SCG-02-WP

Workpapers Supporting the Prepared Direct Testimony of

Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera

(Technical – Project Execution and Management, Volume VI of VII)

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SoCalGas TIMP Reasonableness Review

Retrofit Project Workpapers

Final Workpaper for [redacted] Retrofit TIMP Project

I. [redacted] RETROFIT TIMP PROJECT

A. Background and Summary

[redacted] Retrofit Transmission Integrity Management Program (TIMP) Project completed pipeline retrofits and new facility installations near [redacted] to facilitate future TIMP Inspections. The Project activities were located near residential and commercial areas in the City of Redondo Beach. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Workpaper is $16,920,114.

SoCalGas

Final Workpaper for [redacted] Retrofit TIMP Project

Table 1: General Project Information

Retrofit Details			
Pipeline	1170, 1202		
Site	[redacted]		
Location	Redondo Beach		
Class	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	16,920,114	0	16,920,114

B. Maps and Images

Figure 1: Satellite Image of [redacted] Retrofit 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 retrofit construction activities completed to facilitate future assessments.

Prior to initiating execution of the retrofit, 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. Retrofit – Engineering, Design, and Constructability: SoCalGas completed permanent pipeline retrofits and new facility installations to facilitate future assessments of Line 1170 and Line 1202. The retrofit installations included the following:
   a. Installation of a permanent [redacted] x [redacted] receiver for Line 1170, including a receiver barrel and 89 feet of associated piping as well as 992 feet of [redacted] and [redacted] mainline pipe.
   b. Installation of a permanent [redacted] x [redacted] receiver for Line 1202, including a receiver barrel and 120 feet of associated piping as well as 305 feet of [redacted], [redacted] and [redacted] mainline pipe.
2. Final Project Scope: The final project scope of this Workpaper includes retrofits to Line 1170 and Line 1202 at [redacted] including permanent installation of two receivers, 209 feet of associated piping and 0.25 miles of mainline piping.

Table 2: Final Project Scope – Retrofit

Final Project Scope				
Line	Pipe Function	Pipe Diameter	Installation Length	Cost Category
1170	Receiver	[redacted] x [redacted]	N/A	Capital
	Mainline Piping	[redacted]	992 ft	Capital
	Associated Piping	[redacted]	89 ft	Capital
1202	Receiver	[redacted] x [redacted]	N/A	Capital
	Mainline Piping	[redacted]	305 ft	Capital
	Associated Piping	[redacted]	120 ft	Capital

B. Engineering, Design, and Constructability Factors – Retrofit

SoCalGas executed installation of permanent Inspection assemblies to facilitate future Inspections and meet compliance schedules for transmission pipeline segments ending near [redacted]. Key factors that influenced the engineering and design of the installations are as follows:

1. Site Description:
   a. Line 1170 and Line 1202 are transmission lines with end points near the intersection of [redacted]. Previous In-Line Inspections (ILIs) for these transmission lines required excavation and fabrication of temporary receiver assemblies along the highly transited [redacted] in the City of Redondo Beach. To control recurring costs and minimize impacts, SoCalGas determined installation of permanent installation of receiver assemblies for these pipelines would reduce the traffic and community impacts for future Inspections.
   b. The Project Team identified an adjacent hillside to [redacted], within the [redacted], to locate the new permanent equipment.
   c. A portion of the Project is located within an area previously used as a landfill, resulting in scope changes throughout the design of the Project.
   d. Sandy soil conditions required additional excavation and shoring equipment.

e. The Project was executed in three construction phases:
   i. Phase 1 completed all pipeline installations along and near [redacted].
   ii. Phase 2 completed all routing of new pipelines through a hillside from the existing pipelines along [redacted], through private property and ending at a newly leased section of [redacted].
   iii. Phase 3 completed all above ground piping at the Project site including installation of the permanent receivers.

2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded required isolations for pipeline tie-ins could not be completed in conjunction with neighboring projects. Once coordinated under the proper timeframe, required isolations for the Project could be completed with no system impacts.
3. Customer Impacts: No customer impacts.
4. Community Impacts:
   a. Construction activities during Phases 1 and 2 of the Project resulted in significant traffic impacts along the heavily traversed [redacted] in the City of Redondo Beach.
   b. The Project required extensive coordination and communication with the City of Redondo Beach including board meetings with the community and elected officials.
5. Substructures: The Project Team conducted extensive potholing, surveying, and substructure research along [redacted] to ensure project feasibility.
6. Environmental:
   a. The Project required active biological monitoring throughout the duration of construction activities for the Project.

b. The Project Team conducted additional geological studies for design of supports required in Phase 3. Initial environmental analysis did not anticipate site material to be hazardous. After testing a significant amount of removed material and confirming it as hazardous, the Project Team determined all removed material would be treated.

7. Constructability:
   a. The Project required extensive geotechnical investigation and soil analysis. This research determined the Project location was previously a landfill which required design and installation of caissons and foundations for pipeline supports.
   b. During drilling operations for pipeline supports, material from the landfill was falling into open excavations. It was determined that rebar casings were necessary to complete installation of the concrete caissons.
8. Permit Restrictions: The Project Team obtained multiple permits from the City of Redondo Beach including excavation permits, building permits, and engineering permits. Additional requirements outlined by the permitting agencies were as follows:
   a. All street plating to be recessed and welded together to prevent movement.
   b. Health and Safety Plan.
   c. Erosion Control Plan.
   d. Improvements to landscaping as site restoration.
9. Land Use:
   a. The Project required a new lease in place for a section of the [redacted] to install the new permanent receiver site assemblies.
   b. The Project Team obtained an easement for the installation of new pipeline extensions and to facilitate ingress and egress for the permanent equipment.
   c. The Project Team obtained a Temporary Right of Entry (TRE) agreement near the intersection of [redacted] for an additional laydown yard.

10. Traffic Control: The Project Team obtained Traffic Control Plans (TCP) from the City of Redondo Beach. The TCP included details for daily setups, the use of K-rails, and restriping along [redacted] to reroute traffic for an extended period.
11. Schedule Delays: The Project experienced schedule delays due to the following:
    a. Heavy rainfall caused the Project to demobilize and required dewatering of open excavations. Best Management Practices were updated to manage water run-off at the Project site.
    b. An exposed third-party substructure at the Project location contained inadequate wrap. The Project Team halted construction activities while testing and remediation of the wrap were completed.
    c. Cathodic protection coating on casing pipe at the Project location contained a material defect, requiring transport, sandblasting, and recoating of the casing pipe.
    d. The Project Team encountered previously unidentified substructures during drilling operations.
    e. The Project required rebar cages to tie the foundation to the concrete rebar pilons. It was determined initial designs would not meet civil requirements within the City Inspection, requiring redesign. The improper construction delayed the Project by over three months.
12. Unforeseen Circumstances:
    a. A large on-site office trailer was required per mandated COVID-19 distancing protocols.
    b. The Project Team encountered unstable soil conditions in the area surrounding proposed concrete pads. This required increased excavation areas to stabilize the soil.
    c. The initial casing design experienced buckling during drilling operations. This required procurement and coating of new pipe casing.
    d. The City of Redondo Beach requested extensive site restoration including new vegetation, irrigation system, and installation of fencing at the Project site.

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 3: Construction Timeline – Retrofit

Construction Start Date	[redacted]	
Construction Completion Date		

Final Workpaper for [redacted] Retrofit TIMP Project

Figure 2: Previous Temporary Assemblies along [redacted]

Figure 3: Backfilling new pipeline along [redacted]

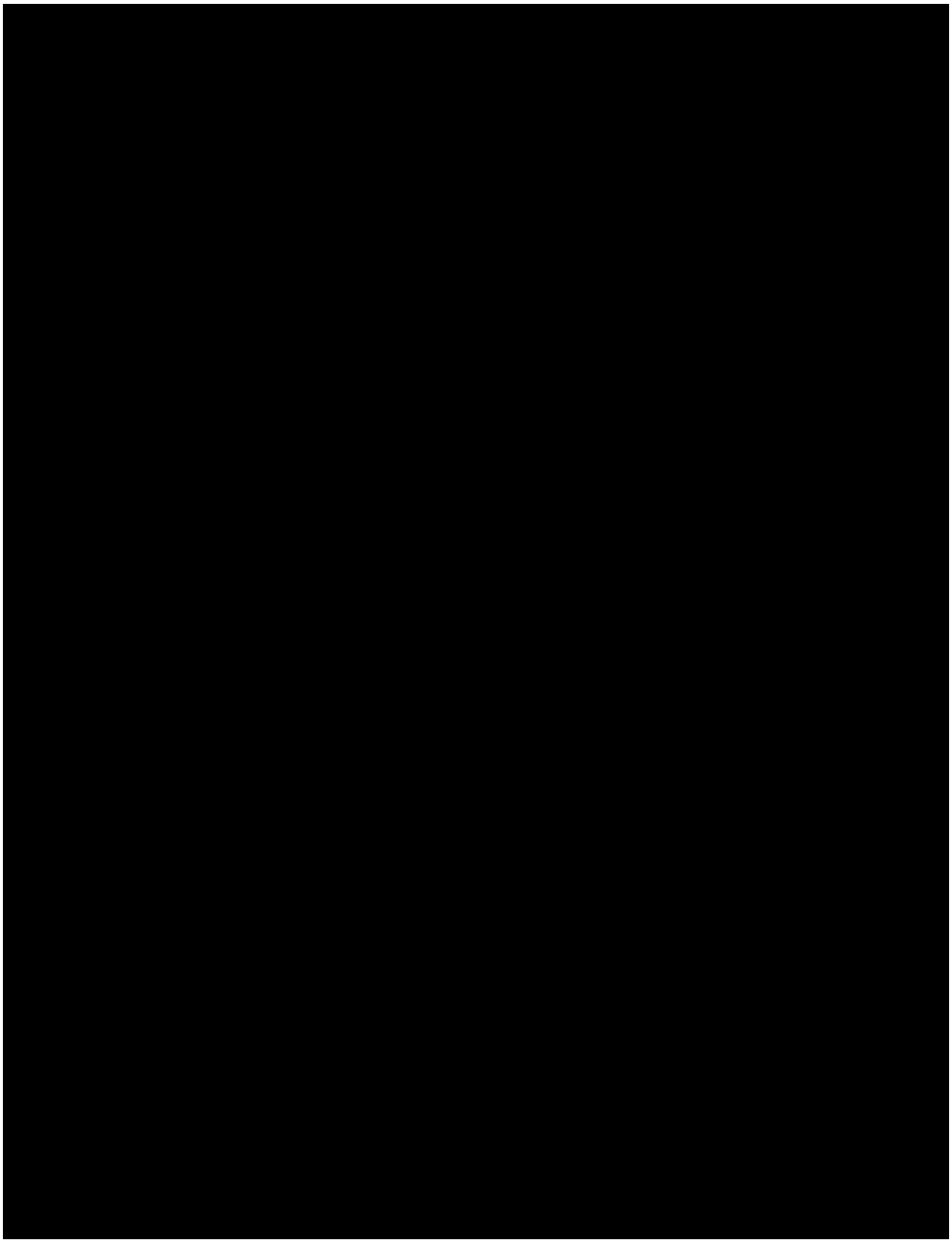


Figure 4: Pipeline supports along hillside

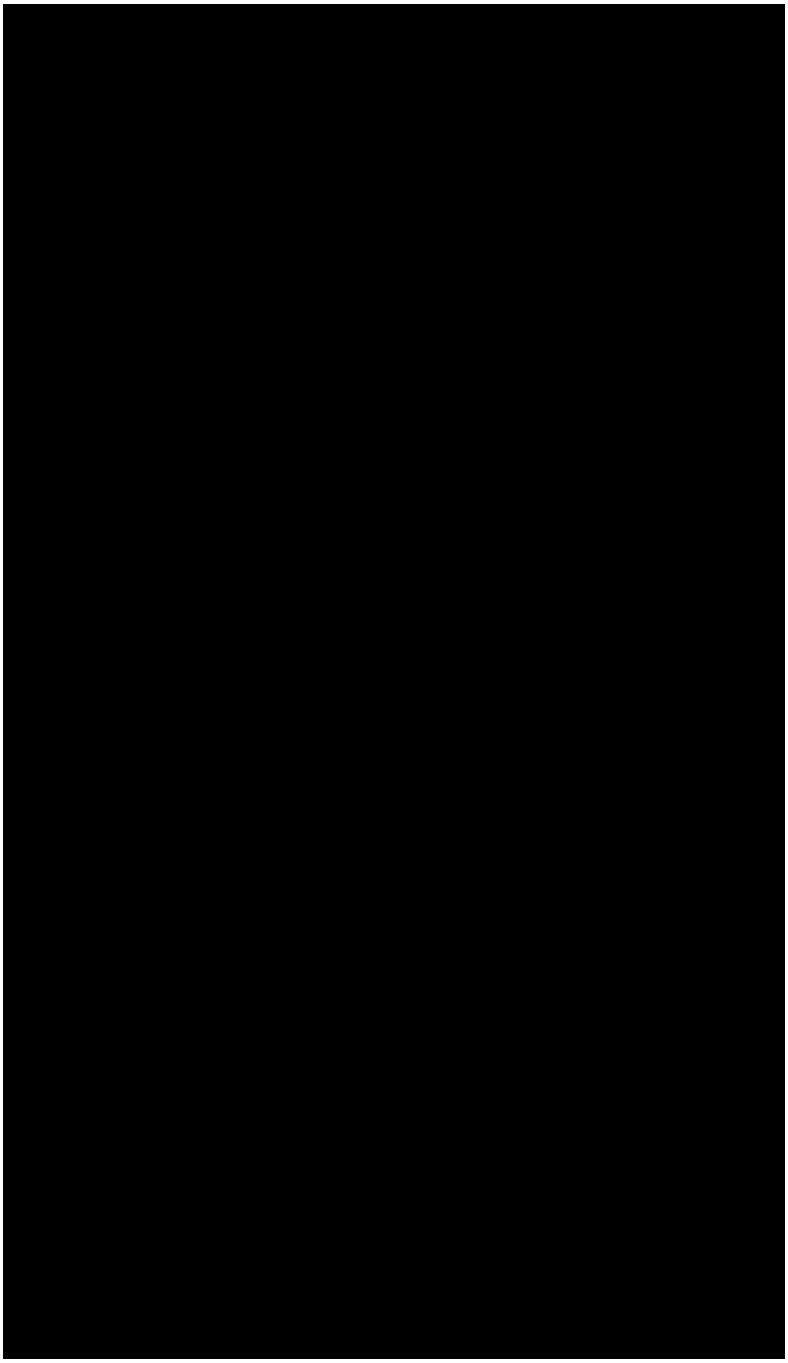
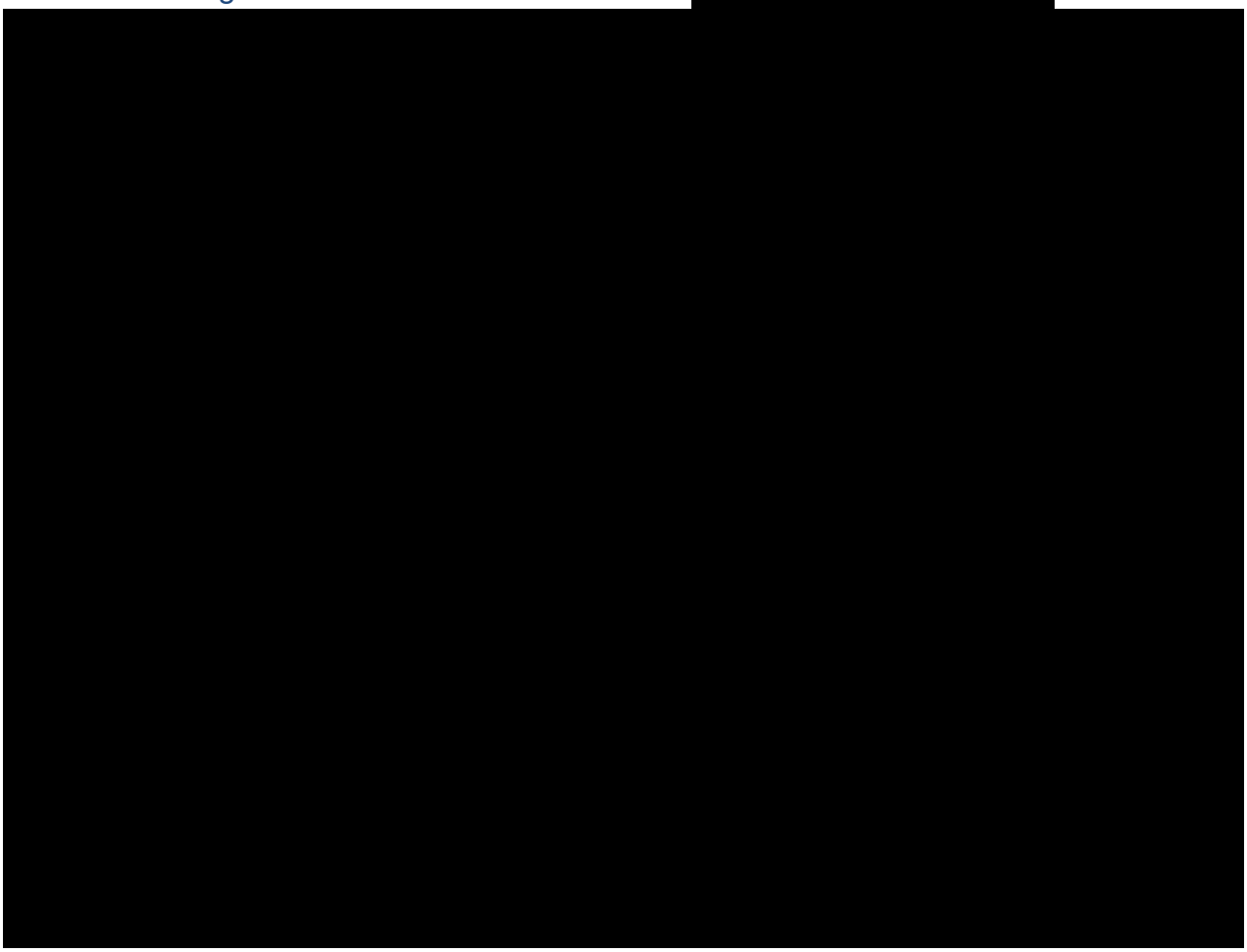


Figure 5: Installed Receivers within [redacted]



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.

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 $16,920,114.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	513,719	0	513,719
Contract Costs	7,211,319	0	7,211,319
Material	983,676	0	983,676
Other Direct Charges	5,822,545	0	5,822,545
Total Direct Costs	14,531,259	0	14,531,259

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,879,489	0	1,879,489
AFUDC	414,210	0	414,210
Property Taxes	95,156	0	95,156
Total Indirect Costs	2,388,855	0	2,388,855

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	16,920,114	0	16,920,114

[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 [redacted] Retrofit 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 $16,920,114.

End of [redacted] Retrofit TIMP Project Final Workpaper

Final Workpaper for [redacted] Retrofit TIMP Project

I. [redacted] RETROFIT TIMP PROJECT

A. Background and Summary

[redacted] Retrofit Transmission Integrity Management Program (TIMP) Project completed pipeline retrofits and a new station installation at [redacted] to facilitate future TIMP Inspections. The Project activities were located near residential and commercial areas in the City of Santa Ana. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Workpaper is $19,703,187.

Final Workpaper for [redacted] Retrofit TIMP Project

Table 1: General Project Information

Station Retrofit Details			
Pipeline	1015, 1016, 1017, 1018		
Site	[redacted]		
Location	City of Santa Ana		
Class	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	19,678,852	24,335	19,703,187

Final Workpaper for [redacted] Retrofit TIMP Project

B. Maps and Images

Figure 1: Satellite Image of [redacted] Retrofit 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 retrofit construction activities completed to facilitate future assessments.

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. Station Retrofit – Engineering, Design, and Constructability: SoCalGas completed permanent retrofit installations to enhance the functionality of [redacted] and facilitate future assessments of Line 1015, Line 1016, Line 1017 and Line 1018. The retrofit installations included the following:
   a. Installation of a permanent [redacted] x [redacted] receiver for Line 1015, including a receiver barrel and 240 feet of associated piping as well as 204 feet of [redacted] mainline pipe.
   b. Installation of a permanent [redacted] x [redacted] receiver for Line 1016, including a receiver barrel and 294 feet of associated piping as well as 176 feet of [redacted] mainline pipe.
   c. Installation of a permanent [redacted] x [redacted] launcher for Line 1017, including a launcher barrel and 282 feet of associated piping as well as 454 feet of [redacted] and [redacted] mainline pipe.
   d. Installation of a permanent [redacted] x [redacted] launcher for Line 1018, including a launcher barrel and 104 feet of associated piping as well as 371 feet of [redacted] and [redacted] mainline pipe.
   e. Installation of a permanent filter separator and associated piping within the station.

2. Final Project Scope: The final project scope of this Workpaper includes retrofits to Line 1015, Line 1016, Line 1017, and Line 1018 at [redacted] including permanent installation of two launchers, two receivers, 920 feet of associated piping, and 0.23 miles of mainline piping.

Table 2: Final Project Scope – Station Retrofit

Final Project Scope				
Line	Pipe Function	Pipe Diameter	Installation Length	Cost Category
1015	Receiver	[redacted] x [redacted]	N/A	Capital
	Mainline Piping	[redacted]	204 ft	Capital
	Associated Piping	[redacted]	240 ft	Capital
1016	Receiver	[redacted] x [redacted]	N/A	Capital
	Mainline Piping	[redacted]	176 ft	Capital
	Associated Piping	[redacted]	294 ft	Capital
1017	Launcher	[redacted] x [redacted]	N/A	Capital
	Mainline Piping	[redacted]	454 ft	Capital
	Associated Piping	[redacted]	282 ft	Capital
1018	Launcher	[redacted] x [redacted]	N/A	Capital
	Mainline Piping	[redacted]	371 ft	Capital
	Associated Piping	[redacted]	104 ft	Capital

B. Engineering, Design, and Constructability Factors – Station Retrofit

SoCalGas executed additional installations of permanent Inspection assemblies to facilitate future Inspections and meet compliance schedules for pipeline segments beginning or ending at [redacted]. Key factors that influenced the engineering and design of the installations are as follows:

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Final Workpaper for [redacted] Retrofit TIMP Project

1. Site Description:
   a. [redacted] is currently a SoCalGas-owned facility that sees various transmission lines. The station serves as a starting point for Line 1017 and Line 1018, while also serving as an end point for Line 1015 and Line 1016. Previous ILIs for all four transmission lines required multiple excavations and fabrication of assemblies on the highly transited [redacted] in the City of Santa Ana. To control recurring costs and minimize impacts, SoCalGas determined installation of a permanent station would largely benefit all future Inspections.
   b. A major driver to complete the [redacted] Retrofit Project was to mitigate recurring impacts at this location. This location previously consisted of a valve assembly along [redacted] that connected a total of four transmission lines: Line 1015, Line 1016, Line 1017, and Line 1018. These pipelines required staggered Inspection schedules resulting in Inspections with temporary assemblies every [redacted]. A redesign of the transmission system at this location, including the new station, significantly reduces community impacts for all future Inspections of these pipelines.
   c. [redacted]. The property was previously categorized as two privately owned lots, leased out to function as a gas station and car wash. SoCalGas purchased the property and took title in 2019.
   d. Existing facilities and structures near and within [redacted] were demolished, abandoned, and/or removed to facilitate construction at this location and incorporate the new station design. This included the following:
      i. Removal and relocation of SoCalGas valve assemblies along [redacted].
      ii. Removal of existing underground storage tanks and proper disposal of liquid contents including contaminated water, soil, fuel, and residue.

iii. Removal of previous piping and associated facilities including concrete pads, asphalt and vents.

iv. Removal of existing buildings and structures on the lot, including car wash facilities, gasoline station facilities, a restroom building and a billboard support within the property.

2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded a temporary bypass was required to mitigate system impacts.
3. Customer Impacts: No customer impacts.
4. Community Impacts: No identified impacts.
5. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Utility Permit from the City of Santa Ana Public Works Agency.
   b. Demolition Permit from the City of Santa Ana.
6. Constructability:
   a. The Project required temporary installation of a power pole to provide power to the facility during construction activities. This installation required approval from local power utility.
   b. The Project required outsourced installation and programming of power and security panels at the station; this included access control and video system installations for the facility.
   c. The Project required additional engineering and structural design for the following:
      i. Foundations for four permanent barrels, a new permanent filter separator, and for newly installed valves along the associated piping installations. The station design also required deep foundation design for the permanent filter separator containment area, as requested by the City of Santa Ana.

ii. Rebuilding and reconstruction of two driveway approach sections entering the station; on [redacted].

iii. Permanent perimeter wall with fencing at the station. The designs were approved by the City of Santa Ana, requesting water efficient landscaping and detailed irrigation plans.

iv. Electronic test stations (ETS) were installed on the new and existing pipe, as well as insulating kits for each launcher and receiver barrel.

d. The Project required new paving throughout the property including concrete paving within the station, new driveway approaches, and sidewalk paving.

e. The Project required bollard installations within and outside the new station.

f. Legal licensing for property lines, walkway delineation, and street curvature on the southwest corner of the property.

g. The Project coordinated with another SoCalGas project to complete design and installations within the station for actuators and controls of the new valve assembly.

7. Substructures: The Project Team conducted extensive substructure research related to the following:
   a. Demolition of facility piping within the property.
   b. Locating and removal of other utility piping within the property.
8. Environmental:
   a. The Project required geological testing of soil and building conditions throughout the facility to determine asbestos and heavy metal content at the facility. Notification of this activity was routed to the State of California Department of Industrial Relations.
   b. The Project required geotechnical analysis of soils within the station prior to grading, paving, and installation of new facilities within the station.

9. Traffic Control: The Project Team obtained approved traffic control plans (TCPs) from the City of Santa Ana for a two-phased traffic control plan to be used during construction activities. The plans required temporary parking signage as well as barricades and signage to accommodate lane closures.
10. Land Use: No identified impacts.
11. Schedule Delay: No identified impacts.
12. Other Identified Risks: The Project incurred costs due to land acquisition of permanent real estate for the Project.

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 – Station Retrofit

Construction Start Date	[redacted]
Construction Completion Date	

Figure 2: Excavation of Previous Valve Assembly along [redacted]

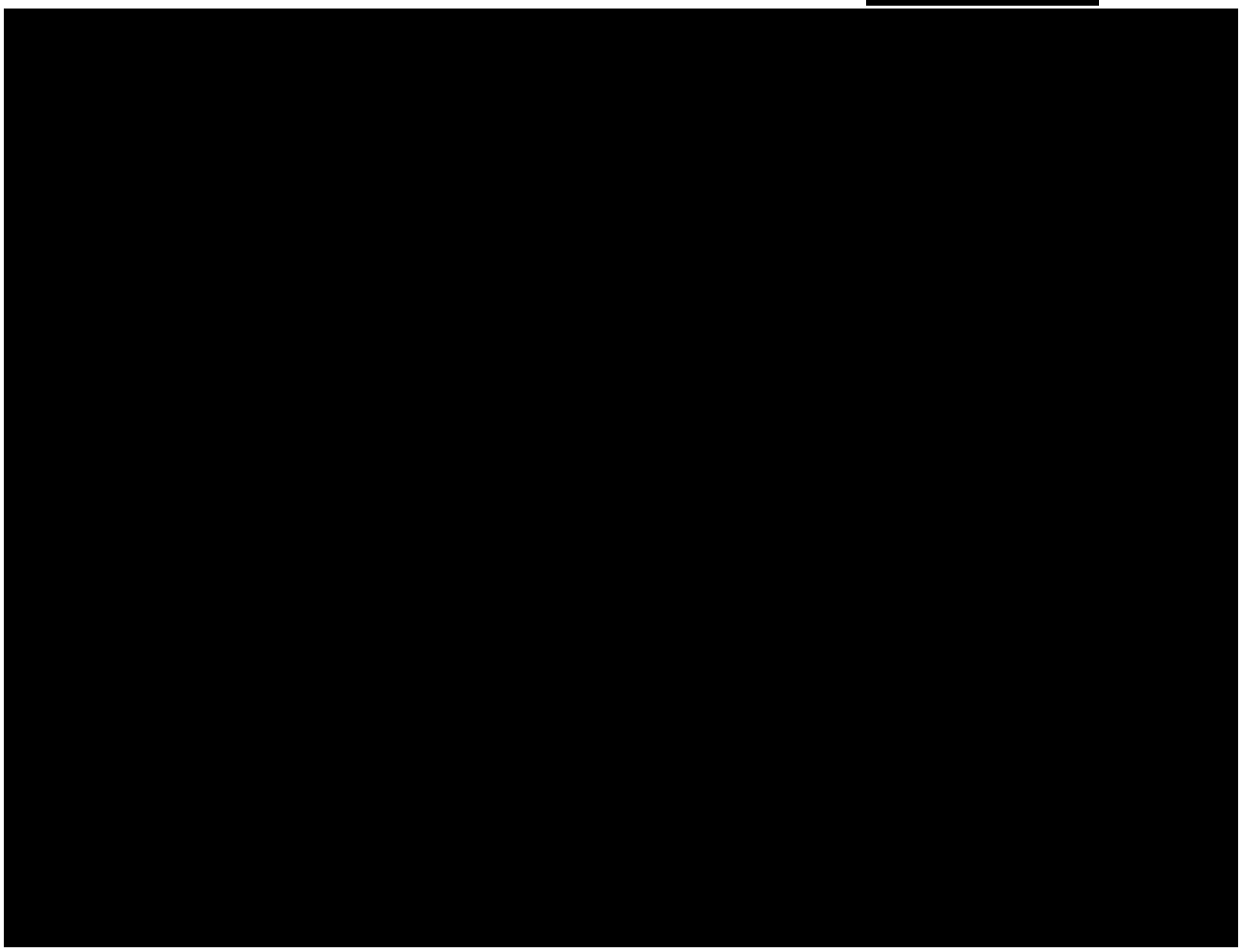

Figure 3: Excavation of Previous Valve Assembly along [redacted]

Figure 4: Previous Gas Station Facility

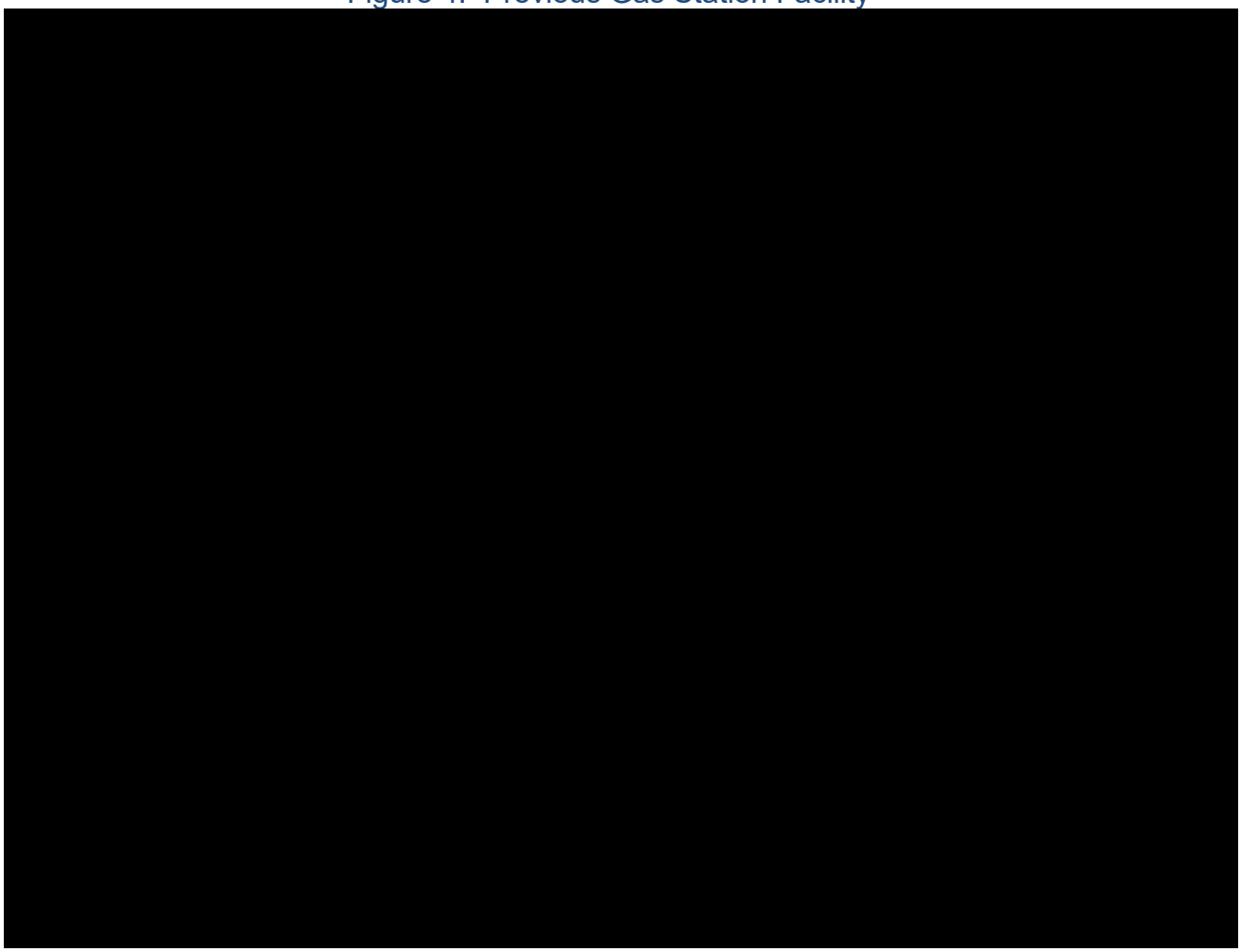

Figure 5: New Permanent Launcher and Associated Piping within Station

Figure 6: [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. Bundling of Projects: The Project shared costs with another SoCalGas project for many facility installations within the property including foundations and lighting due to shared project location.

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 $19,703,187.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	635,323	0	635,323
Contract Costs	13,095,428	0	13,095,428
Material	1,259,898	0	1,259,898
Other Direct Charges	1,966,845	8,502	1,975,347
Total Direct Costs	16,957,497	8,502	16,965,999

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	2,329,984	0	2,329,984
AFUDC	311,055	15,832	326,888
Property Taxes	80,316	0	80,316
Total Indirect Costs	2,721,356	15,832	2,737,188

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	19,678,852	24,335	19,703,187

[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 [redacted] Retrofit TIMP Project. Through this Project, SoCalGas improves the ability to implement and manage 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 $19,703,187.

End of [redacted] Retrofit TIMP Project Final Workpaper

I. DEL REY JUNCTION RETROFIT TIMP PROJECT

A. Background and Summary

Del Rey Junction Retrofit Transmission Integrity Management Program (TIMP) Project completed pipeline retrofits and facility enhancements at Del Rey Junction, a SoCalGas owned facility near the intersection of [redacted]. The Project activities were located near residential and commercial areas in the City of Los Angeles. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $9,764,175.

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Final Workpaper for Del Rey Junction Retrofit TIMP Project

Table 1: General Project Information

Retrofit Details			
Pipeline	1167, 3007, 1205, 2003, 1242		
Site	Del Rey Junction		
Location	City of Los Angeles		
Class	3 and 4		
Pipe Diameter	[redacted]		
MAOP			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	9,764,175	0	9,764,175

B. Maps and Images

Figure 1: Satellite Image of Del Rey Junction Retrofit 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 retrofit construction activities completed to facilitate future assessments.

Prior to initiating execution of the retrofit, 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. Retrofit – Engineering, Design, and Constructability: SoCalGas completed permanent pipeline retrofits and facility installations to facilitate future assessments of Line 1167, Line 3007, and Line 1205. The retrofit installations included the following:
   a. 110 feet of facility piping as well as 142 feet of [redacted] mainline pipe for Line 1167.
   b. 38 feet of facility piping as well as 201 feet of [redacted] mainline pipe for Line 3007.
   c. 235 feet of [redacted], and [redacted] mainline pipe for Line 1205. Installations also included a permanent [redacted] receiver for Line 1205, including a receiver barrel and 35 feet of associated piping.
   d. 14 feet of facility piping as well as 77 feet of [redacted] and [redacted] mainline pipe for Line 2003.
   e. 15 feet of [redacted] mainline pipe for Line 1242.
2. Final Project Scope: The final project scope of this Workpaper includes retrofits to Line 1167, Line 3007, Line 1205, Line 2003, and Line 1242 at Del Rey Junction including permanent installations of a receiver, 35 feet of associated piping, 162 feet of facility piping, and 670 feet of mainline piping.

Table 2: Final Project Scope – Retrofit

Final Project Scope				
Line	Pipe Function	Pipe Diameter	Installation Length	Cost Category
1167	Mainline Piping	[redacted]	142 ft	Capital
	Facility Piping		110 ft	Capital
3007	Mainline Piping		201 ft	Capital
	Facility Piping		38 ft	Capital
1205	Receiver	x	N/A	Capital
	Mainline Piping		235 ft	Capital
	Associated Piping		35 ft	Capital
2003	Mainline Piping		77 ft	Capital
	Facility Piping		14 ft	Capital
1242	Mainline Piping		15 ft	Capital

B. Engineering, Design, and Constructability Factors – Retrofit

SoCalGas executed installation of permanent Inspection assemblies to facilitate future Inspections and meet compliance schedules for pipeline segments near Del Rey Junction. Key factors that influenced the engineering and design of the installations are as follows:

1. Site Description:
   a. Del Rey Junction is a SoCalGas-owned facility that sees various transmission lines. The station initially served as a starting point for Line 3007 while also serving as an end point for Line 1167 and Line 1205. Previous In-Line Inspections (ILI) for these transmission lines required excavation and fabrication of temporary assemblies on highly transited intersections in the City of Los Angeles. To control recurring costs, reduce coordination, and minimize impacts, SoCalGas determined permanent installations and enhancements within and around Del Rey Junction would largely benefit all future Inspections.

b. Permanent installations consisted of a new permanent receiver for Line 1205 within Del Rey Junction. The Project also included pipeline installations that would facilitate conjunct ILIs for Line 1167 and Line 3007, eliminating the need for temporary assemblies at this location for these pipelines.
c. Line 2003 is a [redacted] transmission line within Del Rey Junction that underwent retrofits during this Project. Inspections for Line 2003 include pipeline within the Del Rey Junction, however the segment does not start or end at this location.
d. Line 1242 is a [redacted] pipeline with retrofits completed during this Project resulted in a 15 foot pipeline installation for this pipeline within Del Rey Junction.
e. Existing facilities and structures within Del Rey Junction were demolished, abandoned, and/or removed to facilitate construction at this location and incorporate the new design. This included the following:
    i. Demolition of a controls building.
    ii. Abandonment, demolition, and hauling of existing scrubber vessels.
    iii. Abandonment of existing piping and valving configurations.
    iv. Back-fill of existing vault.
f. The Project was executed in four construction phases:
    i. Phase 1 completed retrofits to Line 1167 and Line 3007 along [redacted]. This phase also included the installation of a permanent drip leg vessel within the facility, bypass piping and other facility piping and valving configurations.
    ii. Phase 2 completed retrofits to Line 1205, including the installation of a new permanent receiver and associated piping within Del Rey Junction. This phase also included the installation of bypass and crossover piping as well as other facility piping and valving configurations within Del Rey Junction.

iii. Phase 3 completed retrofits to Line 2003 and Line 1242 including crossover piping and other facility piping and valving configurations within Del Rey Junction.

iv. Phase 4 completed a retrofit on Line 3007 to install a new [redacted] mainline valve (MLV) near the intersection of [redacted].

2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the retrofit activities could be completed in the proposed project schedules with no system impacts.
3. Customer Impacts: No customer impacts.
4. Community Impacts:
   a. The Project issued various outreach communications to inform the community of construction and blowdown activities in the area.
   b. The Project caused significant impacts to nearby businesses and residential buildings, including limited street parking, noise pollution, and vehicle traffic. The Project Team coordinated with various stakeholders to provide any necessary compensation and accommodations.
5. Substructures:
   a. The Project Team conducted extensive substructure research and analysis prior to installation of permanent receiver supports, valve supports and enclosures, and new sound barrier wall.
   b. The Project Team approached accessing the pipeline by method of hand digging to minimize impacts due to existing pipelines at the retrofit locations.
6. Environmental:
   a. The Project completed abatement activities as well as asbestos and material survey along pipeline, which identified the presence of asbestos containing material (ACM). All construction activities were required to be completed by a licensed abatement contractor with oversight by a licensed industrial hygienist.
   b. The Project required geological testing of soil conditions near pipeline and valve supports.

7. Permit Restrictions: The Project Team required and obtained the following permits and permissions:
   a. Permit from the Bureau of Engineering (BOE) to excavate and complete permanent retrofit installations for the Project.
   b. Potholing Permit from the City of Los Angeles.
   c. Noise Variance through the Los Angeles Police Commission.
   d. Building Permit from the City of Los Angeles Department of Building and Safety.
   e. Installation Permit for pipeline to be installed along Jefferson Boulevard and Inglewood Boulevard.
   f. Peak Hour Exemption (PHE) from the BOE.
   g. Confined Space Entry Permit from Patriot Environmental Services.
8. Traffic Control: The Project Team obtained approval from the City of Los Angeles Department of Transportation for multiple Traffic Control Plans (TCP) required for the Project. The TCPs included restored signage and striping for the intersection of [redacted].
9. Land Use:
   a. The Project Team obtained a temporary right of entry (TRE) agreement with a neighboring property owner to establish the use of ten parking spaces within the private property.
   b. The Project Team obtained a TRE agreement with a neighboring property owner to establish the use of a workplace area to ingress and egress into the Project site, as well as use the area for necessary construction activities.
10. Constructability:
   a. The Project required structural and engineering design for the following:
      i. Concrete foundation and supports for the permanent receiver.
      ii. Concrete masonry unit (CMU) wall and foundation, which included an enclosure system installed to act as a sound barrier wall. This installation required ambient sound level testing to ensure noise pollution from the filter separator was adequately controlled.
      iii. Industrial Perimeter Wall and Fencing throughout the facility.

b. Detailed engineering and structural designs were required to accommodate drip leg installation instead of filter separator or scrubber vessel within the facility.
c. The Project required installation of a moisture analyzer at the facility, which changed the drip leg foundation locations and required additional supports.
d. Additional pipe stress and structural support analyses were required due to layout and alignment changes during the execution of the Project. This resulted in demolition and replacement of block wall on the property.

11. Schedule Delays: The Project experienced schedule delays due to the following:
    a. Unanticipated rainfall caused the Project to demobilize and required dewatering of open excavations.
    b. Layout and scope changes impacted the project timelines, required additional material and equipment as well as additional engineering, Inspections, permitting, and labor.
    c. The Project experienced delayed permitting and traffic control approvals.

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 3: Construction Timeline – Retrofit

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Abatement of Existing Pipeline Wrap

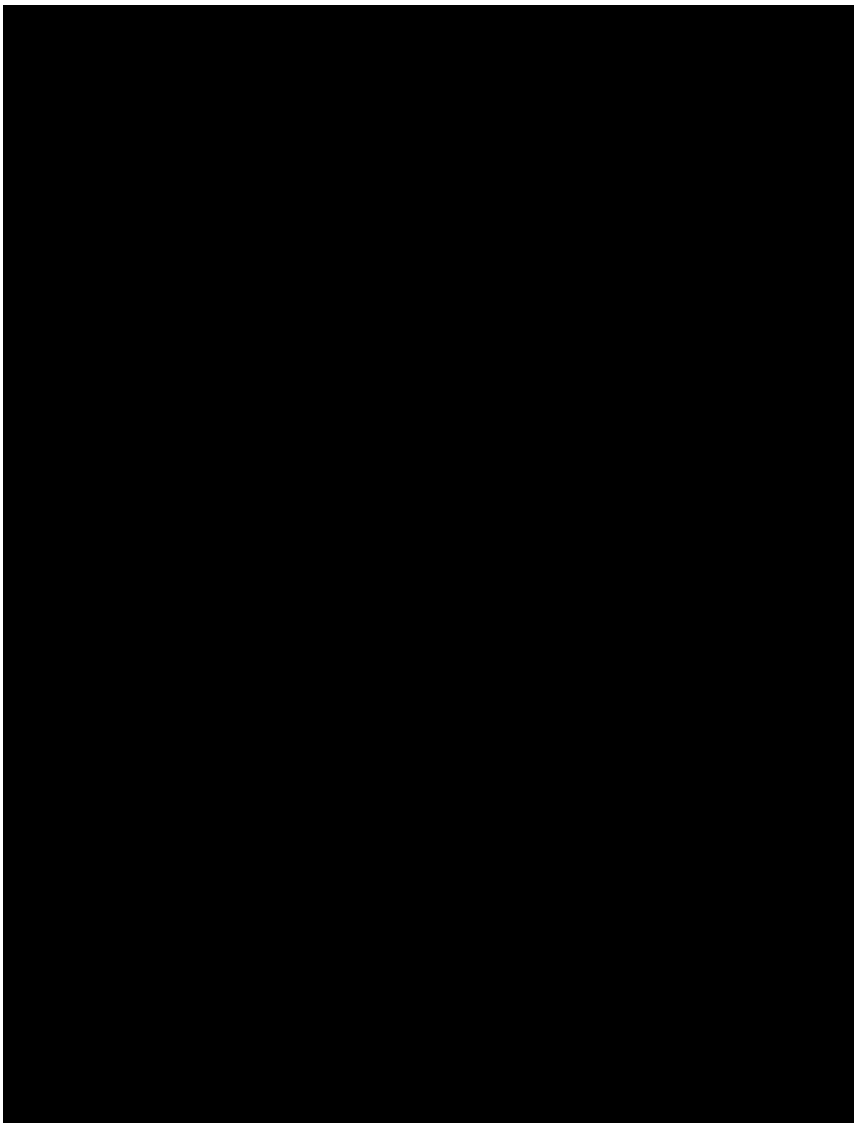


Figure 3: Forms for new Permanent Receiver and Valve Supports

Figure 4: Enclosure Blowoffs

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. Bundling of Projects: The Project Team executed retrofits to five different pipelines within Del Rey Junction together to increase efficiency.
2. Project Design: The Project installed a drip leg vessel that dynamically accommodates TIMP Inspections as well as other functions within the SoCalGas pipeline system.
3. Schedule Coordination: The Project was executed in coordination with other SoCalGas projects, minimizing impacts and increasing execution efficiencies.
4. Future Maintenance: The Project completed retrofits that would increase cost efficiencies for future 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 $9,764,175.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	362,708	0	362,708
Contract Costs	6,510,769	0	6,510,769
Material	7,752	0	7,752
Other Direct Charges	1,508,273	0	1,508,273
Total Direct Costs	8,389,502	0	8,389,502

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,262,319	0	1,262,319
AFUDC	93,818	0	93,818
Property Taxes	18,536	0	18,536
Total Indirect Costs	1,374,673	0	1,374,673

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	9,764,175	0	9,764,175

[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 Del Rey Junction Retrofit TIMP Project. Through this Project, SoCalGas improves the ability to implement and manage 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 $9,764,175.

End of Del Rey Junction Retrofit 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:

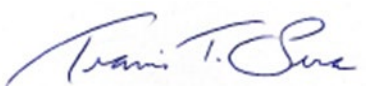
1. I am the Director of Integrity Management for Southern California Gas Company (SoCalGas). I have been delegated authority to sign this declaration by Gina Orozco, Vice President of Gas Engineering and System Integrity for SoCalGas. I have reviewed the confidential information included within SoCalGas-02-WP Workpapers Supporting the Prepared Direct Testimony of Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera (Technical – Project Execution and Management) ("TIMP 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 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 30th day of April, 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 Transmission Integrity Management Program (TIMP) Workpapers

Location of Data	Applicable Confidentiality Provisions	Basis for Confidentiality
SCG-02-WP (Volumes I-VII); 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)	