



JAN 27 2011
CITY OF CHANDLER
CITY CLERK



MEMORANDUM Transportation and Development – Council Memo No. TDE11-010

DATE: JANUARY 27, 2011

TO: MAYOR AND CITY COUNCIL

THRU: RICH DLUGAS, ACTING CITY MANAGER *RD*
PAT MCDERMOTT, ASSISTANT CITY MANAGER *[Signature]*
R.J. ZEDER, TRANSPORTATION & DEVELOPMENT DIRECTOR *[Signature]*
SHEINA HUGHES, CITY ENGINEER *[Signature]*

FROM: WARREN WHITE, PRINCIPAL ENGINEER *WW*

SUBJECT: INTRODUCTION OF ORDINANCE NO. 4267 ADOPTING UPDATED
VERSIONS OF EXISTING CONSTRUCTION STANDARDS
AND AMENDING CHAPTER 43, SECTION 43-5, SUBSECTIONS 43-5.1, 43-
5.2, 43-5.3, 43-5.4, 43-5.5, 43-5.7, 43-5.10, 43-5.12 AND CHAPTER 45,
SECTIONS 45-1 AND 45-2, CODE OF THE CITY OF CHANDLER.

RECOMMENDATION: Staff recommends introduction and tentative approval of Ordinance No. 4267 adopting updated versions of existing construction standards and drainage policies and amending Chapter 43, Section 43-5, Subsections 43-5.1, 43-5.2, 43-5.3, 43-5.4, 43-5.5, 43-5.7, 43-5.10 and 43-5.12, and Chapter 45, Sections 45-1 and 45-2, Code of the City of Chandler.

BACKGROUND/DISCUSSION: The City maintains and publishes Standard Details and Specifications and Technical Design Manuals which have been developed to guide developers and City staff on the design and construction of the City’s infrastructure. These documents are adopted by City Council. In addition the City has adopted drainage policies and standards referenced in the Drainage Policies and Standards (manual) for Maricopa County subject to certain modifications per Chapter 45 Storm Drainage Requirements.

The Engineering Design Standards Committee, with cross-departmental representation, reviews proposed changes to our design standards and makes recommendations for yearly updates. This process also involves reviewing the Maricopa Association of Governments (MAG) Specifications and Standards and their yearly-proposed revisions and when possible, removing City standards in favor of MAG standards.

This Ordinance would amend the following editions of the design standards:

- January 2010 Standard Details and Specifications Manual,
- January 2002 Technical Design Manual #1, Water System Design,
- January 2002 Technical Design Manual #2, Wastewater and Reclaimed Water System Design,
- January 2002 Technical Design Manual #3, Storm Drainage System Design,
- January 2007 Technical Design Manual #4, Street Design and Access Control,
- January 2010 Technical Design Manual #6, Streetlight Design,
- In addition, this Ordinance would adopt the 2011 MAG Uniform Standard Specifications and Details with certain modifications.
- In addition, this Ordinance would adopt the 2004 Policy on Geometric Design of Highways and Streets.
- In addition, this Ordinance would adopt the January 2007 Drainage Policies and Standards for Maricopa County, Arizona

The recommended revisions have been reviewed and approved by the Engineering Design Standards Committee consisting of Engineering, Offsite Inspection, Transportation, Water/Wastewater and Planning divisions. The revisions were provided to members of the industry including the Homebuilders Association, Multihousing Association and engineering design consultants. Comments received were incorporated into these revisions where appropriate.

The complete set of revised Standard Details and Specifications are on file with the City Clerk and available for review. A detailed summary of the changes is also attached.

FINANCIAL IMPLICATIONS: None.

PROPOSED MOTION: Move that Council introduce and tentatively approve Ordinance No. 4267 adopting updated versions of existing construction standards and amending Chapter 43, Section 43-5, Subsections 43-5.1, 43-5.2, 43-5.3, 43-5.4, 43-5.5, 43-5.7, 43-5.10 and 43-5.12, and Chapter 45, Sections 45-1 and 45-2, Code of the City of Chandler.

ATTACHMENTS:

Ordinance No. 4267

Change Summary 2011

ORDINANCE NO. 4267

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CHANDLER, ARIZONA, ADOPTING UPDATED VERSIONS OF PREVIOUSLY ADOPTED DESIGN AND CONSTRUCTION STANDARDS AND AMENDING CHAPTER 43, SECTION 43-5, SUBSECTIONS 43-5.1, 43-5.2, 43-5.3, 43-5.4, 43-5.5, 43-5.7, 43-5.10, 43-5.12 AND CHAPTER 45, SECTIONS 45-1 AND 45-2, CODE OF THE CITY OF CHANDLER, RELATING TO THE ADOPTION OF THESE UPDATED DESIGN AND CONSTRUCTION STANDARDS.

WHEREAS, the City of Chandler has previously adopted certain documents establishing minimum design and construction standards and specifications and believes it to be prudent to adopt the updated versions of those documents; and

WHEREAS, Chapters 43 and 45, Code of the City of Chandler, need to be amended to reflect adoption of those updated documents.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Chandler, Arizona, as follows:

Section 1. That those documents identified below, three copies of each to remain on file in the Office of the City Clerk, each are hereby adopted by reference, with the additions, insertions, deletions and changes set forth herein, and each are hereby declared to be a public record.

- A. City of Chandler Standard Details and Specifications, January 2011 edition.
- B. City of Chandler Technical Design Manual Numbers 1 and 2; Water and Wastewater System Design, January 2011 edition.
- C. City of Chandler Technical Design Manual Number 3, Drainage Policies and Standards, January 2011 edition.
- D. City of Chandler Technical Design Manual Number 4, Street Design and Access Control, January 2011 edition.
- E. City of Chandler Technical Design Manual Number 6, Streetlight Design, January 2011 edition.
- F. Uniform Standard Specifications and Details for Public Works Construction Sponsored and Distributed by the Maricopa Association of Governments, 1998 Arizona edition (includes revisions through 2011).
- G. The Policy of Geometric Design of Highways and Streets published by the American Association of State Highway and Transportation Officials, 2004 edition.

H. Drainage Policies and Standards for Maricopa County, January 2007 edition.

Section 2. Subsection 43-5.1 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.1 City of Chandler Standard Details and Specifications. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Standard Details and Specifications, " January ~~2010~~2011 edition, is hereby adopted by reference and made a part hereof as if set forth at length herein.

Section 3. Subsection 43-5.2 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.2. City of Chandler Technical Design Manual, Numbers 1 and 2: Water and Wastewater System Design. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual, Numbers 1 and 2: Water and Wastewater System Design", January ~~2002~~2011 edition, is hereby adopted by reference and made a part hereof as though set forth at length herein.

Section 4. Subsection 43-5.3 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby deleted in its entirety and Subsection number 43-5.3 is hereby reserved.

Section 5. Subsection 43-5.4 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.4. City of Chandler Technical Design Manual, Number 3: ~~Storm Drainage System Design~~ Drainage Policies and Standards. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual, Number 3: ~~Storm Drainage System Design~~ Drainage Policies and Standards", January ~~2002~~2011 edition, is hereby adopted by reference and made a part hereof as though set forth at length herein.

Section 6. Subsection 43-5.5 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.5. City of Chandler Technical Design Manual, Number 4: Street Design and Access Control. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual Number. 4: Street Design and Access Control", January ~~2007~~2011 edition ~~and November 2009 Memorandum Update~~, is hereby adopted by reference and made a part hereof as though set forth at length herein.

Section 7. Subsection 43-5.7 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.7. City of Chandler Technical Design Manual, Number 6: Streetlight Design. That certain document on file with the City Clerk marked, known and designated as "City of Chandler

Technical Design Manual Number 6: Streetlight Design", January 2010~~2011~~ edition, is hereby adopted by reference and made a part hereof as though set forth at length in full herein.

Section 8. Subsection 43-5.10 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.10. MAG Uniform Standard Specifications and Details. That certain document on file with the City Clerk marked, known and designated as Uniform Standard Specifications and Details for Public Works Construction Sponsored and Distributed by the Maricopa Association of Governments, 1998 Arizona edition (includes revisions through 2009~~2011~~) (MAG Uniform Standard Specifications and Details)~~-published by the Maricopa Association of Governments, Arizona,~~ is hereby adopted by reference and made a part hereof as though set forth at length herein with the additions, insertions, deletions and changes set forth below.

1. The Public Works Director/designee is authorized to increase standard street cross sections, both pavement and right-of-way widths, as necessary to maintain required traffic service levels when a traffic analysis indicates the need for additional lanes of traffic.
2. Where MAG refers to corrective actions for deviations from standards and provides options for "When the contracting agency is the owner" or "When the contracting agency is not the owner (i.e. permits)", the Public Works Director/designee is authorized to utilize any of the corrective actions listed regardless of whether the City is the contracting agency or not.

Section 9. Subsection 43-5.12 of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-5.12. Policy on Geometric Design of Highways and Streets. That certain document on file with the City Clerk marked, known and designated as "The Policy on Geometric Design of Highways and Streets", 2001~~2004~~ edition, published by the American Association of State Highway and Transportation Officials, is hereby adopted by reference and made a part hereof as though set forth at length herein.

Section 10. The first sentence of Section 45-1 of Chapter 45, Code of the City of Chandler, is hereby amended to read as follows:

45-1. - ~~Uniform Drainage Policies and Standards. adopted.~~

That certain document, three (3) copies of which are on file with the City Clerk marked, known and designated as "~~Uniform Drainage Policies and Standards for Maricopa County, Arizona,~~" ~~dated February 25, 1987~~ January 2007 edition; and each and all of the provisions contained therein are hereby adopted by reference and made a part hereof as if set forth at length herein, with the additions, insertions, deletions and changes set forth below; ~~subject to the following modifications:~~

Section 11. Section 45-2 of Chapter 45, Code of the City of Chandler, is hereby amended to read as follows:

45-2. - Compliance with storm drainage regulations.

All storm drainage facilities built, constructed or installed within the City of Chandler shall be designed, engineered and constructed in accordance with the City of Chandler Technical Design Manual Number 3: ~~Storm Drainage System Design~~ Drainage Policies and Standards, January, 2011 edition and with the ~~Uniform~~ Drainage Policies and Standards for Maricopa County, Arizona, January, 2011 edition. ~~adopted herein.~~

Section 12. Except as otherwise provided by law or ordinance, a person convicted of a violation of a code adopted by reference in Chapter 43, Code of the City of Chandler shall be guilty of a Class 1 misdemeanor. A Class 1 misdemeanor is punishable by a fine not exceeding two thousand five hundred dollars (\$2,500.00), by imprisonment for a term not exceeding six (6) months, by probation for a term not exceeding three (3) years, or by any combination thereof. A Class 2 misdemeanor is punishable by a fine not exceeding seven hundred fifty dollars (\$750.00), by imprisonment for a term not exceeding four (4) months, by probation for a term not exceeding two (2) years, or by any combination thereof. A Class 3 misdemeanor is punishable by a fine not exceeding five hundred dollars (\$500.00), by imprisonment for a term not exceeding thirty (30) days, by probation for a term not exceeding one (1) year, or by any combination thereof. Except as otherwise provided by law or ordinance, with respect to violations of this Code that are continuous with respect to time, each day that the violation continues is a separate offense.

INTRODUCED AND TENTATIVELY APPROVED by the City Council this 27th day of January 2011.

ATTEST:

CITY CLERK

MAYOR

PASSED AND ADOPTED by the City Council of the City of Chandler, Arizona this _____ day of _____, 2011.

ATTEST:

CITY CLERK

MAYOR

CERTIFICATION

I HEREBY CERTIFY that the above and foregoing Ordinance No. 4267 was duly passed and adopted by the City Council of the City of Chandler, Arizona, at a regular meeting held on the _____ day of _____, 2011 and that a quorum was present thereat.

CITY CLERK

APPROVED AS TO FORM:



CITY ATTORNEY

PUBLISHED:

<u>Document No.</u>	<u>Title</u>	<u>Revision Summary</u>
General Information Details		
C-104	Fiber Optic Cable Ducts	Reference to Spec 8 becomes Sect 360.
C-109	Shallow Pit Perc Test	Deleted in favor of Double Ring Infiltrometer
C-110	Pavement Cut and Patch	Deleted in favor of adopting Std Dtl 200
C-111	Minimum Pothole Spacing...	Reference to Spec 3 becomes 'See Permit'.
C-113	Trash Receptical Enclosure	Planning Dept handout becomes detail.
Streets Details		
C-206	Collector Street with Median - Typical Cross Section	Added preservative seal - TRMSS
C-208	Industrial Collector Street - Typical Cross Section	Added preservative seal - TRMSS
C-209	Residential Collector Bvd - Typical Cross Section	Added preservative seal - TRMSS
C-210	Residential Collector Street - Typical Cross Section	Added preservative seal - TRMSS
C-211	Local Street w/ Median - Typical Cross Section	Added preservative seal - TRMSS
C-212	Local Bvd w/ Frontages Less than 65' - Typical Cross Section	Added preservative seal - TRMSS
C-213	Local Street - Typical Cross Section	Added preservative seal - TRMSS
C-221	Local Bvd w/ Frontages of 65' to 90' - Typical Cross Section	Added preservative seal - TRMSS
C-222	Local Bvd - Typical Cross Section	Added preservative seal - TRMSS
C-243	Sidewalk Ramp for Roll Curb	Corrected for ADA landing back of ramp.
C-246	Sight Distance	Revision to title (SIGHT DISTANCE FOR ARTERIAL AND COLLECTOR STREETS) for clarification and removal of 25 mph category in table. Lori Greco.
C-247	Sight Distance for Low Speed Local and Collector Streets	Revision to title (SIGHT DISTANCE FOR LOCAL STREETS) and removal of note "or bike lane (where marked)". Lori Greco.
Water Details		
C-305	Locations for New Hydrants	Correction for 1' dimension blooper from back of sidewalk to fire hydrant
C-309	PRB Backflow	Added locked cage.
C-310	Double Check Backflow	Added locked cage.
C-311	RPP Backflow	Added locked cage.
C-312	Double Check Valve 2-1/2 thru 10" Private Domestic Main	Removed concrete slab at ground level.
C-315	RPP 3" thru 10" Private Domestic Main	Removed concrete slab at ground level.
C-319	2" COMBINATION AIR/VACUUM VALVE ASSEMBLY	Cage re-drafted. Is now a Guard Shack expanded metal mesh.
C-321	Water Quality Monitoring Station	NEW detail for Water Quality Monitoring Stations

<u>Document No.</u>	<u>Title</u>	<u>Revision Summary</u>
Wastewater Details		
C-408	Pipe Locator Wire & ID Tape	Corrected for proper MAG Spec reference 616.4
C-416	3" AND 4" RECLAIMED WATER METER VAULT	Revision to accommodate 6" Meter. Vault table and title of detail revised: 3" THROUGH 6" RECLAIMED WATER METER VAULT.
Signage Details		
C-623	Intersection Markings (w/ Medians)	Revision to remove MUTCD R3-17 Sign
Design Manuals		
TDM #1 & TDM#2	Water and Wastewater Design Manual	Merging of these two manuals and incorporating various other documents for a more complete design guide.
TDM #3	Drainage Policies and Standards	TDM #3 rewritten to reflect Maricopa County's revision of Policy Manual.
TDM #4	Street Design and Access	Revisions for MUTCD update. Also, incorporate the Jan 2010
TDM #6	Street Light Design	Revisions to accommodate LED technology. Revision to pg 12 removing "SRP will supply all necessary junction boxes for new streetlights."
Specifications		
Supplemental Section 321	ASPHALT CONCRETE PAVEMENT	Added preservative seal requirement at end of warranty period.
Supplemental Section 334	PRESERVATIVE SEAL FOR ASPHALT CONCRETE	Included TRMSS.
Supplemental Section 336	PAVEMENT MATCHING AND SURFACING REPLACEMENT	All T-Top Type A; EVAC, includes replacement marking and markers.
Supplemental Section 340	CONCRETE CURB, GUTTER, SIDEWALK, SIDEWALK RAMPS, DRIVEWAY, AND ALLEY ENTRANCE	Stated COC subgrade density requirements; see <i>List of Approved Products</i> for detectable warning systems.
Supplemental Section 360	TELECOMMUNICATIONS INSTALLATION	Revised MAG depths of cover.
Supplemental Section 401	TRAFFIC CONTROL	Striping obliteration requirements.
Supplemental Section 450	GUIDED BORE CONSTRUCTION	New Section created for guided bore from old Spec 5.
Supplemental Section 601	TRENCH EXCAVATION, BACKFILLING, AND COMPACTION	Incorporates old Spec 4 requirements.
Supplemental Section 610	WATERLINE CONSTRUCTION	Includes PVC water pipe from old Spec 10.
Supplemental Section 615	SEWER LINE CONSTRUCTION	Chandler allows polypropylene.
Supplemental Section 616	RECLAIMED WATERLINE CONSTRUCTION	Add Chandler requirements from old Spec 9.
Supplemental Section 618	STORM DRAIN CONSTRUCTION	Chandler allows polypropylene.

Document No.	Title	Revision Summary
Supplemental Section 625	MANHOLE CONSTRUCTION AND DROP SEWER CONNECTIONS	Incorporate Chandler adjusting ring minimums, corrosion-protecting coating, and insecticide spray from old Spec 2.
Supplemental Section 630	TAPPING SLEEVES, VALVES AND VALVE BOXES ON WATERLINES	Incorporate Chandler requirements from old Specs 9 & 10.
Supplemental Section 718	PRESERVATIVE SEAL FOR ASPHALT CONCRETE	Include TRMSS.
Supplemental Section 739	POLYPROPYLENE PIPE AND FITTINGS FOR STORM DRAIN AND SANITARY SEWER	New Section created for polypropylene pipe.
Supplemental Section 751	POLYVINYL CHLORIDE (PVC) PRESSURE PIPE	New Section created for PVC water pipe from old Spec 10.
Supplemental Section 756	DRY BARREL FIRE HYDRANTS	Incorporated lock requirements from old Spec 7.