PROJECT NAME		HILO WWTP REHABILATATION & REPLACEMENT PROJECT PHASE 1	
PROJECT NUMBER		WW-4705R	
SUBMITTAL #			
SPECIFICATION SECTION			
SHOP DRAWING REVIEW			
ENGINEER'S REVIEW		CONTRACTOR'S ACTION	
	No Exceptions		Confirm
	Make Corrections Noted		Resubmit
	Rejected		
X	Comments Attached		
Engineer's review is for general conformance with the design concept and the contract requirements. Markings or comments shall not be construed as relieving the Contractor from compliance with the project plans, specifications nor departure therefrom. The Contractor remains responsible for details and accuracy, for conforming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing his work in a safe manner.			
R.M. TOWILL CORPORATION	Date	May 23, 2025	
	By	Michael S. Hong – Construction Manager	

- Hilo Landfill is no longer accepting MSW since permanent closure in 2020. Contractor is not allowed to use the Hilo Reload Station. We are also in the process of updating the DEM Admin Rules. Update will increase (amount is not determined at this time) the landfill tipping charge currently $128/ton. Special handling charge is additional $128/ton.
- An advanced notification for loads exceeding 30 cubic yards. (or multiple 30 cubic yard loads scheduled for delivery is appreciated). Just to be clear, there is a distinction between exceeding 30 cubic yards delivered and multiple loads of 30 cubic yards delivered. Both affect SWD operations in Hilo. An advanced notification is nice but depending on the schedule, this distinction is important to our daily operations.
- C&D wastes are accepted at the West Hawaii Sanitary Landfill.
  [reference Job No. WW-4705R - Section 3.02 Preparation – B1 a. coordinate timing and fees]
  - SWD assumes that Nan Inc. will be coordinating with its Landfill Manager at the West Hawaii Sanitary Landfill for waste delivery
  - SWD would ask for communication to extend to our Operations Team as well
    - West Hawaii Superintendent – Robert Diego First Call for operational coordination at the landfill:
      - robert.diego@hawaiicounty.gov
        808.327.3507
    - Solid Waste Deputy – Michael Kaha copied on all written communication and secondary call ONLY if Robert Diego is unavailable:
      - michael.kaha@hawaiicounty.gov
        808.961.8997
    - Solid Waste Chief – Gene Quiamas copied on all written communications and Final Call ONLY if Robert Diego or Michael Kaha is unavailable:
      - gene.quiamas@hawaiicounty.gov
        808.961.8058

CONTRACTOR SUBMITTAL TRANSMITTAL FORM

Owner:	County of Hawaii	**Date:**	5/19/25
Contractor:	Nan, Inc.	**Project No.:**	WW-4705R
Project Name:	Hilo WWTP Phase 1	**Submittal Number:**	01734-002.0
Submittal Title:	Solid Waste Management Plan		
To:	County of Hawaii Dept. of Environmental Management		
From:	Nan Inc.		

Specification No. and Subject of Submittal / Equipment Supplier			
Spec ##:	**01734 Subject:**	Solid Waste Management Plan	
Authored By:	Nishant More	**Date Submitted:**	5/19/25

Submittal Certification

Check Either (A) or (B):

[X] (A) We have verified that the equipment or material contained in this submittal meets all the requirements specified in the project manual or shown on the contract drawings with no exceptions.

[ ] (B) We have verified that the equipment or material contained in this submittal meets all the requirements specified in the project manual or shown on the contract drawings except for the deviations listed.

Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements.

General Contractor's Reviewer's Signature:

Printed Name and Title: Jason Tagawa - Project Manager

In the event, Contractor believes the Submittal response does or will cause a change to the requirements of the Contract, Contractor shall immediately give written notice stating that Contractor considers the response to be a Change Order.

Firm: **Signature:** **Date Returned:**

PM/CM Office Use

Date Received GC to PM/CM:

Date Received PM/CM to Reviewer:

Date Received Reviewer to PM/CM:

Date Sent PM/CM to GC:

Nan, Inc

PROJECT: HILO WWTP REHABILITATION AND REPLACEMENT PROJECT - PHASE 1

JOB NO. WW-4705R

THIS SUBMITTAL HAS BEEN CHECKED BY THIS CONTRACTOR. IT IS CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED CONTRACTORS AND SUPPLIERS ARE AWARE OF, AND WILL INTEGRATE THIS SUBMITTAL (UPON APPROVAL) INTO THEIR OWN WORK.

DATE RECEIVED 5/19/25
SPECIFICATION SECTION # 01734
SPECIFICATION SELECTIVE ALTERATIONS AND DEMOLITION
PARAGRAPH 1.05 G
DRAWING n/a
SUBCONTRACTOR n/a
SUPPLIER n/a
MANUFACTURER n/a

CERTIFIED BY: Jason Tagawa, Project Manager

SECTION 01738

SELECTIVE ALTERATIONS AND DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
   1. Cutting or modifying of existing and new work.
   2. Demolition of structures and equipment.
   3. In-place abandonment of pipe.
   4. Preparation of and compliance with Solid Waste Management Plan.

1.02 REFERENCES

A. American National Standards Institute (ANSI):
   1. A10.6 - Safety and Health Program Requirements for Demolition Operations.

B. International Concrete Repair Institute (ICRI):
   1. Guideline No. 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.
   2. Guideline No. 310.3R - Guide for the Preparation of Concrete Surfaces for Repair Using Hydrodemolition Methods.

C. County of Hawaii, Department of Environmental Management:
   1. Solid Waste Management Plan - Guidelines.

1.03 DEFINITIONS

A. Chipping hammer: A hand-operated electrical or pneumatic demolition device for removal of hardened concrete or masonry materials having a weight of less than 15 pounds and an impact frequency of greater than 2,000 blows/minute.

B. Concrete breaker: A hand-operated electrical or pneumatic demolition device for removal of hardened concrete or masonry materials having a weight greater or impact frequency less than the limits defined for a chipping hammer.

C. Coring equipment: Non-impact rotary drill with diamond cutting edges.

D. Heavy abrasive blast: Cleaning procedure by which various abrasives materials, or steel shot, are forcibly propelled by high pressure against a surface to remove loose material and produce a concrete surface roughened to ICRI Surface Profile CSP-7, or higher, as specified in ICRI 301.3R.

E. Salvage material: Materials removed from existing facilities and stored for Owner's future reuse.

1.04 DESCRIPTION OF WORK

A. The work includes partial and total demolition, cutting, and modifying of existing facilities, utilities, and/or structures.

B. These facilities may be occupied and/or operational. Satisfactory completion of the work will require that the Contractor plan activities carefully to work around unavoidable obstacles and to maintain overall stability of structures and structural elements. It will further require restoration of existing facilities, utilities, and structures that are to remain in place and that are damaged by demolition or removal operations.

C. Prepare, process, gain acceptance of, and comply with the Solid Waste Management Plan.

1.05 SUBMITTALS

A. General:
   1. Submit specified in Section 01330 - Submittal Procedures.

B. Shop drawings: Include:
   1. The location of all embedded items shall be documented using diagrams and/or other media that clearly show dimensions and locations of existing structural elements, existing embedded items and any new embedded items and their relationship to each other.

C. Submittals for information only:
   1. Permits and notices authorizing demolition.
   2. Certificates of severance of utility services.
   3. Permit for transport and disposal of debris.
   4. Selective Demolition Plan.
   5. Pipe Abandonment Plan.

D. Quality assurance submittals:
   1. Qualifications of non-destructive testing agency/agencies.

E. Project record documents.

F. Drawings and/or other media documenting locations of service lines and capped utilities.

G. Solid Waste Management Plan.

1.06 QUALITY ASSURANCE

A. Qualifications:
   1. Assign relocation, removal, cutting, coring and patching to trades and workers qualified to perform the Work in manner that causes the least damage and that provides means of returning surfaces to an appearance at least equal to that of the surrounding areas unaffected by the Work.

2. Non-destructive testing agencies: Minimum of 5 years' experience performing non-destructive testing for location of steel reinforcement in existing concrete under conditions similar to that required for this Work.

1.07 SEQUENCING

A. Perform Work in sequences and within times specified in Section 01140 - Work Restrictions.

B. If the facility or utility to be modified cannot be removed from service, perform the Work while the facility is in operation using procedures and equipment that do not jeopardize operation or materially reduce the efficiency of that facility.

C. Coordinate the Work with operation of the facility:
   1. Do not begin alterations of designated portions of the Work until specific permission for activities in each area has been granted by Owner in writing.
   2. Engineer will coordinate the planned procedure with facility manager.
   3. Complete Work as quickly and with as little delay as possible.

D. Operational functions of the facility that are required to be performed to facilitate the Work will be performed by facility personnel only.

E. Owner will cooperate to assist in expediting the Work.

F. When necessary for the proper operation or maintenance of portions of the facility, reschedule operations so the Work will not conflict with required operations or maintenance.

1.08 REGULATORY REQUIREMENTS

A. Dispose of debris at the West Hawaii Sanitary Landfill in accordance with governing regulatory agencies, including County of Hawaii, Department of Environmental Management Solid Waste Management Plan and other applicable regulations.

B. Comply with applicable air pollution control regulations.

C. Obtain permits for building demolition, transportation of debris to disposal site and dust control.

1.09 PREPARATION

A. Non-destructive evaluation of existing concrete and masonry:
   1. Prior to cutting, drilling, coring, and/or any other procedure that penetrates existing concrete or masonry, retain and pay for the services of a qualified non-destructive testing agency to perform investigations to determine the location of existing steel reinforcement, plumbing, conduit, and/or other embedments in the concrete. Contractor can also use its own trained and qualified personnel instead of a third-party testing agency for the investigations.[AD3]

2. Submit documentation of the investigations to the Engineer for review and approval as specified in Section 01330 - Submittal Procedures, before any work involving penetration of existing concrete is initiated.

B. Obtain permission from adjacent property owners when outriggers, swinging cranes, and other equipment may have to traverse or extend into adjacent property.

1.10 PROJECT CONDITIONS

A. Do not interfere with use of adjacent structures and elements of the facility not subject to the Work described in this Section. Maintain free and safe passage to and from such facilities.

B. Provide, erect, and maintain barricades, lighting, guardrails, and protective devices as required to protect building occupants, general public, workers, and adjoining property:
   1. Do not close or obstruct roadways without permits.
   2. Conduct operations with minimum interference to public or private roadways.

C. Prevent movement, settlement, or collapse of structures, adjacent services, sidewalks, driveways, and trees:
   1. Provide and place bracing or shoring.
   2. Cease operations and notify Engineer immediately when safety of structures appears to be endangered. Take precautions to properly support structure. Do not resume operations until safety is restored.
   3. Assume liability for movement, settlement, or collapse. Promptly repair damage.

D. Arrange and pay for capping and plugging utility services. Disconnect and stub off.
   1. Notify affected utility company in advance and obtain approval before starting demolition.
   2. Place markers to indicate location of disconnected services.

E. Unknown conditions:
   1. The drawings may not represent all conditions at the site and adjoining areas. Compare actual conditions with drawings before commencement of Work.
   2. Existing utilities and drainage systems below grade are located from existing documents and from surface facilities such as manholes, valve boxes, area drains, and other surface fixtures.
   3. If existing active services encountered are not indicated or otherwise made known to the Contractor and interfere with the permanent facilities under construction, notify the Engineer in writing, requesting instructions on their disposition. Take immediate steps to ensure that the service provided is not interrupted, and do not proceed with the Work until written instructions are received from the Engineer.

PART 2 PRODUCTS

2.01 SALVAGED MATERIAL

A. Materials designated for salvage:
   1. Approximately 30 days prior to the demolition of any process, Contractor, Owner, and Engineer shall meet to discuss what mechanical, electrical, and other equipment and systems, if any, Owner designates for salvage.

B. Handling and storage:
   1. Prevent damage to designated salvage materials during removal, handling, and transportation.
   2. Prepare salvaged materials for storage.
      a. Remove residual wastewater, chemicals, sludge, fluids, and lubricants that may leak, and other harmful materials from equipment before transporting.
   3. Transport to and unload salvaged materials at the area on the project site designated by Owner.

PART 3 EXECUTION

3.01 EXAMINATION

A. Prior to beginning selective demolition operations, perform a thorough inspection of the facility and site.
   1. Report to the Engineer defects, structural damage, and deterioration of existing construction to remain in place.

B. Examine areas affected by the Work and verify the following conditions prior to commencing demolition:
   1. Disconnection of utilities as required.
   2. Verify that utilities serving occupied or active portions of surrounding facilities will not be disturbed, except as otherwise indicated.

C. If unsatisfactory conditions exist, notify the Engineer, and do not begin demolition operations until such conditions have been corrected.

3.02 PREPARATION

A. Plan and organize Work to minimize inconvenience to adjacent buildings and to plant operations.

B. Solid Waste Management Plan:
   1. Prepare, submit to the County of Hawaii, Department of Environmental Management, and gain acceptance of the Solid Waste Management Plan per the guidelines attached to this section as Attachment A.
      a. Coordinate specific requirements with the Solids Waste Division including, but not limited to timing, size of materials for disposal, and special handling fees.
   2. Adhere to all Hawaii Administrative Rules regarding landfill requirements.

C. Selective Demolition Plan:
    1. Prepare and submit a comprehensive selective demolition plan and diversions/recycling plan for the Work including the following elements, at a minimum:
        a. Proposed sequence, methods, temporary support, and equipment for demolition, removal, and disposal of portions of structure(s).
        b. Provisions and procedures for salvage and delivery to Owner of salvaged items, if required.
        c. Method(s) of removing embedded relics and antiques.
        d. Detailed drawings showing proposed weatherproof closures and dustproof partitions.
    2. Plan shall be signed and sealed by a Professional Engineer licensed in the state where Project is located and licensed in the category applicable to the work involved.
    3. Submit plan a minimum 4 weeks before demolition is scheduled to begin.

D. Pipe Abandonment Plan:
    1. Prepare and submit a comprehensive Pipe Abandonment Plan for the Work.
        a. Include provisions to demonstrate and verify with camera inspection that all solids have been removed and that pipe is free of residuals.
    2. At a minimum, define the following elements:
        a. Proposed sequence, methods, cleaning procedures, or demolition, removal, and disposal of contents of the piping.
        b. Method of verification of final pipe condition.
        c. Detailed drawings showing treatment of pipe ends**.**
    3. Submit plan a minimum 4 weeks before abandonment is scheduled to begin.

E. Protection:
    1. Erect weatherproof closures to protect the interior of facilities and elements or equipment that are not designed for exposure to the weather.
    2. Provide temporary heat, cooling, and humidity control as necessary to prevent damage to existing and new equipment and construction.
    3. Maintain existing exiting paths and/or provide new paths in compliance with Building Code requirements.
    4. Erect and maintain dustproof partitions as required to prevent spread of dust, to other parts of building. Maintain negative pressure in the area where the Work is being performed to prevent the accidental spread of dust and to minimize the spread of fumes related to the Work.
    5. Upon completion of Work, remove weatherproof closures and dustproof partitions.
    6. Repair damaged surfaces to match adjacent surfaces.
    7. Provide and maintain protective devices to prevent injury from falling objects.
    8. Locate guardrails in stairwells and around open shafts to protect workers. Post clearly visible warning signs.
    9. Protect the following from damage or displacement during Work.
        a. Benchmarks and survey points.
        b. Existing construction that will remain in place.
        c. Trees and landscaping designated to remain in place.
    10. Carefully remove designated materials and equipment to be salvaged by Owner or reinstalled.
    11. Store and protect materials and equipment to be reinstalled.

F. Layout:
   1. The limits of selective demolition are indicated on the Drawings. Confine demolition operations within the limits indicated on the Drawings.
   2. Lay out demolition and removal work at the site and coordinate with related Work for which demolition and removal is required.
   3. Clearly mark the extent of structural elements to be removed on the actual surfaces that will be removed.
   4. Arrange for Engineer's inspection of the lay out extents.
   5. Do not begin demolition/removal operations until the lay out markings have been reviewed by the Engineer.

3.03 DEMOLITION

A. General:
   1. Perform demolition work in accordance with ANSI A10.6.
   2. Demolish designated portions of structures and appurtenances in orderly and careful manner in accordance with the Selective Demolition Plan.
   3. Conduct demolition and removal work in a manner that will minimize dust and flying particles.
      a. Use water or dust palliative when necessary to prevent airborne dust.
      b. Provide and maintain hoses and connections to water main or hydrant.
   4. Remove materials carefully, to the extent indicated and as required.
      a. Provide neat and orderly junctions between existing and new materials.
      b. Use methods that terminate surfaces in straight lines at natural points of division.
   5. Do not remove anything beyond the limits of Work indicated without prior written authorization from the Engineer.
      a. If in doubt about whether to remove an item, obtain written authorization from the Engineer prior to proceeding.
      b. Do not remove demolition materials and other waste material from the site until the Solid Waste Management Plan is accepted.
   6. Perform work so as to provide the least interference and most protection to existing facilities to remain.
   7. Demolished materials:
      a. Assume possession of materials unless otherwise indicated on the Drawings, specified, or designated by Owner.
      b. Remove demolished materials from site at least weekly and dispose of them in accordance with Laws and Regulations.
      c. Do not burn or bury materials on site.

B. Demolition of concrete and masonry:
   1. Demolish concrete and masonry in small sections.
      a. Perform demolition with small tools as much as possible.
      b. Blasting with explosive charges is not permitted.
   2. Sawcut concrete to establish the edges of demolition, wherever possible.
      a. Do not use a concrete breaker within 6 inches of reinforcing or structural metals that are designated to remain in place.
      b. At edges that are not sawcut, remove the final 6 inches of material with a chipping hammer as defined herein. At surfaces where material is removed with a chipping hammer, follow with a heavy abrasive blast to remove all loose material and microcracking.

c. Alternate techniques to remove concrete may be used if acceptable to the Engineer; however, techniques other than those deemed by ICRI Guideline No. 310.2R to provide a low risk of introducing microcracking will require a subsequent procedure to remove loose material and microcracked.
d. Provide final surface preparation for repairs as directed.

3. At locations indicated on the Drawings where the existing reinforcing is to be preserved, remove concrete using methods that do not damage the reinforcing. Use one of the following techniques:
   a. Hydrodemolition techniques as outlined in ICRI Guideline No. 310.3R.
   b. Chipping hammer, as defined herein, followed by heavy abrasive blast to remove all loose material and microcracking at remaining surfaces impacted by the chipping hammer.
   c. Alternate methods may be used, only when accepted in advance by the Engineer.
   d. For all methods, provide a small completed area for Engineer's review and acceptance. If the proposed method, in the opinion of the Engineer, damages the reinforcing, revise the removal method to remove the concrete with a less aggressive technique to protect the reinforcing.

C. Sizing of openings in existing concrete or masonry:
   1. Make openings large enough to permit final alignment of pipe and fittings without deflections, but without oversizing.
   2. Allow adequate space for packing around pipes and conduit to ensure watertightness.
   3. If the Engineer deems the opening to be insufficient in size to accomplish this criteria, remove additional material using the procedures outlined in this Section.

D. Cutting openings in existing concrete or masonry:
   1. Do not allow saw cuts to extend beyond limits of openings.
   2. Create openings by the following method or other means acceptable to the Engineer that prevents over-cutting of member at corners:
      a. Core-drill through slab or wall at corners, being careful not to damage materials beyond the area to be removed.
      b. Saw cut completely through the member, between the core holes at the corners.
      c. As an alternate to sawcutting through the member, score the edges of the opening with a saw to a 1-inch depth.
         1) Provide score on both surfaces (when accessible).
         2) Remove concrete or masonry to within 6 inches of material to remain with a concrete breaker.
         3) Remove the remaining material with a chipping hammer.
      d. Remove the remaining material at the corners left by the core-drilling with a chipping hammer.
   2. Prevent debris from falling into adjacent tanks or channels in service or from damaging existing equipment and other facilities.

E. In-place Abandonment of Pipe:
   1. Abandoned pipe in-place as indicated on the Drawings.

2. Clean buried or exposed solids service piping to a condition free of residual.
    a. Solids service piping includes: raw wastewater (RAW WW), primary sludge or scum (PS), mixed liquor (ML), return activated sludge (RAS), waste active sludge (WAS), surface waste activated sludge (SWAS), thickened waste activated sludge (TWAS), digested sludge (DS), centrate, or other similar solids service subject to biological degradation, etc.
3. Provide closure of abandoned pipe cut ends as indicated on the Drawings using one of the following methods:
    a. Leave one end open.
    b. Install cap.
    c. Install plug.
    d. Install drain valves, pressure relief valves, vents, etc.
    e. Fill abandoned pipe as specified in Section 02312 - Controlled Low Strength Material (CLSM).

F. Buried structures:
    a. Pump out buried tanks.
    b. Remove tanks and service piping from site.

G. Immediately upon discovery, remove and dispose of contaminated, vermin-infested, or dangerous materials using safe means that will not endanger health of workers and public.

H. Remove trees and shrubs within marked areas, and clear undergrowth and dead plant material as specified in Section 02300 - Earthwork.

I. Backfill open pits and holes caused by demolition as specified in Section 02300 - Earthwork.

J. Rough grade areas affected by demolition.

K. Remove demolished materials, tools, and equipment in accordance with the Solid Waste Management Plan upon completion of demolition.

3.04 RESTORATION

A. General:
1. Repair damage caused by demolition to conditions equal to those that existed prior to beginning of demolition.
    a. Patch and replace portions of existing finished surfaces that are damaged, lifted, and discolored. Refinish patched portion surfaces in a manner which produces uniform color and texture to entire surface, and that matches color and texture of adjacent surfaces.
    b. When existing finish cannot be matched, refinish entire surface to nearest change of plane where angle of change exceeds 45 degrees.
2. The cost of repairs shall be at the Contractor’s expense at no increase in the Contract Price.
3. When new construction abuts or finishes flush with existing construction, make smooth transitions. Match finish of existing construction.
4. Where partitions are removed, patch floors, walls, and ceilings with finish materials that match existing materials.

5. Where removal of partitions results in adjacent spaces becoming one, rework floors, walls, and ceilings to provide smooth planes without breaks, steps, or bulkheads.
    a. Where change of plane between adjacent surfaces exceeds 2 inches, request and obtain instructions for making transition from Engineer.
        1) Refinish door surfaces and edges as necessary.
6. Trim existing doors as necessary to clear new floors.
7. Match patched construction with adjacent construction in texture and appearance so that patch or transition is invisible at 5-foot distance.
8. When finished surfaces are cut so that smooth transition is impossible, terminate existing surface in neat manner along straight line at natural line of division and provide appropriate trim.

B. Restore existing concrete reinforcement as follows:
    1. Where existing reinforcement is to be incorporated into the new Work, protect, clean, and extend into new concrete.
    2. Where existing reinforcement is not to be retained, cut off as follows:
        a. Where new concrete joins existing concrete at the removal line, cut reinforcement flush with concrete surface at the removal line.
        b. Where concrete surface at the removal line will become the finished surface, cut reinforcement 2 inches below the surface, paint ends with epoxy, and patch holes with dry pack mortar.

C. Restore areas affected by removal of existing equipment, equipment pads and bases, piping, supports, electrical panels, electric devices, conduits, and fasteners so little or no evidence of the previous installation remains:
    1. After removal of piping, conduit, fasteners, and other construction, fill areas in existing concrete and masonry floors, walls, and ceilings with non-shrink grout and finish smooth.
    2. Remove concrete bases for equipment and supports by:
        a. Saw cutting clean, straight lines with a depth equal to the concrete cover over reinforcement minus 1/2 inch below finished surface.
            1) Do not cut existing reinforcement in slab.
        b. Chip concrete within scored lines.
        c. Cut exposed reinforcing steel and anchor bolts that will project above the repaired surface.
        d. Patch with non-shrink grout to match adjacent grade and finish.
    3. Terminate abandoned piping and conduits with blind flanges, caps, or plugs.
    4. Where existing fasteners are not to be retained, cut off as follows:
        a. Where new concrete joins existing concrete at the removal line, cut fasteners flush with concrete surface at the removal line.
        b. Where concrete surface at the removal line will become the finished surface, cut fasteners 1 inch below the surface, paint ends with epoxy, and patch holes with epoxy grout.

3.05 DISPOSAL OF WASTE MATERIAL FROM DEMOLITION

A. Dispose of waste materials from demolition at the West Hawaii Sanitary Landfill.

B. Dispose of waste materials from demolition only in compliance with the accepted or approved Solid Waste Management Plan.
   1. For any waste material being disposed of at a landfill, Contractor shall coordinate the timing of disposal of these waste materials with the County of Hawaii Solid Waste Division. The Contractor shall stockpile waste materials when a landfill cell is being closed or opened and dispose of material once allowed by the landfill.

3.06 FIELD QUALITY CONTROL

A. Do not proceed with demolition without Engineer's inspection of lay out.

B. Do not deviate from the submitted demolition plan without notifying the Engineer prior to Work.

END OF SECTION

ATTACHMENT A - SOLID WASTE MANAGEMENT PLAN - GUIDELINES

[AD3] Addendum No. 3 - June 2024

Mitchell D. Roth
Mayor

Lee Lord
Managing Director

Ramzi I. Mansour
Director

Brenda Iokepa-Moses
Deputy Director

County of Hawai'i

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

345 Kekūanāo'a Street, Suite 41 · Hilo, Hawai'i 96720 · cohdem@hawaiicounty.gov
Ph: (808) 961-8083 · Fax: (808) 961-8086

May 5, 2023

SOLID WASTE MANAGEMENT PLAN

Guidelines

INTENT AND PURPOSE

This is to establish guidelines for reviewing Solid Waste Management Plans, for which special conditions are placed on developments. The Solid Waste Management Plan will be used to (1) promote and implement recycling and recycling programs; (2) predict the waste generated by the proposed development to anticipate the impacts on County Solid Waste Management Facilities; and (3) predict the additional vehicular traffic being generated because of waste and recycling transfers. A State of Hawai'i licensed engineer or architect shall prepare a suitable Solid Waste Management Plan for review by the Department of Environmental Management.

REPORT

The Solid Waste Management Plan will contain the following:

1. Description of the project and the potential waste that may be generated: e.g., analysis of anticipated waste volume and composition. This includes waste generated during the construction and operation or maintenance phases. Waste types shall include (but not be limited to):
   A. Organics (including food waste and green wastes);
   B. Construction and Demolition materials;
   C. Paper (including cardboard);
   D. Metal (including ferrous and non-ferrous metals);
   E. Plastic;
   F. Special (including ash, sludge, treated medical waste, bulky items, tires);
   G. Hazardous (including paint, vehicle fluids, oil, batteries); and
   H. Glass.

2. Indicate onsite source separation by waste type, e.g., source separation bins for glass, metal, plastic, cardboard, aluminum, et cetera. Provide ample space for rubbish and recycling.

3. Identification and location of the proposed waste reduction, waste re-use, recycling facility or disposal site and associated transportation methods for the various components of the development's waste management system, including the number of vehicle

movements and associated routes that will be used to transport the waste and recycled materials.

4. The report will include identification of any impacts to County-operated waste management facilities, and the appropriate mitigation measures that will be implemented by the development to minimize these impacts.

5. Analysis will be based on the highest potential use or zoning of the development.

REQUIREMENTS AND CONDITIONS

1. A Solid Waste Management Plan will be prepared for all developments including but not limited to projects that are required to perform an EA, EIS, or Special Use Permit, as defined under the policies of the Department of Environmental Management.

2. The Department of Environmental Management will require the developer to provide or resolve all recommendations and mitigation measures as outlined in the solid waste management plan, besides any conditions placed on the applicant herein.

3. A State of Hawai'i licensed engineer or architect will draft and certify in writing the Solid Waste Management Plan as complying with applicable Federal, State, and County of Hawai'i Solid Waste laws, regulations, and administrative rules.

Should you require additional information, please contact the Solid Waste Division at swd@hawaiicounty.gov or at (808) 961-8270.

CONCUR:

Brenda Iokepa-Moses
DEPUTY DIRECTOR

(For Ramzi I. Mansour, DIRECTOR)

Solid Waste Diversion Plan

Hilo WWTP Rehabilitation and Replacement PH1
Hilo, Hawaii, HI
Project No. WW-4705R

Prepared and Submitted by:

Nan, Inc.
161 Silva Street
Hilo, HI 96720
(808) 842-4929

Purpose

The purpose of the solid waste demolition plan will be used to: (1) promote and implement recycling and reuse programs to divert construction and demolition wastes from County landfills, (2) identify and quantify the anticipated waste generated by the demolition, (3) detail site specific hazardous waste investigation and disposal procedures, and (4) document recycling and reuse procedures.

I. **References**
   a. **County of Hawaii 2019 Integrated Solid Waste Management Plan Update**
   b. **State of Hawaii Dept. Of Health Solid Waste Disclosure Form for Construction site**
   c. **County of Hawaii Dept. Of Environmental Management Solid Waste Demolition Diversion Report (2017)**
   d. **Attachments**
      i. **Attachment I Waste Disposal Information**
      ii. **Attachment II Material Summary**

II. Description of Demolition Work

The Hilo WWTP Rehabilitation and Replacement Phase 1 project involves upgrading and replacing process structures and systems at the existing wastewater treatment facility in Hilo, Hawai‘i. Work includes demolition, construction of new reinforced concrete tanks and channels, installation of mechanical equipment including pumps, blowers, aeration systems, and piping, and demolishing electrical systems including motor control centers, instrumentation, and mechanical equipment. Sitework includes grading, utility relocations, drainage improvements, and paving. Disposal of pre-existing trash area will be removed after County testing of Hazardous waste. Construction will maintain continuous plant operations and comply with all environmental permitting requirements.

III. Anticipated Waste

Anticipated Sold Waste	QUANITY	UNIT
CONCRETE	8438.175	TON
GREEN WASTE	10	TON
NON FERROUS METALS	131.05	TON
SCRAP METAL	330.8504	TON
ASPHALT	339.3	TON
OTHER -ROOFING, FRP, LUMINAIRE & RECEPTACLES	112.96	TON

IV. Waste Collection and Transportation

a. Container Placement: Waste collection containers will be placed in secure locations on site. Each container will be clearly labeled to ensure proper separation of different types of waste.

b. Regular Collection: Monthly waste collection to landfill or recycling centers. Additionally, weekly monitoring of containers will be conducted if more frequent trips are needed.

c. Licensed waste haulers will be used to transport debris to the West Hawaii Sanitary Landfill. On average, approximately 30 cubic yards of waste will be sent to the Hilo Landfill each month. If a haul is expected to exceed 30 cubic yards, the County of Hawaii will be notified in advance. Prior consent from the County of Hawaii will also be obtained for such instances.

V. Hazardous Waste

To date, no hazardous waste has been identified on-site. However, in accordance with the Hawaii Administrative Rules (HAR) Chapter 11-261.1 and applicable federal regulations (40 CFR Part 261), any materials suspected to be hazardous will be promptly evaluated and tested.

If hazardous waste is confirmed, it will be managed in full compliance with state and federal requirements, including proper labeling, storage, transportation, and disposal. All hazardous waste will be transported to the West Hawaii Sanitary Landfill or another permitted facility authorized to accept such waste. Documentation and manifests will be maintained as required by the Hawaii Department of Health's Solid and Hazardous Waste Branch.

ATTATCHMENT I

WASTE DISPOSAL

INFORMATION

Landfill Facilities

West Hawai'i Sanitary Landfill

The landfill is located in Kailua-Kona, Hawaii, owned by County of Hawai'i, and managed by

WM Waste Management

71-1111 Queen Ka'ahumanu Highway

Kailua-Kona, Hawaii 96740

Phone: (808)935-2277

CONCRETE, AGGREGATE, ASPHALT PAVING

West Hawai'i Sanitary Landfill

71-1111 Queen Ka'ahumanu Highway

Kailua-Kona, Hawaii 96740

Phone: (808)935-2277

Materials Accepted/Services:

Accepts general construction and demolition (C&D) waste. Loads larger than 50 cubic yards of C&D waste per day require notifying the West Hawaii Scale House.

FERROUS METALS - STEEL

Big Island Scrap Metal LLC

74-589 Honokohau Street 16-168 Kalara Street

Kailua-Kona, Hawaii 96740 Kea'au, Hawaii 96749

Materials Accepted/Services:

Accepts scrap metals. Offers roll off containers for scrap metals.

Atlas Recycling

30 Maka'ala Street 191 Waianuenue Ave

Hilo, Hawaii 96720 Hilo, Hawaii 96720

Materials Accepted/Services:

Accepts and buys back scrap metals.

NON-FERROUS METALS - ALUMINUM, BRASS, COPPER, AND STAINLESS STEEL

Mr. K's Recycle Redemption

815 Kino'ole Street

Hilo, Hawaii 96720

Phone: (808)969-1222

Materials Accepted/Services:

Accepts and buys back non-ferrous metals such as copper, aluminum, brass, and lead.

Atlas Recycling

30 Maka'ala Street 191 Waianuenue Ave

Hilo, Hawaii 96720 Hilo, Hawaii 96720

Materials Accepted/Services:

Accepts and buys back non-ferrous metals such as copper, aluminum, brass, and lead.

Big Island Scrap Metal LLC

74-589 Honokohau Street 16-168 Kalara Street

Kailua-Kona, Hawaii 96740 Kea'au, Hawaii 96749

Materials Accepted/Services:

Accepts scrap metals. Offers roll off containers for scrap metals.

WOOD AND GREENWASTE

East Hawai'i Organics Facility

1642 Ho'olaulima Road

Hilo, Hawaii 96720

Phone: (808)935-2277

Materials Accepted/Services:

Accepts clean green waste

UNTREATED WOOD AND PALLETS

East Hawai'i Organics Facility

1642 Ho'olaulima Road

Hilo, Hawaii 96720

Phone: (808)935-2277

Materials Accepted/Services:

Accepts uncontaminated, untreated/unpainted used wooden pallets and uncontaminated, untreated/unpainted wood

BATTERIES – Automobiles

Mr. K's Recycle Redemption

815 Kino'ole Street

Hilo, Hawaii 96720

Phone: (808)969-1222

MOTOR OIL/SOLVENTS

Unitek Solvent Services, Inc

16-217 Mikahala St.

Keaau, HI 96749

Phone: (808) 935-8180

Fax: (808) 935-4606

Materials Accepted/Services:

Accepts, picks up, and processes used oil, antifreeze, used oil filters.

TIRES

Big Island Scrap Metal LLC

74-589 Honokohau Street 16-168 Kalara Street

Kailua-Kona, Hawaii 96740 Kea'au, Hawaii 96749

Materials Accepted/Services:

Accepts scrap metals. Offers roll off containers for scrap metals.

Unitek Solvent Services, Inc

16-217 Mikahala St.

Keaau, HI 96749

Phone: (808) 935-8180

PLASTIC BEVERAGE CONTAINERS

Mr. K's Recycle Redemption

815 Kino'ole Street

Hilo, Hawaii 96720

Phone: (808)969-1222

Atlas Recycling

30 Maka'ala Street 191 Waianuenue Ave

Hilo, Hawaii 96720 Hilo, Hawaii 96720

Garbage Collection Services

Business Services Hawaii

16-630 Kipimana Street

Keaau, Hawaii 96749

Phone: (808)966-7489

Fax: (808)982-3606

Materials Accepted/Services:

Offer beverage container redemption, rolloff (10 and 30 cubic yards) & front loader services for commercial and residential, secure document destruction, construction cleanup, and dumpster rentals.

ATTACHMENT II

MATERIAL SUMMARY

ITEMS	QUANTITIES	QUANTITIES IN TONS
CONCRETE	4166.667 CY	8438.175
REBAR - (CS)	106000	53
GRATING - (FRP)	822 SF	30.825
HANDRAIL/ GUARDRAIL (SS)	870	32.625
PIPING - (CU, DI , PVC , HDPE)	4400 LF	89.056
CONTROL PANELS - (ALUM, FRP, CS)	16EA	0.8
LUMINAIRES & RECEPTACLES	20EA	0.5
AWNING - (ROOFING MATERIALS)	260 SF	9.75
PUMPS - (SS, CS, ALUM, FRP)	25EA	50
SLUICE GATE - (SS)	18EA	9
SWBD - (CS/MS/CU)	110EA	59
SCRUBBER (FRP)	1EA	2.5
METAL DIGESTER COVERS - (METAL COVER) - FRP	2EA	30
TANKS (CI, SS, DI)	10EA	12.5
VALVES (SS,CS,CI)	50EA	6.25
GREEN WASTE	1EA	10
ASPHALT	259.6125 CY	339.3
SUPPORTS (SS,CS,ALUMINIUM, & OTHERS)	30EA	100
ELECTRICAL WIRES (CU, ALUM, PVC)	10000 LF	5
MECHANISM - SECONDARY CLARIFIERS (CS, SS)	156600	78.3
MISC (DOORS, EXHAUST FANS (FRP), GATES, RAILS, FLIGHTS, OTHER ELECTRICAL EQUI	46EA	5.75
TOTAL		9362.331