

General Construction Plan Set Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Cover Sheet	☐	☐	
All Sheets sized 34" H x 22" V	☐	☐	
City of Thornton Construction Notes	☐	☐	
Demo Plan (Where Appropriate)	☐	☐	
Horizontal Control Plan (Non-Residential, Multi-Family, Other)	☐	☐	
Overall Grading Plan (SFD/Duplex Lots)	☐	☐	
Detailed Grading Plan (Non-Residential, Family, Other)	☐	☐	
Sediment & Erosion Control Plans (2 Phases Minimum)	☐	☐	
Erosion and Sediment Control Notes	☐	☐	
Overall Utility Plan (Single Sheet - Provide Matchlines & Sheet References)	☐	☐	
Detailed Utility Plans (1":50' Max Scale)	☐	☐	
Roadway Plan and Profiles	☐	☐	
(Based on CL of roadway, profiles extended to CL of intersections min.)	☐	☐	
(City preference is for roadway P&Ps and Storm P&Ps to be combined)	☐	☐	
Sanitary Sewer and Water Line Plan and Profile (based on CL of roadway)	☐	☐	
(City Preference is for sanitary sewer and water line P&Ps to be combined)	☐	☐	
Roadway Grading Details (Include for raised intersections, speed tables, roundabouts, cul-de-sacs, connections to existing roads)	☐	☐	
Roadway X-Sections	☐	☐	
Storm Drainage Plan and Profile (City preference is for storm to be combined w/ road P&P)	☐	☐	
Detention/WQ Facility Detailed Grading	☐	☐	
Detention/WQ Facility Details	☐	☐	
Regional Trail Plan & Profile	☐	☐	
Signage and Striping Plan	☐	☐	
Traffic Signal Construction / Modification Plan	☐	☐	
Lighting Plan (Overall plan showing locations)	☐	☐	
Details (Erosion Control, Drainage, Roadway, Water, Sanitary, Etc.)	☐	☐	
Include a min. 3" tall x 2" wide blank space in same location on all sheets for city stamp	☐	☐	
Drainageway/Channel Construction Plans (Separate Plan Set Optional)	☐	☐	
Retaining Wall Construction Plans & Analysis (Separate Submittal)	☐	☐	
Within Xcel territory, streetlights shall be City owned and have lighting plans showing streetlights, conduit, pull boxes, power connection locations, meter, voltage drop calculations for each circuit.	☐	☐	
Irrigation Construction Documents (Separate Submittal to LA)	☐	☐	
Park Construction Documents (Separate Submittal to LA)	☐	☐	
Median Landscaping Plans (Separate Submittal to LA)	☐	☐	

Cover Sheet Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Title Block	☐	☐	
Project Legal Name (Subdivision, Filing, Lot , Block, Township, Range, Section, City, County)	☐	☐	
Engineer Seal & Signature	☐	☐	
Engineering Company (Name, Address, Phone, Engineer of Record)	☐	☐	
Date (Revision dates after plans are released)	☐	☐	
Sheet Description & Number	☐	☐	
Vicinity Map	☐	☐	
North Arrow (oriented up and either left or right (consistently) on all sheets)(not down)	☐	☐	
Scale	☐	☐	
Sheet Index (including sheet numbers)	☐	☐	
Project Datum/Basis of Bearings	☐	☐	
City of Thornton Conformance Statement (required on all pages)	☐	☐	
Urban Drainage Statement (If Applicable)	☐	☐	
Legend of Symbols (include on additional sheets as necessary)	☐	☐	
Variance Summary Table (If Applicable)	☐	☐	
Contact Information			
Developer (Company, Address, Phone & Contact)	☐	☐	
Engineer/Surveyor (Company, Address, Phone & Contact)	☐	☐	
City of Thornton Development Inspection Supervisor Contact (City of Thornton, Address, Phone & Contact)	☐	☐	
List of Public Utilities (Company, Address, Phone & Contact)	☐	☐	
Xcel/United Power	☐	☐	
Comcast	☐	☐	
CenturyLink	☐	☐	
Oil & Gas	☐	☐	
Fiber Optic Providers (Level 3, City, etc.)	☐	☐	
Water & Sanitation District (City and/or Other)	☐	☐	

Horizontal Control Plan / Site Plan Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
Boundary Lines	☐	☐	
Property Lines	☐	☐	
Plan Details			
Site Surface Improvements (extending to 50-feet minimum outside of site)	☐	☐	
Infrastructure (C&G, sidewalks, driveways, ramps, x-pans, etc.)	☐	☐	
Structures (Buildings, walls, fences, etc.)	☐	☐	
All surface features (existing to remain and proposed)	☐	☐	
Adjacent Improvements/Structures (Roadways, parking lots, buildings, etc.)	☐	☐	
Easements (Existing to remain & proposed)	☐	☐	
Drive Aisle Widths	☐	☐	
Parking Stall Dimensions	☐	☐	
Sidewalk Widths	☐	☐	
Cross Pan, Valley Pan, & Chases Widths	☐	☐	
Dimensions from Building to Property Lines	☐	☐	
Parking Lots & Private Drives (Curb Lines - Line & Curve Table Acceptable)			
Catch/spill curb transition location information	☐	☐	
Adequate dimensions / coordinates to make plans constructable	☐	☐	

Existing Conditions/Demolition Plan Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
Existing Utilities and Infrastructure (water, sanitary, storm, dry utilities, concrete/asphalt, etc.)	☐	☐	
Existing Structures (walls, buildings, RTD pads/stops, etc.)	☐	☐	
Existing Grading (if applicable to help clarity; must extend 100 feet beyond property line)	☐	☐	
Property Lines (Label Properties w/in & Adj to Site)	☐	☐	
Ex. Street Names	☐	☐	
Ex. Right-Of-Way (w/ Width)	☐	☐	
Easements w/ Width Dimensions	☐	☐	
Identify items "to be removed"	☐	☐	
Services & Utilities to be Removed &/or Abandoned	☐	☐	
Define Approx./Anticipated Concrete/Asphalt Removal Limits	☐	☐	
Signage & Striping Removals/Relocations	☐	☐	
Traffic signal removals and interconnect relocations	☐	☐	
Limits of mill and overlay and/or full depth pavement removal	☐	☐	
Identify items "to be protected in place"	☐	☐	
Floodplain limits (most restrictive accepted study)	☐	☐	

Grading Plan Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
North Arrow	☐	☐	
Scale (1":50' Max; Index sheets may be larger than 50')	☐	☐	
Key Map (if applicable)	☐	☐	
Location & Elevation of City or USGS Benchmarks	☐	☐	
Boundary/Property/ROW/Tract Lines/Easements (Existing & Proposed)	☐	☐	
Label properties (Filings, Lots, Etc.) w/in & Adj to Site	☐	☐	
Label ROW & Easement Widths	☐	☐	
Site & Adjacent Infrastructure w/in 150' (Existing & Proposed: Roadways, Parking Lots, Etc.)	☐	☐	
Curb, Flowline, Gutter Lip, Sidewalk, Cross-pans, Medians, Etc.	☐	☐	
Structures w/in 150' (Existing & Proposed: Bldgs., Fences, Retaining Walls, Utility Boxes, Etc.)	☐	☐	
Existing-Utilities (Water, Sanitary Sewer, Etc.)	☐	☐	
Existing Trees & Areas/Vegetation to be Protected	☐	☐	
General Grading			
Existing & Proposed Contours (2' min, Minor & Major Differentiated, with adequate labels)	☐	☐	
Proposed Contours Shall Tie Into Existing	☐	☐	
Contours (150' outside boundary, sites < 5 acres)	☐	☐	
Contours (300' outside boundary or as needed, sites > 5 acres)	☐	☐	
Limits of Grading/Disturbance (Including borrow and stockpile areas)	☐	☐	
Maximum & Minimum Slopes (See Other Checklists For Additional Requirements)	☐	☐	
4:1 Maximum	☐	☐	
Landscaped Areas Minimum grade of 2% (Minimum 4% preferred)	☐	☐	
Flow Direction Arrows	☐	☐	
High/Low Pts. (Spot Elevations)	☐	☐	
Retaining Walls (Proposed & Existing) (See Separate Checklist)	☐	☐	
Top of Wall & Bottom of Wall at Finished Grade (each side of any step in wall height or every 10 ft)	☐	☐	
Sidewalks & Trails (Proposed & Existing)	☐	☐	
Proposed 2% Max. Cross Slope	☐	☐	
Railings are provided at the top of the topmost wall all drops 30-inches or greater where	☐	☐	
in close proximity to public sidewalks or public pedestrian areas			

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Drainage			
Drainage Infrastructure (Existing & Proposed)	☐	☐	
Inlets	☐	☐	
Drainage Pipes	☐	☐	
Manholes	☐	☐	
Temporary Roadside Ditches	☐	☐	
Typical Cross Section(s)	☐	☐	
Ditch Depth, Width	☐	☐	
Flow Depth, 0.5' Freeboard, Q5 Velocity of 5ft/s Max	☐	☐	
Side slopes 4:1 max	☐	☐	
Swales (Proposed & Existing) - Provide Plan & Profile if Necessary	☐	☐	
Typical Cross Section(s) (Sections at regular intervals may also be required)	☐	☐	
Depth, Width, Flow Depth, Bottom Width, Side Slopes	☐	☐	
Longitudinal (Per USDCM, Shear Stress 1lb/ft Max)	☐	☐	
Drainage Channels (Proposed & Existing) - See Channel Plan & Profile Requirements	☐	☐	
Master Plan / Drainageway Stabilization Improvements (Per UDFCD, USDCM, & M.E.)	☐	☐	
Detention/WQ Pond (Provide Detention Pond Plans for Detail - See Detention Pond Cklist)	☐	☐	
Max WSE & Limits	☐	☐	
Existing and Proposed 100 Year Floodplain Limits (most restrictive accepted study)	☐	☐	
Delineated Wetlands and Open Bodies of Water Limits	☐	☐	
Residential (SFD/Duplex Lot) - Overlot Grading			
Spot Elevations at Lot Corners	☐	☐	
2% min. Back to Front of all "A" Lots	☐	☐	
3:1 Max Temporary Lot Grades	☐	☐	
No More Than 1 Lot Drains To Another	☐	☐	
Tracts & ROW Do Not Drain To Lots	☐	☐	
Plugged Sump Inlet Water Surface Elevation & Limits	☐	☐	
Direct/Total Q100 Flow at Sump Location	☐	☐	
No Impact to Residential Lots	☐	☐	
Sump Inlet Emergency Overflow Spillway(s)	☐	☐	
Flow path Grading Defined & Marked	☐	☐	
Sump Overflow X-Section(s) - Dimensions, Slopes, Flow Depth, Freeboard (as needed)	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Commercial, Multifamily, Other - Site Detailed Grading			
Parking Lot C&G - All Critical Points (PC's, PT's, PCR's, Angle Pt's, Grade Breaks, HP's, LP's)	☐	☐	
Finished Floor Elevations	☐	☐	
Finish Grade Elevations At/Around Structures/Buildings (Proposed and ex. to remain)	☐	☐	
Slopes Along Building/Structures (Perpendicular & parallel to bldg.)	☐	☐	
Parking Lot & Drive Aisle	☐	☐	
Longitudinal Slopes (5% max per fire code, 0.75% min)	☐	☐	
2% max ADA access aisles & stalls	☐	☐	
Driveway/Access Information	☐	☐	
Cross Slopes (4% max, 0.75% min)	☐	☐	
Commercial/Non-Residential Driveway ROW Approach 4% Max for 50'	☐	☐	
Provide Plan & Profiles Where Necessary (See Roadway Plan & Profile Cklist)	☐	☐	
Walks Elev & Grades (5% maximum or 8.33% w/landings & handrail, 2% max cross slopes)	☐	☐	
Critical Point Elevations (PCR, PT, PC, PCC, FLPI, HP, & LP)	☐	☐	
Ditches, Swales, Channels/Drainageways, Overflows, & Facilities w/in Easements	☐	☐	
Plugged Sump Inlet Ponding Limits & Water Surface Elevations	☐	☐	
Multifamily - Detailed final grading around buildings	☐	☐	

Sediment & Erosion Control Plan Checklist

Design Engineer is complete this checklist and shall ensure all required information is included in the SECP.
The completed checklist is to be included with each submittal to the City of Thornton.

PROJECT NAME: _____

ENGINEERING FIRM: _____

RESPONSIBLE DESIGN ENGINEER: _____

DESCRIPTION	Citation	PROVIDED (Engineer)	N/A
Sediment and Erosion Control Plan General Info			
Title Block (Along Right Edge of Each Sheet)		☐	☐
- Project Name (Legal Name: Subdivision, Filing, Block, Lot, etc.)		☐	☐
- Professional Engineer Seal & Signature		☐	☐
- Engineering Company (Name, Address, Phone)		☐	☐
- Date (Include Revision Dates For Resubmittals Until Release)		☐	☐
- Sheet Description & Number		☐	☐
North Arrow		☐	☐
Scale		☐	☐
City of Thornton Conformance Statement		☐	☐
Location Key Map		☐	☐
Legend (Line types, hatching, & symbols to correspond to UDFCD CBMP Notes & Details)		☐	☐
Erosion & Sediment Control Plan Notes		☐	☐
- City of Thornton Erosion Control Notes		☐	☐
- Phasing Differentiation Notes (Min 3 Phases Required)		☐	☐
- Dust or Particulate Control Notes*		☐	☐
Limits of Construction		☐	☐
- All Areas of Work (Disturbance)*		☐	☐
- Access Points (Including Temporary/Haul Roads)*		☐	☐
- Storage & Staging Areas*		☐	☐
- Outdoor storage (Construction/building materials, fertilizers, chemicals, etc.)		☐	☐
- Bulk Storage of Materials		☐	☐
- Locations of Vehicle & Equipment Maintenance/Fueling		☐	☐
- Loading & Unloading Operations		☐	☐
Grading Contours (Existing & Proposed, max 2' contours)*		☐	☐
- Extend Min 100' Beyond Property Line*		☐	☐
- Areas of cut and fill		☐	☐
Directional Flow Arrows*		☐	☐
Locations of All Drainage & Water features*		☐	☐
- Streams/Drainageways, Ditches, Springs, & Other Surface Waters*		☐	☐
- Floodplains, Wetlands, & 50ft Wetland Buffers*		☐	☐

DESCRIPTION	Citation	PROVIDED (Engineer)	N/A		
Locations of Discharge Points*		☐	☐		
Locations of Facilities, Paved Areas, & Other Permanent Features*		☐	☐		
Locations of Dedicated Asphalt &/or Concrete Batch Plants *		☐	☐		
Locations of All Initial, Interim, & Final Structural Control Measures*		☐	☐		
		PHASE INSTALLED	N/A ¹		
Standard Erosion Control Measures		INITIAL	INTERIM	FINAL	
Vehicle Tracking Control Pad (VTC) *		☐	☐	☐	☐
- VTC pad at each site entry point		☐	☐	☐	☐
- VTC pad at the main access point (Jersey barriers closing off all other access points)		☐	☐	☐	☐
- Curb Step (CS) in the gutter in front of all VTC pads.		☐	☐	☐	☐
Stabilized Staging Area (SSA)		☐	☐	☐	☐
- Where vehicles, job trailers, materials, etc., will be kept.		☐	☐	☐	☐
Construction Fence (CF)		☐	☐	☐	☐
- Where (SF) is not applicable/placed along property lines and areas of off-site disturbance		☐	☐	☐	☐
Silt Fence (SF) *		☐	☐	☐	☐
Sediment Control Logs (SCL)		☐	☐	☐	☐
Rough Cut Street Control (RCSC) (During street/roadway construction)		☐	☐	☐	☐
Diversion Ditch/Berm (DD)		☐	☐	☐	☐
- Convey all surface flows to TSB or TST		☐	☐	☐	☐
Temporary Slope Drains (TSD)		☐	☐	☐	☐
Temporary Sediment Basins (TSB) (For areas of disturbance 5 acres or greater)		☐	☐	☐	☐
- 1 for every 5 acres, or 1 appropriately sized for the entire development		☐	☐	☐	☐
Temporary Sediment Trap (TST) (For smaller areas & linear roadway projects)		☐	☐	☐	☐
Surface Roughening (SR) (20' from all impervious areas)		☐	☐	☐	☐
Terracing (T) (On excessive slopes - see Grading Checklist)		☐	☐	☐	☐
Temporary Seeding (TS)		☐	☐	☐	☐
- All Distirbed Areas Outside of Active Construction w/in _____ Weeks of Disturbance		☐	☐	☐	☐
Permanent Seeding (PS)		☐	☐	☐	☐
- All Stabilized Areas Not Developed w/in _____ Months of Disturbance		☐	☐	☐	☐
- All Areas of Native Seeding		☐	☐	☐	☐
Mulching & Crimping (MC)		☐	☐	☐	☐
Erosion Control Blankets (ECB)		☐	☐	☐	☐
- Permanent slopes steeper than 1:4		☐	☐	☐	☐
- Below EURV &/or WQ In Drainage Facilities		☐	☐	☐	☐
- In Bottom of Grass lined Swale/Ditch/Channel (Stabilization Until Vegetated)		☐	☐	☐	☐
Inlet Protection (IP) (Specify On-Grade, On-Sump, & Area Inlet) *		☐	☐	☐	☐

DESCRIPTION	Citation	PROVIDED (Engineer)	N/A
PHASE INSTALLED			N/A ¹
	INITIAL	INTERIM	FINAL
Culvert protection (CP)	☐	☐	☐
- Inlet & Outlet Protection on All Culverts	☐	☐	☐
Outlet Structure Protection (OSP)	☐	☐	☐
- In front of all detention pond outlet structures	☐	☐	☐
Check Dams (CD)	☐	☐	☐
- Medium to high flow swales and gulches	☐	☐	☐
Rock Sock in Swale (RSS)	☐	☐	☐
- Low flow swales and gulches	☐	☐	☐
Grass Lined Swales (Erosion Control Blankets (EBC) or Turf Reinforcement Mats (TRM))	☐	☐	☐
Concrete Washout Area (CWA) *	☐	☐	☐
Masonry Work Protection (MWP)	☐	☐	☐
Portable Toilet Protection (PTP) (20' from all impervious areas)	☐	☐	☐
Stockpile Protection (SP)	☐	☐	☐
Debris Control (DC) (Includes street sweeping)	☐	☐	☐
Applicable Erosion Control Notes & Details Included			
Seeding Mix(s)		☐	☐
Applicable UDFCD Details & Detail Notes		☐	☐
Applicable COT Details		☐	☐

***Minimum MS4 permit control measures (where applicable). If minimum measures not included in the SECP please include reason**

¹ Check if CM is not appropriate for the specific construction activity, the applicable pollutant sources, and/or phase of construction.

Design Engineer Comments: _____

CITY USE ONLY			
PROJECT NUMBER:	_____	COT REVIEWER:	_____
DEPARTMENT:	_____	REVIEW DATE:	_____
Does the checklist show that all required control measures are addressed in the SECP?		Yes ☐	No ☐

Overall Utility Plan Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable, or show sheet layout)	☐	☐	
Right-of-Way (Existing & Proposed)	☐	☐	
Easements (Existing & Proposed)	☐	☐	
Site & Adjacent Infrastructure (Roadways, Parking Lots, Etc.)	☐	☐	
Curb, Flowline, Gutter Lip, Sidewalk, Cross-pans, Medians, Etc.	☐	☐	
Structures (Bldgs., fences, retaining walls, utility boxes, mail kiosks, etc.)	☐	☐	
None within exclusive easements	☐	☐	
Approximate Patching Limits for All Pavement Cuts (Commercial only; residential to be shown on P&P)	☐	☐	
Pipe Horizontal Separations - 10' Min Edge to Edge (Water, Sewer, Storm, Other)	☐	☐	
Drainage (Existing & Proposed)			
Inlets	☐	☐	
Pipes	☐	☐	
Min 2' From Edge of Curb, Gutter Pans, Cross pans, Outside of Intersections, Etc.	☐	☐	
Manhole (MH)	☐	☐	
Detention Ponds (outfalls, trickle channels, structures, cutoff walls, etc.)	☐	☐	
Median Trench Drains - Tie into MH or Inlets (Arterials Medians)	☐	☐	
Under Drains (Outfall locations)	☐	☐	
Roof Drains - Tie into MH or Inlets (Commercial Only; if tied to local storm system)	☐	☐	
Chase Drains & Curb Cut	☐	☐	
Waterlines (Existing & Proposed)			
Pipes (Connection points labeled with sizes)	☐	☐	
Min 5' Separation From Concrete	☐	☐	
Valves	☐	☐	
Outside Concrete (Curb, Gutter Pans, Cross pans, Outside of Intersections, Etc.)	☐	☐	
Outside of Intersection and Roundabouts	☐	☐	
Hydrants	☐	☐	
FH Valves 2' Min From Edge of Concrete (Public Roadways)	☐	☐	
Located on a projected lot line or an intersection corner	☐	☐	
Minimum 3' clearance around all sides	☐	☐	
Services & Meters	☐	☐	
Non-residential: Service location only. Size and type shall not be specified.	☐	☐	
Residential Services Off front of lot (Typical; to be located within landscaped areas)	☐	☐	
Other Appurtenances	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Sanitary Sewer (Existing & Proposed)			
Pipes	☐	☐	
Min 5' Separation From Concrete	☐	☐	
Manholes	☐	☐	
Outside Concrete (Curb, Gutter Pans, Cross pans, Outside of Intersections, Etc.)	☐	☐	
Services	☐	☐	
Non-residential: Service location only. Size and type shall not be specified.	☐	☐	
Other Structures	☐	☐	
Dry Utilities (Existing & Proposed)			
Gas	☐	☐	
Electric	☐	☐	
Phone	☐	☐	
Fiber Optic	☐	☐	
Cable T.V.	☐	☐	
Lighting Types/Layout (Arterials, Collectors, Locals, Trails)	☐	☐	
Electrical Plans (Xcel service areas and areas defined by the City only; refer to separate checklist)	☐	☐	

Water Plan and Profile Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
City Preference: Water and Sewer Lines Shown on Single Plan and Profile	☐	☐	
Plan View			
Existing & Proposed Surface Improvements (X-pans, C&G, Pavement, Sidewalks, Etc.)	☐	☐	
Existing & Proposed Utilities (Water, Storm, Irrigation, Cable, Telephone, Fiber Optic, Etc.)	☐	☐	
Grading Contours (When outside of roadway) (Existing and Proposed Required)	☐	☐	
Easements (Existing and proposed)	☐	☐	
Type & Width	☐	☐	
No structures w/in water easements	☐	☐	
Right-of-way (Existing and proposed)	☐	☐	
Roadway Names	☐	☐	
Property Lines (Existing and proposed, with lot/block number)	☐	☐	
Roadway CL & Stationing (Utility to be Stationed Off Roadway Centerline if Located in ROW/Roadway)	☐	☐	
Proposed Water Mains	☐	☐	
Size & Type	☐	☐	
Location	☐	☐	
Located within easement or public ROW	☐	☐	
Separations (10' Min Edge to Edge, 5' Min From Edge of Concrete)	☐	☐	
Cannot cross residential lots	☐	☐	
Deflection (Angle/Degree allowed by Manufacturer & ASTM)	☐	☐	
Main Stub-outs to Future Developments, Filings, Phases	☐	☐	
Fittings & Appurtenances	☐	☐	
Show & Label Size, Type	☐	☐	
Location (STA/OS in Roadway, STA/NE's Outside of Roadways)	☐	☐	
Tees	☐	☐	
Crosses	☐	☐	
Reducers	☐	☐	
Bends (Angle as applicable, minimize where possible)	☐	☐	
Blow-offs (required at stub outs, end of cul-de-sac; hydrant required for 12" or greater)	☐	☐	
Thrust Blocks Shown (Size Noted For Large Pipe Bends)	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Fire Hydrant	☐	☐	
Location (STA/OS)	☐	☐	
150-200' from end of cul-de-sac	☐	☐	
5' minimum from driveways, located on site lot line (residential only)	☐	☐	
In ROW or Exclusive Water Easement	☐	☐	
Min 3 ft clear around hydrant	☐	☐	
On same side of street as water main	☐	☐	
Lateral (Size & Type)	☐	☐	
No bends, deflections, lowerings, or taps	☐	☐	
Length (100' max)	☐	☐	
90° to street main	☐	☐	
6" DIP (Between Valve & Hydrant Base)	☐	☐	
Min 5 ft separation from any other main taps	☐	☐	
Over 50' Needs to be Modeled (Verify Required Flow)	☐	☐	
No more than 1 hydrant located on dead-end mains	☐	☐	
Hydrant spacing not to exceed 1200' (or 600' if raised median is within roadway)	☐	☐	
Valves	☐	☐	
Size, Type, Location	☐	☐	
Valves provided 2 per Tee, 3 per Cross	☐	☐	
Valves Outside of Roadway Intersections (at or beyond curb return)	☐	☐	
Valves located outside of concrete areas (min. offset 2 ft wherever possible)	☐	☐	
Gate Valves Separation:	☐	☐	
300' of commercial	☐	☐	
600' of residential main	☐	☐	
Between 18 residential units,	☐	☐	
Main can runs through round-about, but valves to be located outside (at outside PCR)	☐	☐	
ARVs installed at highpoint in water main 16" or greater	☐	☐	
Taps/Services (size, type, location)	☐	☐	
Non-residential: Service location only. Size and type shall not be specified. Include reference	☐	☐	
to Building Permit MEP Drawings for sizing of services			
Wet Tap (Specify in plans where applicable)	☐	☐	
Irrigation tap (minimum size = 4")	☐	☐	
Service Stub-outs for Future Lots	☐	☐	
Each Dwelling Unit needs its own service line	☐	☐	
Each Non-residential/Multifamily Foundation needs its own service line	☐	☐	
Minimum 10' separation from other services or mains	☐	☐	
Minimum 5' separation from property lines, fire lines (excluding cul-de-sacs)	☐	☐	
Fire Lines (if applicable)	☐	☐	
Gate valve required on all fire service lines	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Meter Pit/Vault (size, type, location)	☐	☐	
Service line perpendicular & straight from main to meter pit	☐	☐	
For SFD or SFA - Locate in landscaped ROW or easement (Must be easily accessible by City.)	☐	☐	
For Non-residential / Multifamily - Locate in landscaped area	☐	☐	
Encasement Location/Limits (STA/OS or NE where outside roadway)	☐	☐	
Profile View			
Vertical and horizontal grids with scales and stationing (1" = 50' maximum)	☐	☐	
Existing and Proposed Ground Surface	☐	☐	
Pipe (Existing and Proposed)	☐	☐	
Material, Type, Size, Class, Length	☐	☐	
Depth from finished grade (min & max for each profile)	☐	☐	
Utility Crossings (Location & Clearance)	☐	☐	
Top & Bottom of Pipe EL's & Clearance (Min 18" Vertical, Edge to Edge)	☐	☐	
Lowerings (Also provide lowering details)	☐	☐	
PVC C900 DR14 or DIP required, DR14 preferred	☐	☐	
Sleeving/Encasement	☐	☐	
Provide Under Drainageways, Irrigation Ditches/Mains, Gas Lines, Box Culverts	☐	☐	
18" Vertical Clearances from Casing Pipes to nearest utility	☐	☐	
Sleeve Size/type, Length, & Slope (Verify pipe limits)	☐	☐	
Cathodic Protection provided for any steel encasement	☐	☐	
Special Plans & Details (If Applicable)			
Plan, profile, and complete details for pump stations, PRV's, vaults, tanks, etc.	☐	☐	
SCADA meter monitoring is needed for all PRV's	☐	☐	
PRV's located outside of roadway, and include valves on each side outside of vault	☐	☐	
Corrosion Protection (if applicable)	☐	☐	

Sanitary Sewer Plan and Profile Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
City Preference: Water and sewer lines shown on single plan and profile	☐	☐	
Plan View			
Existing & Proposed Surface Improvements (X-pans, C&G, Pavement, Sidewalks, Etc.)	☐	☐	
Existing & Proposed Utilities (Water, Storm, Irrigation, Cable, Telephone, Fiber Optic, Etc.)	☐	☐	
Grading Contours (Proposed & Existing when outside of roadway)	☐	☐	
Easements (Existing and proposed)	☐	☐	
Type & Width	☐	☐	
No structures w/in sanitary easements	☐	☐	
Right-of-way (Existing and proposed)	☐	☐	
Roadway Names	☐	☐	
Property Lines (Existing and proposed)	☐	☐	
Indicate lots with lot number and block number to be served by solid lines	☐	☐	
Roadway CL & Stationing (Utility to be Stationed Off Roadway Centerline if Located in ROW/Roadway)	☐	☐	
Proposed Sanitary Mains	☐	☐	
Size, Type, Class, and Length	☐	☐	
Location	☐	☐	
Located within easement in tract or non-residential lot	☐	☐	
Separations (10' Min Edge to Edge of other utilities, 5' Min From Edge of Concrete)	☐	☐	
Cannot cross residential lots	☐	☐	
Flow Direction Arrows	☐	☐	
Encasement Location/Limits (STA/OS, or NE where outside roadway)	☐	☐	
Main Stub-outs to Future Developments, Filings, Phases	☐	☐	
Manholes (Labeled/Numbered)	☐	☐	
Location (STA/OS in Roadway, STA/NE's Outside of Roadways)	☐	☐	
Size	☐	☐	
Required at all ends of sewer section, changes in grade, size, alignment, intersections	☐	☐	
Maximum Separation 450'	☐	☐	
Combined/Connect When Located w/in 50' of Another Manhole	☐	☐	
Located Outside Concrete Areas (Sidewalks, Crosspans, Curbs& Gutters, etc.)	☐	☐	
Sealed if located within inverted crown roadway cross-section	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Where Outside of Pavement/Roadway:	☐	☐	
Rim 6" to 8" Above Finished Grade	☐	☐	
Locking ring & cover, Marker Post, & Concrete Collar	☐	☐	
Lined if located within 1500' of any main connection point which is downstream of existing or proposed lift station	☐	☐	
Drop MH when greater than 24" from inlet to invert (minimized wherever possible)	☐	☐	
Taps/Services (size, type, location)	☐	☐	
Non-residential: Service location only. Size and type shall not be specified. Include reference	☐	☐	
to Building Permit MEP Drawings for sizing of services			
Proposed Wye and Riser Connections	☐	☐	
Each Dwelling Unit needs its own service line	☐	☐	
Each Non-residential/Multifamily Foundation needs its own service line	☐	☐	
10' from Water Service/Main	☐	☐	
5' from other like service lines, property lines, &/or fire lines (excluding cul-de-sacs)	☐	☐	
Location/INV of Cleanouts	☐	☐	
Service Stub-outs for Future Lots	☐	☐	
Service Stubs to be Provided on Mains in Future Phases of Residential Developments	☐	☐	
Access road to manhole for maintenance (if applicable)	☐	☐	
Profile View			
Vertical and horizontal grids with scales and stationing. (1" = 50' maximum horizontal scale)	☐	☐	
Existing and Proposed Ground Surface	☐	☐	
Depth from finished grade	☐	☐	
Pipe (Existing & Proposed)	☐	☐	
Material, Type, Size, Class, Length, and Slope	☐	☐	
Depth from finished grade	☐	☐	
Manhole	☐	☐	
Location (STA/#)	☐	☐	
Size, Invert ELEV's, & Rim ELEV (0.30 Ft Min Fall Across MH)	☐	☐	
Utility Crossings (Location & Clearance)	☐	☐	
Top & Bottom of Pipe EL's & Clearance (Min 18" Vertical, Edge to Edge)	☐	☐	
Drainageway/Irrigation Ditches Crossings	☐	☐	
Sleeving/Encasement	☐	☐	
Provide Under Drainageways, Culverts, Irrigation Ditches/Mains, & Gas Lines	☐	☐	
Locations (INV EL/STA's)	☐	☐	
18" Vertical Clearances from Casing Pipes to nearest utility	☐	☐	
Sleeve Size, type, length, & slope (Verify pipe limits)	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Special Plans & Details (If Applicable)			
Underdrain Plan & Profile (When Varies from Sanitary)	☐	☐	
Size, Type, & Class (and # if proposed)	☐	☐	
Length & Slope	☐	☐	
Cleanout Locations (and # if proposed)	☐	☐	
Outfalls (location & invert Elev)	☐	☐	
Under Drain Note (O&M by HOA/Development)	☐	☐	
No service connection to underdrain if basement drain/service is below the 100 year WSE	☐	☐	
Required for all residential subdivisions	☐	☐	
Constructed with perforated black HDPE minimum 6" diameter	☐	☐	
Placed in trench 1-1(1/2) feet below sanitary sewer main	☐	☐	
Minimum of 6" cleanouts (not located in storm/SS manholes)	☐	☐	
Underdrain service (Min 4" non-perforated HDPE) provided at every residential foundation	☐	☐	
Direct connections to underdrain main provided for each service	☐	☐	

Stormwater Plan and Profile Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
Plan View			
Easements (Existing and proposed)	☐	☐	
Right-of-way (Existing and proposed)	☐	☐	
Roadway Names	☐	☐	
Property Lines (Existing and proposed)	☐	☐	
Existing & Proposed Street Infrastructure (X-pans, C&G, Pavement, Sidewalks, Etc.)	☐	☐	
Existing & Proposed Utilities (Water, Sanitary Sewer, Etc.)	☐	☐	
Grading Contours For Storm Locations Outside of Roadways (Proposed & Existing)	☐	☐	
Proposed 100-year floodplain limits (most restrictive accepted study)	☐	☐	
Minimum 10 ft utility separation from water and/or sewer (outside of pipe to outside of pipe)	☐	☐	
Inlets	☐	☐	
Size, Type, Area Inlet Grate Elevation, Location (in Roadway Sta/OS, Outside Roadway Sta)	☐	☐	
Pipe	☐	☐	
Size, Type, & Class (and # if proposed)	☐	☐	
Min 18" RCP (Public flows, Pond/Drainageway Outfalls, & in ROW)	☐	☐	
Length	☐	☐	
End Treatments (Location: Sta./Off. or Northing/Easting)	☐	☐	
Manholes (Labeled/Numbered)	☐	☐	
Size (and # if Proposed)	☐	☐	
Location (In roadway STA/OS, Outside of Roadway Section STA/Northing/Easting)	☐	☐	
At All Changes in Direction/Grade of Pipe	☐	☐	
Confirm MH diameter is correct for pipe size	☐	☐	
Not located within curb, gutter pans, cross pans, etc.	☐	☐	
Spacing no greater than 400' (15-36" pipe) or 500' (42" pipe or larger)	☐	☐	
Trench & Landscape Drains - Tie Into MH or Inlets Only	☐	☐	
Roof Drains (Non-residential Only)	☐	☐	
Cleanouts at Drain Junctions	☐	☐	
Outfall Into MH, Inlets Drainageway/Pond Only	☐	☐	
Underdrain Outfall (Concrete collar, outlet protection, metal flapper gate)	☐	☐	
Riprap	☐	☐	
Size, Type, Dimensions, & Elevations	☐	☐	
Detention Ponds & Outlet Structures (Existing & Proposed) (refer to separate checklist)	☐	☐	
Chase Drains / Curb Cut (Open Width)	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Profile View			
Existing & Proposed Ground Surface	☐	☐	
Inlets (Size, Type, Invert Elevations)	☐	☐	
Manhole (Size, Invert Elevations, Rim Elevations)	☐	☐	
Positive Fall across MH (0.10 ft or greater preferred)	☐	☐	
Drainage Pipe	☐	☐	
Size, Type, & Class (and # if proposed)	☐	☐	
Length	☐	☐	
Flared End Sections (w/ Joint Restraints & Toe Wall)	☐	☐	
Pipe Outlet Info (Q, Velocity, & Froude #)	☐	☐	
Hydraulic Grade Lines (Minor & Major HGL's)	☐	☐	
Minor Storm - 5yr (in the Pipe)	☐	☐	
Major Event - 100yr	☐	☐	
Account for Tailwater	☐	☐	
Utility Crossings	☐	☐	
Top of Pipe & Bottom of Pipe Elevations @ Crossing	☐	☐	
Clearances (minimum 18" vertical)	☐	☐	
Profile Outfall Channel (Include X-sections at min 50' interval, or less if applicable)	☐	☐	
Riprap (Size, Type and Depth)	☐	☐	
Culverts, Pedestrian Crossings, Low Water Crossings	☐	☐	
Drainage/Pedestrian Crossings (Culvert/Bridge)			
Culvert Profile	☐	☐	
Pipe INV, Size, Type, Class, Slope, Length	☐	☐	
10yr & 100 yr WSE (Passes 10 yr Flows)	☐	☐	
Max Headwater/Diameter = 1.5	☐	☐	
FES/Toe-wall or Head/Wing Walls	☐	☐	
Thickened Edge Along Overflow Spillways	☐	☐	
Pedestrian Bridges (Compiles with Parks and Fire Requirements)	☐	☐	
Min. 50-ft Straight Approach to Underpasses	☐	☐	
Underpass (Conspan or Equivalent)	☐	☐	
Internal Lighting Layout, Conduit, & Photometric Design Provided	☐	☐	
Internal Lighting Flush/Recessed Overhead Mounted, Vandal-Resistant Grey Enclosures)	☐	☐	
Skylights & Access Included (Where Excessive Length per CDOT)	☐	☐	
Flash Flood Warning Signage (Whenever Applicable)	☐	☐	

Detention/Water Quality Pond Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
MHFD Detention Pond Excel design spreadsheet submitted to City (PDF & Excel both)	☐	☐	
Site Layout/Improvements			
Boundary/Property/ROW/Tract Lines/Easements (Existing & Proposed)	☐	☐	
Site & Adjacent Infrastructure (Existing & Proposed)	☐	☐	
Structures (Existing & Proposed)	☐	☐	
Utilities (Existing & Proposed)	☐	☐	
Drainage Infrastructure (Existing & Proposed) (Size, type, & number)	☐	☐	
Existing and Proposed 100 Year Floodplain (FEMA, FHAD, Other)	☐	☐	
Pond Plan View			
Existing & Proposed Contours (Minor & Major, 2' min, with adequate labels)	☐	☐	
Flow Direction Arrows	☐	☐	
Basin Shape (2:1 min Length:Width Ratio)	☐	☐	
Detailed Grading	☐	☐	
Spot Elevations At Toe of Slope, HP/LP's, Top of Berm, & Other Applicable Areas	☐	☐	
Slopes (Perpendicular to Low Flow & Other Applicable Areas)	☐	☐	
Low Flow/Bottom	☐	☐	
Horizontal Alignment (Critical Point STA/EL, Tangent & Curve Data Including Lengths)	☐	☐	
Longitudinal Slope (Grass-Lined = 2% Min, Concrete Channel = 0.75% Min)	☐	☐	
Concrete Channel Width (minimum 4 ft)	☐	☐	
Basin Bottom Cross Slope (4%)	☐	☐	
Side Slopes (4:1 Max.)	☐	☐	
Retaining Walls (Proposed & Existing) (See Separate Checklist)	☐	☐	
Water Quality, EURV, 100 yr. WSE's & Limits	☐	☐	
Maintenance Access (Max Slopes: Longitudinal 7% & X-slope 4% max)	☐	☐	
Access X-section (W=10' Min, minimum 6" of D50=1.5" crushed rock over geofabric or better)	☐	☐	
Access to Forebay & Outlet Structure (minimize length as much as possible)	☐	☐	
Forebay Shown (Specifics in Pond Details)	☐	☐	
Outlet Structure	☐	☐	
Embankment	☐	☐	
4:1 Max Slopes	☐	☐	
10' Top-Width (Dimensions & Spot EL's at Regular Intervals)	☐	☐	
95% Standard Proctor Max Density Compaction (or greater) required	☐	☐	
Overflow Spillway(s)	☐	☐	
Detailed Grading/Spot Elevations	☐	☐	
Overland Flow Path (Location & Longitudinal Slopes)	☐	☐	
Riprap Protection (size, type, dimensions, elevations)	☐	☐	
Verify Downstream Impacts (No Trees, Structures, etc. in Flow Path)	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Pond Details (All Details to Scale)			
Trickle Channel X-Section (If Applicable)	☐	☐	
Outlet Structure(s)	☐	☐	
Inflow FES with Safety Grate/Trash Rack (Fasteners, Toe-wall, & Grate Details Included)	☐	☐	
18" RCP Inflow Pipe (Typical For Ponds Over 5 Acres &/or Deep Ponds)	☐	☐	
Box Type (Detailed, Including Reinforcement or Note For Structural Plans)	☐	☐	
Box Grate Details Included (Open Area & Max Dimensions Per USDCM Vol 2 & 3)	☐	☐	
Safety Rails for open vertical drop greater than 30" or High Velocities	☐	☐	
Manhole steps (internal, both chambers)	☐	☐	
Internal Micropool (min. 30")	☐	☐	
Well Screen/Bar Grate (size and type determined by orifice hole size)	☐	☐	
For Orifice Holes 1.25" or larger, use of aluminum bar grate per MHFD is preferred	☐	☐	
WQ/EURV Orifice Plate (3 holes preferred)	☐	☐	
Orifice Hole to Outlet Pipe Invert Vertical Separation (3" minimum)	☐	☐	
Water Quality WSE	☐	☐	
EURV WSE (below spillover elevation from first to second chamber)	☐	☐	
Structure elevations and dimensions	☐	☐	
100 Year Restrictor Plate (with positioning dimensions)	☐	☐	
100 Year WSE (below invert of emergency overflow spillway, recommend by at least 4")	☐	☐	
Verify Receiving Pipe is Not Surcharged	☐	☐	
Overflow Spillway (per Report)	☐	☐	
Typical Crest & Rundown Cross Sections	☐	☐	
Dimensions, Side Slopes, Q (2xQ100 required), Flow Depth, Freeboard (1' Min), etc.	☐	☐	
Buried Soil Rip rap (size, type, thickness; no bedding allowed)	☐	☐	
Topsoil thickness	☐	☐	
Additional details if cross-section changes downstream	☐	☐	

Roadway Plan and Profile Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
Street Names (w/in & Adjacent to the site)	☐	☐	
Plan View			
Scale (1"=50' Maximum)	☐	☐	
R-O-W, Easements, Property Lines dimensioned	☐	☐	
Roadway Infrastructure (Existing & Proposed)	☐	☐	
Pavement Limits, Sidewalks, C&G (Top Back of Curb, FL, & Gutter Lip), X-pans, Etc.	☐	☐	
Bridges, Culverts, Guard Rails	☐	☐	
Drainage Inlets #, STA, OS, & Top of Front Inlet Elevations	☐	☐	
Include elevations at each end of an on grade inlet, flowline elevation at each end of inlet	☐	☐	
Corresponds to LP Elevation & Station	☐	☐	
Match profile & drainage report	☐	☐	
Drainage Manholes & Pipe (To scale)	☐	☐	
Underdrain Connections (Medians to Drainage System)	☐	☐	
Centerline Alignment	☐	☐	
Tangent Info (Bearing/Distance)	☐	☐	
Curve Information (R, L, Chord Bearing, Chord Distance, & Delta)	☐	☐	
Verify Min Approach Tangent, Reverse Curve Tangent, Radii, Etc.	☐	☐	
Roadway Intersections & Driveways	☐	☐	
Provide CL STA Equation For All Roadway Intersections	☐	☐	
Provide CL STA/EL/OS for all Driveways/Access Points (Single Family Residential N/A)	☐	☐	
100' Approach Tangents (Verify SSD at Collector & Arterial Intersections)	☐	☐	
Thru Lanes must Align & Match Configuration Across Intersections	☐	☐	
Provide design parameters, entry speeds, fastest path analysis, etc. for roundabouts	☐	☐	
Provide elevations and profiles of raised intersections and raised crossings	☐	☐	
Signals, Ped Poles, Cabinets, Signal Boxes, and Fiber Interconnect	☐	☐	
Critical Points - CL STA, CL or FL ELEV, OS (As applicable)	☐	☐	
PC's, PCC's, PT's	☐	☐	
PCR's & FLPI's	☐	☐	
LP's, HP's	☐	☐	
Curb Return Info (Curve table - length, delta, radii)	☐	☐	
Curb Return Details (In plan view or on referenced supplemental intersection detail sheets)	☐	☐	
Define Median (Separate median plan sheets If needed for plan clarity)	☐	☐	
Radii	☐	☐	
Station, Elevation, & Offset	☐	☐	
Identify Median Trench Drain Location, Cleanouts, & Outfall Connections	☐	☐	
Vehicle Maintenance Pullout Area (w/ mountable curb for medians ≥ 600')	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Curb Ramp Locations (CL STA/EL/OS at mid-point)	☐	☐	
Cross-pans (allowed on local/local or local/collector streets)	☐	☐	
Show flowline elevations and slopes for all legs of crossspan	☐	☐	
Define Roadway & FL Transitions (Applicable STA, ELEV, OS, & Radii)	☐	☐	
A-Typical Sections, Parking Pull-Outs, Cul-de-sacs, Knuckles, Turn-arounds, Etc.	☐	☐	
Turn Lanes	☐	☐	
Lane Shifts/Redirect Tapers	☐	☐	
FL Grade 0.75% Min	☐	☐	
Sight Triangles (per plat handout; per NCHRP 627 for roundabouts)	☐	☐	
Profile View			
Vertical and Horizontal Grids with Scales (1"=5' vertical min, 1"=50' horizontal max)	☐	☐	
Stationing direction matches Plan view	☐	☐	
Existing Ground Surface	☐	☐	
Proposed Pavement Surface with Slope Labels	☐	☐	
Intersection Approach Grades & Distance	☐	☐	
End Points (STA./Elevation at tie in point and extended a minimum of 300 ft)	☐	☐	
Location of Proposed Grade (CL for Typical Sections, FL Supplemental)	☐	☐	
Vertical Curves	☐	☐	
VPI, VPC, & VPT's	☐	☐	
K Value (max 167 in order to ensure adequate drainage)	☐	☐	
Length	☐	☐	
Low Point/High Points	☐	☐	
Verify Vertical Curve Sump Depth & Max Ponding (if applicable)	☐	☐	
Super elevation Diagram (If Applicable)	☐	☐	
Miscellaneous (Ancillary) Roadway Requirements			
Typical Roadway Cross-Section Info	☐	☐	
R-O-W, FL-FL, C&G, & Sidewalk (Width & Offset)	☐	☐	
Applicable Station Ranges	☐	☐	
Easements	☐	☐	
Roadway Cross Slopes (2% Normal Crown Typ., Super Elevation as necessary)	☐	☐	
Landscape Area Cross Slope (2% min)	☐	☐	
Cut/Fill Slopes	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
Detailed Roadway Grading Information (i.e. Raised Intersections, Cul-de-Sacs, etc.)			
Roadway Intersection Grading (if applicable)	☐	☐	
CL & FL Grades (Through Street & Approach)	☐	☐	
Intersection Approach - Cross Slopes, CL STA and CL & FL/Lip ELEV (OS as needed)	☐	☐	
At 25' Min Intervals Up to TYP Crown (inclusive of warped transition areas)	☐	☐	
Critical Point STA/EL PC's, PCC's, PT's, PCR's, FLPI's, HP's, & LP's (w/in Detail Limits)	☐	☐	
Detailed Curb Returns (Spot Elevations & Slopes)	☐	☐	
Curb Ramps (Center Point Top & Bottom ELEV, Center Point STA, Slope Labels)	☐	☐	
Cul-de-sac/Round-about/Knuckle Grading	☐	☐	
Define Critical Points STA/EL (OS & STA Equations Where Applicable)	☐	☐	
Outer Curb Return &/or Curve FL Profile (VC/GB Info)	☐	☐	
Minimum 0.75% FL Grade	☐	☐	
Typical 2% X-Slope from Round-About Interior Curb (CL STA/EL to FL/Lip EL)	☐	☐	
Min 2% Max 4% from Roadway CL to Outer FL	☐	☐	
Curb Return Details or Profiles (Typically N/A to returns at x-pan locations)	☐	☐	
FL/STA Equations, Critical Point/Grade Break EL's, FL Slopes	☐	☐	
Detailed Roadway Cross-Sections (Arterials and Widenings)			
Plan View Identifying Section Locations (Based on roadway stationing)	☐	☐	
50 ft Station Intervals or closer, as required for clarity	☐	☐	
Horizontal scale as required for clarity	☐	☐	
Minimum 10x vertical exaggeration from horizontal scale	☐	☐	
Existing & proposed cross & side slopes, including for all elements below	☐	☐	
Existing & proposed lanes, tree lawn(s), sidewalk, swales, and existing grade tie point	☐	☐	
Pavement limits (Existing, full depth, mill and fill, etc.)	☐	☐	
Widths (lane, median, shoulder, side slope, drainage ditch, other)	☐	☐	
Proposed offset and spot elevations (including CL, FL, median flowlines, front of walk, ROW, tie to existing pavement)	☐	☐	

Signing & Striping Plan Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Legend (Line types, hatching, & symbols) & Key Notes/Images	☐	☐	
Signing & Striping Notes (Material specifics, etc.)	☐	☐	
Signing			
Sign Locations (STA/OS preferred) (per City Specifications and MUTCD)	☐	☐	
Sign Type & Size (per City Specifications and MUTCD)	☐	☐	
Striping/ Roadway Markings			
Through Lanes Must Align Across Intersections (per City Specifications and MUTCD)	☐	☐	
Define Layout (Critical point [STA/OS preferred], separations, lengths/radii, etc.) (per City Spec and MUTCD)	☐	☐	
Taper lengths for transitions in accordance with Section 502.7 of the City Specifications	☐	☐	
Striping dimensions and color	☐	☐	

Trails Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable)	☐	☐	
Plan View			
Include applicable items from the Grading Plan Checklist, "General Info," "General Grading," and "Drainage" sections	☐	☐	
Horizontal and Vertical Alignment	☐	☐	
All Critical Points Identified	☐	☐	
Maximum Slopes Shown	☐	☐	
Trail Signage (Types & Locations)	☐	☐	
Lighting (per City Spec Section 810.8)	☐	☐	
Typical X-Section(s)			
Width	☐	☐	
Shoulder/Clear Zone Width (Min 2' Each Side, 3-5' preferred, w/ Crusher Fines on high side if provided)	☐	☐	
X-slope (Max 2%)	☐	☐	
Side Slopes (4:1 Max Outside Shoulder)	☐	☐	
Regional Trails (Additional Requirements)			
Horizontal and Vertical Alignment Designed to meet AASHTO requirements	☐	☐	
Summary of Design Speed/Sight Distance (See AASHTO)	☐	☐	
Proposed 5% Max. Longitudinal Grade	☐	☐	
Located within Easements	☐	☐	
Minimum 10 ft width	☐	☐	
Profile View	☐	☐	
Vertical Curve Info (VPC, VIP, VPT, LP/HP, Lengths)	☐	☐	
Slopes (5% Max Longitudinal Slope or Otherwise as Allowed By AASHTO)	☐	☐	
Grade Break (STA/EL)	☐	☐	
Vertical Sight Line Evaluation	☐	☐	
Detailed X-sections	☐	☐	
Typical section or Shown at regular intervals as appropriate	☐	☐	
Positive Drainage Across Trail	☐	☐	
Trail & Adj. X-Slopes (Defined w/ Tie-in EL & OS's)	☐	☐	
Slope Protection (Where Applicable)	☐	☐	
Section Location Plan View (if applicable)	☐	☐	

Public Streetlight and Fiber Optic Conduit Checklist

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
General Info			
Include applicable items from General Construction Plan and Cover Sheet Checklists	☐	☐	
Key Map (if applicable, or show sheet layout)	☐	☐	
Right-of-Way & Easements (Existing & Proposed)	☐	☐	
Site & Adjacent Infrastructure (All Structures, Roadways, Parking Lots, Etc.)	☐	☐	
All other utilities & existing streetlights	☐	☐	
General Lighting Checklist			
Spacing/Location	☐	☐	
Located within ROW or transportation easements	☐	☐	
One streetlight at each roadway intersection	☐	☐	
Streetlights spaced between intersections per table 500-2 (spacing is per each side of the street)	☐	☐	
Streetlight spacing on local streets may be 200' +/- 40' on alternating sides of the street with variance	☐	☐	
Aligned with side lot lines within residential areas	☐	☐	
Alternate streetlight locations on each side of street where possible	☐	☐	
Confirm streetlight locations don't conflict with other utilities or street signs	☐	☐	
Light Pole Type (post top or cobra head)	☐	☐	
Check City Detail 700-5 for streetlight pole color to be used for steel poles	☐	☐	
Check City Details 700-21 & 700-22 for which streetlight pole should be used	☐	☐	
Xcel Service Area Specific Requirements			
General Electrical Notes (including grounding requirements)	☐	☐	
Show power source connection location (coordinate with Xcel to confirm capacity)	☐	☐	
Identify location of:	☐	☐	
Electric meter pedestal	☐	☐	
Number, size, material, and schedule of conduit (min 2" schedule 40 required)	☐	☐	
Pull boxes located at all significant horizontal bends and at base of all streetlights	☐	☐	
Number & size of conductors (max #10 AWG)	☐	☐	
#14 AWG stranded copper tracer wire with purple sheathing in each conduit	☐	☐	
1/4" pull rope in each conduit	☐	☐	
20 amp in-line fuse at each hand hole for each streetlight	☐	☐	
Voltage drop calculations (max 3.5% drop per circuit)	☐	☐	
Cut sheets for luminaires (discuss allowed luminaire models with the city prior to submitting lighting plans)	☐	☐	
Each luminaire includes photocell	☐	☐	

DESCRIPTION	PROVIDED (Engineer)	N/A	COMMENTS
"Dig Once" Fiber Optic Conduit Requirements			
2 - 2" conduits (in a single trench) located on at least one side of the roadway behind the curb in landscaped area	☐	☐	
Pull boxes located:	☐	☐	
at all significant horizontal bends	☐	☐	
at an approximate spacing of 500 feet, not to exceed 1000 feet	☐	☐	
on each side of all intersections	☐	☐	
outside of sidewalk in all cases	☐	☐	
Separated at least 10 feet from wet utilities (horizontal distance other than crossings)	☐	☐	
If 10 ft separation is not feasible, separation is maximized across all locations 10 ft is not feasible	☐	☐	
Minimum 48" depth	☐	☐	
All equipment located within ROW or in a defined easement	☐	☐	
Tracer wire called out for installation along all conduit	☐	☐	
Pull ropes called out for installation along all conduit (typically simultaneously with tracer wire install)	☐	☐	