

City of Tulsa
Infrastructure Development Process
Plans Review Checklist

IDP# _____

IDP Name _____

Item #	Complies			General Items
	Y	N	N/A	
				Are Permits Required for any of the following?
1.				Corps of Engineers (Section 404)
2.				Levee Authority
3.				Railroad Crossing
4.				Oklahoma Department of Transportation
5.				Oklahoma Turnpike Authority
6.				Oklahoma Water Resources Board
7.				ODEQ Permit for Construction - Engineering Report Form for Water Line Construction
8.				ODEQ Permit for Construction - Engineering Report Form for Sanitary Sewer Construction
9.				NPDES (SP3 required for all projects disturbing one (1) acre or more (NOI Form also required) If receiving water is listed as impaired, additional protection measures are described and status is noted in plans.
				General Information Required
10.				Was the site previously Platted?
11.				Is the site required to be platted for this proposed development?
12.				Have all TAC recommendations/requirements been adequately addressed?
13.				Have all Predevelopment meeting recommendations/requirements been adequately addressed?
14.				Are any retaining walls with a height of 4' or higher from the bottom of the foundation required for the project? Walls should be shown in plan and profile. Walls greater than 4' will require a separate permit for construction. Separate permit plans must be signed and sealed by structural engineer registered in the State of Oklahoma.
15.				Are there any outstanding variance requests?
				General Plan Requirements
16.				Standard plan sheet to be 22''X 34'' (ANSI D).
17.				Plans are to be readable for full and half size text. (All lettering a minimum of 0.10" in height on full size plans.)
18.				New Construction to be shown in bold font.
19.				Sheets are to be numbered according to IDP numbering system.
20.				Drawings at a Common Engineer's Scale.
21.				North Arrow (Top of page or to the right) on every plan sheet.
22.				Appropriate current Title Block on each sheet. See IDP Manual.
23.				Call OKIE logo with phone number on every plan sheet.
24.				Two permanent/temporary Benchmarks (description, location) required using State Plane Coordinates NAD83 and USGS elevations using NAVD 88. Benchmarks must be referenced back to ADS datum. Benchmark information must be included on all plan sheets.

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Item #	Complies			General Items
	Y	N	N/A	
				General Plan Requirements (contd...)
25.				Existing and proposed Right of Way to be shown with dimension lines and bearings and distances. Reference book and page or plat number.
26.				Existing and proposed easements to be included with bearings and distances. Reference book and page or plat number.
27.				Is FEMA A-Zone, or Regulatory Floodplain, on the property? If so, then limits of the Floodplain to be shown on each plan sheet.
28.				Erosion control measures and details (for non-City Standards) to be included on the plans.
29.				Standard note for traffic control & street closures to be provided as necessary. "Traffic access on all streets shall be maintained at all time. Contractor must maintain proper construction signage and traffic control in accordance with the manual on uniform traffic control devices."
30.				Reference City of Tulsa blasting ordinance if rock excavation is expected.
31.				Restoration notes to be provided.
32.				Restoration plan to be included.
				The following Information to be included on the Cover Sheet
33.				IDP Project Number
34.				Legal Description - Verbatim and on Site Plan
35.				Atlas Page(s) No.
36.				List of Sheets. Sheet numbering to comply with IDP Manual.
37.				IDP Description. Quantities of IDP items to be included per IDP Manual.
38.				Engineers Name, Address, Phone Number, email & Contact Person
39.				Owner's Name, Address, Phone Number, email & Contact Person
40.				Engineer Seal, Signature and Date
41.				Engineer's statement should include the following: 1. By my signature on these construction documents, I hereby certify that I am familiar with the adopted ordinances and regulations of the City of Tulsa governing the work in the IDP Description; that these plans have been prepared under my direct supervision; the above and foregoing plans comply with all governing ordinances and the adopted standards of the City of Tulsa to the best of my knowledge and belief. 2. Entire project is (is not) within corporate limits of City of Tulsa 3. This project complies with all Oklahoma Department of Environmental Quality (ODEQ) requirements
42.				List of all City of Tulsa Standards used (include STD No. and Verbatim Title) in numerical order of STD No.
43.				List of all ODOT Standards used.
44.				Location Map (show Subdivision within the Section and Major Streets)
45.				Location (address, legal, subdivision)

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Item #	Complies			General Items
	Y	N	N/A	
				Cover Sheet (contd...)
46.				Legend
47.				Table of Impervious Area (existing, proposed, increase/decrease)
48.				List of all Utility Franchise Contacts and Applicable City Contacts
49.				This note: "All construction to be in strict accordance with current City of Tulsa Standards and Specifications".
50.				Site Plan, showing and labeling the following: Adjacent subdivisions all adjacent and onsite streets and all items being constructed by the IDP Project.
51.				A table listing all Separate Instrument Easements required for the project. Table should include the easement type, the owner of the property where the easement exists, the sheet number where the metes and bounds for the proposed easement are found in the plans and a column for the recording information for the easement.
52.				Jurisdictional determination of federal interest and subsequent agreements as needed. Determination is recommended for potential wetlands inclusion of any site with flood plain. Required if federal structures such as levee on site.
				Easement by Separate Instrument
53.				Call out separate instrument easements
54.				Show metes and bounds in IDP plans – must match documents submitted for separate instrument easement application.
55.				Complete separate instrument application
56.				Offsite separate instrument must be filed and document number provided on plans prior to plan approval.
57.				Easements shall be sized based on: <ul style="list-style-type: none"> - Utility specific requirements - Maintenance and access requirements - As specified by City Engineer on a case by case basis.

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IDP# _____ IDP Name _____

Item #	Complies			Stormwater Review
	Y	N	N/A	
				Stormwater Runoff System
				HAVE ALL GENERAL AND COVER SHEET ITEMS BEEN ADDRESSED?
58.				Site grading to be checked for the following: <ul style="list-style-type: none"> - water will not back up into any buildings - emergency overflow path - drainage from street will not flow to site at entrances - Overland drainage easement requirements.
59.				Only City approved pipe materials to be used for all public storm sewer systems.
60.				All drainage facilities/improvements to be designed in accordance with the current adopted Storm Water Management Criteria Manual.
61.				Maximum angle of deflection at storm structures: 15"-30" – 90° 36"-48" – 60° 54" and up – 45°
62.				All public storm sewers are to be backfilled with State ODOT Type A aggregate or flowable fill per COT Standard 751.
63.				Times of Concentration to be determined in accordance with the current adopted Storm Water Management Criteria Manual.
64.				Drainage areas boundaries to be clearly labeled with flow paths along time of concentration path for all onsite and offsite areas for both existing and proposed conditions.
65.				Standard drainage summary chart(s) to be used and checked for the following: <ul style="list-style-type: none"> • runoff coefficients in accordance with the current adopted Storm Water Management Criteria Manual; • appropriate clogging factors used; • flow depth in street to be 0.38 feet or less; • Overland reaches 150 feet or less.
66.				Public stormwater systems to be placed in ROW or proper easements as required per IDP manual.
67.				Profiles to be shown for all public storm sewers systems and ditches and include: <ul style="list-style-type: none"> - pipe size, type, slope and length - top of rim/top of grate for all structures - invert elevations for all pipes and structures - Q100, V100, HGL/EGL/WSE100 on all pipes and ditches - Inlet/manhole type and name – callout needs to match plan and detail callouts.

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IDP# _____ IDP Name _____

Item #	Complies			Stormwater Review
	Y	N	N/A	
				Stormwater Runoff System (contd...)
68.				Provide minimum flow velocity for clearing sediment 2-Yr event as per Section 1205.2.4 of SWMCM. <ul style="list-style-type: none"> - Storm sewer – 2.5 fps - Culvert – 3.0 fps
69.				Maximum velocities for all public storm sewers systems and ditches shall be limited to: <ul style="list-style-type: none"> - Storm sewer – 20 fps - Culvert – 20 fps - Concrete lined channel – 18 fps - Grass lined channel – 5 fps Check Froude less than 0.8 for turbulent reaches
70.				All utility crossings to be shown on the Storm Sewer Profiles. Separation dimensions shall be shown.
71.				All storm sewers identified, on the plans and profiles, as public or private. A general note stating “ALL STORM SEWERS ARE PUBLIC UNLESS OTHERWISE NOTED” may be shown on each plan and profile sheet.
72.				HGL at or below finished grade and EGL no more than 1’ above grade (pressure flow)
73.				Vertical and horizontal separations between storm sewers and water lines to be maintained per ODEQ water requirements. <ul style="list-style-type: none"> - Outside faces of storm pipes to be at least 6” clear of inside of walls of storm structures. - Outside faces of storm lines to maintain at least 1’ separation from outside face of adjacent storm pipes, measured at the inside face of manholes or junction boxes.
74.				Manholes/junction boxes to be located in accordance with the current adopted Stormwater Management Criteria Manual.
75.				Table of State Plane coordinates to be included for all proposed storm structures.
76.				All curb inlets to be placed outside of curb returns.
77.				Inlets to be located near property lines to avoid complication during driveway construction.
78.				Grading plans to include on-site/offsite contours to establish limits of drainage basins.
79.				City of Tulsa Erosion Control details to be referenced. Details for non-City Standard Erosion control measures to be included on the plans.
80.				Details for all non-standard storm structures to be included in plans.
				Detention Facilities Plan
81.				Is storm water detention required? If Yes continue checklist below, if No go to Item # 103.

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Item #	Complies			Stormwater Review
	Y	N	N/A	
				Detention Facilities Plan (contd...)
82.				The Detention facilities to be placed in a Reserve Area and/or Detention Easement.
83.				The detention facility to be designed in accordance with the current adopted Storm Water Management Criteria Manual using HEC-HMS-SCS method.
84.				The appropriate freeboard provided.
85.				The detention “Summary Charts” to be shown on the plans, including: - Stage/storage/discharge - Pre-Development vs. Post-Development runoff at design points
86.				A concrete trickle channel having a minimum slope of 0.5% to be provided in grassed detention facilities.
87.				The bottom of a grass lined pond to have a minimum slope to the trickle channel of 2%.
88.				The side slopes to be no steeper than 4:1 (3:1 with approval)
89.				All-weather access to be provided to the pond/facility in accordance with the current adopted Storm Water Management Criteria Manual.
90.				The top width of earthen dike(s) to be in accordance with the current adopted Storm Water Management Criteria Manual with an all-weather surface providing access to the outlet structure (along top berm). Minimum width is checked at freeboard required elevation. A smaller flat top still needed for access and ease of grading.
91.				Cross sections (adequate number) to be provided with representative dimensions and proposed elevations for flow lines and top of berm, wall, etc.
92.				Permanent Bermuda Solid Slab Sod is required vegetation for the bottom and embankment side slopes of detention pond.
93.				Details of the Outlet Structure and Emergency Overflow Spillway to be included in the plan set by referencing City of Tulsa Standards or providing special details.
94.				Computational details to be included for all non-standard structures.
95.				Outlet structure pipe to have proper erosion control.
96.				Plan view to be provided with representative dimensions, trickle channel locations, side slopes, and structure locations.
97.				Procedures for development of time of concentration, lag time and curve numbers to be per current adopted Storm Water Management Criteria Manual.
98.				Existing (Pre-developed) and proposed (Post-developed) drainage maps to be provided on plans.
99.				Existing (Pre-developed) and proposed (Post-developed) HEC-HMS models to be prepared and provided in Detention/Drainage Report

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Item #	Complies			Stormwater Review
	Y	N	N/A	
				Detention Facilities Plan (contd...)
100.				Perform analysis for 24-hr durations 2-Yr, 5-Yr, 10-Yr, 50-Yr and 100-Yr storm events, utilizing a balanced rainfall to demonstrate detention facility attenuates increased flows to at or below existing flow. Include analysis for 500-Yr event for ponds with an embankment.
101.				All drainage areas to be accounted for in both existing and proposed drainage areas.
102.				Storm Sewer discharging into detention pond (s) to begin EGL/HGL calculation at 100-yr water surface elevation.
				Floodplain
103.				All Backwater Analysis Required to use HEC-RAS
104.				All new or modified floodplain areas (FEMA and/or COT Regulatory) through a development must be placed in a Reserve Area or the appropriate easement
105.				Have new proposed discharges been prepared for floodplain analysis?(If no skip this section) (a). Drainage boundary map to be prepared. _____ (b). Flow paths to be delineated on drainage maps. _____ (c). Hyetograph and hydrograph routing compliant with City criteria (d). Hydrologic Report, presenting all data to be prepared.
				FEMA Regulatory Flood Plain Development – (Item# 106 – 108)
				Note: All FEMA Floodplains Subject to COT Floodplain Criteria.
106.				Is the property in the FEMA floodplain? (a). Is work being proposed in the floodplain? _____ (b). When completed will a LOMR be required? (Review Letter of Map Revision requirements at https://www.fema.gov/flood-maps/change-your-flood-zone/lomr-clomr) _____ (c). Grading other than a LOMR-F will require a CLOMR _____
107.				Is the project proposing to modify the floodplain? (If no skip this section) (a). Floodplain worksheet showing all cross section locations to be prepared. _____ (b). Existing/Duplicate Effective, Modified/Corrected Effective and Proposed Effective Models to be prepared. _____ (c). Will FEMA discharges be used in models or updated? _____ (d). Required Hydraulic Analysis Report to be prepared. _____ (e). Applicable Existing/Duplicate Effective, Modified/Corrected Effective and Proposed Effective mapping to be prepared. _____ (f) Obtain community acknowledgment from City FPA _____

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Item #	Complies			Stormwater Review
	Y	N	N/A	
				Floodplain (contd...)
108.				<p>Is the project proposing to modify the floodway (FW)? (If no skip this section)</p> <p>(a). Floodplain worksheet showing all cross section locations to be prepared? _____</p> <p>(b). Existing/Duplicate Effective FW, Modified/Corrected Effective FW and Proposed Effective FW Models to be prepared _____</p> <p>(c). FEMA discharges to be used in models? _____</p> <p>(d). Required Hydraulic Analysis Report to be prepared? _____</p> <p>(e). Applicable existing and proposed mapping to be prepared? _____</p>
				COT Regulatory Floodplain Development – (Item# 109 - 11)
109.				<p>Does the project propose to modify the City of Tulsa Regulatory Floodplain? (If not, skip this section)</p> <p>(a). A T-CLOMR must be approved prior to IDP approval.</p> <p>(b). Until the T-LOMR is approved the property will be shown in the floodplain.</p>
110.				<p>Summary of T-CLOMR</p> <p>(a) Completed T-CLOMR application form</p> <p>(b) Written narrative of proposed flood plain changes</p> <p>(c) Grading plan of proposed flood plain changes</p> <p>(d) Appropriate hydrologic and hydraulic models</p> <p>(e) Drainage report</p> <p>(f) Annotated Regulatory Flood Plain Map reflecting proposed flood plain changes vs. existing Regulatory flood plain</p>
111.				<p>Summary of T-LOMR</p> <p>(a) Completed T-LOMR application form</p> <p>(b) Finalized versions of all T-CLOMR approved items</p> <p>(c) A complete set of As-Built IDP plans</p> <p>(d) Certified topographic map(s) with all flood plain boundaries delineated for existing, corrected and proposed flood plains</p> <p>(e) Annotated Regulatory Flood Plain Map reflecting as-built changes to flood plain vs. existing Regulatory flood plain</p> <p>(f) Revised flood profiles</p> <p>(g) Associated plat and legal description of property, showing proposed flood plain easement(s)</p> <p>(h) GIS shape files for proposed regulatory flood plain</p>

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Complies

Stormwater Review

Item # Y N N/A

				COT Regulatory Floodplain Development (contd...)
112.				Have new proposed discharges been prepared for floodplain analysis?(If no skip this section) (a). Drainage boundary map to be prepared. _____ (b). Flow paths to be delineated on drainage maps. _____ (c). Snyder (appropriate?)Coefficients used for analysis. _____ (d). Routing of hydrographs have to be used from node to node. _____ (e). 24-hour duration storm has to be used. _____ (f). Balanced rainfall to be used in analysis. _____ (g). Hydrologic Report, presenting all data to be prepared. _____

**City of Tulsa
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Item #	Complies			Waterline Review
	Y	N	N/A	
				Water Main Extension
				HAVE ALL GENERAL AND COVER SHEET ITEMS BEEN ADDRESSED?
113.				Provide a table / list of total quantities to be installed by contractor
114.				Note to be included: "Testing; chlorinating and flushing notes performed in accordance with General Specifications, Section 109.3"
115.				Note to be included: "Testing and Chlorination to be performed by City of Tulsa"
116.				Note to be included: "No Water Service Connections will be allowed under IDP scope of work."
117.				<p>Note to be included:</p> <p>"WATER OPERATIONS SHALL OPERATE ALL VALVES ON TRANSMISSION MAINS (16" AND LARGER). CONTRACTOR SHALL OPERATE ALL VALVES ON DISTRIBUTION MAINS (SMALLER THAN 16") WITH THE COORDINATION OF FIELD ENGINEERING AND WATER OPERATIONS AND IN THE PRESENCE OF A FIELD ENGINEERING INSPECTOR.</p> <p>A. ATTEMPTS WILL BE MADE WITH ASSISTANCE FROM THE CONTRACTOR TO NOTIFY ALL AFFECTED CUSTOMERS 48-HOURS IN ADVANCE, PARTICULARLY IF COMMERCIAL OR INDUSTRIAL CUSTOMERS ARE INVOLVED. PRIOR TO SHUTDOWN, FIELD ENGINEERING WILL NOTIFY WATER OPERATIONS, AT 918-596-9488, GIVING AN ESTIMATED DOWNTIME. WATER OPERATIONS WILL NOTIFY THE FIRE DEPARTMENT OF ALL FIRE HYDRANTS OUT OF SERVICE AND WHEN THEY ARE BACK IN SERVICE, BY STREET ADDRESS OR INTERSECTION.</p> <p>B. WHERE COMMERCIAL, INDUSTRIAL, OR CRITICAL CUSTOMERS ARE AFFECTED, AND FOR ALL LINES 16-INCH AND LARGER IN SIZE, FIELD ENGINEERING WILL REQUEST WATER OPERATIONS TO SHUT DOWN THE MAIN. THERE WILL BE A MINIMUM OF 48-HOUR NOTICE TO WATER OPERATIONS."</p>

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Item #	Complies			Design Criteria
	Y	N	N/A	
118.				The most current Design Standards Manual for Water Distribution Systems to be used.
119.				Water and Sanitary Sewer separation (per ODEQ and COT Req.) Title 252.626 Public Water Supply Construction Standards <ul style="list-style-type: none"> - 2' Vertical separation outside to outside of pipes - 10' horizontal separation outside to outside of pipes - Pipe joints must be equidistant from water pipe crossing. - Unable to meet separation, met special condition (pressure pipe) requirement ODEQ 252.626.19-2.H.3
120.				Water and storm sewer separation (per ODEQ and COT Req.) <ul style="list-style-type: none"> - 2' vertical separation outside to outside of pipes - 5' horizontal separation outside to outside of pipes. - Unable to meet separation, met special condition (pressure pipe) requirement ODEQ 252.626.19-2.H.3
121.				Water separation from other buried utilities (per ODEQ and COT Req.) (Raw WL, petroleum lines, natural gas lines and other buried utility lines); <ul style="list-style-type: none"> - 2' vertical separation outside to outside of pipes. - 5' horizontal separation outside to outside of pipes - Unable to meet separation, met special condition (pressure pipe) requirement ODEQ 252.626.19-2.H.3
Construction Plan and Profile Sheets				
122.				The design engineer shall provide current flow data (taken at a fire hydrant) in a table on the plans. (static pressure; residual pressure; time of day taken; outside temperature and fire hydrant gallons per minute of existing hydrants near the development site.)
123.				Show existing utilities and features in the profile sheet with stations and flow line or top of pipe elevations.
124.				Waterline standard locations is 8 feet from property line (Right of Way): If 8 feet cannot be met, provide for the following: <ul style="list-style-type: none"> - 5 feet is minimum clearance from water line to property line/right of way; - 3 feet minimum clearance from waterline to back of curb.
125.				Entire trench under all paved driving surfaces to be backfilled with aggregate base and compacted to 95% modified proctor density.
126.				Existing Utilities and features to be shown on plan.
127.				Waterlines to be located on the east and south side of the street and around cul-de-sac.

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Item #	Complies			Waterline Review
	Y	N	N/A	
				Construction Plan and Profile Sheets (contd...)
128.				Pipe Sizing for Distribution Mains: The prescribed <u>minimum</u> requirement: 12-inch mains in major streets 8-inch mains in collector streets 6-inch mains in local streets It is developer's responsibility to determine actual flow requirements.
129.				Every effort must be made to avoid creating new dead-end waterlines. Every effort should be made to tie up existing dead-end waterlines.
130.				Pipe type, size and length to be shown. Distribution mains 6-inch through 12-inches in diameter may be ductile iron pipe (DIP), polyvinyl chloride (PVC) or high-density polyethylene (HDPE) in accordance with COT Standard Specifications and Standard Details.
131.				Minimum pipe size is 6". In all cases, consideration must be given to the average domestic demand simultaneous to any fire-flow event.
132.				Vertical scale 1" = 10' / 1"= 5'
133.				Horizontal scale shall be from 1"=20' to 1"=50', (600' maximum distance per sheet).
134.				Fire hydrant shall be spaced to meet ODEQ and International Fire Code requirements: ODEQ – 500'/400' -Single Family Residential -Max Spacing 500 (feet). -Townhouses and Apartments-Max. Spacing (300). -Commercial / Industrial including shopping centers) Max. Spacing 300 (feet)
135.				First valve in all directions on existing water lines shall be located and noted on plans.
136.				Valves shall be added as necessary to allow for isolating portions of waterlines. Recommend spacing of 400' for flexibility. ODEQ requirements must be met.
137.				Valve, fire hydrant, fitting, air release valve or other appurtenance to be shown with station number, northing and easting and size.
138.				Plan to include sufficient survey detail to construct proposed water line, including existing utilities, walls, etc. for connections on both sides of the street.

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	Y	N	N/A	
				Construction Plan and Profile Sheets (contd...)
139.				All fittings shown as restrained with limits of stationing must be shown on the profile.
140.				Minimum cover from top of pipe over the waterline is 36” with the following exceptions: <ul style="list-style-type: none"> - 4’ is required below pavement, ditches and creek crossing. - 4’ is required in arterial street ROW - 4’ for distribution mains 12 to 16-inches in diameter.
141.				Maximum waterline depth to be 8’-0” unless approved by COT Water Design Section.
142.				Ductile Iron Pipe to be used for the following: <ul style="list-style-type: none"> - Channel or creek crossing (restrained joints required) (HDPE with approval) - All paved areas - Along arterial streets Right of Way even if unpaved - Water service line piping from main tap to downside of meter vault on 3” and larger.
143.				Under Water Crossings (channel/creek) ODEQ regulations Section 252:626-19-2(9)(B) to be used: <ul style="list-style-type: none"> - Provide valves at both ends of water crossings so that the section can be isolated for testing or repair. The valves must be easily accessible and not subject to flooding. The valve closest to the supply source must be in a manhole, and - Make permanent taps on each side of the valve within the manhole to allow insertion of a small meter for testing to determine leakage and for sampling purposes - Provide restrained joints and fittings a minimum of 20 feet into each bank of crossing. - Bank stabilization (Riprap per COT Standard Spec. 214) - Design the pipe for river crossings and have flexible watertight joints.
144.				Taps on waterlines larger than 12” must have approval.
145.				Independent valves required on fire hydrant lines 12” or larger and on water main lines along arterial road ways.
146.				Meter vault locations with reference to appropriate COT standard detail sheet <ul style="list-style-type: none"> - New/replacement residential meters located within Right-of-Way and 2’ off property line - Separate meter box for residential service pressure reducing valve (PRV) shall be located on private property.
147.				All dead ends <u>require approval</u> and a fire hydrant or blow off assembly.
148.				Pipe must be level where valves, fire hydrants and/or conduits are to be installed.

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Item #	Complies			Waterline Review												
	Y	N	N/A													
				Construction Plan and Profile Sheets (contd...)												
149.				<p>Standard Details to be used. The following circumstances require special details:</p> <ul style="list-style-type: none"> - Air/vacuum/release valves for water lines 16” or larger - Air/vacuum/release valves for elevation changes of 15’ or more - Specials (Booster Pump Station, Water Towers, River Crossings, Storage Tanks) - All structures not covered by Standard Details 												
150.				<p>Separate Instrument Easements</p> <ul style="list-style-type: none"> - Public Water Main Line - Public Domestic Meter & Vault - Public Irrigation Meter & Can - Public Fire Suppression Meter Can/Vault - Public Fire Hydrant <p>Water Mains 12” diameter or less not installed in the public right-of-way will require a minimum easement width of twenty (20) feet.</p>												
151.				<p>Minimum Easement / Clearance for Appurtenances</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Appurtenances</td> <td style="text-align: right;">Clearance</td> </tr> <tr> <td>Air Relief</td> <td style="text-align: right;">3 feet on all sides</td> </tr> <tr> <td>Fire Hydrant</td> <td style="text-align: right;">3 feet clear from outside of hydrant</td> </tr> <tr> <td>Meters 2 inches and smaller</td> <td style="text-align: right;">3 feet on all sides</td> </tr> <tr> <td>Meters 3 inches and larger</td> <td style="text-align: right;">3 feet on all sides of meter vault</td> </tr> <tr> <td>Miscellaneous</td> <td style="text-align: right;">6 feet on all sides</td> </tr> </table>	Appurtenances	Clearance	Air Relief	3 feet on all sides	Fire Hydrant	3 feet clear from outside of hydrant	Meters 2 inches and smaller	3 feet on all sides	Meters 3 inches and larger	3 feet on all sides of meter vault	Miscellaneous	6 feet on all sides
Appurtenances	Clearance															
Air Relief	3 feet on all sides															
Fire Hydrant	3 feet clear from outside of hydrant															
Meters 2 inches and smaller	3 feet on all sides															
Meters 3 inches and larger	3 feet on all sides of meter vault															
Miscellaneous	6 feet on all sides															
				Fire Line Systems (Item # 151 and 152)												
152.				<p>Include this note for all Private Fire Lines:</p> <p>“A fire line is a private pipe system connected directly to the City water system. All maintenance of the private fire line is the responsibility of the property owner and begins from the building structure up to the public right-of-way, utility easement or water easement. A fire line, by the nature of its function and use, is susceptible to backflow. Consequently, it is subject to the requirements for backflow prevention.</p> <p>A fire line shall be utilized for fire protection only and shall serve only a single property. Typically, a fire line is a connection for on-site private hydrants or an interior fire sprinkler system for a building. Permitting review and approval interest is limited only to that portion to be constructed in the ROW or water easement.”</p>												

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IDP# _____

IDP Name _____

Complies

Waterline Review

Item # Y N N/A

153.				<p>Acceptable Pipe Materials All fire line installations shall conform to the applicable COT Standard Specifications and Standard Details. A fire line sized 4-inch and larger shall be constructed of ductile iron pipe (DIP) from the public main to detector check/control valve vault. All fire line inside the vault needs to be DIP.</p>
154.				<p>Properly sized conduit with 3/8" steel wall thickness installed level, ROW to ROW (Ultimate per Major Street and Highway Plan)</p>

Waterline Conduit Sizing (inches)

Carrier Pipe Size	6	8	12	16	24	30	36	42
Conduit Size	18	20	24	30	42	48	54	60

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IDP# _____ IDP Name _____

Item #	Complies			Sanitary Sewer Review
	Y	N	N/A	
				Sanitary Sewer Extension
				HAVE ALL GENERAL AND COVER SHEET ITEMS BEEN ADDRESSED?
				Construction Notes/Schedule of Quantities/Miscellaneous
155.				Note to be included: “Contractor will be required to vacuum test all manholes according to current City of Tulsa Standards and Specifications. Existing manholes shall be vacuum tested prior to any modifications and after work is complete.”
156.				Note to be included: “Contractor shall submit professional engineered trench excavation plan for all excavations in excess of 20 feet.”
157.				When abandoning mainlines or manholes, add note: “If any active existing service lines are cut off by removal of sanitary sewer line and manhole, then they must be reconnected to the main for service at the developer’s expense.”
158.				When abandoning main lines or manholes add note: “Sewers and manholes to be abandoned shall be securely blocked at any points of intake or discharge with a bulkhead or preformed plug and shall be completely filled with clean sand, cellular concrete or flowable fill.”
159.				When abandoning main lines or manholes add note: “Frames and covers from any structures scheduled for abandonment shall be returned to the City Sewer and Operations Maintenance at 9319 E. 42 nd Street North Inventory Yard between 7:30 am and 3:00 pm Monday thru Friday. At a minimum all structures shall be completely removed to a point three (3) feet below the final grade, or the depth noted on the drawings. Sand or flowable fill shall be used to fill the structure.”
160.				When tying to existing manhole add note: “The developer shall make any needed modifications to existing manhole in order to comply with current City of Tulsa Standards or maintenance requirements. The developer shall be responsible for cost associated with internal inspection, rehab plan preparation and construction.”
161.				Note to be included: “Water and sanitary sewer separation (outside to outside of pipes) to be minimum two (2) feet vertical & ten (10) feet horizontal per ODEQ regulations When Water and Sewer separation cannot be maintained, the sanitary sewer shall be designed and constructed equal to water pipe. Sanitary sewer must be installed and Tested for Pressure and Leakage in accordance with COT Standard specification Part 203 and ODEQ Standard 252:626-19-2(e)”.
162.				Note to be included: Service Tees shall be constructed as part of IDP. Service connections to buildings shall be done separately as a sewer tap permit.
163.				Note to be included: Backflow preventer must be installed if building site is below the upstream/downstream manhole rim+ 1’
164.				Schedule of Quantities to be provided. Current COT Standard Specifications to be referenced for the quantities.

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IDP# _____ IDP Name _____

Item #	Complies			Sanitary Sewer Review
	Y	N	N/A	
				Construction Notes/Schedule of Quantities/Misc. (contd...)
165.				Oklahoma Department of Environmental Quality Engineer’s report to be provided for all new public sewer main construction. Rerouted lines do not require ODEQ report. Report form can be found at: https://www.deq.ok.gov/wp-content/uploads/water-division/SanitarySewerWater_interactive4web-3.pdf
166.				ODEQ form 583-B to be provided. Form can be found at: https://www.deq.ok.gov/wp-content/uploads/water-division/Permit2Construct580BForm_interactive4web-5.pdf
167.				Pothole all high-pressure gas pipelines at all crossings. Coordinate with the Gas Line Owner.
168.				Plan note: Contractor shall pothole all utility crossings. Contractor is responsible for coordinating with utility owners.
169.				Check all utility crossings to avoid conflicts during construction.
170.				Safety considerations at schools, playgrounds, etc. shall be included.
				Plan and Profile sheets
171.				Manhole numbering: Existing manhole numbers from Atlas Page must be included. Existing MHs connections to use Capital Letters. Proposed MHs to begin with #1 at the lowest end.
172.				Table of State Plane Coordinates for both the existing and proposed manhole locations (MH #, X, Y, Z) to be included.
173.				Manholes must be drawn to scale on plan.
174.				Manhole spacing to be no greater than 500 feet. Longer spacing may be allowed on sewers 12” I.D. and greater per ODEQ specifications.
175.				Manholes with less than 4.0’ depth from top of rim to top of pipe shall require a special structure (5’ I.D. Flat Top MH).
176.				For MHs located in FEMA and/or City of Tulsa regulatory 100-year floodplain, provide standard 5’ diameter manhole elevated 1’ foot above grade.
177.				Internal diameter of proposed manholes to be appropriate for the pipe size (8”-12” pipe: 4ft ID; 15”- 21” pipe: 5ft ID; 22” - 36” pipe: 6ft ID). 5’ and larger diameter manholes must be epoxy lined with no steps. All manholes must have 30” lids.
178.				Concrete manholes, associated with mains 15” ID and larger, to be designed with interior epoxy coating or fiberglass with no coating.
179.				For drop manholes, drop to be placed outside the manhole.
180.				Grade adjustment for manholes to be done per City of Tulsa Sanitary Sewer Rehab Specifications, Section 418

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IDP# _____ IDP Name _____

Item #	Complies			Sanitary Sewer Review
	Y	N	N/A	
				Plan and Profile sheets (contd...)
181.				Heavy wall SDR26 PVC is the minimum gravity sewer pipe requirement and the engineering consultant shall submit design deflection calculations for earth (dead) loading and live loading (H-20 traffic loads for example) for all depths greater than 16 feet. Add bedding details to drawings unique to that depth and geotechnical information.
182.				Sewers to project a minimum of 15.0 feet into the property to be served and must terminate in a manhole. Lamp-holes are not allowed unless approved by SOM.
183.				Profile to be shown with rising grade from left to right.
184.				Pipe length, type, I.D. and slope to be identified on profile.
185.				Service tees to be shown in the profile with station measured from downstream manhole, size and direction facing.
186.				Contour lines (minimum 2-foot contours) to be shown on plan view (existing [dashed] and proposed [solid]).
187.				Flow Direction Arrows to be shown in plan for all sewer lines.
188.				Limits of pavement removal and replacement to be shown on plan view.
189.				Special backfill requirements to be shown in profile.
190.				Existing utilities and features to be shown on both the Plan & Profile. Stationing of features must be included in the profile view.
191.				Drainage Basin Map, clearly defining all areas tributary to the subject property and the proposed sewer main to be included. Basins and subbasins to be analyzed as needed to confirm capacity, including where pipe sizes change, where pipe slopes change and where sewer lines converge. Plans shall include the Sanitary Sewer Design Table provided below.
192.				Does the Ordinance Flow Equation, based on Title 11C Chapter 6, Section 600(G) , ($Q_m = A^{0.8169} \times 0.01467$) show sufficient capacity to serve the entire upstream drainage basin? Include calculations, show entire drainage basin and subbasins as necessary in plans.
193.				If described in the Waste Water Compendium (Comp Study), (latest addition) is capacity provided to serve other basins? Are stub-outs provided per the study?
194.				Type A aggregate backfill compacted to 95% Standard Proctor Density to be shown in profile and provided for the entire trench under the following: <ul style="list-style-type: none"> - paved driving surfaces (streets, parking lots, driveways, etc.) - full ROW width of arterial streets - Commercial and residential driveways

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Item #	Complies			Sanitary Sewer Review
	Y	N	N/A	
				Plan and Profile sheets (contd...)
195.				For channel or creek crossings: <ul style="list-style-type: none"> - Rip rap the channel over the cut - If less than four (4) feet of cover, then steel conduit to be placed 10' beyond the upper toe of each bank. See conduit chart below for conduit size.
196.				For rip rap add note: Rip rap design and installation shall comply with the more stringent of the following: <ol style="list-style-type: none"> 1. ODOT Standard Specifications adopted by the City of Tulsa 2. Current City of Tulsa Stormwater Management Criteria Manual
197.				Aerial Crossings are discouraged and require approval by the Engineering Director and SOM. If an aerial crossing is unavoidable, the following is required: <ul style="list-style-type: none"> - Design calculations, both static and dynamic structural design, (including impact stability during flooding) prepared by a PE experienced in sewer/structural design - Restrained joint non-metallic sewer pipe (bell harness megalugs on SDR26 PVC or Fused DR17 HDPE) - Geotech report showing the strata and depth the deep foundations are penetrating or bearing on. - Type of deep foundations in center and type of deep or shallow footing into banks (H piles, concrete piers, drilled shafts, spread footings, etc.) - Maximum spacing of foundations - Pile cap design showing strap and anchor bolt material and sizes - Pipe to be encased in steel conduit - Must conform to ODEQ regulation 252:656-5-4 (d)
198.				Sanitary sewer to be encased in steel conduit along arterial streets. The length of conduit to be shorter of the following: <ol style="list-style-type: none"> a. ROW to ROW (Ultimate per Major Street and Highway Plan) b. 20' from the face of manhole. If this falls within the pavement then distance from face of manhole may be reduced. See chart below for conduit size.
199.				Water and sanitary sewer separation (outside to outside of pipes) to be minimum two (2) feet vertical & 10' horizontal per ODEQ regulations. When it is impossible to obtain above clearances the sanitary sewer shall be designed and constructed equal to water pipe per ODEQ Regulations.
200.				Service line 8" or larger must connect to manhole at the invert level either through direct entrance or through a drop. Flow calculation to justify size must be provided.
201.				Service connections to be at less than 16' depth.

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IDP# _____ IDP Name _____

Item #	Complies			Sanitary Sewer Review
	Y	N	N/A	
				Plan and Profile sheets (contd...)
202.				Depth of the sewer main must be sufficient to serve all intended properties. Finished Floor elevations to be provided.
203.				Service connections can only be provided on mains 12” ID and smaller. Connections to mains larger than 12” ID allowed only with SOM approval.
204.				Locations where backflow prevention must be installed to be provided in a backflow preventer table in the format shown below.
205.				Minimum distance from outer diameter of manhole to any permanent structure to be ten (10’) feet.
206.				Offset dimensions of sewer line from property line to be shown. Sewer line to be located: <ul style="list-style-type: none"> - 12.5’ from property line within a 17.5’ perimeter easement. - seven (7) feet south or west of the property line within back to back 11foot easements - for side lot easements, pipe to be centered within 15’ easement.
207.				Design must provide sufficient pipeline slope considering minimum velocity of 2.0 FPS for pipe smaller than 15”; minimum 3.5 FPS for pipes 15” or larger -. (Max. slope 8%) See chart below.
208.				Restoration details of retaining walls, improved channels, and other special structures to be provided.
209.				Contact Sewer Operations and Maintenance for condition report where connections are being proposed to existing public manholes and public mains.
210.				Redevelopment involving the demolition of existing residential or commercial structures shall include a complete rehabilitation of all existing sewer facilities servicing the redevelopment. Add note on plan: The developer shall be responsible for the cost associated with internal inspection, rehab plan preparation, and construction.
211.				If applicable, include proper reference to Rehabilitation Specifications (Chapter 400)
212.				For all rehabilitation methods that reduce cross sectional area, flow capacity calculations to be included to confirm sufficient capacity exists.
213.				Private sanitary sewer service lines, 8 inch I.D and larger, shall be required to be designed according to City of Tulsa, Public Mainline Standards and shall be reviewed by Development Services as an IDP project. The service line must be clearly labeled “Private Service Line” on the plans.

City of Tulsa Infrastructure Development Process Plans Review Checklist

IDP# _____

IDP Name _____

Complies

Sanitary Sewer Review

Item # Y N N/A

Item #	Y	N	N/A	Detail Sheet(s)
214.				Existing and proposed MHs to be shown to scale, including manhole diameter, pipe O.D, minimum radius of invert (per Standard 366), location of manhole steps, and deflection angles.
215.				Minimum of 1' clear space to be maintained outside to outside of adjacent pipes in a manhole.

Sanitary Sewer pipe size versus minimum slope requirements

Pipe Size (inches)	8	10	12	14	15	16	18	21	24
Min. %Slope*	0.40	0.29	0.22	0.17	.44	.41	.35	.28	.235

*8"-14" pipes are designed to velocity of 2 fps. 15" and up are designed to 3.5 fps

Conduit Sizing (inches) Wall Thickness minimum 3/8"

Carrier Pipe Size	6	8	10	12	14	15	16	18	20	24	30	36	42	48
Conduit Size	20	20	24	24	30	30	30	36	36	42	48	54	62	68

Backflow Preventer Table

Manhole#	Lot/Block#	Pad FFE	U/S TR	D/S TR	Backflow Preventer Required?

Sanitary Sewer Design Table

Drainage Area #	SSMH #	Area (acres)	Ordinance flow (MGD)	Receiving Pipe Size (in)	Capacity at minimum design slope (Mannings) (MGD)	Ordinance Flow minus capacity (MGD)

Note: Drainage Area Map should clearly show these analysis points (SSMHs) and areas

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IDP# _____ IDP Name _____

Item #	Complies			Transportation Review
	Y	N	N/A	
				Transportation
				HAVE ALL GENERAL AND COVER SHEET ITEMS BEEN ADDRESSED?
				General Information
216.				New driveway and curb cut locations are required to go through the Change of Access Process.
217.				Private improvements in or over the ROW require a License Agreement with the City.
218.				Are sidewalks required for this project? (via plat, zoning code, ordinance...)
219.				Modification of a public roadway median must go through the Change of Access Process.
				Paving Plan
220.				Street layout, locations, and geometrics, including collector streets, must conform to Major Street and Highway Plan, existing or proposed plat, PUD, etc.
221.				Street names to be provided on each street segment on plan sheets.
222.				Ave., Pl., St., and Ct., often get confused. Verify Street names and provide key map.
223.				Provide note on plan "ALL STREETS ARE PUBLIC UNLESS OTHERWISE NOTED". Private Streets to be labeled "Private".
224.				All "Limits of No Access" to be shown on the plan.
225.				Existing and Proposed Right of Way lines to be shown with dimension lines, bearings and distances. Reference Plat or Book and Page number.
226.				Existing median locations and openings on adjacent streets to be shown.
227.				Paving width in proposed street to be called out from gutter line to gutter line.
228.				Asphalt street pavement sections to conform to Standard No. 726 Type 4. Alternative asphalt pavement sections can be considered and require a Geotechnical Report for review.
229.				Type of pavement on existing streets to be called out on plans. (AC, APC, PCC)
230.				Existing and proposed curb and gutter, driveways, sidewalks, and ramps to be clearly identified and dimensioned and referenced to appropriate City of Tulsa Standard detail.
231.				Transitions from curbed to uncurbed sections to be properly detailed, including section showing compacted subgrade and base material extending 2 ft. beyond edge of uncurbed pavement.
232.				Radii at returns to conform to Subdivision Regulations. (25' for residential streets, 30' at intersections with arterials, 40' for industrial districts)
233.				Cul de sac radius to conform to subdivision regulations.
234.				All curb geometry to be provided .

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IDP# _____ IDP Name _____

Item #	Complies			Transportation Review
	Y	N	N/A	
				Paving Plan (contd...)
235.				Sidewalks and ramps to be shown and labeled as to whether their construction is included in the IDP contract or will be by individual lot builders.
236.				Sidewalk to be placed minimum 2' from back of curb or 18" from property line.
237.				If any part of public sidewalk is on private property it must be placed in a sidewalk easement.
238.				Sidewalks, curb cuts and ramps to be compliant with Public Rights of Way Accessibility Guidelines (PROWAG) and Americans with Disabilities Act Accessibility Guidelines (ADAAG)
239.				If there is an obstruction in the sidewalk, minimum of four feet to be available on at least one side.
240.				Call out type of accessible ramp for each ramp. Landing area and ramp dimensions, spot grades, slopes and orientation to be provided. Tactile dome location and orientation shall be shown on the plans and per PROWAG and ADAAG.
241.				Type B and Type D accessible ramps shall not be used without approval.
242.				Concrete bus pads to be located behind curb and connected to sidewalk at Bus Stop locations. If there is only a sign or bench at the location concrete pad to be 10'X10' minimum. Facility to be compliant with PROWAG.
243.				Ties of new to existing pavement to be clearly explained in a construction detail.(At minimum, include note: "Full Depth Saw Cut," and "Match Existing")
244.				All storm water curb inlets to be shown on paving plans. Aprons around curb inlets shall be per City Standard 764.
245.				Driveways shall meet City Standards (commercial driveways width to be between 24'– 36'with radius of returns minimum 15'). Off-tracking should be considered when determining driveway radii.
246.				Pavement type and thickness for driveways to conform to COT Driveway Standards.
247.				On projects with public asphalt paving following note to be included: Failure to reach density of 92% to 97% per lot will result in a rejection of work.
248.				Driveway spacing and geometry to conform to Access Management Standard Detail. Changes in access shall be approved by Traffic Engineering. Driveway and intersection spacing in relation to adjacent driveways and intersections not covered by the Access Management Standard Detail shall be approved by Traffic Engineering.
249.				Gated entry at a private street or parking lot to have adequate queuing storage for two vehicles (50') waiting for access.
250.				Turn around to be provided prior to gates on private streets.

**City of Tulsa
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IDP# _____ IDP Name _____

Item #	Complies			Transportation Review
	Y	N	N/A	
				Paving Plan (contd...)
251.				If existing public pavement is concrete or asphalt overlay over concrete proposed driveway to be shown as concrete.
252.				Sidewalk slope including across driveways to be 1.7%.
253.				Maximum grade of driveway entrance in Right of Way to be 8%.
				Street Profiles
254.				Design speed to be used: 25 mph for residential and collector streets.
255.				Stationing to be clearly shown on paving plan sheets.
256.				All match lines shall have stations shown.
257.				Profiles to be shown directly below plan view.
258.				Horizontal scale 1"=20' (no smaller); Vertical scale 1"=5' (no smaller).
259.				Each profile to be captioned with the correct street name.
260.				All street intersections to be shown with stationing equations and proper street name labels.
261.				Profiles to extend at least 100 ft. beyond ends of paving construction to show tie-in to existing or future pavement or ground topography.
262.				Proposed top of pavement profile at centerline to be clearly labeled on each profile. Gutter flowlines that deviate from the typical cross slope to be shown and labeled.
263.				Elevations to be shown at all 50 ft. stationing increments and at called out features.
264.				Vertical curves to provide elevations at PC, PI, PT, high and low point.
265.				All grades must conform to the minimum 0.75% and maximum 8%.
266.				Vertical curves to be sufficiently distanced (min. 50 ft.) from an arterial street curb line.
267.				Vertical curves to be symmetrical, no asymmetrical curves to be used.
268.				4% maximum grade of intersecting residential streets to be maintained.
269.				Requirements for maximum grade and distance of residential street from arterial street to be maintained (max. 2% for a min. 100 ft. from arterial curb line).
270.				Vertical curve data to be provided to show conformance with design standards.
271.				All vertical curves to conform to City of Tulsa requirements for design standards according to the current edition of the AASHTO Guide (minimum k-value, design speed 25 mph) for Design of Pavement Structures.
272.				All utilities to be shown in plan and profile with cautionary notes included as applicable.

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IDP# _____

IDP Name _____

Item #	Complies			Transportation Review
	Y	N	N/A	
				Site Access Plan
273.				Include a Site Access Plan that includes the following: <ol style="list-style-type: none"> a. Existing ingress/egress locations for the subject site b. Proposed ingress/egress locations for the subject site c. Closest ingress/egress locations for all adjacent properties, including across public streets. d. Public and Private streets Each item listed above needs to be clearly labeled with dimensions for analysis for compliance with COT STDs 711A and 711B
				Intersection Details
274.				Intersection details to be provided for all intersections, transitions to existing and other area that do not conform to typical horizontal or vertical street layout. Intersection details shall extend 150' beyond center line.
275.				All intersection details to be captioned with their correct street names.
276.				Reference stationing to be provided in all details for locating curb returns, street centerlines, medians, islands, and other constructed features.
277.				Top of pavement (TP) spot elevations to be provided at center lines, curb and gutter returns, access ramps and inlets to verify positive drainage in all directions.
278.				Positive drainage to be provided, including the minimum 0.75% along the curb line of the full arc length of each curb return and "eyebrow" intersection.
				At intersections, the design philosophy shall be "table top" design. The crown from side streets into arterials shall transition to meet through gutter line. Smooth transitions with vertical curves. No grade breaks.
279.				Arrows to be provided showing direction of drainage flow.
280.				Storm water curb inlets must be shown on the intersection details.
281.				Special paving features and transitions to be properly labeled and referenced to a corresponding construction detail.
				Traffic Signals, Pavement Markings, Traffic Signs, Street Lighting
282.				Are there any pedestrian and/or vehicular signals and/or traffic signal equipment being added or affected by this project? If no go to #287
283.				If the project is located within 500 feet of a traffic signal, or within 200 feet of any other active traffic control or warning device that is supplied with electrical service or solar power, the equipment shall be shown on the plans. Add notes that any traffic equipment, (loops, conduits, wires, controller cabinet, traffic signals, school zone flashers, RRFB's etc.) shall be replaced with new equipment if damaged or being relocated.

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Item #	Complies			Transportation Review
	Y	N	N/A	
				Traffic (contd...)
284.				If a railroad is located with 200ft of the project, extra care shall be taken not to damage any existing railroad equipment, railroad pre-emption, or quiet zone equipment. If any is damaged or needs to be relocated, it shall be replaced with new equipment that meets the requirements of the railroad and the City of Tulsa. Please be aware that railroad equipment, railroad pre-emption, and railroad quiet zones, can be very expensive.
285.				Include traffic signal sheets (signal plan, phasing and sequencing, and wiring diagram)
				Cover sheet shall list the correct COT standards and specifications for traffic signals.
286.				Include traffic signal notes on plans.
287.				Are there any pavement markings being added, removed, or affected by this project? If no go to #293
288.				Pavement markings and signs shall be shown on the same sheets.
289.				Include the colors, line widths, and dimensions on the plans
290.				Include pavement marking notes on the plans, (pavement markings shall be extruded thermoplastic).
291.				Pavement markings to be shown where necessary (e.g., gore areas, at traffic circles, major transitions, turn lanes), with material and application specifications.
292.				Consider if signage and/or pavement markings specific to school will be required.
293.				Are there any signs being removed, added or affected by this project? If no go to #299
294.				Pavement markings and signs shall be shown on the same sheets.
295.				COT standards and specifications shall be listed on cover sheet for traffic signs.
296.				Include sign notes on plans.
297.				Include a sign summary in the plans
298.				Include street marker signs for new streets in the sign summary.
299.				Private street signs should be replaced with black street signs and not red per MUTCD.
300.				Are any street lights or highway lights being added, removed or affected by this project? If no go to #303
301.				Include COT standards and specifications for lighting on the cover sheet.
302.				Include plan notes for street lighting in plans.
303.				Existing lights that are taken down for the project to be replaced pole for pole.

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IDP# _____

IDP Name _____

Transportation Review

Item #	Complies			
	Y	N	N/A	
				Traffic (contd...)
304.				Relocated or new driveways need to be approved by the city traffic engineer.