HRSD

Position Description: Interceptor Engineer

Section I. Position Reference Information

a.	Department	Interceptor Systems
b.	Division	Interceptor Services
c.	Position Title	Interceptor Engineer
d.	Immediate Supervisor	Chief of Interceptor Services
e.	Work Center	North Shore & South Shore
f.	Grade	9e-9

Section II. Position Summary

Under broad guidance, Interceptor Engineer is responsible for:

a. Providing design, reviewing and analyzing of projects that help HRSD and larger community achieve HRSD mission and environmental goals
b. Serving as HRSD interface with any professional, government official or private citizen desiring to access HRSD services
c. Evaluating service connection requests and assisting in connection location selection
d. Reviewing Flow Certificate applications and generating Flow Certificates
e. Monitoring construction, from review of project design plans to performing acceptance inspections and enforcing HRSD standards, easements, requirements and policies
f. Monitoring growth to optimize system and flow diversion capability

Section III. Examples of Position Duties

a. Interprets and applies HRSD Mission, Vision, and Values
b. Evaluates jurisdictions requests for new Interceptor service connections and assists jurisdictions in the selection of connection location
c. Evaluates capacity, proposed connection location , method and configuration of connection
d. Evaluates applications for Flow Certificates and generates Flow Certificates
e. Trains HRSD personnel in connection inspection requirements and procedures
f. Develops and implements new HRSD Standard Details
g. Reviews project design plans; evaluates the impact of development projects on the HRSD development plan
h. Assembles project justification statements and supplies necessary backup data
i. Performs site visits and meets with project engineers and contractors to resolve unforeseen conflicts with HRSD pipelines
j. Enforces HRSD standards, requirements and policies; negotiates with primary contacts (engineers, planners, directors) at jurisdictions when compromise on conflicting standards is necessary
k. Monitors growth to optimize system and flow diversion capability
l. Evaluates HRSD Pump Stations and Interceptors for adequacy of design and operational practices
m. Plans and coordinates system diversions and flows and notifies affected Departments and Jurisdictions
n. Determines feasibility of proposed Interceptor system configurations and construction
o. Performs special interceptor studies and design

p. Coordinates with the Real Estate Manager on easement and deed requirements when local projects require that existing HRSD lines be secured within a new easement
q. Coordinates with HRSD jurisdictions during emergency repairs of the Interceptor system and other system disruptive events
r. Communicates regularly with peers and Chief of Interceptor Services informally, in writing, one-on-one, and in meetings
s. Implements improvements to technology, processes, work methods and procedures
t. Develops staff skills for current position and future career opportunities
u. Supports a diverse work environment where differences are accepted
v. Continues to build own technical and leadership skills
w. Performs other duties as assigned

Section IV. Position Contacts

a. Standing Teams, Committees, Boards, and Organizations

1. Required
   a) Member – Engineer Selection Teams
   b) Member of the Standards and Preferences for Engineered Construction Projects Committee
   c) Member – Cross Functional Teams, as assigned
   d) Member – Departmental Quality Improvement Teams
   e) Member – WEF
2. Desired
   a) Member –Relevant Professional Organizations
   b) Member – Relevant User Groups
   c) Member – Interceptors Systems Pipeline Standards Team
   d) Member –Interceptors Systems Pump Station Standards Team
   e) Member- Various quality initiatives as requested

b. Internal Contacts

Contact	*Purpose*	*Frequency*
Chief of Interceptor Services	Receive guidance on priorities, feedback on performance, and direction for specific efforts	Daily
Interceptor Operations	Coordination and input on all aspects of job regarding to field operations requirements and impacts	Daily
Planning	Coordinate Planning data; provide feedback and receive notification of local project impacts to HRSD	Daily
GIS Manager	Provide and receive input on updates to the Hydraulic Model	Weekly
Engineering	Coordinate with Project Managers; provide feedback on Interceptor Systems concerns regarding HRSD construction projects; request printouts of various system drawings or answers to questions about drafting procedures	Daily
IWD Manager	Review specific projects to evaluate need for IWD involvement	Bi-monthly
Reliability Manager	Specify metering needs for specific projects, schedule inspectors for connections, diagnose problem areas in Interceptor System	Weekly
Treatment	Coordinate diversions	Weekly
Finance & Administration	Make aware of new development	Weekly

c. External Contacts

Contact	*Purpose*	*Frequency*
Virginia DEQ	Project review feedback and regulation compliance	Weekly
Localities	Coordinate tie-ins, certificates, new development; project review feedback and regulation compliance	Daily
Jurisdiction Planners	Feedback on project impacts to HRSD	Monthly
Jurisdiction Utility Operators	Notification and feedback concerning diversions, inspection and access requirements	Bi-weekly
Consulting Engineers	Coordinate new development and Interceptor projects; ensure HRSD standards and preferences are met	Daily
Developers	Discuss new development review plans	Weekly
Contractors	Meeting HRSD standard/ preferences; scheduling inspections	Weekly
Manufacturers	Coordinate new projects	Monthly
Suppliers	Coordinate new projects	Monthly

Section V. Position Accountabilities and Expectations

a. Compliance – All work of the Interceptor Engineer is performed within HRSD guidelines, Federal, State and Local Government regulations (e.g. Labor Laws and practices, OSHA, DEQ regulations, HAZMAT, MSDS, Hazard Communication, Asbestos Awareness, VDOT, State Water Control Board, SCAT)

b. Financial Management – Expenditures are justified and in alignment with fiscal year budget; budget proposals are aligned with HRSD priorities

c. Process – Design, review and analysis of projects helps HRSD achieve its mission and environmental goals

d. Human Resources Management – Training and development is visibly supported; inspection capabilities among HRSD staff are developed; team environment is such that employees are treated with fairness, respect, and courtesy; other staff are motivated to contribute ideas to improve quality and services

e. Customer Satisfaction – Zero customer complaints; schedules, reports and inspections are provided to customers/partners within a timely manner

f. Timeliness – Meets deadlines for project completion, report submission and change implementation

Section VI. Working Conditions

a. Must be able to work at a middle manager level in a team-oriented culture

b. Must be able to work in an industrial environment

c. Must be able to travel outside HRSD, and drive to various HRSD work centers and sites within the HRSD service area

d. Must be available to work overtime and/or unusual hours as necessary

e. Must be available by telephone during non-scheduled work hours

Section VII. Physical Requirements

a. Must have the physical dexterity to accomplish the duties defined herein
b. Work involves walking, climbing, standing, stooping or bending and at times may be in an OSHA designated noise environment (> 85 decibels)
c. Must be able to perform light lifting (25 – 50 pounds)Must be able to work around hazardous materials, chemicals, fumes, moisture, heat, noise, gases, odors, and in confined spaces
d. Work involves exposure to and handling of wastewater

Section VIII. Other

a. Medical certification of physical requirements may be required
b. Must be currently authorized to work for any U.S. employer

Section IX. Qualification Standards

a. Education
   1. Required
      BS degree in appropriate engineering field such as civil, mechanical or environmental
   2. Desired
      Training in the principles of quality management and strategic planning
b. Experience
   1. Required
      Four years experience focused on the design, operation, & maintenance of utilities to include hydraulic modeling, project management and environmental regulatory enforcement
   2. Desired
      Relevant engineering experience in design and construction relating to operation and maintenance of sewerage facilities
c. Training Levels
   Personnel in this category are fully qualified at Grade 9 with appropriate BS degree, P.E. License and 4 years of experience. While a fully qualified selection is desired, the following training levels and years of experience are established for personnel who are not fully qualified and do not possess the required PE license:

Grade 9a - BS degree plus 4 years relevant experience **or** MS degree and 2 years relevant experience
Grade 9b - BS degree and 3 years relevant experience **or** MS degree and 1 year relevant experience
Grade 9c - BS degree and 2 years relevant experience **or** MS degree and no experience
Grade 9d - BS degree and 1 year relevant experience
Grade 9e - BS degree and no experience

NOTE: Master's Degree in Engineering is equivalent to two years of experience

c. Job-specific Technical Competencies
   1. Required
      a) Knowledge of project management techniques
      b) Knowledge of industry standard civil design and analysis assumptions
      c) Knowledge of estimating techniques for geometric layout of utilities and other site elements

d) Knowledge of cost estimating techniques to support decision making with respect to HRSD Capital Improvement Projects
e) Basic knowledge of procurement standards
f) Knowledge of common chemical processes in sewage and their impact on pipeline operation
g) Knowledge of preventative maintenance practices for water/sewer utilities
h) Knowledge of protective measures for utilities (physical clearances, corrosion protection, installation methods)
i) Knowledge of Pipeline and Pump Station Design, Startup, and Operation
j) Knowledge of Common construction methods for excavation, compaction, pile driving, pipeline laying
k) Ability to use MS Office products and a variety of other industry-specific programs (Forcemain, ISIS, AM Meridian, etc.) at an advanced level of proficiency
l) Ability to evaluate designed engineering plans to for compliance with HRSD standards and reasonable engineering practice
m) Ability to perform complex hydraulic calculations
n) Ability to schedule, craft, & generate detailed interceptor system studies in a structured logical sequence.
o) Ability to determine needed data and explains data requirements to those responsible for retrieving it
p) Ability to model and analyze real-world conditions with computer models: demonstrates an understanding of strengths/limitations of such models

2. Desired
a) Knowledge of CADD
b) Knowledge of GIS
c) Knowledge of HRSD and OSHA Safety Standards with respect to excavations, confined space entry, and similar job sites
d) Knowledge of wastewater demand computation methods and assumptions
e) Knowledge of troubleshooting methods for analysis of pump station and pipeline operation
f) Knowledge of City and County general design preferences for wastewater design and approval procedures for local development and capital improvement projects
g) Knowledge of State Sewage Collection and Treatment (SCAT) Regulations.
h) Knowledge of land property rights including easement restrictions, right-of-way permits, etc.
i) Skill in using a transit, survey tape, electronic distance measuring, and level to perform light survey tasks

d. Special Licenses
Required
a) Valid driver's license from state of residence
b) Professional Engineer License

e. HRSD Universal Competencies