

STANDARD DETAIL INDEX

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Standard Detail Index January, 2018

STREET B - RIGHT-OF-WAY

			STREET B - RIGHT-OF-WAT									
		R2U	R2U	C2U	R2D C2D	C4U	A4D	*	A6D	A6DL	A8D	
			50'	50' NO ALLEY	60'	70'	70'	90'	100'	120'	150'	150'
STREET A - RIGHT-OF-WAY	R2U	50'	2	3	4	5	6	7	*	8	9	10
	R2U	50' NO ALLEY		11	12	13	14	15	*	16	17	18
	C2U	60'			19	20	21	22	*	23	24	25
	R2D C2D	70'				26	27	28	*	29	*	*
	C4U	70'					30	31	*	32	33	34
	A4D	90'						35	*	36	37	38
	*	100'							*	*	*	*
	A6D	120'								39	40	41
	A6DL	150'									42	43
	A8D	150'										44

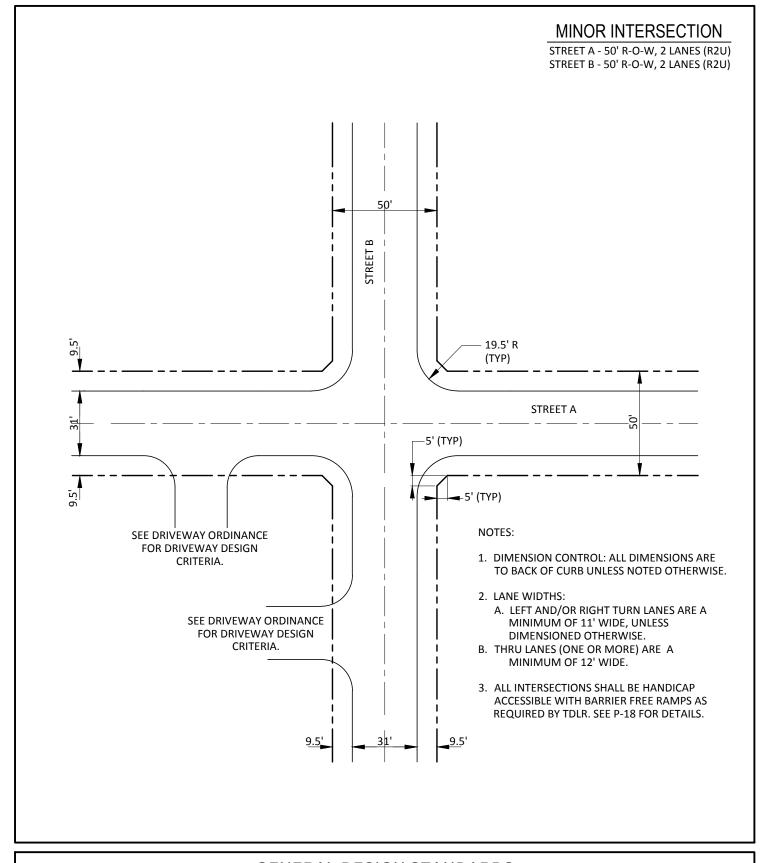
★ - INTERSECTIONS IN THIS CATEGORY ARE TO BE DETERMINED ON A CASE-BY-CASE BASIS BY THE DIRECTOR OF ENGINEERING.

THOROUGHFARE TYPES					
ROW WIDTH	CLASS	TYPES OF THOROUGHFARE			
50'	R2U	RESIDENTIAL - 2 LANE UNDIVIDED			
60'	C2U	RESIDENTIAL COLLECTOR - 2 LANE UNDIVIDED			
70'	R2D	RESIDENTIAL - 2 LANE DIVIDED			
70'	C2D	MINOR COLLECTOR - 2 LANE DIVIDED			
70'	C4U	MAJOR COLLECTOR - 4 LANE UNDIVIDED			
90'	A4D	MINOR ARTERIAL - 4 LANE DIVIDED			
100'	A6D	MAJOR ARTERIAL - 6 LANE DIVIDED WITH REDUCED R.O.W.			
120'	A6DL	MAJOR ARTERIAL - 6 LANE DIVIDED			
150'	A6DL	MAJOR ARTERIAL - 6 LANE DIVIDED WITH LIMITED ACCESS			
150'	A8D	MAJOR ARTERIAL - 8 LANE DIVIDED			



GENERAL DESIGN STANDARDS PAVING DETAILS

STREET INTERSECTION DIMENSION CONTROL SHEET INDEX SCALE: NTS DATE: 01/2017 SHEET 1 OF 44





STREET INTERSECTION DIMENSION CONTROL (R2U - R2U) SCALE: NTS DATE: 01/2004 SHEET 2 OF 44

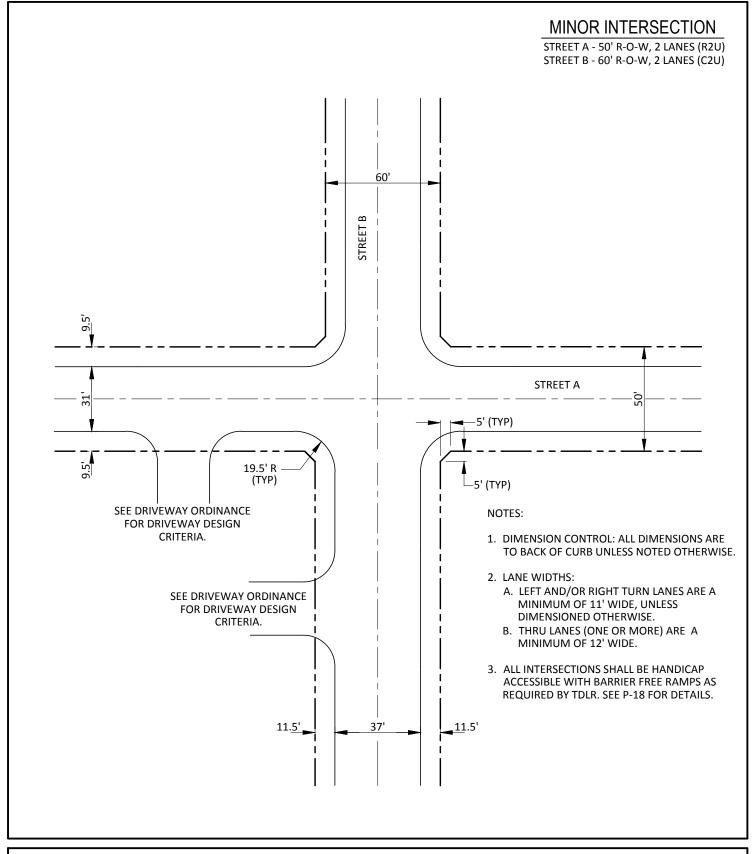
MINOR INTERSECTION STREET A - 50' R-O-W, 2 LANES (R2U) STREET B - 50' R-O-W, 2 LANES (R2U- NO ALLEYS) 5' UTILITY 5' UTILITY **EASEMENT EASEMENT** В STREET A ·5' (TYP) 9.5 19.5' R (TYP) -5' (TYP) SEE DRIVEWAY ORDINANCE FOR DRIVEWAY DESIGN NOTES: CRITERIA. 1. DIMENSION CONTROL: ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE. SEE DRIVEWAY ORDINANCE 2. LANE WIDTHS: FOR DRIVEWAY DESIGN A. LEFT AND/OR RIGHT TURN LANES ARE A CRITERIA. MINIMUM OF 11' WIDE, UNLESS DIMENSIONED OTHERWISE. B. THRU LANES (ONE OR MORE) ARE A MINIMUM OF 12' WIDE. 3. ALL INTERSECTIONS SHALL BE HANDICAP ACCESSIBLE WITH BARRIER FREE RAMPS AS REQUIRED BY TDLR. SEE P-18 FOR DETAILS. 5' UTILITY 5' UTILITY **EASEMENT EASEMENT**



GENERAL DESIGN STANDARDS PAVING DETAILS

STREET INTERSECTION DIMENSION CONTROL (R2U - R2U NO ALLEYS) SCALE: NTS DATE: 01/2004

SHEET 3 OF 44



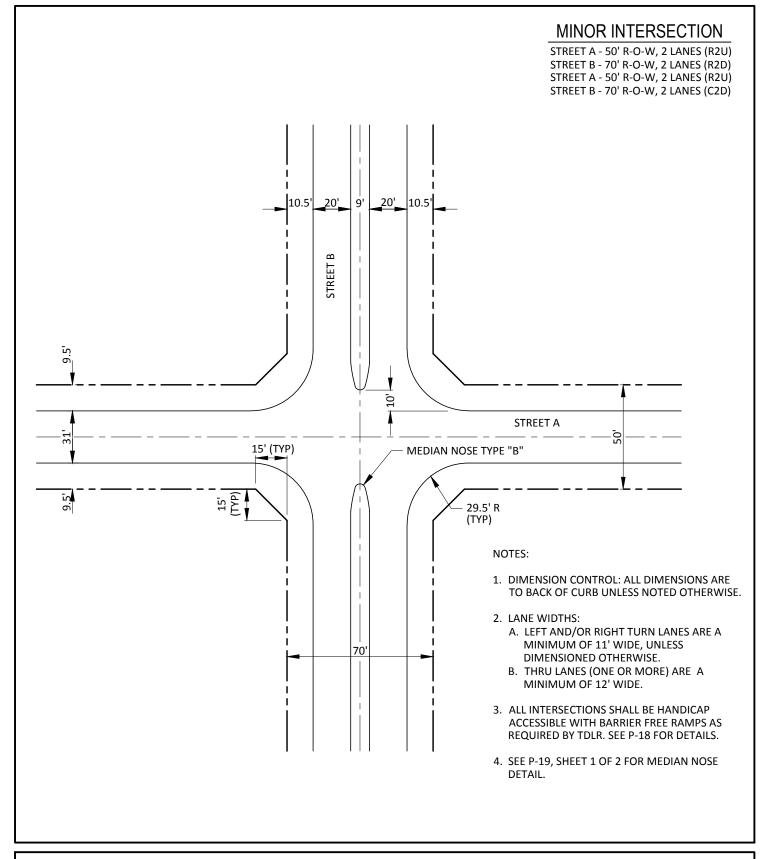


> STREET INTERSECTION **DIMENSION CONTROL** (R2U - C2U)

SCALE: NTS DATE: 01/2004

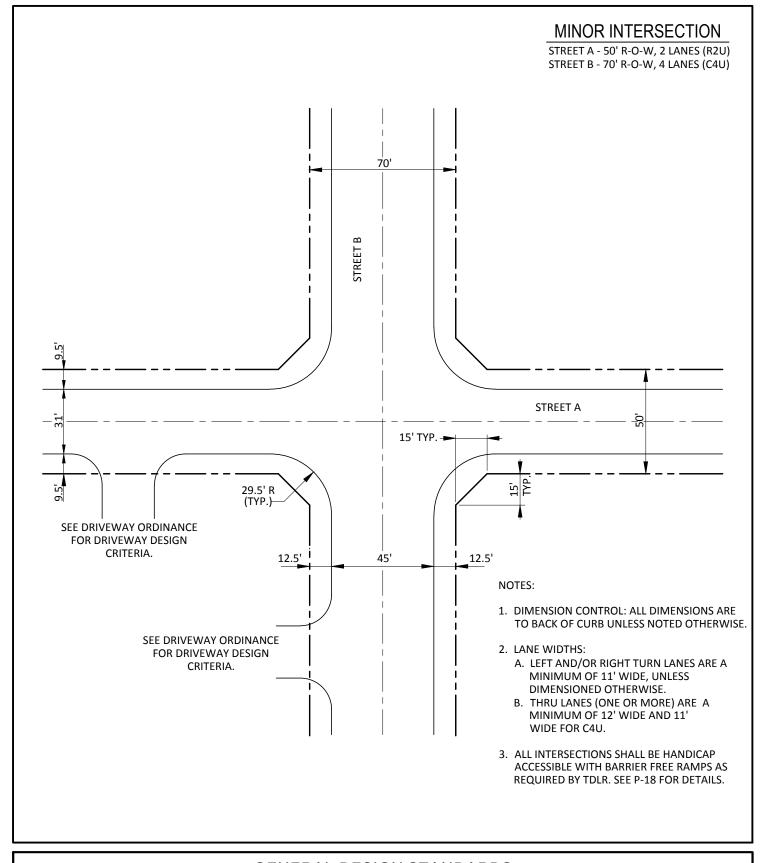
SHEET 4 OF 44

P-1



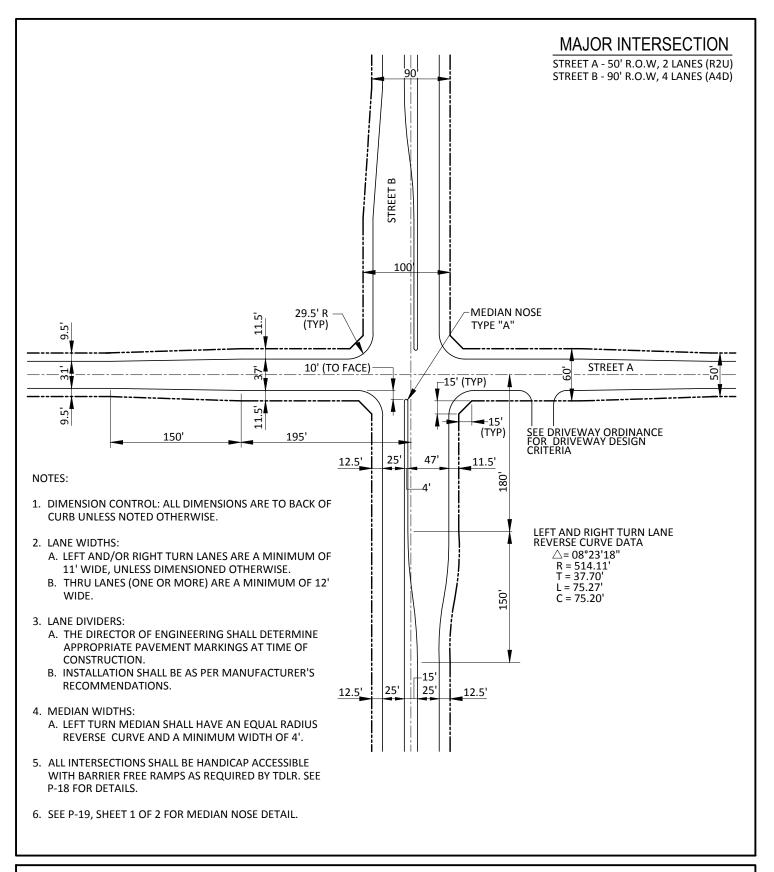


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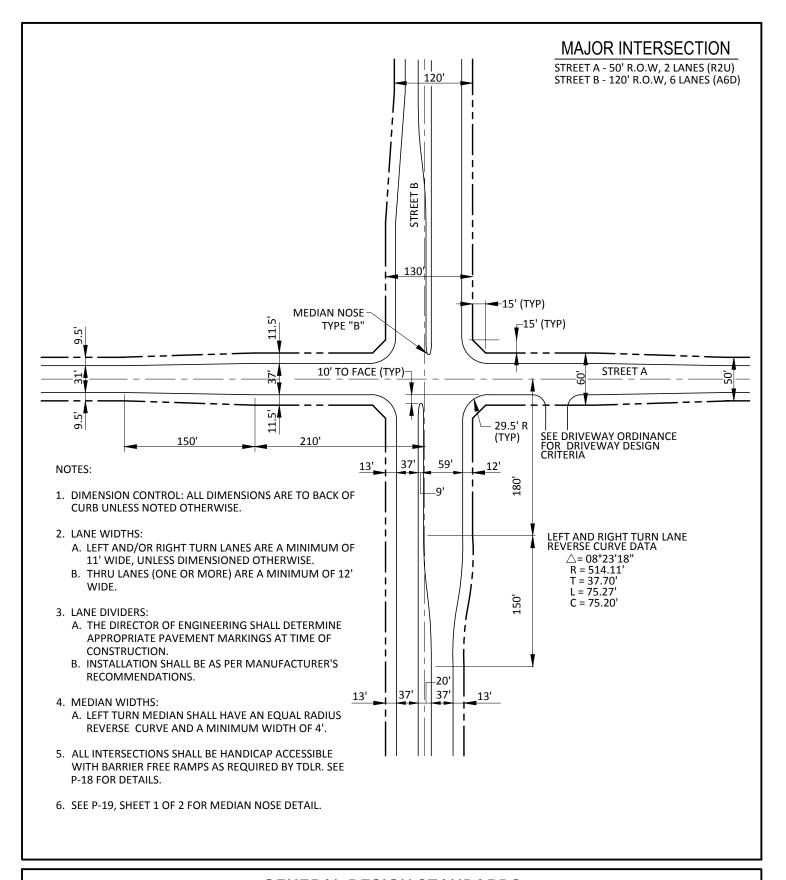


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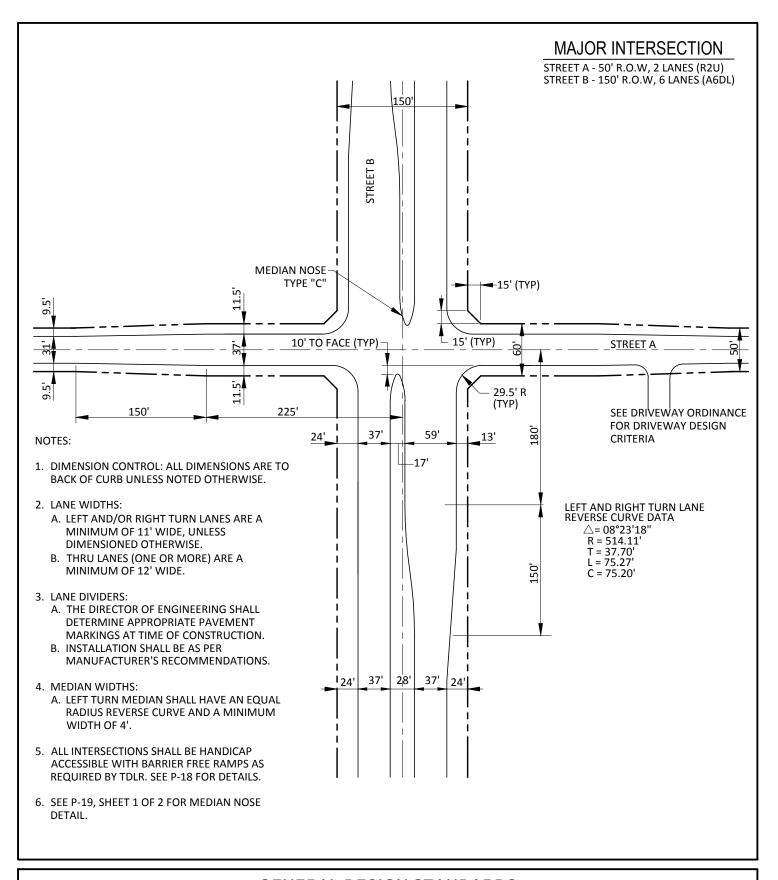


STREET INTERSECTION DIMENSION CONTROL (R2U - A4D) SCALE: NTS DATE: 01/2004 SHEET 7 OF 44



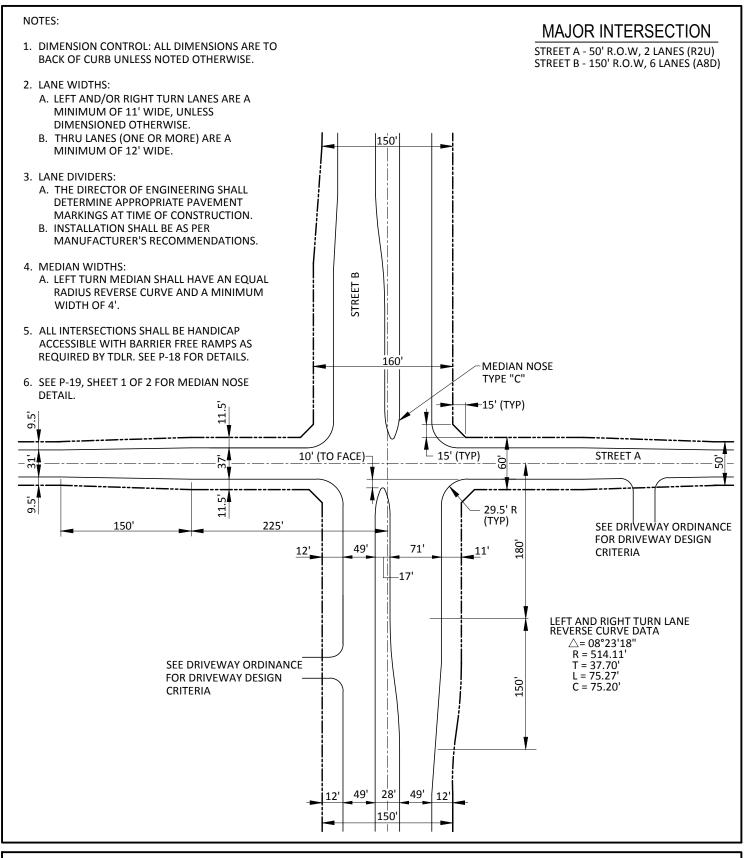


STREET INTERSECTION DIMENSION CONTROL (R2U - A6D) SCALE: NTS DATE: 01/2004 SHEET 8 OF 44



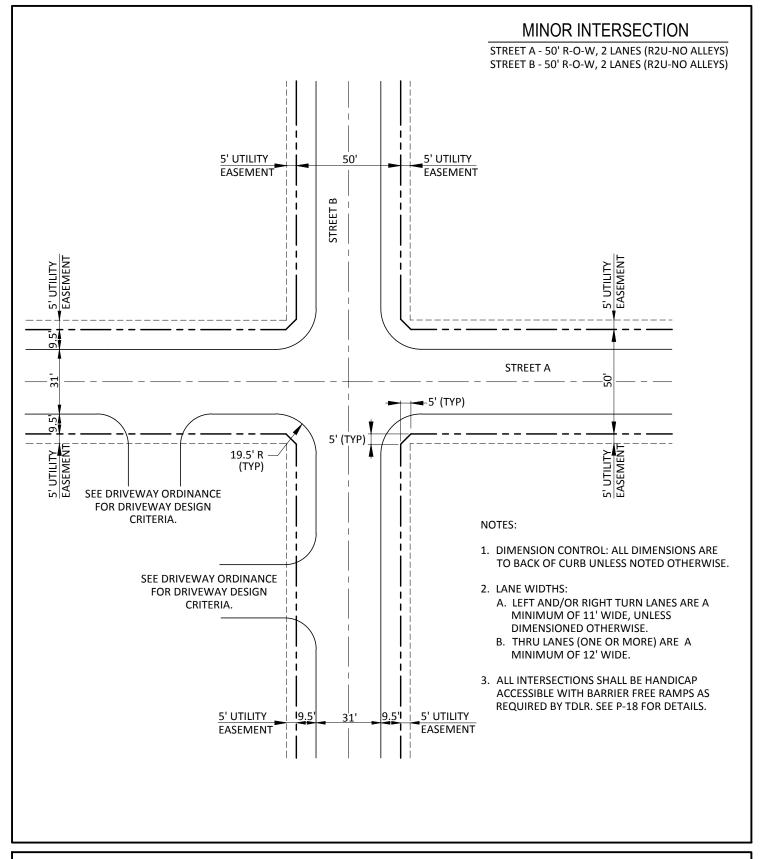


STREET INTERSECTION DIMENSION CONTROL (R2U - A6DL) SCALE: NTS DATE: 01/2004 SHEET 9 OF 44





STREET INTERSECTION DIMENSION CONTROL (R2U - A8D) SCALE: NTS DATE: 01/2004 SHEET 10 OF 44





STREET INTERSECTION
DIMENSION CONTROL
(R2U-NO ALLEYS - R2U-NO ALLEYS)

SCALE: NTS DATE: 12/2013 SHEET 11 OF 44

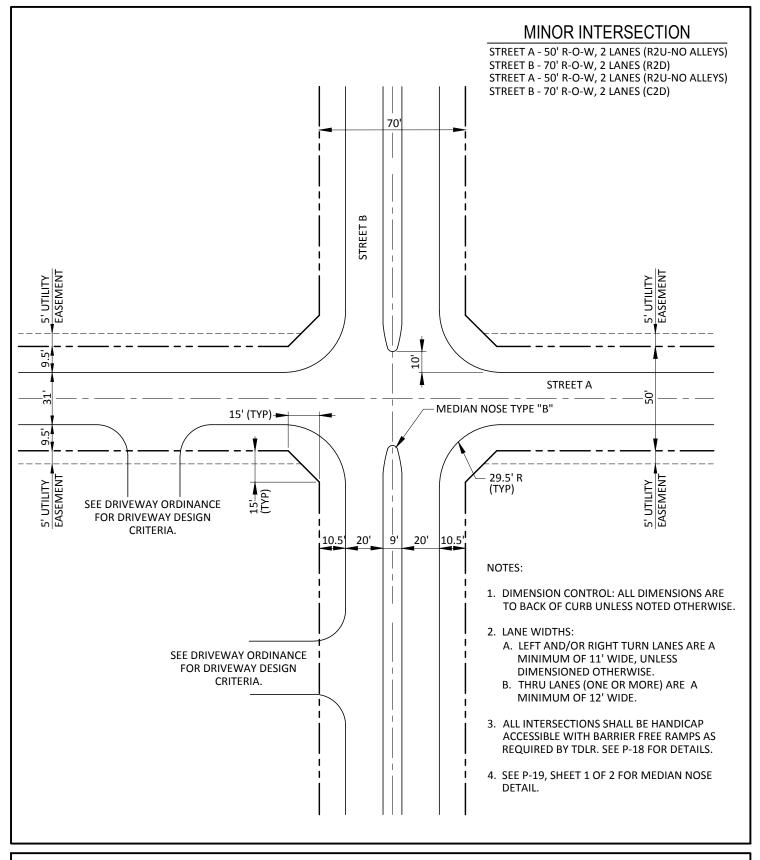
P-1

MINOR INTERSECTION STREET A - 50' R-O-W, 2 LANES (R2U-NO ALLEYS) STREET B - 60' R-O-W, 2 LANES (C2U) 5' UTILITY 5' UTILITY 50' **EASEMENT** EASEMENT STREET STREET B -5' (TYP) 5' (TYP) 19.5' R (TYP) NOTES: SEE DRIVEWAY ORDINANCE 1. DIMENSION CONTROL: ALL DIMENSIONS ARE FOR DRIVEWAY DESIGN TO BACK OF CURB UNLESS NOTED OTHERWISE. CRITERIA. 2. LANE WIDTHS: A. LEFT AND/OR RIGHT TURN LANES ARE A MINIMUM OF 11' WIDE, UNLESS DIMENSIONED OTHERWISE. SEE DRIVEWAY ORDINANCE FOR DRIVEWAY DESIGN B. THRU LANES (ONE OR MORE) ARE A MINIMUM OF 12' WIDE. CRITERIA. 3. ALL INTERSECTIONS SHALL BE HANDICAP ACCESSIBLE WITH BARRIER FREE RAMPS AS REQUIRED BY TDLR. SEE P-18 FOR DETAILS. 5' UTILITY 5' UTILITY EASEMENT **EASEMENT**



GENERAL DESIGN STANDARDS PAVING DETAILS

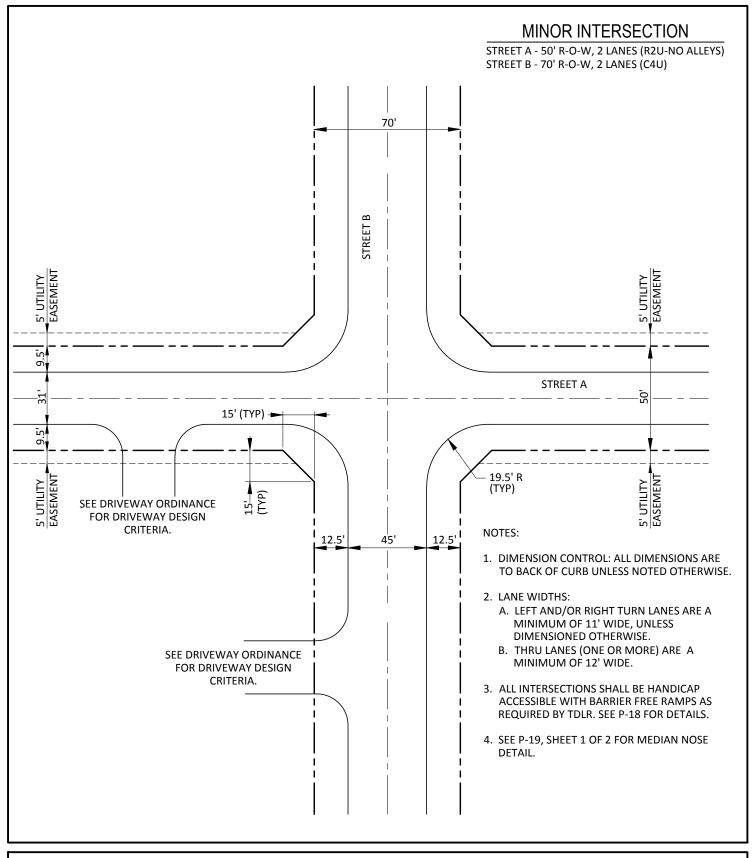
STREET INTERSECTION DIMENSION CONTROL (R2U-NO ALLEYS - C2U) SCALE: NTS DATE: 12/2013 SHEET 12 OF 44





STREET INTERSECTION
DIMENSION CONTROL
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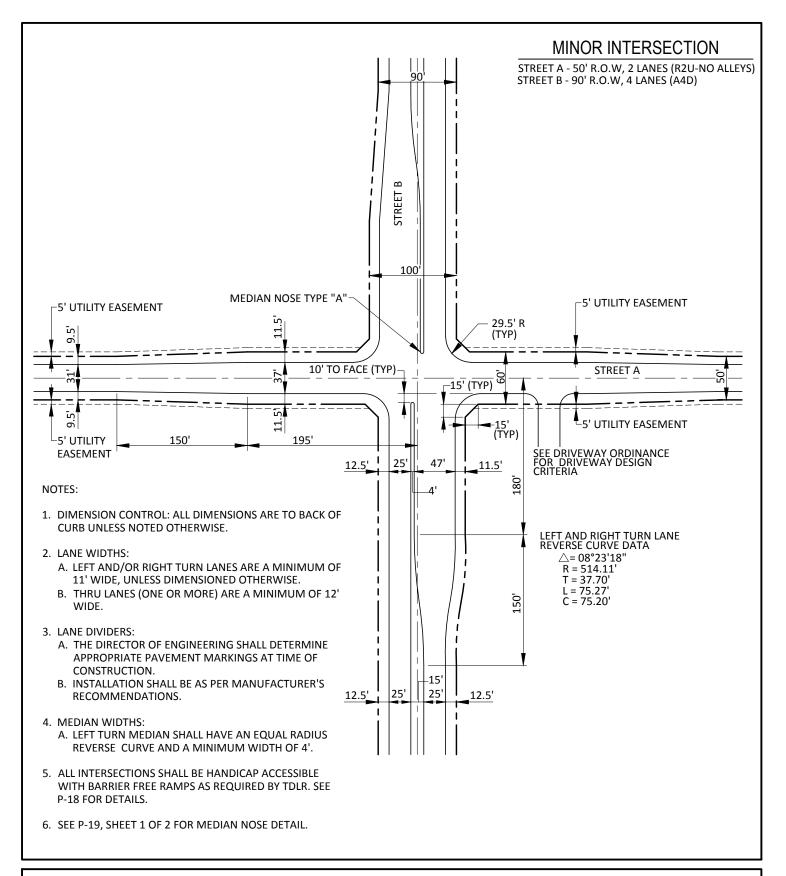
SCALE: NTS DATE: 01/2004 SHEET 13 OF 44





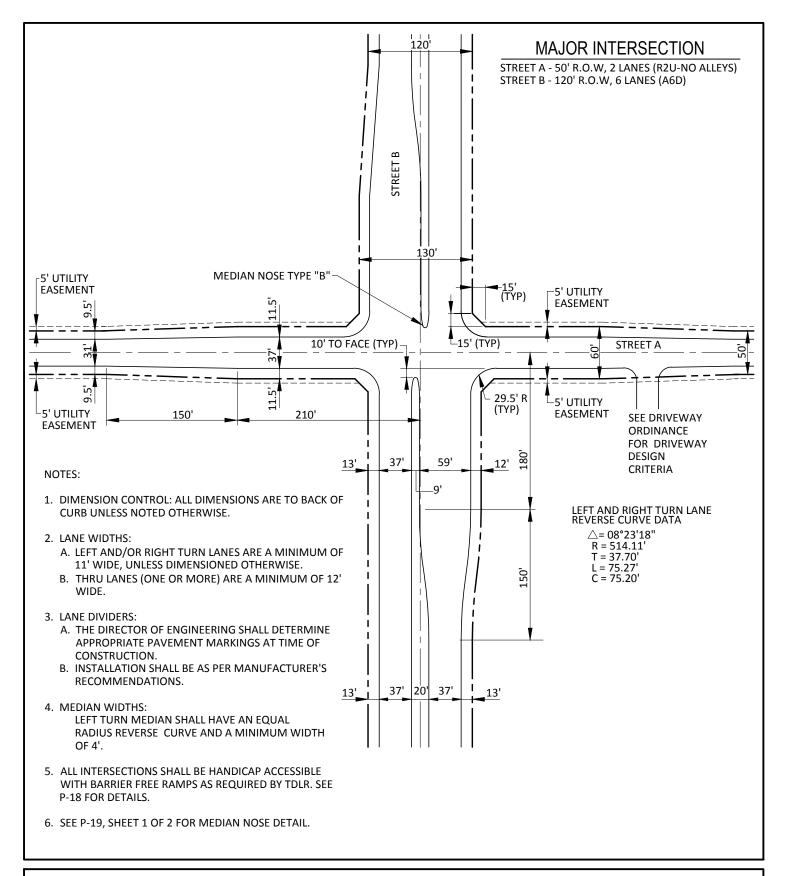
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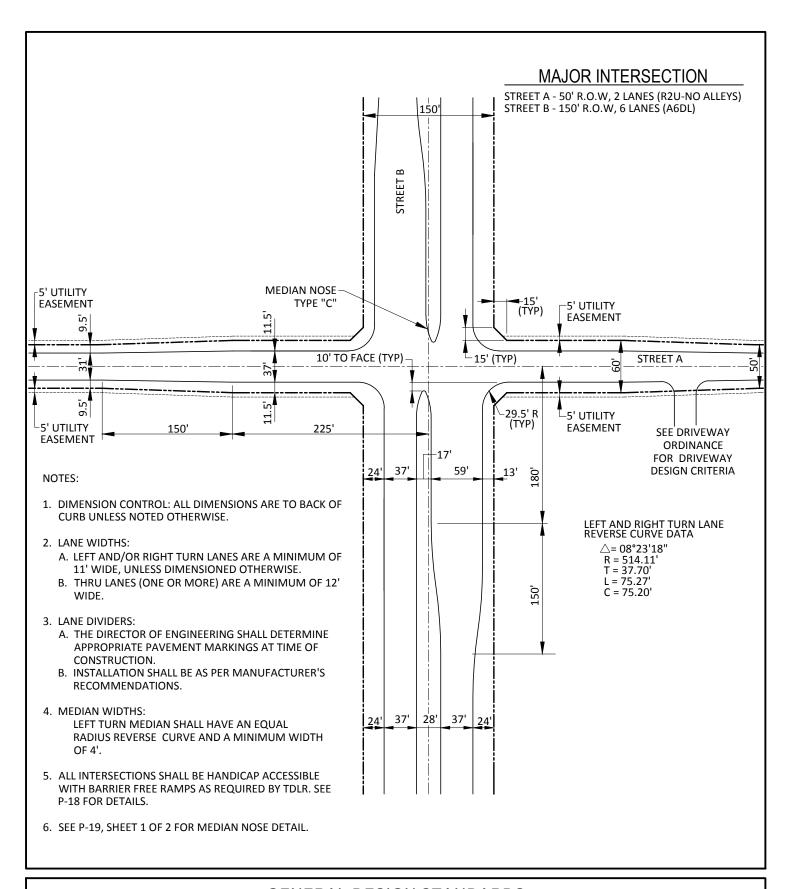


STREET INTERSECTION DIMENSION CONTROL (R2U NO ALLEYS - A4D) SCALE: NTS DATE: 01/2004 SHEET 15 OF 44



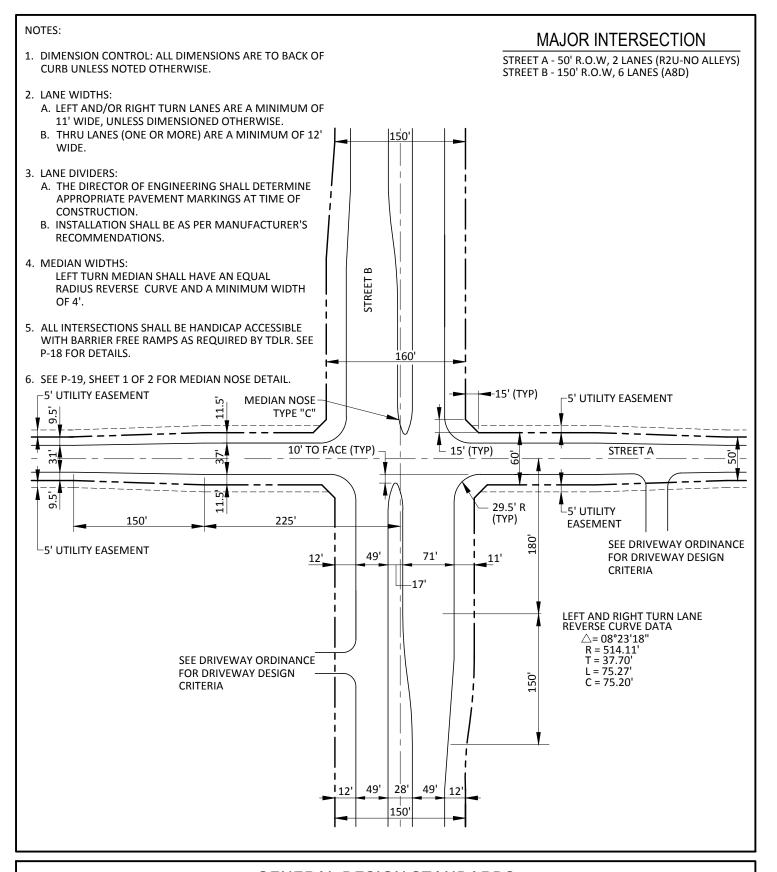


STREET INTERSECTION DIMENSION CONTROL (R2U NO ALLEYS - A6D) SCALE: NTS DATE: 01/2004 SHEET 16 OF 44





STREET INTERSECTION DIMENSION CONTROL (R2U NO ALLEYS - A6DL) SCALE: NTS DATE: 01/2004 SHEET 17 OF 44





STREET INTERSECTION DIMENSION CONTROL (R2U NO ALLEYS - A8D) SCALE: NTS DATE: 01/2004 SHEET 18 OF 44

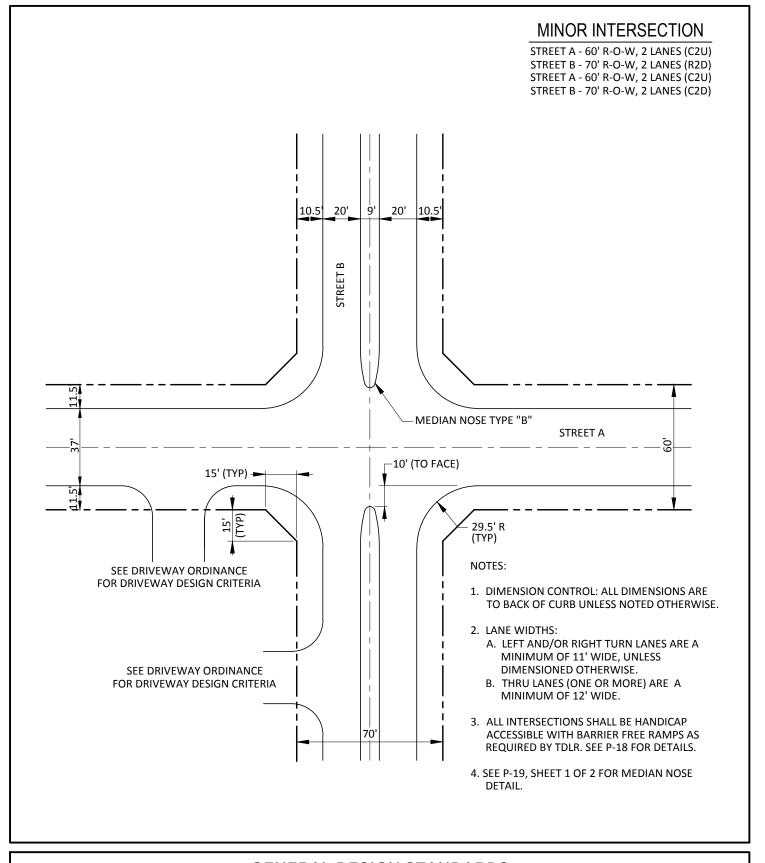
MINOR INTERSECTION STREET A - 60' R-O-W, 2 LANES (C2U) STREET B - 60' R-O-W, 2 LANES (C2U) 60' 19.5' R (TYP) STREET A -5' (TYP) 5' (TYP) NOTES: SEE DRIVEWAY ORDINANCE FOR DRIVEWAY DESIGN 1. DIMENSION CONTROL: ALL DIMENSIONS ARE TO CRITERIA. BACK OF CURB UNLESS NOTED OTHERWISE. 2. LANE WIDTHS: A. LEFT AND/OR RIGHT TURN LANES ARE A SEE DRIVEWAY ORDINANCE FOR DRIVEWAY DESIGN MINIMUM OF 11' WIDE, UNLESS CRITERIA. DIMENSIONED OTHERWISE. B. THRU LANES (ONE OR MORE) ARE A MINIMUM OF 12' WIDE. 3. ALL INTERSECTIONS SHALL BE HANDICAP ACCESSIBLE WITH BARRIER FREE RAMPS AS <u>11.5</u>' 11.5 REQUIRED BY TDLR. SEE P-18 FOR DETAILS.



GENERAL DESIGN STANDARDS PAVING DETAILS

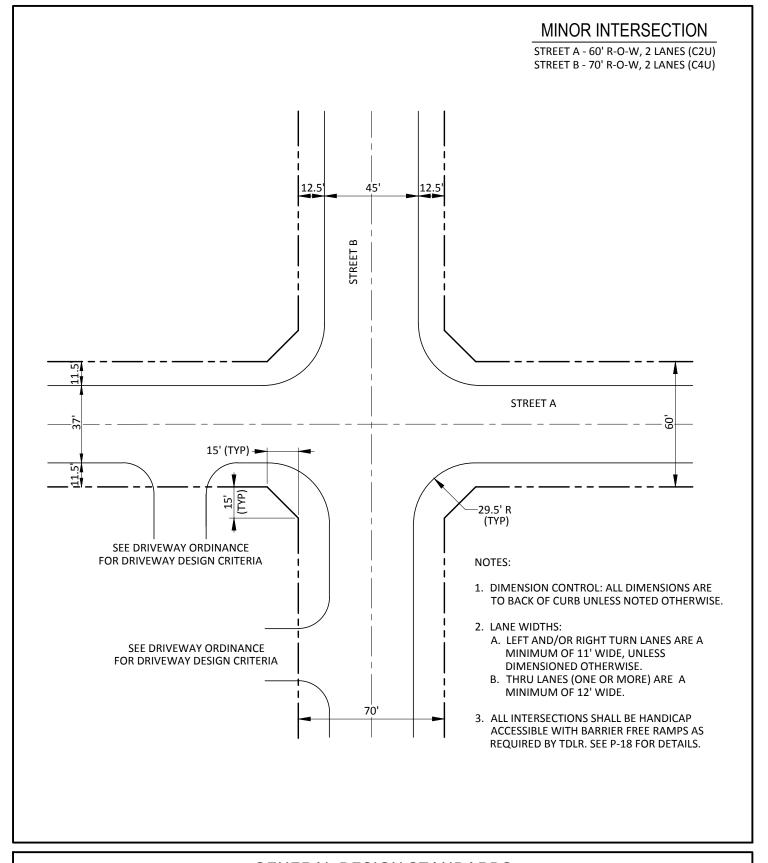
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> P-1 NGINEER



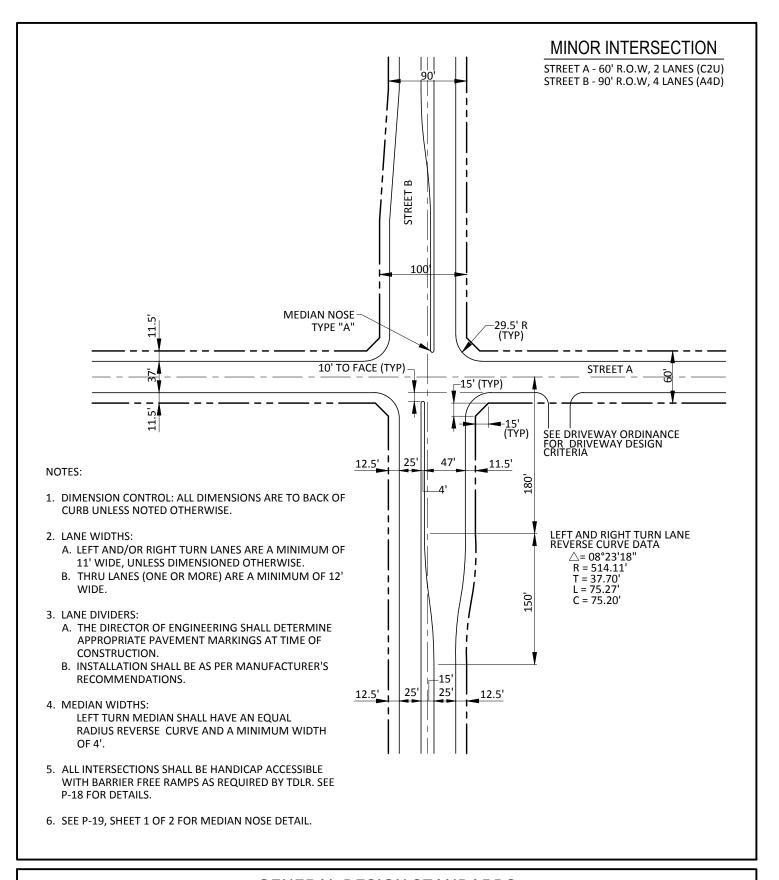


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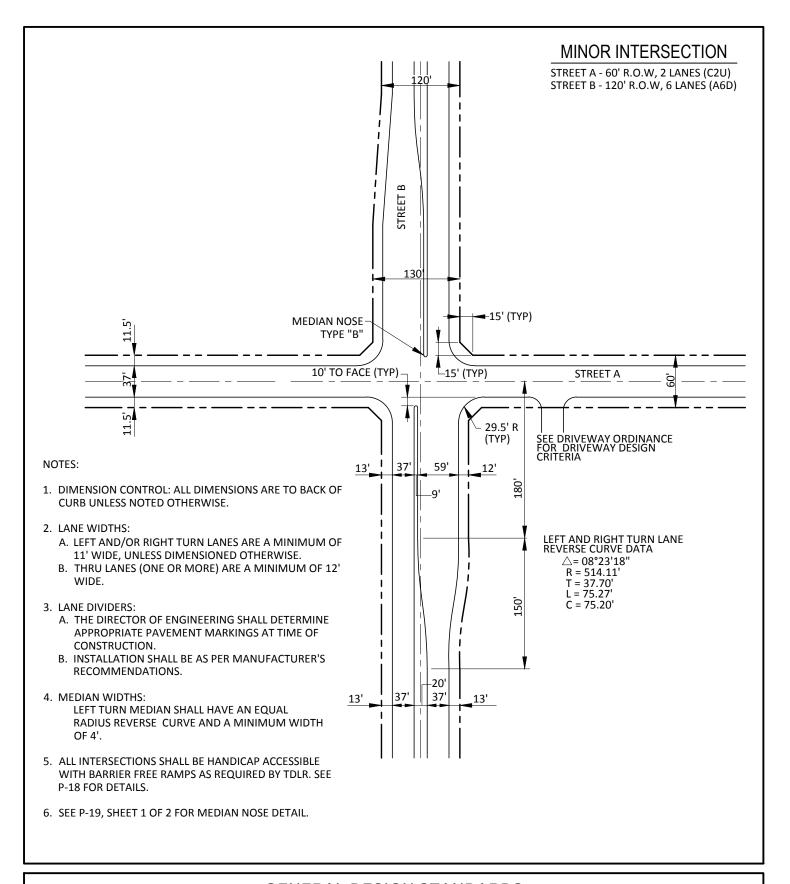


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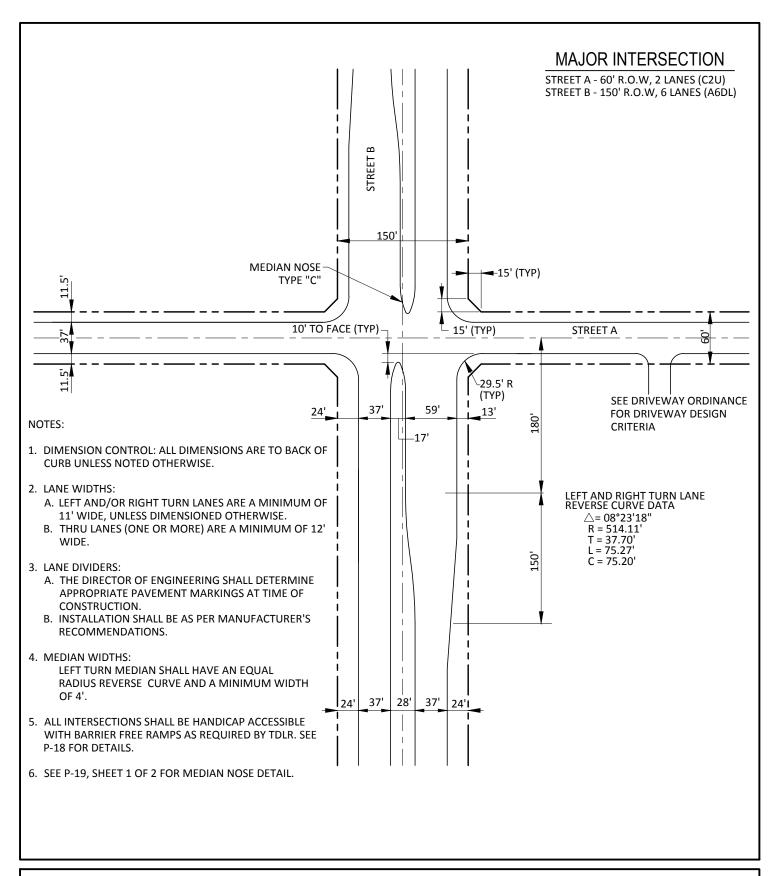


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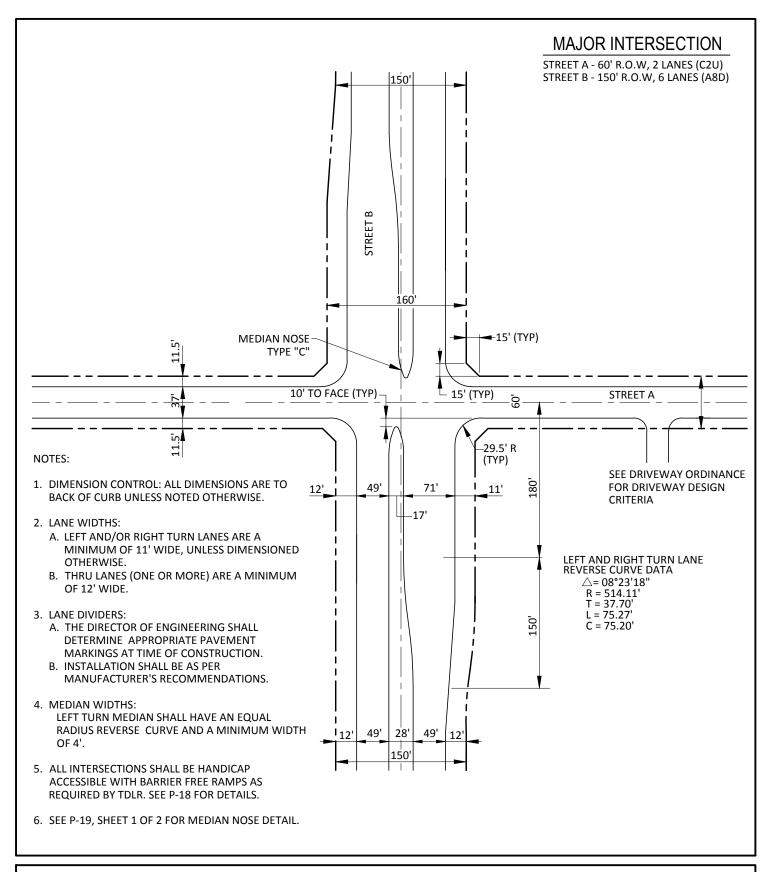
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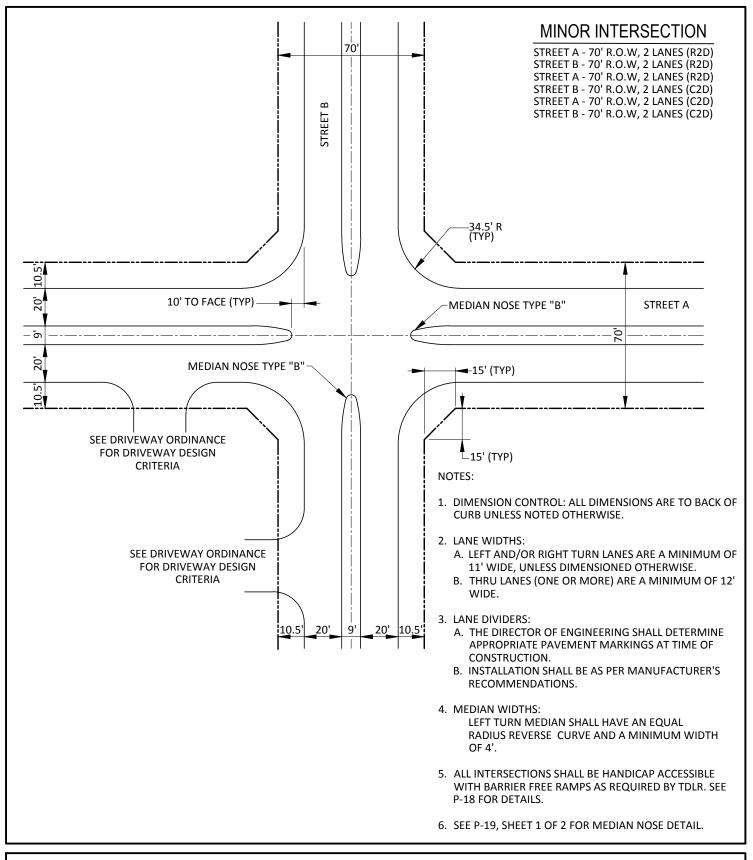
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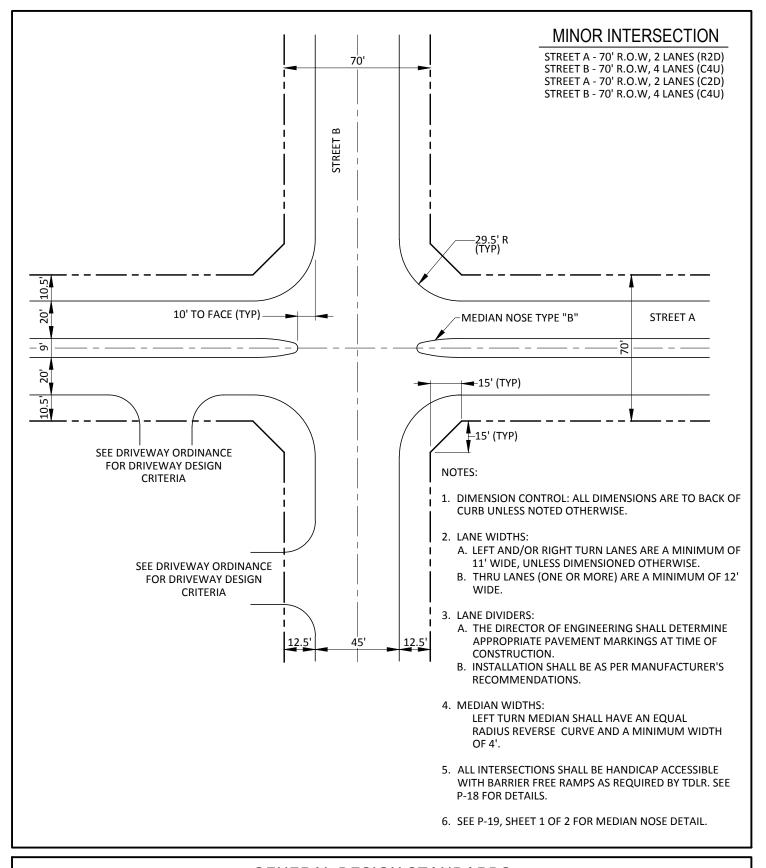
STREET INTERSECTION DIMENSION CONTROL (C2U - A8D) SCALE: NTS DATE: 01/2004 SHEET 25 OF 44





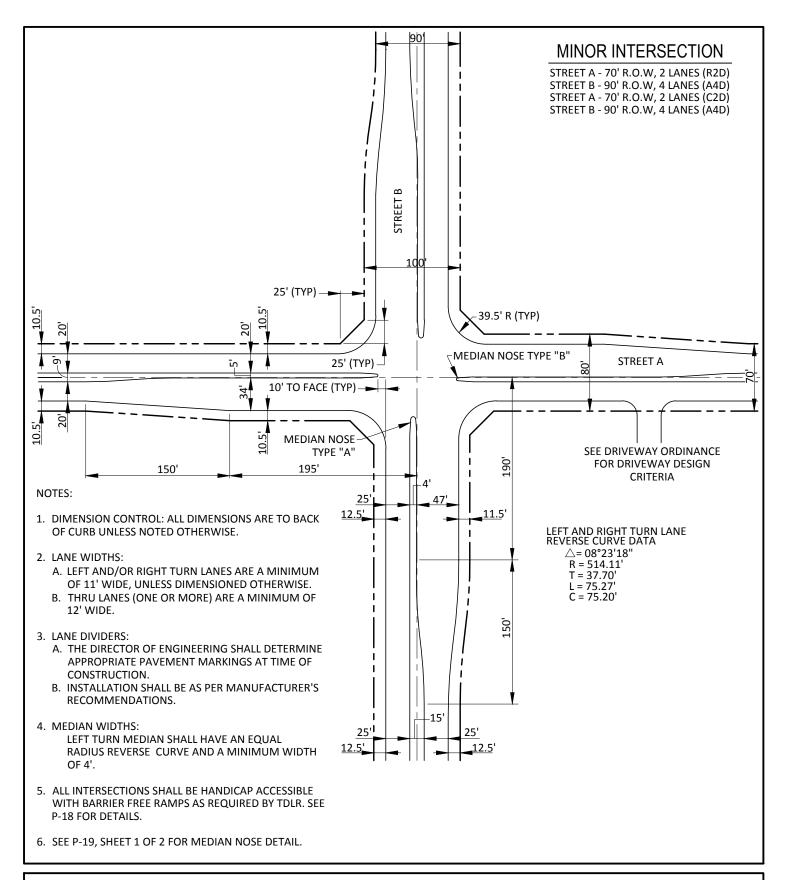
STREET INTERSECTION
DIMENSION CONTROL
(R2D - R2D & R2D - C2D & C2D - C2D)

SCALE: NTS DATE: 01/2004 SHEET 26 OF 44



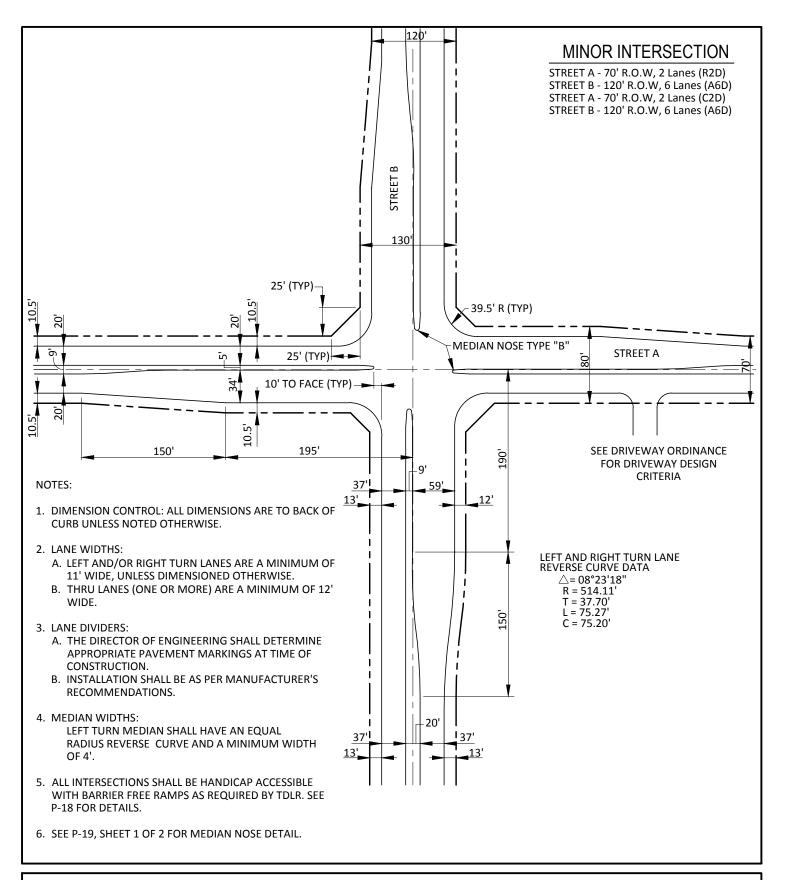


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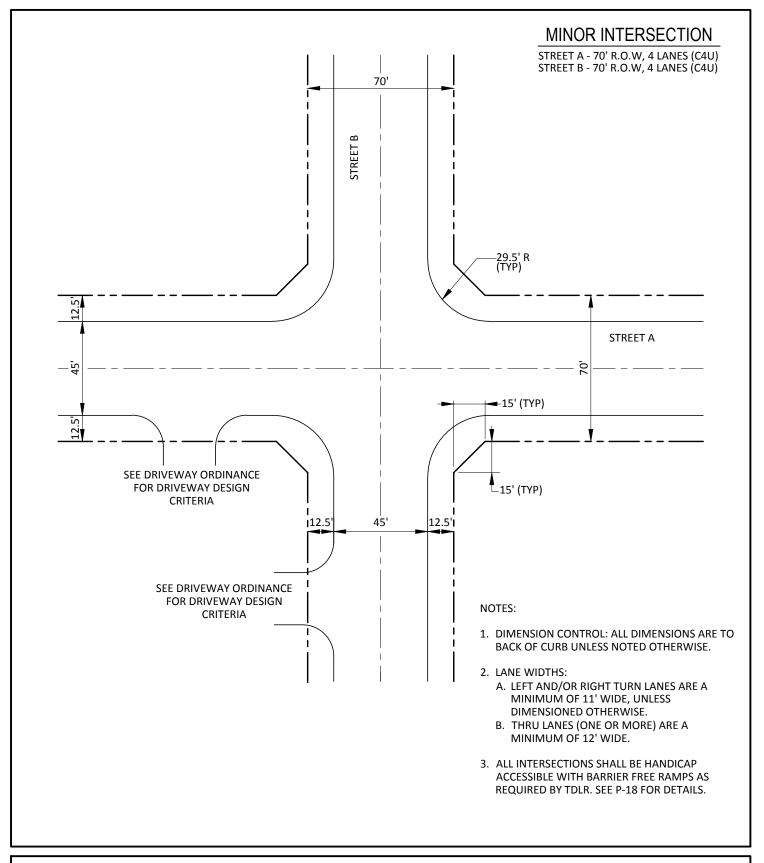
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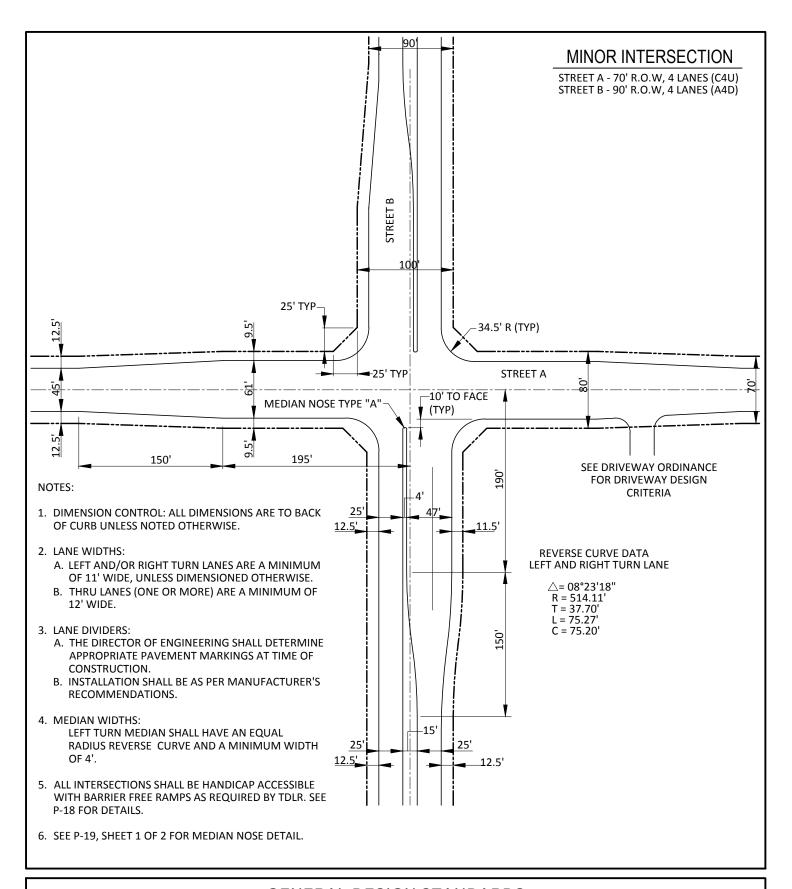
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> P-1 NGINEER



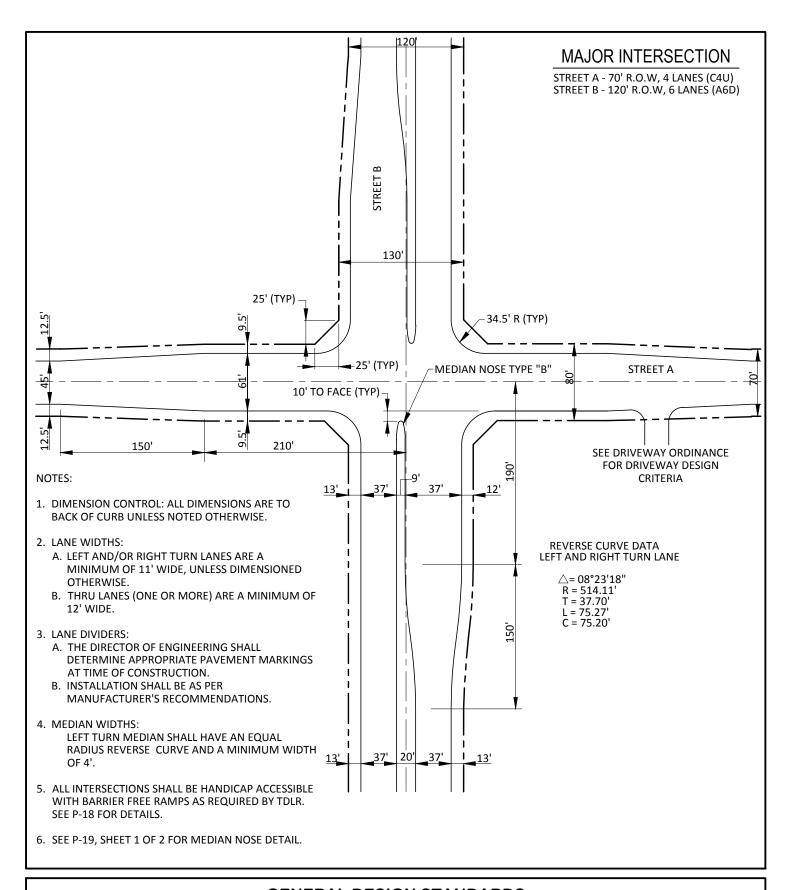


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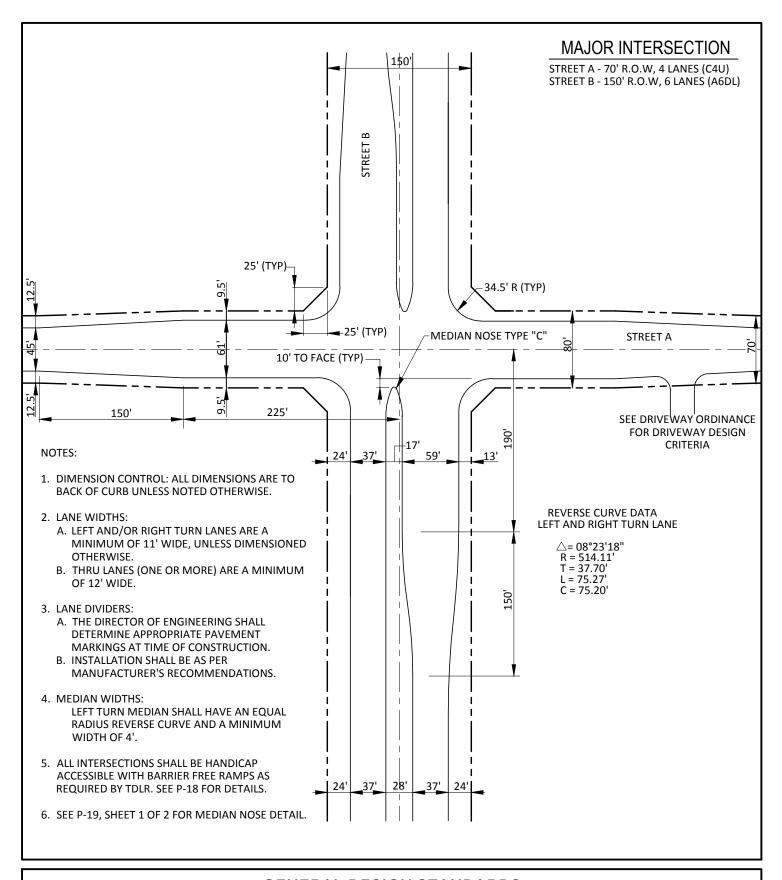


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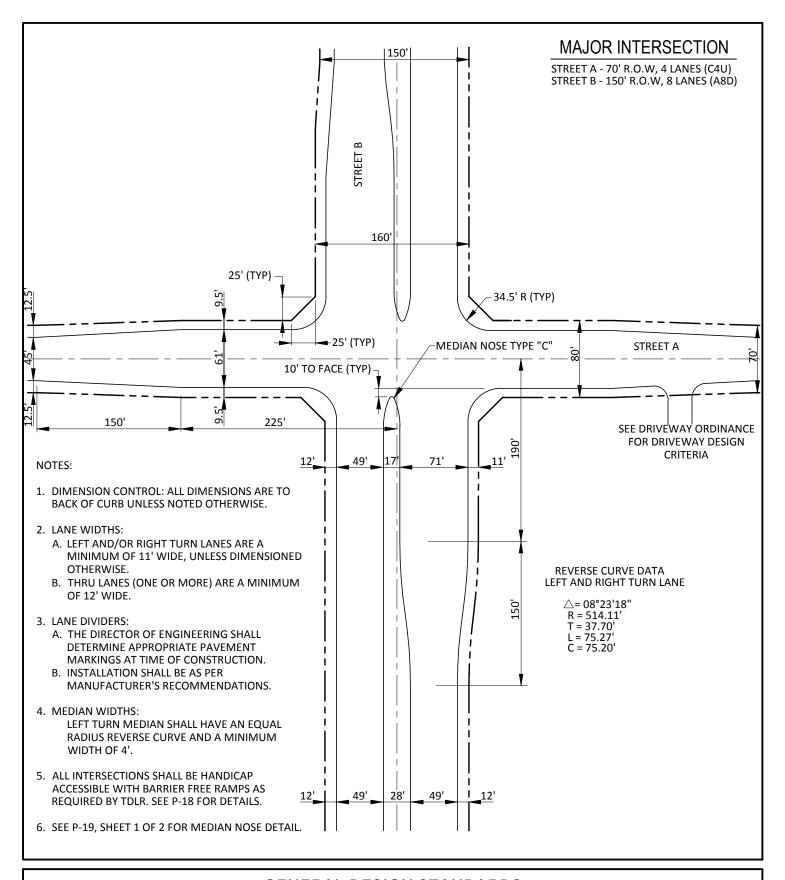


STREET INTERSECTION DIMENSION CONTROL (C4U - A6D) SCALE: NTS DATE: 01/2004 SHEET 32 OF 44



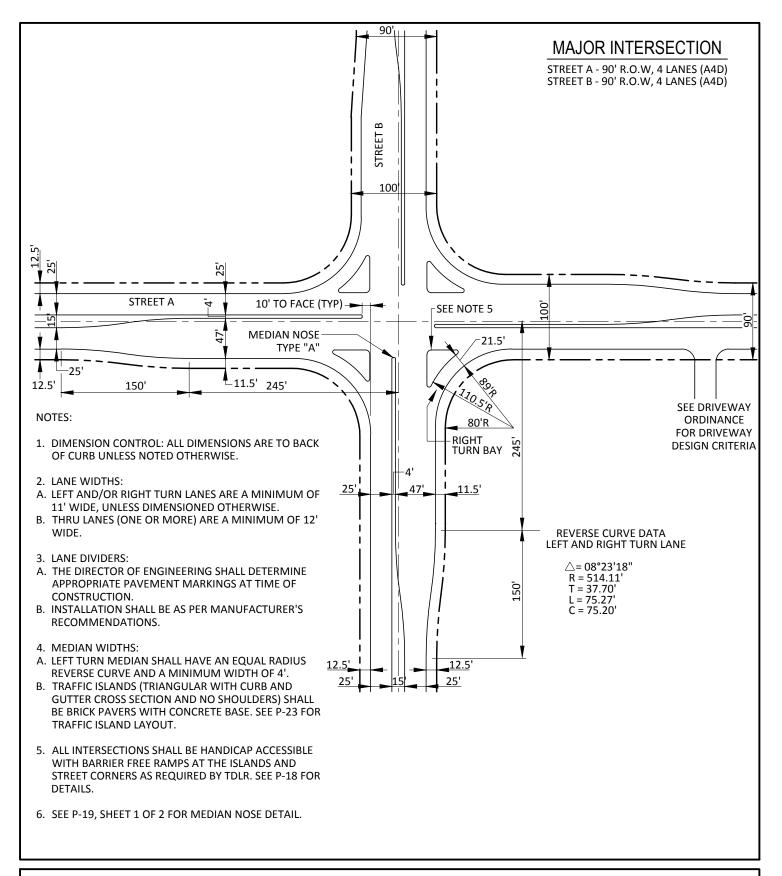


STREET INTERSECTION DIMENSION CONTROL (C4U - A6DL) SCALE: NTS DATE: 01/2004 SHEET 33 OF 44



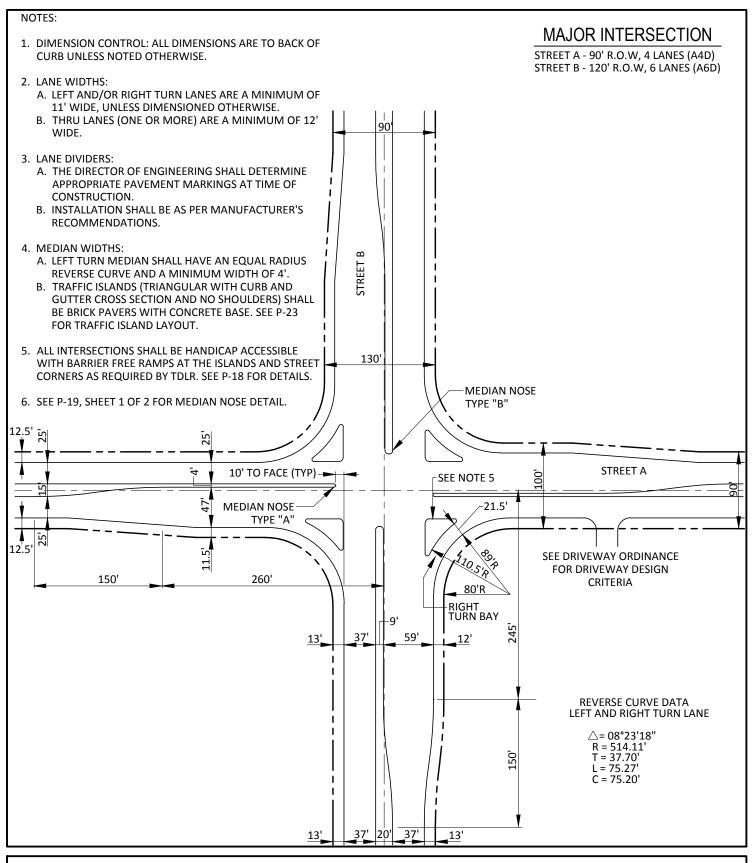


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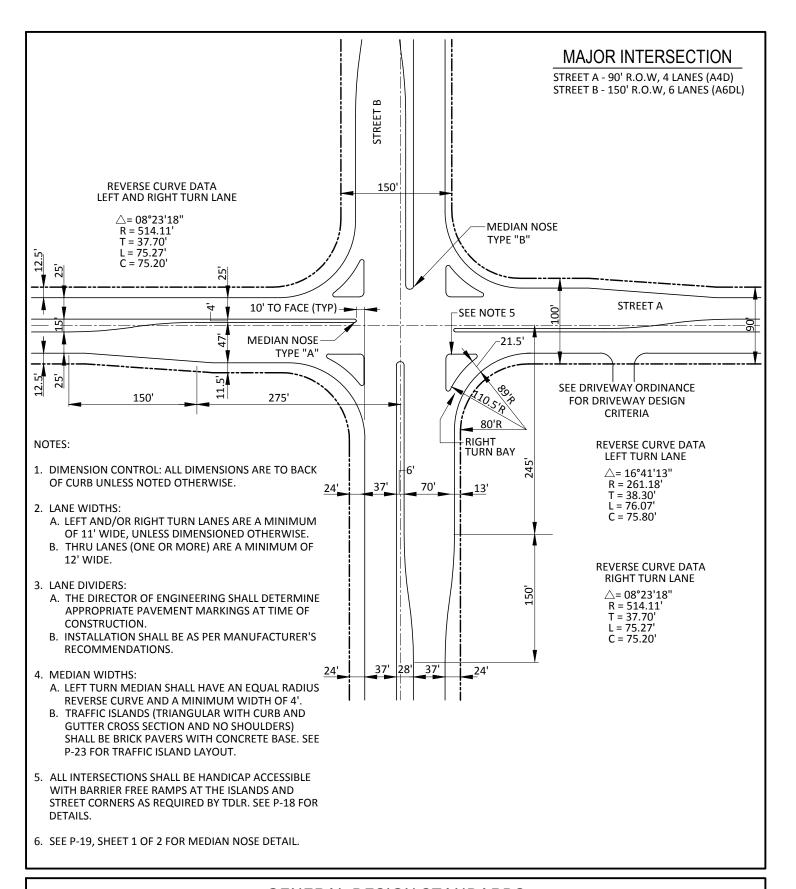


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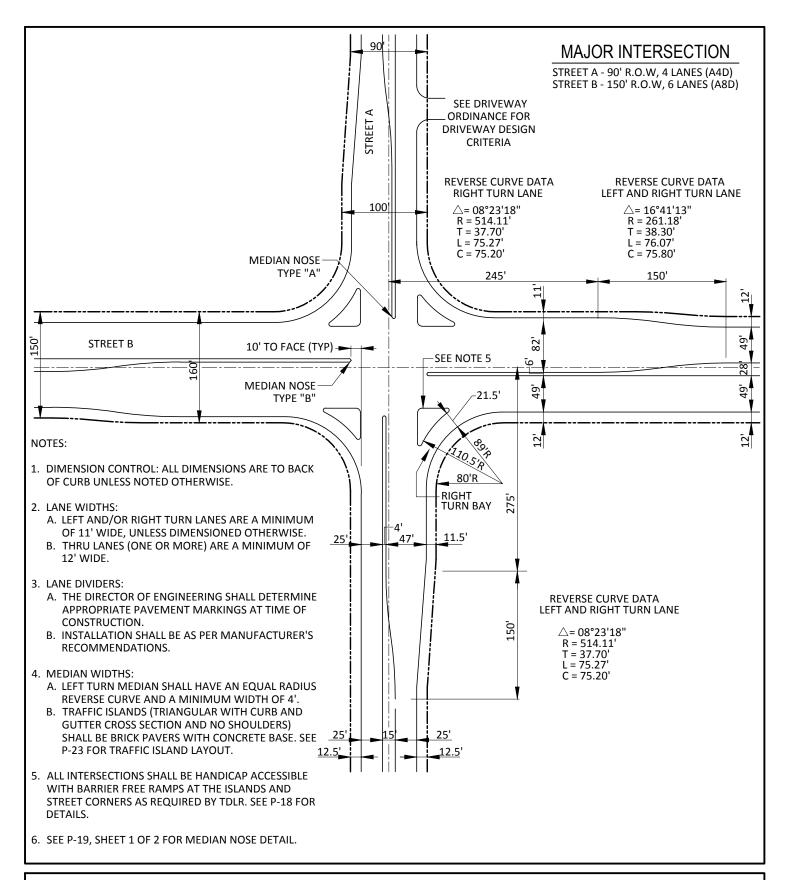


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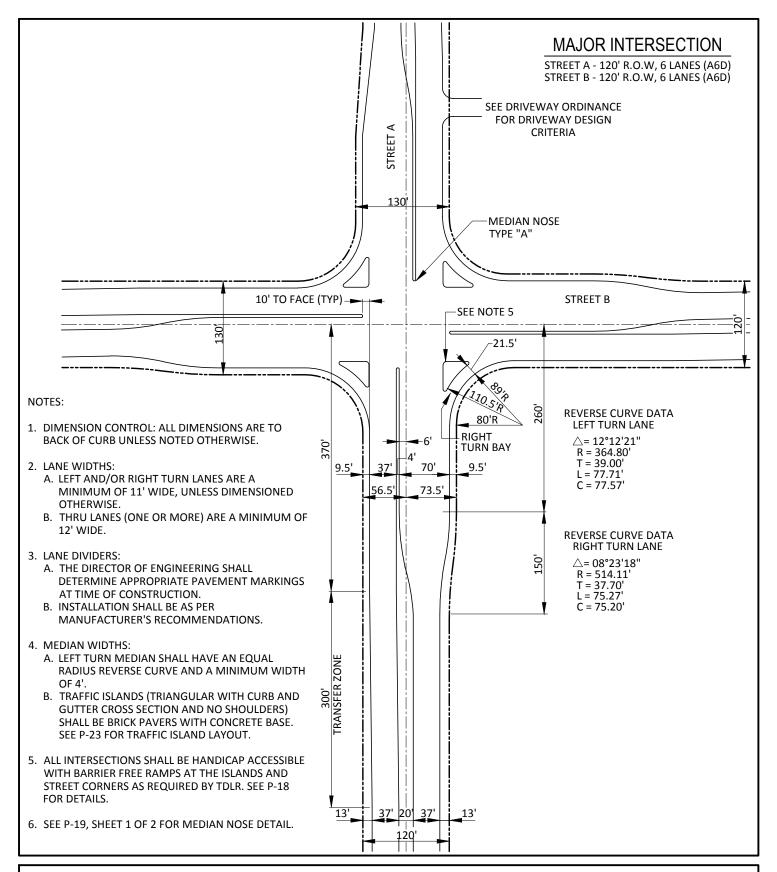


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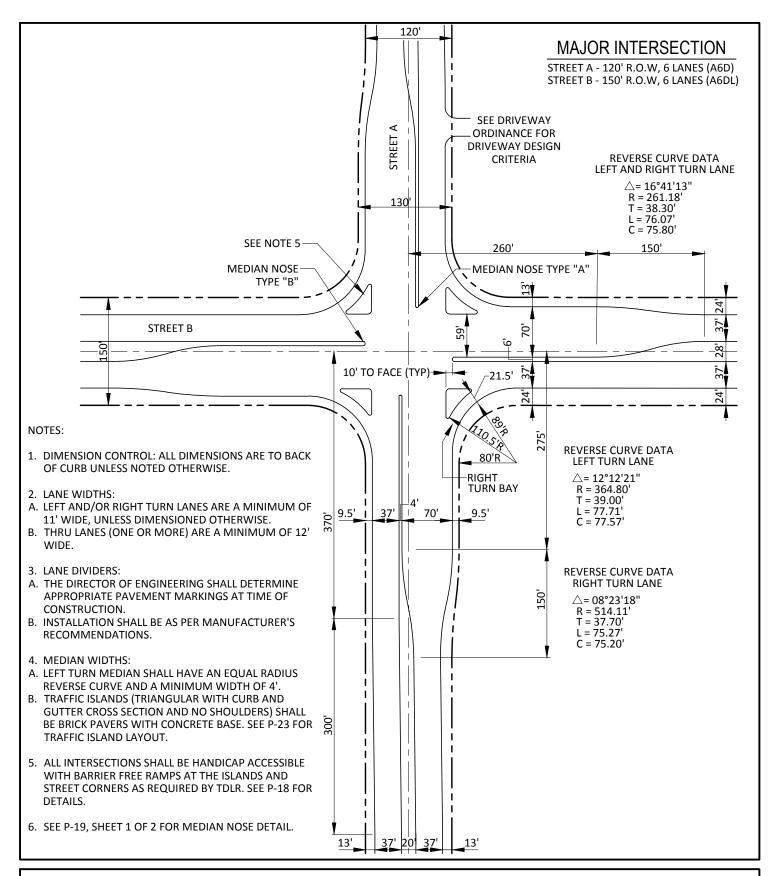


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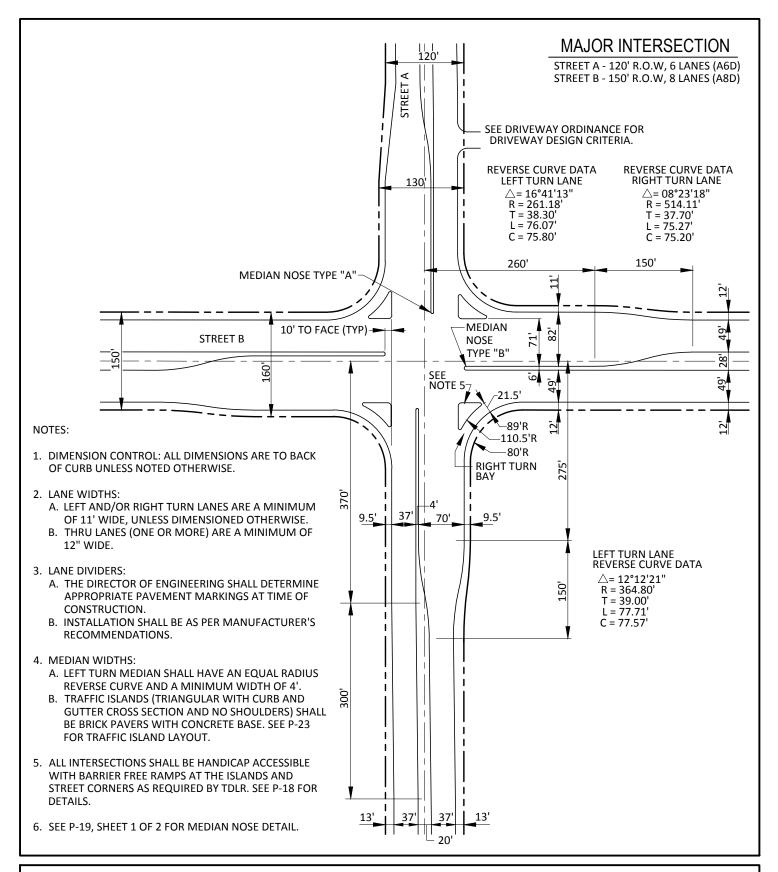


STREET INTERSECTION DIMENSION CONTROL (A6D - A6DL) SCALE: NTS DATE: 01/2004 SHEET 39 OF 44





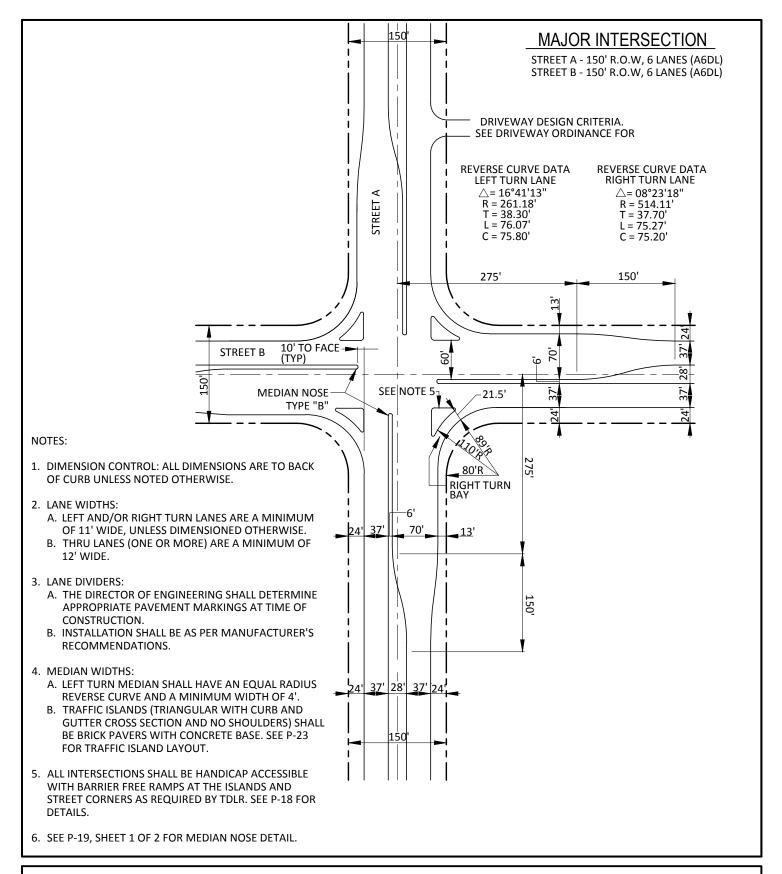
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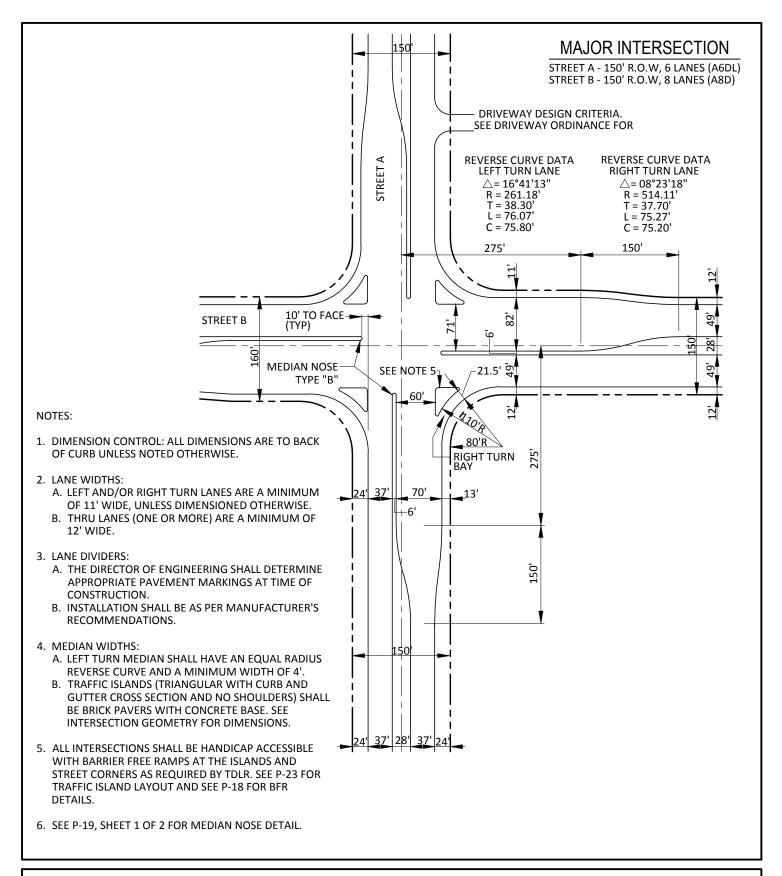
STREET INTERSECTION DIMENSION CONTROL (A6D - A8D) SCALE: NTS DATE: 01/2004 SHEET 41 OF 44

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STREET INTERSECTION DIMENSION CONTROL (A6DL - A6DL) SCALE: NTS DATE: 01/2004 SHEET 42 OF 44

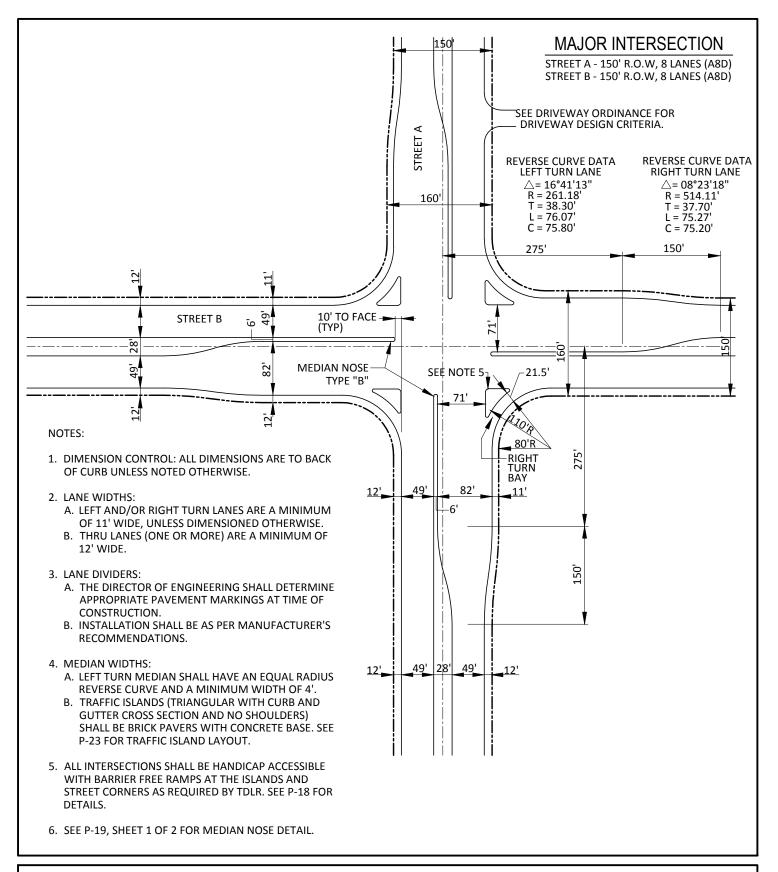




STREET INTERSECTION DIMENSION CONTROL (A6DL - A8D) SCALE: NTS DATE: 01/2004 SHEET 43 OF 44

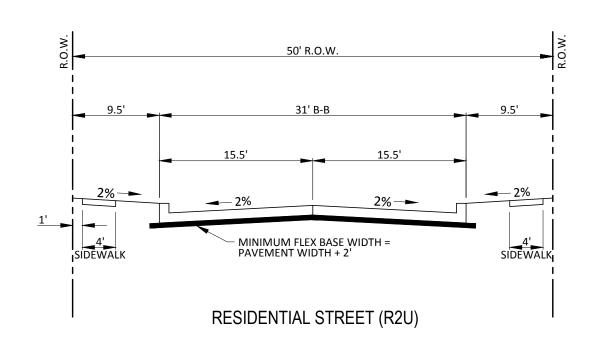
P-1
ENGINEERING

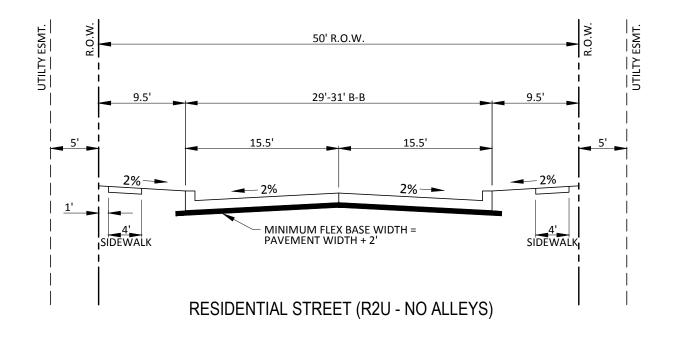
DEPARTMENT





STREET INTERSECTION DIMENSION CONTROL (A8D - A8D) SCALE: NTS DATE: 01/2004 SHEET 44 OF 44





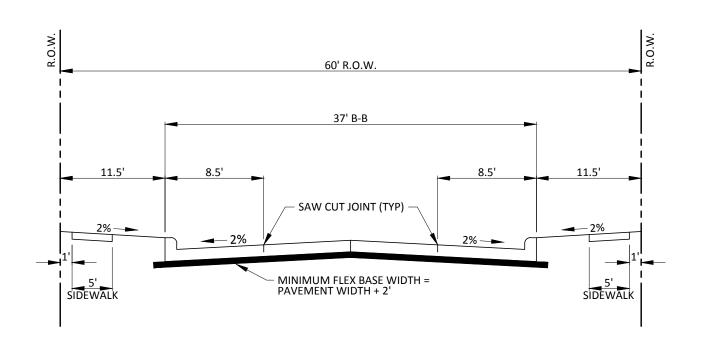
NOTE:

PARABOLIC SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH P-8 FOR NEW SUBDIVISIONS.



GENERAL DESIGN STANDARDS
PAVING DETAILS

LANE STANDARDS RESIDENTIAL (R2U) SCALE: NTS DATE: 12/2013 SHEET 1 OF 8



INDUSTRIAL & RESIDENTIAL COLLECTOR STREET (C2U)

NOTE:

PARABOLIC SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH P-8 FOR NEW SUBDIVISIONS.



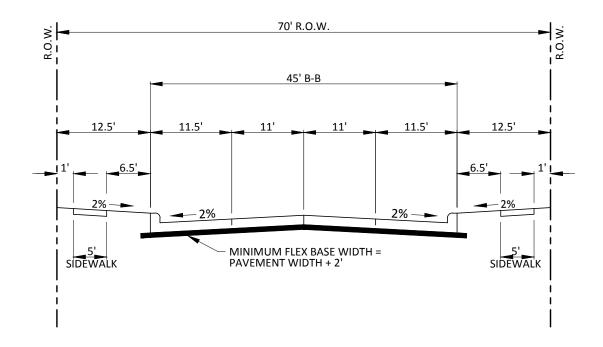
GENERAL DESIGN STANDARDS PAVING DETAILS

LANE STANDARDS COLLECTOR (C2U)

SCALE: NTS DATE: 12/2013

SHEET 2 OF 8

P-2



MAJOR COLLECTOR UNDIVIDED STREET (C4U)

NOTE:

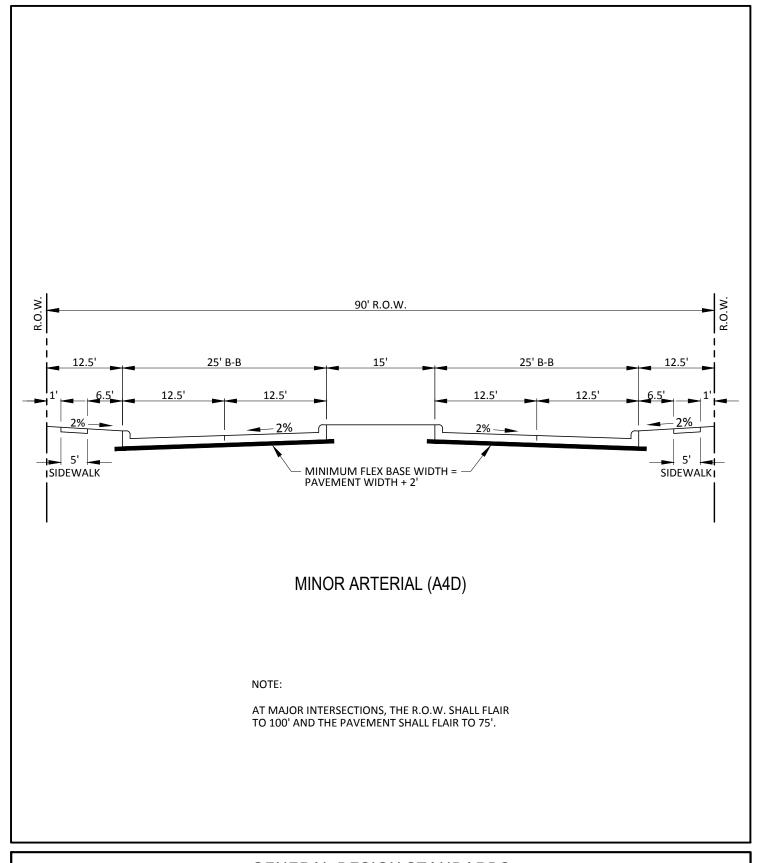
- 1. AT MAJOR INTERSECTIONS, THE R.O.W. SHALL FLAIR TO 80' AND THE PAVEMENT SHALL FLAIR TO 61'.
- 2. PARABOLIC SECTIONS CONSTRUCTED IN ACCORDANCE WITH P-8 ARE PREFERRED FOR NEW STREETS.



GENERAL DESIGN STANDARDS PAVING DETAILS

LANE STANDARDS
MAJOR COLLECTOR UNDIVIDED (C4U)

SCALE: NTS DATE: 12/2013 SHEET 3 OF 8





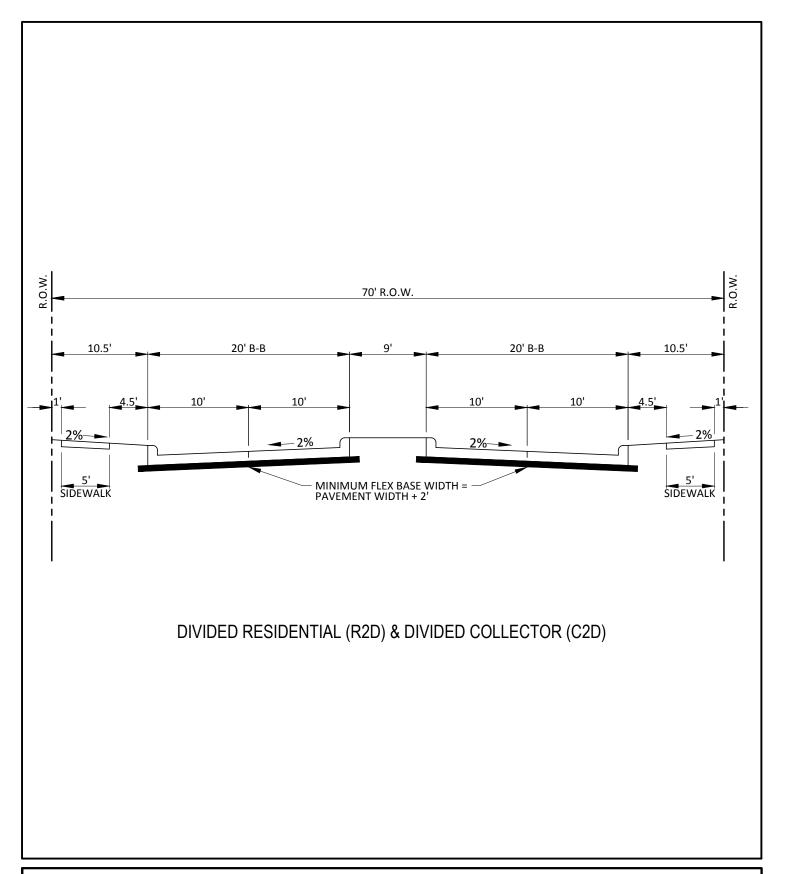
SHEET 4 OF 8

SCALE: NTS

LANE STANDARDS MINOR ARTERIAL (A4D)

P-2

DATE: 12/2013

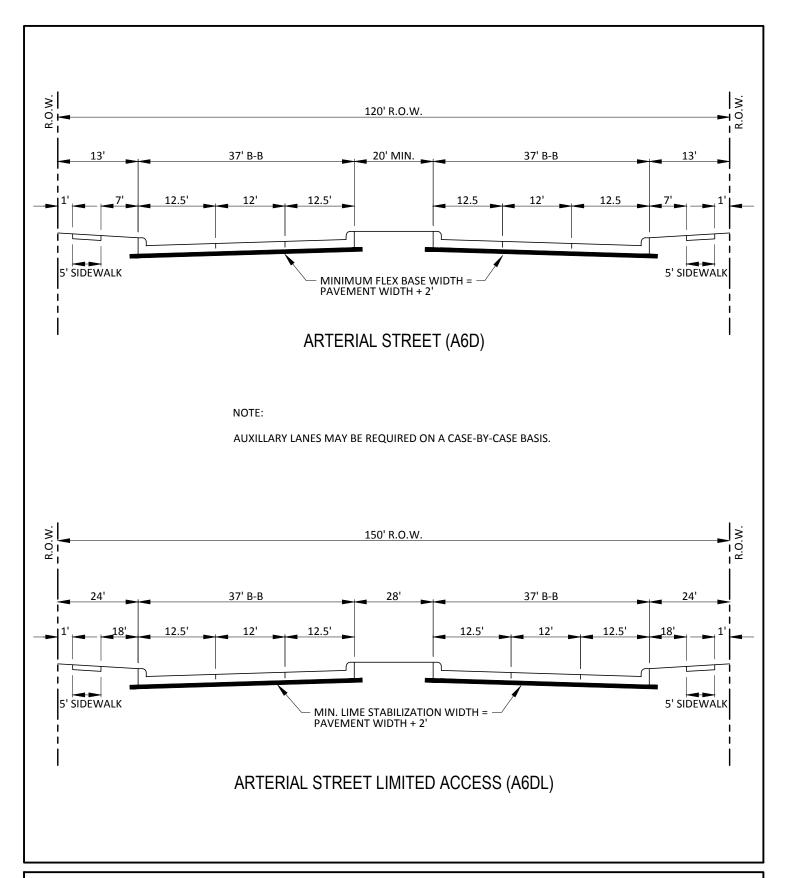




LANE STANDARDS
DIVIDED RESIDENTIAL (R2D)
& DIVIDED COLLECTOR (C2D)

SCALE: NTS DATE: 12/2013 SHEET 5 OF 8

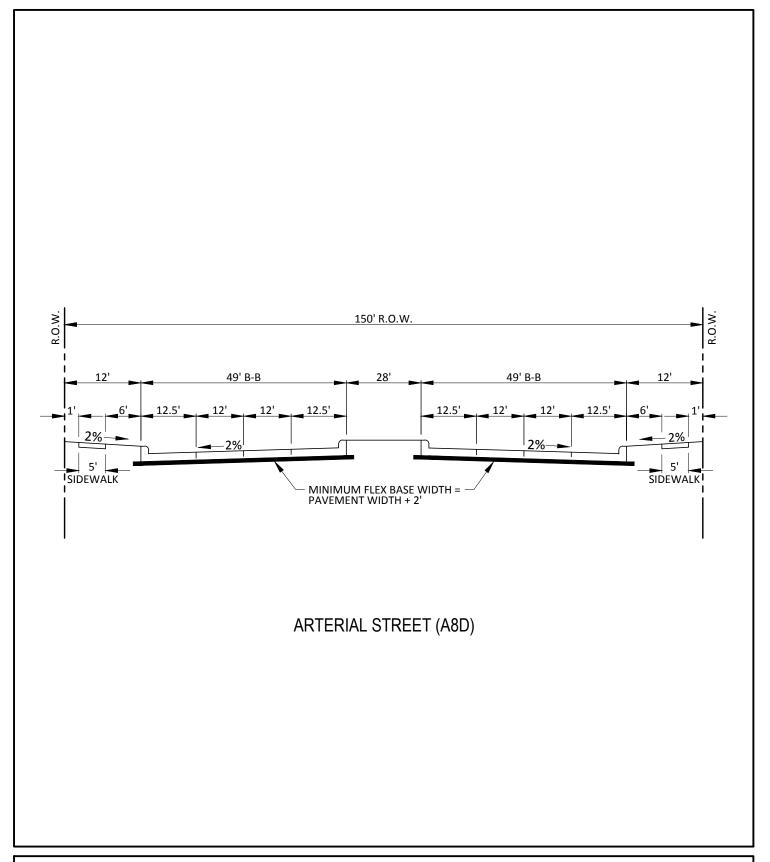
P-2





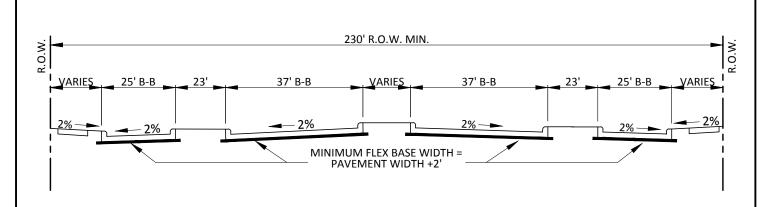
LANE STANDARDS
ARTERIAL (A6D) &
ARTERIAL LIMITED ACCESS (A6DL)

SCALE: NTS DATE: 12/2013 SHEET 6 OF 8

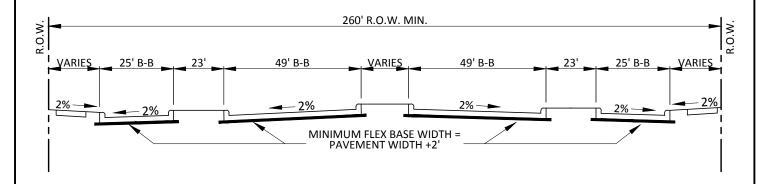




LANE STANDARDS ARTERIAL (A8D) SCALE: NTS DATE: 12/2013 SHEET 7 OF 8



TXDOT URBAN EXPRESSWAY 6 LANES WITH SERVICE ROAD (UE6)

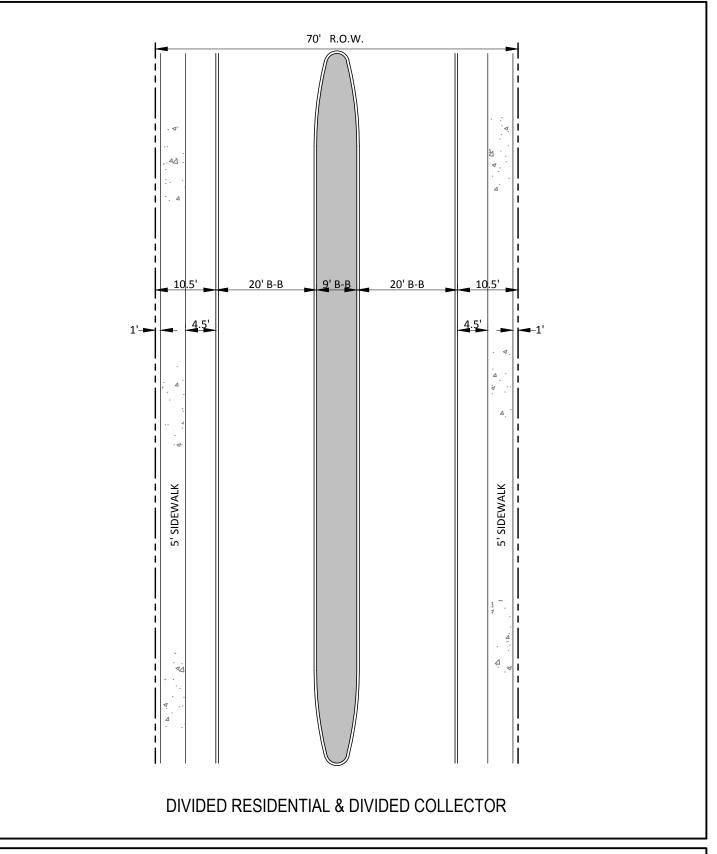


TXDOT URBAN EXPRESSWAY 8 LANES WITH SERVICE ROAD (UE8)



GENERAL DESIGN STANDARDS PAVING DETAILS

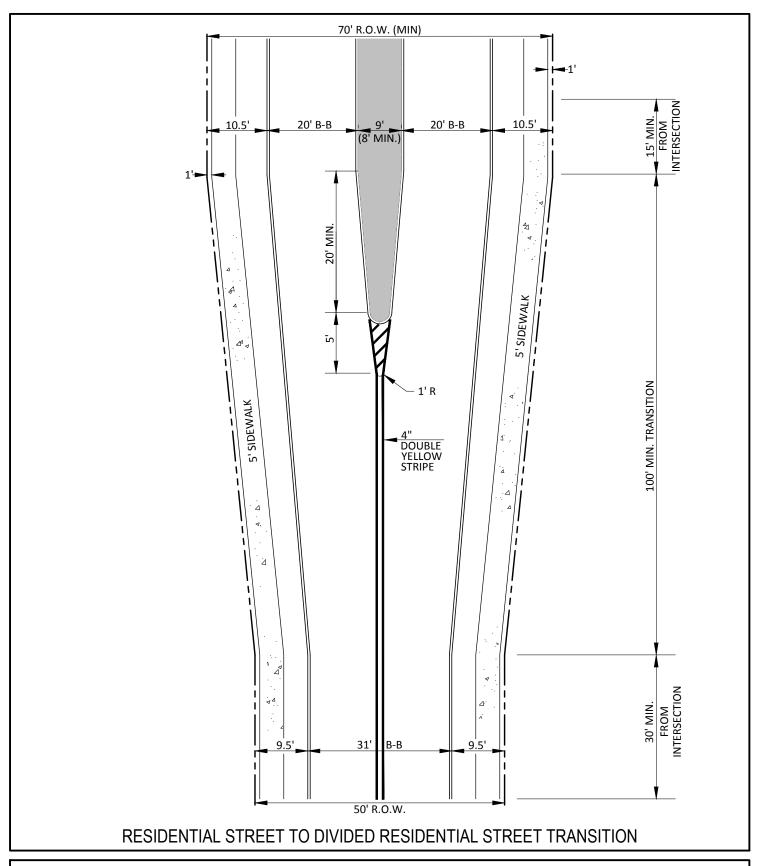
LANE STANDARDS TXDOT URBAN EXPRESSWAY UE6 & UE8 SCALE: NTS DATE: 12/2013 SHEET 8 OF 8





MISC. STREET LAYOUT DETAILS
DIVIDED RESIDENTIAL
& DIVIDED COLLECTOR

SCALE: NTS DATE: 01/2006 SHEET 1 OF 5

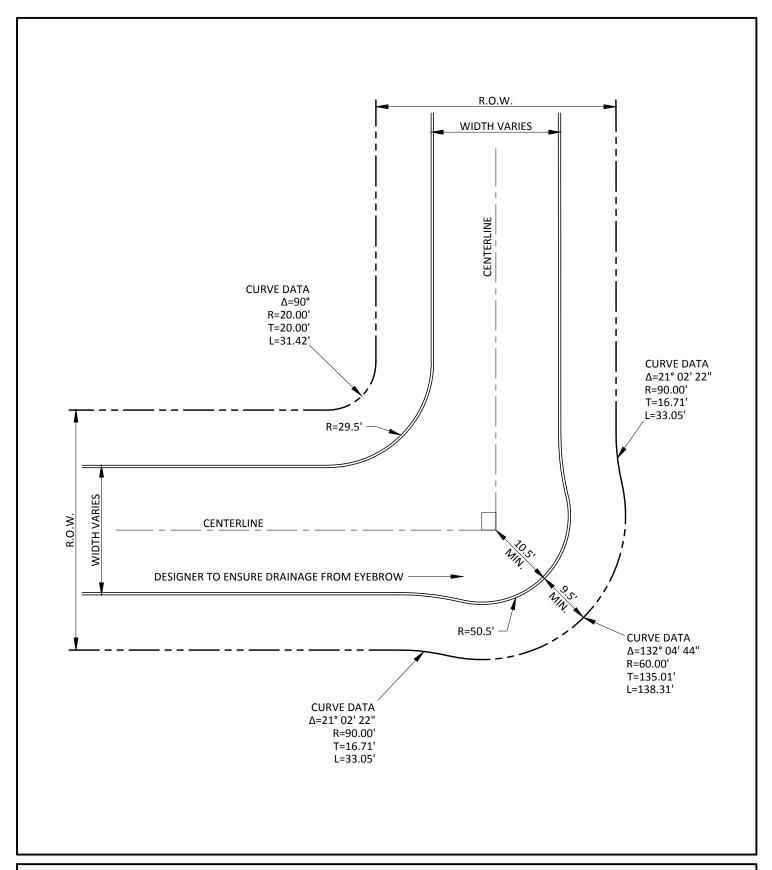




SCALE: NTS DATE: 12/2013

SHEET 2 OF 5

MISC. STREET LAYOUT DETAILS RESIDENTIAL STREET TRANSITION



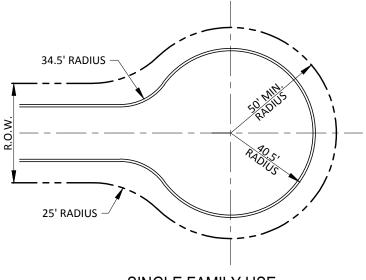


SCALE: NTS DATE: 01/2006 SHEET 3 OF 5

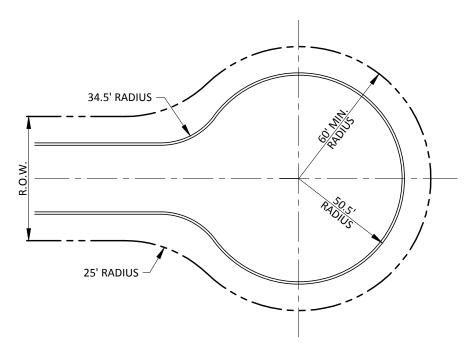
MISC. STREET LAYOUT DETAILS STREET EYEBROW

P-3 ENGINEERING

DEPARTMENT



SINGLE FAMILY USE



APARTMENT, COMMERCIAL, OR INDUSTRIAL ALSO FOR SINGLE FAMILY, FRONT ENTRY

NOTES:

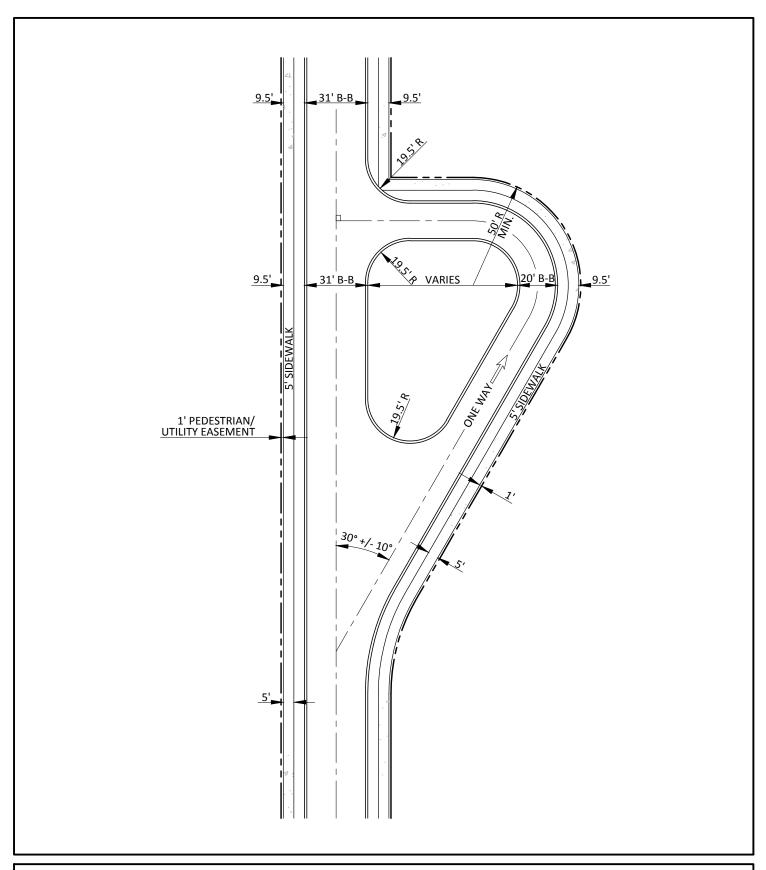
- 1. ISLANDS ARE NOT PERMITTED IN THE DESIGN OF CUL-DE-SACS.
- 2. PAVEMENT DIMENSIONS ARE TO BACK OF CURB.



GENERAL DESIGN STANDARDS PAVING DETAILS

MISC. STREET LAYOUT DETAILS CUL-DE-SAC

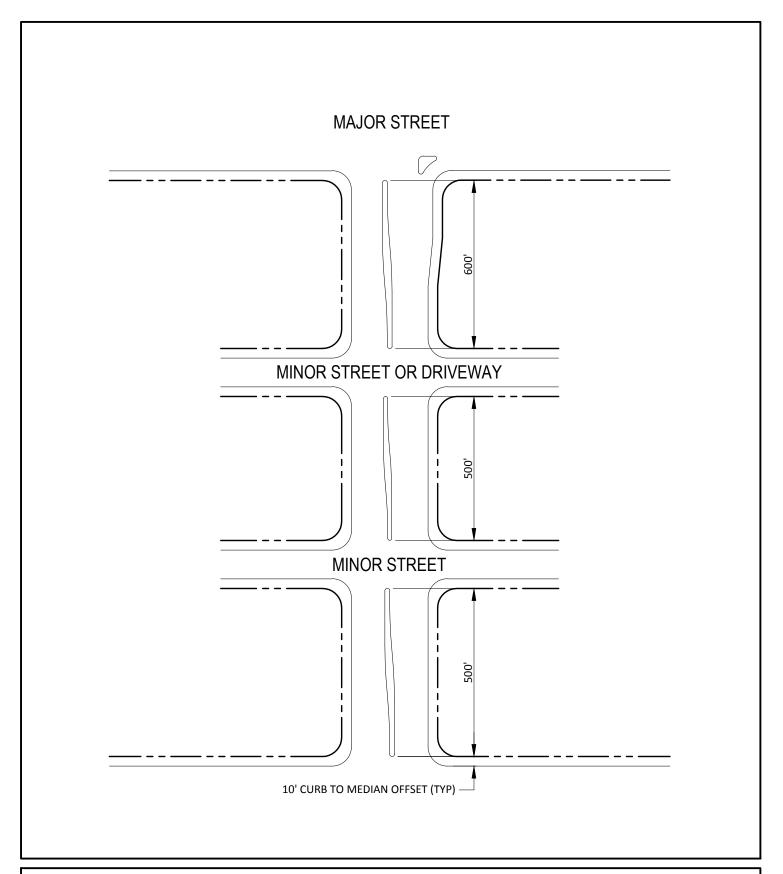
SCALE: NTS DATE: 01/2006 SHEET 4 OF 5





SCALE: NTS DATE: 01/2006 SHEET 5 OF 5

MISC. STREET LAYOUT DETAILS BIRDSEYE LANE

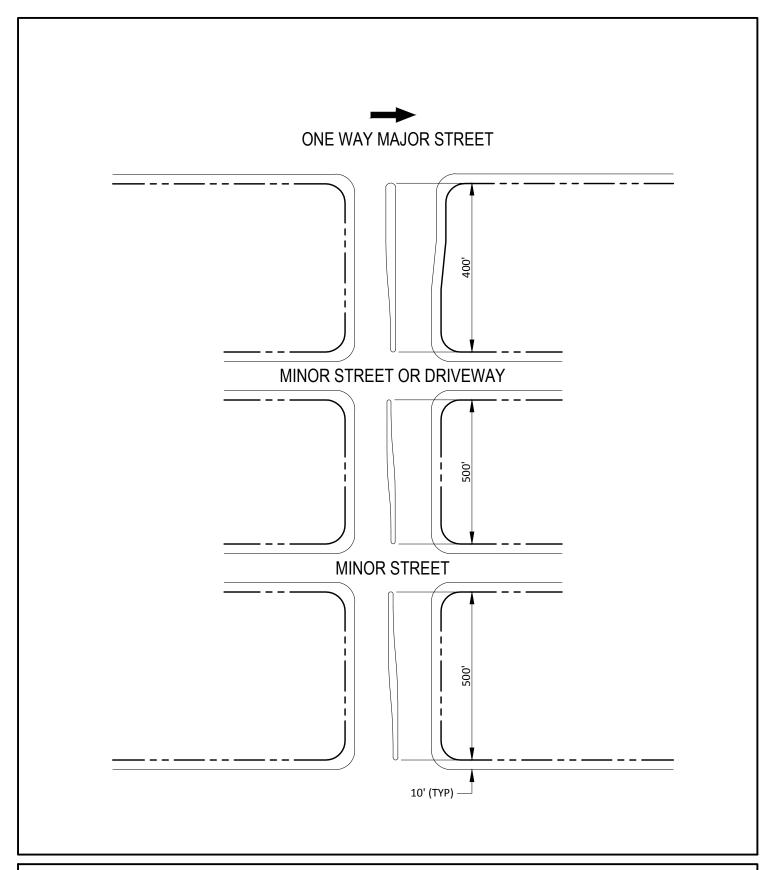




SCALE: NTS DATE: 01/2004

SHEET 1 OF 3

P-4

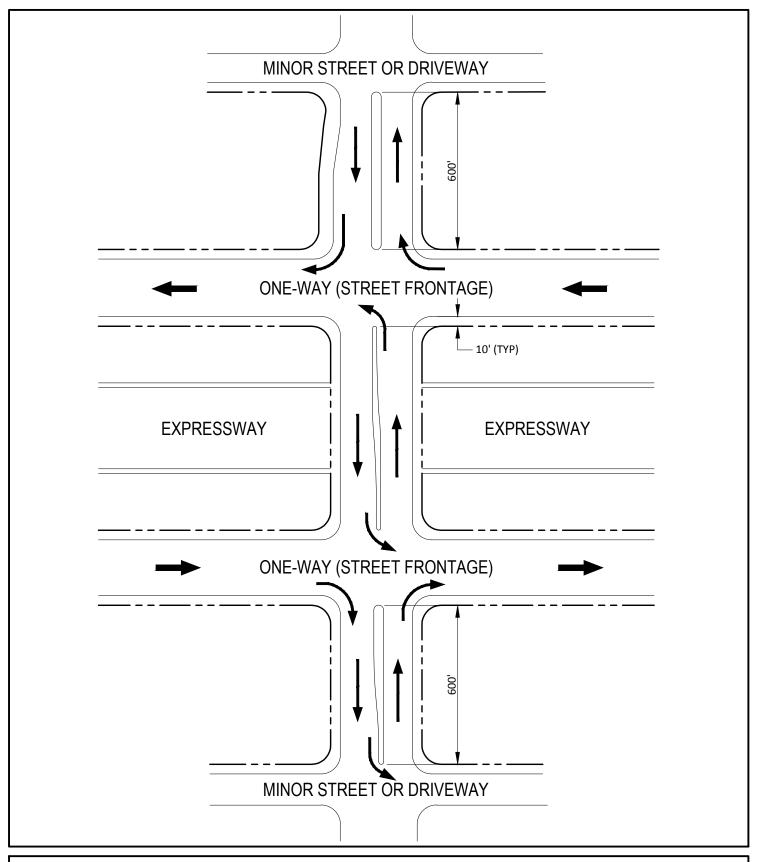




SCALE: NTS DATE: 01/2004

SHEET 2 OF 3

P-4

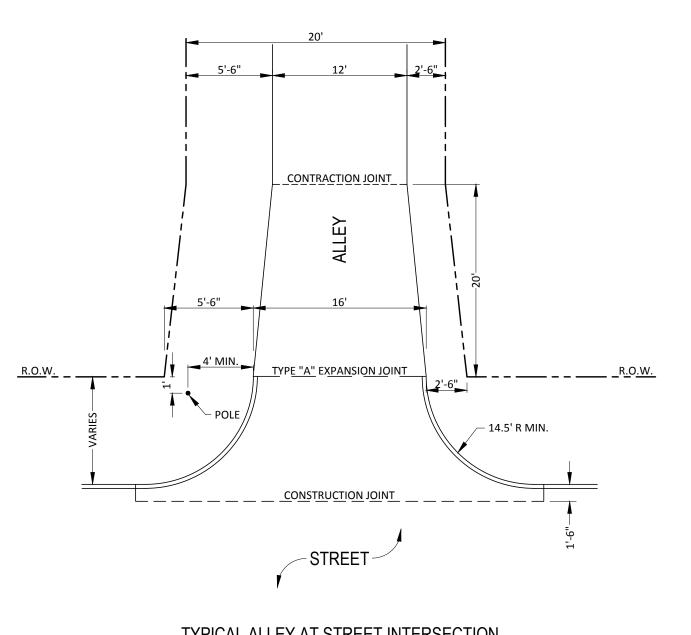




SCALE: NTS DATE: 01/2004

SHEET 3 OF 3

P-4



TYPICAL ALLEY AT STREET INTERSECTION

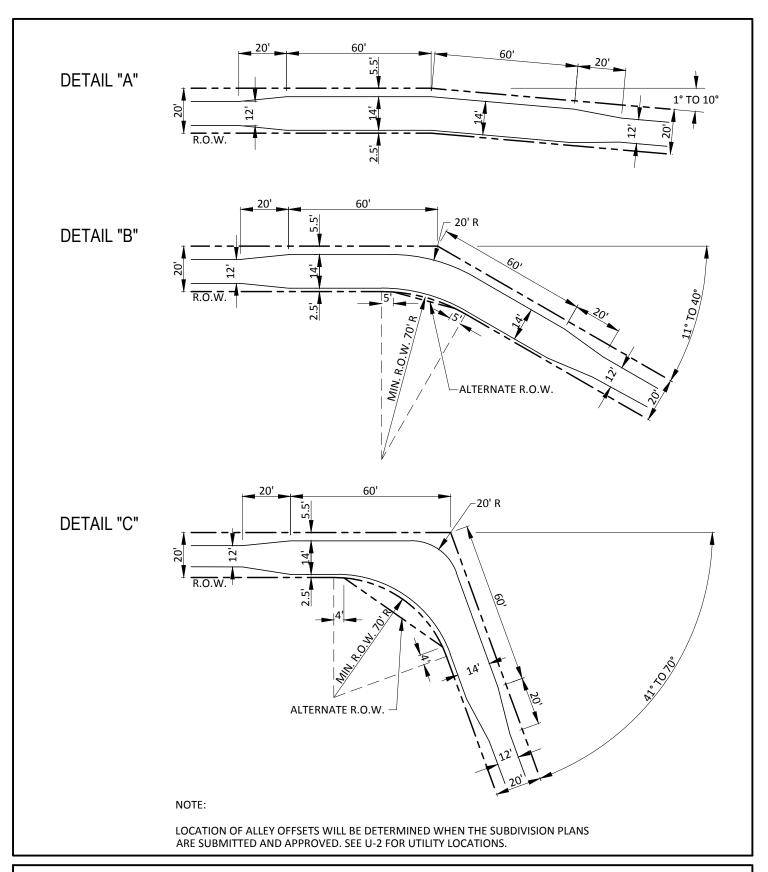
NOTES:

- 1. SEE SECTION 2, PAGE 2-2 FOR CONCRETE STRENGTH.
- 2. IF STREET PAVEMENT IS EXISTING, ALLEY PAVEMENT THICKNESS SHALL MATCH (MIN. 6").
- 3. ALL ALLEY INTERSECTIONS WITH SIDEWALKS SHALL BE ACCESSIBLE WITH BARRIER FREE RAMPS AS REQUIRED BY TDLR.



GENERAL DESIGN STANDARDS PAVING DETAILS

ALLEY PAVING DIMENSION CONTROL SCALE: NTS DATE: 02/2005 SHEET 1 OF 5

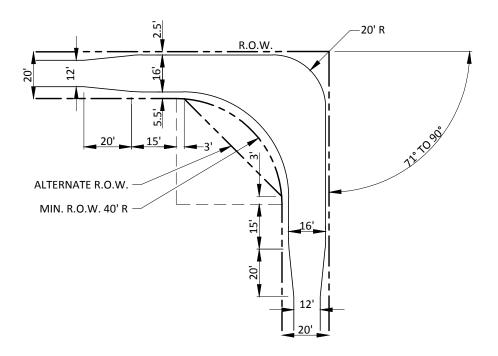




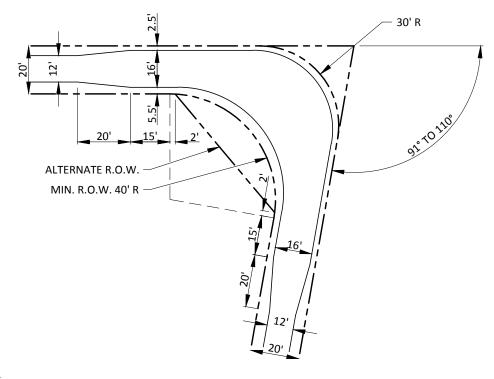
SCALE: NTS DATE: 01/2004 SHEET 2 OF 5

ALLEY PAVING DIMENSION CONTROL

DETAIL "D"



DETAIL "E"



NOTE:

LOCATION OF ALLEY OFFSETS WILL BE DETERMINED WHEN THE SUBDIVISION PLANS ARE SUBMITTED AND APPROVED. SEE U-2 FOR UTILITY LOCATIONS.



GENERAL DESIGN STANDARDS PAVING DETAILS

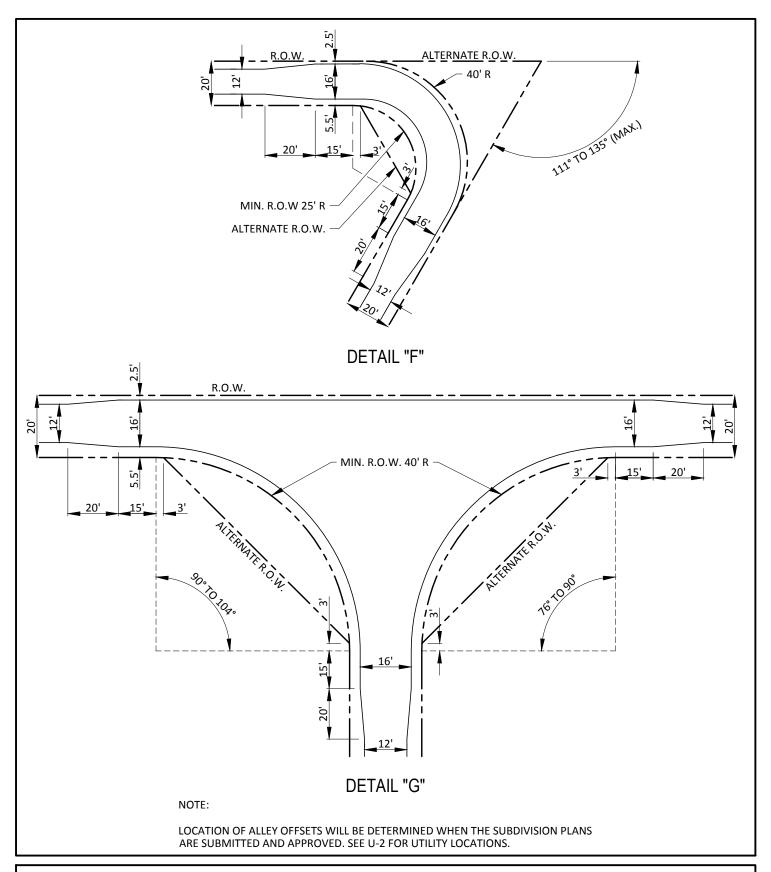
SCALE: NTS DATE: 01/2004 SHEET 3 OF 5

ALLEY PAVING

P-5 ENGINEERING

DEPARTMENT

DIMENSION CONTROL



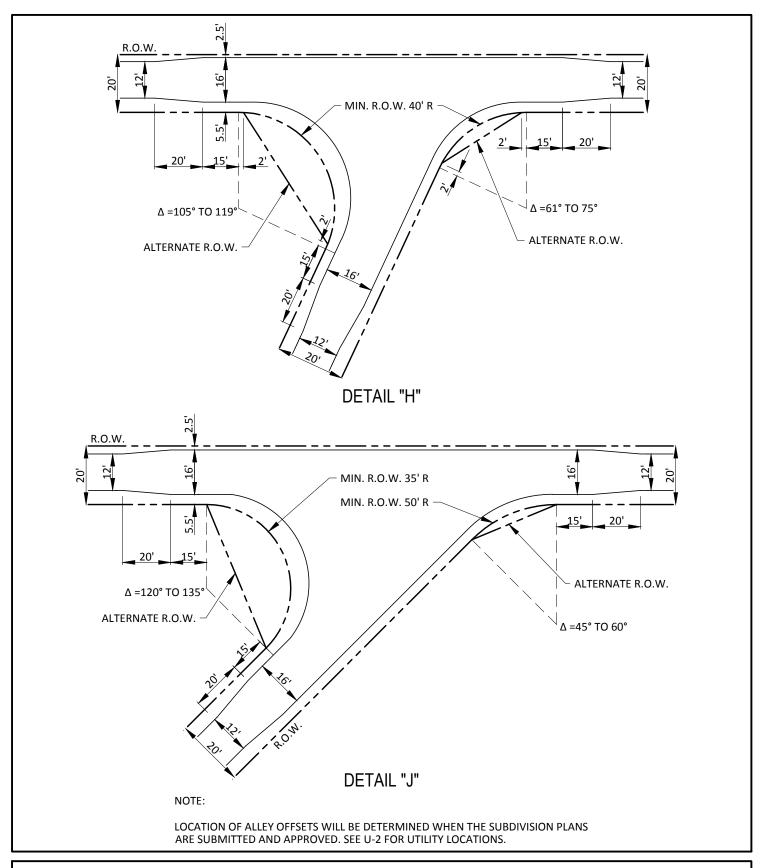


SCALE: NTS DATE: 01/2010 SHEET 4 OF 5

P-5
ENGINEERING

DEPARTMENT

ALLEY PAVING DIMENSION CONTROL

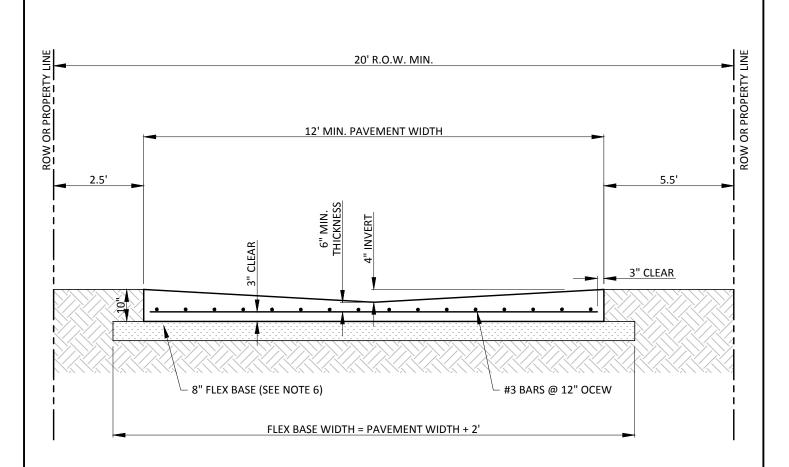




SCALE: NTS DATE: 01/2004

SHEET 5 OF 5

ALLEY PAVING DIMENSION CONTROL



NOTES:

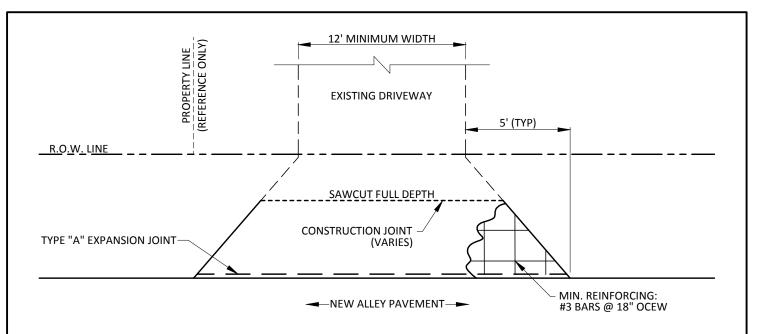
- 1. CONCRETE PAVING SHALL BE A MINIMUM 6 SACK PER CUBIC YARD MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AND A MAXIMUM SLUMP OF 3".
- REINFORCING SHALL BE NEW BILLET STEEL ASTM A615 GRADE 60 REINFORCING BARS WHICH SHALL BE FREE OF RUST, LOOSE SCALE, PAINT, OIL OR OTHER FOREIGN SUBSTANCES WHICH SHALL PREVENT BONDING OF THE CONCRETE AND REINFORCING BARS.
- 3. EXPANSION JOINTS SHALL BE PROVIDED AT THE R.O.W. LINE OF THE ALLEY APPROACH AND EVERY 200', MINIMUM. TRANSVERSE SAW (CONTRACTION) JOINTS SHALL BE PROVIDED EVERY 15', MINIMUM.
- 4. CURBS ARE NOT TO BE ALLOWED IN RESIDENTIAL AREA ALLEYS UNLESS APPROVED BY THE DIRECTOR OF ENGINEERING. WHERE CURBS ARE APPROVED, MINIMUM CLEARANCE (FACE TO FACE OF CURBS) SHALL BE 12'.
- 5. ALLEY PAVING IS TO BE OFFSET AS SHOWN TO ACCOMMODATE UTILITY INSTALLATION.
- 6. FOR ALLEY REBUILDS: IN LIEU OF FLEX BASE, SUBGRADE SHALL BE COMPACTED TO 95% SPD (8" DEPTH).



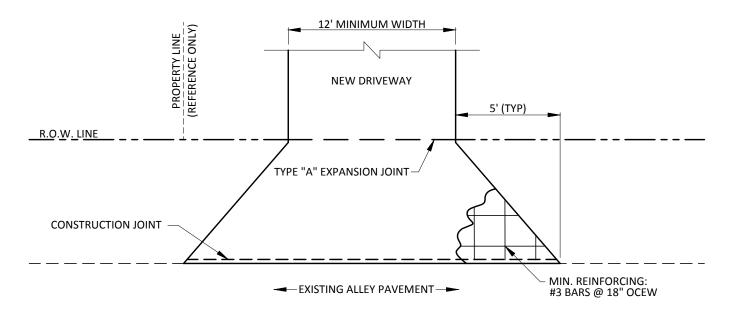
GENERAL DESIGN STANDARDS
PAVING DETAILS

RESIDENTIAL ALLEY PAVING DETAILS (NEW & REBUILDS)

SCALE: NTS DATE: 01/2005 SHEET 1 OF 2



EXISTING DRIVEWAY APPROACH INTO NEW ALLEY (ALLEY REBUILDS)



NEW DRIVEWAY APPROACH INTO EXISTING ALLEY

NOTES:

- 1. FOR CONSTRUCTION JOINT DETAILS SEE P-11.
- 2. FOR EXPANSION JOINT DETAILS SEE P-12.

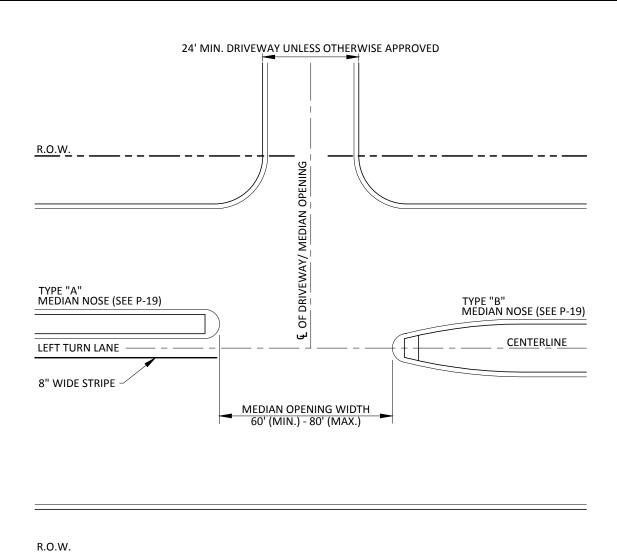


GENERAL DESIGN STANDARDS PAVING DETAILS

RESIDENTIAL ALLEY PAVING DETAILS DRIVEWAY APPROACH INTO ALLEY

SCALE: NTS DATE: 01/2012 SHEET 2 OF 2

P-6



NOTES:

- 1. TURN LANES SHALL BE AT LEAST 11' WIDE.
- 2. THRU LANES SHALL BE AT LEAST 12' WIDE.
- 3. SEE P-22, SHEET 5 OF 5 FOR LANE DIVIDERS BETWEEN THE TURN LANE AND THRU LANE.
- 4. THE LEFT TURN MEDIAN SHALL HAVE AN EQUAL RADIUS REVERSE CURVE AND A MINIMUM TRANSITION WIDTH OF 4' BACK TO BACK.
- 5. THE MEDIAN OPENING SHALL MEET THE MINIMUM SPACING REQUIREMENTS IN ACCORDANCE WITH THE GENERAL DESIGN STANDARDS AS ADOPTED BY THE CITY OF CARROLLTON AND APPROVED BY THE ENGINEERING DEPARTMENT.
- 6. CONSTRUCTION OF PAVEMENT FOR THE TURN LANE AND MEDIAN OPENING SHALL BE THE RESPONSIBILITY OF THE ADJACENT PROPERTY OWNERS.

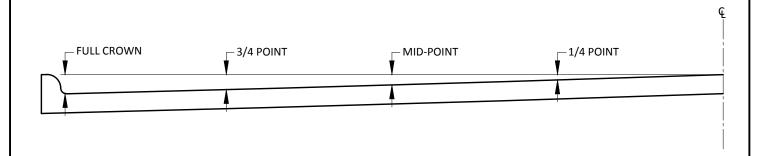


GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 03/2017

SHEET 1 OF 1

P-7



CROWN HEIGHT AND ORDINATES FOR VARIOUS PARABOLIC SECTIONS				
ROADWAY WIDTH (W)	FULL CROWN	³∕₄ POINT	MIDPOINT	⅓ POINT
19'	5"	2 ¹³ / ₁₆ "	1 1/4"	⁵ / ₁₆ "
30'	5"	2 ¹³ / ₁₆ "	1 1/4"	5/16"
36'	6"	3 3/8"	1½"	3/"
44'	6"	3 3/8"	1½"	3/"

NOTE:

SLIP-FORM PAVEMENT MUST MEET CROWN GRADES AT GUTTERS, MIDPOINTS, AND CENTERLINE.



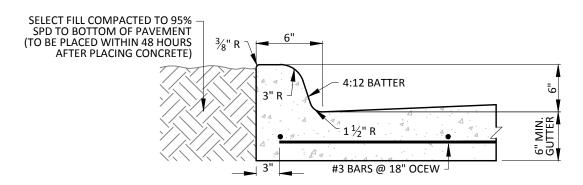
GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 12/2013

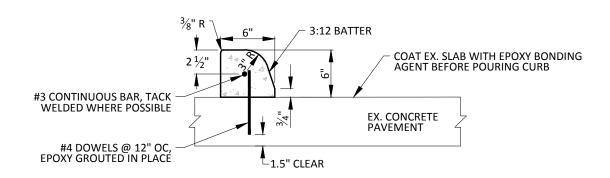
SHEET 1 OF 1

PARABOLIC PAVING HEIGHTS

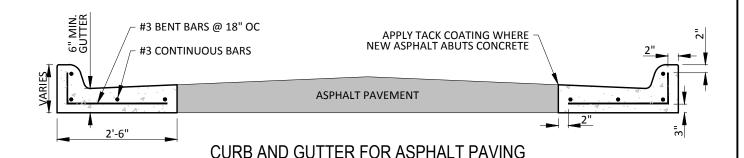
P-8



MONOLITHIC CURB



DOWELED CURB (WITH PERMISSION OF DIRECTOR OF ENGINEERING)



NOTES:

- 1. CONCRETE SHALL BE 4000 PSI COMPRESSIVE @ 28 DAYS.
- 2. DOWELED CURB NOT TO BE USED IN NEW CONSTRUCTION OR RECONSTRUCTION PROJECTS.
- 3. SUBGRADE SHALL MEET SAME STANDARDS AS CONCRETE PAVING.

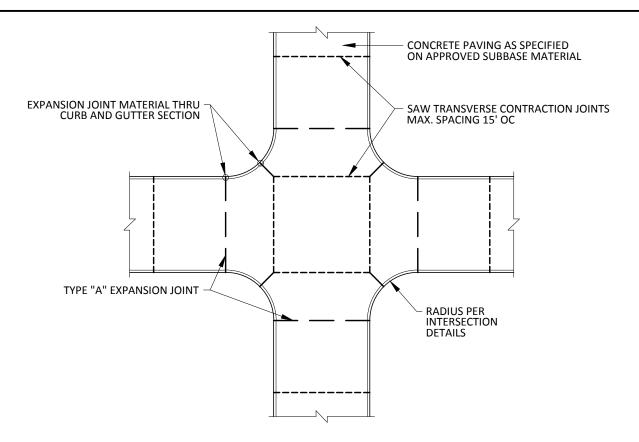


GENERAL DESIGN STANDARDS
PAVING DETAILS

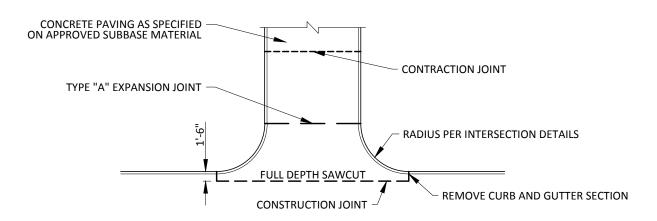
SCALE: NTS DATE: 01/2015

SHEET 1 OF 1

P-9



TYPICAL INTERSECTION JOINTING



EXISTING CONCRETE TO NEW CONCRETE ROADWAY TEE INTERSECTION

NOTES:

- 1. LONGITUDINAL JOINTS ARE REQUIRED ON ANY STREET PAVEMENT WIDER THAN 22.5' (BACK TO BACK).
- 2. SPACING OF EXPANSION JOINTS IS NOT TO EXCEED 200'.

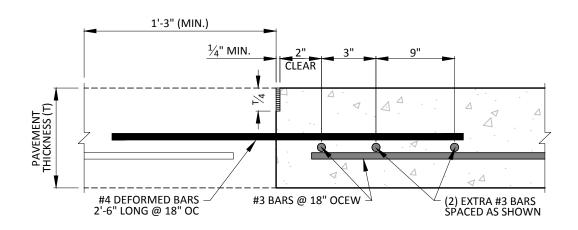


GENERAL DESIGN STANDARDS PAVING DETAILS

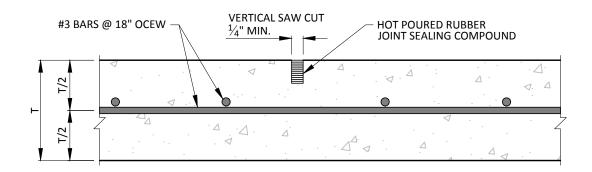
SCALE: NTS DATE: 01/2015 SHEET 1 OF 1

STREET INTERSECTION
JOINTING DETAILS

P-10



CONSTRUCTION JOINT



CONTRACTION JOINT

NOTES:

- 1. ALL #4 x 2'-6" BARS ARE TO BE SET IN DRILLED HOLES USING EPOXY GROUT IN THE MANUFACTURER'S RECOMMEND QUANTITIES.
- 2. ALL REINFORCING BARS SHALL HAVE WIRE TIES AT EVERY INTERSECTION (100% TIE).
- 3. WHERE NEW CONCRETE IS TO BE POURED AGAINST OLD CONCRETE, THE OLD CONCRETE SHALL HAVE A COAT OF EPOXY BONDING AGENT APPLIED AT THE MANUFACTURER'S SPECIFIED RATES.
- 4. MAXIMUM SPACING FOR SAWN TRANSVERSE JOINTS SHALL BE 15'.

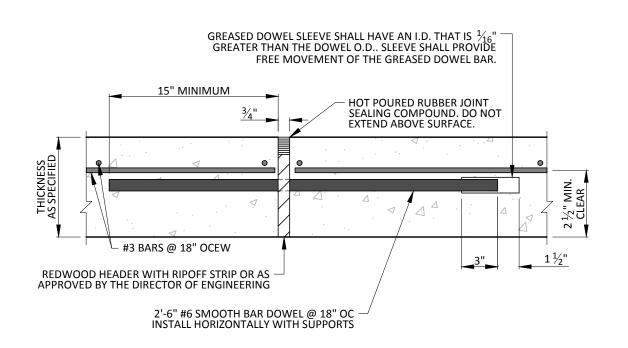


GENERAL DESIGN STANDARDS PAVING DETAILS

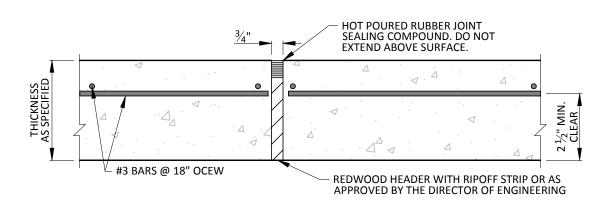
SCALE: NTS DATE: 01/2010 SHEET 1 OF 1

CONSTRUCTION AND CONTRACTION
JOINT DETAILS

P-11



EXPANSION JOINT TYPE "A"



EXPANSION JOINT TYPE "B"

NOTE:

TYPE B EXPANSION JOINTS SHALL BE USED AROUND MANHOLE LEAVE OUTS IN PAVING AREAS.

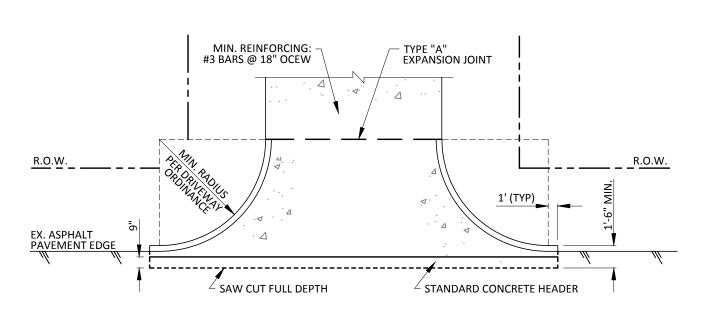


GENERAL DESIGN STANDARDS
PAVING DETAILS

SCALE: NTS DATE: 01/2016

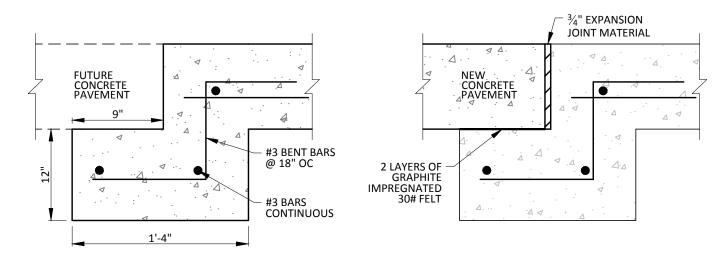
SHEET 1 OF 1

P-12



■ EXISTING ASPHALT PAVEMENT ■ ►

CONCRETE TO ASPHALT ROADWAY TEE INTERSECTION



PAVING HEADER DETAIL

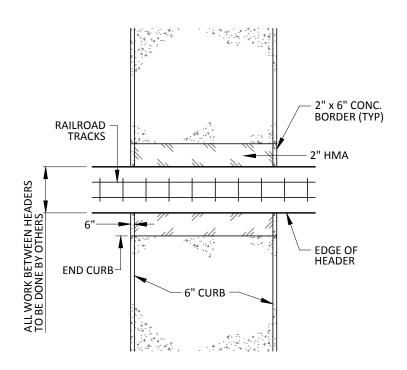


GENERAL DESIGN STANDARDS
PAVING DETAILS

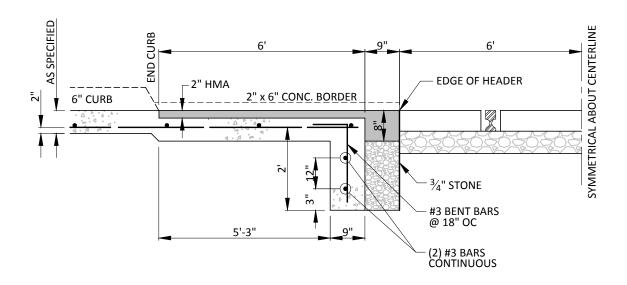
SCALE: NTS DATE: 04/2017 SHEET 1 OF 1

ROADWAY TEE INTERSECTION WITH PAVING HEADER

P-13



RAILROAD CROSSING



RAILROAD CROSSING HEADER DETAIL

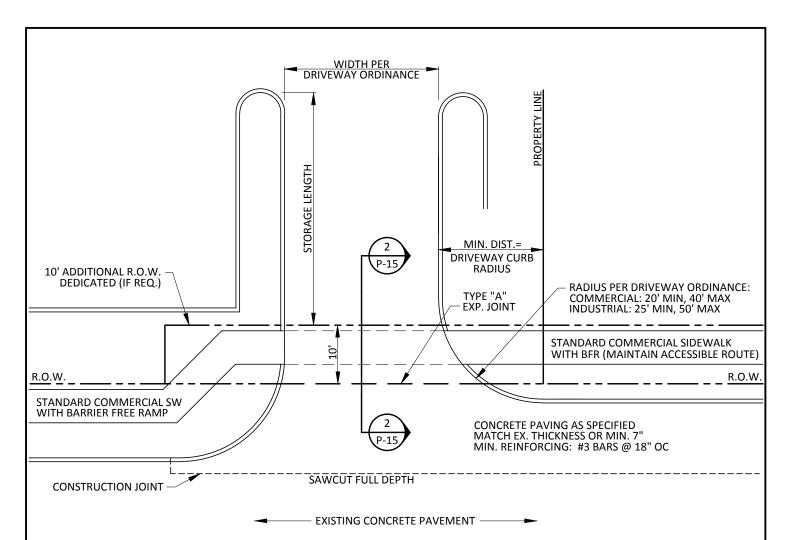


GENERAL DESIGN STANDARDS
PAVING DETAILS

SCALE: NTS DATE: 01/2004 SHEET 1 OF 1

TYPICAL RAILROAD CROSSING HEADER DETAILS

P-14



STORAGE LENGTH				
	MF/COMMERICAL LAND USE		INDUSTRIAL LAND USE	
TOTAL PARKING SPACES PROVIDED	AT NON-MEDIAN OPENING (FT)	AT NON-MEDIAN OPENING (FT)	AT NON-MEDIAN OPENING (FT)	AT NON-MEDIAN OPENING (FT)
LESS THAN 25	15	15	15	33
26 to 50	15	33	15	33
51 to 100	33	33	33	33
101 to 200	33	75	33	55
MORE THAN 200	75	75	55	75

NOTES:

- 1. FOR CONSTRUCTION JOINT DETAILS, SEE P-11. FOR EXPANSION JOINT DETAILS, SEE P-12.
- 2. STORAGE LENGTHS SHALL BE AS SHOWN OR IN ACCORDANCE WITH THE LATEST VERSION OF CHAPTER 53 OF THE CARROLLTON CODE OF ORDINANCES.
- 3. SIDEWALK SHALL BE AT A 2% CROSS SLOPE ACROSS THE DRIVEWAY.



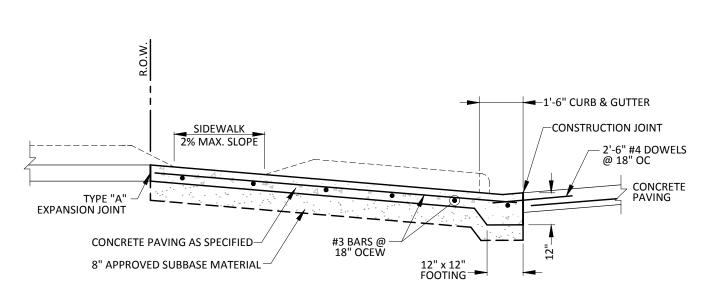
GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 05/2017

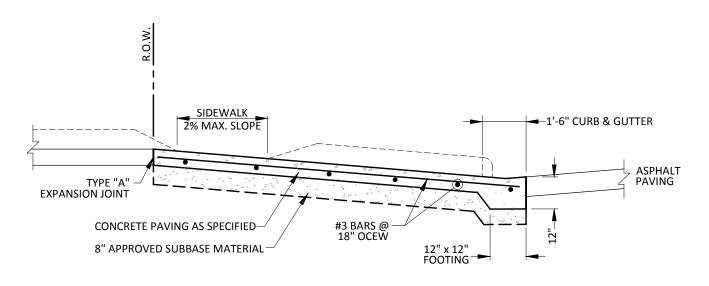
SHEET 1 OF 2

COMMERCIAL DRIVE APPROACH

P-15



COMMERCIAL APPROACH (CONCRETE PAVING)



COMMERCIAL APPROACH (ASPHALT PAVING)

NOTE:

SEE P-18 FOR BARRIER FREE RAMP DETAIL.

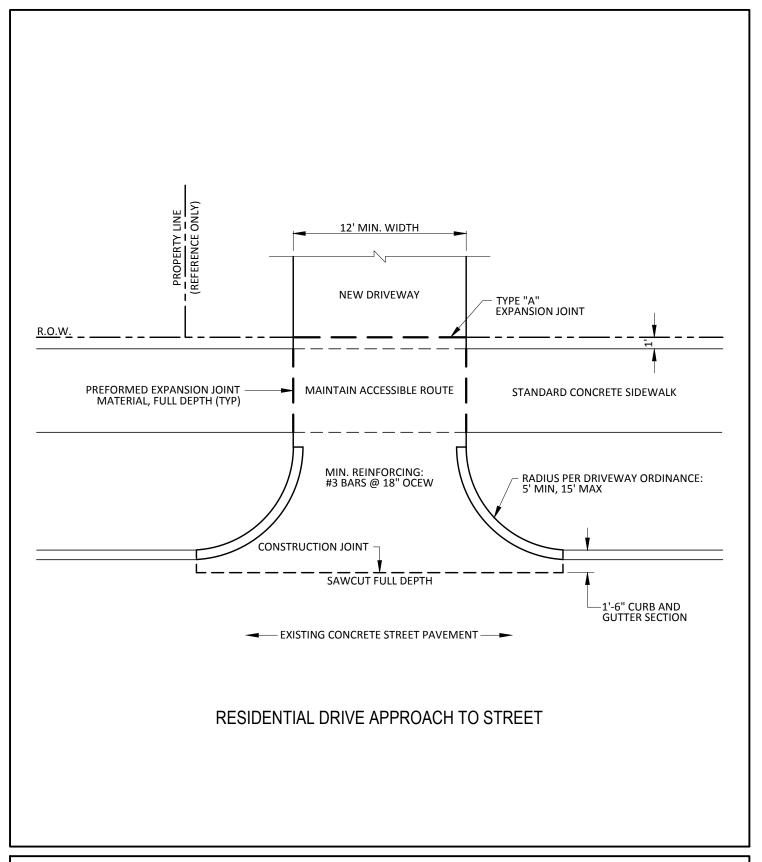


GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 05/2017 SHEET 2 OF 2

COMMERCIAL DRIVE APPROACH CROSS SECTIONS

P-15



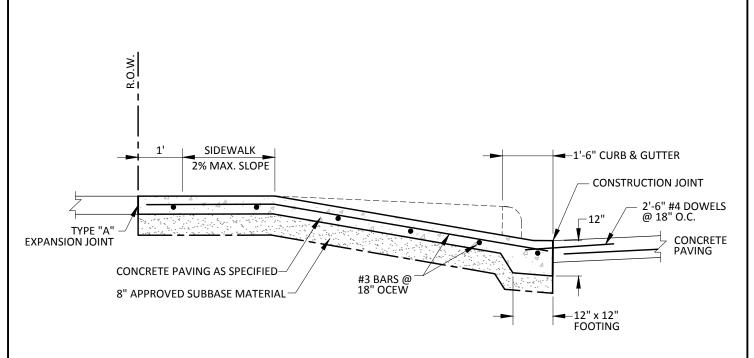


GENERAL DESIGN STANDARDS
PAVING DETAILS

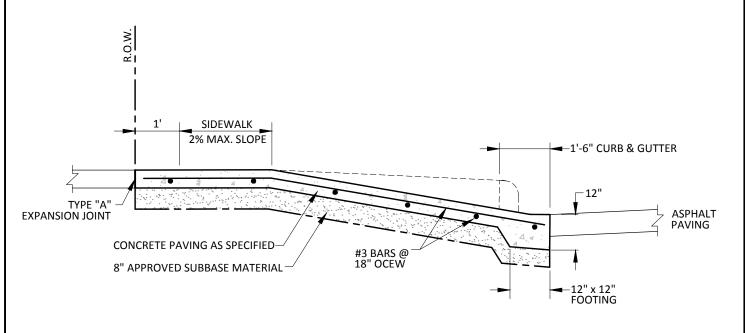
SCALE: NTS DATE: 01/2005 SHEET 1 OF 3

RESIDENTIAL DRIVE APPROACH PLAN VIEW

P-16



RESIDENTIAL APPROACH (CONCRETE PAVING)



RESIDENTIAL APPROACH (ASPHALT PAVING)



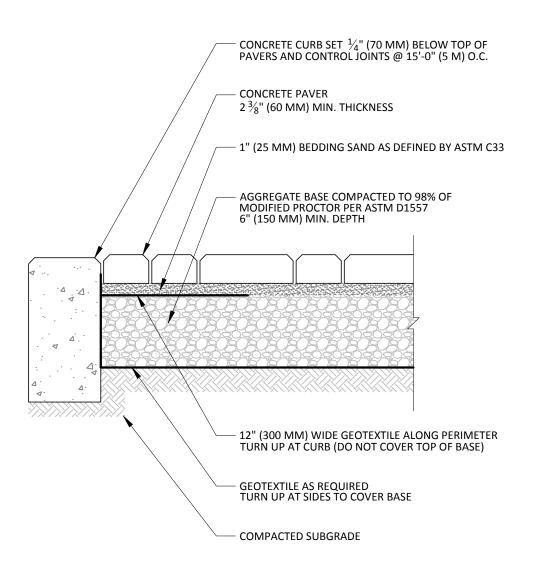
GENERAL DESIGN STANDARDS PAVING DETAILS

DATE: 01/2005 SHEET 2 OF 3

SCALE: NTS

RESIDENTIAL DRIVE APPROACH **CROSS SECTIONS**

P-16



RESIDENTIAL DRIVEWAY WITH CONCRETE PAVERS

NOTES:

- 1. THICKNESS OF AGGREGATE BASE WILL VARY WITH SUBGRADE CONDITIONS.
- CONCRETE PAVERS SHOULD BE PLACED ON A CEMENT-TREATED BASE IF SOIL IS EXTREMELY WEAK OR CONSTANTLY SATURATED.
- 3. BASE MATERIAL SHALL CONFORM TO ASTM D1557.
- 4. PRECAST CONCRETE EDGING MAY BE USED.

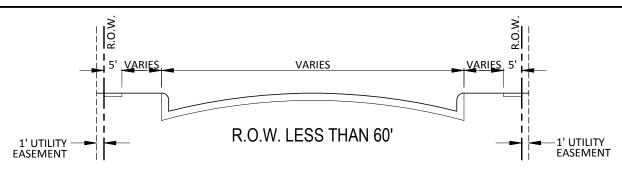


GENERAL DESIGN STANDARDS PAVING DETAILS

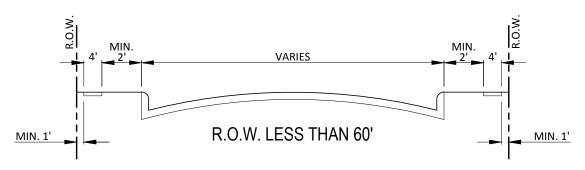
RESIDENTIAL DRIVEWAY WITH CONCRETE PAVERS

SCALE: NTS DATE: 07/2017 SHEET 3 OF 3

P-16

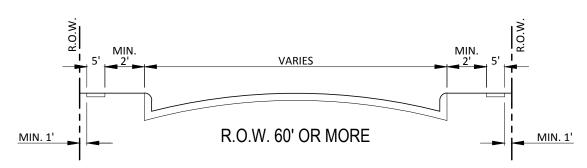


NOTE: WHEN A 5' RESIDENTIAL SIDEWALK IS ADJACENT TO THE RIGHT-OF-WAY LINE, A 1' UTILITY EASEMENT SHALL BE PROVIDED ON PRIVATE PROPERTY (AS SHOWN.)



NOTE:

FOR COLLECTOR STREETS ADJACENT TO T.U. R.O.W., COMMON AREAS, PARKS, AND PUBLIC OPEN SPACES, SIDEWALKS SHALL BE PLACED IN THE STREET PARKWAY A MINIMUM OF 1' OFF THE PROPERTY LINE AND A MINIMUM OF 2' FROM THE BACK OF CURB.



NOTE:

FOR ARTERIAL AND MAJOR COLLECTOR STREETS, SIDEWALKS SHALL BE PLACED IN THE STREET PARKWAY A MINIMUM OF 1' OFF THE PROPERTY LINE AND A MINIMUM OF 2' FROM THE BACK OF THE CURB.

NOTE:

THESE CROSS SECTIONS ARE EXCEPTIONS TO THE P-2 DETAILS. ALL SIDEWALKS SHALL REMAIN AT A 2% CROSS SLOPE.



GENERAL DESIGN STANDARDS PAVING DETAILS

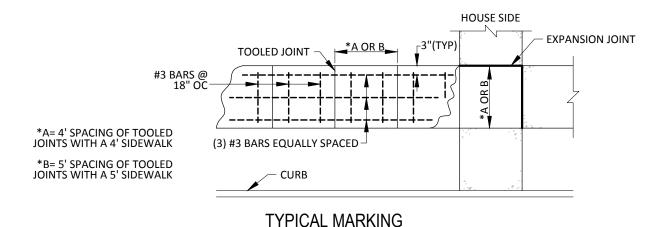
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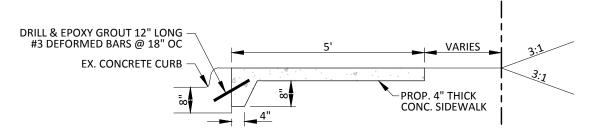
SHEET 1 OF 3

SIDEWALK CROSS SECTION DETAILS

P-17







SIDEWALKS & LEAD WALKS AGAINST EX. CONCRETE CURB

NOTES:

- 1. CONCRETE SHALL BE 3000 PSI COMPRESSIVE AT 28 DAYS.
- 2. ALL MARKINGS SHALL BE CUT 1" DEEP, FOLLOWED BY GROOVING TOOL. ½" REDWOOD EXPANSION JOINT MATERIAL SHALL BE PLACED WHERE NEW WORK ABUTS OLD OR NEW WORK IS ADJACENT TO OTHER CONCRETE WORK, EXCEPT ALONG CURBS.
- 3. TRANSVERSE EXPANSION JOINTS SHALL BE $\frac{1}{2}$ " THICK REDWOOD FOR FULL DEPTH OF SIDEWALK AND LUG TO ENSURE SEPARATION OF CONCRETE AND INCLUDE 24" LONG, ½" DIAMETER GREASED SMOOTH DOWEL STEEL BARS WITH CAPS. MAX. SPACING: 40'.
- 4. WHEN REPLACING EXISTING SIDEWALK DOWEL NEW PAVING INTO ADJACENT SIDEWALK AND INTO THE STREET PAVEMENT BELOW THE GUTTER LINE OR CURB (SEE DETAIL.)
- 5. SURFACE SHALL BE BROOM FINISHED.



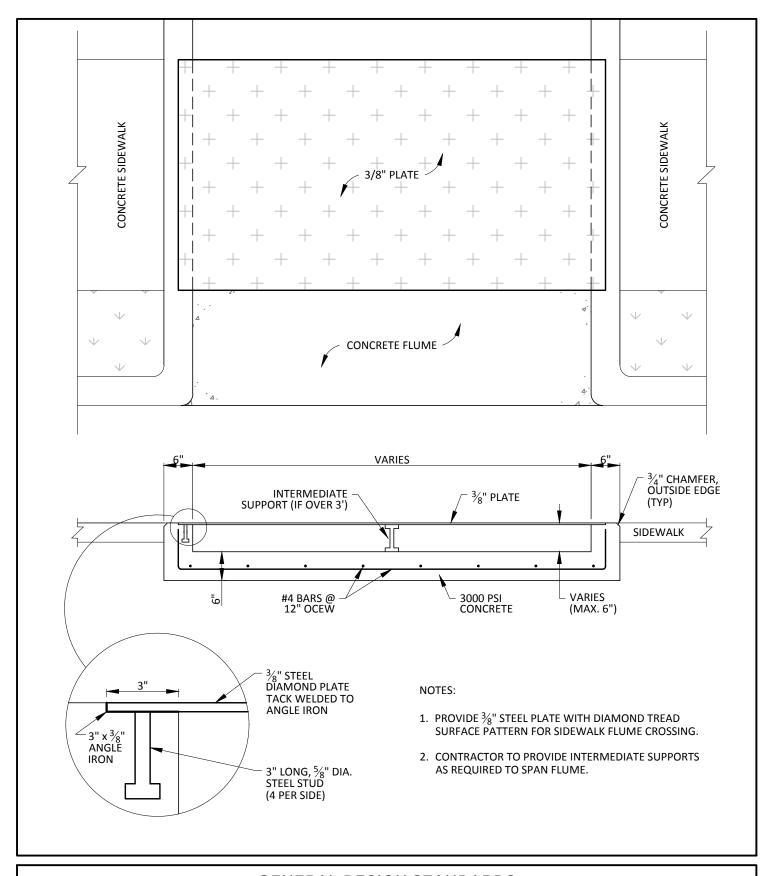
GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 01/2015

SHEET 2 OF 3

SIDEWALK REINFORCING STEEL DETAILS

P-17





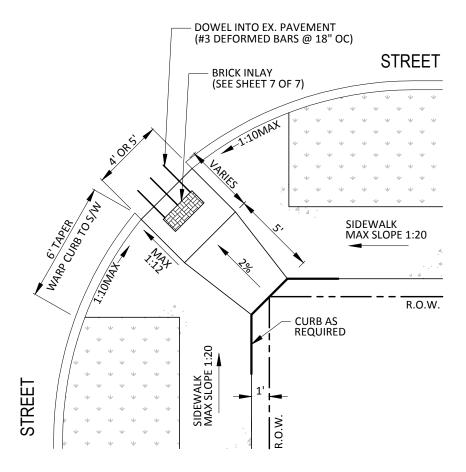
GENERAL DESIGN STANDARDS
PAVING DETAILS

SCALE: NTS DATE: 05/2017 SHEET 3 OF 3

SIDEWALK DETAIL AT FLUME

ENGINEERING DEPARTMENT

P-17



BARRIER FREE RAMP AT STREET INTERSECTION

NOTES:

- BARRIER FREE RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ACCESSIBILITY STANDARDS AND AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS.
- 2. MAXIMUM RUNNING SLOPE ON RAMP PORTION SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION. VERTICAL DISTANCE BETWEEN STREET AND RAMP SHALL NOT EXCEED $\frac{1}{4}$ ".
- DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
- 4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
- LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEERING DEPARTMENT.



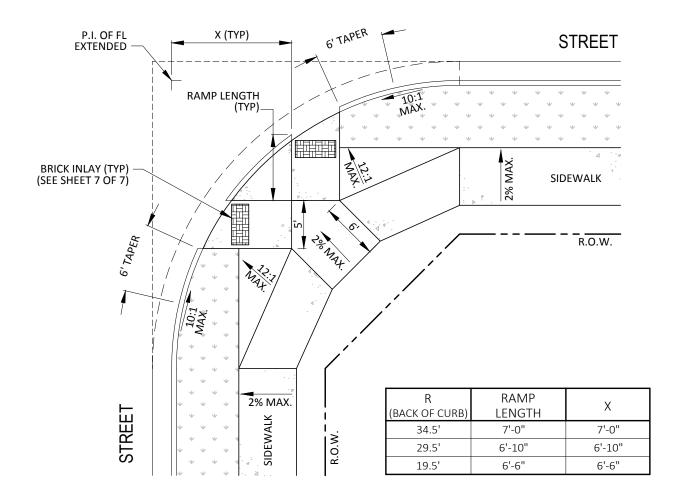
GENERAL DESIGN STANDARDS PAVING DETAILS

BARRIER FREE RAMP DETAILS RAMP AT STREET INTERSECTION

SCALE: NTS DATE: 01/2015 SHEET 1 OF 7

P-18
ENGINEERING

DEPARTMENT



DUAL BARRIER FREE RAMP AT STREET INTERSECTION

NOTES:

- BARRIER FREE RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ACCESSIBILITY STANDARDS AND AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS.
- 2. MAXIMUM RUNNING SLOPE ON RAMP PORTION SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION. VERTICAL DISTANCE BETWEEN STREET AND RAMP SHALL NOT EXCEED $\frac{1}{4}$ ".
- DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
- 4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
- LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEERING DEPARTMENT.



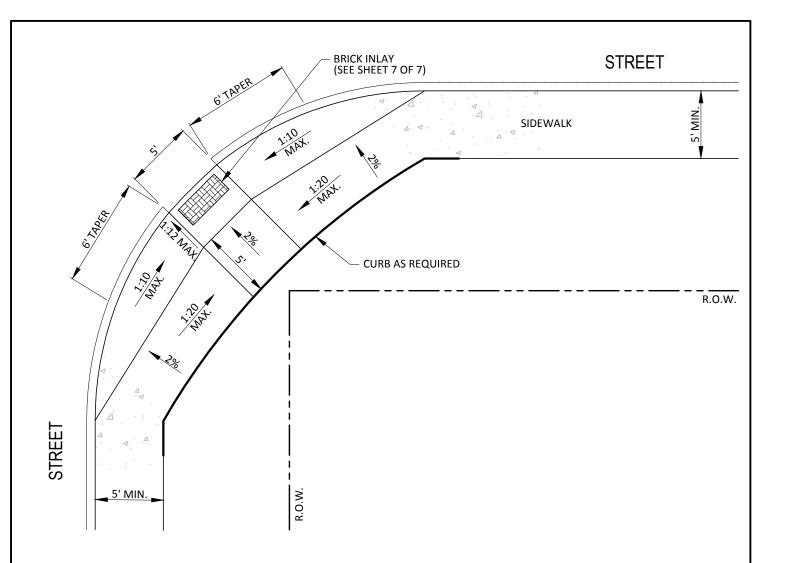
GENERAL DESIGN STANDARDS PAVING DETAILS

BARRIER FREE RAMP DETAILS
DUAL RAMP AT STREET INTERSECTION

SCALE: NTS DATE: 07/2017 SHEET 2 OF 7

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ENGINEERING

DEPARTMENT



BARRIER FREE RAMP WITH BOTH SIDEWALKS ADJACENT TO CURB

NOTES:

- BARRIER FREE RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ACCESSIBILITY STANDARDS AND AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS.
- 2. MAXIMUM RUNNING SLOPE ON RAMP PORTION SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION. VERTICAL DISTANCE BETWEEN STREET AND RAMP SHALL NOT EXCEED $\frac{1}{4}$ ".
- 3. DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
- 4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
- LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEERING DEPARTMENT.

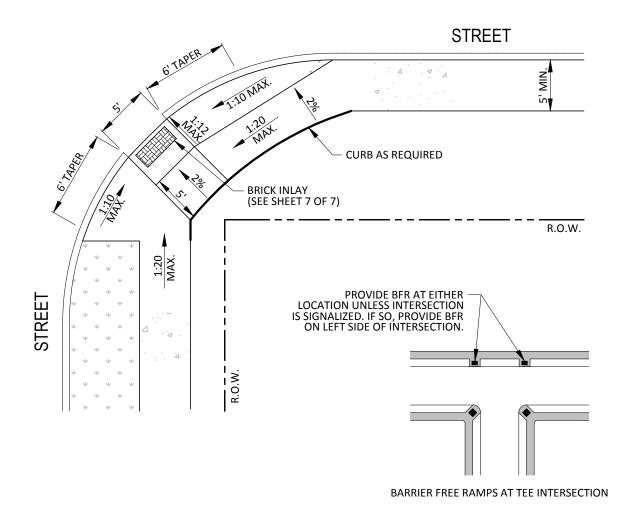


GENERAL DESIGN STANDARDS PAVING DETAILS

DATE: 01/2007

SCALE: NTS SHEET 3 OF 7

P-18



BARRIER FREE RAMP WITH SINGLE SIDEWALK ADJACENT TO CURB

NOTES:

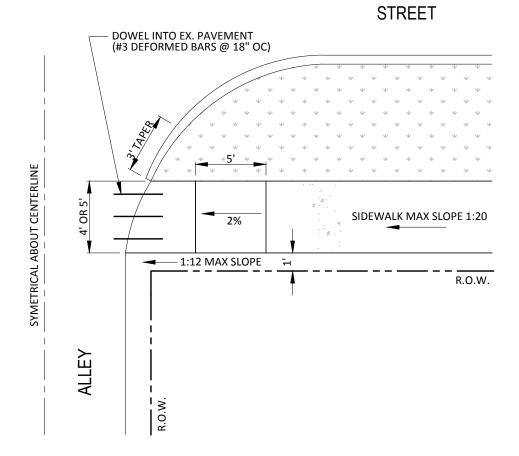
- BARRIER FREE RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ACCESSIBILITY STANDARDS AND AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS.
- 2. MAXIMUM RUNNING SLOPE ON RAMP PORTION SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION. VERTICAL DISTANCE BETWEEN STREET AND RAMP SHALL NOT EXCEED $\frac{1}{4}$ ".
- DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
- 4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
- LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEERING DEPARTMENT.



GENERAL DESIGN STANDARDS PAVING DETAILS

BARRIER FREE RAMP DETAILS SINGLE SIDEWALK ADJACENT TO CURB SCALE: NTS DATE: 02/2011 SHEET 4 OF 7

> P-18 INGINEERIN



BARRIER FREE RAMP AT ALLEY

NOTES:

- BARRIER FREE RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ACCESSIBILITY STANDARDS AND AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS.
- 2. MAXIMUM RUNNING SLOPE ON RAMP PORTION SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION. VERTICAL DISTANCE BETWEEN STREET AND RAMP SHALL NOT EXCEED $\frac{1}{4}$ ".
- 3. DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
- 4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
- LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEERING DEPARTMENT.

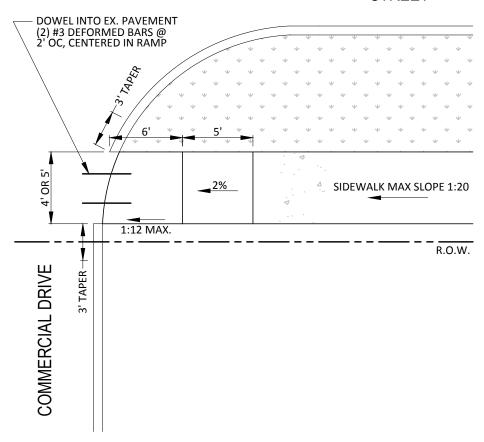


GENERAL DESIGN STANDARDS PAVING DETAILS

BARRIER FREE RAMP DETAILS RAMP AT ALLEY SCALE: NTS DATE: 01/2015 SHEET 5 OF 7

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INGINEERIN

STREET



BARRIER FREE RAMP AT COMMERCIAL DRIVE

NOTES:

- BARRIER FREE RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ACCESSIBILITY STANDARDS AND AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS.
- 2. MAXIMUM RUNNING SLOPE ON RAMP PORTION SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION. VERTICAL DISTANCE BETWEEN STREET AND RAMP SHALL NOT EXCEED $\frac{1}{4}$ ".
- DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
- 4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
- LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE ENGINEERING DEPARTMENT.



GENERAL DESIGN STANDARDS PAVING DETAILS

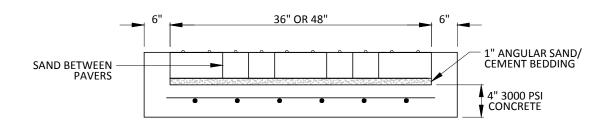
BARRIER FREE RAMP DETAILS RAMP AT COMMERCIAL DRIVE

SCALE: NTS DATE: 01/2015 SHEET 6 OF 7

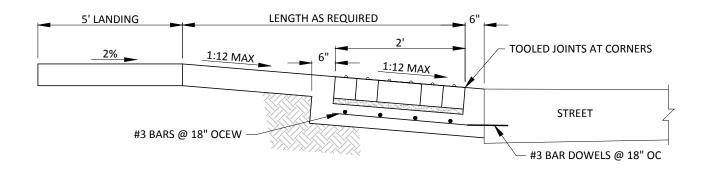
P-18
ENGINEERING

DEPARTMENT

NOTE: SEAL WITH SUREBOND, SB-1300 JOINT STABILIZING SEALER (OR EQUAL) AFTER SAND INSTALLATION



SECTION THRU WIDTH



SECTION THRU LENGTH

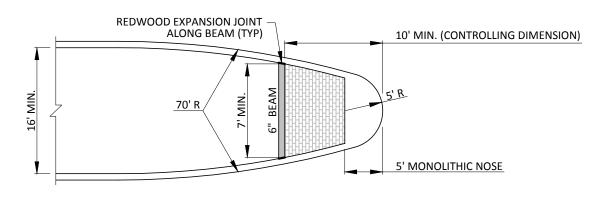
NOTES:

- 1. BRICK PAVERS SHALL BE 8" x 4" x $2\frac{1}{2}$ " IN A COLOR MEETING ADA SECTION 4.29.2 (WHITACRE GREER ANTIQUE RED SHADE NO. 32 OR APPROVED EQUAL) AND SHALL BE LAID IN A 2 UNIT BY 2 UNIT BASKET WEAVE PATTERN. COLOR SHALL BE CONTRASTING TO ADJACENT SIDEWALK COLORS.
- 2. PAVERS SHALL HAVE A DETECTABLE WARNING FEATURE THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9", A NOMINAL HEIGHT OF 0.2", AND A NOMINAL SPACING OF 2.35" ON CENTER.
- BRICK INLAYS (OR DETECTABLE WARNINGS) SHALL ONLY BE INSTALLED AT STREET INTERSECTIONS AND ARE NO LONGER REQUIRED AT DRIVEWAYS AND ALLEYS.
- ADDITIONAL BARRIER FREE RAMP DETAILS AND NOTES CAN BE FOUND ON TXDOT DETAIL PED-02, PEDESTRIAN FACILITIES, CURB RAMPS.
- IN LIEU OF BRICK PAVERS, DETECTABLE WARNING PANELS MANUFACTURED BY ARMORCAST PRODUCTS COMPANY (818-982-3600), ADA SOLUTIONS (800-372-0519), OR EQUAL, MAY BE INSTALLED. APPROVAL FOR PROPOSED PRODUCT MUST BE SUBMITTED PRIOR TO INSTALLATION.



GENERAL DESIGN STANDARDS PAVING DETAILS

BARRIER FREE RAMP DETAILS BRICK INLAY SCALE: NTS DATE: 12/2007 SHEET 7 OF 7



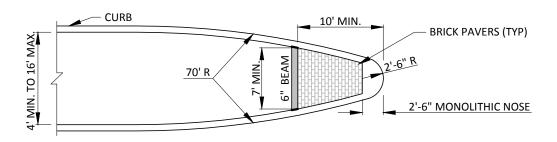
MEDIAN NOSE TYPE "C"

#3 BARS @ 18" OCEW

JALS 7'

MONOLITHIC NOSE CROSS SECTION

NOTE: PAVERS SHALL EXTEND UNTIL WIDTH EQUALS 7' FOR MEDIAN NOSE TYPES 'B' AND 'C'



MEDIAN NOSE TYPE "B"

BLOCK OUT MEDIAN PAVING FOR TRAFFIC SIGNAL BASE/ FOUNDATION, PULL BOX, OR LUMINARY BASE IF LOCATIONS ARE KNOWN AND NOT INSTALLED WITH PAVING

NOTES:

- 1. SEE SECTION 7, PAGE 7-8 FOR BRICK PAVER SPECIFICATIONS.
- 6" BEAM SHALL BE 6" x 6" REINFORCED CONCRETE W/ (2) #3 BARS ACROSS SPAN.

.9

 ALL PAVER SUBGRADE CONCRETE SHALL BE DOWELED INTO PAVEMENT.

MEDIAN NOSE TYPE "A" (STANDARD LEFT TURN LANE MEDIAN)

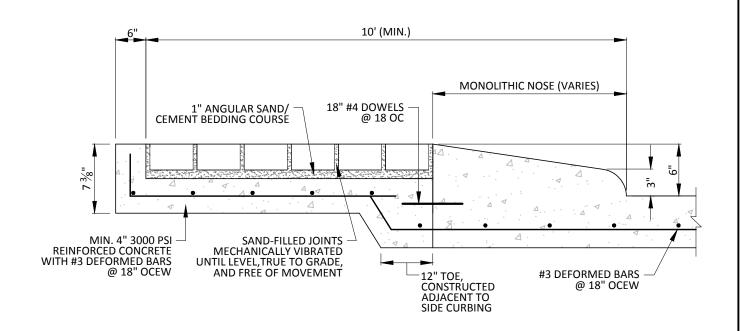


GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 02/2011 SHEET 1 OF 2

MEDIAN NOSE DETAILS DIMENSIONS

P-19



TYPICAL CROSS SECTION

NOTE:

WHERE BEDDING SLAB IS TO BE PART OF A BRIDGE STRUCTURE, BEDDING SLAB THICKNESS SHALL BE INCREASED TO MATCH BRIDGE CONTROL DIMENSIONS.



GENERAL DESIGN STANDARDS PAVING DETAILS

MEDIAN NOSE DETAILS
PAVING STONE INSTALLATION

SCALE: NTS DATE: 12/2008 SHEET 2 OF 2

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FIRE LANE DESIGN SPECIFICATIONS

DESIGNATED FIRE LANES:

TO MEET THE REQUIREMENTS OF THE CARROLLTON FIRE DEPARTMENT FOR ADEQUATE HORIZONTAL EMERGENCY ACCESS, ALL PARTS OF ALL BUILDING MUST BE WITHIN 150' OF A PUBLIC STREET OR A DESIGNATED FIRE LANE.

1. FIRE LANE WIDTH:

FIRE LANE WIDTH SHALL BE A MINIMUM 24' CLEAR (FACE TO FACE OF CURBS) WITHOUT HORIZONTAL OBSTRUCTIONS.

2. FIRE LANE VERTICAL CLEARANCE:

MINIMUM FIRE LANE VERTICAL CLEARANCE SHALL BE AT LEAST 14'.

3. INTERSECTION:

THE FIRE LANE MUST INTERSECT WITH A DEDICATED STREET R.O.W. IN ADDITION, IF THIS FIRE LANE EXCEEDS 150' IN LENGTH, IT MUST INTERSECT WITH A DEDICATED STREET R.O.W. AT EACH END OF THE FIRE LANE OR TERMINATE IN A CONFIGURATION AS DETAILED IN THE FOLLOWING STANDARD DETAILS.

4. PAVING SURFACE:

THE FIRE LANE SHALL BE PAVED IN ACCORDANCE WITH THE CITY OF CARROLLTON STANDARDS AS HEREIN DETAILED.

5. MARKING:

THE DESIGNATED FIRE LANE SHALL BE MARKED AS DETAILED IN THE FOLLOWING STANDARD DETAILS.



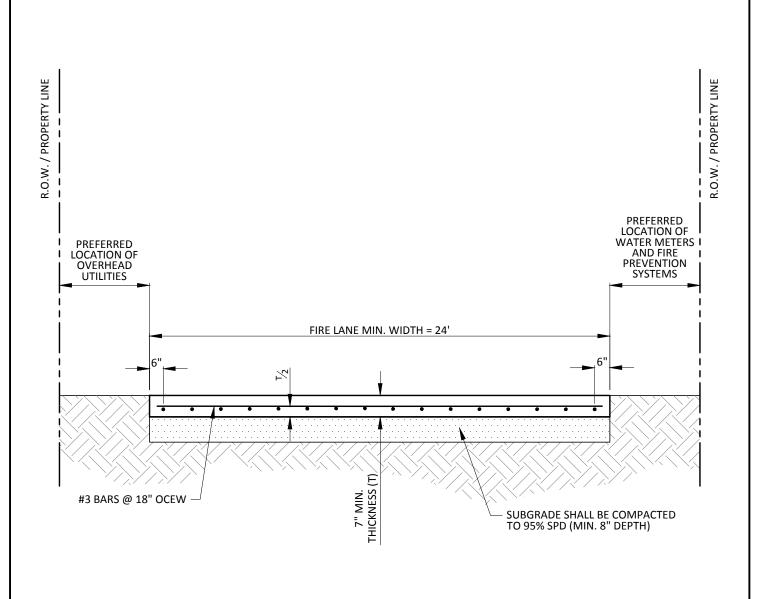
GENERAL DESIGN STANDARDS
PAVING DETAILS

FIRE LANE PAVING DETAILS DESIGN SPECIFICATIONS

SCALE: NTS DATE: 01/2004 SHEET 1 OF 5

P-20 ENGINEERING

DEPARTMENT



NOTES:

- 1. CONCRETE PAVING SHALL BE A MINIMUM 6 SACK PER CUBIC YARD MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AND A MAXIMUM SLUMP OF 3".
- 2. REINFORCING SHALL BE NEW BILLET STEEL ASTM A615 GRADE 60 REINFORCING BARS WHICH SHALL BE FREE OF RUST, LOOSE SCALE, PAINT, OIL OR OTHER FOREIGN SUBSTANCES WHICH SHALL PREVENT BONDING OF THE CONCRETE AND REINFORCING BARS.
- 3. EXPANSION JOINTS SHALL BE PROVIDED AT THE R.O.W. LINE OF THE FIRE LANE APPROACH AND EVERY 200', MINIMUM. TRANSVERSE SAW JOINTS SHALL BE PROVIDED EVERY 15', MINIMUM.
- 4. WHERE A CURB IS USED, THE REQUIRED CLEARANCE SHALL BE MEASURED FROM THE CURB FACE TO ANY PERMANENT TRAFFIC OBSTACLE.

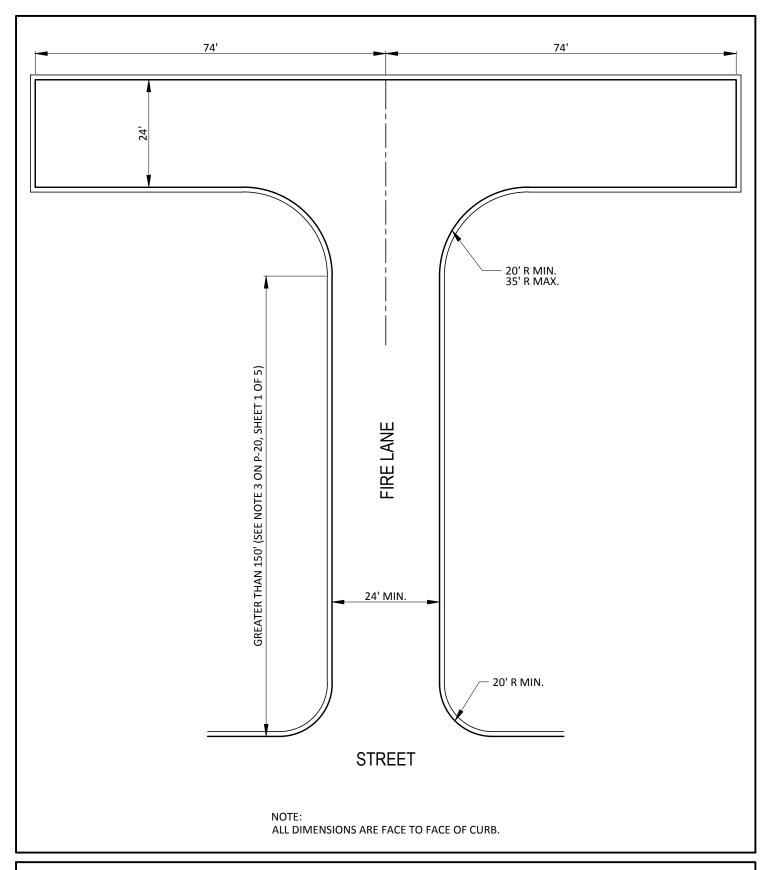


GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS SHEET 2 OF 5 DATE: 08/2003

FIRE LANE PAVING DETAILS CROSS SECTION

P-20





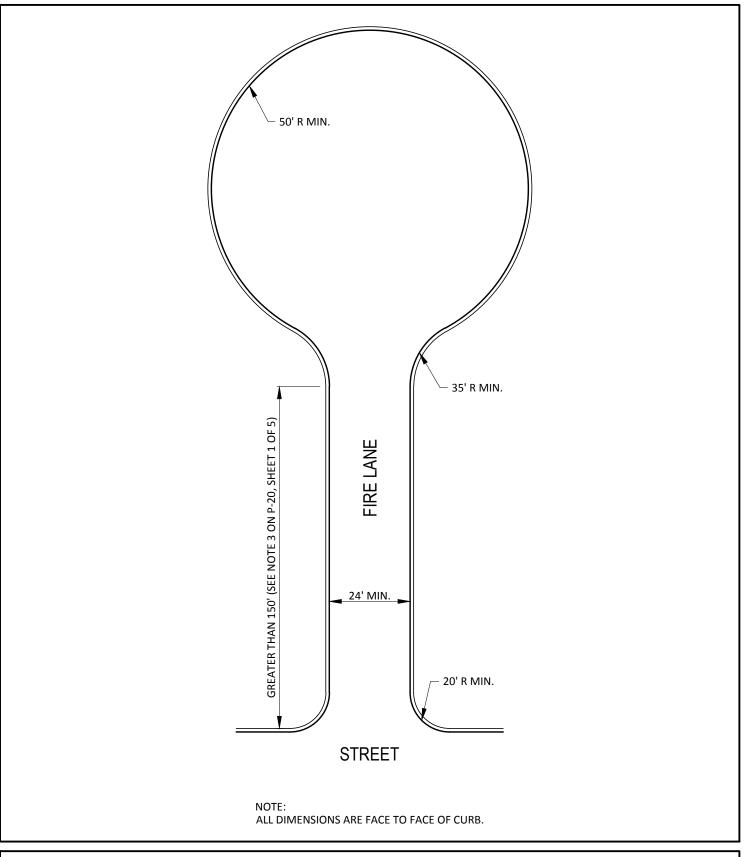
GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 01/2004

SHEET 3 OF 5

FIRE LANE PAVING DETAILS TURNAROUND TYPE "A"

P-20



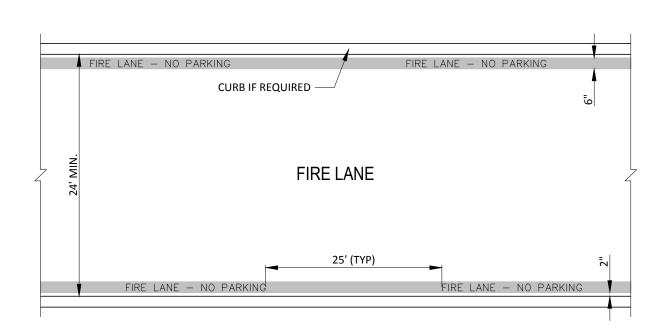


GENERAL DESIGN STANDARDS
PAVING DETAILS

SCALE: NTS DATE: 01/2004 SHEET 4 OF 5

FIRE LANE PAVING DETAILS TURNAROUND TYPE "B"

P-20



FIRE LANE STRIPING DETAIL

SPECIFICATIONS:

- 1. PAINT
 - A. STRIPE SHALL BE 6" WIDE AND PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT. COLOR SHALL BE "TRAFFIC RED" GLIDDEN NO. 63251 OR EQUAL.
 - B. LETTERS SHALL BE 4" TALL AND PAINTED WITH AN EXTERIOR ACRYLIC PAINT. COLOR SHALL BE "TRAFFIC WHITE" GLIDDEN NO. 563245 OR EQUAL.
- 2. APPLICATION
 - A. PAVEMENT SHALL BE PREPARED BY SAND BLASTING OR GRINDING FOLLOWED BY HIGH PRESSURE AIR TO BLOW OFF DEBRIS. ALL CURE SHALL BE REMOVED FROM NEW PAVEMENT TO ALLOW PROPER BONDING OF PAINT.
 - B. STRIPE MAY BE BRUSHED OR SPRAYED, ONE COAT TO FINISH.
 - C. LETTERS SHALL BE STENCIL FORMED, BRUSH APPLIED, AND SPACED AS DETAILED ON THIS SHEET.



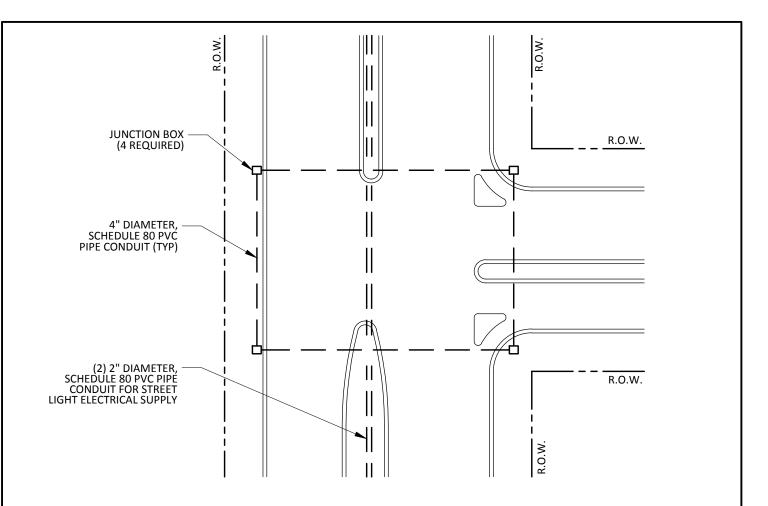
GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 01/2004 SHEET 5 OF 5

FIRE LANE PAVING DETAILS STRIPING DETAIL & SPECIFICATIONS

P-20 ENGINEERING

DEPARTMENT



TYPICAL TEE INTERSECTION CONDUIT/ JUNCTION BOX LAYOUT

NOTES:

- CONDUIT SHALL BE 4" DIAMETER SCHEDULE 80 PVC (GRAY IN COLOR) CONFORMING TO FEDERAL SPECIFICATIONS WC-1094
 AND UNDERWRITERS LABORATORY STANDARD UL-651. CONDUIT SHALL HAVE A MINIMUM BURIAL DEPTH OF 24" UNDER NEW
 PAVEMENT.
- 2. WHERE BENDS ARE REQUIRED THEY SHALL BE OF THE LONG RADIUS TYPE.
- 3. THE CONDUIT SHALL BE CAPPED AFTER INSTALLATION AND PROVEN TO BE FREE OF OBSTRUCTIONS BEFORE THE INTERSECTION PAVING WILL BE ACCEPTED BY THE CITY OF CARROLLTON TRAFFIC DEPARTMENT.
- 4. WHERE THE CONDUIT IS TO BE INSTALLED AS A NON-CONTINUOUS CONDUIT, THE CONDUIT SHALL TERMINATE INSIDE A JUNCTION BOX. THE JUNCTION BOX SHALL BE LOCATED A MINIMUM OF 2' FROM THE EDGE OF THE PAVING, CURB, OR MEDIAN.
- 5. THE JUNCTION BOXES SHALL BE AS MANUFACTURED BY ARMORCAST OR EQUAL. THE JUNCTION BOX BODY SHALL BE 12" DEEP AND HAVE A TOP EXTENSION OF 6" FOR A TOTAL UNIT DEPTH OF 18". THE COVER SHALL BE OF THE BOLT DOWN TYPE AND SHALL BE MARKED "TRAFFIC SIGNAL".
- 6. ALL JUNCTION BOXES SHALL BE BEDDED FLUSH WITH THE FINISHED GRADE AND SHALL HAVE AT LEAST 6" OF $\frac{1}{2}$ " (MAX.) GRAVEL UNDER THE INSTALLED BOXES WITH AN 8" CONCRETE SKIRT, 6" THICK, AROUND THE BOX.



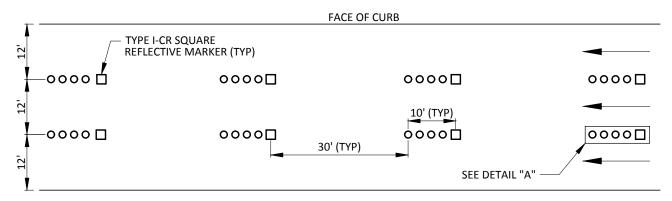
GENERAL DESIGN STANDARDS
PAVING DETAILS

SCALE: NTS DATE: 12/2007 SHEET 1 OF 1

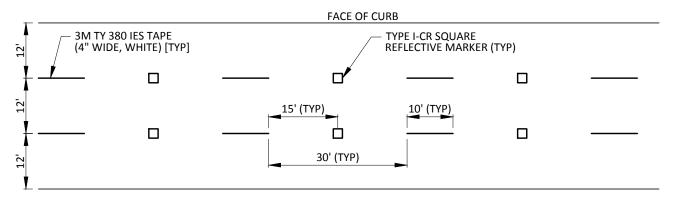
SHEET T OF

CONDUIT/ JUNCTION BOX LAYOUT FOR STREET LIGHTING

P-21



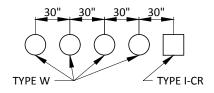
LANE LINES FOR ARTERIALS (A6D) ONE SIDE



LANE LINES FOR ARTERIALS (A6D) ONE SIDE (ALTERNATIVE DESIGN APPROVED BY THE DIRECTOR OF ENGINEERING)

NOTES:

- 1. ON ROADWAYS WITH AN ADT GREATER THAN 6000, TRANSVERSE MARKINGS AND SYMBOLS WILL BE INSTALLED USING 90 MIL THERMOPLASTIC. ALL LONGITUDINAL MARKINGS SHALL BE WITH 3M TYPE 380 IES (WHITE) OR 381 IES (YELLOW). CONSULT WITH THE PUBLIC WORKS TRAFFIC OPERATIONS FOR DETAILS.
- 2. PAVEMENT MARKINGS HAVE DIMENSIONS AS SPECIFIED IN TXDOT STANDARD SHEET RPM(1).



DETAIL "A"

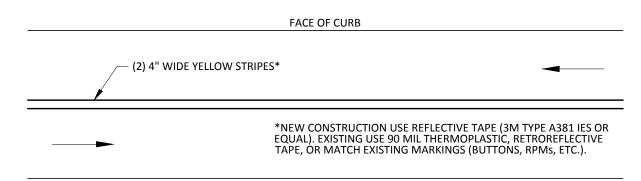


GENERAL DESIGN STANDARDS PAVING DETAILS

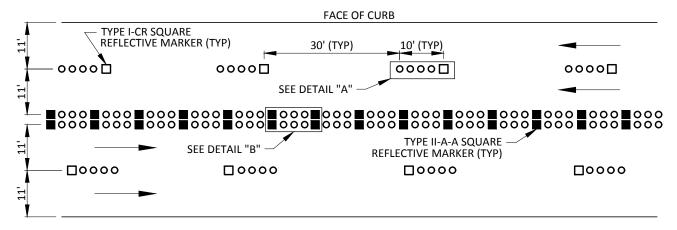
SCALE: NTS DATE: 01/2015

SHEET 1 OF 5

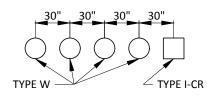
P-22



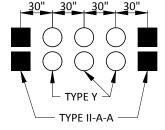
LANE LINES FOR COLLECTORS (C2U) BOTH SIDES



LANE LINES FOR COLLECTORS (C4U) BOTH SIDES



DETAIL "A" (LANE DIVIDE MARKINGS)



DETAIL "B" (CENTERLINE MARKINGS)

NOTE:

PAVEMENT MARKINGS HAVE DIMENSIONS AS SPECIFIED IN TXDOT STANDARD SHEET RPM(1).



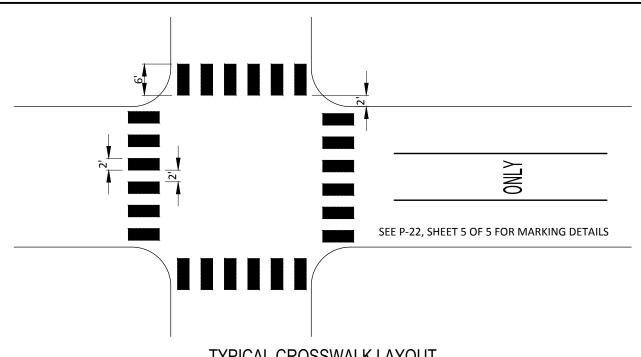
GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 01/2015

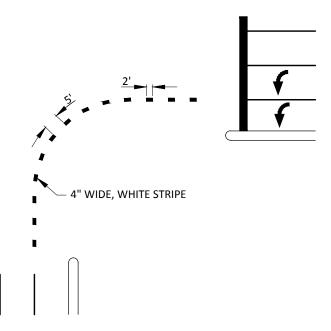
SHEET 2 OF 5

PAVEMENT MARKING DETAILS COLLECTORS

P-22



TYPICAL CROSSWALK LAYOUT



TYPICAL "PUPPY TRACK" PAVEMENT MARKING LAYOUT

NOTES:

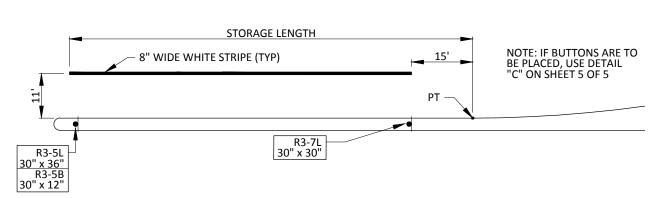
- 1. AT TRAILS, CROSSWALK WIDTH SHALL EQUAL THE WIDTH OF THE TRAIL.
- 2. CROSSWALK AND PUPPY TRACK STRIPING SHALL BE EXTRUDED THERMOPLASTIC 90 MIL THICKNESS.



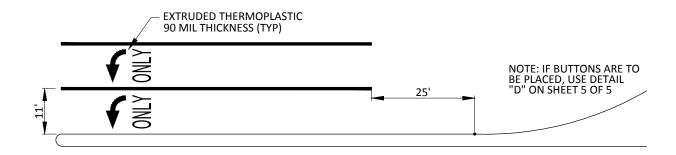
GENERAL DESIGN STANDARDS PAVING DETAILS

PAVEMENT MARKING DETAILS **CROSSWALK & PUPPY TRACKS** SCALE: NTS DATE: 01/2015 SHEET 3 OF 5

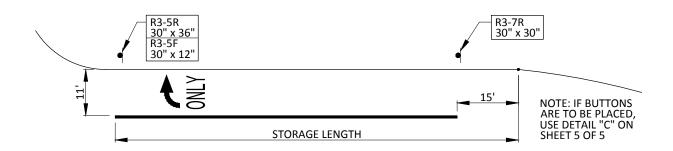
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STANDARD LEFT TURN LANE MARKINGS



DUAL LEFT TURN LANE MARKINGS



STANDARD RIGHT TURN LANE MARKINGS

NOTE:

TURN LANE MARKINGS SHALL BE 8" WIDE 3M TAPE OR THERMOPLASTIC. BUTTONS MAY BE USED AS APPROVED BY THE DIRECTOR OF ENGINEERING.

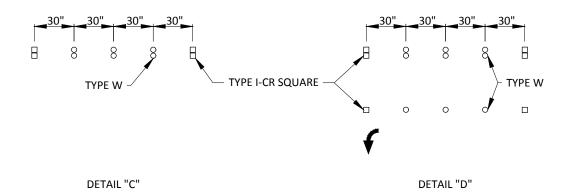


GENERAL DESIGN STANDARDS PAVING DETAILS

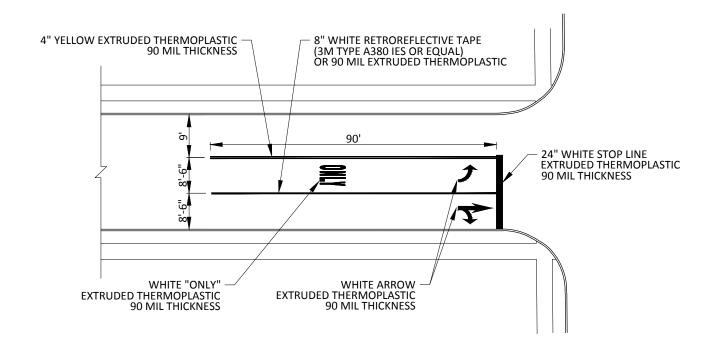
SCALE: NTS DATE: 01/2015 SHEET 4 OF 5

PAVEMENT MARKING DETAILS TURN LANES

P-22



STANDARD BUTTON MARKING DETAILS



NOTE:

ALL MARKINGS SHALL COMPLY WITH TXMUTCD AND CITY OF CARROLLTON STANDARDS. ARROWS AND WORDS SHALL BE EXTRUDED THERMOPLASTIC 90 MIL THICKNESS IN ACCORDANCE WITH TXDOT CRITERIA.

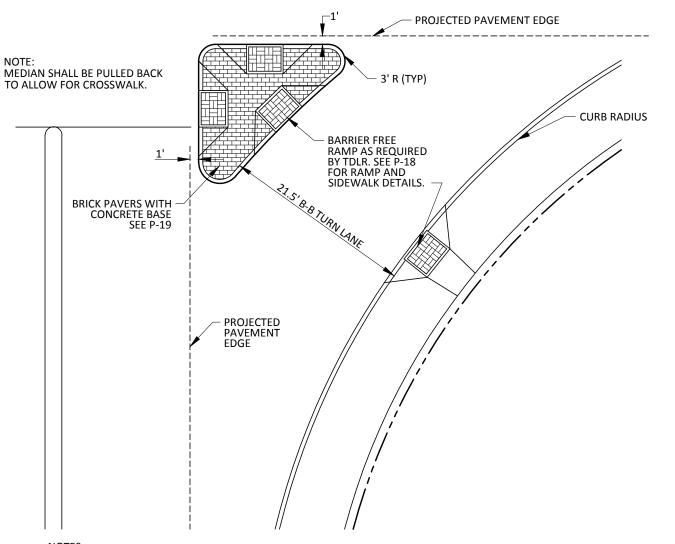


GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 01/2015

SHEET 5 OF 5

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NOTES:

- 1. AT SIGNALIZED INTERSECTIONS THE ISLAND SHOULD BE LARGE ENOUGH FOR A 36" DIAMETER SIGNAL POLE FOUNDATION AND A 24" x 30" GROUND ENCLOSURE (PULL BOX). THE ISLAND SHOULD ALLOW FOR THE FOUNDATION TO BE AT LEAST 3' FROM THE BACK OF CURB.
- 2. ALL EXISTING LOOPS WHICH ARE DAMAGED IN THE COURSE OF THE CONSTRUCTION OF THE ISLAND SHALL BE REPLACED BY THE CONTRACTOR/ AGENCY RESPONSIBLE FOR THE PROJECT. ALL LOOP WORK SHALL CONFORM TO THE CURRENT CITY OF CARROLLTON TRANSPORTATION DEPARTMENT PRACTICES AND PROCEDURES.
- 3. AT ALL INTERSECTIONS, LANE DESIGNATION SIGNS AND ASSOCIATED PAVEMENT MARKINGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR/ AGENCY RESPONSIBLE FOR THE PROJECT. ALL MATERIALS PROVIDED AND INSTALLATIONS PERFORMED SHALL CONFORM TO THE CITY OF CARROLLTON TRANSPORTATION DEPARTMENT PRACTICES AND PROCEDURES.
- 4. WHERE CONDUIT AND CABLE ADJUSTMENTS ARE REQUIRED, WORK SHALL BE PERFORMED BY THE CONTRACTOR/ AGENCY RESPONSIBLE FOR THE PROJECT. CABLE SPLICES ARE NOT ALLOWED; ALL CABLE RUNS SHALL BE CONTINUOUS TO EACH SIGNAL POLE.
- 5. TRAFFIC CONTROL CABINETS SHALL BE RELOCATED AS REQUIRED TO CLEAR CONSTRUCTION.
- 6. MINIMUM ISLAND SIZE SHALL BE 75 SQ. FT.



GENERAL DESIGN STANDARDS PAVING DETAILS

SCALE: NTS DATE: 12/2007

SHEET 1 OF 1

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