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Economic Development Council of Colorado

PUEBLO, CO

October 19-21, 2022



A Quality Management Approach to Project Budgeting and Due Diligence for Remediation and Brownfield Projects

Presented by: The Di Nardo Management Group and Pinyon Environmental, Inc.



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The Presenters

The
Di Nardo Management
Group



Stephen DiNardo

Pinyon
Environmental, Inc.



Karlene R. Thomas, PE

Karlene R. Thomas, PE

History

- Environmental Professional and licensed Professional Engineer with over 30 years of consulting and project management experience
- 23 years at Pinyon, currently Principal and owner

Expertise

- Regulatory compliance – methane, soil-vapor, waste, air, wastewater, tanks, RCRA, CERCLA, Design Build projects
- Water quality - wastewater, surface water and groundwater permitting, stormwater management

Key Projects

- Pikes Peak Heights, Schuck Chapman Communities, Colorado Springs – removal of landfill and development of residential housing, MMP, VCUP, ACEC Excellence in Engineering Award
- The Foundry Redevelopment Project, City of Loveland – hazmat, tank investigations, MMP, VCUP

Stephen Di Nardo

History

- 23 years Owners Presentative for Demolition and Remediation projects.
- Due Diligence & Project Management
- 63 Projects: Children's Hospital, Mercy Hospital, Commerce City Dog Track, Loveland Foundry Project, Central I-70
- Quality Management / Compliance to Regulation
- Management Consultant
 - Process re-engineering
 - Business Analyst
 - Quality Management ISO 9001, ISO 14001, ISO 9000, TPM Management,
 - Continuous Improvement

Workshop Introduction



Topics

- Due Diligence / Project Phasing
- Dos and Don'ts (Environmental Planning)
- Budget Scoring
- Opportunities

Take-away

- Create more sustainable project budgets and project schedules.
- Due diligence and analysis tips
- Improve internal review and approval
- Reduce overall project cost and risk



Current External Economic Factors

- ◆ Increasing material, labor, fuel, and costs in general
- ◆ Increasing environmental regulation
- ◆ Increasing cost of money
- ◆ IJIA Infrastructure Jobs Act

Who is your Customer?



- Economic Development Manager
- City Manager
- City Council
- Risk Management Dept
- Procurement / Purchasing Dept.
- Historic Preservation Dept/Org
- Other Government Agencies (CDPHE)
- Community Representatives
- Other

Needs and What's of Customers

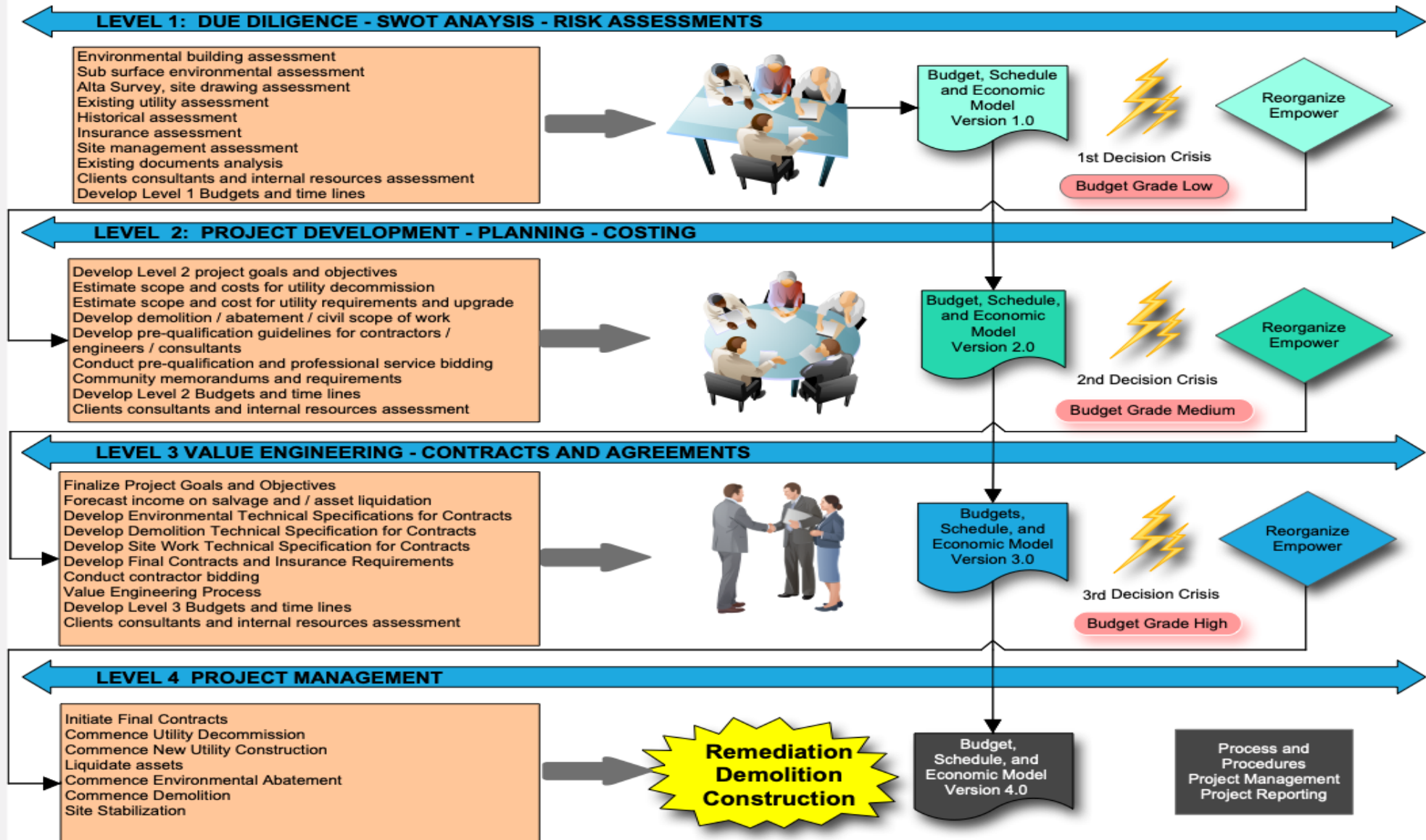


- Sustainable and defensible budgets
- Reduce risk and exposure
- Sustainable project schedules
- Obtain grants, funding, insurance policies, bonds, permits.
- Effective review and approval process

Pre-Workshop Survey Results

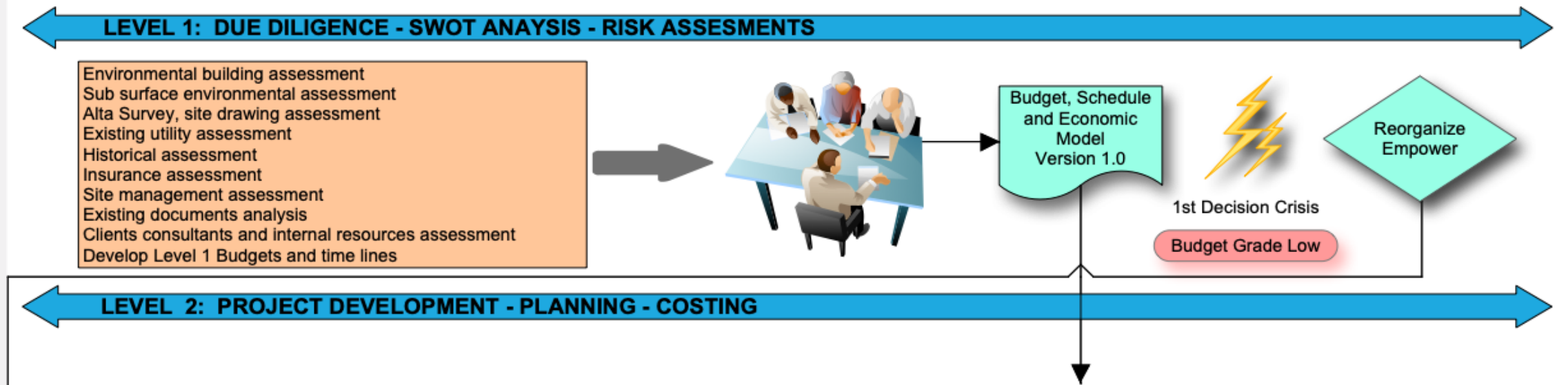


Di Nardo Management Group Project Planning Process



Level 1: Due Diligence/SWOT Analysis / Risk Assessments

Di Nardo Management Group Project Planning Process



- ◆ Develop a budget review procedure to include but not limited to:
 - ◆ Scope of work and line-item review, Action item to improve line-item score, review overall budget attainment levels, Go and No Go.
- ◆ Note review on document control sheet.
- ◆ Critical Decision
- ◆ Re organize

Project Due Diligence

- Define project scope & objectives
- Collect and review existing surveys, records, and documents
- Perform a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) on existing documents
- Identify missing elements
- Develop Action Item and strategy
- Outline Level 1 Budget Version 1



Define Budget Phases

- Definition:
 - Level 1 (Due Diligence / SWOT / Analysis / Risk Assessment)
 - Level 2: Project Development / Planning and Costing
 - Level 3: Value Engineering / Contracting
 - Level 4: Project Management



Budget Scoring



- Definition:
- A value assigned to an activity or group of activities based on predetermined evaluation criteria.
- The evaluation criteria shall include both value-added and non-value-added definitions to promote continuous improvement

Budget Scoring Example

Scoring Worksheet for Environmental Remediation and Demolition

Grade Level	Description and Characteristics Each item will have one or more of the following	Contingency Level	Notes
Level "A"	No Risk	0% to 5%	Standard contingency
Level "B"	Low Risk - Manageable	0% to 20%	Establish contingencies per risk level
Level "C"	Medium Risk- Un-Manageable	15% to 60%	Establish contingencies per risk level
Level "D"	High Risk - Show Stoppers	50% to 200%	Establish contingencies per risk level
Level "F"	Non-Starters	> 200%	Item must be qualified

DO'S AND DON'TS



Environmental Diligence Do's and Don'ts

- ◆ Phase I surveys
- ◆ Asbestos Building Inspection Surveys
- ◆ General Contractor Assumptions.

Do not rely on old Phase I and II (ESAs)



- Phase I reports expire in 6 months
- Lose CERCLA Liability/Innocent Landowner Defense
- Contains other consultants Opinions

Who's your Customer?

Phase 1 Environmental Assessments



Insurance
Companies

Could endanger potential
insurance policies

Outside Agencies
/ CDPHE

Could create additional costs
and oversight

Bankers / Funding
Sources

Could affect lending costs &
Misleading or excessive estimates

Attorney's /
Purchasing

Could result in unnecessary
contract language / Poor bids

Risk Managers

Could scare off internal
management

Investors /
Partners

Could scare off potential
investors

Do Not Rely on old Asbestos Surveys



- ◆ **Building Asbestos Report**
- Discount Report/unqualified inspector
- No access to consultants
- Unclear of the means and methods
- Non-Defendable – Indemnification
- Not a technical specification

Who's your Customer?

Asbestos Building Inspection



Insurance Companies

Could endanger potential insurance policies

Outside Agencies / CDPHE

Could deny permit
Could request work plan

Abatement Contractors

Misleading and/ or excessive costs estimates.

Purchasing / Contracting

Could result in poor bids.
Could result in unqualified Contractors

Risk Managers

Could scare off internal management

Investors / Partners

Could scare off potential investors

General Contractors

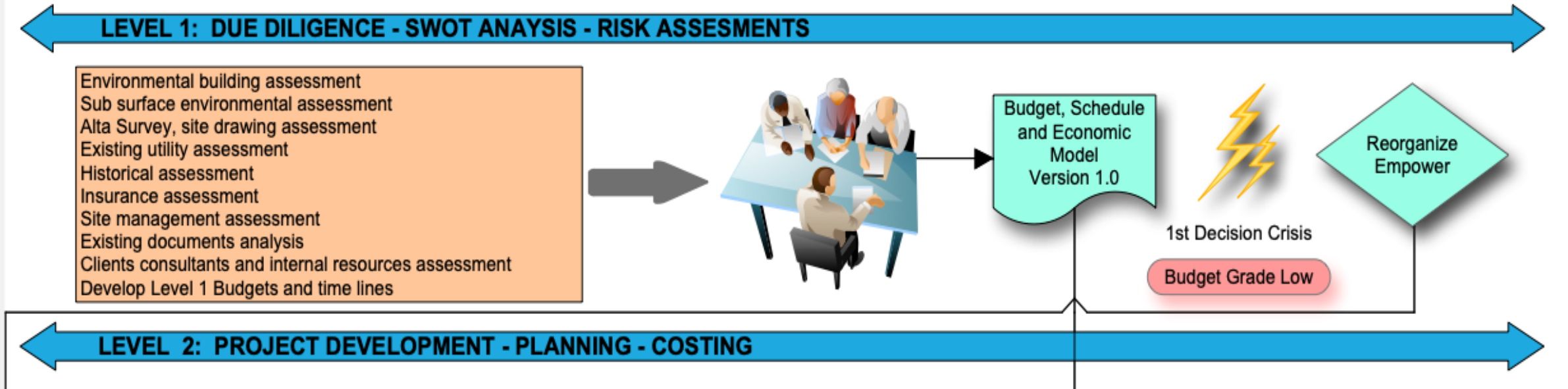


- ♦ Are not trained in Environmental / Demolition
- ♦ GC's can not pull Environmental or Demolition Permits
- ♦ May have no or limited experience with communicating with outside agencies (CDPHE)
- ♦ May rely on unqualified sub contractors for information
- ♦ Client has no direct line of communication with engineers
- ♦ Little to no experience in writing technical specification for bids.
- ♦ Unnecessary Markups



Pulling it all together

Di Nardo Management Group Project Planning Process



- ◆ Develop a scoring operating procedure to include:
 - ◆ Review criteria, team members, document control method and procedure, decision matrix Go / No Go,
 - ◆ Millstones: Define value added and nonvalue added activities per phase, establish contingency levels.
- ◆ Score Budget
- ◆ Review Session

Scoring



Sample Scoring Worksheet

The DiNardo Management Group			
Scoring Worksheet for Environmental Remediation and Demolition			
Grade Level	Description and Characteristics Each item will have one or more of the following	Contingency Level	Notes
Level "A"	Little Risk		
A	Cost items is a fixed price and/or prepaid	0% to 5%	Standard contingency
A	Cost item is included as part of a signed stipulated or fixed fee agreement	0% to 5%	Standard contingency
A	Cost item is subject to a minor level of Adjustments due to government regulations, Weather conditions economic conditions or change order due to unforeseen conditions.	0% to 5%	Standard contingency
A	Insurances and bonds in force	0% to 5%	Standard contingency
Level "B"	Low Risk - Manageable		
B	Cost item is prepared by a licensed engineer, professional, or contractor who will be performing the work.	0% to 20%	Establish contingencies per risk level
B	Cost item is based on qualified technical specification	0% to 20%	Establish contingencies per risk level
B	Cost item is contracted as a stipulated sum or fixed fee agreement	0% to 20%	Establish contingencies per risk level
B	Cost item has been properly bid and verified	0% to 20%	Establish contingencies per risk level
B	The engineers, professionals, and/or contractors have entered into the clients approved contract.	0% to 20%	Establish contingencies per risk level
Level "C"	Medium Risk- Un-Manageable		
C	Cost item is an estimate by a licensed engineer, professional, and/or contractor but not necessary preforming the work	15% to 60%	Establish contingencies per risk level
C	Cost item is not prepared with the use of qualified technical specification	15% to 60%	Establish contingencies per risk level
C	Cost is based on time and materials with engineers, professionals, and/or contractors agreement	15% to 60%	Establish contingencies per risk level

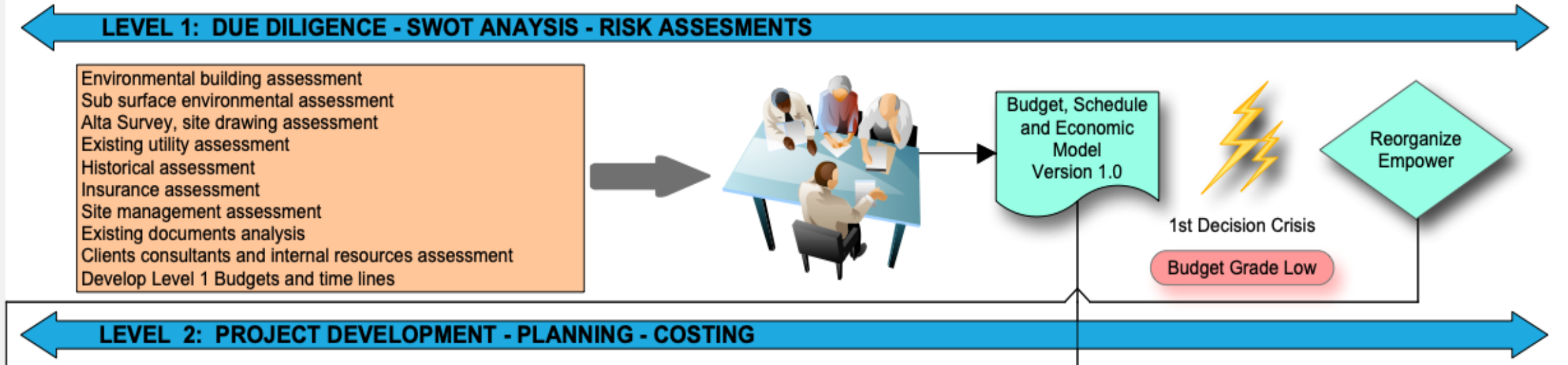
B	approved contract.	0% to 20%	Establish contingencies per risk level
Level "C"	Medium Risk- Un-Manageable		
C	Cost item is an estimate by a licensed engineer, professional, and/or contractor but not necessary performing the work	15% to 60%	Establish contingencies per risk level
C	Cost item is not prepared with the use of qualified technical specification	15% to 60%	Establish contingencies per risk level
C	Cost is based on time and materials with engineers, professionals, and/or contractors agreement	15% to 60%	Establish contingencies per risk level
C	Cost item has not been value engineered	15% to 60%	Establish contingencies per risk level
C	Cost item is subject to medium to high level of adjustments due to government regulation, weather conditions, economic conditions, permitting fees, and change orders due to unforeseen conditions	15% to 60%	Establish contingencies per risk level
Level "D"	High Risk - Show Stoppers		
D	Cost item is not prepared by a licensed engineer, professional, and/or contractor	50% to 200%	Establish contingencies per risk level
D	Cost item is not prepared with the use of qualified technical specification	50% to 200%	Establish contingencies per risk level
D	Cost item has been prepared using outdated / obsolete surveys or studies	50% to 200%	Establish contingencies per risk level
D	No contracting terms have been defined	50% to 200%	Establish contingencies per risk level
D	Source documents contain un-necessary and potentially damaging language	50% to 200%	Establish contingencies per risk level
Level "F"	Non Starters		
F	Cost item contains sufficient unknowns to warrant additional insurance policies or provisions to limit liability or cap cost	> 200%	Item must be qualified
F	Items contains insufficient or incomplete information	>200%	

Revision Control Notes

The DiNardo Management Group				
Revision control notes				
Level 1 Due Diligence Budget				
Revision	Date	Source	General Notes	Date Complete
Due Diligence Professional Services, Permit Fees, Drawings				
1.1	9/1/22	Steve D	Released as is.	9/5/22
1.2	9/5/22	Steve D	Include line item for Historical review	9/5/22
1.2	9/5/22	Steve D	Include line item for Attorney Fees	9/5/22
1.2	9/5/22	Karlene T	Increase cost of Asbestos survey to \$32,000	9/5/22
1.3	9/5/22	Karlene T	Increase cost of Phase I survey to \$12,000	9/5/22
1.3	9/5/22	City Council	Add line item for Historical Preservation	9/5/22
1.3	9/5/22	City Council	Add line item for attorney fees	9/5/22
1.4	9/10/22	FINAL	APPROVED TO LEVEL 2	9/10/22
Level 1 Due Diligence Budget				
Revision	Date	Source	General Notes	General Notes
Due Diligence Professional Services, Permit Fees, Drawings				
2.1	9/10/22	Steve D	Release as is.	9/10/22
2.2	9/14/22	City Council	Reduce Attorney fees from \$50,000 to \$20,000	9/15/22
2.3	9/15/22	Team	Add Site and Decommission category	9/15/22
2.3	9/15/22	Team	Increase Historical Preservation to B Level	9/15/22

Budget Review Session

Di Nardo Management Group Project Planning Process



- ◆ Develop a budget review procedure to include but not limited to:
 - ◆ Scope of work and line-item review, Action item to improve line-item score, review overall budget attainment levels, Go and No Go.
- ◆ Note review on document control sheet.
- ◆ Critical Decision
- ◆ Re organize

Budgeting



The DiNardo Management Group								Budget Goals	A Level	B Level	C Level	D Level
Environmental Remediation/Demolition Sample Scored Budget								Goal	5%	80%	10%	5%
Revision 2.4								Current	1%	2%	50%	47%
								Attainment	21%	2%	496%	948%

Level 1 Due Diligence Budget						Standard Data				Budget Estimates			
Accounting Codes	Risk Level	Current Grading	Budget Line Item	Provider	Terms	Unit of Measure	Volume	Unit Cost	Total Cost	Estimated Budget	Contingency		Budget with Contingency
											%	Amount	
Due Diligence Professional Services, Permit Fees, Drawings													
TBD	Med	B	Project Management	DMG	Net 30	Hourly	200	\$150	\$30,000	\$ 30,000	10%	\$ 3,000	\$ 33,000
TBD	High	C	Civil Engineering Drawings	TBD	Net 30	Hourly	70	\$150	\$10,500	\$ 10,500	15%	\$ 1,575	\$ 3,000
TBD	High	D	Asbestos Survey	Firm B	Net 30	Task Order	1	\$32,000	\$32,000	\$ 32,000	20%	\$ 6,400	\$ 38,400
TBD	High	D	Environmental Phase I	DMG/Pinyon	Net 30	Task Order	1	\$12,000	\$12,000	\$ 12,000	5%	\$ 600	\$ 12,600
TBD	Med	D	Environmental Phase II	TBD	Net 30	Allow	1	\$22,000	\$22,000	\$ 22,000	15%	\$ 3,300	\$ 25,300
TBD	Med	B	Structural Engineer	TBD	Net 30	Allow	1	\$15,000	\$15,000	\$ 15,000	3%	\$ 450	\$ 15,450
TBD	Med	B	Historical Preservation	TBD	Net 30	Allow	1	\$10,000	\$10,000	\$ 10,000	25%	\$ 2,500	\$ 12,500
Sub Total									\$179,500	\$ 179,500	12.05%	\$ 21,625	\$ 192,050
Site decommission and support costs													
TBD	Low	B	Rail Road Application	Railroad	Pre Pay	Each	1	\$3,500	\$3,500	\$ 3,500	0%	\$ -	\$ 3,500
TBD	Low	D	Community Auction	TBD	Net 30	Allow	1	\$3,000	\$3,000	\$ 3,000		\$ -	\$ 3,000
Sub Total Due Diligence									\$167,470	\$ 167,470	0.36%	\$ 596	\$ 168,066
Project Hard Cost													
TBD	High	D	Asbestos Soil Abatement and Remediation	TBD	Lump Sum	Each	1	\$480,000	\$480,000	\$ 480,000	10%	\$ 48,000	\$ 528,000
TBD	High	C	Soils Remediation	TBD	Lum Sum	Allow	1	\$380,000	\$380,000	\$ 380,000	20%	\$ 76,000	\$ 456,000
Sub Total Hard Costs									\$2,203,600	\$ 2,203,600	11.85%	\$ 261,180	\$ 2,464,780
General Site Fee's / Admin / Professional Fee's													
TBD	Low	C	Administration and GM fees	TBD	Lump Sum	Percent	5%	\$2,371,070	\$118,554	\$ 118,554	0%	\$ -	\$ 118,554
TBD	Low	C	General Conditions	TBD	Lump Sum	Lump sum	0.2	\$474,214	\$474,214	\$ 474,214	0%	\$ -	\$ 474,214
TBD	Med	C	Bonding	TBD	Unit Price	Percent	1.25%	\$2,371,070	\$29,638	\$ 29,638	0%	\$ -	\$ 29,638
Sub total G/A and Admin									\$634,406	\$ 634,406	0.00%	\$ -	\$ 634,406
SUB TOTAL COST LESS PROFESSIONAL SERVICE									\$3,005,476	\$ 3,005,476		\$ 261,776	\$ 3,267,252
TOTAL BURDEN COST									\$3,184,976	\$ 3,184,976	8.90%	\$ 283,401	\$ 3,459,302

Budget Grading Summary					
Activities	Base Budget Budget	Base Budget Budget	Grading %	Contingency	Budget With Contingency
A Level items	\$ 34,000	\$ 34,000	1.07%	\$ -	\$ 34,000
B level items	\$ 61,500	\$ 61,500	1.93%	\$ 6,100	\$ 67,600
C Level Items	\$ 1,579,076	\$ 1,579,076	49.58%	\$ 100,446	\$ 1,670,447
D Level Items	\$ 1,510,400	\$ 1,510,400	47.42%	\$ 176,855	\$ 1,687,255
F Level Items	\$ -	\$ -	0.00%	\$ -	\$ -
Total Project Cost less income	\$ 3,184,976	\$ 3,184,976	100.00%	\$ 283,401	\$ 3,459,302

Budget Line Items / Scoring / Revision Number

The DiNardo Management Group								Budget Goals	
Environmental Remediation/Demolition Sample Scored Budget								Goal	
Revision 2.4								Current	
								Attainment	
Level 1 Due Diligence Budget						Standard Data			
Accounting Codes	Risk Level	Current Grading	Budget Line Item	Provider	Terms	Unit of Measure	Volume	Unit Cost	Total Cost
<u>Due Diligence Professional Services, Permit Fees, Drawings</u>									
TBD	Med	B	Project Management	DMG	Net 30	Hourly	200	\$150	\$30,000
TBD	High	C	Civil Engineering Drawings	TBD	Net 30	Hourly	70	\$150	\$10,500
TBD	High	D	Asbestos Survey	Firm B	Net 30	Task Order	1	\$32,000	\$32,000
TBD	High	D	Environmental Phase I	Ace Enviro	Net 30	Task Order	1	\$12,000	\$12,000
TBD	Med	D	Environmental Phase II	TBD	Net 30	Allow	1	\$22,000	\$22,000
TBD	Med	B	Structural Engineer	TBD	Net 30	Allow	1	\$15,000	\$15,000
TBD	Med	B	Historical Preservation	TBD	Net 30	Allow	1	\$10,000	\$10,000
			Sub Total						\$179,500
<u>Site decommission and support costs</u>									
TBD	Low	B	Rail Road Application	Railroad	Pre Pay	Each	1	\$3,500	\$3,500
TBD	Low	D	Community Auction	TBD	Net 30	Allow	1	\$3,000	\$3,000
			Sub Total Due Diligence						\$167,470
<u>Project Hard Cost</u>									



Benefits

- ◆ **Sustainable / Defendable Budget**
- ◆ **Improves Team Participation and reduces misunderstandings**
- ◆ **Promotes Continuous Improvement**
- ◆ **Decision are made on predetermined criteria**
- ◆ **Reduces project risk and mistakes**
- ◆ **Reduces project change orders and delays**
- ◆ **Repeatable process**
- ◆ **Lower costs and increases value**

Quality Management



- Organization – Responsibility and Authority
- Document Control
- Supplier qualification
- Process Control
- Design Review and Approve



Workshop Survey Results



The background of the slide is a dense, colorful field of 3D question marks. The question marks are rendered in various colors including red, blue, yellow, green, and grey, and are scattered across the entire frame. Some are in sharp focus while others are blurred, creating a sense of depth.

Q&A

CONTACTS

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