SoCalGas

Final Workpaper for Line 6904 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	6904		
Segment	Palm Springs		
Inspection Type	[redacted] Tool		
Location	Riverside County		
Class	1, 2, 3		
HCA Length	0.5 miles		
Vintage	Multiple vintages from [redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	~~515,202~~ 713,118	~~847,774~~ 1,089,586	~~1,362,976~~ 1,802,703

Final Workpaper for Line 6904 [redacted] TIMP Project

B. Maps and Images

Figure 1: Satellite Image of Line 6904 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6904 [redacted] TIMP Project for Inspection using [redacted].
   a. [redacted] using two temporary launcher and receiver sites on Line 6904 in Palm Springs.
   b. The Project utilized one existing [redacted] and required installation of a new [redacted] to facilitate the [redacted].
   c. The Project utilized an existing [redacted] and installed a new [redacted] [redacted] to facilitate the [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using [redacted], Direct Examination was done on a validation spool piece. It was determined that no additional Direct Examination sites were required for validation.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the spool piece following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using [redacted].

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
6904	0.8 mi	[redacted]	[redacted]	[redacted]	Yes

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 6904 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project consisted of Inspection of Line 6904 using two temporary launcher and receiver sites used for [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized a [redacted] technology during the Inspection of the pipeline.
6. Inspection Retrofits: The Project required installation of a new [redacted] and a new [redacted] to facilitate the [redacted]

7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
8. Customer Impacts: The Project required partial curtailment for two customers in the project vicinity during the [redacted] Inspection.
9. Community Impacts: No identified impacts.
10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
11. Environmental: The Project required a pre-construction biological survey for the Inspection.
12. Permit Restrictions: The Project required a Fugitive Dust Control Plan Permit from the South Coast Air Quality Management District.
13. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) for a nearby laydown yard. Excavations for the Project were completed within company Right of Way (ROW).
14. Constructability:
    a. The Project Team considered pipeline accessibility based on a previous ILI and installed an additional [redacted] to complete the Inspection from both the North and South extents.
    b. The Project required an unexpected isolation of Line 6904 due to a damaged sleeve at one of the temporary launcher and receiver sites.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas completed the Direct Examination for the Line 6904 [redacted] TIMP Project using a validation spool piece and it was determined that no additional Direct Examination Sites were required for validation.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examination of the validation spool piece to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Figure 2: New valve installation with concrete supports

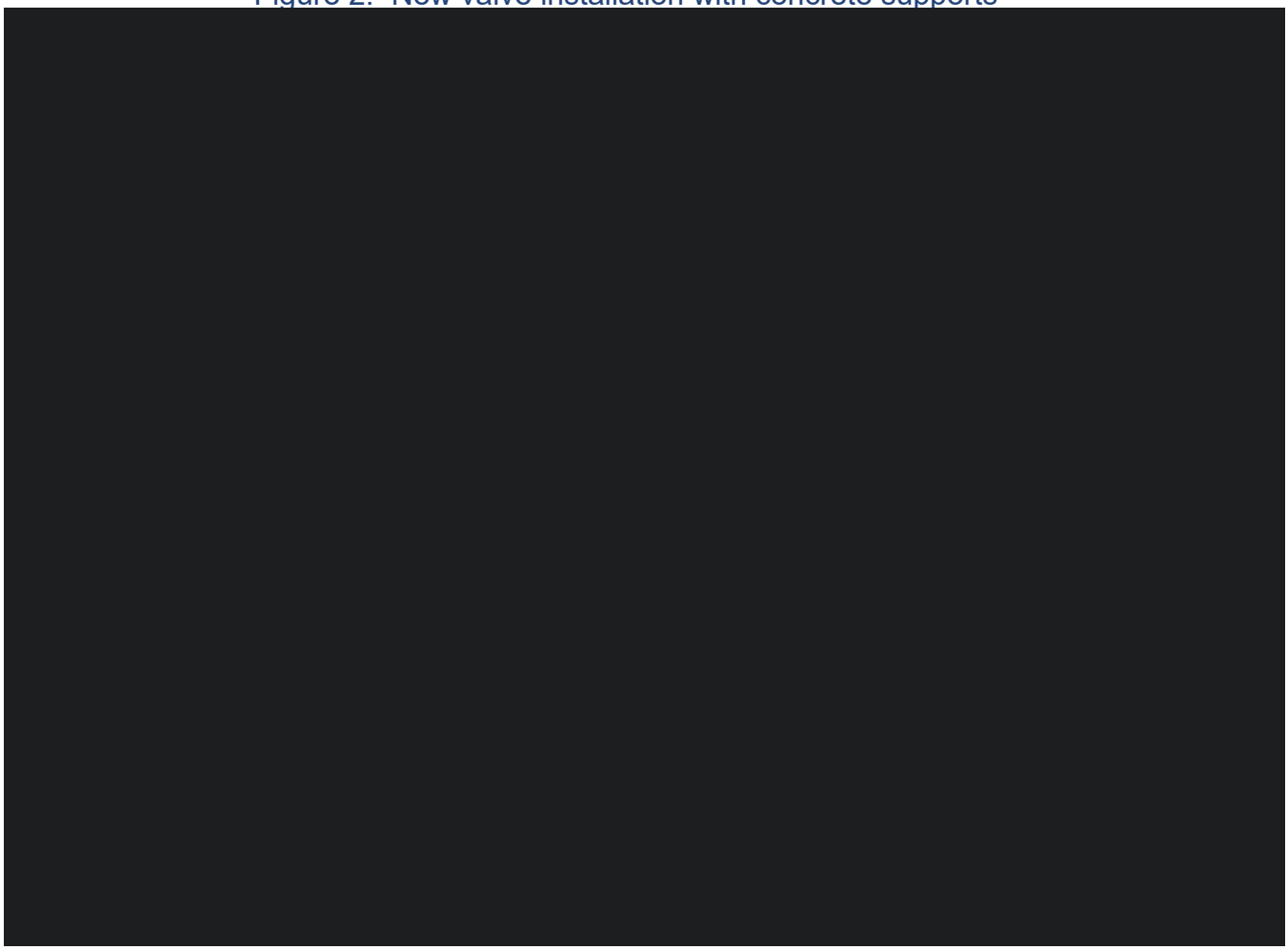
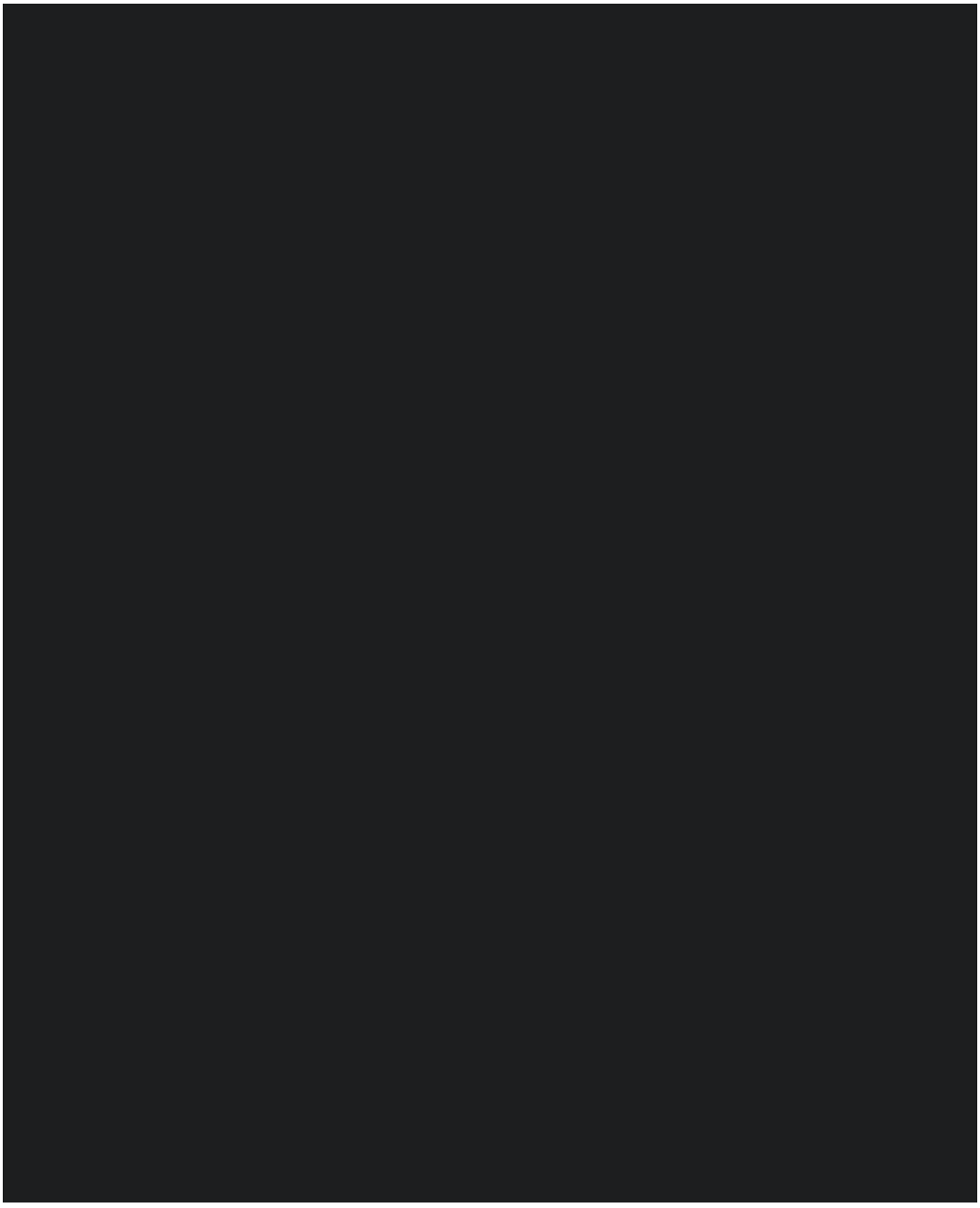
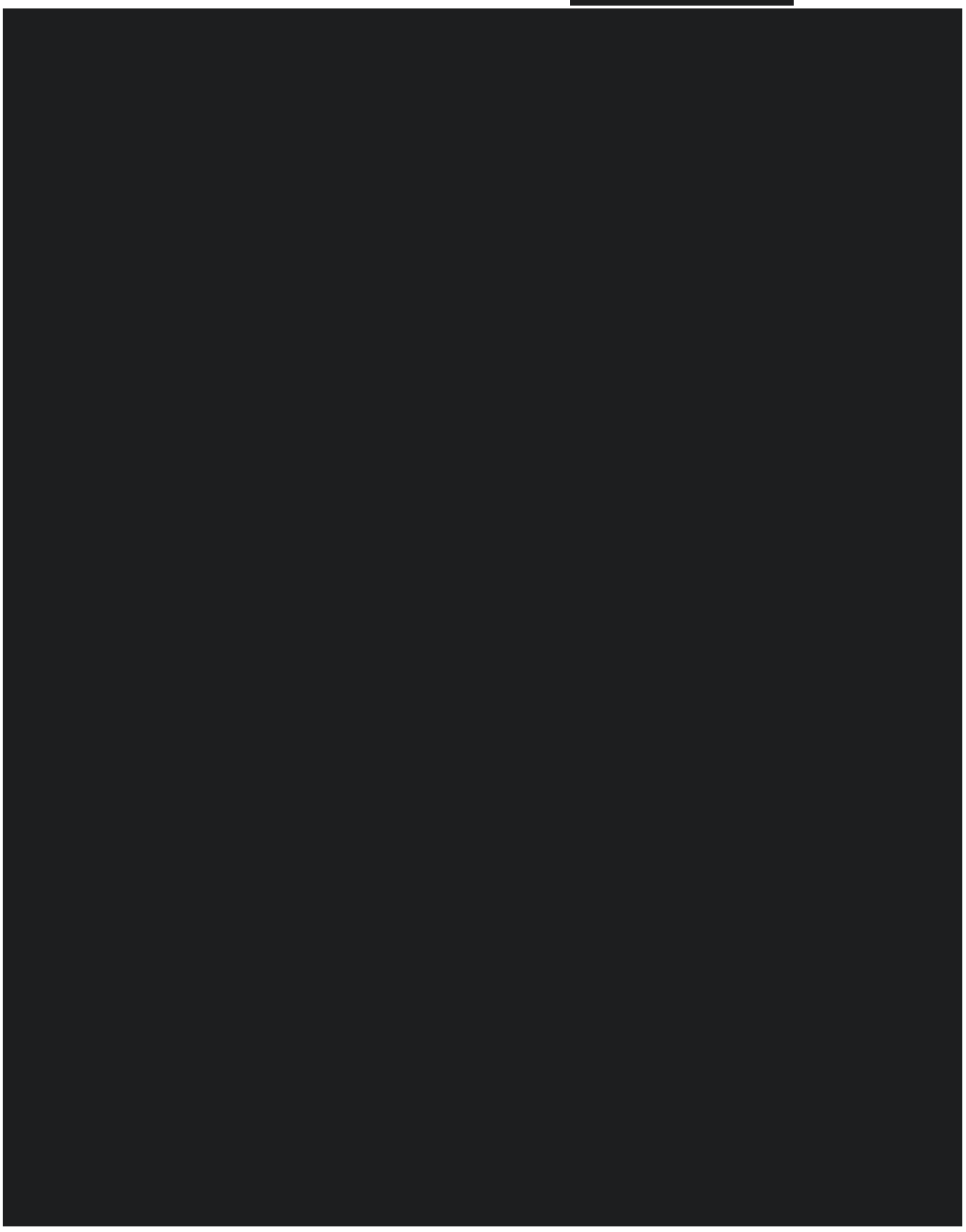


Figure 3: Tapping Unit for New valve installation



Final Workpaper for Line 6904 [redacted] TIMP Project

Figure 4: Tool Launcher and [redacted]



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

Final Workpaper for Line 6904 [redacted] TIMP Project

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the ~~Project is $1,362,976~~ $1,802,703.

Table 4: Actual Direct Costs[2]

~~Direct Costs ($)~~	~~Capital Costs~~	~~O&M Costs~~	~~Total Actual Costs~~
~~Company Labor~~	~~20,464~~	~~143,577~~	~~164,041~~
~~Contract Costs~~	~~238,493~~	~~129,530~~	~~368,023~~
~~Material~~	~~103,733~~	~~16,519~~	~~120,252~~
~~Other Direct Charges~~	~~57,523~~	~~457,930~~	~~515,454~~
~~**Total Direct Costs**~~	~~420,213~~	~~747,556~~	~~1,167,770~~

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	24,716	150,119	174,835
Contract Costs	425,082	426,733	851,815
Material	87,168	16,431	103,598
Other Direct Charges	53,675	370,951	424,626
Total Direct Costs	590,641	964,234	1,554,875

Table 5: Actual Indirect Costs[3]

~~Indirect Costs ($)~~	~~Capital Costs~~	~~O&M Costs~~	~~Total Actual Costs~~
~~Overheads~~	~~93,151~~	~~100,218~~	~~193,368~~
~~AFUDC~~	~~1,542~~	~~0~~	~~1,542~~
~~Property Taxes~~	~~296~~	~~0~~	~~296~~
~~**Total Indirect Costs**~~	~~94,989~~	~~100,218~~	~~195,207~~

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	120,666	125,352	246,017

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.

Final Workpaper for Line 6904 [redacted] TIMP Project

AFUDC	1,522	0	1,522
Property Taxes	289	0	289
Total Indirect Costs	122,477	125,352	247,829

Table 6: Total Costs[4]

~~Total Costs ($)~~	~~Capital Costs~~	~~O&M Costs~~	~~Total Actual Costs~~
~~**Total Loaded Costs**~~	~~515,202~~	~~847,774~~	~~1,362,976~~

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	713,118	1,089,586	1,802,703

[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 6904 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is ~~$1,362,976~~ $1,802,703.

End of Line 6904 [redacted] TIMP Project Final Workpaper

I. LINE 6905 [redacted] TIMP PROJECT

A. Background and Summary

Line 6905 [redacted] Transmission Integrity Management Program (TIMP) assessed a [redacted] diameter transmission line that runs approximately 31.7 miles from [redacted] The pipeline is routed across Class 1, 2, and 3 locations with 2.1 miles within High Consequence Area(s) (HCAs) and 29.6 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI). The Project was located in Boron and Adelanto. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $1,515,592.

SoCalGas

Final Workpaper for Line 6905 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	6905		
Segment	[redacted]		
Inspection Type	[redacted] ILI Tool		
Location	Boron and Adelanto		
Class	1, 2, 3		
HCA Mileage	2.1 miles		
Vintage	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start	[redacted]		
Construction Completion	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	1,515,592	1,515,592

B. Maps and Images

Figure 1: Satellite Image of Line 6905 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6905 for Inspection using ILI.
   a. ILI from a permanent launcher site within [redacted] to a permanent receiver site within [redacted].
   b. Installation of temporary receiver piping and a filter separator.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, Direct Examination sites were identified for validation and will be addressed after 2023.
3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of any future Direct Examinations will be used to determine if additional examinations are required.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
6905	31.7 mi	[redacted]	[redacted]	[redacted]	No

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 6905 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project completed the Inspection of the pipeline from a permanent receiver site at [redacted] to a permanent receiver site at [redacted]
2. HCA Threats:
   [redacted]
3. Pipe Vintage: [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized a combination tool with [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.

7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: This Project occurred within habitat known to be occupied by the desert tortoise. Biological monitoring was required to escort vehicles and equipment to [redacted]. All tool tracking vendors driving the Right of Way (ROW) during ILI operations required a biological escort.
11. Permit Restrictions: No identified impacts.
12. Land Use: No identified impacts.
13. Traffic Control: The Project Team did not identify any traffic control needs at the site.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, complete various site evaluations, and communicate with project stakeholders. Following the completion of the Inspection using ILI, Direct Examination sites were identified for validation and will be addressed after 2023.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team will use the data collected from the Inspection and future Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis will be used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Figure 2: Receiver and Temporary Piping

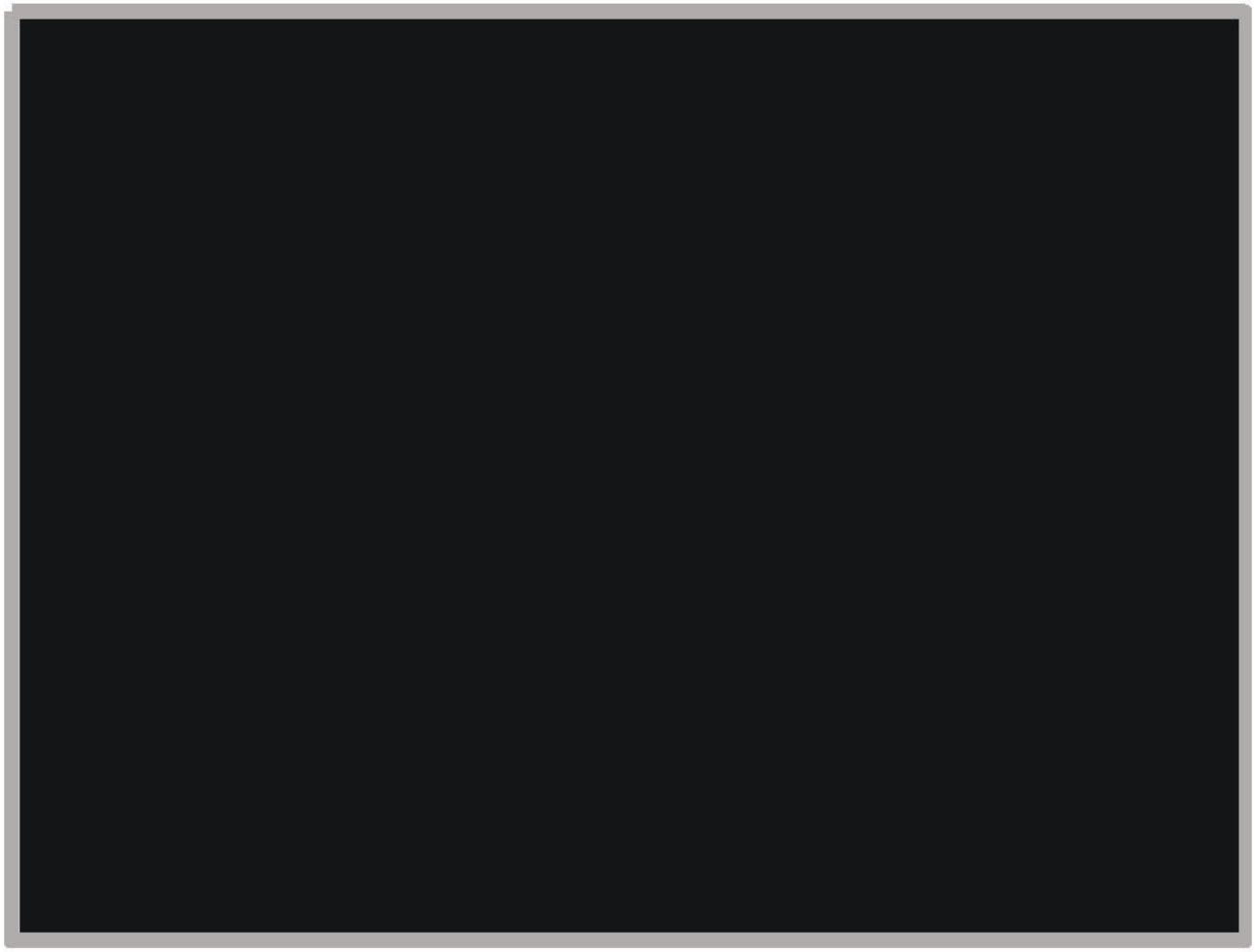


Figure 3: Launcher

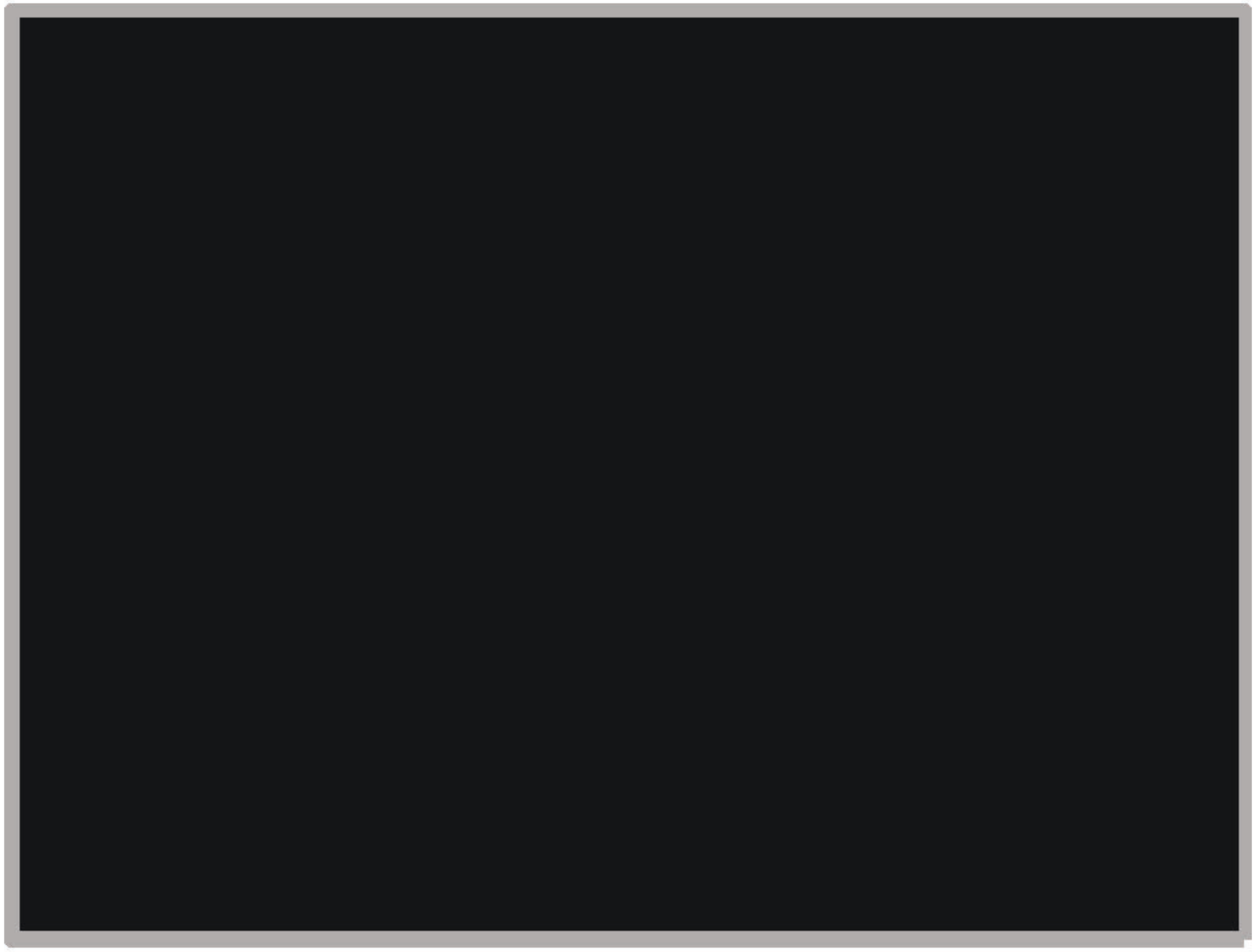
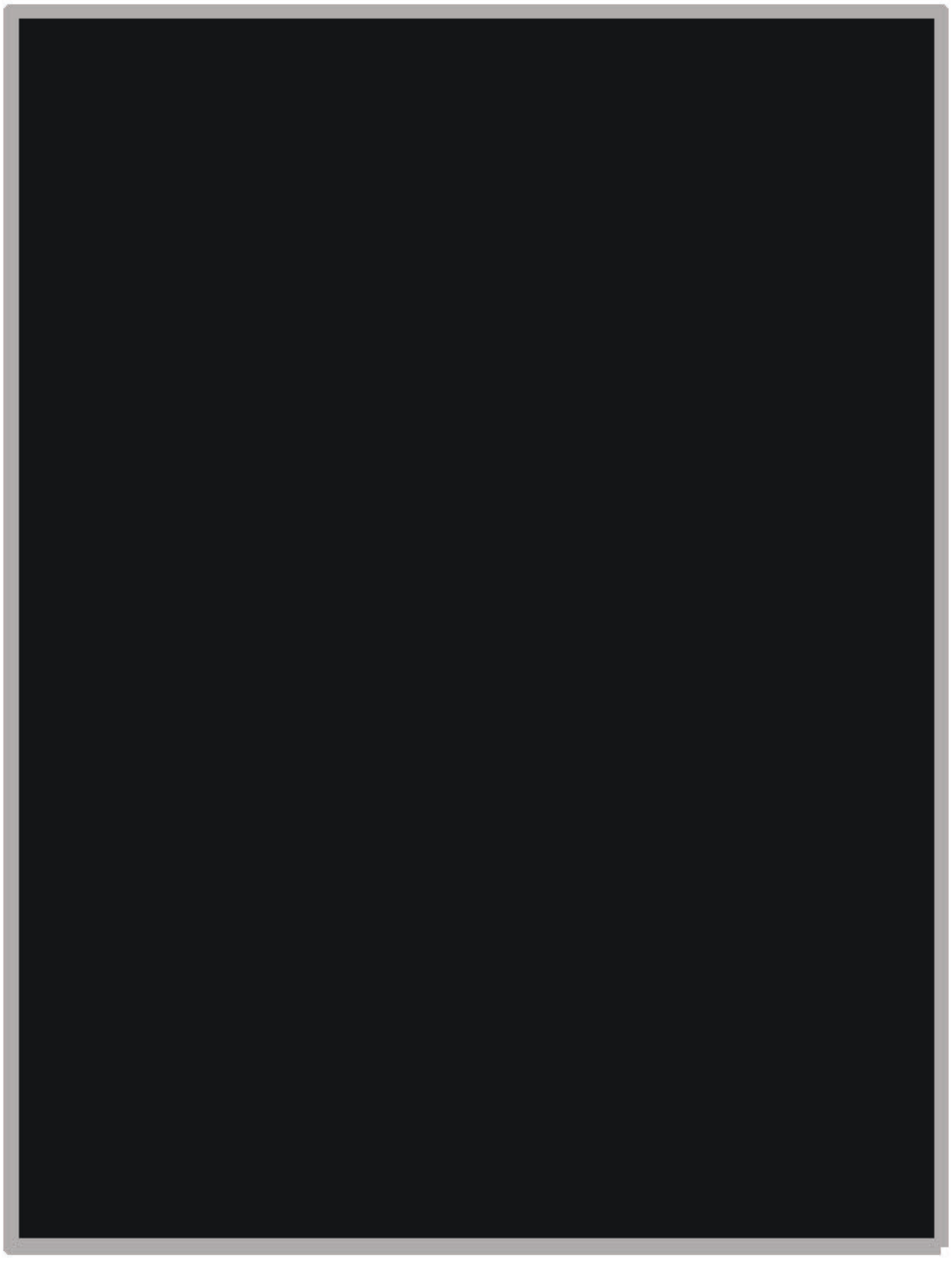


Figure 4: Launcher Temporary Piping



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $1,515,592.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	184,282	184,282
Contract Costs	0	727,363	727,363
Material	0	84,815	84,815
Other Direct Charges	0	341,866	341,866
Total Direct Costs	0	1,338,326	1,338,326

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	177,267	177,267
AFUDC	0	0	0
Property Taxes	0	0	0
Total Indirect Costs	0	177,267	177,267

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	1,515,592	1,515,592

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 6905 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $1,515,592.

End of Line 6905 [redacted] TIMP Project Final Workpaper

I. LINE 6905 PHASE 1 [redacted] TIMP PROJECT

A. Background and Summary

Line 6905 Phase 1 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 32 miles from [redacted], through desert locations. The associated In-line Inspection (ILI) for this Project was completed under a previous General Rate Case (GRC). The pipeline is routed across Class 1, 2, and 3 locations with 2.2 miles within High Consequence Area(s) (HCAs) and 29.8 miles within non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes the Direct Examinations made to three sites. The Project was located in desert locations between [redacted]. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $1,368,932.

SoCalGas

Final Workpaper for Line 6905 Phase 1 [redacted] TIMP Project

Table 1: General Project Information

Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

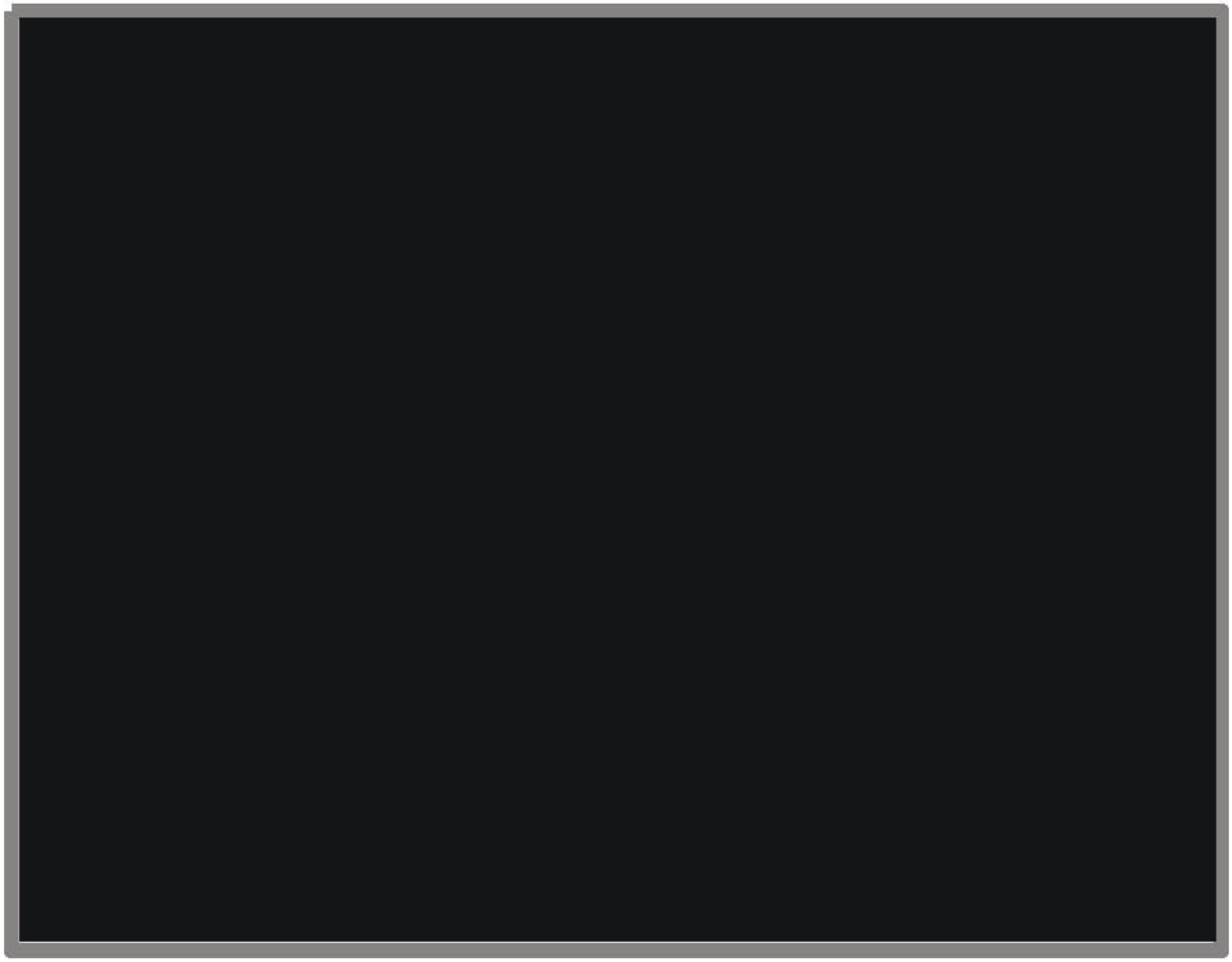
Final Workpaper for Line 6905 Phase 1 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	3		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	1,368,932	1,368,932

B. Maps and Images

Figure 1: Satellite Image of Line 6905 Phase 1 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6905 Phase 1 for Inspection using ILI, activities related to execution of the ILI were completed for this Project under a previous General Rate Case (GRC).
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, three Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes three Direct Examinations.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
6905	1	No	No	18 ft	Soft Pad	N/A	O&M
6905	2	No	No	17 ft	Soft Pad	N/A	O&M
6905	3	No	No	17 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas completed the Inspection for the Line 6905 Phase 1 [redacted] TIMP Project in a previous GRC.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Line 6905 Phase 1 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were three Direct Examination Sites selected for validation of the ILI within the Line 6905 Phase 1 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of soft pad repairs.
      ii. Direct Examination Site #2 consisted of soft pad repairs.
      iii. Direct Examination Site #3 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed various reviews of the Pipeline system to evaluate project feasibility.

a. The Project Team identified the ideal construction window for this Project, taking into consideration factors such as system capacity and timelines of neighboring projects.
b. Once the scheduled date of [redacted] was determined feasible, system analysis concluded that the Direct Examinations could be completed without system impacts.

4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: The Project required a pre-construction desert tortoise survey prior to work activities. The Project required biological monitoring with construction activity and escorting on access roads.
8. Permit Restrictions: There were no special permits or permit restrictions for this Project.
9. Land Use: The Project Team obtained a Temporary Right of Entry Agreement (TRE) from three private landowners at each of the dig sites.
10. Traffic Control: The Project Team did not identify any traffic control needs at the sites.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Dig Site #1

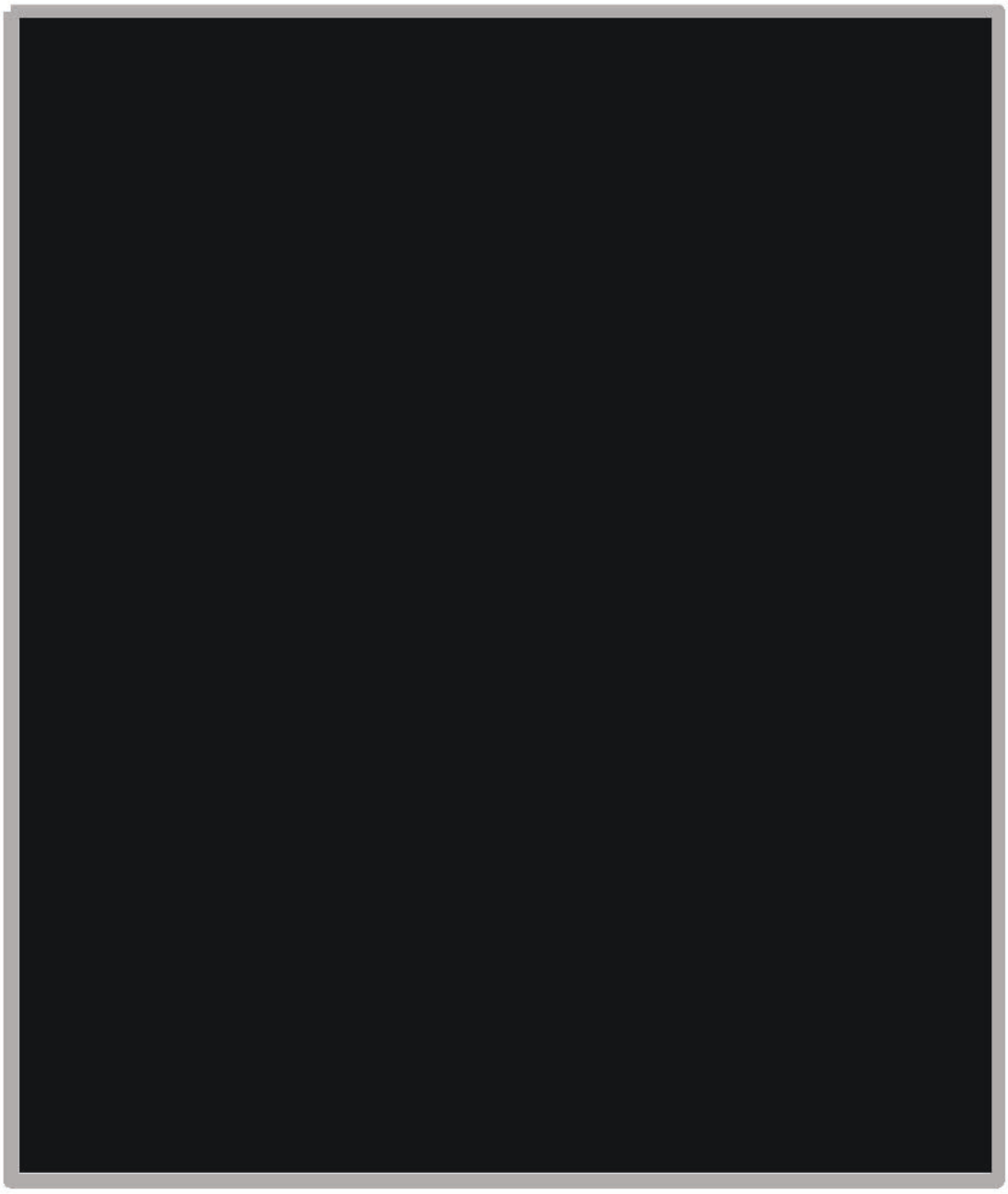


Figure 3: Dig Site #2

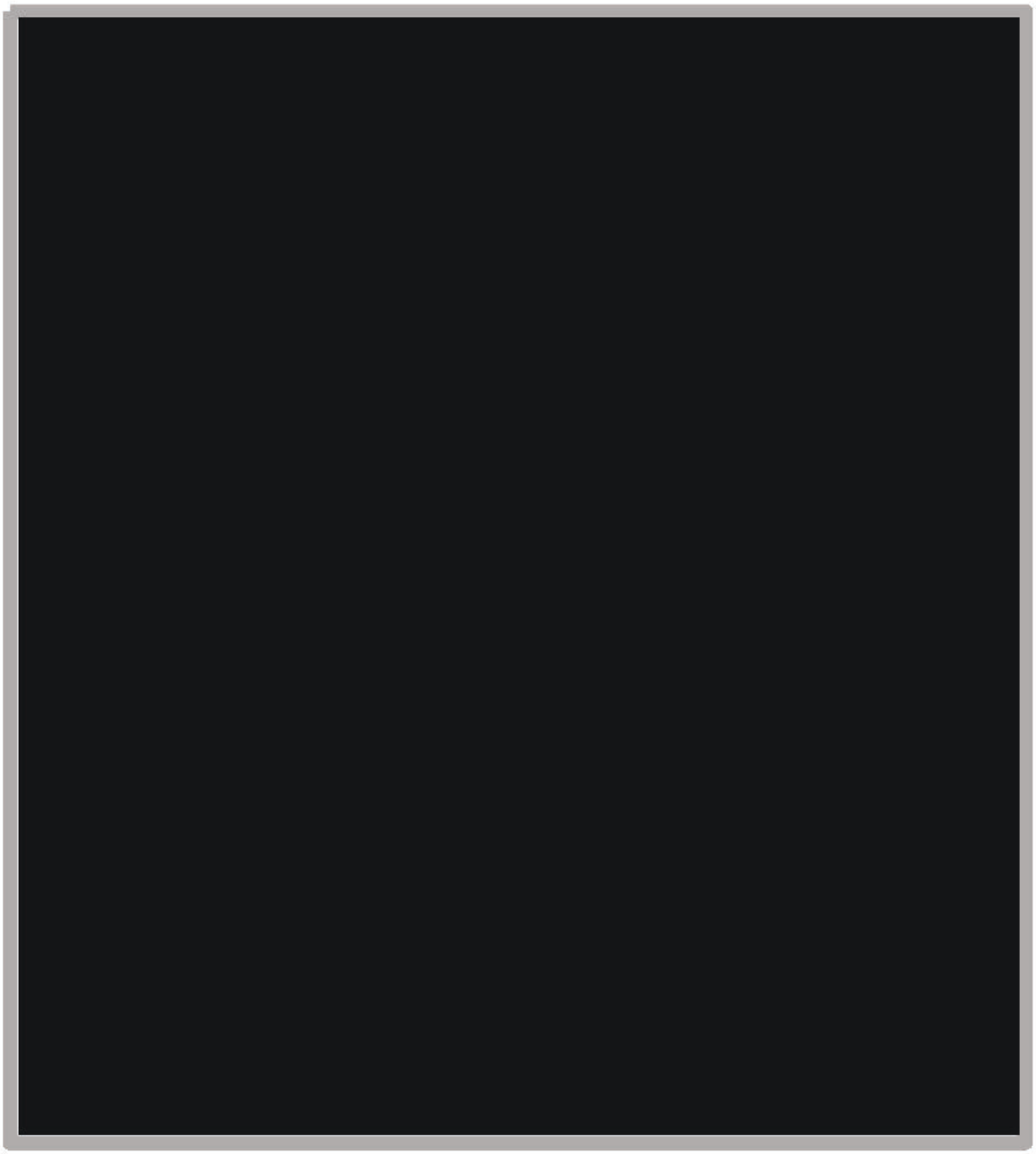
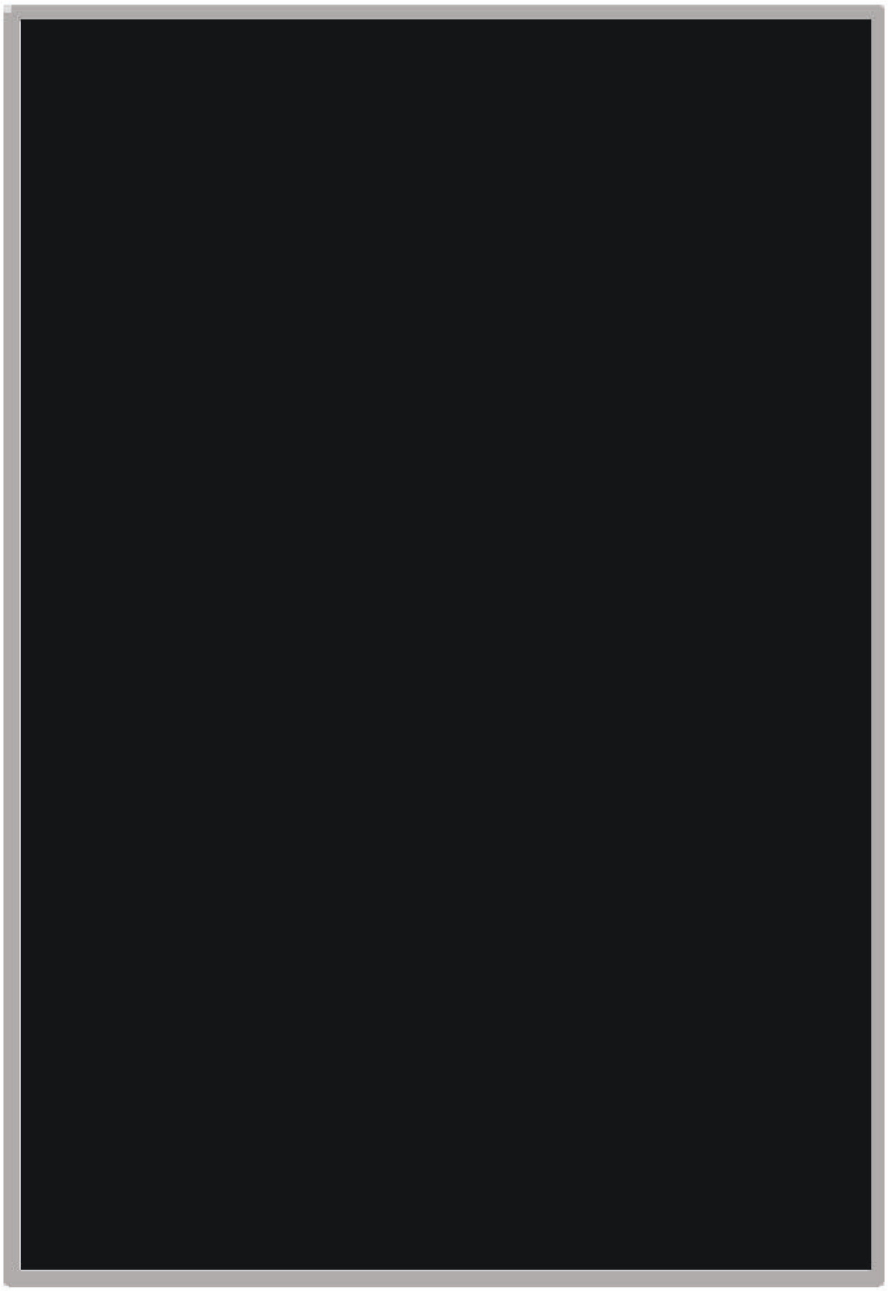


Figure 4: Dig Site #3



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $1,368,932.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	113,842	113,842
Contract Costs	0	513,913	513,913
Material	0	-10,274	-10,274
Other Direct Charges	0	620,662	620,662
Total Direct Costs	0	1,238,143	1,238,143

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	119,728	119,728
AFUDC	0	10,063	10,063
Property Taxes	0	1,448	1,448
Total Indirect Costs	0	130,789	130,789

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	1,368,932	1,368,932

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).

[2] Values may not add to total due to rounding.

[3] Ibid.

[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 6905 Phase 1 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $1,368,932.

End of Line 6905 Phase 1 2022 [redacted] TIMP Project Final Workpaper

Final Workpaper for Line 6906 and Line 6906XO1 [redacted] TIMP Project

I. LINE 6906 AND LINE 6906XO1 [redacted] TIMP PROJECT

A. Background and Summary

Line 6906 and Line 6906XO1 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a predominantly [redacted] diameter transmission line that runs approximately 18 miles from [redacted] through residential neighborhoods and commercial areas. The Project also assessed 185 feet of a [redacted] diameter transmission line in Rancho Cucamonga. The pipelines are routed across Class 1 and 3 locations, entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with the Direct Examinations made to two sites. The Project activities were located in the City of Fontana and City of San Bernardino. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $1,516,133.

SoCalGas

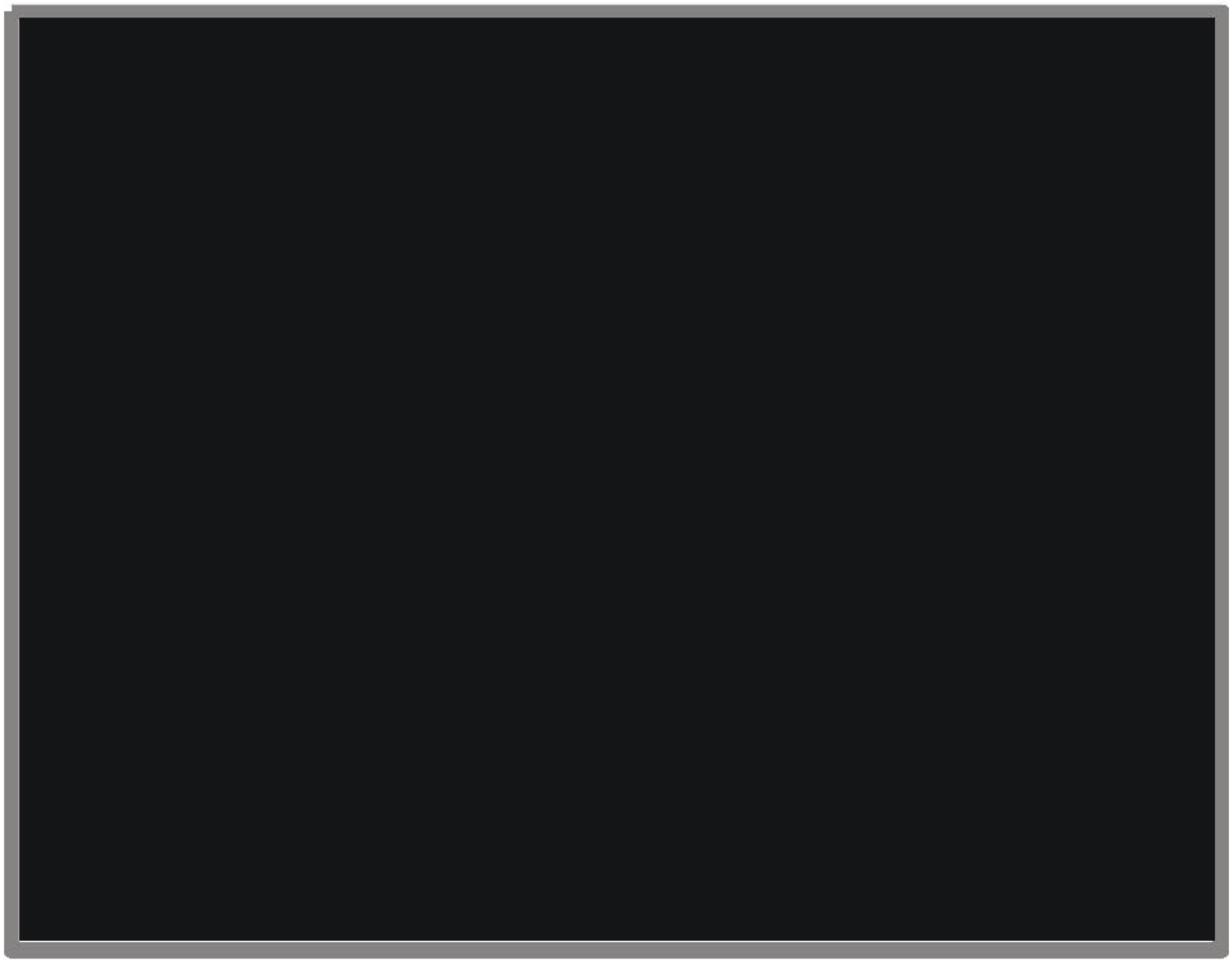
Final Workpaper for Line 6906 and Line 6906XO1 [redacted] TIMP Project

Table 1: General Project Information

Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	423,265	1,092,867	1,516,133

B. Maps and Images

Figure 1: Satellite Image of Line 6906 and Line 6906XO1 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6906 and Line 6906XO1 for Inspection using [redacted] and [redacted] activities related to the ILI were completed for this Project before the TY 2019 General Rate Case (GRC) cycle.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using ILI, two Direct Examination Sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspections resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes two Direct Examinations.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
6906	1	Yes	No	24 ft	Soft Pad	N/A	O&M
6906	2	Yes	No	20 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Planning Factors – Inspection

SoCalGas completed the Inspection for the Line 6906 and Line 6906XO1 [redacted] TIMP Project before the TY 2019 GRC cycle.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Line 6906 and Line 6906XO1 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were two Direct Examination Sites selected for validation within the Line 6906 and Line 6906XO1 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.

3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained an Encroachment Permit from the City of San Bernardino Direct Examination Site #2.
9. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) agreement to utilize private property in the City of San Bernardino near Direct Examination Site #2 as a laydown.
10. Traffic Control: The Project Team obtained an approved Traffic Control Plan (TCP) from the City of San Bernardino Direct Examination Site #2.
11. Other Identified Risks: The Project schedules for Direct Examination Site #2 were delayed due to safety requirements resulting from COVID-19.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Site #2		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct Examination Site #1

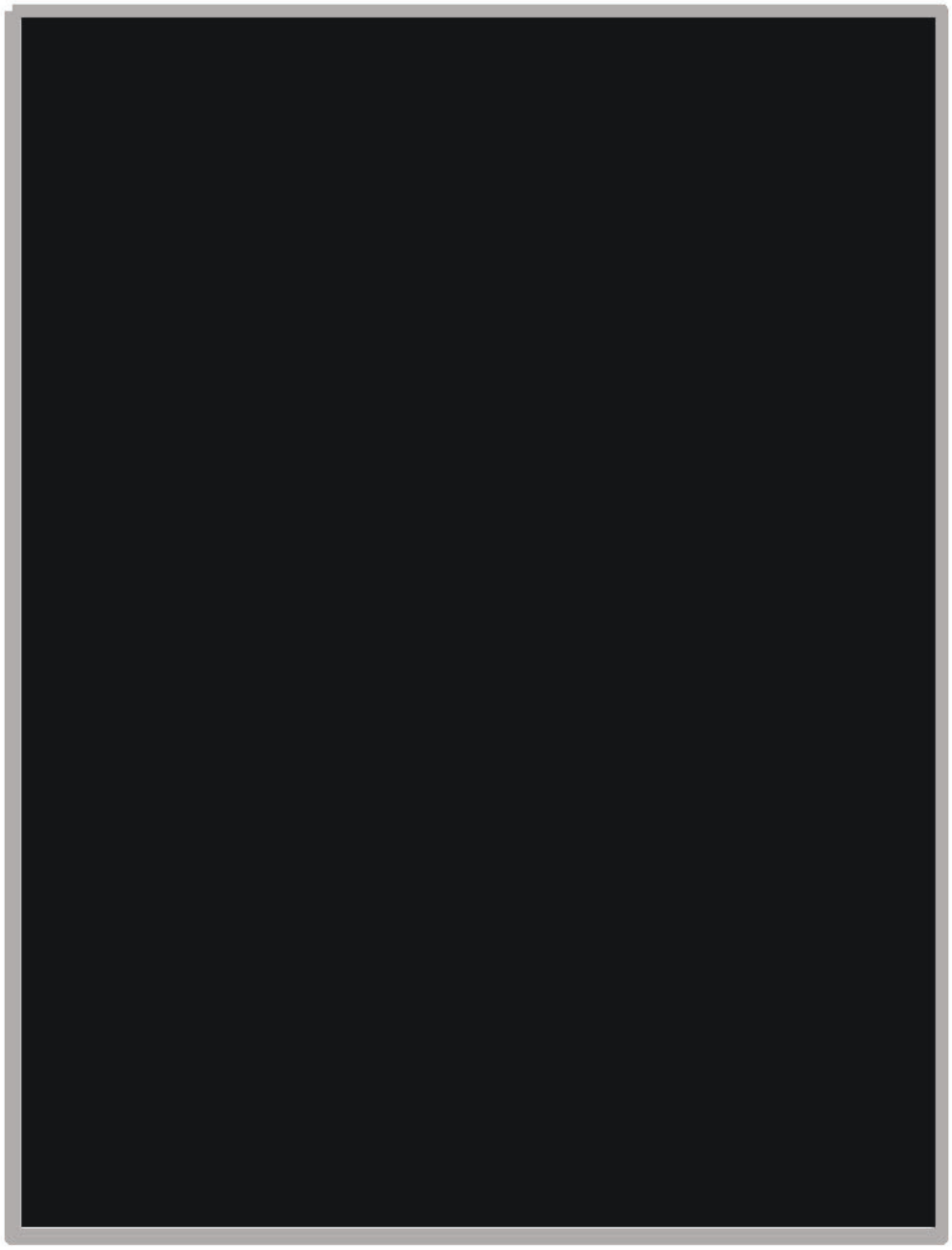
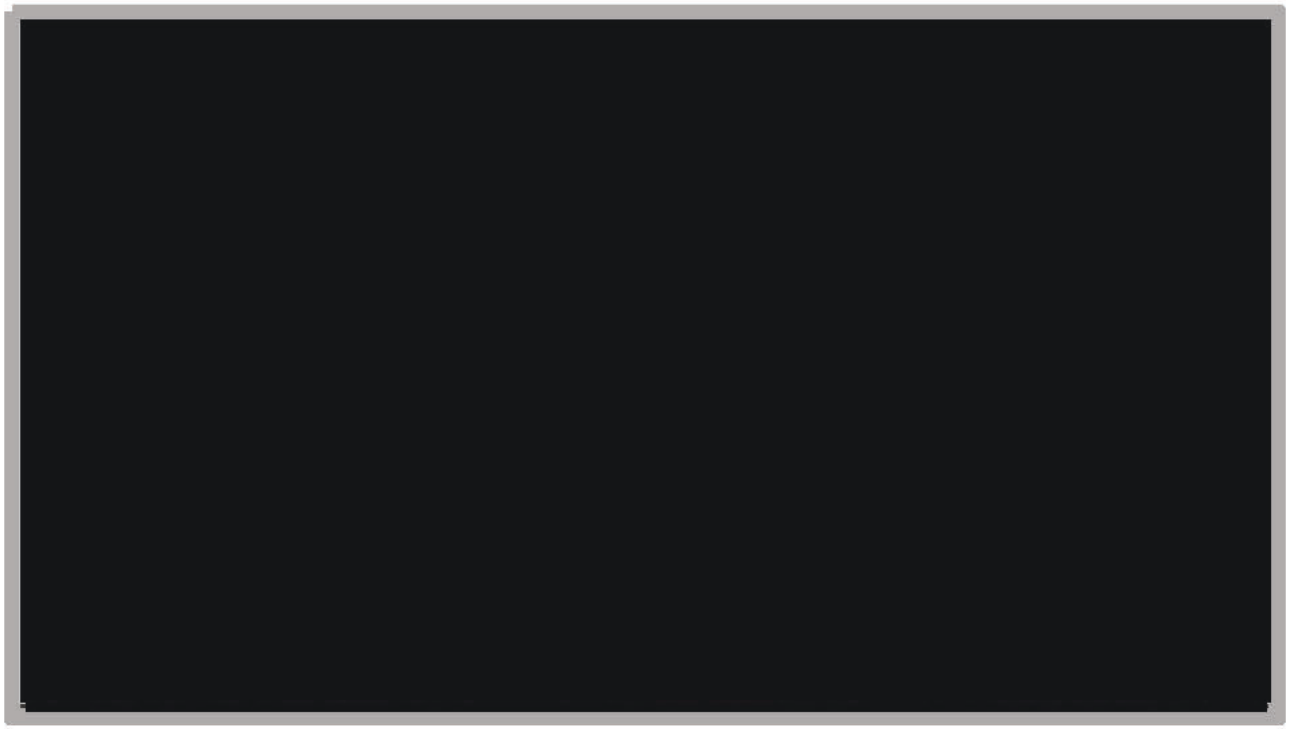


Figure 3: Direct Examination Site #2



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site, final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded Cost of the Project is $1,516,133.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	2,393	40,428	42,820
Contract Costs	318,634	598,953	917,587
Material	0	56,817	56,817
Other Direct Charges	45,940	296,047	341,987
Total Direct Costs	366,967	992,245	1,359,212

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	49,203	98,946	148,149
AFUDC	6,957	0	6,957
Property Taxes	139	1,677	1,815
Total Indirect Costs	56,298	100,623	156,921

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	423,265	1,092,867	1,516,133

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 6906 and Line 6906XO1 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $1,516,133.

End of Line 6906 and Line 6906XO1 [redacted] TIMP Project Final Workpaper

Final Workpaper for Line 6914 [redacted] TIMP Project

I. LINE 6914 [redacted] TIMP PROJECT

A. Background and Summary

Line 6914 Best Avenue Transmission Integrity Management Program (TIMP) Project assessed a multi-diameter [redacted] diameter transmission line that runs approximately 1.5 miles in Brawley, through residential neighborhoods and agricultural land. The pipeline is routed across Class 1 and 3 locations entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with a TIMP Assessment that includes Inspection using [redacted] In-Line Inspection (ILI) located in the City of Brawley. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $1,632,825.

SoCalGas

Final Workpaper for Line 6914 [redacted] TIMP Project

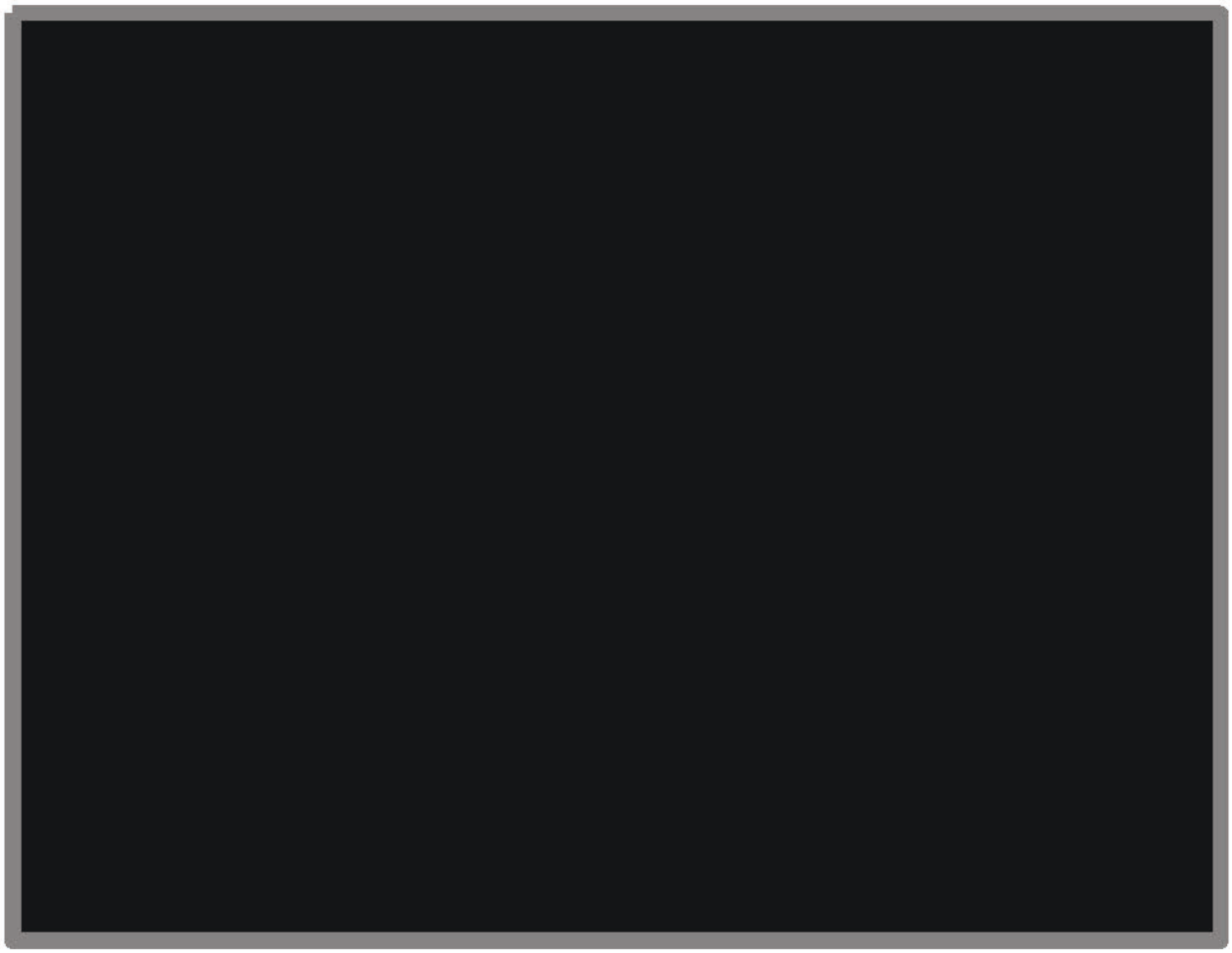
Table 1: General Project Information

Inspection Details			
Pipeline	6914		
Segment	[redacted]		
Inspection Type	[redacted] Tool		
Location	Brawley		
Class	1, 3		
HCA Length	1.5 miles		
Vintage	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	909,456	723,369	1,632,825

Final Workpaper for Line 6914 [redacted] TIMP Project

B. Maps and Images

Figure 1: Satellite Image of Line 6914 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Inspection and Post Assessment.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2, 3, 4, and 5 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6914 [redacted] for Inspection using [redacted] ILI.
   a. A [redacted] ILI was launched and received at the same temporary launcher and receiver location near the midpoint of the pipeline assessment just north of the [redacted].
   b. A permanent [redacted] and an associated concrete support were installed on the line to facilitate the [redacted] ILI.
   c. Two additional locations were excavated near each end of the assessment so that the Project Team could install [redacted] ILI while it remained within the pipeline. This allowed the Project Team to increase the distance of the run to cover the entire HCA area without installing multiple launcher and receiver locations.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using [redacted] ILI, a Direct Examination was done on a validation spool piece.

3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the spool piece following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using [redacted] ILI.

Table 2: Final Inspection Project Scope - ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
6914	1.5 mi	[redacted]	[redacted]	[redacted]	Yes

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 6914 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project is located on the east side of [redacted] and passes through Class 1 and 3 HCA locations.
2. HCA Threats:
   [redacted]
   [redacted]
3. Pipe Vintage: [redacted]
4. Long Seam Type: [redacted]

5. Inspection Tools and Technologies: The Project utilized a [redacted] capabilities during the Inspection of the pipeline.
6. Inspection Retrofits: The Project began by installing a [redacted] and three sets of [redacted] fittings along the assessed pipeline segment prior to the Inspection. These pipeline features were installed in order to facilitate the ILI. The [redacted] was used for the launcher and receiver to insert and remove the tool while the fittings allowed deployment of [redacted] technology to increase the tool Inspection distance.
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
8. Customer Impacts: The Project Team determined that customer service could be maintained to core and non-core customers by installing a [redacted] and utilizing [redacted] technology that resulted in no customer impacts.
9. Community Impacts: Traffic impacts and occasional noise.
10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
11. Environmental: No identified impacts.
12. Permit Restrictions: The Project Team obtained the following permit:
    a. City of Brawley Right of Way Permit
13. Land Use: No identified impacts.
14. Traffic Control: The Project Team required traffic control at each of the three work locations along [redacted] that included the use of Flaggers, K-Rail, barricades, signs, cones, and other measures.
15. Constructability: Large volume customer loads present on Line 6914 made [redacted] methods unfeasible. The Project Team instead utilized a [redacted] tool that can inspect the line while it is operational in order to maintain service to customers.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas completed the Direct Examination for Line 6914 [redacted] using a validation spool piece and it was determined that no additional Direct Examination Sites were required for validation.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

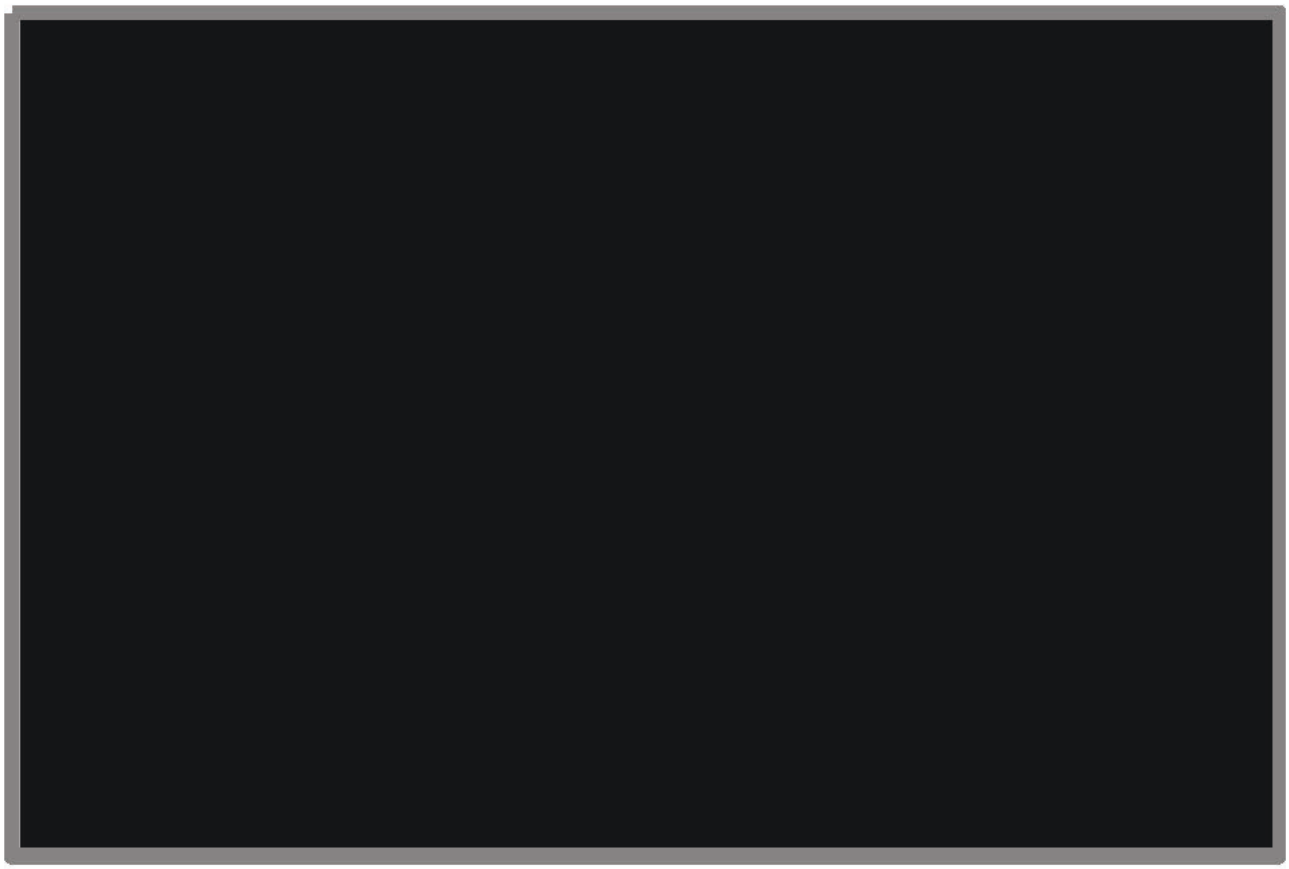
Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

SoCalGas

Final Workpaper for Line 6914 [redacted] TIMP Project

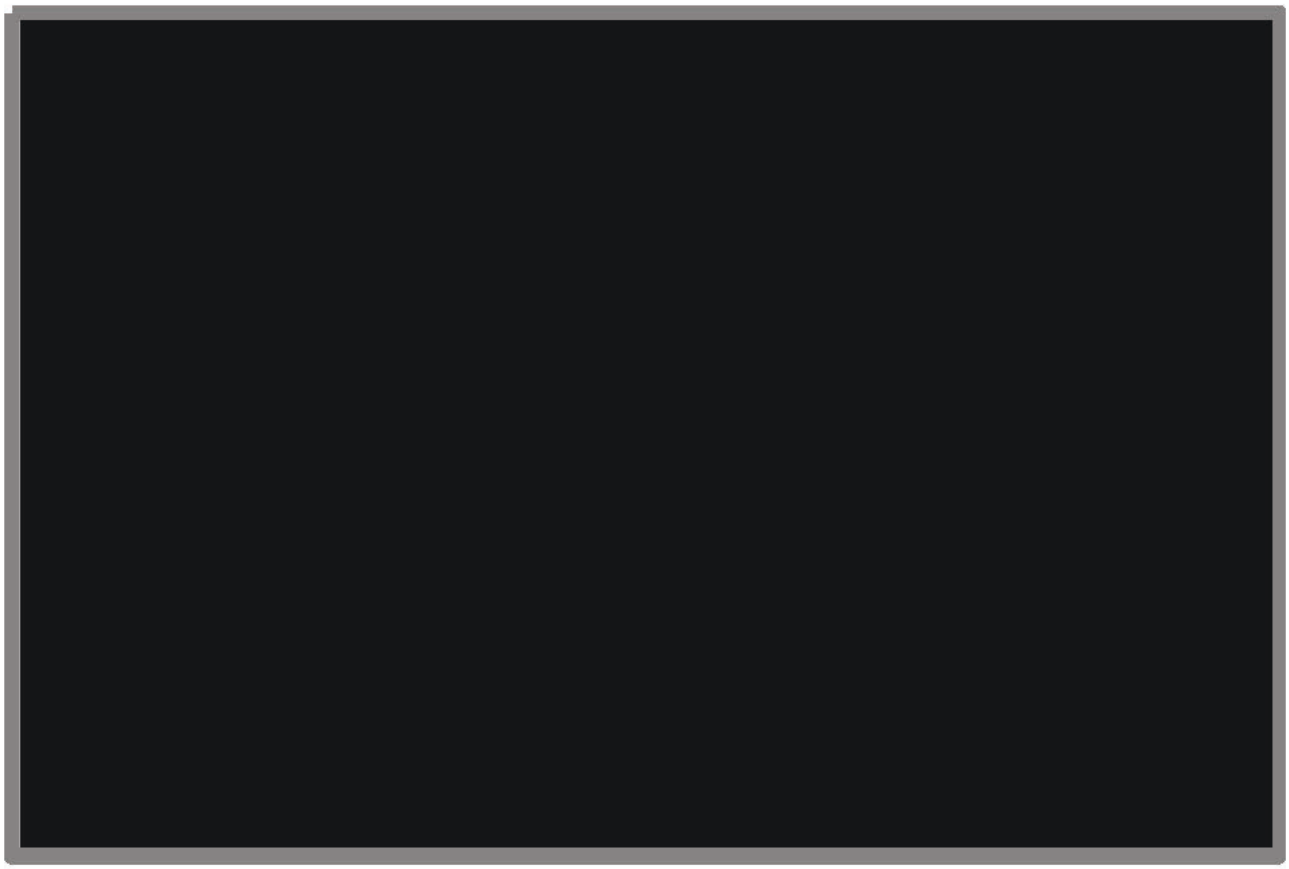
Figure 2: [redacted] In-Line Inspection Tool



SoCalGas

Final Workpaper for Line 6914 [redacted] TIMP Project

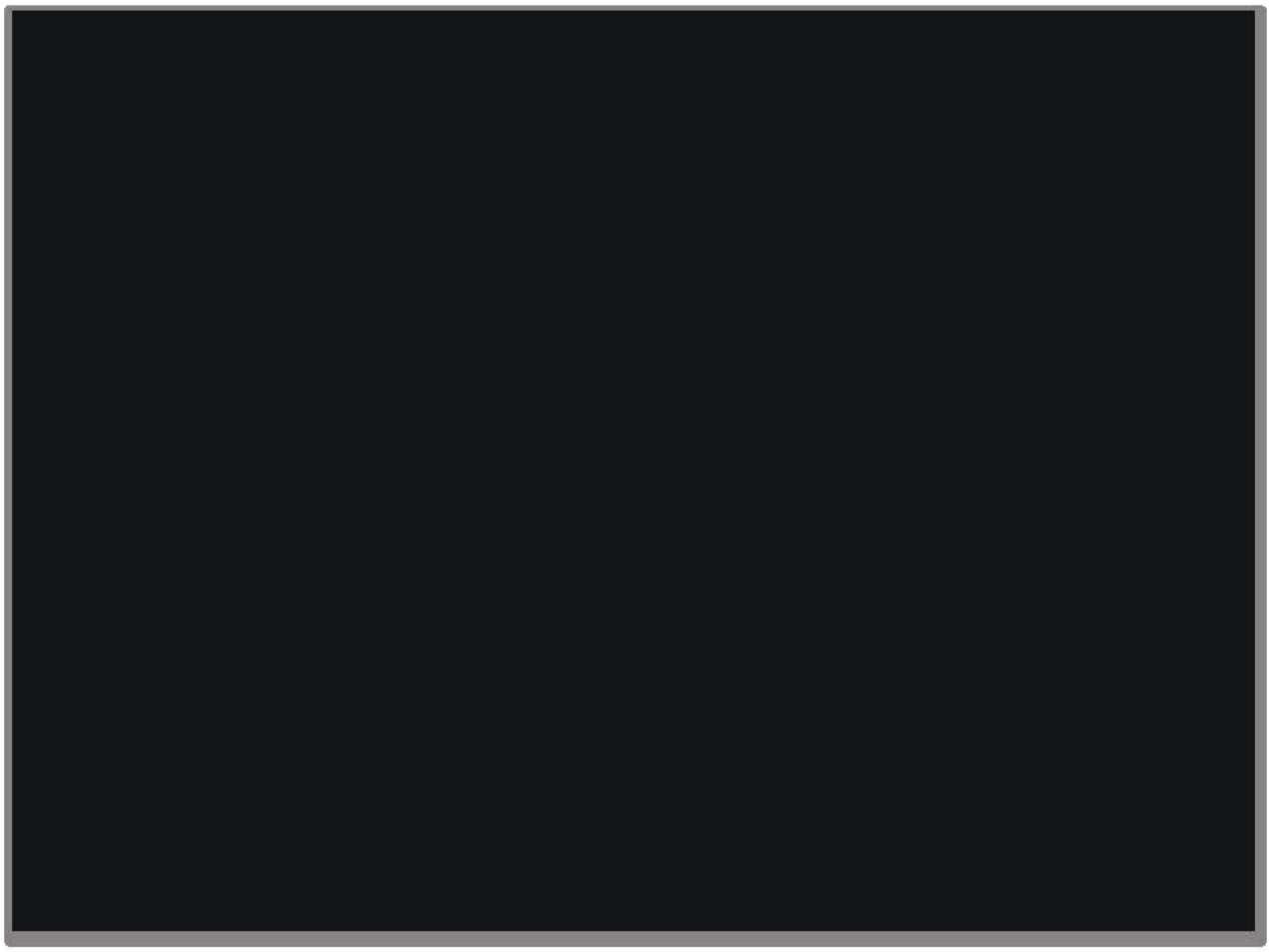
Figure 3: [redacted] Installed for In-Line Inspection Launcher/Receiver



SoCalGas

Final Workpaper for Line 6914 [redacted] TIMP Project

Figure 4: Fitting Installed for [redacted] of ILI Tool



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

SoCalGas

Final Workpaper for Line 6914 [redacted] TIMP Project

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $1,632,825.

Table 7: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	68,304	20,416	88,720
Contract Costs	655,853	495,694	1,151,547
Material	316	330	646
Other Direct Charges	63,028	165,236	228,265
Total Direct Costs	787,502	681,676	1,469,178

Table 8: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	119,936	41,585	161,521
AFUDC	1,703	95	1,798
Property Taxes	315	13	328
Total Indirect Costs	121,955	41,693	163,648

Table 9: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	909,456	723,369	1,632,825

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 6914 [redacted] TIMP Project Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $1,632,825.

End of Line 6914 [redacted] TIMP Project Final Workpaper

I. LINE 6916 PHASE 2 [redacted] TIMP PROJECT

A. Background and Summary

Line 6916 Phase 2 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 60.2 miles from [redacted]. The pipeline is routed across Class 1, 2, and 3 locations with 10.3 miles within High Consequence Areas (HCAs) and 49.9 miles within non-HCAs. This Workpaper describes the activities and costs associated with a TIMP Assessment that includes Direct Examinations made to five sites. The Project activities were located in San Bernardino County and Yucca Valley. The specific attributes of this Project are detailed in Table 1 below. The total loaded cost of the Project is $8,335,774.

SoCalGas

Final Workpaper for Line 6916 Phase 2 [redacted] TIMP Project

Table 1: General Project Information

Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	4
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

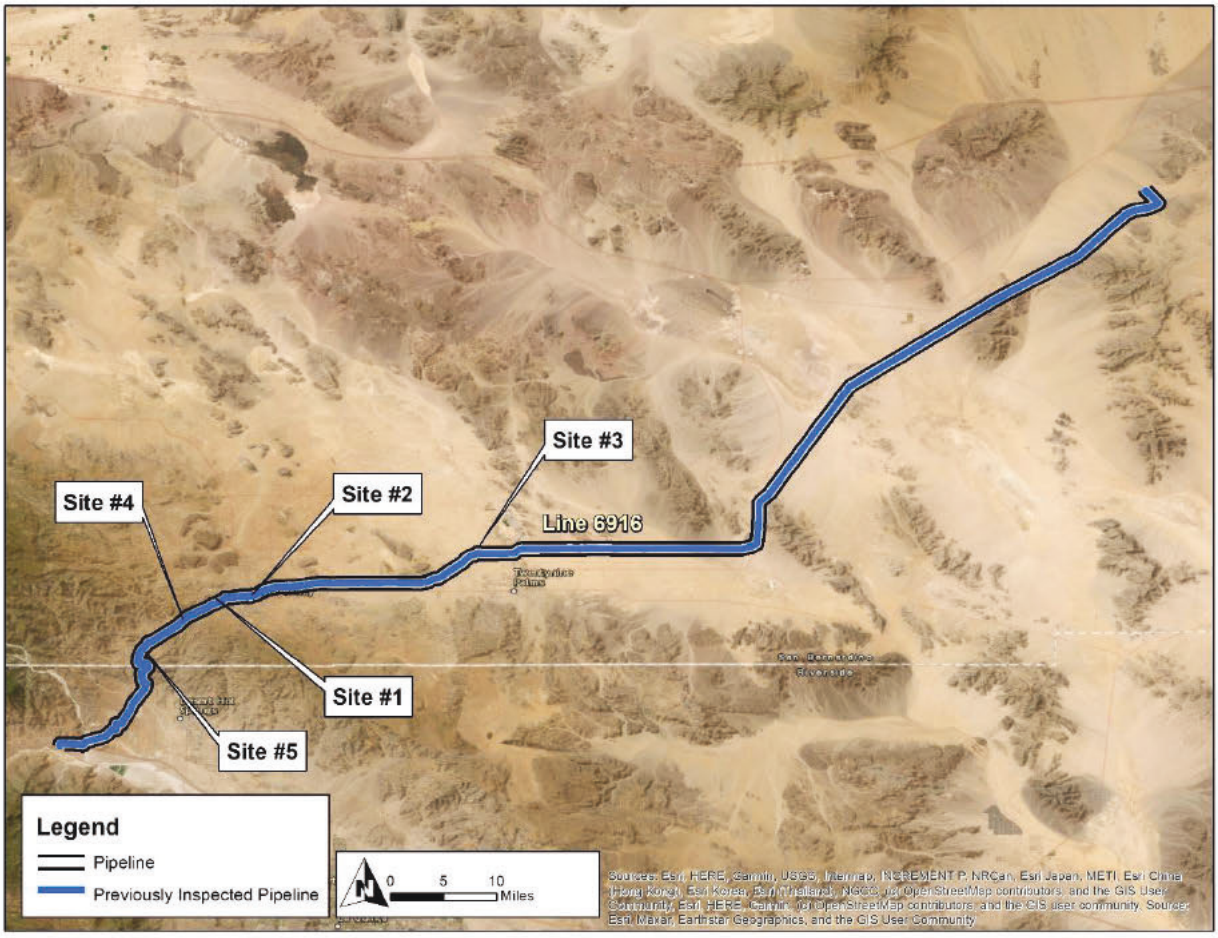
Final Workpaper for Line 6916 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	5		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	8,335,774	0	8,335,774

B. Maps and Images

Figure 1: Satellite Image of Line 6916 Phase 2 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6916 Phase 2 for Inspection using ILI, activities related to execution of the ILI were completed for this Project before the TY 2019 General Rate Case (GRC) cycle.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, 12 Direct Examination sites were identified for validation. Activities for five of the 12 Direct Examinations were completed during the TY 2019 GRC cycle.
   a. Direct Examination Site #1 consisted of Soft Pad Repairs.
   b. Direct Examination Site #2 consisted of an 18 foot Replacement.
   c. Direct Examination Site #3 consisted of a 92 foot Replacement.
   d. Direct Examination Site #4 consisted of a 95 foot Replacement.
   e. Direct Examination Site #5 consisted of Soft Pad Repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes five Direct Examinations.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
6916	1	Yes	No	52 ft	Soft Pad	N/A	Capital
6916	2	Yes	No	25 ft	Replacement	18 ft	Capital
6916	3	No	No	98 ft	Replacement	92 ft	Capital
6916	4	No	No	112 ft	Replacement	95 ft	Capital
6916	5	No	No	23 ft	Soft Pad	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas completed the Inspection for the Line 6916 Phase 2 [redacted] TIMP Project before the TY 2019 GRC cycle.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were five Direct Examination Sites selected for validation of the ILI within the Line 6916 Phase 2 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of Soft Pad Repairs.
   b. Direct Examination Site #2 consisted of an 18 foot Replacement.
   c. Direct Examination Site #3 consisted of a 92 foot Replacement.
   d. Direct Examination Site #4 consisted of a 95 foot Replacement.
   e. Direct Examination Site #5 consisted of Soft Pad Repairs.

2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: The Project Team determined that customer service could be maintained by installing a bypass to provide an alternate service to a non-core customer during construction.
5. Community Impacts: The Project had minimal community impact because most sites were in areas that did not require traffic control.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained Excavation Permits from the San Bernardino Flood Control District and San Bernardino County for Direct Examination Sites #2 and #3.
9. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) for a laydown yard and work at a golf course at Direct Examination Site #1.
10. Traffic Control: The Project Team performed traffic control for a shoulder closure at Direct Examination Site #3 as a requirement of the Excavation Permit.
11. Schedule Delay: The Project Team was required to temporarily demobilize during construction to provide resources to other high priority SoCalGas projects, delaying the completion of Direct Examination Sites #2 and #3 until resources were available.
12. Constructability: The Project Team coordinated with another SoCalGas Project to allow installation of [redacted] at Direct Examination Sites #2 and #5 to facilitate a future [redacted] of Line 6916.

D. Engineering, Design, and Constructability Factors – Post-Assessment

The Project Team used the data collected from the Inspection and Direct Examinations during the Post-Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1, #4, and #5	
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Mobilization 2: Direct Examination Sites #2 and #3	
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Figure 2: Replacement at Site #3

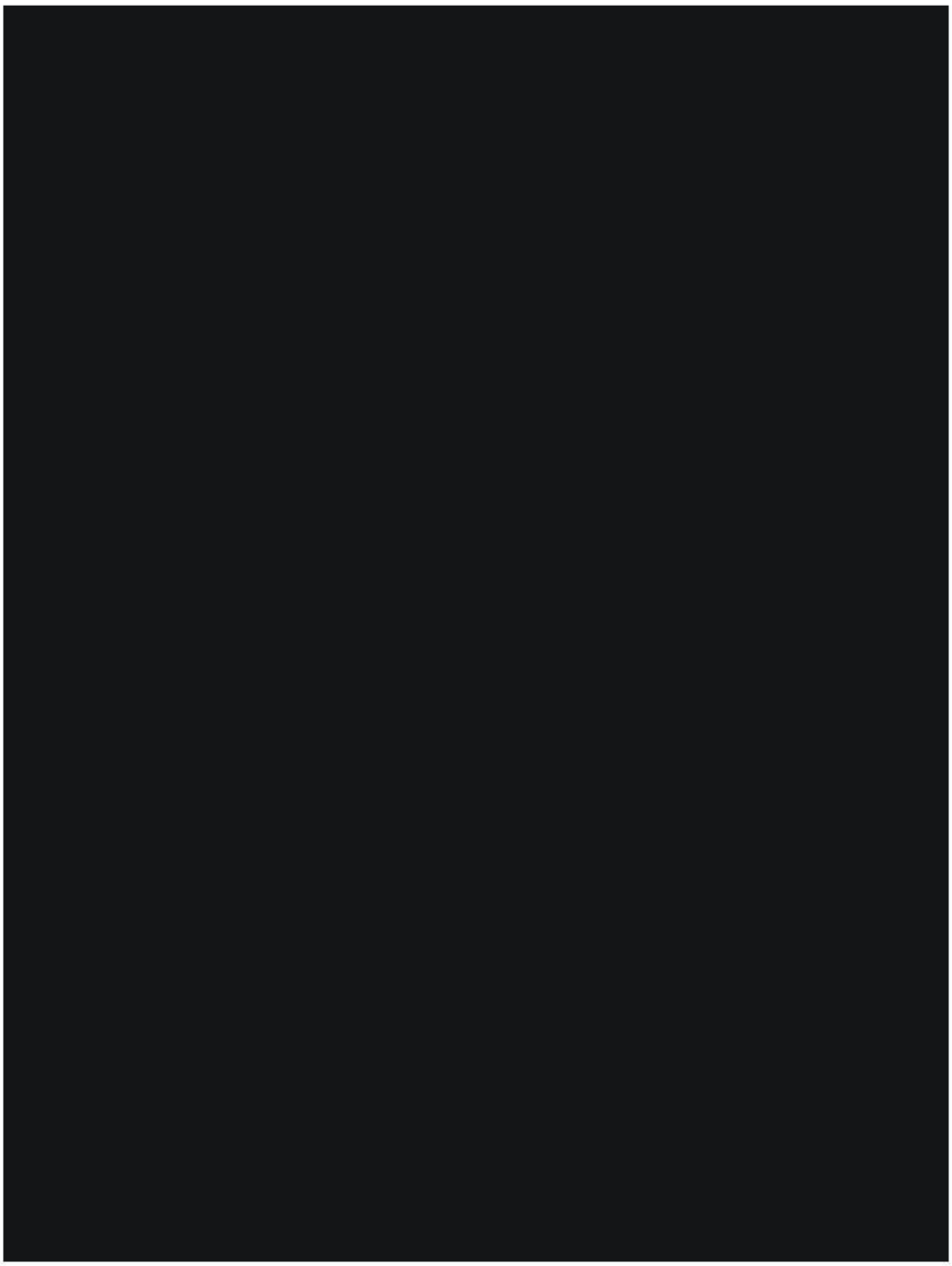
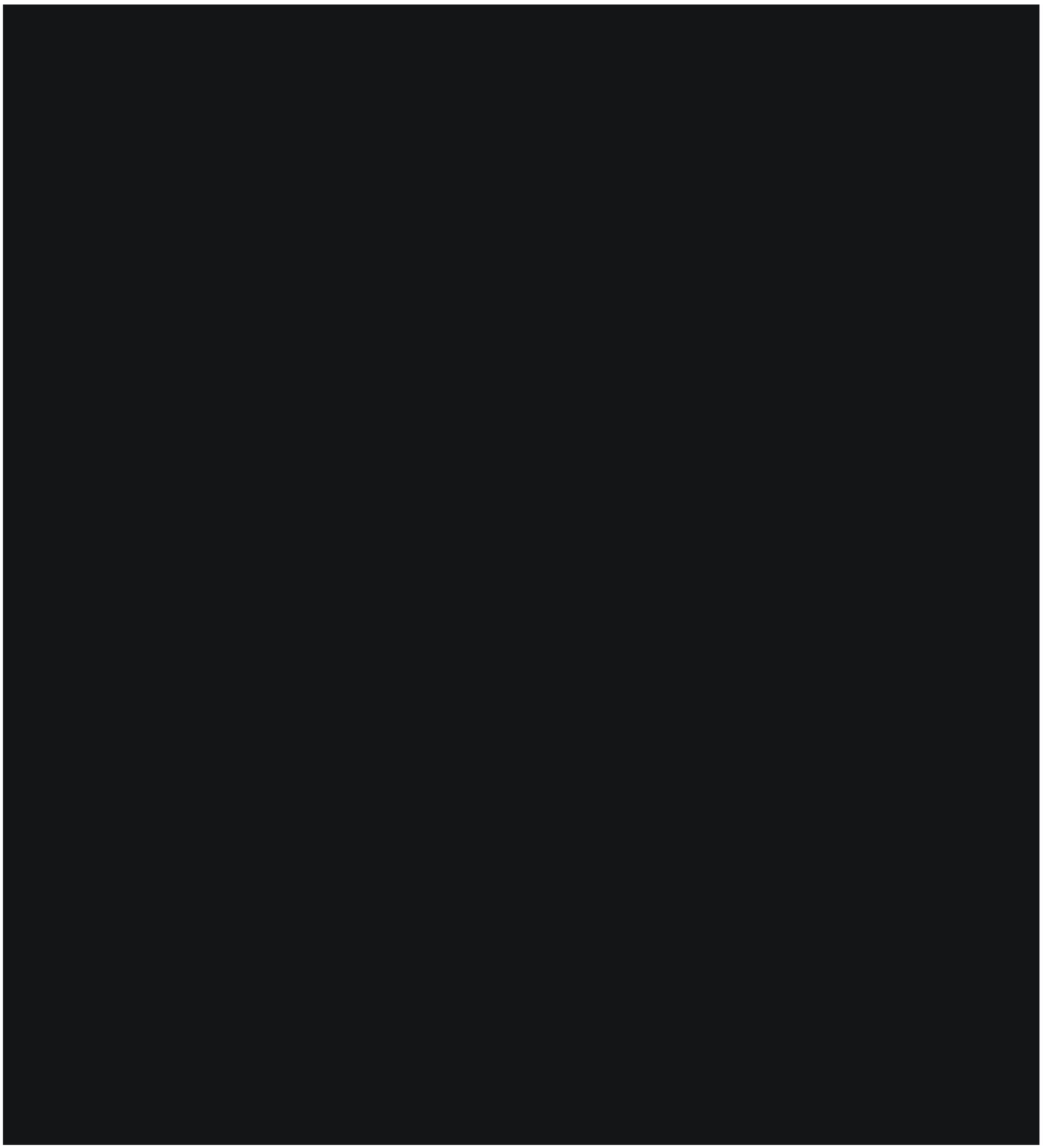


Figure 3: Pipe Removed at Site #4



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $8,335,774.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	365,522	0	365,522
Contract Costs	5,328,589	0	5,328,589
Material	170,055	0	170,055
Other Direct Charges	1,157,966	0	1,157,966
Total Direct Costs	7,022,131	0	7,022,131

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,237,024	0	1,237,024
AFUDC	54,697	0	54,697
Property Taxes	21,922	0	21,922
Total Indirect Costs	1,313,644	0	1,313,644

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	8,335,774	0	8,335,774

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of their integrated natural gas system by prudently executing the Line 6916 Phase 2 [redacted] TIMP Project. Through this Project, SoCalGas successfully implemented and managed the requirements set forth in 49 CFR 192, Subpart O to achieve the objective to continually identify threats to its pipelines, determine the risk posed by these threats, schedule and track assessments to address threats, conduct an appropriate assessment in a prescribed timeline, collect information about the condition of the pipelines, take actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and Report findings of Line 6916 in the San Bernardino County and Yucca Valley. The total loaded cost of the Project is $8,335,774.

End of Line 6916 Phase 2 [redacted] TIMP Project Final Workpaper

I. L6916 PHASE 2 [redacted] TIMP PROJECT

A. Background and Summary

Line 6916 Phase 2 [redacted] Transmission Integrity Management Program (TIMP) Project assessed covered segments (i.e. HCA) of a [redacted] diameter transmission line that runs approximately 60.2 miles from [redacted]. The pipeline is routed across Class 1, 2, and 3 locations with 10.3 miles within High Consequence Area(s) (HCAs) and 49.9 miles within non-HCAs. This Workpaper describes the activities and costs associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to 25 sites, of these sites one contained a Safety Related Condition (SRC) and 24 contained Immediate Repair Conditions (IRCs), located in the cities of Twentynine Palms, Joshua Tree, Yucca Valley, and Morongo Valley. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $40,238,912.

SoCalGas

Final Workpaper for Line 6916 Phase 2 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	6916
Segment	Phase 2 – [redacted]
Inspection Type	[redacted] tools
Location	Twentynine Palms, Joshua Tree, Yucca Valley, and Morongo Valley
Class	1, 2, 3
HCA Length	10.3 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]

SoCalGas

Final Workpaper for Line 6916 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	4
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	5
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	6
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	7
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	8
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	9
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	10
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	11
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	12
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	13
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	14
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	15
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	16
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	17
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	18
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	19
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	20
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	21
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	22
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	23
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	24
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

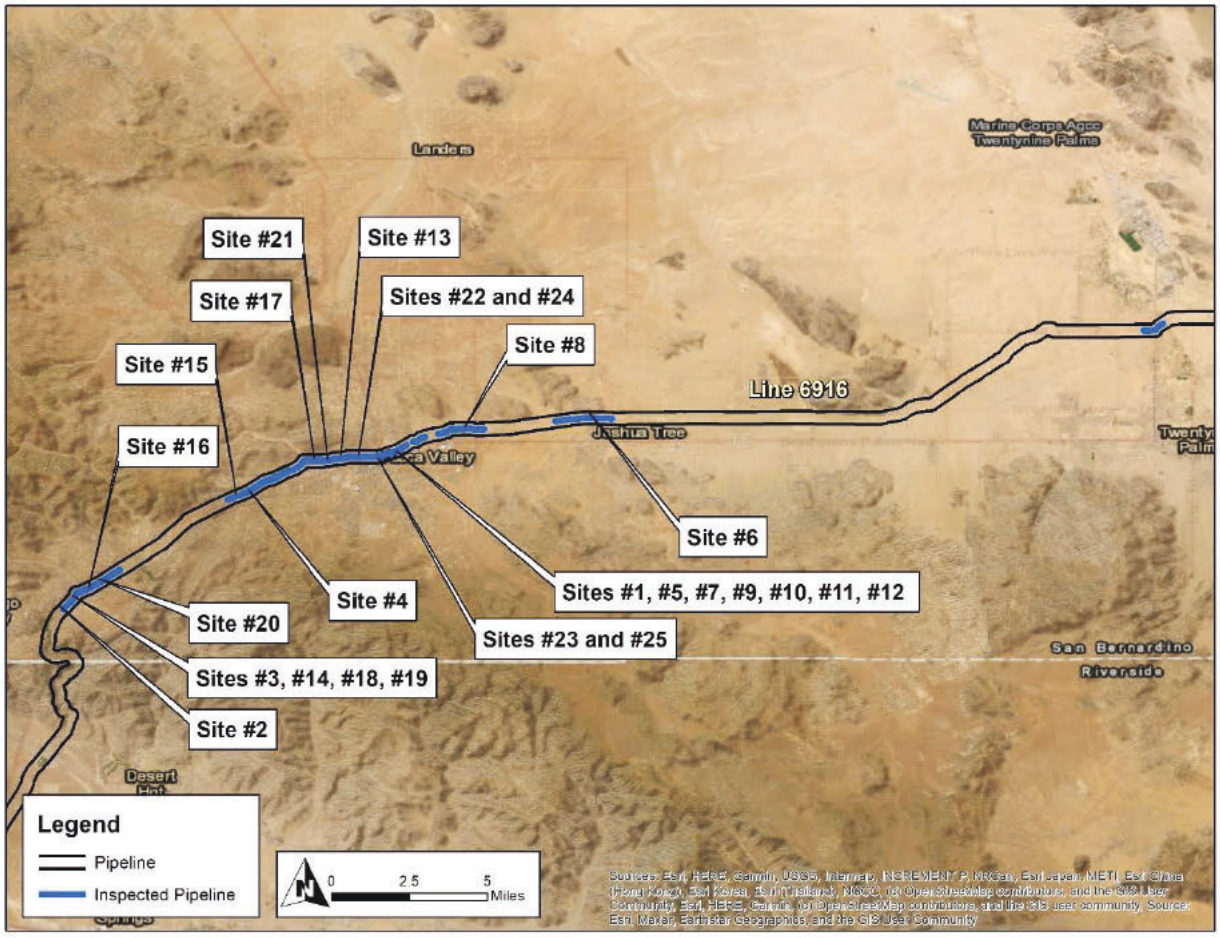
Final Workpaper for Line 6916 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	25		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Replacement		
Within HCA	Yes		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	29,190,035	11,048,877	40,238,912

B. Maps and Images

Figure 1: Satellite Image of Line 6916 Phase 2 [redacted] TIMP Project – Inspection and Direct Examinations



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspections and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 6916 Phase 2 for Inspection using [redacted]
   a. [redacted] tools were launched and received from seven separate launcher and receiver sites along L6916 from [redacted]. Due to system constraints making the use of [redacted] tools infeasible, the Project Team utilized [redacted] tools to the HCAs.
   b. The Project required the development of a new [redacted] tool to assess the longitudinal seam weld location.
   c. The Project Team installed six [redacted] and utilized one existing [redacted] to be used as entry and exit locations for the [redacted] segments.
   d. The Project Team installed 19 In-Line [redacted] to facilitate the [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using [redacted], 25 Direct Examination sites were identified for validation during this GRC cycle.
   a. Direct Examination Site #1 consisted of a 192 foot Replacement.

b. Direct Examination Site #2 consisted of a 70 foot Replacement.
c. Direct Examination Site #3 consisted of a 194 foot Replacement.
d. Direct Examination Site #4 consisted of a 42 foot Replacement.
e. Direct Examination Site #5 consisted of a 59 foot Replacement.
f. Direct Examination Site #6 consisted of a 41 foot Replacement.
g. Direct Examination Site #7 consisted of a 120 foot Replacement.
h. Direct Examination Site #8 consisted of Soft Pad Repairs.
i. Direct Examination Site #9 consisted of a 41 foot Replacement.
j. Direct Examination Site #10 consisted of a 93 foot Replacement.
k. Direct Examination Site #11 consisted of a 41 foot Replacement.
l. Direct Examination Site #12 consisted of a 41 foot Replacement.
m. Direct Examination Site #13 consisted of a Band Repair.
n. Direct Examination Site #14 consisted of a 13 foot Replacement.
o. Direct Examination Site #15 consisted of Soft Pad Repairs.
p. Direct Examination Site #16 consisted of a Band Repair.
q. Direct Examination Site #17 consisted of a 15 foot Replacement.
r. Direct Examination Site #18 consisted of a Band Repair.
s. Direct Examination Site #19 consisted of a Band Repair.
t. Direct Examination Site #20 consisted of a 41 foot Replacement.
u. Direct Examination Site #21 consisted of a Band Repair.
v. Direct Examination Site #22 consisted of a Band Repair.
w. Direct Examination Site #23 consisted of a Band Repair.
x. Direct Examination Site #24 consisted of a 15 foot Replacement.
y. Direct Examination Site #25 consisted of a 13 foot Replacement.
z. The Project identified one Direct Examination site containing a Safety Related Condition (SRC) and 24 Direct Examination sites containing Immediate Repair Conditions (IRCs).

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in additional examinations that will be addressed after 2023, outside the scope of this proceeding.
4. Final Project Scope: The final project scope of this Workpaper includes Inspections using [redacted] and 25 Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
6916	0.4 mi	[redacted]	[redacted]	[redacted]	Yes
6916	0.2 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.9 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.6 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.6 mi	[redacted]	[redacted]	[redacted]	Yes
6916	3.3 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.3 mi	[redacted]	[redacted]	[redacted]	Yes
6916	0.5 mi	[redacted]	[redacted]	[redacted]	Yes
6916	0.3 mi	[redacted]	[redacted]	[redacted]	Yes
6916	2.0 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.6 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.8 mi	[redacted]	[redacted]	[redacted]	Yes
6916	3.3 mi	[redacted]	[redacted]	[redacted]	Yes
6916	1.3 mi	[redacted]	[redacted]	[redacted]	Yes

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
6916	1	Yes	Yes	203 ft	Replacement	192 ft	Capital
6916	2	No	Yes	46 ft	Replacement	70 ft	Capital
6916	3	Yes	Yes	202 ft	Replacement	194 ft	Capital
6916	4	Yes	Yes	47 ft	Replacement	42 ft	Capital
6916	5	Yes	Yes	65 ft	Replacement	59 ft	Capital
6916	6	Yes	Yes	49 ft	Replacement	41 ft	Capital
6916	7	Yes	Yes	129 ft	Replacement	120 ft	Capital
6916	8	Yes	Yes	42 ft	Soft Pad	N/A	Capital
6916	9	Yes	Yes	47 ft	Replacement	41 ft	Capital
6916	10	Yes	Yes	87 ft	Replacement	93 ft	Capital
6916	11	Yes	Yes	46 ft	Replacement	41 ft	Capital
6916	12	Yes	Yes	46 ft	Replacement	41 ft	Capital
6916	13	Yes	Yes	42 ft	Band	N/A	Capital
6916	14	Yes	Yes	35 ft	Replacement	13 ft	Capital
6916	15	Yes	Yes	46 ft	Soft Pad	N/A	Capital
6916	16	Yes	Yes	46 ft	Band	N/A	Capital
6916	17	Yes	Yes	28 ft	Replacement	15 ft	Capital
6916	18	Yes	Yes	18 ft	Band	N/A	Capital
6916	19	Yes	Yes	58 ft	Band	N/A	Capital
6916	20	Yes	Yes	28 ft	Replacement	16 ft	Capital
6916	21	Yes	Yes	17 ft	Band	N/A	Capital
6916	22	Yes	Yes	22 ft	Band	N/A	Capital
6916	23	Yes	Yes	44 ft	Band	N/A	Capital
6916	24	Yes	Yes	44 ft	Replacement	15 ft	Capital
6916	25	Yes	Yes	22 ft	Replacement	13 ft	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 6916 Phase 2 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project addressed ten HCA segments that were each inspected using [redacted] tools. The segments included various launcher and receiver configurations along the pipeline using seven [redacted] locations and 19 [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies:
   a. The Project utilized two [redacted] tools during the Inspection of the pipeline to assess the threats identified. These tools are described below:
      i. One [redacted] tool was outfitted with [redacted] technology and the other tool included [redacted] technology.

[redacted]

ii. Another [redacted] tool was outfitted with [redacted] technology and was the first of its kind in the country. The Project Team coordinated with a vendor to engineer and fabricate this tool prior to construction so that the [redacted] threat on the line could be assessed.

b. The Project included a total of 14 [redacted] Runs.

c. The Project required three [redacted] re-runs due to sensor loss and tool malfunctions.

6. Inspection Retrofits: The Project Team installed six new [redacted] and 19 [redacted] to facilitate the [redacted].

7. System Analysis:

a. The Project Team completed a review of the Pipeline system to evaluate project feasibility by installing a temporary flow meter. Due to low flow rates, the Project Team determined the pipeline to be unpiggable using [redacted] tools. As a result, the Project Team refined the project scope to a [redacted] Inspection and reduced the inspected length to only the HCA segments between [redacted]

8. Customer Impacts: No identified impacts.

9. Community Impacts: The Project had a minimal community noise impact due to [redacted] tools during twilight hours. The Project Team did notify the community ahead of time and utilized noise blankets to minimize the impact.

10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.

11. Environmental:

a. Lake and Streambed Alteration Agreement notification to the California Department of Fish and Wildlife (CDFW).

b. Notice of Intent to the Colorado River Regional Water Quality Control Board (RWQCB).

12. Permit Restrictions:

a. City of Twentynine Palms Encroachment Permits.

b. County of San Bernardino Flood Control Permits.
c. Town of Yucca Valley Encroachment Permits.

13. Land Use:
    a. The Project Team obtained a Temporary Right of Entry (TRE) from a private landowner in the City of Yucca Valley as a laydown yard.
    b. The Project Team obtained a (TRE) from a private landowner in the City of Yucca Valley for the use of a workspace to install an [redacted].
14. Traffic Control: The Project Team required traffic control at four separate project sites during construction.
15. Constructability:
    a. During the [redacted] tool runs, the Project Team worked continuously using day and night shift crews.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were 25 Direct Examination Sites selected for validation of the ILI within the Line 6916 Phase 2 [redacted] TIMP Project.
    a. Direct Examination Site #1 consisted of a 192 foot Replacement.
    b. Direct Examination Site #2 consisted of a 70 foot Replacement.
    c. Direct Examination Site #3 consisted of a 194 foot Replacement.
    d. Direct Examination Site #4 consisted of a 42 foot Replacement.
    e. Direct Examination Site #5 consisted of a 59 foot Replacement.
    f. Direct Examination Site #6 consisted of a 41 foot Replacement.
    g. Direct Examination Site #7 consisted of a 120 foot Replacement.
    h. Direct Examination Site #8 consisted of Soft Pad Repairs.

i. Direct Examination Site #9 consisted of a 41 foot Replacement.
j. Direct Examination Site #10 consisted of a 93 foot Replacement.
k. Direct Examination Site #11 consisted of a 41 foot Replacement.
l. Direct Examination Site #12 consisted of a 41 foot Replacement.
m. Direct Examination Site #13 consisted of a Band Repair.
n. Direct Examination Site #14 consisted of a 13 foot Replacement.
o. Direct Examination Site #15 consisted of Soft Pad Repairs.
p. Direct Examination Site #16 consisted of a Band Repair.
q. Direct Examination Site #17 consisted of a 15 foot Replacement.
r. Direct Examination Site #18 consisted of a Band Repair.
s. Direct Examination Site #19 consisted of a Band Repair.
t. Direct Examination Site #20 consisted of a 41 foot Replacement.
u. Direct Examination Site #21 consisted of a Band Repair.
v. Direct Examination Site #22 consisted of a Band Repair.
w. Direct Examination Site #23 consisted of a Band Repair.
x. Direct Examination Site #24 consisted of a 15 foot Replacement.
y. Direct Examination Site #25 consisted of a 13 foot Replacement.

2. SRC/IRC: Direct Examination Sites #1 and #3 through #22 contained IRCs and Direct Examination Site #2 contained an SRC. These sites required expedited project schedules.
3. System Analysis:
   a. The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded with the Project Team utilizing underpressure protection at Adobe station.
   b. The results of the ILI required the Project Team to reduce the Maximum Operating Pressure (MOP). The Project Team installed sense lines at [redacted] in preparation to maintain the long-term pressure reduction while the SRC and IRCs were evaluated.

4. Customer Impacts: The Project Team determined that a partial curtailment was needed for a non-core customer load in order to complete the validation digs. The Project Team conducted weekly meetings with the customer during the duration of the curtailment and was also able to maintain their core load.
5. Community Impacts: The Project Team conducted significant outreach efforts to impacted customers. This included on-site meetings, door notices, and mail notifications as some sites were in the vicinity of several customers.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental:
   a. Direct Examination Sites #4 and #5 required an environmental monitor during vegetation removal.
   b. Direct Examination Site #4 required k-rail and silt fencing to prevent discharge of soil or other materials into the waterway.
   c. The Project Team completed Nesting Bird Surveys for multiple Direct Examination sites.
8. Permit Restrictions:
   a. Direct Examination Site #8 required a Flood Control Permit from San Bernardino.
   b. Direct Examination Sites #23, #24, and #25 required a Construction Permit from the Town of Yucca Valley that restricted work hours to night work only.
9. Land Use:
   a. The Project Team obtained a temporary right of entry (TRE) from a private landowner in the City of Yucca Valley as a laydown yard.
10. Traffic Control: Direct Examination Sites #23, #24, and #25 required traffic control that included the full street closure of two sections along [redacted] in Yucca Valley that included detour signs to route traffic and barricades to block off the road.

11. Constructability:
    a. Direct Examination Sites #1 through #7 and Sites #9 through #12 were replaced with pipe segments and inspected outside the trench in order to expedite construction and reduce the isolation duration.
    b. Direct Examination Sites #24 and #25 completed Band Repairs that failed Non-Destructive Examination (NDE), which required the Project Team to complete a replacement at each site.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in additional examinations that will be addressed after 2023, outside the scope of this proceeding.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1 - #12	
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Mobilization 2: Direct Examination Sites #13 - #25	
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 6: Construction Timeline – SRC or IRC

SRC/IRC Discovery Date – Site #1	[redacted]
Repair Date – Site #1	[redacted]
SRC/IRC Discovery Date – Site #2	[redacted]
Repair Date – Site #2	[redacted]
SRC/IRC Discovery Date – Site #3	[redacted]
Repair Date – Site #3	[redacted]
SRC/IRC Discovery Date – Site #4	[redacted]
Repair Date – Site #4	[redacted]
SRC/IRC Discovery Date – Site #5	[redacted]
Repair Date – Site #5	[redacted]
SRC/IRC Discovery Date – Site #6	[redacted]
Repair Date – Site #6	[redacted]
SRC/IRC Discovery Date – Site #7	[redacted]

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Final Workpaper for Line 6916 Phase 2 [redacted] TIMP Project

Repair Date – Site #7	[redacted]
SRC/IRC Discovery Date – Site #8	[redacted]
Repair Date – Site #8	[redacted]
SRC/IRC Discovery Date – Site #9	[redacted]
Repair Date – Site #9	[redacted]
SRC/IRC Discovery Date – Site #10	[redacted]
Repair Date – Site #10	[redacted]
SRC/IRC Discovery Date – Site #11	[redacted]
Repair Date – Site #11	[redacted]
SRC/IRC Discovery Date – Site #12	[redacted]
Repair Date – Site #12	[redacted]
SRC/IRC Discovery Date – Site #13	[redacted]
Repair Date – Site #13	[redacted]
SRC/IRC Discovery Date – Site #14	[redacted]
Repair Date – Site #14	[redacted]
SRC/IRC Discovery Date – Site #15	[redacted]
Repair Date – Site #15	[redacted]
SRC/IRC Discovery Date – Site #16	[redacted]
Repair Date – Site #16	[redacted]
SRC/IRC Discovery Date – Site #17	[redacted]
Repair Date – Site #17	[redacted]
SRC/IRC Discovery Date – Site #18	[redacted]
Repair Date – Site #18	[redacted]
SRC/IRC Discovery Date – Site #19	[redacted]
Repair Date – Site #19	[redacted]
SRC/IRC Discovery Date – Site #20	[redacted]
Repair Date – Site #20	[redacted]
SRC/IRC Discovery Date – Site #21	[redacted]
Repair Date – Site #21	[redacted]
SRC/IRC Discovery Date – Site #22	[redacted]
Repair Date – Site #22	[redacted]
SRC/IRC Discovery Date – Site #23	[redacted]
Repair Date – Site #23	[redacted]
SRC/IRC Discovery Date – Site #24	[redacted]
Repair Date – Site #24	[redacted]
SRC/IRC Discovery Date – Site #25	[redacted]
Repair Date – Site #25	[redacted]

Figure 2: [redacted] fitting installation for [redacted]

Figure 3: [redacted] Location for [redacted]

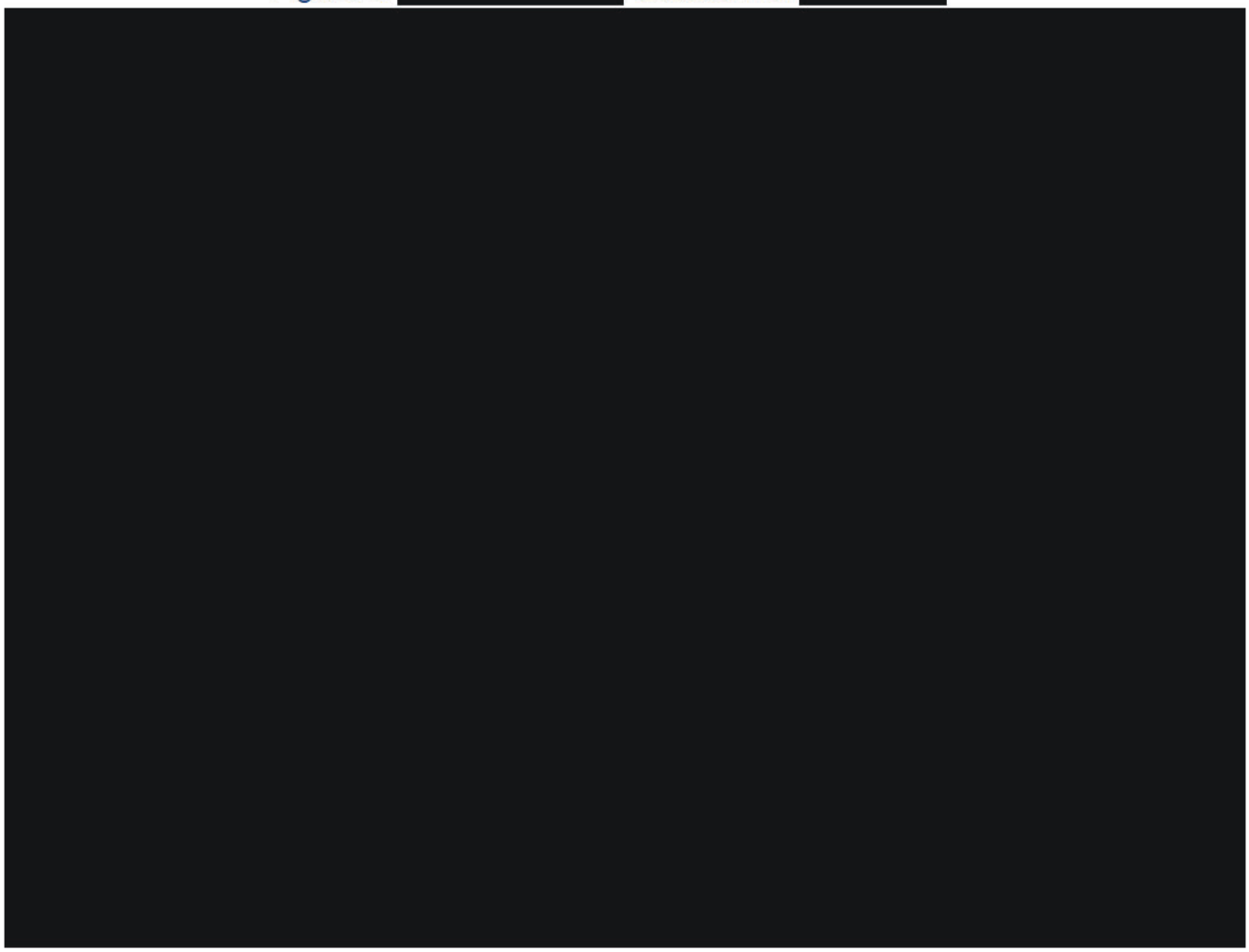
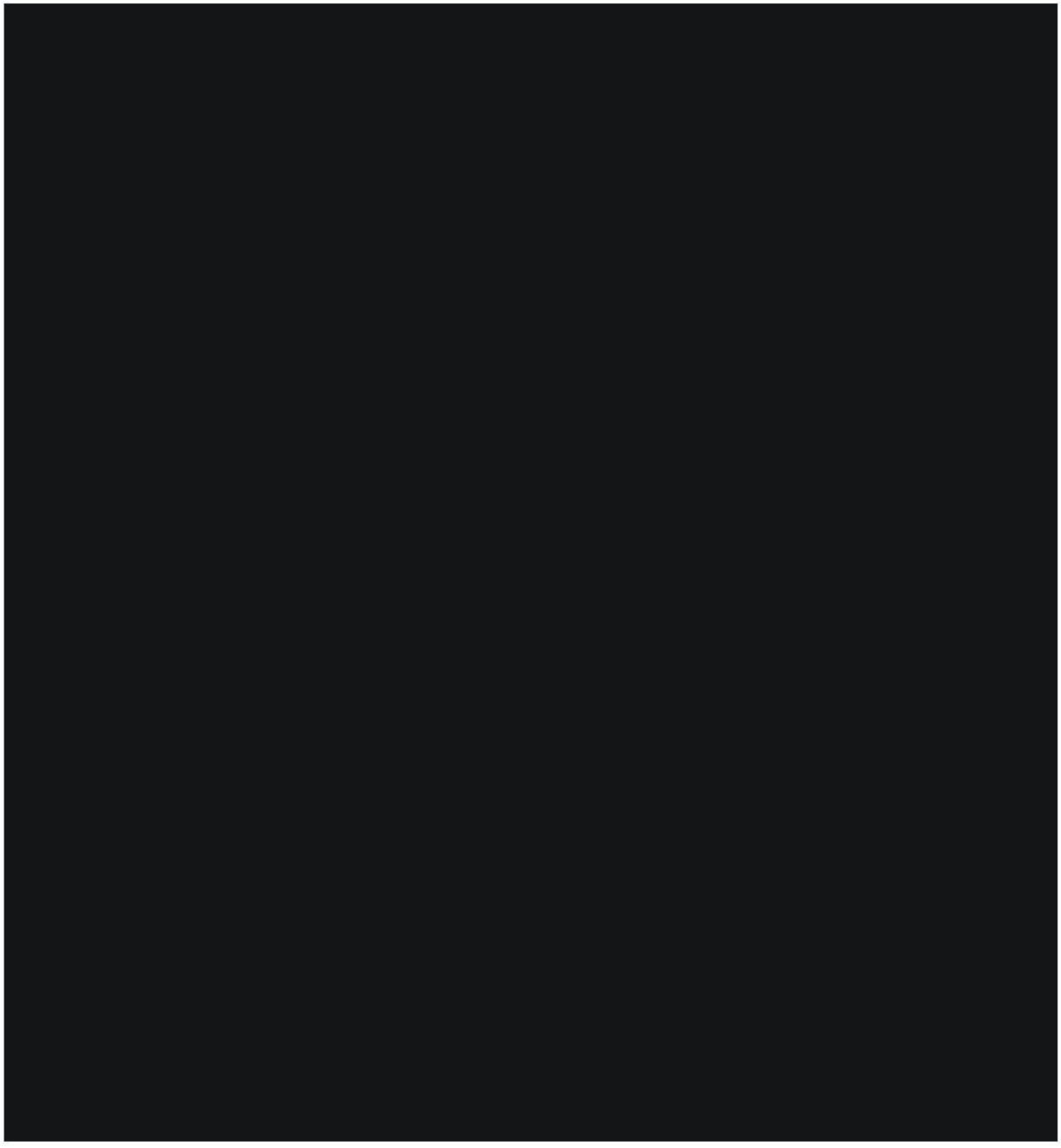


Figure 4: [redacted] tool

Figure 5: [redacted] Launcher Site

Figure 6: Direct Examination Excavation with Pipe Removal

Figure 7: Direct Examination Site Pipe Replacement



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $40,238,912.

Table 7: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	1,357,037	931,864	2,288,901
Contract Costs	17,320,209	3,152,685	20,472,894
Material	1,339,011	27,811	1,366,822
Other Direct Charges	4,361,164	6,064,632	10,425,797
Total Direct Costs	24,377,420	10,176,993	34,554,413

Table 8: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	4,544,317	871,885	5,416,201
AFUDC	210,150	0	210,150
Property Taxes	58,148	0	58,148
Total Indirect Costs	4,812,615	871,885	5,684,499

Table 9: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	29,190,035	11,048,877	40,238,912

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing Line 6916 Phase 2 [redacted] TIMP Project Narrative TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $40,238,912.

End of Line 6916 Phase 2 [redacted] TIMP Project Final Workpaper

I. LINE 7000 PHASE 1 [redacted] TIMP PROJECT

A. Background and Summary

Line 7000 Phase 1 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 29.4 miles from [redacted]. The Project also assessed approximately 0.7 miles of Line 293, a [redacted] diameter pipeline[1]. The pipeline is routed across Class 1, 2, and 3 locations with 6.9 miles within High Consequence Area(s) (HCAs) and 23.3 miles within non-HCAs[2]. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to eight sites, of which three contained Safety Related Conditions (SRCs). The Project activities were located in Kern County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $11,952,527.

[1] See Workpaper Line 293 [redacted] TIMP Project Narrative for assessment of remaining footage for Line 293.
[2] Values may not add to total due to rounding.

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Final Workpaper for Line 7000 Phase 1 Rio Bravo to Delano TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	7000 and 293[3]
Segment	Phase 1 – [redacted]
Inspection Type	[redacted] Tools
Location	Shafter, Delano
Class	1, 2, and 3
HCA Length	6.9 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad and Band
Within HCA	No
SRC/IRC	Yes
SRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

[3] See Workpaper Line 293 [redacted] TIMP Project Narrative for assessment of remaining footage of Line 293.

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	No repairs
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	4
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	5
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	Yes
SRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	6
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	Yes
SRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

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Final Workpaper for Line 7000 Phase 1 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	7		
Examination ID	[redacted]		
Mitigation/Remediation Type	Replacement		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	8		
Examination ID	[redacted]		
Mitigation/Remediation Type	Replacement		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	7,305,203	4,647,324	11,952,527

B. Maps and Images

Figure 1: Satellite Image of Line 7000 Phase 1 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 7000 Phase 1 [redacted] for Inspection using ILI.
   a. ILI from a temporary launcher site south of [redacted] to a permanent receiver site within [redacted].
   b. The temporary launcher site required installation of a temporary launcher barrel and associated piping south of [redacted]
   c. The temporary launcher site was installed on Line 293, resulting in approximately 0.7 miles of Line 293 assessed with this segment[4].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, eight Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad and band repairs.
   b. Direct Examination Site #2 resulted in no repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.

[4] See Workpaper Line 293 [redacted] TIMP Project Narrative for assessment of remaining footage for Line 293.

e. Direct Examination Site #5 consisted of a 40 foot replacement.

f. Direct Examination Site #6 consisted of a 40 foot replacement.

g. Direct Examination Site #7 consisted of a 40 foot replacement.

h. Direct Examination Site #8 consisted of a 41 foot replacement.

i. The Project identified three Direct Examination sites containing SRCs.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations or repair.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI including eight Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
7000	29.4 miles	[redacted]	[redacted]	[redacted]	Yes
293	0.7 miles				
7000	29.4 miles	[redacted]	[redacted]	[redacted]	Yes
293	0.7 miles				
7000	29.4 miles	[redacted]	[redacted]	[redacted]	Yes
293	0.7 miles				

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
7000	1	No	Yes	15 ft	Soft Pad and Band	N/A	Capital
7000	2	No	No	15 ft	No Repair	N/A	O&M
7000	3	No	No	33 ft	Soft Pad	N/A	O&M
7000	4	No	No	15 ft	Soft Pad	N/A	O&M
7000	5	No	Yes	39 ft	Replacement	40 ft	Capital
7000	6	No	Yes	35 ft	Replacement	40 ft	Capital
7000	7	No	No	39 ft	Replacement	40 ft	Capital
7000	8	No	No	40 ft	Replacement	41 ft	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 7000 Phase 1 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Inspection started at a temporary launcher site assembled near [redacted] and ended at a permanent receiver site within [redacted]. The temporary launcher site was installed on Line 293, resulting in approximately 0.7 miles of Line 293 assessed with this segment[5].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].

[5] See Workpaper Line 293 [redacted] TIMP Project Narrative for assessment of remaining footage for Line 293.

4. Long Seam Type: [redacted]
5. Inspection Retrofits: The Project Team completed retrofits to return the pipeline to normal operating conditions. Retrofit installations included approximately 67 feet of new [redacted] pipeline.
6. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Project could be completed without system impacts.
8. Customer Impacts: No identified impacts.
9. Community Impacts: No identified impacts.
10. Substructures: The Project Team evaluated various substructures in the Project vicinity to select an appropriate location for the temporary launcher site near [redacted]
11. Environmental: No identified impacts.
12. Permit Restrictions: No identified impacts.
13. Land Use: No identified impacts.
14. Traffic Control: No identified impacts.
15. Schedule Delay: No identified impacts.
16. Constructability: [redacted] was undergoing reconstruction at the time of Inspection, which required the Project Team to coordinate a temporary launcher site south of the station location. The temporary installation required concrete supports to withstand the weight of valves.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were eight Direct Examination Sites selected for validation within the Line 7000 Phase 1 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of soft pad and band repairs.
      ii. Direct Examination Site #2 resulted in no repairs.
      iii. Direct Examination Site #3 consisted of soft pad repairs.
      iv. Direct Examination Site #4 consisted of soft pad repairs.
      v. Direct Examination Site #5 consisted of a 40 foot replacement.
      vi. Direct Examination Site #6 consisted of a 40 foot replacement.
      vii. Direct Examination Site #7 consisted of a 40 foot replacement.
      viii. Direct Examination Site #8 consisted of a 41 foot replacement.
2. SRC/IRC: Direct Examination Sites #1, #5 and #6 contained SRCs.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the following:
   a. Direct Examination Sites #1, #2, #3, and #4 could be completed with no system impacts.
   b. Direct Examination Sites #5 and #6 required pipeline isolation to complete remediations. A temporary bypass was installed to maintain system capacity.
   c. Direct Examination Sites #7 and #8 could only be completed in [redacted] and required a temporary bypass to maintain system capacity. Additional coordination with neighboring SoCalGas projects was required to ensure project schedule alignment.
4. Customer Impacts: The Project Team identified four customers impacted within the isolation scope for Direct Examination Sites #5 and #6.
5. Community Impacts: No identified impacts.

6. Substructures: No identified impacts.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained the following permits for the Direct Examinations:
   a. Encroachment Permit from the City of Delano for Direct Examination Site #3.
   b. Three Road Encroachment Permits from the County of Kern for Direct Examination Sites #4, #5, and #7.
   c. Caltrans Encroachment Permit for Direct Examination Site #6.
9. Land Use:
   a. The Project Team utilized existing easements to access pipeline for Direct Examination Site #1.
   b. The Project Team secured two laydown yards for Direct Examination Sites #1, #3, and #4.
   c. The Project Team obtained two laydown yards for Direct Examination Sites #2, #5, and #6 in unincorporated Kern County.
   d. The Project Team obtained two laydown yards for Direct Examination Sites #7 and #8.
   e. The Project Team obtained a temporary right of entry for Direct Examination Site #8 near Martin Avenue and 7th Standard Road.
10. Traffic Control: The Project Team obtained approved traffic control plans for the following:
    a. Direct Examination Site #1, approved by the City of Shafter.
    b. Direct Examination Site #3, approved by the City of Delano.
    c. Direct Examination Site #4, approved by the City of McFarland.
    d. Direct Examination Site #5, approved by the City of McFarland.
    e. Direct Examination Site #7, approved by City of McFarland.
11. Schedule Delay: The Project experienced schedule delays due to system analysis and recommendations that would minimize capacity constraints.

a. Requirement to combine Direct Examination Site #2 timeline with Direct Examination Sites #5 and #6.
b. Requirement to execute Direct Examination Sites #7 and #8 in a timeline that did not impact system capacity.

12. Constructability: The Project Team obtained approved concrete support designs for PCF fittings installed to facilitate isolations for the Direct Examinations.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]
Construction Completion Date	
Inspection Due Date	

Table 5: Construction Timeline – Direct Examination

Mobilization 1 – Direct Examination Sites #1, #3, and #4	
Construction Start Date	[redacted]
Construction Completion Date	
Mobilization 2 – Direct Examination Sites #2, #5, and #6	
Construction Start Date	[redacted]
Construction Completion Date	
Mobilization 3 – Direct Examination Sites #7 and #8	
Construction Start Date	[redacted]
Construction Completion Date	

Table 6: Construction Timeline – SRC

Direct Examination Site #1	
SRC Discovery Date	[redacted]
Repair Date	
Direct Examination Site #5	
SRC Discovery Date	[redacted]
Repair Date	
Direct Examination Site #6	
SRC Discovery Date	[redacted]
Repair Date	

Figure 2: Temporary Launcher Site

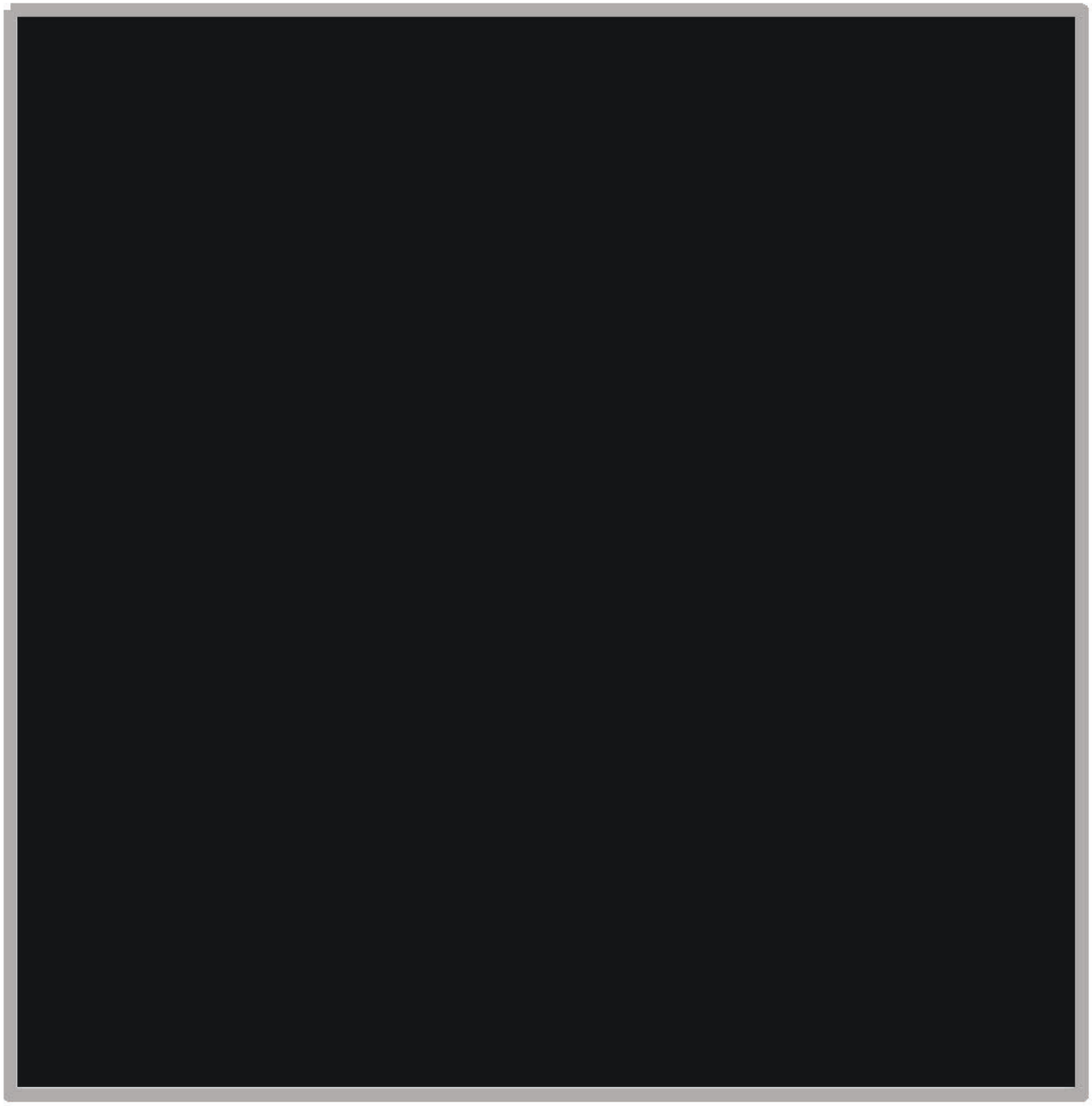


Figure 3: Direct Examination Site #3

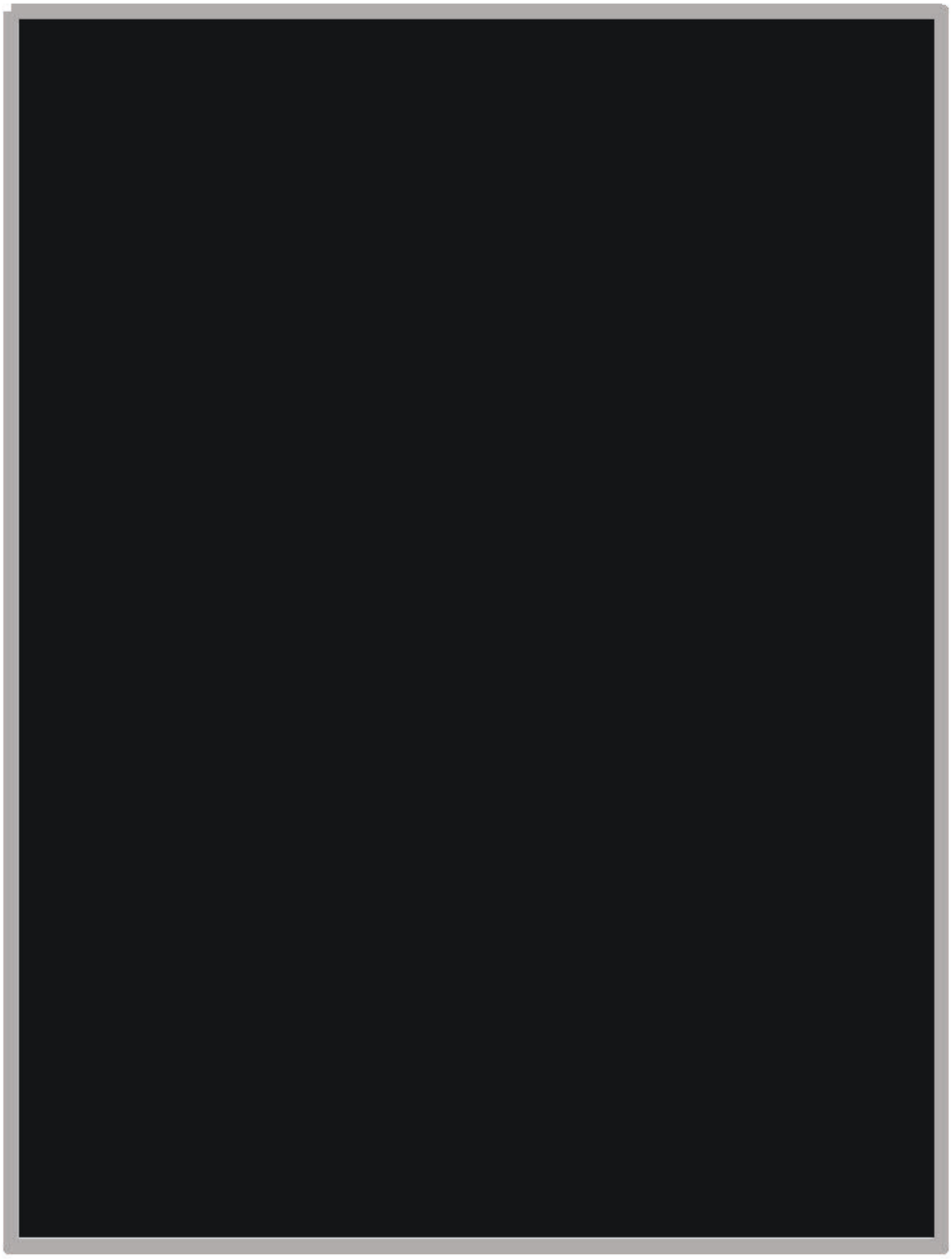


Figure 4: Direct Examination Site #6

Figure 5: Direct Examination Site #7

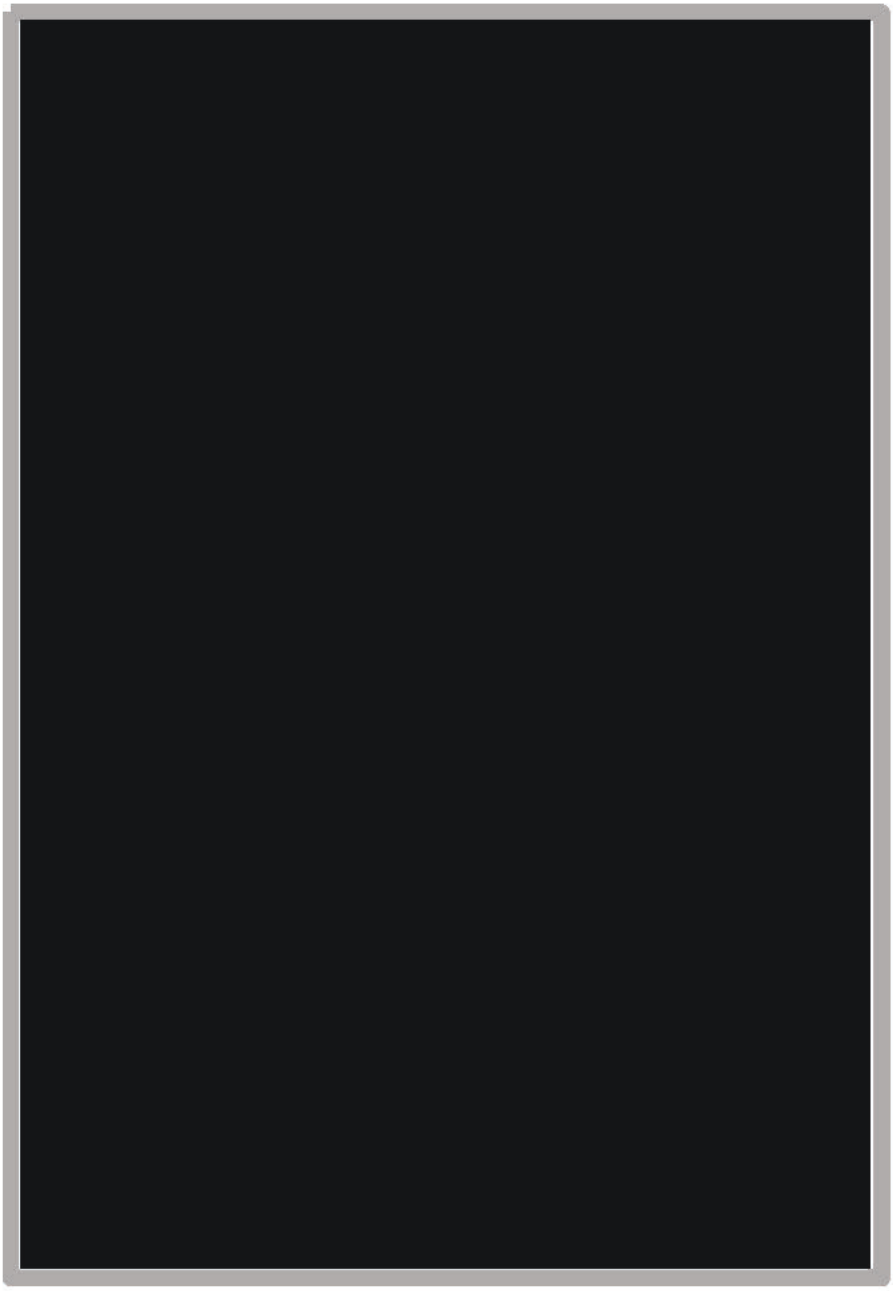
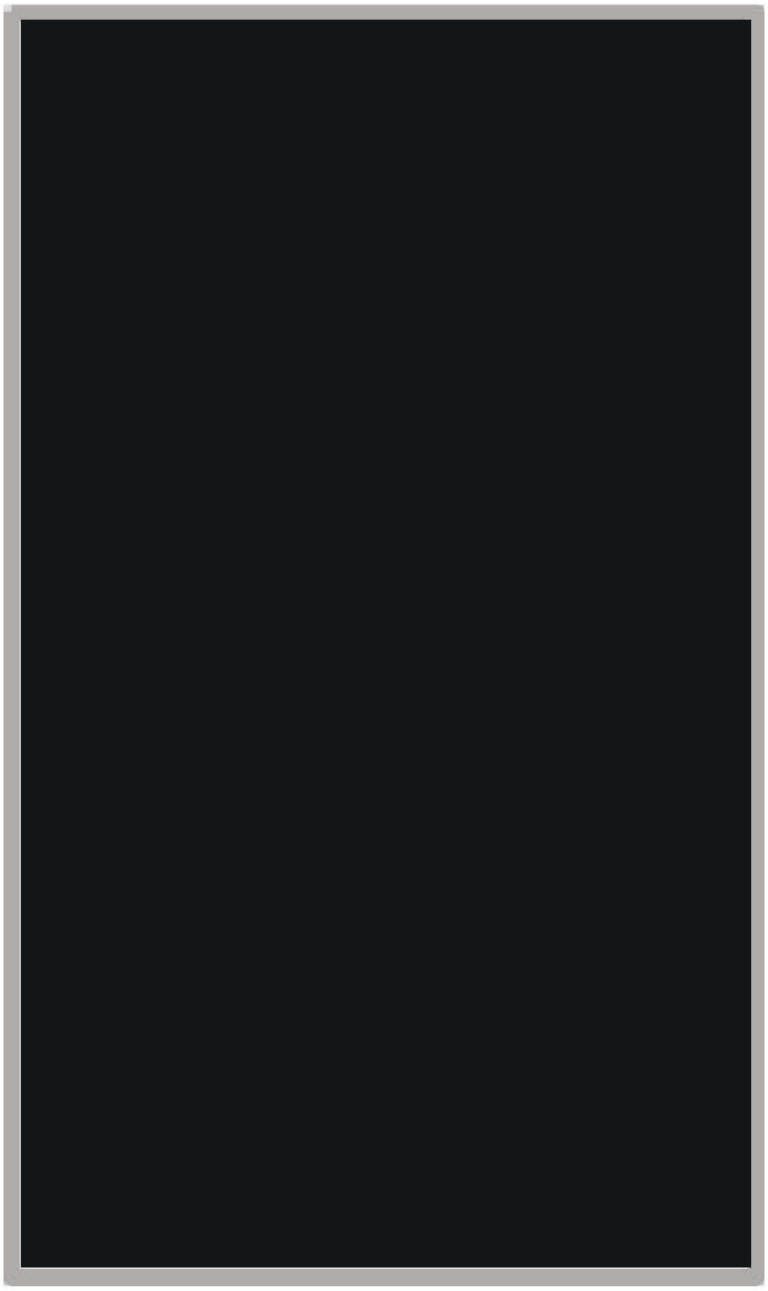


Figure 6: Direct Examination Site #8



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Materials: The Project Team utilized material from another TIMP Project to fabricate the temporary launcher near [redacted].
2. Schedule Coordination: The Project Team combined this Project's mobilization with other TIMP Projects.
3. Land Use: The Project Team utilized a nearby laydown yard that was obtained for another TIMP Project.

B. Actual Costs[6]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $11,952,527.

Table 7: Actual Direct Costs[7]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	661,974	569,671	1,231,646
Contract Costs	4,267,284	2,169,179	6,436,463
Material	221,284	57,606	278,890
Other Direct Charges	882,880	1,358,748	2,241,628
Total Direct Costs	6,033,422	4,155,204	10,188,626

Table 8: Actual Indirect Costs[8]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,198,384	492,120	1,690,504
AFUDC	51,109	0	51,109
Property Taxes	22,288	0	22,288
Total Indirect Costs	1,271,781	492,120	1,763,901

Table 8: Total Costs[9]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	7,305,203	4,647,324	11,952,527

[6] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[7] Values may not add to total due to rounding.
[8] Ibid.
[9] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 7000 Phase 1 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $11,952,527.

End of Line 7000 Phase 1 [redacted] TIMP Project Final Workpaper

I. LINE 7000 PHASE 2 [redacted] TIMP PROJECT

A. Background and Summary

Line 7000 Phase 2 [redacted] the Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 39.4 miles from [redacted]. The pipeline is routed across Class 1, 2, and 3 locations with 2.8 miles within High Consequence Area(s) (HCAs) and 36.7 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to four sites. The Project activities were located in Kern County and Tulare County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,471,107.

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Final Workpaper for Line 7000 Phase 2 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	7000
Segment	Phase 2 – [redacted]
Inspection Type	[redacted] ILI Tool
Location	Delano and Visalia
Class	1, 2, 3
HCA Length	2.8 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 7000 Phase 2 [redacted] TIMP Project

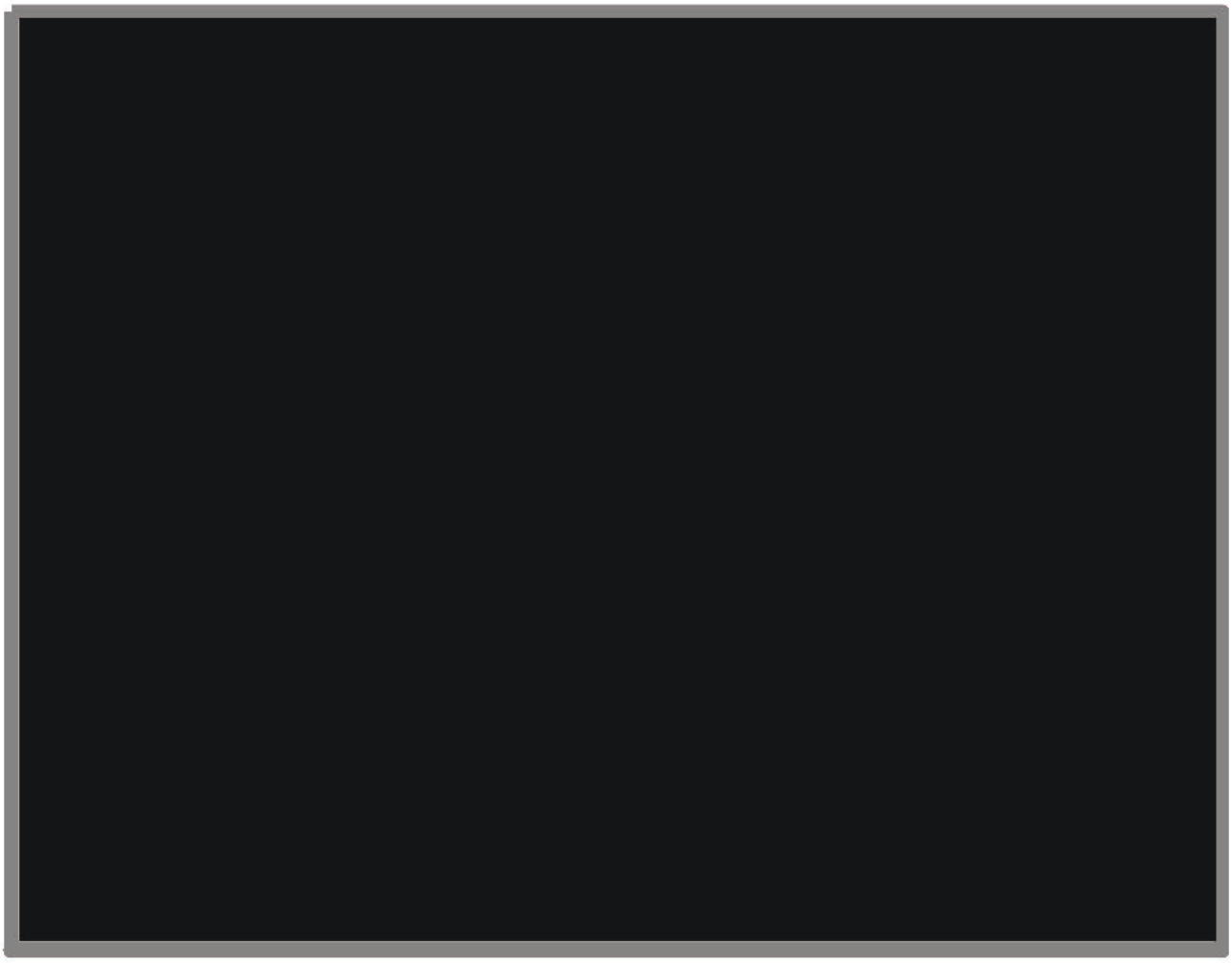
Table 1: General Project Information (continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	
SMYS	
Construction Start Date	
Construction Completion Date	
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	
SMYS	
Construction Start Date	
Construction Completion Date	
Direct Examination Details	
Site	4
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	
SMYS	
Construction Start Date	
Construction Completion Date	

Project Costs ($)	Capital	O&M	Total
Loaded Project Costs	0	3,471,107	3,471,107

B. Maps and Images

Figure 1: Satellite Image of Line 7000 Phase 2 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 7000 Phase 2 [redacted] TIMP Project for Inspection using ILI.
   a. ILI from a permanent launcher site within [redacted] to a permanent receiver site within [redacted]
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, four Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI, and four Direct Examinations.

SoCalGas

Final Workpaper for Line 7000 Phase 2 [redacted] TIMP Project

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
7000	39.4 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
7000	1	No	No	16 ft	Soft Pad	N/A	O&M
7000	2	No	No	46 ft	Soft Pad	N/A	O&M
7000	3	No	No	10 ft	Soft Pad	N/A	O&M
7000	4	No	No	22 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 7000 Phase 2 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Inspection started at a permanent launcher site within [redacted] and ended at a permanent receiver site within [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted].
5. Inspection Tools and Technologies:
   a. The Project utilized a combination tool with [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
   b. The Project required an additional ILI due to distance recorded discrepancies that occurred during the first Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.

9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: No identified impacts.
12. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) for parking area near the receiver location.
13. Traffic Control: No identified impacts.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were four Direct Examination Sites selected for validation within the Line 7000 Phase 2 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.

8. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Utility Encroachment Permit from the County of Tulare for Direct Examination Site #1.
   b. Utility Encroachment Permit from the County of Tulare for Direct Examination Site #2.
   c. Utility Encroachment Permit from the County of Tulare for Direct Examination Site #3.
   d. Utility Encroachment Permit from the County of Tulare for Direct Examination Site #4.
9. Land Use: The Project Team obtained the following TRE agreements for the Direct Examinations:
   a. TRE from a private landowner for temporary workspace area near Direct Examination Site #2.
   b. TRE from a private landowner for temporary workspace area near Direct Examination Site #4.
10. Traffic Control: The Project Team obtained approved Traffic Control Plans (TCPs) from the following entities:
   a. County of Tulare for Direct Examination Site #2
   b. County of Tulare for Direct Examination Site #3.
   c. County of Tulare for Direct Examination Site #4.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

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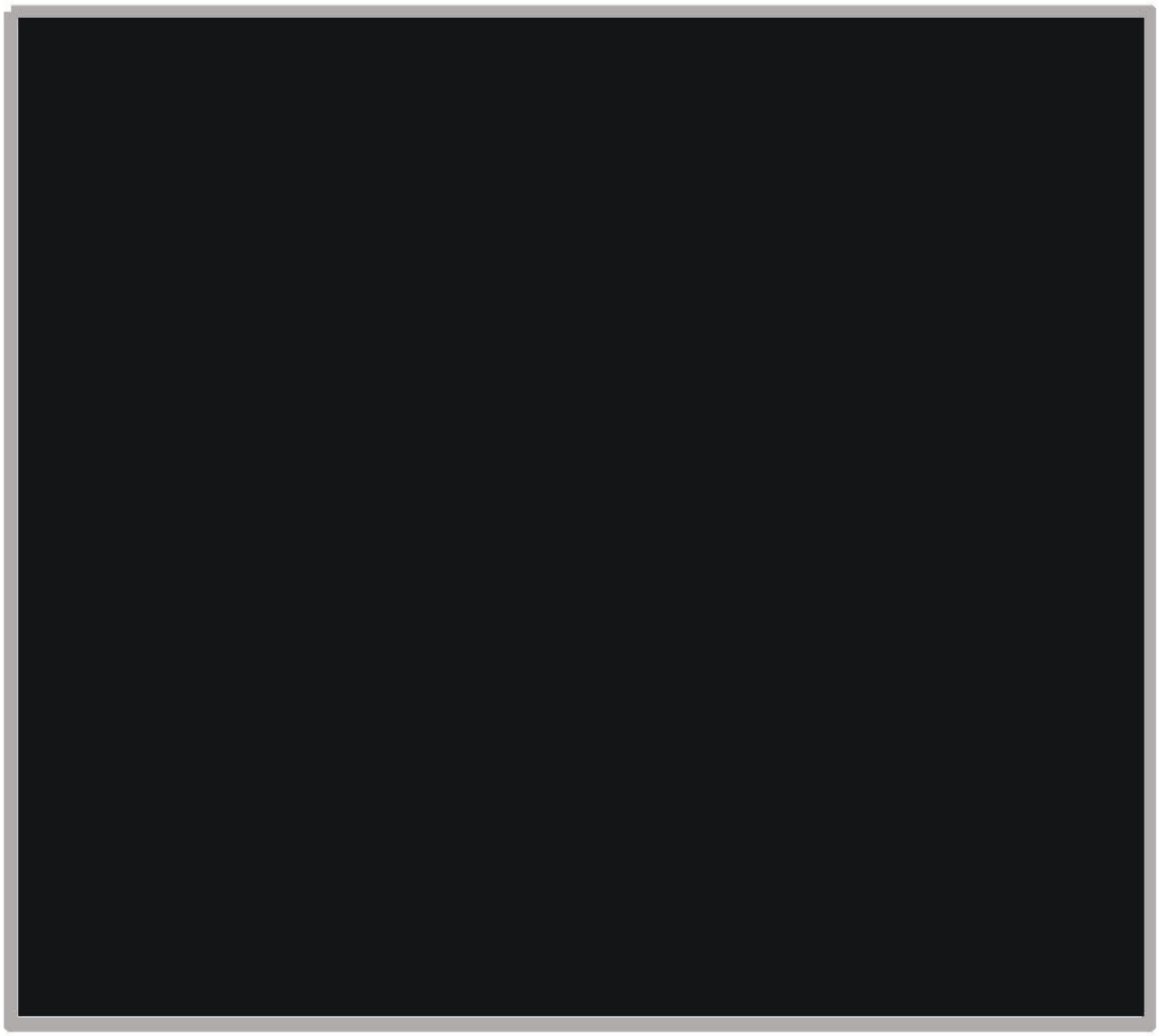
Final Workpaper for Line 7000 Phase 2 [redacted] TIMP Project

Figure 2: Permanent Launcher Site within [redacted]



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Final Workpaper for Line 7000 Phase 2 [redacted] TIMP Project

Figure 3: Permanent Receiver Site within [redacted]

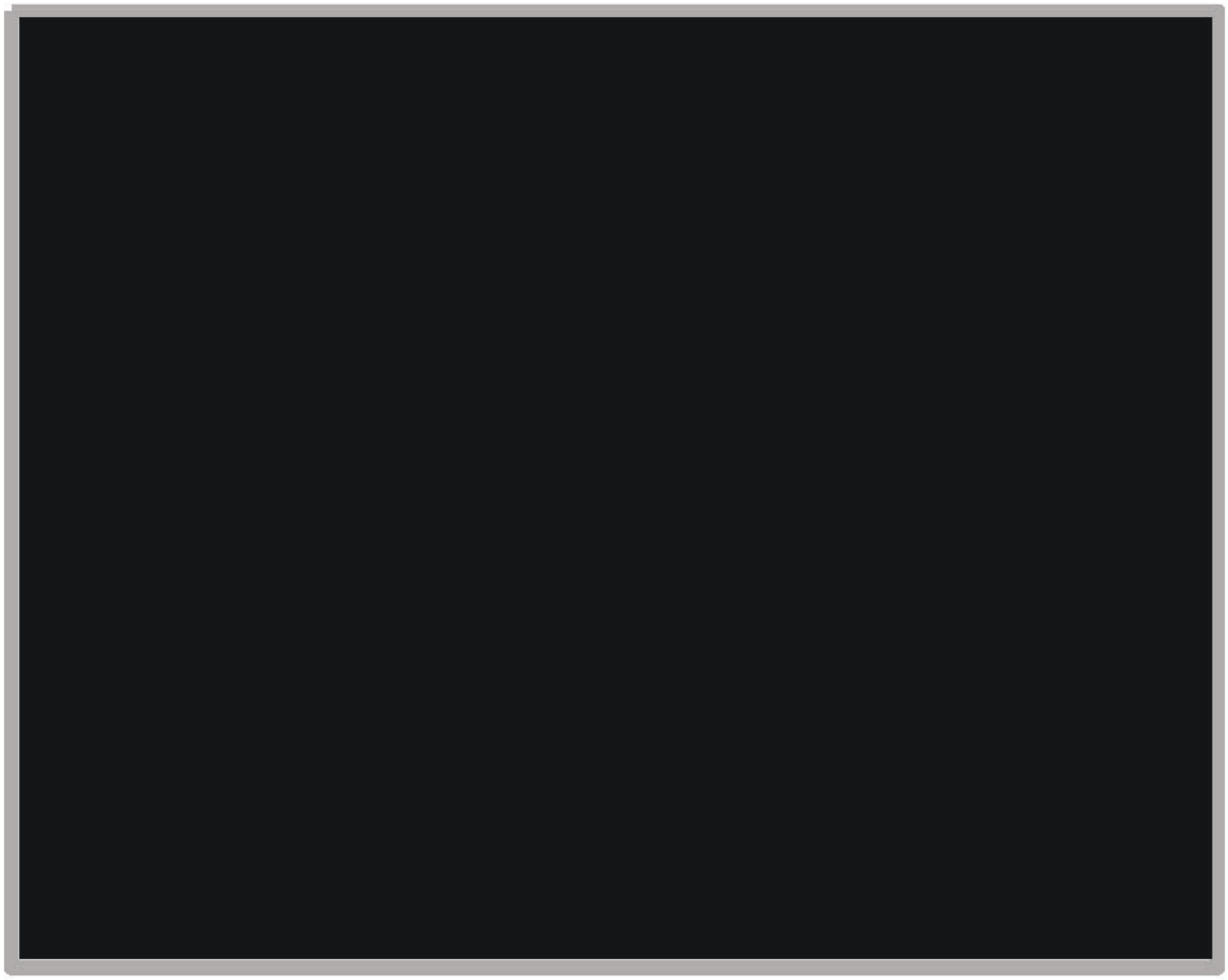


Figure 4: Direct Examination Site #1

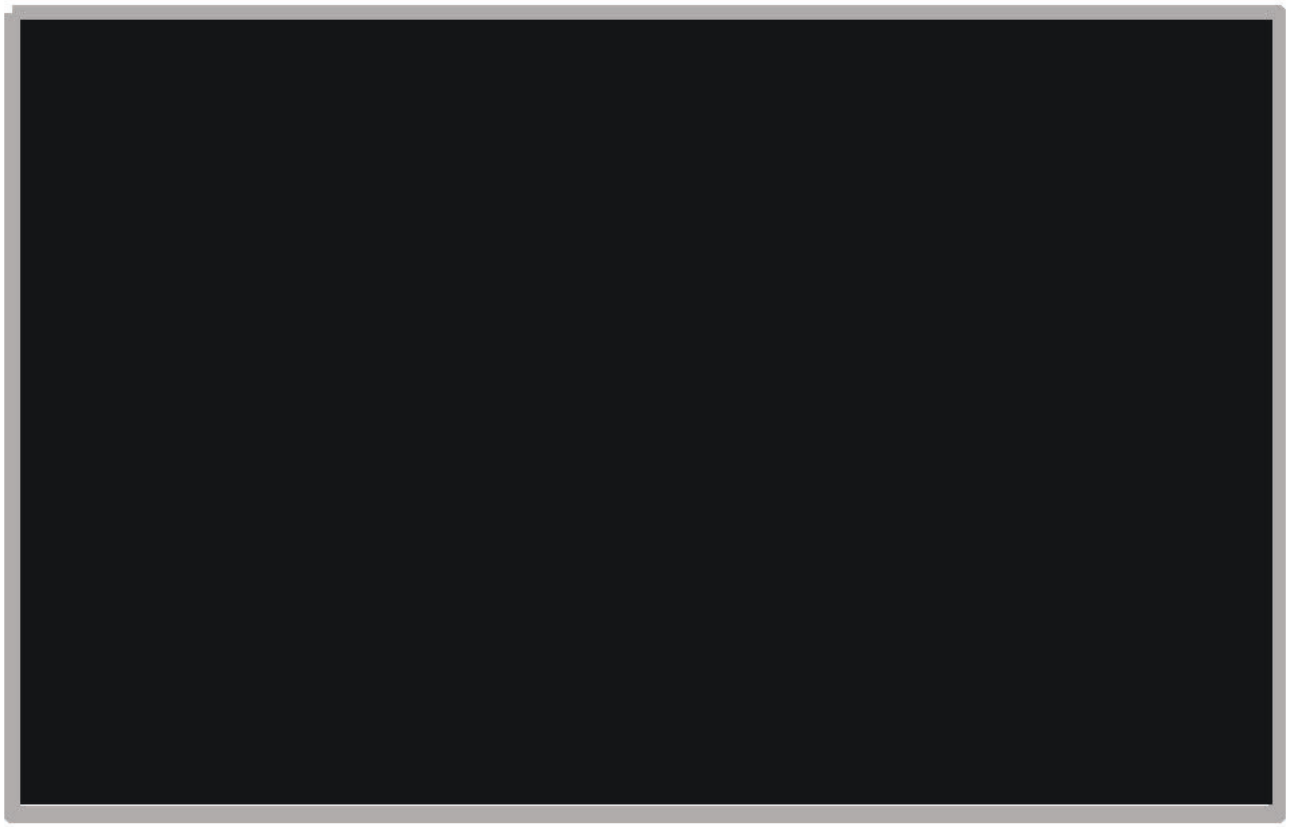
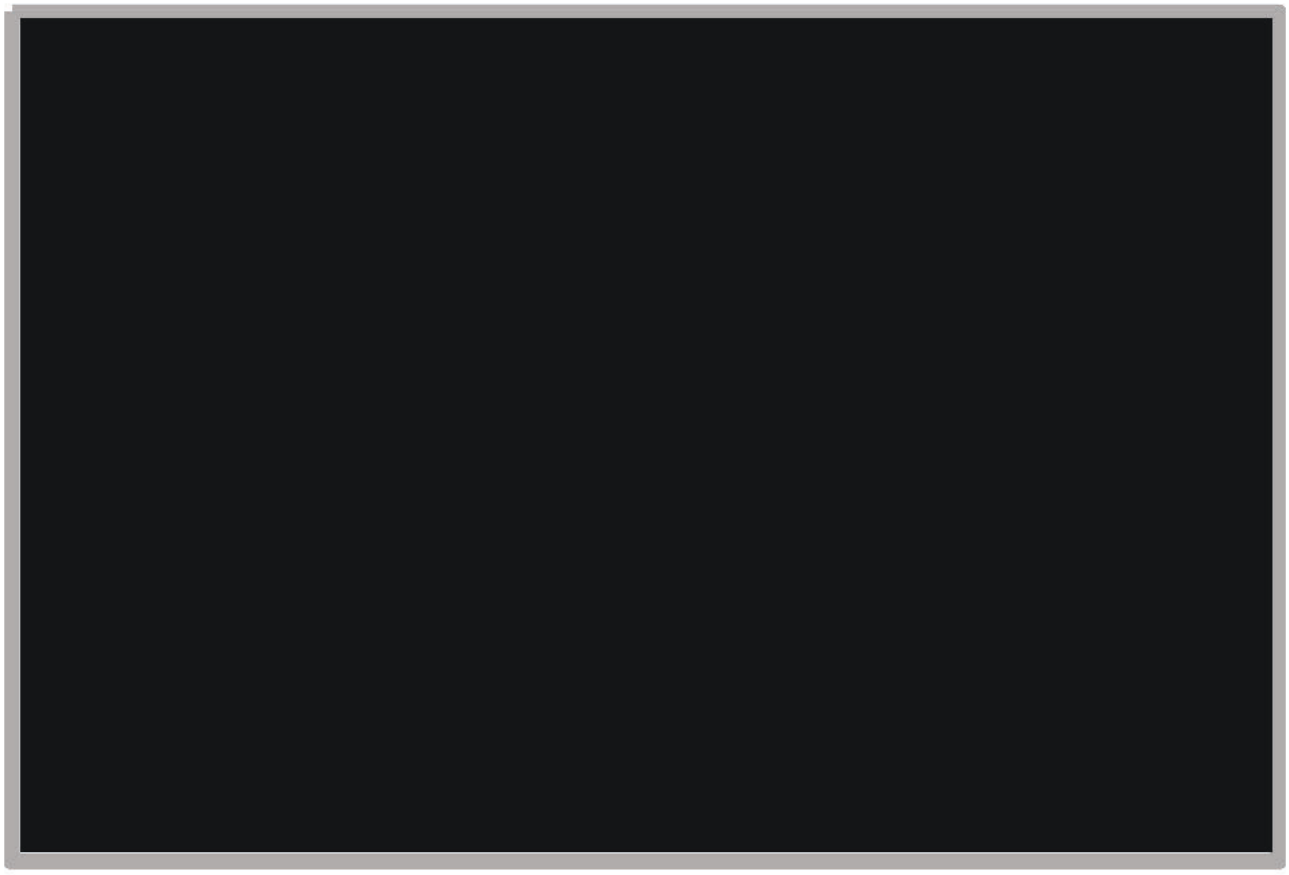


Figure 5: Direct Examination Site #1



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Final Workpaper for Line 7000 Phase 2 [redacted] TIMP Project

Figure 6: Direct Examination Site #2 – Site and TRE Location

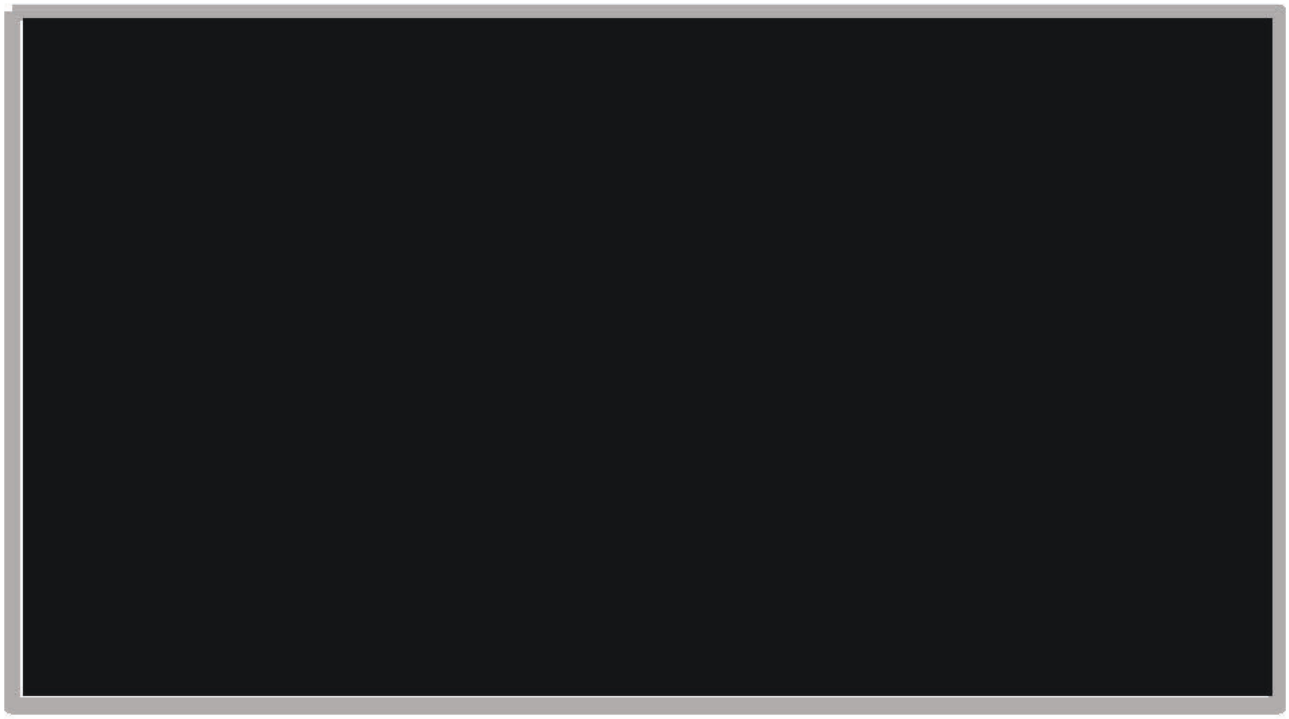


Figure 7: Direct Examination Site #2 – Site and TRE Location

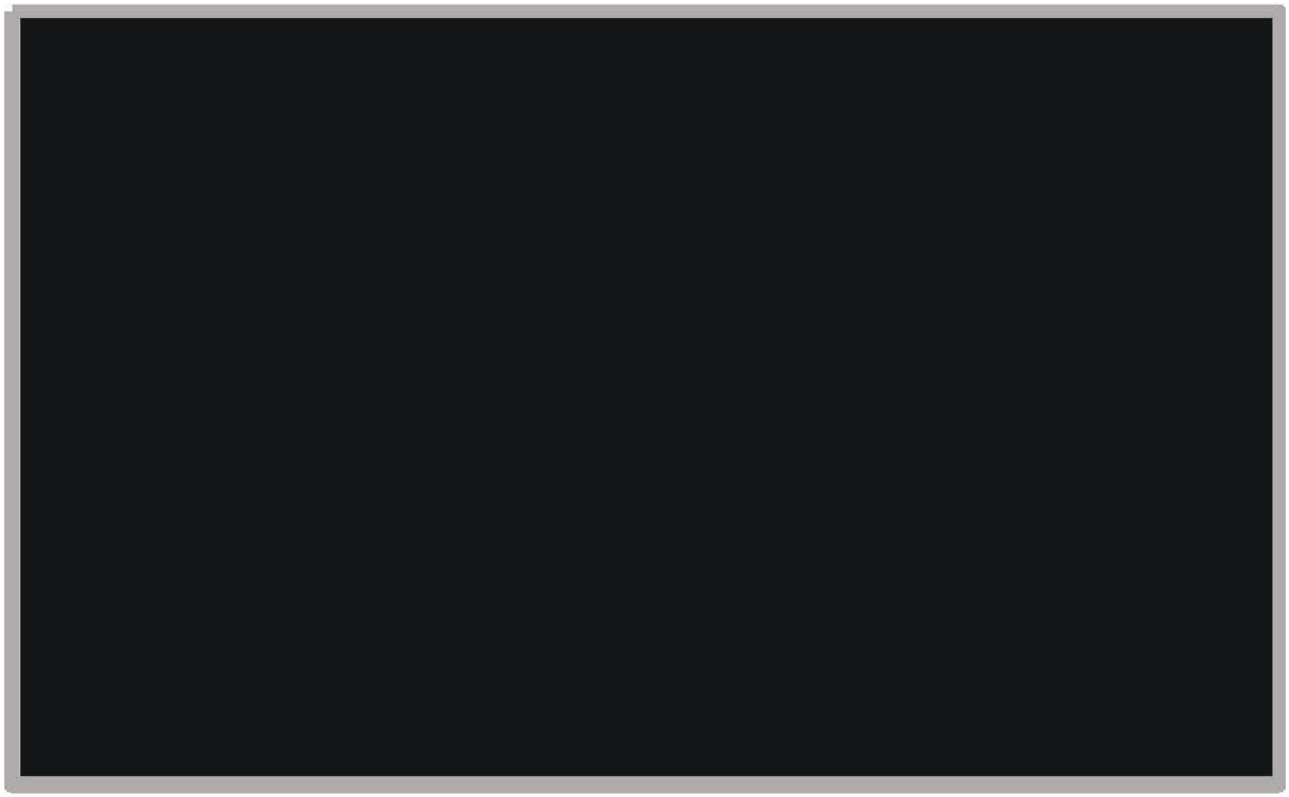
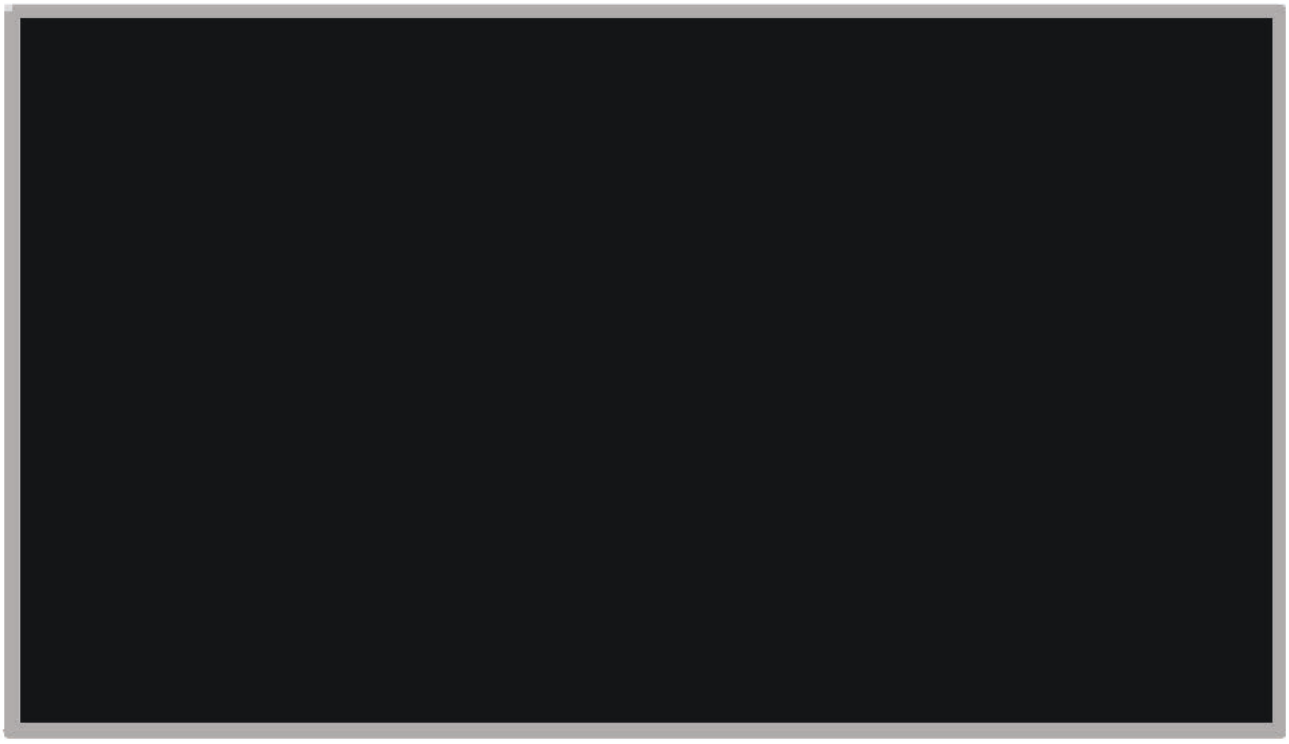


Figure 8: Direct Examination Site #4



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Schedule Coordination: The Project Team combined this Project's mobilization with other TIMP projects.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,471,107.

Table 6: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	428,832	428,832
Contract Costs	0	1,773,477	1,773,477
Material	0	128,626	128,626
Other Direct Charges	0	716,467	716,467
Total Direct Costs	0	3,047,403	3,047,403

Table 7: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	408,009	408,009
AFUDC	0	13,719	13,719
Property Taxes	0	1,977	1,977
Total Indirect Costs	0	423,705	423,705

Table 8: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	3,471,107	3,471,107

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 7000 Phase 2 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,471,107.

End of Line 7000 Phase 2 [redacted] TIMP Project Final Workpaper

I. LINE 7039 [redacted] TIMP PROJECT

A. Background and Summary

Line 7039 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 17.0 miles from [redacted] in Bakersfield to [redacted] through residential neighborhoods, agricultural land, and commercial areas. The pipeline is routed across Class 1 and 3 locations with 14.0 miles within High Consequence Area(s) (HCAs) and 2.9 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to two sites. The Project activities were located in Bakersfield, Kern County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,027,889.

SoCalGas

Final Workpaper for Line 7039 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	7039
Segment	[redacted]
Inspection Type	[redacted] Tools
Location	Bakersfield, Kern County
Class	1, 3
HCA Length	14.0 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]

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Final Workpaper for Line 7039 [redacted] TIMP Project

Table 1: General Project Information (Continued)

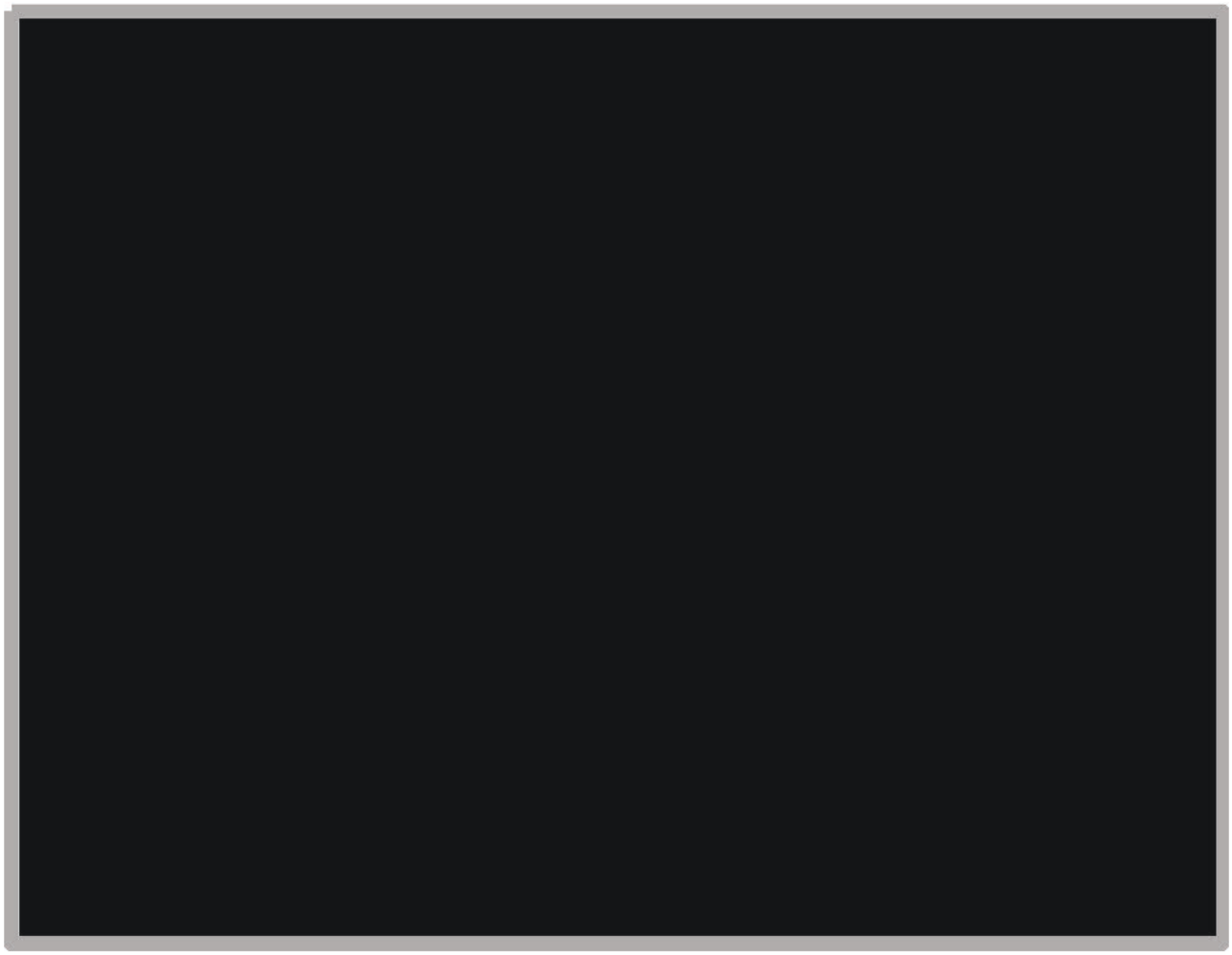
Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	2,027,889	2,027,889

SoCalGas

Final Workpaper for Line 7039 [redacted] TIMP Project

B. Maps and Images

Figure 1: Satellite Image of Line 7039 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspections including Direct Examinations and Post-Assessment.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 7039 for Inspection using ILI.
   a. ILI from a permanent launcher site within a permanent easement at [redacted] to a permanent receiver site at [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of Soft Pad Repairs.
   b. Direct Examination Site #2 consisted of Soft Pad Repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and two Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
7039	17.0 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
7039	1	No	No	15 ft	Soft Pad	N/A	O&M
7039	2	Yes	No	17 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 7039 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: ILI from a permanent launcher site within a permanent station at [redacted] to a permanent receiver site at [redacted]
2. HCA Threats:
   [redacted]

[redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized a combination tool with [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: The Project Team did not identify any anticipated service disruptions to customers.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: There were no special permits or permit restrictions for this Project.
12. Land Use: No identified impacts.
13. Traffic Control: The Project Team did not identify any traffic control needs at the site.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were two Direct Examination Sites selected for validation within the Line 7039 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of Soft Pad Repairs.
   b. Direct Examination Site #2 consisted of Soft Pad Repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: There were no special permits or permit restrictions for this Project.
9. Land Use: No identified impacts.
10. Traffic Control: The Project Team did not identify any traffic control needs at the site.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Inspection Tool before ILI Run

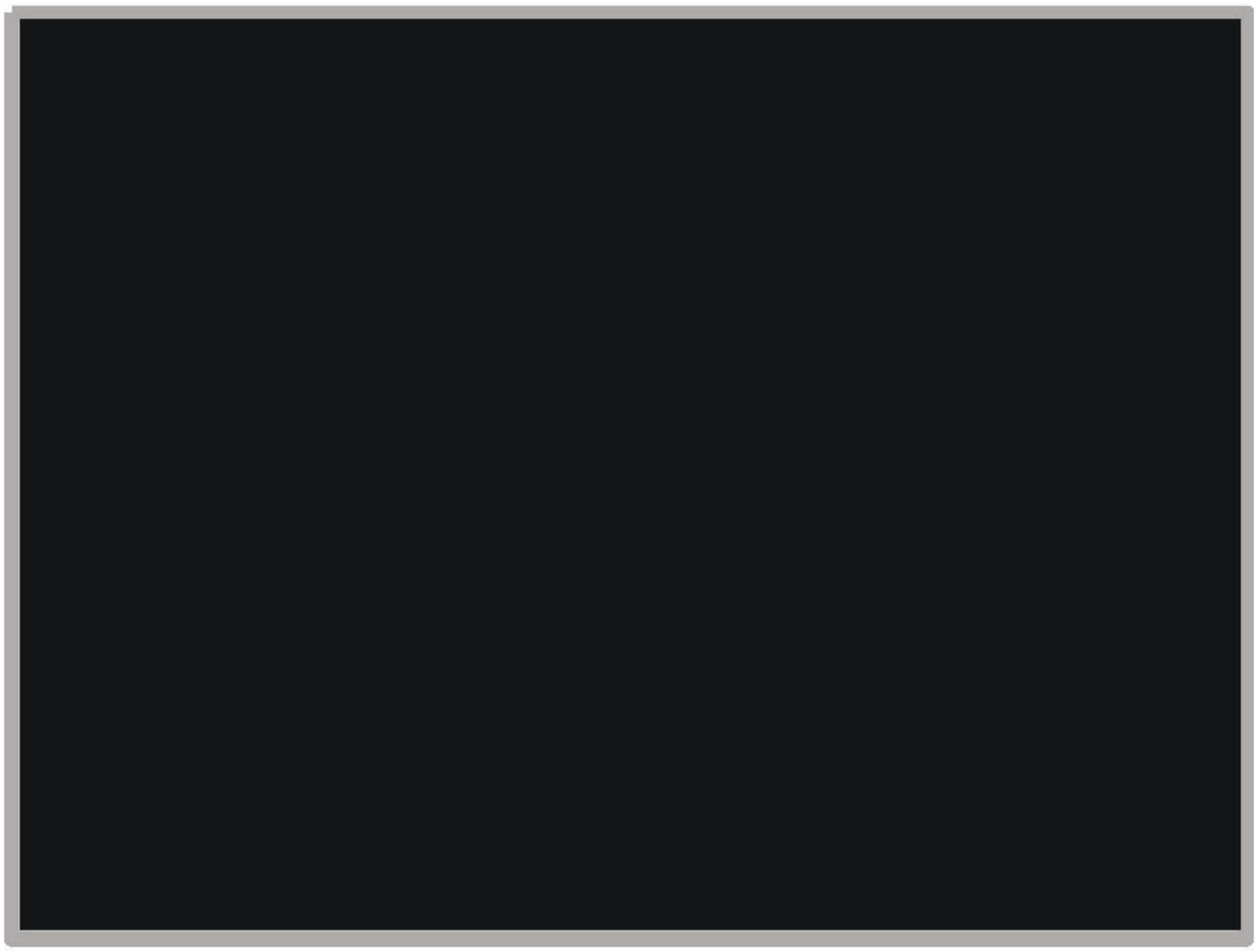


Figure 3: Inspection Tool after ILI Run Completion

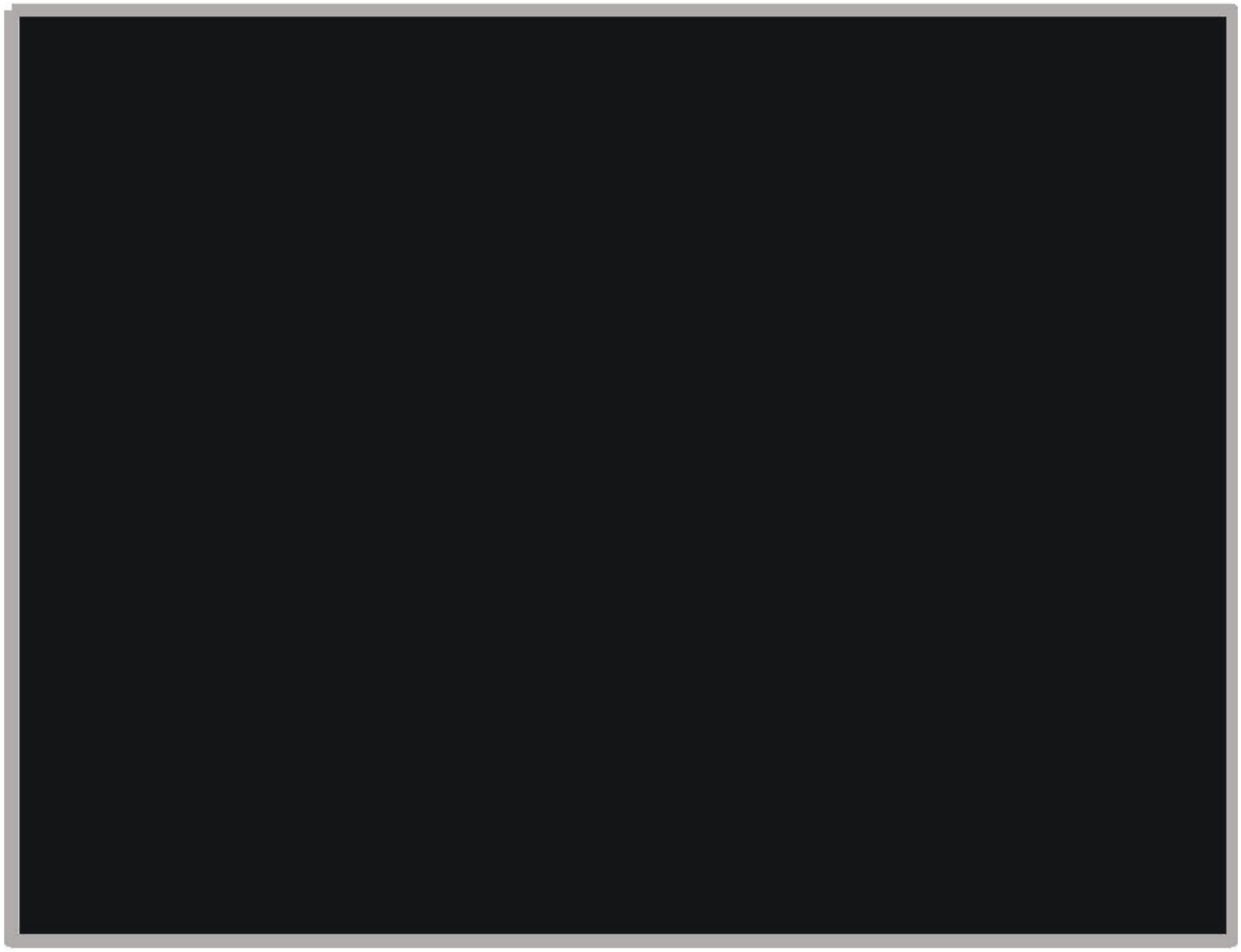


Figure 4: Bare Pipe at Direct Examination Site #1

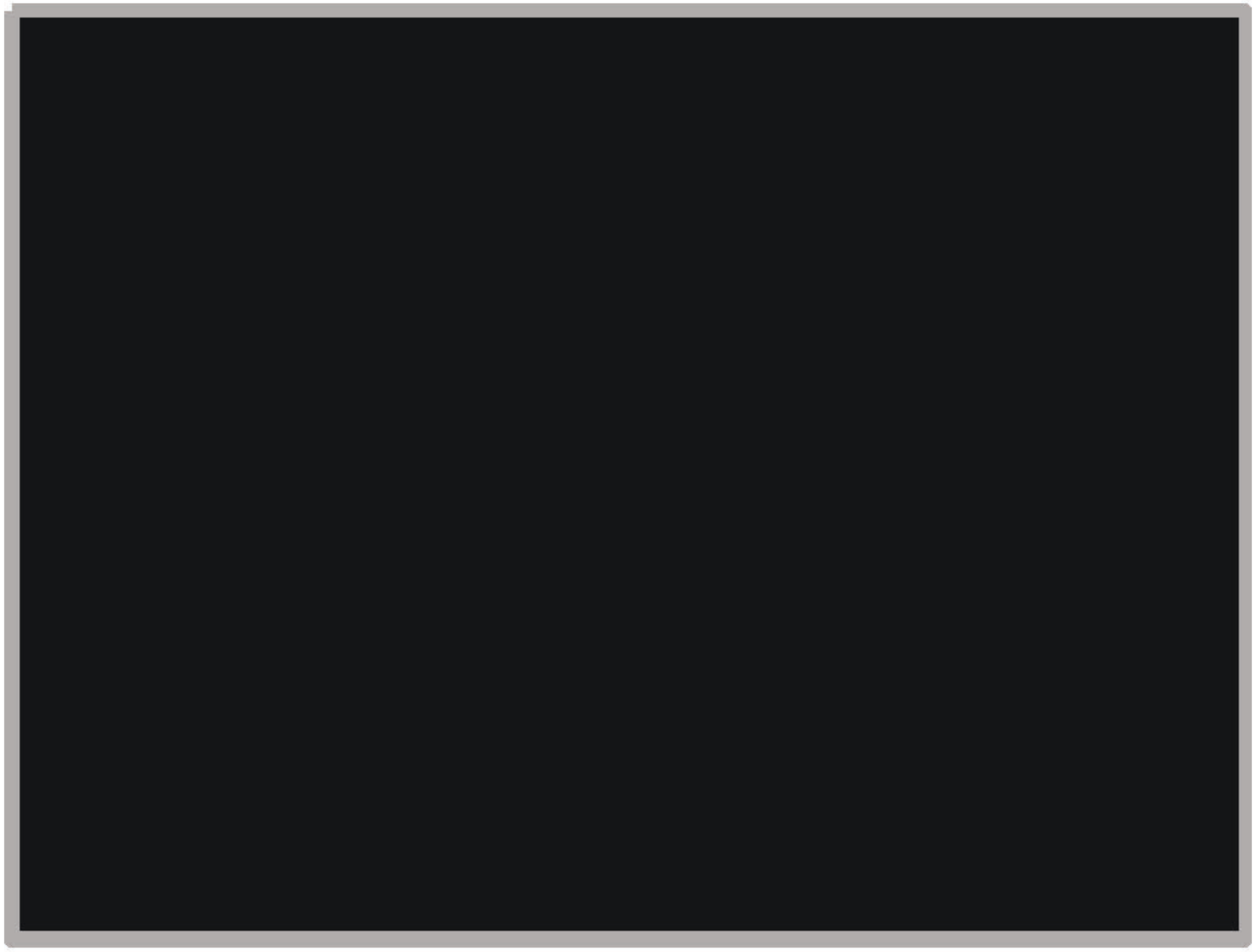
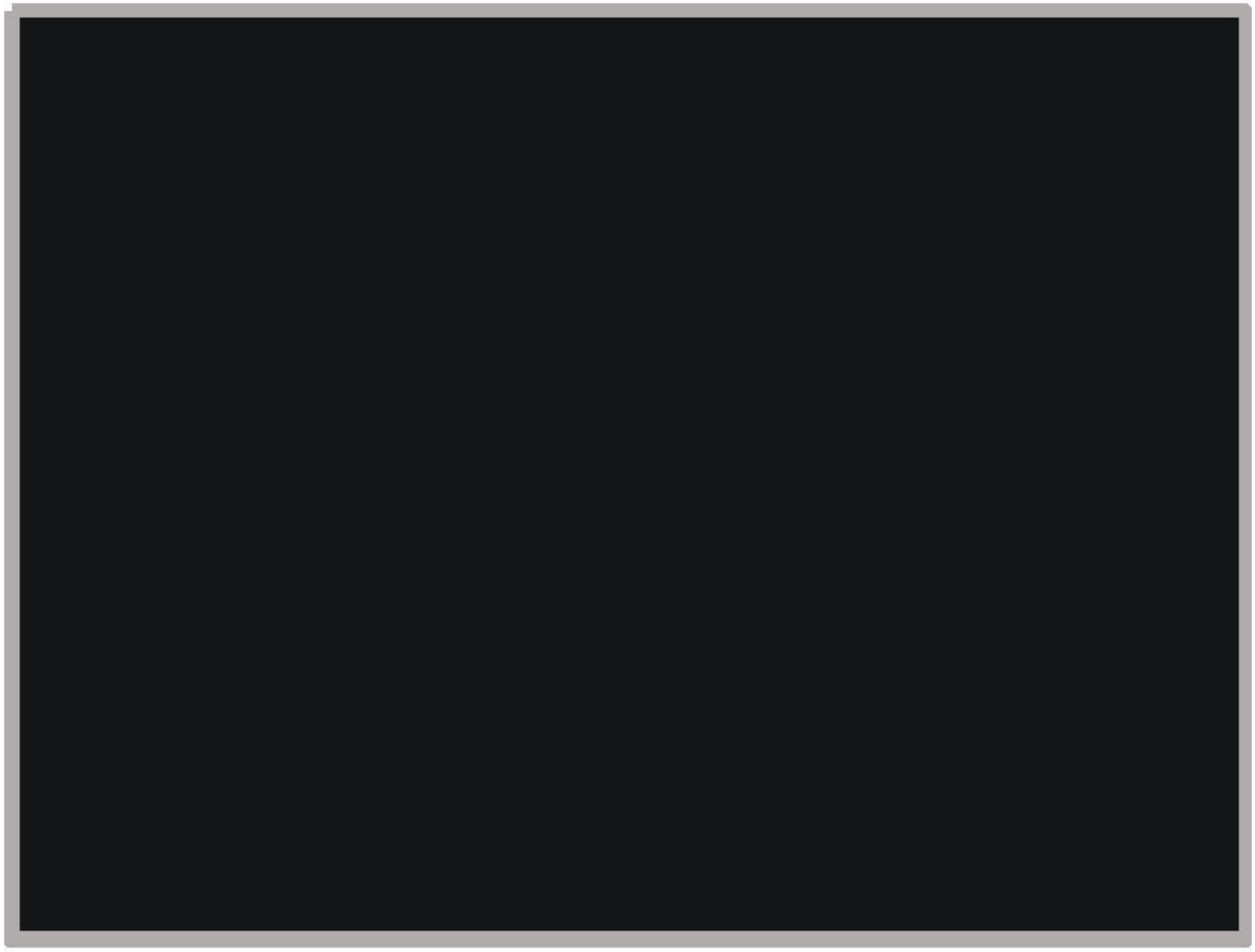


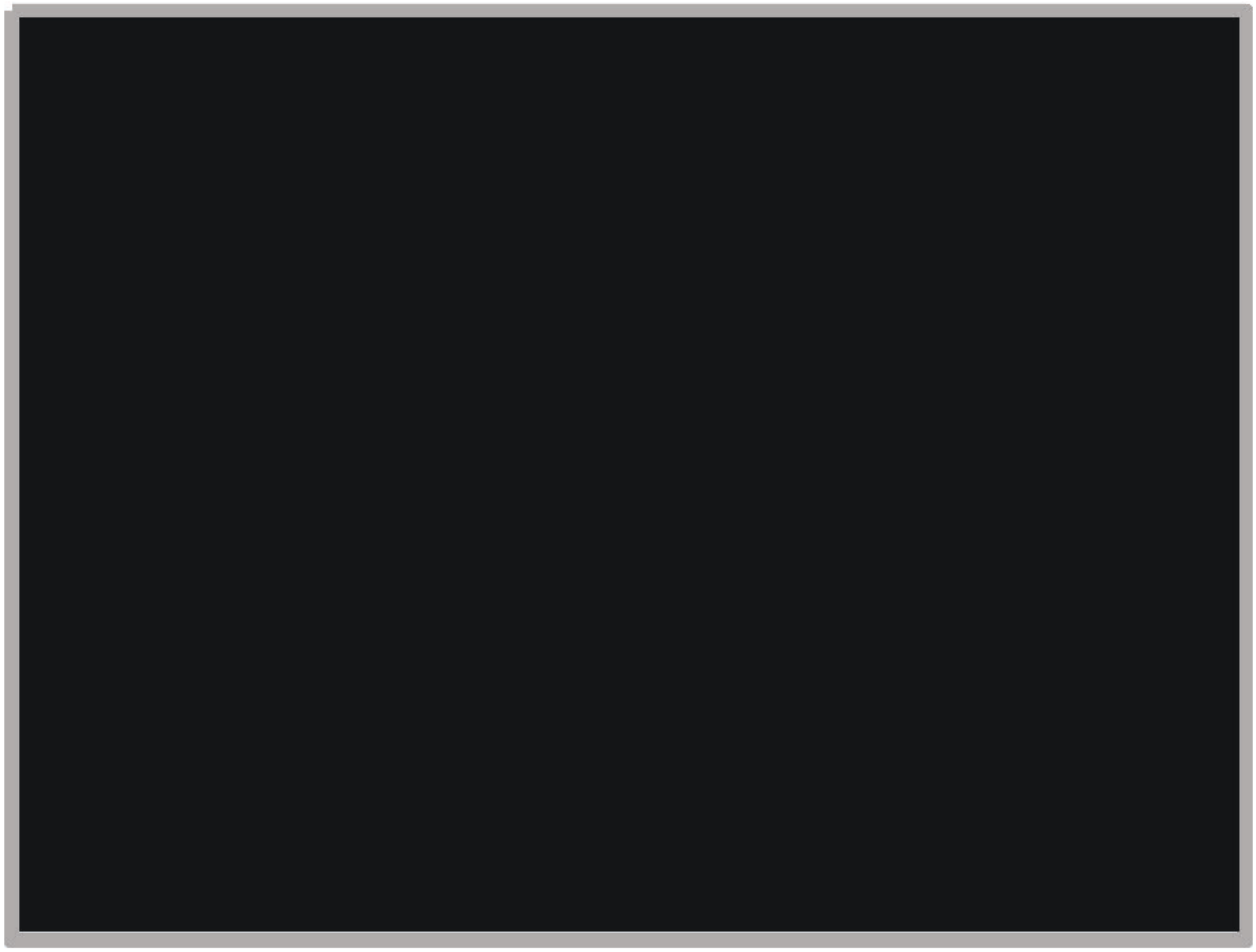
Figure 5: Exposed Pipe with Coating at Direct Examination Site #2



SoCalGas

Final Workpaper for Line 7039 [redacted] TIMP Project

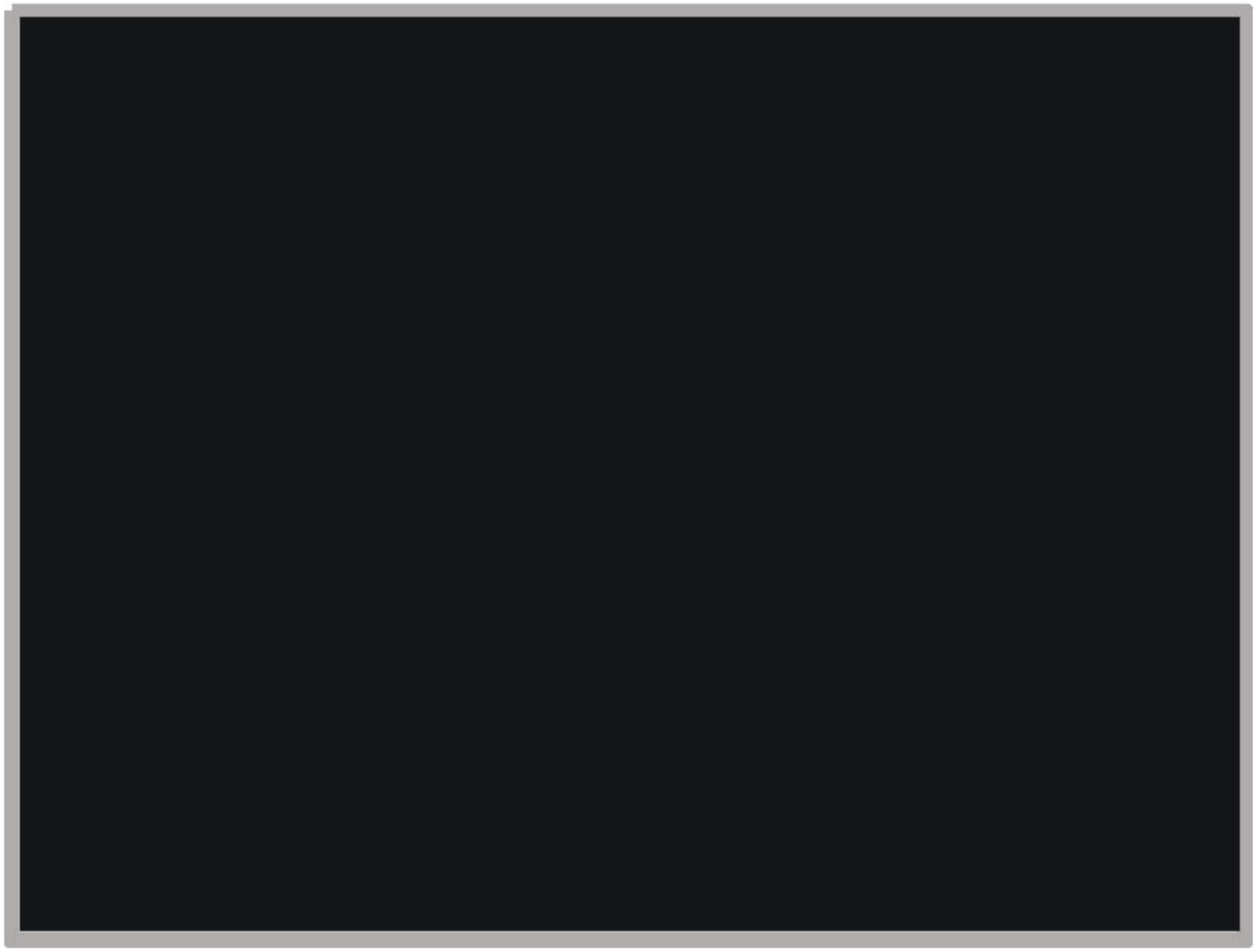
Figure 6: Direct Examination Site #1 Overview



SoCalGas

Final Workpaper for Line 7039 [redacted] TIMP Project

Figure 7: Direct Examination Site #2 Overview



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,027,889.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	228,890	228,890
Contract Costs	0	936,241	936,241
Material	0	36,513	36,513
Other Direct Charges	0	577,305	577,305
Total Direct Costs	0	1,778,948	1,778,948

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	239,615	239,615
AFUDC	0	7,699	7,699
Property Taxes	0	1,628	1,628
Total Indirect Costs	0	248,941	248,941

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	2,027,889	2,027,889

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 7039 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,027,889.

End of Line 7039 [redacted] TIMP Project Final Workpaper

I. LINE 7200 [redacted] TIMP PROJECT

A. Background and Summary

Line 7200 [redacted] the Transmission Integrity Management Program (TIMP) Project assessed approximately nine miles of predominantly [redacted] diameter transmission line from [redacted], through agricultural land. The pipeline is routed across [redacted] locations entirely within non-High Consequence Areas (non-HCAs). This Workpaper describes the activities and costs associated with the Direct Examinations made to four sites. The Project activities were located in Kern County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,679,085.

SoCalGas

Final Workpaper for Line 7200 [redacted] TIMP Project

Table 1: General Project Information

Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	2
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

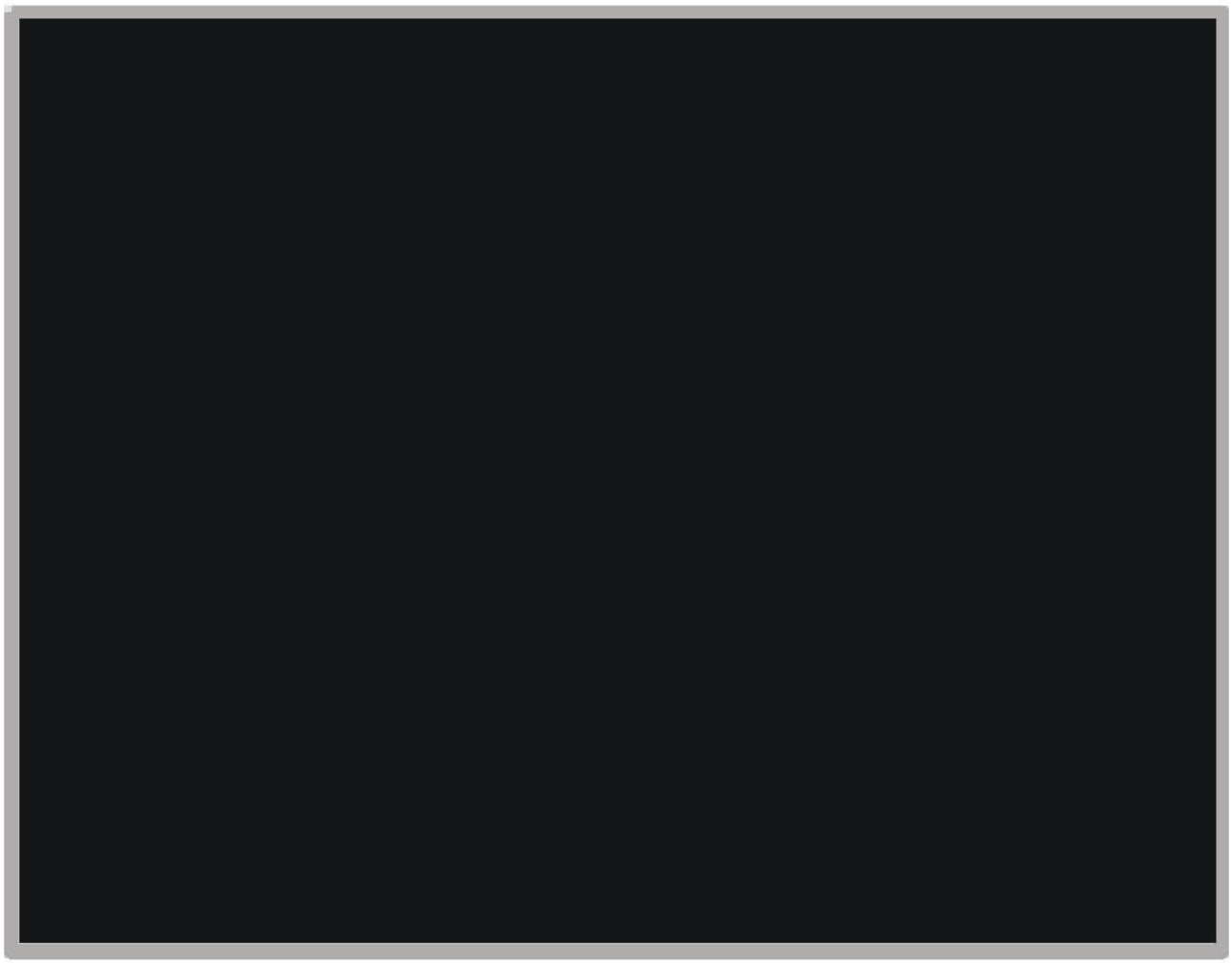
Final Workpaper for Line 7200 [redacted] TIMP Project

Table 1: General Project Information (continued)

Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	2,333,268	1,345,817	3,679,085

B. Maps and Images

Figure 1: Satellite Image of Line 7200 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the prepared direct testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations and Station Retrofits.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 7200 [redacted] TIMP Project for Inspection using ILI, activities related to the ILI were completed for this Project before the TY 2019 General Rate Case (GRC) cycle.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, four Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes four Direct Examinations and Station Retrofits.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
7200	1	No	No	21 ft	Soft Pad	N/A	O&M
7200	2	No	No	24 ft	Soft Pad	N/A	O&M
7200	3	No	No	25 ft	Soft Pad	N/A	O&M
7200	4	No	No	15 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas completed the Inspection for the Line 7200 [redacted] TIMP Project before the TY 2019 GRC cycle.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were four Direct Examination Sites selected for validation within the Line [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded additional system adjustments were required to maintain system capacity.

4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: No identified impacts.
9. Land Use: The Project Team obtained temporary right of entry (TRE) agreements from private landowners for all Direct Examination Sites. In addition to existing easements at the location, the Project Team obtained a TRE agreement for additional area near the launcher location at [redacted]
10. Traffic Control: No identified impacts.
11. Constructability: The Project included permanent pipeline retrofits and new facility installations to facilitate future assessments of Line 7200. Although permanent pipeline installations were completed before the TY 2019 GRC cycle, significant delays for the launcher and receiver barrels resulted in their installations during the Direct Examination step. The installations included the following:
    a. Installation of a permanent [redacted] launcher barrel for Line 7200 within [redacted]
    b. Installation of a permanent [redacted] receiver barrel for Line 7200 within [redacted]
    c. The Project experienced significant schedule delays during these installations due to heavy rainfall.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Permanent Launcher in [redacted]

Figure 3: Permanent Receiver in [redacted]

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Future Maintenance: The Project Team installed a permanent ladder well with catwalk assemblies at both [redacted] and [redacted]. This installation elevates Project safety by minimizing ladder usage and avoids future installations of scaffolding for consequent Inspections.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,679,085.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	46,805	67,498	114,303
Contract Costs	1,416,740	928,556	2,345,296
Material	242,530	8,045	250,575
Other Direct Charges	325,489	221,468	546,957
Total Direct Costs	2,031,564	1,225,567	3,257,131

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	270,809	120,237	391,046
AFUDC	23,584	13	23,597
Property Taxes	7,311	0	7,311
Total Indirect Costs	301,704	120,250	421,954

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	2,333,268	1,345,817	3,679,085

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 7200 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,679,085.

End of Line 7200 [redacted] TIMP Project Final Workpaper

I. LINE 8109 PHASE 2 [redacted] TIMP PROJECT

A. Background and Summary

Line 8109 Phase 2 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 425 feet crossing [redacted], near rural areas. The pipeline is routed across [redacted] locations, entirely within non-High Consequence Areas (non-HCAs). This Workpaper describes the activities and costs associated with a TIMP Assessment that includes the Direct Examinations made to three sites. The Project activities were located in unincorporated Ventura County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $1,236,395.

SoCalGas

Final Workpaper for Line 8109 Phase 2 [redacted] TIMP Project

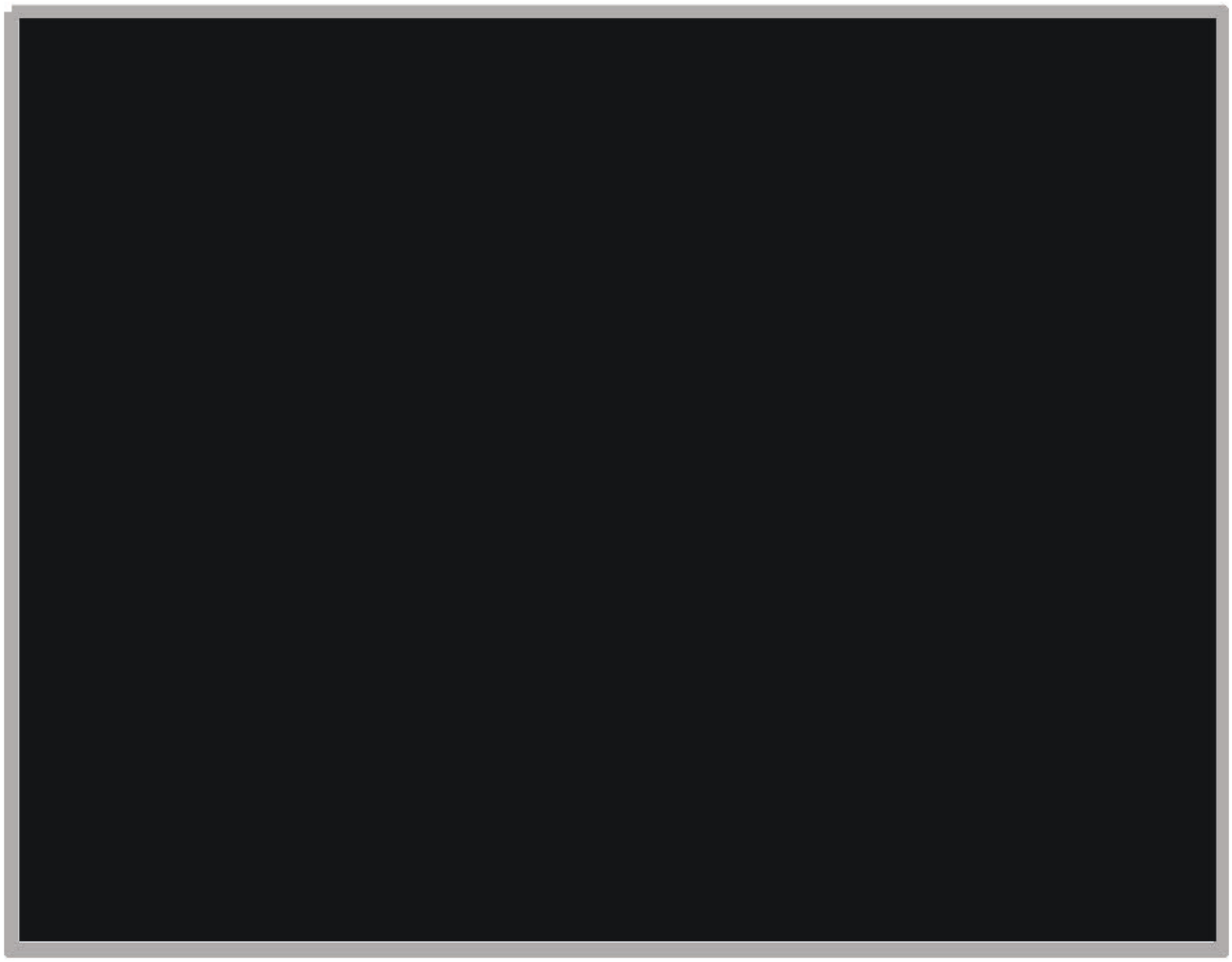
Table 1: General Project Information

Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	
SMYS	
Construction Start Date	
Construction Completion Date	
Direct Examination Details	
Site	2
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	
SMYS	
Construction Start Date	
Construction Completion Date	
Direct Examination Details	
Site	3
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	
SMYS	
Construction Start Date	
Construction Completion Date	

Project Costs ($)	Capital	O&M	Total
Loaded Project Costs	1,236,395	0	1,236,395

B. Maps and Images

Figure 1: Satellite Image of Line 8109 Phase 2 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 8109 at [redacted] for Inspection using [redacted] activities related to the ILI were completed for this Project before the TY 2019 General Rate Case (GRC) cycle.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using [redacted] three Direct Examination sites were identified for validation.
   a. Direct Examination Sites #1, #2, and #3 consisted of a combined 588 foot pipeline replacement.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations or remediations.
4. Final Project Scope: The final project scope of this Workpaper includes three Direct Examinations.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
8109	1, 2, 3	No	No	9 ft	Replacement	588 ft	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas completed the Inspection for the Line 8109 Phase 2 [redacted] TIMP Project before the TY 2019 GRC cycle.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were three Direct Examinations sites selected for validation of the ILI within the Line 8109 Phase 2 [redacted] TIMP Project.
   a. Direct Examination Sites #1, #2, and #3 consisted of a combined 588 foot pipeline replacement.
   b. Direct Examinations were completed on the pipeline at an offsite location.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Project required coordination with other SoCalGas project to minimize system impacts.
4. Customer Impacts: No customer impacts.

5. Community Impacts: The Project location was within private property and required extensive coordination to obtain adequate clearances for work to be completed.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Permit Restrictions: The Project Team obtained the following permits for the Project:
   a. Regional General Permit from the U.S. Army Corps of Engineers (USACE). This permit was submitted and approved multiple times due to amended water diversions plans caused by weather conditions.
   b. Watercourse Permit from the County of Ventura Public Works Agency.
8. Environmental:
   a. The Project required active biological monitoring throughout the Direct Examinations.
   b. Landowners of the Project location required active monitoring of hot spring pools within the property.
9. Land Use:
   a. The Project Team obtained a Temporary Right of Entry (TRE) agreement from the Project site landowners. Delayed project schedules resulted in increased costs for the TRE.
   b. The Project Team implemented a Restoration Memorandum to ensure full environmental restoration within the Project site.
10. Traffic Control: The Project Team provided traffic control signage throughout the duration of the Project.
11. Constructability:
    a. The Project Team increased the initial replacement section to 588 feet to provide sufficient pipeline coating protection.
    b. The Project Team increased the depth of cover over the pipeline to 14 feet within the section crossing [redacted] to comply with waterway design requirements.
    c. The Project required temporary water diversions to safely access the pipeline.

d. The Project experienced multiple demobilizations due to severe weather conditions within a three-month period. The demobilizations included the removal and reinstallation of all temporary water diversions.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

SoCalGas

Final Workpaper for Line 8109 Phase 2 [redacted] TIMP Project

Figure 2: Aerial Overview of Project Site

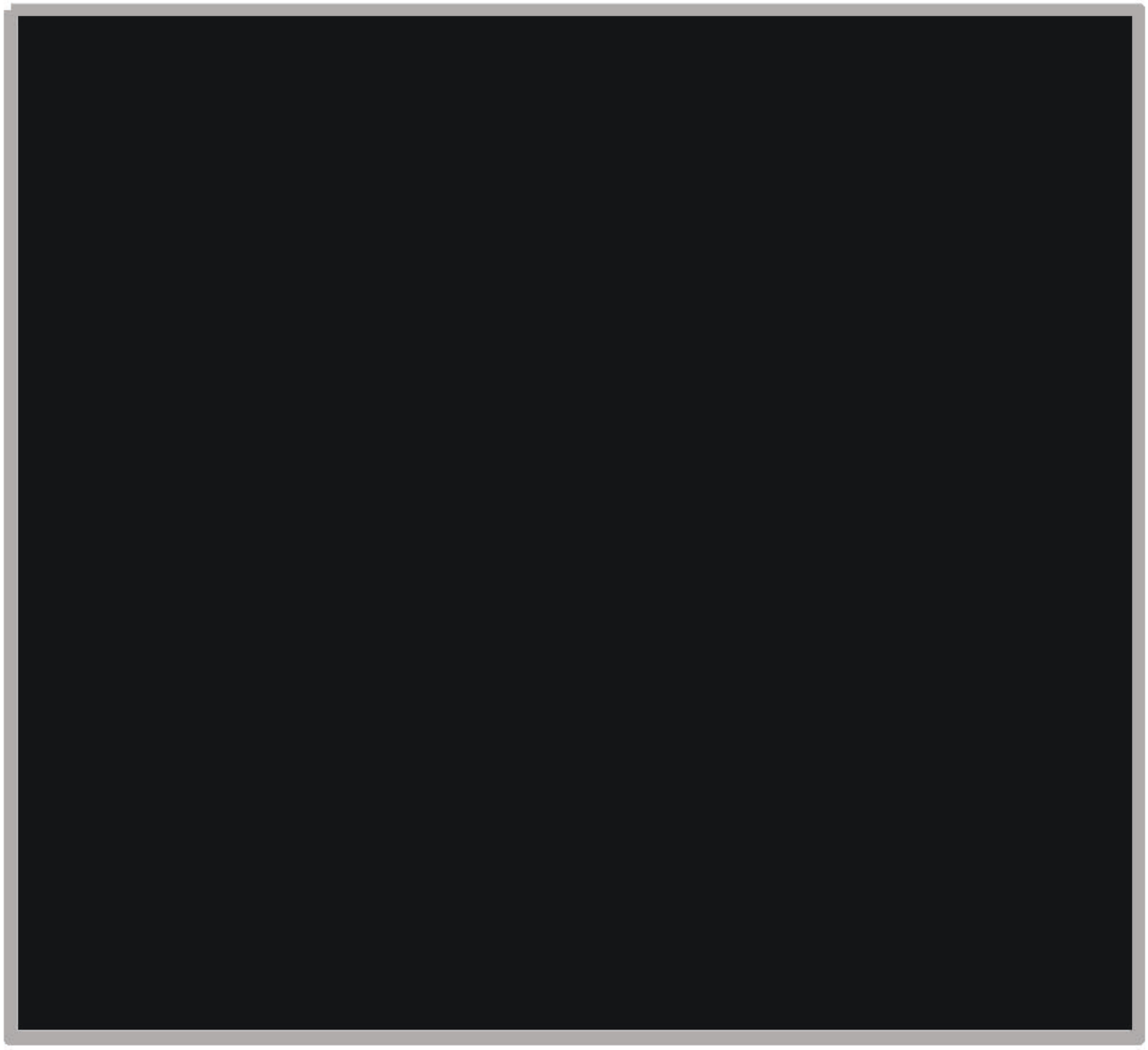


Figure 3: Temporary Bridge to access Project Site

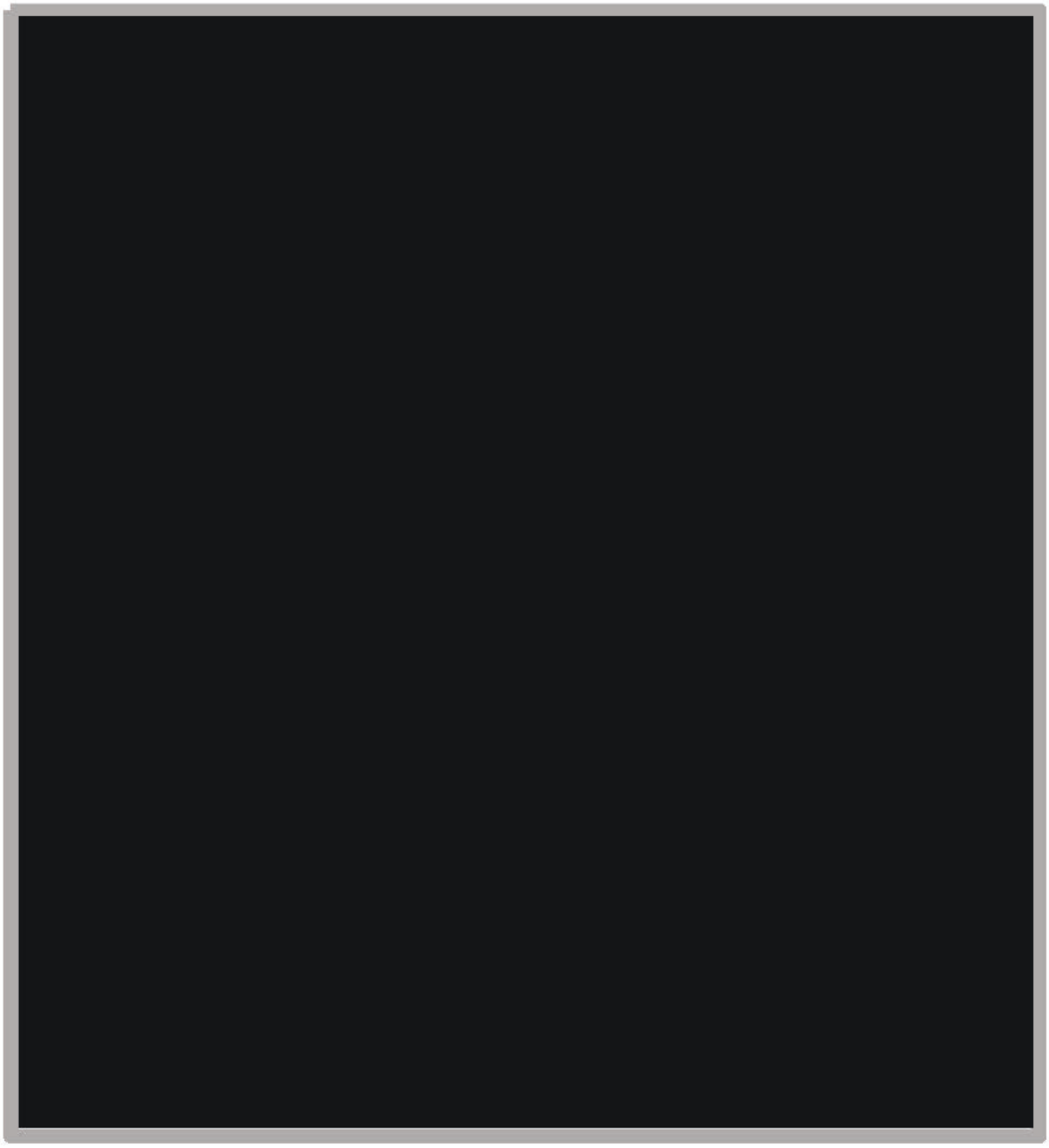


Figure 4: Excavation at Project Site – Elevation Visual

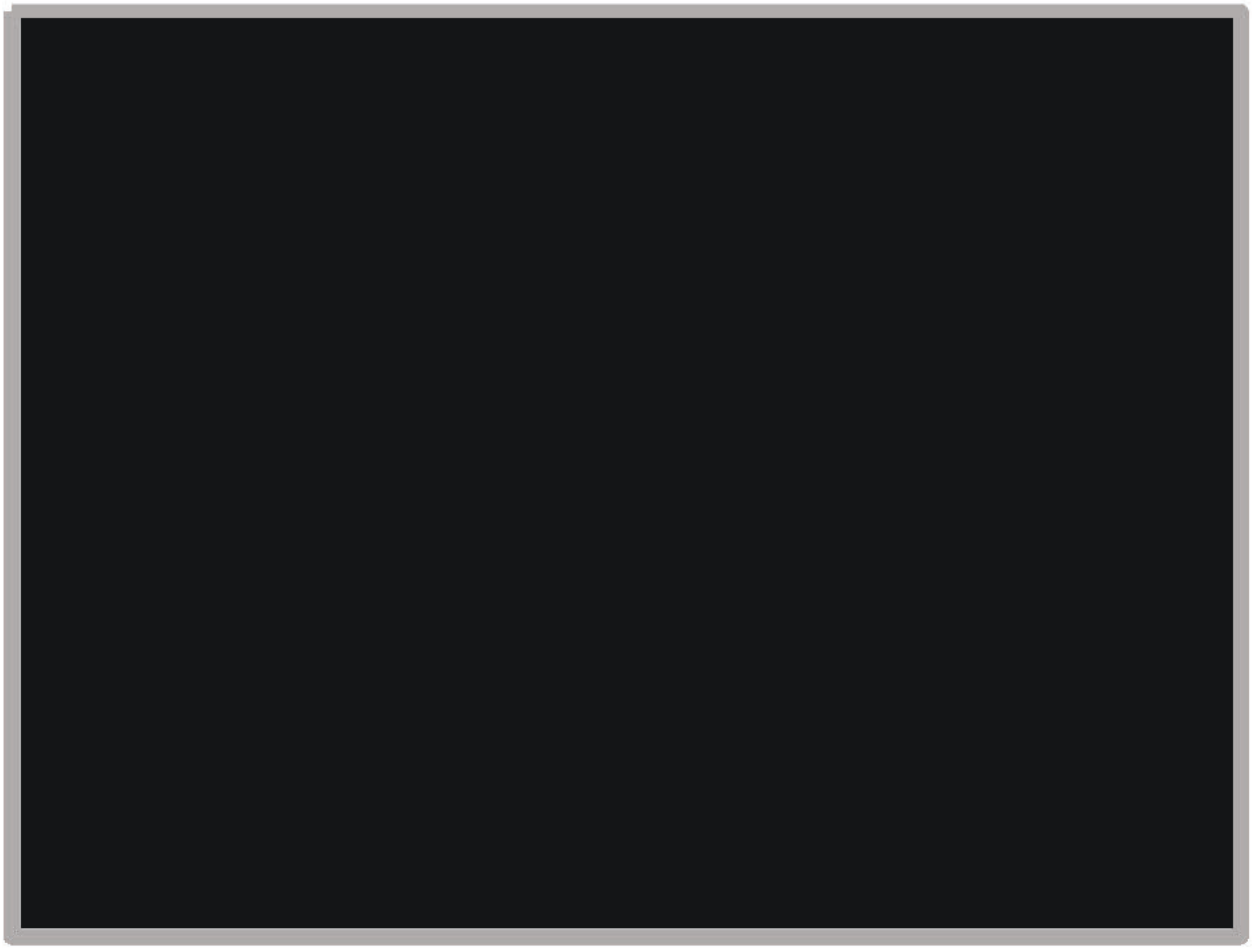


Figure 5: Open Trench at Project Site

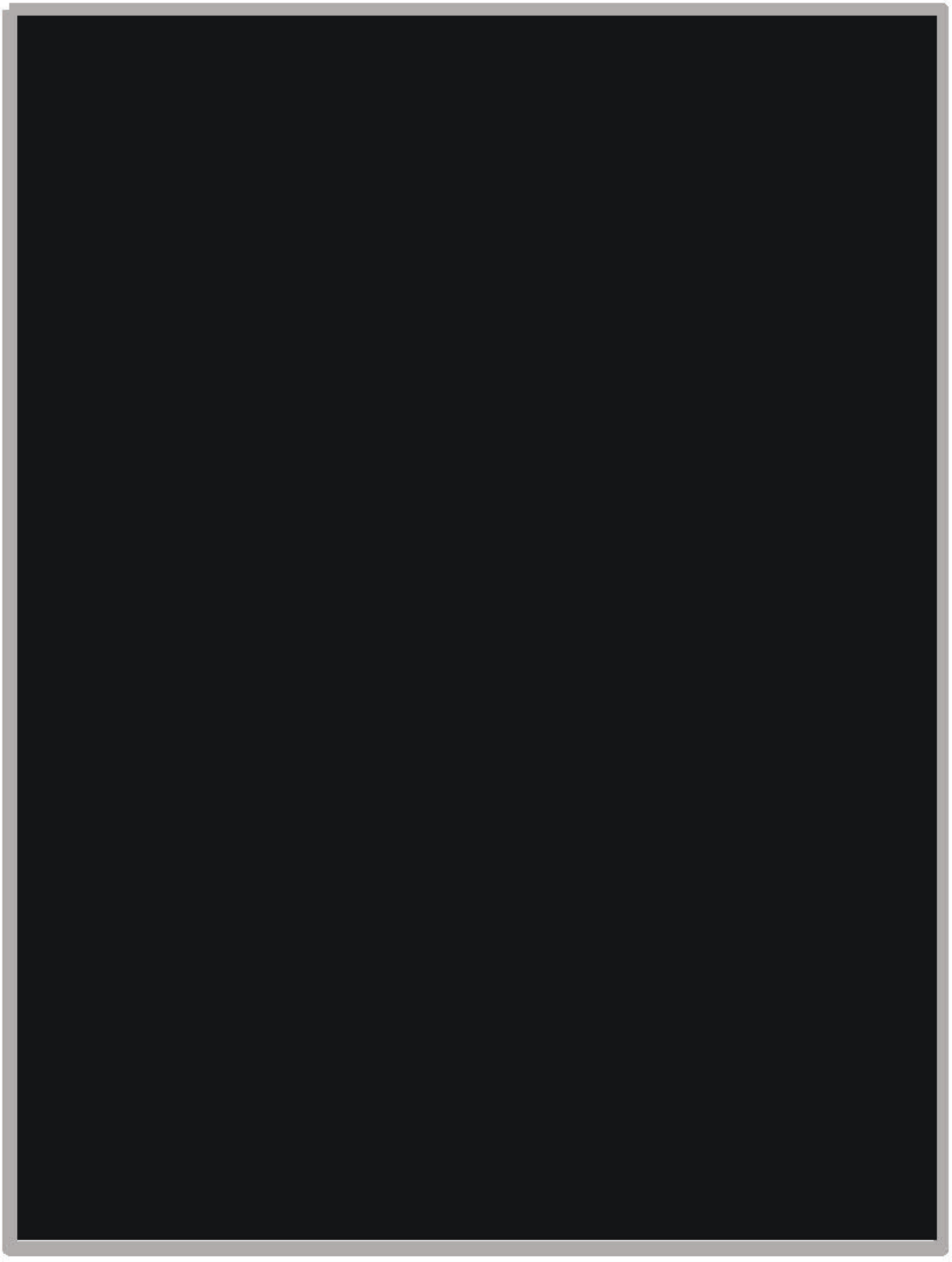
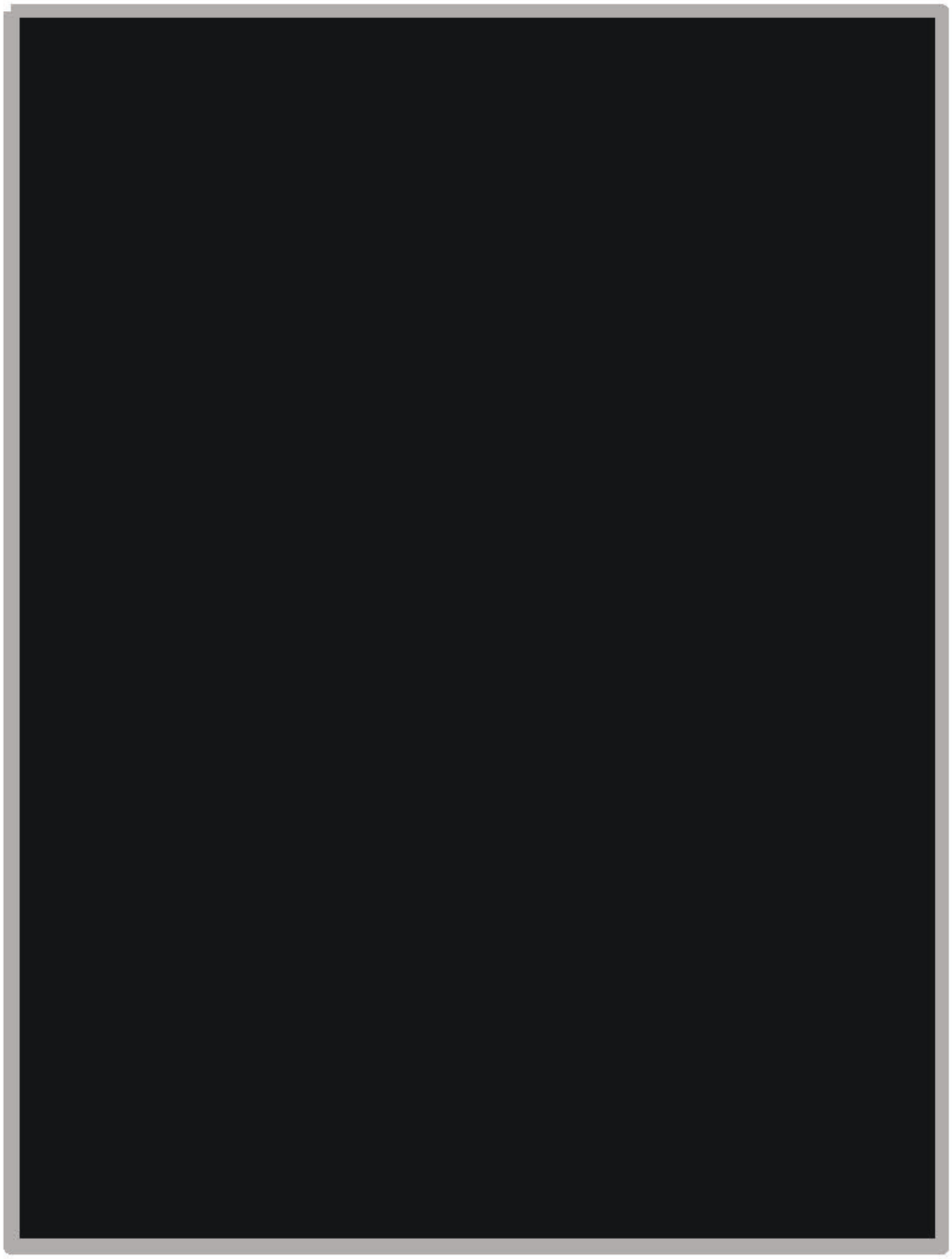


Figure 6: Water Pump at Project Site



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation, and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Construction Execution: This Project was completed in coordination with another SoCalGas project. Project costs were distributed between both project budgets to complete the 588 foot replacement.

B. Actual Costs[1]

Actual Direct Costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $1,236,395.

Table 7: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	28,277	0	28,277
Contract Costs	1,042,854	0	1,042,854
Material	1,222	0	-59,651
Other Direct Charges	49,571	0	110,444
Total Direct Costs	1,121,924	0	1,121,924

Table 8: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	93,859	0	93,859
AFUDC	13,843	0	13,843
Property Taxes	6,770	0	6,770
Total Indirect Costs	114,471	0	114,471

Table 9: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	1,236,395	0	1,236,395

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 8109 Phase 2 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $1,236,395.

End of Line 8109 Phase 2 [redacted] TIMP Project Final Workpaper

I. SUPPLY LINE 30-58 [redacted] TIMP PROJECT

A. Background and Summary

Supply Line 30-58 [redacted] Transmission Integrity Management Program (TIMP) Project assessed an [redacted] and [redacted] multi-diameter line that runs approximately 208 feet from [redacted] into a customer private property, near industrial and commercial areas. The pipeline is routed across a [redacted] location entirely within High Consequence Areas (HCAs). This Workpaper describes the activities associated with a TIMP Assessment that include the Direct Examinations made to two sites. The Project activities were located in the City of Carson. The specific attributes of this Project are detailed in Table 1 below. The total loaded cost of the Project is $3,504,653.

SoCalGas

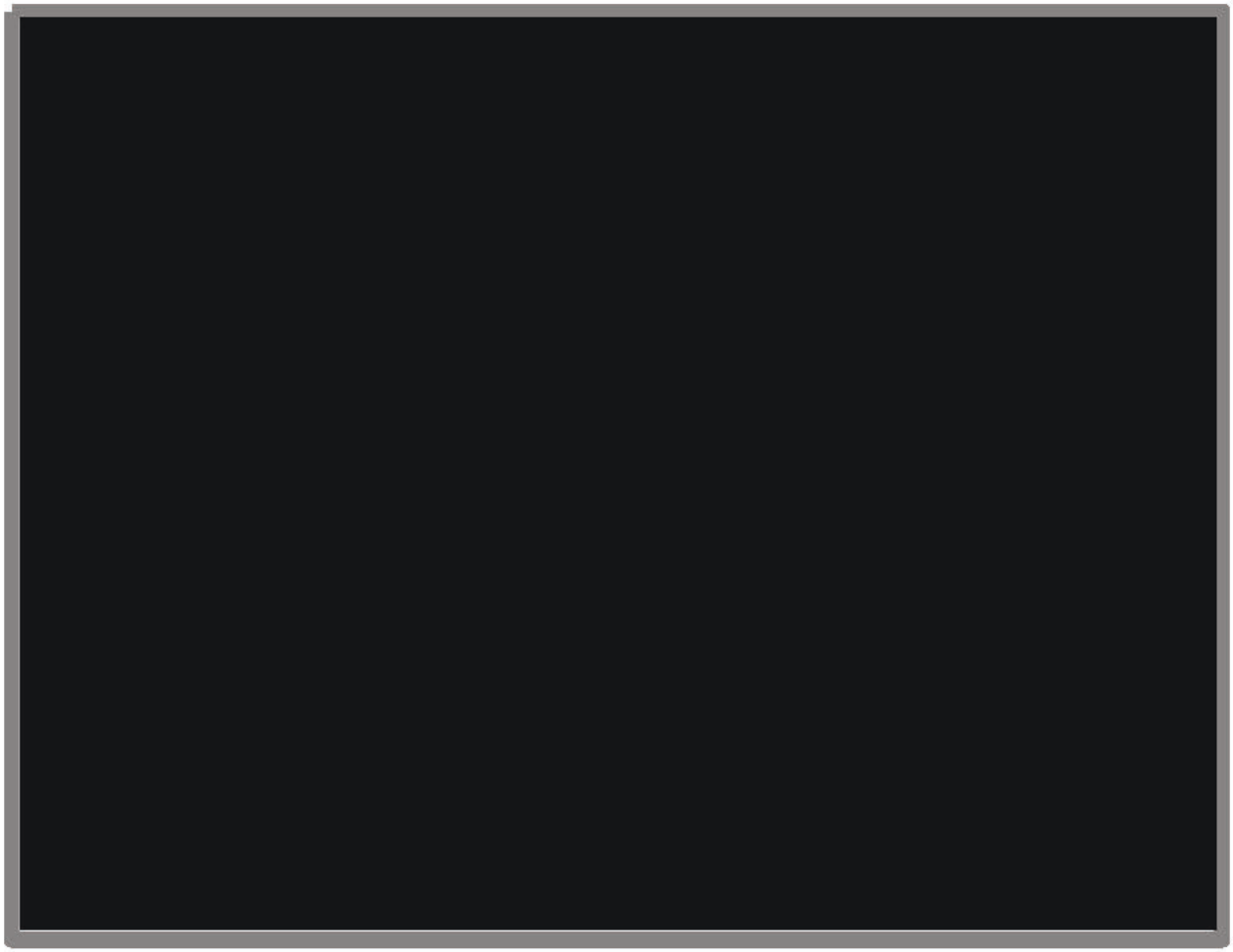
Final Workpaper for Supply Line 30-58 [redacted] TIMP Project

Table 1: General Project Information

Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Type	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Type	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	92,841	3,411,812	3,504,653

B. Maps and Images

Figure 1: Satellite Image of Supply Line 30-58 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the prepared direct testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Supply Line 30-58 for Inspection using the [redacted] assessment method in lieu of ILI.
2. Direct Examination – Engineering, Design, and Constructability: Two Direct Examination sites were identified to assess pipeline segments that could not accommodate an ILI tool.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper consists of two Direct Examinations.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
30-58	1	Yes	No	180 ft	Soft Pad	N/A	O&M
30-58	2	Yes	No	28 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Supply Line 30-58 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the project, confirm the appropriate Inspection methods, and select the inspection tools. It was determined that this pipeline segment could not accommodate an ILI tool and would need to be assessed using the [redacted] method.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Supply Line 30-58 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were two [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Supply Line 30-58 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.

b. Direct Examination Site #2 consisted of soft pad repairs.

2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: The Project Team did not identify any anticipated service disruptions to customers.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The City of Carson required traffic analysis and signal modification as a contingency for the standard encroachment permit. The permit also required specific backfill requirements due to heavy trucks in the area.
9. Land Use: The Project Team obtained a temporary workspace area adjacent [redacted] and a portion of a customer's private property.
10. Traffic Control: Ongoing monitoring of traffic impact and flow was requested by the city. There was a full road closure at the south end [redacted]
11. Constructability: During construction for Direct Examination Site #1 and Site #2, the Project Team required the removal of pipe casing in order to complete the Direct Examination of the pipe.

D. Engineering, Design, and Constructability Factors – Post-Assessment

The Project Team used the data collected from the Direct Examinations during the Post-Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct examination Site #1

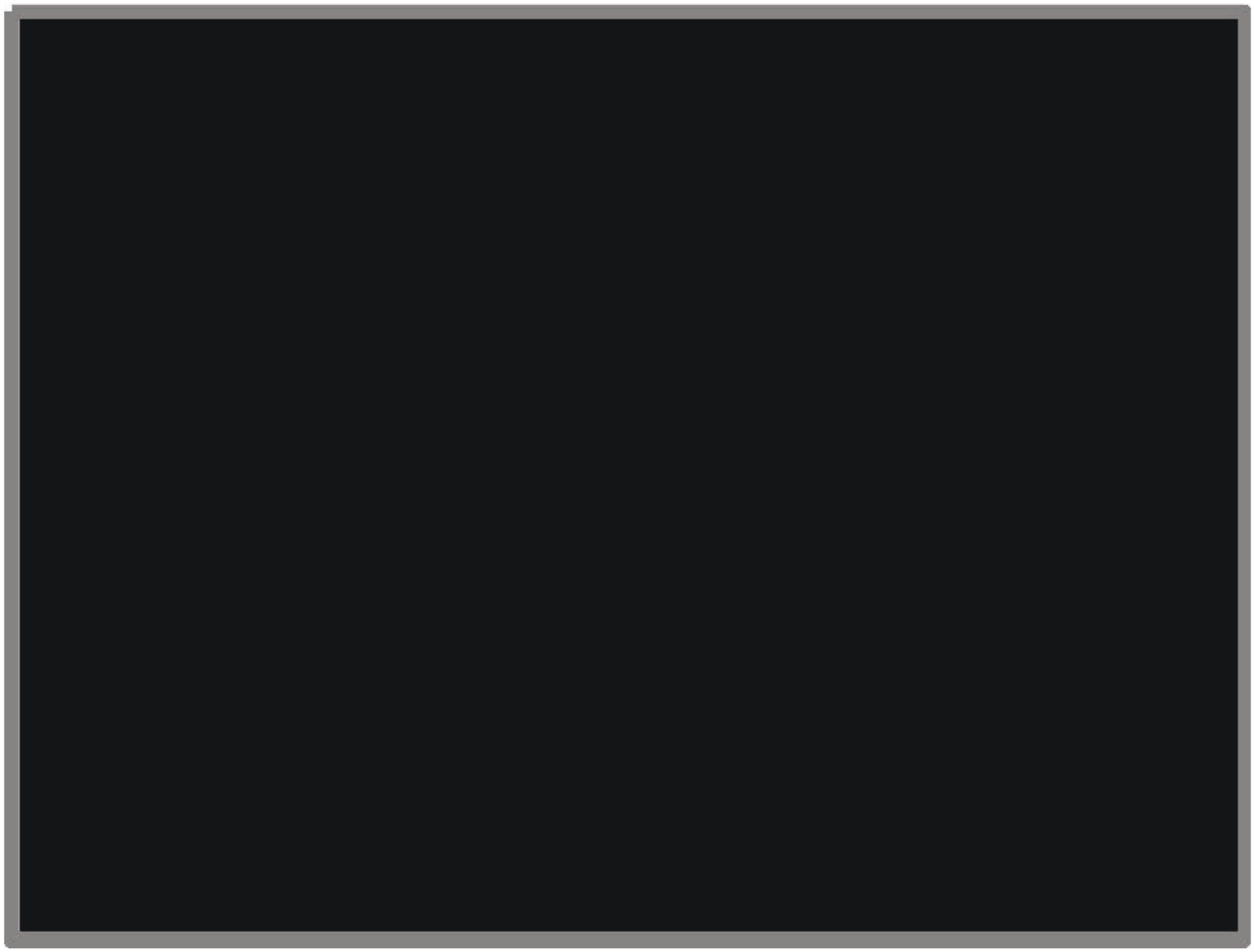
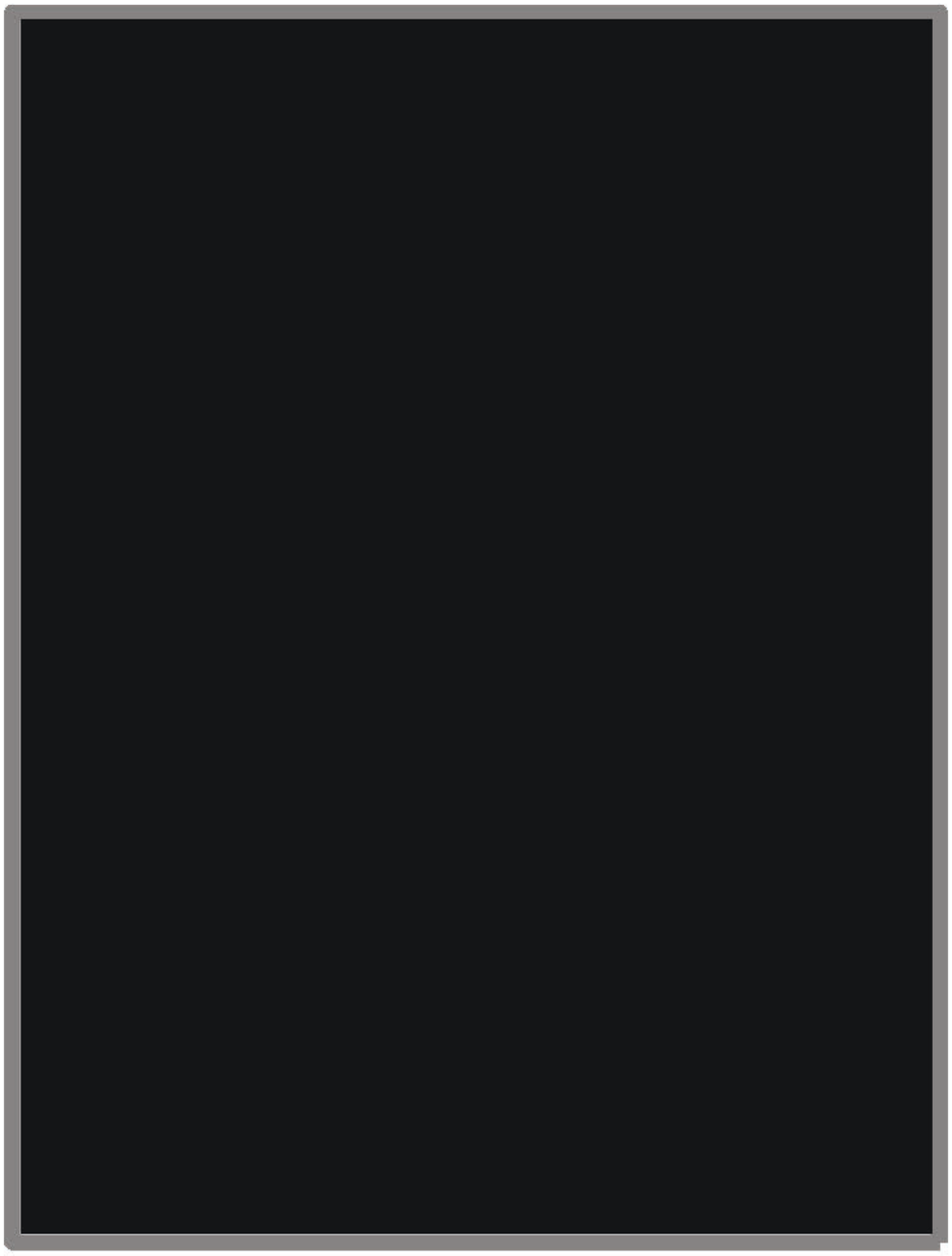


Figure 3: Direct examination Site #2



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,504,653.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	2,095	147,022	149,117
Contract Costs	2,414	2,348,818	2,351,232
Material	69,414	361,002	430,416
Other Direct Charges	11,789	349,619	361,408
Total Direct Costs	85,711	3,206,461	3,292,173

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	-1,320	205,350	204,030
AFUDC	6,781	0	6,781
Property Taxes	1,668	0	1,668
Total Indirect Costs	7,129	205,350	212,480

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	92,841	3,411,812	3,504,653

[1] These are the total project costs incurred between January 1, 2019, and December 31st, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Supply Line 30-58 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,504,653.

End of Supply Line 30-58 [redacted] TIMP Project Final Workpaper

I. SUPPLY LINE 31-09 [redacted] TIMP PROJECT

A. Background and Summary

Supply Line 31-09 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter line that runs approximately 838 feet underneath a railroad crossing near [redacted] in the County of Los Angeles. The pipeline is routed across [redacted] locations with 406 feet within High Consequence Area(s) (HCAs) and 432 feet within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI), a Direct Examination made to one site, which contained an Immediate Repair Condition (IRC), and a Post-Assessment examination made to one site. The Project activities were located in the County of Los Angeles. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $4,584,016.

SoCalGas

Final Workpaper for Supply Line 31-09 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	31-09
Segment	[redacted]
Inspection Type	[redacted] Tool
Location	Walnut and Industry
Class	[redacted]
HCA Length	406 feet
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]

SoCalGas

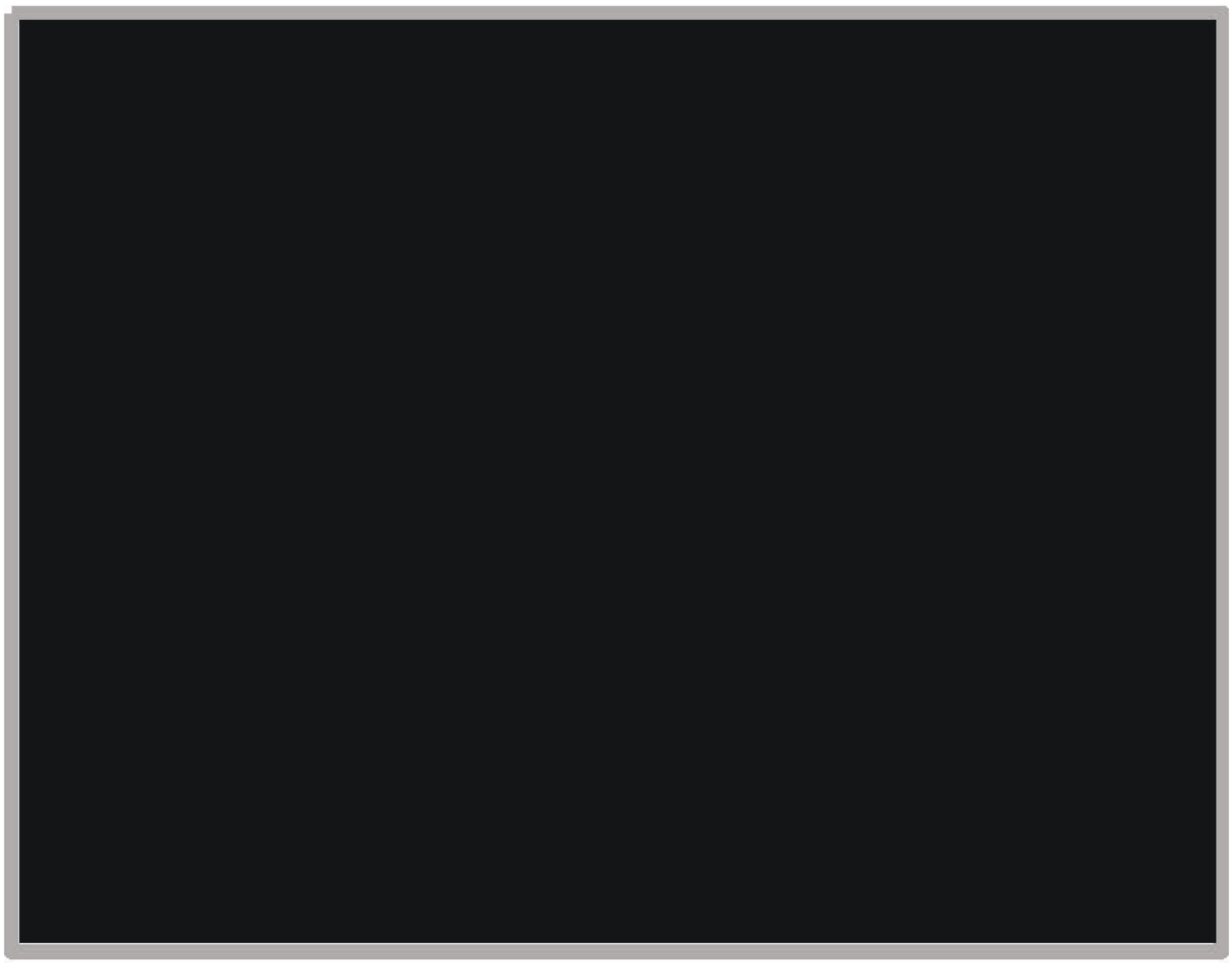
Final Workpaper for Supply Line 31-09 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad and Replacement		
Within HCA	Yes		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date			
Pipe Diameter			
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Post-Assessment Details			
Site	1		
Examination ID	[redacted]		
Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	1,689,211	2,894,805	4,584,016

B. Maps and Images

Figure 1: Satellite Image of Supply Line 31-09 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection, Direct Examination, and Post-Assessment.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2, 3, and 4 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Supply Line 31-09 [redacted] TIMP Project for Inspection using [redacted]
   a. [redacted] from a temporary launcher and receiver site near the south extent of the Project.
   b. The Project required installation of a permanent [redacted] to facilitate the Inspection.
   c. The Project required temporary launcher and receiver dewater locations to complete dewatering activities before the Inspection. This also required permanent replacement of approximately 40 feet of [redacted] pipeline.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using [redacted] Direct Examination was completed

using a validation spool piece and it was determined that one additional Direct Examination site was required.

a. Direct Examination Site #1 consisted of soft pad repairs and a 14 foot pipeline replacement.

b. The Project identified one Direct Examination site containing an IRC.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analyses of the validation spool piece and Direct Examination following the Inspection resulted in one additional examination.

a. Post-Assessment Site #1 consisted of soft pad repairs.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI, one Direct Examination and one Post-Assessment Examination.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
31-09	838 ft	[redacted]	[redacted]	[redacted]	Yes

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
31-09	1	Yes	Yes	19 ft	Soft Pad and Replacement	14 ft	Capital

Table 4: Final Post-Assessment Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
31-09	1	Yes	No	5 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Supply Line 31-09 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description:
   a. [redacted] of Supply Line 31-09 [redacted] through a temporary launcher and receiver site.
   b. The Project required installation of a temporary launcher and receiver to support dewatering.
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted]
4. Long Seam Type:

[redacted]

[redacted]

5. Inspection Tools and Technologies: The Project utilized a [redacted] technology during the Inspection of the pipeline.
6. Inspection Retrofits:
   a. The Project required permanent installation of a [redacted] to facilitate the [redacted]
   b. The Project required permanent replacement of approximately 40 ft of [redacted] pipeline to access the pipeline and support dewatering activities for the segment prior to Inspection.
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Inspection and retrofits could be completed in planned construction window without system impacts.
8. Customer Impacts: No customer impacts.
9. Community Impacts: No identified impacts.
10. Substructures: The Project Team identified an adjacent utility pipe at the dewatering receiver site.
11. Environmental: The Inspection launcher and receiver locations were located adjacent to the [redacted]. The Project Team took additional precautions to ensure project materials or debris did not access the waterways.
12. Permit Restrictions: The Project Team obtained approved permits from the following entities:
    a. Encroachment Permit from the City of Industry.
    b. Excavation Permit from the County of Los Angeles.
13. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) agreement from a private landowner for workspace near the Project.
14. Traffic Control: The Project Team utilized a standard Traffic Control Plan (TCP) to comply with the Encroachment Permit from the City of Industry.

15. Schedule Delay: No identified impacts.
16. Constructability:
    a. The Project Team installed temporary installations of launcher and receiver dewater assemblies. These assemblies helped facilitate dewatering activities prior to Inspection.
    b. The Project required full isolation of the pipeline in preparation for dewatering activities.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas completed Direct Examination for the Supply Line 31-09 [redacted] TIMP Project using a validation spool piece and it was determined that one additional Direct Examination Site was required for validation. Key factors that influenced the engineering and design of this Project are as follows:

1. Engineering Assessment: There was one Direct Examination Site selected for validation of the ILI within the Supply Line 31-09 [redacted] TIMP Project.
    a. Direct Examination Site #1 consisted of soft pad repairs and a 14 foot pipeline replacement.
2. SRC/IRC: Direct Examination Site #1 contained an IRC and required an expedited project schedule.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded a full isolation of the pipeline segment would have a significant impact on the system. Therefore, the Project required installation of a temporary bypass.
4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.

7. Environmental: The Project Team utilized the environmental guidelines provided for the Inspection during the Direct Examination.
8. Permit Restrictions: The Project Team completed the following for the Direct Examination:
   a. Courtesy notification letter to Union Pacific Railroad.
   b. Expedited Excavation Permit from the County of Los Angeles Department of Public Works.
9. Land Use: The Project Team utilized the immediate work area as a laydown yard.
10. Traffic Control: No identified impacts.
11. Schedule Delay: The Project experienced a delay in excavation activities due to large depth of cover at the Direct Examination site.
12. Constructability:
    a. The Project required installation of one new permanent [redacted] and a temporary [redacted] bypass to complete the Direct Examination and minimize system impacts.
    b. The Project required trench plate designs and rentals for the excavation site as well as engineered shoring due depth of the pipeline.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and validation spool piece to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in one additional examination that involved preventative and mitigative measures to enhance the overall integrity and safety of the pipeline. Key factors that influenced the engineering and design of the Project are as follows:

SoCalGas

Final Workpaper for Supply Line 31-09 [redacted] TIMP Project

1. Engineering Analysis:
   a. Post-Assessment Site #1 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during Post-Assessment.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded Post-Assessment Site #1 could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: The Project Team notified nearby residents and businesses of construction activities required for Post-Assessment Site #1.
6. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Encroachment Permit from the City of Industry for a laydown yard near the project site. The permit required the Project Team to coordinate with the Los Angeles County Flood Control District.
   b. Flood Permit from the County of Los Angeles Public Works to access right of way. The permit allowed the Project Team to remove approximately 50 feet of right of way fence on both sides of the nearby [redacted] for access. The Project Team restored fencing upon project completion.
7. Constructability: Post-Assessment Site #1 was located on a pipe span which required aboveground Inspection.
8. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
9. Environmental: Post-Assessment Site #1 was located adjacent to the [redacted]
   a. The Project Team took additional precautions to ensure project materials or debris did not access the waterways.
   b. The Project Team was required to attend Workers Environmental Awareness Training (WEAP) due to the Project location.

10. Traffic Control: The Project Team obtained a TCP approved by the City of Industry that included a lane closure on [redacted], flaggers, cones, and signage.
11. Land Use: The Project Team obtained a TRE agreement from a private landowner for workspace near the Project.
12. Schedule Delay: No identified impacts.
13. Other Identified Impacts: The Project required additional nondestructive evaluation of the Post-Assessment Site since it was located on a pipe span.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 5: Construction Timeline – Inspection

Construction Start Date	[redacted]
Construction Completion Date	
Inspection Due Date	

Table 6: Construction Timeline – Direct Examination

Construction Start Date	[redacted]
Construction Completion Date	

Table 7: Construction Timeline – IRC

IRC Discovery Date – Site #1	[redacted]
Repair Date – Site #1	

Table 8: Construction Timeline – Post-Assessment

Construction Start Date	[redacted]
Construction Completion Date	

Figure 2: Temporary Launcher and Receiver Site

Figure 3: Temporary Launcher and Receiver Site

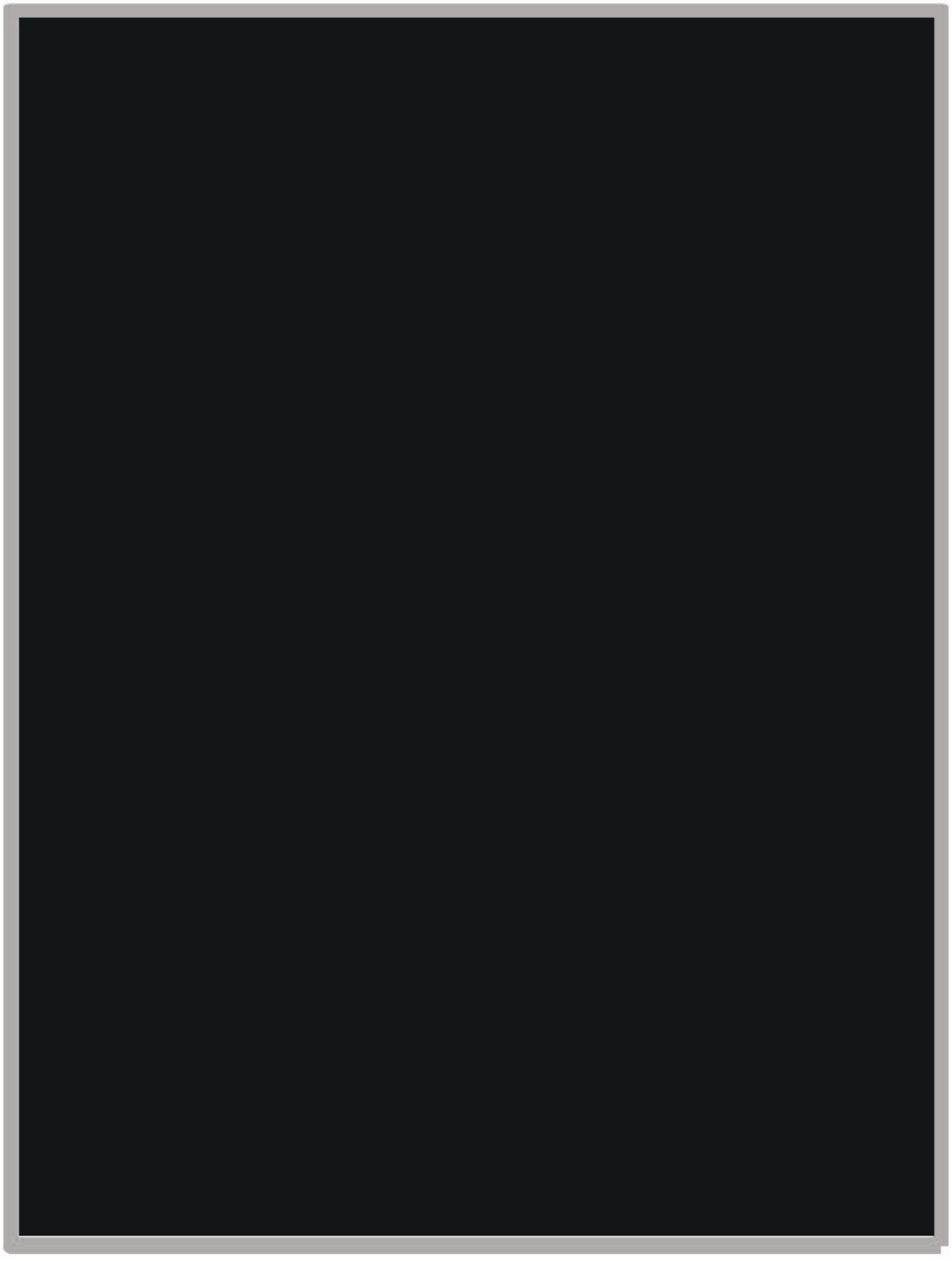


Figure 4: Dewatering Location

Figure 5: Dewatering Location

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $4,584,016.

Table 9: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	116,180	284,119	400,299
Contract Costs	717,927	1,604,556	2,322,483
Material	2,955	120,353	123,308
Other Direct Charges	362,528	621,545	984,073
Total Direct Costs	1,199,590	2,630,573	3,830,163

Table 10: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	463,822	264,232	728,054
AFUDC	11,862	0	11,862
Property Taxes	13,937	0	13,937
Total Indirect Costs	489,621	264,232	753,853

Table 11: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	1,689,211	2,894,805	4,584,016

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Supply Line 31-09 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $4,584,016.

End of Supply Line 31-09 [redacted] TIMP Project Final Workpaper

I. SUPPLY LINE 35-1179 [redacted] TIMP PROJECT

A. Background and Summary

Supply Line 35-1179 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter line that runs approximately 0.45 miles along [redacted], through residential neighborhoods and commercial areas. The pipeline is routed across [redacted] locations with 0.45 miles within High Consequence Areas (HCAs) and no non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using [redacted] In-Line Inspection (ILI) and the Direct Examinations made to two sites. The Project activities were located in the City of Garden Grove. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,741,326.

SoCalGas

Final Workpaper for Supply Line 35-1179 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	35-1179
Segment	[redacted]
Inspection Type	[redacted] Tool
Location	Garden Grove
Class	[redacted]
HCA Length	0.5 miles
Vintage	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Pipeline	Supply Line 35-1179
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

SoCalGas

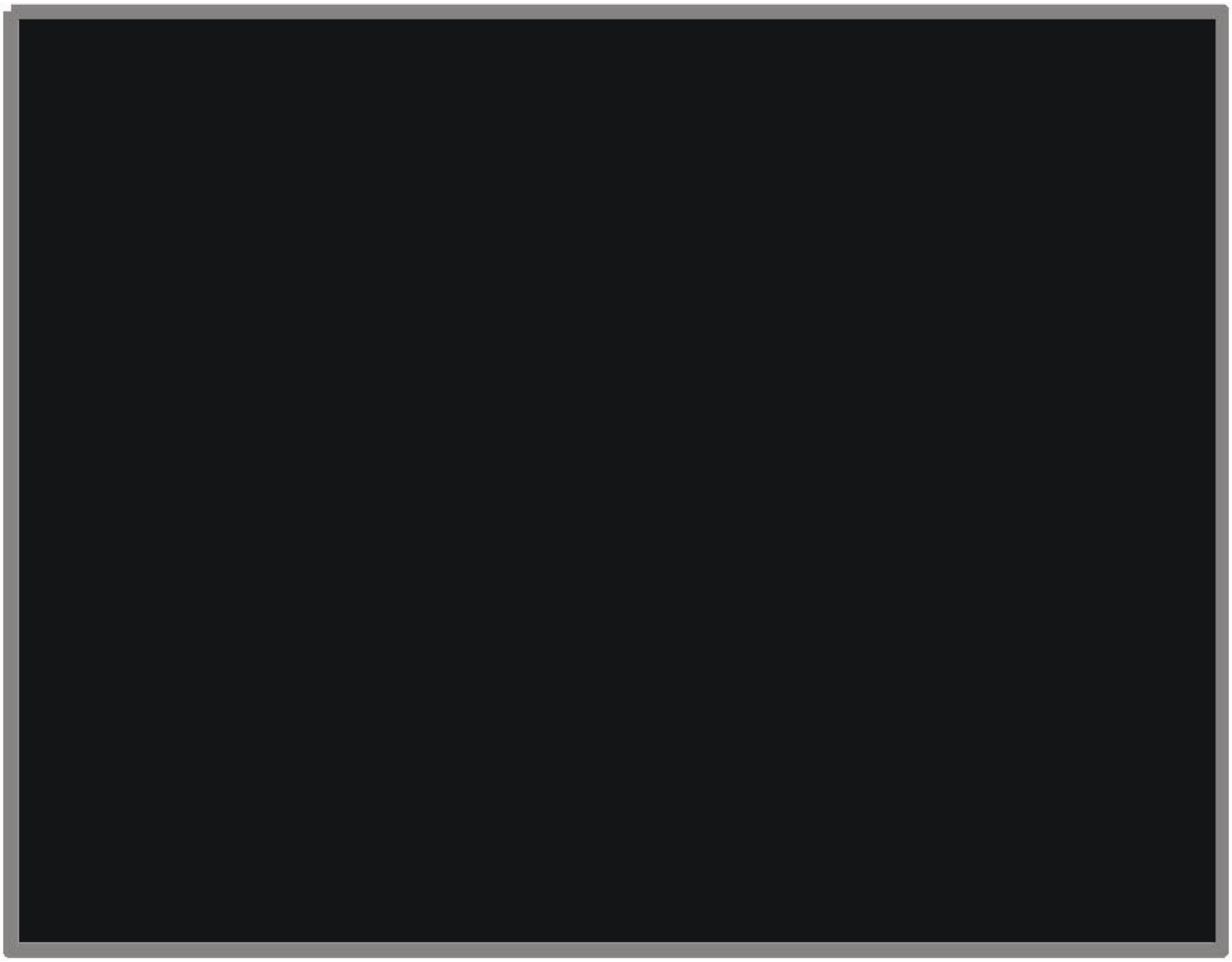
Final Workpaper for Supply Line 35-1179 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Pipeline	Supply Line 35-1179		
Site	2		
Examination ID	[redacted]		
Type	[redacted]		
Mitigation/Remediation Type	Soft Pad, Band		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	1,210,022	2,531,304	3,741,326

B. Maps and Images

Figure 1: Satellite Image of Supply Line 35-1179 [redacted] TIMP Project



II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Inspection and Direct Examination.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Supply Line 35-1179 for Inspection using [redacted]
   a. [redacted] of 0.45 miles of pipeline along [redacted]
   b. The [redacted] was completed using a [redacted] tool which can access the pipeline through a [redacted] installed by the Project Team and therefore did not require launcher or receiver locations.
   c. The Project Team executed a retrofit consisting of a 32-foot pipeline replacement to support pipeline piggability to facilitate future Inspections.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using [redacted], two Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs, and a band repair.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the spool piece following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using [redacted] and Direct Examination of two sites.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
SL35-1179	0.45 miles	[redacted]	[redacted]	[redacted]	Yes

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
SL35-1179	1	Yes	No	12 ft	Soft Pad	N/A	O&M
SL35-1179	2	Yes	No	203 ft	Soft Pad, Band	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Supply Line 35-1179 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The [redacted] was completed using a [redacted] tool which can access the pipeline through a [redacted] fitting installed by the Project Team and did not require launcher or receiver locations.
2. HCA Threats:
   [redacted]
3. Pipe Vintage: [redacted]
4. Long Seam Type:
   a. [redacted]
   Inspection Tools and Technologies: The Project utilized [redacted] technology during the Inspection of the pipeline.
5. Inspection Retrofits: The Project required a retrofit consisting of a 32-foot pipeline replacement of a back-to-back elbow and installation of straight pipe to support pipeline piggability for future Inspections.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: Traffic impacts and occasional noise.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.

11. Permit Restrictions: The Project Team required an Encroachment Permit for the City of Garden Grove.
12. Land Use: No identified impacts.
15. Traffic Control: The Project Team obtained Traffic Control Plans (TCPs) from Caltrans Right of Way (ROW) for potholing, installation, and usage of the [redacted]

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Supply Line 35-1179 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were two [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Supply Line 35-1179 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of soft pad repairs.
      ii. Direct Examination Site #2 consisted of soft pad repairs, and a band repair.
      iii. The Project Team completed these Direct Examinations during the Inspection Phase of the Project.
   b. SoCalGas completed the Direct Examination using a validation spool piece and it was determined that no additional Direct Examination Sites were required for validation of the ILI within the Supply Line 35-1179 [redacted] TIMP Project.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.

1. Community Impacts: No identified impacts.
2. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
3. Environmental: No identified impacts.
4. Permit Restrictions: The Project Team required an Encroachment Permit for the City of Garden Grove.
5. Land Use: No identified impacts.
6. Traffic Control: The Project Team obtained TCPs were required for Caltrans ROW for Direct Examination Site #1 and Site #2.
7. Constructability: The Project Team completed Direct Examination Sites #1 and #2 during the Inspection Phase of the Project.

D. Engineering, Design, and Constructability Factors – Post-Assessment

The Project Team used the data collected from the Inspection during the Post-Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection and [redacted]

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1, #2		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct Examination Site #2

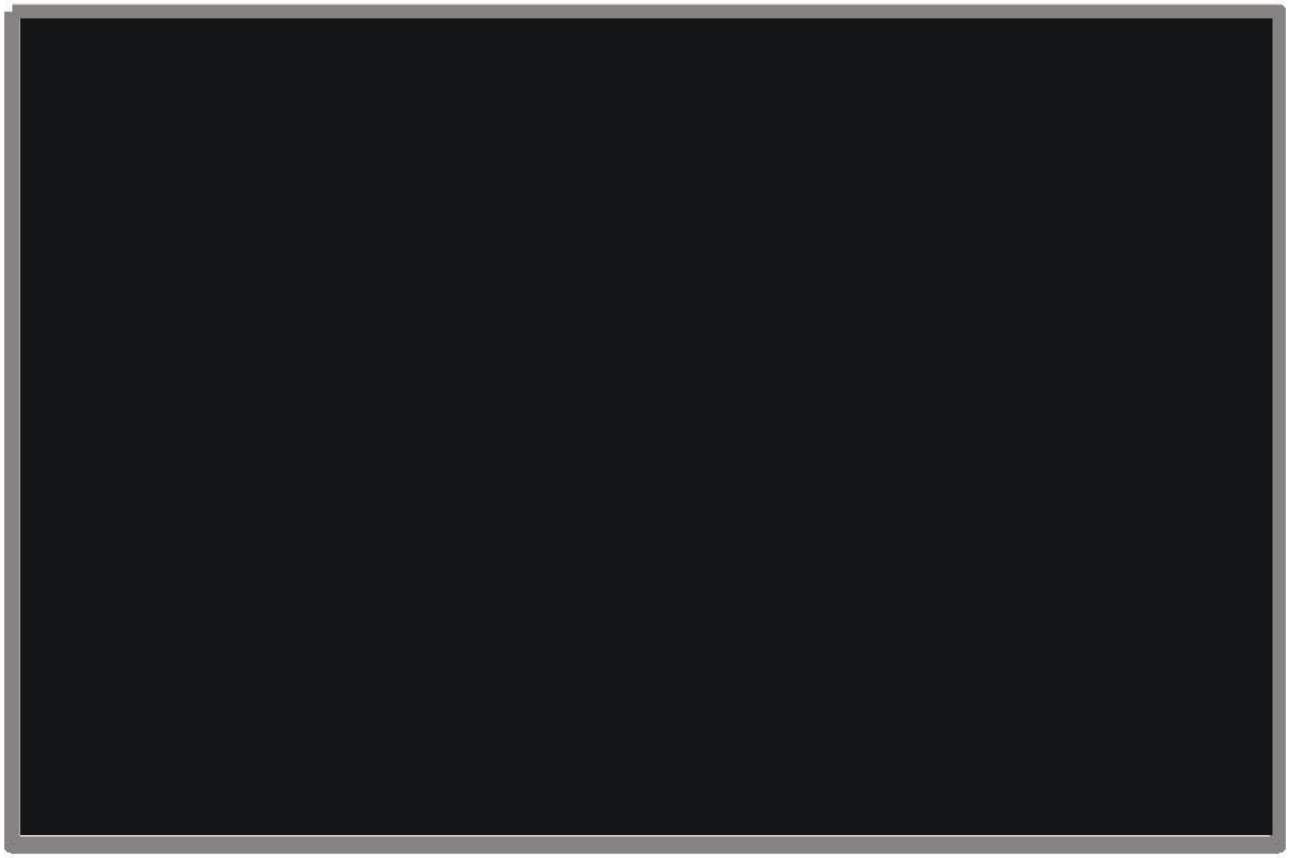


Figure 3: Direct Examination Site #2

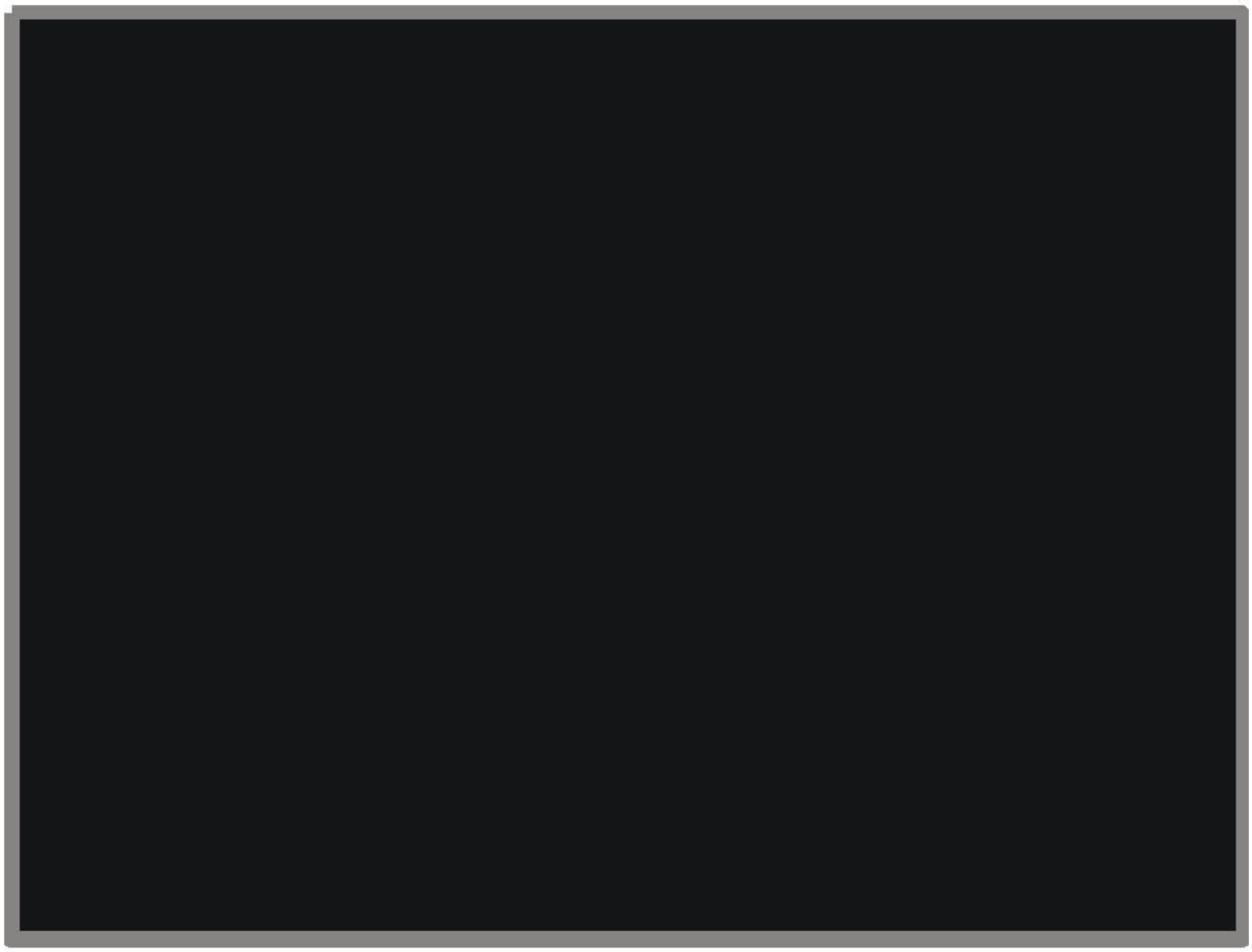


Figure 4: Direct Examination Site #2

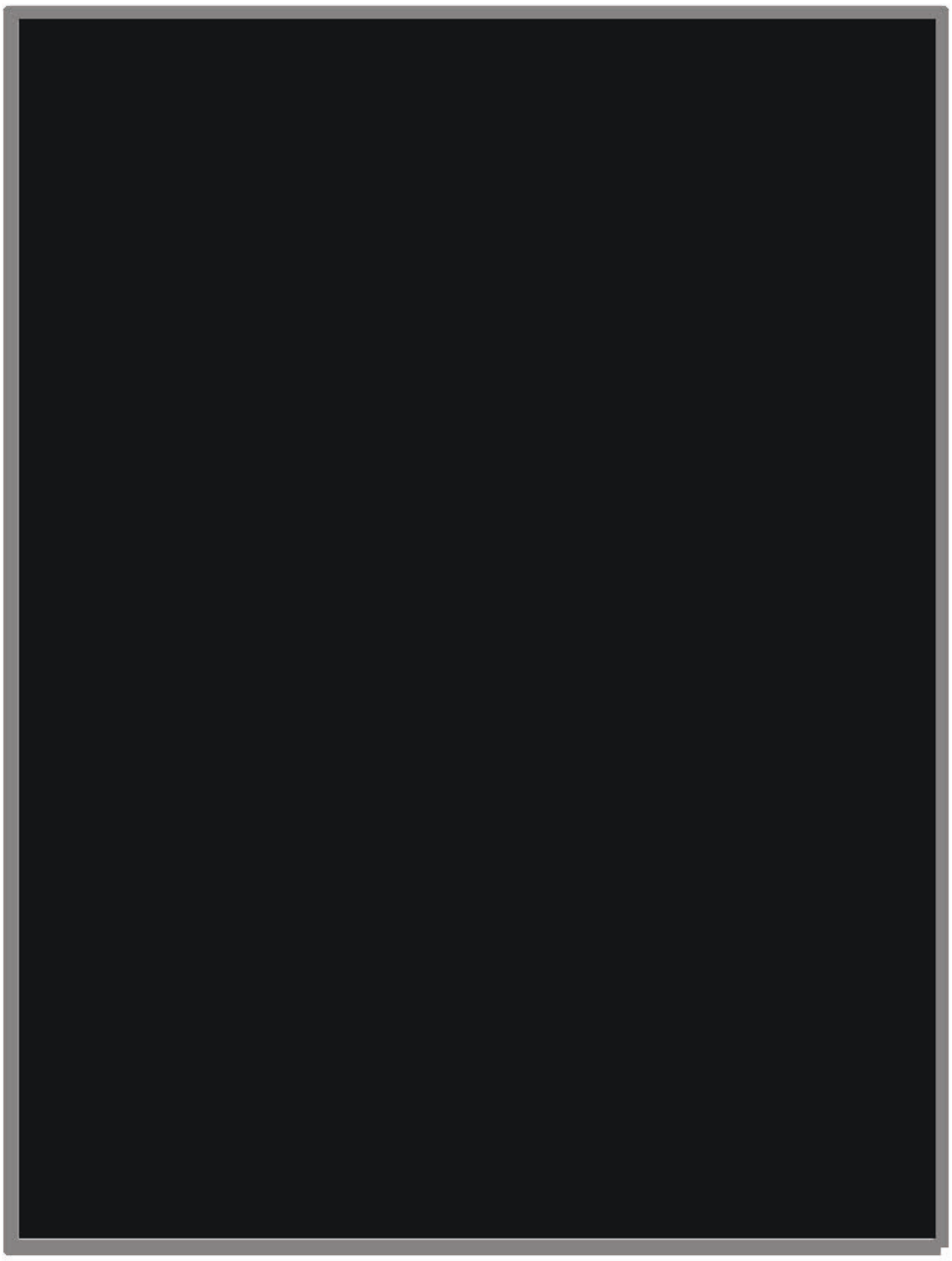
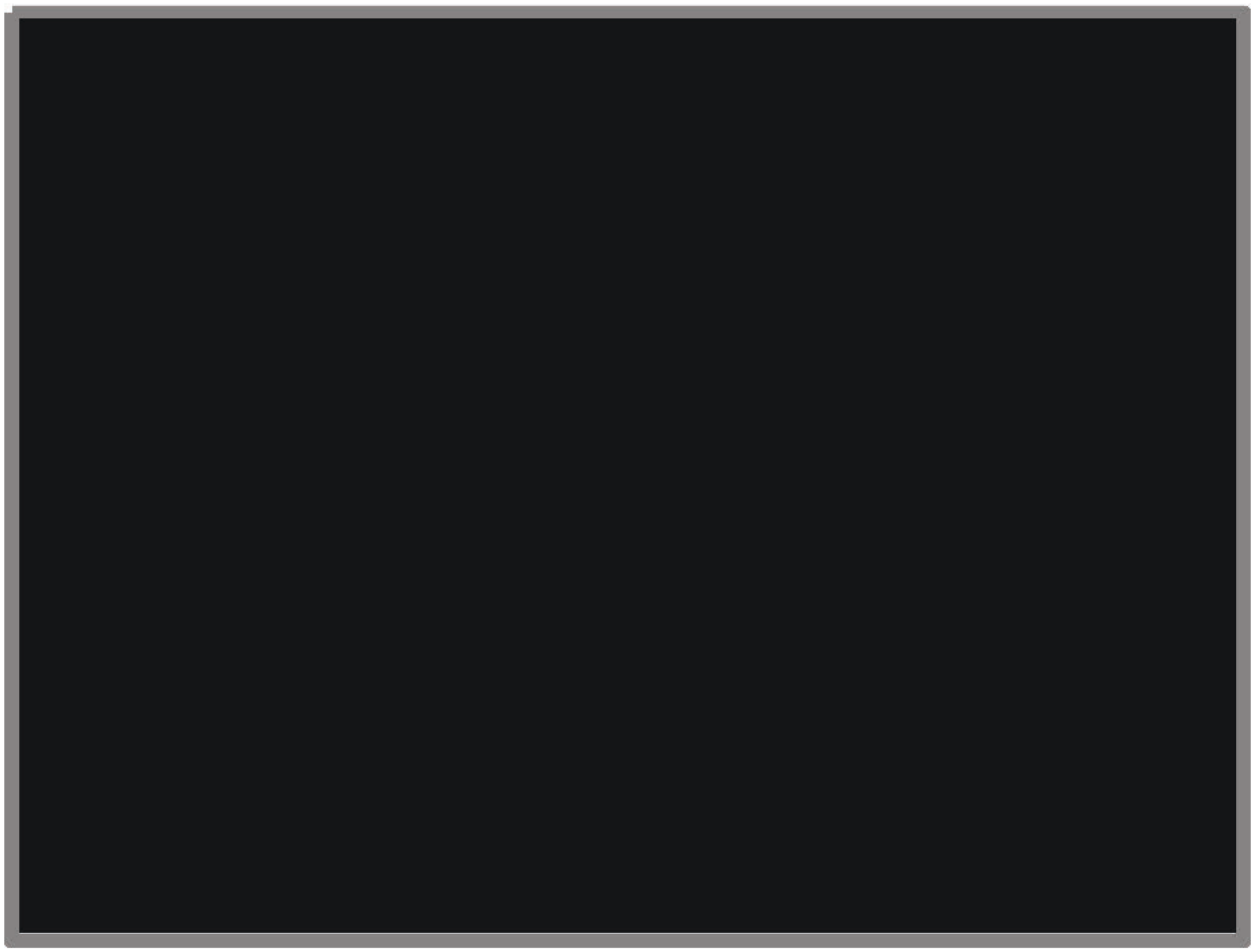


Figure 5: Direct Examination Site #1



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,741,326.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	11,278	161,745	173,023
Contract Costs	917,602	1,621,885	2,539,487
Material	0	1,082	1,082
Other Direct Charges	21,549	553,545	575,094
Total Direct Costs	950,429	2,338,257	3,288,687

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	256,535	193,047	449,582
AFUDC	2,182	0	2,182
Property Taxes	875	0	875
Total Indirect Costs	259,592	193,047	452,639

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	1,210,022	2,531,304	3,741,326

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of their integrated natural gas system by prudently executing the Supply Line 35-1179 [redacted] TIMP Project. Through this Project, SoCalGas successfully implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, to achieve the objective to continually identify threats to its pipelines, determine the risk posed by these threats, schedule and track assessments to address threats, conduct an appropriate assessment in a prescribed timeline, collect information about the condition of the pipelines, take actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and Workpaper findings of Supply Line 35-1179 in the City of Garden Grove. The total loaded cost of the Project is $3,741,326.

End of Supply Line 35-1179 [redacted] TIMP Project Final Workpaper

BEFORE THE PUBLIC UTILITIES
COMMISSION OF THE STATE OF CALIFORNIA

DECLARATION OF TRAVIS T. SERA REGARDING CONFIDENTIALITY OF CERTAIN DOCUMENTS PURSUANT TO D.21-09-020

I, Travis T. Sera, do declare as follows:

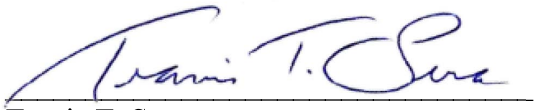
1. I am the Director of Integrity Management for Southern California Gas Company (SoCalGas). I have been delegated authority to sign this declaration by Amy Kitson, Vice President of Gas Engineering and System Integrity for SoCalGas. I have reviewed the confidential information included within SoCalGas-02-WP Amended Workpapers Supporting the Prepared Direct Testimony of Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera (Technical – Project Execution and Management) ("TIMP Amended Workpapers"). I am personally familiar with the facts and representations in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or information and belief.

2. I hereby provide this Declaration in accordance with Decision ("D.") 21-09-020 and General Order ("GO") 66-D to demonstrate that the confidential information ("Protected Information") provided in the TIMP Amended Workpapers is within the scope of data protected as confidential under applicable law.

3. In accordance with the legal authority described in Attachment A, the Protected Information should be protected from public disclosure.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 5th day of September, 2025 at Los Angeles, California.



Travis T. Sera
Director of Integrity Management
Southern California Gas Company

ATTACHMENT A

SoCalGas Request for Confidentiality on the following Protected Information in its Amended Transmission Integrity Management Program (TIMP) Workpapers

Location of Data	Applicable Confidentiality Provisions	Basis for Confidentiality
SCG-02-WP (Volumes I, IV, V, and VII); Amended Workpapers Supporting the Prepared Direct Testimony of Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera (Technical – Project Execution and Management) have been marked/highlighted as confidential pursuant to PUC Section 583, GO 66-D, and D.21-09-020. Confidential Information: Critical Energy Infrastructure Information (CEII), Pipe attributes (SMYS, MAOP/MOP, Diameter, Seam type, Install date, Class location, HCA segment information, Assessment method, Assessment date, Coating type, Construction dates/schedules, Inspection results, Directional flow of natural gas), Threat type, Specific locational information and system pipeline map.	CPRA Exemption, Gov't Code § 7927.705 ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law") • Cal. Civil Code §§ 3426 *et seq.* (Uniform Trade Secrets Act) • *TMX Funding Inc. v. Impero Technologies, Inc.*, 2010 WL 2745484 at *4 (N.D. Cal. 2010) (defining trade secret in an injunction to include "business plans and strategies") • *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 420 F. Supp. 2d 1070, 1089–1090 (N.D. Cal. 2006) ("It does not matter if a portion of the trade secret is generally known, or even that every individual portion of the trade secret is generally known, so long as the combination of all such information is not generally known.") • 18 CFR § 388.113(c) (defining CEII) • FERC Order Nos. 630, 643, 649, 662, 683, and 702 (defining CEII) • FERC Order 833 (including amendments to the CEII regulations, required by The FAST Act) • Critical Energy Infrastructure Information, 68 Fed. Reg. 9857, 9862 (Dep't of Energy Mar. 3, 2003) (final rule) (listing what **gas** information qualifies as CEII) • FERC's Guidelines for Filing Critical Energy/Electric	It is SoCalGas's practice to designate certain data as confidential because this data is similar to data protected by CEII regulations and, if made publicly available, could potentially present a risk to public and pipeline safety. Engineering design values (i.e., Pipe attributes and production data) for existing critical infrastructure could be used to determine the criticality of a gas facility and identify vulnerabilities of the gas delivery network. Because of the critical nature of these attributes, they have been identified by PHMSA to be restricted attributes available only to government officials. Inspection results (including assessment results/dates) are forms of production data that is protected and includes details related to the transmission and distribution of energy. This information if released to the public can be used to predict repair schedules and availability of segments of the transportation network. It may affect market pricing for gas transportation and delivery and lead to speculation in the energy markets that may be detrimental to consumers. This information could also be used to identify vulnerabilities of the gas network. It is SoCalGas's practice to designate portions of their threat analysis, such as threat types, as confidential because this data is considered proprietary, not currently published by PHMSA, and, if made publicly available, could potentially present a risk to public and

	Infrastructure Information, (Feb. 21, 2017), *available at* https://www.ferc.gov/sites/default/files/2020-04/CEII-Filing-guidelines.pdf o Exhibits G, G-1, G-II of pipeline certificate applications. 18 CFR § 157.14 o Exhibit V of abandonment applications. 18 CFR § 157.18 o FERC Form 567. 18 CFR § 260.8 • CPUC Res. L-436, at 8 (stating CPUC will "refrain from making available to the public detailed maps and schematic diagrams showing the location of specific utility regulator stations, valves, and similar facilities") • Cal. Pub. Util. Code § 364(d) ("The commission may, consistent with other provisions of law, withhold from the public information generated or obtained pursuant to this section that it deems would pose a security threat to the public if disclosed.") • The Pipeline and Hazardous Materials Safety Administration's (PHMSA) guidelines consider the data to be restricted pipeline information. PHMSA Guidelines, 81 Fed. Reg. 40757, 40764 (June 22, 2016). • PHMSA also issued an advisory bulletin on December 9, 2016: ABD-2016-0137; Pipeline Safety: Safeguarding and Securing Pipelines from Unauthorized Access detailing	pipeline safety, as well as a potential financial loss of future revenue as these documents could be monetized. Pipeline locations (including street names) and maps at a scale of 1 inch to 24,000 feet scale or less are identified as confidential because the data would provide sufficient information to be used by a third party to excavate or access above ground facilities without notifying the Utility through the local Underground Service Alert (USA) or could be used to identify locations for illegal tapping or other acts that could impact the safety of residents living near the natural gas pipeline or gas facility.

	the need for operators to protect their gas systems • *See* Administrative Law Judge's Ruling Granting Applicant's Motion for Leave to Submit Confidential Materials Under Seal as to Appendix K Geographic Information System (GIS) Data at 2, Application 16-07-016 (December 1, 2016); Administrative Law Judge's Ruling Granting Applicant's Motion to File Specified Documents Under Seal, Application 16-04-022 (June 2, 2016) • *See Mr. Doug Hall*, 114 FERC ¶ 62194, 2006 WL 463906 (Feb. 27, 2006) (letter from the FERC Office of External Affairs to an applicant seeking to review information containing CEII, explaining that "precise dam coordinates which could be used to target the dam. In addition, providing coordinate data for all facilities in a specific geographic region increases the vulnerability of those facilities to attack . . . this information could be used to compromise the dams, placing lives at risk.") • *Ms. Alison Arnold*, 108 FERC ¶ 62287, 64538 (Sept. 30, 2004) (ruling on a request to the U.S. Department of Interior for a copy of GIS data regarding hydropower projects located in the State of Washington that "contains critical energy infrastructure information (CEII)") • *N. Dakota Pipe Line Co., LLC 24-Inch Crude Oil Pipeline - Sandpiper Project Siting Application*, GE-13-193, 2014	

	WL 2567685, at *1 (May 13, 2014) (deeming confidential all the information in "a sealed envelope containing a CD and labeled 'Critical Energy Infrastructure Information.' The information also includes GIS mapping data, GIS data, and two plots of Souris River Crossing relating to the location of the Sandpiper Pipeline.") CPRA Exemption, Gov't Code § 7929.205 (Critical Infrastructure Information)	