Site Specific Spill Prevention Plan (SSSPP)

DATE: January 1, 2017
PROJECT NAME: Community Center of Maui
PROJECT ADDRESS: 123 First Street, Wailuku, Hawaii, 96793
APPLICABLE PERMITS: Work on County Highway Application # T20170001 Building Permit Application B T2017/0010
CONTACT: Jon Smith, ABC Construction, Phone # 244-1234

I. CONSTRUCTION DESCRIPTION

A. PROJECT LOCATION
   123 First Street, Wailuku, Hawaii, 96793

B. CONSTRUCTION TO BE PERFORMED
   The scope of work includes the installation of a new fire hydrant on the existing 18" waterline, a new reinforced concrete jacket on the existing 12" sewerline crossing, and a new sewer manhole (SMH) along First Street. ABC Construction will install a reinforced concrete jacket around the existing 12" sewerline at the new fire hydrant lateral crossing, as well as, installing a new SMH on the existing 12" sewerline between SMH KA10XA1000 and KA10XA1100.

C. IMPACT TO THE EXISTING SEWER SYSTEM
   The greatest impact to the existing sewer system would be accidental damage to any existing sewerlines, while working around the sewerlines. The utmost care shall be used to prevent any disruption of service. The sewage flows should remain the same after construction is completed, as nothing will be added to or removed from the sewer system in the area. Sewage flow rates for the existing 12" sewerline entering into SMH #KA10XA1000 from SMH # KA10XA1100 is estimated at 260 gallons per day (gpd). From these sewage flow rates, we believe proposed pump by-pass setup will be more than sufficient to carry the 260 gpd.

II. WASTEWATER SYSTEM ELEMENTS AFFECTED

A. DESCRIPTION
   The existing 12" sewerline will be affected with the installation of the new reinforced concrete jacket and SMH.

B. SERVICE AREA TRIBUTARY TO SYSTEM ELEMENT
   See the attached map for the affected area.
C. FLOW DATA FOR ELEMENT
Based on visual observations of SMH # KA10XA1100 on December 31, 2016 at
9:00 am, the flow was approximately 3" in the pipe. At a slope of 1%, the
calculated flow of the sewage at peak was 260 gallons per minute (gpm). The
trash pumps being used have more than sufficient capacity, and can carry
approximately 500 gpm each.

III. CONSTRUCTION ACTIVITY AND PREVENTATIVE ACTIONS

A. EQUIPMENT LIST FOR SPILL PREVENTION:
1. 420E Caterpillar Backhoe
2. 950 Caterpillar Loader
3. CAT 345 Excavator
4. Safety equipment including traffic cones, barricades, flag men, etc.
5. Road plates to protect excavated trenching
6. Trench Shoring
7. Communication devices to enable communication among workers (cell phone,
radios, etc.)
8. Spotters to guide the operator regarding the depth of the trench and proximity to
the existing 12" sewerline
9. Tools for hand trenching, including picks, shovels, broom, smaller hand
shovels, hammers, and similar items
10. Two (2) 4" automatic priming trash pump with 4" PVC pipe (170 feet)
11. Two (2) 8" Godwin pumps at 2,500 gpm capacity
12. The use of 2 on-site pump trucks, in case a spill occurs and pumping is
necessary. Pump trucks shall be onsite during excavation and jacket activities.
Capacity of each truck is 3,000 gallons. The first truck would setup at
excavation site and second truck would cycle with first to dump sewage to the
downstream manhole. Maui Pumping will be the provider, Phone # 877-1234.

B. MATERIAL LIST FOR SPILL PREVENTION:
1. Sufficient manpower (6 people minimum) to operate and monitor equipment
and excavation
2. Flashlights and other lighting devices to enable the viewing of the excavated
area (if necessary)
3. Two (2) 12" inflatable flow through plug
4. Two (2) 12" PVC no stop repair couplings
5. Two (2) 50' of 8" hose
6. Four (4) 75' of 4" PVC C900 PVC pipe
7. 1 length SDR 35 PVC 12" pipe
8. Gutter buddies and related erosion control material to contain any
unintentional spillage
9. The use of 2 on-site pump trucks, in case a spill occurs and pumping is
necessary. Pump trucks shall be onsite during excavation and jacket
activities. Capacity of each truck is 3,000 gallons. The first truck would setup
at excavation site and second truck would cycle with first to dump sewage to
the downstream manhole. Maui Pumping will be the provider, Phone # 877-
1234
10. Disinfectant: Chlorine Bleach
C. LABOR
Project Manager/Engineer
Superintendent
Foreman
Two (2) Operators
Three (3) Laborers
Two (2) Certified Traffic Control Personnel, or three (3) personnel needed at an intersection

D. LIST OF SUPERVISORY PERSONNEL
Jon Smith, Project Manager, ABC Construction, Phone # 244-1234
Mike Smith, Project Superintendent, ABC Construction, Phone # 244-123
Arnold Smith, Engineer, ABC Construction, Phone # 244-1236

E. PLAN OF ACTION
This plan of action is to install a new SMH and reinforced concrete jacket to the existing 12" sewerline.
1. The County inspector will be notified at least 5 working days prior to commencement of work.
2. Prior to excavation, residents will be notified of temporary shut-down of the sewer system and given all pertinent contact information.
3. Traffic will be controlled in the immediate work area by closing down the right turn lane on to First Street. Additionally, three remaining lanes of the intersection east of Second Street will become 2 lanes: 1 west bound lane with the ability to turn right, left or go straight, and 1 east bound lane, accommodating traffic crossing the intersection east bound on Third Street.
4. Prior to excavation, signal men and/or warning signs will be put in place and road coned to alert motorist and pedestrians of work in the roadway.
5. In addition to signal men, police will be used to control the intersection and a notice will be posted in the Maui News two (2) days prior to commencement of work to notify the general public of the work to be performed.
6. DEWATERING PLAN:
   Two (2) 8" Godwin pumps at 2,500 gpm capacity will be onsite to pump from four (4) wells and a maximum of 150 gpm for dewatering purposes, an onsite 800,000 gallon desilting/retention lined basin, and a 50' x 50' percolation/discharge basin will be installed prior to commencement of the work. The dewatering system should be more than sufficient to manage any and all ground water produced during the operation. This setup will be tested 24 hours prior to construction of the sewer improvement work. See attached drawing.
7. BY-PASS PLAN:
   Install the 12" inflatable flow through plug on the inlet of SMH # KA10XA1100, and chain the plug to the SMH ladder. Plumb the 4" PVC pipe (20 feet) from the 12" inflatable flow through plug to the 4" automatic priming trash pump. The discharge from the 4" automatic priming trash pump will be plumbed with 150 feet of 4" PVC pipe to SMH # KA10XA1000. A second pump with identical specifications will be onsite as a redundancy, in case the first pump fails. This setup will be tested 24 hours prior to construction of the sewer improvement work. See attached drawing.
8. No traffic will be allowed to use the driveway while the bypass line is laid across it.
9. Maui Pumping will be on location during all excavation work to ensure rapid response in the event of a spill.
10. Excavating equipment will excavate from the shoulder and the portion of the roadway that is closed to motorist to the extent reasonable feasible. There may be times where the excavation must be performed from the open portion of the roadway. These times will be kept to a minimum.
11. Heavy equipment excavation will be done using spotters and communication equipment to assist the operator in making the initial cut into the roadway and excavation.
12. Heavy equipment with spotters will be used to excavate down to 3 feet from where the existing 12" sewerline is calculated to be located, based on measurements conducted in the field.
13. As the operator nears the depth, within 3 feet of where the existing 12" sewerline is expected to be, workers with hand tools will be in place to assist in the excavation to ensure that the sewerline is not damaged.
14. Hand work will continue upon finding the existing 12" sewerline to prevent damage.
15. The invert of the existing 12" sewerline is around -2 feet below mean sea level (msl) and we anticipate encountering ground water at approximately 2 about msl. Dewatering procedures will be underway prior to and during excavation in order to lower ground water level in the area of excavation. A test well will be monitored to ensure ground water level is a minimum of 2 feet below the new maximum excavation depth or -5 msl.
16. A visual survey of the existing line condition will be made to assure that there are no present leaks, cracks or breakages before work on the existing 12" sewerline commences.
17. For the installation of the reinforced concrete jacket, the by-pass plan shall be engaged when excavating within 3 feet of the existing 12" sewerline, and will terminate once the sewerline has been fully exposed. The rebars will be installed and inspected by the WWRD Inspector prior to pouring the concrete.
18. For the installation of the new SMH, the by-pass system shall be engaged when excavating within 3 feet of the existing 12" sewerline, and will terminate once the final tie-in to the existing sewerline is complete.
19. A special order precast concrete base supplied by Runner Industries will be placed on the existing 12" sewerline. This base will be constructed as a single structure, including base and riser, in order to raise the first joint above ground water level; to ensure there is no infiltration of ground water into the sewer system.
20. Once the SMH is in place, 12" PVC no stop couplings will be used in order to tie the SMH into the existing 12" sewerline.
21. Backfill will be conducted using standard engineering practices and compacted per County requirements.
22. Precast concrete risers will be placed with a 24" cast iron frame and cover to bring the top to finish grade with a reinforced concrete collar poured around the frame.
F. WWRD CHECKLIST
1. Will check the site for all materials and equipment needed for SSSPP, including by-pass and dewatering plans, prior to commencement of work.
2. 24 Hours prior to work on the sewerline, the by-pass and dewatering plans will be tested to confirm they will work.

IV. REACTION PLAN IN THE EVENT OF A SPILL

A. EQUIPMENT AND MATERIAL LIST IN THE EVENT OF A SPILL
   Same as equipment on pages 2

B. MATERIAL LIST IN THE EVENT OF A SPILL
   Same as material list on page 2

C. LABOR
   Same as labor list on page 3

D. LIST OF SUPERVISORY PERSONNEL
   Same as personnel list on page 3

E. PLAN OF ACTION IN THE EVENT OF A SPILL
   1. Call County Wastewater Reclamation Division (WWRD) Collections Superintendent at 270-7465 to report the spill. Also, notify WWRD Inspector at 270-7417.
   2. Activate by-pass pumping plan and utilize pump trucks on cycle until repair is complete.
   3. Protect all water and storm drain systems through the use of sand bags and pumping as needed.
   4. Monitor SMHs and pumps, and make necessary repairs to prevent any other spills. Ensure repairs are adequate.
   5. Pump any ground spill into pump truck and dispose of properly.
   6. Remove plugs, and dismiss pump trucks.
   7. Sanitize contaminated area as required.
   8. Notify WWRD that repair and cleanup is complete, and prepare a spill report and submit to WWRD within 24 hours (cause, effects, quantity of spill, remedy, etc.).
*DO NOT INSTALL AC PAVING UNTIL DEWATERING WORK IS COMPLETED

50' x 50' Discharge Basin with 3-feet Sand Berm (sand bottom)

800,000 Gallon Desilting Basin

4'' Backup Pump
4'' By-Pass Pump

4'' By-pass Piping

New Reinforced Concrete Jacket

New Fire Hydrant

4'' PVC C900 pipe

8'' hose

8'' Godwin Pump
4'' x 4'' x 8'' wye fitting

4'' PVC C900 pipe

8'' hose

8'' Godwin Pump

4'' x 4'' x 8'' wye fitting

4'' PVC Well with Mirafy 160 Fabric 15' Deep (4 total)

New SMH # KA10XA1050

Construction Zone

DEWATERING PLAN
(Prior to AC Paving)