Texas Department of Transportation
Book 2 - Technical Provisions

IH 35E Managed Lanes Project

Attachment 4-1

Special Specification 1122
Temporary Erosion, Sedimentation, and Environmental Controls

GUIDANCE DOCUMENT

For Special Specification 1122, "Temporary Erosion, Sedimentation, and Environmental Controls"

I. General.

This specification allows for installing, maintaining, and removing environmental control measures. The control measures are defined as Best Management Practices (BMPs) used to prevent or reduce the discharge of pollutants.

The Contractor must sign a Contractor Certification of Compliance. By signing the certification the Contractor certifies they have read and understand the project's Storm Water Pollution Prevention Plan (SWP3) as provided in the plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000. The contractor also certifies they are solely responsible for any penalties associated with non-performance of implementation or maintenance activities required for compliance. This certification must be signed and given to the Engineer before any earthwork operations are performed. It is preferred the certification be collected at the preconstruction conference.

II. Qualifications, Training, and Employee Requirements.

The Contractor must designate in writing a Contractor Responsible Person Environmental (CRPe). The CRPe will have overall responsibility for the storm water management program and administer training to employees.

The Contractor must provide a superintendent responsible for managing and overseeing the day to day operations and activities at the project site.

All Contractor and subcontractor employee's directly involved in the earthwork activities, small or large structures, storm water control measures, and seeding activities are required to complete the training identified by the Department prior to working in the right of way.

III. Construction.

Together, the CRPe and the Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as determined by the Engineer.

IV. Measurement and Payment.

The installation, removal, and replacement of BMPs will be paid for through the various bid items as described in the specification with the exception of "Maintenance Earthwork for Erosion and Sediment Control for Cleaning and/or Restoring Control Measures." This item will be paid for by Contractor Force Account.

Establish a Contractor Force Account line item during the PS&E development stage of the project and provide an estimated dollar amount to clean and/or restore control measures for the duration of the project. Include a line item in the Engineer's Estimate as follows:

CONTRACTOR FORCE ACCOUNT WORK (PART) -
EROSION CONTROL MAINTENANCE Qty = 1 Unit = LS

SPECIAL SPECIFICATION

1122

Temporary Erosion, Sedimentation, and Environmental Controls

1. Description. Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) as provided in the plans and the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000. Control measures are defined as Best Management Practices used to prevent or reduce the discharge of pollutants. Control measures include but are not limited to rock filter dams, temporary pipe slope drains, temporary paved flumes, construction exits, earthwork for erosion control, pipe, construction perimeter fence, sandbags, temporary sediment control fence, biodegradable erosion control logs, vertical tracking, temporary or permanent seeding, and other measures. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications.

By signing the Contractor Certification of Compliance, the Contractor certifies they have read and understand the requirements applicable to this project pertaining to the SWP3, the plans, and the TPDES General Permit TXR150000, and they are solely responsible for any penalties associated with non-performance of implementation or maintenance activities required for compliance. Provide the Contractor Certification of Compliance to the Engineer prior to performing earthwork operations.

2. Materials. Furnish materials in accordance with the following:

- Item 161, "Compost"
- Item 432, "Riprap"
- Item 556, "Pipe Underdrains"

A. Rock Filter Dams.

1. Aggregate. Furnish aggregate with hardness, durability, cleanliness, and resistance to crumbling, flaking, and eroding acceptable to the Engineer. Provide the following:

- **Types 1, 2, and 4 Rock Filter Dams.** Use 3 to 6 in. aggregate.
- **Type 3 Rock Filter Dams.** Use 4 to 8 in. aggregate.

2. Wire. Provide minimum 20 gauge galvanized wire for the steel wire mesh and tie wires for Types 2 and 3 rock filter dams. Type 4 dams require:

- A double-twisted, hexagonal weave with a nominal mesh opening of 2-1/2 in. x 3-1/4 in.;
- Minimum 0.0866 in. steel wire for netting;

- Minimum 0.1063 in. steel wire for selvages and corners; and minimum 0.0866 in. for binding or tie wire.

3. **Sandbag Material.** Furnish sandbags meeting "Sandbags for Erosion Control," except that any gradation of aggregate may be used to fill the sandbags.

B. Temporary Pipe Slope Drains. Provide corrugated metal pipe, polyvinyl chloride (PVC) pipe, flexible tubing, watertight connection bands, grommet materials, prefabricated fittings, and flared entrance sections that conform to the plans. Recycled and other materials meeting these requirements are allowed if approved.

Furnish concrete in accordance with Item 432, "Riprap."

(Omitted section for Baled Hay.)

C. Temporary Paved Flumes. Furnish asphalt concrete, hydraulic cement concrete, or other comparable non-erodible material that conforms to the plans. Provide rock or rubble with a minimum diameter of 6 in. and a maximum volume of 1/2 cu. ft. for the construction of energy dissipaters.

D. Construction Exits. Provide materials that meet the details shown on the plans and this Section.

1. **Rock Construction Exit.** Provide crushed aggregate for long and short-term construction exits. Furnish aggregates that are clean, hard, durable, and free from adherent coatings such as salt, alkali, dirt, clay, loam, shale, soft, or flaky materials and organic and injurious matter. Use 4- to 8-in. aggregate for Type 1 and 2- to 4-in. aggregate for Type 3.

2. **Timber Construction Exit.** Furnish No. 2 quality or better railroad ties and timbers for long-term construction exits, free of large and loose knots and treated to control rot. Fasten timbers with nuts and bolts or lag bolts, of at least 1/2 in. diameter, unless otherwise shown on the plans or allowed. For short-term exits, provide plywood or pressed wafer board at least 1/2 in. thick.

3. **Foundation Course.** Provide a foundation course consisting of flexible base, bituminous concrete, hydraulic cement concrete, or other materials as shown on the plans or directed.

E. Embankment for Erosion Control. Provide rock, loam, clay, topsoil, or other earth materials that will form a stable embankment to meet the intended use.

F. Pipe. Provide pipe outlet material in accordance with Item 556, "Pipe Underdrains," and details shown on the plans.

G. Construction Perimeter Fence.

1. **Posts.** Provide essentially straight wood or steel posts that are at least 60 in. long. Furnish soft wood posts with a minimum diameter of 3 in. or use 2 x 4 boards. Furnish hardwood posts with a minimum cross-section of 1-1/2 x 1-1/5 in. Furnish T- or L-shaped steel posts with a minimum weight of 1.3 lb. per foot.

2. **Fence.** Provide orange construction fencing as approved by the Engineer.

3. **Fence Wire.** Provide 12-1/2 gauge or larger galvanized smooth or twisted wire. Provide 16 gauge or larger tie wire.

4. **Flagging.** Provide brightly-colored flagging that is fade-resistant and at least 3/4 in. wide to provide maximum visibility both day and night.

5. **Staples.** Provide staples with a crown at least 1/2 in. wide and legs at least 1/2 in. long.

6. **Used Materials.** Previously used materials meeting the applicable requirements may be used if accepted by the Engineer.

H. Sandbags. Provide sandbag material of polypropylene, polyethylene, or polyamide woven fabric with a minimum unit weight of 4 oz. per square yard, a Mullen burst-strength exceeding 300 psi, and an ultraviolet stability exceeding 70%.

Use natural coarse sand or manufactured sand meeting the gradation given in Table 1 to fill sandbags. Filled sandbags must be 24 to 30 in. long, 16 to 18 in. wide, and 6 to 8 in. thick.

Table 1
Sand Gradation

Sieve #	Retained (% by Weight)
4	MAXIMUM 3%
100	MINIMUM 80%
200	MINIMUM 95%

Aggregate may be used in lieu of sand for situations where sandbags are not adjacent to traffic. The aggregate size shall not exceed 3/8 in.

I. Temporary Sediment Control Fence. Provide a net-reinforced fence using woven geo-textile fabric. Logos visible to the traveling public will not be allowed.

1. **Fabric.** Provide fabric materials in accordance with DMS-6230, "Temporary Sediment Control Fence Fabric."

2. **Posts.** Provide essentially straight wood or steel posts with a minimum length of 48 in., unless otherwise shown on the plans. Soft wood posts must be at least 3 in. in diameter or nominal 2 x 4in. Hardwood posts must have a minimum cross-section of 1-1/2 x 1-1/2 in. T- or L-shaped steel posts must have a minimum weight of 1.3 lb. per foot.

3. **Net Reinforcement.** Provide net reinforcement of at least 12-1/2 gauge galvanized welded wire mesh, with a maximum opening size of 2 x 4 in., at least 24 in. wide, unless otherwise shown on the plans.

4. **Staples.** Provide staples with a crown at least 3/4 in. wide and legs 1/2 in. long.

5. **Used Materials.** Use recycled material meeting the applicable requirements if accepted by the Engineer.

J. Biodegradable Erosion Control Logs.

1. **Core Material.** Furnish core material that is biodegradable or recyclable. Except where specifically called out in plans, material may be compost, mulch, aspen excelsior wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or any other acceptable material. No more than 5% of the material is permitted to escape from the containment mesh. Furnish compost meeting the requirements of Item 161, "Compost."

2. **Containment Mesh.** Furnish containment mesh that is 100% biodegradable, photodegradable or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material.

   a. Furnish biodegradable or photodegradable containment mesh when log will remain in place as part of a vegetative system.

   b. Furnish recyclable containment mesh for temporary installations.

3. **Size.** Furnish biodegradable erosion control logs with diameters shown on the plans or as directed. Stuff containment mesh densely so logs do not deform.

(Omitted Equipment Section)

3. Qualifications, Training, and Employee Requirements.

A. Contractor Responsible Person Environmental (CRPe) Qualifications and Responsibilities. Provide and designate in writing at the preconstruction conference a CRPe who has overall responsibility for the storm water management program. The CRPe will identify and implement storm water and erosion control practices; will oversee and observe storm water control measure monitoring and management; will monitor the project site daily to ensure compliance with the SWP3 and TPDES General Permit TXR150000; and will document daily monitoring reports and provide the reports to the Department within 48 hours. The CRPe will provide recommendations to the Engineer on how to improve the effectiveness of control measures. Attend the Department's preconstruction conference for the project. Administer the training identified in Article 3.C. *Training.* Document and submit a list to the Engineer of employees who have completed the training.

B. Contractor Superintendent Qualifications and Responsibilities. Provide a superintendent that is competent and has experience with and knowledge of storm water management and is

knowledgeable of the requirements and the conditions of the TPDES General Permit TXR150000. The superintendent is responsible for managing and overseeing the day to day operations and activities at the project site; working with the CRPe to provide effective storm water management at the project site; representing and acting on-behalf of the contractor; and attending the Department's preconstruction conference for the project.

C. Training. All Contractor and subcontractor employee's directly involved in the earthwork activities, small or large structures, storm water control measures, and seeding activities are required to complete the training identified by the Department prior to working in the right of way. Training may take place at a location at the discretion of the Contractor.

4. Construction.

A. Contractor Responsibilities. Implement the SWP3 for the project site in accordance with in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed by the Engineer. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

B. Implementation. The CRPe, or an alternate, must be accessible by phone and able to respond to storm water management emergencies 24 hours per day.

1. Commencement. Implement the SWP3 as shown and as directed. Contractor proposed recommendations for changes will be allowed as approved. Conform to the established guidelines in the TPDES General Permit TXR150000 to make changes. Do not implement changes until approval has been received and changes have been incorporated into the plans by the Engineer. Minor adjustments to meet field conditions are allowed and will be recorded by the Engineer in the SWP3.

2. Phasing. Implement control measures prior to the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract. Exercise precaution throughout the life of the project to prevent pollution of ground waters and surface waters. Schedule and perform clearing and grubbing operations so that stabilization measures will follow immediately thereafter if project conditions permit. Bring all grading sections to final grade as soon as possible and implement temporary and permanent control measures at the earliest time possible. Implement temporary control measures when required by the TPDES General Permit TXR150000 or otherwise necessitated by project conditions. Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

C. General.

1. **Temporary Alterations or Control Measure Removal.** Altering or removal of control measures is allowed when control measures are restored within the same working day.

2. **Stabilization.** Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site has temporarily or permanently ceased. Establish a uniform vegetative cover or utilize another stabilization practice in accordance with the TPDES General Permit TXR150000.

3. **Finished Work.** Upon the Engineer's acceptance of vegetative cover or other stabilization practice, remove and dispose of all temporary control measures unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained in accordance with the TPDES General Permit TXR150000. An exception will be allowed in arid areas as defined in the TPDES General Permit TXR150000.

4. **Restricted Activities and Required Precautions.** Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on site in a manner as to prevent actual or potential water pollution. Manage, control, and dispose of litter on site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only as described in the TPDES General Permit TXR150000. Utilize appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e. dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

D. Installation, Maintenance, and Removal Work. Perform work in accordance with the SWP3, according to manufacturers' guidelines, and in accordance with the TPDES General Permit TXR150000. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until earthwork construction and permanent erosion control features are in place or the disturbed area has been adequately stabilized as determined by the Engineer.

The Department will inspect and document the condition of the control measures at the frequency shown on the plans and will provide the Construction SW3P Field Inspection and Maintenance Reports to the Contractor. Make corrections as soon as possible before the next anticipated rain event or within 7 calendar days after being able to enter the work site for each control measure. The only acceptable reason for not accomplishing the corrections with the time frame specified is when site conditions are "Too Wet to Work". If a correction is deemed critical by the Engineer, immediate action is required. When corrections are not made within the established time frame, all work will cease on the project and time charges will continue while the control measures are brought into compliance. Once the Engineer

reviews and documents the project is in compliance, work may commence. Commencing work does not release the contractor of the liability for noncompliance of the SWP3, plans, or TPDES General Permit TXR150000.

The Engineer may limit the disturbed area if in the opinion of the Engineer the Contractor cannot control soil erosion and sedimentation resulting from the Contractor's operations. Implement additional controls as directed.

Remove devices upon approval or as directed. Upon removal, finish-grade and dress the area. Stabilize disturbed areas in accordance with the permit, and as shown on the plans or directed. The Contractor retains ownership of stockpiled material and must remove it from the project when new installations or replacements are no longer required.

1. **Rock Filter Dams for Erosion Control.** Remove trees, brush, stumps, and other objectionable material that may interfere with the construction of rock filter dams. Place sandbags as a foundation when required or at the Contractor's option.

   For Types 1, 2, 3, and 5, place the aggregate to the lines, height, and slopes specified, without undue voids. For Types 2 and 3, place the aggregate on the mesh and then fold the mesh at the upstream side over the aggregate and secure it to itself on the downstream side with wire ties, or hog rings, or as directed. Place rock filter dams perpendicular to the flow of the stream or channel unless otherwise directed. Construct filter dams according to the following criteria, unless otherwise shown on the plans:

   a. Type 1 (Non-reinforced).

   (1) Height. At least 18 in. measured vertically from existing ground to top of filter dam.

   (2) Top Width. At least 2 ft.

   (3) Slopes. At most 2:1.

   b. Type 2 (Reinforced).

   (1) Height. At least 18 in. measured vertically from existing ground to top of filter dam.

   (2) Top Width. At least 2 ft.

   (3) Slopes. At most 2:1.

   c. Type 3 (Reinforced).

   (1) Height. At least 36 in. measured vertically from existing ground to top of filter dam.

   (2) Top Width. At least 2 ft.

(3) Slopes. At most 2:1.

d. Type 4 (Sack Gabions). Unfold sack gabions and smooth out kinks and bends. For vertical filling, connect the sides by lacing in a single loop–double loop pattern on 4- to 5-in. spacing. At one end, pull the end lacing rod until tight, wrap around the end, and twist 4 times. At the filling end, fill with stone, pull the rod tight, cut the wire with approximately 6 in. remaining, and twist wires 4 times.

For horizontal filling, place sack flat in a filling trough, fill with stone, and connect sides and secure ends as described above.

Lift and place without damaging the gabion. Shape sack gabions to existing contours.

e. Type 5. Provide rock filter dams as shown on the plans.

2. Temporary Pipe Slope Drains. Install pipe with a slope as shown on the plans or as directed. Construct embankment for the drainage system in 8-in. lifts to the required elevations. Hand-tamp the soil around and under the entrance section to the top of the embankment as shown on the plans or as directed. Form the top of the embankment or earth dike over the pipe slope drain at least 1 ft. higher than the top of the inlet pipe at all points. Secure the pipe with hold-downs or hold-down grommets spaced a maximum of 10 ft. on center. Construct the energy dissipaters or sediment traps as shown on the plans or as directed. Construct the sediment trap using concrete or rubble riprap in accordance with Item 432, “Riprap,” when designated on the plans.

(Omitted section for Baled Hay.)

3. Temporary Paved Flumes. Construct paved flumes as shown on the plans or as directed. Provide excavation and embankment (including compaction of the subgrade) of material to the dimensions shown on the plans, unless otherwise indicated. Install a rock or rubble riprap energy dissipater, constructed from the materials specified above to a minimum depth of 9 in. at the flume outlet to the limits shown on the plans or as directed.

4. Construction Exits. When tracking conditions exist, prevent traffic from crossing or exiting the construction site or moving directly onto a public roadway, alley, sidewalk, parking area, or other right of way areas other than at the location of construction exits. Construct exits for either long or short-term use.

a. Long-Term. Place the exit over a foundation course, if necessary. Grade the foundation course or compacted subgrade to direct runoff from the construction exits to a sediment trap as shown on the plans or as directed. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed.

(1) Type 1. Construct to a depth of at least 8 in. using crushed aggregate as shown on the plans or as directed.

(2) Type 2. Construct using railroad ties and timbers as shown on the plans or as directed.

b. Short-Term.

(1) Type 3. Construct using crushed aggregate, plywood, or wafer board. This type of exit may be used for daily operations where long-term exits are not practical.

(2) Type 4. Construct as shown on the plans or as directed.

5. Earthwork for Erosion Control. Perform excavation and embankment operations to minimize erosion and to remove collected sediments from other erosion control devices.

a. Excavation and Embankment for Erosion Control Features. Place earth dikes, swales, or combinations of both along the low crown of daily lift placement, or as directed, to prevent runoff spillover. Place swales and dikes at other locations as shown on the plans or as directed to prevent runoff spillover or to divert runoff. Construct cuts with the low end blocked with undisturbed earth to prevent erosion of hillsides. Construct sediment traps at drainage structures in conjunction with other erosion control measures as shown on the plans or as directed.

Where required, create a sediment basin providing 3,600 cu. ft. of storage per acre drained, or equivalent control measures for drainage locations that serve an area with 10 or more disturbed acres at one time, not including offsite areas.

b. Excavation of Sediment and Debris. Remove sediment and debris when accumulation affects the performance of the devices, after a rain, and when directed.

6. Construction Perimeter Fence. Construct, align, and locate fencing as shown on the plans or as directed.

a. Installation of Posts. Embed posts 18 in. deep or adequately anchor in rock, with a spacing of 8 to 10 ft.

b. Wire Attachment. Attach the top wire to the posts at least 3 ft. from the ground. Attach the lower wire midway between the ground and the top wire.

c. Flag Attachment. Attach flagging to both wire strands midway between each post. Use flagging at least 18 in. long. Tie flagging to the wire using a square knot.

7. Sandbags for Erosion Control. Construct a berm or dam of sandbags that will intercept sediment-laden storm water runoff from disturbed areas, create a retention pond, detain sediment, and release water in sheet flow. Fill each bag with sand so that at least the top 6 in. of the bag is unfilled to allow for proper tying of the open end. Place the sandbags with their tied ends in the same direction. Offset subsequent rows of sandbags 1/2 the length of the preceding row. Place a single layer of sandbags downstream as a secondary

debris trap. Place additional sandbags as necessary or as directed for supplementary support to berms or dams of sandbags or earth.

8. **Temporary Sediment-Control Fence.** Provide temporary sediment-control fence near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the fence into erosion-control measures used to control sediment in areas of higher flow. Install the fence as shown on the plans, as specified in this Section, or as directed.

   a. Installation of Posts. Embed posts at least 18 in. deep, or adequately anchor, if in rock, with a spacing of 6 to 8 ft. and install on a slight angle toward the run-off source.

   b. Fabric Anchoring. Dig trenches along the uphill side of the fence to anchor 6 to 8 in. of fabric. Provide a minimum trench cross-section of 6 x 6 in. Place the fabric against the side of the trench and align approximately 2 in of fabric along the bottom in the upstream direction. Backfill the trench, then hand-tamp.

   c. Fabric and Net Reinforcement Attachment. Unless otherwise shown under the plans, attach the reinforcement to wooden posts with staples, or to steel posts with T-clips, in at least 4 places equally spaced. Sewn vertical pockets may be used to attach reinforcement to end posts. Fasten the fabric to the top strand of reinforcement by hog rings or cord every 15 in. or less.

   d. Fabric and Net Splices. Locate splices at a fence post with a minimum lap of 6 in. attached in at least 6 places equally spaced, unless otherwise shown under the plans. Do not locate splices in concentrated flow areas.

   Requirements for installation of used temporary sediment-control fence include the following:

   - fabric with minimal or no visible signs of biodegradation (weak fibers),
   - fabric without excessive patching (more than 1 patch every 15 to 20 ft.),
   - posts without bends, and
   - backing without holes.

9. **Biodegradable Erosion Control Logs.** Install biodegradable erosion control logs near the downstream perimeter of a disturbed area to intercept sediment from sheet flow. Incorporate the biodegradable erosion control logs into the erosion measures used to control sediment in areas of higher flow. Install, align and locate the biodegradable erosion control logs as specified below, as shown in plans or as directed.

   Secure biodegradable erosion control logs in a method adequate to prevent displacement as a result of normal rain events, prevent damage to the logs, and to the satisfaction of the Engineer such that flow is not allowed under the logs. Temporarily removing and replacing biodegradable erosion logs as to facilitate daily work is allowed at the Contractor's expense.

10. Vertical Tracking. Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring a minimum of 12 inches in length by 2 to 4 inches in width by 1/2 to 2 inches in depth. Do not exceed 12 inches between track impressions. Install continuous linear track impressions where the 12 inch length impressions are perpendicular to the slope.

E. Monitoring and Documentation. Monitor the control measures on a daily basis. Monitoring will consist of, but is not limited to, observing, inspecting, and documenting site locations with control measures and discharge points to provide maintenance and inspection of controls as described in the SWP3. Keep written records of daily monitoring. Document in the daily monitoring report the control measure condition, the date of inspection, required corrective actions, responsible person for making the corrections, and the date corrective actions were completed. Maintain records of all monitoring reports at the project site or at a place approved by the Engineer. Provide copies to the Engineer. Together, the CRPe and a Engineer's representative will complete the Construction Stage Gate Checklist on a periodic basis as determined by the Engineer.

5. Measurement.

A. Rock Filter Dams. Installation or removal of rock filter dams will be measured by the foot or by the cubic yard. The measured volume will include sandbags, when used.

1. Linear Measurement. When rock filter dams are measured by the foot, measurement will be along the centerline of the top of the dam.

2. Volume Measurement. When rock filter dams are measured by the cubic yard, measurement will be based on the volume of rock computed by the method of average end areas.

a. Installation. Measurement will be made in final position.

b. Removal. Measurement will be made at the point of removal.

B. Temporary Pipe Slope Drains. Temporary pipe slope drains will be measured by the foot.

(Omitted section for Baled Hay.)

C. Temporary Paved Flumes. Temporary paved flumes will be measured by the square yard of surface area. The measured area will include the energy dissipater at the flume outlet.

D. Construction Exits. Construction exits will be measured by the square yard of surface area.

E. Earthwork for Erosion and Sediment Control.

1. Equipment and Labor Measurement. Equipment and labor used will be measured by the actual number of hours the equipment is operated and the labor is engaged in the work.

2. Volume Measurement.

a. In Place.

(1) Excavation. Excavation will be measured by the cubic yard in its original position and the volume computed by the method of average end areas.

(2) Embankment. Embankment will be measured by the cubic yard in its final position by the method of average end areas. The volume of embankment will be determined between:

- the original ground surfaces or the surface upon that the embankment is to be constructed for the feature and
- the lines, grades and slopes of the accepted embankment for the feature.

b. In Vehicles. Excavation and embankment quantities will be combined and paid for under "Earthwork (Erosion and Sediment Control, In Vehicle)." Excavation will be measured by the cubic yard in vehicles at the point of removal. Embankment will be measured by the cubic yard in vehicles measured at the point of delivery. Shrinkage or swelling factors will not be considered in determining the calculated quantities.

F. Construction Perimeter Fence. Construction perimeter fence will be measured by the foot.

G. Sandbags for Erosion Control. Sandbags will be measured as each sandbag or by the foot along the top of sandbag berms or dams.

H. Temporary Sediment-Control Fence. Temporary sediment-control fence will be measured by the foot.

I. Biodegradable Erosion Control Logs. Biodegradable erosion control logs will be measured by the linear foot along the centerline of the top of the control logs.

J. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

6. Payment. The following will not be paid for directly but are subsidiary to pertinent Items:

- erosion-control measures for Contractor project-specific locations (PSLs) inside and outside the right of way (such as construction and haul roads, field offices, equipment and supply areas, plants, and material sources);
- removal of litter; unless a separate pay item is shown in the plans.
- repair to devices and features damaged by Contractor operations;
- added measures and maintenance needed due to negligence, carelessness, lack of maintenance, and failure to install permanent controls;
- removal and reinstallation of devices and features needed for the convenience of the Contractor;
- finish grading and dressing upon removal of the device; and

- minor adjustments including but not limited to plumbing posts, reattaching fabric, minor grading to maintain slopes on an erosion embankment feature, or moving small numbers of sandbags.

Stabilization of disturbed areas will be paid for under pertinent Items.

Furnishing and installing pipe for outfalls associated with sediment traps and ponds will not be paid for directly but is subsidiary to the excavation and embankment under this Item.

A. Rock Filter Dams. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

1. Installation. Installation will be paid for as "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

2. Removal. Removal will be paid for as "Rock Filter Dams (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

When the Engineer directs that the rock filter dam installation or portions thereof be replaced, payment will be made at the unit price bid for "Rock Filter Dams (Remove)" and for "Rock Filter Dams (Install)" of the type specified. This price is full compensation for furnishing and operating equipment, finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

B. Temporary Pipe Slope Drains. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Pipe Slope Drains" of the size specified. This price is full compensation for furnishing materials, removal and disposal, furnishing and operating equipment, labor, tools, and incidentals.

Removal of temporary pipe slope drains will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the pipe slope drain installation or portions thereof be replaced, payment will be made at the unit price bid for "Temporary Pipe Slope Drains" of the size specified, which is full compensation for the removal and reinstallation of the pipe drain.

Earthwork required for the pipe slope drain installation, including construction of the sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

Riprap concrete or stone, when used as an energy dissipater or as a stabilized sediment trap, will be measured and paid for in accordance with Item 432, "Riprap."

(Omitted section for Baled Hay.)

C. Temporary Paved Flumes. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Temporary Paved Flume (Install)" or "Temporary Paved Flume (Remove)." This price is full compensation for furnishing and placing materials, removal and disposal, equipment, labor, tools, and incidentals.

When the Engineer directs that the paved flume installation or portions thereof be replaced, payment will be made at the unit prices bid for "Temporary Paved Flume (Remove)" and "Temporary Paved Flume (Install)." These prices are full compensation for the removal and replacement of the paved flume and for equipment, labor, tools, and incidentals.

Earthwork required for the paved flume installation, including construction of a sediment trap, will be measured and paid for under "Earthwork for Erosion and Sediment Control."

D. Construction Exits. Contractor-required construction exits from off right of way locations or on-right of way PSLs will not be paid for directly but are subsidiary to pertinent Items.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for construction exits needed on right of way access to work areas required by the Department will be paid for at the unit price bid for "Construction Exits (Install)" of the type specified or "Construction Exits (Remove)." This price is full compensation for furnishing and placing materials, excavating, removal and disposal, cleaning vehicles, labor, tools, and incidentals.

When the Engineer directs that a construction exit or portion thereof be removed and replaced, payment will be made at the unit prices bid for "Construction Exit (Remove)" and "Construction Exit (Install)" of the type specified. These prices are full compensation for the removal and replacement of the construction exit and for equipment, labor, tools, and incidentals.

Construction of sediment traps used in conjunction with the construction exit will be measured and paid for under "Earthwork for Erosion and Sediment Control."

E. Earthwork for Erosion and Sediment Control.

1. Initial Earthwork for Erosion and Sediment Control. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Excavation (Erosion and Sediment Control, In Place)", "Embankment (Erosion and Sediment Control, In Place)", "Excavation (Erosion and Sediment Control, In Vehicle)", "Embankment (Erosion and Sediment Control, In Vehicle)", or "Earthwork (Erosion and Sediment Control, In Vehicle)".

This price is full compensation for excavation and embankment including hauling, disposal of material not used elsewhere on the project; embankments including furnishing material from approved sources and construction of erosion-control features; equipment, labor; tools, and incidentals.

Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

2. **Maintenance Earthwork for Erosion and Sediment Control for Cleaning and/or Restoring Control Measures.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for by a Contractor Force Account Item.

   This price is full compensation for excavation, embankment, and re-grading including removal of accumulated sediment in various erosion control installations as directed, hauling, and disposal of material not used elsewhere on the project; excavation for construction of erosion-control features; embankments including furnishing material from approved sources and construction of erosion-control features; and equipment, labor; tools, and incidentals.

   Earthwork needed to remove and obliterate of erosion-control features will not be paid for directly but is subsidiary to pertinent Items unless otherwise shown on the plans.

   Sprinkling and rolling required by this Item will not be paid for directly, but will be subsidiary to this Item.

F. Construction Perimeter Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Construction Perimeter Fence." This price is full compensation for furnishing and placing the fence; digging, fence posts, wire, and flagging; removal and disposal; and materials, equipment, labor, tools, and incidentals.

Removal of construction perimeter fence will be not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the perimeter fence installation or portions thereof be removed and replaced, payment will be made at the unit price bid for "Construction Perimeter Fence," which is full compensation for the removal and reinstallation of the construction perimeter fence.

G. Sandbags for Erosion Control. Sandbags will be paid for at the unit price bid for "Sandbags for Erosion Control" (of the height specified when measurement is by the foot). This price is full compensation for materials, placing sandbags, removal and disposal, equipment, labor, tools, and incidentals.

Removal of sandbags will not be paid for directly but is subsidiary to the installation Item. When the Engineer directs that the sandbag installation or portions thereof be replaced, payment will be made at the unit price bid for "Sandbags for Erosion Control," which is full compensation for the reinstallation of the sandbags.

H. Temporary Sediment-Control Fence. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

1. **Installation.** Installation will be paid for as "Temporary Sediment-Control Fence (Install)" of the type specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, lacing, proper disposal, labor, materials, tools, and incidentals.

2. **Removal.** Removal will be paid for as "Temporary Sediment-Control Fence (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

I. Biodegradable Erosion Control Logs. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid as follows:

1. **Installation.** Installation will be paid for as "Biodegradable Erosion Control Logs (Install)" of the size specified. This price is full compensation for furnishing and operating equipment finish backfill and grading, staking, proper disposal, labor, materials, tools, and incidentals.

2. **Removal.** Removal will be paid for as "Biodegradable Erosion Control Logs (Remove)." This price is full compensation for furnishing and operating equipment, proper disposal, labor, materials, tools, and incidentals.

J. Vertical Tracking. Vertical tracking will not be measured or paid for directly but is considered subsidiary to this Item.

SPECIAL PROVISION
TO
SPECIAL SPECIFICATION
1122--001
Temporary Erosion, Sedimentation, and Environmental Controls

For this project, Special Specification Item 1122, "Temporary Erosion, Sedimentation, and Environmental Controls" is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 3.C. Training is supplemented by the following:

The Environmental Management System (EMS) eLearning Courses and Department's EMS Policy Statement can be found at http://txdot.gov/business/ems+_courses.htm. The following training has been developed in compliance with the Department's EMS program.

All Contractor and subcontractor employee's involved in the earthwork activities, small or large structures, storm water control measures, and seeding activities must complete the following training located at http://txdot.gov/business/ems_courses.htm. Training is provided by the Department at no cost to the Contractor.

- "Environmental Management System: Awareness Training for the Contractor (English and Spanish)", and
- "Storm Water: Environmental Requirements During Construction (English and Spanish)".

The CRPe, alternate CRPe designated for emergencies, Contractor's superintendent, and Contractor and subcontractor lead personnel involved in SWP3 activities must enroll and complete the training located at http://www.uta.edu/ced/static/ttsenvonline.shtml. Training is provided by a third party. Coordinate enrollment through the third party and pay associated fees for the following training:

- ENV413, "Revegetation During Construction",
- ENV432, "Construction General Permit Compliance",
- ENV433, "Construction Stagegate Compliance", and
- CON 816, "Environmental Management System, Construction Stage Gate Checklist (CSGC)".

Training and associated fees will not be measured or paid for directly but are considered subsidiary to this Item.

CONTRACTOR CERTIFICATION OF COMPLIANCE
WITH STORM WATER REQUIREMENTS

I, _____ certify that I am the duly appointed representative of the contractor with authority to make this Contractor certification. I have read and understand the requirements applicable to this project pertaining to storm water discharge authorization under Texas Pollutant Discharge Elimination System (TPDES) General Permit (GP) TXR150000. The Contractor agrees to comply with the terms of the permit that are expressly stated in the contract documents as being the responsibility of the Contractor. I have read and understand the Storm Water Pollution Prevention Plan (SW3P) developed by the Department for this project. The Contractor agrees it will be implemented prior to construction according to permit requirements and the contract documents. I understand that failure to comply with requirements of the TPDES GP TXR150000, including the SWP3 for the project, may result in civil penalties assessed to the Contractor.

The Contractor acknowledges its responsibility to satisfy the following requirements:

- Implement the SWP3 for the project in accordance with the plans and specifications and the TPDES GP TXR150000.
- Install and maintain control measures on the project in accordance with the manufacturer's or designer's specifications.
- Collaborate with the Department for joint monitoring of best management practices (BMPs) on a regular basis to verify that BMPs are performing as intended in accordance with the plans and specifications and with TPDES GP TXR150000.
- Collaborate with the Department for joint identification of BMP maintenance needs and carry out such maintenance in accordance with the plans and specifications, TPDES GP TXR150000 and as directed by the Engineer.
- Repair the integrity of any BMP as directed by the Engineer as soon as reasonably possible.
- If appropriate, recommend changes needed in the SWP3 to the Engineer in order to prevent, to the extent practicable, water pollution associated with construction activities from entering any surface water or private property on or adjacent to the project site by storm water discharges.
- Stabilize disturbed areas, as soon as practicable, in accordance with the TPDES GP TXR150000 and as directed by the Engineer.
- If applicable, obtain appropriate authorizations for activities associated with any Project Specific Location under the authority of the Contractor and provide appropriate documentation of compliance to the Engineer.
- Satisfy any other responsibility indicated in the contract documents that are expressly stated as the responsibility of the Contractor.

Signature and Title: _____

Date: _____

Texas Department of Transportation
Book 2 - Technical Provisions

IH 35E Managed Lanes Project

Attachment 4-2

Form 2118
Construction Storm Water Pollution Prevention Plan Field Inspection and Maintenance Report

CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN
FIELD INSPECTION AND MAINTENANCE REPORT

Project Information

Inspection Cycle (select only one):

☐ At least once every 7 calendar days.

☐ At least once every 14 calendar days and within 24 hours after 0.5 inches or more of rainfall.

☐ *Other _____

CSJ: _____ Inspection Date: _____

Project: _____ TCEQ Authorization No.: _____

Highway: _____ Date of Last Rainfall: _____

County: _____ Amount of Last Rainfall: _____ (inches)

***For "other" options, the Engineer must verify compliance with Part III.F.7(a) of the TPDES Construction General Permit (CGP).**

Inspected Best Management Practice (BMP)/Areas

All of these BMPs/areas must be inspected when present on the right-of-way

☐ Disturbed areas
☐ Discharge locations
☐ Erosion control BMPs
☐ Sediment control BMPs
☐ Concrete truck washout areas
☐ Areas where litter/debris/trash collect
☐ Areas that generate dust
☐ Postings
☐ Material stockpiles
☐ Areas where vehicles enter/leave site
☐ Portable sanitary facilities
☐ Construction material storage areas
☐ Parking/equipment storage areas
☐ Chemical/fuel storage areas

Other _____

Corrective Actions, Maintenance, Upgrading or Additional Controls

Except the items listed below, all areas/BMPs indicated above have been inspected and do not require maintenance, upgrading or additional controls. If multiple highways or project locations are involved, identify the highway or project location of the BMPs/areas requiring maintenance or improvement. Document all changes to the SWP3.

Station(s) or Location	Left or Right of Centerline	Issue/BMP	Corrective Action	Priority*	Date of Corrective Action Completed
Other/Notes			Cause		
Other/Notes			Cause		
Other/Notes			Cause		
Other/Notes			Cause		
Other/Notes			Cause		

* **High** - must be addressed immediately; all other project work is stopped until issue is resolved.
Med - address as soon as practicable or as directed; other work can continue.
Low - address within 7 days or before the next rainfall event.

Stabilization

When construction activities cease on a disturbed portion of the site for 21 or more days, stabilization must be initiated within 14 days unless excepted by Part III.F.2(b)(iii) of the CGP. Indicate the stabilization measures taken.

Station	Left or Right of Centerline	Stabilization Measure	Date Initiated	Other/Notes
to				
to				
to				
to				
to				

Compliance Certification

Check One and Complete Signature.

☐ With the corrective actions noted (if any), the site is in compliance with the CGP regulations and the SWP3.

☐ The site is in potential non-compliance with the CGP regulations and/or the SWP3. Potential non-compliance issues are described below.

TxDOT's Representative's Name (Print clearly):	Title:	Date:
TxDOT's Representative's Signature:		

Potential Non-Compliance Issues

Potential non-compliance issues may include the failure to address previously noted corrective actions, repeated failure of a control measure, off-site discharges of sediment, off-site discharges of other pollutants, or other potential non-compliance issues identified in the CGP. Notify the Engineer immediately of any potential non-compliance issues.

Station	Left or Right of Centerline	Describe Potential Non-Compliance Issue
to		
to		
to		
to		
to		

Contractor Notification

Furnish a copy of this inspection report to the Contractor within one calendar day of the inspection. Corrective actions must be taken as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. If corrective actions are not made within this timeframe and become potential noncompliance issues, other work on the project may be suspended by the Engineer. Time charges will continue until the project is brought into compliance and documentation of corrective action is provided. This in no way releases the contractor of liability for noncompliance.

Contractor's Representative's Name (Print clearly):	Title:	Date:
Contractor's Representative's Signature:		

Inspection Certification

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 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.

TxDOT's Certifying Representative's Name (Print clearly):	Title:	Date:
TxDOT's Certifying Representative's Signature:		

Texas Department of Transportation
Book 2 - Technical Provisions

IH 35E Managed Lanes Project

Attachment 4-3

Form 2448
Construction Stage Gate Checklist (CSGC)

Texas Department of Transportation

Show

Environmental Management System
Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office

Project Personnel Completing CSGC (Joint Inspection)	
TxDOT Representative	Contractor Representative
Print Name:	Print Name:
Signature/Date:	Signature/Date:

CSGC Inspection Period			
From	Date of beginning initial construction activities, or Date of previous CSGC Inspection	To	Date of this CSGC Inspection

List Project Permits

			National Environmental Policy Act (NEPA) Document
☐ Yes	☐ No		1. Have the project limits or scope changed? (If yes, complete question 2)
☐ Yes	☐ No		2. Has coordination with Advance Planning & Development occurred to ensure NEPA compliance?
			Storm Water Resources
☐ Yes	☐ No		3. Does the project require a Construction Site Notice (CSN)?
☐ Yes	☐ No	☐ N/A	4. Is the CSN posted in a publicly accessible location near where the construction activity is underway?
☐ Yes	☐ No	☐ N/A	5. Does the CSN contain all required information?
☐ Yes	☐ No		6. Does the project require a Notice of Intent (NOI)?
☐ Yes	☐ No	☐ N/A	7. Is the NOI posted in a publicly accessible location near where the construction activity is underway?
☐ Yes	☐ No	☐ N/A	8. Does the NOI contain all required information?
☐ Yes	☐ No	☐ N/A	9. Does the project have a Storm Water Pollution Prevention Plan (SWP3)?
☐ Yes	☐ No	☐ N/A	10. Is there a copy of the TCEQ Construction General Permit onsite or with the SWP3?
☐ Yes	☐ No	☐ N/A	11. Is there a copy of a Delegation of Authority Letter authorizing the signing of inspection reports in the SWP3 file?
☐ Yes	☐ No	☐ N/A	12. Is the SWP3 retained and available for inspection at the work site that generates the storm water? (If no, complete question 13)
			13. Where is it located?
☐ Yes	☐ No	☐ N/A	14. Is the SWP3 updated for any changes in design or project change orders?
☐ Yes	☐ No	☐ N/A	15. Are the SWP3 drawings updated for changes to Best Management Practices (BMPs)? (i.e. type, location and install/remove dates)
☐ Yes	☐ No	☐ N/A	16. Is the description of construction and waste materials stored on-site updated with the Contractor?
☐ Yes	☐ No	☐ N/A	17. Are the dates when major grading activities occur updated?
☐ Yes	☐ No	☐ N/A	18. Are the dates when construction activities temporarily or permanently cease on a portion of the site updated?
☐ Yes	☐ No	☐ N/A	19. Did stabilization occur within 14 days at locations where soil disturbing activities have ceased? (If yes, complete question 20)

Environmental Management System
Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office

☐ Yes	☐ No	☐ N/A	20. Is the stabilization documented? (i.e. DWR's, methods, seeding rates, etc)
☐ Yes	☐ No	☐ N/A	21. Did stabilization occur within 14 days at locations where work temporarily ceased (at least 21 days)? (If yes, complete question 22)
☐ Yes	☐ No	☐ N/A	22. Is the stabilization documented? (i.e. DWR's, methods, seeding rates, etc)
☐ Yes	☐ No	☐ N/A	25. Are control measures installed in accordance with the SWP3?
☐ Yes	☐ No	☐ N/A	26. Are control measures properly selected?
☐ Yes	☐ No	☐ N/A	27. Are control measures performing?
☐ Yes	☐ No	☐ N/A	28. Are control measures properly maintained?
☐ Yes	☐ No	☐ N/A	29. Are on-site accumulations of sediment removed as soon as practicable to prevent off-site impacts? (i.e. sediment near off-site inlets, etc)
☐ Yes	☐ No	☐ N/A	30. Is sediment removed from control devices when design capacity is reduced by 50%?
☐ Yes	☐ No	☐ N/A	31. Are litter, construction debris, and construction chemicals exposed to wind or water erosion? (i.e. screening outfalls, picked up daily)
☐ Yes	☐ No	☐ N/A	32. Is a lidded dumpster on the project to dispose of litter, construction debris, etc.?
☐ Yes	☐ No	☐ N/A	33. Were velocity dissipation devices (i.e. rock filter dams, holding ponds, etc) placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to the water course?
☐ Yes	☐ No	☐ N/A	34. Were the inspections performed per the contract/SWP3?
☐ Yes	☐ No	☐ N/A	35. Are deficiencies and nonconformance issues identified on the inspections being addressed before off-site discharge occurs?
☐ Yes	☐ No	☐ N/A	36. Are controls in place to minimize off-site vehicle tracking of sediments?
☐ Yes	☐ No	☐ N/A	37. Has TxDOT approved PSLs on Right-of-Way?
☐ Yes	☐ No	☐ N/A	38. Are the contractor's on and off Right-of-Way PSLs shown on the SWP3 site plan? (If yes, complete question 39)
☐ Yes	☐ No		39. Are the contractor's on and off Right-of-Way PSLs shown on the SWP3 site plan identified as contractor's PSL?
☐ Yes	☐ No		40. Is the contractor required to have a concrete washout area? (If yes, complete questions 41 - 42)
☐ Yes	☐ No		41. Is the concrete washout area shown on the SWP3 site plan?
☐ Yes	☐ No		42. Is the concrete washout area properly constructed and maintained?
☐ Yes	☐ No		43. Is the inspection cycle option for this project “At least every 14 calendar days and within 24 hours after 0.5 inches or more of rainfall”? (If yes, complete questions 44 - 45)
☐ Yes	☐ No		44. Is there a rain gauge on the project?
☐ Yes	☐ No		45. Are there records documenting rainfall amounts?
☐ Yes	☐ No	☐ N/A	46. Did the inspection summary report include the name of the inspector?
☐ Yes	☐ No	☐ N/A	47. Did the inspection summary report include the date(s) of the inspection?
☐ Yes	☐ No	☐ N/A	48. Did the inspection summary report include measures/area inspected?
☐ Yes	☐ No	☐ N/A	49. Did the inspection summary report include actions needed/taken as a result of the inspection?
☐ Yes	☐ No	☐ N/A	50. Did the inspection summary report include major observations? (i.e. locations of discharges of sediment or pollutants, BMPs that require maintenance, BMPS that failed to operate as designed or proved inadequate, BMPs are needed)
☐ Yes	☐ No	☐ N/A	51. Did the SWP3 include appropriately signed certification statement?
☐ Yes	☐ No	☐ N/A	52. Did the SWP3 include the inspector qualification document?
☐ Yes	☐ No		53. Does the project require a Municipal Separate Storm Sewer System (MS4) permit? (If yes, complete question 54)
☐ Yes	☐ No		54. Have the MS4 operator(s) been notified?

Environmental Management System
Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office

Jurisdictional Waters of the United States, including Wetlands			
☐ Yes	☐ No		55. Does the project require a USACE permit? (If yes, complete questions 56 - 62)
☐ Yes	☐ No		56. Are wetlands and waters of the US being protected in accordance with the authorization/permit and the PS&E?
☐ Yes	☐ No		57. Are the proper USACE permits maintained at the site?
☐ Yes	☐ No		58. Is clearance of off Right-of-Way PSLs required by a special condition of TxDOT's USACE permit? (If yes, complete question 59)
☐ Yes	☐ No	☐ N/A	59. Has clearance of these PSLs been obtained?
☐ Yes	☐ No		60. Are the BMPs for protecting wetlands and water of the US working effectively?
☐ Yes	☐ No		61. Are construction activities meeting all USACE general permit conditions?
☐ Yes	☐ No		62. Are construction activities meeting all other USACE special permit conditions?
Navigable Waters			
☐ Yes	☐ No		63. Is a US Coast Guard Section 9 permit applicable? (If yes, complete questions 64 - 65)
☐ Yes	☐ No		64. Is the US Coast Guard Section 9 permit maintained on site?
☐ Yes	☐ No		65. Are construction activities meeting US Coast Guard Section 9 permit conditions?
☐ Yes	☐ No		66. Is a USACE Section 10 permit applicable? (If yes, complete questions 67 - 68)
☐ Yes	☐ No		67. Is the USACE Section 10 permit maintained on site?
☐ Yes	☐ No		68. Are construction activities meeting USACE Section 10 permit conditions?
Edwards Aquifer			
☐ Yes	☐ No		69. Does the project require an Edwards Aquifer Protection Plan? (If yes, complete questions 70 - 73)
☐ Yes	☐ No		70. Is a copy of the Water Pollution Abatement Plan (WPAP) kept on-site?
☐ Yes	☐ No		71. Is a copy of the Contributing Zone Plan kept on-site?
☐ Yes	☐ No		72. Are project requirements met for groundwater protection? (i.e. Item 103 Disposal of Wells, staging requirements from WPAP, etc)
☐ Yes	☐ No		73. Are construction activities meeting permit conditions?
International Boundary Water Commission (IBWC)			
☐ Yes	☐ No		74. Is an IBWC License applicable? (If yes, complete questions 75 - 76)
☐ Yes	☐ No		75. Is the IBWC maintained on site?
☐ Yes	☐ No		76. Are construction activities meeting IBWC License conditions?
Biological Resources			
☐ Yes	☐ No	☐ N/A	77. Is work compliant with the plans for protection of vegetation, including trees?
☐ Yes	☐ No	☐ N/A	78. Are migratory bird nesting requirements being followed?
☐ Yes	☐ No	☐ N/A	79. Is the work compliant with the plans and/or mitigation requirements for protection of threatened or endangered species/habitats?
Noise			
☐ Yes	☐ No		80. Are there any proposed noise impacts? (If yes, complete question 81)
☐ Yes	☐ No		81. Is the work being performed in accordance with the noise mitigation plan?
Air Quality			
☐ Yes	☐ No	☐ N/A	82. Are controls being practiced and are they effective for minimizing dust?

Environmental Management System
Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office

☐ Yes	☐ No	☐ N/A	83. Were the procedures for the Texas Emission Reduction Plan or other incentive measures met and documented? (i.e. contractor is using highest tier level equipment and best fuel grade)
☐ Yes	☐ No	☐ N/A	84. Are measures being taken for reducing idling of equipment and vehicles?
Cultural Resources			
☐ Yes	☐ No	☐ N/A	85. Are known historical and archeological properties being protected and preserved in accordance with the plans?
☐ Yes	☐ No		86. Have historical and archeological properties been encountered during construction? (If yes, complete questions 87 - 88)
☐ Yes	☐ No		87. Were the historical and archeological properties protected?
☐ Yes	☐ No		88. Were the TxDOT Emergency Discovery Guidelines followed?
DSHS Notification			
☐ Yes	☐ No		89. Is DSHS notification(s) required? (if yes, complete questions 90 - 92)
☐ Yes	☐ No		90. Has DSHS notification(s) been mailed?
☐ Yes	☐ No		91. Was the DSHS notification(s) postmarked at least 10 working days prior to initiating demolition or renovation?
☐ Yes	☐ No		92. Were there any amendments to the DSHS notification(s)?
Hazardous Materials			
☐ Yes	☐ No	☐ N/A	93. Are hazardous materials mitigation and abatement procedures being followed?
☐ Yes	☐ No		94. Have unknown hazardous materials been encountered during construction? (If yes, complete questions 95 - 96)
☐ Yes	☐ No		95. Have the proper TxDOT and agency contacts been made and documented?
☐ Yes	☐ No		96. Has mitigation or abatement been addressed?
☐ Yes	☐ No		97. Do the project plans include a soil and/or groundwater management plan? (If yes, complete question 98)
☐ Yes	☐ No		98. Is the abatement/mitigation plan being adhered to?
☐ Yes	☐ No		99. Has a spill of less than reportable quantity occurred? (If yes, complete question 100)
☐ Yes	☐ No		100. Were Spill Response Plan procedures followed for reporting and cleanup?
☐ Yes	☐ No		101. Has a spill of reportable quantity occurred? (If yes, complete question 102)
☐ Yes	☐ No		102. Were Spill Response Plan procedures followed for reporting and cleanup?
Change Orders			
☐ Yes	☐ No		103. Are there change orders on this project? (If yes, complete questions 104 - 106)
☐ Yes	☐ No		104. Are change orders assessed for NEPA re-evaluation and/or resource agency coordination?
☐ Yes	☐ No		105. Do the change orders require environmental mitigation, abatement, or clearance actions? (If yes, complete question 106)
☐ Yes	☐ No		106. Have environmental mitigation, abatement, or clearance actions occurred?

Environmental Management System
Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office

SUMMARY OF PROJECT INSPECTION

Reference Item Number	Finding	Person Responsible For Corrective Action (Print Name)	Date Corrective Action Expected To Be Completed	Date Corrective Action Completed	TxDOT Representative Verifying Completed Corrective Action
					Print Name: _____ Signature: _____
					Print Name: _____ Signature: _____
					Print Name: _____ Signature: _____
					Print Name: _____ Signature: _____

Comments

Reviewer (Optional)

Print Name:	Signature:	Title:	Date of Review:

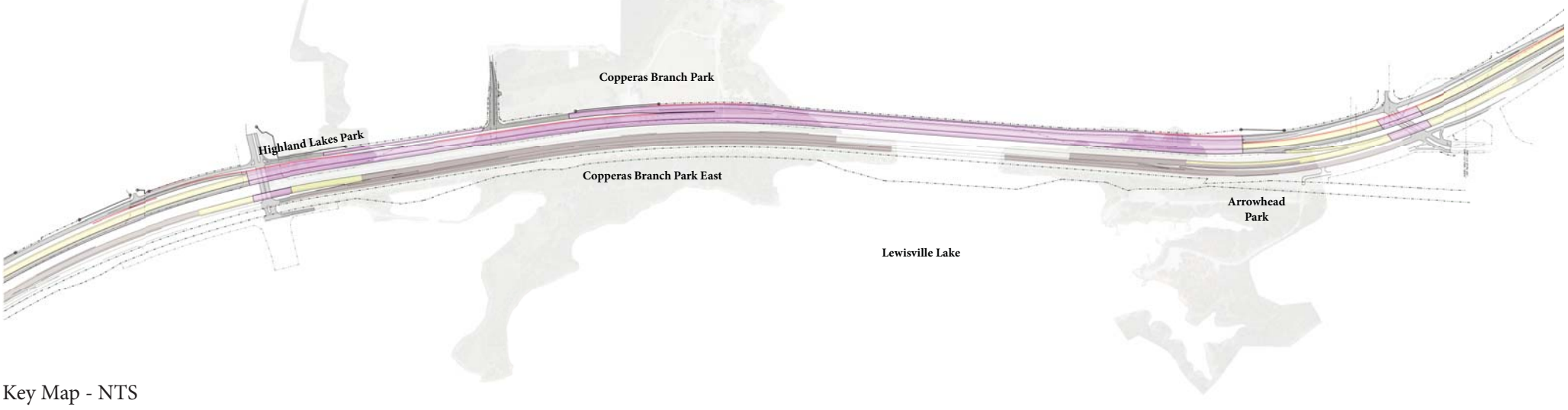
Texas Department of Transportation
Book 2 - Technical Provisions

IH 35E Managed Lanes Project

Attachment 4-4

Section 4(f) Mitigation Master Plan

ATTACHMENT 4-4
IH 35E MANAGED LANES PROJECT MITIGATION ELEMENTS



Key Map - NTS

Mitigation Elements Key

Copperas Branch Park

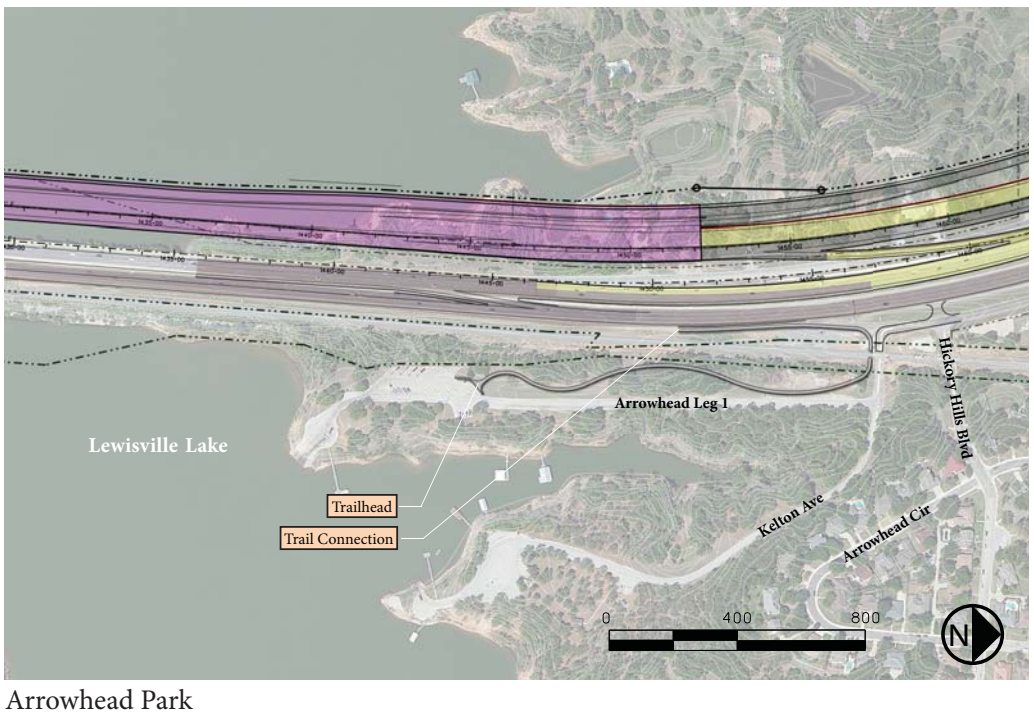
- 2.b2 Park Roads
- 2.c Signage
- 2.d Parking
- 2.g Precast Picnic Tables with Grills
- 2.h Metal Rail Fencing, Barrier Posts and Gates
- 2.i Landscaping (stand of hardwoods in picnic area)
- 2.k Beach
- 2.l Buoys

Copperas Branch Park East

- 2.o Parking Access at Trailhead
- 2.p Copperas Branch Park East Trail
- 2.q Primary Trailhead
- 2.r Minimum Sanitary Facilities
- 2.s Buoys
- 2.v Connector Trail to Copperas Branch Park East

Arrowhead Park

- Trailhead
- Trail Connection



Arrowhead Park

IH35E Managed Lanes Project Mitigation Elements Report*

Developer Mitigation

Copperas Branch Park

2.b2 Park Roads – approximately 930 LF [update quantity] of primary park access road will be constructed within Copperas Branch Park connecting from behind the Gatehouse to the parking lot area under the proposed southbound IH 35E and around to the limits of the construction easement. This access road shall be comprised of a 24' wide concrete section with curb/gutter per TxDOT standard. Refer to the master plan document for layout of the drive.

2.c Signage – two (2) entry signs are to be constructed. The City of Highland Village sign shall be located at the northwest corner of Highland Village Road and the proposed southbound frontage road for IH35E. The Copperas Branch Park entry sign shall be located at the northeast corner of Highland Village Road and Copperas Creek Court. Both shall be double sided cast stone panels supported by a concrete foundation with limestone veneer in a random ashlar pattern. The desired architectural style is illustrated in sketches supporting the master plan document. Refer to the master plan document for approximate locations.

2.d Parking – parking for one hundred and eighty (180) spaces shall be provided under the proposed southbound IH 35E. Standard spaces shall be 9'x20' with 24' wide two-way drives in between bays. ADA compliance is required for all parking areas including grading and accessible spaces. Oversized spaces for buses, RV's or boat trailers should also be included. All parking areas shall be concrete section with curb/gutter per TxDOT standard. Refer to the master plan document for layout of the parking area.

2.g Precast Picnic Tables with Grills – six (6) precast concrete picnic tables and six (6) ground mounted metal grills shall be provided and installed. The picnic tables shall be ADA compliant. Refer to the master plan document for approximate location.

2.h Metal Rail Fencing, Barrier Posts and Gates – Approximately 1,300 LF of post and cable barriers shall be provided around the perimeter of the park to prevent vehicular access to the site where it is not desired. Refer to the master plan document for approximate layout.

2.i Landscaping – every reasonable effort should be made to preserve the existing trees in this area. If existing trees are impacted, native hardwood species shall be planted and established in accordance with USACE and City of Highland Village requirements. These canopy trees that are replaced must be maintained and warrantied for a period of one (1) year after acceptance. If any individual tree expires during this period, it must be replaced immediately and the warranty resets for that tree. Refer to the master plan document for approximate location of existing hardwoods.

2.k Beach – impacts to the beach complex shall be restored along the north shore of the park in accordance with USACE Design Guideline document for Beaches, Beach Complexes And Designated Swim Areas for the Elm Fork Project.

2.l Buoys – a buoy system shall be installed and maintained throughout the duration of the developer contract. “NO WAKE” regulatory buoys (12”) shall be placed no more than 300’ apart along the full extent of the IH 35E bridge structure. Coordination with USACE and adherence to their guidelines is required for installation and maintenance details..

Copperas Branch Park East

2.o Parking Access at Sanitary Facilities and Trailhead – parking for twenty (20) spaces shall be provided at the trailhead for access to Copperas Branch East. Standard spaces shall be 9’x18’ with 24’ wide two-way drives. ADA compliance is required for all parking areas including grading and accessible spaces. All parking areas shall be concrete section with curb/gutter per TxDOT standard. Refer to the master plan document for layout of the parking area.

2.p Copperas Branch Park East Trail – approximately one (1) mile of 10’ wide concrete trail shall be provided as a loop around Copperas Branch East. ADA compliance is required. The 6” concrete section should have a 4’ clear buffer on each side for maintenance and security. Refer to the master plan document for layout.

2.q Primary Trailhead – near the parking area, there shall be a trailhead to consist of a small concrete plaza, a precast concrete bench and a stone monument sign with the name of the park/trail. Refer to the master plan document for approximate location.

2.r Minimum Sanitary Facilities – a self-contained, precast concrete restroom facility shall be provided with a drinking fountain. The restroom shall be a double vault, fully accessible building approximately 175 SF. ADA compliance is required. Water supply shall be provided to support these elements. Refer to the master plan document for approximate location.

2.s Buoys – a buoy system shall be installed and maintained throughout the duration of the developer contract. “NO WAKE” regulatory buoys (12”) shall be placed no more than 300’ apart along the full extent of the IH 35E bridge structure. Installation and maintenance shall comply with USACE guidelines. Refer to the master plan document for approximate location.

2.v Connector Trail – a 2,350 LF, 12’ wide concrete trail shall be provided to connect the primary trailhead to the loop trail at Copperas Branch Park East. This trail shall be installed along the embankment between the DCTA tracks and Lewisville Lake which may require some sections be designed as elevated structure. The concrete section should be designed to support emergency and maintenance vehicles in addition to the pedestrian users. ADA compliance is required. Refer to the master plan document for layout.

Arrowhead Park

Trailhead – near the parking area, there shall be a trailhead to consist of a small concrete plaza, a precast concrete bench and a stone monument sign with the name of the park/trail. Refer to the master plan document for approximate location.

Trail Connection – a 2,000 LF, 10’ wide concrete trail shall be provided to connect the trailhead to the shared use path on the reconfigured IH 35E northbound bridge. This trail shall be installed between the frontage road and the DCTA tracks north to the existing crossing over the DCTA tracks, then south to the trailhead. ADA compliance is required. Refer to the master plan document for layout.

* The Draft Master Plan and Mitigation Elements Report indicates design intent. Location of all elements is approximate and subject to final approval. All take-offs and quantities are best estimation. Existing site conditions may require design modification and quantity adjustment. Coordination with the U.S. Army Corps of Engineers and the cities of Highland Village and Lewisville will be required in order to confirm and finalize design elements before construction.

Texas Department of Transportation
Book 2 - Technical Provisions

IH 35E Managed Lanes Project

Attachment 4-5

Environmental Permits, Issues, and Commitments (EPIC)

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3. All areas should be addressed thoroughly and verify the necessary pay items are set up to support actions needed.

Revised: October 2012
Prepared by HNTB on 10/08/12

I. STORMWATER POLLUTION PREVENTION PLAN-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Perrmit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 1122.

☐ No Action Required ☒ Required Action

Action No.	Commitment
1. File NOI with TCEQ for CGP	Developer must stabilize the project site as stated in the SW3P.
2. File NOT with TCEQ	Developer must stabilize the project site as stated in the SW3P.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas. No equipment is allowed in any sream channel below the ordinary High Water Mark except on approved temporary stream crossings or drill pads.

The Developer must adhere to all of the terms and conditions associated with the following permit(s):

☐ No Permit Required
☒ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
☒ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required:

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

REFER TO EPIC SHEET 2 OF 2 - LEFT COLUMN
FOR SECTION II - CONTINUATION
FOR WATERS OF THE U.S DESCRIPTIONS AND APPROXIMATE LOCATION AND ACTIONS

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices for applicable 401 General Conditions:

Erosion	Sedimentation	Post-Construction TSS
☒ Temporary Vegetation	☒ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☒ Rock Berm	☐ Retention/Irrigation Systems
☒ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☒ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☒ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact TxDOT immediately.
Developer is responsible for the required actions below.

☒ No Action Required ☐ Required Action

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.

☐ No Action Required ☒ Required Action

Action No.	Location	Commitment
1.	Entire project	Permanent soil erosion features would be constructed as soon as possible during the early stage of construction through proper seeding and/or sodding techniques.
2.	Entire project	Disturbed areas would be restored and stabilized as soon as developers schedule permits. Temporary seeding would be considered where large areas of disturbed ground would be left bare for a considerable length of time. Use only native plants for landscaping and in seeding mixtures where practicable.
3.	Entire project	Trees within the ROW, but not in the construction zone, would not be removed if possible.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT.

Developer is responsible for the required actions below.

☐ No Action Required ☒ Required Action

Action No.

1. Prior to any construction activities a qualified biologist shall survey the proposed project corridor for any listed terrestrial species, due to the time period that would elapse between this evaluation and the start of construction activities.

REFER TO EPIC SHEET 2 OF 2 - MIDDLE COLUMN
FOR SECTION V - CONTINUATION
FOR LIST OF SPECIES POTENTIALLY WITHIN PROJECT AREA WITH HABITAT DESCRIPTION AND ADDITIONAL ACTIONS

LIST OF ABBREVIATIONS

BMP: Best Management Practice	SPCC: Spill Prevention Control and Countermeasure
CGP: Construction General Permit	SW3P: Storm Water Pollution Prevention Plan
DSHS: Texas Department of State Health Services	PCN: Pre-Construction Notification
ENV: Environmental Affairs Division	PPCC: Spill Prevention Control and Countermeasure
FEMA: Federal Emergency Management Agency	PSL: Project Specific Location
FHWA: Federal Highway Administration	SPILLS: Spill Listings
MOA: Memorandum of Agreement	TCEQ: Texas Commission on Environmental Quality
MOU: Memorandum of Understanding	TPDES: Texas Pollutant Discharge Elimination System
MS4: Municipal Separate Stormwater Sewer System	TPWD: Texas Parks and Wildlife Department
MBTA: Migratory Bird Treaty Act	TxDOT: Texas Department of Transportation
NOT: Notice of Termination	T&E: Threatened and Endangered Species
NWP: Nationwide Permit	USACE: U.S. Army Corp of Engineers
NOI: Notice of Intent	USFWS: U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):
Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act. Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Developer shall be responsible for the proper containment and cleanup of all product spills.
Contact TxDOT if any of the following are detected:

* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canisters, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation(s) or replacement(s) (bridge class structures not including box culverts)?
☒ Yes ☐ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?
☐ Yes ☒ No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notifiy DSHS 15 working days prior to any scheduled demolition.

In either case, the Developer is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between TxDOT and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

☐ No Action Required ☒ Required Action

REFER TO EPIC SHEET 2 OF 2 - RIGHT COLUMN
SECTION VI - CONTINUATION
FOR OTHER HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☐ No Action Required ☒ Required Action

Action No.	Location	Commitment
1. Floodplains	Elm Fork Trinity River Floodplain	The project is within the Trinity River Corridor Development Regulatory Zone; therefore, a Corridor Development Certificate would be required.

GENERAL NOTE:

Any change orders and/or deviations from the final design must be reported to TxDOT prior to commencement of construction activities, as additional environmental clearance may be required.

---D R A F T---
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 Texas Department of Transportation
Dallas District Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 1 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			IH 35E
STATE	DISTRICT	COUNTY	SOUTH
TEXAS	DALLAS	DALLAS	SHEET NO.
CONTROL	SECTION	JOB	
0196	03	138, 180, 240	

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404 -- (CONTINUATION FROM EPIC SHEET 1 OF 2)

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1. Section 404 permits from USACE/Section 401 Water Quality Certification from Texas Commission on Environmental Quality (TCEQ) based on the specific roadway work and linear transportation crossings identified in the permits and associated with the Draft Interim Schematic and Draft Interim Schematic ROW.

2. Table of preliminary jurisdictional features would be provided in Addendum 4 or the RID.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT. - (CONTINUATION FROM EPIC SHEET 1 OF 2)

Species Potentially within Project Area w/ Description	Habitat Description
1. Alligator snapping turtle: characterized by a large, heavy head, and a long, thick shell with three dorsal ridges of large scales; are a solid gray, brown, black, or olive-green in color, and often covered with algae; radiating yellow patterns around the eyes.	Perennial water bodies, deep water of rivers, canals, lakes and oxbows; also swamps, bayous, ponds near deep running water; usually in water with mud bottom and abundant aquatic vegetation.
2. Timber/canebrake rattlesnake: black and brown crossbands down the back, broad dark shape present behind the eye, black tail above the rattle up to 25% of the body length.	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmland; prefers dense ground cover, i.e. grapevines or palmetto.
3. Texas garter snake: A small to medium sized terrestrial snake that can grow to about a 39-48 inches long. Their backs are green to black, with a distinctive stripe of red or orange, and either side features yellowish stripes.	Wet or moist microhabitats are conducive to the species occurrence, but the snake is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August.
4. Mussells (Little spectaclecase, Louisiana pigtoe, Texas heelsplitter, and Wabash pigtoe): Adult can range from approximately 1-inch to 12-inches in length. Some species have thin shells and shells vary both on the inside and outside of mussels, depending upon the mussel species. Color, texture, and shape variations in shells are used to help identify different types of mussels.	Small and large rivers especially on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in still to swiftly flowing waters.

If any of the listed terrestrial species are observed, cease work in the immediate area, do not disturb species or habitat and contact the TxDOT immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the TxDOT immediately.

Special Note: The Migratory Bird Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade or transport any migratory bird, nest, young, feather or egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. The contractor would remove all old migratory bird nests from any structure where work would be done from October 1 to February 15. In addition, the contractor would be prepared to prevent migratory birds from building nest(s) between February 15 to October 1. In the event that migratory birds are encountered on-site during project construction, efforts to avoid adverse impacts on protected birds, active nests, eggs and/or young would be observed.

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES (CONTINUATION FROM EPIC SHEET 1 OF 2)

Action No.

1. A review of hazardous materials regulatory databases was conducted to determine if any known sites might affect the construction activites based on the interim schematic. See the Limited Phase 1 Environmental Site Assessment Report. Based on this review 8 sites are categorized as high risk, 6 sites are characterized as moderate risk, 38 sites are categorized as low risk. For the high and moderate risk sites Phase II ESAs are recommended prior to the development of the plans and specifications to confirm or deny the potential presence of contamination. The Phase II ESAs should follow the ASTM Designation E1903-11, Standard Practice for Environmental Site Assessments: Phase II ESAs.

2. Developer shall prepare Hazardous Materials Management Plan (HMMP) which will be followed during construction.

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Texas Department of Transportation
Dallas District Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 2 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			IH 35E
STATE	DISTRICT	COUNTY	SOUTH
TEXAS	DALLAS	DALLAS	SHEET NO.
CONTROL	SECTION	JOB	
0196	03	138, 180, 240	

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Revised: October 2012
Prepared by HNTB on 10/08/12

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Revised: October 2012
Prepared by HNTB on 10/30/12

I. STORMWATER POLLUTION PREVENTION PLAN-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Perrmit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 1122.

☐ No Action Required ☒ Required Action

Action No.	Commitment
1. File NOI with TCEQ for CGP	Developer must stabilize the project site as stated in the SW3P.
2. File NOT with TCEQ	Developer must stabilize the project site as stated in the SW3P.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas. No equipment is allowed in any sream channel below the ordinary High Water Mark except on approved temporary stream crossings or drill pads.

The Developer must adhere to all of the terms and conditions associated with the following permit(s):

☐ No Permit Required
☒ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
☒ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP# _____

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

REFER TO EPIC SHEET 2 OF 2 - LEFT COLUMN
FOR SECTION II - CONTINUATION
FOR WATERS OF THE U.S DESCRIPTIONS AND APPROXIMATE LOCATION AND ACTIONS

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices for applicable 401 General Conditions:

Erosion	Sedimentation	Post-Construction TSS
☒ Temporary Vegetation	☒ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☒ Rock Berm	☐ Retention/Irrigation Systems
☒ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☒ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
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☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
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	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact TxDOT immediately.

☒ No Action Required ☐ Required Action

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Developer is responsible for the required actions below.

☐ No Action Required ☒ Required Action

Action No.	Location	Commitment
1.	Entire project	Permanent soil erosion features would be constructed as soon as possible during the early stage of construction through proper seeding and/or sodding techniques.
2.	Entire project	Disturbed areas would be restored and stabilized as soon as contractors schedule permits. Temporary seeding would be considered where large areas of disturbed ground would be left bare for a considerable length of time. Use only native plants for landscaping and in seeding mixtures where practicable.
3.	Entire project	Approximately 18 acres of woody vegetation may be impacted by the proposed project. Of this amount, approximately 0.6 acre, is considered riparian woodlands for which compensatory mitigation is required. Efforts would be made to minimize impacts to trees within the ROW, unusual vegetation features, and special habitat features.
4.	USACE property	On-site mitigation and/or a fee payment to Lewisville Lake Environmental Learning Area (LLELA) or any other Government Entity deemed necessary to satisfy USACE requirements for impacts to natural resources on USACE Property. Coordination with USACE is required for final approval of appropriate mitigation.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT.

Developer is responsible for the required actions below.

☐ No Action Required ☒ Required Action

Action No.

1. Prior to any construction activities a qualified biologist shall survey the proposed project corridor for any listed terrestrial species, due to the time period that would elapse between this evaluation and the start of construction activities.

*TPWD records indicate that the Texas garter snake has been found within the corporate limits of the Town of Hickory Creek on the west side of IH 35E.Care should be taken and brief pre-construction presence/absence survey for the Texas garter snake shall be conducted prior to construction clearing.

REFER TO EPIC SHEET 2 OF 2 - MIDDLE COLUMN
FOR SECTION V - CONTINUATION
FOR LIST OF SPECIES POTENTIALLY WITHIN PROJECT AREA WITH HABITAT DESCRIPTION AND ADDITIONAL ACTIONS

LIST OF ABBREVIATIONS

BMP: Best Management Practice
CGP: Construction General Permit
DSHS: Texas Department of State Health Services
ENV: Environmental Affairs Division
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
LLELA: Lewisville Lake Environmental Learning Area
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
MS4: Municipal Separate Stormwater Sewer System
MBTA: Migratory Bird Treaty Act
NOT: Notice of Termination
NWP: Nationwide Permit
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SPCC: Spill Prevention Control and Countermeasure
SW3P: Storm Water Pollution Prevention Plan
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PSL: Project Specific Location
SPILLS: Spill Listings
TCEQ: Texas Commission on Environmental Quality
TPDES: Texas Pollutant Discharge Elimination System
TPWD: Texas Parks and Wildlife Department
TxDOT: Texas Department of Transportation
T&E: Threatened and Endangered Species
USACE: U.S. Army Corp of Engineers
USFWS: U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):
Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act. Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Developer shall be responsible for the proper containment and cleanup of all product spills.
Contact TxDOT if any of the following are detected:

* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canisters, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation(s) or replacement(s) (bridge class structures not including box culverts)?
☒ Yes ☐ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?
☐ Yes ☒ No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notifiy DSHS 15 working days prior to any scheduled demolition.

In either case, the Developer is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between TxDOT and the asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

☐ No Action Required ☒ Required Action

Action No.

1. A review of hazardous materials regulatory databases was conducted to determine if any known sites might affect the construction activites based on the interim schematic. See the Limited Phase I Environmental Site Assessment Report.
2. Based on this review 7 sites are categorized as high risk, 7 sites are characterized as moderate risk, 22 sites are categorized as low risk. For the high and moderate risk sites Phase II ESAs are recommended prior to the development of the plans and specifications to confirm or deny the potential presence of contamination. The Phase II ESAs should follow the ASTM Designation E1903-11, Standard Practice for Environmental Site Assessments: Phase II ESAs.
3. Developer shall prepare Hazardous Materials Management Plan (HMMP) which will be followed during construction.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

REFER TO EPIC SHEET 2 OF 2 - RIGHT COLUMN
SECTION VII - CONTINUATION
FOR OTHER ENVIRONMENTAL ISSUES

GENERAL NOTE:

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 Texas Department of Transportation
Dallas District Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			IH 35E MIDDLE
STATE	DISTRICT	COUNTY	
TEXAS	DALLAS	DALLAS	
CONTROL	SECTION	JOB	SHEET NO.
0196	03	068, 073, 096, 114, 245	

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Revised: October 2012
Prepared by HNTB on 10/30/12

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404 -- (CONTINUATION FROM EPIC SHEET 1 OF 2)

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1. Section 404 permits from USACE/Section 401 Water Quality Certification from Texas Commission on Environmental Quality (TCEQ) based on the specific roadway work and linear transportation crossings identified in the permits and associated with the Draft Interim Schematic and Draft Interim Schematic ROW.

2. Table of preliminary jurisdictional features would be provided in Addendum 4 or the RID.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT. - (CONTINUATION FROM EPIC SHEET 1 OF 2)

Species Potentially within Project Area w/ Description	Habitat Description
1. Timber/canebrake rattlesnake: black and brown crossbands down the back, broad dark shape present behind the eye, black tail above the rattle up to 25% of the body length.	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmland; prefers dense ground cover, i.e. grapevines or palmetto.
2. Alligator snapping turtle: characterized by a large, heavy head, and a long, thick shell with three dorsal ridges of large scales; are a solid gray, brown, black, or olive-green in color, and often covered with algae; radiating yellow patterns around the eyes.	Perennial water bodies, deep water of rivers, canals, lakes and oxbows; also swamps, bayous, ponds near deep running water; usually in water with mud bottom and abundant aquatic vegetation.
3. White-faced ibis: A dark, chestnut colored-bird with green or purple on its head and upper parts, and a long, down-curved bill. It has reddish legs and feet and red bare skin on the face around the eyes.	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.
4. Mussells (Fawnsfoot, Little spectaclecase, Louisiana pigtoe, Pistolgrip, Rock pocketbook, Sandbank pocketbook, Texas heelsplitter, and Wabash pigtoe): Adult can range from approximately 1-inch to 12-inches in length. Some species have thin shells and shells vary both on the inside and outside of mussels, depending upon the mussel species. Color, texture, and shape variations in shells are used to help identify different types of mussels.	Small and large rivers especially on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in still to swiftly flowing waters.
5. Texas garter snake*: A small to medium sized terrestrial snake that can grow to about a 39-48 inches long. Their backs are green to black, with a distinctive stripe of red or orange, and either side features yellowish stripes.	Wet or moist microhabitats are conducive to the species occurrence, but the snake is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August.
6. Plains spotted skunk: Small slender body with fine black body fur, a white triangular patch on the forehead, four to six broken white stripes extending from the neck along the back and sides, and solid black tail.	Catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie.

If any of the listed terrestrial species are observed, cease work in the immediate area, do not disturb species or habitat and contact TxDOT immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the TxDOT immediately.

Special Note: The Migratory Bird Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade or transport any migratory bird, nest, young, feather or egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. The contractor would remove all old migratory bird nests from any structure where work would be done from October 1 to February 15. In addition, the contractor would be prepared to prevent migratory birds from building nest(s) between February 15 to October 1. In the event that migratory birds are encountered on-site during project construction, efforts to avoid adverse impacts on protected birds, active nests, eggs and/or young would be observed.

VII. OTHER ENVIRONMENTAL ISSUES - (CONTINUATION FROM EPIC SHEET 1 OF 2)

☐ No Action Required ☒ Required Action

Action No.	Location	Commitment
1. Section 4(f)	USACE property including Copperas Branch Park, Copperas Branch Park East, Arrowhead Park, and Highland Lakes Park	Impacted amenities at Copperas Branch Park would be replaced as described in Book 2, Attachment 4-4. Since the Section 4(f) was approved, additional mitigation for loss of park revenue and amenities in the form of an in-lieu fee payment has been agreed to and will be the responsibility of TxDOT. The Developer shall be responsible for any modifications or additional requirements related to in-lieu fee payments above and beyond this agreement.

2. Traffic Noise Mitigation

Noise Barrier 2A	Sta. 1158+19 To Sta. 1159+27 (Right of C/L)	Construct traffic noise barriers 2A and 2B with a 150 ft offset to the right of the centerline. Barrier heights would be 10 ft.
Noise Barrier 2B	Sta. 1160+08 To Sta. 1169+59 (Right of C/L)	
Noise Barrier 5A	Sta. 1348+50 To Sta. 1354+80 (Left of C/L)	Construct traffic noise barriers 5A with a 107 ft offset to the left of the centerline. Barrier heights would be 14 ft.
Noise Barrier 5B	Sta. 1353+76 To Sta. 1357+69 (Left of C/L)	Construct traffic noise barriers 5B with a 189 ft offset to the left of the centerline. Barrier heights would be 10 ft.
Noise Barrier 5C	Sta. 1357+10 To Sta. 1372+95 (Left of C/L)	Construct traffic noise barriers 5C with a 82 ft to 145 ft offset to the left of the centerline. Barrier heights would be 10 ft.
Noise Barrier 5D	Sta. 1380+66 To Sta. 1400+60 (Left of C/L)	Construct traffic noise barriers 5D with a 79 ft offset to the left of the centerline. Barrier heights would be 12 ft.
Noise Barrier 5E	Sta. 1400+32 To Sta. 1409+33 (Left of C/L)	Construct traffic noise barriers 5E with a 148 ft to 152 ft offset to the left of the centerline. Barrier heights would be 12 ft.
Noise Barrier 6A	Sta. 1446+13 To Sta. 1454+19 (Left of C/L)	Construct traffic noise barriers 6A with a 148 ft to 152 ft offset to the left of the centerline. Barrier heights would be 12 ft.
Noise Barrier 6B	Sta. 1454+19 To Sta. 1473+80 (Left of C/L)	Construct traffic noise barriers 6B with a 79 ft offset to the left of the centerline. Barrier heights would be 12 ft.

Special Note
Measures to control fugitive dust would be considered and incoporated into the final design and construction specifications.

See Book 2 (4.3.2) for additional requirements.

GENERAL NOTE:

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 Texas Department of Transportation
Dallas District Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 2 OF 2

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			IH 35E MIDDLE
STATE	DISTRICT	COUNTY	
TEXAS	DALLAS	DALLAS	
CONTROL	SECTION	JOB	SHEET NO.
0196	03	068, 073, 096, 114, 245	

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Revised: October 2012
Prepared by HNTB on 10/24/12

I. STORMWATER POLLUTION PREVENTION PLAN-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Perrmit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 1122.

☐ No Action Required ☒ Required Action

Action No.	Commitment
1. File NOI with TCEQ for CGP	Developer must stabilize the project site as stated in the SW3P.
2. File NOT with TCEQ	Developer must stabilize the project site as stated in the SW3P.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas. No equipment is allowed in any sream channel below the ordinary High Water Mark except on approved temporary stream crossings or drill pads.

The Developer must adhere to all of the terms and conditions associated with the following permit(s):

☐ No Permit Required
☒ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
☐ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required:

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

REFER TO EPIC SHEET 2 OF 2 - LEFT COLUMN
FOR SECTION II - CONTINUATION
FOR WATERS OF THE U.S DESCRIPTIONS AND APPROXIMATE LOCATION AND ACTIONS

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices for applicable 401 General Conditions:

Erosion	Sedimentation	Post-Construction TSS
☒ Temporary Vegetation	☒ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☒ Rock Berm	☐ Retention/Irrigation Systems
☒ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☒ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact TxDOT immediately.

☒ No Action Required ☐ Required Action

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Developer is responsible for the required actions below.

☐ No Action Required ☒ Required Action

Action No.	Commitment
1.	Permanent erosion features would be constructed as soon as feasible during the early stage of construction through proper sodding and/or seeding techniques.
2.	Disturbed areas would be restored and stabilized as soon as the construction schedule permits. Temporary sodding would be considered where large areas of disturbed ground would be left bare for a considerable length of time. Use only native plants for landscaping and in seeding mixtures where practicable.
3.	Approximately 1.2 acres of upland woody vegetation, associated with residences, would be impacted. Compensatory mitigation is not proposed for the impacts to these areas. Efforts would be made to minimize impacts to trees within the ROW, unusual vegetation features, and special habitat features.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT.

Developer is responsible for the required actions below.

☐ No Action Required ☒ Required Action

Action No.

1. Prior to any construction activities a qualified biologist shall survey the proposed project corridor for any listed terrestrial species, due to the time period that would elapse between this evaluation and the start of construction activities.

REFER TO EPIC SHEET 2 OF 2 - MIDDLE COLUMN
FOR SECTION V - CONTINUATION
FOR LIST OF SPECIES POTENTIALLY WITHIN PROJECT AREA WITH HABITAT DESCRIPTION AND ADDITIONAL ACTIONS

LIST OF ABBREVIATIONS

BMP: Best Management Practice
CGP: Construction General Permit
DSHS: Texas Department of State Health Services
ENV: Environmental Affairs Division
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
MS4: Municipal Separate Stormwater Sewer System
MBTA: Migratory Bird Treaty Act
NOT: Notice of Termination
NWP: Nationwide Permit
NOI: Notice of Intent
SPCC: Spill Prevention Control and Countermeasure
SW3P: Storm Water Pollution Prevention Plan
PCN: Pre-Construction Notification
PPCC: Spill Prevention Control and Countermeasure
PSL: Project Specific Location
SPILLS: Spill Listings
TCEQ: Texas Commission on Environmental Quality
TPDES: Texas Pollutant Discharge Elimination System
TPWD: Texas Parks and Wildlife Department
TxDOT: Texas Department of Transportation
T&E: Threatened and Endangered Species
USACE: U.S. Army Corp of Engineers
USFWS: U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):
Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropiate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act. Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Developer shall be responsible for the proper containment and cleanup of all product spills.
Contact TxDOT if any of the following are detected:

* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canisters, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation(s) or replacement(s) (bridge class structures not including box culverts)?
☒ Yes ☐ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?
☐ Yes ☒ No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notifiy DSHS 15 working days prior to any scheduled demolition.
In either case, the Developer is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between TxDOT and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

☐ No Action Required ☒ Required Action

REFER TO EPIC SHEET 2 OF 2 - RIGHT COLUMN
SECTION VI - CONTINUATION
FOR OTHER HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☐ No Action Required ☒ Required Action

Action No.	Location	Commitment
1. Noise Barrier NW5	Sta. 1995+66 To Sta. 2004+74 (Right of C/L)	Construct traffic noise barriers NW5 with a 146 ft to 147 ft offset to the right of the centerline. Barrier heights would be 12 ft.

Special Note
Measures to control fugitive dust would be considered and incoporated into the final design and construction specifications.

See Book 2 (4.3.2) for additional requirements.

GENERAL NOTE:

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ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 1 OF 2

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6			IH 35E
STATE	DISTRICT	COUNTY	NORTH
TEXAS	DALLAS	DALLAS	
CONTROL	SECTION	JOB	SHEET NO.
195, 196	03 01	050, 071, 056, 074	

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Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1. Section 404 permits from USACE/Section 401 Water Quality Certification from Texas Commission on Environmental Quality (TCEQ) based on the specific roadway work and linear transportation crossings identified in the permits and associated with the Draft Interim Schematic and Draft Interim Schematic ROW.

2. Table of preliminary jurisdictional features would be provided in Addendum 4 or the RID.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS TREATY ACT. - (CONTINUATION FROM EPIC SHEET 1 OF 2)

Species Potentially within Project Area w/ Description	Habitat Description
1. Timber/canebrake rattlesnake: black and brown crossbands down the back, broad dark shape present behind the eye, black tail above the rattle up to 25% of the body length.	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmland; prefers dense ground cover, i.e. grapevines or palmetto.

If any of the listed terrestrial species are observed, cease work in the immediate area, do not disturb species or habitat and contact TxDOT immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact TxDOT immediately.

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VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES (CONTINUATION FROM EPIC SHEET 1 OF 2)

Action No.

1. A review of hazardous materials regulatory databases was conducted to determine if any known sites might affect the construction activites based on the interim schematic. See the Limited Phase 1 Environmental Site Assessment Report.
2. Based on this review 4 sites are categorized as high risk, 2 sites are characterized as moderate risk, 41 sites are categorized as low risk. For the high and moderate risk sites Phase II ESAs are recommended prior to the development of the plans and specifications to confirm or deny the potential presence of contamination. The Phase II ESAs should follow the ASTM Designation E1903-11, Standard Practice for Environmental Site Assessments: Phase II ESAs.
3. Developer shall prepare Hazardous Materials Management Plan (HMMP) which will be followed during construction.

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ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			IH 35E
STATE	DISTRICT	COUNTY	NORTH
TEXAS	DALLAS	DALLAS	SHEET NO.
CONTROL	SECTION	JOB	
195, 196	03 01	050, 071, 056, 074	

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Revised: October 2012
Prepared by HNIB on 10/24/12