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# REPORT

EA-HQ-85-25

STATUS REPORT

ON-RESERVE HOUSING  
PROJECT IMPLEMENTATION

MARCH 1, 1985

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Technical Services  
and Contracts

Services techniques  
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# REPORT

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STATUS REPORT

ON-RESERVE HOUSING  
PROJECT IMPLEMENTATION

MARCH 1, 1985

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Project Management  
Technical Services and  
Contracts Branch

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Status Report: On-Reserve HousingProject Implementation March 1, 19851.0 General

This report represents the results of a survey of on-reserve housing implementation for 7 of 8 regions and shows status as of March 1, 1985. The data was obtained from the Engineering and Architecture sections of each regional office. Subsequently, the data was graphically modelled in HQ by the Project Management Section using the Wang Computer and the Lotus 1-2-3 Program.

1.1 Status Summary: All Regions

(1) <u>Housing Production</u>		
- Target Units 84/85		2544
- Completed		1291
- Under Construction		1185
- Total Production		2476
(2) <u>Housing Inspections</u>		
- Units Inspected		2039
- Inspection Reports		4867
- Percentage Inspected		82.3%
- Inspections Per Unit		2.4
(3) <u>Inspection Costs (non-NHA)</u>		
- Current Year Allocation (Non-NHA)	\$	797.3K
- Expenditures/Commitments to Date	\$	774.9K
- Current Year Forecast	\$	833.0K
- Cost Per Unit Inspected	\$	560
- Cost Per Inspection	\$	225

1.2 Statistical Base

The above summary is derived from regional housing statistics displayed in figures 1, 2 and 3. Figure 1 "Housing Production" lists the number of housing units, both NHA and non-NHA financed, that are targetted for fiscal year end 1984/85, are under construction and are completed. Manitoba and B.C. have the largest targets at 820 and 602 units respectively.

Figure 2 summarizes inspection statistics including total units under construction or complete that are available for inspection, the number of units inspected once or more times, and the number of inspection reports produced to date. Manitoba and Saskatchewan have produced the most inspection reports by far.

Figure 3 outlines housing inspection costs by region. The current year allocation (provided by Housing Branch); expenditures plus commitments to date; and current year forecast are placed beside the number of non-NHA financed and targetted units. Manitoba forecasts spending more than 5 times as much as B.C. even though its target is less than 2 times that of B.C.

1.3	<u>Major Issues &amp; Concerns</u>	<u>Recommended Action</u>	<u>BY</u>
	(1) <u>Reporting</u>		
	- Incomplete Atlantic & Ontario Data	.1- Establish regular & standardized reporting requirements/clarify regional roles and responsibilities	HQ
	- Inconsistent & Unreliable Data		
	- Irregular Data Collection Methods	.2- Regions to forward complete data	ATL & QNT
	(2) <u>Production</u>		
	- Quebec & Manitoba target shortfalls by 30% (NHA)	.1- Causes of shortfall to be determined	QUE & MAN
	- 48% of production is incomplete (likely carry-overs)	.2- Determine cause for delayed implementation	HQ
		.3- Establish tools & procedures to minimize annual carry-overs	HQ
		.4- Arrange fall workshop to address implementation problems	HQ
	(3) <u>Inspections</u>		
	- 16.4% or 253 non-NHA units uninspected	.1- Explain cause for incomplete inspection program	QUE, YK, ALTA & B.C.
	- 31.4% or 284 NHA units uninspected		
	- Quebec, Alberta, B.C. & Yukon 30-50% non-NHA units uninspected	.2- Review & recommend how to maintain full inspection program	HQ
	- Inspection frequency 1 to 5 per unit (i.e. Manitoba to Yukon)	.3- Determine factors affecting inspection frequency	HQ

(4) Inspection Costs

- |  |  |           |
|--|--|-----------|
| - Manitoba C.Y. forecast & expenditures exceed C.Y. allocation by \$400K               | .1- Determine nature & cause of extreme costs & recommend actions to reduce cost                                       | <u>HQ</u> |
| - Manitoba & Yukon costs exceed program's estimate of \$400 per unit by \$700 to \$800 | .2- Determine breakdown detail of inspection unit costs to establish more reliable inspection cost estimates & budgets | <u>HQ</u> |
| - Cost per inspection ranges from \$512 (Manitoba) to \$42 (Saskatchewan)              | .3- Sample inspection reports to be reviewed to assess value for money   | <u>HQ</u> |

2.0 Data Collection & Quality

The accuracy of this regional data is not assured and should be read and interpreted with caution. Several regions expressed their unpreparedness in providing this data despite the recent 1983/84 exercise which required reporting of identical information every second month throughout that year. Some regions, like Manitoba, have set up regular on-going housing reporting systems from a district level - this facilitated their response. On the other hand, some regions were ill-prepared and had to resort to field telephone calls to district project officers and managers to pool statistics - Ontario has been unable to get responses from all its districts within a reasonable time and thus is notably absent from this report. Further, Housing Branch also has collected statistics on housing from the regions for the same reporting period and has obtained figures which are, with few exceptions, at variance with our E&A data.

If housing program statistics such as have been collected here, are seen to have continued value to HQ, then measures should be taken to address the problems of inconsistency and unreliability of regional data. Regular and standardized reporting requirements could help. Give regions the impetus to establish data collection mechanisms. Further, clarification of regional roles and responsibilities for reporting on housing could help to get the reporting activity in workplans and eliminate some current duplication and error.

### 3.0 Regional Commentary

Comments on regional housing implementation are noted below:

#### Atlantic

- 28 houses that were targetted for 1984/85 under NHA funding cannot be completed this year pending receipt of Ministerial Guarantee approval.

#### Quebec

- Cree housing has not been included in statistics. It is funded by CMHC.
- No information on CMHC housing inspections and inspection reports was available.

#### Ontario

- No housing information available owing to difficulties in collecting district statistics

#### Manitoba

- Housing statistics include carry-over units from fiscal year 1983/84.
- Region has established regular systematic reporting procedure to maintain record of housing project status across all districts.

#### Saskatchewan

- Some bands have been reluctant to provide information on housing when requested
- Inaccuracies in reporting units complete is due in part to variances in field definition of what is a completed house
- Region is planning to maintain housing status reports at 1 to 2 month intervals
- Current year allocation for housing inspections was nil in 1984/85 (although HQ records allocate \$130.0 k)



- More compliance inspections this year have been done by Native compliance inspectors

#### Alberta

- Housing units that are not complete due to seasonal deficiencies (eg. painting, landscaping) should be complete by June 1985
- The requirement for monthly capital status reports sometimes leads to extra non-NHA inspections
- More inspections next year are planned on last year's housing
- Some trailers are included in the count of units inspected.

#### B.C.

- Region has reported status up to January 31, 1985 which somewhat reduces their effectiveness compared with other regions reporting to March 1.
- Region collects housing status reports every 2 months from their districts

#### Yukon

- 4 houses completed in 1984/85 are carry-overs from 1983/84
- Current year forecast is based on an average of 5 inspections per unit and \$122.00 per inspection

### 4.0 Graphic Analysis

A series of graphic models of regional housing statistics is presented as a new and convenient means to analysis of housing program status and performance. All the graphics have been developed from the basic survey data compiled in figures 1, 2 and 3. Where applicable, actions are recommended to address problematic conditions.



FIGURE 1

HOUSING PRODUCTION  
As of: March 1, 1985

REGION	TARGET UNITS			UNDER CONSTRUCTION			COMPLETED		
	NHA	NON-NHA	TOTAL	NHA	NON-NHA	TOTAL	NHA	NON-NHA	TOTAL
ATLANTIC	28	81	109	0	52	52	0	29	29
QUEBEC	74	116	190	35	126	161	18	61	79
ONTARIO	0	0	0	0	0	0	0	0	0
MANITOBA	215	605	820	76	199	275	74	360	434
SASK	144	333	477	59	120	179	109	187	296
ALBERTA	147	166	313	43	110	153	104	103	207
B.C.	350	252	602	166	181	347	118	93	211
YUKON	26	7	33	8	10	18	25	10	35
TOTAL	984	1560	2544	387	798	1185	448	843	1291

FIGURE 2

INSPECTIONS

REGION	UNITS UNDER CONST/COMPLETE		UNITS INSPECTED		# OF INSPECTION REPORTS TO DATE	
	NHA	NON-NHA	NHA	NON-NHA	NHA	NON-NHA
ATLANTIC	0	81	0	81	0	268
QUEBEC	53	187	0	114	0	226
ONTARIO	0	0	0	0	0	0
MANITOBA	150	559	150	559	203	1184
SASK	168	307	168	307	233	912
ALBERTA	147	213	141	153	409	507
B.C.	384	274	159	164	423	307
YUKON	33	20	33	10	145	50
TOTAL	935	1641	651	1388	1413	3454

FIGURE 3

INSPECTION COSTS (\$000)

REGION	# OF NON-NHA UNITS (TARGET)	CURRENT YEAR		CURRENT YEAR FORECAST
		ALLOCATION	EXPEND/COMM TO DATE	
ATLANTIC	81	10.0	10.0	10.0
QUEBEC	116	29.0	18.7	24.0
ONTARIO	0	220.0	0	0.0
MANITOBA	605	210.0	606.6	612.6
SASK	333	130.0	12.7	12.7
ALBERTA	141	49.0	24.9	27.0
B.C.	350	137.0	89.7	120.0
YUKON	26	12.3	12.3	26.7
TOTAL	1652	797.3	774.9	833.0

#### 4.1 Housing Production

##### 4.1.1 Target Success (Figure 4)

###### Analysis:

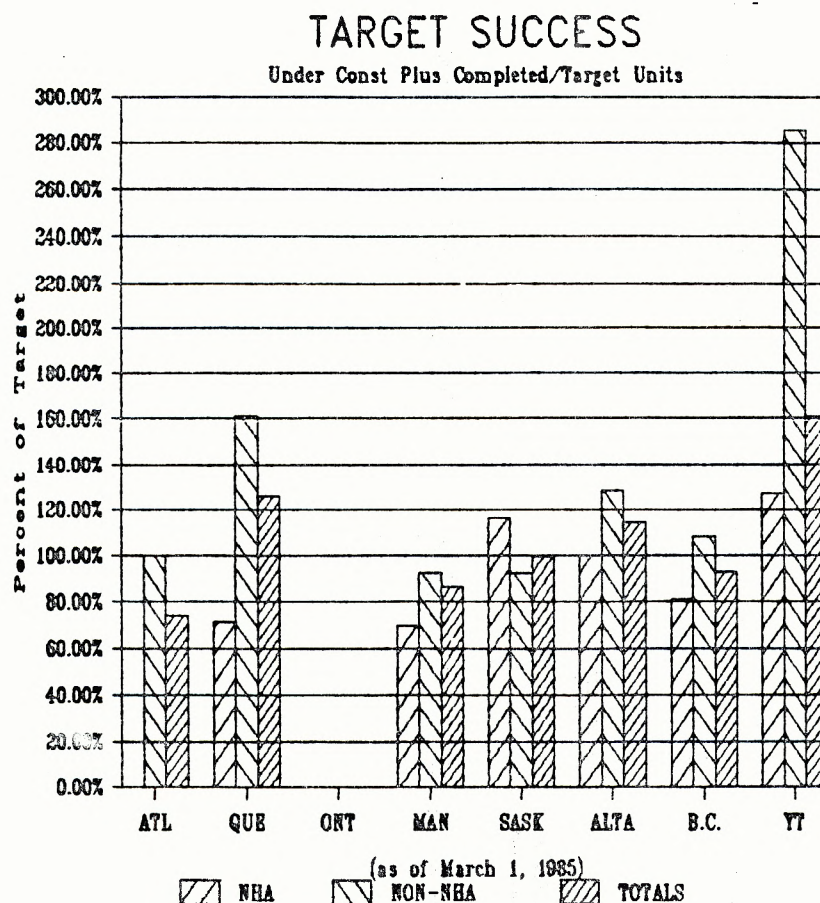
This chart illustrates the degree to which regions have met or exceeded original targets for housing to be built during 1984/85. Success is measured by percentage of the reported target (number of units that are under construction and complete are compared with target).

Most regions have kept close to or exceeded their original construction targets, particularly in the non-NHA area. Quebec and Manitoba have an apparent shortfall of about 30% under NHA financing. Atlantic has not reported any NHA construction activity, although it has 28 NHA units targeted. Ontario has not reported.

###### Action:

Quebec and Manitoba should identify cause of shortfall of target in housing production. HQ should review response to determine what further action might be required. Atlantic region should obtain statistics on NHA financed units and provide to HQ. Ontario should provide HQ with statistics on its housing production.

FIGURE 4



#### 4.1.2 Housing Production (Figure 5)

##### Analysis:

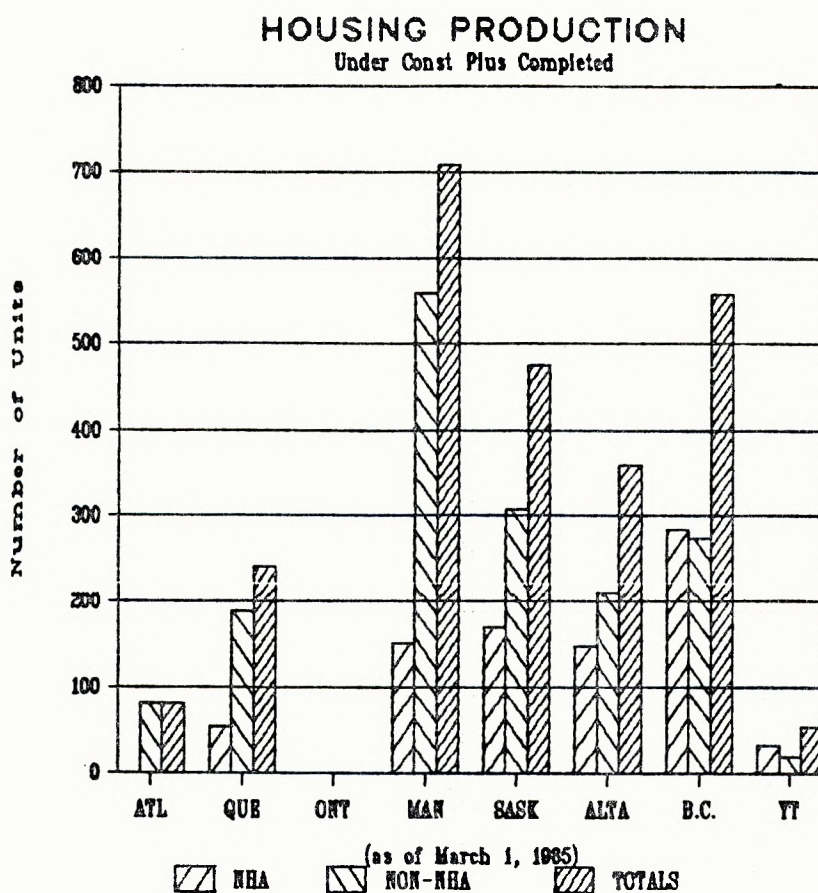
Housing production is represented by the sum of units reported by regions to be completed or still under construction.

The largest housing production occurs in Manitoba, B.C. and Saskatchewan. Total production, excluding Ontario and NHA units in Atlantic, is 2476 units.

##### Action:

N/A

FIGURE 5





#### 4.1.3 Completions All Regions (Figure 6)

##### Analysis:

This pie chart shows the total number of units completed for all regions by NHA or non-NHA funding.

The majority (65%) of completions are non-NHA financed. The total units completed is 1291, however this represents only 52 percent of total housing production.

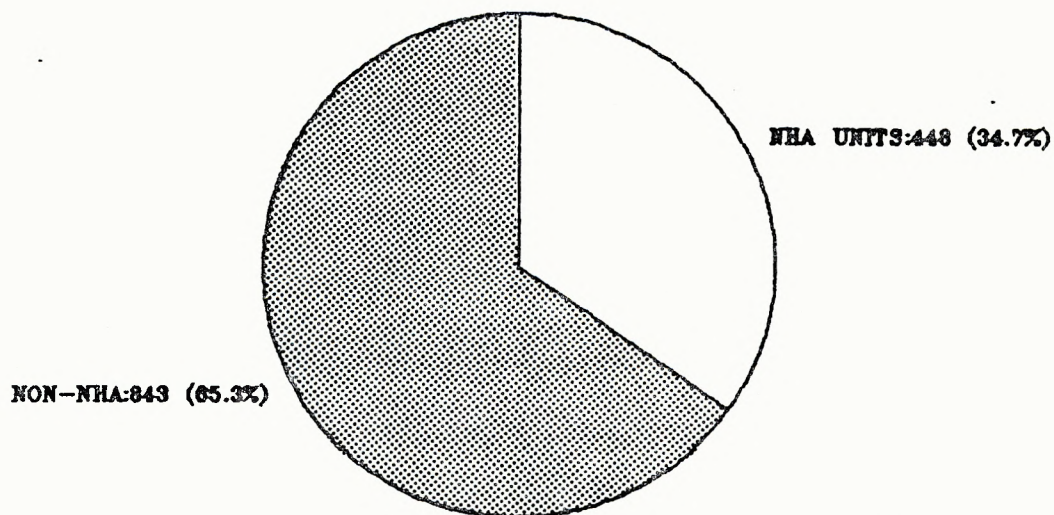
##### Action:

N/A

### COMPLETIONS (all Regions)

FIGURE 6

TOTAL UNITS = 1291



#### 4.1.4 Completions (Figure 7)

##### Analysis:

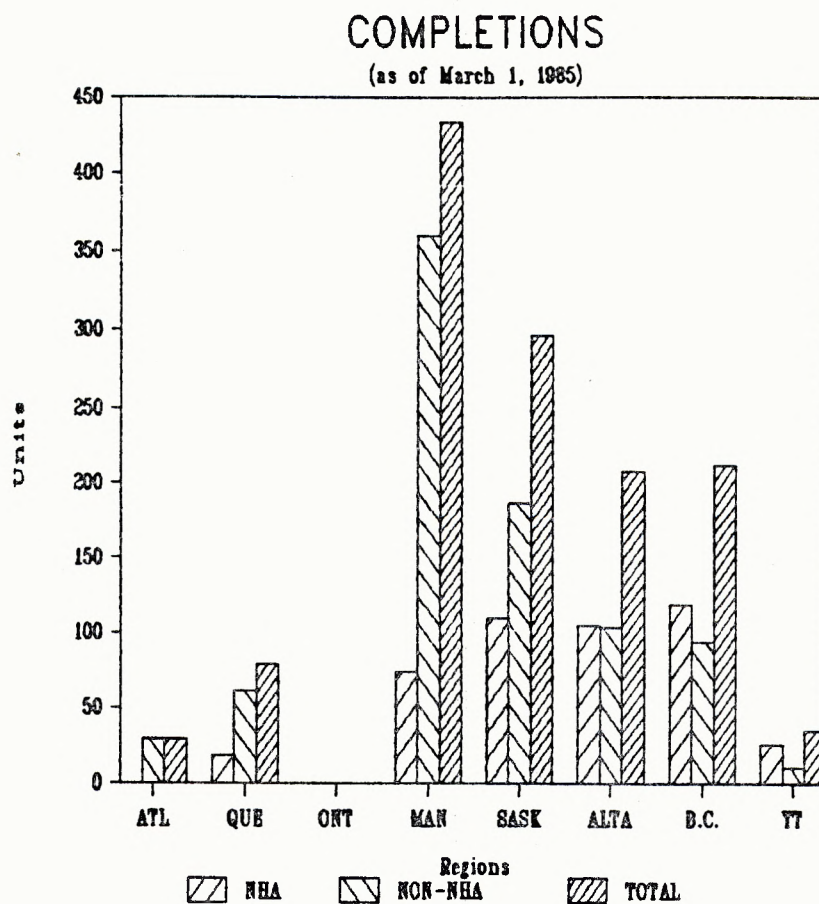
Regional completions by funding source are displayed here.

Manitoba has completed the most housing units - one-third of the national total of 1291 completions.

##### Action:

N/A.

FIGURE 7



#### 4.1.5 Units Under Construction All Regions (Figure 8)

##### Analysis:

The total number of housing units under construction as of March 1, 1985 is shown by funding source.

Of the 1185 units under construction, 67.3 percent are non-NHA financed. When compared with 1291 completions (Fig. 6), it appears that 48 percent of the total production will not be completed in fiscal year 1984/85.

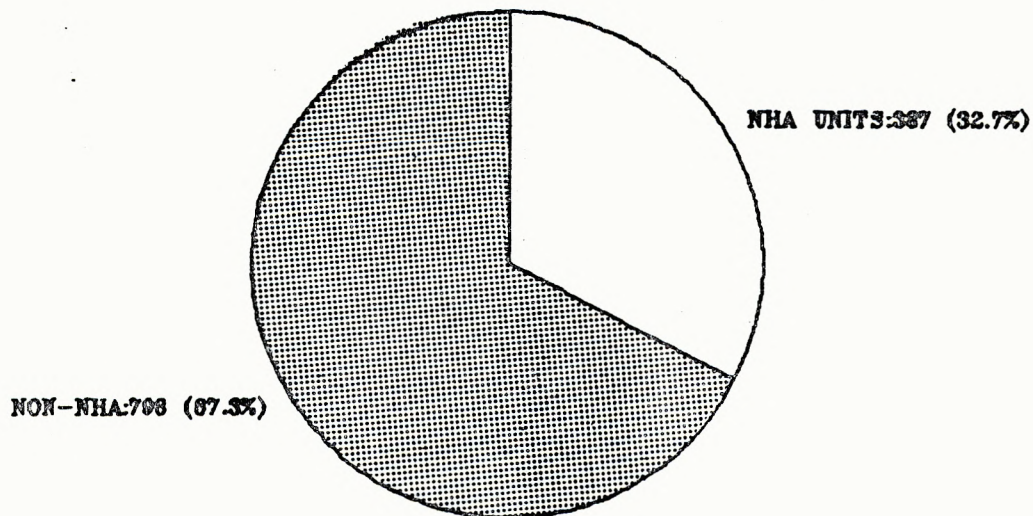
##### Action:

The nature and extent of problems that cause delay to housing program implementation should be determined as soon as possible by HQ by means of a survey. HQ should analyse results to establish suitable tools and procedures that can expedite the implementation process and minimize carry-overs. Subsequently, a fall workshop should be arranged to discuss regional implementation problems and HQ-developed implementation aids.

### UNITS UNDER CONSTRUCTION ALL REGIONS

Total : 1185 Units

FIGURE 8





#### 4.1.6 Under Construction (Figure 9)

##### Analysis:

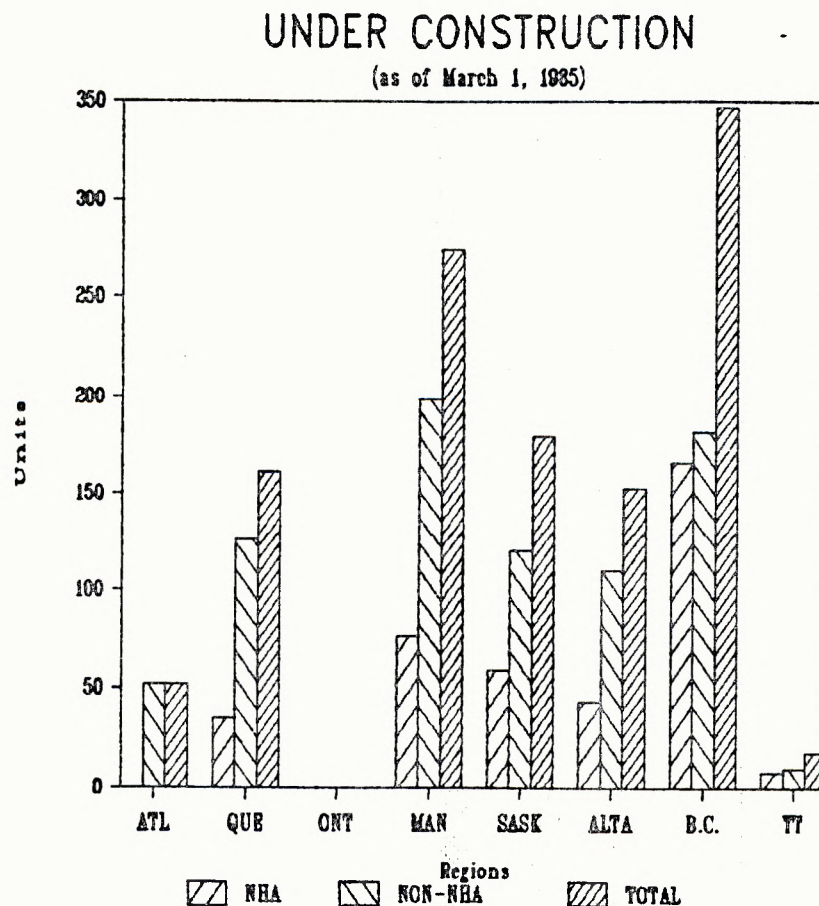
The total number of NHA and non-NHA housing units under construction by region is shown.

Of the 1185 incomplete units, B.C. and Manitoba have the largest share at 347 and 275 units respectively. Saskatchewan, Quebec and Alberta follow with somewhat over 150 incomplete units each. Most of these remaining units are non-NHA type.

##### Action:

Regional directors of E&A in these regions should account for the significant shortfall in housing completions within the fiscal year. At the same time, ideas should be solicited to minimize the number of units left to complete at each fiscal year end.

FIGURE 9



## 4.2 Housing Inspections

### 4.2.1 Percentage Non-NHA Housing Inspected (Figure 10)

#### Analysis:

This diagram displays the percentage of non-NHA housing, under construction or complete, that has been inspected in all regions.

Some 1388 units or 84.6 percent of all 1641 non-NHA units have been inspected.

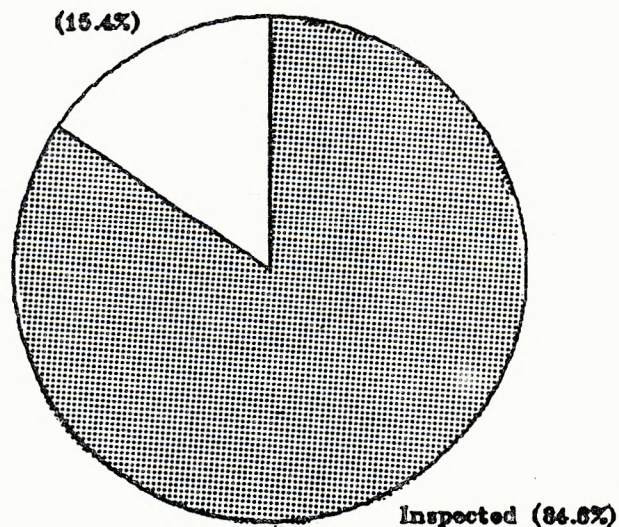
#### Action:

See 4.2.3

FIGURE 10

## PERCENTAGE NON-NHA HOUSING INSPECTED

(Units Inspect/Units Under Const+Compl)



#### 4.2.2 Percentage NHA Housing Inspected (Figure 11)

##### Analysis:

The percentage of NHA funded housing under construction or complete, that has been inspected in all regions is shown here.

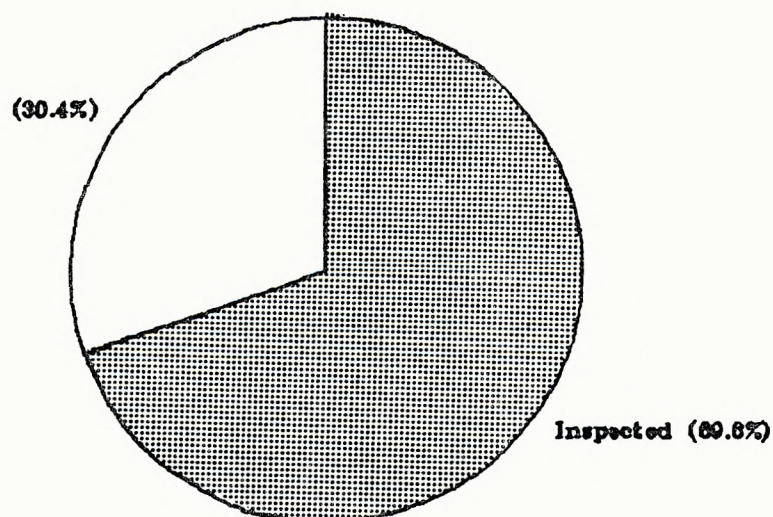
Only 69.6 percent or 651 of all 935 NHA housing units have received inspection.

##### Action:

See 4.2.3

FIGURE 11

**PERCENTAGE of NHA HOUSING INSPECTED**  
(Units Inspect/Units Under Const+Compl)





#### 4.2.3 Percentage of Housing Inspected (Figure 12)

##### Analysis:

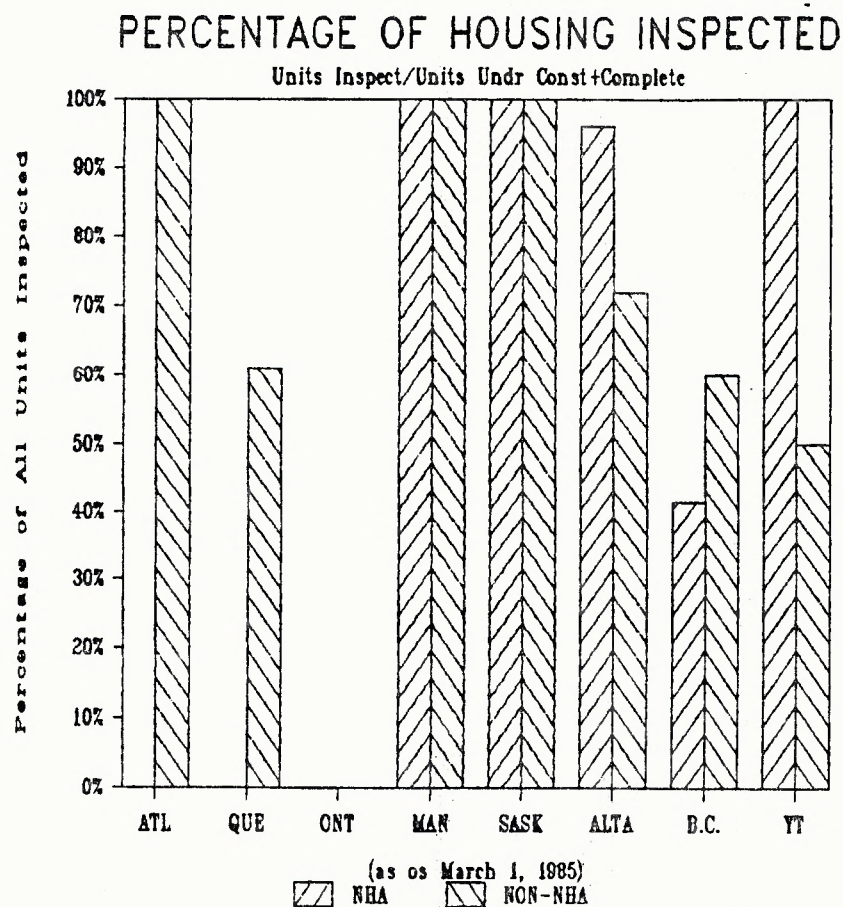
Percentages of units inspected by region and by funding is presented.

Manitoba and Saskatchewan are alone in having inspected all their units under construction and complete, NHA and non-NHA. Yukon has inspected all its NHA units; Atlantic all its non-NHA units. On the other hand, Quebec, Alberta, B.C. and Yukon have not inspected between 30 and 50 percent of their non-NHA housing.

##### Action:

Regional Directors of E&A in Quebec, Alberta, B.C. and Yukon should provide an explanation for the lack of all regional housing units being inspected at least once. Regions should identify to HQ any difficulties in implementing a full inspection program. HQ should review difficulties and provide recommendations to regions as to how to maintain an inspection program for all housing.

FIGURE 12



#### 4.2.4 Inspection Frequency (Figure 13)

##### Analysis:

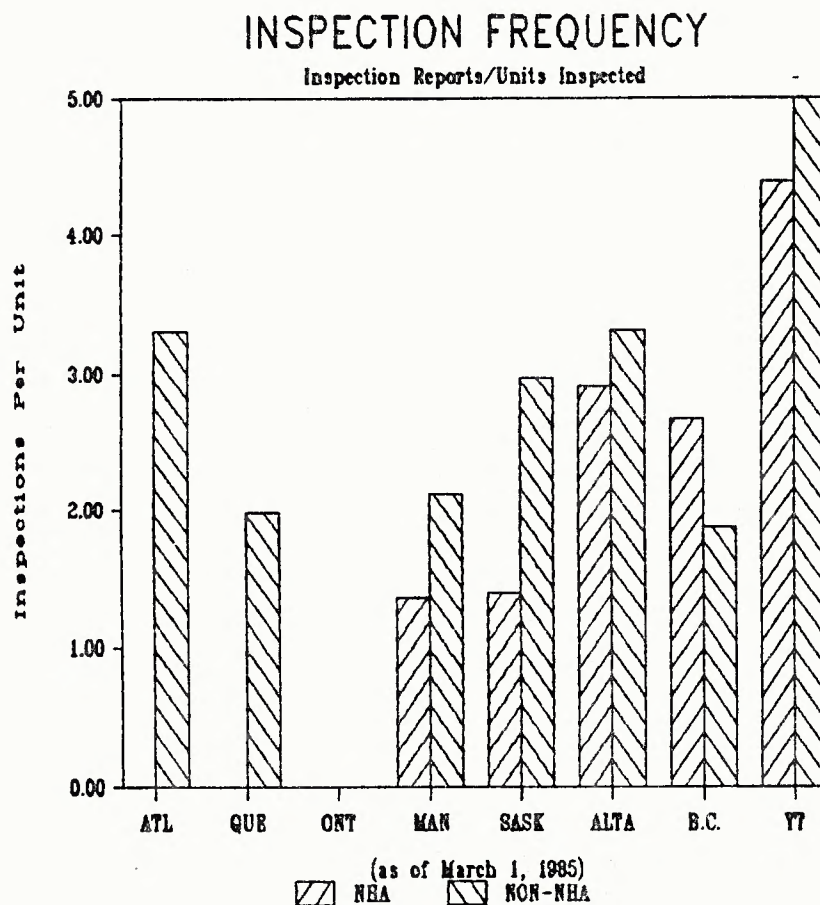
This bar chart displays the number of inspections given to each housing unit by region based on the number of inspection reports produced for only the housing units that have been inspected. NHA and non-NHA units are separated.

The frequency of inspection ranges from 1 to 5 inspections per unit with Yukon doing the most. On average, 2 to 3 inspections per unit seems the practice.

##### Action:

Regional experience with inspections should be reviewed. TS&C should determine what factors determine the frequency of inspections.

FIGURE 13



### 4.3 Housing Inspection Costs

#### 4.3.1 Allocation/Inspection Costs by Region (Figure 14)

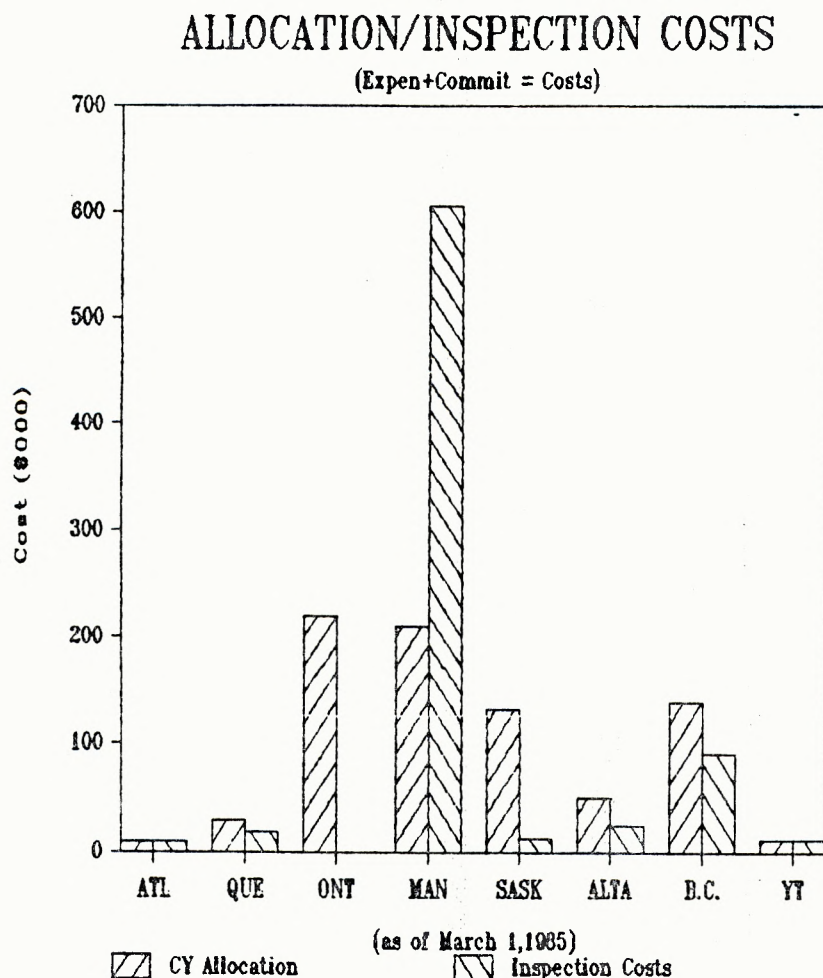
##### Analysis:

This chart shows the total housing inspection costs, that is, expenditures plus commitments to date, reported by regions as of March 1, 1985 compared with current year allocations from HQ.

Manitoba clearly has the largest inspection costs of any region by more than \$500K. Compared with the total current year allocation reported by regions (\$388.3K), more than double the allotted funds have been spent. However, in fact, based on Housing Directorate records, the actual allocations for Quebec, Saskatchewan, Alberta and B.C. are more than reported and are sufficient to cover their expenditures and commitments to date and current year forecast for inspections. Manitoba and Yukon are the exceptions, where their current year forecasts exceed their allocation - by \$402.6K and \$14.4K respectively.

##### Action:

HQ should examine the nature and cause of the exceptional inspection costs in Manitoba and determine what actions can be recommended to reduce these costs for current and future years.





#### 4.3.2 Inspection Cost Per Unit (Figure 15)

##### Analysis:

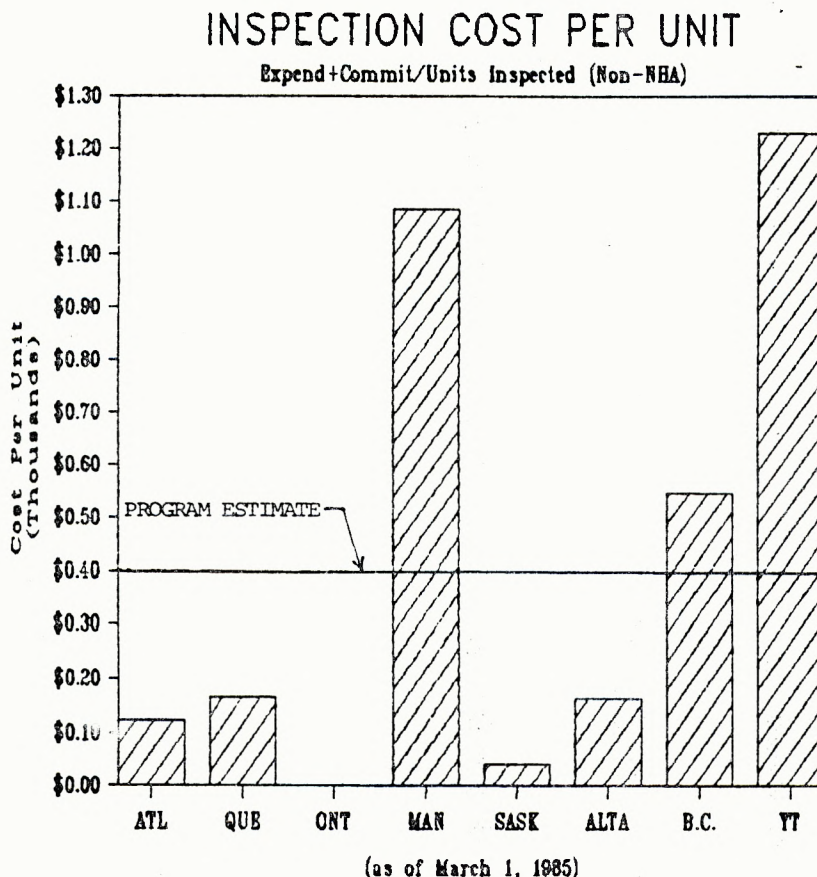
The inspections costs shown are derived from regional reports of expenditures plus commitments compared with the number of non-NHA housing units that have been inspected.

The inspection costs per unit range from about \$1200.00 in Yukon to \$38.00 in Saskatchewan. Inspection funding is allocated using a cost of \$400.00 per non-NHA unit. Only Atlantic, Quebec, Saskatchewan and Alberta have fallen within that figure. Manitoba's costs are about \$1100.00 per unit; B.C.'s costs are about \$550 per unit. Inspection costs vary so widely that no pattern or normal cost is evident.

##### Action:

HQ should determine through regions the breakdown detail for inspection costs so that the nature of these wide variances in unit costs can be determined. For budget allocation purposes, HQ should review these breakdown costs to establish a more reliable basis for estimating inspection costs per unit. Yukon and Manitoba should explain why their costs are so high.

FIGURE 15



#### 4.3.3 Cost Per Inspection (Figure 16)

##### Analysis:

The cost per inspection is based on the reported sum of expenditures and commitments compared with the number of non-NHA inspection reports received by region.

Manitoba, B.C. and Yukon have the highest non-NHA inspection costs. Manitoba's costs are \$512 per inspection; B.C.'s are \$292; Yukon's are \$246. The other regions have inspection costs under \$100.

##### Action:

Given the wide range in costs, HQ should determine what, if any, difficulties exist that either increase or decrease the cost per inspection. The quality and content of sample inspection reports should be reviewed to assess value for money.

FIGURE 16

