CONSTRUCTION PLANS FOR ARTERIAL STREET REHABILITATION
51st ST. - MINGO RD. TO GARNETT RD.
INCLUDING 51ST & MINGO RD. INTERSECTION
PROJECT NO. 144017-AE & BA

ACCOUNT NO. 144017.STREETS.5451101.453122-541101
CITY OF TULSA, OKLAHOMA

ENGINEERING SERVICES DEPARTMENT

PROJECT SITE
SEC. 30 & 31, T.19-N., R.14-E

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ROADWAY LENGTH = 8,689 FT = 1.30 MILES = 5.20 LANE MILES

CITY OF TULSA STANDARDS

720 CONCRETE PAYMENT STANDARDS FOR RESIDENTIAL AND COLLECTOR STREETS (1 of 2)
751 PIPE WELDING DETAIL FOR STORM SEWER INLETS
753 PIPE WELDING DETAIL FOR STORM SEWER INLETS (F.I.D.)
759 STORMWATER PIPEWORK
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784 STANDARD STORM SEWER INLETS (1 of 2)
822 STANDARD STORM SEWER INLETS (F.I.D.)
820 STORMWATER PIPEWORK (1 of 2)
790 STORMWATER PIPEWORK (F.I.D.)
1205 HIGHWAY DEPARTMENT
725 COMMERCIAL DEPARTMENT
1375 PATCH & REPAIR DETAIL
710 STANDARD DETAIL (CAST IRON)
1206 COLLECTOR STREETS (1 of 2)

This project complies with all Oklahoma Department of Environmental Quality (ODEQ) requirements and is currently located within the corporate limits of the city of Tulsa. Current city of Tulsa standard specifications and standard details governing all other construction and materials shall be in accordance with the 2006 Oklahoma Standard Specifications for Highway Construction.
## Summary of Surfacing Quantities

**Street** | **P&R SHEET** | **CY** | **FY** | **ST** | **CY** | **LF** | **CY** | **FA** | **EA** | **EA** | **EA**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
E. S 41 ST | 1 | - | - | 210 | - | 176 | - | 64 | 5 | - | 5
E. S 41 ST | 2 | - | - | - | - | - | - | - | - | - | -
E. S 41 ST | 3 | - | 114 | 245 | 374 | 272 | 88 | 120 | - | 43 | -
E. S 41 ST | 4 | - | - | - | - | - | - | - | - | - | -
E. S 41 ST | 5 | - | 1101 | 3920 | 3832 | 2871 | 688 | 627 | 506 | 376 | -
E. S 41 ST | 6 | - | - | - | - | - | - | - | - | - | -
E. S 41 ST | 7 | - | 1444 | 400 | 395 | 132 | 83 | 159 | 109 | 890 | 830
E. S 41 ST | 8 | - | 405 | 1363 | 1800 | 1191 | 298 | 539 | - | 122 | -
E. S 41 ST | 9 | - | - | - | - | - | - | - | - | - | -
E. S 41 ST | 10 | - | - | - | - | - | - | - | - | - | -
E. S 41 ST | 11 | - | - | - | - | - | - | - | - | - | -
E. MINNO RO | 12 | - | - | - | - | - | - | - | - | - | -
**TOTALS** | | 2632 | 1859 | 2139 | 840 | 1407 | 1991 | 1213 | 2178 | 0 | 528 | 16

## Summary of Erosion Control

### Temporary

**Street** | **P&R SHEET** | **ILFT** | **FENCING 2 (Ft)** | **% SEEDING METHOD B (200Ft)** | **VEGETATIVE MULCHING (200Ft)** | **TENTILLOE (300-400)** | **TENTILLOE (401-500)** | **SOIL SAVING (200Ft)** | **TENTILLOE (300-400)** | **SOIL SAVING (500-1000)** | **WAVERING**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
E. S 41 ST | 1 | 0.50 | 0.03 | 0.01 | 0.30 | 133 | 0.01 | 0.20 | 0.10 | 11.12
E. S 41 ST | 2 | 0.11 | 0.06 | 0.02 | 0.29 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02
E. S 41 ST | 3 | 0.08 | 0.04 | 0.01 | 0.01 | 196 | 0.02 | 0.72
E. S 41 ST | 4 | 0.12 | 0.08 | 0.01 | 0.01 | 365 | 0.03 | 12.50
E. S 41 ST | 5 | 0.38 | 0.19 | 0.06 | 0.13 | 313 | 0.09 | 18.18
E. S 41 ST | 6 | 0.45 | 0.22 | 0.07 | 0.03 | 1019 | 0.11 | 6.16
E. S 41 ST | 7 | 0.27 | 0.14 | 0.04 | 0.00 | 467 | 0.02 | 25.26
E. S 41 ST | 8 | 0.15 | 0.07 | 0.02 | 0.01 | 161 | 0.04 | 14.44
E. S 41 ST | 9 | 0.04 | 0.02 | 0.01 | 0.00 | 300 | 0.06 | 2.44
E. S 41 ST | 10 | - | - | - | - | - | - | - | - | - | -
E. MINNO RO | 11 | 0.61 | 0.11 | 0.01 | 0.00 | 53 | 0.00 | 0.12
E. MINNO RO | 12 | 0.61 | 0.11 | 0.01 | 0.00 | 53 | 0.00 | 0.12
**TOTALS** | | 5.24 | 1.34 | 0.41 | 0.25 | 1007 | 0.41 | 182.84

*For Contractors Information Only, Cost to be Included in the Pkg BID for Other Work.*

## Summary of Earthwork Quantities

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<th>STREET</th>
<th>P&amp;R SHEET</th>
<th>EXCAVATION</th>
<th>EMBANKMENT</th>
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<th>WASTE</th>
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**TOTALS** | | 4045 | - | - | - | - |

## Summary of Striping Quantities

### Unclassified

**Street** | **Name** | **Length (Ft)** | **Width (Ft)** | **Area (Ft)** | **Vacation (Ft)** | **Railroad Crossing (Ft)** |
--- | --- | --- | --- | --- | --- | ---
E. S 41 ST | 1 | 158 | 365 | 10 | 158 | 365 |
E. S 41 ST | 2 | 543 | 6 | - | - | - |
E. S 41 ST | 3 | 577 | 159 | 6 | 577 | 159 |
E. S 41 ST | 4 | 1711 | 789 | 6 | 1711 | 789 |
E. S 41 ST | 5 | 543 | 10 | - | - | - |
E. S 41 ST | 6 | 664 | 6 | - | - | - |
E. MINNO RO | 7 | 1156 | 16 | - | - | - |
**TOTALS** | | 7358 | 1759 | 61 | 4 | 16473 |

## Summary of Guardrail

**Location** | **Guardrail Start** | **Guardrail End** | **Length** | **Description** |
--- | --- | --- | --- | ---
Call-On-Roll Overhead |tal | 150 | 150 | 150 |
150 ft to 193 ft | 150 | 150 | 150 |
193 ft to | 150 | 150 | 150 |
**TOTALS** | | 4 | 4 | 4 |
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<th>STATION</th>
<th>STREET ADDRESS</th>
<th>SIDE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>BREAKING</th>
<th>PAVEMENT, CEMENT</th>
<th>DRAINAGE</th>
<th>FENCING</th>
<th>EXISTING</th>
<th>EFFECTIVE</th>
<th>CONDITION</th>
<th>COMMENTS</th>
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- DRIVEWAY IN GOOD CONDITION AND SUFFICIENT RUN SLOPE
- DRIVEWAY NOT IN USE, TO BE REMOVED
### SUMMARY OF SIGNS

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**SPECIAL SIGN (SP-1):**

PRICE BID TO INCLUDE COST OF SIGN POST AND FOUNDING

**BORDER:**

IN-0.38

**BORDER R=1.5:**

TH=0.38

IN-0.38

---

[Diagram of Arterial Street Rehabilitation Project]
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<th>NORTHING</th>
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<th>ELEV</th>
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OUTER LIMITS OF STATIONING

SURVEYOR'S CERTIFICATION

This survey was conducted to the horizontal and vertical control for this project. This survey was conducted upon the survey points with due regard to accuracy and precision. The survey was conducted using the U.S. NAVSTAR GPS System and Trimble 4800 TRS in accordance with the standards set by the National Geodetic Survey and the American Congress on Surveying and Mapping (ACSM) and other surveying organizations.

SURVEYOR: __________________________
DATE: __________________________
STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: EAST 81ST ST, BETWEEN SOUTH MINO RD. AND SOUTH GARNETT RD. EXCLUDING THE INTERSECTION AT EAST 81ST ST, SOUTH AND SOUTH GARNETT RD.

PROJECT DESCRIPTION: PAVER REHABILITATION AND PATCHING OF APPROXIMATELY ONE MILE OF SOUTH 81ST ST. BETWEEN SOUTH MINO RD. AND SOUTH GARNETT RD.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:
1. PLACE TEMPORARY SEDIMENT CONTROL DEVICES AT DRAINAGE LOCATIONS PRIOR TO STRUCTURE MODIFICATION AND CLEARING OPERATIONS.
2. PERFORM CLEARING OPERATIONS AND REMOVALS, PRESERVING ANY VEGETATION NOT IMPENDING CONSTRUCTION. PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED TO PREVENT EROSION.
3. AS PERMANENT VEGETATION IS ESTABLISHED (90% COVER) TEMPORARY SEDIMENT DEVICES MAY BE REMOVED.
4. AS CONDITIONS WARRANT, THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, MAY MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIC PRACTICES OR CONTROLS TO IMPROVE EFFECTIVENESS.

NOTE: THIS SHOULD INCLUDE MAJOR ACTIVITIES REQUIRED TO CONSTRUCT THE PROJECT AND EROSION CONTROL ITEMS.

SOIL TYPE: PRIMARY SOILS SAND AND Silt CLAY.

TOTAL AREA OF THE CONSTRUCTION SITE:

ESTIMATED AREA TO BE DISTURBED:

TOTAL IMPERVIOUS AREA:

TOTAL IMPERVIOUS AREA:

LATTITUDE & LONGITUDE OF CENTER OF PROJECT:

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS:

SENSITIVE WATERS OR WATERSHED:

HORSE IMPAIRED:

IF YES, LIST IMPAIRMENT:

LOCATED IN A TMDL:

LAKE THUNDERBIRD TMDL:

MOL ENTITY:

NOT:

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

SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION IN AMOUNT
- 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 THE PLANS OR AS DIRECTED BY THE ENGINEER.

EROSION AND SEDIMENT CONTROLS

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:
ALL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INFREQUENTLY, THE CONTRACTOR AND ANY PERMAI ASSOCIATES SHALL BE REQUIRED TO PROMPTLY EROSION CONTROL DEVICES NO LESS THAN 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.1 INCHES RECIEVED RAIN CAUSED TO BE LOCATED ON THE 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 SHOULD INCLUDE STAKES, SURPLUS SEEDS, AND ALL OTHER BY-PRODUCTS FROM THE CONTRACTOR’S OPERATIONS. PRACTICES TO INCLUDE EXPOSING MATERIALS SUCH AS SODDING, SEEDING, AND TRASH TO ENSURE ACADEMIC 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 MATERIAL IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURERS RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO CONTROL HANDLING, DISPOSAL, AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO PAINTS, ACES, CLEANING SOUDENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOLIDS.

GENERAL NOTES:

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

103.06 BONDING REQUIREMENTS
104.10 FINAL CLEANUP
104.12 CONTRACTOR’S RESPONSIBILITY FOR WORK
104.13 ENVIRONMENTAL PROTECTION
106.06 STORAGE AND HANDLING OF MATERIAL
107.01 LAWS AND REGULATIONS TO BE OBSERVED
107.20 STORM WATER MANAGEMENT
220 MANAGEMENT OF EROSION, SEEDMENT AND STORM WATER POLLUTION AND CONTROL
221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:
"NO DEVELOPMENT PERMIT (NODP) FOR STORM WATER DISCHARGES"
"FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA" ODEG WATER QUALITY DIVISION, SEPTEMBER 13, 2017.
NOTE:
LANES ON MINGO RD SHOULD ONLY BE CLOSED WHEN ACTUAL WORK IS TAKING PLACE ON MINGO RD.
NOTE:
LANES ON MINGO RD SHOULD ONLY BE CLOSED WHEN ACTUAL WORK IS TAKING PLACE ON MINGO RD.
NOTE:
CONTRACTOR TO MAINTAIN ACCESS TO AND FROM US-198 FOR PROJECT DURATION
SECTION 30, T-19-N, R-14-E

NOTIFICATION OF WORK:
The Contractor will be required to enter into a Union Pacific Railroad Company's Right of Entry Agreement. Upon receipt of the executed Right of Entry Agreement, the Contractor shall notify the Railroad ten (10) working days prior to entering onto the Railroad's right-of-way. To avoid hazards, the Union Pacific Railroad Company may have a representative present.

THE CONTRACTOR SHALL NOTIFY:
Mr. William C. Rundell
Manager of Track Maintenance
Union Pacific Railroad Company
2424 E. 15th St.
Corpus Christi, TX 78401
Phone: 361-350-0854
Fax: 361-350-0858
wcrundell@up.com

FLAGGERS AND INSURANCE:
Flaggers and insurance shall be provided as shown on Section 10 of the standard specifications and in the special provisions for railroad flagging use and insurance.

THE CONTRACTOR IS REQUIRED TO REMIND THE UNION PACIFIC RAILROAD COMPANY FOR FLAGGING SERVICES PROVIDED.

PRIOR TO WORKING ON THE UNION PACIFIC RAILROAD COMPANY'S RIGHT OF WAY OR IN THE VICINITY OF THEIR TRACKS, YOU MUST CONTACT THE LOCAL M.A.
WARNING:
OVERHEAD AND UNDERGROUND UTILITIES IN PROJECT VICINITY

SECTION 31, T-19-N, R-14-E

UNION PACIFIC RAILROAD NOTES:

NOTIFICATION OF WORK:
The contractor will be required to enter into a Union Pacific Railroad Company's Right-of-Way Agreement. Upon receipt of the executed copy of the Agreement, the Contractor shall notify the Railroad Ten Days Prior to Entering Onto the Railroad Right-of-Way. To avoid hazards, the Union Pacific Railroad Company may have a representative present, if desired necessary, for the purpose of inspection and the issuance of any appropriate instructions for railroad operations during the pedestrian improvement work on E. 51st St., City of Tulsa, as it relates to the Union Pacific Railroad.

THE CONTRACTOR SHALL NOTIFY:
MR. WILLIAM COPELAND
MANAGER OF TRACK MAINTENANCE
UNION PACIFIC RAILROAD COMPANY
DENISON, TX 75020
PHONE: 409-586-8234
WWW.UP.COM

PUBLIC PROJECT REPRESENTATIVE
ALFRED B. BENSON & COMPANY
DENISON, TX 75020
PHONE: 940-388-0080
EMAIL: ALFRED@BENSON.COM

FLAGGING AND INSURANCE:
Flaggering and Insurance shall be provided as specified in Section 117 of the standard specifications and in the special provisions for railroad flagging. Flagging is required for all special provisions and work is stated to be in the Union Pacific Railroad Company's right-of-way. At their discretion, the railroad will provide flagging for the railroad utility/drainage construction operations. The contractor is required to reimburse the Union Pacific Railroad Company for flagging services provided.

THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE TO THE STATE OF OKLAHOMA THAT THEY HAVE PROVIDED INSURANCE OF THE KINDS AND AMOUNTS AS SPECIFIED IN THE SPECIAL PROVISIONS FOR RAILROAD INSURANCE AND IN THE UNION PACIFIC COMPANY'S RIGHT-OF-WAY AGREEMENT.

THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE TO THE STATE OF OKLAHOMA THAT THEY HAVE PROVIDED INSURANCE OF THE KINDS AND AMOUNTS AS SPECIFIED IN THE SPECIAL PROVISIONS FOR RAILROAD INSURANCE AND IN THE UNION PACIFIC COMPANY'S RIGHT-OF-WAY AGREEMENT.

THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE TO THE STATE OF OKLAHOMA THAT THEY HAVE PROVIDED INSURANCE OF THE KINDS AND AMOUNTS AS SPECIFIED IN THE SPECIAL PROVISIONS FOR RAILROAD INSURANCE AND IN THE UNION PACIFIC COMPANY'S RIGHT-OF-WAY AGREEMENT.

SOUTH END OF DOT 413302U
MP 286.95
TULSA SUBDIVISION
E. 51ST SOUTH IN TULSA