SCHEDULE 6

HPTE Service Requirements

Colorado High Performance Transportation Enterprise - US 36 Managed Lanes – Toll Concession Project
Schedule 6
Service Requirements

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1.0 ORGANIZATION AND GENERAL INFORMATION

1.1 General Requirements

The operation and maintenance of the Managed Lanes and maintenance of the General Purpose Lanes as agreed by the Concession Agreement will be under the direction of the Concessionaire beginning at the Services commencement date(s) and continuing during the Services Period provided in the Concession Agreement. The Concessionaire shall maintain the Managed Lanes and the General Purpose Lanes (including the BOS Corridors) as agreed in the Concession Agreement (the "Maintained Elements") in a manner that provides a safe and reliable transportation system for improved mobility at current CDOT standards or better. Concessionaire is responsible for performing all activities necessary to satisfy HPTE's Service Requirements in this Schedule 6 with respect to the operation of the Managed Lanes and the maintenance of the Maintained Elements within the limits described in Section 1.2.1 of this Schedule 6 (Specific Service Limits).

1.2 General Description

The Phase 1 Managed Lanes and Phase 2 Managed Lanes include new buffer-separated managed lanes in each direction on US 36 generally from 88th Avenue to just east of Foothills Parkway. The Phase 1 Corridor portion of the Managed Lanes is currently being designed and constructed by others under the Phase 1 DB Contract. The Phase 2 Construction Work portion is being designed and constructed as part of this Concession Agreement. The locations of the phases are as follows:

a. Phase 1 of US 36 runs eastbound (EB) and westbound (WB) direction from State Route 1388+00 at MP 45.55 to EB and WB State Route 2416+70 at MP 54.55, and
b. Phase 2 of US 36 runs EB State Route 1145+00 at MP39.95 to Phase 1 limit and WB State Route 1120+00 at MP 39.47 to the Phase 1 limit.

1.2.1 Specific Service Limits

1.2.1.1 US 36

US 36 Phase 1 longitudinal limits for the Managed Lanes begins just east of 88th Street at the west end starting at Sta 1388+00 and MP 44.55 east to the existing barrier-separated reversible lane at Sta 2498+00 and MP 56.09, including all portions of the work.

US36 Phase 2 longitudinal limits for the Managed Lanes begins east of the Foothills Parkway interchange at Sta 1120+00 and MP 39.47 east to the Phase 1 limit east of 88th Street at Sta 1388+00 and MP 44.55, including all portions of the work.

The lateral limits shall be all work in the Managed Lanes on US 36 between and including the right shoulder stripe line of the inside buffer lane for both directions not including the buffer lane, managed lane and inside shoulder of both directions. For purposes of Routine Maintenance Services the General Purpose Lanes will encompass the same longitudinal limits as listed above and the lateral limits will be all portions except for those defined as Managed Lanes above.

Figures 6.1 through 6.3 depict typical sections of US36 and the limits between the General Purpose Lanes and Managed Lanes. The US36 General Purpose Lanes for purposes of Schedule 6 encompass the BOS Corridors. Figures 6.4 through 6.9 depict the maintenance

limits for US36 starting at the West end of the project at Foothills Parkway to the East end at I-25.

1.2.1.2 I-25 Managed Lanes

The lateral limits shall be work in the I-25 Managed Lanes between and including the shoulder stripe lines of the inside buffer lane for both directions including the buffer lane, managed lane and inside shoulder of both directions except as specifically modified herein.

The longitudinal limits of the Concessionaire's maintenance responsibilities on the I-25 Managed Lanes shall start at I-25 from approximately MP 211.8 northward to MP 217.8, a distance of 6 miles, and from the interchange of I-25 and US 36 westward along US 36 to MP 52.9, a distance of approximately 0.6 miles. The I-25 Managed Lanes also includes an interchange ramp at 70th Avenue and connections with two arterials into Downtown Denver at 19th Street and 20th Street via a reversible two lane direct connect fly over bridge. The I-25 Managed Lanes is a limited access reversible facility with ingress/egress locations at 20th Street (Downtown Denver outbound ingress), 19th Street and Denver Union Station (Downtown Denver ingress/egress), ingress/egress at approximately MP 211.8, ingress/egress at approximately MP 217.8 and ingress/egress at approximately MP 52.9 along US 36 (I-25 Managed Lanes). The ingress access locations as noted above have a system of access gates to allow ingress into the I-25 Managed Lanes as well as providing prevention of access when the system is in reverse flow operations. Additions and modifications to the I-25 Managed Lane access gates will be made associated with the I-25 North Managed Lanes Extension project that is being delivered by CDOT. Appendix 6-5 shows the currently expected configuration of such changes.

The lateral limits shall be all work in the I-25 Managed Lanes the full width of pavement on the barrier separated section; the entire sections of the Downtown Denver ingress/egress ramps from/to I-25 and the entire section of the 70th Avenue interchange ramps from/to I-25. The Type 7 barrier and attenuators that are adjacent to the I-25 General Purpose Lanes is not included in the Maintained Elements except as it relates to the I-25 Preventative Maintenance Program. Figures 6-10 through 6-11 provide graphical representation of these limits. Figure 6.3 depicts the typical sections of I-25 and the limits between the General Purpose Lanes and Managed Lanes. Figures 6.10 and 6.11 depict the maintenance limits for I-25 starting at the North end at US36 to the South end at 19th/20th Streets.

The I-25 Managed Lanes include the fifteen (15) I-25 Bridges. Of these 15 bridge structures, five carry only the I-25 Managed Lanes and the remainder carries both the I-25 Managed Lanes and the I-25 General Purpose Lanes (the percentage attributable to the I-25 Managed Lanes varying between 16% and 30%). Section 1.4.1.1 details the special provisions related to shared maintenance responsibilities associated with the bridge structures.

1.3 Governing Documents

The Concessionaire shall be responsible for compliance with the most recent versions of CDOT's Manuals and Guidelines, procedures, manuals, guides, and handbooks. A list of these applicable standards, procedures, manuals, guides, and handbooks is included in Schedule 5. In addition, the following documents must be complied with and are available from the CDOT website:

a. CDOT Highway Maintenance Levels of Service Manual dated December 22, 1999,
b. CDOT Plant Maintenance (PM) Field Manual January 2008,
c. Manual on Uniform Traffic Control Devices (MUTCD),
d. Current edition CDOT Report No. CDOT-DTD-R-2004-17 Final Report, Development of A Pavement Preventive Maintenance Program For the Colorado Department of Transportation, Appendix A – Preventive Maintenance Program Guidelines and Appendix B – Distress Manual for HMA and PCC,
e. Current edition CDOT Pavement Management Technical Narrative, (posted on the Concession Web Site)
f. CDOT Region 6 and Region 4 Lane Closure Strategy (A Congestion Management Initiative) Third Edition, November 2010,
g. US 36 Traffic Incident Management Plan – Boulder Turnpike May 2011 (and as revised to reflect the Phase 2 Construction Work),
h. I-25 HOV/Toll Lanes Traffic Incident Management Response Manual, May 2006,
i. The Federal Motor Carrier Safety Regulations,
j. Colorado Revised Statutes,
k. All CDOT M&S Standards and Specifications Books and Manuals, and
l. The CDOT Procedure CP 74, Operating Profilers and Evaluating Pavement Profile.

Additional governing documents include the Intergovernmental Agreements and all addendums between HPTE and the Denver Regional Transportation District for the I-25 Managed Lanes and the US 36 Managed Lanes

1.4 Concessionaire Obligation to Operate, Remedy, Repair and Maintain

1.4.1 Service Requirements

Concessionaire is responsible for operating the I-25 Managed Lanes, Phase 1 Managed Lanes and Phase 2 Managed Lanes as well as maintaining the Electronic Toll Collection System in accordance with all information in this Schedule 6 including Appendix 6-2 and maintaining the Maintained Elements in accordance with Appendix 6-1.

1.4.1.1 I-25 Managed Lanes

Concessionaire shall take responsibility for operation and maintenance of the I-25 Managed Lanes upon the Commencement Date. In addition to the overall requirements outlined in Appendix 6-1 and Appendix 6-2, Sections 1.4.1 and 4.4.5 of this Schedule 6 further describes the additional responsibilities associated with the I-25 Managed Lanes. For first five years after the Commencement Date, there will be average International Roughness Index (IRI) of less than 125 inches per mile with 80% of auditable sections of the mainlines and ramps and throughout 98% of those auditable sections, having an IRI of less than 150 inches per mile. At the end of that initial five year period, the IRI for the I-25 Managed Lanes will revert to the IRI standard shown in Appendix 6-1.2.

1.4.1.1.2 I-25 Managed Lanes Structures

There are special requirements for the I-25 Managed Lanes associated with the I-25 Bridges. The Concessionaire will responsible for all Routine Maintenance and Life Cycle Maintenance of the I-25 Managed Lanes except for the special provisions outlined in this section associated the I-25 Bridges. The structures are a cast-in-place post-tensioned box with a bare deck bridge with modular joints. The deck is approximately 6 ½" thick with a 2" epoxy concrete overlay.

As it relates to the I-25 Bridges, the Concessionaire is responsible for all Routine Maintenance of the I-25 Managed Lanes and the I-25 Managed Lanes portion of the Life Cycle Maintenance for the I-25 Bridge Deck Superstructure. Further, as defined below, the Concessionaire will prepare and carry out the I-25 Preventative Maintenance Program for all portions of the I-25 Bridge Superstructure. The scope and proposed budget of the I-25 Preventative Maintenance Program (as further described below) is to be included by the Concessionaire in the 5-Year Plan and the appropriate one-year plans, agreed to with HPTE, and HPTE will reimburse the Concessionaire for its pro rata portion of the agreed upon budget for the I-25 Preventative Maintenance Program in relation to routine maintenance through Section 30.1(c) of the Concession Agreement, and in relation to Life Cycle Maintenance through the Provisions of Section 24.4 relating to Non-Separable Tasks. The barrier between the I-25 Managed Lanes and the I-25 General Purpose Lanes will be the responsibility of HPTE through CDOT except where it is part of I-25 Shared Bridge Decks. Figures 6-12 through 6-14 further clarify the distribution of responsibilities associated with the structures.

To mitigate the possibility of replacing the structures during the term of the Agreement, the Concessionaire will prepare and conduct the I-25 Preventative Maintenance Program as provided in the Services Proposal and further detailed in the approved MMP The I-25 Preventative Maintenance Program to be detailed by the Concessionaire as part of the MMP will demonstrate that all necessary activities to maintain the I-25 Bridge Superstructure are being undertaken to include, at a minimum, the following:

- Resealing and replacement of expansion joints on the bridge decks when they show signs of leaking or damage (seals approximately every 5 years, entire expansion joint every 20 years),
- Sealing bridge decks (sealing cycle to be determined by product used, e.g. penetrating sealers: ~2-3 years, 3/8" epoxy overlays: 1 years, 3/4" polyester overlay: ~20 years),
- Sealing exposed concrete in splash zones, and
- Rehabilitation of bridge decks or sealers where damage has occurred.

1.4.2 Service Requirements for all Maintained Elements

From the dates specified in Section 22.1 of the Concession Agreement the Concessionaire is to maintain the Maintained Elements in accordance with Appendix 6-1.

1.4.2.1 Category 1 and Category 2 Defects

Category 1 Defects are those failures of a Maintained Element to comply with the requirements of Appendix 6-1 requiring immediate and urgent attention because they are likely to create a danger or serious inconvenience , defined as any delays, detours, rough rides, obstacles, hazards or any other issues requiring drivers to make sudden evasive maneuvers, to customers. All others failures of a Maintained Element to comply with the requirements of Appendix 6-1 are Category 2 Defects which can be included for repair either within Concessionaire's annually recurring highway maintenance and repair program or as Life Cycle Maintenance.

Where a Category 1 Defect is revealed by any inspection or is otherwise brought to the attention of Concessionaire, Concessionaire shall take immediate steps to alert customers to the hazard and shall categorize, correct, make safe and repair the Category 1 Defect[1] in accordance with Appendix 6-1. Due to the immediate hazard of Category 1 Defects, the Concessionaire shall have two levels of response obligations – first to alleviate the immediate hazard and second to complete the final remedy as indicated below:

a. Initial response - take necessary action such that the hazard to customers is mitigated within the period given in the column entitled "Cat 1 Hazard Mitigation" in Appendix 6-1.

b. Permanent remedy – complete remediation of the Category 1 Defect within the period given in the column entitled "Cat 1 Permanent Remedy" in Appendix 6-1.

For Category 2 Defects, Concessionaire shall undertake the permanent repair within the period specified in the column entitled "Cat 2 Permanent Repair" in Appendix 6-1.

1.4.2.2 Residual Life Assessment

Concessionaire shall use the results of the inspections described in its Maintenance Management Plan and other relevant information to determine, on an annual basis, or more frequently, the Residual Life of each Maintained Element including the Reliability calculations as specified in Section 6.2.1. Concessionaire shall use this information to update the scope of the Life Cycle Maintenance Plan as described in Section 6.3 of this Schedule 6.

1.4.2.3 Preventative Maintenance

Concessionaire shall adhere to the minimum standards as determined by the equipment manufacturer's recommended maintenance schedule and operating procedures.

1.5 Safety

The Concessionaire shall conduct the Services in accordance with all applicable safety laws. The Concessionaire shall perform all Services with the impetus to maximize the safety of the traveling public and the Concessionaire's employees. The Concessionaire shall develop a Safety Plan that includes staff training, safety procedures and protocols to address the hazardous conditions associated with the Services. The Safety Plan shall be an integral part of the operations and maintenance plans as described in Section 1.7.

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a. The Concessionaire is responsible for ensuring that all equipment used shall be maintained in a safe and efficient manner in accordance with all State, local and federal laws, safety organizations, regulations and guidelines pertaining to providing the required services.
b. The Concessionaire shall follow all safety requirements outlined in the National Electric Safety Code (NESC), the Occupational Safety and Health Administration (OSHA) rules, and any standards or practices for safe installation or maintenance of required equipment per the Contract Documents.
c. The Concessionaire is solely responsible for the safety of all toll system personnel and shall be solely responsible for maintaining the safety required and providing safety equipment and procedures for the protection of employees and the public throughout the area(s) of the applicable toll system.
d. If any deficiency may cause harm to life or property or violate any rules or regulations such as, but not limited to, American With Disabilities Act, Occupational Safety and Health Administration rules or as otherwise contained herein, HPTE shall, to the extent practicable, give notice to Concessionaire and Concessionaire shall have the right to cure. If Concessionaire fails to cure within 30 days or such time specified in the notice, HPTE may take any immediate corrective actions required, and the Concessionaire shall be responsible for the burden of any of these direct and any associated and/or indirect costs, in accordance with the Contract Documents.

1.6 Staffing Requirements and Plan

The Concessionaire shall identify a primary staff to be dedicated to providing the Services and shall maintain adequate support staff with appropriate skill levels and proper training to respond to all of HPTE's Service Requirements, at all times, for the full duration of the Services Period. The Concessionaire's staff shall be available 24 hours per day, seven days per week, and every day of the year to respond as necessary to support the maintenance requirements. The Concessionaire shall maintain updated staff records and shall provide HPTE access to these staff records upon request. The Concessionaire shall update records within five business days of notification or knowledge of a change and will assure that all necessary notifications to HPTE are made as required by the Concession Agreement.

The Concessionaire's operations and maintenance staff shall exercise good sound judgment in carrying out their duties and shall conduct themselves in such a manner that will reflect favorably upon HPTE.

1.7 Operations & Maintenance Plans

1.7.1 Maintenance Management Plan (MMP)

Concessionaire shall prepare a Maintenance Management Plan (MMP) that sets out how Concessionaire will comply with HPTE's Service Requirements in accordance with the Concessionaire's Service Proposals and defines the process and procedures for the maintenance of the Maintained Elements beginning with the respective Services commencement dates. The Concessionaire shall submit the MMP in accordance with Section 22.4 of the Concession Agreement and shall include the following for each Maintained Element in accordance with Appendix 6-1 and Appendix 6-2 for ETCS:

a. performance requirements
b. measurement procedures
c. threshold values at which maintenance is required
d. inspection procedures and frequencies
e. subsequent maintenance to address noted deficiencies.

Concessionaire's maintenance staff shall have access to and use the MMP. Concessionaire shall update the MMP annually, or more frequently as necessary, to indicate the maintenance requirements for each of the Maintained Elements as they are revised, upgraded and/or replaced.

1.7.1.1 MMP Contents

The Concessionaire through the MMP will, at a minimum, include processes that will help perform and/or document the following:

a. Identification of Routine Maintenance and preventative maintenance items,

b. Schedule of maintenance actions,

c. Computerized tracking/management system,

d. Inspection checklists for roadway, bridges, drainage, illumination, signs, ROW appurtenances, buildings, toll systems, etc.,

e. Schedule for inspections and personnel responsible,

f. Maintenance action response form,

g. Condition assessments,

h. Identification of future major maintenance needs including how the I-25 Managed Lanes will achieve the IRI standards after the initial five years,

i. Identification of milestones/criteria for these needs,

j. Procedures for managing records of inspection and maintenance activities, including appropriate measures for providing protected duplication of the records

k. Response times to mitigate hazards, permanently remedy, and permanently repair Defects, differentiated for Category 1 Defects and Category 2 Defects (response times shall be in accordance with Appendix 6-1, or lower)

The Concessionaire shall include in the MMP how the following specific obligations will be implemented:

l. Preventative maintenance including a separate section on the specific provisions associated with the I-25 Preventative Maintenance Program as further detailed in Section 1.4.1.1

m. Maintenance and Service Manual: Concessionaire shall prepare and update a Maintenance and Service Manual in both printed and electronic file format (searchable PDF). This manual shall be comprehensive and shall include, but not be limited to, detailed technical maintenance and servicing descriptions for all major Maintained Elements as well as equipment that is specialized to meet the Services. The manual shall include preventative maintenance schedules, testing and trouble-shooting techniques, corrective measures, both temporary and permanent, the location and availability of support services, point to point component wiring schematics and logic signal flows, and assembly and disassembly drawings, including exploded view drawings. Standard service manuals for unmodified commercial products are acceptable for inclusion in the MMP provided that they contain details and accurate information in order to properly service the specific equipment that is part of the Maintained Elements.

n. Spare parts and inventory levels: Concessionaire shall maintain a comprehensive, accurate, and auditable parts and spares inventory adequate to address the maintenance obligations. This information contained in the inventory shall be compatible with the Maintenance Management Information System (MMIS) as described in Section 5.1 of this Schedule 6.

o. Work plans: Concessionaire shall prepare quarterly work plans together with one-year and five-year work plans. In respect of this requirement, a work plan means a detailed plan that identifies all maintenance activities that will be undertaken during a specified period, including a schedule of the expected road closures with the activities that could impact the Managed Lanes or General Purpose Lanes. This will include all of the requirements associated with the I-25 Preventative Maintenance Plan.

The one-year work plans shall be updated every quarter and shall include a rolling 12-month work plan.

The five-year work plan (5-Year Plan) shall be a combined plan that includes all of the Lifecycle Maintenance requirements as required by Section 25.1 of the Concession Agreement and the I-25 Preventative Maintenance Plan. The 5-Year Plan will be updated each year and include all Lifecycle Maintenance requirements as outlined in Section 6.3 and the I-25 Preventative Maintenance Plan. The proposed scope and budget for all I-25 Preventative Maintenance Plan activities will be reviewed and agreed to with HPTE through CDOT in order to assess and agree to the pro rata share due from CDOT.

p. Maintenance records: The Concessionaire shall keep inspection and maintenance records for the complete Services Period and shall provide them to HPTE at the end of the Services Period. These records shall include numbers for labor hours, expended materials, quantity and equipment types as well as the hours for that equipment. This information may be submitted in CDOT component numbers or class code numbers.

1.7.1.2 MMP Sections

The MMP shall be separated into "Roadway/Roadside Maintenance" and "Managed Lanes Electronic Toll Collection System (ETCS) Maintenance" sections (as further described in Sections 1.7.1.3 and 1.7.1.4 to this Schedule 6 below).

1.7.1.3 Components of Roadway/Roadside Maintenance Section

The MMP shall include a Road Maintenance Plan section that addresses the following minimum requirements related to roadway/roadside (Road) maintenance for the Maintained Elements:

a. Overview description of all Road assets within the limits described in Section 1.2.1 of this Schedule 6, including an inventory of facilities, systems and equipment to be maintained by the Concessionaire;
b. A logical system breakdown of all roadway assets within the limits described in Section 1.2.1 of this Schedule 6, including facilities equipment and systems and the levels of maintenance to be provided by the Concessionaire's staff;
c. Description of the staffing plan (including all positions, work locations, and work hours) and related workshop, maintenance garages, major equipment, vehicles, storage facilities, etc., as necessary to support the roadway assets and maintenance program,
d. Description of the staff qualifications for each staff position,
e. List of the Maintained Elements major systems and equipment manufacturers/vendors, including their contact information (contact person, address, telephone numbers, website address and e-mail address),
f. List of Sub-Contractors used to perform any roadway asset maintenance services and the identification of the services expected to be provided,
g. List of preventative maintenance and Routine Maintenance procedures for all Road assets,
h. Road assets Routine Maintenance and preventative maintenance schedule indicating the tasks, required frequency and the necessary reporting requirements,
i. A list of unplanned but anticipated maintenance services for all Road assets,
j. Diagnostic procedures for equipment and systems,

k. Detailed preventative maintenance procedures for all Road assets ,
l. Detailed reactive maintenance procedures for all Road assets,
m. Spare parts inventory procedures for all Road assets available in a reasonable time,
n. Repair procedures for repairs that are anticipated,
o. Systems and equipment manufacturer's operations and maintenance manuals,
p. Software manuals, if applicable,
q. As-built documents, including wiring diagrams, schematic drawings, logic block diagrams, etc.,
r. Assembly and disassembly drawings clearly identifying the components,
s. Inspection Plan, copies of all inspection forms, checklists, etc.,
t. A summary listing of all maintenance tasks for all Road assets categorized by system/discipline,
u. Inclusion or reference to a maintenance of traffic plan, to include traffic management plans, traffic control plans and methods of handling traffic,
v. Inclusion or reference to Incident Management Plan, to include crises communication plan,
w. Inclusion or reference to activities necessary to comply with the Environmental Compliance Work Plan,
x. Asset Condition Score
y. How Best Management Practices, will be applied

1.7.1.4 Components of Managed Lanes Electronic Toll System Maintenance Section

The MMP shall include a section for Electronic Toll Collection System (ETCS) maintenance management for the Managed Lanes. The MMP shall include, but not be limited to the following:

a. Reference to the Transition Plan for the I-25 Managed Lanes in accordance with Section 1.7.5 of this Schedule 6,
b. Overview description and system breakdown of all ETCS components,
c. Approach, procedures, and methods for an ETCS,
d. Description of the maintenance management system that will be used for inventory and maintenance tracking,
e. Description of the staffing plan and qualifications as necessary to support ETCS devices maintenance,
f. Spare parts inventory procedures for ETCS equipment,
g. List of the major systems and equipment manufacturers/vendors, including their contact information (contact person, address, telephone numbers, website address and e-mail address),
h. List of Contractors which will be used to perform any ETCS device maintenance services and the identification of the services expected to be provided,
i. Detailed preventative maintenance and Routine Maintenance procedures and schedule for all toll system devices, software and firmware,
j. Emergency response procedures for ETCS,
k. Comprehensive Disaster Recovery Plan for the ETCS and associated toll system infrastructure addressing a documented, cost-effective method for responding to a disaster that may degrade the performance of the ETCS or the toll system infrastructure.
l. List of unplanned but anticipated maintenance services for all toll system devices,
m. Diagnostic procedures for equipment and systems,
n. Systems and equipment manufacturer's operations and maintenance manuals,
o. Software manuals,
p. Wiring diagrams, schematic drawings, logic block diagrams, etc.,
q. Assembly and disassembly drawings clearly identifying the components, and

r. Copies of all inspection forms, checklists, etc.
s. For custom equipment and systems, custom operations and maintenance manuals that include detailed information that addresses the custom features of the equipment provided and include drawings.
t. Standard service manuals for commercially available equipment and products, only if the equipment provided is standard off-the-shelf equipment without any custom features or functions.

1.7.2 Operations Management Plan (OMP)

The Concessionaire shall prepare the Operations Management Plan (OMP) to meet the requirements set forth in HPTE's Service Requirements and shall include information regarding the procedures for the Services Period. The Concessionaire shall submit the OMP in accordance with Section 22.4 of the Concession Agreement.

The Concessionaire shall prepare the OMP in a manner which shall set forth in detail, at a minimum, the approach, procedures, and implementation for the following:

a. Overview description of all facilities, systems and equipment to be operated by the Concessionaire,
b. Staffing plan procedures, including staff qualifications, training and certification processes,
c. Monitoring the condition and operational performance of the Managed Lanes
d. Description of the parameters to be used for setting, increasing and decreasing tolls to optimize use of the Managed Lanes,
e. Incident response, management and reporting,
f. Traffic operations restrictions, including periods of lane closure restrictions,
g. Tolling integration with other tolling entities,
h. Description of how performance monitoring will be accomplished,
i. Operating protocols, agreements and interactions with the various entities and agencies with interests in the Managed Lanes,
j. Standard operating and communication procedures for emergency preparation, response, and recovery, including impacts from extreme weather conditions
k. Planning and coordination with all affected Governmental Authorities, including emergency services,
l. Liaison and coordination with the CDOT Traffic Management Centers or any other entities that may establish traffic management centers in the corridors,
m. Analysis of vehicular accident patterns to identify safety issues and implement cost effective solutions to maximize safety,
n. Identification, containment and disposal of Hazardous Materials spills with reports to CDOT,
o. Prompt investigation of reports or complaints received from all sources,
p. Detailed descriptions of the procedures, methods and protocols for opening, closing and maintaining the Managed Lanes system including the I-25 reversible lanes Automatic Gates,
q. Establishment of policies and procedures for the detection and monitoring of traffic events,
r. Establishment of procedures for external communication system messaging resulting in improved dissemination of information and safety,
s. Establishment of guidelines and procedures for handling system failures and ensuring that all failures are properly documented,
t. Staff qualifications, equipment availability, response and cleanup as a result of fuel spills or other contamination-causing events,
u. How all requirements of the Intergovernmental Agreements with Denver RTD for the I-25 Managed Lanes and the US36 Managed Lanes will be addressed,

v. How all requirements of the TIGER Performance Measures will be addressed for the Managed Lanes as described in Exhibit 6-1. The Concessionaire shall provide all information to HPTE for submission.

The OMP shall encompass these additional plans:

w. Safety Plan,
x. Emergency management plan encompassing the existing US 36 Traffic Incident Management Plan – Boulder Turnpike May 2011 and the existing I-25 Managed Lanes,
y. Managed Lanes Communication Plan for communicating with and educating the public on Managed Lanes information and procedures. Public information relevant to an incident on the GP or Managed Lanes will be coordinated with HPTE.
z. Courtesy patrol service plan, which shall provide an overview and establish procedures for the courtesy patrol services to assist travelers in both the Managed Lanes and the General Purpose Lanes including the hours of service. This is to include the strategy to assure that customers in all lanes will be provided assistance, and
aa. Enforcement plan to address occupancy enforcement in the Managed Lanes

1.7.3 Quality Management Plan

The Concessionaire shall include a section in their Quality Management Plan (QMP) that describes what quality procedures will be performed for the operations and maintenance work which shall fully comply with the requirements included in Schedule 6.

The QMP will include separate sections on Operations Quality Management and Maintenance Quality Management – addressing each of the following:

a. Approach to quality management including a description of quality assurance and quality control functions,
b. Approach to reporting relationships and responsibilities including HPTE oversight. This will also include a description of the internal process for preparing and reviewing incident reports, non-conformance reports, traffic reports and maintenance work reports, and how non-compliance issues will be documented and corrected.
c. Procedures that will establish the Concessionaire's self-monitoring process and to monitor the performance of the Maintained Elements as well as the OMP services.

The QMP shall be submitted with the MMP for review and comment by HPTE. The QMP shall provide the means to evaluate Concessionaire's level of performance with respect to the minimum performance requirements as detailed in Appendix 6-1 and 6-2 The QMP shall also assemble the necessary operations and maintenance information to compare it to the minimum performance requirements so that HPTE can ultimately resolve any Noncompliance Points imposed on the Concessionaire. As part of the QMP the Concessionaire shall develop a detailed quality assurance system for validating the information, accuracy, and results of the QMP. The system shall include procedures to validate the data, times, dates, other information and calculations that are the basis of any Noncompliance Points. The Concessionaire shall prepare reports that provide summary of observations and identify the results from the QMP processes.

1.7.4 Incident Response Plan

The Concessionaire shall prepare an Incident Response Plan ("IRP") for HPTE's Acceptance for the Maintained Elements that is consistent and demonstrates how they will comply with the CDOT Incident Management Plans for US 36 (US 36 Traffic Incident Management Plan – Boulder Turnpike May 2011 (and as updated to reflect the Phase 1 Corridor construction work and Phase 2 Construction Work) and follow the existing I-25 HOV/Toll Lanes Traffic Incident Management

Response Manual, May 2006 for the I-25 Managed Lanes. It shall also comply with all requirements of all Intergovernmental Agreements with the Denver RTD. In the IRP, the Concessionaire shall include or address any specifics not addressed in the CDOT Incident Management Plans including:

a. a description of the Concessionaire's specific responses to incidents
b. the responsibility to and turnaround time for the preparation of monthly incident reports in electronic format (and as further specified in Section 1.8.2 of this Schedule 6) and submission of them to HPTE when incidents occur
c. all issues associated with Hazardous Materials spills
d. necessary coordination responsibilities with CDOT and third party personnel when incidents occur.

1.7.5 Transition Plan

Concessionaire shall assume full responsibility for all operations and designated maintenance activities for the Maintained Elements upon each Services commencement date. Prior to any of the Services commencement dates, Concessionaire shall prepare a comprehensive Transition Plan that clearly identifies the steps and activities necessary to coordinate with HPTE and CDOT to achieve a smooth transition of both operations and maintenance activities on the I-25 Managed Lanes, the Phase 1 Corridor and Phase 2 Corridor.

The Concessionaire shall prepare the comprehensive Transition Plan as a separate document from the MMP or OMP that includes all phases of the Services and submit it for Acceptance to HPTE at least 30 days prior to the I-25 Managed Lanes Services Commencement. At least 30 days prior to the Services Commencement Date for the Phase 1 Corridor and at least 30 days prior to the Final Services Commencement Date updates to the Transition Plan shall be submitted for Acceptance to HPTE.

The Transition Plan shall detail how the Concessionaire will transition all aspects of the Services including those aspects currently provided by others to ensure a seamless transfer of operations and maintenance services and ensure a continuous (24 hours per day, seven days per week, and every day of the year) system operation and functionality of all components of the Managed Lanes and the General Purpose Lanes as applicable.

1.8 Reports

1.8.1 Monthly Maintenance

The Concessionaire shall prepare monthly maintenance reports that shall identify all of the activities associated with Maintained Elements for the month, the actual maintenance performed for the period, and confirmation that the Concessionaire performed all Maintained Elements in compliance with the Contract Documents,

The Concessionaire shall have monthly maintenance reports in electronic format available for submittal to HPTE upon request. The monthly maintenance reports shall contain at minimum the following information:

a. A summary of the planned maintenance activities for the upcoming month,
b. A summary of the maintenance performed and completed for the month,
c. A summary of the planned maintenance that was not completed for the month, including the reasons for the incompletion of the planned maintenance and a summary of deferred days for each deferred item,
d. Summary of the maintenance activities and results performed for the month beyond the planned maintenance activities for that month,

e. The Concessionaire's incident response logs related to maintenance activities, including a time-based report of all actions and activities performed by the Concessionaire including a description of any damages including the date, infrastructure component, details of the resulting Category 1 Defect or Category 2 Defect or damage,
f. Detailed results of all inspections, assessments and testing activities, including the related procedures, forms, etc.,
g. Monthly toll system performance reports,
h. Preventative maintenance plan and progress,
i. Mean Time Between Failure (MTBF), and
j. Mean Time Between Repair (MTBR).

1.8.2 Operations Reports

Concessionaire shall prepare the following reports on a quarterly basis, except as noted below:

a. A monthly summary of the status of the Managed Lanes for the month covering all essential statistics for the lanes including revenue, usage by vehicle type, non-revenue, etc.
b. Monthly incident reports: For any incidents on the Managed Lanes that result in damage to Maintained Elements or require response of emergency medical services, a report shall be created identifying the nature of the Incident, time, date, location, parties involved, and actions taken. For incidents involving deaths, the Concessionaire shall submit the incident report to HPTE within 24 hours of the Incident.
c. Non-compliance reports: For each material Defect in the Maintained Elements represented in Appendix 6-1 or 6-2, the report shall identify the location, nature, and cause of the material Defect and the steps that will be, or have been, taken to address the material Defect.
d. Customer relations activities, including complaints, complaint tracking data, customer service rating data, and the details of the Concessionaire's response,
e. Traffic Reports: Each traffic report shall summarize traffic volumes along the Managed Lanes on a daily, weekly, and monthly basis including hourly information.
f. Quality conformance summary.
g. Environmental monitoring activities.
h. TIFIA Performance Measurer per Exhibit 6-1
i. If the TIFIA loan obligations remain the responsibility of the HPTE:
   (i) Report that includes Pledged Revenues received and total Project O&M expenses and Capital Expenditures incurred.
   (ii) Report showing any variance in Pledged Revenues actually received and Budgeted Pledged Revenues as shown in the Annual Operating Budget, together with a brief explanation for any variance of 20% or more.
   (iii) Report showing any variance in Pledged Revenues actually received and Budgeted Pledged Revenues as shown in actual O&M Expenses incurred and the budgeted Project O&M Expenses as shown in the Annual Operating Budget, together with a brief explanation for any variance of 20% or more.

Upon request, Concessionaire shall also provide HPTE any technical documentation it maintains regarding the Services.

1.8.3 Annual Reports

Concessionaire shall have annual reports in electronic format available for submittal to HPTE upon request. The annual reports shall contain at minimum the following information:

a. An overall summary of the Managed Lanes traffic and performance for the year including quality, safety, environmental.
b. A summary of the planned maintenance and operations activities for the upcoming year,
c. A summary of the maintenance and operations activities performed and completed for the year along with the results,

d. A summary of the planned activities that were not completed for the year, including the reasons for the incompletion and a summary of deferred days for each deferred item,
e. Summary of the maintenance and operations activities performed for the year beyond the planned activities for that year,
f. Summary of [Noncompliance Points] assessed including details of each assessment,
g. The Concessionaire's incident response logs including a time-based report of all actions and activities performed by the Concessionaire,
h. Customer relations activities, including complaints, complaint tracking data, customer service rating data, and the details of the Concessionaire's response,
i. Results of all inspections, assessments and testing activities,
j. Monthly toll system performance reports,
k. Preventative maintenance plans and progress,
l. Renewal plans: Description of the Life Cycle Maintenance Plan conducted in the previous year and updates to the five-year Life Cycle Maintenance Plan to describe the planned Life Cycle Maintenance and identify any changes from the previous plans,
m. Mean Time Between Failure (MTBF),
n. Mean Time Between Repair (MTBR),
o. Updates to the MMP, and
p. Updates to the OMP, including planned operating procedures and any changes from the previous OMP.

1.9 Meetings

The Concessionaire shall have monthly meetings, or as needed, with HPTE representatives to discuss the Services.

The Concessionaire, HPTE and CDOT representatives will meet monthly to review the Services status including the reports required under Section 1.8. The items to be discussed shall include, but not be limited to: operations and maintenance activities of the previous month, planned operations and maintenance for the next month, public information and customer issues, future lane closures, incidents and emergencies, incident management coordination, calculation of any adjustments to the any maintenance payments, assessment of Noncompliance Points, closures, and any other pertinent information related to the Services. HPTE may wish to hold separate meetings for general management/operations and maintenance.

HPTE may request a meeting at any time to discuss Services-related issues, accidents, etc. In addition, the Concessionaire will coordinate meetings to be held at least one week prior to planned lanes closures. The Concessionaire shall be required to actively participate in toll system meetings, major work meetings, meetings to plan for all forecast winter storms and for debriefings after all winter storms, planning meetings and others as directed by HPTE, and shall provide assistance, information, and expertise as needed.

The Concessionaire shall conduct incident debriefings to review lessons learned and best practices. These incident debriefings shall be summarized at subsequent meetings. The Concessionaire shall be required to attend quarterly meetings with HPTE to review any safety and traffic operations issues or requests related to the Maintained Elements.

1.10 Coordination

1.10.1 Coordination with CDOT/HPTE

Understanding that it is critical to the success of the Managed Lanes that the Concessionaire, HPTE, CDOT as well as all Governmental Authorities in the corridors coordinate on all issues facing the Managed Lanes, these Services Requirements outline several points of communication. To facilitate this coordination the Concessionaire will provide HPTE with one point-of-contact, the Concessionaire's Representative, as a member of the Concessionaire's Key Personnel with authority to coordinate all Services work. CDOT/HPTE will require 24 hour numbers for the primary, secondary and back-up contacts that are knowledgeable of the operations and that can make operational and emergency decisions.

1.10.2 Coordination with Emergency Services

Concessionaire shall coordinate with local emergency services and Colorado State Patrol.

1.11 HPTE Operations and Maintenance Monitoring

1.11.1 Review of Annual Services

The Concessionaire will prepare an Annual Review Report. The HPTE will meet with the Concessionaire to discuss any potential impacts to the Services including those that may result from the occurrences below as well as any changes which may be required to the MMP and OMP:

a. A change to statewide maintenance programs or practices;
b. A change to any of the policies, procedures, standards, manuals, handbooks, guides, specifications, or any other State, local, or federal documents used to monitor the performance of the Services;
c. Increased maintenance due to the construction of roadways, structures, and facilities not included in HPTE's work program at the time of execution of the Concession Agreement;
d. Increased maintenance due to the transfer of ownership to HPTE of non-state roadways, structures, and facilities within the O&M Toll System; and
e. Additional requirements as a result of traffic operational improvements.

2.0 ROADWAY MAINTENANCE REQUIREMENTS

2.1 Roadway Maintenance Management System

For scheduled road closures associated with Routine Maintenance operations, the Concessionaire shall coordinate these lane closures and maintenance activities with HPTE a minimum of two weeks in advance of the planned activities as planned maintenance in accordance with this Schedule 6. The Concessionaire shall notify HPTE and other agencies appointed by HPTE immediately when closing any travel lanes (including the BOS Corridors) for unplanned lane closures when the circumstances arise.

2.2 General Description of Routine Maintenance Responsibilities of the Concessionaire for the Maintained Elements

Concessionaire shall take all necessary actions to achieve the following:

a. Minimize delay and inconvenience to customers,
b. Minimize the risk of damage, disturbance, or destruction of third-party property during the performance of maintenance activities,
c. Coordinate with and enable HPTE, CDOT and others with statutory duties or functions in relation to the Managed Lanes to perform such duties and functions,
d. Perform systematic inspections of the Maintained Elements, periodic maintenance and Routine Maintenance in accordance with the provisions of the MMP and the Safety Plan,
e. Provide all resources necessary for the performance of all activities in the MMP.

2.2.1 Overall Responsibilities

Concessionaire is responsible for the minimum performance and measurement criteria included in Appendix 6-1 for the Maintained Elements. The Concessionaire shall take all actions necessary to perform all required maintenance activities, including, but not limited to:

a. All activities described in Appendix 6-1, whether included in the list below or not,
b. Performance of systematic inspections of the Maintained Elements, periodic maintenance and Routine Maintenance in accordance with the provisions of the MMP and the Safety Plan,
c. Patching and repair of existing pavements included as a part of the Managed Lanes and any associated traffic management,
d. Patching and repair of all existing structures included as a part of the Maintained Elements
e. Any associated traffic management,
f. Repair of shoulder drop-offs,
g. Replacement and repair of shoulders,
h. Lighting as further detailed in Section 2.10)
i. Maintenance of delineators, signing and pavement markings in accordance with the MUTCD and the Current Colorado Supplement to MUTCD as well as Current CDOT M&S Standard Plans,
j. Drainage maintenance,
k. Water quality monitoring and maintenance
l. Replacement of damaged guardrail, bridge rail, barriers, and glare screens,
m. Repair of impact attenuators,
n. Routine and Life Cycle Maintenance of Node Building 2 (as part of the Managed Lanes) including payment of utilities,,
o. Routine and Life Cycle Maintenance of the 70th Avenue Maintenance Facility Sand Dome and Magnesium Chloride Storage (as part of the Managed Lanes)
p. Pest control for any buildings acquired within the CDOT Right-of-Way

q. Perform maintenance to control Noxious Weeds in accordance with Concessionaire's Maintenance Management Plan, in accordance with CDOT requirements and the Executive Order D 006 99 requiring the management of noxious weeds on lands and public rights-of-way,
r. Removal debris, including litter, graffiti, animals, and abandoned vehicles or equipment from the ROW of the Maintained Elements,
s. Identification and correction of all Defects and damages from Incidents, and
t. Monitoring and observation of weather and weather forecasts to proactively deploy resources to minimize delays and safety hazards due to heavy rains, snow, ice, or other severe weather events.

For additional clarity, the maintenance of the Active Traffic Management Lane Usage Signs (LUS) over the Managed Lanes will not be the responsibility of the Concessionaire. Operation of the LUS is discussed in Section 4.4.6.

When an event occurs causing damage to the facility, HPTE authorizes the Concessionaire to pursue claims against any responsible party for reimbursement of expenses incurred.

2.3 Inspections

The Concessionaire shall carry out general inspections and continuous monitoring of the Maintained Elements in accordance with the OMP. The Concessionaire shall use the results of general inspections to develop and update the I-25 Preventative Maintenance Plan and the Life Cycle Maintenance Plan, to maintain asset conditions and service levels, and to develop programs of maintenance and Life Cycle Maintenance to minimize the effect of Maintained Elements on customers. Concessionaire shall cause trained and competent personnel to plan and implement a program of inspections of the Maintained Elements which:

a. verifies the continuing safety of the Maintained Elements for customers,
b. prioritizes Category 1 Defects,
c. identifies Category 2 Defects to be included for repair either within Concessionaire's annually recurring highway maintenance and repair program or as Life Cycle Maintenance,
d. is responsive to reports or complaints received,
e. takes account of Incidents and emergencies affecting the Maintained Elements,
f. monitors the effects of extreme weather conditions, and
g. collates data to monitor performance of the Maintained Elements and to establish priorities for future maintenance operations and Life Cycle Maintenance.

2.3.1 Inspection Frequency

Concessionaire shall annually review and update as necessary the schedule for inspections which will be appropriately spaced throughout the year. After periods of inclement weather or other events which may cause accelerated deterioration of Assets, safety hazards or other detrimental impacts to the Maintained Elements, Concessionaire shall conduct comprehensive visual surveys which will identify all such areas of concern.

2.3.2 Inspection Standards

In performing inspections to identify Category 1 and Category 2 Defects, Concessionaire shall, for any Maintained Element defined in the column entitled "Element" in Appendix 6-1, conform at a minimum to the inspection standards set forth for that Maintained Element in the column entitled "Inspection and Measurement Method" in Appendix 6-1

Concessionaire shall establish inspection procedures and perform inspections so that:

a. All Category 1 Defects are identified and remedied such that the hazard to customers is mitigated within the period given in the column entitled "Category 1 Hazard Mitigation" in Appendix 6-1
b. All Category 1 Defects are identified and permanently remedied within the period given in the column entitled "Category 1 Permanent Remedy" in Appendix 6-1
c. All Category 2 Defects excluding those items which have no impact on any parties other than Concessionaire are identified and permanently repaired within the period given in the column entitled "Category 2 Permanent Repair" in Appendix 6-1.

The periods stated in Appendix 6-1 under each of the above headings shall be deemed to start upon the date Concessionaire first obtained knowledge of, or first reasonably should have known of, the Defect. For this purpose Concessionaire shall be deemed to first obtain knowledge of the failure not later than the date of delivery of the initial notice to Concessionaire. Concessionaire shall investigate reports and complaints on the condition of the Maintained Elements received from all sources. Concessionaire shall record these as records that shall be maintained for inspection by HPTE ("O&M Records") together with details of all relevant inspections and actions taken in respect of Defects, including temporary protective measures and repairs.

2.3.3 General Inspections

Concessionaire shall perform general inspections in accordance with the MMP so that the repairs of all Defects are included in planned programs of work. O&M Records in respect of general inspections shall include details of the manner of inspection (e.g. center lane closure or shoulder), the weather conditions and any other unusual features of the inspection. Concessionaire shall perform general inspections such that Category 2 Defects are identified and repaired within the period shown in Appendix 6-1or, if the Defect is not specified in Appendix 6-1, within six (6) months of the Defect occurring; provided that Defects which require special equipment to identify or are listed under the heading of "Specialist Inspections" may have different identification periods.

2.3.4 Specialist Inspections

Concessionaire shall undertake specialist inspections for Maintained Elements listed in Table 6-1 below and shall include the inspection results as O&M Records. As it relates to I-25 Bridges, while CDOT will include the I-25 Bridges in its' biannual bridge inspection program, inspections of all portions that are the responsibility of the Concessionaire should be detailed in the MMP and carried out by the Concessionaire..

2.3.5 I-25 Managed Lanes and I-25 Bridges Initial Inspection

The Concessionaire shall complete an initial inspection of the I-25 Managed Lanes and I-25 Bridges, and submit the results to HPTE at least 60 days prior to the anticipated Commencement Date. If any Element does not then meet the requirements of Appendix 6-1.2, and are not addressed in the I-25 Initial Work Package, Section 22.10 shall apply.

Table 6-1 – Specialist Inspections

Element	Frequency
Roadway	Annual survey of pavement condition for the Managed Lanes and all Maintained Elements undertaken using automated condition survey equipment to measure all necessary criteria including: ruts, skid resistance and ride quality according to the inspection and measurement methods set forth in Appendix 6-1
Bridges	Inspections and load rating calculations at the frequency specified in Appendix 6-1. In addition, NBIS inspections as per FHWA Laws and at the frequency specified in FHWA regulations as well as CDOT Pontis Bridge Inspection Coding Guide revised 10/1998 and AASHTO Manual for Condition Evaluation of Bridges.
Electrical supplies to lighting, signs, traffic signals and communications equipment	Inspections as required by FHWA or electrical Laws as well as all Current CDOT M&C Standard Plans
Toll equipment	Inspections as required by the equipment manufacturer.

2.3.6 Concessionaire Audit Inspections

The Maintained Elements shall be subject to Auditable Sections that shall be at least 0.3 mile in length of the highway facility, randomly selected. The Auditable Sections shall separately account for the Managed Lanes and the General Purpose Lanes such that the same .3 mile length of the highway will have two Auditable Sections. Auditable Sections selected must not be utilized again within 5 years. Concessionaire shall establish and prepare plans identifying the Auditable Sections. The plans shall identify the boundaries of each Auditable Section and shall cross reference to an inventory describing each Maintained Element contained within each Auditable Section. Concessionaire shall submit these plans no later than thirty (30) days prior to commencement of initial inspections. Initial inspections shall take place by the Services Commencement Date.

Concessionaire shall undertake detailed inspections of randomly selected Auditable Sections for audit purposes (the "Concessionaire's Audit Inspections") at least once quarterly. On each occasion that a Concessionaire's Audit Inspection is undertaken, the inspection shall include at least five (5) percent of the total available Auditable Sections. Concessionaire shall assess the condition of each Maintained Element, as set forth in the column entitled "Element" in Appendix 6-1, using the inspection and measurement method set forth in the column entitled "Inspection and Measurement Method". Concessionaire's Audit Inspections shall include physical inspection of those Maintained Elements that are safely accessible without traffic control. Where the measurement method would require specialist equipment or would require traffic lane closures to implement, Concessionaire shall assess the condition of the relevant Maintained Element by reference to the current O&M Records held in Concessionaire's database.

Concessionaire shall create a new O&M Record for each Maintained Element physically inspected in accordance with the column entitled "Measurement Record" in Appendix 6-1. Concessionaire's Auditable Sections shall be randomly selected and performed on a schedule agreed to by the HPTE. The HPTE shall be given the opportunity to accompany Concessionaire when it undertakes the physical inspections associated with the Audit Inspection.

In taking over operations and maintenance of existing facilities for the I-25 Managed Lanes, the Concessionaire shall establish the Asset Condition Score for the existing facilities by initiating 100% Audit Inspections of existing facilities (60) days prior to the I-25 Managed Lanes Services Commencement. HPTE will make available any maintenance records in its possession that will assist in establishing the Asset Condition Score. If there is work required in addition to the I-25 Initial Work Package to meet the requirements of Appendix 6-1, that shall be dealt with in accordance with Section 23.10 of the Concession Agreement.

2.3.7 Asset Condition Score by Concessionaire

Within ten (10) Days of the last quarterly Concessionaire's Audit Inspections, Concessionaire shall assess its achievement of the Performance Requirements by self-scoring against the Targets set forth in Appendix 6-1 the Performance and Measurement Table Baseline.

Concessionaire shall report quarterly to the HPTE an Asset Condition Score to include, for each Element Category, all of the Auditable Sections inspected in the most recent Concessionaire's Audit Inspection. Concessionaire shall assess the Asset Condition Score according to the measurement criteria set forth in Table 6-2 below.

Table 6-2 - Asset Condition Score Criteria for Element Categories

(Reported quarterly for each Element Category for all inspected Auditable Sections)

Score	Criteria
5	• Targets for individual Maintained Elements are almost entirely met (95% to 100% compliance with the relevant Targets for each Maintained Element within each Auditable Section), and • Is fully functional and in nearly new condition, meeting or exceeding Performance Requirements.
4	• Targets for individual Maintained Elements are substantially met (less than 95% compliance and 90% or greater compliance with the relevant Targets for each Maintained Element within each Auditable Section), and • Is functional and in good condition, meeting Performance Requirements.
3	• Targets for individual Maintained Elements are mostly met (less than 90% compliance and 75% or greater compliance with the relevant Targets for each Maintained Element within each Auditable Section), and • Is in fair condition, but suggesting need for early replacement, renewal or repair of individual Maintained Element and/or maintenance or operation improvement action to meet Performance Requirements.
2	• Targets for individual Maintained Elements are barely met (less than 75% compliance and 50% or greater compliance with the relevant Targets for each Element within each Auditable Section), or • In poor condition demonstrating need for immediate replacement, renewal or repair of individual Maintained Element and/or immediate change to the MMP.
1	• Targets for individual Maintained Elements are not met ((less than 50% compliance with the relevant Targets for each Element within each Auditable Section), or • In very poor condition demonstrating need for immediate replacement, renewal or repair of individual Maintained Element and/or immediate change to the MMP.

Notes:

1. The Asset Condition Score for any Element Category shall be determined by the average Asset Condition Score for any Maintained Element within the Element Category. .However, remedial action will be required for any Maintained Element that falls below the average Asset Condition Score for three or more quarters.
2. The mean of the Asset Condition Scores across Maintained Elements in any Element Category is calculated to 1 decimal point and also recorded.
3. Where a measurement record relates to a service measured over time or a Maintained Element that is not represented in more than 25% of Auditable Sections then the Asset Condition Score will be based on the total service and not a 5% random sample. This applies to the performance measurement of Element Categories; structures, traffic signals, incident response, customer service, snow and ice control, facility buildings and toll equipment or other Element Categories meeting the above criteria identified following establishment of the Auditable Sections.
4. Pavement Condition Score is a component of Asset Condition Score for Element Category "Pavement", but Pavement Condition Score shall also be reported annually for all Managed Lanes.

   Concessionaire acknowledges that Asset Condition Score is a mechanism to benchmark the performance of the Managed Lanes against the performance of other similar facilities and that HPTE may, during the Services Period, alter the Asset Condition Score criteria to reflect Best Industry Practice.

2.3.8 Roadway Condition Monitoring

HPTE will conduct a routine annual roadway condition survey as part of the CDOT statewide annual pavement condition data collection services performed by a contracted service provider. Data collected, at a minimum, will include the following: 1) International Roughness Index (IRI) using AASHTO Standard Practices PP50-07, PP49-07, and RR43M/R43-7; 2) Rutting using a 5-laser sensor rut bar in accordance with AASHTO PP38-00; 3) Maximum faulting and average faulting for 1/10-mile segments measured in accordance with AASHTO R36-04; and 4) Cracking Distress in accordance with Distress Identification Manual for Long-term Pavement Management Performance Project (FHWA-RD-03-031). This routine annual pavement condition survey will serve as a quality control check of the Concessionaire in order to ensure that the Concessionaire is consistently monitoring the pavement condition in accordance with the Concession Agreement. HPTE may conduct additional monitoring at any time.

2.3.9 Access to Node Buildings and 70th Avenue Maintenance Facility

2.3.9.1 Node Building 1

CDOT shall provide the Concessionaire with key card access to Node Building 1. Node Building 1 contains fiber related to the I-25 Managed Lanes variable message signs and modems for the Gate Software. CDOT shall retain control and responsibility for Node Building 1.

2.3.9.2 70th Avenue Maintenance Facility

The Concessionaire shall have exclusive control of and access to the designated Sand Dome and Magnesium Chloride Storage facilities in the 70thAvenue Maintenance Facility.

While the Concessionaire is responsible for the Node Building 2 and the I-25 Managed Lane equipment residing within, CDOT will retain responsibility for distribution of key card access to Node Building 2 for access by CDOT, E-470 and their contractors. CDOT and E-470 will both own equipment residing in the NodeBuilding2

2.3.10 Roadway Lighting Responsibilities

Where roadway lighting is located within the boundaries of a local jurisdiction, control and responsibility for lighting belongs to that relevant local jurisdiction as required under Colorado statute. CDOT has maintenance responsibility for lighting only in the unincorporated areas of the I-25 and US36 corridors. The Concessionaire will be responsible for maintaining those lights that fall within the CDOT maintenance responsibility. Brief descriptions of the relevant lighting areas are shown below.

- I-25 Managed Lanes - 11 mid-mast poles, Curvilinear, 400W HPS, 4 fixtures per pole, 44 total fixtures.
- US 36 from I-25 to Zuni Street (Region 6) – Managed Lanes barrier mounted structures, 25 poles, 4 fixtures per pole, 100 total fixtures.
- Lighting on ramp from southbound Foothills Parkway in Boulder to eastbound US 36, 4 poles, 1 fixture/pole, 4 total fixtures.

2.4 Roadway Maintenance Performance Measurement Criteria

2.4.1 General Requirements

Concessionaire shall maintain the Managed Lanes in a manner that provides a safe and reliable transportation system for improved mobility and in compliance with Appendix 6-1.

2.4.2 Specific Requirements for Maintenance on the General Purpose Lanes

Appendix 6-1 specifies those Maintained Elements for which Routine Maintenance must be carried out on the General Purpose lanes (including the BOS Corridors).

3.0 TOLL MAINTENANCE REQUIREMENTS

3.1 General Requirements

The Concessionaire shall provide maintenance, repair and replacement of all equipment required for the collection and enforcement of tolls in the Managed Lanes in a manner that shall ensure a continuous (24 hours per day, seven days per week, and every day of the year) system operation and functionality of all Electronic Toll Collection System components (ETCS). The ETCS shall be operated and maintained by the Concessionaire to fulfill the requirements in Appendix 6-2.The ETCS will include all existing toll system devices and subsystems on the I-25 Managed Lanes and the Phase 1 Corridor including all ancillary components within the Managed Lanes. This also includes the Automatic Gate Equipment as further described in Appendix 6-4.These systems are currently maintained by HPTE to meet the performance standards required in Appendix 6-2 and 6-4. The Concessionaire will employ an appropriate level of skilled toll system technicians who will be responsible for maintaining the gate and lane equipment and system hardware necessary to operate the toll collection equipment in the HPTE Managed Lanes.

If ETCS maintenance requires road closures, the Concessionaire shall coordinate these lane closures and maintenance activities with HPTE as described in Section 4.4.2 for lane closures. The Concessionaire will provide all system support, routine and periodic maintenance, and failed or destroyed component replacement.

3.1.1 Spare Parts/Inventory

All equipment and component parts that are furnished shall be new, unused and shall meet all requirements of these Services Requirements. The Concessionaire shall provide replacement parts as needed for the maintenance of the ETCS. All parts shall be of high quality workmanship and no part or attachment shall be applied contrary to the manufacturer's recommendations or standard practice. The replacement parts shall be the latest compatible technology, equal to or better in function and quality to the existing system component or equipment. The Concessionaire shall be responsible for inventory control of all replacement equipment. The Concessionaire shall maintain and have readily available an up to date inventory of all of the Managed Lane's roadway assets and Toll System equipment and/or parts. The inventory shall contain, but not be limited to, at a minimum:

a. Manufacturer,
b. Model number,
c. Descriptive name,
d. Manufacturer serial number,
e. Current condition (new, used or damaged),
f. Indication if it is a spare,
g. Location of equipment,
h. Date of purchase,
i. Equipment status,
j. Warranty status if applicable.

3.2 Roadside and In-Lane Equipment Support and Maintenance

The Concessionaire shall support and maintain all roadside and in-lane equipment and infrastructure installed on the Managed Lanes lanes and/or related to Managed Lanes operations. This includes items such as lane controllers, loops, antennas/readers, cameras, static and electronic toll signs and HOV indicator beacons.

In addition, the Concessionaire has the following responsibility for ITS equipment: The Concessionaire shall maintain the CDOT ITS equipment and communications infrastructure the Concessionaire installs for a period of one year after Project Completion.

For the duration of the 1-year maintenance period, the Concessionaire shall appoint a contact qualified in installing, maintaining, troubleshooting, and repairing the ITS equipment and communications infrastructure. That person's credentials shall be presented to CDOT ITS staff for approval or rejection.

The Concessionaire shall repair the malfunctioning or damaged devices and equipment within 24 hours of being notified of the problem by HPTE, with the exception of backbone communication and VTMS failures, which shall be repaired and restored within four hours of being notified of the problem by HPTE. The Concessionaire shall furnish all devices, equipment, and materials necessary to complete the repairs. If the devices and equipment are not repaired within the specified timeframe, HPTE will mobilize maintenance forces to fix the problem(s). The costs associated with such mobilization, labor and equipment will be calculated and deducted from payments owed to the Concessionaire or an invoice will be submitted.

After the 1-year maintenance period, the HPTE shall retain the responsibility to support and maintain all ITS and other equipment and infrastructure on the GP lanes, all other roadways and overpasses, including signalized intersections.

3.3 Information Technology Support and Maintenance

The Concessionaire shall carry out Information Technology service management in accordance with Good Industry Practice. As used in the preceding sentence, "Information Technology" means the application of computers (hardware, software and related systems) and telecommunications equipment to store, retrieve, transmit and manipulate data.

The Concessionaire shall maintain anti-virus and protection procedures to protect the ETCS from viruses and other destructive devices, and to manage the impact of virus attacks including transmission to the E-470 EXpressToll Service Center, any HPTE systemsor Third Party systems.

Any infection by computer virus or similar destructive devices shall be immediately notified to the HPTE upon identification.

3.4 Interfaces

The Concessionaire shall continuously monitor all interfaces for the ETCS. The monitoring should include availability, throughput, performance, buffer usage, queue lengths, hardware status, system alarms and warnings, and any other diagnostic data provided by the Concessionaire's implementation of the interfaces.

3.5 System Back-up and Recovery

The Concessionaire shall provide data security for the ETCS. Data security may include, but not be limited to:

- Backup of all software and configuration following each release of, or change to, the system, including any Disaster Recovery site;
- Daily back-up of all new/changed data held on the ETCS;
- Removal of the media used for the daily back-up to a secure off-site location within 24 hours (or other agreed timeframe); and

- Storage of one month of the data back-ups in a secure off-site location.

Backups shall not affect the ETCS's ability to capture, store or process detection data.

3.6 System Failure

The Concessionaire shall notify the HPTE without delay upon becoming aware of any event of or the likely event of any system failure that results in a critical element of the ETCS not functioning or results in or is likely to result in an unacceptable impact on the public or the HPTE.

Upon the observation or a notification of a malfunction or problem with the ETCS, it is the Concessionaire's responsibility to dispatch qualified personnel to provide diagnostic and troubleshooting services as required, to identify the problem and repair or replace to achieve 100% functional status. The Concessionaire will meet the response times prescribed in Appendix 6-2.

3.7 Emergency Power for Toll System Devices

The Concessionaire shall be responsible for security and maintenance of the necessary equipment to maintain emergency power to the ETCS. This equipment shall be maintained by the Concessionaire according to the manufacturer's operating manual.

3.8 Communication Link

Beyond the required 1-year maintenance period specified in section 3.2, HPTE will retain primary control over the fiber optic network. The Concessionaire will be granted usage of the fiber optic communications for the Managed Lanes and shall coordinate any access or repairs through HPTE or its designated ITS representative. If for some reason this communication link is damaged by the Concessionaire, it is the responsibility of the Concessionaire to coordinate with HPTE or its designated ITS representative for the repair or replacement of the damaged communications equipment (fiber optic cable, conduit, pull boxes, splice cabinets, hubs, etc.) within four hours. HPTE or its designated ITS representative will provide direction as to whether the Concessionaire shall initiate repairs or retain financial responsibility for repairs undertaken by HPTE. Per the sole decision of HPTE or its designated ITS representative, damaged fiber optic cable may be temporarily fusion spliced within the four-hour period to temporarily restore communications; however, any damaged fiber optic cable will be replaced from point to point with the same type of cable within 90 days.

3.9 ETCS (Electronic Toll Collection System) Monitoring

The ETCS performance requirements set forth in Appendix 6-2 shall apply at all times within a vehicle speed range of 1 to 100 mph, with the exceptions of classification and image capture, for which the stated tolling performance requirements shall be achieved for a speed range of 5 to 100 mph. ETCS performance requirements shall apply to all vehicles in the Managed Lanes.

On an annual basis, the Concessionaire shall conduct a performance audit to verify that system reliability and accuracy has not degraded over time and the ETCS continues to satisfy the functional and performance requirements. The performance audit shall include (1) the analysis of previous year-to-date transaction and maintenance data and (2) controlled tests, using statistically significant test samples, conducted by using test vehicles. HPTE may choose to perform ad hoc operational testing as part of the performance audit.

No more than 30 days after the performance audit has been completed, the Concessionaire shall submit a report of the results. The report shall include, at least, the following:

a) A summary of the overall testing methodology and test results;
b) An explanation of, and remedy for, any system deficiencies and/or degradations; and
c) An appendix containing the detailed test procedures, results, and data used in evaluating the system's operational performance.

HPTE may also, at its sole discretion and at any time, require the Concessionaire to provide the information necessary to show that the Concessionaire is meeting the performance requirements.

4.0 OPERATIONS REQUIREMENTS

4.1 General Requirements

Toll collection on the Managed Lanes will be through a 100% barrier-free open road electronic toll collection system requiring no reduction in speed. Non-Tolled Vehicles will be able to travel the US 36 Managed Lanes toll free, provided that a multi-position transponder in toll-free mode is used. Other vehicles will pay tolls either through the use of a multi-position transponder in toll-paying mode or through capturing an image of the vehicle's license plate (license plate tolling).

The ETCS equipment relies on the backbone fiber installation referred to above and the communications network connected to it to send data to the back-office for toll processing and collection

4.2 Customer Service Center/Back Office Operations

The Concessionaire shall provide a customer service center operation ("CSC"), and shall deal with the users of the Managed Lanes at a standard which is either comparable to or greater than the level in which E-470 is required to perform its obligations in that regard under the Tolling Services Agreement.

4.2.1 Customer Service

The Concessionaire will be responsible for customer service and maintenance of the Managed Lanes as described below:

a. Maintain all customer data in a customer service center application that allows both customer service agents, as well as the customers, access to add, modify or delete that information.
b. Provide transaction processing for EXpressToll transactions occurring within the Managed Lanes and, Managed Lane License Plate Tolling transactions,
c. Account for all Managed Lane HOV, motorcycle, hybrid vehicle usage and designated Managed Lane non-revenue transactions.
d. Violation processing for License Plate Tolling transactions that are not paid by the end of the first or second billing periods and have not responded to collection efforts for 90-days.
e. Administrative law court to adjudicate toll violation citations in the Managed Lanes.
f. Maintain and modify, as required, equipment and software necessary for the CSC Services for the Managed Lanes
g. Responsible for business rule changes related to toll charges, violations and operational hours of the Managed Lanes provided HPTE approval is obtained as required.

4.2.2 Customer Service Center Services Performance Standards

Concessionaire is responsible for the minimum performance and measurement criteria included in Appendix 6-2 for each of the areas named in the column "Element Category."

a. ETCS Equipment,
b. Contact Center,
c. Image Processing and,
d. System Availability.

4.3 Customer Relations

In addition to the CSC Services, the Concessionaire will provide for a customer relations function that distributes information regarding the operation of and general information on the Managed Lanes to the general public. The Concessionaire will maintain a telephone line dedicated to handling incoming calls and distributing information to callers, maintain a customer service rating program, maintain a complaint tracking system, and including a corrective action program.

The Concessionaire will ensure that complaints and requests from the users of the Managed Lanes that are received via telephone email or in person are quickly and effectively handled by the appropriate party.

The Concessionaire shall report safety related complaints to the HPTE within one day unless they constitute an immediate hazard (Category 1 in which case HPTE shall be notified as soon as practicable but in no case less than 1 hour from occurrence.) Other complaints shall be reported and documented in the Concessionaire's monthly reporting. The Concessionaire shall respond to valid complaints or requests to the extent that the complaints or requests cover issues addressed within the Services Requirements. The Concessionaire shall convey any requests for services that are beyond *its obligations to perform the Services* to the HPTE. The monthly reporting shall identify the time and date of the complaint, the nature of the complaint, location of the complaint, identification and contact information of the individual making the complaint, and the date that the complaint response was issued and the completion date of any work or services performed to resolve the complaint.

4.4 Operation of the Project

The Concessionaire is responsible for the operation of the HPTE Managed Lanes and the US36 General Purpose Lanes to ensure safe and reliable movement of traffic.

4.4.1 Patrols

4.4.1.1 Courtesy Patrol

The Concessionaire shall provide Courtesy Patrol service for the facility – both Managed Lanes and the US36 General Purpose Lanes which includes the BOS Corridors (Patrol Area). The Courtesy Patrol service shall be free of charge to the public. The purpose of the Courtesy Patrol program is to continuously patrol US36 and the I-25 Managed Lanes during peak traffic hours, provide on-call towing services for the Managed Lane at all times, quickly locating, assisting and/or removing disabled vehicles from travel lanes (including the BOS Corridors), ramps and shoulders, changing flat tires, jump-starting batteries and removing minor non-hazardous spills and debris from the highway and assisting the Colorado State Patrol during incidents.

These services shall be provided in a manner which is consistent with the CDOT Mile High Courtesy Patrol program. The requirements in this section reflect that CDOT operates a program of courtesy patrols known as the "Mile High Courtesy Patrol Program". That program was the subject of a recent procurement process in which the successful bidder's rate was $81 per vehicle per hour. The requirements for the provision of Courtesy Patrol services in this Schedule have adopted the requirements for the current Mile High Courtesy Patrol Program. CDOT will periodically re-procure the services for the Mile High Courtesy Patrol Program and when it does so it may modify or supplement the requirements for those services. The Concessionaire will be obliged to comply with any such modified or supplemented

requirements for the Mile High Courtesy Program which are in force from time to time (without the need for HPTE to operate the Change Procedure). HPTE will make payments for services associated with the US36 General Purpose Lanes (as described in more detail in Appendix 6.6) to the Concessionaire for the provision of the Courtesy Patrol based on the rate of $81 per vehicle per hour and then on the rate bid by the successful bidder from time to time following each re-procurement by CDOT of the services for the Mile High Courtesy Patrol Program. The rate in force from time to time is referred to in this Schedule as the "bid rate".

The patrolling duties of the Courtesy Patrol must be provided in four categories of service:

a. To locate a disabled vehicle on the shoulder of the highway and, at the motorist's election, to move the vehicle to an appropriate drop site and there to provide the limited assistance available to the Concessionaire (i.e., repair tires, provide gasoline) if such assistance will make the vehicle operational.
b. To locate a disabled vehicle in traffic on the Patrol Area and, at the motorists election, to move the vehicle either to the shoulder of the highway or to an appropriate drop site, and there to provide the limited assistance available to the Concessionaire if such assistance will make the vehicle operational.
c. To assist motorists, and local public agencies or law enforcement authorities as requested, concerning an accident or other emergency on the Patrol Concessionaire. Such assistance includes, without limitation, protecting the scene of an accident, cleaning up debris caused by an accident, and calling and assisting local law enforcement in the event of an accident.
d. To pick up light debris on roadway as requested

At a minimum there shall be Courtesy Patrol operation covering all lanes of the Patrol Area between the hours of 6:30 to 9:00 AM and 3:30 – 6:30 PM from April through October and 5:30 – 9:00 AM and 3:30 – 6:30 PM November through March Monday through Friday (Patrol Periods) plus 24-hour on-call coverage for the Managed Lanes for all hours which are not Patrol Periods. The only exceptions for on-call coverage are the following: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

4.4.1.1.1 Courtesy Patrol Vehicles and Inspections

Courtesy Patrol vehicles shall conform to statewide standards for the paint scheme and markings as well as the equipment load-out as further described in Appendix 6-6.

No later than ninety (90) days prior to the Commencement Date, the Concessionaire must present to CDOT, for inspection, each vehicle designated for the Courtesy Patrol, to ensure conformance to vehicle specifications. If the vehicles comply with such conditions, and the Drop-Site (see Section 4.4.1.1.3) list is approved, then Concessionaire will be required to present the previously inspected vehicles for *further* inspections. CDOT will re-inspect each vehicle designated for the Courtesy Patrol within 30 working days after Commencement of service to ensure it continues to meet the vehicle specifications.

CDOT will conduct random inspections throughout the services period. .Any unsafe, poorly maintained or improperly equipped vehicle(s), shall require the Concessionaire to pay Liquidated Damages equal to two (2) hours of the Concessionaire's hourly bid rate. In addition, any unsafe vehicle will not be permitted to patrol, and additional Liquidated Damages may accrue for any time the Patrol Area is not patrolled (e.g. providing the four categories of service listed above.)

4.4.1.1.2 Courtesy Patrol Requirements

a. All courtesy patrol services (Courtesy Patrol Services) shall, at all times, be provided by the Concessionaire free of any charge to, or payment from, the motorists driving the disabled vehicles or any other person or entity, public or private. The Concessionaire shall refuse any offers of other payment or gratuities of any kind.
b. The Concessionaire shall provide the Courtesy Patrol Services to disabled motorists driving the disabled vehicles only after the Concessionaire explains to the motorist the services to be provided (including the Drop Site, and that the services are free of charge), and only after requesting and obtaining the motorist's consent to such services. The Courtesy Patrol Services may be refused by the motorist at any time.
c. Subject to the motorist's consent, it is preferable for the Concessionaire to move the vehicle from traffic or from the shoulder (whichever is applicable) off of the highway to a Drop Site before providing additional services, in order to eliminate any hazard or congestion that might result if the Concessionaire provided service in traffic or on the shoulder.
d. The motorist may choose to have the Concessionaire leave the vehicle in traffic, or to have the Concessionaire move a disabled vehicle that is in traffic to the shoulder of the highway and provide limited assistance to the vehicle on the shoulder, rather than to have the Concessionaire move the vehicle from the highway to a drop site. In the event the motorist chooses not to have their vehicle moved from the travel lane to the shoulder or drop site, the Concessionaire will protect the scene by pulling behind the disabled vehicle, activating flashing lights and contacting the local law enforcement agency for assistance.
e. The Concessionaire shall provide the tow truck vehicles needed to perform the assistance services mentioned above. The tow trucks shall meet the following requirements at all times:

    i. Colorado licensed, including Public Utility Commission licenses, and insured Class A tow truck with a minimum gross vehicle rating of 10,000 pounds, dual wheel chassis and four (4) ton recovery equipment rating. Flatbed "roll back" service trucks may be used in-lieu-of boom type wrecker trucks. Flatbed trucks must be equivalent in capacity to specified boom type trucks (excluding vertical lift) to safely handle the scope of work.
    ii. The vehicles must be operational, in sound mechanical condition, and in full compliance with applicable legal requirements, at all times relative to the performance of the Courtesy Patrol services.

f. Concessionaire must make provisions to transport all occupants of a disabled vehicle to the shoulder of the road or to the Drop-Site. Under no circumstances are any occupants or pets to be left unprotected in the disabled vehicle while the vehicle and operator are transported to the shoulder of the road or a Drop-Site.
g. The Concessionaire shall use all reasonable efforts to separate its two tow truck operators by a sufficient distance, on the Patrol Area, in an effort to provide continuous coverage/service on as much of the Patrol Area as possible and, as a result, minimize response time.
h. In compliance with the Mile High Courtesy Patrol program, **at all times** during the performance of the Courtesy Patrol Services, the Concessionaire, its patrol operators, and its employees **shall not**:

i. Solicit membership in any commercial/business organization or association, including vehicle repair or service associations.

ii. Recommend or pressure motorists to use any towing service other than the Courtesy Patrol for a disabled vehicle.

iii. Recommend, or pressure motorists to use, any business (including Drop-Site businesses) for service on a disabled vehicle.

iv. Radio for an alternative towing service, except when specifically asked by a motorist to do so, after the free Courtesy Patrol Services have been offered and explained to the motorist.

v. Tow a vehicle to a location other than the shoulder of the Patrol Area, or to the designated drop-site nearest the vehicle location.

vi. Interfere with a private sector towing service that is already present at the immediate location of a disabled vehicle. When the operator arrives at the vehicle in such circumstances, the operator should stop and offer assistance only to the motorist.

vii. Stay at the scene of an accident on the Patrol Area after the local law enforcement authorities have arrived at the scene, unless requested by local authorities to assist at the accident scene.

viii. Tow a disabled vehicle while the motorist, or other occupants of the disabled vehicle, are in the towed vehicle, or leave any unattended occupants on the freeway while towing the vehicle. If necessary, Concessionaire shall provide for alternate transport of such occupants (e.g. other courtesy patrol or police vehicle).

ix. Accept tips, money, or any other payment or compensation of any kind from the motorists driving disabled vehicles for the services provided.

x. Patrol with any other person in the patrol vehicle, unless that person is directly associated with the program.

xi. Commit traffic violations of any kind including without limitation, speeding, illegal lane changes, or driving on a shoulder.

xii. Use the vehicle's yellow warning lights other than as authorized by law. The yellow warning lights shall be activated only when the vehicle is operating on the roadway to eliminate hazards to other traffic. As required by **Colorado Revised Statutes 42-4-214.**

4.4.1.1.3 Managed Lane On-Call Requirements

The on-call hours for the Managed Lanes are any hours not covered by Courtesy Patrols to assure 24-hour coverage including weekends regardless of weather. The response shall be within twenty-five minutes of being dispatched, all vehicles shall be towed to a designated drop point. These Drop Sites may be different than the ones that are being required by the Patrol Area which are only required to be open until 9:00 pm during the week. The Drop Sites required for this on-call scope of work will be a location that meets the requirements 4.4.1.2.1. However, these locations will be open on the weekends and will be open twenty four hours a day, i.e. 7-11 stores. Furthermore, incidents or accidents will be moved to the nearest shoulder (a location that is safe to all) to open all lanes of the Managed Lanes. The Concessionaire/operator shall use flat-bed or wrecker tow trucks to remove vehicles from the scene, and these trucks shall meet the requirements in Appendix 6-6 and contain all the equipment that is set forth by the Colorado PUC.

4.4.1.1.4 Drop Sites

The Concessionaire must obtain the right to use suitable "drop-sites" near the highway. A Drop Site is defined as any business location to which the Concessionaire can tow (and leave) the motorists driving disabled vehicles, and from which the motorists driving the disabled vehicles can safely make arrangements to be picked up and/or to have the vehicle repaired. The Concessionaire will submit with their OMP the proposed Drop Sites for review.

Drop Sites must satisfy all of the following specific conditions:

i. There must be a minimum of three Drop-Sites The Drop Sites should be located so that they are reasonably proximate to various portions of the Managed Lanes, and must be located within a half mile of the Managed Lanes and within a half mile from an interchange relative to the Managed Lanes.

ii. The Drop Sites must be well lighted and must have a working phone (pay or business) available to the public on the premises.

iii. The Drop Sites must be businesses, and must be open at all times during patrolling/towing hours and for at least two hours after the end of that patrol's hours of operation.

iv. (It is preferable, but not required; that each business Drop Site is able to provide assistance to the disabled vehicle, e.g. full service gas stations, tire stores, or other repair facilities.)

v. Businesses used as Drop Sites must allow a disabled vehicle to remain on site, free of charge, for at least three hours, in order to provide sufficient time for the motorist to make suitable arrangements.

vi. The Concessionaire must have written evidence included in the OMP from the owner/operator of the business of the Concessionaire's right to use that business as a Drop Site, in accordance with these conditions.

vii. The particular Drop Sites used by the contractor may vary from hour to hour, depending on the conditions at each site during the hours of operation of the patrol.

viii. The Concessionaire shall provide a list of Drop Sites, listed by hour each Drop Site is available for use, to the Colorado State Patrol and to any local law enforcement agency with jurisdiction over such sites immediately upon award of any contract. The Concessionaire shall also provide any modification of such list to such agencies and CDOT, within one (1) working day of that modification.

ix. As described above, the Concessionaire must obtain the motorist's consent to move the motorist and the disabled vehicle to a Drop Site. The Concessionaire must explain to the motorist that they have only three hours at the drop-site to make suitable arrangements or their vehicle can be towed away at their expense.

x. The Concessionaire shall be solely responsible for any motorist injury or vehicle damage resulting from Concessionaire's selection or use of a particular Drop Site.

xi. The Concessionaire shall not leave a motorist and/or a disabled vehicle at a particular Drop Site if, under the circumstances, that Drop Site presents an unreasonable risk of harm to the motorist or vehicle

4.4.1.1.5 Patrolling

Upon the Full Services Commencement Date, at the beginning of a shift, the Contractor shall dispatch three (3), specially equipped Courtesy Patrol towing vehicles (Courtesy Patrol Vehicles) to begin patrolling the Patrol Area. Two Courtesy Patrol Vehicles will be dedicated to US36 and must start at opposite ends of US36 traveling in opposite directions. The patrol operators of the vehicles shall be sufficiently spaced to adequately provide continuous coverage during a shift. Courtesy Patrol Vehicles must be patrolling at the beginning of the shift and not in-route, or being acquired. Prior to the Full Services Commencement Date, for US36 Phase 1 two (2) Courtesy Patrol Vehicles will be required. Upon the Commencement Date, the Concessionaire is to provide, at a minimum, patrols and on-call towing services for the I-25 Managed Lanes.

The Courtesy Patrol Vehicle(s) must continuously patrol the Patrol Area for disabled vehicles in need of assistance and, upon finding such vehicles, remove such vehicles from the traveled portion of the highway and/or providing assistance to such vehicles as quickly as possible, as specifically described in this Section.

Patrol operators shall not park a Courtesy Patrol Vehicle during hours of operation and wait for an incident; rather they must constantly patrol during their assigned shift except when otherwise providing disabled vehicle service(s).

When a disabled vehicle incident/accident is discovered, the Courtesy Patrol Vehicle shall respond as described in Appendix6-6.

4.4.1.2 Patrols of Maintained Elements

In addition to the specific functions of providing a Courtesy Patrol to the public, the Concessionaire shall conduct regular patrols of all the Maintained Elements, to identify conditions that are unsafe or have the potential to become unsafe; to identify conditions that could threaten the infrastructure; and to attend to existing or changing conditions. Patrols must be conducted at least once every 24 hours during normal operating conditions, but no less frequently than every two hours during weather events that are likely to cause hazardous traveling conditions. These patrols can be completed by the same personnel that are providing Courtesy Patrol service for the facility provided it does not interfere with providing the services to the public.

4.4.2 Lane Closures

The Concessionaire shall be responsible for all planning as well as necessary equipment and tools required for the setup and removal of any traffic control required and are subject to approval by HPTE, such approval shall not be unreasonably withheld. For the I-25 Managed Lanes, the Concessionaire shall make every attempt to perform routine maintenance during routine closures of the Managed Lanes. For all Managed Lanes, requests for special closure must be made with a minimum of one week of advance notice to HPTE/CDOT and RTD.

For the US 36 Managed Lanes and US 36 General Purpose Lanes, no routine closures are scheduled; requests for special closures should be generally scheduled during the hours of 7:30 PM and 4:30 AM Monday through Friday or on weekends taking into consideration any special events or other activities occurring in the corridor.

For the I-25 Managed Lanes routine and special closure times are outlined below:

ROUTINE CLOSURE for purposes of reversing the direction of travel and conducting all safety surveys	10:00AM - noon 3:00 AM – 5:00 AM	Monday –Friday
Special Closure	7:30 PM -4:30AM	Monday -Friday
Special Closure	(as agreed)	Saturday and Sunday

4.4.3 HOV Enforcement

The Concessionaire is responsible for providing the level and scope of service for HOV enforcement. HPTE will have to contract with the Colorado State Patrol for enforcement. The interface with the Colorado State Patrol will be managed by the Concessionaire.

4.4.4 Hazardous Materials and Spills

The Concessionaire shall be required to respond to any Contaminated Material or fuel spill event on the Maintained Elements upon the commencement of each Services Commencement Date through the remainder of the Services Period. The specifics on how this will be handled shall be specified in the Incident Management Manual.

The Concessionaire shall provide all qualified staff and equipment necessary to manage all cleanup operations and any monitoring of the affected area in accordance with local, county, State, or Federal government laws, rules, regulations and ordinances. The Concessionaire shall be required to manage an initial assessment of the affected area and provide the HPTE with a recommendation on how to proceed as required by the Incident Management Manual. The Concessionaire shall further develop a comprehensive plan for the long-term cleanup and monitoring of any contaminated materials as needed. Upon the Concessionaire and the HPTE agreeing on the long-term plan and a completion schedule, the Concessionaire shall be responsible for any and all remediation, monitoring and/or related responsibilities related to the event. All remediation and monitoring of the materials will remain the responsibility of the Concessionaire until such time that the Concessionaire has received and submitted to the HPTE, acceptable documentation indicating that the Concessionaire has complied with all directives and fulfilled and completed their remediation obligations as directed by the governing municipal entity, whether it be a local, county, State, or Federal agency.

4.4.5 I-25 Managed Lanes Specialty Operations

In addition to the overall scope of services for the operation of the Managed Lanes, it is also necessary to address the unique aspects of the I-25 Managed Lanes, particularly the reversible operations. The I-25 Managed Lanes are barrier-separated lanes between Downtown Denver and US 36. At the tolling point vehicles are separated into two lanes as follows:

a) **HOV Lane**: Non-Tolled Vehicles may use this lane toll-free. Tolled Vehicles *may not* travel in the lane marked "HOV".
b) **Express Lane:** Vehicles with a transponder that pass through the electronic toll collection enforcement area in the designated lane marked "Toll" may use the lanes and will be billed, through their EXpressToll account, the amount of the toll in effect during the time the vehicle passed through the toll collection point.

The I-25 Managed Lanes operate in the southbound direction from between the hours of 5:00AM and 10:00AM. The I-25 Managed Lanes are then closed until noon and the direction is reversed to northbound. The I-25 Managed Lanes operate northbound from 12:00PM (noon) until 3:00AM. The I-25 Managed Lanes are then closed until 5:00AM when they re-open in the southbound direction. Before the lanes are reversed the Concessionaire must ensure that all vehicles or any other obstacles have been removed and the gates and informational signs are operating correctly.

Appendix 6-3 lists the current operations procedures for reversing the I-25 Managed Lanes during the closure times of 3:00AM-5:00AM and from 10:00AM-Noon each weekday. During those times a "sweeping" operation to assure that all vehicles have been removed from the lanes before they reverse the direction of travel. The Concessionaire shall be responsible for all operations activities and maintenance associated with the I-25 reversible lanes access gates. Certain modifications, deletions and additions to the access gates will be made as part of the I-25 North Managed Lane Extension project; these will all be transferred to and become the responsibility of the Concessionaire after completion. All work associated with the I-25 North Managed Lane Extension project will be the responsibility of others and not the Concessionaire. The additional access gates will be in the same configurations and of compatible equipment as the current I-25 access gates. Turnover will be coordinated with the Concessionaire after the completion of the I-25 North Managed Lane Extension project. Appendix 6-5 shows the currently expected configuration of gates upon the completion of the I-25 North Managed Lane Extension project.

Appendix 6-4 provides details on the access gate equipment currently in use and the specific requirements associated with replacements.

4.4.6 Traffic Operations Center

The Concessionaire shall be responsible for monitoring the Managed Lanes 24 hours a day 7 days a week, every day of the year. The Concessionaire will be required to place staff in the CDOT Traffic Operations Center (TOC) in Golden, Colorado to cover the following hours, at a minimum: 5:30 AM to 6:30 PM, Monday through Friday plus 24-hours in the event of a major incident involving the Managed Lanes (to be further defined as part of the Incident Response Plan.) The primary responsibility of the employee will be to monitor the Managed Lanes using the CDOT monitoring systems. CDOT TOC staff will train Concessionaire staff on procedures and systems used in the center. The Concessionaire staff will be responsible for, but not limited to, the following:

a) Advising patrols of an incident in the Managed Lanes.

b) Notifying the appropriate outside agencies of Managed Lane incidents such as emergency medical services and law enforcement.
c) Monitoring surveillance cameras for changes in road conditions due to inclement weather.
d) Monitoring that the system is functioning properly.

The US36 Corridor including the Managed Lanes will have Active Traffic Management Lane Usage Signs over each lane. It will be necessary to jointly establish between HPTE, CDOT and the Concessionaire the protocols for the advisory information that will be normally posted, criteria for modification, as well as how emergencies will be handled. Between the hours of 6.30 PM and 5.30 AM the obligation to monitor the Managed Lanes may be discharged by the Concessionaire having protocols and procedures in place with the police and others to ensure that it receives notification (to a person who will be "on call" for this purpose) of incidents in the Managed Lanes provided those arrangements enable the Concessionaire to respond to those incidents in accordance with this Schedule.

5.0 HIGHWAY LOCATION AND DATA REQUIREMENTS

5.1 Maintenance Management Information System (MMIS)

Concessionaire shall implement a computer-based MMIS to record inventory, failures, repairs, maintenance activities and inspections performed. Concessionaire shall enter all of the Maintained Elements into the MMIS with Maintained Element identifications (IDs) consistent with those descriptions and units of measure used by CDOT. The Concessionaire shall record all information in a consistent manner and shall ensure that all information is searchable by individual attribute. HPTE shall have read-only remote access to the MMIS. The information contained in the MMIS shall be provided in exportable format to allow pertinent information to be included in the CDOT maintenance system.

Concessionaire shall include relevant information in the MMIS including, but not limited to, the following for each and every Maintained Element, as appropriate:

a. location, accurate to within one foot in 100 feet
b. equipment nomenclature;
c. serial number;
d. name;
e. date of installation;
f. technician identification;
g. type of failure;
h. date and time of failure;
i. date and time of response to the site;
j. date and time of return to service;
k. preventive maintenance work;
l. scheduled work;
m. work repair code;
n. failure and repair history; and
o. statistical data on mean time between failure and mean time to repair.

The Concessionaire shall configure the MMIS shall to report work by CDOT function code, Maintained Element, reference marker, crew and unit of measurement. In the MMIS, the information for bridges shall include National Bridge Inventory (NBI) sheets. The MMIS shall be fully populated and operational prior to each Services commencement date and kept updated and operational during the Services Period.

5.1.1 Geographical Reporting in the MMIS

The MMIS shall be capable of reporting system performance on a geographical basis to demonstrate compliance with operational and maintenance requirements. Within the MMIS, the Concessionaire shall incorporate a Geographical Information System (GIS), which shall use the same database engine as the MMIS and shall use the MMIS for display of Maintained Element information. All Maintained Elements shall be identified on the MMIS. Locations shall be accurate to within one foot to in 100 feet.

The information displayed geographically shall include pavement condition measurements, maintenance limits, average daily traffic and truck counts, work performed by roadway segment,

type of work, crew/contractor, and any other information relevant to the construction, operation, maintenance and renewal of the Maintained Elements.

5.1.2 Creation, Updating and Hand Over of the MMIS

Concessionaire shall fully populate and make operational the MMIS prior to the Services commencement date for each segment of the Maintained Elements and shall keep the MMIS updated and operational for the duration of the Services Period. Concessionaire shall provide equipment, facilities and training necessary to permit remote, real-time, dedicated high-speed access to the MMIS, via one terminal each, for HPTE and its designated consultant.

When a Maintained Element is constructed, installed, maintained, inspected, modified, replaced or removed, the Concessionaire shall update the MMIS within three (3) days of completion of such work. The Concessionaire shall record Category 1 Defects and Category 2 Defects on the MMIS within three (3) days of them coming to the attention of Concessionaire. The Concessionaire shall record all other required information within fifteen (15) days after completion or occurrence of the relevant activity.

Concessionaire shall hand over the fully populated MMIS and everything required for its operation to HPTE, or other entity as directed by HPTE, upon the end of the Services Period.

6.0 RENEWAL OF MAINTAINED ELEMENTS AND LIFE CYCLE MAINTENANCE

6.1 Renewal of Maintained Elements

The Concessionaire shall reconstruct, rehabilitate, restore, renew or replace each Maintained Element (or, in the case of the pavement of the roadway, the surface of the pavement and the roadway substructure separately) when it reaches the end of its Serviceable Life. All renewed Maintained Elements (or, in the case of the pavement of the roadway, the surface of the pavement and the roadway substructure separately) shall meet all applicable code requirements and industry design standards at the time of the work of reconstruction, rehabilitation, restoration, renewal or replacement.

6.2 Conditions to Determine the End of Serviceable Life

A Maintained Element (or, in the case of the pavement of the roadway, the surface of the pavement and the roadway substructure separately) shall be treated as at the end of its Serviceable Life when any of the following conditions is evident:

a. The Asset Condition Score of a Maintained Element is below 3 as described in Table 6-2, except for asphalt and concrete pavement.

b. For asphalt and concrete pavement in the Managed Lanes, the pavement condition rating of any one-mile continuous segment falls below 80% or the International Roughness Index (IRI) is greater than 85%. The "Reliability" (as calculated pursuant to Section 6.2.1 of this Schedule 6) is less than 99.9% for any safety critical Maintained Element, defined as one that, should it fail, the safe operation of any aspect of the Maintained Elements would be in jeopardy or an immediate or imminent safety hazard would result.

c. The "Reliability" (as calculated pursuant to Section 6.2.1 of this Schedule 6) is less than 90% for a Maintained Element other than a safety critical Maintained Element.

d. All actions necessary to avoid deterioration of any Maintained Element will be taken to assure there is not a failure to meet the requirements in Appendix 6-1 and 6-2.

e. The Maintained Element ceases to function or dies (as in the case of certain landscaping).

f. The frequency of repair is higher than that recommended in the manufacturer's preventative maintenance schedule or more frequently than would ordinarily be expected in accordance with Good Industry Practice.

g. Routine Maintenance in accordance with the requirements of the Contract cannot be undertaken due to the unavailability or obsolescence of spare parts and/or consumables that do not constitute renewal of Maintained Elements, or for any other reason outside the Concessionaire's reasonable control.

6.2.1 Calculation of Reliability

For the purposes of Section 6.2 of this Schedule 6, "Reliability" is calculated as the in-service time over a prescribed time period. For example, if a Maintained Element is out of service for 20 Days of 365 Days, its "reliability" is 94.5% (i.e. (365 – 20)/365 x 100%). Concessionaire shall apply this measurement over a moving 365 Days.

6.3 Life Cycle Maintenance

The Concessionaire shall identify its plans for Life Cycle Maintenance within the Life Cycle Maintenance Plan, which the Concessionaire shall prepare in accordance with the requirements set forth in Section 24.1 of the Concession Agreement. In the Life Cycle Maintenance Plan, the Concessionaire shall address for each Maintained Element its plans for maintenance, repair, reconstruction, rehabilitation, restoration, renewal or replacement of a type:

a. that is not normally included as an annually recurring cost in highway maintenance and repair budgets,
b. that requires a significant amount of time to accomplish; and
c. that therefore must be coordinated, scheduled and planned well in advance of the work effort.

The Concessionaire shall include the following information for each Maintained Element in its Life Cycle Maintenance Plan:

a. the estimated Residual Life as defined in Schedule 1 of the Concession Agreement;
b. a brief description of the type of Life Cycle Maintenance anticipated to be performed on the Maintained Element;
c. the estimated cost of such Life Cycle Maintenance,
d. the underlying assumptions used to develop the Life Cycle Maintenance Plan, including assumptions arising from re-evaluations of the physical condition of the Maintained Elements conducted pursuant to these Service Requirements,
e. the total estimated cost of Life Cycle Maintenance in each of the years covered by the Life Cycle Maintenance Plan;
f. a schedule of anticipated closures and work windows for the performance of the Life Cycle Maintenance covered by the Life Cycle Maintenance Plan during the upcoming five calendar years; and
g. such other information as may be reasonably requested by HPTE.

The Concessionaire shall diligently perform work according to its Life Cycle Maintenance Plan as and when necessary to maintain compliance with applicable performance measures and standards.

6.3.1. Life Cycle Maintenance Report

Not later than 90 Days after the end of each calendar year, the Concessionaire shall deliver to HPTE/CDOT a written report of the Life Cycle Maintenance performed, including any as-built drawings, in the immediately preceding calendar year. The report shall describe, by location, for each Maintained Element listed in the Life Cycle Maintenance Plan:

a. the type of work performed
b. the dates of commencement and completion of the work
c. the cost of Life Cycle Maintenance, both for specific tasks and for all Life Cycle Maintenance performed during the calendar year for the Maintained Element
d. such other information as may be reasonably requested by HPTE

EXHIBIT 6-1

TIGER PERFORMANCE MEASURES

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.
Travel Time Reliability	Reduced Buffer Index in managed lane compared to buffer index of GP lanes pre- and post-project.	Buffer index for managed lane post construction better than for GP lanes pre and post construction.	Baseline – collect data monthly for GP lanes 1 year before project gets started report quarterly.
	(secondarily, no decline in buffer index for GPs post construction compared to pre-opening)	Buffer index for GP lanes no worse post-construction than for GP lanes pre-construction.	Comparison points: collect GP and Managed Lane data monthly with a quarterly report for 3 yrs post construction Wed AM/PM peak, EB/WB directions, and GP/managed lanes will be measured. Speeds will be collected and average travel time per 5 min period between Interlocken and Pecos for Wed peak period in each direction will be calculated for use in the Buffer index. A buffer index for the month will be reported for each category.
	Equal or improved transit on-time	% of buses operating on time post-	Baseline – RTD already collects this data. Collect monthly

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.
	performance post project over pre-project. Ultimately, we would like to see the express buses compress their schedules and still meet their on-time performance.	construction is at least as high as % on-time pre-construction. Also report modifications to schedule.	report quarterly for one year before project gets started. Collect all Wednesdays am and pm Peaks EB/WB direction. (or if more easily available in different time periods from RTD – use that instead) Post-project: Collect monthly report quarterly for 3 yrs.
Improved Speeds	Maintain minimum speed in managed lane	traffic in managed lane moves at least 45 mph at least 95% of the time except for incidents or explained events	No baseline needed – post-construction only Collect monthly for managed lanes, report quarterly for 3 yrs. Speeds measured in managed lane at all locations in travel time reliability (above) each Wednesday AM and PM Peak EB/WB. Report 95th %tile monthly speed each segment during am and pm peak hours. Frequency of sample (5 min).
	Faster speeds in managed lane compared to GP lanes post construction.	managed lane moves at speeds greater than or equal to speeds in GP lane at	Probably do need a baseline of speeds in the current system to indicate the overall benefits of this project.

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.
		least 95% of the time *am and pm peak hours* (except for incidents / explained events)	Collect monthly for GP and managed lanes , report quarterly for 3 yrs Measured and calculated the same as the managed lanes above.
Throughput	More ADT post-construction than pre-construction.	Before and After Average Daily Vehicles all lanes (note this will capture # of vehicles, not number of trips)	Baseline -- Collect monthly for 1 year prior. Post project – collect monthly, report quarterly for 3 yrs. Managed lane/GP EB/WB between Pecos and Interlocken/ Superior. Report ADT between each segment (same as data collected for speeds above)
Transit Use	Increase in transit ridership	Post project ridership on buses using US 36 greater than pre-project ridership (See list below of RTD routes).	Collect quarterly 1 yr prior and quarterly post construction for 3 yrs.
Carpool Use	Increase in carpooling	Post project carpooling rate greater than pre-project	Use DRCOG model as a baseline and collect current data quarterly.

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.
GP Lane Speed	Improved speed for GP lanes	Faster average speeds in GP lanes post construction compared to pre-project GP speeds	Baseline – collect speed from GP lanes quarterly for 1 year prior Comparison points – gather data every monthly for GP lanes, report quarterly for 3 years.
GP Lane Travel Time Travel Time Reliability	More reliable travel time GP lanes post project	Before and after buffer index in GP lanes	Baseline – collect GP lane data quarterly for 1 year before project start Comparison points: collect GP lane data quarterly, report annually for 3 years post project
Crash Rates	Reduced crashes of all types	Before and after crash rates for all types of incidents	Most recent crash rate data at time project construction starts. Compare with actual data collected each year following project open.

Appendix 6-1

[See Attached]

Appendix 6-2
Electronic Toll Collection System Maintenance and Customer Service Center Performance and Measurement Table

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCEREQUIREMENT	TIME TO RESPOND	INSPECTIONAND MEASUREMENT METHOD*	MEASUREMENT RECORD*
1) ETCS EQUIPMENT	1.1	ETCS Equipment - Maintenance	All ITS and ETCS 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 communications 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	7 days	a) Structural soundness Visual inspection b) Electrical soundness Testing to meet NEC regulations	Inspection records showing safe installation and maintenance
	1.2	VES Equipment - Maintenance	All VES equipment is kept clean, the identification numbers are visible.	1 Week	Visual inspection	Inspection records showing identification markers and other information are easily readable
	1.3	Toll Message Sign Equipment	Toll Message Signs are free from faults such as: i) Any signal displaying an message which is deemed to be a safety hazard ii) Failure of system to post appropriate toll rates that match those charged by the toll system iii) 2 or more contiguous sign failures that prevent control office setting strategic diversions iv) Signs displaying an incorrect message	24 hrs	Visual inspection	Inspection records showing compliance
	1.4	Vehicle Detection Equipment	All equipment free of defects and operational problems such as; i) Inoperable loops. ii) Malfunctioning camera controllers.	2 hrs	a) Lane monitoring equipment b) Monthly reporting	Reports showing frequency of failures.

	1.5	HOV Beacon	All beacons are functioning as required when a vehicle passes through the lane declared as HOV2.	2 hrs	Monthly testing	
	1.6	VES Equipment Performance	All VES equipment is functioning per design. a) Images being captured for all vehicles where no transponder is detected. b) Images matched to appropriate vehicle c) Readable image on at least 95% of eligible transactions d) Front and rear image available on all eligible transactions	3 hrs	a) Image processing reports b) Lane monitoring	Monthly reports
	1.7	Antennas and Readers	All antennas and readers are capturing 99.95% of transactions where a transponder is present in the vehicle.	3 hrs	a) Lane monitoring b) System reports	Monthly reports
	1.8	Lane Controllers	Lane controllers are up and running 99.99% of the time that the Managed Lanes are open.	3 hrs	a) Lane monitoring b) System report	Monthly reports
	1.9	Automatic Vehicle Classification (AVC) System	AVC system is classifying the correct number of axles on vehicles correctly 99.95% of the time a transaction is detected in the lane.	3 hrs	a) CSC reporting b) Customer contact	Monthly reports
?) CONTACT CENTER	2.1	Customer contact line	Telephone line manned during business hours and 24 hour availability of messaging system. Faults to telephone line or message system rectified	1 Month	Monthly reporting	Monthly reports
	2.2	Inbound Call Service Level	80% of all inbound calls should answered in thirty (30) seconds or less	1 Month	Monthly reporting	Monthly reports
	2.3	Customer Driven Management Surveys (CDM)	Maintain an average of 4.0 or better on a scale of 1.0 to 5.0 on CDM customer service survey results	1 Month	Monthly reporting	Monthly reports
	2.4	Phone Surveys	Maintain an average of 2.0 or better on a scale of 1.0 to 5.0 on after-call surveys done through the phone system	1 Month	Monthly reporting	Monthly reports
	2.5	Average Hold Time	Duration of the wait time after being placed on hold by a CSR until the call is picked-up does not exceed 90-seconds	1 Month	Monthly reporting	Monthly reports
	2.6	Average Abandon Rate	In the automatic call distributor – less than 4% after the minimum answer time	1 Month	Monthly reporting	Monthly reports

	2.7	Customer Requests	98% of all customer, violator and public requests and correspondence regardless of communication method will be responded to within three (3) business days	1 Month	Monthly reporting	Monthly reports
	2.8	Phone Quality	Maintain an average of 94.5% quality measurement for management phone audits	1 Month	Monthly reporting	Monthly reports
	2.9	Schedule Conformity	This will be measured according to workforce management software in contact center. Maintain an average of98.5%.	1 Month	Monthly reporting	Monthly reports
	2.10	Schedule Adherence	This will be measured according to workforce management software in the contact center. Maintain an average of94.0%	1 Month	Monthly reporting	Monthly reports
3) IMAGE PROCESSING	3.1	Seconds per Image	Maintain an average of7.5secondsper image	1 Month	Monthly reporting	Monthly reports
	3.2	Final Image Accuracy	Maintain an image review accuracy rate of 99.6%	1 Month	Audit of reviewed images	Monthly reports
	3.3	Image Reprocess Rate	Maintain an image reprocess rate of less than 6.5%of all images reviewed	1 Month	Measured bi-weekly based on system reporting	Bi-Weekly reports
) SYSTEM AVAILABILITY	4.1	Online Customer Access	System functionality available 99.7%of the time (excluding planned system maintenance)	1 Month	Monthly reporting	Monthly reports
	4.2	Email Availability	System functionality available 99.7%of the time (excluding planned system maintenance)	1 Month	Monthly reporting	Monthly reports
	4.3	IVR Availability	System functionality available 99.7%of the time (excluding planned system maintenance)	1 Month	Monthly reporting	Monthly reports
	4.4	Phone System	System functionality available 99.7%of the time (excluding planned system maintenance)	1 Month	Monthly reporting	Monthly reports

Appendix 6-3
Current Daily Functions on the I-25/US 36 Managed Lanes Access Gate Opening & Closing Sequence

1.0 Operating Schedule

The current operating schedule for the I-25 Managed Lanes is as follows:

Opens South Bound 5:00 A.M

Closes South Bound 10:00 A.M.

Opens North Bound 12:00 P.M.

Closes North Bound 3:00 A.M.

Open North Bound Weekends and Holidays

2.0 Safety

While keeping the I-25 Managed Lanes open as scheduled is the key concept, safety is the single most important consideration in the day-to-day operations of the lanes. Safety means safety for the traveling public and for the I-25 Managed Lanes employees. If any technician feels it is not safe to open the lanes, for any reason, they have the authority to do so. Unsafe conditions are usually related to abandoned vehicles in the lanes, snow/ice conditions, and equipment operation (usually damaged gates due to an accident). During these incidents, staff is required to contact RTD dispatch and the Director immediately.

3.0 I-25 Managed Lane Technician Functions

The I-25 Managed Lanes dedicated technician hours are from 3:00 A.M. to 11:30 A.M. Monday through Friday. The technician arrives in time to verify that the lanes were closed properly or will take the necessary steps to complete the closure. During this closure, the technician will drive through the lanes ensuring that there are no abandoned vehicles or trash that may be a hazard. If there are, the technician will contact the Colorado State Patrol or the Denver Police and have the vehicle removed immediately. If the technician can handle any trash they address it, otherwise they will contact the maintenance contractor. Once this is complete they will inspect the gates to ensure none have been damaged during the night and repair as necessary. They will also do any scheduled preventative maintenance at this time. If, at any time, the technician has an issue that requires more than one person, they are to immediately contact the On-call Technician for assistance. If it is serious situation, such as three or more gates damaged or the operating system is down, they are to call the Supervisor immediately.

Just prior to the 5:00 a.m. opening, the technician will once again drive through the entire system and ensure that any abandoned cars have been removed; that there are no

maintenance/construction workers in the lanes; and that the lanes are in a safe condition for the morning rush hour commute. The technician will start the opening sequence at 4:52 a.m. to ensure that the lanes are opened by 5:00. If there is a delay in the opening for any reason the technician is to immediately contact RTD and explain the reason to them. The technician is then to do what is necessary to get the lanes opened as soon-as-possible. If the delay may take longer than 30 minutes they are to contact the Supervisor and advice of the situation.

During the 5:00 to 10:00 morning rush period the technician is to monitor the signs for proper prices and the lanes for any serious delays. Delays must be monitored on a case by case basis. If there is an accident on the mainline that causes delays in the lanes this may be cause for a refund; notify the supervisor immediately. If there is a pattern developing the technician is to notify the supervisor immediately of any observed issues. At 10:00 the technician is to monitor the closing. If there is a delay, or if maintenance crews are waiting to gain access, they are to contact the maintenance crew immediately to ensure their safety, contact the supervisor and finish the closing as-soon-as-possible.

From 10:00 to the technician's normal end of work day, the technician is to repeat the activities during the 3:00 to 5:00 closing to ensure the lanes are safe for the noon opening. Prior to 11:30 the on-call technician is to report to the I-25 Managed Lanes and get in contact with the morning technician. Any issues that have occurred during the past 24-hours are to be discussed. The On-call technician will then drive through the lanes and again ensure they are safe for the noon opening.

At 11:52 the on-call technician is to initiate the northbound opening sequence. Once the lanes are opened he may continue with other duties as assigned. At 3:00, 3:30 and 4:30 p.m. the On-call technician will monitor the signs for proper pricing. If the supervisor or another authorized individual is available they may monitor the price changes. On Friday night the on-call technician is to check the prices to ensure that the price has changed to $0.50 for the weekend.

4.0 Access Gates

There are seven entrances to the I-25 Managed Lanes. Gate set 1 is located at 20th and Blake; gate set 2 is located at the top of the ramp at 20th and Blake; gate set 3 is northbound I-25 at 20th Ave; gate set 4 is on SH 224/70th Ave (gate for eastbound and one for westbound); gate set 5 is southbound I-25 under US 36; gate set 6 is at the RTD terminal at Union station and gate set 7 is southbound US 36 at Pecos.

These entrances will have from 1 to 10 gates. When the gate set is given the command to open the gate furthest from traffic will open first. When the gate set is given the command to close the gate closest to traffic will close first. Only one gate will close at a time. Gates take the greatest amount of maintenance. The I-25 Managed Lanes have gate damage on a routine basis which normally requires the lamp and shear pin to be replaced and there is minimal gate arm damage. On average, approximately once a year, the I-25 Managed Lanes will have to replace a complete unit due to an accident

5.0 I-25 Managed Lanes Opening and Closing Sequences

5.1 South Bound Opening (5:00AM):

Manual command entered,

Gate set #5 begins opening, last gate on the inside opens first (8 gates total),

Once GS#5 has opened, VMS #4, 5 and 7 update with an HOV open message,

Gate set #7 opens (10 gates total). Once complete, VMS #11, 12 and 13 update with open messages,

Gate set #4 opens (2 gates total: one east and one west). Once complete VMS #8 and 9 update with open messages, and

Sequence finishes and goes green Southbound.

5.2 South Bound Closing (10:00AM)

Automatic closing begins @ 10:00 A.M.,

VMS #8 and 9 update with an HOV closed message,

VMS #4, 5 and 7 update with closed messages,

VMS #11, 12 and 13 update with closed messages,

Gate set #4 closes,

Gate set #5 closes, first gate on the outside closes first,

Gate set #7 closes,

Sequence finishes and goes red closed, and

Lanes are swept for vehicles/debris and maintenance is performed.

5.3 North Bound Opening (12:00PM):

Manual command entered,

Gate set # 2 and Gate set #3 begin opening, last gate on the inside opens first,

Once GS #2 and GS #3 are fully opened, Gate set #1 begins opening,

Once GS #1 is open (single gate), VMS #3 updates with HOV open message, including prices,

VMS #2 updates,

VMS #1 updates,

VMS #10 updates, and

Sequence finishes and goes green Northbound.

5.4 North Bound Closing (3:00AM):

Automatic closing begins @ 3:00 A.M.,

VMS #10 updates with an HOV closed message,

VMS #1, 2 and 3 update with closed messages,

Gate set #1 closes (single gate),

Gate set #3 closes, first gate on the outside closes first (9 gates total),

Gate set #2 closes, first gate on the outside closes first (3 gates total),

Sequence finishes and goes red closed, and

Lanes are swept for vehicles/debris and maintenance is performed.

**Gate set #5 currently consists of 8 active gates. However, it was originally designed for 10 active gates. The outer and inner most gates were removed in the past primarily due to numerous successive hits. The pedestals are still in place with all necessary wiring but the cabinets have been removed and used as replacements in other areas.

Appendix 6-4
Automatic Access Gate Equipment and Gate System

1.0 Description

A system of equipment and software is currently in use for the reversible I-25 Managed Lanes to manage the gates that are open or closed based the direction of travel.

The Concessionaire shall be responsible for the operation and maintenance of the automatic gate equipment currently in use on the I-25 Managed Lanes (the "Gate Equipment").There is a current software system in place that creates the interlock between the position of the gates and the advisory overhead sign, it also provides the toll rate to the overhead VMS signs (the "Gate System"). HPTE and CDOT are in the process of evaluating a replacement for the Gate System. . This Gate System will be owned by HPTE as it will also be used on the I-25 North Managed Lanes. The Gate System will be provided to the Concessionaire and then the Concessionaire will be responsible for maintenance of the Gate System and any associated equipment.

All replacement materials furnished, assembled, fabricated or installed shall be new, corrosion resistant and in strict accordance with the details shown and described in this Exhibit. . Hydraulic alternatives shall not be considered.

The automatic gate equipment currently in use includes, but is not limited to the following.

- Gate foundation and pedestal,
- Gate arm and other mechanical support and structure,
- Motor and the associated mechanical and electro-mechanical drives,
- Control Relays and limit switches,
- Gate operator housing for the control components,
- Gate controller (Model 170 controller Assembly and Isolators).See Note 1.
- Gate/sign interlock circuitry,
- Gate/traffic signal interlock circuitry,
- Gate system interlock circuitry,
- Gate control cables (IMSA 20-1) 600 volt solid copper conductor, straight layer polyethylene jacket, and
- Gate lights.

2.0 Materials

All gate mechanisms must be resistant to freezing, dust and debris and all hangers properly sealed.

3.0 Gate Functionality

The following is a list of current functionality of the Gate Equipment. If the Concessionaire replaces the equipment it must meet or exceed this level of functionality.

The automatic gates are motor-operated and gear driven.

The automatic gates operate against a wind pressure of 80 MPH.

The design of the entire gate assembly and the driving mechanism shall meet the requirements of all codes applicable to this type of equipment.

Limit stops are be provided to restrict the movement of the gate only in the designated range.

The entire travel of the gate must be accomplished in less than 12 seconds.

The operating mechanism is able to gradually accelerate the arm until 50% of the arm travel has been reached, and then gradually decelerate until the arm comes to rest, preventing bouncing or whip of the arm.

A hand crank is furnished for each gate for manual operation. Insertion of the hand crank will automatically immobilize the control circuit to the motor-reversing contactor and release the magnetic break. Manual operation is accomplished from outside of the housing with the door open. Door safety switches automatically break the control circuit power when the door is opened. Using the hand crank the gate is fully open or closed within a maximum of 50 revolutions.

The control panel has a local/remote select switch, open and close switches, VMS message select switches and gate status indicators.

The gate controller provides an interface the control panel and the gate control relays to control the sequence of the gate operations and to provide the interlock functions with the VMS sign controller unit (currently Model 170), traffic signals and with the other gates.

The controller sequences the gate opening and closing, when closing, the gate that is closest to the on-coming traffic is closed first and so forth, when opening, the gate that is closest to the on-coming traffic is opened last.

Gate/sign interlock is be provided at the gate controller locations to prohibit closing the gate when the associated VMS is not showing a "closed" message and to prohibit the sign from showing a manually selected "open" message when the associated gate is not fully open. Two levels of checking are provided. The NODE Building control equipment correlates the sign messages and gate conditions.

A wiring system spanning the complete gate subsystem, by location, is used so that the opening of any gate in one traffic flow direction is only possible when all gates in the opposite direction are fully closed.

4.0 Electrical Specifications

The following specifications apply to each gate.

4.1 Drive Motor

The motors are totally enclosed, non-ventilated, ball-bearing and instant-reversing type. They each operate from single phase 230 VAC, 50 HZ with the power rating sized according to the gate arm length, but not less than 1 hp.

At certain location(s) flashing light(s) are provided instead of gate arms(s). The light(s) are to be operational when the gate(s) are closing and remain illuminated when the gate(s) are closed.

4.2 Motor Control Circuits and Accessories

A gasketed hinged NEMA I electrical compartment is used above the transmission and contains the following electrical components.

Reversing motor starter with thermal overloads

Breaker for motor disconnect

Breaker for control and accessories.

Panel for local circuits.

230/115 V transformer for control accessories

2-circuit flasher, heavy duty with radio suppressor, for the obstruction gate lights

Terminal blocks with engraved identification strips.

Thermostat mounted bottom section for heater.

Dual convenience receptacle mounted on side of enclosure.

Lamp outlet mounted on side of enclosure.

4.3 Local/Remote Select Switch

A heavy duty select switch is used on the control panel. The switch has two positions, local and remote, to select the mode of operation of the gate controller.

4.4 Local Operations and VMS Interlock

Each gate has a locked weatherproof switch box with one pushbutton switch for gate opening and one for gate closing operations.

4.5 Remote Control Operation

Two inputs are used, one for opening and one for closing the gates. These inputs are compatible with commands in the form of relay closures. A terminal strip is mounted on the control Panel for the inputs.

4.6 Gate Status Indication

Two (2) heavy duty red indicators are used, one for the gate open and one for the gate closed status. The indicators are on when the gates are fully open or closed, respectively. One heavy duty green indicator is used to indicate the normal condition of the gate operation. This indicator is off when the gate loses power or when the gate is in the local mode.

4.7 Gate Controller

The gate controller uses a 104-pin connector <Need part number specification> to interface with the equipment in the cabinet. The controller is programmed to control the gates and communicate with the central system.

A Model 170 gate controller is currently used to interface the switches to the control relays of the gates and to monitor the limit switches of the gates.

The controller must meet the following requirements:

Inputs to the Model 170 controller are compatible with contact closures, with the standard Model 170 Input file, and are isolated from the channel output. Two Model 242 two Channel CD isolators are used with each Model 170 controller assembly interfacing with gate equipment.

Outputs from the Model 170 cabinet utilize Model 200 switch packs. Power to the motor and power to the open/closed manual override panel are separate types.

Processes detector data from the gate controller location.

Monitor gate circuits, the interlock functions with the VMS or signal controller, the 24 VDC power supply, and the Model 170 controller operations.

4.8 Gate/Sign Interlock

The Concessionaire shall ensure that the gate position and variable message sign display are compatible. The gate controller inhibits any gate closing action when the sign is not showing "closed". This interlock applies to central control and local override conditions. Transmission and remote control of this activity occurs via the optical transceiver located in the associated VMS/Sign/Gate control cabinet.

4.9 Gate System Interlock

The gates are programmed in such a manner that inbound gates cannot open when outbound gates are open and vice versa.

4.10 Power

The automatic gate and the associated equipment operate from 115/230 +/- 20/40 VAC, 60 +/- 3 Hz.

5.0 Mechanical Specifications

5.1 Gate Construction

All shafts and fasteners are stainless steel and all contactors and limit switch contacts are silver alloy. Gate transmission is gear-driven, with no belts or chains. The transmission mechanism is removable as a single unit. All shafts protruding from gear boxes containing oil are equipped with dual oil seals. Each transmission sub-assembly is interchangeable with all other such units. All bearings are designed for one million cycles of operation. Lubrication is not required at any point more often than once every 12 months. All gears, motor pinions and similar mechanical parts are enclosed and running in oil, with the exception of the limit switch drive gears, where silicon lubricant is used.

5.2 Gate Housing

The gate housing is fabricated from stainless steel or aluminum and is not painted.

Removable access doors are provided on each side of the main housing. Doors are made of the same material as the housing and are equipped with continuous stainless steel hinges with bronze hinge pins. Each door is equipped with a three-point vault-type stainless steel handle and index plate with provisions for padlocking in the closed position. The locks are required to be equivalent to 3900 Masterlock (Brass) Padlocks. Each Gate lock is to be supplied with two keys. Each door is to be equipped with a louvered, screened and filtered vent at the top and at the bottom. Each housing door has an enclosed switch for controlling the interior lamp.

5.3 Gate Arms

The gate arms are made of rectangular aluminum tube, 6061-T6 Aluminum Alloy. Stainless steel truss cables are used for each gate arm. Arm lengths greater than 24 feet are equipped with a spring loaded roadway bumper. White reflective sheeting of the pressure sensitive type is applied to the entire face of the arms, and 6-inch wide red enamel diagonal stripes painted thereon, 12 inches on center. Reflective sheeting is used.

5.4 Gate Arm Base

A break-away shear pin base is used on all gate arms, regardless of length or gate location. The shear pin base is designed for ease of installation or replacement by one person.

5.5 Gate Lights

Three hundred sixty degree obstruction gate lights are installed on the gate arms. The Lights conform to FAA Specification L-180 except with amber screw-down lenses. All wiring between gate terminal boards and gate lights are two conductors, #14, extra flexible, PVC-jacketed cable, with two prong quick disconnect plug and terminating in water tight connectors at fixture entrances. The cable is installed in PVC conduit fastened along gate arms.

A flasher unit is installed in each gate. The unit flashes the lights while the gate is closing and opening. When closed, the lights are continuously illuminated. When open, the lights are off.

5.6 Control Panel

The control panel is to be stainless steel or anodized aluminum sized for mounting on standard EIA racks. The legends of the switches and indicators are engraved.

The Concessionaire shall conduct tests on the automatic gate and associated equipment, as described herein.

The standalone tests include the following as minimum.

Operations of the gate, opening and closing, in both the local and in the remote modes.

Hand cranking operation of the gate.

Limit switch indications

Gate light operations.

Gate operation during both closing and opening when obstacles are encountered.

Operation of all contactors, circuit breakers, AC receptacles and lamp outlets.

Demonstration of the motor thermal overload protection operation.

Demonstration of the gate/VMS, Gate/Signal and Gate system interlock.

NOTES

Note 1 – Presently the Model 170 Controller is in use, however, this model is now obsolete. Any future Gate Controller will need to be available from at least three sources. The unit will need to meet the Environmental Standards for equipment exposed to the local weather conditions.

ELECTRICAL, ENVIRONMENTAL AND TESTING REQUIREMENTS

General
The requirements called out in this Appendix 6-4 dealing with equipment evaluation are a minimum guide and shall not limit the testing and inspection to insure compliance.

Certification
These test procedures shall be followed by the Contractor who shall certify that they have conducted inspection and testing in accordance with these specifications.

Inspection
A visual and physical inspection shall include mechanical, dimensional and assembly conformance of all parts of these specifications.

Environmental and Electrical
All components shall properly operate within the following limits unless otherwise noted:

Applied Line Voltage: 90 to 135 VAC, note "Power Failure / Restoration" limits
Frequency: 60 (+/-3.0) Hertz
Humidity: 5% to 95%
Ambient Temperature: -34.6 oF to +165.2 oF
Shock - Test per Specification MIL-STD-810G Method 516.6.
Vibration - per Specification MIL-STD-810G Method 514.6.

Commencement Operation
All circuits, unless otherwise noted, shall commence operation at or below 90 VAC as the applied voltage is raised from 50 to 90 VAC at a rate of 2 (+/-0.5) volts / second.

Equipment Compliance
All equipment shall be unaffected by transient voltages normally experienced on commercial power lines. Where applicable, equipment purchased separately from the cabinet (which normally is resident) will be tested for compliance in a State accepted cabinet connected to the commercial power lines.

Operating
The equipment shall withstand (nondestructive) and operate normally when one discharge pulse of plus or minus 300 volts is synchronously added to its incoming AC power line and moved uniformly over the full wave across 360 degrees or stay at any point of Line Cycle once every second. Peak noise power shall be 5 kilowatts with a pulse rise time of 500 ns. The unit under test will be operated at 68 oF ±41 oF and at 120 (+/-12) VAC.

UL Requirements
Equipment shall comply only with the requirements of UL Bulletin of Research No. 23, "Rain Tests of Electrical Equipment."

Normal Operation
All equipment shall continue normal operation when subjected to the following:

Low Temperature Test
With the item functioning at a line voltage over Electrical Range the Device in its intended operation, the ambient temperature shall be lowered from 68 oF to 34.6 oF at a rate of not more than 64.4 oF per hour. The item shall be cycled at -34.6 oF for a minimum of 5 hours and then returned to 68 oF at the same rate.

High Temperature Test
With the item functioning at a line voltage over Electrical Range the Device in its intended operation, the ambient temperature shall be raised from 68 oF to 165.2 oF at a rate of not more than 64.4 oF per hour. The item shall be cycled at 165.2 oF for 5 hours and then returned to 68 oF at the same rate. The test shall be repeated with the line voltage at 135 VAC.

Normal Operation
All equipment shall resume normal operation following a period of at least 5 hours at -34.6 oF and less than 10 percent humidity and at least 5 hours at 165.2 oF and 22% humidity, when 90 VAC is applied to the incoming AC.

Humidity and Ambient Temperature
The relative humidity and ambient temperature values in the following table shall not be exceeded.

AMBIENT TEMPERATURE VERSUS RELATIVE HUMIDITY AT BAROMETRIC PRESSURES (29.92 In. Hg.)

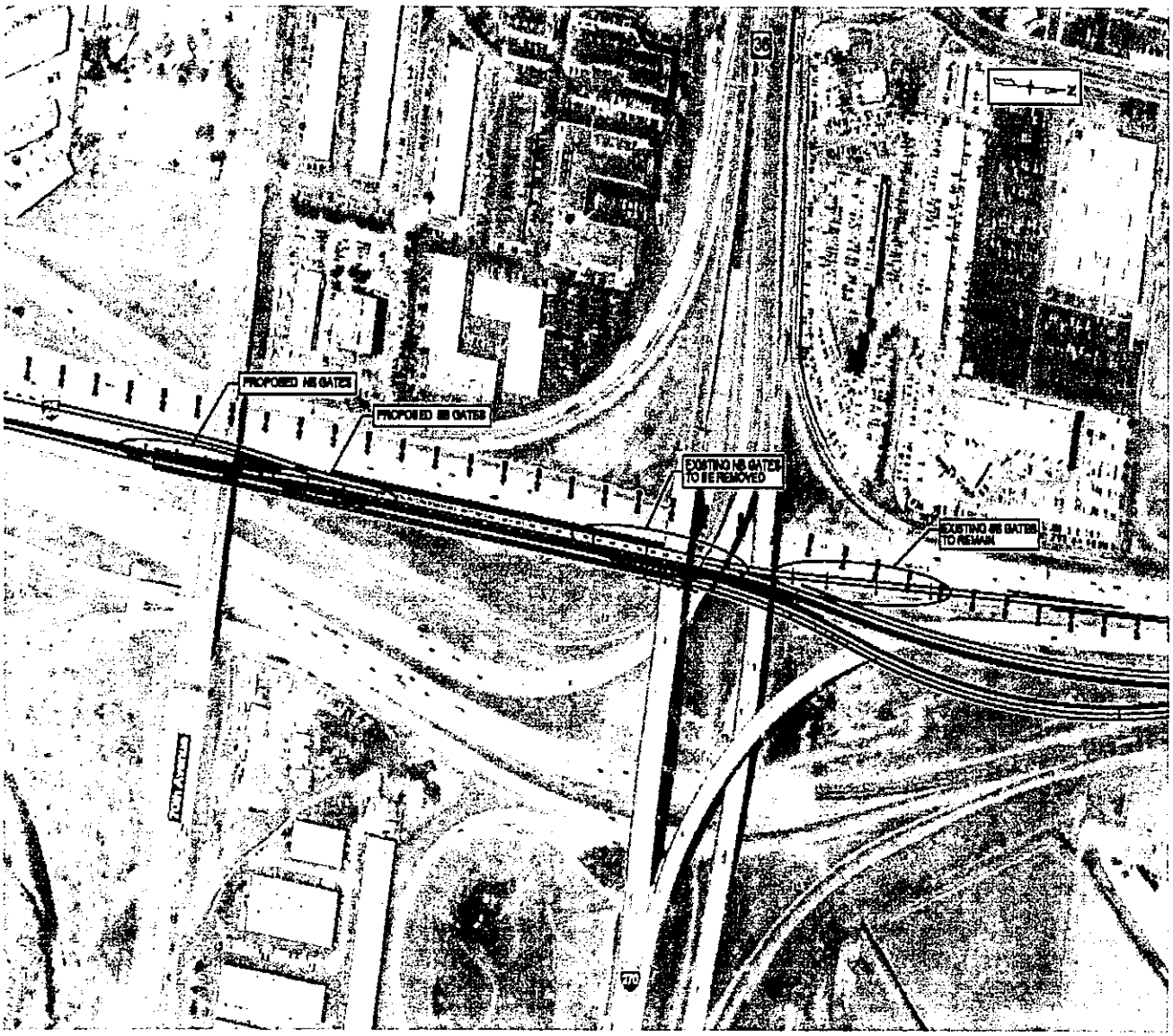
Ambient Temperature/Dry Bulb (in °F)	Relative Humidity (in percent)	Ambient Temperature/Wet bulb (in °F)
-34.6 to 33.98	10	1.04 to 108.86
33.98 to 114.8	95	108.86
119.84	70	108.86
129.92	50	108.86
140	38	108.86
149.72	28	108.86
160.16	21	108.86
165.2	18	108.86

Opening and Closing of Contacts

All equipment shall be capable of normal operation following opening and closing of contacts in series with the applied voltage at a rate of 30 openings and closings per minute for a period of 2 minutes in duration.

Appendix 6-5
Access Gate Revisions I-25 North Managed Lanes

The graphic below provides the final configuration of access gates that is expected to be delivered associated with the I-25 North Managed Lanes Extension project.



Appendix 6-6
Courtesy Patrol Response Procedures, Equipment and Personnel Requirements

1.0 RESPONSE PROCEDURES

When a disabled vehicle incident or accident is discovered, the Courtesy Patrol Vehicle shall respond as follows:

1.1 Arriving At a Disabled Vehicle on the Shoulder

When a patrol operator finds a disabled vehicle on the shoulder of the highway, the operator shall pull directly behind the vehicle. However, the operator shall not turn on the towing vehicle's yellow warning lights unless the disabled vehicle or the Courtesy Patrol Vehicle poses a hazard to other motorists. The patrol operator shall then exit the Courtesy Patrol Vehicle, distribute the program brochure, and offer the program services to the motorist. As agreed upon in the OMP, the operator shall explain to the motorist:

a. The Courtesy Patrol is a CDOT program;
b. The program is publicly funded;
c. The services are free of charge to the motorist;
d. The motorist has the option to refuse or accept the service;
e. Only particular services may be provided to the motorist (as defined below);
f. The nature of the drop site(s) available; and
g. The motorist has the option to leave his/her vehicle on the shoulder of the freeway or to be taken to a drop-site.

The patrol operator shall then request the motorist's consent, to such service, and must obtain such consent – in writing, before providing service.

The Concessionaire shall offer to allow the motorist to use the mobile telephone equipment in the tow truck, and the motorist shall be allowed up to five minutes of local calls at no charge to the motorist.

If the motorist refuses the service, the patrol operator shall leave the scene immediately, report the incident as agreed in the OMP, and continue patrolling.

If the motorist consents to service and, if the operator can make the vehicle operational by providing the limited assistance available to the Concessionaire, then the Concessionaire shall proceed as follows:

a. If the motorist does not consent to have the vehicle moved, and the operator can render service on the shoulder with minimal hazards created, then the patrol operator will render such service on the shoulder for a period not to exceed 10 minutes. If the patrol operator cannot make the vehicle operational within 10 minutes then, with the motorist's consent, the patrol operator shall move the disabled vehicle and motorist to the Drop Site nearest the location of the vehicle. If the motorist does not consent to moving the disabled vehicle and the patrol operator has offered all available options of the Courtesy Program to the motorist, the patrol operator shall notify his/her supervisor and the appropriate law enforcement agency then leave the scene immediately and continue patrolling.

b. If the motorist does consent to have the vehicle moved, it is recommended that the vehicle be moved to the nearest Drop Site to provide assistance.

After the patrol operator provides assistance on the shoulder, or moves the disabled vehicle and the motorist safely to the drop-site and provides assistance at the Drop Site, the patrol operator shall immediately return to patrolling.

1.2 Arriving At a Disabled Vehicle in Traffic

When the patrol operator finds a disabled vehicle in traffic, the patrol operator shall pull directly behind the vehicle as soon as possible, and turn on the Courtesy Patrol Vehicle's yellow warning lights. The patrol operator shall then exit the Courtesy Patrol vehicle and explain the CDOT program to the motorist, and the services available.

The patrol operator shall then ask for the motorist's consent to move the disabled vehicle, and the motorist, to a drop-site (first choice), or to the shoulder of the highway (second choice). If the motorist consents, the operator shall take appropriate action and follow the agreed upon procedures in the OMP regarding providing information on the incident's status. If the motorist refuses, the patrol operator shall immediately contact local law enforcement to report the disabled vehicle in traffic, and the patrol operator shall stay directly behind the disabled vehicle with yellow warning lights activated until the vehicle is moved from traffic or until a local law enforcement officer arrives. The patrol operator shall follow the instructions of the local law enforcement officer and follow the agreed upon procedures in the OMP regarding providing information on the incident's status.

1.3 Arriving At an Accident

When the patrol operator finds an accident, the patrol operator shall pull directly behind the vehicle(s) as soon as possible and turn on the yellow warning lights. The patrol operator should then carefully exit the patrol vehicle and discuss the situation with the motorist(s).

If there are injuries, the patrol operator should not attempt to move the vehicle(s), but rather immediately call 911 and discuss further action with local law enforcement. The patrol operator shall follow all instructions made by local law enforcement and follow the agreed upon procedures in the OMP regarding providing information on the incident's status.

If there are no injuries (accident involves only property damage) but the vehicle(s) cannot be safely driven, the patrol operator shall explain the program to the motorists, and ask the motorist's consent to move the vehicles from the traveled portion, median, or ramp of the highway and follow the agreed upon procedures in the OMP regarding providing information on the incident's status.

If the motorist does not consent, then the patrol operator shall stay immediately behind the vehicles until local law enforcement arrives, shall assist law enforcement as requested, and follow the agreed upon procedures in the OMP regarding providing information on the incident's status.

If the motorist consents, the patrol operator shall request additional Courtesy Patrol assistance before taking further action. (The operator should not move one of the vehicles if that means the other disabled vehicle will remain alone in traffic, but instead protect the accident scene by staying directly behind both vehicles until assistance arrives). If the motorists have already fulfilled the requirements of **Colorado Revised Statutes 42-4-1603**, concerning exchanging identification/information, then when assistance arrives, the patrol operator(s) should move the disabled vehicles to the nearest drop-site if damages appear to total less than $1,000.00. If the motorist(s) have not exchanged such information, then the operator(s) shall move the vehicles to the nearest suitable location for that purpose in accordance with **C.R.S.42-4-1602(2).**

Under no circumstances shall a patrol operator attempt to repair an accident vehicle in an attempt to make it mobile.

2.0 SPECIFIC EQUIPMENT REQUIREMENTS

The Courtesy Patrol Vehicle shall be equipped, ***at a minimum***, with the following:

a. Wheel lift towing equipment, including safety straps with a minimum lift rating of 3,000 pounds;
b. Hydraulic boom lift capability with a static rating of 5,000 pounds;
c. Winch cable with an 8,000 pound rating on the first layer of cable;
d. Towing slings rated at 3,000 pounds;
e. Tow chains of 5/16" alloy or OEM specs, and J.T. hook assembly;
f. Yellow/amber warning lights with front to rear (360 degree) directional flashing, with on/off switch in cab;
g. Power outlets ("hot boxes"), front mounted, with outlets compatible with 12-volt booster cables;
h. Heavy duty, 60^{+}-amp battery;
i. Two-way radio communications with base office;
j. Cellular telephone;
k. Cab Lighting;
l. Rear work lights;
m. Safety D-ring on rear of truck;
n. Floor jack on rollers with a 2-ton rating; and
o. All equipment necessary to operate the towing vehicles during winter driving conditions (i.e. chains, studded snow tires, etc.).

In addition to the specific vehicle equipment described above, at the start of a shift, the Courtesy Patrol vehicle shall contain each of the following items in order to ensure adequate service to disabled vehicles. These items shall be promptly replenished prior to the next shift, and as needed:

a. Unleaded gasoline (5 gallons) available in an easy access gas transfer system;
b. Safety chains measuring a minimum of 5 ft. (1 each);
c. Radiator water (5 gallons). Anti-freeze shall be added to the water when needed to keep the water in a liquid form;
d. Four way lug wrench (metric) (1 each);
e. Four way lug wrench (standard) (1 each);
f. Rechargeable air bottle (100 psi capacity), hoses and fittings to fit tire valve stems (1 each);
g. Flashlight and spare batteries (1 each);
h. Booster cables, 25 ft. long minimum, 3-gauge copper wire with heavy-duty clamps with one end adapted to truck's power outlets (1 set);
i. Funnel, multipurpose, flexible spout (1 each);
j. 36-inch highly visual orange traffic cones with reflectorized bands (5 each);
k. Reflector vest for the patrol operator (1 each);
l. First aid kit, 16 units (1 kit);
m. Fire extinguisher, 10ABC (1 each);

n. Hand broom (1 each
o. Snow shovel (1 each);
p. Traction sand (20lbs);
q. Flares, 30 minute (3 each); and
r. Reflective Triangular Warning devices (3 each).

3.0 SPECIFIC PATROL OPERATOR REQUIREMENTS

The following patrol operator requirements must be met:

Identify by full name, date of birth, and Colorado driver's license number, the specific individuals that will operate the towing vehicles, including the experience of the firm providing the services (if other than the Concessionaire) and the specifically identified patrol operators, in providing such services. For each identified patrol operator and for the firm providing the service (if other than the Concessionaire), a written resume with two (2) work related references (name, address and telephone), must be provided.

Submit a current record of all arrests (if any) for each identified patrol operator, from the files of the Colorado Bureau of Investigation, 690 Kipling Street, #3000, Denver, Colorado 80215, (303) 239-4680. This must be provided before the operator begins performance of his/her duties.

The Concessionaire must notify CDOT in the manner agreed in the OMPbefore the Concessionaire substitutes any other individual to perform such services, and shall comply with the same information submittal requirements regarding such individual.

The Concessionaire's patrol operators must meet all of the following requirements at all times for performance of the CDOT program services:

a. All federal, state, and local requirements for operation of tow vehicles.
b. Be at least 18 years of age, have at least one (1) year of towing experience, and pass a criminal background check. Patrol operators who have been convicted of a felony may be rejected.
c. Wear clean clothing, free of holes, at the beginning of each shift. Patrol operators must wear shirts covering their chest and armpits, full length pants, and protective footwear. Patrol operators shall wear high visibility safety apparel. These items shall be provided and maintained by the Concessionaire and/or the patrol operator, at their expense. Patrol operators shall wear hats with CDOT logos at all times while patrolling. The initial set of these items shall be provided by CDOT. If these items are lost, stolen, or damaged, replacement will be at the Concessionaire's expense.
d. Be reasonably clean (as further described in **C** above) at the beginning of each shift.
e. Not smoke during patrol operations and/or while assisting motorists
f. Not use, be under the influence of, or have in their possession any alcohol or illegal substances during patrol operations. Patrol operators shall not carry firearms, or any

device whose primary function is as a weapon, either on their person or in the towing vehicle.

g. Conduct themselves appropriately, with courtesy, at all times. Swearing, sexual advances, sexual harassment, racial or ethnic jokes, discrimination, rude conduct, or any other activity deemed unacceptable by the Contract Administrator and his/her designee, are all prohibited.
h. Express a positive, helpful, cooperative attitude when dealing with motorists.
i. Any new patrol operator assigned by the Concessionaire to the CDOT program, must accompany a current patrol operator, experienced with the Mile High Courtesy Patrol, for at least one full shift prior to patrolling the Patrol Area.

The CDOT personnel designated in the OMP, may at any time direct a Concessionaire to remove a specific patrol operator from the performance of program services for violation of any patrol operator requirement. Such removal may continue for any length of time the Contract Administrator reasonably determines is appropriate under the circumstances. Failure of the Concessionaire to affect removal upon such notice shall be cause for corrective action or penalties described herein, including termination of the contract, at CDOT's option.

If the Concessionaire removes a patrol operator, the Concessionaire shall supply a replacement patrol operator as soon as possible, but not later than within 24 hours. Liquidated damages, shall apply to any hours that the required number of patrol operator(s) are not present as a result of such removal.The replacement shall meet all patrol operator requirements.

Liquidated Damages will be as follows: loss of hourly pay, plus liquidated damages equal to two times the hourly pay will be deducted from payment due for each failure to comply with these requirements

4.0 GENERAL EQUIPMENT AND PATROL OPERATOR REQUIREMENTS

The Concessionaire must comply with the general equipment and patrol operator requirements described in this Appendix.

The Concessionaire shall provide the tow truck vehicles needed to perform the CDOT program's patrolling and disabled vehicle assistance services. Upon the Full Services Commencement Date, the Concessionaire shall provide a minimum of 4 tow trucks (3 patrolling and 1 backup). The tow trucks shall meet the following requirements at all times during the term of the contract:

a. Be Colorado licensed, including Public Utility Commission licenses, and be an insured Class A tow truck with a minimum gross vehicle rating of 10,000 pounds, dual wheel chassis and four (4) ton recovery equipment rating. Flatbed "roll back" service trucks may be used in-lieu-of boom type wrecker trucks. Flatbed trucks must be equivalent in capacity to specified boom type trucks (excluding vertical lift) to safely handle the scope of work.

b. The Concessionaire shall provide documentation evidencing that the Concessionaire or a Sub-Contractor is the registered owner of the tow trucks, or is the lessee of such tow vehicles for at least the term of the awarded contract.

c. All the vehicles must be completely operational, in sound mechanical condition, and in full compliance with applicable legal requirements at all times, for the performance of the program services.
d. The vehicle's exterior shall be reasonably clean at the beginning of each shift, free of road grime, grease, and articles/equipment not needed for the program. No body damage and/or broken glass shall be permitted on the vehicle at the start of a shift.
e. The inside of the vehicle shall be kept clean. The seat and floor shall be free of dirt, grease and any other substance that may transfer to someone's clothing by contact. The seat shall not be torn. Exposed springs, seat stuffing or damaged upholstery shall not be permitted. Torn dashboards, missing screws, hanging hoses or wire, or any other unsightly items inside the cab shall not be permitted.
f. The Concessionaire shall maintain a backup tow vehicle for the Patrol Area (the third/second truck) at all times, and shall use the backup to replace any disabled tow truck, or to replace any tow truck rejected for non-compliance with operational requirements within ½ hour of verbal notification from CDOT as agreed in the OMP. Failure to provide a replacement vehicle within this time requirement will result in an assessment of Liquidated Damages, as described herein.
g. The vehicle must be bright red.
h. The vehicle shall display one magnetized 15 inch by 26 inch Courtesy Patrol logo sign on each door at all times during performance of program services. These signs will be supplied by CDOT. The size of the sign specified is a minimum. If larger signs are required to cover any private information on the doors, the initial set will be provided by CDOT. If these signs are lost, stolen or damaged, the Concessionaire will replace these signs at the Concessionaire's own expense. CDOT will not be billed for sign replacement. Concessionaire name, phone number, and/or logo shall not be permitted anywhere on the vehicle, unless completely covered with the Courtesy Patrol signs during performance of program services.
i. The Courtesy Patrol signs must be removed from the vehicle at all times when the vehicle is used for purposes other fulfilling the Courtesy Patrol services.
j. The Concessionaire shall provide documentation evidencing that he/she is the registered owner of the tow trucks, or is the lessee of such tow vehicles for at least the term of the awarded contract.
k. All the Courtesy Patrol Vehicles must be completely operational, in sound mechanical condition, and in full compliance with applicable legal requirements at all times, for the performance of the program services.
l. The vehicle's exterior shall be reasonably clean at the beginning of each shift, free of road grime, grease, and articles/equipment not needed for the program. No body damage and/or broken glass shall be permitted on the vehicle at the start of a shift.
m. The inside of the vehicle shall be kept clean. The seat and floor shall be free of dirt, grease and any other substance that may transfer to someone's clothing by contact. The seat shall not be torn. Exposed springs, seat stuffing or damaged upholstery shall not be permitted. Torn dashboards, missing screws, hanging hoses or wire, or any other unsightly items inside the cab shall not be permitted.

n. The Concessionaire shall maintain a backup tow vehicle at all times, and shall use the backup to replace any disabled tow truck, or to replace any tow truck rejected for non-compliance with operational requirements within ½ hour of verbal notification by CDOT. Failure to provide a replacement vehicle within this time requirement will result in an assessment of liquidated damages, as described herein.

o. The vehicle must be bright red.

p. The vehicle shall display one magnetized 15 inch by 26 inch Courtesy Patrol logo sign on each door at all times during performance of program services. These signs will be supplied by CDOT. The size of the sign specified is a minimum. If larger signs are required to cover any private information on the doors, the initial set will be provided by CDOT. If these signs are lost, stolen or damaged, the Concessionaire will replace these signs at the Concessionaire's own expense. CDOT will not be billed for sign replacement. Concessionaire name, phone number, and/or logo shall not be permitted anywhere on the vehicle, unless completely covered with the Courtesy Patrol signs during performance of program services.

The Courtesy Patrol signs must be removed from the vehicle at all times when the vehicle is used for purposes other than the Courtesy Patrol program.

r. The Concessionaire will only be required to perform services up to the capacities of their equipment. If situations are encountered outside of their capacities, the operators shall:

i. If on shoulder, offer use of cellular phone

ii. If in roadway, alert motorists by activating yellow warning lights and contacting the responsible law enforcement agency

iii. When a police officer is at the scene, return to the patrol, unless otherwise ordered.

iv. The Concessionaire shall provide the cellular phone numbers to CDOT upon request.

5.0 Method/Basis Of Payment for US36 General Purpose Lane Tow Trucks (Up to a maximum of two)

All payment to the Concessionaire for the performance of all Courtesy Patrol program services shall be calculated based solely on a specific hourly pay rate, multiplied by the number of actual hours that the Concessionaire's Courtesy Patrol vehicles are patrolling and/or performing assistance services for disabled motorists on the US36 General Purpose Lanes.

The hours of patrol/service operation shall be determined by the actual time that the Concessionaire patrols/provides services, within the maximum number of hours authorized per shift, by only approved patrol vehicles, within the US36 General Purpose Lanes, and with no more than the designated number of vehicles.

CDOT Will Pay the Concessionaire only at the bid price that has been established by the bid process that is periodically conducted by CDOT for the Mile High Courtesy Patrol. (Most recent bids in 2012 are $81/hour.)

PAY ITEM	PAY UNIT
Courtesy Patrol Tow Truck	$/hour

Bid price shall be payment in full for satisfactory performance of Courtesy Patrol services as described in the specifications.

All actions/services/equipment that the Concessionaire must provide to satisfactorily administer, supervise, plan, prepare, repair, supply, operate, repair, and perform the Courtesy Patrol program, as described in this bid, shall be deemed included in the hourly rate of payment submitted by the bidder, and shall not be paid for separately. The bid price includes the cost of all such items in the hourly pay unit figure.

CDOT Will NOT Pay the Concessionaire for any separate charges, or for:

a. Patrolling and/or service performed before or after the designated hours of operation (5:30 - 9:00 A.M., 3:30 - 6:30 P.M. or weekends), except that if an incident occurs requiring an operational tow vehicle to stay on duty past the designated hours of operation then that activity shall be paid for if approved by the Contract Administrator;
b. More than two patrol vehicles for the US 36 General Purpose Lanes, even if the Concessionaire patrols with more than 2 or one respective vehicle(s);
c. Contractor's supervisory vehicles, if any;
d. Vehicles that fail to meet all equipment requirements;
e. Any non-operational vehicles for the time they are non-operational;
f. Vehicles removed from service due to a dysfunctional operator for the time they are removed from service; or
g. Overtime, shift differential or any other rate adjustments when determining hours worked.

Figures 6-1, 6-2, 6-3, 6-4, 6-5, 6-6, 6-7, 6-8, 6-9, 6.10, 6.11

[See Attached]

Figures 6-12 – 6.14

[See Attached]

Appendix 6-1.1: General Purpose Lanes Performance and Measurement Criteria for US 36

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
GP-1) ROADWAY									
	GP1.1	Obstructions and debris	Roadway and clear zone free from obstructions and debris	< 1 hr to respond	N/A	N/A	Visual inspection of the corridor	Number of obstructions and debris	Nil
	GP1.2	Pavement	All roadways have a smooth and quiet surface course (including bridge decks, covers, gratings, frames, and boxes) free from defects.	24 hrs	28 days	6 months	**a) Ruts – Main lanes, shoulders & ramps** Depth as measured using an automated device in compliance with CDOT Standards.	No more than 3% of wheel path length with ruts greater than 1.5" in depth in each audited section	Nil
							b) Failures Instances of failures exceeding the failure criteria set forth in the CDOT Distress Manual for HMA and PCC Pavement including potholes, base failures, punchouts and jointed concrete pavement failures.	Occurrence of any failure	Nil
							c) Edge drop-offs Physical measurement of edge drop-off level compared to adjacent surface	Instances of edge drop-off greater than 2"	Nil
	GP1.3	Crossovers and other paved areas	Crossovers and other paved areas are free of Defects	24 hrs	28 days	6 months	**a) Potholes**	Potholes of any severity level	Nil
							b) Base failures	Base failures of any severity level	Nil
	GP1.4	Concrete joint sealing	Joints in concrete paving are sealed and watertight	24 hrs	28 days	12 months	Visual inspection of joints	Joints with an opening of greater than 1 inch should be sealed to mitigate safety issues. All other joints should be sealed as part of the annual routine maintenance schedule.	Nil
	GP1.5	Crack sealing	Crack sealing	24 hrs	28 days	3 years	Visual inspection of seals	Requirement to add crack sealing material to all visual cracks every 3 years or as needed. Cracks that are open greater than 1 inch should be sealed as soon as possible to mitigate safety issues.	Nil
	GP1.6	Longitudinal joints	Longitudinal joint separation	24 hrs	28 days	6 months	Measurement of joint width and level difference of two sides of joints	Joint width more than 1" or faulting more than ¼"	Nil
	GP1.7	Transition	Transition joints to/from concre	24 hrs	28 days	6 months	Visual inspection of joints	Joint width more than 1" or faulting more than ¼"	Nil
	GP1.8	Shoulders	Unpaved shoulders	24 hrs	28 days	6 months	Visual inspection of unpaved shoulders and drainage	Concession will maintain all unpaved shoulders including providing appropriate drainage along these shoulders	Nil
	GP1.9	Curbs	Curbs are free of defects	24 hrs	28 days	6 months	Visual inspection	Any curb that creates a safety or drainage issue shall be repaired/replaced within 28 days. Any cosmetic defect should be addressed when resources are available.	Nil
GP-2) DRAINAGE									
	GP2.1	Pipes and channels	Each element of the drainage system is maintained in its proper function by cleaning, clearing and/or emptying as appropriate from the point at which water drains from the travel way to the outfall or drainage way.	< 1 hr to respond	28 days	6 months	Visual inspection supplemented by CCTV where required to inspect buried pipe work	Length with less than 90% of cross section clear (feet)	Nil
	GP2.2	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 (Number)	100%
	GP2.3	Permanent waters	Appropriately maintained level of all permanent water quality features	24 hrs	28 days	6 months	Chemical inspection of permanent water features	Maintenances all permanent water features at current quality including pumping and cleaning as necessary or required by law	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	GP2.4	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.	< 1 hr to respond	28 days	6 months	Visual inspection of water on surface	Instances of hazardous water build-up	Nil
	GP2.5	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
	GP2.6	Protected Species	Named species and habitats are protected.	24 hrs	28 days	6 months	Visual inspection	Compliance with the requirement	100%
GP-3) STRUCTURES									
	GP3.1	Structures having an opening measured along the center of the roadway of more than 20 feet between under copings of abutments or springlines of arches or extreme ends of openings or multiple boxes.	Substructures and superstructures are free of:	< 1 hr to respond	28 days	28 days	Visual inspection and records		
			Graffiti					Number with graffiti	Nil
			Undesirable vegetation						
			Debris and bird droppings					Number with vegetation, debris or silt	Nil
			Blocked drains, weep pipes, manholes and chambers					Number with blockages	Nil
			Blocked drainage holes in structural components						
			Crack sealing, deck sealing,					Number with defects in sealant	Nil
			Defects in pedestrian protection measure					Number of pedestrian protection defects	Nil
			Bridge paint failures					Number that require paint repair/replacement	Nil
			Defects in joint sealant, with the exception of expansion joints					Number with defects in sealant	Nil
	GP3.2	Structure components	i) Expansion joints are free of:	< 1 hr to respond	28 days	28 days	Visual inspection and records. Elements are maintained to applicable CDOT standards.		
			• dirt debris and vegetation					Number with vegetation, debris or silt	Nil
			• loose nuts and bolts					Number with loose nuts and bolts	Nil
			ii) The deck drainage system is free of all debris and vegetation, operates as intended.					Number with vegetation, debris or silt	Nil
			iii) Barriers are free of:						
			• loose nuts or bolts					Number with loose nuts and bolts	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
			• blockages of hollow section drain holes					Number with blockages	Nil
			• graffiti					Number with graffitti	Nil
			• vegetation and debris					Number with vegetation, debris or silt	Nil
			•Impace damage					Number that have impace damage	Nil
			iv) Bearings and bearing shelves are clean.					Bearing, bearing shelves, sliding and roller surfaces, and special finishes are clean and perform to the appropriate standard.	100%
			v) Sliding and roller surfaces are clean to ensure satisfactory performance. Special finishes are clean and perform to the appropriate standards.						
	GP3.3	Culverts/Concrete Box Culvert	All culverts/concrete box culverts are free of:	< 1 hr to respond	28 days	28 days	Visual inspection and records		
			• vegetation, debris and silt					Number with vegetation, debris and silt	Nil
			• scour damage					Number with scour damage	Nil
	GP3.4	Sign Structures	Sign gantries are structurally sound and free of:	24 hrs	28 days	6 months	Inspection and assessment in accordance with the requirements of CDOT Signs and Signals Coding Guide	All condition states to be one or two for all structural members	100%
			Loose nuts and bolts					Number with loose assemblies	Nil
			Defects in surface protection system					Number with defects in surface protection	Nil
			Graffitti					Number with graffiti	Nil
	GP3.5	Retaining walls	Minor repairs and grafitti removal	24 hrs	28 days	6 months	Inspection and assessment in accordance with CDOT guidelines	Panel damage	Nil
								Number with Graffiti	Nil
	GP3.6	Load ratings	All structures maintain the design load capacity.	< 1 hr to respond	28 days	6 months	Load rating calculations in accordance with the AASHTO Manual for Bridge Evaluation the current version of the CDOT Pontis Bridge Inspection Coding, and CDOT Bridge Rating Manual AASHTO Manual for Bridge Evaluation Load restriction requirements as per AASHTO Manual for Bridge Evaluation, the current version of the CDOT Pontis Bridge Inspection Coding, and CDOT Bridge Rating Manual.	Number of load restrictions on new structures for Colorado legal loads (including legally permitted vehicles)	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
GP-4) ROAD PAVEMENT									
	GP4.1	Pavement markings	Pavement markings are:	24 hrs	28 days	6 months	a) Markings - General	Length meeting the minimum retroreflectivity 100 med/sqm/lx for white	100%
			• clean and visible during the day and at night				Portable retroreflectometer, which uses 30 meter geometry meeting the requirements described in ASTM E 1710	Length meeting the minimum retroreflectivity 100 med/sqm/lx for white	100%
			• whole and complete and of the correct color, type, width and length				Physical measurement	No more than 32.5% of pavement markings are worn or not visible in any auditable section	Nil
			• placed to meet the MUTCD and the Current Colorado Supplement to MUTCD, as well as Current CDOT M&S Standard Plans.				Visual inspection	Pavement markings on the entire roadway will be replaced no less than every five years.	Nil
	GP4.2	Delineators & Markers	Object markers, mail box markers and delineators are:	24 hrs	28 days	6 months	Visual inspection	No more than 12.5% of delineators or markings will be missing or not easily visible in any auditable section.	Nil
			• clean and visible						
			• of the correct color and type						
			• legible and reflective						
			• Straight and Vertical						
GP-5) GUARDRAIL, SAFETY BARRIER, IMPACT ATTENUATORS									
	GP5.1	Guard rails and safety barriers	All guardrails, safety barriers, concrete barriers, etc.) 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.	< 1 hr to respond	Repaired or marked in 48 hours	6 months	Visual inspection as least equivalent to CDOT's current program	Length of road restraint systems correctly installed, no more than 12.5% out of spec.	100%
								Length free from defects	100%
								Length at correct height	100%
								Length at correct distance from roadway and obstacle	100%
	GP5.2	Impact attenuators	All impact attenuators are appropriately placed and correctly installed	< 1 hr to respond	7 days	6 months	Visual inspection as least equivalent to CDOT's current program	All impact attenuators, including guardrail end treatments, shall be correctly placed or installed per CDOT standards.	100%

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
GP-6) TRAFFIC SIGNS									
	GP6.1	General - All Signs	i) Signs are clean, correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects	24 hrs	28 days	6 months	a) Retroreflectivity Coefficient of retro - reflectivity	Number of signs with reflectivity below the requirements of Schedule 5 or the most recent version of CDOT M&S Standard Plans .	Nil
			ii) Identification markers are provided, correctly located, visible, clean and legible				b) Face damage Visual inspection	Number of signs with face damage greater than 5% of area	Nil
			iii) Sign mounting posts are vertical, structurally sound and rust free				c) Placement Visual inspection	Signs are placed in accordance with Schedule 5 or the most recent version of CDOT M&S Standard Plan, MUTCD and most recent version of Colorado Supplement to MUTCD including not twisted or leaning	100%
			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				d) Obsolete signs Visual inspection	Number of obsolete signs	Nil
			v) Obsolete and redundant signs are removed or replaced as appropriate				e) Sign information Visual inspection	Sign information is of the correct size, location, type and wording to meet its intended purpose	100%
			vi) Visibility distances meet the stated requirements				f) Dynamic Message Signs Visual inspection	Dynamic message signs are fully functioning	100%
			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 MUTCD and the Current Colorado Supplement to MUTCD						
			x) Dynamic message signs are in an operational condition						
	GP6.2	General - Safety critical signs	Requirements as 6.1, Plus:	< 1 hr to respond	1 week	6 months	Visual inspection as least equivalent to CDOT's current program	Number of damaged Safety critical signs	Nil
			"Stop," "Yield," "Do Not Enter," "One Way" and "Wrong Way" signs are clean legible and undamaged.						

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
GP-7) TRAFFIC SIGNALS									
	GP7.1	General	i) Traffic Signals and their associated equipment are: • clean and visible • correctly aligned and operational • free from damage caused by accident or vandalism • correctly aligned and operational 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	N/A	N/A	N/A	N/A	N/A	N/A
	GP7.2	Soundness	Traffic Signals are structurally and electrically sound	N/A	N/A	N/A	N/A	N/A	N/A
	GP7.3	Identification marking	Signals have identification markers and the telephone number for reporting faults are correctly located, clearly visible, clean and legible	N/A	N/A	N/A	N/A	N/A	N/A
	GP7.4	Pedestrian Elements and Vehicle Detectors	All pedestrian elements and vehicle detectors are correctly positioned and fully functional at all times	N/A	N/A	N/A	N/A	N/A	N/A
GP-8) LIGHTING									
	GP8.1	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	Number of sections with less than 90% of lights functioning correctly at all times Instances of more than two consecutive lights out of action	Nil Nil
	GP8.2	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
	GP8.3	Electrical Supply	Electricity supply, feeder pillars, cabinets, switches and fittings are electrically, mechanically and structurally sound and functioning	24 hrs	7 days	1 month	Testing to meet NEC regulations, visual inspection	Inspection records showing safe installation and maintenance	100%
	GP8.4	Access Panels	All access panels in place at all times.	24 hrs	7 days	1 month	Visual Inspection	Instances of missing access panels	Nil
	GP8.5	High Mast Structures	High mast are structurally sound and free of:loose nuts and bolts. No defects in surface protection systems No graffiti	24 hrs	28 days	6 months	Inspection and assessment in accordance with the requirements of CDOT Signs and Signals Coding Guide	All condition states to be one or two for all structural members Number with loose assemblies Number with defects in surface protection Number with graffiti	100% Nil Nil Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	GP8.6	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 is correctly functioning and maintained without rusting or corrosion v) 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 are maintained.	24 hrs	48 days	1 month	Yearly inspection and night time inspections or automated logs	Instances of two or more lamps not working per high mast pole	Nil
GP-9) FENCES, WALLS (minor), SOUND ABATEMENT									
	GP9.1	Design and Location	Fences and walls act as designed and serve the purpose for which they were intended	< 1 hr to respond	28 days	6 months	Visual inspection	Inspection records showing compliance	100%
	GP9.2	Construction (includes existing)	Integrity and structural condition of the fence is maintained	< 1 hr to respond	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance	100%
	GP9.3	Livestock	Integrity and structural condition of all fences that hold livestock	Nil	Nil	Nil	Structural assessment if visual inspection warrants	Maintenance and immediate repair or replacement of any fences that hold livestock	100%
GP-10) ROADSIDE									
	GP10.1	Vegetated Areas - Except landscaped areas - General	Vegetation is maintained so that: I) Height of grass and weeds is kept within the limits described for urban and 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, main lanes, sidewalks, islands, riprap, traffic barrier or curbs. iv) A herbicide program is undertaken in accordance with the D 006 99 v) Development and implementatin of noxious weed management program to control noxious weeds and to eliminate grass in pavement or concrete vi) A mowing cycle completed after the first frost of the first 15'from the edge of pavement.	24 hrs	7 days	28 days	a) **Urban 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 in. and 18 in Individual measurement areas to have 95% of height of grass and weeds between 6 in. and 30 in Occurrences of vegetation encroachment in each auditable section Adherence to vegetation management manuals Instances of impairment of sight lines or sight distance to signs, control of weeds in pavement and barrier	100% 100% Nil 100% Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	GP10.2	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 FMP. iii) The height of grass and weeds is kept between 6" and 8". Mowing begins before vegetation reaches a hazardous condition, such as sight distance, blocking reflectors, hiding animals or causing drifting snow . iv) Damaged or dead vegetation is replaced.	24 hrs	7 days	28 days	Visual inspection	Inspection records showing compliance	100%
	GP10.3	Fire Hazards	Fire hazards are controlled	24 hrs	7 days	28 days	Visual inspection	Instances of dry brush or vegetation forming fire hazard	Nil
	GP10.4	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 CDOT 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 or shading on the road. iii) Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed. iv) All undesirable and unplanned 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%
	GP10.5	Water Quality Ponds	Maintenance of all vegetation within the pond area	24 hrs	7 days	28 days	Visual inspection of ponds	Maintained as required per the design	100%
	GP10.6	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
GP-11) EARTHWORKS & EMBANKMENTS									
	GP11.1	Slope Failure	All structural or natural failures of the embankment and cut slopes of the Facility are repaired	< 1 hr to respond	28 days	6 months	Visual inspection by geotechnical specialist and further tests as recommended by the specialist	Recorded instances of slope failure	Nil
	GP11.2	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		Inspection records showing compliance	100%
GP-12) GRAFFITI									
	GP12.1	Graffiti	Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces	24 hrs	10 days	6 months	All graffiti is considered a Category 1 defect	Inspection records showing compliance	100%

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
GP-13) INCIDENT RESPONSE									
	GP13.1	General	Respond to incidents in accordance with the US 36 Traffic Incident Management Plan.	<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%
	GP13.2	Hazardous Materials	For any hazardous materials spills, comply with the requirements of Section 4.4.4 of Schedule 6.	<1 hr	N/A	N/A	FMP details the process and procedures in place and followed.	Inspection records showing compliance	100%
	GP13.3	Structural assessment	Evaluate structural damage to structures and liaise with emergency services to ensure safe working in clearing the incident. CDOT staff bridge must be notified immediately to complete inspection	<1 hr	N/A	N/A	Inspections and surveys as required by incident	Inspection records showing compliance	100%
	GP13.4	Temporary and permanent remedy	Propose and implement temporary measures or permanent 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	Auditable inspection records showing compliance	100%
GP-14) SWEEPING AND CLEANING									
	GP14.1	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 enforcement areas iii) Remove all sweepings without stockpiling in the right of way and dispose of at approved site.	1 hr	24 hrs	28 days	Buildup of dirt, ice rock, debris (from accidents and otherwise), spilled materials, etc. on roadways and bridges not to accumulate greater than 24" wide or 1/2" deep.	Inspection records showing compliance	100%
	GP14.2	Litter	i) Keep the right of way in a neat condition, remove litter regularly ii) Pick up large litter items before mowing operations. Dispose of all litter and debris collected at an approved solid waste site.	24 hrs	28 days	28 days	No more than 20 pieces of litter per roadside mile shall be visible when traveling at highway speed. Litter is picked up off the roadway once a week and every 15 days within the right of way.	Inspection records showing compliance	100%

Appendix 6-1.2: Managed Lanes Performance and Measurement Criteria

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
ML-1) ROADWAY									
	ML1.1	Obstructions and debris	Roadway and clear zone free from obstructions and debris	< 1 hr to respond	N/A	N/A	Visual Inspection of the corridor	Number of obstructions and debris	Nil
	ML1.2	Pavement	All roadways have a smooth and quiet surface course (including bridge decks, covers, gratings, frames, and boxes) free from defects.	24 hrs	28 days	6 months	a) Pavement Condition Score - Measurements and inspections necessary to derive pavement condition score.	A pavement condition score for 80% of Auditable Sections exceeds 95% A pavement condition score for each auditable section exceeds 80%	100% 100%
							b) Ruts – Main lanes, shoulders & ramps Depth as measured using an automated device in compliance with CDOT Standards. 10ft straight edge used to measure rut depth for localized areas.	Percentage of wheel path length with ruts greater than 1.5 inches in depth in each Auditable Section will not exceed 3%	Nil
							c) Ride Quality Measurement of International Roughness Index (IRI) according to CDOT Colorado Procedure CP 74, Operating Profilers and Evaluating Pavement Profiles.	For the first five years after the I-25 Managed Lanes Services Commencement Date, 80% of all Auditable Sections Measured, IRI throughout 98% of each is less than or equal to 150" per mile**. Overall IRI Standard which shall apply to US36 from the Phase 1 Services Commencement Date and to I-25 after the five year period: For 80% of auditable sections measured, IRI throughout 98% of each auditable section is less than or equal to 95" per mile on mainlines and ramps. IRI measured throughout 98% of auditable sections is less than or equal to 120" per mile on mainlines and ramps. IRI measured throughout 98% of each lane containing a bridge deck in any Auditable Section, 0.1 mile average - 125" per mile**. **To allow for measurement bias, an adjustment of -10 (minus 10) is made to IRI measurements for concrete pavements before assessing threshold compliance	100% 100% 100%
							Renewal work and new construction subject to construction quality standards.	for every 0.1 mile - 85" per mile**. **To allow for measurement bias, an adjustment of -10 (minus 10) is made to IRI measurements for concrete pavements before assessing threshold compliance	100%
							d) Failures Instances of failures exceeding the failure criteria set forth in the CDOT Distress Manual for HMA and PCC Pavement including potholes, base failures, punchouts and jointed concrete pavement failures.	Occurrence of any failure	Nil
							e) Edge drop-offs Physical measurement of edge drop-off level compared to adjacent surface	Instances of edge drop-off greater than 2"	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
							f) Skid resistance ASTM E 274 Standard Test Method for Skid Resistance Testing of Paved Surfaces at 50 MPH using a full scale smooth tire meeting the requirements of ASTM E 524	Number of Auditable Sections investigated as to potential risk of skidding accident and appropriate remedial action taken where average Skid Number for 0.5-mile section of mainlines, shoulders and ramps are in excess of 30.	100%
								When the Skid Number is below 25 and/or when required by the Wet Weather Accident Reduction Program, areas categorized as high risk, the Concessionaire shall perform a site investigation and perform required corrective action.	100%
			Road users warned of potential skidding hazards	24 hrs	7 days	N/A		Instances where road users warned of potential skidding hazard where remedial action is identified	100%
	ML1.3	Crossovers and other paved areas	Crossovers and other paved areas are free of Defects	24 hrs	28 days	6 months	a) Potholes	Potholes of any severity level	Nil
							b) Base failures	Base failures of any severity level	Nil
	ML1.4	Concrete joint sealing	Joints in concrete paving are sealed and watertight	24 hrs	28 days	12 months	Visual inspection of joints	Joints with an opening of greater than 1 inch should be sealed to mitigate safety issues. All other joints should be sealed as part of the annual routine maintenance schedule.	Nil
	ML1.5	Crack sealing	Crack sealing	24 hrs	28 days	3 years	Visual inspection of seals	Requirement to add crack sealing material to all visual cracks every 3 years or as needed. Cracks that are open greater than 1 inch should be sealed as soon as possible to mitigate safety issues.	Nil
	ML1.6	Longitudinal joints	Longitudinal joint separation	24 hrs	28 days	6 months	Measurement of joint width and level difference of two sides of joints	Joint width more than 1" or faulting more than ¼"	Nil
	ML1.7	Transition	Transition joints to/from concrete to asphalt	24 hrs	28 days	6 months	Visual inspection of joints	Joint width more than 1" or faulting more than ¼"	Nil
	ML1.8	Shoulders	Unpaved shoulders	24 hrs	28 days	6 months	Visual inspection of unpaved shoulders and drainage	Concession will maintain all unpaved shoulders including providing appropriate drainage along these shoulders	Nil
	ML1.9	Curbs	Curbs are free of defects	24 hrs	28 days	6 months	Visual inspection	Any curb that creates a safety or drainage issue shall be repaired/replaced within 28 days. Any cosmetic defect should be addressed when resources are available.	Nil
ML-2) DRAINAGE									
	ML2.1	Pipes and channels	Each element of the drainage system is maintained in its proper function by cleaning, clearing and/or emptying as appropriate from the point at which water drains from the travel way to the outfall or drainage way.	< 1 hr to respond	28 days	6 months	Visual inspection supplemented by CCTV where required to inspect buried pipe work. Pipes and channels subject to this requirement are those that are in the Managed Lanes only and don't cross the General Purpose lanes.	Length with less than 90% of cross section clear (feet)	Nil
	ML2.2	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. Responsible only for treatments that are in the Managed Lanes. If the pipe or channel attached to the treatment crosses the General Purpose lanes, the pipe or channel will be maintained by those responsible for the General Purpose lanes.	Devices functioning correctly with means of operation displayed (Number)	100%
	ML2.3	Permanent waters	Appropriately maintained level of all permanent water quality features	24 hrs	28 days	6 months	Chemical inspection of permanent water features	Maintenances all permanent water features at current quality including pumping and cleaning as necessary or required by law	Nil
	ML2.4	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.	< 1 hr to respond	28 days	6 months	Visual inspection of water on surface	Instances of hazardous water build-up	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	ML2.5	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
	ML2.6	Protected Species	Named species and habitats are protected.	24 hrs	28 days	6 months	Visual inspection	Compliance with the requirement	100%
ML-3) STRUCTURES									
As it relates to the I-25 Structures, the requirements related to certain Nonseparable and Preventative Maintenance activities that span both the Managed Lanes and General Purpose Lanes must be replaced as described in 1.4.1.1 of Schedule 6.									
	ML3.1	Structures having an opening measured along the center of the roadway of more than 20 feet between under copings of abutments or springlines of arches or extreme ends of openings or multiple boxes.	Substructures and superstructures are free of:	< 1 hr to respond	28 days	28 days	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 current version of the CDOT Pontis Bridge Inspection Coding Guide and AASHTO Manual for Bridge Evaluation, and the FHWA Bridge Inspector Reference Manual.	Records as required in the current version of the CDOT Pontis Bridge Inspection Coding Guide and AASHTO Manual for Bridge Evaluation.	
			Graffiti,Undesirable vegetation, Debris and bird droppings, Blocked drains, weep pipes, manholes and chambers, Blocked drainage holes in structural, Defects in joint sealants components, Defects in pedestrian protection measure, Scour damage, Corrosion of rebar, Paint system failures, Impact damage					Occurrence of NBI condition rating below eight for any new deck, superstructure or substructure	
			Bridge structures maintain a minimum vertical clearance of 16.5 feet over traveled lanes.					Occurrence of NBI condition rating below six for any widened or rehabilitated deck, superstructure or substructure, prior to reconstruction of a new structure.	Nil
								All Pontis condition states to be one or two for all structure components	100%
								Number with vegetation, debris or silt	Nil
								Number with defects in sealant and movement joints	Nil
								Number with scouring damage	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	ML3.2	Structure components	i) Expansion joints are free of: • dirt debris and vegetation • defects in drainage systems • loose nuts and bolts • defects in gaskets • leaking ii) The deck drainage system is free of all and operates as intended. iii) Barriers are free of: • loose nuts or bolts • blockages of hollow section drain holes • graffiti • vegetation • accident damage iv) Bearings and bearing shelves are clean. v) Sliding and roller surfaces are clean and greased to ensure satisfactory performance. Additional advice contained in bearing manufacturers' instructions, in the Current CDOT M&S Standard Plans, Standard Specification for Road and Bridge Construction is followed. Special finishes are clean and perform to the appropriate standards. vi) 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 are maintained.	< 1 hr to respond	28 days	28 days	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 current version of the CDOT Pontis Bridge Inspection Coding Guide and AASHTO Manual for Bridge Evaluation, and the FHWA Bridge Inspector Reference Manual.	Records as required in the current version of the CDOT Pontis Bridge Inspection Coding Guideand AASHTO Manual for Bridge EvaluationBridge Evaluation. Occurrences of NBI condition rating below seven for any new deck, superstructure or substructure Occurrence of NBI condition rating below six for any widened or rehabilitated deck, superstructure or substructure, prior to reconstruction of a new structure. All Pontis condition states to be one or two for all structure components	 Nil Nil 100%

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	ML3.3	Non-bridge class culverts	Non-bridge-class culverts are free of:	< 1 hr to respond	28 days	28 days	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 current version of the CDOT Pontis Bridge Inspection Coding Guide and AASHTO Manual for Bridge Evaluation, and the FHWA Bridge Inspector Reference Manual.	Records as required in the current version of the CDOT Pontis Bridge Inspection Coding Guideand AASHTO Manual for Bridge Evaluation.	
			• vegetation and debris and silt					Occurrences of NBI condition rating below seven for any culvert elements	Nil
			• defects in sealant to movement joints					All Pontis condition states to be one or two for all structure components	100%
			• scour damage					Number with vegetation, debris and silt	Nil
								Number with defects in sealant and movement joints	Nil
								Number with scour damage	Nil
	ML3.4	Sign Structures	Sign gantries are structurally sound and free of:loose nuts and bolts, defects in surface protection systems,graffiti	24 hrs	28 days	6 months	Inspection and assessment in accordance with the requirements of CDOT Signs and Signals Coding Guide	All condition states to be one or two for all structural members	100%
								Number with loose assemblies	Nil
								Number with defects in surface protection	Nil
								Number with graffiti	Nil
	ML3.5	Retaining walls	Structurally sound with no defects or graffiti	24 hrs	28 days	6 months	Inspection and assessment in accordance with CDOT guidelines	Structurally sound	Nil
								Number with Graffiti	Nil
	ML3.6	Load ratings	All structures maintain the design load capacity.	< 1 hr to respond	28 days	6 months	Load rating calculations in accordance with the AASHTO Manual for Bridge Evaluation the current version of the CDOT Pontis Bridge Inspection Coding, and CDOT Bridge Rating Manual AASHTO Manual for Bridge Evaluation Load restriction requirements as per AASHTO Manual for Bridge Evaluation, the current version of the CDOT Pontis Bridge Inspection Coding, and CDOT Bridge Rating Manual.	Number of load restrictions on new structures for Colorado legal loads (including legally permitted vehicles)	Nil
ML-4) ROAD PAVEMENT									
	ML4.1	Pavement markings	Pavement markings are:	24 hrs	28 days	6 months	a) Markings - General	Length meeting the minimum retroreflectivity 100 med/sqm/lx for white	100%
			• clean and visible during the day and at night				Portable retroreflectometer, which uses 30 meter geometry meeting the requirements described in ASTM E 1710	Length meeting the minimum retroreflectivity 100 med/sqm/lx for white	100%
			• whole and complete and of the correct color, type, width and length				Physical measurement	No more than 32.5% of pavement markings are worn or not visible in any auditable section	Nil
			• placed to meet the MUTCD and the Current Colorado Supplement to MUTCD, as well as Current CDOT M&S Standard Plans.				Visual inspection	Pavement markings on the entire roadway will be replaced no less than every five years.	Nil
	ML4.2	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	No more than 12.5% of delineators or markings will be missing or not easily visible in any auditable section.	Nil

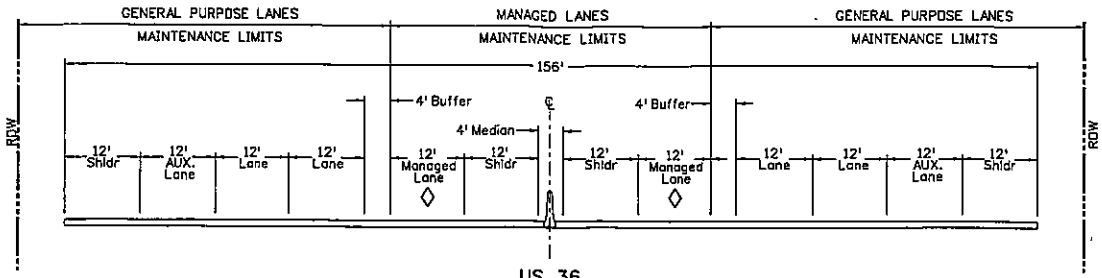
ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
ML-5) GUARDRAIL, SAFETY BARRIER, IMPACT ATTENUATORS									
	ML5.1	Guard rails and safety barriers	All guardrails, safety barriers, concrete barriers, etc.) 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.	< 1 hr to respond	Repaired or marked in 48 hours	6 months	Visual inspection as least equivalent to CDOT's current program	Length of road restraint systems correctly installed, no more than 12.5% out of spec.	100%
								Length free from defects	100%
								Length at correct height	100%
								Length at correct distance from roadway and obstacle	100%
	ML5.2	Impact attenuators	All impact attenuators are appropriately placed and correctly installed	< 1 hr to respond	7 days	6 months	Visual inspection as least equivalent to CDOT's current program	All impact attenuators, including guardrail end treatments, shall be correctly placed or installed per CDOT standards.	100%
ML-6) TRAFFIC SIGNS									
	ML6.1	General - All Signs	i) Signs are clean, correctly located, clearly visible, legible, reflective, at the correct height and free from structural and electrical defects	24 hrs	28 days	6 months	a) Retroreflectivity Coefficient of retro - reflectivity	Number of signs with reflectivity below the requirements of Schedule 5 or the most recent version of CDOT M&S Standard Plans .	Nil
			ii) Identification markers are provided, correctly located, visible, clean and legible				b) Face damage Visual inspection	Number of signs with face damage greater than 5% of area	Nil
			iii) Sign mounting posts are vertical, structurally sound and rust free				c) Placement Visual inspection	Signs are placed in accordance with Schedule 5 or the most recent version of CDOT M&S Standard Plan, MUTCD and most recent version of Colorado Supplement to MUTCD including not twisted or leaning	100%
			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				d) Obsolete signs Visual inspection	Number of obsolete signs	Nil
			v) Obsolete and redundant signs are removed or replaced as appropriate				e) Sign Information Visual inspection	Sign information is of the correct size, location, type and wording to meet its intended purpose	100%
			vi) Visibility distances meet the stated requirements				f) Dynamic Message Signs Visual inspection	Dynamic message signs are fully functioning	100%
			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 MUTCD and the Current Colorado Supplement to MUTCD						
			x) Dynamic message signs are in an operational condition						

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	ML6.2	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.	< 1 hr to respond	1 week	6 months	Visual inspection as least equivalent to CDOT's current program	Number of damaged Safety critical signs	Nil
ML-7) TRAFFIC SIGNALS									
	ML7.1	General	i) Traffic Signals and their associated equipment are: • clean and visible • correctly aligned and operational • free from damage caused by accident or vandalism • correctly aligned and operational 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	2hrs	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%
	ML7.2	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%
	ML7.3	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 as least equivalent to CDOT's current Standard Plans M & S Standards program	Inspection records showing identification markers and other information are easily readable	100%
	ML7.4	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 as least equivalent to CDOT's current Standard Plans M & S Standards program	Inspection records showing compliance	100%
ML-8) LIGHTING									
	ML8.1	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	Number of sections with less than 90% of lights functioning correctly at all times Instances of more than two consecutive lights out of action	Nil Nil
	ML8.2	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
	ML8.3	Electrical Supply	Electricity supply, feeder pillars, cabinets, switches and fittings are electrically, mechanically and structurally sound and functioning	24 hrs	7 days	1 month	Testing to meet NEC regulations, visual inspection	Inspection records showing safe installation and maintenance	100%
	ML8.4	Access Panels	All access panels in place at all times.	24 hrs	7 days	1 month	Visual inspection	Instances of missing access panels	Nil
	ML8.5	High Mast Structures	High mast are structurally sound and free of loose nuts and bolts. No defects in surface protection systems No graffiti	24 hrs	28 days	6 months	Inspection and assessment in accordance with the requirements of CDOT Signs and Signals Coding Guide	All condition states to be one or two for all structural members Number with loose assemblies Number with defects in surface protection Number with graffiti	100% Nil Nil Nil

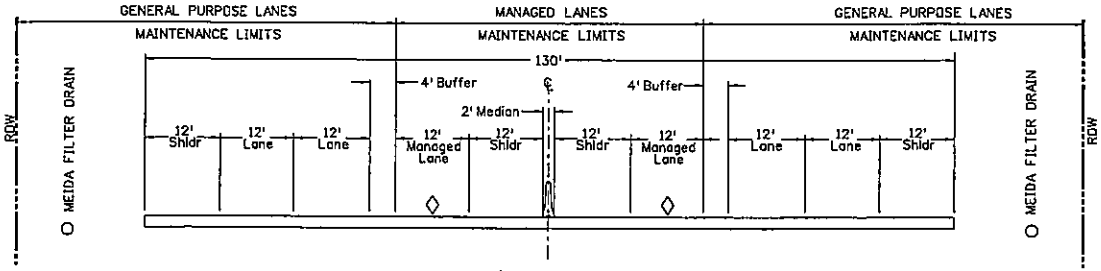
ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	ML8.6	High Mast Lighting	i) All high mast luminaries functioning on each pole ii) All obstruction lights are present and working (if required) iii) Compartment door is secure with all bolts in place iv) All winch and safety equipment is correctly functioning and maintained without rusting or corrosion (for structural requirements refer to Element Category 3)	24 hrs	48 days	1 month	Yearly inspection and night time inspections or automated logs	Instances of two or more lamps not working per high mast pole	Nil
ML-9) FENCES, WALLS (minor), SOUND ABATEMENT									
	ML9.1	Design and Location	Fences and walls act as designed and serve the purpose for which they were intended	< 1 hr to respond	28 days	6 months	Visual Inspection	Inspection records showing compliance	100%
	ML9.2	Construction (includes existing)	Integrity and structural condition of the fence is maintained	< 1 hr to respond	28 days	6 months	Structural assessment if visual inspection warrants	Inspection records showing compliance	100%
ML-10) ROADSIDE									
	ML10.1	Non-Landscaped areas	a) A herbicide program is undertaken in accordance with the D 006 99 b) Development and implementatin of noxious weed management program to control noxious weeds and to eliminate grass in pavement or concrete	24 hrs	7 days	28 days	Visual inspection	Adherence to vegetation management manuals	100%
	ML10.2	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 FMP. iii) The height of grass and weeds is kept between 6" and 8". Mowing begins before vegetation reaches a hazardous condition, such as sight distance, blocking reflectors, hiding animals or causing drifting snow. iv) Damaged or dead vegetation is replaced.	24 hrs	7 days	28 days	Visual inspection	Inspection records showing compliance	100%
	ML10.3	Fire Hazards	Fire hazards are controlled	24 hrs	7 days	28 days	Visual inspection	Instances of dry brush or vegetation forming fire hazard	Nil

ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
	ML10.4	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 CDOT 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 or shading on the road. iii) Dead trees, brush, ornamentals and branches are removed. Potentially dangerous trees or limbs are removed. iv) All undesirable and unplanned 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%
	ML10.5	Water Quality Ponds	Maintenance of all vegetation within the pond area	24 hrs	7 days	28 days	Visual inspection of ponds	Maintained as required per the design	100%
	ML10.6	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
ML-11) EARTHWORKS & EMBANKMENTS									
	ML11.1	Slope Failure	All structural or natural failures of the embankment and cut slopes of the Facility are repaired	< 1 hr to respond	28 days	6 months	Visual inspection by geotechnical specialist and further tests as recommended by the specialist	Recorded instances of slope failure	Nil
	ML11.2	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		Inspection records showing compliance	100%
ML-12) GRAFFITI									
	ML12.1	Graffiti	Graffiti is removed in a manner and using materials that restore the surface to a like appearance similar to adjoining surfaces	24 hrs	10 days	6 months	All graffiti is considered a Category 1 defect	Inspection records showing compliance	100%
ML-13) INCIDENT RESPONSE									
	ML13.1	General	Respond to Incidents in accordance with the US 36 Traffic Incident Management Plan.	< 1 hr to respond	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%
	ML13.2	Hazardous Materials	For any hazardous materials spills, comply with the requirements of Section 4.4.4 of Schedule 6.	< 1 hr to respond	N/A	N/A	FMP details the process and procedures in place and followed.	Inspection records showing compliance	100%
	ML13.3	Structural assessment	Evaluate structural damage to structures and liaise with emergency services to ensure safe working in clearing the incident. CDOT staff bridge must be notified immediately to complete inspection	< 1 hr to respond	N/A	N/A	Inspections and surveys as required by incident	Inspection records showing compliance	100%
	ML13.4	Temporary and permanent remedy	Propose and implement temporary measures or permanent 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	Auditable inspection records showing compliance	100%

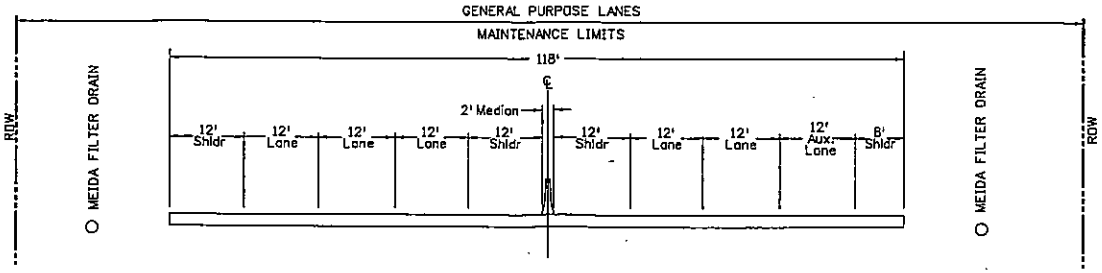
ELEMENT CATEGORY	REF	ELEMENT	PERFORMANCE REQUIREMENT	RESPONSE TO DEFECTS			INSPECTION AND MEASUREMENT METHOD*	MEASUREMENT RECORD*	TARGET
				Cat 1		Cat 2			
				Hazard Mitigation	Permanent Remedy	Permanent Repair			
ML-14) SWEEPING AND CLEANING									
	ML14.1	Sweeping	i) Keep all channels, hard shoulders, gore areas, ramps, intersections, islands and frontage roads swept clean, ii) Clear and remove debris from traffic lanes, hard shoulders, verges and enforcement areas iii) Remove all sweepings without stockpiling in the right of way and dispose of at approved site.	1 hr	24 hrs	28 days	Buildup of dirt, ice rock, debris (from accidents and otherwise), spilled materials, etc. on roadways and bridges not to accumulate greater than 24" wide or 1/2" deep.	Inspection records showing compliance	100%
	ML14.2	Litter	i) Keep the right of way in a neat condition, remove litter regularly ii) Pick up large litter items before mowing operations. Dispose of all litter and debris collected at an approved solid waste site.	24 hrs	28 days	28 days	No more than 20 pieces of litter per roadside mile shall be visible when traveling at highway speed. Litter is picked up off the roadway once a week and every 15 days within the right of way.	Inspection records showing compliance	100%
ML-15) BUILDINGS AND STORAGE FACILITIES									
	ML15.1	Node Building 2	i) Keep roof and walls structurally sound. No cracking, leaks, door operates normally ii) Ensure HVAC system running properly	24 hours	28 days	6 months	Visual Inspection	Inspection records showing compliance	100%
	ML15.2	Sand Storage Dome	i) Keep building structurally sound. No cracking or leaking.	24 hours	28 days	6 months	Visual Inspection	Inspection records showing compliance	100%
	ML15.3	Liquid Storage Facility	i) Tanks are intact with no leaking from the tank or connections for pipes and valves. ii) Ensure pumping units function properly.	24 hours	28 days	6 months	Visual Inspection	Inspection records showing compliance	100%



US 36
Interlocken Loop to Wadsworth Parkway



US-36
Typical Section
South Boulder Creek to Interlocken Loop



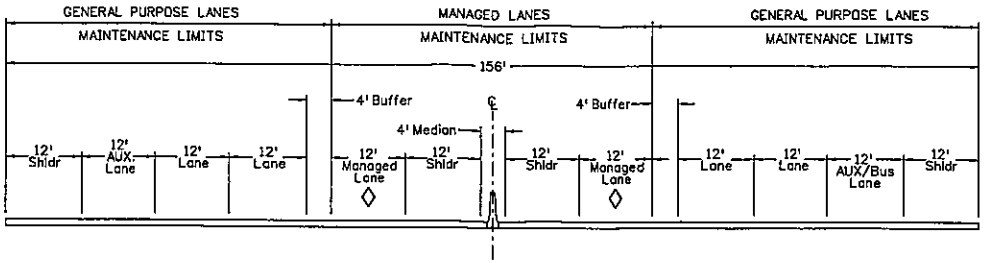
US-36
Typical Section
Foothills Pwky. to South Boulder Creek

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS

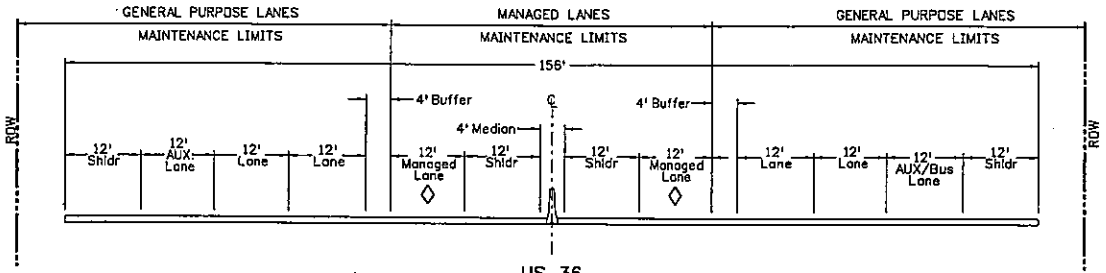
Print Date: 12/3/2012
Horiz. Scale: 1:500

FIGURE 6.1

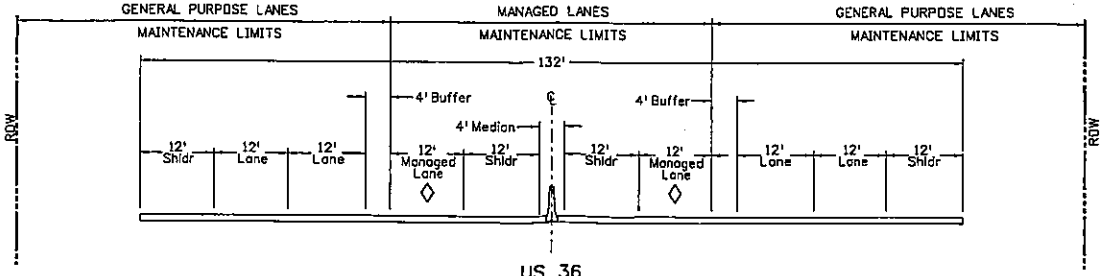
US 36
CONCESSION PROJECT



US 36
Federal Boulevard to Pecos Street



US 36
Sheridan Boulevard to Federal Boulevard



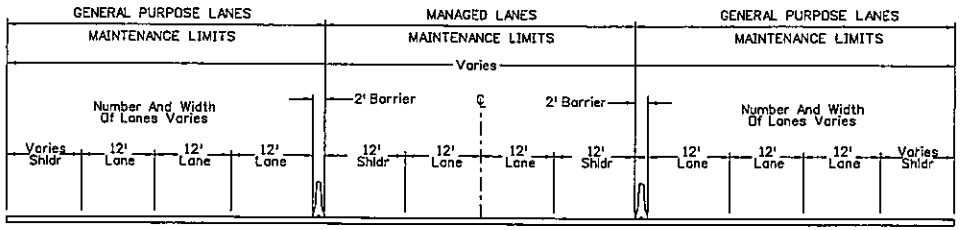
US 36
Wadsworth Parkway to Sheridan Boulevard

FIGURE 6.2

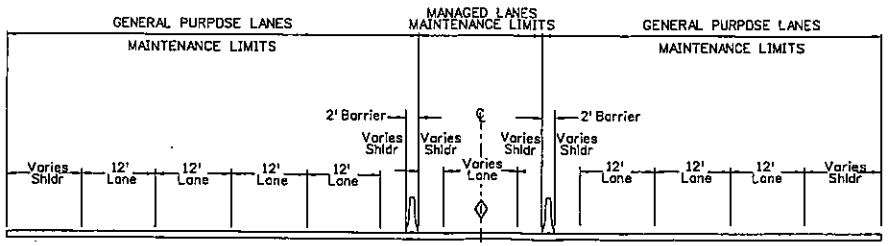
SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS

Print Date: 12/3/2012
Horiz. Scale: 1:500

US 36
CONCESSION PROJECT



I-25 HOT Lanes
US-36 to 20th Street



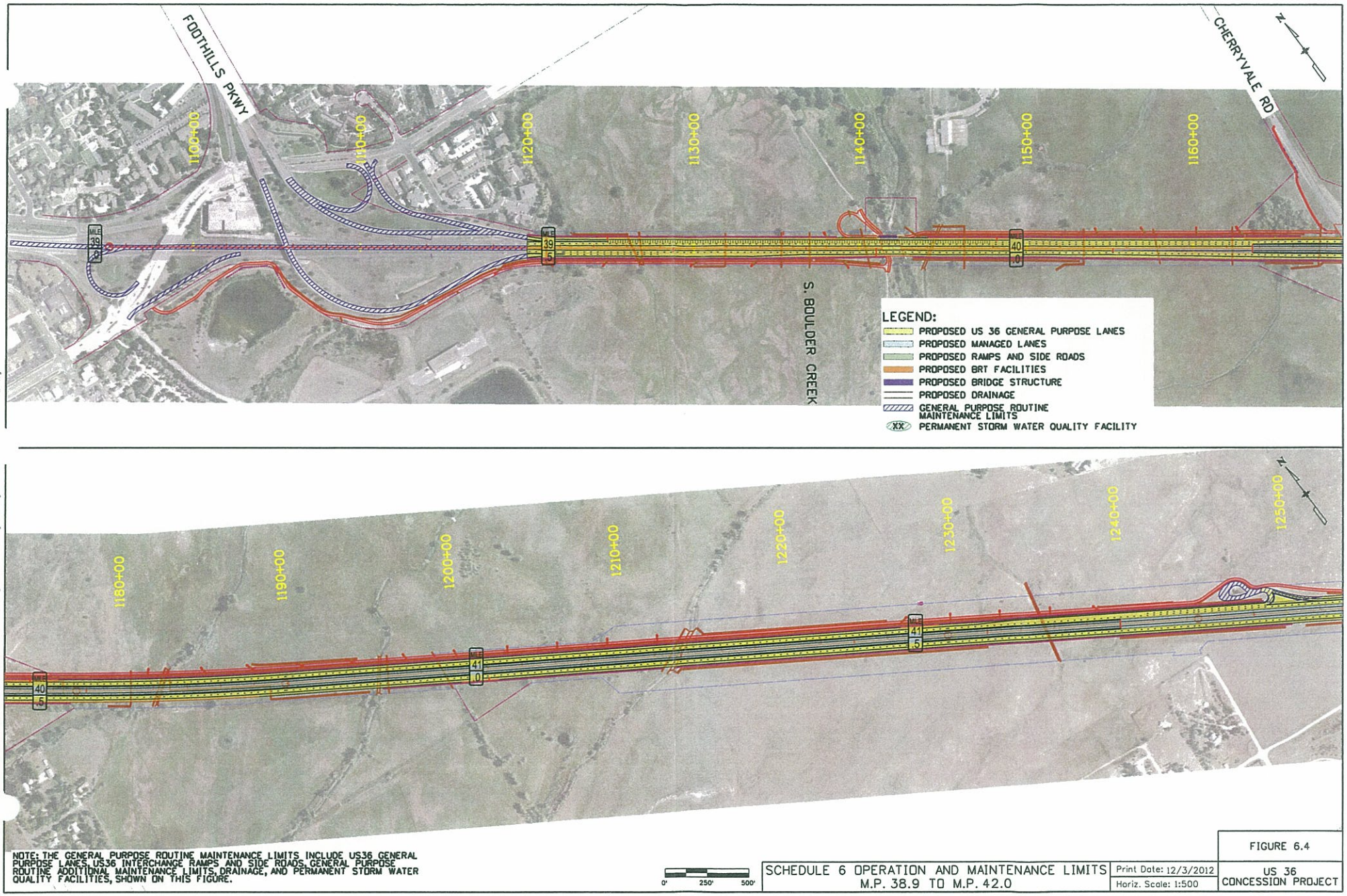
US 36
Pecos Street to Broadway

FIGURE 6.3

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS

Print Date: 12/5/2012
Horiz. Scale: 1:500

US 36
CONCESSION PROJECT



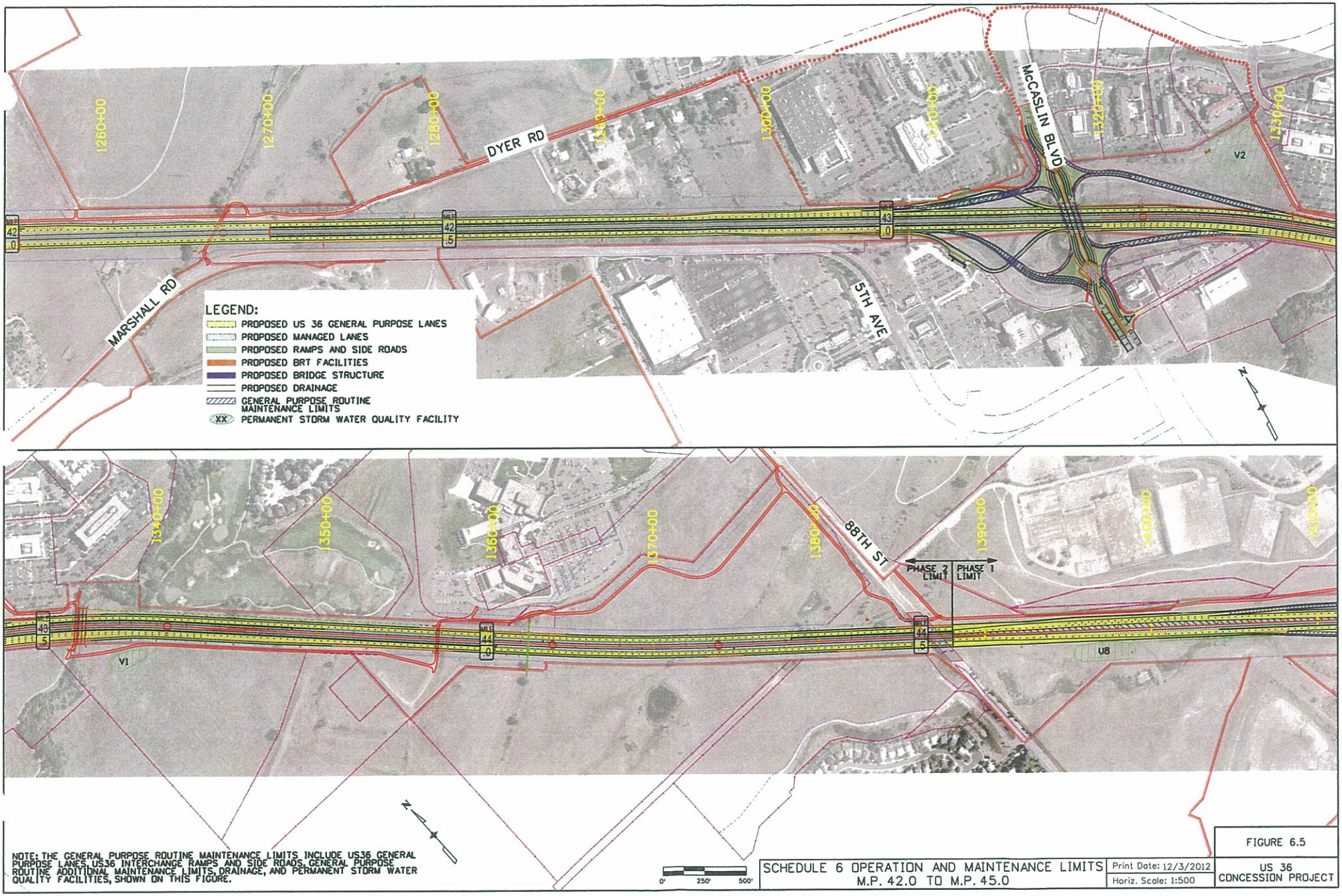
NOTE: THE GENERAL PURPOSE ROUTINE MAINTENANCE LIMITS INCLUDE US36 GENERAL PURPOSE LANES, US36 INTERCHANGE RAMPS AND SIDE ROADS, GENERAL PURPOSE ROUTINE ADDITIONAL MAINTENANCE LIMITS, DRAINAGE, AND PERMANENT STORM WATER QUALITY FACILITIES, SHOWN ON THIS FIGURE.

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 38.9 TO M.P. 42.0

Print Date: 12/3/2012
Horiz. Scale: 1:500

FIGURE 6.4

US 36
CONCESSION PROJECT



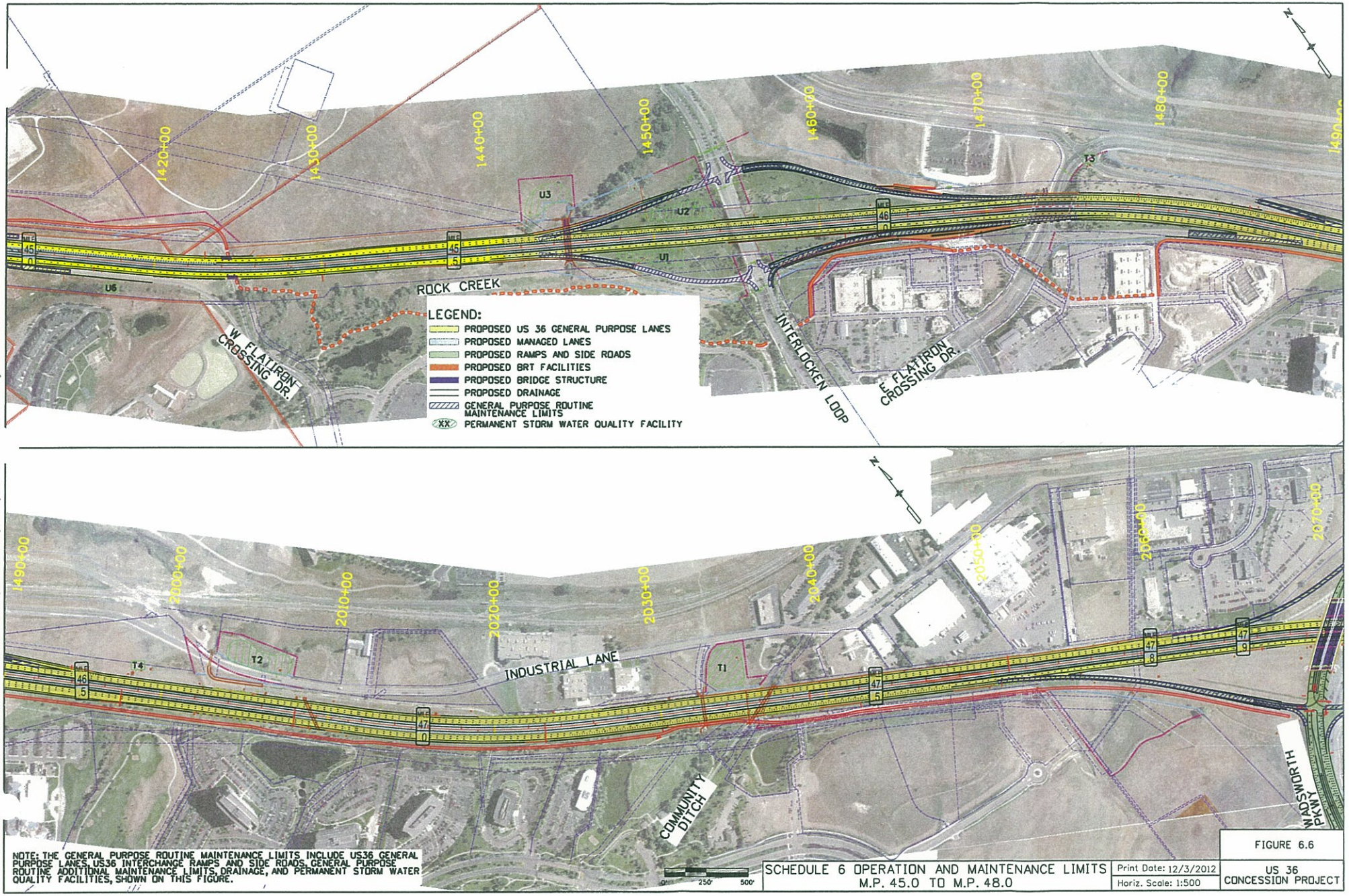
NOTE: THE GENERAL PURPOSE ROUTINE MAINTENANCE LIMITS INCLUDE US36 GENERAL PURPOSE LANES, US36 INTERCHANGE RAMPS AND SIDE ROADS, GENERAL PURPOSE ROUTINE ADDITIONAL MAINTENANCE LIMITS, DRAINAGE, AND PERMANENT STORM WATER QUALITY FACILITIES, SHOWN ON THIS FIGURE.

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 42.0 TO M.P. 45.0

Print Date: 12/3/2012
Horiz. Scale: 1:500

FIGURE 6.5

US 36
CONCESSION PROJECT



NOTE: THE GENERAL PURPOSE ROUTINE MAINTENANCE LIMITS INCLUDE US36 GENERAL PURPOSE LANES, US36 INTERCHANGE RAMPS AND SIDE ROADS, GENERAL PURPOSE ROUTINE ADDITIONAL MAINTENANCE LIMITS, DRAINAGE, AND PERMANENT STORM WATER QUALITY FACILITIES, SHOWN ON THIS FIGURE.

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 45.0 TO M.P. 48.0

Print Date: 12/3/2012
Horiz. Scale: 1:500

FIGURE 6.6

US 36
CONCESSION PROJECT

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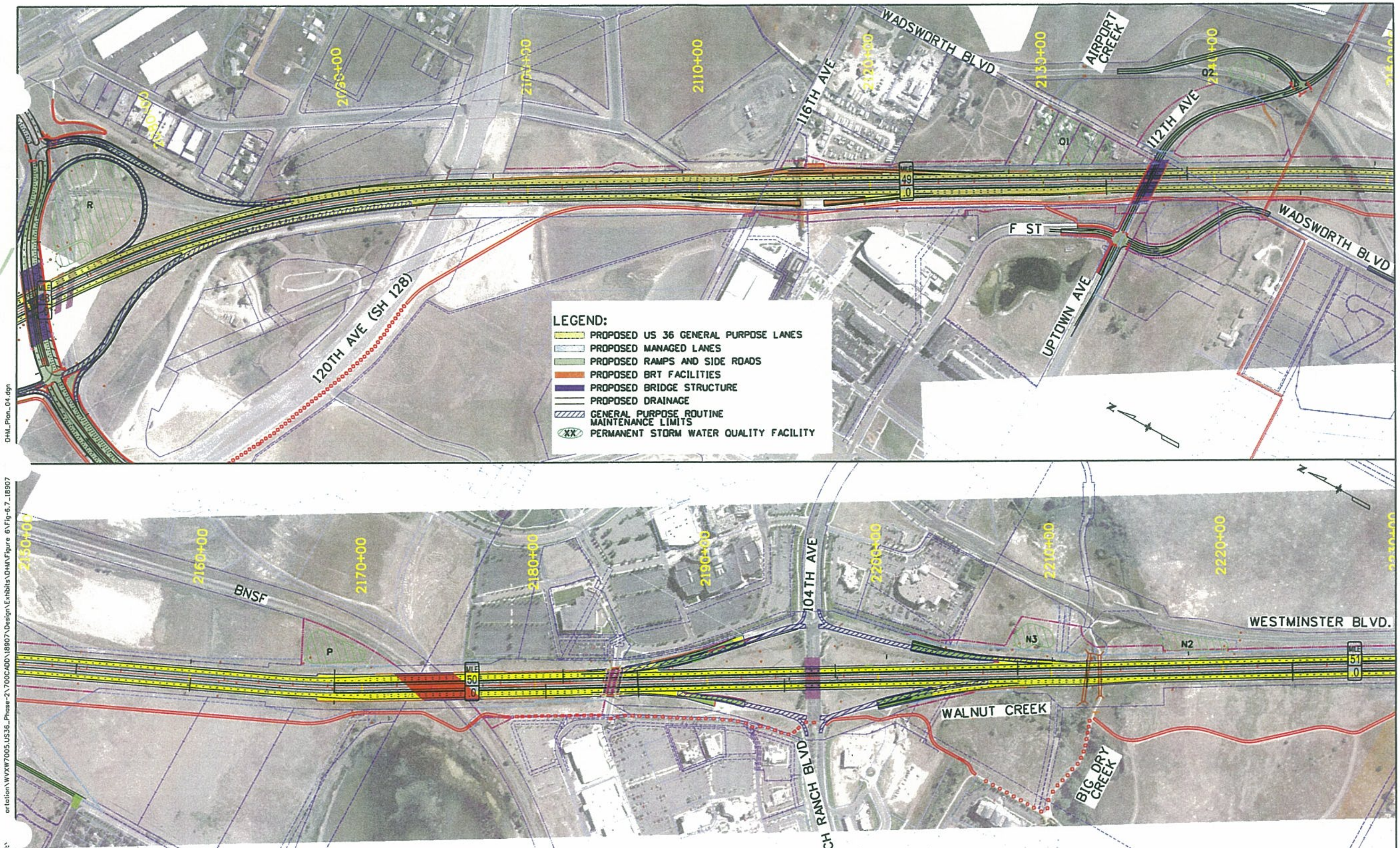

NOTE: THE GENERAL PURPOSE ROUTINE MAINTENANCE LIMITS INCLUDE US36 GENERAL PURPOSE LANES, US36 INTERCHANGE RAMPS AND SIDE ROADS, GENERAL PURPOSE ROUTINE ADDITIONAL MAINTENANCE LIMITS, DRAINAGE, AND PERMANENT STORM WATER QUALITY FACILITIES, SHOWN ON THIS FIGURE.

0' 250' 500'

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 48.0 TO M.P. 51.0

Print Date: 12/3/2012
Horiz. Scale: 1:500

FIGURE 6.7

US 36 CONCESSION PROJECT

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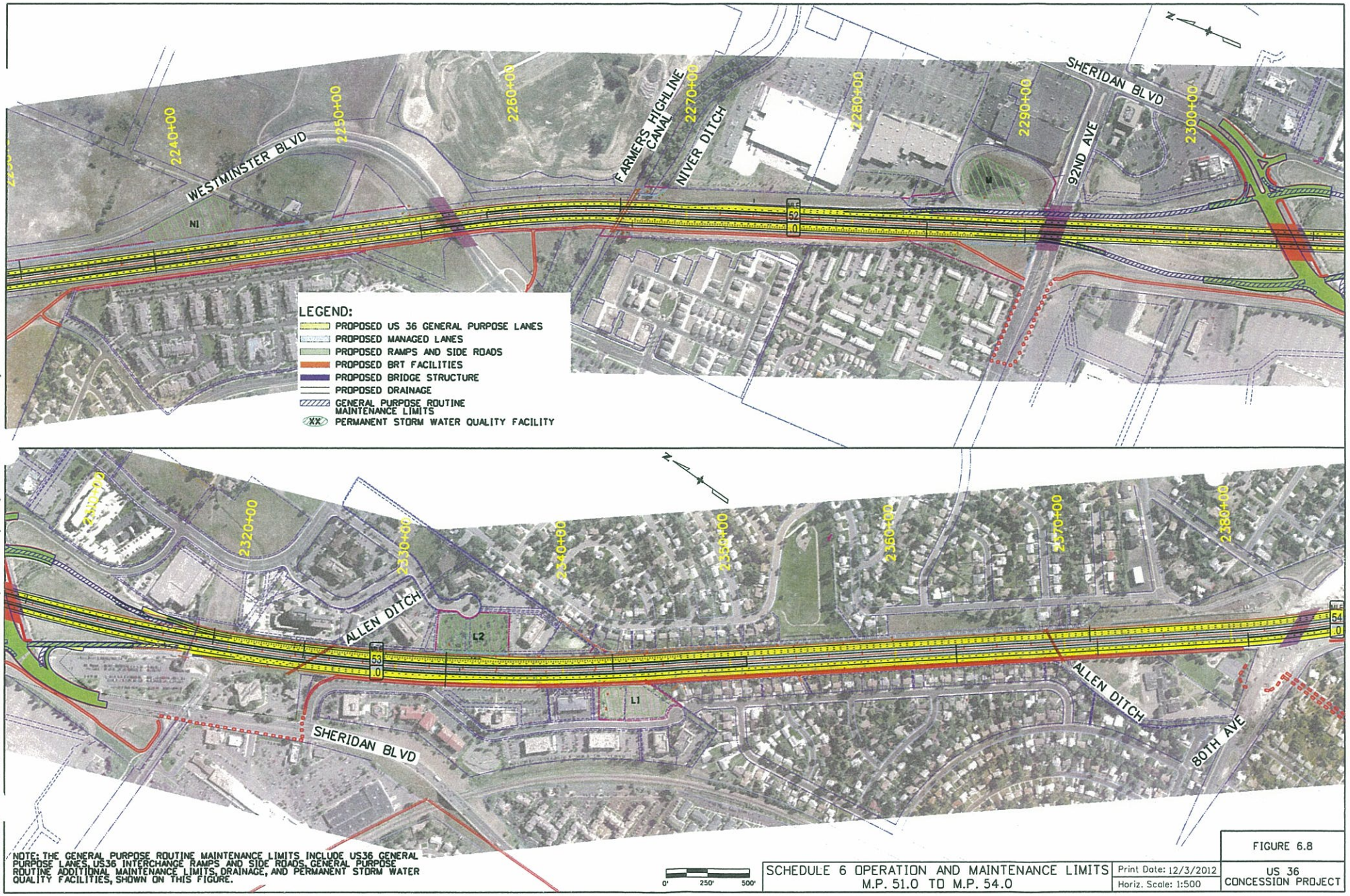

NOTE: THE GENERAL PURPOSE ROUTINE MAINTENANCE LIMITS INCLUDE US36 GENERAL PURPOSE LANES, US36 INTERCHANGE RAMPS AND SIDE ROADS, GENERAL PURPOSE ROUTINE ADDITIONAL MAINTENANCE LIMITS, DRAINAGE, AND PERMANENT STORM WATER QUALITY FACILITIES, SHOWN ON THIS FIGURE.

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 51.0 TO M.P. 54.0

Print Date: 12/3/2012
Horiz. Scale: 1:500

FIGURE 6.8

US 36
CONCESSION PROJECT

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NOTE: THE GENERAL PURPOSE ROUTINE MAINTENANCE LIMITS INCLUDE US36 GENERAL PURPOSE LANES, US36 INTERCHANGE RAMPS AND SIDE ROADS, GENERAL PURPOSE ROUTINE ADDITIONAL MAINTENANCE LIMITS, DRAINAGE, AND PERMANENT STORM WATER QUALITY FACILITIES, SHOWN ON THIS FIGURE.

0' 250' 500'

SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 54.0 TO M.P. 57.1

Print Date: 12/12/2012
Horiz. Scale: 1:500

FIGURE 6.9

US 36
CONCESSION PROJECT

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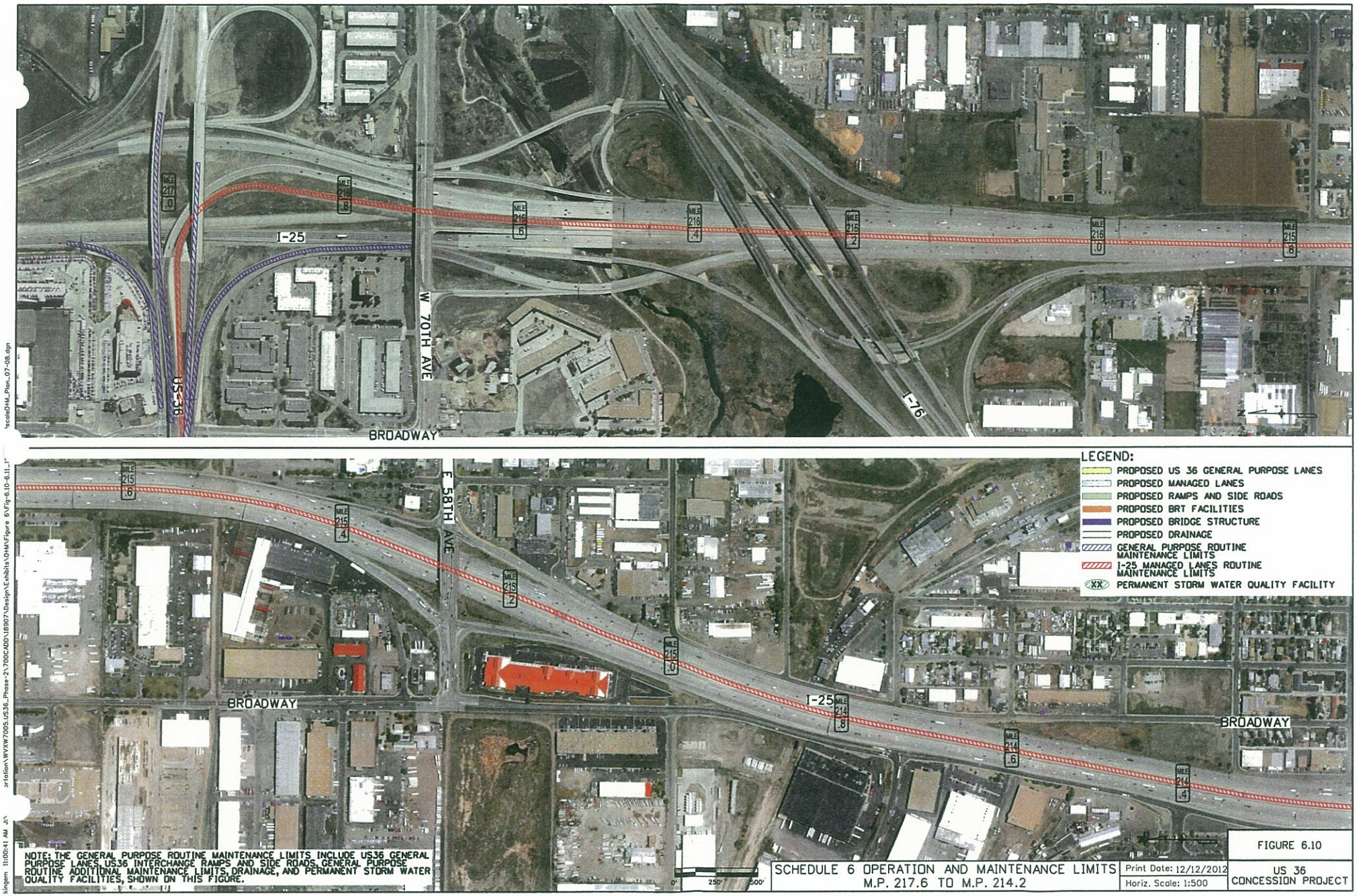
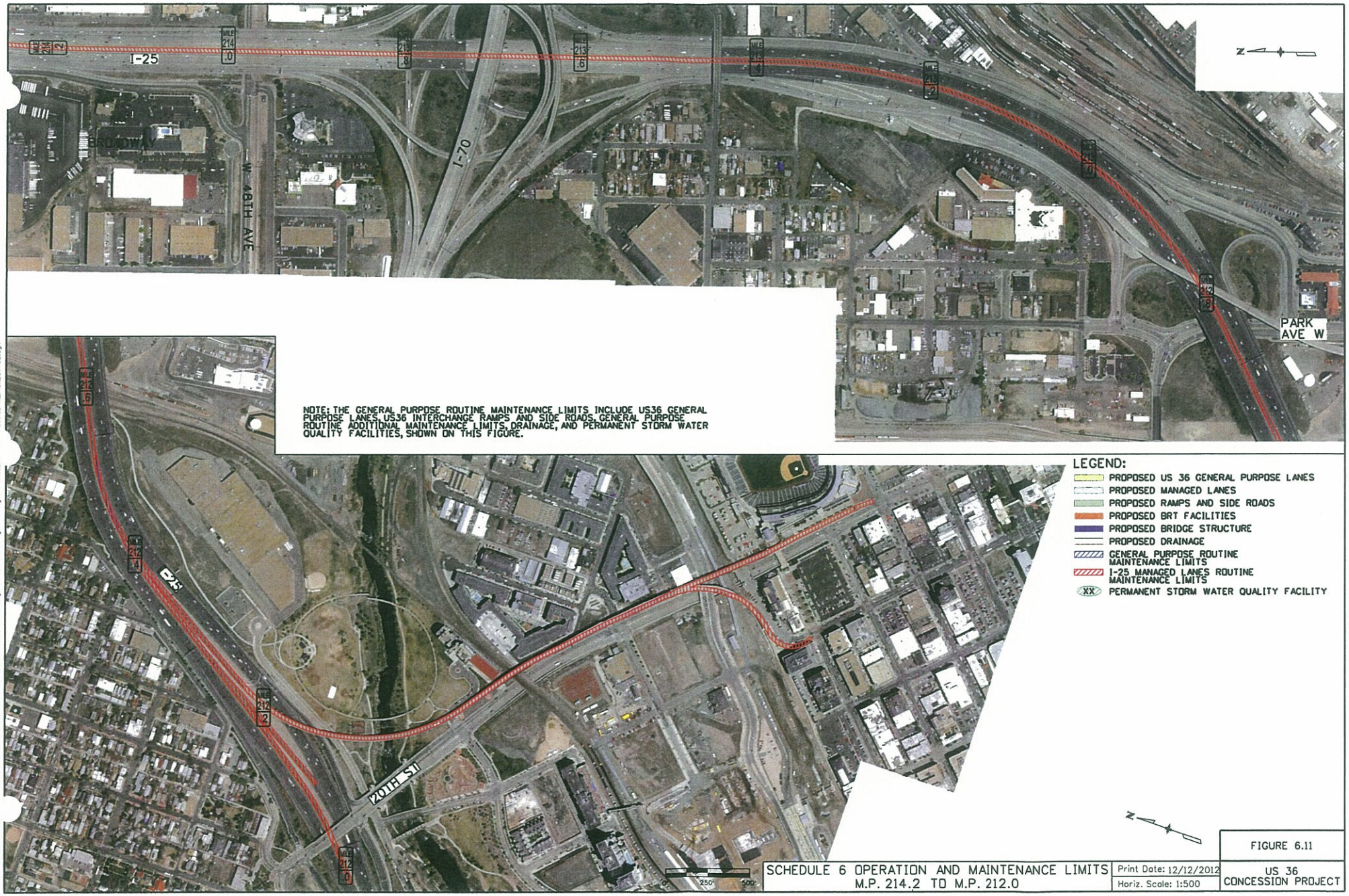


SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 217.6 TO M.P. 214.2

Print Date: 12/12/2012
Horiz. Scale: 1:500

FIGURE 6.10

US 36
CONCESSION PROJECT

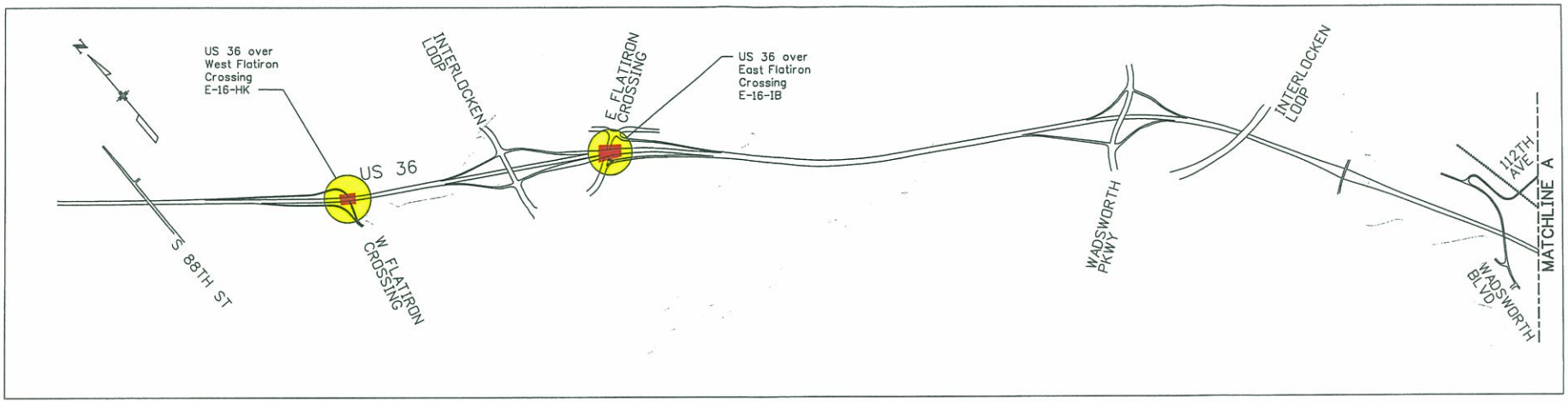


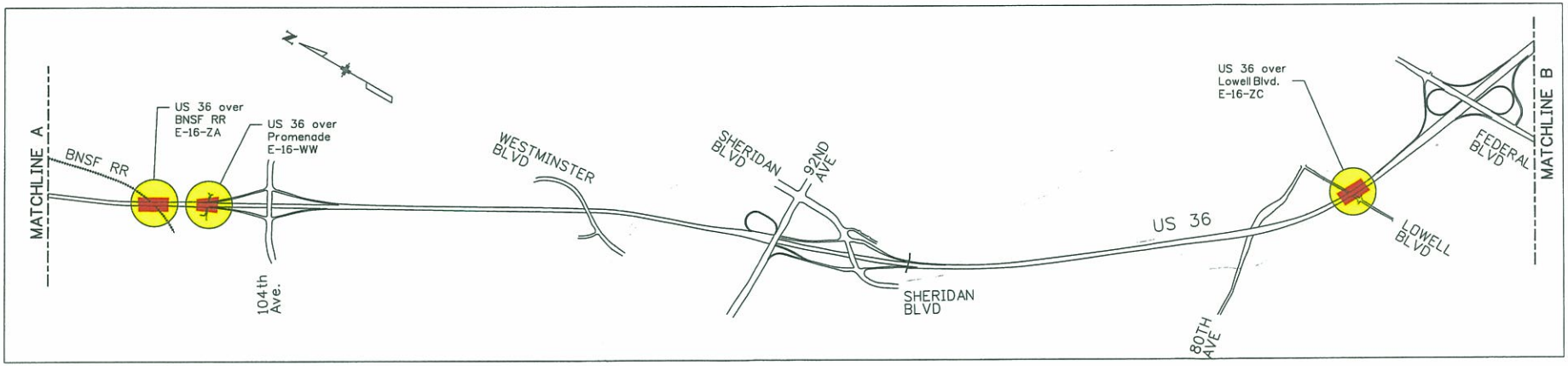
SCHEDULE 6 OPERATION AND MAINTENANCE LIMITS
M.P. 214.2 TO M.P. 212.0

Print Date: 12/12/2012
Horiz. Scale: 1:500

FIGURE 6.11

US 36
CONCESSION PROJECT





KEY

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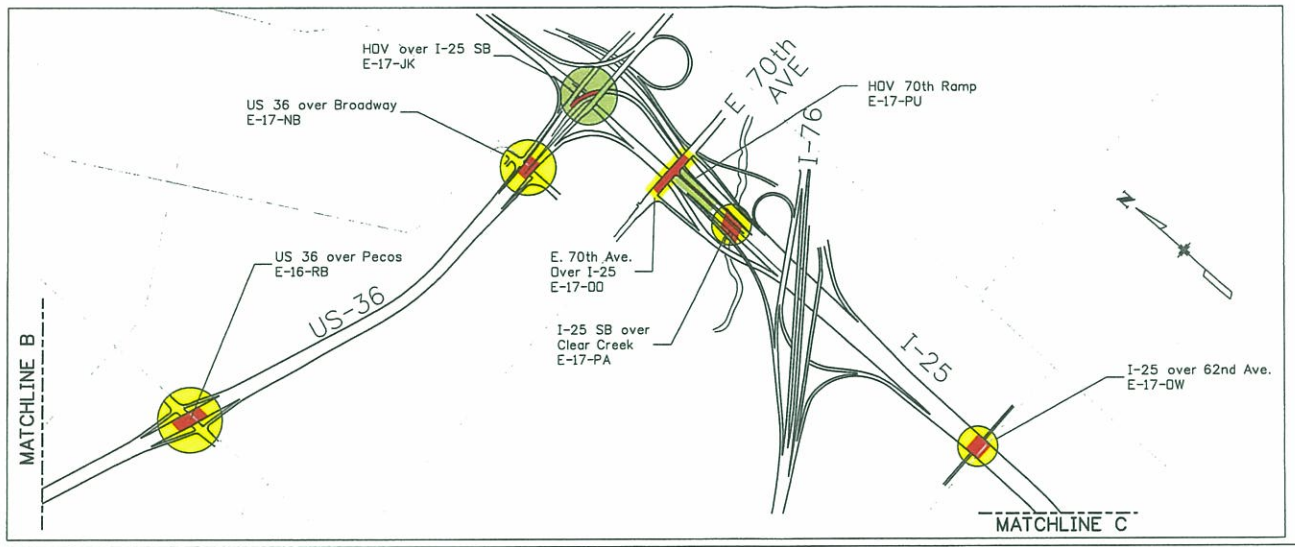
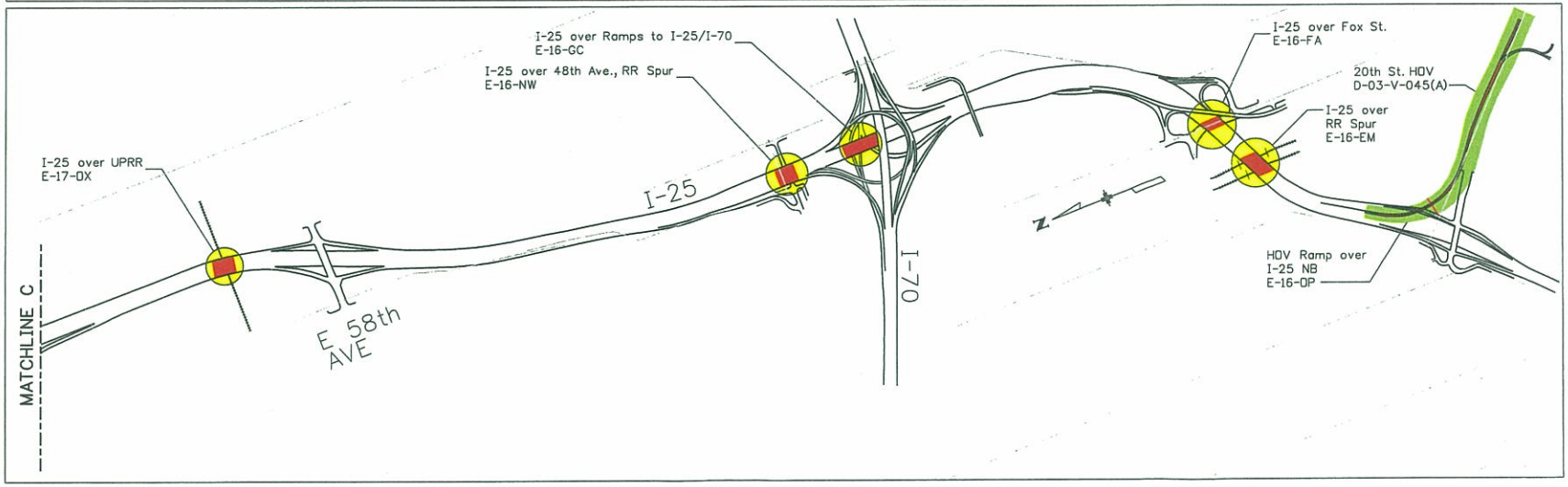
ALL OTHER STRUCTURES ARE CDOT

Print Date: 9/19/2012	Sheet Revisions		
File Name: 18907BRG_36-PROJECT LOCATION PLAN.dgn	Date:	Comments	Init.
Horiz. Scale: 1:2000 Vert. Scale: As Noted			

Colorado Department of Transportation
1050 Lee Hill Road
Boulder, CO 80302
Phone: 303-546-5660 FAX: 303-444-0751

As Constructed	US 36 MANAGED LANES TOLL CONCESSION PROJECT US 36 MANAGED LANES LOCATION PLAN		Project No./Code
No Revisions:			NH 0361-103
Revised:	Designer:	Structure Numbers	18907
Void:	Detailer:		Sheet Number FIG. 6-12
	Sheet Subset:	Subset Sheets:	





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ALL OTHER STRUCTURES ARE CDOT

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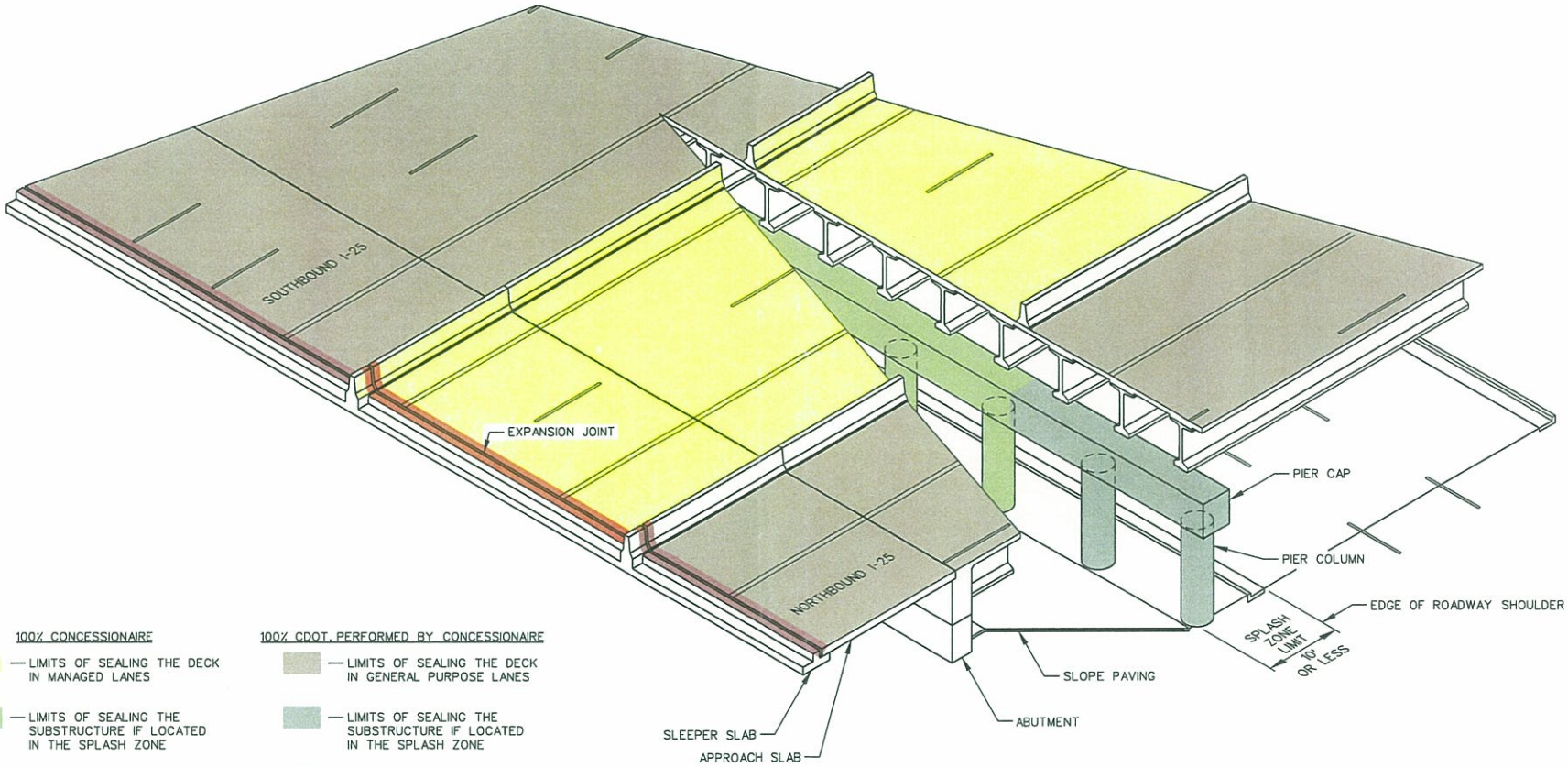
Print Date: 9/19/2012	0000	Sheet Revisions			Colorado Department of Transportation	As Constructed	US 36 MANAGED LANES TOLL CONCESSION PROJECT	Project No./Code
File Name: 18907BRG_PROJECT LOCATION PLAN.dgn		Date:	Comments	Init.	1050 Lee Hill Road Boulder, CO 80302 Phone: 303-546-5660 FAX: 303-444-0751	No Revisions:	I-25 MANAGED LANES LOCATION PLAN	NH 0361-103
Horiz. Scale: 1:1600 Vert. Scale: As Noted						Revised:	Designer: / Structure Numbers:	18907
						Void:	Detailer: / Sheet Subset: / Subset Sheets:	Sheet Number FIG. 6-13



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Print Date: 9/19/2012	0000	Sheet Revisions	Colorado Department of Transportation	As Constructed	US 36 MANAGED LANES TOLL CONCESSION PROJECT MANAGED LANES MAINTENANCE EXHIBIT	Project No./Code
File Name: 18907BRG_MANAGED LANES EXHIBIT.dgn		Date: Comments: Init.	1050 Lee Hill Road, Boulder, CO 80302	No Revisions:		NH 0361-103
Horiz. Scale: 1:15 Vert. Scale: As Noted			Phone: 303-546-5660 FAX: 303-444-0751	Revised:	Designer: B. TOSTI / Detailer: B. COLLINS / Sheet Subset: BRIDGE / Structure Numbers / Subset Sheets:	18907
				Void:		Sheet Number FIG. 6-14