### DW 33200 - ROSS PARK

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STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: BIGGS PARK

PROJECT DESCRIPTION: BANK STABILIZATION

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

FOOTNOTE:

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."

STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- 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
- RIP RAP
- INLET SEDIMENT ФILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BARRIERS
- TEMPORARY STREAM CROSSINGS

OFFSITE AREA TO BE DISTURBED:

- FOR CONTRACTOR USE
- TOTAL IMPERVIOUS AREA
  - PRE-CONSTRUCTION: 0.01 ACRE
  - POST-CONSTRUCTION RUNOFF
    - COEFFICIENT OF THE SITE: XX
    - LATITUDE & LONGITUDE OF CENTER OF PROJECT: N 45° 05′ 36″ W 95° 52′ 29″

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: UNIMID TRIBUTARY

SENSITIVE WATERS OR WATERSHEDS:
- YES [ ] NO [X]

303 IMPAIRED WATERS:
- YES [X] NO [ ]

IF YES, LIST IMPAIRMENT:
- FISHES [ ] BIOSEASAMES [ ]

LOADED HAUL TRUCKS TO BE COVERED WITH TARP

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 0.2 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 OF THE CONTRACTOR. MATERIALS INCLUDE STOOLIES, SURPLUS, DESIRS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL 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, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO PAINTS, ACIDS, 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 (ODEQ). 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. 1E. 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 HAS THE POTENTIAL TO CONTAMINATE WATERBODIES THROUGH SEDIMENTATION AND POLLUTANTS. THE USE OF GOOD PRACTICES AND MEASURES IS ESSENTIAL TO THE SUCCESS OF THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAMINATION OF HAZARDOUS MATERIALS AND THE REDUCTION 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 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
220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:
"ODG GENERAL PERMIT (OKR-10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." "OSGQ, WATER QUALITY ACTIVITIES, SEPTEMBER 13, 2017.

REVISION 08/18/2017

STORM WATER MANAGEMENT PLAN
PROJECT: #13120-2021-117880
DAMAGE #331391

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

Mershak & Associates, LLC.
**SITE PHOTO**
STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: NORBERG PARK

PROJECT DESCRIPTION: REPLACING RETAINING WALL

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

X SOIL STABILIZATION PRACTICES:
X TEMPORARY SEEDING
X PERMANENT SODDING, SPRIGGING OR SEEDING
VEGETATIVE MULCHING
SOIL RETENTION BLANKET
X 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.

X STRUCTURAL PRACTICES:
X STABILIZED CONSTRUCTION EXIT
X TEMPORARY SILT FENCE
X TEMPORARY SILT DIKES
X TEMPORARY FIBER LOG
X DIVERSION, INTERCEPTOR OR PERIMETER DIKES
X DIVERSION, INTERCEPTOR OR PERIMETER SWALES
X ROCK FILTER DAMS
X TEMPORARY SLOPE DRAIN
X PAVED DITCH W/ DITCH LINER PROTECTION
X TEMPORARY DIVERSION CHANNELS
X TEMPORARY SEDIMENT BASINS
X TEMPORARY SEDIMENT TRAPS
X TEMPORARY SEDIMENT BARRES
X TEMPORARY SEDIMENT REMOVAL
X RIP RAP
X INLET SEDIMENT FILTER
X TEMPORARY SWIMMING BARRIER
X SANDBAG BERM
X TEMPORARY STREAM CROSSINGS

X OFFSITE VEHICLE TRACKING:
X HAUL ROADS DAMPENED FOR DUST CONTROL
X LOADED MULCH TRUCKS TO BE COVERED WITH TARPaulIN
X EXCESS DIRT ON ROAD REMOVED DAILY

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 RAINGUAGE 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 IS REQUIRED BY THE CONTRACTOR. MATERIALS TO INCLUDE STOCKPILES, SURPLUS, DEBRIS, AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES SHOULD INCLUDE PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES.

STRUCTURAL PRACTICES:
X PROPER SCHEDULING AND STORAGE OF MATERIALS IS REQUIRED.
X TEMPORARY SEDIMENT CONTROL:
X SWIMMING BARRES
X SANDBAG BERM
X TEMPORARY STREAM CROSSINGS

X HAZARDOUS MATERIALS:
PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, ENSURING CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES.

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. EXPERIENCE WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (OQE) IS RECOMMENDED. THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESS OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP. I.E. BORROW PIT, WORK ROADS, DISPOSAL SITES, APPRAIAT, 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 HAS THE POTENTIAL TO BE A SOURCE OF POLLUTANTS AND MUST BE TREATED OR PREVENTED DURING THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND INHIBITION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE IS THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:
10.09 BONING REQUIREMENTS
10.10 FINAL CLEANUP
10.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
10.13 ENVIRONMENTAL PROTECTION
10.31 STORAGE AND HANDLING OF MATERIAL
10.70 LAWS, RULES AND REGULATIONS TO BE OBSERVED
10.20 STORM WATER MANAGEMENT
220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:
"ODG-ENV-035-PERM (OKR15) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ WATE QUALITY DIVISION, SEPTEMBER 13, 2017.

REVISED 06/18/2017

STORM WATER MANAGEMENT PLAN

PROJECT #137120-T0211-17860

CITY: TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

REVIEWED: JLM
EDITED: JLM
CONF: D.PF

REVISION
PAGE
5
5
NORBERG - DAMAGE #331393 (56.11623 - 95.84890)

- WALKWAY BASE - 1.33 CY OF UNCLASSIFIED FILL, 6 FT LONG X 3 FT WIDE X 2 FT DEEP, HIGH VELOCITY SURFACE WATER FLOODING ERODED BRIDGE/CULVERT SURFACE MATERIAL, BASE MATERIAL AND DAMAGED RAILROAD TIE WALL.

- ASPHALT SURFACE MATERIAL - 0.16 CY OF ASPHALT SURFACE MATERIAL, 6 FT LONG X 3 FT WIDE X 3 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING ERODED BRIDGE/CULVERT SURFACE MATERIAL, BASE MATERIAL AND DAMAGED RAILROAD TIE WALL.

- RETAINING WALL - 8 EACH OF RAILROAD TIES, 6 FT LONG X 8 IN WIDE X 8 IN HIGH, HIGH VELOCITY SURFACE WATER FLOODING ERODED BRIDGE/CULVERT SURFACE MATERIAL, BASE MATERIAL AND RETAINING WALL.

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SECTION A-A
- EXISTING HARDSCAPE
- EXISTING CONCRETE FEEDWALL
- DRAINAGE INLET
- DRAINAGE PIPE
- DRAINAGE Ditch
- SCAFFOLDING
- SELF STORAGE
- PARKING LOT
- DOMINIC'S PIZZA
- E 32ND ST
- E 31ST PL S
- 1/20 ANNUAL FLOOD HAZARD
- REGULATORY FLOODWAY
- PROJECT SITE LOCATION
- WALKING TRAIL
- WALKING TRAIL
- REGULATORY FLOODWAY
- NORBERG PARK
- CREATION PARK
- CONSTRUCTION NOTES
- SITE NORBERG PARK
- 1/20 ANNUAL FLOOD HAZARD

LEGEND
- WALKWAY BASE
- EX. HARDSCAPE
- RAILROAD TIE RETAINING WALL
- ASPHALT SURFACE PATCH
- EX. HARDSCARP
- FEMA SITE AREA

FEMA SITE NORBERG PARK
PROJECT #173120-T021-117860
DAMAGE #331393
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT
Muench & Associates, L.L.C.

PLANS AND ESTIMATES PREPARED BY:

Muench & Associates, L.L.C.

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PROOFREAD BY:

Kathy Muench

DATE: 2/28/2021
STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: ZINK PARK

PROJECT DESCRIPTION: STONE WALNUT REPLACEMENT

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

ESTIMATED AREA TO BE DISTURBED:
TOTAL AREA OF THE CONSTRUCTION SITE: 0.2 ACRE

TOTAL IMPERVIOUS AREA:
PRE-CONSTRUCTION: 0.2 ACRES
TOTAL IMPERVIOUS AREA:
POST-CONSTRUCTION: 0.2 ACRES

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: X

LATITUDE AND LONGITUDE OF CENTER OF PROJECT: N39°07'03.4", W95°58'14.6"

PROJECT WILL DISCHARGE TO:
NAME OF RECEIVING WATERS: CROW CREEK

SENSITIVE WATERS OR WATERSHEDS:
YES [ ] NO [x] 303 IMPAIRED WATERS:
YES [x] NO [ ]

IF YES, LIST IMPAIRMENT:
6. COIL, FISHES, BIOASSESSMENTS, MICROCONVERGATE BIO

LOCATED IN A TMDL:
YES [x] NO [ ]

LAKE THUNDERBIRD TMDL:
YES [x] NO [ ]

MS4 ENTITY:
YES [x] NO [ ]

IF YES, LOCATION:
TULSA COUNTY

NOTE: THIS SHEET SHOULD BE CONJOINED IN 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.

REVISED: 06/19/2017

STORM WATER MANAGEMENT PLAN

PROJECT #175120-0211-117860

DAMAGE #331403

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

FORM AND DRAWINGS PREPARED BY
Meshek & Associates, LLC

METHODOLOGY/PROJECT #175120-0211-117860

STORM WATER MANAGEMENT PLAN

SOIL STABILIZATION PRACTICES:
X TEMPORARY SEEDING
X PERMANENT SEEDING, SPRIGGING OR SEEDING VEGETATIVE MULCHING
SOIL RETENTION BLANKET
X 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:
X STABILIZED CONSTRUCTION EXIT
X TEMPORARY SILT FENCE
TEMPORARY SILT DIXES
TEMPORARY FIBER LOG
DIVERSION INTERCEPTOR OR PERIMETER DIXES
DIVERSION INTERCEPTOR OR PERIMETER BARRIERS
ROCK FILTER DAMS
TEMPORARY SLOPE DRAIN
PAVED DITCH W/ DITCH LINER PROTECTION
TEMPORARY DIVERSION CHANNELS
TEMPORARY SEDIMENT BASINS
TEMPORARY SEDIMENT TRAPS
TEMPORARY SEDIMENT FILTERS
X TEMPORARY SEDIMENT REMOVAL
RIP RAP INLET FILTER
INLET SEDIMENT FILTER
TEMPORARY BRUSH SEDIMENT BARRIER
SAND/DESS BARRIERS
TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:
HAUL ROADS DAMPENED FOR DUST CONTROL
LOADED HULL TRUCKS TO 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 A 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 FREE-FLOWING DAIN 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 TO INCLUDE STOOLIES, SHOULDERS, DEBRIS, AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL 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, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO, PAINTS, ACIDS, 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-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH A COPY OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESS OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP. I.E., BORROW PITS, ROAD WORK, DRAINS, ASPHALT, CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATERS DISCHARGE. RUNOFF FROM CONSTRUCTION SITES HAS THE POTENTIAL TO CONTAMINATE AND INCREASE THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION AND PREVENTION OF HAZARDOUS MATERIALS ENTERING THE 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:
105.05 BONDING REQUIREMENTS
104.10 FINAL CLEANING UP
104.12 CONTRACTOR’S RESPONSIBILITY FOR WORK
104.13 ENVIRONMENTAL PROTECTION
106.00 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:
"ODEQ GENERAL PERMIT (ODM5) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITY" (SUMMARY OF STATE OF OKLAHOMA), ODEQ, WASTE QUALITY DIVISION, SEPTEMBER 13, 2013.
ZINC PARK - SITE 1

**CONSTRUCTION NOTES:**

- **STONE WALKWAY BASE** - 5.77 CY OF CRUSHED STONE BASE MATERIAL FOR STONE WALKWAY, 52 FT LONG X 6 FT WIDE X 6 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIAL.

- **MORTAR** - 0.05 CY OF MORTAR BETWEEN STONES, 26 FT LONG X 2 IN WIDE X 4 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

**ITEM ACCESSIBILITY:**

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**LOCATION MAP**

- SITE LOCATION: ZINC PARK

**SITE PHOTO**

- Photo of ZINC PARK - SITE 1

**LEGEND**

- FEMA SITE AREA

**FEMA SITE**

- ZINC PARK - SITE 1

**PROJECT**

- #173120-TO21-117860

**DAMAGE**

- #331403

**OKIE 811**

- CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT

**MENENBREK & ASSOCIATES, LLC.**

- PLANS AND SPECIFICATIONS PREPARED BY: MENENBREK & ASSOCIATES, LLC.
ZINK PARK - DAMAGE #331402 (56.11720, -95.87071)

SITE 2 LOCATION 1:
- BASE - 2.22 CY OF CRUSHED STONE BASE MATERIAL FOR STONE WALKWAY, 10 FT LONG X 12 FT WIDE X 6 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

SITE 2 LOCATION 2:
- BASE MATERIAL - 1.85 CY OF CRUSHED STONE BASE MATERIAL FOR STONE WALKWAY, 10 FT LONG X 10 FT WIDE X 6 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

SITE 2 LOCATION 3:
- BASE MATERIAL - 3.7 CY OF CRUSHED STONE BASE MATERIAL FOR STONE WALKWAY, 10 FT LONG X 20 FT WIDE X 6 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

SITE 2 LOCATION 1.2.3:
- MORTAR - 0.04 CY OF MORTAR BETWEEN STONES, 15 FT LONG X 2 IN WIDE X 4 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

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FEMA SITE
ZINK PARK - SITE 2
PROJECT #175120-1021-117860
DAMAGE #331403

OKIE 811
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

FEMA SITE AREA

LEGEND

ZINK PARK - SITE 2
CONSTRUCTION SITE

ZINK PARK CINNAMON COURT

SITE ZINK PARK

INTERSECTING FLOODWAY

SITE ZINK PARK

FEMA SITE AREA
ZINK PARK - SITE 3

- BASE MATERIAL - 0.14 CY of CRUSHED STONE BASE MATERIAL FOR STONE WALKWAY. 4 FT LONG X 2.5 FT WIDE X 0.6 IN DEEP, HIGH VELLOCY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

- MORTAR - 0.005 CY OF MORTAR BETWEEN STONES, 3 FT LONG X 2 IN WIDE X 4 IN DEEP, HIGH VELLOCY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

- EMBANKMENT - 27.03 CY OF UNCLASSIFIED EMBANKMENT. 10 FT LONG X 10 FT WIDE X 1 FT DEEP, HIGH VELLOCY SURFACE WATER FLOODING CAUSES A LARGE WASHOUT AREA.

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ZINK PARK - SITE 3

RIPRAP INSTALLATION

LEGEND

- FEMA SITE AREA

LEGEND

- FEMA SITE AREA

FEMA SITE
ZINK PARK - SITE 3

PROJECT #331403
DATE: 09-26-2011

OKIE 811

PROJECT SITE LOCATION
ZINK PARK

NOTE: SITE ZINK PARK CONSTRUCTION NOTES

SITE ZINK PARK CONSTRUCTION NOTES
ZINK PARK – DAMAGE #521403 (36.11760, -95.97071)

SITE 4

- BASE MATERIAL – 0.22 CY OF CRUSHED STONE BASE MATERIAL FOR STONE WALKWAY, 6 FT LONG X 2 FT WIDE X 6 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

- MORTAR – 0.01 CY OF MORTAR BETWEEN STONES, 5 FT LONG X 2 IN WIDE X 4 IN DEEP, HIGH VELOCITY SURFACE WATER FLOODING DISPLACED STONE WALKWAYS AND BASE MATERIALS.

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STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: CHAPMAN GREEN PARK

PROJECT DESCRIPTION: ELECTRONIC PUMP CONTROL REPLACEMENT

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

SOIL STABILIZATION PRACTICES:

- X TEMPORARY SEEDING
- X PERMANENT SEEDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- X 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.

EROSION AND SEDIMENT CONTROLS

SOIL TYPE: VARIABLE

TOTAL AREA OF THE CONSTRUCTION SITE: 0.007 ACRE

ESTIMATED AREA TO BE DISTURBED: 0.007

OFFSITE AREA TO BE DISTURBED:
- FOR CONTRACTOR USE
  - TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.007 ACRES
  - TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.007 ACRES
  - POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: X

LATTITUDE & LONGITUDE OF CENTER OF PROJECT: N36°08'03.3", W95°10'18.7"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: N/A

SENSITIVE WATERS OR WATERSHEDS:

- YES 
- NO
- X

303 IMPAIRED WATERS:

- YES 
- NO
- X

IF YES, LIST IMPAIRMENT:

- LOCATED IN A TMDL:
- YES 
- NO
- X

- LAKE THUNDERBIRD TMDL:
- YES 
- NO
- X

- MS4 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.

PROJECT #175120-1021-117680

STORM WATER MANAGEMENT PLAN

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 RECEIVED 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 MATERAL IS REQUIRED BY THE CONTRACTOR. MATERIALS LIKE STOOPLES, RAMP U.S., DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS PRACTICES INCLUDE DISPOSAL; PROPER MATERIALS HANDLING; SPILL 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, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACRYLIC, 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-WORK 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 (ODEQ). 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 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 HAS THE POTENTIAL TO DAMAGE HABITAT AND BECAME THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF EROSION, CONTAMINATION OF HAZARDOUS MATERIALS AND THE INTERCEPTION OF THESE POLLUTANTS ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

101.01 BONDING REQUIREMENTS
101.10 FINAL CLEANUP
101.13 ENVIRONMENTAL PROTECTION
101.08 STORAGE AND HANDLING OF MATERIAL
101.07 timel. RULES AND REGULATIONS TO BE OBSERVED
101.20 STORM WATER MANAGEMENT
221 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:
"ODG GENERAL PERMITS" FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA.
ODGEQ WATER QUALITY DIVISION, SEPTEMBER 13, 2017.