

Work Type Definition and Submittal Requirements
13.1 Detailed Inspection and Location of Stormwater System Features (Level 1)

Work Type Definition

Pages 1-2 detail the work type definition. In order to become *pre-qualified* for this work type, please see the “Work Type Submittal Requirements” on pages 3-4.

I. Description

- A. Inspection includes GPS location, database inventory and condition rating and evaluation of all stormwater system features using HYDINFRA Data Dictionaries.
- B. Any suspected illicit discharges to the drainage system must be reported

II. Standards and Specifications

Standards and specifications required for a project under this work type may include the following:

- A. HYDINFRA data dictionaries
- B. HYDINFRA ASCII comma-delimited format
- C. HYDINFRA Condition Rating Guide
- D. MnDOT webpages for HydInfra Inspector and HydInfra Data Formatting

III. Provided By MnDOT

Information to be supplied by MnDOT for a project may include the following:

- A. HYDINFRA Data Dictionaries for Trimble data collectors with TerraSync or ArcPad software.
- B. Project Plan Sheets
- C. Map of surveyed stormwater feature locations
- D. HYDINFRA feature GIS data files
- E. Map of HYDINFRA features
- F. ID numbers of HYDINFRA features
- G. HYDINFRA Reports
- H. Training for Inspector(s) provided by MnDOT HYDINFRA Coordinator
- I. TerraSync Import Files

IV. Provided by Consultant

Deliverables to be supplied by the consultant for a project may include the following:

- A. Inventory and Inspection data files, based on HYDINFRA data dictionaries, exported to the proper HYDINFRA ASCII comma-delimited format, which contractor uploads to the HYDINFRA Data Upload webpage on MnDOT's external website.
- B. An electronic map of all stormwater system features showing all features and the flow connection and direction between features.
- C. HYDINFRA Inventory and Inspection data successfully uploaded to the HYDINFRA database.
- D. Updated Stormwater System Map with all stormwater features shown and known flow directions shown.

Note: Suspected Illicit Discharges should immediately be reported to Dispatch at 651-582-1550 (Metro Area) or to the appropriate contact in the HYDINFRA Ratings Guide (Outside the Metro Area).

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E. Data:

1. Data must be collected using HYDINFRA data dictionaries and must be successfully uploaded into the HYDINFRA database. (Caution – data formatting is easy with Trimble gps exported with Pathfinder Office software or ArcPad, but data formatting can be difficult when using other equipment and software, including other Trimble software.)
2. Condition Rating of the feature must be assigned based on the HYDINFRA Condition Rating Guide and must accurately describe the condition of the feature.
3. Pipe span and rise dimensions must be measured accurately within 1 inch of actual dimension.
4. Pipe material must accurately describe the actual pipe material.
5. Pipe shape must accurately describe the shape of the pipe as originally installed -- before any distortion occurred.
6. HYDINFRA features must be located with GPS units that are rated for an accuracy of 1 foot below for x and y coordinates and 6 inches or below for z. Field data files must be differentially or real time corrected before data is formatted and uploaded to database.
7. Contractors who submit inaccurate data will be required to correct inaccurate data without additional payment or will be disqualified from future contracts.

F. Maps:

1. Maps must be in ArcGIS, ArcMap, MicroStation, or DXF format.
2. All map and map edits must be returned to MnDOT.
3. Map edit's must be legible and need to distinguish all known features according to unique identification number system provided by MnDOT.

G. Traffic control:

1. Traffic control and lane closures must be conducted in accordance with the Minnesota Manual of Uniform Traffic Control Devices and, in the Metro Area must be coordinated with Dispatch (651-582-1550). Traffic Control is solely the responsibility of the consultant/contractor to arrange.

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Work Type Submittal Requirements

A consultant firm becomes pre-qualified based on the qualifications of the personnel that are employed by the firm and by meeting the demonstrated requirements.

Key Personnel Requirements	
Minimum Number of Staff:	<ul style="list-style-type: none"> • One HYDINFRA–trained inspector must perform the inspections. • One experienced GPS locator <p><i>These two requirements can be satisfied by one person, if that person is qualified for both tasks.</i></p>
Professional Certification/Licensure:	<ul style="list-style-type: none"> • HYDINFRA training and certification is required before work on a contract begins. <p><i>(MnDOT will provide training when a contract is awarded. MnDOT Contact for Training is Bonnie Peterson: 651-366-4470. Trimble GPS unit capable of using HYDINFRA data dictionaries is required for HydInfra training.)</i></p>
Work Type Submittal Requirements*	
<p>I. Resume and Relevant Project Experience Form (Form PQ1)</p> <p><i>Submit in Word format</i></p>	<p>A. Complete Parts, 1, 1A, and 2 of form PQ1</p> <p>Part 1: Fill out general information and names of personnel, including other professional and technical support personnel.</p> <p>Part 1A: Fill out one for each person listed in Part 1. Experience of the qualified staff must be demonstrated by reference to completed storm water system feature inspection and location projects* (minimum of three for each staff member, up to five) within the last five years. Competence in the use of GPS equipment for data collection is required and must be demonstrated.</p> <p>Part 2: Project Examples listed must correlate to those described below in “Project Example Requirements”</p> <p>Part 3: Not applicable for this work type</p>
<p>II. Project Example Requirements</p> <p><i>Submit in PDF format</i></p>	<p>A. Submit one project* example completed within the last 5 years, by key personnel submitted for this work type: Include project description, dates, location map and data reports.</p> <ul style="list-style-type: none"> ❖ If project example is from completed MnDOT HYDINFRA projects, and firm is currently on MnDOT’s Pre-Qualification list for this work type, then experience may be demonstrated by reference to completed MnDOT HYDINFRA projects (include Contract #, Highway #, and beginning and end mile reference points) <p>*For the purposes of the submittal, a “project” is defined as a segment or corridor defined by the owner/client such as MnDOT’s State Project (SP) numbers. There may be more than</p>

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	one “project” (multiple SPs) under an individual contract.
III. Proof of Professional Certification/ Licensure <i>Submit in PDF format</i>	A. Provide copy of HYDINFRA Certification
<p style="text-align: center;">*Work Type Submittal Instructions:</p> <p style="text-align: center;">Create a CD or flash drive that includes the following individual files or folders in this order:</p> <ul style="list-style-type: none"> I. Resume and Relevant Project Experience Form (Form PQ1) II. Project Example Requirements (this should be a folder that includes individual files clearly named according to Part 2 of the PQ1) III. Proof of Professional Certification/Licensure <p style="text-align: center;">Each file should be saved in the format identified above. Submit 5 copies of the CD or flash drive.</p>	