EXHIBIT 2

MAINTENANCE SPECIFICATION

Attachments:

- Attachment 1 Performance and Measurement Table
- Attachment 2 Not Used
- Attachment 3 Maintenance Limits
- Attachment 4 Maintenance Management Plan Contents
- Attachment 5 Not Used
- Attachment 6 Lane Closure Requirements
- Attachment 7 Function Codes and Descriptions

1 GENERAL

1.1 Maintenance Obligations

Throughout the Maintenance Period, DB Contractor shall be responsible for and shall carry out Maintenance Services for the Maintenance Elements within the Maintenance Limits. DB Contractor shall establish and maintain an organization that effectively manages all Maintenance Services in a manner set forth in the approved Maintenance Management Plan (MMP) and the requirements of the COMA Documents. DB Contractor shall take all necessary actions to achieve the following:

- Coordinate activities of other entities with interests within the Maintenance Limits.
- Provide response to Incidents and Emergencies, including management and reporting.
- Conduct daily patrols of all lanes within the Maintenance Limits to identify conditions that are unsafe or have the potential to become unsafe, conditions that could threaten the infrastructure, and to attend to existing or changing conditions.
- Minimize delay and inconvenience to Users and, to the extent under DB Contractor's control, users of adjacent and connecting roadways.
- Monitor and observe weather and weather forecasts to proactively deploy resources to minimize delays and safety hazards due to high winds, severe thunderstorms, tornadoes, heavy rainfall and flooding, hail, snow, ice, or other severe weather events.
- Minimize the risk of damage, disturbance, or destruction of third-party property during the performance of Maintenance Services.
- Coordinate with and enable TxDOT and others with statutory duties or functions in relation to the Project to perform such duties and functions.
- Perform Maintenance Services including inspections, Incident response, traffic control, Routine O&M, and Renewal Work in accordance with the provisions of DB Contractor's MMP and the COMA Documents.
- Promptly investigate reports or complaints received from all sources.

1.2 Maintenance Management Plan

1.2.1 Submittal Requirements

The MMP is an umbrella document that describes DB Contractor's managerial approach, strategy, and quality procedures for the Maintenance Services to achieve all requirements of the COMA Documents.

DB Contractor shall assign a Maintenance Manager who shall be responsible for implementing the maintenance obligations in this Exhibit 2 and the DB Contractor's MMP. The Maintenance Manager shall ensure the Maintenance Services are performed in accordance with the COMA Documents including ensuring proper training of its maintenance personnel and resources available for conducting Maintenance Services. The Maintenance Manager shall be responsible for the health and safety of personnel delivering the Maintenance Services and the general public affected by the Project and shall serve as the point of contact for DB Contractor in communication with TxDOT and in coordination activities with other entities during Emergency events.

Within 60 days after issuance of Maintenance NTP1, DB Contractor shall submit the MMP to TxDOT. Attachment 4 lists the main contents of the MMP. DB Contractor shall update the

MMP as required, or at least annually and shall submit to TxDOT no later than 30 days prior to each anniversary of the Initial Maintenance Term Commencement Date.

1.2.2 General Requirements

The MMP shall be consistent with the general maintenance obligations described in Section 1.1 of this Exhibit 2.

The MMP shall include:

- Processes and procedures that will be employed by DB Contractor to meet the Performance Requirements, including Targets, Defect Remedy Period to mitigate hazards, permanently remedy, and permanently repair Defects, and the necessary inspection procedures and frequencies.
- Procedures and proposed cycle times for safety patrols, sweeping, litter pickup, and debris pickup.
- The most recently approved version of the applicable Performance and Measurement Table in accordance with Section 1.3.2 of this Exhibit 2.
- The MMP shall address impacts to adjacent and connecting roadways, in addition to the general sequence of Maintenance Services and schedule deadlines.
- The MMP shall include procedures for managing records of inspection and Maintenance Services.
- Maintenance and service manuals including equipment manufacturer's recommended maintenance schedule and operating procedures in both printed and electronic file format (searchable PDF) to include technical maintenance and servicing descriptions for all major and safety critical components as well as equipment that is specialized to meet the needs of the Project. The manual shall include preventive maintenance schedules, testing and troubleshooting techniques, corrective measures, both temporary and permanent, the location and availability of support services, point to point component wiring schematics and logic signal flows, assembly and disassembly drawings, including exploded view drawings.
- Standard service manuals for unmodified commercial products containing information necessary to properly service the specific equipment supplied in connection with the Project.
- Spare parts, special tools and equipment list including an auditable parts and spares inventory adequate to address the maintenance obligations and compatible with the Maintenance Management System as described in Section 1.6 of this Exhibit 2 and inventory control process and procedures and an updated list of vendors for equipment and maintenance services.
- Current versions and procedures, functionality, software maintenance requirements and access protocols for all specialist software employed by DB Contractor in connection with the Maintenance Services including the Maintenance Management System.

The MMP shall also include a detailed process by which Defects are handled and processed in conformance with the COMA Documents including:

- Training - This includes developing and implementing a training program to prepare responsible individuals for Defect identification. DB Contractor shall maintain evidence

of attendance and the frequency with which training updates are attended by relevant staff.

- Notification - This includes Defect identification, notification triggers (periodic or inspection based), responsible individuals, and entities or individuals to be notified.
- Categorization - This includes how Defects are categorized as a Category 1 Defect or Category 2 Defect.
- Action - By Defect category type, this includes a description of how the actions are carried out stating the responsible individuals and the duration it will take to complete such actions in accordance with the requirements of this Exhibit 2.
- Remedy - This includes how the Defect is remedied, stating necessary notification and the individuals to be notified for such Defect remedy.
- Documentation - This includes how Defects are entered, updated and closed in the Maintenance Management System.

1.3 Performance Requirements

1.3.1 Defect Categorization

For each Defect identified, DB Contractor shall make a determination as to whether:

- it represents an immediate or imminent health or safety hazard to Users or road workers;
- there is a risk of immediate or imminent structural failure or deterioration;
- there is an immediate or imminent risk of damage to a third party's property; or
- there is an immediate or imminent risk of damage to the environment.

Should a Defect meet any of the above criteria, DB Contractor shall record it as a Category 1 Defect and take all necessary action to mitigate and remedy the Defect. Any other Defect not meeting the foregoing criteria shall be assigned as a Category 2 Defect. DB Contractor shall take necessary action to avoid any Category 2 Defect from becoming a Category 1 Defect. DB Contractor shall monitor Category 2 Defects to verify the condition of the affected Maintenance Element prior to repair and shall inform TxDOT immediately should any such Defect deteriorate to a Category 1 Defect. Whenever TxDOT notifies the DB Contractor of any Defect that shall be categorized as a Category 1 Defect, the DB Contractor shall mitigate the hazard and remedy within the applicable Defect Remedy Period. DB Contractor shall provide training to all relevant personnel on the categorization of Defects. DB Contractor shall maintain a record of the circumstances of the Defect and how it was categorized.

For Category 1 Defects, DB Contractor shall take necessary action such that any hazard to Users is mitigated within the period specified in the column with the heading "Category 1 Hazard Mitigation" in the Performance and Measurement Table and shall permanently remedy the Defect within the period identified in the column with the heading "Category 1 Permanent Remedy" in the Performance and Measurement Table. "Category 1 Hazard Mitigation" shall continue until a "Category 1 Permanent Remedy" is completed.

For Category 2 Defects, DB Contractor shall undertake the permanent repair within the period specified in the column with the heading "Category 2 Permanent Repair" in the Performance and Measurement Table unless an earlier repair is required to prevent deterioration to a Category 1 Defect.

Failure to meet a Performance Requirement, whether through failure to meet the Target for any relevant measurement record, or for any other reason, shall be deemed to be a Defect. Where multiple instances of Category 2 Defects arise from the failure to meet a given Target, a separate Category 2 Defect shall be recorded for each Performance Section within which the Target is not met.

The remedy or repair of any Maintenance Element shall meet the Target in the Performance and Measurement Table. Where action is taken to remedy or repair any Defect in any Maintenance Element, DB Contractor shall create a Maintenance Record that identifies the nature of the remedy or repair. DB Contractor shall include within the relevant Maintenance Record a measurement record in accordance with the requirements set forth in the column entitled "Measurement Record" in the Performance and Measurement Table.

The Defect Remedy Period set forth in the Performance and Measurement Table shall commence upon the earlier of: (i) the date and time DB Contractor became aware of the Defect; and (ii) the date and time DB Contractor should have known of the Defect.

1.3.2 Performance and Measurement Table Update

DB Contractor shall propose changes to the Performance and Measurement Table for TxDOT approval. In its annual update of the MMP, DB Contractor shall propose for TxDOT's approval such amendments to the "Inspection and Measurement Method" and "Measurement Record" as are necessary to cause these to comply with Good Industry Practice and this Exhibit 2. TxDOT may, at any time, require DB Contractor to adopt amendments to the columns with the headings "Measurement Record" and "Inspection and Measurement Method" in the Performance and Measurement Table where such updates are required to comply with then current Good Industry Practice.

TxDOT shall require the adoption of a new Target only when this is required because the "Inspection and Measurement Method" or "Measurement Record" no longer complies with Good Industry Practice. In this case, the new Target shall be determined using the principle that it shall achieve no less than the standard of Maintenance Services that would have been achieved through DB Contractor's compliance with the original "Inspection and Measurement Method", "Measurement Record", and Target.

DB Contractor shall provide updates to the Performance and Measurement Table to take into consideration specific attributes of the Final Design (for example, where the Final Design incorporates a feature that is not included as a Maintenance Element in the Performance and Measurement Table). Within this Exhibit 2, reference to the Performance and Measurement Table means the latest approved version of the Performance and Measurement Table as included within DB Contractor's MMP.

1.4 Inspections

DB Contractor shall establish inspection procedures and a plan to implement a program of inspections of the Project to be included within the Maintenance Services Deliverable Schedule.

Inspections shall be conducted to ensure:

- the Project is safe for Users;
- Category 1 Defects are identified and repaired such that the hazard to Users is mitigated within the period given in the column entitled "Category 1 Hazard Mitigation" in the Performance and Measurement Table;

- Category 1 Defects are identified and permanently remedied within the period given in the column entitled "Category 1 Permanent Remedy" in the Performance and Measurement Table; and
- Category 2 Defects are identified and permanently repaired within the period given in the column entitled "Category 2 Permanent Repair" in the Performance and Measurement Table.

The program of inspections shall be adjusted as necessary: following reports or complaints received from Customer Groups; in response to Incidents and Emergencies affecting the Project; to generate data to monitor performance of the Project and to establish priorities for future Maintenance Services including Renewal Work.

In performing inspections to identify Category 1 Defects and Category 2 Defects, DB Contractor shall, for any Maintenance Element, conform at a minimum to the inspection standards set forth for that Maintenance Element in the column entitled "Inspection and Measurement Method" in the Performance and Measurement Table. DB Contractor shall employ only trained personnel for the purpose of such inspections, capable of accurately identifying, categorizing and recording Defects in accordance with the requirements of Section 1.3.1 of this Exhibit 2.

1.4.1 General Inspections

DB Contractor shall perform General Inspections so that the repairs of all Defects are included in planned programs of work. The results of a General Inspection shall be used to develop or update the Renewal Work Schedule, to maintain asset condition and service levels, and to develop programs of maintenance and Renewal Work to minimize the effect of Maintenance Services on Users.

DB Contractor shall record details of the manner of inspection (e.g., center Lane Closure or shoulder), the weather conditions and any other unusual features of the inspection in Maintenance Records.

DB Contractor shall submit to TxDOT non-conformance reports within seven Days of issuance and shall notify TxDOT of Nonconforming Work within two Days of discovering the Nonconforming Work. TxDOT will issue a non-conformance report if TxDOT discovers any Nonconforming Work. DB Contractor's responsibility to correct Nonconforming Work is set forth in Section 5.9 of the Comprehensive Maintenance Agreement.

1.4.2 Specialist Inspections

DB Contractor shall ensure that personnel performing inspections of road pavements and structures are certified as inspectors and/or raters in accordance with TxDOT's PMIS program or applicable certifying agency for the type of inspection being performed. Inspections, reviews, and testing performed in respect of Maintenance Services shall only be performed by personnel with appropriate training and qualifications, using appropriate equipment that is accurately calibrated and maintained in good operating condition at an AMRL (AASHTO R18, "Establishing and Implementing a Quality System for Construction Materials Testing Laboratories") accredited facility, or at a facility with comparable certification (e.g., ISO 17025, "General requirements for the competence of testing and Calibration laboratories").

DB Contractor shall undertake Specialist Inspections for Maintenance Elements listed in Table 1 and shall include the inspection results as Maintenance Records.

Table 1 – Specialist Inspections

Maintenance Element	Specialist Inspection
All Maintenance Elements in the Maintenance Element Category 'Pavement' in the Performance and Measurement Table	Annual survey of pavement condition for the entire Project, including main lanes, ramps, and frontage roads, undertaken using automated condition survey equipment to measure all necessary criteria including: ruts, skid resistance and ride quality according to the "Inspection and Measurement Method" set forth in the Performance and Measurement Table.
All Maintenance Elements in the Maintenance Element Category 'Structures' in the Performance and Measurement Table	Inspections[1] and load rating calculations as necessary to supplement the routine biennial inspections by TxDOT in order to meet the Performance Requirements. An updated load rating will only be needed if the structural system changes.
Pavement Markings Maintenance Element for all lane lines, edge lines, centerline/no passing barrier-line	Annual Mobile Retro-reflectivity Data Collection (MRDC) performed 60 days before the first anniversary of the Initial Maintenance Term Commencement Date in accordance with Special Specification 8094 Mobile Retro-reflectivity Data Collection for Pavement Markings.

[1]Excludes routine biennial inspections of "Structures"

1.4.3 Routine Biennial Inspections of Structures

TxDOT will conduct routine biennial inspections, to the extent required, for all structures within the Maintenance Limits in compliance with the latest FHWA / NBIS and TxDOT requirements. The results of all routine biennial inspections will be made available to DB Contractor upon their completion.

Using the results of the routine biennial inspections and other available sources, DB Contractor shall determine the condition of all Maintenance Elements of the "Structures" within the Maintenance Limits and shall identify structural and non-structural deficiencies.

1.5 Audits

1.5.1 Performance Sections

As part of the MMP, DB Contractor shall prepare drawings identifying the Performance Sections and shall submit and update these plans with the applicable part of the MMP. The drawings shall identify the boundaries of each Performance Section and shall cross reference to an inventory describing each Maintenance Element of the Project contained within each Performance Section.

DB Contractor shall implement the Texas Reference Marker (TRM) System used by TxDOT to establish Performance Sections for records in accordance with the MMP. DB Contractor shall use the existing TRM System established on existing sections of the Project. DB Contractor shall coordinate with TxDOT prior to submittal of the MMP to establish the TRM System on newly constructed sections of roadway.

1.5.2 Audit Inspections

DB Contractor shall undertake Audit Inspections of TxDOT's randomly selected Performance Sections for audit purposes every 6 months. The Audit Inspections shall be conducted on a minimum of 10% of the available Performance Sections such that over a period of five (5) years the Audit Inspections provide coverage of 100% of the Project. DB Contractor shall assess the

condition of each Maintenance Element using the inspection and measurement method set forth in the column entitled "Inspection and Measurement Method" in the Performance and Measurement Table.

DB Contractor shall create a new Maintenance Record for each Maintenance Element physically inspected in accordance with the column entitled "Measurement Record" in the Performance and Measurement Table. Audit Inspections shall be undertaken to a schedule agreed with TxDOT on Performance Sections randomly selected by TxDOT. TxDOT shall be given the opportunity by seven days' notice, to accompany DB Contractor when it undertakes the physical inspections associated with the Audit Inspections.

1.5.3 Asset Condition Score

Within ten days following each Audit Inspection, DB Contractor shall assess its achievement of the Performance Requirements by self-scoring against the Targets set forth in the Performance and Measurement Table.

DB Contractor shall report to TxDOT in the Maintenance Services Report a Maintenance Element Asset Condition Score for each Maintenance Element and a Mean Asset Condition Score for each Maintenance Element Category, to include all of the Performance Sections inspected in the most recent Audit Inspection. DB Contractor shall calculate the Maintenance Element Asset Condition Scores according to the measurement criteria set forth in Table 2.

Table 2 – Maintenance Element Asset Condition Score Criteria

Score	Criteria
5	• Targets for individual Maintenance Elements are almost entirely met (90% to 100% compliance with the relevant Targets for each Maintenance Element within each Performance Section), and • Is fully functional and in nearly new condition, meeting or exceeding Performance Requirement.
4	• Targets for individual Maintenance Elements are substantially met (less than 90% compliance and 80% or greater compliance with the relevant Targets for each Maintenance Element within each Performance Section), and • Is functional and in good condition, meeting Performance Requirement.
3	• Targets for individual Maintenance Elements are mostly met (less than 80% compliance and 70% or greater compliance with the relevant Targets for each Maintenance Element within each Performance Section), and • Is in fair condition, but suggesting need for early replacement, renewal or repair of individual Maintenance Element and/or maintenance or operation improvement action to meet Performance Requirement.
2	• Targets for individual Maintenance Elements are barely met (less than 70% compliance and 60% or greater compliance with the relevant Targets for each Maintenance Element within each Performance Section), or • In poor condition demonstrating need for immediate replacement, renewal or repair of individual Maintenance Element and/or immediate change to MMP.
1	• Targets for individual Maintenance Elements are not met (less than 60% compliance with the relevant Targets for each Maintenance Element within each Performance Section), or • In very poor condition demonstrating need for immediate replacement, renewal or repair of individual Maintenance Element and/or immediate change to MMP.

Notes to Table 2:

1. The calculation of Maintenance Element Asset Condition Score for a Maintenance Element is demonstrated by the following example:

   Assume there are 520 Performance Sections, of these 10%, or 52 are audited. There are five Targets to be assessed for Maintenance Element "pavement markings." There are therefore, 5 x 52 = 260 "Measurement Records" for pavement markings. If 250 of these "Measurement Records" meet the Target, there would be 96% compliance and a Maintenance Element Asset Condition Score of five assigned for that Maintenance Element.

2. A Mean Asset Condition Score for each Maintenance Element Category shall be calculated to 1 decimal point.

3. "Mean" in this context shall be the arithmetic mean of each of the Maintenance Element Asset Conditions Scores within the Maintenance Element Category.

4. Where a measurement record relates to a service measured over time or a Maintenance Element that is not represented in more than 25% of Performance Sections then the Maintenance Element Asset Condition Score will be based on the total service and not a 10% random sample. This applies to the performance measurement of Maintenance Element Categories: Structures, Traffic Signals, Snow and Ice Control, Incident Response, Customer Response or other Maintenance Element Categories meeting the above criteria identified following establishment of the Performance Sections.

5. DB Contractor acknowledges that the Maintenance Element Asset Condition Score is a mechanism to benchmark the performance of the Project against the performance of other similar facilities and that TxDOT may, during the Maintenance Period, alter the Maintenance Element Asset Condition Score criteria to reflect Good Industry Practice.

6. Where Defects are recorded for a Maintenance Element within a Performance Section, these Defects shall be deemed to meet Performance Requirements for the purpose of the Maintenance Element Asset Condition Score and will be removed from the sample and not scored, if both of the following conditions are met:

   a. DB Contractor can document that the Defect was observed and recorded prior to the DB Contractor's Audit Inspection, and

   b. all "Category 1 Hazard Mitigation" has been performed and all "Category 1 Permanent Remedy" and all "Category 2 Permanent Repair" activities are ongoing and within the allowable Defect Remedy Period in the Performance and Measurement Table.

Where specific measurement criteria are not provided in the Performance and Measurement Table, DB Contractor shall use Good Industry Practice to assess the Maintenance Element Asset Condition Score against the general criteria stated in Table 2.

1.6 Maintenance Management System

DB Contractor shall implement a computer-based Maintenance Management System (MMS), compatible with TxDOT MMS, to record asset inventory and system condition, Defects, failures, repairs, maintenance activities, inspections performed, and Noncompliance Events in accordance with Section 19.2 of the Comprehensive Maintenance Agreement.

The MMS shall include relevant Maintenance Element information including but not limited to, horizontal and vertical locational accuracy that complies with or exceeds Good Industry Practice, using the posted reference marker number, Geographic Information System (GIS) data and control number for bridge class structures, asset description, date of installation, type of failure, date-time of failure, date-time of response to the site and date-time returned to service, preventive maintenance work, scheduled work, work repair code, and time of repair. The MMS shall be configured to report work by TxDOT "function code" shown in Attachment 7, Maintenance Element, reference marker, and unit of measurement, as the same described in the TxDOT Maintenance Management Manual, to categorize the Maintenance Services performed by DB Contractor.

The MMS shall be able to record all complaints/service requests and DB Contractor shall report weekly to TxDOT, on a format approved by TxDOT, information on any complaints or service requests received by DB Contractor. This information will include the following:

- the date and time of the complaint;
- the location and nature of the problem;
- injuries and police involvement, including agency, name and badge number;
- who made the complaint; and
- date and action taken to address the complaint.

The MMS shall be able to record all accidents/Incidents related to Maintenance Services being performed by DB Contractor or within a work zone, including the following information:

- accidents involving DB Contractor or any Subcontractor personnel, equipment, barricades or tools;
- traffic accidents within the Maintenance Limits or in the vicinity of any Maintenance Services being performed by DB Contractor or any Subcontractors;
- Releases of Hazardous Materials;
- any accident involving DB Contractor or the traveling public that causes damage to any Project appurtenance, structure, improvement or fixture; and
- with respect to any accident/Incident, the information provided shall include as a minimum:
    - date and time of the accident/Incident;
    - location of the Incident;
    - nature of the Incident;
    - all parties involved in the Incident, including names, addresses, telephone numbers and their involvement (including witnesses);
    - responsible party and insurance information;
    - action taken to address the Incident; and
    - documentation of traffic control in place at location.

When a Maintenance Element is constructed, installed, maintained, inspected, modified, replaced or removed, DB Contractor shall update the MMS within three days of completion of such work. Defects shall be recorded on the MMS within 3 days of coming to the attention of DB

Contractor. All other recording requirements shall be recorded on the MMS within 15 days of completion or occurrence of the relevant activity.

90 days prior to the Initial Maintenance Term Commencement Date, the MMS shall be fully populated and operational and DB Contractor shall demonstrate to TxDOT the functionality and use of the MMS and that it is fully compliant with the requirements of the COMA Documents. The MMS shall be kept updated and operational for the duration of the Maintenance Period.

As part of the demonstration, DB Contractor shall provide equipment, facilities and training necessary to permit remote, real-time, dedicated high-speed access to the MMS, via one terminal each, for up to three TxDOT employees. DB Contractor shall repeat the training and demonstration annually and whenever system changes are implemented. DB Contractor shall transfer inventory and condition data to TxDOT at the date when DB Contractor's MMS is fully operational prior to the commencement of Maintenance Services and transfer the updates of the inventory and condition data quarterly afterwards throughout the Maintenance Period. At a minimum, the following data shall be transferred to TxDOT:

- an inventory of all elements, components, and equipment to be maintained;
- a description of each item with location, tag number, serial number, and equipment nameplate (size, model, and serial number);
- inspection history and reports; and
- condition data for each element.

DB Contractor shall handover the MMS and everything required for its operation to TxDOT, or other entity as directed by TxDOT, upon expiration or earlier termination of the Comprehensive Maintenance Agreement.

2 RENEWAL WORK REQUIREMENTS

2.1 Obligation to perform Renewal Work

DB Contractor shall promptly perform Renewal Work to renew, repair, or replace any Maintenance Element when any of the following conditions occur:

- The Maintenance Element is scheduled for replacement, rehabilitation or renewal in accordance with the Renewal Work Schedule.
- The condition of any Maintenance Element is such that early replacement, rehabilitation or renewal is needed to enable Performance Requirements to be reliably achieved.
- Defects have occurred or may be expected to occur on a frequent basis and there is a risk that DB Contractor will be unable to comply with its obligation to remedy and repair such Defects within the applicable Defect Remedy Period.
- The reliability for Maintenance Elements in the "Traffic Signals" and "ITS Equipment" Maintenance Element Categories is less than 90 percent except for safety-critical Maintenance Elements, which shall not be less than 99.7 percent.
- The Maintenance Element ceases to function or dies (as in the case of plantings).
- The frequency of repair is higher than that recommended in the manufacturer's preventive maintenance schedule.

The term “safety-critical” as used above means that should a Maintenance Element fail, the safe operation of the Project would be in jeopardy or an immediate or imminent safety hazard would result.

The term “reliability” as used above shall be calculated as the in-service time measured over a moving 365-day period. For example, if a Maintenance Element is out of service for 20 days of 365 days, its “reliability” is 94.5 percent (i.e., (365 – 20)/365 x 100).

Prior to the expiration or earlier termination of any part of the Maintenance Services, DB Contractor shall submit to TxDOT a complete set of Record Drawings and supporting calculations and details that accurately show all Renewal Work and any other changes to the Project during the performance of the Maintenance Services. All Renewal Work shall follow the applicable design and construction requirements within the Technical Provisions as applicable to the original design, installation or construction unless such Technical Provisions have been superseded by Good Industry Practice. When a Maintenance Element is renewed or replaced, and upon the first installation of the renewed or replaced Maintained Element into the Project, DB Contractor shall not have the benefit of any Defect Remedy Period. DB Contractor shall cause all Renewal Work to achieve the Target applicable to the Maintenance Element as shown on the Performance and Measurement Table from the date that the renewed or replaced Maintenance Element is incorporated into the Project.

2.2 Renewal Work Submittal

As part of the MMP, DB Contractor shall submit to TxDOT the first Renewal Work Submittal. The Renewal Work Submittal shall include the timing, scope, and nature of Renewal Work that DB Contractor proposes for each year throughout the Maintenance Period with more details provided for the next five years. DB Contractor shall set forth, by Maintenance Element:

- the estimated Useful Life;
- the description of the Renewal Work anticipated to be performed at the end of the Maintenance Element’s Useful Life; and
- a brief description of any Renewal Work anticipated to be performed before the end of the Maintenance Element’s Useful Life including reasons why this work should be performed at the proposed time.

Not later than 30 days before each anniversary of the Initial Maintenance Term Commencement Date, DB Contractor shall prepare and submit, for TxDOT’s review and approval, either: (a) a revised Renewal Work Submittal or (b) the then-existing Renewal Work Submittal, accompanied by a written statement that DB Contractor intends to continue in effect the then-existing Renewal Work Submittal for each Maintenance Element without revision for the upcoming year (in either case, referred to as the “updated Renewal Work Submittal”).

DB Contractor shall make revisions as reasonably required by experience and then-existing conditions respecting the Project, changes in technology, changes in DB Contractor’s planned means and methods of performing the Renewal Work, and other relevant factors. The updated Renewal Work Submittal shall show the revisions, if any, to the prior Renewal Work Submittal and include an explanation of reasons for revisions. If no revisions are proposed, DB Contractor shall include, for each Maintenance Element, a justification as to why the prior Renewal Work Submittal still applies.

3 MAINTENANCE SERVICES DELIVERABLE SCHEDULE

As part of the MMP, DB Contractor shall prepare a Maintenance Services Deliverable Schedule.

The Maintenance Services Deliverable Schedule shall include a listing of all Submittals or deliverables as called out in the COMA Documents. Submittal activity durations shall include specific durations for TxDOT review and/or approval of the DB Contractor's Submittals as called out elsewhere in the COMA Documents.

In updates to the MMP, DB Contractor shall update the Maintenance Services Deliverable Schedule to reflect the current status of the Project, including approved Change Orders or provide a notification of no change to the current schedule. Each Maintenance Services Deliverable Schedule update shall accurately reflect all activities as of the effective date of the updated schedule.

4 MAINTENANCE PROCEDURES

4.1 Maintenance Services Quality Management Plan

As part of the MMP, DB Contractor shall prepare and submit a Maintenance Services Quality Management Plan (MSQMP). The MSQMP is intended to: (a) place the responsibility for the quality of all design, construction, maintenance and repair associated with the Maintenance Services on DB Contractor; and (b) allow TxDOT to oversee the Maintenance Services. DB Contractor shall undertake all quality control in accordance with the MSQMP and the requirements set forth in the COMA Documents.

DB Contractor shall incorporate quality processes as part of its MSQMP including planned and systematic activities undertaken by a party independent of the construction or maintenance process.

The MSQMP shall capture all Maintenance Services performed by DB Contractor and its Subcontractors and shall contain detailed procedures for the DB Contractor's quality control activities, including a complete description of the quality policies and objectives that the DB Contractor shall implement throughout its organization. The policies shall demonstrate the DB Contractor senior management's commitment to implement and continually improve the maintenance quality system.

The MSQMP shall contain detailed descriptions of the inspection and test plans, including the timing and frequency of testing, as well as detailed systems and procedures for the following:

- control of quality records;
- validate the accuracy of Maintenance Records;
- management reviews;
- resource allocation;
- measurement of customer satisfaction;
- control of nonconforming products and services;
- validate the data, times, dates and other information entered into the Maintenance Management System for Noncompliance Events; and
- internal audits.

DB Contractor shall update the MSQMP as needed to ensure current versions of the following information are contained in said plan:

- the organizational chart that identifies all quality management personnel, their roles, authorities and line reporting relationships;

- descriptions of the roles and responsibilities of all quality management personnel and those who have the authority to stop activities;
- identification of testing agencies, including information on each agency's capability to provide the specific services required for the activities, certifications held, equipment, and location of laboratories; and
- resumes for all quality management personnel.

DB Contractor shall revise its MSQMP when its own quality management organization detects a repeating or fundamental non-conformance in the work performed or in the manner the Maintenance Services are inspected or tested, or when TxDOT advises the DB Contractor of such a problem.

DB Contractor shall ensure that the MSQMP meets all requirements set out in ISO standards relating to quality systems, plans and audits in effect as of the Effective Date.

Quality terminology, unless defined or modified elsewhere in the COMA Documents, shall have the meaning defined in ISO 9001. Terms used in ISO 9001 shall have the meanings defined below:

- Organization - DB Contractor's organization, including any Affiliates and Subcontractors
- Customers - the Users of the roadways, TxDOT, Customer Groups, and key stakeholders that have an adjacent property interest or connecting roadway
- Suppliers - Contractors
- Product - Maintenance Services
- Quality control - the part of quality management focused on fulfilling quality requirements
- Quality Management Plan - the MSQMP

DB Contractor shall make all quality records available to TxDOT for review upon TxDOT's request and shall submit to TxDOT the results of all internal audits within seven Days of their completion.

Throughout the Maintenance Period, DB Contractor shall have a Maintenance Quality Manager who is responsible for independently overseeing and performing all quality responsibilities for the Maintenance Services in accordance with the MSQMP and who shall have the authority to stop Maintenance Services for quality-related issues. The Maintenance Quality Manager shall be functionally independent from the DB Contractor's staff responsible for implementation of the work, and shall report directly to the DB Contractor's principals, rather than to the Maintenance Manager. The Maintenance Quality Manager shall be responsible to see that the methods and procedures contained in approved MSQMP are implemented and followed by DB Contractor and Subcontractors in the performance of the Maintenance Services. Maintenance Quality Manager shall be a Registered Professional Engineer.

4.2 Maintenance Safety Plan

As part of the MMP, DB Contractor shall prepare and submit a comprehensive safety plan ("Maintenance Safety Plan"). The Maintenance Safety Plan shall fully describe the DB Contractor's policies, plans, training programs, and work site controls to ensure the health and safety of personnel involved in the Project and the general public affected by the Project during the Maintenance Period.

DB Contractor's Maintenance Safety Plan shall address procedures for immediately notifying TxDOT of all Incidents arising out of or in connection with the performance of the Maintenance Services, whether on or adjacent to the Project.

A Maintenance Safety Manager shall be assigned to the Project throughout the Maintenance Period. The Maintenance Safety Manager shall be responsible for carrying out the Maintenance Safety Plan and all safety-related activities, including training and enforcement of safety operations. The Maintenance Safety Manager shall have the authority to stop all work on the Project. Upon TxDOT's approval, this position can be fulfilled by another employee of the DB Contractor if the employee can meet all qualification requirements and can be available on site to the extent needed to perform the level of oversight deemed necessary for the work being performed. Requirements for the Maintenance Safety Manager include:

- roadway construction and safety enforcement experience;
- ten (10) years of progressive safety management experience, five years of which must be safety management experience on similar operations and maintenance projects;
- designation, at or before the Effective Date, as a Construction Health and Safety Technician® (CHST) by the Board of Certified Safety Professionals (BCSP), or designation as a Certified Safety & Health Official (CSHO), either of which may be substituted for two years of safety management experience;
- completion of the OSHA #500 course – Trainer Course in OSHA Standards for Construction;
- training and current certification for CPR and first aid; and
- completion of the following training sponsored by an accredited agency:
    - work zone traffic control; and
    - flaggers in work zones.

4.3 Incident and Emergency Management Plan

As part of the MMP, DB Contractor shall prepare and implement in coordination with TxDOT, Emergency Services, and applicable Governmental Entities an Incident and Emergency Management Plan (IEMP) to address Incident and Emergency response, including:

- descriptions of contact methods, personnel available, and response times for any Emergency condition requiring attention during off-hours.
- procedures to identify Incidents and notify Emergency Services providers;
- procedures for establishing traffic control for Incident management activities in a timely manner;
- procedures for removal of stalled, broken down, wrecked or otherwise incapacitated vehicles from the travel lane, including coordination with Emergency Services and towing services to clear the Incident and return lane availability within one hour of notification, at the User's expense;
- procedures to institute all measures for cleanup of objects foreign to the roadway surface where lane availability cannot be restored within one hour of notification; and
- procedures to identify and contain all Hazardous Material spills and appropriate disposal of such materials.

DB Contractor shall coordinate with TxDOT, Emergency Services, and applicable Governmental Entities in response to an Incident or Emergency per the IEMP. Where an Incident or Emergency has an effect on the operation of the Project, DB Contractor shall clear obstructions and repair damage to the Project under the supervision of the relevant Emergency Services if necessary, such that the Project is returned to normal operating standards and safe conditions as quickly as possible.

Where liquid or soluble material spills are involved, DB Contractor shall take all necessary measures to minimize pollution of watercourses or groundwater in accordance with the Hazardous Materials Management Plan and the Spill Prevention and Countermeasures Plan.

Where structural damage to structures is suspected, DB Contractor shall cause that a suitably qualified bridge engineer or specialist inspector is available to evaluate the structure and to advise on temporary repairs and shoring needed to provide safe clearance of the Incident or Emergency.

Where such an Incident or Emergency involves a personal injury, DB Contractor shall not remove any vehicle or other item that may assist a potential investigation by Emergency Services until authorized to do so by such agency or agencies.

4.4 Snow and Ice Control Plan

As part of the MMP, DB Contractor shall prepare and implement a Snow and Ice Control Plan (SICP) that contains detailed operational procedures for performing snow and ice control work throughout the Maintenance Period. The DB Contractor shall report to TxDOT information on weather-related events which may cause unsafe driving conditions such as ice, sleet, snow, floods or high winds. The SICP shall comply with all applicable Law, codes, and regulations governing the operation of equipment on public highways.

The SICP shall address the following:

- weather forecasting;
- advance preparation procedures;
- call-out procedures;
- response protocol;
- operational requirements;
- training;
- record keeping/reporting;
- environmental management;
- anti-icing and de-icing chemical storage;
- anti-icing and de-icing materials, including salt and alternative substances; and
- equipment.

As part of the MMP updates, DB Contractor shall incorporate any changes in strategy and equipment levels designed to rectify faults identified by DB Contractor and TxDOT in DB Contractor's snow and ice removal operations during the preceding winter season.

4.5 Severe Weather Evacuation Plan

As part of the MMP, DB Contractor shall prepare and implement a Severe Weather Evacuation Plan (SWEP) that contains operational procedures for evacuation. The SWEP shall comply with all applicable Law, codes, and regulations governing the operation of equipment on public highways. As part of the MMP updates, DB Contractor shall incorporate any changes in strategy and evacuation routes during the previous year.

4.6 Environmental Compliance

4.6.1 Hazardous Materials Management Plan

As part of the MMP, DB Contractor shall prepare and submit a Hazardous Materials Management Plan (HMMP) for the safe handling, storage, treatment and/or disposal of Hazardous Materials, whether encountered at or brought onto the Project by the DB Contractor, encountered or brought onto the Project by a third party, or otherwise, during the Maintenance Period. The HMMP shall include the identification and contact information for designated responsible individuals in the management of Hazardous Materials and the HMMP and procedures compliant with all applicable Environmental Laws, which at a minimum include:

- procedures for updating Material Safety Data Sheets (MSDS), per OSHA requirements, for all chemicals used on the Project for the Maintenance Period;
- procedures for identifying and documenting potential contaminated sites which might impact Project development;
- procedures for mitigation of contamination during the operation and maintenance of the Project;
- procedures for developing the prevention, control, and mitigation of fugitive noxious or toxic vapors or particulate matter (dust), contaminated soil, and contaminated groundwater during disturbance of noxious or hazardous materials and media;
- processes for training personnel for responding to and mitigating Incidents involving contamination or waste;
- provisions for appropriate storage and disposal of all waste encountered or disposed of on the Project throughout the Maintenance Period;
- provisions for a Hazardous Materials training module; and
- procedures for preparing an investigative work plan and site investigative report in the event that Hazardous Materials are discovered during Maintenance Services.

The HMMP shall include provisions for making all on-Site workers aware of and able to recognize the potential Hazardous Materials to which they may be exposed, limiting DB Contractor's workers' exposure to Hazardous Materials and providing all necessary personal protection equipment to protect workers from exposure. The HMMP shall require DB Contractor to provide any non-DB Contractor personnel who visit the Project with the appropriate personal protection equipment.

The HMMP shall require that all personnel of DB Contractor-Related Entities handling Hazardous Materials be trained and certified at least to the minimum requirements established under the current guidelines of OSHA 1910.120 (HAZWOPER Training). The HMMP shall include procedures for ensuring that all applicable certifications, licenses, authorizations and Governmental Approvals for DB Contractor personnel handling Hazardous Materials are current and valid throughout the Maintenance Period.

4.6.2 SW3P Implementation

As part of the MMP, DB Contractor shall prepare procedures for implementing a Storm Water Pollution Prevention Plan (SW3P) including criteria determining the types of Maintenance Services for which SW3P requirements shall be followed. Maintenance Services shall be undertaken in compliance with the Texas Pollutant Discharge Elimination System and the TxDOT Storm Water Management and Guidelines for Construction Activities Manual.

4.6.3 Spill Prevention and Countermeasures Plan

As part of the MMP, DB Contractor shall prepare and submit a Spill Prevention and Countermeasures Plan (SPCP). The SPCP shall, at a minimum, specify minimum increments for internal audits to be conducted of the DB Contractor's compliance with the SPCP to assess whether these goals were achieved through review of environmental documentation.

4.6.4 Pollution Prevention Plan

As part of the MMP, DB Contractor shall prepare and submit a Pollution Prevention (P2) Plan in accordance with the Texas Waste Reduction Policy Act. The P2 Plan will also address waste management and recycling procedures. The following items shall be included in the P2 Plan:

- large and small quantity generators of hazardous waste;
- toxics release inventory (TRI);
- list of all hazardous wastes and TRI chemicals;
- activities that generate the waste or TRI chemical;
- explanation of P2 projects;
- implementation schedule;
- measurable P2 goals; and
- personnel awareness program.

4.6.5 Environmental Compliance and Mitigation Plan

As part of the MMP, DB Contractor shall prepare and submit an Environmental Compliance and Mitigation Plan (ECMP) to document and fully detail compliance strategies and procedures to be employed in accordance with the requirements of applicable Environmental Laws and Environmental Approvals. The ECMP shall provide, at a minimum:

- procedures for maintaining the environmental commitments required to verify that any discharge from the Project into a sanitary sewer system complies with appropriate codes and standards of the sanitary sewer owner;
- procedures for identifying and mitigating any potential traffic noise caused by conducting Maintenance Services;
- procedures for providing all other environmental monitoring within the Project area and submitting all necessary environmental documentation and monitoring reports to the appropriate Governmental Entities and, when applicable, to TxDOT, to the extent necessary to maintain compliance with applicable Environmental Approvals; and
- procedures for training personnel to avoid or take appropriate action to minimize environmental impacts caused by conducting Maintenance Services.

DB Contractor shall meet the environmental requirements of Section 4 of the Technical

Provisions during the performance of Renewal Work.

4.7 Maintenance Document Management Plan

As part of the MMP, DB Contractor shall establish and maintain an electronic document control system ("Maintenance Document Management Plan") to store, catalog, and retrieve Maintenance Records and all Project-related documents in a format compatible with TRM System used by TxDOT.

Maintenance Records shall be kept throughout the Maintenance Period and shall be provided to TxDOT at the time the Project is delivered to TxDOT, at either the expiration of the Maintenance Period or earlier termination of the Comprehensive Maintenance Agreement. All records obtained during the Warranty Periods shall be kept and provided to TxDOT at the end of the last Warranty Period.

Unless otherwise directed by TxDOT, record retention shall comply with the requirements of the Texas State Records Retention Schedule.

4.8 Maintenance Communications Plan

As part of the MMP, DB Contractor shall prepare and submit a comprehensive communications plan ("Maintenance Communications Plan").

The Maintenance Communications Plan shall describe the processes and procedures for communication of Project information between the DB Contractor's organization and TxDOT, other Governmental Entities, Utilities, and third parties. The Maintenance Communications Plan shall describe how the DB Contractor's organization will respond to unexpected requests for information, communicate changes or revisions to necessary DB Contractor personnel, and notify TxDOT before and after changes are made to the COMA Documents.

4.9 Maintenance Transition Plan

At sixty (60) days prior to the end of this Comprehensive Maintenance Agreement, or upon earlier termination, DB Contractor shall submit a comprehensive transition plan ("Maintenance Transition Plan") to TxDOT which includes the following items:

- Maintenance Transition punch list;
- list and status of equipment Warranties;
- vendors' test reports;
- DB Contractor's test reports;
- Record Drawings for Renewal Work;
- Maintenance Records (including NBIS records);
- copies of Warranty and service contracts; and
- list of spare parts purchased as part of the Maintenance Services.

At sixty (60) days prior to the end of this Comprehensive Maintenance Agreement, the DB Contractor shall submit to TxDOT a complete set of Record Drawings. The Record Drawings and documentation shall be an organized, complete record of drawings and supporting calculations and details that accurately represent what the DB Contractor constructed. DB Contractor shall ensure that the Record Drawings reflect the actual condition of the Maintenance Services construction.

DB Contractor shall coordinate the identification of Maintenance Transition punch list items required to be completed by DB Contractor prior to maintenance transfer. Maintenance Transition punch list shall include (a) estimated completion dates, (b) responsible Party(s), and (c) items that must be completed prior to maintenance transfer.

DB Contractor shall be responsible to prepare (in conjunction with TxDOT), administer and complete all items on the Maintenance Transition punch list to the satisfaction of TxDOT prior to the transfer of maintenance responsibilities to TxDOT.

5 TRAFFIC MANAGEMENT REQUIREMENTS

5.1 General Requirements

Throughout the Maintenance Period, DB Contractor shall conform with the requirements set forth in this Section 5 of this Exhibit 2, and shall provide for the safe and efficient movement of people, goods, and services, through and around the Project, while minimizing negative impacts to Users, residents, and businesses.

While planning and carrying out Maintenance Services, DB Contractor shall take into account the restrictions set forth in Attachment 6 to this Exhibit 2 and shall coordinate its Traffic Management Plan (TMP) with the traffic management to be performed by others to minimize disruption to Users of the Project.

DB Contractor shall analyze overweight load permit applications from the Texas Department of Motor Vehicles (TxDMV). Refer to: http://www.txdmv.gov/motor-carriers/oversizeoverweight-permits for a description of permit types. Notification of an overweight load permit application will come from and response shall be returned to the TxDMV. DB Contractor shall respond to each overweight load permit request within seven days.

5.2 Traffic Management Plan

As part of the MMP, DB Contractor shall prepare and implement a TMP to be used throughout the Maintenance Period that includes the following items:

- descriptions of the qualifications and duties of the traffic engineering manager, traffic control coordinator, and other personnel with traffic control responsibilities;
- procedures to identify and incorporate the needs of transit operators, Utility Owners, Governmental Entities, local governmental agencies, Emergency Service providers, school districts, business owners, and other related Users, Customer Groups or entities in the Project corridor and surrounding affected areas;
- procedures for obtaining acceptance of detours, road and Lane Closures and other traffic pattern modifications from applicable Governmental Entities, and implementing, maintaining and removing those modifications;
- procedures for obtaining approval of traffic control plans for Lane Closures from TxDOT;
- procedures for installation, maintenance and removal of interim signing and the corresponding handling of permanent signing during Maintenance Services;
- procedures for installation, maintenance, replacement and removal of traffic control devices, including pavement markings and traffic barriers, if used;
- procedures and process for the safe ingress and egress of construction vehicles in the work zone;

- provisions to provide continuous access to established truck routes and Hazardous Material routes, and to provide suitable detour routes, including obtaining any approvals required by the appropriate Governmental Entities for these uses;
- procedures to modify plans as needed to adapt to changing Project circumstances;
- procedures to communicate TMP information and notify the public of maintenance of traffic issues; and
- descriptions of contact methods, personnel available, and response times for any Emergency conditions requiring TxDOT attention during off-hours.

DB Contractor shall use the procedures set forth in the approved TMP and the standards of the TMUTCD to develop traffic control plans for Lane Closures per Attachment 6 to this Exhibit 2 that provide for all Maintenance Services, as well as all required switching procedures. The traffic control plans shall include details for all detours, traffic control devices, striping, and signage applicable to each maintenance activity. Information included in the traffic control plans shall be of sufficient detail to allow verification of design criteria and safety requirements, including typical sections, alignment, striping layout, drop off conditions, and temporary drainage. The traffic control plans shall clearly designate all temporary reductions in speed limits. Changes to posted speed limits will not be allowed unless specific prior approval is granted by TxDOT. If at any time the traffic queue resulting from the Maintenance Services cannot be dispersed within 10 minutes, DB Contractor shall immediately undertake modifications to alleviate the traffic congestion. A contingency plan of how traffic congestion can be alleviated should be included with the traffic control plan.

5.3 Traffic Operation Restrictions

DB Contractor shall keep the number of Lane Closures to an absolute minimum and shall keep each Lane Closure to the shortest time and extent necessary for safe and efficient operations and in accordance with Attachment 6.

DB Contractor shall ensure that opposing traffic on a normally divided roadway shall be separated with appropriate traffic control devices, shall maintain signing continuity within the Project and intersecting streets at all times, and shall ensure all streets and intersections remain open to traffic to the greatest extent possible.

DB Contractor shall maintain access to all adjacent streets and shall provide for ingress and egress to public and private properties at all times.

5.4 Traffic Management Implementation Requirements

Traffic management implementation shall be in accordance with DB Contractor's TMP, the manufacturer's directions or recommendations where applicable, and the applicable provisions of the TMUTCD. If at any time TxDOT determines DB Contractor's traffic control operations do not meet the intent of the TMP or any specific traffic control plan, DB Contractor shall immediately revise such operations to correct the deficient conditions or discontinue such operations.

DB Contractor shall provide TxDOT the names of the traffic control coordinator and support personnel, and the phone number(s) where they can be reached 24 hours per day, seven days per week.

DB Contractor shall maintain existing bicycle and pedestrian access and mobility with the frontage roads and across all cross streets. DB Contractor shall maintain access to existing transit stop locations during construction or reasonable alternative locations shall be provided.

DB Contractor shall maintain all detours in a safe and traversable condition. DB Contractor shall provide a pavement transition at all detour interfaces, suitable for the posted speed of the section.

5.5 Public Information and Communications

It is vital to the success of the Project that TxDOT and the DB Contractor gain and maintain public support. The public will better support TxDOT and the DB Contractor if they are kept abreast of Project information in a timely manner, are notified in advance of potential impacts, have an opportunity to identify issues and recommend solutions, receive timely and appropriate feedback from the DB Contractor, and perceive a high-quality, well-executed communications plan for keeping them informed, engaged, and educated.

DB Contractor shall provide information within 24 hours of a request by TxDOT, such that TxDOT may communicate such information to interested parties.

Subject to the Lane Closure restrictions set forth in Attachment 6 to this Exhibit 2, DB Contractor shall provide TxDOT and appropriate Customer Groups a minimum of two weeks advance notice for Lane Closures and/or traffic switches planned to be in effect longer than 24 hours, and a minimum of 48 hours advance notice for Lane Closures that are planned to be in effect less than 24 hours. In addition, DB Contractor shall be responsible for the rental and placement of portable messaging signs (dynamic and static) as required by the approved traffic control plan to alert the public to traffic impacts/road closures. DB Contractor shall ensure that messaging on the signs is current and accurate at all times. DB Contractor shall input all Lane Closures (or an event that results in Lane Closures) in accordance with the Houston District Highway Conditions Report manual for the respective fiscal year. Additional emphasis and efforts will be expected related to scheduled closures anticipated to have major traffic impacts and/or emergency situations that result in Lane Closures. For planned Lane Closures and Emergency Closures, as appropriate, the DB Contractor shall coordinate Lane Closures that may affect cross streets including TxDOT facilities with appropriate TxDOT District and area offices or other Governmental Entities, as needed, to ensure that no conflicts occur.

For all Emergency events, DB Contractor shall take timely and appropriate action to inform TxDOT and appropriate Customer Groups of all pertinent details. DB Contractor shall provide these details through the use of appropriate tools to ensure effective communication. These tools include, but are not limited to: dynamic message signs, TxDOT's Highway Conditions Report, and TxDOT Beaumont and Houston District Office Highway Advisory Reports. DB Contractor shall continue to provide updated information, as available and on a timely basis, until the Emergency no longer exists. In the event of an unforeseen Emergency, timely notification shall mean as soon as practicable, but in no event longer than within one hour of the occurrence. If advanced warning is available for an Emergency event such as ice/snow, timely notification shall mean as soon as practicable, but in no event longer than within one hour of the time the information is available. In both situations, DB Contractor shall continue to provide updated information, as available and on a timely basis, until the Emergency no longer exists.

6 REPORTING REQUIREMENTS

6.1 Maintenance Services Report

The Maintenance Services Report shall identify all of the Maintenance Services for the period, the actual Maintenance Services performed for the period, and confirmation that all Maintenance Services performed were in compliance with the MMP. DB Contractor shall organize the Maintenance Services Report using the report sections and section reporting requirements shown in Table 3:

Table 3 – Maintenance Services Report Sections

Report Sections	Reporting Requirements/Description
Project Status	Report a high-level summary of Project condition and operational status, which shall include at a minimum: i) Maintenance Element Asset Condition Scores and Mean Asset Condition Scores, ii) tracking log of accident statistics, iii) tracking log of Lane Closures, iv) tracking log of public inquiries/complaints, and v) tracking log of public contact/outreach activities.
Operational Status	Report a summary of Project condition and operational status, which shall include at a minimum: i) Defects including the location, the nature and cause of the Defect and the steps that will be, or have been, taken to address the Defects per Section 1.3.1 of this Exhibit 2, ii) inspection results for General Inspections, Specialist Inspections and Audit Inspections per Section 1.4 and Section 1.5.2 of this Exhibit 2, iii) accidents, Incidents and Emergencies per Section 1.6 of this Exhibit 2 including effectiveness of Incident response, iv) tracking database of Noncompliance Events, and v) workforce injuries and OSHA related accidents.
Organizational Status	Report a summary of DB Contractor's organizational status (or reference to the appropriate sections/attachments in the latest MMP for the information) for the items below. i) list of personnel, ii) log of all training activities undertaken and planned, iii) list of major equipment, and iv) Subcontractors.
Progress Report	Report a summary of DB Contractor's activity, which shall include at a minimum from the previous month: i) a tracking log of completed action items with start and end dates and documentation supporting resolution, ii) a summary of the Maintenance Services performed including Renewal Work, iii) a summary of quality control activities and results, iv) list of any Nonconforming Work with explanation of non-conformance and associated risks, and v) meetings/correspondence logs.
Planned Activities	Report a summary of DB Contractor's planned activity, which shall include at a minimum: i) a tracking log of action items in progress with start and projected end dates with a description of proposed solutions, ii) schedule of planned Maintenance Services including Renewal Work for the upcoming month, iii) future Lane Closures including location, duration and reason of each, iv) a 3-month look ahead schedule of planned Maintenance Services including Renewal Work, and v) a 1-month look ahead for any future Submittals included in the Maintenance Services Deliverable Schedule.

6.2 Annual Report

DB Contractor shall submit an annual report to TxDOT by each anniversary of the Initial Maintenance Term Commencement Date. This annual report shall include the following elements:

- An assessment of the actual Maintenance Services achievements versus the planned goals established in the MMP, as well as corrective actions and measures to be taken in the ensuing year to ensure that any shortcomings are corrected.
- An assessment of compliance with the various traffic control requirements and limitations contained in Section 3.4 of the Comprehensive Maintenance Agreement and the traffic control plans developed in accordance with Section 5.2 of this Exhibit 2, as well as any corrective measures taken to correct any breach or violation of such requirements and limitations and any corrective measures necessary to prevent such future breach or violation of such requirement and limitations.
- A report of the inspections and tests performed as part of the MMP and as required by the Performance and Measurement Table, the results of such inspections and tests, and occurrences and the measures taken to correct Nonconforming Work.
- A report of the Renewal Work performed in the immediately preceding year. The report shall describe: (a) by location, the Maintenance Element, as listed in the Renewal Work Submittal, and any other Project component for which Renewal Work was performed; (b) the type of Renewal Work performed; (c) each specific item replaced; (d) any warranty information associated with any replacement item; (e) the dates of commencement and completion of such Renewal Work; and (f) such other information as is reasonably requested by TxDOT.

6.3 Quarterly Noncompliance Events Report

The Quarterly Noncompliance Events Report shall be submitted in accordance with Section 19.2.1.3 of the Comprehensive Maintenance Agreement. The Quarterly Noncompliance Events Report shall contain the information required in Section 19.2.4.1 of the Comprehensive Maintenance Agreement.

7 ADDITIONAL REQUIREMENTS

7.1 Rail

Where the Project crosses a railroad right of way owned by an operating railroad, DB Contractor shall coordinate the Maintenance Services with the operating railroad and shall be responsible for obtaining the required approvals, permits, and agreements as required for the Maintenance Services, including any railroad related maintenance activities.

Whenever an agreement for construction, maintenance and use of railroad right-of-way between the operating railroad and TxDOT is required, DB Contractor shall prepare all the documentation required to obtain the agreement, including preparation of the agreement application on behalf of TxDOT, the drawings and specifications, making necessary modifications as required, and preparation of the agreement. DB Contractor shall submit the draft agreement to TxDOT for transmittal to the operating railroad. After all comments have been incorporated or satisfactorily resolved by the DB Contractor, railroad or TxDOT, DB Contractor shall submit a complete and final agreement to TxDOT for execution. DB Contractor shall comply with all construction requirements and specifications set forth in the agreement.

DB Contractor shall arrange with the operating railroad for railroad flagging as required. DB Contractor shall comply with the operating railroad's requirements for contractor safety training prior to performing Maintenance Services or other activities on the operating railroad's property.

DB Contractor shall cooperate and coordinate with all operating railroads for access by the operating railroad and/or their agents to the rail right-of-way as necessary for rail maintenance and operations activities.

DB Contractor shall procure and maintain, prior to working adjacent to and entry upon operating railroad property, insurance policies naming TxDOT, TxDOT's consultants, and railroad as named insured. DB Contractor shall obtain insurance per Exhibit 10 of the Comprehensive Maintenance Agreement. All insurance policies shall be in a form acceptable to the operating railroad. Copies of all insurance policies shall be submitted to TxDOT prior to any entry by the DB Contractor upon operating railroad property. DB Contractor shall be responsible for scheduling the work to be completed by operating railroad as well as the work to be completed by its own forces. DB Contractor shall be responsible for all costs associated with the railroad/transit force account work.

7.2 Toll Interface

7.2.1 Incident Response affecting Tolling

DB Contractor shall notify the TxDOT Statewide System Integrator (SI) with a copy to TxDOT no later than 2 hours following the DB Contractor's first awareness of any circumstance that is adversely affecting or has the potential to adversely affect power, communications, or structures supporting Electronic Toll Collection System (ETCS) equipment.

7.2.2 Maintenance Services

Following an ETCS event, DB Contractor shall coordinate with the SI to install infrastructure for purposes of re-establishing damaged ETCS equipment with the objective of minimizing impact to revenue collection.

Whenever DB Contractor plans to undertake Maintenance Services that may adversely affect the performance of the ETCS equipment, DB Contractor shall inform TxDOT, in writing, 28 days in advance of performing any such Maintenance Services. DB Contractor shall avoid any adverse impact on ETCS equipment wherever possible and shall comply with any restrictions and requirements applicable to the Maintenance Services that may be imposed by TxDOT in its sole discretion.

Where adverse impact on ETCS equipment as a result of Maintenance Services is unavoidable, DB Contractor shall prepare and submit an ETCS equipment impact mitigation plan, no later than 28 days in advance of the planned Maintenance Services, for TxDOT's approval in its sole discretion that shall identify the nature and duration of the potential impacts associated with the Maintenance Services and the mitigation measures DB Contractor proposes. Upon approval by TxDOT of the mitigation plan and completion of the Maintenance Services, DB Contractor shall provide safe access to TxDOT and the SI for the purpose of re-installation and/or re-calibration of affected ETCS equipment. DB Contractor shall be solely responsible for the provision of safe access to TxDOT and the SI including all necessary traffic control to facilitate and enable the SI to re-install and/or re-calibrate ETCS equipment (as needed).

7.2.3 Replacement of System Integrator

Upon TxDOT's 90 days' notice to the SI of its replacement, TxDOT may perform a hands-on inspection conducted jointly with TxDOT, DB Contractor and the outgoing SI to inspect the

ETCS and adjacent Maintenance Elements including structures and conduits supporting the ETCS to determine any Defects that may affect the SI transition. The DB Contractor shall provide a permanent repair of any Defect that may affect the SI transition prior to the date the replacement SI is scheduled to commence. The DB Contractor shall provide safe access and traffic control for the purpose of the inspections and shall accompany TxDOT in the performance of inspections.

7.3 Metered Utility Consumption Costs

Throughout the Maintenance Period, TxDOT will be responsible for metered utility consumption costs for Maintenance Elements in the Performance and Measurement Table including traffic signals, lighting, and ITS equipment.

The DB Contractor is responsible for all other metered utility consumption costs charged by utilities including any costs to operate DB Contractor's office facilities or other similar facilities under DB Contractor's control throughout the Maintenance Period.

8 CLOSE-OUT REQUIREMENTS

No later than 180 days prior to the end of the Maintenance Period, DB Contractor shall complete a Close-Out Inspection for all Maintenance Elements within the Maintenance Limits, and shall prepare a Close-Out Punch List. The Close-Out Punch List shall include (a) a description of each Defect identified in the Close-Out Inspection, (b) details of the Maintenance Services that will be undertaken, and (c) schedule for completing required Maintenance Services.

The Close-Out Punch List submitted to TxDOT shall be signed and sealed by a Registered Professional Engineer.

DB Contractor shall undertake the necessary hazard mitigation, permanent remedy, and permanent repair for each Close-Out Punch List item so that the affected Maintenance Element meets or exceeds the Target contained in the Performance and Measurement Table no later than 60 days prior to the end of the Maintenance Period.

DB Contractor shall cause the Close-Out Inspection to follow the latest inspection guidelines (at the time of the Close-Out Inspection) issued by TxDOT. DB Contractor shall provide to TxDOT a minimum of 14 Days' notice to witness any of the inspections and/or tests. DB Contractor shall deliver to TxDOT, within ten days after it is created, the output data arising from any testing and any interpretation thereof made by the testers.

The Close-Out Inspection for Maintenance Elements requiring a Specialist Inspection in accordance with Section 1.4.2 of this Exhibit 2 shall be performed by independent engineers, testing facilities and specialists from TxDOT's list of engineering firms qualified for such work.

EXHIBIT 2, ATTACHMENT 1: PERFORMANCE AND MEASUREMENT TABLE

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
1) PAVEMENT									
							Unless stated otherwise, measurements shall be conducted using procedures, techniques, and measuring equipment consistent with TxDOT's *Pavement Management Information System Rater's Manual.* Unless otherwise stated, pavement performance measurement records relate to 0.1-mile sections as described in the *Pavement Management Information System Rater's Manual*.		
	1.1	Ruts	All roadways are free from surface depressions in wheel path.	24 hrs	28 days	6 months	Depth as measured using an automated device in compliance with TxDOT Standards.	(i) Percentage of wheel path length with ruts greater than ¼" in depth in each Performance Section • Mainlanes, shoulders and ramps - equal to or more than 3% • Frontage roads – equal to or more than 10%	Nil
							10 ft straight edge used to measure rut depth for localized areas.	(ii) Depth of rut at any location greater than 0.5"	Nil
	1.2	Ride quality	All roadways have a smooth surface course (including bridge decks, covers, gratings, frames and boxes).	24 hrs	28 days	6 months	Measurement of International Roughness Index (IRI) according to TxDOT standard Tex-1001-S, Operating Inertial Profilers and Evaluating Pavement Profiles	(i) For 80% of all Performance Sections measured, IRI throughout 98% of each Performance Section is less than or equal to: • Mainlanes, ramps - 95" per mile • Frontage roads - 120" per mile	100%
							(Renewal Work and new construction subject to construction quality IRI standards, refer to Section 8.3.2 of Technical Provisions)	(ii) IRI measured throughout 98% of Performance Section is less than or equal to: • Mainlanes, ramps - 120" per mile • Frontage roads - 150" per mile • Mainlanes, ramps, 0.1 mile average - 150" per mile • Frontage roads, 0.1 mile average - 180" per mile	100%
								(iii) IRI measured throughout 98% of each lane containing a bridge deck in any Performance Section, 0.1 mile average - 200" per mile	100%
							10-ft straightedge used to measure discontinuities	(iv) Individual discontinuities greater than 1/4"	Nil

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
	1.3	Failures	All roadways are free from failures.	2 hrs	28 days	N/A	Instances of failures exceeding the failure criteria set forth in the TxDOT PMIS Rater's Manual, including potholes, base failures, punchouts and jointed concrete pavement failures	Occurrence of any failure	Nil
	1.4	Edge drop-offs	All roadways are free from edge drop-offs	24 hrs	28 days	6 months	Physical measurement of edge drop-off level compared to adjacent surface	Instances of edge drop-off greater than 2"	Nil
	1.5	Skid resistance	All roadways have adequate skid resistance	24 hrs	28 days	6 months	ASTM E274/E274M-11 Standard Test Method for Skid Resistance Testing of Paved Surfaces at 50 MPH using a full scale smooth tire meeting the requirements of ASTM E524-08.	(i) Sections investigated as to potential risk of skidding accident where average Skid Number for 0.5-mile section is below: • Mainlanes, shoulders and ramps – 30 • Frontage roads – 30	100%
								(ii) Perform a site investigation and required corrective action when the skid number is below 25 and/or when required by the Wet Weather Accident Reduction Program, for areas categorized as high risk.	100%
			Road Users warned of potential skidding hazards	24 hrs	7 days	N/A		(iii) Instances where road Users warned of potential skidding hazard where remedial action is identified.	100%
	1.6	Crossovers and other paved areas	Crossovers and other paved areas are free of defects based on visual survey	2 hrs	28 days	N/A	Instances of failures exceeding the failure criteria set forth in the TxDOT PMIS Rater's Manual, including potholes, base failures, punchouts and jointed concrete pavement failures	Occurrence of any failure	Nil
	1.7	Joints in concrete	Joints in concrete paving are sealed and watertight	24 hrs	28 days	6 months	Visual inspection of joints	Length unsealed joints greater than ¼"	Nil
			Longitudinal joint separation				Measurement of joint width and level difference of two sides of joints	Joint width more than 1" or faulting more than ¼"	Nil
2) DRAINAGE									
	2.1	Pipes, ditches, and channels	Each element of the drainage system is maintained in its proper function by cleaning, clearing and/or emptying as appropriate including any vegetation, debris and silt from the point at which water drains from the travel way to the outfall or drainage way.	24 hrs	28 days	6 months	Visual inspection supplemented by CCTV where required to inspect buried pipe work	Length with less than 90% of cross-sectional area clear (feet)	Nil
	2.2	Drainage treatment devices	Drainage treatment and balancing systems, flow and spillage control devices function correctly and their location and means of operation is recorded adequately to permit their correct operation in Emergency.	24 hrs	28 days	6 months	Visual inspection	Devices functioning correctly with means of operation displayed	100%
	2.3	Travel way	The travel way is free from water to the extent that such water would represent a hazard by virtue of its position and depth.	24 hrs	28 days	6 months	Visual inspection of water on surface	Instances of hazardous water build-up	Nil

Performance and Measurement Table

MAINTENANCE ELEMENT CATEGORY	REF	MAINTENANCE ELEMENT	PERFORMANCE REQUIREMENT	DEFECT REMEDY PERIOD			INSPECTION AND MEASUREMENT METHOD	MEASUREMENT RECORD	TARGET
				Category 1 Hazard Mitigation	Category 1 Permanent Remedy	Category 2 Permanent Repair			
	2.4	Discharge systems	Surface water discharge systems perform their proper function and discharge to groundwater and waterways complies with the relevant legislation and permits.	24 hrs	28 days	6 months	Visual inspection and records	Non-compliances with legislation	Nil
	2.5	Protected species	Named species and habitats are protected.	24 hrs	28 days	6 months	Visual inspection	Compliance with the requirement	100%
	2.6	Erosion	Address erosion greater than 12” deep along ditches, swales, ponds, and channels	24 hrs	28 days	3 months	Visual inspection and records	Compliance with the requirement	100%
	2.7	Channels and ditches – Permanent Erosion Control Measures	Where permanent erosion control measures such as rock or concrete riprap are utilized: repair undermined or damaged erosion control measures	24 hrs	28 days	3 months	Visual inspection	Inspection records showing compliance	100%
3) STRUCTURES									
	3.1	Structure components (Structures having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or springlines of arches or extreme ends of openings or multiple boxes)	(i) Substructures and superstructures are free of: • undesirable vegetation • debris and bird droppings • blocked drains, weep pipes manholes and chambers • blocked drainage holes in structural components • defects in joint sealants • defects in pedestrian protection measure • scour damage • corrosion of rebar • paint system failures • impact damage (ii) Expansion joints free of: • dirt, debris and vegetation • defects in drainage systems • loose nuts and bolts • defects in gaskets (iii) The deck drainage system is free of all debris and operates as intended. (iv) Parapets free of: • loose nuts and bolts • blockages of hollow section drain holes • graffiti • vegetation • accident damage (v) Bearings and bearing shelves are clean. (vi) Sliding and roller surfaces are clean and greased to ensure satisfactory performance. Additional advice contained in bearing manufacturers' instructions in the Structure Maintenance Manual is followed. (vii) Special finishes are clean and perform to the appropriate standards. (viii) All non-structural items such as hoists and electrical fixings, operate correctly, are clean and lubricated as appropriate, in accordance with the manufacturer's recommendations and certification of lifting devices is maintained.	24 hrs	28 days	6 months	Inspection and assessment in accordance with the requirements of federal National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways – Part 650, the TxDOT Bridge Inspection Manual, and the Federal Highway Administration’s Bridge Inspector’s Reference Manual.	Records as required in the TxDOT Bridge Inspection Manual Occurrences of condition rating below seven (7) for any deck, superstructure or substructure	100% Nil

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 **Hazard Mitigation**	**Category 1** **Permanent Remedy**	**Category 2** **Permanent Repair**			
	3.2	Non-bridge class culverts	Non-bridge-class culverts are free of: • vegetation and debris and silt • defects in sealant to movement joints • scour damage	24 hrs	28 days	6 months	Visual inspection	Number with vegetation, debris and silt Number with defects in sealant and movement joints Number with scour damage	Nil Nil Nil
	3.3	Load ratings	All structures maintain the design load capacity.	24 hrs	28 days	6 months	Load rating calculations in accordance with the Manual for Bridge Evaluation and the TxDOT Bridge Inspection Manual. Load restriction requirements as per the TxDOT Bridge Inspection Manual	Number of load restrictions for Texas legal loads (including legally permitted vehicles)	Nil
	3.4	Gantries and high masts	Sign signal gantries, high masts are structurally sound and free of: • loose nuts and bolts • defects in surface protection systems	24 hrs	28 days	6 months	Visual inspection	Number with loose assemblies Number with defects in surface protection	Nil Nil
	3.5	Access points	All hatches and points of access have fully operational and lockable entryways.	24 hrs	28 days	6 months	Visual inspection	Number of Defects in locks or entryways	Nil
	3.6	Mechanically stabilized earth and retaining walls	Mechanically stabilized earth and retaining walls free of: • blocked weep holes • undesirable vegetation • defects in joint sealants • defects in pedestrian protection • scour damage • corrosion of reinforcing bars • paint system failure • concrete spalling • impact damage Parapets free of: • loose nuts and bolts • blockage of drain holes • undesirable vegetation • impact damage • concrete spalling	24 hrs	28 days	6 months	Perform inspection and assessment using Good Industry Practice of all mechanically stabilized earth and retaining walls	Mechanically stabilized earth and retaining walls are 95% free of blocked weep holes, undesirable vegetation, defects in joint sealants, defects in pedestrian protection, scour damage, corrosion of reinforcing bars, paint system failure, concrete spalls and impact damage Number of parapet areas with loose nuts & bolts, blockage, undesirable vegetation, impact damage or concrete spalling in the Performance Section.	100% Nil
4) PAVEMENT MARKINGS, OBJECT MARKERS, BARRIER MARKERS AND DELINEATORS									
	4.1	Pavement markings	Pavement markings are: • clean and visible during the day and at night • whole and complete and of the correct color, type, width and length • placed to meet the TMUTCD and TxDOT's Pavement Marking Standard Sheets	24 hrs	28 days	6 months	a) Markings - General Maintain pavement markings and perform annual Mobile Retroreflectivity Data Collection (MRDC) in accordance with TxDOT's Special Specification 8094 Mobile Retroreflectivity Data Collection for Pavement Markings. Physical measurement	Length meeting the minimum retroreflectivity 175 mcd/m^2/lx for white Length meeting the minimum retroreflectivity 125 mcd/m^2/lx for yellow Length with more than 5% loss of area of material at any point	100% 100% Nil

Performance and Measurement Table

MAINTENANCE ELEMENT CATEGORY	REF	MAINTENANCE ELEMENT	PERFORMANCE REQUIREMENT	DEFECT REMEDY PERIOD			INSPECTION AND MEASUREMENT METHOD	MEASUREMENT RECORD	TARGET
				Category 1 Hazard Mitigation	Category 1 Permanent Remedy	Category 2 Permanent Repair			
	4.1 cont.			24 hrs	28 days	6 months	 b) Profile Markings Visual inspection	Length with spread more than 10% of specified dimensions. Length performing its intended function and compliant with relevant regulations	Nil 100%
	4.2	Raised reflective markers	Raised reflective pavement markers are: • clean and clearly visible • of the correct color and type • reflective or retroreflective as TxDOT standard • correctly located, aligned and at the correct level • are firmly fixed • are in a condition that will ensure that they remain at the correct level.	24 hrs	28 days	6 months	Visual inspection	Number of markers associated with road markings that are ineffective in any 10 consecutive markers. (Ineffective includes missing, damaged, settled or sunk) A minimum of four markers should be visible at 80’ spacing when viewed under low beam headlights Uniformity (replacement raised reflective pavement markers have equivalent physical and performance characteristics to adjacent markers).	Nil 100% 100%
	4.3	Delineators & markers	Object markers, mail box markers and delineators are: • clean and visible • of the correct color and type • legible and reflective • straight and vertical	24 hrs	28 days	6 months	Visual inspection	Less than 5% of object markers or delineators defective or missing	100%
5) CURBS, GUARDRAILS, SAFETY BARRIERS AND IMPACT ATTENUATORS									
	5.1	Curbs	Curbs are free of cracks, chips and separation and are in good alignment.	24 hrs	28 days	6 months	Visual inspection Physical measurement 10 feet straight edge will be used to measure each curb alignment	Continuous curb lengths where more than 10% of the length has defects such as cracks and chips Continuous curb lengths where more than 5% of the length has a separation exceeding 0.25" between curb face and adjacent roadway surface Deviation from original alignment greater than 1”	Nil Nil Nil
	5.2	Guard rails and safety barriers	All guardrails, safety barriers, and concrete barriers are maintained free of Defects. They are appropriately placed and correctly installed at the correct height and distance from roadway or obstacles. Installation and repairs shall be carried out in accordance with the requirements of NCHRP 350 standards.	24 hrs	28 days	6 months	Visual inspection	Length of road restraint systems correctly installed Length free from defects Length at correct height Length at correct distance from roadway and obstacle	100% 100% 100% 100%
	5.3	Impact attenuators	All impact attenuators are appropriately placed, correctly installed, and free of damage.	24 hrs	7 days	6 months	Visual inspection	Number correctly placed and installed	100%

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
6) TRAFFIC SIGNS									
	6.1	General – All signs	(i) Signs are clean, correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects (ii) Identification markers are provided, correctly located, visible, clean and legible (iii) Sign mounting posts are vertical, structurally sound and rust free (iv) All break-away sign mounts are clear of silt or other debris that could impede break-away features and shall have correct stub heights (v) Obsolete and redundant signs are removed or replaced as appropriate (vi) Visibility distances meet the stated requirements (vii) Sign information is of the correct size, location, type and wording to meet its intended purpose and any statutory requirements (viii) All structures and elements of the signing system are kept clean and free from debris and have clear access provided. (ix) All replacement and repair materials and equipment are in accordance with the requirements of the TMUTCD	24 hrs	28 days	6 months	a) Retroreflectivity Coefficient of retroreflectivity b) Face damage Visual inspection c) Placement Visual inspection d) Sign Information Visual inspection	Number of signs with reflectivity below the requirements of TxDOT's TMUTCD Number of signs with face damage greater than 5% of area Signs are placed in accordance with TxDOT's Sign Crew Field Book including not twisted or leaning Sign information is of the correct size, location, type and wording to meet its intended purpose	Nil Nil 100% 100%
	6.2	General - Safety critical signs	Requirements as 6.1, Plus: "Stop," "Yield," "Do Not Enter," "One Way" and "Wrong Way" signs are clean legible and undamaged.	2 hrs	7 days	N/A	Visual inspection	Number of damaged safety critical signs	Nil
7) TRAFFIC SIGNALS									
	7.1	General	(i) Traffic Signals and their associated equipment are: • clean and visible • correctly aligned and operational • free from damage caused by accident or vandalism (ii) Signal timing and operation is correct (iii) Contingency plans are in place to rectify Category 1 defects not immediately repairable to assure alternative traffic control is provided during a period of failure	2 hrs	24 hrs	6 months	a) General condition Visual inspection b) Damage Visual inspection c) Signal timing Timed measurements d) Contingency plans Records review	Signals are clean and visible Signals are undamaged Installations have correct signal timings Full contingency plans are in place	100% 100% 100% 100%

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
	7.2	Soundness	Traffic signals are structurally and electrically sound	24 hrs	28 days	6 months	a) Structural soundness Visual inspection b) Electrical soundness Testing to meet NEC regulations	Inspection records showing safe installation and maintenance	100% 100%
	7.3	Identification marking	Signals have identification markers and the telephone number for reporting faults are correctly located, clearly visible, clean and legible	N/A	28 days	6 months	Visual inspection	Inspection records showing identification markers and other information are easily readable	100%
	7.4	Pedestrian elements and vehicle detectors	All pedestrian elements and vehicle detectors are correctly positioned and fully functional at all times	24 hrs	28 days	6 months	Visual Inspection	Inspection records showing compliance	100%
8) LIGHTING									
	8.1	Roadway lighting – General	(i) All lighting is free from defects and provides acceptable uniform lighting quality (ii) Lanterns are clean and correctly positioned (iii) Lighting units are free from accidental damage or vandalism (iv) Columns are upright, correctly founded, visually acceptable and structurally sound	24 hrs	28 days	6 months	a) Mainlane lights operable Night time inspection or automated logs b) Mainlane lights out of action Night time inspection or automated logs	Performance Sections with less than 90% of lights functioning correctly at all times Instances of more than two consecutive lights not functioning	Nil Nil
	8.2	Sign lighting	Sign lighting is fully operational	24 hrs	28 days	6 months	Night time inspection or automated logs	Instances of more than one bulb per sign not working	Nil
	8.3	Electrical supply	Electricity supply, feeder pillars, cabinets, switches and fittings are electrically, mechanically and structurally sound and functioning	24 hrs	7 days	28 days	Testing to meet NEC regulations, visual inspection	Inspection records showing safe installation and maintenance	100%
	8.4	Access panels	All access panels in place at all times.	24 hrs	7 days	28 days	Visual inspection	Instances of missing access panels	Nil
	8.5	High mast lighting	(i) All high mast luminaries functioning on each pole (ii) All obstruction lights are present and working (if required) (iii) Compartment door is secure with all bolts in place (iv) All winch and safety equipment are correctly functioning and maintained without rusting or corrosion (for structural requirements refer to Maintenance Element Category 3)	24 hrs	7 days	28 days	Night time inspections or automated logs	Instances of two or more lamps not working per high mast pole Identification of other defects	Nil Nil
9) FENCES, WALLS AND SOUND ABATEMENT									
	9.1	Design and location	Fences and walls act as designed and serve the purpose for which they were intended	24 hrs	28 days	6 months	Visual inspection	Inspection records showing compliance in each Performance Section	100%
	9.2	Construction - fences	Integrity and structural condition of the fence is maintained	24 hrs	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance in each Performance Section	100%
	9.3	Construction - walls	Integrity and structural condition of the walls are maintained	24 hrs	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance in each Performance Section	100%

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
	9.4	Operation	Fences, Walls, and Sound Abatement elements free of: • blocked weep holes • undesirable vegetation • defects in joint sealants • defects in pedestrian protection • scour damage • corrosion of reinforcing bars • paint system failure • concrete spalling • impact damage	24 hrs	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance in each Performance Section	100%
10) ROADSIDE MANAGEMENT									
	10.1	Vegetated areas – Except landscaped areas – General	Vegetation is maintained so that: (i) Height of grass and weeds is kept within the limits described for rural areas. Mowing begins before vegetation reaches the maximum height. (ii) Spot mowing at intersections, ramps or other areas maintains visibility of appurtenances and sight distance. (iii) Grass or vegetation does not encroach into or on paved shoulders, mainlanes, sidewalks, islands, riprap, traffic barrier or curbs. (iv) A herbicide program is undertaken in accordance with the TxDOT Herbicide Manual to control noxious weeds and to eliminate grass in pavement or concrete. (v) A full width mowing cycle is completed after the first frost (vi) Wildflowers are preserved utilizing the guidelines in the mowing specifications and TxDOT Roadside Vegetation Manual.	24 hrs	7 days	28 days	a) Rural areas Physical measurement of height of grass and weeds b) Encroachment Visual inspection of instances of encroachment of vegetation c) Wildflowers Visual inspection with audit of process. d) Sight lines Visual inspection	Individual measurement areas to have 95% of height of grass and weeds between 5” and 30” Occurrences of vegetation encroachment in each Performance Section Adherence to vegetation management manuals Instances of impairment of sight lines or sight distance to signs	100% Nil 100% Nil
	10.2	Landscaped areas	(i) All landscaped areas are maintained to their originally constructed condition. Landscaped areas are as designated in the Plans. (ii) Mowing, litter pickup, irrigation system maintenance and operation, plant maintenance, pruning, insect, disease and pest control, fertilization, mulching, bed maintenance, watering is undertaken as per MMP. (iii) The height of grass and weeds is kept between 2“ and 8”. Mowing begins before vegetation reaches 8” (iv) Damaged or dead vegetation is replaced.	24 hrs	7 days	28 days	Visual inspection	Inspection records showing compliance	100%
	10.3	Fire hazards	Fire hazards are controlled	24 hrs	7 days	28 days	Visual inspection	Instances of dry brush or vegetation forming fire hazard	Nil

Performance and Measurement Table

MAINTENANCE ELEMENT CATEGORY	REF	MAINTENANCE ELEMENT	PERFORMANCE REQUIREMENT	DEFECT REMEDY PERIOD			INSPECTION AND MEASUREMENT METHOD	MEASUREMENT RECORD	TARGET
				Category 1 Hazard Mitigation	Category 1 Permanent Remedy	Category 2 Permanent Repair			
	10.4	Trees, brush and ornamentals	(i) Trees, brush and ornamentals on the right of way, except in established no mow areas, are trimmed in accordance with TxDOT standards. (ii) Trees, brush and ornamentals are trimmed to insure they do not interfere with vehicles or sight distance, or inhibit the visibility of signs. (iii) Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed. (iv) All undesirable trees and vegetation are removed. Diseased trees or limbs are treated or removed by licensed contractors.	24 hrs	7 days	28 days	Visual inspection	Inspection records showing compliance	100%
	10.5	Wetlands	Wetlands are managed in accordance with the permit requirements	24 hrs	7 days	28 days	Visual inspection, assessment of permit issuers	Instances of permit requirements not met	Nil
	10.6	Sidewalks and pedestrian curb ramps	Maintain at a standard to be free of defects as follows: (i) unsealed cracks or joints (ii) broken sections (iii) vertical displacement or misalignment	24 hrs	7 days	28 days	Visual inspection	Inspection records showing compliance with TxDOT Design Standards and Americans with Disabilities Act (ADA) requirements.	100%
11) REST AREAS AND PICNIC AREAS (Not Used)									
12) EARTHWORKS, EMBANKMENTS AND CUTTINGS									
	12.1	Slope failure	All structural or natural failures of the embankment and cut slopes of the Project are repaired	24 hrs	28 days	6 months	Visual inspection by geotechnical specialist and further tests as recommended by the specialist	Recorded instances of slope failure	Nil
	12.2	Slopes - General	Slopes are maintained in general conformance to the original graded cross-sections, the replacement of landscaping materials, reseeding and re-vegetation for erosion control purposes and removal and disposal of all eroded materials from the roadway and shoulders	24 hrs	28 days	6 months	Visual inspection	Inspection records showing compliance	100%
	12.3	Slopes – Erosion	Slopes are maintained to prevent erosion leading to further deterioration	24 hrs	28 days	3 months	Visual inspection	Length of erosion greater than six inches (> 6") deep	Nil
	12.4	Slopes - Permanent Erosion Control Measures	Where permanent erosion control measures such as rock or concrete riprap are utilized: repair undermined or damaged erosion control measures	24 hrs	28 days	3 months	Visual inspection	Inspection records showing compliance	100%

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
13) ITS EQUIPMENT									
	13.1	ITS Equipment	All ITS equipment is fully functional and housing is functioning and free of defects. (i) All equipment and cabinet identification numbers are visible, sites are well drained and access is clear (ii) Steps, handrails and accesses are kept in a good condition (iii) Access to all communication hubs, ground boxes, cabinets and sites is clear (iv) All drainage is operational and all external fixtures and fittings are in a satisfactory condition (v) All communication cable markers, cable joint markers and duct markers are visible and missing markers are replaced (vi) Backup power supply system is available at all times	24 hrs	14 days	28 days	Visual inspection	Inspection records showing compliance with requirements for maintenance of ITS equipment in each Performance Section.	100%
	13.2	Dynamic message sign equipment	Dynamic message signs are free from faults such as: (i) Any signal displaying a message which is deemed to be a safety hazard (ii) Failure of system to clear sign settings when appropriate. (iii) 2 or more contiguous sign failures that prevent control office setting strategic diversions (iv) Signs displaying an incorrect message.	2 hrs	24 hrs	14 days	Defect measurement dependent on equipment	Inspection records showing compliance	100%
	13.3	CCTV equipment	CCTV Systems are free from faults that limit the availability of the operators to monitor the area network, such as: (i) Failure of CCTV Systems to provide control offices with access and control of CCTV images (ii) Failure of a CCTV camera or its video transmission system. (iii) Failure of a pan / tilt unit or its control system. (iv) Moisture ingress onto CCTV camera lens (v) Faults that result in significant degradation of CCTV images	2 hrs	24 hrs	14 days	Defect measurement dependent on equipment	Inspection records showing compliance	100%
	13.4	Vehicle detection equipment	All equipment free of defects and operational problems such as; (i) Inoperable loops. (ii) Malfunctioning camera controllers.	2 hrs	24 hrs	28 days	Defect measurement dependent on equipment Traffic detector loops: Loop circuit's inductance to be > 50 and < 1,000 micro henries. Insulation resistance to be > 50 meg ohms.	Inspection records showing compliance Instances of loops out of compliance	100% Nil
14) TOLLING Facilities and Buildings (Not Used)									

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
15) AMENITY									
	15.1	Graffiti	Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces	4 hrs	7 days	N/A	All graffiti is considered a Category 1 defect.	Inspection records showing compliance	100%
	15.2	Animals	All dead or injured animals are removed	2 hrs	N/A	N/A	Visual inspection	No dead or injured animals are present	100%
	15.3	Abandoned vehicles and equipment	All abandoned vehicles and equipment are removed	1 hr	3 days	N/A	Visual inspection	No abandoned vehicles or equipment present	100%
16) SNOW AND ICE CONTROL									
	16.1	Travel lanes	Maintain travel way free from snow and ice	1 hr or 2 hrs as noted.	N/A	N/A	Maximum 1 hr response time to complete manning and loading of spreading vehicles Maximum 2 hrs from departure from loading point to complete treatment and return to loading point Maximum 1 hr response time for snow and ice clearance vehicles to depart from base	Inspection records showing compliance	100%
	16.2	Weather forecasting	Weather forecast information is obtained and assessed and appropriate precautionary treatment is carried out to prevent ice forming on the travel way	2 hrs	N/A	N/A	MMP and SICP details the process and procedures in place and followed	Inspection records showing compliance	100%
	16.3	Operational plans	Operate snow and ice clearance plans to maintain traffic flows during and after precipitation resulting in snowfall or ice and restore the travel way to a clear condition as soon as possible.	2 hrs	N/A	N/A	MMP and SICP details the process and procedures in place and followed	Inspection records showing compliance	100%
17) INCIDENT RESPONSE									
	17.1	General	Respond to Incidents in accordance with the MMP and IEMP.	1 hr	N/A	N/A	Response times met for 98% of Incidents measured on a 1 year rolling basis. No complaints from Emergency Services.	Inspection records showing compliance	100%
	17.2	Hazardous Materials	For any Hazardous Materials spills, comply with the requirements of the MMP.	1 hr	N/A	N/A	MMP details the process and procedures in place and followed.	Inspection records showing compliance	100%
	17.3	Structural assessment	Evaluate structural damage to structures and liaise with Emergency Services to ensure safe working in clearing the Incident	1 hr	N/A	N/A	Inspections and surveys as required by Incident	Inspection reports showing compliance	100%
	17.4	Temporary and permanent remedy	Propose and implement temporary measures and permanent remedies or repairs to Defects arising from the Incident. Ensure the structural safety of any structures affected by the Incident	24 hrs	28 days	N/A	Review and inspection of the Incident site	Performance Section inspection records showing compliance	100%
18) CUSTOMER RESPONSE									

Performance and Measurement Table									
MAINTENANCE ELEMENT CATEGORY	**REF**	**MAINTENANCE ELEMENT**	**PERFORMANCE REQUIREMENT**	**DEFECT REMEDY PERIOD**			**INSPECTION AND MEASUREMENT METHOD**	**MEASUREMENT RECORD**	**TARGET**
				Category 1 Hazard Mitigation	**Category 1 Permanent Remedy**	**Category 2 Permanent Repair**			
	18.1	Response to inquiries	Timely and effective response to customer inquiries and complaints.	48 hrs	14 days	N/A	Contact the customer within 48 hours following initial customer inquiry. All work resulting from customer requests is scheduled within 48 hours of customer contact. Follow-up contact with the customer within 72 hours of initial inquiry. All customer concerns/requests are resolved to TxDOT's satisfaction within 2 weeks of the initial inquiry.	Number of responses within specified times	100%
	18.2	Customer contact line	Telephone line manned during business hours and 24 hour availability of messaging system. Faults to telephone line or message system rectified	24 hrs	N/A	N/A	Instances of line out of action or unmanned	Operations records showing non availability including complaints from public.	nil
19) SWEEPING AND CLEANING									
	19.1	Obstructions and debris	Roadway and clear zone free from obstructions and debris including at a minimum objects, luminaire poles, and tires.	2 hrs	N/A	N/A	Visual Inspection	Number of obstructions and debris	Nil
	19.2	Sweeping	(i) Keep all channels, hard shoulders, gore areas, ramps, intersections, islands and frontage roads swept clean, (ii) Clear and remove debris from traffic lanes, hard shoulders, verges and central reservations, footways and cycle ways (iii) Remove all sweepings without stockpiling in the right of way and dispose of at approved tip.	24 hrs	3 days	N/A	Buildup of dirt, ice rock, debris, etc. on roadways and bridges not to accumulate greater than 24" wide or 1/2" deep	Inspection records showing compliance	100%
	19.3	Litter	(i) Keep the Project in a neat condition, remove litter regularly (ii) Pick up large litter items before mowing operations. (iii) Dispose of all litter and debris collected at an approved solid waste site.	24 hrs	3 days	N/A	No more than 20 pieces of litter per roadside mile shall be visible when traveling at highway speed.	Inspection records showing compliance	100%

NOTES FOR PERFORMANCE AND MEASUREMENT TABLE

[1] "Category 1 Hazard Mitigation" shall be an action taken by DB Contractor to mitigate a hazard to Users or imminent risk of damage or deterioration to property or the environment.

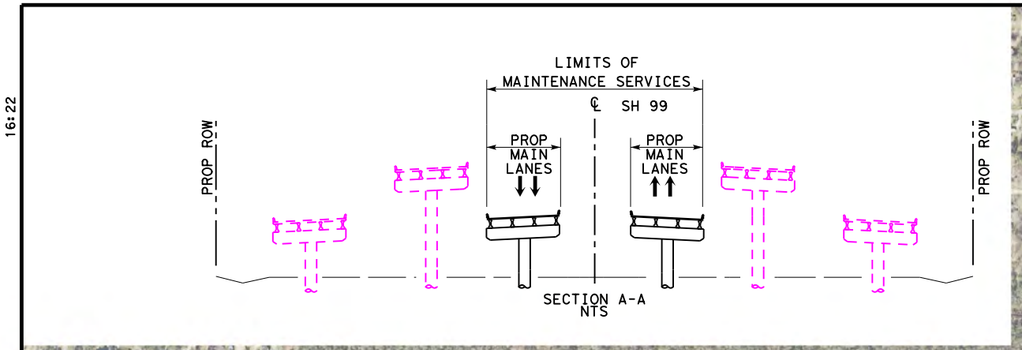
[2] "Category 1 Permanent Remedy" shall be an action taken by DB Contractor to restore the condition of a Maintenance Element following "Category 1 Hazard Mitigation" of a Category 1 Defect: (a) to the standard required for new construction / Renewal Work; or (b) to a condition such that the Target is achieved for each Measurement Record.

[3] "Category 2 Permanent Repair" shall be an action taken by DB Contractor to restore the condition of a Maintenance Element for which a Category 2 Defect has been recorded: (a) to the standard required for new construction / Renewal Work; or (b) to a condition such that the Target is achieved for each Measurement Record.

ATTACHMENT 2: NOT USED

ATTACHMENT 3: MAINTENANCE LIMITS

[SEE ATTACHED]



NOTE: I-69/ US 59 GENERAL PURPOSE LANES AND FRONTAGE ROADS TO BE OPERATED AND MAINTAINED BY TxDOT

BEGIN PROJECT STA 1016+60

1000+00

1050+00

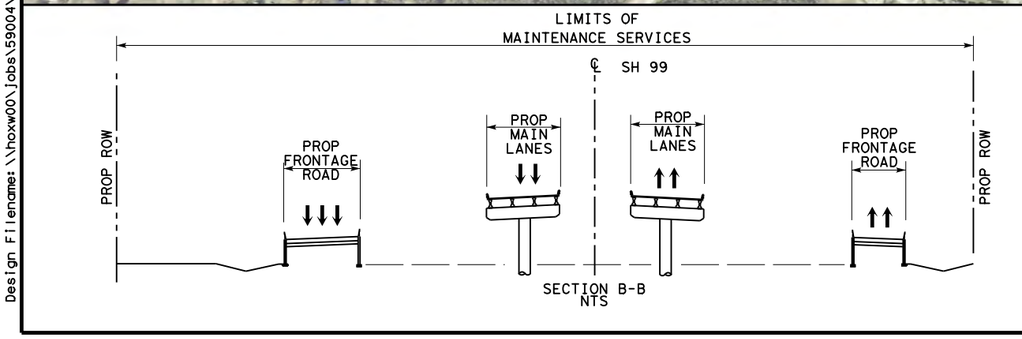
PROP ROW

US 59

A

B

MATCH LINE STA 1070+00



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

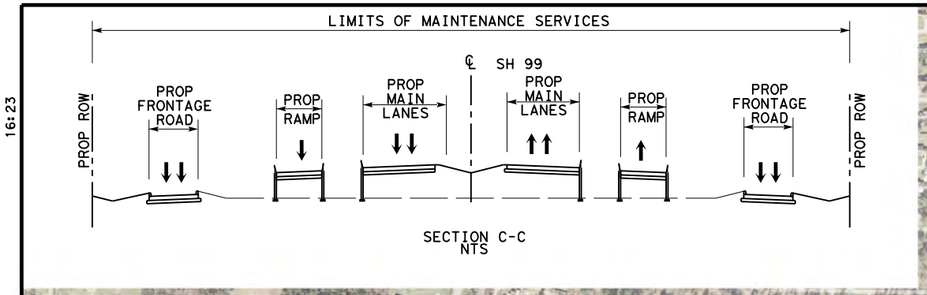
0 200 400 800 (H)

Texas Department of Transportation

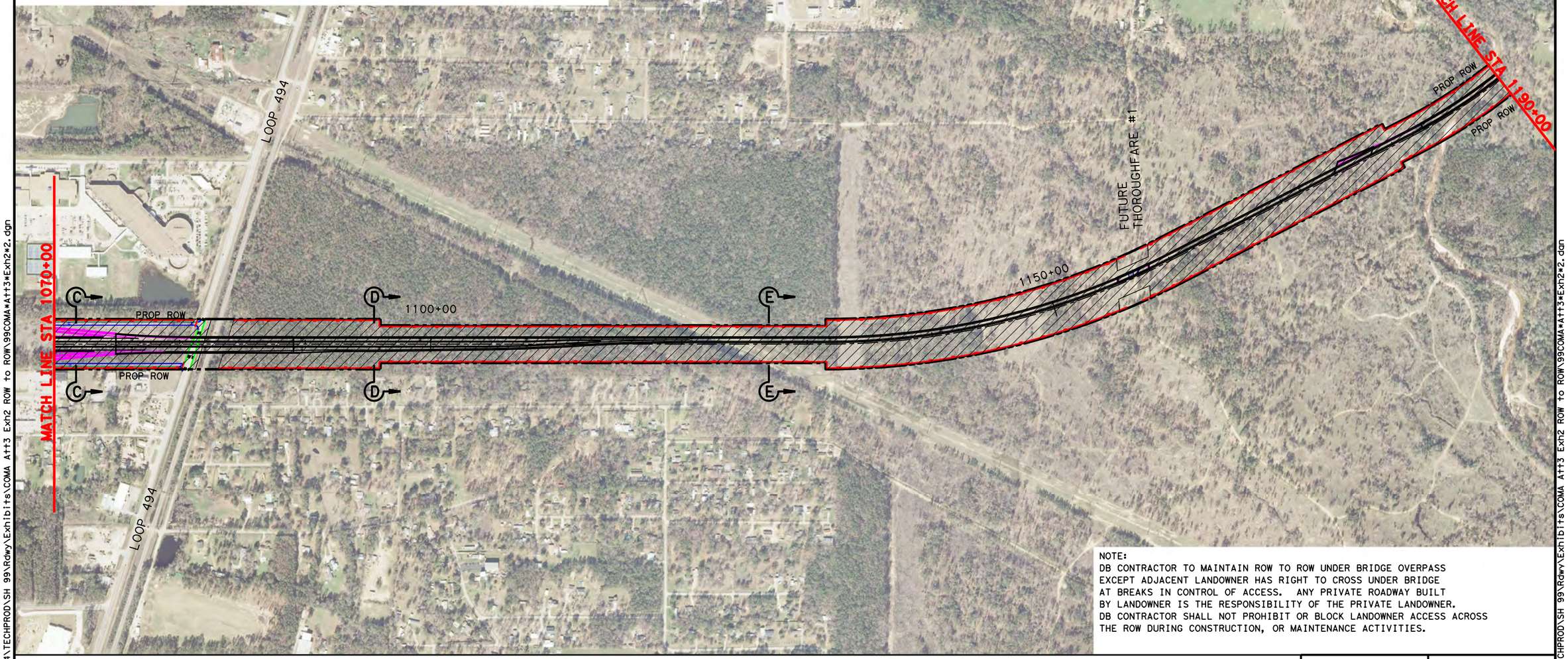
STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						1



SECTION C-C
NTS



NOTE:
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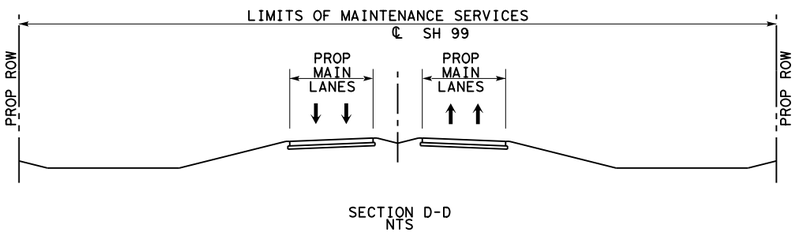
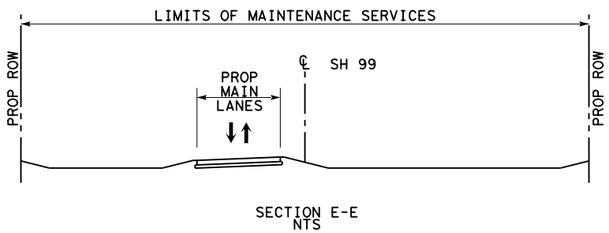


SECTION D-D
NTS



SECTION E-E
NTS

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						2

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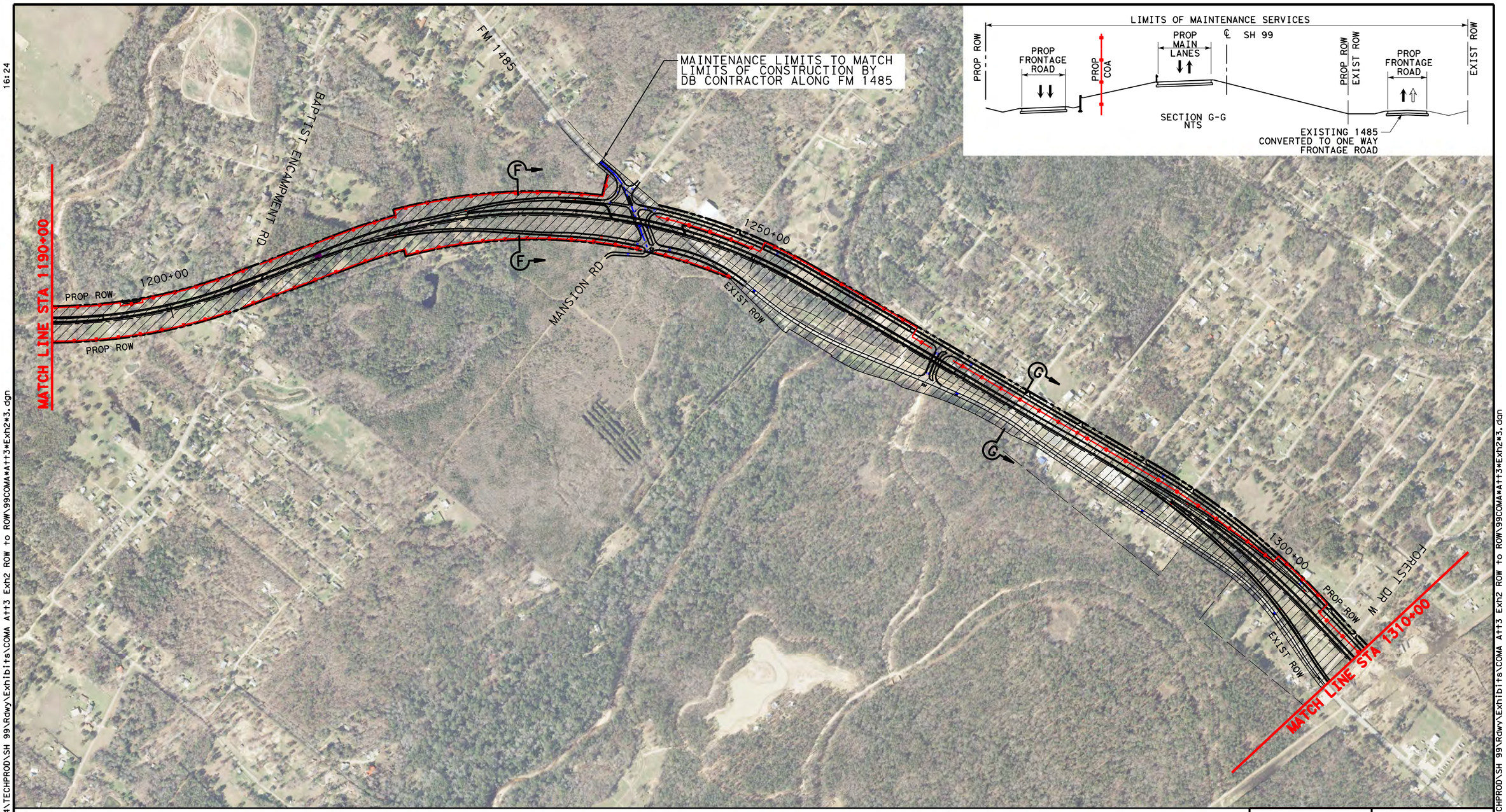

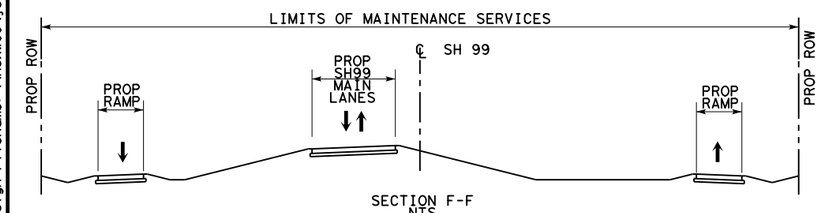

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
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Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
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DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						3

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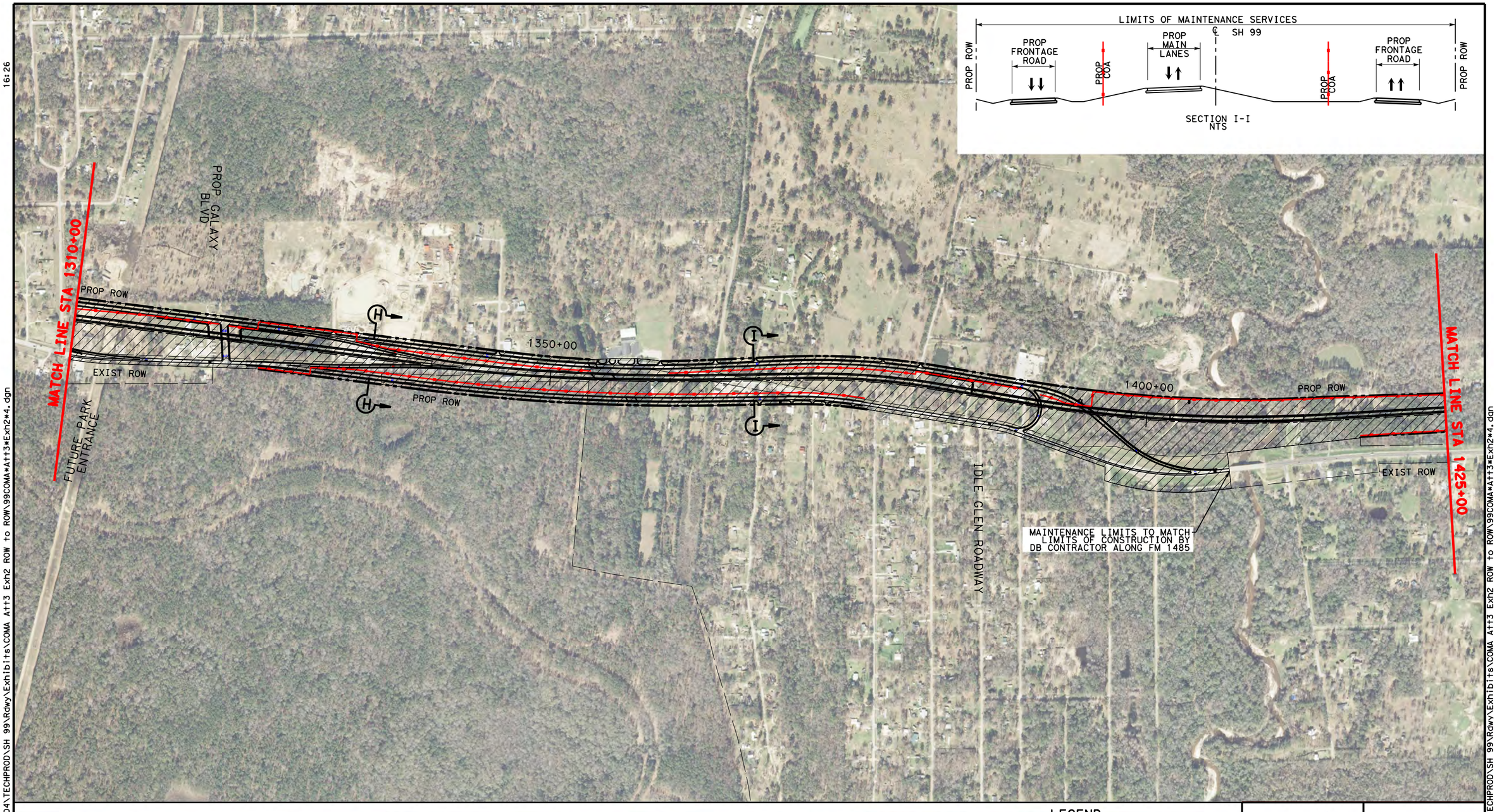
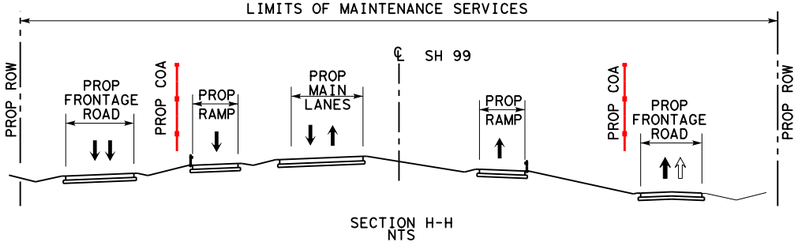
dmallon





LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						4

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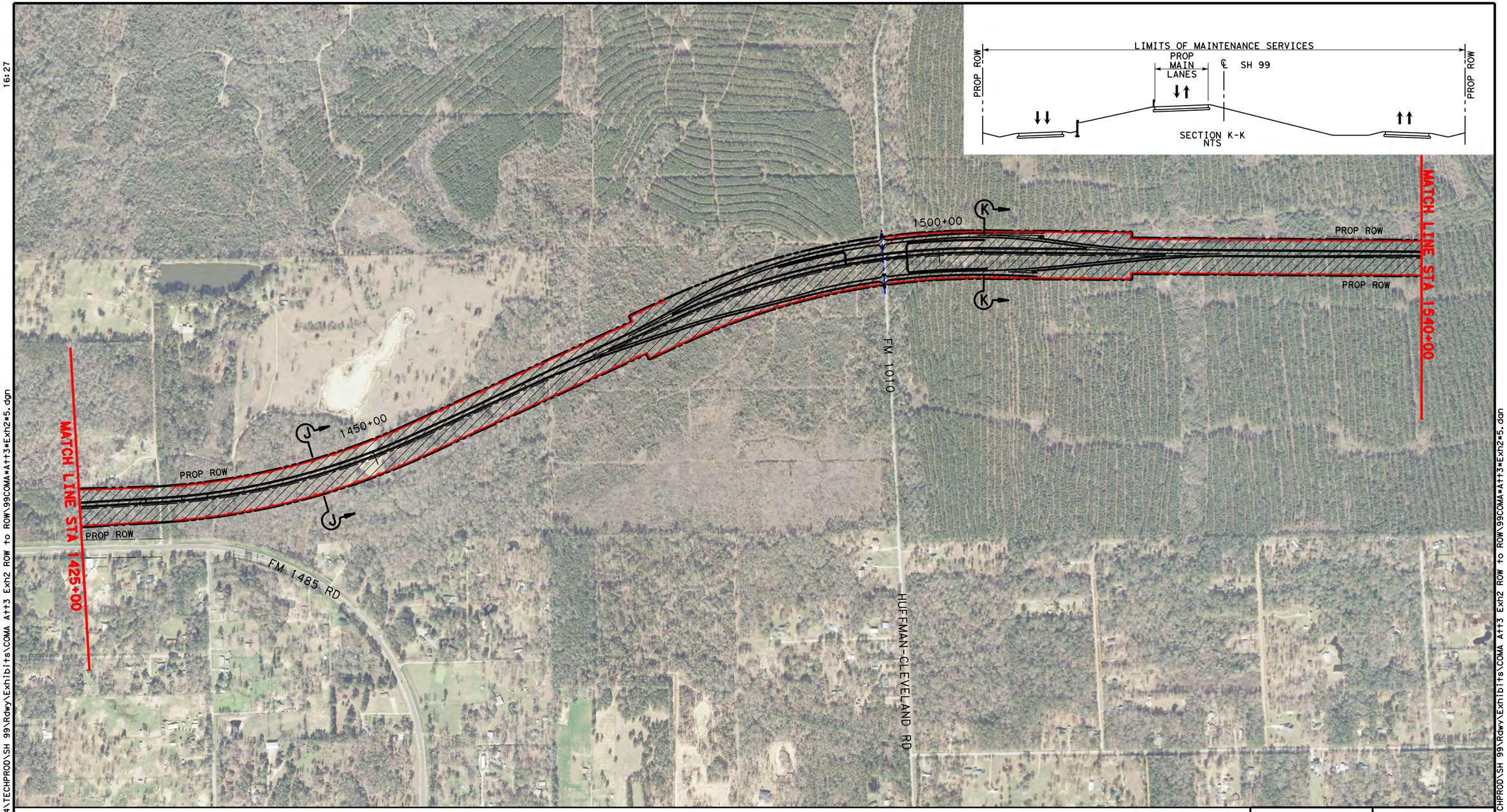

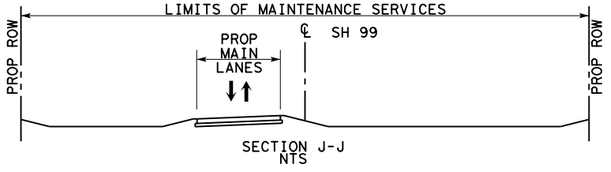

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						5

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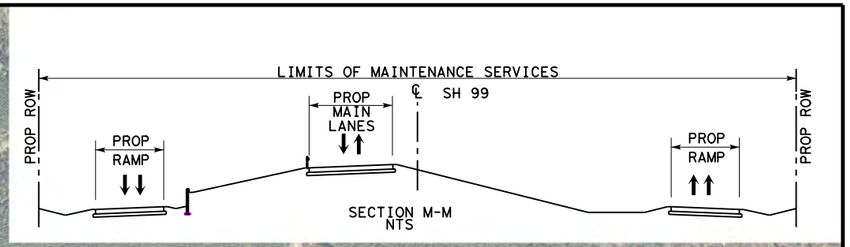

FUTURE MILLER-WILSON

1600+00

1550+00

PROP ROW

PROP ROW

MATCH LINE STA 1540+00

PROP ROW

1650+00

PROP ROW

MATCH LINE STA 1655+00

NOTE:
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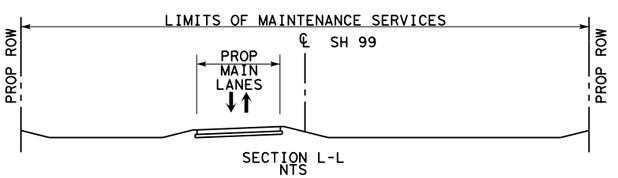

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
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- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						6

dmallon
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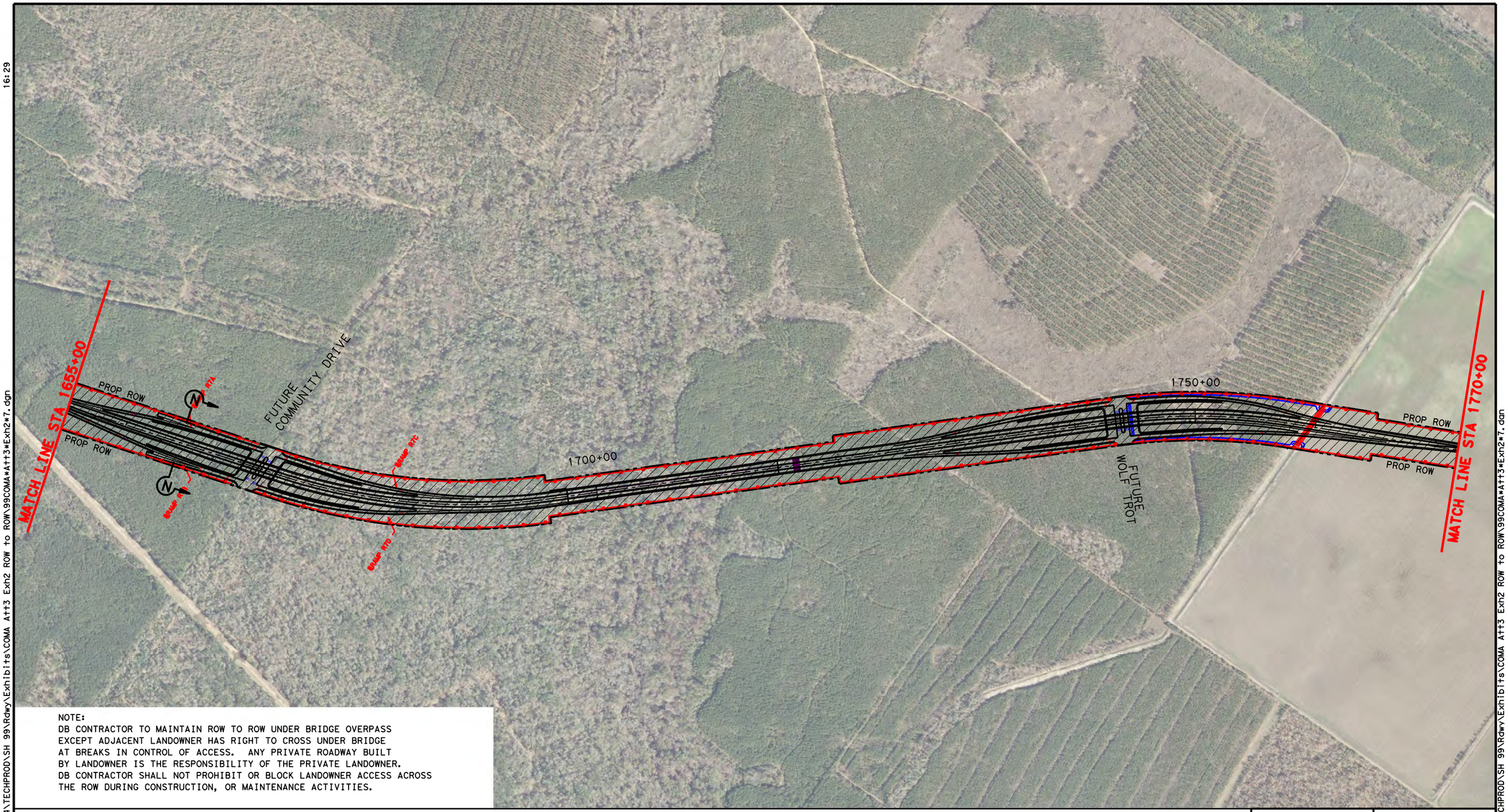

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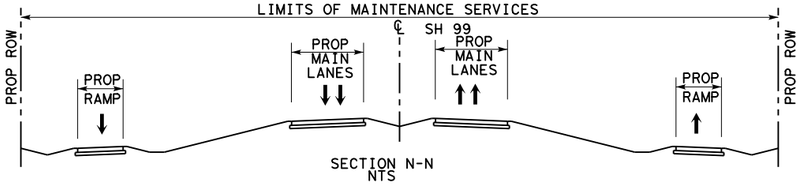

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
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- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						7

dnallion
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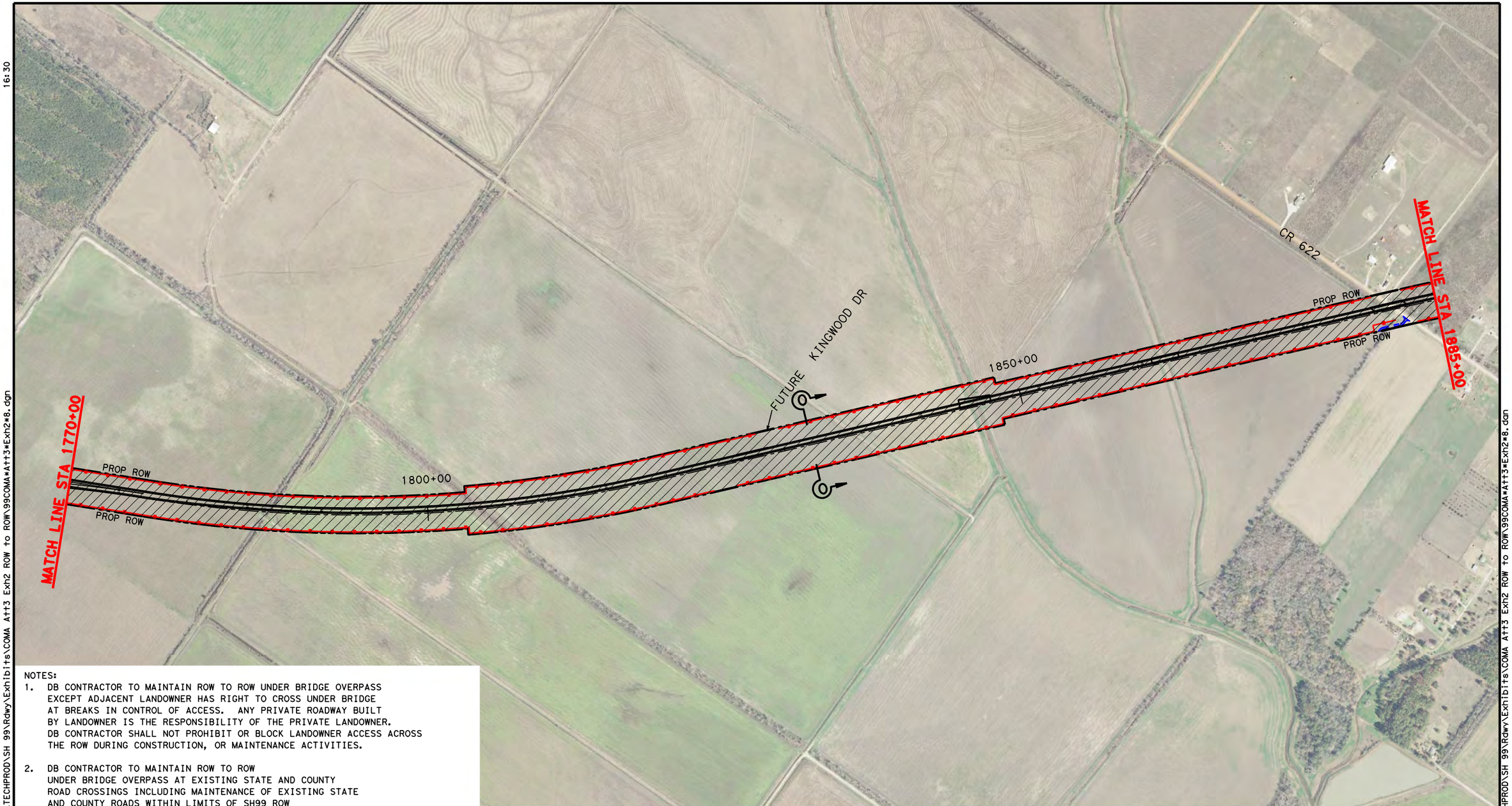
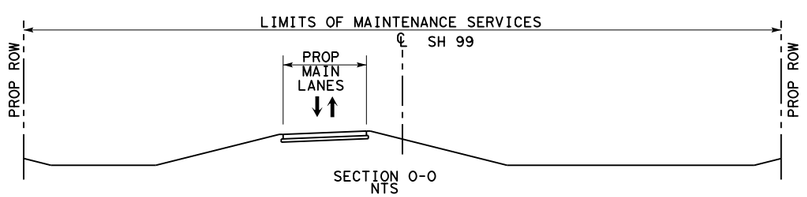


NOTES:
1. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.

2. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE AND COUNTY ROADS WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
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- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						8

dnallion
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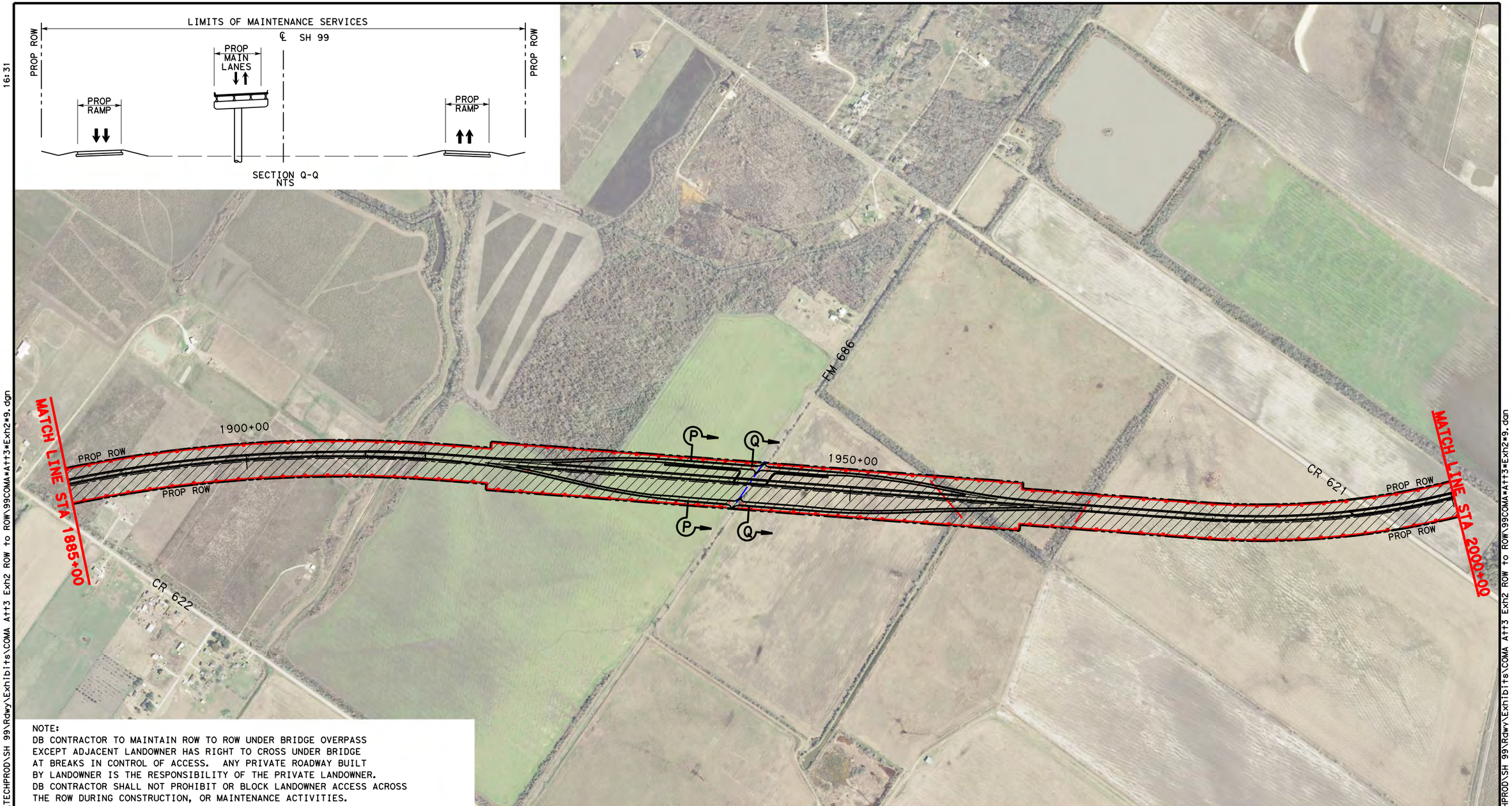

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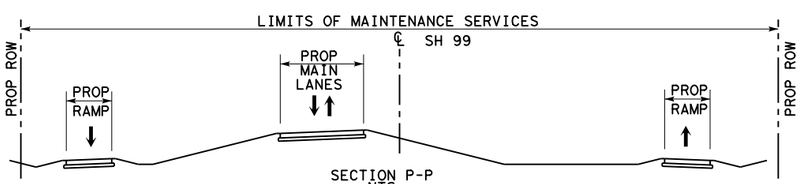

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
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Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

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CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						9

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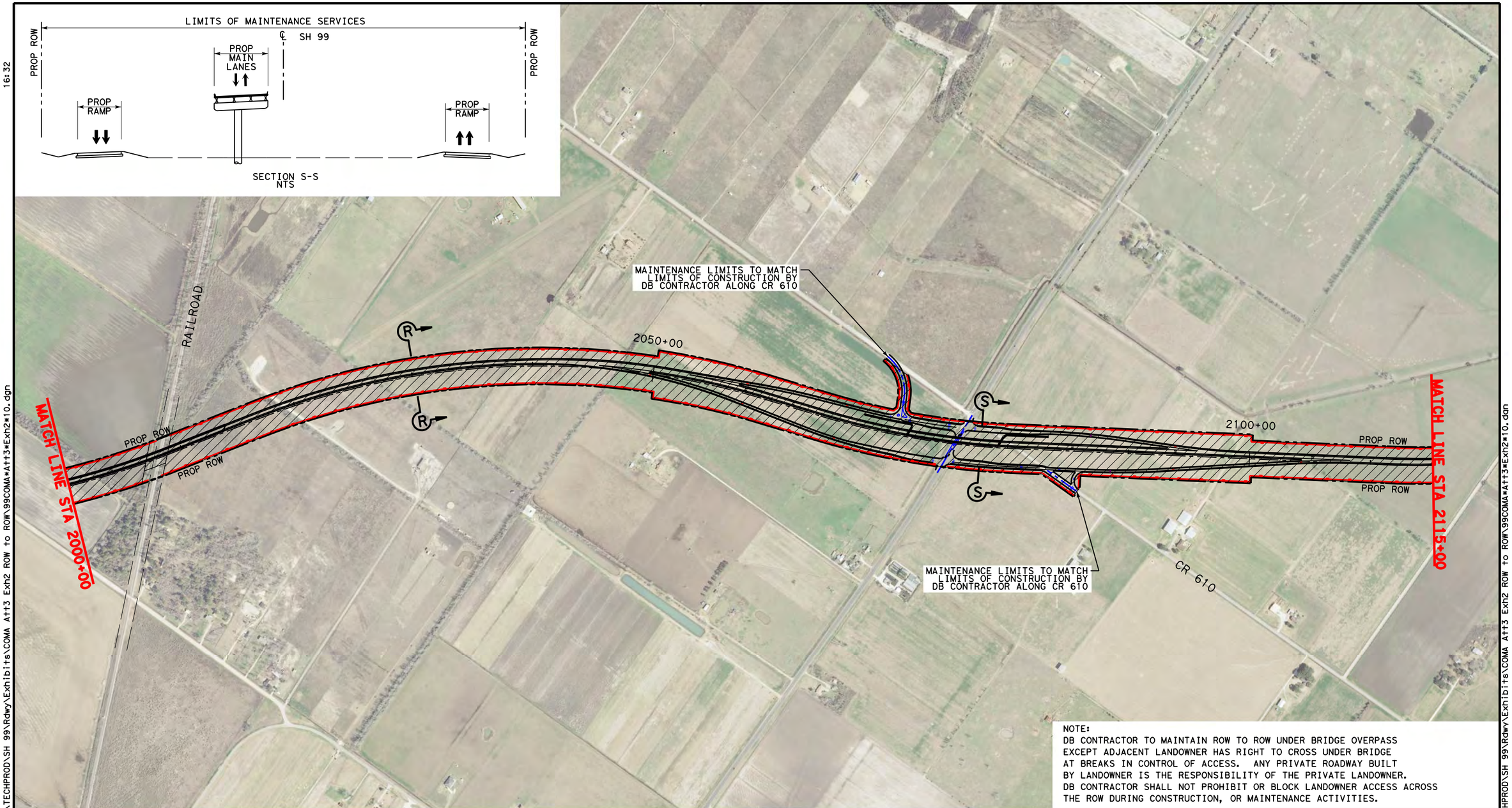

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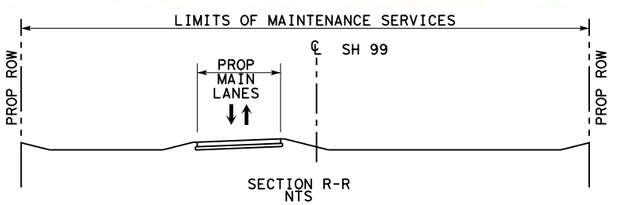

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
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- PROPOSED GRAND PARKWAY BY OTHERS

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Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						10

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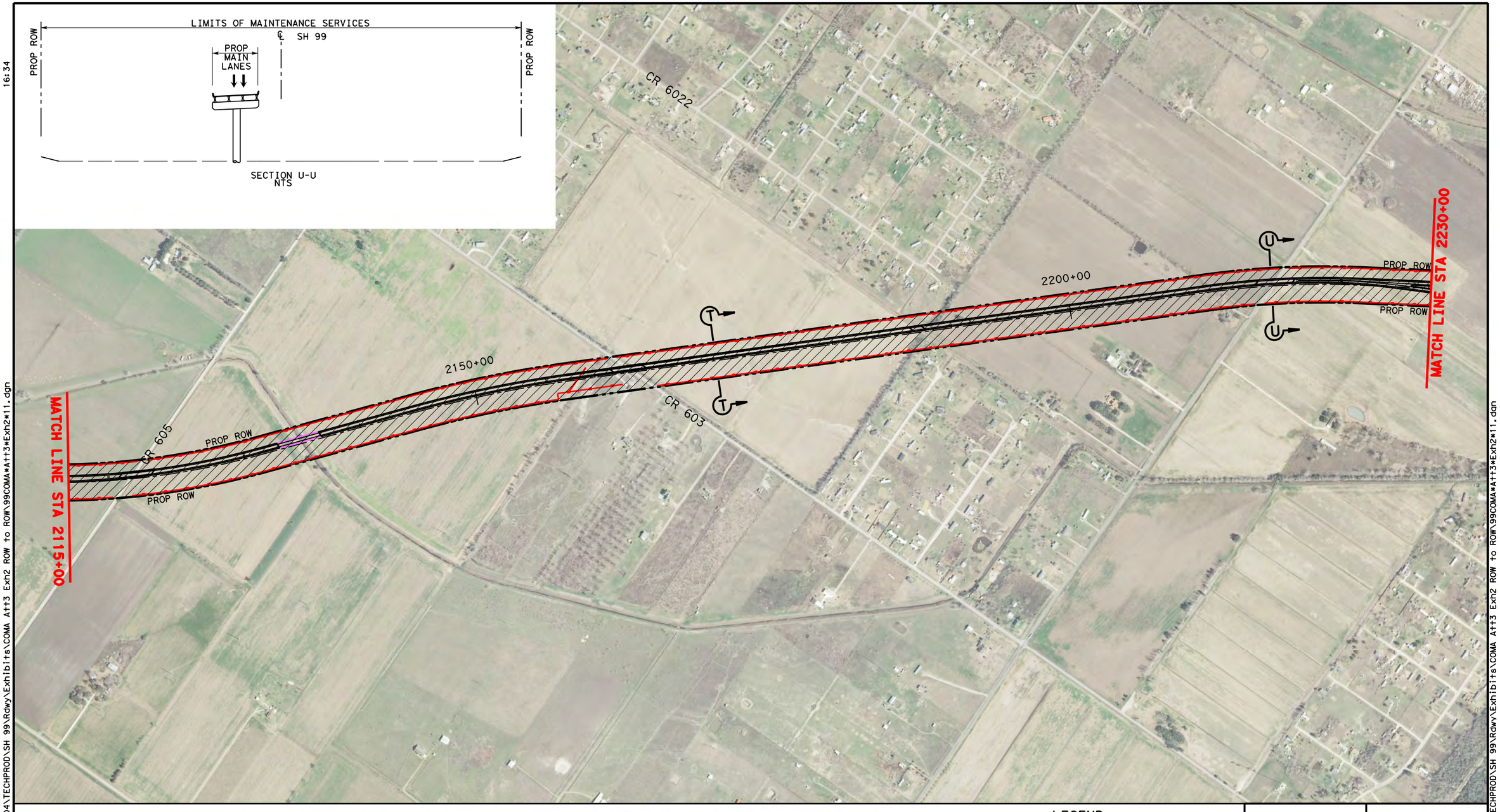

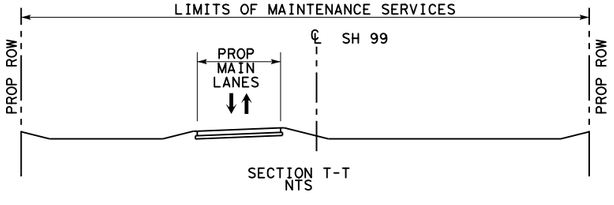

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						11

dmaillon
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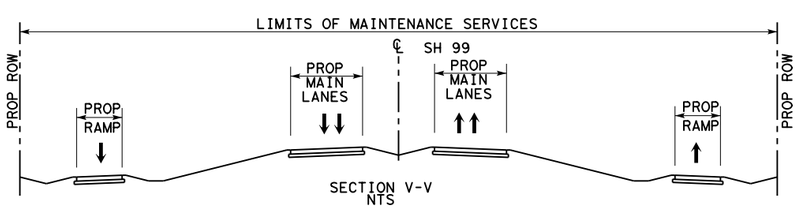
NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING
STATE, AND COUNTY ROAD WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						12

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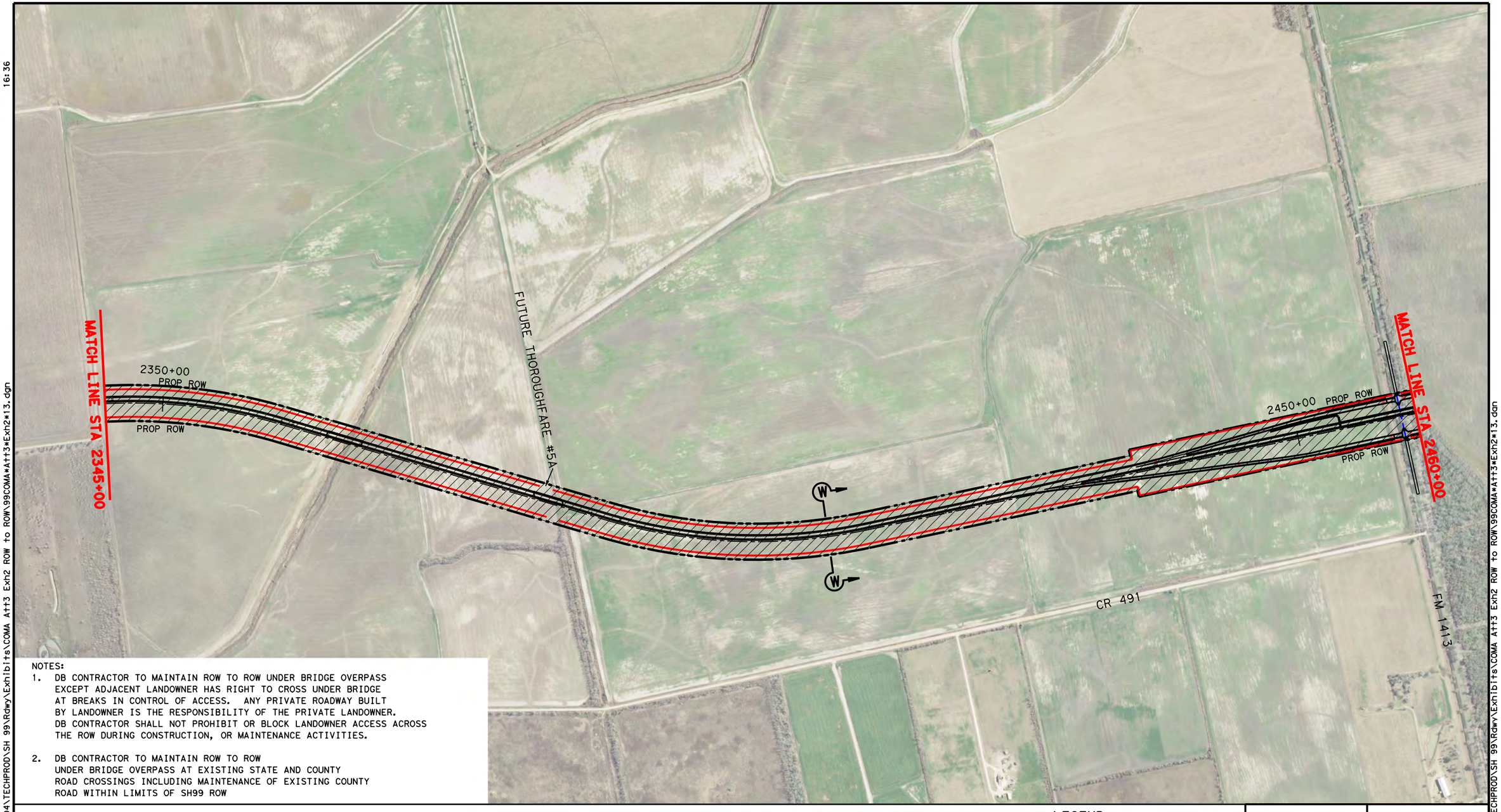
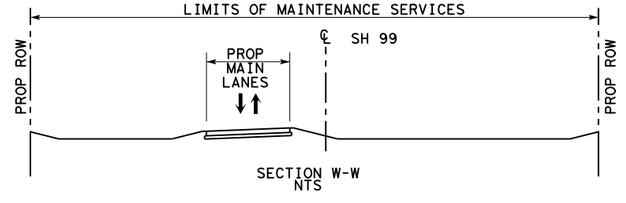


NOTES:

1. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.

2. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING COUNTY ROAD WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						13

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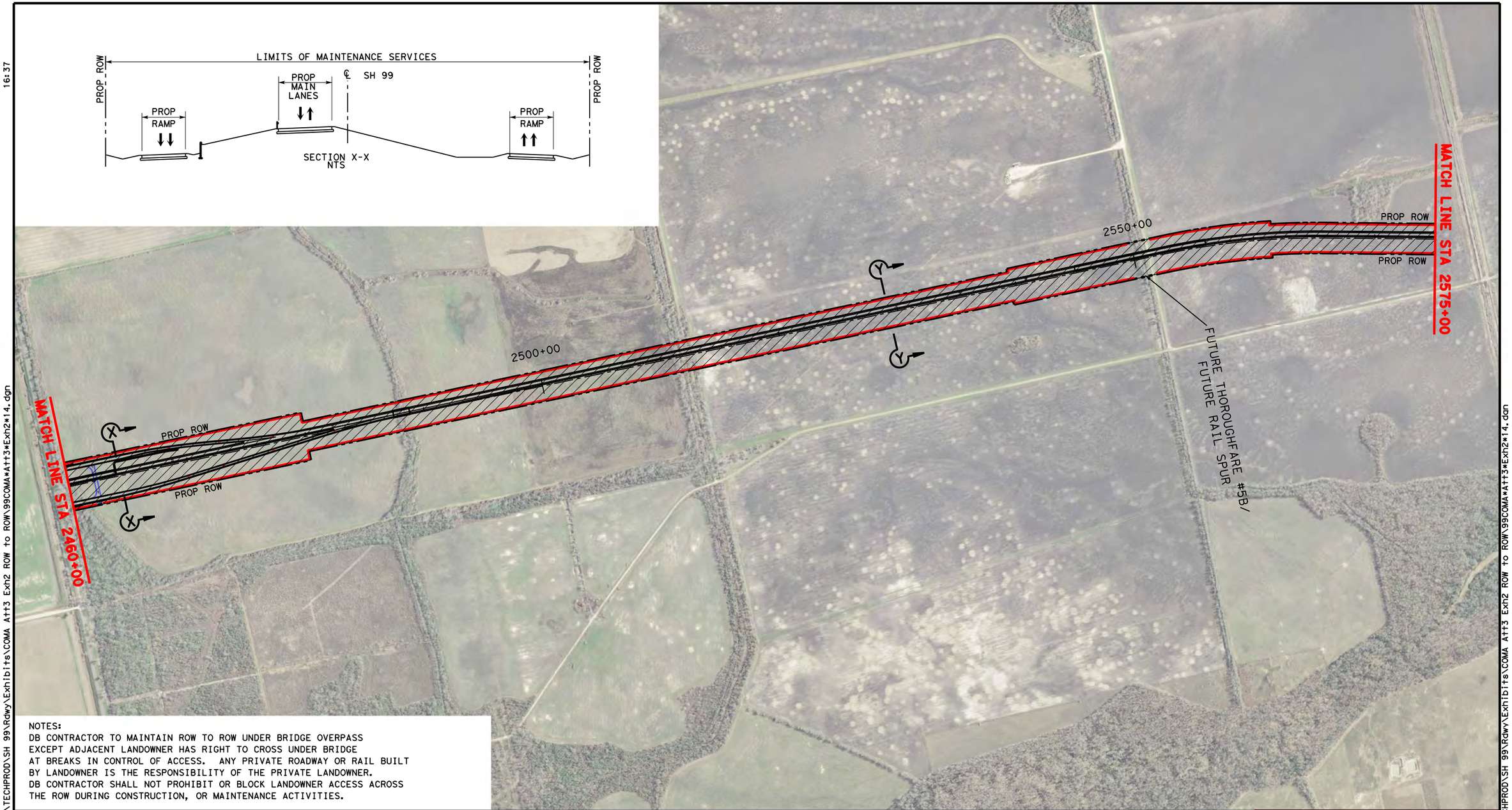
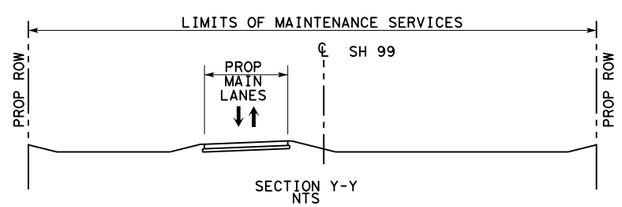


NOTES:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY OR RAIL BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER.
DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						14

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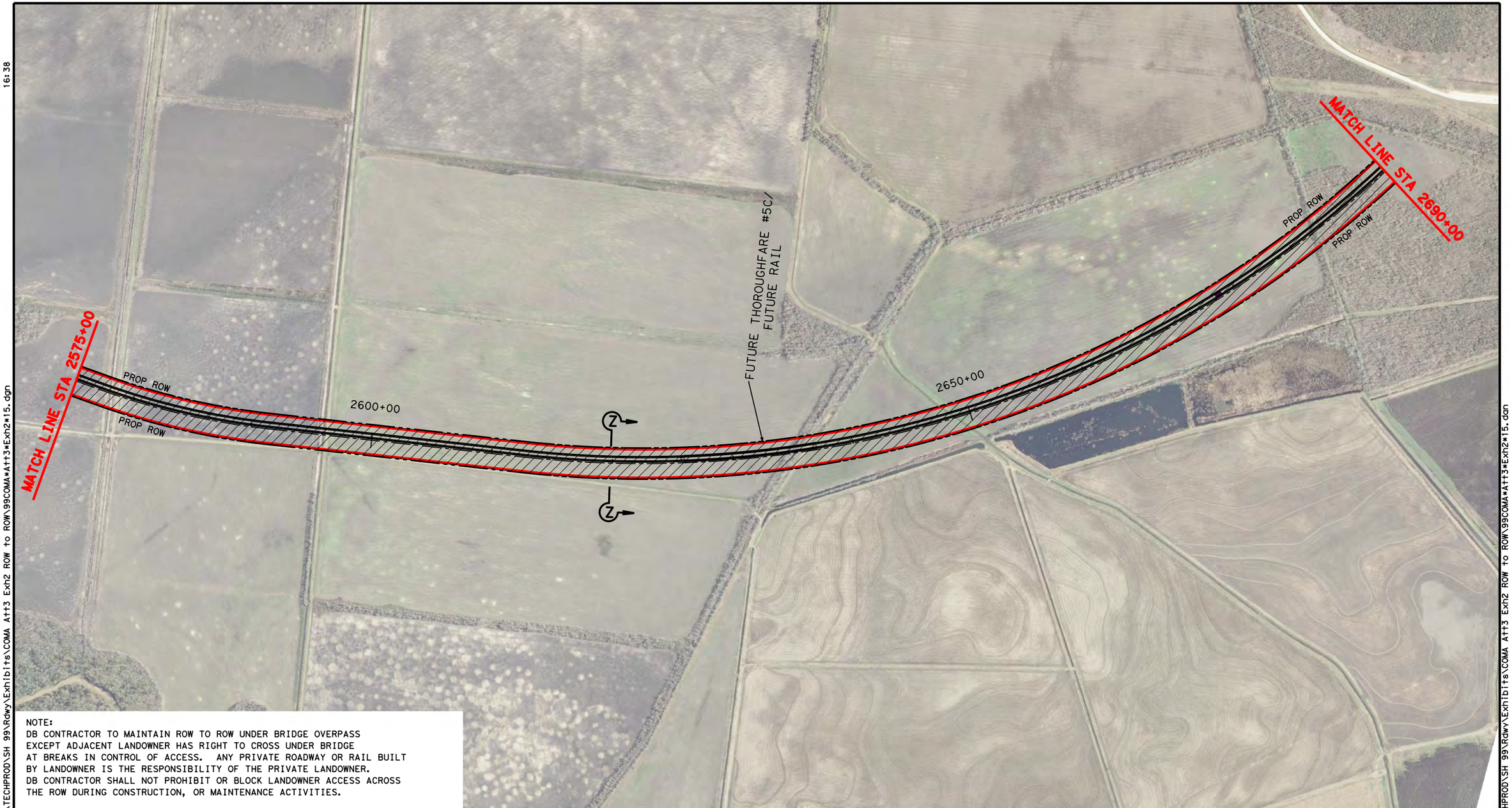
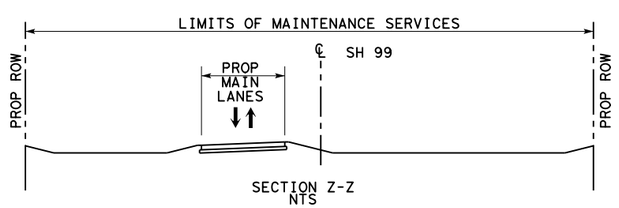


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY OR RAIL BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						15

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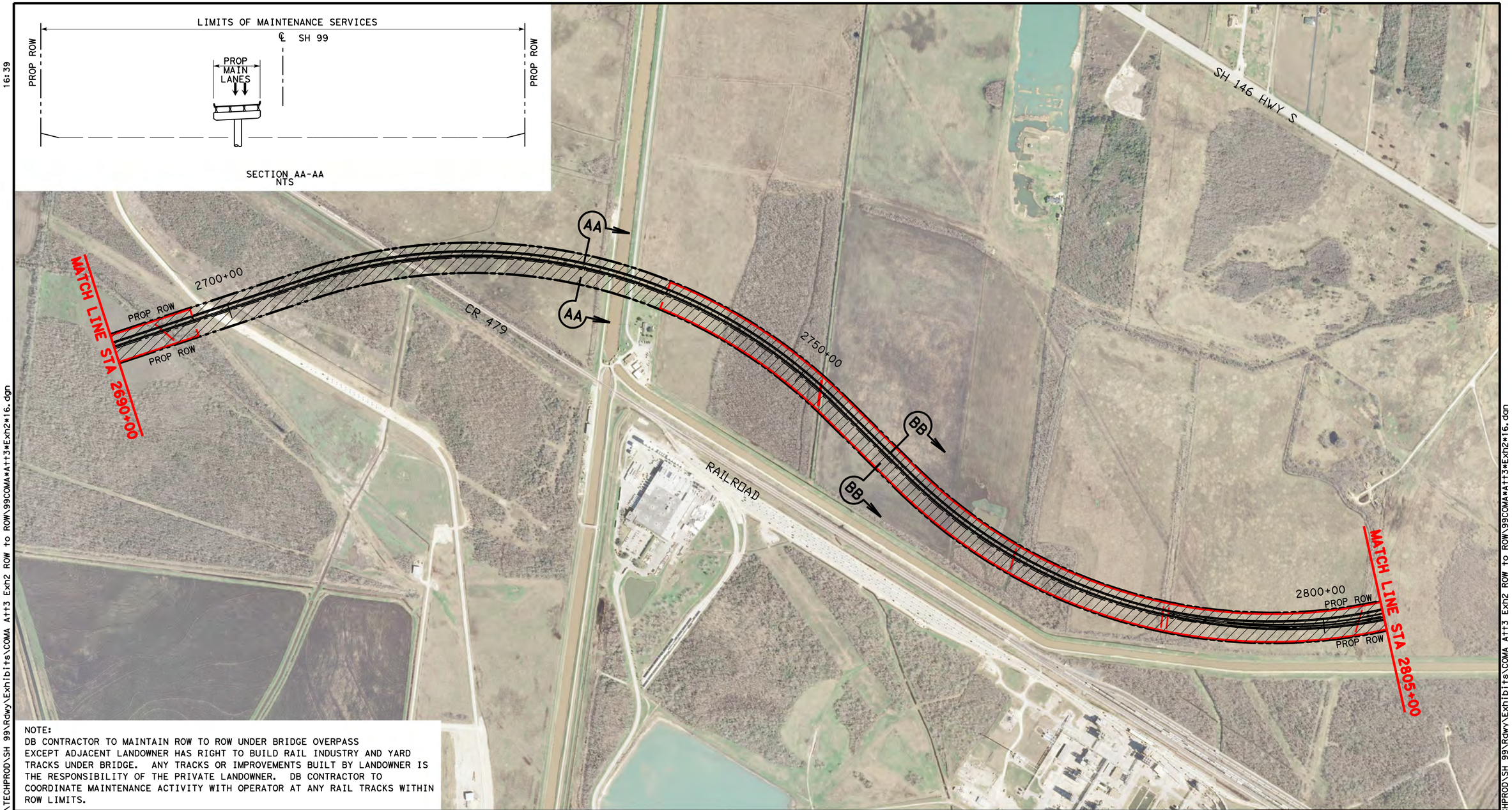
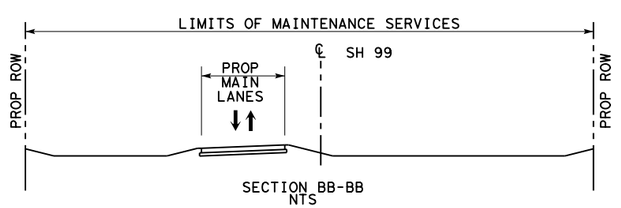
SECTION AA-AA
NTS



NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO BUILD RAIL INDUSTRY AND YARD TRACKS UNDER BRIDGE. ANY TRACKS OR IMPROVEMENTS BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR TO COORDINATE MAINTENANCE ACTIVITY WITH OPERATOR AT ANY RAIL TRACKS WITHIN ROW LIMITS.



SECTION BB-BB
NTS

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800(H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						16

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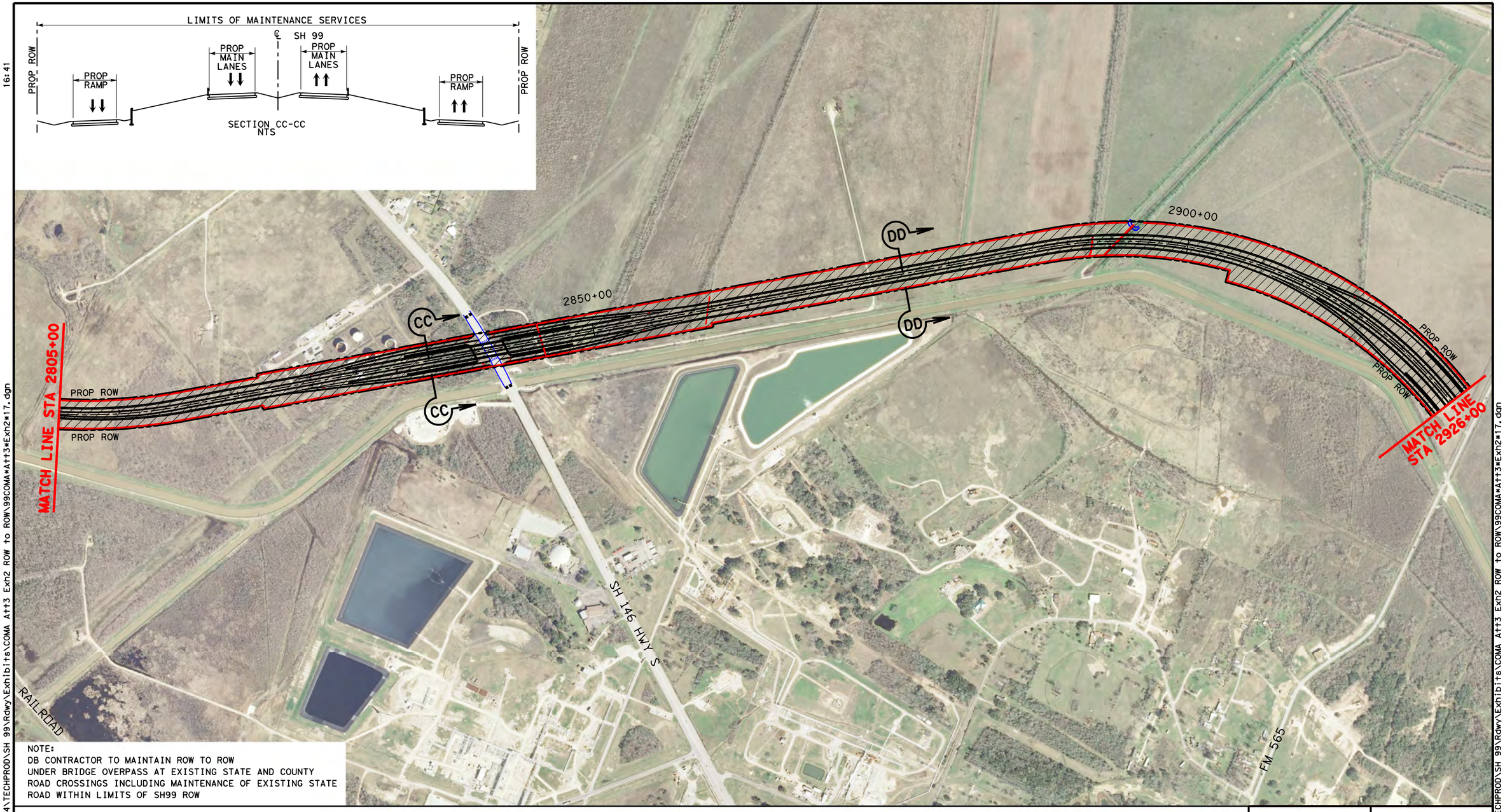
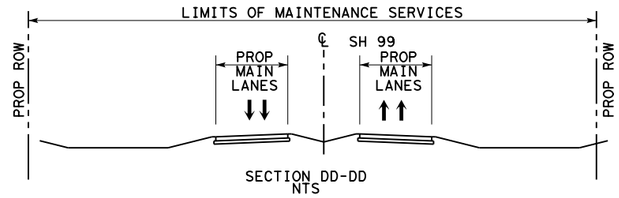


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE ROAD WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						17

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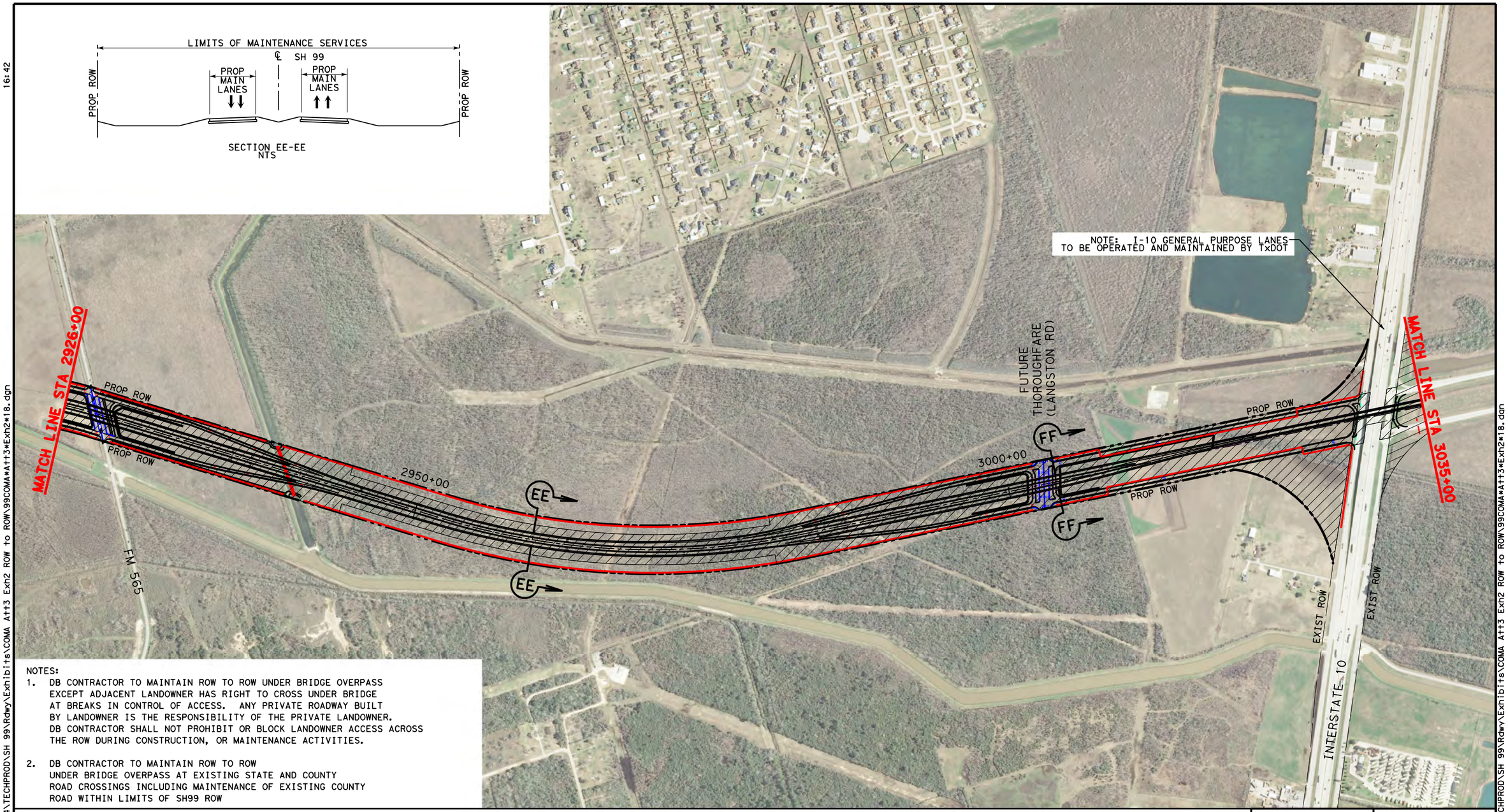
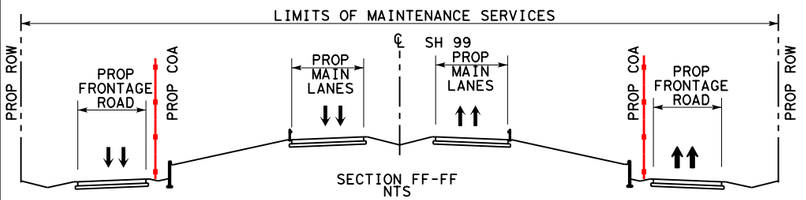
SECTION EE-EE
NTS



NOTES:

1. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS EXCEPT ADJACENT LANDOWNER HAS RIGHT TO CROSS UNDER BRIDGE AT BREAKS IN CONTROL OF ACCESS. ANY PRIVATE ROADWAY BUILT BY LANDOWNER IS THE RESPONSIBILITY OF THE PRIVATE LANDOWNER. DB CONTRACTOR SHALL NOT PROHIBIT OR BLOCK LANDOWNER ACCESS ACROSS THE ROW DURING CONSTRUCTION, OR MAINTENANCE ACTIVITIES.

2. DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING COUNTY ROAD WITHIN LIMITS OF SH99 ROW



SECTION FF-FF
NTS

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						18

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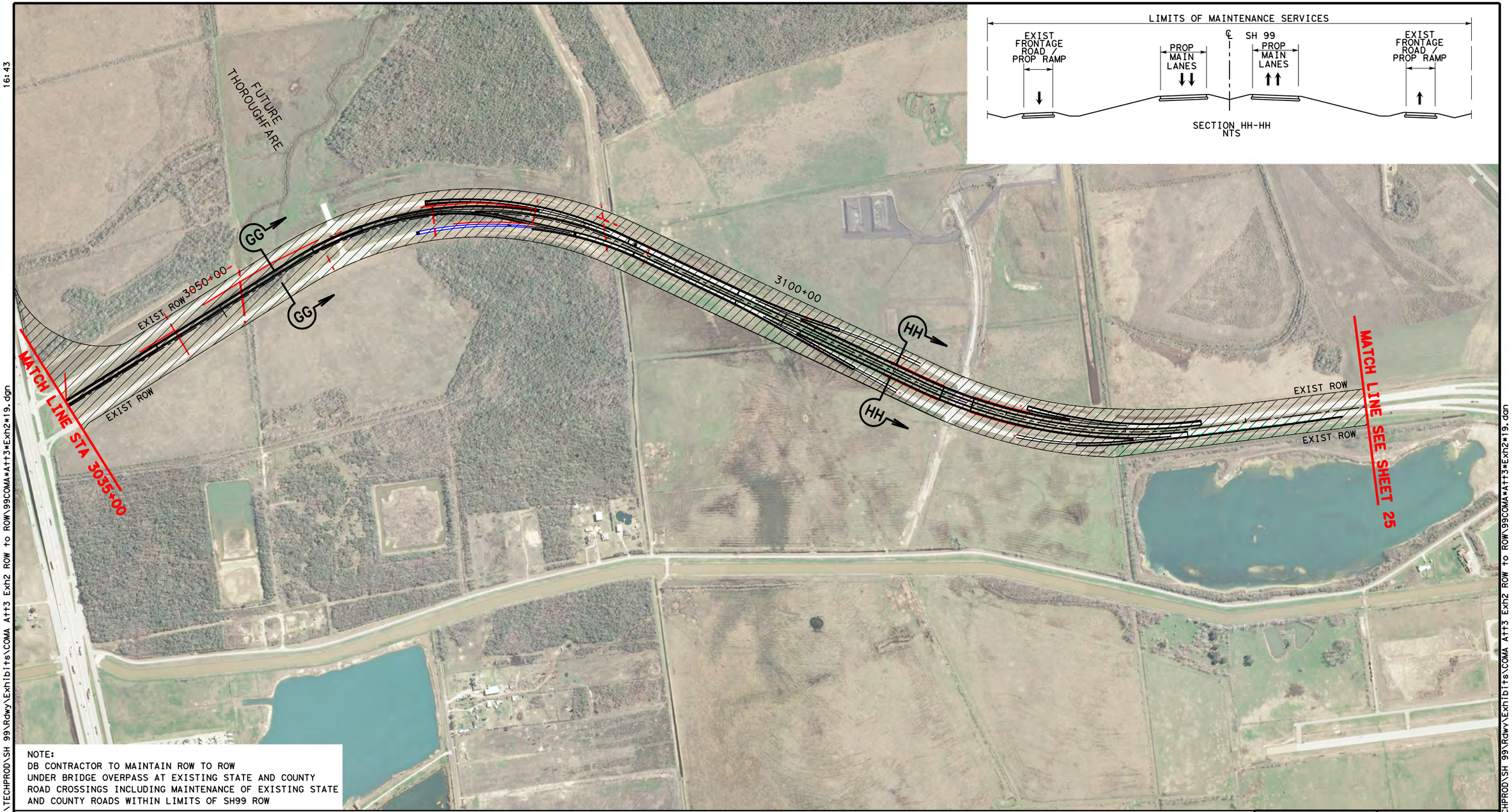
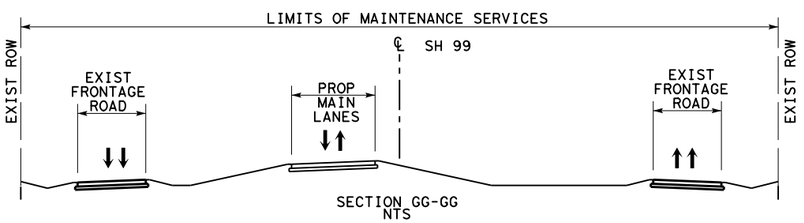
dmaillon



NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE AND COUNTY ROADS WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						19

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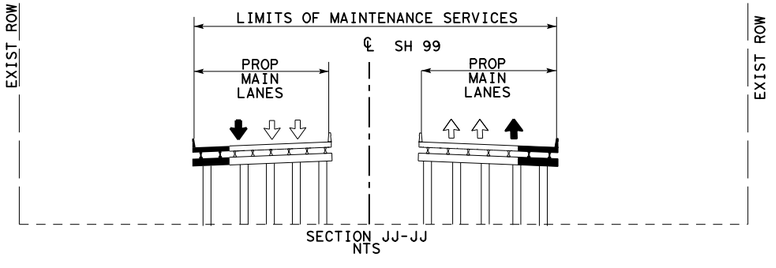
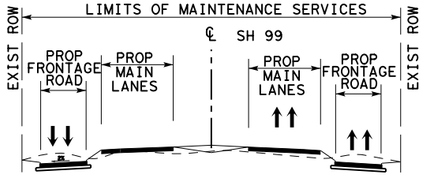


SECTION JJ-JJ
NTS



SECTION KK-KK
NTS

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

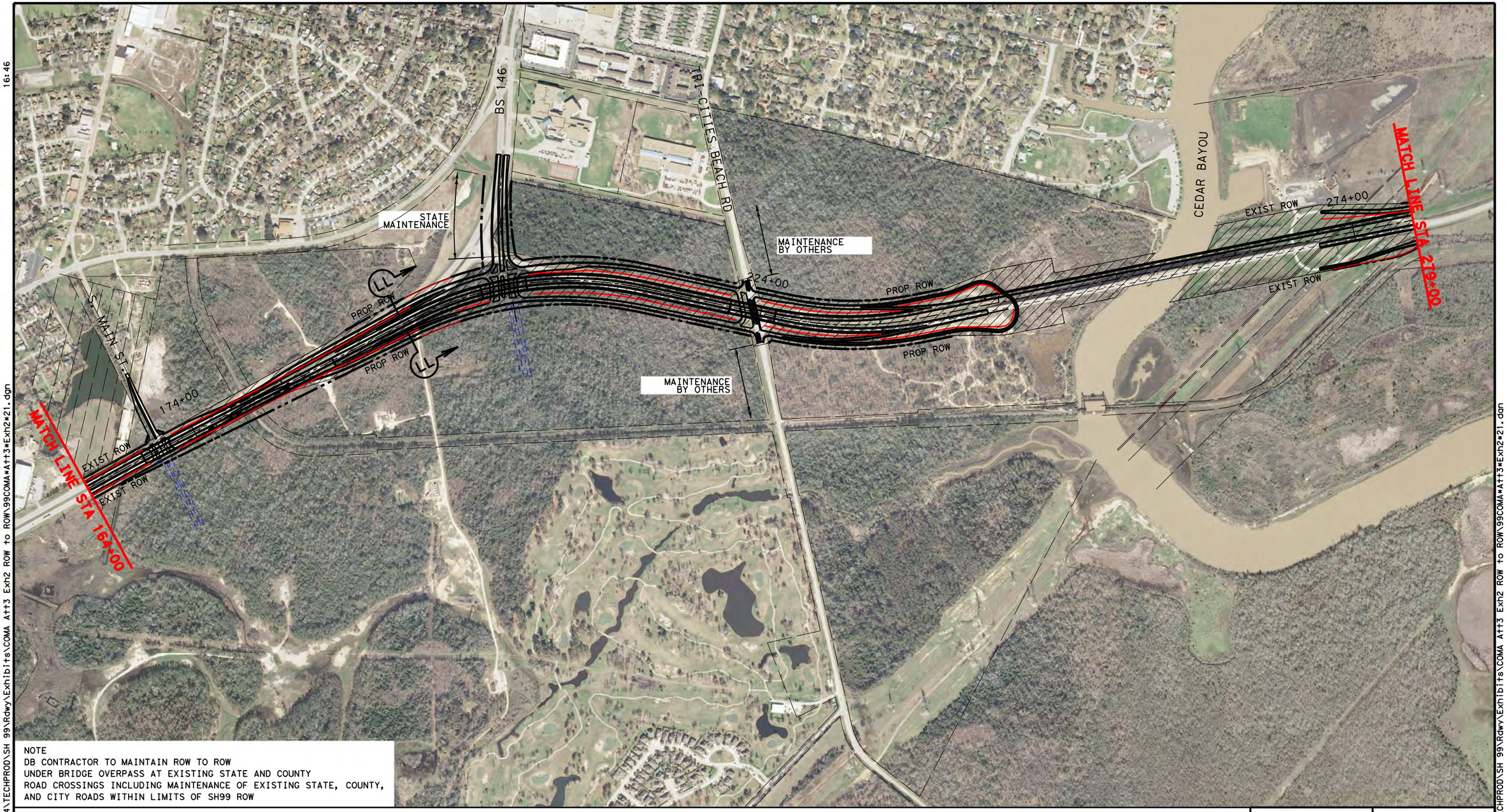
0 200 400 800 (H)

Texas Department of Transportation

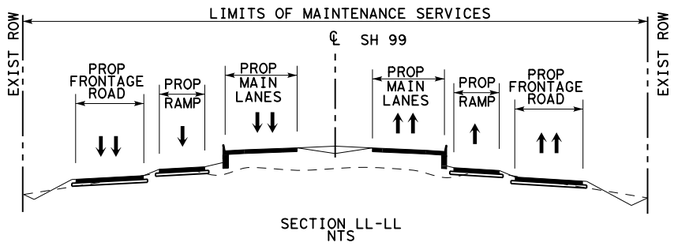
STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						20



NOTE
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE, COUNTY,
AND CITY ROADS WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						21

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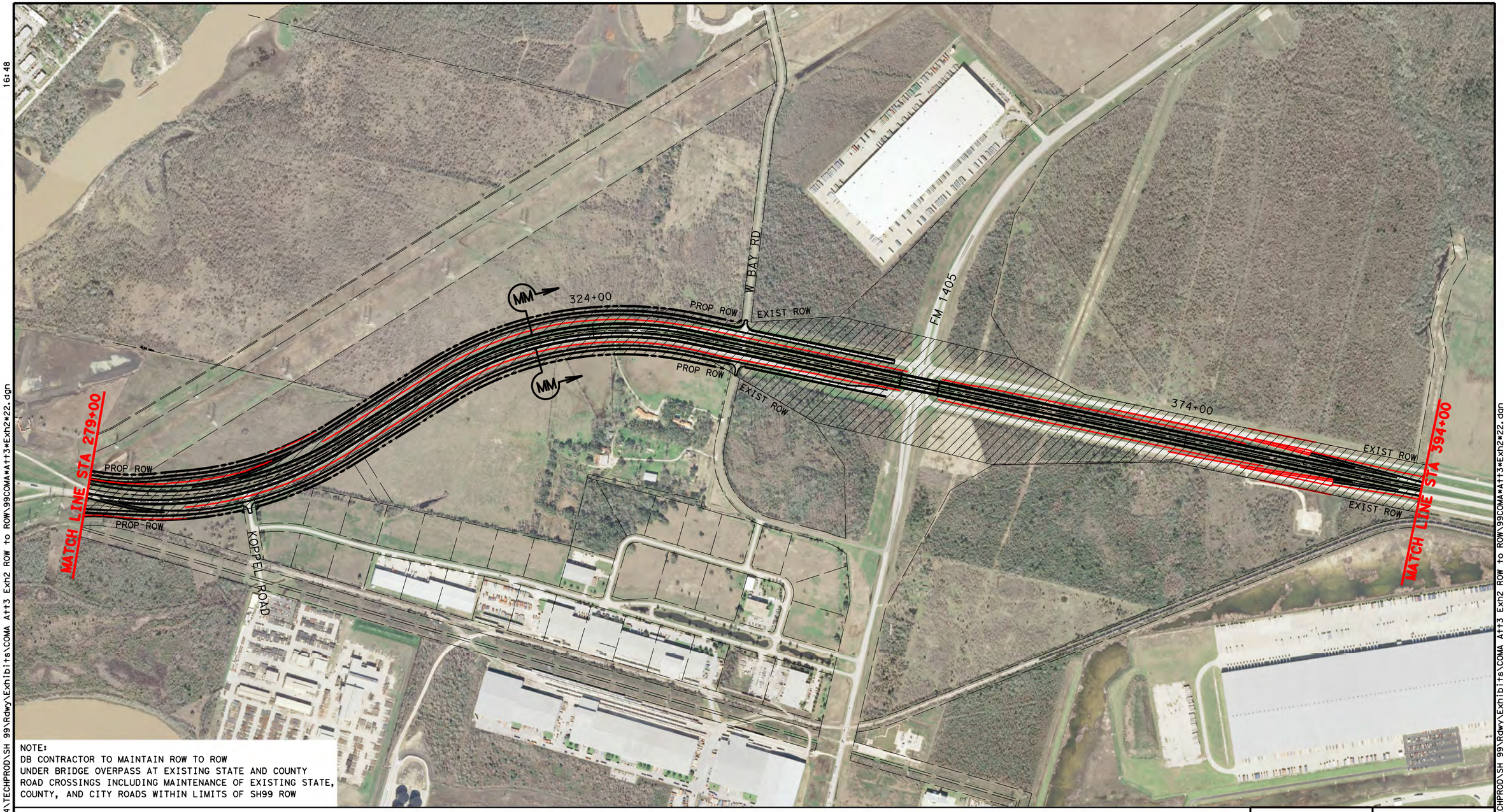
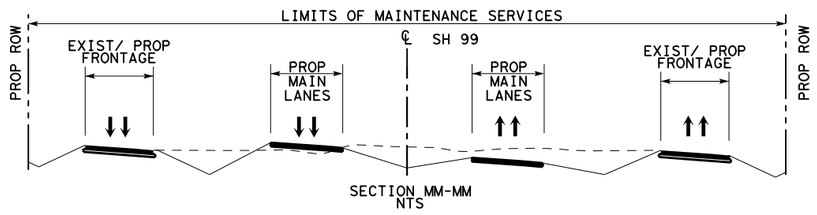
dnaillon



NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE,
COUNTY, AND CITY ROADS WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						22

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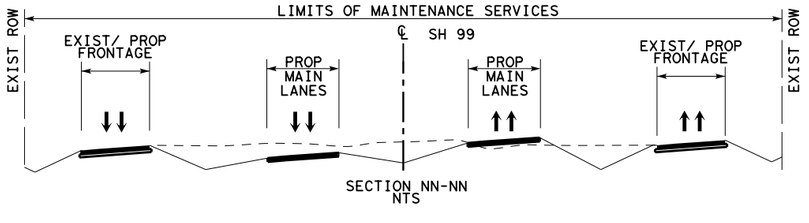
Plotted on: 9/18/2015 16:50

NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY
ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE,
COUNTY, AND CITY ROADS WITHIN LIMITS OF SH99 ROW



LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						23

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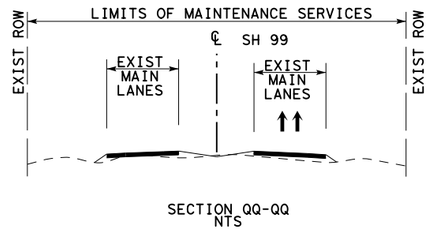

SECTION QQ-QQ
NTS

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						24

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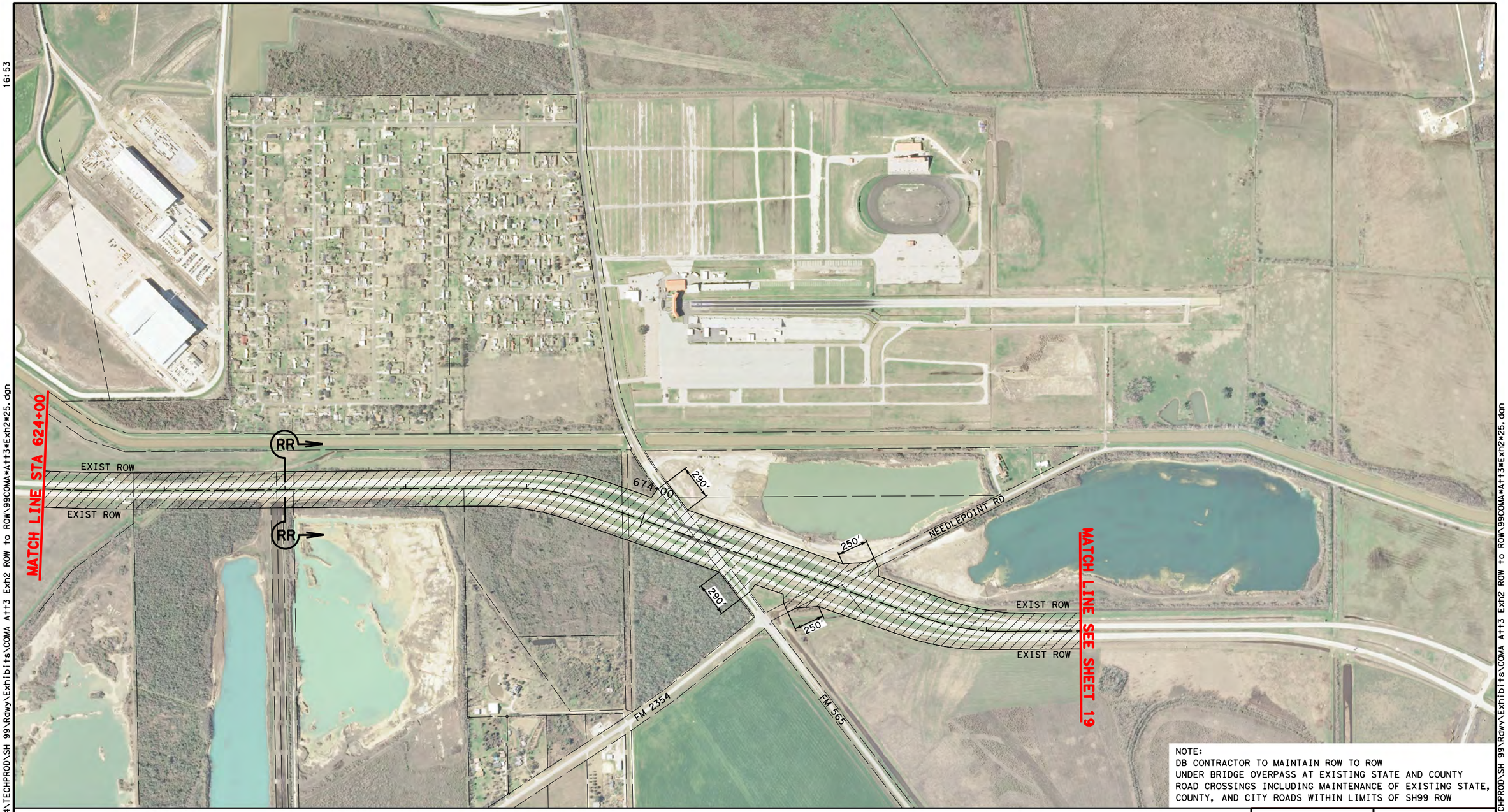
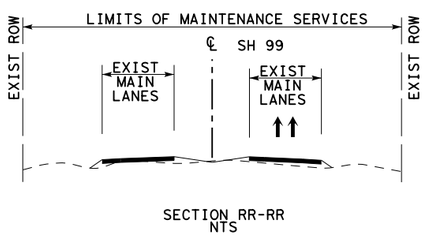


NOTE:
DB CONTRACTOR TO MAINTAIN ROW TO ROW
UNDER BRIDGE OVERPASS AT EXISTING STATE AND COUNTY ROAD CROSSINGS INCLUDING MAINTENANCE OF EXISTING STATE, COUNTY, AND CITY ROADS WITHIN LIMITS OF SH99 ROW



SECTION RR-RR
NTS

LEGEND

- LIMITS OF MAINTENANCE SERVICES
- PROPOSED GRAND PARKWAY
- PROP ROW
- PROP CONTOL OF ACCESS
- EXISTING ROW
- PROPERTY LINE
- PROPOSED GRAND PARKWAY BY OTHERS

0 200 400 800 (H)

Texas Department of Transportation

STATE HIGHWAY 99 GRAND PARKWAY H&I

SH99 GRAND PARKWAY
SEGMENT H, I-1 AND I-2
COMPREHENSIVE MAINTENANCE AGREEMENT
ATTACHMENT 3 OF EXHIBIT 2
MAINTENANCE LIMITS

DSN:	FED. RD. DIV. NO.	STATE	PROJECT NO.			HIGHWAY NO.
CK:	6	TEXAS				SH 99
DRN:	STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
CK:						25

Design Filename: \\hoxw00\jobs\59004\TECHPROD\SH 99\Rdwy\Exhibits\COMA A+3 Exh2 ROW to ROW\99COMA*A+3*Exh2*25.dgn

ATTACHMENT 4: MAINTENANCE MANAGEMENT PLAN CONTENTS

Part	Reference	Section	Contents
1. General Management and Administration			
	1.1	Organization	DB Contractor's main contractual arrangements
			Organizational structure covering the activities to be performed in accordance with the COMA Documents
	1.2	Personnel	DB Contractor's approach to provide experienced personnel for the maintenance of the Project including a training program for personnel and Subcontractors
			Arrangements for coordinating and managing staff interaction with TxDOT and its consultants
			Names and contact details, titles, and job roles of personnel for Subcontractors and any third party with which DB Contractor will coordinate its activities
			Names and contact details, titles, and job roles of personnel
			Procedures for providing training for personnel involved with environmental mitigation activities and Hazardous Materials handling
	1.3	Maintenance Communications Plan	Procedures for communication of Project information between DB Contractor's organization and TxDOT and for communication with other Governmental Entities, Utilities, and third parties as appropriate
	1.4	Project Meetings	List of regularly scheduled meetings including frequency and personnel
	1.5	Maintenance Document Management Plan	Procedures for maintaining Maintenance Records and Project-related documents
	1.6	Procurement	Procedures for procurement of services, materials and products including methods to ensure best value
	1.7	Subcontractors	Overall control procedures for Subcontractors, including consultants and subconsultants
			Responsibility of Subcontractors and Affiliates
			Steps taken to ensure Subcontractors and Suppliers meet the obligations imposed by their respective Subcontracts
			Procedures for providing training for employees of Subcontractors involving with environmental mitigation activities and Hazardous Materials handling
	1.8	Resources	Procedures for maintaining equipment
			Tools and equipment list
			Maintenance and service manuals
	1.9	Insurances	The checklist of all required insurances required for the Maintenance Services with dates on which policies were renewed and dates proof of insurance was provided to TxDOT
2. Emergency Response			
	2.1	Incident and Emergency Management Plan	Procedures setting out how DB Contractor will respond to accidents and Incidents on the Project
			Procedures to establish protocols with Emergency Services and others during Emergencies
	2.2	Snow and Ice Control Plan	Procedures for performing snow and ice control

Part	Reference	Section	Contents
	2.3	Severe Weather Evacuation Plan	Procedures for evacuation during severe weather
3. Environmental Compliance			
	3.1	Governmental Approvals and Permits	The required permits for Governmental Entities and third parties as part of the Maintenance Services
	3.2	Hazardous Materials Management Plan	Procedures for handling Hazardous Materials
	3.3	SW3P Implementation	Procedures for implementation of SW3P
	3.4	Spill Prevention and Countermeasures Plan	Procedures and information per Section 4.6.3 of this Exhibit 2
	3.5	Pollution Prevention Plan	Procedures for pollution prevention, waste management, and recycling
	3.6	Environmental Compliance and Mitigation Plan	Compliance strategies and procedures to be employed in accordance with the requirements of applicable Environmental Laws and Environmental Approvals
4. Maintenance Limits & Schedules			
	4.1	Maintenance Limits	Maintenance Limits as set forth in Section 3.1.1.1 of the Comprehensive Maintenance Agreement
	4.2	Performance Sections	Performance Section drawings as set forth in Section 1.5.1 of Exhibit 2
	4.3	Maintenance Services Deliverable Schedule	Schedule to include all principal submittals in connection with the Maintenance Services
	4.4	Renewal Work Submittal	See Section 2.2 of this Exhibit 2
5. Compliance with Performance Requirements			
	5.1	Principal Activities	Procedures for how the principal activities will be performed during the Maintenance Period: to include Routine O&M, Renewal Work, and inspections regime
			Procedures and proposed cycle times for safety patrols, sweeping, litter pickup, and debris pickup within the Maintenance Limits
	5.2	Performance Requirements	Procedures to meet the Performance Requirements, measurement procedures, threshold values at which maintenance is required, inspection procedures and frequencies, and subsequent maintenance to address Defects, as well as thresholds for rehabilitation in accordance with the Performance and Measurement Table and Good Industry Practice
			Performance and Measurement Table
	5.3	Maintenance Management System	Procedures for establishing Maintenance Management System
			Software including sample reports and links to MMS training
			Software updates
			Documentation and forms
	5.4	Defects	Process for handling and processing Defects including training, notification, categorization, action, remedy and documentation set forth in Section 1.2.2 of Exhibit 2
	5.5	Complaints	Procedures to respond to comments and/or complaints received from Users and others

Part	Reference	Section	Contents
	5.6	Noncompliance Events	Procedures for tracking and reporting Noncompliance Events
6. Maintenance Safety Plan			
	6.1	Procedures	Policies, plans, training programs, and work site controls to ensure the health and safety of personnel involved in the Project and the general public affected by the Project throughout the Maintenance Period
7. Maintenance Services Quality Management Plan			
	7.1	Organization	Quality organization and staffing plan
	7.2	Procedures	Procedures for quality control activities including a complete description of the quality policies and objectives
8. Traffic Management Plan			
	8.1	Personnel	Qualifications and responsibilities of personnel
	8.2	Procedures	Procedures for setting out how DB Contractor will coordinate Lane Closure, and traffic control for conducting Maintenance Services
9. Maintenance Transition Plan			
	9.1	Procedures	Procedures for preparing list of items to be transferred to TxDOT
10. Close-Out Requirements			
	10.1	Procedures	Procedures for implementation of Close-Out Requirements
11. Required Key Appendices			
	11.1	Contact List	Refer to 1.2 Personnel of this Attachment 4
	11.2	Resources and Manuals	Refer to 1.8 Resources of this Attachment 4
	11.3	Insurance Verification	Refer to 1.9 Insurances of this Attachment 4
	11.4	Maintenance Limits & Performance Sections	Refer to 4.1 Maintenance Limits and 4.2 Performance Sections of this Attachment 4
	11.5	Maintenance Services Deliverable Schedule	Refer to 4.3 Maintenance Services Deliverable Schedule of this Attachment 4
	11.6	Renewal Work Submittal	Refer to 4.4 Renewal Work Submittal of this Attachment 4
	11.7	Performance and Measurement Tables	Refer to 5.2 Performance Requirements of this Attachment 4
	11.8	Maintenance Management System Details	Refer to 5.3 Maintenance Management System of this Attachment 4

ATTACHMENT 5: NOT USED

ATTACHMENT 6: LANE CLOSURE REQUIREMENTS

6.1 General Requirements

Lane Closures will be permitted as part of a traffic control plan when DB Contractor can demonstrate that the Lane Closure is necessary to complete Maintenance Services and complies with the restrictions set forth in Table 6-1 (for which the maximum number of lanes closed at any time during the Lane Closure does not exceed the "maximum lanes permitted for closure" for the applicable roadway type and time period). TxDOT will approve additional Lane Closures only if DB Contractor can demonstrate that the Lane Closure is essential for the safe performance of Maintenance Services and will subject to an approval of a traffic control plan.

Lane Closures must be coordinated with adjacent projects. Where multiple requests for traffic control are received from the DB Contractor and Governmental Entities that would adversely affect Users if implemented simultaneously, TxDOT will give priority to the closure submitted first. The safety of workers and the traveling public must be the first consideration when determining the appropriate time to implement a Lane Closure.

DB Contractor shall coordinate Lane Closures that may affect any roadways adjacent to, connecting with or crossing under or over the Project with TxDOT and Governmental Entities, to ensure that no conflicts occur.

The DB Contractor shall provide traffic control plans and advance notification of all Lane Closures as shown below:

- The traffic control plan for a Partial Lane Closure should be submitted to TxDOT for review no later than 10 days before implementation.
- The traffic control plan for a Full Lane Closure should be submitted for TxDOT approval no later than 14 days before implementation.

The following TxDOT policy and procedure manuals and references apply for all Lane Closures:

- Texas Manual of Uniform Traffic Control Devices (TMUTCD)
- TxDOT Traffic Control Plan Standards
- TxDOT Barricade and Construction Standards
- TxDOT Standard Specifications "Item 502 (Barricades Signs and Traffic Handling)

The Lane Closure requirements in Section 6.2 to 6.5 supplement the above list of manuals and references for the Project.

6.2 Lane Closure Restrictions

Table 6-1 defines the restrictions applicable to Lane Closures for the Project. In addition,

- DB Contractor shall maintain a minimum of one driveway per business at all times. For businesses with multiple driveways, when driveway closure is necessary to progress Maintenance Services, no driveway may be closed for more than thirty (30) consecutive days or more than forty-five (45) days in a ninety (90) day period.
- DB Contractor shall not close two consecutive entrance ramps or two consecutive exit ramps at the same time.

Table 6-1: Lane Closure Restrictions

Roadway	**Roadway Lanes** (one direction)	**Lane Closure Types (**Maximum Lanes Permitted for Closure **)***		
		Peak Periods Monday-Friday (5:00 a.m. - 9:00 p.m.) and Major Events and Holidays	Off-Peak Periods Monday-Friday (9:00 p.m. to 10:30 p.m.) and Saturday	Lowest Volume Periods Monday-Friday (10:30 p.m. - 5:00 a.m.) and Sunday
Mainlanes	3 (if applicable)	None	Type 3	Type 4
	2	None	Type 2	Type 3
	1	None	Type 1	Type 2
Ramps	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3
Direct Connectors (if applicable)	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3
Frontage Roads	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3
Cross Streets	3 (if applicable)	None	Type 4	Type 5
	2	None	Type 3	Type 4
	1	None	Type 2	Type 3

* Lane Closure Types (Type 1 with least lanes closed and Type 5 with most lanes closed):

- Type 1: Close 1 shoulder only
- Type 2: Close 1 travel lane or 1 shoulder but not both
- Type 3: Close 1 travel lane or 1 shoulder or 1 travel and 1 shoulder
- Type 4: Close 2 travel lanes or 2 travel lanes and 1 shoulder
- Type 5: Close 3 travel lanes or 3 travel lanes and 1 shoulder

6.3 Emergency Closures

Additionally, the following events are considered Emergency Closures and will not be subject to Lane Closure restrictions in Table 6-1.

- a Lane Closure due to a TxDOT-Directed Change;
- a Lane Closure specified, caused or ordered by, and continuing only for so long as required by, TxDOT or any Governmental Entity, or a Utility Owner performing work under a permit issued by TxDOT;
- a Lane Closure required due to a Force Majeure Event; or
- a Lane Closure required solely for the hazard mitigation of a Category 1 Defect and persisting for no longer than the Defect Remedy Period.

For each event set forth above, the Lane Closure will be an Emergency Closure only if DB Contractor is using commercially reasonable efforts to: (i) mitigate the impact of such event, (ii) reopen the affected segment to traffic, and (iii) minimize the impact of DB Contractor's activities and the Lane Closure to traffic flow.

6.4 Detour Usage

DB Contractor shall use State routes for detour routes, wherever applicable. If State routes are unavailable, DB Contractor shall use local roadways, provided that DB Contractor has obtained TxDOT's approval and the necessary permits from the Governmental Entity having jurisdiction.

DB Contractor shall provide motorists with guidance on the use of alternate routes to divert traffic around the construction, detouring around specific construction sites, and traveling through the construction areas. This shall include the installation and maintenance of temporary regional signs and changeable message signs to divert traffic around the Project. Motorist guidance to and along detour routes shall be provided, together with regional guidance.

6.5 Restricted Hours

A. Holiday Restrictions
No Lane Closure that restricts or interferes with traffic shall be allowed from 12:00 PM (noon) on the day proceeding to 10:00 PM on the day after the following holiday schedule. No additional lane or ramp closure that restricts or interferes with traffic shall be allowed. TxDOT has the right to lengthen, shorten, or otherwise modify these restrictions as actual traffic conditions may warrant.

- New Year's Eve and New Year's Day (December 31 through January 1)
- Easter Holiday Weekend (Friday through Sunday)
- Memorial Day Weekend (Friday through Monday)
- Independence Day (July 3 through noon on July 5)
- Labor Day Weekend (Friday through Monday)
- Thanksgiving Holiday (Wednesday through Sunday)
- Christmas Holiday (December 23 through December 26)

B. Major Event Restrictions

DB Contractor shall coordinate with TxDOT regarding Lane Closures during regional events. TxDOT has the right to lengthen, shorten, or otherwise modify these restrictions as actual traffic conditions may warrant. TxDOT also has the right to modify the list of major events as they are added, rescheduled or warranted.

ATTACHMENT 7: FUNCTION CODES AND DESCRIPTIONS

Last Update: 07/31/14

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	BASE AND SUBGRADE (TRAVEL LANE AND SHOULDERS)
110+	**Base Removal and Replacement (UM = CY)**
	The removal of base and/or subgrade materials from distressed or failed areas and replacement with suitable material. (Includes resurfacing.)
120+	**In Place Repair (UM = CY)**
	In place repair of existing base and/or subgrade material (Includes resurfacing, may or may not include additional stabilizing material).
135+	**Install and/or Maintain Under-drains (UM=EA)**
	Installation, repair and maintenance of all types of under-drains.
145+	**Unpaved Road Maintenance (UM = SY)**
	Repair of gravel or dirt roads, including blading, additon of base, etc.
	ASPHALTIC SURFACES (Travel Lane and Shoulders)
211+	**Leveling or Overlay with Laydown Machine (UM = SY)**
	The application of asphaltic tack coat and placing asphaltic concrete material to improve the ride qualities or level up low spots.
212+	**Leveling or Overlay with Maintainer (UM = SY)**
	The application of asphaltic tack coat and placing layers of asphaltic concrete material
213+	**Leveling by Hand (UM = SY)**
	The application of asphaltic tack coat and placing layers of asphaltic concrete material. This includes repair of pavement areas greater than one square yard.
214+	**Leveling or Overlay with Dragbox (UM=SY)**
	The application of asphaltic tack coat and placing layers of asphaltic concrete material.
225+	**Sealing Cracks (UM = LM)**
	Cleaning, filling and sealing cracks in the pavement using asphaltic rubber or other sealants.
231+	**Seal Coat (UM = SY)**
	Application of a single layer of asphaltic material followed by the application of a single layer of aggregate over the full width of the travel lane or shoulder (greater than 6' in width) for a minimum of 1000 continuous feet.
232+	**Strip or Spot Seal Coat (UM = SY)**
	Application of a single layer of asphaltic material followed by the application of a single layer of aggregate over areas that are not full width of the travel lane or shoulder (6' or less in width), or the full width of the lane or shoulder but less than 1000 feet in length.
233+	**Fog Seal (UM = SY)**
	Retain aggregate, enliven surface and/or seal hairline cracks by the application of a thin layer of asphaltic material.
235+	**Microsurfacing (UM = SY)**
	The application of a polymer modified high performance emulsion coupled with fine graded aggregate, mineral fillers and special additives in a slurry, to fill ruts or to provide a new wearing surface. (Caution: Should not be used to seal cracked pavements.)
241+	**Pothole Repair (UM = EA)**
	The repair of holes with a area less than or equal to one square yard. Charge to Function 213 if greater than one square yard.
245+	**Adding or Widening Pavement (UM = SY)**
	Widening travel lanes up to two (2) feet or adding shoulders up to four (4) feet to correct a maintenance problem (includes subgrade, base and surfacing, or adding turn lanes to improve safety).
252+	**Milling or Planing (UM = SY)**
	The removal of the pavement surface by planing or milling.
253+	**Spot Milling (UM=SY)**
	The removal of pavement surface by milling using a small milling machine (drum width is 4 feet or less).
265+	**Treat Bleeding Pavement (UM = SY)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Treatment of excess asphalt on the pavement surface.
270+	**Edge Repair (UM = LF)**
	Repair of raveled, low or damaged pavement edges with aspaltic materials.
	CONCRETE PAVEMENT (Travel Lanes and Shoulders)
315	**Slab Stabilization/Jacking (UM=SY)**
	Leveling concrete pavement through the use of hydraulically placed material.
325+	**Cleaning and Sealing Joints and Cracks (UM = LF)**
	Cleaning, filling and sealing of joints in concrete pavement.
330	**Blowouts and Stress Relief (UM=SY)**
	Repair of blowouts and cutting pavement for stress relief.
345+	**Repair Spalling (UM = SY)**
	Clean and fill spalled areas (not full depth of concrete slab).
360+	**Full Depth Removal and Replacement (UM = SY)**
	The removal and replacement of failed areas for the full depth of the concrete slab.
	APPROACHES AND MISCELLANEOUS SHOULDER MAINTENANCE
455+	**Reshaping unpaved shoulders. (UM = LF)**
	Restore sod or flexible base shoulders to original sections. Includes reshaping frontslope to eliminate low pavement edges along a paved shoulder.
480+	**Side Road Approaches, Crossover and Turnouts (UM = SY)**
	The installation or maintenance of side road approaches, crossovers, historical markers, mailbox and litter barrel turnouts, etc.
488+	**Concrete Appurtenance Installation and Maintenance (UM=SY)**
	The maintenance, installation, or removal of concrete appurtenances which include curbs and/or gutters, raised medians, sidewalks and sound barriers.
495+	**Parking Area Maintenance (UM = SY)**
	Repair of subgrade, base or surface of areas including parking lots, park and ride lots and camping pads.
	ROADSIDE AND OTHER
511+	**Mowing (UM = AC)**
	Mowing of the right-of-way
513+	**Spot Mowing (UM = HR)**
	Spot mowing of the right-of-way.
520+	**Illegal Dumpsite Removal and Disposal (UM=CY)**
	Removal and dispoal of debris discarded or deposited in an unauthorized area in the right of way, such as under a bridge, overpass, culvert, etc.
521+	**Litter (UM = AC)**
	Removal and disposal of litter from the entire right-of-way, excluding paved areas, picnic and rest areas.
522+	**Street Sweeping (UM = MI)**
	Routine street sweeping. Units are the actual miles swept regardless of the centerline miles.
523+	**Debris (UM=MI)**
	Routine patrolling to remove and dispose of debris, including dead animals.
524+	**Spot Litter (UM = AC)**
	Spot removal and disposal of litter, including dead animals, from the right-of-way.
525	**Adopt-A-Highway (UM = HR)**
	Installation of posts and signs, materials furnished to groups, personnel and equipment used to assist in removal and disposal of collected litter.

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
527	**Hand Sweeping (UM=SY)** Hand sweeping of riprap, islands, medians, curb & gutter, bullpens, driveways, etc.
530+	**Removal of Graffiti (UM= SF)** Removal of graffiti from fixtures, wingwalls, bridge structures, etc. Not to be used in lieu of Function 733, Maintain Vandalized Signs, Function 731 or 732, Sign Maintenance
531+	**Picnic Area Maintenance (Without Restrooms) (UM = HR)** Work performed in maintaining picnic areas, including mowing, litter pickup, emptying litter barrels, paved areas, maintenance of plantings, graffiti removal, etc.
532+	**Rest Area Facility Maintenance (UM = HR)** Work performed in janitorial and grounds maintenance, including mowing, litter pickup, emptying litter barrels, maintenance of plantings, cleaning restrooms, cleaning arbors, graffiti removal, minor painting, etc. This item shall also include special maintenance required to repair buildings, repair/replace arbors, picnic tables, fixtures, litter barrels, paved areas, etc. (including maintenance of treatment plants and dump stations).
533+	**Rest Area Facility Maintenance through Regional Contracts (UM = HR)** (Maintenance Division Use Only)
535	**Maintenance of Specialty Facilities (UM = HR)** All maintenance costs to speciality facilities including border safety inspection facilities (BSIFs), toll booths, service plazas, fences and associated appurtenances. The highway class code will determine the type of facility.
536	**Toll Road System Operations** All operating costs for all system toll roads. Maintenance costs should be charged to the appropriate segment 78 function.
538	**Pest Control (UM=AC)** Activities related to the use of predatory animal and insect control whether in turf and ornamental sites or on the ROW.
540	**Hand Vegetation Control (UM = HR)** Hand cleaning vegetation out of islands, medians, riprap, drainage channels, etc. by chemical, manual or mechanical means.
541+	**Chemical Vegetation Control, Edges (UM = AC)** Complete control of vegetation encroaching in pavement edges, shoulders, medians, islands and curbs with herbicides.
542+	**Chemical Vegetation Control, Overspray (UM = AC)** Control of undesirable vegetation growth by overspraying the right-of-way including fixtures (i.e. signs, delineator, guardrails, culverts, etc) with herbicides.
544+	**Chemical Vegetation Control, Ropewick (UM = AC)** Control of tall vegetation (i.e. Johnson grass) in the right of way with wick applicator.
545	**Chemical Vegatation Control, Basal Application (UM = HR)** Control of undesirable brush species in the right of way with a low volume basal bark application.
548+	**Seeding, Sodding, Hydromulching and Blanketing (UM = SY)** Seeding, sodding, hydromulching and/or placing soil retention blankets.
551	**Landscaping (UM=AC)** The installation or maintenance of landscape plantings and their facilities including planter walls, border, sprinkler systems, etc. (excluding picnic and rest areas).
552	**Tree and Brush Control (UM=CL)** The trimming, pruning and disposal of shrubs, vines, and trees (excluding picnic and rest areas).
558	**Storm Water Pollution Protection (UM=LF)** Maintenance or Installation of storm water pollution protection plan (SW3P) in accordance with EPA regulation on projects designated by Area Engineers
560+	**Riprap Installation and Maintenance (UM=SY)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Installation and maintenance of ditch liners, retards, down drains, riprap, flumes, concrete mowing strips, gabions, retaining walls and other erosion protection.
561+	**Ditch Maintenance (UM = CY)**
	Removal and hauling of silt, drift and/or filling eroded areas. Not to be used for work at culverts or bridges. (See Functions 570 and 620.)
562+	**Reshaping Ditches (UM = LF)**
	Reshaping ditches using maintainer and/or gradall, etc. Not to be used for work at culverts and bridges. (See Functions 570 and 620.)
563+	**Slope Repair/Stabilization (UM = SY)**
	Slope repair and/or stabilization. Not to be used for work at culverts and bridges. (See Functions 570 or 620)
570	**Culvert and Storm Drain Maintenance (UM=EA)**
	The repair and maintenance of culverts up to bridge classification (twenty feet measured along centerline of roadway). This work includes silt and debris removal from inlet, storm drains, retention ponds and culverts (except those costs associated with Function 571).
571	**Storm Water Pump Station Maintenance (UM=EA)**
	Repair and maintenance of motors, pumps, generators, wet wells, dry wells, debris screening baskets, buildings, etc., including costs of utility services.
580+	**Removal of Illegal Signs on ROW (Temporary, no special handling required.) (UM =EA)**
	Removal of illegal signs on right-of-way, including disposal and written notices to owners.
581+	**Removal of Illegal Signs on ROW (Permanent, special handling required.) (UM = EA)**
	Removal of illegal signs on right-of-way, including disposal and written notices to owners.
582	**Removal of Encroachments, Other than Signs (UM = HR)**
	Removal of illegal encroachments (other than signs) on the ROW, including disposal and written notice to owners.
585+	**Driveway Installation / Removal and Maintenance (UM = SY)**
	See access management policy
591	**Utilities and Driveway Inspection (UM = HR)**
593+	**Cable Median Barrier (UM=LF)**
	Installation and maintenance of high tension cable median barrier systems, including the cable, posts and other end treatments.
594+	**Concrete Barrier (UM = LF)**
	Installation, removal and maintenance of concrete barrier, including attached headlight barrier fence.
595+	**Guard Fence (UM = LF)**
	Installation and maintenance of guard fence, M.B.G.F. turn down ends, median barrier and attached headlight barrier fence, including posts, metal beams, etc. (End treatment other than turn down ends see Function 596)
596+	**Guardrail End Treatment Systems (UM=EA)**
	Installation and maintenance of guardrail end treatments systems. (For attenuators other than GETS, see function 725)
597+	**Mailboxes, Installation and Maintenance (UM = EA)**
598	**Boat Ramp Maintenance (UM = HR)**
	Work performed in maintaining boat ramps including mowing, litter pick, emptying litter barrels, maintenance of paved and unpaved areas, etc..
	BRIDGES AND BRIDGE CHANNELS
610+	**Bridges, Movable Span (UM = HR)**
	Operation, routine maintenance and inspection of movable span bridges, (Swing barge, lift or turn). Restricted use: Beaumont, Houston, Pharr, and Yoakum District only.
611+	**Bridges, Portable (UM=HR)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Installation, removal, maintenance and inspection of portable bridges.
620+	**Bridge Channel Maintenance (UM=CY)** Removing of silt and drift, filling eroded areas, maintenance and repair of fenders, jetties, dikes, riprap and channel maintenance (including easements) except under bridges.
628+	**Bridges, Rail (UM = LF)** Maintenance of bridge rail, posts and post connections to deck, including painting.
645+	**Bridges, Joint Maintenance (UM =LF)** Repair of bridge joints including cleaning and sealing.
646+	**Bridges, Joint Replacement (UM =LF)** Replacement of bridge joints.
650+	**Bridges, Deck (UM = SF)** Repair to bridge decks.
660+	**Bridges, Superstructure, Concrete (UM=SF)** Routine maintenance of concrete components of the bridge superstructure.
665+	**Bridges, Superstructure, Steel (UM=SF)** Routine maintenance of the steel components of the bridge superstructure, including bearings, concrete diaphragms, and beams.
670+	**Bridges, Substructure, Concrete (UM=SF)** Routine maintenance of the concrete components of the bridge substructure including caps, columns, abutments, wingwalls, piling, etc.
675+	**Bridges, Substructure, Steel and Timber (UM=SF)** Routine maintenance of the steel or timber components of the bridge substructure including caps, abutments, pile extensions, etc.
680+	**Bridges, Painting (UM=SF)** Cleaning and painting of steel superstructure or steel substructure.
690+	**Bridges, Mechanical and Electrical (UM = HR)** Maintenance and repair of the electrical and mechanical components of a bridge
695+	**Fender Systems (UM=HR)** Installation and maintenance of fender systems.
	TRAFFIC OPERATIONS
711+	**Paint and Bead Striping (UM=LF)** Striping or re-striping lane lines, center lines and edge lines using paint and beads. Function 711 should be used for all activities associated with new and retrace striping. Work items could include removal of old stripe, preparing and operating striping equipment and support vehicles such as the supply truck and shadow vehicle.
712+	**High Performance Striping (UM=LF)** Striping or re-striping lanes lines, centerlines and edge lines using thermoplastic or other high performance materials. Function 712 should be used for all activities associated with new and retrace thermoplastic striping. Work items might include removal of old stripe and installation of sealer. Work items will also include personnel and equipment time charges associated with inspection of contract striping work.
713	**Specialty Markings (UM=EA)** Medians, islands and other pavement markings not covered under functions 711 or 712. (Including make-ready operations for all stripe alignment, such as spotting, tabs, temporary tape, etc.)
715	**Removing Pavement Striping (UM=LF)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Function 715 should be used for all activities associated with the removal or obliteration of pavement stripes when the stripe is not going to be replaced. Work items could include grinding, burning, scraping or covering existing pavement stripes by applying an asphaltic material.
716	**Performance-Based Contract Distribution (UM=LM)** These contracts are set up to pay the contractor a fixed price on a periodic basis regardless of the type of work performed and/or the amount of work performed.
721+	**Delineators (UM = EA)** Installation, maintenance and/or replacement of damaged or missing delineators and/or posts. This function shall include straightening of posts. Measured by each post and each reflector replaced.
724	**Roadway Access Control (UM=LF)** Installation and maintenance of barriers other than those covered by Functions 594 and 595, designed to control access on highways, including post and cable fences, ROW fences and cattle guards.
725	**Vehicle Attenuators (UM=EA)** Installation and maintenance of vehicle attentuator, crash cushions, etc. (Includes end treatment devices on guard fence).
731+	**Install or Reinstall Small Signs (UM=EA)** The installation of signs (less than 4' x 4'). Includes the installation of an old sign on a new post or the installation of a new sign on an existing post. Not to be used in lieu of Function 733, Maintain Vandalized Signs, Installation of Large Signs Function 732, or Adopt-A-Highway Function 525.
732+	**Install or Reinstall Large Signs (UM=EA)** The installation of signs (equal to or greater than 4' x 4'). Includes the installation of an old sign on a new post or the installation of a new sign on an existing post. Not to be used in lieu of Function 733, Maintain Vandalized Signs, Installation of Small Signs Function 731, or Adopt-A-Highway Function 525.
733+	**Vandalized Signs (UM = EA)** Replacement or repair of signs damaged by vandalism.
738	**Installation and Maintenance of Flashing Beacons (UM=EA)** Installation and maintenance of overhead flashing beacons, pedestal or sign mounted flashing beacons, etc.
742	**Illumination (UM=EA)** Installation, maintenance and operation of illumination systems including continuous lighting, safety lighting, and sign illumination.
743	**Installation and Maintenance of Isolated Traffic Signals (UM=EA)** Maintenance and operation of isolated traffic signals, diamond interchange signals, etc.
745	**Traffic Management System (UM=CM)** Maintenance and operation of traffic management systems on freeways or non-freeways, entrance/exit ramps, motorist information (e.g. changeable message signs, highway advisory radio, etc.), surveillance and related communications equipment. (ITS Control Center personnel should charge to Segment 70, Detail 0570).
750+	**Installation & Removal of Pavement Markers (UM=EA)** Installation and/or removal of traffic buttons or reflective pavement markers.
790	**Miscellaneous Traffic Services (UM = HR)** All traffic surveys (including all motor vehicle and pedestrian counts at intersections) and directly related locations and other traffic services not covered elsewhere. **NOTE: Traffic control performed during the pavement evaluation process should be charge to Segment 71, Detail 3214, and the appropriation function code (600 thru 690).**
799	**Traffic Control Plan (UM = HR)** The placement, maintenance and removal of barricades, signs, cones, lights and other such devices needed to handle traffic during the maintenance operation.
	EXTRAORDINARY MAINTENANCE
811	**Assistance to Traffic (Snow and Ice) (UM = HR)**

Code Chart 12 - Segment 78
Function Codes and Descriptions by FIMS Segments

Function Code	Description
	Provide assistance to traffic caused by snow and ice conditions on all highways. (includes sanding, deicing, clearing, removal, etc.)
830	**Hazardous Material Cleanup, Spill or Leaking Storage Tanks (UM = HR)** Investigation, testing, cleanup, removal, disposal, and restoration work associated with a spill or leaking storage tank.
831	**Hazardous Material Cleanup (Abandoned Materials) (UM = HR)** Investigation, testing, cleanup, removal, disposal, and restoration work associated with abandoned hazardous materials of unknown ownership