

The City of Durant encourages participation from all its citizens. If participation at any public meeting is not possible due to a disability, notification to the City Clerk at least 48 hours prior to the scheduled meeting is encouraged in order to make the necessary accommodations. The City of Durant may waive the 48-hour rule if interpreters for the deaf (signing) or translation services for limited English proficient (LEP) individuals are not the necessary accommodation.

DURANT CITY UTILITIES AUTHORITY

6:00 PM

**Roscoe J. Hatfield
Council Chambers,
300 West Evergreen,
Durant, Oklahoma
SPECIAL CALLED
AGENDA**

June 23, 2023

CALL TO ORDER

ROLL CALL

ORDER OF BUSINESS

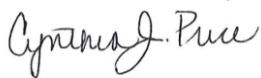
1. Administration

- a. Consider Approval of Durant City Utilities Authority Fiscal Year 2023-2024 Financial Plan with Durant City Council as Beneficiary
- b. Consider Approval of Resolution Amending Certain Fees on the Fee Schedule; Directing Posting (R-2023-08)
- c. Discussion, Consideration and Possible Action to Approve a Sewer Line Extension

ADJOURNMENT

CERTIFICATE

This is to certify that in conformity with the Oklahoma Open Meeting Act, public notice of the date, time and place of this meeting was filed with the City Clerk of Durant on the 19th day of June, 2023 and that an agenda of said meeting was posted at the place of such meeting at 5:40 p.m. on the 22nd day of June, 2023.



Cynthia J. Price, City of Durant



The City of Durant

Memorandum

Date: 6/23/2023
To: Mayor and City Council
From: Lisa Taylor, City Manager
Re: Consider Approval of Durant City Utilities Authority Fiscal Year 2023-2024 Financial Plan with Durant City Council as Beneficiary

See attached memorandum.

Council Information / Action Requested

Approval of Durant City Utilities Authority Fiscal Year 2023-2024 Financial Plan with Durant City Council as Beneficiary

City Staff Information / Action Follow-up, if Council authorizes this action:

Treasurer's Office: Install FY 23-24 DCUA Financial Plan

ATTACHMENTS:

1. 4-3-5-1. MEMO TO REQUEST FILING OF DCUA BUDGET -COUNCIL

Memorandum

Date: June 21, 2023

To: Durant City Utilities Authority

From: Lisa J. Taylor City Manager

Re: Consider Approval of Durant City Utility Authority FY 2023-2024 Financial Plan with Durant City Council as Beneficiary

Public trusts created pursuant to Title 60 of the Oklahoma State Statutes shall file annually, with their respective beneficiaries, a financial plan or budget. Public trust fund budgets are not required by the Municipal Budget Act and are not considered legally adopted, appropriated budgets (merely financial plans).

Durant City Utilities Authority Fund:	FY 21/22 Actual	FY 22/23 Budget	FY 22/23 Projection	FY 23/24 Budget
Revenue Summary:				
Balance Forward	0	963,054	0	0
Licenses & Permits	9,305	21,100	2,028	9,000
Charges for Services	13,377,249	14,006,702	10,469,065	14,108,150
Miscellaneous Revenues	296,670	192,271	88,992	785,026
Total Revenues	13,683,224	15,183,127	10,560,085	14,902,176
Expenditure Summary:				
Public Works Administration	368,426	413,105	328,300	256,790
Utility Billing	487,482	621,483	405,522	598,025
Water/Sewer Line Maintenance	966,261	1,242,650	783,769	1,192,673
Water Treatment Plant	1,161,915	1,452,967	1,180,876	1,933,338
Wastewater Treatment Plant	995,335	1,256,569	946,657	1,412,711
Solid Waste Collection	1,113,822	1,318,073	913,389	1,305,924
Utility General Administration	5,192,075	6,697,701	4,333,086	5,975,000
Lake Durant	37,943	51,950	28,566	68,550
Solid Waste Disposal	1,839,692	12,128,630	1,616,678	2,159,165
Economic Development Transfer	0	0	0	0
Total Expenditures	12,162,951	15,183,127	10,536,842	14,902,176

Council Information / Action Requested

- Approval of Filing of Durant City Utilities Authority FY 2023-2024 Financial Plan with Durant City Council as Beneficiary

City Staff Information / Action Follow-up, if Council authorizes this action:

- Treasurer's Office: Install FY 23-24 DCUA Financial Plan



The City of Durant

Memorandum

Date: 6/23/2023
To: Mayor and City Council
From: Lisa Taylor, City Manager
Re: Consider Approval of Resolution Amending Certain Fees on the Fee Schedule; Directing Posting (R-2023-08)

Council Information / Action Requested

Approval of Resolution Amending Certain Fees on the Fee Schedule; Directing Posting (R-2023-08)

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. R-2023-08 Fee Schedule Unsigned

RESOLUTION NO. R-2023-08

A RESOLUTION ESTABLISHING FEES AND COSTS CHARGED BY THE CITY OF DURANT, DURANT CITY UTILITY AUTHORITY, AND DURANT AIRPORT AUTHORITY FOR DURANT SERVICES.

WHEREAS, the City Council of the City of Durant and the Trustees for the Durant City Utility Authority, and the Trustees for the Durant Airport Authority have reviewed various fees charged for inspections, utility services, zoning, and other services provided by Durant as set forth on the Exhibit A attached hereto; and,

WHEREAS, the costs charged for various fees are in need of adjustment to ensure the City of Durant, Durant City Utility Authority, and Durant Airport Authority will recover its expenses involved in providing certain services.

NOW, THEREFORE, be it resolved by the City Council of the City of Durant, Oklahoma, and the Trustees for the Durant City Utility Authority, and the Trustees for the Durant Airport Authority that the attached Exhibit A, with various services and fees set forth therein, are hereby established as fees to be charged by the City of Durant, Durant City Utility Authority, and Durant Airport Authority for the specific services enumerated.

BE IT FURTHER resolved that the City Manager is authorized to set additional temporary fees, as needed, to ensure Durant will recover its expenses for services.

PASSED AND APPROVED by the Durant City Council, the Durant City Utility Authority, and Durant Airport Authority on this 23rd day of June, 2023, all rates will become effective the 1st day of August, 2023.

Mayor

DCUA Chairman

DAA Chairman

ATTEST:

Cynthia Price, City Clerk

EXHIBIT A

FEES AND OTHER CHARGES

FEE SCHEDULE

Section	Fee Description	Amount (in dollars)	
Administration			
Public Records Requests	Photocopy Costs, per page up to 8.5 x 14	\$0.25	
	Photocopy Costs, per page larger than 8.5 x 14	\$0.50 -1.00	
	Certified Photocopy Costs, per page	\$1.00	
	Items on CD-ROM or DVD-ROM (additional charge of time to copy to media will apply if employee time exceeds 60 minutes)	\$5.00	
	Items on citizen supplied media (charge of time to copy to media will apply if employee time exceeds 60 minutes)	TBD /First HR-\$15.00/per additional HR \$20/per	
	Returned Check Fee	\$45.00	
	Fingerprint Fee	\$25.00	
	Deferment Fee	\$40.00 plus the amount of ticket	
	Property Abatement Fee	Actual Costs	
	Property Condemnation Fee	Actual Costs	
	Asbestos Inspection Fee (per structure)	Actual cost of materials and shipping plus \$25.00	
Equipment Costs	See Current FEMA Schedule of Equipment Rates https://www.fema.gov/assistance/public/schedule-equipment-rates		
	Actual Cost of Labor		
Airport			
Hangar Rental Monthly Rates			
Building #	Hangar Type & Number	Monthly Rate	Discounted Annual Rate*
4	Box Hangar (1-2)	\$400.00	\$4,400.00
4	Box Hangar (3-12)	\$310.00	\$3,410.00
8	Box Hangar (1-4)	\$440.00	\$4,840.00
8	Box Hangar (5-12)	\$350.00	\$3,850.00
10	T-Hangar (1-9)	\$230.00	\$2,530.00
10	T-Hangar (10)	\$340.00	\$3,740.00
12	T-Hangar (1)	\$230.00	\$2,530.00
12	T-Hangar (2)	\$340.00	\$3,740.00
12	T-Hangar (3-8)	\$230.00	\$2,530.00
12	T-Hangar (9)	\$260.00	\$2,860.00
12	T-Hangar (10)	\$310.00	\$3,410.00
24	Corp Hangar (A-D)	\$730.00	\$8,030.00
*For Annual payments, one year in advance, one month discount has been given (Discount does not apply for late payments)			
After Hours Call Out Fees	After Hours Call Out Fee	\$100.00 initial; plus \$50.00 per person	
Overnight Parking Fees	Single/Twin Engine Overnight Parking	\$5.00 - \$10.00/night – 3 nights Waived with 100-gallon fuel purchase	
	Turbine/Jet Overnight Parking	\$5.00 - \$10.00/night – 3 nights Waived with 200-gallon fuel purchase	
Ramp Fees	General Aviation Aircraft Ramp Fee	\$25.00 per night	
All ramp fees can be waived with a 200-gallon fuel purchase and at the discretion of the Airport Director	Small Turbo Props/Large Piston Ramp Fee	\$50.00 per night	
	Large/Twin Turbo Props Ramp Fee	\$75.00 per night	
	Jet Ramp Fee	\$100.00 per night	

Lavatory Charges	Relocation of Aircraft	\$25.00 - \$100.00 based on size and type
	Airport Facility Fee/Conference Room Fee	\$100.00 per day
	Lavatory Service Fee (new service)	\$150 per service
Animal Control		
Impound Fees and Costs	Impound Fee	\$10.00/ First Second-\$20 Third-\$40
	Redemption Fee	\$10.00
	Boarding Fee	\$7.00 per day Regular Size- \$10 Large (40lb up) \$25
	Publication of Notice and Animal Care (including veterinary)	Actual Cost
	Pet Adoption Fees	No Charge—\$50 Includes Neuter/Spay
	Sterilization Deposit	\$35.00
License Fees	Dangerous Animals – additional license surcharge	\$10.00
	Kennels, Catteries, and Pet Shops – Annual	\$100.00
	Exotic Animal Owner Permit	\$2,400.00
Buildings and Building Regulations (All permits are subject to an additional \$4.00 State Fee)		
Residential Permit Fees	New Construction (Does not include Floodplain permit or MEP's; pulled separate)	\$0.35 per square foot (\$250.00 minimum)
	Remodel Construction (Does not include Floodplain permit or MEP's; pulled separate)	\$0.35 per square foot (\$100.00 minimum)
Commercial Permit Fees	New Commercial, Industrial, Warehouse Construction (Does not include Floodplain permit or MEP's; pulled separate)	\$0.35 per square foot (\$250.00 minimum)
	Remodel Commercial, Industrial, Warehouse Construction (Does not include Floodplain permit or MEP's; pulled separate)	\$0.35 per square foot (\$100.00 minimum)
Other Charges and Fees	Certificate of Occupancy	\$150.00
	Fencing	\$50.00
	Accessory Buildings	\$75.00
	Swimming Pools	\$150.00
	Roofing Residential	\$75.00
	Roofing Commercial	\$150.00
	Demolition	\$100.00
	Building/Structure Relocation Fee	\$50.00
	Electrical Permit	\$0.05 per square foot
	Plumbing Permit	\$0.05 per square foot
	Mechanical Permit	\$0.05 per square foot
	Fire, Health/Safety Code Compliance Certification Fee	\$50.00
	Zoning Code Compliance Certification Fee	\$50.00
	Antenna & Antenna Support Permit Fee	\$500.00
	Roll Off Permit Fee (Annual)	\$100.00 annually
	Non-Permanent Structure	N/A
	Permanent Structure	\$300.00
	Residential Building Inspection Fee	\$50.00/trade per inspection
	Commercial Inspection Fee	\$50.00/trade per inspection
	Re-inspection Fee (multiple reinspection to compensate staff work)	\$50/Trade per Inspect
	Electrical Inspection Fee	\$50.00/trade per inspection
	Plumbing or Mechanical Inspection Fee	\$50.00/trade per inspection
	Red Tag Fee	\$100.00 per visit
	Onsite Consultations	\$50.00 per labor hour (2 hour minimum)
	Night, Weekend, Holiday Inspections	\$75.00 per hour (2 hour minimum)
	Contractor License—Electrical, Mechanical, Plumbing, Roofing	\$100.00 annually (expires June 30 each year)
Signs	New Sign Construction Permit	\$200.00
	Sign Modification Permit	\$75.00
	New Sign/Modification Permit (not using it)	\$25.00
	Temporary Sign Permit	\$40.00
	Billboard Sign Permit	\$500.00
Floodplain Development		

	Floodplain Development Review	\$300.00
	Flood Hazard Development Review	\$100.00
	Floodplain Development Inspection	\$100.00
	The floodplain fee schedule shall not exceed a cumulative amount of \$500.00, in accordance with the Title 82, Section 1604, Item 4.	
Engineering Review		
	In-House Engineering Review	\$500.00
	Consultant Engineering Review	\$50.00 plus invoiced cost
Plan Review Fee		
		25% of permit fee
Cemetery		
	Burial Plot	\$425.00
	Maintenance Fee (one time only, due at time of each burial)	\$75.00
	Highland Cemetery Chapel Rental Fee	\$200.00
	Pavilion Rental (if deceased will not be buried at Highland Cemetery)	\$100.00
	Deed Transfer Fee	\$25.00
Emergency Response Rate Schedule		
Structure Fire (Including Mobile Homes and Outbuilding)	*Minimum charge for first hour, first assignment (three apparatus typical with staff vehicle)	\$750.00*
	For each additional apparatus for the first hour	\$250.00
	For each apparatus for each additional hour or portion thereof	\$250.00
Hazardous Material Response	*Minimum charge for first hour, first alarm assignment (three apparatus typical with staff vehicle)	\$750.00*
	Hourly rate as listed plus actual replacement cost of materials to include, but not limited to: disposable supplies, personal protective equipment, monitoring equipment, and other contaminated unusable equipment. Additional charges may be incurred for specialized equipment and contractors	
	For each additional apparatus for the first hour	\$250.00
	For each apparatus for each additional hour or portion thereof	\$250.00
Vehicle Fire	*minimum charger for the first hour, first alarm assignment (one apparatus typical)	\$250.00*
Wildland Fire	*minimum charge for first hour, first alarm assignment (two apparatus typical)	\$300.00*
Trash Fire	*minimum charge for first hour, first assignment (one apparatus typical)	\$200.00*
Motor Vehicle Collision	*minimum charge for first hour, first alarm assignment (two apparatus typical with staff vehicle)	\$650.00*
	For each additional apparatus for the first hour	\$250.00*
	For each apparatus for each additional hour or portion thereof	\$250.00*
Other Charges and Fees	Firefighter Stand-by	\$50.00 per hour
	Brush Truck Stand-by	\$150.00 per hour
	Engine Stand-by	\$250.00 per hour
Fire Department Permits and Plan Review		
Residential Burn Permit	2 Day Permit	\$10.00
	30 Day Permit	\$25.00
	1 Year Permit	\$100.00
Commercial Burn Permit	1 Year Permit	\$100.00
	Fire Suppression Plan Review Suggested by Okie Safety	\$50.00/min per .03 sqft/ \$300
	Fire Alarm Plan Review Suggested by Okie Safety	\$50.00/min per .03 sqft/ \$300
	Fire Sprinkler Plan Review Suggested by Okie Safety	\$50.00/min per .03 sqft/ \$300
Legal Publications in newspaper or periodicals		
		Invoiced cost of publication
Library		
Late Fees	Books & Audiobooks	\$0.10 per day
	DVDs	\$0.25 per day
	Video Games & Launch Pads	\$1.00 per day

Room Rentals	Children's Story Room	\$50.00 \$60
(room set up free)	Conference Room	\$50.00 \$75
	Black Box Theater	\$250.00 \$300
	CC Meeting Room	\$125.00 \$150
	Computer Lab	\$50.00 \$75.00
Private Rentals	Deposit	\$200.00
Library Services	Copies	B&W \$0.10 Color \$0.50
	Fax Sending	\$1.00 per page; additional \$0.25 after 1 page
	Fax Receiving	\$0.10 per page
	Library Card Replacement	\$3.00
	Out of County Membership – Family (up to /3 years	\$25.00 for 3 years \$40- 3yrs
	Interlibrary Loan (first loan free per month)	\$1.50
	Proctor	\$15.00 per hour
	Laminating	\$1.00 per business card \$2.00 per 8.5 x 11 sheet \$1.50 per foot
3-D printing & resin printing		\$0.10/gram or mL
Licenses		
Business	Business License – Annual (January 1 st -December 31 st)	No Charge
	Family Amusement Center License – Base Fee (Annual)	\$75.00
	Additional for each pool or billiard table	\$15.00
	Additional for each card table	\$5.00
	Additional for each coin-operated amusement device	\$15.00
Caterer	Caterer License – Initial	\$1,000.00
	Caterer License – Renewal	\$900.00
Winemaker	Winemaker License	\$625.00
	Small Farm Winery License (Oklahoma Grown)	\$25.00
Brewer	Brewer License	\$1,250.00
	Small Brewer License	\$50.00
Distiller	Distiller License	\$3,125.00
Retail Alcohol	On Premise Beer License – Initial	\$500.00
	On Premise Beer License – Renewal	\$450.00
	Retail Beer	\$500.00
	Retail Wine	\$1,000.00
	Retail Alcohol	\$1,500.00
Retail Spirits Store	Retail Spirits Store	\$900.00
Mixed Beverage Establishment (Bars)	Mixed Beverage Establishment – Initial	\$1,000.00
	Mixed Beverage Establishment – Renewal	\$900.00
Wholesaler	Wholesaler License	\$2,500.00
	Class B Wholesaler License	\$625.00
Itinerant Merchant	Itinerant Merchant License (1-3 Days)	\$250.00
	Itinerant Merchant License (4-7 Days)	\$500.00
	Itinerant Merchant License (Annual)	\$1,000.00
	Locally Grown Produce Vendor License (Annual)	\$100.00
Mobile Home Park	Mobile Home Park License	\$500.00
Pawn Shop	Pawn Shop License	\$25.00
Taxicab	Taxicab Business License	\$125.00
Manufactured Housing and Mobile Homes		
	Manufactured Housing Development License – Initial	\$1,500.00
	Manufactured Housing Development License – Renewal	\$500.00
	Manufactured Housing Development License Transfer	\$500.00
	Manufactured Housing Development Review	\$500.00
	Manufactured Housing Placement Inspection	\$50.00 per home
	Manufactured Housing Development Annual Inspection Fee	\$500.00
	Mobile Home Alteration or Accessory Building Permit Fee	\$75.00
	Mobile Home Permit Fee	\$100.00
Maps and Digital Data		
	8 ½ x 11 Prints	\$5.00
	11 x 17 Prints	\$6.00
	8 ½ x 11 Prints with Aerial Background	\$20.00

	11 x 17 Prints with Aerial Background	\$24.00
	Plots	\$25.00 plus 3.00/linear foot
	Plots with Aerial Background	\$50.00 plus 3.00/linear foot
	Digital Aerial Photos	\$75.00 per section
	Customer Map & Data Research and Preparation	\$50.00 per hour (2 hour minimum)
	Mapping & Electronic Fees	\$25.00
	911 Information and Shape Files	\$1,000.00 per shape file
Oil/Gas and Associated Facilities		
	Oil/Gas Drilling Permit	\$1,000.00/Well
	Oil/Gas Well Drilling Inspection	\$100.00/Site
	Oil/Gas Construction (Tank Batteries, Booster Pumps, Compressor, Pipeline)	\$1,000.00/Site
	Oil/Gas Injection Well and Secondary Recovery Program Permit	\$1,000.00/Site
	Oil/Gas License – Initial	\$7,500.00 applicable structure
	Oil/Gas License – Annual Renewal	\$1,000.00 applicable structure
	Oil/Gas Well Operation Inspection Fee	\$250.00/Site
Parks		
Baseball and Softball Fields	Field Rental All Day	
	Field Rental Hourly w/ Lights	\$30.00/Hour
	Pavilion Rental Average within 50 Miles	\$10.00/hour
	Disc Golf Course Tournament Fee	\$50.00/Day
Lake		
Camping	Lake Durant RV Camping Fees – Daily (28 day max.)	\$25.00
	Lake Durant RV Camping Fees – Weekly (4 week max.)	\$150.00
	Lake Durant RV Camping Monthly Fee (1 Month Max)	\$500.00
	Lake Durant RV Camping Cancellation Fee	\$10.00
	Lake Durant RV Domestic Sewage Disposal Fee	\$25.00
	Lake Durant Pavillon Réservation Fee	\$10.00 per hour (5 Hour minimum)
	Lake Durant Tent Camping	\$10.00/Day
	Disc Golf Course Tournament Fee	\$50.00/Day
Multi-Sports Complex		
Baseball and Softball Fields	Field Deposit (Refundable upon satisfactory inspection)	\$25.00 per field
	Field Rental Fee with lights	\$30.00/hour
	Tournament Use Fee	\$250.00 per field
	Durant Youth Complex Tournament Deposit	\$100.00 per day
	Durant Youth Complex – Youth League Use fee (Regular Season only)	\$12.00 per kid
	Tournament Team Fee	\$400.00
	Camp Fee	\$50.00 Per Kid
	Gate Fee Adult	\$10.00
	Gate Fee Student	\$5.00
	Gate Fee Senior 65+	\$6.00
	Gate Fee Weekend Pass	\$25.00
Pool		
Daily Admission	Children (0 – 3 years)	0.00
	Students (4– 15 years)	\$4.00
	Adults (16 – 64 years)	\$5.00
	Seniors (65+ years)	\$4.00
Season Pass	Individual Pass	\$100.00
	Family (up to 3 members)	\$250.00
	Family Additional members	\$50.00 additional person after 3
Swim Lessons	Group Lessons (4 lessons Monday-Thursday)	\$100.00

	Private Lessons (4 lessons Monday-Thursday)	\$150.00
	Private Lesson (1 lesson)	\$50.00
Pool Party	2 hour pool party (up to 60 guests)	\$300.00; \$100.00 deposit (non-refundable)
	Additional 30 guest	\$50.00
Petitions to the Board of Adjustments (does not include legal publication and engineering review fees)		
	Variances	\$300.00
	Appeals	\$300.00
	Expedited Hearing Fee	\$500.00
Petitions to the Planning Commission (does not include legal publication and engineering review fees)		
	Zoning Amendments	\$300.00
	Conditional Use Permits	\$300.00
	Planned Unit Developments	\$300.00
	Expedited Hearing Fee	\$500.00
Platting/Development (does not include legal publication and engineering review fees)		
	Platting/Subdivision Fee	\$300.00
	Airport Zone Permit	\$300.00
	Zoning Verification Letter	\$50.00
	Zoning Clearance	\$50.00
	Street Improvement Inspection Fee	\$500.00 plus actual cost of inspection
	Water Line Improvement Inspection Fee	\$500.00 plus actual cost of inspection
	Sanitary Sewer Improvement Inspection Fee	\$500.00 plus actual cost of inspection
	Storm Drainage Improvement Inspection Fee	\$500.00 plus actual cost of inspection
Permits		
Special Event Permit	Special Event Permit	\$25.00
Beverage Garden Permit	Beverage Garden Permit	\$50.00
Food Truck	Food Truck Permit (1 Day)	\$10.00
	Food Truck Permit (90 Days)	\$50.00
	Food Truck Permit (1 Year)	\$100.00
Firework Stand	Firework Stand Permit	\$25.00
Farmer's Market	Farmer's Market Permit	\$25.00
Mobile Boutique	Mobile Boutique Permit (3 Day)	\$25.00
	Mobile Boutique Permit (1 Month)	\$70.00
	Mobile Boutique Permit (Annual)	\$250.00
	Special Event Mobile Boutique Permit (Annual)	\$70.00
Produce	Produce Permit	\$25.00
Street Cut/Excavation Permit		
Street Cut/Excavation Permit	Minimum Application Deposit	\$200.00
	Inspection Fee	\$70.00
Type of Surface	Asphalt	\$2.00 per square foot
	Concrete	\$2.00 per square foot
	Earth	\$0.25 per square foot
	Directional Boring	\$1.00 per linear foot
	Work conducted without a permit additional 50% of cost of the permit	50% upcharge
Sanitation		
Residential Poly Cart (once per week)	Inside City Limits	\$20.35 \$20.96
	Additional Cart	\$11.45 each \$11.79 each
	Outside City Limits	\$29.30 \$30.18
	Additional Cart	\$13.70 each \$14.11

Commercial Poly Cart (once per week)	Inside City Limits	\$24.85 \$25.60
	Additional Cart	\$11.45 each \$11.79
	Outside City Limits	\$29.90 \$30.80
	Additional Cart	\$13.70 each \$14.11
	Poly Cart Replacement (if missing)	\$90.00 \$150.00
	Extra Dump Poly Cart	\$25.80 \$26.58
City Waste Collection Rates	Tires	\$6.00 each, 16" and below \$15 \$13.00 each, 17" and up \$20
	One Ton Flat-Bed Load	\$49.90 per trip
	Furniture requiring 1-2 workers to collect	\$27.70 per piece
	Appliances requiring 1-2 workers to collect	\$27.70 per unit
	Freon laden appliances (refrigerators, freezers, AC units, etc.)	\$30.40 per unit
Landfill – Durant City Residents	Residential Customer C&D Landfill (min charge)	\$15.00
	Once per month City Residential customers may dump up to 1,500 lbs with the presentation of a current residential City Utility bill and Valid ID	Free
	Residential Customer C&D Landfill Charge per Ton (including DEQ fee)	\$30.00
Landfill – Commercial and Non-Durant City Residents	Commercial and Out of City Customer C&D Landfill (min charge)	\$25.00
	Commercial and Out of City Customer C&D Landfill Charge per Ton (including DEQ fee)	\$45.00
Landfill – Other Charges and Fees	Transfer Station MSW	\$19.30 minimum charge
	Transfer Station MSW	\$75.00 per ton
	Concrete Disposal	\$16.00 per ton
	Appliance w/ Freon	\$31.45
	Appliance w/o Freon	\$15.75
	Tires 16" and below	\$4.90
	Tires 17" and above	\$9.80
	Clean Dirt	\$10.80
	Unsecured Loads additional 50% of the cost of the load	50% upcharge
Roll Off Charge	Roll Off (container)	\$30.00 per container dumped
Roll Off \$25 one time delivery fee per container	20 yd. per dump on demand (you call)	\$307.05
	Sitting fee if no dump within the billing period (ON DEMAND ONLY)	\$208.40
	20 yd. 1x per week scheduled	\$631.85
	20 yd. 2x per week scheduled	\$1,263.75
	20 yd. 3x per week scheduled	\$1,895.60
	20 yd. 4x per week scheduled	\$2,527.45
	20 yd. 5x per week scheduled	\$3,159.35
Roll Off \$25 one time delivery fee per container	30 yd. per dump on demand (you call)	\$460.00
	Sitting fee if no dump within the billing period (ON DEMAND ONLY)	\$312.40
	30 yd. 1x per week scheduled	\$947.80
	30 yd. 2x per week scheduled	\$1,895.60
	30 yd. 3x per week scheduled	\$2,843.40
	30 yd. 4x per week scheduled	\$3,791.20
	30 yd. 5x per week scheduled	\$4,739.00
Roll Off \$25 one time delivery fee per container	40 yd. per dump on demand (you call)	\$615.25
	Sitting fee if no dump within the billing period (ON DEMAND ONLY)	\$372.85
	40 yd. 1x per week scheduled	\$1,263.75
	40 yd. 2x per week scheduled	\$2,527.45
	40 yd. 3x per week scheduled	\$3,791.20
	40 yd. 4x per week scheduled	\$5,054.95
	40 yd. 5x per week scheduled	\$6,318.65

	Relocating Roll Off Container fee	\$69.00
Commercial Rate Compactor per collection – City Owned	20 yd. self-contained	\$456.50
	30 yd. self-contained	\$684.65
	40 yd. self-contained	\$912.90
Commercial Rate Compactor per collection – Privately Owned	20 yd. compactor	\$345.60
	30 yd. compactor	\$518.40
	40 yd. compactor	\$691.05
Scheduled Collection Monthly Dumpster Rates	2 yd. dumpster (1 Collection per week)	\$69.10
	2 yd. dumpster (2 Collection per week)	\$138.25
	2 yd. dumpster (3 Collection per week)	\$207.35
	2 yd. dumpster (4 Collection per week)	\$276.50
	2 yd. dumpster (5 Collection per week)	\$345.60
	Additional pick up of 2 yd. dumpster	\$84.60
	3 yd. dumpster (1 Collection per week)	\$103.65
	3 yd. dumpster (2 Collection per week)	\$207.30
	3 yd. dumpster (3 Collection per week)	\$310.95
	3 yd. dumpster (4 Collection per week)	\$414.60
	3 yd. dumpster (5 Collection per week)	\$518.25
	Additional pick up of 3 yd. dumpster	\$126.90
Utilities		
Residential Water Inside City Limits	First 2000 gallons	\$12.00 \$12.82
	Next 1000 gallons	\$3.50 \$3.71
	Next 1000 gallons	\$3.60 \$3.91
	Next 1000 gallons	\$3.70 \$4.02
	Over 5000 gallons, rate per 1000 gallons	\$3.80 \$3.91
Residential Sewer Inside City Limits	First 2000 gallons (added back old charge of 12.45 and 3% on that amount)	\$9.00 \$12.82
	Next 1000 gallons	\$2.63 \$3.71
	Next 1000 gallons	\$2.70 \$3.91
	Next 1000 gallons	\$2.78 \$4.02
	Over 5000 gallons, rate per 1000 gallons	\$2.85 \$3.91
Commercial Water and Sewer Inside City Limits	First 2000 gallons	\$17.95 \$18.49
	Next 1000 gallons	\$4.25 \$4.38
	Next 1000 gallons	\$4.50 \$4.64
	Next 1000 gallons	\$4.70 \$4.84
	Over 5000 gallons, rate per 1000 gallons	\$4.50 \$4.64
Residential and Commercial Water and Sewer Outside City Limits	First 2000 gallons	\$17.95 \$18.49
	Next 1000 gallons	\$4.25 \$4.38
	Next 1000 gallons	\$4.50 \$4.64
	Next 1000 gallons	\$4.70 \$4.84
	Over 5000 gallons, rate per 1000 gallons	\$4.50 \$4.64
Summer Residential Sewer Rates	Residential sewer customers whose sewer bill is based on water consumption, sewer charges shall be based on a maximum water usage of 10,000 gallons for the months of May, June, July, & August	
Sanitary Sewer Rates for customers not connected to City water service	Customers shall be charged based on RWD reported water usage	

Surcharges for Industrial Wastewater	Surcharge for BOD (Biochemical Oxygen Demand)	\$0.50 per lb.
	Surcharge for TSS (Total Suspended Solids)	\$0.40 per lb.
	Surcharge for FOG (Fats, Oil, Grease)	\$0.65 per lb.
	Surcharge for Nitrogen, Ammonia	N/A
	Table II & III Metals plus Molly	Monitored
Water and Sewer Distribution System Rates	Water Tap ¾-inch Fee	\$875.00 \$1,150.00
	Water Tap 1-inch Fee	\$1,012.50 \$1500.00
	Water Tap 1 ½-inch Fee	\$1,712.50 Not in use
	Water Tap 2-inch Fee	\$1,912.50 \$2,500.00
	ALL WATER TAP FEES ARE IN ADDITION TO THE CURRENT COST OF THE METER. LESS \$75.00 CHARGE FOR ANY NEW WATERLINE WITH AN OPEN DITCH NEW SUBDIVISION WITH PRIOR APPROVAL ONLY). STREET CUT FOR ROAD BORE FEES SHALL BE IN ADDITION TO WATER AND TAP FEES AND EQUAL TO \$6.00 PER INCH/FOOT FOR 2" THROUGH 10" DIAMETER PLUS CURRENT COST OF ENCASEMENT. FEES FOR WATER TAPS OVER 2" AND METER COSTS WILL BE SET BY THE M&O SUPERINTENDENT.	
	Sewer Tap 4-inch Fee	\$931.25 \$3,000
	Sewer Tap 6-inch Fee	\$1,393.75 \$4,000
	Sewer Tap 8-inch Fee	\$1,856.25 \$5,000
	PLUS, A MAINTENANCE FEE OF \$13.00 PER FOOT (FROM TAP TO SERVICE LINE EXCESSIVE DEPTH FEE \$13.00 PER LINEAR FOOT FOR EACH 5 FEET OR PORTION THEREOF LESS \$75.00 CHARGE FOR ANY NEW SEWER LINE WITH AN OPEN DITCH ALL USERS CONNECTED TO A SEWER LINE EXTENSION WHICH IS FUNDED IN PART BY THE CITY OF DURANT, EITHER BY CASH EXPENDITURE OR THE FURNISHING OF LABOR IN CONSTRUCTING SAID EXTENSION, SHALL PAY A CONNECTION FEE OF \$1061.00 FOR CONNECTING TO SAID SEWER LINE EXTENSION	
	Subdivision Development Water/Sewer Connection Inspection	\$188.00 per tap
	Water Main and Sub Main Installation Permit Fee	\$100.00
	Water Main and Sub Main Installation Plan Review	\$50.00 per hour
	Water Main and Sub Main Installation Testing	\$50.00 per hour
	Water Main and Sub Main Installation Inspection	\$50.00 per hour
	Collection Line Cleaning (Excessive Grease)	\$125.00 per hour
	Meter On/Off After Hours	\$50.00 \$100.00
	Pop Off Valve Installation & Inspection	\$38.00
Deposits	Residential Water/Sewer and Garbage	\$100.00
	Residential Garbage (only)	\$85.00
	Commercial Accounts	\$300.00
Miscellaneous Fees	Penalty if not paid by the due date (10% of the balance)	10%
	Nonpayment fee if not paid by 5:00 p.m. before the cut-off day &Past Due must be paid before services	\$50.00
	Transfer Fee	\$25.00 \$30.00
	Clean Up Fee (5 business day clean-up for property owner/landlord)	\$25.00
	Hydrant Meter	\$1,350.00 deposit
	Hydrant Meter Monthly Fee	\$75.00
	Tampering with Meter Fee	\$100.00
	Bacteriological Total Coliform Water Testing - 1 sample	\$31.25 \$36.00
	Bacteriological Total Coliform Water Testing - 2 samples or more	\$25.00 \$36.00
	Bacteriological Total Coliform Water Testing – 2 or more samples	\$36.00
	Accurate Labs	\$40.00
	Friday Test Date	\$90.00
	ODEQ	\$29.65
	ERT	\$50.00

	ERT- 2 or more	\$30.00 per test
	Industrial Pretreatment Wastewater Discharge Permit Application Fee	\$312.50
	Annual Industrial Pretreatment Permit Fee	\$125.00
	Industrial Pretreatment Permit Modification Fee	\$31.25
	Accidental Discharge Procedure/Construction Plan Review	\$31.25 per plan
	Industrial Pretreatment Appeal Filing Fee	\$31.25
	Routine Pretreatment Facility Inspection	\$93.75
	Requested Pretreatment Facility Inspection	\$125.00
	Industrial Pretreatment Onsite Consultations	\$50.00
	Night, Weekend, Holiday Pretreatment Inspection Fee	\$93.75
	After Hours Industrial Visit	\$62.50
	Industrial Pretreatment Grab Sample Collection	\$31.25
	Industrial Pretreatment 24-hour Composite Sample Collection	\$31.25
	Industrial Pretreatment Analytical Testing/Shipping	Actual Cost
	Industrial Pretreatment Code Enforcement Administrative Fee	\$250.00
	Excessive Strength FOG Surcharge	\$0.65 per lb.
	Excessive Strength BOD Surcharge	\$0.50 per lb.
	Excessive Strength TSS Surcharge	\$0.40 per lb.
	Commercial Septic Disposal Permit	\$312.50
	Commercial Septic Waste Disposal Discharge	\$125.00 flat rate or \$0.05/gallon (whichever is greater)



The City of Durant

Memorandum

Date: 6/23/2023
To: Mayor and City Council
From: Michael Simulescu, Advisory Board Member
Re: Discussion, Consideration and Possible Action to Approve a Sewer Line Extension

A Developer has asked to extend a sewer line that is in the county. The Developer built some duplexes on West Wilson Street approximately two years ago and was permitted to build a sewer line and connect it to the city sewer. He is now wanting to build more duplexes and is asking to tie a sewer line into the line he tied into City sewer approximately two years ago.

Council Information / Action Requested

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. Wilson St Durant Sewer Plans 8.22.22 (6) (1)

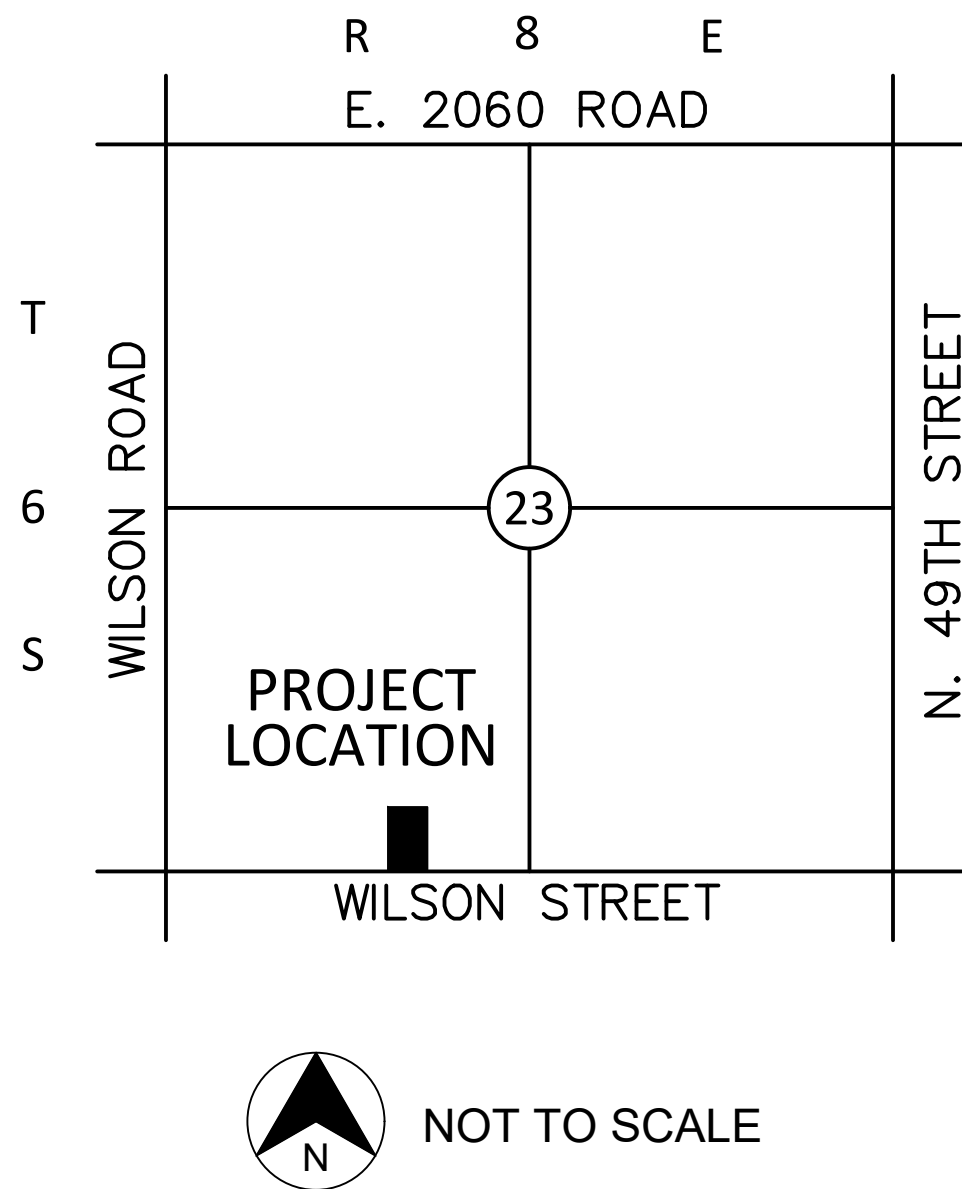
SUMMARY OF QUANTITIES				
ITEM #	ITEM	UNIT	QUANTITY	AS-BUILT
1.	8" SANITARY SEWER PIPE	L.F.	719	
2.	MANHOLE - COMPLETE 0'-6"	E.A.	3	
3.	0' - 8' TRENCH	L.F.	651	
4.	8' - 10' TRENCH	L.F.	45	
5.	10' - 12' TRENCH	L.F.	23	
6.	CRUSHED ROCK BEDDING	C.Y.	119	
7.	LEAKAGE TESTING	L.S.	1	
8.	DEFLECTION TESTING	L.S.	1	
9.	MANHOLE TESTING	L.S.	1	
EROSION CONTROL QUANTITIES (BY CONTRACTOR)				
1.	SILT FENCE	L.F.	740	

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8.	DEFLECTION TESTING	L.S.	1	
9.	MANHOLE TESTING	L.S.	1	
EROSION CONTROL QUANTITIES (BY CONTRACTOR)				
1.	SILT FENCE	L.F.	740	

BEING PART OF THE SW $\frac{1}{4}$, SECTION 23, TOWNSHIP 6 SOUTH,
RANGE 8 EAST
CITY OF DURANT, BRYAN COUNTY, OKLAHOMA

[illegible]

	BOUNDARY LINE		EX. POWER POLE
	RIGHT OF WAY LINE		PROP. POWER POLE
	EASEMENT LINE		EX. TELEPHONE PED.
	EXISTING CONCRETE CURB AND GUTTER		EX. TELEPHONE MANHOLE
	PROPOSED CONCRETE CURB AND GUTTER		EX. TRAFFIC SIGNAL LIGHT
	PROPOSED FIRE LANE STRIPING		EX. TRAFFIC CONTROL BOX
	OVERHEAD ELECTRIC		EX. FLAG POLE
	UNDERGROUND ELECTRIC		EX. YARD LIGHT
	GAS LINE		EX. GREASE TRAP
	UNDERGROUND TELEPHONE		EX. SS MANHOLE
	UNDERGROUND FIBER OPTIC		PROP. SS MANHOLE
	SANITARY SEWER		EX. GAS METER
	WATERLINE		PROP. GAS METER
	BENCHMARK		EX. ELECT. MANHOLE
			EX. STORM MANHOLE

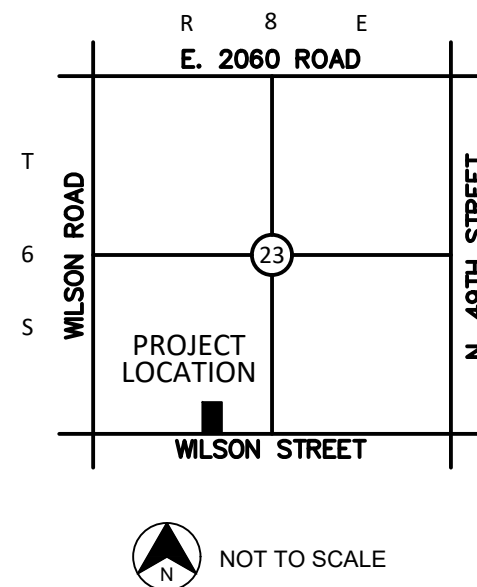


GENERAL NOTES:

1. THE CONTRACTOR SHALL SATISFY HIMSELF CONCERNING THE ACCURACY OF ALL MEASUREMENTS BEFORE CONSTRUCTING ANY PERMANENT STRUCTURE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH SURFACE AND SUB-SURFACE CONDITIONS. THE BASE BID AS SHOWN IN THE PROPOSAL SHALL INCLUDE COSTS FOR UNCLASSIFIED EXCAVATING OF EARTH AND ROCK, FOR DE-WATERING AND STABILIZING UNSUITABLE SOILS SUCH AS QUICKSAND OR OTHER UNSUITABLE MATERIALS AND FOR ANY OTHER HAZARD THAT MAY BE ENCOUNTERED.
3. ALL SANITARY SEWER TRENCHES BETWEEN LOTS AND IN STREET RIGHT-OF-WAY SHALL BE BACKFILLED IN ACCORDANCE WITH CITY OF DURANT STANDARD SPECIFICATIONS FOR SANITARY SEWERS.
4. MANHOLE TOP OF RIM ELEVATIONS SHOWN IN THE PLANS ARE APPROXIMATE ONLY. CONSTRUCT MANHOLES WITH NECESSARY HEIGHT TO LEAVE THE RIM 0.50 FEET ABOVE THE FINISHED GRADE OR 3" ABOVE THE TOP OF CURB.
5. CRUSHED ROCK SHALL BE USED ONLY FOR BEDDING OF ALL PIPES. LOCATIONS WHERE CRUSHED ROCK IS USED MUST BE SHOWN ON THE WYE SHEETS. CRUSHED ROCK TICKETS SHALL BE TURNED INTO CEDAR CREEK CONSULTING IN ORDER TO RECEIVE PAYMENT. THE MAXIMUM PAY QUANTITY FOR CRUSHED ROCK THAT QUANTITY REQUIRED TO FILL A NEAT MINIMUM WIDTH DITCH, LISTED IN THE TRENCH WIDTH TABLE, FROM 6" BELOW THE FLOWLINE OF THE PIPE TO 6" ABOVE THE TOP OF PIPE.
6. SAND BACKFILL SHALL BE PLACED IN ALL DITCHES UP TO THE GROUND LEVEL WHERE LINES CROSS UNDER PROPOSED OR EXISTING PAVING. SAND BACKFILL SHALL BE COMPACTED BY WATER CONSOLIDATION. THE MAXIMUM PAY QUANTITY FOR SAND BACKFILL IS THAT QUANTITY REQUIRED TO FILL A NEAT MINIMUM WIDTH DITCH, LISTED IN THE TRENCH WIDTH DETAIL, FROM THE FLOWING OF THE PIPE TO THE PAVEMENT SUBGRADE ELEVATION, TO 5' BACK OF CURB ON EACH SIDE OF THE STREET. ANY ADDITIONAL SAND REQUIREMENTS ARE CONSIDERED INCIDENTAL. IN ORDER TO RECEIVE PAYMENT FOR SAND, THE DELIVERY TICKETS MUST BE ATTACHED TO THE INVOICE FORWARDED TO CEDAR CREEK CONSULTING FOR REVIEW.
7. ALL FILL AREAS TO BE 90% STANDARD PROCTOR DENSITY AND SHALL BE PLACED AND COMPACTED IN SIX (6") INCH LIFTS FOR HAND-TAMPED EQUIPMENT AND THIRTY (30") INCH LIFTS FOR SELF-PROPELLED OR POWER-DRIVEN EQUIPMENT TO THE FOLLOWING MINIMUM PERCENT OF STANDARD PROCTOR DENSITY OR RELATIVE DENSITY AS DETERMINED BY ASTM D-698. "TESTS FOR MOISTURE-DENSITY RELATIONS OF SOILS AND SOIL-AGGREGATE MIXTURES". AND ASTM D-2049 "TESTS FOR RELATIVE DENSITY OF COHESIONLESS SOILS". RESPECTIVELY. ASTM-D698 TEST SHALL BE CONDUCTED ON COHESIVE OR FINE-GRAINED SOILS, WHERE ASTM TEST D-2049 SHALL BE PERFORMED ON COHESIONLESS (GRANULAR) SOILS. COHESIVE BACKFILL MATERIAL SHALL REACH THE INDICATED COMPACTION LEVELS AT PLUS OR MINUS THREE (3%) PERCENT OF OPTIMUM MOISTURE CONTENT. THE LIFT THICKNESS SHALL BE REDUCED, IF NECESSARY, TO MEET THE COMPACTION REQUIREMENTS SPECIFIED HEREIN.
8. ALL WORK AND/OR MATERIALS NOT CLASSIFIED AS A "CONTRACT PAY ITEM" SHALL BE CONSIDERED INCIDENTAL AND THE COST THEREOF SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS WHICH ARE CLASSIFIED FOR PAYMENT.
9. ALL SANITARY SEWER BY-PASS LINES SHALL BE FREE FROM ANY LEAKS AS TO ELIMINATE CONTAMINATION DURING BY-PASS OPERATIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OR REPAIR OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROMPT REPLACEMENT AND/OR REPAIR OF ALL TRAFFIC CONTROL DEVICES AND APPURTENANCES DAMAGED DUE TO CONSTRUCTION.
12. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
13. A STORM WATER DISCHARGE PERMIT IS REQUIRED BEFORE ANY LAND DISTURBING ACTIVITY CAN BEGIN.
14. CONSTRUCTION ACTIVITIES THAT RESULT IN LAND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE (1) ACRE, OR LESS THAN ONE (1) ACRE IF THEY ARE A PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT AT LEAST ONE (1) ACRE MUST ALSO OBTAIN A PERMIT FROM ODEQ (FORM 605-002a) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. THIS MEANS THAT LAND DISTURBING OF ONE (1) ACRE OR MORE MUST PERMIT WITH ODEQ AND THE CITY OF DURANT STORM WATER QUALITY.
15. 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.
16. FINAL CLEAN UP - UPON COMPLETION OF THE WORK AND BEFORE ACCEPTANCE AND FINAL PAYMENT WILL BE MADE, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL MACHINERY AND EQUIPMENT, AND ANY SURPLUS AND DISCARD MATERIALS, RUBBISH, TEMPORARY STRUCTURES AND STUMPS OR PORTIONS OF TREES. MATERIALS CLEARED FROM THE SITE MUST BE DISPOSED OF SATISFACTORILY.



LOCATION MAP:



PROJECT:

WILSON
STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
DRAWING DATE: 08.22.22
ISSUE DATE: 08.22.22

SEAL:



SUBMITTAL:

PERMIT SET

REVISIONS:

[illegible]

MARK	DATE	DESCRIPTION
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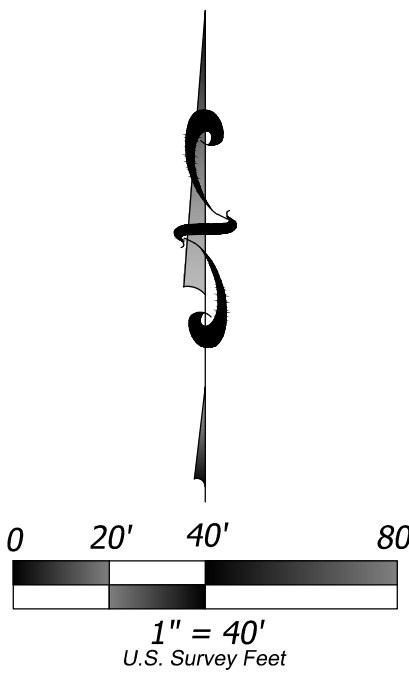
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DRAWING TITLE:

COVER SHEET

SHEET:

C0.00

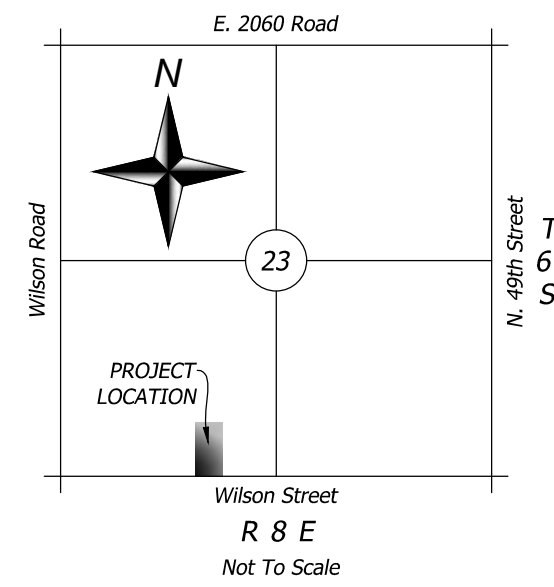


Northwest Corner of the SW/4
Sect. 23, T6S, R8E, 14M
Found 1/4" Iron Pin
Matching OCCR April 4, 2013

Calculated Northeast Corner of the SW/4
Sect. 23, T6S, R8E, 14M

North Quarter Corner of
Sect. 23, T6S, R8E, 14M
Found 3/8" Iron Pin
Matching OCCR April 26, 2018

East Quarter Corner of
Sect. 23, T6S, R8E, 14M
Found 1/4" Iron Pin
Matching OCCR January 19, 2000



UTILITY NOTE

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown compromise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that utilities are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.



LEGEND	
POWER POLE	GAS METER
LIGHT POLE	GAS VALVE
GUY ANCHOR	GAS MASKER
ELECTRIC METER	OIL PIPELINE MARKER
ELECTRIC BOX	MAIL BOX
ELEC. TRANSFORMER	SIGN
ELEC. MANHOLE	FLAG POLE
ELEC. PEDESTAL	FIRE HYDRANT
ELEC. PULL BOX	WATER MANHOLE
SPOT LIGHT	WATER METER
SANITARY SEWER MANHOLE	DOWN SPOUT
SANITARY SEWER CLEANOUT	AIR CONDITIONER
STORM SEWER MANHOLE	TELEPHONE RISER
TELEPHONE RISER	TRAFFIC SIGNAL
TELEPHONE MANHOLE	TRAFFIC SIGNAL BOX
TELEPHONE MARKER	TRAFFIC SIGNAL PULL BOX
TELEPHONE PULL BOX	GREASE TRAP
FIBER OPTIC MARKER	KEY PAD
FIBER OPTIC PULL BOX	SECTION CORNER
CABLE TV PEDESTAL	QUARTER CORNER
CABLE MARKER	SET IRON PIN W/CAP
CABLE TV PULL BOX	SET MAG NAIL W/WASHER
IRRIGATION CONTROL VALVE	FOUND MONUMENT
SPRINKLER HEAD	RIGHT OF WAY MARKER
BOLLARD	YARD HYDRANT/SPOCKET
FIRE DEPARTMENT CONNECT	BENCHMARK
PROPANE TANK	WELLHEAD
WATER LINE	SATELLITE DISH
GAS LINE	CHAIN LINK FENCE
SANITARY SEWER LINE	WOOD PANEL FENCE
TELEPHONE LINE	MASONRY FENCE
ELECTRIC LINE	IRON FENCE
OVERHEAD POWERLINE	FIBER OPTIC LINE
BARBED WIRE FENCE	LOT LINE
S.I.P.-SET IRON PIN	EASEMENT LINE
I.P.-FOUND IRON PIN	SECTION LINE
H/C-HANDICAP	
R/C-REINFORCED CONCRETE PIPE	
U/E-UTILITY EASEMENT	

NOTE: ALL MONUMENTS SET ARE CAPPED 1/2" IRON PINS OR MAG NAILS WITH WASHERS BOTH BEING STAMPED "GOLDEN CA 7365" UNLESS NOTED OTHERWISE

Southwest Corner of the SW/4
Sect. 23, T6S, R8E, 14M
Found 1/4" Pipe
Matching OCCR May 8, 2013

Southwest Corner of the SW/4
Sect. 23, T6S, R8E, 14M
Found Brass ODOT Monument
Matching OCCR March 21, 2011

LEGAL DESCRIPTION

The E/2 SW/4 SE/4 SW/4 of Section 23, Township 6 South, Range 8 East of the Indian Base and Meridian, Bryan County, Oklahoma, according to the Government Survey thereof, Containing 218.095 Sq. Ft. or 5.0067 Acres, more or less.

GENERAL NOTES

- Said described property in, by graphical plotting only, located within an area having a Zone Designation "X" Unshaded by FEMA, on Flood Insurance Rate Map No. 40013C0170E, dated June 2, 2011.
- The Property has direct access to Wilson Street, both being a dedicated public street.
- There is no observed evidence of current earth moving work, building construction or building additions.
- There are no proposed changes in street right of way lines, to the best of my knowledge. There is no observed evidence of recent street or sidewalk construction or repairs.
- There is no observed evidence of site use as a solid waste dump, sump or sanitary landfill.
- A assumed bearing of South 89° 04' 18" West as the South line of the SW/4 per Oklahoma State Plane Grid South was used as the basis of bearing for this survey.
- This survey was conducted without the benefit of a Title Commitment, there may be matters benefiting or burdening the subject property unknown to the surveyor.
- All unit of measurements are US Survey feet (Ground).

TOPOGRAPHIC SURVEY

I, Troy Dee, certify that this project was completed under my direct and responsible charge from an actual survey made under my supervision; that this ground survey was performed at the 95% percent confidence level to meet Federal Geographic Data Committee Standards; that this survey was performed to meet the requirements for a topographic/planimetric survey and meets the Oklahoma Minimum Technical Standards for the practice of land surveying as adopted by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors. The original data was obtained on July 22, 2022; that the survey was completed on August 2, 2022; that contours shown as broken lines may not meet the stated standard; and all coordinates are based on Oklahoma State Plane Grid South "NAD 83" and realization all elevations are based on NAVD 88.



August 2, 2022

TOPOGRAPHIC SURVEY OF WILSON STREET 5 ACRES

Prepared By

**GOLDEN
LAND SURVEYING**

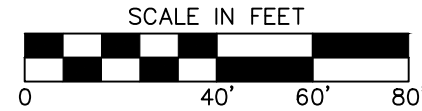
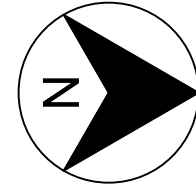
4131 N.W. 122nd St., Suite 100, Oklahoma City, Oklahoma 73120

C.A.# 7263 / Exp. Date =6/30/2024

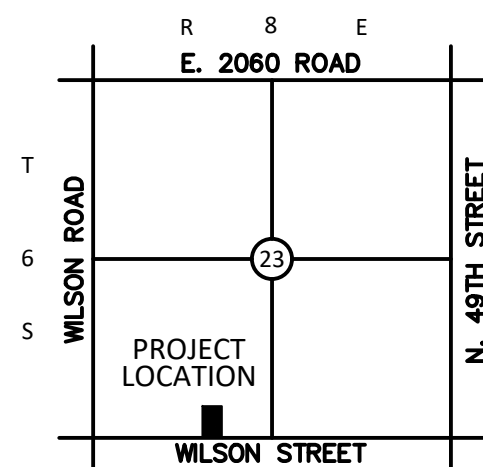
Telephone: (405) 802-7883 Email: troy@goldenls.com

Drawn by: SD
Plot Date: August 2, 2022 Paper Size: 24"x36"
GLS Job No.: 221686

Sheet 1 Of 1



LOCATION MAP:



PROJECT:

WILSON STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
DRAWING DATE: 08.22.22
ISSUE DATE: 08.22.22

SEAL:



SUBMITTAL:

PERMIT SET

REVISIONS:

MARK	DATE	DESCRIPTION

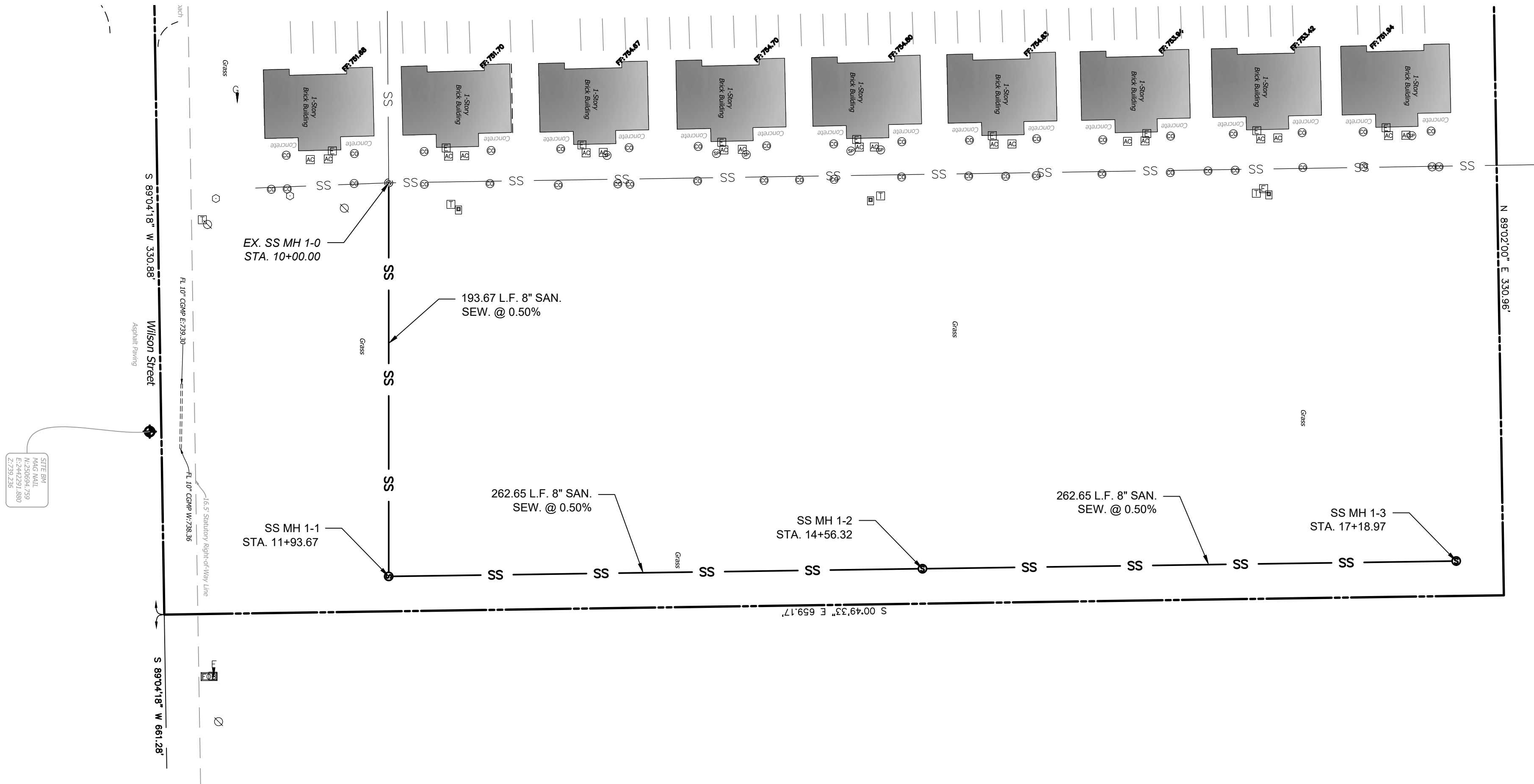
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DRAWING TITLE:

SANITARY SEWER
PLAN & PROFILE

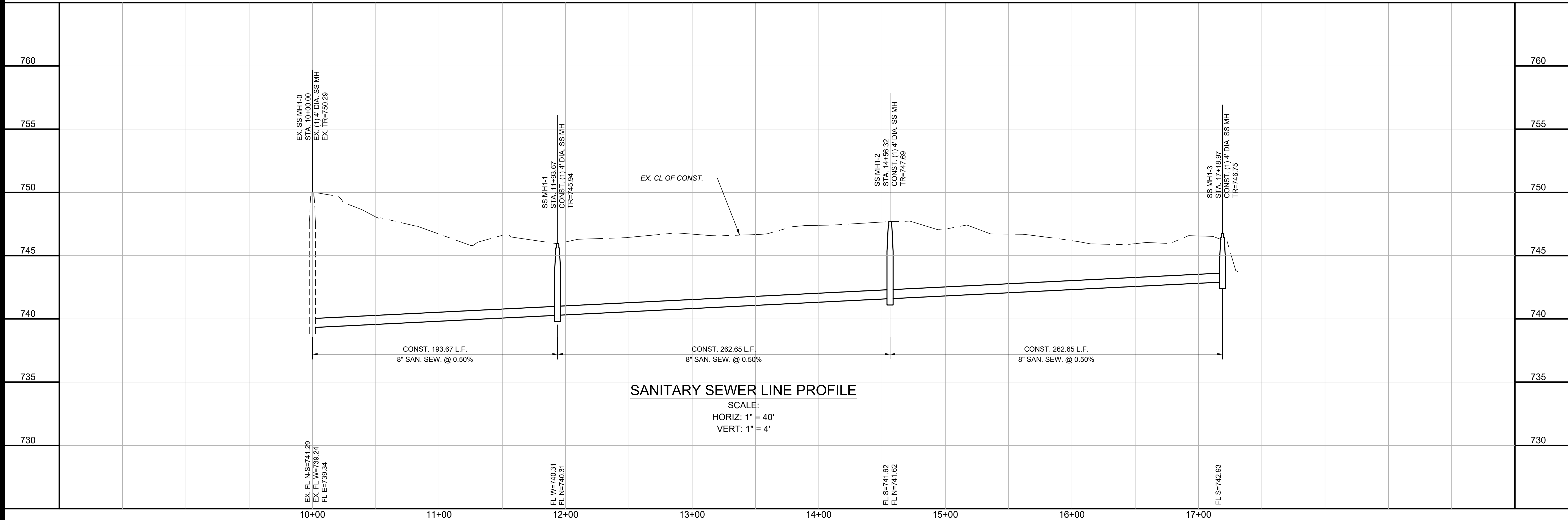
SHEET:

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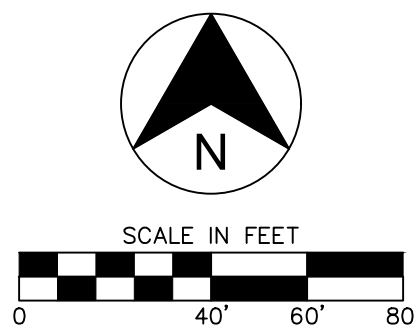
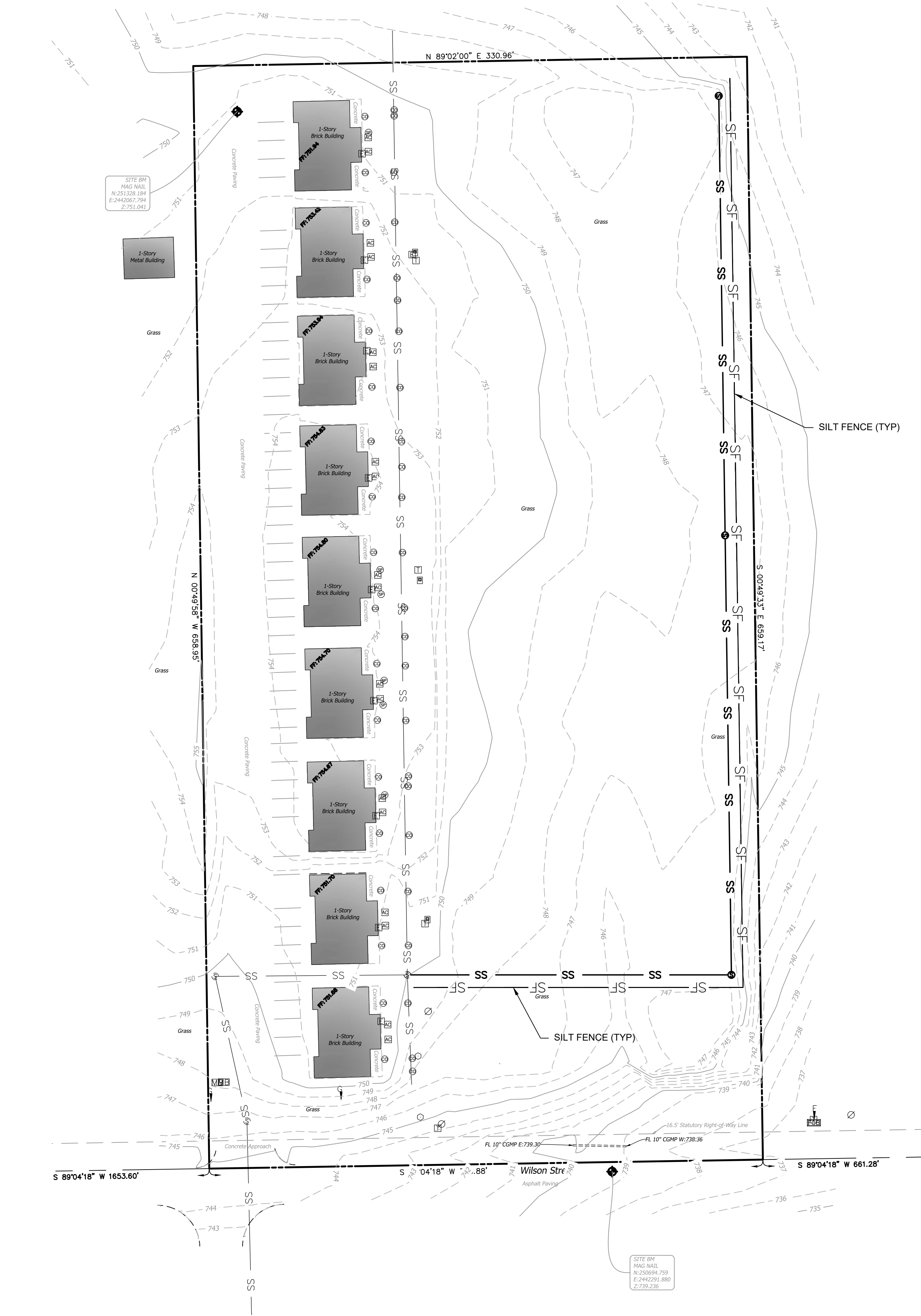


SANITARY SEWER LINE PLAN
SCALE: 1" = 40'

- NOTES:
- FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 - CONTRACTOR SHALL FIELD LOCATE AND VERIFY UTILITY CROSSINGS PRIOR TO CONSTRUCTION.



SANITARY SEWER LINE PROFILE
SCALE:
HORIZ: 1" = 40'
VERT: 1" = 4'



NOTE: CONTRACTOR SHALL ENSURE WILSON STREET TO REMAIN FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND REMAIN PROTECTED DURING CONSTRUCTION.

EROSION CONTROL NOTES

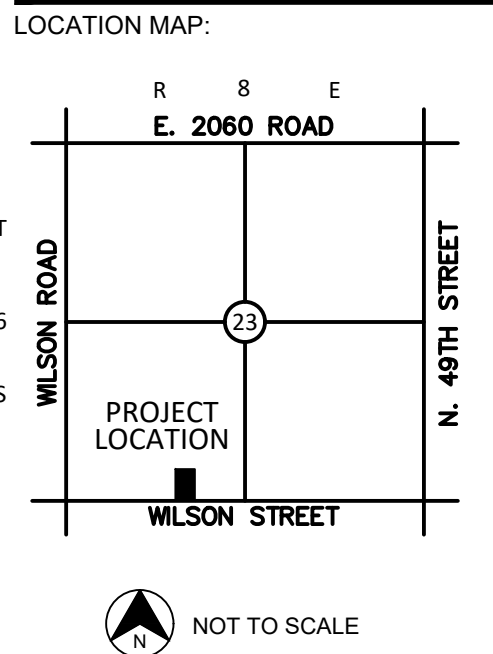
- A. SEDIMENT BASINS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF OKLAHOMA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- C. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.
- D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- E. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- F. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- G. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- H. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- I. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- J. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- K. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- L. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- N. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- O. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- P. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- Q. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE PLAN AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- R. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- S. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
- T. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- U. A 3' STRIP OF SOD SHALL BE PLACED ALONG THE EDGE OF ALL PAVING TO ACT AS A SEDIMENT BUFFER AND AID IN THE ESTABLISHMENT OF VEGETATION.

LEGEND

- BOUNDARY LINE
- RIGHT OF WAY LINE
- EASEMENT LINE
- EXISTING CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED FIRE LANE STRIPING
- OHE OVERHEAD ELECTRIC
- UGE UNDERGROUND ELECTRIC
- GAS GAS LINE
- UGT UNDERGROUND TELEPHONE
- FO UNDERGROUND FIBER OPTIC
- SS SANITARY SEWER
- 8"W WATERLINE
- BENCHMARK
- FIRE HYDRANT
- WATER VALVE
- EX. WATER METER PIT
- EX. WATER METER
- PROP. WATER METER
- EX. SPRINKLER VALVE
- EX. AUTO SPRINKLER
- EX. ELECT. PEDESTAL
- EX. ELECT. TRANSFORMER
- EX. ELECT. METER
- PROP. ELECT. METER
- EX. AIR CONDITIONER
- EX. SIGNAGE
- EX. LIGHT POLE
- PROP. LIGHT POLE
- EX. BOLLARD
- PROP. INLETS (SEE GRADING PLAN FOR TYPE)
- LIMITS OF DISTURBANCE
- SILT FENCE
- TEMPORARY DIVERSION DIKE
- SODDING
- INLET PROTECTION
- CONCRETE WASHOUT AREA
- EX. POWER POLE
- PROP. POWER POLE
- EX. TELEPHONE PED.
- EX. TELEPHONE MANHOLE
- EX. TRAFFIC SIGNAL LIGHT
- EX. TRAFFIC CONTROL BOX
- EX. FLAG POLE
- EX. YARD LIGHT
- EX. GREASE TRAP
- EX. SS MANHOLE
- PROP. SS MANHOLE
- EX. GAS METER
- PROP. GAS METER
- EX. ELECT. MANHOLE
- EX. STORM MANHOLE

SEQUENCE OF CONSTRUCTION

- PHASE 1
 - 1. A PRE-CONSTRUCTION MEETING SHALL BE HELD BY THE GENERAL CONTRACTOR'S MANAGER, AND THE OPERATOR'S ENGINEER PRIOR TO LAND DISTURBING ACTIVITIES.
 - 2. PREPARE AND PULL ALL NECESSARY PERMITS.
 - 3. CONSTRUCT TEMPORARY CONSTRUCTION EXITS AT LOCATIONS SHOWN ON THE SWPPP PLANS AND PREPARE TEMPORARY PARKING AND STORAGE AREA. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WELL WASH, CONCRETE WASHOUT, MASONS AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGE IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
 - 4. CONSTRUCT THE SILT FENCES ON THE SITE. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMP'S. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORMWATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
 - 5. INSTALL PUBLIC WATER, SEWER AND BOX CULVERT
 - 6. DEMO, CLEAR AND GRUB THE SITE.
 - 7. BEGIN GRADING THE SITE.
 - 8. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
 - 9. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY SEEDED AND WATERED.
- PHASE 2
 - 1. INSTALL UTILITIES, UNDER DRAINS, STORM SEWERS, CURB AND GUTTERS.
 - 2. INSTALL INLET PROTECTION DEVICES.
 - 3. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
 - 4. FINALIZE PAVEMENT SUBGRADE PREPARATION.
 - 5. INSTALL BASE MATERIAL AS REQUIRED FOR PAVEMENT.
 - 6. PAVE LOT.
 - 7. REMOVE TEMPORARY CONSTRUCTION EXITS ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THESE AREAS. (THESE AREAS TO BE PAVED LAST)
 - 8. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY SEEDED AND WATERED.
 - 9. FINE GRADE AND INSTALL PERMANENT SEEDING AND PLANTINGS.
 - 10. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS DEvised. (ONLY IF SITE IS STABILIZED)
 - 11. REMOVE INLET PROTECTIONS AROUND INLETS AND MANHOLES NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.



PROJECT: WILSON STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
DRAWING DATE: 08.22.22
ISSUE DATE: 08.22.22

SEAL:

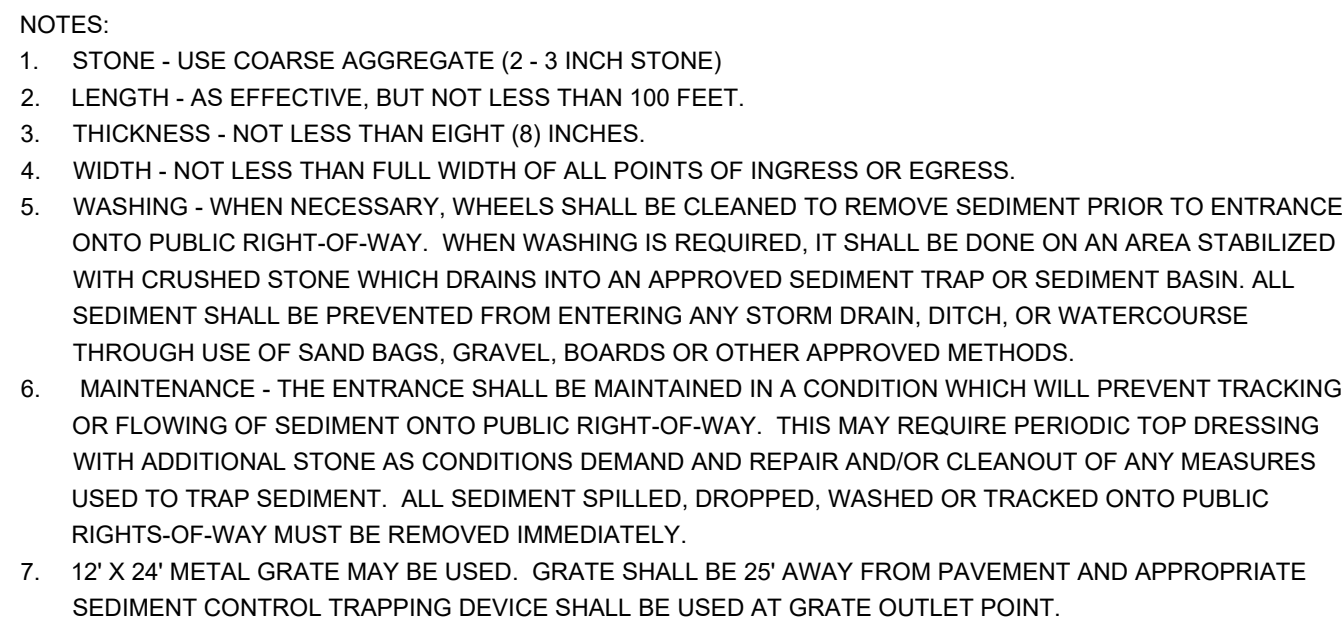
SUBMITTAL: PERMIT SET

REVISIONS:

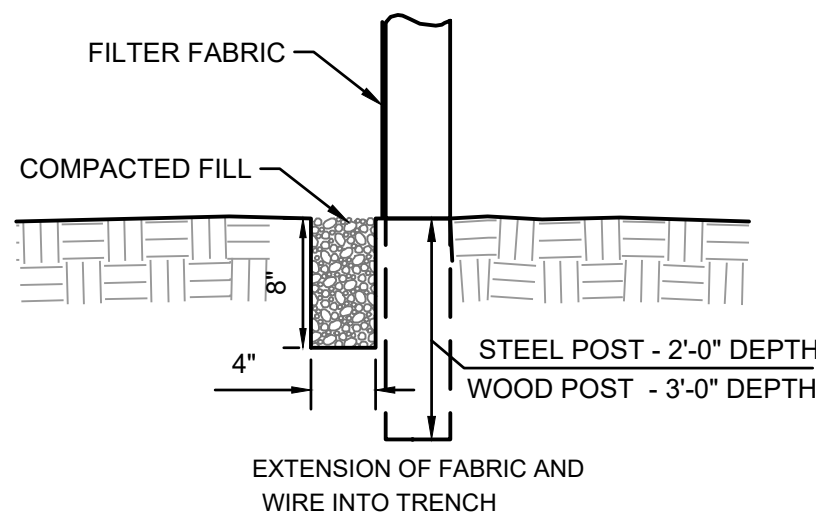
MARK	DATE	DESCRIPTION

DRAWING TITLE: EROSION CONTROL PLAN

SHEET: C2.00

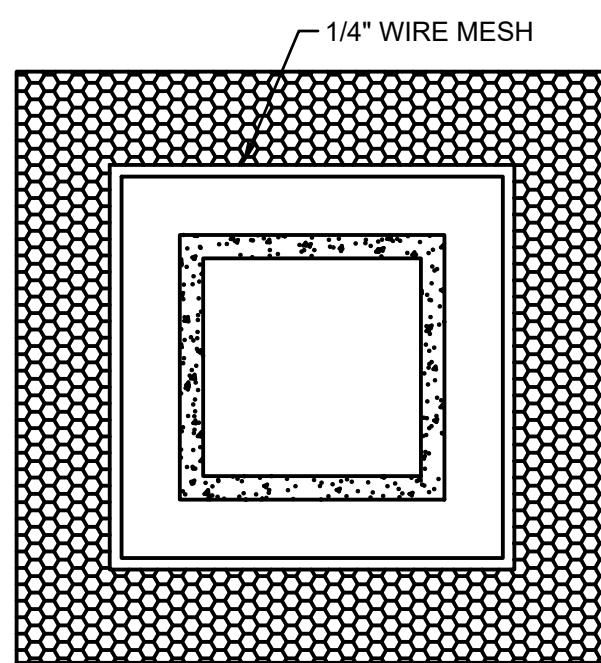


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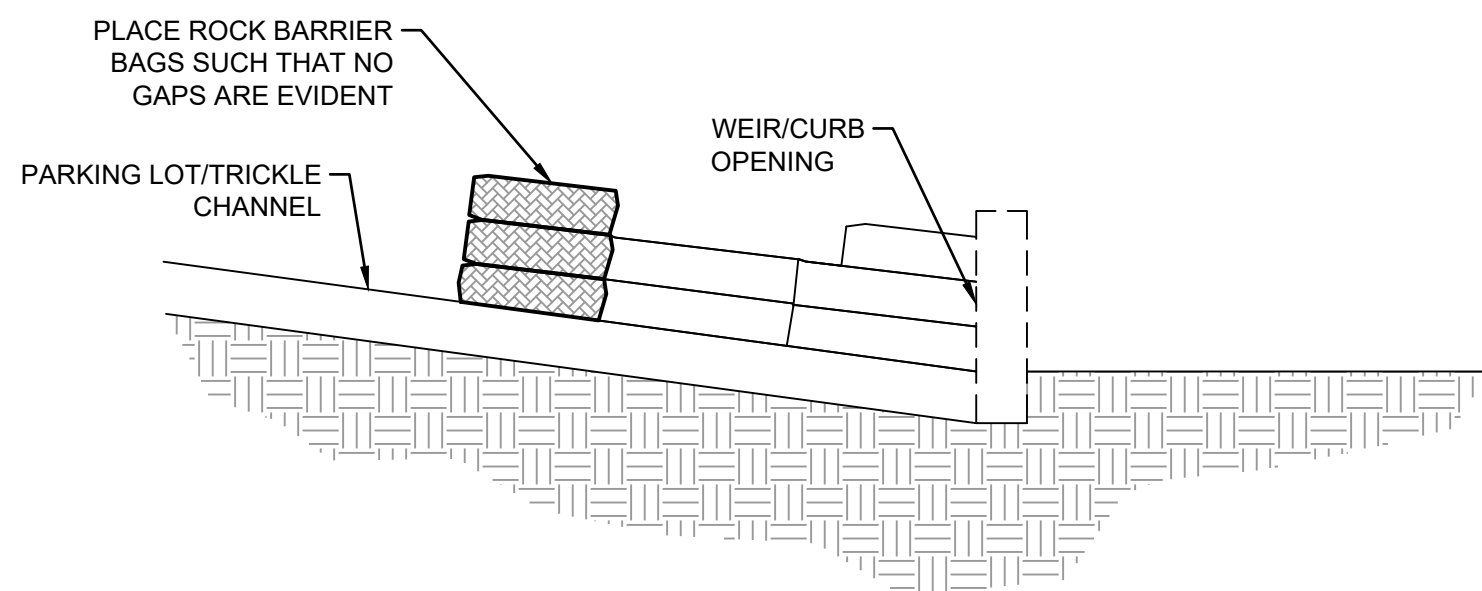
1. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE.
3. STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
4. WOOD POST SHALL BE 6'-0" IN HEIGHT AND 3" IN DIAMETER.

NOT TO SCALE



1. SEDIMENT CONTROL STONE SHALL BE 3/4" WASHED STONE.
2. WIRE MESH SHALL BE HARDWARE CLOTH 23 GAUGE MIN. AND SHALL HAVE 1/4 INCH MESH OPENINGS.
3. TOP OF WIRE MESH SHALL BE A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.
4. STEEL POST SHALL BE 5 FT. IN HEIGHT, BE INSTALLED 1.5 FT. DEEP MINIMUM, AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
5. WOOD POST SHALL BE 6 FT. IN HEIGHT, BE INSTALLED TO 1.5 FT. DEEP MINIMUM, AND BE 3 INCHES IN DIAMETER.
6. POST SPACING SHALL BE A MAXIMUM OF 4 FT.

NOT TO SCALE

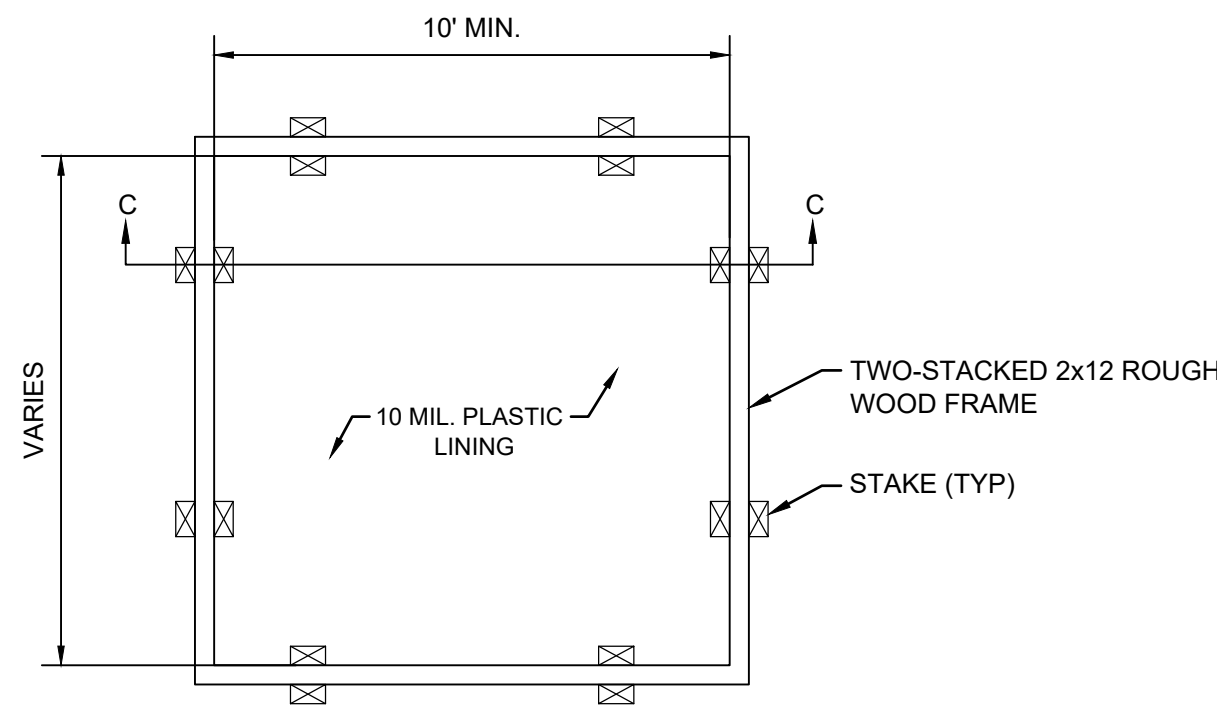


1. PLACE CURB TYPE ROCK BAG BARRIER ON GENTLY SLOPING PAVING, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
3. LEAVE ON ROCKBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

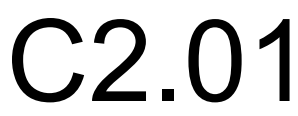
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NOT TO SCALE



TYPE 'ABOVE GRADE' WITH WOOD PLANKS



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03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-00
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
VITRIFIED CLAY PIPE (VCP) MINIMUM PIPE DESIGN ASTM C-700		
PIPE NOMINAL SIZE (INCHES)	MINIMUM THREE-EDGE BEARING STRENGTH (LB/FT)	MAXIMUM DEPTH OF COVER (FT)
4	2000	25
6	2000	25
8	2200	20
10	2400	18
12	2600	16
15	2900	15
18	3300	14
21	3850	14
24	4400	14
27	4700	13
30	5000	13
33	5500	13
36	6000	13
39	6500	13
42	7000	12

VITRIFIED CLAY PIPE DESIGN		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-04
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF OKLAHOMA CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS.		
2. ALL WORK NOT CLASSIFIED AS A CONTRACT PAY ITEM SHALL BE CONSIDERED AS AN INCIDENTAL AND NOT PAID FOR DIRECTLY.		
3. ALL EXCAVATION UNDER EXISTING PAVEMENT SHALL BE BACKFILLED WITH CRUSHER RUN ROCK. ALL EXCAVATION UNDER FUTURE PAVEMENT SHALL BE BACKFILLED WITH SAND.		
4. PIPE LEAKAGE TESTS SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE OKLAHOMA CITY SEWER REQUIREMENTS. LEAKAGE SHALL NOT EXCEED 50 GALLONS PER INCH OF NORMAL PIPE PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.		
5. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST THIRTY (30) DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF MORE THAN FIVE (5%) PERCENT. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL AND MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO NINETY-FIVE (95%) PERCENT OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.		
6. POLYVINYL CHLORIDE (PVC) PIPES SHALL CONFORM TO ASTM F-794 FOR OPEN PROFILE PIPE AND ASTM F-1803 FOR CLOSED PROFILE PIPE. REGARDLESS OF SIZE, OPEN PROFILE WALL PIPE WILL BE ALLOWED ONLY ON SECTIONS OF PIPE WHERE THERE ARE NO APPARENT SERVICE CONNECTIONS.		
7. SPECIAL SANITARY SEWER PIPE SHALL BE REQUIRED TO SATISFY MINIMUM HORIZONTAL AND VERTICAL CLEARANCE REQUIREMENTS FROM WATERLINES, WELLS AND PETROLEUM STORAGE TANKS, AS ESTABLISHED BY THE OKLAHOMA STATE DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ).		
8. SPECIAL PVC PIPE SHALL CONFORM TO ASTM D-2241 AND SDR 32.5 FOR SIZES FOUR (4") INCHES TO THIRTY-SIX (36") INCHES, OR AWWA C-900 AND AWWA C-905; WITH A MINIMUM DR RATING OF DR18 FOR PIPE SIZES FOUR (4") INCHES TO TWELVE (12") INCHES AND A MINIMUM DR RATING OF DR32.5 FOR PIPE SIZES GREATER THAN TWELVE (12") INCHES.		
9. DUCTILE IRON PIPE (DIP) SHALL CONFORM TO THE REQUIREMENTS OF AWWA C-151.		
9.1. EXTERIOR COATING -- THE EXTERIOR SURFACES OF DUCTILE IRON PIPE, SPECIFICATIONS AND FITTINGS SHALL BE COATED WITH AN ASPHALTIC COATING IN ACCORDANCE WITH ASTM A746, SECTION 6.1; OF AWWA E-151. THE COATING SHALL HAVE A MINIMUM THICKNESS OF ONE (1) MIL.		
9.2. INTERIOR COATING -- INTERIOR SURFACES OF PIPE AND FITTINGS SHALL BE LINED WITH FORTY (40) MILS OF VIRGIN POLYETHYLENE COMPLYING WITH ASTM D-1248 OR MADISON POLYETHYLENE LINING, CORPORATE II TX-5 MINUTE NUMBER 17115, MANUFACTURED BY MADISON CHEMICALS, INC., CANADA, OR APPROVED EQUAL. THE LINING MATERIALS SHALL BE COMPOUNDED WITH A MINIMUM OF TWO (2%) PERCENT CARBON BLACK TO RESIST ULTRA VIOLET RAYS.		
9.3. THICKNESS -- UNLESS OTHERWISE SPECIFIED, DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS IN THE FOLLOWING TABLE AS SHOWN IN DETAIL S-02.		

GENERAL CONSTRUCTION NOTES		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-01
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
DIP PIPE THICKNESS REQUIREMENTS		
DEPTH OF COVER (feet)	Standard Pressure Class (inches) C-151	Nominal Thickness (inches) C-151
>50' or ≥30'	350	0.25
>20' or ≥25'	350	0.25
>15' or ≥20'	350	0.25
>10' or ≥15'	350	0.25
≤10'	350	0.25
3	350	0.25
4	350	0.25
6	350	0.25
8	350	0.25
10	350	0.25
12	350	0.25
15	350	0.25
18	350	0.25
21	350	0.25
24	350	0.25
27	350	0.25
30	350	0.25
33	350	0.25
36	350	0.25
39	350	0.25
42	350	0.25
45	350	0.25
48	350	0.25
51	350	0.25
54	350	0.25
57	350	0.25
60	350	0.25
63	350	0.25
66	350	0.25
69	350	0.25
72	350	0.25
75	350	0.25
78	350	0.25
81	350	0.25
84	350	0.25
87	350	0.25
90	350	0.25
93	350	0.25
96	350	0.25
99	350	0.25
102	350	0.25

GENERAL CONSTRUCTION NOTES		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-02
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
1. HIGHWAYS		
MINIMUM PIPE CLASSES FOR DIAMETER TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") MEETING THE REQUIREMENTS OF ASTM C-76 SHALL BE AS FOLLOWS:		
MAXIMUM DEPTH OF COVER (FT)	MINIMUM CLASS	
10	III	
15	IV	
25	V	

FOR MAXIMUM DEPTH OF COVER THIRTY FEET (30') PIPES RANGING FROM TWENTY FOUR INCHES (24") TO FIFTY FOUR INCHES (54") IN DIAMETER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ASTM C-655 AND SHALL HAVE THE FOLLOWING MINIMUM THREE-EDGE BEARING STRENGTH FOR 0.01 INCH CRACK (D0.01) IN POUNDS PER LINEAL FOOT PER FOOT OF INSIDE DIAMETER.

PIPE NOMINAL SIZE (INCHES)	D _{0.01} (LB./LINEAL FT./FT. OF INSIDE Ø)
24	3200
27	3050
30	3050
33	3475
36	3475
42	3450
48	3300
54	3125

PIPES RANGING IN DIA. FROM SIXTY INCHES (60") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS V FOR A MINIMUM DEPTH OF COVER OF THIRTY FEET (30') WHEN MANUFACTURED IN ACCORDANCE WITH ASTM C-76.

PIPE NOMINAL SIZE (INCHES)	D _{0.01} (LB./LINEAL FT./FT. OF INSIDE Ø)
24	3300
27	3125
30	3150
33	3575
36	3575
42	3550
48	3400
54	3225
60	3100

DIAMETERS TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS V.

REINFORCED CONCRETE PIPE MINIMUM DESIGN		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-03
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
1. GENERAL -- WHEN CALLED FOR ON THE PLANS OR SPECIFIED, MANHOLES SHALL BE TESTED, BEFORE ACCEPTANCE, BY EITHER PERFORMING EXFILTRATION OR VACUUM TEST. THE ENGINEER SHALL DETERMINE WHICH TEST SHALL BE PERFORMED.		
2. EXFILTRATION TEST -- ALL INCOMING AND OUTGOING LINES (INCLUDING SERVICES) SHALL BE PLUGGED AND THE MANHOLE FILLED WITH WATER UP TO THE BOTTOM OF THE MANHOLE RING. IF THE WATER LOSS EXCEEDS THE MAXIMUM ALLOWABLE AS SHOWN, THE MANHOLE SHALL BE CONSIDERED TO HAVE FAILED THE TEST. THE CONTRACTOR SHALL DRAIN, PERFORM THE NECESSARY REPAIRS AS DIRECTED BY THE ENGINEER, AND THEN RESET THE MANHOLE UNTIL IT PASSES, ALL AT NO ADDITIONAL COST TO THE CITY.		
3. VACUUM TESTING -- ALL INCOMING AND OUTGOING SEWER AND SERVICE LINES SHALL BE PLUGGED. THE PLUGS RESTRAINED AND THE VACUUM TESTER HEAD PLACED ON THE MANHOLE RING AND SEALED. A VACUUM OF TEN (10") INCHES Hg (MERCURY) SHALL THEN BE DRAWN ON THE MANHOLE AND THE TIME MEASURES FOR THE VACUUM TO DROP TO NINE (9") INCHES Hg. THE TIME MEASURED SHALL BE NOT LESS THAN THAT SHOWN ON THE FOLLOWING TABLE.		
Manhole Internal Diameter (feet)		Time Measured (seconds)
4		60
5		60
6		60
7		70

MANHOLE TESTING		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-05
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
TRENCH WIDTH TABLE		
PIPE NOMINAL SIZE (IN.)	MIN. TRENCH WIDTH (FT.)	MAX. TRENCH WIDTH (FT.)
≤ 12	3.00	5.00
15	3.25	5.00
18	3.50	5.00
21	3.75	5.25
24	4.00	6.00
27	4.25	6.25
30	4.50	6.75
33	4.75	8.25
36	5.25	9.00
42	6.25	9.50
48	7.00	11.00
54	8.00	11.50
60	9.00	12.00
66	9.75	13.00
72	10.50	13.00
78	10.50	13.50
84	11.00	14.00
90	11.50	14.50
96	12.00	15.00
102	12.50	15.50

EMBEDMENT MATERIAL

EMBEDMENT MATERIAL IS THE MATERIAL TO BE PLACED FROM A MINIMUM OF SIX-INCHES (6") BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE (HALF THE PIPE DIAMETER) OR TO A MINIMUM OF SIX-INCHES (6") ABOVE THE TOP OF THE PIPE FOR RIGID AND FLEXIBLE PIPES, RESPECTIVELY. THE REMAINING TO BE PLACED OVER THE EMBEDMENT MATERIAL WILL BE CONSIDERED BACKFILL.

MINIMUM MATERIAL REQUIREMENTS

1. GENERAL

EMBEDMENT MATERIAL FOR ALL RIGID AND FLEXIBLE PIPES SHALL BE CRUSHED ROCK MEETING THE REQUIREMENTS EITHER OF ASTM D-2221, CLASS 1A, OR ASTM C-33, NO. 57 OR 67 IN GRADATIONS SHOWN BELOW.

NOMINAL SIEVE REQUIREMENT	PERCENT PASSING	
	ASTM D-2221 CLASS 1A	ASTM C-33 NO. 57
1 1/2" IN.	100%	100%
1" IN.	-	95 TO 100%
3/4" IN.	-	100%
3/8" IN.	-	90 TO 100%
1/2" IN.	-	25 TO 60%
3/4" IN.	-	20 TO 55%
NO. 4	≤ 10%	0 TO 10%
NO. 8	0 TO 5%	0 TO 5%
NO. 20	≤ 5%	-

2. COMPACTION REQUIREMENTS

ALL EMBEDMENT MATERIAL SHALL BE PLACED AND COMPACTED IN SIX INCH (6") LIFTS TO THE FOLLOWING MINIMUM PERCENT OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D-698. TESTS FOR MOISTURE DENSITY RELATIONS OF SOIL - AGGREGATE MIXTURES" AND ASTM D-2049, "TEST FOR RELATED DENSITY OF COHESIONLESS SOILS", RESPECTIVELY.

COMPACTION TEST	COMPACTION REQUIREMENT
STANDARD PROCTOR DENSITY	95%
RELATIVE DENSITY	75%

3. COMPACTION METHODS

ALL EMBEDMENT MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE METHODS DESCRIBED IN PART "3" OF "BACKFILLING REQUIREMENTS"

EMBEDMENT MATERIAL & TRENCH WIDTH TABLE		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-06
OKLAHOMA CITY UTILITIES DEPARTMENT		

SANITARY SEWER STANDARD DETAIL		
1. DESCRIPTION		
BACKFILL IS THAT PORTION OF THE TOTAL TRENCH BACKFILL DOWN TO BUT NOT INCLUDING THE PIPE EMBEDMENT MATERIAL. THE BACKFILL SHALL BE ONLY MATERIAL APPROVED BY THE ENGINEER CONSISTING OF LOOSE EARTH FREE OF CLODS, STONES, ORGANIC MATTER, DEBRIS OR OTHER OBJECTIONABLE MATERIAL. ALL BACKFILLING SHALL BE DONE IN SUCH A MANNER AS NOT TO DISTURB OR DAMAGE THE PIPE OR STRUCTURES OVER OR AGAINST WHICH IT IS BEING PLACED. ANY PIPE OR STRUCTURE DAMAGED OR MOVED FROM ITS PROPER LINE OR GRADE DURING BACKFILLING OPERATIONS SHALL BE OPENED UP AND REPAIRED AND THEN REBACKFILLED AS HEREIN SPECIFIED. THE PLACING OF BACKFILL MATERIAL SHALL NOT BEGIN UNTIL APPROVAL FOR SO DOING HAS BEEN GIVEN BY THE ENGINEER, BUT BACKFILLING ABOUT STRUCTURES OR PORTIONS OF STRUCTURES SHALL BE DONE IMMEDIATELY WHEN SO ORDERED BY THE ENGINEER. THE TOP SURFACE OR OTHER MATERIAL IS REMOVED AND PILED SEPARATELY. SUCH MATERIAL SHALL BE CAREFULLY REPLACED IN A MANNER APPROVED BY THE ENGINEER. THE TOP TWELVE INCHES (12") OF BACKFILL MATERIAL SHALL BE OF AS GOOD OR BETTER QUALITY AS THE ORIGINAL TOP SOIL WHICH WAS REMOVED.		
2. COMPACTION REQUIREMENTS		
ALL BACKFILL SHALL BE PLACED AND COMPACTED IN SIX INCH (6") LIFTS OR HAND-TAMPED EQUIPMENT AND THIRTY INCH (30") LIFTS FOR SELF-PROPELLED OR POWER DRIVEN EQUIPMENT TO THE FOLLOWING MINIMUM PERCENT OF STANDARD PROCTOR DENSITY OR RELATED DENSITY AS DETERMINED BY ASTM D-698, "TESTS FOR MOISTURE-DENSITY RELATIONS OF SOILS AND SOIL AGGREGATE MIXTURES", AND ASTM D-2049, "TEST FOR RELATED DENSITY OF COHESIONLESS SOILS", RESPECTIVELY. ASTM D-2049 SHALL BE PERFORMED ON COHESIONLESS (GRANULAR) SOILS. COHESIVE BACKFILL MATERIAL SHALL REACH THE INDICATED COMPACTION LEVELS AT PLUS OR MINUS THREE PERCENT (3%) OF OPTIMUM MOISTURE CONTENT. THE LIFT THICKNESS SHALL BE REDUCED, IF NECESSARY, TO MEET THE COMPACTION REQUIREMENTS SPECIFIED HEREIN:		
GENERAL LOCATION	PERCENT COMPACTION	
	STANDARD PROCTOR DENSITY ASTM D-698	RELATIVE DENSITY TEST ASTM - 2049
UNDER TRAFFIC AREA OR IMPROVED EXISTING SURFACES	95	75
URBAN & RESIDENTIAL AREAS	90	70
UNDEVELOPED & OTHER AREAS	85	70

BACKFILLING REQUIREMENTS		
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14
MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR		S-07
OKLAHOMA CITY UTILITIES DEPARTMENT		

The City of Oklahoma City Utilities Department Engineering Division		
DATE: 03/14/14		
DRAWN BY: JDS		
CHECKED BY: MWS/EJW		
SCALE: AS SHOWN		
SHEET NUMBER S-STD-01		

SANITARY SEWER STANDARD DETAIL

3. COMPACTION METHODS

COMPACTION METHODS MAY VARY DEPENDING ON THE MATERIAL OR AS APPROVED BY THE ENGINEER

A. COHESIVE MATERIALS

COMPACTION OF COHESIVE MATERIALS MAY BE OBTAINED BY USE OF IMPACT TYPE EQUIPMENT IN CONFINED AREAS, PNEUMATIC TAMPERS AND ENGINE DRIVEN RAMMERS MAY ALSO BE USED. IN RELATIVELY NARROW TRENCHES, SELF-PROPELLED RAMMERS MAY BE USED. IN WIDE TRENCHES, SHEEPSFOOT ROLLERS MAY BE USED.

B. COHESIONLESS MATERIALS

COHESIONLESS MATERIALS ARE GRANULAR MATERIALS CLASSIFIED AS NON-PLASTIC. IN GENERAL, VIBRATORY EQUIPMENT MAY BE USED FOR PROPER COMPACTION. IN CONFINED AREAS, VIBRATORY PLATES MAY BE USED. FOR WIDER TRENCHES, VIBRATORY ROLLERS MAY BE USED.

C. FLOODING OR JETTING

WHEN APPROVED BY THE ENGINEER, MATERIALS MAY ALSO BE COMPACTED OR SETTLED BY FLOODING WHERE ADEQUATE QUANTITIES OF WATER ARE AVAILABLE FROM THE CITY'S WATER SYSTEM, PRIVATELY OWNED PONDS, CREEKS OR OTHER SOURCES LOCATED WITHIN THREE HUNDRED FEET (300') OF THE TRENCH. WATER SHALL BE USED TO PRODUCE A SEMI-FLUID MASS ALONG AND OUT OF THE TRENCH AT STREAM CROSSINGS OR OTHER PLACES OF ABRUPT CHANGES IN GROUND PROFILE. THE CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS WITH THE CITY FOR THE PURCHASE OF WATER FROM THE CITY WATER MAINS, AND WITH OWNERS OF WATER PROCURED FROM PRIVATELY OWNED WATER SOURCES. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED TO THE CONTRACTOR FOR SETTLING THE BACKFILL BY JETTING. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR TRENCH EXCAVATION AND BACKFILL OR OTHER PAY ITEMS THE CONTRACTOR MAY ELECT.

4. COMPACTION REQUIREMENTS

ALL BACKFILL SHALL BE TESTED BY AN APPROVED LABORATORY FOR COMPLIANCE OF THE COMPACTION REQUIREMENTS.

5. SURFACE RESTORATION

UPON COMPLETION OF BACKFILLING PROCEDURES, THE CONTRACTOR SHALL REPLACE ALL SURFACE MATERIALS AND SHALL RESTORE PAVING, CURBING, SIDEWALKS, GUTTERS, SHRUBBERY, FENCES, SOD AND OTHER SURFACES DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION BEFORE WORK BEGAN.

SANITARY SEWER STANDARD DETAIL

FLEXIBLE PIPE INSTALLATION DETAIL (DIP, HDPE, PVC & RFP)

This diagram illustrates the standard installation for flexible pipes. A central circular pipe is shown within a square trench. The trench is filled with bedding material, represented by a pattern of small circles. The top of the trench is covered by a layer of backfill, indicated by a cross-hatch pattern. Dimension lines specify the following: 'EMBEDMENT MATERIAL' for the vertical height of the bedding; 'PIPE OD' for the pipe's outer diameter; 'TRENCH WIDTH' for the horizontal width of the bedding; and '6" MIN' for the minimum thickness of the bedding on both the top and right sides of the pipe.

RIGID PIPE INSTALLATION DETAIL (RCP & VCP)

This diagram illustrates the standard installation for rigid pipes. A central circular pipe is shown within a square trench. The trench is filled with bedding material, represented by a pattern of small circles. The top of the trench is covered by a layer of backfill, indicated by a cross-hatch pattern. Dimension lines specify the following: 'INITIAL BACKFILL (SELECT FILL)' for the vertical height of the backfill; 'EMBEDMENT MATERIAL' for the vertical height of the bedding; 'PIPE OD' for the pipe's outer diameter; 'TRENCH WIDTH' for the horizontal width of the bedding; and '12" MIN' for the minimum thickness of the bedding on the top side of the pipe. A separate dimension line on the right indicates 'OD/2' for the bedding thickness on the right side of the pipe. A final dimension line at the bottom right indicates 'OD/4' for the bedding thickness on the bottom side of the pipe, with a '6" MIN' note below it. A legend box in the upper right corner specifies: 'OD=PIPE OUTSIDE DIAMETER (IN.)', 'BEDDING CLASS: "B"', and 'LOAD FACTOR = 1.5'.

1. CAST-IN-PLACE NON-REINFORCED CONCRETE AND BRICK MANHOLES

1.1. THE EXISTING CONE AND WALL, IF NECESSARY, SHALL BE REMOVED TO A LEVEL WHICH WILL ALLOW INSTALLATION OF NEW CONE TO THE PROPER GRADE. THE EXPOSED CUT-OFF SURFACES OF THE EXISTING MANHOLE WALL SHALL BE CLEANED BY REMOVING LOOSE MATERIAL AND WETTED, PRIOR TO CONSTRUCTION OF CONCRETE PAD. ALL LOOSE BACKFILL AROUND THE MANHOLE WALL SHALL BE REMOVED AND REPLACED WITH COMPACTED CRUSHED ROCK. THE NEW CONCRETE PAD SHALL BE CONSTRUCTED, AND A NEW CONE SHALL BE FORMED OR PLACED TO THE PROPER GRADE USING FIFTEEN THOUSAND (15000 PSI) POUNDS PER SQUARE INCH MORTAR.

2. PRECAST REINFORCED CONCRETE MANHOLES

2.1. PRECAST SECTIONS SHALL BE REMOVED TO A LEVEL WHERE THE NEW CONE CAN BE INSTALLED TO THE DESIRED GRADE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPROPRIATE STANDARD DETAIL FOR PRECAST MANHOLE CONES. A NEW RUBBER GASKET SHALL BE USED TO SEAL EACH SECTION.

The diagram illustrates the process of removing an old manhole and installing a new one. The top section shows an 'ABANDONED MANHOLE' with a note to 'REMOVE EXIST. TOP 2'-0" OF MANHOLE'. The bottom section shows the new installation, which includes a 'PLUG' at the top, 'EX. SAN. SEWER' (existing sanitary sewer) on the left, 'COMPACTED SAND BACKFILL' in the center, 'CONC. FILL BOTTOM OF M.H. TO TOP OF PIPE' (concrete fill from the bottom of the manhole to the top of the pipe), and another 'PLUG' at the bottom. A dimension of '12"' is shown for the width of the new manhole structure.

ABANDONED MANHOLE

**REMOVE EXIST. TOP
2'-0" OF MANHOLE**

PLUG

EX. SAN. SEWER

COMPACTED SAND BACKFILL

**CONC. FILL BOTTOM OF
M.H. TO TOP OF PIPE**

EX. SAN. SEWER

12"

PLUG

**NOTE: SALVAGED MATERIALS, INCLUDING RING AND COVER SHALL BE
DELIVERED TO THE LINE MAINTENANCE DIVISION OF THE WATER AND
WASTEWATER UTILITIES DEPARTMENT.**

The diagram is a cross-sectional view of a trench. At the top, a horizontal line is labeled 'TRENCH WIDTH'. The trench walls are shown with a hatched pattern, and the material filling the trench above the plug is labeled 'BACKFILL'. Below the backfill is a rectangular 'EMBEDMENT PLUG'. Inside the plug is a circular pipe with a diameter labeled 'ØD'. To the right of the plug, a vertical dimension line indicates the height of the plug, labeled 't_p'.

NOTES:

TWO TYPES OF EMBEDMENT PLUGS MAY BE USED, AT THE CONTRACTORS OPTION, AS FOLLOWS:

1. CLAY PLUGS
 - 1.1. THE EMBEDMENT AND BACKFILL MATERIAL SHALL BE SELECT CLAY SEPARATED FROM EXCAVATED MATERIAL AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. THIS MATERIAL SHALL BE FREE OF CLODS, CLUMPS, DEBRIS, ORGANIC MATERIAL AND STONES. ALL CLAY PLUG MATERIAL SHALL BE COMPACTED TO A MINIMUM OF NINETY (90%) PERCENT OF STANDARD PROCTOR DENSITY (ASTM D-698) AT PLUS OR MINUS THREE (3%) PERCENT OF OPTIMUM MOISTURE CONTENT.
2. FLOWABLE FILL PLUGS
 - 2.1. FLOWABLE FILL PLUGS SHALL CONSIST OF A PORTLAND CEMENT GROUT HAVING A MINIMUM TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF FIVE HUNDRED (500 PSI) POUNDS PER SQUARE INCH.

SANITARY SEWER STANDARD DETAILED

1. MANHOLES SHALL BE CONSTRUCTED AS SPECIFIED IN ASTM C-478.
2. THE MINIMUM WALL THICKNESS IS SPECIFIED IN THE FOLLOWING TABLE AND SHALL NOT BE LESS THAN ONE-TWELFTH (1/12) OF THE INTERNAL DIAMETER OF THE LARGEST CONE OR RISER OR FIVE-INCHES (5") WHICHEVER IS GREATER.

MANHOLE INTERNAL DIAMETER (FEET)	MINIMUM WALL THICKNESS (INCHES)
4	5
5	5
6	6
7	7
8	8

3. MINIMUM DEPTH OF MANHOLE TO BE 6'-0".
4. ALL LIFTING HOLES PROVIDED IN EACH SECTION SHALL BE REPAIRED WITH A MIXTURE OF CEMENT & SAND GROUT FIRMLY PACKED INTO ENTIRE ORIFICE.
5. ALL INSIDES SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNECMC SERIES 69 HI-BUILD EPOXYLINE II, OR APPROVED EQUAL.
6. WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLES AND TESTED FOR COMPRESSIVE STRENGTH.
7. ACCEPTANCE OF THE MANHOLE STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.

The diagram illustrates the construction of a sanitary sewer manhole. It consists of two main sections: a 'STANDARD TRANSITION SECTION 4 MINIMUM' and a tapered section below it. The standard section has a height of '4 FT. - 5 FT. - or 6 FT.' and contains 'LIFTING HOLES'. The tapered section has a height of '8 FT. - 7 FT. - or 6 FT.' and is reinforced with 'REINFORCING WIRE PER ASTM C-478'. The manhole is shown as a precast structure with a concrete or grout interior and a reinforced exterior.

SANITARY SEWER STANDARD STANDARD DETAIL

NOTE:

1. ALL CONCRETE FOR MANHOLE STRUCTURE AND BASE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI
2. PRECAST MANHOLES SHALL BE CONSTRUCTED AS PER ASTM C-478
3. ALL INSIDE SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNAMEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.
4. MINIMUM DEPTH OF MANHOLE TO BE 6'-0".

The diagram is a cross-sectional view of a sanitary sewer manhole. At the top, a horizontal line represents the ground surface. Below it, the manhole structure is shown. The walls are labeled 'MH WALL SECTION' and are shown with a break symbol in the middle. An 'O-RING SEAL' is located at the top of the wall where it meets the ground. The interior of the manhole has a '2" SLOPE TO TROUGH' indicated by arrows pointing towards a central circular 'INVERT AND BENCH'. The invert is shown as a circular opening. The walls are reinforced with 'REINFORCING WIRE PER ASTM C-478' and '#4 BARS 8" O.C. BOTH WAYS'. The base of the manhole is a '2 FT MIN. BASE HEIGHT SECTION' shown with a break symbol. Below the manhole base is a '6" CRUSHED ROCK FOUNDATION'. The entire structure is supported by 'UNDISTURBED EARTH' at the bottom. A '*ALOK* GASKET SYSTEM FOR PIPE PENETRATION' is shown at the bottom right, where a pipe enters the manhole. The manhole is surrounded by a layer of material, possibly backfill or bedding, indicated by a dashed line.

1. MANHOLES SHALL BE CONSTRUCTED AS SPECIFIED IN ASTM C-478

2. THE MINIMUM WALL THICKNESS IS SPECIFIED IN THE FOLLOWING TABLE AND SHALL NOT BE LESS THAN ONE-TWELTH ($\frac{1}{12}$) OF THE INTERNAL DIAMETER OF THE LARGEST CONE OR RISER OF FIVE-INCHES (5") WHICHEVER IS GREATER.

MANHOLE INTERNAL DIAMETER (FEET)	MINIMUM WALL THICKNESS (INCHES)
4	5
5	5
6	6
7	7
8	8

3. MINIMUM DEPTH OF MANHOLE TO BE 6'-0".

4. ALL LIFTING HOLES PROVIDED IN EACH SECTION SHALL BE REPAIRED WITH A MIXTURE OF CEMENT & SAND GROUT FIRMLY PACKED INTO ENTIRE ORIFICE.

5. ALL INSIDE SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF NEMEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.

6. WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLES AND TESTED FOR COMPRESSIVE STRENGTH.

7. ACCEPTANCE OF THE MANHOLE STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.

The image contains two technical cross-section drawings of manhole sections. The left drawing is for a 'CONCENTRIC CONE' and the right is for an 'ECCENTRIC CONE'. Both drawings show a 'STANDARD RING & LID' at the top and a 'STD. PRECAST CONE SECTION' below it. The cone section has a height of '1'-6" MAX' and a diameter of '3'-0"'. The cone section is shown with 'LIFTING HOLES' and 'REINFORCING WIRE PER ASTM C-478'. The cone section is also shown with 'RUBBER O-RING GASKET MATERIAL' at the bottom. The drawings show the cone section is made of 'BRICK MASONRY OR PRECAST RING (MORTARED)'. The drawings show the cone section is made of 'STD. PRECAST CONE SECTION 3'-0"'. The drawings show the cone section is made of '1'-6" MAX'.

CONCENTRIC CONE

ECCENTRIC CONE

S-STD-02

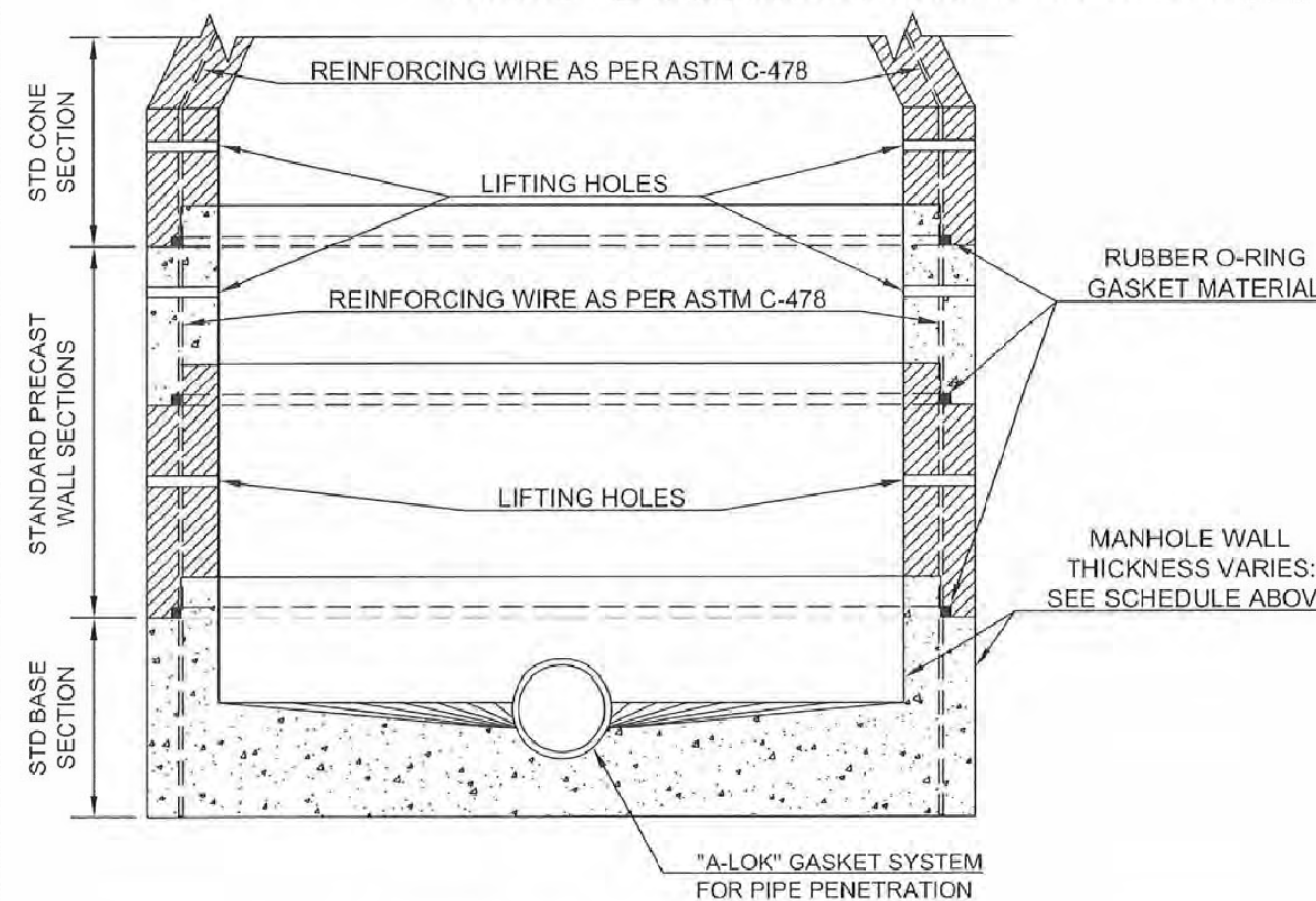
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SANITARY SEWER STANDARD DETAIL

- MANHOLES SHALL BE CONSTRUCTED AS SPECIFIED IN ASTM C-478.
- THE MINIMUM WALL THICKNESS IS SPECIFIED IN THE FOLLOWING TABLE AND SHALL NOT BE LESS THAN ONE-TWELTH ($\frac{1}{12}$) OF THE INTERNAL DIAMETER OF THE LARGEST CONE OR RISER OR FIVE-INCHES (5") WHICHEVER IS GREATER.

MANHOLE INTERNAL DIAMETER (FEET)	MINIMUM WALL THICKNESS (INCHES)
4	5
5	5
6	6
7	7
8	8

- ALL LIFTING HOLES PROVIDED IN EACH SECTION SHALL BE REPAIRED WITH A MIXTURE OF CEMENT AND SAND GROUT FIRMLY PACKED INTO ENTIRE ORIFICE.
- ALL INSIDE SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNESEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.
- WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLES AND TESTED FOR COMPRESSIVE STRENGTH.
- ACCEPTANCE OF THE MANHOLE STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.



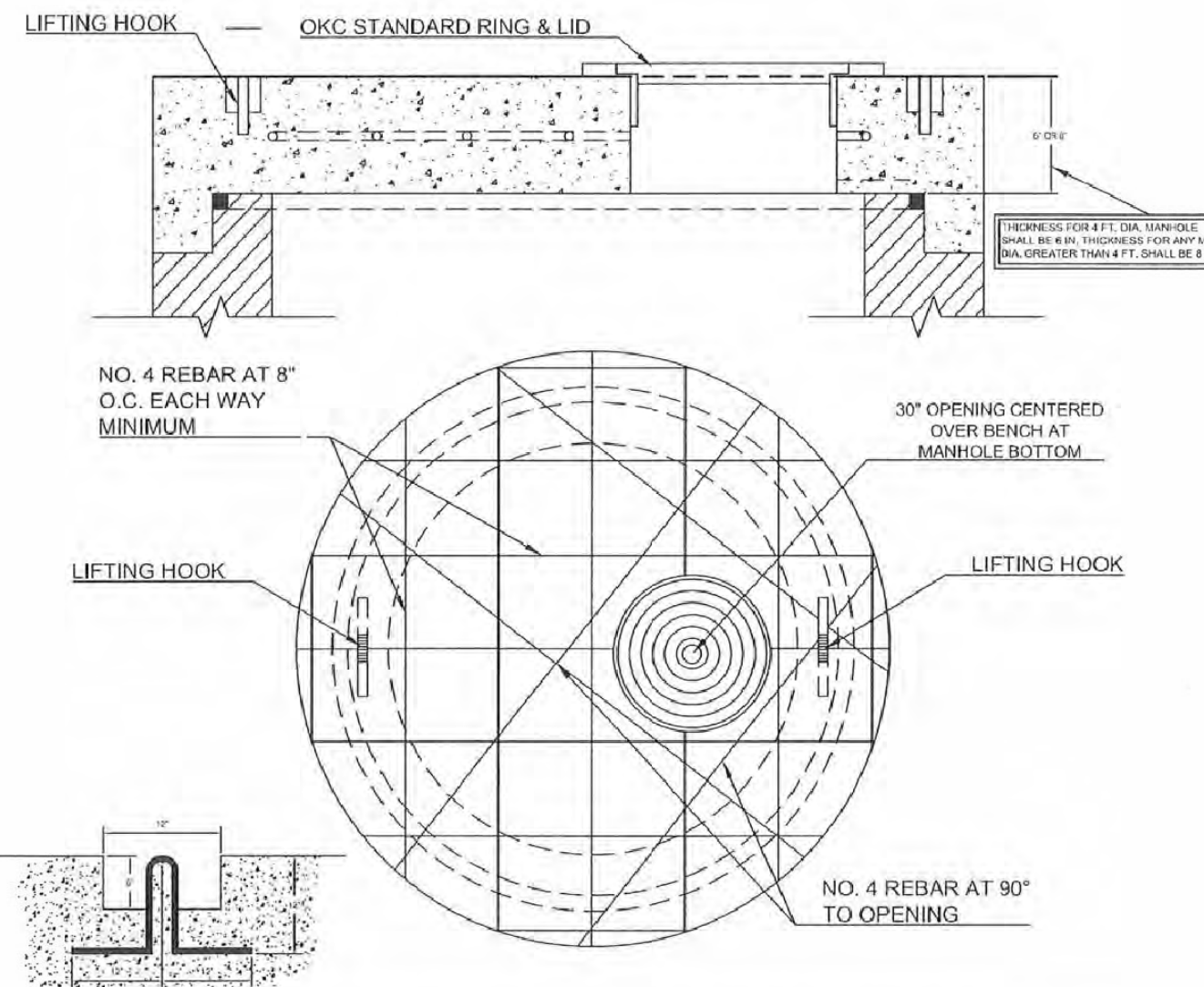
PRECAST MANHOLE WALL DETAIL

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-16
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

- MANHOLE TOPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C-478 LIFTING HOOKS SHALL BE CONSTRUCTED AS PER MANUFACTURERS RECOMMENDATION.
- ALL INSIDE SURFACES OF PRECAST FLAT TOP SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNESEC 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.
- WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLE TOPS AND TESTED FOR A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
- ACCEPTANCE OF THE MANHOLE TOP STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.

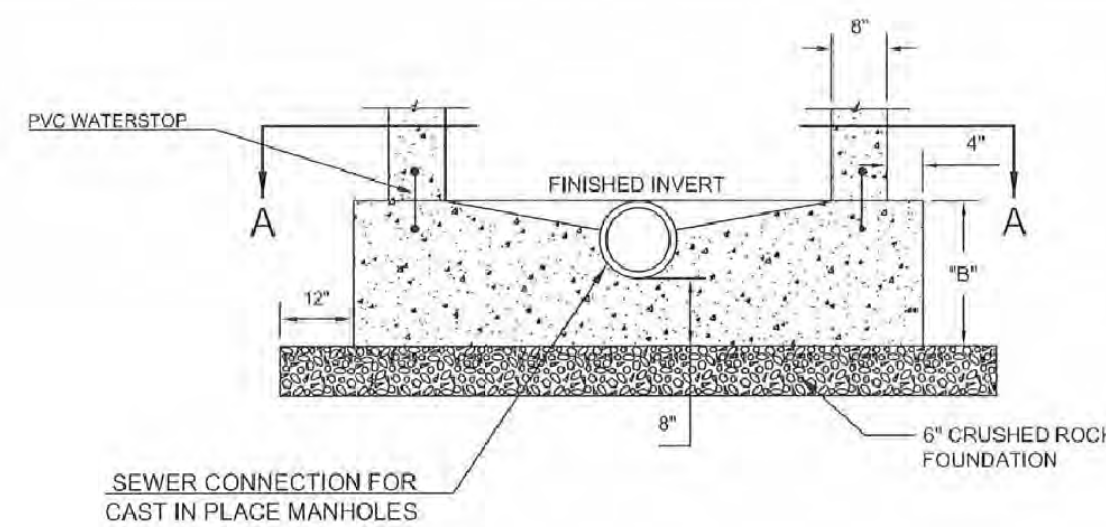


PRECAST REINFORCED CONCRETE FLAT SLAB MANHOLE TOP

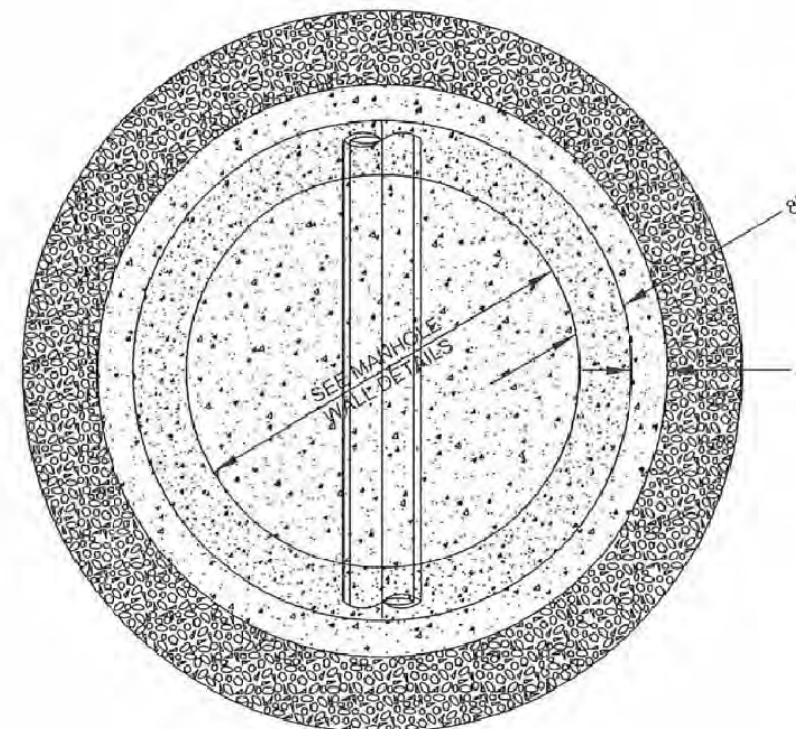
03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-17
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



PIPE DIAMETER	"B"
8"	1'-8"
10"	1'-10"
12"	2'-1"
15"	2'-4"
18"	2'-8"
21"	3'-0"
24"	3'-3"



SECTION A-A

CAST-IN-PLACE CONCRETE MANHOLE BASE SECTION

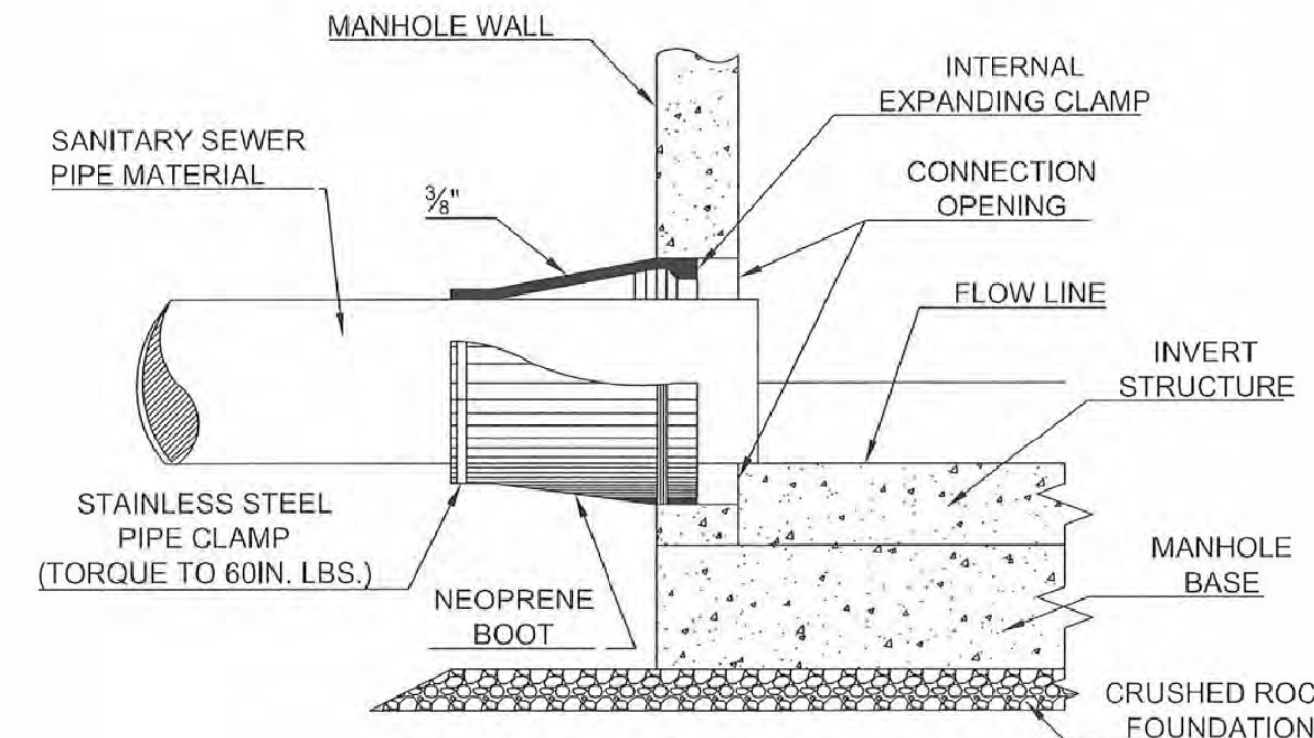
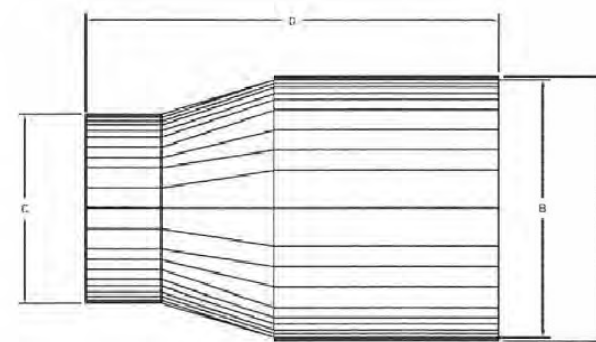
03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-18
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

- NOTE*
- ALL PIPE CLAMPS SHALL BE STAINLESS STEEL
 - NEOPRENE EPDM BLENDED COMPOUND BOOT SHALL MEET ASTM C-923

SUGGESTED PIPE O.D. RANGE (IN.)	HOLE & BOOT DIAMETER DIMENSIONS
3 1/2" - 4 1/2"	7" 6 3/4" 4 1/2" 6"
5 1/4" - 7"	12" 10 1/4" 6 1/2" 8"
7" - 8 1/2"	12" 10 1/4" 8" 8"
8 1/2" - 9 1/2"	12" 10 1/4" 8 1/2" 8"
9 1/2" - 11"	16" 14 1/4" 10 1/2" 8"
10 1/2" - 12"	16" 14 1/4" 12" 8"
12" - 13 1/2"	16" 14 1/4" 13 1/2" 8"
14 1/2" - 16 1/2"	20" 18 1/4" 15 1/2" 8"
15 1/2" - 17 1/2"	20" 18 1/4" 17" 8"
18 1/2" - 21 1/2"	24" 22 1/4" 20 1/2" 8"



MANHOLE PIPE CONNECTION FOR CAST IN PLACE MANHOLES

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-19
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

- GENERAL -- Cast iron rings, tops, covers, grating and all cast iron fitting shall be sound, true to form and thickness, and neatly finished and shall fit together in a satisfactory manner. Castings shall be clean, uniform and whole without blow or sand holes, deposit, hard spots, shrinkage distortion or any other surface defects which would impair serviceability. Casting surfaces shall be smooth and well-cleaned by shot blasting or other approved cleaning method. Plugging or filling holes or other defects shall not be permitted. Parting fins and pouring gates shall be removed. Sharp edges resulting from fabrication shall be dulled by acceptable method to ensure safety in handling. Casting shall conform to the requirements of the Standard Specification for Grey Iron Fittings ASTM A-48, Class "30 B" for rings and "35 B" for covers and the approved Standard Details for Manhole Rings and Covers.

All rings and covers shall be accurately and carefully placed. All rings shall be beaded in a substantial layer of mortar, shall have a full bearing and shall be set to the exact grade. Unless other wise shown, top of covers shall be flush with or slightly above the surrounding surface. When each cover is placed in any position on the ring, the side play shall not exceed one-eighth ($\frac{1}{8}$ ") inch in any direction.

- RINGS -- Rings may be manufactured in accordance with the Standard Detail for Reversible Manhole Rings.

- COVERS --
 - GENERAL -- Manhole covers may be manufactured in accordance with the appropriate Standard Details for Vented or Non-Vented Covers.
 - COATING -- When called for on the plans or specified, the underside of all manhole covers shall be given one (1) coat of asphalt varnish after visual inspection and approval on the job site.
 - APPLICATION -- All lids (covers) in street right-of-way shall be non-vented and include rainguard inflow protectors.
- CASTING WEIGHTS -- The minimum weight of casting will be not less than shown below:

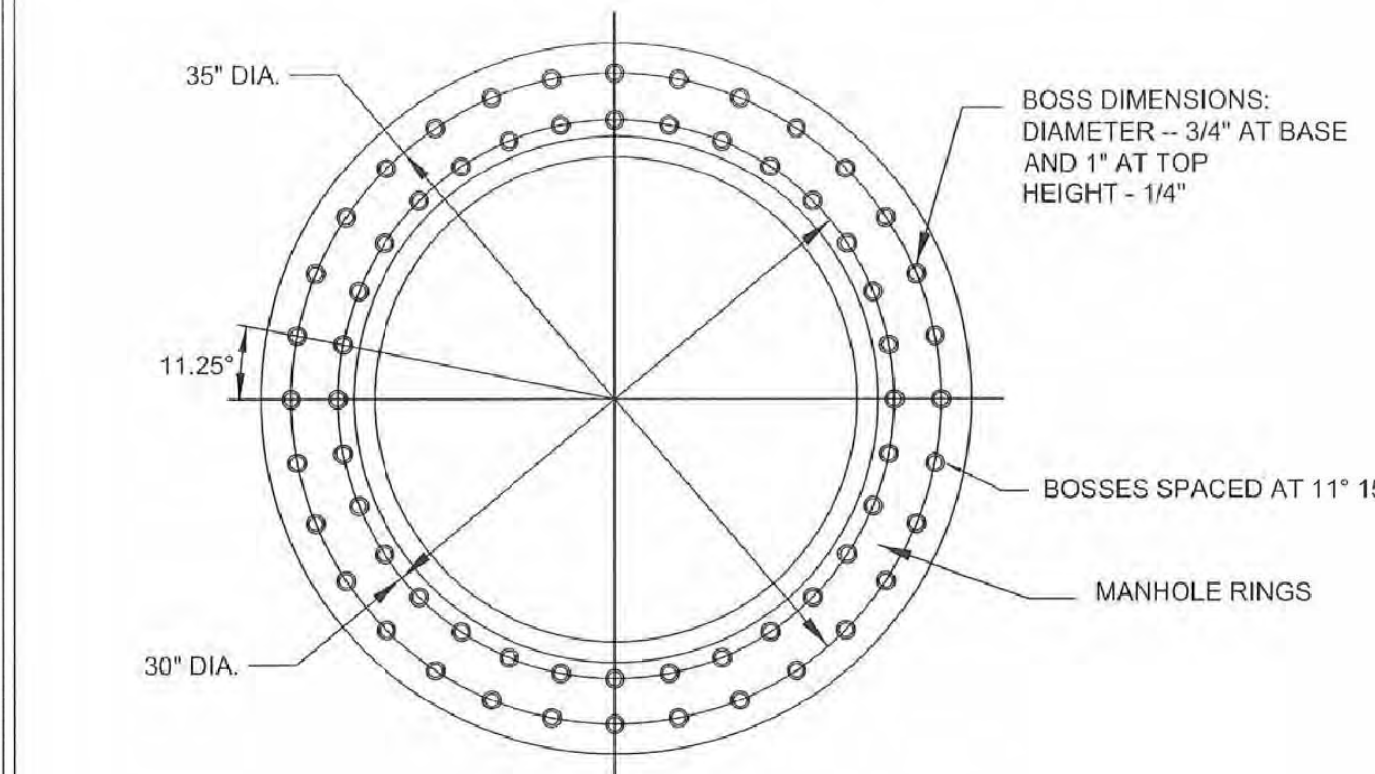
Ring Only	200 LBS
Cover Only	150 LBS
Totals	350 LBS

MANHOLE LID / RING GENERAL NOTES

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-20
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



PLAN

SECTION

AS SHOWN FOR OUT OF PAVING INSTALLATION
REVISED FOR IN PAVING INSTALLATION

GENERAL NOTES:

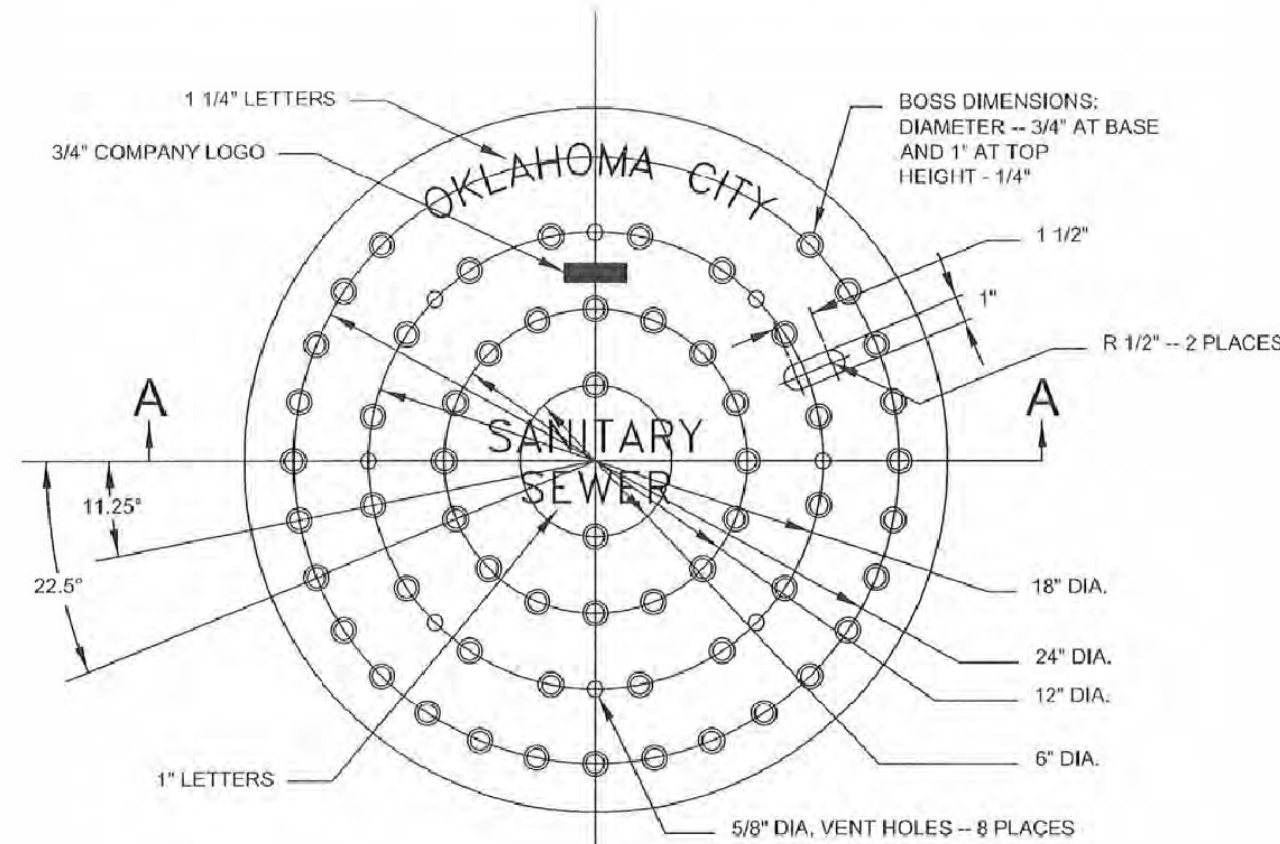
- FINISH EXCESS IRON AND FINIS; MACHINE SEATING SURFACES FLAT TO NOTE DIMENSIONS.
- FILLETS SHALL BE $\frac{1}{4}$ " UNLESS OTHERWISE SPECIFIED.
- UNLESS OTHERWISE SHOWN, ALL DIMENSIONS ARE IN INCHES.

REVERSIBLE MANHOLE RING

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-21
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



PLAN OF TOP

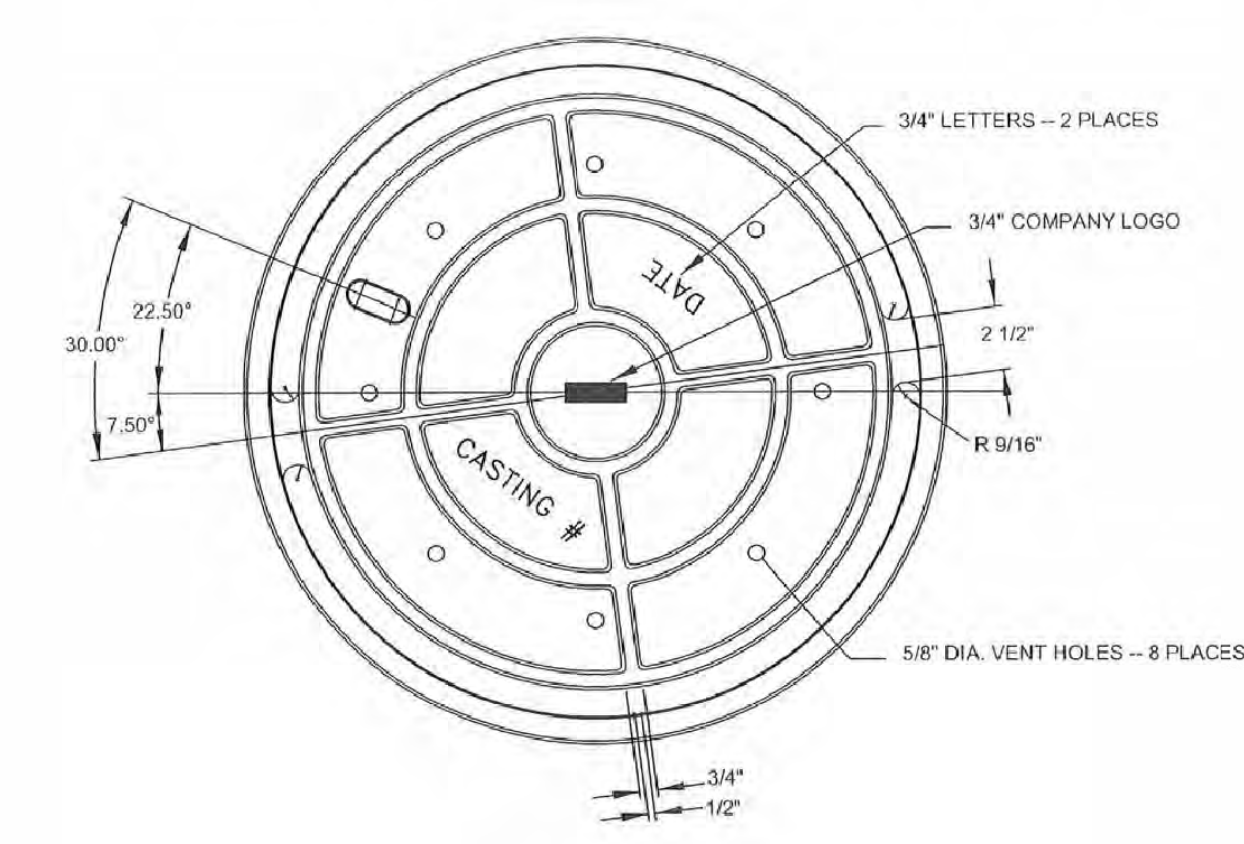
SECTION A-A

VENTED MANHOLE COVER

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-22
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



PLAN OF UNDERSIDE

SECTION THRU PICK SLOT

GENERAL NOTES:

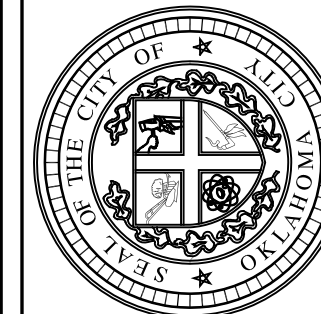
- FINISH EXCESS IRON AND FINIS; MACHINE SEATING SURFACES FLAT TO NOTE DIMENSIONS.
- FILLETS SHALL BE $\frac{1}{4}$ " UNLESS OTHERWISE SPECIFIED.
- UNLESS OTHERWISE SHOWN, ALL DIMENSIONS ARE IN INCHES.

VENTED MANHOLE COVER

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-23
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

The City of
Oklahoma City
Utilities Department
Engineering Division



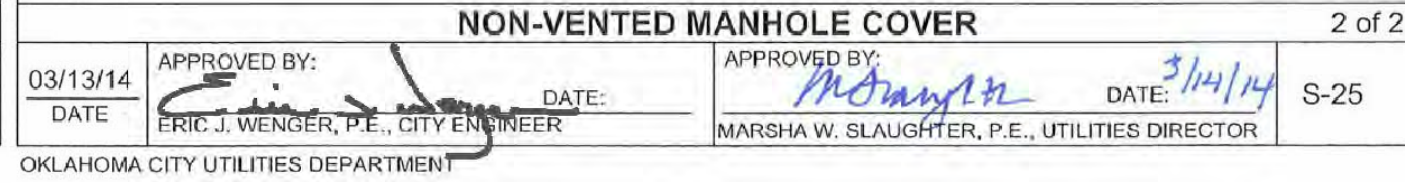
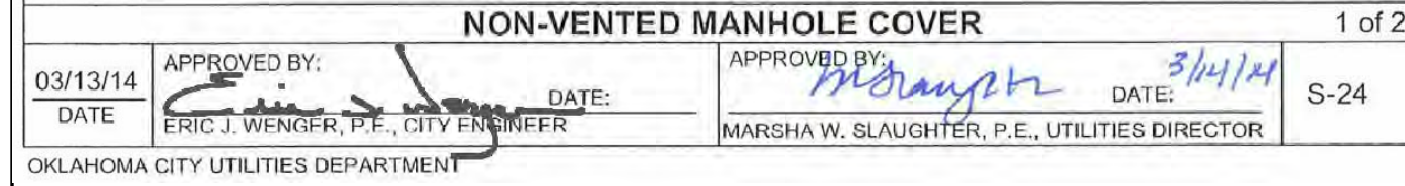
NO. DATE DESCRIPTION

SANITARY SEWER
STANDARD DETAILS

DATE: 03/14/14
DRAWN BY: JDS
CHECKED BY: MWS/EJW

SCALE:
AS SHOWN

SHEET NUMBER
S-STD-03



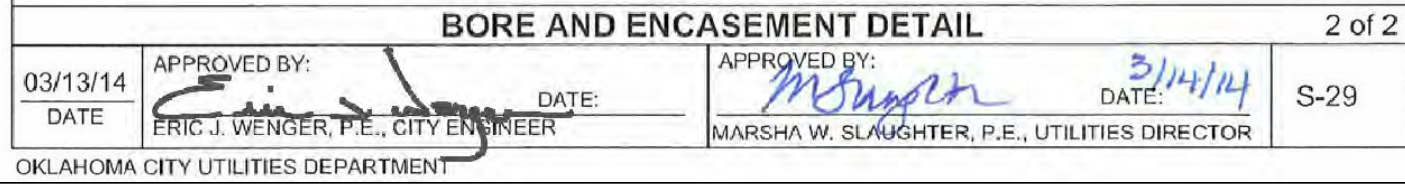
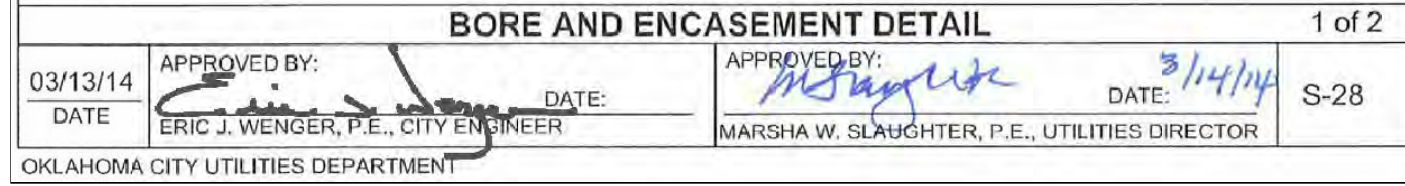
- | SERVICE CONNECTION INSTALLATION | | | |
|--|--|--|--|
| 1/13/14
DATE | APPROVED BY:

ERIC J. WENGER, P.E., CITY ENGINEER | DATE:

MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | APPROVED BY:

MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR |
| APPROVED BY:

MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | | | DATE:
3/14/14 |
| S-27 | | | |



PIPE NOMINAL SIZE (inches)	SUGGESTED CASING PIPE INSIDE DIAMETER (inches)
4	6 to 10
6	10 to 12
8	14 to 16
10	16 to 18
12	18 to 20
15	20 to 22
18	24 to 26
24	31 to 33
27	33 to 36
30	36 to 42
36	42 to 48
42	54 to 60
48	60 to 66

OUTSIDE DIAMETER (INCHES)	UNDER HIGHWAY		UNDER RAILROAD		
	WALL THICKNESS (INCHES)	MAXIMUM COVER (FEET)	BNFS (UNCOATED) WALL THICKNESS (INCHES)	UNION PACIFIC WALL THICKNESS (INCHES)	MAXIMUM COVER (FEET)
≤ 12	0.1880	30	0.2500	0.2500	30
16	0.2500	30	0.3125	0.3125	30
18	0.2500	30	0.3125	0.3125	30
20	0.2500	30	0.3750	0.3750	30
24	0.2500	30	0.4375	0.4375	30
30	0.3220	30	0.5000	0.5000	30
36	0.3750	30	0.5625	0.5625	30
42	0.3750	25	0.5625	0.5625	30
48	0.4380	25	0.6250	0.6250	25
54	0.4380	25	0.6250	0.6250	25
60	0.4380	25	0.6250	0.6250	25
66	0.4380	20	BNFS RR	OVERLAP MUST BE APPROVED BY U.P.R.R.CO.	20

4. CASING MATERIAL -- Steel casing pipe shall conform with ASTM A-139, Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe (NPS4 and over). The steel material shall be new, smooth wall, carbon steel, Grade B, with a minimum tensile strength, and minimum thirty-five-thousand (35,000 psi) pounds per square inch yield strength.

[illegible]

SANITARY SEWER STANDARD DETAILS

DATE:	03/14/14
DRAWN BY:	JDS
CHECKED BY:	MWS/EJW

SCALE:
AS SHOWN

SHEET NUMBER
S-STD-04