

1 **DRAFT MINUTES**
2 **TOWN OF APEX**
3 **TOWN COUNCIL WORK SESSION**
4 **TUESDAY, FEBRUARY 20, 2024**
5 **3:30 P.M.**

6 The Apex Town Council met for a work session on Tuesday, February 20, 2024 at 3:30 p.m. at
7 the Apex Town Hall located at 73 Hunter Street in Apex North Carolina.

8 This meeting was open to the public. Members of the public were able to attend this
9 meeting in-person or watch online via the livestream on the Town’s YouTube Channel:

10 <https://www.youtube.com/watch?v=Tq17QonOp1g>

11
12 Elected Body

13 Mayor Jacques K. Gilbert (presiding)

14 Mayor Pro-Tempore Ed Gray

15 Councilmember Terry Mahaffey

16 Councilmember Audra Killingsworth (*arrived late; see note below*)

17
18 Absent: Councilmember Brett Gantt

19 Councilmember Arno Zegerman

20
21
22 Town Staff

23 Interim Town Manager Shawn Purvis

24 Assistant Town Manager Demetria John

25 Assistant Town Manager Marty Stone

26 Town Attorney Laurie Hohe (*attended via teams*)

27 Town Clerk Allen Coleman

28 All other staff members will be identified appropriately below.

29 **[COMMENCMENT]**

30
31 **[ADDED - AGENDA ITEM NO. 1 - WAKE COUNTY FARMLAND PRESERVATION**
32 **PROGRAM PRESENTATION]**

33
34 **Mayor Gilbert** said he’s going to wait until Councilmember Killingsworth arrives to
35 make the meeting official. He suggested to proceed and he introduced Loren Hendrickson,
36 Wake County Farmland Preservation Coordinator, and Trevor Hyde, Wake County
37 Cooperative Extension Agent for Local Food Systems, to start their presentation on Wake
38 County Farmland Preservation Program.

1 [SLIDE-1]

**Wake County
Farmland
Preservation Program**
February 2024

Loren Hendrickson, Farmland Preservation
Coordinator

@wakegov wake.gov

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3 [SLIDE-2]

Background

- Wake County is one of the fastest growing counties in the nation and adds approximately 56 new residents per day.
- The recent 2040 Farms Under Threat Report from the American Farmland Trust shows NC as the #2 state in the country for projected farmland loss.
- Wake County is one of the 3 most heavily impacted counties in the state for projected farmland loss, losing nearly 23,000 acres of agricultural land in the last 10 years.

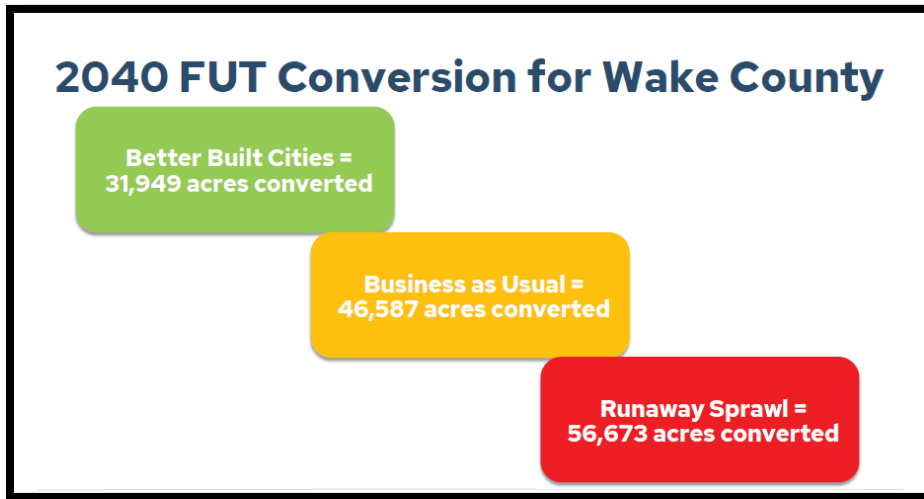
4
5 [SLIDE-3]

**The recent USDA Agricultural Census
data just released for 2022 shows...**

**...Wake County has 642 farms, totaling
62,323 acres of land in farms.**

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1 [SLIDE-4]



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3 [SLIDE-5]



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5 [SLIDE-6]

Wake Farmland Preservation Program


Program Offerings	Program Updates
<ul style="list-style-type: none"> • Voluntary Agricultural Districts (VAD) • Enhanced Voluntary Agricultural Districts (EVAD) • Conservation Easements (CEs) 	<ul style="list-style-type: none"> • Two new program offerings – EVAD and CE • New branding and communication. • New full-time staff position • Custom database to manage program enrollment

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1 [SLIDE-7]

Voluntary Agricultural District


- Requires a revocable 10-year agreement with Wake County Agricultural Advisory Board.
- May renew for 10 years after initial period unless notice is given by landowner.
- May provide assessments for utilities provided by city or county be held in abeyance, with or without interest.



The graphic features a blue sky background with the text 'Wake County Farmland Preservation' in white. Below the text is an illustration of a farm scene with a red barn, a black cow, a white sheep, and green trees. At the bottom, there is a brown banner with the Wake County logo and the text 'Voluntary Agricultural District'.

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3 [SLIDE-8]

Enhanced Voluntary Agricultural District



- Requires a 10-year irrevocable agreement.
- Must be recorded on deed.
- May renew for 3 years after initial period unless notice is given by landowner.
- May provide assessments for utilities provided by city or county be held in abeyance, with or without interest.

The graphic features a blue sky background with the text 'Wake County Farmland Preservation' in white. Below the text is an illustration of a farm scene with a red barn, a black cow, a white sheep, and green trees. At the bottom, there is a brown banner with the Wake County logo and the text 'Enhanced Voluntary Agricultural District'.

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5 [SLIDE-9]

Conservation Easement Program

- Places permanent protection on the land by eliminating future subdivision.
- Landowners can receive funding to compensate for the sale of development rights in conservation easement acquisition.
- Can include tax incentives and federal tax deductions.



The graphic features a blue sky background with the text 'Wake County Farmland Preservation' in white. Below the text is an illustration of a farm scene with a red barn, a black cow, a white sheep, and green trees. At the bottom, there is a red banner with the Wake County logo and the text 'Agricultural Conservation Easement'.

6

1 [SLIDE-10]

Getting Serious about Conservation

- In March of 2023, Wake BOC approved the use of deferred tax dollars from PUV rollback to fund permanent conservation easements.
- \$4.2 million committed for farmland preservation largest in the state and southeast.
- All \$4.2 million has been either spent or allocated to future projects.



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3 [SLIDE-11]

Two Successful Closings



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5 [SLIDE-12]

Early Success



- Since the program was established in February 2023, our office has approved:
 - 1,376 acres of additional land for VAD (VAD total is 12,559 acres)
 - 128 acres of EVAD
 - 2 conservation easements totaling 246 acres
 - Submittal of 7 applications for future conservation easement funding

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1 [SLIDE-13]

In Summary

Here's where we hope to go

Establish partnerships with Wake County municipalities to recognize our program offerings and allow the existence of VAD, EVAD and conservation easement options within municipal boundaries.

Here's how we hope to get there

Codify partnerships with Memorandum's of Understanding (or similar type of agreement) with municipalities detailing the approval of VAD, EVAD and conservation easement parcels to exist within municipal boundaries.

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3 [SLIDE-14]



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6 **Councilmember Mahaffey** thanked them for coming said this is great information.
7 He asked why would someone want to opt into this program and asked if there are any
8 incentives of the Voluntary Agricultural District (VAD).

9 **Mr. Hendrickson** said public hearings have come up more frequently and it's
10 affecting any utility roadway projects which affect the land owners. He said with VAD it gives
11 the opportunity to know what changes are going on around the land owners. He said it would
12 also show VAD highlighted on the iMaps map as well. He said it also useful for nuisance
13 management, to let people know there may noises and smells associated with farms.

14 **Mr. Hyde** said there is no cost associated to enroll in the VAD program for land
15 owners.

16 **Councilmember Mahaffey** asked why would someone move from the Voluntary
17 Agricultural District (VAD) to the Enhanced Voluntary Agricultural District because then the
18 land owner would have to record a deed restriction.

1 **Mr. Hendrickson** said the two big differences are one its entities the farmer to a
2 higher rate of cost shares. He said if you're a farmer and worked with Wake County on any
3 conservation projects, it allows you to receive more money from being in the Enhancement
4 VAD Program. It also helps with filling out a grant application and cost sharing criteria. He
5 said being in the Enhancement VAD program will allow you to sell a higher percentage of
6 non-farm goods and still qualify as a bona fide farm.

7 **Councilmember Mahaffey** asked to clarify a sentence that states, "May provide
8 assessments for utilities provided by city or county be held in abeyance, with or without
9 interest".

10 **Mr. Hendrickson** said it's more statutory language, but hints to the protection and
11 public hearings requirements.

12 **Mayor Pro-Tempore Gray** asked what is our definition of a farm. He said is it the
13 statutory definition of what is North Carolina has. He asked to be a part of VAD, EVAD and the
14 Conservation District Program, do you have to be an existing farm now.

15 **Mr. Hendrickson** said, mostly yes. He said when Wake County Farmland Preservation
16 assess property the criteria mirror the bona fide farm statute at state level. He said they need
17 to be in production before enrolling.

18 **Mayor Pro-Tempore Gray** asked can three or four partial owners come together that
19 maintain farm land.

20 **Mr. Hyde** said it would depend on the size of the land. He said these have specific
21 size minimums. He said he will provide information on other options for smaller parcels.

22 **Mayor Pro-Tempore Gray** said he wanted to clarify if this is not for vegetable
23 production.

24 **Mr. Hendrickson** said anything that meets the state agriculture definition would
25 apply.

26 **Mayor Pro-Tempore Gray** said what about commercially owned versus family owned
27 property.

28 **Mr. Hendrickson** said there are no guidelines on ownership. He said almost all of
29 their VAD parcels are smaller, family farms.

30 **Mr. Hyde** said some municipalities have established their own definition on what
31 counts as a farm. He said the Town can construct a Memorandum of Understanding (MOU)
32 and construct their own rules within town limits and Wake County Farmland Preservation can
33 help staff create those policies and can bring back at a later date to propose for adoption if
34 Council chose to go that direction.

35 **Councilmember Mahaffey** asked if they had an MOU template already established to
36 look at ahead of time.

37 **Mr. Hyde** said yes.

38 **Mayor Gilbert** asked if anyone had any other questions.

39 **Councilmember Mahaffey** said he would love to learn more and see how the town
40 can support the program.

41 **Mr. Hendrickson** said this would be the first MOU they have established with any
42 municipality.

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2 **Mayor Gilbert** called for a brief recess.

3
4 **Councilmember Killingsworth** arrived at 4:16 p.m.

5
6 **Mayor Gilbert** called the Work Session to order, and led in a recitation of the Pledge
7 of Allegiance.

8
9 **[AGENDA ITEM NO. 1 - TOWN FACILITY SOLAR STUDY]**

10 **Daniel Edwards**, Senior Capital Projects Manager, gave an overview of the Town's
11 Facility Solar Feasibility study report.

12
13 **[TABLE-1 - TABLE 1- TOWN OF APEX FACILITIES-EXISTING FACILITY INFORMATION]**

Table 1:
Town of Apex Facilities - Existing Facility Information

#	FACILITY	ADDRESS	SIZE	BUILD YEAR	BUILDING AGE	ROOF AGE	ROOF TYPE	ROOF SIZE SQ. FT.	NOTES
1	Parks/Rec Maint. Building	2500 Evans Rd	4,950	2014	8	8	Metal	6125	
2	Seymour Fields Restroom/Shelter	2500 Evans Rd	624	2014	8	8	Shingle	2244	
3	Nature Park Restroom /Shelter	2600 Evans Rd	900	2014	8	8	Metal	3065	replace inverter
4	Nature Park Amphitheater	2600 Evans Rd	66	2014	8	8	Metal	1287	
5	West St Shelter	108 West St		unknown	unknown	unknown	Shingle	542	
6	ACP Classroom/Restroom	2200 Laura Duncan Rd	2,500	1996?	26	7-8?	Shingle	2860	
7	ACP Rear Restroom	2200 Laura Duncan Rd		2007	5	2007	Shingle	676	
8	ACP Small Shelter	2200 Laura Duncan Rd		unknown	unknown	unknown	Shingle	1384	
9	ACP Large Shelter	2200 Laura Duncan Rd		unknown	unknown	unknown	Shingle	2490	
10	Parks/Rec Maint. Building	2200 Laura Duncan Rd	1,698	2000	22	22	Shingle		
11	Lakepine Restroom	1808 Lakepine Dr	209	2016	8	8	Concrete	240	
12	Kelly Rd Restroom/Shelter	1609 Kelly Rd	562	1996	26	unknown	Shingle	1035	
13	Kelly Rd Shelter	1609 Kelly Rd		1996	26	unknown	Shingle	466	
14	Kelly Glen Shelter	1701 Kelly Glen		unknown	unknown	unknown	Metal	410	
15	Pleasant Park - Maintenance Building	2241 Recreation Dr	3,750	Under Construction	New	New	SS metal	4000	Under construction at time of evaluation/site visit
16	Pleasant Park	2200-Recreation-Dr	NA	Under Construction	NA	NA	NA	NA	Removed
17	Pleasant Park - Pump Station	2245-Recreation-Dr	342	Under Construction	NA	NA	Shingle	400	Removed
18	Pleasant Park - Amenity Building	2200 Recreation Dr	3,864	Under Construction	New	New	Shingle	4000	Under construction at time of evaluation/site visit
19	Pleasant Park - Shelter #2	2225 Recreation Dr	2,864	Under Construction	New	New	Shingle	4000	Under construction at time of evaluation/site visit
20	Pleasant Park - Signature Fieldhouse	2211 Recreation Dr	5,925	Under Construction	New	New	SS Metal	6000	Under construction at time of evaluation/site visit
21	Salem Pond Restroom	6112 Old Jenks Rd	226	2022	New	New	Concrete	311	
22	Seagroves Restroom/Shelter	201 Parkfield Dr	590	2012	10	10	Shingle	2222	
23	Hunter St Restroom/Shelter	1250 Ambergate	600	2012	10	10	Shingle	2198	
24	Clairemont Shelter	801 E Chatham St		unknown	unknown	unknown	Shingle	445	
25	Sue Helton Gazebo	703 Matney Lane		unknown	unknown	unknown	Shingle	320	
26	Jaycee Park Restroom/Shelter	451 NC Highway 55	453	1995?	27	unknown	Shingle	1698	
27	Fire Station # 2	3045 New Hill Hollenan Rd.	4,114	1996	24	24	Metal	5235	
28	Electrical Main Office	2850 Milano Ave	21,000	2021	0	0	Metal	22665	
29	Electrical Warehouse	2850 Milano Ave		2021	0	0	Metal	12180	
30	Electrical Covered Storage	2850 Milano Ave		2021	0	0	Metal	5249	

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15 **[TABLE-1 CONT. - TABLE 1- TOWN OF APEX FACILITIES-EXISTING FACILITY**
16 **INFORMATION]**

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#	FACILITY	ADDRESS	SIZE	BUILD YEAR	BUILDING AGE	ROOF AGE	ROOF TYPE	ROOF SIZE SQ. FT.	NOTES
31	Water Resources Meter Shop	1705 Kelly Glen		unknown	unknown	unknown	Shingle		
32	Public Works Operations	105 Upchurch St	27,710	1997	23	23	Metal	28700	replace inverter
33	Public Works Operations Covered Storage	105 Upchurch St		1997	23	23	Metal	8227	
34	Chamber of Commerce	220 N Salem St	2,486	1873	147	4	Shingled Tile	4100	
35	Halle Cultural Arts Center	237 N. Salem St	10,354	2008	12	12	Flat/Membrane	6020	
36	Senior Center	Hunter St	30,000	2021	0	0	Metal	20837	
37	Public Safety Station 6	1201 Wimberly Rd	13,642	Under Construction	New	New	Metal	13642	Solar Ready, Under construction at time of evaluation/site visit
38	Mason St Municipal Building	322 N. Mason St	14,688	Under Construction	New	New	Flat(Membrane)/Metal	6729/1000	Solar Ready, Under construction at time of evaluation/site visit

1 [TABLE-1 - TOWN OF APEX FACILITIES - UTILITY INFORMATION]

Table 2:
Town of Apex Facilities - Utility Information

#	FACILITY	UTILITY TRANSFORMER	BUILDING SERVICE	METER #	PEAK DEMAND (KW)	MAX ANNUAL USAGE (KWH)	ELECTRICAL SERVICE	BASE CHARGE	ELECTRICAL RATE PER (KWH)	DEMAND CHARGE	NOTES
1	Parks/Rec Maint. Building	Underground	120/240V 1PH, 600A	10261185	17.1	64,200	Small General Service	\$ 27.00	\$ 0.0966		
2	Seymour Fields Restroom/Shelter	Underground	120/240V 1PH, 200A	10271850	8.752	10,650	Small General Service	\$ 27.00	\$ 0.0966		
3	Nature Park Restroom /Shelter	Underground	120/240V 1PH, 200A	10038576	12.932	25,042	Small General Service	\$ 27.00	\$ 0.0966		Existing PV
4	Nature Park Amphitheater	Underground	(2) 120/240V 1PH, 200A	15825638	1.752	4,391	Small General Service	\$ 27.00	\$ 0.0966		
5	West St Shelter	NA	None	NA	-	-			\$ 0.0966		
6	ACP Classroom/Restroom	Underground	120/240V 1PH, 200A	10271847	13.14	35,246	Small General Service	\$ 27.00	\$ 0.0966		
7	ACP Rear Restroom	Underground	120/240V 1PH, 100A	10278881	49	101,509	Small General Service	\$ 27.00	\$ 0.0966		Multiple Services
8	ACP Small Shelter	NA	No panel, Powered lights & rec	same as above	-	-					Multiple Services
9	ACP Large Shelter	NA	No panel, Powered lights & rec	same as above	-	-					Multiple Services
10	Parks/Rec Maint. Building	Overhead	120/240V 1PH, 200A	10278863	15.656	43,017	Small General Service	\$ 27.00	\$ 0.0966		
11	Lakepine Restroom	Underground	120/240V 1PH, 200A	20170093	8.864	12,819	Small General Service	\$ 27.00	\$ 0.0966		
12	Kelly Rd Restroom/Shelter	Underground	120/240V 1PH, 125A	10261181	54.54	43,640	Small General Service	\$ 27.00	\$ 0.0966		
13	Kelly Rd Shelter	NA	None	NA	-	-					
14	Kelly Glen Shelter	NA	None	NA	-	-					
15	Pleasant Park - Maintenance Building	New (unknown)									Under construction at time of this report
16	Pleasant Park	NA									
17	Pleasant Park - Pump Station	NA									
18	Pleasant Park - Amenity Building	New (unknown)									Under construction at time of this report
19	Pleasant Park - Shelter #2	New (unknown)									Under construction at time of this report
20	Pleasant Park - Signature Fieldhouse	New (unknown)									Under construction at time of this report
21	Salem Pond Restroom	Underground	120/240V 1PH, 100A	20023138	19.576	8,786	Small General Service	\$ 27.00	\$ 0.0966		
22	Seagroves Restroom/Shelter	Underground	120/240V 1PH,	12722375	10.832		Small General	\$ 27.00	\$ 0.0966		

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3 [TABLE-1 CONT. - TOWN OF APEX FACILITIES - UTILITY INFORMATION]

#	FACILITY	UTILITY TRANSFORMER	BUILDING SERVICE	METER #	PEAK DEMAND (KW)	MAX ANNUAL USAGE (KWH)	ELECTRICAL SERVICE	BASE CHARGE	ELECTRICAL RATE PER (KWH)	DEMAND CHARGE	NOTES
23	Hunter St Restroom/shelter	Underground	200A 120/240V 1PH, 200A	12722415	11.82	30,472 22,472	Service Small General Service	\$ 27.00	\$ 0.0966		
24	Clairemont Shelter	NA	None	NA	-	-					
25	Sue Helton Gazebo	NA	None	NA	-	-					
26	Jaycee Park Restroom/Shelter	Underground	120/240V 1PH, 40A, No space left	10038614	47.296	32,286	Small General Service	\$ 27.00	\$ 0.0966		Service Panel in sight of shelter
27	Fire Station # 2	Overhead	120/240V 1PH, 400A, Gen backed	325393878	19	4,663	Small General Service (large)	\$ 21.00	\$ 0.12546		Duke Energy
28	Electrical Main Office	Underground	120/208V 3PH, 1000A, Gen backed	30906009	118.23	337,520	Large General Service	\$ 350.00	\$ 0.0451	\$ 20.18	Multiple Services
29	Electrical Warehouse	Underground	120/208V 3PH, 500A, feed from main, Gen backed	same as above	-	-					Multiple Services
30	Electrical Covered Storage	Underground	120/208V 3PH, 125A, feed from main, Gen backed	same as above	-	-					Multiple Services
31	Water Resources Meter Shop	Underground	277/480V 3PH, 250A		-	-	Large General Service	\$ 350.00	\$ 0.0451	\$ 20.18	
32	Public Works Operations	Underground	120/208V 3PH, 1200A	10434375	117.28	215,600	Large General Service	\$ 350.00	\$ 0.0451	\$ 20.18	Existing PV
33	Public Works Operations Covered Storage	Underground	277/480V 3PH, 400A	10434405	36.7	64,300	Medium General Service	\$ 90.00	\$ 0.0788	\$ 8.20	
34	Chamber of Commerce	Overhead	120/240V 1PH, 200A	10271884	12.116	21,045	Small General Service	\$ 27.00	\$ 0.0966		Historical building, Special tile
35	Halle Cultural Arts Center	Overhead	120/208V 3PH, 1200A	10434352	97.76	310,560	Large General Service	\$ 350.00	\$ 0.0451	\$ 20.18	
36	Senior Center	Underground	120/208V 3PH, 2000A	19045451	83.85	236,630	Large General Service	\$ 350.00	\$ 0.0451	\$ 20.18	
37	Public Safety Station 6	New (unknown)									Under construction at time of this report
38	Mason St Municipal Building	New (unknown)									Under construction at time of this report

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5 **Assistant Town Manager Stone** said he recommended looking at putting solar at all
6 the sites, and if it can produce some solar, how much it would cost. He said these tables
7 would be the breakdown if there were solar at these sites.

1 **Councilmember Killingworth** asked if maintenance cost is a yearly or over the life of
 2 the 25 years.

3 **Mr. Edwards** said he believes it's 25 years.

4
 5 **[TABLE-3 - TOWN OF APEX FACILITIES-SITE INVESTIGATION]**

Table 3:
Town of Apex Facilities - Site Investigation

#	FACILITY	CAN WE ADD SOLAR TO ROOF? (REFER TO HELIOSCOPE ANALYSIS)	SOLAR CONNECTION POINT	WOULD NEW/UPGRADED ELECTRICAL SERVICE BE REQUIRED?	WOULD NEW ROOF BE REQUIRED/RECOMMENDED?	ARE TREES/OBSTRUCTIONS AN ISSUE OF SHADING?	NOTES
1	Parks/Rec Maint. Building	Yes	Panel	No	No	Yes	Has shading issues. Trees around building should be removed.
2	Seymour Fields Restroom/Shelter	Yes	Panel	No	Yes	No	Would need to upgrade shingled roof
3	Nature Park Restroom/Shelter	No	-	-	-	-	Has existing Solar and no other area is available. Areas that are available are not ideal
4	Nature Park Amphitheater	Yes	Panel	No	No	No	Building orientation is not ideal
5	West St Shelter	No	None	Yes	Yes	Yes	No power, covered by trees, small footprint for panels, and shingled roof, structural deterioration
6	ACP Classroom/Restroom	No	Panel	No	Yes	Yes	Covered by trees and on shingled roof, Roof areas for mounting and orientation is not practical
7	ACP Rear Restroom	No	Panel	No	Yes	Yes	Building orientation is not ideal, small footprint for panels and shingled roof
8	ACP Small Shelter	No	None	Yes	Yes	Yes	No power, covered by trees, and shingled roof, structural deterioration
9	ACP Large Shelter	No	None	Yes	Yes	Yes	No power, covered by trees, and shingled roof, structural deterioration
10	Parks/Rec Maint. Building	Yes	Panel	No	Yes	Yes	Covered by trees and on a shingled roof. Would be good if trees and roof were addressed.
11	Lakepine Restroom	No	Panel	No	No	Yes	Has shading issues, building orientation is not ideal, too small footprint for panels, and a concrete roof
12	Kelly Rd Restroom/Shelter	Yes	Panel	No	Yes	Yes	Has shading issues, building orientation is not ideal, and has shingled roof
13	Kelly Rd Shelter	No	XFM	Yes	Yes	No	No power, Require ductbank, and Shingled Roof, structural deterioration
14	Kelly Glen Shelter	No	XFM	Yes	No	No	No power, Require ductbank
15	Pleasant Park - Maintenance Building	Yes	Panel	No	No	Yes	No utility info, building orientation is not ideal, and shading is an issue. Under constructed at the time of this report
16	Pleasant Park	NA	NA	NA	NA	NA	
17	Pleasant Park - Pump Station	NA	NA	NA	NA	NA	
18	Pleasant Park - Amenity Building	NA	NA	NA	NA	NA	Under construction at the time of this report, No utility info, No building info, to perform layout
19	Pleasant Park - Shelter #2	Yes	Panel	No	No	No	No utility info, New shingled roof, Under constructed at the time of this report
20	Pleasant Park - Signature Fieldhouse	Yes	Panel	No	No	No	No utility info, New metal Roof but Orientation would be on parking lot side Under constructed at the time of this report
21	Salem Pond Restroom	No	Panel	No	No	Yes	Has shading issues, building orientation is not ideal, too small footprint for panels, and a concrete roof
22	Seagroves Restroom/Shelter	Yes	Panel	No	Yes	No	Would need to upgrade shingled roof
23	Hunter St Restroom/shelter	Yes	Panel	No	Yes	Yes	Has minor shading issues, building orientation is not ideal, and Shingled Roof. Would need to upgrade shingled roof

6
 7 **[TABLE-3 CONT. - TOWN OF APEX FACILITIES-SITE INVESTIGATION]**

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#	FACILITY	CAN WE ADD SOLAR TO ROOF? (REFER TO HELIOSCOPE ANALYSIS)	SOLAR CONNECTION POINT	WOULD NEW/UPGRADED ELECTRICAL SERVICE BE REQUIRED?	WOULD NEW ROOF BE REQUIRED/RECOMMENDED?	ARE TREES/OBSTRUCTIONS AN ISSUE OF SHADING?	NOTES
24	Clairemont Shelter	No	None	Yes	Yes	Yes	No power, has shading issues, building orientation is not ideal, too small footprint for panels, and a shingled Roof
25	Sue Helton Gazebo	No	None	Yes	Yes	Yes	No power, has shading issues, building orientation is not ideal, too small footprint for panels, and a shingled Roof
26	Jaycee Park Restroom/Shelter	Yes	XFM	Yes	Yes	Yes	Has shading issues, building orientation is not ideal, would need to upgrade service or ductbank and a shingled Roof. In addition, wood rot on building is significant.
27	Fire Station # 2	Yes	Utility XFM, Gen backed	No	No	No	Building orientation is not ideal, would require ductbank to utility or work around Generator, No utility info, Duke only provided Total Annual Consumption and Peak
28	Electrical Main Office	Yes	Utility XFM, Gen backed	No	No	No	Front of Main Building is best but may not be allowed, and other building orientations are not ideal. If KW is higher than load we could not connect to panels because the site is generator backed up and panels would backfeed into gen. Would only recommend if KW is lower than load. service disconnect would need to be next to utility and ductbank would impact payback.
29	Electrical Warehouse	Yes	Utility XFM, Gen backed	No	No	No	Feed from Main office, building orientation is not ideal
30	Electrical Covered Storage	Yes	Utility XFM, Gen backed	No	No	No	Feed from Main office, building orientation is not ideal
31	Water Resources Meter Shop	Yes	Panel	No	Yes	Yes	No utility info, building orientation is not ideal, shingled roof, and shading is minor issue
32	Public Works Operations	Yes	Panel	No	No	Yes	Would only provide on main part. Shading is an issue with rest. Building Orientation is not ideal. Removing trees would help on parts of building
33	Public Works Operations Covered Storage	Yes	Panel	No	No	No	Building orientation is not ideal
34	Chamber of Commerce	No	Panel	No	No	No	Historical Building, building orientation is not ideal, and special Roof would not allow attachment of panels
35	Halle Cultural Arts Center	Yes	Panel	No	No	Yes	Would be a ballasted system and only a couple panels and would not off set much. Roof equipment has shading
36	Senior Center	Yes	Panel	No	No	No	Areas that are available are not ideal
37	Public Safety Station 6	Yes	Panel	No	No	No	Under construction at the time of this report. Drawings were provided, No utility info
38	Mason St Municipal Building	Yes	Panel	No	No	No	Under construction at the time of this report. Drawings were provided, No utility info

1 [TABLE-4 - TOWN OF APEX FACILITIES-STRUCTURAL ANALYSIS]

Table 4:
Town of Apex Facilities – Structural Analysis

#	FACILITY	STRUCTURAL ROOF SYSTEM	STRUCTURAL CONDITION	WOULD STRUCTURAL BE IMPACTED IF SOLAR WAS ADDED? (BASED ON 3 LBS/SQFT OR LESS)	STRUCTURAL REQUIREMENTS FOR ADDED SOLAR	WILL STRUCTURE BE MAJOR OR MINOR?	POTENTIAL STRUCTURAL COST ESTIMATE FOR ADDITION OF SOLAR	STRUCTURAL NOTES
1	Parks/Rec Maint. Building	Steel purlins with steel deck	Average	No	None	None		
2	Seymour Fields Restroom/Shelter	Ghulam Arches with T&G decking	Average	No	None	None		
4	Nature Park Amphitheater	Ghulam Beams with T&G decking	Average	No	None	None		
10	Parks/Rec Maint. Building	Hard Ceiling No Attic Access - likely wood trusses with Plywood Deck	Can not be determined at this time	No	None	None		
12	Kelly Rd Restroom/Shelter	Heavy Timber, Ghulam arches with T&G decking	Visible deterioration	No	Replacement of deteriorated wood members	Major	\$10,000	Major changes to the structure for solar is not likely. Do not recommend
15	Pleasant Park - Maintenance Building	Wood trusses with plywood deck	New	No	None	None		
19	Pleasant Park - Shelter #2	Heavy Timber with T&G decking	New	No	None	None		
20	Pleasant Park - Signature Fieldhouse		New	No	None	None		
22	Seagroves Restroom/Shelter	Heavy Timber with T&G decking	Average	No	None	None		
23	Hunter St Restroom/shelter	Heavy Timber with T&G decking	Old	No	None	None		
26	Jaycee Park Restroom/Shelter	Heavy Timber with T&G decking	Visible deterioration	No	Replacement of deteriorated wood members	Major	\$10,000	Major changes to the structure for solar is not likely. Do not recommend
27	Fire Station # 2	PEMB with Steel purlins and steel deck	Average	No	None	None		
28	Electrical Main Office	PEMB with Steel purlins and steel deck	Average	No	None	None		
29	Electrical Warehouse	PEMB with Steel purlins and steel deck	Average	No	None	None		
30	Electrical Covered Storage	PEMB with Steel purlins and steel deck	Average	No	None	None		

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3 [TABLE-4 CONT. - TOWN OF APEX FACILITIES-SITE INVESTIGATION]

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#	FACILITY	STRUCTURAL ROOF SYSTEM	STRUCTURAL CONDITION	WOULD STRUCTURAL BE IMPACTED IF SOLAR WAS ADDED? (BASED ON 3 LBS/SQFT OR LESS)	STRUCTURAL REQUIREMENTS FOR ADDED SOLAR	WILL STRUCTURE BE MAJOR OR MINOR?	POTENTIAL STRUCTURAL COST ESTIMATE FOR ADDITION OF SOLAR	STRUCTURAL NOTES
31	Water Resources Meter Shop	Hard Ceiling No Attic Access - likely wood trusses with Plywood Deck	Can not be determined at this time	No	None	None		
32	Public Works Operations	PEMB with Steel joist and purlins and steel deck	Surface Rust Noted	No	None	None		
33	Public Works Operations Covered Storage	PEMB with Steel purlins and steel deck	Average	No	None	None		
35	Halle Cultural Arts Center	Steel joists with steel deck	Average	Yes	Additional miscellaneous steel and possible joist reinforcement likely required	Minor	\$15,000	Ballasted System will likely be up to 7 lb/sqft
36	Senior Center	Steel joists with steel deck	Average	No	None	None		
37	Public Safety Station 6	Cold Formed Trusses w/ steel decking	New	No	None	None		
38	Mason St Municipal Building	Steel joists with steel deck	New	No	None	None		LM design the structure. Solar was included in design

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1 [TABLE-5 - TOWN OF APEX FACILITIES-SOLAR ANALYSIS]

Table 5:
Town of Apex Facilities – Solar Analysis

#	FACILITY	UTILITY PEAK (KW AC)	RACKING TYPE	SYSTEM SOLAR SIZE (KW AC)	SYSTEM SOLAR SIZE (KW DC)	LOAD RATIO	MAX ANNUAL PRODUCTION (MWH)	APPROXIMATE CAPITAL COST (\$)	25YR LEVELIZED COST OF ENERGY (\$/KWHR)	ANNUAL ENERGY SAVINGS (\$)	NOTES
1	Parks/Rec Maint. Building	17.1	Flush	9.1	11.6	1.27	15.9	\$ 34,800.00	0.14	\$ 1,535.94	
2	Seymour Fields Restroom/Shelter	8.752	Flush	3.8	4.9	1.29	6.9	\$ 14,700.00	0.14	\$ 666.54	
4	Nature Park Amphitheater	1.752	Flush	9.1	11.6	1.27	14.5	\$ 34,800.00	0.16	\$ 1,400.70	
10	Parks/Rec Maint. Building	15.656	Flush	2.7	3.4	1.26	4.7	\$ 10,200.00	0.15	\$ 454.02	Additional Panels could be adding if shading was addressed
12	Kelly Rd Restroom/Shelter	54.54	Flush	3.8	4.9	1.29	6.4	\$ 14,700.00	0.15	\$ 618.24	Additional Panels could be adding if shading was addressed
15	Pleasant Park - Maintenance Building	0	Flush	8.4	10.7	1.27	14	\$ 32,100.00	0.15	\$ -	No utility info for production savings
19	Pleasant Park - Shelter #2	0	Flush	9.1	11.6	1.27	12.4	\$ 34,800.00	0.19	\$ -	No utility info for production savings
20	Pleasant Park - Signature Fieldhouse	0	Flush	11.4	14.6	1.28	19.9	\$ 43,800.00	0.14	\$ -	No utility info for production savings
22	Seagraves Restroom/Shelter	10.832	Flush	5.7	7.3	1.28	10.3	\$ 21,900.00	0.14	\$ 994.98	
23	Hunter St Restroom/shelter	11.82	Flush	5.7	7.3	1.28	9.3	\$ 21,900.00	0.16	\$ 898.38	
26	Jaycee Park Restroom/Shelter	47.296	Flush	3.8	4.9	1.29	6.9	\$ 14,700.00	0.14	\$ 666.54	Additional Panels could be adding if shading was addressed
27	Fire Station # 2	19	Flush	19.8	26.7	1.35	30.2	\$ 80,100.00	0.17	\$ 3,788.89	
28	Electrical Main Office	118.23	Flush	84.2	113.5	1.35	137.3	\$ 340,500.00	0.16	\$ 6,192.23	
29	Electrical Warehouse	0	Flush	48.6	65.5	1.35	66.1	\$ 196,500.00	0.19	\$ 2,981.11	
30	Electrical Covered Storage	0	Flush	23	31	1.35	35.3	\$ 93,000.00	0.17	\$ 1,592.03	
31	Water Resources Meter Shop	0	Flush	4.6	5.8	1.26	7.7	\$ 17,400.00	0.15	\$ 347.27	
32	Public Works Operations	117.28	Flush	46.4	62.6	1.35	80.8	\$ 187,800.00	0.15	\$ 3,644.08	Additional Panels could be adding if shading was addressed
33	Public Works Operations Covered Storage	36.7	Flush	37.8	50.9	1.35	62.6	\$ 152,700.00	0.16	\$ 4,932.88	
35	Halle Cultural Arts Center	97.76	Ballasted	2.5	3.4	1.36	4.5	\$ 10,200.00	0.15	\$ 202.95	
36	Senior Center	83.85	Flush	72	97	1.35	118	\$ 291,000.00	0.16	\$ 5,321.80	
37	Public Safety Station 6	0	Flush	36.7	49.5	1.35	66.5	\$ 148,500.00	0.15	\$ -	No utility info for production savings
38	Mason St Municipal Building	0	Ballasted	18.4	24.7	1.34	33	\$ 74,100.00	0.15	\$ -	No utility info for production savings

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3 [TABLE-6 - TOWN OF APEX FACILITIES-SUMMARY]

Table 6:
Town of Apex Facilities – Summary

#	FACILITY	IS SOLAR RECOMMENDED	APPROXIMATE CAPITAL COST (\$)	STRUCTURAL COST	SYSTEM SOLAR SIZE (KW DC)	ROOF TYPE	ROOF AGE	SOLAR POTENTIAL	25YR LEVELIZED COST OF ENERGY (\$/KWHR)	PROJECT RANKING (ORDER OF BEST JOB TO COMPLETE FIRST)	NOTES
1	Parks/Rec Maint. Building	Yes	\$ 34,800.00	\$ -	11.6	Metal	8	Satisfactory	\$ 0.14	6	Tree shading issues
2	Seymour Fields Restroom/Shelter	Yes	\$ 14,700.00	\$ -	4.9	Shingle	8	Satisfactory	\$ 0.14	7	Roof may need replaced
4	Nature Park Amphitheater	Yes	\$ 34,800.00	\$ -	11.6	Metal	8	Poor	\$ 0.16	16	Bad Orientation and Tree shading issues
10	Parks/Rec Maint. Building	Yes	\$ 10,200.00	\$ -	3.4	Shingle	22	Poor	\$ 0.15	18	Tree shading issues, and roof needs replaced
12	Kelly Rd Restroom/Shelter	No	\$ 14,700.00	\$ 10,000.00	4.9	Shingle	unknown	Poor	\$ 0.15	NA	Major Structural and roof would exceed solar gain, Tree shading issues
15	Pleasant Park - Maintenance Building	Yes	\$ 32,100.00	\$ -	10.7	SS metal	New	Excellent	\$ 0.15	2	
19	Pleasant Park - Shelter #2	Yes	\$ 34,800.00	\$ -	11.6	Shingle	New	Excellent	\$ 0.19	5	
20	Pleasant Park - Signature Fieldhouse	Yes	\$ 43,800.00	\$ -	14.6	SS Metal	New	Excellent	\$ 0.14	1	
22	Seagraves Restroom/Shelter	Yes	\$ 21,900.00	\$ -	7.3	Shingle	10	Excellent	\$ 0.14	4	Roof may need replaced
23	Hunter St Restroom/shelter	Yes	\$ 21,900.00	\$ -	7.3	Shingle	10	Satisfactory	\$ 0.16	12	Roof may need replaced
26	Jaycee Park Restroom/Shelter	No	\$ 14,700.00	\$ 10,000.00	4.9	Shingle	unknown	Satisfactory	\$ 0.14	NA	Major Structural and roof would exceed solar gain, Tree shading issues
27	Fire Station # 2	Yes	\$ 80,100.00	\$ -	26.7	Metal	24	Satisfactory	\$ 0.17	15	Difficult Electrical Service connection
28	Electrical Main Office	Yes	\$ 340,500.00	\$ -	113.5	Metal	0	Excellent	\$ 0.16	3	Difficult Electrical Service connection
29	Electrical Warehouse	Yes	\$ 196,500.00	\$ -	65.5	Metal	0	Satisfactory	\$ 0.19	8	Difficult Electrical Service connection
30	Electrical Covered Storage	Yes	\$ 93,000.00	\$ -	31	Metal	0	Satisfactory	\$ 0.17	9	Difficult Electrical Service connection
31	Water Resources Meter Shop	Yes	\$ 17,400.00	\$ -	5.8	Shingle	unknown	Poor	\$ 0.15	19	Roof needs replaced, Tree shading issues
32	Public Works Operations	Yes	\$ 187,800.00	\$ -	62.6	Metal	23	Poor	\$ 0.15	17	Tree shading issues
33	Public Works Operations Covered Storage	Yes	\$ 152,700.00	\$ -	50.9	Metal	23	Satisfactory	\$ 0.16	14	
35	Halle Cultural Arts Center	No	\$ 10,200.00	\$ 15,000.00	3.4	Flat/Membrane	12	Poor	\$ 0.15	NA	Structural cost and limited solar
36	Senior Center	Yes	\$ 291,000.00	\$ -	97	Metal	0	Satisfactory	\$ 0.16	13	
37	Public Safety Station 6	Yes	\$ 148,500.00	\$ -	49.5	Metal	New	Satisfactory	\$ 0.15	10	
38	Mason St Municipal Building	Yes	\$ 74,100.00	\$ -	24.7	Flat(Membrane)/Metal	New	Satisfactory	\$ 0.15	11	

1 [TABLE-7 - TOWN OF APEX FACILITIES-RUNNING ORDER]
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Table 7:
Town of Apex Facilities – Ranking Order

#	FACILITY	APPROXIMATE SOLAR CAPITAL COST (\$)	STRUCTURAL COST	SYSTEM SOLAR SIZE (KW DC)	25YR LEVELIZED COST OF ENERGY (\$/KWH)	PROJECT RANKING (ORDER OF BEST JOB TO COMPLETE FIRST)	NOTES
20	Pleasant Park - Signature Fieldhouse	\$ 43,800.00	\$ -	14.6	\$ 0.14	1	
15	Pleasant Park - Maintenance Building	\$ 32,100.00	\$ -	10.7	\$ 0.15	2	
28	Electrical Main Office	\$ 340,500.00	\$ -	113.5	\$ 0.16	3	Difficult Electrical Service connection
22	Seagroves Restroom/Shelter	\$ 21,900.00	\$ -	7.3	\$ 0.14	4	Roof may need replaced
19	Pleasant Park - Shelter #2	\$ 34,800.00	\$ -	11.6	\$ 0.19	5	
1	Parks/Rec Maint. Building	\$ 34,800.00	\$ -	11.6	\$ 0.14	6	Tree shading issues
2	Seymour Fields Restroom/Shelter	\$ 14,700.00	\$ -	4.9	\$ 0.14	7	Roof may need replaced
29	Electrical Warehouse	\$ 196,500.00	\$ -	65.5	\$ 0.19	8	Difficult Electrical Service connection
30	Electrical Covered Storage	\$ 93,000.00	\$ -	31	\$ 0.17	9	Difficult Electrical Service connection
37	Public Safety Station 6	\$ 148,500.00	\$ -	49.5	\$ 0.15	10	
38	Mason St Municipal Building	\$ 74,100.00	\$ -	24.7	\$ 0.15	11	
23	Hunter St Restroom/Shelter	\$ 21,900.00	\$ -	7.3	\$ 0.16	12	Roof may need replaced
36	Senior Center	\$ 291,000.00	\$ -	97	\$ 0.16	13	
33	Public Works Operations Covered Storage	\$ 152,700.00	\$ -	50.9	\$ 0.16	14	
27	Fire Station # 2	\$ 80,100.00	\$ -	26.7	\$ 0.17	15	Difficult Electrical Service connection
4	Nature Park Amphitheater	\$ 34,800.00	\$ -	11.6	\$ 0.16	16	Bad Orientation and Tree shading issues
32	Public Works Operations	\$ 187,800.00	\$ -	62.6	\$ 0.15	17	Tree shading issues
10	Parks/Rec Maint. Building	\$ 10,200.00	\$ -	3.4	\$ 0.15	18	Tree shading issues, and roof needs replaced
31	Water Resources Meter Shop	\$ 17,400.00	\$ -	5.8	\$ 0.15	19	Roof needs replaced, Tree shading issues
12	Kelly Rd Restroom/Shelter	\$ 14,700.00	\$ 10,000.00	4.9	\$ 0.15	NA	Major Structural and roof would exceed solar gain, Tree shading issues
26	Jaycee Park Restroom/Shelter	\$ 14,700.00	\$ 10,000.00	4.9	\$ 0.14	NA	Major Structural and roof would exceed solar gain, Tree shading issues
35	Halle Cultural Arts Center	\$ 10,200.00	\$ 15,000.00	3.4	\$ 0.15	NA	Structural cost and limited solar
Total		\$ 1,870,200.00	\$ 35,000.00	623.4	\$ 0.16 (avg)		

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 4 **Councilmember Mahaffey** said in the table there is a flat cost per kilowatt and asked
 5 where it came from.

6 **Mr. Edwards** said it's a cost based on equipment and labor.

7 **Councilmember Mahaffey** asked is it market data, or if they sent off and got
 8 estimates.

9 **Mr. Edwards** said this is market data and typical dollar per watt.

10 **Councilmember Mahaffey** asked if the town pursues solar energy, are there federal
 11 programs available to municipalities.

12 **Interim Town Manager Purvis** said staff will look into it and see what programs are
 13 available for the town. He said they know those programs are out there, but they need more
 14 info.

15 **Mr. Edwards** said Don Reeves, the town's Sustainability Coordinator, is looking into
 16 programs that can help support solar in the town and help them increase their ROI.

17 **Councilmember Mahaffey** said the town's bill from Duke Energy involves peak
 18 demand, he asked if the batteries on the site to discharge during peak hours to offset the
 19 peak demand from Duke.

20 **Assistant Town Manager Stone** said staff has been working on finding out if the
 21 batteries on site can change. He said he spoke to someone with Duke and was told that they
 22 couldn't make a solar combined with a battery system work for our system, based on the
 23 economic considerations. He said they would put an RFP to see if somebody is able to make
 24 it work. To reduce the peak, their consideration, it was cheaper to go with battery storage at
 25 certain locations. He said the town is looking at a 10 megawatt to reduce our peak.

26 **Councilmember Mahaffey** asked what direction does staff want Council to go with
 27 this report.

1 **Assistant Town Manager Stone** said the plan is to see what kind of grants are out
2 there and what's available. He said then Council would give specific directions to staff on how
3 to move forward with solar, including specific projects. He said it's cheaper to do a package
4 than individual solar panels. He said also staff can break it down into a program and look at
5 cost wise. He said they can also specify how quickly they want staff to act on certain things
6 and work with them to create a schedule.

7 **Councilmember Killingsworth** said to go with table 6, look at solar potential, and do
8 ones rated excellent.

9 **Councilmember Mahaffey** said table 7 as it's sorted by priority.

10 **Councilmember Killingsworth** said it makes sense to do the ones with a bigger
11 potential first as a grouping.

12 **Councilmember Mahaffey** said he thinks it makes sense to wait for the lifetime of the
13 roof to replace it. He said he wants the priority for solar to be at Pleasant Park, since it's the
14 newest and supposed to their modern park.

15 **Interim Town Manager Purvis** said they can start with looking at the excellent rated
16 options. He said staff needs a little bit more time to evaluate the extra cost for the structural
17 piece. He said they can also see what the CIP looks like.

18 **Councilmember Mahaffey** said it sounds like the idea is to look at the projects over a
19 three-year period and place in priority order.

20 **Interim Town Manager Purvis** said staff will start working to put a plan together. He
21 said they will share how it would impact the budget.

22 **Councilmember Mahaffey** said he is excited about seeing the potential programs
23 the town can use to help them with this.

24 **Assistant Town Manager Stone** said the Municipal Building and Public Safety 6 are
25 solar ready and he recommends to include those buildings as part of the packaging.

26 **Councilmember Killingsworth** said she would like to see the Senior Center to be
27 included in the packaging since it's a newer building.

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30 **[ADJOURNMENT]**

31 **Mayor Gilbert** thanked everyone and declared the meeting adjourned at 4:43 p.m.

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Jacques K. Gilbert
Apex, Mayor

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37 Allen Coleman, CMC, NCCCC

38 Apex, Town Clerk

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41 Submitted for approval by Apex Town Clerk Allen Coleman.

42 Minutes approved on _____ of _____, 2024.