Blvd., Suite 206

City: Fort Wort County: Tarrant State: Texas Zip Code: 76109

(Area Code) Telephone Number: (817) 735-9770

E-Mail Address:

Agent in Service Name (required only for out-of-state):

Mailing Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

E-Mail Address:

11. Ownership Status of the Facility

Is this a modification that changes the legal description, the property owner, or the Site Operator (Permittee/Registrant)?

Yes No

If the answer is "No", skip this section.

Does the Site Operator (Permittee/Registrant) own all the facility units and all the facility property?

Yes No

If "No", provide the information requested below for any additional ownership.

Owner Name:

Street or P.O. Box:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address (optional):

Charter Number:

Signature Page

I, Lonnie R. Banks, Managing Director of EWS,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Lonnie R. Banks Date: 4/6/16

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said Lonnie R. Banks

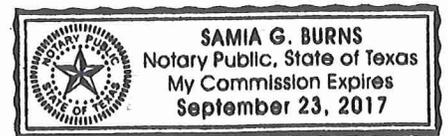
On this 6th day of April, 2016

My commission expires on the 23 day of September, 2017

Samia G. Burns
Notary Public in and for

Dallas County, Texas

(Note: Application Must Bear Signature & Seal of Notary Public)



Facility Name: Castle Drive Landfill
MSW Authorization #: 1062A

Initial Submittal Date: April 6, 2016
Revision Date:

Permit/Registration Modification with Public Notice

(See Instructions for P.E. seal requirements.)

Required Attachments

Land Ownership Map
Land Ownership List
Marked (Redline/Strikeout) Pages
Unmarked Revised Pages

Attachment No.

D
D
A
B

Additional Attachments as Applicable- Select all those apply and add as necessary

- Signatory Authority
- Fee Payment Receipt
- Confidential Documents

Facility Name: Castle Drive Landfill
MSW Authorization #: 1062A

Initial Submittal Date: April 6, 2016
Revision Date:

Permit/Registration Modification without Public Notice or TA

(See Instructions for P.E. seal requirements.)

Required Attachments (for Modifications only)

Attachment No.

Marked (Redline/Strikeout) Pages

Unmarked Revised Pages

Additional Attachments as Applicable- Select all those apply and add as necessary

- Signatory Authority
- Fee Payment Receipt
- Confidential Documents

Facility Name: Castle Drive Landfill
MSW Authorization #: 1062A

Initial Submittal Date: April 6, 2016
Revision Date:

Permit/Registration Name Change/Transfer Modification

(See Instructions for P.E. seal requirements.)

Required Attachments

Attachment No.

TCEQ Core Data Form(s)

Property Legal Description

Property Metes and Bounds Description

Metes and Bounds Drawings

On-Site Easements Drawing

Land Ownership List

Land Ownership Map

Property Owner Affidavit

Verification of Legal Status

Evidence of Competency

Additional Attachments as Applicable- Select all those apply and add as necessary

- Signatory Authority
- Fee Payment Receipt
- Confidential Documents
- Final Plat Record of Property, if platted
- Assumed Name Certificate

APPENDIX D
LANDOWNER'S MAP AND LIST



Nezat Turan

04-06-2016

ADJACENT LANDOWNER LIST AND MAP

The following list and figures (Figure D-1 and D-2) lists the names, mailing addresses, and location of the “Adjacent and Potentially Affected Landowners” within ¼ mile of the site. Refer to Figures D-1 and D-2, Land Ownership Maps, for location of the properties. The numbering on the land ownership list corresponds to the numbers listed on Figure D-1. The list is based on records of the Dallas County Central Appraisal District, posted on the Dallas County Appraisal District website <http://www.dallascad.org>. The list was compiled by Weaver Consultants Group in January 2016.

In accordance with Title 30 Texas Administrative Code §330.59(c)(3), the availability of mineral ownership beneath the facility has been investigated. Based on a conversation with the Dallas County Central Appraisal District, they do not maintain mineral ownership records.

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST

- | | |
|---|---|
| 1. CITY OF GARLAND PO BOX 469002 GARLAND TX 75046-9002 | 11. CHACKO FINNY 7801 DREAM MAKER WAY ROWLETT TX 75089-2895 |
| 2. NORTHPLACE CHURCH OF THE ASSEMBLIES OF GOD 2709 3RD ST SACHSE TX 75048-3731 | 12. KIMANH T & MUOI VAN NGUYEN 7914 GLENSIDE DR ROWLETT TX 75089-2893 |
| 3. LANDGRAF REVOCABLE TRUST 163 LBJ FREEWAY STE 280 DALLAS TX 75234-6001 | 13. MINH TRONG TRUONG 7910 GLENSIDE DR ROWLETT TX 75089-2893 |
| 4. NICHOLS W N LIFE ESTATE 9210 MILES ROAD ROWLETT TX 75089-9041 | 14. MINNIE Y DEVANCEHUDSON 7906 GLENSIDE DR ROWLETT TX 75089-2893 |
| 5. GARLAND ISD 720 STADIUM DR GARLAND TX 75046-4616 | 15. NIDYA & ALBERT GONZALES 7902 GLENSIDE DR ROWLETT TX 75089-2893 |
| 6. LAND FOR THE LORD LP 3465 W WALNUT ST STE 209 GARLAND TX 75042-7140 | 16. JULIE T & DUSTIN FENNELL 7814 GLENSIDE DR ROWLETT TX 75089-2892 |
| 7. MICHAEL TRAVIS & DLAINÉ MERRITT 9313 MERRITT DR ROWLETT TX 75089-9056 | 17. JEFFREY S & CHRISTY D MORROW TRUSTEES 7810 GLENSIDE DR ROWLETT TX 75089-2892 |
| 8. MAYILON O & SHARON L TETER 4506 TOLER RD ROWLETT TX 75089-3406 | 18. OWNER WITHHELD PER SEC. #25.025 OR 25.026 OF TEXAS PROPERTY TAX CODE |
| 9. CATHERINE YANCEY MERRITT 6602 FALCON ST ROWLETT TX 75089-2901 | 19. JAMES R & LISA DUNN 7714 GLENSIDE DR ROWLETT TX 75089-2891 |
| 10. LESLIE MERRITT SKIPPER 3114 CASTLE DR ROWLETT TX 75089-9023 | 20. TUNG LE 7710 GLENSIDE DR ROWLETT TX 75089-2891 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|--|
| 21. BILLY BOB & JUDY LYNEE FLEMING 7706 GLENSIDE DR ROWLETT TX 75089-2891 | 31. EDRA LAVONNE BRASHEAR 7805 GLENSIDE DRIVE ROWLETT TEXAS 75089-2884 |
| 22. THU Q PHAM 7702 GLENSIDE DR ROWLETT TX 75089-2891 | 32. K2 REAL ESTATE LP 1A 205 CHATELAIN DR ST ALBERT T8N 5A4 ALBERTA CANADA |
| 23. CASTLE HILL EST OWNERS ASSN C/O LONE STAR ASSN MGMT 2500 LEGACY DR STE 220 FRISCO TX 75034-1848 | 33. THY NGUYEN & VAN DANH 7901 GLENSIDE DR ROWLETT TX 75089-2883 |
| 24. JONATHAN M & JULIE R BLAKEY 7614 GLENSIDE DR ROWLETT TX 75089-2890 | 34. JULIE ERINUBIL & CHAD ANDERSON 7905 GLENSIDE DR ROWLETT TX 75089-2883 |
| 25. PHI NGOC VU 7610 GLENSIDE DR ROWLETT TX 75089-2890 | 35. ALTON D & VIRGINIA A ROLLINS 8001 GLENSIDE DR ROWLETT TX 75089-2882 |
| 26. KHANH NGUYEN 604 ASHFIELD DR RICHARDSON TX 75081-5170 | 36. ZEWDIE D DUGDA 8009 GLENSIDE DR ROWLETT TX 75089-2883 |
| 27. JIMMY Q TRAN & JEANNIE H CAO 7705 GLENSIDE DR ROWLETT TX 75089-2885 | 37. DUANE HILL 3809 KNIGHT DR ROWLETT TX 75089-2897 |
| 28. ENDALE & MESRET ASORE 7709 GLENSIDE DR ROWLETT TX 75089-2885 | 38. HIEU DANH 3801 KNIGHT DR ROWLETT TX 75089-2897 |
| 29. KHAI DINH NGUYEN 2333 LANCE CREST DR GARLAND TX 75044-6041 | 39. ANH TUY TRAN & TON HONG 3609 KNIGHT DR ROWLETT TX 75089-2899 |
| 30. BING THANH LE 7801 GLENSIDE DR ROWLETT TX 75089-2884 | 40. CASTLE HILL EOA C/O LONE STAR ASSN MGMT 2500 LEGACY DR STE 220 FRISCO TX 75034-1848 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|---|
| 41. VINH TRINH 7914 GLENVIEW WAY ROWLETT TX 75089-2867 | 51. CUONG DO 2598 GLEN KELLER CT SAN JOSE, CA 95148-4138 |
| 42. GUSTAVO SANTANA 7906 GLENVIEW WAY ROWLETT TX 75089-2867 | 52. KIET NGUYEN 3710 DUNHILL PL ROWLETT TX 75089-2889 |
| 43. ANDREW F JULY 7902 GLENVIEW WAY ROWLETT TX 75089-2867 | 53. AHMAD GHABRIS & FATIMA MUHIEDDIN 3706 DUNHILL PL ROWLETT TX 75089-2889 |
| 44. ANDREA KAY SHAER 7814 GLENVIEW WAY ROWLETT TX 75089-2868 | 54. SON H & LINH NGUYEN 3702 DUNHILL PL ROWLETT TX 75089-2889 |
| 45. BRIAN & CHRISTINE SCHMIDT 7810 GLENVIEW WAY ROWLETT TX 75089-2868 | 55. OLUCHI ANOSIKEH 3613 DUNHILL PL ROWLETT TX 75089-2886 |
| 46. SEAN DANIEL & LAURA MARIE MCGREW 7806 GLEVIEW WAY ROWLETT TX 75088-8033 | 56. RITA IGIEHON 3702 MANOR DR ROWLETT TX 75089-2873 |
| 47. GLENN PHILIP & WANDA JEAN BROWNMILLER 7802 GLENVIEW WAY ROWLETT TX 75089-2868 | 57. TRAN XUAN 7801 GLENVIEW WAY ROWLETT TX 75089-2871 |
| 48. SHARA GIBBS & ROOSEVELT GIBBS JR 7714 GLENVIEW WAY ROWLETT TX 75089-2869 | 58. JOSE M ROMERO 7805 GLENVIEW WAY ROWLETT TX 75089-2871 |
| 49. CITIMORTGAGE INC. 7710 GLENVIEW WAY ROWLETT TX 75089-2869 | 59. QUANG TRAN & HA T LE 7809 GLENVIEW WAY ROWLETT TX 75089-2871 |
| 50. BETHY A SUJI 7706 GLENVIEW WAY ROWLETT TX 75089-2869 | 60. HA NGO & LUU THUY 7813 GLENVIEW WAY ROWLETT TX 75089-2871 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|--|
| 61. THUAN VAN HO & ANH TUYET NGUYEN 7905 GLENVIEW WAY ROWLETT TX 75089-2854 | 71. LUNWONDA R DIGGS 3510 MANOR DR ROWLETT TX 75089-2875 |
| 62. ALEXANDER P DANIEL 7909 GLENVIEW WAY ROWLETT TX 75089-2854 | 72. JULIE HOANG 3506 MANOR DR ROWLETTE, TX 75089-2875 |
| 63. HUYEN B VO 7810 DREAM MAKER WAY ROWLETT TX 75089-2880 | 73. DUNG PHAN 3502 MANOR DR ROWLETT TX 75089-2875 |
| 64. TU V NGUYEN 7806 DREAM MAKER WAY ROWLETT TX 75089-2880 | 74. ETALEMAHU TEKELE & GULILAT YIMENU 3414 MANOR DR ROWLETT TX 75089-2876 |
| 65. DUYN NGUYEN & KATHY HOAVIET 7802 DREAM MAKER WAY ROWLETT TX 75089-2880 | 75. WILLA J CUBBAGE 3410 MANOR DR ROWLETT TX 75089-2876 |
| 66. LISA WILSON 3614 MANOR DR ROWLETT TX 75089-2874 | 76. LIZY & JIMMY JOHNS 3406 MANOR DR ROWLETT TX 75089-2876 |
| 67. ADA MCPHAUL 3610 MANOR DR ROWLETT TX 75089-2874 | 77. CHELSEA THI NGUYEN & VINCENT VAN TRAN 3402 MANOR DR ROWLETT TX 75089-2876 |
| 68. JAMES A & TRACY G STAFFORD 3606 MANOR DR ROWLETT TX 75089-2874 | 78. ROBERT LEE THOMAS JR 3401 DUNHILL PL ROWLETT TX 75089-8904 |
| 69. TADESE BERIHUN 3602 MANOR DR ROWLETT TX 75089-2874 | 79. CHRISTOPHER W & ANA L ESQUIVEL 340 DUNHILL PL ROWLETT TX 75089-8904 |
| 70. EVERADO & MAYRA MARTINEZ 3514 MANOR DR ROWLETT TX 75089-2875 | 80. NHAN DOAN & UYEN PHAN 3409 DUNHILL PL ROWLETT TX 75089-8904 |

**PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST
(CONTINUED)**

- | | |
|--|--|
| 81. THIEN PHAM 3413 DUNHILL PL ROWLETT TX 75089-8904 | 91. ANTHONY G & DONNA F CURTIS 3513 GLENVIEW WAY ROWLETT TX 75089-8905 |
| 82. JASON M PHAN 3501 DUNHILL PL ROWLETT TX 75089-2887 | 92. JOHNNY W & PATRICIA A LEATHERS 3509 GLENVIEW WAY ROWLETT TX 75089-8905 |
| 83. MARTHA CERELLA LONG 3505 DUNHILL PL ROWLETT TX 75089-2887 | 93. JOSE ROBERTO & YASMINA FLORES 3505 GLENVIEW WAY ROWLETT TX 75089-8905 |
| 84. MELODY & EARL MATTHEW JR 3509 DUNHILL PL ROWLETT TX 75089-2887 | 94. KHOA TAN DAO 3501 GLENVIEW WAY ROWLETT TX 75089-8905 |
| 85. MICHAEL GENE & ALISON ELIZABETH KEYES 1204 NAKOMIS DR NE UNIT A ALBUQUERQUE NM 87112-6079 | 95. TASH AARON EVEN 3413 GLENVIEW WAY ROWLETT TX 75089-8906 |
| 86. HANNAH L PAULLING 3601 DUNHILL PL ROWLETT TX 75089-2886 | 96. KIET TRAN 2598 GLEN KELLER CT SAN JOSE, CA 95148-4138 |
| 87. TONY NGUYEN 3605 DUNHILL PL ROWLETT TX 75089-2886 | 97. CHASON & NGOC T NGUYEN 3405 GLENVIEW WAY ROWLETT TX 75089-8906 |
| 88. JOE A & KRISTIE L ROCHA 3609 DUNHILL PL ROWLETT TX 75089-2886 | 98. THU ANH DOAN & PHAT HUU PHAM 3402 DUNHILL PL ROWLETT TX 75089-8907 |
| 89. EST OF BRUCE E COLEMAN 2518 ROBIN LN GARLAND TX 75041-1445 | 99. GIAN M DIN 3406 DUNHILL PL ROWLETT TX 75089-8907 |
| 90. CHRIS & KATE CHRISTOPHERSON 3601 GLENVIEW WAY ROWLETT TX 75089-2879 | 100. DEEPA MANNATH 7250 FERNMEADOW DR DALLAS TX 75248-5605 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|---|--|
| 101. HENOK KEBREAB& ZEWDI NEGASSI 3414 DUNHILL PL ROWLETT TX 75089-8907 | 111. VIET VAN VUONG 3409 KNIGHT DR ROWLETT TX 75089-2966 |
| 102. STERLING L ROBINSON 3502 DUNHILL PL ROWLETT TX 75089-2888 | 112. QUANG NGUYEN 3401 KNIGHT DR ROWLETT TX 75089-2966 |
| 103. JOHN & ISABEL ARMENDARIZ 3506 DUNHILL PL ROWLETT TX 75089-2888 | 113. TRUNG QUOC & TRAM BUI NGUYEN 3402 KNIGHT DR ROWLETT TX 75089-2856 |
| 104. BARBARA JEAN HAMMOND 7805 DREAM MAKER WAY ROWLETT TX 75089-2895 | 114. JEFFREY NILS & HEATHER NOEL VANHOUTEN 3406 KNIGHT DR ROWLETT TX 75089-2856 |
| 105. HUONG LAM PHAM 7809 DREAM MAKER WAY ROWLETT TX 75089-2895 | 115. DANIEL CALVO MONTES & FABIOLA V ARTEAGA VERUSCHKA 3410 KNIGHT DR ROWLETT TX 75089-2856 |
| 106. TRAM THI KIEU NGO 7813 DREAM MAKER WAY ROWLETT TX 75089-2895 | 116. GARY A & JOHNNIE FLETCHER 3414 KNIGHT DR ROWLETT TX 75089-2856 |
| 107. KOVU & SEENA VARGHESE 7901 DREAM MAKER WAY ROWLETT TX 75089-2846 | 117. EULA H HYATT 3502 KNIGHT DR ROWLETT TX 75089-2857 |
| 108. XUAN THANH & SANH VAN NGUYEN 3505 KNIGHT DR ROWLETT TX 75089-2965 | 118. JOSE L & SUSAN MARGARET FLORES 3506 KNIGHT DR ROWLETT TX 75089-2857 |
| 109. PHUONG NGUYEN 3501 KNIGHT DR ROWLETT TX 75089-2965 | 119. JILL & SHAY HOUSTON 3510 KNIGHT DR ROWLETT TX 75089-2857 |
| 110. ANNE LIU & JULIO C RODRIGUEZ 3413 KNIGHT DR ROWLETT TX 75089-2966 | 120. CHRISTIANA I OGBONNA 3514 KNIGHT DR ROWLETT TX 75089-2857 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|---|
| 121. SAMER ELSADI AVENUE DU MILLENAIRE 3513 MANOR DR ROWLETT TX 75089-2872 | 131. ROBERT J & LINDA JO HARRIS 2314 CASTLE DR ROWLETT TX 75089-2727 |
| 122. MOHAMED CHAHINE 3509 MANOR DR ROWLETT TX 75089-2872 | 132. H C HERBOLD 3014 PECAN RIDGE DR ROWLETT TX 75088-5949 |
| 123. FUAD M MASOUD 3505 MANOR DR ROWLETT TX 75089-2872 | 133. PHYLLIS & PATTERSON MARILYN WYRICK INGRAM 103 BUCKEYE TRL WEST LAKE HILLS TX 78746-4417 |
| 124. HELEN P TRAN 3501 MANOR DR ROWLETT TX 75089-2872 | 134. CITY OF ROWLETT PO BOX 99 ROWLETT TX 75030-0099 |
| 125. CHANH TRUNG VU & TRACY TRAN 3413 MANOR DR ROWLETT TX 75089-2877 | 135. FAIRFIELD ASSETS CORP 5400 PRESTON OAKS RD APT 3070 DALLAS TX 75254-8464 |
| 126. WESLEY & ELIZABETH B SAMUEL 3409 MANOR DR ROWLETT TX 75089-2877 | 136. VFC PPTIES 33 LLC PO BOX 8216 WACO TX 76714-8216 |
| 127. CINDY GAMBLE 3405 MANOR DR ROWLETT TX 75089-2877 | 137. JIM DORSEY 2680 COUNTY ROAD 2010 RAVENNA TX 75476-6315 |
| 128. YESHE F & YAREGAL F NEGATU 3401 MAJOR DR ROWLETT TX 75089-2887 | 138. DAVID BUBBUS & ELIZABETH DIANE JOINT REVOCABLE TRUST 216 N SHORE DR RUSSELLVILLE, AR 72802-8827 |
| 129. CASTLE HILL EOA C/O LONE STAR ASSOC MGMT 2500 LEGACY DR STE 220 FRISCO TX 75034-1848 | 139. ELAINE THOMAS LIMITED PS 1801 TOBIN TR GARLAND TX 75043-2534 |
| 130. REINHARDT BIBLE CHURCH INCORP 2402 CASTLE DR ROWLETT TX 75089-2729 | 140. TUYET VO 3309 DUCHESS WAY ROWLETT TX 75089-1990 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|---|
| 141. CUONG MANH VU 3305 DUCHESS WAY ROWLETT TX 75089-1990 | 151. CUONG NGO 3013 DUCHESS WAY ROWLETT TX 75089-1991 |
| 142. DAVID RAY COWART 3301 DUCHESS WAY ROWLETT TX 75089-1990 | 152. JIMMY TUAN NGUYEN 3009 DUCHESS WAY ROWLETT TX 75089-1991 |
| 143. NHUT XUAN LE 3213 DUCHESS WAY ROWLETT TX 75089-1985 | 153. CHAPARRAL ASSETS LLC PO BOX 191021 DALLAS TX 75219-8021 |
| 144. HANH THI NGUYEN 3209 DUCHESS WAY ROWLETT TX 75089-1985 | 154. CHERYL ANN & WENDELL R PERKINS BATTISTE 7701 SUMMER HILL LN ROWLETT TX 75089-2859 |
| 145. RONALD E & KERI G CEPAK 3205 DUCHESS WAY ROWLETT TX 75089-1985 | 155. GOKCEN CERAN 7613 SUMMER HILL LN ROWLETT TX 75089-2800 |
| 146. THUY HOANG 3201 DUCHESS WAY ROWLETT TX 75089-1985 | 156. LOC HUU TRAN & MYLE THI TRUONG 7609 SUMMER HILL LN ROWLETT TX 75089-2800 |
| 147. XUAN K TRAN 3113 DUCHESS WAY ROWLETT TX 75089-1986 | 157. BRANDON NGUYEN & VANTHAO THI HUYNH 7605 SUMMER HILL LN ROWLETT TX 75089-2800 |
| 148. ALONDRA BULKA 3109 DUCHESS WAY ROWLETT TX 75089-1986 | 158. MOLLY & MATTHEW SAMUEL 3205 SILVER SPRINGS WAY ROWLETT TX 75089-2861 |
| 149. MARIZELA SANCHEZ & JUAN VILLAJUANA DR 3105 DUCHESS WAY ROWLETT TX 75089-1986 | 159. BRANDON JAMES & PENNY LIN PIKE 3002 SILVER SPRINGS WAY ROWLETT TX 75089-2865 |
| 150. NICOLE Q NGUYEN 2834 CEDAR BROOK DR GARLAND TX 75040-9049 | 160. PHUONG NGUYEN 3006 SILVER SPRINGS WAY ROWLETT TX 750892865 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|---|--|
| 161. PETER & GRACE LY 3010 SILVER SPRINGS WAY ROWLETT TX 75089-2865 | 171. JACQUELINE D STOKES 3302 SILVER SPRINGS WAY ROWLETT TX 75089-2864 |
| 162. YVONNE E & FREDERICK A CAPERS 3014 SILVER SPRINGS WAY ROWLETT TX 75089-2865 | 172. MICHAEL S & PURITA P BEACHMAN 3306 DUCHESS WAY ROWLETT TX 75089-1989 |
| 163. HOANG TAMMY 3102 SILVER SPRINGS WAY ROWLETT TX 75089-2866 | 173. GULSEREN & UMIT ERGUL 3305 SILVER SPRINGS WAY ROWLETT TX 75089-2860 |
| 164. LUIS A BUITRAGO 3106 SILVER SPRINGS WAY ROWLETT TX 75089-2866 | 174. DAVID L & STEPHANIE G SMITH 3301 SILVER SPRINGS WAY ROWLETT TX 75089-2860 |
| 165. MOHAMED MAAROUF KOLAILAT 3110 SILVER SPRINGS WAY ROWLETT TX 75089-2866 | 175. JOHNNY STEVEN & BETH GONZALES 3213 SILVER SPRINGS WAY ROWLETT TX 75089-2861 |
| 166. HANH MINH & ANH THI VO 3114 SILVER SPRINGS WAY ROWLETT TX 75089-2866 | 176. THO KHAC HO & HIEN MINH NGUYEN 3209 SILVER SPRINGS WAY ROWLETT TX 75089-2861 |
| 167. TU TRUONG & NUONG PHAM 3202 SILVER SPRINGS WAY ROWLETT TX 75089-2863 | 177. TFHSP LLC SERIES 3201 SILVER SPRINGS WAY ROWLETT TX 75089-2861 |
| 168. KEVIN PHU DAT HUYNH 3206 SILVER SPRINGS WAY ROWLETT TX 75089-2863 | 178. RODRICK LEON LACY 3113 SILVER SPRINGS WAY ROWLETT TX 75089-2896 |
| 169. FEDERAL HOME LOAN MTG CORPORATION 5000 PLANO PKWY CARROLLTON TX 75010-4900 | 179. AMY E & NATHAN D SIKES 3109 SILVER SPRINGS WAY ROWLETT TX 75089-2896 |
| 170. PHUONG DANG 3214 SILVER SPRINGS WAY ROWLETT TX 75089-2863 | 180. ALYSSA TRAN 3105 SILVER SPRINGS WAY ROWLETT TX 75089-2896 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|---|--|
| 181. LINH HANG & PAUL DU NGUYEN 2317 HAVERHILL DR TYLER TX 75707-4496 | 191. ANTONIO G RIVERA 3106 DUCHESS WAY ROWLETT TX 75089-1987 |
| 182. HAI DINH TRUONG 3013 SILVER SPRINGS WAY ROWLETT TX 75089-2862 | 192. LADEITRA ADKINS 3110 DUCHESS WAY ROWLETT TX 75089-1987 |
| 183. LA TRAN 3009 SILVER SPRINGS WAY ROWLETT TX 75089-2862 | 193. TUYET NGA DUONG & NGHI PHAM 3114 DUCHESS WAY ROWLETT TX 75089-1987 |
| 184. GLYNNIS JOAN & WENDEL RAMON BAROT 3005 SILVER SPRINGS WAY ROWLETT TX 75089-2862 | 194. DOLORES M BISCHOF 3202 DUCHESS WAY ROWLETT TX 75089-1988 |
| 185. CHERYL LYNN & JIMMY DEAN STEWART 3001 SILVER SPRINGS WAY ROWLETT TX 75089-2862 | 195. STACY CARRUTH 3206 DUCHESS WAY ROWLETT TX 75089-1988 |
| 186. ANDY THANH DUONG 3002 DUCHESS WAY ROWLETT TX 75089-1984 | 196. CASEY JOSEPH & REBECCA CHRISTY GRAY 3210 DUCHESS WAY ROWLETT TX 75089-1988 |
| 187. MULU KIDANE & TESHOME S HAILE 3006 DUCHESS WAY ROWLETT TX 75089-1984 | 197. HUONG THI TRUONG & KHOI N DAO 5021 GLEN VISTA DR GARLAND TX 75044-5511 |
| 188. LAN PHAN 11721 KILKIRK LN DALLAS TX 75228-1713 | 198. SHERRY & CHARLES ALBERT 3302 DUCHESS WAY ROWLETT TX 75089-1989 |
| 189. DAT TRUONG & PHUONG B LE 3014 DUCHESS WAY ROWLETT TX 75089-1984 | 199. STEPHEN & JANA B HOOTEN 7710 BLUEWOOD DR ROWLETT TX 75089-2755 |
| 190. EKAETE I EKPO 3102 DUCHESS WAY ROWLETT TX 75089-1987 | 200. CARL W & JENNIFER L FARLEY 7706 BLUEWOOD DR ROWLETT TX 75089-2755 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|---|---|
| 201. SCOTT A & JACQUELINE M VERTZ 7702 BLUEWOOD DR ROWLETT TX 75089-2755 | 211. ALFRED T SAKER II & PATRICIA J SAKER 7702 PLANETREE DR ROWLETT TX 75089-1614 |
| 202. GARY & CHERYLE DOYLE 7614 BLUEWOOD DR ROWLETT TX 75089-2756 | 212. BAC TRAN & KIM PHUONG THI CAO 7706 PLANETREE DR ROWLETT TX 75089-1614 |
| 203. MARK ALAN & DELORIS DYAN HAMBLIN 7610 BLUEWOOD DR ROWLETT TX 75089-2756 | 213. DARREN KEITH & KIMBERLY ANN EDWARDS 2706 CHINKAPIN LN ROWLETT TX 75089-1612 |
| 204. KATIE HOMUTH 7606 BLUEWOOD DR ROWLETT TX 75089-2756 | 214. THOMAS K & ANIYAMMA T PAUL 2710 CHINKAPIN LN ROWLETT TX 75089-1612 |
| 205. STEPHEN ZACHARY & DANIELLE L RIDDLE 2805 PLANETREE DR ROWLETT TX 75089-1616 | 215. DAVID D & MEURIAL A SINGH 2714 CHINKAPIN LN ROWLETT TX 75089-1612 |
| 206. DR EDUARDO DELAFUENTES 2801 PLANETREE DR ROWLETT TX 75089-1616 | 216. MARTHA & DONALD R TENAN 2802 CHINKAPIN LN ROWLETT TX 75089-1613 |
| 207. FRANCISO B & DEBRA A OBERA 2713 PLANETREE DR ROWLETT TX 75089-1615 | 217. JOHN A & CYNTHIA D ARMSTRONG 2806 CHINKAPIN LN ROWLETT TX 75089-1613 |
| 208. HERNDON RICHARDSON JR KIMBERLY RENEE RICHARDSON 2709 PLANETREE DR ROWLETT TX 75089-1615 | 218. DIANNE P & DANIEL VILLARREAL 2805 CHINKAPIN LN ROWLETT TX 75089-1610 |
| 209. JOHN QUANG TRAN & JUSTINE TRANG TRAN 2705 PLANETREE DR ROWLETT TX 75089-1615 | 219. GULELAT F GEBREWOLD 2801 CHINKAPIN LN ROWLETT TX 75089-1610 |
| 210. BRIAN A & BRITTANY R SPRUIELL 2701 PLANETREE DR ROWLETT TX 75089-1615 | 220. GARY RAY WALLACE & MARY FRANCES WALLACE 2713 CHINKAPIN LN ROWLETT TX 75089-1609 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|--|
| 221. CLINTON B & LINDA D OGILVIE 2709 CHINKAPIN LN ROWLETT TX 75089-1609 | 231. DK REALTY PARTNERS LTD 1229 CRESTWICK DR MURPHY TX 75094-4142 |
| 222. RUDY & LAURA MORENO 2705 CHINKAPIN LN ROWLETT TX 75089-1609 | 232. LOGAN L VIG 7701 PLANETREE DR ROWLETT TX 75089-1617 |
| 223. KEN W & KATHY WESSON 2701 CHINKAPIN LN ROWLETT TX 75089-1609 | 233. JAMES GODWIN & RENEE GODWIN 2610 CHINKAPIN LN ROWLETT TX 75089-1611 |
| 224. KEVIN & TANIA KOPPLIN 2613 CHINKAPIN LN ROWLETT TX 75089-1608 | 234. LAURENT C & FAYNE A BOUGUYON 2606 CHINKAPIN LN ROWLETT TX 75089-1611 |
| 225. VANNAK KHUON 2609 CHINKAPIN LN ROWLETT TX 75089-1608 | 235. JOSHUA A & ELDA M HUDSON 2602 CHINKAPIN LN ROWLETT TX 75089-1611 |
| 226. DON JOHN THOMAS 2605 CHINKAPIN LN ROWLETT TX 75089-1608 | 236. GREGORY R & CINDY G MILLER 7614 SCARLET OAK DR ROWLETT TX 75089-2777 |
| 227. GREGORY MARTINEZ JR & WANDA SUE MARTINEZ 2601 CHINKAPIN LN ROWLETT TX 75089-1608 | 237. JESUS PARADA & MICHELLE CHIM 7610 SCARLET OAK DR ROWLETT TX 75089-2777 |
| 228. GARY & MARIA TIEGS 2513 CHINKAPIN LN ROWLETT TX 75089-1607 | 238. MELISSA PAIGE HARGETT 7606 SCARLET OAK DR ROWLETT TX 75089-2777 |
| 229. MICHAEL D KIRK & SVETLANA M KIRK 2509 CHINKAPIN LN ROWLETT TX 75089-1607 | 239. 112267 LIVING TRUST 2501 SWEETGUM CT ROWLETT TX 75089-2778 |
| 230. JAMES & SHARON E WHITEFIELD 2614 PLANETREE DR ROWLETT TX 75089-1619 | 240. JAMES A & LAWSON MARY L SKINNESS LAWSON 2505 SWEETGUM CT ROWLETT TX 75089-2778 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

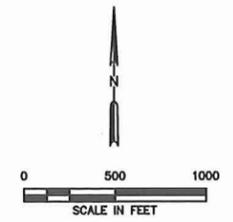
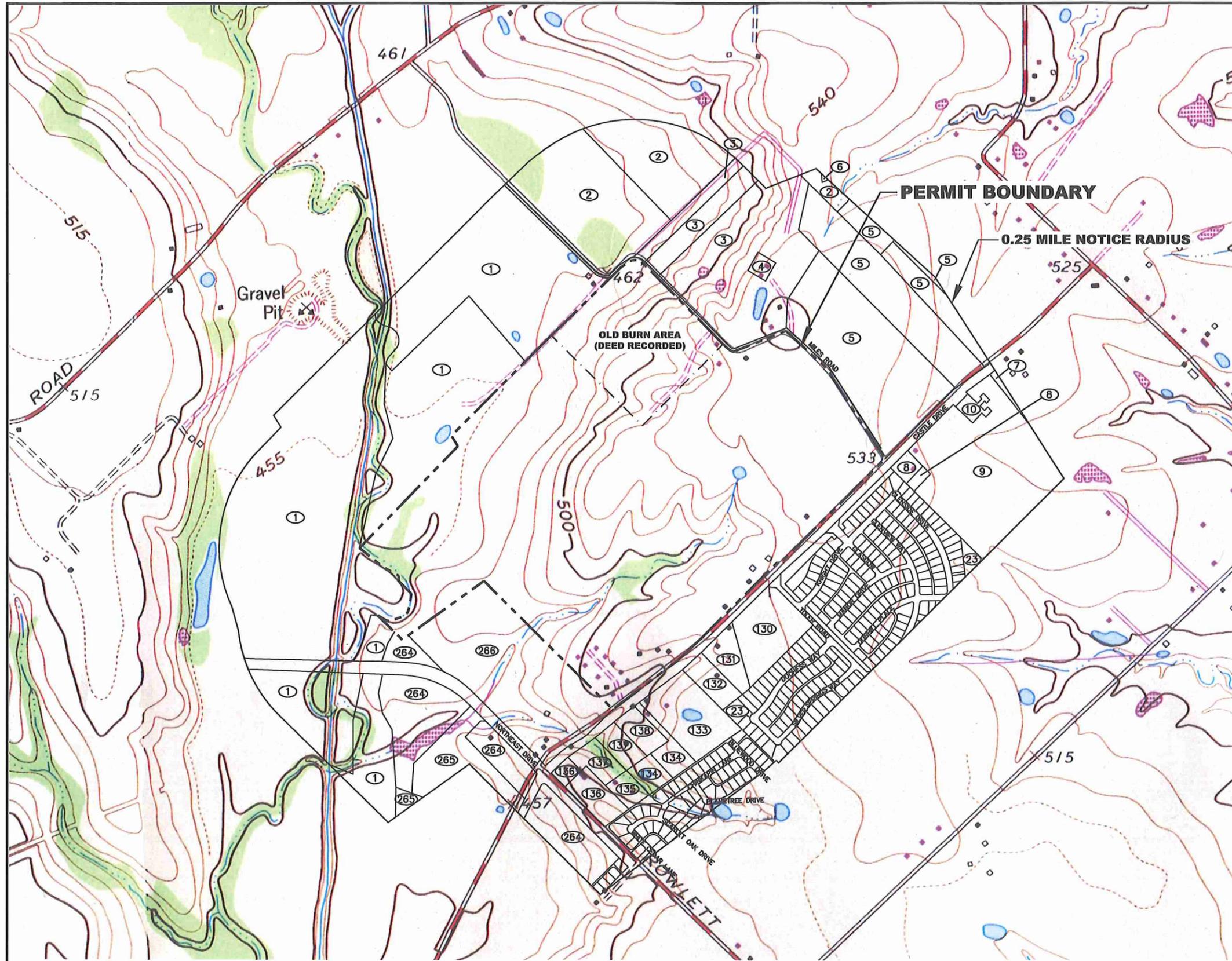
- | | |
|---|--|
| 241. LATASHA ROCHELL & MARIO LANCE BILLINGS 2509 SWEETGUM CT ROWLETT TX 75089-2778 | 251. VINH & DAO NGUYEN 7605 WHITECEDAR LN ROWLETT TX 75089-1602 |
| 242. ROBERT G & JANICE C UTTERBACK 2501 SCARLET OAK DR ROWLETT TX 75089-1651 | 252. EMMETT D & SHELYTA K SEALS 7606 WHITECEDAR LN ROWLETT TX 75089-1600 |
| 243. TITTLE CHRISTINE S 2413 SCARLET OAK DR ROWLETT, TX 75089-2775 | 253. MILTON F & MARGARET R WILLIAMS 7610 WHITECEDAR LN ROWLETT TX 75089-1600 |
| 244. PATRICK & TAMMY SMITH 2409 SCARLET OAK DR ROWLETT TX 75089-2775 | 254. ADAM J & KRISTI L BORISON 2406 SCARLET OAK DR ROWLETT TX 75089-2774 |
| 245. RAUL J PACHECO JR 2405 SCARLET OAK DR ROWLETT TX 75089-2775 | 255. JAMES & KIM NORMAN 2410 SCARLET OAK DR ROWLETT TX 75089-2774 |
| 246. SHERRIE TAYLOR BAKER 2401 SCARLET OAK DR ROWLETT TX 75089-2775 | 256. ALICIA LOPEZ 7613 SCARLET OAK DR ROWLETT TX 75089-2776 |
| 247. RICHARD TRAN 7705 WHITECEDAR LN ROWLETT TX 75089-1606 | 257. THRESIAMMA & ABRAHAM KORAH 7609 SCARLET OAK DR ROWLETT TX 75089-2776 |
| 248. MICHAEL R & BEVERLY J CARTER 7701 WHITECEDAR LN ROWLETT TX 75089-1606 | 258. MAMIE & FREDERICK C BROOKINS PO BOX 941754 PLANO TX 75094-1754 |
| 249. DANNY LEE & PATRICIA ANN REED 7613 WHITECEDAR LN ROWLETT TX 75089-1601 | 259. RAUL E & MARIA G MAZARIEGOS 2413 KATHERINE DR ROWLETT TX 75089-7462 |
| 250. CHRISTOPHER L & MELANIE S FERRELL 7609 WHITECEDAR LN ROWLETT TX 75089-1601 | 260. MARIO & ROXANNE G RODRIGUEZ 2409 KATHERINE DR ROWLETT TX 75089-7462 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|--|---|
| 261. VIET A LE & HUONG T HOANGLE 2405 KATHERINE DR ROWLETT TX 75089-7462 | 271. NGUYEN TRANG T 7802 GLENSIDE DR ROWLETT TX 75089-2892 |
| 262. PIERRE BOULOS 3520 MARCHWOOD DR RICHARDSON TX 75082-3535 | 272. TRAN SANG 7814 DREAM MAKER WAY ROWLETT TX 75089-2880 |
| 263. HANH M TRAN 2313 KATHERINE DR ROWLETT TX 75089-7461 | 273. HOA VAN NGUYEN & LOAN VU TRAN 3601 KNIGHT DRIVE ROWLETT TX 75089-2899 |
| 264. J V SPRINGFIELD C/O MILLENNIUM MGMT GRP LLC 16250 DALLAS PKWY STE 105 DALLAS TX 75248-2622 | 274. LIBI AMBOOKEN & IMRAN KHAN 3513 KNIGHT DR ROWLETT TX 75089-2965 |
| 265. CASTLE POINT HOMEOWNERS ASSN 405 STATE HWY 121 STE A-210 LEWISVILLE TX 75067-8214 | 275. JOHN D & LINDA N MCMAHON 3613 KNIGHT DR ROWLETT TX 75089-2899 |
| 266. PHYLLIS WYRICK 103 BUCKEYE TR AUSTIN TX 78746-4417 | 276. HOA H LE & TONY NGUYEN 3701 KNIGHT DR ROWLETT TX 75089-2898 |
| 267. JONATHAN LEE & ROSKAM MAGALI 7816 GLENSIDE DR ROWLETT TX 75089-2884 | 277. MAN & KAYLY NGUYEN 3705 KNIGHT DR ROWLETT TX 75089-2898 |
| 268. ROLANDA LACHELLE MCKENZIE 7909 GLENSIDE DR ROWLETT TX 75089-2883 | 278. MINH NGUYEN 3709 KNIGHT DR ROWLETT TX 75089-2898 |
| 269. TRAN EMMY 3401 GLENVIEW WAY ROWLETT TX 75089-8906 | 279. TUAN NGOC NGUYEN & UT THI NGO 3713 KNIGHT DR ROWLETT TX 75089-2898 |
| 270. LAM & DIANE TA LY 3602 GLENVIEW WAY ROWLETT TX 75089-8908 | 280. SEQUITA MYERSCARLISLE 3805 KNIGHT Dr ROWLETT TX 75089-2897 |

PROPERTY OWNERS AND MINERAL RIGHTS OWNERS LIST (CONTINUED)

- | | |
|---|---|
| 281. THOMAS A CHAVEZ 8014 GLENSIDE DR ROWLETT TX 75089-2894 | 288. JAGJIT SINGH 7902 DREAM MAKER WAY ROWLETT TX 75089-2881 |
| 282. MARIZA G AGUILAR 8010 GLENSIDE DR ROWLETT TX 75089-2894 | 289. KIM HIEU NGUYEN 3509 KINIGHT DR ROWLETT TX 75089-2965 |
| 283. GIAU PHAN & TUOI TRAN 8006 GLENSIDE DR ROWLETT TX 75089-2894 | 290. CHUYEN LE & QUYNH TRUONG 3405 KNIGHT DR ROWLETT TX 75089-2966 |
| 284. VICTOR M GUTIERREZ JR & MARA Y GUTIERREZ 8002 GLENSIDE DR ROWLETT TX 75089-2894 | 291. VANETTA LEWIS 8005 GLENSIDE DR ROWLETT TX 75089-2883 |
| 285. NGOC P TRAN 3514 GLENVIEW WAY ROWLETT TX 75089-2855 | 292. FLOYD W CRAWFORD JR 8009 GLENSIDE DR ROWLETT TX 75089-2870 |
| 286. AN NGUYEN 7901 GLENVIEW WAY ROWLETT TX 75089-2854 | 293. SEJ ASSET MANAGEMENT & INVESTMENTS CO %7 ELEVEN INC ONE ARTS PLAZA 1722 ROUTH ST STE 1000 DALLAS TX 75201-2504 |
| 287. LINH TUYET GIANG 3819 ROSEWOOD LN SACHSE TX 75048-6131 | 294. DERRICK W & YOLANDA ALDRIDGE 7601 SUMMER HILL LN ROWLETT TX 75089-2800 |



LEGEND

| | |
|--|------------------------|
| | PERMIT BOUNDARY |
| | OLD BURN AREA |
| | 1/4 MILE NOTICE RADIUS |

ROWLETT, TEX.
 NE/4 GARLAND 15' QUADRANGLE
 32096-H5-TF-024
 1959
 PHOTOREVISED 1968 AND 1973
 DMA 6649 I NE-SERIES V882

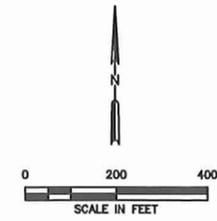
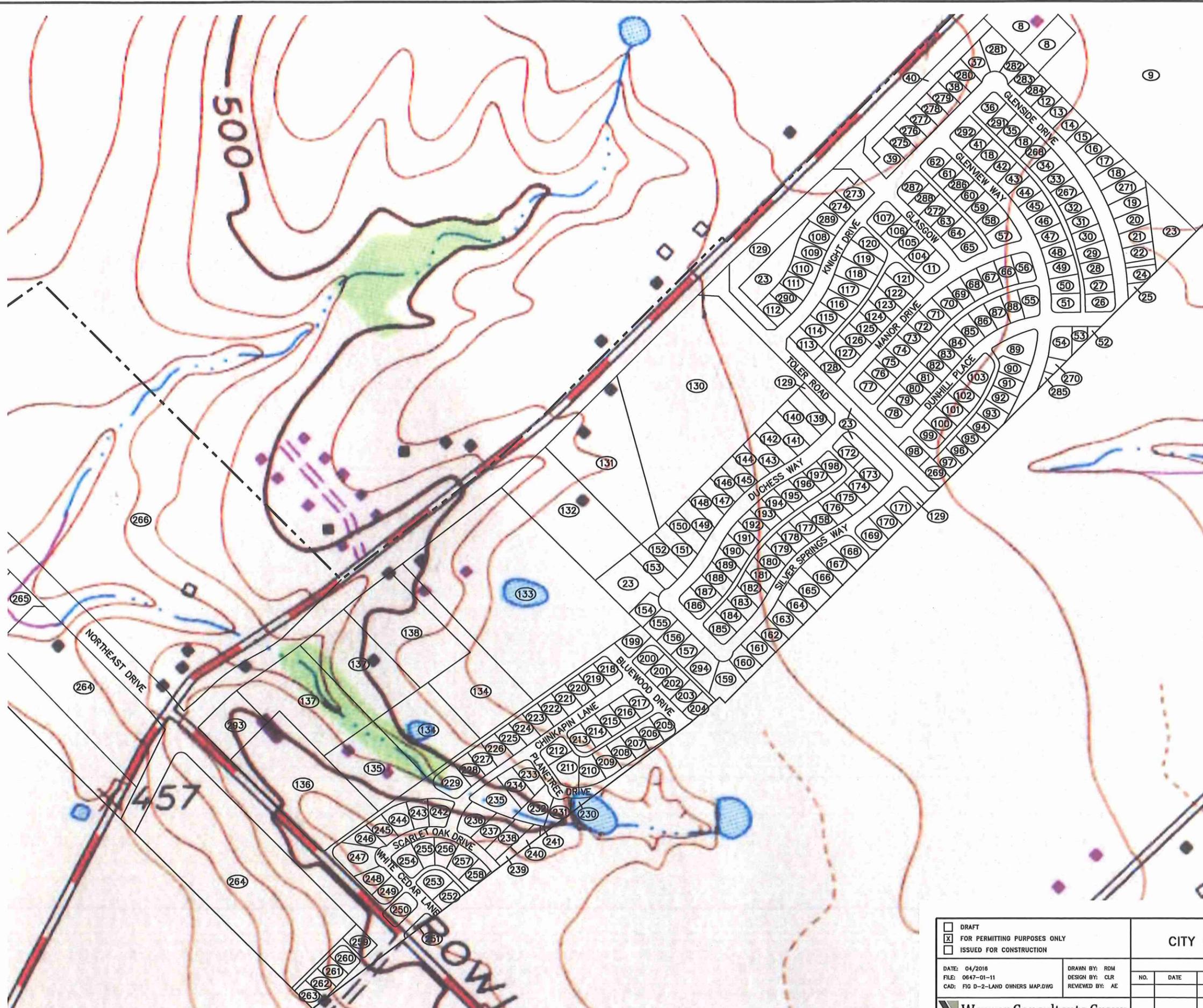
- NOTES:**
- ① REFERS TO LANDOWNERS LISTED ON LANDOWNERS LIST.
 - PROPERTY OWNERS WITHIN 1/4 MILE OF THE PERMIT BOUNDARY ARE SHOWN.
 - PROPERTY OWNERS LIST OBTAINED FROM DALLAS COUNTY APPRAISAL DISTRICT RECORDS IN JANUARY 2016.



04-06-2016

| | | |
|--|---|---|
| <input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY <input type="checkbox"/> ISSUED FOR CONSTRUCTION | PREPARED FOR | CITY OF GARLAND PERMIT MODIFICATION LAND OWNERSHIP MAP CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS |
| | DATE: 04/2016 FILE: 0647-01-11 CAD: FIG D-1-LAND OWNERS MAP.DWG | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | REVISIONS | |
| | NO. DATE DESCRIPTION | WWW.WCGRP.COM FIGURE D-1 |

O:\0647\01\NOTICE PERMIT MOD\FIGURE D-1-LAND OWNERSHIP MAP.DWG, r.morris, 1:2



LEGEND

--- PERMIT BOUNDARY

--- OLD BURN AREA

--- 1/4 MILE NOTICE RADIUS

ROWLETT, TEX.
 NE/4 GARLAND 15 QUADRANGLE
 32096-H5-TF-024
 1959
 PHOTOREVISED 1968 AND 1973
 DMA 6649 I NE-SERIES V882

- NOTES:**
- ① REFERS TO LANDOWNERS LISTED ON LANDOWNERS LIST.
 - PROPERTY OWNERS WITHIN 1/4 MILE OF THE PERMIT BOUNDARY ARE SHOWN.
 - PROPERTY OWNERS LIST OBTAINED FROM DALLAS COUNTY APPRAISAL DISTRICT RECORDS IN JANUARY 2016.

O:\0647\01\notice permit mod\figure d-2-land ownership map closeup.dwg, r.morris, 1:2

| <input type="checkbox"/> DRAFT | PREPARED FOR | CITY OF GARLAND | | | | | | | | | | | | |
|--|-----------------|--|-------------|--|--|-----|------|-------------|--|--|--|--|--|--|
| <input checked="" type="checkbox"/> FOR PERMITTING PURPOSES ONLY | | | | | | | | | | | | | | |
| <input type="checkbox"/> ISSUED FOR CONSTRUCTION | | | | | | | | | | | | | | |
| DATE: 04/2016 | DRAWN BY: RDM | <table border="1"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | REVISIONS | | | NO. | DATE | DESCRIPTION | | | | | | |
| REVISIONS | | | | | | | | | | | | | | |
| NO. | DATE | | DESCRIPTION | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| FILE: 0647-01-11 | DESIGN BY: CLR | | | | | | | | | | | | | |
| CAD: FIG D-2-LAND OWNERS MAP.DWG | REVIEWED BY: AE | | | | | | | | | | | | | |
| Weaver Consultants Group TBPE REGISTRATION NO. F-3727 | | PERMIT MODIFICATION LAND OWNERSHIP MAP CASTLE DRIVE LANDFILL DALLAS COUNTY, TEXAS WWW.WCGRP.COM | | | | | | | | | | | | |