

	<p>Sidewalk Repair & Maintenance Program Policy</p>	<p>4.15.21</p>
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Background:

The City of Pearland maintains 648.97 miles of sidewalk and utilizes an annual budget of \$701,266.00. Currently the City is divided into five sections (A,B,C,D & E) as defined by the Public Works Grid Map, included on the [Interactive GIS Map](#) . The City conducts sidewalk repair services, as resources allow, within each of the five designated sections and in accordance with this policy.

Purpose:

The purpose of this policy is to:

- Provide a safe walking path by maintaining, accessible sidewalks and shared use pathways within the City’s public right of way, ensuring that pedestrian travel routes are free from hazards, and in compliance with the Americans with Disabilities Act (ADA) and Texas Accessibility Standards (TAS).
- Protect the public investment in the transportation infrastructure that is dedicated for pedestrian and non-motorized use by keeping existing infrastructure in good condition. This infrastructure includes: sidewalks, shared use paths and related public infrastructure such as roadway curbs, curb ramps and the portions of this pedestrian or non-motorized infrastructure that crosses driveways within the public right of way.
- Address hazards for safe travel and ensure the timely and cost-effective repair method and correction through several maintenance strategies.
- Protect the urban tree canopy as it relates to street trees and other desirable vegetation that are adjacent to sidewalks and shared use paths, while maintaining infrastructure for pedestrian use.
- Clarify maintenance responsibilities of the City, TXDOT and private entities such as residents and businesses as it relates to sidewalks and shared use pathways.

For the purpose of this policy, the term “non-compliant” refers to the ADA and TAS specific standards, as currently enacted.

Eligibility:

Sidewalks on City-owned property or right of way are eligible for repair and replacement by the City. Examples of this include: sidewalks in residential areas, sidewalks along major thoroughfares, shared use paths, and City owned facilities.

The City is responsible to provide a contiguous sidewalk network for public use and maintain compliance with ADA requirements. If a sidewalk intersects a private driveway or walkway, the City will only improve and maintain the contiguous portion of the sidewalk. It is the landowners responsibility to repair or maintain the portion of intersecting driveway or walkway that is not contiguous. An exception to this provision entails the City repairing and replacing any sidewalk or driveway that is damaged while conducting public services. Additionally, if a trip hazard is formed during public services the City will repair or replace the hazard on that portion of the driveway or walkway.

If a sidewalk intersects with a private driveway or walkway and is not delineated as a contiguous public sidewalk by the presence on parallel form boards separating the public walkway from the private infrastructure, the City will install these form boards during any sidewalk services to properly delineate the public vs private unfactured. Photos to illustrate this have been included in images A13 & A14. In the event a section of contiguous sidewalk has been constructed with a decorative or enhanced material such as stamped, stained or exposed aggregate, the City will do it's best to restore the sidewalk to as was or better condition but is not required by policy to replace with like kind material. At a minimum the sidewalk will be restored to City sidewalk specifications.

Sidewalks are the property owner's responsibility to repair if they have been damaged through the property owner's own actions (i.e. driven on, broken to install irrigation systems, etc).

Management of the Sidewalk Repair Program:

The City's Sidewalk Repair Program is funded through the City's General Fund, and is managed by the Public Works Department, Streets and Drainage Division. All requests for service, notifications of a trip hazard or sidewalk in need of repair will be inspected and prioritized for action. A request for service can be generated by telephone, email, the Connect2Pearland app or via the city's website.

The following considerations will be followed in establishing sidewalk segments considered for repair: a prioritization and classification for type of repair strategy.

The current need for repairs currently exceeds the City's annual budget for the sidewalk repair program, and as such, requests for repairs will be allocated on a program approach, allocating funds first to existing work orders, and high priority repairs, followed by critical repairs and then with less critical repairs. The sidewalk repair program will allocate the annual funds across the city, rather than to one neighborhood at a time, so as to repair the most critical hazards across the city in a responsive and equitable way.

It should be noted that unless the City is responsible for sidewalk maintenance as

dedicated by plat or executed agreement between City and Subdivision, the City of Pearland shall not be responsible for sidewalk repairs or maintenance within a gated community. The exception to this removal of sidewalk maintenance responsibility would include the restoration of any sidewalk damages caused by City, during the repair and maintenance of public utilities.

Inspection, Prioritization, Classification and Documentation:

This policy is supported by a Standard Operation Procedure that is detailed and offers direction to staff on the following items as related to the inspection, prioritization, classification of repair strategy and documentation for the City's sidewalks as part of the right of way asset inventory. A scorecard has been developed to accompany this policy and provide objective priority ranking for repair based on policy language. (This scoring mechanism will be converted to an electronic tool intended to weigh sidewalk repairs and identify response priority)

Inspection:

All public sidewalk repair requests shall be inspected within 3 – 5 business days of the receipt of a work order for service/work order, or may be staff generated based on routine inspections. The inspection will be conducted by staff and documented. The staff will utilize tablets, work orders, and the GIS Data Collector app, and photographs wherever possible.

Prioritization:

The prioritization of repairs will consider a balanced approach between responding to hazards and the most cost-effective strategy, and current resources. Staff will consider and review the following conditions:

- Right of Way Assessment Condition of sidewalks and curb ramps
- History of prior accidents, or injury to pedestrians.
- Use by individuals related to the Americans with Disabilities Act
- Sidewalk location and amount of pedestrian traffic
- Surrounding land uses
- The nature and severity of the condition requiring repair and/or replacement.
- Utilities ie: (manholes valves meter boxes blow off valves and hydrants)

High priority: trip hazard requiring immediate mitigation of the area for the following: 5 point

- Horizontal separation is 4 inches or greater
- Vertical separation is 3 inch or greater
- Cross-slope exceeds 4 inch per foot or more
- Holes/gaps exceed 6 inches in diameter
- Non-compliant curb ramps containing trip hazards, unsafe due to broken concrete and slope grades exceeding 1:12 in. slope, use of curb ramps by known disabled individuals in the immediate area. (Known is defined as the City having prior knowledge of a disabled resident in the area. There is not a requirement for the City to call each adjacent landowner and verify this information)

- Hydrant, manhole or valve castings adjacent or within the sidewalk area resulting in broken concrete due to uneven movement of the surrounding soils. must create a grade change that exceeds a grade change of greater than 4" from surrounding grade
- Areas of regular ponding or drainage concerns that hold water between for more than five days

Any immediate hazards will be mitigated as soon as possible as to create a safe pedestrian walking surface. Cold patch asphalt may be used to provide a smooth transition; or the area may be temporarily closed and signed to provide clarity to pedestrians.

Medium priority: 2.5 point

- Horizontal separation is 2 - 4 inches
- Vertical separation is 2-3 inches
- Cross-slope between 3 – 4 inch per foot
- Holes/gaps between 3 – 6 inches in diameter
- Curb ramps with non-compliant slopes, exceeding 1:8 in. slope
- Areas of regular ponding or drainage concerns that hold water between three and five days
- Hydrant, manhole or valve castings adjacent or within the sidewalk area resulting in broken concrete due to uneven movement of the surrounding soils. must create a grade change that exceeds a grade change between 2 – 4" from surrounding grade

Low priority: 1 point

- Horizontal separation is 1/2 - 2 inches
- Vertical separation is 1-2 inch
- Cross-slope exceeds 2 inch per foot or more
- Holes/gaps between 1 – 3 inches in diameter
- Curb ramps that are constructed on a diagonal rather than at a right angle
- Areas of short-term ponding
- Hydrant, manhole or valve castings adjacent or within the sidewalk area resulting in broken concrete due to uneven movement of the surrounding soils. must create a grade change between 1/2" – 2" from surrounding grade

Sidewalks that meet or exceed the priority criteria will be placed on the repair/replacement list. Sidewalks that meet or exceed this minimum criterion, but are impacted by tree roots or landscape/vegetation will have root barrier placed if determined necessary by the Right of Way Superintendent and/or tree root trimming as allowed by a supervised City forester and available funding

Classification:

Every attempt will be made to use resources well, applying the most cost-effective repair strategy to the location noted. The City utilizes in-house staff, and several contracts to perform repairs. The Public Works Department will maintain access to several repair contracts to accomplish the work as efficiently as possible. The most efficient and

responsive method will be used for the issue noted.

Each request that is prioritized will be classified for repair strategy as follows:

A. Horizontal Cut, or “(Slice)”:

1 " - 2 " horizontal offset, that will result in a trip hazard, and the adjacent panels are completely intact

2 " is the maximum depth horizontal saw cutting depth; if greater than 2 in, refer to another repair method.

B. Pavement Raising or “(Mud Raising)”:

1 " - 8" offset, and the adjacent panel is completely intact, the sidewalk is reverse grade, the section of sidewalk is allowing water to pond, or is impeding a positive flow of drainage across towards the street

C. Remove and Replace: (R&R)

* 1 " - 8" offset, and the sidewalk panel or the adjacent panel is damaged, cracked or broken in several areas, a hydrant, manhole, or valve casting or other utility device is adjacent to the area.

D: If a utility related item is involved, such as a hydrant, manhole, or valve, the Public Works Distribution & Collections concrete crew will be included in the review and referral for this location to repair in conjunction with utility repair work. In most cases, when a utility is within or a section of sidewalk requiring repair, removal and replace is the typical method of correction.

E: Identify if roots may be adjacent or causing panel damage, in which case root barrier maybe placed. - - The City’s Urban Forest will make determinations upon request by Right of Way Superintendent, if trimming of the tree roots is necessary.

F: In areas of significant concern, the replacement of sidewalk with an ADA approved alternate materials (Asphalt) may be made. These are reviewed on a case by case basis and balanced with the City’s ability to maintain the area, and the need. See image A7

G: Sidewalk Joint Separation Repair:

If no trip hazard is found but a horizontal separation of 1 ½ " or more exists, City staff will make repairs by filling the gap using a recommended or engineer approved product. (self-leveling joint sealer) See image A6 for horizontal separation

H: Driveway/Curb or adjacent work will be addressed using both internal and contractor services.

The area of repair will be identified, prioritized and placed in a schedule for repair.

Communication /Notification

Upon completion of inspection and assessment of the issue, (priority and classification for repair) the City will:

1. Notify the requestor of the status of the request for service;
2. Establish a repair method based on the current criteria and schedule for repair. This schedule is subject to modification based both on sidewalk conditions, weather and the availability of resources for sidewalk replacement and repair. The repair schedule will be communicated with the resident or homeowner's association if applicable. The notification method will include the use of a traffic advisory (if needed), to the homeowner's association and door hangers.

When sidewalk repairs and/or replacement are necessitated due to the impact of utility systems, the appropriate utility system owners will be notified that they are responsible for mitigation of the cause of damage prior to the repair and/or replacement of the sidewalk.

The City's Sidewalk Repair & Maintenance Program should be construed as prohibiting individual property owners from voluntarily repairing or replacing adjacent sidewalks, to city standards, of their own accord. In this case, standard building permit procedures will be followed.

Documentation

The City invested in a right of way asset inventory, which provides the condition of assets such as sidewalks and curb ramps within the right of way. Staff will update the asset inventory with repairs as part of the asset management program to keep the condition of assets current.

Work orders will be documented with photos, date of repair and type of repair made to support the City's asset management program.

City and TxDOT Right of Way:

Sidewalks that must be constructed as part of a private improvement, as required by the City's Unified Development Code may be eligible for the Sidewalk Fund, wherein the cost for future construction of sidewalks is deposited into the Sidewalk Fund. It is understood that these costs are for future improvements and will be constructed as part of a capital improvement, or separate action.

In areas where TxDOT owns and controls the right of way (FM865, FM518, and SH35), TxDOT will be notified of the repairs. Sidewalks within TxDOT right of ways must be reported.

All driveways that provide ingress/egress to state right of way are considered the property owner's responsibility.

Sidewalk Scoring System:

Sidewalks within the City limits of Pearland are repaired based on this policy and prioritized based on the determination of a point value (score) assigned to a sidewalk repair. This score is based on several criteria and are intended to improve the safety, use and connectivity of our pedestrians. The scoring criteria are: Life Safety; Pedestrian Use, Connectivity & Backlogged (aged) Work Order. Point values are assigned in the following methods and the higher the point value for each repair the more priority it receives when working within the dedicated zone.

- Life Safety – this criterion is defined as the intent to mitigate harm to a person, animal or object traversing the sidewalk. Trip hazards, gaps and damaged walking surfaces or edges have the ability to cause harm to commuters. This criterion assigns a point value based on the potential to cause real harm or damage based on the measurements listed earlier in this document.
 - High priority trip hazard requiring immediate mitigation of the area as listed in Prioritization = 5 point
 - Medium priority trip hazard requiring expedited mitigation of the area as listed in Prioritization =2.5 point
 - Low priority trip hazard requiring mitigation of the area as listed in Prioritization, as time allows= 1 point

- Pedestrian Use / Traffic Volume - This criterion is utilized to gauge the amount of use a specific segment of sidewalk receive by commuters. A segment of sidewalk is defined as the walkway immediately within the limits of perpendicular property lines or in cases where adjacent property lines are not available, between two intersecting roads or sidewalk. See image A1 & A2 for reference. Pedestrian use is determined based on estimated traffic volume on each segment.
 - High Use is considered when a segment of sidewalk is immediately adjacent to a residential development or retail business. Additionally, if a sidewalk is located within 0.5 miles of a school, it is determined to have high use. Lastly, if the section of sidewalk is non-compliant with ADA requirements it will receive the greatest point value under use criteria. = 5 points
 - Medium Use is considered when a sidewalk is adjacent to a industrial business or along major and minor collector streets as determined by the City’s Thoroughfare Plan and retail or residential development is not immediately adjacent = 2.5 Points
 - Low Use is considered when a sidewalk is adjacent to Major and Secondary Thoroughfare and industrial, residential or retail development is not immediately adjacent = 1 Point

- Connectivity - This criterion is utilized to gauge the connectivity a specific path's ability to connect two destinations. A path in this case is defined as the continuous walkway connecting two destinations, which may transition into multiple rights of way or properties but be no more than 0.5 miles long. See image A3 & A4 for reference. Connectivity is determined based on the likely hood in which a sidewalk connects two locations of frequent visitation.
 - High Connectivity is defined as a continuous path no longer than 0.5 miles that connects a residential property with a school; residential property with a park; residential property with a City of Pearland Park's Department Trail Connectivity Network; residential property with a shopping center or a shopping center with another shopping center = 5 points
 - Medium Connectivity is defined as a continuous path that is no longer than 0.5 miles and connects residential property with other residential property; connects two industrial properties; connects a residential property to a single retailer or connects two single retailers = 2.5 points
 - Low Connectivity is defined as a continuous path that is no longer than 0.5 miles and has no intended residential, retail, school, park or industrial destination. = 1 point

- Backlog (aged) work order – this criterion is utilized to determine a point value for aged work orders previously submitted to the City for repair. These work order submissions can either be received from the public or generated by staff. The older a submission is, the higher point value to be associated with the request. It should be noted that the age is determined from the submission date, to the date sidewalk services begin within a designated section as determined by the PW Grid Map
 - High Aging is determined when a work order has been submitted by the public or staff and exceeds one year between the date of submission and the date sidewalk services entered the section that this request is located within.
 - Medium Aging is determined by when a work order has been submitted by the public or staff and is between six months and one year between the date of submission and the date sidewalk services are begin within the section the request is located within
 - Low Aging is determined when a work order has been submitted by the public or staff and is between zero and six months between the date of submission and the date sidewalk services begin within the section the request is located within

Sidewalk repair methods:

The City of Pearland employs three standard concrete repair methods to maintain, repair or improve the sidewalk network. Those options include removal & replacement, mud raising and slicing. While no single method is preferred, it is through the assessment of damages and consideration of the “mix of fixes” that allows staff to determine the most cost effective and efficient maintenance method to provide reliable, safe and traversable sidewalks. Emphasis is given to the terms “Cost effective” and “efficient” when determining the best route forward. However, neither of these terms are intended to imply that the cheapest repair option is the best. Consideration shall be given to the timeliness of each repair method, long-term sustainability and potential impacts to delayed action. It is the responsibility of the Public Works Department’s Right of Way Superintendent, or their designee to maintain necessary service contracts for each of these methods and determine the appropriate repair method for each project.

- Removal & Replacement – This repair method is often referred to as R&R and is the costliest of the repair methods. R&R involves the physical removal of an existing sidewalk segment, installation of new form boards and rebar, before replacing the removed section with new concrete. The vendor typically returns a couple days later to remove the form boards once the concrete cures and add sand to the disturbed area between the sidewalk and turf. Lastly, depending on the damage sustained to the property during construction activities, new sod is installed in areas wider than one (1) sqft. It should be noted that the restoration of sod is contingent upon contract specifications and availability of budgetary dollars. This is the most accurate repair method that ensure all elevations are matched and provide the longest return on the investment. This method is often implemented when there are multiple trip hazard on a single segment of sidewalk, public utilities are located within the walkway and prohibit other method or the concrete is deteriorated to a point that requires replacement. See A9 & A10
- Mud Raising – This repair method is often called “mud raising” or “mud jacking” and involves the raising of concrete panels until walking surface elevations match and trip hazards are abated. The raising occurs when a hole is drilled through the sidewalk and a flowable liquid is pumped between the ground and the sidewalk. As the flowable liquid hardens, it expands and causes the concrete surface to raise. The finished height of the sidewalk is adjusted, pumping product from multiple entry points and by adding more flowable material under the walkway until the desired height is reached. See A11

- Slicing – The process of slicing involves the removal of concrete from a sidewalk to reduce uneven elevations (trip hazards) in the walking surface. This cutting is often completed by grinding away the walking surface or trip hazard to ensure a usable smooth surface. Grinding is often completed by a hand held or push type machine, in which the operator passes a rotating gutting head repeatedly over the surface of concrete until is desired elevation is reached. See A12

ADA Transition Program:

As part of this policy the City intends to systematically identify and repair any non-compliant ADA sidewalk locations and address (bring into compliance) those within six (6) month of identification. As indicated previously in this policy, mitigation of any safety concern should be conducted immediately upon identification of the hazard. Any non-compliant sidewalk should also be issued a point value of 11.

A1 – Sidewalk Segment



A2 – Sidewalk Segment



A3 – Path



A4 - Path



A5 – Trip Hazard (Elevation change in walking surface of sidewalk)



A6 – Trip Hazard (Horizontal separation)



A7 - Temporary Patch (asphalt repair of trip hazard on concrete sidewalk)



A8 - Slicing (Concrete slicing to remove trip hazard)



A9 Removal & Replace (Demo sidewalk)



A10 - Removal & Replace (New sidewalk)



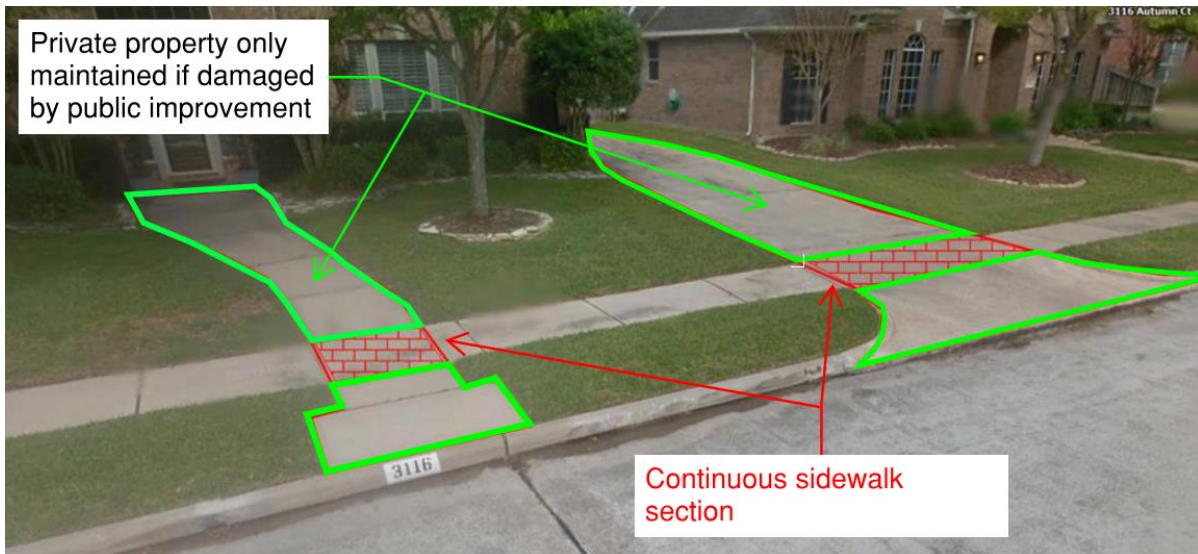
A11 – Mud Raising



A12 – Concrete Slicing



A13- Contiguous sidewalk through private walkway and driveway (City Responsibility) note - the City will mitigate any trip hazards created on private portion of driveway and walkways when repair/replacement of contiguous section of sidewalk caused said trip hazards. Work conducted will only mitigate trip hazard and not replace entire private infrastructure if not warranted by policy.



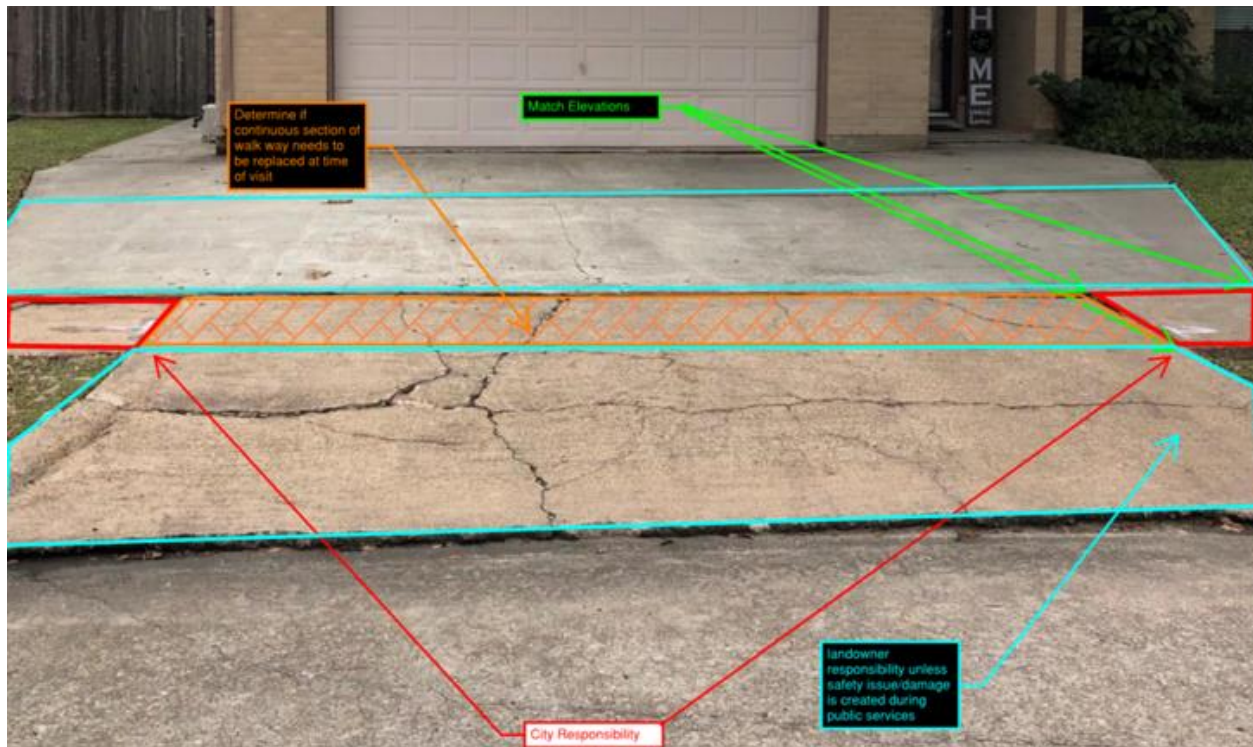
A14 – Continuous sidewalk through private driveway delineated by parallel form boards



A15 – Damaged Driveway apron. Unless repair of the continuous sidewalk caused damage to or a safety hazard within the privately owned driveway apron, this apron is the responsibility of the landowner. However, surrounding utilities shall also be taken into consideration. In the event a trip hazard is created by an adjacent utility, the private section shall also be replaced to ensure safety of the user/landowner.



A16 – Matching grade with surrounding pavement and consideration of driveway apron saw cutting. In the event there are multiple elevations of surrounding pavement, it is the intent of this policy to match as many elevations as possible to remove the risk of trip hazards. Additionally, when extensive damage is present within a driveway apron that is not defined as a continuous sidewalk, it is the intent of the policy for the ROW Division Superintendent, or his/her designee, to give heavy consideration to replace the sidewalk portion of the apron while onsite and reduce the potential for future site visits.



Supporting Links / Reference Material

[Thoroughfare plan](#)

<https://gis.pearlandtx.gov/interactivemap/>

[ADA TRANSITION](#)

[Engineering Design Criteria Manual](#)

[Sidewalk Specs sheet](#)

[Driveway Details](#)

[Sidewalk Details](#)