

Storm Water Pollution Prevention Plan (SWPPP)

In Accordance with

TPDES General Permit No. TXR150000

For Storm Water Discharges Associated with Large Construction Activities

for

Skyscraper Shadows Area Roadside Ditch Rehabilitation

WBS No. M-000126-0070-4

City of Houston, Texas

AECOM Technical Services, Inc.

March 2015



Project Name and Location:

Name: Phase II Final Design of Skyscraper Shadows Area Roadside Ditch Rehabilitation

Location: The project is located in Skyscraper Shadows Subdivision in southeast Houston.

The project is affecting approximately 234 Acres of existing Drainage Area inside the neighborhood for drainage improvement purposes. The project will be constructed in two phases as follows:

Phase 1 Detention Basin Construction

Phase 2 Neighborhood Drainage Improvements

Owner Name and Address: City of Houston

Contractor Name and Address: _____

General Contractor: _____

Subcontractor: To be provided (By Contractor) in *Attachment A*

General Instructions/Information To Contractor Regarding Storm Water Pollution Prevention Plan

- CONTRACTOR will be responsible for implementing all procedures and controls contained in the attached Storm Water Pollution Prevention Plan.
- All controls described in the Storm Water Pollution Prevention Plan will be constructed and maintained in accordance with the TECHNICAL SPECIFICATIONS.
- Prior to execution of the Contract Documents, CONTRACTOR will provide ENGINEER with a list of subcontractors who will implement any of the measures described in the Storm Water Pollution Prevention Plan, along with the name and title of the individual who will sign for the CONTRACTOR and Subcontractors, the address and phone number of the subcontractors and a brief description of the specific measures for which each subcontractor will be responsible.
- CONTRACTOR will prepare and execute a Notice of Intent (NOI form attached in Storm Water Pollution Prevention Plan in *Attachment C*), and submit it along with the application fee to the Texas Commission on Environmental Quality with executed contract documents.
- Copies of all Inspection Reports and Revisions to the Storm Water Pollution Prevention Plan (as described in Section 4 of the attached Storm Water Pollution Prevention Plan) must be submitted to the OWNER within 2 days after each inspection. Any modifications to the Storm Water Pollution Prevention Plan resulting from inspections shall be implemented within 7 days of the inspection. Forms and Certifications for the Inspection Reports are included in *Attachment B* of the Storm Water Pollution Prevention Plan.
- A copy of the Project Description Sheet included in *Attachment D* in the Storm Water Pollution Prevention Plan and a copy of the NOI must be posted at the Construction site in a permanent place for public viewing. Removal will be as directed by OWNER.
- The complete Storm Water Pollution Prevention Plan (including all amendments, inspection reports and certifications) must be retained on the construction-site at all times during the duration of the Contract.
- If erosion and sedimentation control systems are existing from prior contracts, OWNER and/or OWNER's representative with the CONTRACTOR shall examine the existing erosion and sedimentation control systems for damage prior to CONTRACTOR starting construction of the Contract. Any damage noted at this time shall be repaired at OWNER's expense or by the previous CONTRACTOR.
- Upon completion of the project and prior to OWNER's approval of the final payment, CONTRACTOR will submit a complete copy of the final (updated if necessary) Storm Water Pollution Prevention Plan including copies of all inspection reports, certifications, and amendments to the OWNER and ENGINEER.
- At completion of the contract, OWNER and/or OWNER's Representative with the CONTRACTOR shall examine erosion and sedimentation control systems before relieving CONTRACTOR of any maintenance responsibilities.
- CONTRACTOR will execute a Notice of Termination (NOT form attached in Storm Water Pollution Prevention Plan in *Attachment C*), and submit it to the Texas Commission on Environmental Quality in accordance with the General Permit.

- Note that all certifications, reports, etc. (including the NOI) must be signed in accordance with the signatory requirements of the General Permit. A complete description of these signatory requirements is provided in the instructions accompanying the NOI, which are included in the Storm Water Pollution Prevention Plan, in *Attachment C*.

The General Permit provides that stabilization measures must be initiated on portions of disturbed areas where construction activities have temporarily or permanently ceased as soon as practicable, but no more than 14 days after construction activity on that particular portion of the site has temporarily or permanently ceased unless construction activities will resume on that portion of the site within 21 days from when the construction activities ceased.

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Section 1 Site Information

1.1 Site Description

The project site is located in Skyscraper Shadows Subdivision (Key Map 575 P & Q). The site is bounded by Ballantine St on the west, Almeda-Genoa Rd on the north, Moers Rd. on the east and Wayfarer Ln on the south. The detention basin improvements will be located east of Monroe Rd and West of Moers Rd.

1.1.1 Description of the Construction Activity

The project is a City of Houston Capital Improvement Plan (CIP) project for local improvements of drainage facilities in the Skyscraper Shadows Subdivision and the expansion of an existing detention pond. Driveway culverts in the subdivision will be cleaned or replaced and roadside ditches will be cleaned and regarded as shown in plans. The existing detention pond to the east of the subdivision will be expanded to handle the appropriate volume. Storm sewer will be installed along several streets to collect the runoff and then outfall to the proposed detention pond.

1.1.2 Sequence of Major Activities

1. Construction of detention pond
2. Storm sewer and outfalls to the detention pond
3. Culvert and ditch replacement/rehabilitation at subdivision

1.1.3 Estimated Total Site Area, Total Disturbed Area

The project area consists of two separate sites. The project limits for the subdivision site includes approximately 234 acres. A proposed detention pond expansion for an existing inline detention facility will include excavation and fill covering approximately 9.5 acres.

The proposed drainage areas for this project will remain relatively unchanged with only minor modification. The drainage calculations for the proposed conditions assign each drainage area a specific "C" value. Please refer to *Appendix D* for a detailed table of drainage area coefficient values.

1.1.4 Runoff Coefficient

A runoff coefficient was assigned to each land-use type in this study. H-GAC 2012 photography was used to estimate impervious cover. Impervious cover values selected were 0.2 to 0.25 for mostly undeveloped drainage areas, 0.4 for residential areas, 0.45 for denser residential areas and mixed-use offsite areas, 0.55 to 0.65 for industrial/commercial areas, and 0.9 for portions of the A120-00-00 channel. R.O.W was assumed to be part of the adjacent drainage area.

The drainage area that contains the existing detention basin and proposed detention basin expansion was assigned a 0.50 impervious cover value for existing conditions and 0.85 for proposed conditions.

The C-value for each drainage area was calculated from the assigned impervious cover using the equation found in Section 9.05.B.3.a.2 of the City of Houston IDM.

For details on the determination of C-values, please refer to *Appendix D*.

1.1.5 Site Map

A General location Map has been included in the project construction drawings. A Site Map with the SWPPP Controls is provided in *Appendix D*. Separate site maps for offsite support or staging areas may be provided as needed.

1.1.6 Name of the Receiving Water

The subdivisions existing ditch systems are designed to allow the runoff to outfall to the three surrounding ditches, with the majority of the runoff flowing towards Beamer Ditch. Beamer Ditch leads to Halls Road Ditch (Harris County Flood Control District Unit No. A120-00-00).

The proposed drainage improvements will result in no adverse impact to either ditches A120-00-00 or A125-00-00 for rainfall events up to the 100-yr storm.

1.1.7 Extent of Wetlands

It was determined that the proposed new developments will not impact any wetlands in the area.

1.1.8 Endangered Species and Critical Habitat

There are no known critical habitat sites on the project.

Section 2 Best Management Practices

2.1 Controls

All controls described herein will be constructed and maintained in accordance with Manufacturer's specifications, in accordance with the TECHNICAL SPECIFICATIONS contained in the CONTRACT DOCUMENTS, and with good engineering practice.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR, WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, TO IMPLEMENT ALL MEASURES AND CONTROLS DESCRIBED IN THIS STORM WATER POLLUTION PREVENTION PLAN.

2.1.1 Erosion and Sediment Controls

Major erosion and sediment controls are shown in the attached SWPPP sheets.

The following short and long term goals and criteria are as follows;

- Sediment will be retained on site to the extent practical
- Control measures will be properly selected, installed, and maintained in accordance with manufactures' specification and good engineering practice.
- If damaged or rendered ineffective, the erosion and sediment controls will be repaired or replaced immediately.
- If sediment escapes the site, off-site accumulations will be removed to minimize off-site impacts.
- Dewatering effluent should be routed through filtration controls. Untreated or direct discharge into a storm sewer will not be allowed.
- Sediment will be removed from sediment traps or sediment ponds when design capacity has been reduced by 50%.
- Litter, construction debris, and construction chemical exposed to storm water will be removed covered or otherwise prevented from becoming a pollutant source.
- Installation of storm water pollution abatement measures will be coordinated with construction sequencing in order to optimize storm water pollution abatement.
- Any existing erosion and sedimentation control systems remaining on project site from prior construction activities shall be examined y contractor for evidence of damage before starting new construction. Any damage noted during inspection shall be reported to owner.
- Soil stockpile erosion shall be controlled with protective coverings and filter fabric fences or other approved storm water pollution abatement installations at contractor's expense.
- Each disturbed area shall be stabilized within 14 days of ceasing construction activities in that area, except locations in which the next construction activity will occur within 21 days of the most recent activity.
- Erosion and sedimentation control installations shall remain in place until final stabilization has occurred in all disturbed areas not covered by pavements or permanent structures. Contractor to ensure final stabilization of disturbed areas in accordance with TCEQ-defined requirements prior to removal of installations.

2.1.1.1 Stabilization Practices

The following stabilization practices will be used:

- a. Construction exits, staging and parking areas will be stabilized using course aggregate.
- b. The staging and parking area will be surrounded by filter fabric fence.
- c. The road driveway and culvert replacement phase is expected to begin within 2 weeks after utilities are completed. If the interim period between construction phases along the same corridor is more than 21 days, the road rights-of-way will be mulched within 14 days. After culvert replacement and pavement replacement, the newly graded areas and all exposed soils will be seeded or hydromulched, unless sodding is specified on the construction drawings.

The following records must be maintained and either attached to or referenced in the SWPPP, and made readily available upon request:

- a. The dates when major grading activities occur;
- b. The dates when construction activities temporarily or permanently cease on a portion of the site; and
- c. The dates when stabilization measure are initiated.

2.1.1.2 Structural Practices

- a. Filter Fabric Fences and Sand Bag Barriers:

Filter fabric fences will be placed along the street property lines all around the site. Sand bag barriers will be placed on concrete paved areas where filter fabric fences cannot be staked.

Exposed pipes of storm inlets removed in the course of construction will be covered with filter fabric to reduce sediment inflow.

- b. Inlet Protection Barriers

Storm sewer inlets on-site and on adjacent streets will have inlet protection barriers, made of filter fabric fence or stacked gravel bags whichever is applicable, to collect sediment before runoff enters the inlets.

- c. Vehicle Equipment Wash Area:

A vehicle equipment wash area stabilized with course aggregate will be established near the staging/parking area for trucks and equipment leaving the site. Wash water will directed to a sediment trap, and then released into the storm sewer system.

- d. Rock Filter Dam

Rock filter dam will be established at the detention basin outfalls during construction of the detention basin expansion.

In channel filter dam will be established downstream of the detention pond outfall along the Halls Road Ditch channel to collect sediments created from upstream construction.. Geotextiles will be placed to prevent small aggregates from escaping the dam structure into the stream.

2.1.1.3 Prior to Any Construction

A stabilized construction exit and staging/parking area will be installed at the site of the detention pond.

2.1.1.4 Permanent Storm Water Controls

- a. The revegetated landscaping strips will provide flow attenuation and partial vegetative filtration.
- b. Storm water from roadway will discharge into the roadside ditches, and then drain into existing city storm sewer systems. There is no need for velocity dissipation devices besides the Safety End Treatments.

2.1.2 Other Controls

Notice stating the following practices will be posted in the office trailer and the contractor who managed the day-to-day site operations will be responsible for seeing that these procedures are followed.

2.1.2.1 Waste Disposal

- a. **Waste Materials:** All waste materials will be collected and stored in a securely lidded metal dumpster. The dumpster will meet all local and state solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The trash and debris will be hauled to an approved landfill. No construction waste material will be buried on-site. The CONTRACTOR who manages the day-to-day site operations will instruct all personnel regarding the correct procedure for waste disposal.
- b. **Hazardous Waste:** No hazardous waste is expected to be generated or encountered in this project. In the event that hazardous waste is encountered, all hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. As with all other measures and controls included herein, the CONTRACTOR, who manages the day-to-day site operations, will be responsible for seeing that these practices are followed.
- c. **Sanitary Waste:** All sanitary waste will be regularly collected from the portable units by a licensed sanitary waste management contractor.

2.1.2.2 Off-Site Vehicle Tracking

A stabilized construction exit will be provided to help reduce vehicle tracking of sediments on site for the proposed detention pond.

The paved streets adjacent to site entrance as well as all streets within the project will be cleaned (not flushed) daily to remove any excess mud, dirt, or rock tracked from the site. This material will be disposed by the CONTRACTOR at an off-site location that is not in or adjacent to a stream or floodplain. Off-site disposal will be the responsibility of the CONTRACTOR. Sediment to be placed at the project site should be spread, compacted and stabilized in accordance with the OWNER's directions. Sediment shall not be allowed to flush into stream or drainage way. If sediment has been contaminated, it shall be disposed of in accordance with existing federal, state, and local regulations.

2.1.2.3 Demonstration of Compliance with State and Local Regulations

The proposed project will be in compliance with applicable state and local waste disposal and sanitary sewer regulations.

2.1.2.4 Construction and Waste Materials Stored Onsite.

Refer to Section 5.1 Non-Storm Water Discharges. Substances expected to be on-site during construction include the following: concrete, asphalt, soil, pipe, plastic, reinforcing steel, sand, brick, mortar, wood, detergents, fertilizer, fuels, and lubricants. Spill prevention measures include good HouseKeeping Practices, Hazardous Product Practices, Product Specific Practices, and Spill Prevention Practices.

2.1.2.5 Velocity Dissipation Devices

Velocity dissipation devices shall be placed before outfall locations and downstream of ditch lines to provide a non-erosive flow velocity from the structure to a water course so that natural physical and biological characteristics and functions are maintained and protected.

2.1.3 Approved State or Local Plans

This plan was prepared in accordance with the Texas Commission on Environmental Quality Construction General Permit, effective March 5, 2003, as applicable.

This plan also complies with the construction regulations for Harris County, Texas, for Storm Water Quality Management, effective October 1, 2001.

Section 3

3.1 Maintenance

CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF STORM WATER CONTROLS AND MANAGEMENT MEASURES PRIOR TO FINAL STABILIZATION OF THE DISTURBED AREA..

EROSION AND SEDIMENT CONTROL MEASURES THAT HAVE BEEN IMPROPERLY INSTALLED OR HAVE BEEN DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY.

3.1.1 Erosion and Sediment Controls to be used on This Project

3.1.1.1 Stabilization Practices

- a. Seeding and/or Hydro-Mulching Seeding.
- b. Stabilization of construction exits, staging and parking areas.
- c. Any surface disturbed after stabilization shall be re-stabilized.

3.1.1.2 Structural Practices

- a. Filter fabric fences.
- b. Inlet protection barriers.
- c. Sediment traps.
- d. Storm sewers and gutters.
- e. Velocity dissipation devices.
- f. Rock Filter Dam

To Maintain the Practices Described on the Preceding Page, the Following Will Be Performed by CONTRACTOR

1. All maintenance activities will be performed by the CONTRACTOR in accordance with the TECHNICAL SPECIFICATIONS.
2. Maintenance and repairs will be conducted within 24 hours of inspection report (see Section 4 below).
3. Sediment will be removed from behind the filter fabric fences when it becomes about one-third of the height of the fence and will be disposed of in accordance with the TECHNICAL SPECIFICATIONS.

4. Sediment will be removed from around the inlet barriers when the storage capacity is approximately 50 percent filled and will be disposed of in accordance with the TECHNICAL SPECIFICATIONS.
5. All temporary controls will be removed after the disturbed areas have been stabilized.

Section 4

4.1 Inspections

EROSION AND SEDIMENT CONTROL MEASURES THAT HAVE BEEN IMPROPERLY INSTALLED OR HAVE BEEN DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY.

4.1.1 Scope of Inspections

Each CONTRACTOR will designate a qualified person or persons to perform the following inspections:

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system.
2. Erosion and sediment control measures identified in the plan will be observed to ensure that they are operating correctly.
3. Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
4. Locations where vehicles enter or exit the site will be inspected for evidence of off-site sediment tracking.

The inspection will be conducted by the responsible person at least once every **14 calendar days** and within 24 hours after the end of a storm of 0.5 inch or greater. Contractor shall provide, at his own expense, a rain tube or other suitable device to measure rainfall.

After a portion of the site is finally stabilized, inspection will be conducted at least once every month.

4.1.2 SW3P Revisions

Based on the results of the inspection, contractor to modify the on-site storm water pollution abatement installations and/or construction procedures as appropriate to optimize storm water pollution abatement. Where modifications to the installations are required, contractor to amend a copy of the Storm Water Pollutions Prevention Plan, re-certify the amended plan and keep the amended plan at the project site.

Contractor to implement any changes to the storm water pollution abatement installations within 7 calendar days of the inspection indication modification are required.

4.1.3 Inspection Report

A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SW3P, and actions taken in accordance with section 4.1.2 above will be made and retained as part of the SW3P for at least three years from the date that the site is finally stabilized. The report will be signed in accordance with Part VII.6 of the Construction General Permit.

Copies of the forms to be used for the Inspection and Maintenance report are included in *Appendix B* of this SW3P.

Section 5

5.1 Pollution Prevention Measures for Non-Storm Water Discharges

5.1.1 Inventory for Storm Water Pollution Prevention Plan

The substances listed below are expected to be present on-site during construction:

Concrete	Aggregate	Fuels
Paints	Asphalt	Wood
Detergents	Steel products	Lubricants
Fertilizers	Cleaning Solvents	

The following are authorized non-storm water discharges anticipated during the project:

- Water for vehicle washing or dust control
- Irrigation drainage for watering vegetation
- Pavement wash water (not from toxic or hazardous spill areas)

These effluents are to be controlled as required to minimize creation of sediment discharge to off-site drainage structures.

5.1.2 Spill Prevention

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of the materials and substances described above to storm water runoff.

5.1.3 Good Housekeeping

The following good housekeeping practices will be followed by the CONTRACTOR onsite during the construction project.

1. An effort will be made to store only enough product required to do the job.
2. All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
3. Products will be kept in their original containers with the original manufacturer's labels.
4. Substances will not be mixed with one another unless recommended by the manufacturer.
5. Whenever possible, all of a product will be used up before disposing of the container.
6. Manufacturers' recommendations for proper use and disposal will be followed.
7. The CONTRACTOR will inspect daily to assure proper use and disposal of materials onsite.
8. CONTRACTOR shall locate fuel/material storage areas away from storm water conveyance systems. CONTRACTOR shall use a liner under aboveground storage tanks.

CONTRACTOR shall use filter fabric fencing, straw bales, or berms around fuel storage areas.

9. CONTRACTOR shall advise OWNER immediately, verbally, and in writing, of any fuel or toxic material spills onto the project/construction area and the actions taken to remedy the problem.
10. CONTRACTOR is responsible for disposing of fuels, materials, and contaminated excavations in a legally approved manner.
11. CONTRACTOR is responsible for complying with all applicable environmental laws.

5.1.4 Hazardous Products

These practices will be used by the CONTRACTOR to reduce the risks associated with hazardous materials, if hazardous materials are used.

1. Products will be kept in original containers unless they are not resealable.
2. Original labels and material safety data will be retained.
3. If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

5.1.5 Product-Specific Practices

The product-specific practices to be followed are listed in Table 1.

5.1.6 Spill-Prevention Practices

The spill prevention practices to be followed are listed in Table 1.

5.1.7 Other: Non-Storm Water Discharges

Water line and fire hydrant flushings may be performed during this project. This discharge will be made to the paved areas whenever possible. Inlet protection controls will trap any sediment generated by this activity.

CONTRACTOR should minimize production of dust on the site.

Section 6

6.1 Standard Specifications

6.1.1 Specification References

Refer to City of Houston Standard Construction Specifications for details of the following specifications:

- Section 01410 TDPES Requirements (See Attachment C)
- Section 01570 – Storm Water Pollution Control
- Section 01575 – Stabilized Construction Exit
- Section 01576 – Waste Material Disposal
- Section 01578 – Control of Ground and Surface Water

Refer to Harris County Flood Control District Standard Specifications for details of the following specifications:

- Section 02364 – Filter Dams

6.1.2 Certifications

Any subcontractors employed by the contractor and working on the site will certify that they understand and agree to follow the requirements of the SWPPP developed for this site.

Certification forms required by Contractor in the General Permit are attached in *Appendix A*. Certification forms required by Subcontractor and Inspector are also attached in *Appendix B*.

TABLE 1

Product Specific Practices

The following product specific practices will be followed on-site:

Petroleum Products:

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphalt substances used on-site will be applied according to the manufacturer's recommendations.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks:

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site except in area approved by Owners. All concrete waste will be removed from the site.

Spill Prevention Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the materials storage area on-site. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Contractor's site superintendent is responsible for the day-to-day site operations, will be the spill prevention and cleanup coordinator. He will designate at least one other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for all phases of prevention and cleanup. The names of all responsible spill personnel will be posted in the material storage area and in the office trailer on-site.

Attachment A

TD PES OPERATOR'S INFORMATION

ATTACHMENT 3

TPDES OPERATOR'S INFORMATION

Owner's Name and Address: City of Houston

Mr. _____
(City Official)

(Department)
P. O. Box 1562
Houston, Texas 77251-1562
(713) 247-1000

Contractors' Names and Addresses:

General Contractor: _____

Telephone: _____

Site Superintendent: _____

Telephone: _____

Erosion Control and
Maintenance Inspection: _____

Telephone: _____

Subcontractors' Names and Addresses:

Phone: _____

Phone: _____

Note: Insert name, address, and telephone number of person or firms

ATTACHMENT 4

CONTRACTOR'S / SUBCONTRACTOR'S

CERTIFICATION FOR TPDES PERMITTING

I certify under penalty of law that I understand the terms and conditions of TPDES General Permit No. TXR150000 and the Storm Water Pollution Prevention Plan for the construction site identified as part of this certification.

Signature: _____
Name: (printed or typed) _____
Title: _____
Company: _____
Address: _____
Date: _____

Signature: _____
Name: (printed or typed) _____
Title: _____
Company: _____
Address: _____
Date: _____

Signature: _____
Name: (printed or typed) _____
Title: _____
Company: _____
Address: _____
Date: _____

Attachment B

INSPECTION AND MAINTENANCE REPORT FORMS

**CITY OF HOUSTON MAINTENANCE REPORT
EPA NDPES CONSTRUCTION INSPECTION FORM**



ATTACHMENT 5
EPA NPDES
Construction
Inspection Form



The following inspection is being performed in compliance with Part IV.D.4. of the NPDES Region 6 Storm Water Construction General Permit [63 Fed. Reg. 36502] and being retained in accordance with Part V of the Permit. Qualified personnel (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, placement and effectiveness of structural control measures, and locations where vehicles enter or exit the site. Inspections shall be performed at least once every 14 days and within 24 hours of the end of a storm event of 0.5 inches or greater. Where sites have been temporarily stabilized, runoff is unlikely due to winter conditions, or during seasonal arid periods in arid areas (0-10 inches of rainfall annually) and semi-arid areas (10-20 inches annually) such inspections shall be conducted at least once every month. This form is primarily intended for use with construction projects in Texas and New Mexico. Permittees on Indian Country lands in Oklahoma, Louisiana and Arkansas and some oil and gas facilities in Oklahoma may use this form if they are eligible for this permit. Other facilities need to check with their NPDES authority before using this form.

If you do not know your NPDES Permit Number, contact the NOI Processing Center at (301)495-4145. This form was prepared as an example and it is not a required form for use with the permit. Alternative forms may be used if they contain all of the required information as set forth in the permit. This form and additional information regarding the NPDES Region 6 storm water program may be found on the Internet at <http://www.epa.gov/region6/sw/>. Any person with a complaint about the operation of this facility in regards to this permit should contact EPA Region 6 at (214)665-7112.

Permit Number(s) covered by this inspection (e.g. owners, developers, general contractor, builders)	
Signature and Certification in accordance with Part VI.G of the permit:	<p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p> <p>Signature _____ Date _____</p>
Date of Inspection	
Inspector Name	
Is there a copy of the permit language with the SWPPP?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Is the inspector qualified and are the qualifications documented in the SWPPP?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Is an NPDES storm water construction sign posted at the entrance for all permittees?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<p>You may want to use EPA Region 6 construction checklist to assure components of the SWPPP are complete. This form, the construction sign, and the checklist are available on the Region 6 NPDES Storm Water Forms and Documents web page which may be found on the internet at http://www.epa.gov/earth/r6/gen/w/formsw.htm. In addition to the checklist, you should provide a narrative (see next page) on the existing Best Management Practices and Structural Controls found during each inspection. Any problems identified in an inspection should be corrected within 7 days. The inspection should cover all components of the SWPPP and all potential pollutants. While eroded soil is the primary pollutant of concern, do not forget to inspect for other pollutant sources such as fuel tanks, paints, solvents, stabilization materials, concrete hardner, batch plants, and construction debris. The inspector will need to update the SWPPP to reflect findings of the inspection. The site map should be updated after an inspection to show controls that have been added or removed, to ensure the site map is kept current in accordance with Part IV.C. of the permit.</p>	

Revision 4, March 1, 2000

ATTACHMENT 5**Narrative Findings of the inspection:**

Observations should include any findings of Best Management Practices or controls that are not in accordance with the SWPPP. If a control is not in place or failed, observe the reason why. A control removed temporarily for work is not necessarily a violation if properly recorded in the SWPPP. If it has been removed, record why it was removed and, if applicable, when it will be reinstalled. If the control has failed, observe the conditions so a conclusion may be made as to whether the control failed for improper maintenance or improper design. The qualified inspector will know when a failed control is inadequate and should be replaced by an improved control mechanism. Qualified inspectors are to have authority to make changes to the SWPPP to assure compliance. Controls that have not been installed should be given a reason why they are not installed and/or a scheduled date for installation if they are designed for a later phase of construction. After the inspection, the SWPPP and its site map should be updated to reflect current conditions of controls and Best Management Practices at the time of the inspection. This includes removing uninstalled controls from the site map or otherwise denoting on the site map if they are no longer installed if the controls have been removed because they are no longer necessary (e.g. stabilization has been achieved in that area).

Revision 4, March 1, 2000

01410-18
02-01-2011

ATTACHMENT 6



City of Houston
Storm Water Pollution Prevention Plan
Construction Site Inspection Report

TPDES/EPA Permit Number _____

COH Storm Water Quality Permit Number _____

DATE _____

No exceptions noted.

The following must be corrected prior to continuing work:

- Public Notice improperly posted
- Initial Construction Site Inspection Report information requires updating
- Copy of NOI not on site
- Storm water pollution prevention plan not on site
- Erosion and sediment controls improperly installed
- Erosion and sediment control devices improperly maintained
- Fueling or washout areas not properly protected
- Portocan or other sanitary facilities not properly protected
- Self-inspection and maintenance records incomplete
- Sediment from site outside area of construction
- Other (see description below)

Please contact the Storm Water Quality Engineer at
611 Walker, RA-257, Houston TX 77002
713-837-7383 fax 713-837-0570

Once the above items have been corrected, call to arrange for reinspection. No further inspections for any construction related activity shall be made until the above items have been corrected.

Inspector's Signature

Contractor's Signature

Inspector's Name

Contractor's Name

not present

Distribution Stormwater Quality Engineer, Code Enforcement, Inspector, Operator
(Operator is Contractor)

Form _____ (10-01-01)

STORM WATER POLLUTION PREVENTION PLAN

Inspection and Maintenance Report

Project: _____

Phase: _____

Inspector: _____ Date: _____

Number of Days Since Last Rainfall _____ Amount of Last Rainfall _____ Inches

STABILIZATION MEASURES

Area	Days Since Last Disturbance	Date of Next Disturbance	Stabilized?	Stabilized with?	Condition
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Stabilization Required: _____

To Be Performed By: _____ On or Before: _____

Corrected By: _____ On: _____

STRUCTURAL CONTROLS

Filter Fabric Fence

Location	Bottom of Fabric Still Buried?	Fabric Torn or Sagging?	Posts Tipping Over?	How Deep is the Sediment?
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Maintenance Required for Silt Fence: _____

To Be Performed By: _____ On or Before: _____

Corrected By: _____ On: _____

Inlet Protection Traps

Location	In Place? Condition?	Depth Of Sediment	Condition of Inlet
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Maintenance Required for Inlet Protection Traps: _____

To Be Performed By: _____ On or Before: _____

Corrected By: _____ On: _____

Inlet Protection Barriers

Location	In Place? Condition?	Depth of Sediment	Condition of Inlet
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Maintenance Required for Inlet Protection Barriers: _____

To Be Performed By: _____ On or Before: _____
Corrected By: _____ On: _____

OTHER CONTROLS

Burlap Bag Barriers

Location	In Place? Condition?	How Deep is Sediment?
_____	_____	_____
_____	_____	_____
_____	_____	_____

Maintenance Required for Burlap Bag Barriers: _____

To Be Performed By: _____ On or Before: _____
Corrected By: _____ On: _____

Stabilized Construction Entrance/Staging Area

Does much sediment get tracked onto road?	Entry surface clean or sediment filled?	Does all traffic use entrance?
_____	_____	_____
_____	_____	_____
_____	_____	_____

Maintenance Required for Stabilized Construction Entrance/Staging Area: _____

To Be Performed By: _____ On or Before: _____
Corrected By: _____ On: _____

Changes Required to the Storm Water Pollution Prevention Plan:

Reasons for Changes:

Inspector's Signature: _____ Date: _____

Attachment C

**NOTICE OF INTENT
NOI INSTRUCTIONS
PAYMENT SUBMITTAL FORM
NOTICE OF TERMINATION
NOI INSTRUCTIONS
CONSTRUCTION SITE NOTICE
EPA NPDES CONSTRUCTION INSPECTION FORM**

ATTACHMENT 1

	<p>Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity under the TPDES Construction General Permit (TXR150000)</p> <p>For help completing this application, read the TXR150000 NOI Instructions (TCEQ-20022-Instructions).</p>	<p>TCEQ Office Use Only TPDES Permit Number: TXR15 _ _ _ _ - NO GIN Number: _ _ _ _ _ _ _ _ _ _ </p>
<p>A. Construction Site Operator <input type="checkbox"/> New <input type="checkbox"/> No Change Customer Reference Number: CN _____</p> <p>Name: _____</p> <p>Mailing Address: _____ City: _____ State: _____ Zip Code: _____</p> <p>Country Mailing Information (if outside USA) Territory: _____ Country Code: _____ Postal Code: _____</p> <p>Phone Number: _____ Extension: _____ Fax Number: _____</p> <p>E-mail Address: _____</p> <p>Type of Operator: <input type="checkbox"/> Individual <input type="checkbox"/> Sole Proprietorship - D.B.A. <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation <input type="checkbox"/> Federal Government <input type="checkbox"/> State Government <input type="checkbox"/> County Government <input type="checkbox"/> City Government <input type="checkbox"/> Other: _____</p> <p>Independent Operator? <input type="checkbox"/> Yes <input type="checkbox"/> No Number of Employees: <input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 or higher</p> <p>Federal Tax ID: _____ State Franchise Tax ID Number: _____ DUNS Number: _____</p>		
<p>B. Billing Address</p> <p>Name: _____</p> <p>Mailing Address: _____ City: _____ State: _____ Zip Code: _____</p> <p>Country Mailing Information (if outside USA) Territory: _____ Country Code: _____ Postal Code: _____</p>		
<p>C. Project / Site Information <input type="checkbox"/> New <input type="checkbox"/> No Change Regulated Entity Reference Number: RN _____</p> <p>Name: _____</p> <p>Mailing Address: _____ City: _____ State: _____ Zip Code: _____</p> <p>Physical Address: _____ City: _____ County: - _____ Zip Code: _____</p> <p>Location Access Description: _____</p> <p>Latitude: ____° ____' ____" N Longitude: ____° ____' ____" W Degrees (°), Minutes ('), and Seconds (") Latitude: _____ Longitude: - _____ Decimal Form</p> <p>Standard Industrial Classification (SIC) code: _____ Also, describe the construction activity at this site (do not repeat the SIC code): _____</p> <p>Has a storm water pollution prevention plan been prepared as specified in the general permit (TXR150000)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Estimated area of land disturbed (to the nearest acre): _____ Is the project / site located on Indian Country Lands? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Does this project / site discharge storm water into a municipal separate storm sewer system (MS4)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, provide the name of the MS4 operator: _____</p> <p>Provide the name or segment number of the water body that receives storm water from this project / site: _____</p>		
<p>D. Contact - If the TCEQ needs additional information regarding this application, who should be contacted?</p> <p>Name: _____ Title: _____</p> <p>Phone Number: _____ Extension: _____ Fax Number: _____</p> <p>E-mail Address: _____</p>		
<p>E. Payment Information - Check / Money Order Number: _____ Name on Check / Money Order: _____</p>		
<p>F. Certification</p> <p>I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p> <p>Construction Site Operator:</p> <p>Prefix: _____ First: _____ Middle: _____ Last: _____ Suffix: _____ Title: _____</p> <p>Signature: _____ Date: _____</p> <p>If you have questions on how to fill out this form or about the storm water program, please contact us at (512) 239-4671. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at (512) 239-3282.</p> <p>The completed NOI must be mailed to the following address. Use the attached document to submit the \$100 application fee. Please note that the NOI and application fee are submitted separately to different addresses.</p> <p style="text-align: center;">Texas Commission on Environmental Quality Storm Water & General Permits Team; MC - 228 P.O. Box 13087 Austin, Texas 78711-3087</p>		
TCEQ-20022 (05/03)	Page 1 of 2	

ATTACHMENT 1

**Texas Commission on Environmental Quality
Payment Submittal Form**

The storm water application fee shall be sent under separate cover to the Texas Commission on Environmental Quality.

This form must be used to submit your Storm Water Application Fee. Please complete the following information, staple your check in the space provided at the bottom of this document, and mail it to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753



Fee Code: GPA

Storm Water General Permit: TXR150000

Check / Money Order No: _____ Amount of Check/Money Order: _____

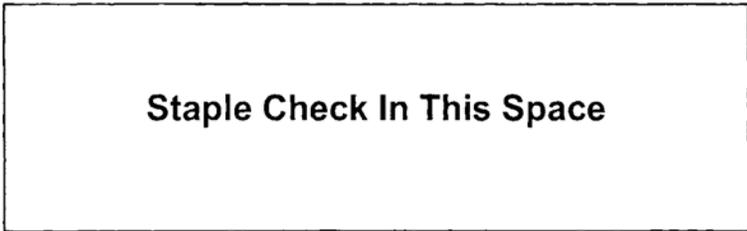
Date of Check or Money Order: _____

Name on Check or Money Order: _____

Facility / Site Name: _____

Facility / Site Physical Address: _____

City: _____ Zip Code: _____



ATTACHMENT 1

Completing the Notice of Intent for Storm Water Discharges
Associated with Construction Activity
under the TPDES Construction General Permit (TXR150000)

A. Construction Site Operator Information

Check boxes and Customer Reference Number

These boxes designate the operator's status as a TCEQ "customer"—in other words, an individual or business that is involved in an activity that we regulate. We assign each customer a number that begins with "CN," followed by nine digits. **This is not a permit number, registration number, or license number.** In the remainder of this section, we will use "this customer" to mean the operator for Part A of the form.

- If this customer has not been assigned a Customer Reference Number or if this number is unknown, check "New" and leave the space for the Customer Reference Number blank.
- If this customer has already been assigned this number, enter the operator's Customer Reference Number and:
 - Check "No Change" if all the remaining customer information is the same as previously reported. However, you must still complete most blanks in this form for this notice of intent to be valid.
 - If this customer's information has changed since the last time it was reported to the TCEQ, check neither box and complete the remainder of this notice of intent.
- **Do not enter a permit number, registration number, or license number in place of the Customer Reference Number.**

Name

Enter the legal name of this customer as authorized to do business in Texas. Include any abbreviations (LLC, Inc., etc.).

Mailing Address

Enter a central and general mailing address for this customer to receive mail from the TCEQ. For example, if this customer is a large company, this address might be the corporate or regional headquarters. On the other hand, for a smaller business, this address could be the same as the site address.

If this is a street address, please follow US Postal Service standards. In brief, these standards require this information in this order:

- the "house" number—for example, the 1401 in 1401 Main St
- if there is a direction before the street name, the one- or two-letter abbreviation of that direction (N, S, E, W, NE, SE, SW, or NW)
- the street name (if a numbered street, do not spell out the number—for example, 6th St, not Sixth St)
- an appropriate abbreviation of the type of street—for example, St, Ave, Blvd, Fwy, Exwy, Hwy, Cr, Ct, Ln
- if there is a direction after the street name, the one- or two-letter abbreviation of that direction (N, S, E, W, NE, SE, SW, or NW)
- if there is a room number, suite number, or company mail code

City, State, and ZIP Code

Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

Country Mailing Information

If this address is **outside** the United States, enter the territory name, country code, and any non-ZIP mailing codes or other non-U.S. Postal Service features here. If this address is **inside** the United States, leave these spaces blank.

Phone Number and Extension

This number should correspond to this customer's mailing address given earlier. Enter the area code and phone number here. Leave "Extension" blank if this customer's phone system lacks this feature.

Fax Number

This number should correspond to this customer's mailing address given earlier. Enter the area code and fax number here.

E-mail Address

As with the mailing address, this should be a general address that is appropriate for e-mail to this customer's central or regional headquarters, if applicable.

If "No Change" was checked for this customer, you may skip the rest of the fields in this part of the form and continue to the next part of the NOI.

Type of Operator

Check **only one** box.

Check ...	if this customer ...
Individual	is a person and has not established a business to do whatever causes them to be regulated by us.
Sole Proprietorship—D.B.A.	is a business that is owned by only one person and has not been incorporated. This business may: <ul style="list-style-type: none"> • be under the person's name • have its own name ("doing business as" or d.b.a.) • have any number of employees
Partnership	is a business that is established as a partnership as defined by the Texas Secretary of State's Office
Corporation	meets all of these conditions <ul style="list-style-type: none"> • is a legally incorporated entity under the laws of any state or country • is recognized as a corporation by the Texas Secretary of State • has proper operating authority to operate in Texas
Federal, state, county, or city government (as appropriate)	is either an agency of one of these levels of government or the governmental body itself (if a utility district, water district, tribal government, college district, council of governments, or river authority, check "Other" and write in the specific type of government.)
Other	fits none of the above descriptions. Enter a short description of the type of customer in the blank provided.

Independent Operator?

Check "No" if this customer is a subsidiary or part of a larger company. Otherwise, check "Yes."

Number of Employees

Check one box to show the number of employees for this customer's entire company, at all locations. **This is not necessarily the number of employees at the site named in this NOI.**

Federal Tax ID

All businesses, except for some small sole proprietors, should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Individuals and sole proprietors do not need to provide a federal tax ID.

State Franchise Tax ID

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter this number here.

DUNS Number

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

B. Billing Address

We will mail the annual fee invoice for this site to the address entered in this section.

Name

Enter the legal name of the person or business to which we should mail this site's fee invoice each year.

Mailing Address

Enter the specific mailing address to which we should mail this site's fee invoice each year. If this is a street address, please follow the US Postal Service standards as described under "A. Construction Site Operator Information" on page 1 of these instructions.

City, State, and ZIP Code

Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

Country Mailing Information

If this address is **outside** the United States, enter the territory name, country code, and any non-ZIP mailing codes or other non-U.S. Postal

ATTACHMENT 1

Service features here. If this address is *inside* the United States, leave these spaces blank.

C. Project / Site Information

Check boxes and Regulated Entity Reference Number

These boxes designate this site's status as a TCEQ "regulated entity"—in other words, a location where an activity that we regulate occurs. We assign each regulated entity a number that begins with "RN," followed by nine digits. *This is not a permit number, registration number, or license number.*

- If this site has not been assigned a Regulated Entity Reference Number or if this number is unknown, check "New" and leave the space for the Regulated Entity Reference Number blank.
- If this site has already been assigned this number, enter the Regulated Entity Reference Number and:
 - Check "No Change" if all the remaining information is the same as previously reported. However, even if there has been no change, you must complete this section at least through "E-mail Address" for this NOI to be valid.
 - If this site's information has changed since the last time it was reported to the TCEQ, check neither box and complete the remainder of this notice of intent.
- **Do not enter a permit number, registration number, or license number in place of the Regulated Entity Reference Number.**

Name

Enter the name by which you want this site to be known to the TCEQ.

Mailing Address

Enter the specific mailing address for this site. If this is a street address, please follow the US Postal Service standards as described under "A. Construction Site Operator Information" on page 1 of these instructions. If the project / site's mailing address is the same as what is provided in Section A, you may enter "Same as Section A".

City, State, and ZIP Code

Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

Physical Address

Enter the physical address of the site itself. TCEQ staff should be able to use this address to find the site. Please follow the US Postal Service standards as described under "A. Construction Site Operator Information" on page 1 of these instructions. If the project / site does not have a physical address, enter "No Address".

City, County, and ZIP Code

Enter the name of the city, the county, and the ZIP Code. (Enter the full ZIP+4 if you know it.) This information must be provided even if you have entered "No Address" in the previous field.

Location Access Description

Enter a physical description of the location of the site based on highway intersections and/or permanent landmarks.

Latitude and Longitude

Enter the latitude and longitude of the site in *either* degrees, minutes, and seconds *or* decimal form.

For help obtaining the latitude and longitude, go to:

<http://www.tnrc.state.tx.us/gis/drgview.html>

Standard Industrial Classification (SIC) Code and Activity Description

Provide the SIC code that best describes the construction activity being conducted at the site.

For help with SIC codes, go to:

<http://www.osha.gov/oshstats/sicser.html>

In addition to the SIC code, you must also provide a description of the construction activity being conducted at the site. This may include such descriptions as: "Apartment Building Construction" or "Shopping Center Construction."

Storm Water Pollution Prevention Plan

This plan identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter storm water, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. **You must develop this plan before you complete this NOI.** This plan must be available for a TCEQ investigator to review on request. Specific requirements for the development of the plan

can be found in the *Texas Pollutant Discharge Elimination System Construction General Permit (TXR150000)*.

Estimated Area of Land Disturbed

Provide the approximate number of acres that the construction site will disturb. It is appropriate to enter a value less than 5, only if the project is part of a larger common plan that disturbs five or more acres. If the acreage is less than 1, enter 1. "Disturb" means any clearing, grading, excavating, or other similar activities.

Is the site located on Indian Country Lands?

Check "Yes" only if the site is on a reservation or other areas designated by the federal government as Indian Country Lands. If not, check "No."

Destination of Storm Water Discharge

The storm water from your site eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. The discharge may initially be into a municipal separate storm sewer system (MS4). Check the appropriate boxes for whether storm water is discharged into an MS4. If you checked "Yes" to "An MS4?", then enter the name of the entity that operates the storm sewer—often a city, town, or utility district, but possibly another form of government.

You must also provide the name of the water body that receives the discharge from the construction site (a local stream or lake). Storm water may be discharged directly to a receiving stream or via a storm sewer system. If known, please include the segment number if the discharge is to a classified water body.

For a map that includes segment numbers, go to:

<http://www.tnrc.state.tx.us/water/quality/data/index.html>

D. Contact

Give all the relevant information for the person whom TCEQ can contact if there are questions about any of the information on this form—perhaps the same person who completed the form.

E. Payment Information

Provide the number and account holder name from the check or money order used to pay the \$100 application fee.

F. Certification

The operator must sign and date this statement to validate this NOI. Be sure to enter the full legal name of the person signing the form and the relevant title—for example, "Operator," "Vice-President," or "Partner." Use the "Prefix" blank for such titles as Dr., Mr., or Ms., as desired. Use the "Suffix" blank for such designations as Ph.D., Jr., Sr., III, or J.D., if applicable.

For a corporation, the application shall be signed by a responsible corporate officer. A responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this application, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the United States Environmental Protection Agency).

Questions?

If you have questions about any of the information on this form, contact our Storm Water Program at 512/239-4671 or look for "Storm Water" on our Web site:

www.tceq.state.tx.us

ATTACHMENT 2



CONSTRUCTION SITE NOTICE

FOR THE
Texas Commission on Environmental Quality (TCEQ)
Storm Water Program

TPDES GENERAL PERMIT TXR150000

The following information is posted in compliance with **Part II.D.2.** of the TCEQ General Permit Number TXR150000 for discharges of storm water runoff from construction sites. Additional information regarding the TCEQ storm water permit program may be found on the internet at:

www.tnrec.state.tx.us/permitting/waterperm/wwperm/tpdestorm

Contact Name and Phone Number:	
Project Description: (Physical address or description of the site's location, estimated start date and projected end date, or date that disturbed soils will be stabilized)	
Location of Storm Water Pollution Prevention Plan :	

For Construction Sites Authorized Under Part II.D.2. (Obtaining Authorization to Discharge) the following certification must be completed:

I _____ (Typed or Printed Name Person Completing This Certification) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part II.D.2. of TPDES General Permit TXR150000 and agree to comply with the terms of this permit. A storm water pollution prevention plan has been developed and implemented according to permit requirements. A copy of this signed notice is supplied to the operator of the MS4 if discharges enter an MS4 system. I am aware there are significant penalties for providing false information or for conducting unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title

Date

ATTACHMENT 7

	Notice of Termination (NOT) for Storm Water Discharges Associated with Construction Activity under the TPDES Construction General Permit (TXR150000)	TCEQ Office Use Only
		TPDES Permit Number: TXR15: ___ ___ ___ ___ - NO GIN Number: ___ ___ ___ ___
For help completing this application, read the TXR150000 NOI Instructions (TCEQ-20023-Instructions).		
A. TPDES Permit Number: TXR15 _____		
B. Construction Site Operator		Customer Reference Number: CN _____
Name: _____		
Mailing Address: _____		
City: _____ State: -- _____ Zip Code: _____		
Country Mailing Information (if outside USA) Territory: _____ Country Code: _____ Postal Code: _____		
Phone Number: _____ Extension: _____ Fax Number: _____		
E-mail Address: _____		
C. Project / Site Information		Regulated Entity Reference Number: RN _____
Name: _____		
Physical Address: _____		
Location Access Description: _____		
City: _____ County: -- _____ Zip Code: _____		
D. Contact - If the TCEQ needs additional information regarding this termination, who should be contacted?		
Name: _____ Title: _____		
Phone Number: _____ Extension: _____ Fax Number: _____		
E-mail Address: _____		
E. Certification		
I certify under penalty of law that authorization under the TPDES Construction General Permit (TXR150000) is no longer necessary based on the provisions of the general permit. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under the general permit TXR150000, and that discharging pollutants in storm water associated with construction activity to waters of the U.S. is unlawful under the Clean Water Act where the discharge is not authorized by a TPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.		
Construction Site Operator Representative:		
Prefix: _____ First: _____ Middle: _____		
Last: _____ Suffix: _____		
Title: _____		
Signature: _____ Date: _____		
If you have questions on how to fill out this form or about the storm water program, please contact us at (512) 239-4671. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at (512) 239-3282.		
The completed NOT must be mailed to the following address:		
Texas Commission on Environmental Quality Storm Water & General Permits Team; MC - 228 P.O. Box 13087 Austin, Texas 78711-3087		
TCEQ - 20023 (02/03) Page 1 of 1		

ATTACHMENT 7

Completing the Notice of Termination for Storm Water Discharges
Associated with Construction Activity
under the TPDES Construction General Permit (TXR150000)

Who May File a Notice of Termination (NOT) Form

Permittees disturbing 5 acres or more (or part of a larger common plan of development or sale disturbing 5 acres or more) who are presently covered under the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit must submit a Notice of Termination (NOT) when final stabilization has been achieved on all portions of the site that is the responsibility of the permittee; or another permitted operator has assumed control over all areas of the site that have not been finally stabilized and all silt fences and other temporary erosion controls have either been removed, scheduled for removal as defined in the SWP3, or transferred to a new operator if the new operator has sought permit coverage. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.

Final Stabilization occurs when either of the following conditions are met:

- (a) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (b) For individual lots in a residential construction site by either:
 - (1) the homebuilder completing final stabilization as specified in condition (a) above; or
 - (2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization.
- (c) For construction activities on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to a surface water and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

A. TPDES Permit Number

Provide the TPDES permit number assigned to the operator of the construction site.

B. Construction Site Operator Information

Customer Reference Number

This number designates the operator's status as a TCEQ "customer"—in other words, an individual or business that is involved in an activity that we regulate. We assign each customer a number that begins with "CN," followed by nine digits. **This is not a permit number, registration number, or license number.** In the remainder of this section, we will use "this customer" to mean the operator for Part B of the form.

- If this customer has not been assigned a Customer Reference Number, leave the space for the Customer Reference Number blank.
- If this customer has already been assigned this number, enter the operator's Customer Reference Number.
- **Do not enter a permit number, registration number, or license number in place of the Customer Reference Number.**

Name

Enter the legal name of this customer as authorized to do business in Texas. Include any abbreviations (LLC, Inc., etc.).

Mailing Address

Enter a central and general mailing address for this customer to receive mail from the TCEQ. For example, if this customer is a large company, this address might be the corporate or regional headquarters. On the other hand, for a smaller business, this address could be the same as the site address.

If this is a street address, please follow US Postal Service standards. In brief, these standards require this information in this order:

- the "house" number—for example, the 1401 in 1401 Main St
- if there is a direction before the street name, the one- or two-letter abbreviation of that direction (N, S, E, W, NE, SE, SW, or NW)
- the street name (if a numbered street, do not spell out the number—for example, 6th St, not Sixth St)
- an appropriate abbreviation of the type of street—for example, St, Ave, Blvd, Fwy, Exwy, Hwy, Cr, Ct, Ln
- if there is a direction after the street name, the one- or two-letter abbreviation of that direction (N, S, E, W, NE, SE, SW, or NW)
- if there is a room number, suite number, or company mail code

City, State, and ZIP Code

Enter the name of the city, the two-letter USPS abbreviation for the state (for example, TX), and the ZIP Code. (Enter the full ZIP+4 if you know it.)

ATTACHMENT 7

Country Mailing Information

If this address is *outside* the United States, enter the territory name, country code, and any non-ZIP mailing codes or other non-U.S. Postal Service features here. If this address is *inside* the United States, leave these spaces blank.

Phone Number and Extension

This number should correspond to this customer's mailing address given earlier. Enter the area code and phone number here. Leave "Extension" blank if this customer's phone system lacks this feature.

Fax Number

This number should correspond to this customer's mailing address given earlier. Enter the area code and fax number here.

E-mail Address

As with the mailing address, this should be a general address that is appropriate for e-mail to this customer's central or regional headquarters, if applicable.

C. Project / Site Information

Regulated Entity Reference Number

This number designates this site's status as a TCEQ "regulated entity"—in other words, a location where an activity that we regulate occurs. We assign each regulated entity a number that begins with "RN," followed by nine digits. ***This is not a permit number, registration number, or license number.***

- If this site has not been assigned a Regulated Entity Reference Number, leave the space for the Regulated Entity Reference Number blank.
- If this site has already been assigned this number, enter the Regulated Entity Reference Number.
- ***Do not enter a permit number, registration number, or license number in place of the Regulated Entity Reference Number.***

Name

Enter the name by which you want this site to be known to the TCEQ.

Physical Address

Enter the physical address of the site itself. TCEQ staff should be able to use this address to find the site.

Location Description

Enter a physical description of the location of the site based on highway intersections and/or permanent landmarks.

City, County, and ZIP Code

Enter the name of the city, the county, and the ZIP Code. (Enter the full ZIP+4 if you know it.)

D. Contact

Give all the relevant information for the person whom TCEQ can contact if there are questions about any of the information on this form—perhaps the same person who completed the form.

E. Certification

The operator must sign and date this statement to validate this NOI. Be sure to enter the full legal name of the person signing the form and the relevant title—for example, "Operator," "Operator's attorney," or "Senior Site Manager." Use the "Prefix" blank for such titles as Dr., Mr., or Ms., as desired. Use the "Suffix" blank for such designations as Ph.D., Jr., Sr., III, or J.D., if applicable.

For a corporation, the application shall be signed by a responsible corporate officer. A responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this application, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. regional administrator of the United States Environmental Protection Agency).

Questions?

If you have questions about any of the information on this form, contact our Storm Water Program at 512/239-4671 or look for "Storm Water" on our Web site:

www.tceq.state.tx.us

Attachment D

Project Description Sheet

Storm Water Pollution Prevention Plan

Project Description to Be Posted On-Site

Project Description:

Site: Skyscraper Shadows Area Roadside Ditch Rehabilitation

Location: The site is bounded by Ballantine St on the west, Almeda-Genoa Rd on the north, Moers Rd. on the east and Wayfarer Ln on the south. The proposed detention basin is located east of Monroe Rd and West of Moers Rd.

Latitude 29°37'##" North, Longitude 95°16' ##" West

The project consists of the drainage improvements inside the Skyscraper Shadows Subdivision and a detention basin expansion east of the subdivision.

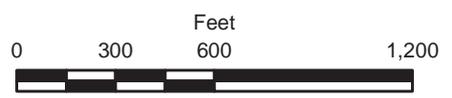
1. Phase 1 – Drainage facilities serving the Skyscraper Shadows subdivision will be improved to accommodate storm water events which currently cause flooding in the subdivision. A detention basin expansion will be constructed to establish a dry detention pond capable of storing higher volumes to accommodate storm event drainage in the Skyscraper subdivision area. New cross culverts will be installed crossing Monroe Rd. between the subdivision and Halls Road Ditch (A120-00-00), a Harris County Flood Control Channel.
2. Phase 2 – Driveway cross culverts will be cleaned or replaced along the road side ditches of the subdivision. Road side ditches will be cleaned or regarded. Proposed storm sewer will be installed to receive storm water from the subdivision and direct towards the proposed dry detention basin. Utility relocations will occur to serve the proposed storm sewer.

Erosion and sediment controls will be installed. All disturbed areas will be stabilized.



Legend

-  Project Boundary
-  Overland Flow Direction
-  Existing Storm Sewer System

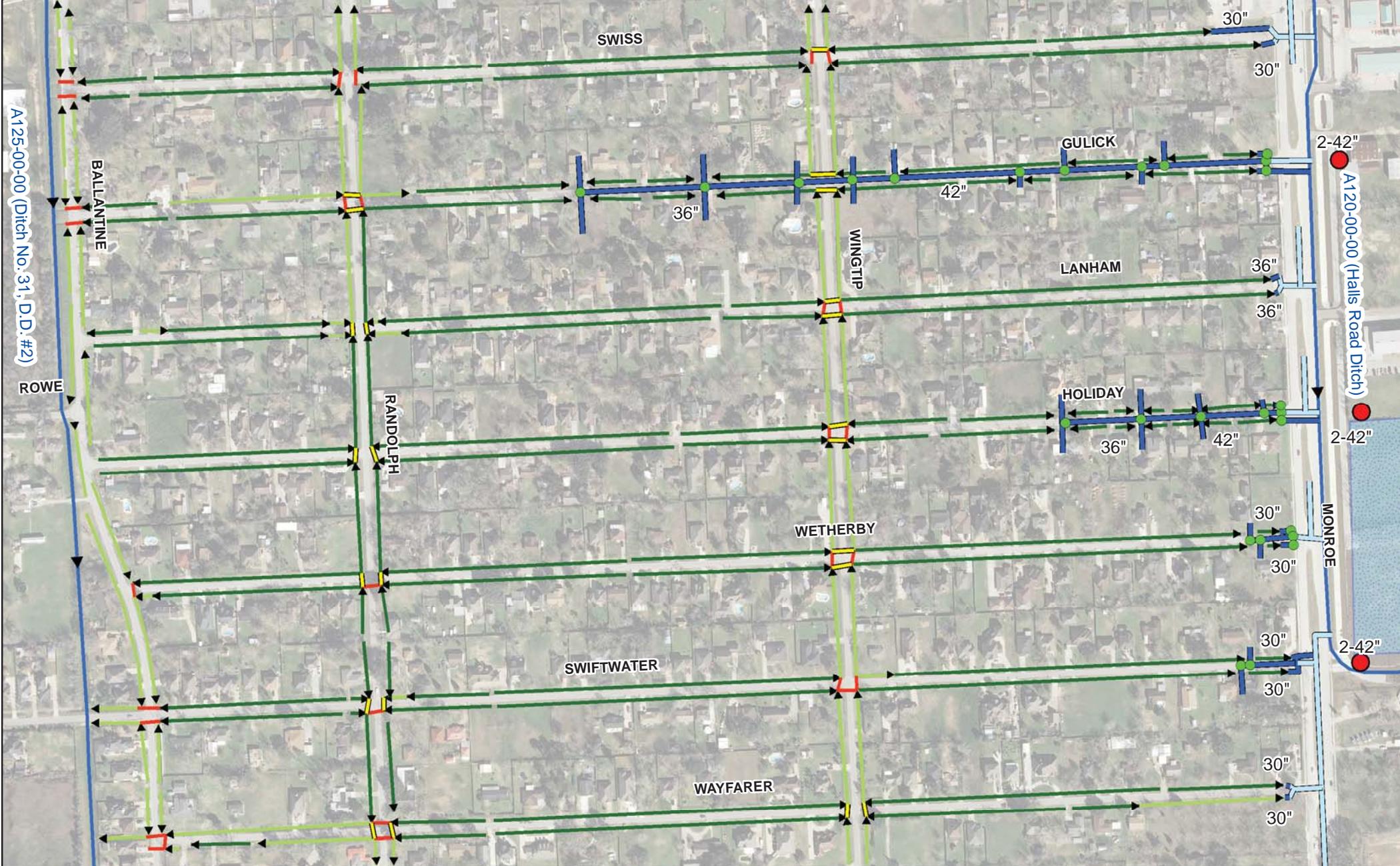


LOCAL DRAINAGE PROJECT
SKYSCRAPER SHADOWS SUBDIVISION

**Topography and
Overland Drainage Patterns**



AECOM Technical Services, Inc.
5444 Westheimer Rd, Suite 200
Houston, Texas 77056-5308
www.aecom.com
TBPE Reg. No. F-3580



Legend

- Potential Detention
- Proposed Outfall Improvements
- Storm Sewer Improvements
- Existing Storm Sewer
- Proposed New / Impr Culvert
- Existing Culvert to Remain
- Existing Ditch / Driveway Culvert
- Regrade Ditch / Min 24" Driveway Culvert
- HCFCD Channel

Note: All proposed culverts and storm sewers are 24" RCP unless otherwise noted. Trunk sizes shown only. See plan and profile for details.



**LOCAL DRAINAGE PROJECT
SKYSCRAPER SHADOWS SUBDIVISION**

**Proposed
Improvements**



AECOM Technical Services, Inc.
5444 Westheimer Rd, Suite 200
Houston, Texas 77056-5308
www.aecom.com
TBPE Reg. No. F-3580

Table 3-1: Green and Ampt Loss Parameters for All Drainage Areas

Parameter	Initial Loss (in)	Moisture Deficit	Suction (in)	Conductivity (in/hr)
Value Used	0.1	0.385	12.45	0.024

Along with the subbasin parameters described above, a spreadsheet was used to vary the Clark Unit Hydrograph's R until the peak flow from the subbasin matched the calculated value within 0.5% of the Rational Method calculation, where possible, using a one minute time step. A unique storage coefficient was developed for each drainage area for each storm. Once the R values were entered into HEC-HMS, the peak flows from the HEC-HMS engine may not exactly match the spreadsheet's values, as the HEC-HMS model uses a 5-minute time step. As a result, the peak flows within the HEC-HMS model will not exactly match the Rational Method peak flows calculated for every drainage area. This issue will not significantly affect the design or impact analysis, as the timing of the hydrograph peak and the placement of the proper volume near the peak are the driving factors for the analysis, especially for the larger storms. **Table 3-2** and **3** summarize the hydrologic parameters and peak flows for each of the drainage areas.

The City of Houston does not provide rational method intensity duration frequency coefficients (b, d, and e) for the 50-year storm. To estimate the 50-year peak flow, an R value interpolated from the 25-year and 100-year calibrations was used in HEC-HMS along with the 50-year rainfall distribution. The interpolation was linear in R and used a normal probability distribution for the storm frequency.

Table 3-2: Summary of Hydrologic Parameters for All Drainage Areas

Drainage Area ID	Area (ac)	t_c (hr)	Impervious Cover (%)	C	Storage Coefficient, R (hr)				
					2-yr	10-yr	25-yr	50-yr*	100-yr
100	47.44	0.579	45	0.47	1.026	1.051	1.087	1.161	1.229
101	41.76	0.572	45	0.47	1.018	1.042	1.077	1.151	1.218
102	28.65	0.551	45	0.47	0.989	1.010	1.047	1.118	1.183
103	165.04	0.660	45	0.47	1.139	1.164	1.205	1.288	1.362
104	4.98	0.471	65	0.59	0.601	0.590	0.598	0.636	0.670
105	7.10	0.485	40	0.44	0.993	1.027	1.066	1.146	1.217
106	7.35	0.487	40	0.44	0.986	1.030	1.067	1.143	1.211
107	7.47	0.487	40	0.44	0.996	1.034	1.076	1.149	1.215
108	7.53	0.488	40	0.44	0.993	1.037	1.070	1.145	1.213
109	6.90	0.484	40	0.44	0.982	1.027	1.070	1.144	1.211
110	6.22	0.480	40	0.44	0.974	1.026	1.053	1.131	1.201
111	6.01	0.479	40	0.44	0.975	1.021	1.052	1.129	1.199
112	6.05	0.479	40	0.44	0.985	1.019	1.052	1.130	1.201
113	5.95	0.478	40	0.44	0.978	1.018	1.060	1.135	1.203
114	6.19	0.480	40	0.44	0.984	1.018	1.057	1.133	1.202
115	7.39	0.487	40	0.44	0.994	1.027	1.066	1.142	1.211
116	5.94	0.478	40	0.44	0.977	1.017	1.058	1.133	1.201
117	8.78	0.494	40	0.44	1.008	1.041	1.086	1.162	1.231
118	13.53	0.514	65	0.59	0.644	0.629	0.640	0.682	0.719
119	7.82	0.489	65	0.59	0.618	0.605	0.617	0.655	0.690

Table 3-2 continued.

Drainage Area ID	Area (ac)	t_c (hr)	Impervious Cover (%)	C	Storage Coefficient, R (hr)				
					2-yr	10-yr	25-yr	50-yr*	100-yr
120	13.18	0.512	40	0.44	1.033	1.070	1.109	1.189	1.260
121	12.24	0.509	40	0.44	1.027	1.064	1.103	1.183	1.256
122	12.55	0.510	40	0.44	1.029	1.066	1.104	1.183	1.254
123	12.50	0.510	40	0.44	1.023	1.066	1.111	1.189	1.259
124	12.41	0.510	40	0.44	1.030	1.067	1.109	1.186	1.255
125	12.63	0.510	40	0.44	1.029	1.069	1.109	1.186	1.255
126	12.60	0.510	40	0.44	1.025	1.065	1.105	1.184	1.256
127	12.68	0.511	40	0.44	1.026	1.070	1.112	1.189	1.259
128	12.61	0.510	40	0.44	1.027	1.067	1.107	1.187	1.259
129	12.65	0.511	40	0.44	1.032	1.065	1.106	1.187	1.259
130	15.40	0.520	40	0.44	1.046	1.084	1.124	1.203	1.274
131	12.51	0.510	40	0.44	1.024	1.068	1.105	1.184	1.254
132	18.27	0.528	40	0.44	1.052	1.097	1.139	1.217	1.288
133	13.08	0.512	40	0.44	1.029	1.069	1.113	1.190	1.260
134	6.15	0.479	65	0.59	0.610	0.600	0.609	0.647	0.680
135	14.52	0.517	40	0.44	1.040	1.081	1.122	1.200	1.270
136	12.10	0.509	40	0.44	1.028	1.066	1.108	1.186	1.256
137	12.24	0.509	40	0.44	1.028	1.065	1.103	1.184	1.257
138	12.24	0.509	40	0.44	1.026	1.064	1.109	1.186	1.255
139	12.08	0.508	40	0.44	1.026	1.063	1.105	1.183	1.253
140	12.25	0.509	40	0.44	1.028	1.066	1.104	1.185	1.258
141	12.28	0.509	40	0.44	1.023	1.064	1.103	1.184	1.258
142	12.34	0.509	40	0.44	1.020	1.064	1.105	1.183	1.254
143	12.24	0.509	40	0.44	1.027	1.064	1.109	1.186	1.255
144	12.25	0.509	40	0.44	1.028	1.066	1.104	1.185	1.258
145	15.03	0.519	40	0.44	1.038	1.081	1.120	1.200	1.271
146	12.18	0.509	40	0.44	1.029	1.063	1.107	1.187	1.258
147	17.70	0.526	40	0.44	1.049	1.092	1.134	1.214	1.285
148	11.39	0.506	20	0.32	1.583	1.738	1.853	1.997	2.126
149	7.88	0.490	90	0.74	0.395	0.364	0.361	0.384	0.406
150	76.82	0.608	55	0.53	0.885	0.883	0.906	0.965	1.018
151	26.68	0.547	55	0.53	0.813	0.813	0.834	0.889	0.938
152	30.93	0.555	55	0.53	0.825	0.823	0.842	0.897	0.947
153	163.65	0.659	45	0.47	1.137	1.163	1.204	1.287	1.361
1203	3.88	0.462	40	0.44	0.956	1.003	1.027	1.098	1.163
1204	5.65	0.476	40	0.44	0.977	1.018	1.059	1.131	1.196
1205	5.82	0.477	40	0.44	0.982	1.023	1.059	1.129	1.193
1206	36.34	0.564	25	0.35	1.518	1.647	1.735	1.871	1.994
1207	42.17	0.572	25	0.35	1.538	1.664	1.754	1.891	2.014
1208	23.14	0.540	25	0.35	1.468	1.597	1.683	1.816	1.936
1229	20.16	0.533	45	0.47	0.965	0.987	1.022	1.092	1.155

Table 3-2 continued.

Drainage Area ID	Area (ac)	t _c (hr)	Impervious Cover (%)	C	Storage Coefficient, R (hr)				
					2-yr	10-yr	25-yr	50-yr*	100-yr
1230	20.08	0.533	45	0.47	0.964	0.988	1.022	1.091	1.153
1543	4.43	0.467	20	0.32	1.473	1.663	1.764	1.896	2.015
1544	6.03	0.479	60	0.56	0.670	0.661	0.674	0.717	0.756
1753	9.15	0.496	50	0.5	0.830	0.842	0.864	0.922	0.974
1753_Prop	9.15	0.496	85	0.71	0.439	0.407	0.406	0.432	0.456

*Storage coefficient for the 50-year storm event was interpolated based on the 25- and 100-year storm events

Table 3-3: Summary of Peak Flows for All Drainage Areas

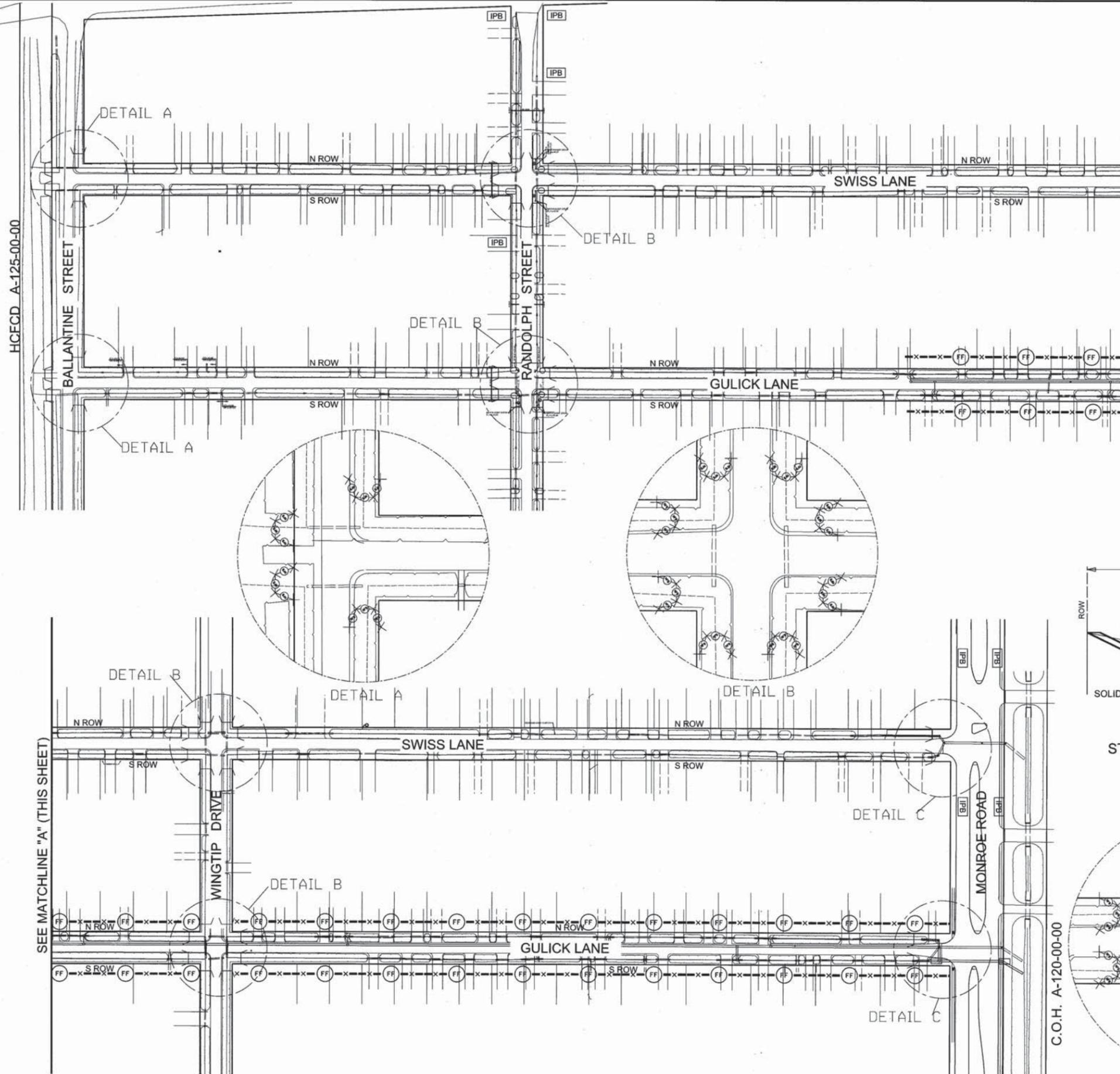
Drainage Area ID	Rational Peak Flow (cfs)					HMS Peak Flow (cfs)				
	2-yr	10-yr	25-yr	50-yr*	100-yr	2-yr	10-yr	25-yr	50-yr*	100-yr
100	63.7	95.5	111.6	122.1	135.6	63.3	95.1	111.3	122.1	135.5
101	56.4	84.6	98.8	108.0	120	56.1	84.1	98.4	108.0	119.8
102	39.5	59.2	69	75.3	83.8	39.4	59.0	68.8	75.3	83.5
103	205.3	310.8	363.8	398.5	443.5	204.5	309.4	362.7	398.5	443.0
104	9.4	13.9	16.2	17.7	19.6	9.4	13.8	16.1	17.7	19.5
105	9.8	14.6	17	18.5	20.5	9.8	14.6	17.0	18.5	20.5
106	10.2	15.1	17.6	19.2	21.3	10.2	15.1	17.6	19.2	21.3
107	10.3	15.3	17.8	19.5	21.6	10.2	15.3	17.8	19.5	21.6
108	10.4	15.4	18	19.7	21.8	10.4	15.4	18.0	19.7	21.8
109	9.6	14.2	16.5	18.0	20	9.5	14.2	16.5	18.0	20.0
110	8.7	12.8	15	16.4	18.1	8.6	12.8	15.0	16.4	18.1
111	8.4	12.4	14.5	15.8	17.5	8.3	12.4	14.5	15.8	17.5
112	8.4	12.5	14.6	15.9	17.6	8.3	12.5	14.6	15.9	17.6
113	8.3	12.3	14.3	15.6	17.3	8.2	12.3	14.3	15.6	17.3
114	8.6	12.8	14.9	16.3	18	8.5	12.8	14.9	16.3	18.0
115	10.2	15.2	17.7	19.3	21.4	10.1	15.2	17.7	19.3	21.4
116	8.3	12.3	14.3	15.6	17.3	8.2	12.2	14.3	15.6	17.3
117	12	17.9	20.8	22.8	25.2	12.0	17.9	20.8	22.8	25.2
118	24.4	36.3	42.3	46.1	51.2	24.3	36.1	42.1	46.1	50.9
119	14.5	21.5	25	27.3	30.3	14.4	21.4	24.9	27.3	30.2
120	17.7	26.4	30.8	33.7	37.3	17.7	26.4	30.8	33.7	37.3
121	16.5	24.6	28.7	31.4	34.7	16.5	24.6	28.7	31.4	34.7
122	16.9	25.2	29.4	32.2	35.6	16.9	25.2	29.4	32.2	35.6
123	16.9	25.1	29.2	32.0	35.4	16.9	25.1	29.2	32.0	35.4
124	16.7	24.9	29	31.8	35.2	16.7	24.9	29.0	31.8	35.2
125	17	25.3	29.5	32.3	35.8	17.0	25.3	29.5	32.3	35.8
126	17	25.3	29.5	32.3	35.7	17.0	25.3	29.5	32.3	35.7
127	17.1	25.4	29.6	32.4	35.9	17.1	25.4	29.6	32.4	35.9
128	17	25.3	29.5	32.3	35.7	17.0	25.3	29.5	32.3	35.7
129	17	25.4	29.6	32.3	35.8	17.0	25.4	29.6	32.3	35.8
130	20.5	30.6	35.7	39.0	43.3	20.5	30.6	35.7	39.0	43.2

Attachment E

**Dates and Brief Description
of
Amendments To Plan**

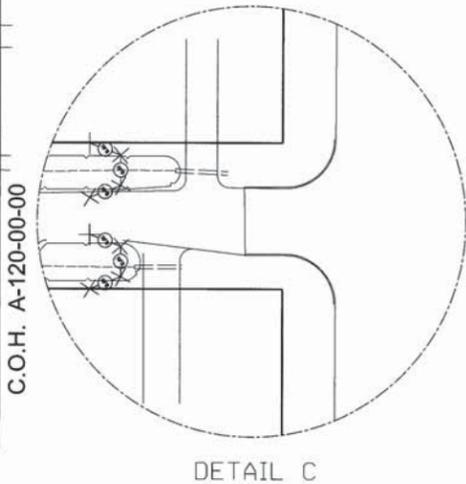
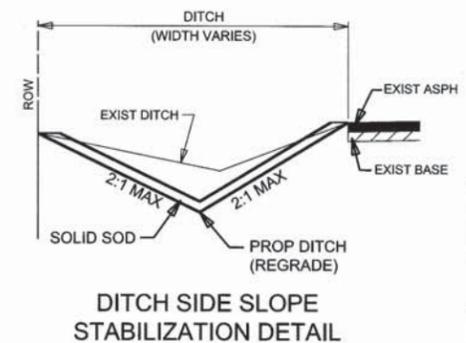
Attachment F

**Endangered and Threatened Species
Conclusion Letter**



- LEGEND:**
- IPB INLET PROTECTION BARRIER
 - RFB REINFORCED FILTER FABRIC BARRIER
 - RFD ROCK FILTER DAM TYPE III
 - SC STABILIZED CONSTRUCTION ACCESS
 - FF FILTER FABRIC BARRIER

- NOTES:**
1. UPON COMPLETION OF REGRADING DITCHES CONTRACTOR SHALL PLACE SOD WHERE DITCHES ARE DISTURBED.
 2. THE LOCATION OF CONSTRUCTION SUPPORT ACTIVITIES INCLUDING MATERIALS, WASTE, BORROW, FILL, AND EQUIPMENT STORAGE AREA WILL BE SHOWN ON THE PLAN SHEETS ONCE ESTABLISHED BY CONTRACTOR. THREE SITES WILL BE INCLUDED IN THE INSPECTION REPORT.
 3. THE LOCATION OF VEHICLE WASH AREA INCLUDING CONCRETE WASHOUTS WILL BE SHOWN ON THE PLANS ONCE ESTABLISHED BY THE CONTRACTOR. THIS SITE WILL BE INCLUDED IN THE INSPECTION REPORT.
 4. THE FOLLOWING RECORDS WILL BE MAINTAINED BY THE CONTRACTOR AND WILL BE MADE READILY AVAILABLE UPON REQUEST TO PARTIES IN PART #D.1 OF THE TPDES GENERAL PERMIT TXR150000.
 - A. DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.
 - B. ALL DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
 5. SEE ROCK FILTER DAM DETAILS AND SPECIFICATION HCPID 00750 FOR ROCK FILTER DAM.
 6. INLET LOCATIONS ON MONROE ARE APPROXIMATIONS BASED ON ASBUILTS.
 7. FILTER FABRIC FENCE TO BE PLACED INSIDE THE ROW.



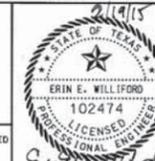
SEE MATCHLINE "A" (THIS SHEET)

SEE MATCHLINE "A" (THIS SHEET)

C.O.H. A-120-00-00



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FB NO. P-5649

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SKYSCRAPER SHADOWS AREA
ROADSIDE DITCH REHABILITATION
STORM WATER POLLUTION
PREVENTION PLAN
SWISS LANE & GULICK LANE

WBS NO. M-000126-0070-4

DRAWING SCALE

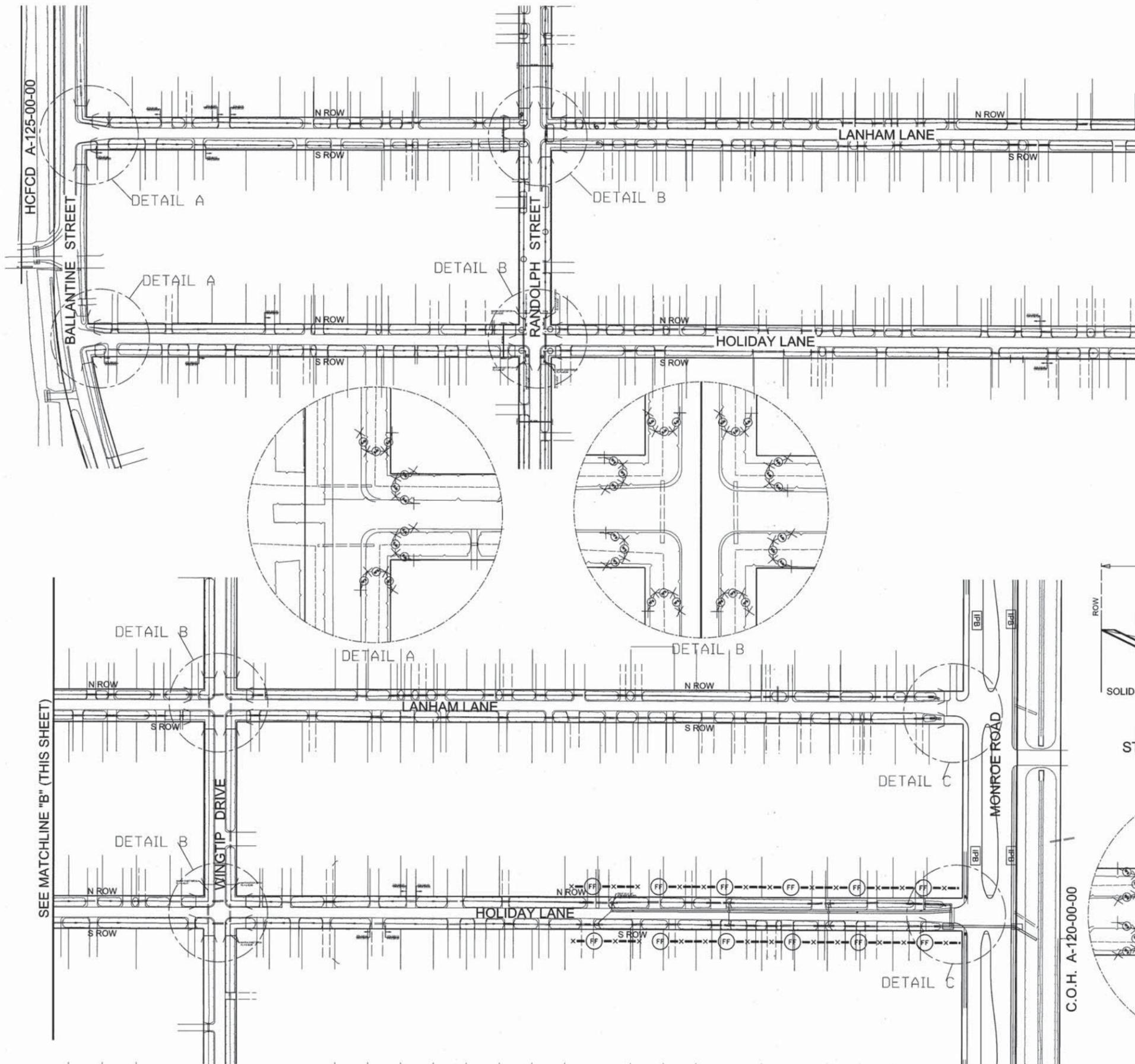
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CITY OF HOUSTON PM

MARCUS STUCKETT, P.E.

SHEET NO. 136 OF 146

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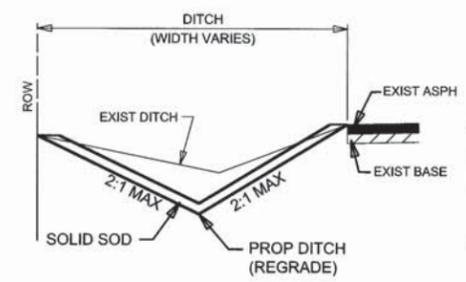


- LEGEND:**
- INLET PROTECTION BARRIER
 - REINFORCED FILTER FABRIC BARRIER
 - ROCK FILTER DAM TYPE III
 - STABILIZED CONSTRUCTION ACCESS
 - FILTER FABRIC BARRIER

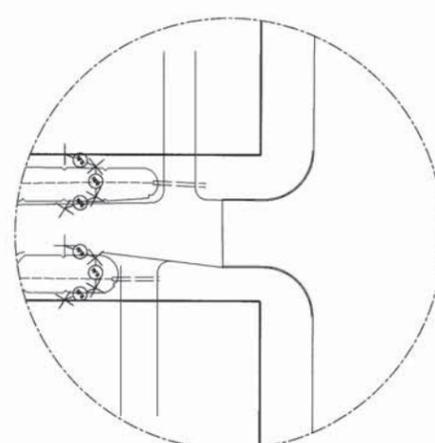
- NOTES:**
1. UPON COMPLETION OF REGRADING DITCHES CONTRACTOR SHALL PLACE SOD WHERE DITCHES ARE DISTURBED.
 2. THE LOCATION OF CONSTRUCTION SUPPORT ACTIVITIES INCLUDING MATERIALS, WASTE, BORROW, FILL, AND EQUIPMENT STORAGE AREA WILL BE SHOWN ON THE PLAN SHEETS ONCE ESTABLISHED BY CONTRACTOR. THREE SITES WILL BE INCLUDED IN THE INSPECTION REPORT.
 3. THE LOCATION OF VEHICLE WASH AREA INCLUDING CONCRETE WASHOUTS WILL BE SHOWN ON THE PLANS ONCE ESTABLISHED BY THE CONTRACTOR. THIS SITE WILL BE INCLUDED IN THE INSPECTION REPORT.
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 5. SEE ROCK FILTER DAM DETAILS AND SPECIFICATION HCPID 00750 FOR ROCK FILTER DAM.
 6. INLET LOCATIONS ON MONROE ARE APPROXIMATIONS BASED ON ASBUILTS.
 7. FILTER FABRIC FENCE TO BE PLACED INSIDE THE ROW.

SEE MATCHLINE "B" (THIS SHEET)

SEE MATCHLINE "B" (THIS SHEET)



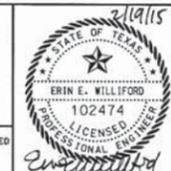
DITCH SIDE SLOPE STABILIZATION DETAIL



DETAIL C



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CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SKYSCRAPER SHADOWS AREA
ROADSIDE DITCH REHABILITATION
STORM WATER POLLUTION
PREVENTION PLAN
LANHAM LANE & HOLIDAY LANE

WBS NO. M-000126-0070-4

DRAWING SCALE

1" = 100'

CITY OF HOUSTON PM

MARCUS STUCKETT, P.E.

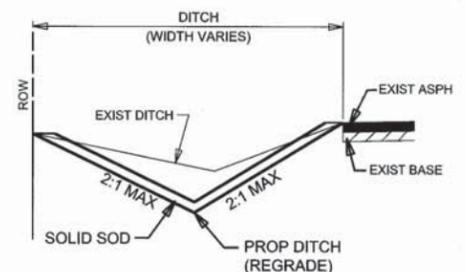
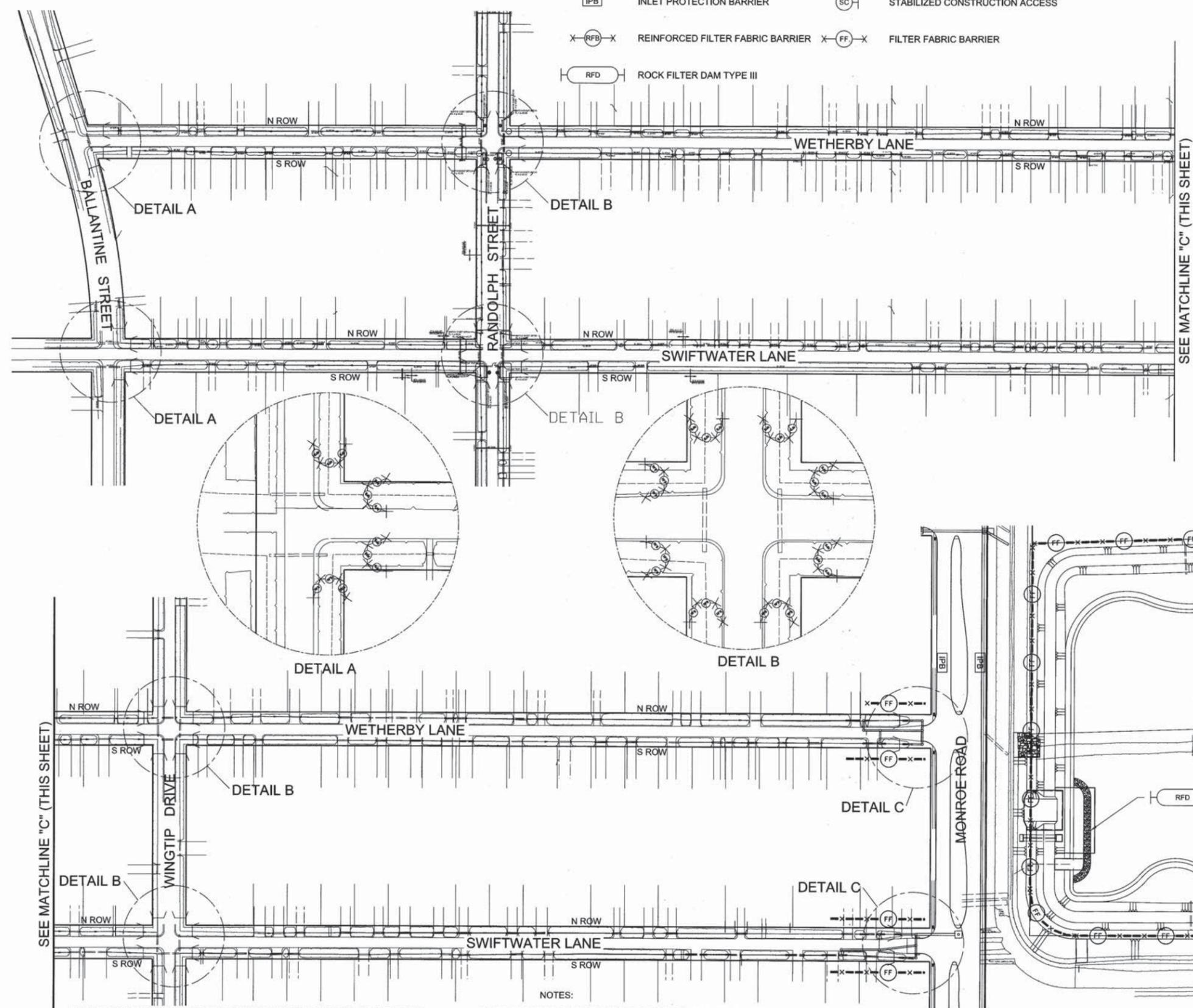
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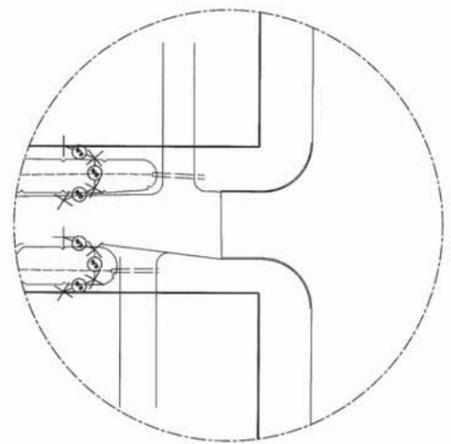


LEGEND:

- [IPB] INLET PROTECTION BARRIER
- [SC] STABILIZED CONSTRUCTION ACCESS
- X-RFB-X REINFORCED FILTER FABRIC BARRIER
- X-FF-X FILTER FABRIC BARRIER
- [RFD] ROCK FILTER DAM TYPE III



DITCH SIDE SLOPE STABILIZATION DETAIL



DETAIL C

SEE MATCHLINE "C" (THIS SHEET)

SEE MATCHLINE "C" (THIS SHEET)

- NOTES:
- UPON COMPLETION OF REGRADING DITCHES CONTRACTOR SHALL PLACE SOD WHERE DITCHES ARE DISTURBED.
 - THE LOCATION OF CONSTRUCTION SUPPORT ACTIVITIES INCLUDING MATERIALS, WASTE, BORROW, FILL, AND EQUIPMENT STORAGE AREA WILL BE SHOWN ON THE PLAN SHEETS ONCE ESTABLISHED BY CONTRACTOR. THREE SITES WILL BE INCLUDED IN THE INSPECTION REPORT.
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- INLET LOCATIONS ON MONROE ARE APPROXIMATIONS BASED ON ASBUILTS.

- FILTER FABRIC FENCE TO BE PLACED INSIDE THE ROW.
- UPON COMPLETION OF DETENTION POND GRADING, CONTRACTOR SHALL HYDRUMULCH SEED DISTURBED AREAS.



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CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SKYSCRAPER SHADOWS AREA
ROADSIDE DITCH REHABILITATION
STORM WATER POLLUTION
PREVENTION PLAN
WETHERBY LANE &
SWIFTWATER LANE

WBS NO. M-000126-0070-4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
MARCUS STUCKETT, P.E.
SHEET NO. 139 OF 140

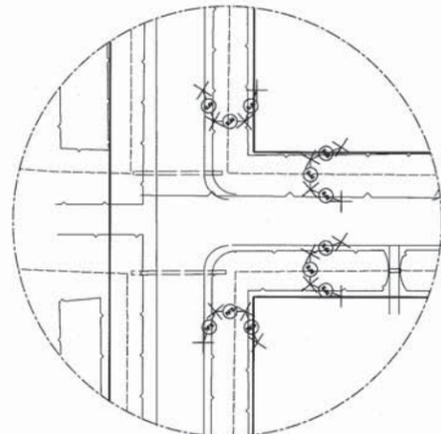
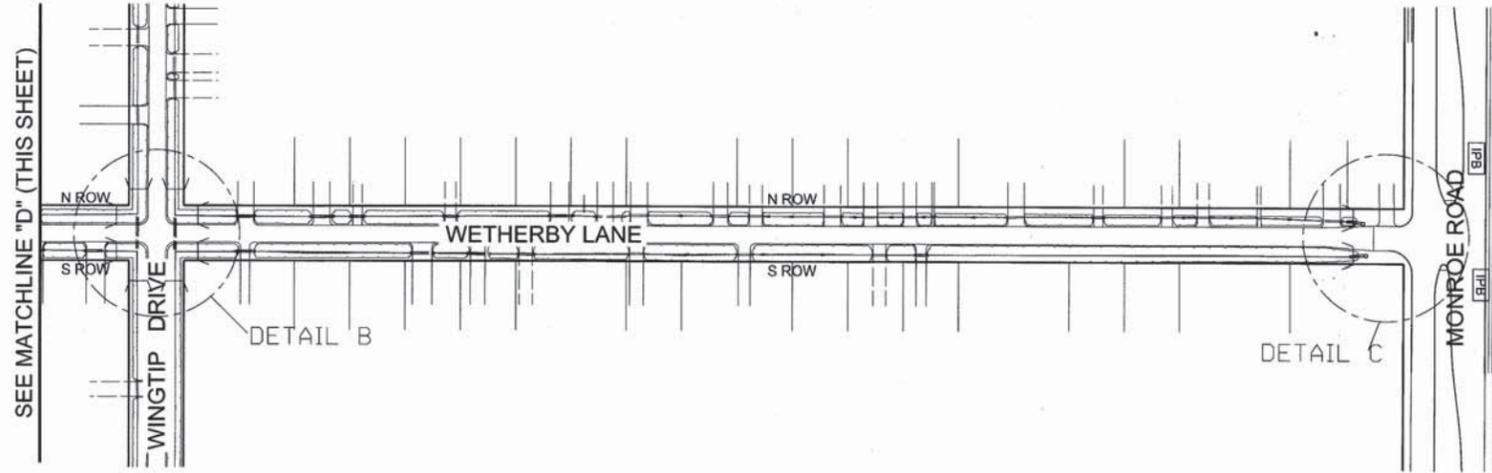
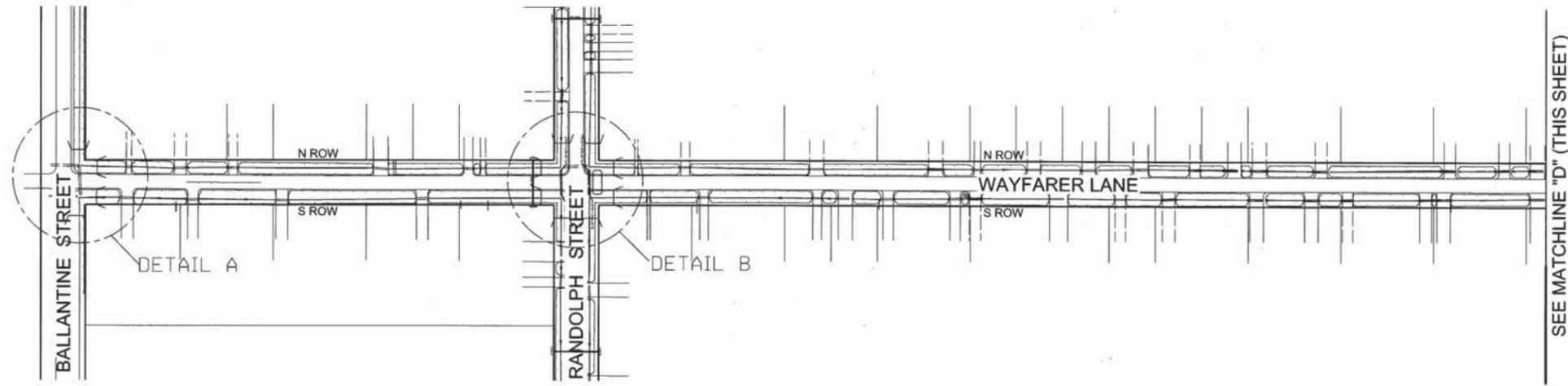
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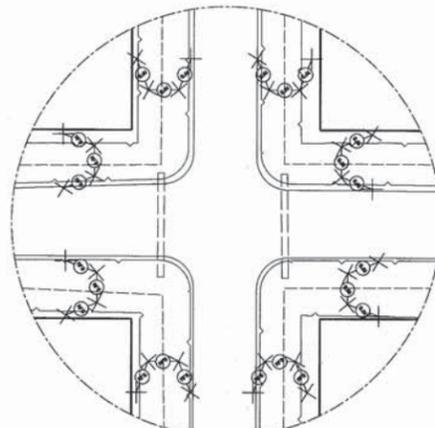
-  INLET PROTECTION BARRIER
-  REINFORCED FILTER FABRIC BARRIER
-  ROCK FILTER DAM TYPE III
-  STABILIZED CONSTRUCTION ACCESS
-  FILTER FABRIC BARRIER

NOTES:

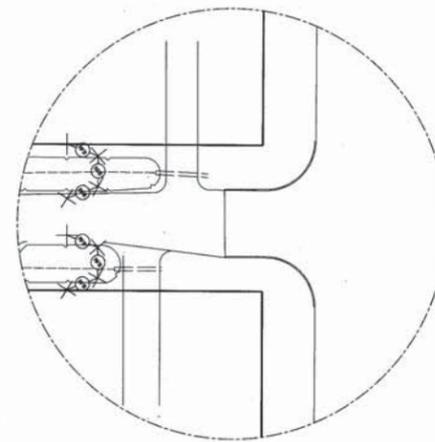
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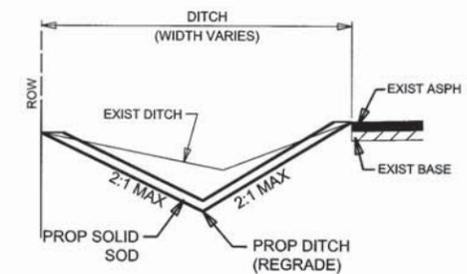
DETAIL A



DETAIL B



DETAIL C



DITCH SIDE SLOPE STABILIZATION DETAIL



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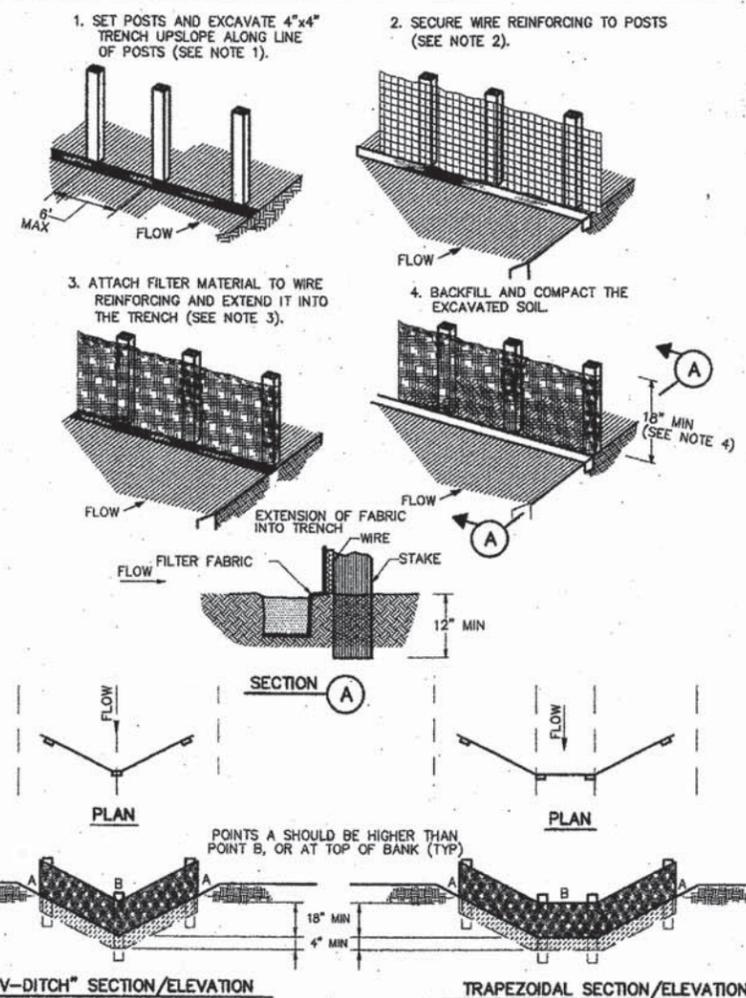
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SKYSCRAPER SHADOWS AREA
ROADSIDE DITCH REHABILITATION
STORM WATER POLLUTION
PREVENTION PLAN
WAYFARER LANE

WBS NO. M-000126-0070-4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
MARCUS STUCKETT, P.E.
SHEET NO. 140 OF 146

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No.	Date	Revisions

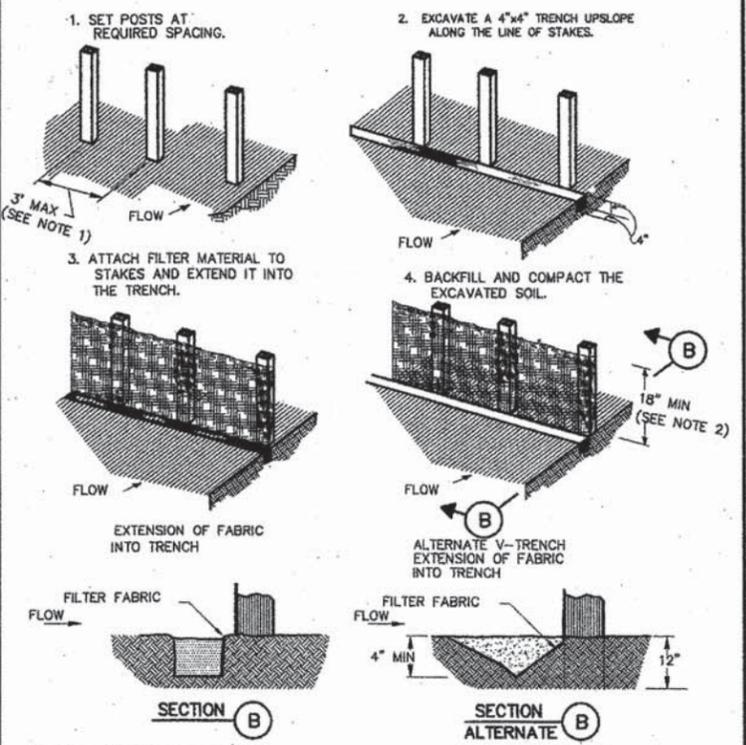
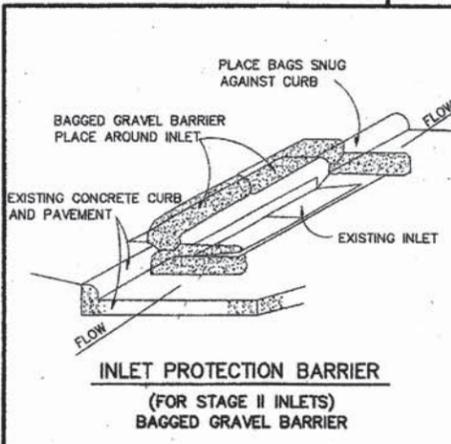


CONSTRUCTION NOTES:

- SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
- WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
- MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL:

REINFORCED FILTER FABRIC BARRIER

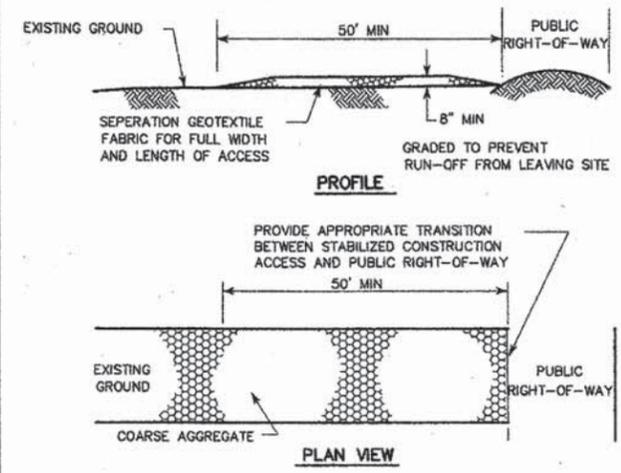
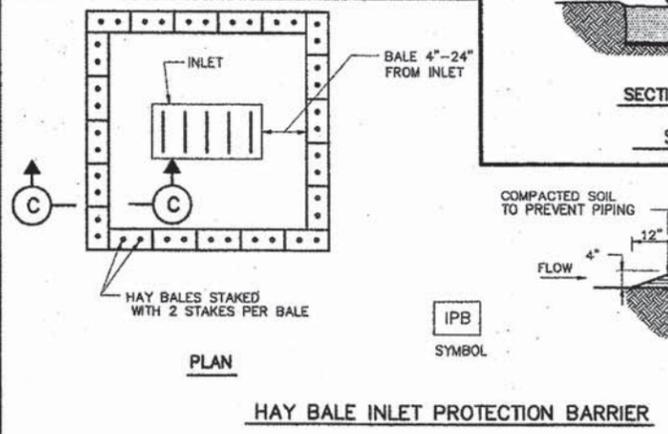


CONSTRUCTION NOTES:

- 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
- ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL:

FILTER FABRIC BARRIER

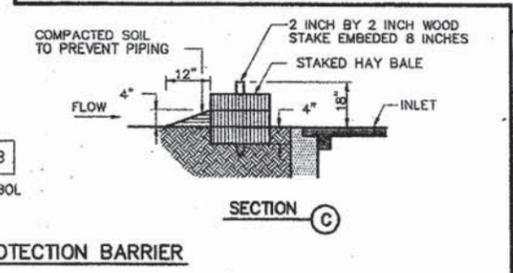
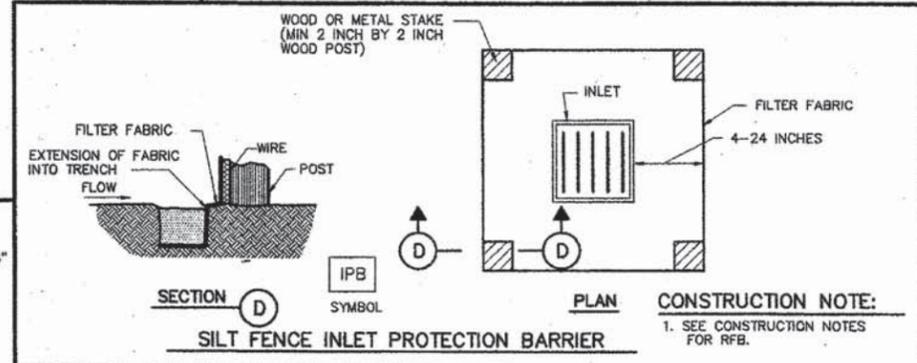


CONSTRUCTION NOTES:

- LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
- THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
- WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
- STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
- COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
- STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SYMBOL:

STABILIZED CONSTRUCTION ACCESS



CONSTRUCTION NOTE:

- SEE CONSTRUCTION NOTES FOR RFB.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED: CITY ENGINEER
APPROVED: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 01571-01



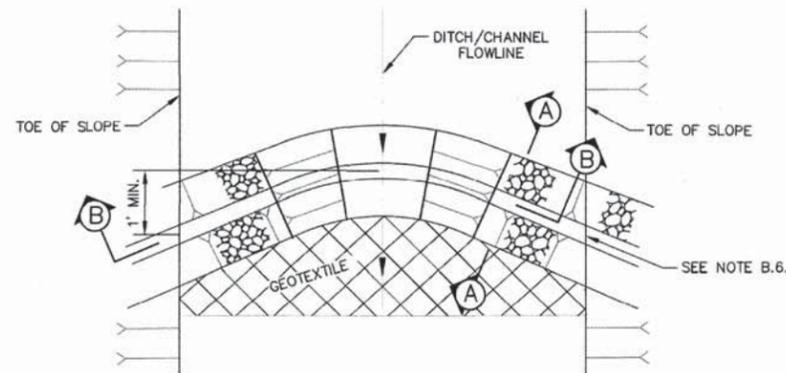
SURVEYED BY: MORIM & CREED
FB NO. P-5649

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

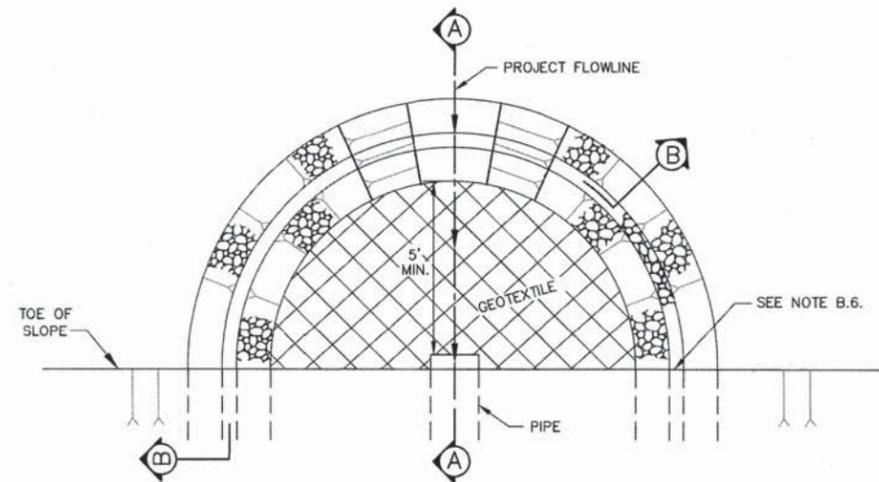
SKYSCRAPER SHADOWS AREA
ROADSIDE DITCH REHABILITATION

STORM WATER POLLUTION PREVENTION PLAN DETAILS

WBS NO. M-000126-0070-4
DRAWING SCALE
NOT TO SCALE
CITY OF HOUSTON PM
MARCUS STUCKETT, P.E.
SHEET NO. 141 OF 146

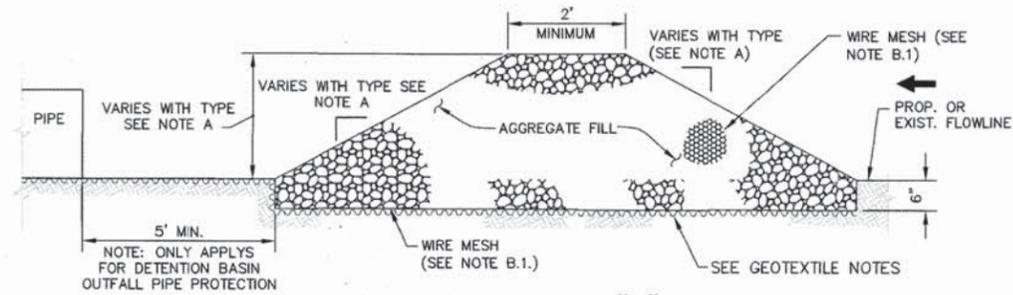


IN-CHANNEL FILTER DAM PLAN
N.T.S.

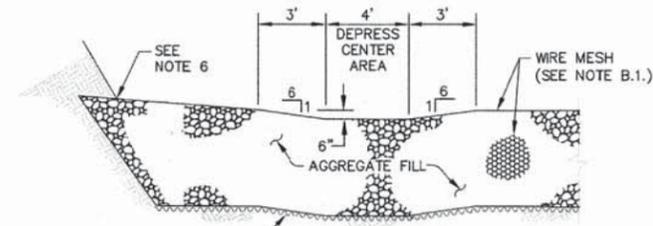


FILTER DAM AT DETENTION BASIN OUTFALL PLAN
N.T.S.

GEOTEXTILE NOTES:
MIN. AOS SIEVE NO. 120 MIN
MAX. AOS SIEVE NO. 50 MAX
WEIGHT OZ/SY 4 OZ. MIN



SECTION "A"

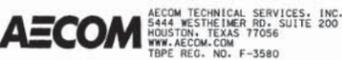
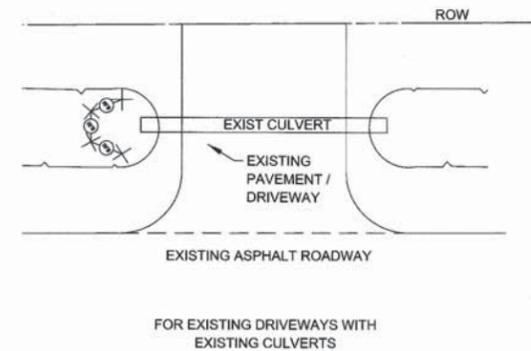


SECTION "B"

ROCK FILTER DAM
N.T.S.

FILTER DAM NOTES:

- A. TYPES OF FILTER DAMS**
1. TYPE 1 (NON-REINFORCED)
 - a. HEIGHT - 18-24 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM)
 - c. SLOPES - 2:1 (MAXIMUM).
 2. TYPE 2 (REINFORCED)
 - a. HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 - c. SLOPES - 2:1 (MAXIMUM).
 3. TYPE 3 (REINFORCED)
 - a. HEIGHT - 36-48 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 - c. SLOPES - 3:1 (MAXIMUM).
 4. TYPE 4 (GABION)
 - a. HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 5. TYPE 5. AS SHOWN ON THE PLANS.
- B. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.**
1. TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
 2. GRANULAR FILL:
 - a. PLACE ON MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
 - b. 3-5 INCHES FOR ROCK FILTER DAM TYPES 1,2, AND 4 AND 4-8 INCHES FOR ROCK FILTER DAM TYPE 3. REFER TO GRANULAR FILL IN HCFCD SPECIFICATION SECTION NO. 02378-RIPRAP AND GRANULAR FILL.
 3. WIRE MESH: FOLD AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
 4. IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
 5. SEE HCFCD SPECIFICATION SECTION NO. 02364-FILTER DAMS.
 6. EMBED ONE FOOT MINIMUM INTO SLOPE AND RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA AT SLOPE.



SURVEYED BY: MCKIM & CREED
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CITY OF HOUSTON
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SKYSCRAPER SHADOWS AREA
ROADSIDE DITCH REHABILITATION
ROCK FILTER DAM DETAILS

WBS NO. M-000126-0070-4
DRAWING SCALE
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CITY OF HOUSTON PM
MARCUS STUCKETT, P.E.
SHEET NO. 142 OF 146

NO.	REVISIONS	DATE	NAME

**HARRIS COUNTY
PUBLIC INFRASTRUCTURE DEPARTMENT
ARCHITECTURE & ENGINEERING DIVISION**



PROJECT TITLE:		HCPID, A&E STANDARD
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CK'D BY: MA		
SCALE: NONE	APPROVED BY:	SHEET NO: /
DATE: 3/1/12		

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