

January 5, 2015

Mr. David Wurdlow  
Transportation Program Manager  
Houston-Galveston Area Council  
3555 Timmons, Suite 120  
Houston, TX 77027

**Re: H-GAC 2015-2018 Call for Projects Applications**

Dear Mr. Wurdlow,

Thank you for the opportunity to apply for funding through the 2015-2018 H-GAC Transportation Improvement Program Call for Projects. Included in this submission are three priority mobility projects that will greatly enhance quality of life, mobility, and access. The projects are as follows:

- Westheimer Road Pedestrian-Transit Improvements (Rockyridge Drive to Kirkwood Road)
- CenterPoint Hike & Bike Trail (Westheimer Road to Richmond Avenue)
- Walnut Bend Street Reconstruction (Westheimer Road to Westpark Drive)

These projects would be implemented in FY 2017-18 timeframe and are all either working towards a 30% level of design or beyond. As you may be aware, the Westchase District recently entered into a "380 agreement" with the City of Houston, which has allowed us to accelerate our process of engineering and designing our long-planned improvement projects. We hope that the work we have put into our projects will enhance our chances of selection within this funding round.

Additionally, we have demonstrated our ability to coordinate both TxDOT and FTA funded projects with our past participation and implementation of the TxDOT Green Ribbon Program along Beltway 8 and Westheimer. This Spring, we will be letting the Brays Bayou Connector Trail (Library Loop Phase II), an FTA funded project.

We look forward to working with H-GAC, FTA, METRO, the City of Houston, and TxDOT to implement multimodal transportation solutions that will benefit the entire region. If you have any questions on our application materials, please feel free to contact me or Irma Sanchez at 713-780-9434.

Sincerely,

  
Jim Murphy  
General Manager

BOARD OF DIRECTORS

*Chairman*  
Philip Schneidau  
BMS Management

*Vice Chairman*  
Douglas L. Elliott  
CBRE

*Secretary*  
Donna J. Flowers  
Unity National Bank

*Treasurer*  
Mark D. Taylor  
CBRE

*Assistant Secretary*  
Beth Van Winkle  
Milestone Management

*Assistant Treasurer*  
Andrew R. Lear  
Westchase Management

Greg Brooke  
TIER REIT

Brad Fricks  
Stream Realty Partners

Amy Funk  
Camden Property Trust

Harry Greenblatt  
Houston Marriott Westchase

Keith Josey  
Apache Corporation

John Kelley  
Crimson Services LLC

David J. Lee  
Transwestern Commercial Realty

Patrick Manchi  
Weingarten Realty

Mark Smith  
Jacobs Engineering

Trey Stone  
Guardian Equity Management

Martin Wiltshire  
MS Interests

**RESOLUTION AUTHORIZING THE FILING OF APPLICATIONS WITH THE HOUSTON-GALVESTON AREA COUNCIL FOR FEDERAL TRANSPORTATION ASSISTANCE AUTHORIZED BY 49 U.S.C. CHAPTER 53, TITLE 23 UNITED STATES CODE, AND OTHER FEDERAL STATUTES ADMINISTERED BY THE FEDERAL TRANSIT ADMINISTRATION AND TEXAS DEPARTMENT OF TRANSPORTATION.**

WHEREAS, Westchase Management District (the “Westchase District”) has been legally created by a special act of the Texas Legislature and is a political subdivision of the State of Texas operating pursuant to Chapter 375, Texas Local Government Code and Chapter 3801, Texas Special Districts Code;

WHEREAS, the Board of Directors of Westchase District (the “Board”) hereby finds it is in the best interest of Westchase District to pursue additional federal funds for transportation projects in Westchase District;

WHEREAS, the Houston-Galveston Area Council has been delegated authority to award Federal financial assistance for transportation projects;

WHEREAS, the grant or cooperative agreement for Federal financial assistance will impose certain obligations upon the District, and may require Westchase District to provide the local share of the project costs in the following amounts:

<b>Project</b>	<b>Scope</b>	<b>Total Cost</b>	<b>Local Share</b>
Westheimer Road (Rockyridge to Kirkwood)	Pedestrian-Transit Access Improvements (sidewalk, curb, landscaping, pedestrian lighting, ADA)	\$11,797,935	\$2,949,484 (25%)
Centerpoint Trail (Westheimer to Richmond)	Construct .62 mile hike & bike trail to AASHTO standards	\$527,000	\$131,750 (25%)
Walnut Bend (Westheimer to Westpark)	Reconstruct back of curb and roadway within the existing r-o-w. Improvements include storm water and water improvements.	\$9,134,867	\$1,826,973 (20%)

WHEREAS, Westchase District has or will provide all annual certifications and assurances to the Federal Transit Administration required for the project; and

WHEREAS, the Board is convened on this date at a regular meeting open to the public; Now, Therefore,

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF WESTCHASE MANAGEMENT DISTRICT, THAT:

Section 1: That any Vice President is authorized to execute and file an application for Federal assistance on behalf of the District with the Houston- Galveston Area Council for Federal assistance

authorized by 49 U.S.C. chapter 53, Title 23, United States Code, or other Federal statutes authorizing a project administered by the Federal Transit Administration or Texas Department of Transportation.

Section 2. That such Vice -President is authorized to execute and file with its applications the annual certifications and assurances and other documents the Houston-Galveston Area Council requires before awarding a Federal assistance grant or cooperative agreement.

Section 3. That such Vice-President is authorized to execute grant and cooperative agreements with the Houston-Galveston Area Council on behalf of the District.

PASSED AND APPROVED this 8<sup>th</sup> day December, 2014.

  
\_\_\_\_\_  
Chairman, Board of Directors

ATTEST:

  
\_\_\_\_\_  
Secretary, Board of Directors

(SEAL)



# The Senate of The State of Texas

SENATOR RODNEY ELLIS  
District 13

PRESIDENT PRO TEMPORE  
1999 - 2000

COMMITTEES:

Chair, Open Government  
Natural Resources  
Transportation  
State Affairs

December 4, 2014

Mr. Alan Clark  
Director of Transportation Planning  
Houston-Galveston Area Council  
P.O. Box 22777  
Houston, TX 77027

Re: Westchase Management District TIP Submissions

Dear Mr. Clark:

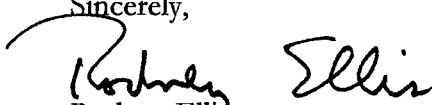
As the State Senator for District 13, I am pleased to support the Westchase Management District in their pursuit of transportation funds in the 2015-2018 Transportation Improvement Program at the Houston-Galveston Area Council. With this funding they plan to implement the following projects:

- Walnut Bend (Westpark to Westheimer)
- Westheimer (Rocky Ridge to Kirkwood)
- Centerpoint Trail (Hike and Bike)

Work for the Walnut Bend portion of the project will reconstruct the roadway and add curbs, gutters, sidewalks, landscaping, ADA ramps, and pedestrian lighting. These improvements are expected to enhance the pedestrian level of service and safety, increase transit ridership and pedestrian activity, provide potential economic benefits, and reduce auto trips and vehicle emissions. For Westheimer, work will include widening sidewalks, bringing the area into ADA compliance, and installing street furniture, bollards, pedestrian lighting, and transit stops. These upgrades are expected to improve pedestrian safety, increase transit ridership and pedestrian activity, provide potential economic benefits, and reduce auto trips and vehicle emissions. The Centerpoint portion of the project is a hike and bike trail. It will provide a new north-south connector between Westheimer and Richmond for alternative forms of transportation, and will connect to existing bikeways. This work is expected to improve safety for pedestrians and transit users, increase transit ridership and pedestrian activity, and reduce auto trips. All of these projects will serve to improve connectivity, access, and safety for pedestrians and transit users in our region.

Thank you for considering my comments, and I hope you will give this project serious consideration. If you have any questions or concerns, please feel free to contact my office at (713) 236-0306.

Sincerely,

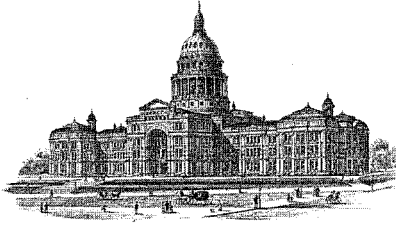
  
Rodney Ellis

Lyric Centre  
440 Louisiana, Suite 575  
Houston, Texas 77002  
(713) 236-0306  
FAX: (713) 236-0604

P.O. Box 12068  
Austin, Texas 78711  
(512) 463-0113  
FAX: (512) 463-0006  
Dial 711 For Relay Calls

2440 Texas Parkway, Suite 110  
Missouri City, Texas 77489  
(281) 261-2360  
FAX: (281) 261-4726

# TEXAS HOUSE OF REPRESENTATIVES



GENE WU  
DISTRICT 137

December 1, 2014

Mr. Alan Clark  
Director of Transportation Planning  
Houston-Galveston Area Council  
P.O. Box 22777  
Houston, TX 77027

Re: Westchase Management District TIP Submissions

Dear Mr. Clark:

As the Texas House Representative for District 137, I am pleased to support the Westchase Management District in their pursuit of transportation funds in the 2015-2018 Transportation Improvement Program at the Houston-Galveston Area Council. With this funding they plan to implement the following projects:

- Walnut Bend (Westpark to Westheimer)
- Westheimer (Rocky Ridge to Kirkwood)
- Centerpoint Trail (Hike and Bike)

Work for the Walnut Bend portion of the project will reconstruct the roadway and add curbs, gutters, sidewalks, landscaping, ADA ramps, and pedestrian lighting. These improvements are expected to enhance the pedestrian level of service and safety, increase transit ridership and pedestrian activity, provide potential economic benefits, and reduce auto trips and vehicle emissions. For Westheimer, work will include widening sidewalks, bringing the area into ADA compliance, and installing street furniture, bollards, pedestrian lighting, and transit stops. These upgrades are expected to improve pedestrian safety, increase transit ridership and pedestrian activity, provide potential economic benefits, and reduce auto trips and vehicle emissions. The Centerpoint portion of the project is a hike and bike trail. It will provide a new north-south connector between Westheimer and Richmond for alternative forms of transportation, and will connect to existing bikeways. This work is expected to improve safety for pedestrians and transit users, increase transit ridership and pedestrian activity, and reduce auto trips. All of these projects will serve to improve connectivity, access, and safety for pedestrians and transit users in our region.

Thank you for your attention in this matter. If you have any questions or concerns, please feel free to contact me at (512) 463-0492.

Sincerely,

A handwritten signature in black ink, appearing to read "Gene Wu", with a long horizontal flourish extending to the right.

Gene Wu  
The Texas House of Representatives  
District 137





# COUNCIL MEMBER OLIVER PENNINGTON

## DISTRICT G

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December 4, 2014

Mr. Alan Clark  
Director of Transportation Planning  
Houston-Galveston Area Council  
P.O. Box 22777  
Houston, TX 77027

Re: Westchase Management District TIP Submissions

Dear Mr. Clark:

As the Houston City Council Member for District G, I am pleased to support the Westchase Management District in their pursuit of transportation funds in the 2015-2018 Transportation Improvement Program at the Houston-Galveston Area Council. With this funding, they plan to implement the following projects:

- Walnut Bend (Westpark to Westheimer)
- Westheimer (Rocky Ridge to Kirkwood)
- Centerpoint Trail (Hike and Bike)

Work for the Walnut Bend portion of the project will reconstruct the roadway and add curbs, gutters, sidewalks, landscaping, ADA ramps, and pedestrian lighting. These improvements are expected to enhance the pedestrian level of service and safety, increase transit ridership and pedestrian activity, provide potential economic benefits, and reduce auto trips and vehicle emissions. For Westheimer, work will include widening sidewalks, bringing the area into ADA compliance, and installing street furniture, bollards, pedestrian lighting, and transit stops. These upgrades are expected to improve pedestrian safety, increase transit ridership and pedestrian activity, provide potential economic benefits, and reduce auto trips and vehicle emissions. The Centerpoint portion of the project is a hike and bike trail. It will provide a new north-south connector between Westheimer and Richmond for alternative forms of transportation, and will connect to existing bikeways. This work is expected to improve safety for pedestrians and transit users, increase transit ridership and pedestrian activity, and reduce auto trips. All of these projects will serve to improve connectivity, access, and safety for pedestrians and transit users in our region.

Thank you for your attention to this matter. If you have any questions or concerns, please feel free to contact my office at (832) 393-3007 or via e-mail at [districtg@houstontx.gov](mailto:districtg@houstontx.gov).

Sincerely,

A handwritten signature in cursive script that reads "Oliver Pennington".

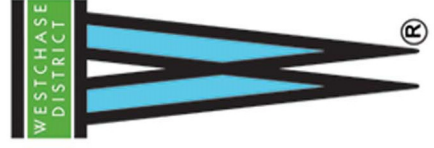
Oliver Pennington

900 Bagby, 1<sup>st</sup> Floor | Houston, TX 77002  
832.393.3007 | 832.395.9571 (fax) | [districtg@houstontx.gov](mailto:districtg@houstontx.gov)

Terry Hershey Trail



# Westchase District Proposed Hike & Bike Trail Network



Deerwood Trail  
(Proposed)

CenterPoint Trail  
(Proposed)

Library Loop Trail

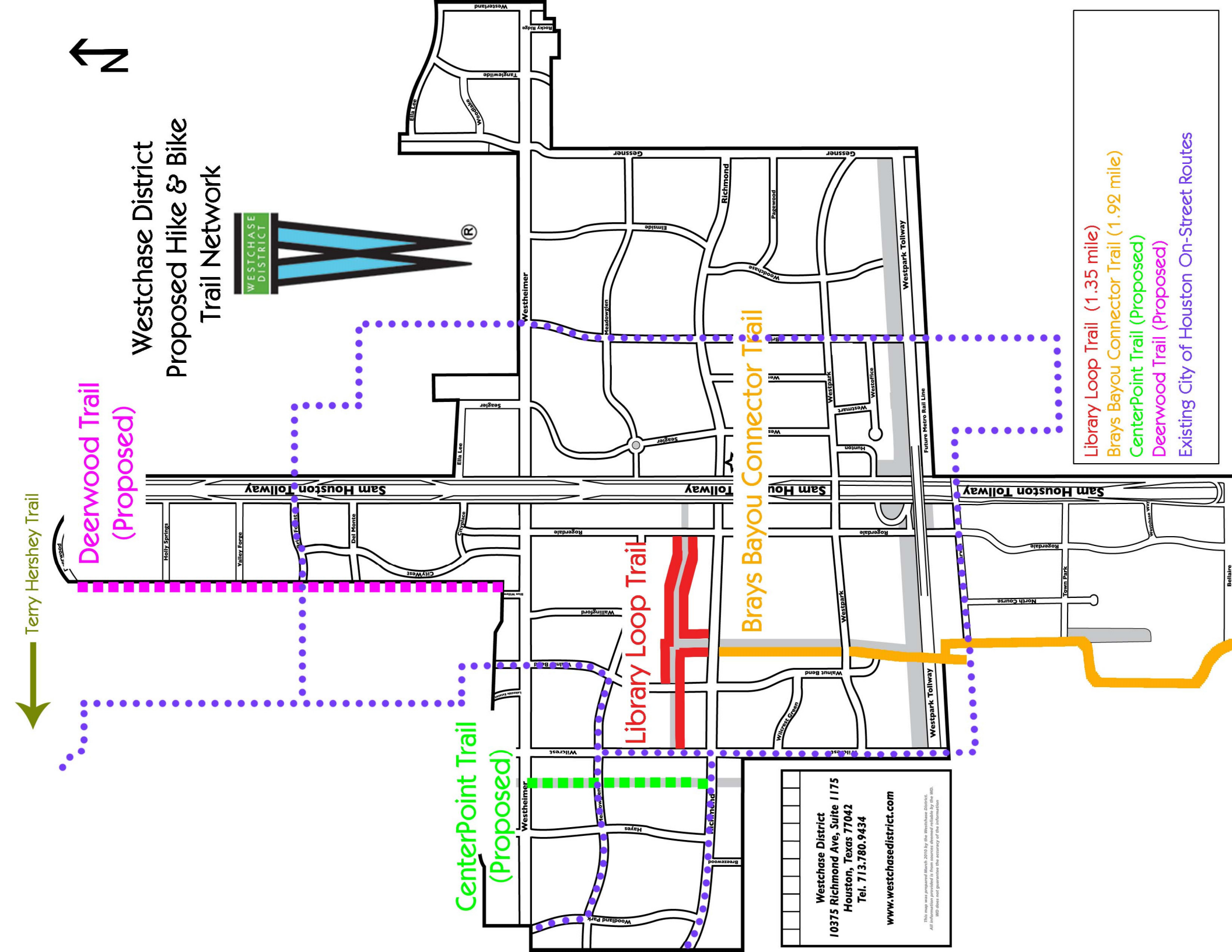
Brays Bayou Connector Trail

- Library Loop Trail (1.35 mile)
- Brays Bayou Connector Trail (1.92 mile)
- CenterPoint Trail (Proposed)
- Deerwood Trail (Proposed)

Existing City of Houston On-Street Routes

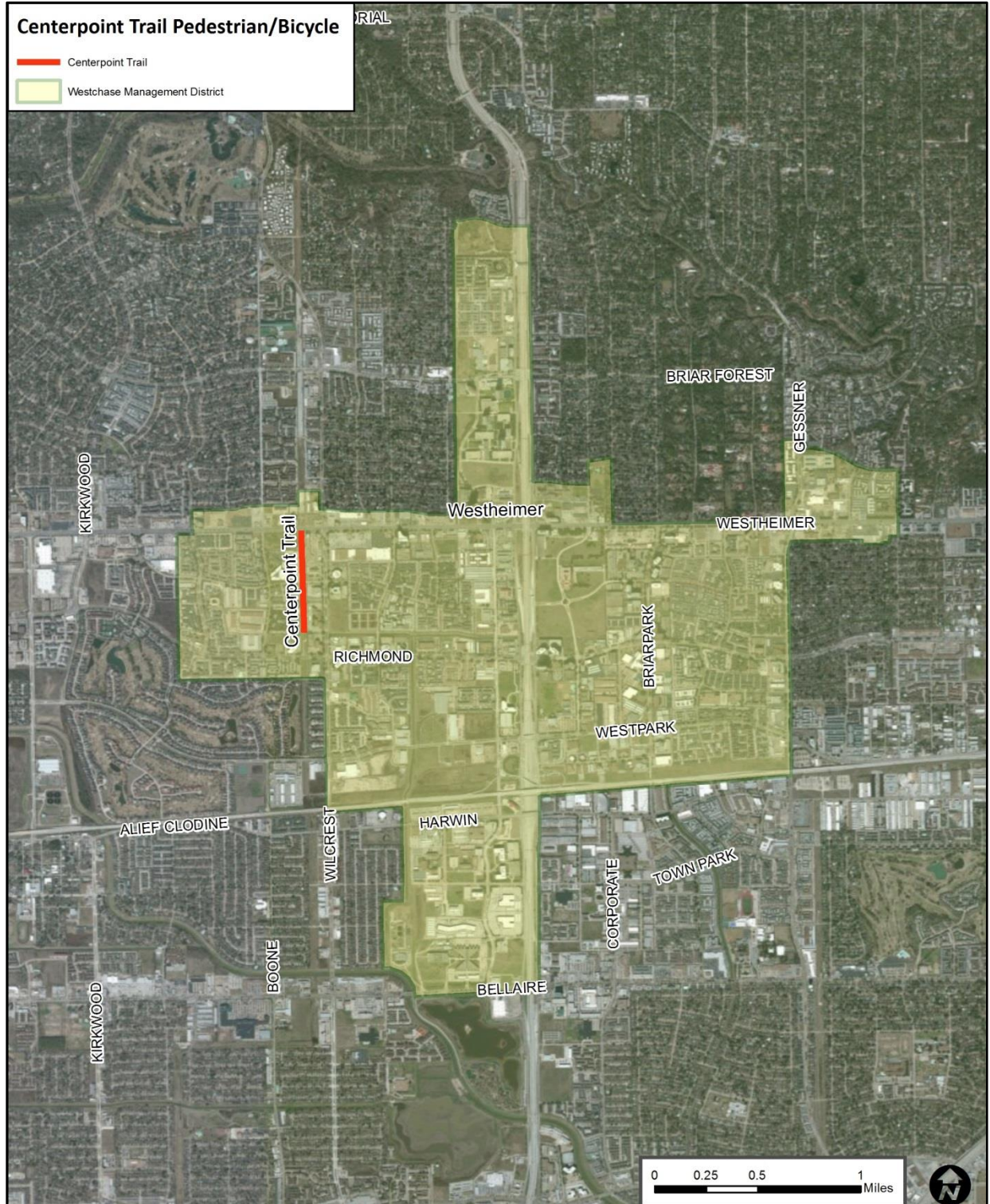
Westchase District  
10375 Richmond Ave, Suite 1175  
Houston, Texas 77042  
Tel. 713.780.9434  
[www.westchasedistrict.com](http://www.westchasedistrict.com)

This map is provided for informational purposes only. All information is provided as a service and is not intended to be used as a legal document. WPD does not guarantee the accuracy of the information.



# Center Point Hike& Bike Trail Additional Information

## Project Location Map





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## Land Use

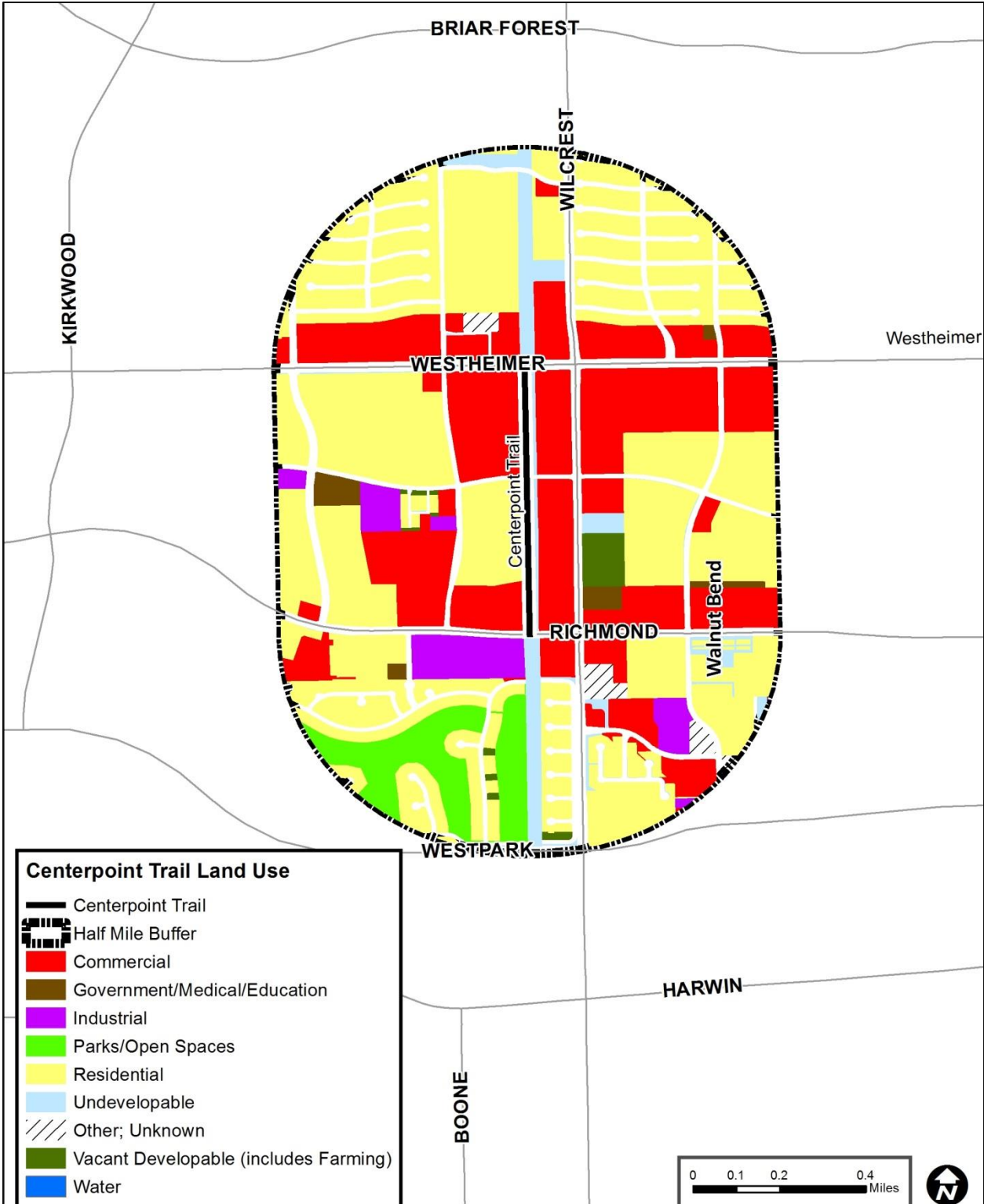
The current land use map prepared by Houston-Galveston Area Council shows that the land uses around the project corridor includes:

- Residential (single-family and multi-family)
- Commercial (retail, office space)
- Government/Medical/Education
- Industrial
- Parks and open space
- Vacant
- Other

Table 1 tabulates the total area and proportion in each land use category within half mile of the project corridor. The table shows that residential and commercial land covers almost 80 percent of the total area. The remaining 20 percent includes industrial, institutional, undeveloped and other uses.

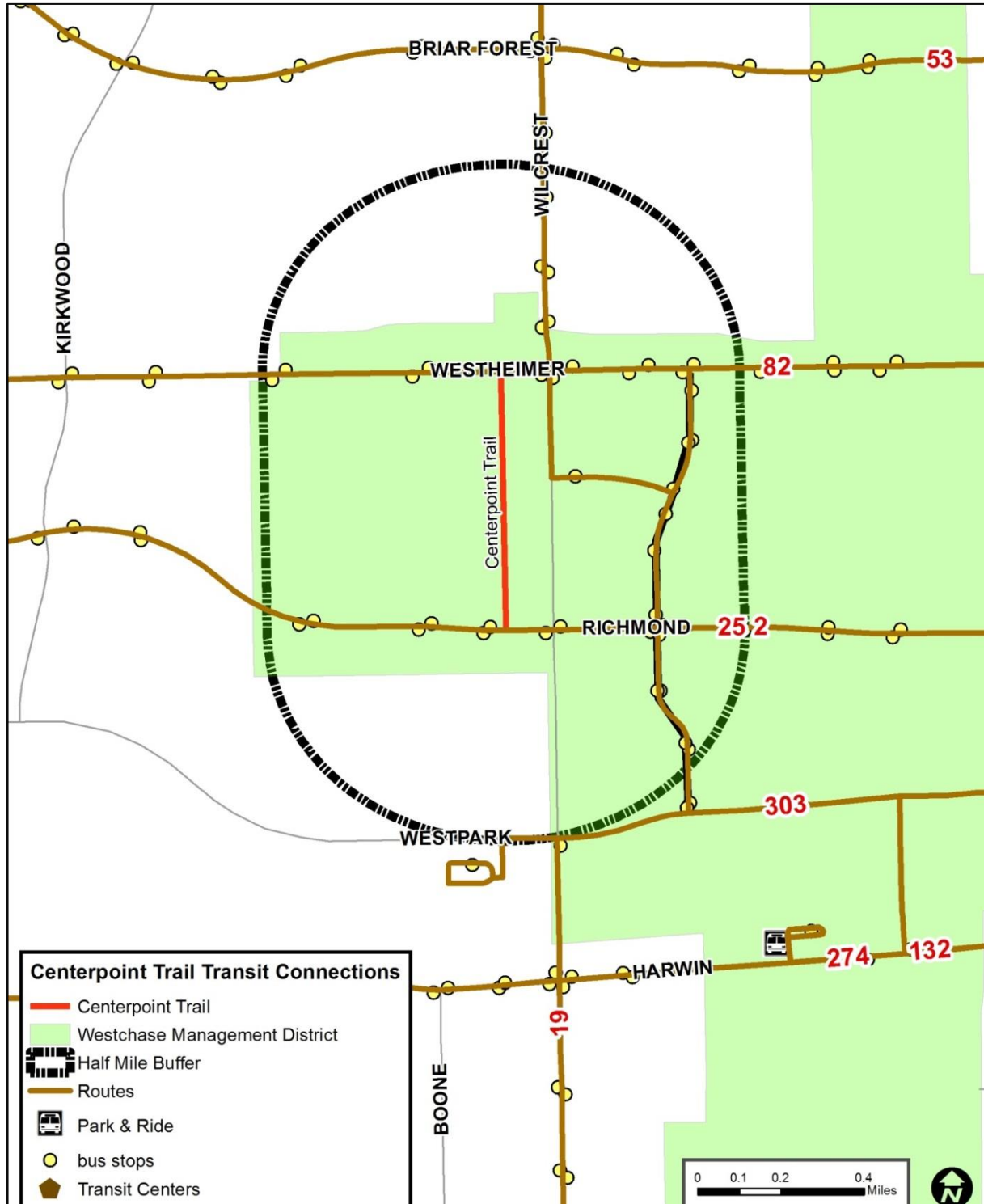
<i>Table 1 – Land Use</i>		
<i>Land Use Type</i>	<i>Acres</i>	<i>Percentage</i>
Residential	405.80	53%
Commercial	228.89	30%
Undevelopable	42.82	6%
Parks/Open Spaces	39.08	5%
Industrial	28.17	4%
Government/Medical/Education	9.59	1%
Vacant Developable (includes Farming)	8.84	1%
Other	6.02	1%
Unknown	2.00	0%
<b>Total</b>	<b>771.22</b>	

There are high-density apartments, shopping centers, grocery stores, restaurants, banks, fitness centers, and churches within half mile of the project corridor. The proposed CenterPoint Trail will provide Westchase visitors and residents with another mode of transportation to access the adjacent residences and places of business.



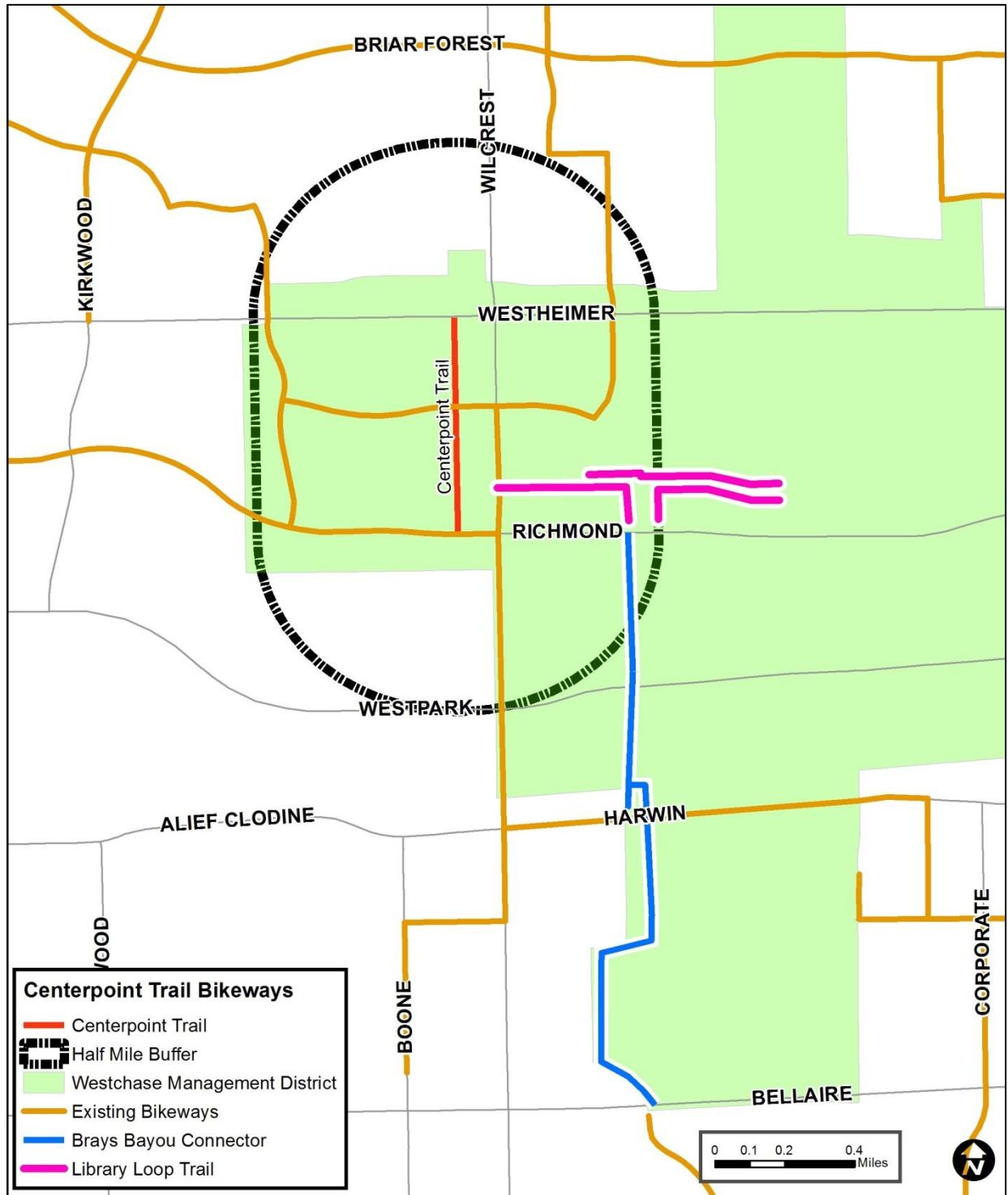
## Transit Connections

This trail will provide access to transit routes along Westheimer, Wilcrest, and Richmond. There are 42 bus stops within half mile buffer of the proposed CenterPoint Trail. The combined ridership along these bus stops is 1,735.



## Bikeways

The Centerpoint Trail will intersect existing City of Houston bikeways along Richmond and Meadowglen. The trail will also serve to extend the north/south trail connectivity of the soon to be constructed Brays Bayou Trail. The importance of introducing alternative modes of transportation has been specifically highlighted as part of the H-GAC sponsored West Houston Mobility Plan.





L103061

**LICENSE AGREEMENT FOR  
HIKE AND BIKE TRAIL**

This License Agreement ("Agreement") is made and entered into this 17th day of October, 2014, by and between **CenterPoint Energy Houston Electric, LLC**, a Texas limited liability company ("CenterPoint" or "Licensor"), and the **Westchase District**, a political subdivision of the State of Texas (the "District" or "Licensee").

**RECITALS**

WHEREAS, Licensor is the fee simple owner, easement holder, or licensee of certain real property identified and described in an approved Exhibit "A" (hereinafter referred to as the "Transmission Corridor"); and

WHEREAS, Licensor is now occupying or intends to occupy, in whole or in part, the Transmission Corridor for the purpose of erecting and maintaining across and thereon structures and facilities for or incidental to the transmission and distribution of electric energy and for other purposes; and

WHEREAS, Licensee has requested that Licensor make available the Transmission Corridor for Licensee to construct, install, operate and maintain a pedestrian and bicycle trail (hereinafter referred to as the "Hike and Bike Trail") in order for the general public to use the Transmission Corridor for recreational purposes;

WHEREAS, Licensor is willing to grant Licensee a revocable license to use the Transmission Corridor to construct, install, operate and maintain the Hike and Bike Trail on the terms and conditions set forth in this Agreement; and

WHEREAS, Licensor and Licensee desire to enter into an agreement as contemplated by Section 75.0022 of the Texas Civil Practice and Remedies Code and further desire for Licensor to enjoy to the fullest extent the liability protections afforded therein.

**NOW, THEREFORE, KNOW ALL PERSONS BY THESE PRESENTS**, that for and in the consideration of the mutual promises herein contained, the parties hereto do hereby covenant and agree as follows:

1. Revocable License. Licensor hereby grants to Licensee, and Licensee hereby accepts from Licensor, a revocable license to use the Transmission Corridor described in an approved Exhibit "A" (hereinafter referred to as the "Licensed Property") to construct, install, and maintain a Hike and Bike Trail on the Licensed Property for use by the general public for certain recreational purposes only ("License"), subject to the limitations of use set forth in (2) below. Provided further, however, that such Hike and Bike Trail shall be constructed, installed, and maintained in such a manner so as not to damage or destroy Licensor's power lines, supporting structures, and other facilities, not to interfere with the continued operation and maintenance of

Licensor's power lines, supporting structures, and other facilities, and not to interfere with Licensor's existing and future uses of the Licensed Property.

2. Limitations of Use. This License is strictly limited to the Hike and Bike Trail to be constructed, installed, and maintained within the Licensed Property. Unless otherwise agreed to by Licensor in an approved Exhibit "A," the Hike and Bike Trail shall consist of an improved surface, not to exceed ten (10) feet in width. Licensee's use is expressly limited to biking, walking, running, roller-skating, roller-blading, skateboarding and dog walking only on the surface of the Hike and Bike Trail and only during the hours from dawn to dusk each day. All other activities on the Hike and Bike Trail, including, but not limited to kite flying, recreational sports, picnicking and other recreational activities provided for under Section 75.001(3) of the Texas Civil Practice and Remedies Code, are strictly prohibited. This License does not extend to the use of any of Licensor's facilities located on the Licensed Property. The Hike and Bike Trail is expressly intended for individual recreational activities such as biking, walking, running, roller-skating, roller blading, skateboarding and dog walking. Motorcycles, all terrain vehicles or any other motorized vehicles, including motorized bicycles, are not allowed unless operated by Police, Emergency or Maintenance personnel, or as permitted under Section 6 of this Agreement. Bollards or other similar barricades shall be installed by Licensee at all vehicular access points along the Hike and Bike Trail, to the extent necessary to limit unauthorized vehicular access. It is understood that construction, installation, maintenance, operation, and/or use of the Hike and Bike Trail or any portion of the Licensed Property shall not commence, and access to such portions of the Licensed Property shall not be permitted, unless and until plans for the Hike and Bike Trail have been submitted to and approved in writing by Licensor, such plans to include a proposed Exhibit "A." All plans for the Hike and Bike Trail shall be prepared at Licensee's sole cost and expense and in conformance with the terms of this Agreement and with the specifications set forth in Exhibit "B," "Specification – CenterPoint Energy Houston Electric, LLC," #007-231-79, and with the requirements for a survey drawing set forth in Exhibit "E." In the event that the terms of Exhibit "B" or Exhibit "E" are inconsistent or conflict with the terms of this Agreement, the terms of this Agreement shall control. Licensor shall provide initial comments to Licensee's proposed plans for the Hike and Bike Trail within forty-five (45) days of receipt; provided, however, that nothing in this sentence shall limit the ability of Licensor to approve or reject Licensee's proposed plans, including any proposed Exhibit "A." Licensee further shall not place any structures, piles or debris, or change the level of the ground by excavation or mounding without Licensor's express prior written consent. No businesses, buildings, or other facilities, other than an improved Hike and Bike Trail in accordance with this Agreement shall be permitted to be installed upon the Licensed Property.

3. Term and Consideration. Subject to the provisions of Section 4, this Agreement shall be for a term of twenty (20) years (the "Initial Term") commencing on the Effective Date. Upon expiration of the Initial Term, this Agreement will automatically be renewed on the same terms and conditions, on a year-to-year basis until terminated by either party hereto as set forth in this Agreement (the Initial Term, together with any such annual renewals, is herein referred to as the "Term"). In consideration of this License, Licensee shall pay an Inspection and Review Fee every quarter, within thirty (30) calendar days of receipt of Licensor's invoice, in an amount determined by Licensor so as to recover its actual costs associated with any inspections or plan review hereunder. In determining its actual costs, Licensor shall use the hourly rate schedule set forth in Exhibit "C," as such rate schedule may be adjusted, amended or supplemented from time

to time during the Term of this Agreement. Within thirty (30) calendar days of receipt of Licensor's invoice, Licensee shall also reimburse Licensor the City of Houston impervious surface fee allocable to the Hike and Bike Trail, the ad valorem taxes allocable to the Hike and Bike Trail, and any other fee or tax assessed against Licensor on account of the Hike and Bike Trail. Upon written request from Licensee, Licensor shall provide substantiation for the charges reflected on Licensor's invoices.

4. Termination and Revocation of License. This Agreement may be terminated or temporarily suspended, in either case with respect to some or all of the Transmission Corridor, and the License revoked by providing written notice of termination to the other party in the event of any of the following:

- a. Licensor determines, in its sole discretion, that the Hike and Bike Trail interferes with the Licensor's existing and/or future uses of the Licensed Property, including, but not limited to: (i) the continued operation and maintenance of Licensor's power lines, supporting structures, and other facilities, or the facilities of Licensor's affiliates, (ii) construction or expansion of the facilities of Licensor or its affiliates, (iii) the continued operation and maintenance of third-parties' facilities, and (iv) construction or expansion of third-parties' facilities. In the event of a termination under Section 4(a), Licensor shall provide Licensee ninety (90) days written notice of termination.
- b. Licensor determines, in its sole discretion, that this Agreement or the Hike and Bike Trail interferes or conflicts with, or detracts from, Licensor's electrical transmission and distribution business, other business purposes, or the business purposes of its affiliates. In the event of a termination under Section 4(b), Licensor shall provide Licensee ninety (90) days written notice of termination.
- c. Licensor or Licensee determines, in their sole discretion, that the Hike and Bike Trail poses a hazard to the users. Licensor shall give Licensee notice of such hazard and Licensee shall have thirty (30) days to cure such hazard, or such longer time as is necessary if the hazard cannot be cured within such time period, provided that Licensee pursues such cure diligently. Licensee shall notify Licensor in writing that the cure will require more than thirty days and provide a plan to accomplish the cure, which plan must be approved by Licensor in writing to extend the cure period. Licensor may require Licensee to close the Hike and Bike Trail or a segment of such facility while the hazard is being repaired. Notwithstanding the foregoing if the hazard endangers the property or facilities of Licensor or the hazard rises to such a level that Licensor determines that the Hike and Bike Trail should be closed permanently, Licensor may terminate this License upon written notice to Licensee.
- d. Licensor determines, in its sole discretion, that Licensee or its contractors failed to comply with one of the provisions of this Agreement or defaulted in any of their obligations under this Agreement and failed to correct such default or noncompliance to the satisfaction of Licensor, in its sole discretion, within thirty (30) days after written notice from Licensor or such longer time as is necessary if



the default cannot be cured within such time period, provided that Licensee pursues such cure diligently.

- e. Licensor determines, in its sole discretion, that events beyond its control make it impossible, illegal, impractical or unreasonable for Licensor to perform under this Agreement, including, but not limited to applicable law or regulation, acts or rulings of the courts, the Public Utility Commission of Texas, or any federal, state or local agency having jurisdiction over Licensor; termination or non-renewal of the franchise granted by the City of Houston to Licensor to conduct an electric delivery business and for other business purposes; interruptions of Licensor's electrical transmission and distribution services or damage to Licensor's towers, facilities or related appurtenances; fires, epidemics, floods, storms, heavy rains, hurricanes, tornadoes, ice or hail storms; explosions, war, terrorist acts, riots, court orders, acts of superior governmental or military authority; material changes in industry practices, standards or customs; or any repeal of or amendment to Section 75.0022 of the Texas Civil Practice and Remedies Code.

Upon notice of termination, Licensee shall have the right to remove the Hike and Bike Trail, related appurtenances and other improvements made to the Licensed Property by the Licensee (collectively "the Improvements").

5. Condition upon Termination. Upon termination of this Agreement, Licensee shall surrender the Licensed Property to the Licensor in the same condition as received except for ordinary wear and tear. In addition, Licensor may require Licensee to remove the Improvements upon termination of this Agreement and restore the Licensed Property to its condition immediately prior to construction of the Hike and Bike Trail, at Licensee's expense. All Improvements not removed by Licensee shall, in Licensor's sole discretion, (i) become Licensor's property at no cost or expense to Licensor, or (ii) be removed by Licensor, in either case without further notice and without liability to Licensee. Licensee shall reimburse Licensor the cost and expense of having the Improvements removed from the Licensed Property. Licensee shall pay such amount to Licensor within thirty (30) calendar days of receipt of Licensor's invoice.

6. Safety and Security. Licensee shall be solely responsible for maintaining peace and order upon the Hike and Bike Trail and shall prevent any nuisances in or upon or connected with the Hike and Bike Trail. At its sole cost, Licensee shall be responsible for patrolling the Hike and Bike Trail for the purpose of maintaining peace and order and may utilize motorized vehicles to perform its duties under this Section. In accordance with Texas Utilities Code §251.001, prior to any construction activities, Licensee or Licensee's contractor shall contact the appropriate utility locating service to identify all underground utilities and pipelines. Licensee shall trim and maintain any vegetation approved by Licensor and installed by Licensee to ensure all areas surrounding the Hike and Bike Trail remain visible to the users of the Hike and Bike Trail. Licensee and its agents, contractors and subcontractors shall be aware of and abide by all federal, state and local rules and regulations which govern work near power lines including, but not limited to, OSHA regulations and Chapter 752 of the Texas Health and Safety Code. Licensee agrees to include a requirement in its contracts with contractors performing work under this Agreement that such contractors will be responsible for damage to Licensor's or third parties'

structures and facilities located on the Licensed Property, including, but not limited to, overhead power lines, underground pipelines, and underground fiber optics telecommunication lines, and shall promptly reimburse Licensor or third parties all reasonable costs to repair such facilities.

7. Complaints. Licensee shall be solely responsible for responding to and resolving, to Licensor's satisfaction, any complaints from homeowners, businesses or governmental entities relating to the construction, installation, operation, use, maintenance, repair, modification, removal or presence of Licensee's Hike and Bike Trail on the Licensed Property.

8. Licensor's Access. Licensor, its authorized agents, contractors, assignees or other licensees shall have the right to enter the Licensed Property at any time for any purpose for their full enjoyment and dominant use. Licensor, its agents, contractors, assignees or other licensees, retain the superior right to enter upon and fully use the Licensed Property for any purpose, including, but not limited to, inspecting, maintaining, installing, removing or replacing electrical distribution and transmission facilities and structures, PCS cell sites/telecommunication lines and equipment, pipelines, or other utilities or facilities. It is understood that from time to time entry will be necessary for inspection, maintenance, and work upon Licensor's or third-parties' facilities located upon the Licensed Property and, on such occasions, Licensor may in its sole discretion determine that it is necessary to temporarily close all or portions of the Hike and Bike Trail and prohibit the public from using same. Where reasonably practical, in its sole discretion, Licensor agrees to give notice by electronic mail to a designated representative of Licensee of planned inspection, maintenance or work by Licensor that necessitates temporary closure of more than twenty-four (24) hours of all or portions of the Hike and Bike Trail, such notice to indicate, to the extent reasonably practical, if heavy equipment is to be used in such inspection, maintenance or work by Licensor. In the event heavy equipment is used by Licensor for inspection, maintenance, or other work, Licensor will attempt to avoid or minimize damage to Licensee's facilities, where reasonably practical and in Licensor's sole discretion. Notwithstanding the foregoing, Licensor shall have no liability for any damage to Licensee's facilities. This License is not exclusive, and Licensor, its employees, agents, contractors, assignees, representatives, and others whom it may license, may for any purpose go upon the Licensed Property, make improvements upon and traverse the Licensed Property and make changes in the location of or additions to Licensor's or third-parties' facilities located thereon without payment of compensation to Licensee, and without liability for any damage to Licensee's facilities, including but not limited to, the Hike and Bike Trail and approved vegetation, or for any interruption of use of the Hike and Bike Trail.

9. Future Construction. Licensor has expressed intentions and hereby notifies Licensee of plans to build upon and expand its facilities on the Licensed Property or to allow third-parties to build or expand their facilities on or under the Licensed Property. Licensor hereby retains the right to terminate or temporarily suspend the License if and when such construction or expansion takes place. Licensor is not responsible for any repairs to the Improvements as a result of Licensor's construction or maintenance activities, or as a result of those activities conducted by contractors or another entity licensed to use said Licensed Property.

10. Existing Easement Holders, Lessees, or Other Interests. Prior to construction, installation, maintenance, and use of the Hike and Bike Trail, Licensee and its agents, contractors and subcontractors shall: (i) observe and comply with, at Licensee's sole cost and expense, all

notification requirements of Texas Utilities Code §251.001, the Underground Facility Damage Prevention and Safety Act, when working along, within, and/or near the Licensed Property, and (ii) provide written notice to any and all easement holders, lessees, fee owners, or other interests affecting the Licensed Property, with a copy of such notice to the Licensor. Licensee may have prepared at its sole cost and expense a current title report identifying the owners of all interests in the Licensed Property and all recorded encumbrances for purposes of satisfying its notification obligation under this Section; provided, however, that nothing in this sentence shall limit the obligations of Licensee elsewhere in this Section or this Agreement. Licensee and its agents, contractors and subcontractors shall comply with any and all safety codes and laws that apply when working along, within and/or near the Licensed Property, as well as with the requirements of any easement, lease, fee interest, or other interest or any other requirement affecting the Licensed Property. In like manner, prior to construction of the Hike and Bike Trail on the Licensed Property, Licensee shall obtain written consent from any easement holder, lessee, fee owner or any other party whose interest affects the Licensed Property, and shall further deliver copies of such consents to Licensor prior to commencing construction. Licensee shall be solely responsible for compliance in all respects with the requirements of any easement, lease, fee interest or other interest affecting the Licensed Property to the extent any such interest affects the Licensed Property, the License, the Hike and Bike Trail or any other right of Licensee under this Agreement.

11. Acceptance of Premises. **LICENSEE ACKNOWLEDGES AND AGREES THAT IT HAS FULLY INSPECTED THE LICENSED PROPERTY AND ACCEPTS THE LICENSED PROPERTY "AS IS," "WHERE IS" AND IN ITS PRESENT CONDITION AS SUITABLE FOR THE PURPOSES FOR WHICH IT IS LICENSED. LICENSEE SPECIFICALLY ACKNOWLEDGES THAT THE TRANSMISSION CORRIDOR IS OR MAY BE USED FOR THE TRANSMISSION AND DISTRIBUTION OF ELECTRICITY OVER HIGH VOLTAGE POWER LINES AND THAT THE TRANSMISSION AND DISTRIBUTION OF ELECTRICITY OVER SUCH LINES RESULTS IN THE EXISTENCE OF ELECTRIC AND MAGNETIC FIELDS THAT MAY EXTEND TO THE HIKE AND BIKE TRAIL AND ANY INDIVIDUALS WHO UTILIZE SUCH HIKE AND BIKE TRAIL.** Licensee shall not make or cause to be made any improvements to the Licensed Property other than as approved by Licensor in advance, in writing, and then only at the sole cost and expense of Licensee.

12. Assignment and Subletting. The License is personal to Licensee and may not be sold, transferred, assigned or sublet, except to a political subdivision, as contemplated by Section 75.0022 of the Texas Civil Practice and Remedies Code, and only with the prior written consent of Licensor, which shall not be unreasonably withheld. Any other purported transfer or assignment shall be null and void ab initio and of no force or effect. If this License is transferred by operation of law to an entity to whom Licensor does not consent, Licensor may terminate this License. It is the intention of this Agreement not to confer benefits, rights, or privileges on any person or entity other than Licensor and Licensee.

13. Construction Requirements. Licensee shall not commence construction, installation, maintenance, operation and/or use of the Hike and Bike Trail until plans for same have been approved in writing by Licensor. All construction and ongoing maintenance activities submitted to Licensor shall conform to the terms of this Agreement and the specifications attached as

Exhibit "B" to this License. In the event that the terms of Exhibit "B" are inconsistent or conflict with the terms of this Agreement, the terms of this Agreement shall control. If any mechanics' or materialmens' lien is filed against the Licensed Property for work claimed to have been undertaken for or on behalf of Licensee, whether such lien relates to the initial construction of the Hike and Bike Trail or Licensee's ongoing maintenance obligations hereunder, Licensee, at its sole cost and expense, shall discharge and obtain and record a release of any such lien within thirty (30) days of such lien being filed, or shall provide a bond for such lien in compliance with all applicable laws and deliver to Licensor evidence of such release or bond. If Licensee shall fail to obtain a release or bond for any such lien, Licensor may, at its option, discharge the same and Licensee shall reimburse Licensor for the cost thereof, together with costs and attorneys' fees, within thirty (30) days of being invoiced by Licensor.

14. Work to be Performed by Contractors. All work within the Licensed Property or under this Agreement shall be performed by Licensee's contractors and not by Licensee itself, provided such contractors have been approved by Licensor in writing in advance of the work to be performed. Any references herein to Licensee working within the Licensed Property or under this Agreement shall be construed to refer to Licensee's contractors performing such work. Licensor reserves the right, at any time, to prohibit one or more of Licensee's contractors from working if Licensor concludes, in its sole discretion, that such contractors are not qualified. Licensee shall provide evidence satisfactory to Licensor that Licensee's contractors have provided all insurance and indemnities required by this Agreement. Notwithstanding the foregoing, Licensor agrees that Licensee may use District employees to provide security as required under Section 6, but Licensor reserves the right, at any time, to prohibit Licensee from performing this work if Licensor concludes, in its sole discretion, that Licensee is not qualified to do so.

15. Maintenance of Hike and Bike Trail. Licensee, at its sole cost and expense, at all times during the term of this Agreement, agrees to maintain and keep clean to Licensor's satisfaction the area depicted on an approved Exhibit "A" (hereinafter referred to as the "Maintenance Area"), including the Hike and Bike Trail and any other improvements which may be placed or erected on the Licensed Property by Licensee. Unless otherwise indicated on an approved Exhibit "A," the Maintenance Area shall include a ten foot strip on each side of the Hike and Bike Trail. Trash, graffiti and debris removal, in addition to mowing, must be performed as often as necessary to maintain and keep clean the Maintenance Area, and whenever requested by Licensor. In the event that Licensee fails to properly maintain the Maintenance Area as provided herein, Licensor shall have the right, but not the obligation, to have such maintenance completed, and Licensee agrees to reimburse Licensor its costs and expenses for such work. Licensee shall pay such amount to Licensor within thirty (30) calendar days of receipt of Licensor's invoice.

16. Tower Protection and Liability for Damage. No self-propelled equipment shall be allowed directly beneath Licensor's lattice towers. In the event Licensee, its agents, contractors, or subcontractors damage Licensor's structures, facilities, equipment, or other property, including, but not limited to, overhead power lines, underground pipelines, and underground fiber optics telecommunication lines, Licensee agrees to reimburse Licensor its costs and expenses of necessary repairs. Licensee shall pay such amount to Licensor within thirty (30) calendar days of receipt of Licensor's invoice.

17. Vegetation. Licensee shall not plant shrubs, bushes, or any vegetation on the Licensed Property without the prior written permission of Licensor. Under no circumstances shall Licensee plant trees or other vegetation with a mature height exceeding three (3) feet above ground level or install any type of irrigation system upon said Licensed Property. Licensee shall refer to Exhibit "D," attached hereto and as may be supplemented or amended from time to time on [www.centerpointenergy.com](http://www.centerpointenergy.com), for examples of low-growing vegetation; provided, however, that nothing in this sentence shall limit or otherwise modify the requirement of the first sentence of this Section 17.

18. Water Channelization, Detention, and Drainage. Licensee shall have no water channelization, canals, detention facilities, or ditches on the Licensed Property, including but not limited to any channels, canals, detention facilities, or ditches, arising from Licensee's Hike and Bike Trail located on adjacent or nearby property. Licensee shall maintain current and natural drainage patterns or shall be responsible to design the Hike and Bike Trail so as to mitigate against such changes in drainage patterns and shall be solely responsible for the drainage of the Hike and Bike Trail and all adjoining property. Licensee shall further be responsible for obtaining, at its sole cost and expense, all necessary permits and/or approvals for the construction, installation, maintenance, operation and/or use of the Hike and Bike Trail from the Harris County or any other governmental agency of any kind having jurisdiction over the Licensed Property. Licensee shall be solely responsible for any damages to the Licensed Property and Licensor's adjoining property relating to drainage, channelization, canals, detention facilities, or ditches on the Licensed Property. All plans for mitigation of changes in drainage patterns must be approved in writing by Licensor.

19. Lighting. Licensee may, at its sole cost and expense, install and maintain adequate security and/or pedestrian lighting, along with all related appurtenances, conduits, conductors, switches and devices, along the Hike and Bike Trail. Only low profile lighting, not to exceed 6 feet in height, shall be installed by Licensee along the Hike and Bike Trail. Licensee shall address the details of its proposed lighting installation in the plans to be submitted to Licensor for approval prior to the construction, installation, maintenance, operation and/or use of the Hike and Bike Trail.

20. Signage. Licensee will be solely responsible for installing and maintaining adequate signs along the Hike and Bike Trail to address matters such as: hours of operation, prohibited activities, appropriate cautionary statements, and an acknowledgement of Licensor's ownership (where applicable) of the Licensed Property. Details concerning such signage, including the wording thereof, will be addressed in the plans to be submitted to Licensor for approval prior to the construction, installation, maintenance, operation and/or use of the Hike and Bike Trail.

21. Contractor/Subcontractor Insurance. At all times during the term of this Agreement, Licensee shall cause its contractors to procure and maintain in full force and effect, at the contractor's sole expense, insurance of the following types and amounts, written by insurance companies satisfactory to Licensor having an A.M. Best's Rating of not less than "A- VII" and authorized to do business in the State of Texas.

- a. Workers' Compensation. Licensee's contractors shall carry statutory workers' compensation insurance covering the contractor's employees in compliance with all requirements of the workers' compensation laws of the State of Texas.
- b. Employer's Liability. Licensee's contractors shall carry employer's liability insurance covering the contractor's operations and work under this Agreement or involving the Licensed Property in an amount not less than the following:

Each Accident	\$1,000,000
Each Disease Each Employee	\$1,000,000
Disease Policy Limit	\$1,000,000

- c. General Liability. Licensee's contractors shall carry general liability insurance on a form no less broad than the coverage provided by a "Commercial General Liability Insurance" form (dated 2004 or thereafter) promulgated by the Insurance Services Office, and containing language affording coverage for contractual liability, the products and completed operations hazards, broad form property damage liability, and the explosion, collapse and underground hazards, as respects all recreational use(s), operations and work hereunder, for all liability arising out of injury to or death of one or more persons, and injury to or destruction of property, in any one occurrence, in amounts not less than the following:

General Aggregate	\$ 2,000,000
Products Comp/Ops Aggregate	\$ 1,000,000
Personal & Advertising Injury	\$ 1,000,000
Each Occurrence	\$ 1,000,000

- d. Automobile Liability. Licensee's contractors shall carry commercial automobile liability insurance on a form no less broad than the coverage provided by a Business Automobile Liability Insurance form (dated 2004 or thereafter) promulgated by the Insurance Services Office, on all owned or hired autos, as well as non-owned autos, in an amount not less than \$1,000,000 (combined single limit), for all liability arising out of injury to or death of one or more persons, and injury to or destruction of property, in any one occurrence.
- e. Excess Liability. Licensee's contractors shall carry excess liability insurance that follows the form of the underlying primary liability insurance required by Sections 21(b), 21(c), and 21(d), in an amount not less than \$10,000,000 per occurrence and \$10,000,000 in the aggregate, unless lower amounts for a contractor have been agreed to in writing by Licensor prior to work by the contractor.
- f. Deductibles. Any and all deductibles, or self-insured retentions, of all insurance policies required hereunder shall be assumed by, for the account of, and at the contractor's sole risk and expense, and shall not be billed to or payable by Licensor, or its direct and indirect subsidiaries and affiliates, including limited liability companies.

- g. Additional Insureds. The insurance required by this Section shall include Licensor, including its direct and indirect subsidiaries and affiliates, including limited liability companies, as additional insureds with respect to all recreational use(s), operations, and work under this Agreement or involving the Licensed Property, as to the full limits of liability purchased by the contractor (including limits greater than the minimum limits required herein), and shall include language providing:
- i. that such insurance applies separately to each insured against whom claim is made or suit is brought; and coverage to Licensor, including its direct and indirect subsidiaries and affiliates, including limited liability companies, no less broad than one or the other of the following alternatives: (a) the coverage afforded to the named insured under the policy with respect to the recreational use(s), operations, and work under this Agreement; or (b) the coverage afforded by the combination of Insurance Services Office Endorsements' CG 20 33 07 04 (entitled "Additional Insured – Owners, Lessees or Contractors – Automatic Status When Required in Construction Agreement with You) and CG 20 37 07 04 (entitled "Additional Insured – Owners, Lessees or Contractors – Completed Operations"); and,
  - ii. that such insurance shall respond as primary insurance and shall not require contribution from any other insurance that may be maintained by Licensor, or its direct and indirect subsidiaries and affiliates, including limited liability companies; and
  - iii. that thirty (30) days written notice (except ten (10) days written notice in the case of nonpayment of premium) shall be given to Licensor prior to cancellation of or material change in the coverage.
- h. Waiver of Subrogation. The insurance required by this Section shall include full waivers of subrogation in favor of Licensor, including its direct and indirect subsidiaries and affiliates, including limited liability companies.
- i. Certificates of Insurance. Licensee shall furnish Licensor with certificates of insurance signed by contractor's insurance agent and such other endorsements or copies of policies, showing contractor's procurement of the insurance required hereunder. Each such certificate shall accurately reflect insurance in place, shall be in a form that complies with all applicable laws, rules and regulations of agencies having jurisdiction over such matters.

Attached to the certificate will be the endorsement(s) regarding indemnity of the Licensor and related entities and/or copies of the policies providing that the insurance is primary and non-contributory and contains a waiver of subrogation in favor of those parties listed in Section 21(h).

Licensee's contractors shall warrant and represent that each certificate of insurance furnished to Licensor is accurate and evidences contractor's procurement of the insurance required hereunder. Licensee's contractors shall provide Licensor with the written notice required by Section 21(i)(ii).

- j. Claims-Made Insurance. If the insurance required under this Section is procured on a form affording "claims-made" coverage, then (i) all limits stated above as "per occurrence" shall be understood to mean "per claim" or "per occurrence," as is consistent with the terms of the "claims-made" policy; and, (ii) such claims-made insurance shall not provide for a retroactive date later than the commencement of the contractor's performance under this Agreement. All insurance as required by this section shall be primary to any other insurance coverage purchased and shall be issued by an insurer authorized to do business in the State of Texas having an A. M. Best's Rating of not less than "A- VII."
- k. Reinstatement of Impaired Limits. In the event that the required aggregate limits of liability of any insurance required by this section are reduced or impaired by fifty percent (50%) or more, the contractor shall give Licensor notice of the impairment and promptly cause such impaired limits to be reinstated to the required limits.
- l. Subcontractors' Insurance. Each contractor shall cause its subcontractors, including all persons hired by the contractor who are not employees of the contractor, who perform any part of the work hereunder, to: (i) procure and maintain in full force and effect insurance of the types and amounts, and meeting the requirements described in Sections 21(a), 21(b), 21(c), 21(d) and 21(e), and (ii) comply with Sections 21(g), 21(h), 21(i), 21(j), 21(k), and 21(m).
- m. Term of Required Insurance. All terms of these insurance requirements shall survive termination of this Agreement and shall continue until thirty (30) days past the final completion of all work or operations performed under this Agreement, including the performance of any warranty work. In addition, each contractor shall maintain in full force and effect completed operations coverage under the insurance policies required by general liability and excess liability, and any "claims-made" coverage under Section 21(j), for a minimum of two (2) years after final completion of all work or operations hereunder. Each contractor shall purchase an extended reporting period, or "tail coverage," if necessary to comply with the latter requirement.
- n. No Waiver by Licensor. A contractor's failure to provide insurance as required hereunder, or failure to supply certificates of insurance that comply with Section 21(i), or the failure of Licensor to require evidence of insurance or to notify Licensee or contractor of any breach of the requirements of these provisions or deficiencies in the insurance obtained, shall not constitute a waiver by Licensor of any of the these insurance requirements, or a waiver of any other terms and conditions of this Agreement, including the contractor's and the Licensee's obligations to defend, indemnify, and hold harmless Licensor as required herein.



- o. Policy Requirements. The foregoing insurance requirements are minimum requirements intended to benefit Licensor, shall not be interpreted to limit the Licensee's or contractor's liability to Licensor in any manner whatsoever; and, are separate from and independent of Licensee's or contractor's other obligations under this Agreement, including the obligations to defend, indemnify and hold harmless Licensor.

22. Licensee Insurance. At all times during the term of this Agreement, Licensee shall procure and maintain in full force and effect, at Licensee's sole expense, insurance of the following types and amounts, written by insurance companies satisfactory to Licensor having Standard & Poor's Rating of not less than "A" and authorized to do business in the State of Texas.

- a. Workers' Compensation. Licensee shall carry statutory workers' compensation insurance covering Licensee's employees in compliance with all requirements of the workers' compensation laws of the State of Texas.
- b. Employer's Liability. Licensee shall carry employer's liability insurance covering Licensee's operations and work under this Agreement or involving the Licensed Property in an amount not less than the following:

Each Accident	\$1,000,000
Each Disease Each Employee	\$1,000,000
Disease Policy Limit	\$1,000,000

- c. General Liability. Licensee shall carry general liability insurance on a form no less broad than the coverage provided by a "Commercial General Liability Insurance" form (dated 2004 or thereafter) promulgated by the Insurance Services Office, and containing language affording coverage for contractual liability, the products and completed operations hazards, broad form property damage liability, and the explosion, collapse and underground hazards, as respects all recreational use(s), operations and work hereunder, for all liability arising out of injury to or death of one or more persons, and injury to or destruction of property, in any one occurrence, in amounts not less than the following:

General Aggregate	\$ 2,000,000
Products Comp/Ops Aggregate	\$ 1,000,000
Personal & Advertising Injury	\$ 1,000,000
Each Occurrence	\$ 1,000,000

- d. Automobile Liability. Licensee shall carry commercial automobile liability insurance on a form no less broad than the coverage provided by a Business Automobile Liability Insurance form (dated 2004 or thereafter) promulgated by the Insurance Services Office, on all owned or hired autos, as well as non-owned autos, in an amount not less than \$1,000,000 (combined single limit), for all liability arising out of injury to or death of one or more persons, and injury to or destruction of property, in any one occurrence.

- e. Excess Liability. Licensee shall carry excess liability insurance that follows the form of the underlying primary liability insurance required by Sections 22(c) and 22(d), in an amount not less than \$9,000,000 per occurrence and \$9,000,000 in the aggregate.
- f. Deductibles. Any and all deductibles, or self-insured retentions, of all insurance policies required hereunder shall be assumed by, for the account of, and at Licensee's sole risk and expense, and shall not be billed to or payable by Licensor, or its direct and indirect subsidiaries and affiliates, including limited liability companies.
- g. Additional Insureds. Licensor acknowledges that the District's insurer, the Texas Municipal League, is a Texas local government insurance pool that by law may only insure governments like the Licensee and that Licensor cannot be named as an additional insured. If the laws and rules applicable to this insurer change to allow Licensor to be named an additional insured, then this Licensee will be required to add Licensor, including its direct and indirect subsidiaries and affiliates, including limited liability companies, as additional insureds with respect to all recreational use(s) as to the full limits of the liability purchased by Licensee (including limits greater than the minimum limits required herein). The insurance required by this Section shall include language providing:
  - i. that such insurance applies separately to each insured against whom claim is made or suit is brought; and coverage to Licensor, including its direct and indirect subsidiaries and affiliates, including limited liability companies, no less broad than one or the other of the following alternatives: (a) the coverage afforded to the named insured under the policy with respect to the recreational use(s), operations, and work under this Agreement; or (b) the coverage afforded by the combination of Insurance Services Office Endorsements' CG 20 33 07 04 (entitled "Additional Insured – Owners, Lessees or Contractors – Automatic Status When Required in Construction Agreement with You) and CG 20 37 07 04 (entitled "Additional Insured – Owners, Lessees or Contractors – Completed Operations") (if Licensor is required to include Licensor parties as additional insureds); and,
  - ii. that such insurance shall respond as primary insurance and shall not require contribution from any other insurance that may be maintained by Licensor, or its direct and indirect subsidiaries and affiliates, including limited liability companies; and
  - iii. that thirty (30) days written notice (except ten (10) days written notice in the case of nonpayment of premium) shall be given to Licensor prior to cancellation of or material change in the coverage.

- h. Waiver of Subrogation. The insurance required by this Section shall include full waivers of subrogation in favor of Licensor, including its direct and indirect subsidiaries and affiliates, including limited liability companies.
- i. Certificates of Insurance. Licensee shall furnish Licensor with certificates of insurance signed by Licensee's insurance agent and such other endorsements or copies of policies, showing Licensee's procurement of the insurance required hereunder. Each such certificate shall accurately reflect insurance in place, shall be in a form that complies with all applicable laws, rules and regulations of agencies having jurisdiction over such matters.

Attached to the certificate will be the endorsement(s) regarding indemnity of the Licensor and related entities and/or copies of the policies providing that the insurance is primary and non-contributory and contains a waiver of subrogation in favor of those parties listed in Section 22(h).

Licensee warrants and represents that each certificate of insurance furnished to Licensor is accurate and evidences Licensee's procurement of the insurance required hereunder.

- j. Claims-Made Insurance. If the insurance required under this Section is procured on a form affording "claims-made" coverage, then (i) all limits stated above as "per occurrence" shall be understood to mean "per claim" or "per occurrence," as is consistent with the terms of the "claims-made" policy; and, (ii) such claims-made insurance shall not provide for a retroactive date later than the commencement of the contractor's performance under this Agreement. All insurance as required by this section shall be primary to any other insurance coverage purchased.
- k. Reinstatement of Impaired Limits. In the event that the required aggregate limits of liability of any insurance required by this section are reduced or impaired by fifty percent (50%) or more, Licensee shall give Licensor notice of the impairment and promptly cause such impaired limits to be reinstated to the required limits.
- l. Term of Required Insurance. All terms of these insurance requirements shall survive termination of this Agreement and shall continue until thirty (30) days past the final completion of all work or operations performed under this Agreement, including the performance of any warranty work. In addition, Licensee shall maintain in full force and effect completed operations coverage under the insurance policies required by general liability and excess liability, and any "claims-made" coverage under Section 22(j), for a minimum of two (2) years after final completion of all work or operations hereunder. Licensee shall purchase an extended reporting period, or "tail coverage," if necessary to comply with the latter requirement.

- m. No Waiver by Licensor. Licensee's failure to provide insurance as required hereunder, or failure to supply certificates of insurance that comply with Section 22(i), or the failure of Licensor to require evidence of insurance or to notify Licensee of any breach of the requirements of these provisions or deficiencies in the insurance obtained, shall not constitute a waiver by Licensor of any of the these insurance requirements, or a waiver of any other terms and conditions of this Agreement, including Licensee's obligations to defend, indemnify, and hold harmless Licensor as required herein.
- n. Policy Requirements. The foregoing insurance requirements are minimum requirements intended to benefit Licensor, shall not be interpreted to limit Licensee's liability to Licensor in any manner whatsoever; and, are separate from and independent of Licensee's other obligations under this Agreement, including the obligations to defend, indemnify and hold harmless Licensor.

**23. INDEMNITY. TO THE FULLEST EXTENT PERMITTED BY THE TEXAS TORT CLAIM ACT AND THE TEXAS CONSTITUTION, LICENSEE HEREBY BINDS ITSELF, ITS SUCCESSORS, ASSIGNS, AND AGENTS TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS LICENSOR, ITS EMPLOYEES, CONTRACTORS, SUBCONTRACTORS, AGENTS, DIRECTORS, OFFICERS, SHAREHOLDERS, AFFILIATES, SUBSIDIARIES, SUCCESSORS, ASSIGNS, AND THEIR RESPECTIVE EMPLOYEES, AGENTS, DIRECTORS, AND OFFICERS, FROM AND AGAINST ANY AND ALL LIABILITIES, DAMAGES, LOSSES, CLAIMS, DEMANDS, JUDGMENTS, COSTS, CAUSES OF ACTION, ACTIONS, AND SUITS (INCLUDING ALL COSTS THEREOF AND ATTORNEYS' FEES) OF EVERY KIND AND CHARACTER, WHICH ARISE IN FAVOR OF THE LICENSEE OR ANY THIRD PARTY (INCLUDING, BUT NOT LIMITED TO, THE GENERAL PUBLIC, PERSONNEL FURNISHED BY LICENSEE, AND LICENSEE'S CONTRACTORS AND SUBCONTRACTORS OF ANY TIER), ON ACCOUNT OF BODILY INJURY, DEATH, DAMAGE TO PROPERTY, TRESPASS, NUISANCE OR OTHER CAUSE OF ACTION ARISING OUT OF, INCIDENT TO, OR IN ANY WAY CONNECTED WITH THE CONSTRUCTION, INSTALLATION, OPERATION, USE, MAINTENANCE, REPAIR, MODIFICATION, REMOVAL OR PRESENCE OF LICENSEE'S HIKE AND BIKE TRAIL ON THE LICENSED PROPERTY OR THE GRANT OF RIGHTS TO THE LICENSEE FROM LICENSOR HEREUNDER, ALL REGARDLESS OF THE NEGLIGENCE OR FAULT OF LICENSOR, ITS EMPLOYEES, CONTRACTORS, SUBCONTRACTORS, AGENTS, DIRECTORS, OFFICERS, AFFILIATES, SHAREHOLDERS, SUBSIDIARIES, SUCCESSORS AND ASSIGNS, AND EVEN AS A RESULT OF THE JOINT, CONTRIBUTORY, COMPARATIVE, CONCURRENT, OR SOLE NEGLIGENCE OR FAULT OF LICENSOR, ITS EMPLOYEES, CONTRACTORS, SUBCONTRACTORS, AGENTS, DIRECTORS, OFFICERS, AFFILIATES, SHAREHOLDERS, SUBSIDIARIES, SUCCESSORS AND ASSIGNS.**

**NOTWITHSTANDING THE FOREGOING, THE PARTIES AGREE THAT LICENSEE SHALL SATISFY ITS OBLIGATION TO DEFEND LICENSOR BY: (i) PAYING THE ATTORNEYS' FEES, EXPENSES AND COSTS OF COUNSEL SELECTED BY LICENSOR; (ii) PAYING THE ATTORNEYS' FEES, EXPENSES AND**

COSTS OF COUNSEL SELECTED BY LICENSEE TO DEFEND LICENSOR, PROVIDED THAT LICENSOR CONSENTS IN ITS SOLE DISCRETION IN WRITING TO SUCH REPRESENTATION; OR (iii) PROCURING INSURANCE COVERAGE, IF AVAILABLE, TO PAY THE ATTORNEYS' FEES, EXPENSES AND COSTS OF COUNSEL SELECTED BY LICENSOR, PROVIDED THAT LICENSOR CONFIRMS IN WRITING ITS SATISFACTION IN ITS SOLE DISCRETION WITH SUCH INSURANCE COVERAGE AND FURTHER PROVIDED THAT LICENSEE SHALL REMAIN LIABLE HEREUNDER FOR ANY DEDUCTIBLE AND FOR ANY COSTS NOT COVERED BY SUCH INSURANCE.

24. **CONTRACTOR'S INDEMNITY.** Licensee shall require the following indemnity provision in the contracts between Licensee and all contractors performing work under this Agreement or on the Licensed Property:

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR HEREBY BINDS ITSELF, ITS SUCCESSORS, ASSIGNS, AND AGENTS TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC, ITS CORPORATE AFFILIATES AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS, FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, CAUSES OF ACTION, SUITS OR OTHER LITIGATION (INCLUDING ALL COSTS THEREOF AND ATTORNEYS' FEES) OF EVERY KIND AND CHARACTER ARISING IN FAVOR OF CONTRACTOR OR ANY THIRD PARTY (INCLUDING, BUT NOT LIMITED TO, PERSONNEL FURNISHED BY CONTRACTOR OR ITS SUPPLIERS AND SUBCONTRACTORS OF ANY TIER) ON ACCOUNT OF BODILY INJURY, DEATH, DAMAGE TO PROPERTY, TRESPASS, NUISANCE OR OTHER CAUSE OF ACTION IN ANY WAY OCCURRING, INCIDENT TO, ARISING OUT OF OR IN CONNECTION WITH THE WORK PERFORMED OR TO BE PERFORMED HEREUNDER OR OCCURRING, INCIDENT TO, ARISING OUT OF OR IN CONNECTION WITH THE PRESENCE OF CONTRACTOR PERSONNEL, AGENTS, SUPPLIERS AND SUBCONTRACTORS (AND THEIR RESPECTIVE PERSONNEL) ON THE LICENSED PROPERTY, ALL REGARDLESS OF WHETHER SUCH INJURY, DEATH OR DAMAGE IS CAUSED BY THE JOINT, CONCURRENT, CONTRIBUTING, COMPARATIVE, OR SOLE NEGLIGENCE OR FAULT OF CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC, ITS CORPORATE AFFILIATES, OR THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES OR AGENTS.

25. **LIMITED LIABILITY.** AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, LICENSEE AGREES THAT LICENSOR, ITS ASSIGNEES, OR OTHER LICENSEES SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES DONE TO THE LICENSED PROPERTY OR HIKE AND BIKE TRAIL AND RELATED APPURTENANCES ON THE LICENSED PROPERTY, AND, AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, LICENSEE HEREBY RELEASES ALL SUCH CLAIMS THAT IT HAS NOW, OR MAY HAVE IN THE FUTURE FOR SUCH DAMAGES. IN NO EVENT SHALL LICENSOR OR ITS PARENT CORPORATION, SUBSIDIARIES, AFFILIATES, OFFICERS, DIRECTORS, EMPLOYEES, OR ANY

**COMBINATION OF THEM, BE LIABLE (IN CONTRACT OR IN TORT OR OTHERWISE, INCLUDING NEGLIGENCE, GROSS NEGLIGENCE, AND STRICT LIABILITY) TO LICENSEE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES, RESULTING FROM LICENSOR'S PERFORMANCE, NON-PERFORMANCE, OR DELAY IN PERFORMANCE.**

26. No Real Property Interests; Limitations on Rights. Licensee acknowledges the following: (i) the License is not a right or interest in real property, and this Agreement does not confer, assign or create any right or interest in real property; (ii) Licensor makes no warranties or representations, express or implied, with respect to its title to any real property interest in the Licensed Property; (iii) the License and Licensee's rights hereunder are subject to all outstanding encumbrances to Licensor's title with respect to the Licensed Property; (iv) in each case where Licensor owns less than a fee title interest in a portion of the Licensed Property (e.g., where Licensor holds an easement or leasehold interest), Licensee's rights are limited to the rights of Licensor, and subject to the same terms, limitations and conditions as those applicable to Licensor; (v) to the extent the grant of the License is subject to the approval of any landlord, grantor under an easement, or other third party, the grant of the License is subject to obtaining such approval; and (vi) to the extent the grant of the License herein would cause a default under any applicable lease or easement of Licensor, the License shall be deemed void with respect to such lease or easement, with the same effect as if never granted.

27. Notices. All written notices required under this License must be hand delivered or sent by certified mail addressed to the proper party at the following addresses:

To Licensor: CenterPoint Energy  
P.O. Box 1700  
Houston, Texas 77251  
Attention: Manager, Surveying & Right-of-Way

To Licensee: Westchase District  
10375 Richmond, Suite 1175  
Houston, Texas 77042  
Attention: Ms. Irma Sanchez

28. Texas Law. This Agreement shall be construed under, and in accordance with, the laws of the State of Texas. Licensor reserves the right to deny access to the Licensed Property to Licensee or the general public if deemed necessary to comply with governmental laws or regulations. This License is performable in Harris County, Texas, and exclusive venue for enforcing same shall be Harris County, Texas.

29. Amendment. No amendment, modification, or alteration of the terms of this Agreement shall be binding unless it is in writing, dated subsequent to this Agreement, and duly executed by the parties hereto.

30. Exercise of Rights. No delay or omission by Licensor in exercising any right hereunder shall operate as a waiver or a forfeiture of such right.

31. Effective Date. This Agreement shall become effective following execution by Licensor and Licensee.

[Remainder of page intentionally blank.]

**LICENSEE:**

Westchase District  
By: [Signature]  
Name: Philip M. Schwetidan  
Title: Chairman  
Date: 10-2-14

**LICENSOR:**

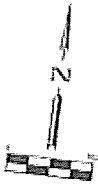
CenterPoint Energy Houston Electric, LLC  
By: [Signature]  
Name: Kerian A. Meals  
Title: Agent & Attorney in Fact  
Date: 10/17/2014

KOV



**Exhibit "A"**  
to the  
License Agreement for  
Hike and Bike Trail  
between  
CenterPoint Energy Houston Electric, LLC  
and  
Westchase District





WILCREST GREEN  
VOL. 316, PD. 74 H.C.M.R.

H.C.F.C.O. UNIT  
D124-05-02  
120' H.C.F.C.O. EASEMENT  
VOL. 2507, PG. 102 H.C.C.R.

CORPORATE CENTER  
WESTCHASE  
F.C. NO. 508260

ROGERDALE

CENTERPOINT  
CALLED 31,171 ACRES  
VOL. 1224 PG. 315 H.C.C.R.  
NO. 100' FEET STRIP

WIDE  
#12111

PROPOSED 10' WIDE  
CONCRETE TRAIL

PROPOSED 8' WIDE  
CONCRETE TRAIL

Office  
#12111

Office  
#12111  
F.C. NO. 1224442, 11  
V.L. 201602010

WIDE  
#12111  
F.C. NO. 1224442, 11  
V.L. 201602010

WESTPARK TOLLWAY

N 82°55'30" E 1,004.57'

SOUTHWEST CORNER  
31.171 ACRES

GENERAL NOTES

BEARING ORIENTATION AND COORDINATES ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE. RAC-83 AND NAD ESTABLISHED BY GPS OBSERVATIONS TO CONVERT SURFACE DISTANCES TO GRID DISTANCES, MUSTIFY THE SURFACE DISTANCE BY A CORRECTION FACTOR OF 0.999999933.

I, Paul A. Jurek, J., a Registered Professional Land Surveyor of the State of Texas, do hereby certify to the accuracy of the information herein contained in accordance with the minimum technical standards as promulgated by the Texas Board of Professional Land Surveying.



Paul A. Jurek, J.  
Paul A. Jurek, J., P.L.S. No. 4264  
Brewer & Gay Engineers, Inc.  
10777 Westchase, Suite 400  
Houston, Texas 77042  
Telephone: (281) 252-8700

REFERENCE TO  
CENTERPOINT ENERGY INC.  
MAP NUMBER B330

**Brewer & Gay**  
Engineers, Inc.  
10777 Westchase, Suite 400, Houston, TX 77042  
Tel: 281-252-8700 Fax: 281-252-8701  
P.O. Box 10000 Houston, TX 77255

PROPOSED CONCRETE TRAIL ACROSS  
CENTERPOINT ENERGY FEE STRIP  
SITUATED IN THE  
HENRY WOODRUFF SURVEY, A-844  
CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

Scale	Sheet No.	Date	Sheet
1" = 40'	1121-CB	11/12/12	1

LEGEND

F.C. FILE CODE  
H.C.C.R. HARRIS COUNTY CLERK'S FILE  
H.C.F.C.O. HARRIS COUNTY DEED RECORDS  
H.C.M.R. HARRIS COUNTY RECORDS (LAND) DISTRICT  
NO. NUMBER HARRIS COUNTY MAP RECORDS  
PAGE PAGE  
VOLUME VOLUME

**Exhibit "B"**

to the  
License Agreement for  
Hike and Bike Trail  
between  
CenterPoint Energy Houston Electric, LLC  
and  
Westchase District

# SPECIFICATION

**CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC  
P. O. BOX 1700, HOUSTON, TEXAS 77251-1500**

## **A. CONSTRUCTION**

**Reference Drawings:**

CenterPoint Energy Transmission Standards Manual

Drawing No.: 006-203-01

006-203-02

006-203-04

006-203-07

GC3GATE

Hike and Bike Trail Specification

**Reference Specifications:**

- CenterPoint Energy #007-229-06
- Texas Health & Safety Code – Chapter 752
- Federal Regulations, Title 29, CFR 1926.651, CFR 1910.333 ASTM C76
- Texas Highway Department Standard Specifications for Construction of Highways, Streets and Bridges: Item 162, Item 164, Item 166
- American Association of State Highway and Transportation Officials (AASHTO) 17<sup>TH</sup> Edition-2002

## **B. SPECIAL AND TECHNICAL CONDITIONS, FLEXIBLE BASE ROAD AND YARD PAVING**

**REFERENCE SPECIFICATIONS:**

Texas Highway Department (THD) Item 260

a/k/a Texas Department of Transportation (TxDOT)

1972 Standards for Construction Item 264

Of Highways, Streets and Bridges Item 270

Texas Highway Department	Tex-101E-1966	ASTM C14-75
Test Methods	Tex-104E-1968	ASTM C76-75
	Tex 106E-1962	ASTM C506-75
	Tex 110 E 1968	ASTM C150-76
	Tex 114E-1965	ASTM D2487-69
	Tex 115E 1962	AWPA C1-73
	Tex-116E 1962	AWPA C2-73
		AWPA A5-76
		AWPA P8-64
		AWPA P9-73

NO.	DATE	REVISION SECTION(S) AFFECTED	BY	CH	APP
1	07/03/86	Created	RDT	RNM	REB
2	05/05/03	Revised all sections	LRS	LRS	MJP
3	02/18/08	Revised all – Split Sec. 9	LRS	LRS	MJP
4	10/20/09	Revised Sect. 4	LRS	LRS	MJP
5	01/19/12	Revised Gate & Access Widths	LRS	LRS	MJP
6	02/10/14	Overall Revision	MDL	LRS	JHD

<b>SPECIFICATION</b>			
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1.0 SCOPE

- a. This specification covers the requirements that a Grantee/Contractor shall adhere to when performing work on the property of CenterPoint Energy.
- b. At the time of this revision, the active Company Representatives for these specifications and or their successors are:

**Mr. Dennis R. Klare**  
Office 713-207-6481  
Cell 713-825-3353

**Mr. Lee R. Stoerner**  
Office 713-207-6480  
Cell 713-906-5473

**Mr. D. Scott Humble**  
Office 713-207-6747  
Cell 713-855-7836

Office Fax 713-207-4031

2.0 DEFINITIONS

- a. Company – CenterPoint Energy Houston Electric, LLC, which also may be referred to as Grantor in associated documents.
- b. Company’s Representative - The person or persons designated in the agreement to inspect the work performed on Company Property.
- c. Company’s Property - All property in which the company has an interest (easement or fee) including distribution easements, district office locations, and substations as they pertain to transmission use including towers, poles and wires, which also may be referred to as Grantor’s Property in associated documents
- d. Agreement – The written contract, letter agreement, or Document by which the company formally authorizes the use of its property by an outside party
- e. Grantee - The actual owner, developer, lessee, private person, partnership, company, corporation or governmental entity that is responsible for the maintenance and control of the facility or work authorized by the Agreement, which also may be referred to as Grantee in associated documents.
- f. Contractor – Any individual or business firm, separate from the grantee, but contracting to perform or supply part or all of the activity or facilities under the Grantee.

<b>SPECIFICATION</b>			
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- g. Subcontractor - Any individual or business firm, separate from the contractor, but contracting to perform or supply part or all of the activity or facilities under the Contractor. Any work performed by the Subcontractor and its agents or employees shall comply with the provisions of the Agreement as if they were employees of the Contractor.

**3.0 GENERAL REQUIREMENTS FOR CONSTRUCTION**

- a. The following General Requirements in this section are applicable to a Grantee/Contractor requesting permission to perform construction work on Company's Property. The Special Requirements in other sections apply in addition to these General Requirements.
- b. Any violation of the requirements contained herein shall be considered as grounds, by the Company's Representative, to stop the construction until corrective actions are taken.
- c. No work shall be performed on Saturdays, Sundays or holidays on Company's Property unless approved by the Company's Representative forty-eight (48) hours in advance.
- d. The Grantee/Contractor shall furnish to the Company's Representative access at all times to the work being done and to the premises used by the Grantee/Contractor, and shall provide every reasonable accommodation for the purpose of inspection, even to the extent of discontinuing portions of the work temporarily, or of uncovering or taking down portions of finished work.
- e. Upon project completion, the Grantee/Contractor shall return Company's Property to its original condition or better, including roads, fences, and gates.
  - The Grantee/Contractor shall grade Company's Property to a smooth finish, and all excess material shall be either removed from, or distributed on Company's Property as directed by the Company's Representative.
  - All swales, ditches, and other surface graded areas disturbed during construction shall be seeded with Bermuda grass in accordance with Texas Highway Department Item 164. Fertilizer application shall conform to Texas Highway Department Item 166 and shall have an analysis of 16-8-8.
  - All debris, vegetation or cleared materials shall be removed from Company's Property by the Grantee/Contractor, including:
    - ❖ Trash, rubble and any flammable materials.
    - ❖ Sand, concrete and construction materials.

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- ❖ Containers of any type or character for the purpose of storing trash.
- ❖ Any material defined in environmental regulations as a solid waste, regulated toxic material or hazardous material.

f. DOCUMENTATION REQUIREMENTS

- The Grantee/Contractor shall have a copy of the signed Agreement at all times at the construction site where the operation of equipment is within Company's Property. It is the Grantee's responsibility to provide a copy of this specification to the Contractor and to ensure that all the provisions in the Agreement are followed.
- Any necessary field changes or modifications to the Agreement must be approved in writing by the Company's Representative prior to construction by the Grantee/Contractor.
- It is the Grantee/Contractor's responsibility to examine all the available records and to make a field inspection of the site and Company's Property for determination of the surface conditions and surface water conditions to be encountered, and the character of equipment and facilities needed for the desired work.

g. NOTIFICATION REQUIREMENTS

- The Grantee/Contractor shall be responsible for notifying all parties having an interest in or an easement on, under or above the subject Company's Property. The construction requirements of the parties with prior rights shall be observed; however, the Company's Specification for Construction shall be adhered to as a minimum.
- The Grantee/Contractor shall notify the Company's Representative seven (7) days prior to beginning any type of work so that an inspection of Company's facilities and/or properties can be arranged. The Grantee/Contractor shall provide the name and telephone number of their representative responsible for the construction activities to coordinate a preliminary inspection. The executing party of the Agreement shall pay the repair cost for damages to Company's facilities caused by the Grantee/Contractor.
- The Grantee/Contractor shall be responsible to call the One-Call Network at "8-1-1", forty-eight (48) hours prior to construction, to locate the Company's underground fiber optics line, and/or underground distribution facilities, and/or underground transmission facilities.

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**h. DAMAGE MITIGATION REQUIREMENTS**

- Any use of land necessary by the Grantee/Contractor's operations which causes damage to property, crops, etc. shall be mitigated by the Grantee/Contractor at his expense.
- Any damage to Company's facilities or Company's Property caused by the Grantee/Contractor's operations shall be mitigated by the Grantee/Contractor at his expense.

**i. SAFETY AND EQUIPMENT REQUIREMENTS**

- It shall be the Grantee's responsibility to ensure that the Contractor be familiar with and comply with all local, state, and federal codes (i.e. Texas Health and Safety Code Chapter 752 and Federal Regulations, Title 29, CFR 1910.333, CFR 1926.1407-1411) for construction operations in close proximity to electrical power lines. The Grantee/Contractor shall comply with all applicable federal, state, and local environmental regulations concerning the loading and transportation of hazardous materials.
- The Grantee/Contractor shall take all precautions necessary, shall be responsible for the safety of the work, and shall maintain all lights, guards, barriers, barricades, signs, temporary passageways, or other protection necessary for that purpose. The work shall be carried on to completion without damage to any work or property of the Company or of others and without interference with the operation of existing machinery or equipment.
- The Grantee/Contractor shall be responsible at all times for the safety of the general public and for the protection of persons who may for any reason enter within the limits of his work and shall comply with all the laws of the State of Texas and the United States and with all valid rules and regulations now in force or hereafter adopted pursuant thereto. Effective barricades with acceptable warning and detour signs shall protect roads and highways closed to traffic. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset to sunrise. The Grantee/Contractor shall bear the entire expense and shall not be reimbursed directly or separately by the Company for providing and maintaining all necessary or required barricades, warning lights, danger signals, signs or other precautions for the protection of the work and safety of the public.

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- If at any time the Grantee/Contractor's methods, materials or equipment appear to the Company's Representative to be unsafe, inefficient or inadequate for securing the safety of the workers, the public, or any Company's facilities, he may order the Grantee/Contractor to increase his safety, efficiency and adequacy, and the Grantee/Contractor shall comply with such orders. The failure of the Company's Representative to make such demands shall not relieve the Grantee/Contractor of his obligation to secure the quality and safe conduct of the work, and the grantee/Contractor alone shall be and remain liable and responsible for the safety, efficiency and adequacy of his methods, materials, working force and equipment, irrespective of whether or not any changes are made as a result of any orders received from the Company's Representative.
- The Grantee/Contractor shall immediately remove from the job, whenever requested to do so by the Company's Representative, any person considered to be disposed or disorderly, or for any other reason unsatisfactorily complying with the requirements of this specification, and such person shall not again be employed on the work without the consent of the Company.
- The Grantee/Contractor shall not permit or suffer the introduction or the use of intoxicating liquor or narcotic drugs upon any of the grounds occupied or controlled by the Company.
- No structure of any type shall be constructed on Company's Property unless a final set of detailed drawings have been reviewed and approved by the Transmission Operations Department. Structures include but are not limited to signs, fences, paving, lighting, drainage facilities, etc. All structures of any type must be properly grounded.
- No temporary fuel tanks shall be stored on Company's Property unless prior written approval has been granted. Prior to approval, a specific location will be determined by the Company's Representative and the Grantee/Contractor. Fuel tanks within Company's Property must be adequately grounded and bermed for spill protection.
- No equipment or material shall be permitted on Company's Property at a height greater than 15 feet above natural ground elevation, unless approved by the Company's Representative. Cranes, lifts, etc. shall be blocked so that operators may not bring the boom to a greater height.
- Trenching and excavation will not be permitted within twenty (20) feet of any structure foundation or other facilities measured at ground level unless approved by the Company's Representative.

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- Excavation shall comply with CFR 1926.651. The installation of sheet piling, cribbing or other protective measures beyond the scope of CFR 1926 .651 will be required if stipulated by the Company's Representative.
- No self-propelled equipment shall be allowed directly beneath a lattice tower.

j. RIGHT OF WAY ACCESS REQUIREMENTS

- The Grantee/Contractor shall not sell, assign, or remove equipment or materials which have been installed by or which are owned by the Company and may be necessary for right-of-way access or any other activities without the written consent of the Company's Representative.
- No equipment, material, or railroad cars shall be stored on Company's Property without prior written consent.
- A minimum 20-foot wide access path along Company's Property shall be kept free of obstacles at all times to provide a passable area for the Company's equipment to travel.
- The Grantee/Contractor upon the request of the Company's Representative shall use matting on the right-of-way for temporary access on or across Company's Property.

k. DRAINAGE REQUIREMENTS

- Under no circumstances shall the natural drainage pattern of Company's Property be blocked or altered by construction. All previously existing ditches shall be re-established.
- All reinforced concrete pipes installed on Company's Property should be Class IV as specified by ASTM Specification C76 and should have a minimum of 12 inches of cover.
- All corrugated steel pipe and high density polyethylene pipe used for culverts and installed on Company's Property should be 16 gauges with 2 & 2/3" x 1/2" or 3" x 1" corrugations and have a minimum of 12 inches of cover or manufacturer's specified cover.
- The top of all manholes shall be built at final grade and must be capable of HS-20-44 loading, (A ASHTO 17th Edition-2002). All manholes must be protected with a minimum of four 6" diameter bollards made of wood or steel that are 6' long and set at least 24" in the ground with 48" above the ground.

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I. SPOILING REQUIREMENTS

- No spoiling is allowed unless written approval has been obtained.
- Spoiling, if allowed, shall be done as directed by the Company's Representative. The spoil material shall be free of concrete, asphalt, steel, wood, or any other objectionable material. Spoil material shall not be stockpiled or placed over any distribution manholes, pull holes, etc. The spoil material shall be spread in lifts not to exceed 12" and compacted as required by the Company's Representative. The end results of spoiling and grading shall yield positive drainage and flow with no ponding.
- The elevation beneath any of the Company's structures within the limits of the proposed work shall be maintained equal to or greater than the surrounding finished grade elevation. Spoil material, if approved in writing, shall not exceed a point six (6) inches below the top elevation of the concrete cap of a tower foundation. Any spoil material added beneath the tower shall be compacted to 95% density with a tamper or hand vibratory equipment and shaped to a smooth finish to provide proper drainage.

4.0 SPECIAL REQUIREMENTS FOR PIPELINES AND VALVE SITES, COMMUNICATION CABLES AND CABLE TELEVISION INSTALLATIONS

- a. Pipelines shall have a minimum cover of four (4) feet, measured from the top of the pipe to the natural ground level, unless otherwise specified in the Agreement.
- b. Pipelines to be installed within twenty (20) feet of any structure foundation shall be installed by either boring, tunneling, or other protective methods approved by the Company Representative. Where boring is performed, the hole shall not be more than one (1) inch greater than the outside diameter of the pipe and the protective coating or casing. Where tunneling is performed and column bents of concrete are used, the top of the concrete shall be a minimum of three (3) feet below ground level and the remainder of the column shall be filled and compacted at lifts not to exceed twelve (12) inches to 95% Standard Proctor density. De-watering will not be permitted unless approved by the Company's Representative.
- c. Trenches shall be backfilled, sufficiently compacted to prevent future settlement, and crowned as required by the Company's Representative. For any settlement that occurs as a result of access for the associated pipeline installation, the owner of the pipeline, upon request, shall fill or smooth the Company's right-of-way as directed.

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- d. No structure of any type shall be constructed on Company's Property unless described in detail in the formal agreement document, except for test point terminals and pipeline markers, which shall be installed in locations such that they do not create an obstruction to Company's equipment traveling within Company's Property.
- e. If at any time the pipe is abandoned, the pipe shall be removed by the pipeline owner. If the pipe cannot be removed because of possible damage to Company's facilities (tower foundation, poles, etc.), the pipeline shall be cut 20' away from each side of the Company facility and the abandoned pipe section filled with grout to prevent future caving or settling.
- f. Pipelines with a proposed location between a Company's structure and a down guy anchor or other appurtenance will be bored or tunneled unless specific approval has been granted by the Company's Representative.
- g. New or relocated pipeline occupations that are located between a lattice tower's foundations will require the Company to install "Mower Guards" (Company Drawing #006-203-07) at each tower at the expense of the requesting pipeline company.
- h. The following are additional requirements applicable to installations of valve and metering sites within Company's Property.
- No valve site or station is to be located closer than fifty (50) feet to a transmission structure or appurtenance without exclusive written consent.
  - Valve sites or stations are to be located on Company's Property such that they do not limit access along Company's Property.
  - Valve sites or stations are to have perimeter barricades or fences installed in order to prevent damage from equipment traveling along Company's Property.
  - Valve sites or stations, plus an additional three (3) feet outside the site area, shall be kept free of high grass and weeds at all times by the valve owners.
  - Valve sites or stations are to be well marked with the owner's name and telephone number to be called in cases of emergency.
  - No blow-off vents or flares are to be located on Company's Property.
  - Grounding/Anode Beds will be treated as a Valve Site, separately from the pipelines.

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i. The following are additional requirements for pipeline crossings of the Company's underground electric distribution facilities.

- The Company will furnish upon Grantee/Contractor's request any drawings of the existing underground distribution facilities.
- If a crossing is required, the pipeline shall be installed beneath the Company's underground distribution facilities. A minimum vertical clearance of eighteen (18) inches must be maintained between the Company's underground distribution facilities and any other facilities (i.e. outside pipe wall to outside concrete encasement or pipe wall).
- If a pipeline is installed parallel to the Company's underground electric distribution facilities, a minimum horizontal clearance of five (5) feet must be maintained between the Company's underground distribution facilities and any other facilities (i.e. outside pipe wall to outside concrete encasement or pipe wall).
- If the Company's concrete encased duct bank is to be exposed during the installation or maintenance of a pipeline, the Company's duct bank must be fully supported every four (4) feet.
- Upon completion of the work, Grantee shall furnish the Company with a complete set of as-built drawings. Any substitutions or changes made by the Contractor/Grantee for the purpose of fabrication or installation shall be marked by Contractor/Grantee on those drawings and accompanied by a complete revised metes and bounds or centerline description if applicable.

j. COMMUNICATION CABLES AND CABLE TELEVISION INSTALLATIONS

- Overhead cables must be approved by a Representative from the Asset Planning and Optimization Transmission Encroachment & 3rd Party Use Department, for location and maximum and minimum height requirements.
- All underground occupations must be buried with a minimum 4.0' of cover and all above ground appurtenances must be approved for location.

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**5.0 SPECIAL REQUIREMENTS FOR DRAINAGE DITCHES**

- a. Ditch side slopes along Company's Property shall be "Asphalt Mulch Seeded" with Bermuda grass in accordance with Texas Highway Department, Item 164. Application of seed shall be at the rate of forty (40) pounds per acre. Asphalt Film Spray Emulsion SS-1, CSS-1, CMS-25, or MS-2 shall be used. This spray is to be applied at the rate of 0.2 to 0.4 gallons per square yard. Fertilizer application shall conform to Texas Highway Department, Item 166 and shall have an analysis of 16-8-8 urea form.

ALTERNATE: The Grantee/Contractor may use solid "Block Sodding" on ditch side slopes in accordance with Texas Highway Department, Item 162.

- b. Cement stabilized limestone and cement stabilized sand shall conform to Company's Specification #007-229-06, attached hereto and made a part hereof.
- c. Unless specified otherwise, the Grantee/Contractor shall install, for the exclusive use of the Company, a culvert crossing for access to Company's Property with a roadway width of twenty four (24) feet. The Grantee/Contractor shall install the roadway at the location stipulated in the Agreement or as determined by the Company's Representative.
- d. Ditch design shall be such that erosion and slope stability is controlled by flat side slopes, natural vegetation, riprap or other approved methods. The side slopes of ditches shall not be steeper than 4:1.
- e. The high bank of any ditch shall not be closer than twenty four (24) feet to any structure foundation measured at ground level unless approved by the Company's Representative. The high bank of any ditch shall not be closer than three (3) feet to any wood poles or appurtenances measured at ground level unless approved by the Company's Representative. If this is not possible, the wood poles will be braced or relocated by the Company at the Grantee/Contractor's expense.

**6.0 SPECIAL REQUIREMENTS FOR STREETS, ROADS, HIKE AND BIKE TRAILS, AND PLAY GROUND EQUIPMENT**

- a. Barricades to protect the Company's structures shall be installed as required before construction of the street or road begins.
- b. Unless specified otherwise, the Grantee/Contractor shall install, for the exclusive use by the Company, a twenty four (24) foot wide drive on both sides of the street or road. The Grantee/Contractor shall install the drive at the location stipulated in the Agreement or as determined by the Company's Representative. Curb cut-outs shall be installed with a five (5) foot radius.

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- c. Adequate drainage for Company's Property shall be provided and indicated on plan and profile drawings at each street or road crossing. Installation of drainage structures and/or shaping of the adjacent property to ensure proper drainage of Company's Property shall be done at Grantee/Contractor's expense.
- d. Hike and Bike Trail minimum standards are referenced on CenterPoint Energy Transmission Standard, Hike and Bike Trails, Minimum Standards Drawings. Subject to full review and subject to change based on the field notes.
- e. PLAY GROUP EQUIPMENT or ANY RECREATION FACILITIES is prohibited within Company's Property without any exception.

**7.0 SPECIAL REQUIREMENTS FOR SPUR TRACKS**

- a. Company's structures located within twelve (12) feet of the nearest rail of the proposed rail spur shall be relocated at the spur track owner's expense. The Company's construction forces will relocate the structures.
- b. For the exclusive use of the Company, the Grantee/Contractor shall install a twenty four (24) foot wide grade crossing over the spur track in accordance with local railroad specifications. Before construction can begin, the Grantee/Contractor shall assume responsibility for the exact location of the grade crossing with respect to the Company's right-of-way line as determined by the Company's Representative. If the spur right-of-way is to be cross-fenced, a twenty four (24) foot wide gate shall be installed in each cross fence at/and parallel to the grade crossing.
- c. The top rail elevation shall not exceed four (4) feet above the natural ground elevation of the Company's right-of-way.

**8.0 SPECIAL REQUIREMENTS FOR PARKING FACILITIES**

- a. Parking lot plans showing the area to be surfaced, curbs, fences, drainage and traffic access routes as applicable must be submitted to and approved by the Company's Representative prior to the granting of the Agreement.
- b. No through roads will be allowed along Company's Property; therefore, if the parking lot has multiple entrances, the lot must be so constructed that through traffic is not possible.
- c. Company's Property requested for parking must be immediately adjacent or substantially close to the Grantee's property.

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- d. The Grantee/Contractor shall be responsible for any damage to Company's facilities. This includes all existing structures as well as future structures. Barriers will be required if the proposed parking facility or any drives associated with the parking area are closer than ten (10) feet to any transmission facility. Barriers in accordance with Company's Drawing #006-203-01, 006-203-02, or 006-203-04, attached hereto and made a part hereof, shall be installed.
- e. If fences or traffic restrictors are placed across Company's Property, the Grantee/Contractor must install a twenty four (24) foot gate in accordance with Company's Drawing #GC3GATE, attached hereto and made a part hereof, on which the Company will install a chain and lock.
- f. The Company reserves the right to enter and traverse any parking facility as required for inspection, maintenance or construction purposes and reserves the right to cancel all or part of the agreement as may be required for the installation of future facilities or maintenance of existing facilities.

**9.0 SPECIAL REQUIREMENTS FOR NURSERY OPERATIONS**

- a. Liquid fertilizer is not allowed on Company's Property.
- b. No permanent sprinkler systems are allowed on Company's Property.
- c. Only containerized trees and plants will be allowed on nursery operations and only to a maximum height of ten (10) feet.
- d. No berms or earthen mounds will be allowed.
- e. The Company is not to be held responsible for any plants that may be damaged due to emergency repair of the Company's facilities.

**10.0 SPECIAL REQUIREMENTS FOR DECORATIVE PLANTING**

- a. No plants which at maturity are taller than ten (10) feet will be approved and subject to approval on a case by case basis. No planting shall be made closer than twenty (20) feet to any Company's structure.
- b. No trees of any type will be allowed.
- c. No berms or earthen mounds will be allowed.
- d. No permanent sprinkler systems are allowed on Company's Property.
- e. Liquid fertilizer is not allowed on Company's Property.

<b>SPECIFICATION</b>			
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SPEC ID	007	231	79

- f. The Company reserves the right to have plantings removed by the Grantee/Contractor without notice. Should plantings not be removed, the Company will remove the plantings and not be liable for their replacement.
- g. Any vegetation placed within Company's Property without prior written approval may be removed by the Company. The Grantee/Contractor shall be responsible for reimbursing the Company for removal of unauthorized plantings.
- h. The Company is not to be held responsible for any decorative grass or plants that may be damaged.
- i. Grantee shall keep Company Property free of high grass, weeds, and trash within the area covered by the Agreement.

**11.0 SPECIAL REQUIREMENTS FOR PROTECTING CULTURAL RESOURCES, ARCHAEOLOGICAL SITES, AND THREATENED AND ENDANGERED PLANTS AND ANIMALS**

**a. Archaeological and historical sites**

- Known or potential archaeological or historical site(s)

- ❖ The Grantee/Contractor shall conspicuously mark the site areas in the field to ensure the areas are avoided by construction activities.
- ❖ If a site is determined to be located in a wooded area, any necessary vegetation clearing shall be done in such a manner that the root zone is not disturbed until an archaeologist has completed and investigation of the site, including removal of all artifacts. This may be accomplished by using manually operated chain saws or mechanical cutters to cut down trees at ground level and lifting them onto trucks for transport out of the right of way rather than dragging them. When archaeological work is completed, stump grinders may be used to remove the remaining portions of large trees below ground level, after which the surrounding surface can be prepared for construction. More specific procedures for avoidance or lessening of damage to sites will be decided on a site-by-site basis, or as directed by the State Historic Preservation Office.
- ❖ In certain circumstances, it may be necessary for vehicles to cross the identified archaeological/ historical areas. In such cases, loose earth fill, or other temporary ground cover, in a thickness necessary to prevent damage by the passage of vehicles over the site surface will be placed on such sites. The fill shall be a contrasting color or texture so as to allow re-establishment of the original site surface at a later date. The Grantee/Contractor shall document the placement and removal of such temporary fill.

<b>SPECIFICATION</b>			
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- Unknown archaeological or historical site(s)
  - ❖ Upon discovery of any evidence of an archaeological or historical site (e.g. accumulations of oyster shells or other seashells, pottery or pottery pieces, animal or human bones, rusted metal such as nails or cannon balls), all construction operations in the immediate vicinity shall cease. The Grantee/ Contractor shall promptly contact the Company's Representative.
  - ❖ The Company will contact qualified environmental contractors to investigate the discovered site in accordance with applicable procedures and guidelines. The area of significance will be conspicuously marked in the field so that construction activities may proceed while avoiding the site.
- Mitigation process
  - ❖ If a structure or site cannot be protected through any relocation, stabilization or restoration technique, then mitigation of the construction effects on archaeological and/or historical sites will be performed in accordance with applicable procedures and guidelines as directed by the State Historic Preservation Office.

b. Endangered or threatened plants and animals

- Known locations of species and/or their habitats
  - ❖ The company may provide the Grantee/Contractor any previously documented sites of any known endangered and threatened species that it has discovered along the construction route. Where such documentation is provided, the Grantee/Contractor shall implement any mitigating actions required by the Company.
- Unknown locations of species and/or their habitats
  - ❖ If during construction, the Grantee/Contractor discovers an endangered or threatened plant or animal species, the Grantee/Contractor shall cease all work in that immediate area. The Grantee/Contractor shall promptly notify the Company's Representative who will notify the appropriate State/Federal agencies for any required mitigating actions.

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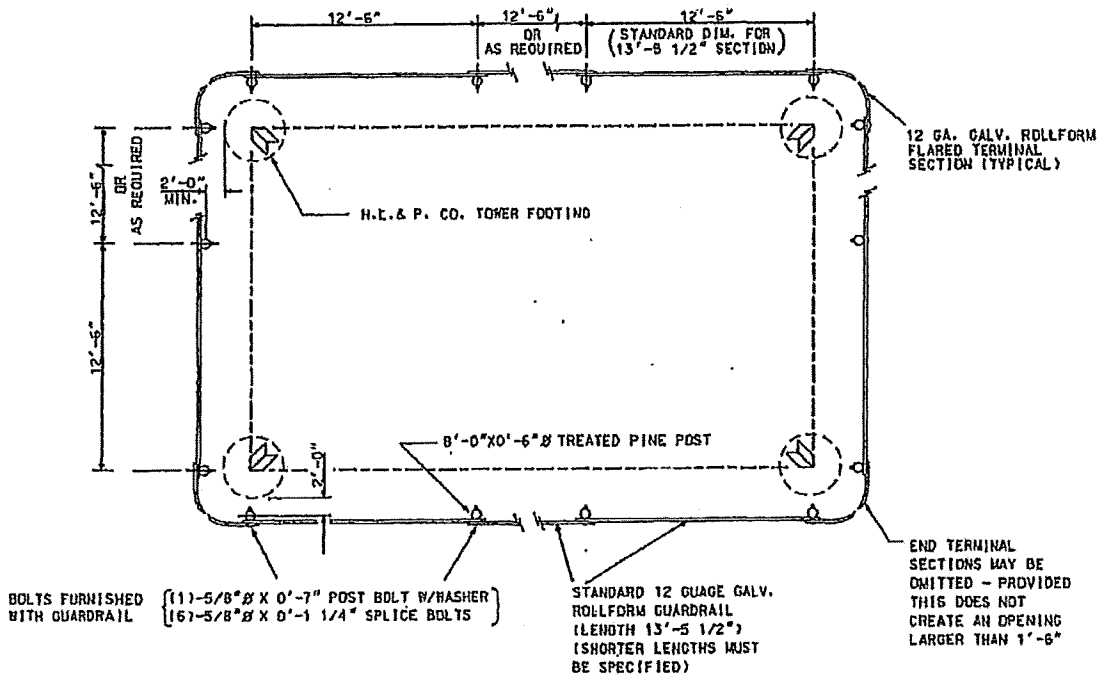
❖ If during construction, the Grantee/Contractor discovers an endangered or threatened plant or animal species, the Grantee/Contractor shall cease all work in that immediate area. The Grantee/Contractor shall promptly notify the Company's Representative who will notify the appropriate State/Federal agencies for any required mitigating actions.

• Mitigation process

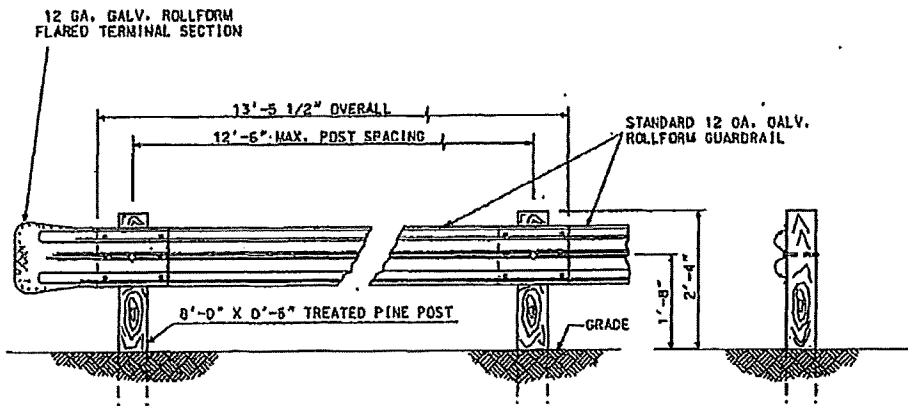
❖ Any mitigation concerning endangered and/or threatened species, applicable to the project construction, will be reviewed by the Company and communicated to the Grantee/Contractor. Only when necessary mitigation measures have been completed by the Grantee/Contractor will construction work be reinitiated

SPECIFICATION			
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**CENTERPOINT ENERGY  
TRANSMISSION STANDARD**



PLAN



ELEVATION

SIDE VIEW

SPECIFICATION			
SHEET 18 of 35 SHEETS			
SPEC ID	007	231	79

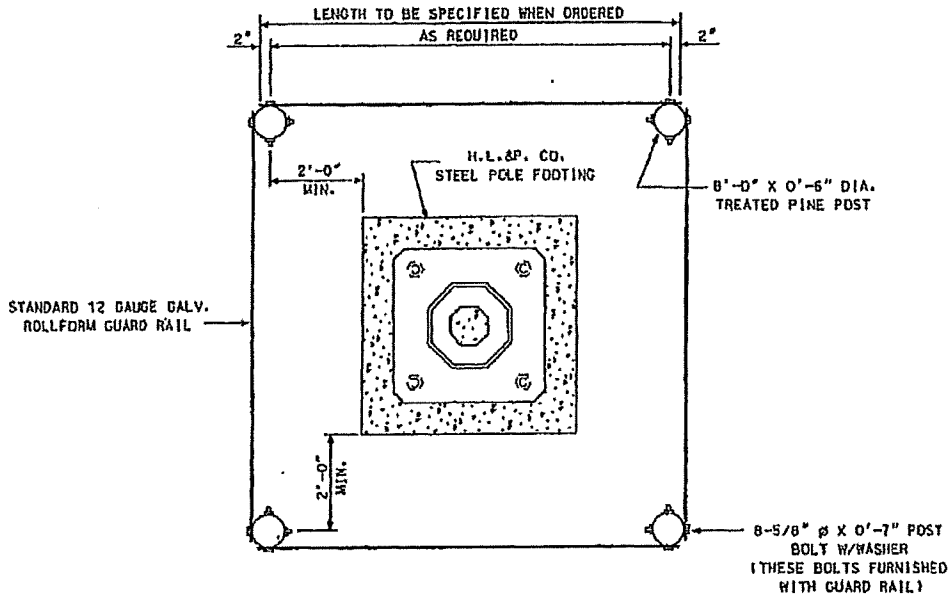
FOR USE ON HOUSTON LIGHTING AND POWER CO.  
RIGHTS-OF-WAY.

BARRIERS	
<b>TYPICAL DETAILS GALVANIZED ROLLFORM TOWER GUARD RAIL</b>	
SCALE: NTS	006-203-01

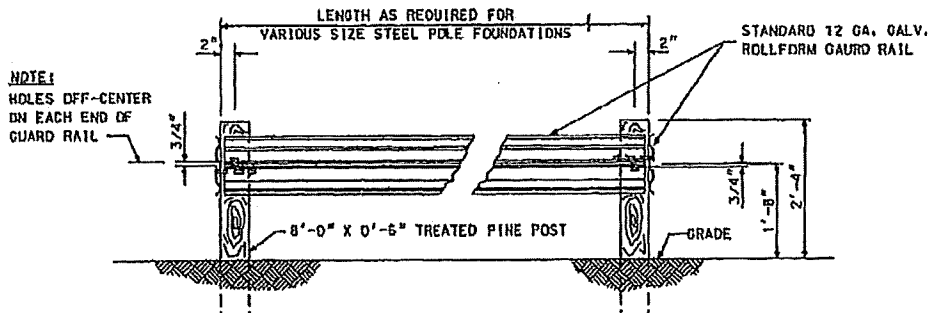
NO.	DATE	REVISION	BY	CHK	APP	APPR
1	11-18-93	CONVERT TO CAD	JMF			

DRWN	01-23-69	R. VAUGHN
CHEK	01-24-69	L.B. WIDEMAN
ENGR	01-27-69	E. TURNER

**CENTERPOINT ENERGY  
TRANSMISSION STANDARD**



PLAN



ELEVATION

SPECIFICATION			
SHEET 19 of 35 SHEETS			
SPEC ID	007	231	79

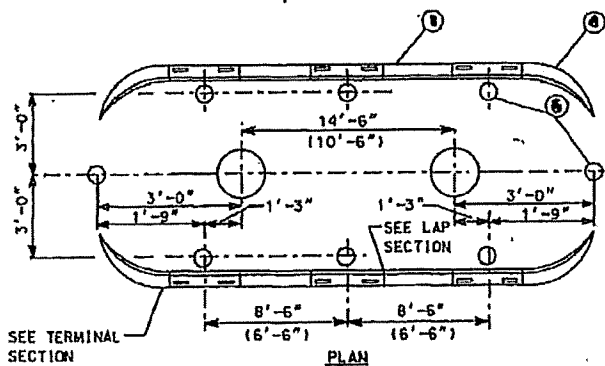
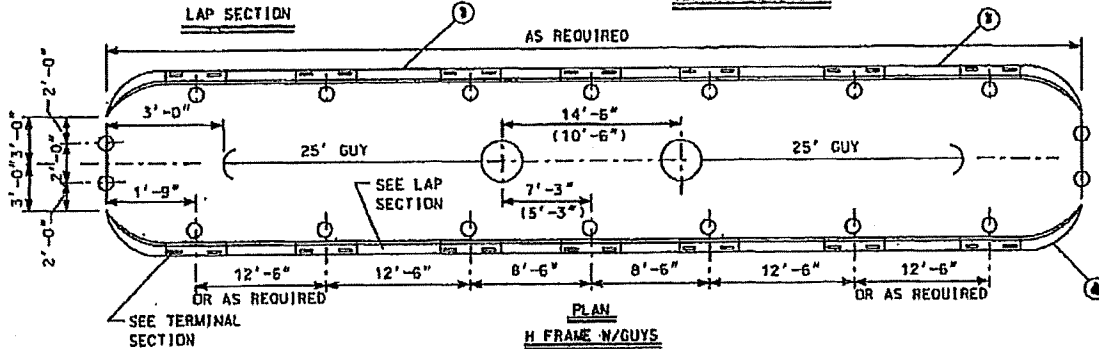
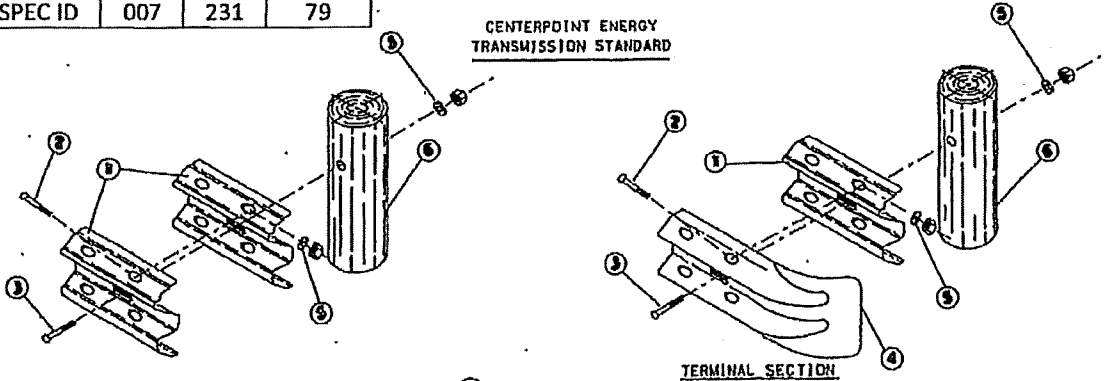
FOR USE ON HOUSTON LIGHTING AND POWER CO.  
RIGHTS-OF-WAY.

BARRIERS	
<b>TYPICAL DETAILS GALVANIZED ROLLFORM STEEL POLE GUARD RAIL</b>	
SCALE: NTS	005-203-02

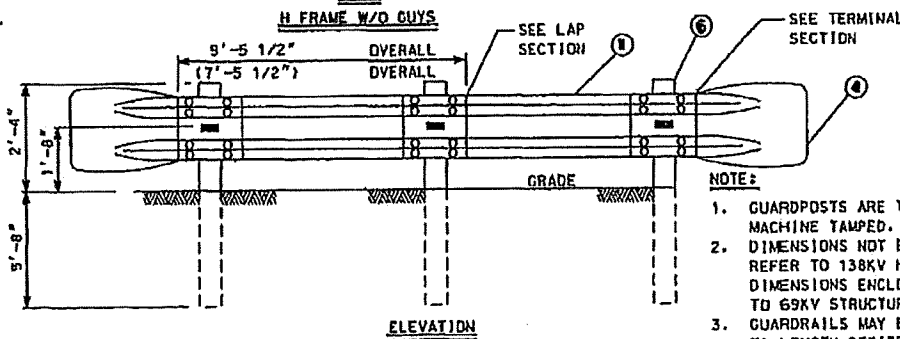
NO.	DATE	REVISION	BY	CHK	APP	DRAWN	DI-06-70	B. VAUGHN
1	11-19-93	CONVERT TO CAD	AKN			CHECK		L. B. WIDENAY
						COPR	DI-09-70	E. A. TURNER
						APPR		D. E. SIMONS

SPECIFICATION			
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SPEC ID	007	231	79

CENTERPOINT ENERGY  
TRANSMISSION STANDARD



MATERIAL LIST		
ITEM NO.	DESCRIPTION	QTY (AS REQ BY JOB)
1	GUARDRAIL (12 GA.) SEE NOTE 3	
2	BUTTON HEAD BOLT W/NUT 5/8" Ø x 9 1/4" WITH OVAL SHOULDER	
3	BUTTON HEAD BOLT W/NUT 5/8" Ø x 9 1/2" WITH OVAL SHOULDER	
4	TERMINAL SECTION	
5	WASHER FOR 5/8" Ø BOLT	
6	GUARD POST 8'-0" WITH 6" TOP DIA.	



- NOTE:
1. GUARDPOSTS ARE TO BE SET 5'-8" AND MACHINE TAMPED.
  2. DIMENSIONS NOT ENCLOSED IN PARENTHESIS REFER TO 138KV H-FRAME STRUCTURES. DIMENSIONS ENCLOSED IN PARENTHESIS REFER TO 69KV STRUCTURES.
  3. GUARDRAILS MAY BE ORDERED AND FURNISHED TO LENGTH DESIRED.

**BARRIERS**

**TYPICAL DETAILS  
GALVANIZED ROLLFORM H-FRAME  
GUARDRAIL**

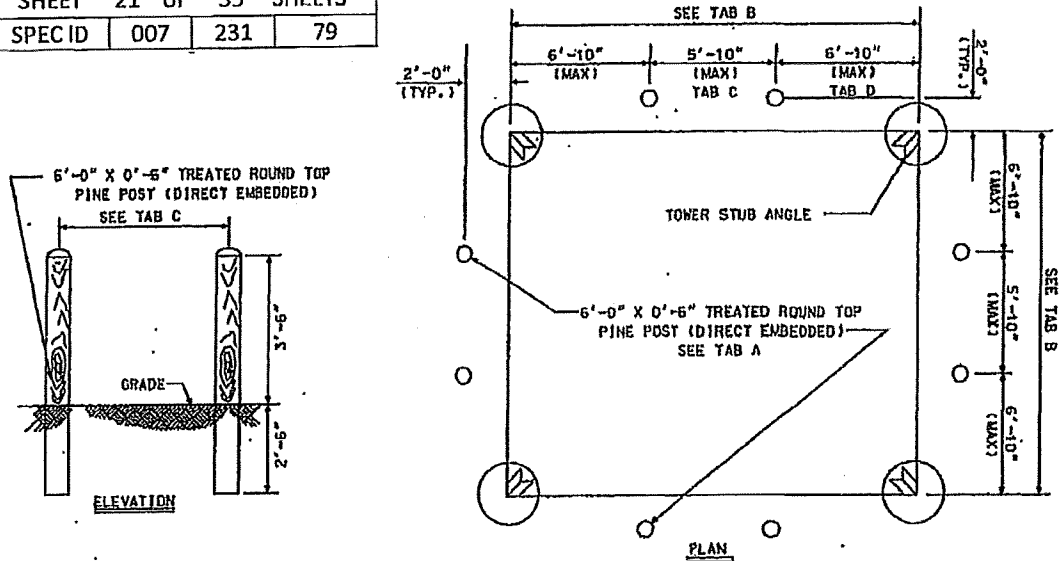
NO.	DATE	REVISION	BY	CHK	APP	APPR	11-28-72	RL BLANKENSHIP
1	11-17-93	CONVERT TO CAD	TMY				12-21-72	JW HANSON
							12-21-72	A. GUTCHSKI
							12-22-72	J.A. CAMPBELL

SCALE: NTS 006-203-04



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SPECID	007	231	79

CENTERPOINT ENERGY  
TRANSMISSION STANDARD



A	B	C	D
NO. OF BARRIERS PER SIDE	DIMENSION BETWEEN TOWER LEGS	DIMENSION BETWEEN BARRIERS	DIMENSION BETWEEN BARRIERS AND TOWER LEG
2 BARRIERS	14'-9" TO 17'-5"	4'-11" TO 5'-10"	EVENLY SPACED
	17'-6" TO 19'-6"	5'-10" (MAX)	5'-10 1/2" TO 6'-10" (MAX)
3 BARRIERS	19'-7" TO 23'-4"	4'-11" TO 5'-10"	EVENLY SPACED
	23'-5" TO 25'-4"	5'-10" (MAX)	5'-10 1/2" TO 6'-10" (MAX)
4 BARRIERS	25'-5" TO 29'-2"	5'-1" TO 5'-10"	EVENLY SPACED
	29'-3" TO 31'-2"	5'-10" (MAX)	5'-10 1/2" TO 6'-10" (MAX)
5 BARRIERS	31'-3" TO 35'-0"	5'-2" TO 5'-10"	EVENLY SPACED
	35'-1" TO 37'-0"	5'-10" (MAX)	5'-10 1/2" TO 6'-10" (MAX)
6 BARRIERS	37'-1" TO 40'-10"	5'-3 1/2" TO 5'-10"	EVENLY SPACED
	40'-11" TO 42'-10"	5'-10" (MAX)	5'-10 1/2" TO 6'-10" (MAX)
7 BARRIERS	42'-11" TO 46'-8"	5'-4 1/2" TO 5'-10"	EVENLY SPACED
	46'-9" TO 48'-8"	5'-10" (MAX)	5'-10 1/2" TO 6'-10" (MAX)

INSTRUCTIONS:

1. MEASURE DISTANCE BETWEEN TOWER LEGS AT STUB ANOLES.
2. LOCATE DIMENSION IN TAB "B".
3. DETERMINE BARRIER SPACING FROM TAB "C" AND "D". BARRIERS MAY BE SPACED EVENLY OR UP TO A MAXIMUM OF 5'-10" BETWEEN BARRIERS AND A MAXIMUM OF 6'-10" BETWEEN THE END BARRIER AND TOWER LEG.
4. BARRIERS TO BE LOCATED 2'-0" DUSIDE THE PERIMETER OF THE BASE, MEASURED FROM THE STUB ANGLE (SEE PLAN VIEW).
5. POST TO BE SET 2'-6" DEEP
6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITES BEFORE DIGGING.

LOCAL POST SUPPLIERS: SAM BASSETT LUMBER  
ADDRESS: 3839 POLK STREET  
PHONE: 713-223-9154

BARRIERS	
WOOD POST MOWER BARRIER INSTALLATION FOR TOWERS	
SCALE: NTS	006-203-07

NO.	DATE	REVISION	BY	CHK	APP	DRWNG	10-20-06	KL WHITE
						CRCK	10-20-06	RJ BUTTRICK
1	04-23-07	REVISED POST SUPPLIER	RJB	KLW	KLW	CDR	10-20-06	MD KOWUSZ
						APPR	10-20-06	MJ PAKELTIS

OC30GATE.

CENTERPOINT ENERGY  
TRANSMISSION STANDARD

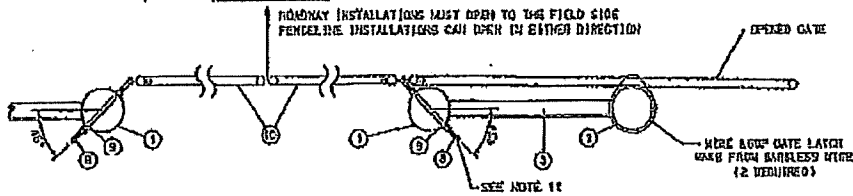
ITEM	DESCRIPTION	QTY	U	I	QUANTITY				
					GAP DATE		TIME DATE		
					NEW	REPAIR	NEW	REPAIR	
1	POST, 10" TREATED PIPE W/1"-16" TOPS	108299	EA	--	--	4	--	--	--
2	POST, 10" TREATED PIPE W/3"-6" TOPS	100100	EA	4	4	--	--	--	--
3	POST, 2" TREATED PIPE W/3" TOPS	108348	EA	4	4	2	--	--	--
4	WIRE, BARBED (2 1/2 DIA @ 1320')	142478	SP	--	--	--	--	--	--
5	WIRE, BARBED STEEL, 2 H.Y. GALV. (1320')	142477	SP	--	--	--	--	--	--
6	STAPLES, 1 1/2" GALVANIZED	137283	LD	1	1	1	--	--	--
7	NAILS, WIRE ROD GALVANIZED	237550	LD	1	1	1	--	--	--
8	RIVET, GATE HINGE, 3/4" DIA. 1/4"	110000	EA	--	--	4	2	--	--
9	WASHER, CORNER, 4"x4"x1/4", 31716" HOLE	226701	EA	--	--	4	2	--	--
10	GATE, 6-RAM W/2", GALVANIZED 12"x50"	245425	EA	--	--	2	1	--	--
11	STAY, TREATED 2", GALVANIZED	114283	EA	3	3	--	--	--	--
12	PADLOCK, US DOUBLE BALL STAINLESS STEEL, 2" BR/158	228147	EA	1	1	1	1	--	--
13	CHAIN, EDIL 1/4"	430493	FT	5	5	8	2	--	--

STRUCTURE CLASSIFICATION  
STRUCTURE TYPE

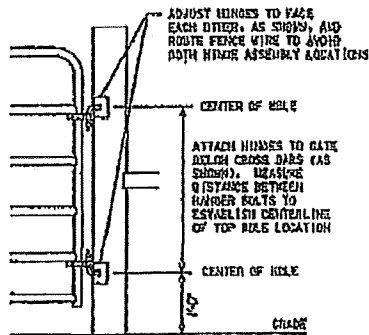
AAI KEY  
SUBSTRUCTURE CLASSIFICATION

QAYS - QAYS  
STRUCTURE TYPE  
P - GAP DATE (BARBESS WIRE)  
Q - GAP DATE (BARBESS WIRE)  
S - TISS DATE, 6-TAIL  
U - TISS DATE & HORIZONTAL BRACE REPLACEMENT ONLY

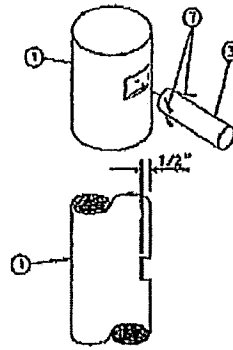
OPENING DIRECTIONS



DETAIL "A"  
POST AND GATE ATTACHMENT DETAIL



DETAIL "B"  
GATE POST HINGE ATTACHMENT DETAIL



DETAIL "C"  
HORIZONTAL WOOD BRACE DETAIL

GATES & CULVERTS

3	DESIGN	REVISION FOR NEW LOCATIONS	2/9	R.S.	DAV	REVIEW	02/03/08	PLANNING
4	DESIGN	REFLECTED FROM GATE W/ FOR DATE	1/28	R.S.	UP	CHECK	02/03/08	PLANNING
5	DESIGN	ADDED ROW TO FENCELINE PLAN	0/9	R.S.	UP	CHECK	02/03/08	PLANNING
REV.	DATE	REVISION	BY	CHK	APP	APPROV	02/03/08	PLANNING

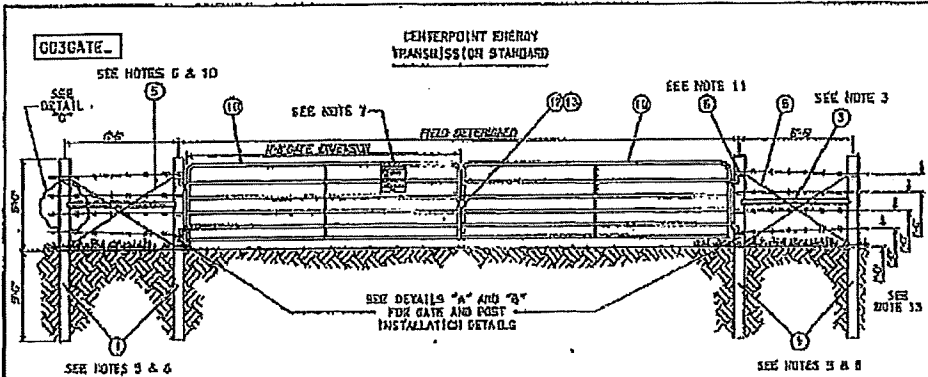
SCALE: NTS

OC30GATE

SPECIFICATION

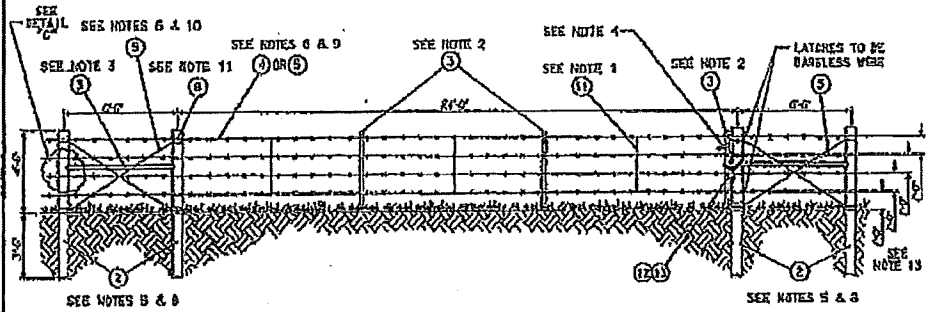
SHEET 22 of 37 SHEETS

SPEC ID 007 231 79



TYPICAL 24' DOUBLE STEEL TUBE GATE

OC30GATE 24' TUBE GATE  
 OC30GATE 12' TUBE GATE REPLACEMENT



TYPICAL 24' GAP GATE

OC30GATE 24' GAP GATE WITH BARBLESS WIRE  
 OC30GATE 24' GAP GATE WITH BARBED WIRE

NOTES:

1. 2" DIAMETER WOOD POST MAY BE SUBSTITUTED FOR STAYS (NON-STICK ITEM).
2. VERTICAL BRACE POSTS AND LATCH POSTS TO BE FABRICATED OUT OF POST FROM W/N 10000, CUT TO 4'-6".
3. HORIZONTAL BRACE POST TO BE FABRICATED OUT OF POST FROM W/N 10000, CUT TO 6'-6".
4. WOOD CHEATER TO BE FABRICATED FROM WOOD POST SHAP.
5. ALL TIMBER AND POSTS SHALL BE TREATED IN ACCORDANCE WITH ANNA SPEC. C-1, C-6, P-1 LATEST EDITION. FINAL NET DRY WEIGHT OF CROCKOTE TREATED BY ASSAY = 0 PCF.
6. ALL WIRE SHALL BE 12 1/2 GAUGE AND MUST MEET ASTM SPEC. A-181.
7. NOTICE SIGNS TO BE INSTALLED AT ALL ROADWAY INSTALLATIONS ON PROPERTY OWNED BY CENTERPOINT ENERGY. TO INSTALL NOTICE SIGN USE ASSEMBLY UNIT [SHEET 23].
8. POSTS ARE TO BE TAMPED WITH NATIVE BACKFILL.
9. BARBLESS WIRE TO BE USED WITHIN INCORPORATED CITY LIMITS.
10. BRACE WIRES ARE TO BE WRAPPED THREE AROUND POSTS, FLALED, AND STAPLED.
11. WHEN DEPENDING WIRE, FULL UNDER FULL TENSION, STAP TRICE AROUND POSTS, THEN TRICE AROUND WIRE, AND STAPLE SEVERAL PLACES ON POST.
12. ALL NUTS ON GATE BOLTS SHALL BE WELDED OR GATE BOLTS SHIPPED TO PREVENT REMOVAL.
13. WIRE SPACING MAY VARY IN ORDER TO BE COMPATIBLE WITH EXISTING FENCE.

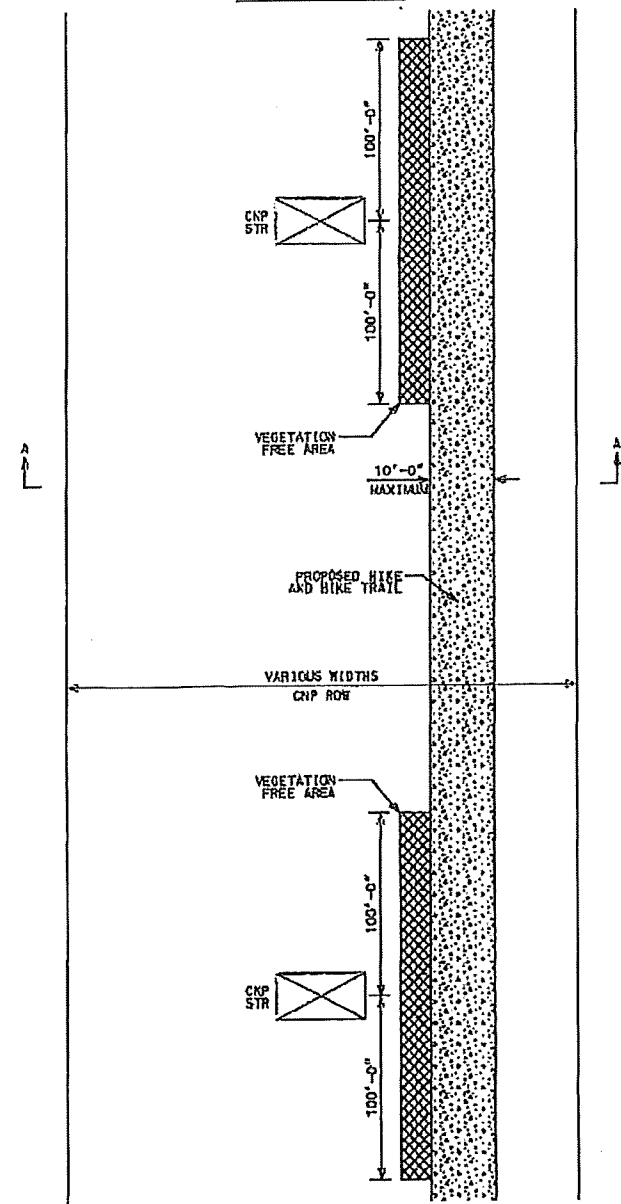
GATES & CULVERTS

NO.	REV.	DATE	BY	CHK	APP.	TRNG	QC/APP	ELAB/TRNG
3	OC30G							
2	OC30G							
1	OC30G							

SCALE: NTS		OC30ATE
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SPECIFICATION			
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SPEC ID	007	231	79

CENTERPOINT ENERGY  
TRANSMISSION STANDARD

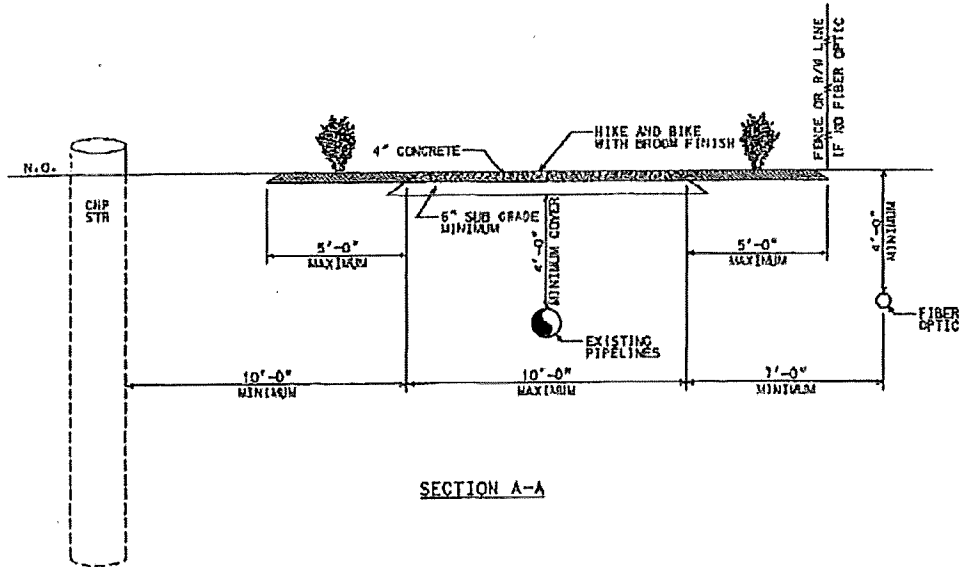


HIKE AND BIKE TRAILS	
MINIMUM STANDARDS	
SCALE	NTS

NO.	DATE	REVISION	BY	CHK	APP	APPR	DATE	DESCRIPTION

SPECIFICATION			
SHEET 24 of 35 SHEETS			
SPEC ID	007	231	79

CENTERPOINT ENERGY  
TRANSMISSION STANDARD



SECTION A-A

										HIKE AND BIKE TRAILS		
										MINIMUM STANDARDS		
NO.	DATE	REVISION	BY	CHK	APP	DESIGN	01-20-14	C. GREEN			SCALE	NTS
						CHECK	01-21-14	P. RYAN				
						ESTR	02-04-14	C. GREEN				
						APP	02-04-14	V. BERRY				

SPECIFICATION			
SHEET 25 of 35 SHEETS			
SPEC ID	007	231	79

**12.1 SCOPE**

- a. This specification covers the furnishing of labor, material, equipment, permits and supervision necessary for the installation of flexible base road and yard paving on CenterPoint Energy's property.

**12.2 GENERAL**

- a. The paving work shall be done in accordance with the CenterPoint Energy's Purchase Order, CenterPoint Energy's drawings, CenterPoint Energy's Job Specifications, General Conditions for Construction (CenterPoint Energy's Specification 007-231-79), this specification, the Texas Highway Department Standards (THD), American Society for Testing Materials Standards (ASTM), and the American Wood Preservers Association Standards (AWPA).
- b. In case of conflict, the order of precedence shall be the CenterPoint Energy's Purchase Order, CenterPoint Energy's Job Specification, CenterPoint Energy's drawings, this Specification, the General Conditions for Construction, and the THD, ASTM and AWPA Specifications.
- c. The equipment for proper prosecution of the work shall be at the work site and approved by the CenterPoint Energy's Representative prior to the beginning of construction operations.
- d. The Contractor shall maintain on the job site, at all times, a complete and readable copy of all specifications and any drawings provided by CenterPoint Energy governing the subject paving installation.
- e. No deviation from this specification will be permitted without authorization from CenterPoint Energy.

**12.3 MATERIAL ESTIMATES**

- a. The quantities indicated on the CenterPoint Energy's drawings are estimated by CenterPoint Energy utilizing plan dimensions, and shall be verified by the Contractor. If the Contractor detects any discrepancies in the quantities estimated by CenterPoint Energy, he should amend the figures on the inquiry sheet to reflect the quantities he has estimated. The quantities shown on the inquiry sheet by CenterPoint Energy, or as amended by the Contractor, shall be the quantities which appear on the purchase order when issued and will be the quantities for which the Contractor will be paid.

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12.4 SCHEDULING

- a. The Contractor shall state in his proposal the number of working days required to complete the job.
- b. The Contractor shall give CenterPoint Energy notice 72 hours prior to the start of construction.
- c. All work shall be performed between the hours of 7:00 a.m. to 7:00 p.m. Work shall not be performed on Saturdays or holidays without a 48 hour advance approval by CenterPoint Energy. Work shall not be performed on Sundays.

12.5 GRUBBING AND EXCAVATION

- a. The area to be paved shall be excavated and shaped to conform with the typical sections shown on the paving drawing.
- b. The area to be paved shall be "cleared and grubbed" removing and disposing of all trees, stumps, brush, roots and stripped of all vegetation, logs, rubbish and other undesirable matter to a depth of four (4) inches.
- c. Very soft or unstable soils that are deemed unfit due to high humus content, high water content, low density, etc., shall be removed to a depth determined by CenterPoint Energy.
- d. All holes, ruts and depressions shall be filled with material approved by the CenterPoint Energy's Representative.
- e. The Contractor shall not use excavated material as fill material without specific authorization from the CenterPoint Energy's Representative.
- f. The Contractor shall exercise care when grading, to stay clear of power lines, structures, pipes, septic tanks, fences or any underground facilities installed prior to the road and/or paving construction.
- g. The Contractor shall reimburse CenterPoint Energy for the repair or replacement of any of the previously mentioned equipment he damages.

12.6 SELECT FILL MATERIAL

- a. Select fill material shall conform to a CL (clay) or SM (sand) soil classification designated in ASTM D-2487 unless otherwise approved by the CenterPoint Energy's Representative.

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- b. Select fill material shall meet the following Atterberg limits:

Class A Fill Material

Liquid Limit 30-45  
Plasticity Index 7.5 – 15

Class B Fill Material

Maximum Liquid Limit 35  
Maximum Plasticity Index 20

12.7 SOIL STERILANTS

- a. When required, Krovar-1 and Dowpon soil sterilants shall be applied to the area to be paved at the rate of 30 lbs. of Krovar-1 and 30 lbs of Dowpon in 200 gallons of water per acre.
- b. The soil sterilants shall be applied by a state licensed applicator.
- c. The Contractor shall notify the CenterPoint Energy's Representative 48 hours prior to applying soil sterilants so that spraying operation may be inspected.
- d. Failure to abide by this shall be cause for the Contractor to re-spray the designated area at his expense.

12.8 CEMENT STABILIZED SOIL

- a. Soil that CENTERPOINT ENERGY requires to be stabilized with cement shall be done in accordance with THD Standards, Item 270.
- b. The entire area shall be stabilized to the depth shown on the CenterPoint Energy's paving drawings prior to the placement of the fill material.
- c. The amount of Portland cement will be specified by CenterPoint Energy as required by the soil conditions.
- d. The Contractor shall assume full responsibility for damage resulting from cement that has washed or blown off the subgrade.

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**12.9 LIME STABILIZED SOIL**

- a. Soil that CenterPoint Energy requires to be stabilized with lime shall be done in accordance with THD Standards, Items 260 and 264.
- b. The lime shall be furnished and spread as dry lime.
- c. The road and yard areas shall be stabilized to the depth shown on the paving drawings upon completion of grubbing operations and prior to the placement of any select fill.
- d. The amount of lime stabilization will be specified by CenterPoint Energy as required by the soil conditions.
- e. Sprinkling may be employed to reduce dusting problems during spreading, but excessive wetting of the lime shall be avoided until mixing operations commence.
- f. The Contractor shall assume full responsibility for damages resulting from lime that has washed or blown off the subgrade.

**12.10 COMPACTION REQUIREMENTS**

- a. All select fill material, stabilized soil, existing yard paving and excavated areas shall be compacted to 95% density as established by the Standard Proctor Density Test with moisture content within 2% optimum.
- b. The select fill material shall be compacted in lifts not to exceed eight (8) inches.
- c. The CenterPoint Energy's Representative shall approve the equipment the Contractor proposes to use for compaction of the fill material.
- d. CenterPoint Energy will check the in-place density using Nuclear Test Methods.

**12.11 FORMING**

- a. The forms for the paving shall be constructed of Southern yellow pine treated with pentachlorophenol.
- b. The pentachlorophenol solution shall be in accordance with AWPA P8 and AWPA P9, and shall contain a minimum of 5% pentachlorophenol by weight as determined by AWPA A5.
- c. The preservative treatment shall be by the Empty-Cell Process in accordance with AWPA C1 and C2.

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- d. The lumber shall be treated to 0.40 pounds per cubic foot final net retention of pentachlorophenol by assay.
- e. The forms shall be installed in accordance with the plans and shall be true in both horizontal and vertical planes.
- f. The forms shall be of the size, shape and type indicated on the plans.
- g. Forms and stakes shall be of sound heartwood and shall be free of knots, clustered birdseye, checks, splits, and sapwood. Occasional sound or hollow birdseye when not in clusters will be permitted, provided the board is free from any other defects that will impair its usefulness as a form.
- h. Any forms damaged beyond repair due to the Contractor's negligence shall be replaced at his expense.

**12.12 CONCRETE PIPE**

- a. All concrete pipe shall be constructed in accordance with ASTM C-14, Tongue and Groove.
- b. All reinforced concrete pipe shall be constructed to comply with ASTM C-76, Class IV, Wall B, Reinforced Concrete Pipe.

**12.13 GRASS SEEDING**

- a. The substation site shall be seeded with hulled Bermuda at the rate of 110 pounds per acre. Gulf Coast Rye shall also be planted with the Bermuda when the ground is 70°F or below. When Bermuda and Gulf Coast Rye are planted together they shall be proportioned as follows:

Bermuda:        50 pounds per acre  
 Gulf Coast Rye:    100 pounds per acre

- b. Seeding shall not be performed when the wind velocity would be detrimental to the uniform distribution of the seed.
- c. The area to be seeded shall be lightly raked to provide a seed bed.
- d. The required seed mixture shall be sown uniformly in accordance with the Manufacturer's recommendations.
- e. After sowing, the area shall be evenly raked to provide cover for the seeds.
- f. The lawn area shall be watered in a manner so as not to cause surface erosion.

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12.14 AGGREGATES

- a. The aggregates for the base and sub-base shall consist of one or more of the following: shell, sand, gravel, limestone, or granite gravel.
- b. The aggregates when properly slaked and tested shall conform to the following size requirements:

<u>AGGREGATE TYPE</u>	<u>U.S. STANDARD SIEVE SIZE</u>	<u>PERCENT RETAINED BY WEIGHT</u>	<u>MAX. LIQUID LIMIT</u>	<u>MAX. PLASTIC INDEX</u>
Oyster Shell	2"	0-12%	35	12
	7/8"	12-37%		
	No. 40	50-85%		
	No. 200	88-100%		
Sand	No. 10	0-5%	--	--
	No. 20	5-20%		
	No. 50	75-90%		
	No. 100	95-100%		
Gravel	1 3/4" Screen	0-10%	35	12
	No. 4	30-75%		
	No. 40 Mesh Sieve	70-85%		
Shell and Sand	1 3/4 " Sieve	0-10%	35	12
	No. 4 Sieve	40-65%		
	No. 40 Sieve	50-75%		
Limestone	1 3/4" Sieve	0	40	12
	3/4" Sieve	15-45%		
	No. 4 Sieve	45-75%		
	No. 40 Sieve	60-85%		
Granite Gravel	3/8" to 3/4" Sieve	10-15%	32	14
	No. 4	15-25%		
	No. 8	40-55%		
	No. 16	55-70%		
	No. 40	65-90%		

- c. Local material suppliers shall be approved by CenterPoint Energy.
- d. The aggregate shall be free from excess salt, alkali, vegetable matter, clay or otherwise objectionable matter.

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- e. At the discretion of CenterPoint Energy, the following THD test methods will utilized to verify compliance with these specifications:

1. Tex-101-E, Preparation of Soil & Flexible Base material for Testing
2. Tex-104-E, Liquid Limit
3. Tex-106-E, Plastic Index
4. Tex-110-E, Sieve Analysis

**12.15 CEMENT**

- a. Cement shall be Type 1 of a standard brand of Portland cement and shall conform to the requirements of ASTM C-150.

**12.16 GROUND BOXES**

- a. Ground boxes will be set by CenterPoint Energy before final grading. The Contractor shall set the ground boxes to finish grade.
- b. The Contractor shall set ground boxes to grade over base line monuments.

**12.17 STABILIZED BASE COURSES**

- a. The approximate combination of aggregates stabilized with Portland cement or flue dust may be provided for the base or subbase in accordance with the following percent mixtures:

<u>Cement-Dual Base</u>		<u>Cement-Tri-Base</u>		<u>Flue Dust-Dual Base</u>	
Oyster Shell	60%	Oyster Shell	30-55%	Oyster Shell	60%
Sand	33%	Gravel	18-35%	Sand	33%
Cement	7%	Sand	35-45%	Flue Dust	7%
		Cement	1.17-7%		

- b. The percent of Portland cement in the Cement-Dual Base and the percent of flue dust in the Flue Dust-Dual Base shall be to the exact proportion given above.
- c. The percent of Portland cement in the Cement-Tri-Base will range from 1.17-7%, with the actual proportion given in the CenterPoint Energy purchase order.
- d. The Portland cement or flue dust stabilized base courses shall not be mixed or placed when the air temperature is 40°F (or below) and falling.

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12.18 MIXING

- a. The cement, aggregate and water shall be thoroughly mixed in a pugmill type mixer approved by CenterPoint Energy.
- b. The plant shall be equipped with feeding and metering devices which will add the aggregate, cement or flue dust and water into the mixer in the specified quantities.
- c. The moisture content of the mixture shall be maintained between optimum moisture and two percentage points above optimum moisture to protect against dehydration during shipment.
- d. The optimum moisture content and desirable density shall be determined by the Texas Highway Department test Method Tex-114-E, latest revision, and checked in the field by the Nuclear Method.

12.19 CONSTRUCTION METHODS

- a. The Contractor shall apply the base in lifts of not more than 6" or less than 3".
- b. After each lift is spread, it shall be sprinkled and rolled to secure maximum compaction with succeeding layers placed similarly until the course is completed. The material shall be tamped with floats and/or rolled with a roller weighing not less than three (3) tons.
- c. All areas and "nests" of segregated coarse or fine material shall be corrected or removed and replaced with well-graded material, then be sprinkled as required and rolled until a uniform compaction is secured.
- d. All irregularities, depressions or weak spots which develop shall be corrected immediately by scarifying the areas affected, adding suitable material as required, reshaping and recompacting.
- e. When the uncompacted stabilized base mixture is wetted by rain so that at the time of final compaction the average moisture content exceeds the range specified in the test, the entire section shall be removed or additional stabilizer shall be added at the Contractor's expense.
- f. The stabilized base shall be compacted to a density of not less than 95 percent of compaction ratio density as established by the Standard Proctor Density Test. After completion of compaction, the surface that forms the ramp shall be thoroughly wetted and slush rolled to work sufficient mortar to the surface to provide a broom finish for the ramp.

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- g. Prior to each day's construction, a straight joint shall be formed by cutting back into the entire depth of completed work to form a true vertical face free of loose and shattered material.
- h. The stabilized base shall be protected against rapid drying for a period not less than three days.
- j. After the final course of the stabilized base is compacted, the surface shall be finished to grade and section by blading and shall be sealed with approved pneumatic tire or flat wheel rollers.
- k. The finished shape of the course shall be smooth and conform to the typical sections shown on plans, and to the established lines and grades. The surface shall be finished to a tolerance of 1/2 inch in ten (10) feet under a straight edge.
- l. Not more than two (20) hours shall elapse between the start of mixing and the time of starting the compaction of the stabilized base on the prepared subgrade.
- m. The compaction shall be completed within six (6) hours of the time water is added to the mixture.
- n. The CenterPoint Energy's Representative may at his/her option reject any stabilized material that is not in accordance with this specification.
- o. The Contractor shall erect and maintain sufficient barricades to prevent traffic on the newly paved area(s) for a period of 72 hours.

**12.20 GRADING**

- a. The Contractor shall surface grade the entire substation property including drainage facilities to provide a smooth finish and good drainage.
- b. In the event the paving installation is performed in two phases, the Contractor shall surface grade the substation area after each phase.
- c. When grading, it shall be the Contractor's responsibility to stay clear of power lines and structures. When pipes, septic tanks, or any other underground facilities have been installed prior to road and paving construction, care shall be taken to avoid damage during construction. If these structures are damaged due to the Contractor's negligence, they shall be replaced at his expense.

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**12.30 JOB COMPLETION**

- a. The Contractor shall remove all debris, scrap material, broken asphalt or concrete and any other objectionable material.
- b. Private property that was damaged during construction shall be repaired, replaced or otherwise corrected at the Contractor's expense.
- c. The unpaved areas shall be sufficiently smooth to allow machine mowing and drainage of all areas.
- d. All clean-up work and surface grading shall be complete before the final inspection by the CenterPoint Energy's Representative.

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**Exhibit "C"**  
to the  
License Agreement for  
Hike and Bike Trail  
between  
CenterPoint Energy Houston Electric, LLC  
and  
Westchase District

	Hourly Rate
Year 1	\$77.69
Year 2	\$80.41
Year 3	\$83.22
Year 4	\$86.14
Year 5	\$89.15
Year 6	\$92.27
Year 7	\$95.50
Year 8	\$98.84
Year 9	\$102.30
Year 10	\$105.88



**Exhibit "D"**  
to the  
License Agreement for  
Hike and Bike Trail  
between  
CenterPoint Energy Houston Electric, LLC  
and  
Westchase District

## Low-Growing Vegetation List

CenterPoint Energy carefully removes trees and controls the vegetation within its transmission line corridors to provide for a low-growing, predictable environment. **Do not plant anything within a transmission right-of-way without first seeking approval from the CenterPoint Energy Surveying & Right of Way Department at 713-207-5769.**

The following low-growing perennial plants grow to a mature height of 10 feet or less. Some species or varieties of xeric (requiring little water) plants are also included. For questions about low-growing species or varieties, please contact CenterPoint Energy at 713-207-2222 or 1-800-332-7143, and request that a company forester be notified to assist you.

### Earth-Kind<sup>®</sup> Roses

The Texas AgriLife Extension Service of Texas A&M University has selected a variety of shrub roses it has designated as Earth-Kind<sup>®</sup> roses. This designation is based on the results of extensive research and field trials and is awarded only to those roses demonstrating superior pest tolerance, combined with outstanding landscape performance. These roses require no pesticides or fungicides to maintain a healthy appearance, and only limited fertilization will ensure a constant display of flowers from spring through the first heavy frost in the Fall. Earth-Kind<sup>®</sup> roses also require less watering than most other roses.

Earth-Kind<sup>®</sup> roses do well in a variety of soil types, ranging from well-drained acid sands to poorly aerated, highly alkaline clays. Once established, these roses also have excellent heat and drought tolerance, but they benefit from a three-inch layer of mulch and supplemental watering during dry periods, especially during the first year after transplanting. Another advantage of Earth-Kind<sup>®</sup> roses is that they are readily available at most plant nurseries in Texas, and the varieties listed here grow to less than 10 feet. All photographs and many of the descriptions contained in this section of the plant list are taken from the website, <http://aggie-horticulture.tamu.edu/earthkind/roses/cultivars/>, of the Texas AgriLife Extension Service and used with their permission.

**Dwarf Shrub Roses:**

**'Marie Daly' Rose:**

This fragrant, semi-double Polyantha rose with light pink blooms (fading to almost white in intense heat) has very few thorns. It needs full sun and good air circulation and well drained soil to do its best. 'Marie Daly' is an excellent choice for a low hedge or a formal mass planting bed and it can also be grown in individual containers.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Marie Daly'	3'	3'	5'	Low-Moderate; tolerates salt	Spring-Fall	Needs full sun; hedges or formal beds

**'Souvenir de St. Anne's' Rose:**

This Bourbon rose is rated by the Texas AgriLife Extension Service as the most fragrant of all the Earth-Kind® roses. It should be planted in full sun and have good air circulation. This variety is not recommended for areas having an elevated salt content in the water.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Souvenir de St. Anne's'	3'	3'	5'	Low-Moderate; does not tolerate salt	Spring-Fall	One of the most fragrant varieties

**'The Fairy' Rose:**

This Polyantha rose has blooms that are medium to light pink blooms and fully double, relatively small in size, but they have little or no fragrance. It does well in a variety of temperatures and can be grown in all parts of Texas. 'The Fairy' should be grown in full sun. This rose is a good candidate for hedges as well as mass bed plantings and can also be grown as a container plant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'The Fairy'	3'	4'	6'	Low-Moderate	Spring-Fall	A great hedge rose; full sun; no fragrance

**Small Shrub Roses:**

**'Cécile Brunner' Rose:**

Texas AgriLife Extension Service calls 'Cécile Brunner' one of the easiest to grow rose varieties. This Polyantha rose is sometimes called 'Mme. Cécile Brunner' and may also be called The Sweetheart Rose. It is of French ancestry and has numerous double light pink blooms with darker pink centers.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Cécile Brunner'	4'	3'	5'	Low-Moderate	Spring-Fall	Sweet fragrance

**'Caldwell Pink' Rose:**

This is a "found" rose of unknown origin introduced by Dr. Bill Welch of Texas A&M University in the 1930s. It is sometimes called the Summer Carnation Rose due to the form of its flowers, which are described as lilac pink but can fade to almost white under high heat conditions. 'Caldwell Pink' has no fragrance, but it is extremely carefree and makes an excellent back border for beds. It can also be planted as a hedge and as a container plant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Caldwell Pink'	4'	4'	6'	Low-Moderate	Spring-Fall	Good along back borders or as a hedge; no fragrance

**'Perle d'Or' Rose:**

This French rose dating from the 1880s is sometimes called "Yellow Cecile Brunner". The blooms begin as an apricot-colored bud, and then open to a golden buff pink. Plants need good air circulation and they should be in full sun. Texas AgriLife Extension Service named 'Perle d'Or' its Earth-Kind® Rose of the Year in 2007.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Perle d'Or'	4'	4'	6'	Low; does not tolerate salt or overwatering	Spring-Fall	Very fragrant; can be grown in clay soils if given good drainage

**Medium Shrub Roses:**

**'La Mante' Rose:**

This Polyantha rose was developed in 1915 in France. Individual bushes have only a few thorns. The semi-double blooms are made up of a pink and white combination of loosely cupped and ruffled petals. Full sun and a well-drained soil are needed.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'La Mante'	5'	4'	6'	Low-Moderate; does not tolerate salt	Spring-Fall	One of the best medium-sized hedge roses; light fragrance

**'Spice' Rose:**

This fully double China rose cultivar has blooms ranging from blush pink to white in color, the color fading in hot weather. Its origins are unclear, but some believe it to be Hume's Blush Tea-Scented China rose dating from 1810. It has been used to produce many of the popular varieties of roses in existence today. 'Spice' should be planted in full sun and in an area where it will get good air circulation for optimum performance.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Spice'	5'	4'	6'	Low-Moderate	Spring-Fall	Peppery spice fragrance; good starter rose for beds or containers

**'Belinda's Dream' Rose:**

This cultivar was developed in 1992 by a Texas A&M mathematics professor specifically to withstand the high summer temperatures we experience. 'Belinda's Dream' was the first of the Earth-Kind® roses and continues to be the favorite of many people. The 4-inch medium pink blooms are very full, having over 100 petals per bloom. In addition to mass plantings, this rose makes an excellent specimen plant and can be easily grown in a large container.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Belinda's Dream'	5'	5'	7'	Low-Moderate	Spring-Fall	Mildly fragrant

**'Carefree Beauty' Rose:**

This cultivar was developed at Iowa State University to withstand the long, cold winters of the Midwest. It has proven to be just as hardy in Texas and was recognized as the 2006 Earth-Kind® Rose by the Texas Agrilife Extension Service. Individual blooms are semi-double, are deep pink in color, and are moderately fragrant. An added attraction is that large orange rose hips are produced by almost every flower, which provides color during the winter when the flowers are dormant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Carefree Beauty'	5'	5'	7'	Low-Moderate; salt tolerated if drip irrigation used	Spring-Fall	Formerly called 'Katy Road Pink'; moderate fragrance

**'Else Poulsen' Rose:**

This Floribunda semi-double rose was developed in 1924 by a Danish rose breeder named S. Poulsen. It is a relatively large shrub rose, and it has large clusters of upright blooms that have been described as looking like a giant Cyclamen pot plant. Blooms are light pink with a slightly darker pink on the reverse side. Its large size makes 'Else Poulsen' a good choice for placing at the back of a bed, where it provides a colorful backdrop for the shorter plants in front of it. This rose needs full sun.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Else Poulsen'	5'	5'	7'	Low-Moderate	Spring-Fall	No fragrance; needs good air circulation; tolerates poor soils

**'Ducher' Rose:**

'Ducher' is a China shrub rose developed in the 1860s by the Ducher family of France. It has very double ivory-white blooms. The new leaves have a bronze coloration, gradually lightening to light green. Individual plants have a rounded appearance and they make excellent container-grown specimen plants.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Ducher'	6'	4'	6'	Low-Moderate	Spring-Fall	Fruity fragrance; needs good air circulation



**'Duchesse de Brabant' Rose:**

This Tea rose was developed in 1857 in France and was often worn in the lapel of his suits by President Theodore Roosevelt. The blooms are described as cupped, rose pink in color, and fully double in form. It is an excellent bedding plant, as a specimen or in mass plantings, and also makes a good large container specimen plant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Duchesse de Brabant'	6'	4'	6'	Low-Moderate	Spring-Fall	Strong tea fragrance; needs full sun and good air circulation

**'Georgetown Tea' Rose:**

This relatively large Tea rose was discovered in the yard of a daycare center in Georgetown, Texas by Texas A&M professor of horticulture Dr. Bill Welch. The double blooms have a tea-like fragrance, are salmon pink in the center fading to lilac pink at the edges, and have an unusual pointed appearance due to rolling of each petal at its tip. This rose can be used in mass plantings or as a specimen plant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Georgetown Tea'	6'	6'	8'	Low-Moderate	Spring-Fall	Tea fragrance; needs good air circulation

**'Knock Out' Rose:**

Introduced in 2000, the single, cherry red petals and carefree nature have made it one of the most widely-used varieties of roses in landscape plantings. Since it was named the All American Rose Selection in 2000, breeders have developed several other colors and bloom types of 'Knock Out' rose, including semi-double and double varieties in light pink, a combination of light pink and yellow, and a pure yellow variety. They do equally well in full sun or part sun. Rose hips are produced in the fall and provide winter color. This rose has been known to bloom non-stop during mild winters, and the new reddish-bronze foliage gradually becomes a medium green color.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Knock Out'	6'	6'	8'	Low-Moderate	Spring-Fall	Non-fragrant in its pink and red colors, but mildly fragrant yellow color blooms

**'Mme. Antoine Mazi' Rose:**

This Tea rose cultivar, named 2008 Earth-Kind® Rose of the Year by the Texas AgriLife Extension Service, was developed in France in 1901. New leaves are a deep maroon color, becoming a medium green color at maturity. The blooms have the typical downturned petals of a Tea rose. The petals are a dark pink at the base and become light pink at the tips.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Mme. Antoine Mazi'	6'	6'	8'	Low-Moderate	Spring-Fall	Tea fragrance, needs good air circulation

**'Mutabilis' Rose:**

This China rose cultivar is a single blossom variety developed in 1894. 'Mutabilis' is a shrub rose that "mutates" through three distinct color phases, each blossom starting out yellow, gradually darkening to pink, and finally becoming crimson. Texas Agrilife Extension Service named 'Mutabilis' its 2005 Earth-Kind® Rose of the Year for its disease resistance and high tolerance for hot, humid summer weather.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Miscellaneous
'Mutabilis'	6'	6'	3'	Low-Moderate	Spring-Fall	Non-fragrant; also known as the Butterfly Rose

### Texas Superstar® Perennial Plants

The Texas AgriLife Extension Service of Texas A&M University has selected a variety of plants that will reliably return year after year (perennials), have been found in field trials to be tough enough to withstand the high heat and humidity of Texas summers, and are also disease and pest resistant. CenterPoint Energy has selected the following plant species/ varieties from among the Texas Superstar® plants to include on this list because of their hardiness under low water conditions. All photographs and descriptions of Texas Superstar® plants are taken from the website of the Texas AgriLife Extension Service, <http://texasagrilife.com/plants/index.html>, and used with their permission.

#### 'Katie' Dwarf Mexican Petunia:

'Katie', which is a variety of the species *Ruellia brittoniana*, is a rugged, drought-resistant ground cover plant that is covered by violet, light purple, pink, and even white flowers that last only one day. The next day, they are completely replaced by a new set of flowers. It produces seeds freely and will quickly cover the ground in either full sun or part shade. The leaves are grass-like, being broader at the base and pointed at the tip ends.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Katie' Dwarf Mexican Petunia	8-12"	12"	12-18"	Low	Spring-Fall	Short Ground Cover

**'Blue Princess' Verbena:**

This hybrid variety of *Verbena* sp. is covered with lavender blue clusters of flowers. This easy-care plant attracts butterflies but resists diseases which attack plants under stress from summer heat, such as powdery mildew. Deer also tend to avoid it as a food source. Plants should be sheared to remove spent blooms at the end of each blooming cycle, which will result in more blooms being produced.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Blue Princess' Verbena	12"	3'	3'	Low	Spring-Fall	Short Ground Cover

**'Mystic Blue Spires' Salvia:**

This is a hybrid variety of sage, created by crossing *Salvia farinacea* with *Salvia longispicata*, another popular salvia species sold under the cultivar name of 'Indigo Spires'. 'Mystic Blue Spires' is more compact and produces flowers over a longer period of time, even during hot, dry periods in the summer. This variety is carefree if planted in a well-drained soil. It should not be fertilized heavily and will produce fewer flowers if it receives too much water. Deer and other pests will not bother it. After new growth starts in the spring, the plants can be cut to just above ground level, which will encourage new, compact growth.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Mystic Blue Spires' Salvia	18-30"	12-18"	12-18"	Low	Spring-Summer	Medium Bounding Plant

**'Henry Daelberg' Salvia:**

*Salvia farinacea* 'Henry Daelberg' is a cultivar of this Texas native sage species that was discovered growing in a cemetery in central Texas. It has bluer flowers, and more of them, than other cultivars of this species. The leaves are also a deeper green in color than other varieties. 'Henry Daelberg' salvia blooms in full sun during the hot summer season. Deer will eat it only as a last resort, making it a valuable landscape plant for areas unprotected by fencing.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Henry Daelberg' Salvia	3'	3'	4-5'	Low	Spring-Fall	Tall Budding Plant

**'New Gold' Lantana:**

This hybrid variety of *Lantana* is drought tolerant once established and is also deer resistant. 'New Gold' is an excellent candidate for a tall ground cover in areas receiving full sun. The golden yellow flowers produce few, if any, fruit and grow best under summer heat conditions that most other flowering plants do not tolerate.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'New Gold' Lantana	2-4'	4'	5-6'	Low	Spring-Fall	Tall Ground Cover

**'John Fanick' Perennial or Garden Phlox:**

*Phlox paniculata* 'John Fanick' is a summer-blooming hardy variety of phlox that tolerates heat, drought, and powdery mildew. The showy clusters of light pink flowers with darker pink throats contrast with the dark green leaves. This plant exhibits a compact growth habit, and prefers full sun.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'John Fanick' Garden Phlox	3'	2'	3'	Low-Moderate	Late Spring-Fall	Tall Bounding Plant

**'Victoria' Perennial or Garden Phlox:**

*Phlox paniculata* 'Victoria' is another summer-blooming hardy variety of phlox that tolerates heat, drought, and powdery mildew. It has a more open growth habit than 'John Fanick' and the flowers are magenta. The leaves are a lighter green than 'John Fanick'.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Victoria' Garden Phlox	3'	2'	3'	Low-Moderate	Late Spring-Fall	Tall Bounding Plant

**Firebush:**

*Hamelia patens* is a small shrub, sometimes called hummingbird bush. It is very heat tolerant and pest resistant, and attracts hummingbirds with its abundant, tubular red-orange flowers. It may be planted in well-drained soil in the ground or in containers. Although Firebush may suffer freeze damage, it is root-hardy in Zone 8 and southward.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Firebush, <i>Hamelia patens</i>	3'	3'	5-6'	Low	Summer-Fall	Small Shrub

**'Imperial Blue' Cape Plumbago:**

*Plumbago auriculata*, a native of South Africa, has an unusual sky-blue color not found in many other plants. The variety 'Imperial Blue' grows well in the hot Texas summers and will continue to bloom until the first frost. It is considered to be a tender perennial, which means it will likely suffer damage during a prolonged sub-freezing period unless it is covered and mulched heavily. Removal of spent flowers will encourage more blooms, and some pruning to maintain a compact shape will be required.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Imperial Blue' Cape Plumbago	3-4'	3'	6-8'	Low-Moderate	Summer-Fall	Small Shrub



**Thryallis:**

Thryallis or Showers-of-Gold, *Galphimia glauca*, is a woody shrub with bright yellow, upright blooms that stand above the evergreen leaves and dark stems. It must have well-drained soil and full sun or light shade, whether planted directly in the ground or in containers. Showers-of-Gold Thryallis benefits from periodic pruning to maintain a denser growth habit.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Thryallis or Showers-of-Gold	3-5'	5'	3-6'	Low	Late Spring-Fall	Shrub or Hedge

**'Gold Star' Esperanza or Yellow Bells:**

*Tecoma stans* 'Gold Star' is a Texas native shrub that is both heat tolerant and pest resistant, with golden yellow trumpet-shaped flowers and attractive dark green leaves. 'Gold Star' does best when grown in full sun, and it can be planted in the ground or grown in containers.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Gold Star' Esperanza or Yellow Bells	4'	3'	6'	Low-Moderate	Late Spring-Fall	Shrub

**Grandma's Yellow Rose:**

*Rosa* 'Nacogdoches', or Grandma's Yellow Rose, is a floribunda type shrub rose with flowers having a rich yellow color, a light, spicy fragrance, and repeat blooms from spring until frost. It needs at least 6 hours of direct sun per day and prefers a slightly acid soil, but it will tolerate alkaline clay soil that has good drainage. The leaves are a bronze color when they first appear but change to a dark green color when mature. During extremely wet conditions, the leaves may be attacked by black spot fungus and benefit from a fungicide treatment. If black spot does cause some leaves to drop, they will be replaced by new ones shortly and the plant will recover nicely.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Grandma's Yellow Rose, <i>Rosa</i> 'Nacogdoches'	4-5'	3'	6'	Low-Moderate	Spring-Fall	Shrub or Hedge

**'Flare' Rose Mallow Hibiscus:**

Once established, this refined *Hibiscus moscheutos* hybrid variety requires only moderate amounts of water to produce beautiful fuchsia-colored blooms from summer to frost. 'Flare' prefers to be planted where it will receive full sun most of the day, and alkaline soils are tolerated well.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Flare' Rose Mallow Hibiscus	4'	4'	7'	Low, tolerates alkaline soil	Summer-early Fall	Shrub

**'Lord Baltimore' Rose Mallow Hibiscus:**

This hybrid hardy *Hibiscus* sp. variety prefers neutral to slightly acid soil. When planted in full sun, it will produce beautiful red flowers during a long blooming period from summer to frost. The petals on 'Lord Baltimore' are slightly ruffled and the leaf margins are lobed.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Lord Baltimore' Rose Mallow Hibiscus	5'	5'	4'	Low	Summer-early Fall	Shrub

**'Moy Grande' Texas Giant Hibiscus:**

Texas AgrLife Extension Service states that 'Moy Grande' may have the largest bloom of any hibiscus on earth, the pink blooms reaching the size of a dinner plate. During the blooming season, summer through frost, seed pods should be removed after the flowers fall off to encourage further blooming because 'Moy Grande' is not a sterile hybrid like 'Flare' and 'Lord Baltimore'.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Moy Grande' Giant Texas Hibiscus	5'	5'	4'	Low; tolerates neutral to alkaline soils	Summer-early Fall	Shrub

**'Lowery's Legacy' Cenizo or Texas Sage:**

*Leucophyllum langmaniae* 'Lowery's Legacy' has a more gray-green color than 'Green Cloud' Texas Sage, its flowers are a true lavender color, and it requires the same well-drained soils and full sunlight to do its best. This variety is not as dependent on changes in humidity levels for blooming and it blooms more often during a growing season. 'Lowery's Legacy' has a rounded growth form and tends to have a denser blooming habit than other varieties of Texas Sage.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Lowery's Legacy' Texas Sage	4'	5'	7-8'	Low; requires good drainage	Late Spring-Fall	Shrub or Hedge

**'Green Cloud' Texas Sage:**

*Leucophyllum frutescens* 'Green Cloud' is a cultivar with green leaves that are larger in size than the silver or grey-green varieties of Texas Sage. It should be pruned heavily in late winter-early spring to encourage compact growth and more blooms. In mild winters, most of the leaves will remain on the plant, but there can be substantial leaf drop after a very heavy frost. 'Green Cloud' may be used as a specimen plant or as a tall hedge row plant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Green Cloud' Texas Sage	5-6'	5'	7-8'	Low; requires good drainage	Late Spring-Fall	Shrub or Hedge

## Ornamental Grasses

Many species and varieties of ornamental grasses, both natives and Texas-adapted non-natives, are available at local nurseries and over the internet. They range in height from just a few inches to well over 10 feet, but the species and varieties listed here grow to less than 10 feet. Ornamental grasses are listed according to their published maximum heights of the leaves, starting with the shortest and proceeding to the tallest. The flowers or inflorescence may extend above the leaves, often as tall as the leaves themselves.

### 'Little Bunny' Fountain Grass:

*Pennisetum alopecuroides* 'Little Bunny' is one of the smallest ornamental grasses, making it ideal for planting in the foreground of a planting bed. It is adaptable to a wide range of soil types and moisture regimes, but soggy conditions should be avoided. The growth form is upright and it should be grown in full sun to partial shade. The leaves are green and the flower heads are white to whitish green.

Entire Plant:



Single Inflorescence:



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Little Bunny' Fountain Grass	8-10"	12-24"	3'	Low; requires good drainage	Summer-Fall	Clumping, upright

**Blue Oat Grass:**

*Helictotrichon sempervirens*, Blue Oat Grass, is a better choice for planting in the Houston area than Blue Fescue Grass, another ornamental grass offered for sale by online nurseries. Blue Fescue does not hold up to the heat and humidity combination we experience. Blue Oat Grass foliage is described by many as being "metallic blue" in color. This grass likes full sun and dry to moderately moist, well drained soil. The greenish flowers appear in early summer, mature to a golden wheat color in the fall, and extend about two feet above the leaves.

Planted as Specimen Plant:



Closeup of Inflorescence:



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Blue Oats Grass	12-18"	20-24"	3-4'	Low-moderate; requires good drainage	Summer-Fall	Clumping, upright in center, arching outer leaves

***Nassella tenuissima*:**

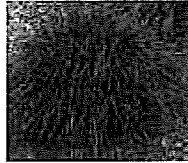
Mexican Feather Grass is a relatively short ornamental grass with narrow leaves that arch gracefully and move with the slightest breeze. It is very drought tolerant once it is well established, requiring only minimal supplemental watering. The inconspicuous white flowers, which appear in late Summer through Fall, are only slightly longer than the leaves. This grass looks great in mass plantings or as a specimen plant. It turns a pleasing tan color in Winter.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Mexican Feather Grass	12-24"	12-24"	3'	Low-moderate, good drainage required	Summer-Fall	Clumping, leaves arching

**Dwarf Fountain Grass 'Hameln':**

*Pennisetum alopecuroides* 'Hameln' is a relatively short fountain grass, reaching a maximum height of 1-2 feet. It needs full sun. The bright green narrow leaves arch gracefully. The flowers are white with a rose-copper tint and resemble bottle brushes. This grass is great for planting along the edges of borders or paths and even along steep banks.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Hameln' Dwarf Fountain Grass	12-24"	18"	2-3'	Low-moderate, requires good drainage	Summer-Fall	Clumping, arching

**Variiegated Feather Reed Grass 'Overdam':**

*Calamagrostis acutiflora* 'Overdam' is a mid-sized ornamental grass with white and green variegated leaves that are moderately wide. Unlike many other ornamental grasses, 'Overdam' does well in heavy clay soils as well as in other soil types. 'Overdam' prefers moist, but not soggy, well drained soil. The flower color is described as pinkish green, and in the fall and winter the leaves turn a pleasing tan color.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Overdam' Variegated Feather Reed Grass	12-24"	18"	2-3'	Low-moderate, requires good drainage	Summer-Fall	Clumping, upright in center, arching outer leaves

**Little Bluestem:**

*Schizachyrium scoparium*, commonly known as Little Bluestem but sometimes called Sagegrass or Beargrass, is a native North American prairie grass which will tolerate poor soils and partial sun. It has a pleasing bluish green color, turning to rusty orange in the fall and winter. Flower stems are reddish in color, turning to tan after a frost. The flowers are white. This grass looks best in mass plantings and provides a natural food source for many native birds.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Little Bluestem	3-4'	2-2.5'	3'	Low-moderate, requires good drainage	Summer	Clumping, upright

**Gulf or Pink Muhly Grass:**

*Muhlenbergia capillaris*, commonly known as Gulf Muhly or Pink Muhly Grass, is a clump-forming grass native to the prairies of the southern United States and Mexico. It tolerates a wide range of soils from sand to marly clay and dry to wet conditions as long as drainage is good. The leaves are narrow, almost wiry. In the early Fall, the inflorescence extends above the leaves and opens to reveal the wiry pink seed heads. When viewed from a distance on an early October morning, especially in bright sunlight, the plants take on the appearance of cotton candy. After the first frost, the seed heads turn a tan color. This grass can be grown as a tall ground cover or can be used as specimen plants if planted singly.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Gulf Muhly Grass	3'	3'	4-5'	Low-moderate, requires good drainage	Summer	Clumping, upright in center, arching outer leaves



**'Karley Rose' Grass:**

*Pennisetum orientale* 'Karley Rose' is one of the fountain grasses with bright green leaves. From early Summer through Fall, a succession of rose-purple flowers appear above the leaves and move freely in the slightest breeze. It is adaptable to a wide range of soil types as long as good drainage is maintained. 'Karley Rose' looks great in mass plantings as well as planted individually among other perennials and annuals.

Entire Plant:



Inflorescence:



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Karley Rose' Grass	3-4'	2-3'	4'	Low-moderate, requires good drainage	Summer	Clumping, upright in center, arching outer leaves

***Miscanthus sinensis* 'Adagio':**

'Adagio' is one of the more compact Maiden Grasses, reaching a height of 3-4 feet and a width of 3-4 feet. It has an arching growth form and the green leaves have a white midrib stripe. The flowers open in late Summer as a pinkish plume held above the leaves, but gradually fade to white by Fall. It does well in a variety of soil types, but likes to have good drainage and does best in full sun. 'Adagio' can be used as a specimen plant or planted in mass.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season	Growth Form
'Adagio' Maiden Grass	3-4'	3-4'	5'	Low-moderate, requires good drainage	Summer	Clumping, upright in center, arching outer leaves

**Variegated *Miscanthus sinensis* 'Morning Light':**

*Miscanthus sinensis* is commonly called Maiden Grass and the variety 'Morning Light' is a variegated type with the fine textured green leaves having a white midrib and margins, giving it an almost silvery appearance. It will thrive in all types of soil as long as the bed or container has excellent drainage and access to full sun. The flowers appear in the Fall and are described as reddish bronze plumes. 'Morning Light' makes a great specimen plant, but also can be used toward the back of planting beds.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season	Growth Form
'Morning Light' Maiden Grass	4-5'	2-3'	6"	Low-moderate, requires good drainage	Fall	Clumping, columnar growth pattern, with arching outer leaves

***Miscanthus sinensis* 'Huron Sunrise':**

'Huron Sunrise' Maiden Grass is another of the tall, columnar ornamental grasses. It is very tolerant of different soil types and can grow in both full sun and part shade. It prefers moderate amounts of soil moisture and is one of the few ornamental grasses that does not require good drainage. The green leaves turn a golden color after the first frost and the flowers are initially burgandy in color fading to white, first appearing in mid-Summer and lasting well into Fall.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Huron Sunrise' Maiden Grass	5-6'	2-3'	6"	Moderate, poor drainage tolerated	Summer-Fall	Clumping, columnar growth pattern, with arching outer leaves

*Cortaderia selloana*:

Pampas Grass, native to Argentina, is a large ornamental grass with multiple white flower plumes extending above the gracefully arching green leaves. White- (shown at left below) and gold-striped leaf varieties have been developed and are available over the internet. Flowers appear in late Summer and last through Fall. Pink- and yellow-flowered (shown in the middle photo below) varieties are available over the internet. Pampas Grass is drought tolerant after it is well established and will grow well in all soil types except for supersaturated, flooded soils. The leaves are finely serrated, making annual late Winter trimming of the leaves to within a foot of the ground challenging. It is recommended that individual clumps be planted far enough apart to keep them separated from each other to expedite the annual leaf trimming.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Pampas Grass	5-8'	6-8'	12'	Low-moderate; drainage not critical	Summer-Fall	Clumping, arching leaves and large plume-like flowers

**Ground Covers and Non-woody Perennials:**

***Trachelospermum asiaticum* 'Salsa':**

'Salsa' is a fairly new variety of Asian Jasmine that is supposed to have yellow, orange, red, and cream colored leaves, but when planted in full sun, it tends to revert back to the dark green coloration of the species. It forms a dense ground cover, ranging from 6-12" in height, spreading by above-ground stems. Unless contained by edging, this plant can become invasive and spread across lawns and beds where it is not wanted, but 'Salsa' does have one advantage over the original Asian Jasmine: in full sun, it does not spread as rapidly as the species.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Salsa' Asian Jasmine	6-12"	Unknown	12" for 4" pots	Moderate, drainage not important	Flowers infrequently in Summer	Dense ground cover

***Lantana camara* 'Irene':**

'Irene' *Lantana* is one of the newer varieties of *Lantana*. It is classified as a moderately tall ground cover and has multicolored flower clusters made up of individual flowers in colors of red, pink, orange, and yellow. 'Irene', like 'New Gold', is very heat and drought tolerant and blooms from late Spring through Fall. This plant is a great butterfly attractor. The dark berries that appear after flower drop are eaten by birds, but children should be kept away from them as they are poisonous to humans.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Irene' Lantana	2-3'	6-8'	24-36"	Low-moderate, prefers good drainage	Flowers Spring-Fall	Shrub-like ground cover

***Dietes bicolor:***

African Iris has green, grass-like leaves that reach a height of 2-3'. This plant spreads by underground tubers and has unique Summer-early Fall flowers ranging in color from pale to medium yellow, with each flower having three dark brown eye spots surrounded by orange. African Iris is very drought resistant and grows in any type of soil. Periodic thinning may be required to maintain good bloom production. They can also be grown in containers to control spreading.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
African Iris	2-3'	Variable	1-4'	Low-moderate	Summer- early Fall	Clumping, upright leaves

***Salvia greggii* 'Red':**

Red Autumn Sage is a cultivated variety of this Texas native perennial sage. *Salvia greggii* does well in its dry native habitat of southern Texas to northern Mexico, so it is well adapted to living in semi-desert conditions. This makes it a great candidate for planting in areas with only limited availability of supplemental watering, like transmission rights-of-way. Its dark red flowers attract butterflies, bees, and hummingbirds. In early spring, individual plants should be pruned by at least one third to maintain a dense growth of leaves.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Red' Autumn Sage	1-4'	1'	4-5'	Low; requires good drainage	Summer- Fall	Semi-woody, shrublike

*Hesperaloe parviflora:*

Red Yucca, which is actually in the Agave family, is a succulent native to the desert and semi-desert portions of Texas and northern Mexico. This plant is highly adaptable and will thrive in the high humidity of the Texas Gulf Coast as long as it has excellent drainage. It is often used in elevated beds in the medians of highways because of its ability to produce multiple stalks with clusters of dark pink to light red flowers which have yellow inner petals, even under the driest conditions. The flowers produce pods containing many black papery seeds which can be planted to grow new plants, although it can take three or more years to produce a flowering specimen.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Red Yucca	3-5'	4'	6'	Low; requires good drainage	Summer- Fall	Fountain-like arching leaves

### Woody Shrubs:

#### *Rapholepis Indica* 'Snow White':

'Snow White' Indian Hawthorn is a medium-sized flowering shrub which maintains a neat, mounded appearance without the need for pruning. As the name implies, the early Spring flowers are pure white. They are replaced in the Summer by dark bluish black fruits. After they become established, 'Snow White' Indian Hawthorns are very drought tolerant.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Snow White' Indian Hawthorn	3'	4-5'	6'	Low-moderate; requires good drainage	Early Spring	Mounded shrub

#### *Abelia grandiflora*:

Glossy Abelia is an evergreen shrub in the Houston area. It has relatively small, medium to dark green leaves occurring the entire length of the upright to cascading branches. The tubular white flowers are mildly fragrant and attract butterflies, and since they occur on the new growth of the plant, even trimming back the branches during the growing season of Spring through Fall to control the height of the shrub tends to increase blooming. Glossy Abelia is not attacked by disease or insects and can be used in mass plantings or in informal hedges. Soil type is not important, but relatively good drainage should be provided.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Glossy Abelia	3-6'	4-5'	6-7'	Low-moderate; requires good drainage	Spring - Fall	Cascading shrub

*Loropetalum chinense* 'Sizzling Pink':

'Sizzling Pink' Chinese Fringe Flower is a medium size shrub with leaves that undergo a color change during the year, being a dark maroon to purple color during the winter months and turning a lighter color with some green showing through in the Spring through Summer seasons. The most notable thing about the fringe flower is that it blooms during the cooler months of the year, and the hot pink flowers really stand out against the dark leaves. The fringe flower has few pests or diseases that attack it, and it is not particular about soil type as long as it has good drainage.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
'Sizzling Pink' Chinese Fringe Flower	4-6'	4-5'	6-7'	Low-moderate; requires good drainage	Late Winter - Early Spring; sometimes repeats in Fall	Mounding shrub

*Jasminum mesnyi*:

Primrose Jasmine is a large shrub exhibiting highly arching branches with the tips of the branches almost touching the ground around the shrub. Because of this growth habit, it is an excellent candidate for individual potting or for planting in elevated beds. In the early Spring, Primrose Jasmine is covered with lemon yellow, non-fragrant flowers growing on square stems and the leaves are dark green. This is a vigorous grower and can take some shade, but it does best in full sun. Periodic trimming of the branches will be required to keep the shrub in shape.



Variety Name	Height	Width	Spacing	Water Requirements	Flowering Season(s)	Growth Form
Primrose Jasmine	5-8'	5-8'	7-9'	Moderate; likes good drainage	Early Spring	Arching tall shrub



**Exhibit "E"**  
to the  
License Agreement for  
Hike and Bike Trail  
between  
CenterPoint Energy Houston Electric, LLC  
and  
Westchase District

**Exhibit “E”**  
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The following is a list of minimum requirements for a survey drawing to be used as an Exhibit “A”. A metes and bounds description is not required if the following format is followed.

- 1) North arrow & scale.
- 2) County name.
- 3) Survey name & abstract number.
- 4) Point of beginning (with State Plane Coordinates if available).
- 5) Tie to closest CenterPoint Energy property corner.
- 6) Tie to closest CenterPoint Energy above ground and underground structures (showing distance and structure number).
- 7) Hike & bike trail shall be identified by a centerline symbol or a cross-hatched symbol.
- 8) Stationing along the Hike & Bike Trail centerline of route.
- 9) Bearing & distance of crossing or longitudinal occupation.
- 10) Locative reference – Tie to a street and any existing pipelines within 20 feet on either side of requestor’s facilities.
- 11) CenterPoint Energy tract reference and adjoiner information, including width of CenterPoint Energy right of way.
- 12) Basis of bearings (& coordinates if used).
- 13) Reference to CenterPoint Energy map sheet (if available).
- 14) Registered professional land surveyor’s certification, seal, signature & printed name with registration number.
- 15) Name, address and phone number of registered professional land surveyor or firm that prepared the survey.
- 16) Ties to existing pipelines, water lines or wet utilities every 200 feet or a change in direction and position.
- 17) Locations of swales, ditches, ponds, rivers, and/or canals located within the right of way.
- 18) A profile of any facility if it crosses any CenterPoint underground facilities (fiber optic, underground residential distribution or three phase underground duct banks).