



Facility Feasibility Study

Town of Lansing Highway Department Building



Final Report
November 10, 2021



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3.0 PROGRAMMING

3.1 PROGRAMMING OVERVIEW

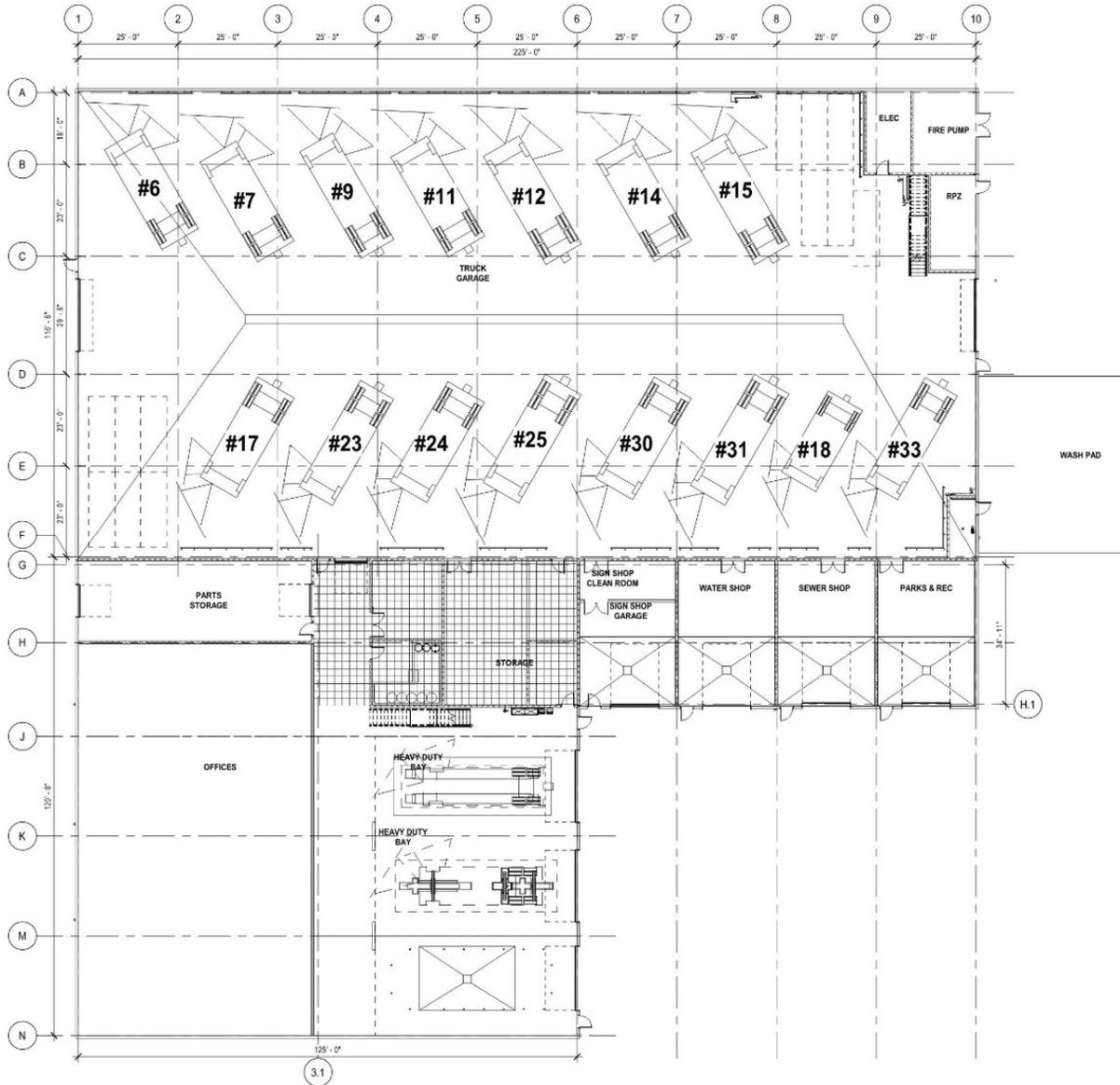
At the close of the site visit on February 5, 2021, our Design team met with the Highway Department Superintendent and Deputy Superintendent. Bergmann used the information compiled to develop and refine the requested options. The findings are summarized below.

- OFFICES: Three equal office spaces all roughly 12'x15' or one larger for the Superintendent and (2) smaller. Interconnection between the spaces is important but not necessary.
- RESTROOMS: Separate restrooms for Office Staff and the Maintenance Staff.
- ACCESS CONTROL: Separate for the separate groups:
 - Day Shift – Maintenance Staff
 - Night Shift – Maintenance Staff
 - Administration Staff
- CONFERENCE ROOM: Room to use for Training, large enough for 25 people
- OPEN OFFICE AREA: 3-4 sized to be turned into offices
- LOCKER ROOMS: Both Men's and Women's are required. Ventilation and shower stalls are important.
- FILE STORAGE: Adjacent to Administration Offices. Are currently stored in Sign Room.
- WAR ROOM: Working area with space for files. Files are currently stored in office and mezzanine.
- MAINTENANCE BAY:
 - Direct Connect Exhaust
 - Minor Welding
 - 2-3 Bays Utilized
 - Radiant Flooring
- FLUIDS ROOM: Dedicated room needed, currently is done in corner of Maintenance Bay.
- PARTS ROOM: To be separate from Maintenance Bay.
- MEZZANINE STORAGE: To be maintained or recreated.
- Future crane to be planned for.
- Lifts to be replaced with large lift (30 ton). Lift to be in each Maintenance Bay.
- Everything is to be connected to the Generator.
- Solar Panel options to be reviewed.
- Existing Building is on a Septic System.
 - Building on Town Center Parcel I would also be on a Septic System.
 - Sewer connection is 3 miles away.
- SHOPS: Sign, Pump, Parks and Recreation, and Water along with associated storage is preferred for future use as departments expand.
 - Associated Offices to be with in Administration Area.
- TRUCK BAY:
 - Trucks are parked with wings on and down.
 - Radiant Heating.
- Fuel Island to receive canopy and replacement tanks / dispensers.



3.2 PROTOTYPE PLAN

Based on the information gathered on site, the program established with the Superintendent and Deputy Superintendent, and the design team's previous Department of Public Works Projects, the following prototype plan was developed. The intention of creating the prototype plan was to confirm the program and adjacencies, and to use an approved plan as the basis of site layouts for the development options.

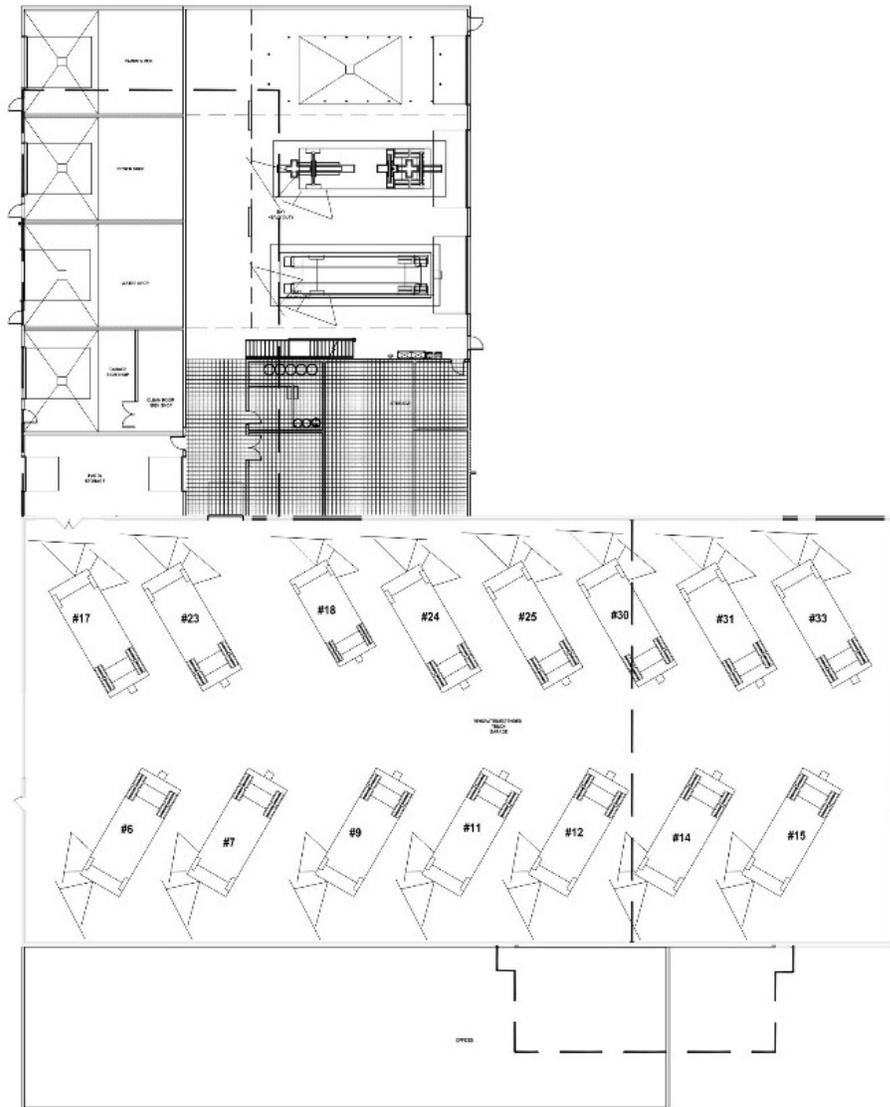




3.3 EXISTING MODIFICATIONS PLANS

Upon the review of the Prototype with the Town, the Design Team used the Prototype to help develop the following Existing Modifications Plans, merging the benefits of the prototype and ideal arrangement with the limitations of the existing building. During various virtual meetings, the Prototype Plan and Existing Modification Plans were discussed and reviewed. From this, the Design Team developed the Concept Plans in the next section.

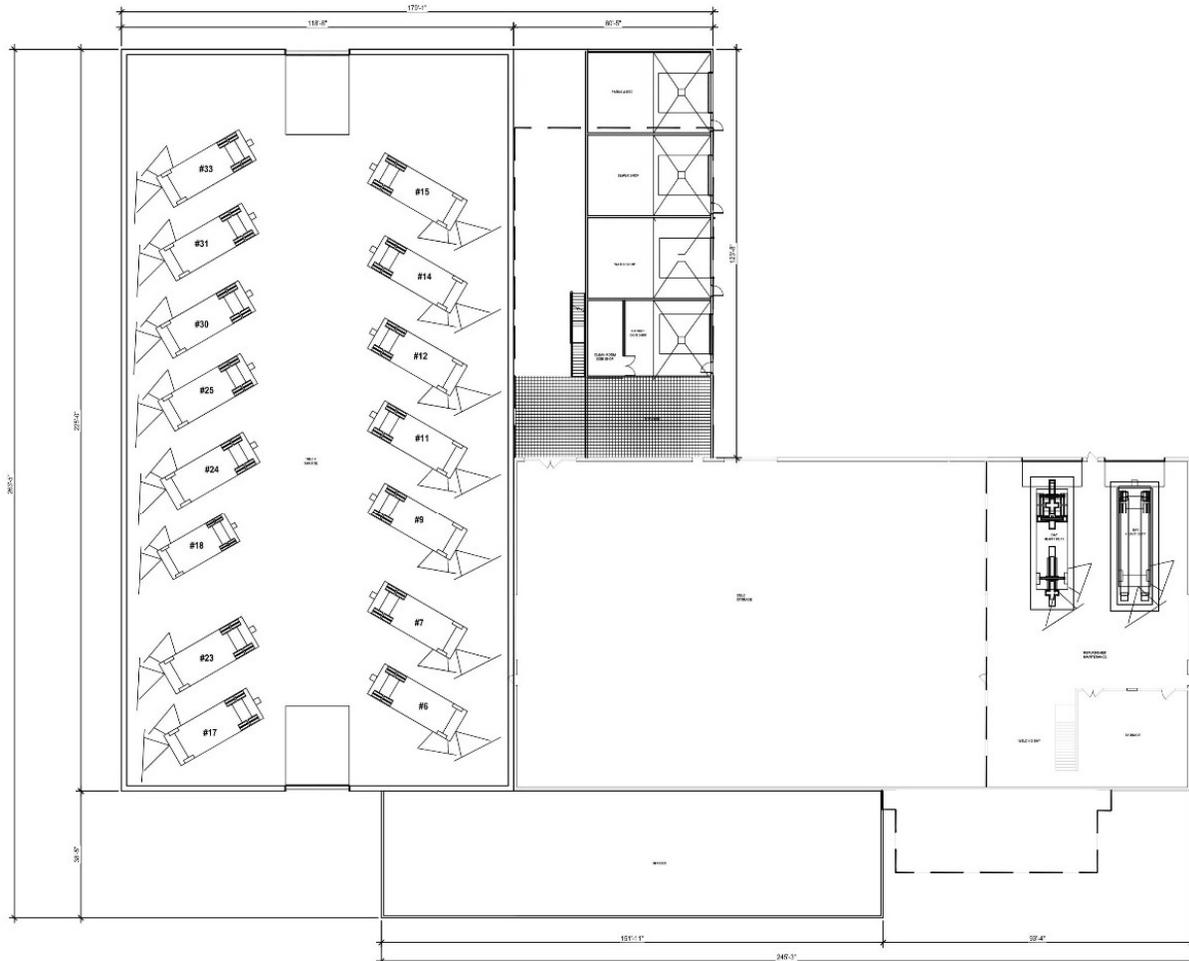
EXISTING MODIFICATION PLAN – SCHEME 1



In Scheme 1, the truck storage area is retained (though circulation reversed), and the CMU wall removed to expand truck storage into the existing maintenance area. The admin wing is demolished and replaced with a larger office area. The pole barn is demolished and replaced with a new building for maintenance, storage with mezzanine, and shops.



EXISTING MODFICIATION PLAN – SCHEME 2



In Scheme 2, the truck storage area is converted into cold storage in the middle of the new facility. Maintenance is renovated in its current location. The admin wing is demolished and replaced with a larger office area. The pole barn is demolished and a new truck storage building with a wing for shops and storage with mezzanine.



4.0 CONCEPT DEVELOPMENT

4.1 OVERVIEW

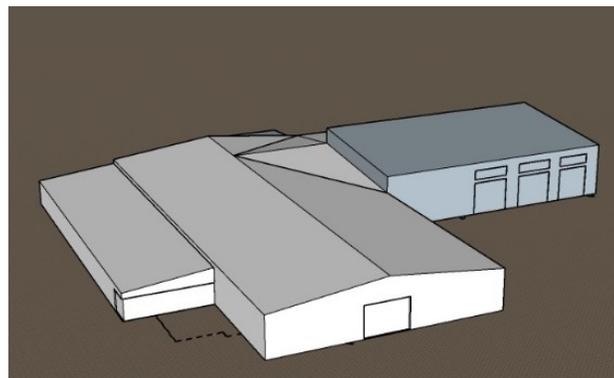
Bergmann reviewed the facility-provided Highway Asset Inventory Report (see Appendix C), our onsite field findings and our preliminary questions with the committee to outline the project goals and objectives and understand required adjacencies. Based on the information gathered, it was determined that four main concepts needed to be further developed. Site and Floor Plans have been developed for Scheme 1, 2, and 3 below. Each scheme also accommodates an adjusted location for a cell phone tower, access, and 100' fall zone. See full size Site and Floor Plans in Appendix D.

4.2 SCHEME 1 – RENOVATION AND ADDITION



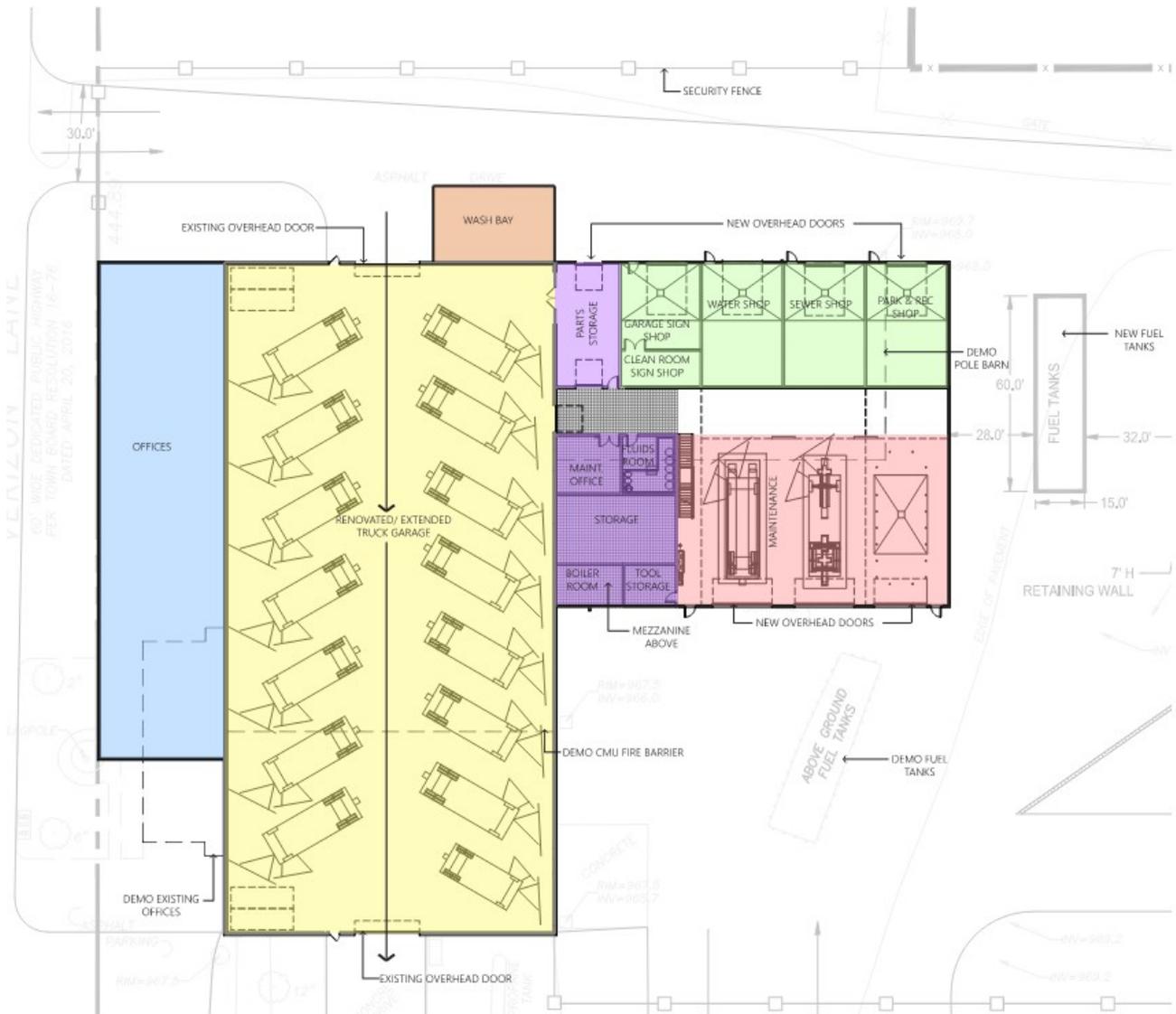
This scheme allows for the reuse of most of the existing facility and for the existing Salt Barn to remain. Using Existing Modification Plan 1 as a basis of design, the Truck Garage is renovated and extended into the former maintenance bays while the rest of the facility is demolished. Single story additions to the east (maintenance and shops) and west (offices) sides of the building allow for the remaining required program spaces. A new Cold Storage pre-engineered building, Fuel Island, perimeter security fence, and parking area are included in this scheme, as well as the relocation of the Fenced Storage Area. This scheme would need to be performed in phases and allow for some of the facility to remain operational during construction.

RENOVATED AREAS	
RENOVATED/EXTENDED TRUCK GARAGE	20800
TOTAL	20800
NEW AREAS	
OFFICES	5836
SHOPS	3796
MAINTENANCE	3942
STORAGE	3199
WASH BAY	875
CIRCULATION	1652
TOTAL	19300
RENOVATION + NEW TOTAL	40100
NEW COLD STORAGE	10000
	50100



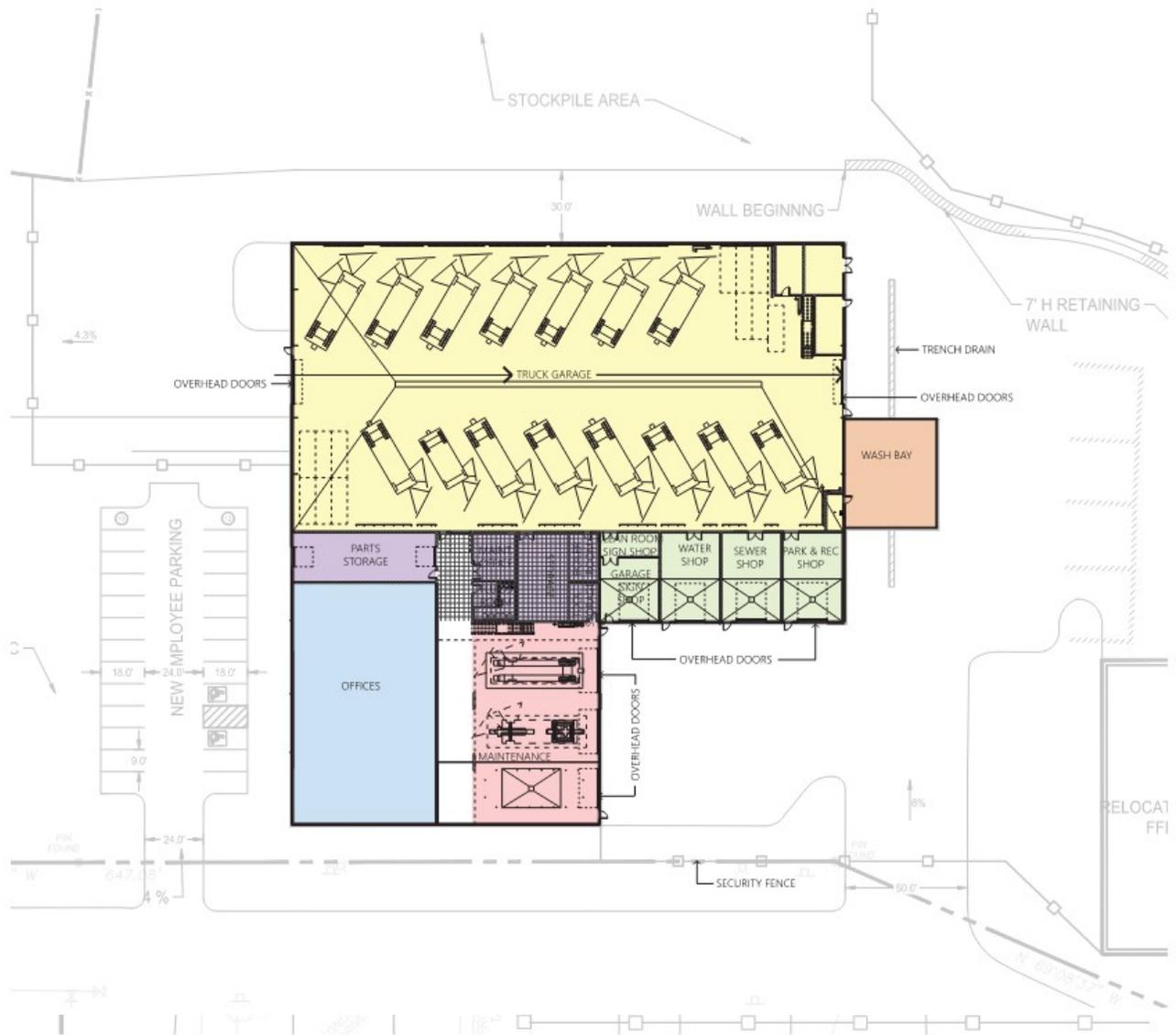


SCHEME 1 – RENOVATION AND ADDITION FLOOR PLAN





SCHEME 2 – NEW



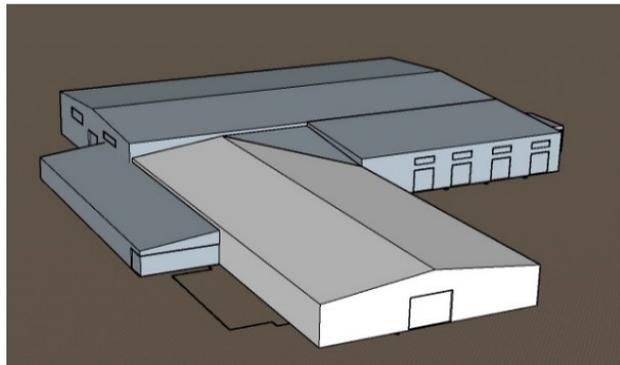


4.4 SCHEME 3 – RENOVATION AND ADDITION



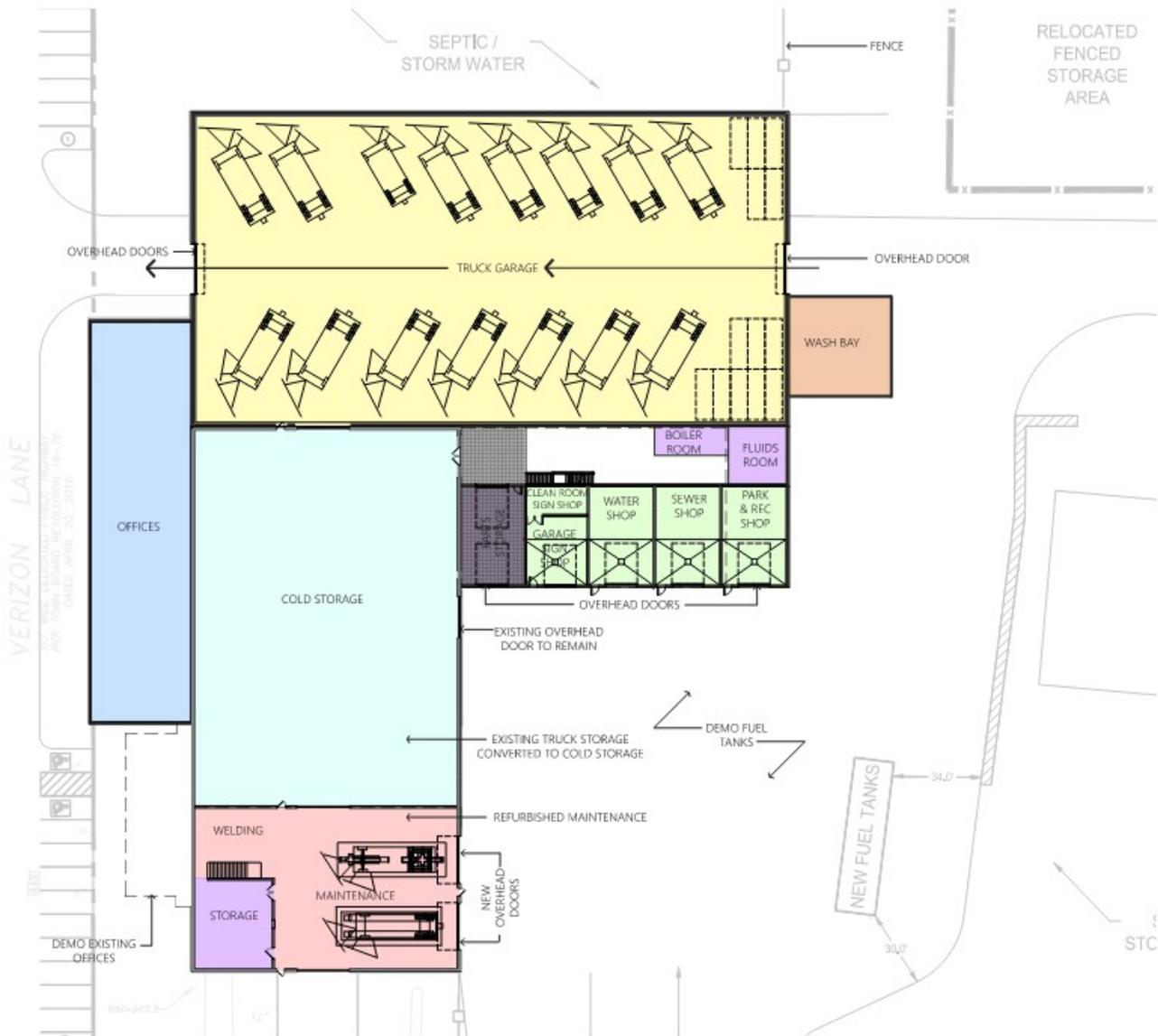
Scheme 3 is very similar to Scheme 1 in that it reuses and renovates the Truck Garage and allows the Salt Barn to remain. This scheme uses Existing Modification Plan 2 as the basis of design, with the Truck Garage renovated into Cold Storage and the Maintenance Garage, while the rest of the facility is demolished. Single story additions to the north (vehicle storage), east (shops and storage) and west (admin offices) sides of the building allow for the remaining program spaces. Fuel Island renovation, existing Parking expansion, relocation of the Fenced Storage Area, and a new perimeter security fence are included in the site modifications.

RENOVATED AREAS	
COLD STORAGE	14490
REFURBISHED MAINTENANCE	6310
TOTAL	20800
NEW AREAS	
TRUCK GARAGE	26699
OFFICES	5830
SHOPS	3751
STORAGE	1830
WASH BAY	875
CIRCULATION	1890
TOTAL	40875
RENOVATION + NEW TOTAL	61675





SCHEME 3 – RENOAVTION AND ADDITION FLOOR PLAN



4.5 SCHEME 4 – PARCEL I (NEW FACILITY)

Scheme 4 was for a new building on the Town Center Parcel I site. During the existing conditions review it was determined that this site was not a viable option due to the cost associated with extending roads and utilities. It was also determined that other adjacent parcels were not likely to be developed in the near enough future to help support the costs associated with the extensions. Site plans were not developed.



5.0 COST ESTIMATES

Based on the information gathered through the investigation exercise and the concept plans, DJB Builds prepared the following estimate(s) which are intended to provide the Town with a total project cost needed to establish financial strategies and to go out the public for a referendum bond vote for approval. The estimates are based on the Schematic Plans dated June 14, 2021. See Estimates in Appendix E.

6.0 EVALUATION OF OPTIONS

6.1 EVALUATION MATRIX

In assessing the concept schemes for the Town of Lansing Highway Department Building, Bergmann developed an evaluation matrix to assess and compare the options. The intent of this is to a) identify areas of concern, including project goals identified during the kickoff and other items discussed over time, and b) help to assess conditions other than just cost, and c) to provide justification for the selection of a preferred scheme. The evaluation matrix has been filled out by each member of the committee to fill out to show their own biases toward certain aspects of the project, and then the scores were compared. Below is a summary of the overall findings. The full matrix reviews can be found in Appendix F.

	<p><i>Priority-</i> (1-5) 5 is highest priority. <i>Ranking-</i> Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking. <i>Total-</i> Factor of Priority multiplied by the Ranking. <i>na</i> - Not Applicable</p>			
<p>Lansing Highway Department Renovation Scheme Evaluation Matrix August 2, 2021</p>				
Schemes Studied Summary				
Evaluation Factor 5 Items				
None				
Evaluation Factor 1 Items				
None				
Team Member Scoring Order	Option 1	Option 2	Option 3	
Ed LaVigne	2	1	3	
Guy Krogh	3	1	2	
David Herrick	1	2	3	
Mike Moseley	3	1	2	
CJ Randall	2	1	3	
Option Totals	1279	1652	1216	



6.2 RECOMMENDATIONS

The following recommendations represent Bergmann's opinions of each scheme in regard to providing the Town with the best value for development. This summary corresponds to discussion with the Town, completion of our own evaluation matrix, and consideration of the operational demands on the Lansing Highway Department

6.2.1 SCHEME SUMMARIES

SCHEME 1

From the standpoint of limiting cost and site impact, Scheme 1 – the renovation and addition of the existing facility with a new Cold Storage building – becomes a very viable option. The condition of the existing structure is in good enough shape that a lot of the building can be retained with renovation costs less than new construction. There are many benefits to this concept that many committee members indicated as important for the project. However, this scheme has high risk with unforeseen conditions that may be uncovered during construction and known 'sins of the past' that will be incorporated into the updated facility, as well as having significant impact on the operations of the Highway Department. The lowest cost of Scheme 1 makes it a secondary scheme if the Townspeople do not support Scheme 2.

SCHEME 2

Scheme 2 - with a 100% new facility and converting the existing building to Cold Storage – is the optimal option to meet the current and future needs of the facility while not having to contend with the limitations of existing conditions. As the prototype plan is the desired layout based on our process, Scheme 2 is the most direct application of this. In addition, one of the most important aspects of this scheme is that construction can happen without significant impact on the Highway Department operations or having to relocate from the existing facility. If construction is delayed for any reason, operations can still continue. This scheme is also the least likely to be affected by unforeseen conditions, as the new building is not impacted by the existing building and sets the Highway Department up for the next 50 years. The most significant negative aspect of this scheme is the highest cost, but still provides the best value. The outcome of the evaluation matrix assessments supports that this is the preferred scheme, if the cost is acceptable to the Townspeople.

SCHEME 3

Scheme 3 – a new building at existing site and converting the existing facility Cold Storage – is the least desirable option, both from the output of the matrices and from a practical standpoint. While there are some benefits to this concept, there are significant limitations to the scheme, including the negative impact of moving operations to conduct construction, retaining the 'sins of the past' by re-using aspects of the existing building, significant overbuilding and thermal / weatherproofing concerns that will be incurred in the design. At a cost comparable to a new facility in Scheme 2, we recommend the elimination of Scheme 3 as a development option for the Town.

6.2.2 NEXT STEPS

The Feasibility Study phase of the Lansing Highway Department project was successful in helping the Town to determine what the ultimate needs of the facility are, how they might be realized in a site development and building project or how the existing building could be renovated to provide improved conditions, and what budget will be required to provide a facility to suit their needs. The next step is to strategize methods for public engagement to garner support for a project before moving into design. Simultaneously, Bergmann will also work with the Town to determine a 'No' vote project, reflective of the renovations that have to be done to the facility for current operations to suffice without significant long-term improvements. Bergmann is also developing a cost estimate for this condition.



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APPENDIX A – EXISTING DRAWINGS

PLANS FOR HIGHWAY DEPARTMENT GARAGE DATED APRIL 1968

NOT PROVIDED



APPENDIX B – PHOTO APPENDIX

INCLUDED IN FACILITY CONDITIONS ASSESSMENT



APPENDIX C – HIGHWAY ASSET INVENTORY REPORT

NOT PROVIDED



APPENDIX D – CONCEPT SITE AND FLOOR PLAN

SCHEME 1 SITE

SCHEME 1 PLAN

SCHEME 2 SITE

SCHEME 2 PLAN

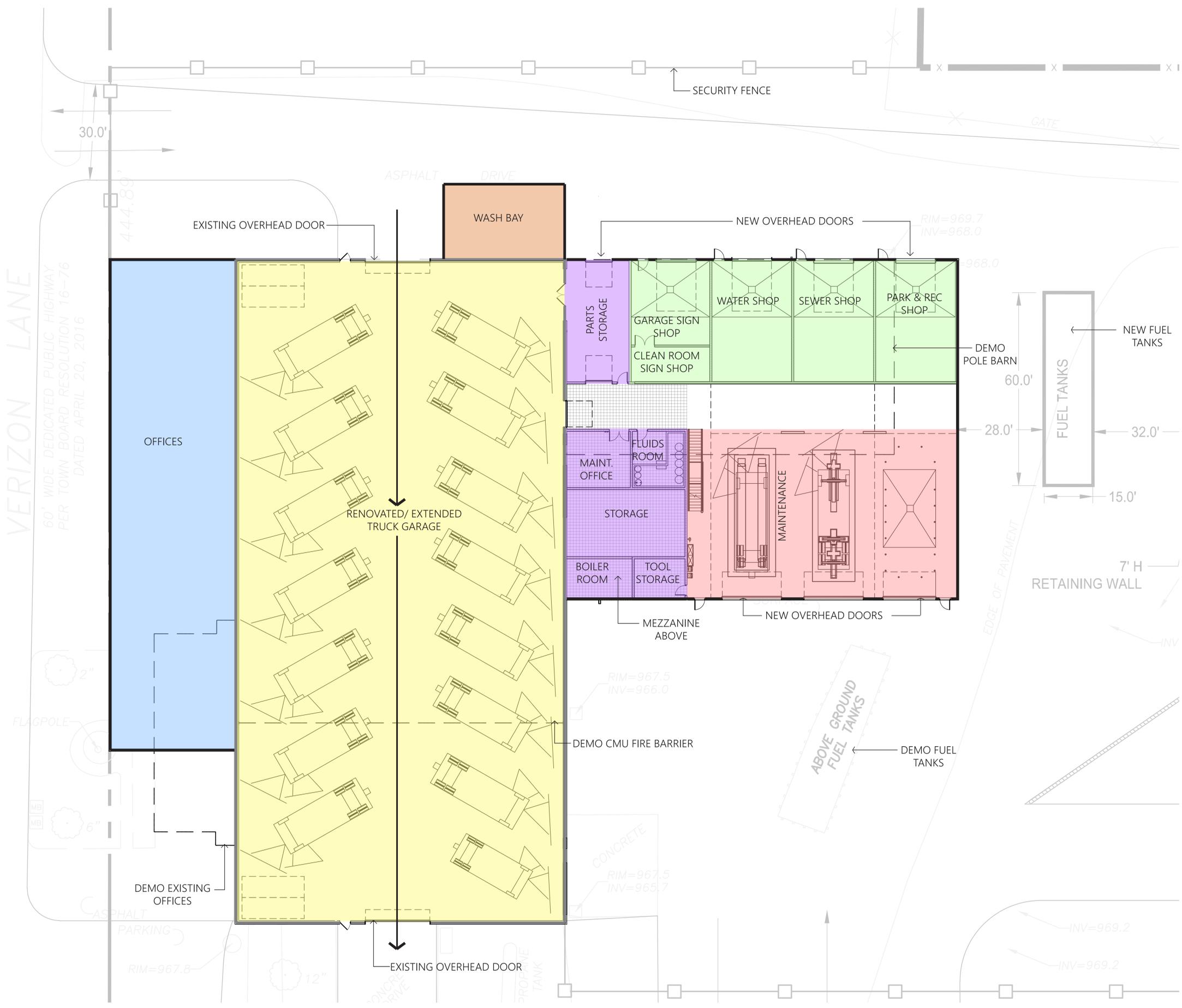
SCHEME 3 SITE

SCHEME 3 PLAN

SCHEME 1 SITE SUMMARY

- RENOVATE EXISTING FACILITY BUILDING
- EXISTING SALT BARN TO REMAIN
- NEW COLD STORAGE
- RELOCATION OF FENCED STORAGE AREA
- NEW FUEL ISLAND
- NEW PARKING LAYOUT





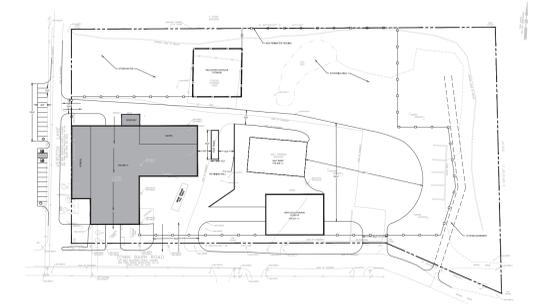
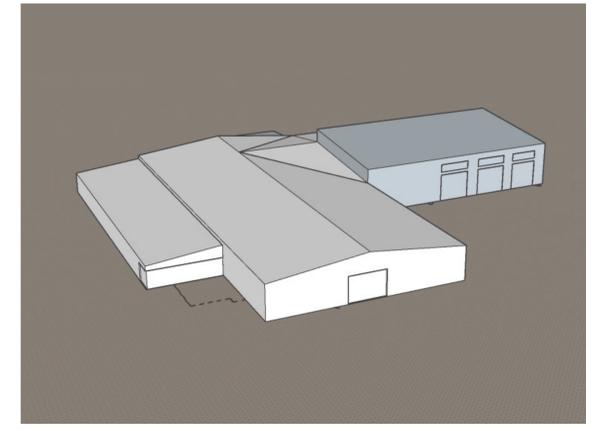
SCHEME 1 SUMMARY

- RENOVATE/EXTEND TRUCK GARAGE
- DEMOLITION OF REST OF BUILDING
- SINGLE STORY ADDITIONS TO EAST AND WEST SIDES OF THE BUILDING

RENOVATED AREAS	
RENOVATED/EXTENDED TRUCK GARAGE	20800
TOTAL	20800

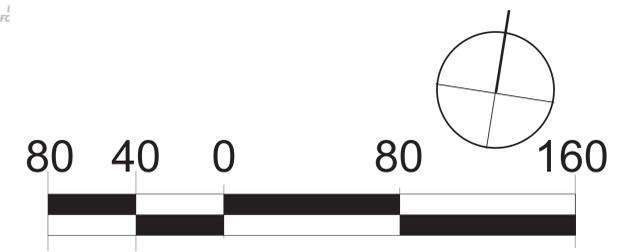
NEW AREAS	
OFFICES	5836
SHOPS	3796
MAINTENANCE	3942
STORAGE	3199
WASH BAY	875
CIRCULATION	1652
TOTAL	19300

RENOVATION + NEW TOTAL	40100
NEW COLD STORAGE	10000
	50100



SCHEME 2 SITE SUMMARY

- NEW FACILITY BUILDING
- CONVERT TRUCK GARAGE TO COLD STORAGE
- EXISTING FENCED STORAGE ARE TO REMAIN
- RELOCATED SALT BARN
- NEW FUEL ISLAND
- NEW PARKING LAYOUT

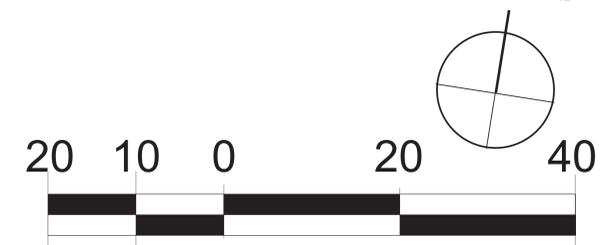
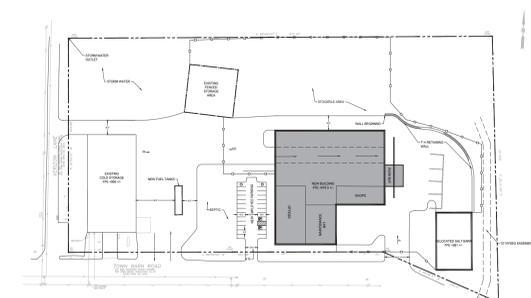
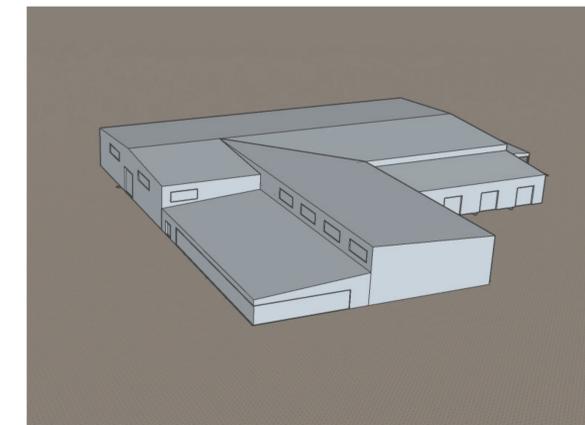


SCHEME 2 SUMMARY

- CONVERT TRUCK GARAGE TO COLD STORAGE
- DEMOLITION OF REST OF BUILDING
- NEW SINGLE STORY OPERATIONS BUILDING

NEW AREAS	
TRUCK GARAGE	26800
OFFICES	5930
SHOPS	3860
MAINTENANCE	4300
STORAGE	3050
WASH BAY	875
CIRCULATION	1700
TOTAL	46515

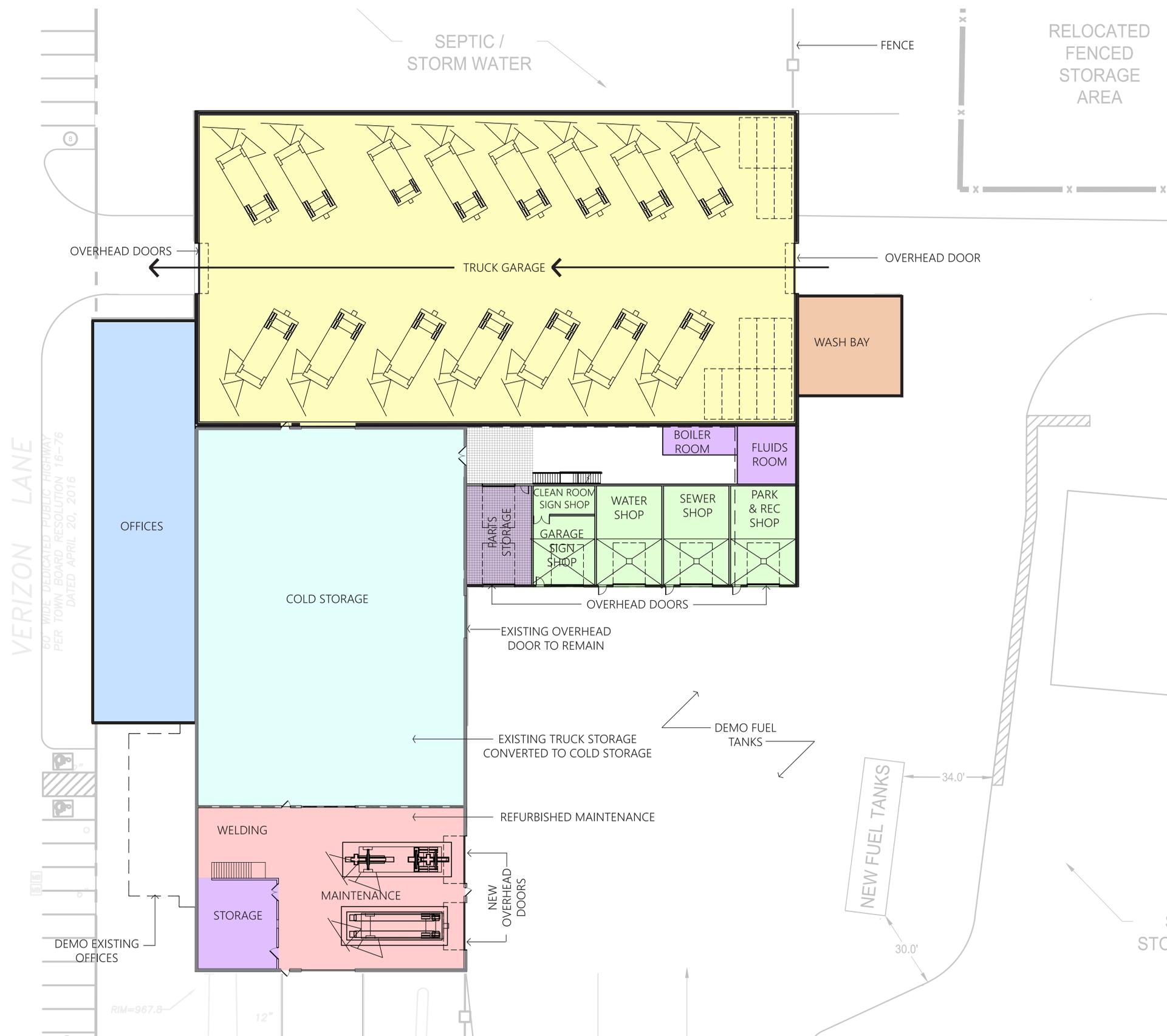
NEW TOTAL	46515
RENOVATED COLD STORAGE	20800
	67315



SCHEME 3 SITE SUMMARY

- RENOVATE EXISTING FACILITY BUILDING
- EXISTING SALT BARN TO REMAIN
- CONVERTED TRUCK GARAGE TO COLD STORAGE
- RELOCATION OF FENCED STORAGE AREA
- NEW FUEL ISLAND
- EXISTING PARKING EXPANDED





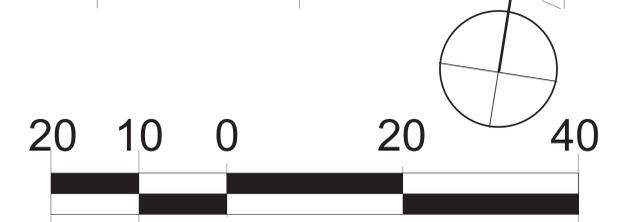
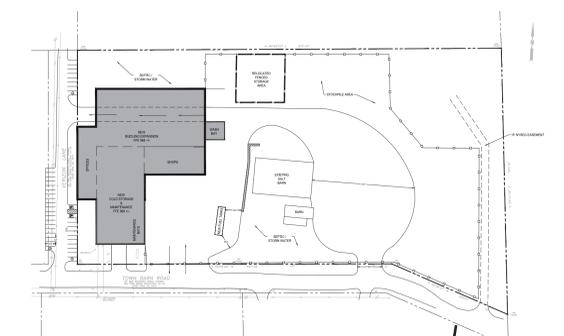
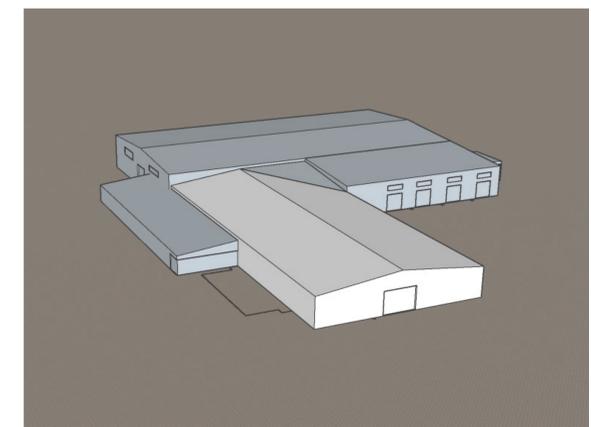
SCHEME 3 SUMMARY

- CONVERT TRUCK GARAGE TO COLD STORAGE
- DEMOLITION OF REST OF BUILDING
- SINGLE STORY ADDITIONS TO NORTH, EAST AND WEST SIDES OF THE BUILDING

RENOVATED AREAS	
COLD STORAGE	14490
REFURBISHED MAINTENANCE	6310
TOTAL	20800

NEW AREAS	
TRUCK GARAGE	26699
OFFICES	5830
SHOPS	3751
STORAGE	1830
WASH BAY	875
CIRCULATION	1890
TOTAL	40875

RENOVATION + NEW TOTAL	
	61675





APPENDIX E – COST ESTIMATES

SCENARIO 1

SCENARIO 2

SCENARIO 3



PROJECT NAME - Town of Lansing Highway Garage

Location: Lansing, NY

Project #:

Date: 6/11/2021

Work Description	Scenario 1			
	Qty.	Unit	Unit Cost	Total
Demolition				
Remove Office Building	1,560	sf	\$5.97	\$9,320
Remove Pole Barn	4,600	sf	\$5.97	\$27,470
Remove Masonry Fire Wall	2,408	sf	\$9.55	\$23,010
Remove Asphalt Paving	101,410	sf	\$2.99	\$302,760
SWPPP Measures				
Install Silt Fence	2,400	lf	\$3.28	\$7,890
Install Inlet Protection	10	ea	\$477.67	\$4,780
Install Stone Entrances	60.00	ton	\$35.83	\$2,150
Weekly Maintenance	20	wks	\$1,194.18	\$23,890
Site Grading				
Strip Topsoil	500	cy	\$4.78	\$2,390
Mass Grading	12,840	cy	\$7.17	\$92,000
Excavate Pond	10,000	cy	\$7.17	\$71,660
Fine Grading	103,903	sf	\$0.30	\$31,020
Export Excess Material	11,675	cy	\$6.00	\$70,050
Import Stone for Building Pad	1,057	ton	\$35.83	\$37,870
Site Utilities				
Storm Sewers	1	ls	\$35,000.00	\$35,000
Stone RIP RAP at Pond	35.00	ton	\$35.83	\$1,260
Sanitary Sewer 8"	1	ls	\$10,000.00	\$10,000
New Fire Main 8"	1	ls	\$15,000.00	\$15,000
Site Paving				
Asphalt Paving HD (12" & 5")	10,846	sy	\$45.38	\$492,170
Asphalt Paving LD (8" & 4")	699	sy	\$38.21	\$26,730
Concrete Curbing	800	lf	\$21.50	\$17,200
Pavement Striping	1	ls	\$2,500.00	\$2,500
Site Concrete				
Sidewalk	1,500	sf	\$9.55	\$14,340
Concrete Retaining Wall	2,216	sf	\$125.00	\$277,000
New Fencing	1,770	lf	\$21.50	\$38,050
Site Electrical				
Conduit for Ground Sign	500	lf	\$35.83	\$17,920
Light Poles	12	ea	\$6,209.76	\$74,520
New Fuel System (2,000 gal diesel & Gas Tanks & 4 pumps)	1	ls	\$274,662.51	\$274,670
Removal & Remediation of Existing Fuel System	1	ls	\$50,000.00	\$50,000
Relocation of Existing Salt Shed	0	sf	\$0.00	\$0
Building Construction				
Renovate Existing Maintenance Garage	26,200	sf	\$22.69	\$594,470
Build New Office Area	5,900	sf	\$185.00	\$1,091,500
Build New Maintenance Area	12,650	sf	\$160.00	\$2,024,000
Storage Mezzanine	2,500	sf	\$42.99	\$107,480
Mezzanine Stairs	1	ea	\$17,912.77	\$17,920
New Cold Storage Building (Pole Barn Type)	10,000	sf	\$47.17	\$471,710
Renovate Truck Bay to Cold Storage	0	sf	\$0.00	\$0
Project Contingencies				
Design & Estimating Contingency	12.00%			\$763,170
Construction Contingency	8.00%			\$508,780
Subtotal of Direct Costs				\$7,631,650
Indirect Costs				
General Conditions & Staff	4.00%			\$305,270.00
General Requirements	1.75%			\$133,560.00
Owner's Soft Costs	0.00%			\$0.00
Permits & Fees	0.15%			\$11,450.00
Insurances				
Builders Risk Ins.	0.80%			\$61,060.00
General Liability Ins.	0.95%			\$72,510.00
Contractor Fee	5.00%			\$410,780.00
TOTAL ESTIMATED COST				\$8,626,280

Scenario 2			
Qty.	Unit	Unit Cost	Total
Demolition			
1,560	sf	\$5.97	\$9,320
4,600	sf	\$5.97	\$27,470
	sf	\$9.55	\$0
101,410	sf	\$2.99	\$302,760
SWPPP Measures			
2,400	lf	\$3.28	\$7,890
10	ea	\$477.67	\$4,780
60	ton	\$35.83	\$2,150
20	wks	\$1,194.18	\$23,890
Site Grading			
800	cy	\$4.78	\$3,830
19,760	cy	\$7.17	\$141,590
10,000	cy	\$7.17	\$71,660
111,490	sf	\$0.30	\$33,290
18,790	cy	\$6.00	\$112,740
2,602	ton	\$35.83	\$93,220
Site Utilities			
1	ls	\$40,000.00	\$40,000
35	ton	\$35.83	\$1,260
1	ls	\$16,000.00	\$16,000
1	ls	\$24,000.00	\$24,000
Site Paving			
11,414	sy	\$45.38	\$517,980
973	sy	\$38.21	\$37,200
800	lf	\$21.50	\$17,200
1	ls	\$2,500.00	\$2,500
Site Concrete			
1,500	sf	\$9.55	\$14,340
3,565	sf	\$125.00	\$445,630
1,220	lf	\$21.50	\$26,230
Site Electrical			
500	lf	\$35.83	\$17,920
12	ea	\$6,209.76	\$74,520
1	ls	\$274,662.51	\$274,670
1	ls	\$50,000.00	\$50,000
1,900	sf	\$33.44	\$63,540
Building Construction			
0	sf	\$0.00	\$0
5,900	sf	\$180.00	\$1,062,000
39,765	sf	\$155.00	\$6,163,580
2,500	sf	\$42.99	\$107,480
1	ea	\$17,912.77	\$17,920
0	sf	\$47.17	\$0
21,500	sf	\$19.11	\$410,800
Project Contingencies			
			\$10,219,360
10.00%			\$1,021,940
5.00%			\$510,970
Subtotal of Direct Costs			\$11,752,270
Indirect Costs			
3.00%			\$352,570.00
1.50%			\$176,290.00
0.00%			\$0.00
0.15%			\$17,630.00
0.80%			\$94,020.00
0.95%			\$111,650.00
4.00%			\$500,180.00
TOTAL ESTIMATED COST			\$13,004,610

Scenario 3			
Qty.	Unit	Unit Cost	Total
Demolition			
1,560	sf	\$5.97	\$9,320
4,600	sf	\$5.97	\$27,470
	sf	\$9.55	\$0
101,410	sf	\$2.99	\$302,760
SWPPP Measures			
2,400	lf	\$3.28	\$7,890
10	ea	\$477.67	\$4,780
60	ton	\$35.83	\$2,150
20	wks	\$1,194.18	\$23,890
Site Grading			
400	cy	\$4.78	\$1,920
6,500	cy	\$7.17	\$46,580
10,000	cy	\$7.17	\$71,660
124,832	sf	\$0.30	\$37,270
5,335	cy	\$6.00	\$32,010
2,285	ton	\$35.83	\$81,860
Site Utilities			
1	ls	\$45,000.00	\$45,000
35	ton	\$35.83	\$1,260
1	ls	\$10,000.00	\$10,000
1	ls	\$15,000.00	\$15,000
Site Paving			
12,992	sy	\$45.38	\$589,590
878	sy	\$38.21	\$33,550
800	lf	\$21.50	\$17,200
1	ls	\$2,500.00	\$2,500
Site Concrete			
1,500	sf	\$9.55	\$14,340
1,790	sf	\$125.00	\$223,750
1,811	lf	\$21.50	\$38,930
Site Electrical			
500	lf	\$35.83	\$17,920
12	ea	\$6,209.76	\$74,520
1	ls	\$274,662.51	\$274,670
1	ls	\$50,000.00	\$50,000
0	sf	\$0.00	\$0
Building Construction			
0	sf	\$0.00	\$0
5,900	sf	\$185.00	\$1,091,500
34,200	sf	\$160.00	\$5,472,000
1,520	sf	\$42.99	\$65,350
1	ea	\$17,912.77	\$17,920
0	sf	\$47.17	\$0
21,500	sf	\$20.90	\$449,320
Project Contingencies			
			\$9,153,880
12.00%			\$1,098,470
8.00%			\$732,320
Subtotal of Direct Costs			\$10,984,670
Indirect Costs			
3.00%			\$329,550.00
1.50%			\$164,780.00
0.00%			\$0.00
0.15%			\$16,480.00
0.80%			\$87,880.00
0.95%			\$104,360.00
4.00%			\$467,510.00
TOTAL ESTIMATED COST			\$12,155,230



APPENDIX F – EVALUATION MATRICES

MATRIX SUMMARY

ED LAVIGNE MATRIX REVIEW

GUY KROGH MATRIX REVIEW

DAVID HERRICK MATRIX REVIEW

MIKE MOSELEY MATRIX REVIEW

CJ RANDALL MATRIX REVIEW



Priority- (1-5) 5 is highest priority.

Ranking- Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking.

Total- Factor of Priority multiplied by the Ranking.

na - Not Applicable

**Lansing Highway Department Renovation
Scheme Evaluation Matrix**

August 2, 2021

Schemes Studied Summary

Evaluation Factor 5 Items

None

Evaluation Factor 1 Items

None

Team Member Scoring Order	Option 1	Option 2	Option 3
Ed LaVigne	2	1	3
Guy Krogh	3	1	2
David Herrick	1	2	3
Mike Moseley	3	1	2
CJ Randall	2	1	3

Option Totals	1279	1652	1216
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Priority- (1-5) 5 is highest priority.
Ranking- Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking.
Total- Factor of Priority multiplied by the Ranking.
na - Not Applicable



**Lansing Highway Department Renovation
 Scheme Evaluation Matrix**
 June 14, 2021

Name: LaVigne

Evaluation Factor		Priority	Schemes Studied (Ratings)								
			Scheme 1 - Renovation and Addition; New Cold Storage building			Scheme 2 - New Facility; Convert Existing To Cold Storage			Scheme 3 - New build at Existing Site; Convert Existing to Cold Storage		
			Scheme Performance	Rank	Total	Scheme Performance	Rank	Total	Scheme Performance	Rank	Total
Example: xxx		2	xxx	2	4						
1	Building Area (SF)	4	Existing SF - 20,800 New SF - 29,300	3	12	Existing SF - 20,800 New SF - 46,515	5	20	Existing SF - 20,800 New SF - 40,875	3	12
2	Storage Area (SF)	4	Storage SF - 1,750 + Mezz Cold Storage SF - 10,000	3	12	Storage SF - 1,750 + Mezz Cold Storage SF - 20,800	5	20	Storage SF - 2,000 + Mezz Cold Storage SF - 14,500	3	12
3	Preparation for Future Growth / Ability to Expand	4	Limited for maintenance and shops; may be limited by stormwater capacity	2	8	Unlimited for truck storage; Limited for maintenance and shops; may be able to expand offices	5	20	Requires renovation, but space is available	2	8
4	All LHD Equipment under cover		Yes		0	Yes		0	TBD; limited cold storage		0
5	Minimize amount of work to be done to existing facility for operation	2	Moderate work - refurbishment for truck storage	2	4	Less work - conversion to cold storage	4	8	Most work - cold storage is embedded within building; Maintenance needs new access and equipment	2	4
6	Minimize amount / difficulty of building demolition	2	Offices, Pole Barn, and interior Fire Barrier	2	4	None needed; Offices and Pole Barn recommended	3	6	Offices, Pole Barn	2	4
7	Avoid "sins of the past"	5	All in refurbished garage	2	10	Very few	5	25	All in maintenance; New construction surrounds existing and is susceptible	2	10
8	Estimated Project Cost	5	\$8,626,280	3	15	\$13,004,610	5	25	\$12,155,230	4	20
9	Minimize amount of Site Grading	2	Moderate	2	4	Significant	3	6	Minor to Moderate	2	4
10	Ease of site circulation (compared to current conditions)	4	Similar, with drive-through truck storage	3	12	Efficient for fuel - park - salt	3	12	Will require two loops for salt	3	12
11	Location on site for public access	3	Near the front of the site	3	9	Near the back of the site	3	9	Near the front of the site	3	9
12	Location on site for adequate separations of functions	3	Max separation of public parking from operations	3	9	Shared entry, but public parking in separated lot	3	9	Public parking along truck exit route	3	9
13	Adequate site area for functions	3	Similar to existing conditions	4	12	Less area for materials storage	3	9	Similar to existing conditions	4	12
14	Minimize Building or Site layout constraints	4	Tight to West property line; tight at fuel island	2	8	Circulation around new facility is tight	5	20	Tight to West property line; Cold storage (existing) embedded within footprint	2	8
15	Re-use of existing septic system	2	Yes	2	4	New	4	8	Yes	2	4
16	Ability to have shared parking with rec fields redesign	1	Yes	1	1	Not of value	1	1	Some	1	1
17	Inclusion of an exterior wash bay	4	Yes	4	16	Yes	4	16	Yes, though circulation limited	2	8
18	Avoid roof challenges that could lead to leaking or snow drift	4	Minor	3	12	Yes	5	20	No	1	4
19	Opportunities for natural light	3	Maybe in maintenance and shops; very limited in truck storage	2	6	Yes	5	15	Yes in truck storage and shops; limited in maintenance	4	12
20	Minimize Operational impact during construction (Risk)	4	Major impact	1	4	Very minor impact	4	16	Major - see phasing	1	4
21	Minimize duration of Construction	4	One longer phase	1	4	Two efficient phases	4	16	Less site work, potentially shorter	2	8
22	Minimize impact of Staging / Phasing of Construction	2	Operations have to be relocated during one construction phase	2	4	Two phases - new construction while fully operational, then demo and conversion to cold storage	2	4	Possible to remain in offices and operate truck storage through maintenance and side door, but very disruptive	3	6
23	Minimize exposure to unforeseen conditions or change orders to remedy spaces for code compliance (Risk)	5	Moderate exposure, as the area of vehicle storage is continuing use	3	15	Minor exposure, other than soils conditions	5	25	Most exposure with renovation of existing maintenance area	1	5
24	Avoid potential delays of renovation work vs. new construction in the current climate (Risk)	5	Moderate risk	3	15	Minor risk	5	25	Significant risk	1	5
25	Avoid relocation of existing site elements	2	Fenced storage, Fuel island	4	8	Salt and soil storage; Fuel island replaced in place	2	4	Fenced storage, Fuel island	2	4
26	Location of Fuel Tanks for Fire Department use	4	Within fenced area, requiring access	4	16	Outside fenced yard	5	20	Within fenced area, requiring access	4	16
27	Limit Amount of fencing	4	Extensive; large yard; 3 gates required	4	16	Less yard area; 2 gates	5	20	Large efficient yard; 2 gates	4	16
28	Unique benefits	3	New cold storage building (soft shell or PEMB)	2	6	All new construction for operations	5	15	Minimized site usage for inclusion of new spaces	2	6
29	Long Term Value	4	Half of the facility is existing (stuff happens to aging structures)	1	4	50+ year life expectancy	5	20	Major spaces new; challenges of tying into existing building	2	8
30					0			0			0
Grand Totals					250			414			231

Clarifications:

1. Building Area includes all spaces for Office, Truck Storage, Maintenance, Shops, Storage, Wash Bay, and Cold Storage. Mezzanine areas not included. Values given in Existing SF (renovation) and New SF (new construction)
2. Storage area is all total storage area except truck storage. Values given in Storage SF (conditioned space) and Cold Storage SF (non-conditioned space)
3. Site grading will require retaining walls in all schemes
4. Base Case Costs do not include temporary move costs related to phasing.
5. For the Risk Factors, consider "If the construction were to delay or cease due to changes or unavailability of materials, for example, how would the Highway Department manage?"



Priority- (1-5) 5 is highest priority.
Ranking- Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking.
Total- Factor of Priority multiplied by the Ranking.
na - Not Applicable



**Lansing Highway Department Renovation
 Scheme Evaluation Matrix**
 June 14, 2021

Name: Guy K. Krogh

Evaluation Factor	Priority	Schemes Studied (Ratings)								
		Scheme 1 - Renovation and Addition; New Cold Storage building			Scheme 2 - New Facility; Convert Existing To Cold Storage			Scheme 3 - New build at Existing Site; Convert Existing to Cold Storage		
		Scheme Performance	Rank	Total	Scheme Performance	Rank	Total	Scheme Performance	Rank	Total
Example: xxx	2	xxx	2	4						
1 Building Area (SF)	4	Existing SF - 20,800 New SF - 29,300	3	12	Existing SF - 20,800 New SF - 46,515	4	16	Existing SF - 20,800 New SF - 40,875	4	16
2 Storage Area (SF)	4	Storage SF - 1,750 + Mezz Cold Storage SF - 10,000	2	8	Storage SF - 1,750 + Mezz Cold Storage SF - 20,800	4	16	Storage SF - 2,000 + Mezz Cold Storage SF - 14,500	3	12
3 Preparation for Future Growth / Ability to Expand	5	Limited for maintenance and shops; may be limited by stormwater capacity	2	10	Unlimited for truck storage; Limited for maintenance and shops; may be able to expand offices	4	20	Requires renovation, but space is available	4	20
4 All LHD Equipment under cover	4	Yes	4	16	Yes	4	16	TBD; limited cold storage	2	8
5 Minimize amount of work to be done to existing facility for operation	2	Moderate work - refurbishment for truck storage	3	6	Less work - conversion to cold storage	5	10	Most work - cold storage is embedded within building; Maintenance needs new access and equipment	2	4
6 Minimize amount / difficulty of building demolition	2	Offices, Pole Barn, and interior Fire Barrier	3	6	None needed; Offices and Pole Barn recommended	4	8	Offices, Pole Barn	3	6
7 Avoid "sins of the past"	4	All in refurbished garage	2	8	Very few	5	20	All in maintenance; New construction surrounds existing and is susceptible	3	12
8 Estimated Project Cost	3	\$8,626,280	4	12	\$13,004,610	3	9	\$12,155,230	3	9
9 Minimize amount of Site Grading	2	Moderate	3	6	Significant	2	4	Minor to Moderate	4	8
10 Ease of site circulation (compared to current conditions)	4	Similar, with drive-through truck storage	2	8	Efficient for fuel - park - salt	4	16	Will require two loops for salt	3	12
11 Location on site for public access	3	Near the front of the site	4	12	Near the back of the site	3	9	Near the front of the site	4	12
12 Location on site for adequate separations of functions	3	Max separation of public parking from operations	4	12	Shared entry, but public parking in separated lot	3	9	Public parking along truck exit route	2	6
13 Adequate site area for functions	4	Similar to existing conditions	3	12	Less area for materials storage	2	8	Similar to existing conditions	3	12
14 Minimize Building or Site layout constraints	3	Tight to West property line; tight at fuel island	2	6	Circulation around new facility is tight	3	9	Tight to West property line; Cold storage (existing) embedded within footprint	3	9
15 Re-use of existing septic system	2	Yes	2	4	New	4	8	Yes	2	4
16 Ability to have shared parking with rec fields redesign	2	Yes	3	6	Not of value	2	4	Some	3	6
17 Inclusion of an exterior wash bay	3	Yes	3	9	Yes	3	9	Yes, though circulation limited	3	9
18 Avoid roof challenges that could lead to leaking or snow drift	4	Minor	3	12	Yes	5	20	No	2	8
19 Opportunities for natural light	3	Maybe in maintenance and shops; very limited in truck storage	2	6	Yes	4	12	Yes in truck storage and shops; limited in maintenance	3	9
20 Minimize Operational impact during construction (Risk)	3	Major impact	2	6	Very minor impact	3	9	Major - see phasing	2	6
21 Minimize duration of Construction	2	One longer phase	3	6	Two efficient phases	3	6	Less site work, potentially shorter	4	8
22 Minimize impact of Staging / Phasing of Construction	2	Operations have to be relocated during one construction phase	2	4	Two phases - new construction while fully operational, then demo and conversion to cold storage	3	6	Possible to remain in offices and operate truck storage through maintenance and side door, but very disruptive	3	6
23 Minimize exposure to unforeseen conditions or change orders to remedy spaces for code compliance (Risk)	2	Moderate exposure, as the area of vehicle storage is continuing use	3	6	Minor exposure, other than soils conditions	3	6	Most exposure with renovation of existing maintenance area	2	4
24 Avoid potential delays of renovation work vs. new construction in the current climate (Risk)	3	Moderate risk	3	9	Minor risk	4	12	Significant risk	2	6
25 Avoid relocation of existing site elements	2	Fenced storage, Fuel island	3	6	Salt and soil storage; Fuel island replaced in place	2	4	Fenced storage, Fuel island	3	6
26 Location of Fuel Tanks for Fire Department use	4	Within fenced area, requiring access	3	12	Outside fenced yard	3	12	Within fenced area, requiring access	3	12
27 Limit Amount of fencing	2	Extensive; large yard; 3 gates required	2	4	Less yard area; 2 gates	3	6	Large efficient yard; 2 gates	4	8
28 Unique benefits	3	New cold storage building (soft shell or PEMB)	3	9	All new construction for operations	4	12	Minimized site usage for inclusion of new spaces	3	9
29 Long Term Value	5	Half of the facility is existing (stuff happens to aging structures)	2	10	50+ year life expectancy	4	20	Major spaces new; challenges of tying into existing building	3	15
30 Not sure evaluation by legal counsel		is as relevant as input from		0	highway and those who will		0	vote and 'fund' this project		0
Grand Totals				243			316			262

Clarifications:

1. Building Area includes all spaces for Office, Truck Storage, Maintenance, Shops, Storage, Wash Bay, and Cold Storage. Mezzanine areas not included. Values given in Existing SF (renovation) and New SF (new construction)
2. Storage area is all total storage area except truck storage. Values given in Storage SF (conditioned space) and Cold Storage SF (non-conditioned space)
3. Site grading will require retaining walls in all schemes
4. Base Case Costs do not include temporary move costs related to phasing.
5. For the Risk Factors, consider "If the construction were to delay or cease due to changes or unavailability of materials, for example, how would the Highway Department manage?"



Priority- (1-5) 5 is highest priority.
Ranking- Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking.
Total- Factor of Priority multiplied by the Ranking.
na - Not Applicable



Lansing Highway Department Renovation Scheme Evaluation Matrix
 June 14, 2021

Name: Herrick

Evaluation Factor		Priority	Schemes Studied (Ratings)								
			Scheme 1 - Renovation and Addition; New Cold Storage building			Scheme 2 - New Facility; Convert Existing To Cold Storage			Scheme 3 - New build at Existing Site; Convert Existing to Cold Storage		
			Scheme Performance	Rank	Total	Scheme Performance	Rank	Total	Scheme Performance	Rank	Total
Example: xxx		2	xxx	2	4						
1	Building Area (SF)	4	Existing SF - 20,800 New SF - 29,300	2	8	Existing SF - 20,800 New SF - 46,515	3	12	Existing SF - 20,800 New SF - 40,875	4	16
2	Storage Area (SF)	4	Storage SF - 1,750 + Mezz Cold Storage SF - 10,000	2	8	Storage SF - 1,750 + Mezz Cold Storage SF - 20,800	4	16	Storage SF - 2,000 + Mezz Cold Storage SF - 14,500	3	12
3	Preparation for Future Growth / Ability to Expand	2	Limited for maintenance and shops; may be limited by stormwater capacity	2	4	Unlimited for truck storage; Limited for maintenance and shops; may be able to expand offices	4	8	Requires renovation, but space is available	3	6
4	All LHD Equipment under cover	4	Yes	3	12	Yes	3	12	TBD; limited cold storage	3	12
5	Minimize amount of work to be done to existing facility for operation	3	Moderate work - refurbishment for truck storage	3	9	Less work - conversion to cold storage	4	12	Most work - cold storage is embedded within building; Maintenance needs new access and equipment	2	6
6	Minimize amount / difficulty of building demolition	3	Offices, Pole Barn, and interior Fire Barrier	2	6	None needed; Offices and Pole Barn recommended	4	12	Offices, Pole Barn	3	9
7	Avoid "sins of the past"	2	All in refurbished garage	3	6	Very few	4	8	All in maintenance; New construction surrounds existing and is susceptible	2	4
8	Estimated Project Cost	5	\$8,626,280	4	20	\$13,004,610	2	10	\$12,155,230	3	15
9	Minimize amount of Site Grading	4	Moderate	4	16	Significant	2	8	Minor to Moderate	3	12
10	Ease of site circulation (compared to current conditions)	3	Similar, with drive-through truck storage	3	9	Efficient for fuel - park - salt	4	12	Will require two loops for salt	2	6
11	Location on site for public access	3	Near the front of the site	4	12	Near the back of the site	2	6	Near the front of the site	3	9
12	Location on site for adequate separations of functions	4	Max separation of public parking from operations	4	16	Shared entry, but public parking in separated lot	3	12	Public parking along truck exit route	2	8
13	Adequate site area for functions	4	Similar to existing conditions	4	16	Less area for materials storage	2	8	Similar to existing conditions	4	16
14	Minimize Building or Site layout constraints	3	Tight to West property line; tight at fuel island	4	12	Circulation around new facility is tight	3	9	Tight to West property line; Cold storage (existing) embedded within footprint	2	6
15	Re-use of existing septic system	1	Yes	3	3	New	3	3	Yes	3	3
16	Ability to have shared parking with rec fields redesign	3	Yes	4	12	Not of value	2	6	Some	3	9
17	Inclusion of an exterior wash bay	3	Yes	3	9	Yes	3	9	Yes, though circulation limited	2	6
18	Avoid roof challenges that could lead to leaking or snow drift	3	Minor	3	9	Yes	4	12	No	2	6
19	Opportunities for natural light	2	Maybe in maintenance and shops; very limited in truck storage	3	6	Yes	4	8	Yes in truck storage and shops; limited in maintenance	2	4
20	Minimize Operational impact during construction (Risk)	3	Major impact	3	9	Very minor impact	4	12	Major - see phasing	2	6
21	Minimize duration of Construction	3	One longer phase	2	6	Two efficient phases	4	12	Less site work, potentially shorter	3	9
22	Minimize impact of Staging / Phasing of Construction	2	Operations have to be relocated during one construction phase	2	4	Two phases - new construction while fully operational, then demo and conversion to cold storage	3	6	Possible to remain in offices and operate truck storage through maintenance and side door, but very disruptive	4	8
23	Minimize exposure to unforeseen conditions or change orders to remedy spaces for code compliance (Risk)	3	Moderate exposure, as the area of vehicle storage is continuing use	3	9	Minor exposure, other than soils conditions	4	12	Most exposure with renovation of existing maintenance area	2	6
24	Avoid potential delays of renovation work vs. new construction in the current climate (Risk)	3	Moderate risk	3	9	Minor risk	4	12	Significant risk	2	6
25	Avoid relocation of existing site elements	4	Fenced storage, Fuel island	4	16	Salt and soil storage; Fuel island replaced in place	2	8	Fenced storage, Fuel island	3	12
26	Location of Fuel Tanks for Fire Department use	3	Within fenced area, requiring access	4	12	Outside fenced yard	2	6	Within fenced area, requiring access	3	9
27	Limit Amount of fencing	3	Extensive; large yard; 3 gates required	3	9	Less yard area; 2 gates	2	6	Large efficient yard; 2 gates	4	12
28	Unique benefits	3	New cold storage building (soft shell or PEMB)	3	9	All new construction for operations	4	12	Minimized site usage for inclusion of new spaces	2	6
29	Long Term Value	3	Half of the facility is existing (stuff happens to aging structures)	3	9	50+ year life expectancy	4	12	Major spaces new; challenges of tying into existing building	2	6
30					0			0			0
Grand Totals					285			281			245

Clarifications:

1. Building Area includes all spaces for Office, Truck Storage, Maintenance, Shops, Storage, Wash Bay, and Cold Storage. Mezzanine areas not included. Values given in Existing SF (renovation) and New SF (new construction)
2. Storage area is all total storage area except truck storage. Values given in Storage SF (conditioned space) and Cold Storage SF (non-conditioned space)
3. Site grading will require retaining walls in all schemes
4. Base Case Costs do not include temporary move costs related to phasing.
5. For the Risk Factors, consider "If the construction were to delay or cease due to changes or unavailability of materials, for example, how would the Highway Department manage?"



Priority- (1-5) 5 is highest priority.
Ranking- Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking.
Total- Factor of Priority multiplied by the Ranking.
na - Not Applicable



**Lansing Highway Department Renovation
 Scheme Evaluation Matrix**
 June 14, 2021

Name: Moseley

Evaluation Factor	Priority	Schemes Studied (Ratings)								
		Scheme 1 - Renovation and Addition; New Cold Storage building			Scheme 2 - New Facility; Convert Existing To Cold Storage			Scheme 3 - New build at Existing Site; Convert Existing to Cold Storage		
		Scheme Performance	Rank	Total	Scheme Performance	Rank	Total	Scheme Performance	Rank	Total
Example: xxx	2	xxx	2	4						
1 Building Area (SF)	5	Existing SF - 20,800 New SF - 29,300	2	10	Existing SF - 20,800 New SF - 46,515	5	25	Existing SF - 20,800 New SF - 40,875	3	15
2 Storage Area (SF)	5	Storage SF - 1,750 + Mezz Cold Storage SF - 10,000	2	10	Storage SF - 1,750 + Mezz Cold Storage SF - 20,800	5	25	Storage SF - 2,000 + Mezz Cold Storage SF - 14,500	3	15
3 Preparation for Future Growth / Ability to Expand	2	Limited for maintenance and shops; may be limited by stormwater capacity	1	2	Unlimited for truck storage; Limited for maintenance and shops; may be able to expand offices	3	6	Requires renovation, but space is available	5	10
4 All LHD Equipment under cover	5	Yes	5	25	Yes	5	25	TBD; limited cold storage	2	10
5 Minimize amount of work to be done to existing facility for operation	3	Moderate work - refurbishment for truck storage	1	3	Less work - conversion to cold storage	3	9	Most work - cold storage is embedded within building; Maintenance needs new access and equipment	5	15
6 Minimize amount / difficulty of building demolition	3	Offices, Pole Barn, and interior Fire Barrier	2	6	None needed; Offices and Pole Barn recommended	5	15	Offices, Pole Barn	3	9
7 Avoid "sins of the past"	5	All in refurbished garage	3	15	Very few	4	20	All in maintenance; New construction surrounds existing and is susceptible	2	10
8 Estimated Project Cost	3	\$8,626,280	4	12	\$13,004,610	2	6	\$12,155,230	2	6
9 Minimize amount of Site Grading	2	Moderate	3	6	Significant	1	2	Minor to Moderate	2	4
10 Ease of site circulation (compared to current conditions)	4	Similar, with drive-through truck storage	3	12	Efficient for fuel - park - salt	5	20	Will require two loops for salt	1	4
11 Location on site for public access	2	Near the front of the site	3	6	Near the back of the site	3	6	Near the front of the site	3	6
12 Location on site for adequate separations of functions	2	Max separation of public parking from operations	3	6	Shared entry, but public parking in separated lot	3	6	Public parking along truck exit route	3	6
13 Adequate site area for functions	3	Similar to existing conditions	3	9	Less area for materials storage	2	6	Similar to existing conditions	3	9
14 Minimize Building or Site layout constraints	3	Tight to West property line; tight at fuel island	3	9	Circulation around new facility is tight	3	9	Tight to West property line; Cold storage (existing) embedded within footprint	3	9
15 Re-use of existing septic system	1	Yes	3	3	New	4	4	Yes	3	3
16 Ability to have shared parking with rec fields redesign	1	Yes	1	1	Not of value	1	1	Some	1	1
17 Inclusion of an exterior wash bay	4	Yes	4	16	Yes	4	16	Yes, though circulation limited	3	12
18 Avoid roof challenges that could lead to leaking or snow drift	5	Minor	3	15	Yes	4	20	No	2	10
19 Opportunities for natural light	4	Maybe in maintenance and shops; very limited in truck storage	2	8	Yes	4	16	Yes in truck storage and shops; limited in maintenance	3	12
20 Minimize Operational impact during construction (Risk)	5	Major impact	1	5	Very minor impact	5	25	Major - see phasing	1	5
21 Minimize duration of Construction	5	One longer phase	2	10	Two efficient phases	3	15	Less site work, potentially shorter	4	20
22 Minimize impact of Staging / Phasing of Construction	5	Operations have to be relocated during one construction phase	1	5	Two phases - new construction while fully operational, then demo and conversion to cold storage	5	25	Possible to remain in offices and operate truck storage through maintenance and side door, but very disruptive	3	15
23 Minimize exposure to unforeseen conditions or change orders to remedy spaces for code compliance (Risk)	5	Moderate exposure, as the area of vehicle storage is continuing use	3	15	Minor exposure, other than soils conditions	5	25	Most exposure with renovation of existing maintenance area	1	5
24 Avoid potential delays of renovation work vs. new construction in the current climate (Risk)	5	Moderate risk	3	15	Minor risk	5	25	Significant risk	1	5
25 Avoid relocation of existing site elements	1	Fenced storage, Fuel island	3	3	Salt and soil storage; Fuel island replaced in place	3	3	Fenced storage, Fuel island	3	3
26 Location of Fuel Tanks for Fire Department use	1	Within fenced area, requiring access	3	3	Outside fenced yard	3	3	Within fenced area, requiring access	3	3
27 Limit Amount of fencing	3	Extensive; large yard; 3 gates required	1	3	Less yard area; 2 gates	3	9	Large efficient yard; 2 gates	4	12
28 Unique benefits	2	New cold storage building (soft shell or PEMB)	4	8	All new construction for operations	4	8	Minimized site usage for inclusion of new spaces	3	6
29 Long Term Value	5	Half of the facility is existing (stuff happens to aging structures)	2	10	50+ year life expectancy	5	25	Major spaces new; challenges of tying into existing building	2	10
30				0			0			0
Grand Totals				251			400			250

Clarifications:

- Building Area includes all spaces for Office, Truck Storage, Maintenance, Shops, Storage, Wash Bay, and Cold Storage. Mezzanine areas not included. Values given in Existing SF (renovation) and New SF (new construction)
- Storage area is all total storage area except truck storage. Values given in Storage SF (conditioned space) and Cold Storage SF (non-conditioned space)
- Site grading will require retaining walls in all schemes
- Base Case Costs do not include temporary move costs related to phasing.
- For the Risk Factors, consider "If the construction were to delay or cease due to changes or unavailability of materials, for example, how would the Highway Department manage?"



Priority- (1-5) 5 is highest priority.
Ranking- Individuals/ Groups ranking of criteria. (1-5). 5 is highest ranking.
Total- Factor of Priority multiplied by the Ranking.
na - Not Applicable



Lansing Highway Department Renovation Scheme Evaluation Matrix
 June 14, 2021

Name: C.J. Randall

Evaluation Factor		Priority	Schemes Studied (Ratings)								
			Scheme 1 - Renovation and Addition; New Cold Storage building			Scheme 2 - New Facility; Convert Existing To Cold Storage			Scheme 3 - New build at Existing Site; Convert Existing to Cold Storage		
			Scheme Performance	Rank	Total	Scheme Performance	Rank	Total	Scheme Performance	Rank	Total
Example: xxx		2	xxx	2	4						
1	Building Area (SF)	4	Existing SF - 20,800 New SF - 29,300	2	8	Existing SF - 20,800 New SF - 46,515	4	16	Existing SF - 20,800 New SF - 40,875	3	12
2	Storage Area (SF)	2	Storage SF - 1,750 + Mezz Cold Storage SF - 10,000	2	4	Storage SF - 1,750 + Mezz Cold Storage SF - 20,800	5	10	Storage SF - 2,000 + Mezz Cold Storage SF - 14,500	4	8
3	Preparation for Future Growth / Ability to Expand	5	Limited for maintenance and shops; may be limited by stormwater capacity	2	10	Unlimited for truck storage; Limited for maintenance and shops; may be able to expand offices	5	25	Requires renovation, but space is available	3	15
4	All LHD Equipment under cover	4	Yes	3	12	Yes	5	20	TBD; limited cold storage	4	16
5	Minimize amount of work to be done to existing facility for operation	1	Moderate - refurbishment for truck storage	2	2	Less - conversion to cold storage	3	3	Most - cold storage is embedded within building; Maintenance needs new access and equipment	1	1
6	Minimize amount / difficulty of building demolition	3	Offices, Pole Barn, and interior Fire Barrier	3	9	None needed; Offices and Pole Barn recommended	3	9	Offices, Pole Barn	3	9
7	Avoid "sins of the past"	5	All in refurbished garage	2	10	Very few	5	25	All in maintenance; New construction surrounds existing and is susceptible	1	5
8	Estimated Project Cost	5	\$8,626,280	4	20	\$13,004,610	1	5	\$12,155,230	1	5
9	Minimize amount of Site Grading	3	Moderate	3	9	Significant	1	3	Minor to Moderate	4	12
10	Ease of site circulation (compared to current conditions)	3	Similar, with drive-through truck storage	3	9	Efficient for fuel - park - salt	4	12	Will require two loops for salt	2	6
11	Location on site for public access	4	Near the front of the site	4	16	Near the back of the site	2	8	Near the front of the site	4	16
12	Location on site for adequate separation of functions	3	Max separation of public parking from operations	4	12	Shared entry, but public parking in separated lot	3	9	Public parking along truck exit route	1	3
13	Adequate site area for functions	4	Similar to existing conditions	4	16	Less area for materials storage	2	8	Similar to existing conditions	4	16
14	Minimize Building or Site layout constraints	2	Tight to West property line; tight at fuel island	3	6	Circulation around new facility is tight	2	4	Tight to West property line; Cold storage (existing) embedded within footprint	1	2
15	Re-use of existing septic system	1	Yes	2	2	New	4	4	Yes	2	2
16	Ability to have shared parking with rec fields redesign	2	Yes	4	8	Not of value	1	2	Some	5	10
17	Inclusion of an exterior wash bay	2	Yes	4	8	Yes	4	8	Yes, though circulation limited	3	6
18	Avoid roof challenges that could lead to leaking or snow drift	4	Minor	3	12	Yes	4	16	No	2	8
19	Opportunities for natural light	3	Maybe in maintenance and shops; very limited in truck storage	2	6	Yes	4	12	Yes in truck storage and shops; limited in maintenance	4	12
20	Minimize Operational impact during construction (Risk)	5	Major impact	1	5	Very minor impact	4	20	Major - see phasing	1	5
21	Minimize duration of Construction	4	One longer phase	2	8	Two efficient phases	3	12	Less site work, potentially shorter	2	8
22	Minimize impact of Staging / Phasing of Construction	3	Operations have to be relocated during one construction phase	1	3	Two phases - new construction while fully operational, then demo and conversion to cold storage	2	6	Possible to remain in offices and operate truck storage through maintenance and side door, but very disruptive	2	6
23	Minimize exposure to unforeseen conditions or change orders to remedy spaces for code compliance (Risk)	5	Moderate, as the area of vehicle storage is continuing use	3	15	Minor, other than soils conditions	4	20	Most with renovation of existing maintenance area	1	5
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28	Unique benefits	1	New cold storage building (soft shell or PEMB)	4	4	All new construction for operations	1	1	Minimized site usage for inclusion of new spaces	4	4
29	Long Term Value	5	Half of the facility is existing (stuff happens to aging structures)	3	15	50+ year life expectancy	5	25	Major spaces new; challenges of tying into existing building	3	15
30					0			0			0
Grand Totals					250			314			228

Clarifications:

1. Building Area includes all spaces for Office, Truck Storage, Maintenance, Shops, Storage, Wash Bay, and Cold Storage. Mezzanine areas not included. Values given in Existing SF (renovation) and New SF (new construction)
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4. Base Case Costs do not include temporary move costs related to phasing.
5. For the Risk Factors, consider "If the construction were to delay or cease due to changes or unavailability of materials, for example, how would the Highway Department manage?"



APPENDIX G – ENVIRONMENTAL RADIUS REPORT (SITE 3)

NOT PROVIDED



APPENDIX H – ASBESTOS, LEAD-BASED PAINT, AND PCB CAULK SURVEY

INCLUDED IN FACILITY CONDITIONS ASSESSMENT