Further Options for Additional Public Parking in Uptown

City Council Regular Agenda
February 25, 2020

North Forest – original Option A and B footprint options

Option A

3 level – 272 spaces

Option B

3 level – 393 spaces

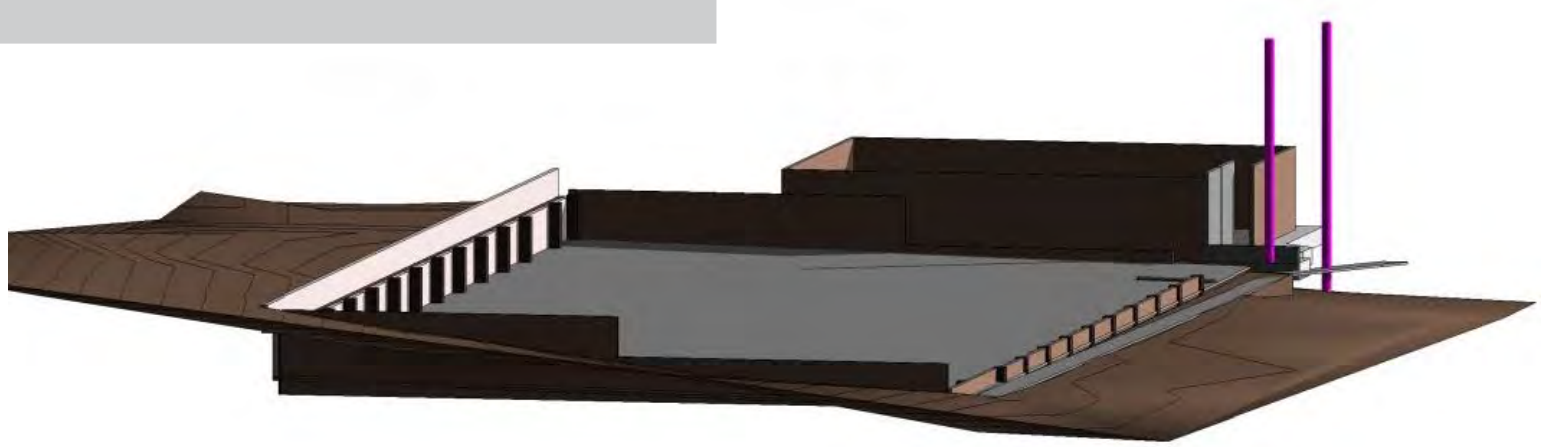
North Forest Site Options
Surface Lot Options

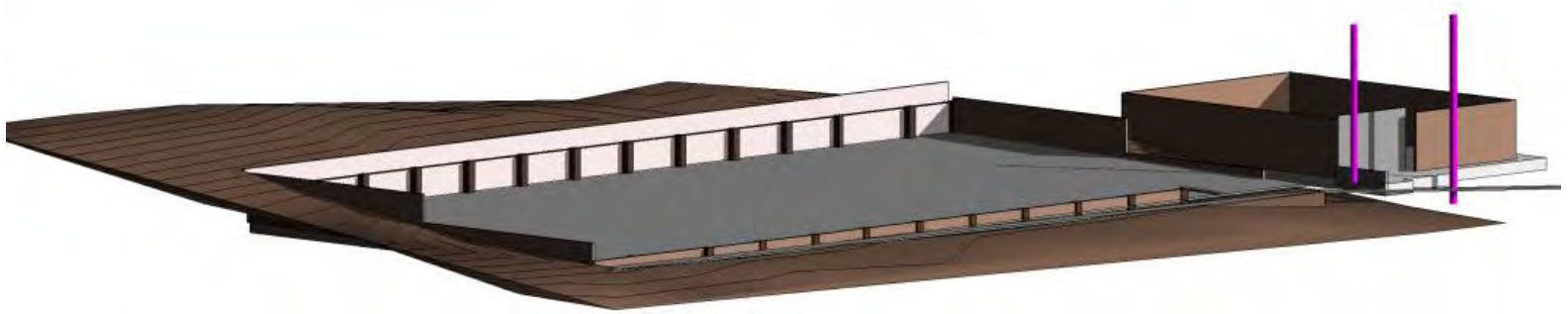
Surface Lot – Option 1 (2% Sloped)

Metrics	
Degree of Slope	2%
Excavation Cubic Yard	7,178 cy
Retaining Wall Height	13 ft
Total Lot Square Footage	32,500 SF
Total Space Count	99 spaces

Surface Lot – Option 1 (2% Sloped)

Advantages	Disadvantages
• Preferred user experience due to almost flat surface for parking and walking	• Double the excavation cost than sloped



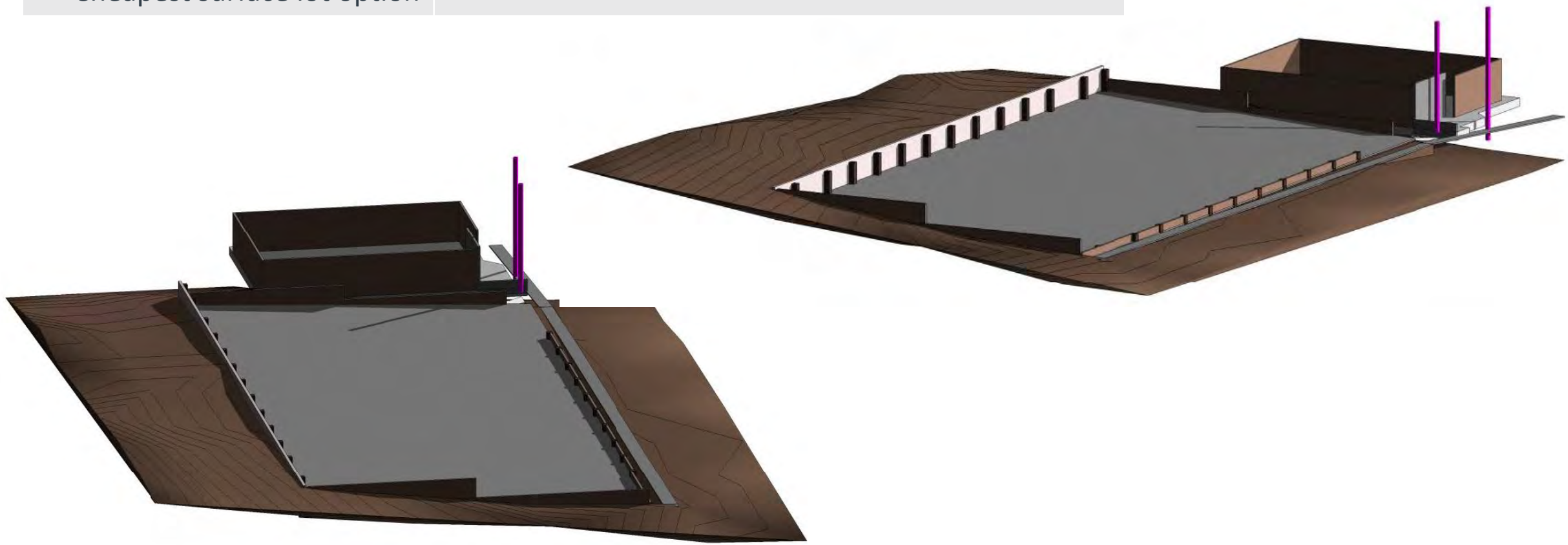


Surface Lot – Option 2 (5% Sloped)

Metrics	
Degree of Slope	5%
Excavation Cubic Yard	4,943 cy
Retaining Wall Height	8 ft
Total Lot Square Footage	32,500 SF
Total Space Count	99 spaces

Surface Lot – Option 2 (5% Sloped)

Advantages	Disadvantages
• Lowest excavation cost	• Less desirable user experience due to parking on slope and walking on sloped surface
• Cheapest surface lot option	




Approx 6%
Uptown Municipal Lot


Approx 3.6%
Jordan Parking Lot

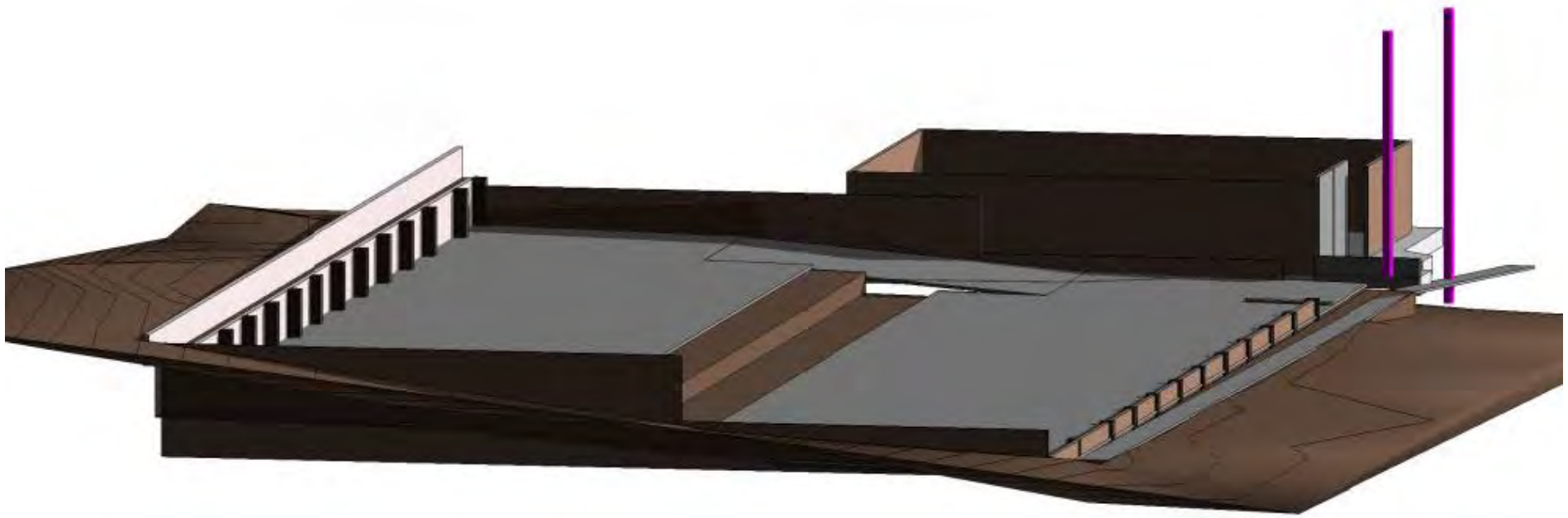

Approx 2%

Surface Lot – Option 3 (Tiered)

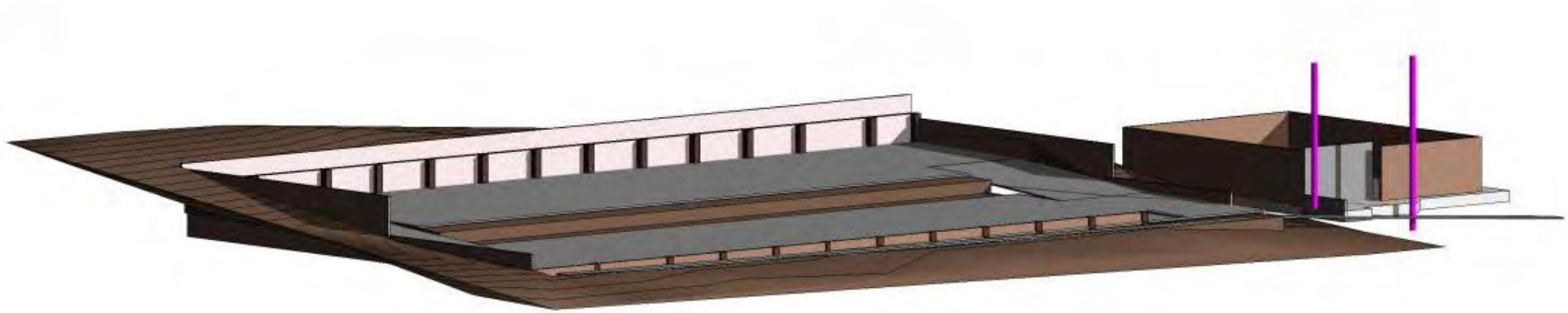
Metrics	
Degree of Slope	2%
Excavation Cubic Yard	7,587 cy
Retaining Wall Height	13 ft
Total Lot Square Footage	38,106 SF
Total Space Count	98 spaces

Surface Lot – Option 3 (Tiered)

Advantages	Disadvantages
• Almost flat surface for parking	• Highest excavation cost
	• Most expensive surface lot option



Surface Lot – Option 3 (Tiered)



Transitioning to Garage from Surface Lot

Two options to develop a surface lot for vertical expansion:

1. Provide no additional elements to the surface lot.
    - Only requirement is to make sure geometry can accommodate future parking levels
    - No additional foundations or sizing of the underground infrastructure
    - No additional design fees
    - Foundations and underground utilities added at a later date
    - Surface lot material only need to be minimal to meet City Code
    - Entire lot excavated when construction of the garage starts
    - No cost for future vertical expansion

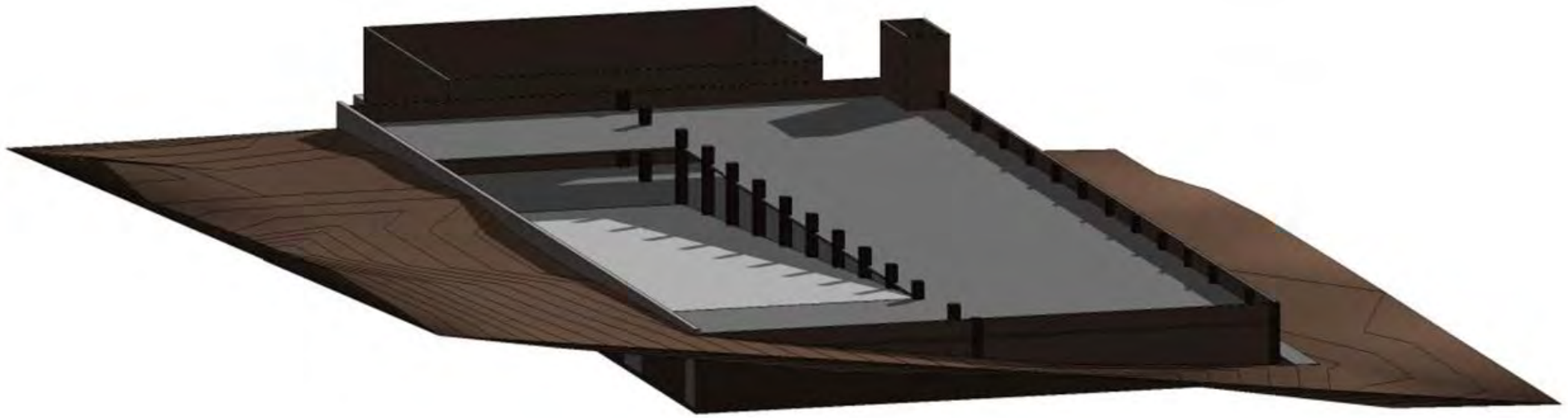
2. Design and construct foundations and underground utilities when designing surface lot:
    - The design of the parking structure would need to be developed to a point where the contractor can build the foundation
    - All design disciplines would need to be engaged through 50% construction documents in order have all design elements in place such as column locations, grade beams, underground storm, sewer, water and electrical connections.
    - The architect of record, structural engineer, MEP engineer, and civil engineer would need to be engaged for a foundation package and throughout the construction of the lot.
    - All of these elements would be installed during the construction of the lot.
    - The final ground level design, with the exception of the ramp bay, would only require minimal work to perform the vertical expansion.
    - Knock-out locations in the concrete slab would be provided to allow for less intrusive demolition.
    - Less expensive to install foundation and utilities now than in the future.
    - Approximately $800,000 - $1.2M for future vertical expansion

Garage Options

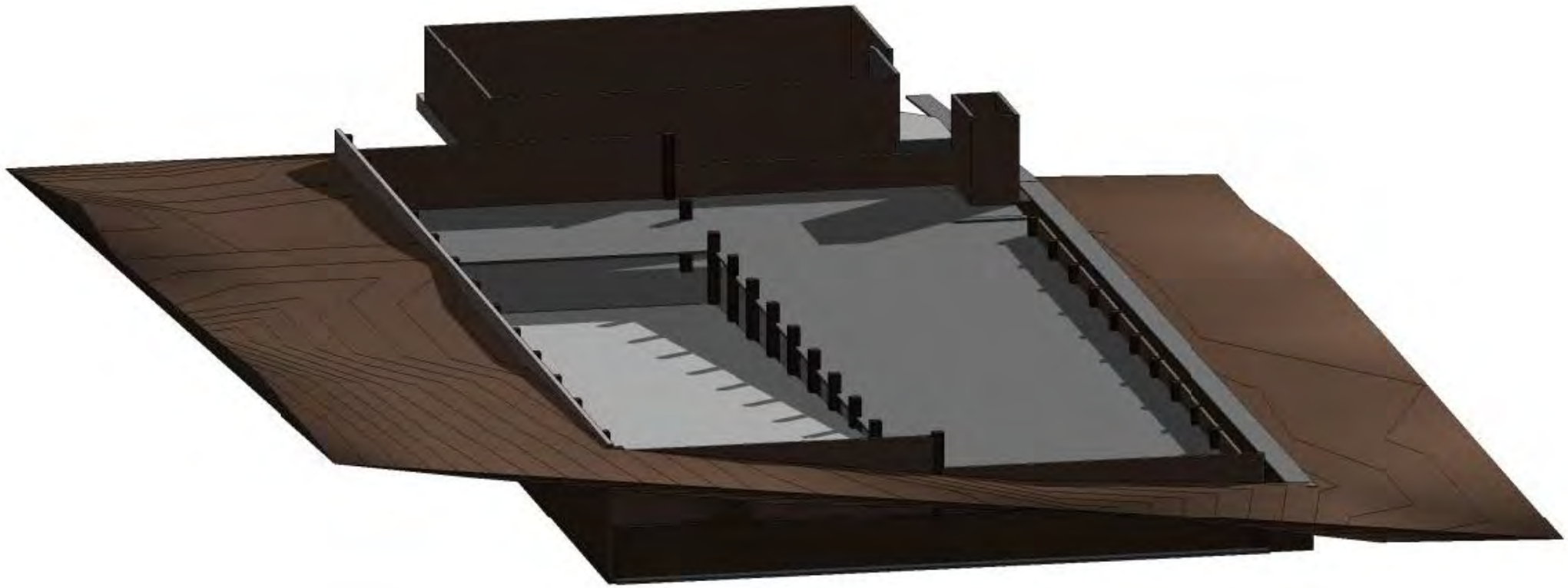
Garage – Option 1 (Two-Deck, One Story)

Metrics	
Excavation Cubic Yard	9,944 cy
Retaining Wall Height	16 ft
Total Space Count	162 spaces

Garage – Option 1 (Two-Deck, One Story)

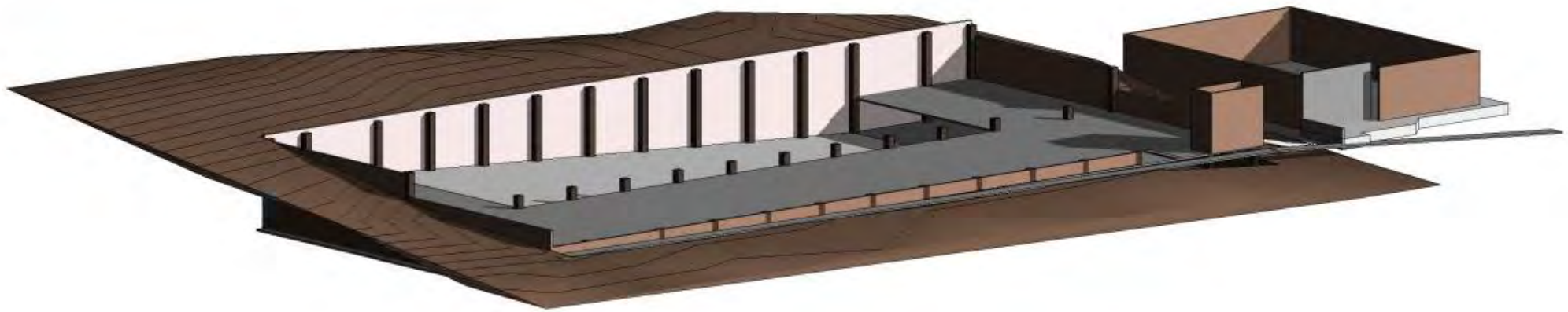


Garage – Option 2 (Two-Decks With One Level Subgrade)

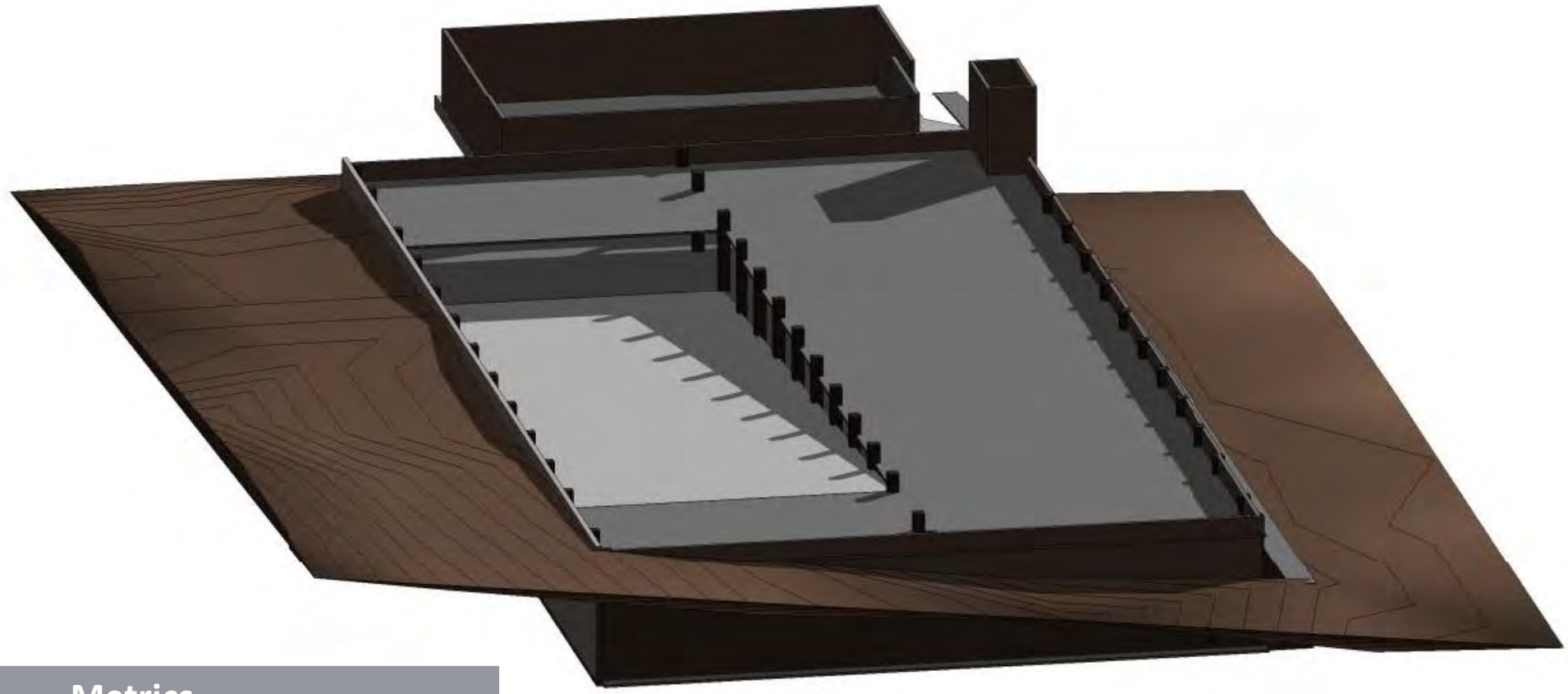


Metrics	
Excavation Cubic Yard	22,556 cy
Retaining Wall Height	26 ft
Total Space Count	162 spaces

Garage – Option 2 (Two-Level With One Level Subgrade)

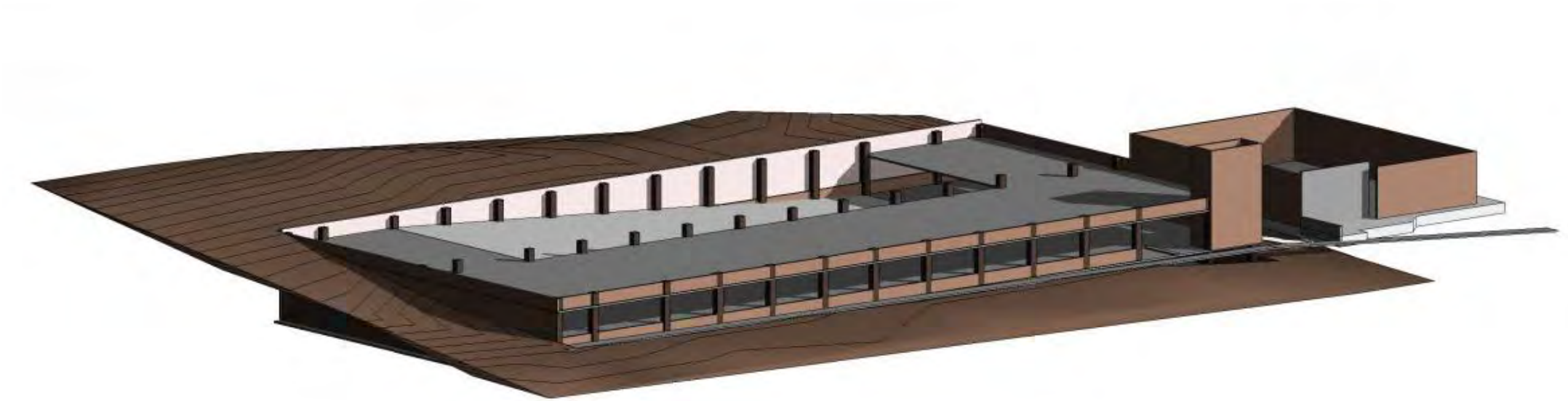


Garage – Option 3 (Three-Deck With One Level Subgrade)

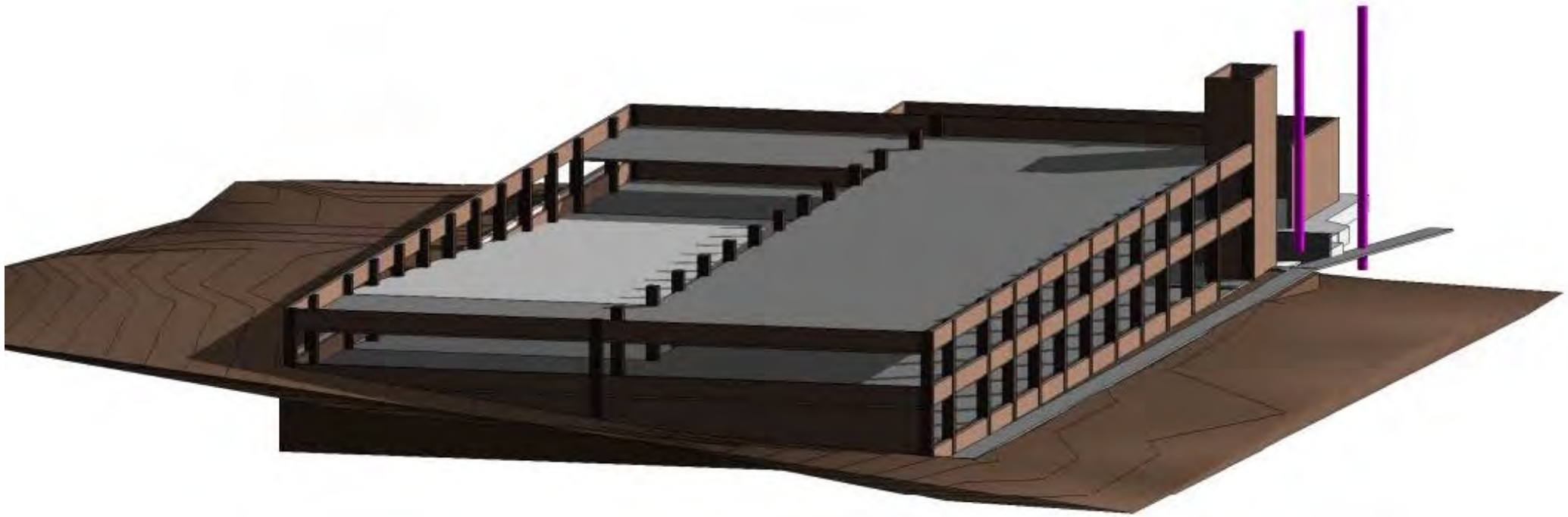


Metrics	
Excavation Cubic Yard	22,556 cy
Retaining Wall Height	26 ft
Total Space Count	272 spaces

Garage – Option 3 (Three-Level With One Level Subgrade)



Garage – Option 4 (Three-Level – original concept)



Metrics	
Excavation Cubic Yard	9,944 cy
Retaining Wall Height	16 ft
Total Space Count	272 spaces

Garage – Option 4 (Three-Level)

Order of Magnitude Cost Estimates

Cost Estimates

Surface Lot Cost Estimates					
	Parking Spaces	Total Estimated Construction Cost	Land Cost	Total Construction/Land Costs	Cost/Space
2% Sloped Surface Lot	99	$860,945	$800,000	$1,660,945	$16,777
5% Sloped Surface Lot	99	$724,839	$800,000	$1,524,839	$15,402
Tiered Surface Lot	98	$923,849	$800,000	$1,723,849	$17,590

Garage Option Cost Estimates					
	Parking Spaces	Total Estimated Construction Cost	Land Cost	Total Construction/Land Costs	Cost/Space
2-Level Above Ground Garage	162	$5,377,590	$800,000	$6,177,590	$38,133
2-Level Garage, One Subgrade Lvl.	162	$6,845,069	$800,000	$7,645,069	$47,192
3-Level Above Ground Garage	272	$9,594,881	$800,000	$10,394,881	$38,216
3-Level Garage, One Subgrade Lvl.	272	$10,677,075	$800,000	$11,477,075	$42,195

401 Jordan Road

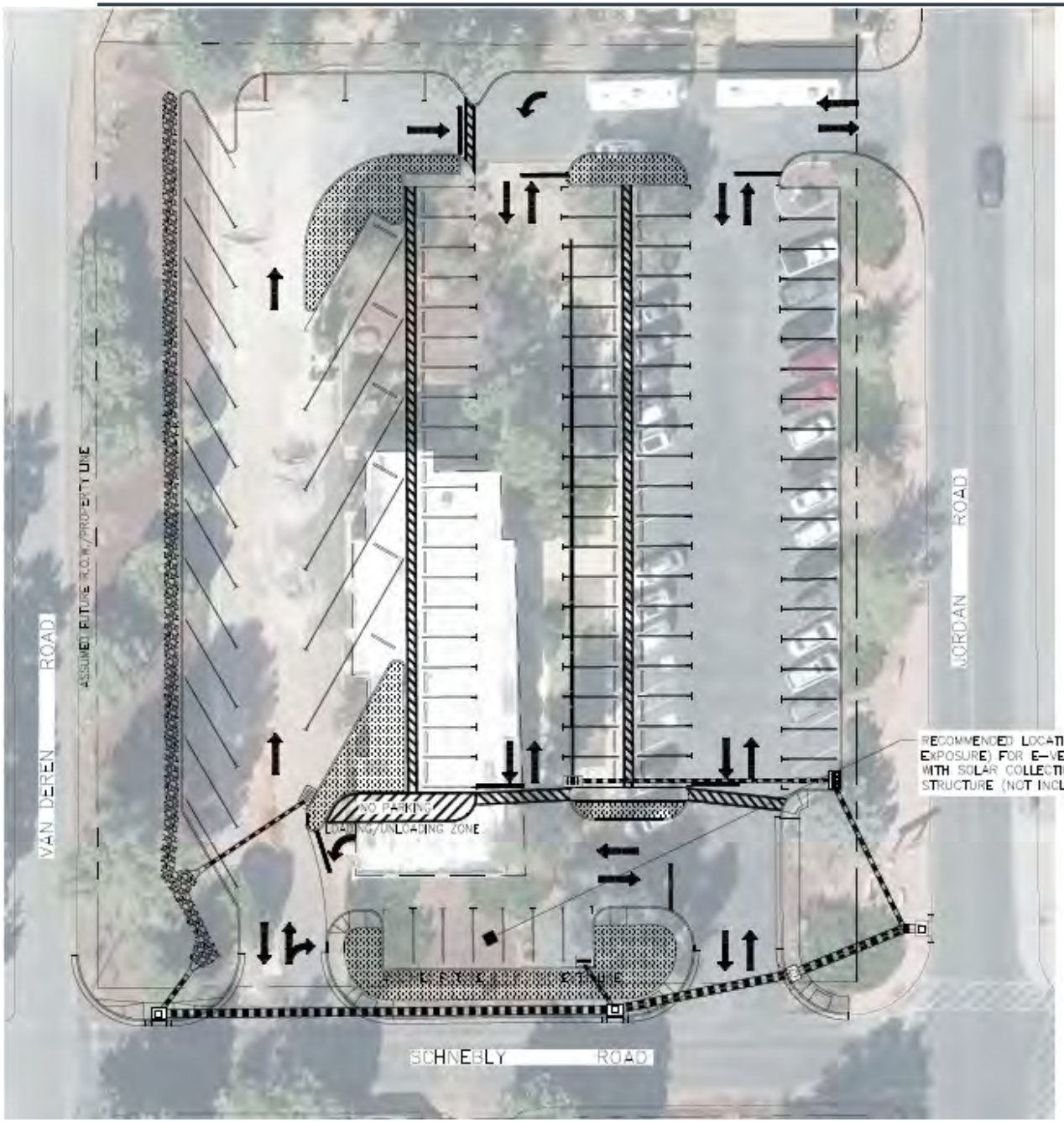
Existing spaces – 55

Total spaces – 98 (94 standard, 4 ADA)

ENGINEER'S OPINION OF COST

Uptown Parking Study - Alternative 1, Parking Improvements at Jordan Lot (401 Jordan Road)

Item No.	Description	Units	Quantity	Unit Cost $	Estimated Cost $
	Parking Improvements				
1	Mobilization	LS	1	$ 10,000.00	$ 10,000.00
2	Clearing & Grubbing	LS	1	$ 5,000.00	$ 5,000.00
3	Building Demolition (demo, debris removal, site returned to grade)	SF	5904	$ 8.00	$ 47,232.00
4	Earthwork (Cut & Haul)	CY	80	$ 24.00	$ 1,920.00
5	Earthwork (Fil)	CY	0	$ 5.00	$ -
6	4" ABC Per MAG 702	SY	2411	$ 12.00	$ 28,932.00
7	AC 3" thick per MAG 710	SY	2411	$ 20.00	$ 48,220.00
8	Concrete Curb	LF	1050	$ 20.00	$ 21,000.00
9	Pavement Sawcut and Tack	LF	690	$ 2.00	$ 1,380.00
10	Drainage Improvements (minor)	LS	1	$ 12,000.00	$ 12,000.00
11	Pavement Markings and Signage	LS	1	$ 8,000.00	$ 8,000.00
12	Misc. Site Utility Relocations/Terminations	LS	1	$ 5,000.00	$ 5,000.00
13	Landscaping (Xeroscape, minor)	LS	1	$ 8,000.00	$ 8,000.00
	SUBTOTAL				**$ 196,684.00**
	Contingency and Incidental Construcion Costs				
	Contingency (25%)				$ 49,171.00
	SWPPP/Environmental Controls (2.0%)				$ 3,933.68
	Construction Staking (2.0%)				$ 3,933.68
	QA/QC Testing (3.5%)				$ 6,883.94
	SUBTOTAL				**$ 63,922.30**
	TOTAL CONSTRUCTION COST				**$ 261,000.00**
	Other Project Development Costs				
	Right-of-Way Acquisition				$ -
	Civil/Geotechnical Design Development (18%)				$ -
	ADOT Coordination				$ -
	Permitting/Utility Coordination				$ -
	TOTAL ESTIMATED PROJECT COST				**$ 261,000.00**
	Optional - Additive Impovements Costs				



Existing spaces – 55

Total spaces – 107 (89 standard, 4 ADA, 6 Rec, 7 e-vehicle)

ENGINEER'S OPINION OF COST

Uptown Parking Study - Alternative 2, Parking Improvements at Jordan Lot (401 Jordan Road)

Item No.	Description	Units	Quantity	Unit Cost $	Estimated Cost $
	Parking Improvements				
	Mobilization	LS	1	$ 10,000.00	$ 10,000.00
	Clearing & Grubbing	LS	1	$ 6,000.00	$ 6,000.00
	Building Demolition (demo, debris removal, site returned to grade)	SF	5904	$ 8.00	$ 47,232.00
	Site Grading	SY	5800	$ 5.00	$ 29,000.00
	Earthwork (Fill)	CY	300	$ 30.00	$ 9,000.00
	4" ABC Per MAG 702	SY	5700	$ 12.00	$ 68,400.00
	AC 3" thick per MAG 710	SY	5700	$ 20.00	$ 114,000.00
	Concrete Curb	LF	1466	$ 20.00	$ 29,320.00
	Concrete Curb and Gutter	LF	276	$ 28.00	$ 7,728.00
	Sidewalk and Ramps	SF	270	$ 12.00	$ 3,240.00
	Pavement Sawcut and Tack	LF	120	$ 2.00	$ 240.00
	Storm Drain Pipe, 12"	LF	55	$ 90.00	$ 4,950.00
	Storm Drain Pipe, 15"	LF	81	$ 100.00	$ 8,100.00
	Storm Drain Pipe, 18"	LF	45	$ 120.00	$ 5,400.00
	Storm Drain Pipe, 30"	LF	240	$ 175.00	$ 42,000.00
	Slotted Corrugated Metal Drain Pipe, 18"	LF	155	$ 180.00	$ 27,900.00
	Flared-end Section, 12"	EA	1	$ 400.00	$ 400.00
	Flared-end Section, 15"	EA	1	$ 500.00	$ 500.00
	Catch Basin, MAG Type 'B' (SD #531) < 5'	EA	3	$ 7,500.00	$ 22,500.00
	Catch Basin MAG Type <5'	EA	4	$ 4,500.00	$ 18,000.00
	Storm MH, MAG SD #520 < 8'	EA	1	$ 7,000.00	$ 7,000.00
	Parking Wheel Stops	EA	66	$ 180.00	$ 11,880.00
	Riprap	CY	30	$ 170.00	$ 5,100.00
	Pavement Markings and Signage	LS	1	$ 10,000.00	$ 10,000.00
	Misc. Site Utility Relocations/Terminations	LS	1	$ 5,000.00	$ 5,000.00
	Landscaping (Xeroscape, minor)	LS	1	$ 12,000.00	$ 12,000.00
	SUBTOTAL				**$ 504,890.00**
	Contingency and Incidental Construcion Costs				
	Contingency (25%)				$ 126,222.50
	SWPPP/Environmental Controls (1.5%)				$ 7,573.35
	Construction Staking (1.5%)				$ 7,573.35
	QA/QC Testing (2.5%)				$ 12,622.25
	SUBTOTAL				**$ 153,991.45**
	TOTAL CONSTRUCTION COST				**$ 659,000.00**
	Other Project Development Costs				
	Right-of-Way Acquisition				$ -
	Civil/Geotechnical Design Development (15%)				$ -
	ADOT Coordination				$ -
	Permitting/Utility Coordination				$ -
	TOTAL ESTIMATED PROJECT COST				**$ 659,000.00**
	Optional - Additive Improvements Costs				

Existing spaces – 55
Total spaces – 161 (149 standard, 6 ADA, 6 e-vehicle)

ENGINEER'S OPINION OF COST
Uptown Parking Study- Alternative 4, Parking Improvements at Jordan Lot (401 Jordan Road)

Item No.	Description	Units	Quantity	Unit Cost $	Estimated Cost $
	Parking Improvements				
	Mobilization	LS	1	$ 30,000.00	$ 30,000.00
	Clearing & Grubbing	LS	1	$ 6,000.00	$ 6,000.00
	Building Demolition (demo, debris removal, site restored to grade)	SF	5904	$ 8.00	$ 47,232.00
	Site Grading	SY	5600	$ 5.00	$ 28,000.00
	Earthwork (Fill)	CY	250	$ 30.00	$ 7,500.00
	4" ABC Per MAG 702	SY	6000	$ 12.00	$ 72,000.00
	AC 3" thick per MAG 710	SY	5550	$ 20.00	$ 111,000.00
	Concrete Curb	LF	1016	$ 30.00	$ 30,320.00
	Concrete Curb and Gutter	LF	246	$ 28.00	$ 6,888.00
	Sidewalk and Ramps	SF	295	$ 12.00	$ 3,540.00
	Pavement Sawcut and Tack	LF	120	$ 2.00	$ 240.00
	Storm Drain Pipe, 12"	LF	12	$ 90.00	$ 1,080.00
	Storm Drain Pipe, 18"	LF	50	$ 100.00	$ 5,000.00
	Storm Drain Pipe, 30"	LF	240	$ 175.00	$ 42,000.00
	Slotted Corrugated Metal Drain Pipe, 18"	LF	225	$ 180.00	$ 40,500.00
	Flared-end Section, 18"	EA	1	$ 500.00	$ 500.00
	Catch Basin, MAG Type 'B' (SD #531) < 8'	EA	3	$ 7,500.00	$ 22,500.00
	Catch Basin MAG Type 'F' <8'	EA	3	$ 6,500.00	$ 19,500.00
	Storm MH, MAG SD #520 < 8'	EA	1	$ 7,000.00	$ 7,000.00
	Parking Wheel Stops	EA	80	$ 180.00	$ 14,400.00
	Riprap	CY	30	$ 170.00	$ 5,100.00
	Pavement Markings and Signage	LS	1	$ 10,000.00	$ 10,000.00
	Misc. Site Utility Relocations/Terminations	LS	1	$ 5,000.00	$ 5,000.00
	Landscaping (Xeriscape, minor)	LS	1	$ 12,000.00	$ 12,000.00
	SUBTOTAL				$ 503,300.00
	Contingency and Incidental Construction Costs				
	Contingency (25%)				$ 125,825.00
	SWPPP/Environmental Controls (1.5%)				$ 7,549.50
	Construction Staking (1.5%)				$ 7,549.50
	QA/QC Testing (7.5%)				$ 37,782.50
	SUBTOTAL				$ 178,706.50
	TOTAL CONSTRUCTION COST				$ 682,000.00
	Other Project Development Costs				
	Right-of-Way Acquisition				$ -
	Civil/Architectural Design Reimbursement (15%)				$ -
	ADOT Coordination				$ -
	Permitting/Utility Coordination				$ -
	TOTAL ESTIMATED PROJECT COST				$ 682,000.00
	Optional - Additional Improvements Costs				

Garage Phasing

Parking Inventory Adequacy with Changes

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opt A – Add N. Forest Surface Lot	23	1	(22)	(45)	(70)	(96)	(121)	(147)	(175)	(203)
Opt B – Add N. Forest Surface and Jordan Lot	83	61	38	15	(10)	(35)	(61)	(87)	(115)	(143)
Opt C –Add 2-level N. Forest garage	(76)	(98)	41	18	(7)	(32)	(58)	(84)	(112)	(140)
Opt D – Add 3-level N. Forest garage	(76)	(98)	151	128	103	78	52	26	(2)	(30)
Opt E – Add 2-level N. Forest garage and Jordan Lot	(16)	(38)	101	78	53	28	2	(24)	(52)	(80)

Assumptions:

- Surface lots are added in 2020 and garages are added in 2022
- Jordan Lot – 60 net spaces added to parking system

Transitioning to Garage from Surface Lot

Option One – Add North Forest Lot

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Parking Inventory Adequacy Prior if add N. Forest Lot	23	1	(22)	(45)	(70)	(95)	(121)	(147)	(175)	(203)
Remove N. Forest Surface Lot				-99	-99	-99	-99	-99	-99	-99
Add 2-Level Garage						162	162	162	162	162
Parking Inventory Adequacy	**23**	**1**	**(22)**	**(144)**	**(169)**	**(32)**	**(58)**	**(84)**	**(112)**	**(140)**

Option Two – Add North Forest and Jordan Lots

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Parking Inventory Adequacy Prior if add N. Forest and Jordan Lots	83	61	38	15	(10)	(35)	(61)	(87)	(115)	(143)
Remove N. Forest Surface Lot				-99	-99	-99	-99	-99	-99	-99
Add 2-Level Garage						162	162	162	162	162
Parking Inventory Adequacy	**83**	**61**	**38**	**(84)**	**(109)**	**28**	**2**	**(24)**	**(52)**	**(80)**

Parking In-Lieu Analysis

In-Lieu Definition and Methodology

Definition:
An in-lieu parking fee gives developers the option to pay a fee “in-lieu” of providing a portion of the number of parking spaces required by the City code.

Variety of uses:
- Finance public parking spaces
- Finance mass transportation alternatives
- Finance operation and maintenance of public parking spaces

Methodology:
- Setting fee amounts:
    1. Calculate appropriate fee per space on a case-by-case basis for each project, or;
    2. Uniform fee per space for all projects (most common)
- Evaluation of fees:
    1. Most cities have no explicit policy regarding how often to update the fees
    2. Some cities link their fees to an index of construction costs

Advantages/Disadvantages of In-Lieu

Advantages:

1. Concentrates parking and allows for more desirable land uses given the limited supply of developable property in Uptown
2. Allow development of sites that cannot physically accommodate the amount of parking spaces required
3. Provides developers an alternative to meeting parking requirements
4. Allows for increased revenue opportunity for their property
5. Opportunity for developer to pay one-time fee without burden of continuous payments or upkeep
6. Public parking spaces allow more sharing of spaces for the entire parking system
7. Better urban design and control of aesthetics
8. Fewer variances for the City
9. Historic preservation

Disadvantages:

1. Lack of on-site parking
2. No guarantee developers will opt for in-lieu, or the number of participants – City could build garage and not be able to off-set some of the cost
3. Lapse of time in payment of in-lieu fees vs. availability of new parking spaces
4. City has ongoing requirement and associated fees for upkeep and maintenance of the parking system

In-Lieu Fee Recommendation

- Type of Fee:
  - Voluntary
  - Per Parking Space Basis
- Eligibility:
  - All new development within boundary should be eligible
  - All redevelopment within boundary should be eligible
  - Boundary can be revised at a later date
- Fee Amount:
  - $35,000/space
  - Fee would be universal fee amount regardless of land use or project location within boundary
  - Link fee to construction cost index and adjust annually
  - Retain flexibility to revise amount if needed
  - Lump sum fee payment due before issuance of building permit or payment over a 10-year period. Interest will be charged if long-term payments are made.
- In-Lieu Revenue Use:
  - Make as flexible as possible
  - Goal is to use revenue to offset some of the new inventory cost
  - Include options to maintain parking inventory, fund parking and transportation programs, leasing of private lots, etc.

North Forest

Address:	430 and 460 Forest Rd	Current Parking Spaces:	Option A: 0 spaces Option B: 18 spaces
Size of Parcels:	Option A: 1.25 acres Option B: 1.37 acres	Total Parking Spaces Constructed:	Option A: 272 spaces Option B: 393 spaces
Zoning:	RS-18 single-family residential	Total Net Parking Spaces:	Option A: 272 spaces Option B: 375 spaces

	Advantages	Disadvantages
Landowner		• Private • Requires acquisition of two parcels
Location	• In area of high demand for employee parking • Opposite end of Uptown from the Municipal Lot (for even distribution of major public parking lots)	
Vehicular Access	• Northbound traffic is diverted at Forest Rd. stoplight, prior to area of high congestion • Future access to W 89A on planned Forest Rd. extension	
Pedestrian Access	• Good, direct proximity to Main St. (550’) • Good potential for future transit stop	
Setting	• Across Forest Rd. from parking lot, utility building on east side • North side of Forest Rd. also includes church, multi-family residential, older house, vacant land • South side of Forest Rd. includes commercial, Fire Station, public parking and Hyatt timeshare development	• Single-family residential to west and north
Site Conditions	• Hillside helps hide the structure	• Hillside will require excavation • Demolition of one house required
Lot Size/Shape	• Size of footprint allows for efficient garage	
Current Use	• One vacant lot	• One single-family residence (older home)
Potential Future Land Use	• Opportunity to revitalize Forest Rd. • Entire south side of the road is commercially-zoned	• Loss of two single-family lots or potential for alternate land uses

North Forest

Option A

Option B