SP- 231051 (New)



## SPECIAL PROVISIONS FOR NPDES PERMIT REQUIREMENTS

Polk County HDP-1945(411)--71-77

Effective Date January 22, 2025

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

#### 231051.01 GENERAL.

- A. This project is subject to Section 402(b) of the Clean Water Act and Iowa Code Section 455B.174 and Iowa Administrative Code 567-64.4 (projects disturbing one or more total acres) and requires inclusion in the National Pollution Discharge Elimination System (NPDES) General Permit No. 2, or an individual NPDES Permit for stormwater (also storm water) discharge associated with industrial activity for construction activities. All Work shall be in accordance with Section 2602 of the Standard Specifications and this Supplemental Provision.
- B. The City of Des Moines has caused a general Storm Water Pollution Prevention Plan (SWPPP) to be prepared which is included in these contract documents. Said general SWPPP is based upon general construction methods and does not include any information regarding the Contractor's scheduling or specific construction methods. The Contractor shall be responsible to review said general SWPPP, complete the SWPPP by providing data and/or information as necessary, and propose any revisions necessary for compliance with the General Permit No. 2 based on the Contractor's proposed scheduling and construction methods. The Contractor will be responsible for the preparation of any modifications to said general SWPPP. If necessary, the Contractor shall be responsible to retain or engage persons knowledgeable in the preparation of a SWPPP. The SWPPP shall be prepared in a manner that complies with all applicable requirements.
- C. The City of Des Moines will be responsible for publishing the Public Notice of Storm Water Discharge, as required for General Permit No. 2, obtaining the affidavits of publication for said notices, and obtaining permit authorization from the Iowa DNR.
- D. Except as specifically otherwise stated herein, the Contractor shall be responsible for any and all compliance with erosion control, stormwater discharge, the SWPPP and/or permit requirements regarding same. The City shall be the "operator" of the project for all compliance purposes, notwithstanding the status of the Contractor and subcontractors as co-permittees. The Contractor shall

indemnify the City and hold the City harmless from any and all claims, including without limitation penalties, fines, attorney fees, consulting fees, and costs, arising out of the work at this project and/or the alleged violation of erosion control requirements, stormwater discharge and management, the SWPPP and/or permit requirements regarding same. The Contractor shall take prompt action to address and/or avoid any potential or real violation of same at their own cost.

- E. The Contractor shall incorporate all erosion control features into the project at the earliest practicable time, as outlined in the SWPPP or work schedule. Stormwater Pollution Prevention measures shall be constructed at locations shown in the contract documents and as determined by the Contractor, at locations where conditions develop during construction that were unforeseen during design, or where needed to control water pollution that develops during normal construction practices.
- F. The Contractor shall coordinate the required site inspections with the Engineer so a City Employee can sign the site inspection report. The site inspection shall be distributed to the Contractor to address deficiencies, the City of Des Moines MS4 coordinator, Erica Harris, and the Engineer.
- G. The weekly site inspections shall be completed each week in compliance with the Iowa DNR General Permit No. 2. Failure to perform and submit the inspections within the required timeframe will result in a deduction of \$750 per calendar day from payment due under the contract, except when Engineer extends such time period.
- H. Failure to address the erosion control deficiencies within 2 calendar days of the completion of the site inspection, will result in a deduction of \$750 per calendar day from payment due under the contract, except when Engineer extends such time period.
- I. The Engineer may suspend operations, without cost to the City of Des Moines, if the Contractor fails to provide adequate erosion control measures in a timely manner.

### 231051.02. GENERAL STORMWATER POLUTION PREVENTION PLAN (SWPPP).

### A. Erosion and Sediment Controls.

1. General.

Erosion and Sediment Controls are measures to be used for controlling erosion and sediment throughout the construction project and include stabilization measures for controlling erosion from disturbed areas and structural controls to divert runoff and remove sediment. Contractor is responsible for the implementation and management of control measures specific to this site. As work progresses, field investigation may indicate additional erosion control measures may be required as determined by the Contractor, Contracting Authority, Engineer, or other governmentally regulated agencies.

### 2. Stabilization.

- a. Preserve existing vegetation in areas not disturbed during construction.
- b. Area of disturbed soil at any one time by construction operations shall be held to a minimum.
- c. Temporary Stabilization areas where construction activity is not planned to occur for at least 14 days will be stabilized immediately by temporary erosion controls.
  - Topsoil stockpiles and disturbed portions of the site will be stabilized with temporary mulch.
  - Frequent watering during construction in dry weather shall minimize wind erosion from exposed soil.
- d. Permanent Stabilization areas where construction activity has permanently ended will be stabilized immediately upon ceasing construction activities in that area.
  - Permanent seeding and mulch in all areas where final grading is complete.
  - Permanently seed drainage swales immediately upon reaching final grade to facilitate sediment deposition in surface runoff.
- e. Vegetative Buffer Strips: Where possible, existing vegetation strips should be left in place to increase infiltration and sediment deposition by reducing runoff velocity.

- f. Protection of Trees and Natural Vegetation: Undisturbed areas will utilize existing vegetation as a natural buffer zone to increase infiltration and sediment deposition by reducing runoff velocity.
- g. Dust Control: Utilize mulch or watering of surface to control wind erosion of susceptible soils during and/or immediately after mass site grading operations.
- h. Stream Bank Stabilization: Stage the installation of any rip rap so that the time that the bank is disturbed is minimized.

### 3. Structural Controls.

- a. At all areas where runoff can move offsite, silt fence or approved equal will be installed along the perimeter of the project downstream of disturbing activities. Also protect storm water discharge points prior to site clearing and grading operations as required and/or shown on the plans.
- b. Temporary sediment basins provided at the rate of 3600 cubic feet of storage per acre for disturbed areas over 10 acres. If not attainable, a combination of silt fences, multiple sediment traps, or equivalent sediment controls are required for all side slopes and down slope boundaries of the disturbed area.
- c. Areas of 10 acres or less disturbed will require silt fence, sediment traps or equivalent measures for all side slopes and down slope boundaries of the disturbed area.
- d. Silt fences and ditch checks should be installed along concentrated drainage ways to control sediment deposition.
- e. Permanently seed all drainage swales immediately upon reaching final grade to facilitate sediment deposition in surface runoff. Use in conjunction with sediment traps, ditch checks, or other control measures to trap sediment.
- f. Additional silt fences or other measures may be required on all embankments, stockpiles and other areas to ensure runoff control.

### B. Other Controls.

### 1. General.

Undertake measures for controlling other sources of potential pollution that may exist on the construction site. During the course of construction, it is possible that situations may arise where unknown materials will be encountered. When such situations occur, they will be handled according to all applicable federal, state, and local regulations in effect at the time.

### 2. Waste Materials.

Disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

### 3. Hazardous Waste.

- a. Hazardous waste materials will be disposed of in accordance with applicable local, state, and/or federal regulations.
- b. Equipment refueling and maintenance operations will be carried out in such a manner so as to prevent any spills and contamination to the soil and groundwater.
- c. Potentially hazardous materials will be used with great care to prevent spillage in any volume.

### 4. Sanitary Waste.

If a portable restroom facility is on the project site, wastes shall be collected and disposed of in complete compliance with local, state and federal regulations. This facility shall be located in an area where contact with the storm water discharge is minimal.

### 5. Vehicle Tracking.

a. Stabilized construction entrances should be installed at all site access points to reduce vehicle tracking of sediment offsite.

- b. Paved streets adjacent to the site shall be inspected daily and cleaned as necessary to remove any excess mud, dirt or rock tracked from the site.
- c. Dump trucks hauling material shall be properly loaded or covered with a tarp to prevent loss of material.
- d. Dust control measures should be utilized as necessary.

### 6. Non-Storm Water Discharges.

- a. Expected sources of non-storm water discharges from the site during construction could include:
  - Potable water sources including water line flushings, irrigation drainage and fire fighting activities.
  - Uncontaminated groundwater from de-watering excavation.
  - Natural springs, wetland, water sources.
- b. Non-storm water discharges should be directed to non-erosive areas prior to discharge offsite.

## C. Implementation: State and Local Requirements.

- 1. The storm water pollution prevention plan reflects the State of Iowa requirements for storm water management and erosion and sediment control, as established in 161A.64 Code of Iowa, State of Iowa Statutory Requirements Pertaining to Erosion Control Plans.
- 2. Prior to initiating a land disturbing activity, a person engaged in land disturbing activity shall file a signed affidavit with the soil and water conservation district that the project will not exceed the soil loss limits.
- 3. Code Compliance: The Contractor shall comply with the soil erosion control requirements of the lowa Code, the lowa DNR NPDES permit and all local ordinances.

### D. Implementation: Timing of Controls/Measures.

- 1. Install down-slope and side-slope perimeter silt fence prior to commencing land-disturbing activity.
- 2. Install construction entrance and vehicle tracking controls.
- 3. Construct sediment basins, ditch checks, or other erosion control measures at storm water discharge points.
- 4. Do not disturb an area until necessary for construction to proceed.
- 5. Install interior silt fences, sediment traps, etc. as grading progresses.
- 6. Cover or stabilize disturbed areas immediately after ceasing construction for more than 14 days.
- 7. Construct riprap aprons at storm outlets and creek crossings that are disturbed by the construction.
- 8. Place swale control measures (erosion control mats, silt traps, ditch checks, seed & mulch) in drainage ways as soon as final grades are achieved.
- 9. As areas reach their final grade, provide additional silt fence, sediment traps, earthen dikes, and ditch checks as necessary.
- 10. Complete permanent stabilization seeding as soon as possible after work is complete.
- 11. Remove temporary sediment controls and accumulated sediment once entire site is stabilized. Reseed any areas disturbed during removal.

## E. Hazardous Substance Spill Prevention and Response.

- The Contractor is responsible for training all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or wastes will be allowed to come into contact with storm water discharges. If contact does occur, the storm water discharge will be contained onsite until appropriate measures in compliance with all federal, state, and local regulations are followed to dispose of the hazardous substance.
- 2. In addition to good housekeeping and material management practices, the following practices shall be done by the Contractor to minimize the potential for hazardous material spills and to reduce the risk of the spill coming in contact with storm water.
  - Manufacturer's recommended methods for spill cleanup will be clearly posted and site

personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

- Materials and equipment necessary for spill control, containment and cleanup will be provided onsite in a material storage area.
- 3. In the event of a spill, the following procedures will be followed by the Contractor:
  - All spills will be cleaned up immediately following discovery.
  - The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substance.
  - Spill of toxic or hazardous material will be reported to the appropriate state or local governmental agency and to the project manager and engineer, regardless of the size of the spill.
- 4. In the event the construction site has a release of a hazardous substance or oil in an amount which exceeds a reportable quantity (RQ) as defined at 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 then the Contractor shall:
  - Have its person in charge of the site at the time of the spill immediately call the EPA National Response Center to report the spill (800-424-8802, or 202-426-2675).
  - Modify the Pollution Prevention Plan accordingly within 14 days of the spill including the items mentioned below.
  - Within 14 days of the release, submit a written description of the release including: a description of the release, type of material, estimated amount of spill, date of release, explanation of why the spill happened, and a description of the steps taken to prevent and control future releases.

### F. Materials Management.

### 1. General.

Site sources of pollution generated as a result of this work related to silts and sediment which may be transported as a result of a storm event. However, this SWPPP provides conveyance for other (non-project related) operations. These other operations have storm water runoff, the regulation of which is beyond the control of this SWPPP.

- 2. Materials or substances expected to be present onsite during construction:
  - a. Concrete
  - b. Detergents
  - c. Glue
  - d. Tar
  - e. Fertilizers
  - f. Petroleum based additives
  - g. Wood
  - h. Solids and construction wastes
- **3.** Material Management Practices: The following is a list of practices that will be used by the Contractor on site to minimize the risk of spills or other accidental exposure of materials and substances to storm water runoff.
  - a. Good Housekeeping.
    - An effort will be made to store onsite only enough products required to complete the job.
    - All materials stored onsite will be kept in a neat, orderly manner and in their appropriate containers. If possible, products shall be kept under a roof or other enclosure.
    - Materials will be kept in their original containers with the original manufacturer's label.
    - Substances will not be mixed with one another unless recommended by the manufacturer.
    - Whenever possible, all of a product will be used up before disposing of the container.
    - Manufacturer's recommendations for proper use and disposal will be followed.
    - The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.

- b. Hazardous Products.
  - Products will be kept in their original containers with the original manufacturer's label.
  - The original labels and material safety data sheets will be kept for each of the materials as they contain important product information.
  - Disposal of any excess product will be done in a manner that follows all manufacturers', federal, local and state recommended methods for proper disposal.
- **4.** Product Specific Practices: The following is a list of potential sources of pollution and specific practices to be used by the Contractor to reduce pollutant discharges from materials or sources expected to be present during construction.
  - a. Petroleum Storage Tanks.
    - All onsite vehicles shall be inspected and monitored for leaks and receive preventative maintenance to reduce the chance of leakage.
    - Steps will be taken by the Contractor to eliminate contaminants from storage tanks from entering ground soil. Any petroleum storage tanks kept onsite will be located with an impervious surface between the tank and the ground.
  - b. Fertilizers: shall be applied in the amounts specified. It shall be worked into the soil as to minimize the contact with storm water discharge.
  - C. Concrete Wastes.
    - Concrete trucks will be allowed to washout or discharge excess concrete only in specifically designated areas which have been prepared to minimize contact between the concrete and storm water discharge from the site.
    - The hardened product from the concrete washout areas will be disposed of by the Contractor as other non-hazardous waste materials or may be broken up and used on the site for other appropriate uses.
  - d. Solid and Construction Wastes: All trash and construction debris shall be collected and disposed of offsite by the Contractor. No construction waste materials will be buried onsite.

# 231051.03. SITE INFORMATION.

Duele of Norma										
Project Name	Southeast Connector from SE 30 <sup>th</sup> to US 65 Activity ID 06-2022-020									
Project Location	City of Des Moines, Polk County, Iowa									
(address, lat./long. or	Section 7, Township 78N, Range 23W									
Section-T-R)										
Owner Name	City of Des Moines									
Representative	Craig Bouska									
	Engineering Department Engineering Department									
Owner Address/Phone	City Hall - 400 Robert D. Ray Drive City Hall - 400 Robert D. Ray Drive									
	Des Moines, Iowa Des Moines, Iowa									
Contractor Name										
Representative										
Contractor										
Address/Phone										
Site Area	Approximately 105.0 Acres									
Disturbed Area	Approximately 102.0 Acres									
Final Runoff Coefficient	.45									
Soil type /										
characteristics	Lean to Fat Clay (CL-CH)									
Receiving Waters	Des Moines River									
Decerintien	This project or work involves following described improvement:									
Description (purpose and types of	This project or work involves following described improvement:									
soil disturbing	Provide all labor, material and equipment necessary for erosion control, seeding									
activities)	and sodding; in accordance with the contract documents commencing with Plan									
	File Nos. 699-001/1056 located at and along the SE Connector, from SE 30 <sup>th</sup> to									
	US 65.									
	Soil disturbing activities necessary to complete the work are clearing and grubbing, pavement removal, grading, final grading, topsoil placement, and surface									
	restoration. Site sources of pollution generated as a result of this project relate to silts and sediments that may be transported as a result of a stormwater event.									
Expected Sequence of										
Major Construction	Clearing & Grubbing, Topsoil Removal, Mass Grading, Storm Sewer, Pavements,									
Activities to be	Topsoiling, Fencing, Final Seeding									
Completed by										
Contractor										
(subject to change; any										
deviations shall be										
noted on this plan)										

### 231051.04. PUBLIC NOTICE OF STORM WATER DISCHARGE.

The City of Des Moines plans to submit a Notice of Intent to the Iowa Department of Natural Resources to be covered under NPDES General Permit No. 2 "Storm Water Discharge Associated with Industrial Activity for Construction Activities." The storm water discharge will be from the construction of the <u>SE Connector</u>, from SE 30<sup>th</sup> to US 65, Activity ID 06-2022-020.

located in <u>SW ¼ Sec. 7, T78N, R23W, Polk County</u> <u>NW ¼ Sec. 9, T78N, R23W, Polk County</u>

Storm water will be discharged from \_\_\_\_\_ point source and will be discharged to the following stream: \_\_\_\_\_ Des Moines River \_\_\_\_.

Comments may be submitted to the Storm Water Discharge Coordinator, IOWA DEPARTMENT OF NATURAL RESOURCES, Environmental Protection Division, 502 E. 9<sup>th</sup> Street, Des Moines, IA, 50319-0034. The public may review the Notice of Intent from 8:00 a.m. to 4:30 p.m., Monday through Friday, at the above address after it has been received by the department.

Published in the <u>The Des Moines Register</u>

### 231051.05. NPDES CERTIFICATION STATEMENT.

- A. This project is subject to Section 402(b) of the Clean Water Act and Iowa Code Section 455B.174 and Iowa Administrative Code 567-64.4 (projects disturbing one or more total acres) and requires inclusion in the National Pollution Discharge Elimination System (NPDES) General Permit No. 2, or an individual NPDES Permit for stormwater (also storm water) discharge associated with industrial activity for construction activities. A general stormwater pollution prevention plan for this project is included in the contract documents. A copy of the stormwater pollution prevention plan must be kept at the construction site from the time construction begins until the site has reached final stabilization. The Contractor must sign the NPDES Certification Statement and submit it with the contract documents. By doing so the Contractor becomes a co-permittee with the City of Des Moines and other co-permittee contractors. The Contractor is solely responsible for the development and implementation of a specific stormwater pollution prevention plan for this project to comply with the law, and must identify any contracting entity charged with the development and/or implementation of any portion of the stormwater pollution prevention plan. The Contractor is the party responsible for maintaining compliance with the stormwater pollution prevention plan and NPDES Permit for the project.
- B. All subcontractors, including short-term contractors and subcontractors, prior to approval, must sign the NPDES Certification Statement before conducting any work at the site. The certification must be signed in accordance with the signatory requirements found in the general permit; i.e., principal executive officer, vice president, general partner, proprietor, elector official, and will be incorporated into the Stormwater Pollution Prevention Plan (SWPPP).
- C. Upon signing the certification and to the extent allowed by law, other contractors and sub-contractors become co-permittees with the City of Des Moines, the Contractor, and other co-permittees. In signing the plan, the authorized representative certifies that the information is true and assumes liability for the plan. Note that Section 309 of the Clean Water Act provides for significant penalties where information is false or the permittee violates, either knowingly or negligently, permit requirements.
- D. All contractors/subcontractors shall conduct their operations in a manner that minimizes erosion and prevents erosion of sediment from the project site. The Contractor shall be responsible for compliance and implementation of the SWPPP for their entire contract. The Contractor is responsible for the identification, coordination and cooperation of all other contractors and subcontractors whose work is a likely source of potential pollution under the law, the NPDES permit and the SWPPP, and to develop and implement the SWPPP.
- E. A copy of the NPDES Certification Statement of the Contractor and all subcontractors shall be filed with the City of Des Moines and shall also become a part of the project SWPPP.

### NPDES CERTIFICATION STATEMENT of Contractor or Subcontractor

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site as part of this certification. Further, by my signature, I understand that I am becoming a co-permittee, along with the owner(s) and other contractors and subcontractors signing such certifications, to the Iowa Department of Natural Resources NPDES General Permit No. 2 for 'Storm Water Discharge Associated with Industrial Activity for Construction Activities' at the identified site. As a co-permittee, I understand that I, and my company, are legally required under the Clean Water Act and the Code of Iowa, to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under this NPDES permit and the terms of this NPDES permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Project Description		SE Connector, From SE 30 <sup>th</sup> to US 65								
Project Adc	Iress	805 SE 30 <sup>th</sup> Street								
Contractor or Subcontractor										
Name (Print/Type)										
Signature										
Title										
Street Address										
City, State, Zip										
Telephone Number										
Date			Activity ID	06-2022-020						

## NOTE:

- 1) The signature on this certification must be an original signature in ink; copies or facsimile of any signature will not be accepted.
- The Contractor and all subcontractors must sign the NPDES certification statement and return it to the City Engineer before conducting any work at the site. The certification must be incorporated in the SWPPP.
  The person who signs this certification for the Contractor or subcontractor shall be:
  - a. Corporations. In the case of a corporation, a principal executive officer of at least the level of vice president.
  - b. Partnerships. In the case of a partnership, a general partner.
  - c. Sole proprietorships. In the case of a sole proprietorship, the proprietor.

### **CORPORATE ACKNOWLEDGMENT**

STATE OF	)	
	)	SS
	COUNTY)	

On this \_\_\_\_\_\_day of \_\_\_\_\_\_, 20 \_\_\_\_, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_\_\_, personally appeared \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_, to me known, who, being by me duly sworn, did say that they are the \_\_\_\_\_\_, and \_\_\_\_\_\_, respectively, of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that \_\_\_\_\_\_ and \_\_\_\_\_\_ acknowledged the execution of the instrument to be the voluntary act and deed of the corporation, by it and by them voluntarily executed.

Notary Public in and for the State of \_\_\_\_\_\_ My Commission expires \_\_\_\_\_\_, 20\_\_\_\_

#### PARTNERSHIP ACKNOWLEDGMENT

STATE OF \_\_\_\_\_) SS \_\_\_\_\_ COUNTY)

On this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_\_, personally appeared \_\_\_\_\_\_ to me personally known, who being by me duly sworn, did say that the person is one of the partners of \_\_\_\_\_\_, a partnership, and that the instrument was signed on behalf of the partnership by authority of the partners and the partner acknowledged the execution of the instrument to be the voluntary act and deed of the partnership by it and by the partner voluntarily executed.

Notary Public in and for the State of \_\_\_\_\_\_, 20\_\_\_\_\_, 20\_\_\_\_\_, 20\_\_\_\_\_, 20\_\_\_\_\_.

#### LIMITED LIABILITY COMPANY ACKNOWLEDGEMENT

STATE OF \_\_\_\_\_) SS \_\_\_\_\_ COUNTY)

On this		day	' of		, 2	.0	_, be	efore r	ne the	e und	lersigr	ned, a	Notary	Public in a	nd fo	or the	State
of	,	per	sonally app	bear	ed					_, to	me pe	ersona	ally kno	wn, who be	eing l	by m	e duly
sworn did say that person is								of said							_, that (the seal		
affixed	to sa	aid	instrument	is	the	seal	of	said	OR	no	seal	has	been	procured	by	the	said)
				,	and	that	said	instru	ument	was	s sign	ed ar	nd seal	ed on beh	half c	of the	∍ said
			, b	y aut	thority	/ of its	mai	nagers	s and t	the s	aid				_ ack	nowle	edged
the exe	cution	of	said instru	men	t to b	be the	e vol	untary	/ act	and	deed	of sa	id			,	by its
voluntar	ilv exe	cute	ed.														

Notary Public in and for the State of \_\_\_\_\_\_ My commission expires \_\_\_\_\_\_, 20\_\_\_\_.