

Typical American SubdivisionsOctober 2016 Special Study for HousingEconomics.com Paul Emrath and Carmel Ford

In May of 2016, the National Association of Home Builders (NAHB) conducted its second survey of development projects across the U.S. Results from the 2016 survey show that the median size of a subdivision is 25 total acres, and the median number of housing units in a subdivision is 50. The results from the previous (2014) survey were not drastically different, although the median number of housing units in a subdivision was somewhat higher in the earlier survey (Figure 1).

Figure 1. 2014 and 2016 NAHB Development Project Surveys Compared

	All Subdivisi	ons	Single-family deta	ched only
	2014	2016	2014	2016
Medians				
Acres per Subdivision	24	25	22	26
Acres Dedicated to Housing	na	17	na	17
Number of Housing Units	60	50	48	45
Net Residential Density (units per acre)	na	4.0	na	3.2
Share of Subdivisions with				
Retail Space	12%	9%	4%	3%
Other Commercial Space	11%	11%	4%	3%
A Community Association	na	80%	na	83%

A question added to the 2016 survey asked about how many acres in a subdivision are dedicated specifically to housing. From this it is possible to calculate a measure of net residential density, or how many housing units are actually placed on an acre in practice. In 2016, the median net residential density was 4.0 housing units per acre—3.2 for subdivisions consisting exclusively of single-family detached homes.

In both the 2014 and 2016 surveys, roughly 70 percent of the subdivisions contained only single-family detached housing. Median acreage of the single-family

only subdivisions is about the same as for all residential subdivisions, but the median number of housing units for single-family only subdivisions is somewhat lower. Retail or other commercial space is less common in subdivisions that contain only single-family detached homes. After briefly describing the 2016 survey, the rest of this article discusses the characteristics of development projects of different types. For a description of the 2014 survey, see the <u>previous Special Study</u>

The 2016 NAHB Survey

In federal housing surveys, data is usually collected at the level of an individual housing unit. For multifamily housing, the government collects some data on new_buildings. There is also a recent effort by HUD and the Census Bureau to collect more comprehensive multifamily data by property. But for single-family housing, data have really never been available at the level of a subdivision. Private vendors may collect some relevant information, but understandably undertake an effort only when they believe it will be profitable, so the information tends to be available only in select areas, for certain types of projects, and often at considerable cost.

To help fill this gap, in May of 2016, NAHB's Economics and Housing Policy group conducted a survey to collect information about residential development projects across the US. The survey was sent electronically to 1,490 NAHB members whose primary business activity is land development. A total of 121 responded (an 8 percent response rate). The survey asked developers to provide information for up to three projects that they currently have underway, or have recently completed. Thirty-seven developers provided data on one project, 29 provided data on two, and 55 provided data on three projects.

In the U.S., most jurisdictions require that development projects have a minimum number of housing units to classify it as a subdivision. Although practices vary, a common threshold is 4 housing units. Only a handful of the projects captured in the 2016 contained fewer than 4 housing units. After deleting these, the sample

contained a total of 254 4-plus unit development projects. This article presents summary statistics for these projects and refers to them as subdivisions.

Among other things, the 2016 survey provided developers with a brief summary of the official definition of a metropolitan area (a densely settled urban area and surrounding counties tied to the urban area by frequent commuting) and asked if each development was inside or outside a metro area. Overall, the developers indicated that three-fourths of their subdivisions were in metro areas.

The survey also collected information on the type of housing built in the subdivision: single-family detached, townhome or multifamily. For purposes of this report, townhome and multifamily subdivisions are grouped together in an "attached" category. Seventy-two percent of the subdivisions in the 2016 survey sample are single-family detached, 13 percent are attached, and 15 percent are "mixed" (containing a combination of single-family detached and attached housing).

Subdivision Size

In terms of total acreage, the size of subdivisions varies widely. At the top end, some projects span many square miles, and the averages tend to be driven strongly by these relatively few extreme cases. For example, the average size of a subdivision in survey sample is 244 acres, compared to the median of only 25. Because the median better reflects projects being developed by a large share of NAHB members, this report generally uses medians to describe "typical" subdivisions. The detailed tables (available under additional resources) shows the averages as well as medians.

As Figure 2 shows, the median number of acres for subdivisions in metro areas is 29 acres, compared to 20 acres for those located outside of metro areas. These findings stand in contrast to the 2014 results: the non-metro median acreage was 40 that year, which was larger than the 20 acres for projects in metro areas. The figure also shows that the median size of subdivisions with a mix of single-family

detached and attached housing is significantly larger than that for single-family detached only, and attached-only projects.

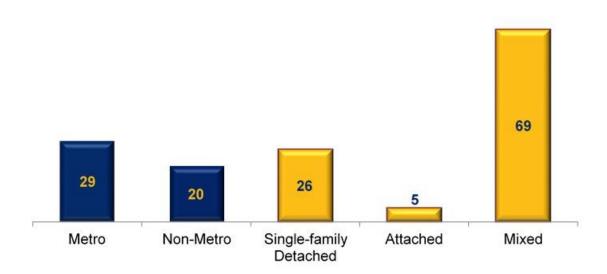
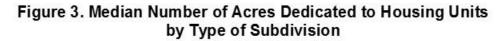
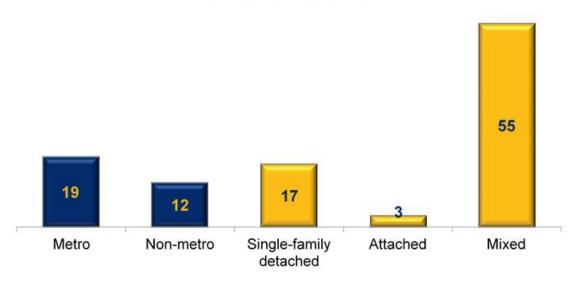


Figure 2. Median Number of Acres by Type of Subdivision

As mentioned above, the 2016 survey also asked developers about how many of the acres in a subdivision are dedicated to housing. Sometimes, this can be the same as the subdivision's total acreage—as might be expected when, for example, the development consists of a single residential city block. But for nearly 80 percent of the subdivisions in the sample, there was a (frequently substantial) difference between the size of the subdivision and the area dedicated to housing. Developers often are required by their local jurisdictions to set aside land for environmental reasons, parks, open space, etc. Some developments are also mixed-use, with space dedicated to commercial as well as residential use (see below).

Overall, the median number of acres dedicated to housing units for subdivisions in the survey is 17. The number of acres dedicated to housing units is slightly higher in metro areas at 19 acres, compared to 12 acres outside of metros. Mixed housing subdivisions have a median of 55 acres dedicated to housing, compared to 17 acres for single-family detached only, and 3 acres for attached-only subdivisions (Figure 3).

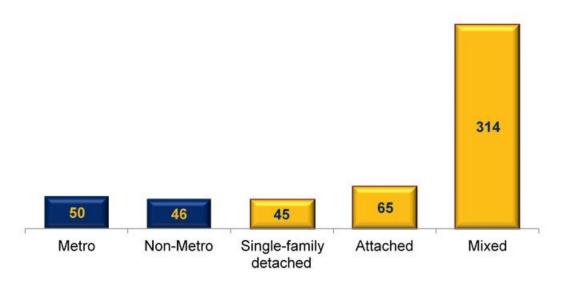




Number of Homes

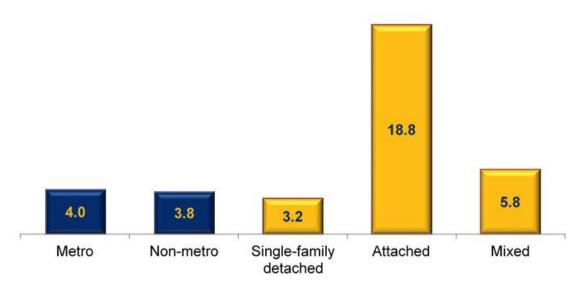
The size of a subdivision can also be measured in terms of the number of homes built in it. As Figure 1 showed, the median number of housing units in subdivisions in the 2016 survey is 50. Metro and non-metro area subdivisions contain roughly the same number of housing units. The median number of housing units in subdivisions inside metro areas is 50, compared to 46 for development outside of metro areas. Mixed housing subdivisions, which are the largest in terms of total acreage, also contain the most housing units. The median in mixed housing developments is 314 housing units, compared to a median of 65 in attached-only, and 45 in single-family detached only subdivisions (Figure 4).





Given the acreage in the subdivision dedicated to housing, and the number of housing units built on those acres, it's possible to calculate a measure of net residential density. The median net residential density for all subdivisions is 4.0 units per acre. For subdivisions located inside metro areas, the median net residential density is 4.0 units per acre, slightly higher than the 3.8 units per acre for non-metro developments. When looking at the net residential density of subdivisions by type of housing, attached-only subdivisions have the largest median net residential density of 18.8 units per acre, compared to 5.8 units per acre in mixed housing developments, and 3.2 units per acre in single-family detached only (Figure 5).

Figure 5. Median Net Residential Density by Type of Subdivision (Housing Units per Acre Dedicated to Housing)



For comparison, NAHB tabulation of data from the <u>Survey of Construction</u> (conducted by the U.S. Census Bureau with partial funding from HUD) shows that the median lot size for new single-family detached homes built for sale in 2015 was just under one-fifth of an acre (see the recent <u>NAHB Eye on Housing post</u>). The same post shows how the median lot size been declining over time, and in 2015 was the smallest on record since the Census Bureau began tracking the data.

Mixed-Use Development

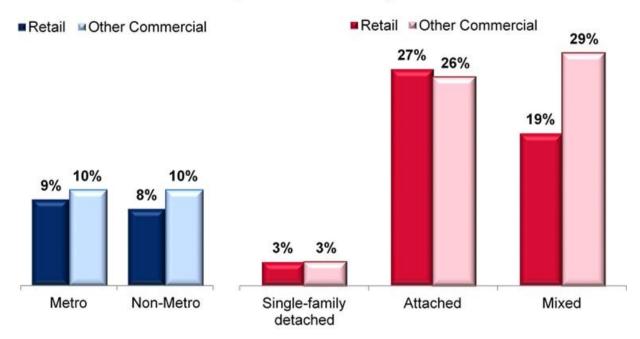
Mixed-use is a type of development that blends residential with commercial of other land uses. The NAHB survey collected information specifically about space set aside for retail or other commercial use in the subdivision. Overall, 9 percent of the subdivisions have retail space, and 11 percent have commercial space other than retail.

Inside metro areas, 9 percent of subdivisions include retail space, compared to 8 percent of non-metro area projects. Twenty-seven percent of attached-only

developments include retail space, compared to 19 percent of mixed housing and a mere 3 percent of single-family detached only developments.

The share of subdivisions with commercial space other than retail was 10 percent both inside and outside of metro areas. Again, land set aside for commercial uses was much more common in residential development that includes housing other than single-family detached. Twenty-nine percent of the mixed housing developments, and 26 percent of attached only, include commercial space other than retail, compared to a mere 3 percent of single-family detached only developments (Figure 6).

Figure 6. Retail and Other Commercial Space Included by Type of Subdivision (Percent of Subdivisons)

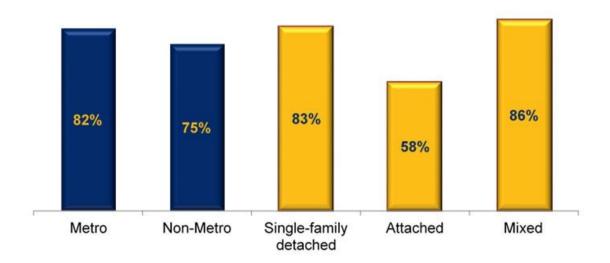


Community Associations

The survey also contained a question on whether there is a HOA, condo, or other type of community association for the development. Results show that 80 percent of the subdivisions have one of these association types.

Inside metro areas, 82 percent of the subdivisions have a HOA/condo/community association, compared to 75 percent outside of metro areas. Eighty-six percent of mixed housing developments have a HOA/condo/community association, compared to 83 percent of single-family detached only, and 58 percent of attached-only developments (Figure 7).





The likelihood of a project having a HOA/condo/community association increases as the number of housing units increase. Seventy-eight percent of projects with 4 to 49 units have a HOA/condo/community association, compared to 83 percent of projects with 50 or more units (see the detailed tables available under "additional resources").

For comparison, NAHB tabulation of data from the Survey of Construction shows that 59 percent of new single-family homes started in 2015 were part of a community or homeowner's association.

As the above discussion has demonstrated, significant differences exist among subdivisions projects depending on where they are located and the type of housing built in them. For convenience, a profile for each of the five major types of

subdivisions is compiled and made available in the "additional resources" box that appears at the top of the online version of this article. Also available under "additional resources" are detailed tables with additional information for each type of subdivision and breakdowns by region and housing units in the development, as well as a copy of the questionnaire for the 2016 NAHB survey used to collect the data for this article.

TYPICAL SUBDIVISION PROFILES

Subdivisions Inside Metropolitan Areas:

- Median size: 29 acres.
- Median area dedicated to housing: 19 acres.
- Median number of housing units: 50.
- Median net residential density: 4.0 units per acre.
- 9% include retail space.
- 10% include other (non-retail) commercial space.
- 82% have a HOA/condo/community association.

Subdivisions Outside Metropolitan Areas:

- Median size: 20 acres.
- Median area dedicated to housing: 12 acres.
- Median number of housing units: 46.
- Median net residential density: 3.8 units per acre.
- 8% include retail space.
- 10% also include other (non-retail) commercial space.
- 75% have a HOA/condo/community association.

Single-family detached Housing-Only Subdivisions:

- Median size: 26 acres.
- Median area dedicated to housing: 17 acres.
- Median number of housing units: 45 units.
- Median net residential density: 3.2 units per acre.
- 3% include retail space.
- 3% include other (non-retail) commercial space.
- 83% have a HOA/condo/community association.
- 72% are located in a metropolitan area.

Attched (towhhome or multifamily) Housing-Only Subdivisions:

- Median size: 5 acres.
- Median area dedicated to housing: 3 acres.
- Median number of housing units: 65.
- Median net residential density: 18.8 units per acre.
- 27% include retail space.
- 26% include other (non-retail) commercial space.
- 58% have a HOA/condo/community association.
- 88% are located in a metropolitan area.

Subdivisions with a Mix (attached and single-family detached) of Housing Types:

- Median size: 69 acres.
- Median area dedicated to housing: 55 acres.
- Median number of housing units (including all types): 314 units.
- Median net residential density: 5.8 units per acre.
- 19% include retail space.
- 29% include other (non-retail) commercial space.
- 86% have a HOA/condo/community association.
- 76% are located in a metropolitan area.

NAHB 2016 SURVEY OF LAND DEVELOPMENT PROJECTS: DETAILED TABLES

1. Total number of acres in the project

(Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Fewer than 5 acres	19	21	15	16	48	15	36	3	4	25	14	13	31
5 to 19 acres	22	19	33	25	19	12	34	33	2	19	27	17	28
20-99 acres	39	40	36	42	30	32	29	55	46	44	35	47	28
100 acres or more	19	20	16	17	4	41	1	9	48	13	24	23	13
Average	244	306	80	87	15	1196	17	39	624	41	72	114	570
Average without largest	85	87	80	87	15	134	17	39	196	41	72	114	61
project in sample													
Median	25	29	20	26	5	69	9	20	93	27	30	38	10
Number of Projects	228	165	61	167	27	34	111	33	84	16	37	104	71

2. How many of those acres are dedicated to housing units (Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Fewer than 5	25	27	21	22	52	18	47	6	4	44	24	13	38
5-10 acres	12	7	25	13	15	3	20	9	2	13	11	6	21
10-20 acres	17	16	20	19	15	12	17	46	6		14	20	18
21-60 acres	22	23	16	22	15	24	13	21	33	25	16	32	9
60 to 100 acres	11	13	5	11	4	15	3	12	21	6	14	14	7
100 or more	14	13	13	13		29	1	6	33	13	22	15	7
Average	75	83	52	53	11	232	12	32	175	31	51	69	105
Average without largest	53	53	52	53	11	89	12	32	117	31	51	69	36
project in sample													
Median	17	19	12	17	3	55	5	16	65	8	25	26	7
Number of Projects	228	165	61	167	27	34	111	33	84	16	37	104	71

3. Total Units: Single-family + Multifamily + Townhomes (Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
4-10 Units	9	10	8	11	12		19			4	9	5	18
11-25 Units	19	17	23	20	21	11	38			30	19	15	21
26-49 Units	21	21	22	24	15	13	43			26	28	19	20
50-99 Units	16	14	22	17	15	11		100		19	19	14	16
100 Units or more	35	37	25	28	38	66			100	22	26	48	25
Total Units													
Average	200	215	159	121	130	643	24	67	513	103	113	197	288
Median	50	50	46	45	65	314		63	292	39	41	82	
Number of Projects	254	187	64	182	34	38	126	40	88	27	43	108	76
		•	•	72%	13%	15%		•	•			•	

4. Net Residential Density: Units/Acres Dedicated to Housing Units (Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	ion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
1 or fewer units per acre	8	6	13	11			13	12		19	11	6	7
1.01 to 5 units per acre	53	54	51	65		35	50	55	57	38	62	62	39
5.01 to 10 units per acre	24	24	23	19	26	47	22	21	29	13	16	23	32
More than 10 units per acre	15	16	13	5	74	18	16	12	14	31	11	10	21
Average	8.6	8.5	9.0	5.2	30.8	7.7	8.4	9.1	8.6	20.5	7.0	5.2	11.7
Median	4.0	4.0		3.2	18.8	5.8	3.6	3.3	4.5	2.9	2.6	3.5	5.3
Number of Projects	228	165	61	167	27	34	111	33	84	16	37	104	71

5. How many different general contractors do you estimate will build (built) in this development? (Percent of Development Projects)

		Metrop	olitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
1	54	52	57	52	82	34	67	59	32	67	44	44	67
2	10	12	7	10	3	18	3	15	17		7	17	7
3, 4 or 5	19	18	21	23	6	13	14	18	25	19	26	21	12
More than 5	18	19	15	16	9	34	15	8	25	15	23	19	14
Average	5.9	6.6	4.0	4.3	3.0	15.8	4.0	2.3	10.1	4.5	5.1	7.4	4.9
Median	1.0	1.0	1.0		1.0		1.0	-	3.0	1.0	_	-	
Number of Projects	245	181	61	173	34	38	119	39	87	27	43	102	73

6. How many years will (did) it take to completely build out the project? (Percent of Development Projects)

		Metrop	oolitan		Туре			Total Units			Reg	ion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Less than 1	1	1	2	1	3		2						3
1 to 2 years	18	19	17	19	21	14	29	10	7	11	14	17	26
2 to 4 years	42	43	41	46	61	11	47	64	27	56	30	44	43
More than 4 years	38	37	41	35	15	76	23	26	66	33	56	40	28
Average	4.3	4.1	4.7	3.9	2.6	7.5	3.0	3.6	6.4	4.4	5.5	4.2	3.6
Median	3.0									3.0		3.0	2.1
Number of Projects	245	183	59	175	33	37	120	39	86	27	43	101	74

7. Does the project include any retail space? (Percent of Development Projects)

		Yes No			Type			Total Units			Reg	ion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Yes	9	9	8	3	27	19	2	5	19	19	5	9	7
No	91	91	92	97	73	81	98	95	81	81	95	91	93
Number of Projects	247	181	63	177	33	37	123	38	86	26	43	105	73

8. Does it include any other commercial space? (Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Yes	11	10	10	3	26	29	3	11	21	19	8	9	11
No	89	90	90	97	74	71	97	89	79	81	92	91	89
Number of Projects	246	184	60	174	34	38	123	37	86	26	38	108	74

9. Is it part of a larger subdivision/ development project? (Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Yes	35	33	42	39	12	37	38	28	34	26	49	44	18
No	65	67	58	61	88	63	62	73	66	74	51	56	82
Number of Projects	254	187	64	182	34	38	126	40	88	27	43	108	76

10. Is there a HOA/condo/community association? (Percent of Development Projects)

		Metrop	olitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Yes	80	82	75	83	58	86	78	83	83	63	85	91	68
No	20	18	25	17	42	14	22	18	17	37	15	9	32
Number of Projects	245	182	61	175	33	37	121	40	84	27	41	105	72

11. Are any of the housing units age-restricted? (Percent of Development Projects)

		Metrop	oolitan		Type			Total Units			Reg	jion	
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Yes	4	2	8	1	15	13	2	5	8	11	2	4	4
No	96	98	92	99	85	87	98	95	92	89	98	96	96
Number of Projects	250	184	63	178	34	38	122	40	88	27	43	107	73

12. Is the project in a metropolitan area? (Percent of Development Projects)

		Metropolitan		Туре			Total Units			Region			
	Total	Yes	No	Single- family Detached	Attached	Mixed	4 to 49 Units	50 to 99 Units	100 Units or more	North- east	Mid- west	South	West
Yes	75	100		72	88	76	73	65	81	77	68	84	63
No	25		100	28	13	24	27	35	19	23	32	16	37
Number of Projects	251	187	64	181	32	38	125	40	86	26	41	108	76

2016 SURVEY OF LAND DEVELOPMENT PROJECTS

1. Please provide the following basic information for up to <u>three</u> residential development projects that you have currently under way, or have completed recently. If a project is developed in phases, provide information for the most recent phase only and check "Yes" in part J.

	Project 1	Project 2	Project 3
A. Total number of acres in the project			
B. How many of those acres are dedicated to housing units (after setting aside land for environmental reasons, parks/open space, commercial or other residential uses/streets)?			
C. Number of single-family detached housing units			
D. Number of townhomes (attached side-by-side housing units)			
E. Number of multifamily units (either condo or rental)			
F. How many different general contractors do you estimate will build (built) in this development?			
G. How many years will (did) it take to completely build out the project?			
H. Does the project include any retail space?	Mm1□ Yes mm2□ No	Mm3□ Yes mm4□ No	Mm5□ Yes mm6□ No
I. Does it include any other commercial space?	Mm7□ Yes mm8□ No	Mm9□ Yes mm10□ No	Mm11□ Yes mm12□ No
J. Is it part of a larger subdivision/ development project?	Mm13□ Yes mm14□ No	Mm15□ Yes mm16□ No	Mm17□ Yes mm18□ No
K. Is there a HOA/condo/community association?	Mm19□ Yes mm20□ No	Mm21□ Yes mm22□ No	Mm23□ Yes mm24□ No
L. Are any of the housing units agerestricted?	Mm25□ Yes mm26□ No	Mm27□ Yes mm28□ No	Mm29□ Yes mm30□ No
M. Is the project in a Metropolitan Area? (A metropolitan area consists of a densely settled urban area, and surrounding counties tied to the urban area by frequent commuting)	Mm31□ Yes mm32□ No	Mm33□ Yes mm34□ No	Mm35□ Yes mm36□ No
2. Comments			