

TEXAS PROJECT DELIVERY FRAMEWORK  
**BUSINESS CASE**



**Railroad Commission of Texas**  
Geographic Information Systems (GIS)  
Technology Upgrade Project

VERSION: 1.3

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*Approval of the Business Case indicates an understanding of the purpose and content described in this deliverable. Approval of the Business Case constitutes approval of the business case analysis results and hereby certifies the overall accuracy, viability, and defensibility of the content and estimates. By signing this deliverable, each individual agrees the proposed business solution has been analyzed effectively as described herein.*

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## Section 1. Executive Summary

For a standard Business Case, complete this section *after* completing all other sections.

### 1.1 Issue

*Briefly describe the business issue that the recommended project would solve without describing how the problem will be addressed. Include a brief statement of any mandates that require processes and/or services not currently in place.*

⇒ The RRC's GIS technical environment was last upgraded in the year 2000 and the hardware and software components are over twelve years old. The RRC GIS platform components are no longer supported by the vendor. The GIS software must run on a particular hardware platform which is no longer being manufactured and the company which produced it is no longer in business. Due to the age of the hardware, it is always a concern when rebooting, that the server will not respond fully. If the current hardware fails, the GIS software and RRC applications could not be moved to a new server. The agency would have to try and find a refurbished version of the current hardware if it is available anywhere. If no hardware is available, the RRC GIS software would have to be migrated to new hardware/software platforms an estimated cost of three million dollars. In the interim all applications using the GIS data (Drilling Permits, Field Inspectors, and Emergency Management) would require an alternate means to obtain the necessary data.

The current hardware already has one inoperable disk drive in the cabinet. To date, we have been able to replace disk drives and other components to keep the server going. The replacement parts for the outdated hardware will eventually not be available. The DCS vendors will not transform this server into the data center as part of the overall agency transformation because the hardware is too old and the software has no vendor support. Until the GIS technology is updated, the GIS hardware and software must remain at the Travis Building.

This proposed project would replace aging hardware, install and configure current levels of mapping software, and convert existing GIS applications to use the new mapping software. The Commission depends on GIS technology to support its mission. Current, supportable and effective GIS technology is a critical component of the mapping review step of the drilling permit approval process. The effectiveness of the GIS technology in this process directly affects the Commission's ability to approve drilling permits in a timely manner, which in turn has a direct positive impact on the State's economy, relative to the receipt of severance tax collections, along with cascading effects on local economies with industry activity.

Upgrading the Commission's GIS technology will improve system stability and minimize the risk of downtime for the critical business functions that rely on GIS, particularly the drilling permit approval process. The Commission's current GIS technical environment cannot be consolidated into the statewide data center as part of the standard data center consolidation process. Further, now that the GIS hardware and software are deemed "unsupported," the data center service provider's GIS support obligation has shifted from being responsible for achieving contracted service levels for availability and response time to a "best efforts" only requirement. This project will enable GIS consolidation into the state data center. Upgraded GIS technology will also

support the Commission's ability to consume GIS data from other agencies or vendors as well as allow the Commission to publish its GIS data to other agencies and stakeholders.

## 1.2 Anticipated Outcomes

*Describe the anticipated outcomes of implementing a project that specifically addresses the business issue. The description should include answers to questions such as "What are we aiming for?" and "What are the expected benefits to business operations?"*

⇒ The RRC utilizes GIS to support the Oil & Gas, Pipeline Safety and Gas Services Divisions. These divisions are engaged in mission critical programs such as creating and maintaining well locations, adding and verifying newly permitted wells, and processing and importing pipeline data. GIS data is also utilized to execute searches and create plots for industry and the general public. The public also has access via the RRC website and the RRC Public Viewer to search and view the GIS database. To ensure continued support for the RRC's GIS environment, it is necessary to upgrade the existing technical environment to current and supported levels. With the upgrade, the RRC would also be better positioned to take advantage of new and emerging GIS technologies that support the sharing of GIS services between different organizations and advancements in map rendering as well as map creation.

The GIS upgrade will increase the efficiency of the Oil and Gas Division staff and increase their ability to approve more drilling permit applications by minimizing and/or eliminating the risk of downtime with the current GIS System. With the current increase in activity in the Oil and Gas industry, any delay in granting permits results in a negative economic impact to the state as well. Timely processing of drilling permit applications has a direct, positive impact on the local and state economy. The downstream economic effect of delays in the approval of oil and gas drilling permits can be dramatic. For every oil and gas industry job not created due to the delay of the approval of drilling permit applications, there is a loss of gross state product according to comptroller studies.

The GIS technology upgrade will also enable the RRC to bring its GIS applications to compatible levels with other GIS producing agencies and enable consolidation into the state data center.

Other benefits of the GIS technology upgrade are the following:

- Greatly enhance user experience that requires less training and promotes user adoption (internal and external)
- Improve web site performance for external entities using the GIS public viewer
- Consume Base Layers from other agencies or vendors
- Publish Map Services to other agencies
- Improved supportability and maintainability
- Mitigate the risk of excessive downtime

### 1.3 Recommendation

*Describe the project that is being recommended to achieve the anticipated business outcomes by summarizing the approach for how the project will address the business issue. Identify the stakeholders/customers involved in determining whether the desired results are achievable by implementing the project.*

⇒ It is the intention of the RRC to select a vendor to configure the new software, convert existing applications to use the new software, and to perform project management activities. In converting existing applications to use the new software, the selected vendor will replace or convert existing scripts that were developed over the years using various scripting languages to support GIS business processes. The data center services provider will be responsible for installing the new hardware and software.

The RRC, other state agencies, businesses, industry, and the public consider the RRC's GIS data as an essential component for daily operations. Using the RRC Viewer or the RRC Public Viewer, the GIS database is available for internal and external stakeholders to retrieve information on demand. GIS data is also requested either online or via mail or fax through Central Records and is provided to the requestor on Compact Disc. These services are presently available and are heavily utilized. This GIS technology upgrade will position the RRC to leverage newer technology and expanded capability to meet the current and future needs for GIS data to ensure that stakeholders have access to data that is reliable, current and accurate.

### 1.4 Justification

*Justify why the recommended project should be implemented and the rationale for why the project was selected above the other alternative solutions. Provide a compelling argument by summarizing key quantitative and qualitative information from the Project Evaluation section, including a description of the impact of not implementing the project.*

*Determine and include analysis information that is necessary to provide a clear justification for the project. The type and extent of information included in the justification will vary based on the best approach for making a compelling and accurate argument. Charts from the Project Selection, Results section may be copied to support justification for selecting this project.*

⇒ The RRC utilizes GIS to support the Oil & Gas, Pipeline Safety and Gas Services Divisions. These divisions are engaged in mission critical programs such as creating and maintaining well locations, adding and verifying newly permitted wells, and processing and importing pipeline data. GIS data is also utilized to execute searches and create plots for industry and the general public. The public also has access via the RRC website and the RRC Public Viewer to search and view the GIS database. To ensure continued support for the RRC's GIS environment, it is necessary to upgrade the existing technical environment to current and supported levels. With the upgrade, the RRC would also be better positioned to take advantage of new and emerging GIS technologies

that support the sharing of GIS services between different organizations and advancements in map rendering as well as map creation.

Commission staff uses GIS when reviewing oil and gas well drilling permits for approval. GIS enables staff to ensure precise locations of proposed oil and gas wells in order to ensure compliance with spacing and density rules. Therefore, the effectiveness of GIS technology is essential for an efficient and quick drilling permit approval process. Timely processing of drilling permit applications also has a direct, positive impact on local and the state's economy through increased oil and gas tax revenues.

Upgrading the Commission's GIS technology will provide improved stability and minimize the risk of downtime for many Commission critical business functions that rely on GIS, including the drilling permit approval process. In addition, upgraded software will support improvements and efficiencies in all RRC GIS functions including the drilling permit approval process that involves mapping review. The upgrade will increase productivity and reduce overhead now required to keep up with the increased number of pending permits.

Currently, the Commission relies on the statewide data center services (DCS) contract for support of the GIS technical environment. The DCS contract includes service levels for systems availability and problem resolution time with financial penalties for the vendor if the service levels are not achieved. The Commission's GIS hardware and software are deemed "unsupported," so the data center service provider's GIS support obligation has shifted downward from being responsible for achieving contracted service levels for availability and problem resolution time to a "best efforts" only requirement.

If the GIS Technology Upgrade is not pursued, the worst-case scenario would be that the Commission's GIS technical environment ceases to function. At that point, the Commission would not be able to carry out its data custodian function for the GIS layers that it is responsible for using automated tools. The Commission would have to resort to the use of physical maps until an appropriate technical solution could be implemented on an emergency basis. All critical business functions reliant upon GIS technology would be negatively affected.

This project is aligned with statewide GIS improvement initiatives including the Data Center Services Technology Plan. Upgraded GIS technology will support the Commission's ability to use GIS data from other agencies or vendors as well as allow Commission GIS data to be used by other agencies and stakeholders.

## 1.5 Assumptions

*List and describe any assumptions relevant to the project that is being recommended to achieve the anticipated business outcomes.*

⇒ Subject Matter experts are assumed to be available as needed throughout the project. There are no off-the shelf applications that can provide the required functionality.

Due to the unique nature of the information and the functionality required for this system, it was determined that the application should be developed by contractors because there are no off-the shelf applications that can provide the required functionality. The value from this system is dependent on the custom applications that are used by the Railroad Commission mapping personnel to perform specific regulatory functions. Therefore, in evaluating the best approach and solution, it was determined the most effective solution for this project would be to migrate the applications using consulting assistance for technical solutions. The GIS software requires the purchase of new software and tools to meet the requirements of this project.

## 1.6 Limitations

*List and describe any limiting factors, or constraints, relevant to the project that is being recommended to achieve the anticipated business outcomes.*

⇒ The mapping digitization software selected is based on the recommendation of the state agency, the Texas Water Development Board (TWDB), with oversight responsibility for mapping products. There is only one major software vendor that supplies the mapping digitization software, Environmental Systems Research Institute (ESRI), which TWDB has recommended.

This project will be dependent upon the data center services vendor to purchase and deploy the required hardware and software environments necessary for the timely completion of project milestones.

## Section 2. Governance and Business Case Analysis Team

### 2.1 Governance

*Describe the IT governance processes and structures within the agency.*

⇒ The Railroad Commission has an established Information Technology (IT) governance process to guide the selection and oversight of major information technology projects. Strategic goals and priorities are set by the three elected Railroad Commissioners. The Executive Director sets tactical goals and priorities in support of the Commission’s strategic goals. Initiatives that have been identified by the leadership, in support of Commission goals, are evaluated and analyzed by the Information Technology Services Division in partnership with the business divisions. For major projects, the Texas Project Delivery Framework is used to provide a consistent method for project selection, control, and evaluation based on alignment with business goals and objectives. Based on the project evaluations, the Executive Director will make recommendations to the Commissioners regarding major projects and initiatives. The Commissioners ultimately support projects and initiatives that sustain and enhance the capability to meet the Railroad Commission mission and goals.

### 2.2 Business Case Analysis Team Members

*Describe the roles on the business case analysis team. Provide the names and titles of agency staff that will fulfill them.*

The IT Director will assign the appropriate team members upon completion of the study.

Role	Description	Name/Title
IT Sponsor	Chairs IT Governance Steering Committee which considers the project priority within the Railroad Commission	Director ITS
Business Subject Matter Expert	Manages the mapping function for the Oil and Gas Division and provides expertise for the Business Application and Process	Manager GIS/Well Mapping
ITS Analyst	Provides ITS Analysis and interfaces with Business Analyst and Subject Matter Expert	Analyst ITS
Project Management	Provides ITS Analysis and interfaces with Business Analyst and Subject Matter Expert	Assistant Director, ITS
Financial Analyst	Provides ITS Financial Analysis working with the Business Analyst and ITS and financial resources	Assistant Director, ITS

<b>Role</b>	<b>Description</b>	<b>Name/Title</b>
Lead Technical Analyst	Provides ITS Technical Analysis working with the Business Analyst and ITS	System Architect
Business Subject Matter Expert	Provides subject matter expertise	GIS Systems Analyst
Business Subject Matter Expert	Provides subject matter expertise	Manager, Drilling Permits
Business Subject Matter Expert	Provides subject matter expertise	Engineering Specialist

## Section 3. Problem Definition

### 3.1 Problem Statement

*Describe the problem the project would address, including any problems related to technology, processes and/or services, without presupposing a solution.*

⇒ The RRC's GIS technical environment was last upgraded in the year 2000 and the hardware and software components are over twelve years old. The RRC GIS platform components are no longer supported by the vendor. The GIS software must run on a particular hardware platform which is no longer being manufactured and the company which produced it is no longer in business. Due to the age of the hardware, it is always a concern when rebooting, that the server will not respond fully. If the current hardware fails, the GIS software and RRC applications could not be moved to a new server. The agency would have to try and find a refurbished version of the current hardware if it is available anywhere. If no hardware is available, the RRC GIS software would have to be migrated to new hardware/software platforms an estimated cost of \$3 million. In the interim all applications using the GIS data (Drilling Permits, Field Inspectors, and Emergency Management) would require an alternate means to obtain the necessary data.

The current hardware already has one inoperable disk drive in the cabinet. To date, we have been able to replace disk drives and other components to keep the server going. The replacement parts for the outdated hardware will eventually not be available. The DCS vendors will not transform this server into the data center as part of the overall agency transformation because the hardware is too old and the software has no vendor support. Until the GIS technology is updated, the GIS hardware and software must remain at the Travis Building.

Given the current state of the RRC's GIS technical infrastructure, consolidation into the statewide data centers is not possible.

### 3.2 Agency and Constituent Environment

*Identify and briefly describe the relation of each stakeholder/customer to the project.*

Stakeholders/Customers	Description
General Public	The RRC provides its GIS data to the general public via a public GIS viewer that is accessible from the RRC website as well as making the data available for purchase.
Oil and Gas Industry	The RRC maintains oil and gas well and pipeline GIS data. RRC staff execute searches of the internal RRC GIS database and create plots for industry consultants and the general public This data is available via the RRC website as well as for purchase.
Research Institutions	Research institutions use the RRC's map data to conduct studies.
Division of Emergency Management	The RRC provides its GIS map data to the Division of Emergency Management to assist in rapid assessment activities following natural disasters. The RRC has also developed a GIS Critical Infrastructure Layer for use by Emergency Management as part of a SECO grant.
RRC State Office Staff	RRC state office staff employ RRC map data as part of their ongoing regulatory functions.

Stakeholders/Customers	Description
Other State Agencies	General Land Office, Texas Commission on Environmental Quality, UT Lands Accounting, Comptroller of Public Accounts, Texas Water Development Board, state task force and others as needed.
RRC Field Staff	RRC field staff access GIS map data as part of standard field operations for inspections and other activities

*Describe the processes and/or services that would be modified or automated by the project. Include processes and/or services for agencies and constituents (citizens, employers, other agencies).*

Processes/Services	Description of Modifications/Automation
Digitization of well locations	The RRC maintains the state's oil and gas well layer on an ongoing basis using unsupported GIS software.
Digitization of Original Texas Land Survey (OTLS)	The RRC maintains the state's OTLS layer on an ongoing basis using unsupported GIS software.
Digitization of pipeline locations	The RRC maintains the state's pipeline layer on an ongoing basis using unsupported GIS software.
Digitization of LP Gas facilities	The RRC maintains the state's LP gas facility layer on an ongoing basis using unsupported GIS software.
Online rendering of well and pipeline GIS data	The RRC renders its well, pipeline and OTLS data using a number of applications including the GIS public viewer and District Office viewer.
Distribution of well and pipeline GIS data	The RRC make its well, pipeline and OTLS data available for purchase and distributes it to interested parties.

### 3.3 Current Technology Environment

#### 3.3.1 Current Software

*Describe the agency's existing software that will be modified or replaced by the proposed project.*

Software Items	Description
ArcView 3.X	A desktop mapping and geographic information system (GIS) software tool for the management, display, query, and analysis of spatial information - replace
ArcGIS 9.X	A complete system for authoring, serving, and using geographic information- upgrade
ArcInfo 9.X	Software to allow creation and editing of multiuser geodatabases and coverages- replace
ArcIMS 4.X	Software to deliver dynamic maps and GIS data and services via the Web- upgrade
ArcSDE 8.X	<b>ArcSDE</b> is part of the ArcGIS platform, and is the data server between ArcGIS and relational databases. -upgrade

### 3.3.2 Current Hardware

*Describe the agency's existing hardware that will be modified or replaced by the proposed project.*

Hardware Items	Description
HP Alpha Server	Primary GIS server- replace
Sun V480	Sun Web Server- modify
Sun V880	Sun Database Server -modify
GIS Workstations	Two digitization workstation - replace

## Section 4. Project Overview

### 4.1 Project Description

*Describe the approach the project will use to address the business problem. Include the project sequence number(s) for the project from the Information Technology Detail (ITD).*

Description of Project
<p>This proposed project would replace aging hardware, install and configure current levels of mapping software, and convert existing GIS applications to use the new mapping software.</p> <p>The Railroad Commission (RRC) has developed and used GIS over the years in support of its mission. Currently, the RRC employs GIS in its automated environment to support several of its Divisions engaged in mission critical programs including the Oil &amp; Gas, Pipeline Safety and Gas Services Divisions. In addition, the RRC provides GIS data to the public either through the website using the RRC Public Viewer or data requests through its Central Records Division.</p> <p>The GIS technical environment in place today is in need of a major technology upgrade. The last major upgrade was completed in the year 2000, and the software and hardware components are either no longer vendor supported. The RRC would like to take advantage of new and emerging GIS technologies that support the sharing of GIS services between different organizations. In addition, the RRC needs to replace or convert existing applications that were developed over the years to support GIS business processes in the new upgraded environment. It is the intention of the RRC to select a vendor to configure the new software, convert existing applications to use the new software and to perform project management activities. The data center services provider will be responsible for installing the new hardware and software.</p> <p>The RRC will enlist the assistance of a professional services firm to propose and configure an upgraded GIS technical environment as well as to automate current GIS business processes and procedures in the context of the upgraded environment. The RRC will leverage the data center services contract for the procurement, installation and ongoing support and maintenance of the proposed hardware and software.</p> <p>Project components include the following: replace aging hardware, install and configure current levels of mapping software, convert existing GIS applications to use the new mapping software, select and implement new map rendering software.</p>
<p><b>ITD Project Sequence Number(s):</b> 9</p>

### 4.2 Goals and Objectives

*Describe the business goals and objectives of the project. Ensure the goals and objectives support business needs.*

Business Goal/Objective	Description
Goal 1 Energy Resources	Support the development, management, and use of Texas' oil and gas energy resources to protect correlative rights and provide equal and fair energy access to all entities.
Objective 1.1	Increase opportunities for oil and gas resource development while preventing waste, protecting the correlative rights of mineral interest owners, and conserving the state's oil and natural gas resources.
Goal 3 Environmental Protection	Assure that Texas fossil fuel energy production, storage, and delivery is conducted to minimize harmful effects on the state's environment and to preserve natural resources.

Business Goal/Objective	Description
Objective 3.1	Reduce the occurrence of identified pollution violations associated with fossil fuel energy production in Texas from FY2002 levels.
Objective 3.2	Identify and correct existing environmental threats through voluntary operator actions or with use of state funds.
Goal 4 Public Access to Information and Services	Maximize electronic government and to minimize paper transactions by developing technological enhancements that promote efficient regulatory programs and preserve and increase access to public information.
Objective 4.1	Increase efficiency in providing public access to information and provide more efficient interaction with regulated industries.

### 4.3 Performance Measures

*Describe performance measures that will be used to gauge the project's business outcomes for key processes and services.*

The IT Modernization project will impact many of the agency performance measures. The results of the FY 13 study should identify more specifically the benefits to be expected as a result of this project.

Key Process/Services	Performance Measure
<b>Drilling Permits/ Mapping Functions</b>	Internal RRC staff are able to increase the number of permits reviewed and improve the turn around time for approval.
<b>Public GIS Services</b>	Public is able to access the GIS viewer with multiple browsers and is able to navigate and search maps using google-like commands.
<b>GIS Data Sharing</b>	RRC is able to transfer and accept GIS data directly from other state agencies.
<b>GIS Hardware</b>	Running on current hardware in the State Data Center – Fully supported under Data Center Services.
<b>GIS Hardware</b>	GIS production environment is transformed into the Austin Data Center.

### 4.4 Assumptions

*List the assumptions regarding the agency processes and/or services affected by the proposed project.*

⇒ Subject Matter experts are assumed to be available as needed throughout the project. There are no off-the shelf applications that can provide all of the required functionality.

## 4.5 Constraints

*List the limitations or constraints regarding the agency processes and/or services affected by the proposed project.*

⇒ The schedule for Data Center Services installation of hardware and software may be impacted by other statewide priorities.

## 4.6 Proposed Technology Environment

### 4.6.1 Proposed Software

*Describe software for the project, including technical factors that may be critical to project selection if applicable.*

Software Item	Description
ArcView /ArcGIS Explorer 10.x	A desktop mapping and geographic information system (GIS) software tool for the management, display, query, and analysis of spatial information – replace. A complete system for authoring, serving, and using geographic information- upgrade.
ArcGIS 10.x	A complete system for authoring, serving, and using geographic information- upgrade
ArcView 10.x/ARCScan	Software to allow creation and editing of multiuser geodatabases and coverages
ARcGIS Server 10.x	Software to deliver dynamic maps and GIS data and services via the Web-
ArcSDE 10.x	<b>ArcSDE</b> is part of the ArcGIS platform, and is the data server between ArcGIS and relational databases.
MS SQL Server 2008+	Windows server software

### 4.6.2 Proposed Hardware

*Describe the hardware for the project, including technical factors that may be critical to project selection if applicable.*

Hardware Item	Description
Servers – Windows Server 2008 R2 (4)	Servers to support the RRC's GIS development, test, pre-production and production environments.
Workstations and PCs PC-Desktop Windows 7+ (3)	Devices to replace the current digitizing workstations and PCs involved in GIS maintenance
Server Tru64 or Solaris 10 (1)	Oracle Database

#### 4.7 Major Project Milestones

*Describe the project's preliminary major milestones, deliverables, and target dates.*

Project timelines and milestones will be initially determined based on a roadmap provided by the FY 2013 Modernization study. This section will then be updated.

Milestones/Deliverables	Target Date
Selection of Vendor	1Q FY2014
Hardware and Software Installation/Establish environments	2Q FY2014
Analysis	2Q FY2014
Software Development	2Q FY2015
Implementation	4Q FY2015

## Section 5. Project Evaluation

The Business Case Workbook is completed as part of this section. Once completed, the Business Case Workbook evaluation factors are summarized in this section.

### 5.1 Statutory Fulfillment

*Describe the direct and derived mandate(s) related to the project and cite reference(s) for federal and state statutes, rules, and regulatory requirements. Describe any penalties or funding losses.*

Mandates Related to Project	Statutory Citations	Penalties/Funding Losses
Data Center Consolidation	HB 1516 – 79 <sup>th</sup> Legislature	
Texas Natural Resources Code	Chapters 81,85-89, 91	
Texas Water Code		
Safe Drinking Water Act		
42 U.S.C. 300th		
42 U.S.C. 6926		

### 5.2 Strategic Alignment

*Identify titles of strategic plans the project addresses, including the State Strategic Plan for Information Resources Management, agency strategic plan, and any other applicable plans. Cite the specific goals and objectives in each plan that are related to the project. Describe the relationship of the project to each of the plans based on how the project aligns and meets the goals and objectives cited in the strategic plans.*

Plan	Goals/Objectives	Relationship to Project
RRC Strategic Plan – Fiscal Years 2013 - 2017	All Goals	Continued availability of mission critical computing resources supporting the efficient delivery of services. Increase efficiency in providing public access to information and provide more efficient interaction with regulated industries.
State Strategic Plan for Information Resources Management	P3 – Data Sharing P4 – Infrastructure P5 – Legacy Applications	The project will improve the usability of the Data. Updating the Geographic Information System (GIS) technical environment to current technology will address the “Connect” guiding principal by allowing improvements to methods of gaining access to GIS data. The legacy GIS applications will be updated.

### 5.3 Agency Impact Analysis

*Summarize how the project would impact the use of technology resources at the agency level, including support of the defined architecture and standards for the agency and state.*

⇒ As a result of this project, the RRC will be able to consolidate its GIS technical infrastructure into the state data centers to achieve current supported levels of hardware and software.

### 5.4 Financial Analysis

*Using the level of detail illustrated in the instructions, describe methods used to calculate business case cost and quantitative project benefit estimates. Describe estimate factors and underlying assumptions.*

Methods: Business Case Cost Estimates	Estimate Factors/Underlying Assumptions
Programming estimates based on experience and vendor quotes. Hardware and Software costs based on vendor quotes.	Assumption: Vendor has experience with projects of similar size and scope.
Methods: Agency and Constituent Quantitative Project Benefits	Estimate Factors/Underlying Assumptions
Agency efficiencies gained based on experience	Assumption: Business process analysis identified potential savings through gains in efficiency.

### 5.5 Initial Risk Consideration

*Identify each additional initial risk and rate it consistent with the instructions provided in the Business Case Workbook Evaluation Factor worksheet. These are initial risks that were not already identified in the Evaluation Factor worksheet.*

Risk	Rating
Resources leaving the project.	3
Scope changes. Plans are in place to manage this risk.	5

### 5.6 Alternatives Analysis

*Describe alternative options, including the option of not implementing any project at all and at least one non-selected project option. State the reasons for not selecting each alternative. If at least one rejected alternative is not included, explain why.*

No Project (Status Quo)	Reasons For Not Selecting Alternative
	The RRC GIS hardware and software components presently installed are currently in an unsupported state.
Alternative Option	Reasons For Not Selecting Alternative

No Project (Status Quo)	Reasons For Not Selecting Alternative
Upgrade GIS technology using only state resources	The RRC has only one technical GIS resource. Based on level of effort estimates and allowing for time required to support the existing GIS applications during the upgrade effort, the length of time required to accomplish the GIS technology implementation and application remediation work would exceed two biennia. This time frame is not consistent with the RRC's approach for identifying projects that can be accomplished within a two year period.
Alternative Option	Reasons For Not Selecting Alternative

## Section 6. Project Selection

### 6.1 Methodology

*Describe the agency-developed methodology used for project selection.*

⇒ The Executive Management made recommendations to the Commissioners regarding major projects and initiatives. The Commissioners ultimately decided to approve this project, which will sustain and enhance the capability to meet the Railroad Commission mission and goals.

### 6.2 Results

*State the rationale for why the project was selected above the other alternative solutions. Cite any market research that was conducted.*

⇒ The RRC has only one technical GIS resource. Based on level of effort estimates and allowing for time required to support the existing GIS applications during the upgrade effort, the length of time required to accomplish the GIS technology implementation and application remediation work would exceed two biennia. This time frame is not consistent with the RRC's approach for identifying projects that can be accomplished within a two year period.

*Copy and paste the Summary: All Project Evaluation Factors chart to this section by completely replacing the blank chart.*

<b>Summary: All Project Evaluation Factors</b>			
<b>Line</b>	<b>Factor</b>	<b>Maximum Rating Possible</b>	<b>Rating</b>
SF	Statutory Fulfillment	35	33
SA	Strategic Alignment	45	39
IA	Agency Impact Analysis	35	31
FA	Financial Analysis - Government/Constituent	60	38
RC	Initial Risk Consideration	45	37
AA	Alternatives Analysis	30	18
	<b>Total, All Project Factors</b>	250	196

## Section 7. Glossary

*Define all terms and acronyms required to interpret the Business Case properly.*

⇒

## Section 8. Revision History

*Identify changes to the Business Case.*

## Section 9. Appendices

*Include any relevant appendices.*

⇒