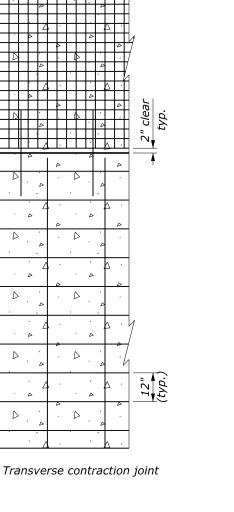
PROJECT SHEET NUMBER

# NOTE:

- 1. Provide the same type of dowel assemblies and tie bars for joints in plain portland cement concrete pavement as shown for joints in reinforced pavement.
- 2. See Standard 501-2 for joint and joint sealing details.
- 3. Lap longitudinal and transverse reinforcement not less than 15 inches.



PAVEMENT	TRANSVERSE
THICKNESS	JOINT SPACING
(in)	(ft)
T < 6	10
6 ≤ T <12	15

See Note 2 Dowel bar	2" clear	typ.
	<b>—</b>	
└─ Slab reinforcement 4" x 4" - W6 x W6		

welded wire reinforcement or No. 4 bars

PLAN

Traffic

2'-0"

(typ.)

2" clear

Tie bar

Longitudinal joint

Slab reinforcement 4" x 4" - W6 x W6 welded wire reinforcement or No. 4 bars

REINFORCED MINOR CONCRETE PAVEMENT

**PROFILE** 

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF FEDERAL LANDS HIGHWAY

FLH STANDARD

# **MINOR CONCRETE PAVEMENT**

STANDARD APPROVED FOR USE/	STANDARD
REVISED: 9/2016	501-1

NO SCALE

c:\pw-work\d0256454\Std501-1-tes

Transverse joint

Dowel bar

PLAN

PROFILE

PLAIN MINOR CONCRETE PAVEMENT

See Note 2

ebruary 2023 10:50 AM

PROJECT

# NOTE:

- 1. Provide the same type of dowel assemblies and tie bars for joints in plain portland cement concrete pavement as shown for joints in reinforced pavement.
- 2. See Standard M501-2 for joint and joint sealing details.
- Lap longitudinal and transverse reinforcement not less than 380 mm.
- Dimensions without units are millimeters.

PAVEMENT THICKNESS	TRANSVERSE JOINT SPACING
(mm)	(m)
T < 150	3
$150 \le T < 300$	4.5

		<b>→</b>	51 clear typ.	3. L
	Tie bar			typ.
	Slab reinforcement 100 x 100 - MW15 x MW15 welded wire reinforcement or #13 bars			
				305 (typ.)
Transverse joint — PLAN		$\frac{610}{(typ.)}$ PLAN	Transverse contraction	i joint

Se	e Note 2	51 clear typ.	— Dowel bar	51 clear typ.
•••••••••••••••••••••••••••••••••••••••	··	<del>/</del>	•••••	=
		4	✓ △	Ť
	Slab reinforceme	nt 100 x 100 -	MW15 x MW1!	5
	welded wire reinf	forcement or #.	13 bars	

PROFILE

Dowel bar

See Note 2

PLAIN MINOR CONCRETE PAVEMENT

PROFILE

REINFORCED MINOR CONCRETE PAVEMENT

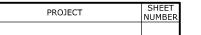
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF FEDERAL LANDS HIGHWAY

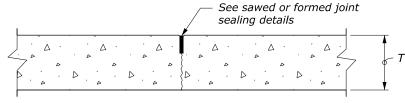
METRIC FLH STANDARD

# **MINOR CONCRETE PAVEMENT**

NO SCALE	STANDARD APPROVED FOR USE 3/1996
NO SCALE	REVISED: 6/1997

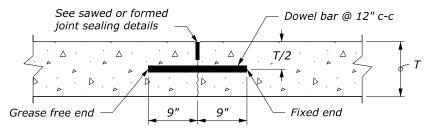
STANDARD M501-1 DRAFT: 9/2016





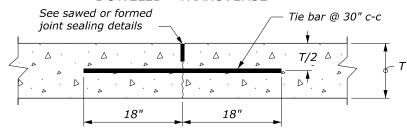
#### **CONTRACTION JOINT**

UNDOWELED - TRANSVERSE and UNTIED - LONGITUDINAL



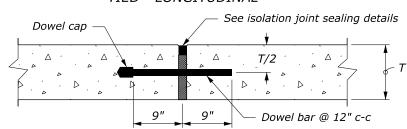
# **CONTRACTION JOINT**

DOWELED - TRANSVERSE



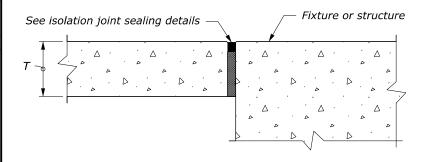
#### **CONTRACTION JOINT**

TIED - LONGITUDINAL



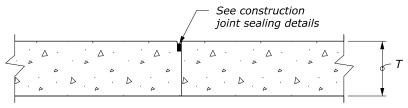
# ISOLATION/EXPANSION JOINT

DOWELED - TRANSVERSE



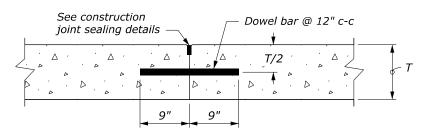
# **ISOLATION JOINT**

UNDOWELED - LONGITUDINAL



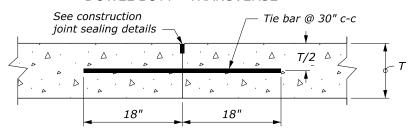
# **CONSTRUCTION JOINT**

PLAIN - TRANSVERSE or LONGITUDINAL



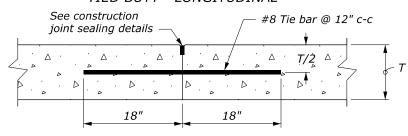
# **CONSTRUCTION JOINT**

DOWEL BUTT - TRANSVERSE



# **CONSTRUCTION JOINT**

TIED BUTT - LONGITUDINAL



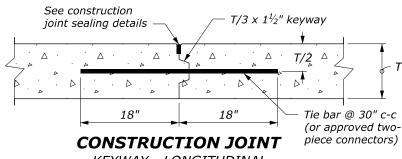
# **CONSTRUCTION JOINT**

TIED BUTT - TRANSVERSE

ISOLATION JOINT

#### NOTE:

- 1. Use epoxy-coated material for all tie bars, dowels, and other steel used in the construction of concrete pavement.
- 2. Deformed reinforcing bars or hook bolts may be used
- 3. Do not place tie bars within 15 inches of transverse joints.
- 4. Install isolation joints when abutting a fixed structure. Use expansion joint material extending the full depth and length of the concrete surface.
- 5. Transverse and longitudinal construction joints are not included in the joint layout plan. Use transverse and longitudinal construction joints sparingly. Submit planned construction joint locations for approval.
- 6. For construction joints, if tie bars and dowels are not set into concrete during placement, drill and anchor the tie bars and dowels into the existing concrete construction with epoxy resin.
- 7. Maintain joint sealant shape factor of 1:1; except when silicone sealant is used maintain the width to depth shape factor of 2:1 or as recommended by sealant manufacturer.
- 8. See Section 712 for joint material requirements.
- 9. See Standards 501-1 or 502-1 for reinforcement details.



**PAVEMENT** 

THICKNESS (T)

(in)

 $T \leq 8$ 

 $8 < T \le 10$ 

 $10 < T \le 12$ 

KEYWAY - LONGITUDINAL

<sup>1</sup> / <sub>2</sub> " typ. ►	½" typ. ►	<sup>1</sup> / <sub>8</sub> " typ. ►
Joint sea	ed · · · · · · · · · · · · · · · · ·	Backer rod

### MINOR CONCRETE PAVEMENT JOINT SEALING DETAILS

CONSTRUCTION JOINT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF FEDERAL LANDS HIGHWAY

BAR SIZES

TIE BAR

#5

#5

#6

FLH STANDARD

DOWEL BAR

DIAMETER

(in)

 $1\frac{1}{4}$ 

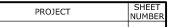
 $1\frac{1}{2}$ 

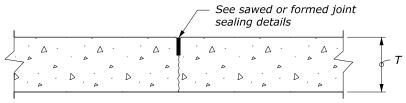
# MINOR CONCRETE **PAVEMENT JOINTS**

STANDARD APPROVED FOR USE --/----STANDARD REVISED: 9/2016 501-2

NO SCALE

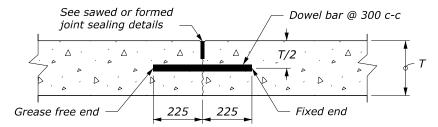
SAWED OR FORMED JOINT





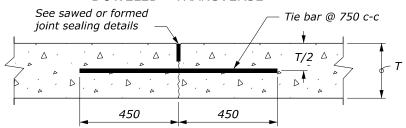
# **CONTRACTION JOINT**

UNDOWELED - TRANSVERSE and UNTIED - LONGITUDINAL



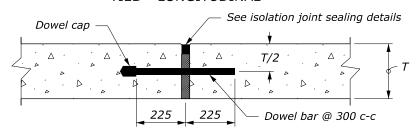
# **CONTRACTION JOINT**

DOWELED - TRANSVERSE



#### **CONTRACTION JOINT**

TIED - LONGITUDINAL



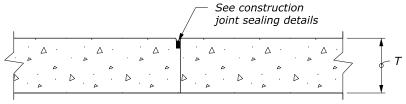
# ISOLATION/EXPANSION JOINT

DOWELED - TRANSVERSE

# See isolation joint sealing details Fixture or structure

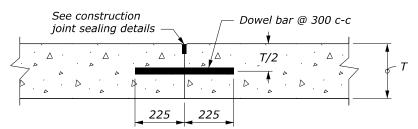
# **ISOLATION JOINT**

UNDOWELED - LONGITUDINAL



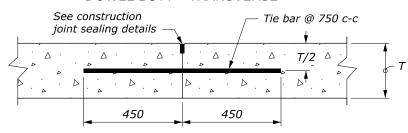
# **CONSTRUCTION JOINT**

PLAIN - TRANSVERSE or LONGITUDINAL



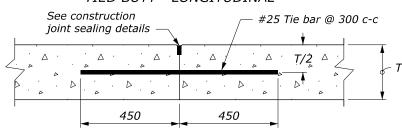
# **CONSTRUCTION JOINT**

DOWEL BUTT - TRANSVERSE



# **CONSTRUCTION JOINT**

TIED BUTT - LONGITUDINAL



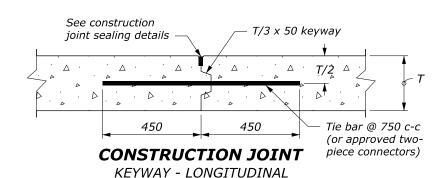
# **CONSTRUCTION JOINT**

TIED BUTT - TRANSVERSE

ISOLATION JOINT

#### NOTE:

- 1. Use epoxy-coated material for all tie bars, dowels, and other steel used in the construction of concrete pavement.
- 2. Deformed reinforcing bars or hook bolts may be used for tie bars.
- 3. Do not place tie bars within 380 mm of transverse joints.
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- 7. Maintain joint sealant shape factor of 1:1; except when silicone sealant is used maintain the width to depth shape factor of 2:1 or as recommended by sealant manufacturer.
- 8. See Section 712 for joint material requirements.
- 9. See Standards M501-1 or M502-1 for reinforcment details.
- 10. Dimensions without units are millimeters.



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BAR SIZES			
PAVEMENT THICKNESS (T) (mm)	TIE BAR	DOWEL BAR DIAMETER (mm)	
T ≤ 200	16	25	
200 < T ≤ 250	16	32	
250 < T ≤ 300	19	43	

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF FEDERAL LANDS HIGHWAY

METRIC FLH STANDARD

# MINOR CONCRETE PAVEMENT JOINTS

STANDARD APPROVED FOR USE 3/1996 STANDARD
REVISED: 6/1997 M501-2

13 typ. ►	3 typ.	3 typ.
7/3 Jo	int sealant	— Joint sealant — T/3 — T/3 — Backer rod — D — D — D — D — D — D — D — D — D —
Pr jo.	reformed int filler	

MINOR CONCRETE PAVEMENT JOINT SEALING DETAILS

CONSTRUCTION JOINT

NO SCALE

SAWED OR FORMED JOINT