THE CITY OF OKLAHOMA CITY

APPROVAL SHEET

Project No. TC-0598
Intersection Improvements
NW Expressway and Lake Hefner Parkway

Prepared by:

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Recommended for Approval

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Public Works/Interim City Engineer

APPROVED by the City of Oklahoma City this 16TH day of JANUARY, 2024

ATTEST:

City Clerk

Mayor

PRELIMINARY DESIGN REPORT

FOR

CITY OF OKLAHOMA CITY
OKLAHOMA CITY, OK

INTERSECTION IMPROVEMENTS
TC-0598 – NW EXPRESSWAY AND LAKE HEFNER PARKWAY

12/14/23

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CEC®

12/14/23
PRELIMINARY ENGINEERING REPORT

INTERSECTION IMPROVEMENTS
TC-0598 – NW EXPRESSWAY AND LAKE HEFNER PARKWAY

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EXECUTIVE SUMMARY

Scope

CEC was retained by the City of Oklahoma to provide plans and construction documents for TC-0598 intersection improvements for the intersection of NW Expressway and the north bound off ramp of Lake Hefner Parkway, a street development project. The City of Oklahoma City has been awarded an ACOG grant (Association of Central Oklahoma Government) for construction, which will be administered by ODOT (Oklahoma Department of Transportation), 80% ACOG/ODOT and 20% OKC street development. The overall focus of the project is to add additional capacity and reduce the congestion of the identified intersection within Benefit Area C1. See Figure 1 below.

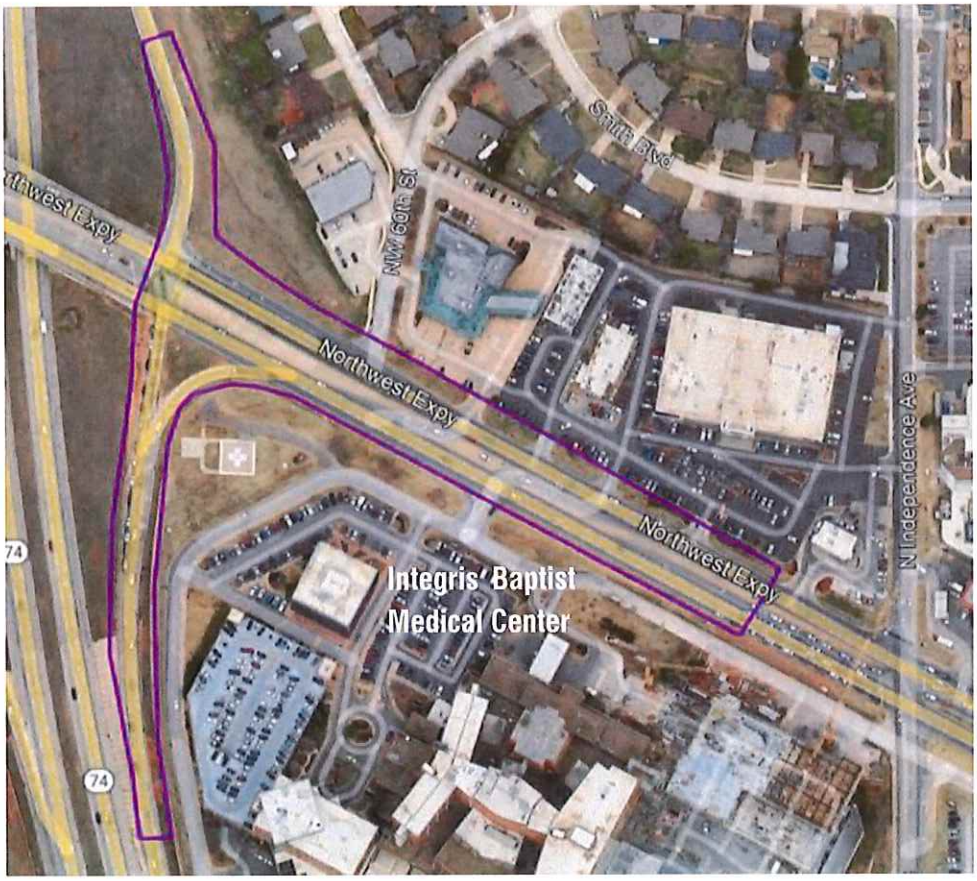


Figure 1: TC-0598 Project Location

Through its analysis of traffic operations, this traffic study recommended the extension of storage length for the westbound traffic turning right on NW Expressway and for northbound traffic turning right from the exit ramp from Lake Hefner Parkway. It was determined, essentially, that a single turn bay provided enough capacity for projected traffic but that these movements were limited by the fact that the turn bays were short and long lines of traffic frequently prevented vehicles from reaching them. This has also been

observed through experience of CEC staff and during field observation during afternoon rush hour. For this study, CEC has investigated these options, and others, for feasibility.

Summary

This Study analyzes key recommendations of a prior study for feasibility and investigates additional improvements that can be incorporated to improve traffic operations. The following improvements are recommended for this intersection as the Base Bid:

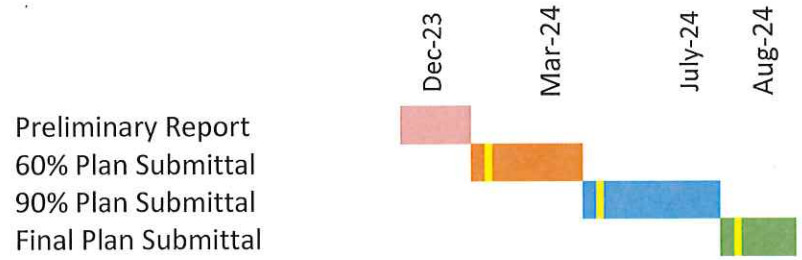
- Northbound Lake Hefner Parkway exit ramp
  - Extend the right turn bay to provide a total of 510 feet of storage.
  - Reconstruct the vertical profile of the right turn bay to flatten out the grade vehicles accelerate out of and raise the elevation to improve sight distance.
  - Make minor adjustments to the northbound through/left stop bar to keep lines of sight clear.
  - Relocate the traffic signal pole that serves eastbound NW Expressway to clear sight obstruction.
- Westbound NW Expressway
  - Extend the right turn bay to provide a total of 800 feet of storage.

A project kick-off meeting was held on September 6, 2023 to discuss the project scope with City of Oklahoma City staff. The City of Oklahoma City has been awarded an ACOG grant, Association of Central Oklahoma Governments, which will be administered by ODOT, Oklahoma Department of Transportation, 80% ACOG/ODOT and 20% OKC construction cost. See figure below.

Budget	ACOG/ODOT	OKC
Preliminary Base Bid /w Alt 1. Cost Estimate	$1,134,669	$283,667
Fixed Limit of Construction Budget	$1,686,563	$421,641
Total Under Construction Budget	$551,894	$137,974

A combination of ODOT and City of Oklahoma City funding will be used for construction. ODOT standards and specifications will be used for the proposed design.

Project Schedule



Estimated Construction Duration: 8 months

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DECISION MATRIX

Base Bid: TC-0598	
Advantages	**Disadvantages**
✓ Improves Intersection Performance	✗ Construction in high traffic roads
✓ Significantly improved right turn performance	
✓ Significantly improved right turn performance	
✓ Improved sight distance and safety	
✓ $1,444,927 Construction Cost, Under budget	

Add Alternate 1: TC-0598	
Advantages	**Disadvantages**
✓ Westbound right turn becomes free flowing, a modest increase over existing performance	✗ Construction in high traffic ramp
✓ Removes conflicts with northbound through moving vehicles	✗ Modest improvement relative to cost
✓ Would still be under budget if incorporated	

Recommendation

After considering multiple solutions, CEC recommends the Base Bid and Add Alternate for the intersection of Hefner Parkway with NW Expressway which includes the following:

- Lengthen the existing westbound right turn bay on NW Expressway to provide 800 total feet of storage.
- Reconstruct the northbound right turn bay on the Lake Hefner Parkway exit ramp and lengthen to provide a total of 510 linear feet of storage length.
    - Revised geometrics will improve sight distance and aid acceleration onto NW Expressway. The northbound left stop bar will also be shifted back, and the existing signal pole servicing eastbound traffic will be relocated to improve visibility.
- Upsize four storm sewer inlets.
- Widen the Northbound entrance ramp for a dedicated lane to receive westbound right traffic.

INTRODUCTION

This report summarizes the preliminary design considerations for the City of Oklahoma City Project No. TC-0598 intersection improvements along NW Expressway and Lake Hefner Parkway. The report outlines the existing conditions of the roadway and lengthening of existing right turn bays along with several conceptual layouts. Proposed improvements to lengthen the northbound right and westbound right turn bays are as previously recommended in the traffic study submitted in November 2022 which analyzed traffic operations at this location. The project location is shown in Figure 2.

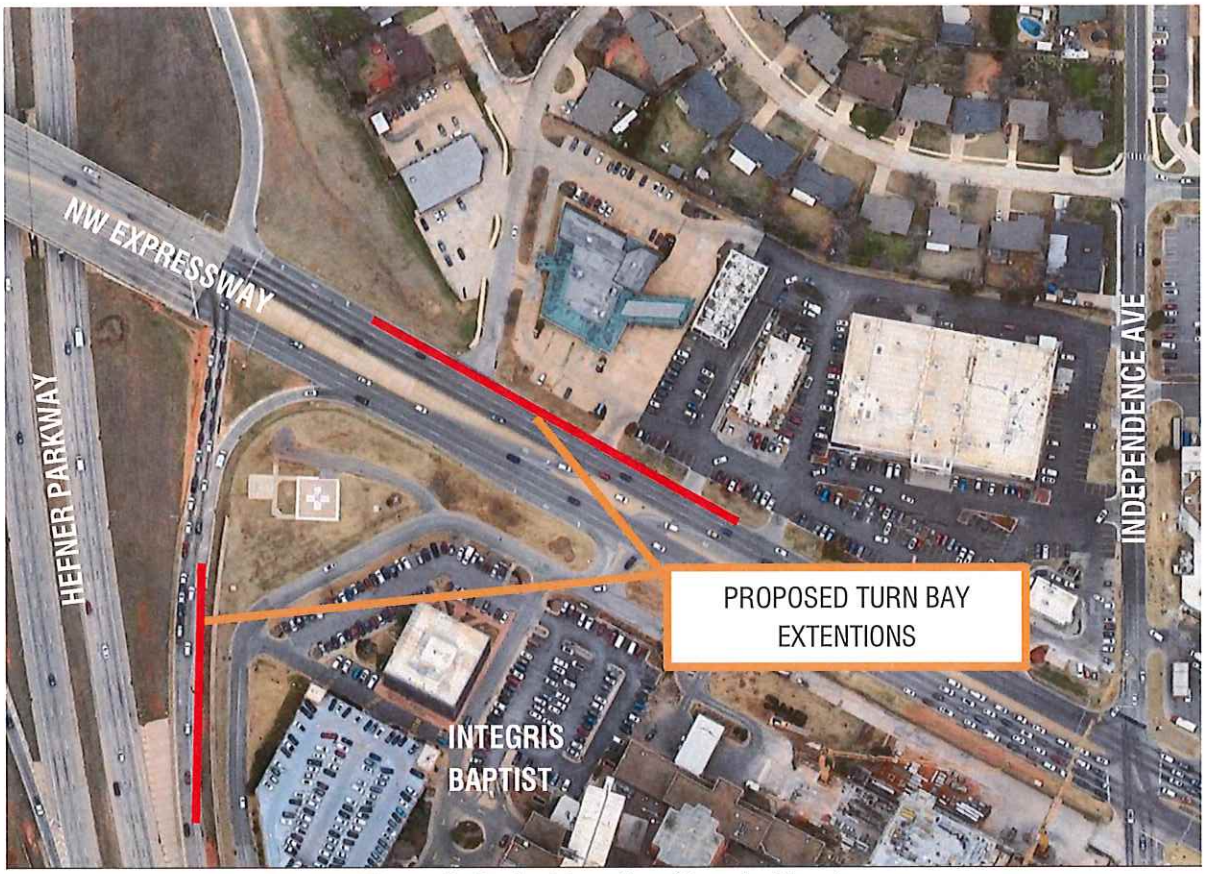


Figure 2- Project Location (Google Maps)

A project kick-off meeting was held on August 1, 2023, between the City of Oklahoma City and CEC staff. The City of Oklahoma City Public Works department requested improvements for this project along NW Expressway and Lake Hefner Parkway. These improvements are discussed in further detail in the following sections. The total budget allotted for construction of the roadway is $1,071,310.

EXISTING CONDITIONS

Roadway Facilities

Project extents for TC-0598 is centered at the intersection of NW Expressway with Lake Hefner Parkway's northbound on and off ramps. Lake Hefner Parkway is a six-lane highway with four ramp-terminal connections to NW Expressway, which is also a six-lane facility. Vehicles exit northbound Lake Hefner Parkway on a 40 mph off ramp and approach NW Expressway in three different lanes. These lanes are a protected northbound left, a shared northbound/northbound through lane, and a northbound right turn bay with 325 feet of storage length that is yield controlled. This yield-controlled right enters at an angle to Expressway to accommodate WB-67 trucks. While the angle of entry is unavoidable, there are additional factors that complicate entering Expressway and therefore reduce the through capacity of this movement. See Figure 3 below.

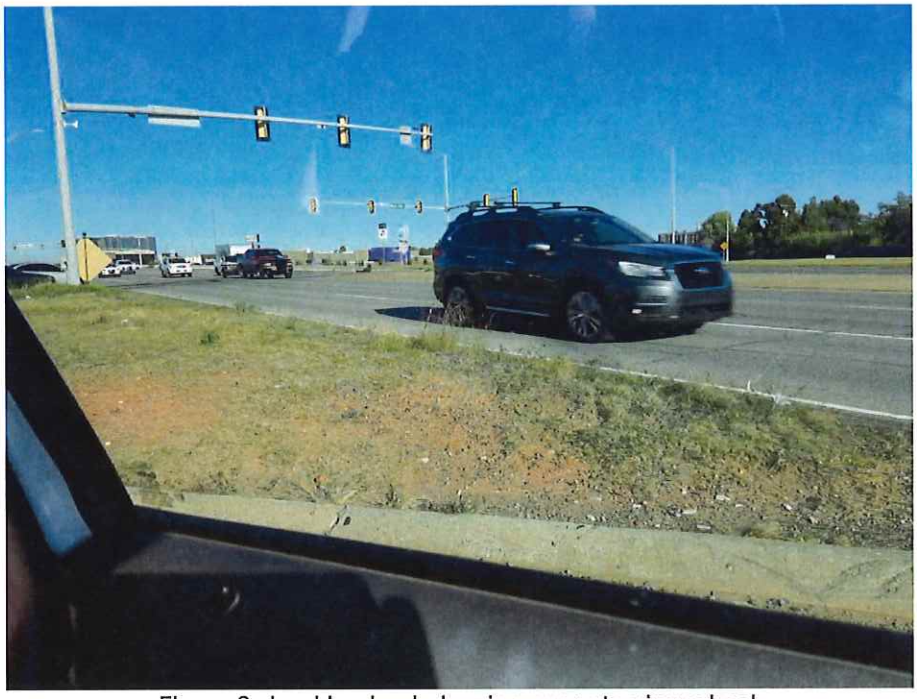


Figure 3- Looking back, leaning over steering wheel.

The above image was taken from the passenger seat of a Ford Explorer. In addition to the acute angle resulting from radii to accommodate semi-truck traffic, this turn lane is also at a 2.6% upgrade as it approaches Expressway which negatively affects vehicle acceleration and sets vehicles 10 inches below the adjacent eastbound lane. This might not be as much of an issue for a Ford Explorer but would present greater difficulty to a compact car with a lower riding height. These additional considerations exacerbate the driver's ability, or level of comfort, to find a suitable gap in cars to turn into and thereby reduces capacity of this movement. These are issues we will alleviate with this project. Additionally, it is worth noting that a silver vehicle had crept past the stop bar and that in combination with the base of the

existing signal pole greatly limited sight distance for yield controlled vehicles right turning vehicles. A zoomed version of the same picture is below.

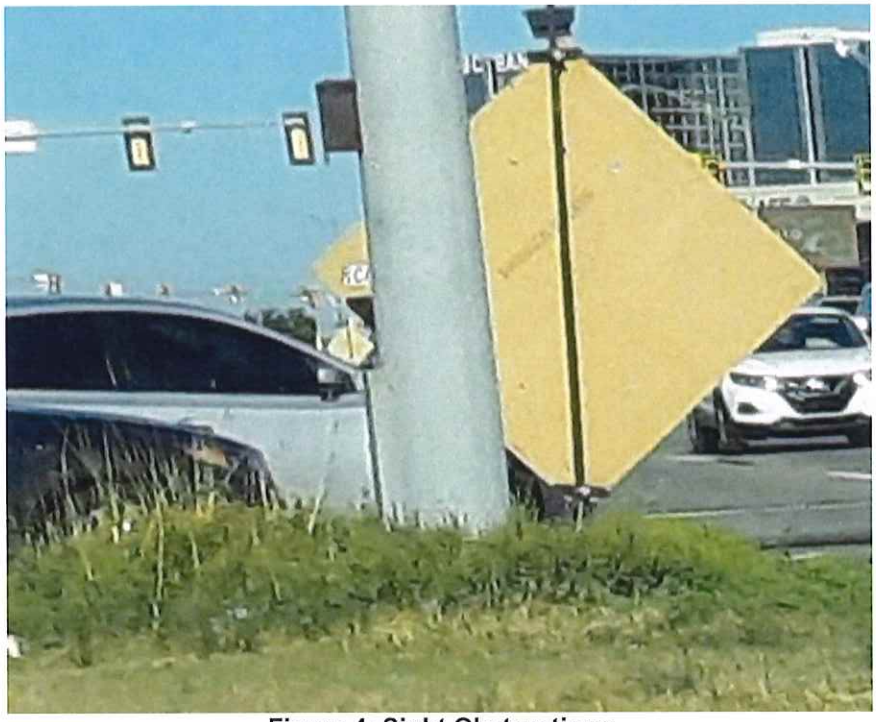


Figure 4: Sight Obstructions

The traffic control sign was corrected after the picture was taken but the other two sources of obstruction need to be addressed so vehicles can see to the west end of the bridge and more comfortably find gaps in traffic. NW Expressway is signed for 45 mph and its westbound approach to the northbound Hefner Parkway Ramps includes four lanes, three of which are westbound through lanes and the fourth is a westbound right turn bay that currently has 270 feet of storage length.

On the north side of NW Expressway, there is an entrance to a housing addition and 5 commercial drives serving multiple businesses. On the south side of NW Expressway is one of the primary entrances for Integris Baptist Medical Center that is also the main point of access for the emergency room and sees regular traffic from medical ambulances. The hospital helipad is located on the southeast corner of the intersection. The required helipad clear area depends on the size of the helicopter according to the Federal Aviation Administration. Preliminary calculations based on a Huey type helicopter with a 48-foot rotor indicate that the clear area is possibly touching, or slightly overlapping with some of the existing fence. For this reason, we will coordinate TC-0598 construction activities with Integris and will avoid disturbing the existing fence or otherwise creating flight obstructions near this clear area.

Traffic and Accident History

As discussed in the previously submitted TC-0598 traffic study, the NW Expressway corridor sees approximately 40,000 AADT. According to this traffic study, this intersection operates at the Level of Service (LOS) C and is projected to decline to LOS F by 2042. Key challenges in present day traffic operations for this intersection are regarding low performance of the westbound right turn bay on Expressway and the right turn bay for the northbound off ramp on Hefner Parkway. In both instances it was determined that the limiting factor was not the volume of turning traffic or how traffic was controlled. Instead, performance was limited by the queue lengths from primary movements blocking cars from entering the short right turn bays. This is a condition that CEC staff have also seen while observing peak hour traffic operations.

Accidents along the corridor are historically located at the Lake Hefner intersection due to driver-related occurrences. Between 2015 and 2021, there have been a total of 5 collisions along the project extents. While there have been some injuries, none of the recorded crashes have been fatal. According to the traffic study, the studied intersection is not considered a high-collision area.

Pedestrian Access and Bus Facilities

Presently, there is no existing sidewalk within the project limits. During our site visits, there was pedestrian traffic and evidence of paths where pedestrians had previously walked observed along the exit ramps from Lake Hefner Parkway. There are currently plans to install an ADA sidewalk corridor along the north side of Expressway under MS-0127. There are not any bike routes along this corridor. However, there is a bike route to the east along N Independence Ave. The proposed project will not interfere with the Independence bike route.

In terms of alternative transportation, the Bus Rapid Transit (BRT) is scheduled to be operatable in late 2023. The alignment is proposed to be along Independence Avenue and Hospital Road. This alignment is not in interference with proposed improvements in TC-0598.

Existing Utilities

The observed existing utilities along this corridor include electrical lines, light poles, water lines and gas lines.

- Gas lines – There is a large 20" transmission main behind the retaining wall above the Lake Hefner Parkway Northbound Exit ramp that crosses the highway on a utility bridge in line with Hospital Road. It will not conflict with the proposed project.
- Water lines – There is an existing 12" water line on the south side of NW expressway that continues down the west side of the hospital. It will not conflict with the proposed project.
- Sewer Lines- The only nearby sewer is above the northbound exit ramp along the west side of the hospital and will not conflict with the project.

- Light poles – Located throughout the project and several are anticipated to need relocation due to conflicts with widenings.
- ATT & Cox – These utilities do not have anything in the project vicinity and will not be impacted.

CEC will hold a utility conference during design to confirm the above and make sure that nothing is missing.

Light Poles

There are four existing roadway light poles located throughout the project that will conflict with proposed turn bay widenings as shown in Figure 5. This lighting system operates at 240 volts and is connected by an underground circuit to pole bases with 2/c4AL wire. Inside the poles there is a pair of #12 gage wires running up to the luminaire.

- NBR: It is expected that the southernmost light pole (Hefner Pkwy Sta. 631+60), at the tip of where the extended turn bay begins, can be removed and that a second luminaire can be affixed to the existing pole 170 feet to the north to provide coverage.
- NBR: The second pole to the north (Expressway Sta. 1290+50) will need to be removed with a new pole footing installed 15 feet to the SE at Expressway Sta. 1290+65.
- WBR: The first pole for the westbound right bay extension that will require relocation is located at Expressway Sta. 1296+20. The new pole will need to be pushed back to maintain a 4' minimum offset.
- WBR: The second pole for the westbound right bay extension that requires relocation is at Expressway Sta. 1293+95. This pole will also need to be moved back to maintain minimum offset.

It is expected that about 590 feet of new electrical conduit that services light poles will also have to be relocated as the existing conduit is inside of the proposed widening footprint. This will require new wiring to be run through this section. After a roadway configuration has been agreed upon, CEC will calculate roadway lumens to ensure current or better performance Illuminating Engineering Society (IES) results.

Figure 5- Light Pole Relocations

Drainage

The NW Expressway and Lake Hefner Parkway intersection has a closed drainage system. Some inlets may need to be replaced or relocated as part of construction. Location and sizes of existing drainage structures can be seen in the preliminary plans provided in Appendix B. A preliminary drainage report noting specific drainage structures that need to be replaced has been provided to the city under a separate cover.

PROPOSED IMPROVEMENTS

To improve traffic operations for the intersection of the northbound Hefner Parkway ramps with NW Expressway, CEC proposes the following improvements:

- Expressway Westbound Right Turn Bay
    - Lengthen the westbound right turn bay to provide 800 total feet of storage length, primarily for the purpose of extending past westbound queues that regularly block access to the existing turn bay during heavy traffic.
- Lake Hefner Parkway Northbound Off Ramp
    - Lengthen the northbound right turn bay to provide 510 total feet of storage length, primarily for the purpose of extending past northbound queues that regularly block access to the existing turn bay during heavy traffic.

- Reconfigure northbound right turn bay by raising the profile to promote better sight distance and flattening the end portion of the ramp to improve the ability to accelerate onto Expressway.
- Adjust stop bar for northbound left turn bays and employ multiple methods to encourage vehicles to comply and stay out of sight lines for northbound right turn bay.
- Relocate the traffic signal serving eastbound traffic that obstructs the view.

Proposed improvements for the extended westbound right turn bay are straight forward in the sense that once access to this turn bay is improved, it will have plenty of capacity to serve demand. This is especially true considering that it gets overlapping right of way while EB and WB phases are running and is essentially under the same conditions to right-turn-on-red while northbound left movements are running given the very low volume of through moving traffic. According to turning movement counts collected by TEC this was only 23 vehicles northbound through vehicles over the course of a day out of 14,021 daily vehicles at this approach. This is roughly the same as saying there are less than 2 northbound through vehicles for every 1000 arriving at that approach.

The chief improvement to the northbound right turn movement will be the lengthening of its turn bay to 510 feet so that it is not as easily blocked by queuing northbound left vehicles. Improvements proposed for the northbound approach to NW Expressway are geared toward improving driver sight distance and ability to accelerate while still maintaining geometrics that allow a WB-67 vehicle to turn onto NW Expressway without turning through multiple lanes of traffic. As discussed previously, vehicles waiting for a gap to turn into on expressway are vertically set about 10 inches lower than traffic on the southernmost lane of NW Expressway. This will be improved by rebuilding the vertical profile of the northbound right turn bay and raising the position about 8 inches higher than it currently is at the end of the ramp. Part of the revised alignment is to shift the northbound right lane away from the through lanes at 26.66:1 to facilitate a vertical grade break between the lanes. This proposed improvement will also flatten out the area in which northbound right vehicles wait to turn right onto NW Expressway from what is currently a 2.6% upgrade to a 0.4% upgrade.

The west facing traffic signal can be relocated within the island by installing a new signal offset 5 feet further from expressway and 10 feet SE with at 55-foot mast arm. This will allow most of the work to be performed without having to impact signal operation and minimize down time. Wiring will fortunately be straightforward as this is the same corner as the traffic controller. Additionally, while it is a minor adjustment, CEC also proposes to push back the northbound stop bar back one foot to encourage vehicles to stay out sight lines for the yielding northbound right movement and employ other tactics to encourage compliance.

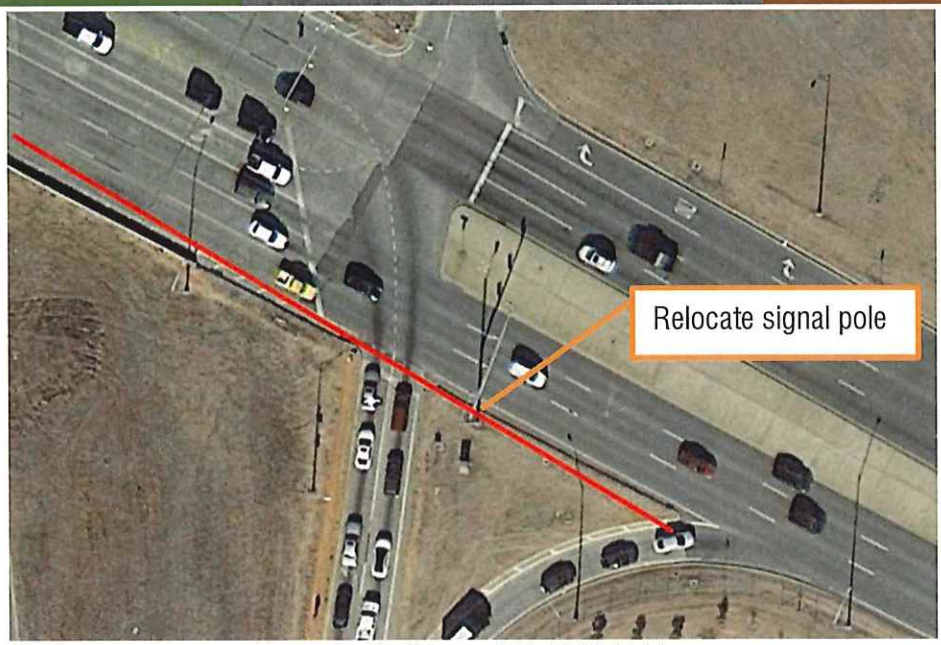


Figure 6- Northbound Right Sight Line

Taken altogether, this will improve access to the northbound right during heavy traffic and improve safety and capacity by alleviating factors that limit sight distance and provide a space that is easier for vehicles to accelerate out of. Essentially, the sight distance and grade improvements will lower the threshold for gap acceptance (or perceiving enough space between cars) and allow more drivers to safely enter the roadway while operating under yield control.

OTHER CONCEPTS

CEC has investigated other ideas aimed at improving traffic operations for this intersection, but for various reasons are not recommended:

Concept 1: Create an Auxiliary Lane on NW Expressway to receive northbound right turning vehicles.
Concept 2: Dual Northbound Right Lanes from exit ramp, signal controlled.
Concept 3: Create a raised concrete island ("porkchop") for northbound on-ramp.
Concept 4: Modified angle of entry for northbound right turn

Concept 1

This concept sought to eliminate yield control for the northbound right movement out of the exit ramp from Lake Hefner Parkway by providing a protected lane to enter onto. The goal of this would be to increase capacity for that movement and improve safety.

Figure 7- Concept 1 Auxiliary Lane

If this lane were to be implemented, its length up to the current hospital entrance would be approximately 340 feet. This length is below the minimum deceleration lane length of 350 feet according to section 10 of the AASHTO manual. CEC has considered multiple potential solutions to get above this minimum distance. One solution would be to move the hospital entrance farther down Northwest Expressway to the southeast. This is considered a non-starter as this is also the primary entrance to Integris Baptist for emergency vehicles. Furthermore, this would require the westbound left turn bay into this drive to be similarly shifted to the southeast and thereby interfere with the eastbound left turn bay at the intersection of Expressway and Independence. There are also special considerations that must be taken for this location. Emergency vehicles will likely be traveling urgently at speeds higher than the posted limit, meaning that the minimum deceleration lane length would need to be even longer than 350 feet to be compliant with AASHTO standards. Using a lane length of less than 350 feet would create unsafe weaving movements and driver awareness problems between vehicles exiting Lake Hefner Parkway and emergency vehicles turning into the hospital. This cannot be fixed without widening the bridge over Hefner Parkway to add an additional lane to the west. For these safety reasons the concept was abandoned.

Concept 2

This second concept was to add a second northbound right turn bay to the exit ramp past the north end of the existing retaining walls. Adding a second turn northbound right turn bay would necessitate the need for a stop bar and control from additional signal heads. This is because adding a second lane without stop control could create a confusing condition where the inside lane has a protected lane while the outer turn lane is yield controlled. Currently, the single yield control lane effectively gets the right of way while the northbound left movement has the green light.

Concept 3

CEC evaluated the possibility of adding a porkchop to the northbound on ramp to direct northbound through moving vehicles to the left lane and delineate the eastern northbound lane to be exclusively for westbound right turning vehicles in what would be a relatively low-cost solution. See Figure 8 below.

Figure 8- Raised Concrete Island

According to turning movement counts there are approximately 23 northbound through vehicles at this intersection. This concept, at least as shown in Figure 8 is not feasible due to the need to accommodate dual eastbound left turning lanes.

Alternatively, CEC has investigated widening the northbound on-ramp to accommodate a third lane dedicated to the westbound right movement. Constructing such an improvement would require the relocation of two additional light poles and over 250 feet of 9-inch P.C. concrete auxiliary lane. This may not be worthwhile considering the additional cost. The low volume of northbound-through moving vehicles that westbound right vehicles are already required to yield to other traffic when they have the red light. This has been included as Alternate 1 and an exhibit is included in Appendix C.

Concept 4

The fourth concept is to change the angle at which the off-ramp from Lake Hefner Parkway meets NW Expressway. Currently, motorists have to look back over their shoulder in order to check for traffic which can be challenging. According to section 9 of the AASHTO manual, an angle of 112 degrees is ideal for a yield-controlled entry to a cross street where higher turning speeds are encouraged and pedestrian use is limited. However, causing vehicles to merge at a sharper angle would mean that WB-67 vehicles would be forced to cross over one lane of traffic to merge into the middle lane. This would limit semis' abilities to find appropriate gaps in traffic as well as slow down cars behind them. Because of this, concept 4 was not pursued.

DRAINAGE

The existing drainage along project TC-0598 contains closed drainage systems for runoff from the northbound on-ramp, northbound off-ramp, and NW Expressway. These systems consist of curb inlets and concrete pipes, and the zoning categories included in this project are Community Commercial (C3) and General Office (C2). According to the Oklahoma City Drainage Ordinance, several inlets were found to be out of compliance. Ex-1, Ex-2, Ex-3, and Ex-4 are out of compliance due to flow exceeding existing capacity. Ex-1, Ex-5, and Ex-6 are out of compliance due to exceeding the allowable spread.

Table 1: Proposed Structure Improvements

EXISTING STR NO.	EXISTING STUCTURE SIZE	PROPOSED STR. NO.	PROPOSED STUCTURE SIZE
EX-1	*Design 2-2*	1	Design 7
EX-2	*Design 2-1*	2	Design 3-2
EX-3	*Design 1-0*	3	Design 2-1
EX-4	*Design 2-0*	4	Design 2-1
EX-6	*Design 3-0*	5	Design 3-0
EX-7	*Design 3-2*	6	Design 3-2
Note: Inlets being replaced with like-kind are those that meet capacity requirements and only need to be relocated			

PRELIMINARY COST ESTIMATES

Table 2: Preliminary Project Descriptions and Estimates	
Base Bid – TC-0598 / JP #35921(04) • **Extend WB right turn bay to 800 LF of storage** • **Extend NB right turn bay to 510 LF of storage** • **Reconstruct NB off ramp for improved geometrics** • **Relocate signal pole to improve sight distance**	$1,144,927
Alternate 1 • **Dedicated lane on NB off ramp for WB right turns** • **Removes conflicts with NB vehicles**	$279,409
CITY OF OKLAHOMA CITY BUDGET	$2,108,204

Total Fixed Limit of Construction Budgeted for TC-0598 **$2,108,204**
Total Proposed Construction Cost for TC-0598 **$1,144,927**
Total Under Construction Budget: **$963,277**

These costs are based on the most recent bid tabs available. Detailed preliminary cost estimates can be found in Appendix A.

RECOMMENDATIONS

The purpose of this study is to implement recommendations of the TC-0598 traffic study and investigate solutions to address the identified traffic operations issues for the intersection of Hefner Parkway with NW Expressway. CEC makes the following recommendations:

- Lengthen the existing westbound right turn bay on NW Expressway to provide 800 total feet of storage.
- Reconstruct the northbound right turn bay on the Hefner Parkway exit ramp and lengthen to provide a total of 510 linear feet of storage length.
    - Revised geometrics will improve sight distance and aid acceleration onto NW Expressway. The northbound left stop bar will also be shifted back and the existing signal pole servicing eastbound traffic will be relocated.
- Replace and upsize four storm sewer inlets.

These improvements will improve the overall operation of the project intersection by increasing capacity for the right turn movements that will now be able to access the turn bays even when there are long queues for the primary movement. Additionally, improved geometrics will also make the northbound right turn easier to navigate for motorists with improved visibility and ease of entering the roadway.

The total cost for these improvements is estimated at $1,144,927 which is $963,277 under the overall fixed limit of construction budgeted for this project. Total cost breakdown can be found in Appendix A.

APPENDIX A

PRELIMINARY COST ESTIMATES

30% Construction Estimate

October 31, 2023

TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
201(A)	1200	1	CLEARING AND GRUBBING	LSUM	1.0	$ 5,000.00	$ 5,000.00
202(A)	2200	2	UNCLASSIFIED EXCAVATION	C.Y.	625.0	$ 10.00	$ 6,250.00
221(B)	2300	3	TEMPORARY SILT FENCE	L.F.	1,600.0	$ 3.00	$ 4,800.00
221(C)	2400	4	TEMPORARY SEDIMENT FILTER	EA.	7.0	$ 300.00	$ 2,100.00
230(A)	7200	5	SOLID SLAB SODDING	S.Y.	1,444.0	$ 3.00	$ 4,332.00
303(A)	1200	6	AGGREGATE BASE TYPE A	C.Y.	386.0	$ 90.00	$ 34,740.00
407(B)	7300	7	TACK COAT	GAL	120.0	$ 5.00	$ 600.00
411(B)	1330	8	SUPERPAVE, TYPE S3 (PG 58-28 OK)	TON	1,449.0	$ 130.00	$ 188,370.00
411(D)	1520	9	SUPERPAVE, TYPE S5 (PG 70-28 OK)	TON	1,250.0	$ 135.00	$ 168,750.00
412	3100	10	COLD MILLING PAVEMENT	S.Y.	10,476.0	$ 4.00	$ 41,904.00
414(G)	5800	11	P.C. CONCRETE FOR PAVEMENT	C.Y.	260.0	$ 250.00	$ 65,000.00
600(B)	300	12	(PL) AUDIO/VIDEO CONSTRUCTION RECORDING	LSUM	1	$ 6,000.00	$ 6,000.00
609(B)	4375	13	2'-8" COMB.CRB. & GUT.(8" BARRIER)	L.F.	1,548.0	$ 50.00	$ 77,400.00
610(B)	5320	14	8" CONCRETE DRIVEWAY	S.Y.	320.0	$ 140.00	$ 44,800.00
611(G)	7758	15	INLET CI DES. 2 (B)	EA.	2.0	$ 8,000.00	$ 16,000.00
611(G)	7786	16	INLET CI DES. 3 (STD)	EA.	1.0	$ 10,000.00	$ 10,000.00
611(G)	7794	17	INLET CI DES. 3 (D)	EA.	2.0	$ 11,000.00	$ 22,000.00
611(G)		18	INLET CI DES. 7	EA.	1.0	$ 16,000.00	$ 16,000.00
612(A)	3200	19	MANHOLE ADJUST TO GRADE	EA.	2.0	$ 1,700.00	$ 3,400.00
612(E)	3600	20	PULL BOXES ADJUST TO GRADE	EA.	1.0	$ 500.00	$ 500.00
613(A)	5208	21	18" R.C. PIPE CLASS III	L.F.	122.0	$ 106.00	$ 12,932.00
619(B)	6356	22	REMOVAL OF CURB AND GUTTER	L.F.	1,449.0	$ 11.00	$ 15,939.00
619(B)	6360	23	REMOVAL OF CONCRETE PAVEMENT	S.Y.	746.0	$ 10.00	$ 7,460.00
619(B)	6364	24	REMOVAL OF ASPHALT PAVEMENT	S.Y.	655.0	$ 7.00	$ 4,585.00
619(B)	6368	25	REMOVAL OF DRAINAGE INLETS	EA.	6.0	$ 710.00	$ 4,260.00
619(B)	6380	26	REMOVAL OF CONCRETE DRIVEWAY	S.Y.	320.0	$ 18.00	$ 5,760.00
						ROADWAY TOTAL:	**$768,882.00**

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
802		27	LIGHT POLE WIRING	LSUM	1.0	$ 50,000.00	$ 50,000.00
802(B)	0324	28	2" PVC SCH.40 PLASTIC CONDUIT TRENCHED	L.F.	583.0	$ 30.00	$ 17,490.00
803(A)	1210	29	PULL BOX (SIZE I)	EA.	5.0	$ 2,000.00	$ 10,000.00
804(A)	2200	30	STRUCTURAL CONCRETE	C.Y.	7.0	$ 1,400.00	$ 9,800.00
804(B)	2300	31	REINFORCING STEEL	LB	1,023.8	$ 4.00	$ 4,095.20
805		32	LIGHT POLE FOOTING	EA.	4.0	$ 8,000.00	$ 32,000.00
805(D)	3504	33	REMOVE AND RESET LIGHT POLE	EA.	4.0	$ 6,000.00	$ 24,000.00
806(A)	4264	34	32'MH POLE,55'TS & 10'LMA(G.STL.)	EA.	1.0	$ 80,000.00	$ 80,000.00
834(A)	6235	35	2/C TRAFFIC SIGNAL ELECTRICAL CABLE	L.F.	60.0	$ 10.00	$ 600.00
834(A)	6235	36	5/C TRAFFIC SIGNAL ELECTRICAL CABLE	L.F.	120.0	$ 15.00	$ 1,800.00
834(A)	6205	37	21/C TRAFFIC SIGNAL ELECTRICAL CABLE	L.F.	30.0	$ 25.00	$ 750.00
856(A)	8200	38	TRAFFIC STRIPE (MULTI-POLY)(4" WIDE)	L.F.	1,715.0	$ 1.00	$ 1,715.00
856(A)	8208	39	TRAFFIC STRIPE (MULTI-POLY)(6" WIDE)	L.F.	2,730.0	$ 1.25	$ 3,412.50
856(A)	8208	40	TRAFFIC STRIPE (MULTI-POLY)(8" WIDE)	L.F.	748.0	$ 2.00	$ 1,496.00
856(A)	8216	41	TRAFFIC STRIPE (MULTI-POLY)(24" WIDE)	L.F.	53.0	$ 12.00	$ 636.00
856(B)	8304	42	TRAFFIC STRIPE (MULTI-POLY)(ARROWS)	EA.	13.0	$ 250.00	$ 3,250.00
						TRAFFIC TOTAL:	**$241,044.70**

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
880(J)	7110	43	CONSTRUCTION TRAFFIC CONTROL	LSUM	1.0	$ 60,000.00	$ 60,000.00

						TRAFFIC TOTAL:	**$60,000.00**

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
642(B)	3300	44	CONSTRUCTION STAKING LEVEL II	LSUM	1.0	$ 20,000.00	$ 20,000.00
						TOTAL:	**$20,000.00**

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
220	1100	45	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1.0	$ 5,000.00	$ 5,000.00
641	2100	46	MOBILIZATION	LSUM	1.0	$ 50,000.00	$ 50,000.00
						TOTAL:	**$55,000.00**

TOTAL: **$1,144,927**

APPENDIX B

PRELIMINARY CONSTRUCTION PLANS

CEC // TRANSPORTATION

PRELIMINARY PLANS
10/30/2023

SURVEY CONTROL DATA

1. ALL HORIZONTAL COORDINATE VALUES SHOWN ARE U.S. SURVEY FEET AND ALL VERTICAL ELEVATIONS VALUES ARE SHOWN IN FEET.
2. CONTROL POINT 5 (CP-5) WAS TAKEN FROM PREVIOUS CEC PROJECT # 210295. CP-5 WAS DERIVED FROM CITY OF OKC CONTROL MONUMENT #321 AND BY 4-SHOT AVERAGE OF RTK OBSERVATIONS. CONTROL POINTS 1 & 2 ARE USED AS A BASIS FOR HORIZONTAL AND VERTICAL CONTROL WITH A BEARING OF N 53°20'57" W BETWEEN THEM TO BE USED AS A BASIS OF BEARING.
3. ALL BEARINGS ARE OKLAHOMA STATE PLANE, NAD 83/2011, NORTH ZONE AS DETERMINED BY OPUS SOLUTION. ALL DISTANCES ARE GRID AS DETERMINED BY OPUS SOLUTION IN U.S. SURVEY FEET. ALL FIELD MEASUREMENTS AND ANGLES APPLIED TO CONTROL POINTS WERE MADE WITH TRIMBLE R10 GNSS RECEIVERS WITH AN ACCURACY OF 8MM+1PPM RMS HORIZONTAL AND 15MM+1PPM RMS VERTICAL.
4. ALL ELEVATIONS OF CONTROL POINTS ARE BASED ON INITIAL ELEVATION OF 1249.619' DERIVED BY 4-SHOT AVERAGE OF RTK OBSERVATIONS FOR CONTROL POINT 5 WITH THE DATUM BEING NAVD88. ALL ELEVATIONS FOR SUBSEQUENT CONTROL POINTS ARE DETERMINED BY PERFORMING DIFFERENTIAL LEVELING TECHNIQUES USING A SOKKIA B20 AUTOMATIC LEVEL WITH AN ACCURACY OF 0.7MM ADJUSTED TO MEET NGS 3RD ORDER ACCURACY.
5. CONTROL POINT 1 & CONTROL POINT 2 WERE SET AND OBSERVED ON 08/14/2023 AND ADJUSTED TO FINAL COORDINATES ON 08/14/2023.

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
STREET IMPROVEMENTS
GRADE, DRAIN, AND SURFACE PLANS

NW EXPRESSWAY AND LAKE HEFNER PARKWAY

OKLAHOMA CITY, OKLAHOMA
OKLAHOMA COUNTY
OKC PROJECT NO. TC-0598
ODOT PROJECT NO. STP-255N(562)AG
JP NO. 35921(04)

INDEX OF SHEETS

	BEGIN PROJECT	END PROJECT
LATITUDE	35° 31' 44.66" N	35° 31' 50.58" N
LONGITUDE	97° 34' 42.02" W	97° 34' 32.99" W

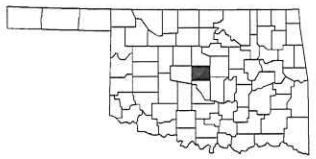
DESIGN DATA
NB OFF RAMP

ADT 2021	– 14,021
ADT 2041	– 17,108
T(% of ADT)	– 2%
V	40 MPH
(20)FLEX ESAL'S	– 3.24 M

DESIGN DATA
NW EXPRESSWAY

ADT 2021	– 33,938
ADT 2041	– 41,411
T(% of ADT)	– 1%
V	45 MPH
(20)FLEX ESAL'S	– 1.96 M

SCALES
PLAN 1:20
PROFILE HOR. 1:20
VER. 1:2
LAYOUT MAP 1" = 1125'



STATE MAP
N.T.S.

T11N T12N R4W

	EXISTING	PROPOSED
PROPERTY LINE		
EASEMENT		
RIGHT-OF-WAY		
ROADWAY CENTERLINE		
ROADWAY C&G		
WATERLINE	W	W
SAN. SWR. LINE	SS	SS
STORM SEWER LINE	ST	ST
TELE. UNDERGROUND	TUG	TUG
FIBER OPTIC CABLE	FOC	FOC
POWER UNDERGROUND	PUG	PUG
POWER OVERHEAD	OHE	OHE
GAS LINE	G	G
FENCE LINE	X	
5' CONTOURS	XXXX	XXXX
1' CONTOURS	XXXX	XXXX
TOP OF BANK		
TOE OF SLOPE		
FLOWLINE		

CALL OKIE TWO WORKING DAYS BEFORE YOU DIG
1-800-522-6543

COMPLY WITH THE REQUIREMENTS OF THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION DECEMBER 18, 2019, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

ROADWAY LENGTH_____1,665 FT _____0.32 MI
TOTAL PROJECT LENGTH_____1,665 FT _____0.32 MI
EXCEPTIONS_____NONE
EQUATIONS_____NONE

THE FOLLOWING STANDARDS WILL BE REQUIRED FOR THIS PROJECT.

ODOT 2019 ROADWAY STANDARDS		ODOT TRAFFIC STANDARDS		OKC STANDARDS
SSS-2-1	PCI-1-1	PM1-1-03	TCS1-1-01	D-300
CSCD-6-2	PRM-1-2	RSD1-1-00	TCS2-1-00	D-700A
WCR-4-2	PMD-1-1	SBS1-1-00	TCS4-1-01	D-700B
TWD-2-2	CI-2-2	SBS2-1-00	TCS6-1-02	D-700C
MFC-5-1	SSIF-5-1	SSP1-1-02	TCS7-1-02	D-800
SPI-5-2	CIC-4-1	SSA1-1-00	TCS8-1-00	
FHTCP-4-1	PBB-1-2	GMF1-2-01	TCS9-1-01	
RSF-0	SBI-5-2	CCD1-1-00	TCS14-1-00	
CWA-0	MI-4-2	PM6-1-00	TCS20-1-00	
CDIB30-2-2	PDT-2-2	SPBP1-1-01	PWD1-2-00	
MJB-4-2	PSM-1-2	SA1-1-02	CFD1-2-01	

PREPARED BY:
CEC CORPORATION
CA32 6/30/24
OKLAHOMA CITY, OKLAHOMA

LICENSED PROFESSIONAL ENGINEER — KYLE L. MORSE — 27689 — OKLAHOMA

CEC

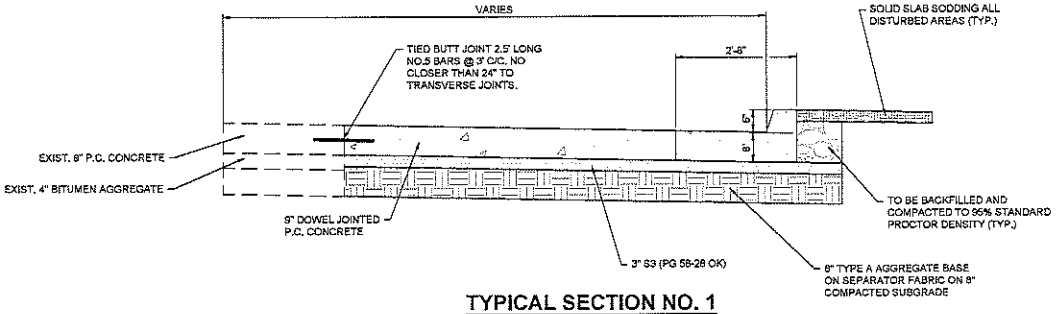
KYLE L. MORSE — DATE
OKLA. REG. NO. 27689

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR

PROJ. NO. STP-225N(562)AG — SHEET NO. 0001

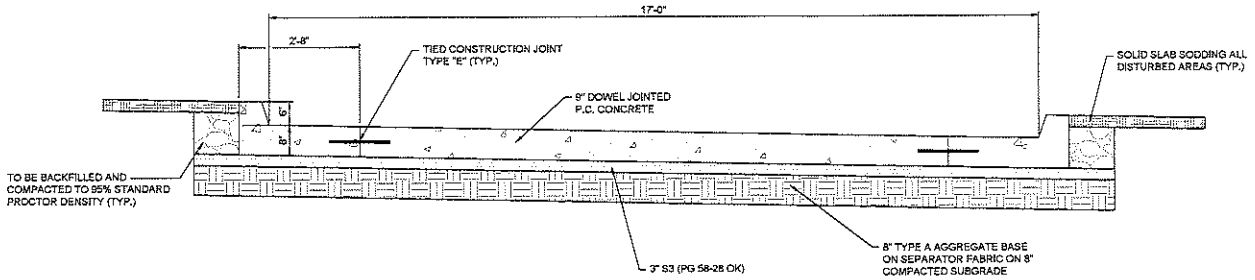
CEC // TRANSPORTATION

PRELIMINARY PLANS
10/30/2023



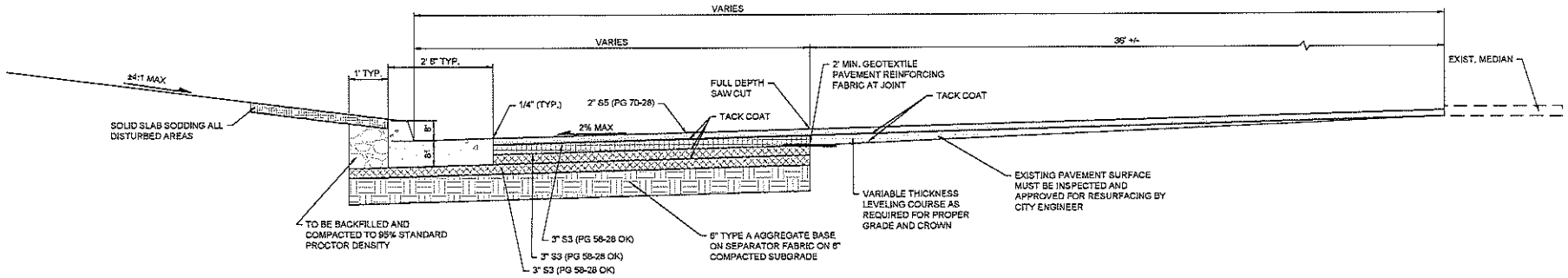
TYPICAL SECTION NO. 1

EXIT RAMP WIDENING
STATION: 631+26 TO 635+47.77



TYPICAL SECTION NO. 2

EXIT RAMP
STATION: 100+00 TO 101+91



TYPICAL SECTION NO. 3

NW EXPRESSWAY WIDENING
STATION: 1291+60 TO 1298+35

TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY — OKLAHOMA COUNTY

TYPICAL SECTION

JOB PIECE NO. 35921(04) SHEET NO. 0002

CEC // TRANSPORTATION

PRELIMINARY PLANS
10/30/2023

0100 - ROADWAY — ROADWAY PAY QUANTITIES

ITEM		ITEM NO.	DESCRIPTION		UNIT	QTY
201(A)	1200	1	CLEARING AND GRUBBING		LSUM	1
202(A)	2200	2	UNCLASSIFIED EXCAVATION	(R-1)(1)(2)(5)	C.Y.	625
220(H)		3	TEMPORARY CONCRETE WASHOUT		LSUM	1
221(B)	2300	4	TEMPORARY SILT FENCE	(R-8)(10)	L.F.	1,600
221(C)	2400	5	TEMPORARY SEDIMENT FILTER	(R-8)(10)	EA.	7
230(A)	7200	6	SOLID SLAB SODDING	(R-6)(R-7)	S.Y.	1,444
303(A)	1200	7	AGGREGATE BASE TYPE A	(6)	C.Y.	386
407(B)	7300	8	TACK COAT	(R-25)	GAL	120
411(B)	1330	9	SUPERPAVE, TYPE S3 (PG 58-28 OK)	(R-26)	TON	1,449
411(D)	1520	10	SUPERPAVE, TYPE S5 (PG 70-28 OK)	(R-26)	TON	1,250
412	3100	11	COLD MILLING PAVEMENT	(R-29)(7)	S.Y.	10,476
414(G)	5800	12	P.C. CONCRETE FOR PAVEMENT		C.Y.	260
600(B)	300	13	(PL) AUDIO/VIDEO CONSTRUCTION RECORDING	(9)	LSUM	1
609(B)	4375	14	2'-8" COMB.CRB. & GUT.(8" BARRIER)		L.F.	1,548
610(B)	5320	15	8" CONCRETE DRIVEWAY		S.Y.	320
611(G)	7758	16	INLET CI DES. 2 (B)	(R-34)(R-35)	EA.	2
611(G)	7786	17	INLET CI DES. 3 (STD)	(R-34)(R-35)	EA.	1
611(G)	7794	18	INLET CI DES. 3 (D)	(R-34)(R-35)	EA.	2
611(G)		19	INLET CI DES. 7		EA.	1
612(A)	3200	20	MANHOLE ADJUST TO GRADE	(8)	EA.	2
612(E)	3600	21	PULL BOXES ADJUST TO GRADE	(8)	EA.	1
613(A)	5216	22	18" R.C. PIPE CLASS III	(3)	L.F.	122
619(B)	6356	23	REMOVAL OF CURB AND GUTTER	(R-40)	L.F.	1,449
619(B)	6360	24	REMOVAL OF CONCRETE PAVEMENT	(R-40)(R-41)	S.Y.	746
619(B)	6364	25	REMOVAL OF ASPHALT PAVEMENT	(R-40)(R-41)	S.Y.	655
619(B)	6368	26	REMOVAL OF DRAINAGE INLETS	(R-40)	EA.	6
619(B)	6380	27	REMOVAL OF CONCRETE DRIVEWAY	(R-40)(R-41)	S.Y.	320

0300 - PERMANENT — TRAFFIC PAY QUANTITIES

802		27	LIGHT POLE WIRING	LSUM	1.0
802(B)	0324	28	2" PVC SCH.40 PLASTIC CONDUIT TRENCHED	L.F.	583.0
803(A)	1210	29	PULL BOX (SIZE I)	EA.	5.0
804(A)	2200	30	STRUCTURAL CONCRETE	C.Y.	7.0
804(B)	2300	31	REINFORCING STEEL	LB	1,023.8
805		32	LIGHT POLE FOOTING	EA.	4.0
805(D)	3504	33	REMOVE AND RESET LIGHT POLE	EA.	4.0
806(A)	4264	34	32'MH POLE,55'TS & 10'LMA(G.STL.)	EA.	1.0
834(A)	6235	35	2/C TRAFFIC SIGNAL ELECTRICAL CABLE	L.F.	60.0
834(A)	6235	36	5/C TRAFFIC SIGNAL ELECTRICAL CABLE	L.F.	120.0
834(A)	6205	37	21/C TRAFFIC SIGNAL ELECTRICAL CABLE	L.F.	30.0
856(A)	8200	38	TRAFFIC STRIPE (MULTI-POLY)(4" WIDE)	L.F.	1,715.0
856(A)	8208	39	TRAFFIC STRIPE (MULTI-POLY)(6" WIDE)	L.F.	2,730.0
856(A)	8208	40	TRAFFIC STRIPE (MULTI-POLY)(8" WIDE)	L.F.	748.0
856(A)	8216	41	TRAFFIC STRIPE (MULTI-POLY)(24" WIDE)	L.F.	53.0

0303 - TEMPORARY — TRAFFIC PAY QUANTITIES

0600 - STAKING — PAY QUANTITIES

0640 - CONSTRUCTION — PAY QUANTITIES

220	1100	45	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1.0

TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY — OKLAHOMA COUNTY

PAY QUANTITIES

JOB PIECE NO. 35921(04) SHEET NO. AR01

CEC // TRANSPORTATION

PRELIMINARY PLANS

10/30/2023

GENERAL NOTES

COMPLY WITH THE REQUIREMENTS OF THE 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION DECEMBER 18, 2019, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNING.

THE CONTRACTOR SHALL NOTIFY THE CITY OF OKLAHOMA CITY AND ODOT DIVISION IV OFFICE IN OKLAHOMA CITY, IN WRITING, FOURTEEN CALENDAR DAYS PRIOR TO BEGINNING CONSTRUCTION.

(CAUTION) THE LOCATION AND DEPTH OF ALL UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC.

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE" 1-800-522-6543 OR 811.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

A WORK ZONE PERMIT MUST BE OBTAINED FROM THE TRAFFIC MANAGEMENT DIVISION AT LEAST TWO (2) WORKING DAYS PRIOR TO THE START OF WORK AND/OR PLACING OR REMOVING ANY BARRICADES OR MODIFYING EXISTING TRAFFIC CONTROL DEVICES. EMAIL WORKZONES@OKC.GOV TO OBTAIN AN APPLICATION.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROMPT REPLACEMENT AND/OR REPAIR OF ALL TRAFFIC CONTROL DEVICES AND APPURTENANCES DAMAGED OR DISTURBED DUE TO CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL PAVEMENT MARKINGS THAT WILL BE IN CONFLICT WITH THE PROPOSED WORK.

CONSTRUCTION ACTIVITIES THAT RESULT IN LAND DISTURBANCE OF EQUALS TO OR GREATER THAN ONE (1) ACRE, OR LESS THAN ONE (1) ACRE IF THEY ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT TOTALS AT LEAST ONE (1) ACRE MUST OBTAIN A PERMIT FROM ODEQ (FORM 606-002A) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. THIS MEANS THAT LAND DISTURBANCE OF ONE (1) ACRE OR MORE MUST PERMIT WITH ODEQ AND THE CITY OF OKLAHOMA CITY, STORM WATER QUALITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.

A COPY OF THE EROSION SITE PLAN MUST ALWAYS BE ON SITE AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITY LINES AND STRUCTURES REGARDLESS OF WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. DURING CONSTRUCTION THE CONTRACTOR SHALL CARRY OUT HIS OPERATIONS IN SUCH A MANNER AS TO PRECLUDE DAMAGE TO ANY EXISTING UTILITIES OR STRUCTURES. ANY SUCH DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

EXISTING UTILITIES ARE SHOWN ON THE PLANS IN THE APPROXIMATE LOCATION WHERE EVIDENCE OF THEIR LOCATION WAS AVAILABLE EITHER BY FIELD OBSERVATION OR FROM INFORMATION PROVIDED BY THE UTILITY COMPANY. NEITHER THE CITY OF OKLAHOMA CITY NOR THE CONSULTING ENGINEER(S) ACCEPT ANY RESPONSIBILITY FOR DAMAGE DONE BY THE CONTRACTOR TO ANY UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL UTILITIES DURING CONSTRUCTION. IF THERE IS ANY INTERFERENCE FROM ALIGNMENT OR ELEVATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE CONFLICT RESOLVED TO PERMIT CONSTRUCTION TO CONTINUE.

CONTRACTOR SHALL VERIFY EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES, SPECIFICALLY AT CRITICAL TIE-IN POINTS, PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES VERIFICATION OF SIZE AND CONSTRUCTION MATERIAL (I.E., PVC, DIP, RCP, ETC.) ALSO SHALL BE PERFORMED DURING THESE ACTIVITIES.

CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL BUILT ELEMENTS, INCLUDING BUT NOT LIMITED TO SIDEWALKS, PARKING SPACES AND ACCESS RAMPS COMPLY WITH THE OKLAHOMA CITY ADA STANDARD REQUIREMENTS. CONTRACTOR SHALL NOTIFY THE ENGINEER OR ENGINEER'S DESIGNEE FOR ANY DISCREPANCIES BETWEEN DESIGN INFORMATION AND THE CITY OF OKLAHOMA CITY STANDARD REQUIREMENTS PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER CIRCUMSTANCES WHICH MAY REQUIRE A DEVIATION FROM THE WORK OF THE APPROVED PLANS. VARIANCE FROM THE PLANS WILL BE REVIEWED BY THE ENGINEER AND THE OWNER OR THE OWNER'S REPRESENTATIVE. VARIATION FROM APPROVED PLANS UNDERTAKEN BY THE CONTRACTOR PRIOR TO RECEIPT OF NOTICE FROM THE OWNER AND/OR ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.

PAY QUANTITY NOTES

(R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.

(R-6) FOR 230(A) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 LBS. PER 1,000 SQUARE YARDS.

(R-7) FOR 230(A) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 80 GALLONS PER SQUARE YARD.

(R-8) PRICE BID TO INCLUDE COST OF ALL NECESSARY MAINTENANCE, MAINTAINING DEVICE IN PROPER UPRIGHT POSITION, REMOVAL OF DEVICE, AND REMOVAL OF SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE DEVICE.

(R-25) ESTIMATED AT 0.075 GALLONS PER SQUARE YARD OF ORIGINAL EMULSION OF TACK COAT (BEFORE DILUTION FOR APPLICATION) IN ACCORDANCE WITH SECTION 407 OF THE STANDARD SPECIFICATIONS.

(R-26) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.

(R-29) PRICE BID TO INCLUDE COST OF FOG SEAL, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.

(R-34) PRICE BID TO INCLUDE COST OF 8" BARRIER CURB HOODS.

(R-35) THE PRECAST CONCRETE OPTION MAY BE USED INSTEAD, PER DIRECTION OF THE ENGINEER.

(R-39) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.

(R-40) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.

(R-41) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.

(TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION).
THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH O.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.

(TC-84) XXX CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.

(TS-24) QUANTITY SHOWN INCLUDES 1,715 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE)WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE.

(TS-26) QUANTITY SHOWN INCLUDES 2,730 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT SIX INCH (6") WIDE TRAFFIC STRIPE.

(TS-26) QUANTITY SHOWN INCLUDES 784 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF EIGHT INCH (8") WIDE TRAFFIC STRIPE.

(TS-28) QUANTITY SHOWN INCLUDES 53 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY-FOUR INCH (24") WIDE TRAFFIC STRIPE.

(1) SEE SUMMARY OF EARTHWORK QUANTITIES, ON SHEET AR03.

(2) INCLUDES COST OF SALVAGING AND PLACING TOPSOIL APPROXIMATELY 5 INCHES DEEP ON COMPLETED FORESLOPE, DITCHES, AND BACKSLOPES AND 18-46-0 FERTILIZER (ESTIMATED AT 150 LBS PER ACRE).

(3) PRICE BID TO INCLUDE COST OF TRENCH EXCAVATION AND STANDARD BEDDING.

(4) IN ADDITION TO THE RESPONSIBILITIES SHOWN IN THE SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND/OR ESTABLISHING THE SURVEY CONTROL POINTS SHOWN ON THE PLANS, STAKING THE CENTERLINE OF CONSTRUCTION, AND REESTABLISHING RIGHT-OF-WAY STAKES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING BENCH MARKS SHOWN ON THE PLANS AND FOR ESTABLISHING NEW BENCH MARKS AS NEEDED TO CONSTRUCT THE PROJECT.

(5) INCLUDES 500 C.Y. FOR MISCELLANEOUS EARTHWORK, WHERE NO QUANTITY IS SHOWN ON THE PLANS.

(6) AGGREGATE BASE WILL BE MEASURED BY THE CUBIC YARD AND COMPACTED TO AT LEAST 98 PERCENT STANDARD PROCTOR DENSITY, MEASUREMENT BY THE CUBIC YARD WILL BE BASED ON THE ACTUAL LENGTH MULTIPLIED BY THE THEORETICAL CROSS SECTIONS SHOWN ON THE PLANS.

(7) COST INCLUDES SAWING PAVEMENT IN A MANNER APPROVED BY THE ENGINEER.

(8) MANHOLE AND VALVE BOXES THAT ARE BEING ADJUSTED TO GRADE REQUIRE A CONCRETE APRON TO BE CONSTRUCTED AROUND EACH STRUCTURE. CONCRETE APRON SHOULD BE LOCATED WITHIN THE SIDEWALK OR ROADWAY.

(9) AUDIO/VIDEO CONSTRUCTION RECORDING BY DRONE FOOTAGE IS TO BE PREFORMED AT PRE-CONSTRUCTION, DURING CONSTRUCTION, AND POST CONSTRUCTION.

(10) ESTIMATED QUANTITY FOR TEMPORARY EROSION AND SEDIMENT CONTROL TO BE USED IN A MANNER APPROVED BY THE ENGINEER. PRICE BID TO INCLUDE THE COST OF NECESSARY MAINTENANCE, MAINTAINING IN AN UPRIGHT POSITION, REMOVAL OF CONTROL AND SEDIMENT REMOVAL.

TC-0S98 NW EXPRESSWAY AND LAKE HEFNER PARKWAY — OKLAHOMA COUNTY

GENERAL NOTES

JOB PIECE NO. 35921(04) SHEET NO. AR02

CEC // TRANSPORTATION

PRELIMINARY PLANS
10/30/2023

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: NW EXPRESSWAY FROM LAKE HEFNER PARKWAY TO INDEPENDENCE AVENUE

PROJECT DESCRIPTION: GRADE, DRAIN, AND SURFACE, NW EXPRESSWAY AND LAKE HEFNER PARKWAY, OKLAHOMA CITY, OKLAHOMA

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. VEGETATIVE STRIPPING
2. UNDERCUT & STOCKPILE EXISTING TOPSOIL
3. INSTALL PERIMETER EROSION CONTROL MEASURES
4. SIDEWALK EXCAVATION AND EMBANKMENT
5. CONST. NEW STORM INLETS
6. INSTALL TEMP. SEDIMENT FILTERS
7. CONST. FINISHED SIDEWALK PAVING AND ROADWAY SURFACING
8. SPREAD TOPSOIL
9. INSTALL SOLID SLAB SOD

SOIL TYPE: TELLER-URBAN LAND COMPLEX

TOTAL AREA OF THE CONSTRUCTION SITE: 2.98 AC.

ESTIMATED AREA TO BE DISTURBED: 0.81 AC.

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE) N/A

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 2.37 AC.

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 2.56 AC.

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.87

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 35°31'52.83" N, 97°34'39.93" W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: CLOVERLEAF CREEK

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

303(d) IMPAIRED WATERS: YES [ ] NO [x]

IF YES, LIST IMPAIRMENT:

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

LAKE THUNDERBIRD TMDL: YES [x] NO [ ]

MS4 ENTITY YES [x] NO [ ]

IF YES, LOCATION: OKLAHOMA CITY

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.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- ___ 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.

STRUCTURAL PRACTICES:

- ___ STABILIZED CONSTRUCTION EXIT
- _X_ 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
- _X_ TEMPORARY SEDIMENT FILTERS
- _X_ TEMPORARY SEDIMENT REMOVAL
- ___ RIP RAP
- ___ INLET SEDIMENT FILTER
- ___ TEMPORARY BRUSH SEDIMENT BARRIERS
- ___ SANDBAG BERMS
- ___ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- _X_ HAUL ROADS DAMPENED 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 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, 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 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 A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT 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 2019 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

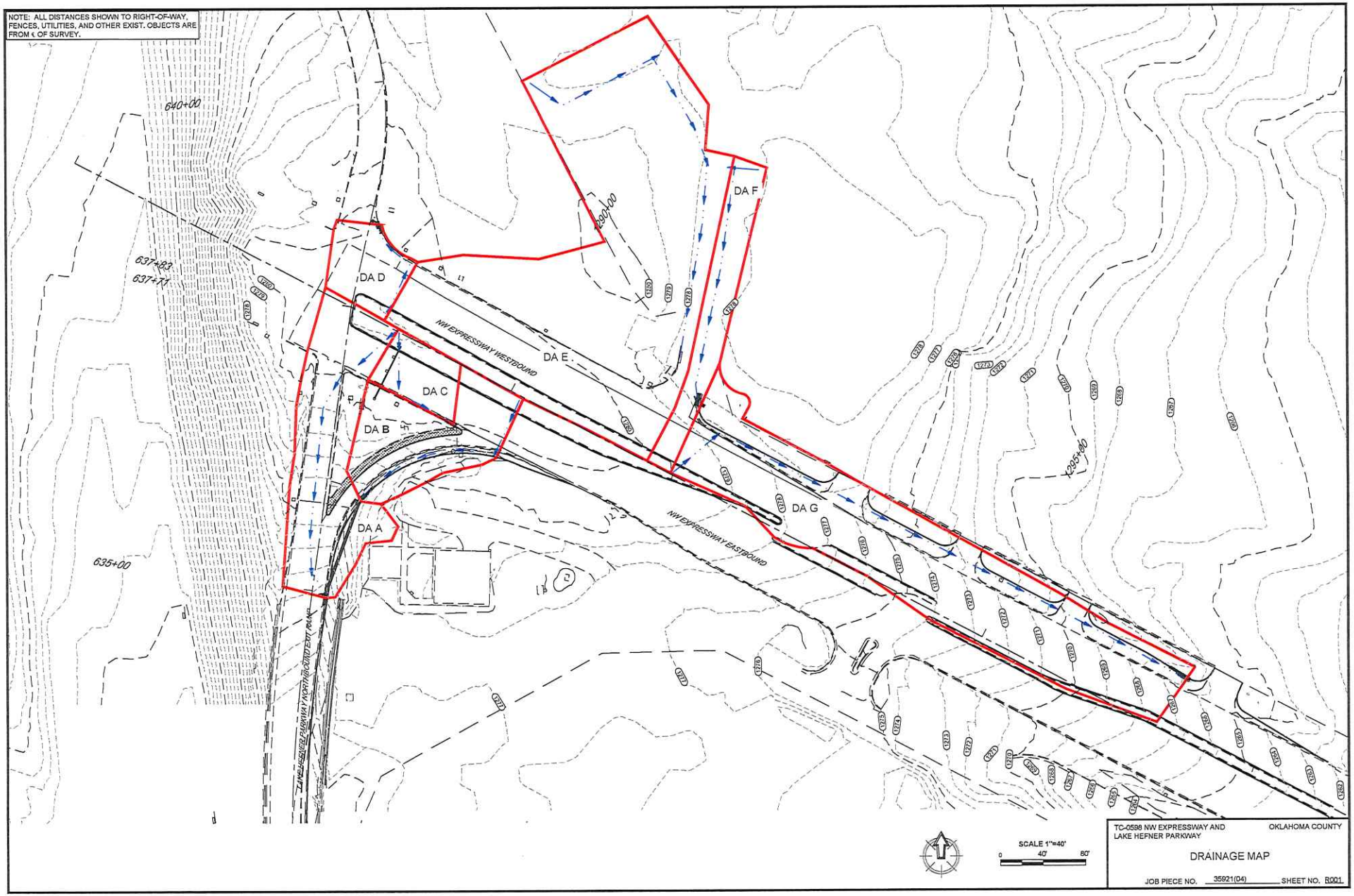
103.05 BONDING REQUIREMENTS
104.10 FINAL CLEANING UP
104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
104.13 ENVIRONMENTAL PROTECTION
106.08 STORAGE AND HANDLING OF MATERIAL
107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
107.20 STORM WATER MANAGEMENT
220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER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

IN ADDITION:
"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA," ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY — OKLAHOMA COUNTY

STORM WATER MANAGEMENT PLAN

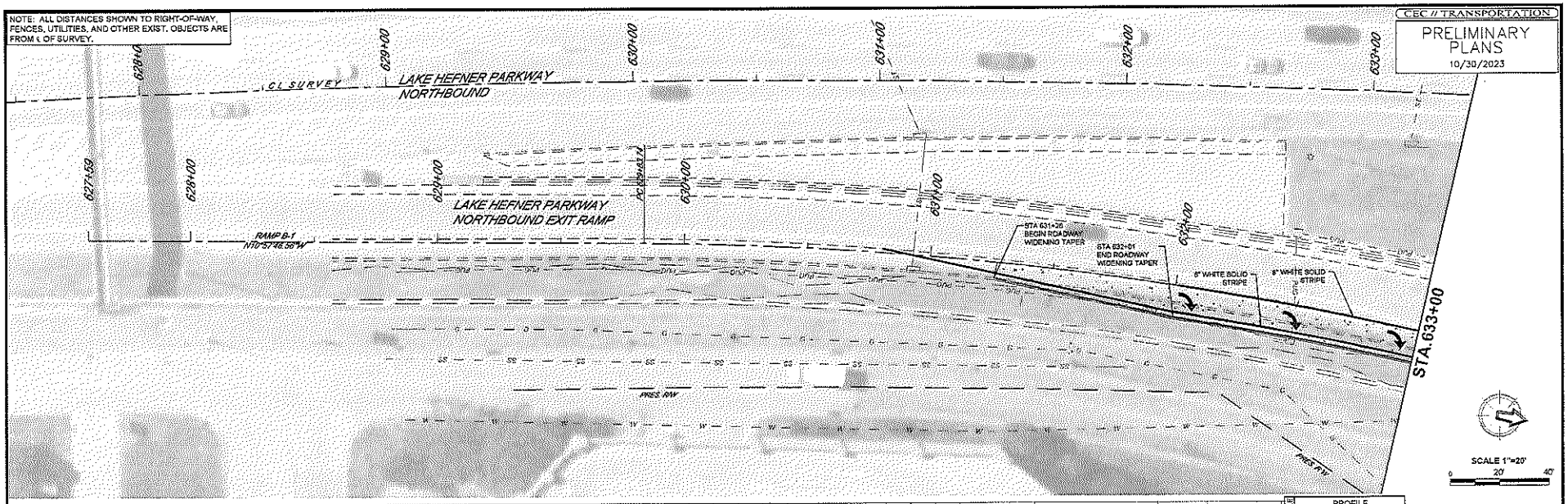
JOB PIECE NO. 35921(04) SHEET NO. E001

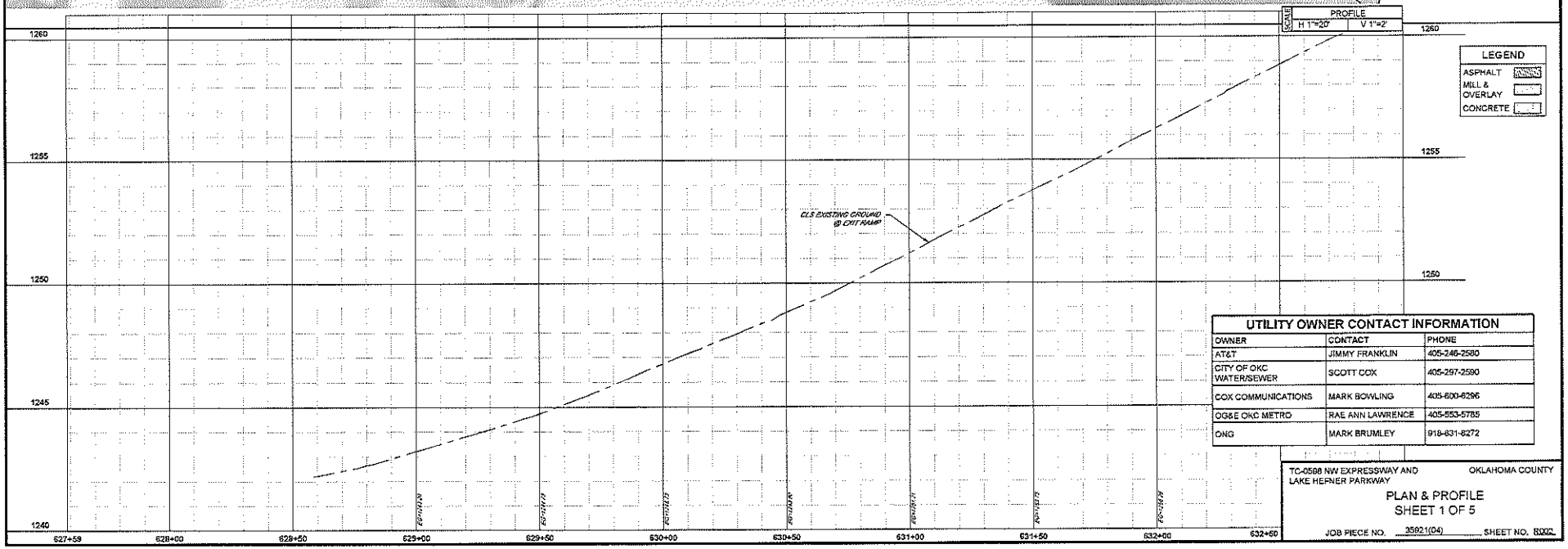

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ℄ OF SURVEY.
640+00
637+83
637+71
635+00
290+00
295+80
DA A
DA B
DA C
DA D
DA E
DA F
DA G
NW EXPRESSWAY WESTBOUND
NW EXPRESSWAY EASTBOUND
LAKE HEFNER PARKWAY NORTHBOUND EXIT RAMP
SCALE 1"=40'
0
40'
80'
TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY
OKLAHOMA COUNTY
DRAINAGE MAP
JOB PIECE NO. 35921(04)
SHEET NO. R001

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ℄ OF SURVEY.

CEC // TRANSPORTATION

PRELIMINARY PLANS
10/30/2023





LEGEND

- ASPHALT
- MILL & OVERLAY
- CONCRETE

UTILITY OWNER CONTACT INFORMATION

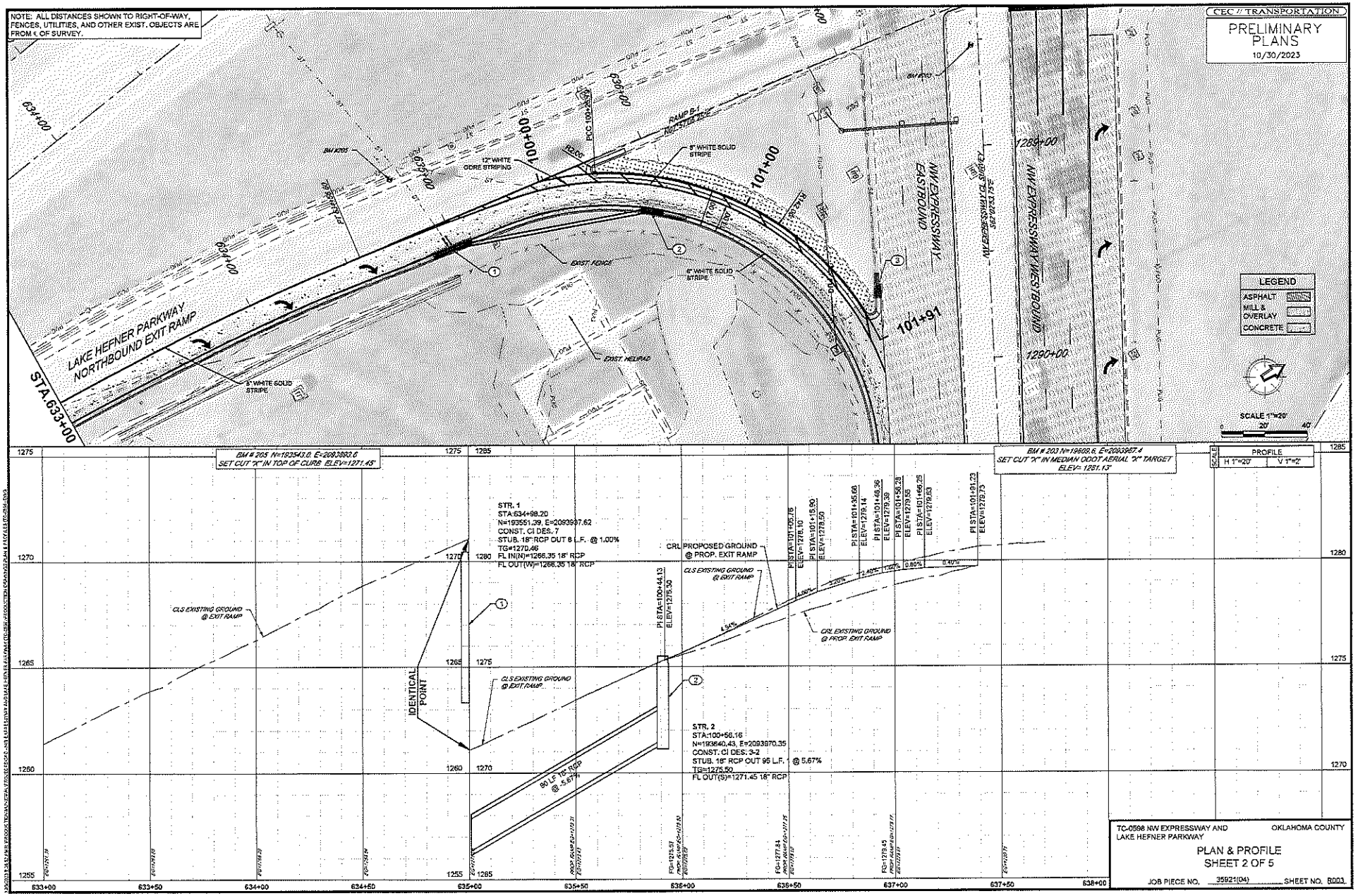
OWNER	CONTACT	PHONE
AT&T	JIMMY FRANKLIN	405-246-2580
CITY OF OKC WATER/SEWER	SCOTT COX	405-297-2590
COX COMMUNICATIONS	MARK BOWLING	405-600-6296
OG&E OKC METRO	RAE ANN LAWRENCE	405-553-5785
ONG	MARK BRUMLEY	918-831-8272

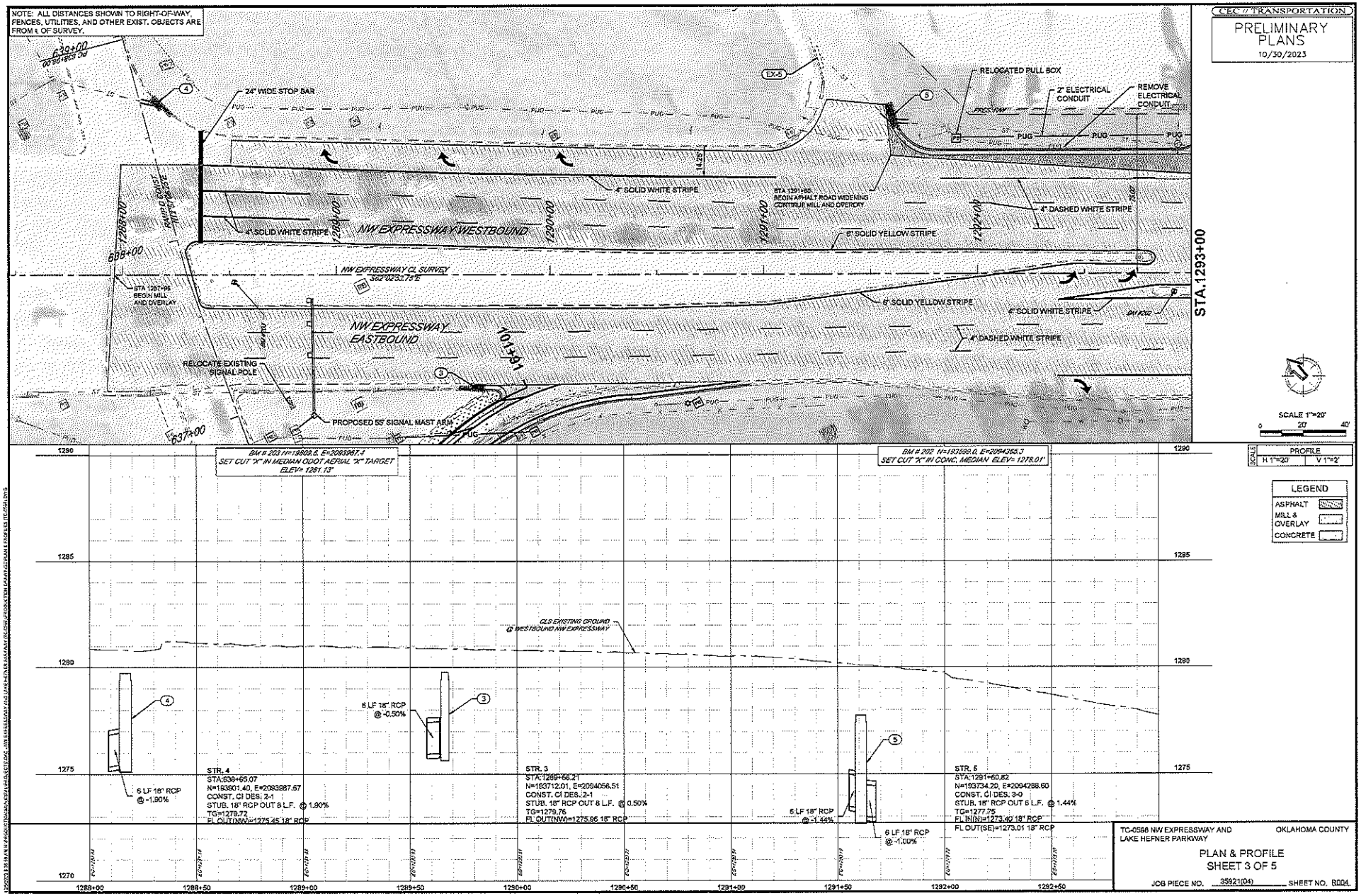
TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY

OKLAHOMA COUNTY

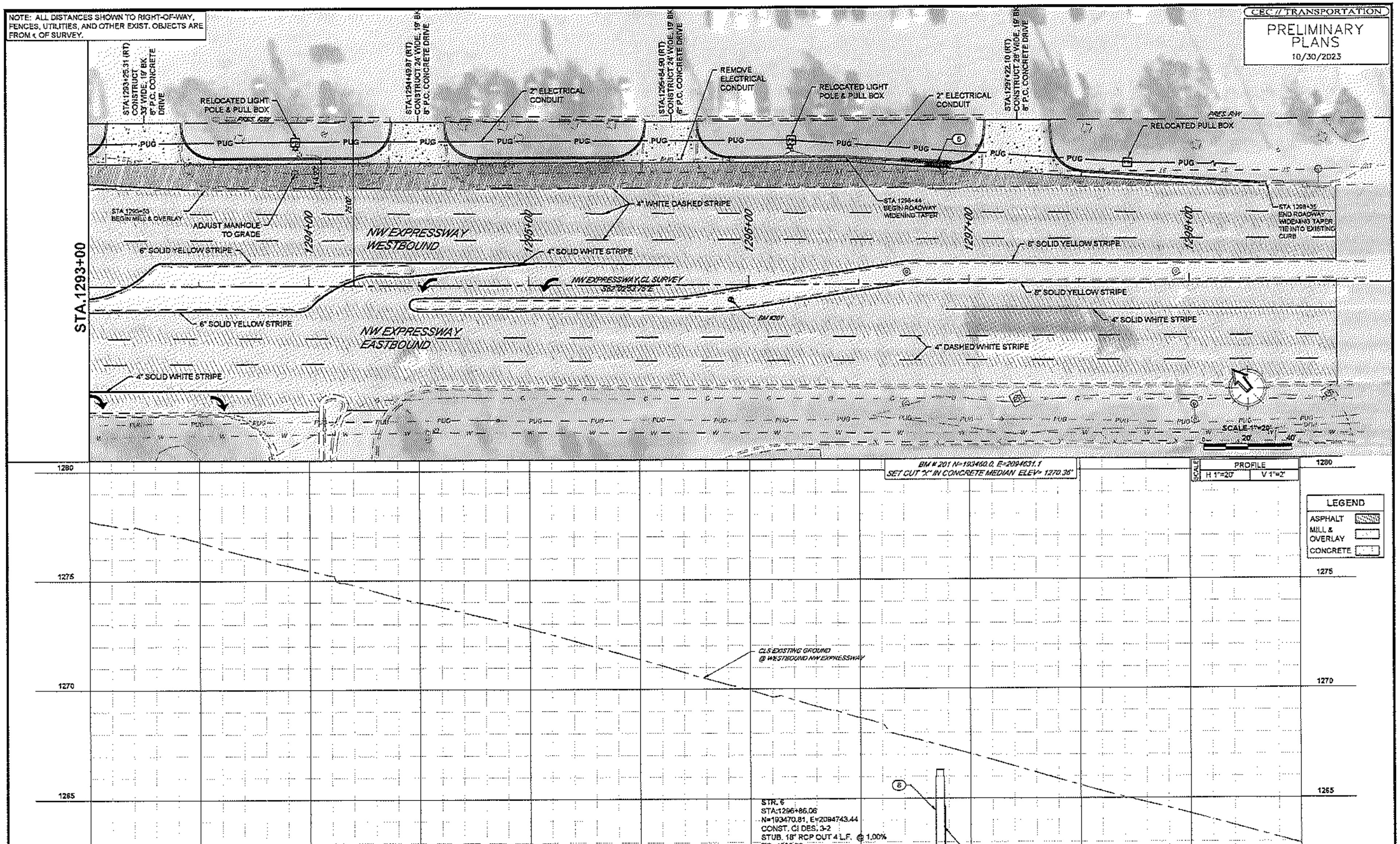
PLAN & PROFILE
SHEET 1 OF 5

JOB PIECE NO. 35921(04) SHEET NO. 83002


NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ℄ OF SURVEY.
CEC // TRANSPORTATION
PRELIMINARY PLANS
10/30/2023
LAKE HEFNER PARKWAY NORTHBOUND EXIT RAMP
NW EXPRESSWAY EASTBOUND
NW EXPRESSWAY WESTBOUND
RAMP B-1
12" WHITE GORE STRIPING
8" WHITE SOLID STRIPE
EXIST. FENCE
EXIST. HELIPAD
LEGEND
ASPHALT
MILL & OVERLAY
CONCRETE
SCALE 1"=20'
BM # 205 N=192543.0, E=2093882.6
SET CUT "X" IN TOP OF CURB ELEV=1271.45'
BM # 203 N=19609.8, E=2093967.4
SET CUT "X" IN MEDIAN ODOT AERIAL "X" TARGET
ELEV= 1281.13'
PROFILE
H 1"=20'
V 1"=2'
STR. 1
STA:634+98.20
N=193551.39, E=2093937.62
CONST. CI DES. 7
STUB. 18" RCP OUT 8 L.F. @ 1.00%
TG=1270.46
FL IN(N)=1266.35 18" RCP
FL OUT(W)=1266.35 18" RCP
STR. 2
STA:100+56.16
N=192640.43, E=2093970.35
CONST. CI DES: 3-2
STUB. 18" RCP OUT 95 L.F. @ 5.67%
TG=1275.50
FL OUT(S)=1271.45 18" RCP
CRL PROPOSED GROUND @ PROP. EXIT RAMP
CLS EXISTING GROUND @ EXIT RAMP
CRL EXISTING GROUND @ PROP. EXIT RAMP
IDENTICAL POINT
90 L.F. 18" RCP @ -5.67%
PI STA=100+44.13 ELEV=1275.50
PI STA=101+05.16 ELEV=1278.16
PI STA=101+15.90 ELEV=1278.50
PI STA=101+35.66 ELEV=1279.14
PI STA=101+45.36 ELEV=1279.39
PI STA=101+56.28 ELEV=1279.55
PI STA=101+66.25 ELEV=1279.63
PI STA=101+81.23 ELEV=1279.73
4.94%
4.00%
3.20%
2.40%
1.60%
0.80%
0.40%
TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY
OKLAHOMA COUNTY
PLAN & PROFILE
SHEET 2 OF 5
JOB PIECE NO. 35921(04)
SHEET NO. B003


NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ℄ OF SURVEY.
CEC // TRANSPORTATION
PRELIMINARY PLANS
10/30/2023
24" WIDE STOP BAR
4" SOLID WHITE STRIPE
NW EXPRESSWAY WESTBOUND
NW EXPRESSWAY EASTBOUND
NW EXPRESSWAY ℄ SURVEY S02°02'33.75"E
STA 1287+98 BEGIN MILL AND OVERLAY
STA 1291+82 BEGIN ASPHALT ROAD WIDENING CONTINUE MILL AND OVERLAY
RELOCATED PULL BOX
2" ELECTRICAL CONDUIT
REMOVE ELECTRICAL CONDUIT
4" DASHED WHITE STRIPE
6" SOLID YELLOW STRIPE
RELOCATE EXISTING SIGNAL POLE
PROPOSED 55' SIGNAL MAST ARM
STA.1293+00
SCALE 1"=20'
BM # 203 N=193909.5, E=2093967.4 SET CUT "X" IN MEDIAN ODOT AERIAL "X" TARGET ELEV= 1281.13'
BM # 202 N=193599.0, E=2094365.7 SET CUT "X" IN CONC. MEDIAN ELEV= 1278.01'
PROFILE
H 1"=20' V 1"=2'
LEGEND
ASPHALT
MILL & OVERLAY
CONCRETE
GLS EXISTING GROUND @ WESTBOUND NW EXPRESSWAY
6 LF 18" RCP @ -1.90%
6 LF 18" RCP @ -0.50%
6 LF 18" RCP @ -1.44%
6 LF 18" RCP @ -1.00%
STR. 4
STA:638+65.07
N=193901.40, E=2093987.67
CONST. CI DES.: 2-1
STUB. 18" RCP OUT 6 L.F. @ 1.90%
TG=1279.72
FL OUT(NW)=1275.45 18" RCP
STR. 3
STA:1289+56.21
N=193712.01, E=2094056.51
CONST. CI DES.: 2-1
STUB. 18" RCP OUT 6 L.F. @ 0.50%
TG=1279.76
FL OUT(NW)=1275.96 18" RCP
STR. 5
STA:1291+60.82
N=193734.20, E=2094288.60
CONST. CI DES.: 3-0
STUB. 18" RCP OUT 6 L.F. @ 1.44%
TG=1277.75
FL IN(N)=1273.40 18" RCP
FL OUT(SE)=1273.01 18" RCP
1290
1285
1280
1275
1270
1288+00
1288+50
1289+00
1289+50
1290+00
1290+50
1291+00
1291+50
1292+00
1292+50
TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY
OKLAHOMA COUNTY
PLAN & PROFILE
SHEET 3 OF 5
JOB PIECE NO. 35921(04)
SHEET NO. R004

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ¢ OF SURVEY.


STA.1293+00
STA:1293+25.31 (RT) CONSTRUCT 33' WIDE, 19' BK 8" P.C. CONCRETE DRIVE
RELOCATED LIGHT POLE & PULL BOX
STA:1294+49.87 (RT) CONSTRUCT 24' WIDE, 19' BK 8" P.C. CONCRETE DRIVE
2" ELECTRICAL CONDUIT
STA:1295+64.50 (RT) CONSTRUCT 24' WIDE, 19' BK 8" P.C. CONCRETE DRIVE
REMOVE ELECTRICAL CONDUIT
RELOCATED LIGHT POLE & PULL BOX
2" ELECTRICAL CONDUIT
STA:1297+22.10 (RT) CONSTRUCT 28' WIDE, 19' BK 8" P.C. CONCRETE DRIVE
RELOCATED PULL BOX
PRES. R/W
PUG
STA 1293+53 BEGIN MILL & OVERLAY
ADJUST MANHOLE TO GRADE
4" WHITE DASHED STRIPE
STA 1296+44 BEGIN ROADWAY WIDENING TAPER
STA 1298+35 END ROADWAY WIDENING TAPER TIE INTO EXISTING CURB
1294+00
1295+00
1296+00
1297+00
1298+00
NW EXPRESSWAY WESTBOUND
6" SOLID YELLOW STRIPE
4" SOLID WHITE STRIPE
NW EXPRESSWAY CL SURVEY
6" SOLID YELLOW STRIPE
4" SOLID WHITE STRIPE
BM #201
NW EXPRESSWAY EASTBOUND
4" DASHED WHITE STRIPE
4" SOLID WHITE STRIPE
SCALE 1"=20'
BM # 201 N=193460.0, E=2094631.1
SET CUT "X" IN CONCRETE MEDIAN ELEV= 1270.36'
PROFILE
H 1"=20'
V 1"=2'
LEGEND
ASPHALT
MILL & OVERLAY
CONCRETE
1280
1275
1270
1265
1260
CLS EXISTING GROUND @ WESTBOUND NW EXPRESSWAY
STR. 6
STA:1296+86.06
N=193470.81, E=2094743.44
CONST. CI DES. 3-2
STUB. 18" RCP OUT 4 L.F. @ 1.00%
TG=1266.32
FL OUT(S)=1262.96 18" RCP
2 LF 18" RCP @ -1.00%
1293+00
1293+50
1294+00
1294+50
1295+00
1295+50
1296+00
1296+50
1297+00
1297+50

CEC // TRANSPORTATION

PRELIMINARY PLANS
10/30/2023

TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY | OKLAHOMA COUNTY

PLAN & PROFILE
SHEET 4 OF 5

JOB PIECE NO. 35921(04) SHEET NO. B005

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ℄ OF SURVEY.

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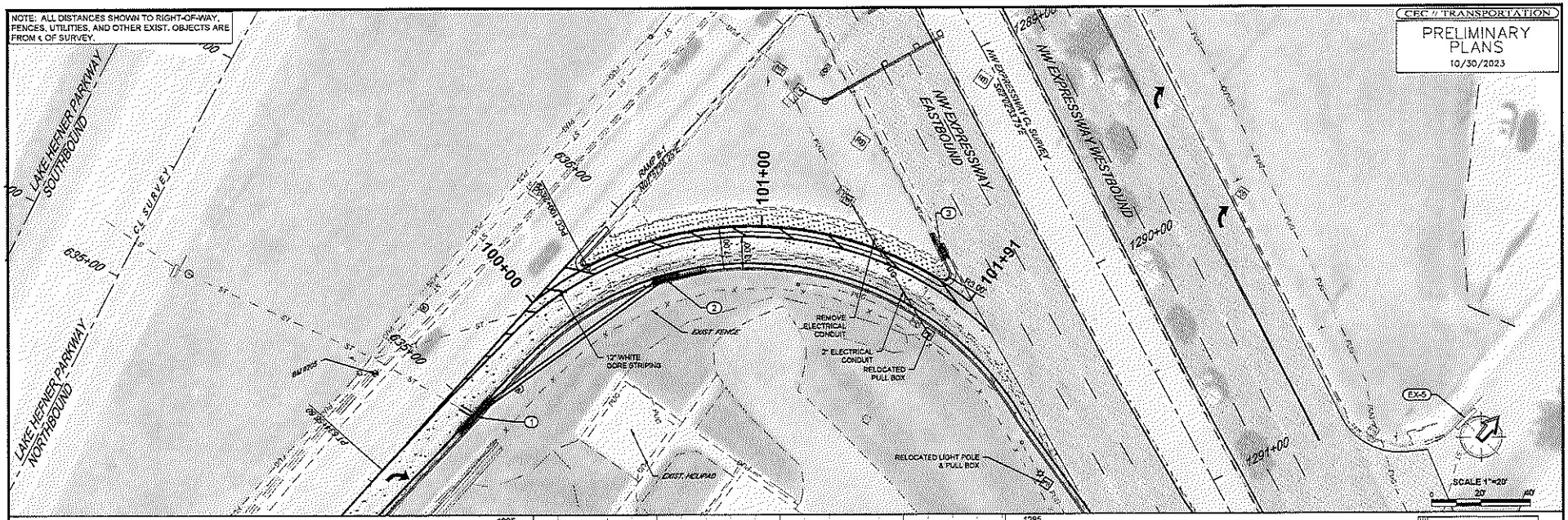
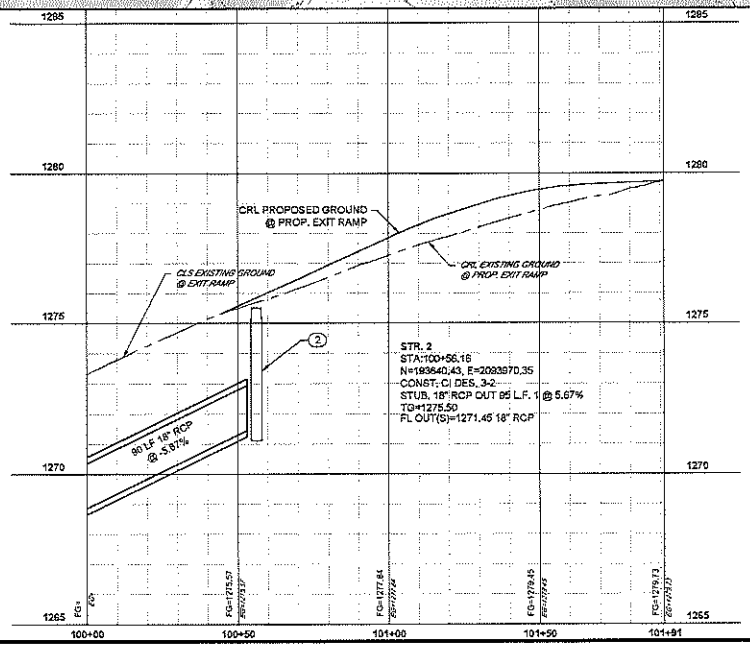
PRELIMINARY PLANS
10/30/2023



SCALE	PROFILE	
	H 1"=20'	V 1"=2'

LEGEND

- ASPHALT
- MILL & OVERLAY
- CONCRETE



TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY — OKLAHOMA COUNTY

PLAN & PROFILE
SHEET 5 OF 5

JOB PIECE NO. 35821(04) SHEET NO. R006

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APPENDIX C

ALTERNATE 1 EXHIBIT & ESTIMATE

30% Construction Estimate

October 31, 2023

TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY
ALTERNATE 1

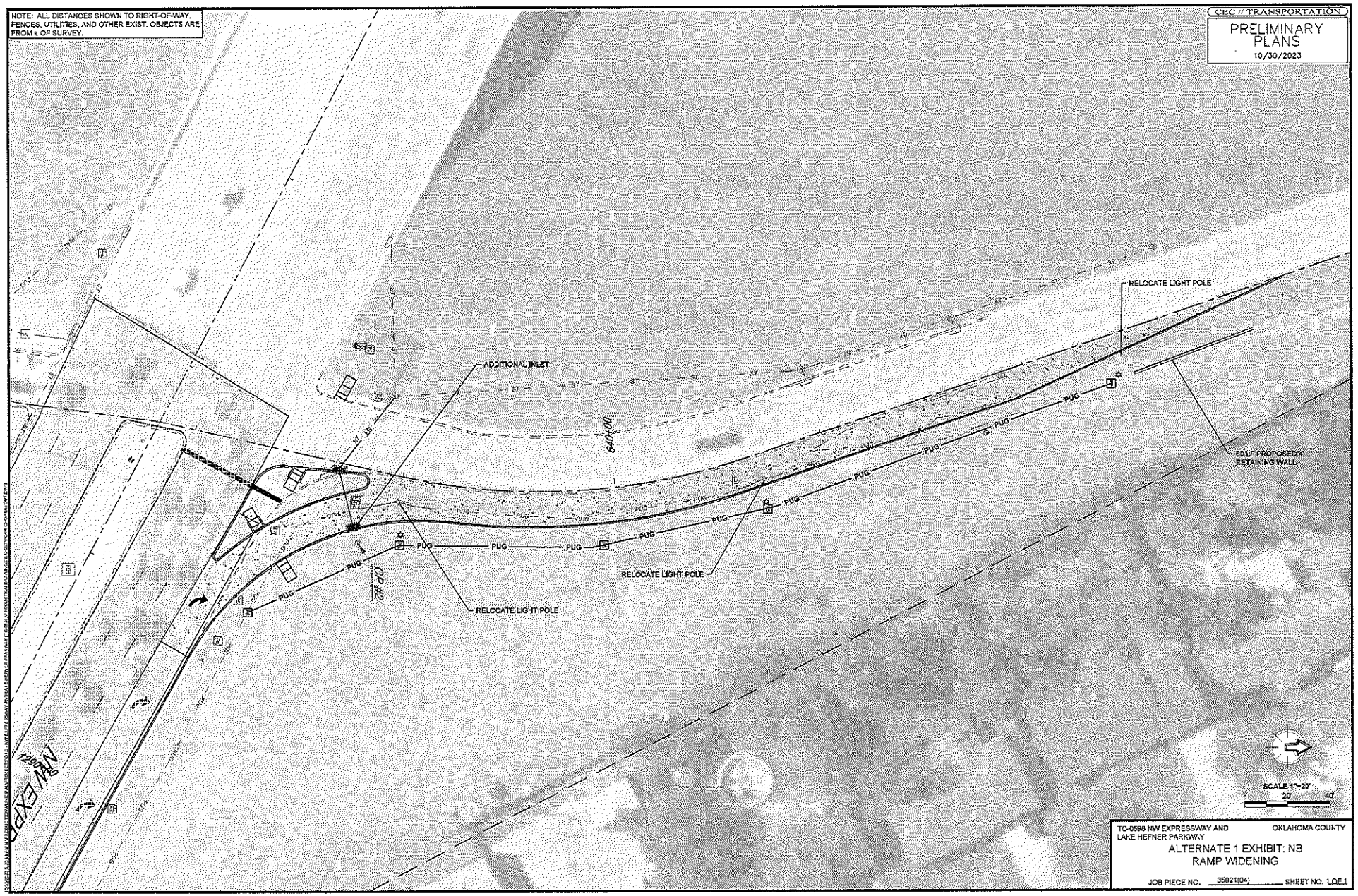
SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
201(A)	1200	1	CLEARING AND GRUBBING	LSUM	1.0	$ 2,000.00	$ 2,000.00
202(A)	2200	2	UNCLASSIFIED EXCAVATION	C.Y.	1,289.0	$ 10.00	$ 12,890.00
221(B)	2300	3	TEMPORARY SILT FENCE	L.F.	473.0	$ 3.00	$ 1,419.00
221(C)	2400	4	TEMPORARY SEDIMENT FILTER	EA.	1.0	$ 300.00	$ 300.00
230(A)	7200	5	SOLID SLAB SODDING	S.Y.	420.0	$ 3.00	$ 1,260.00
303(A)	1200	6	AGGREGATE BASE TYPE A	C.Y.	190.0	$ 90.00	$ 17,100.00
411(B)	1330	7	SUPERPAVE, TYPE S3 (PG 58-28 OK)	TON	143.0	$ 130.00	$ 18,590.00
414(G)	5800	8	P.C. CONCRETE FOR PAVEMENT	C.Y.	213.0	$ 250.00	$ 53,250.00
510(A)	1220	9	RETAINING WALL	LSUM	1.0	$ 15,000.00	$ 15,000.00
600(B)	300	10	(PL) AUDIO/VIDEO CONSTRUCTION RECORDING	LSUM	1.0	$ 1,000.00	$ 1,000.00
609(B)	4375	11	2'-8" COMB.CRB. & GUT.(8" BARRIER)	L.F.	645.0	$ 35.00	$ 22,575.00
610(B)	5320	12	8" CONCRETE DRIVEWAY	S.Y.	122.0	$ 95.00	$ 11,590.00
611(G)	7758	13	INLET CI DES. 2 (B)	EA.	1.0	$ 8,000.00	$ 8,000.00
612(A)	3200	14	MANHOLE ADJUST TO GRADE	EA.	2.0	$ 1,700.00	$ 3,400.00
612(E)	3600	15	PULL BOXES ADJUST TO GRADE	EA.	1.0	$ 500.00	$ 500.00
613(A)	5216	16	18" R.C. PIPE CLASS III	L.F.	30.0	$ 100.00	$ 3,000.00
619(B)	6356	17	REMOVAL OF CURB AND GUTTER	L.F.	562.0	$ 11.00	$ 6,182.00
619(B)	6360	18	REMOVAL OF CONCRETE PAVEMENT	S.Y.	178.0	$ 10.00	$ 1,780.00
619(B)	6368	19	REMOVAL OF DRAINAGE INLETS	EA.	1.0	$ 710.00	$ 710.00
						ROADWAY TOTAL:	$180,546.00

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
802		20	ELECTRICAL WIRING	LSUM	1.0	$ 20,000.00	$ 20,000.00
802(B)	0324	21	2" PVC SCH.40 PLASTIC CONDUIT TRENCHED	L.F.	426.0	$ 30.00	$ 12,780.00
803(A)	1210	22	PULL BOX (SIZE I)	EA.	5.0	$ 2,000.00	$ 10,000.00
805		23	LIGHT POLE FOOTING	EA.	3.0	$ 8,000.00	$ 24,000.00
805(D)	3504	24	REMOVE AND RESET LIGHT POLE	EA.	3.0	$ 6,000.00	$ 18,000.00
856(A)	8200	25	TRAFFIC STRIPE (MULTI-POLY)(4" WIDE)	L.F.	808.0	$ 1.00	$ 808.00
856(A)	8208	26	TRAFFIC STRIPE (MULTI-POLY)(6" WIDE)	L.F.	220.0	$ 1.25	$ 275.00
						TRAFFIC TOTAL:	$85,863.00

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
880(J)	7110	27	CONSTRUCTION TRAFFIC CONTROL	LSUM	1.0	$ 5,000.00	$ 5,000.00
						TRAFFIC TOTAL:	$5,000.00

SECTION	ITEM	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
642(B)	3300	28	CONSTRUCTION STAKING LEVEL II	LSUM	1.0	$ 2,000.00	$ 2,000.00
						TOTAL:	$2,000.00

TOTAL: $273,409


NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ℄ OF SURVEY.
CEC // TRANSPORTATION
PRELIMINARY PLANS
10/30/2023
ADDITIONAL INLET
RELOCATE LIGHT POLE
RELOCATE LIGHT POLE
RELOCATE LIGHT POLE
60 LF PROPOSED 4' RETAINING WALL
PUG
CP #2
NW EXPY
SCALE 1"=20'
0
20'
40'
TC-0598 NW EXPRESSWAY AND LAKE HEFNER PARKWAY
OKLAHOMA COUNTY
ALTERNATE 1 EXHIBIT: NB RAMP WIDENING
JOB PIECE NO. 35921(04)
SHEET NO. LOE.1