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**DI 011100 - SITE 206**

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**DI 011100 - SITE 212**

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STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION


PROJECT DESCRIPTION:
SITE 201: REPLACE PAVEMENT AND PIPE
SITE 218: REPLACE PAVEMENT AND PIPE
SITE 238: REPLACE PAVEMENT AND PIPE
SITE 241: REPLACE CLIVERT END SECTION
SITE 442: REPLACE CLIVERT END SECTION

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:
1. TEMPORARY EROSION CONTROL
2. PERMANENT EROSION CONTROL

SOIL STABILIZATION PRACTICES:
- TEMPORARY SEEDING
- PERMANENT SEEDING, SPRINKLING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:
- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DYES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIXES
- DIVERSION, INTERCEPTOR OR PERIMETER SHUTES
- ROCK FILTER DAMS
- TEMPORARY DRAINAGE SLOPE
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SAND BAGS
- TEMPORARY STREAM CROSSINGS

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:
ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDERD BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION EXTRAS AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS WILL BE ALL EXAMINATIONS OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:
PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS SUCH AS STOOL, SCRUB, DEBRIS, AND ALL OTHER PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SEDIMENT PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:
PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED BY THE CONTRACTOR. REMOVAL OF CONTAMINANTS IS RECOMMENDED TO ENSURE ROYAL CORRECT HANDLING, DISPOSAL, SEDIMENT PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE, BUT NOT LIMITED TO, PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:
A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REQUIRATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE. CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOD) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (OEDQ). THE PLAN MUST BE KEPT CURRENT WITH UP TO DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE BPMP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAVE THE POTENTIAL TO CONTAMINATE OUR WATERWAYS AND AFFECT THE HEALTH OF THE LOCAL COMMUNITY. THE OLD STORM WATER DISCHARGES WILL BE DIRECT TO THE NEAREST NW TRIBUTARY TO THE OKLAHOMA RIVER. THE PREVENTION OF SOIL EROSION, CONTAMINATION OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:
103.05 BONDING REQUIREMENTS
104.10 FINAL CLEANUP
104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
104.13 ENVIRONMENTAL PROTECTION
106.08 STORAGE AND HANDLING OF MATERIAL
107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
107.20 STORM WATER MANAGEMENT
220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:
"OEDQ GENERAL PERMIT (KRM) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITY WITHIN THE STATE OF OKLAHOMA." OEDQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

EROSION AND SEDIMENT CONTROLS

PROJECT #173120-1021-126336

STORM WATER MANAGEMENT PLAN

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

MEHREK & ASSOCIATES, LLC

11/14/2022

REVISED 09/18/2017
CONSTRUCTION NOTES:
- STORM DRAIN, 3 EACH OF RDP - 25 FT LONG X 18 IN DIAMETER, SURFACE WATER FLOODING CAUSED PIPE SEPARATIONS.

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PROJECT NOTES:
1. SITE ESTIMATES FOR WORK TO BE COMPLETED WERE GENERATED USING RS MEANS.
2. ALL BORROW OR FILL MATERIAL MUST COME FROM PRE-EXISTING STOCKPILES.
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3. ALL EXCAVATION DIMENSIONS ARE SHOWN IN THE COD.

SITE 206

LOCATION MAP

SITE 206

SITE PHOTO

FEMA SITE 206
PROJECT #175120-1021-125336
DAMAGE #: 331120

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

LEGEND
FEMA SITE AREA
SITE LOCATION

CITY OF TULSA, OKLAHOMA

CONSTRUCTION NOTES:

- STORM DRAIN, 1 EACH OF RCP - 25 FT LONG X 18 IN IN DIAMETER, SURFACE WATER FLOODING CAUSED PIPE SEPARATIONS.

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PROJECT NOTES:

1. SITE ESTIMATES FOR WORK TO BE COMPLETED WERE GENERATED USING RS MEANS.

2. ALL BORROW OR FILL MATERIAL MUST COME FROM PRE-EXISTING STOCKPLIES, MATERIAL RECLAIMED FROM MAINTAINED ROADSIDE DITCHES (PROVIDED THE DESIGNED WIDTH OR DEPTH OF THE DITCH IS NOT INCREASED), OR COMMERCIAL PROCURED MATERIAL FROM A SOURCE EXISTING PRIOR TO THE EVENT. FOR ANY FEMA-FUNDED PROJECT REQUIRING THE USE OF A NON-COMMERCIAL SOURCE OR A COMMERCIAL SOURCE THAT WAS NOT PERMITTED TO OPERATE PRIOR TO THE EVENT (E.G. A NEW PIT, AGRICULTURAL FIELDS, ROAD ROWS, ETC.) IN WHOLE OR IN PART, REGARDLESS OF COST, THE APPLICANT MUST NOTIFY FEMA AND THE RECIPIENT PRIOR TO EXTRACTING MATERIAL. FEMA MUST REVIEW THE SOURCE FOR PRESERVATION LAWS AND EXECUTIVE ORDERS PRIOR TO A SUBRECIPIENT OR THEIR CONTRACTOR COMMENCING BORROW EXTRACTION. CONSULTATION AND REGULATORY PERMITTING MAY BE REQUIRED. NONCOMPLIANCE WITH THIS REQUIREMENT MAY JEOPARDIZE RECEIPT OF FEDERAL FUNDING. DOCUMENTATION OF BORROW SOURCES UTILIZED IS REQUIRED AT CLOSOUT.

3. ALL EXCAVATION DIMENSIONS ARE SHOWN IN THE OGD.
SITE 241 - (36.08550, -95.99070)

CONSTRUCTION NOTES:

- STORM DRAIN, 3 EACH OF RCP END SECTION - 6 FT LONG X 24 IN. IN DIAMETER, SURFACE WATER FLOODING CAUSED PIPE SEPARATIONS.

PROJECT NOTES:

1. SITE ESTIMATES FOR WORK TO BE COMPLETED WERE GENERATED USING RS MEANS.

2. ALL BORROW OR FILL MATERIAL MUST COME FROM PRE-EXISTING STOCKPILES, MATERIAL RECLAIMED FROM MAINTAINED ROADSIDE DITCHES (PROVIDED THE DESIGNED WIDTH OR DEPTH OF THE DITCH IS NOT INCREASED), OR COMMERCIALLY PROCURED MATERIAL FROM A SOURCE EXISTING PRIOR TO THE EVENT. FOR ANY FEMA-FUNDED PROJECT REQUIRING THE USE OF A NON-COMMERCIAL SOURCE OR A COMMERCIAL SOURCE THAT WAS NOT PERMITTED TO OPERATE PRIOR TO THE EVENT (E.G. A NEW PIT, AGRICULTURAL FIELDS, ROAD ROWS, ETC.) IN WHOLE OR IN PART, REGARDLESS OF COST, THE APPLICANT MUST NOTIFY FEMA AND THE RECIPIENT PRIOR TO EXTRACTING MATERIAL. FEMA MUST REVIEW THE SOURCE FOR PRESERVATION LAWS AND EXECUTIVE ORDERS PRIOR TO A SUBRECIPIENT OR THEIR CONTRACTOR COMMENCING BORROW EXTRACTION. CONSULTATION AND REGULATORY PERMITTING MAY BE REQUIRED. NONCOMPLIANCE WITH THIS REQUIREMENT MAY JEOPARDIZE RECEIPT OF FEDERAL FUNDING. DOCUMENTATION OF BORROW SOURCES UTILIZED IS REQUIRED AT CLOSOUT.

3. ALL EXCAVATION DIMENSIONS ARE SHOWN IN THE DDO.

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SITE 241

TYPE 1 APD CUT AND REPAIR (NON-ARTERIAL)

SOUTH SIDE WAS NOW TO TREATMENT PLANT

0.2% ANNUAL CHANCE FLOOD HAZARD

REGULATORY FLOODWAY

0.2% ANNUAL CHANCE FLOOD HAZARD

REGULATORY FLOODWAY

OKIE 811

FEMA SITE 241

DEADLINE # 331120

DAMAGE # 331120

OKIE 811

FEMA SITE AREA

PROJECT #173120-1021-126335

Meseck & Associates, I.L.C.

OKIE 811

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

ENGINEERING SERVICES DEPARTMENT

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT
SITE 242  (36.07990, -95.89070)

CONSTRUCTION NOTES:
- STORM DRAIN, 2 EACH OF RIP END SECTION – 6 FT LONG X 18 IN IN DIAMETER, SURFACE WATER FLOODING CAUSED PIPE SEPARATIONS.

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PROJECT NOTES:
1. SITE ESTIMATES FOR WORK TO BE COMPLETED WERE DERIVED USING RS MEANS.
2. ALL BORROW OR FILL MATERIAL MUST COME FROM PRE-EXISTING STOCKPILES, MATERIAL RECLAIMED FROM MAINTAINED ROADSIDE DITCHES (PROVIDED THE DESIGNED WIDTH OR DEPTH OF THE GTR IS NOT INCREASED), OR COMMERCIAL MATERIAL FROM A SOURCE EXISTING PRIOR TO THE EVENT. FOR ANY FEMA-FUNDED PROJECT REQUIRING THE USE OF A NON-COMMERCIAL SOURCE OR A COMMERCIAL SOURCE THAT WAS NOT PERMITTED TO OPERATE PRIOR TO THE EVENT (E.G. A NEW PTO, AGRICULTURAL FIELDS, ROAD ROWS, ETC.) IN WHOLE OR IN PART, REGARDLESS OF COST, THE APPLICANT MUST NOTIFY FEMA AND THE RECIPROCAL PRIOR TO EXTRACTING MATERIAL. FEMA MUST REVIEW THE SOURCE FOR PRESERVATION LAWS AND EXECUTE ORDERS PRIOR TO A SUBRECIPIENT OR THEIR CONTRACTOR COMMENCING BORROW EXTRATION. CONSULTATION AND REGULATORY PERMITTING MAY BE REQUIRED. INACCUMPLISHMENT WITH THESE REQUIREMENTS MAY JEOPARDIZE ELIGIBILITY FOR FEDERAL FUNDING. DOCUMENTATION OF BORROW SOURCES UTILIZED IS REQUIRED AT CLOSEOUT.
3. ALL EXCAVATION DIMENSIONS ARE SHOWN IN THE DDO.

FEMA SITE 242
PROJECT #175120-021-126336
DAMAGE # 331120

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

OKIE 811
MEMBEK & ASSOCIATES, LLC.
STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: DAMAGE INVENTORY #331132 SITES ALONG THE WEST SIDE OF THE ARKANSAS RIVER INCLUDING SITE 201, SITE 219 AND SITE 220. ALL APPROXIMATELY LOCATED IN THE WS OF SECTION 36 OF 60 T169 N R21 E WITHIN THE CITY LIMITS OF TULSA, OKLAHOMA.

PROJECT DESCRIPTION: SITE 201: REPLACE CONCRETE APRON SITE 219: REMOVAL OF SEDIMENT SITE 220: REMOVAL OF SEDIMENT

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:
1. TEMPORARY EROSION CONTROL
2. PERMANENT EROSION CONTROL

SOIL STABILIZATION PRACTICES:
- TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CAUSED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

EROSION AND SEDIMENT CONTROLS

PROGRAM AND EROSION CONTROL ACTIVITIES:

SOIL STABILIZATION PRACTICES:
- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DYES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DYES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE PROTECTION
- PAVED DICTIONARY DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BARRIERS
- TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:
- X Haul roads damped or cud for dust control
- X Loaded haul trucks to be covered with tarpaulin
- X Excess dirt on road removed daily

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:
All erosion and sediment controls will be maintained in good working order from the beginning of construction until an acceptable vegetative cover is established. Inspection by the contractor and any necessary repairs shall be performed once every 7 calendar days and within 24 hours after any storm event greater than 0.5 inch as recorded by a non-freezing rain gauge to be located at or near the construction site. All potentially erodible areas, drainage ditches, and sediment control entrances and exits along with erosion and sediment control locations are examples of sites that need to be inspected.

WASTE MATERIALS:
Proper management and disposal of construction waste materials is required by the contractor. Materials like concrete, brick, wood, and other by-products from the construction process must be managed in accordance with regulations to ensure correct handling, disposal, and recycling.

Hazardous Materials:
Proper management and disposal of hazardous waste materials is required. The contractor is responsible for following manufacturers' recommendations, state and federal regulations to ensure correct handling, disposal, and recycling.

GENERAL NOTES:
A storm water pollution prevention plan (SWPPP) is required to comply with the Oklahoma pollution discharge elimination system (OPDES) regulations. This plan is initiated during the design phase and continued throughout the construction process. The plan must be kept current with up-to-date amendments during the construction phase. All contractor off-site operations associated with the construction project must be documented in the SWPPP. This includes information such as borrow pits, work roads, disposal sites, and other activities.

The following sections of the 2009 ODOT standard specifications should be noted:

102.95 Bonding requirements
104.10 Final cleaning up
104.12 Contractor's responsibility for work
104.13 Environmental protection
105.08 Storage and handling of material
107.01 Laws, rules and regulations to be observed
107.20 Storm water management
201.01 Management of erosion and sediment and storm water pollution prevention and control
221.01 Temporary sediment controls

In addition, "OOGQ GENERAL PERMIT (ORPH) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE CITY OF TULSA, OKLAHOMA" in addition to "OOGQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

REVISED 09/18/2017

CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT

STORM WATER MANAGEMENT PLAN

PROJECT #175120-1021-128336

DAMAGE #331132

CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT

MABEK & ASSOCIATES, LLC.
SITE 201 - (36.13250, -95.99560)

CONSTRUCTION NOTES:
- OUTFALL PAD - 15 CY OF OUTFALL APRON (CONCRETE), 20 FT LONG X 20 FT WIDE X 1 FT DEEP. SURFACE WATER FLOODING UNDERMINED/CRACKED CONCRETE.

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SITE 219 - (36.13370, -95.99660)

CONSTRUCTION NOTES:
- SAND/SILT, 252 CY OF SAND/SILT (REMOVE, 85 FT LONG X 40 FT WIDE X 2 FT DEEP) RIVER FLOODED DEPOSITED SAND/SILT ON BANK.

PROJECT NOTES:
1. EXTRACTED SILT THAT CANNOT BE REUSED ON SITE WILL BE DISPOSED AT THE C & D LANDFILL LOCATED AT 13012 OK HWY 256, TULSA, OK 74146, WITH THE GPS COORDINATES 36.219036, -95.830082 (SOLID WASTE PERMIT NO. 35720412). IF THE SILT DESTINATION CHANGES, THE APPLICANT MUST NOTIFY FEMA AND THE RECIPIENT PRIOR TO DELIVERING TO THE NEW LOCATION.

SITE PHOTO

SITE PHOTO

ITEM DESCRIPTION | QUANTITY |
--- | --- |
REMOVAL OF SEDIMENT | 252.00 CY |

LOCATION MAP

SITE 219

LEGEND

FEMA SITE AREA
STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: DAMAGE INVENTORY #331149 SITES ALONG THE WEST SIDE OF THE ARKANSAS RIVER INCLUDING SITE 282, APPROXIMATELY LOCATED IN THE SOUTH OF SECTION 13 OF T138N R12E, WITHIN THE CITY LIMITS OF TULSA, OKLAHOMA.

PROJECT DESCRIPTION:

SITE 282: EROSION CONTROL

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. TEMPORARY EROSION CONTROL
2. PERMANENT EROSION CONTROL

SOIL TYPE: LOAMY FINE SAND, STRATIFIED FINE SAND TO LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: LESS THAN 1 ACRE COMBINED

ESTIMATED AREA TO BE DISTURBED: LESS THAN 1 ACRE COMBINED

OFFSITE AREA TO BE DISTURBED:

TOTAL IMPERVIOUS AREA PRIOR-CONSTRUCTION: ___ .XX ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: ___ .XX ACRES

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: ___ .XX

LATTITUDE & LONGITUDE OF CENTER OF PROJECT: N38°13'13", W95°09'25.4"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: ARKANSAS RIVER

SENSITIVE WATERS OR WATERSHEDS: YES ☐ NO ☑ X

303 IMPAIRED WATERS: YES ☑ X NO ☐

IF YES, LIST IMPAIRMENT: CADMIUM

LOCATED IN A TMDL: YES ☑ X NO ☐

LAKE THUNDERBIRD TMDL: YES ☑ X NO ☐

MIS ENTITY: YES ☑ X NO ☐

IF YES, LOCATION: TULSA COUNTY

NOTE: THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

STORM WATER MANAGEMENT PLAN

PROJECT #173120-2021-126336

CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

DATE: 12/14/2020

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT SODDING, SPRINGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DYES
- TEMPORARY FIBER LOGS
- DIVERSION, INTERCEPTOR OR PERIMETER DYES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RAP RAP
- INLET SEDIMENT FILTER
- TEMPORARY SPILL SEDIMENT BARRIERS
- SANDBAG BARRIERS
- TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TC BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPOOL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPOOL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO PAINTS, ACOIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-CONSTRUCTION MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP. I.E., BORROW PITTS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORMWATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORMWATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAMINATION OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THOSE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORMWATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2006 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTORS RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 105.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
- 221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:

*OQO GENERAL PERMIT [OK 010] FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA*

0QO, WATER QUALITY REPORT, SEPTEMBER 13, 2017.

REVISED 06/19/2017
SITE 262 — (36.12050, -95.99040)

CONSTRUCTION NOTES:
- BACKFILL — 19 CY of UNCLASSIFIED FILL — 25 FT LONG X 7 FT WIDE X 3 FT DEEP, SURFACE WATER FLODDING ERODED SOIL.

SITE 262 — (36.12050, -95.99040)

HAZARD MITIGATION PROPOSAL SCOPE OF WORK:
- ADDING 25 CY RIP RAP TO MITIGATE DAMAGE FROM RAPIDLY FLOWING FLOOD WATERS.
- ADDING 25 FT GEOSYNTHETIC FABRIC TO PREVENT EROSION CAUSED BY RAPIDLY FLOWING FLOOD WATERS.

IMP NOTES:
1. THE MITIGATION PROPOSAL ESTIMATES WERE GENERATED USING RS MEANS.

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16" TYPE 1A PLAN REPAIR

EXISTING GROUND/ FINISH GRADE

COMPACTED BACKFILL

RIPRAPH INSTALLATION

SCALE: NONE

FEMA SITE 262

PROJECT #173120-1021-128336

DAMAGE #: 331149

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

PLANS AND ESTIMATES PREPARED BY
Mesbeck & Associates, LLC.

OKIE 811

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT