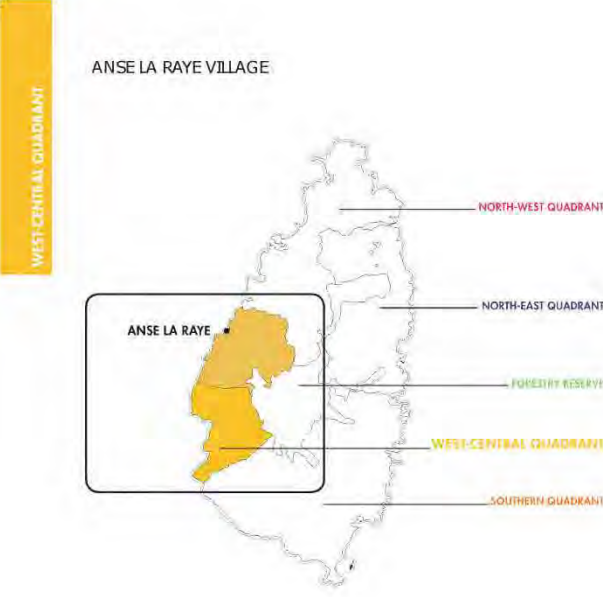


5. Reference Data

5-1 Superior Development Plan for Anse La Raye District in Coastal Zone Management



VISION PLAN INITIAL IMPRESSIONS

- As with many of the coastal villages away from the North-West, Anse La Raye has been left behind in the development of tourism, both local and international. This provides the village with many opportunities to develop local facilities to attract tourists in the village on more than the "Beach and Pools". To successfully develop a sustainable tourist business, the local population needs to be involved in the improvements to the village.
- High unemployment, particularly in youth.
- Major water quality issues – average suspended sediment (SS) 140ppm (and total) waste as the river pollution of water. Urgent need to relocate intake.
- No formal market area – street vending.
- No storage facilities or market facilities for fishermen.
- Lack of facilities for tourism.
- Housing issues including shacks, loss, and lack of affordable housing.
- Formal training and education is needed (vocational, public facilities) and vending opportunities.
- Lack of services facilities, insufficient protected vaccination facility.
- Lack of collecting or loan making resources.
- No recreational or sporting facilities.
- Inappropriate lighting in key areas.
- No gas station for residential fuel.
- Potential factory of crop storage facilities.
- Lack of structured transportation plan.
- Proper public toilet facilities for guests and residents.
- Storm water drainage – current drains are eroding and need fixing.

ACTION ITEMS

Community Development Initiatives

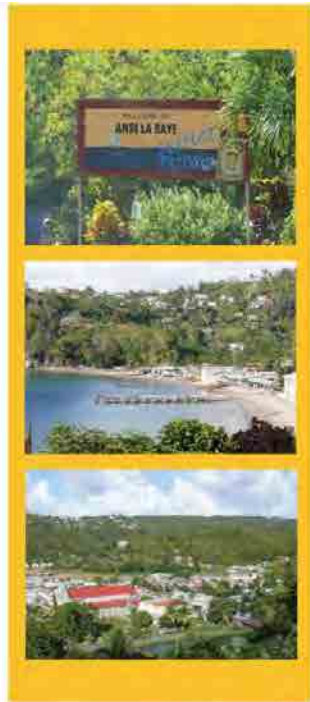
- Tourism-related (Beach, Water and reef) look for new products within village local transportation plans. Tailoring capacity for new permanent roadway and water supply systems. (limited for emergency response to the extent of the NEMA's capacity).
- Sustainable Development Plan. Village needs to support "Beach and Pools" maintenance costs. Protected swimming beach and boat facilities. (Sustainable).
- Housing Plan. Improvement of existing housing stock. (Include zoning and density plan. Formalize new facilities). Potential for new developments for all parts of existing infrastructure.
- Educational and Vocational Development Plan. Considered a village initiative to meet the needs of the whole community's literacy. (Strategic level through vocational training to support local business and tourism opportunities).
- Social Services Plan. (To maximize services facilities, support services centers).
- Fisheries Plan. (To maximize services facilities, support services centers).
- Fisheries Village Improvement Plan. (To maximize services facilities, support services centers).
- River Improvement Plan. (To maximize services facilities, support services centers).
- Local management and water management plan.

Tourism Initiatives

- Develop local site to south of village.
- A primary school program to encourage local tourists to visit the community. (Include training and support to provision of facilities).
- Regional Transportation & Welfare Centre. (Include local income, education, and other facilities to the existing site).
- Public Initiative. (To bring the development of a heritage park in the center of the village, and in Natural Coastal Park to the north of the village. (Include a of historical buildings and other recreational facilities to the Village Initiative).
- Economic and Development. (To support services and development, such as creating and new enterprises, tourism and other sites).
- Village Initiative. (To support services and development, such as the 44 public centers).

Initiatives for Surrounding Areas

For surrounding areas such as Anse-la-Raye, Maitia, and Davidsville, community work can be initiated, including transportation and transportation links. The development and maintenance of public and recreational areas and water supply. (Include zoning and density plan. Formalize new facilities). Potential for new developments for all parts of existing infrastructure.



INITIAL ANSE LA RAYE VILLAGE BUBBLE DIAGRAM



ANSE LA RAYE VILLAGE CONCEPTUAL LAND-USE DIAGRAM



ANSE LA RAYE VILLAGE PHOTO



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ANSE LA RAYE VILLAGE RENDERING



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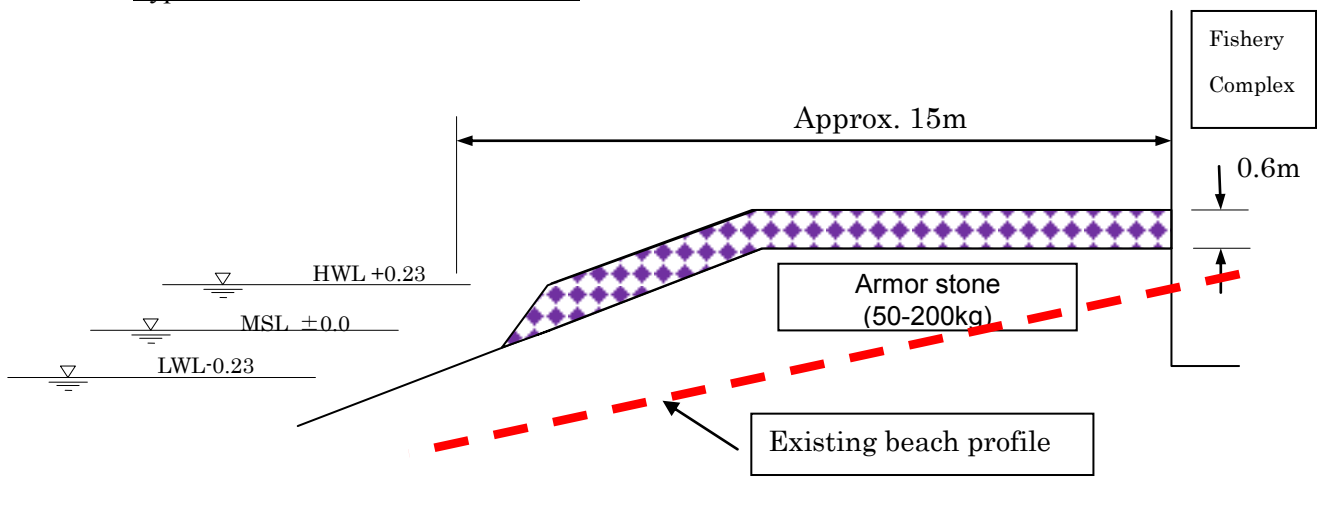
5-2 Additional documents concerning the application of permission for the Short-Term Countermeasures
(1) Work Summary Plan

Short Term Countermeasures
Construction Method and Transportation Route of Rubble Stones and Armor Stones in Anse La Raye
Function of Amor Stone Covering Backshore

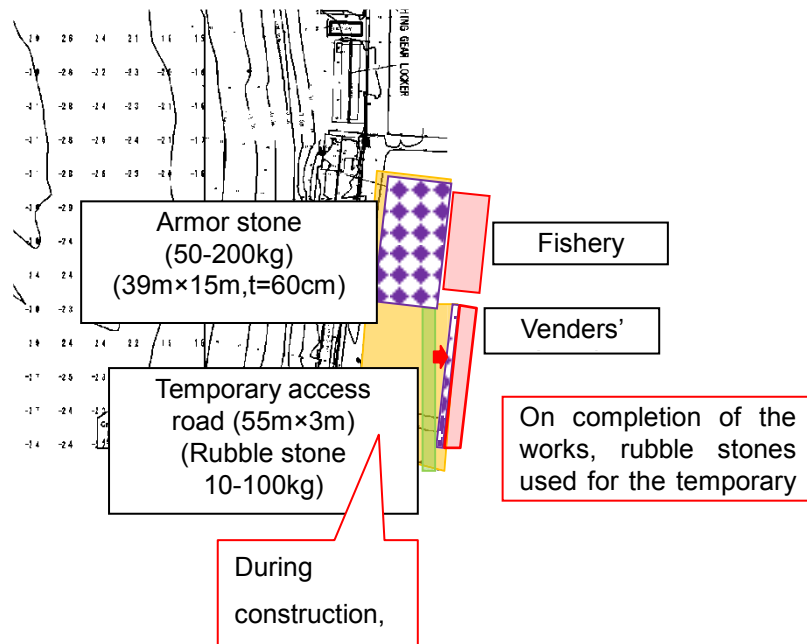
The backshore part of the fishery complex building and vender's arcade is retreated by long period waves with high occurrence frequency. The long period waves have the strong energy of run-up and backwash. The beach retreats by this long period wave.

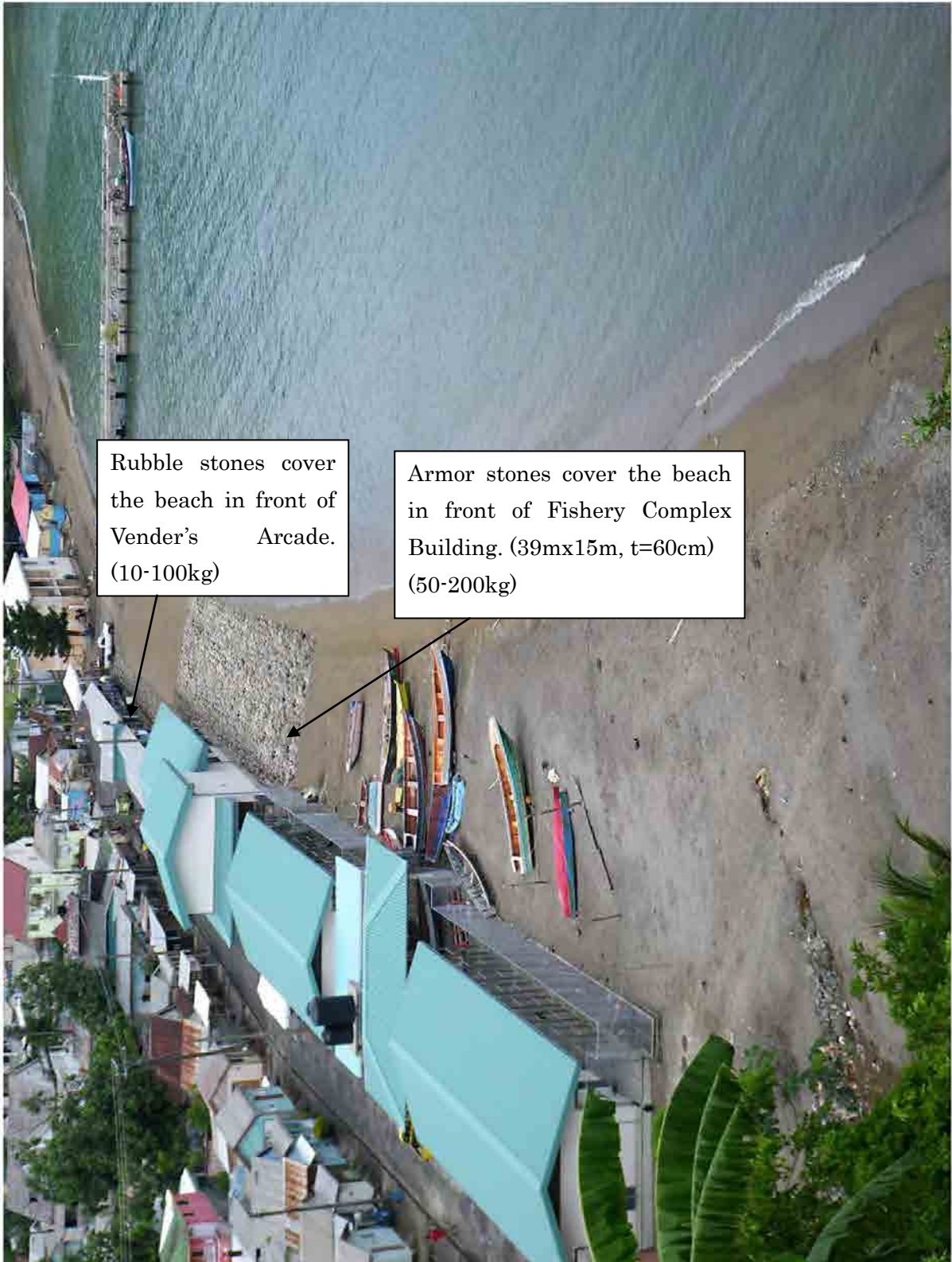
It is necessary to attenuate the power of run-up and backwash. The structure with the void area is effective for attenuating the wave energy. The cover of the beach by the armor stone is effective as the structure comprising weight and the void area that can resist the wave energy.

Typical Cross Section of Armor Stone



General Plan of Armoring Area





Rubble stones cover the beach in front of Vender's Arcade. (10-100kg)

Armor stones cover the beach in front of Fishery Complex Building. (39m x 15m, t=60cm) (50-200kg)

Construction of Short Term Countermeasures

Purpose	Concerning beach erosion generated at the beach in front of the facilities, Fisheries Complex building and foundation part of Vender's Arcade shall be protected in hurricane season up to October, 2011.
Method	This work shall be assigned to local construction company. Construction supervisor shall be stationed during the construction period.
Work Area	As shown in Figure 1, in front of Fisheries Complex (39m × 15m) and Vender's Arcade
Protection method	Armor protection with installing rubble stones (50-200 kg) with thickness of t=60 cm
Construction Quantity	386m ³ (10% allowance for the settlement to sand ground has been considered) However, the consignment contract shall be made by changing the quantity if construction quantity is changed depending on the measurement result shown below.
Construction Method	<p>1. Temporary road In order to transport materials to the job site, it has to pass beach in front of Vender's Arcade. Therefore, temporary road (L=55m, W=3m) shall be installed on the beach. Material to be used is rubble stones (10-100 kg).</p> <p>2. Armor stone works Armor stones work (39 m x 15 m) shall be installed with rubble stones (50-200 kg) with the thickness of 60 cm using a backhoe in front of Fisheries Complex building.</p> <p>3. Removal of temporary road After construction of armor stone works, rubble stones used for temporary road shall be installed in front of Vender's Arcade to protect from waves.</p>

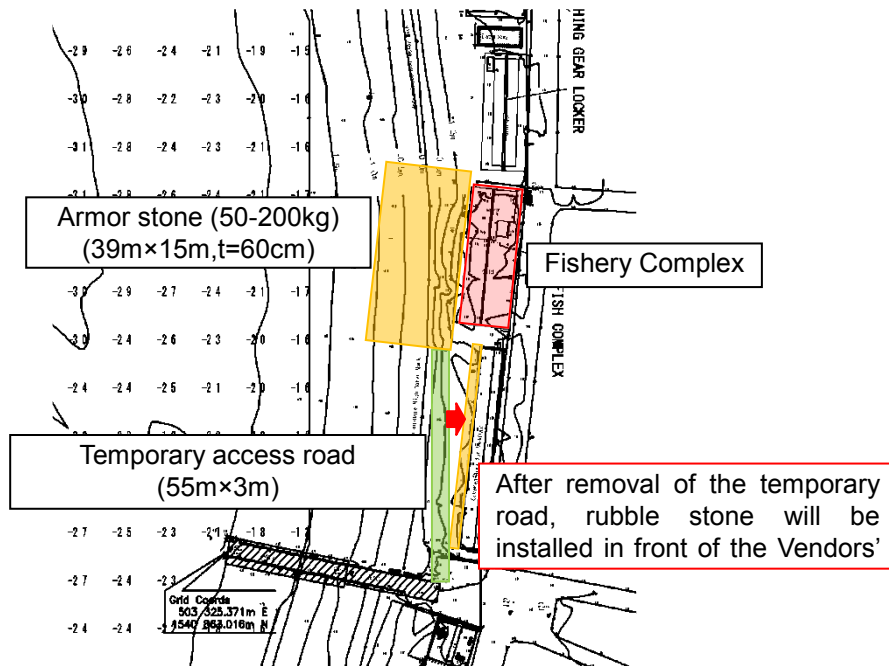


Figure 1 Location for Short Term Countermeasures

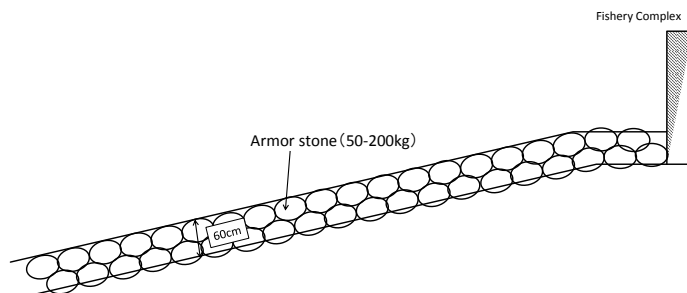
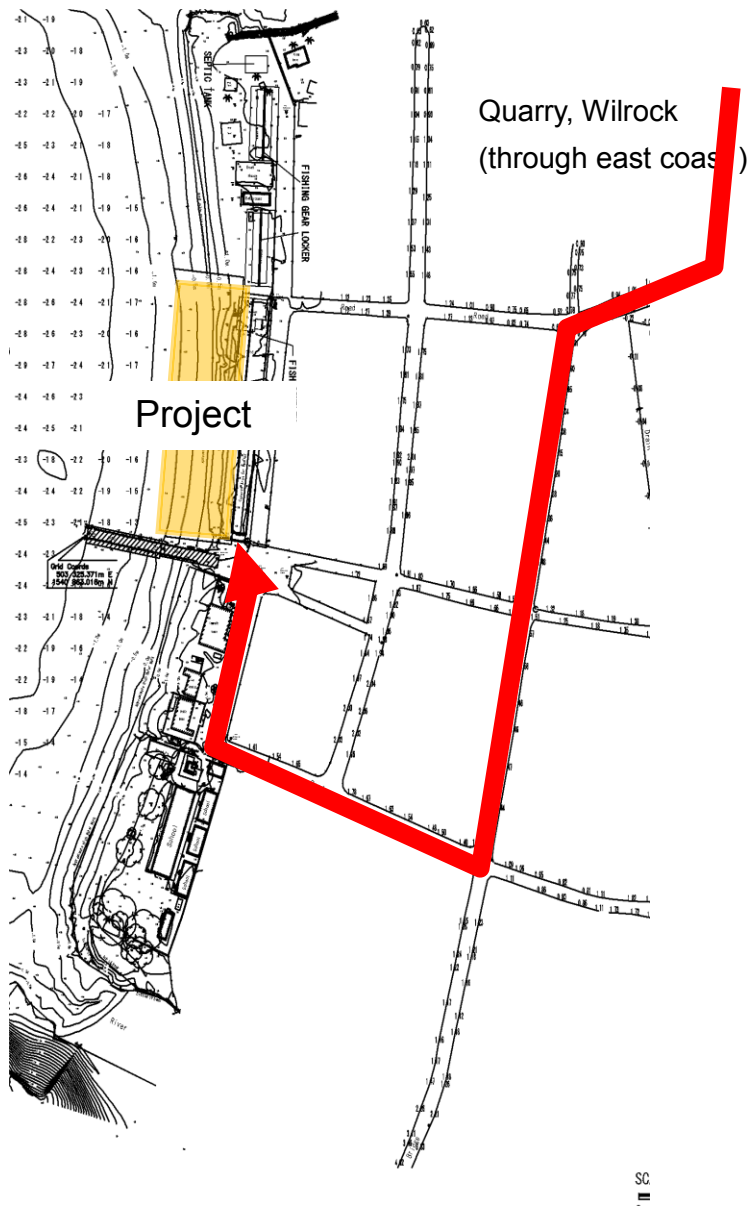


Figure 2 Cross section outlines of short term countermeasures

Transportation routes of rubble stone and armor stones

The stockyard of armor stones is not required in order to continuous supply from the quarry site of Wilrock. The route of transportation of armor stones is planed through the red line to the project site. The access route will be installed at the space among the jetty and the vender's arcade to the end of the project site. The volume of rubble stones, 10-100kg, for installing the temporary road, the length of 55m and the width of 3m, is around 143ton. The volume of armor stones is around 1,000ton which is the length of 39m and the width of 15m and the depth of 60cm. The average number of truck per a day is 4 trucks.

The construction days is planed 20days. About $1,143\text{ton}/15\text{ton}/\text{truck}=76.2\text{trucks}$
 $76.2\text{trucks}/20\text{days}=3.8\text{trucks}/\text{day}$: 4trucks, Total 8trucks/day)



(2) Site Management Plan

**THE PROJECT FOR IMPROVEMENT OF
FISHERIES INFRASTRUCTURE
IN ANSE LA RAYE
ST. LUCIA**

SHORT TERM COUNTERMEASURES

SITE MANAGEMENT PLAN

**Ministry of Agriculture, Lands, Forestry and Fisheries
St. Lucia**

September 2011

**JAPAN INTERNATIONAL COOPERATION AGENCY
ECOH CORPORATION**

Introduction

After the permission of commencement of works, the official invitation of the works will be distributed to three companies in St. Lucia and the consultant will select the cheapest estimated company as the constructor after discussing with JICA Head Office. The consultant will be arranged the engineer as the supervisor.

The working hour is 8:00am to 5pm in a day. It is fully operated on Monday, Tuesday and Saturday. Every Thursday is not fully operated by the tourist activity. Every Friday is operated 8:00am to 3pm for preparation of Fish Friday. Wednesday is fully operated on every other Wednesday for tourist activity. On this situation, we need the four weeks or more for the construction work. In the case of the permission on Sept.14, 2011, the commencement of works will be on Sept. 19, 2011 and we could have the completion date on Oct. 17, 2011.

Followings are the site management plan of the works. More detailed plan will be considered after the selection of constructor.

1. Temporary works and mobilization

1-1. Preparation work

- Practical inspection of the site conditions will be done.
 - Kick-off meeting with the Client (Ministry of Agriculture, Lands, Forestry and Fisheries), the Consultant and the Contractor will be held at the earliest time after the above inspection.
 - Permissions required for the execution of the work will be acquired with due cooperation of the Client and instruction of the Consultant.
 - Submission of proposal of construction materials and equipment for consultant's approval will be done.
 - Work method and shop drawings will be submitted for consultant's approval. Above basic procedures will be always done by documents before starting practical works.
 - To avoid disturbance to existing fishery related activities in the project site shall be taken into consideration.
- *for prevention of unnecessary troubles at site, explanatory meeting of this project will be held among the fisheries related representative, the Client, the Consultant and the Contractor.

1-2. Temporary works

The project site area will be handed over to the Contractor before commencement of the works. Then temporary works will be able to start such as construction of temporary access road at site. Please note that the statement herein is preliminary. The final plan will be submitted for approval after further detail research and study by the constructor.

1-2-1. Site survey

Site survey will be done to establish a temporary benchmark and basic survey points.

1-2-2. Temporary facilities

A temporary fence and gates will be installed enclosing all site premises in order to secure the working area from the general public.

1-3. Material procurement and mobilization / demobilization

Stone materials will be supplied from the local quarry, Wilrock, and transported to the site by trucks. Major heavy equipment and machineries such as excavator will be mobilized from the region. All machineries will be demobilized after the completion of the project.

2. Major construction works

Please note that the statement herein is preliminary. The final plan will be submitted for approval after further detail research and study by the constructor.

2-1. Civil works

Civil works will be executed accordance with the short term countermeasures. Rubble stone (10-100kg) and Armor stone (50-200kg) foundation will be placed, filled and trimmed by excavator PC300.

<Placed works>

Rubble stone (50-100kg) works

Armor stone (50-200kg) works

3. QUALITY PLAN

ECOH CORPORATIN International Department established Quality, Environment, Safety Management Policy based on our Company's philosophy reflecting our aim of building the best possible system destined for risk management, cost control and client satisfaction in order to achieve our aim of making a contribution to international society.

3-1. QUALITY CONTROL PLAN

1) In every aspect, following procedures shall be observed and records shall be retained.

Flow-1:

Proposal → Approval by the Consultant → Inspection → Practical Works → Inspection, Test and record → Satisfactory result → Completion of the Work

Flow-2:

In case of finding defective work → removal, replace or change → Inspection, Test and record

This Flow-2 shall be repeated till getting satisfactory result.

*Records shall be retained in forms of Certificate, Check sheet and Photograph.

4. SAFETY CONTROL PLAN

4-1 GENERAL

Safety of works shall be maintained throughout the work period, so that the works can be executed smoothly without any interruption. Attention shall be paid to prevention of any accident such as personal injury, fire, damages to structures and works. In principal, safety rules and regulations stipulated by the government of St. Lucia shall be observed. Specific safety control procedures of works are as follows. Safety meeting will be held on weekly basis.

4-2 Site Safety

The site safety will be achieved primarily through day-to-day check of the working conditions at the site. Safety officers, engineers and foremen shall, while supervising the works, detect, point out and eliminate any unsafe and dangerous situation at the site. Their attention shall be paid to;

- Safety gears such as helmet, shoes and belts
- Condition of First Aid and fire-fighting equipment
- Condition of vehicles and equipment
- Electric equipment and cables
- Heat producing works involving welding and gas torch
- Excavation slopes
- Holes on the ground
- Hoisting works
- Works in closed location
- Under water works
- Anchor wires
- Works in high location
- On-site traffic
- Tidiness and cleanliness of the site
- Fire extinguisher and bucket filled with water against fire
- Other unsafe situations

If any unsafe situation in the above matters are found or detected, it shall be reported to the Safety Officer of the constructor immediately. The safety officer shall then issue Safety Instructions to the engineer-in-charge and/or subcontractors concerned and the copy to the Project Manager to rectify such unsafe working conditions. Safety Instructions shall be followed by the safety officer's inspection until the situation is improved to his satisfaction. The safety officer shall give advice of safety improvement to the engineer-in-charge and/or subcontractors when required.

4-3 Emergency Counter Measures

If any accidents occur on the site, they shall be reported by a witness to a staff of the

contractor's office, (immediately after taking possible effort to avoid further related accident at the spot). The safety officer shall immediately investigate and evaluate the situation of the accident site and conditions of the injured if any, and shall take necessary action such as;

- To give first aid treatment
- To avoid secondary accident
- To protect structure and the work
- To request services from outside

The safety officer shall discuss with the Project Manager if any further actions are necessary. The safety officer shall prepare an accident report after emergency measures are implemented and shall submit it to the Project Manager, the Consultant, and the Client. Analysis of the accidents and recommended counter-measures shall be discussed in the report. Emergency Network shall be kept updated and placed in the public attention.

4-4 SAFETY RULES AND REGULATIONS

All staffs and workers working on the site must keep safety rules and regulations. Major rules and regulations are as follows;

- They must wear Safety Hats in the field.
- They must wear shoes. Sandals are not permitted.
- Maximum speed limit of vehicle is 20 km/hour on the site.
- Crane operators must be certified.
- Equipment must be checked before work.
- Barricade, sign boards must be installed at dangerous places.
- Working site must be kept clean and tidy.

4-5 SAFETY PRECAUTIONS

Followings shall be well considered during the Work period:

- Temporary boundary fence,
- Regular Safety meeting at Site,
- Notification to the public by meeting and notice board etc. in time,
- Monitoring weather (sea) conditions and observation of forecast by public organizations for preparation for rough weather, i.e. Hurricane and so on,
- Notification of "Emergency communication network" on notice board

5. ENVIRONMENTAL MEASURES

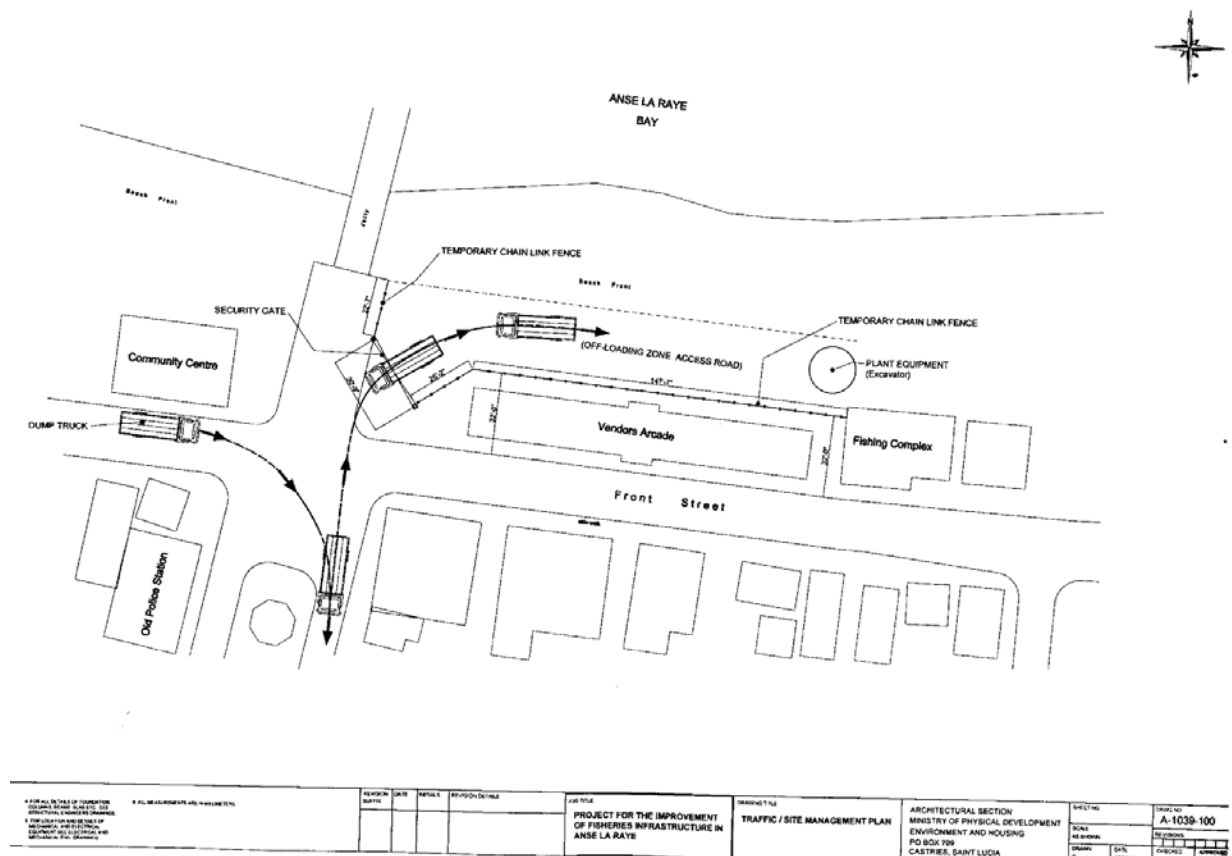
5-1 Environmental Policy

According to Company's Basic Philosophy on Environmental Consideration, we will make all-out effort to reduce environmental impact and prevent environmental and construction pollution while taking careful consideration on the harmful influence on environment through construction business. Environmental policy will be disclosed to the public and we will promote environmental friendly oriented activities securing perfect

harmony with society. In execution of the Works, followings shall be well considered:

- Sanitation control in the temporary and construction site in accordance with the local regulations,
- Safety control for public, especially existing fish landing site and residence area in Anse La Raye, surrounding the construction site by public announcement and sign boards,
- Traffic control for transportation of construction materials and disposal by public announcement and traffic guides in accordance with the local regulations,
- Dust prevention in the site by watering and so on,
- Vibration and noise prevention in the site by employing appropriate equipment
- Counter measures against any pollution to the environment.

(3) Traffic Management Plan

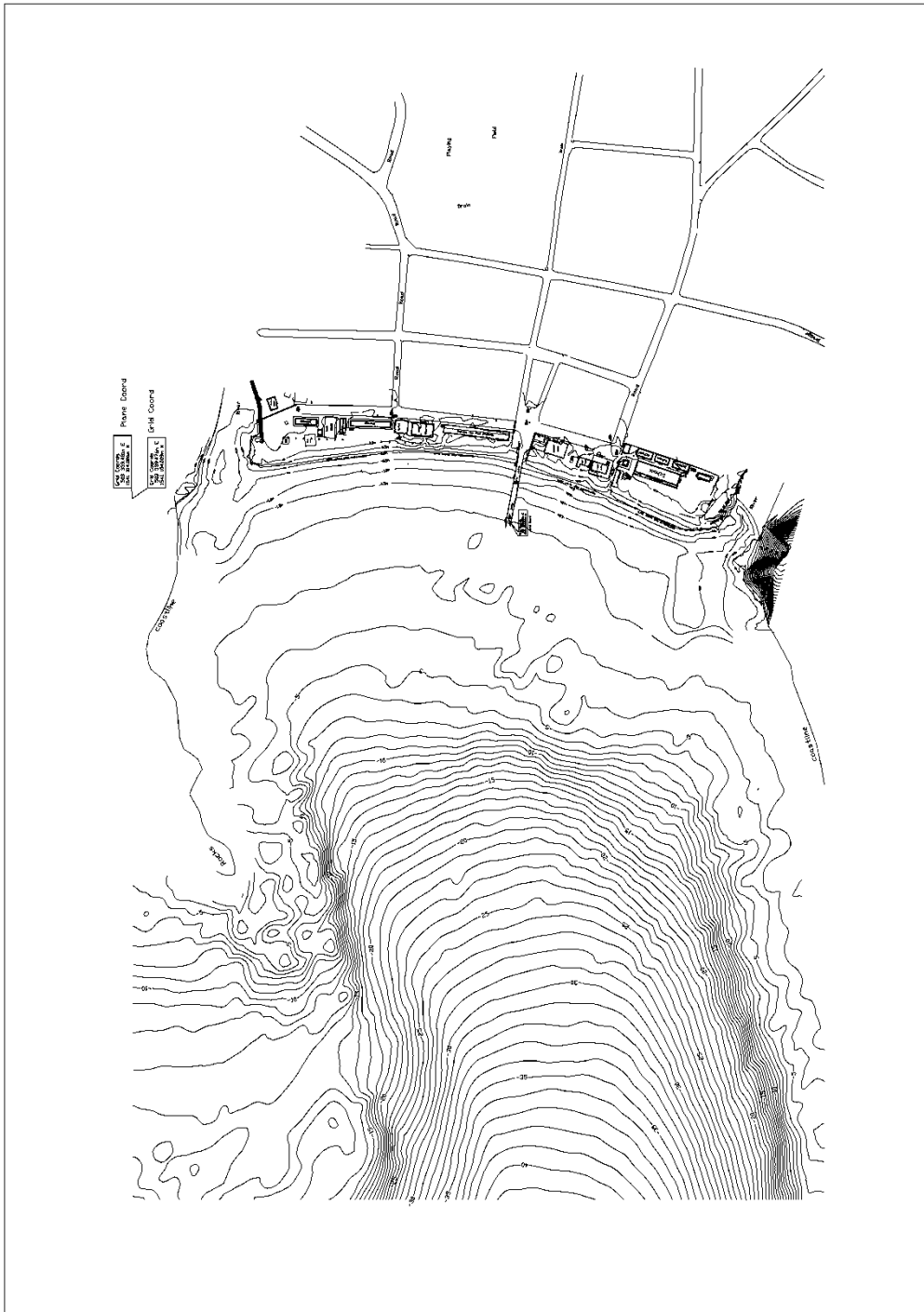


5-3 Results of natural conditions survey

5-3-1 Results of bathymetric survey

(1) Result of bathymetric survey at the time of Basic Design stage (20 October 2006)

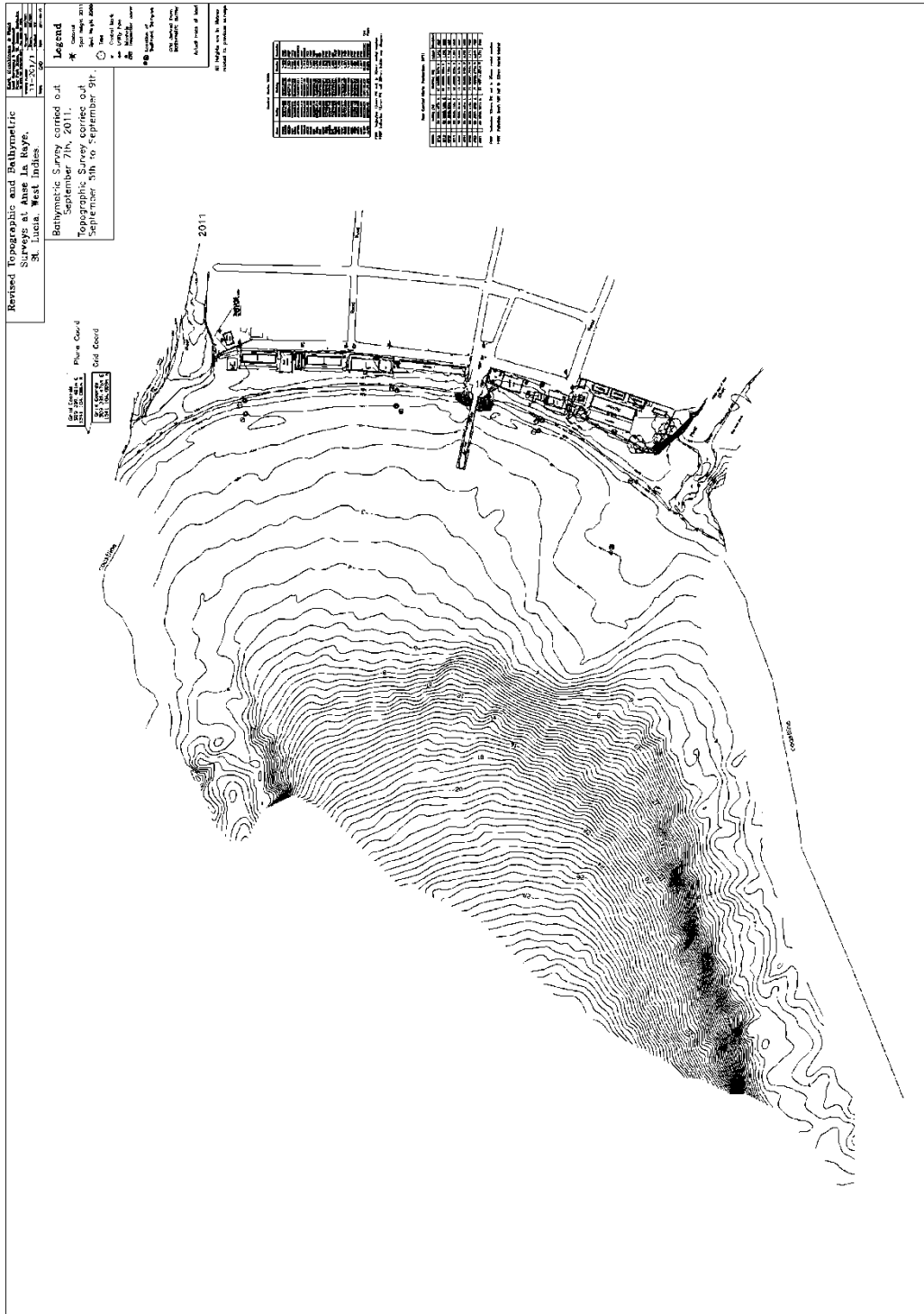
It is understood that the area of deposition is small in front of south river mouth at the Basic Design Stage and the existence of deformity of contour lines presented the extend of rock reef from the jetty to offshore of south side beach.



**Appendices Figure 5-3-1-1 Result of bathymetric survey at Basic Design stage
(20 October 2006)**

**(2) Result of bathymetric survey at the time of Follow-up Cooperation Stage
(8 September 2011)**

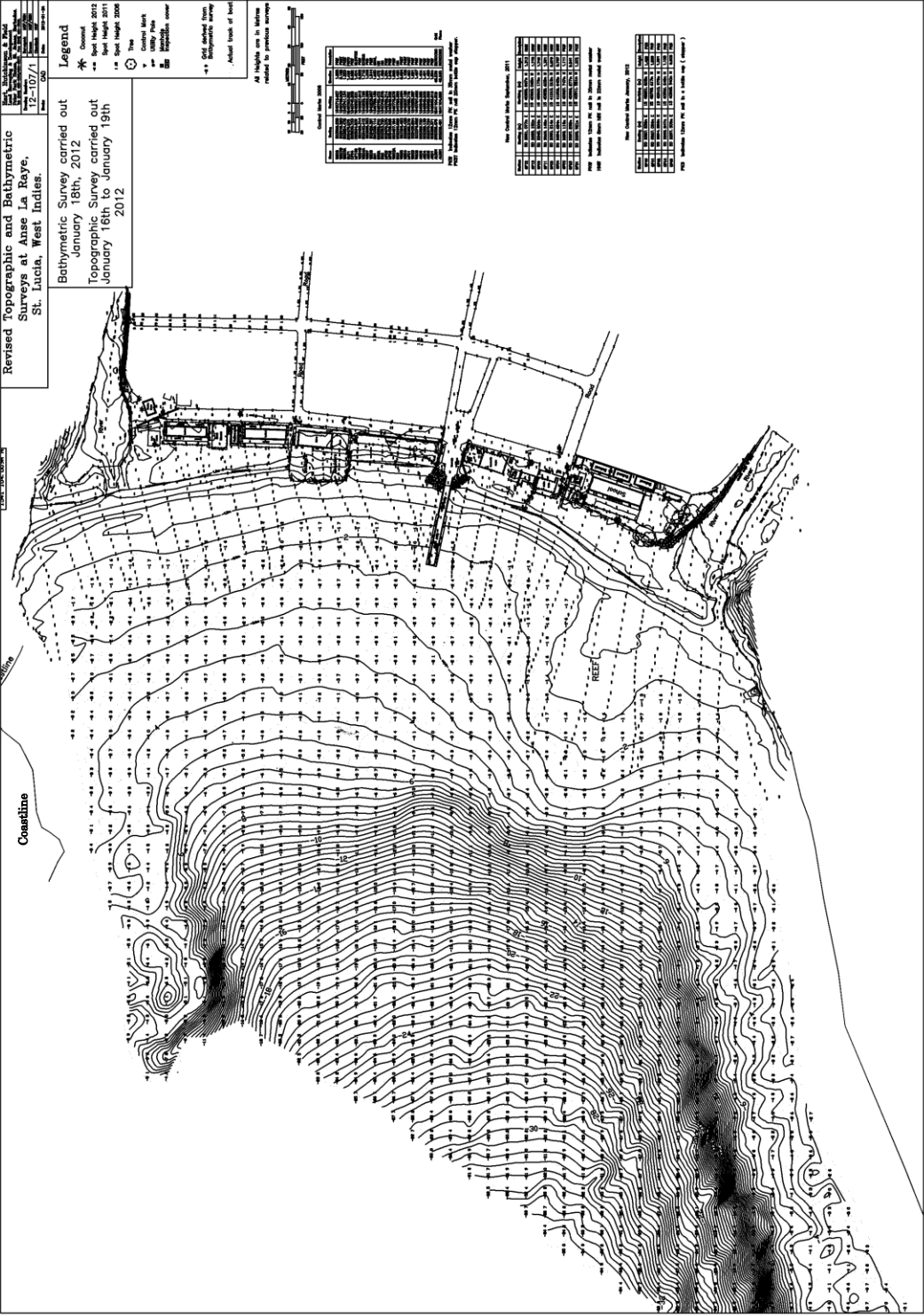
The result of bathymetric survey shows that the area of deposition is largely pendent in front of south river mouth at the time of Follow-up Cooperation stage. And, this result also shows that the rock reef in offshore of south side beach of the jetty is buried by sand deposition.



**Appendices Figure 5-3-1-2 Result of bathymetric survey at Follow-up Cooperation stage
(8 September 2011)**

(3) Result of bathymetric survey at the time of additional survey stage (18 September 2012)

The result of bathymetric survey shows that the area of deposition in south river mouth is reduced slightly and the sand is moved to north side beach. The shore line is advancing in the south side beach of the jetty and backshore is forming.

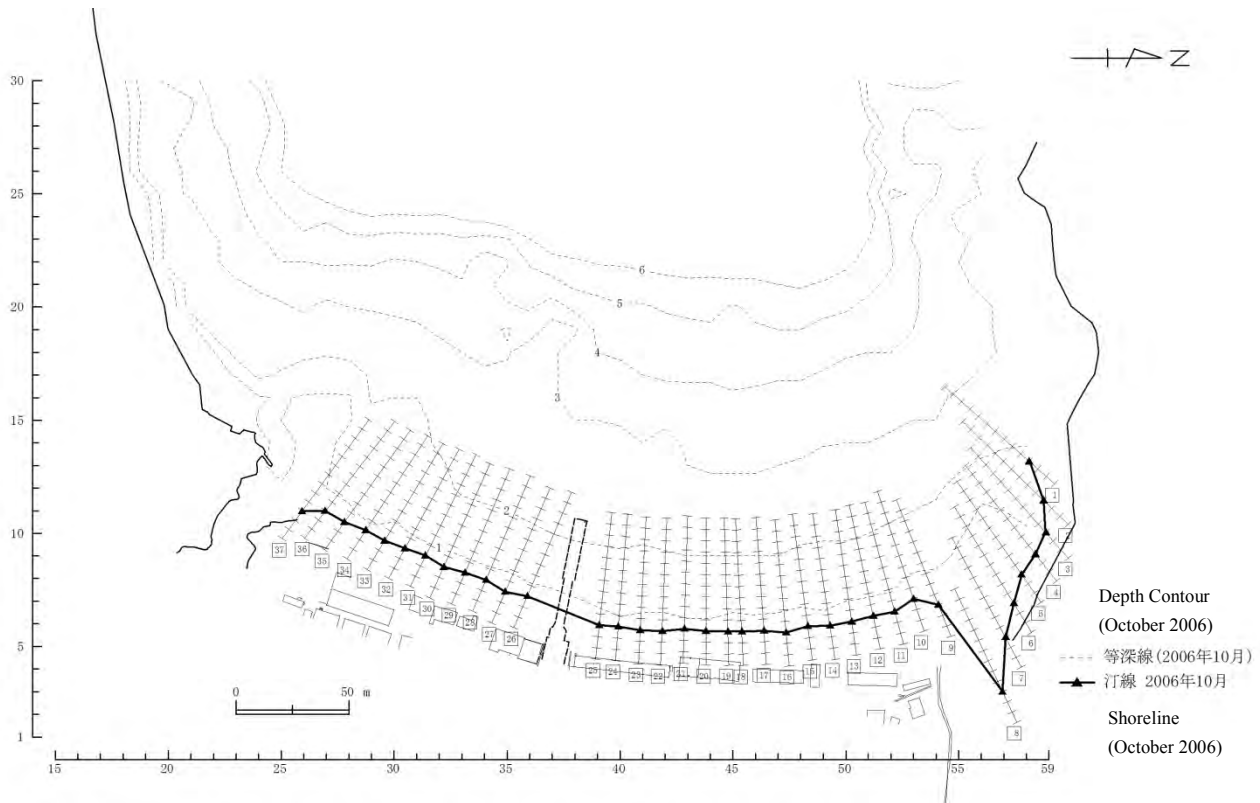


Appendices Figure 5-3-1-3 Result of bathymetric survey at additional survey stage (18 January 2012)

5-3-2 Bathymetric and topographic change considered from results of bathymetric surveys

(1) Change of Cross Section

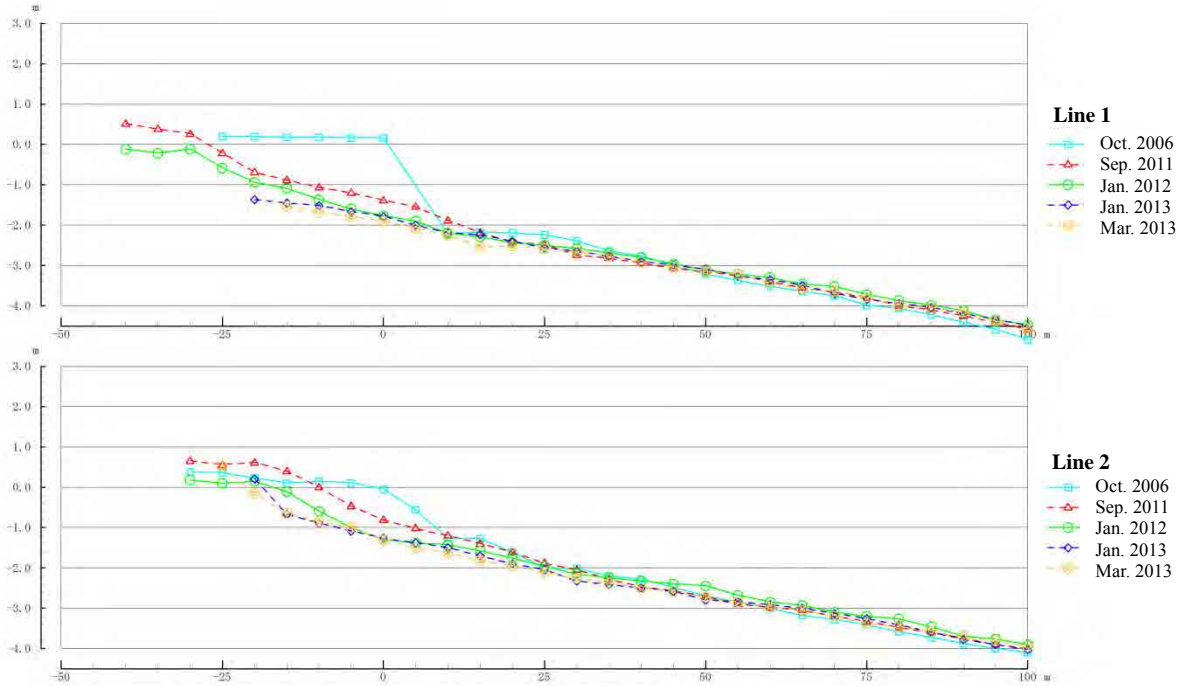
The bathymetric and topographic survey was conducted five times, Year 2006 (Basic Design stage), Year 2011 (Follow-up Cooperation Study stage), Year 2012 (Additional Survey of Follow-up stage) and two times of Year 2013 (Before and after of Middle Term Countermeasures work). The cross sections are showed as following figures. The cross section is plotted based on the control point of the shoreline at 2006 survey point.



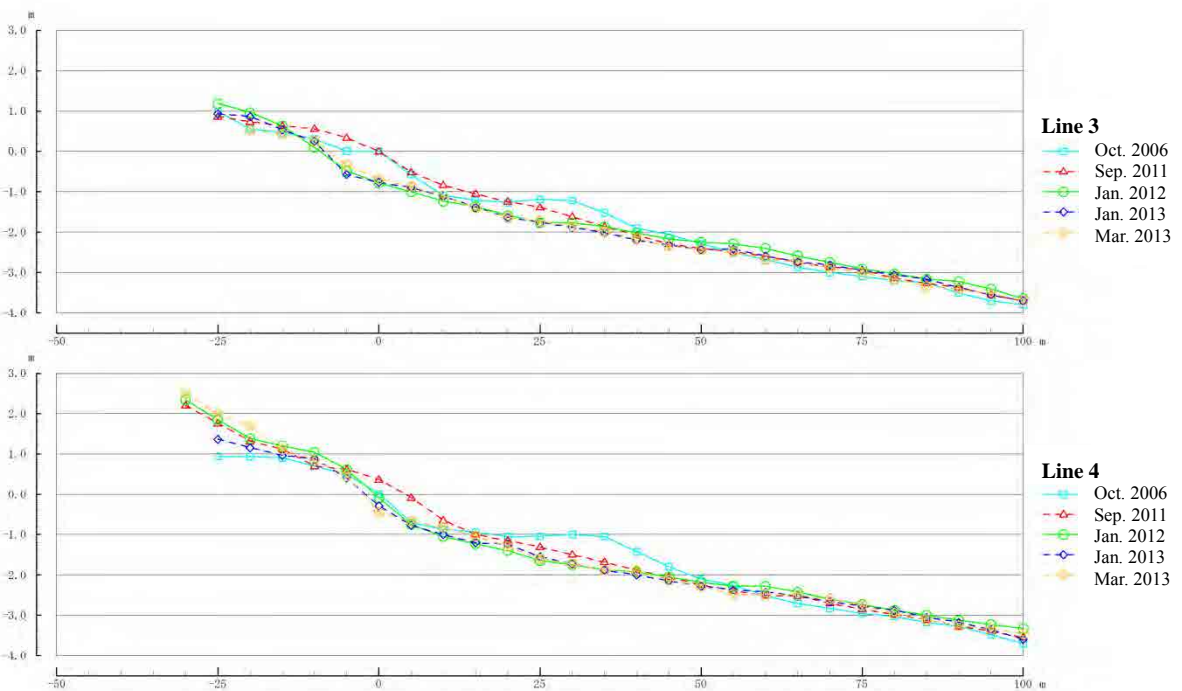
Appendices Figure 5-3-2-1 The line of location of Cross Section

(2) Change of Cross Section on the line

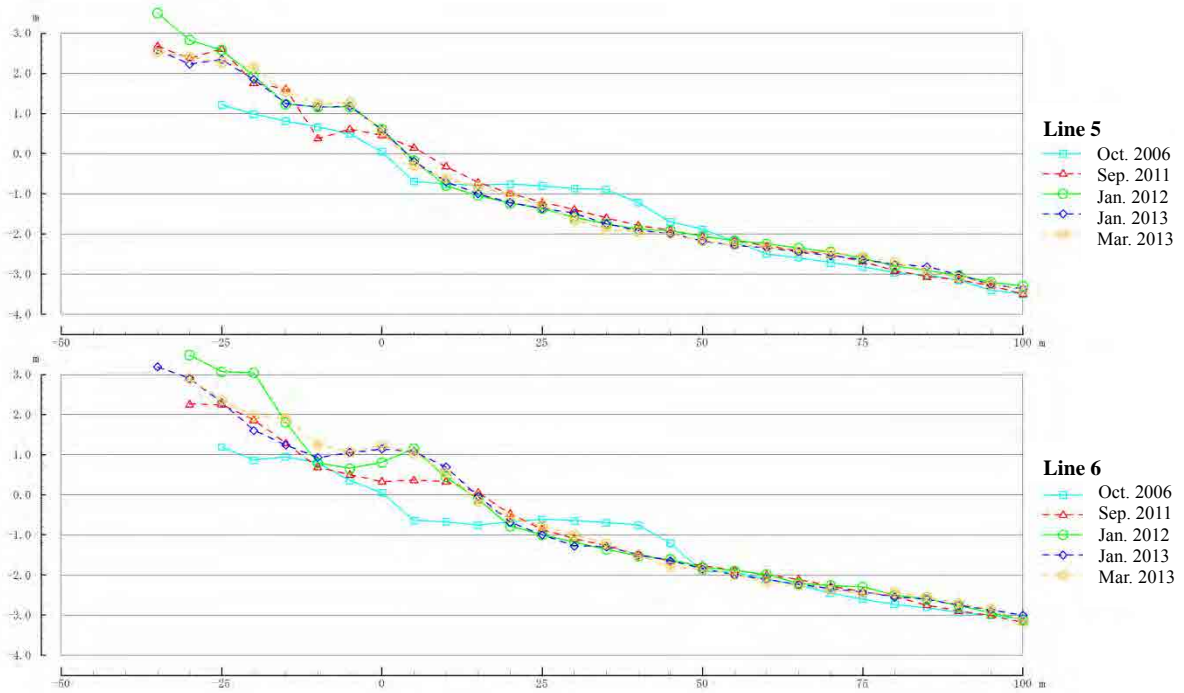
Appendices Figure 6-3-2-2 to 20 shows the change of cross section on the line. The cross section at Year 2011 is the result of survey after the appearance of shoreline retreat and sunk of backshore. We could understand that the retreat of shoreline and sunk of backshore was appeared on year 2011 based on the cross section on Year 2006 and after then shoreline and backshore is appeared the tendency of recovering. As well the 0 point in the cross section is the shoreline on Year 2006.



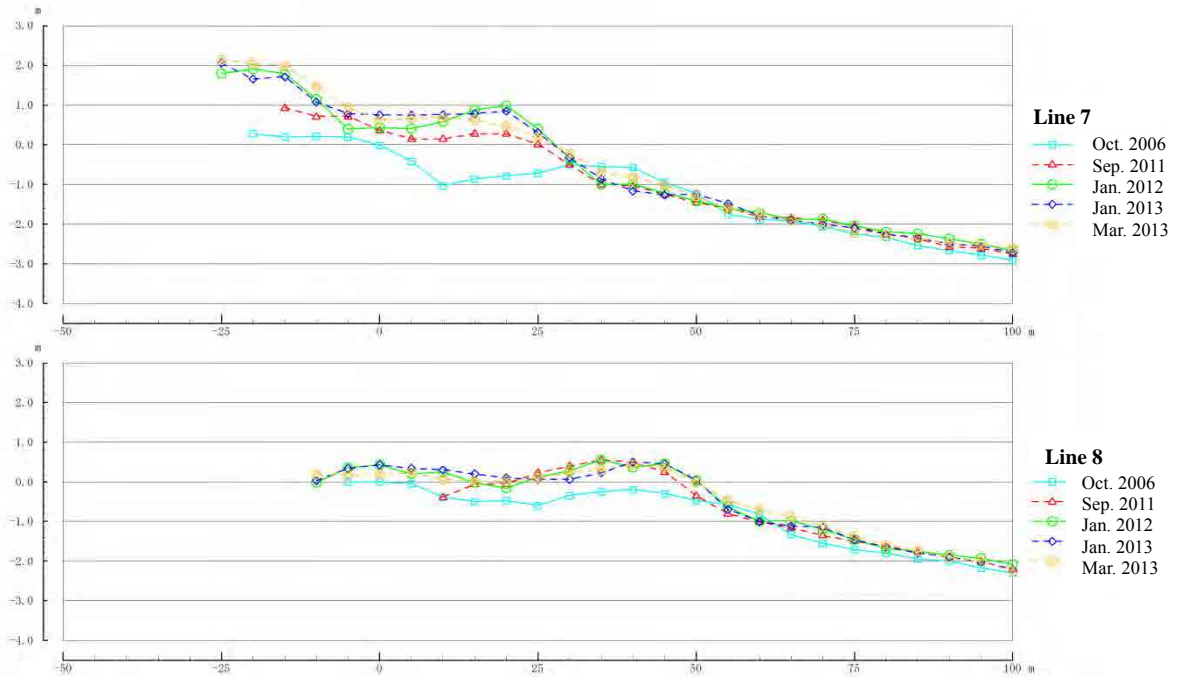
Appendices Figure 5-3-2-2 Cross Section (Line 1-2)



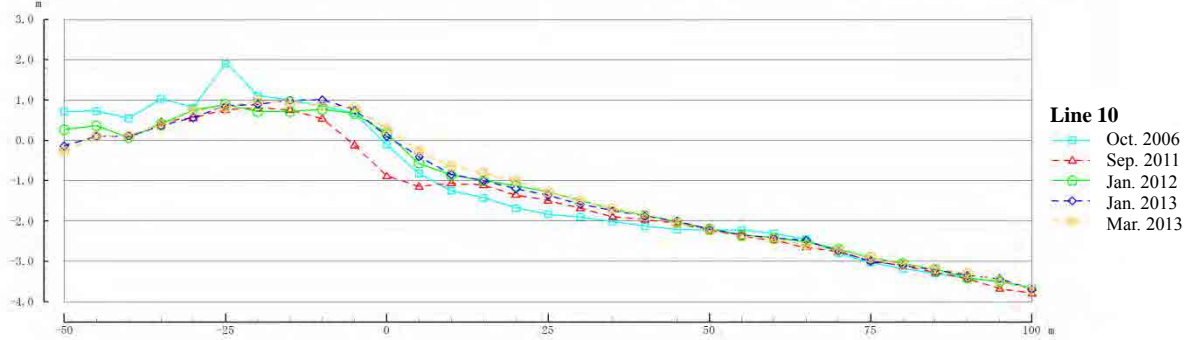
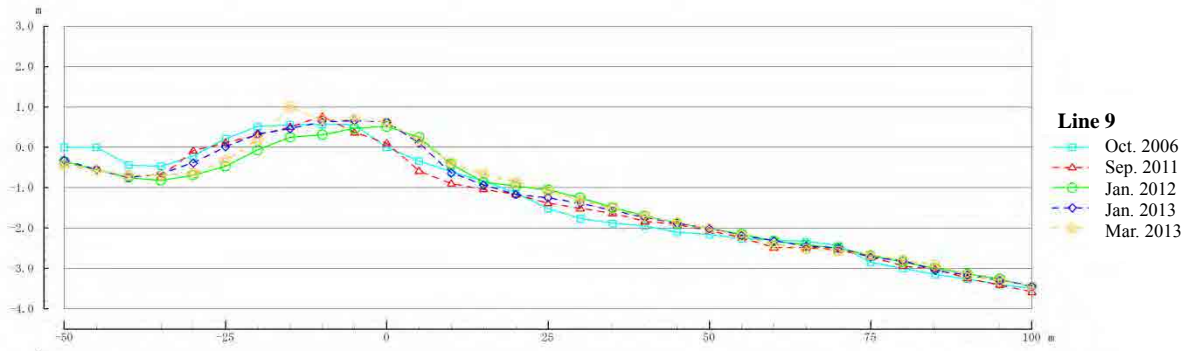
Appendices Figure 5-3-2-3 Cross Section (Line 3-4)



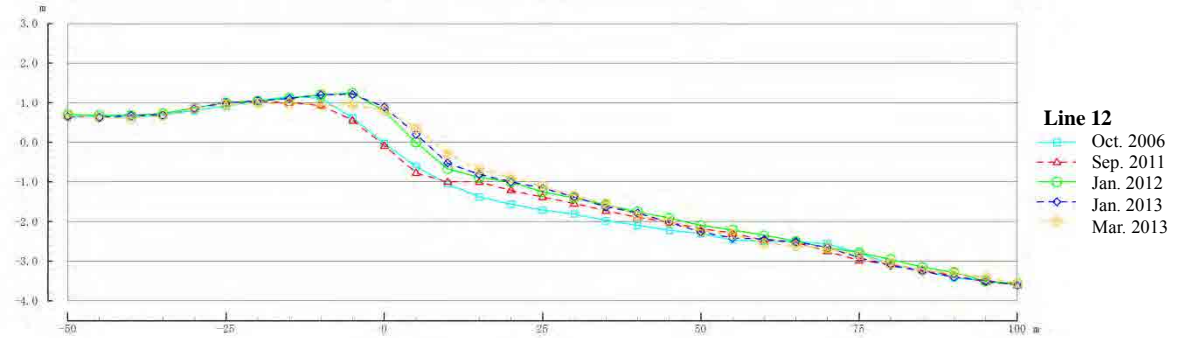
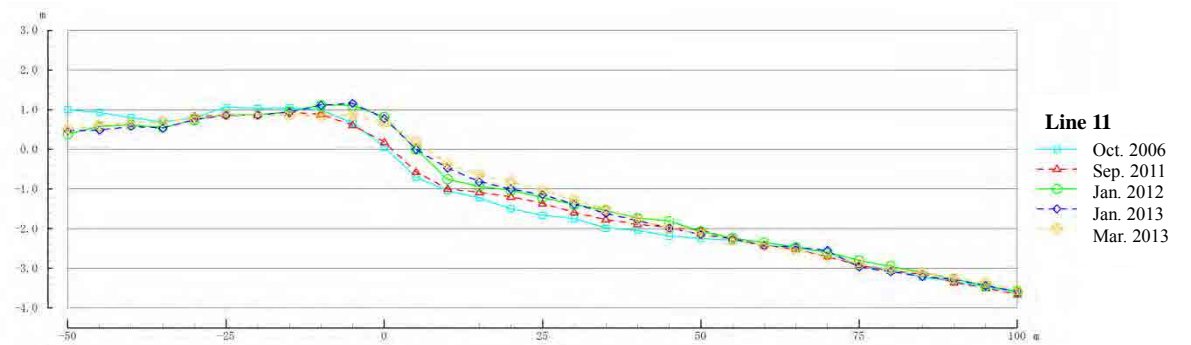
Appendices Figure 5-3-2-4 Cross Section (Line 5-6)



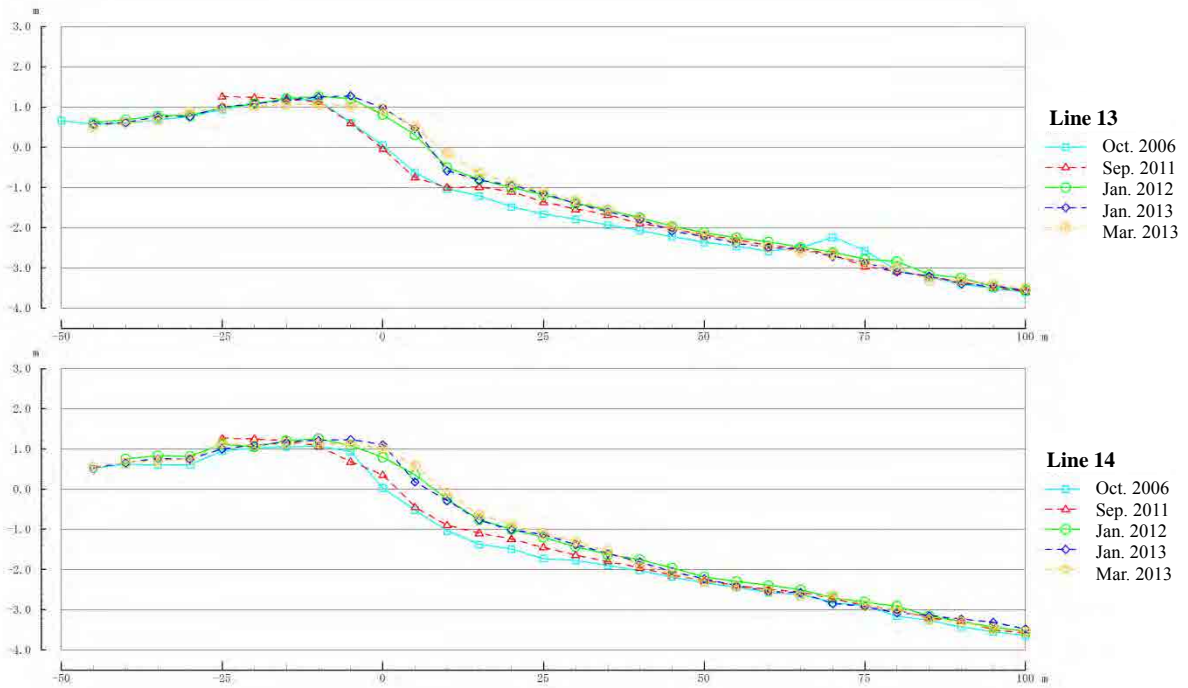
Appendices Figure 5-3-2-5 Cross Section (Line 7-8)



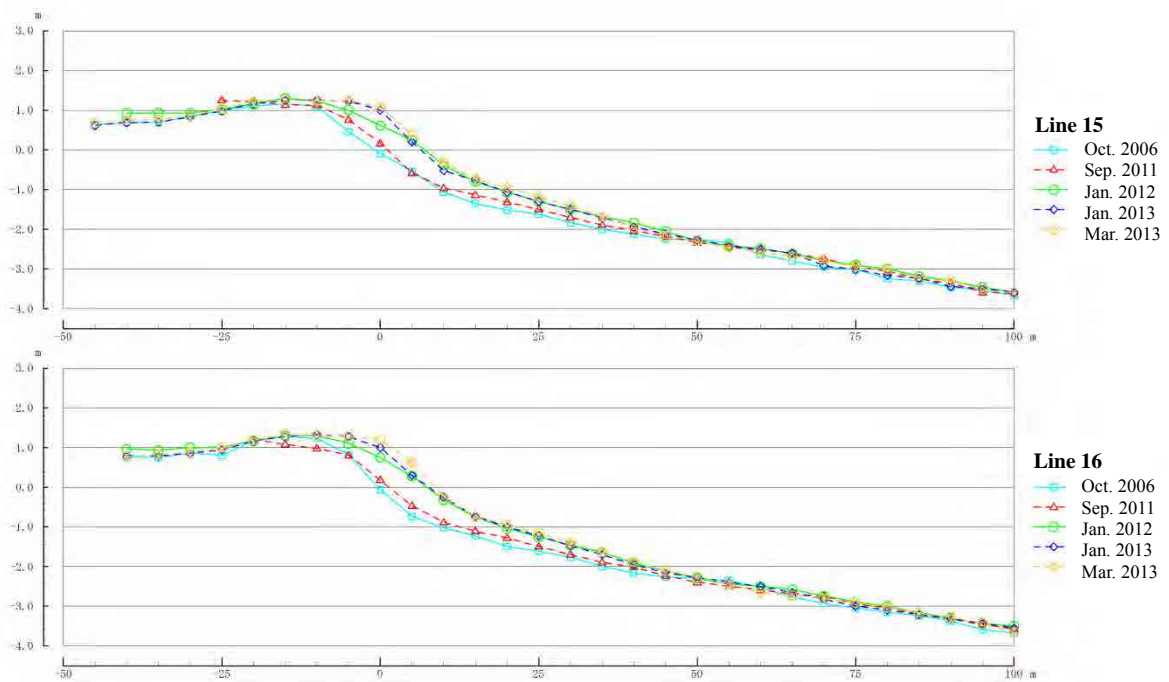
Appendices Figure 5-3-2-6 Cross Section (Line 9-10)



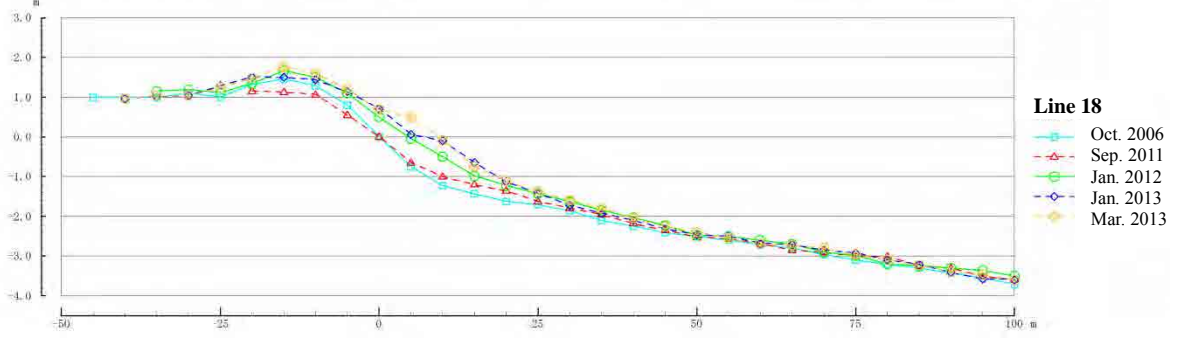
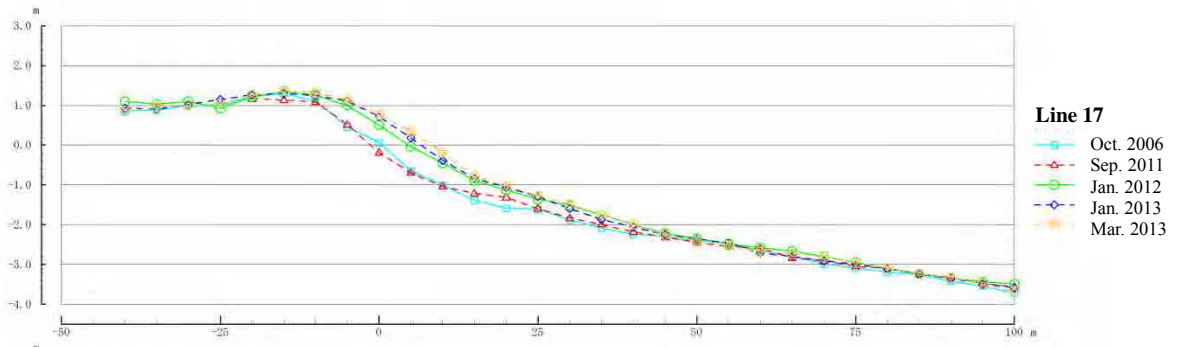
Appendices Figure 5-3-2-7 Cross Section (Line 11-12)



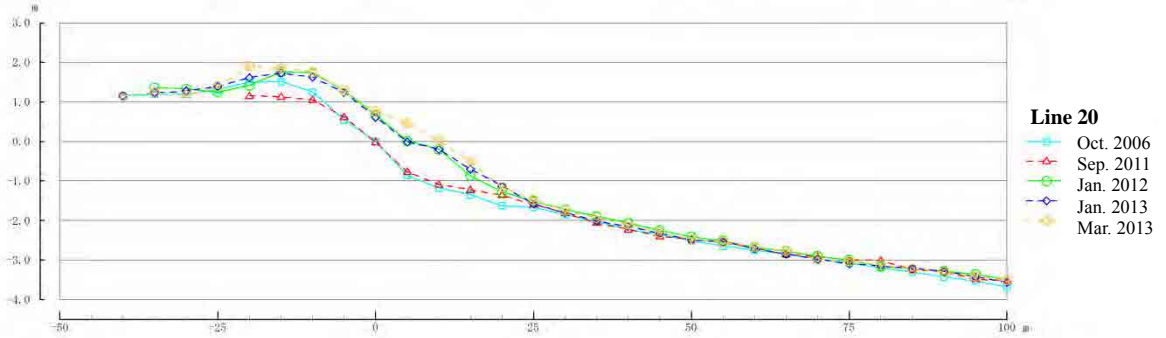
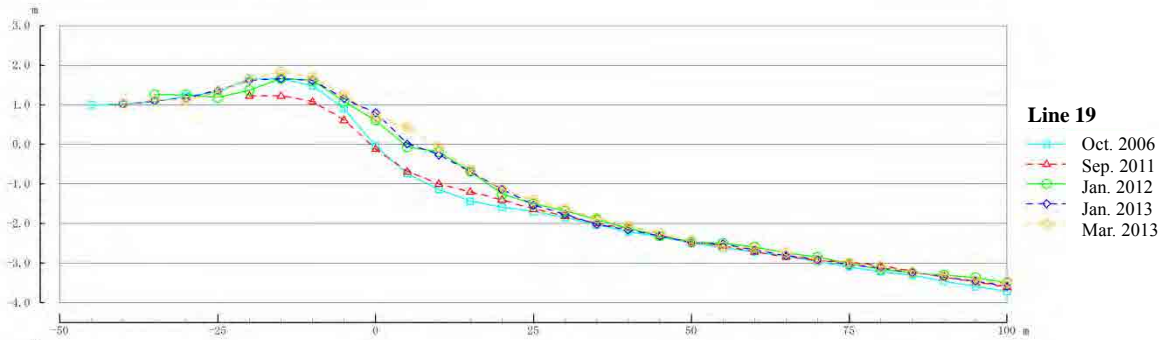
Appendices Figure 5-3-2-8 Cross Section (Line 13-14)



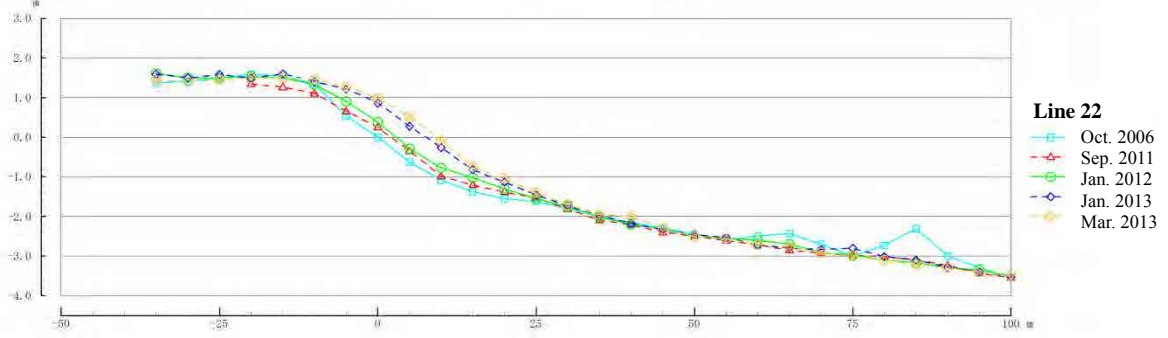
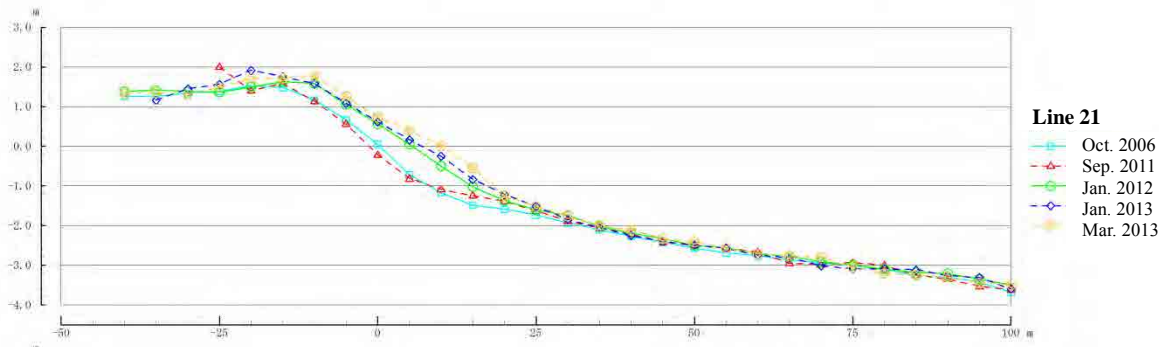
Appendices Figure 5-3-2-9 Cross Section (Line 15-16)



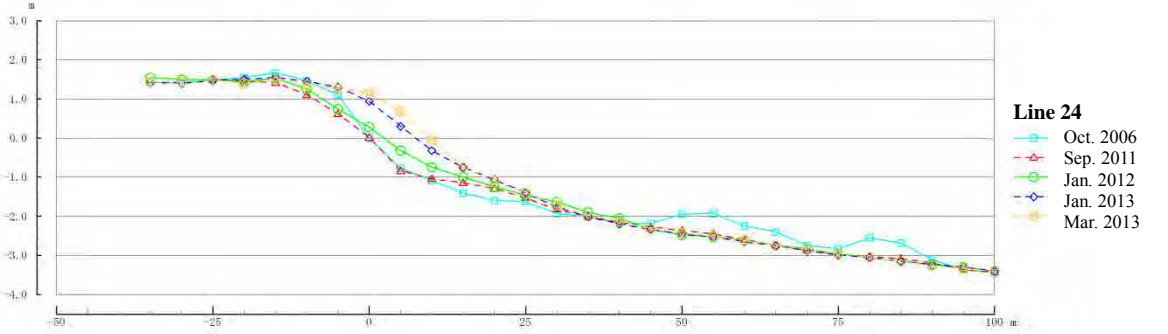
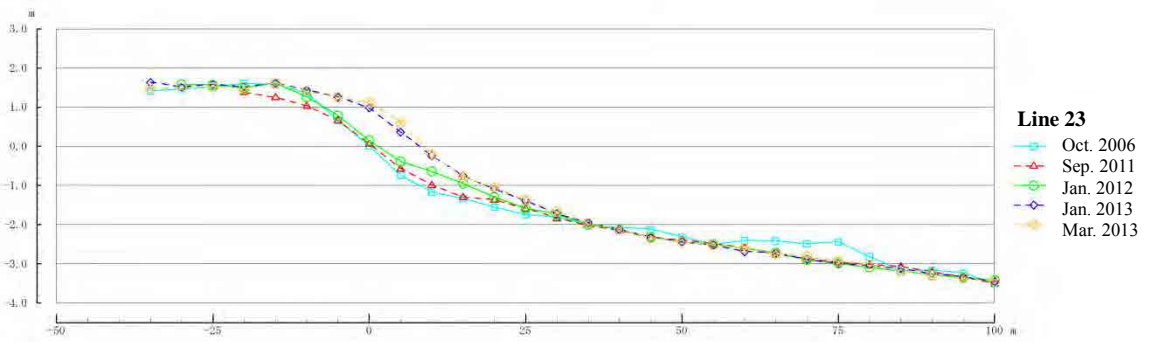
Appendices Figure 5-3-2-10 Cross Section (Line 17-18)



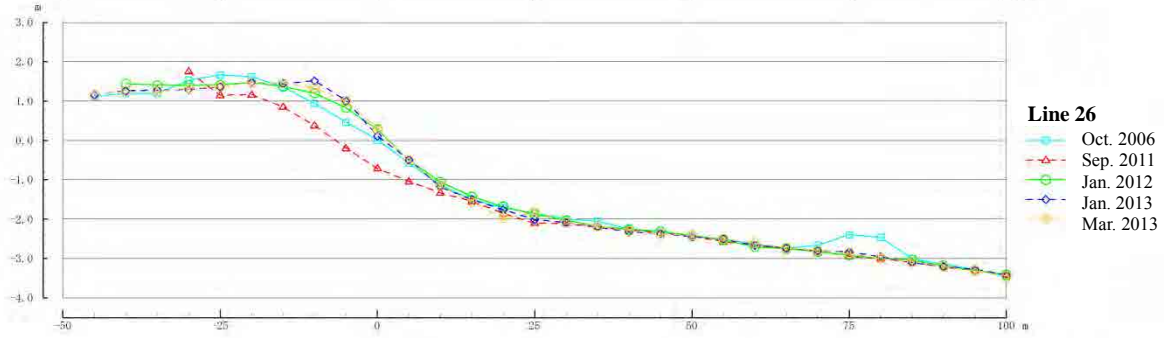
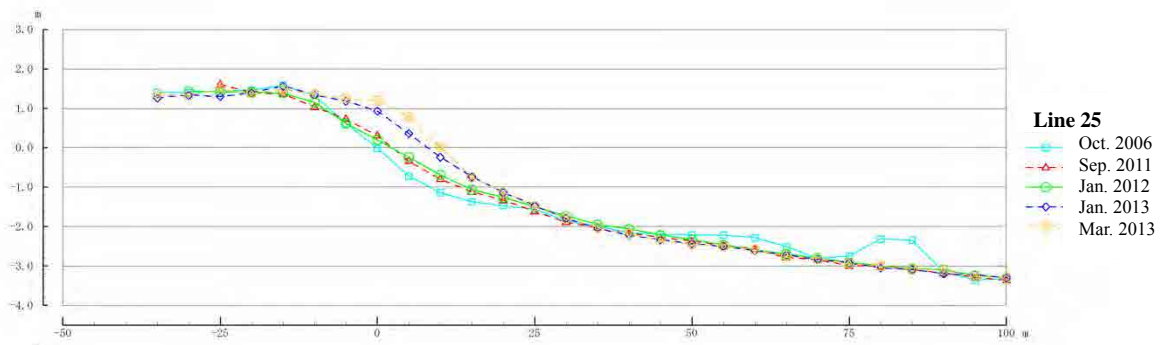
Appendices Figure 5-3-2-11 Cross Section (Line 19-20)



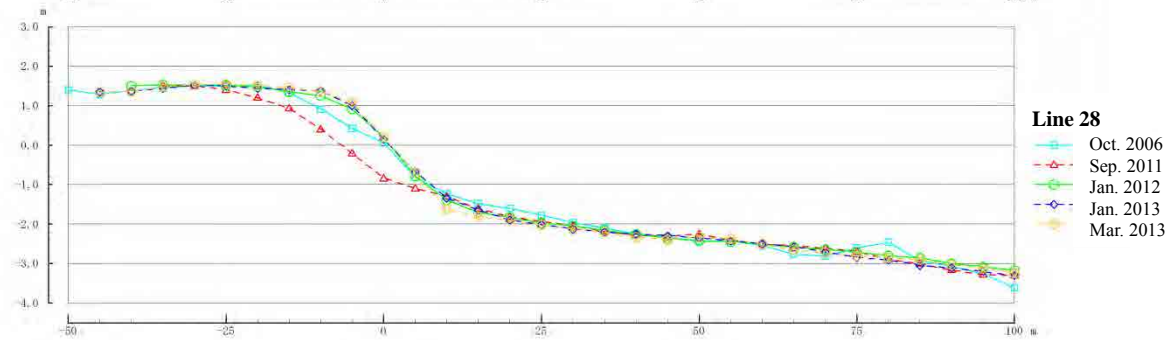
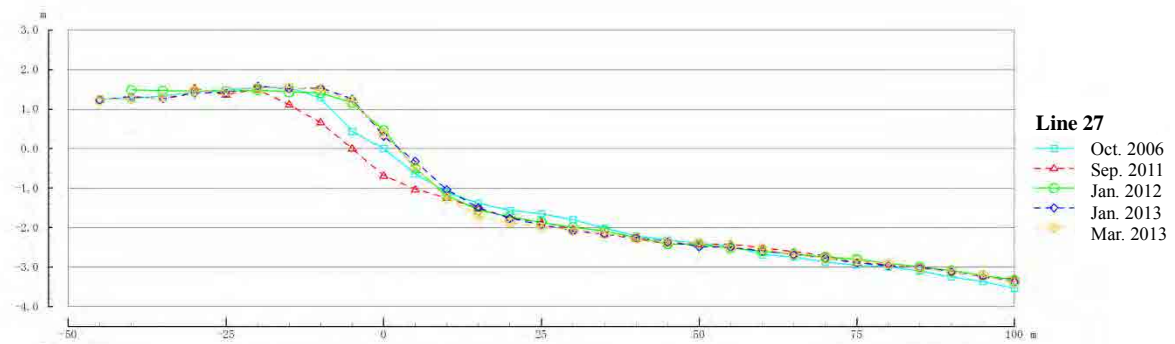
Appendices Figure 5-3-2-12 Cross Section (Line 21-22)



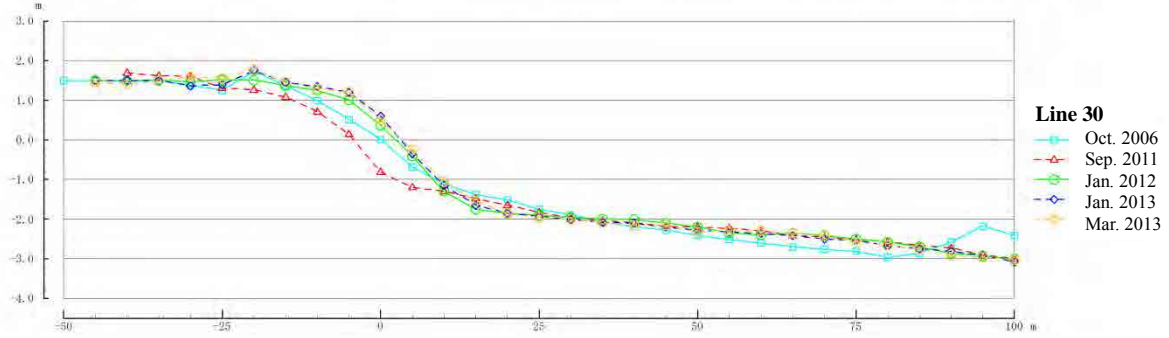
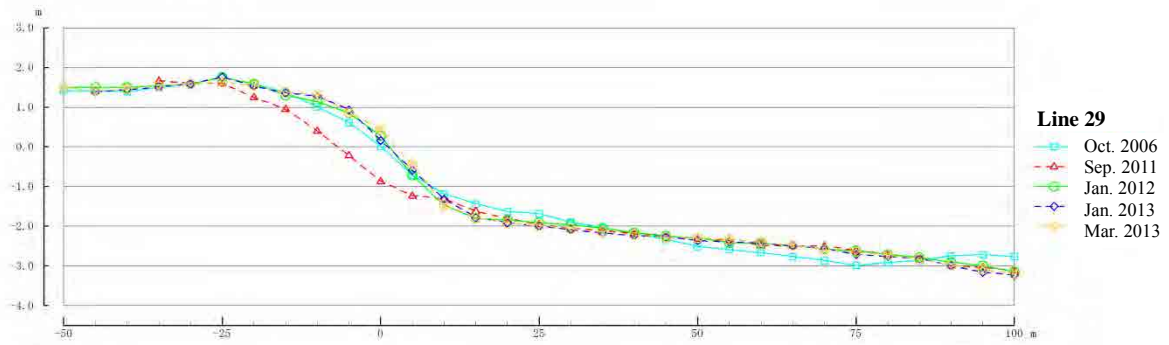
Appendices Figure 5-3-2-13 Cross Section (Line 23-24)



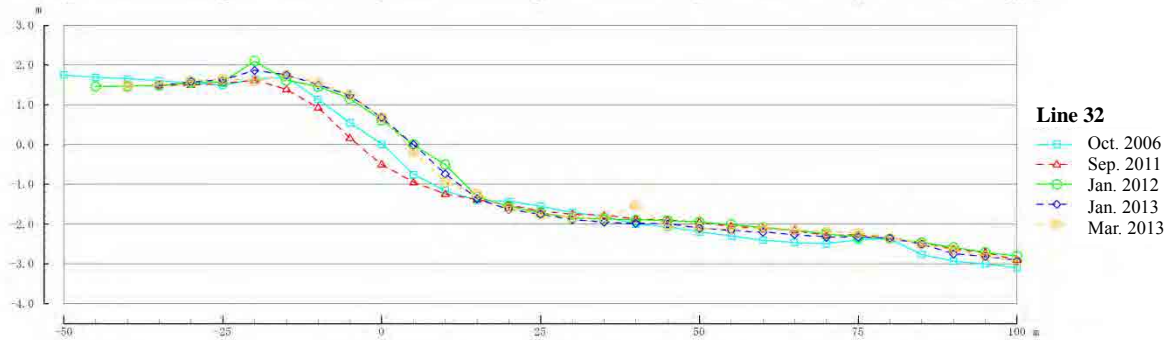
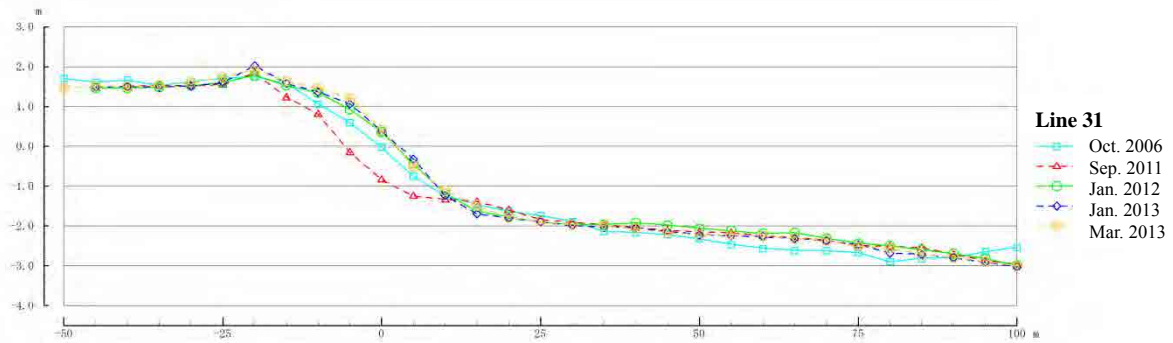
Appendices Figure 5-3-2-14 Cross Section (Line 25-26)



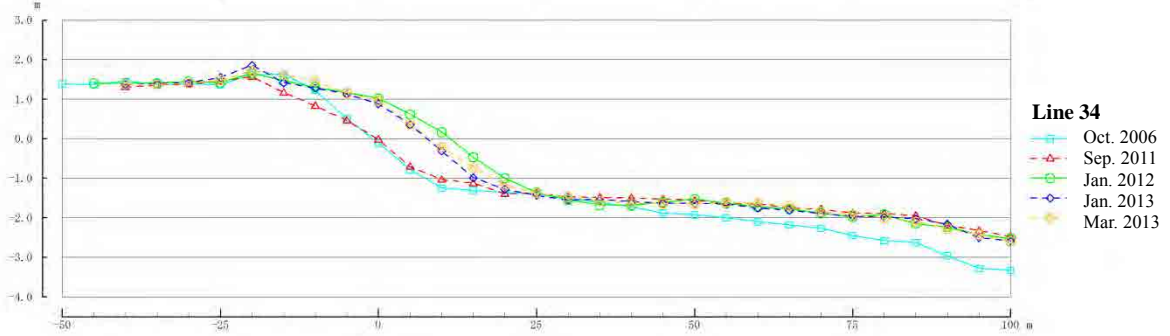
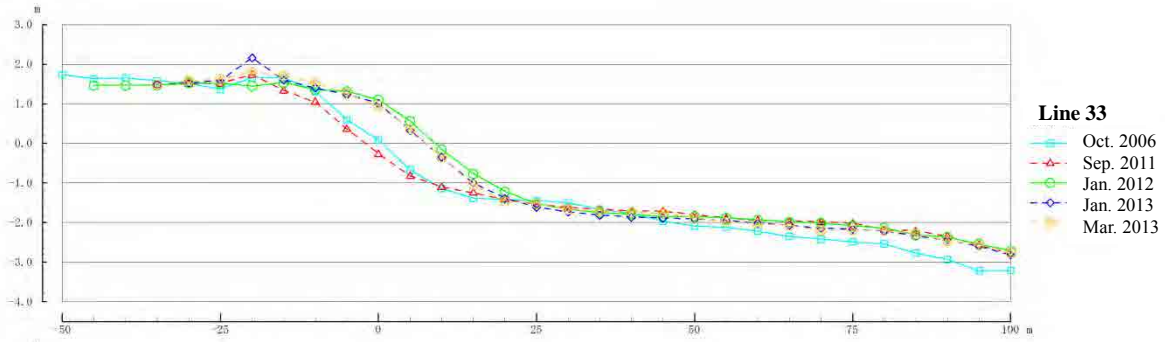
Appendices Figure 5-3-2-15 Cross Section (Line 27-28)



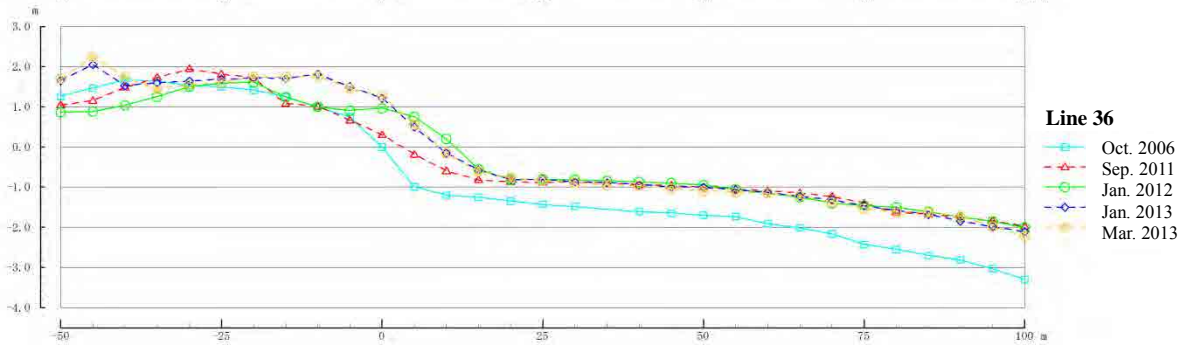
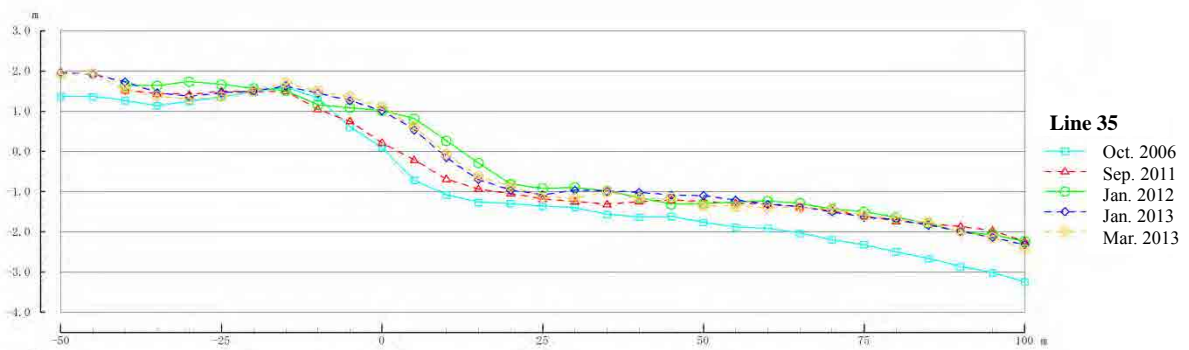
Appendices Figure 5-3-2-16 Cross Section (Line 29-30)



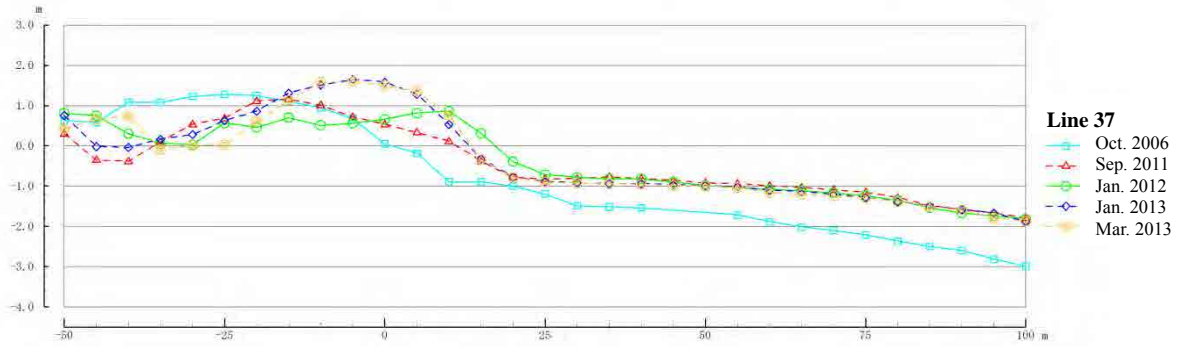
Appendices Figure 5-3-2-17 Cross Section (Line 31-32)



Appendices Figure 5-3-2-18 Cross Section (Line 33-34)



Appendices Figure 5-3-2-19 Cross Section (Line 35-36)



Appendices Figure 5-3-2-20 Cross Section (Line 37)

5-4 Permission for the Works of Short-Term Countermeasures

(1) Permission of the Works of Short-Term Countermeasures by DCA (Development Control Authority)

GOVERNMENT OF ST. LUCIA

Ministry of Physical Development and the Environment

FROM : Chief Architect

TO : Chief Fisheries Officer

DATE : September 22, 2011

SUBJECT : Improvement of Fisheries Infrastructure in Anse La Raye
(Short Term Countermeasures)
Application Registration No. 927 (a)

With reference to the above caption, please find attached Approval Letter from the Development Control Authority.


AUGUSTIN POYOTTE
CHIEF ARCHITECT



Development Control Authority

Graham Louisy Administrative Building
P.O. Box 709
Waterfront, Castries
Saint Lucia, West Indies

Telephone : 453-1276
468-4438/4439
Fax : 459-0563

Please reply to the Executive Secretary

02

22nd September, 2011

Chief Architect
Architectural Section
1st Floor
Graham Louisy Administrative Building
Castries

Dear Sir,

**Re: Improvement of Fisheries Infrastructure in Anse La Raye
(Short Term Countermeasures)
Application Registration No. 927(a)**

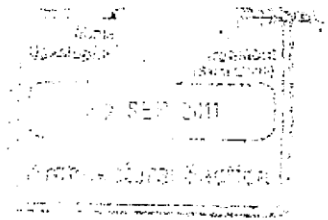
I am directed to inform you that on 20th September, 2011 the Board of the Development Control Authority granted **temporary approval** for a proposed armor stone cover along the Anse La Raye Beach Front subject to the following conditions:

1. In the event that the Coastal Wave Action Study proves contrary, the armor should be removed and the site restored in accordance with the instructions of the Development Control Authority.

Kindly be guided accordingly.

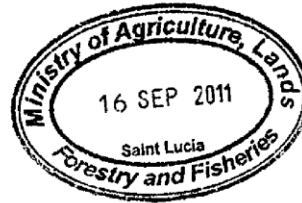
**Executive Secretary
Development Control Authority**

cc Chairman, Development Control Authority
Deputy Chief Physical Planner
Legal Officer
Development Control Officer
Physical Planning Officers



(2) Collateral conditions concerning works by Ministry of Public Works

2011011603



GOVERNMENT OF SAINT LUCIA
Ministry of Communications, Works, Transport & Public Utilities

MEMORANDUM

FROM : Chief Engineer
TO : Chief Fisheries Officer
Cc : Renata Philogene-McKie
DATE : 16th September, 2011

SUBJECT : **Traffic Management Approval – The Improvement of Fisheries Infrastructure in Anse La Raye**

The Ministry of communications, Works, Transport and Public Utilities acknowledges receipt of your proposed Traffic Management Plan.

We have assessed same and wish to inform that the Ministry has no objection to your request.

The following conditions however apply:

1. The undersigned must be informed the instance works officially commence.
2. There should be **no storage** of construction material along Front Street.
3. There should be **no parking** of construction site vehicles in front of the Vendors Arcade.

Please be guided accordingly


Lester Arnold
Chief Engineer

5-5 Report of the Works for the Short-Term Countermeasures

1. Work Contents

1-1 Revetment work

The revetment was constructed with the length of 30m and the width of 18 to 20m by installing rubble stones (100kg-200kg) with thickness of $t=60\text{cm}$ at in front of Fisheries Complex.

1-2

Rubble stones (10-100kg) were installed with thickness of $t=50\text{cm}$ in front of Vendors Arcade (length 48m, width 3m).

2. Equipment and Manpower

Equipment

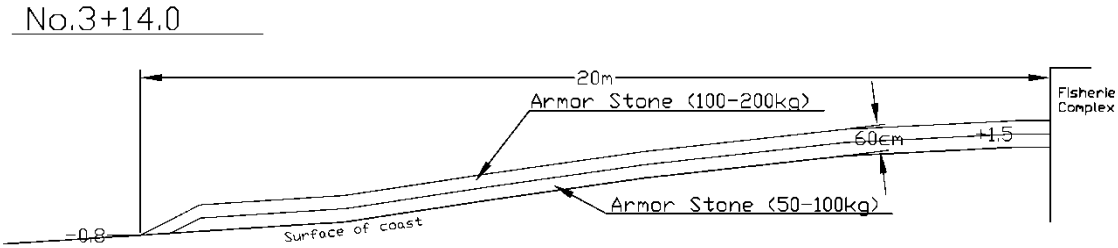
Excavator (320-L Caterpillar 148HP) with bucket of maximum 2m^3

Manpower

Project manager:	1
Accountant:	1
Foreman:	1
Stone masonry worker:	1
Quarry:	1
Driver:	1
Worker:	3
Operator for Excavator:	1
Total	10

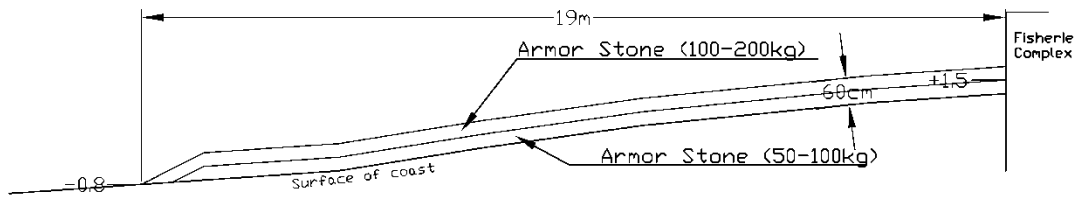
3. Cross section

No.3+14.0 10m area from sea side



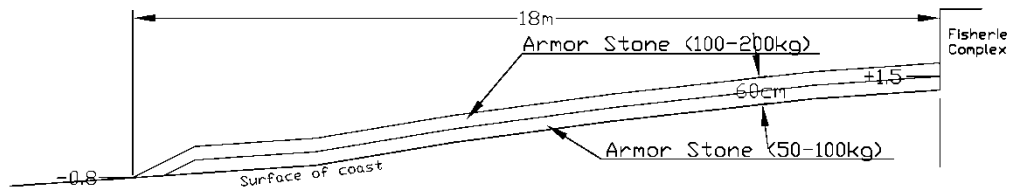
No.3

No.3



No.2+4.0

No.2+4.0



Around No.2 Completion of digging



Around No.2 Laying of rubble stones



Around No1 Digging



Around No.1 Laying of rubble stones



Around No.0 Digging



Around No.0 Laying of rubble stones

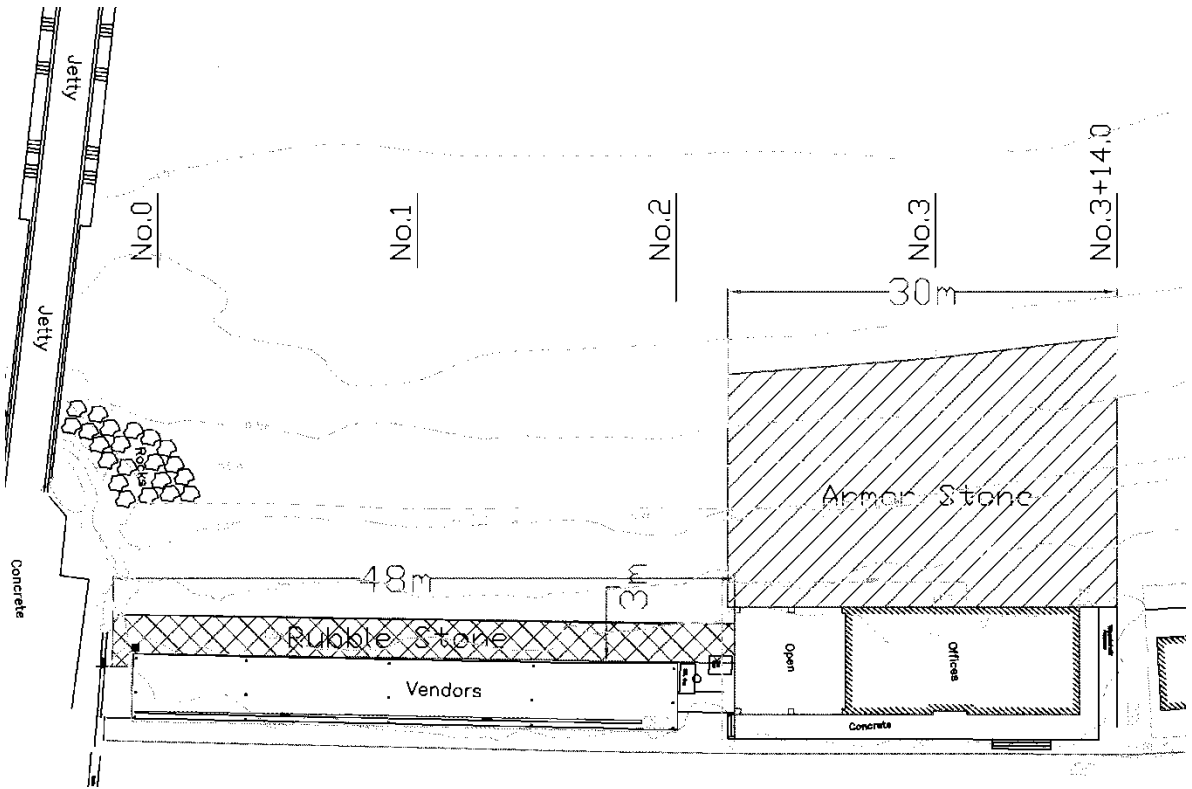


No.0 ~ No.2 Completion of cover of sand



Completion photo (from view point of north side of project site)





Whole Plan of Completion

5-6 Permission for the Works of Middle-Term Countermeasures

NOV-7-2012 14:07 FROM:DEPT OF FISHERIES 17584523853

TO:4536036

P.1/2



GOVERNMENT OF SAINT LUCIA

Ministry of Agriculture, Food Production, Fisheries and Rural Development Department of Fisheries

4th & 5th Floor, Sir Stanislaus James Building
Castries, Saint Lucia



Communications on this subject
should be addresses to:
The Chief Fisheries Officer
and the following Number
quoted:

November 7, 2012

Mr Mizutani Kyohei
Resident Representative
JICA/JOCV
Saint Lucia

Dear Mr Kyohei

**RE: Proposed Infrastructural Development (Shoreline protection)
at Anse La Raye Village, Anse La Raye (Block & Parcel O240C 293)
Application Registration Number: 677/12**

Please be informed that the Development Control Authority (DCA) on November 2nd 2012 approved your request.

Your attention is drawn to the following:-

- 28-(1) If permission is granted for the development of land and the development is not commenced within a period of twelve months for the date on which it was granted, it shall lapse.
- 28-(2) A person who intends to carry out a development for which permission has been granted shall give notice to the Executive Secretary of the Development Control Authority of the date on which that development will commence.
- 28-(5) If a development other than a development by way of mining operations or a material change of use of any land is not completed within 30 months of the date of commencement fixed by the notice given under subsection (2) or (3), or such other period as may be prescribed in the notice granting permission the permission shall lapse, without prejudice to the status of such of the permitted works as then complete.
- 29-(1) Whenever any plans have been submitted to the Development Control Authority on an application for permission to develop any land and such permission has been granted, the development is question shall be

Reception: (758) 468-4143
Extension Unit: (758) 468-4105
Email: deptfish@maff.gov.lc

Admin Section: (758) 468-4143
Resource Management: (758) 468-4642
Website: www.slumaffe.org

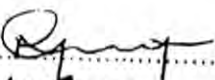
Accounts Section: (758) 468-4102
Fax: (758) 452-3853

carried out in accordance with the approved plans and any conditions subject to which permission was granted.

You are therefore required, for the duration of the construction period, to maintain onsite, a copy of the approved plans for inspection by the DCA.

Should you require further information or clarification, feel free to contact the Mr. Rufus George, Chief Fisheries Officer (AG) at telephone number 468 4143.

Yours sincerely


.....
Rufus George
CHIEF FISHERIES OFFICER (AG)

5-7 Report of supervision for the Works of Middle-Term Countermeasures

PROJECT MANAGEMENT

1.1 Schedule Control

(1) Construction Progress

The construction commencement date is 7th January and the construction completion date is 26th March based on contract of contractor, the construction commenced in 14th January, because delay of site survey before construction.

At first the construction completion date was 26th March, revised the construction completion date will 27th March of one day delay.

The site survey (Topographic & Bathymetric) before commencement of construction works started 14th January and finished 17th January.

January progress was taken effect on schedule 14.4%, although the site survey was delayed.

February progress was 54.4%, ahead 1.6% comparison with completion forecast curve.

The construction was completed on 15th March, the survey after completion of construction started on 18th March and finished on 21st March.

1.2 Quality / Outcome Control

(1) Protective Works in front of Fishing Gear Locker

The contents of construction work in front of Fishing Gear Locker Area(76 m) are excavate of sand, laying of rubble stone and sand filling, inspections of bottom of excavation and top elevation of rubble stone have been carried out.

In quest of submission, the result of the gravity test of stone used on the site was confirmed with the contractor about 2.65~2.70t/m³.

The underground buried cable was discovered in the position of a place and about 1m below ground which excavated the north side of the Fishing Gear Locker 1.

This underground buried cable is taken into the

施工監理報告

1.1 工程管理

(1) 工事進捗率

受注業者の契約書では1月7日工事着工、3月26日完工となっていたが、工事前測量の遅れにより1月14日に着工した。完工日は当初の3月26日から1日遅れの3月27日となっている。

1月14日から工事前測量(地形測量、深淺測量)が始まり、1月17日に終了した。

1月の工事進捗率は工事前測量が遅れたにも拘らず、14.4%で完工予想曲線と比較して予定通りに進捗した。

2月の工事進捗率は54.4%で完工予想曲線と比較して1.6%先行した。

3月15日に工事は完工し、18日から工事完工時の測量が始まり、21日に終了した。

1.2 品質/出来形管理

(1) 漁具倉庫前の捨石工

漁具倉庫前(76 m)の工事内容は、砂の掘削、Rubble Stoneの敷設及び砂の埋戻しであり、掘削底面、Rubble Stone天端の出来形検査を実施した。

現場で使用する石の比重試験の結果を施工業者に提出を求め、2.65~2.70t/m³あることを確認した。

漁具倉庫1の北側を掘削した所、地下約1mの位置に地下埋設ケーブルを発見した。

この地下埋設ケーブルは約10mの位置で、

distribution box in the fence of the Fishing Gear Locker 1 in about 10m position.

In order not to damage an underground buried cable, about 10m shifted to the sea side 1m, and excavate and laying stone were performed.

(2) Protective Works in front of Fisheries Complex
The contents of construction works in front of Fisheries Complex Area(30 m) are removal of existing rubble stone at middle part, excavate of sand, laying of rubble stone and sand filling, inspections of bottom of excavation、top elevation of rubble stone and after leveling of sand filling have been carried out.

The raising rubble stone and installation of armor stone at shoreline, the inspection was carried out the top elevation of armor stone. Moreover, the raising rubble stone at Fisheries Complex side was carried out and the top elevation was inspected.

(3) Protective Works in front of Vendors Arcade
The contents of construction works in front of Vendors Arcade Area(48m) are excavation of existing rubble stone and removal, excavation of sand, laying and leveling of rubble stone. The inspections of bottom of excavation sand and top elevation of rubble stone have been carried out.

(4) Sand filling Works in front of Vendors' Arcade
The contents of construction works in front of Vendors Arcade Area(48 m) is transportation of sand and sand filling , after leveling sand carried out inspection.

(5) Site Inspection
The completion inspection by Client, Department of Fisheries, the Consultant and Contractor was carried out on 15th March.

漁具倉庫 1 のフェンス内の分電ボックスに込まれている。

地下埋設ケーブルを傷つけないために北側約 10m 区間を海側に 1m シフトして、掘削、石の敷設を行った。

(2) 水産複合棟前の捨石工
水産複合棟前(30 m)の工事内容は、中間部分の既設 rubble stone の撤去、砂の掘削、rubble stone の敷設及び覆砂であり、掘削底面、rubble stone 天端及び覆砂の出来形検査を実施した。

汀線部分の rubble stone の嵩上げ、armor stone の敷設であり、armor stone 天端の出来形検査を実施した。

また水産複合棟際の既設石積部分の rubble stone の嵩上げを行い、天端の確認を行った。

(3) ベンダーズ・アーケード前の捨石工
ベンダーズ・アーケード前(48 m)の工事内容は既設 rubble stone の掘削及び撤去、砂の掘削、rubble stone の敷設及び均しである。砂の掘削底面、rubble stone 天端の出来形検査を実施した。

(4) ベンダーズ・アーケード前の覆砂工
ベンダーズ・アーケード前(48 m)の工事内容は覆砂材の運搬と砂の敷均しであり、敷均し後の出来形検査を実施した。

(5) 完工検査
施主(JICA)、水産局、コンサルタント及び施工業者による完工検査を 3 月 15 日に実施した。

1.3 Safety Control

The Notice Board in which a construction period and the construction area were shown was installed in two places of the site.

Moreover, around construction place by stretching the yellow tape urged to cautions.

The guard was stationed at the entrance of construction vehicles.

1.4 Monthly Meeting

The Monthly Meeting by Client, the Department of Fisheries, the Consultant and Contractor held the monthly meeting in January on 8th February and held monthly meeting in February on 4th March.

Furthermore, the meeting by four parties was held also on 14th March.

2. Special Issues

(1)Arrival of the Resident Engineer

The Resident Engineer, Mr.Sase arrived in Castriesin 3rd January.

(2)Advance Payment

The contractor filed the advanced payment to JICA on 16 January, but the submitted document has mistaked some, reintroduced and the advance payment 40% was paid on 24th January.

(3)Request of Interim Payment

The contractor proposed progress payment at the end of February, although remaining 60% of construction cost pay after completion of construction based on contractor contract.

This affair was reported to JICA St. Lucia.

The US\$ 40,400 was by discretion of JICA on 8th March.

1.3 安全管理

現場の 2 ケ所に工事期間及び工事範囲を示した掲示板を設置した。

また工事箇所周辺には注意を促す黄色いテープを張って工事を実施している。

工事車輛等の入り口にはガードマンを配備している。

1.4 月例会議

施主(JICA)、水産局、コンサルタント及び施工業者による月例会議は 2 月 8 日に 1 月の月例会議、3 月 4 日に 2 月の月例会議を開催した。

更に 3 月 14 日にも会議を開催した。

2. 特記事項

(1)現場常駐コンサルタントの着任

1 月 3 日に現場常駐コンサルタントの佐瀬が着任した。

(2)前払い金の請求及び支払い

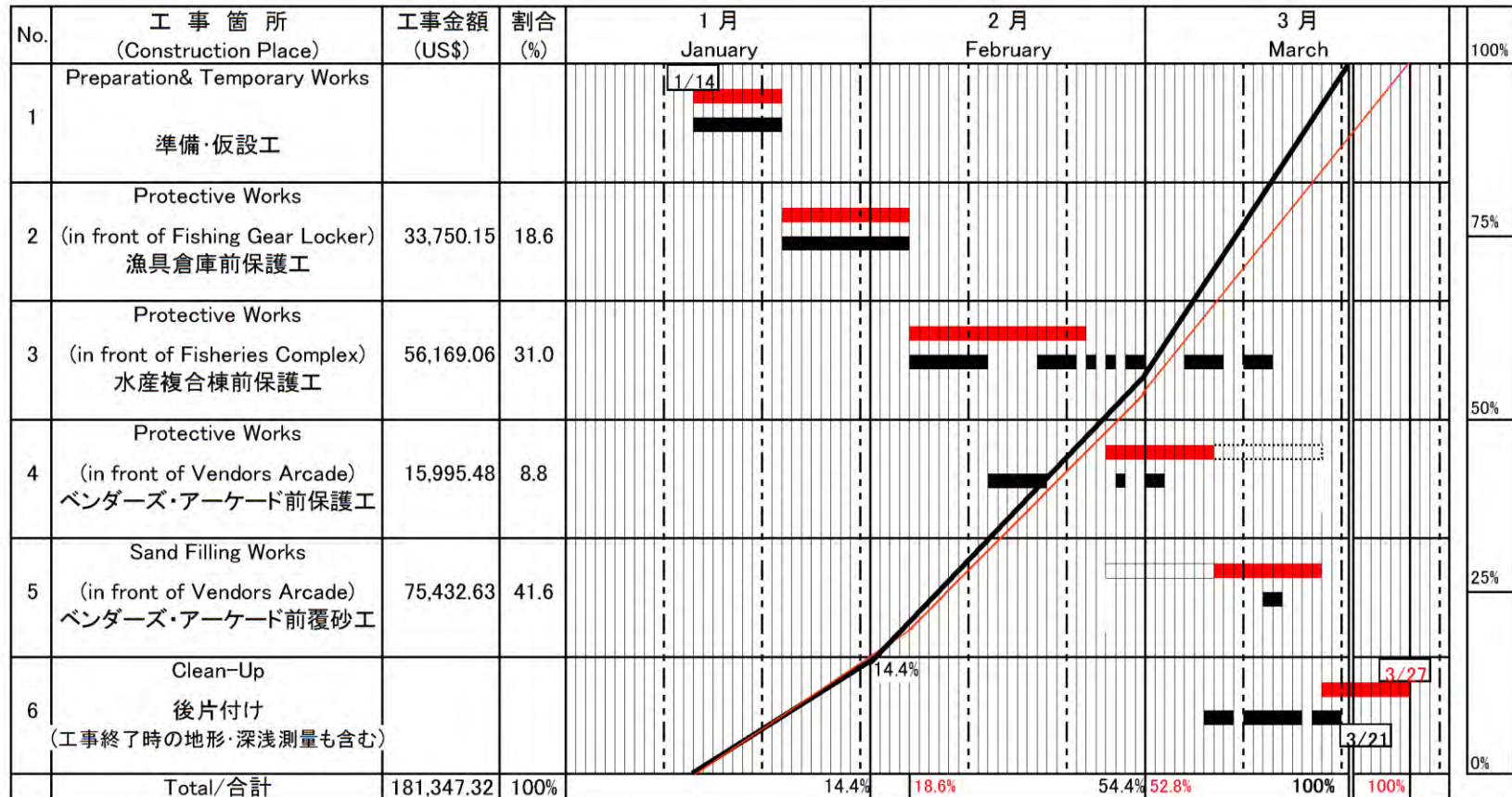
施工業者が前払い金の請求を 1 月 16 日に行ったが、提出書類に不備があり、再度提出の後 1 月 24 日に 40%が支払われた。

(3)中間払い金の請求について

業者契約書では契約金額の残り 60%は工事完了後の支払いになるにも拘らず、業者は 2 月終了時点で出来高払いを請求したいとの申し入れがあった。

この件については JICA セントルシアに報告した。JICA の計らいにより 3 月 8 日に US\$ 40, 400 が支払われた。

Construction Schedule



Note ; 2から5の工事箇所については工事金額がBQで明確ですが、Temporary Works等については明確になっていないので2から5の工事金額の比率で分け、2から5の各工事金額にプラスしました。

Red ; Schedule
Black ; Actual Result